SUGATSUNE

Industrial Component Hardware



I N D U S T R I A L C O M P O N E N T S

Motion DesignTec®

Updated 2017.10.27

No.280

INDEX

HINGES
LID SUPPORTS & SMALL CABINET SYSTEMS
CABINET DOOR HARDWARE & SHUTTER DOORS
DRAWER SLIDES
HANDLES, PULLS & KNOBS
HOOKS & BRACKETS
CATCHES, LATCHES & FASTENERS
LOCKS
CASTERS
LEVELLING GLIDES & BASE
MISCELLANEOUS

Sugatsune Also Offers Made-to-order Products!

With our manufacturing and testing equipment, as well as over 15% of our human resource dedicated to product design and manufacturing, we can respond carefully and rapidly.

Function Addition

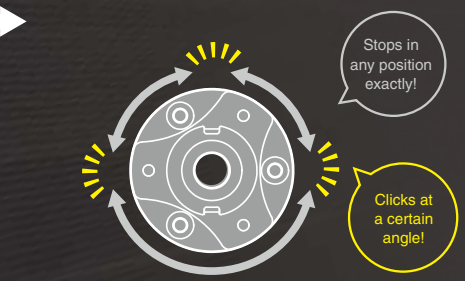
Torque Hinge + Detent Mechanism

A detent mechanism is added to the swivel torque hinge HG-S.
It temporarily holds at a certain angle with a click.



Ready-made item



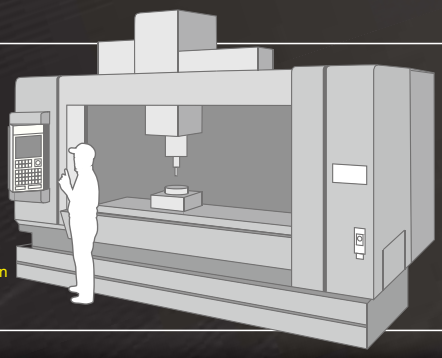




What is swivel torque hinge?

A hinge which can swivel 360°.
It can exactly stop in any position, suitable for the operation panel of machine tools.
Adjustable swivelling angle of the panel allows for easy checking of the processing status.

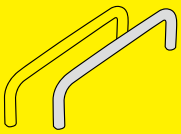
With the additional detent mechanism which can temporarily hold in a position with a click, the panel will not shake even with a forcible button operation or impact.



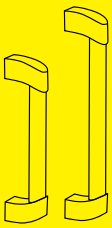
Sugatsune can respond to customers' various requests!
Please feel free to contact us.

Updated 2017.10.27

Customised Finish

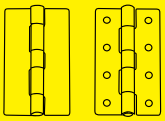


Customised Dimension



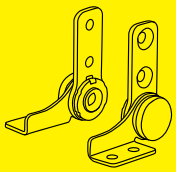
Processing & Function Addition

Hole drilling, bending, etc.



Customised Features

Change in load capacity, torque, magnetic force, etc.



Development



※Shown are simulated images. Changes above may be unavailable for some products.

Customised Dimension

3-metre Piano Hinge

Stainless steel piano hinge LSN (total length of ready-made item 300~2,000mm) is extended to 3,000mm.

Made to order

3,000mm



Development

Stainless Steel Spring Loaded Lid Stay S-AT

"I am worried about gas leaking from the gas spring….."
In response to the customers' consultations like this, we designed and developed a compact stay with large load capacity from scratch.

For more details, please refer to ▶ 📖 P.208

For OEM and ODM quotation request with required items at consultation, refer to ▶ 📖 P.924
For the introduction of our manufacturing bases, refer to ▶ 📖 P.917

Motion DesignTec®

For smooth movement
Soft motion

Hold in any position
Free-stop motion

Helps you open
Power assist motion

Snap and stop
Click motion

New openings
Unique motion

What is Sugatsune's "Motion Design Tech"?

Motion
‖
New motion

Design
‖
Developed

Tech
‖
With technology



Motion Design Tech Lab (Development laboratory)
Mr. ISHIGAYA, researcher

Motion Design Tech is Sugatsune's unique product concept to provide specialist movement solutions for your flaps and doors.

The operability of doors or lids can be improved by choosing from the 5 types of motion suitable for work environment.
It can also improve the efficiency of work involving opening and closing movements, increasing the added value of the device and equipment.

So where should they be used separately?
We will introduce them below one by one.

For smooth movement

Soft Motion

Reduces the opening/closing speed of doors, lids or drawers.

Video

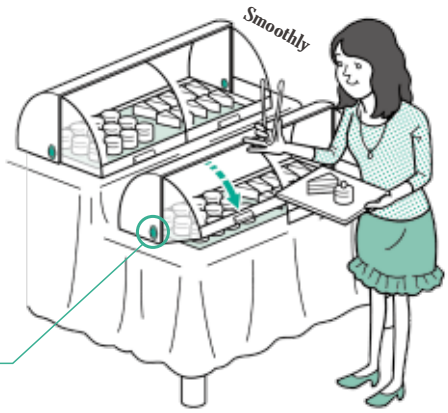
Applicable Places

This is ideal for wall-storage or information terminals in hospitals.
Once used and the flap is lightly pushed up, it will slowly and naturally close.
This is a perfect solution for quiet environments.



Self-close Stay
HDS-10S P.236





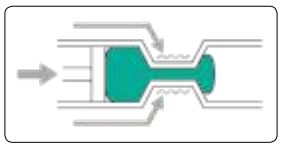


Disk Damper
UDD P.70

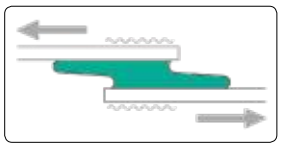
This is suitable for food display cases such as self-serve bakery cases and candy or sweet cases, etc.
If the flap is pushed down slightly, it will close naturally and slowly by itself.
(It isn't necessary to hold the flap until it closes completely)



Reduces speed by means of resistance



Orifice Structure
Resistance develops when a viscous medium flows from a thick diameter to a thin diameter.



Shear Structure
Resistance develops when moving the two plates with the viscous medium between.

Lapcon

"Lapcon" refers to Sugatsune's patented damper mechanism using left structures.

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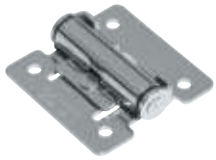
Hold in any position

Free Stop Motion

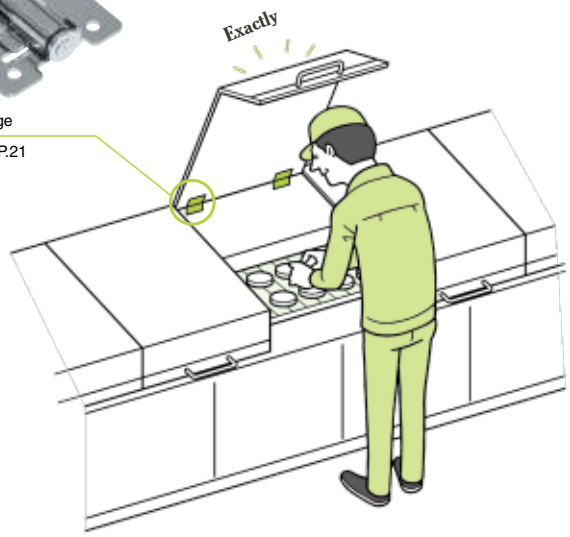
It can hold the door, lid or cover in any position during opening or closing.

Video

Applicable Places



Torque Hinge
HG-TS P.21



Ideal for top-opening covers in a production line, as it allows for the cover to be held open in any position. Because no stopper is necessary, speedy checks and maintenance is possible.
No stay is needed, clearing additional space inside the machine.
Users don't have to worry about slamming the lid closed, bringing additional safety and ensuring it remains damage-free.

Suitable for displays of airplane seats. Enables a monitor to be adjusted to a level of adults or children's eyes.

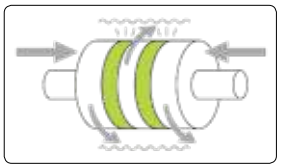


Torque Hinge
HG-TB P.37

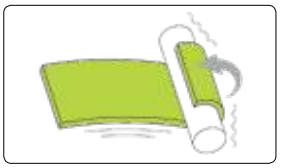




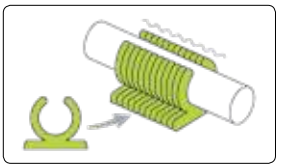
Stops by means of friction



Disk Structure
Friction occurs when rotating the movable disks with the fixed disk inserted between them.



Curl Structure
Friction occurs when rotating the shaft with the leaf spring twined on it.



Clip Structure
Friction occurs when rotating the shaft supported with clips.

Helps you open

Power Assist Motion

Assists in opening/closing heavy doors, lids or covers.

Video

Applicable Places



Lift Assist Hinge

HG-PA230 P.72



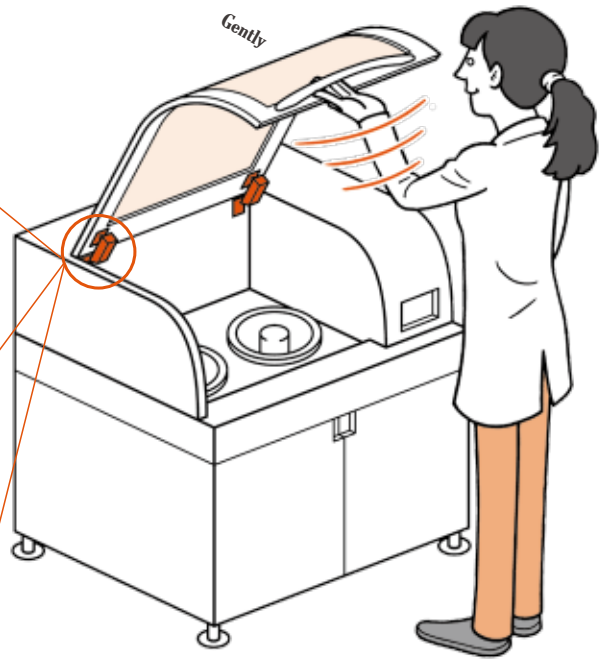
Heavy Duty Spring Loaded Lid Stay

S-AT02W P.210



Stainless Steel Lift Assist Hinge

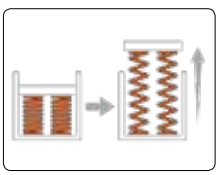
HG-JH210 P.79



Ideal for a large sized analysing device and enables a heavy flap to be opened using little power.
Anyone can easily handle it with one hand - neither the opening nor closing operation will burden users.

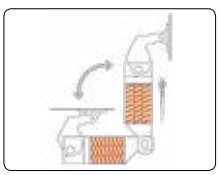


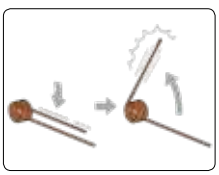
Lifts by means of reaction force



Compression Spring

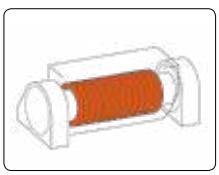
Reaction force is generated when the shrunken spring returns to its original shape.





Torsion Spring

Reaction force is generated when the curled spring returns to its original shape.



Easy and fine operation can be achieved by using a spring suitable for the application.

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Snap and stop

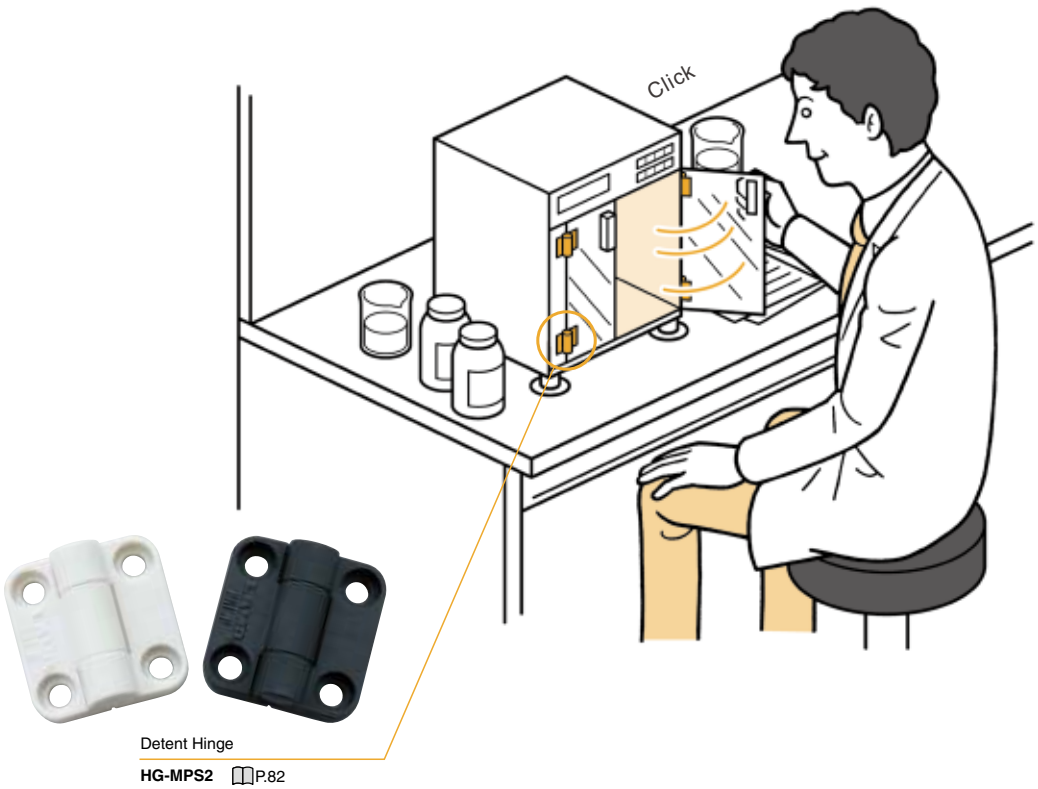
Click Motion

Temporarily holds door, lid or cover during opening/closing at a certain angle with a unique feel.

Video

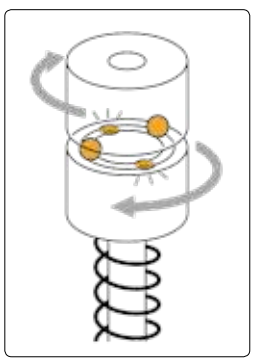
Applicable Places

Ideal for a measuring device in a laboratory and enables a flap to be held at a certain angle. It also prevents a flap moving freely so users don't have to worry about it knocking down an instrument.



Detent Hinge

HG-MPS2 P.82



Temporarily holds with detent mechanism

When rotating two grooved parts with balls between them, the moving balls will fall into the grooves, realising temporary holding.



Updated 2017.10.27

New openings

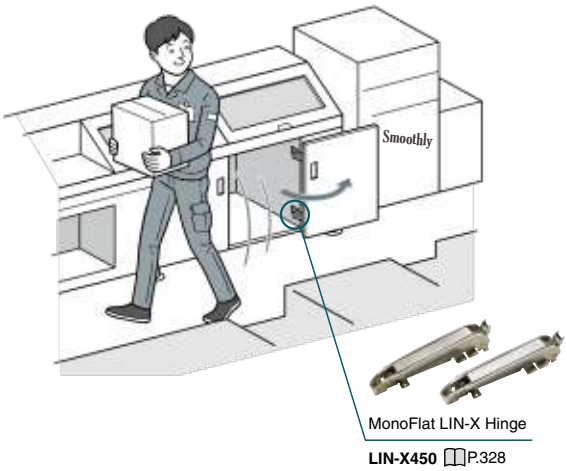
Unique Motion

Video

Expand variations of opening/closing locus.

Applicable Places

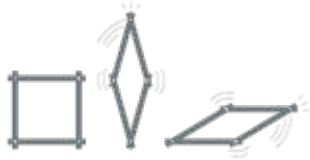
Ideal for large-size machines such as in food processing or printing.
It enables a flap to move parallel to a body and decreases the space needed to open the door.
By using this mechanism, an open door will not obstruct narrow corridors in a factory where several machines are operating. The wide opening makes it easier to take something in and out.



LIN-X450 P.328

Moves by using link mechanism

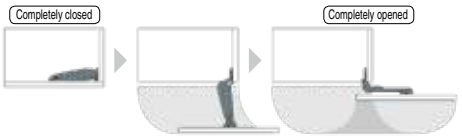




Combining multiple shafts and arms creates more versatile locus than moving with one shaft.

Example 1 Locus of MonoFlat LIN-X hinge

Door projection is less than that of common swing doors.



Example 2 Locus of concealed hinge

Even for overlay doors, the door hinge side moves inward and will not hit the door next.



One major advantage of "Motion Design Tech" supporting 5 types of motion

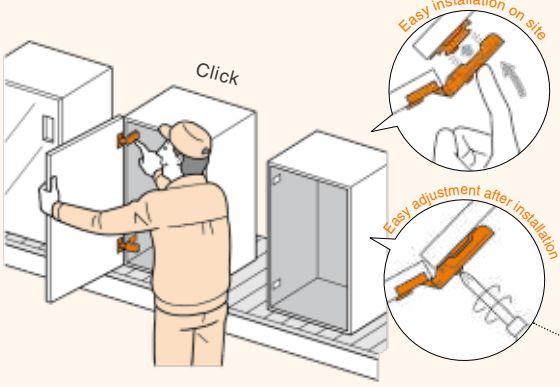
Easy Installation & Adjustment Function

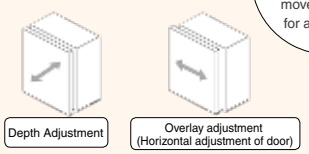
Proper installation is very important for the functioning of the industrial components.
Since "Motion Design Tech" is a technology of motion, to further improve that "motion", installation support function is incorporated in various products.
Easy installation and possible door adjustment after installation realises a comfortable fine opening and closing operation.

Example of applicable products

CONCEALED HINGE FOR SHEET METAL HT160THV2 P.132







Adjustable in various directions.

High durability is also proprietary to Sugatsune. Comfortable movement lasts for a long time.

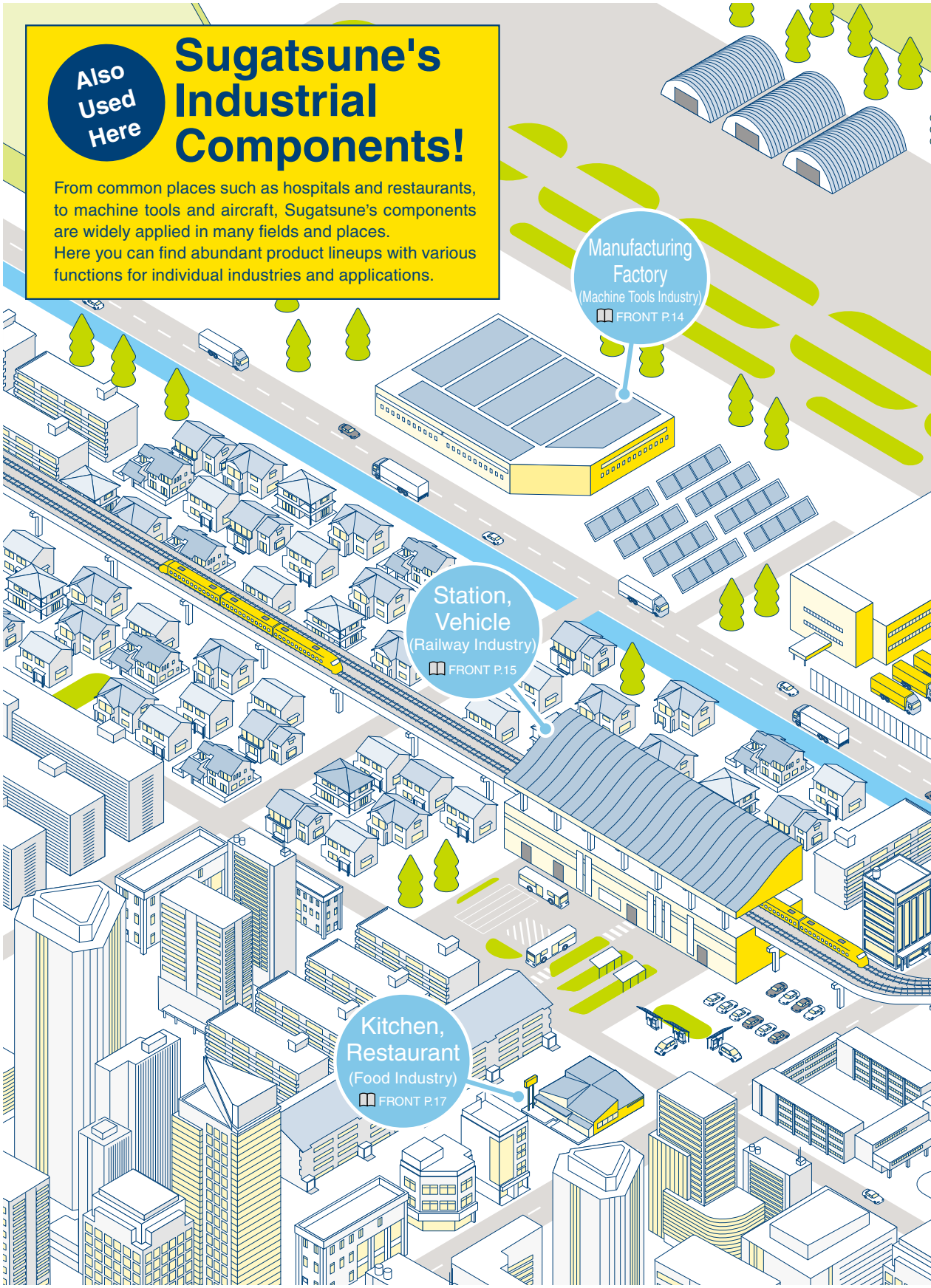


SUGATSUNE

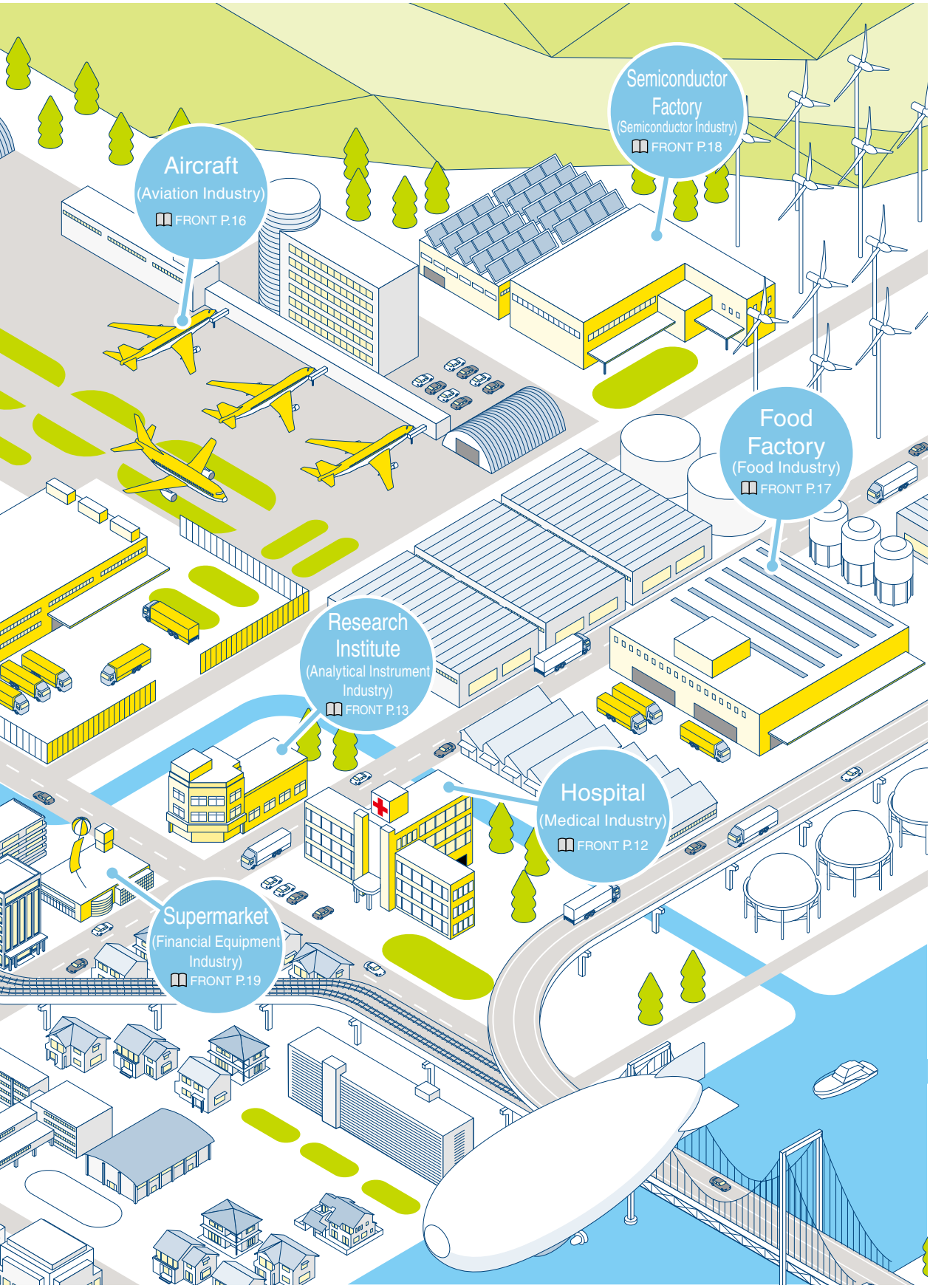
Also Used Here

Sugatsune's Industrial Components!

From common places such as hospitals and restaurants, to machine tools and aircraft, Sugatsune's components are widely applied in many fields and places.
Here you can find abundant product lineups with various functions for individual industries and applications.



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Updated 2017.10.27

Hospital

From the equipment of the operation room to the cabinets for the wards.
Our products enhance the safety and comfort of both patients and staff.

Operation Room

For biological information monitor



Exactly stopping in an easy-to-view direction
Torque Hinge (Dual Axis)
P.29

For anaesthesia machine



Easy lock lever operation
Dual Brake System Caster
P.762

Ward

For cabinet



Silent & soft closing
Soft-close Slide
P.404

Corridor

For nurse cart



Easy lock lever operation
Dual Brake System Caster
P.761

For information terminal



Slowly closing once lifted a little
Self-close Stay
P.236

For drip stand

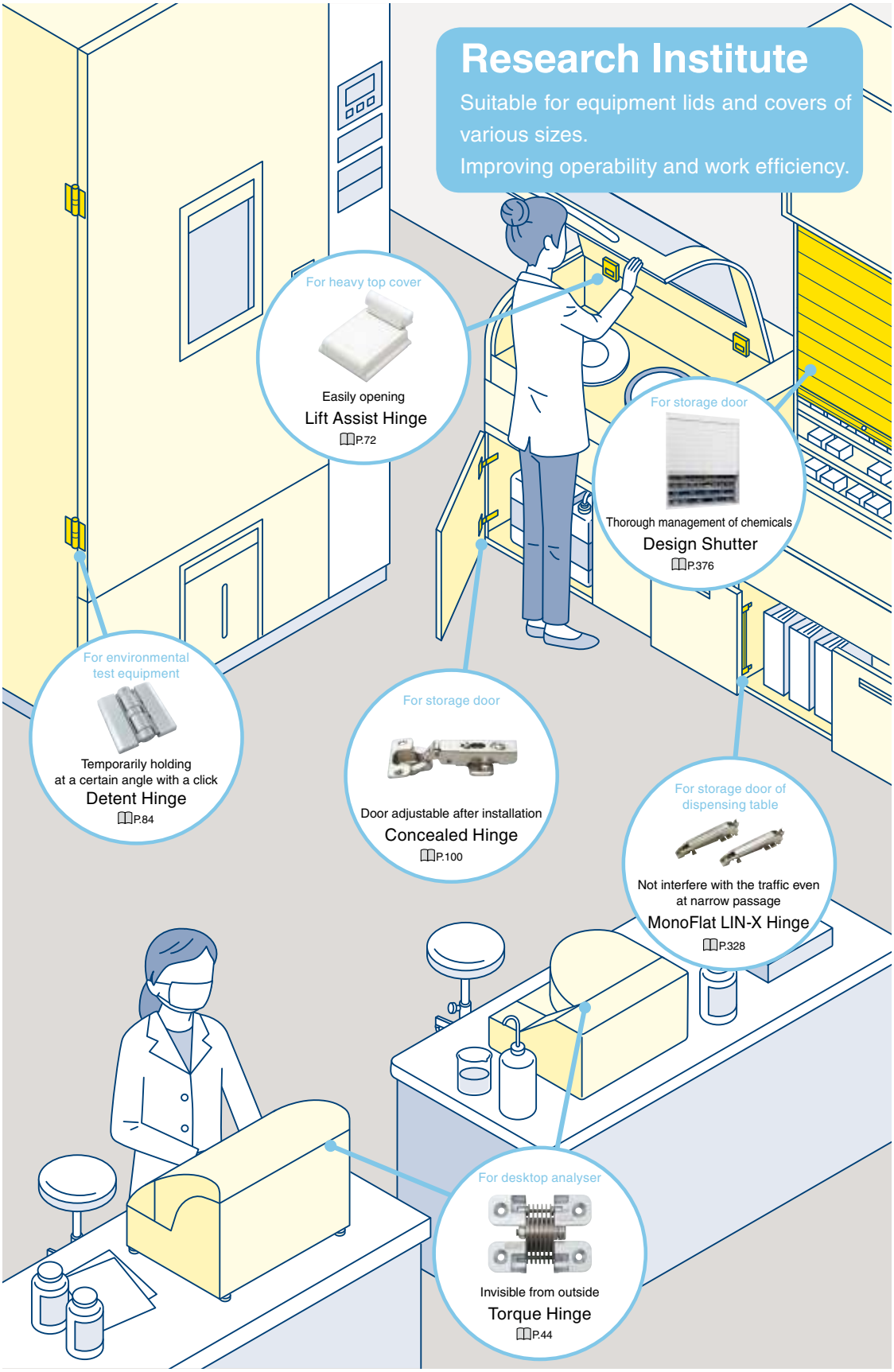


Easy-to-clean flat surface
Base
P.836

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Research Institute

Suitable for equipment lids and covers of various sizes.
Improving operability and work efficiency.



For heavy top cover

Easily opening
Lift Assist Hinge
P.72

For storage door

Thorough management of chemicals
Design Shutter
P.376

For environmental test equipment

Temporarily holding at a certain angle with a click
Detent Hinge
P.84

For storage door

Door adjustable after installation
Concealed Hinge
P.100

For storage door of dispensing table

Not interfere with the traffic even at narrow passage
MonoFlat LIN-X Hinge
P.328

For desktop analyser

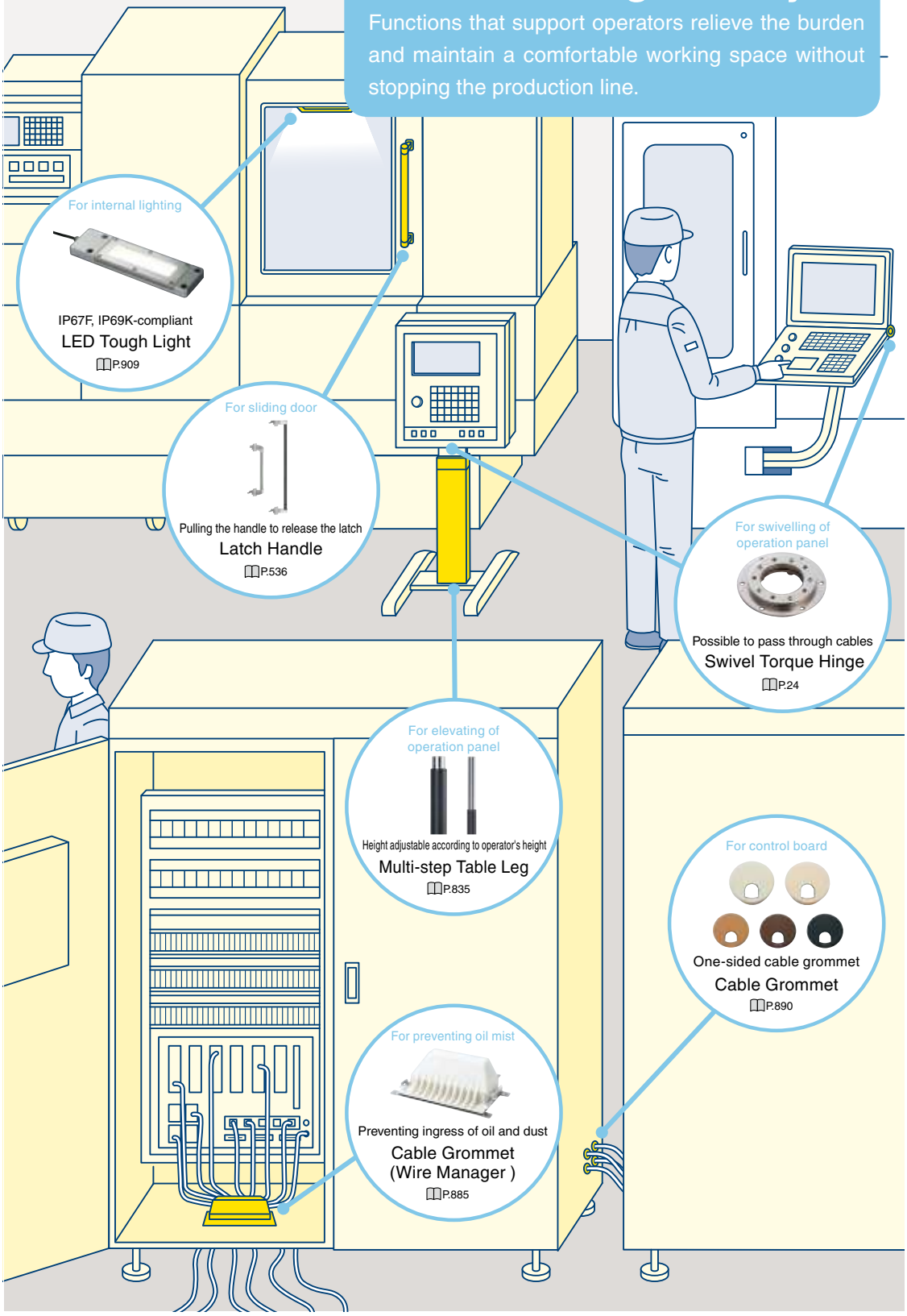
Invisible from outside
Torque Hinge
P.44

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SUGATSUNE

Manufacturing Factory

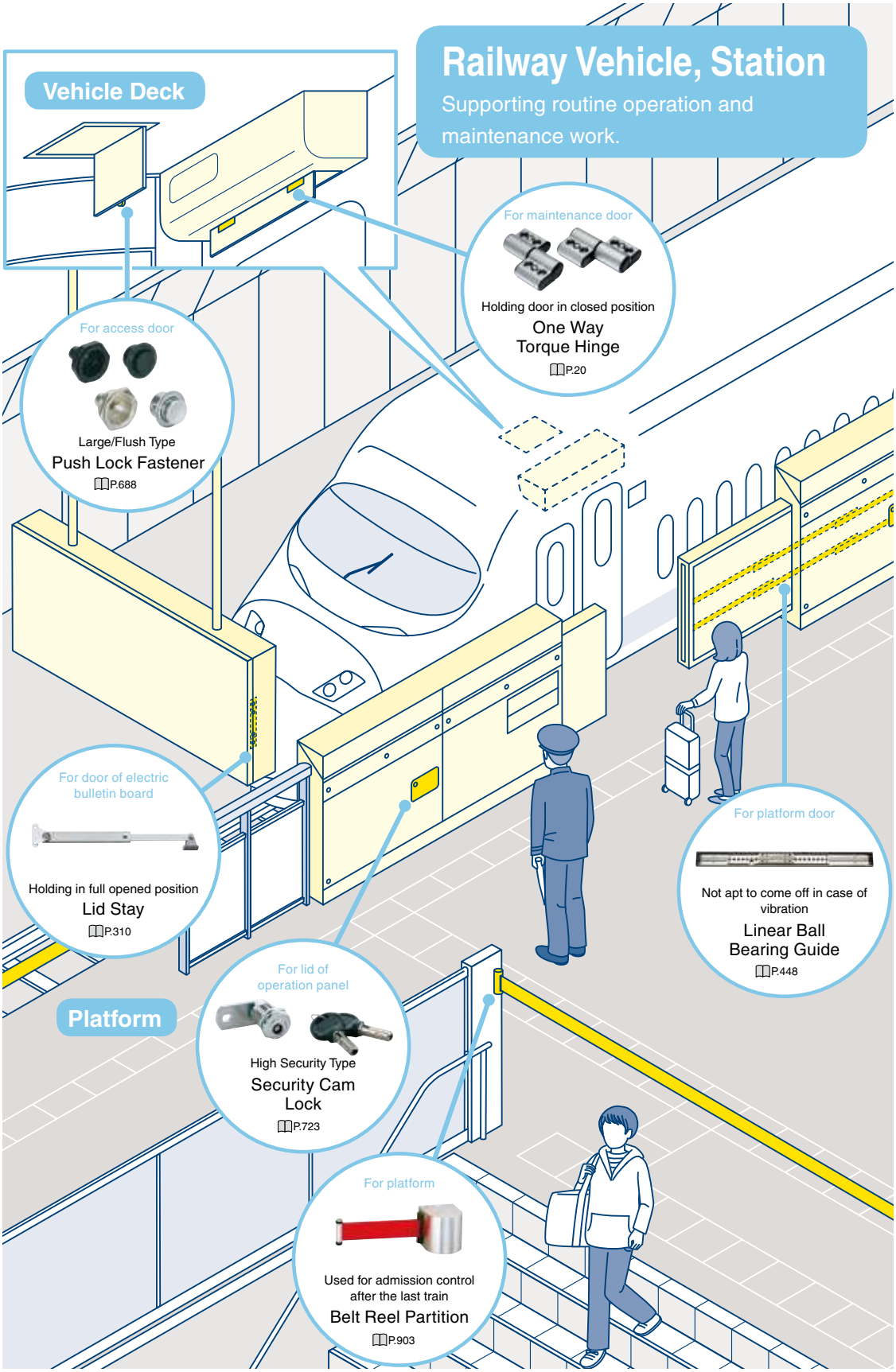
Functions that support operators relieve the burden and maintain a comfortable working space without stopping the production line.



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Railway Vehicle, Station

Supporting routine operation and maintenance work.

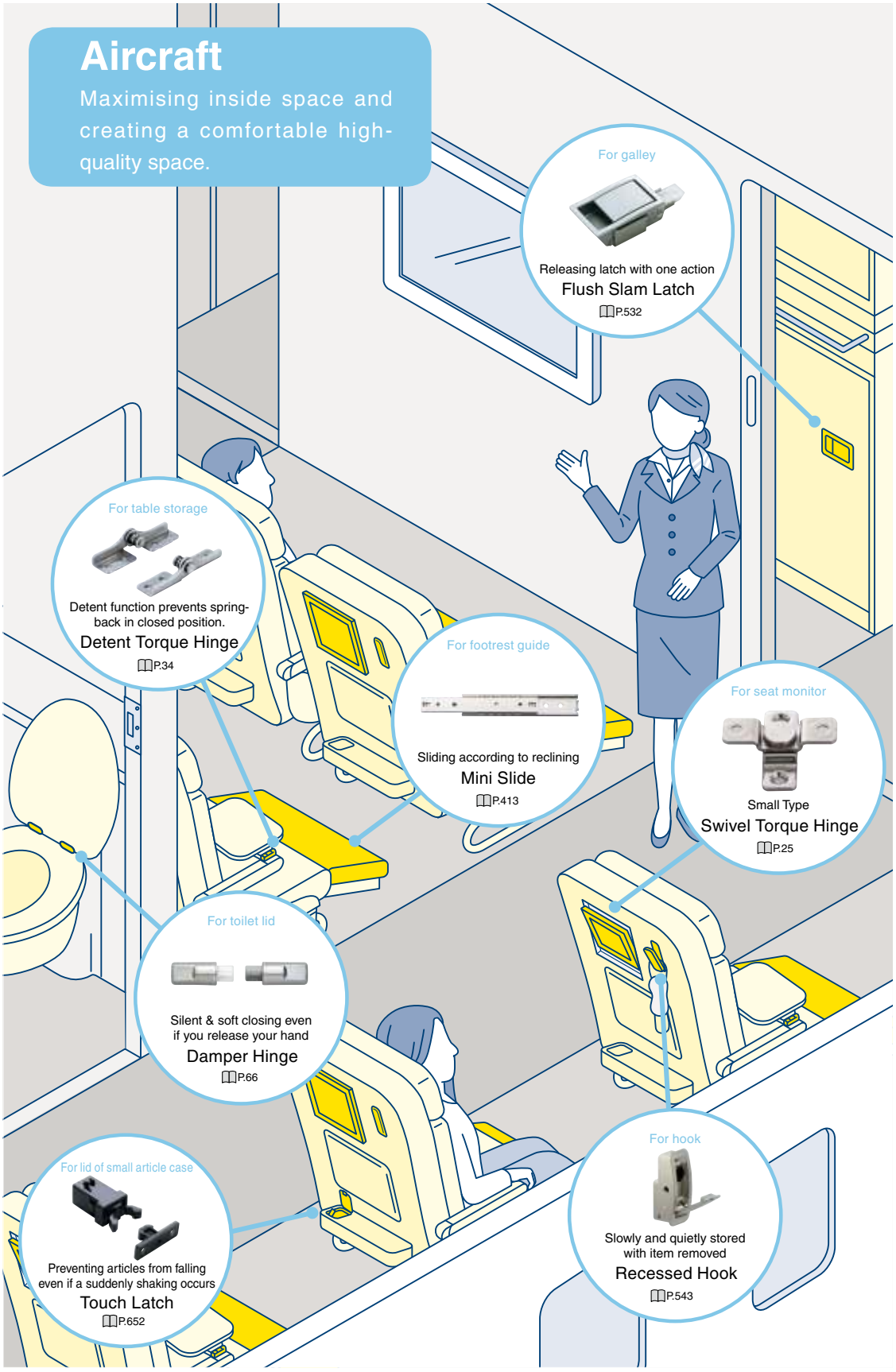


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Aircraft

Maximising inside space and creating a comfortable high-quality space.



For galley

Releasing latch with one action
Flush Slam Latch
P.532

For table storage

Detent function prevents spring-back in closed position.
Detent Torque Hinge
P.34

For footrest guide

Sliding according to reclining
Mini Slide
P.413

For seat monitor

Small Type
Swivel Torque Hinge
P.25

For toilet lid

Silent & soft closing even if you release your hand
Damper Hinge
P.66

For lid of small article case

Preventing articles from falling even if a suddenly shaking occurs
Touch Latch
P.652

For hook

Slowly and quietly stored with item removed
Recessed Hook
P.543

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Food Factory, Kitchen

Reducing the risk of foreign matter ingress for the sake of hygiene.

Food Factory

For production line cover



Covered with blue rubber for easy finding

Sealed Magnetic Catch

P.623

For slicer cover



Highly corrosion-resistant stainless steel + anti-rust coating

Magnetic Catch

P.621

For control board



Stopping door exactly in any position

Torque Hinge (Concealed)

P.22

For oven door



Suitable for up to about 250˚C

Magnetic Catch

P.608

For door of cooking table



No outward projection of door secures the traffic line.

MonoFlat LIN-X Hinge

P.328

For refrigerator door



Smooth and beautiful shape

Aluminium Door Handle

P.470

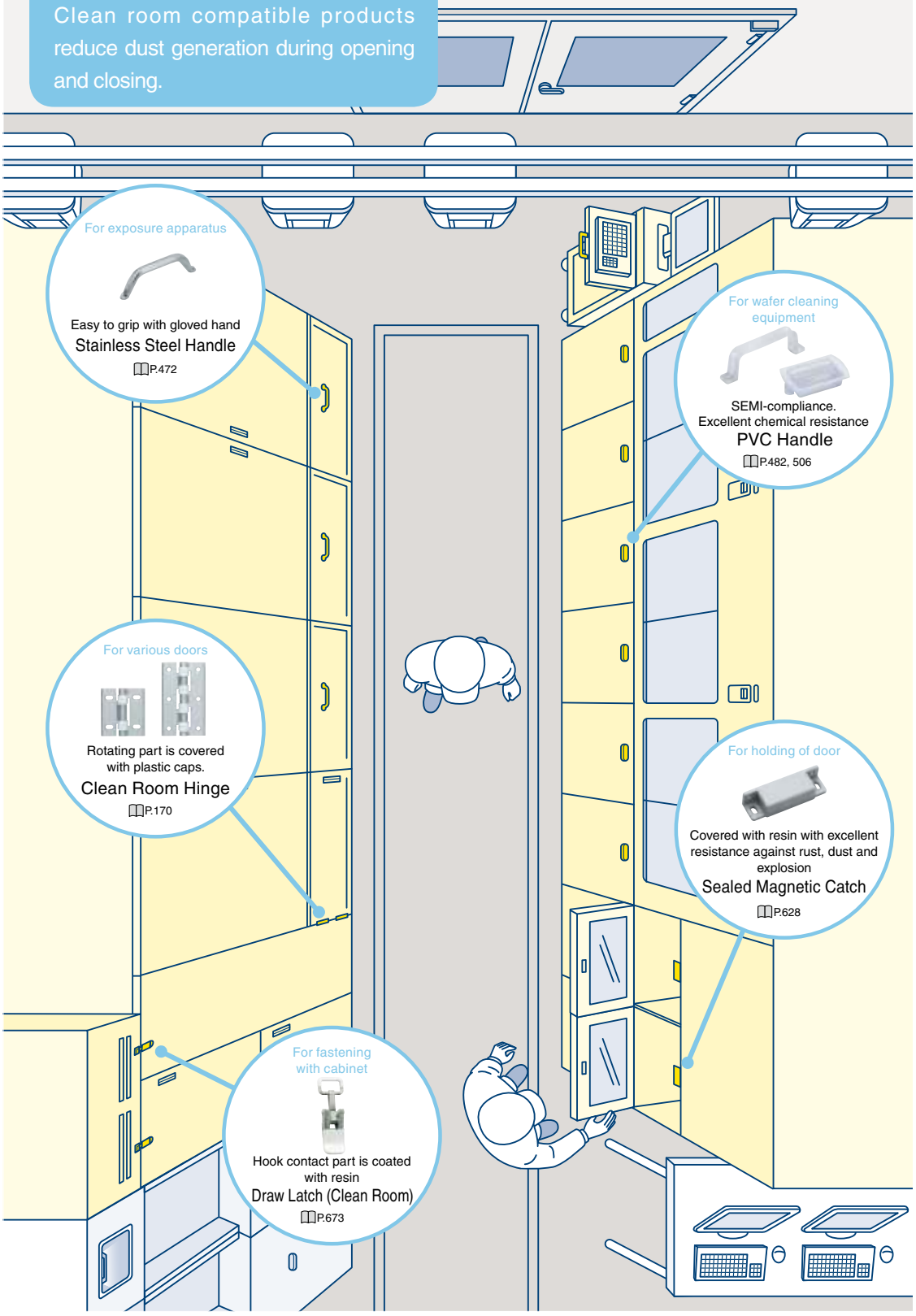
Kitchen

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SUGATSUNE

Semiconductor Factory

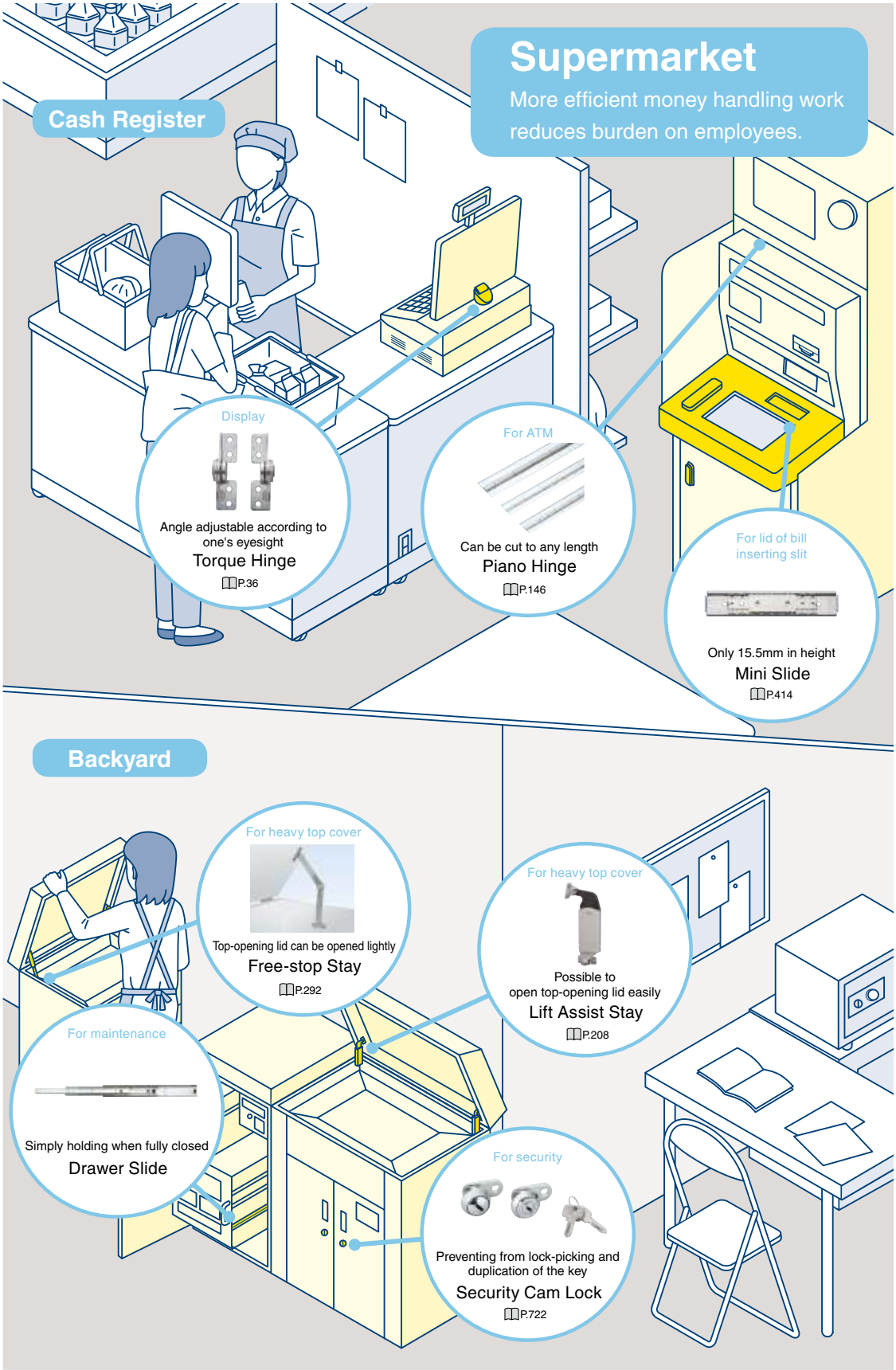
Clean room compatible products reduce dust generation during opening and closing.



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Supermarket

More efficient money handling work reduces burden on employees.



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SUGATSUNE

Aluminium Frame × Industrial Components

Exclusive design for aluminium frame provides easy installation!
With these parts, equipment and workbenches can be used more easily!

Aluminium Frame Support System AS Series



※Aluminium frame not included.

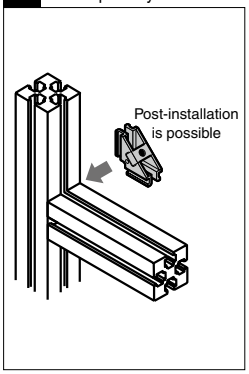
For aluminium frame assembly and reinforcement.

Aluminium frames can be easily fastened with only 1 screw! Corner Connector PJ One-touch Connector (Post-installation Type)

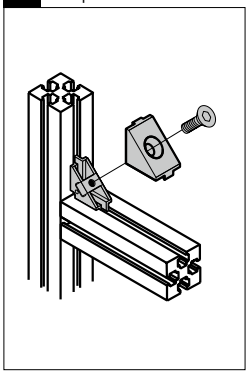
1 Pick up the supplied inner connector



2 Simply fit it in the groove to temporarily fasten

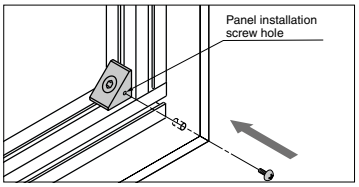


3 Fix the cover with screw to complete the installation





Also for double-groove (post-installation not available)



Corner connector with panel installing hole also available

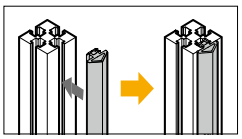
For preventing injury and product damage. Easy installation with 1 screw!
Corner Cap AS-C





Just fit it in the groove of the aluminium frame
Rubber Gasket AS-PAA

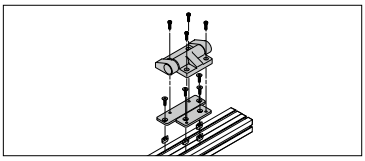




Reduces noise when closing the sliding door.

For installation of industrial components.

Just this, firmly fixed! Stainless Steel AS Nut (Post-installation Type)

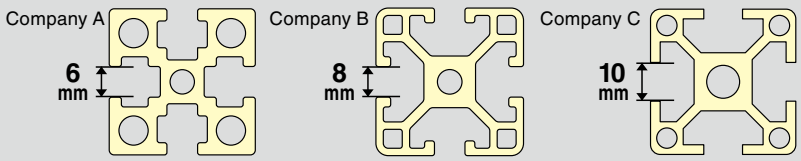






Applicable Groove Width and Shape

Possible to install to aluminium frames other than the ones on the right. Please contact us.



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AS SYSTEM SERIES INDEX
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Application Example of Aluminium Frame Support System As Series

1 Select Parts

Select the industrial components to be installed to the aluminium frame. Refer to FRONT P.22~23 for the system construction example.
AS parts set (brackets, mounting screws, AS nuts, etc.) used for installing to aluminium frame and single parts are available.

■Installation Parts (Example)



Sealed Magnetic Catch MC-JM63G
AS Parts Set (P.629)



Pivot Hinge AS-AF-25D
AS Parts Set (P.176)



Threaded Bolt Type Caster (P.768~)

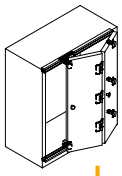


Levelling Glide (P.804~)

+



Glide Base AS Parts Set (P.832)



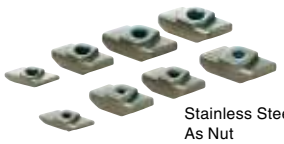
Folding Door System KF111-MH (P.362) (When installed to other position than the frame)

+



Bracket for Centre Hinge CH-75

+



Stainless Steel As Nut (P.706)

2 Assemble aluminium frames

Use corner connector PJ to assemble aluminium frames.

■Corner Connector PJ



One-touch Connector Post-installation Type (P.701)



One-touch Connector For Single-groove (P.702)

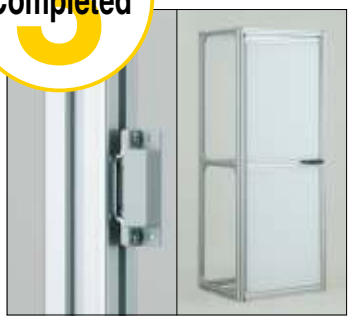


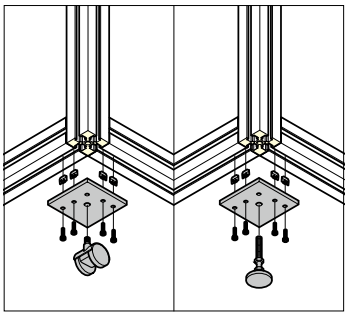
One-touch Connector For Double-groove (P.703)

3 Completed

Install the industrial components to the aluminium frame.

■Installation Example





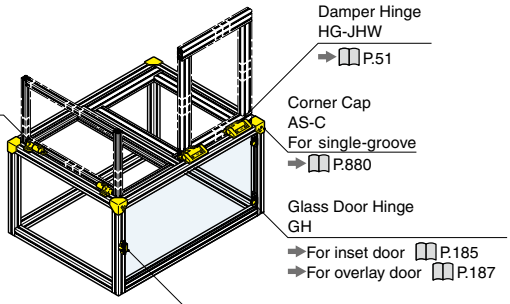


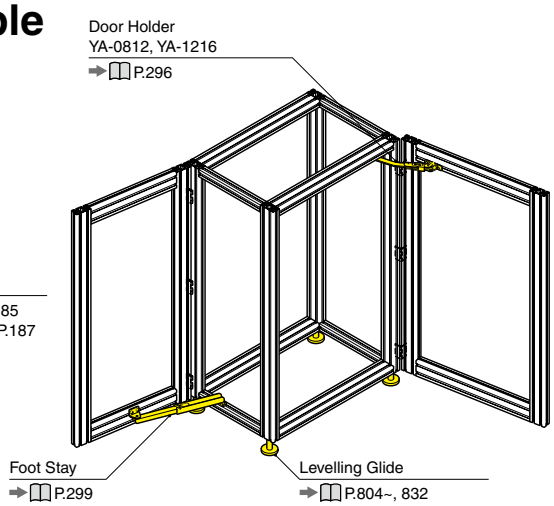
Refer to the next page for parts suitable for aluminium frames.

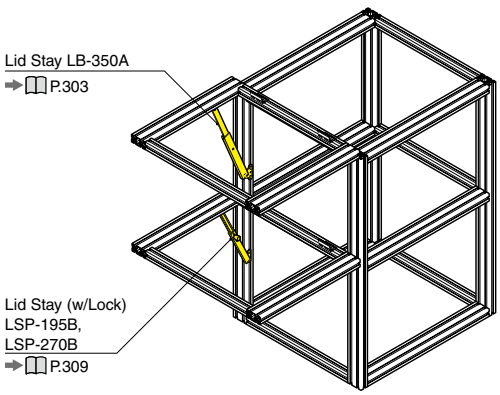
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ITEM NAME INDEX (END PART)

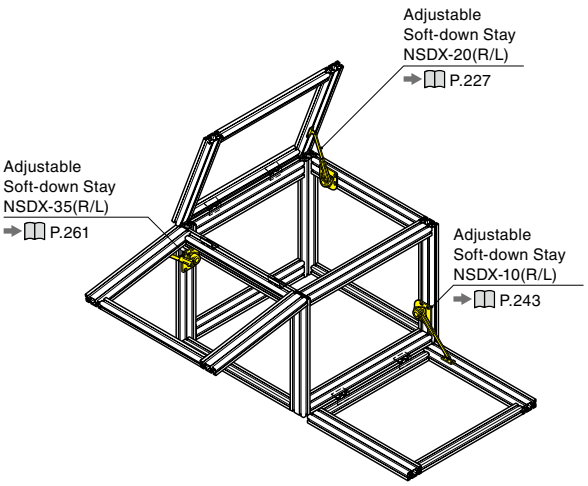
SUGATSUNE

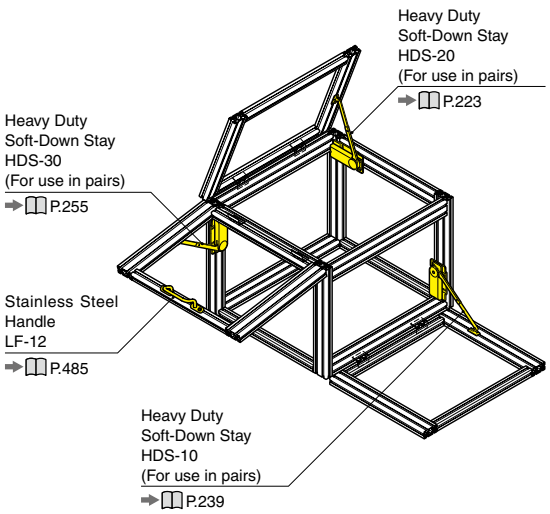
System Construction Example

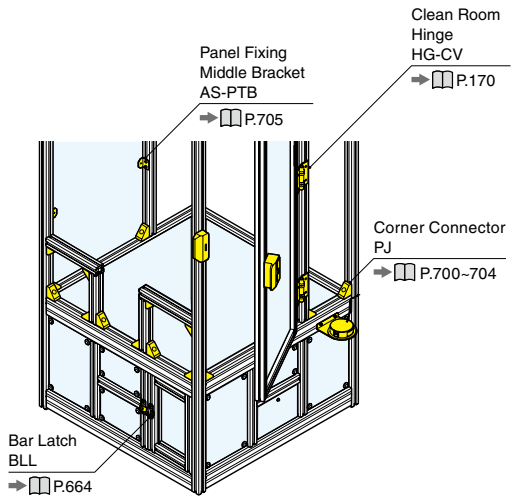








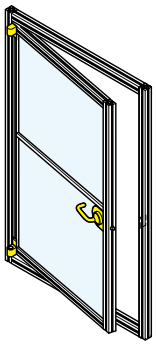




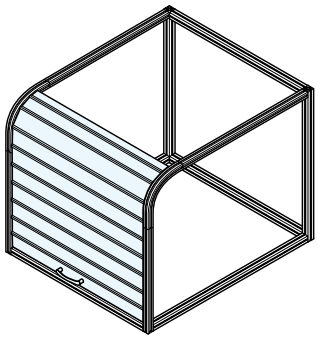
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Lever Handle
HCSA
No.240 P.711

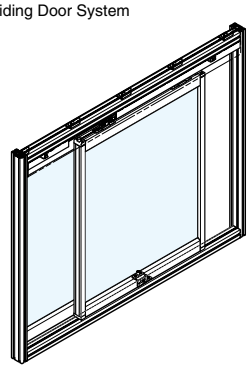
Pivot Hinge
AS-AF-25D
P.176



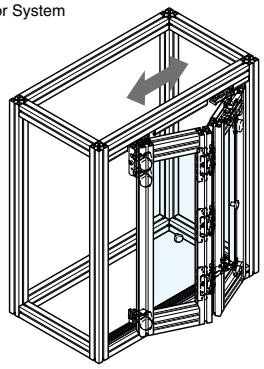
AS High Rigidity Cabinet Shutter
P.382



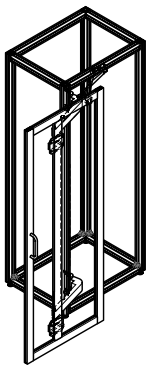
Aluminium Frame Sliding Door System
AF-25H
P.358



Slidable Folding Door System
KF111-R
P.366



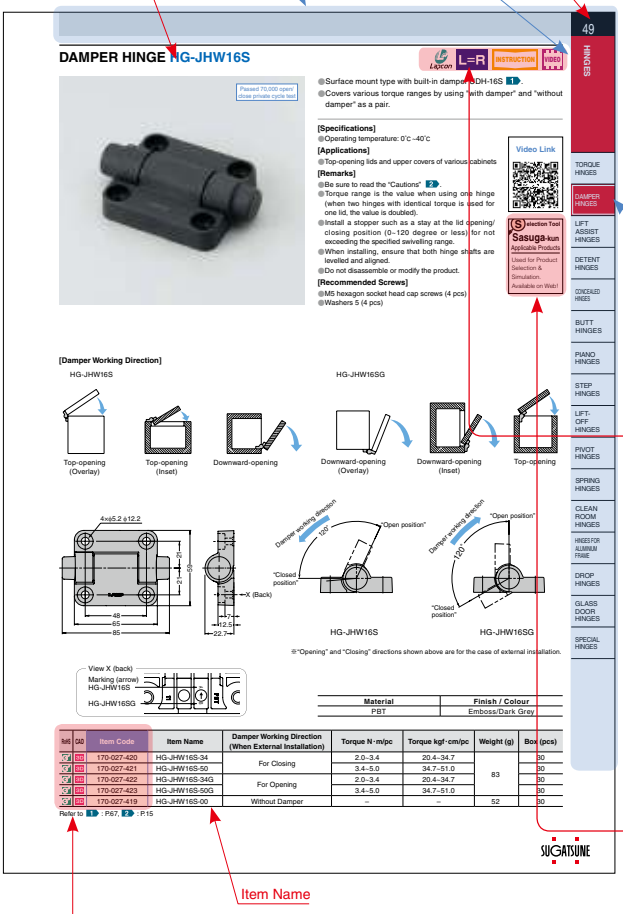
MonoFlat
FAD-44
P.342



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Description of Main Text



Main features displayed by icons.

Refer to FRONT P.25 for icon definitions.

Lapcon L=R INSTRUCTION VIDEO

Scan the QR code to view the videos of product features and movement, etc.



Video Sugatsune Channel

Selection Tool Sasuga-kun Corresponding Icon



Selection results



Graphs

With the selection tool Sasuga-kun, you can select the “Motion Design Tech” products meeting your requirements simply by entering values such as the size and weight of the lid or door. You can use it on our website.

RoHS	CAD	Item Code
G	3D	170-027-420
G	3D	170-027-421

Please specify the item code and quantity when ordering.
For each item name, it is possible to confirm if it is RoHS-compliant product and whether it has 3D CAD data.

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HOW TO USE THIS CATALOGUE

- All items, unless specified, are made to exact metric dimension.
- Changes in dimensions, finishes, packing, etc., and suspension of production may occur without notice.
- Our liability is limited to the replacement of the merchandise.

Icon Definitions

Icons are meant to symbolise the following content. They do not directly indicate the specifications or details.

Standard Icons

Products compliant with RoHS Directive (2011/65/EU).
It is based on in-house analysis and verification. Packing materials are excluded.
Products without this icon may be applicable.
In addition, four substances to be added from the end of July 2019 are under investigation. For further details, please contact us.

Products with 3D CAD data.

Products tested under specific conditions.
Refer to P.911 for details of the test method and use conditions.

E.g.
Reference number: In this case, test 1 is shown.

Products usable as both right ad left types.

PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE.

Product series equipped with Sugatsune's patented damper mechanism “Lapcon” .

Product series (AS series) used for aluminium frame.
For the AS series, please refer to FRONT P.20.

Products that have been processed to suppress the growth of bacteria.

Products with installation instructions.

Products made of titanium.

Products made of SUS316 stainless steel or equivalent materials.

Products made of stainless steel other than SUS316 or stainless cast steel.

Products for tempered glass.

Products supplied with a hex key.

Products with a video explaining its features and installation method.

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INDEX

HINGES

P. 2

- Torque Hinges
- Damper Hinges
- Lift Assist Hinges
- Detent Hinges
- Concealed Hinges
- Butt Hinges
- Piano Hinges
- Step Hinges
- Lift-off Hinges
- Pivot Hinges
- Spring Hinges
- Clean Room Hinges
- Hinges for Aluminium Frame
- Drop Hinges
- Glass Door Hinges
- Special Hinges



LID SUPPORTS & SMALL CABINET SYSTEMS

P.200

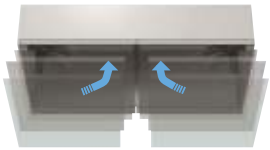
- Lift Assist Stays
- Soft Closing Stays
- Torque Stays
- Heavy Duty Locking Stays
- Foot Stays
- Lid Stays
- Other Stays
- Top-Opening
- Downward-Opening
- Upward-Opening
- Bottom-Opening
- Swing Door
- Lift-Up
- Lift-Down
- Up & Over
- Bi-Folding
- Over the Top



CABINET DOOR HARDWARE & SHUTTER DOORS

P.326

- Flush / Lateral Opening Door Systems
- Sliding Door Systems
- Folding Door Systems
- Shutter Door Systems



DRAWER SLIDES

P.394

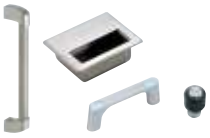
- Self & Soft-Close Slides
- Push-to-Open Slides
- Mini Slides
- Medium Size Slides (Stainless Steel)
- Medium Size Slides (Aluminium)
- Medium Size Slides (Others)
- Linear Slides
- Stainless Steel
- Aluminium
- Steel



HANDLES, PULLS & KNOBS

P.452

- Large Handles
- Handles (Front Screw Mount)
- Handles (Back Screw Mount)
- Recessed Pulls
- Pulls & Knobs
- Latch Handles



HOOKS & BRACKETS

P.540

- Recessed Hooks
- Latch Hooks
- Swing Hooks
- Small Hooks
- Large Hooks
- Panel Hanger
- Brackets
- Shelving Systems



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Updated 2017.10.27

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CATCHES, LATCHES & FASTENERS

P.600

- Magnetic Catches
- Knuckle Catches & Tension Catches
- Touch Latches
- Lever Latches
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- Draw Latches
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- Aluminium Frame Corner Connectors
- Door Dampers



LOCKS

P.718

- Cam Locks
- Dial Locks
- Glass Door Locks
- Cabinet Door Locks
- Other Locks



CASTERS

P.750

- Heavy Duty Casters
- Single Wheel Casters
- Twin Wheel Casters
- Casters with Levelling Glides
- Ball Casters
- Sliding Door Rollers



LEVELLING GLIDES & BASE

P.802

- Special Levelling Glide
- Heavy Duty Levelling Glides
- Medium-sized Levelling Glides
- Small Levelling Glides
- Base for Levelling Glides
- Case Feet
- Base



MISCELLANEOUS

P.840

- Bearings
- Swivels
- Multi-Purpose Lids
- Ventilators
- Multi-Purpose Caps
- Grommets
- Cable Grommets
- Gasket
- Belt Reel Partition
- Glass Point Fix
- Others
- LED Lights



SUGATSUNE

The best solutions for each industry summarised here!

Sugatsune's "Proposal by Industry"

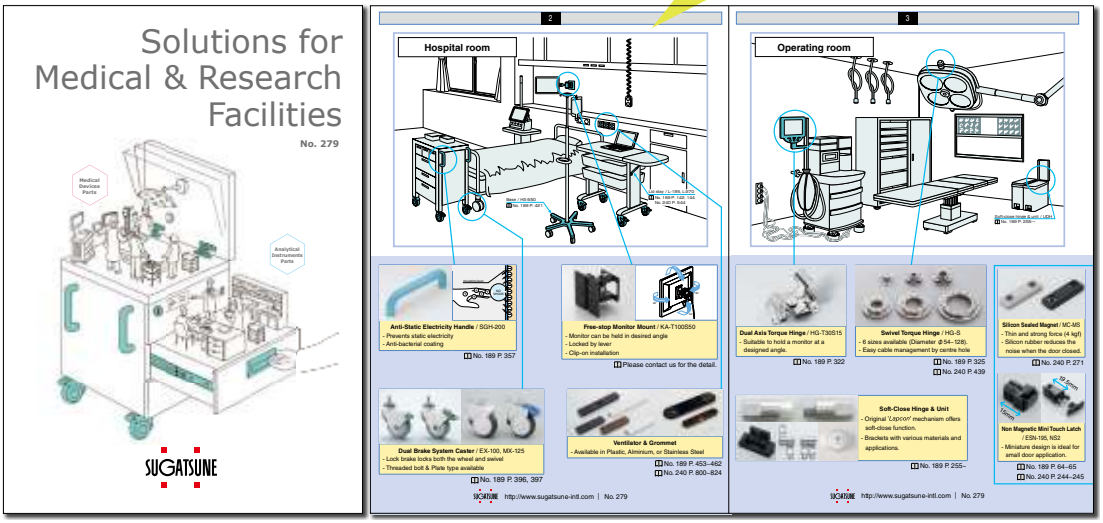
Please refer to the website and catalogues.

www.sugatsune-intl.com

Sugatsune Proposal by Industry

Solutions for Medical & Research Facilities No.279

The answer to such questions as "Is there such a product...?" "Can be used for that!" is immediate!



Mechanical Hardware for Machine Tools No.265



Component Hardware Catalogue for Rail Industry No.269



Please refer to the digital web catalogues in the "catalogue list" on our website.
Refer to 🕮 back cover for the catalogue list.

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SUGATSUNE

Updated 2017.10.27

LAMP®

HINGES

Hinges are a kind of hardware used for opening and closing doors or lids.

It is said that they look like butterflies, so they are also known as “CHOUTSUGAI (paired butterflies)” in Japanese.

A typical hinge consists of two leaves and one shaft, where the leaves revolve around the shaft.

In recent years, various kinds of hinges are developed, such as hinges with increased opening angle by increasing the number of axes (multiaxis), and hinges which can stop at any position or rotate slowly by introducing friction or resistance at the shaft, etc.

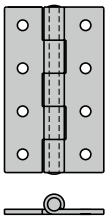
SUGATSUNE

Updated 2017.10.27

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Shapes of Hinges

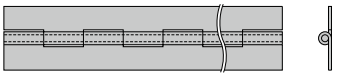
Butt Hinges



LSB P.136

Leaves are flat.

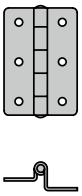
Piano Hinges



LSN P.146

Leaves are long in the axial direction.

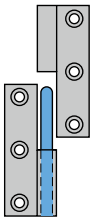
Step Hinges

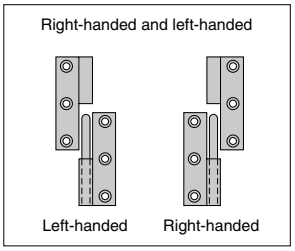


DH-60C P.149

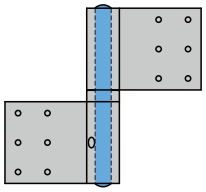
Can be used for overlay doors.

Lift-off Hinges





KN P.151



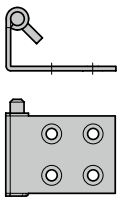
HG-KH P.159

Doors can be attached and detached, convenient for maintenance and door installation.

Pivot Hinges

Installed at the upper and lower ends of a door to reduce visible range of hinge.

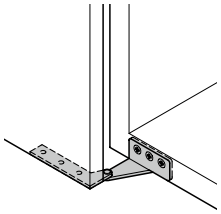
Detachable type



HG-PV-30C P.161

Doors are detachable on the action of spring.

Edge mount type



PL-65 P.162

Installed at the edge of door or cabinet.

Sugatsune Also Offers Made-to-order Products!

Function Addition



Adding detent mechanism on torque hinge

Specification Change



Changing to antibacterial material, adding antibacterial coating

Size Change



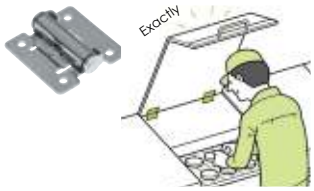
Extending piano hinge to 3000mm

For OEM and ODM request form with required items at consultation, refer to P.923~925

■Outline INDEX

Realising motion functions

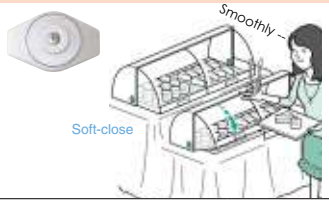
Torque Hinges (Free stop)



Freely stop doors, lids or covers at any position.

P.16~

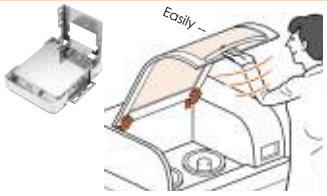
Damper Hinges (Smooth and quiet motion)



Lower opening/closing speed of doors or lids.

P.49~

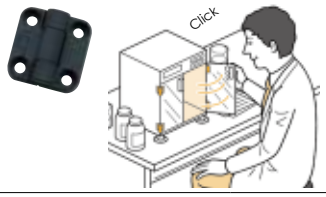
Lift Assist Hinges



Assist in opening/closing heavy lids or covers.

P.72~

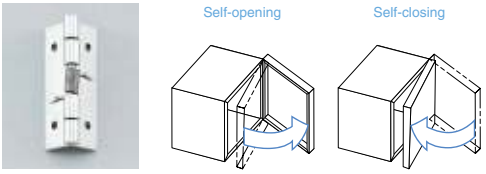
Detent Hinges



Temporarily hold doors, lids or covers at a certain angle.

P.80~

Spring Hinges

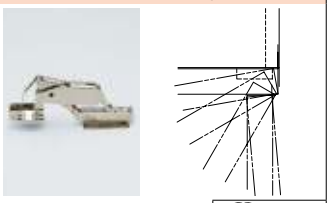


Automatically close or open.

P.164~

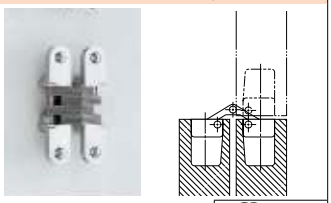
Designing opening/closing locus

Concealed Hinges



P.100~

Concealed Hinges



P.88~

Multi-shaft mechanism draws a unique locus in which the rotation centre moves.
Hinges are invisible from outside.

Search by Application

Clean Room Hinges



Prevent metal-to-metal wear and metal powder scattering.

P.169~

Hinges for Aluminium Frame



Special hinges fitting with the mounting groove of aluminium frame.

P.172~

Glass Door Hinges



Types for inset/overlay doors and types with/without catch are available.

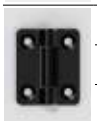
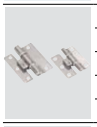
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Butt Hinges	P.136~
Piano Hinges	P.146~
Step Hinges	P.149~
Lift-off Hinges	P.150~
Pivot Hinges	P.161~
Drop Hinges	P.177~
Special Hinges	P.194~

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Torque Hinges

Picture	Item Name	Torque N·m	Feature	Page
	HG-VH8-T15	$0.15^{\pm 0.05}$	Damper hinges and spring hinges of the same type also available.	P.16
	HG-VH8-T35	$0.35^{\pm 0.1}$		
	HG-TQJ100	0~10	Friction in one direction only. Torque adjustable.	P.19
	HG-TQA90	$9.0^{+40\%}_{-20\%}$	Friction in one direction only.	P.20
	HG-MF-08	$0.0784^{\pm 25\%}$	Small plastic torque hinge.	P.47
	HG-MF-15	$0.147^{\pm 33\%}$		
	HG-MF-25	$0.245^{\pm 33\%}$		
	HG-TS03	$0.35^{+40\%}_{-20\%}$	Greaseless.	P.21
	HG-TS07	$0.7^{+40\%}_{-20\%}$		
	HG-TS15	$1.5^{+40\%}_{-20\%}$		
	SFTH-02-5	5	All Stainless.	P.21
	SFTH-03-9	9		
	SFTH-03-19	19		
	SFTH-05-35	35		
	SFTH-05-58	58		
	HG-TU03	$0.35^{+40\%}_{-20\%}$	Hinge is hidden when door is closed. Can be used horizontally or vertically.	P.22
	HG-TU07	$0.7^{+40\%}_{-20\%}$		
	HG-TUWA07	$0.7^{+40\%}_{-20\%}$	Greaseless	P.23
	HG-TUWA15	$1.5^{+40\%}_{-20\%}$		
	HG-ITS25	$2.5^{\pm 20\%}$	Supplied with mounting hole cover.	P.31
	HG-ITS35	$3.5^{\pm 20\%}$		
	HG-ITM50	$5.0^{\pm 20\%}$		
	HG-ITM70	$7.0^{\pm 20\%}$		
	HG-ITSF	–		
	HG-ITMF			
	HG-ITJ4080	$4^{\pm 20\%}$~8	Torque adjustable.	P.30
	HG-DTA4	$0.4^{\pm 20\%}$	No reaction (spring-back).	P.34
	HG-DTA8	$0.8^{\pm 20\%}$		
	HG-TWP15	1.5	For exterior use	P.32
	HG-TWP30	3.0		
	HG-ITHP07	0.7	Heat resistant	P.32
	HG-ITHP15	1.5		
	HG-ITHP30	3.0		

Picture	Item Name	Torque N·m	Feature	Page
	HG-TLS30-50-300	3	Greaseless	P.33
	HG-DTB4	$0.4^{\pm 20\%}$	No reaction (spring-back).	P.35
	HG-DTB8	$0.8^{\pm 20\%}$		
	HG-TA20	$2.0^{\pm 20\%}$	Types with wire hole also available.	P.36
	HG-TA30	$3.0^{\pm 20\%}$		
	HG-TA45	$4.5^{\pm 20\%}$		
	HG-TB7	$0.7^{\pm 20\%}$	–	P.37
	HG-TB20	$2.0^{\pm 20\%}$		
	HG-TB30	$3.0^{\pm 20\%}$		
	HG-TB45	$4.5^{\pm 20\%}$		
	HG-TA45H	$4.5^{\pm 20\%}$	With wire hole.	P.38
	HG-TC45H	$4.5^{\pm 20\%}$	With wire hole.	P.39
	HG-TAS15	$1.5^{\pm 20\%}$	All stainless	P.40
	HG-TAS25	$2.5^{\pm 20\%}$		
	HG-TAS40	$4.0^{\pm 20\%}$		
	HG-TASJ40	0~4.0	Torque adjustable	P.41
	HG-TBS15	$1.5^{\pm 20\%}$	All stainless	P.42
	HG-TBS25	$2.5^{\pm 20\%}$		
	HG-TBS40	$4.0^{\pm 20\%}$		
	HG-TBSJ40	0~4.0	Torque adjustable	P.43
	HG-RT30	$3^{\pm 20\%}$	Hinge is hidden when door is closed.	P.44
	HG-RT50	$5^{\pm 20\%}$		
	HG-KNT3	$0.3^{\pm 0.20}$	Lift-off type, easy to detach.	P.46
	HG-KNT7	$0.7^{\pm 0.25}$		
	HG-KNT16	$1.6^{\pm 0.3}$		
	HG-S7-MN	$0.7^{\pm 20\%}$	Rotates 360°. Centre hole for easy cable management (except for HG-S-MN).	P.25
	HG-S20-MN	$2.0^{\pm 20\%}$		

INDEX by Type

Torque Hinges

Picture	Item Name	Torque N·m	Feature	Page
	HG-S30-12	3.0±20%	Rotates 360°. Centre hole for easy cable management (except for HG-S-MN).	P.25
	HG-S50-12	5.0±20%		
	HG-S30-21	3.0±20%		P.26
	HG-S50-21	5.0±20%		
	HG-S50-34	5.0±20%		P.26
	HG-S70-34	7.0±20%		
	HG-S70-50	7.0±20%		P.27
	HG-S100-50	10.0±20%		
	HG-S50-75	5.0±20%		P.27
	HG-S70-75	7.0±20%		
	HG-T30S15	3.0±20% (Tilting) 1.5±20% (Swivelling)	Can hold in tilting or swivelling direction.	P.29
	HG-T70S30	7.0±20% (Tilting) 3.0±20% (Swivelling)		P.28
	HG-RNM30	3.0±20%	For transom window. Door detachment without tools.	P.45
	HG-RNM30-SET			

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Damper Hinges (Smooth and quiet motion)

Picture	Item Name	Torque N·m	Feature	Page
	HG-VH8-D3	0.022~0.038	Torque hinges and spring hinges of the same type also available.	P.16
	HG-JHW16S-34	2.0~3.4	Surface mount type.	P.49
	HG-JHW16S-50	3.4~5.0		
	HG-JHW16S-00	–		
	HG-JH25	3~5		P.52
	HG-JH35	5~7		
	HG-JHW50	3~5		P.50
	HG-JHW70	5~7		
	HG-JH14-50	3~5	Surface mount type. Supplied with stainless steel bracket.	P.59
	HG-JHM14-S-8	0.5~0.8	Surface mount type. HG-JHM14 can also be mounted at the bottom by using with bracket (sold separately).	P.57
	HG-JHM14-S-15	0.8~1.5		
	HG-JHM14-S-20	1.5~2.0		
	HG-JHM16-34	2~3.4		P.56
	HG-JHM16-50	3.4~5		
	HG-JHM20T-80BL	6~8		P.54
	HG-JHM20T-80WT			
	HG-JHM20T-80CR			
	HG-JHM20-80	6~8		P.55
	HG-JHS9-S	0.027~0.043	Self-closing, Side mount type.	P.62
	HG-JHS9-U	0.027~0.043	Self-closing, Under mount type.	P.63
	HG-JHM9-S	0.027~0.086	Built-in bidirectional damper, Side mount type.	P.60
	HG-JHM9-U	0.027~0.086	Built-in bidirectional damper, Under mount type.	P.61
	HG-CSH63	–	Can hold at two opening angles of 0° and 120° where detent function works.	P.64
	HG-CSH63A(B)M	1~1.7		
	HG-CSH63A(B)H	1.7~2.5		
	UDH-14A(B)LS	0.5~0.8	Can be detached as a single unit.	P.68
	UDH-14A(B)MS	0.8~1.5		
	UDH-14A(B)TS	1.5~2.0		
	UDH-A(B)MS-G	1.5~2.5		P.66
	UDH-A(B)HS-G	2.5~3.5		
	UDH-A(B)GS-G	3.0~4.0		
	UDH-A(B)MP-G	1.5~1.8		
	UDH-A(B)HP-G	1.8~3.5		

Picture	Item Name	Torque N·m	Feature	Page
	UDH-16SA(B)M	1~1.7	Can be detached as a single unit.	P.67
	UDH-16SA(B)H	1.7~2.5		
	UDH-16NA(B)MS	1.7~2.4		P.68
	UDH-16NA(B)HS	2.2~3		
	URD8-3	0.022~0.038	Recess mount type.	P.69
	UDD-S	0.5~1.0	Can be mounted at the shaft of rotating lid, etc.	P.70
	UDD-M	1.0~2.0		
	UDD-H	2.0~3.0		

Lift Assist Hinges

Picture	Item Name	Torque N·m	Feature	Page
	HG-PA180-9	9±10%	Outside mount type. Torque adjustable.	P.74
	HG-PA200(201)-15	15±10%		P.75
	HG-PA200(201)-20	20±10%		
	HG-PA200(201)-25	25±10%		
	HG-PA270-35	35±10%		P.76
	HG-PA270-45	45±10%		
	HG-PA210-9	9±10%	Inside mount type. Torque adjustable.	P.77
	HG-PA230(231)-15	15±10%		P.78
	HG-PA230(231)-20	20±10%		
	HG-PA230(231)-25	25±10%		
	HG-JH210	–	Outside mount type.	P.79

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Detent Hinges

Butt Hinges

Picture	Item Name	Retaining Torque N·m	Detent Angle	Page
	HG-MPS2	0.26 0.145	−10° 120° 170°	P.82
	HG-YJ50	Approx. 0.49	90° each	P.83
	HG-FH128	10	60° 120°	P.84
	CH-75	–	0° 90° 180°	P.86
	HG-RCT15-C	40	0° 90°	P.86

Recess Mount

Picture	Item Name	O. D.	Remarks	Page
	MPH-20-5G2	ϕ5	–	P.80
	MPH-22G	ϕ6	–	P.80
	MPH-30	ϕ6	High Torque Type	P.81
	MPH-30-5TN	ϕ5	High Torque Type	P.81

Others (Special Type)

Picture	Item Name	Retaining Torque N·m	Page
	HG-YC105	Approx. 1.18	P.85
	KA-60	Load Capacity 25	P.87

Concealed Hinges

Picture	Item Name	Door Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Page
	R	–	Max. 4 Max. 7	–	P.88
	RK-50	Min. 15	Max. 2.6	–	P.89
	INO-66	–	Max. 30	Max. 50	P.89
	HES3D-E190	Min. 38	Max. 100	Max. 125	P.92
	HES3D-160	Min. 35	Max. 45	Max. 60	P.93
	HES3D-120	Min. 29	Max. 30	Max. 40	P.94
	HES3D-90	Min. 23	Max. 12	Max. 16	P.95

Picture	Item Name	Door Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Page
	HES3D-70	Min. 19	Max. 9	Max. 12	P.96
	HES3D-V135LGR	Min. 30	Max. 40	Max. 55	P.97

Bracket for Sheet Metal HES3D-E190BKT ····· P.98
Bracket for Sheet Metal HES3D-120BKT ····· P.98
Installation Template HES3D-TMP ····· P.99

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Concealed Hinges

Picture	Series	Recommended Door Thickness	Overlay	Quick Detachment	Page
	HT160	30	15	O	P.132 ~
	H95	30	13.6	O	P.134 ~
	J95	18~30	25 16 Inset	O	P.100 ~
	100	15~20	19 14 9	–	P.112 ~

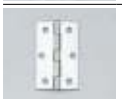
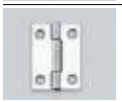
Picture	Series	Recommended Door Thickness	Overlay	Quick Detachment	Page
	170	15~20	19 9 Inset	–	P.118 ~
	H160	18~34	28 23 18 Inset	–	P.121 ~
	T-90-200	15~18	15~18	–	P.193

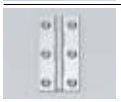
Door Dimensions and Number of Hinges ····· P.110
How to Use the Locus Chart ····· P.111
Examples of Installation to Sheet Metal ····· P.131

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Picture	Item Name	Load Capacity N/2 pcs		Page
	LSA, LSB	69 88 157	186 333 363	P.136
	LSF	275 353 500 667		P.136
	KHA	49 59 69 88 108	118 137 147 167 186	P.137
	KHB	49 59 78 98 118	127 147 157 177 206	P.137
	F-A	20 29 39	59 69	P.138
	28300, 28400	167 226		P.138
	50704, 50706	118		P.138
	D-S-A	78 98 137	196 226 284	P.139
	D-S-B	49 59 88	127 186 235	P.139
	D-S-C	20 29 49 59		P.140
	HG-BF1	157		P.140
	28000, 28500	167		P.140
	27800, 27900	167		P.141
	SYR140	69		P.141
	LSS	245		P.141

Picture	Item Name	Load Capacity N/2 pcs		Page
	SBR40	69		P.142
	SR75, SR75B	186		P.142
	3535SS, 4040SS	333 431		P.142
	3535WSS, 4040WSS	245 294		P.142
	4545BSS	481		P.143
	SR	69 88		P.143
	KHBL	167 255		P.143
	FHS	186 226 275	490 569 637	P.144
	LSK-1157	127 235 284 333	500 579 647	P.144
	D-CH	177 275 294		P.145
	OLYA	127 245		P.145
	YHS	59 98		P.145
	HG-CV	147 226		P.170
	HG-P100	98		P.172
	AS-HG-IS	69 157 333		P.172
	AS-HG-AL	147		P.174

Picture	Item Name	Load Capacity N/2 pcs	Page
	AS-HG-SUS	294	P.175

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Piano Hinges

Picture	Item Name	Load Capacity N/pc	Page
	LSN	137 628 255 667 275 716 304 745 392 981 461 1370 520 1770 598 2550	P.146

Picture	Item Name	Load Capacity N/pc	Page
	LH	216 539 255 569 324 598 431 618	P.147
	LHN	549 588 745 834	P.147

Picture	Item Name	Load Capacity N/pc	Page
	HG-MH	–	P.148

Step Hinges

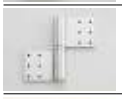
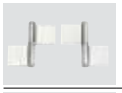
Picture	Item Name	Load Capacity N/2 pcs	Page
	ROH-80	–	P.149
	KOH-80	127	P.149

Picture	Item Name	Load Capacity N/2 pcs	Page
	DH60N	147	P.149
	DH-60C	108	P.149

Picture	Item Name	Load Capacity N/2 pcs	Page
	28100	167	P.150

Lift-off Hinges

Picture	Item Name	Load Capacity N/2 pcs	Page
	NH-40	69	P.151
	SNR65	177	P.152
	SNRK65	167	P.152
	BN	88 118	P.153
	HNH	127 177 245 422	P.154
	HG-CV-65N	108	P.171
	AS-HG-AL-N	78	P.173
	HG-OT	29 59 69	P.160
	LSX-100	294	P.150
	KN	78 108 167	P.151

Picture	Item Name	Load Capacity N/2 pcs	Page
	HG-LSH	1961 2177	P.158
	HG-KM	2940 4610 4810	P.159
	HG-KH	2940 4610 4810	P.159
	ZL-1701	314 559	P.155
	HG-CV-127	981	P.169
	SKH	78 118 284	P.153
	S-6166-2	–	P.156
	S-6166-6	–	P.156
	S-6173-2	–	P.157
	S-6173-5	–	P.157

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Pivot Hinges

Detachable Type

Picture	Item Name	Material	Page
	HG-PV-30C	Stainless Steel	P.161
	HG-PV60AC	Stainless Steel	P.161

Edge mount type

Picture	Item Name	Material	Page
	PL-65	Stainless Steel	P.162
	WP1, WP3	Stainless Steel	P.162
	PL-60	Stainless Steel	P.163
	PP-60	Stainless Steel	P.163

Spring Hinges

Picture	Item Name	Load Capacity N/2 pcs	Page
	HG-SHL	39 59	P.164
	HG-SH	9.8 29 59 69	P.164
	SH-C	88 157 196	P.165
	HG-BF3-2	69	P.165

Picture	Item Name	Load Capacity N/2 pcs	Page
	SA	196 392	P.166
	ST150-6314-05	400	P.167
	PM120	200	P.167
	DA	–	P.168

Clean Room Hinges

Picture	Item Name	Load Capacity N/2 pcs	Page
	HG-CV-127	981	P.169
	HG-CV	147 226	P.170

Picture	Item Name	Load Capacity N/2 pcs	Page
	HG-CV-65N	108	P.171
	HG-P100	98	P.172

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Picture	Item Name	Load Capacity N/2 pcs	Page
	AS-HG-IS	69 157 333	P.172
	AS-HG-AL-N	78	P.173
	AS-HG-AL	147	P.174

Picture	Item Name	Load Capacity N/2 pcs	Page
	AS-HG-SUS	294	P.175
	AS-AF-25D	–	P.176

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LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

INDEX by Type

Drop Hinges

Picture	Item Name	Door Thickness	Page
	SDH-001	16~20	P.178
	SDH-P	16~20	P.177

Picture	Item Name	Door Thickness	Page
	MH-30	Max. 21	P.179
	MH-40	Max. 21	P.179

Glass Door Hinges

Picture	Item Name	Door Size	Page
	XL-GH03-48-0	Door Width: Max. 650 Door Height: Max. 900 Glass Thickness: 5, 6, 8	P.180
	XL-GH03-48-8	Door Width: Max. 650 Door Height: Max. 900 Glass Thickness: 5, 6, 8	P.180
	GH-456C	Door Width: Max. 600 Door Height: Max. 1200 Glass Thickness: 5, 6, 8	P.181
	GH-456N	Door Width: Max. 600 Door Height: Max. 1200 Glass Thickness: 5, 6, 8	P.181
	GH36-NCR	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.182
	GH34-0	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.183
	GH34-0CR-K	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.183

Picture	Item Name	Door Size	Page
	GH34-8CR-K	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.184
	GHC34-8CR-K	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.184
	GH34-0SS	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.185
	GH34-8SS	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.187
	GH34-8	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.189
	GHC34-8	Door Width: Max. 450 Door Height: Max. 700 Glass Thickness: 4, 5, 6	P.191

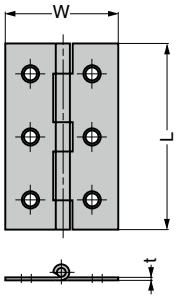
Special Hinges

Picture	Product Name	Page
	Stainless Steel Double Action Hinge HG-BH	P.194
	Stainless Steel Corner Fastener Hinge STH-C64	P.194
	All Stainless Steel Hinge with Catch Stay HG-YS65C	P.195

Picture	Product Name	Page
	MONITOR BRACKET KA-T100S50	P.196
	MONITOR BRACKET TV	P.198
	MONITOR BRACKET KA-150	P.198

Size and Load Capacity Table by Material and Thickness

Butt Hinges



Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
0.8	25.5 × 21	20	D-S-25C	P.140
	31.5 × 22.5	29	D-S-32C	P.140
	38 × 26	29	D-S-38C	P.140
	51 × 31	49	D-S-51C	P.140
	51 × 34.5	49	D-S-51B	P.139
	64 × 33	59	D-S-64C	P.140
	64 × 40	59	D-S-64B	P.139
1	76 × 46	88	D-S-76B	P.139
1.2	38 × 82	59	YHS-38	P.145
	89 × 56	127	D-S-89B	P.139
1.3	51 × 39	78	D-S-51A	P.139
	64 × 42.5	98	D-S-64A	P.139
1.5	25 × 32	49	KHA-25C(N)	P.137
	30 × 32	59	KHA-30C(N)	P.137
	32 × 90	59	YHS-32	P.145
	40 × 30	69	AS-HG-IS40	P.172
	40 × 32	69	KHA-40C(N)	P.137
	40 × 35	69	LSA(B)-40	P.136
	40 × 35	69	SBR40	P.142
	40 × 35	69	SR40	P.143
	50 × 32	88	KHA-50C(N)	P.137
	50 × 35	88	LSA(B)-50	P.136
	50 × 35	88	SR50	P.143
	51 × 116	98	YHS-51	P.145
	60 × 32	108	KHA-60C(N)	P.137
	65 × 32	118	KHA-65C(N)	P.137
	75 × 32	137	KHA-75C(N)	P.137
	76 × 50	137	D-S-76A	P.139
	80 × 32	147	KHA-80C(N)	P.137
	90 × 32	167	KHA-90C(N)	P.137
	100 × 32	186	KHA-100C(N)	P.137
	102 × 66.5	186	D-S-102B	P.139
	127 × 82	235	D-S-127B	P.139
1.8	89 × 56.5	196	D-S-89A	P.139
	102 × 70	226	D-S-102A	P.139
	127 × 82	284	D-S-127A	P.139
2	28 × 140	69	SYR140	P.141
	51 × 128	127	OLYA-128S	P.145
	65 × 50	157	LSA(B)-65	P.136
	65 × 50	157	AS-HG-IS65	P.172
	65 × 50	157	HG-BF1	P.140
	75 × 50	186	LSA(B)-75	P.136
	75 × 50	186	SR75(B)	P.142

Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
2.5	51 × 50	127	LSK-1157-1	P.144
	89 × 89	245	3535WSS	P.142
	101.6 × 101.6	294	4040WSS	P.142
3	50 × 50	186	FHS-50	P.144
	60 × 64	226	FHS-60	P.144
	64 × 64	235	LSK-1157-2	P.144
	65 × 56	245	LSS-H(Z)-A(N)65	P.141
	65 × 185	245	OLYA-185S	P.145
	75 × 70	275	FHS-75	P.144
	76 × 74	284	LSK-1157-3	P.144
	89 × 87	333	LSK-1157-4	P.144
	89 × 89	333	3535SS	P.142
	90 × 60	333	LSA(B)-90	P.136
	90 × 60	333	AS-HG-IS90	P.172
	100 × 60	373	LSA(B)-100	P.136
3.4	101.6 × 101.6	431	4040SS	P.142
	114.3 × 114.3	481	4545BSS	P.143
4	100 × 100	490	FHS-100	P.144
	101.6 × 99	500	LSK-1157-5	P.144
	125 × 100	569	FHS-125	P.144
	127 × 119	579	LSK-1157-6	P.144
	150 × 120	637	FHS-150	P.144
	152 × 143	647	LSK-1157-7	P.144
	38 × 39	167	28300	P.138
	50 × 50	226	28400	P.138
	58 × 38	167	27900	P.141
	68 × 43	294	AS-HG-SUS-M3020	P.175
	68 × 50	294	AS-HG-SUS-M3030	P.175
	68 × 57	294	AS-HG-SUS-M3040	P.175
	68 × 64	294	AS-HG-SUS-M4040	P.175
	72 × 38	167	27800	P.141
	74 × 38	167	28500	P.140
	104 × 38	167	28000	P.140
	105 × 26.5	118	50704	P.138
	158 × 26.5	118	50706	P.138
5	50 × 50	275	LSF-50	P.136
	65 × 65	363	LSF-65	P.136
6	75 × 75	500	LSF-75	P.136
	100 × 100	618	LSF-100	P.136

Thickness (t)	Material: Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
0.8	25 × 20	20	F-25A	P.138
	32 × 22	20	F-32A	P.138
	38 × 26	29	F-38A	P.138
	51 × 30	39	F-51A	P.138
1	64 × 33	59	F-64A	P.138
	76 × 41	69	F-76A	P.138
3	60 × 50	177	D-CH-60	P.145
	90 × 60	275	D-CH-90	P.145
	100 × 80	294	D-CH-100	P.145

Thickness (t)	Material: Aluminium Alloy			
	L × W	Load Capacity N/2 pcs	Item Name	Page
3.5	65 × 60	147	HG-CV-65(TNS)	P.170
	65 × 60	147	AS-HG-CV-65	P.170
	100 × 60	226	HG-CV-100(TNS)	P.170
	100 × 60	226	AS-HG-CV-100	P.170
3.8	68 × 43	147	AS-HG-AL-M3020	P.174
	68 × 50	147	AS-HG-AL-M3030	P.174
	68 × 57	147	AS-HG-AL-M3040	P.174
	68 × 64	147	AS-HG-AL-M4040	P.174

Thickness (t)	Material: Brass			
	L × W	Load Capacity N/2 pcs	Item Name	Page
2.3	25 × 32	49	KHB-25CR	P.137
	30 × 32	59	KHB-30CR	P.137
	40 × 32	78	KHB-40CR	P.137
	50 × 32	98	KHB-50CR	P.137
	60 × 32	118	KHB-60CR	P.137
	65 × 32	127	KHB-65CR	P.137
	75 × 32	147	KHB-75CR	P.137
	80 × 32	157	KHB-80CR	P.137
	90 × 32	177	KHB-90CR	P.137
	100 × 32	206	KHB-100CR	P.137
3.2	60 × 50	167	KHBL-60CR	P.143
	90 × 50	255	KHBL-90CR	P.143

Thickness (t)	Material: Resin			
	L × W	Load Capacity N/2 pcs	Item Name	Page
8	100 × 80	98	HG-P100	P.172

Updated 2017.10.27

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Size and Load Capacity Table by Material and Thickness

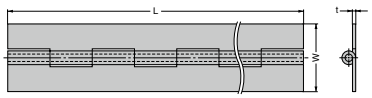
Piano Hinges

Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/pc	Item Name	Page
0.8	300 × 25	137	LSN8-25-300	P.146
	300 × 32	137	LSN8-32-300	P.146
	600 × 25	275	LSN8-25-600	P.146
	600 × 32	275	LSN8-32-600	P.146
	1000 × 25	461	LSN8-25-1000	P.146
	1000 × 32	461	LSN8-32-1000	P.146
	1000 × 38	461	LSN8-38-1000	P.146
	1200 × 32	549	LHN-32-1200	P.147
	1200 × 38	549	LHN-38-1200	P.147
	1500 × 32	588	LHN-32-1500	P.147
	1500 × 38	588	LHN-38-1500	P.147
	1800 × 25	716	LSN8-25-1800	P.146
	1800 × 32	716	LSN8-32-1800	P.146
	1800 × 38	716	LSN8-38-1800	P.146
	1872 × 32	745	LHN-32-1872	P.147
	1872 × 38	745	LHN-38-1872	P.147
	2100 × 32	834	LHN-32-2100	P.147
	2100 × 38	834	LHN-38-2100	P.147

Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/pc	Item Name	Page
1.5	300 × 32	255	LSN15-32-300	P.146
	350 × 32	304	LSN15-32-350	P.146
	450 × 32	392	LSN15-32-450	P.146
	600 × 32	520	LSN15-32-600	P.146
	750 × 32	598	LSN15-32-750	P.146
	850 × 32	628	LSN15-32-850	P.146
	900 × 32	667	LSN15-32-900	P.146
	1000 × 32	745	LSN15-32-1000	P.146
	1000 × 38	745	LSN15-38-1000	P.146
	1000 × 50	745	LSN15-50-1000	P.146
	1800 × 38	1370	LSN15-38-1800	P.146
	1800 × 50	1370	LSN15-50-1800	P.146
2	1000 × 50	981	LSN20-50-1000	P.146
3	1000 × 100	1370	LSN30-100-1000	P.146
	2000 × 100	2550	LSN30-100-2000	P.146
4	500 × 100	981	LSN40-100-500	P.146
	1000 × 100	1770	LSN40-100-1000	P.146

Thickness (t)	Material: Steel			
	L × W	Load Capacity N/pc	Item Name	Page
1.6	300 × 32	216	LH-30A	P.147
	350 × 32	255	LH-35A	P.147
	450 × 32	324	LH-45A	P.147
	600 × 32	431	LH-60A	P.147
	750 × 32	539	LH-75A	P.147
	850 × 32	569	LH-85A	P.147
	900 × 32	598	LH-90A	P.147
	1000 × 32	618	LH-100A	P.147

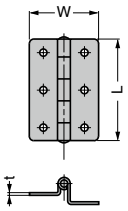
Thickness (t)	Material: Aluminium Alloy			
	L × W	Load Capacity N/pc	Item Name	Page
3.5	400 × 70	–	HG-MH400S(BR/BL)	P.148
	800 × 70	–	HG-MH800S(BR/BL)	P.148
	1100 × 70	–	HG-MH1100S(BR/BL)	P.148



Step Hinges

Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
1.5	60 × 40	108	DH-60C	P.149
2	60 × 36.3	147	DH-60N	P.149
4	39 × 58	167	28100	P.150

Thickness (t)	Material: Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
1.6	80 × 57	–	ROH-80	P.149
	80 × 69.5	127	KOH-80	P.149

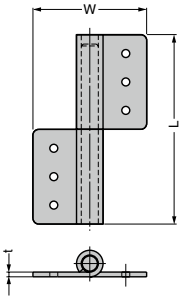


Lift-off Hinges

Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
1.5	40 × 30	69	NH-40CL(R)	P.151
	45 × 50	29	HG-OTA45L(R)	P.160
	45 × 50	29	HG-OTB45L(R)	P.160
	50 × 30	88	BN-50S	P.153
	50 × 32	78	KN-50CL(R)	P.151
	64 × 36	118	BN-64S	P.153
	64 × 36	108	KN-64CL(R)	P.151
	75 × 50	59	HG-OTA(B)75	P.160
	100 × 50	69	HG-OTA(B)100	P.160
2	75 × 38	167	KN-75CL(R)	P.151
2.5	100 × 60	294	LSX-100L(R)	P.150
	50 × 40	127	HNH-50CL(R)	P.154
	65 × 40	177	SNR65L(R)	P.152
	65 × 40	167	SNRK65L(R)	P.152
	65 × 50	177	HNH-65CL(R)	P.154

Thickness (t)	Material: Stainless Steel			
	L × W	Load Capacity N/2 pcs	Item Name	Page
3	108 × 96	559	ZL-1701-10	P.155
	75 × 70	245	HNH-75CL(R)	P.154
	125 × 100	981	HG-CV-127L(R)	P.169
4	144 × 104	314	ZL-1701-12	P.155
	100 × 82	422	HNH-100CL(R)	P.154
6	154 × 116	1140	HG-LSH-154L(R)	P.154
	204 × 160	1500	HG-LSH-204L(R)	P.154
12	268 × 300	2940	HG-KH12-268	P.159
	268 × 350	2940	HG-KM12-268	P.159
19	275 × 300	4810	HG-KH19-275	P.159
	275 × 350	4810	HG-KM19-275	P.159
20	250 × 280	4610	HG-KH20-250	P.159
	250 × 350	4610	HG-KM20-250	P.159

Thickness (t)	Material: Aluminium Alloy			
	L × W	Load Capacity N/2 pcs	Item Name	Page
3.5	65 × 60	108	HG-CV-65NR(L)	P.171
	65 × 60	108	AS-HG-CV-65NR(L)	P.171
3.8	63 × 43	78	AS-HG-AL-NL(R)3020	P.173
	63 × 43	78	AS-HG-AL-NL(R)3020N	P.173
	63 × 50	78	AS-HG-AL-NL(R)3030	P.173
	63 × 50	78	AS-HG-AL-NL(R)3030N	P.173
	63 × 50	78	AS-HG-AL-NL(R)4020	P.173
	63 × 57	78	AS-HG-AL-NL(R)3040	P.173
	63 × 64	78	AS-HG-AL-NL(R)4040	P.173



[Concept of Moment]

When selecting Motion Design Tech products, such as torque hinges and damper hinges, etc., the criterion is the moment of the door or cover.
Moment refers to the action of the force tending to make the object rotate around a point. If the moment matches the torque (※) of the hinge, it means that the hinge is applicable.

※ Torque refers to the action of the force making the object rotate around the rotation axis. When using multiple hinges, its value is the torque multiplied by the number of hinges being used.

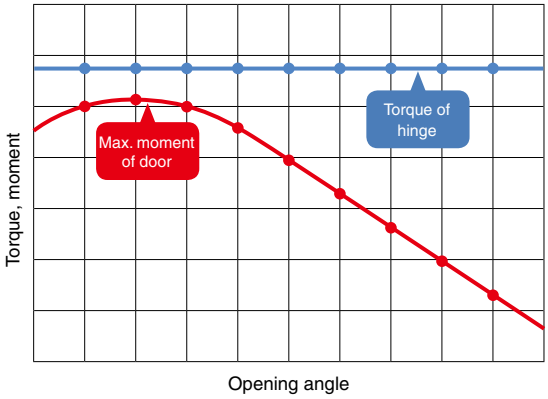
Formula for Calculating the Moment

Moment of door or lid = Horizontal distance from rotation centre to centre of gravity × Weight of door or lid
Maximum moment of door or lid = Maximum horizontal distance from rotation centre to centre of gravity × Weight of door or lid

Relationship between Applicable Hinge and Moment of Door

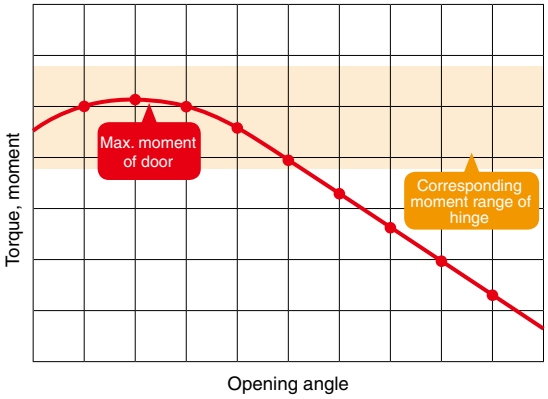
● In case of a torque hinge (Free stop)

If the torque of the hinge is more than the maximum moment of the door, then the hinge is applicable.



● In case of a damper hinge (soft motion)

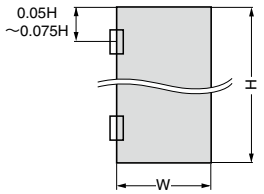
If the maximum moment of the door is within the torque range of the hinge, then the hinge is applicable.



※ The moment of the door is calculated as per the horizontal distance from the rotation centre to the centre of gravity. Therefore, it changes with the opening angle.

[Concept of Load-bearing]

The load-bearing of individual hinge is calculated as per “Door width : Door height = 1:2” .
Wherein, the mounting position of the hinge is determined according to the situation that the distance from the upper end surface or lower end surface of the door to the hinge centre in longitudinal direction is within the range of 0.05 H ~ 0.075 H (H is the height of the door).



[Precautions for Use]

Torque Hinge

- 2 hinges per door (lid) is recommended.
- Continuous action (repeated action within short time) is not allowed.
- Avoid eccentric load on the hinge.
- Do not contact with water, oil and lubricants, etc.
- Torque refers to the torque at delivery, rather than the torque after durability test.
- Do not use in the outdoor or at dusty places to avoid significantly degrading of performance.

Damper Hinge

- 2 hinges per door (lid) is recommended.
- Use within the torque range.

COMBINATION HINGE HG-VH8

Lapcon INSTRUCTION VIDEO



- Hinges with built-in damper, spring or torque unit, etc.
- Various motions by using hinges with different built-in parts in combination.
- For hinges with built-in springs, the spring tension can be adjusted with a hex key.

[Specifications]
- Operating temperature: 0˚C~40˚C

[Applications]
- Lightweight lids of small equipment, etc.

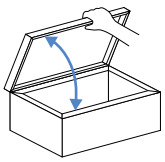
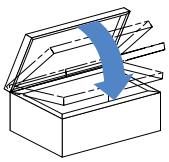
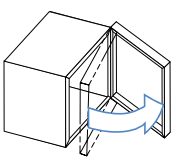
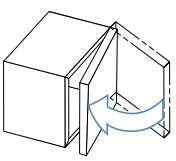
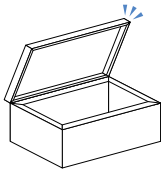
[Remarks]
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are aligned.

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

※The applicable products are only limited to hinges with built-in "damper" or "torque unit" .

Video Link

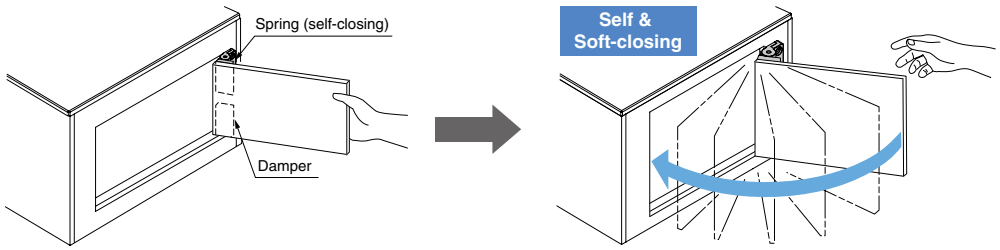
[Hinge Motions] For top-opening lid

Part Built-in		Without Part Built-in	Damper	Spring (self-opening)	Spring (self-closing)	Torque
Motions		 Freely opens and closes as normal hinges.	Soft-close  Slowly closes.	Self-opening  Always tries to open.	Self-closing  Always tries to close.	Free stop  Stops at any position.
Possible Combinations (built-in unit)	Without Part Built-in	Yes	Yes	Yes	Yes	Yes
	Damper	Yes	Yes	Yes	Yes	No
	Spring (self-opening)	Yes	Yes	Yes	No	It depends
	Spring (self-closing)	Yes	Yes	No	Yes	It depends
	Torque	Yes	No	It depends	It depends	Yes

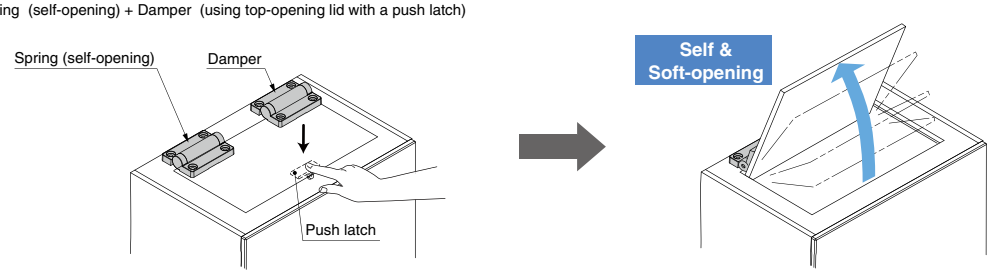
(It depends) Please carry out thorough tests before using since performance with these combinations might vary depending on door size and weight.

[Combination Example]

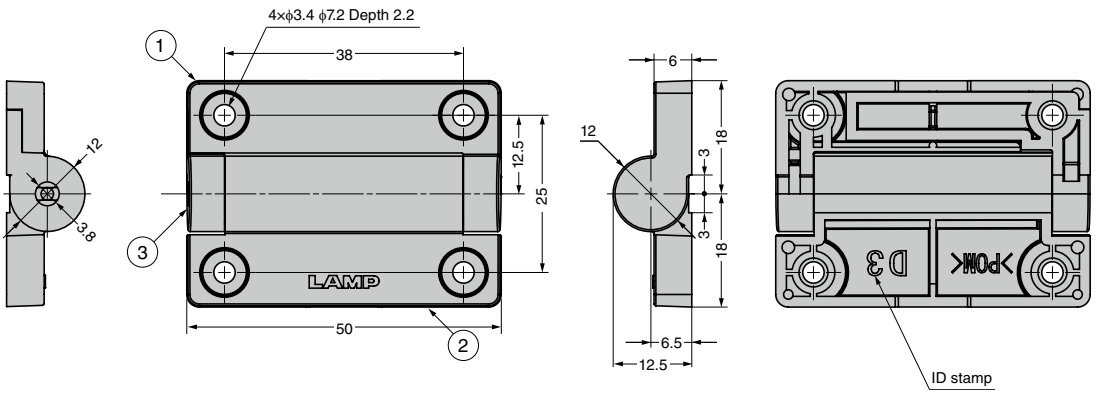
- Spring (self-closing) + Damper (lateral-opening)



- Spring (self-opening) + Damper (using top-opening lid with a push latch)



Refer to 1 : P.15



No.	Part Name	Material	Colour
①	Bracket A	POM	Black, White
②	Bracket B		
③	Bracket C		
–	Damper URD8-3	POM, etc.	–
–	Spring Unit URS8	–	–
–	Torque Unit URT8	–	–

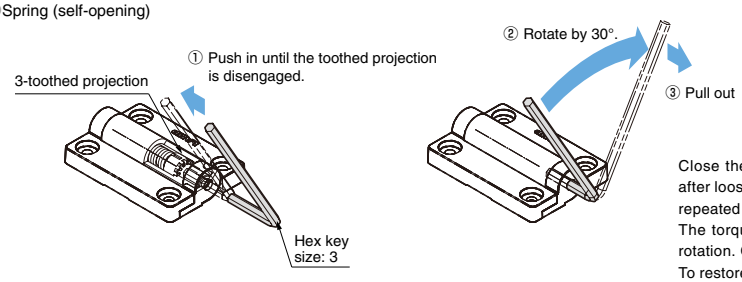
Lateral-opening door weight: Max. 810g
Reference door size: W300×H450×t 5 mm
Acrylic plate, Density 1.2 g/cm³

RoHS	CAD	Item Code	Item Name	Part Built-in	ID Stamp	Colour	Torque N·m/pc	Torque kgf·cm/pc	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-032-616	HG-VH8-N-BL	–	N	Black	–	–	270°	11	40	640
G	3D	170-032-617	HG-VH8-N-WT			White					40	640
G	3D	170-032-618	HG-VH8-D3-BL	Damper	D3	Black	0.022~0.038	0.22~0.39		14	40	640
G	3D	170-032-619	HG-VH8-D3-WT			White					40	640
G	3D	170-032-620	HG-VH8-OP-BL	Spring (self-opening)	OP	Black	※	※		18	40	640
G	3D	170-032-621	HG-VH8-OP-WT			White					40	640
G	3D	170-032-622	HG-VH8-CL-BL	Spring (self-closing)	CL	Black	※	※			40	640
G	3D	170-032-623	HG-VH8-CL-WT			White					40	640
G	3D	170-032-624	HG-VH8-T15-BL	Torque	T1	Black	0.15±0.05	1.53±0.51		19	40	640
G	3D	170-032-625	HG-VH8-T15-WT			White					40	640
G	3D	170-032-626	HG-VH8-T35-BL		T3	Black	0.35±0.1	3.57±1.02			40	640
G	3D	170-032-627	HG-VH8-T35-WT			White					40	640

※ Increased by 0.0153N・m (0.16kgf・cm) by adjusting the spring tension. The initial value of the spring tension is 0N・m.

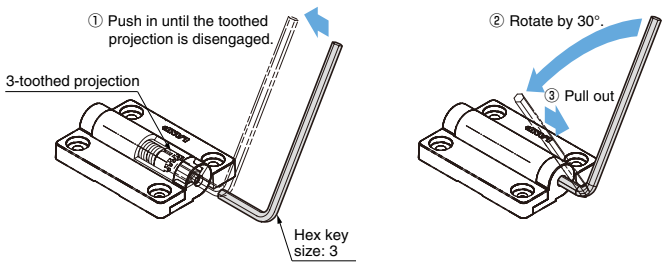
[How to Adjust Spring Tension]

●Spring (self-opening)



Close the lid, and check if the lid can be opened smoothly after loosing your hand(s). If the spring tension is not enough, repeated steps ① ~ ③.
The torque will be increased by 0.0153N・m at each 30° of rotation. Generally no more than 4 times (120°) are required.
To restore to the initial state, rotate in the direction opposite to above.

●Spring (Self-closing)



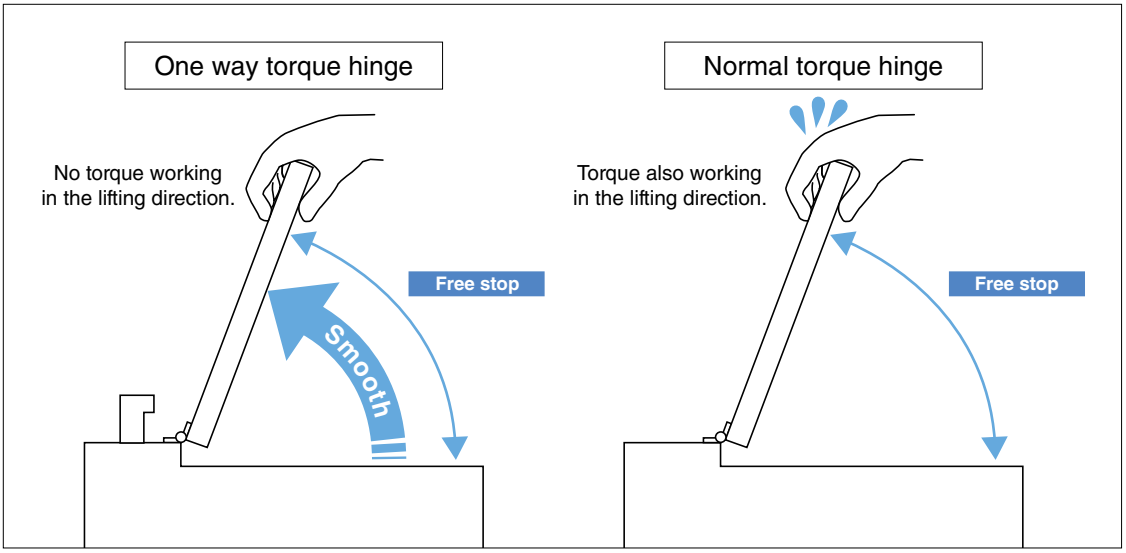
Open the lid and check if the lid can be closed smoothly after loosing your hand(s). If the spring tension is not enough, repeated steps ① ~ ③.
The torque will be increased by 0.0153N・m at each 30° of rotation. Generally no more than 4 times (120°) are required.
To restore to the initial state, rotate in the direction opposite to above.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

ONE WAY TORQUE HINGE

Free stop + Easy operation

Friction in one direction only (free stop): Allows for frictionless handling of the door or lid in the opposite direction.



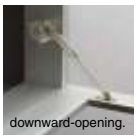
[List of One Way Torque Hinges]

Item Name		
	HG-TQJ100	HG-TQA
Torque N・m	0~10 (Adjustable)	$9.0^{+40\%}_{-20\%}$
Page	P.19	P.20

[Other One Way Torque Products]

FREE STOP STAY (ONE WAY) S-TAR P.288







- Torque stay for upward-opening, downward-opening and top-opening.
- Friction in one direction only, realising smooth opening.
- Torque adjustable with a hex key (included).
- Torque: 0 ~ 7N・m (adjustable)

ADJUSTABLE ONE WAY TORQUE HINGE HG-TQJ100



- Friction in one direction only: Allows for frictionless handling of the door in the opposite direction.
- Torque adjustable from 0 to 10N・m.
- High torque type with max. torque up to 10N・m.
- Two types (friction in opening direction and in closing direction) available.
- Torque is stable.
- Cover attached to torque adjustment part for clean appearance.

[Specifications]

- Operating temperature: 0℃~40℃

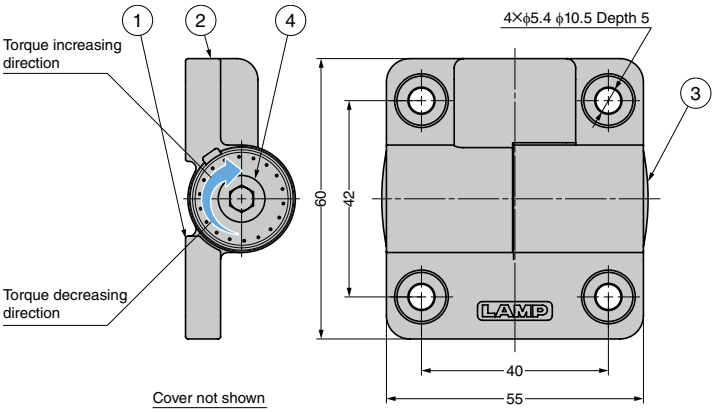
[Applications]

- Impact-free opening and closing of door.Medical equipment, FA equipment, and OA equipment, etc.

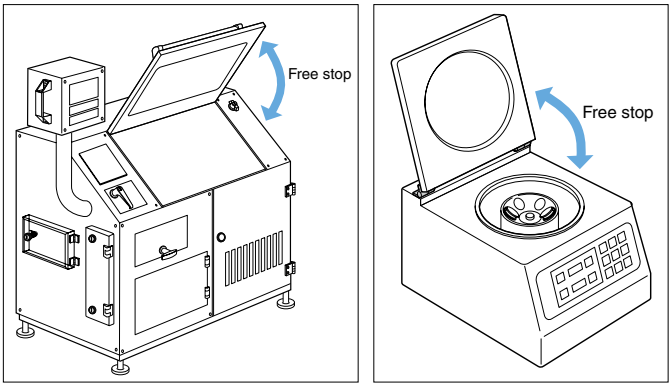
[Remarks]

- Be sure to read the “Cautions” 1.
- Use all mounting holes.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Do not remove the torque adjustment screw.
- Use a hex key (nominal size 5) for torque adjustment.
- Readjust the torque moment when it lowers.

Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation. Available on Web!

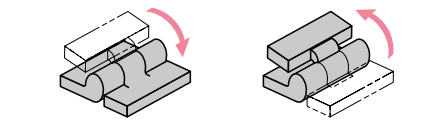


[Application Example]



Since torque is adjustable from 0 to 10N・m, applicable to various doors.

[Torque Working Direction]



Opening direction
Item name suffixed with “A”

Closing direction
Item name suffixed with “B”

No.	Part Name	Material	Finish / Colour
①	Bracket A	Zinc Alloy	Satin Chrome
②	Bracket B		
③	Cover	PP	Dark Grey
④	Torque Adjustment Nut	Steel	–

RoHS	CAD	Item Code	Item Name	Type	Torque N・m/pc	Torque kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-032-969	HG-TQJ100-A	Torque Working in Opening Direction	0~10	0~102	242	12	96
G	3D	170-032-970	HG-TQJ100-B	Torque Working in Closing Direction				12	96

Refer to 1 : P.15.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

ONE WAY TORQUE HINGE HG-TQA

VIDEO



Sold in pairs.

- Friction in one direction only: Allows for frictionless handling of the door in the opposite direction.
- Torque is stable.

[Specifications]

- Operating temperature: 0˚C~50˚C

[Applications]

- Impact-free opening and closing of door.Medical equipment, FA equipment, and OA equipment, etc.

[Remarks]

- Be sure to read the “Cautions” 1.
- Use the door at less than 80% of torque (7.2N・m or less).
- Torque will decrease at low temperature.
- Not suited to vibration environment.
- Hexalobular socket head screw (shown below as ◎) may not be used for torque adjustment.Do not tighten or loosen.
- Install an external stopper to hold the door within the range where torque is not effective (Refer to the lower left diagram for details).
- Install a catch to keep the door closed.
- Before installation, check if the installing position is strong enough.
- Install the torque unit (male) at the fixed side while the clutch unit (female) at the movable side.
- Sold in pairs.
- When installing, ensure that both hinge shafts are levelled and aligned.

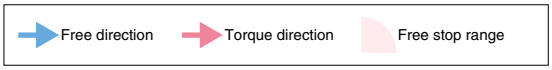
[Recommended Screws]

- M5 binding head screws

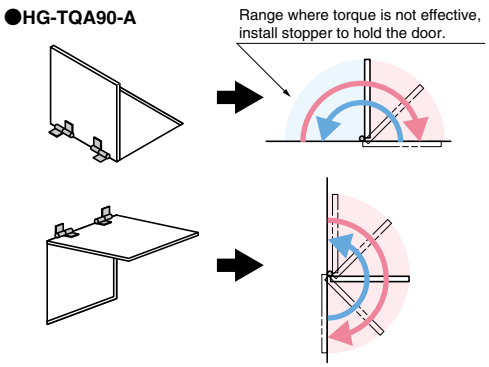
Video Link

Selection Tool Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

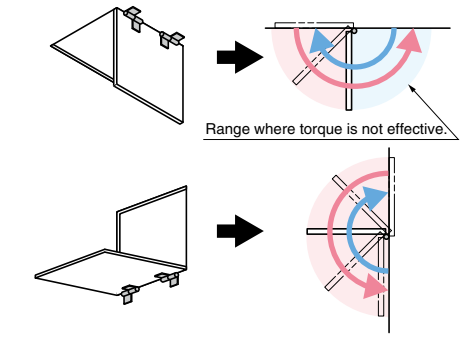
[Torque and Free Stop Range]

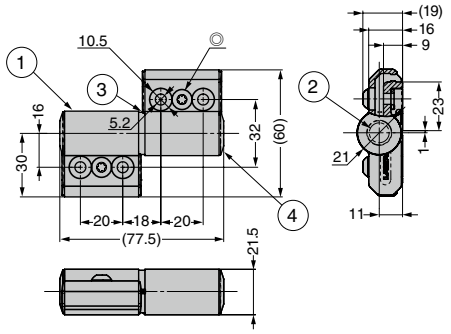


●HG-TQA90-A



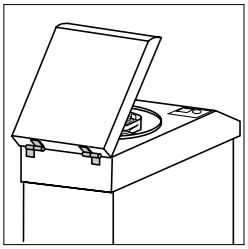
●HG-TQA90-B



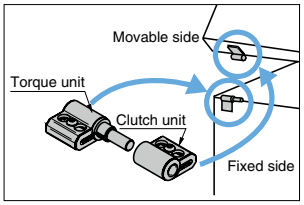


No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Anodised Silver
②	Shaft	Stainless Steel	Plain
③	Sleeve	POM	Black
④	Cover		

[Application Example]



[Installation]



RoHS	CAD	Item Code	Item Name	Torque N·m / pair※	Torque kgf·cm / pair※	Weight (g / pair)	Box (pairs)	Carton (pairs)
G	3D	170-021-244	HG-TQA90-A	$9.0^{+40\%}_{-20\%}$	$91.8^{+40\%}_{-20\%}$	270	1	10
G	3D	170-021-245	HG-TQA90-B				1	10

Refer to 1 : P.15.

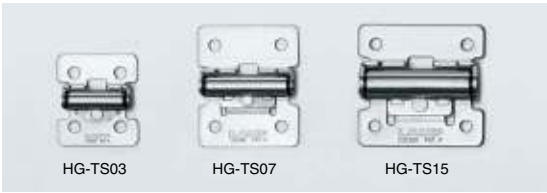
※ Since torque will decrease due to long-term use, temperature, humidity and other factors, it is set to a higher level at delivery.

TORQUE HINGE HG-TS

SUS



Free stop
Greaseless
Passed 20,000 open/ close private cycle test



- Sugatsune's patented technology reduces the number of parts for a cost-effective solution.
- Can be installed to aluminium frame.

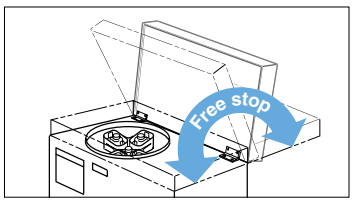
[Specifications]
- Operating temperature: -10˚C~50˚C
- Operating humidity: 90%RH or less

[Applications]
- Stereo equipment, FA equipment, and various automatic equipment

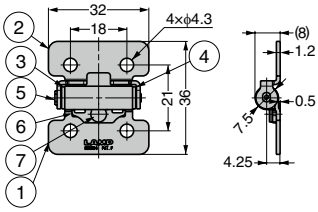
[Remarks]
- Be sure to read the “Cautions” 1.
- When installing, ensure that both hinge shafts are levelled and aligned.

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

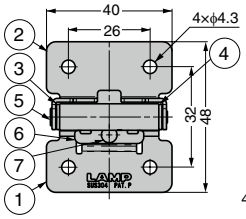
[Application Example]



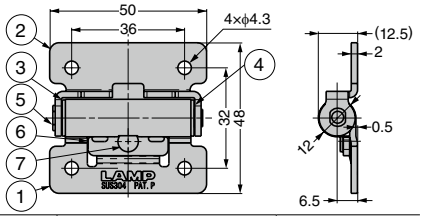
HG-TS03



HG-TS07



HG-TS15



No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Rotating Tube L	POM	Black
④	Rotating Tube R		

No.	Part Name	Material	Finish / Colour
⑤	Shaft	Stainless Steel (SUS303)	–
⑥	Press Washer	Stainless Steel (SUS304)	Barrel Polished
⑦	Pin	Stainless Steel	–

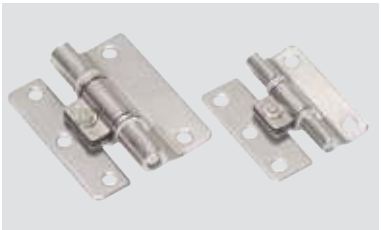
RoHS	CAD	Item Code	Item Name	Torque N·m/pc※	Torque kgf·cm/pc※	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-018-501	HG-TS03	0.35 +40% −20%	3.6 +40% −20%	15.0	50	500
G	3D	170-018-502	HG-TS07	0.7 +40% −20%	7.1 +40% −20%	27.5	50	500
G	3D	170-018-503	HG-TS15	1.5 +40% −20%	15.3 +40% −20%	64.1	20	200

Refer to 1 : P.15.

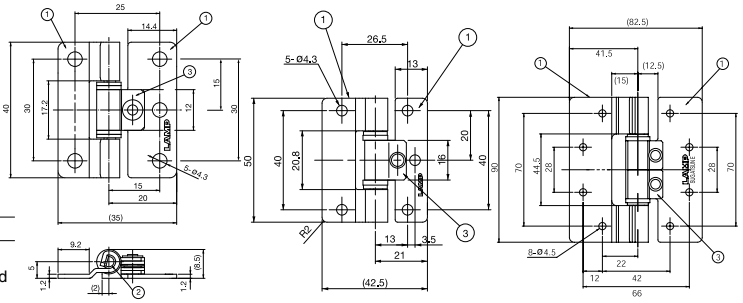
※ Since torque will decrease due to long-term use, temperature, humidity and other factors, it is set to a higher level at delivery.

STAINLESS STEEL TORQUE HINGE SFTH

SUS



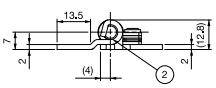
- Hinge with friction torque holds lid/door in desired position.
- Stainless steel material ideal for corrosive environments.
- Operating temperature: -20˚C~60˚C.



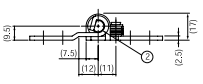
SFTH-02

No.	Part Name	Material	Finish
①	Body A	Stainless Steel (SUS304)	Polished
②	Shaft	Stainless Steel (SUS303)	
③	Body B	Stainless Steel (SUS301)	

RoHS	CAD	Item Code	Item Name	Torque per piece	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-199	SFTH-02-5	5±1kgf·cm	21	50	500
G	3D	170-098-198	SFTH-03-9	9±2kgf·cm	51	30	300
G	3D	170-098-197	SFTH-03-19	19±2kgf·cm			
G	3D	170-098-196	SFTH-05-35	35±5kgf·cm	195	10	100
G	3D	170-098-200	SFTH-05-58	58±5kgf·cm			



SFTH-03



SFTH-05

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

TORQUE HINGE (CONCEALED) HG-TU

SUS



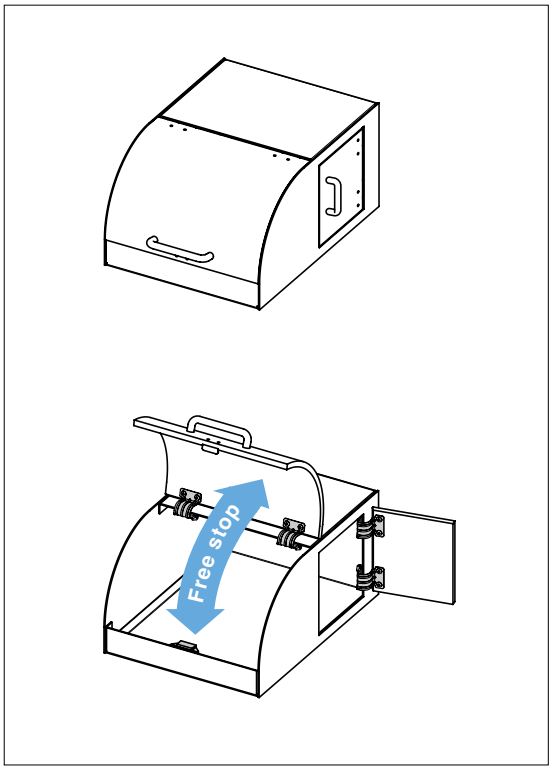
- Installation on the back side of the door for clean appearance.
- Can be used horizontally or vertically.

[Remarks]

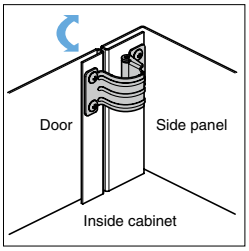
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are aligned.

Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

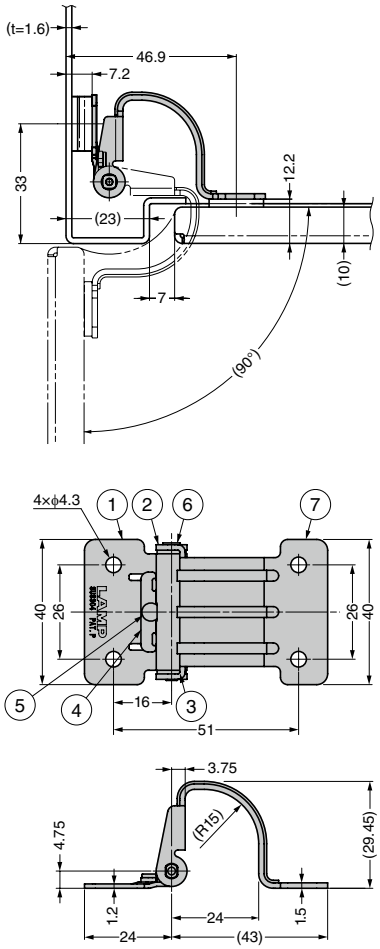
[Application Example]



[Installation]



[Dimensions]



No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Fixing Tube L	POM	Black
③	Fixing Tube R		
④	Press Washer	Stainless Steel (SUS304)	Barrel Polished
⑤	Pin	Stainless Steel	–
⑥	Shaft	Stainless Steel (SUS303)	
⑦	Base	Stainless Steel (SUS304)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Torque N·m/pc※	Torque kgf·cm /pc※	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-022-304	HG-TU03	0.35 +40% −20%	3.6 +40% −20%	50	20	200
G	3D	170-022-305	HG-TU07	0.7 +40% −20%	7.1 +40% −20%		20	200

Refer to 1 : P.15.

※ Since torque will decrease due to long-term use, temperature, humidity and other factors, it is set to a higher level at delivery.

TORQUE HINGE (CONCEALED) HG-TUWA

SUS



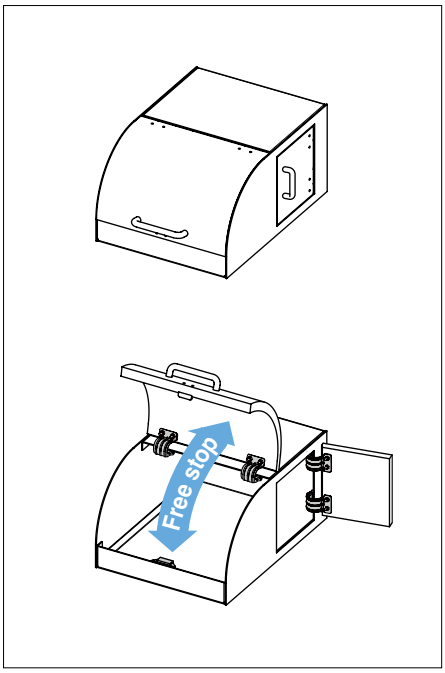
- High torque and wide opening angle (130°) type of HG-TU 1 .
- Installation on the back side of the door for clean appearance.
- Can be used horizontally or vertically.

[Remarks]

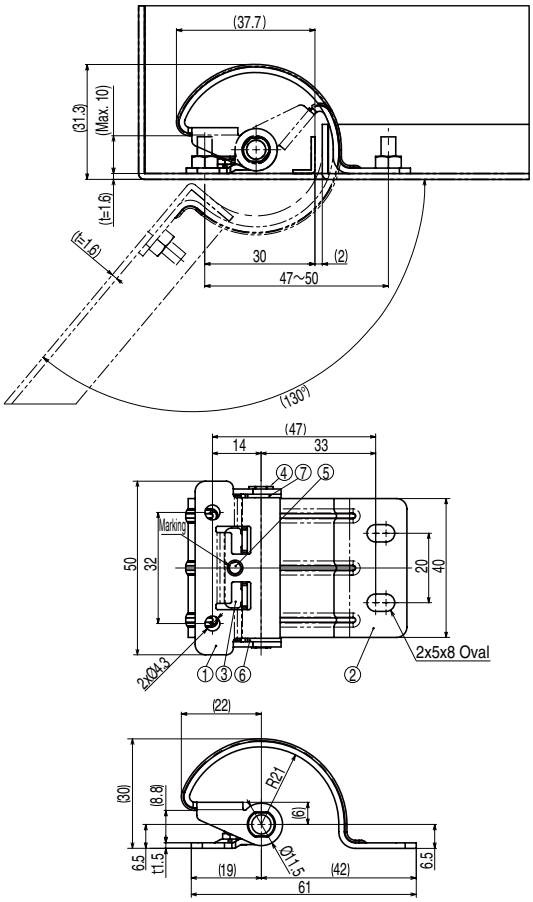
- Be sure to read the “Cautions” 2 .
- When installing, ensure that both hinge shafts are aligned.

Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

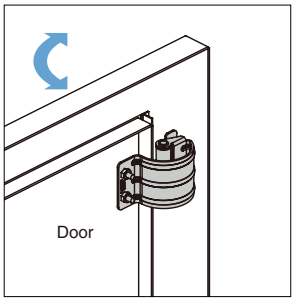
[Application Example]



[Dimensions]



[Installation]



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Press Washer		
④	Shaft	Stainless Steel (SUS303)	–
⑤	Pin	Stainless Steel	
⑥	Fixing Tube L	POM	Black
⑦	Fixing Tube R		

RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-034-313	HG-TUWA07	0.7 +40% −20%	7.1 +40% −20%	88	20	100
G	3D	170-034-314	HG-TUWA15	1.5 +40% −20%	15.3 +40% −20%		20	100

Refer to 1 : P.22, 2 : P.15.

Updated 2017.10.27

SWIVEL TORQUE HINGE HG-S

SUS VIDEO



- HG-S-MN, HG-S-21 and HG-S-75 are newly launched.
- Rotation angle: 360°
- Centre hole for easy cable management (except for HG-S-MN). Five types of hole diameters (ϕ12, ϕ21.5, ϕ34, ϕ50, and ϕ75) are available.

[Applications]

- Operation panel of machine tools and LCD, etc.

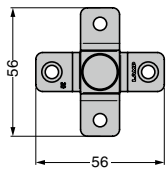
[Remarks]

- Be sure to read the "Cautions" 1.
- Hinges can be used upside down. However, fix the screws from the mounting surface (refer to the "Installation" in relevant pages). Otherwise, the products will not function.
- ⋆ is horizontal use only.

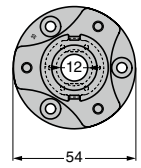
Video Link

[Selection Guide]

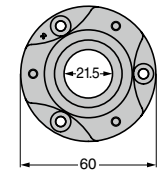
RoHS	CAD	Item Code	Item Name	No.	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Page
G	3D	170-029-726	HG-S7-MN	1	56	–	0.7±20%	7.1±20%	2
G	3D	170-029-727	HG-S20-MN				2.0±20%	20.4±20%	
G	3D	170-021-976	HG-S30-12	2	ϕ54	12	3.0±20%	30.6±20%	
G	3D	170-021-975	HG-S50-12				5.0±20%	51.0±20%	
G	3D	170-029-728	HG-S30-21	3	ϕ60	21.5	3.0±20%	30.6±20%	3
G	3D	170-029-729	HG-S50-21				5.0±20%	51.0±20%	
G	3D	170-023-959	HG-S50-34	4 ⋆	ϕ87	34	5.0±20%	51.0±20%	
G	3D	170-023-960	HG-S70-34				7.0±20%	71.4±20%	
G	3D	170-023-961	HG-S70-50	5 ⋆	ϕ103	50	7.0±20%	71.4±20%	4
G	3D	170-023-962	HG-S100-50				10.0±20%	102.0±20%	
G	3D	170-029-730	HG-S50-75	6 ⋆	ϕ128	75	5.0±20%	51.0±20%	
G	3D	170-029-731	HG-S70-75				7.0±20%	71.4±20%	



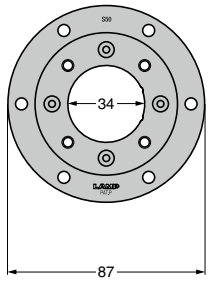
1 HG-S-MN



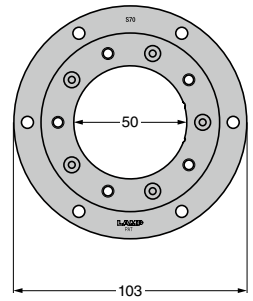
2 HG-S-12



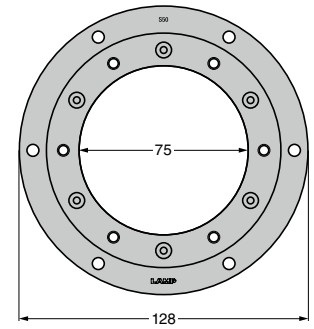
3 HG-S-21



4 HG-S-34

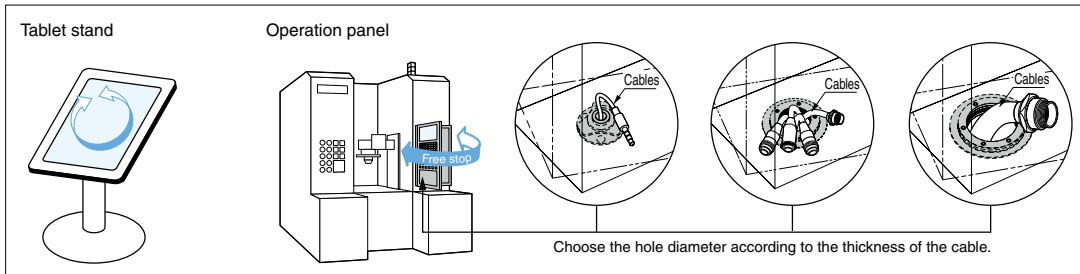


5 HG-S-50



6 HG-S-75

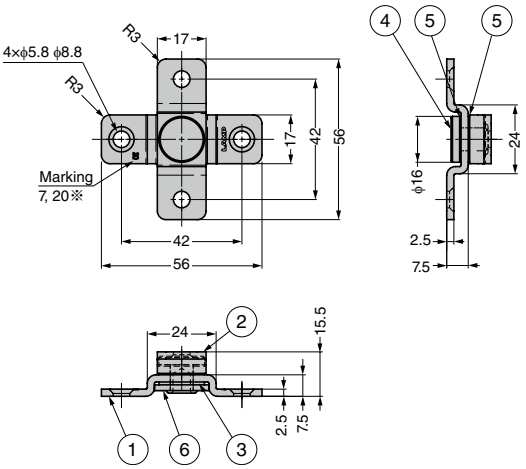
[Application Example]



Refer to 1 : P.15, 2 : P.25, 3 : P.26, 4 : P.27

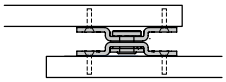
SWIVEL TORQUE HINGE HG-S-MN Small Type

SUS VIDEO



※7: HG-S7-MN, 20: HG-S20-MN.

[Installation]

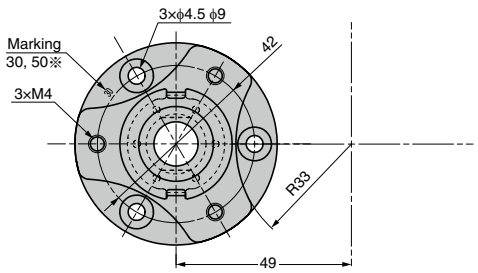


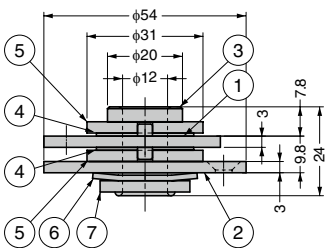
No.	Part Name	Material	Finish
①	Bracket B	Stainless Steel (SUS430)	Barrel Polished
②	Bracket A		
③	F Plate	Bronze	–
④	Shaft	Stainless Steel (SUS303)	
⑤	Spring Washer	Stainless Steel	
⑥	Washer	Stainless Steel (SUS430)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Size	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-726	HG-S7-MN	56	0.7±20%	7.1±20%	48	25	200
G	3D	170-029-727	HG-S20-MN		2.0±20%	20.4±20%	49	25	200

SWIVEL TORQUE HINGE HG-S-12 Hole Dia. ϕ12

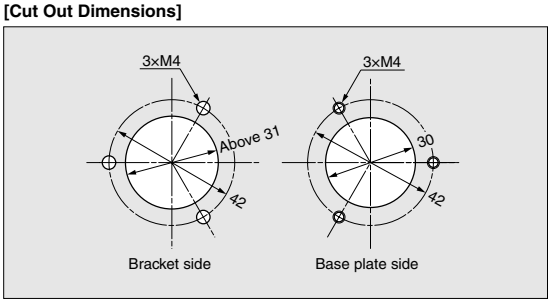
SUS VIDEO



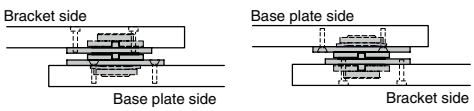


※30: HG-S30-12, 50: HG-S50-12.

[Cut Out Dimensions]



[Installation]



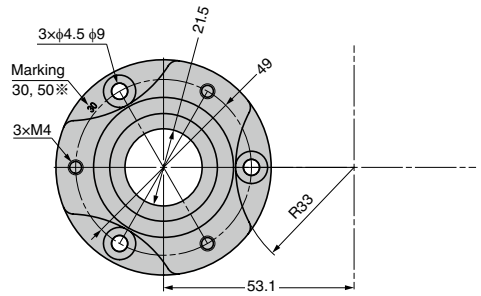
No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS430)	Barrel Polished
②	Base plate		
③	Sleeve	Stainless Steel (SUS303)	–
④	F Plate	Bronze	
⑤	Washer	Stainless Steel (SUS430)	Barrel Polished
⑥	Spring Washer	Steel	–
⑦	Washer	Stainless Steel (SUS430)	

Max. load capacity : 200N (20.4kgf)/pc

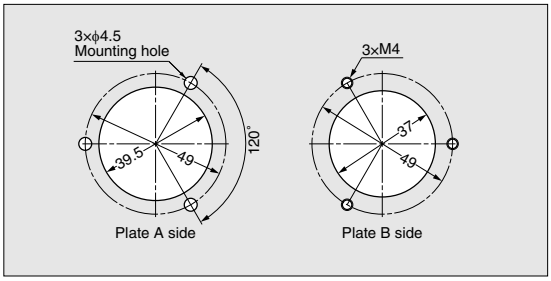
RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-021-976	HG-S30-12	54	12	3.0±20%	30.6±20%	129	100	10
G	3D	170-021-975	HG-S50-12			5.0±20%	51.0±20%	132	100	10

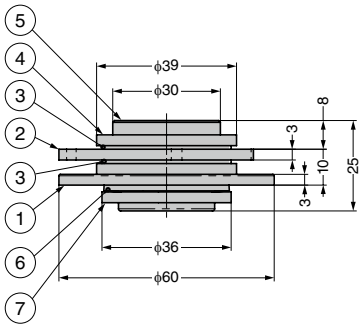
SWIVEL TORQUE HINGE HG-S-21 Hole Dia. ϕ 21.5

SUS VIDEO



[Cut Out Dimensions]





※30: HG-S30-21, 50: HG-S50-21.

[Installation]



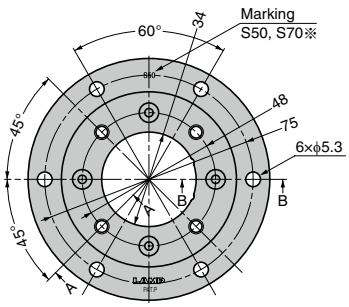
No.	Part Name	Material	Finish
①	Plate B	Stainless Steel (SUS430)	Barrel Polished
②	Plate A		
③	F Plate	Bronze	Barrel Polished
④	Washer	Stainless Steel (SUS430)	Barrel Polished
⑤	Sleeve	Stainless Steel (SUS303)	Plain
⑥	Spring Washer	Stainless Steel	–
⑦	Washer	Stainless Steel (SUS430)	

Max. load capacity : 200N (20.4kgf)/pc

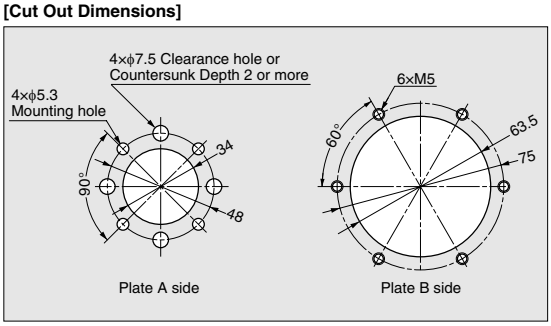
RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-728	HG-S30-21	60	21.5	3.0±20%	30.6±20%	175	10	80
G	3D	170-029-729	HG-S50-21			5.0±20%	51.0±20%	174	10	80

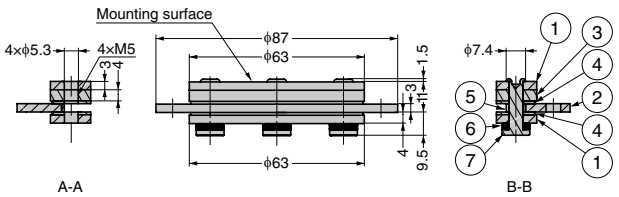
SWIVEL TORQUE HINGE HG-S-34 Hole Dia. ϕ 34

SUS VIDEO



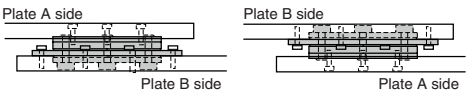
[Cut Out Dimensions]





※S50: HG-S50-34, S70: HG-S70-34.

[Installation]



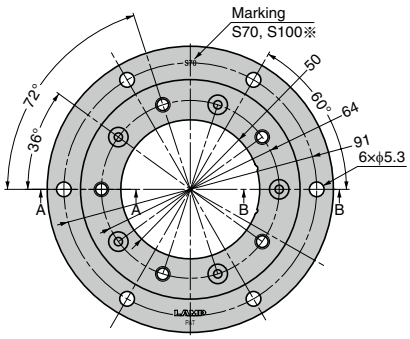
No.	Part Name	Material	Finish
①	Plate A	Stainless Steel (SUS430)	Barrel Polished
②	Plate B		
③	Plate C		
④	F Plate	Bronze	–
⑤	Bush	POM	
⑥	Spring Washer	Stainless Steel	
⑦	Shaft	Stainless Steel (SUS303)	

Max. load capacity : 400N (40.8kgf)/pc

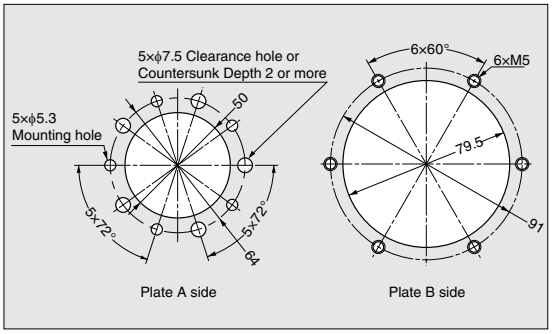
RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-023-959	HG-S50-34	87	34	5.0±20%	51.0±20%	280	5	40
G	3D	170-023-960	HG-S70-34			7.0±20%	71.4±20%	282	5	40

SWIVEL TORQUE HINGE HG-S-50 Hole Dia. ϕ 50

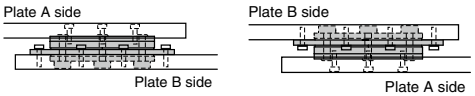
SUS VIDEO

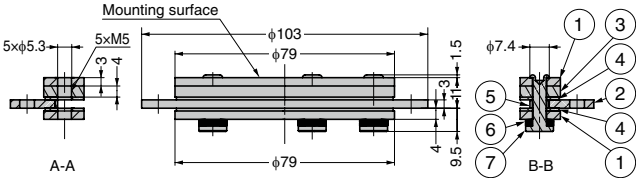


[Cut Out Dimensions]



[Installation]





※S70: HG-S70-50, S100: HG-S100-50.

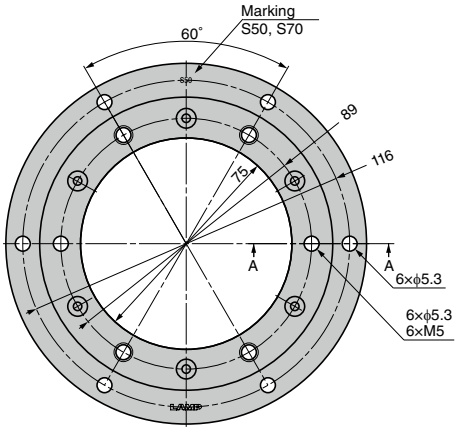
No.	Part Name	Material	Finish
①	Plate A	Stainless Steel (SUS430)	Barrel Polished
②	Plate B		
③	Plate C		
④	F Plate	Bronze	–
⑤	Bush	POM	
⑥	Spring Washer	Stainless Steel	
⑦	Shaft	Stainless Steel (SUS303)	

Max. load capacity : 400N (40.8kgf)/pc

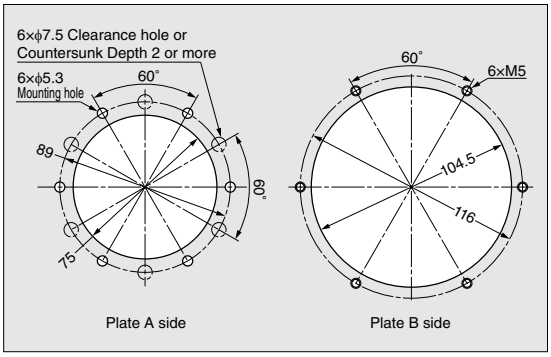
RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-023-961	HG-S70-50	103	50	7.0±20%	71.4±20%	365	5	40
G	3D	170-023-962	HG-S100-50			10.0±20%	102.0±20%	371	5	40

SWIVEL TORQUE HINGE HG-S-75 Hole Dia. ϕ 75

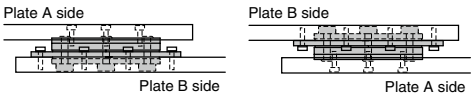
SUS VIDEO

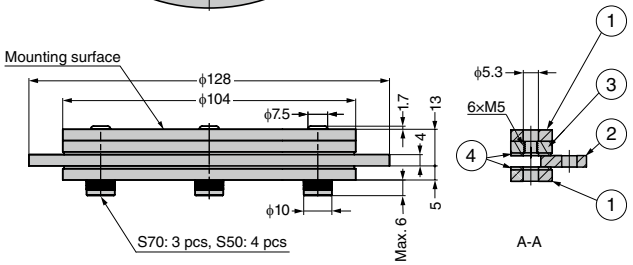


[Cut Out Dimensions]



[Installation]





※ S50: HG-S50-75, S70: HG-S70-75.

No.	Part Name	Material	Finish
①	Plate A	Stainless Steel (SUS430)	Barrel Polished
②	Plate B		
③	Plate C		
④	F Plate	Bronze	–

RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-730	HG-S50-75	128	75	5.0±20%	51.0±20%	545	5	40
G	3D	170-029-731	HG-S70-75			7.0±20%	71.4±20%	575	5	40

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

TORQUE HINGE (DUAL AXIS) HG-T70S30

SUS VIDEO



- Dual Axis: Can hold at any angle in tilt & swivel.
- Swivels 360°.
- Able to limit swivel angle and tilt angle by inserting a screw in ※1 hole and a pin in ※2 hole shown in the figure below, respectively. (The screw and pin not included)
  Limited opening and closing angle
  : Tilting ··· 0°~120°
  : Swivelling ··· ±30°, ±90°
- Provides torque stability in both directions.

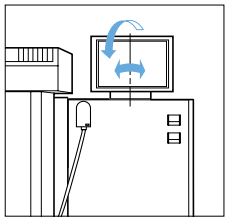
[Specifications]
- Operating temperature: 0˚C~40˚C

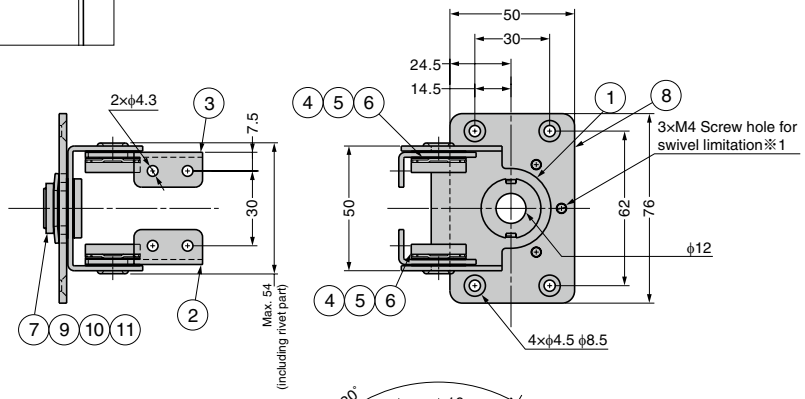
[Applications]
- LCD, monitoring camera, etc.

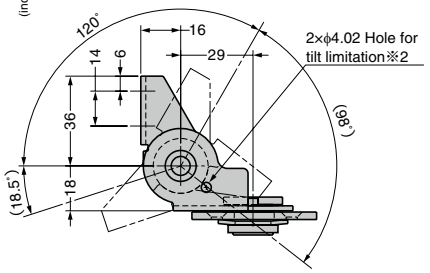
[Remarks]
- Be sure to read the "Cautions" 1.
- Tilt angle and swivel angle may decrease depending on the size, shape and installation method of the monitor used.
- Do not use in water splash environment.

Video Link

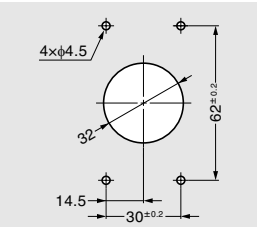
[Application Example]



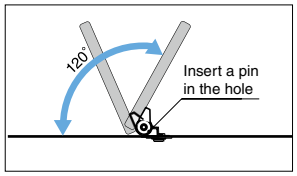


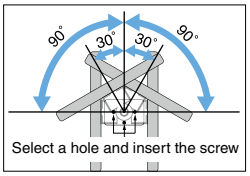


[Cut Out Dimensions]



[Angle Limitation]





No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS430)	Barrel Polished
②	Bracket L		
③	Bracket R		
④	Spring Washer	Steel (SK85)	–
⑤	F Plate B	Bronze	
⑥	Shaft	Stainless Steel (SUS303)	
⑦	Sleeve		
⑧	Base plate	Stainless Steel (SUS430)	Barrel Polished
⑨	F Plate	Bronze	–
⑩	Washer	Stainless Steel (SUS430)	Barrel Polished
⑪	Spring Washer	Steel	–

RoHS	CAD	Item Code	Item Name	Torque N·m/pc (Tilting)	Torque kgf·cm/pc (Tilting)	Torque N·m/pc (Swivelling)	Torque kgf·cm/pc (Swivelling)	Weight (g)	Box (pcs)	Carton (pcs)
G	CAD	170-012-419	HG-T70S30	7.0±20%	71.4±20%	3.0±20%	30.6±20%	229	5	40

Refer to 1 : P.15

TORQUE HINGE (DUAL AXIS) HG-T30S15

SUS VIDEO



- Dual Axis: Can hold at any angle in tilt & swivel.
- Swivels 360°.
- Surface mount base provides easy installation on cabinets.
- Provides torque stability in both directions.

[Specifications]

- Operating temperature: 0˚C ~40˚C

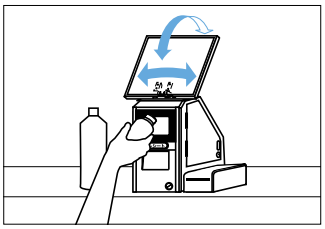
[Applications]

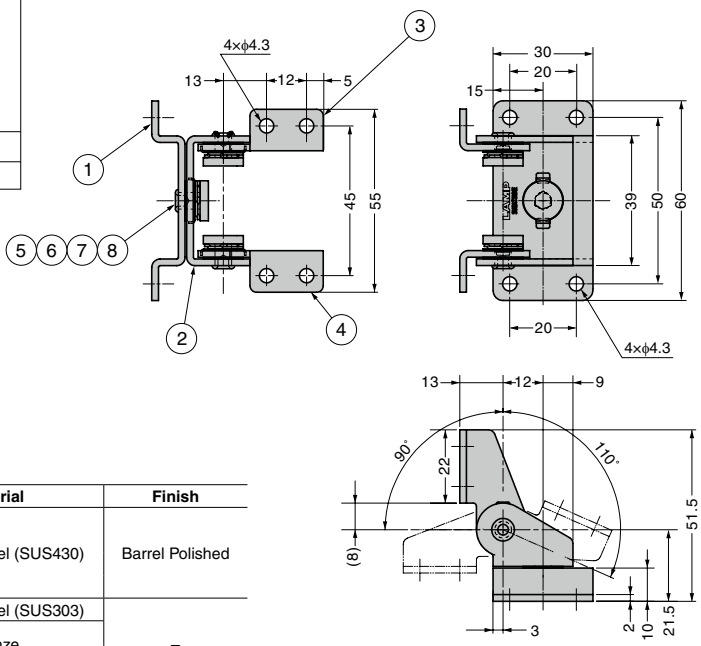
- Self-checkout machine and small monitor, etc.

[Remarks]

- Be sure to read the "Cautions" 1.
- Tilt angle and swivel angle may decrease depending on the size, shape and installation method of the monitor used.
- Do not use in water splash environment.

[Application Example] Self-checkout machine





No.	Part Name	Material	Finish
①	Base plate	Stainless Steel (SUS430)	Barrel Polished
②	Base		
③	Bracket L		
④	Bracket R		
⑤	Shaft	Stainless Steel (SUS303)	–
⑥	F Plate A	Bronze	
⑦	F Plate B		
⑧	Spring Washer	Steel (SK)	

RoHS	CAD	Item Code	Item Name	Torque N·m/pc (Tilting)	Torque kgf·cm/pc (Tilting)	Torque N·m/pc (Swivelling)	Torque kgf·cm/pc (Swivelling)	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-020-826	HG-T30S15	3.0±20%	30.6±20%	1.5±20%	15.3±20%	87	12	96

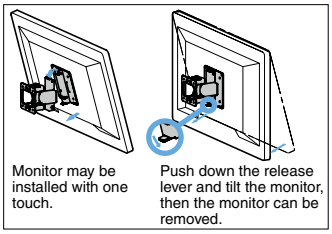
Refer to 1 : P.15

MONITOR BRACKET DIGEST



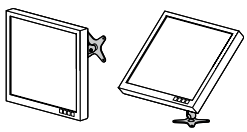
MONITOR BRACKET KA-T100S50 WITH TORQUE & AUXILIARY LOCK 1

[How to Install and Remove Monitor]





MONITOR BRACKET KA-150 2



Refer to 1 : P.196, 2 : P.198

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

ADJUSTABLE TORQUE HINGE HG-ITJ4080

SUS VIDEO



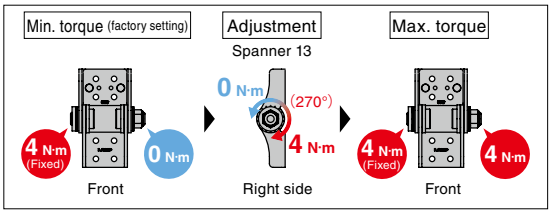
- Torque adjustable from 4 to 8 N・m.
- To prevent accidental fall of door or lid, minimum torque is set at 4 N・m.
- High torque and space-saving type.

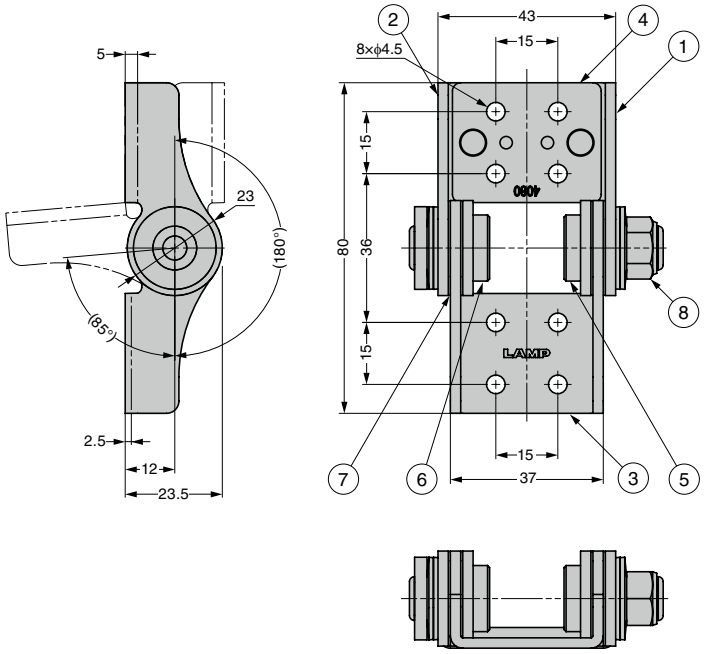
[Specifications]
- Operating temperature: 0˚C~40˚C

[Remarks]
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Use a spanner (nominal size 13) for torque adjustment.
- Do not forcibly remove the torque adjustment nut.

Video Link

Selection Tool Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!





No.	Part Name	Material	Finish
①	Bracket A	Stainless Steel (SUS430)	Barrel Polished
②	Bracket B		
③	Bracket C		
④	Connecting Plate		
⑤	Shaft A	Stainless Steel	–
⑥	Shaft B		
⑦	Washer	Bronze	Barrel Polished
⑧	Torque Adjustment Nut M8	Stainless Steel (SUSXM7)	–

RoHS	CAD	Item Code	Item Name	Torque N・m/pc	Torque kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	CAD	170-029-802	HG-ITJ4080	4±20%~8	41±20%~82	163	10	80

Refer to 1 : P.15

TORQUE HINGE HG-IT

SUS VIDEO







- Cover of the same colour with body hides mounting holes for clean appearance (sold separately).
- With a label to recognise the torque value.
- Torque free type (HG-ITSF, HG-ITMF) also available. Covers various torque ranges by using "torque type" and "torque free type" as a pair.

[Specifications]
- Operating temperature: -10˚c~50˚c

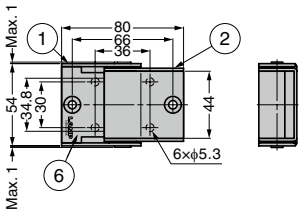
[Applications]
- LCD, monitoring camera, etc.

[Remarks]
- Be sure to read the “Cautions” 1.
- When installing, ensure that both hinge shafts are levelled and aligned.

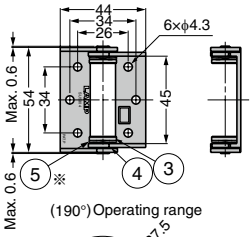
[Sold Separately]
- Cover

Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation. Available on Web!

Motion Designtec Video
Free stop

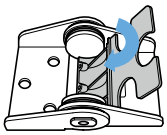


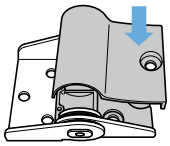
HG-ITM (With cover shown)

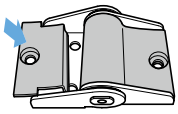


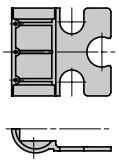
HG-ITS (Without cover shown)

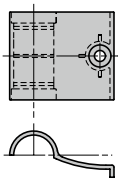
[How to Install Cover]

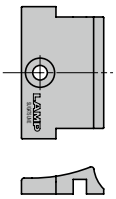

1. Insert the cover A under the hinge shaft.


2. Put the cover B on the cover A.


3. Put the cover C.


Cover A


Cover B


Cover C

No.	Part Name	Material	Finish / Colour
①	Base	Stainless Steel (SUS304)	Barrel Polished
②	Bracket		
③	Shaft	Stainless Steel (SUS303)	Plain
④	Washer	Bronze	Barrel Polished
⑤	Spring Washer	Steel	Nickel
⑥	Cover	ABS	Metallic Silver Paint / Clear

※⑤: Only for HG-ITS and HG-ITM (Not provided for the torque free type).

Refer to 1 : P.15

[Hinge]

RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	170-090-106	HG-ITS25	2.5±20%	25.49±20%	190°	50	20	160
G'	3D	170-090-115	HG-ITS35	3.5±20%	35.69±20%			20	160
G'	3D	170-090-114	HG-ITM50	5.0±20%	50.98±20%	193°	130	10	80
G'	3D	170-090-113	HG-ITM70	7.0±20%	71.38±20%			10	80
G'	3D	170-090-999	HG-ITSF	–	–	190°	50	20	160
G'	3D	170-090-998	HG-ITMF			193°	130	10	80

[Cover] Sold Separately

RoHS	CAD	Item Code	Item Name	Cover for	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	170-091-002	HG-ITSC	HG-ITS	10	40	960
G'	3D	170-091-001	HG-ITMC	HG-ITM	18	20	480

TORQUE HINGE HG-TWP Exterior Type

Under Development SUS



※The shape of body is different from actual item. Refer to the drawings for details.

- Ideal for exterior application.
- O-rings at the shaft part prevent invasion of water and dust.

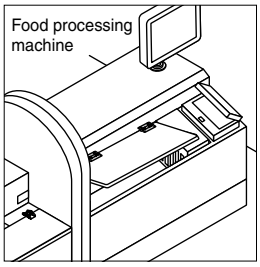
[Specifications]

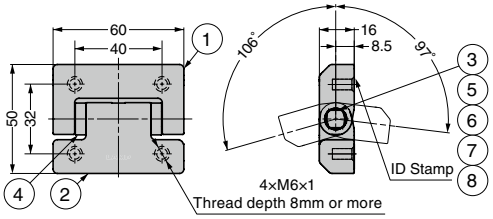
- Operating temperature: 0˚C ~40˚C

[Remarks]

- Be sure to read the "Cautions" 1.
- Use all mounting holes.
- When installing, ensure that both hinge shafts are levelled and aligned.

[Application Example]





No.	Part Name	Material
①	Bracket	Stainless Steel (SUS316)
②	Base	
③	Shaft	
④	Plug	POM
⑤	O-ring (Outside)	Rubber
⑥	O-ring (Inside)	
⑦	Spring Pin	Stainless Steel (SUS304)
⑧	Hexagon Socket Set Screw	

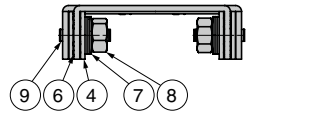
RoHS	CAD	Item Code	Item Name	ID Stamp	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	–	170-037-310	HG-TWP15	15	1.5	15.3	–	–	–
–	–	170-037-311	HG-TWP30	30	3.0	30.6	–	–	–

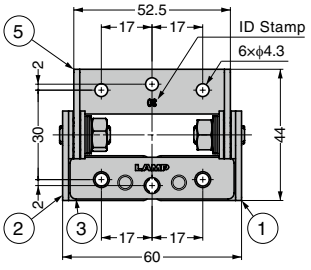
Refer to 1 : P.15

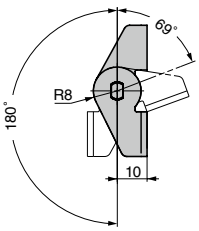
TORQUE HINGE HG-ITHP

Under Development SUS









- Suitable for use in heat-generating environment.

[Specifications]

- Operating temperature: 0˚C ~100˚C
  For applications beyond the operating temperature range above, please contact local representatives.

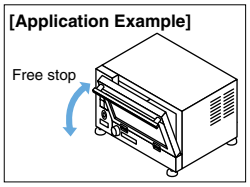
[Applications]

- Food processing equipment, kitchen equipment.

[Remarks]

- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Torque may decrease during and after heating. And it will restore when returning to normal temperature.

[Application Example]



No.	Part Name	Material	Finish
①	Base L	Stainless Steel (SUS304)	–
②	Base R		
③	Connecting Bracket		
④	Thrust Plate	Carbon Steel	
⑤	Movable Bracket	Stainless Steel (SUS304)	
⑥	Ball	Steel	
⑦	Spring Washer		
⑧	Hexagon Nut	Steel (SWCH)	Zinc Chromate (Trivalent)
⑨	Shaft	Stainless Steel (SUS303)	–

RoHS	CAD	Item Code	Item Name	ID Stamp	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	–	170-037-312	HG-ITHP07	07	0.7	7.1	–	–	–
–	–	170-037-313	HG-ITHP15	15	1.5	15.3	–	–	–
–	–	170-037-314	HG-ITHP30	30	3.0	30.6	–	–	–

Refer to 1 : P.15

TORQUE PIANO HINGE HG-TLS30-50-300

Under Development

Free stop
Greaseless

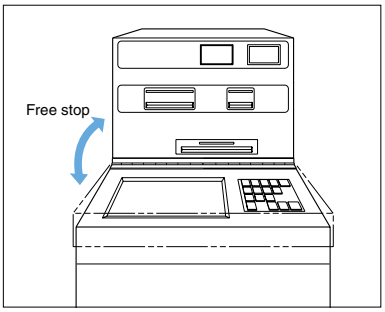


- Long type torque hinge.
- Other lengths also available on order.

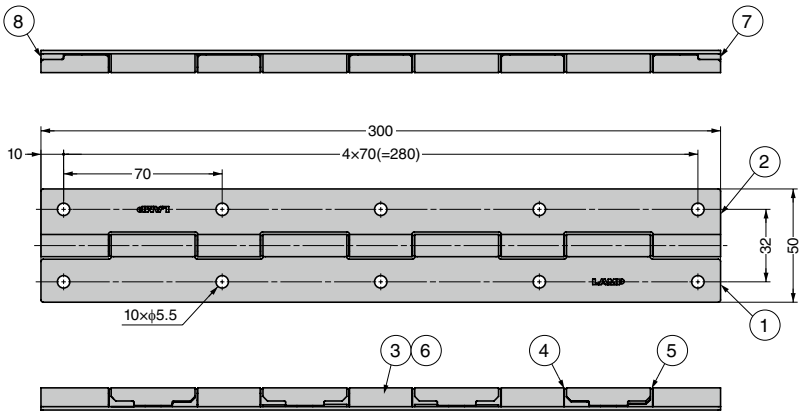
[Remarks]

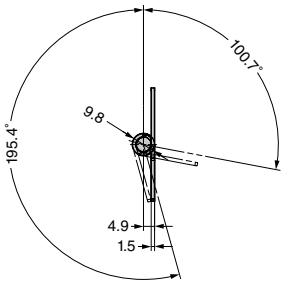
- Be sure to read the “Cautions” 1.
- When using multiple hinges, ensure that both hinge shafts are levelled and aligned.
- Can not be used by cutting the length.

[Application Example]



For opening/closing of cash machine maintenance door.





No.	Part Name	Material
①	Hinge A	Stainless Steel (SUS304)
②	Hinge B	
③	Shaft	
④	Plug L	POM
⑤	Plug R	
⑥	Collar	
⑦	Holder L	PA
⑧	Holder R	

RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	–	170-037-315	HG-TLS30-50-300	3	29	–	–	–

Refer to 1 : P.15

Updated 2017.10.27

DETENT TORQUE HINGE HG-DTA

SUS VIDEO



●Detent function prevents spring-back in closed position.

[Specifications]
●Operating temperature: 0˚C ~40˚C

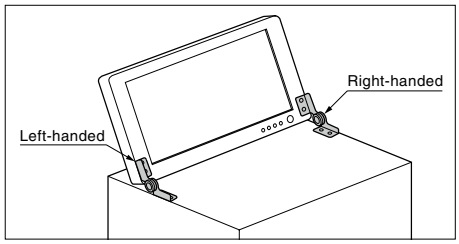
[Applications]
●Small device with cover, folding machine, etc.

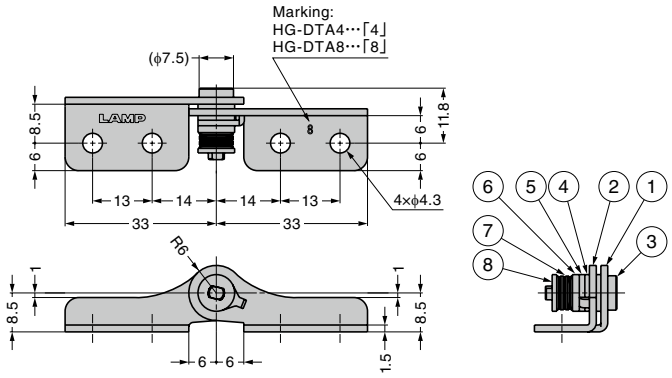
[Remarks]
●Be sure to read the “Cautions” 1.
●For pair using: Please use the same torque in both hinges.
●When installing, ensure that both hinge shafts are levelled and aligned.

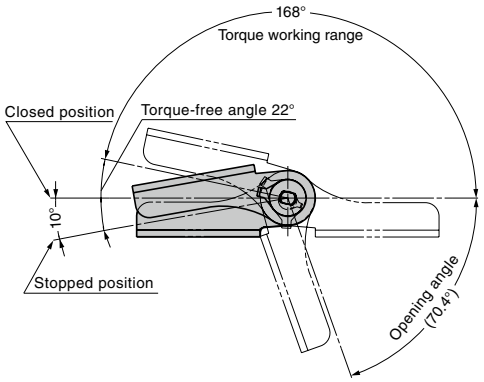
Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

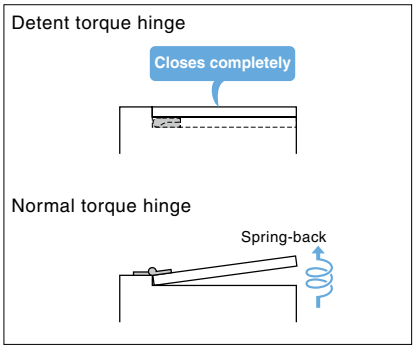
[Application Example]







Left-handed type shown. Right-handed type is symmetrical.



●Detent function prevents spring-back in closed position.

No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS304)	Barrel Polished
②	Bracket		
③	Shaft	Stainless Steel (SUS303)	–
④	Washer	Stainless Steel	
⑤	Cam A		
⑥	Cam B		
⑦	Spring Washer		
⑧	Plate	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Release Torque※ N·m/pc	Release Torque※ kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-026-457	HG-DTA4-R	Right-handed	0.4±20%	4.08±20%	0.7±20%	7.14±20%	19	50	500
G	3D	170-026-458	HG-DTA4-L	Left-handed						50	500
G	3D	170-026-459	HG-DTA8-R	Right-handed	0.8±20%	8.16±20%	1.5±20%	15.31±20%		50	500
G	3D	170-026-460	HG-DTA8-L	Left-handed						50	500

Refer to 1 : P.15

※Torque required to release detent.

DETENT TORQUE HINGE HG-DTB

SUS VIDEO



●Detent function prevents spring-back in closed position.

[Specifications]

●Operating temperature: 0˚C~40˚C

[Applications]

●Small device with cover, folding machine, etc.

[Remarks]

●Be sure to read the "Cautions" 1.

●For pair using: Please use the same torque in both hinges.

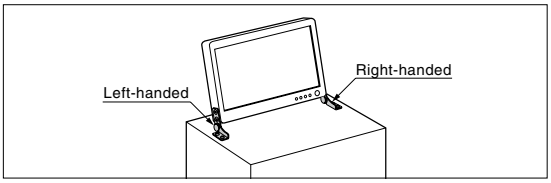
●When installing, ensure that both hinge shafts are levelled and aligned.

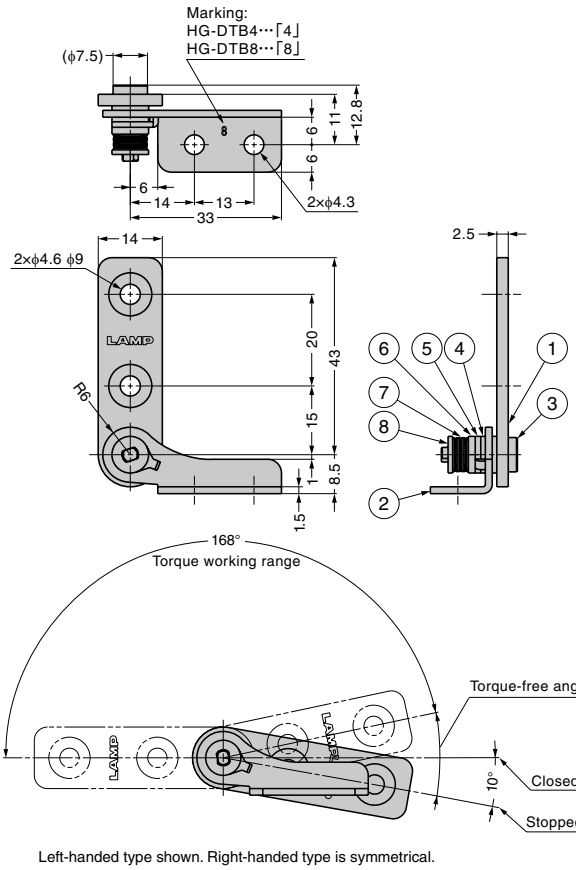
Video Link

Selection Tool Sasuga-kun Applicable Products

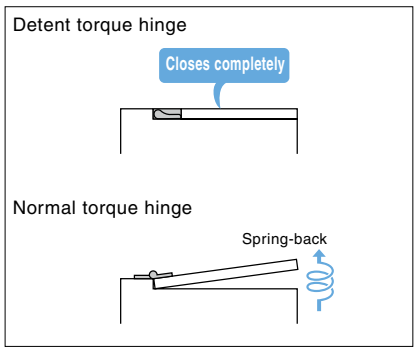
Used for Product Selection & Simulation. Available on Web!

[Application Example]





Left-handed type shown. Right-handed type is symmetrical.



●Detent function prevents spring-back in closed position.

No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS304)	Barrel Polished
②	Bracket		
③	Shaft	Stainless Steel (SUS303)	–
④	Washer	Stainless Steel	
⑤	Cam A		
⑥	Cam B		
⑦	Spring Washer		
⑧	Plate	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Release Torque※ N·m/pc	Release Torque※ kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-026-461	HG-DTB4-R	Right-handed	0.4±20%	4.08±20%	0.7±20%	7.14±20%	22	50	500
G	3D	170-026-462	HG-DTB4-L	Left-handed						50	500
G	3D	170-026-463	HG-DTB8-R	Right-handed	0.8±20%	8.16±20%	1.5±20%	15.31±20%	23	50	400
G	3D	170-026-464	HG-DTB8-L	Left-handed						50	400

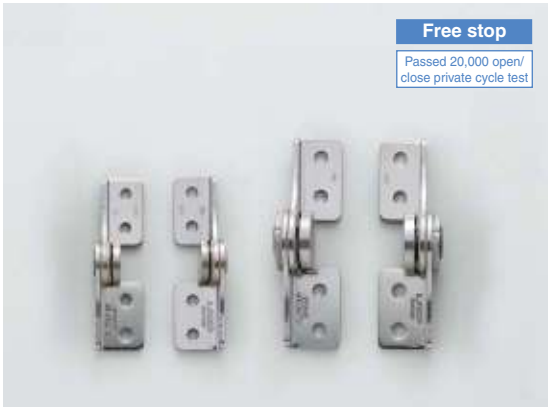
Refer to 1 : P.15

※Torque required to release detent.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

TORQUE HINGE HG-TA

SUS VIDEO



- Highly durable HG-TA45H with wire hole is newly launched 1.

[Specifications]
- Operating temperature: 0˚C~40˚C

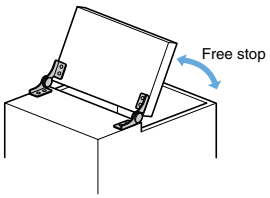
[Applications]
- LCD, monitoring camera, etc.

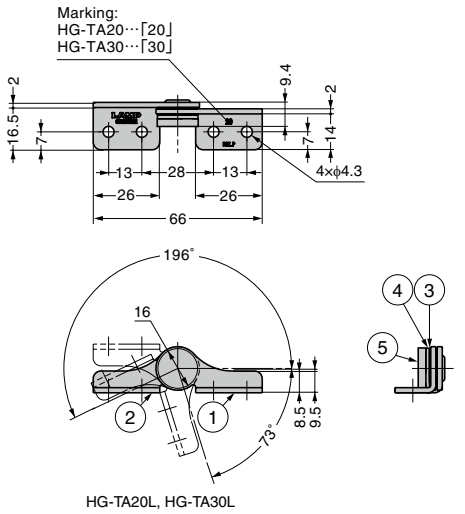
[Remarks]
- Be sure to read the "Cautions" 2.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

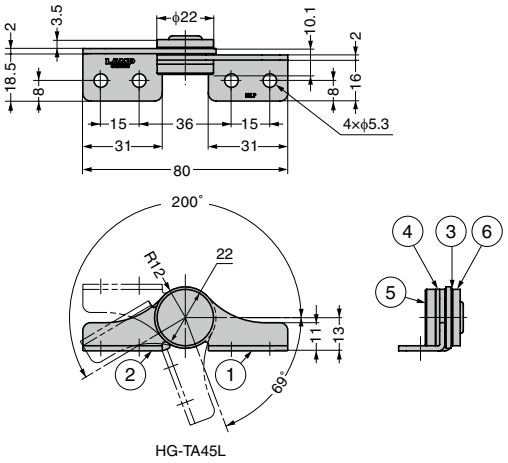
Video Link

[Application Example]





HG-TA20L, HG-TA30L



HG-TA45L

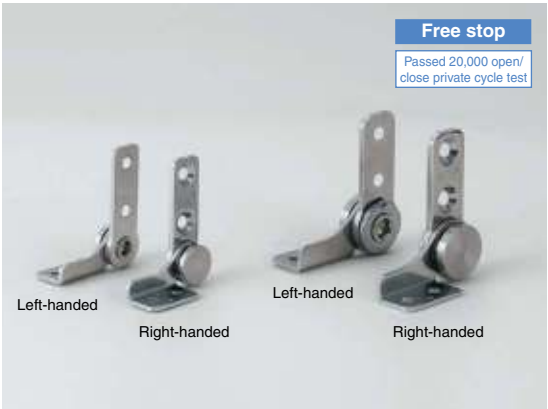
No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS430)	Barrel Polished
②	Base		
③	F Plate	Bronze	–
④	Spring Washer	Steel	
⑤	Shaft	Stainless Steel (SUS303)	
⑥	Washer	Stainless Steel (SUS430)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Description	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-012-403	HG-TA20R	Without wire hole	Right-handed	2.0±20%	20.4±20%	30	40	320
G	3D	170-012-404	HG-TA20L		Left-handed				40	320
G	3D	170-012-405	HG-TA30R		Right-handed	3.0±20%	30.6±20%		40	320
G	3D	170-012-406	HG-TA30L		Left-handed				40	320
G	3D	170-012-407	HG-TA45R		Right-handed	4.5±20%	45.9±20%	65	20	160
G	3D	170-012-408	HG-TA45L		Left-handed				20	160

Refer to 1 : P.38, 2 : P.15

TORQUE HINGE HG-TB

SUS VIDEO



- Provides torque stability in both directions.

[Specifications]

- Operating temperature: 0˚C~40˚C

[Applications]

- LCD, monitoring camera, etc.

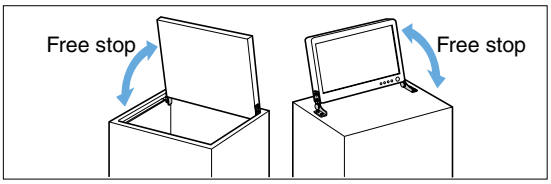
[Remarks]

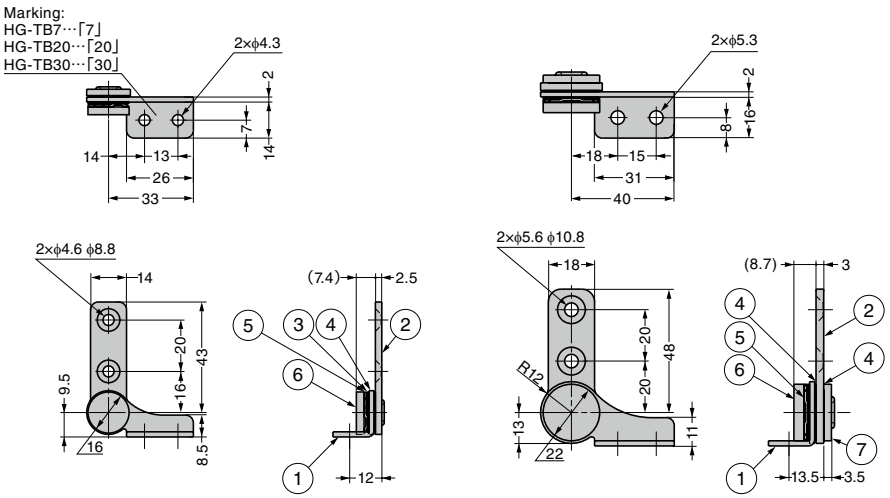
- Be sure to read the "Cautions" 1.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Can not be used around water because not all parts are made of stainless steel.

Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

[Application Example]





HG-TB7L, G-TB20L, HG-TB30L

HG-TB45L

Left-handed type shown. Right-handed type is symmetrical.

No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS430)	Barrel Polished
②	Base		
③	F Plate A	Bronze	–
④	F Plate B		
⑤	Spring Washer	Steel	
⑥	Shaft	Stainless Steel (SUS303)	
⑦	Washer	Stainless Steel (SUS430)	Barrel Polished

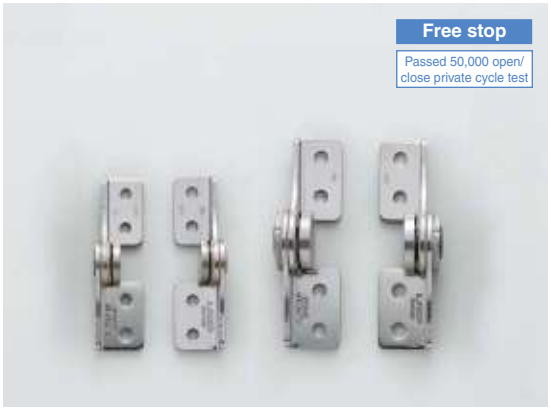
RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-022-142	HG-TB7R	Right-handed	0.7±20%	7.1±20%	360°	31	40	320
G	3D	170-022-143	HG-TB7L	Left-handed					40	320
G	3D	170-012-413	HG-TB20R	Right-handed	2.0±20%	20.4±20%		32	40	320
G	3D	170-012-414	HG-TB20L	Left-handed					40	320
G	3D	170-012-415	HG-TB30R	Right-handed	3.0±20%	30.6±20%			40	320
G	3D	170-012-416	HG-TB30L	Left-handed					40	320
G	3D	170-012-417	HG-TB45R	Right-handed	4.5±20%	45.9±20%		67	20	160
G	3D	170-012-418	HG-TB45L	Left-handed					20	160

Refer to 1 : P.15

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

TORQUE HINGE HG-TA45H

SUS



- With wire hole.
- Excellent durability.

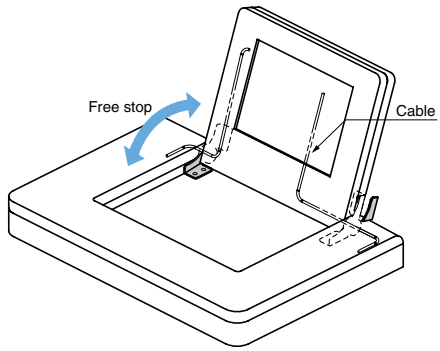
[Specifications]
- Operating temperature: 0˚C ~40˚C

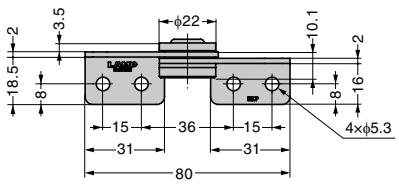
[Applications]
- LCD, monitoring camera, etc.

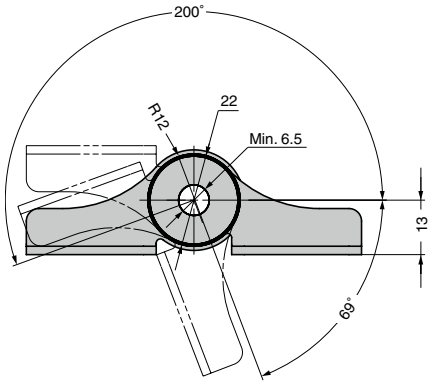
[Remarks]
- Be sure to read the “Cautions” 1.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.

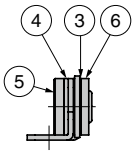
Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

[Application Example]









Left-handed type shown. Right-handed type is symmetrical.

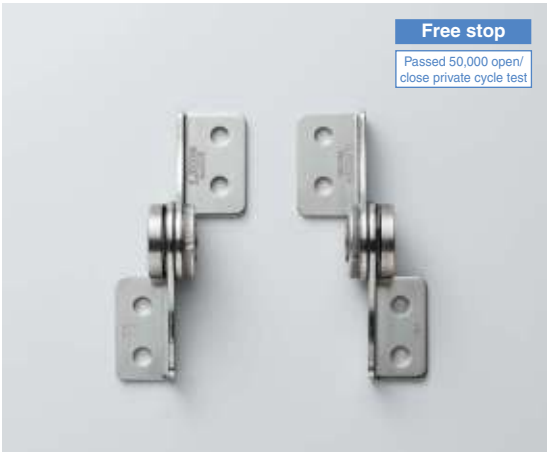
No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS430)	Barrel Polished
②	Base		
③	F Plate	Bronze	–
④	Spring Washer	Steel	
⑤	Shaft	Stainless Steel (SUS303)	
⑥	Washer	Stainless Steel (SUS430)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Description	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-034-215	HG-TA45HR	With wire hole	Right-handed	4.5±20%	45.9±20%	60	20	160
G	3D	170-034-216	HG-TA45HL		Left-handed				20	160

Refer to 1 : P.15

TORQUE HINGE HG-TC45H

SUS



- With wire hole.
- Excellent durability.

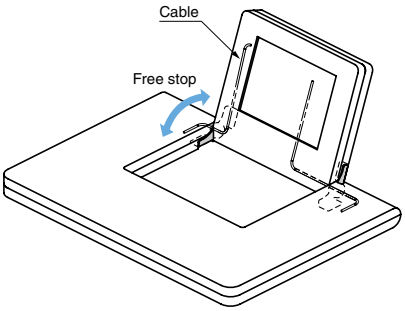
[Specifications]
- Operating temperature: 0˚C ~40˚C

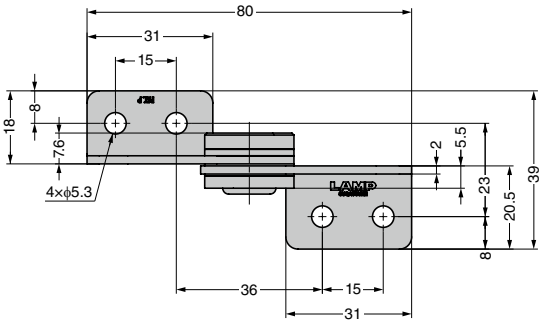
[Applications]
- LCD, monitoring camera, etc.

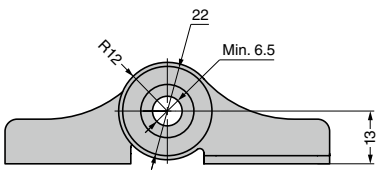
[Remarks]
- Be sure to read the “Cautions” 1.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.

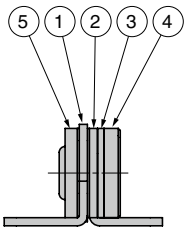
Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation.
Available on Web!

[Application Example]









Left-handed type shown. Right-handed type is symmetrical.

No.	Part Name	Material	Finish / Colour
①	Bracket	Stainless Steel (SUS430)	Barrel Polished
②	Base		
③	Spring Washer	Steel	–
④	Shaft	Stainless Steel (SUS303)	
⑤	Washer	Stainless Steel (SUS430)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Description	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-034-217	HG-TC45HR	With wire hole	Right-handed	4.5±20%	45.9±20%	60	20	160
G	3D	170-034-218	HG-TC45HL		Left-handed				20	160

Refer to 1 : P.15

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

STAINLESS STEEL TORQUE HINGE HG-TAS

SUS VIDEO



- Stainless steel construction suitable for corrosive environments.

[Specifications]
- Operating temperature: 0˚C ~40˚C

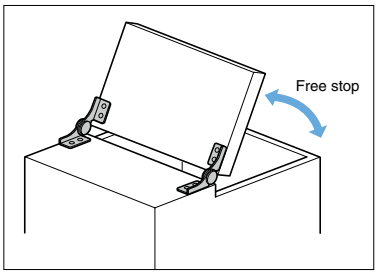
[Applications]
- LCD, monitoring camera, etc.

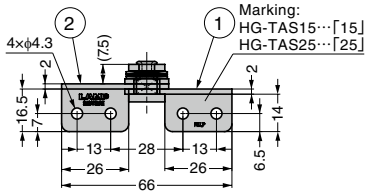
[Remarks]
- Be sure to read the “Cautions” 1.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.

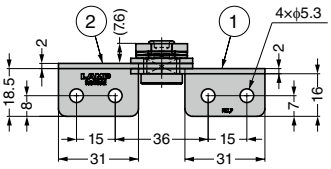
Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

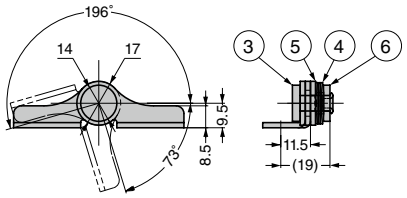
Video Link

[Application Example]

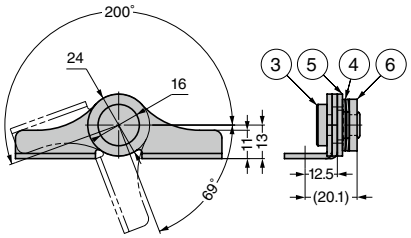








HG-TAS15L, 25L



HG-TAS40L

Left-handed type shown. Right-handed type is symmetrical.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Shaft	Stainless Steel (SUS303)	–
④	Spring Washer	Stainless Steel (SUS304)	
⑤	Plate		Barrel Polished
⑥	Washer	Stainless Steel (SUS430)	

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-037-294	HG-TAS15R	Right	1.5±20%	15.3±20%	37	40	320
G	3D	170-037-295	HG-TAS15L	Left			37	40	320
G	3D	170-037-296	HG-TAS25R	Right	2.5±20%	25.5±20%	38	40	320
G	3D	170-037-297	HG-TAS25L	Left			38	40	320
G	3D	170-037-298	HG-TAS40R	Right	4.0±20%	40.8±20%	64	20	160
G	3D	170-037-299	HG-TAS40L	Left			64	20	160

Refer to 1 : P.15

ADJUSTABLE TORQUE HINGE HG-TASJ40

SUS



- Torque adjustable from 0 to 4 N・m.
- Stainless steel construction suitable for corrosive environments.

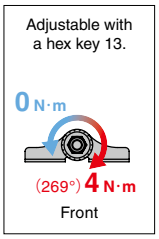
[Specifications]

- Operating temperature: 0℃~40℃

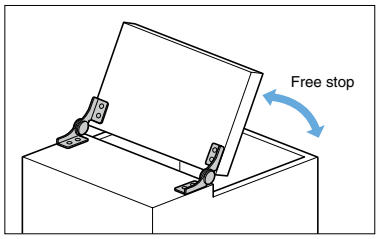
[Remarks]

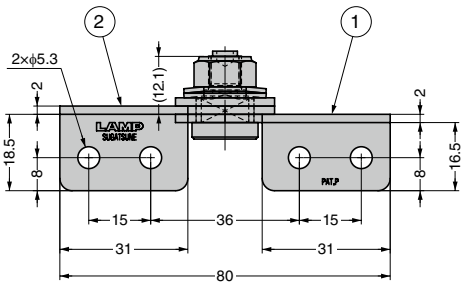
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Use a spanner (nominal size 13) for torque adjustment.
- Do not forcibly remove the torque adjustment nut.
- The factory setting of torque is 4.0N・m. Adjust if necessary.

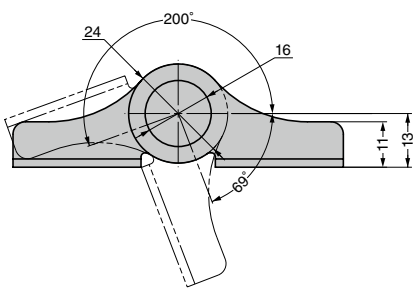
Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

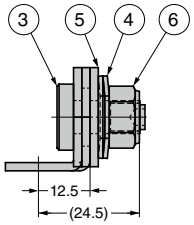


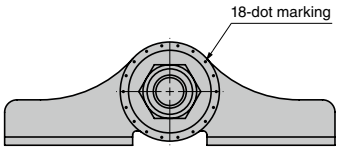
[Application Example]











Left-handed type shown. Right-handed type is symmetrical.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Shaft	Stainless Steel (SUS303)	–
④	Spring Washer	Stainless Steel (SUS304)	
⑤	Plate		Barrel Polished
⑥	Lock Nut	Stainless Steel	–

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-037-306	HG-TASJ40R	Right	0~4.0	0~40.8	64	20	160
G	3D	170-037-307	HG-TASJ40L	Left			64	20	160

Refer to 1 : P.15

STAINLESS STEEL TORQUE HINGE HG-TBS

SUS VIDEO



- Stainless steel construction suitable for corrosive environments.

[Specifications]
- Operating temperature: 0˚C ~40˚C

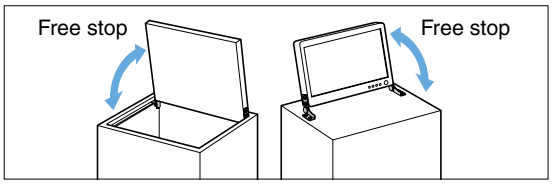
[Applications]
- LCD, monitoring camera, etc.

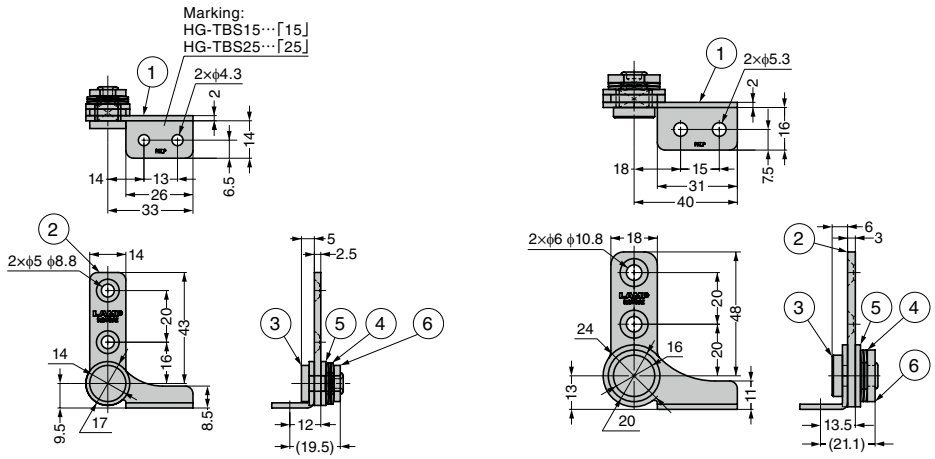
[Remarks]
- Be sure to read the "Cautions" 1.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.

Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation.
Available on Web!

[Application Example]





Left-handed type shown. Right-handed type is symmetrical.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Shaft	Stainless Steel (SUS303)	–
④	Spring Washer	Stainless Steel (SUS304)	
⑤	Plate		Barrel Polished
⑥	Washer	Stainless Steel (SUS430)	

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-037-300	HG-TBS15R	Right	1.5±20%	15.3±20%	360°	37	40	320
G	3D	170-037-301	HG-TBS15L	Left				37	40	320
G	3D	170-037-302	HG-TBS25R	Right	2.5±20%	25.5±20%		38	40	320
G	3D	170-037-303	HG-TBS25L	Left				38	40	320
G	3D	170-037-304	HG-TBS40R	Right	4.0±20%	40.8±20%		67	20	160
G	3D	170-037-305	HG-TBS40L	Left				67	20	160

Refer to 1 : P.15

ADJUSTABLE TORQUE HINGE HG-TBSJ40

SUS



- Torque adjustable from 0 to 4 N・m.
- Stainless steel construction suitable for corrosive environments.

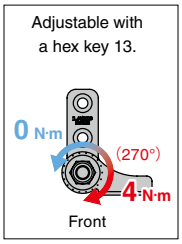
[Specifications]

- Operating temperature: 0℃~40℃

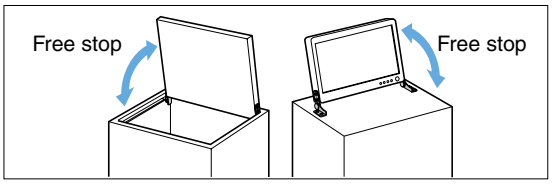
[Remarks]

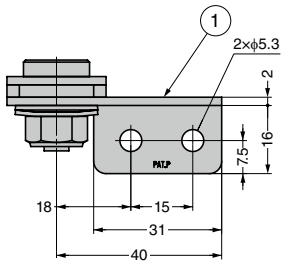
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Use a spanner (nominal size 13) for torque adjustment.
- Do not forcibly remove the torque adjustment nut.
- The factory setting of torque is 4.0N・m. Adjust if necessary.

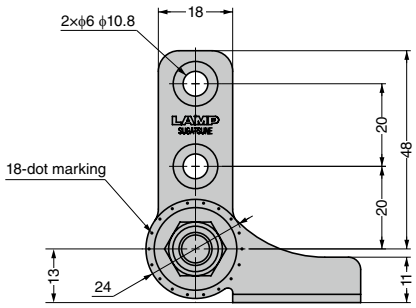
Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!



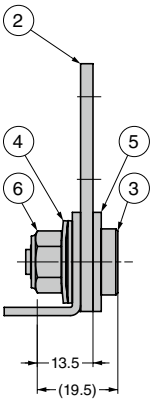
[Application Example]

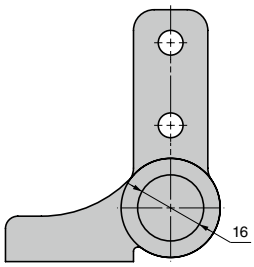






Left-handed type shown. Right-handed type is symmetrical.



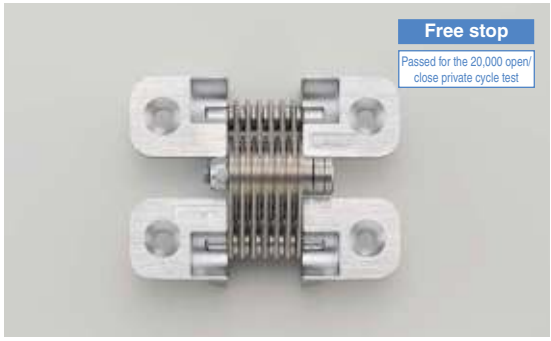


No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Shaft	Stainless Steel (SUS303)	–
④	Spring Washer	Stainless Steel (SUS304)	
⑤	Plate		Barrel Polished
⑥	Lock Nut	Stainless Steel	–

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-037-308	HG-TBSJ40R	Right	0~4.0	0~40.8	360°	67	20	160
G	3D	170-037-309	HG-TBSJ40L	Left				67	20	160

Refer to 1 : P.15

TORQUE HINGE (CONCEALED) HG-RT



- Hinge is completely hidden when the door is closed.
- Torque decreases as the opening angle increases, making easier to open the lid (refer to "Torque Curve" at the lower left).
- Use with top-opening lids (opening angle 0°~100°) (free stop range).
- Non-friction torque type also available 1 .

[Specifications]

- Operating temperature: 0˚C~40˚C

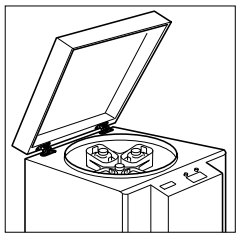
[Remarks]

- Be sure to read the “Cautions” 2 .
- Torque changes with the opening angle (refer to "Torque Curve" at the lower left).
- When selecting, ensure that the maximum torque of lid (door) is less than half of the torque at the hinge closed position (see the table below).
- Set a stopper in the Range where torque is not effective (refer to "Free Stop Range" at the left)
- When installing, ensure that both hinge shafts are levelled and aligned.

[Recommended Screws]

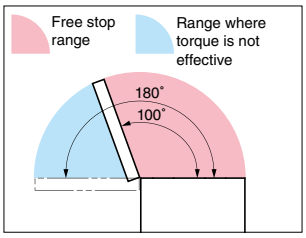
- Countersunk head tapping screw 4 or Countersunk head screw M4

[Application Example]



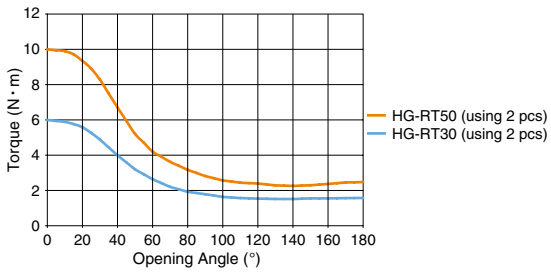
Use with top-opening lids (opening angle 0 ° ~100°).

[Free Stop Range]

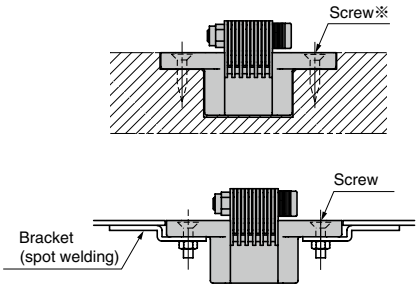


Install stopper to hold the door within the range where torque is not effective.

[Torque Curve]

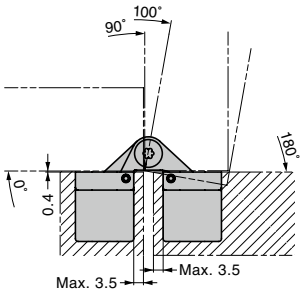


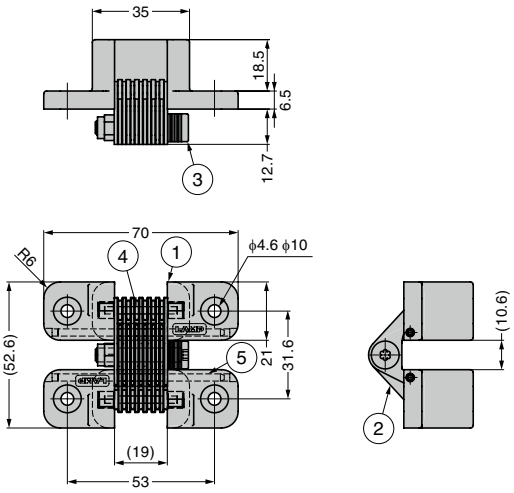
[Installation]



※Screws and brackets not included.

[Locus Chart]





No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Satin Chrome
②	Arm	Stainless Steel (SUS304)	Plain
③	Shaft 1		
④	Shaft 2		
⑤	Shaft 3		

RoHS	CAD	Item Code	Item Name	Max. Lid (Door) Moment		Torque N·m/2pcs (Closed Position)	Torque kgf·cm/2pcs (Closed Position)	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
				Max. N·m/2 pcs	Max. kgf·cm/2 pcs						
G	3D	170-026-478	HG-RT30	3	31	3±20%	31±20%	180°	160	12	72
G	3D	170-021-889	HG-RT50	5	51	5±20%	51±20%			12	72

Refer to 1 : P.88, 2 : P.15

DETACHABLE TORQUE HINGE HG-RNM30

INSTRUCTION SUS VIDEO



- Window attachment and detachment without tools, easy to maintain.
- Lock mechanism prevents the window from falling off.

[Remarks]

- Be sure to read the "Cautions" 1.
- Sold in set (hinge and strike each 2 pcs).
- When installing, ensure that both hinge shafts are levelled and aligned.
- Force for operating window varies depending on use environment (air temperature, wind).
- Do not use with window enduring strong wind pressure.
- Use mohair separately if air tightness is required.

Video Link

[Parts Included]

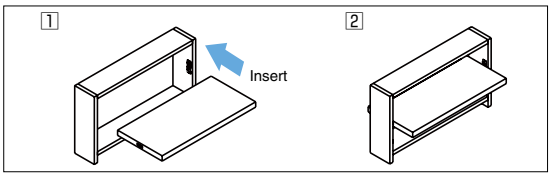
Only for HG-RNM30-SET

- Pan head tapping screw 4×20 (strike side)
- Countersunk head tapping screw 4×20 (hinge side)

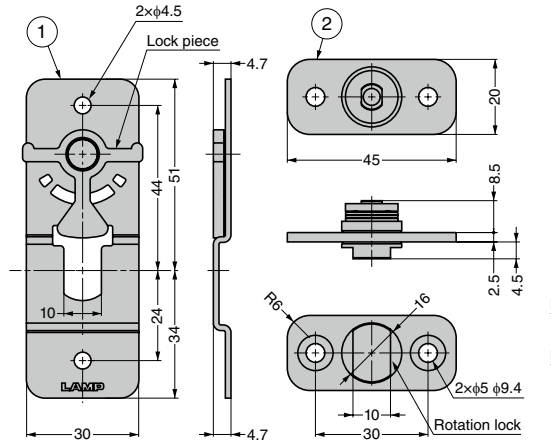
[Recommended Screws]

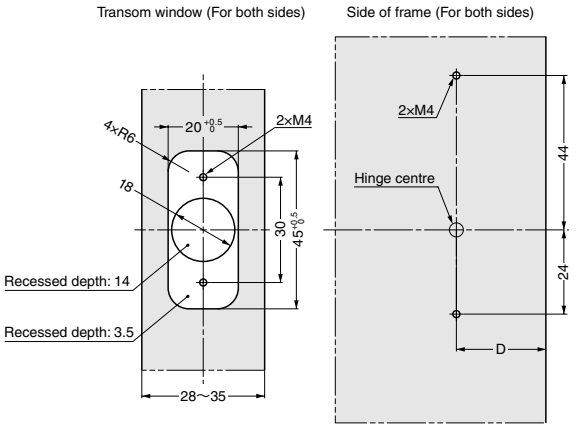
- Pan head screw M4 (strike side)
- Countersunk head screw M4 (hinge side)

[Installation]



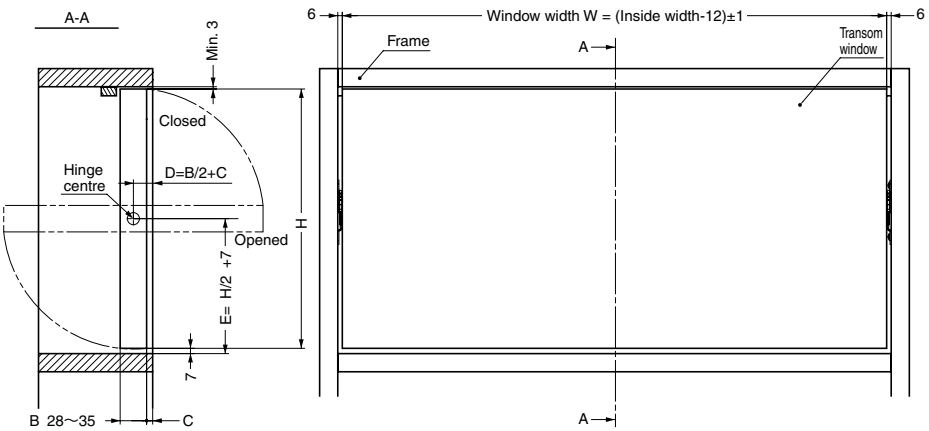
[Cut Out Dimensions]



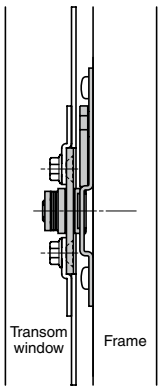


No.	Part Name	Material	Finish
①	Strike	Stainless Steel, POM	–
②	Hinge	Stainless Steel, etc.	

[Cut Out Dimensions]



[Installation Reference]



RoHS	CAD	Item Code	Item Name	Screw	Torque N·m/set	Torque kgf·cm/set	Weight (g)	Box (sets)	Carton (sets)
G	3D	170-029-733	HG-RNM30	w/o	3.0±20%	30.6±20%	112	15	120
G	3D	170-033-319	HG-RNM30-SET	w/				15	120

Refer to 1 : P.15

LIFT-OFF TORQUE HINGE HG-KNT

SUS



HG-KNT3L

- Can be used vertically and horizontally.
- Lift-off type, easy to detach doors.

[Applications]

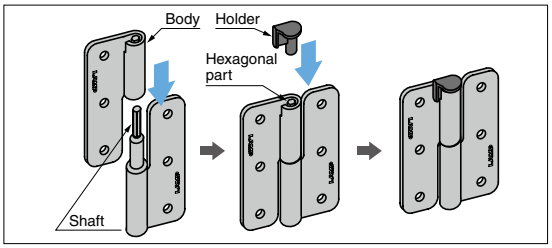
- Laboratory equipment, OA equipment, FA equipment, and various automatic equipment.

[Remarks]

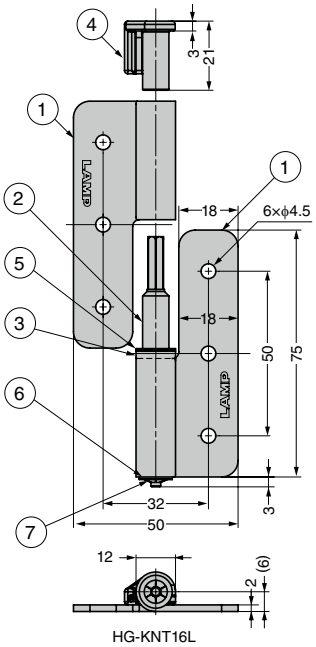
- Be sure to read the "Cautions" 1.
- When installing, ensure that both hinge shafts are aligned.
- Insert into holder following installation of the door. Infirm insertion may cause damage.
- When using the hinges horizontally, set the holders opposite each other to prevent them being inserted or removed.

Selection Tool Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

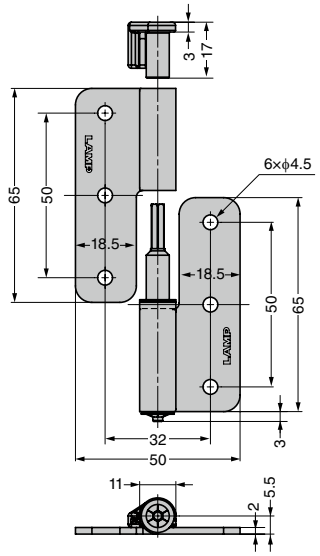
[Assembly]



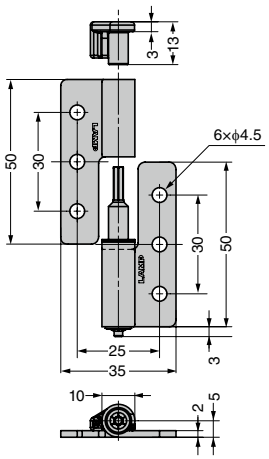
Insert the body into shaft, and then insert the holder into the hexagonal part of shaft to generate torque. To detach, use a tool to push the holder out.



HG-KNT16L



HG-KNT7L



HG-KNT3L

Left-handed type shown. Right-handed type is symmetrical.

No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Shaft		–
③	Plug	POM	Black
④	Holder	PA	
⑤	Washer	PTFE	Natural
⑥	Washer	POM	
⑦	Push Nut	Stainless Steel	–

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	–	170-035-380	HG-KNT3L	Left-handed	$0.3^{\pm 0.2}$	$3.1^{\pm 2.0}$	42	50	200
G	–	170-035-381	HG-KNT3R	Right-handed				50	200
G	–	170-035-382	HG-KNT7L	Left-handed	$0.7^{\pm 0.25}$	$7.1^{\pm 2.6}$	76	50	200
G	–	170-035-383	HG-KNT7R	Right-handed				50	200
G	–	170-035-384	HG-KNT16L	Left-handed	$1.6^{\pm 0.3}$	$16.3^{\pm 3.1}$	96	30	120
G	–	170-035-385	HG-KNT16R	Right-handed				30	120

Refer to 1 : P.15

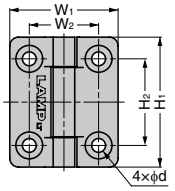
MINI TORQUE HINGE HG-MF



●Small plastic torque hinge.

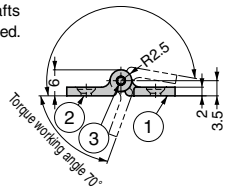
[Applications]
- ●Small and lightweight doors such as office equipment and shop furniture

[Remarks]
- ●Be sure to read the "Cautions" 1.
- ●When installing, ensure that both hinge shafts are levelled and aligned.



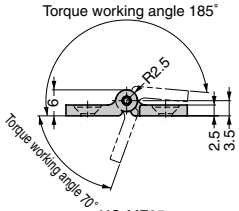
Selection Tool Sasuga-kun
Applicable Products
Used for Product Selection & Simulation. Available on Web!

Torque working angle 190°



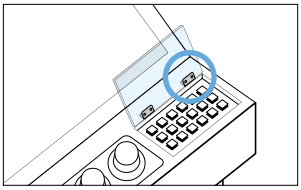
HG-MF08, HG-MF15

Torque working angle 185°



HG-MF25

[Application Example]



No.	Part Name	Material	Colour
①	Body A	POM	Black, White
②	Body B		
③	Shaft	Stainless Steel (SUS304)	–

RoHS	CAD	Item Code	Item Name	Colour	W1	W2	H1	H2	t	dφ	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-023-854	HG-MF08-BL	Black	25	16	20	10	2	φ2.4, φ4.2	0.0784±25%	0.8±25%	2	300	1800
G	3D	170-023-855	HG-MF08-WT	White									2	300	1800
G	3D	170-023-856	HG-MF15-BL	Black			30	20		φ3.2, φ6.2	0.147±33%	1.5±33%	3	200	1200
G	3D	170-023-857	HG-MF15-WT	White									3	200	1200
G	3D	170-023-858	HG-MF25-BL	Black	28	18	40	25	2.5		0.245±33%	2.5±33%	5	100	600
G	3D	170-023-859	HG-MF25-WT	White									5	100	600

Refer to 1 : P.15

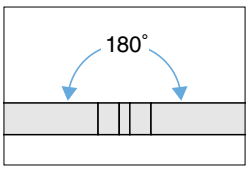
DUAL AXIS TORQUE HINGE

Under Development



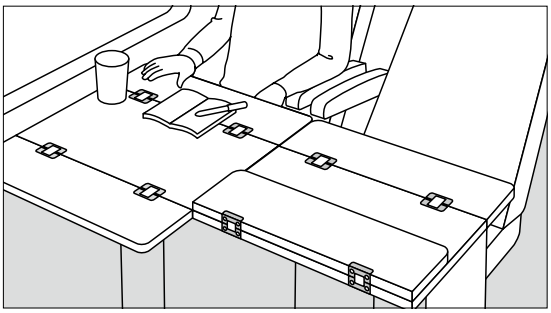


- ●Swivels 180° .
- ●Suitable for folding table of shop and train, etc.



No projection from the top surface of the door when fully opened. And the design of door is maintained as the mounting screws are not visible.

[Application Example]



Box seat table of train

Fully opened



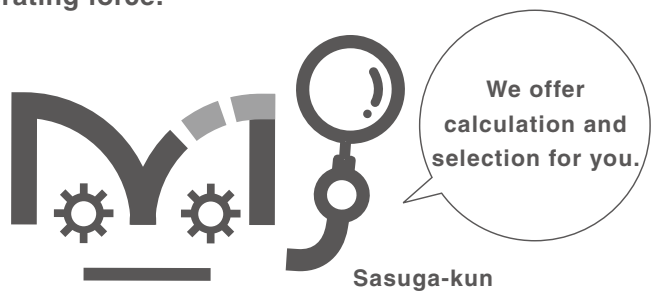
Mounting screws do not protrude when closed.



TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.



Access from here | Sasuga-kun **Search**

http://contents.sugatsune.co.jp/en/motion/selection/

DAMPER HINGE HG-JHW16S

Lapcon L=R INSTRUCTION VIDEO



- Surface mount type with built-in damper UDH-16S 1.
- Covers various torque ranges by using "with damper" and "without damper" as a pair.

[Specifications]
- Operating temperature: 0℃~40℃

[Applications]
- Top-opening lids and upper covers of various cabinets

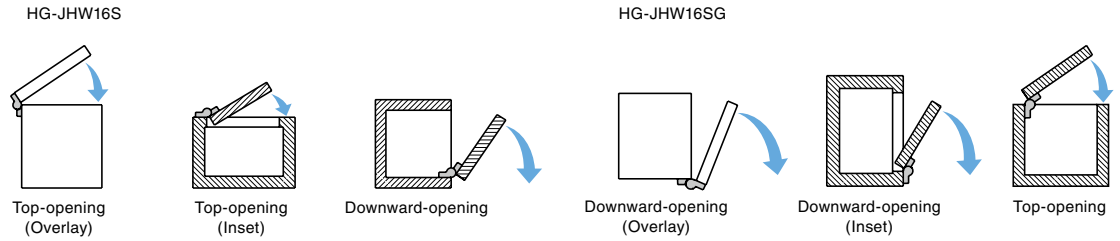
[Remarks]
- Be sure to read the "Cautions" 2.
- Torque range is the value when using one hinge (when two hinges with identical torque is used for one lid, the value is doubled).
- Install a stopper such as a stay at the lid opening/closing position (0~120 degree or less) for not exceeding the specified swivelling range.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Do not disassemble or modify the product.

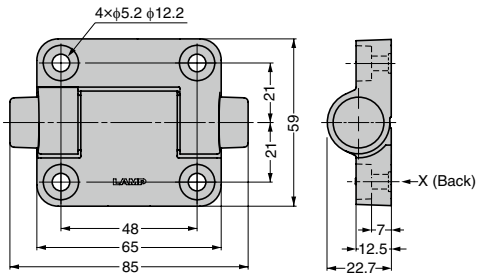
[Recommended Screws]
- M5 hexagon socket head cap screws (4 pcs)
- Washers 5 (4 pcs)

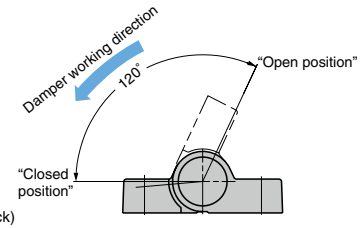
Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

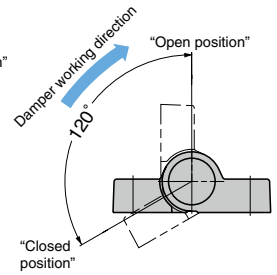
[Damper Working Direction]





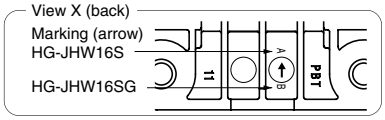


HG-JHW16S



HG-JHW16SG

※"Opening" and "Closing" directions shown above are for the case of external installation.



Material	Finish / Colour
PBT	Emboss/Dark Grey

RoHS	CAD	Item Code	Item Name	Damper Working Direction (When External Installation)	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)
G	3D	170-027-420	HG-JHW16S-34	For Closing	2.0~3.4	20.4~34.7	83	30
G	3D	170-027-421	HG-JHW16S-50		3.4~5.0	34.7~51.0		30
G	3D	170-027-422	HG-JHW16S-34G	For Opening	2.0~3.4	20.4~34.7		30
G	3D	170-027-423	HG-JHW16S-50G		3.4~5.0	34.7~51.0		30
G	3D	170-027-419	HG-JHW16S-00	Without Damper	–	–	52	30

Refer to 1 : P.67, 2 : P.15

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

DAMPER HINGE HG-JHW, HG-JHWG





- Hinge with built-in dampers UDH 1.
- AS parts set for installing to aluminium frame also available. 2

[Applications]

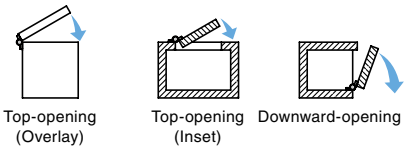
- Top-opening lids and upper covers of various cabinets.

[Remarks]

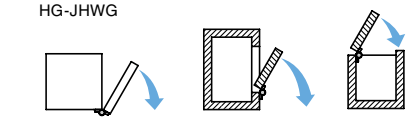
- Be sure to read the "Cautions" 3.
- Install a stopper such as a stay at the lid opening/closing position (0~115 degree or less) for not exceeding the specified swivelling range.
- When installing, ensure that both hinge shafts are levelled and aligned.

[Damper Working Direction]

HG-JHW

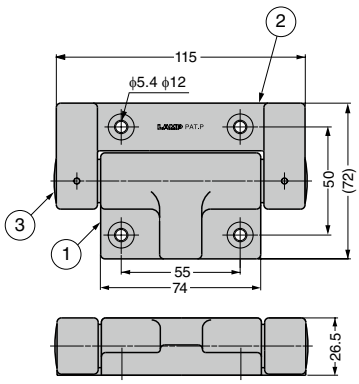


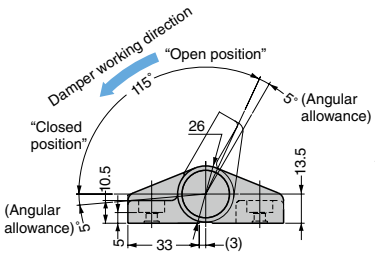
HG-JHWG



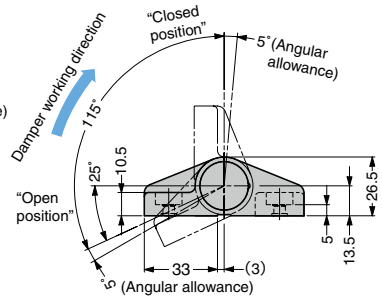
Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation.
Available on Web!





HG-JHW



HG-JHWG

No.	Part Name	Material	Finish / Colour
①	Bracket	PBT	Emboss/Dark Grey
②	Damper		
③	Cover	PP	

RoHS	CAD	Item Code	Item Name	Damper Working Direction	Torque N·m/2pcs	Torque kgf·cm/2pcs	Marking Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-092-212	HG-JHW50	For Closing	3~5	61.2~102	White	184	4	64
G	3D	170-092-211	HG-JHW70		5~7	102~142.8	w/o	182	4	64
G	3D	170-092-215	HG-JHW50G	For Opening	3~5	61.2~102	White, Red	216	4	64
G	3D	170-092-216	HG-JHW70G		5~7	102~142.8	Red	180	4	64

Refer to 1 : P.66, 2 : P.51, 3 : P.15

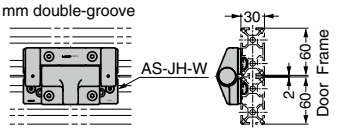
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

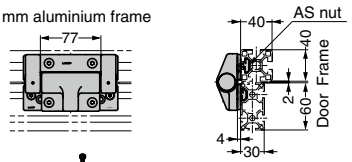


[Dimensions]

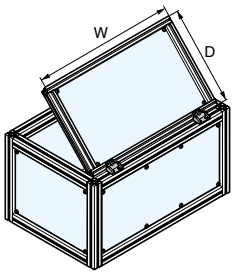
In case of 30×60 mm double-groove aluminium frame



In case of 40×40 mm aluminium frame



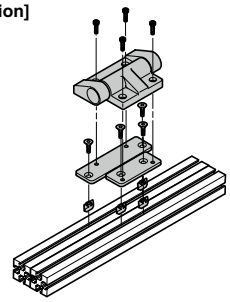
[Criterion of Door Weight]



Item Name	W	D	Door Weight kg
HG-JHW50	600	500	3.4
HG-JHW70	1000		5

※ In case of using two hinges for one door.

[Installation]

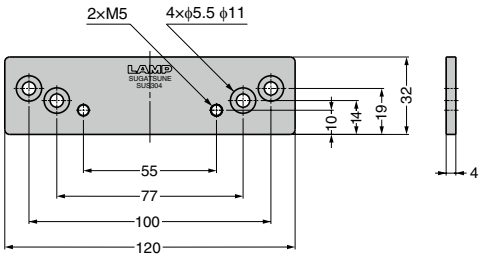


[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	170-041-554	AS-HG-JHW50-30-8	Groove Width 8 mm	Damper Hinge HG-JHW50 : 1pc Bracket AS-JH-W : 2pcs AS Nut AS-8M5 : 4pcs Hexagon Socket Head Cap Screw M5×8 : 4pcs Hexagon Socket Countersunk Head Screw M5×12 : 4pcs	–
G	–	170-041-555	AS-HG-JHW70-30-8		Damper Hinge HG-JHW70 : 1pc Bracket AS-JH-W : 2pcs AS Nut AS-8M5 : 4pcs Hexagon Socket Head Cap Screw M5×8 : 4pcs Hexagon Socket Countersunk Head Screw M5×12 : 4pcs	–
G	–	170-041-556	AS-HG-JHW50-40-10-30-8	Groove Width 8 mm Groove Width 10 mm	Damper Hinge HG-JHW50 : 1pc Bracket AS-JH-W : 2pcs AS Nut AS-8M5 : 2pcs AS Nut AS-10M5 : 2pcs Hexagon Socket Head Cap Screw M5×8 : 4pcs Hexagon Socket Head Cap Screw M5×12 : 4pcs	–
G	–	170-041-557	AS-HG-JHW70-40-10-30-8		Damper Hinge HG-JHW70 : 1pc Bracket AS-JH-W : 2pcs AS Nut AS-8M5 : 2pcs AS Nut AS-10M5 : 2pcs Hexagon Socket Head Cap Screw M5×8 : 4pcs Hexagon Socket Head Cap Screw M5×12 : 4pcs	–

Refer to 1 : FRONT P.20, 2 : P.50, 3 : P.706, 4 : P.51

AS BRACKET FOR HG-JHW AS-JH-W



- Used for installing damper hinge HG-JHW to aluminium frame.
- Use AS nuts for installation.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-692	AS-JH-W	Stainless Steel (SUS304)	Barrel Polished	105	25	250

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

DAMPER HINGE HG-JH

Lapcon AS INSTRUCTION



Sold in pairs.

- Hinge with built-in dampers hinge UDH 1.
- Smooth movement in the opening direction.
- Left-handed…Damper works when rotating counterclockwise.
  Right-handed…Damper works when rotating clockwise.
- AS parts set for installing to aluminium frame also available. 2

[Applications]

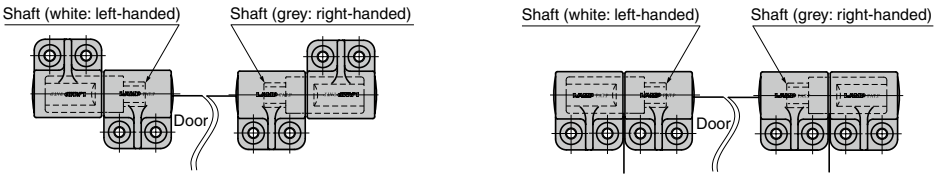
- Top-opening lids and upper covers of various cabinets.

[Remarks]

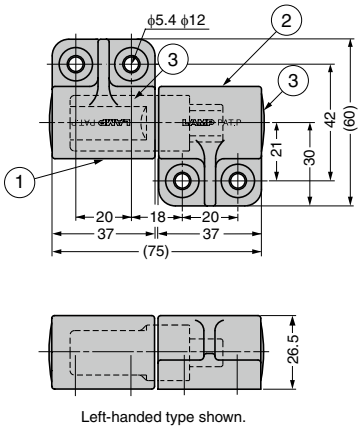
- Be sure to read the "Cautions" 3.
- Torque range is the value when using two hinges for one door.
- Install a stopper such as a stay at the lid opening/closing position (0~115 degree or less) for not exceeding the specified rotation range.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Sold in pairs.

Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

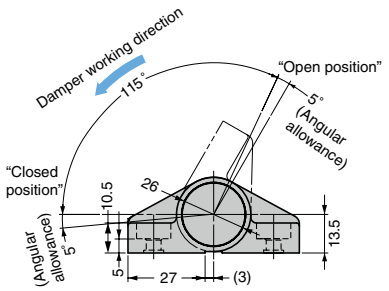
[Installation]



When viewing door from lower side as shown above, install the left-handed type damper (white) on the left side and the right-handed type (grey) on the right side.



Left-handed type shown.



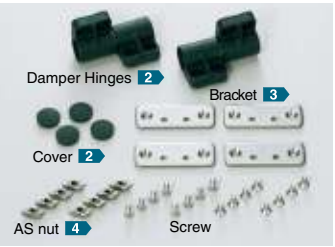
No.	Part Name	Material	Finish / Colour
①	Bracket	PBT	Emboss/Dark Grey
②	Damper		
③	Cap	PP	

RoHS	CAD	Item Code	Item Name	Torque N·m/pair	Torque kgf·cm/pair	Marking Colour (Base Side)	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-092-209	HG-JH25	3~5	30.6~51	Blue	200	4	64
G	3D	170-092-210	HG-JH35	5~7	51~71.4	Red	193	4	64

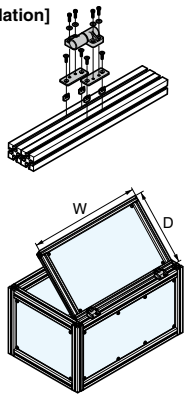
Refer to 1 : P.66, 2 : P.53, 3 : P.15

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

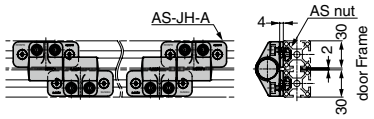


[Installation]

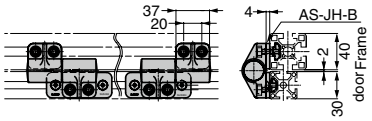


[Dimensions]

In case of 30×30 mm aluminium frame



In case of 40×40 mm aluminium frame



[Criterion of Door Weights]

Item Name	W	D	Door Weight kg
HG-JH25	400	400	2.3
HG-JH35	700	400	3.2

※ In case of using two hinges for one door.

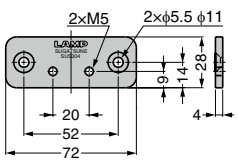
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
–	–	170-041-550	AS-HG-JH25-30-8	Groove Width 8 mm	Damper Hinge HG-JH25 : 1set Bracket AS-JH-A : 4pcs AS Nut AS-8M5 : 8pcs M5×10 Hexagon Socket Head Cap Screw : 8pcs M5×12 Hexagon Socket Countersunk Head Screw : 8pcs M5 Washers (size 5) : 8pcs	–
–	–	170-041-551	AS-HG-JH35-30-8		Damper Hinge HG-JH35 : 1set Bracket AS-JH-A : 4pcs AS Nut AS-8M5 : 8pcs M5×10 Hexagon Socket Head Cap Screw : 8pcs M5×12 Hexagon Socket Countersunk Head Screw : 8pcs M5 Washers (size 5) : 8pcs	–
–	–	170-041-552	AS-HG-JH25-40-10-30-8	Groove Width 8 mm Groove Width 10 mm	Damper Hinge HG-JH25 : 1set Bracket AS-JH-A : 2pcs Bracket AS-JH-B : 2pcs AS Nut AS-8M5 : 8pcs AS Nut AS-10M5 : 8pcs M5×10 Hexagon Socket Head Cap Screw : 4pcs M5×20 Hexagon Socket Head Cap Screw : 4pcs M5×12 Hexagon Socket Countersunk Head Screw : 4pcs M5 Washers (size 5) : 8pcs	–
–	–	170-041-553	AS-HG-JH35-40-10-30-8		Damper Hinge HG-JH35 : 1set Bracket AS-JH-A : 2pcs Bracket AS-JH-B : 2pcs AS Nut AS-8M5 : 8pcs AS Nut AS-10M5 : 8pcs M5×10 Hexagon Socket Head Cap Screw : 4pcs M5×20 Hexagon Socket Head Cap Screw : 4pcs M5×12 Hexagon Socket Countersunk Head Screw : 4pcs M5 Washers (size 5) : 8pcs	–

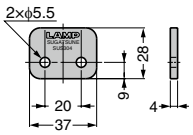
Refer to 1 : FRONT P.20, 2 : P.52, 3 : P.53, 4 : P.706

AS BRACKET FOR HG-JH AS-JH

AS SUS



AS-JH-A



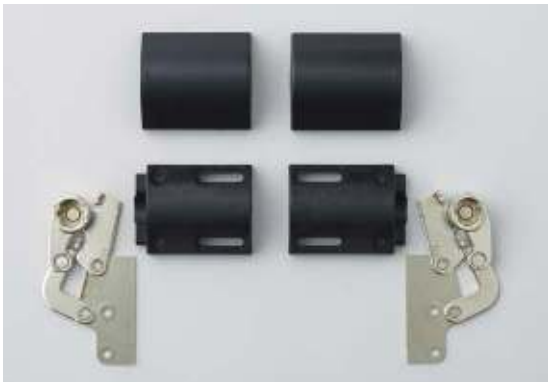
AS-JH-B

- Used for installing damper hinge HG-JH to aluminium frame.
- Use AS nuts for installation.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-690	AS-JH-A	Stainless Steel (SUS304)	Barrel Polished	60	50	500
G	3D	170-090-691	AS-JH-B			30	100	1000

DAMPER HINGE HG-JHM20T Surface Mount Type

Lapcon INSTRUCTION STEEL VIDEO



W/ black cover　　Sold in pairs.



W/ white cover



Assembly example

- Newly-added surface mount type: Easy to install without the need of recessing.
- Hinge with built-in damper UDH 1.
- Soft-close and smooth-open features.
- For Inset Lid.
- Cover hides mounting screws.

[Remarks]

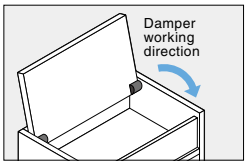
- Sold in pairs.
- Below torque range is the value when using a pair of hinges (left and right) per lid.
- Be sure to read the "Cautions" 2.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Damper mechanism works when opening the top-opening lid by about 60° or more. Otherwise, the damper may not work.

[Parts Included]

- Hinge plate mounting screws: binding head tapping screw 3.5 x 14 (nickel) 4 pcs
- Bracket mounting screws: binding head tapping screw 3.5 x 20 (nickel) 8 pcs



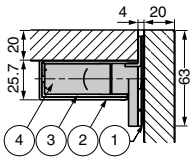
Chrome finished cover



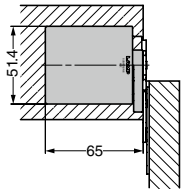
No.	Part Name	Material	Finish/Colour
①	Hinge Plate	Steel (SPCC)/Zinc Alloy (ZDC)	Nickel
②	Bracket	POM	Black
③	Cover	ABS	Black/White/Chrome
④	Damper	–	Bearing Right-handed: Grey, Left-handed: Natural

[Front View]

Top-opening lid closed



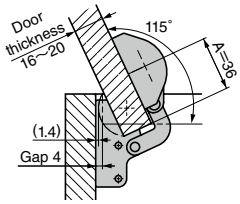
Top-opening lid opened by 90°



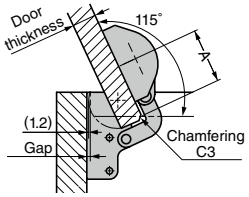
※Right-handed type shown. Left-handed type is symmetrical.

[Installation]

Standard



Chamfered lid edge



※Gap is decreased compared with standard when chamfered.

Door thickness	Standard		Chamfered Lid Edge	
	Size A	Gap	Size A	Gap
16	36	4	38	2
18			37	3
20			–	–

[Door Weight Selection]

Door Length (D)	Door Weight (*m*)
250	5.61~7.48 kg
300	4.57~6.09 kg
350	3.85~5.13 kg
400	3.33~4.43 kg
450	2.93~3.90 kg

Selection Tool Sasuga-kun

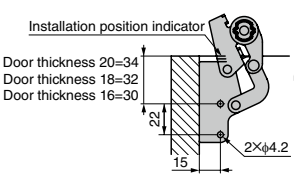
Applicable Products

Used for Product Selection & Simulation.

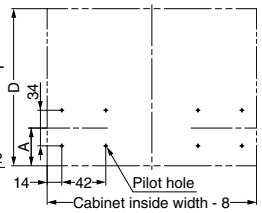
Available on Web!

Video Link

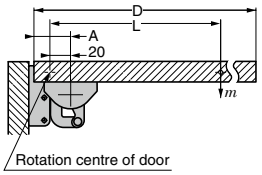
[Hinge Plate Installation Position]



[Cut Out Dimensions]



■Calculation of maximum door moment (for homogeneous material)



$$T = m \times 9.80665 \times L \times \frac{1}{1000}$$

T : Max. door torque (N・m)

m : Door weight (kg)

L : Distance from rotation centre to door centre of gravity (mm)

$$L = \frac{D}{2} - A + 20 \text{ ※}$$

D : Door length (mm)

A : Bracket installation dimension (mm) (The range of A is about 36mm ~38mm)

※(Formula for assuming that the centre of gravity is in the centre of door)

※For heterogeneous door (e.g., attached with a mirror), please refer to our website > Selection Tool Sasuga-kun > "What is the centre of gravity? What is moment?" page.

RoHS	CAD	Item Code	Item Name	Finish/Colour	Torque N·m/pair	Torque kgf·cm/pair	Marking Colour (Base Side)	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-036-328	HG-JHM20T-80BL	Black	6~8	61.2~81.6	Yellow	–	–	–
G	3D	170-036-329	HG-JHM20T-80WT	White				–	–	–
G	3D	170-036-839	HG-JHM20T-80CR	Chrome				–	–	–

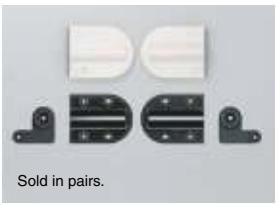
Refer to 1 : P.66, 2 : P.15

DAMPER HINGE HG-JHM20

Lapcon INSTRUCTION VIDEO



W/ black cover



W/ white cover

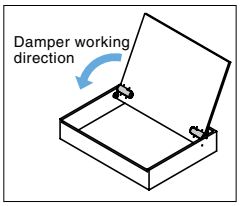
- Hinge with built-in dampers UDH 1.
- Smooth movement in the opening direction.
- Mortise mount type.
- Easy to cut out with a router.
- Cover hides mounting screws for clean appearance.

[Remarks]

- Be sure to read the "Cautions" 2.
- Sold in pairs.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Damper mechanism works when opening the lid by about 60° or more.

[Parts Included]

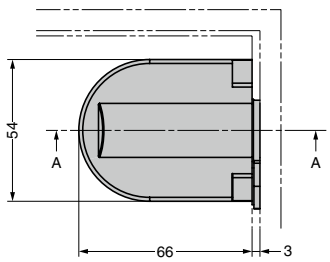
- Countersunk head tapping screw 4×20 (For wooden door)



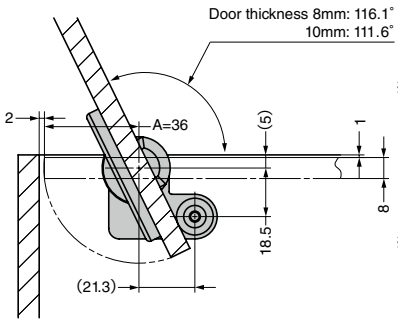
Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

Video Link

[Top View]



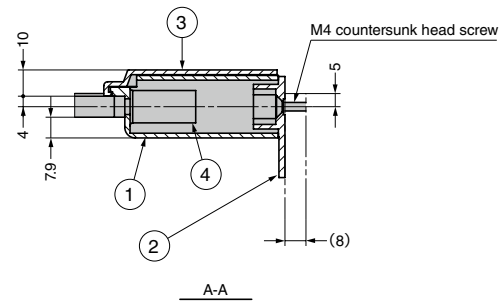
[Installation]



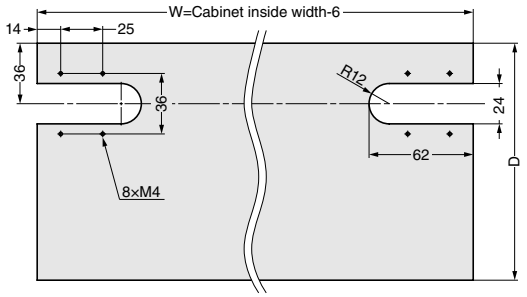
※If the distance from the screw hole to the edge is 5mm, a level difference of 1mm is generated.

※Min. door thickness 8mm

[Cross-section Drawing]



[Cut Out Dimensions]



No.	Part Name	Material	Finish / Colour
①	Body	POM	Black
②	Bracket	Aluminium Alloy (ADC)	Black Enamel Finish
③	Cover	ABS	Black/White
④	Damper	–	–

RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Marking Colour (Base Side)	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-012-854	HG-JHM20-80BL	Black	6~8	61.2~81.6	Yellow	206	–	–
G	3D	170-012-855	HG-JHM20-80WT	White				206	–	–

Refer to 1 : P.66, 2 : P.15

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

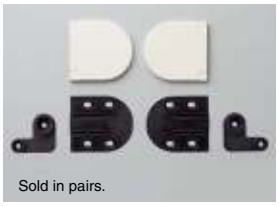
DAMPER HINGE HG-JHM16

Lapcon INSTRUCTION VIDEO



Sold in pairs.

W/ black cover



Sold in pairs.

W/ white cover

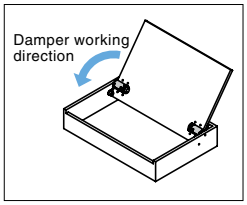
- Hinge with built-in damper UDH-16 1.
- Smooth movement in the opening direction.
- Mortise mount type.
- Easy to cut out with a router.
- Cover hides mounting screws for clean appearance.

[Remarks]

- Be sure to read the "Cautions" 2.
- Sold in pairs.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Damper mechanism works when opening the lid by about 60° or more.

[Parts Included]

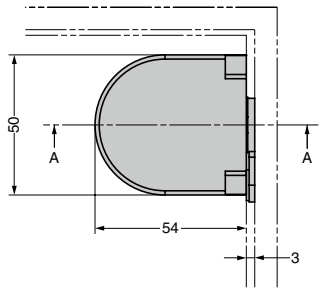
- Countersunk head tapping screw 4×20 (For wooden door)



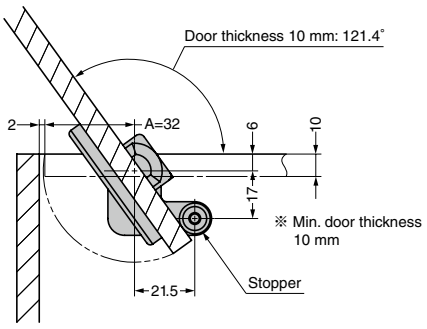
Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation.
Available on Web!

Video Link

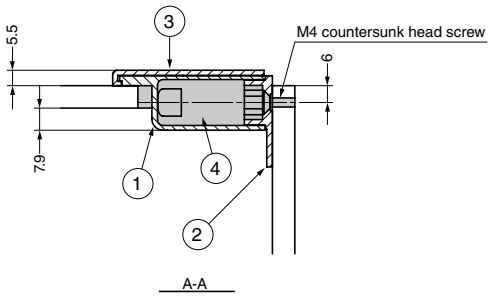
[Top View]



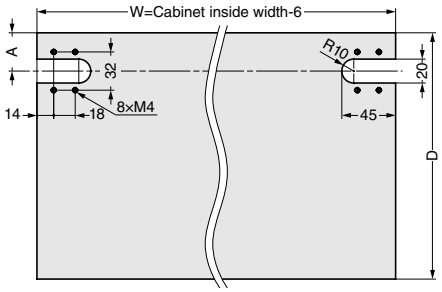
[Installation]



[Cross-section Drawing]



[Cut Out Dimensions]



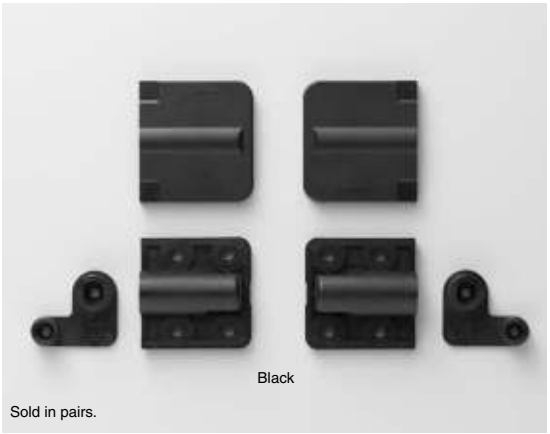
No.	Part Name	Material	Finish / Colour
①	Body	POM	Black
②	Bracket	Aluminium Alloy (ADC)	Black Enamel Finish
③	Cover	ABS	Black/White
④	Damper	–	–

RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Marking Colour (Base Side)	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-092-221	HG-JHM16-34BL	Black	2~3.4	20.4~34.7	Green	126	–	–
G	3D	170-092-222	HG-JHM16-34WT	White				126	–	–
G	3D	170-092-223	HG-JHM16-50BL	Black	3.4~5	34.7~51	Black	126	–	–
G	3D	170-092-224	HG-JHM16-50WT	White				126	–	–

Refer to 1 : P.67, 2 : P.15

DAMPER HINGE HG-JHM14

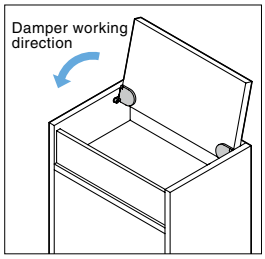
Lapcon INSTRUCTION



Sold in pairs.



Sold in pairs.



- Hinge with built-in damper UDH-14 1.
- Smooth movement in the opening direction.
- Cover hides mounting screws for clean appearance.
- Easy to cut out with a router.

[Specification]

- Operating temperature: 0˚c ~40˚c

[Remarks]

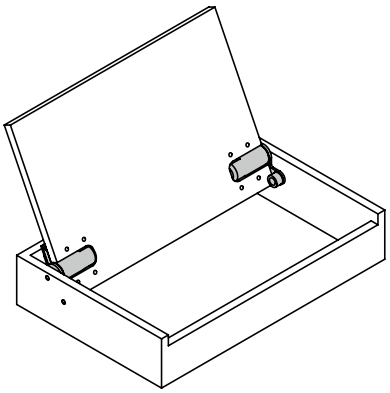
- Be sure to read the “Cautions” 2.
- The installation example in the Manual Instruction is for wooden lid.
- Sold in pairs.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Damper mechanism works when opening the lid by about 60° or more.

[Sold Separately]

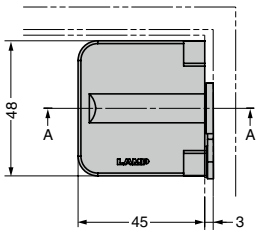
- Bracket for under mount (UKZ14) also available 3 .

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation.
Available on Web!

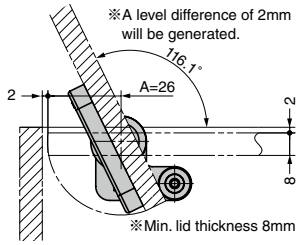
■Side Mount Type



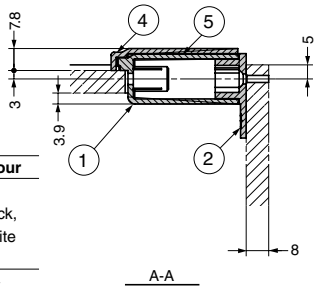
[Top View]



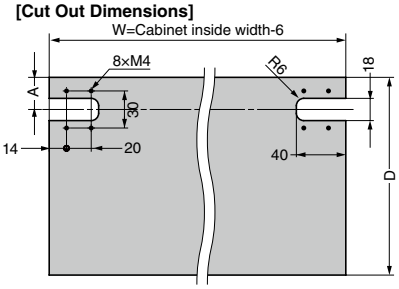
[Installation]



[Cross-section Drawing]



[Cut Out Dimensions]

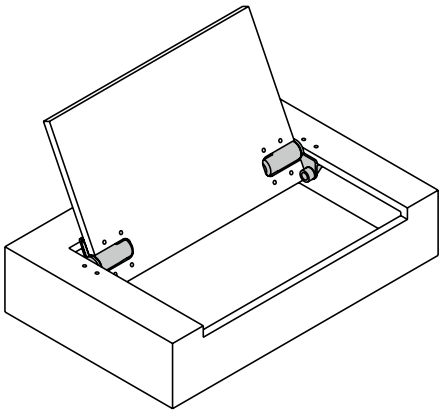


No.	Part Name	Material	Colour
①	Body	POM	Black, White
②	Bracket for side mount R	Reinforced	
③	Bracket for side mount L	PBT	
④	Cover	ABS	
⑤	Damper	–	–

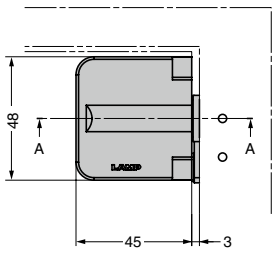
RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Marking Colour	Opening Angle	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-031-930	HG-JHM14-S-8BL	Black	0.5~0.8	5.1~8.2	Purple	105°	51.4	20	220
G	3D	170-031-931	HG-JHM14-S-8WT	White					51.4	20	220
G	3D	170-031-932	HG-JHM14-S-15BL	Black	0.8~1.5	8.2~15.3	Blue		51.4	20	220
G	3D	170-031-933	HG-JHM14-S-15WT	White					51.4	20	220
G	3D	170-031-934	HG-JHM14-S-20BL	Black	1.5~2	15.3~20.4	Green		51.4	20	220
G	3D	170-031-935	HG-JHM14-S-20WT	White					51.4	20	220

Refer to 1 : P.68, 2 : P.15, 3 : P.58

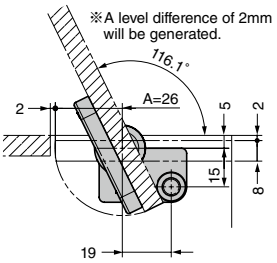
■Under Mount Type (optional bracket 1 for under mount is required)



[Top View]

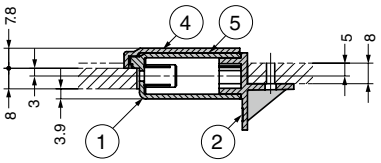


[Installation]



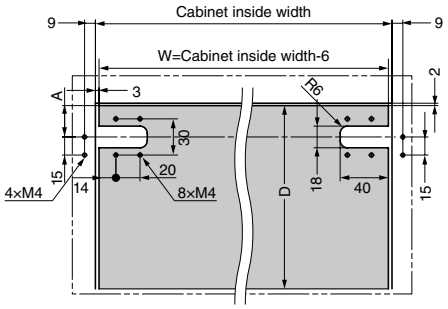
※Min. door thickness 8mm

[Cross-section Drawing]



A-A

[Cut Out Dimensions]



No.	Part Name	Material	Colour
①	Body	POM	Black, White
②	Bracket for Side Mount R	Reinforced PBT	
③	Bracket for Side Mount L	PBT	
④	Cover	ABS	
⑤	Damper	–	–

Refer to 1 : P.58

BRACKET FOR HG-JHM14 UNDER MOUNT UKZ14

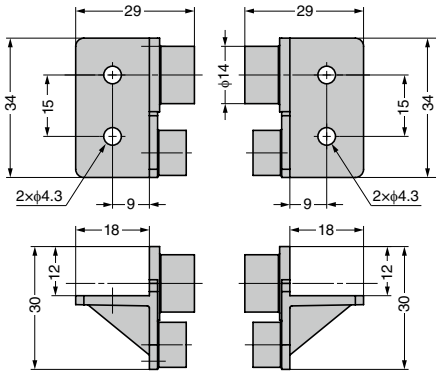
INSTRUCTION



UKZ14-BL



UKZ14-WT



Bracket for under mount L Bracket for under mount R

[Bracket for Under Mount]

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-031-936	UKZ14-BL	Reinforced PBT	Black	13	40	440
G	3D	170-031-937	UKZ14-WT		White	14	40	440

DAMPER HINGE HG-JH14-50 Stainless Steel Bracket

Lapcon INSTRUCTION SUS



Sold in pairs.

- Hinge with damper UDH-14 1 with stainless steel bracket.
- Light and smooth opening and soft closing.
- Left-handed…Damper works when rotating counterclockwise. Right-handed…Damper works when rotating clockwise.
- Low torque type (1.6~3.0N・m) also available by made to order.

[Applications]

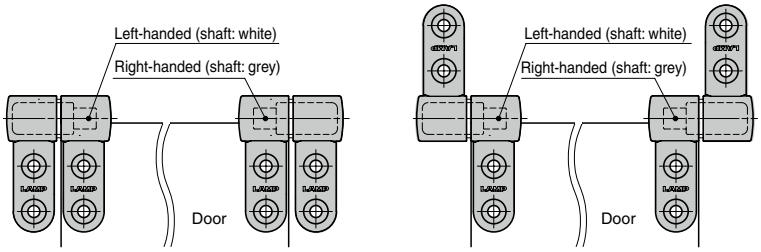
- Top-opening lids of various cabinets for soft closing.

[Remarks]

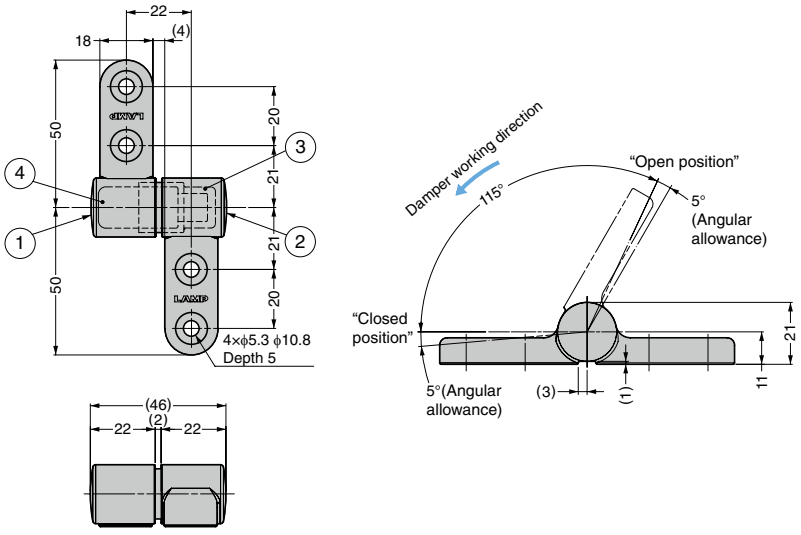
- Be sure to read the "Cautions" 2.
- Install a stopper such as a stay at the lid opening/closing position (0~115 degree or less) for not exceeding the specified rotation range. Damper may be damaged if exceeding the rotation range.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Sold in pairs.

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

[Installation]



When viewing door from lower side as shown above, install the left-handed type damper (white) on the left side and the right-handed type (grey) on the right side.



Left-handed type shown.

No.	Part Name	Material	Finish / Colour
①	Bracket (L)	Stainless Steel (SCS13)	Mirror
②	Bracket (R)		
③	Bush	POM	White
④	Damper	Stainless Steel/PBT	–

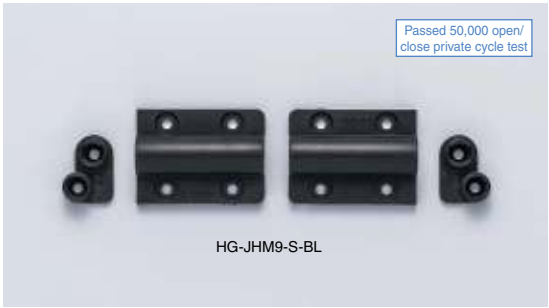
RoHS	CAD	Item Code	Item Name	Torque N·m/pair	Torque kgf·cm/pair	Weight (g/pair)	Box (pairs)	Carton (pairs)
G	3D	170-021-173	HG-JH14-50	3~5	30.6~51	254	8	48

Refer to 1 : P.68, 2 : P.15

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

MINI DAMPER HINGE HG-JHM9-S Side Mount

INSTRUCTION VIDEO



HG-JHM9-S-BL

- Hinge with built-in damper.
- Can be used for top-opening, upward-opening, downward-opening and bottom-opening.
- Under mount type 1 also available.

[Specifications]
- Operating temperature: 0˚C ~40˚C

[Applications]
- Small lid for conference table, small cover of mechanical equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 2.
- Sold in pairs.
- When installing, ensure that both hinge shafts are levelled and aligned.

[Recommended Screws]
- Countersunk head screw M3, Binding head screw M3, Countersunk head tapping screw 3, Binding head tapping screw 3, etc.

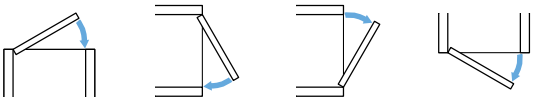
Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

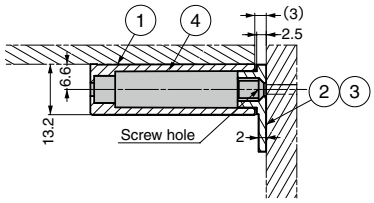
[Application Example]



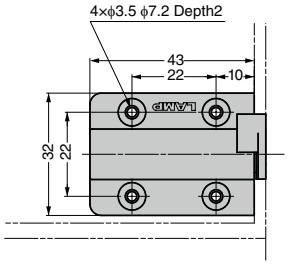
[Damper Working Direction]



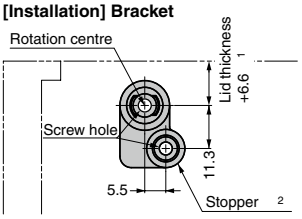
[Front View] Cross-section



[Bottom View]

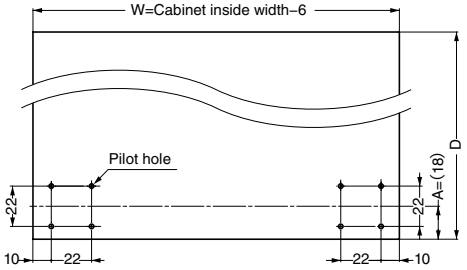


[Installation] Bracket

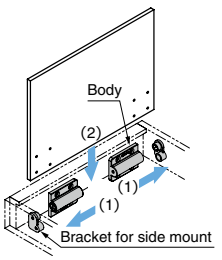


※1 Dimension when side board is flush with top surface of lid.
※2 To increase the opening angle of lid, rotate the stopper then fix it.

[Cut Out Dimensions]



[How to Install Body and Lid]
(1) Insert the body into fixed bracket.
(2) Align mounting holes of lid with the body, and then fix with screws.



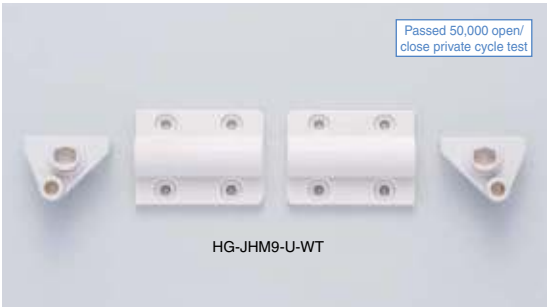
No.	Part Name	Material	Colour
①	Body	POM	Black, White
②	Bracket R	PBT	
③	Bracket L		
④	Damper	POM	–

RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Opening Angle	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-025-895	HG-JHM9-S-BL	Black	0.054~0.086	0.55~0.88	105°	29	40	440
G	3D	170-025-896	HG-JHM9-S-WT	White				28	40	440
G	3D	170-037-326	HG-JHM9-S4-BL	Black	0.027~0.043	0.275~0.44		–	–	–
G	3D	170-037-327	HG-JHM9-S4-WT	White				–	–	–

Refer to 1 : P.61, 2 : P.15

MINI DAMPER HINGE HG-JHM9-U Under Mount

INSTRUCTION VIDEO



- Hinge with built-in damper.
- Can be used for top-opening, upward-opening, downward-opening and bottom-opening.
- Side mount type 1 also available.

[Specifications]
- Operating temperature: 0˚C ~40˚C

[Applications]
- Small lid for conference table, small cover of mechanical equipment, etc.

[Remarks]
- Be sure to read the “Cautions” 2.
- Sold in pairs.
- When installing, ensure that both hinge shafts are levelled and aligned.

[Recommended Screws]
- Binding head screw M3, Binding head tapping screw 3, etc.

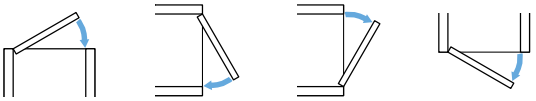
Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation.
Available on Web!

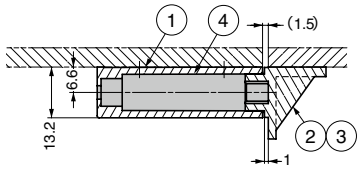
[Application Example] Shown below is HG-JHM9-S 1



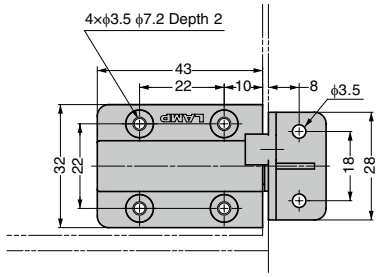
[Damper Working Direction]



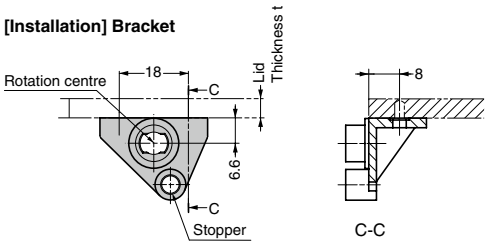
[Front View] Cross-section



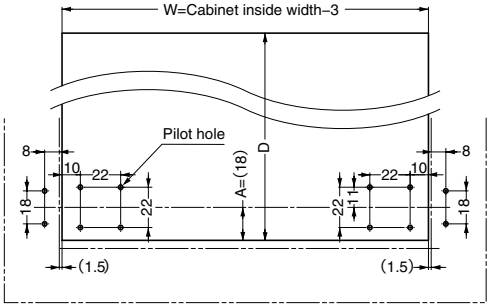
[Bottom View]



[Installation] Bracket

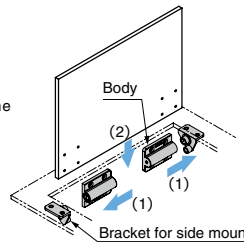


[Cut Out Dimensions]



[How to Install Body and Lid]

(1) Insert the body into fixed bracket.
(2) Align mounting holes of lid with the body, and then fix with screws.



No.	Part Name	Material	Colour
①	Body	POM	Black, White
②	Bracket R	PBT	
③	Bracket L		
④	Damper	POM	–

RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Opening Angle	Weight (g)	Box (pairs)	Carton (pairs)
G	3D	170-025-897	HG-JHM9-U-BL	Black	0.054~0.086	0.55~0.88	105°	31	35	385
G	3D	170-025-898	HG-JHM9-U-WT	White				31	35	385
G	3D	170-037-328	HG-JHM9-U4-BL	Black	0.027~0.043	0.275~0.44		–	–	–
G	3D	170-037-329	HG-JHM9-U4-WT	White				–	–	–

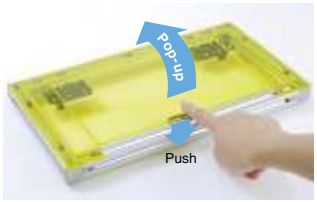
Refer to 1 : P.60, 2 : P.15

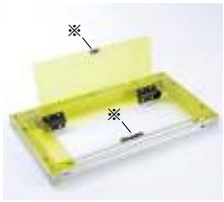
TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

SELF-OPEN MINI DAMPER HINGE HG-JHS9-S Side Mount

INSTRUCTION VIDEO







※: Optional push latch ESN-195/BLK 1 (Picture above is HG-JHS9-U 2).

- Small damper hinge with self-opening function for top-opening lids. Using with a push latch 1 enables pop-up function of the lid.
- Inset type.
- Opening speed is adjustable with a hex key.
- Under mount type 2 also available.

[Specifications]
- Operating temperature: 0˚C ~40˚C

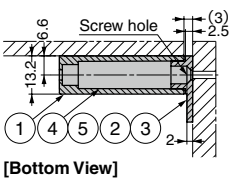
[Applications]
- Small lid for conference table, small cover of mechanical equipment, etc.

[Remarks]
- Be sure to read the “Cautions” 3.
- Sold in pairs.
- Make sure to mount spring unit at L side of the body. Check if damper is mounted at R side.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Install a push latch (sold separately) to keep the lid at closed position.

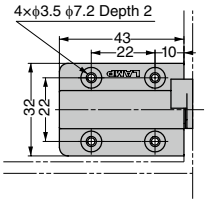
[Recommended Screws]
- Countersunk head screw M3, Binding head screw M3, Countersunk head tapping screw 3, Binding head tapping screw 3, etc.

Video Link

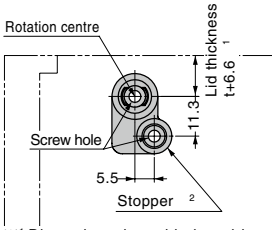
[Front View] Cross-section



[Bottom View]

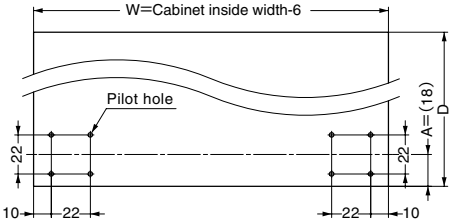


[Installation] Bracket



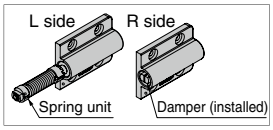
※1 Dimension when side board is flush with top surface of lid.
※2 To increase the opening angle of lid , rotate the stopper then fix it.

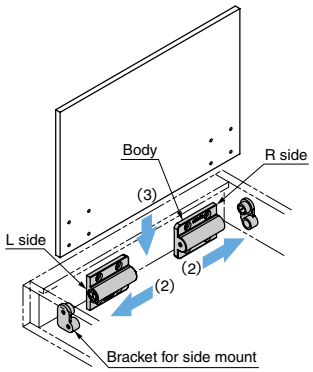
[Cut Out Dimensions]



[How to Install Body and Lid]

(1) Mount spring unit at L side of the body. Check if damper is mounted at R side.
(2) Insert the body into fixed bracket.
(3) Align mounting holes of lid with the body, and then fix with screws.



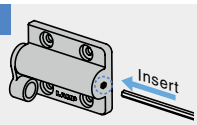


No.	Part Name	Material	Colour
①	Body	POM	Black, White
②	Bracket R	PBT	
③	Bracket L		
④	Damper (R side)	POM	–
⑤	Spring Unit (L side)	Zinc Alloy (ZDC)/Stainless Steel	Chromate/-

[Adjustment of Lid Opening Speed]

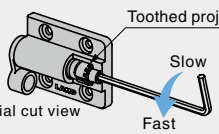
When increasing lid opening speed

1



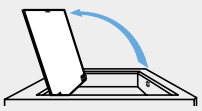
Insert a hex key (size 2.5) into the hole of spring unit (L side)

2



Push in the hex key※ until toothed projection is disengaged, while rotating counterclockwise by 30°, and then pull it out.

3



Close the lid, and check if the lid can be opened smoothly. Repeat steps 1~3 (maximum 1~2 times) if lid opening speed is still slow.

※Make sure to rotate counterclockwise following pushing in the hex key and disengaging the projection. Forced rotation may cause damage.

When decreasing lid opening speed (returning to the speed before adjustment)

Loosen the force following the hex key rotating clockwise.

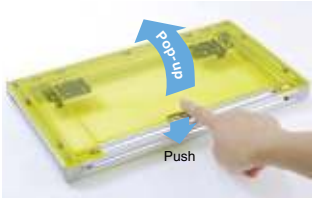
RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Opening Angle	Weight (g/pair)	Box (pairs)	Carton (pairs)
G	3D	170-028-293	HG-JHS9-S-BL	Black	0.027~0.043	0.28~0.44	105°	38	40	440
G	3D	170-028-294	HG-JHS9-S-WT	White					40	440

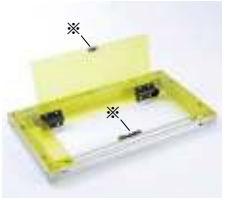
Refer to 1 : P.652, 2 : P.63, 3 : P.15

SELF-OPEN MINI DAMPER HINGE HG-JHS9-U Under Mount

INSTRUCTION VIDEO







※: Optional push latch ESN-195/BLK 1 .

- Small damper hinge with self-opening function for top-opening lids. Using with a push latch 1 enables pop-up function of the lid.
- Inset type.
- Opening speed is adjustable with a hex key.
- Side mount type 2 also available.

[Specifications]
- Operating temperature: 0˚C ~40˚C

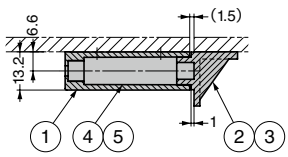
[Applications]
- Small lid for conference table, small cover of mechanical equipment, etc.

[Remarks]
- Be sure to read the “Cautions” 3.
- Sold in pairs.
- Make sure to mount spring unit at L side of the body. Check if damper is mounted at R side.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Install a push latch (sold separately) to keep the lid at closed position.

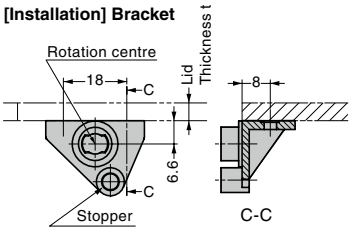
[Recommended Screws]
- Binding head screw M3, Binding head tapping screw 3, etc.

Video Link

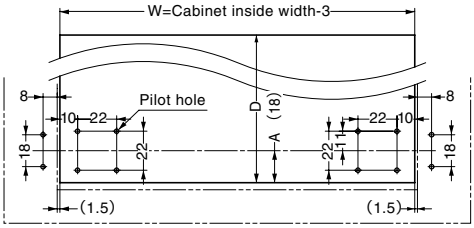
[Front View] Cross-section



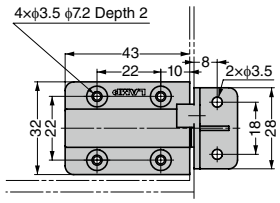
[Installation] Bracket



[Cut Out Dimensions]

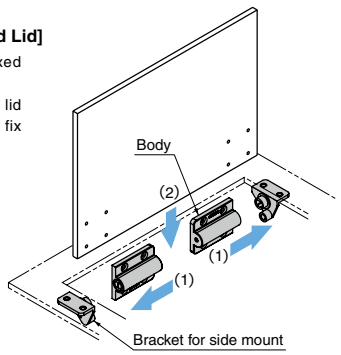


[Bottom View]



[How to Install Body and Lid]

(1) Insert the body into fixed bracket.
(2) Align mounting holes of lid with the body, and then fix with screws.

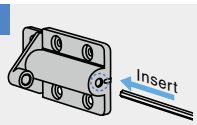


No.	Part Name	Material	Colour
①	Body	POM	Black, White
②	Bracket R	PBT	
③	Bracket L		
④	Damper (R side)	POM	–
⑤	Spring Unit (L side)	Zinc Alloy (ZDC) /Stainless Steel	Chromate/-

[Adjustment of Lid Opening Speed]

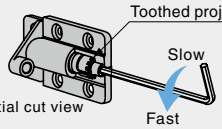
When increasing lid opening speed

1



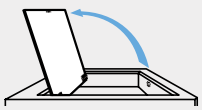
Insert a hex key (size 2.5) into the hole of spring unit (L side)

2



Push in the hex key※ until toothed projection is disengaged, while rotating counterclockwise by 30°, and then pull it out.

3



Close the lid, and check if the lid can be opened smoothly. Repeat steps 1~3 (maximum 1~2 times) if lid opening speed is still slow.

When decreasing lid opening speed (returning to the speed before adjustment)

Loosen the force following the hex key rotating clockwise.

※Make sure to rotate counterclockwise following pushing in the hex key and disengaging the projection. Forced rotation may cause damage.

RoHS	CAD	Item Code	Item Name	Colour	Torque N·m/pair	Torque kgf·cm/pair	Opening Angle	Weight (g/pair)	Box (pairs)	Carton (pairs)
G	3D	170-028-295	HG-JHS9-U-BL	Black	0.027~0.043	0.28~0.44	105°	38	35	385
G	3D	170-028-296	HG-JHS9-U-WT	White					35	385

Refer to 1 : P.652, 2 : P.62, 3 : P.15

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

DETENT HINGE HG-CSH63 With Damper

Lapcon



- Detent at both 0°and 100°.
- Also available without damper type.
- Damper works clockwise or counterclockwise.

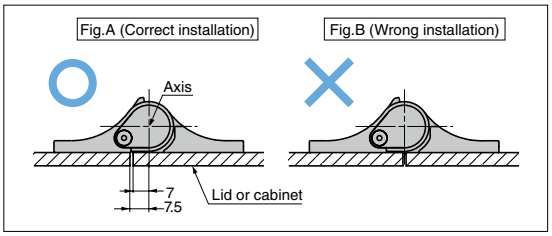
[Applications]

- Carrying box of motorcycle courier, etc.

[Remarks]

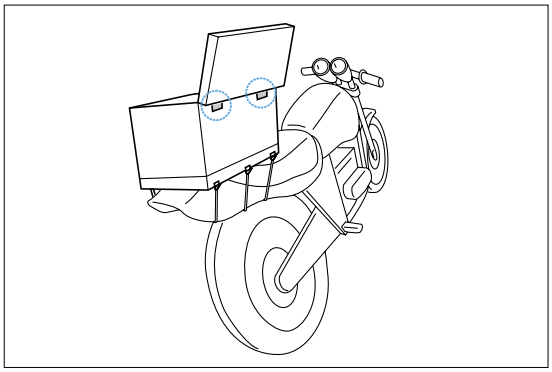
- Be sure to read the “Cautions” 1 .
- When installing, ensure that both hinge shafts are levelled and aligned.
- Torque not adjustable.

[Installation]

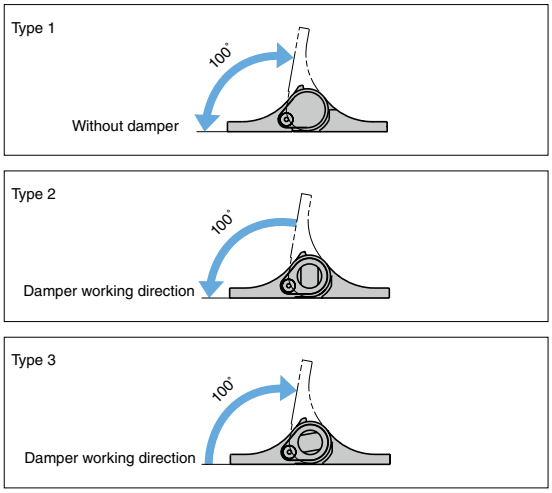


As shown in Fig. A, shift the axis of hinge and the edge of lid or cabinet.

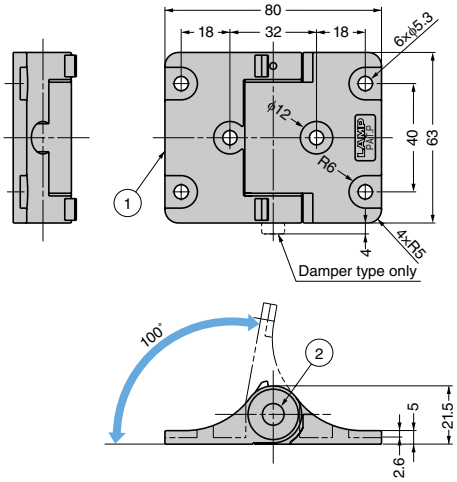
[Installation]



[Types]



Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!



No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Silver Enamel Finish
②	Shaft・Spring	Stainless Steel (SUS304)	–

RoHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Retaining Torque N·m/pc	Retaining Torque kgf·cm/pc	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-090-044	HG-CSH63	1 (Without Damper)	–	–	0.98	10	100°	98.7	10	120
G	3D	170-090-109	HG-CSH63AM	2	1~1.7	10.2~17.3				114.3	10	120
G	3D	170-090-108	HG-CSH63AH		1.7~2.5	17.3~25.5					10	120
G	3D	170-090-111	HG-CSH63BM	3	1~1.7	10.2~17.3					10	120
G	3D	170-090-110	HG-CSH63BH		1.7~2.5	17.3~25.5					10	120

Refer to 1 : P.15

TORQUE DAMPER UDH SERIES

Picture	Item Name	Diameter	Length	Damping direction	Torque	Page
	UDH-A	20mm	55mm		150 - 400N·cm	P.66
	UDH-B	20mm	55mm		150 - 400N·cm	P.66
	UDH16N-A	16mm	51mm		170 - 300N·cm	P.68
	UDH16N-B	16mm	51mm		170 - 300N·cm	P.68
	UDH16-A	16mm	37mm		100 - 250N·cm	P.67
	UDH16-B	16mm	37mm		100 - 250N·cm	P.67
	UDH16S-A	16mm	37mm		100 - 250N·cm	P.67
	UDH16S-B	16mm	37mm		100 - 250N·cm	P.67
	UDH14-A	14mm	37mm		50 - 200·cm	P.68
	UDH14-B	14mm	37mm		50 - 200·cm	P.68

TORQUE DAMPERS

Item Name	Torque (N.cm)	Torque range (N.cm) 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400	Page
UDD-S	50 - 100		P.70
UDD-M	100 - 200		P.70
UDD-H	200 - 300		P.70
UDH-M	150 - 250		P.66
UDH-H	250 - 350		P.66
UDH-G	300 - 400		P.66
UDH16N-M	170 - 240		P.68
UDH16N-H	220 - 300		P.68
UDH16-M	100 - 170		P.67
UDH16-H	150 - 250		P.67
UDH16S-M	100 - 170		P.67
UDH16S-H	150 - 250		P.67
UDH14-T	150 - 200		P.68
UDH14-M	80 - 150		P.68
UDH-14L	50 - 80		P.68

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

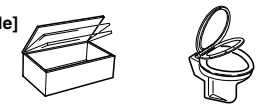
TORQUE DAMPER UDH



- Patented technology allows compact design.
- Can be used as a single unit.
- Keeps lids / doors from slamming shut.
- With marking colour at the body to recognise the torque moment. Refer to the following for details.
- Ideal for applications requiring flap slow down. Helps prevent noise and impact.
- Standard and progressive models available.

Video Link

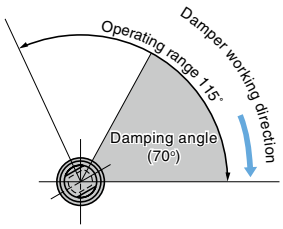
[Application Example]



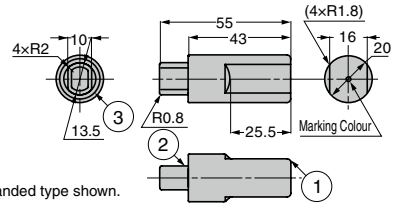
[Applications]
- Toilet seat / lid, cover for maintenance, etc.

[Remarks]
- When mounting on sheet metal, ensure the edge of the plate is rounded to prevent damage to the damper.
- Do not apply and vertical load on the shaft.

Damper Operating Angle

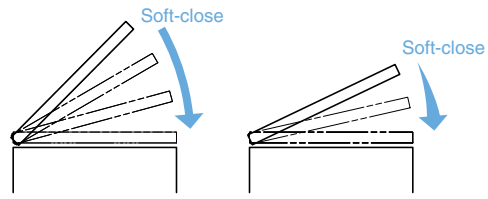


Right-handed: damper works when the shaft is turned clockwise (this figure)
Left-handed: damper works when the shaft is turned counterclockwise (symmetrical to this figure)



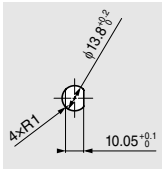
Right-handed type shown.

[Difference Between Standard Type and Progressive Type]

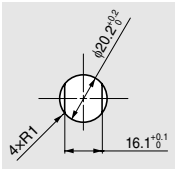


[Cut Out Dimensions]

Shaft side hole size



Body side hole size



No.	Part Name	Material	Colour
①	Body	Stainless Steel	–
②	Shaft	PBT	Left-handed: Natural, Right-handed: Grey
③	Cover Ring	Black	–

[Standard Type]

RoHS	CAD	Item Code	Item Name	Type	Damper Working Direction	Marking Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Carton (pcs)
G	3D	170-090-820	UDH-AMS-G	Left-handed	Counterclockwise	Blue	1.5~2.5	15.3~25.5	38	200
G	3D	170-090-822	UDH-BMS-G	Right-handed	Clockwise					200
G	3D	170-090-821	UDH-AHS-G	Left-handed	Counterclockwise	Red	2.5~3.5	25.5~35.7		200
G	3D	170-090-823	UDH-BHS-G	Right-handed	Clockwise					200
G	3D	170-090-824	UDH-AGS-G	Left-handed	Counterclockwise	Yellow	3.0~4.0	30.6~40.8		200
G	3D	170-097-955	UDH-BGS-G	Right-handed	Clockwise					200

[Progressive Type]

RoHS	CAD	Item Code	Item Name	Type	Damper Working Direction	Marking Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Carton (pcs)
G	3D	170-090-825	UDH-AMP-G	Left-handed	Counterclockwise	Green	1.5~1.8	15.3~18.4	38	200
G	3D	170-090-827	UDH-BMP-G	Right-handed	Clockwise					200
G	3D	170-090-826	UDH-AHP-G	Left-handed	Counterclockwise	Black	1.8~3.5	18.4~35.7		200
G	3D	170-090-828	UDH-BHP-G	Right-handed	Clockwise					200

TORQUE DAMPER UDH-16



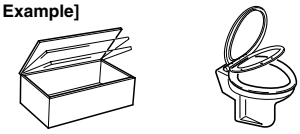
- Patented technology allows compact design.
- Can be used as a single unit.
- Keeps lids / doors from slamming shut.
- Left-handed and right-handed can be distinguished according to the colour of shaft. In addition, slow rotation type changed the shape of shaft.
- With marking colour at the body to recognise the torque moment. Refer to the following for details.
- Ideal for applications requiring flap slow down. Helps prevent noise and impact.
- Standard and progressive models available.

Video Link

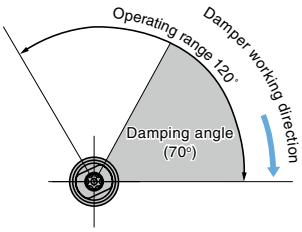
[Applications]
- Toilet seat / lid, cover for maintenance, etc.

[Remarks]
- When mounting on sheet metal, ensure the edge of the plate is rounded to prevent damage to the damper.
- Do not apply any vertical load on the shaft.

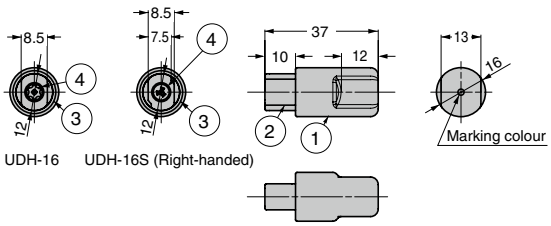
[Application Example]



Damper Operating Angle

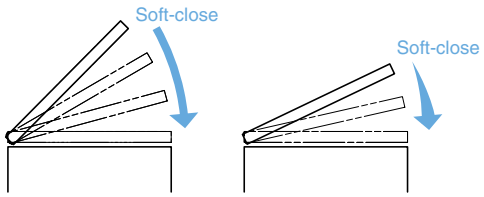


Right-handed: damper works when the shaft is turned clockwise (this figure)
Left-handed: damper works when the shaft is turned counterclockwise
(symmetrical to this figure)



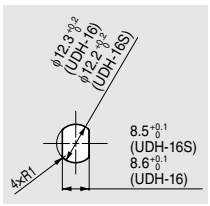
UDH-16 UDH-16S (Right-handed)

[Difference Between Standard Type and Progressive Type]

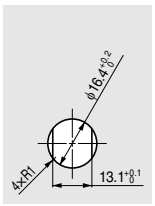


[Cut Out Dimensions]

Shaft side hole size



Body side hole size



No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel	–
②	Shaft	PBT	Left-handed: Natural, Right-handed: Grey
③	Cover Ring		Black
④	Screw	Stainless Steel	–

[Standard Type]

RoHS	CAD	Item Code	Item Name	Type	Damper Working Direction	Marking Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Carton (pcs)
G	3D	170-011-717	UDH-16SAMS	Left-handed	Counterclockwise	Blue	1~1.7	10.2~17.3	16	200
G	3D	170-011-719	UDH-16SBMS	Right-handed	Clockwise					200
G	3D	170-011-718	UDH-16SAHS	Left-handed	Counterclockwise	Red	1.7~2.5	17.3~25.5		200
G	3D	170-011-720	UDH-16SBHS	Right-handed	Clockwise					200

[Progressive Type]

RoHS	CAD	Item Code	Item Name	Type	Damper Working Direction	Marking Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Carton (pcs)
G	3D	170-090-829	UDH-16AMS-G	Left-handed	Counterclockwise	Green	1~1.7	10.2~17.3	16	200
G	3D	170-090-831	UDH-16BMS-G	Right-handed	Clockwise					200
G	3D	170-090-830	UDH-16AHS-G	Left-handed	Counterclockwise	Black	1.7~2.5	17.3~25.5		200
G	3D	170-090-832	UDH-16BHS-G	Right-handed	Clockwise					200

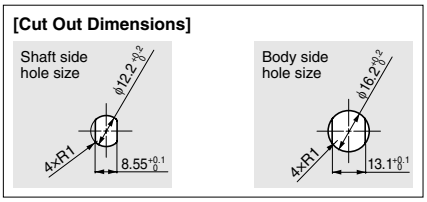
TORQUE DAMPER UDH-16N



- Patented technology allows compact design.
- Can be used as a single unit.
- Keeps lids / doors from slamming shut.
- Left-handed and right-handed can be distinguished according to the colour and shape of shaft.
- With marking colour at shaft to recognise the torque moment.
- Ideal for applications requiring flap slow down. Helps prevent noise and impact.

Video Link

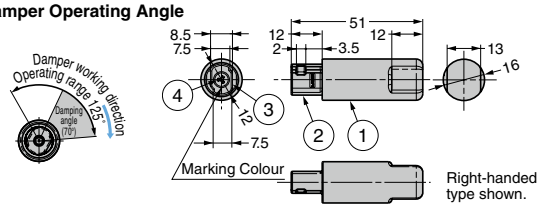
[Cut Out Dimensions]



[Applications]
- Toilet seat / lid, cover for maintenance, etc.

[Remarks]
- When mounting on sheet metal, ensure the edge of the plate is rounded to prevent damage to the damper.
- Do not apply any vertical load on the shaft.

Damper Operating Angle

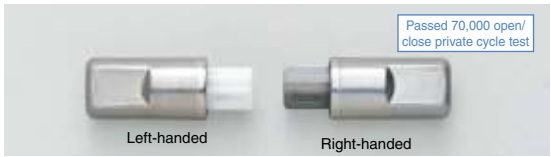


Right-handed: damper works when the shaft is turned clockwise (this figure)
Left-handed: damper works when the shaft is turned counterclockwise (symmetrical to this figure)

No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel	–
②	Shaft	PBT	Left-handed: Natural, Right-handed: Grey
③	Cover Ring	PPS	Black
④	Screw	Stainless Steel	–

RoHS	CAD	Item Code	Item Name	Type	Damper Working Direction	Marking Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Carton (pcs)
G	3D	170-090-833	UDH-16NAMS	Left-handed	Counterclockwise	Blue	1.7~2.4	17.3~24.5	25	200
G	3D	170-090-834	UDH-16NBMS	Right-handed	Clockwise					200
G	3D	170-090-835	UDH-16NAHS	Left-handed	Counterclockwise	Red	2.2~3	22.4~30.6		200
G	3D	170-090-836	UDH-16NBHS	Right-handed	Clockwise					200

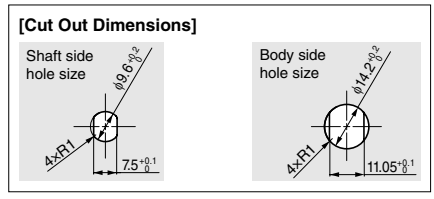
TORQUE DAMPER UDH-14



- Patented technology allows compact design.
- Can be used as a single unit.
- Keeps lids / doors from slamming shut.
- Left-handed and right-handed can be distinguished according to the colour and shape of shaft.
- With marking colour at shaft to recognise the torque moment.
- Excellent in corrosion resistance and rigidity due to stainless steel body.
- Ideal for applications requiring flap slow down. Helps prevent noise and impact.

Video Link

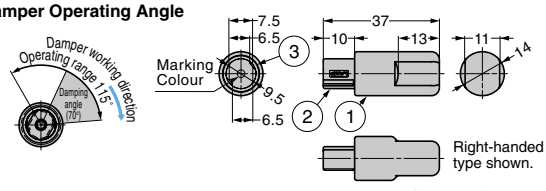
[Cut Out Dimensions]



[Applications]
- Toilet seat / lid, cover for maintenance, etc.

[Remarks]
- When mounting on sheet metal, ensure the edge of the plate is rounded to prevent damage to the damper.
- Do not apply any vertical load on the shaft.

Damper Operating Angle



Right-handed: damper works when the shaft is turned clockwise (this figure)
Left-handed: damper works when the shaft is turned counterclockwise (symmetrical to this figure)

No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel	–
②	Shaft	PBT	Left-handed: Natural, Right-handed: Grey
③	Cover Ring	POM	Black

RoHS	CAD	Item Code	Item Name	Type	Damper Working Direction	Marking Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)
G	3D	170-028-472	UDH-14ALS	Left-handed	Counterclockwise	Purple	0.5~0.8	5.1~8.2	10	400
G	3D	170-028-473	UDH-14BLS	Right-handed	Clockwise					400
G	3D	170-017-538	UDH-14AMS	Left-handed	Counterclockwise	Blue	0.8~1.5	8.2~15.3		400
G	3D	170-017-539	UDH-14BMS	Right-handed	Clockwise					400
G	3D	170-024-697	UDH-14ATS	Left-handed	Counterclockwise	Purple	1.5~2.0	15.3~20.4		400
G	3D	170-025-678	UDH-14BTS	Right-handed	Clockwise					400

ROTARY DAMPER URD8-3



- Insert type rotary damper.
- Unlimited rotation angle and rotation direction, suitable for various opening modes. In addition, combining with springs further expands application.
- Small outer diameter realises space-saving and downsizing of equipment.

[Specifications]

- Operating temperature: 0˚C ~50˚C

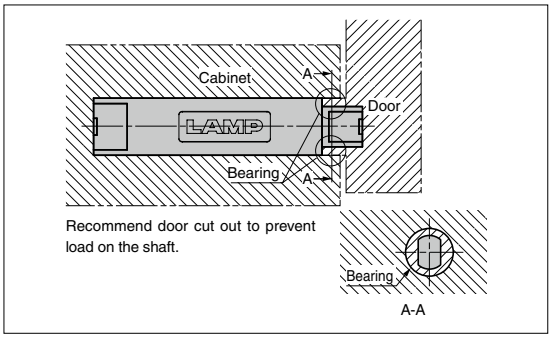
[Applications]

- Switch cover of equipment
- Wire hole cover of table

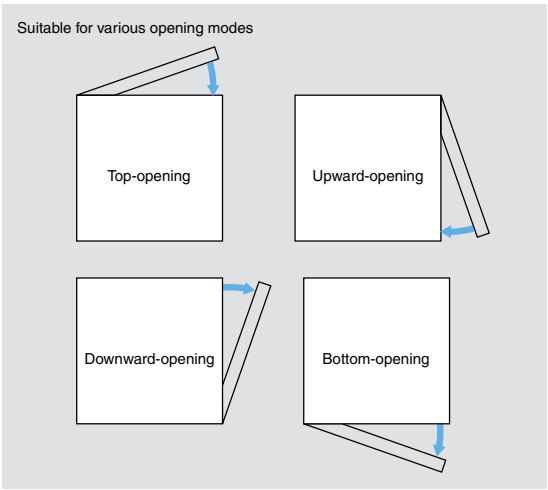
[Remarks]

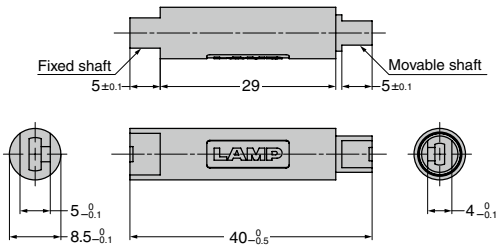
- Be sure to read the “Cautions” 1.
- Measurement conditions of torque value: ambient temperature 23˚C, rotation speed 20rpm.
- For use beyond the operating temperature range above, please contact local representatives.

[Installation]

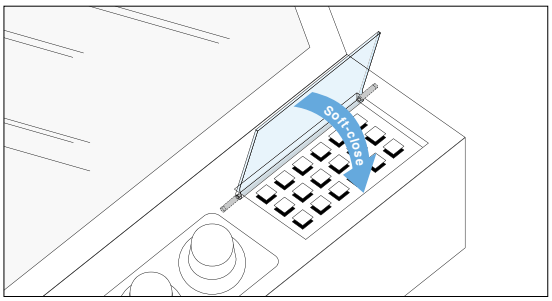


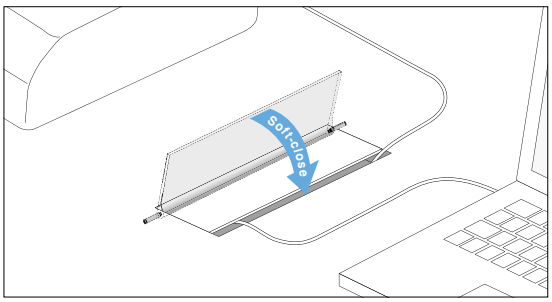
Suitable for various opening modes



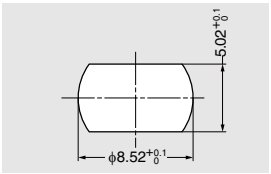


[Application Example]

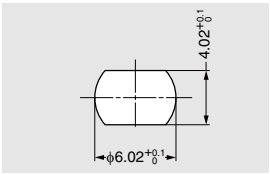




[Cut Out Dimensions]



Fixed shaft



Movable shaft

RoHS	CAD	Item Code	Item Name	Material	Colour	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-026-907	URD8-3	POM	Natural	0.022~0.038	0.22~0.39	2.5	100	2000

Refer to 1 : P.15.

DISK DAMPER UDD®

Lapcon INSTRUCTION VIDEO



- Keeps lids/doors from slamming shut.
- Simple design does not affect cabinet appearance.
- Choose from 3 torques according to door size.
- Ideal for food showcase, etc.

[Specifications]

- Operating temperature: 5˚C~35˚C

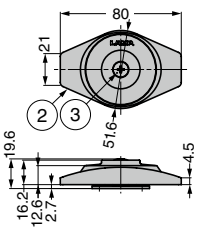
[Remarks]

- Spacer or L-shaped bracket may be required depending on the shape of display.
- Customer should provide spacer according to board thickness in the application below.
- Use types (S, M, H) with identical torque on the left and right sides.
- Use indoors.
- Do not use impact screwdriver for mounting.
- Do not use in water splash environment.
- Use 2 pcs in one set.

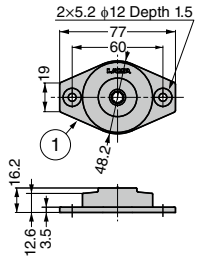
Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation.
Available on Web!

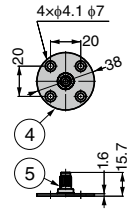
[Assembled State]
(Body+Cover+Mounting plate)



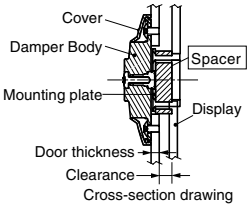
[Damper Body]

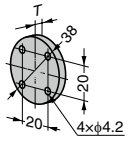


[Mounting Plate]



[Spacer]

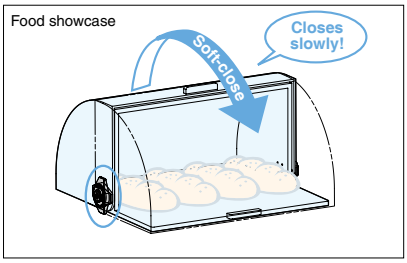




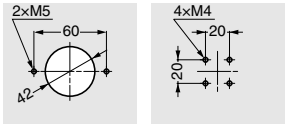
Spacer thickness (T) =Clearance + Door thickness-2.7 mm

No.	Part Name	Material	Finish / Colour
①	Damper Body	–	–
②	Cover	ABS	Emboss/Light Grey
③	Screw	Steel	Nickel
④	Mounting Plate		
⑤	Shaft		Zinc Chromate

[Application Example]

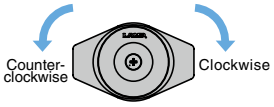


[Cut Out Dimensions]

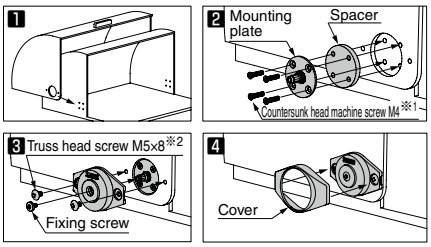


Door side Fixed side

[Damper Working Direction]



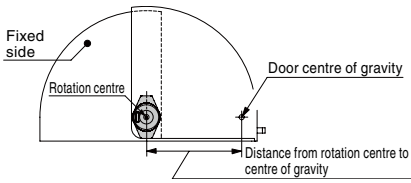
[How to Install]



※1, ※2 screws not included.
In case of wooden display, please prepare countersunk head tapping screw 3.5 for ※1, and truss head tapping screw 5x12 for ※2.

[Selection of Damper]

Choose from 3 types according to door moment.
Max. door moment = Door weight kg × 9.80665 × Distance from rotation centre to centre of gravity (m)



Door Moment	Type	Qty
1.0~2.0 N・m	S	2 pcs
2.0~4.0 N・m	M	2 pcs
4.0~6.0 N・m	H	2 pcs

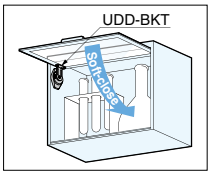
RoHS	CAD	Item Code	Item Name	Damper Working Direction	Torque N・m/pc	Torque kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	180-022-306	UDD-S-L	Counterclockwise	0.5~1.0	5.1~10.2	90	20	20
G'	3D	180-022-307	UDD-S-R	Clockwise				20	20
G'	3D	180-022-308	UDD-M-L	Counterclockwise	1.0~2.0	10.2~20.4		20	20
G'	3D	180-022-309	UDD-M-R	Clockwise				20	20
G'	3D	180-022-310	UDD-H-L	Counterclockwise	2.0~3.0	20.4~30.6		20	20
G'	3D	180-022-311	UDD-H-R	Clockwise				20	20

BRACKET FOR DISK DAMPER UDD-BKT

L=R SUS



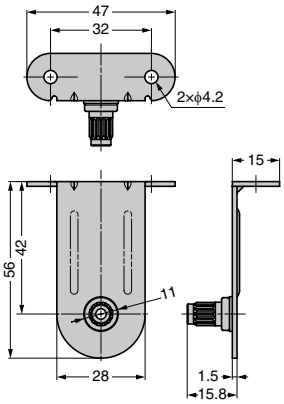
[Application Example]



- Bracket of disk damper UDD 1 for upward-opening doors.

[Remarks]

- Chamfer edge of top board to reduce the gap between the door and top board by referring to Fig.2 and Table 2 (recommended).
- Install a stopper on the cabinet (Fig.3).
- Catch is needed for holding door in opened position.
- Face plate SDS for glass door and spacer SDS-50G 2 available for glass/acrylic doors.



[Installation]

Fig.1

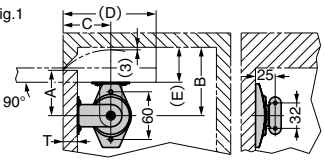


Fig.2

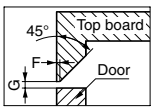


Fig.3

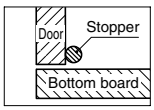


Table 1

No.	Door Thickness T	A	B	C	D	E
①	5	46	70	49	(95)	(26)
②	15	54	82	57	(111)	(40)
③	18	57	86	60	(117)	(44)

Table 2

Chamfering Allowance F	Gap G
1	3
2	4
3	5

※① is the value when using acrylic or glass door with a door thickness of 5 mm, a face plate SDS for glass door, and spacer SDS-50G.
②③ are the values when using wooden doors with door thicknesses given in the above table.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Carton (pcs)
G	3D	180-026-764	UDD-BKT	Stainless Steel (SUS304)	Plain	33	60

Refer to 1 : P.70, 2 : P.267

LIFT-ASSIST DAMPER LAD®, LAD®-ST DIGEST



- Ideal for the top board of counter entrance.
- Supplied with LAPCON mechanism, damper works during closing and top board slowly closes.Damper works even at a slight opening angle.
- Lift-assist function allows opening the top board easily.
- Can be retrofitted to existing counters without machining.
- Installation position can be easily determined with the supplied template.

Video Link

Selection Tool Sasuga-kun
Applicable Products
Used for Product Selection & Simulation. Available on Web!



LAD 1



LAD-ST (with stopper) 2
Stops at 95° opening.

Refer to 1 : P.232, 2 : P.230

LIFT-ASSIST HINGE HG-PA SERIES

VIDEO



- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Smooth and soft-closing movement at the end, preventing lid from slamming shut.
- Torque is adjustable by turning the adjustment screw (see below).

[Specifications]

- Operating temperature: 0˚C ~40˚C

[Applications]

- Medical equipment, analytical instruments, semiconductor equipment etc.

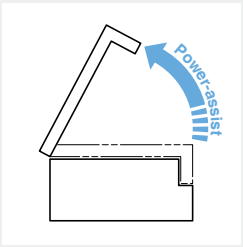
[Remarks]

- Be sure to read the "Cautions" 1 .
- When installing, ensure that both hinge shafts are levelled and aligned.
- Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.
- Do not use outdoors.
- Check if the cabinet has sufficient strength and rigidity before use.
- For inside mount type, check the torque adjusting screw position, and turn the screw with cabinet and lid already mounted.

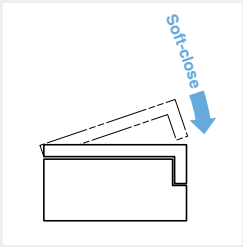
Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

Video Link
Motion Design Tec Video
Lift Assist

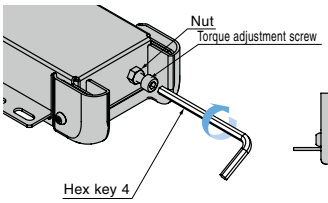
Lift assist function



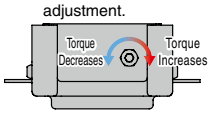
Soft-close function



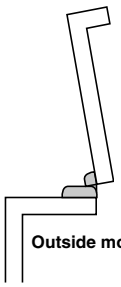
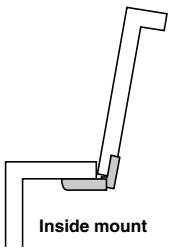
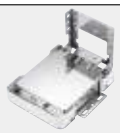
[How to Adjust Torque]



Loose the end nut with a wrench, and then turn the adjustment screw with a hex key. Tighten the nut again after adjustment.



[HG-PA Series]

Type	Torque N · m	Torque kgf · cm	Torque Adjustment Range	Item Name	Page
 Outside mount	9 ±10%	91 ±10%	±11%	 HG-PA180-9	2
	15 ±10%	153 ±10%	±5%	 HG-PA200, HG-PA201	3
	20 ±10%	204 ±10%			
	25 ±10%	255 ±10%			
	35 ±10%	357 ±10%	±5%	 HG-PA270	4
	45 ±10%	459 ±10%			
 Inside mount	9 ±10%	91 ±10%	±11%	 HG-PA210-9	5
	15 ±10%	153 ±10%	±5%	 HG-PA230, HG-PA231	6
	20 ±10%	204 ±10%			
	25 ±10%	255 ±10%			

Refer to 1 : P.15, 2 : P.74, 3 : P.75, 4 : P.76, 5 : P.77, 6 : P.78

Please use selection tool "SASUGA-kun" for product selection.
Simulation when using multiple hinges is possible.

Please visit by clicking the banner on the website

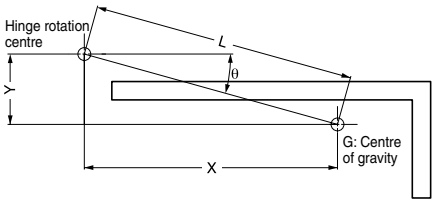
Selection Tool Sasuga-kun

[How to Select] Refer to the following 1~3 for model selection.

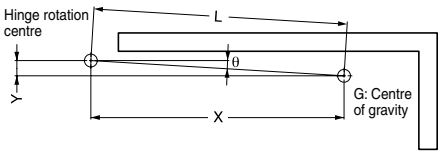
1. Calculating lid moment

Calculation formula Mu=m × g × L × cos θ

●Outside mount type (HG-PA180, HG-PA200, HG-PA201, HG-PA270)

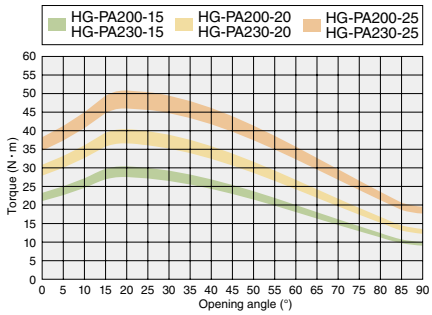


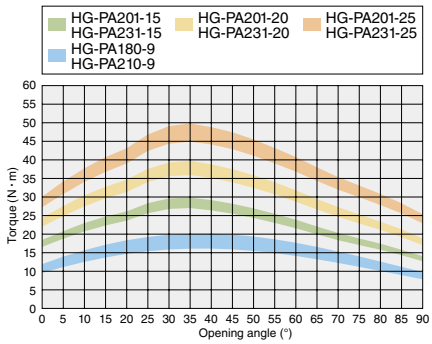
●Inside mount type (HG-PA210, HG-PA230, HG-PA231)

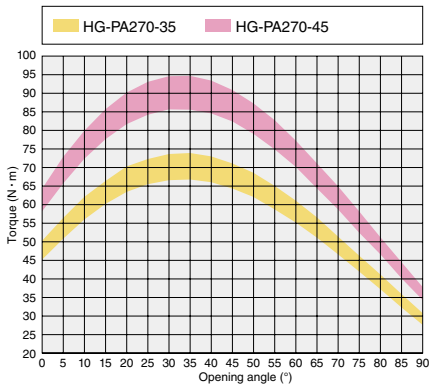


X	Horizontal distance from rotation centre to lid centre of gravity
Y	Vertical distance from rotation centre to lid centre of gravity
L	Distance from rotation centre to lid centre of gravity
θ	Angle from the horizontal line at the rotation centre to lid centre of gravity
m	Lid weight
G	Lid centre of gravity

2. Torque of the hinge (using 2 pcs)

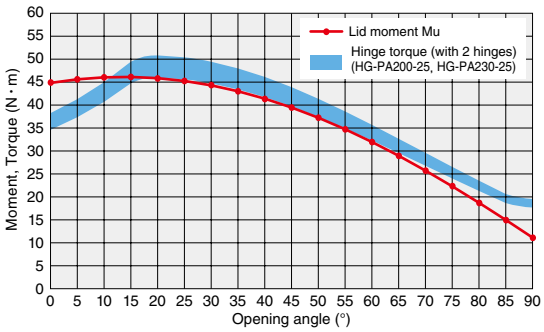






3. Selecting model

Example



Lid torque and hinge torque should be overlapped as shown on the graph above.

Lid moment Mu > Hinge torque···Force is applied in the closing direction of lid.
Lid moment Mu < Hinge torque···Force is applied in the opening direction of lid.

※Confirm the movement with actual item when the lid moment Mu is at the upper or lower limit of the torque range of lift assist hinge.

Conditions in the above example : X=43 cm, Y=-10.5 cm, L=44.3 cm, W=10.8 kg
Recommended model : 2 pcs of HG-PA200-25 or HG-PA230-25

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

LIFT-ASSIST HINGE HG-PA180-9 Outside Mount

INSTRUCTION SUS VIDEO

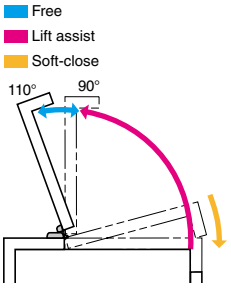


- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Smooth and soft-closing movement at the end, preventing lid from slamming shut.
- Torque is adjustable by turning the adjustment screw (±11%).
- With plastic cover for clean appearance.

[Remarks]

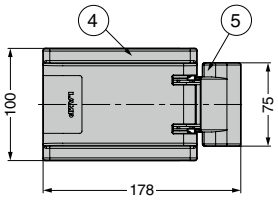
- Be sure to read the "Cautions" 1 .

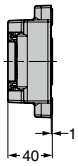
[Operating Range]

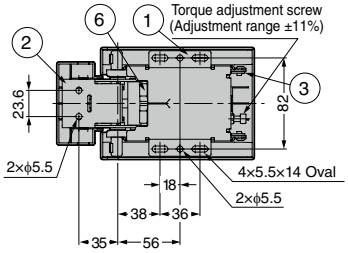


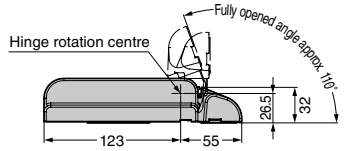
Selection Tool Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

Video Link
Motion Designtec Video Lift Assist



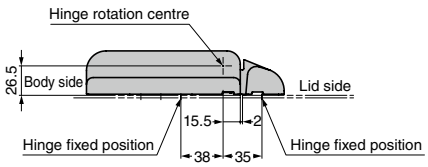






No.	Part Name	Material / Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Case	
④	Cover A	PBT/Light Grey
⑤	Cover B	
⑥	Slider	POM
–	Spring	Steel (SWO)

[Installation]



RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-739	HG-PA180-9	9±10%	91±10%	800	1	12

Refer to 1 : P.15.

LIFT-ASSIST HINGE HG-PA200, HG-PA201 Outside Mount

SUS VIDEO

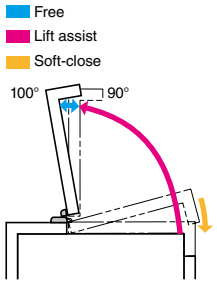


- The torque peaks at 20° or 35° depending on the lid shape (see diagram below).
- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Smooth and soft-closing movement at the end, preventing lid from slamming shut.
- Torque is adjustable by turning the adjustment screw (±5%).
- With plastic cover for clean appearance.

[Remarks]

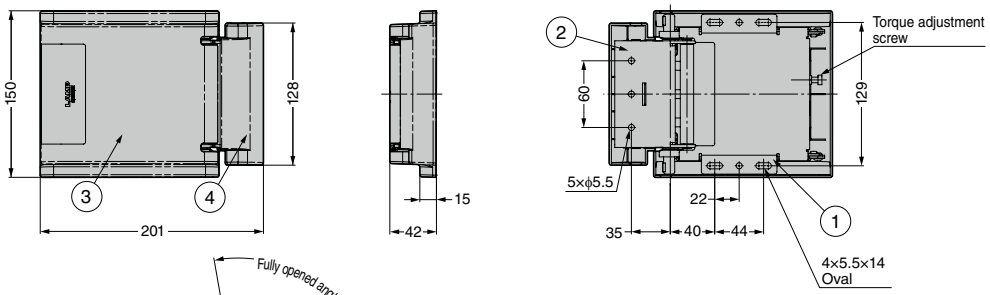
- Be sure to read the "Cautions" 1 .
- Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.
- For HG-PA200 and HG-PA201, centre-of-gravity positions of the applicable doors are different.
  Please refer to How to Select 2 for model selection.

[Operating Range]



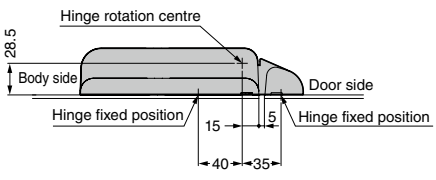
Selection Tool
Sasuga-kun
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Video Link
Motion Designtec Video
Lift Assist



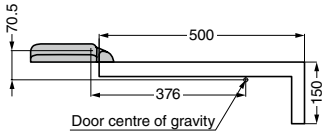
No.	Part Name	Material / Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Cover A	PBT/Light Grey
④	Cover B	
–	Slider	POM
–	Spring	Steel (SWO)

[Installation]

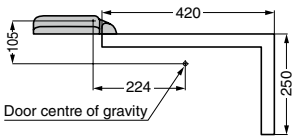


[Installation]

HG-PA200 (Peak torque angle 20°)



HG-PA201 (Peak torque angle 35°)



RoHS	CAD	Item Code	Item Name	Description	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-025-668	HG-PA200-15	Peak torque angle 20°	15±10%	153±10%	1385	1	8
G	3D	170-025-669	HG-PA200-20		20±10%	204±10%		1	8
G	3D	170-025-670	HG-PA200-25		25±10%	255±10%		1	8
G	3D	170-029-741	HG-PA201-15	Peak torque angle 35°	15±10%	153±10%		1	8
G	3D	170-029-742	HG-PA201-20		20±10%	204±10%		1	8
G	3D	170-029-743	HG-PA201-25		25±10%	255±10%		1	8

Refer to 1 : P.15, 2 : P.73

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

LIFT-ASSIST HINGE HG-PA270 Outside Mount

INSTRUCTION SUS VIDEO

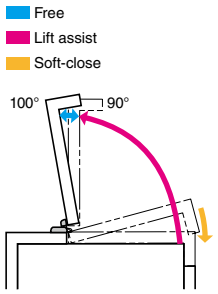


- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Smooth and soft-closing movement at the end, preventing lid from slamming shut.
- Torque is adjustable by turning the adjustment screw (±5%).
- With plastic cover for clean appearance.

[Remarks]

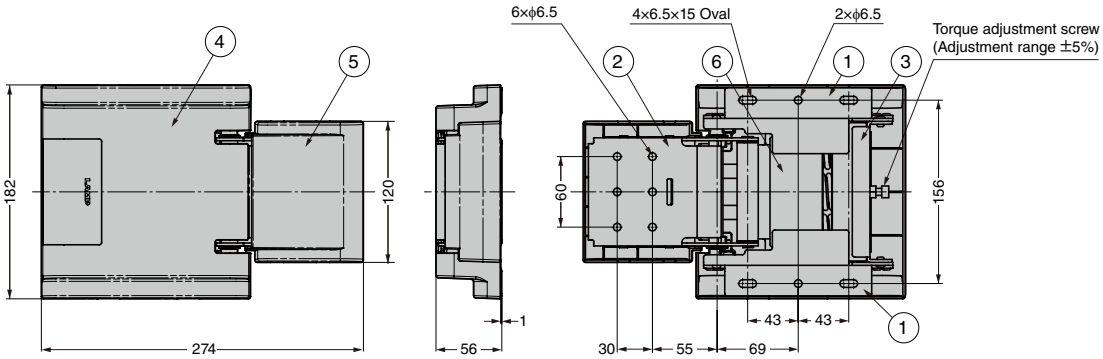
- Be sure to read the "Cautions" 1 .
- Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.

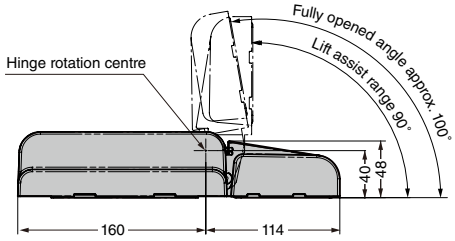
[Operating Range]



Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation.
Available on Web!

Video Link
Motion Designtec Video Lift Assist





No.	Part Name	Material / Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Case	
④	Cover A	PBT/Light Grey
⑤	Cover B	
⑥	Slider	POM
–	Spring	Steel (SWO)

RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-034-307	HG-PA270-35	35±10%	357±10%	2500	1	4
G	3D	170-034-308	HG-PA270-45	45±10%	459±10%		1	4

Refer to 1 : P.15.

LIFT-ASSIST HINGE HG-PA210-9 Inside Mount

INSTRUCTION SUS VIDEO



Lift assist
Soft-close
Passed 100,000 open/close private cycle test

- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Smooth and soft-closing movement at the end, preventing lid from slamming shut.
- Torque is adjustable by turning the adjustment screw (±11%).
- Able to limit the 140° opening angle to 55° or 80° with use of the included stopper plate.
- Opening angle can also be restricted between 15° and 90° (made to order).

[Remarks]

- Be sure to read the "Cautions" 1 .
- When not mounting the angle restricting piece, Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.

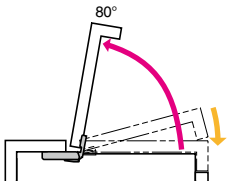
Video Link

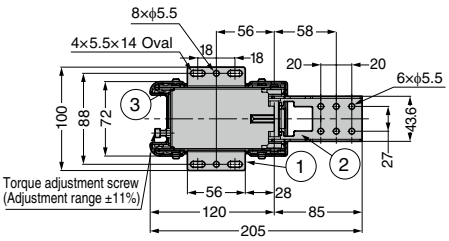
Motion Designtec Video Lift Assist

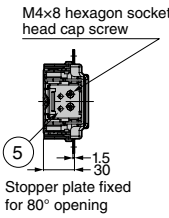
Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation.
Available on Web!

[Operating Range]

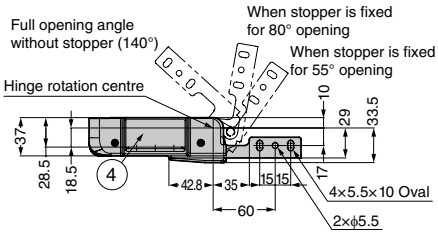
Lift assist
Soft-close





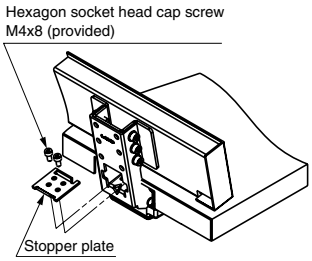


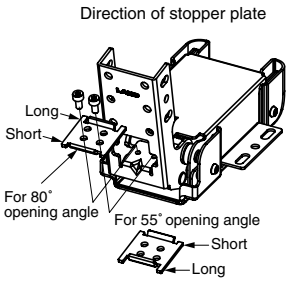
No.	Part Name	Material / Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Case	
④	Cover	PP/Light Grey
⑤	Stopper Plate	Stainless Steel (SUS430)
–	Slider	POM
–	Spring	Steel (SWO)



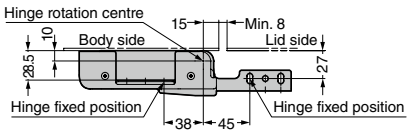
[Setting of Opening angle]

Opening angle can be limited to 55° or 80° with the included stopper plate.





[Installation]



RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-740	HG-PA210-9	9±10%	91±10%	770	1	12

Refer to 1 : P.15.

LIFT-ASSIST HINGE HG-PA230, HG-PA231 Inside Mount

SUS VIDEO



- The torque peaks at 20° or 35° depending on the lid shape (see diagram below).
- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Smooth and soft-closing movement at the end, preventing lid from slamming shut.
- Torque is adjustable by turning the adjustment screw (±5%).
- Able to limit the 140° opening angle to 55° or 80° with use of the included stopper plate.
- Opening angle can also be restricted between 15° and 90° (made to order).

[Remarks]

- Be sure to read the "Cautions" 1 .
- For HG-PA230 and HG-PA231, centre-of-gravity positions of the applicable doors are different. Please refer to How to Select 2 for model selection.
- Install a stopper (not included) on the cabinet to prevent from exceeding the operating angle during opening or closing.

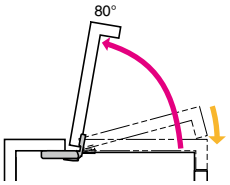
Video Link

Motion Design Tec Video Lift Assist

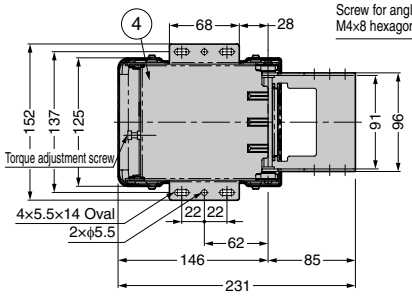
No.	Part Name	Material / Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Cover	PP/Light Grey
④	Case	Stainless Steel (SUS430)
⑤	Stopper Plate	
–	Slider	POM
–	Spring	Steel (SWO)

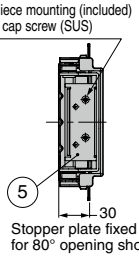
[Operating Range]

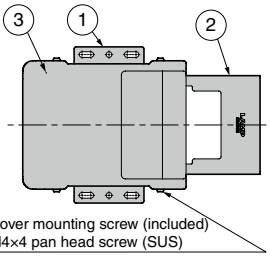
Lift assist
Soft-close

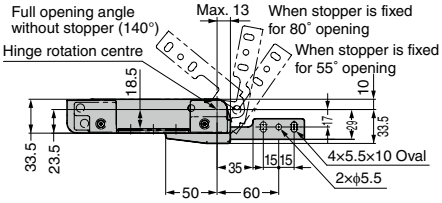


Selection Tool Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!



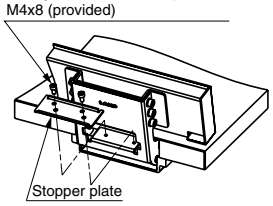






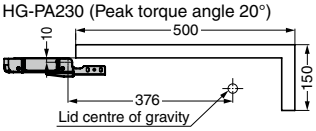
[Setting of Opening angle]

Opening angle can be limited to 55° or 80° with the included stopper plate.

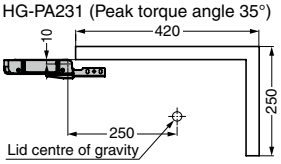


[Installation]

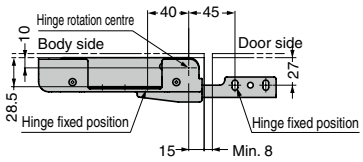
HG-PA230 (Peak torque angle 20°)



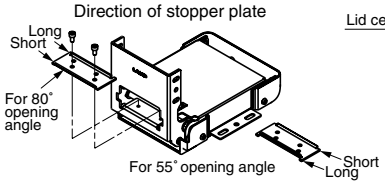
HG-PA231 (Peak torque angle 35°)



[Installation]



Direction of stopper plate

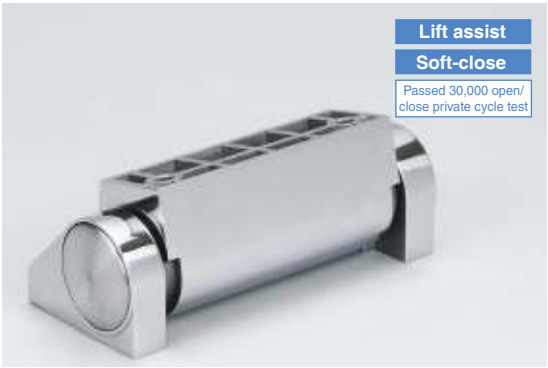


RoHS	CAD	Item Code	Item Name	Description	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-025-671	HG-PA230-15	Peak torque angle 20°	15±10%	153±10%	1296	1	8
G	3D	170-025-672	HG-PA230-20		20±10%	204±10%		1	8
G	3D	170-025-673	HG-PA230-25		25±10%	255±10%		1	8
G	3D	170-029-744	HG-PA231-15	Peak torque angle 35°	15±10%	153±10%		1	8
G	3D	170-029-745	HG-PA231-20		20±10%	204±10%		1	8
G	3D	170-029-746	HG-PA231-25		25±10%	255±10%		1	8

Refer to 1 : P.15, 2 : P.73

STAINLESS STEEL LIFT-ASSIST HINGE HG-JH210

Lapcon INSTRUCTION SUS316 VIDEO



- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Supplied damper prevents top-opening lid from slamming shut. (Damper effective angle approx. 30° or more).
- Built-in helical torsion spring makes lid feel lighter when opening.

[Specifications]

- Assist torque: 20.58N・m (210kgf・cm) (when using 1 pc)
- Built-in damper max. load torque: 7N・m (71.4kgf・cm)
- Built-in damper operating temperature: 0℃~ 40℃
- Hinge operating angle: 0° ~ 110°

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

Motion Designtec Video Lift Assist

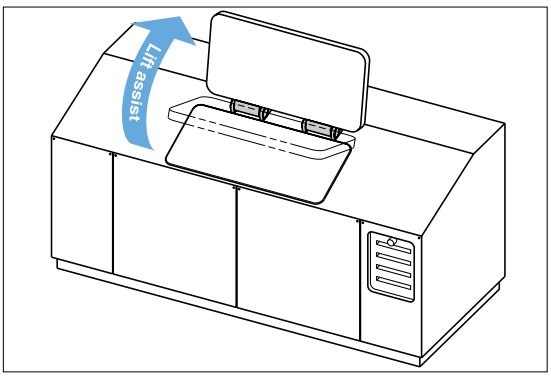
[Applications]

- Heavy top-opening lids of environmental equipment, testing equipment, etc.

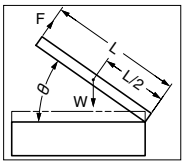
[Remarks]

- When installing, ensure that both hinge shafts are levelled and aligned.

[Application Example]



[Calculation Formula and Graph of Moment]



Lid moment $Mt = W \times \cos\theta \times \frac{L}{2}$

Hinge moment $Mh = Mm \times (1 - \frac{\theta}{115})$

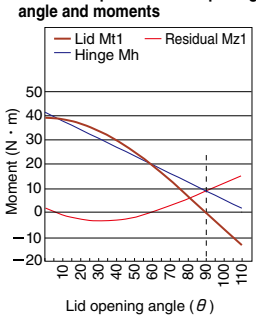
Residual moment $Mz = Mh - Mt$

Operating force $F = \frac{Mt - Mh}{L}$

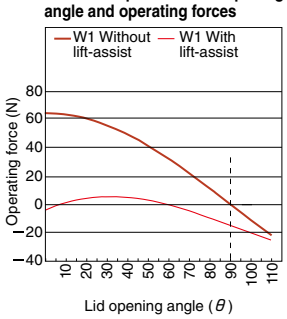
W : Weight at lid centre of gravity θ : Lid opening angle
L : Lid length Mm : Torque value of lift-assist hinge

The meaning of residual moment Mz= (Mh–Mt) is as follows.
・"–" means that the force is applied in the closing direction of lid.
・"+" means that the force is applied in the opening direction of lid.

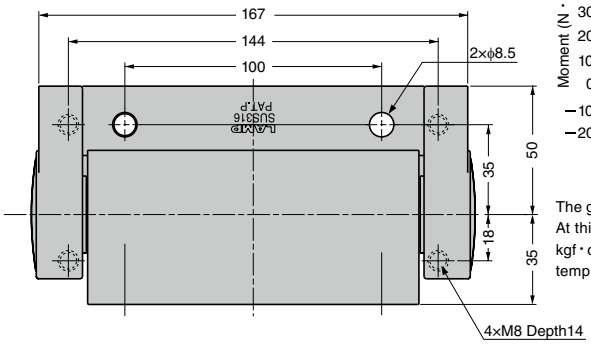
Relationship between lid opening angle and moments

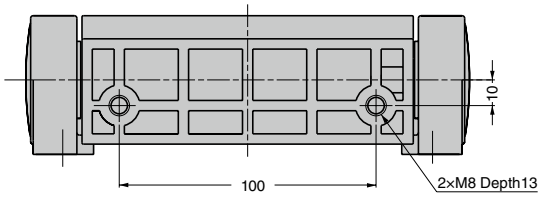


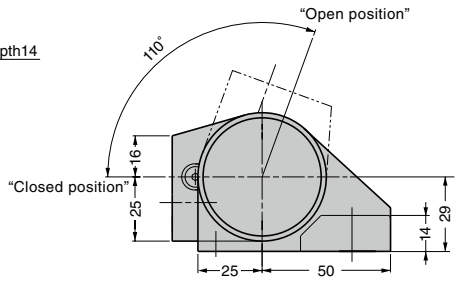
Relationship between lid opening angle and operating forces



The graph is an example when L=60cm, W1=12kg, and two HG-JH210 are used. At this time, the maximum load torque of built-in damper is 7×2=14N・m(142.8 kgf・cm).Damper works when the residual moment is 14N・m or less. (Room temperature)







RoHS	CAD	Item Code	Item Name	Material	Finish	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-090-535	HG-JH210	Stainless Steel (SCS14)	Polished	110°	2350	1	6

※SCS14 is equivalent of SUS316.

MICRO DETENT HINGE MPH-20-5G2

VIDEO

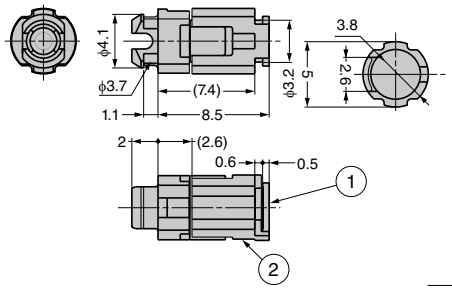


- Ultra compact detent hinge suitable for clamshell type cell phones, PDA and other foldable devices.
- Small diameter of ϕ5 for space-saving and downsizing of casing.
- Designed for 160° opening, and detent catch in open and closed position.
- Easy snap-in for quick assembly.

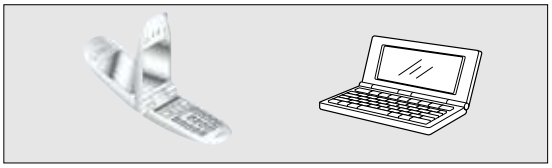
[Applications]
- Cell phone, PDA, remote control, gaming device, etc.

[Remarks]
- For clamshell type cell phones, with weight up to 55g when using two hinges.
- The boundary between the movable side and fixed side of casing shall be set near the hinge centre.
- For more details on mounting dimensions, please contact local representatives.

Motion Designtec Video Detent Motion



[Application Example]



No.	Part Name	Material	Finish / Colour
①	Spindle	Steel	Clear Zinc Chromate
②	Body	POM	White

RoHS	CAD	Item Code	Item Name	Opening Angle	Weight (g)	Box (pcs)
G	3D	170-090-536	MPH-20-5G2	160°	0.46	4000

MICRO DETENT HINGE MPH-22G

VIDEO

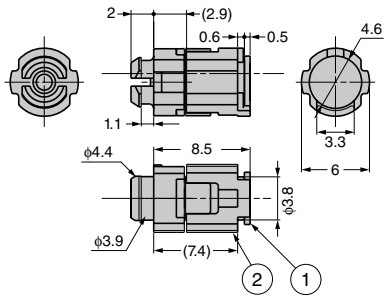


- Ultra compact detent hinge suitable for clamshell type cell phones, PDA and other foldable devices.
- Designed for 160° opening, and detent catch in open and closed position.
- Easy snap-in for quick assembly.

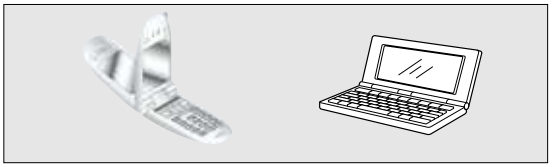
[Applications]
- Cell phone, PDA, remote control, gaming device, etc.

[Remarks]
- For clamshell type cell phones, with weight up to 55g when using two hinges.
- The boundary between the movable side and fixed side of casing shall be set near the hinge centre.
- For more details on mounting dimensions, please contact local representatives.

Motion Designtec Video Detent Motion



[Application Example]



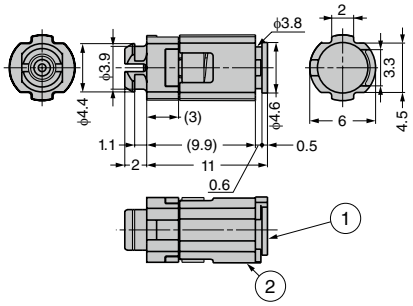
No.	Part Name	Material	Finish / Colour
①	Spindle	Steel	Coloured Zinc Chromate
②	Body	POM	Grey

RoHS	CAD	Item Code	Item Name	Opening Angle	Weight (g)	Box (pcs)
G	3D	170-098-727	MPH-22G	160°	0.62	4000

MICRO DETENT HINGE MPH-30 High Torque Type

VIDEO





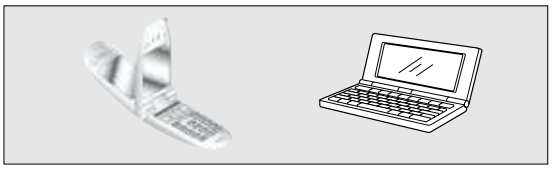
- Ultra compact detent hinge suitable for clamshell type cell phones, PDA and other foldable devices.
- With the torque of a single hinge equal to that of two conventional hinges, you can design various casings as there is no need for hinge space on the other side.
- Designed for 160° opening, and detent catch in open and closed position.
- Easy snap-in for quick assembly.

[Applications]
- Cell phone, PDA, remote control, gaming device, etc.

[Remarks]
- For clamshell type cell phones, with weight up to 55g when using one hinge.
- The boundary between the movable side and fixed side of casing shall be set near the hinge centre.
- For more details , please contact local representatives.

Motion Designtec Video Detent Motion

[Application Example]



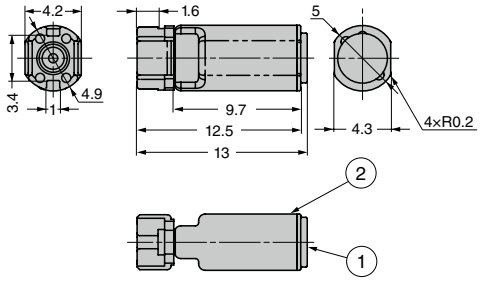
No.	Part Name	Material	Finish
①	Spindle	Steel	Clear Zinc Chromate
②	Body	POM	Black

RoHS	CAD	Item Code	Item Name	Opening Angle	Weight (g)	Box (pcs)
G	3D	170-090-024	MPH-30	160°	0.98	4000

MICRO DETENT HINGE MPH-30-5TN High Torque Type

VIDEO





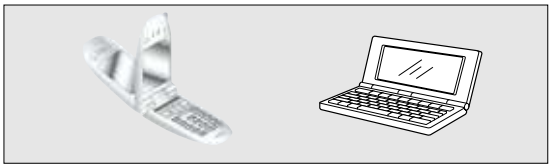
- Ultra compact detent hinge suitable for clamshell type cell phones, PDA and other foldable devices.
- With the torque of a single hinge equal to that of two conventional hinges, you can design various casings as there is no need for hinge space on the other side.
- Small outer diameter of ϕ5 realises space-saving and downsizing of casing.
- Designed for 160° opening, and detent catch in open and closed position.

[Applications]
- Cell phone, PDA, remote control, gaming device, etc.

[Remarks]
- For clamshell type cell phones, with weight up to 55g when using one hinge.
- The boundary between the movable side and fixed side of casing shall be set near the hinge centre.
- For more details , please contact local representatives.

Motion Designtec Video Detent Motion

[Application Example]



No.	Part Name	Material	Finish
①	Spindle	Steel	Nickel
②	Body	Stainless Steel	–

RoHS	CAD	Item Code	Item Name	Opening Angle	Weight (g)	Box (pcs)
G	3D	170-097-888	MPH-30-5TN	160°	0.86	4000

※The item will be discontinued after current stock is sold out.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

DETENT HINGE HG-MPS2



- Holds at 3 positions: -10° , 120° and 170° .
- Can be used horizontally or vertically.

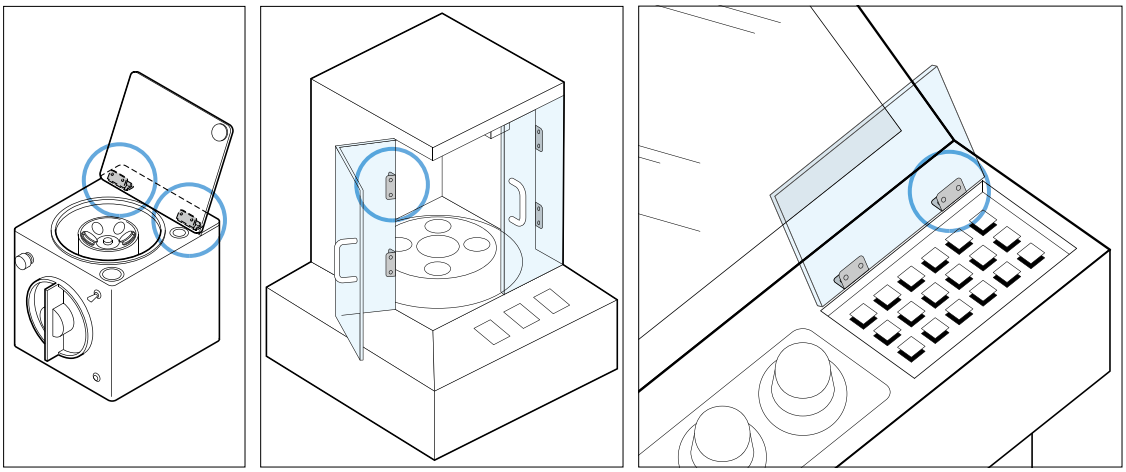
[Applications]
- Small and light doors of medical equipment, measuring equipment, analytical equipment, etc.

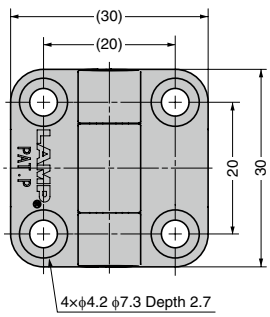
[Remarks]
- Additional stopper is recommended at 0° (fully closed) and 170° (fully opened).
- For indoor use only. Not suitable for wet applications.
- Do not use impact screwdriver for mounting.

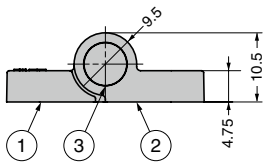
[Recommended Screws]
- Pan head screw M4 or pan head tapping screw 4

Video Link

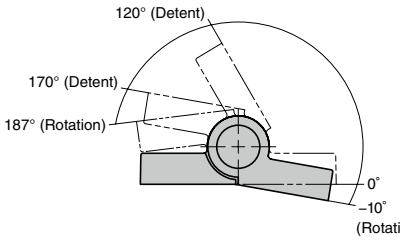
[Installation]

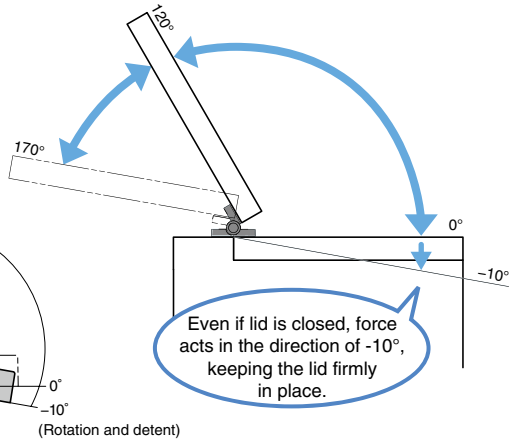






[Rotation and Detent Angle]





No.	Part Name	Material	Colour
①	Fixed Bracket	PBT	Black (BL), White (WT)
②	Movable Bracket		
③	Cap	ABS	

[Criterion of Door or Lid Size] Using 2 pcs vertically

Width	Height	Weight
Max. 370	Max. 460	Max. 1.0kg

When using horizontally, design the door and lid sizes not to exceed the following torque.

RoHS	CAD	Item Code	Item Name	Colour	Retaining Torque -10° , 170°		Retaining Torque 120°		Weight (g)	Box (pcs)	Carton (pcs)
					N·m/pc	kgf·cm/pc	N·m/pc	kgf·cm/pc			
G	3D	170-023-908	HG-MPS2-BL	Black	0.26	2.65	0.145	1.48	6.9	50	500
G	3D	170-023-909	HG-MPS2-WT	White						50	500

DETENT HINGE HG-YJ50

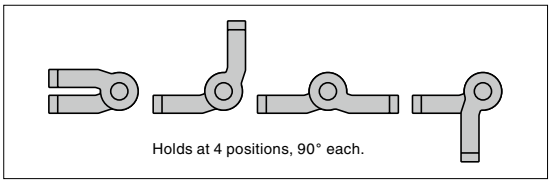


With cap.

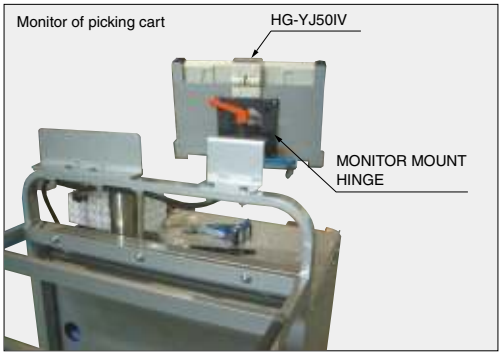
- Holds at 4 positions, 90° each.
- Lightweight plastic hinge.
- Plastic parts and metal parts can be separated for easy recycling.
- Caps for the screw holes are included. Caps (Ivory: KD-772-3I, Black: KD-772-3B) also available separately. 1

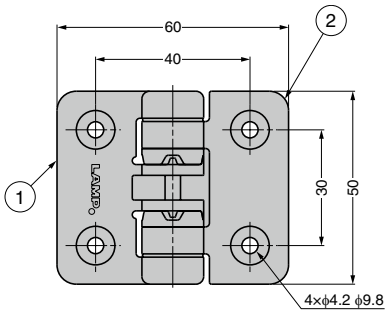
[Applications]

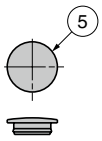
- Plastic doors or small metal doors of medical equipment, measuring equipment, food machinery, etc.

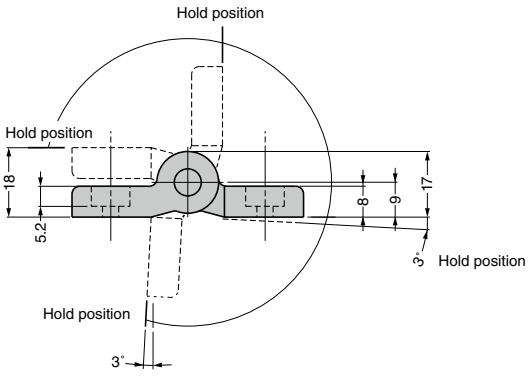


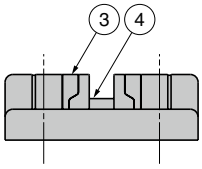
[Application Example]











No.	Part Name	Material	Finish / Colour
①	Body A	POM	Emboss/Ivory (IV), Black (BL)
②	Body B		
③	Stopper Plate	PA	
④	Shaft	Stainless Steel (SUS303)	–
⑤	Cap (included)	PP	Emboss/Ivory (IV), Black (BL)

[Criterion of Door Size] using 2 pcs vertically for plastic doors

Width	Height	Weight
Max. 400	Max. 500	Max. 1.2kg

RoHS	CAD	Item Code	Item Name	Colour	Retaining Torque N·m/pc	Retaining Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-000	HG-YJ50IV	Ivory	Approx. 0.49	Approx. 5	30	20	200
G	3D	170-090-002	HG-YJ50BL	Black				20	200

Refer to 1 : P.881

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

DETENT HINGE HG-FH128

VIDEO




Cover not shown

- Holds doors at 60° and 120° .
- Depth and horizontal adjustment can also be made after installation.
- Covers for the screw holes are included.
- Fluororesin washer at rotation part ensures smooth operation.

[Applications]

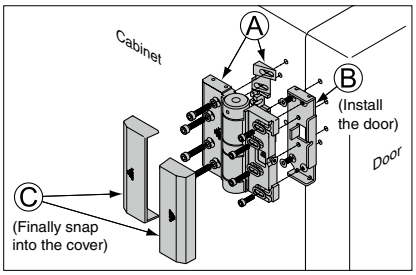
- Environmental test equipment, laboratory equipment, etc.

[Parts Included]

- Hexagon socket head cap screw M6×25 (SUS)
- Hexagon socket head cap screw M5×25 (SUS)
- Hexagon socket countersunk head screw M5×14 (SUS)
- Oval washer for M5 (SUS)
- Washer 6 (SUS)

Video Link

[How to Install (Screws Included)]

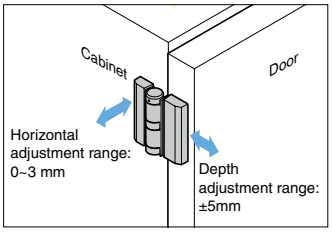


Install by steps Ⓐ～Ⓒ

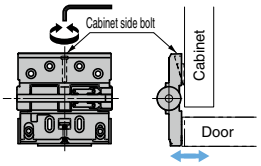




[How to Adjust Position (With Cover Removed)]

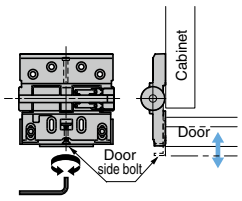


Horizontal adjustment

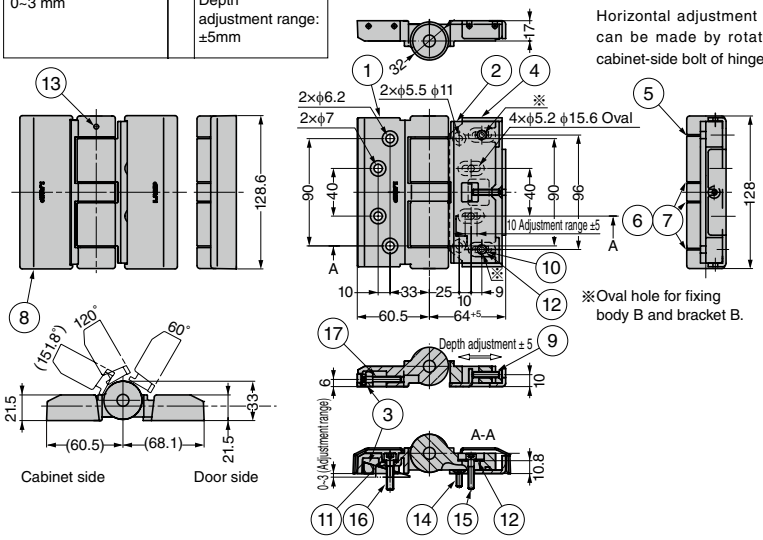


Horizontal adjustment of door can be made by rotating the cabinet-side bolt of hinge.

Depth adjustment

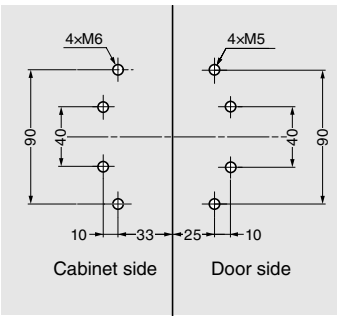


Depth adjustment of door can be made by rotating the door-side bolt of hinge.



※Oval hole for fixing body B and bracket B.

[Cut Out Dimensions]

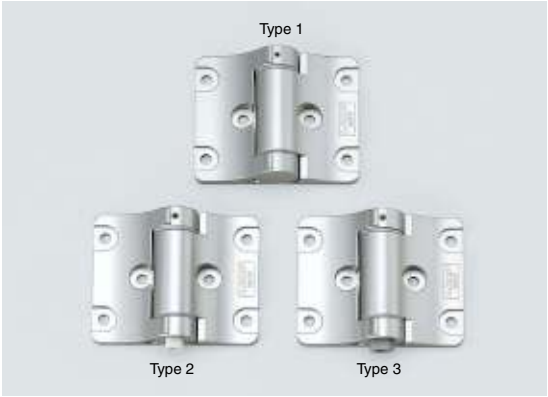


No.	Part Name	Material	Finish
①	Body A	Zinc Alloy (ZDC)	Dull Nickel + Clear Finish
②	Body B		
③	Bracket A		Nickel
④	Bracket B	Stainless Steel (SUS304)	Barrel Polished
⑤	Washer	PTFE	–
⑥		POM	
⑦		PS	
⑧	Cover	AES	Metallic Silver Paint

No.	Part Name	Material	Finish
⑨	Hexagon Socket Countersunk Head Screw M5×25	Stainless Steel	–
⑩	Hexagon Socket Head Cap Screw M5×12		
⑪	Washers 6		
⑫	Oval Washer for M5		
⑬	Spring Pin 4×32		
⑭	Hexagon Socket Countersunk Head Screw M5×14		
⑮	Hexagon Socket Head Cap Screw M5×25		
⑯	Hexagon Socket Head Cap Screw M6×25		
⑰	Hexagon Socket Low Head Screw M5×30		

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Door Weight kg/Pair	Retaining Torque N·m/Pair	Retaining Torque kgf·m/Pair	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-317	HG-FH128	600~900	900~1200	Max. 40	10	102	1500	1	6

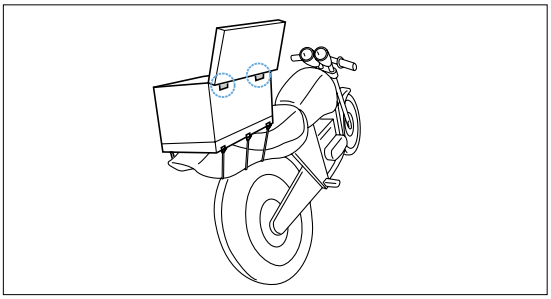
DETENT HINGE HG-CSH63 DIGEST



- Detent at both of 0°and 100°.
- Also available without damper type.
- Damper works clockwise or counterclockwise.
- Be sure to read the “Cautions” 1 .

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

[Installation]



Refer to 1 : P.15

DETENT HINGE HG-YC105

SUS



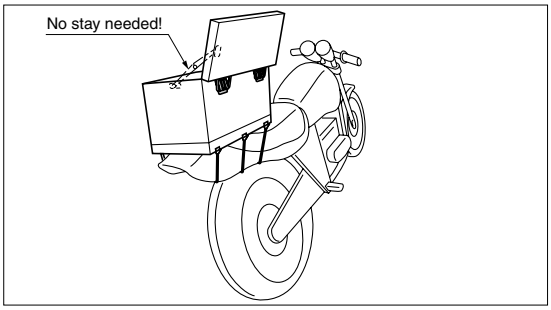
- Holds door open without secondary support.
- Easy installation and no damage to mounting surface with integrated back cover.

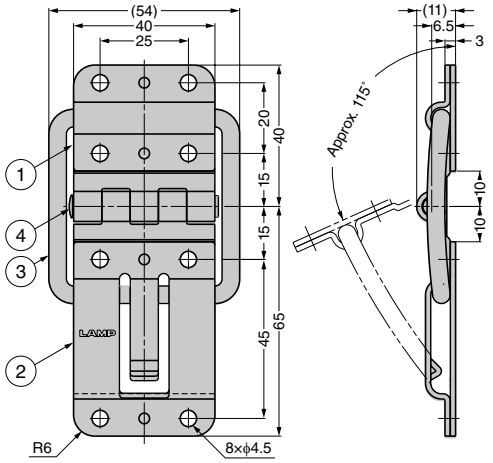
[Applications]
- Motorcycle carrying box, control box, etc.

[Remarks]
- Retaining torque varies. Not guaranteed value.
- Confirm with actual item before use.



[Application Example]



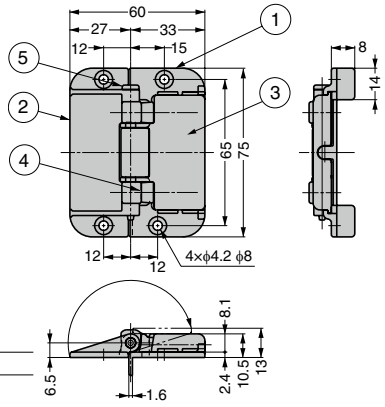


No.	Part Name	Material	Finish
①	Body (Fixed Side)	Stainless Steel (SUS304)	Barrel Polished
②	Body (Movable Side)		
③	Stopper		–
④	Shaft		

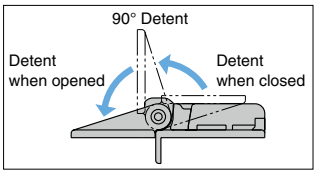
RoHS	CAD	Item Code	Item Name	Retaining Torque N·m/pc	Retaining Torque kgf·m/pc	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	170-099-093	HG-YC105	Approx. 1.18	Approx. 12	122	10	100

CENTRE HINGE CH-75





- Cam and slide latch provide a detent function in opened and closed positions.
- Cushion function absorbs impact at full opening and unexpected external force.
- Removable hinge pin allows easy installation.
- AS Parts Set for installing to aluminium frame also available. Please contact local representative for more details.



No.	Part Name	Material	Finish / Colour
①	Body A	Zinc Alloy (ZDC)	Nickel (NI), Bronze (GB)
②	Body B		
③	Holder	POM	Brown
④	Latch		Black
⑤	Hinge Pin	Steel (SWCH)	Lubricant Coating/Black

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	250-129-208	CH-75-NI	Nickel	101	42	168
–	3D	250-120-031	CH-75-GB	Bronze	99	42	168

RATCHET HINGE WITH FRICTION HG-RCT15-C



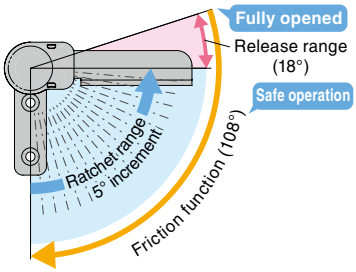
- Ratchet mechanism holds at angles in 5° increment from closed to opened position.
- Lift up to the fully open position to release the ratchet mechanism.
- The friction (resistance) function works even when released for safe operation.

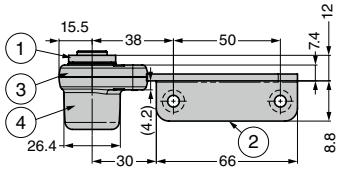
[Applications]

- For angle adjustment of folding table, touch panel, keyboard, etc.

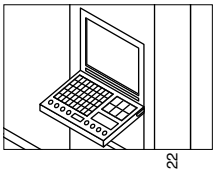
[Remarks]

- Use in pairs.
- Ensure the cabinet has enough rigidity. Otherwise, the ratchet mechanism may not function.
- When the mounting width of hinge is more than 400mm, the ratchet mechanisms may not work simultaneously on the left and right.

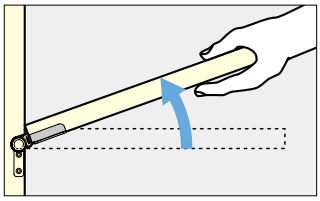


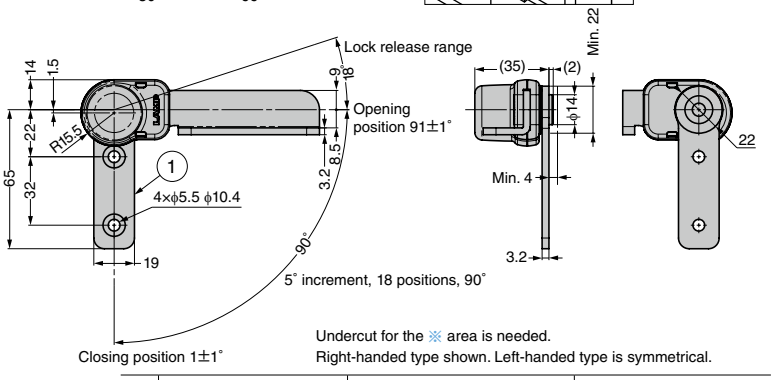


[Application Example]



[Lock Release]





Undercut for the ※ area is needed.
Right-handed type shown. Left-handed type is symmetrical.

No.	Part Name	Material	Finish
①	Bracket	Steel (SPCC)	Nickel
②	Arm (Right-handed)		
③	Cover (Right-handed)	PC	–
④	Cover (Right-handed)		

RoHS	CAD	Item Code	Item Name	Allowable Moment N·m/pair	Allowable Moment kgf·cm/pair	Weight (g)	Box (pairs)	Carton (pairs)
–	3D	170-036-333	HG-RCT15-C	40	408	173	–	–

MULTI ANGLE STAY KA-60 With Locking Mechanism

INSTRUCTION



- Angle adjustment and locking is realised by simple button operation. Suitable for pipe joints for which angle adjustment is required.
- Angle can be adjusted from 0° ~180° by 10° increment.
- Completely locked when your hands are off the release button.

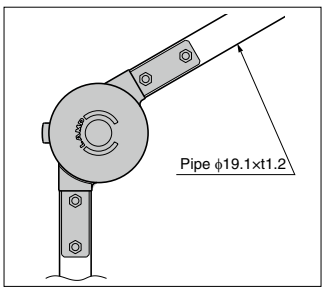
[Remarks]

- Do not forcibly apply force in the locked position.
- Pipe not included.

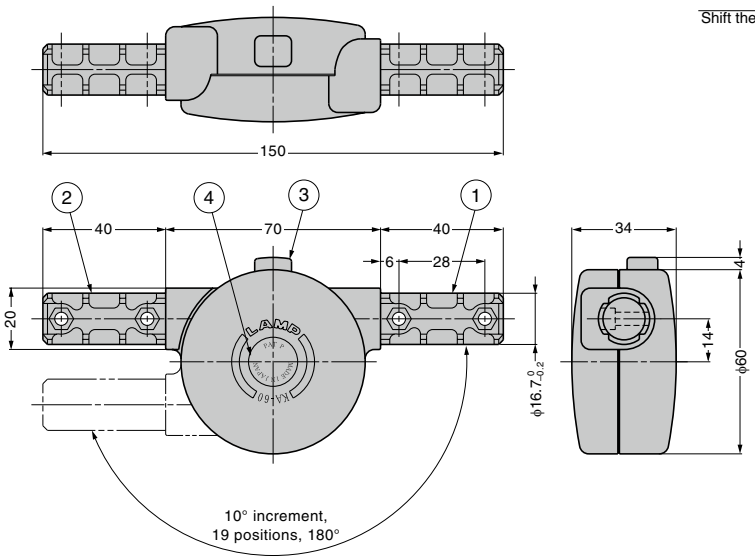
[Installation Example]



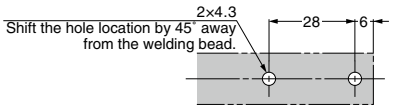




After releasing the lock by pushing the button, angle can be adjusted every 10° .



[Pipe Cut Out Dimensions]



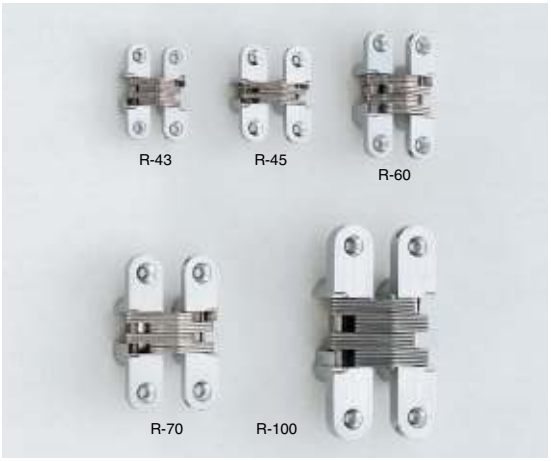
Pipe outer diameter : ϕ19.1
Pipe thickness : t1.2

No.	Part Name	Material	Finish
①	Body A	Aluminium Alloy	Enamel Finish/Ivory
②	Body B		
③	Release Button		Chrome
④	Cap	ABS	Black

RoHS	CAD	Item Code	Item Name	Pipe	Load Capacity N·m/pc	Load Capacity kgf·m/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-890-570	KA-60	ϕ19.1×t1.2	25	2.5	170	6	60

CONCEALED HINGE R

VIDEO



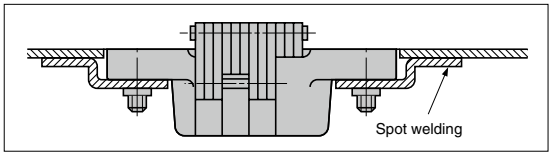
- Stainless steel (SUS304) arm has sufficient strength and superior corrosion resistance.
- R-100 adopts a roller as guide pin, making smooth movement even under high load.
- Can be widely used from wooden doors to sheet metal doors.
- Torque hinge types also available 1 .

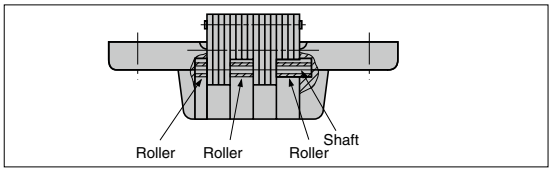
[Remarks]
- Distance to door edge must be less than Xmm.
- Roller is supplied to R-100 only.
- Recommended for use in pairs.

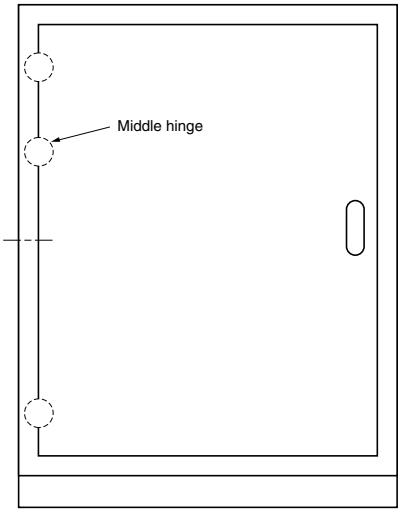
[Parts Included]
- Countersunk head wood screw (SUS)
- Countersunk head tapping screw (SUS) (R-70 only)

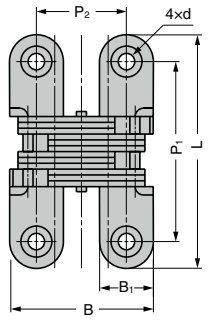
Motion Design Tec Video
Locus & Open/Close Angle

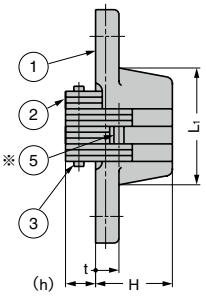
[Metal Door]

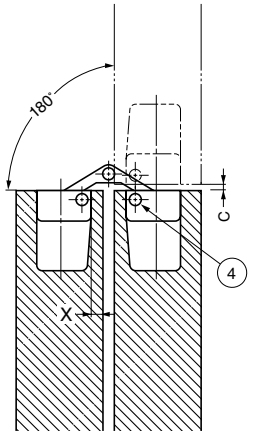












(Reference)
When hanging a door with 3 hinges, a large load is applied to the upper hinge, so the middle hinge is preferably set at about 1/2 of the distance from the midpoint of upper and lower hinges to the upper hinge.

No.	Part Name	Material					Finish
		R-43	R-45	R-60	R-70	R-100	
①	Body	Zinc Alloy					Satin Chrome
②	Arm	Stainless Steel (SUS304)					Plain
③	Shaft	Stainless Steel			Stainless Steel (SUS303)	Stainless Steel	
④	Shaft	Stainless Steel (SUS304)				Steel	
⑤	Shaft						
※	Roller (R-100 only)	–					Nickel

RoHS	CAD	Item Code	Item Name	L	L1	B	B1	P1	P2	H	h	t	d	C	X	Screw	Number of Arms	Door Width	Door Height	Door Weight kg/2 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-079	R-43	43	22	29	11	32	18	13	5	5	ϕ3.5 ϕ6.2	0.8	2.3	3.1×16	12	Max. 450	Max. 700	Max. 4	180°	37	30	300
G	3D	170-090-084	R-45	45	19	35.7	13		22.7	18.5	6		ϕ3.5 ϕ7		3	3.1×20	8					56	20	200
G	3D	170-090-081	R-60	60	33	35.2		47	22.2		6.5	6.5	ϕ4.3 ϕ8.3	1		3.5×20	12					94	10	100
G	3D	170-095-200	R-70	70	35	42.6	16.1	53	26.6	23	7.3	7	ϕ4.6 ϕ9.1	1.2	3.5	4×25				Max. 7		157	10	–
G	3D	170-095-201	R-100	100	52	53.2	20	80	33.2	27.5	9.5	9.5	ϕ5.3 ϕ10	1.8	4.8	4.5×32	16					342	10	60

Refer to 1 : P.44

CONCEALED HINGE RK-50



- High corrosion with stainless steel.
- For light door.

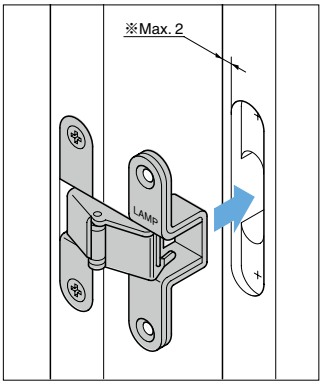
[Remarks]

- When increasing the board thickness, be sure to keep the dimensions of ※ marked on bellow drawings and increase the remaining margins on the opposite side.
- Recommended for use in pairs.

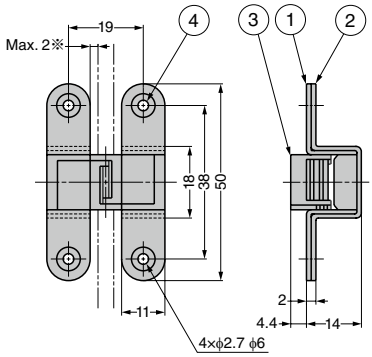
[Parts Included]

- Countersunk head wood screw 2.4×13 (SUS)

Motion Designtec Video
Locus & Open/Close Angle



※Distance to door edge must be less than 2mm.

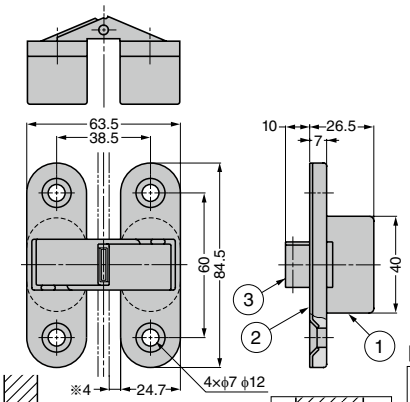


No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Cover		Plain
③	Arm		Satin
④	Eyelet		Plain
–	Other Shaft Parts		

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Door Thickness	Door Weight kg/2 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	170-090-086	RK-50	Max. 450	Max. 700	Min. 15	Max. 2.6	180°	28	24	240

CONCEALED HINGE INO-66





- Stainless steel front plate.

[Applications]

- Folding door or window, door of built-in furniture, etc.

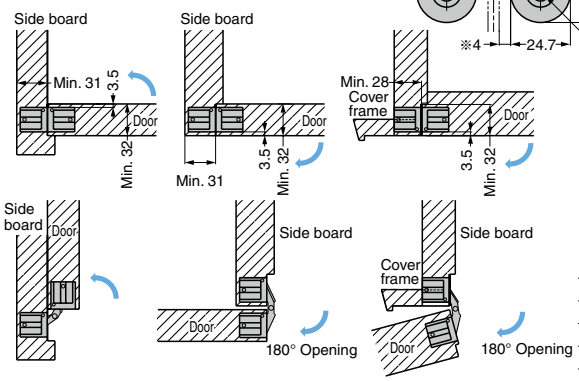
[Remarks]

- When using three hinges, install the middle one 200mm below the upper hinge.
- ※Distance to door edge must be less than 4mm.

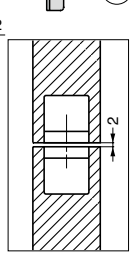
[Recommended Screws]

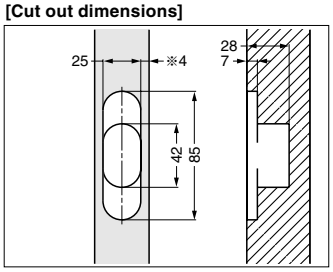
- Countersunk head wood screw 5.8

[Installation]



[Cut out dimensions]





No.	Part Name	Material	Finish
①	Body	PA	–
②	Front Plate	Stainless Steel (SUS304)	Satin
③	Arm		–

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	170-095-018	INO-66	Max. 800	Max. 2100	Max. 30	Max. 50	180°	100	24	240

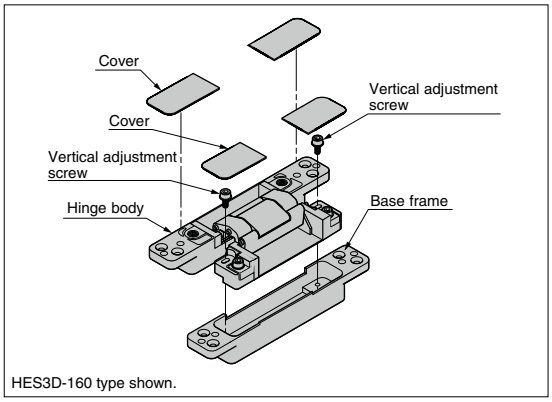
TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

CONCEALED HINGE HES® SERIES



- Hinge is completely hidden when the door is closed. Original design of the door is maintained with improved security.
- Products with 3-way adjustment function (vertical, horizontal, and depth adjustment) and products with temporary holding feature to allow easy door installation are available.Refer to list 1 for applicable products.
- HES3D-160 2 was awarded the “Good Design Award 2011”
- Can be used together with a door damper.
  - ・LAPCON DOOR DAMPER LDD-V 3
  - ・LAPCON DOOR DAMPER LDD-S 4

a. Exploded View



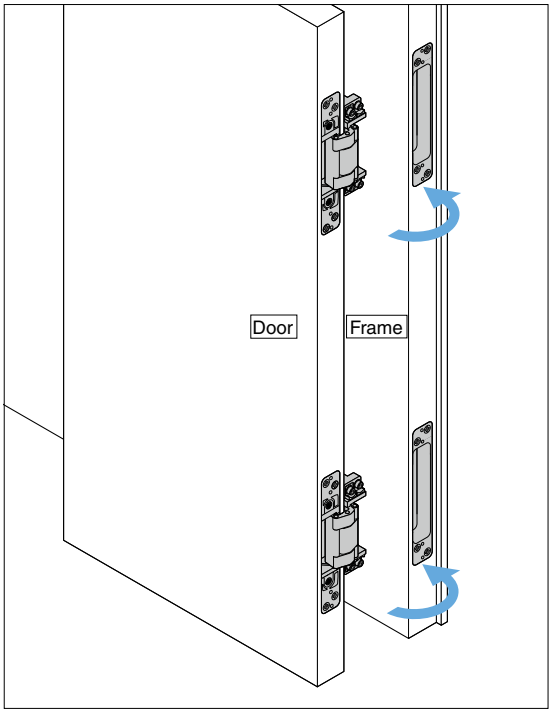
HES3D-160 type shown.

[Installation and Adjustment Procedure Using Temporary Holding Feature]

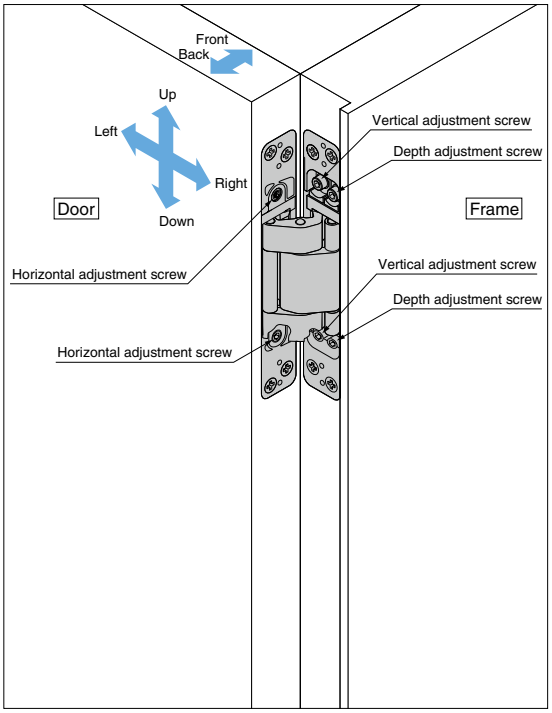
By using the temporary holding feature, you can easily install the door by one person.

1. Remove screw covers and vertical adjustment screws to split the hinge into the hinge body and base frame as shown in Fig.a.
2. Secure the hinge body (the side with LAMP logo) to the bored hole of the door and the base frame to the bored hole of the frame with mounting screws respectively
3. Push the hinge body horizontally into the base frame as shown in Fig. b. The temporary holding feature holds the door in the frame even if you loosen your hands after pushing it in.
4. Replace and temporarily tighten the vertical adjustment screws that were removed in step 1.
5. Adjust the door positions in order one by one.
6. Loosen the vertical adjustment screws by one turn, and adjust the vertical position of the door.
7. After adjusting the vertical position, tighten the vertical adjustment screws.
8. Loosen the depth adjustment screws by one turn, and adjust the depth position of the door.
9. After adjusting the depth position, tighten the depth adjustment screws.
10. Turn the horizontal adjustment screws to adjust the horizontal position of the door. To do this, turn the left and right adjustment screws little by little, respectively. Turning them by force may cause failure or damage.
11. Finally, replace the screw covers to complete.

b. Installation



c. Adjustment screws



Refer to 1 : P.91, 2 : P.93, 3 : P.710, 4 : P.713

※ Adjustment directions are those when door is closed.

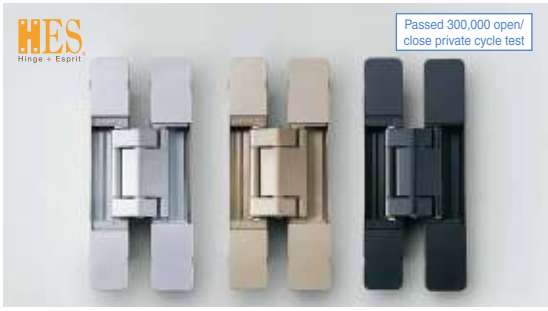
[HES Concealed Hinge Series Digest]

Picture, Item Name	Door Width	Door Height	Door Thickness	Door Weight	3-Way Adjustment Function	Temporary Holding Feature	Page
 3-WAY ADJUSTABLE CONCEALED HINGE HES3D-E190	Max. 900	Max. 2400	Min. 38	Max. 100 kg/ 2 pcs Max. 125kg/ 3 pcs	Yes	Yes	P.92
 3-WAY ADJUSTABLE CONCEALED HINGE HES3D-160	Max. 900	Max. 2400	Min. 35	Max. 45kg/ 2 pcs Max. 60kg/ 3 pcs	Yes	Yes	P.93
 3-WAY ADJUSTABLE CONCEALED HINGE HES3D-120	Max. 900	Max. 2400	Min. 29	Max. 30kg/ 2 pcs Max. 40kg/ 3 pcs	Yes	Yes	P.94
 3-WAY ADJUSTABLE CONCEALED HINGE HES3D-90	Max. 600	Max. 1500	Min. 23	Max. 12kg/ 2 pcs Max. 16kg/ 3 pcs	Yes	Yes	P.95
 3-WAY ADJUSTABLE CONCEALED HINGE HES3D-70	Max. 600	Max. 1200	Min. 19	Max. 9kg /2pcs Max. 12kg /3pcs	Yes	Yes	P.96
 3-WAY ADJUSTABLE CONCEALED HINGE HES3D-V135LGR	Max. 900	Max. 2400	Min. 30	Max. 40kg/ 2 pcs Max. 55kg/ 3 pcs	Yes	Yes	P.97

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-E190

INSTRUCTION HEX KEY VIDEO



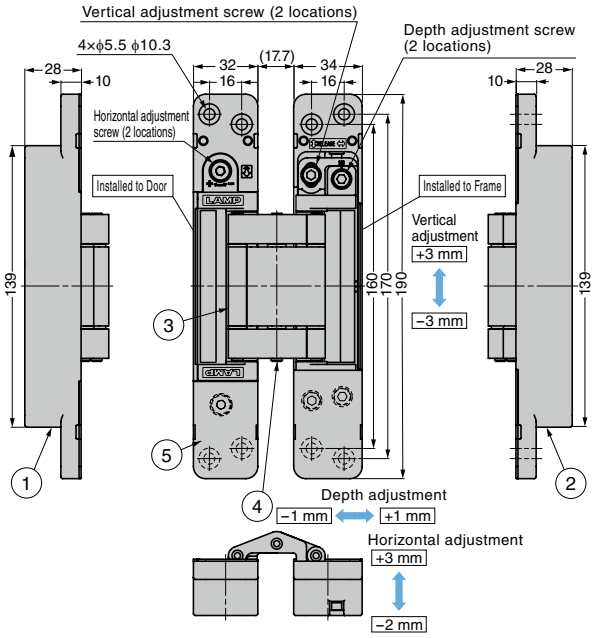
- Max. Door Weight: 100kg with 2 pcs, 125kg with 3 pcs.
- Small bore depth for compact assembly.
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Easy installation: Hinge can be split into the door side and the frame side and has temporary door holding feature.
- Unique seven link structure helps to prevent door sagging.
- Order-made colour available.

[Parts Included]
- Countersunk head tapping screw 5×30 (8 pcs/hinge) SUS
- Hex key 4

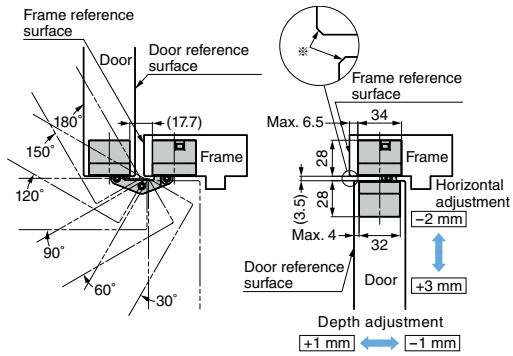
[Sold Separately]
Installation template HES3D-E190-TMP 3
※ Can be reused, so door and frame can be easily cut out with a router.

[Remarks]
- Can be used with Sugatsune door damper/door closer shown below. Please check and follow product specifications.
  - ・LAPCON DOOR DAMPER LDD-S 1
  - ・LAPCON DOOR DAMPER LDD-V 2
  - ・LAPCON DOOR CLOSER LDC-N2
- Using with other door closers might lead to hinge damage.
- For using Sugatsune door closer, please install the door holder separately at the stop position.

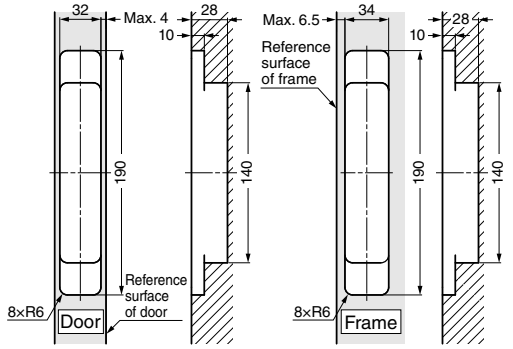
Figure below shows the state with the upper screw covers removed.



[Locus Chart]
Please process the part (corner of door/frame) of ※ marked on the drawing to C1 or more (or R1 or more).



[Cut Out Dimensions]



No.	Part Name	Material	Finish / Colour		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Dull Nickel	Black Enamel Finish
②	Base Frame				
③	Arm	Aluminium Alloy			
④	Shaft	Stainless Steel	Plain	Plain	Plain
⑤	Cover (2 pairs)	ABS	Satin Chrome	Dull Nickel	Black

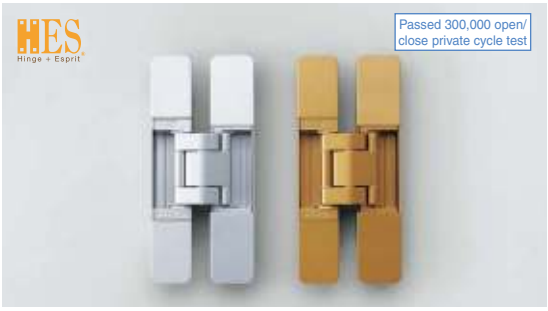
Video Link
Motion Designtec Video Easy Installation & Adjustment
Motion Designtec Video Locus & Open/Close Angle

RoHS	CAD	Item Code	Item Name	Colour	Door Width	Door Height	Door Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-025-498	HES3D-E190DC	Silver	Max. 900	Max. 2400	Min. 38	Max. 100	Max. 125	180°	1110	2	12
G	3D	170-025-499	HES3D-E190DN	Champagne Gold							1113	2	12
G	3D	170-025-539	HES3D-E190BL	Black							1110	2	12

Refer to 1 : P.713, 2 : P.710, 3 : P.99

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-160

INSTRUCTION HEX KEY VIDEO



- Small bore depth for compact assembly.
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Easy installation: Hinge can be split into the door side and the frame side and has temporary door holding feature.
- Unique seven link structure helps to prevent door sagging.
- Awarded the “Good Design Award 2011”.

[Remarks]

- Can be used with Sugatsune door damper/door closer shown below. Please check and follow product specifications.
  - ・LAPCON DOOR DAMPER LDD-S 1
  - ・LAPCON DOOR DAMPER LDD-V 2
  - ・LAPCON DOOR CLOSER LDC-N2
- Using with other door closers might lead to hinge damage.
- For using Sugatsune door closer, please install the door holder separately at the stop position.

Video Link

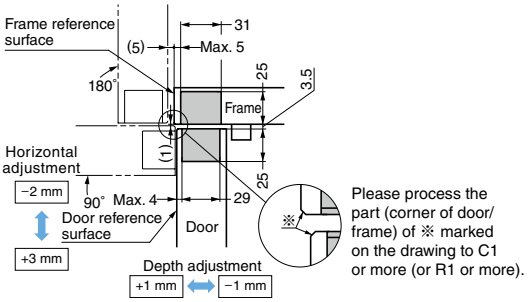
[Parts Included]

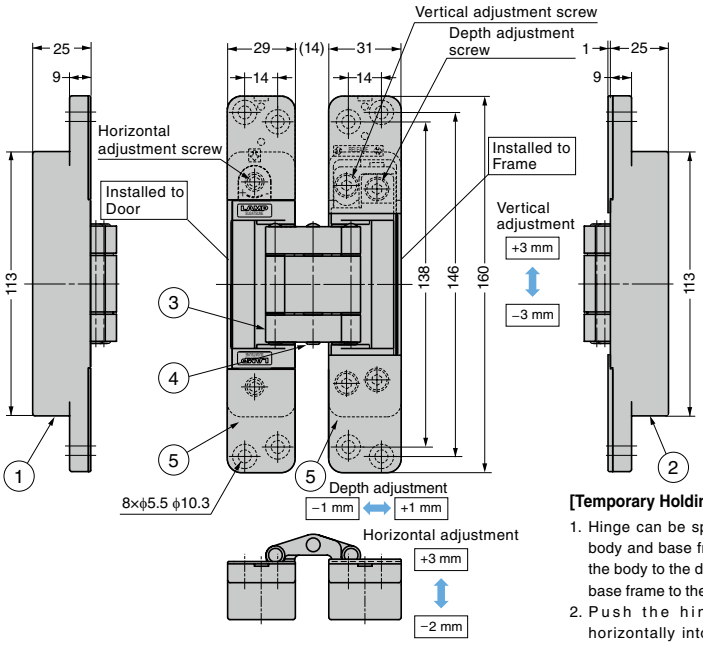
- Countersunk head wood screw 4.8×25 (8 pcs/hinge)
- Hex key 4

[Sold Separately]

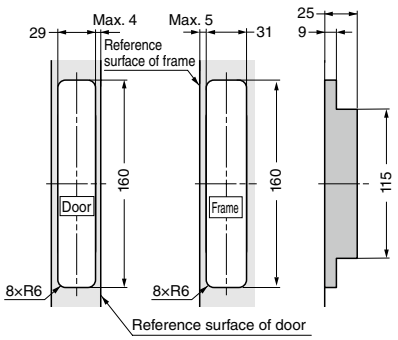
- Installation template HES3D-160-TMP 3

[Locus Chart]



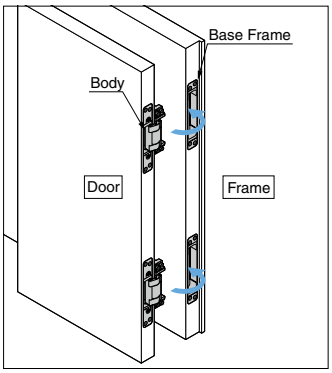


[Cut Out Dimensions]



[Temporary Holding Feature]

1. Hinge can be split into the body and base frame.Install the body to the door and the base frame to the frame.
2. Push the hinge body horizontally into the base frame in the direction of the arrow.The door is held to the frame duo to the temporary holding feature.
3. Temporarily tighten the fixing screws and adjust the door position.
4. After adjustment, tighten the fixing screws completely to fix the hinge body.



No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy	Silver, Gold Enamel Finish
②	Base Frame		
③	Arm	Aluminium Alloy	
④	Shaft	Stainless Steel	–
⑤	Cover	ABS	Silver, Gold

RoHS	CAD	Item Code	Item Name	Colour	Door Width	Door Height	Door Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-009	HES3D-160SL	Silver	Max. 900	Max. 2400	Min. 35	Max. 45	Max. 60	180°	756	2	12
G	3D	170-091-010	HES3D-160GL	Gold							756	2	12

Refer to 1 : P.713, 2 : P.710, 3 : P.99

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-120

INSTRUCTION HEX KEY VIDEO



- Small bore depth for compact assembly.
- Black colour is newly launched.
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Easy installation: Hinge can be split into the door side and the frame side and has temporary door holding feature.
- Unique seven link structure helps to prevent door sagging.
- Order-made colour available.

[Remarks]

- Can be used with Sugatsune door damper/door closer shown below. Please check and follow product specifications.
  - ・LAPCON DOOR DAMPER LDD-S 1
  - ・LAPCON DOOR DAMPER LDD-V 2
  - ・LAPCON DOOR CLOSER LDC-N2
- Using with other door closers might lead to hinge damage.
- We do not recommend to use with concealed door closer.

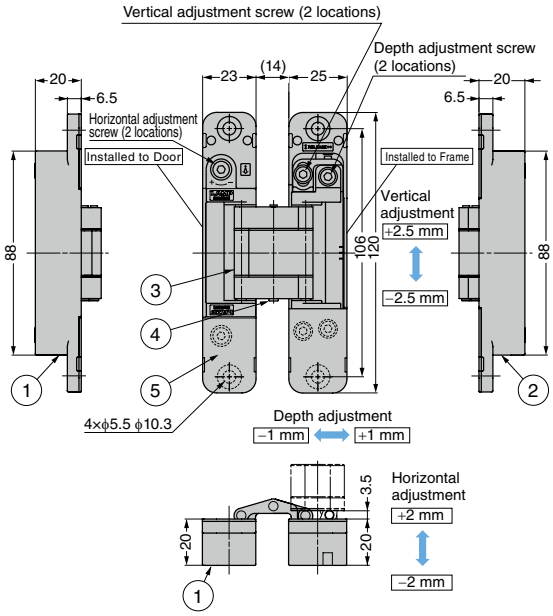
[Parts Included]

- Countersunk head tapping screw 5×20 (4 pcs/hinge) SUS
- Hex key 3

[Sold Separately]

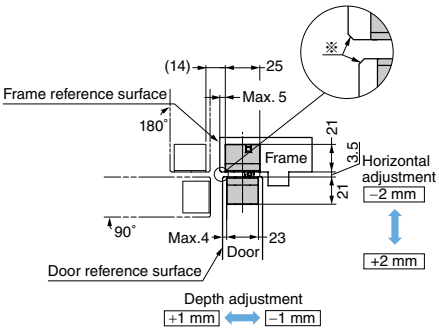
- Installation template HES3D-120-TMP 3
  ※Can be reused, so door and frame can be easily cut out with a router.

Figure below shows the state with the upper screw covers removed.

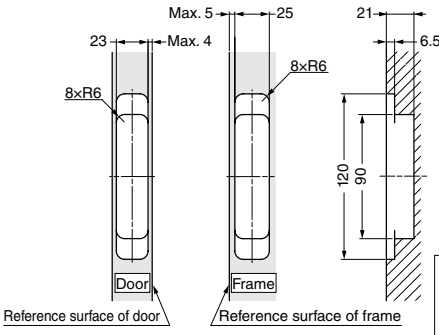


[Locus Chart]

Please process the part (corner of door/frame) of ※ marked on the drawing to C1 or more (or R1 or more).



[Cut Out Dimensions]



Video Link

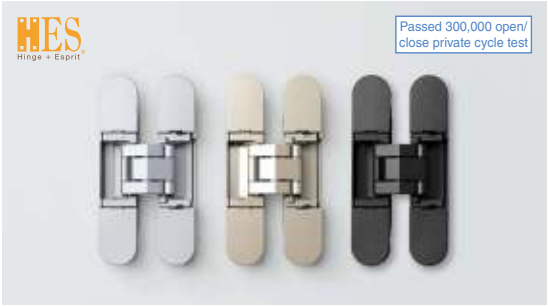
No.	Part Name	Material	Finish / Colour		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Dull Nickel	Black Enamel Finish
②	Base Frame				
③	Arm				
④	Shaft	Stainless Steel	–	–	–
⑤	Cover (2 pairs)	ABS	Satin Chrome	Dull Nickel	Black

RoHS	CAD	Item Code	Item Name	Colour	Door Width	Door Height	Door Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-022-086	HES3D-120DC	Silver	Max. 900	Max. 2400	Min. 29	Max. 30	Max. 40	180°	410	2	24
G	3D	170-022-087	HES3D-120DN	Champagne Gold							415	2	24
G	3D	170-022-088	HES3D-120BL	Black							403	2	12

Refer to 1 : P.713, 2 : P.710, 3 : P.99

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-90

INSTRUCTION



- Small HES series can be applied with Min. door thickness of 23mm.
- Small bore depth, easy to cut out the door and frame.
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Hinge can be split into the door side and the frame side.
- Unique seven link structure helps to prevent door sagging.
- Order-made colour available. For further details, please contact local representatives.

[Remarks]

- Can not be used with LAPCON DOOR DAMPER LDD 1 or LAPCON DOOR CLOSER LDC-N2.

[Parts Included]

- Countersunk head tapping screw 4×20 (4 pcs/hinge) SUS
- Hex key 2

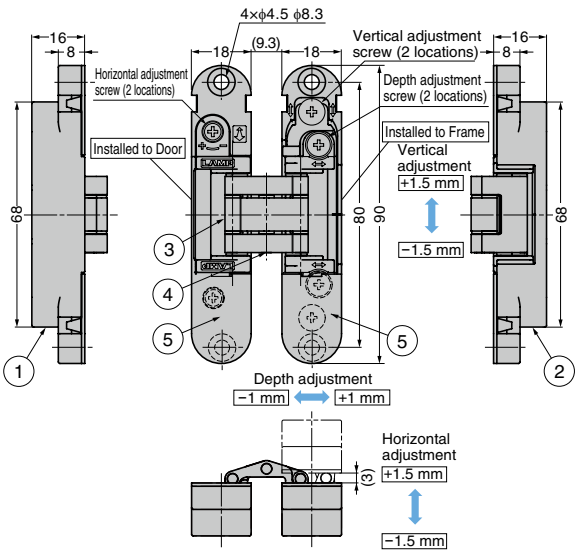
[Sold Separately]

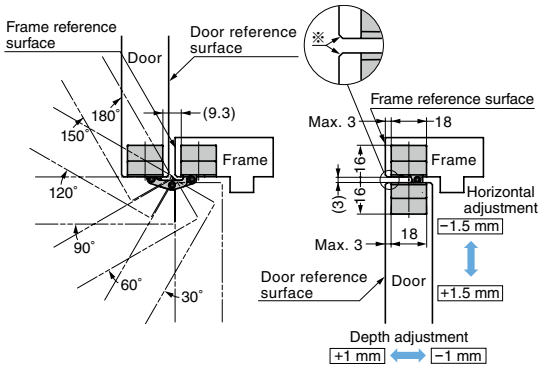
- Installation template HES3D-90-TMP (made to order)
  ※Can be reused, so door and frame can be easily cut out with a router.

[Locus Chart]

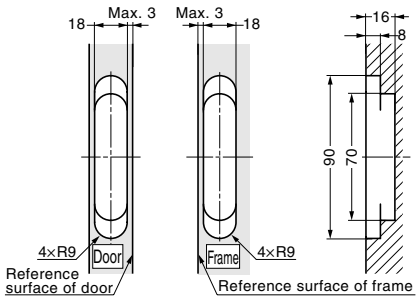
Please process the part (corner of door/frame) of ※ marked on the drawing to C1 or more (or R1 or more).

Figure below shows the state with the upper screw covers removed.





[Cut Out Dimensions]



No.	Part Name	Material	Finish		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Dull Nickel	Black Enamel Finish
②	Base Frame				
③	Arm				
④	Shaft	Stainless Steel	–	–	–
⑤	Cover (2 pairs)	ABS	Satin Chrome	Dull Nickel	Black

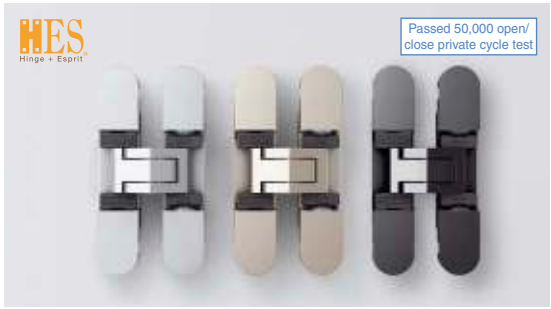
RoHS	CAD	Item Code	Item Name	Colour	Door Width	Door Height	Door Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-221	HES3D-90DC	Silver	Max. 600	Max. 1500	Min. 23	Max. 12	Max. 16	180°	195	2	48
G	3D	170-029-222	HES3D-90DN	Champagne Gold							195	2	48
G	3D	170-033-588	HES3D-90BL	Black							195	2	48

Refer to 1 : P.710, 713

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-70

INSTRUCTION



- Small HES series can be applied with Min. door thickness of 19mm.
- Small bore depth, easy to cut out the door and frame.
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Hinge can be split into the door side and the frame side.

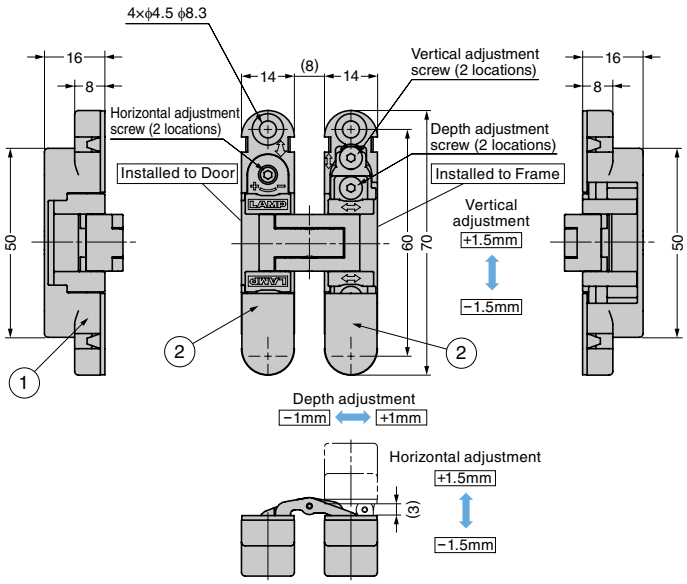
[Remarks]

- Can not be used with LAPCON DOOR DAMPER LDD 1 or LAPCON DOOR CLOSER LDC-N2.
- Use below opening angle 180° .

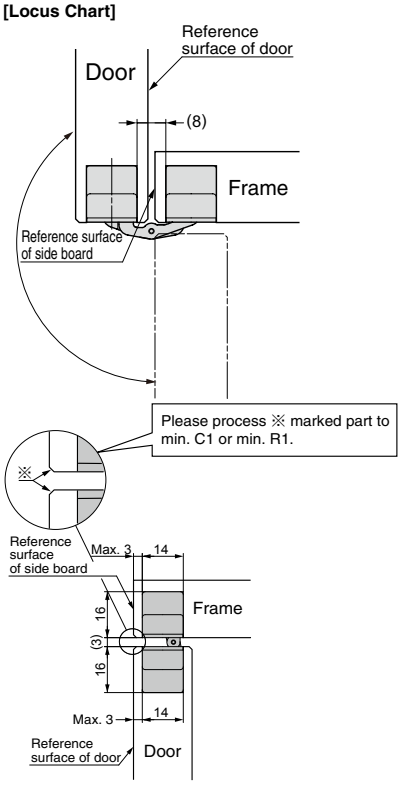
[Parts Included]

- Countersunk head tapping screw 4×20 (4 pcs/hinge) SUS
- Hex key 2

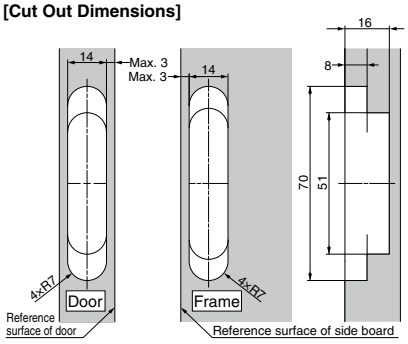
Figure below shows the state with the upper screw covers removed.



[Locus Chart]



[Cut Out Dimensions]



No.	Part Name	Material	Finish		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Dull Nickel	Black Paint
②	Cover (2 pairs)	ABS	Silver Paint	Champagne Gold Paint	Black

RoHS	CAD	Item Code	Item Name	Colour	Door Width	Door Height	Door Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-035-441	HES3D-70DC	Silver	Max. 600	Max. 1200	Min. 19	Max. 9	Max. 12	180°	95	2	48
G	3D	170-035-442	HES3D-70DN	Champagne Gold								2	48
G	3D	170-035-443	HES3D-70BL	Black								2	48

Refer to 1 : P.710, P.713

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-V135LGR

INSTRUCTION VIDEO



- Small bore depth for compact assembly.
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Easy installation: Hinge can be split into the door side and the frame side and has temporary door holding feature.
- Unique seven link structure helps to prevent door sagging.

[Remarks]

- Our original new link arm mechanism provides different locus from other products 1 of the same series. Please confirm the position where the door is opened by 90° on the left figure.
- Can be used with Sugatsune door damper/door closer shown below. Please check and follow product specifications.
  - ・LAPCON DOOR DAMPER LDD-S 2
  - ・LAPCON DOOR DAMPER LDD-V 3
  - ・LAPCON DOOR CLOSER LDC-N2
- Using with other door closers might lead to hinge damage.
- For using Sugatsune door closer, please install the door holder separately at the stop position.

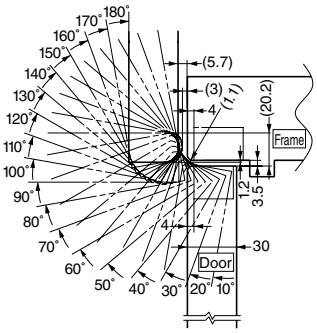
[Parts Included]

- Binding head tapping screw 5×15

[Sold Separately]

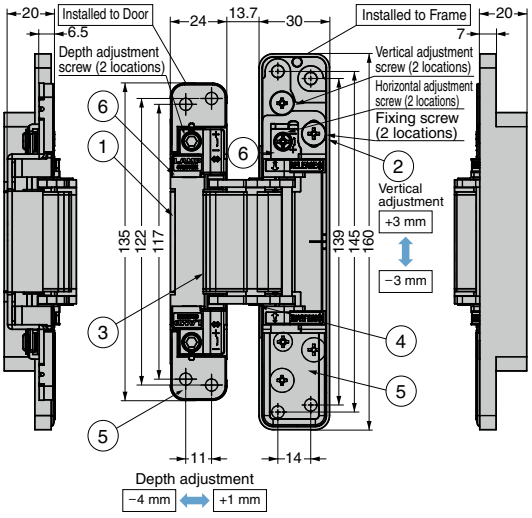
- Installation template HES3D-V135-TMP 4

[Locus Chart]

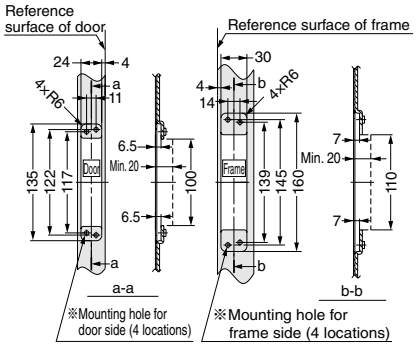


Video Link

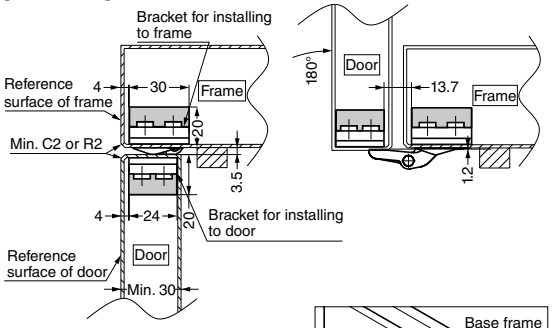
Motion Designtec Video
Locus & Open/Close Angle



[Cut Out Dimensions]

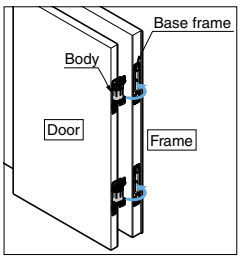


[Installation]



[Temporary Holding Feature]

1. Hinge can be split into the body and base frame. Install the body to the door and the base frame to the frame.
2. Push the hinge body horizontally into the base frame in the direction of the arrow. The door is held to the frame duo to the temporary holding feature.
3. Temporarily tighten the fixing screws and adjust the door position.
4. After adjustment, tighten the fixing screws completely to fix the hinge body.



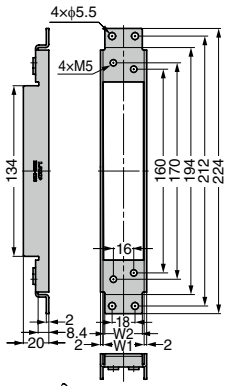
No.	Part Name	Material	Finish / Colour
①	Body	Steel	Nickel
②	Base Frame	POM	Light Grey
③	Arm	Aluminium Alloy	Anodised Silver
④	Shaft	Steel	Nickel
⑤	Cover	POM	Light Grey
⑥	Adjustment Block	Zinc Alloy (ZDC)	Nickel

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Door Thickness	Frame Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-020-804	HES3D-V135LGR	Max. 900	Max. 2400	Min. 30	Min. 20	Max. 40	Max. 55	180°	400	2	24

Refer to 1 : P.91, 2 : P.713, 3 : P.710, 4 : P.99

BRACKET FOR SHEET METAL HES3D-E190BKT For Hinge HES3D-E190



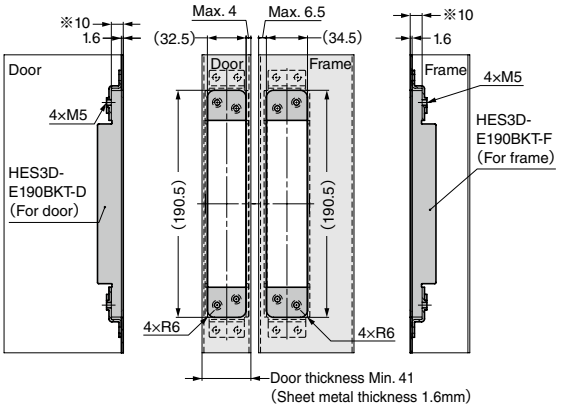


- Brackets for installing HES3D-E190 1 to steel door (SD) and steel frame.

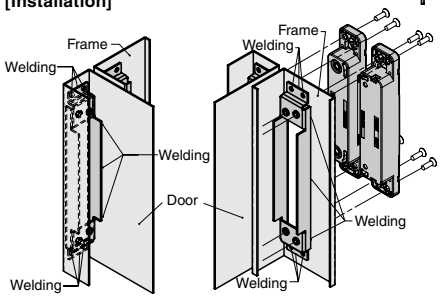
[Remarks]

- When the sheet metal thickness of the installation side is 1.6 mm, screw cover surface becomes flush with cabinet surface. The surface may slightly protrude or retract, depending on the board thickness of the installation side.
- As a general-purpose bracket, additional processing may be required for the door and frame of the installation side and the bracket when installation.

[Cut Out Dimensions] ※Dimensions in case of 1.6 mm thick sheet metal.



[Installation]

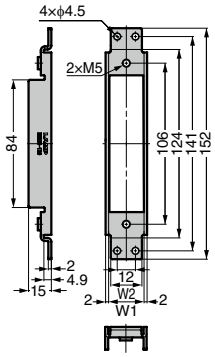


RoHS	CAD	Item Code	Item Name	Description	Material	Finish	W1	W2	Weight (g)	Box (pcs)
G	3D	170-032-741	HES3D-E190BKT-D	For Door	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)	32.3	29.5	142	50
G	3D	170-032-742	HES3D-E190BKT-F	For Frame			34.3	31.5	144	50

Refer to 1 : P.92

BRACKET FOR SHEET METAL HES3D-120BKT For Hinge HES3D-120



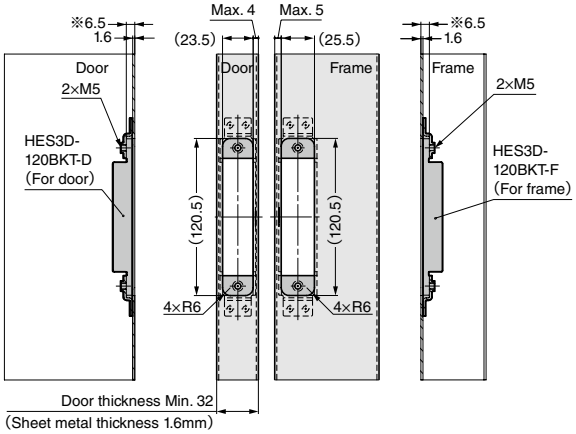


- Brackets for installing HES3D-120 1 to steel door (SD) and steel frame.

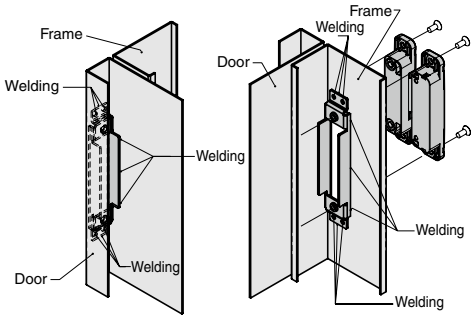
[Remarks]

- When the sheet metal thickness of the installation side is 1.6 mm, screw cover surface becomes flush with cabinet surface.The surface may slightly protrude or retract, depending on the board thickness of the installation side.
- As a general-purpose bracket, additional processing may be required for the door and frame of the installation side and the bracket when installation.

[Cut Out Dimensions] ※Dimensions in case of 1.6 mm thick sheet metal.



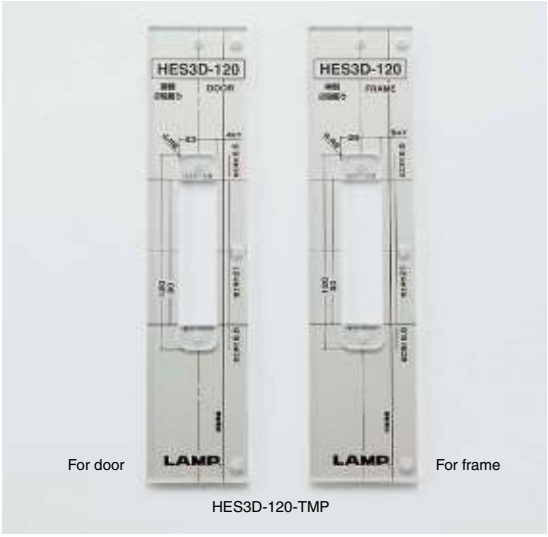
[Installation]



RoHS	CAD	Item Code	Item Name	Description	Material	Finish	W1	W2	Weight (g)	Box (pcs)
G	3D	170-032-739	HES3D-120BKT-D	For Door	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)	23.3	20.5	66	50
G	3D	170-032-740	HES3D-120BKT-F	For Frame			25.3	22.5	68	50

Refer to 1 : P.94

INSTALLATION TEMPLATE HES3D-TMP For Hinge HES3D



HES3D-120-TMP

- Installation template for hinge HES3D included.
- Easy to cut out door and frame with a router.
- Can be reused due to acrylic resin material.

[Remarks]
- Sold in pairs (for door and frame).

[Parts Included]
- Parts for 2-step grooving (Each 2 pcs for door and for frame)

RoHS	CAD	Item Code	Item Name	Applicable Hinge (Page)	Material	Colour	Weight (g)	Box (pairs)	Carton (pairs)
G	–	170-024-569	HES3D-120-TMP	HES3D-120 1	PMMA	Clear	186	1	50
G	–	170-024-570	HES3D-160-TMP	HES3D-160 2			224	1	50
G	–	170-028-808	HES3D-E190-TMP	HES3D-E190 3			238	1	50
G	–	170-024-572	HES3D-V135-TMP	HES3D-V135LGR 4			220	1	50

Refer to 1 : P.94, 2 : P.93, 3 : P.92, 4 : P.97

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

HEAVY DUTY CONCEALED HINGE J95

Max. Door Weight : 25 kg with 2 pcs, 40 kg※ with 3 pcs. ※35kg for glass doors

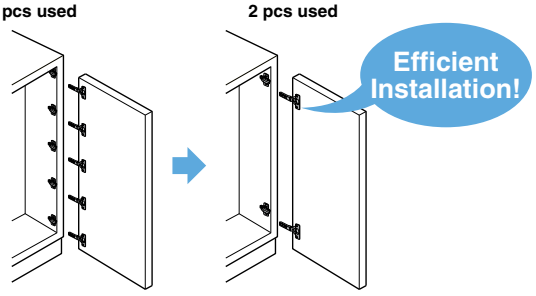
[Application Example] Chemical storage cabinets, etc.
Operating temperature of J95: -10˚C ~ 40˚C





[Normal Concealed Hinges] **5 pcs used**

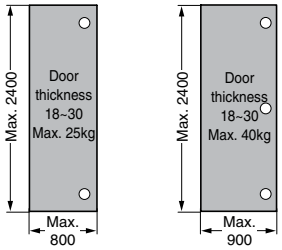
[J95] **2 pcs used**



Less usage compared with normal concealed hinges, reducing construction and installation time and providing clean appearance.

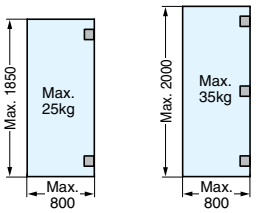
[Door Dimensions and Number of Hinges]

●In case of sheet metal door

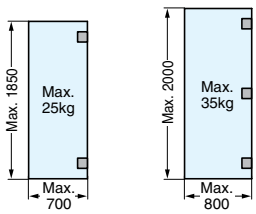


●In case of glass door

Glass thickness 8mm



Glass thickness 10 mm

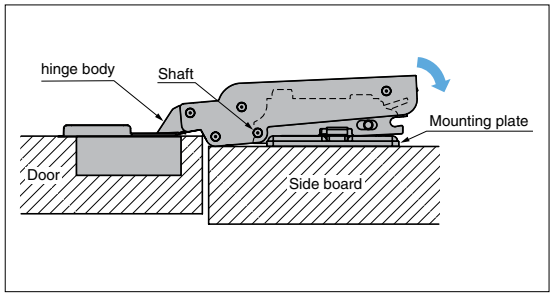


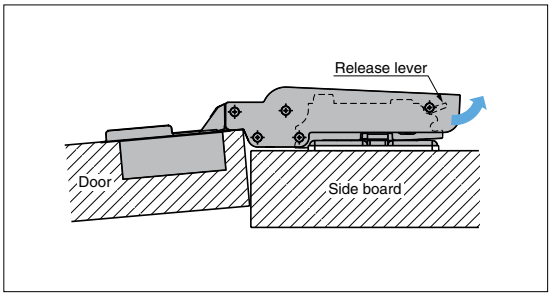
Install the upper and lower hinges within 200mm from the door end.Set equal installation pitch when using 3 pcs.

Simple Installation and Detachment by One-Touch.

[How to Install]
Align shaft of hinge body with front end of mounting plate, and press down back end of hinge body until it snaps into place.

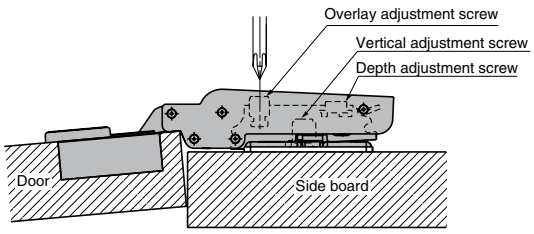
[How to Detach]
Push up release level in ↗ direction, and remove hinge body from mounting plate.





Check if hinge body is properly installed on mounting plate.

Easy and Fast Adjustment

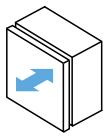
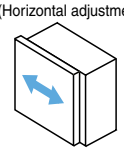
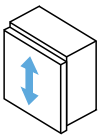
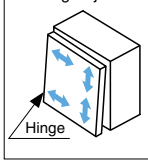


※Use a ⊕ No.2 screwdriver in the above adjustment.

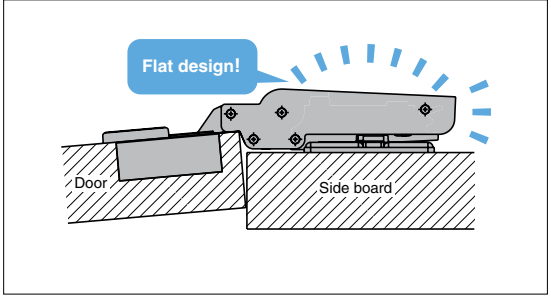
With the eccentric cam mechanism, the door can be freely adjusted by only turning depth and vertical adjustment screws. Door position is easy to adjust without the need of loosening the adjustment screw, positioning and fixing.Overlay and tilting are adjustable by turning overlay adjustment screw.

[Remarks]
Be sure to use a manual screwdriver to fine tune adjustment screws within the adjustment range. Do not use pneumatic, electric or rechargeable screwdriver. Otherwise, the adjustment range may be exceeded and damage and malfunction of adjusting mechanism may occur.

[Adjustment Directions, Amount and Method]

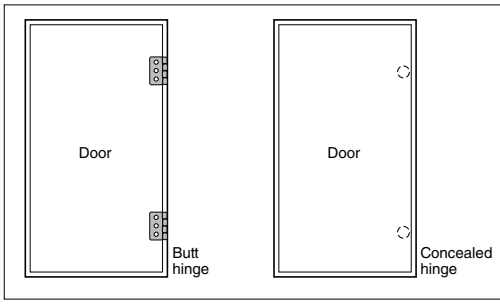
Depth adjustment 	+1.5 mm, –2.5 mm	Turning the depth adjustment screw counterclockwise ↶ to move the door forwards and clockwise ↷ to move the door backwards.
Overlay adjustment (Horizontal adjustment) 	+0 mm, –4 mm	Turning the overlay adjustment screw clockwise ↷ to decrease and counterclockwise ↶ to increase the overlay.
Vertical adjustment 	±3 mm	In case of right-hanging, turning the vertical adjustment screw counterclockwise ↶ to move the door upwards and clockwise ↷ to move the door downwards. ※In case of left-hanging, door moves in the opposite direction.
Tilting Adjustment 	–	Turning the overlay adjustment screw counterclockwise or clockwise to adjust.

Flat Design



Flat design with no projections such as adjustment screws on the top of body. It is safe because the release level does not protrude from the back of body.

Without Impairing Design



Since the hinge is not visible from outside when door is closed, it does not impair the design of cabinet.

[Remarks]
- When using concealed hinge J95 for glass and metal door, applicable door size varies.
- Door weight has priority over door size.
- Set door centre of gravity at door centre.
- Maximise the hinge installation pitch. Set equal installation pitch when using 3 pcs. Besides, the warpage of door shall be considered.
- Door dimensions and number of hinges 1 are for reference only. Please check in actual installation.
- Lubricate regularly during use.
- Watch your hands during handling before door installation.
- Do not repeatedly open and close with a single concealed hinge before installation.Otherwise, it may be damaged.
- Scattering prevention film is recommended for tempered glass.

Refer to 1 : P.100

95° Opening | **25mm Overlay** | **Overlay 21~25mm (When Bore Distance is 8 mm)** | **Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~30mm/Glass Thickness 8, 10mm** | **Mounting Plate 1 J95-P6T**

HEAVY DUTY CONCEALED HINGE J95



Picture above is the combination of concealed hinge and mounting plate (sold separately).

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-026-905	J95-24/25T	Without Catch	Body/Steel, Cup/Zinc Alloy (ZDC)	Nickel	134	100
G	3D	160-026-731	J95-C24/25T	With Catch			146	100
G	3D	–	J95-24/25T BN	Without Catch		Black Nickel	134	100
G	3D	–	J95-C24/25T BN	With Catch			146	100

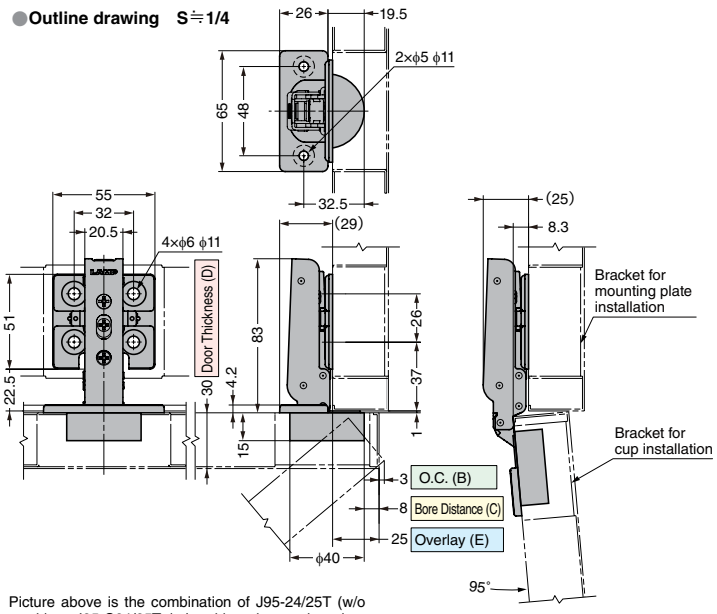
A mounting plate (sold separately) is required for installation. Please order separately.

[Sold Separately]
- Mounting plate J95-P6T 1
- Face plate for glass door GH-J95FP 2
- Safety cover J95SC-25GR 3
- Cover for mounting plate J95ZC-GR 4

[Recommended Screws]
- M5 countersunk head screw, M5 raised countersunk head screw

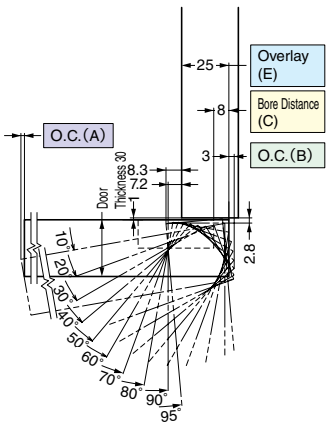
■In case of sheet metal door

●Outline drawing S≒1/4

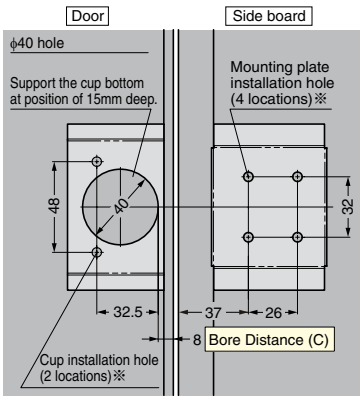


Picture above is the combination of J95-24/25T (w/o catch) or J95-C24/25T (w/catch) and mounting plate J95-P6T (sold separately).

●Locus chart S≒1/4
(How to Use the Locus Chart 5)



●Cut Out Dimensions



※Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7	8
Overlay (E)	20	21	22	23	24	25

Overlay adjustment (Max. -4mm) by turning the Overlay adjustment screw.

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7	8
18	0.3	0.3	0.3	0.3	0.3	0.3
20	0.5	0.5	0.5	0.5	0.5	0.5
22	0.8	0.8	0.8	0.7	0.7	0.7
24	1.1	1.1	1.1	1.1	1.1	1.0
26	1.7	1.6	1.6	1.5	1.5	1.5
28	3.2	2.8	2.5	2.2	2.1	2.0
30	5.0	4.5	4.0	3.6	3.3	3.0
32※	6.8	6.2	5.7	5.2	4.8	4.4
34※	8.6	8.0	7.5	6.9	6.5	6.0
	O.C. (B)					

※Please refer to the locus chart if door thickness is over 30 mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) or C chamfering (chamfer plane) on the door)

[O.C.(A)] Table-3

Door Thickness (D)	Door Width 300	400	500	600	700	800	900
30	0.5	0.3	0.3	0.2	0.2	0.2	0.2
	O.C. (A)						

[Door Dimensions and Number of Hinges] 6

Refer to 1 4 : P.108, 2 : P.110, 3 : P.109, 5 : P.111, 6 : P.100

[How to Select Products]

Necessary Parts

In case of sheet metal door

In case of glass door





- Concealed hinge 1
- Mounting plate 2
- Face plate for glass door 3

Optional Parts

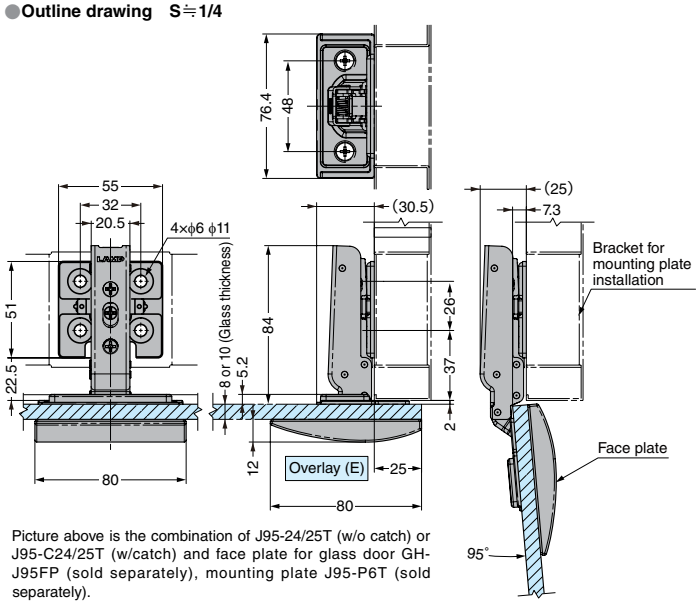




- Safety cover J95SC-25GR 4
- Cover for mounting plate 5

■In case of glass door

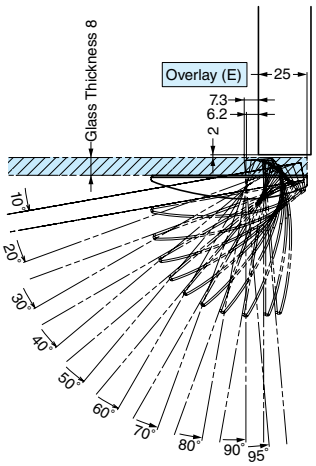
●**Outline drawing S≒1/4**



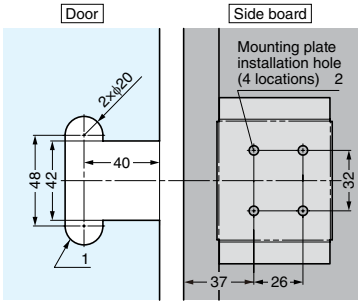
Picture above is the combination of J95-24/25T (w/o catch) or J95-C24/25T (w/catch) and face plate for glass door GH-J95FP (sold separately), mounting plate J95-P6T (sold separately).

●**Locus chart S≒1/4**

(How to Use the Locus Chart 6)



●**Cut out dimensions**



※1: Use tempered glass. Scattering prevention film is recommended.

※2: Internal threads need to be made by welding nut or burring.

[Opening Clearance (O.C.)]

When using a concealed hinge, although door edge O.C.(A) and hinge side O.C.(B) are required, but for glass door, hinge side O.C.(B) is 0 (zero) because the door thickness (glass thickness) is much thinner than that of the wooden door.Besides, O.C.(A) is identical to Table-3 7 .

[Door Dimensions and Number of Hinges] 8

Refer to 1 7 : P.102, 2 5 : P.108, 3 : P.110, 4 : P.109, 6 : P.111, 8 : P.100

95° Opening | **16mm Overlay** | **Overlay 12~16mm (When Bore Distance is 8 mm)** | **Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~30mm/Glass Thickness 8, 10mm** | **Mounting Plate 1 J95-P6T**

HEAVY DUTY CONCEALED HINGE J95



Picture above is the combination of concealed hinge and mounting plate (sold separately).

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-033-658	J95-24/16T	Without Catch	Body/Steel, Cup/Zinc Alloy (ZDC)	Nickel	143	50
G	3D	160-033-657	J95-C24/16T	With Catch			155	50
G	3D	–	J95-24/16T BN	Without Catch		Black	143	50
G	3D	–	J95-C24/16T BN	With Catch		Nickel	155	50

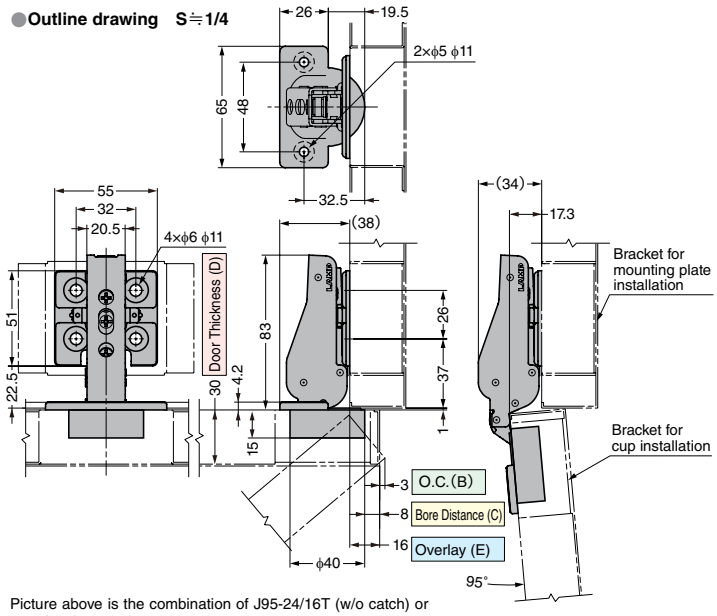
A mounting plate (sold separately) is required for installation. Please order separately.

[Sold Separately]
- Mounting plate J95-P6T 1
- Face plate for glass door GH-J95FP 2
- Safety cover J95SC-16GR 3
- Cover for mounting plate J95ZC-GR 4

[Recommended Screws]
- M5 countersunk head screw, M5 raised countersunk head screw

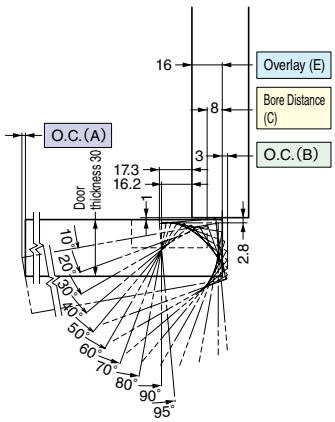
■In case of sheet metal door

●Outline drawing S≒1/4

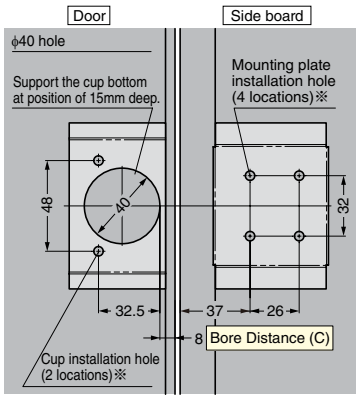


Picture above is the combination of J95-24/16T (w/o catch) or J95-C24/16T (w/catch) and mounting plate J95-P6T (sold separately).

●Locus chart S≒1/4
(How to Use the Locus Chart 5)



●Cut out dimensions



※Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7	8
Overlay (E)	11	12	13	14	15	16

Overlay adjustment (Max. -4 mm) by turning the Overlay adjustment screw.

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7	8
18	0.3	0.3	0.3	0.3	0.3	0.3
20	0.5	0.5	0.5	0.5	0.5	0.5
22	0.8	0.8	0.8	0.7	0.7	0.7
24	1.1	1.1	1.1	1.1	1.1	1.0
26	1.7	1.6	1.6	1.5	1.5	1.5
28	3.2	2.8	2.5	2.2	2.1	2.0
30	5.0	4.5	4.0	3.6	3.3	3.0
32※	6.8	6.2	5.7	5.2	4.8	4.4
34※	8.6	8.0	7.5	6.9	6.5	6.0
	O.C. (B)					

※Please refer to the locus chart if door thickness is over 30 mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) or C chamfering (chamfer plane) on the door)

[O.C.(A)] Table-3

Door Thickness (D)	Door Width 300	400	500	600	700	800	900
30	0.5	0.3	0.3	0.2	0.2	0.2	0.2
	O.C. (A)						

[Door Dimensions and Number of Hinges] 6

Refer to 1 4 : P.108, 2 : P.110, 3 : P.109, 5 : P.111, 6 : P.100

[How to Select Products]

Necessary Parts

In case of sheet metal door

In case of glass door





●Concealed hinge 1
●Mounting plate 2

●Face plate for glass door 3

Optional Parts



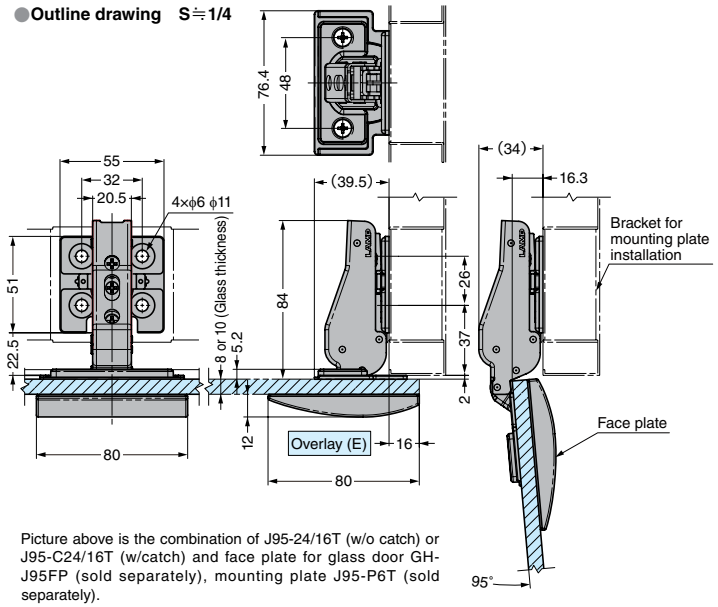
●Safety cover J95SC-16GR 4



●Cover for mounting plate 5

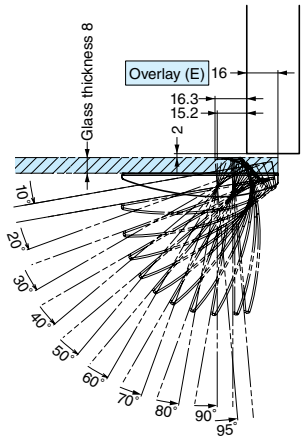
■In case of glass door

●**Outline drawing S≒1/4**

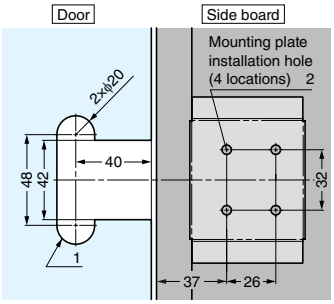


Picture above is the combination of J95-24/16T (w/o catch) or J95-C24/16T (w/catch) and face plate for glass door GH-J95FP (sold separately), mounting plate J95-P6T (sold separately).

●**Locus chart S≒1/4**
(How to Use the Locus Chart 6)



●**Cut out dimensions**



※1: Use tempered glass. Scattering prevention film is recommended.
※2: Internal threads need to be made by welding nut or burring.

[Opening Clearance (O.C.)]
When using a concealed hinge, although door edge O.C.(A) and hinge side O.C.(B) are required, but for glass door, hinge side O.C.(B) is 0 (zero) because the door thickness (glass thickness) is much thinner than that of the wooden door.Besides, O.C.(A) is identical to Table-3 7 .

[Door Dimensions and Number of Hinges] 8

Refer to 1 7 : P.104, 2 5 : P.108, 3 : P.110, 4 : P.109, 6 : P.111, 8 : P.100

93° Opening | **Inset** | **Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~30mm/Glass Thickness 8, 10mm** | **Mounting Plate 1 J95-P6T**

HEAVY DUTY CONCEALED HINGE J95



Picture above is the combination of concealed hinge and mounting plate (sold separately).

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-033-660	J95-24/0T	Without Catch	Body/Steel, Cup/Zinc Alloy (ZDC)	Nickel	148	50
G	3D	160-033-659	J95-C24/0T	With Catch			160	50
G	3D	–	J95-24/0T BN	Without Catch		Black	148	50
G	3D	–	J95-C24/0T BN	With Catch		Nickel	160	50

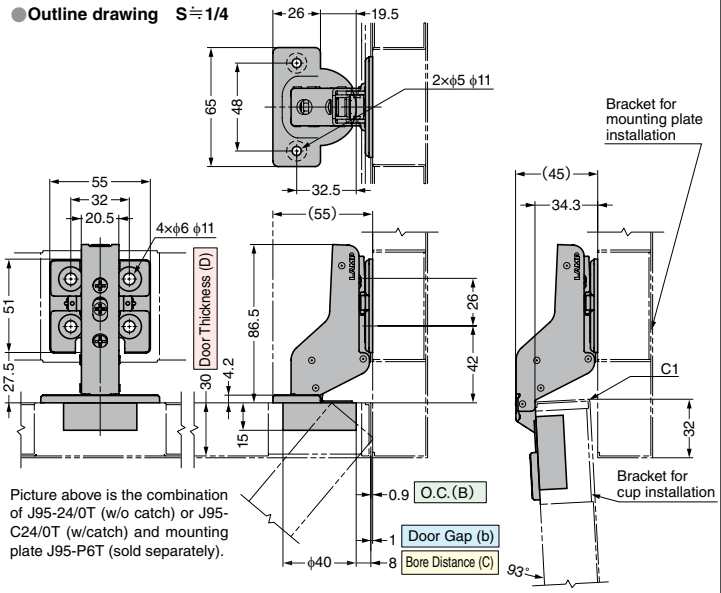
A mounting plate (sold separately) is required for installation. Please order separately.

[Sold Separately]
- Mounting plate J95-P6T 1
- Face plate for glass door GH-J95FP 2
- Safety cover J95SC-0GR 3
- Cover for mounting plate J95ZC-GR 4

[Recommended Screws]
- M5 countersunk head screw, M5 raised countersunk head screw

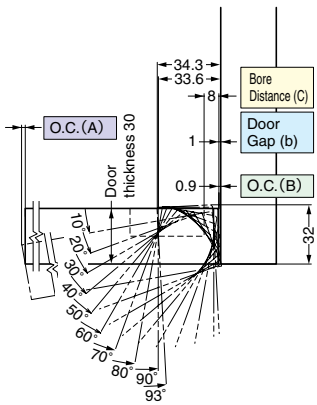
■In case of sheet metal door

●**Outline drawing** S≒1/4

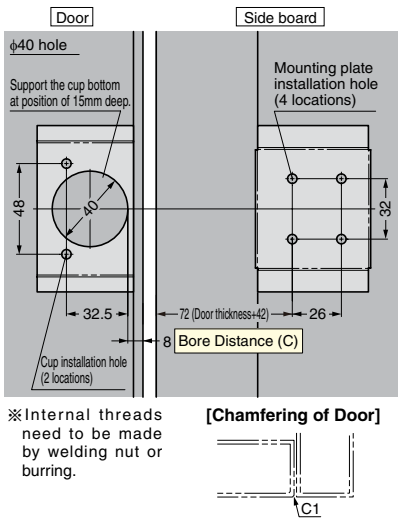


Picture above is the combination of J95-24/0T (w/o catch) or J95-C24/0T (w/catch) and mounting plate J95-P6T (sold separately).

●**Locus chart** S≒1/4
(How to Use the Locus Chart 5)



●**Cut out dimensions**



※Internal threads need to be made by welding nut or burring.

[Chamfering of Door]

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7	8
Door Gap (b)	6	5	4	3	2	1

Door gap can be adjusted by turning the overlay adjustment screw.

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C).Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7	8
18	0	0	0	0	0	0
20	0	0	0	0	0	0
22	0.1	0.1	0.1	0.1	0	0.1
24	0.1	0.1	0.1	0.1	0.1	0.1
26	0.3	0.3	0.3	0.3	0.3	0.3
28	1.7	1.1	0.6	0.5	0.5	0.5
30	3.5	2.9	2.3	1.8	1.0	0.9
32※	5.4	4.7	4.1	3.6	3.0	2.5
34※	7.3	6.6	6.0	5.4	4.8	4.3
	O.C. (B)					

※Please refer to the locus chart if door thickness is over 30 mm.(O.C. (B) can be made smaller by R chamfering (round chamfer) or C chamfering (chamfer plane) on the door)

[O.C.(A)] Table-3

Door Thickness (D)	Door Width 300	400	500	600	700	800	900
30	0.9	0.6	0.5	0.4	0.4	0.3	0.3
	O.C. (A)						

[Door Dimensions and Number of Hinges] 6

Refer to 1 4 : P.108, 2 : P.110, 3 : P.109, 5 : P.111, 6 : P.100

[How to Select Products]

Necessary Parts

In case of sheet metal door

In case of glass door





- Concealed hinge 1
- Mounting plate 2
- Face plate for glass door 3

Optional Parts

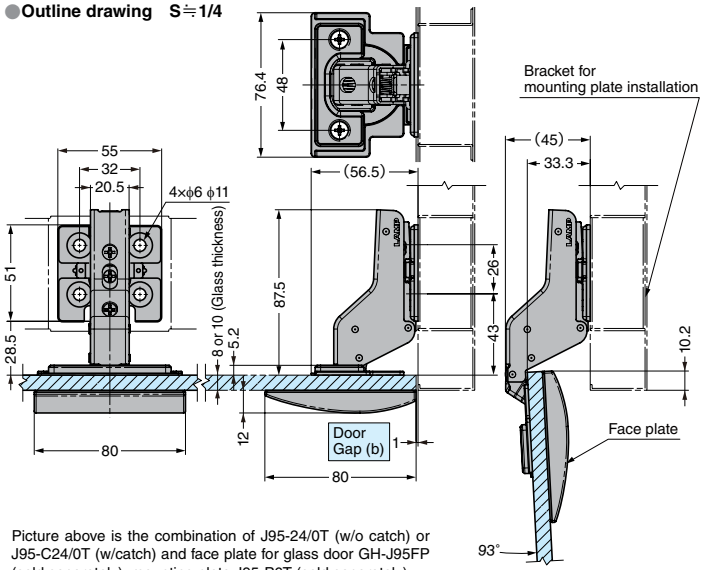




- Safety cover J95SC-0GR 4
- Cover for mounting plate 5

■In case of glass door

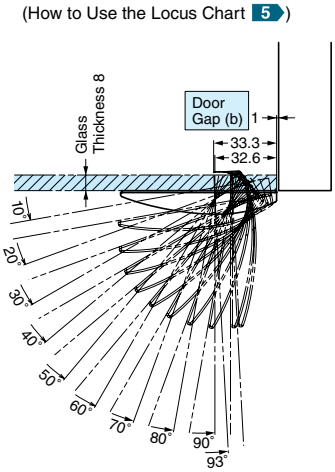
●Outline drawing S≒1/4



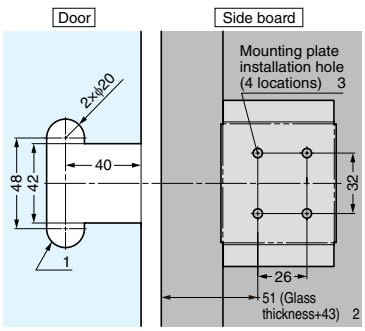
Picture above is the combination of J95-24/0T (w/o catch) or J95-C24/0T (w/catch) and face plate for glass door GH-J95FP (sold separately), mounting plate J95-P6T (sold separately).

●Locus chart S≒1/4

(How to Use the Locus Chart 5)



●Cut out dimensions



※1: Use tempered glass.Scattering prevention film is recommended.

※2: The size is 53 when using 10mm thick glass door.

※3: Internal threads need to be made by welding nut or burring.

[Opening Clearance (O.C.)]

When using a concealed hinge, although door edge O.C.(A) and hinge side O.C.(B) are required, but for glass door, hinge side O.C.(B) is 0 (zero) because the door thickness (glass thickness) is much thinner than that of the wooden door.Besides, O.C.(A) is identical to Table-3 7 .

[Door Dimensions and Number of Hinges] 8

Refer to 1 7 : P.106, 2 5 : P.108, 3 : P.110, 4 : P.109, 6 : P.111, 8 : P.100

MOUNTING PLATE J95-P6T For Heavy Duty Concealed Hinge J95



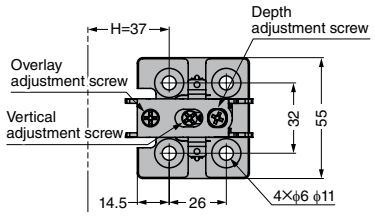
- Depth adjustment: +1.5, -2.5mm
- Vertical adjustment: ±3mm
- Overlay (horizontal) adjustment: +0, -4mm
- Value of H: Door thickness +42mm in use of INSET type.

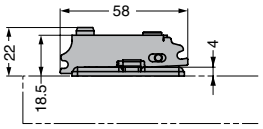
[Sold Separately]

- Cover for mounting plate J95ZC-GR 1

[Recommended Screws]

- Size 5 countersunk head, or raised countersunk head tapping screw or wood screw.





RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-026-732	J95-P6T	Steel/Zinc Alloy (ZDC)	Nickel	94	100
G	3D	–	J95-P6T BN		Black Nickel	94	100

Refer to 1 : P.108

COVER FOR MOUNTING PLATE J95ZC For Heavy Duty Concealed Hinge J95 Series

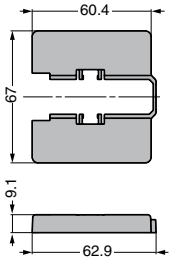

J95ZC-GR


J95ZC-NI

- For hiding screw holes of mounting plate 1 .
- Mounting plate adjustable horizontally, vertically and in depth even after installation.

[Remarks]

- Do not bend by force. Otherwise, it may be damaged.



[With Safety Cover and Mounting Plate Cover]





Picture above is for 25mm overlay.

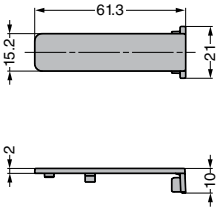
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-032-766	J95ZC-GR	ABS	Grey	9	500
G	3D	160-034-743	J95ZC-NI		Nickel	9	500

Refer to 1 : P.108

SAFETY COVER J95SC-25 For Heavy Duty Concealed Hinge J95 25mm Overlay

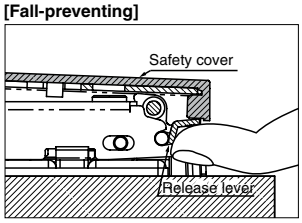

J95SC-25GR


J95SC-25NI



- Nickel plating finish is newly launched.
- For hiding screw holes.

[Fall-preventing]



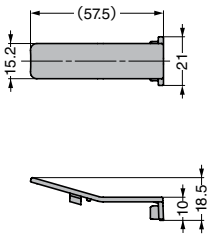
Safety cover can lock the release lever of J95 body, preventing door from falling-off due to misoperation.

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	160-032-763	J95SC-25GR	ABS	Grey	3	500
G	3D	160-034-673	J95SC-25NI		Nickel	9	500

SAFETY COVER J95SC-16 For Heavy Duty Concealed Hinge J95 16mm Overlay

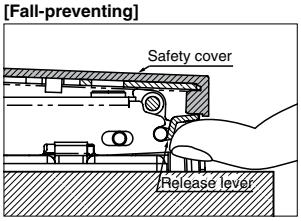

J95SC-16GR


J95SC-16NI



- Nickel plating finish is newly launched.
- For hiding screw holes.

[Fall-preventing]



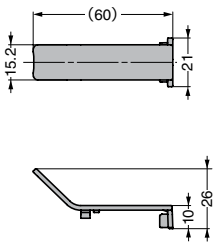
Safety cover can lock the release lever of J95 body, preventing door from falling-off due to misoperation.

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	160-032-764	J95SC-16GR	ABS	Grey	3	500
G	3D	160-034-674	J95SC-16NI		Nickel	9	500

SAFETY COVER J95SC-0 For Heavy Duty Concealed Hinge J95 Inset

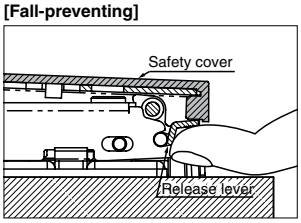

J95SC-0GR


J95SC-0NI



- Nickel plating finish is newly launched.
- For hiding screw holes.

[Fall-preventing]



Safety cover can lock the release lever of J95 body, preventing door from falling-off due to misoperation.

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	160-032-765	J95SC-0GR	ABS	Grey	3	500
G	3D	160-034-675	J95SC-0NI		Nickel	9	500

FACE PLATE FOR GLASS DOOR GH-J95FP For Heavy Duty Concealed Hinge J95

INSTRUCTION TEMPERED GLASS


GH-J95FP-CR


GH-J95FP-SN

- Used for installing J95 1 to glass door.

[Remarks]

- Use supplied screws and tighten with 1.5 N・m or more for installation.

[Parts Included]

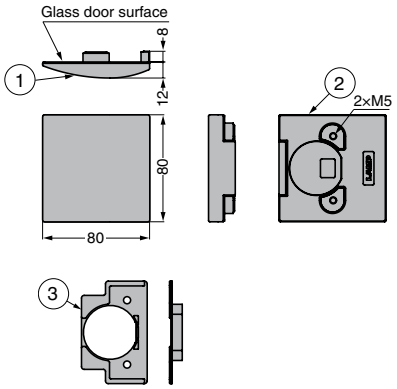
- Countersunk head screw M5×18

[Application Example]



Japanese traditional pattern also available by made to order.





No.	Part Name	Material	Finish/Colour
①	Face Plate	Zinc Alloy (ZDC)	Chrome/Satin Nickel
②	Face Plate Spacer	POM	Black
③	Socket Spacer		

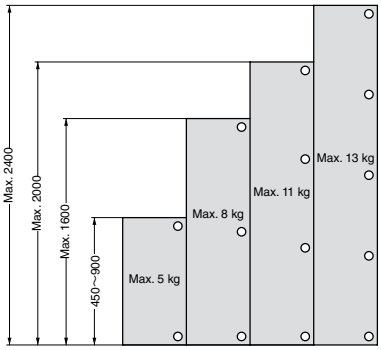
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-032-418	GH-J95FP-CR	Zinc Alloy (ZDC)	Chrome	320	1	20
G	3D	160-033-893	GH-J95FP-SN		Satin Nickel		1	20

Refer to 1 : P.102~107

DOOR DIMENSIONS AND NUMBER OF HINGES

[100 SERIES HINGES]

- Set door centre of gravity at door centre 1.
- Install the upper and lower hinges within 100mm from the door ends. Set equal installation pitch when using 3 hinges or more.
- The figure on the right is for reference only. Please check in actual installation.
- Lubricate regularly during use.
- If the conditions in the right figure, above or in the table below are not met, please contact local representatives.



Door Width	Door Thickness	Door Specific Gravity	Installation pitch
Max. 450	Max. 20	Max. 0.6	Min. 300

Refer to 1 : P.114~116

How to Use the Locus Chart

If you wish to use a specification other than the recommended one, please draw the specification on the locus chart. If some problems can be solved in this way, you can use various specifications. Following is an example.

For Overlay Door

●When using a door above recommended thickness (100° Opening)

Here, 100-36-19SK is used, and a specification of door thickness 28mm and overlay 19mm is considered. On the door part with the maximum opening angle and the opening angle of 10° to 30° where the opening clearance (O.C.) becomes maximum, draw a door with the door thickness increased by 8 mm (colour line in Fig.1). At that time, there may be the following two problems, i.e. (a) and (b).

(a) The edge of door conflicts with the edge of side board, thus door cannot reach the maximum opening angle. (A)

(b) O.C. is very large, so you should be careful when using a continuous door specification and a door close to a wall. (B)

A. As a way to solve (a), as shown in Fig. 2, if corner rounding or chamfering on the edge of the door, the door can reach the maximum opening angle. This method also serves as a solution to (b), and O.C. can be reduced (Fig.3). Besides, you may also leave a gap between door and side board (Fig.4).

B. To solve (b), take the above method or increase side board thickness to eliminate O.C. (Fig. 4), or reduce overlay.

●When using a door above recommended thickness (160° and 170° Opening)

Here, 170-34-19 is used, and a specification of door thickness 24mm and overlay 19mm is considered. As same as 100° opening, on the door part with the maximum opening angle and the opening angle of 50° where the opening clearance (O.C.) becomes maximum, draw a door with the door thickness increased by 4mm (colour line in Fig.5). The problem here is increased opening clearance and, in the continuous door specification, colliding with the next door at the maximum opening angle. The problem of opening clearance may be solved by using the same method as 100° opening hinge. As for the problem of colliding with the next door, it may be solved by reducing overlay, or increasing the side board thickness to greatly increase clearance between doors and limit the maximum opening angle to 130° or 150° , etc.

For Inset Door

●When using a door above recommended thickness

Again draw the actual door thickness. The problem here is also increased opening clearance. For inset door, door conflicts with side board and cannot be opened. This problem may be solved by providing a gap between door and side board (Fig.7), or corner rounding or chamfering on door edge (Fig.2) (Fig.8).

Actual dimensions for solving the problem can be tracked to some extent from the drawing.

For further details, please contact local representatives.

Fig.1

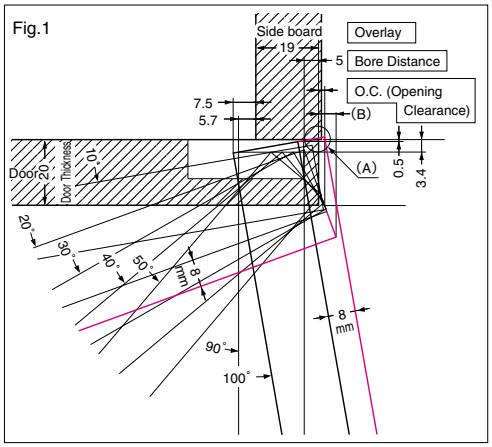


Fig.2

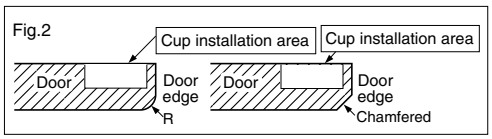


Fig.3

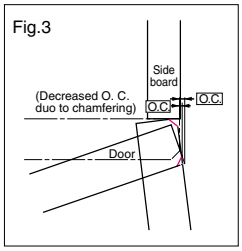


Fig.4

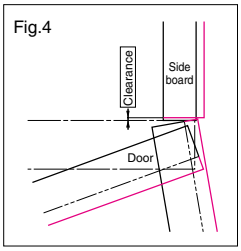


Fig.5

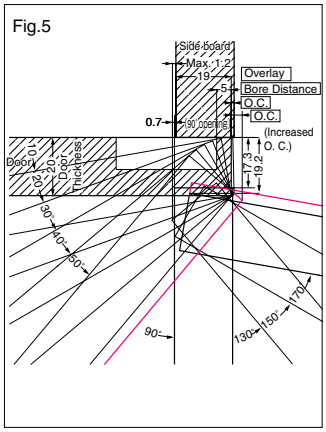


Fig.6

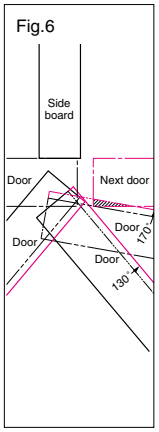


Fig.7

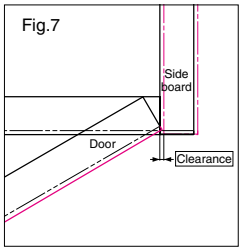
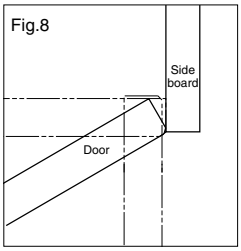


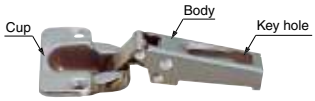
Fig.8



CONCEALED HINGE 100 SERIES

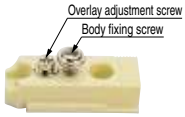
Part Names

[Concealed Hinge 1]



[Mounting Plate 2]

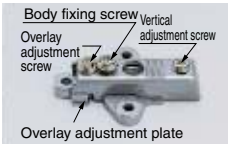
Mounting Plate



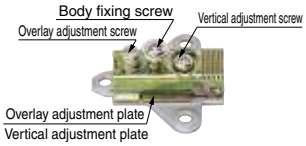
Type A



Type W



Type A-W

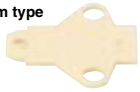


[Spacer 3]

Standard type



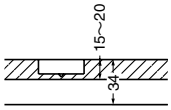
System type



Body	Install to mounting plate.
Cup	Cut out a ϕ35 (or ϕ26, ϕ40) hole on the door, and install concealed hinge.
Key hole	When fixing to the mounting plate, insert body fixing screw in this hole and tighten.
Mounting plate	First install to the side board, then insert and tighten the body.
Body fixing screw	Used to fix the body to the mounting plate.It can also be used for door depth adjustment.
Overlay adjustment screw	Used to adjust overlay of door.
Overlay adjustment plate	(In case of type A or type A-W mounting plate) Turning overlay adjustment screw can adjust door overlay without affecting door depth and vertical adjustment.
Vertical adjustment screw	(In case of type W or type A-W mounting plate) Used for vertical adjustment of door.
Vertical adjustment plate	(In case of type W or type A-W mounting plate) Turning door vertical adjustment screw can move the door vertically.
Spacer	Used for decreasing door overlay, or increasing door gap for inset type.

Suitable for Various Door Thickness

100 Series are suitable for door thickness 15mm~34mm. Besides, performance can be maximised by using locus chart.



Full Range of Mounting Plates

Nearly 20 different mounting plates are available for 100 series to meet diversified installation requirements. Each one can be installed quickly, accurately and reliably.

Superior Corrosion Resistance

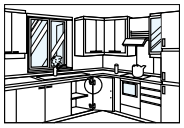
[All Stainless Steel]

The world's first stainless steel (SUS304) concealed hinge. Stainless steel features superior corrosion resistance, suitable for damp places like combined kitchen and washroom, etc. It can also be used for fields such as medical, laboratory and ship, etc.

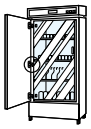
[Satin Chrome]

Plated type is highly corrosion-resistant thanks to satin chrome finish of main metal parts. And metallic silver colour makes high-tech furniture more eye-catching. (Nickel plating type also available by made to order)

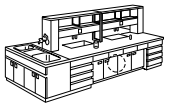
<Main Purpose of Stainless Steel Concealed Hinge>



Kitchen equipment



Medical warehouse



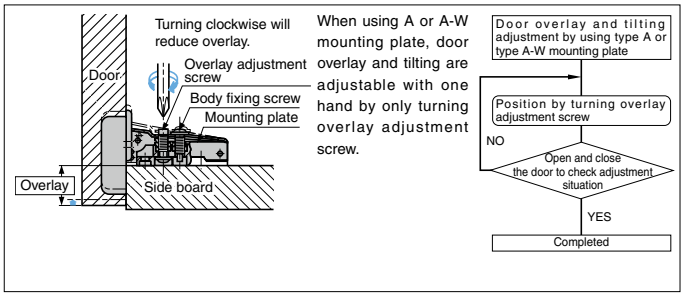
Laboratory



Marine

Easy and Fast Adjustment TYPE A, A-W MOUNTING PLATE

[100 Series Concealed Hinge Type A, A-W Mounting Plate]



Note) Be sure to use a manual screwdriver to fine tune adjustment screws within the adjustment range. Do not use a pneumatic, electric or rechargeable screwdriver, or excessive tightening torque may damage thread and cause malfunction.

Refer to 1 : P.114~116, 2 : P.117, 3 : P.129

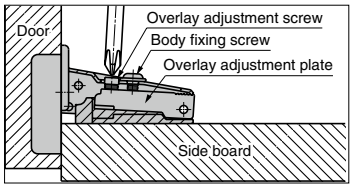
How to Adjust

Door Adjustment by Using Type A or Type A-W Mounting Plate

[Type A]

100-02A-30, 100-03A, 100-04A-30, 100-04A-32-3, 100-06A, 100-P3A, 100-P4A-30

Type A



Depth Adjustment

Loosen the body fixing screw, move the door back and forth to select appropriate position, and then tighten the screw.

Overlay Adjustment (Horizontal Adjustment)

Turning the overlay adjustment screw clockwise ↻ to decrease and counterclockwise ↺ to increase the overlay.
Operate with the body fixing screw tightened.

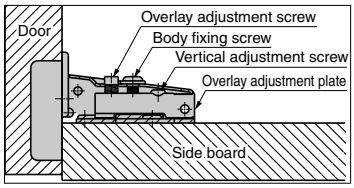
Tilting Adjustment

Turn the overlay adjustment screw. Operate with the body fixing screw tightened.

[Type A-W]

100-04A-W-30, 100-04A-W-30-2, 100-04A-W-32, 100-06AW

Type A-W



Depth Adjustment | Overlay Adjustment | Tilting Adjustment are the same as type A.

Vertical Adjustment

Loosen the vertical adjustment screw, move the door up and down to select appropriate position, and then tighten the screw.

Door Adjustment by Using Mounting Plate Other Than Type A and Type A-W

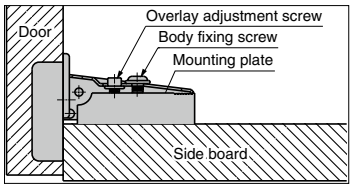
[100-01, 100-02-30, 100-03, 100-04-30, 100-06, 100-P6]

Depth Adjustment

Loosen the body fixing screw, move the door back and forth to select appropriate position, and then tighten the screw.

Overlay Adjustment (Horizontal Adjustment)

Loosen the body fixing screw first. Turn the overlay adjustment screw to determine appropriate position. Turning the overlay adjustment screw clockwise ↻ to increase and counterclockwise ↺ to decrease the overlay. Finally tighten the body fixing screw.

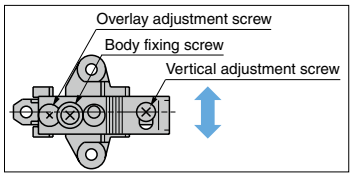


Tilting Adjustment

Loosen the body fixing screw first. Turn the overlay adjustment screw to determine appropriate position, and finally tighten the body fixing screw securely.

[Type W]

100-04W-30



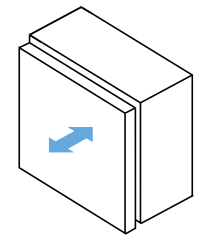
Depth Adjustment | Overlay Adjustment | Tilting Adjustment are the same as the above method.

Vertical Adjustment

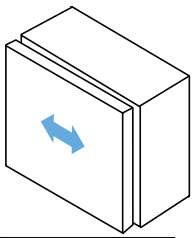
Loosen the vertical adjustment screw, move the door up and down to select appropriate position, and then tighten the screw.

[Remarks]

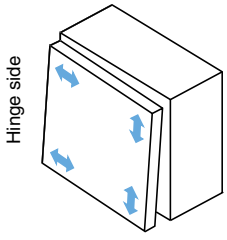
Body fixing screw may become loose due to door opening and closing.
Regularly check and tighten to prevent the door from falling off.



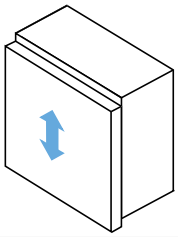
Depth Adjustment



Overlay Adjustment
(Horizontal Adjustment)



Tilting Adjustment



Vertical Adjustment

100° Opening | **19mm Overlay** | **Overlay 15~19mm** | **Cup Dia ϕ35 Bore Depth 11mm Door Thickness 15~20mm** | **Stainless Steel Mounting Plate 1 100 Series**

CONCEALED HINGE (STAINLESS STEEL) 100

NSF SUS



Picture above is the combination of concealed hinge and mounting plate (sold separately).

[Sold Separately]

- Stainless steel 100 series mounting plate 1

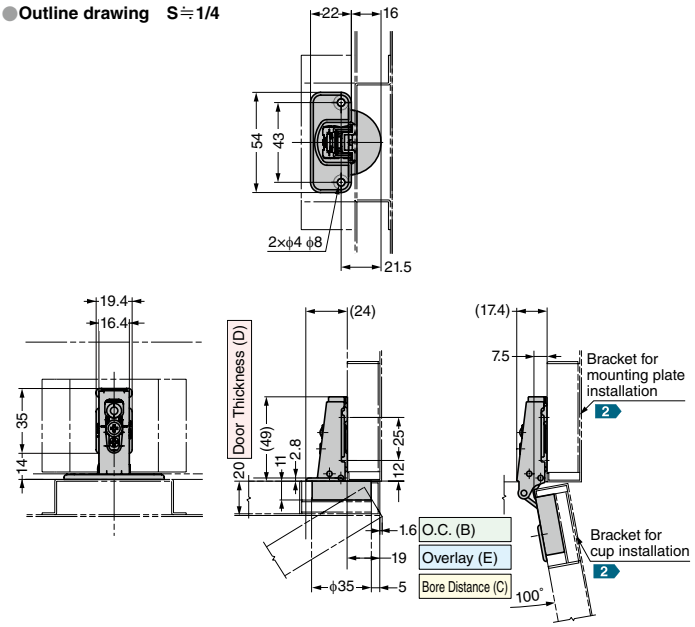
[Recommended Screws]

- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-865	100-46/19SUS304B	Without Catch	Stainless Steel (SUS304)	Polished	39.1	200
G	3D	160-073-870	100-C46/19SUS304B	With Catch			44.1	200

A mounting plate (sold separately) is required for installation. Please order separately.

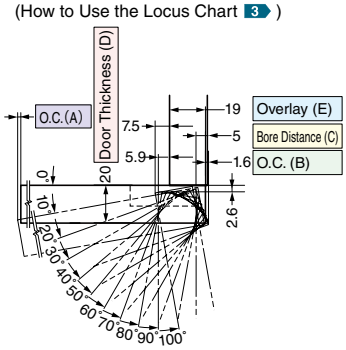
Outline drawing S≒1/4



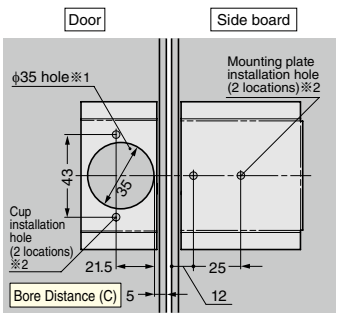
Picture above is the combination of 100-46/19 or 100-C46/19 (w/catch) and mounting plate 100-P3A (sold separately).

Locus chart S≒1/4

(How to Use the Locus Chart 3)



Cut out dimensions For metal door



※1: Support the cup bottom at position of 11mm deep.
※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5
Overlay (E)	17	18	19

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -3mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness	Bore Distance (C)		
(D)	3	4	5
15	0.5	0.5	0.4
16	0.6	0.6	0.6
17	0.9	0.8	0.8
18	1.1	1.1	1.0
19	1.4	1.3	1.3
20	1.7	1.6	1.6
21※	2.1	2.0	1.9
22※	2.5	2.4	2.3
	O.C. (B)		

※Please refer to the locus chart if door thickness is over 20mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

[O.C.(A)] Table-3

Door Thickness	O.C. (A)			
(D)	Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	0.2	0.1	0.1	0.1

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.117, 2 : P.131, 3 : P.111, 4 : P.110

100° Opening | **14mm Overlay** | Overlay 10~14mm | Cup Dia ϕ35 Bore Depth 11mm Door Thickness 15~20mm | Stainless Steel Mounting Plate 1 100 Series

CONCEALED HINGE (STAINLESS STEEL) 100

NSF SUS



Picture above is the combination of concealed hinge and mounting plate (sold separately).

[Sold Separately]

- Stainless steel 100 series mounting plate 1

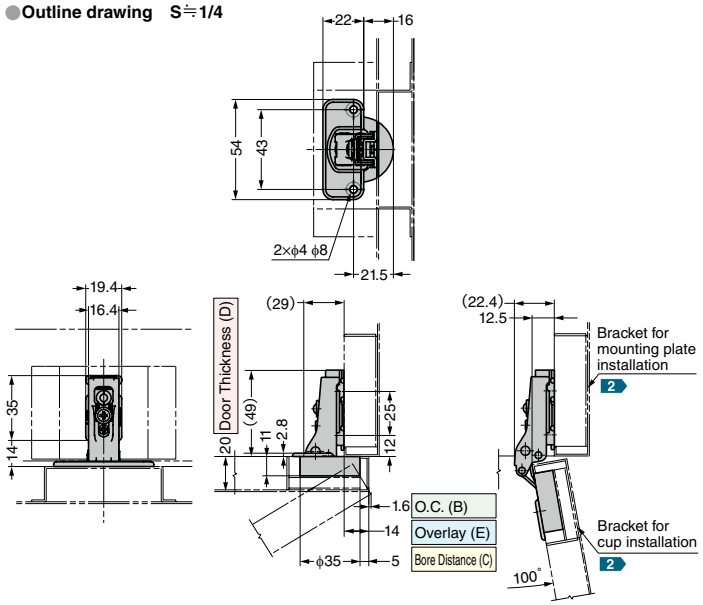
[Recommended Screws]

- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-875	100-46/14SUS304B	Without Catch	Stainless Steel (SUS304)	Polished	39.8	200
G	3D	160-073-880	100-C46/14SUS304B	With Catch			44	200

A mounting plate (sold separately) is required for installation. Please order separately.

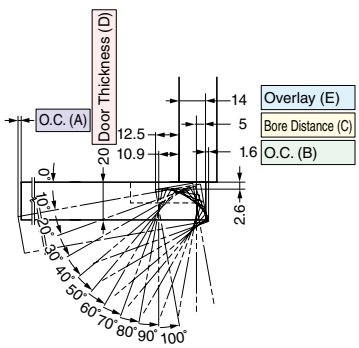
●Outline drawing S≒1/4



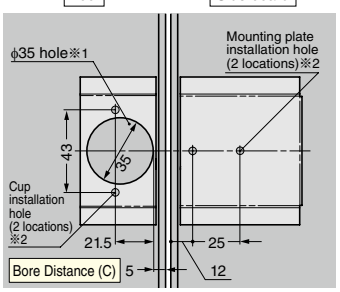
Picture above is the combination of 100-46/14 or 100-C46/14 (w/catch) and mounting plate 100-P3A (sold separately).

●Locus chart S≒1/4

(How to Use the Locus Chart 3)



●Cut out dimensions For metal door



※1: Support the cup bottom at position of 11mm deep.

※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5
Overlay (E)	12	13	14

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -3mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5
15	0.5	0.5	0.4
16	0.6	0.6	0.6
17	0.9	0.8	0.8
18	1.1	1.1	1.0
19	1.4	1.3	1.3
20	1.7	1.6	1.6
21※	2.1	2.0	1.9
22※	2.5	2.4	2.3
	O.C. (B)		

※Please refer to the locus chart if door thickness is over 20mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

[O.C.(A)] Table-3

Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	0.2	0.1	0.1	0.1

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.117, 2 : P.131, 3 : P.111, 4 : P.110

100° Opening | **9mm Overlay** | Overlay 5~9mm | Cup Dia ϕ35 Bore Depth 11mm Door Thickness 15~20mm | Stainless Steel Mounting Plate 1 100 Series

CONCEALED HINGE (STAINLESS STEEL) 100

NSF SUS



Picture above is the combination of concealed hinge and mounting plate (sold separately).

[Sold Separately]

- Stainless steel 100 series mounting plate 1

[Recommended Screws]

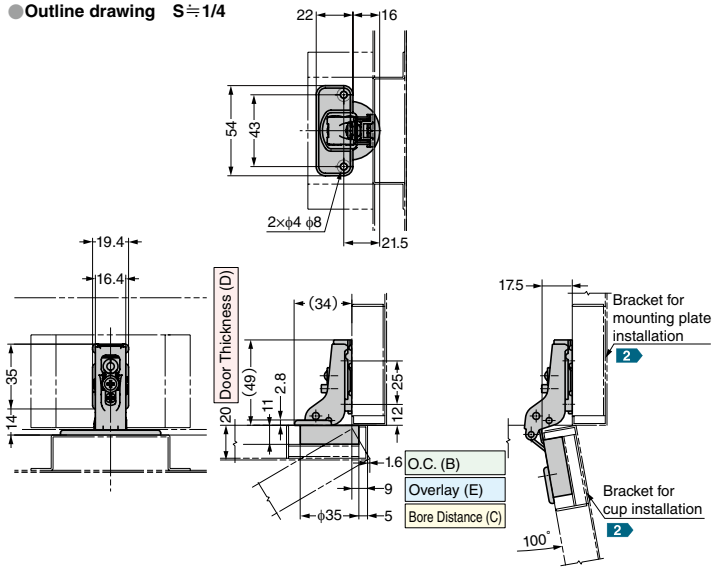
- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-883	100-46/9SUS304B	Without Catch	Stainless Steel (SUS304)	Polished	41.3	200
G	3D	160-073-884	100-C46/9SUS304B	With Catch			45.9	200

A mounting plate (sold separately) is required for installation. Please order separately.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

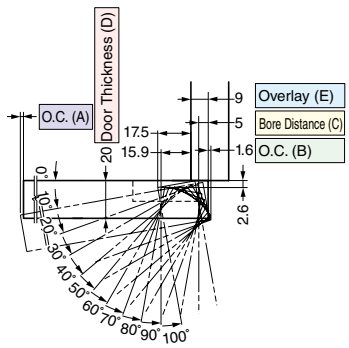
Outline drawing S≒1/4



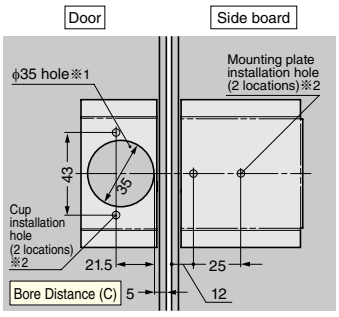
Picture above is the combination of 100-46/9 or 100-C46/9 (w/catch) and mounting plate 100-P3A (sold separately).

Locus chart S≒1/4

(How to Use the Locus Chart 3)



Cut out dimensions For metal door



※1: Support the cup bottom at position of 11mm deep.
※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5
Overlay (E)	7	8	9

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -3mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness	Bore Distance (C)		
(D)	3	4	5
15	0.5	0.5	0.4
16	0.6	0.6	0.6
17	0.9	0.8	0.8
18	1.1	1.1	1.0
19	1.4	1.3	1.3
20	1.7	1.6	1.6
21※	2.1	2.0	1.9
22※	2.5	2.4	2.3
	O.C. (B)		

※Please refer to the locus chart if door thickness is over 20mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

[O.C.(A)] Table-3

Door Thickness	O.C. (A)			
(D)	Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	0.2	0.1	0.1	0.1

[Door Dimensions and Number of Hinges] 4

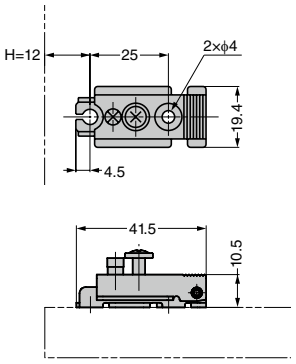
Refer to 1 : P.117, 2 : P.131, 3 : P.111, 4 : P.110

STANDARD TYPE

STAINLESS STEEL MOUNTING PLATE 100-P3A-SUS304B

SUS





- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]
- M4 binding head screw

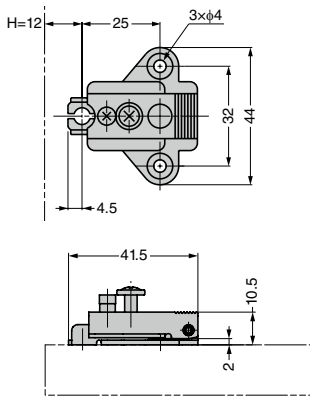
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-155	100-P3A-SUS304B	Stainless Steel (SUS304)	Barrel Polished	21.3	400

SYSTEM 37, 32 TYPE

STAINLESS STEEL MOUNTING PLATE 100-P4A-32-SUS304B

SUS





- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

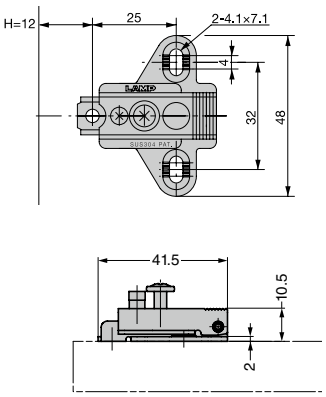
[Recommended Screws]
- M4 binding head screw

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-149	100-P4A-32-SUS304B	Stainless Steel (SUS304)	Barrel Polished	26	400

STAINLESS STEEL MOUNTING PLATE 100-P4A/32-3WAY-SUS304B

SUS





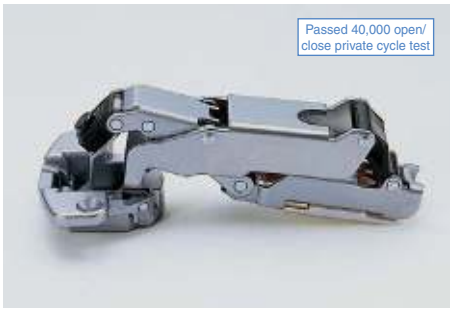
- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]
- M4 binding head screw

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-079-044	100-P4A/32-3WAY-SUS304B	Stainless Steel (SUS304)	Barrel Polished	40	400

170° Opening | **19mm Overlay** | **Overlay 15~20mm** | **Cup Dia ϕ35 Bore Depth 11mm Door Thickness 15~20mm** | **Mounting Plate 1 100 Series**

CONCEALED HINGE 170



Picture above is the combination of concealed hinge and mounting plate (sold separately).

●Opening angle can be adjusted 140° ~ 170° degrees by turning the adjustment dial on the hinge.

[Sold Separately]

●100 series mounting plate 1

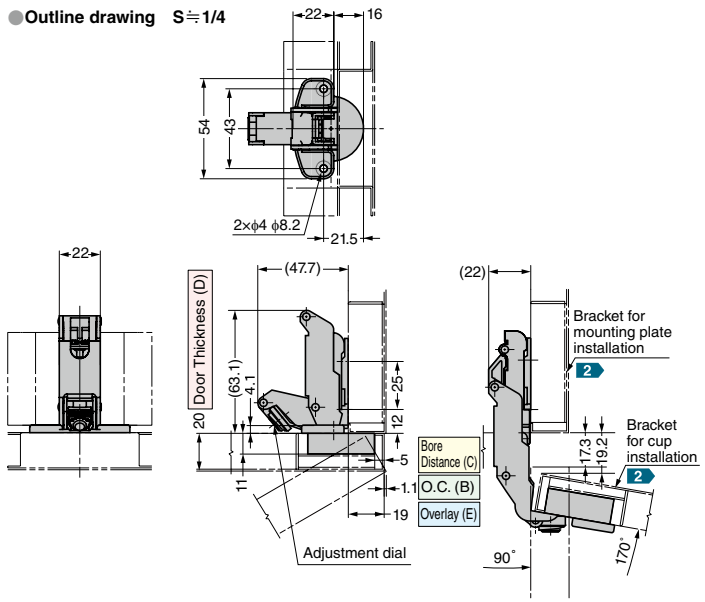
[Recommended Screws]

●M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-390	170-34/19	Without Catch	Body/Steel, Cup/	Satin	117	100
G	3D	160-073-400	170-C34/19	With Catch	Zinc Alloy (ZDC)	Chrome	125.7	100

A mounting plate (sold separately) is required for installation. Please order separately.

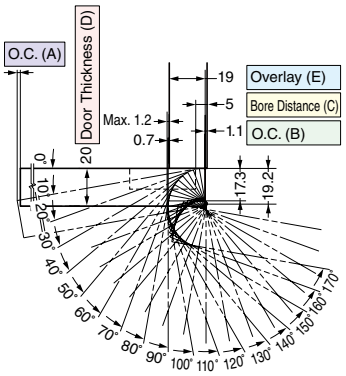
●**Outline drawing** S≒1/4



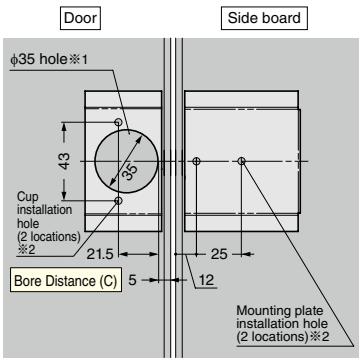
Picture above is the combination of 170-34/19 or 170-C34/19 (w/catch) and mounting plate 100-03A (sold separately).

●**Locus chart** S≒1/4

(How to Use the Locus Chart 3)



●**Cut out dimensions** **For metal door**



※1: Support the cup bottom at position of 11mm deep.

※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6
Overlay (E)	17	18	19	20

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -3mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6
15	0	0	0	0
16	0	0	0	0
17	0.1	0.1	0.1	0.1
18	0.1	0.1	0.1	0.1
19	1.1	0.8	0.3	0.1
20	2.5	1.7	1.1	0.6
21※	3.5	2.7	2.0	1.5
22※	4.5	3.7	2.9	2.3
	O.C. (B)			

※The above table is O.C. (B) for 0~90° opening. Please refer to the locus chart if door thickness is over 20mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door).

[O.C.(A)] Table-3

Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500
15	0.7	0.6	0.5
20	0.7	0.6	0.5
22	0.7	0.6	0.5

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.125~128, 2 : P.131, 3 : P.111, 4 : P.110

170° Opening | **9mm Overlay** | Overlay 5~10mm | Cup Dia ϕ35 Bore Depth 11mm Door Thickness 15~20mm | Mounting Plate 1 100 Series

CONCEALED HINGE 170



Picture above is the combination of concealed hinge and mounting plate (sold separately).

●Opening angle can be adjusted 140° ~ 170° degrees by turning the adjustment dial on the hinge.

[Sold Separately]

●100 series mounting plate 1

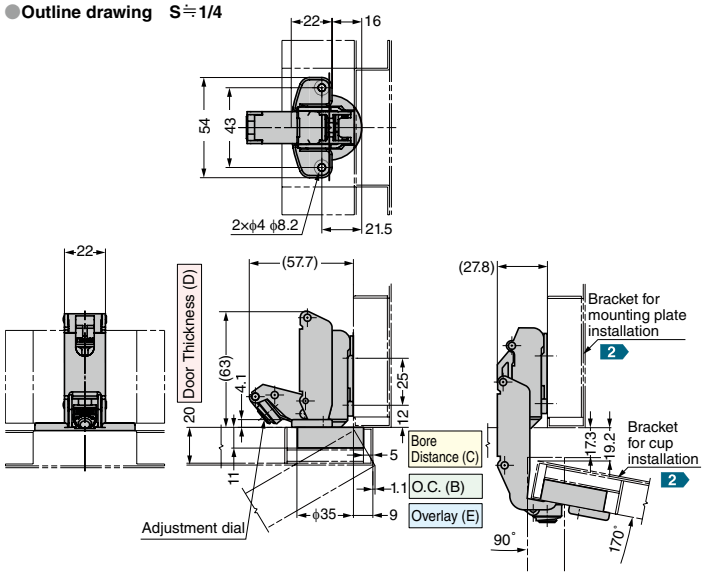
[Recommended Screws]

●M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-392	170-34/9	Without Catch	Zinc Alloy	Satin	132.8	100
G	3D	160-073-402	170-C34/9	With Catch	(ZDC)	Chrome	140.6	100

A mounting plate (sold separately) is required for installation. Please order separately.

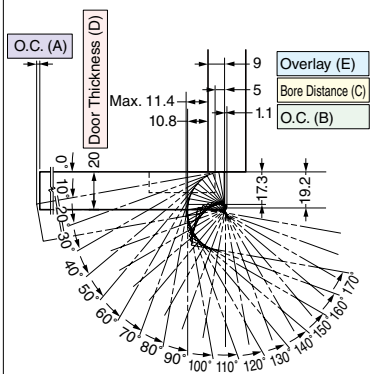
●**Outline drawing** S≒1/4



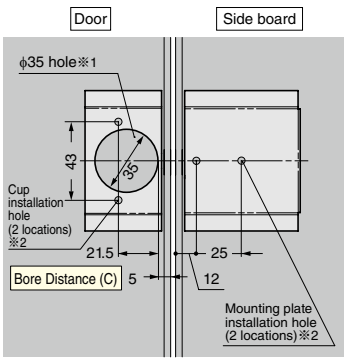
Picture above is the combination of 170-34/9 or 170-C34/9 (w/catch) and mounting plate 100-03A (sold separately).

●**Locus chart** S≒1/4

(How to Use the Locus Chart 3)



●**Cut Out Dimensions For metal door**



※1: Support the cup bottom at position of 11mm deep.

※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6
Overlay (E)	7	8	9	10

For standard type shown in the table above mounting plate 0mm thickness.

Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -3mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0.1	0.1	0	0
19	1.0	0.6	0.2	0
20	2.3	1.7	1.1	0.6
21※	3.5	2.6	2.0	1.5
22※	4.4	3.5	2.9	2.2
	O.C. (B)			

※The above table is O.C. (B) for 0~90° opening. Please refer to the locus chart if door thickness is over 20mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door).

[O.C.(A)] Table-3

Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500
15	0.7	0.5	0.5
20	0.7	0.5	0.5
22	0.7	0.5	0.5

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.125~128, 2 : P.131, 3 : P.111, 4 : P.110

170° Opening | **Inset** | **Cup Dia ϕ35 Bore Depth 11mm Door Thickness 15~20mm** | **Mounting Plate 1 100 Series**

CONCEALED HINGE 170



Picture above is the combination of concealed hinge and mounting plate (sold separately).

- Opening angle can be adjusted 140° ~ 170° degrees by turning the adjustment dial on the hinge.

[Sold Separately]

- 100 series mounting plate 1

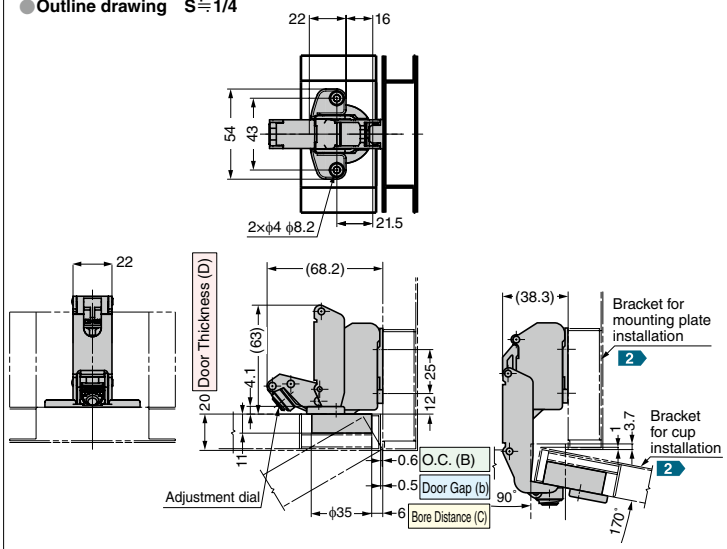
[Recommended Screws]

- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-393	170-34/0	Without Catch	Zinc Alloy	Satin	152	100
G	3D	160-073-403	170-C34/0	With Catch	(ZDC)	Chrome	159.5	100

A mounting plate (sold separately) is required for installation. Please order separately.

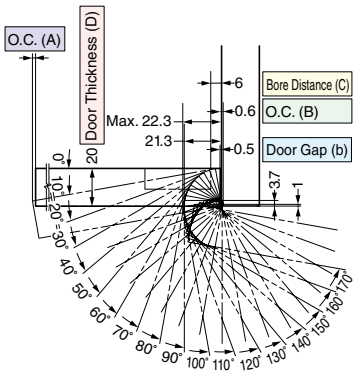
Outline drawing S≒1/4



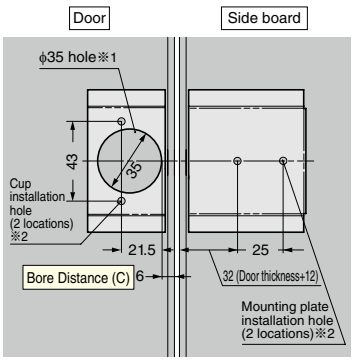
Picture above is the combination of 170-34/0 or 170-C34/0 (w/catch) and mounting plate 100-03A (sold separately).

Locus chart S≒1/4

(How to Use the Locus Chart 3)



Cut Out Dimensions For metal door



※1: Support the cup bottom at position of 11mm deep.

※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6
Door Gap (b)	3.5	2.5	1.5	0.5

For standard type shown in the table above mounting plate 0mm thickness.

Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -3mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0.1	0.1	0	0
19	1.0	0.6	0.2	0
20	2.3	1.7	1.1	0.6
21※	3.5	2.6	2.0	1.5
22※	4.4	3.5	2.9	2.2
	O.C. (B)			

※The above table is O.C. (B) for 0~90° opening. Please refer to the locus chart if door thickness is over 20mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

[O.C.(A)] Table-3

Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500
15	0.7	0.5	0.5
20	0.7	0.5	0.5
22	0.7	0.5	0.5

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.125~128, 2 : P.131, 3 : P.111, 4 : P.110

160° Opening | **28mm Overlay** | Overlay 19~28mm | Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~34mm | Mounting Plate 1 100 Series

CONCEALED HINGE H160 For Thick Door



Picture above is the combination of concealed hinge and mounting plate (sold separately).

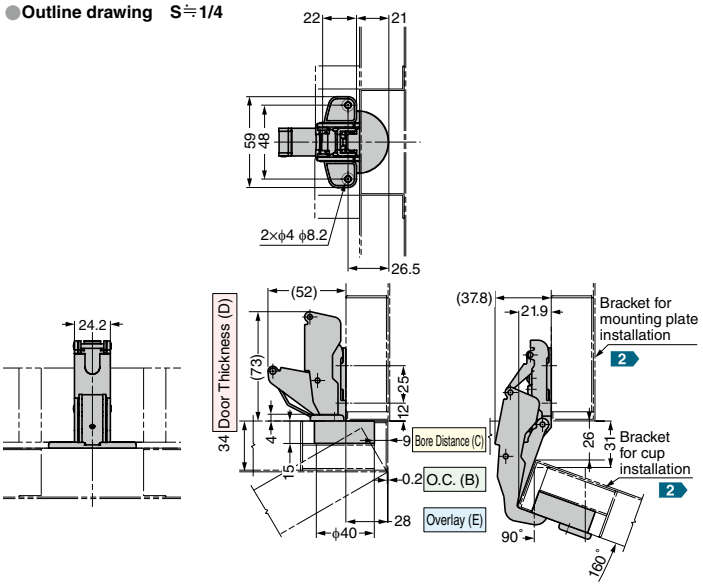
[Sold Separately]
- 100 series mounting plate 1

[Recommended Screws]
- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-620	H160-34/28	Without Catch	Body/Steel, Cup/	Satin	181.4	100
G	3D	160-073-630	H160-C34/28	With Catch	Zinc Alloy (ZDC)	Chrome	194.4	100

A mounting plate (sold separately) is required for installation. Please order separately.separately.

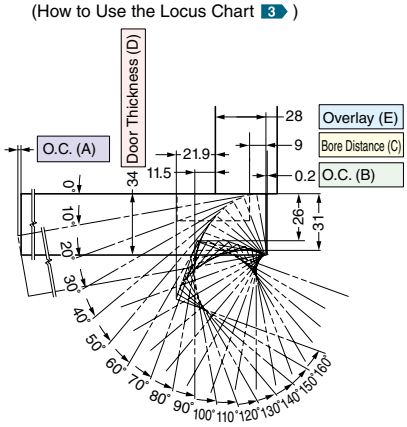
Outline drawing S≒1/4



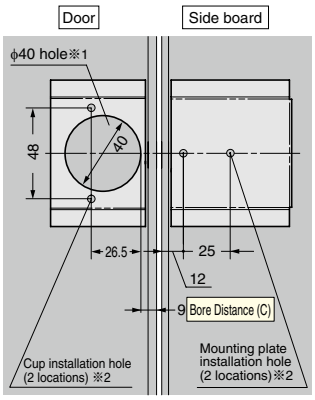
Picture above is the combination of H160-34/28 or H160-C34/28 (w/catch) and mounting plate 100-03A (sold separately).

Locus chart S≒1/4

(How to Use the Locus Chart 3)



Cut Out Dimensions For metal door



※1: Support the cup bottom at position of 15mm deep.
※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7	8	9
Overlay (E)	22	23	24	25	26	27	28

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -3mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7	8	9
Max. 33	Max. 0.1						
34	0.2	0.2	0.2	0.2	0.2	0.2	0.2
35※	0.3	0.3	0.3	0.3	0.3	0.3	0.3
36※	2.0	1.6	1.5	1.4	1.0	0.7	0.5
37※	3.7	3.1	2.7	2.4	2.0	1.4	0.9
38※	5.0	4.4	3.8	3.3	2.8	2.2	1.7
39※	6.2	5.4	4.9	4.3	3.7	3.0	2.6
40※	7.2	6.4	5.7	5.3	4.6	3.9	3.4
	O.C. (B)						

※The above table is O.C. (B) for 0~90° opening.Please refer to the locus chart if door thickness is over 34mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

[O.C.(A)] Table-3

Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	1.6	1.1	1.0	0.9
30	2.2	1.4	1.1	1.0
34	2.2	1.5	1.1	1.0

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.125~128, 2 : P.131, 3 : P.111, 4 : P.110

160° Opening | **23mm Overlay** | **Overlay 14~23mm** | **Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~34mm** | **Mounting Plate 1 100 Series**

CONCEALED HINGE H160 For Thick Door



Picture above is the combination of concealed hinge and mounting plate (sold separately).

[Sold Separately]

●100 series mounting plate 1

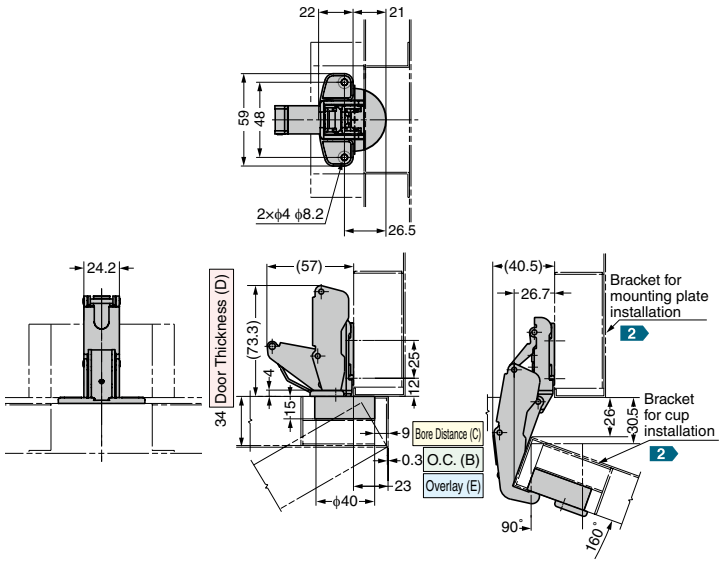
[Recommended Screws]

●M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-621	H160-34/23	Without Catch	Body/Steel, Cup/	Satin	185.4	100
G	3D	160-073-631	H160-C34/23	With Catch	Zinc Alloy (ZDC)	Chrome	197.9	100

A mounting plate (sold separately) is required for installation. Please order separately.

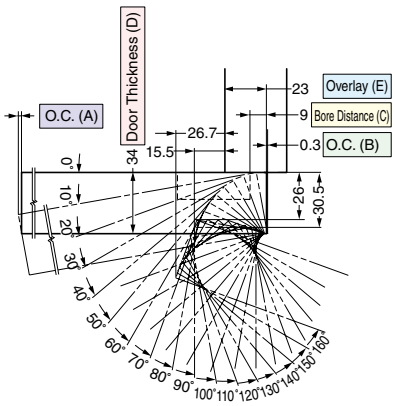
●**Outline drawing** S≒1/4



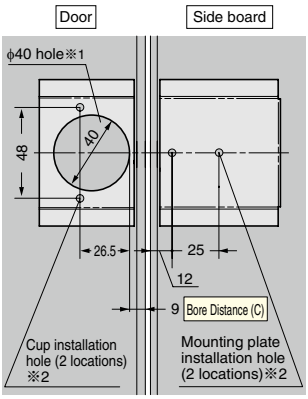
Picture above is the combination of H160-34/23 or H160-C34/23 (w/catch) and mounting plate 100-03A (sold separately).

●**Locus chart** S≒1/4

(How to Use the Locus Chart 3)



●**Cut Out Dimensions For metal door**



※1: Support the cup bottom at position of 15mm deep.

※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7	8	9
Overlay (E)	17	18	19	20	21	22	23

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -3mm).

[Opening Clearance (O.C.)]

Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness	Bore Distance (C)						
(D)	3	4	5	6	7	8	9
Max. 33	Max. 0.2						
34	0.3	0.3	0.3	0.3	0.3	0.3	0.3
35※	0.7	0.7	0.7	0.7	0.7	0.6	0.5
36※	3.2	3.0	2.7	2.3	1.6	1.3	0.9
37※	5.0	4.4	3.8	3.2	2.6	2.1	1.6
38※	6.2	5.5	4.8	4.2	3.5	2.9	2.4
39※	7.2	6.4	5.7	5.1	4.4	3.9	3.3
40※	8.3	7.3	6.6	6.0	5.4	4.7	4.2
	O.C. (B)						

※The above table is O.C. (B) for 0~90° opening. Please refer to the locus chart if door thickness is over 34mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

[O.C.(A)] Table-3

Door Thickness	O.C. (A)			
(D)	Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	1.4	1.1	0.8	0.7
30	1.8	1.3	1.0	0.8
34	1.8	1.3	1.0	0.8

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.125~128, 2 : P.131, 3 : P.111, 4 : P.110

160° Opening | **18mm Overlay** | Overlay 9~18mm | Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~34mm | Mounting Plate 1 100 Series

CONCEALED HINGE H160 For Thick Door



Picture above is the combination of concealed hinge and mounting plate (sold separately).

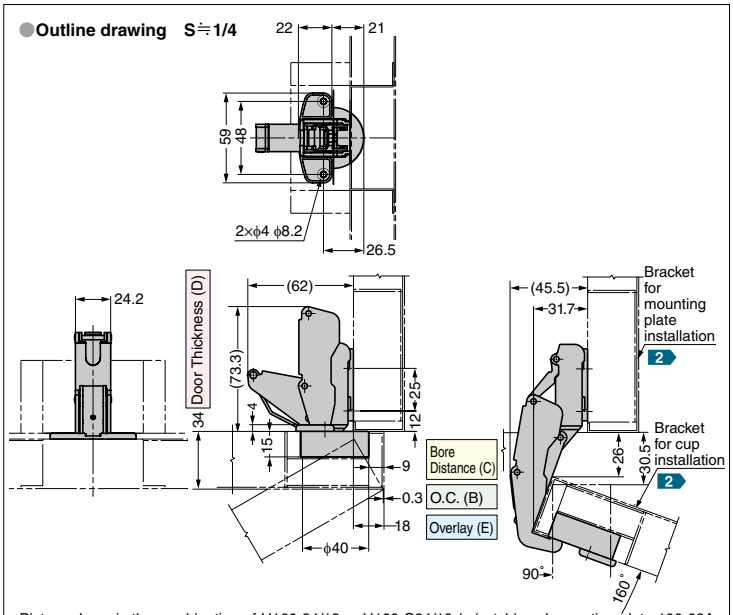
[Sold Separately]
- 100 series mounting plate 1

[Recommended Screws]
- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-622	H160-34/18	Without Catch	Zinc Alloy	Satin	191	100
G	3D	160-073-632	H160-C34/18	With Catch	(ZDC)	Chrome	203.5	100

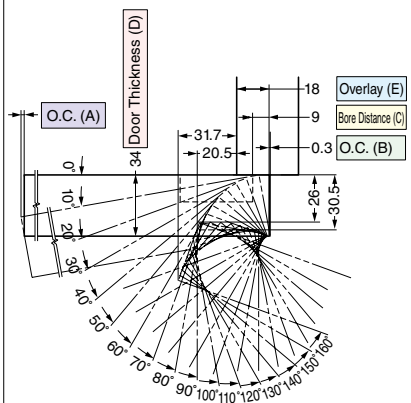
A mounting plate (sold separately) is required for installation. Please order separately.

Outline drawing S≒1/4

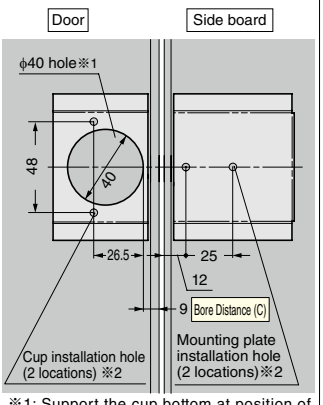


Picture above is the combination of H160-34/18 or H160-C34/18 (w/catch) and mounting plate 100-03A (sold separately).

Locus chart S≒1/4
(How to Use the Locus Chart 3)



Cut Out Dimensions For metal door



※1: Support the cup bottom at position of 15mm deep.
※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7	8	9
Overlay (E)	12	13	14	15	16	17	18

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -3mm).

[Opening Clearance (O.C.)]
Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7	8	9
Max. 33	Max. 0.2						
34	0.3	0.3	0.3	0.3	0.3	0.3	0.3
35※	0.7	0.7	0.7	0.7	0.7	0.6	0.5
36※	3.2	3.0	2.7	2.3	1.6	1.3	0.9
37※	5.0	4.4	3.8	3.2	2.6	2.1	1.6
38※	6.2	5.5	4.8	4.2	3.5	2.9	2.4
39※	7.2	6.4	5.7	5.1	4.4	3.9	3.3
40※	8.3	7.3	6.6	6.0	5.4	4.7	4.2
	O.C. (B)						

※The above table is O.C. (B) for 0~90° opening. Please refer to the locus chart if door thickness is over 34mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

[O.C.(A)] Table-3

Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	1.4	1.1	0.8	0.7
30	1.8	1.3	1.0	0.8
34	1.8	1.3	1.0	0.8

[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.125~128, 2 : P.131, 3 : P.111, 4 : P.110

160° Opening | **Inset** | **Cup Dia ϕ40 Bore Depth 15mm Door Thickness 18~34mm** | **Mounting Plate 1 100 Series**

CONCEALED HINGE H160 For Thick Door



Picture above is the combination of concealed hinge and mounting plate (sold separately).

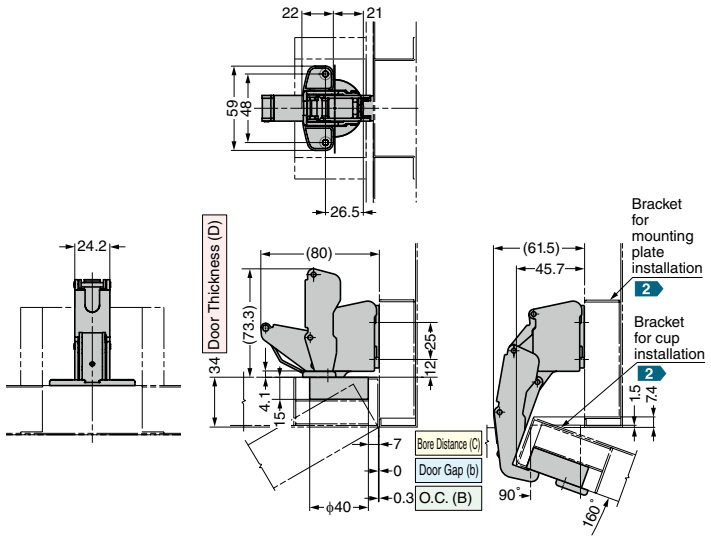
[Sold Separately]
- 100 series mounting plate 1

[Recommended Screws]
- M4 raised countersunk head screw

RoHS	CAD	Item Code	Item Name	Description	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-623	H160-34/0	Without Catch	Zinc Alloy (ZDC)	Satin	230.9	100
G	3D	160-073-633	H160-C34/0	With Catch		Chrome	244.1	100

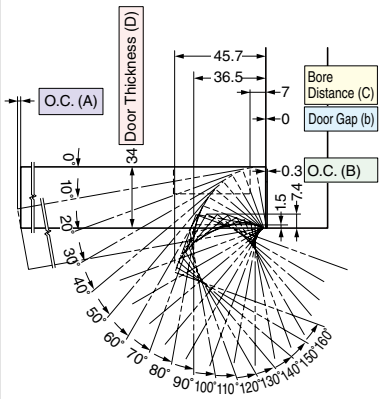
A mounting plate (sold separately) is required for installation. Please order separately.

Outline drawing S≒1/4

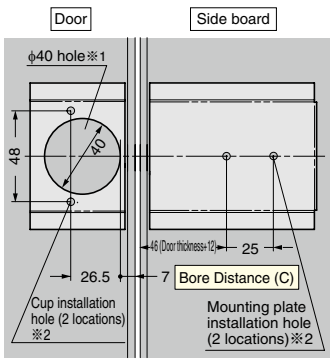


Picture above is the combination of H160-34/0 or H160-C34/0 (w/catch) and mounting plate 100-03A (sold separately).

Locus chart S≒1/4
(How to Use the Locus Chart 3)



Cut Out Dimensions For metal door



※1: Support the cup bottom at position of 15mm deep.
※2: Internal threads need to be made by welding nut or burring.

[Bore Distance (C)] Table-1

Bore Distance (C)	3	4	5	6	7
Door Gap (b)	4	3	2	1	0

For standard type shown in the table above mounting plate 0mm thickness.
Turning the overlay adjustment screw or using spacer (2mm thickness) to adjust overlay (Max. -3mm).

[Opening Clearance (O.C.)]
Clearances for door edge O.C. (A) and hinge side O.C. (B) are necessary. O.C. (A) and (B) change depending on door thickness and bore distance (C). Refer to locus chart and tables below when designing cabinets.

[O.C.(B)] Table-2

Door Thickness (D)	Bore Distance (C) 3	4	5	6	7
Max. 30	Max. 0.1				
31	0.1	0.1	0.1	0.1	0.1
32	0.2	0.2	0.2	0.2	0.2
33	0.2	0.2	0.2	0.2	0.2
34	0.3	0.3	0.3	0.3	0.3
35※	0.9	0.9	0.9	0.8	0.8
36※	3.4	3.1	2.8	2.2	1.6
	O.C. (B)				

※The above table is O.C. (B) for 0~90° opening. Please refer to the locus chart if door thickness is over 34mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.)

[O.C.(A)] Table-3

Door Thickness (D)	O.C. (A) Door Width 300	Door Width 400	Door Width 500	Door Width 600
20	1.4	1.1	0.8	0.7
30	1.7	1.3	1.0	0.8
34	1.7	1.3	1.0	0.8

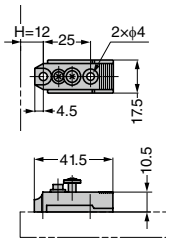
[Door Dimensions and Number of Hinges] 4

Refer to 1 : P.125~128, 2 : P.131, 3 : P.111, 4 : P.110

STANDARD TYPE

MOUNTING PLATE 100-01





- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

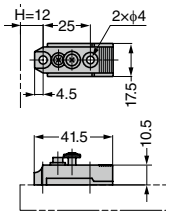
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)
G	3D	160-074-070	100-01	PA	Ivory	7.3	800

MOUNTING PLATE 100-03





- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

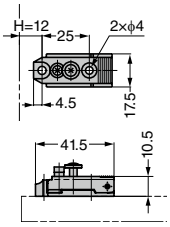
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-079	100-03	Zinc Alloy (ZDC)	Satin Chrome	22.3	800

MOUNTING PLATE 100-03A





- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

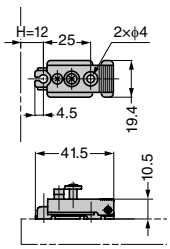
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-083	100-03A	Zinc Alloy (ZDC)/Steel	Nickel/Coloured Zinc Chromate	27.8	800

MOUNTING PLATE 100-P3A





- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]

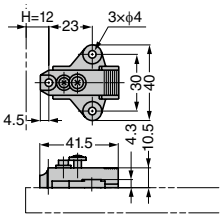
- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-244	100-P3A	Steel	Satin Chrome/Coloured Zinc Chromate	21.4	800

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

MOUNTING PLATE 100-02-30





- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

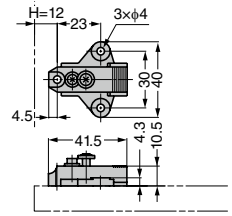
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)
G	3D	160-074-071	100-02-30	PA	Ivory	8.3	400

MOUNTING PLATE 100-04-30





- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

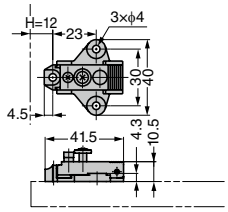
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-085	100-04-30	Zinc Alloy (ZDC)	Satin Chrome	28.3	400

MOUNTING PLATE 100-02A-30





- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

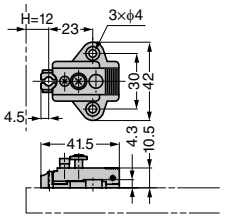
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	160-074-074	100-02A-30	PA/Steel	Ivory/Coloured Zinc Chromate	17	400

MOUNTING PLATE 100-04A-30





- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

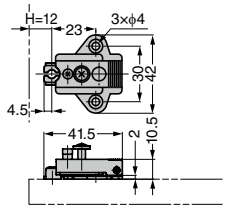
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-087	100-04A-30	Zinc Alloy (ZDC)/Steel	Satin Chrome/Coloured Zinc Chromate	30.7	400

MOUNTING PLATE 100-P4A-30





- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]

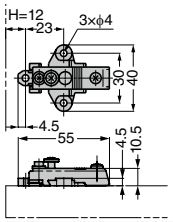
- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-161	100-P4A-30	Steel	Satin Chrome/Coloured Zinc Chromate	26.6	400

SYSTEM 30 TYPE

MOUNTING PLATE 100-04W-30





- Height adjustable (±1.5).
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Remarks]

- When using a concealed hinge with wide angle opening, vertical adjustment screw is difficult to adjust.

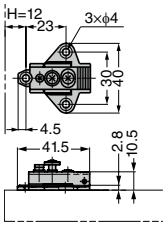
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-095	100-04W-30	Zinc Alloy (ZDC)/Steel	Satin Chrome	35.4	200	800

MOUNTING PLATE 100-04A-W-30





- Height adjustable (±1.5).
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

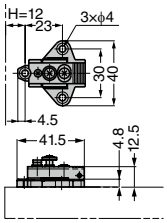
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-115	100-04A-W-30	Steel	Satin Chrome/Coloured Zinc Chromate	32.1	200	800

MOUNTING PLATE 100-04A-W-30-2





- Overlay and height adjustable (±1.5).
- Height: 2mm
- Used to make overlay 2mm smaller.
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]

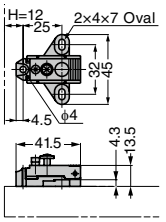
- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-158	100-04A-W-30-2	Zinc Alloy (ZDC)/Steel	Satin Chrome/Coloured Zinc Chromate	35	200	800

SYSTEM 32 TYPE

MOUNTING PLATE 100-04A-32-3





- Overlay adjustable.
- Height: 3mm
- Used to make overlay 3mm smaller.
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

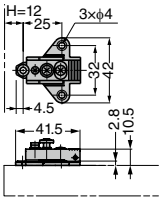
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-089	100-04A-32-3	Zinc Alloy (ZDC)/Steel	Satin Chrome/Coloured Zinc Chromate	37.2	400

MOUNTING PLATE 100-04A-W-32





- Overlay and height adjustable (±1.5).
- Standard height: 0mm
- Value of H: Door thickness + 17mm in use of INSET type (Door thickness + 12mm in use of INSET type of H160 or 170 hinge).

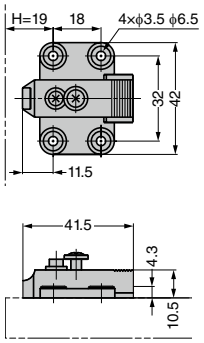
[Recommended Screws]

- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-116	100-04A-W-32	Steel	Satin Chrome/Coloured Zinc Chromate	32.4	200	800

MOUNTING PLATE 100-06





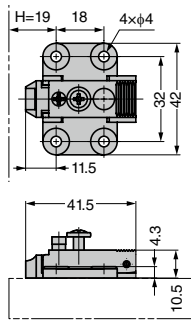
- Standard height: 0mm
- Value of H: Door thickness + 24mm in use of INSET type (Door thickness + 19mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]
- Size 3.1 countersunk head screw

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-110	100-06	Zinc Alloy (ZDC)	Satin Chrome	28.5	400

MOUNTING PLATE 100-06A





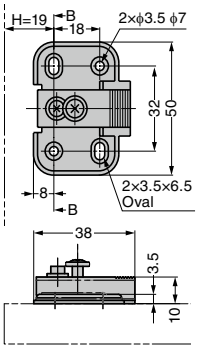
- Overlay adjustable.
- Standard height: 0mm
- Value of H: Door thickness + 24mm in use of INSET type (Door thickness + 19mm in use of INSET type of H160 or 170 hinge).

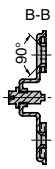
[Recommended Screws]
- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-111	100-06A	Zinc Alloy (ZDC)/Steel	Satin Chrome/ Coloured Zinc Chromate	36.1	400

MOUNTING PLATE 100-P6







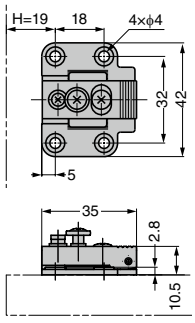
- Standard height: 0mm
- Value of H: Door thickness + 24mm in use of INSET type (Door thickness + 19mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]
- Size 3.1 countersunk head screw

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-160	100-P6	Steel	Satin Chrome	23	400

MOUNTING PLATE 100-06AW





- Overlay and height adjustable (±1.5).
- Standard height: 0mm
- Value of H: Door thickness + 24mm in use of INSET type (Door thickness + 19mm in use of INSET type of H160 or 170 hinge).

[Recommended Screws]
- Size 3.5 tapping screw or wood screw (do not use countersunk head screws)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-074-171	100-06AW	Steel	Satin Chrome/ Coloured Zinc Chromate	36.7	400

SPACER FOR 100 SERIES MOUNTING PLATE 100-DP2 2mm Thickness



●Used to make overlay 2mm smaller.

Use with the following mounting plates:

100-01 100-03
100-03A 100-P3A
100-P3A-SUS304B

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-100	100-DP2	PA	Ivory	1.2	800	3200

SPACER FOR 100 SERIES MOUNTING PLATE 100-DP2-30 2mm Thickness



●Used to make overlay 2mm smaller.

Use with the following mounting plates:

100-02-30 100-02A-30
100-04-30 100-04A-30
100-04W-30 100-P4A-30
100-04A-W-30 100-04A-W-30-2
100-P4A-30-SUS304B

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-105	100-DP2-30	PA	Ivory	1.5	800	3200

SPACER FOR 100 SERIES MOUNTING PLATE 100-DP2-32 2mm Thickness



●Used to make overlay 2mm smaller.

Use with the following mounting plates:

100-04A-32-3 100-04A-W-32
100-P4A-32-SUS304B

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-107	100-DP2-32	PA	Ivory	1.5	800	3200

SPACER FOR 100 SERIES MOUNTING PLATE 100-DP2-06 2mm Thickness



●Used to make overlay 2mm smaller.

[Remarks]
●When used for 100-06AW, it may partially protrude.

Use with the following mounting plates:

100-06 100-06AW
100-06A

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-145	100-DP2-06	PA	Ivory	2.1	800	3200

JIG FOR MOUNTING PLATE FOR 100 SERIES For Wooden Overlay Door



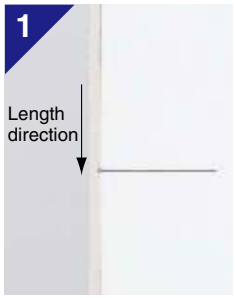
Use with the following mounting plates:

100-01	100-3
100-03A	100-02-30
100-04-30	100-02A-30
100-04A-30	100-04A-W-30
100-04A-W-30-2	100-04A-32-3
100-04A-W-32	

(Cannot be used for inset type mounting plates.)

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	160-074-109	JIG	8.5	50	500

[How to Install]



●Draw a line at the centre of the mounting plate installation position (length direction) on side board etc.
If you want to erase the line later, drawing on the edge of side board is recommended.



●Align the V-groove of the jig with the line.



●Insert the mounting plate into the jig for correct installation position.
Optionally, insert the mounting plate into the jig and then align with the line (in reverse order of ② and ③).



●Hold the jig while fixing the mounting plate with a screw.

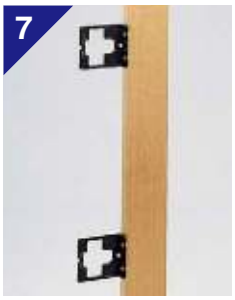
[Other Examples]



●Can also be used with mounting plates designed for system type.



●Mark the holes for easy installation.



●Attach the jig to a bar when installing several mounting plates at the same time.



●The bar will help you decide the correct distance between the plates.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

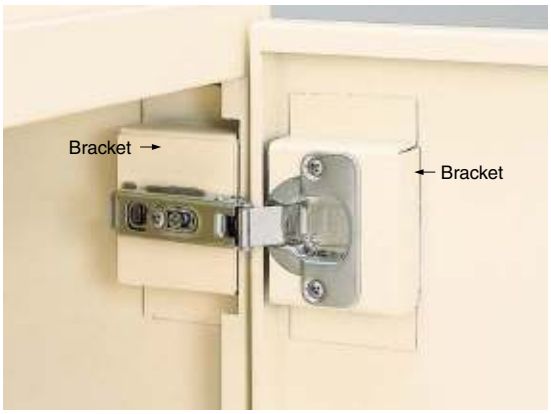
Examples of installation to sheet metal (Brackets not included)

Concealed hinges can also be used for metal cabinets.

170 (19 mm Overlay)

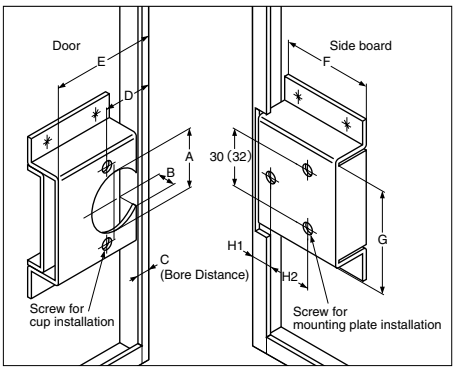


100 (19 mm Overlay)



[Bracket Installation]

Refer to this example and install brackets to the inner side of door and cabinet side board.
Customer should provide brackets.



Size A: Cup diameter (ϕ26, ϕ35, or ϕ40)
Size B: Bore depth (Be sure to support cup bottom)
Size C: Bore distance
Size D: Distance from door edge to cup mounting screw
Size E: More than distance from door edge to tip of cup flange.
●For details, refer to the content page of each hinge.

Size F: More than total length of mounting plate.
Size G: More than width of mounting plate.
Size H_1, H_2: Installation position size from edge of mounting plate.
●For details, refer to the content page of the mounting plate of hinge used.

Bracket for Mounting Plate Installation





Bracket for Cup Installation





CONCEALED HINGE (CLIP-ON) HT160THV2

VIDEO



- Sheet metal door can be quickly installed and removal.
- Spacers on the slide arms reduce arm wear and door sagging.
- Door opens without interfering with side cabinets or wall.
- For more details , please contact local representatives.

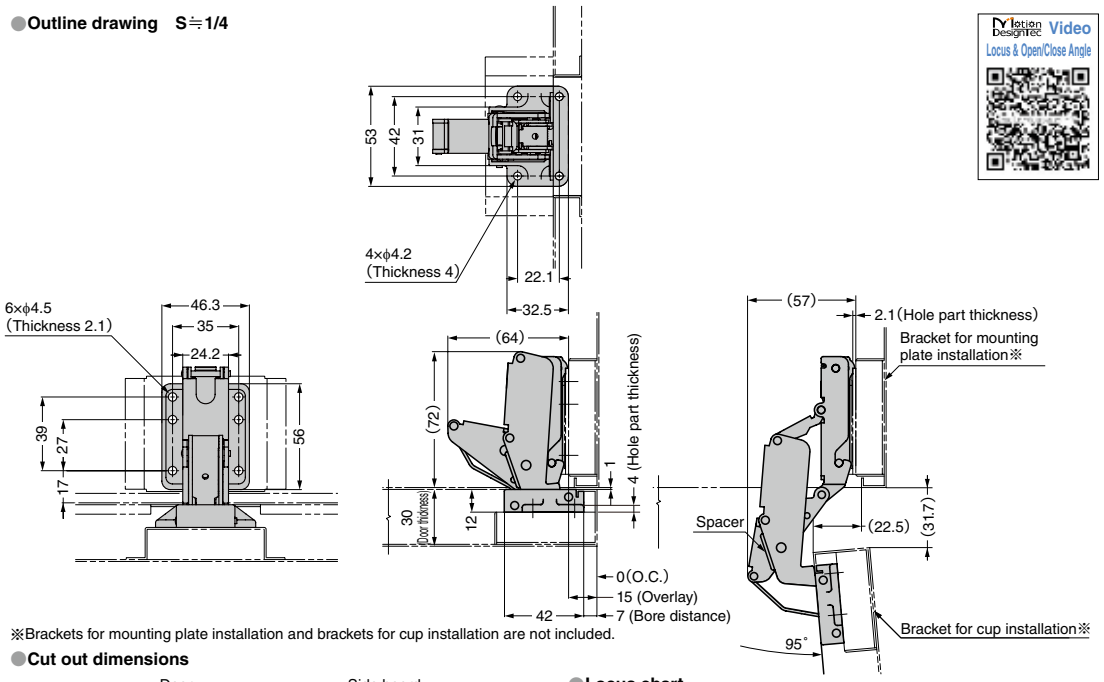
[Applications]

- Small vending machines, ticket vending machines, contiguous doors, door of cabinet embedded in the wall, etc.

[Sold Separately]

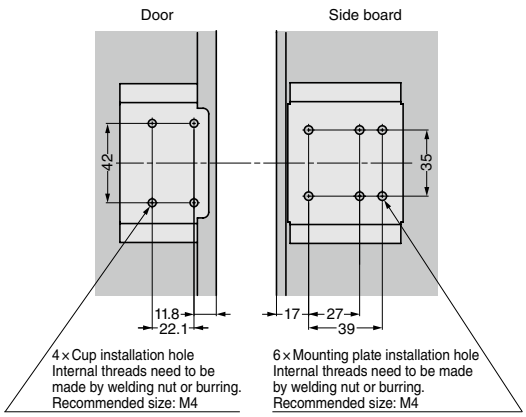
- Mounting plate HT160TZ

Outline drawing S≒1/4



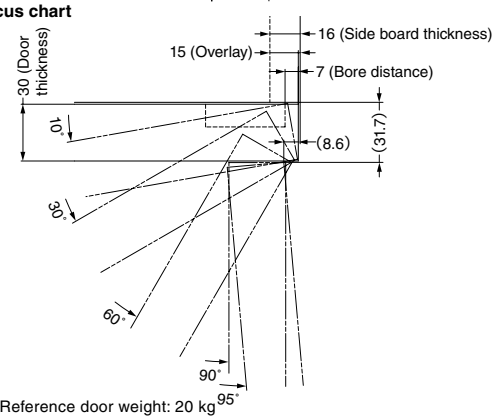
※Brackets for mounting plate installation and brackets for cup installation are not included.

Cut out dimensions



Drawing above is Bore Distance 7 mm, Door Thickness 30 mm and 15 mm Overlay.

Locus chart



Reference door weight: 20 kg
(In case of door size W450×H800, installation pitch 550, using 2 pcs vertically)

[Hinge Body]

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	160-070-327	HT160THV2-G	Body/Steel, Cup/Zinc Alloy (ZDC), Spacer/POM	Body・Cup/Nickel, Spacer/Black	204.6	100

[Mounting Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-070-391	HT160TZ	Steel	Nickel	69.1	200

※Use in combination of hinge body and mounting plate (sold separately).

CONCEALED HINGE FOR SHEET METAL HT160V2 With Mounting Plate

VIDEO



- For sheet metal doors.
- Overlay adjustment (Max. $^{+0}_{-3}$mm) by turning the overlay adjustment screw.
- Spacer on the slide arms reduces arm wear and door sagging.
- Door opens without interfering with side cabinets or wall.
- For more details, please contact local representatives.

[Applications]

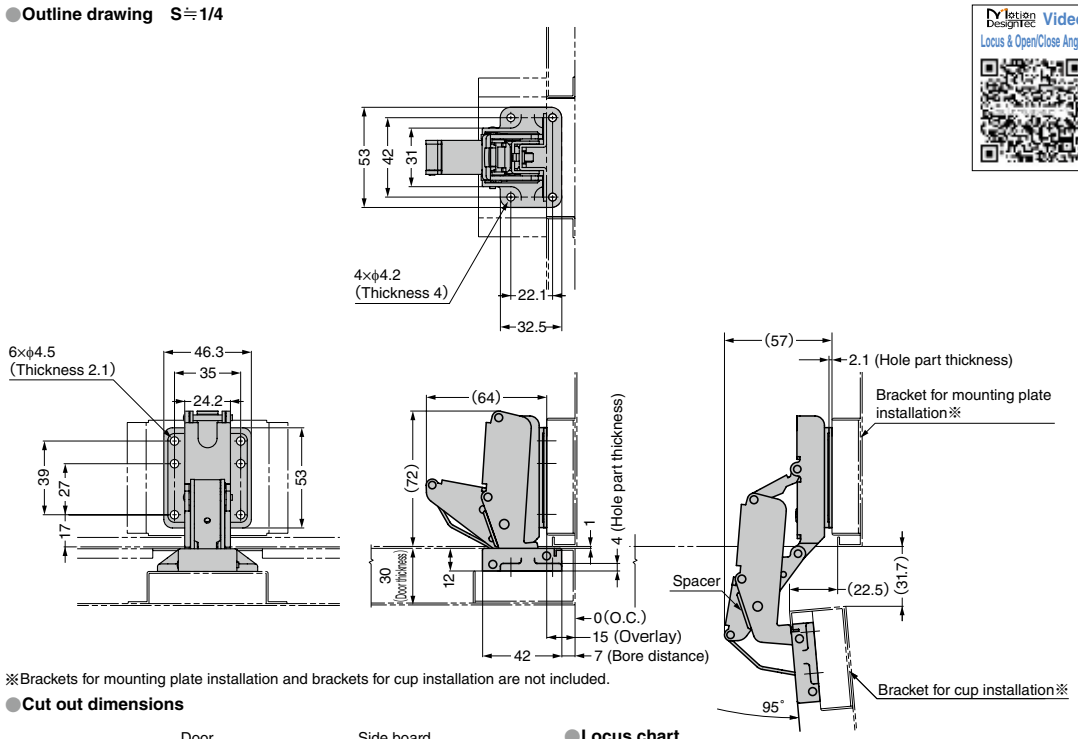
- Small vending machines, ticket vending machines, contiguous doors, door of cabinet embedded in the wall, etc.

[Parts Included]

- Mounting plate

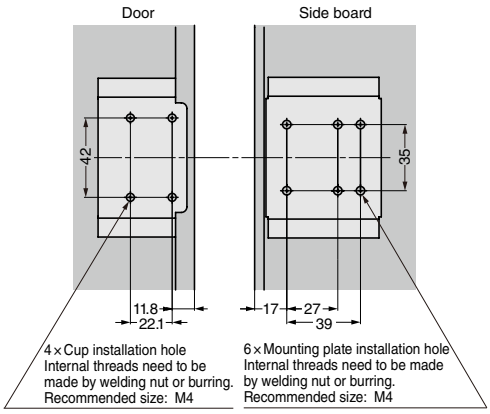
Outline drawing S≒1/4

Motion Designtec Video
Locus & Open/Close Angle



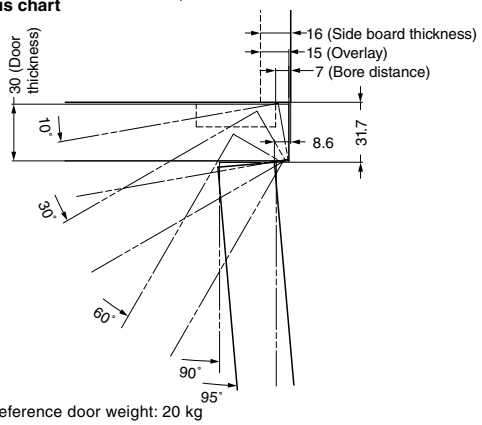
※Brackets for mounting plate installation and brackets for cup installation are not included.

Cut out dimensions



Drawing above is Bore Distance 7 mm, Door Thickness 30 mm and 15 mm Overlay.

Locus chart



Reference door weight: 20 kg
(In case of door size W450×H800, installation pitch 550, using 2 pcs vertically)

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	160-070-393	HT160V2	Body/Steel, Cup/Zinc Alloy (ZDC), Spacer/POM	Body • Cup/Nickel, Spacer/Black	252.6	50

SUGATSUNE

CONCEALED HINGE (CLIP-ON) H95TMH



- Compact design for space saving.
- Simple one-touch installation and detachment.
- Door opens without interfering with side cabinets or wall.
- For more details, please contact local representatives.

[Applications]

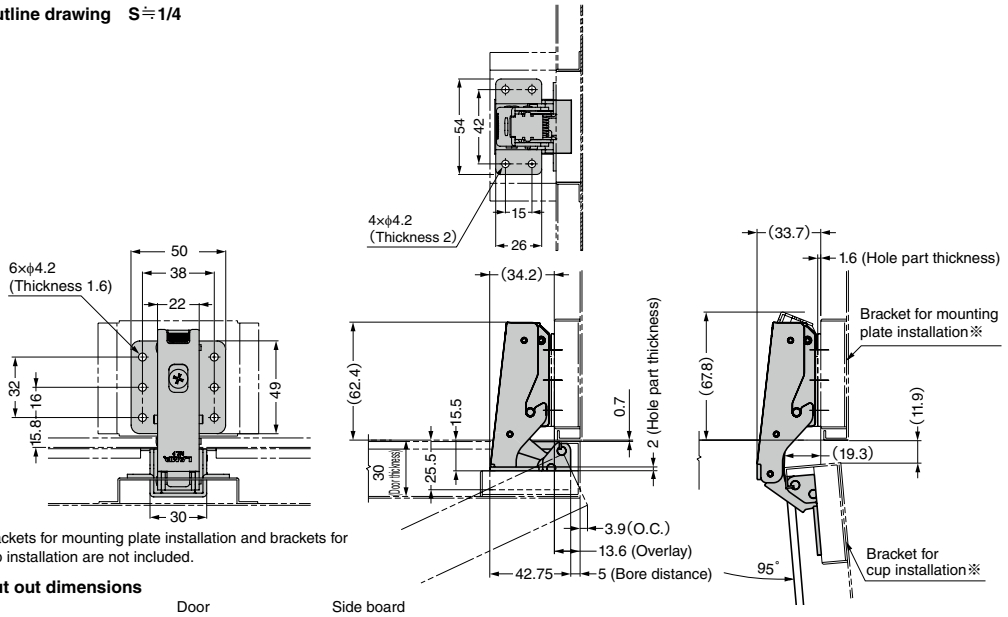
- Small vending machines, ticket vending machines, contiguous doors, door of cabinet embedded in the wall, etc.

[Sold Separately]

- Mounting plate H95TMZ

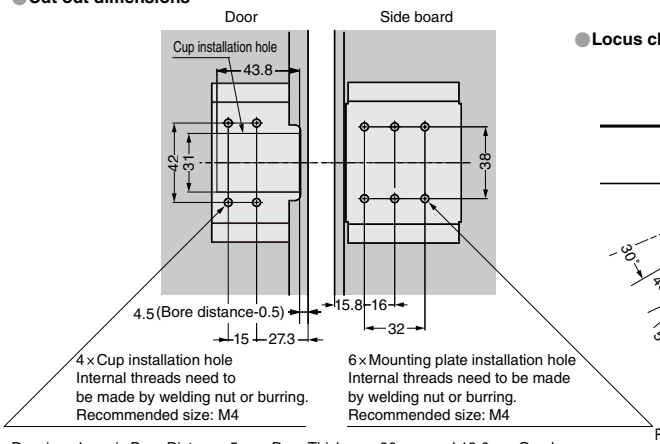
TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

Outline drawing S≒1/4

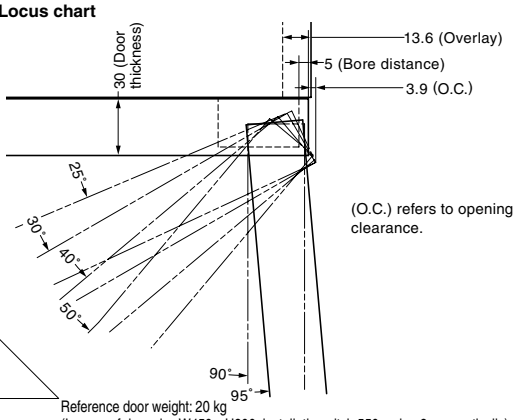


※Brackets for mounting plate installation and brackets for cup installation are not included.

Cut out dimensions



Locus chart



Drawing above is Bore Distance 5mm, Door Thickness 30 mm and 13.6mm Overlay.

Reference door weight: 20 kg
(In case of door size W450×H800, installation pitch 550, using 2 pcs vertically)

[Hinge Body]

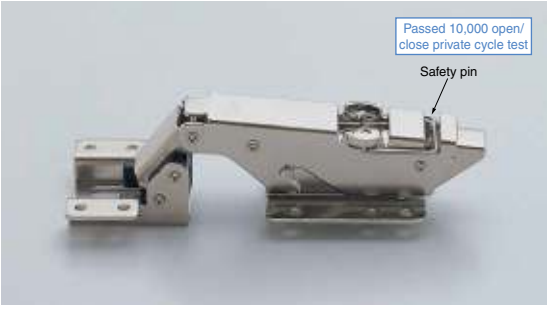
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-070-101	H95TMH	Steel	Nickel	138	100

[Mounting Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-070-102	H95TMZ	Steel	Nickel	80.8	100

※Use in combination of hinge body and mounting plate (sold separately).

CONCEALED HINGE (CLIP-ON) H95TSH



- Simple installation and detachment by one-touch.
- Door opens without interfering with side cabinets or wall.
- With a safety pin on the lock lever.
- For more details, please contact local representatives.

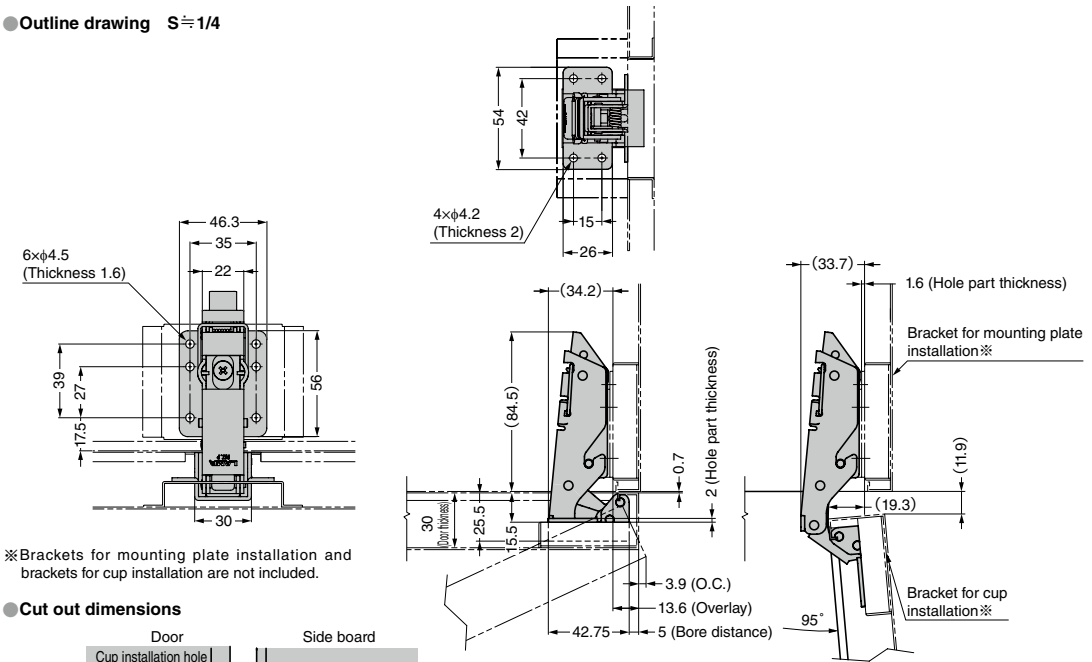
[Applications]

- Small vending machines, ticket vending machines, contiguous doors, door of cabinet embedded in the wall, etc.

[Sold Separately]

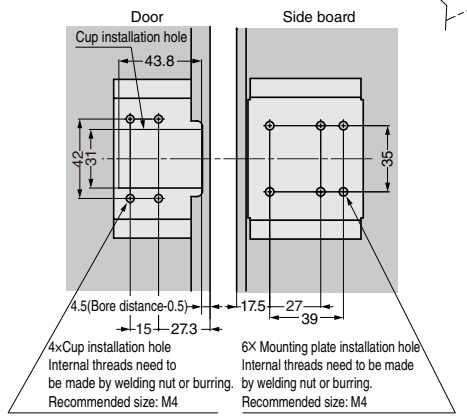
- Mounting plate H95TSZ

Outline drawing S≒1/4



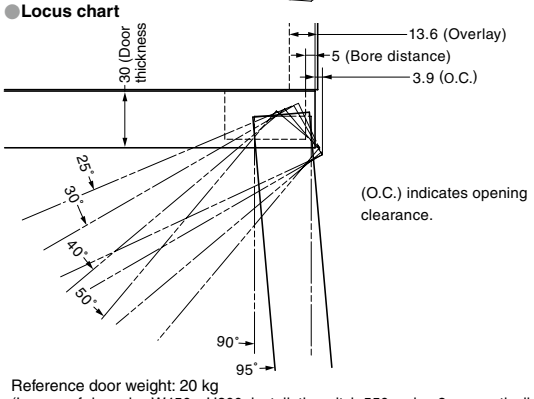
※Brackets for mounting plate installation and brackets for cup installation are not included.

Cut out dimensions



Drawing above is Bore Distance 5mm, Door Thickness 30 mm and 13.6mm Overlay.

Locus chart



Reference door weight: 20 kg
(In case of door size W450×H800, installation pitch 550, using 2 pcs vertically)

[Hinge Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-590	H95TSH	Steel	Nickel	150	100

[Mounting Plate] Sold Separately

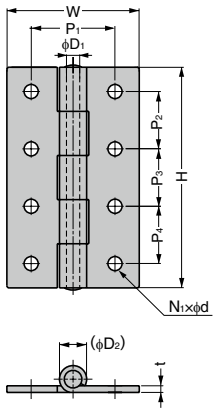
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
G	3D	160-073-591	H95TSZ	Steel	Nickel	94	100

※Use in combination of hinge body and mounting plate (sold separately).

BUTT HINGE LSA, LSB

SUS





●All parts made of polished stainless steel. Made to order available.

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Holes	Material	Finish	H	W	P1	P2	P3	P4	t	d	D1	D2	N1	Load Capacity N / 2 pcs	Load Capacity kgf / 2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-730	LSA-40	Without screw holes	Stainless Steel (SUS304)	Mirror	40	35	–	–	–	–	1.5	–	3	6.3	–	69	7	25	100	400
G	3D	170-090-731	LSA-50				50											88	9	30	100	400
G	3D	170-090-718	LSA-65				65	50					2		4.5	8.8		157	16	66	50	200
G	3D	170-090-719	LSA-75				75											186	19	76	40	160
G	3D	170-090-734	LSA-90				90	60					3		6	12.3		333	34	190	10	80
G	3D	170-090-735	LSA-100				100											363	37	200	10	60
G	3D	170-090-724	LSB-40	With screw holes			40	35	22	26	–	–	1.5	3.2	3	6.3	4	69	7	25	100	400
G	3D	170-090-725	LSB-50				50			34				4.3				88	9	30	100	400
G	3D	170-090-716	LSB-65				65	50	30	23	23		2		4.5	8.8	6	157	16	64	50	200
G	3D	170-090-717	LSB-75				75			27	27			5.3				186	19	74	40	160
G	3D	170-090-728	LSB-90				90	60	38	35	35		3	6.4	6	12.3	8	333	34	180	10	80
G	3D	170-090-729	LSB-100				100			26	26	26						363	37	195	10	60

Refer to 1 : P.15

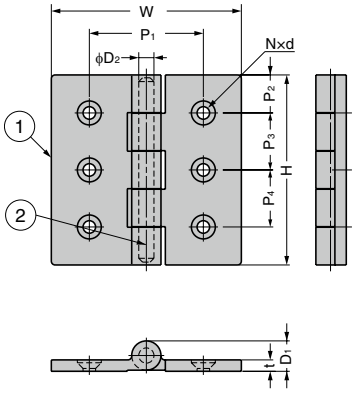
BUTT HINGE LSF

NSF SUS316



[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Mirror
②	Shaft	Stainless Steel (SUS316)	–

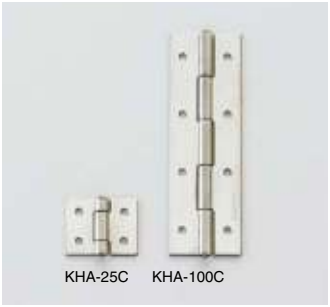
※SCS14 is equivalent of SUS316.

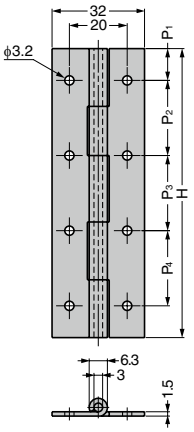
RoHS	CAD	Item Code	Item Name	H	W	P1	P2	P3	P4	t	D1	D2	Knuckles	N	d	Load Capacity N / 2 pcs	Load Capacity kgf / 2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-720	LSF-50	50	50	35	15	20	–	5	14	6	3	4	Counterbore for M4	275	28	110	20	100
G	3D	170-090-721	LSF-65	65	65	40		35							Counterbore for M5	353	36	190	20	80
G	3D	170-090-722	LSF-75	75	75	50	17.5	40		6	16	8			Counterbore for M6	500	51	305	10	50
G	3D	170-090-723	LSF-100	100	100	60	20	30	30				5	6		667	68	500	10	30

Refer to 1 : P.15

BUTT HINGE KHA

SUS





- Various sizes available.
- Steel hinge also available on order.For further details, please contact local representatives.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

Material	Finish
Stainless Steel (SUS304)	Polished

[With Mounting Holes]

RoHS	CAD	Item Code	Item Name	H	P1	P2	P3	P4	Knuckles	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-180	KHA-25C	25	6	13	–	–	3	49	5	13	200	800
G	3D	170-091-181	KHA-30C	30	7	16				59	6	16	200	800
G	3D	170-091-182	KHA-40C	40	8	24				69	7	21	150	600
G	3D	170-091-199	KHA-50C	50	10	30				88	9	26	100	400
G	3D	170-091-200	KHA-60C	60	8	22	22	–	5	108	11	31	100	400
G	3D	170-091-201	KHA-65C	65	8.5	24	24			118	12	34	100	400
G	3D	170-091-202	KHA-75C	75	9.5	28	28			137	14	39	50	200
G	3D	170-091-203	KHA-80C	80	10	30	30			147	15	42	50	200
G	3D	170-091-204	KHA-90C	90		35	35			167	17	47	50	200
G	3D	170-091-205	KHA-100C	100	11	26	26	26		186	19	52	50	200

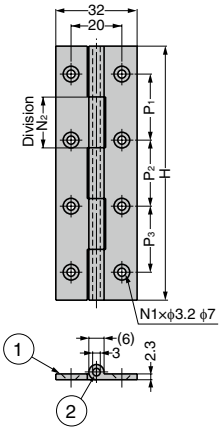
[Without Mounting Holes]

RoHS	CAD	Item Code	Item Name	H	Knuckles	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-170	KHA-25CN	25	3	49	5	13	200	800
G	3D	170-091-171	KHA-30CN	30		59	6	16	200	800
G	3D	170-091-190	KHA-40CN	40		69	7	21	150	600
G	3D	170-091-191	KHA-50CN	50		88	9	26	100	400
G	3D	170-091-192	KHA-60CN	60	5	108	11	31	100	400
G	3D	170-091-193	KHA-65CN	65		118	12	34	100	400
G	3D	170-091-194	KHA-75CN	75		137	14	39	50	200
G	3D	170-091-195	KHA-80CN	80		147	15	42	50	200
G	3D	170-091-196	KHA-90CN	90		167	17	47	50	200
G	3D	170-091-179	KHA-100CN	100		186	19	52	50	200

Refer to 1 : P.15

BUTT HINGE KHB





- Drawing material, with small shaft diameter.
- Various sizes available.

[Applications]

- Ship, vehicle, kitchen equipment

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

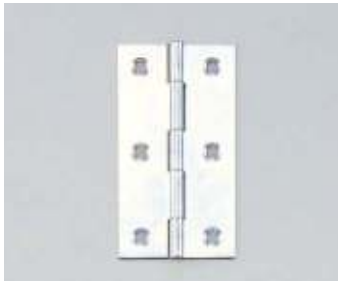
No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Shaft		–

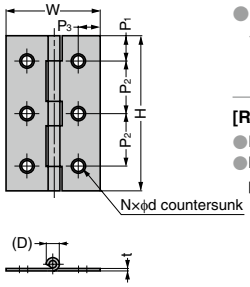
RoHS	CAD	Item Code	Item Name	H	P1	P2	P3	N1	N2	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-226	KHB-25CR	25	13	–	–	4	3	49	5	17	200	800
G	3D	170-091-227	KHB-30CR	30	16					59	6	20	150	600
G	3D	170-091-228	KHB-40CR	40	24					78	8	28	100	400
G	3D	170-091-229	KHB-50CR	50	30					98	10	35	100	400
G	3D	170-091-230	KHB-60CR	60	22	22	–	6	5	118	12	41	60	240
G	3D	170-091-231	KHB-65CR	65	24	24				127	13	43	60	240
G	3D	170-091-232	KHB-75CR	75	28	28				147	15	52	60	240
G	3D	170-091-233	KHB-80CR	80	30	30				157	16	54	60	240
G	3D	170-091-234	KHB-90CR	90	35	35				177	18	63	50	200
G	3D	170-091-235	KHB-100CR	100	26	26	26	8		206	21	68	50	200

Refer to 1 : P.15

Updated 2017.10.27

BUTT HINGE F-A





- No hole type or different finish (bronze plating, melamine enamel finish, plain) are available on order. For further details, please contact local representatives.

[Remarks]
- Product movement varies. Please check with actual item.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

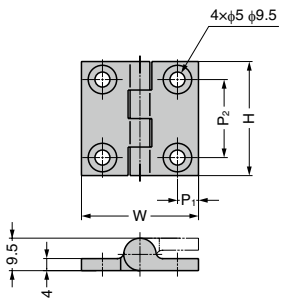
RoHS	CAD	Item Code	Item Name	Material	Finish	H	W	P_1	P_2	P_3	t	D	N	d	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-282	F-25A	Steel (SPCC)	Clear Zinc Chromate	25	20	3.5	18	3.5	0.8	3.8	4	3.4	20	2	4.4	120	4800
G	3D	170-090-283	F-32A			32	22	4	24	4							6.1	120	4800
G	3D	170-090-284	F-38A			38	26	5	28	4.5		4.2			29	3	8.9	60	3600
G	3D	170-090-285	F-51A			51	30	6	39	5.5				3.7	39	4	13.2	60	2400
G	3D	170-090-287	F-64A			64	33	6.5	25.5	6.5	1	4.4	6	3.9	59	6	19.4	24	1200
G	3D	170-090-286	F-76A			76	41	8	30	8		5.3		4.4	69	7	32.5	24	720

Refer to 1 : P.15

BUTT HINGE 28300, 28400

SUS316





[Remarks]
- Recommended for use in pairs.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Material	Finish	H	W	P_1	P_2	Door Width	Door Height	Door Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-096-004	28300	Stainless Steel (SCS14)	Polished	38	39	7	26	Max.	Max.	Max.	167	17	55	20	100
G	3D	170-096-005	28400			50	50	7.5	34	450	700	21	226	23	90	20	–

Refer to 1 : P.15

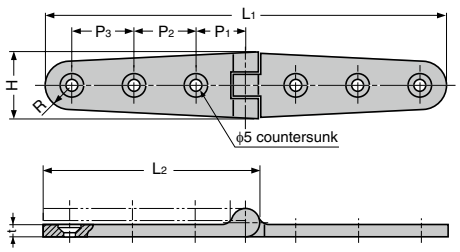
※SCS14 is equivalent of SUS316.

BUTT HINGE 50704, 50706

SUS316



[Remarks]
- Recommended for use in pairs.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



RoHS	CAD	Item Code	Item Name	Holes	Material	Finish	L_1	L_2	H	R	P_1	P_2	P_3	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-096-000	50704	4	Stainless Steel (SCS14)	Polished	105	57	26.5	9	17.5	25	–	4	118	12	75	20	100
G	3D	170-096-001	50706	6			158	84			19.5		25				115	20	100

Refer to 1 : P.15

※SCS14 is equivalent of SUS316.

BUTT HINGE D-S-A

SUS

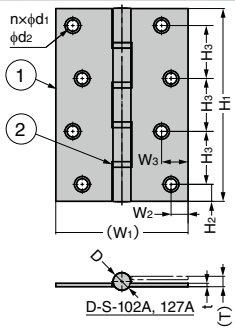


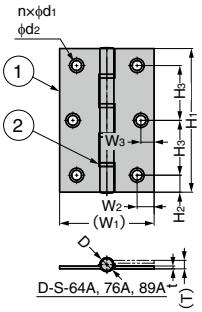
[Remarks]

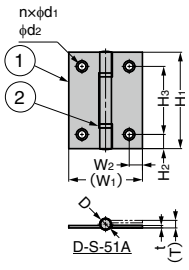
- When installing this hinge to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the hinge is fixed.
- Product movement and edge processing vary. Please check with actual item.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Parts Included]

- Countersunk head wood screw (SUS)







No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Washer	PA	–

RoHS	CAD	Item Code	Item Name	H1	H2	H3	W1	W2	W3	D	t	T	d1	d2	Knuckles	Washer	Holes n	Screw	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-265	D-S-51A	51	7.5	36	39	7	–	6.2	1.3	4	4.2	6	3	2	4	2.7×16	78	8	27.4	20	1000
G	3D	170-090-266	D-S-64A	64	7	25	42.5	8	6				5	7				3.1×16	98	10	36.5	20	800
G	3D	170-090-267	D-S-76A	76	9	29	50	9	7	7.4	1.5	4.5	5.2	7.5			6	3.5×22	137	14	59.5	20	480
G	3D	170-090-268	D-S-89A	89	10.5	34	56.5	10.5	7.5	9.1			5.4	8.3	5	4		3.8×25	196	20	91.6	10	280
G	3D	170-090-269	D-S-102A	102	9	28	70	9	14	9.5	1.8	5.5							226	23	132.5	10	200
G	3D	170-090-270	D-S-127A	127	11	35	82	10.5	16	11.3		6	6	9			8	4.1×25	284	29	231.5	6	120

Refer to 1 : P.15

BUTT HINGE D-S-B

SUS

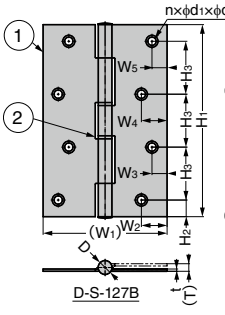


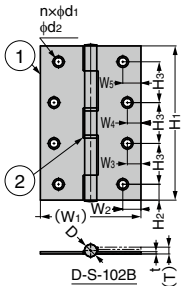
[Remarks]

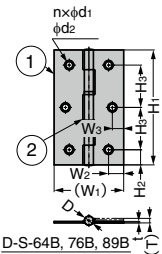
- Dimensions in the following drawing are for reference. Please confirm with actual item when installing.
- When installing this hinge to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the hinge is fixed.
- Product movement and edge processing vary. Please check with actual item.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

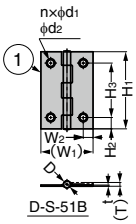
[Parts Included]

- Countersunk head wood screw (SUS)









No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS430)	Polished
②	Washer	PA	–

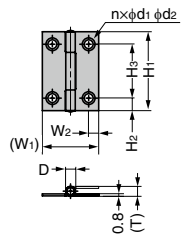
RoHS	CAD	Item Code	Item Name	H1	H2	H3	W1	W2	W3	W4	W5	D	t	T	d1	d2	Knuckles	Washer	Holes n	Screw	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-271	D-S-51B	51	7.5	36	34.5	6.5	–			4.8	0.8	2.5	4.4	5.8		0	4	2.7×13	49	5	15.2	20	1200
G	3D	170-090-272	D-S-64B	64	8	24	40	9	5.5	–	–			3	4.2				6	2.7×16	59	6	23.8	20	1000
G	3D	170-090-273	D-S-76B	76	10	28	46	10	7.5			6	1.0		4.5	6.2				2.9×20	88	9	37.8	20	700
G	3D	170-090-274	D-S-89B	89	9.5	35	56	12	8			7	1.2	4		7.5	5	2		3.5×22	127	13	63.6	10	400
G	3D	170-090-275	D-S-102B	102	10.5	27	66.5		9	9	12	8.2	1.5	4.5	5.5				8		186	19	96.4	10	300
G	3D	170-090-276	D-S-127B	127	11	35	82	10	17	10	17	9.2		5		8				3.8×25	235	24	161.5	6	180

Refer to 1 : P.15

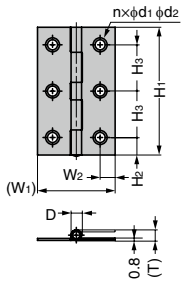
BUTT HINGE D-S-C

SUS





D-S-25C, 32C, 38C



D-S-51C, 64C

[Remarks]

- Dimensions in the following drawing are for reference. Please confirm with actual item when installing.
- When installing this hinge to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the hinge is fixed.
- Product movement and edge processing vary. Please check with actual item.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Parts Included]

- Countersunk head wood screw (SUS)

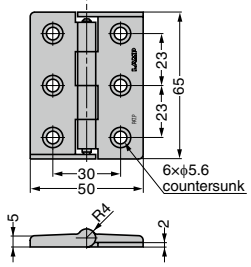
RoHS	CAD	Item Code	Item Name	Material	Finish	H1	H2	H3	W1	W2	D	T	d1	d2	Knuckles	Holes n	Screw	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-277	D-S-25C	Stainless Steel (SUS430)	Polished	25.5	5	15.5	21	3.5	3.8	3.8	3.5	5.1	3	4	2.4×10	20	2	4.4	100	3000
G	3D	170-090-278	D-S-32C			31.5		21.5	22.5	4								29	3	5.7	100	3000
G	3D	170-090-279	D-S-38C			38	5.5	27	26	5	3.9	3.9	3.8							7.7	50	2000
G	3D	170-090-280	D-S-51C			51	7	18.5	31	6	4.2	4.2	4	5.6	5	6	2.7×13	49	5	12.9	50	1500
G	3D	170-090-281	D-S-64C			64	9	23	33	6.2							2.7×16	59	6	19.4	50	1000

Refer to 1 : P.15

BUTT HINGE HG-BF1

SUS





- Rim on edges may reduce load.
- Rim on edges may reduce warpage and increase strength.
- Rim on edges prevents shaft from falling off.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

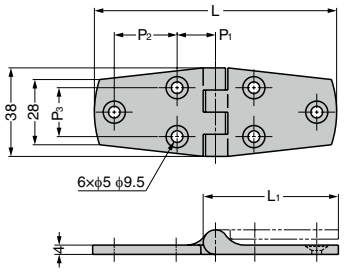
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-560	HG-BF1	Stainless Steel (SUS304)	Barrel Polished	157	16	63	20	120

Refer to 1 : P.15

BUTT HINGE 28000, 28500

SUS316





[Remarks]

- Recommended for use in pairs.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	P1	P2	P3	Door Width	Door Height	Door Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-096-002	28500	Stainless Steel (SCS14)	Polished	74	42	13	17	20	Max. 450	Max. 700	Max. 21	167	17	85	20	100
G	3D	170-096-003	28000			104	57	16.5	27	21						115	20	100

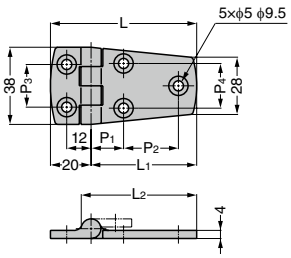
Refer to 1 : P.15

※SCS14 is equivalent of SUS316.

BUTT HINGE 27800, 27900

SUS316





[Remarks]
- Recommended for use in pairs.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	L2	P1	P2	P3	P4	Door Width	Door Height	Door Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-096-008	27900	Stainless Steel (SCS14)	Polished	58	38	42	13.5	16.5	21	20	Max.	Max.	Max.	167	17	70	20	100
G	3D	170-096-007	27800			72	52	57	16	27	22	21	450	700	21			85	20	100

Refer to 1 : P.15

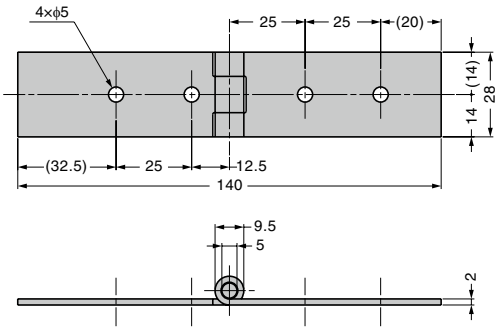
※SCS14 is equivalent of SUS316.

BUTT HINGE SYR140

SUS



[Remarks]
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



RoHS	CAD	Item Code	Item Name	Material	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Finish	Weight (g)	Carton (pcs)
G	3D	170-099-045	SYR140	Stainless Steel (SUS304)	69	7	Plain	74	300

Refer to 1 : P.15

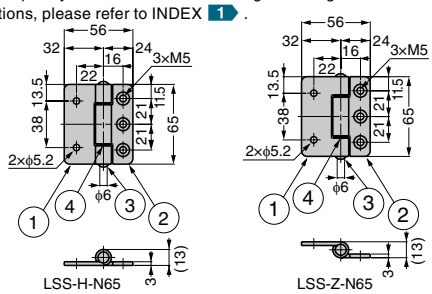
BUTT HINGE LSS

SUS



No.	Part Name	Material	Finish
①	Body A	Stainless Steel (SUS304)	Satin
②	Body B		
③	Shaft		–
④	Washer		

[Remarks]
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



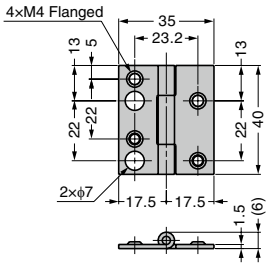
RoHS	CAD	Item Code	Item Name	Holes	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-542	LSS-H-A65	Without screw holes	245	25	125	30	120
G	3D	170-090-541	LSS-H-N65	With screw holes				30	120
G	3D	170-090-548	LSS-Z-A65	Without screw holes				30	120
G	3D	170-090-547	LSS-Z-N65	With screw holes				30	120

Refer to 1 : P.15

BUTT HINGE SBR40

SUS





- Hinge will not be in contact with screw heads while closing.
- Hinge is internal threaded.

[Remarks]

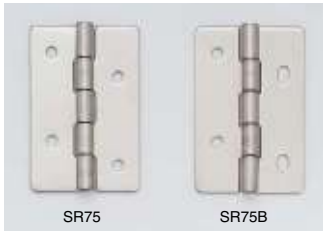
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

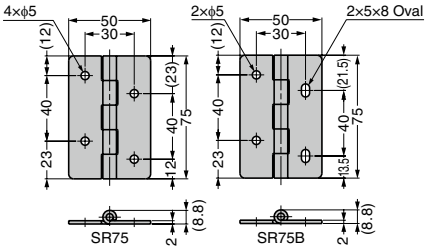
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)
G	3D	170-099-088	SBR40	Stainless Steel (SUS304)	Plain	69	7	21	20

Refer to 1 : P.15

BUTT HINGE SR75, SR75B

SUS





[Applications]

- Measuring instruments, precision instruments, etc.

[Remarks]

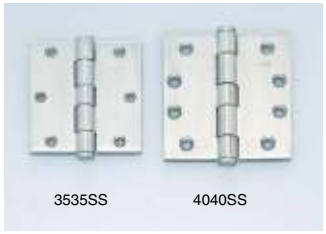
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

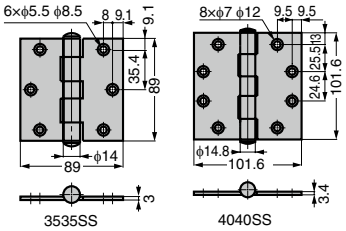
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Carton (pcs)
G	3D	170-099-086	SR75	Stainless Steel (SUS304)	Plain	186	19	76	250
G	3D	170-099-047	SR75B					76	100

Refer to 1 : P.15

BUTT HINGE 3535SS, 4040SS

NSF SUS





[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .
- Countersinking is required for cabinet when installing to metal sheet.

[Parts Included]

3535SS : Countersunk head wood screw 4.5×25
4040SS : Countersunk head tapping screw 5.5×32

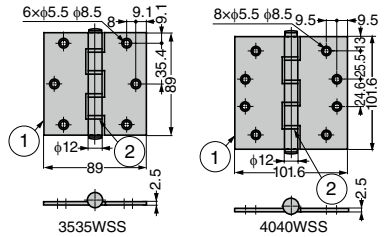
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-920-181	3535SS	Stainless Steel (SUS304)	Satin	333	34	145	2	100
G	3D	170-920-182	4040SS			431	44	195	2	100

Refer to 1 : P.15

BUTT HINGE (W/WASHER) 3535WSS, 4040WSS

SUS





- Plastic washer prevents metal-to-metal contact and metal powder scattering.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .
- Countersinking is required for cabinet when installing to metal sheet.

[Parts Included]

- Countersunk head tapping screw 4×25

RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-029-834	3535WSS	245	25	195	2	100
G	3D	170-029-835	4040WSS	294	30	250	2	50

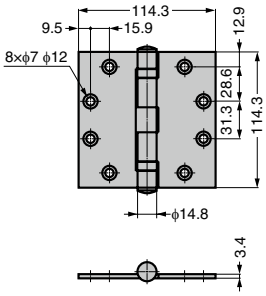
No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Washer	PA	White

Refer to 1 : P.15

BUTT HINGE (W/ BALL BEARING) 4545BSS

SUS





- Ball bearing provides smooth movement.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .
- Countersinking is required for cabinet when installing to metal sheet.

[Parts Included]

- Countersunk head tapping screw 5.5×32

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-920-184	4545BSS	Stainless Steel (SUS304)	Satin	481	49	420	2	50

Refer to 1 : P.15

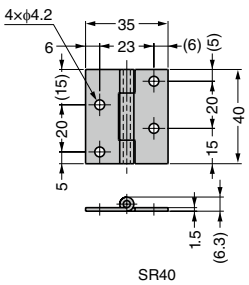
BUTT HINGE SR

SUS

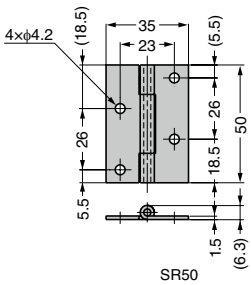


[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



SR40



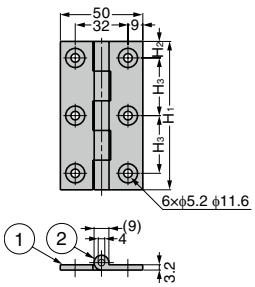
SR50

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Carton (pcs)
G	3D	170-099-044	SR40	Stainless Steel (SUS304)	Plain	69	7	22	500
G	3D	170-099-042	SR50			88	9	27	500

Refer to 1 : P.15

BUTT HINGE KHBL





- Drawing material, with small shaft diameter.

[Applications]

- Ship, vehicle, kitchen equipment

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Shaft		Plain

RoHS	CAD	Item Code	Item Name	H_1	H_2	H_3	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-479	KHBL-60CR	60	9	21	167	17	95	–	–
G	3D	170-099-761	KHBL-90CR	90	10	35	255	26	140	–	–

Refer to 1 : P.15

Updated 2017.10.27

BUTT HINGE FHS

SUS

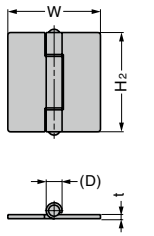


[Applications]

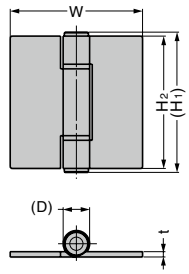
- Ship, kitchen equipment

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



FHS-50, FHS-60, FHS-75



FHS-100, FHS-125, FHS-150

RoHS	CAD	Item Code	Item Name	Material	Finish	H_1	H_2	W	D	t	Knuckles	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-479	FHS-50	Stainless Steel (SUS304)	Satin	–	50	50	12	3	3	186	19	90	–	–
G	3D	170-090-478	FHS-60				60	64				226	23	130	–	–
G	3D	170-090-477	FHS-75				75	70				275	28	170	–	–
G	3D	170-090-476	FHS-100			110	100	100	20	4		490	50	520	–	40
G	3D	170-090-475	FHS-125			135	125				5	569	58	635	–	–
G	3D	170-090-474	FHS-150			160	150	120				637	65	850	–	–

Refer to 1 : P.15

BUTT HINGE LSK-1157

SUS



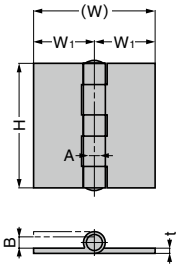
- Additional drilling is also possible. For further details, please contact local representatives.

[Applications]

- Power distribution box, control board, vehicle, ship, etc.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

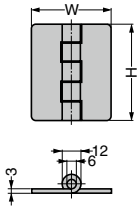


RoHS	CAD	Item Code	Item Name	Material	Finish	H	W_1	W	A	B	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-445	LSK-1157-1	Stainless Steel (SUS304)	Satin	51	25	50	6	6	2.5	127	13	76	10	250
G	3D	170-090-446	LSK-1157-2			64	32	64	7	7	3	235	24	141	10	150
G	3D	170-090-447	LSK-1157-3			76	37	74				284	29	188	10	100
G	3D	170-090-448	LSK-1157-4			89	43.5	87	8	8		333	34	257	10	80
G	3D	170-090-449	LSK-1157-5			101.6	49.5	99			4	500	51	417	10	50
G	3D	170-090-450	LSK-1157-6			127	59.5	119	11	11		579	59	681	6	30
G	3D	170-090-451	LSK-1157-7			152	71.5	143	12	12		647	66	928	4	20

Refer to 1 : P.15

BUTT HINGE D-CH





[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

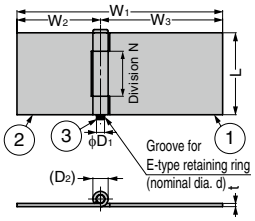
RoHS	CAD	Item Code	Item Name	Material	Finish	H	W	Knuckles	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-395	D-CH-60	Steel (SPHC)	Coloured Zinc Chromate (Trivalent)	60	50	3	177	18	105	–	–
G	3D	170-090-396	D-CH-90			90	60	5	275	28	180	–	–
G	3D	170-090-398	D-CH-100			100	80		294	30	245	–	–

Refer to 1 : P.15

BUTT HINGE OLYA

SUS





- Shaft detachable.

[Remarks]

- E-type retaining ring is not included.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

No.	Part Name	Material	Finish
①	Body A	Stainless Steel (SUS304)	Polished
②	Body B		
③	Shaft		Plain

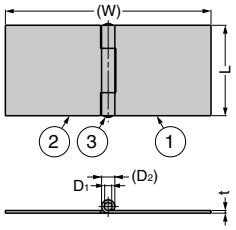
RoHS	CAD	Item Code	Item Name	L	W1	W2	W3	t	d	D1	D2	N	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-772	OLYA-128S	51	128	52	76	2	4	5	9.5	3	127	13	120	–	–
G	3D	170-099-771	OLYA-185S	65	185	30	155	3	5	6	12.5	5	245	25	330	–	–

Refer to 1 : P.15

BUTT HINGE YHS

SUS





[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

No.	Part Name	Material	Finish
①	Body A	Stainless Steel (SUS304)	Polished
②	Body B		
③	Shaft		Plain

RoHS	CAD	Item Code	Item Name	L	W	t	D1	D2	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-428	YHS-32	32	90	1.5	3.5	7	59	6	45	–	–
G	3D	170-099-427	YHS-38	38	82	1.2	3	5.6			35	–	–
G	3D	170-099-426	YHS-51	51	116	1.5	4	7.2	98	10	85	–	10

Refer to 1 : P.15

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

PIANO HINGE LSN

SUS



- Thick type (t = 3mm, 4mm) for ultra heavy duty also available. 5 widths (25mm, 32mm, 38mm, 50mm, 100mm) and length from 300 to 2000mm suitable for various applications.
- LSN 40-100-500 and LSN 40-100-1000 have built-in metal mesh resin composite bush with excellent wear resistance. Both ends are welded to prevent shaft from slipping off.
- Special dimensions and additional hole drilling, or different materials and finishes also available by made to order.

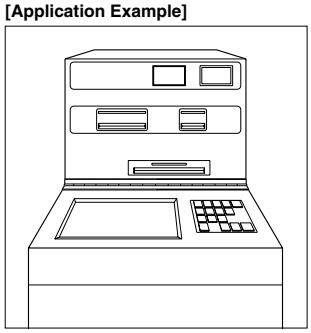
[Applications]

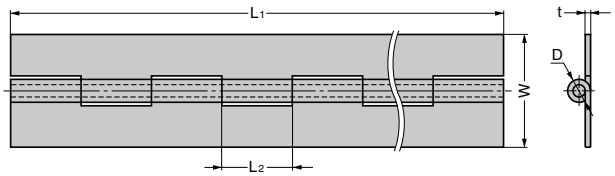
- ATM, game machine, control board, etc.

[Remarks]

- Load capacity is the value when using one hinges. For calculation conditions, please refer to INDEX 1 .

[Application Example]



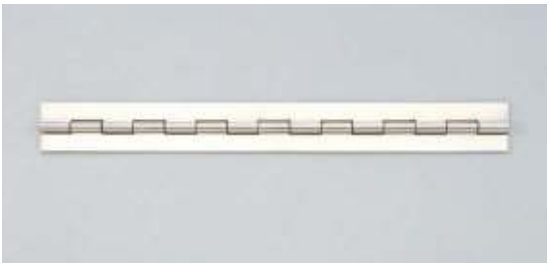


RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	W	t	D	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-376	LSN8-25-300	Stainless Steel (SUS304)	Polished	300	12.5	25	0.8	2.6	137	14	690	10	50
G	3D	170-099-377	LSN8-25-600			600					275	28	134	10	50
G	3D	170-099-362	LSN8-25-1000			1000					461	47	240	10	50
G	3D	170-099-187	LSN8-25-1800			1800					716	73	400	10	50
G	3D	170-099-378	LSN8-32-300			300		32			137	14	79	10	50
G	3D	170-099-372	LSN8-32-600			600					275	28	166	10	50
G	3D	170-099-361	LSN8-32-1000			1000					461	47	265	10	50
G	3D	170-099-186	LSN8-32-1800			1800					716	73	420	10	50
G	3D	170-099-198	LSN8-38-1000			1000		38			461	47	0	10	50
G	3D	170-099-184	LSN8-38-1800			1800					716	73	500	10	50
G	3D	170-149-329	LSN15-32-300			300	20	32	1.5	3.5	255	26	165	10	50
G	3D	170-099-373	LSN15-32-350			350					304	31	192	10	50
G	3D	170-149-330	LSN15-32-450			450					392	40	247	10	50
G	3D	170-149-331	LSN15-32-600			600					520	53	337	10	50
G	3D	170-099-982	LSN15-32-750			750					598	61	410	10	50
G	3D	170-099-374	LSN15-32-850			850					628	64	461	10	50
G	3D	170-099-375	LSN15-32-900			900					667	68	491	10	50
G	3D	170-099-808	LSN15-32-1000			1000					745	76	545	10	50
G	3D	170-099-030	LSN15-38-1000					38					609	10	50
G	3D	170-099-031	LSN15-38-1800			1800					1370	140	1300	5	25
G	3D	170-090-709	LSN15-50-1000			1000		50			745	76	400	5	25
G	3D	170-099-182	LSN15-50-1800			1800					1370	140	1400	5	25
G	3D	170-099-029	LSN20-50-1000			1000	50		2	5	981	100	1096	5	25
G	3D	170-012-596	LSN30-100-1000		Plain			100	3.0	8.0	1370	140	3175	1	5
G	3D	170-012-597	LSN30-100-2000			2000					2550	260	6350	1	5
G	3D	170-012-598	※LSN40-100-500			500	90		4.0	10.0	981	100	2400	1	–
G	3D	170-012-599	※LSN40-100-1000			1000					1770	180	4600	1	–

Refer to 1 : P.15

※Built-in metal mesh resin composite bush with excellent load bearing and wear resistance.
※Both ends are welded to prevent shaft from slipping off.
※Appearance may be partly different from the drawing.

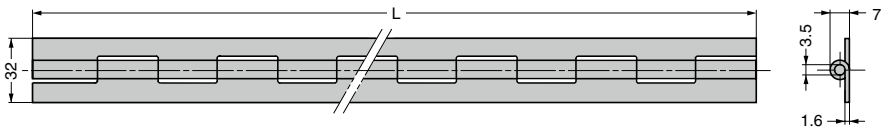
PIANO HINGE LH



- Can be cut to any length. In case of cutting the hinge, please cut the side without knurling to prevent the shaft from coming off.
- Special dimensions and drilled products also available.

[Remarks]

- Load capacity is the value when using one hinges. For calculation conditions, please refer to INDEX 1 .



RoHS	CAD	Item Code	Item Name	Material	Finish	L	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)
G	3D	170-095-505	LH-30A	Steel (SPCC)	Clear Zinc Chromate	300	216	22	175	30
G	3D	170-095-508	LH-35A			350	255	26	205	30
G	3D	170-090-507	LH-45A			450	324	33	265	30
G	3D	170-095-512	LH-60A			600	431	44	350	10
G	3D	170-095-515	LH-75A			750	539	55	437	10
G	3D	170-095-518	LH-85A			850	569	58	493	10
G	3D	170-095-521	LH-90A			900	598	61	522	10
G	3D	170-095-524	LH-100A			1000	618	63	551	10

Refer to 1 : P.15

PIANO HINGE LHN

SUS

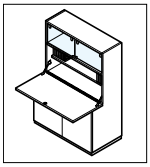


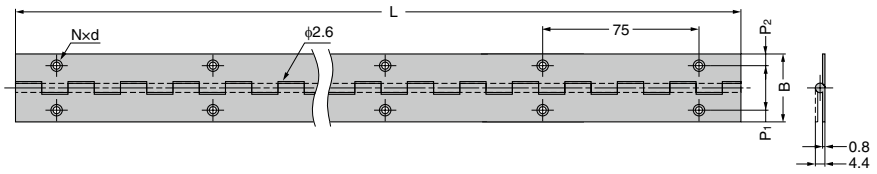
- Length from 1200 to 2100mm suitable for various application.
- Can be cut to any length.

[Remarks]

- Size L is slightly shorter. Please check with actual item.
- Mounting hole pitch is actually measured on wooden item. Not suitable for sheet metal and installation with mounting hole pitch limitation.
- Take care not to damage the shaft when cutting.
- Attention should be paid to prevent the shaft from coming off.
- When installing this hinge to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the hinge is fixed.
- Load capacity is the value when using one hinges. For calculation conditions, please refer to INDEX 1 .

[Application Example]





RoHS	CAD	Item Code	Item Name	Material	Finish	L	B	P1	P2	Qty of Holes N	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)
G	3D	170-097-846	LHN-32-1200	Stainless Steel (SUS304)	Polished	1200	32	20	6	32		549	56	400	30
G	3D	170-097-847	LHN-32-1500			1500				40	ϕ4	588	60	400	30
G	3D	170-097-848	LHN-32-1872			1872				50	ϕ5.2	745	76	400	30
G	3D	170-097-849	LHN-32-2100			2100				56		834	85	600	30
G	3D	170-097-850	LHN-38-1200			1200	38	22.5	7.75	32		549	56	400	30
G	3D	170-097-843	LHN-38-1500			1500				40	ϕ4.6	588	60	400	30
G	3D	170-097-844	LHN-38-1872			1872				50	ϕ6	745	76	600	30
G	3D	170-097-845	LHN-38-2100			2100				56		834	85	650	30

Refer to 1 : P.15

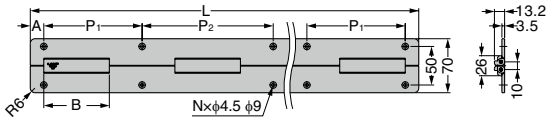
TABLETOP PIANO HINGE HG-MH



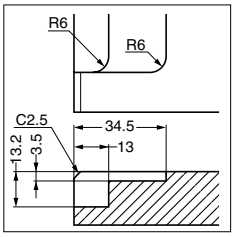
- Double pivot hinge allows 180° opening.
- 400mm, 800mm, 1100mm length available.
- Can be cut easily. In case of cutting the hinge, attention should be paid to prevent the shaft from coming off.

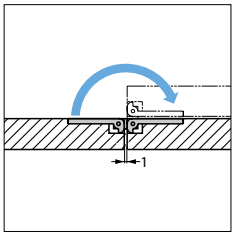
[Remarks]

- No stopper mechanism.
- Do not bear the door weight by hinge alone.



[Cut Out Dimensions]





RoHS	CAD	Item Code	Item Name	Material	Finish	L	A	P_1	P_2	B	Qty of Holes N	Weight (g)	Box (pcs)
G	3D	170-012-587	HG-MH400S	Aluminium Alloy	Anodised/Stainless Finish	400	15	111	148	74	8	452	15
G	3D	170-012-588	HG-MH400BR		Anodised/Brown							452	15
G	3D	170-012-589	HG-MH400BL		Anodised/Black							452	15
G	3D	170-012-590	HG-MH800S		Anodised/Stainless Finish	800	17.5	127.5	170	85	12	908	10
G	3D	170-012-591	HG-MH800BR		Anodised/Brown							908	10
G	3D	170-012-592	HG-MH800BL		Anodised/Black							908	10
G	3D	170-012-593	HG-MH1100S		Anodised/Stainless Finish	1100	16.5	145.5	194	97	14	1236	8
G	3D	170-012-594	HG-MH1100BR		Anodised/Brown							1236	8
G	3D	170-012-595	HG-MH1100BL		Anodised/Black							1236	8

DUAL AXIS TORQUE HINGE

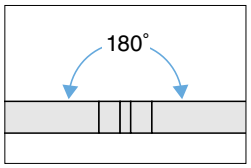
Under Development

Free stop



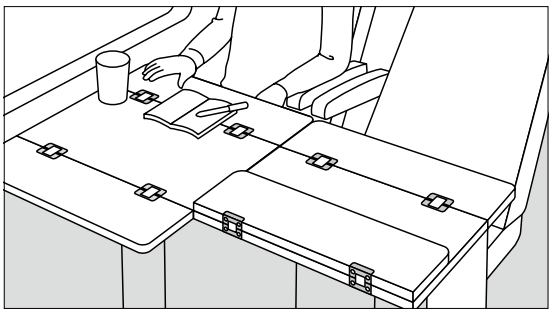


- Swivels 180° .
- Suitable for folding table of shop and train, etc.



No projection from the top surface of the door when fully opened. And the design of door is maintained as the mounting screws are not visible.

[Application Example]



Box seat table of train

Fully opened

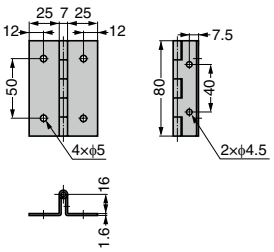


Mounting screws do not protrude when closed.



BUTT HINGE ROH-80



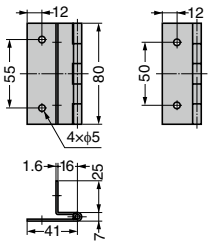


No.	Part Name	Material	Finish
①	Body A	Steel (SPCC)	Nickel
②	Body B		
③	Shaft	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-092-109	ROH-80	Steel	Nickel	85	50	200

BUTT HINGE KOH-80





[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

No.	Part Name	Material	Finish
①	Body A	Steel (SPCC)	Nickel
②	Body B		
③	Shaft	Stainless Steel (SUS304)	Plain

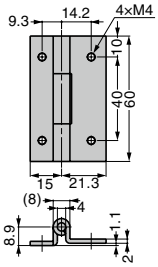
RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-149-316	KOH-80	127	13	94	50	200

Refer to 1 : P.15

STEP HINGE DH60N

SUS





[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

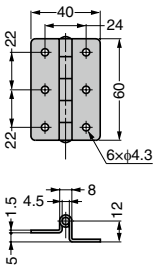
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Carton (pcs)
G	3D	170-099-128	DH60N	Stainless Steel (SUS304)	Plain	147	15	51.2	150

Refer to 1 : P.15

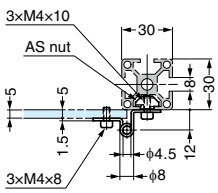
STEP HINGE DH-60C

SUS





[Dimensions]



- Door may be changed into overlay type by using 5mm thick panel.
- Stainless steel lift-off hinge with the same shape also available.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-159	DH-60C	Stainless Steel (SUS304)	Polished	108	11	52	80	320

Refer to 1 : P.15

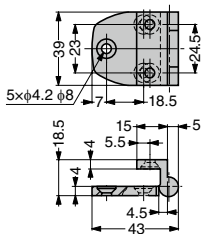
BUTT HINGE 28100

SUS316



[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



RoHS	CAD	Item Code	Item Name	Material	Finish	Door Width	Door Height	Door Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-096-006	28100	Stainless Steel (SCS14)	Polished	Max. 450	Max. 700	Max. 21	167	17	78.5	20	100

Refer to 1 : P.15

※SCS14 is equivalent of SUS316.

LIFT-OFF HINGE LSX-100

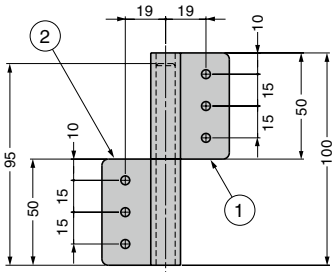
SUS

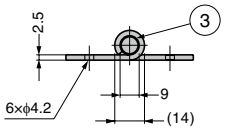


●Handed: Specific left and right hand mounting.

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .





LSX-100R
(LSX-100L is symmetrical)

No.	Part Name	Material	Finish
①	Body A	Stainless Steel (SUS304)	Polished
②	Body B		
③	Shaft		–

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-341	LSX-100L	Left-handed	294	30	170	20	80
G	3D	170-090-340	LSX-100R	Right-handed				20	80

Refer to 1 : P.15

LIFT-OFF HINGE KN

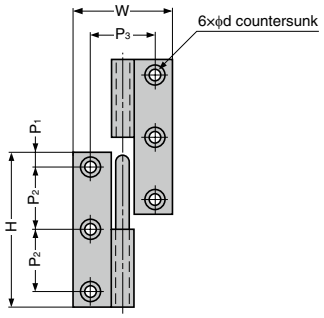
SUS

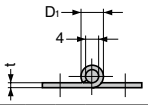

Right-handed

●Handed: Specific left and right hand mounting.

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .





Right-handed type shown.
Left-handed type is symmetrical.

RoHS	CAD	Item Code	Item Name	Type	Holes	Material	Finish	H	W	P1	P2	P3	D1	t	d	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-742	KN-50CL	Left-handed	With screw holes	Stainless Steel (SUS304)	Polished	50	32	5	20	21	7.5	1.5	3.2	78	8	28	100	400
G	3D	170-090-743	KN-50CR	Right-handed														30	100	400
G	3D	170-090-744	KN-64CL	Left-handed				64	36	8	24	24				108	11	38	100	400
G	3D	170-090-745	KN-64CR	Right-handed														38	100	400
G	3D	170-090-746	KN-75CL	Left-handed				75	38	7.5	30		8.5	2		167	17	60	50	200
G	3D	170-090-747	KN-75CR	Right-handed														60	50	200

Refer to 1 : P.15

LIFT-OFF HINGE NH-40

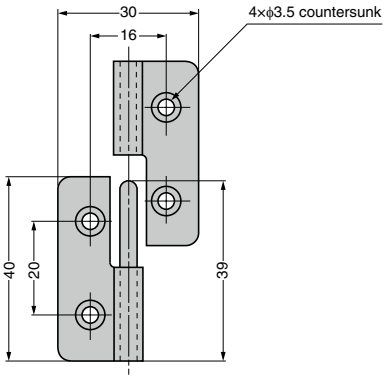
SUS

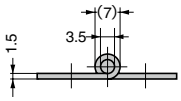

NH-40CL

●Steel hinge without mounting holes also available.

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .





Right-handed type shown.
Left-handed type is symmetrical.

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-339	NH-40CL	Left-handed	Stainless Steel (SUS304)	Polished	69	7	21	150	600
G	3D	170-090-337	NH-40CR	Right-handed						150	600

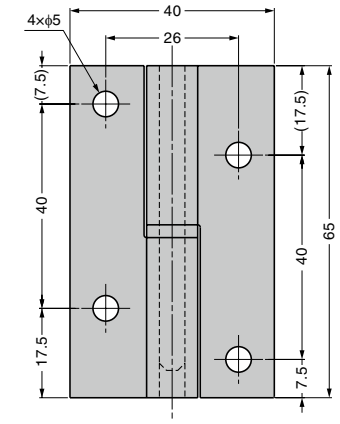
Refer to 1 : P.15

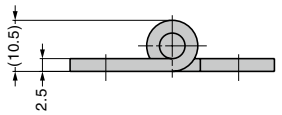
LIFT-OFF HINGE SNR65

SUS



SNR65R





Right-handed type shown.Left-handed type is symmetrical.

●Handed: Specific left and right hand mounting.

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)
G	3D	170-099-046	SNR65L	Left-handed	Stainless Steel (SUS304)	Plain	177	18	76.2	200
G	3D	170-099-043	SNR65R	Right-handed						200

Refer to 1 : P.15

LIFT-OFF HINGE SNRK65

SUS

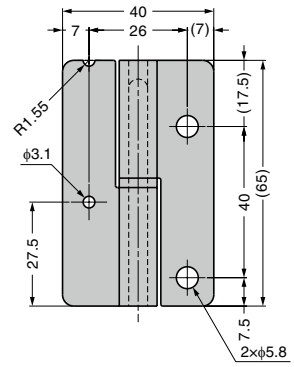


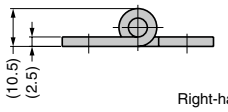
SNRK65R

●Handed: Specific left and right hand mounting.

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .





Right-handed type SNRK65R shown.
Right-handed type SNRK65L is symmetrical.

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Carton (pcs)
G	3D	170-099-084	SNRK65L	Left-handed	Stainless Steel (SUS304)	Plain	167	17	75	150
G	3D	170-099-085	SNRK65R	Right-handed						150

Refer to 1 : P.15

LIFT-OFF HINGE BN

SUS

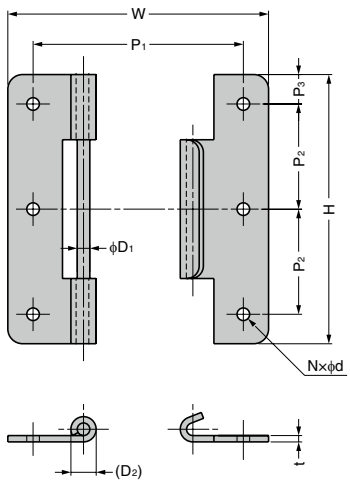


[Applications]

●Measuring instruments, laboratory equipment, trunk, etc.

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



RoHS	CAD	Item Code	Item Name	Material	Finish	H	W	P1	P2	P3	d	D1	D2	t	N	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-498	BN-50S	Stainless Steel (SUS304)	Polished	50	30	20	20	5	3	3	6	1.5	6	88	9	6	–	–
G	3D	170-099-497	BN-64S			64	36	24	25	7						118	12	8	–	–

Refer to 1 : P.15

LIFT-OFF HINGE SKH

SUS



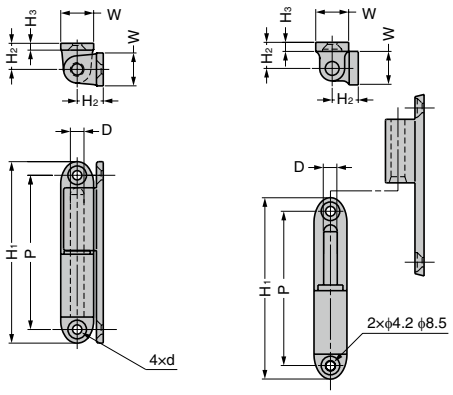
SKH-35CR

[Applications]

●Control board, various enclosures

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



SKH-S SKH-CR

RoHS	CAD	Item Code	Item Name	Material	Finish	H1	H2	H3	W	P	D	d	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-129	SKH-51S	Stainless Steel (SUS304)	Barrel Polished	51	8	2.5	11	40	4	Counterbore for M3	78	8	30	–	–
G	3D	170-090-818	SKH-60S			60	9.5	3	13	48	5	Counterbore for M4	118	12	50	–	–
G	3D	170-099-328	SKH-80S			80	11.5	4.5	14.5	68	6		284	29	95	–	–

Refer to 1 : P.15

LIFT-OFF HINGE HNH

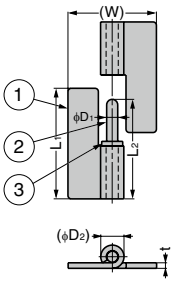
SUS


Right-handed

●Handed: Specific left and right hand mounting.

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



Right-handed type.
Left-handed type is symmetrical.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Shaft		Plain
③	Washer		

RoHS	CAD	Item Code	Item Name	Type	Material	L_1	L_2	W	D_1	D_2	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-064	HNH-50CL	Left-handed	Stainless Steel (SUS304)	50	45	40	5	10.5	2.5	127	13	60	30	240
G	3D	170-091-057	HNH-50CR	Right-handed											30	240
G	3D	170-091-054	HNH-65CL	Left-handed		65	60	50				177	18	89	20	160
G	3D	170-091-055	HNH-65CR	Right-handed											20	160
G	3D	170-091-060	HNH-75CL	Left-handed		75	70	70	6	12	3	245	25	165	10	80
G	3D	170-091-053	HNH-75CR	Right-handed											10	80
G	3D	170-091-050	HNH-100CL	Left-handed		100	90	82	8	16	4	422	43	347	5	40
G	3D	170-091-051	HNH-100CR	Right-handed											5	40

Refer to 1 : P.15

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES



Zwei L LIFT-OFF HINGE ZL-1701

SUS316



- Oilless ring provides smooth movement.
- Superior "Zwei L Finish".
  Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give a jewel like finish that highlights any industrial design.

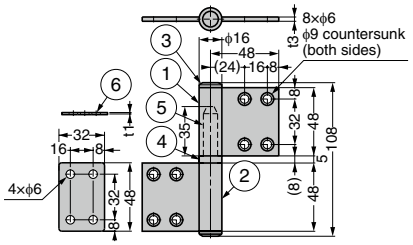
[Remarks]

- When installing, be sure to insert the spacer as shown in the installation examples and screw it.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

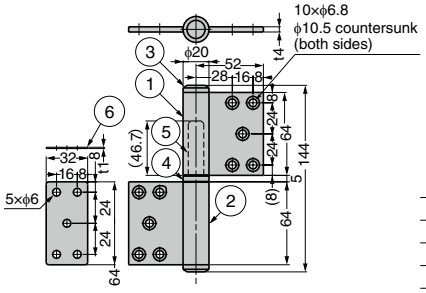
[Parts Included]

ZL-1701-10
- Countersunk head wood screw 4.1×38
- Countersunk head machine screw M5×16 (head diameter ϕ8)

ZL-1701-12
- Countersunk head wood screw 4.8×38
- Countersunk head machine screw M5×16 (head diameter ϕ9)

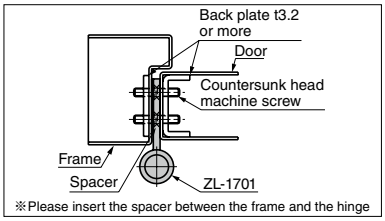


ZL-1701-10

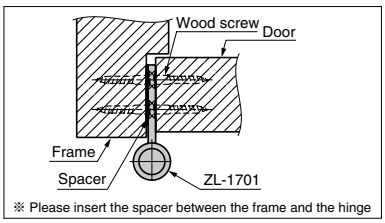


ZL-1701-12

[Installing to Metal Door]



[Installing to Wooden Door]

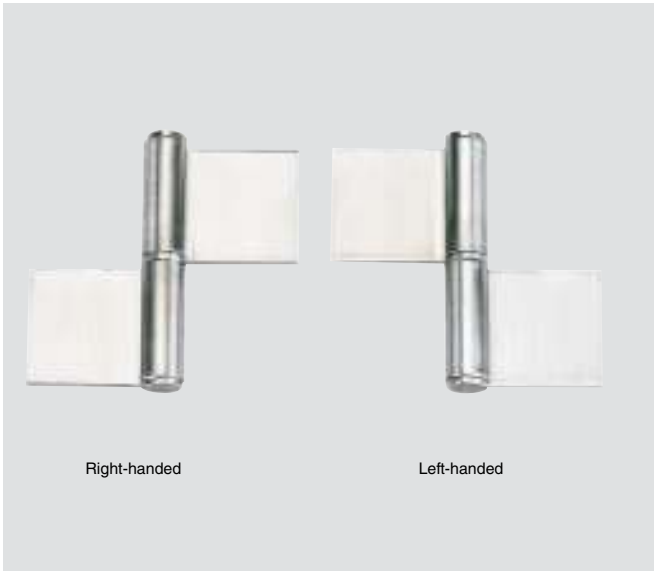


No.	Part Name	Material	Finish
①	Hinge Plate (For Door)	Stainless Steel (SUS316)	Polished/Satin
②	Hinge Plate (For Frame)		
③	Finial		
④	Oilless Ring		Satin
⑤	Shaft		Plain
⑥	Spacer		

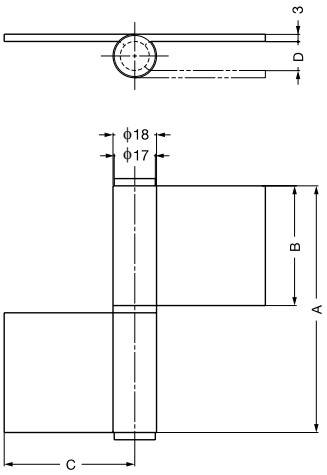
RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)
–	3D	170-091-691	ZL-1701-10	314	32	305	8
–	3D	170-091-690	ZL-1701-12	559	57	560	6

Refer to 1 : P.15

LIFT-OFF HINGE (WELD-ON) S-6166-2



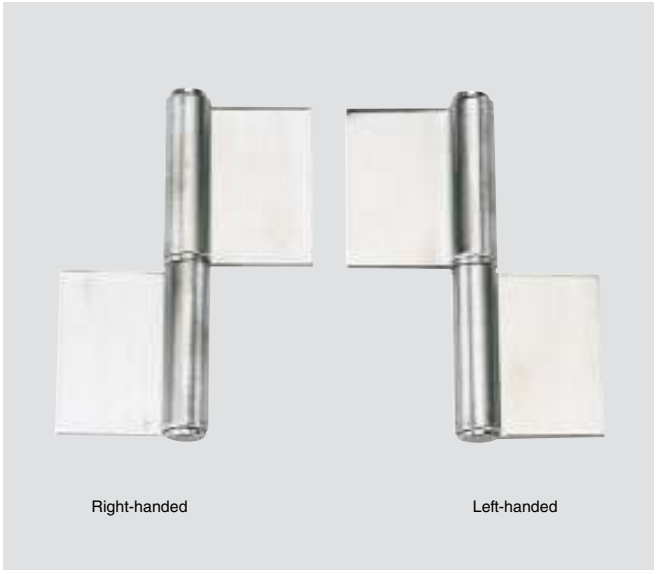
- Weld-on type stainless steel lift-off hinge.
- Handed: Specific left and right hand mounting.
- Door weight: Max. 40kg/pair.



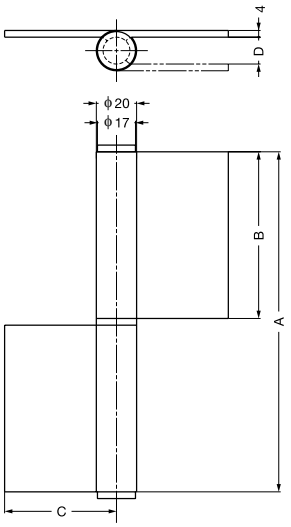
Material	Finish
Stainless Steel (304)	Satin

RoHS	CAD	Item Code	Item Name	Type	A	B	C	D	Weight (g)	Box (pcs)	Carton (pcs)
–	–	170-099-400	S-6166-2-L	Left-handed	102	49.5	55	12	300	12	60
–	–	170-099-401	S-6166-2-R	Right-handed							

LIFT-OFF HINGE (WELD-ON) S-6166-6



- Weld-on type stainless steel lift-off hinge.
- Handed: Specific left and right hand mounting.
- Door weight: Max. 90kg/pair.



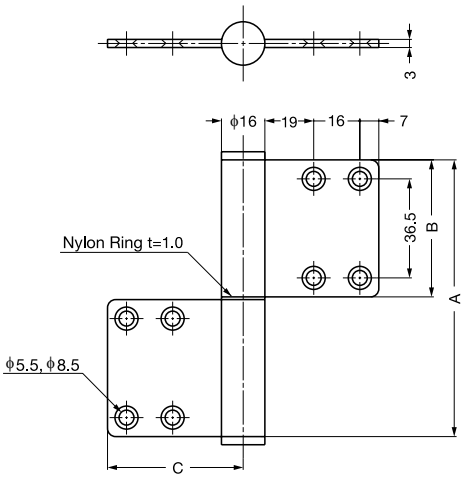
Material	Finish
Stainless Steel (304)	Satin

RoHS	CAD	Item Code	Item Name	Type	A	B	C	D	Weight (g)	Box (pcs)	Carton (pcs)
–	–	170-099-402	S-6166-6-L	Left-handed	152	74.5	55	12	570	8	40
–	–	170-099-403	S-6166-6-R	Right-handed							

LIFT-OFF HINGE S-6173-2



- Screw hole is countersunk from both sides.
- Non-Handed: Can be installed on left or right side.
- Door weight: Max. 40kg/pair.



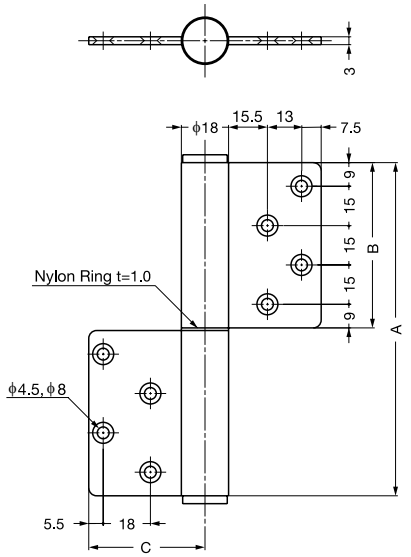
Material	Finish
Stainless Steel (304)	Satin

RoHS	CAD	Item Code	Item Name	A	B	C	Weight (g)	Box (pcs)	Carton (pcs)
–	–	170-099-404	S-6173-2	102	50.5	50	240	12	60

LIFT-OFF HINGE S-6173-5



- Screw hole is countersunk from both sides.
- Non-Handed: Can be installed on left or right side.
- Door weight: Max. 50kg/pair.



Material	Finish
Stainless Steel (304)	Satin

RoHS	CAD	Item Code	Item Name	A	B	C	Weight (g)	Box (pcs)	Carton (pcs)
–	–	170-099-405	S-6173-5	127	63	45	330	8	40

LIFT-OFF HINGE (WELD-ON) HG-LSH

SUS



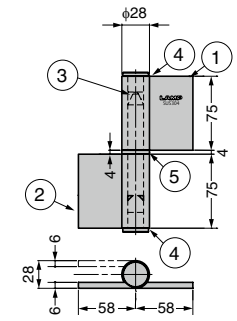
- Uses 6mm thick stainless steel for heavy duty doors.
- Oilless ring provides smooth movement.
- With head caps for beautiful appearance.

[Applications]

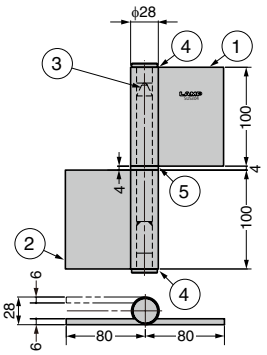
- Large doors, gate doors, and other rotation mechanism of heavy objects, etc.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



LSH-154R



LSH-204R

No.	Part Name	Material	Finish
①	Door Side Leaf	Stainless Steel (SUS304)	Satin
②	Frame Side Leaf		
③	Pin		Plain
④	Finial		
⑤	Ring		

※Open/close test under the following conditions:
Three hinges used vertically, door size W900×H2000
When using HG-LSH-154: Door weight 250kg
When using HG-LSH-204: Door weight 280kg

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	170-034-219	HG-LSH-154L	Left-handed	1961	200	1020	6	12
G'	3D	170-034-220	HG-LSH-154R	Right-handed				6	12
G'	3D	170-034-221	HG-LSH-204L	Left-handed	2177	222	1540	–	6
G'	3D	170-034-222	HG-LSH-204R	Right-handed				–	6

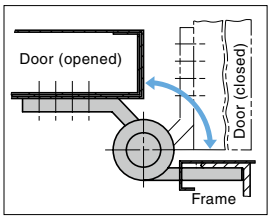
Refer to 1 : P.15

LIFT-OFF HINGE HG-KM

SUS



[Installation]



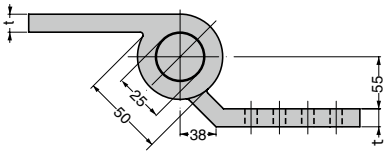
- Ultra thick hinge for ultra heavy doors.
- Thrust bearing in movable part provides smooth movement.

[Applications]

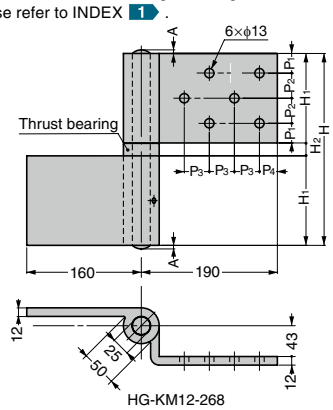
- Large doors, gate doors, and other rotation mechanism of heavy objects, etc.

[Remarks]

- Screws not included.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



HG-KM19-275, HG-KM20-250



HG-KM12-268

RoHS	CAD	Item Code	Item Name	Material	Finish	H	H1	H2	P1	P2	P3	P4	A	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)
G	3D	170-090-452	HG-KM12-268	Stainless Steel (SUS304)	Satin	268	125	18	27.5	35	35	25	5	12	2940	300	8.3	1
–	3D	170-090-453	HG-KM19-275			275		25			30		10	19	4810	490	19.8	1
–	3D	–	※HG-KM20-250			250	114	22	28	29	25	23		20	4610	470	18.1	1

Refer to 1 : P.15

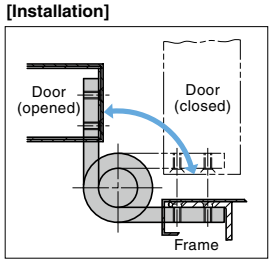
※Made to order.

LIFT-OFF HINGE HG-KH

SUS



[Installation]



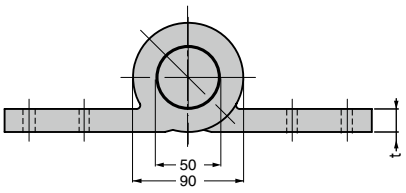
- Ultra thick hinge for ultra heavy doors.
- Thrust bearing in movable part provides smooth movement.

[Applications]

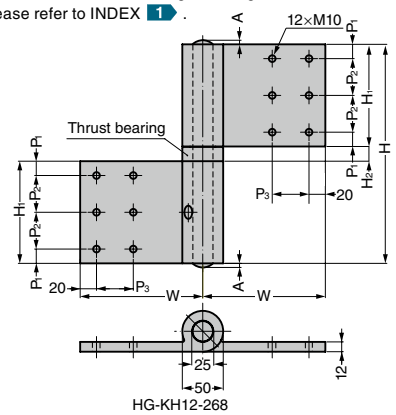
- Large doors, gate doors, and other rotation mechanism of heavy objects, etc.

[Remarks]

- Screws not included.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



HG-KH19-275, HG-KH20-250



HG-KH12-268

RoHS	CAD	Item Code	Item Name	Material	Finish	H	H1	H2	W	P1	P2	P3	A	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)
G	3D	170-090-454	HG-KH12-268	Stainless Steel (SUS304)	Satin	268	125	18	150	17.5	45	45	5	12	2940	300	7.4	1
G	3D	170-090-455	HG-KH19-275			275		25					10	19	4810	490	17.2	1
–	3D	–	※HG-KH20-250			250	114	22	140	17	40	40		20	4610	470	16.6	1

Refer to 1 : P.15

※Made to order.

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

QUICK RELEASE HINGE HG-OT Quick Installation Type

SUS

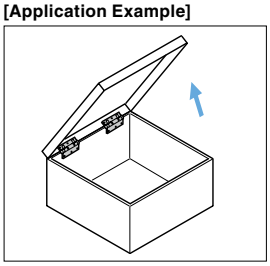


- Easy and quick to install/remove doors.
- Non-handed except for HG-OTA45, HG-OTB45.
- Can be used for upward-opening doors, top-opening lids and lateral opening doors.

[Remarks]

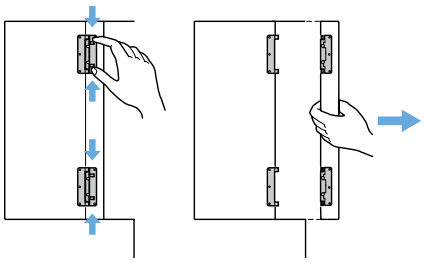
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Application Example]



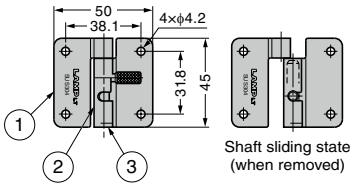
[Retracted Shaft]



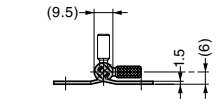


Retract the shaft and rotate it to the cabinet side.

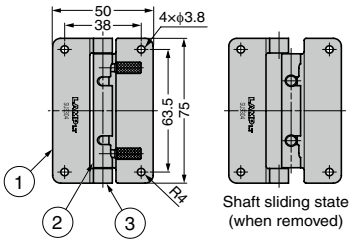
Can be installed and removed in the front direction.



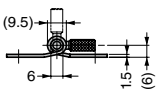
Shaft sliding state (when removed)



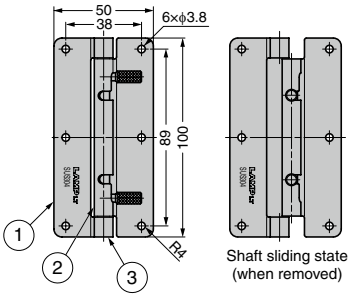
HG-OTA45L



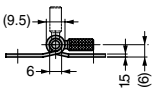
Shaft sliding state (when removed)



HG-OTA75



Shaft sliding state (when removed)



HG-OTA100

No.	Part Name	Material	Finish
①	Plate	Stainless Steel (SUS304)	Satin
②	Hinge Pin	Stainless Steel (SUS303)	
③	Spring	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	Type	Holes	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-944	HG-OTA45R	Right-handed	With screw holes	29	3	40	30	300
G	3D	170-090-946	HG-OTB45R		Without screw holes				30	300
G	3D	170-090-945	HG-OTA45L	Left-handed	With screw holes				30	300
G	3D	170-090-947	HG-OTB45L		Without screw holes				30	300
G	3D	170-090-942	HG-OTA75	Non-handed	With screw holes	59	6	70	40	160
–	3D	170-090-943	HG-OTB75		Without screw holes				40	160
G	3D	170-090-940	HG-OTA100		With screw holes	69	7	90	30	120
G	3D	170-090-941	HG-OTB100		Without screw holes				30	120

Refer to 1 : P.15

PIVOT HINGE HG-PV-30C

SUS



- Small detachable pivot hinge.
- Door is easily detached only by using the lever.

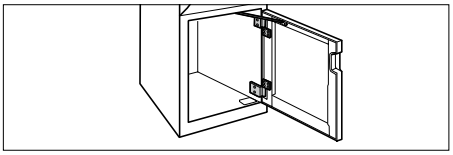
[Applications]

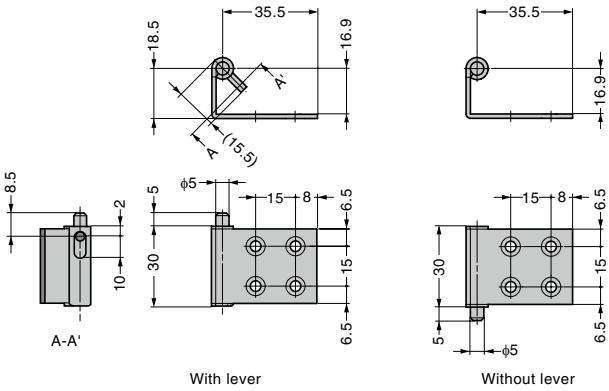
- Light doors of financial equipment, etc.

[Remarks]

- Sold in pairs (upper and lower).

[Application Example]





For right-hanging, the hinge with lever is at the upper side, while that without lever at the lower side.
For left-hanging, the hinge with lever is at the lower side, while that without lever at the upper side.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-215	HG-PV-30C	Stainless Steel (SUS304)	Barrel Polished	54	100	200

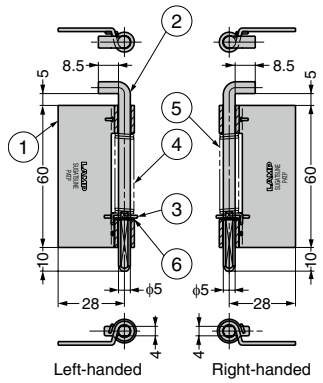
SPRING LOADED PIVOT HINGE HG-PV60AC

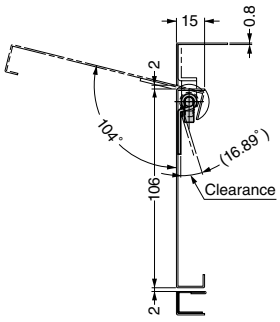
SUS



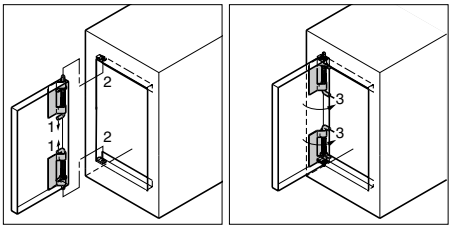
HG-PV60AC-R (Right-handed)

- Spring loaded for self closing.
- Easy door installation and removal.
- Compact self-closing mechanism saves space.





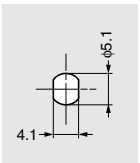
[Installation]



1. Pull up the hook of the lower hinge.
2. Insert the body into the rotation stop hole.
3. Hold the door to prevent rotation while rotating the hook, insert it to bottom along the hole.
4. Install the upper hinge in the same manner.
5. Open and close the door to check the movement.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Shaft		–
③	Stopper		Barrel Polished
④	Spring L	Stainless Steel (SUS-304WPB)	–
⑤	Spring R		
⑥	E-type Retaining Ring (Size 3)	Stainless Steel (SUS304)	

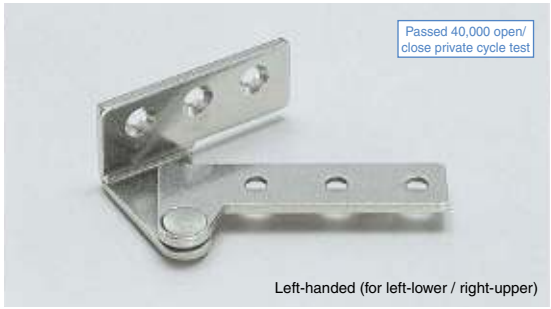
[Cut Out Dimensions]



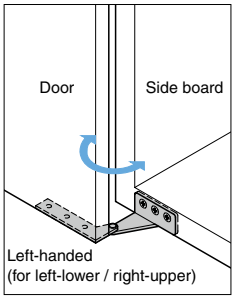
RoHS	CAD	Item Code	Item Name	Type	Door Weight kg/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-988	HG-PV60AC-L	Left-handed	2	38	50	200
G	3D	170-090-987	HG-PV60AC-R	Right-handed			50	200

PIVOT HINGE PL-65 For Overlay Door

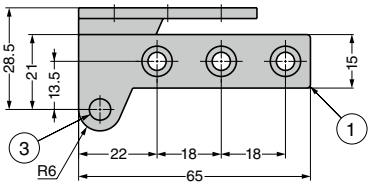
SUS

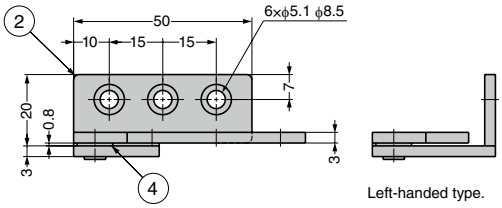


Left-handed (for left-lower / right-upper)



[Remarks]
- Recommended for use in pairs.





Left-handed type.

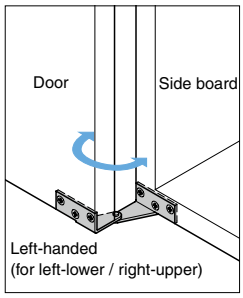
No.	Part Name	Material
①	Arm A	Stainless Steel (SUS430)
②	Arm B	
③	Hinge Pin	Stainless Steel
④	Washer	Stainless Steel (SUS304)

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-190	PL-65R	Right-handed (for right-lower / left-upper)	55	40	400
G	3D	170-099-191	PL-65L	Left-handed (for left-lower / right-upper)		40	400

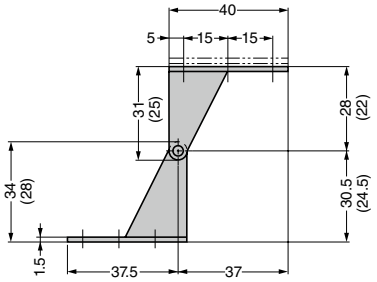
PIVOT HINGE WP1, WP3 For Overlay Door

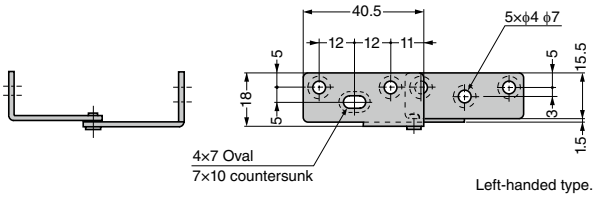
SUS


Left-handed (for left-lower / right-upper)



[Remarks]
- Recommended for use in pairs.
- Dimensions in ( ) is for WP3.





Left-handed type.

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Door Width	Door Height	Door Thickness	Door Weight kg/set	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-257	WP1R	Right-handed (for right-lower / left-upper)	Stainless Steel (SUS430)	Plain	Max. 300	Max. 700	Max. 24	Max. 1.8	23	100	1000
G	3D	170-090-258	WP1L	Left-handed (for left-lower / right-upper)								100	1000
G	3D	170-090-259	WP3R	Right-handed (for right-lower / left-upper)					Max. 18		21	100	1000
G	3D	170-090-260	WP3L	Left-handed (for left-lower / right-upper)								100	1000

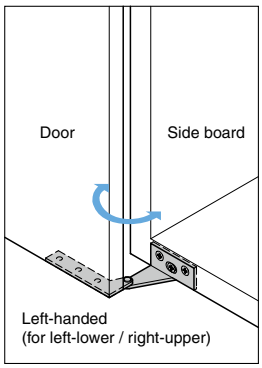
PIVOT HINGE PL-60 For Overlay Door

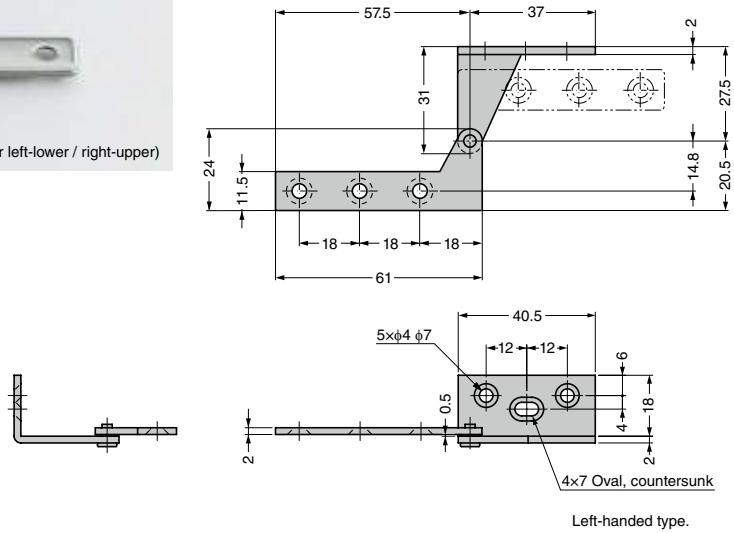
SUS



[Remarks]

●Recommended for use in pairs.





Left-handed type.

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Door Width	Door Height	Recommended Door Thickness	Door Weight kg/set	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-263	PL-60R	Right-handed (for right-lower / left-upper)	Stainless Steel (SUS430)	Plain	Max. 450	Max. 700	22	Max. 2.6	27	100	1000
G	3D	170-090-264	PL-60L	Left-handed (for left-lower / right-upper)								100	1000

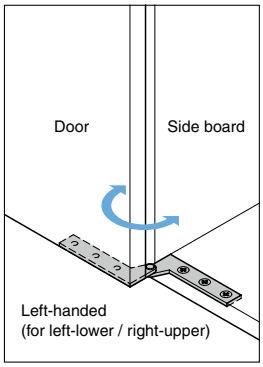
PIVOT HINGE PP-60 For Inset Door

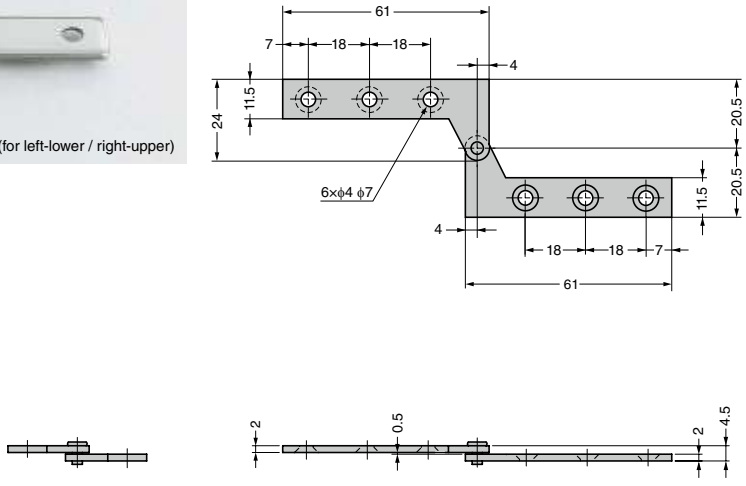
SUS



[Remarks]

●Recommended for use in pairs.





Right-handed type.

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Door Width	Door Height	Door Weight kg/set	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-261	PP-60R	Right-handed (for right-lower / left-upper)	Stainless Steel (SUS430)	Plain	Max. 450	Max. 700	Max.2.6	22	100	1000
G	3D	170-090-262	PP-60L	Left-handed (for left-lower / right-upper)							100	1000

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

HIGH DURABILITY SPRING HINGE HG-SHL

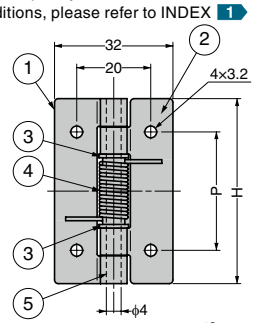
SUS

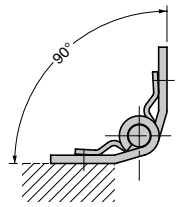


- Stainless steel construction suitable for corrosive environments.
- High durability.

[Remarks]

- Torque given in the table below is the value when the hinge opens 90° . (Refer to ※ in the drawing below)
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .





※When applying the torque given in the table below

No.	Part Name	Material	Finish
①	Body 1	Stainless Steel (SUS304)	Barrel Polished
②	Body 2		
③	Collar	Stainless Steel (SUS303)	–
④	Spring	Stainless Steel (SUS304)	–
⑤	Shaft	Stainless Steel (SUS303)	–

RoHS	CAD	Item Code	Item Name	H	P	Torque Moment cN·m	Torque Moment kgf·cm	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-024-384	HG-SHL32	32	18	4.7	0.48	39	4	20	50	500
G	3D	170-024-385	HG-SHL50	50	32	8.9	0.91	59	6	30	50	500
G	3D	170-024-386	HG-SHL60	60	40	14.0	1.43			38	50	500

Refer to 1 : P.15

SPRING HINGE HG-SH

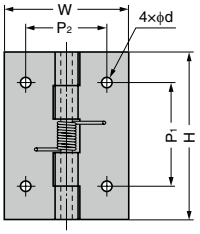
SUS

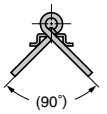


- Stainless steel construction suitable for corrosive environments.

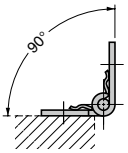
[Remarks]

- Torque given in the table below is the value when the hinge opens 90° . (Refer to ※ in the drawing below)
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .





Free state



※When applying the torque given in the table below

RoHS	CAD	Item Code	Old Item Code	Item Name	Material	Finish	H	W	P_1	P_2	D_1	D_2	d	t	Torque Moment cN·m	Torque Moment kgf·cm	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-515	–	HG-SH-20C	Stainless Steel (SUS304)	Barrel Polished	20	14	–	–	1	2.2	–	0.5	9.7	0.99	9.8	1	1.5	800	3200
G	3D	170-098-520	–	HG-SH-25C			25	32	14	20	3	5.8	3.2	1.2	6.5	0.66	29	3	10	300	1200
G	3D	170-098-517	170-098-521	HG-SH-38C			38		26			6.5		1.5	14.7	1.5	59	6	20	200	800
G	3D	170-098-518	※170-098-522	HG-SH-51C			51	38	32	25					13.5	1.38	69	7	35	130	520

Refer to 1 : P.15

※Item code of the product was changed.

SPRING HINGE SH-C

SUS

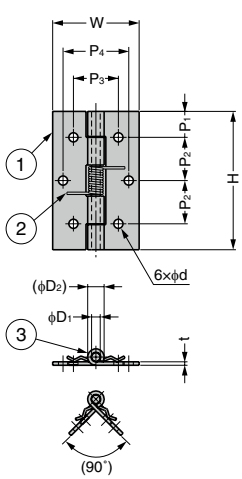


●All parts made of stainless steel.

[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

※When applying the torque given in the table below



SH-60C, SH-80C　　SH-100C

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Spring		–
③	Shaft		

RoHS	CAD	Item Code	Item Name	H	W	t	P1	P2	P3	P4	D1	D2	d	Torque Moment cN·m	Torque Moment kgf·cm	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-099-788	SH-60C	60	40	1.5	10	20	26	26	5	8.5	4.3	27.8	2.83	88	9	44	250	–
G	3D	170-099-787	SH-80C	80	50	2	15	25		38		9.5	5.3	32.8	3.34	157	16	86	–	–
G	3D	170-099-786	SH-100C	Above Drawing	Above Drawing	Above Drawing	Above Drawing	Above Drawing	Above Drawing	Above Drawing	Above Drawing	Above Drawing	Above Drawing	97.7	9.96	196	20	110	150	–

Refer to 1 : P.15

SPRING HINGE HG-BF3-2

SUS



HG-BF3-2L-SC　　HG-BF3-2R-SO

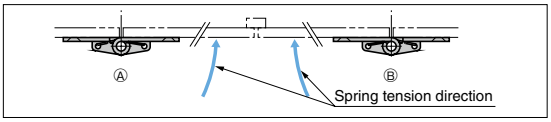
●Self-closing type (SC) and self-opening type (SO) available.

●Spring ends cannot be accessed for safety.

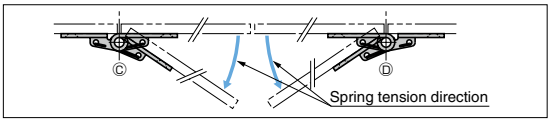
[Remarks]

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

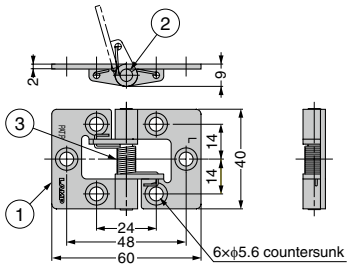
[Self-Closing Type (SC)]



[Self-Opening Type (SO)]



※Ⓐ and Ⓒ are marked with "L" , Ⓑ and Ⓓ are marked with "R" .



※Drawing above is HG-BF3-2L-SC. HG-BF3-2R-SC is symmetrical.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Shaft		–
③	Spring		

RoHS	CAD	Item Code	Item Name	No.	Description	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-562	HG-BF3-2L-SC	Ⓐ	SC/Left-opening	69	7	41	20	120
G	3D	170-091-564	HG-BF3-2R-SC	Ⓑ	SC/Right-opening				20	120
G	3D	170-091-561	HG-BF3-2L-SO	Ⓒ	SO/Left-opening				20	120
G	3D	170-091-563	HG-BF3-2R-SO	Ⓓ	SO/Right-opening				20	120

Refer to 1 : P.15

Updated 2017.10.27

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

COMBINATION HINGE HG-VH8 DIGEST


Black


White

- Hinges with multiple inserts, such as damper, spring and torque unit, etc.
- By combining hinges with different motion functions, or using hinges without parts built-in at one side, it is possible to realise marvellous opening and closing actions.
- For hinges with built-in springs, the spring tension can be adjusted with a hex key.
- Refer to the product page 1 for details.

Refer to 1 : P.16~17

SPRING HINGE SA

SUS



- Spring loaded for self-closing.
- Spring tension adjustable with three steps with a hex key.
- All parts including shaft and spring made of stainless steel (SUS304).
- Soft-close by using with LAPCON DOOR DAMPER LDD-S 1 and LDD-V 2 (in case of door weight 15 to 40kg).

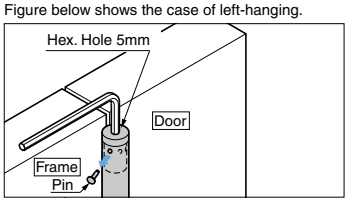
[Remarks]

- In case of noise, apply lubricant (grease) to washer and torsion spring.

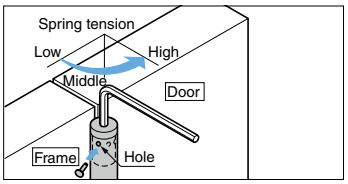


[How to Adjust Spring Tension]

Figure below shows the case of left-hanging.

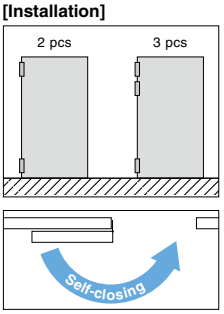


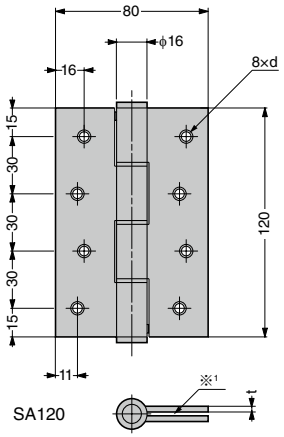
Loosen shaft with a hex key and remove the pin.



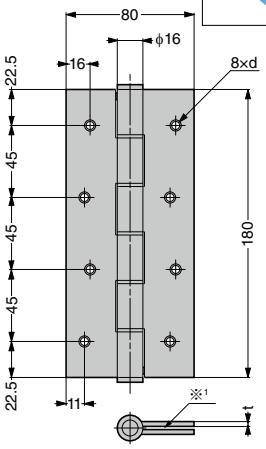
Adjust spring tension with three steps. Put the pin to the hole and fix.

[Installation]





SA120



SA180

※1 After the door is closed, leaves are not parallel to each other. ※2 The value in case of door width 1000mm or less

RoHS	CAD	Item Code	Item Name	Material	Finish	t	d	Load Capacity N/2 pcs※2	Load Capacity kgf/2 pcs※2	Load Capacity N/3 pcs※2	Load Capacity kgf/3 pcs※2	Weight (g)	Box (pcs)
G	3D	170-090-810	SA120-5314-01	Aluminium Alloy	Anodised	4	ϕ5	196	20	294	30	175	2
G	3D	170-090-811	SA180-5814-01				ϕ8	392	40	588	60	260	2
G	3D	170-090-812	SA120-5314-05	Stainless Steel (SUS304)	Plain	2.5	ϕ5.5	196	20	294	30	303	2
G	3D	170-090-813	SA180-5814-05			3	ϕ9	392	40	588	60	526	2

Refer to 1 : P.713, 2 : P.710

SPRING HINGE ST150-6314-05

SUS





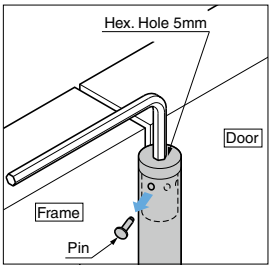
- Spring loaded for self-closing.
- Spring tension adjustable with three steps with a hex key.
- Can reduce clearance between door and frame without door cutting.
- Soft-close by using with LAPCON DOOR DAMPER LDD-S 1 and LDD-V 2 (in case of door weight 15 to 40kg).
- Aluminium hinge also available by made to order.

[Remarks]

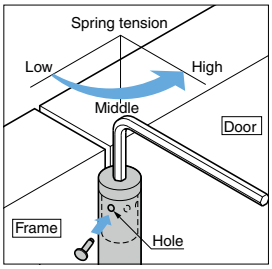
- In case of noise, apply lubricant (grease) to washer and torsion spring.

[How to Adjust Spring Tension]

Figure below shows the case of left-hanging. Right-hanging is symmetrical.

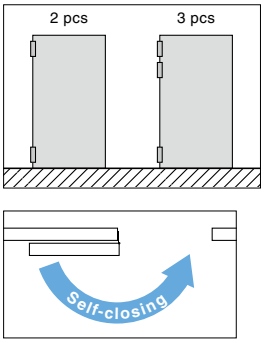


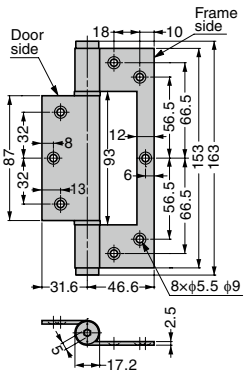
Loosen shaft with a hex key and remove the pin.



Adjust spring tension with three steps. Put the pin to the hole and fix.

[Installation]





※ The value in case of door width 1000mm or less

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/2 pcs※	Load Capacity kgf/2 pcs※	Load Capacity N/3 pcs※	Load Capacity kgf/3 pcs※	Weight (g)	Box (pcs)
G	3D	170-022-486	ST150-6314-05	Stainless Steel (SUS304)	Plain	400	40	600	60	336	2

Refer to 1 : P.713, 2 : P.710

ALUMINIUM SPRING LIFT-OFF HINGE PM120



Picture above is PM120-524401L.

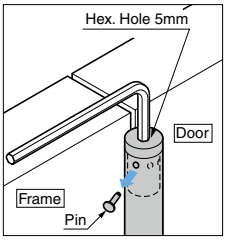
- Spring loaded for self-closing.
- Spring tension adjustable with three steps with a hex key.
- Easy to remove the door.
- Black, white, golden or bronze colours and R10 corner rounding also available by made to order.
- Soft-close by using with LAPCON DOOR DAMPER LDD-S 1 and LDD-V 2 (in case of door weight 15 to 40kg).

[Remarks]

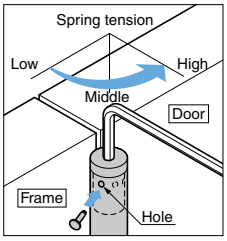
- In case of noise, apply lubricant (grease) to washer and torsion spring.

[How to Adjust Spring Tension]

Figure below shows the case of left-hanging.

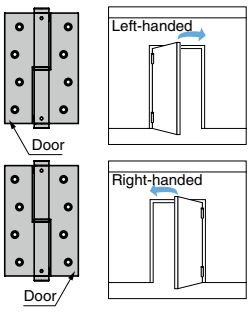


Loosen shaft with a hex key and remove the pin.

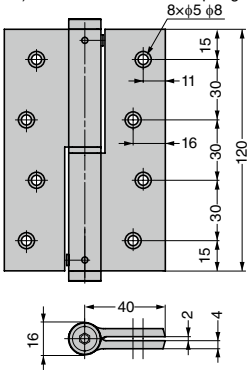


Adjust spring tension with three steps. Put the pin to the hole and fix.

[Installation]



Use right-handed hinge if door is hung on the right (viewing from the side of pulling the door).



Left-handed type.

※ 1 After the door is closed, leaves are not parallel to each other.

※ 2 The value in case of door width 1000mm or less

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Load Capacity N/2 pcs ※ 2	Load Capacity kgf/2 pcs ※ 2	Load Capacity N/3 pcs ※ 2	Load Capacity kgf/3 pcs ※ 2	Weight (g)	Box (pcs)
G	3D	170-022-484	PM120-524401L	Left-handed	Aluminium Alloy	Anodised	200	20	300	30	172	2
G	3D	170-022-485	PM120-525401R	Right-handed								2

Refer to 1 : P.713, 2 : P.710

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

SPRING HINGE (DOUBLE ACTION) DA

SUS



- Opens in both directions inside and outside.
- Spring loaded for self-closing.
- Spring tension adjustable with three steps with a hex key.
- Opening angle is 180° .
- All parts including shaft and spring made of stainless steel (SUS304).

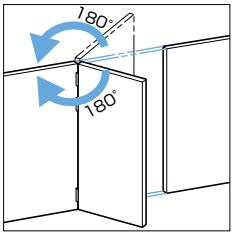
[Relationship Between Door Height and Door Weight]

	DA120	DA180
Recommended Door Height	1800~2500 mm	
Min. Door Height	500 mm	800 mm
Door Weight	Door Height: Max. 1800mm	
	Reduce by 1.1 kg for lowering 100mm each time.	Reduce by 2.1kg for lowering 100mm each time.

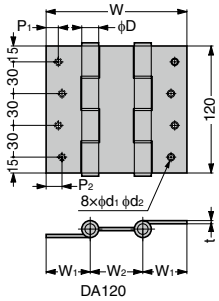
[Remarks]

- In case of noise, apply lubricant (grease) to washer and torsion spring.

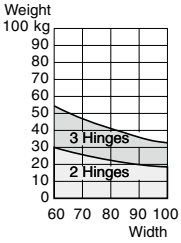




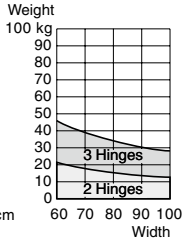
Hinges for double action door.



DA120

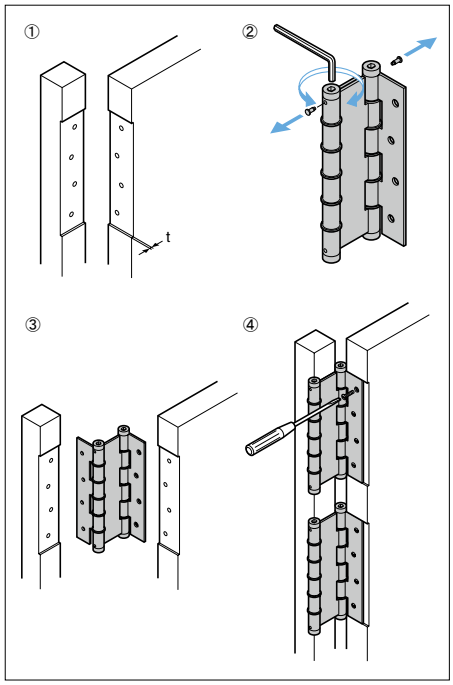


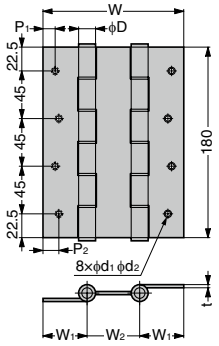
DA120-5404



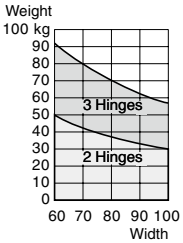
DA120-5414

[Installation]

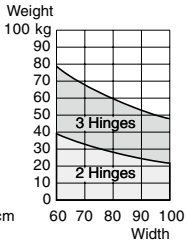




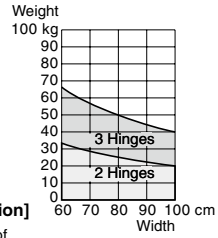
DA180



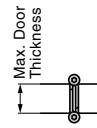
DA180-5904



DA180-5914

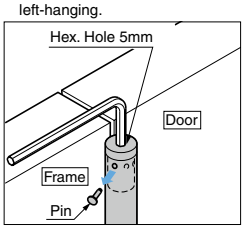


DA180-5934

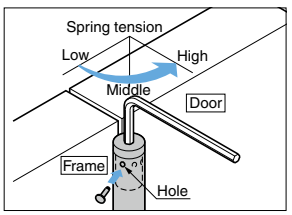


[How to Adjust Spring Tension]

- Figure below shows the case of left-hanging.



Loosen shaft with a hex key and remove the pin.



Adjust spring tension with three steps. Put the pin to the hole and fix.

RoHS	CAD	Item Code	Item Name	Material	Finish	W	W1	W2	P1	P2	D	t	d1	d2	Max. Door Thickness	Opening Angle	Screw	Weight (g)	Box (pcs)
G	3D	170-090-803	DA120-5404-01	Aluminium Alloy	Anodised	101	29.5	42	6.5	11.5	16	4	5	8	30	180°	–	275	2
G	3D	170-090-804	DA120-5414-01			133	40	53	11	16					40			320	2
G	3D	170-090-805	DA120-5414-05	Stainless Steel (SUS304)	Plain						17	2.5	5.5	9	36		Countersunk Head Tapping Screw	555	2
G	3D	170-090-806	DA180-5904-01	Aluminium Alloy	Anodised	101	29.5	42	6.5	11.5	16	4	5	8	30		–	407	2
G	3D	170-090-807	DA180-5914-01			133	40	53	11	16					40			466	2
G	3D	170-090-808	DA180-5914-05	Stainless Steel (SUS304)	Plain						18	3	5.5	9	38		Countersunk Head	947	2
G	3D	170-090-809	DA180-5934-01	Aluminium Alloy	Anodised	157	48.5	60	19.5	24.5	16	4	5	8	50		Tapping Screw	510	2

CLEAN ROOM HINGE HG-CV-127

SUS



HG-CV-127R

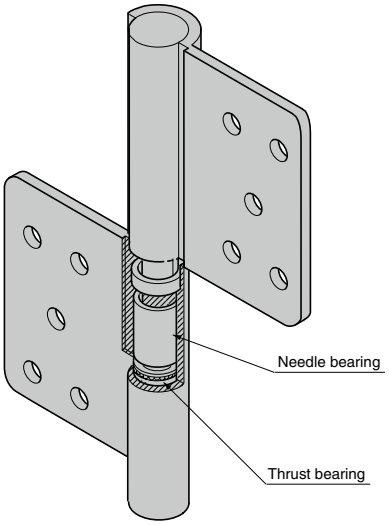
- Suitable for use in a clean room.
- Built-in thrust bearing and needle bearing reduce metal-to-metal friction.
- Seal of rotating part prevents metal powder from scattering.
- Welded curl part provides excellent durability.

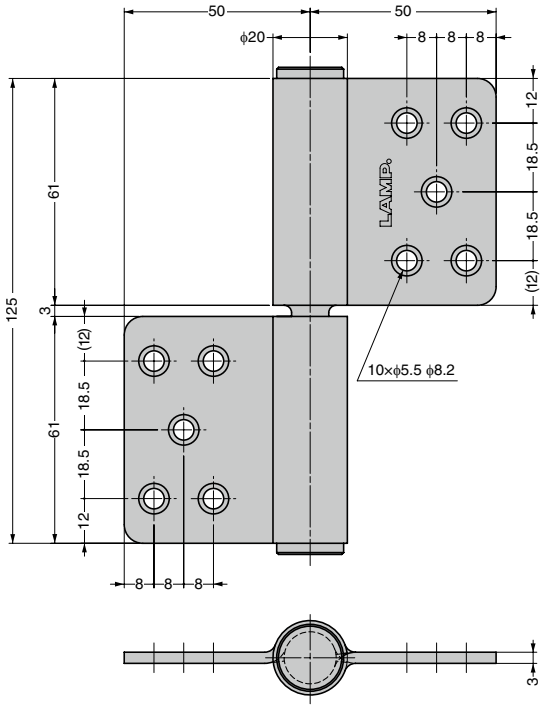
[Applications]

- Semiconductor manufacturing equipment, clean room, etc.

[Remarks]

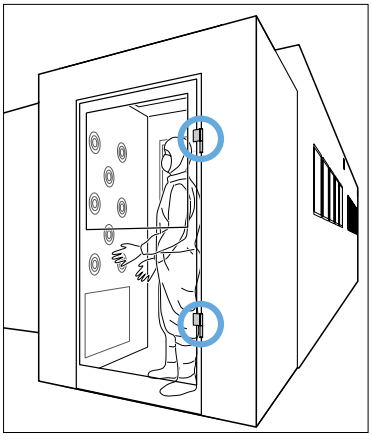
- Install the shaft downwards on the door side.
- Load capacity and open/close test under the following conditions: door size H2000×W900mm, door weight 100kg, two hinges used, installation pitch 1600mm.





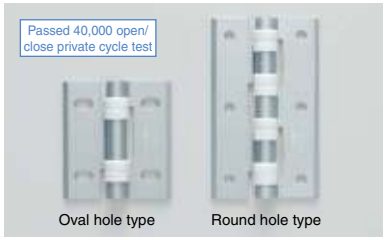
Drawing above is HG-CV-127R.

[Application Example]



RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-013-013	HG-CV-127L	Left-handed	Stainless Steel (SUS304)	Satin	981	100	388	5	50
G	3D	170-014-422	HG-CV-127R	Right-handed						5	50

CLEAN ROOM HINGE HG-CV



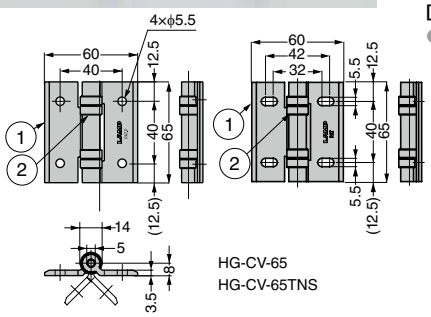
- Plastic caps at rotating part prevent metal-to-metal friction and metal powder scattering.
- When opening and closing door, plastic caps will not interfere with frame .
- Aluminium alloy material, light weight and excellent design.
- Round hole type, precision type and oval hole type available. For precision type, clearance between hinge leaves and plastic caps/shaft is small.

[Applications]

- Semiconductor manufacturing equipment, clean room, aluminium frame, household equipment, etc.

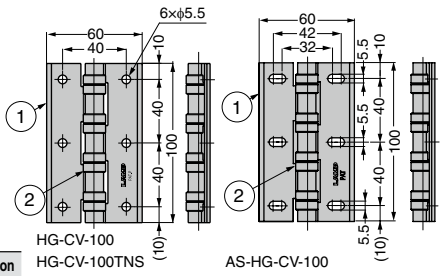
[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



HG-CV-65
HG-CV-65TNS

AS-HG-CV-65



HG-CV-100
HG-CV-100TNS

AS-HG-CV-100

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-441	HG-CV-65	Round	147	15	50	20	240
G	3D	170-091-442	HG-CV-100	Hole Type	226	23	78	20	160
G	3D	170-099-151	HG-CV-65TNS	Precision	147	15	50	20	240
G	3D	170-099-152	HG-CV-100TNS	Type	226	23	78	20	160
G	3D	170-090-537	AS-HG-CV-65	Oval Hole	147	15	49	20	240
G	3D	170-090-540	AS-HG-CV-100	Type	226	23	76	20	160

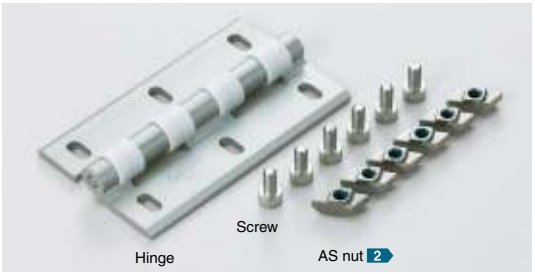
Refer to 1 : P.15

Reference door weight (HG-CV65): 8kg
Reference door weight (HG-CV100): 13kg
(In case of door size W600×800, using 2 pcs vertically)

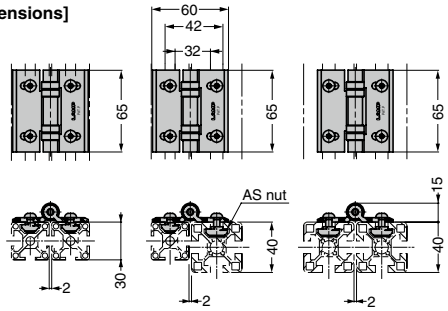
No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Anodised Silver
②	Cap	POM	White
–	Shaft	Stainless Steel (SUS303)	–

AS Parts Set For Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Dimensions]

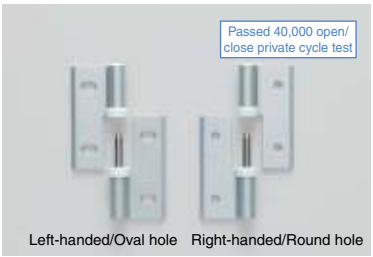


[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	170-041-527	AS-HG-CV65-30-6	Groove width 6 mm	Hinge AS-HG-CV-65: 1 pc AS nut AS-6M4: 4 pcs Hexagon socket head cap screw M4×10: 4 pcs	–
G	–	170-041-528	AS-HG-CV65-30-8	Groove width 8 mm	Hinge AS-HG-CV-65: 1pc AS nut AS-8M5: 4 pcs Hexagon socket head cap screw M5×14: 4 pcs	–
G	–	170-041-529	AS-HG-CV65-40-8			–
G	–	170-041-530	AS-HG-CV65-40-10	Groove width 10 mm	Hinge AS-HG-CV-65: 1pc AS nut AS-10M5: 4 pcs Hexagon socket head cap screw M5×14: 4 pcs	–
G	–	170-041-531	AS-HG-CV100-30-6	Groove width 6 mm	Hinge AS-HG-CV-100: 1 pc AS nut AS-6M4: 6 pcs Hexagon socket head cap screw M4×10: 6pcs	–
G	–	170-041-532	AS-HG-CV100-30-8	Groove width 8 mm	Hinge AS-HG-CV-100: 1pc AS nut AS-8M5: 6pcs Hexagon socket head cap screw M5×14: 6pcs	–
G	–	170-041-533	AS-HG-CV100-40-8			–
G	–	170-041-534	AS-HG-CV100-40-10	Groove width 10 mm	Hinge AS-HG-CV-100: 1pc AS nut AS-10M5: 6pcs Hexagon socket head cap screw M5×14: 6pcs	–

Refer to 1 : FRONT P.20, 2 : P.706

CLEAN ROOM HINGE HG-CV-65N Lift-Off Type



- Plastic caps at rotating part prevent metal-to-metal friction and metal powder scattering.
- Lift-off type, easy to detach the door.
- When opening and closing door, plastic caps will not interfere with frame .
- Aluminium alloy material, light weight and excellent design.
- Oval hole type also available.

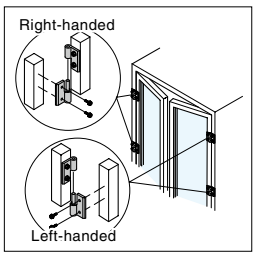
[Applications]

- Semiconductor manufacturing equipment, clean room, aluminium frame, household equipment, etc.

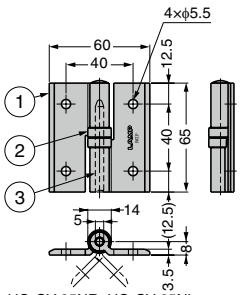
[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

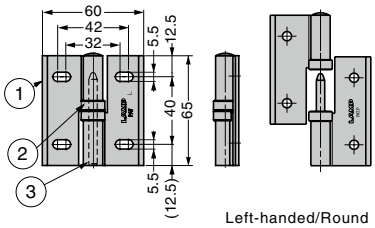
[Installation]



Reference door weight: 8kg
(In case of door size W600×800, using 2 pcs vertically)



HG-CV-65NR, HG-CV-65NL



AS-HG-CV-65NR
AS-HG-CV-65NL

Left-handed/Round hole type shown. Right-handed type is symmetrical.

RoHS	CAD	Item Code	Item Name	Description	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-452	HG-CV-65NR	Right-handed/Round Hole	108	11	49	20	240
G	3D	170-091-451	HG-CV-65NL	Left-handed/Round Hole				20	240
G	3D	170-090-538	AS-HG-CV-65NR	Right-handed/Oval Hole			48	20	240
G	3D	170-090-539	AS-HG-CV-65NL	Left-handed/Oval Hole				20	240

Refer to 1 : P.15

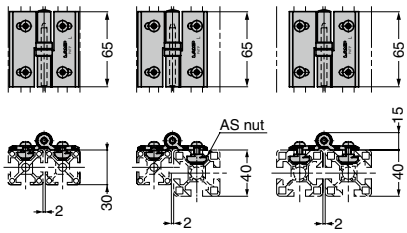
No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Anodised Silver
②	Cover	POM	White
③	Shaft	Stainless Steel (SUS303)	Plain

AS Parts Set For Installing to Aluminium Frame

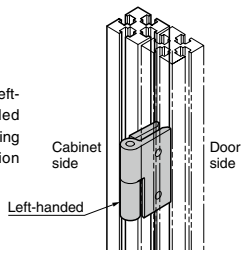
Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



As shown on the right, left-handed and right-handed types are defined according to the Installation position of the hinge.



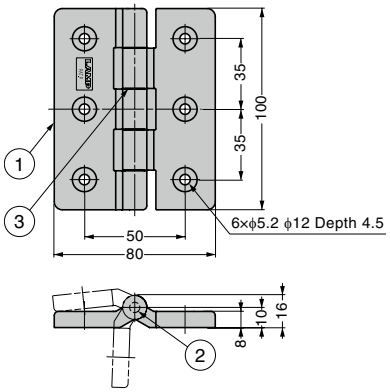
[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	170-041-535	AS-HG-CV65NR-30-6	Groove Width 6 mm	Hinge AS-HG-CV-65NR: 1pc AS Nut AS-6M4: 4pcs Hexagon Socket Head Cap Screw M4×10: 4pcs	–
G	–	170-041-539	AS-HG-CV65NL-30-6		Hinge AS-HG-CV-65NL: 1pc AS Nut AS-6M4: 4pcs Hexagon Socket Head Cap Screw M4×10: 4pcs	–
G	–	170-041-536	AS-HG-CV65NR-30-8	Groove Width 8 mm	Hinge AS-HG-CV-65NR: 1pc AS Nut AS-8M5: 4pcs Hexagon Socket Head Cap Screw M5×10: 4pcs	–
G	–	170-041-540	AS-HG-CV65NL-30-8		Hinge AS-HG-CV-65NL: 1pc AS Nut AS-8M5: 4pcs Hexagon Socket Head Cap Screw M5×10: 4pcs	–
G	–	170-041-537	AS-HG-CV65NR-40-8		Hinge AS-HG-CV-65NR: 1pc AS Nut AS-8M5: 4pcs Hexagon Socket Head Cap Screw M5×14: 4pcs	–
G	–	170-041-541	AS-HG-CV65NL-40-8		Hinge AS-HG-CV-65NL: 1pc AS Nut AS-8M5: 4pcs Hexagon Socket Head Cap Screw M5×14: 4pcs	–
G	–	170-041-538	AS-HG-CV65NR-40-10	Groove Width 10 mm	Hinge AS-HG-CV-65NR: 1pc AS Nut AS-10M5: 4pcs Hexagon Socket Head Cap Screw M5×14: 4pcs	–
G	–	170-041-542	AS-HG-CV65NL-40-10		Hinge AS-HG-CV-65NL: 1pc AS Nut AS-10M5: 4pcs Hexagon Socket Head Cap Screw M5×14: 4pcs	–

Refer to 1 : FRONT P.20, 2 : P.706

BUTT HINGE HG-P100





- PVC material, with excellent chemical resistance.
- No metal powder generated because all parts (except shaft) are made of resin.
- Clear type does not affect appearance even on transparent door.
- Lead-free.

[Applications]

- Semiconductor manufacturing equipment, liquid crystal manufacturing equipment, etc.

[Remarks]

- Screw may become loose, depending on use situation. Please check appropriately.
- Use washers when fixing with screws.
- When installing to aluminium frame, over-tightening may damage mounting screws.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Recommended Screws]

- M5 screw (Recommended tightening torque 2.0N・m)

No.	Part Name	Material	Finish / Colour
①	Leaf	PVC	Clear
②	Shaft	Titanium Alloy	Plain
③	Washer	PEEK	–

Reference door weight: 8kg
(In case of door size W600×H800, using 2 pcs vertically)

RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-020-836	HG-P100	98	10	74	30	240

Refer to 1 : P.15

BUTT HINGE FOR ALUMINIUM FRAME AS-HG-IS

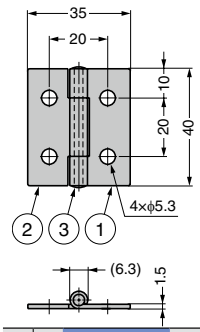
SUS

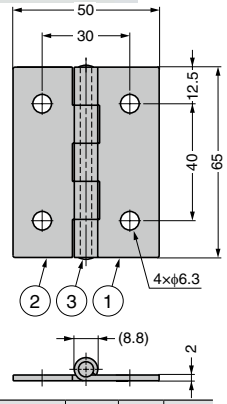


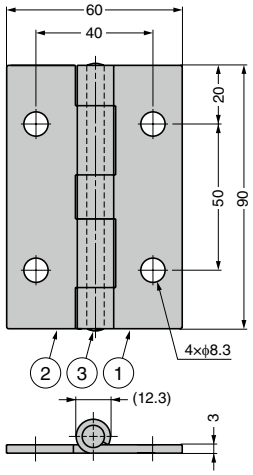
- Can be installed to aluminium frame.
- All parts made of polished stainless steel.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .







RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-116	AS-HG-IS40	69	7	21	400	–
G	3D	170-098-117	AS-HG-IS65	157	16	99	50	200
G	3D	170-098-118	AS-HG-IS90	333	34	169	10	80

Refer to 1 : P.15

No.	Part Name	Material	Finish
①	Body 1	Stainless Steel (SUS304)	Mirror
②	Body 2		
③	Shaft		–

LIFT-OFF HINGE FOR ALUMINIUM FRAME AS-HG-AL-N



- Aluminium alloy material, light weight and excellent design.
- Resin covering rotating part and shaft end prevents metal-to-metal friction and metal powder scattering.
- Unique shaft design for easy installation
- Shaft with rib will not fall off when door is detached.
- Suitable for aluminium frames from various manufacturers.

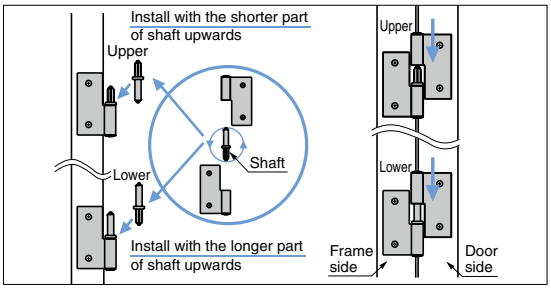
[Applications]

- Semiconductor manufacturing equipment, aluminium frame, household equipment, etc.

[Remarks]

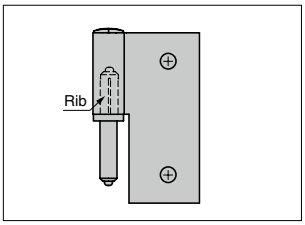
- For details such as applicable aluminium frames, please contact local representatives.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Installation]



- Shaft
  Install upper and lower hinges with the longer and shorter part of shaft reversed.
- Door installation
  Hang the door on to the lower hinge first, and then on to the upper hinge. Different shaft length reduces installation time.

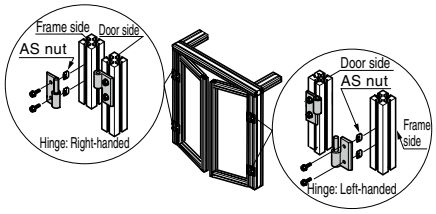
[Structure of Shaft]



Unique rib design means that the shaft will remain in the door part of the upper hinge when the door is removed.
When re-installing door, remove shaft and install it into hinge at the frame side.

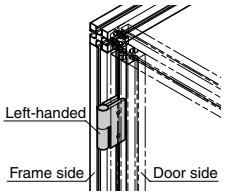
[Installation]

In case of surface mount

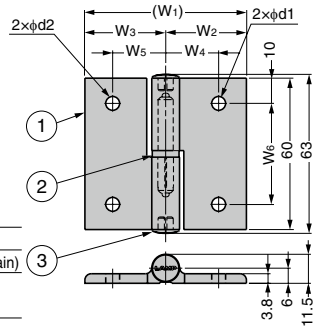


As shown above, in case of surface mount, use left-handed hinge for right-hanging while right-handed hinge for left-hanging.

In case of non-surface mount



As shown on the left, in case of non-surface mount, use right-handed hinge for right-hanging while left-handed hinge for left-hanging.



Right-handed/Round hole type shown. Left-handed type is symmetrical.

No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Matte Anodised Silver (Machined Surface: Plain)
②	Shaft	Stainless Steel (SUS303), POM	White
③	Cover	POM	

RoHS	CAD	Item Code	Item Name	Description	W1	W2	W3	W4	W5	W6	d1	d2	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-018-210	AS-HG-AL-NL3020	Round Holes, Left-handed	43	18	25	11	16	40	4.5	5.5	78	8	34	20	240
G	3D	170-018-209	AS-HG-AL-NR3020	Round Holes, Right-handed											34	20	240
G	3D	170-018-212	AS-HG-AL-NL3030	Round Holes, Left-handed	50	25		16			5.5				37	20	240
G	3D	170-018-211	AS-HG-AL-NR3030	Round Holes, Right-handed											37	20	240
G	3D	170-018-214	AS-HG-AL-NL3040	Round Holes, Left-handed	57										40	20	240
G	3D	170-018-213	AS-HG-AL-NR3040	Round Holes, Right-handed											40	20	240
G	3D	170-020-921	AS-HG-AL-NL4020	Round Holes, Left-handed	50	18	32	11	21		4.5				38	20	240
G	3D	170-020-920	AS-HG-AL-NR4020	Round Holes, Right-handed											38	20	240
G	3D	170-018-216	AS-HG-AL-NL4040	Round Holes, Left-handed	64	32		21			5.5				46	20	240
G	3D	170-018-215	AS-HG-AL-NR4040	Round Holes, Right-handed											46	20	240
G	3D	170-020-684	AS-HG-AL-NL3020N	No Holes, Left-handed	43	18	25	–	–	–	–	–			–	–	–
G	3D	170-020-685	AS-HG-AL-NR3020N	No Holes, Right-handed											–	–	–
G	3D	170-020-686	AS-HG-AL-NL3030N	No Holes, Left-handed	50	25									–	–	–
G	3D	170-020-687	AS-HG-AL-NR3030N	No Holes, Right-handed											–	–	–

Refer to 1 : P.15

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

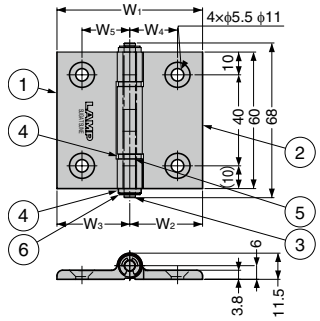
BUTT HINGE FOR ALUMINIUM FRAME AS-HG-AL



- Special hinges fitting perfectly with the mounting groove of aluminium frame. No additional washers are required.
- Plastic bushes provide smooth movement and prevent metal-to-metal friction.
- Aluminium alloy material, light weight and excellent design.
- Stainless steel hinge AS-HG-SUS 1 of the same type also available.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .



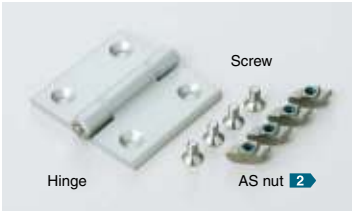
No.	Part Name	Material	Finish / Colour
①	Body A	Aluminium Alloy	Anodised Silver
②	Body B		
③	Shaft	Stainless Steel (SUS303)	Plain
④	Bush	POM	Natural
⑤	Washer	PEEK	
⑥	E-type Retaining Ring	Stainless Steel (SUS304)	–

RoHS	CAD	Item Code	Item Name	W1	W2	W3	W4	W5	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-011-679	AS-HG-AL-M3020	43	18	25	11	16	147	15	41	20	300
G	3D	170-011-680	AS-HG-AL-M3030	50	25		16				45	20	300
G	3D	170-011-681	AS-HG-AL-M3040	57	32	32	21	21			48	20	300
G	3D	170-011-682	AS-HG-AL-M4040	64							53	20	300

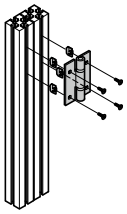
Refer to 1 : P.175, 2 : P.15

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Installation]

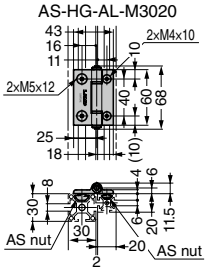


[AS Parts Set] Parts set of screws and AS nuts

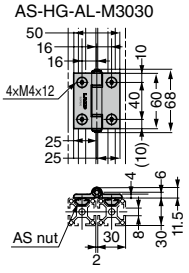
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	170-041-810	AS-HG-AL-M3020-8	Groove Width 6 mm Groove Width 8 mm	Hinge AS-HG-AL-M3020 : 1pc AS Nut AS-8M5 : 2pcs Hexagon Socket Countersunk Head Screw M5×12 : 2pcs AS Nut AS-6M4 : 2pcs Hexagon Socket Countersunk Head Screw M4×10 : 2pcs	–
G	–	170-041-811	AS-HG-AL-M3030-8	Groove Width 8 mm	Hinge AS-HG-AL-M3030 : 1pc AS Nut AS-8M5 : 4pcs Hexagon Socket Countersunk Head Screw M5×12 : 4pcs	–
G	–	170-041-812	AS-HG-AL-M3040-10	Groove Width 8 mm Groove Width 10 mm	Hinge AS-HG-AL-M3040 : 1pc AS Nut AS-10M5 : 2pcs Hexagon Socket Countersunk Head Screw M5×16 : 2pcs AS Nut AS-8M5 : 2pcs Hexagon Socket Countersunk Head Screw M5×12 : 2pcs	–
G	–	170-041-813	AS-HG-AL-M4040-8	Groove Width 8 mm	Hinge AS-HG-AL-M4040 : 1pc AS Nut AS-8M5 : 4pcs Hexagon Socket Countersunk Head Screw M5×16 : 4pcs	–
G	–	170-041-814	AS-HG-AL-M4040-10	Groove Width 10 mm	Hinge AS-HG-AL-M4040 : 1pc AS Nut AS-10M5 : 4pcs Hexagon Socket Countersunk Head Screw M5×16 : 4pcs	–

[Dimensions]

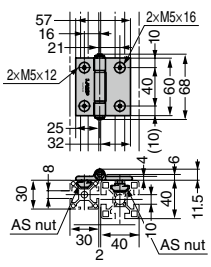
AS-HG-AL-M3020



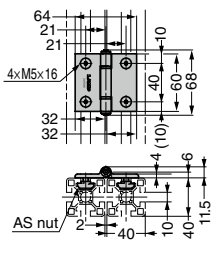
AS-HG-AL-M3030



AS-HG-AL-M3040



AS-HG-AL-M4040



Refer to 1 : FRONT P.20, 2 : P.706

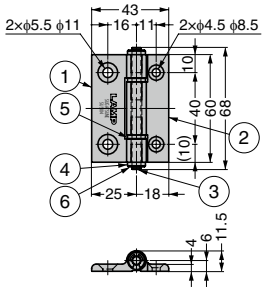
BUTT HINGE FOR ALUMINIUM FRAME AS-HG-SUS


AS-HG-SUS-M3030　AS-HG-SUS-M3040

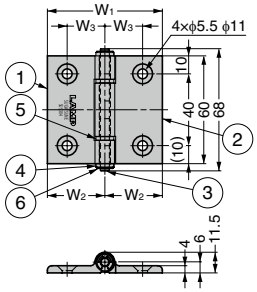
- Special hinges fitting perfectly with the mounting groove of aluminium frame. No additional washers are required.
- Plastic bushes provide smooth movement and prevent metal-to-metal friction.
- Aluminium alloy hinge AS-HG-AL 1 of the same type also available.

[Remarks]

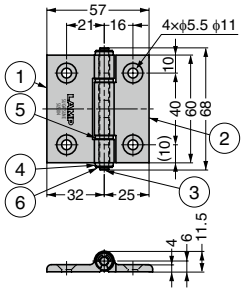
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .



AS-HG-SUS-M3020
(Fig.A)



AS-HG-SUS-M3030
AS-HG-SUS-M4040
(Fig.B)



AS-HG-SUS-M3040
(Fig.C)

RoHS	CAD	Item Code	Item Name	Drawing	W1	W2	W3	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	170-011-886	AS-HG-SUS-M3020	Fig.A	–	–	–	294	30	96	10	100
G'	3D	170-011-887	AS-HG-SUS-M3030	Fig.B	50	25	16			102	10	100
G'	3D	170-011-888	AS-HG-SUS-M3040	Fig.C	–	–	–			112	10	100
G'	3D	170-011-889	AS-HG-SUS-M4040	Fig.B	64	32	21			124	10	100

No.	Part Name	Material	Finish / Colour
①	Body A	Stainless Steel (SCS13)	Polished
②	Body B		
③	Shaft	Stainless Steel (SUS303)	Plain
④	Bush	POM	Natural
⑤	Washer	PEEK	
⑥	E-type Retaining Ring	Stainless Steel	–

Refer to 1 : P.174, 2 : P.15

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

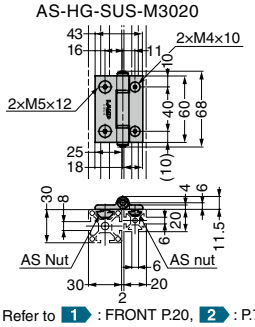


[AS Parts Set] Parts set of screws and AS nuts

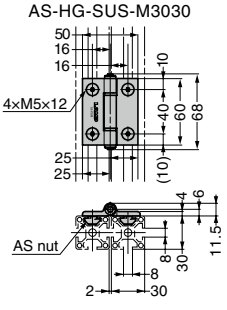
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G'	–	170-013-727	AS-HG-SUS-M3020-8	Groove width 6 mm Groove width 8 mm	Hinge AS-HG-SUS-M3020 : 1pc AS Nut AS-8M5 : 2pcs AS Nut AS-6M4 : 2pcs Hexagon Socket Countersunk Head Screw M4×10 : 2pcs Hexagon Socket Countersunk Head Screw M5×12 : 2pcs	–
G'	–	170-013-728	AS-HG-SUS-M3030-8	Groove width 8 mm	Hinge AS-HG-SUS-M3030 : 1pc AS Nut AS-8M5 : 4pcs Hexagon Socket Countersunk Head Screw M5×12 : 4pcs	–
G'	–	170-013-729	AS-HG-SUS-M3040-10	Groove width 8 mm Groove width 10 mm	Hinge AS-HG-SUS-M3040 : 1pc AS Nut AS-8M5 : 2pcs AS Nut AS-10M5 : 2pcs Hexagon Socket Countersunk Head Screw M5×12 : 2pcs Hexagon Socket Countersunk Head Screw M5×16 : 2pcs	–
G'	–	170-013-730	AS-HG-SUS-M4040-8	Groove width 8 mm	Hinge AS-HG-SUS-M4040 : 1pc AS Nut AS-8M5 : 4pcs Hexagon Socket Countersunk Head Screw M5×16 : 4pcs	–
G'	–	170-013-731	AS-HG-SUS-M4040-10	Groove width 10 mm	Hinge AS-HG-SUS-M4040 : 1pc AS Nut AS-10M5 : 4pcs Hexagon Socket Countersunk Head Screw M5×16 : 4pcs	–

[Dimensions]

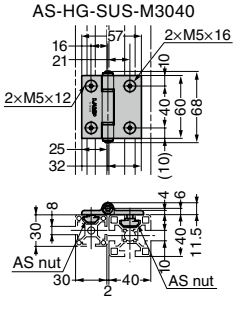
AS-HG-SUS-M3020



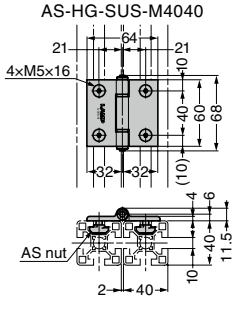
AS-HG-SUS-M3030



AS-HG-SUS-M3040



AS-HG-SUS-M4040



Refer to 1 : FRONT P.20, 2 : P.706

TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

PIVOT HINGE FOR ALUMINIUM FRAME AS-AF-25D

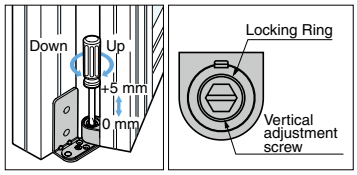


- Compact and space-saving.
- Horizontally and vertically adjustable after door installation.
- Robust structure thanks to 3mm thick stainless steel bracket.
- Door fall-preventing function provides safety.
- Use AS nuts for installation.
- Sold in pairs.

[Remarks]

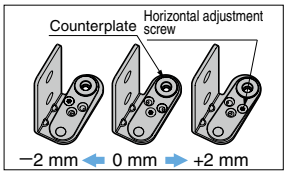
- When installing, ensure that upper and lower hinge shafts are aligned.

[Vertical Adjustment]

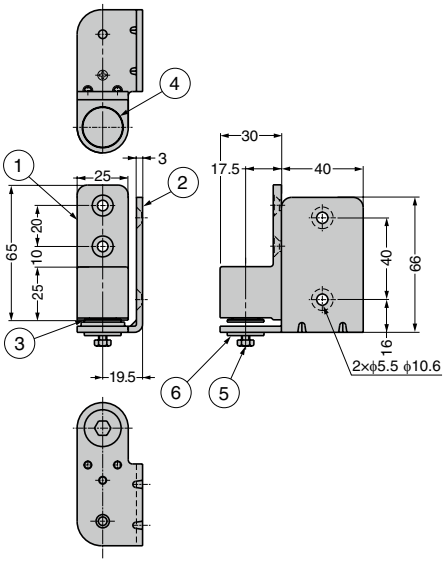


1. Remove the plastic cap from the hinge body.
2. Loosen the lock ring with a hex key.
3. Turn the vertical adjustment screw with a slotted screwdriver to adjust to an arbitrary position. (Adjustment range +5mm)
4. After that, tighten the lock ring to complete.

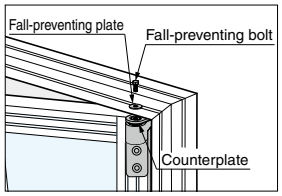
[Horizontal Adjustment]



1. Remove the horizontal adjustment screw from the counterplate.
2. Choose one from the three holes (adjustment position -2mm, 0mm, 2mm) of the counterplate and secure with the horizontal adjustment screw.

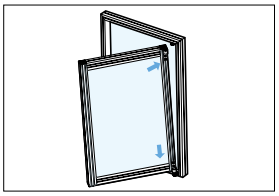


[Fall-preventing]



- After door installation and vertical adjustment, mount the fall-preventing plate and fall-preventing bolt to the top of the upper hinge.
- The fall-preventing bolt prevents the door from accidental falling off.

[How to Install Door]



1. Insert the body of the lower hinge into the counterplate.
2. Install the door while pressing the pivot on the bottom of the body of the upper hinge.
3. Shake the door gently to make sure that it will not come off.

No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Soft Chrome
②	Bracket	Stainless Steel (SUS304)	Barrel Polished
③	Counterplate	POM	White
④	Cover	ABS	Grey
⑤	Fall-preventing Bolt	Stainless Steel (SUS303)	–
⑥	Fall-preventing Plate	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Door Thickness	Door Weight kg	Weight (g)	Box (pairs)	Carton (pairs)
–	3D	170-090-693	AS-AF-25D	Max. 900	Max. 2200	33~42	Max. 35	369	1	20

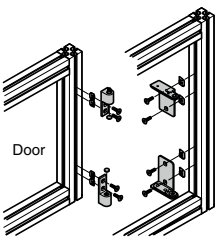
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



※Picture above shows 2 sets.

[Installation]



[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
–	–	170-041-616	AS-AF-25D-40-10-30-8	Groove width 8 mm Groove width 10 mm	Hinge AS-AF-25D : 1 pair AS nut AS-10M5 : 2 pcs Hexagon socket countersunk head screw M5×14 : 2pcs AS nut AS-8M5 : 2 pcs Hexagon socket countersunk head screw M5×12 : 2pcs	–

Refer to 1 : FRONT P.20, 2 : P.706

DROP HINGE (ADJUSTABLE TYPE) SDH-P

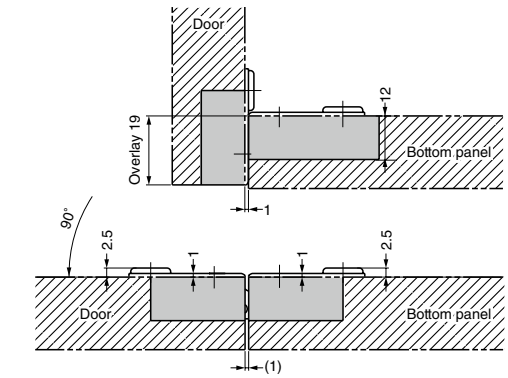


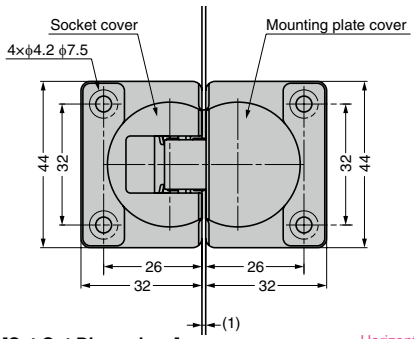
- 3-way adjustment.
  Overlay: 16-19mm / Horizontal: ±1mm / Door gap: 1-3mm
- Can be used with soft-down stay SDS-100 1, SDS-100TV, NSDX-10(R/L) 2, NSDX-10(R/L)K-TV, CSD-10-TV.
- Bore depth:12mm

[Recommended Screws]
- Pan head tapping screw 3.5×15

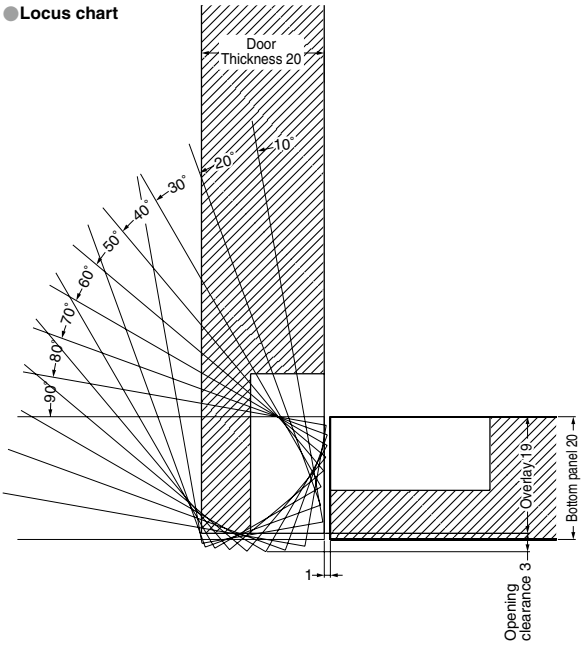
Hinges and covers are packed separately.

Outline drawing



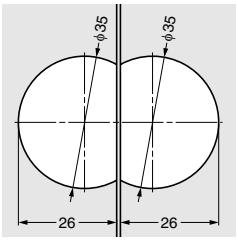


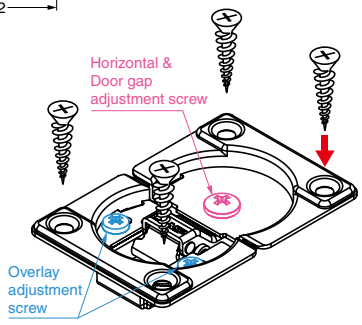
Locus chart



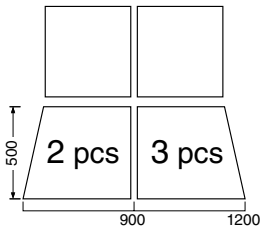
Example (door thickness : 20 mm / bottom panel: 20 mm / overlay : 19 mm)

[Cut Out Dimensions]





[Number of Hinges]
In case of door thickness up to 20 mm. Material: Particle board.



[Drop Hinge+Cover]

RoHS	CAD	Item Code	Item Name
G	3D	170-035-444	SDH-P-BL-SET
G	3D	170-037-357	SDH-P-WT-SET
G	3D	170-037-358	SDH-P-NI-SET

[Drop Hinge]

RoHS	CAD	Item Code	Item Name	Material	Finish	Overlay	Door Thickness	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-034-200	SDH-P	Steel	Nickel	16~19	16~20	90°	42	50	200

[Cover Set] Socket cover + mounting plate cover

RoHS	CAD	Item Code	Item Name	Styles	Material	Finish / Colour	Weight (g)	Box (pcs)
G	3D	170-034-769	SDH-PC-BL	Socket Cover + Mounting Plate Cover	ABS	Black	4	100
G	3D	170-034-828	SDH-PC-WT			White	4	100
G	3D	170-034-829	SDH-PC-NI			Nickel	4	100

Refer to 1 : P.244, 2 : P.242

DROP HINGE (ADJUSTABLE TYPE) SDH-001

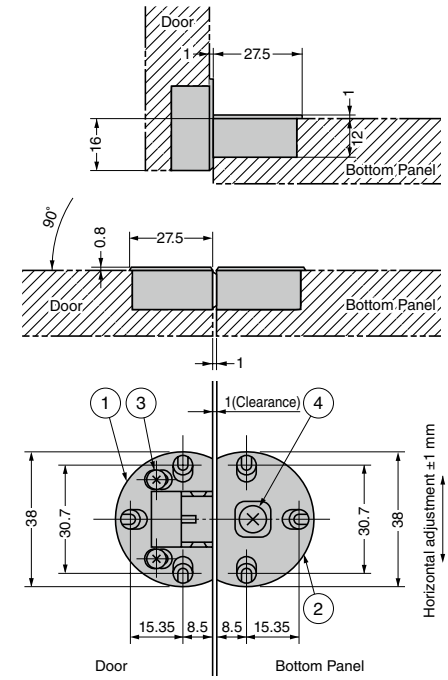


- 3-way adjustment. Overlay: 14~16mm / Door gap: +1mm / Horizontal: ±1mm
- Can be used with SOFT-DOWN STAY SDS-100 1 and NSDX-10 2 .
- Bore depth: 12mm
- Pan head tapping screw 3×13 in black (sold separately) for SDH-001BL is also available. Sold in bags (300 pcs per pack).
- Glass door type is also available.

[Remarks]
- Use with a stay for downward-opening.

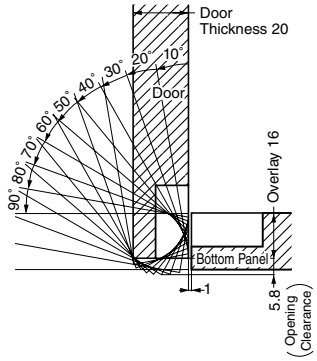
[Recommended Screws]
- Pan head tapping screw 3×13

Outline drawing



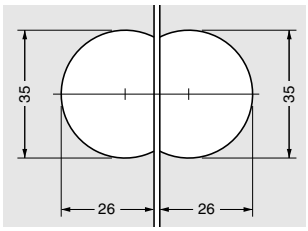
No.	Part Name	Material	Finish
①	Fixing Socket	Zinc Alloy (ZDC)	Nickel / Black Enamel Finish
②	Mounting Plate		
③	Overlay Adjustment Screw	Steel (SWCH)	–
④	Body Fixing Screw		

Locus chart (How to Use the Locus Chart 3)



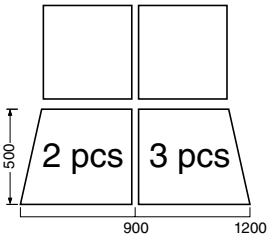
A gap equivalent to opening clearance is required for door opening and closing. Drawing above is door thickness 20 mm, bottom panel thickness 20 mm and 16 mm overlay. The value of opening clearance may change with the door thickness. Please confirm in the locus chart.

[Cut Out Dimensions]



[Number of Hinges]

In case of door thickness up to 20 mm.
Material: particle board.



[Application Example]



Combination with HEAVY DUTY SOFT-DOWN STAY HDS-10 4

[Pan Head Tapping Screw 3×13] Black

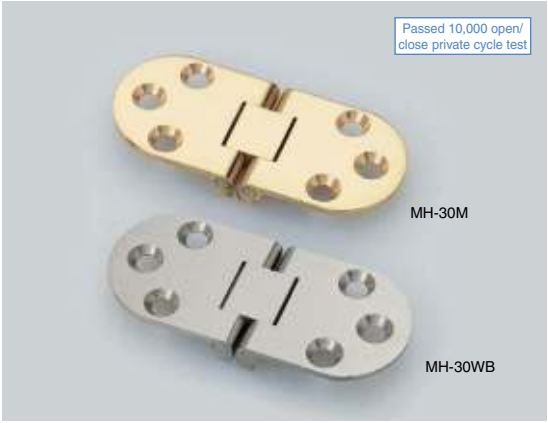
RoHS	CAD	Item Code	Item Name	1 pack	Weight (g)	Box (pcs)
G	–	170-011-885	SDH-001-S-BL	300 pcs	179	300

[Hinge]

RoHS	CAD	Item Code	Item Name	Material	Finish	Overlay	Recommended Door Thickness	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-471	SDH-001	Zinc Alloy (ZDC)	Nickel	14~16	16~20	90°	85	50	200
–	3D	170-010-648	SDH-001BL		Black Enamel Finish				85	50	200

Refer to 1 : P.244, 2 : P.242, 3 : P.111, 4 : P.238

TABLETOP HINGE MH-30

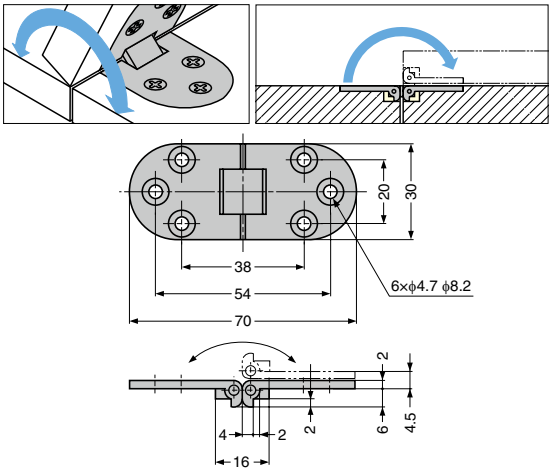


●Double pivot hinge allows 180° opening.

[Remarks]

●Recommended door dimensions in the table below are the value when using two hinges for one door.

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



RoHS	CAD	Item Code	Item Name	Material	Finish	Door Width	Door Height	Door Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-090-052	MH-30M	Brass	Polished	Max. 450	Max. 700	Max. 21	29	3	180°	45	24	360
–	3D	170-090-051	MH-30WB		White Bronze Plating								24	360
–	3D	170-090-050	MH-30CR		Chrom								24	360

Refer to 1 : P.15

TABLETOP HINGE MH-40

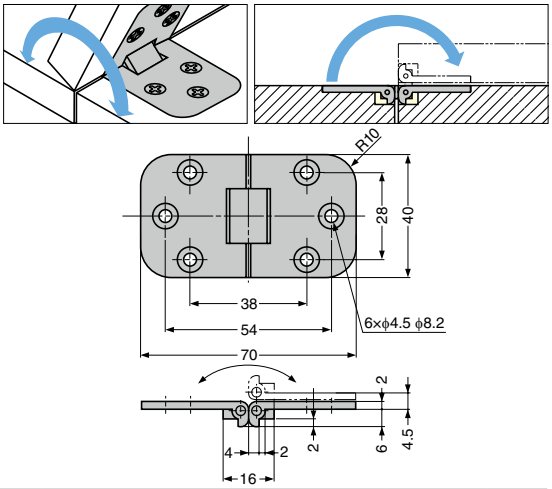


●Double pivot hinge allows 180° opening.

[Remarks]

●Recommended door dimensions in the table below are the value when using two hinges for one door.

●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



RoHS	CAD	Item Code	Item Name	Material	Finish	Door Width	Door Height	Door Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-090-057	MH-40M	Brass	Polished	Max. 450	Max. 700	Max. 21	29	3	180°	64	16	240
–	3D	170-090-056	MH-40WB		White Bronze Plating								16	240
–	3D	170-090-055	MH-40CR		Chrom								16	240

Refer to 1 : P.15

GLASS DOOR HINGE XL-GH03-48-0 For Inset Door

SUS TEMPERED GLASS

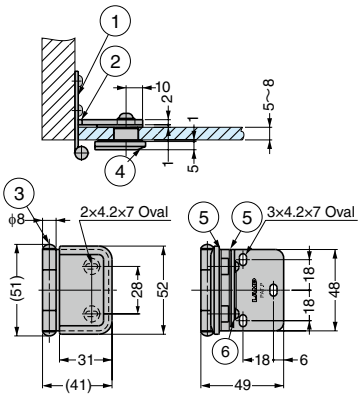


●Only two round holes needed on the door for one hinge.

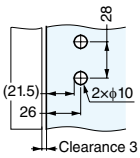
[Applications]
●Glass or acrylic doors, various showcases, etc.

[Remarks]
●Recommended for use in pairs.
●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Parts Included]
●Spacer (2 pcs)
●Truss head screw M4×12 (2 pcs)



[Cut Out Dimensions]



No.	Part Name	Material	Finish / Colour	
			CR	GC
①	Hinge Plate	Stainless Steel (SUS304)	Polished	Gold, Clear
②	Arm			
③	Shaft			
④	Plate	Zinc Alloy (ZDC)	Chrome	
⑤	Spacer	Polyethylene	White	Natural
⑥	Screw	Stainless Steel (SUS304)	Plain	Plain

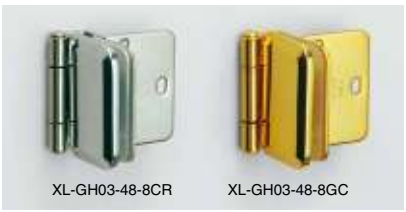
RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-651	XL-GH03-48-0CR	Max. 650	Max. 900	5, 6, 8	118	12	132	10	100
–	3D	170-098-652	XL-GH03-48-0GC						144	10	100

Refer to 1 : P.15

※ Load capacity has priority over glass size.

GLASS DOOR HINGE XL-GH03-48-8 For Overlay Door

SUS TEMPERED GLASS

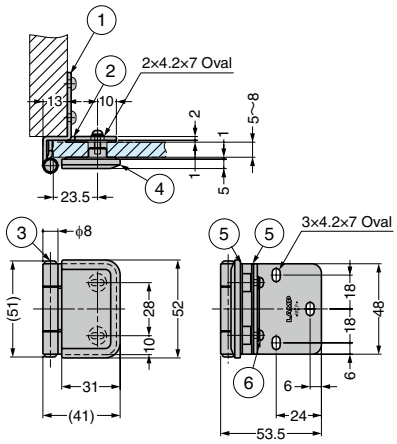


●Only two round holes needed on the door for one hinge.

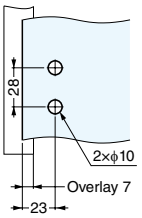
[Applications]
●Glass or acrylic doors, various showcases, etc.

[Remarks]
●Recommended for use in pairs.
●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Parts Included]
●Spacer (2 pcs)
●Truss head screw M4×12 (2 pcs)



[Cut Out Dimensions]



No.	Part Name	Material	Finish / Colour	
			CR	GC
①	Hinge Plate	Stainless Steel (SUS304)	Polished	Gold, Clear
②	Arm			
③	Shaft			
④	Plate	Zinc Alloy (ZDC)	Chrome	
⑤	Spacer	Polyethylene	Natural	Natural
⑥	Screw	Stainless Steel (SUS304)	Plain	Plain

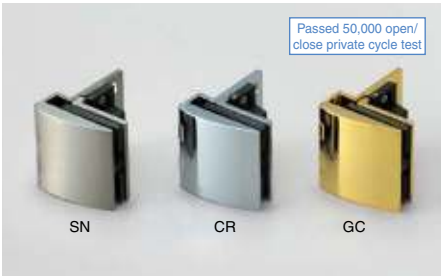
RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-098-649	XL-GH03-48-8CR	Max. 650	Max. 900	5, 6, 8	118	12	141	10	100
–	3D	170-098-650	XL-GH03-48-8GC						148	10	100

Refer to 1 : P.15

※ Load capacity has priority over glass size.

GLASS DOOR HINGE (W/ CATCH) GH-456C For Overlay Door

INSTRUCTION TEMPERED GLASS



- Suitable for showcases and covers for machine.
- Mounting position adjustable: Vertically ±1mm, Horizontally ±1.2mm.
- Inset door hinge is also available.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

[Recommended Screws]

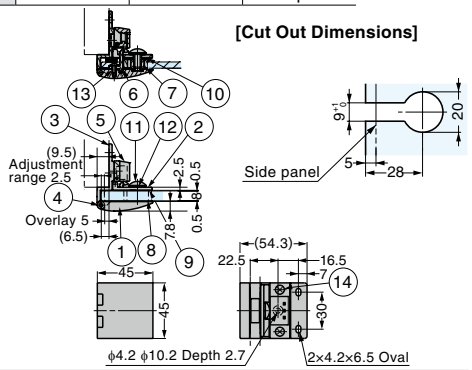
- Size 4 truss head tapping screw or size 3.8 round head wood screw

[Glass Thickness and Qty of Spacers]

Glass Thickness	5	6	8
Qty of Spacers	3	2	No Spacer

No.	Part Name	Material	Finish
①	Front Plate	Brass	SN: Satin Nickel CR: Chrome GC: Gold
②	Fixing Plate C		
③	Hinge Plate		
④	Shaft	Stainless Steel (SUS303)	Plain
⑤	Catch	–	Black
⑥	Striker	Zinc Alloy (ZDC)	–
⑦	Glass Adjustment Block	PA	Black
⑧	Pad C	PVC	–
⑨	Pad D		
⑩	Spacer	PP	
⑪	Truss Head Screw	Stainless Steel	
⑫	Spring Washer		
⑬	Truss Head Screw		
⑭	Truss Head Screw		

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Finish	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-020-968	GH-456C-SN	Satin Nickel	Max. 600	Max. 1200	5, 6, 8	148	15	216	10	80
–	3D	170-020-969	GH-456C-CR	Chrome						216	10	80
–	3D	170-020-970	GH-456C-GC	Gold						216	10	80

Refer to 1 : P.15

※ Load capacity has priority over glass size.

GLASS DOOR HINGE (W/O CATCH) GH-456N For Overlay Door

INSTRUCTION TEMPERED GLASS



- Suitable for showcases and covers for machine.
- Mounting position adjustable: Vertically ±1mm, Horizontally ±1.2mm.
- Inset door hinge is also available.

[Remarks]

- Without catch.For type with catch, Refer to GH-456C 1 .
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .

[Recommended Screws]

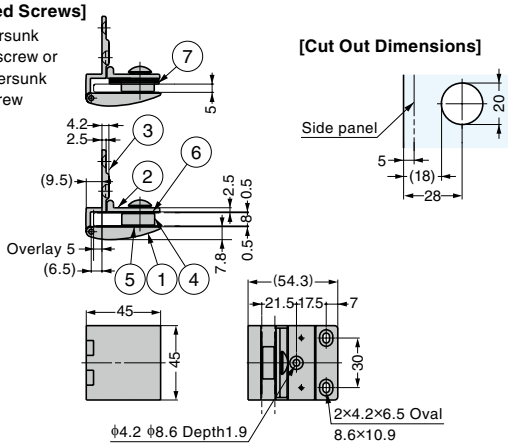
- Size 4 Countersunk head tapping screw or size 3.8 countersunk head wood screw

[Glass Thickness and Qty of Spacers]

Glass Thickness	5	6	8
Qty of Spacers	3	2	No Spacer

No.	Part Name	Material	Finish
①	Front Plate	Copper Alloy (C3604)	SN: Satin Nickel CR: Chrome GC: Gold
②	Fixing Plate B		
③	Hinge Plate		
④	Shaft	Stainless Steel (SUS303)	Plain
⑤	Glass Adjustment Block	PA	Black
⑥	Pad A	Chloroprene Rubber (CR)	
⑦	Pad B		
⑧	Spacer (Small)	PP	
⑨	Truss Head Screw	Stainless Steel	–
⑩	Spring Washer		

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Finish	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-090-702	GH-456N-SN	Satin Nickel	Max. 600	Max. 1200	5, 6, 8	148	15	206	10	80
–	3D	170-090-703	GH-456N-CR	Chrome						206	10	80
–	3D	170-090-704	GH-456N-GC	Gold						206	10	40

Refer to 1 : P.181, 2 : P.15

※ Load capacity has priority over glass size.

GLASS DOOR LIFT-OFF HINGE GH36-NCR For Inset Door

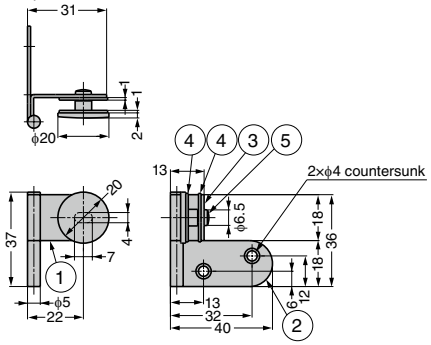
TEMPERED GLASS


Left-handed

- Hinge for glass/acrylic doors.

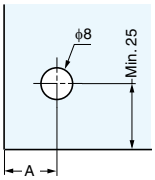
[Remarks]

- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws .
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .



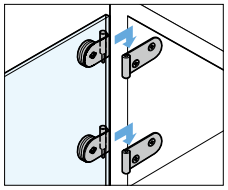
Left-handed type shown. Right-handed type is symmetrical.

[Cut Out Dimensions]



Boring position changes with the glass thickness.

[Installation Example]



Glass Thickness	A
4	19
5	18
6	17

No.	Part Name	Material	Finish / Colour
①	Body (Male)	Steel (SPCC)	Chrome
②	Body (Female)		
③	Plate	Brass	
④	Washer	PVC	Clear
⑤	Screw	Steel (SWCH)	Nickel

RoHS	CAD	Item Code	Item Name	Type	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-097-958	GH36-NCRR	Right-handed	Max. 450	Max. 700	4, 5, 6	39	4	24.5	100	400
–	3D	170-097-957	GH36-NCRL	Left-handed							100	400

Refer to 1 : P.15

※ Load capacity has priority over glass size.

GLASS DOOR HINGE GH34-0 For Inset Door

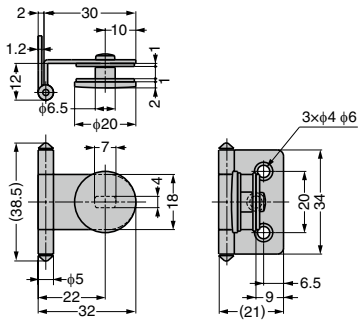
TEMPERED GLASS



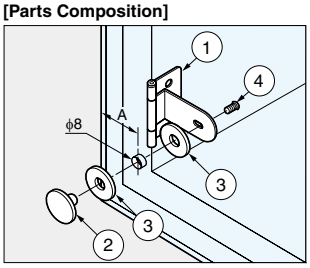
- Hinge for glass/acrylic doors.Square plate type GH34-0CR-K 1 also available.

[Remarks]

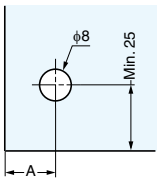
- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws .
- Note that scratch is conspicuous on black surface.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .



[Parts Composition]



[Cut Out Dimensions]



Boring position changes with the glass thickness.

Glass Thickness	A
4	19
5	18
6	17

No.	Part Name	Material	Finish / Colour
①	Body	Steel	Chrome, Paint/Black
②	Plate	Brass	
③	Washer	PVC	Clear
④	Screw	Steel	Nickel, Paint/Black

RoHS	CAD	Item Code	Item Name	Finish	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-083-513	GH34-0CR	Chrome	Max.	Max.	4, 5, 6	39	4	23.5	150	900
–	3D	170-025-831	GH34-0BL	Paint/Black	450	700					150	900

Refer to 1 : P.183, 2 : P.15

※ Load capacity has priority over glass size.

GLASS DOOR HINGE GH34-0CR-K For Inset Door

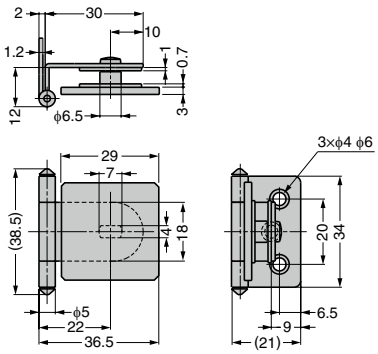
TEMPERED GLASS



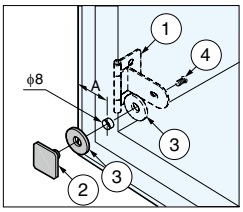
- Hinge for glass/acrylic doors.
- Round plate type GH34-0CR 1 also available

[Remarks]

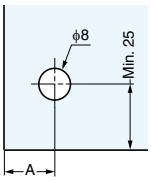
- Recommended for use in pairs.
- When mounting screws, use a screw loosening prevention agent.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .



[Parts Composition]



[Cut Out Dimensions]



Boring position changes with the glass thickness.

Glass Thickness	A
4	19
5	18
6	17

No.	Part Name	Material	Finish / Colour
①	Body	Steel	Chrome
②	Plate	Zinc Alloy (ZDC)	
③	Washer	PVC	Clear
④	Screw	Steel	Nickel

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-019-481	GH34-0CR-K	Max. 450	Max. 700	4, 5, 6	39	4	34	100	500

Refer to 1 : P.183, 2 : P.15

※ Load capacity has priority over glass size.

GLASS DOOR HINGE GH34-8CR-K For Overlay Door

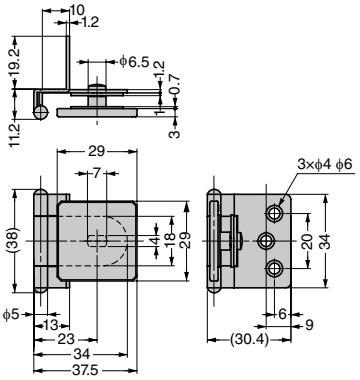
TEMPERED GLASS



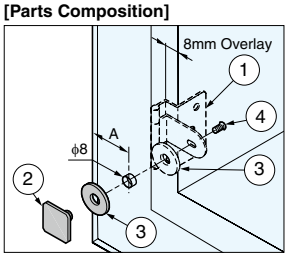
- Hinge for glass/acrylic doors.
- Round plate type GH34-8CR 1 also available.

[Remarks]

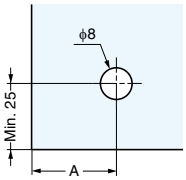
- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .



[Parts Composition]



[Cut Out Dimensions]



Boring position changes with the glass thickness.

Glass Thickness	A	Overlay
4	19	8
5	18	7
6	17	6

No.	Part Name	Material	Finish / Colour
①	Body	Steel	Chrome
②	Plate	Zinc Alloy (ZDC)	
③	Washer	PVC	Clear
④	Screw	Steel	Nickel

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	CAD	170-019-482	GH34-8CR-K	Max. 450	Max. 700	4, 5, 6	39	4	37	50	500

Refer to 1 : P.189, 2 : P.15

※ Load capacity has priority over glass size.

GLASS DOOR HINGE (W/ CATCH) GHC34-8CR-K For Overlay Door

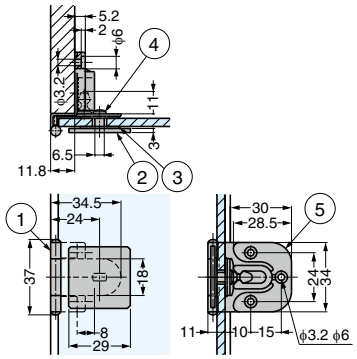
TEMPERED GLASS



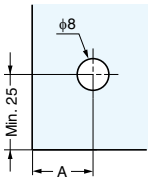
- Hinge for glass/acrylic doors.
- Round plate type GHC34-8CR 1 also available.

[Remarks]

- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .



[Cut Out Dimensions]



Boring position changes with the glass thickness.

Glass Thickness	A	Overlay
4	19	7
5	18	6
6	17	5

No.	Part Name	Material	Finish / Colour
①	Body	Steel	Chrome
②	Plate	Zinc Alloy (ZDC)	
③	Washer	PVC	Clear
④	Screw	Steel	Nickel
⑤	Catch	POM	Black

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	CAD	170-019-480	GHC34-8CR-K	Max. 450	Max. 700	4, 5, 6	39	4	43	40	600

Refer to 1 : P.191, 2 : P.15

※ Load capacity has priority over glass size.

GLASS DOOR HINGE GH34-0SS For Inset Door

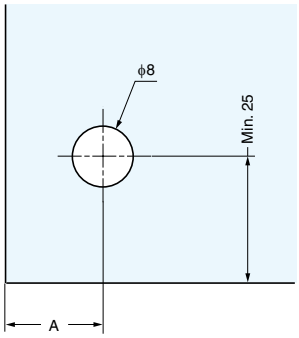


- Hinge for glass/acrylic doors.

[Remarks]

- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

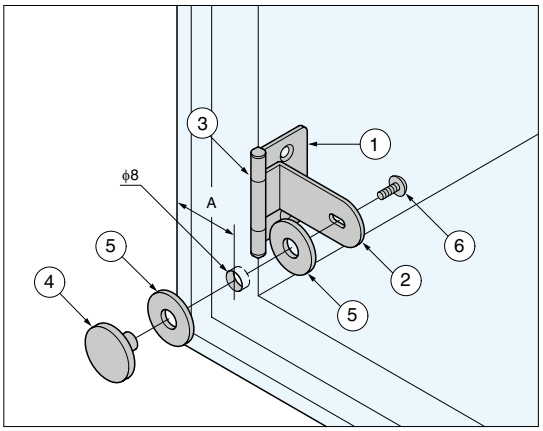
[Cut Out Dimensions]



Boring position changes with the glass thickness.

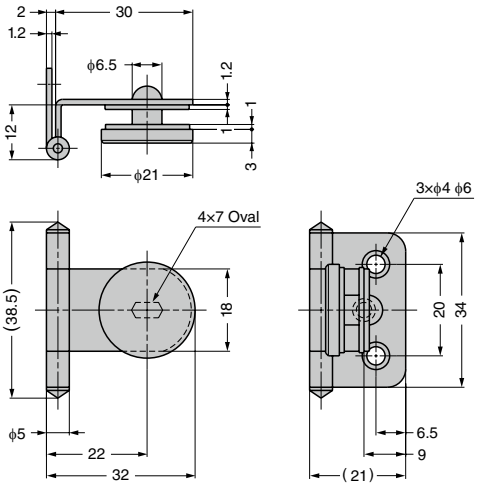
Glass Thickness	A
4	19
5	18
6	17

[Parts Composition]



No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel	Plain
②	Arm	(SUS304)	
③	Shaft	Stainless Steel	
④	Plate	Aluminium Alloy	Circular Satin Anodised Silver
⑤	Washer	PVC	Clear
⑥	※Screw	Stainless Steel	Plain

※Truss head screw M3×6



RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-083-529	GH34-0SS	Max. 450	Max. 700	4, 5, 6	49	5	15	150	900

Refer to 1 : P.15

※ Load capacity has priority over glass size.

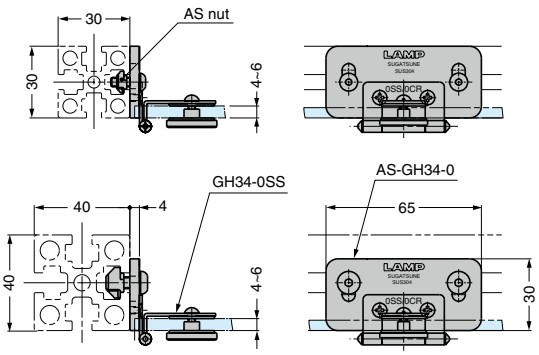
TORQUE HINGES
DAMPER HINGES
LIFT ASSIST HINGES
DETENT HINGES
CONCEALED HINGES
BUTT HINGES
PIANO HINGES
STEP HINGES
LIFT-OFF HINGES
PIVOT HINGES
SPRING HINGES
CLEAN ROOM HINGES
HINGES FOR ALUMINIUM FRAME
DROP HINGES
GLASS DOOR HINGES
SPECIAL HINGES

AS Parts Set for Installing to Aluminium Frame

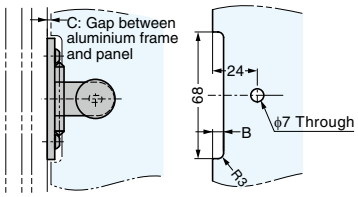
Please refer to the series introduction page 1 for details about AS series.



[Dimensions]

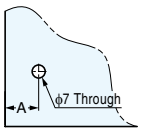


Installation (panel with notch)



Panel with notch
Cut Out Dimensions

Panel Thickness	B	C
4	5	2
5	6	2
6	7	2



Panel without notch
Cut Out Dimensions

Panel Thickness	A	C
4	19	7.1
5	18	7.9
6	17	7.9

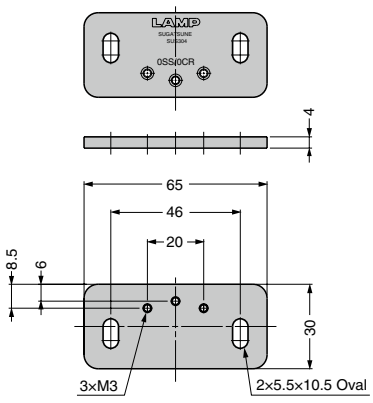
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	170-041-604	AS-GH34-0SS-30-6	Groove Width 6 mm	Hinge GH34-0SS : 1pc AS Nut AS-6M4 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-0 : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
G	3D	170-041-605	AS-GH34-0SS-30-8	Groove Width 8 mm	Hinge GH34-0SS : 1pc AS Nut AS-8M4 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-0 : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
G	3D	170-041-606	AS-GH34-0SS-40-8		Hinge GH34-0SS : 1pc AS Nut AS-8M5 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-0 : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–
G	3D	170-041-607	AS-GH34-0SS-40-10	Groove Width 10 mm	Hinge GH34-0SS : 1pc AS Nut AS-10M5 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-0 : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–

Refer to 1 : FRONT P.20, 2 : P.706

AS BRACKET FOR GH34-0SS AS-GH34-0

AS SUS



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-080-020	AS-GH34-0	Stainless Steel (SUS304)	Barrel Polished	52	50	250

GLASS DOOR HINGE GH34-8SS For Overlay Door

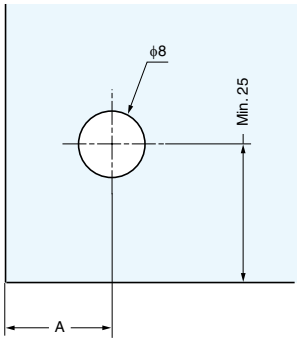


●Hinge for glass/acrylic doors.

[Remarks]

- ●Recommended for use in pairs.
- ●Use screw loosening prevention agent when mounting screws.
- ●Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1 .

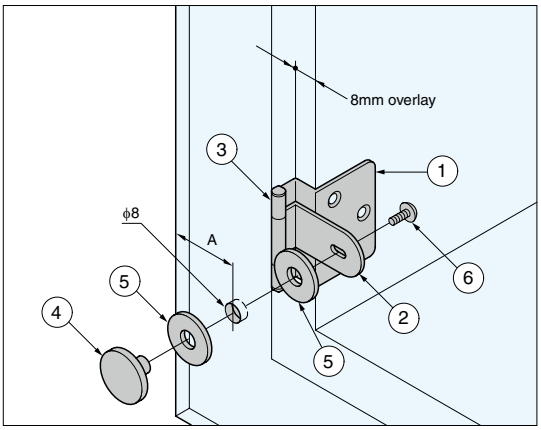
[Cut Out Dimensions]

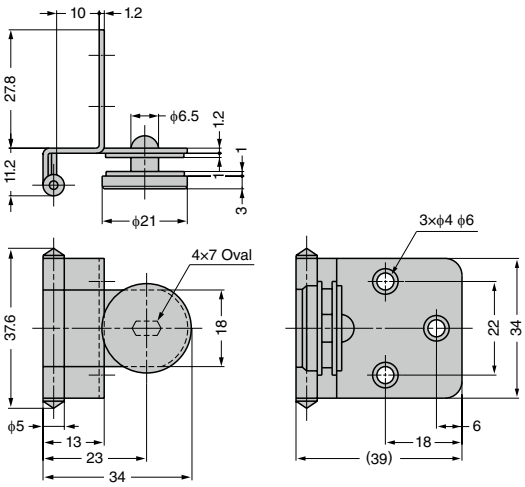


Boring position changes with the glass thickness.

Glass Thickness	A	Overlay
4	19	8
5	18	7
6	17	6

[Parts Composition]





No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel	Plain
②	Arm	(SUS304)	
③	Shaft	Stainless Steel	
④	Plate	Aluminium Alloy	Circular Satin Anodised Silver
⑤	Washer	PVC	Clear
⑥	※Screw	Stainless Steel	Plain

※Truss head screw M3×6

RoHS	CAD	Item Code	Item Name	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-083-530	GH34-8SS	Max. 450	Max. 700	4, 5, 6	49	5	21	100	600

Refer to 1 : P.15

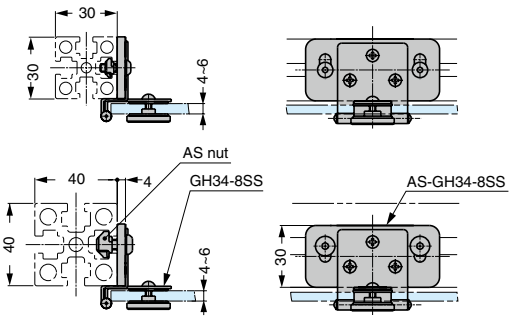
※ Load capacity has priority over glass size.

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



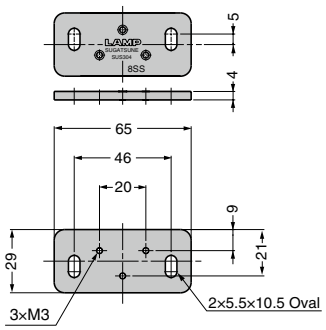
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	170-041-584	AS-GH34-8SS-30-6	Groove Width 6 mm	Hinge GH34-8SS : 1pc AS Nut AS-6M4 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8SS : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
G	3D	170-041-585	AS-GH34-8SS-30-8	Groove Width 8 mm	Hinge GH34-8SS : 1pc AS Nut AS-8M4 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8SS : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
G	3D	170-041-586	AS-GH34-8SS-40-8		Hinge GH34-8SS : 1pc AS Nut AS-8M5 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8SS : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–
G	3D	170-041-587	AS-GH34-8SS-40-10	Groove Width 10 mm	Hinge GH34-8SS : 1pc AS Nut AS-10M5 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8SS : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–

Refer to 1 : FRONT P.20, 2 : P.706

AS BRACKET FOR GH34-8SS AS-GH34-8SS

AS SUS



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-080-021	AS-GH34-8SS	Stainless Steel (SUS304)	Barrel Polished	52	50	500

GLASS DOOR HINGE GH34-8 For Overlay Door

TEMPERED GLASS

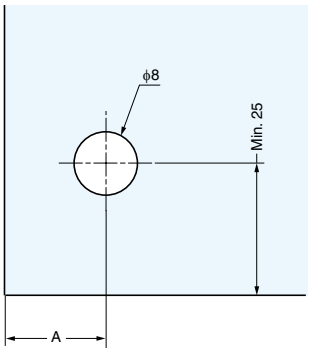


- Hinge for glass/acrylic doors. Square plate type GH34-8CR-K 1 also available.

[Remarks]

- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws.
- Note that scratch is conspicuous on black surface.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .

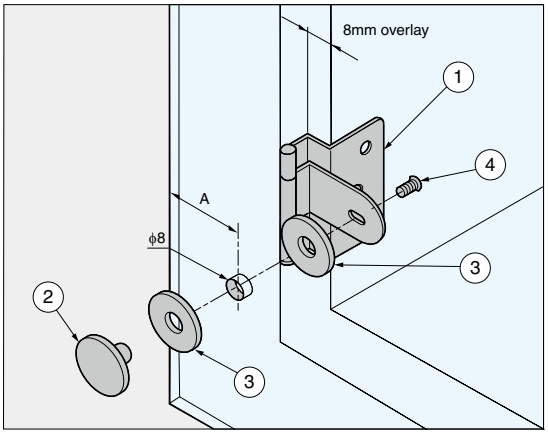
[Cut Out Dimensions]



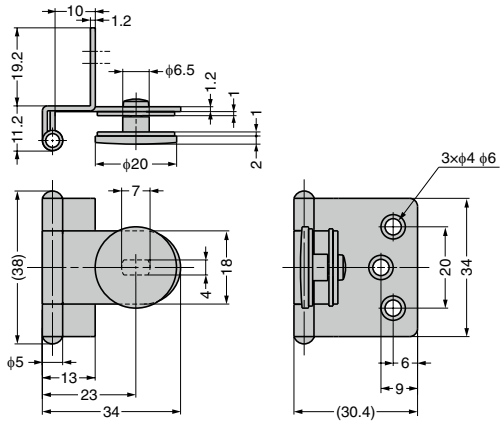
Boring position changes with the glass thickness.

Glass Thickness	A	Overlay
4	19	8
5	18	7
6	17	6

[Parts Composition]



No.	Part Name	Material	Finish / Colour
①	Body	Steel	Chrome, Paint/Black
②	Plate	Brass	
③	Washer	PVC	Clear
④	Screw	Steel	Nickel, Paint/Black



RoHS	CAD	Item Code	Item Name	Finish	Door Width	Door Height	Glass Thickness	Door Weight kg/2pcs	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-083-528	GH34-8CR	Chrome	Max. 450	Max. 700	4, 5, 6	Max. 4	39	4	25	50	500
–	3D	170-025-832	GH34-8BL	Paint/Black								50	500

Refer to 1 : P.184, 2 : P.15

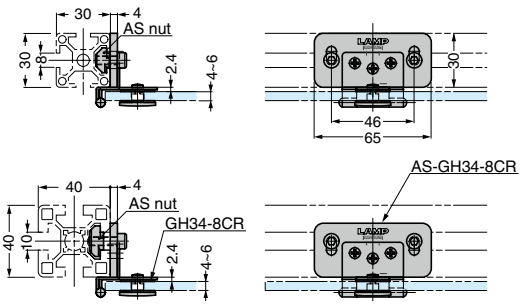
※ Load capacity has priority over glass size.

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



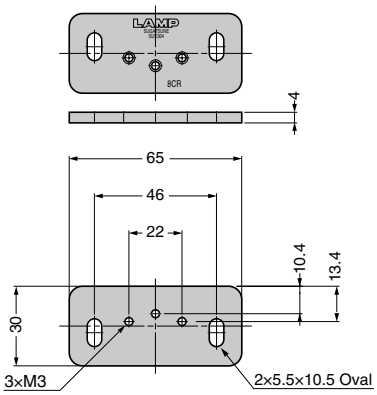
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
–	3D	170-041-588	AS-GH34-8CR-30-6	Groove Width 6 mm	Hinge GH34-8CR : 1pc AS Nut AS-6M4 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8CR : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
–	3D	170-041-589	AS-GH34-8CR-30-8	Groove Width 8 mm	Hinge GH34-8CR : 1pc AS Nut AS-8M4 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8CR : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
–	3D	170-041-590	AS-GH34-8CR-40-8		Hinge GH34-8CR : 1pc AS Nut AS-8M5 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8CR : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–
–	3D	170-041-591	AS-GH34-8CR-40-10	Groove Width 10 mm	Hinge GH34-8CR : 1pc AS Nut AS-10M5 : 2pcs Countersunk Head Screw M3×5 : 3pcs Bracket AS-GH34-8CR : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–

Refer to 1 : FRONT P.20, 2 : P.706

AS BRACKET FOR GH34-8CR AS-GH34-8CR

AS SUS



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-080-022	AS-GH34-8CR	Stainless Steel (SUS304)	Barrel Polished	55	50	500

GLASS DOOR HINGE (W/ CATCH) GHC34-8 For Overlay Door

TEMPERED GLASS

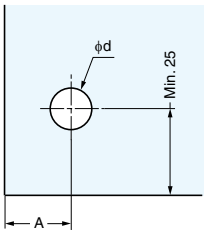


- Hinge for glass/acrylic doors.
- Square plate type GH34-8CR-K 1 also available

[Remarks]

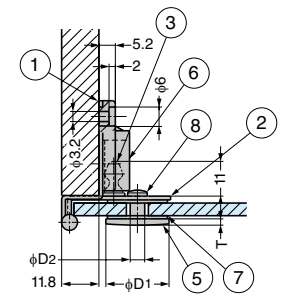
- Recommended for use in pairs.
- Use screw loosening prevention agent when mounting screws.
- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 2 .

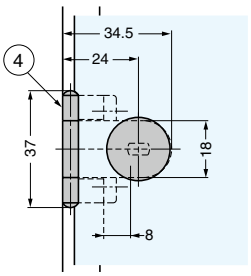
[Cut Out Dimensions]

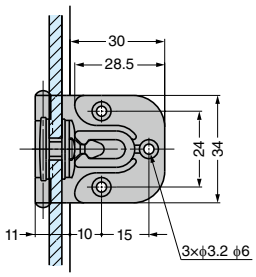


Boring position changes with the glass thickness.

Glass Thickness	A	Overlay
4	19	7
5	18	6
6	17	5







No.	Part Name	Material			
		GHC34-8G	GHC34-8B	GHC34-8CR	GHC34-8CR-W
①	Body	Steel (SPCC)	Stainless Steel (SUS304)	Steel (SPCC)	
②	Arm				
③	Striker	Brass	Stainless Steel (SUS303)	Brass	Copper Alloy
④	Shaft	Steel (SWCH)	Stainless Steel (SUS304)	Steel	
⑤	Plate	Copper Alloy	Aluminium Alloy	Brass	Copper Alloy
⑥	Catch	POM			
⑦	Washer	PVC			
⑧	Binding head screw	Brass	Steel		

No.	Part Name	Finish / Colour			
		GHC34-8G	GHC34-8B	GHC34-8CR	GHC34-8CR-W
①	Body	Gold, Clear	Black Enamel Finish	Chrome	
②	Arm				
③	Striker				
④	Shaft				
⑤	Plate	Polished, Clear	Black Anodised		
⑥	Catch	Black			Natural
⑦	Washer	Clear			
⑧	Binding head screw	Plain	Nickel		

RoHS	CAD	Item Code	Item Name	D1	D2	d	T	Door Width	Door Height	Glass Thickness	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	170-083-524	GHC34-8G	20	6.5	8	2	Max. 450	Max. 700	4, 5, 6	39	4	36	40	600
–	3D	170-083-508	GHC34-8B	21	8	10	3				49	5	32	40	600
–	3D	170-083-523	GHC34-8CR	20	6.5	8	2				39	4	36	40	600
–	3D	170-083-516	GHC34-8CR-W											40	600

Refer to 1 : P.184, 2 : P.15

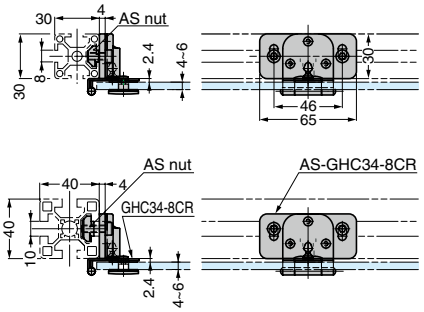
※ Load capacity has priority over glass size.

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



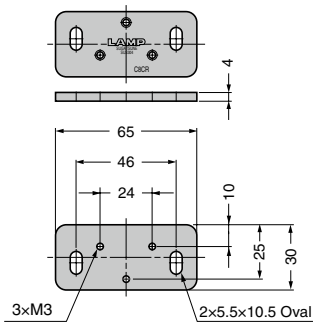
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts (Hinges)	Parts (Others)	Weight (g)
–	3D	170-041-600	AS-GHC34-8B-30-6	Groove Width 6 mm	GHC34-8B : 1pc	AS Nut AS-6M4 : 2pcs Pan Head Screw M3×8 : 3pcs Bracket AS-GHC34-8CR : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
–	3D	170-041-592	AS-GHC34-8CR-30-6		GHC34-8CR : 1pc		–
–	3D	170-041-596	AS-GHC34-8CR-W-30-6		GHC34-8CR-W : 1pc		–
–	3D	170-041-601	AS-GHC34-8B-30-8	Groove Width 8 mm	GHC34-8B : 1pc	AS Nut AS-8M4 : 2pcs Pan Head Screw M3×8 : 3pcs Bracket AS-GHC34-8CR : 1pc Hexagon Socket Button Head Screw M4×12 : 2pcs	–
–	3D	170-041-593	AS-GHC34-8CR-30-8		GHC34-8CR : 1pc		–
–	3D	170-041-597	AS-GHC34-8CR-W-30-8		GHC34-8CR-W : 1pc		–
–	3D	170-041-602	AS-GHC34-8B-40-8		GHC34-8B : 1pc	AS Nut AS-8M5 : 2pcs Pan Head Screw M3×8 : 3pcs Bracket AS-GHC34-8CR : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–
–	3D	170-041-594	AS-GHC34-8CR-40-8		GHC34-8CR : 1pc		–
–	3D	170-041-598	AS-GHC34-8CR-W-40-8		GHC34-8CR-W : 1pc		–
–	3D	170-041-603	AS-GHC34-8B-40-10	Groove Width 10 mm	GHC34-8B : 1pc	AS Nut AS-10M5 : 2pcs Pan Head Screw M3×8 : 3pcs Bracket AS-GHC34-8CR : 1pc Hexagon Socket Button Head Screw M5×14 : 2pcs	–
–	3D	170-041-595	AS-GHC34-8CR-40-10		GHC34-8CR : 1pc		–
–	3D	170-041-599	AS-GHC34-8CR-W-40-10		GHC34-8CR-W : 1pc		–

Refer to 1 : FRONT P.20, 2 : P.706

AS BRACKET FOR GHC34-8 AS-GHC34-8CR

AS SUS



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-080-023	AS-GHC34-8CR	Stainless Steel (SUS304)	Barrel Polished	54	50	500

CONCEALED HINGE (SURFACE MOUNT) T-90-200 For Both Overlay And Inset Doors



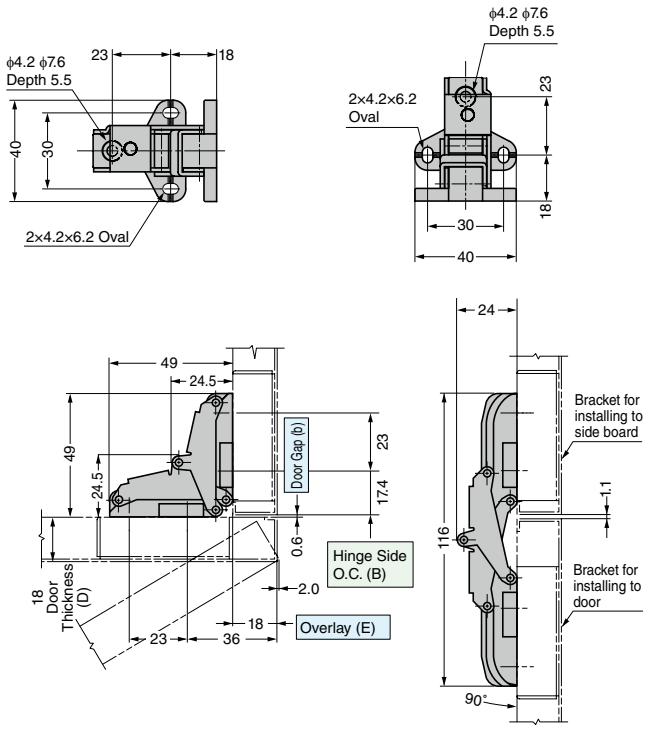
●Can be used for overlay and inset.

[Recommended Screws]
●Binding head screw M4
●Pan head tapping screw 4

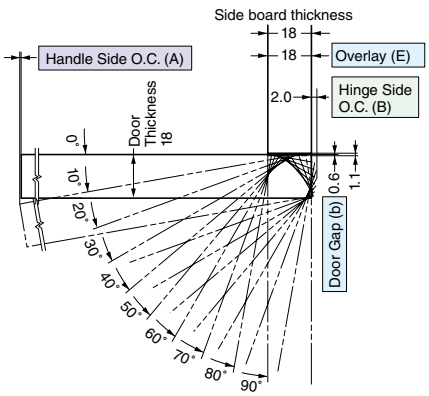
Part Name	Material	Finish / Colour
Body	PA	Ivory
Arm	Steel (SPCC)	Chrome

RoHS	CAD	Item Code	Item Name	Description	Overlay	Door Thickness	Opening Angle	Weight (g)	Box (pcs)
GT	3D	170-090-090	T-90-200	Without Catch	15~18	15~18	90°	42	200

●**Outline drawing** S≒1/3



●**Locus chart** S≒1/3 (How to Use the Locus Chart 1)



Drawing above is door thickness 18mm, side board thickness 18mm and 18mm overlay.

[Opening Clearance (O.C.) and Door Gap(b)]
Handle side O.C. (A), hinge side O.C. (B) and Door Gap (b) are necessary (see the locus chart and outline drawing). Pay full attention to it in door design.

[Hinge Side O.C. (B)] Table -1

Door Thickness (D)	Hinge Side O.C. (B) Overlay (E) 15	Overlay (E) 16	Overlay (E) 17	Overlay (E) 18
15	1.1	0.5	0	0
16	2.0	1.4	0.8	0.2
17	2.9	2.3	1.7	1.1
18	3.8	3.2	2.6	2.0

※Please refer to How to Use the Locus Chart 1 if door thickness is over 18mm

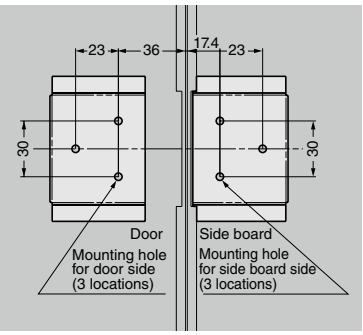
[Handle Side O.C.(A)] Table -2

Door Thickness (D)	Handle Side O.C. (A) Door Width 300	Door Width 400	Door Width 500
15	0.5	0.4	0.3
16	0.5	0.4	0.4
17	0.5	0.4	0.4
18	0.5	0.4	0.4

[Overlay (E)] Table -3

Overlay (E)	Door Gap (b)
15	0.2
16	0.3
17	0.5
18	0.6

[Cut Out Dimensions] For metal door



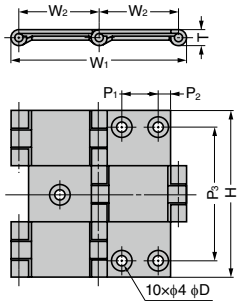
Drawing above is door thickness 18mm, side board thickness 18mm and 18mm overlay.

Refer to 1 : P.111

DOUBLE ACTION HINGE HG-BH

SUS

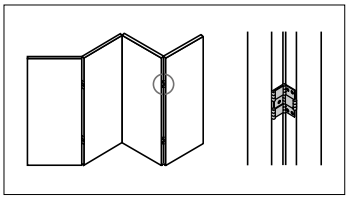




- Opens 180° in both left and right direction.

[Remarks]
- Recommended for use in pairs.

[Application Example]



RoHS	CAD	Item Code	Item Name	Material	Finish	H	W1	W2	T	P1	P2	P3	D	Door Width	Door Height	Door Weight kg/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-090-065	HG-BH60	Stainless Steel (SUS304)	Satin	60	64	29	5.5	13.5	4.8	47	6.5	Max. 450	Max. 700	Max. 2.6	65	20	260
G	3D	170-090-066	HG-BH70			70	78	35	7.5		6.8	57	7				130	10	180
G	3D	170-090-067	HG-BH80			80	94	43.2		22	6.5	66					175	10	120

CORNER FASTENER HINGE (W/ LOCK) STH-C64

SUS



- Combination of hinge and corner fastener.
- Works with STF-C64A and STF-C64B fastener 1.
- Can be installed on cabinet corner.
- Locks when fastened to prevent accidental release.
- Sealing pin (sold separately) may be installed.

[Applications]
- Doors and covers required for dustproof and drip-proof.
- Doors and covers required for vibration proof.
- Measurement equipment, communication equipment, machine tools, etc.



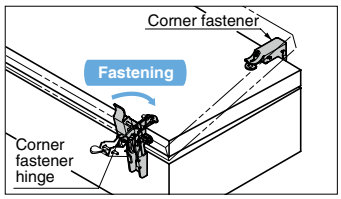
Step 1.
After locked.

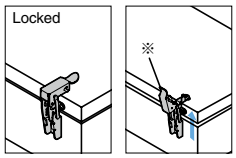


Step 2.
Pull the lever and lift the latch.

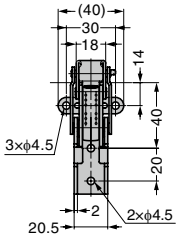


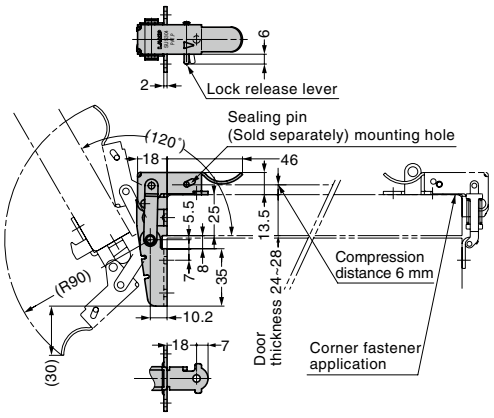
Step 3.
Release the lock of the fastener to open the lid.





Pull the lever ※while pushing the lock release lever to lift the latch to open the lid.





RoHS	CAD	Item Code	Item Name	Material	Finish	Door Width	Door Height	Door Thickness	Door Weight kg/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-091-430	STH-C64	Stainless Steel (SUS304)	Barrel Polished	Max. 300	Max. 400	24~28	Max. 2.8	90	10	140

Refer to 1 : P.678

CONCEALED HINGE (W/ STAY) HG-YS65C

SUS



- Combination of hinge and stay.
- Slim shape. (Refer to ※ following “Cut Out Dimensions”.)
- Stay with catch holds door in opened position.
- Catch is spring type. When door is pushed with a stronger force (refer to the retaining torque), the spring extends and the catch is released.
- Non-handed.
- Removable pin allows easy door installation and removal.

[Applications]

- Measurement equipment, communication equipment, control cabinet, etc.

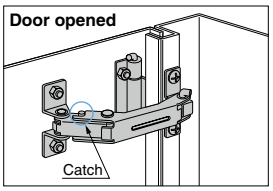
[Remarks]

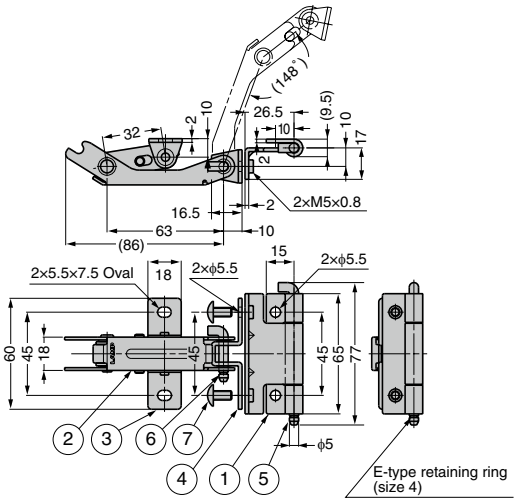
- E-type retaining ring not included.
- Use screw lock to fix mounting screws of stay and hinge.
- Retaining torque varies. It is not guaranteed value.

[Parts Included]

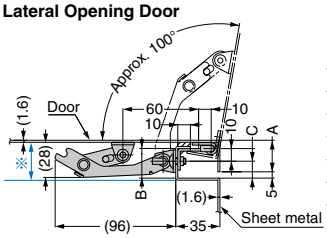
- Mounting screws for stay and hinge: truss head screw M5×10 2pcs

[Installation]





Lateral Opening Door



[Cut Out Dimensions]

A	B	C
20	19	8.5
21	20	9.5
22	21	10.5
23	22	11.5
24	23	12.5
25	24	13.5

※It can also be used for top-opening lid, but the retaining torque varies. Besides, rataining torque is not two times when using two hinges due to installation fluctuation.

No.	Part Name	Material	Finish
①	Hinge	Stainless Steel (SUS304)	Polished
②	Stay		
③	Bracket		
④	Hinge Bracket		
⑤	Pin		–
⑥	Hinge Bracket Pin		
⑦	Truss Head Screw M5×10 (Included)	SUS	

RoHS	CAD	Item Code	Item Name	Door Weight kg (Per Pair)	Retaining Torque cN·m/pc	Retaining Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-100-087	HG-YS65C	Approx. 10 (Max.)	Approx. 294	Approx. 30	190	10	100

CORNER FASTENER (W/ LOCK) STF-C64A, STF-C64B DIGEST

SUS



- Designed to allow front operation.
- Locks when fastened to prevent accidental release.
- With hole for padlock.
- Available with or without spring.
- Applicable door thickness: 14~28mm
- Refer to the product page 1 for details.



- After locked



- Pull the lever and lift the latch to open the lid.



- After opened

Refer to 1 : P.678

MONITOR BRACKET KA-T100S50 With Torque & Auxiliary Lock

INSTRUCTION



- Can be quickly installed and removed.
- Free stops in a range of 180° (swivel) and 40° (tilt).
- Auxiliary lock prevents monitor from sagging due to minute vibration.Also suitable for touch screen.
- Auxiliary lock temporarily releases if a heavy load is applied when locked.
- Bracket holes based on VESA standard (75×75mm, 100×100mm).
- Applicable monitor size: 12~22.9 inch (Up to about 10.0kg)

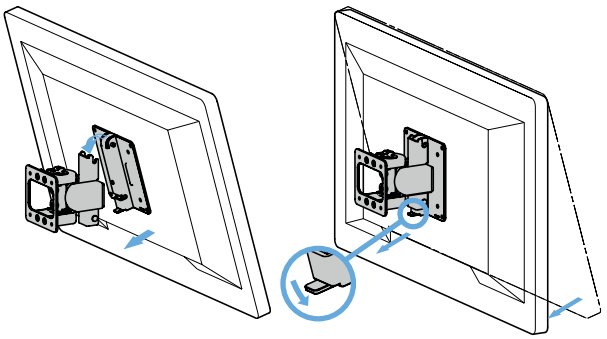
[Applications]

- Liquid crystal monitors for machine tools, OA equipment and medical equipment, etc.

[Remarks]

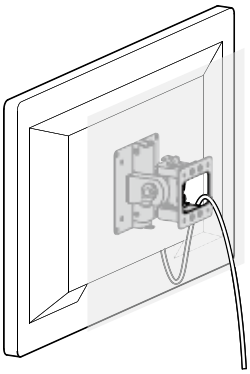
- Do not forcibly move the monitor after applying the auxiliary lock.
- After installing the monitor, make sure that the release lever is locked.
- Do not operate continuously (repeatedly in a short time).

[How to Install and Remove Monitor]



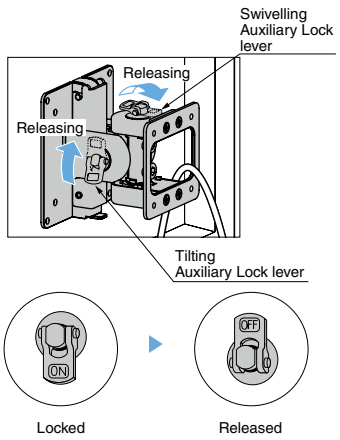
Monitor may be installed with one touch.

Push down the release lever and tilt the monitor, then the monitor can be removed.



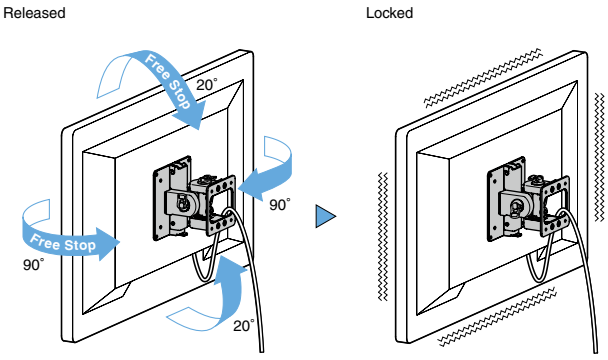
Wire hole allows you to put power cable and monitor cable out of the mounting surface.

[Auxiliary Lock Operation]



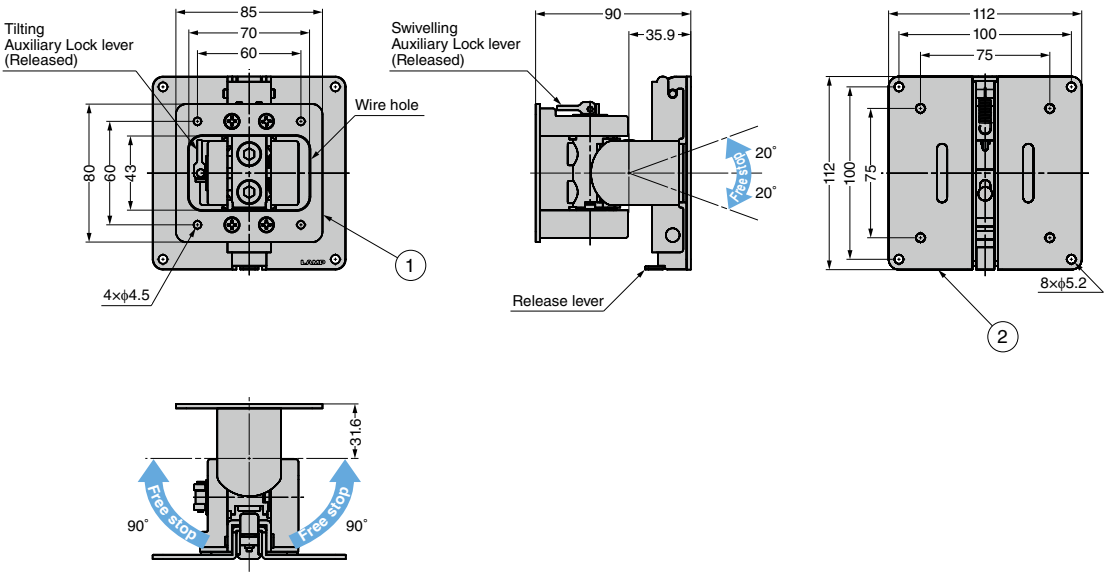
Releases with auxiliary lock lever.

[How to Adjust Angle]



Can hold at any angle within ±20° in tilting and ±90° in swivelling.

Keeps the monitor in position even while subject.



No.	Part Name	Material	Finish / Colour
①	Body (Wall Side)	Steel (SPCC)/ ABS	Black
②	Base (Monitor Side)		

RoHS	CAD	Item Code	Item Name	Mounting	Torque (Tilting) N·m/pc	Torque (Tilting) kgf·cm/pc	Torque (Swivelling) N·m/pc	Torque (Swivelling) kgf·cm/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	210-033-587	KA-T100S50	Wall Mount	10.0±20%	102.0±20%	5.0±20%	51.0±20%	1	1	–

MONITOR BRACKET TV

INSTRUCTION


Fixed type TV-400SK

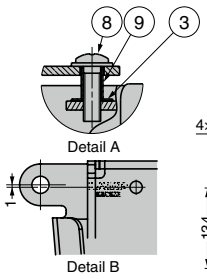

Adjustable type TV-410SK

- Used to fix a small display on the wall.
- Fixed type (TV-400SK) and adjustable type (TV-410SK) are available.
- Adjustable type (TV-410SK) can adjust the angle of the display about 20° from the vertical state to the front. Can hold the display at any angle within the adjustment range.
- Hole pitch (100×100mm) of mounting bracket on the monitor side conforming to the VESA standard.

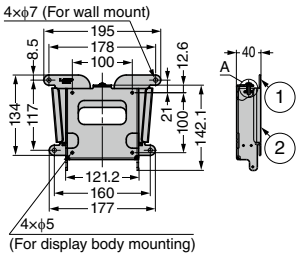
[Remarks]
- Do not apply load on small display when using.
- Durability varies depending on operating environment and frequency. Confirm the adaptability for the purpose of use in advance. For details on durability test, please contact local representative.

[Installation (Adjustable Type)]

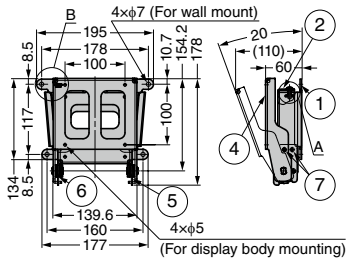




No.	Part Name	Material	Finish / Colour
①	Bracket	Steel (SPCC)	Black Paint
②	Fixed Plate		
③	Fall-preventing Washer	PA	Natural
④	Adjustable Plate	Steel (SPCC)	Black Paint
⑤	Hinge R	Steel (SPCC), etc	Clear Zinc Chromate (Trivalent), etc
⑥	Hinge L		
⑦	Countersunk head machine screw	Steel (SWCH)	Clear Zinc Chromate (Trivalent)
⑧	Washer Faced Pan Head Screw		
⑨	Wrapped Bush	Steel (SPCC)	



TV-400SK



TV-410SK

RoHS	CAD	Item Code	Item Name	Mounting	Type	Max. Monitor Weight kg/pc	Weight (kg)	Box (Unit)
G	3D	210-010-646	TV-400SK	Wall Mount	Fixed	8	0.85	1
G	3D	210-010-647	TV-410SK		Adjustable		1.15	1

MONITOR BRACKET KA-150

HEX KEY


KA-150

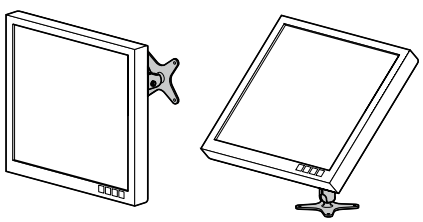

Made to order

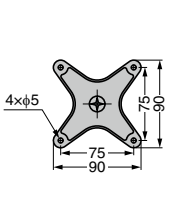
- Total length can be changed by adjusting the pole length. Pole length can be adjusted as order basis. For further details, please contact local representatives.
- Ball-shaped holding part allows adjusting to any angle (loosen the screw and adjust).
- Mounting hole pitch (75×75mm) on the monitor mounting side conforming to the VESA standard.

[Remarks]
- Monitor mount is used for moving and adjusting monitor position. Do not apply load on display when using.
- Durability varies depending on operating environment and frequency. Confirm the adaptability for the purpose of use in advance. For details on durability test, please contact local representative.

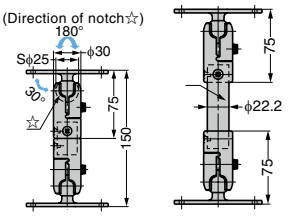
[Parts Included]
- Hex key (for fixing the mounting base)

[Recommended Screws]
- Tapping screw 4.5 or M4 screw





Mounting plate



※Pole length can be adjusted as order basis.

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Load Capacity N·m/pc	Load Capacity kgf·m/pc	Weight (g)	Box (unit)	Carton (unit)
–	3D	210-030-578	KA-150	Aluminium Alloy	Silver Enamel Finish	4.4	0.45	383	1	40

LAMP®

LID SUPPORTS & SMALL CABINET SYSTEMS

Stays and gas springs are used for restricting the opening range of doors or lids, or holding them at a certain angle.

[Stays]
A typical stay has two connected arms. In recent years, various kinds of stays are developed for stopping, slowly closing or softly opening doors and lids by use of friction, resistance, spring tension and so on.

[Gas Springs]
Gas springs frequently used for car hatchback utilise the reaction of high pressure gas sealed in the cylinder tube as a spring. Sugatsune's gas springs mainly assist in opening and closing the lid of equipment.

SUGATSUNE

Updated 2017.10.27

■INDEX by Type

Lift Assist Stays
P.208~215



Assists in opening and closing heavy door or lid by use of spring tension.

◂ HEAVY DUTY SPRING LOADED LID STAY S-AT (P.208)

Soft Closing Stays
P.216~287



Slowly opens and closes door or lid with LAPCON mechanism.

◂ SELF-OPENING STAY HDS-20S (P.220)

Torque Stays
P.288~293



Stops door or lid in any position.

◂ FREE-STOP STAY S-100T30 (P.292)

Heavy Duty Locking Stays
P.294~297



Automatically locks door when fully opened.

◂ DOOR HOLDER YA-2020, YA-2020W (P.294)

Foot Stays
P.298~300



Automatically locks door when opened and releases by simply lifting the stay with foot.

◂ FOOT STAYS YF-300W (P.298)

Heavy Duty Locking Stays
P.301~317



Automatically locks door when fully opened.

◂ LID STAY LB-200A, LB-350A, LB-500A (P.303)

A tool for easily selecting soft-close, free stop and lift assist stays now available online!

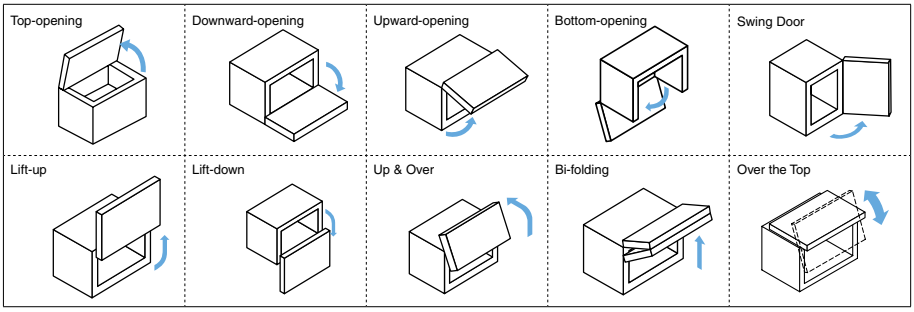
Motion Design Tech
Selection Tool "Sasuga-kun"

Simply by inputting the movement, size, weight and centre of gravity of the door or lid to be used, the torque required can be automatically calculated and suitable stay can be selected.



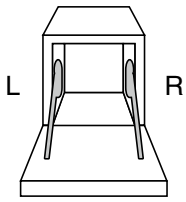
INDEX by Opening Direction

Opening Directions

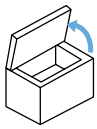


Left and Right-handed

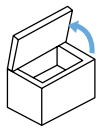
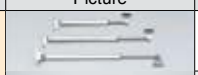
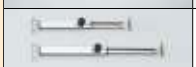
When viewing from door opening side, located on the right side is right-handed (R) and on the left side is left-handed (L).

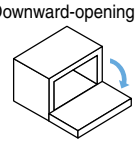


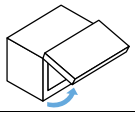
Products by Opening Direction

Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Top-opening 	Lift Assist Stays		S-AT	Side Mount	○	6.1~11.8 N·m/pc (62~120 kgf·cm/pc)	P.208
				Back Panel Mount		6.1~11.8 N·m/pc (62~120 kgf·cm/pc)	
			S-AT02W	Side Mount	○	17.6~21.0 N·m/pc (180~214 kgf·cm/pc)	P.210
				Back Panel Mount		15.0~16.5 N·m/pc (153~168 kgf·cm/pc)	
			S-ATH-60S	Back Panel Mount	○	60 N·m/pc (611.6 kgf·cm/pc)	P.212
			S-ATH-70S			70 N·m/pc (713.6 kgf·cm/pc)	
			S-YT01	Side Mount	–	Max. 2.94 N·m/pc (Max. 30 kgf·cm/pc)	P.214
			S-YT02			Max. 3.92 N·m/pc (Max. 40 kgf·cm/pc)	
			S-YT01S	Back Panel Mount	○	Max. 2.94 N·m/pc (Max. 30 kgf·cm/pc)	
			S-YT02S			Max. 3.92 N·m/pc (Max. 40 kgf·cm/pc)	
	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
	Soft Closing Stays		HDS-20S	With self-opening For Use in Pairs	–	6.9~14.7 N·m/2 pcs (70~150 kgf·cm/2 pcs)	P.220
			HDS-20	With Catch For Use in Pairs	–	13.7~29.4 N·m/2 pcs (140~300 kgf·cm/2 pcs)	P.222
			NSD-20	With Catch	–	1.96~6.86 N·m/pc (20~70 kgf·cm/pc)	P.225
			NSDX-20 (R/L)	With Catch	–	1.96~6.86 N·m/pc (20~70 kgf·cm/pc)	P.226
			SDS-200 SDS-201	With Catch	○	3.43~4.9 N·m/pc (35~50 kgf·cm/pc)	P.228
			SDS-210	–			

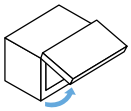
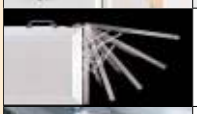
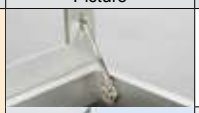
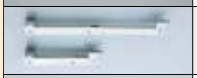
Products by Opening Direction

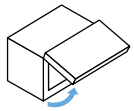
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment		Page
Top-opening 	Soft Closing Stays		LAD-ST	Lift-assist Soft-close	○	8.0~16 N・m/pc (81.6~163.2 kgf・cm/pc)		P.230
			LAD	Lift-assist Soft-close	○	8.0~16.0 N・m/pc (81.6~163.2 kgf・cm/pc)		P.232
			LADH-35 LADH-50	Lift-assist Soft-close	○	25~50 N・m/pc (255~510 kgf・cm/pc)		P.234
	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment		Page
	Torque Stays		S-TAR	Free Stop	–	0~7 N・m (0~71 kgf・cm)		P.288
			S-100T30	Free Stop	–	$3^{\pm 20\%}$ N・m/pc ($30.6^{\pm 20\%}$ kgf・cm/pc)		P.292
			S-52T15	Free Stop	–	$1.5^{\pm 20\%}$ N・m/pc ($15.3^{\pm 20\%}$ kgf・cm/pc)		P.293
	Type	Picture	Item Name	Description	Non-handed	Tension Force	Compression Load	Page
	Heavy Duty Locking Stays		YA-2020 (R/L) YA-2020W (R/L)	Locks When Fully Opened Keeps Unlocked	–	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)	P.294
			YA-0812 YA-1216	Locks When Fully Opened Keeps Unlocked	–	–	–	P.296
	Type	Picture	Item Name	Description	Non-handed	Compression Load		Page
	Lid Stays		LK-222 LK-335 LK-380	Holds When Fully Opened	○	–		P.306
			L-FS350A	Multi-angle Lock	○	294 N/pc (30 kgf/pc)		P.307
			LSP-195B LSP-270B	Locks When Fully Opened	○	294 N/pc (30 kgf/pc)		P.309
			L-FS140	Multi-angle Lock	○	58.8 N/pc (6 kgf/pc)		P.314
			L-SL140	Locks When Fully Opened	○	147 N/pc (15 kgf/pc)		P.315
	Type	Picture	Item Name	Description	Non-handed	Compression Load		Page
	Other Stays		S-91 S-92 S-93	–	–	–		P.317
			F-300	–	○	–		P.318
			F-150 F-200 F-250	–	–	–		P.318
			F-100	–	–	–		P.318
			S-20	With Catch	–	–		P.319
			S-19	–	–	–		P.319
			S-6 S-16	–	–	–		P.320
			S-21	With Catch	–	–		P.320
			S-23	With Catch	–	–		P.321

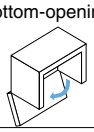
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Downward-opening 	Soft Closing Stays		HDS-10S	Self-close With Catch For Use in Pairs	–	5.9~17.6 N·m/2 pcs (60~180 kgf·cm/2 pcs)	P.236
			HDS-10	With Catch For Use in Pairs	–	13.7~29.4 N·m/2 pcs (140~300 kgf·cm/2 pcs)	P.238
			NSD-10	With Catch	–	1.96~6.86 N·m/pc (20~70 kgf·cm/pc)	P.241
			NSDX-10 (R/L)	With Catch	–	1.96~6.86 N·m/pc (20~70 kgf·cm/pc)	P.242
			SDS-100	–	○	3.43~4.9 N·m/pc (35~50 kgf·cm/pc)	P.244
			SDS-C100	With Catch			
			CSD-10-TV	–	○	1.0~4.0 N·m/pc (10.2~40.8 kgf·cm/pc)	P.246
			NSDX-10 (R/L) K-TV	With Catch	–	0.98~1.96 N·m/pc (10~20 kgf·cm/pc)	P.247
			SDS-100W(B)-TV	–	○	0.49~1.18 N·m/pc (5~12 kgf·cm/pc)	P.248
			SDS-100W(B)-TVZ			1.62~3.68 N·m/pc (16.5~37.6 kgf·cm/pc)	
			SDS-C100W(B)-TV	With Catch		0.49~1.18 N·m/pc (5~12 kgf·cm/pc)	
			SDS-C100W(B)-TVZ			1.62~3.68 N·m/pc (16.5~37.6 kgf·cm/pc)	
	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
	Torque Stays		S-TAR	Free Stop	–	0~7 N·m (0~71kgf·cm)	P.288
			S-52T15	Free Stop	–	$1.5^{\pm 20\%}$ N·m/pc ($15.3^{\pm 20\%}$ kgf·cm/pc)	P.293
	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
	Other Stays		HS	–	○	–	P.321
			S-35	–	○	–	P.322
			S-34	–	○	–	P.322
			S-24 S-27 S-25	–	–	–	P.323

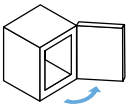
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Upward-opening 	Soft Closing Stays		SLS-ELAN	Lift-assist Free Stop Soft-down	–	4.90~9.80 N·m/pc (50~100 kgf·cm/pc)	P.250
			SLS-ELAN-TV	Lift-assist Free Stop Soft-down	–	4.60~6.17 N·m/pc (47~63 kgf·cm/pc)	P.252

Products by Opening Direction

Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Upward-opening 	Soft Closing Stays		HDS-30	With Catch For Use in Pairs	–	13.7~29.4 N・m/2 pcs (140~300 kgf・cm/2 pcs)	P.254
			HDSN-30	With Catch For Use in Pairs	–	13.7~34.3 N・m/2 pcs (140~350 kgf・cm/2 pcs)	P.256
			NSD-35	With Catch	–	1.96~6.86 N・m/pc (20~70 kgf・cm/pc)	P.259
			NSDX-35 (R/L)	With Catch	–	1.96~6.86 N・m/pc (20~70 kgf・cm/pc)	P.260
			NSDX-35 (R/L) 2S	With Catch	–	1.96~4.9 N・m/pc (20~50 kgf・cm/pc)	P.262
			SDS-C301N	With Catch	○	3.92~6.86 N・m/pc (40~70 kgf・cm/pc)	P.263
	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
	Torque Stays		S-TAR	Free Stop (Adjustable)	–	0~7 N・m (0~7kgf・cm)	P.288
			S-100T30	Free Stop	–	$3^{\pm 20\%}$ N・m/pc ($30.6^{\pm 20\%}$ kgf・cm/pc)	P.292
			S-52T15	Free Stop	–	$1.5^{\pm 20\%}$ N・m/pc ($15.3^{\pm 20\%}$ kgf・cm/pc)	P.293
	Type	Picture	Item Name	Description	Non-handed	Tension Force / Compression Load	Page
	Heavy Duty Locking Stays		YA-2020 (R/L) YA-2020W (R/L)	Locks When Fully Opened Keeps Unlocked	–	1470 N/pc (150 kgf/pc) / 588 N/pc (60 kgf/pc)	P.294
			YA-0812 YA-1216	Locks When Fully Opened Keeps Unlocked	–	– / –	P.296
	Type	Picture	Item Name	Description	Non-handed	Compression Load	Page
	Lid Stays		LB-200A	Holds When Fully Opened	○	294 N/pc (30 kgf/pc)	P.303
			LB-350A			245 N/pc (25 kgf/pc)	
			LB-500A			196 N/pc (20 kgf/pc)	
			LBTS-350 LBTS-450	Holds at Multiple Angles	–	686 N/pc (70 kgf/pc)	P.304
			LB-S350	Holds When Fully Opened	○	1307 N/pc (133 kgf/pc)	P.305
			LB-S450			953 N/pc (97 kgf/pc)	
			LK-222 LK-335 LK-380	Holds When Fully Opened	○	–	P.306
			L-FS350A	Multi-angle Lock	○	294 N/pc (30 kgf/pc)	P.307

Opening Direction	Type	Picture	Item Name	Description	Non-handed	Compression Load	Page
Upward-opening 	Lid Stays		LB-215 LB-290	Holds When Fully Opened	○	147 N/pc (15 kgf/pc)	P.308
			LSP-195B LSP-270B	Locks When Fully Opened	○	294 N/pc (30 kgf/pc)	P.309
			L-195 L-270	Holds When Fully Opened	○	147 N/pc (15 kgf/pc)	P.310
			LB-CV215A	Holds When Fully Opened	○	147 N/pc (15 kgf/pc)	P.311
			L-200P	Holds When Fully Opened	○	147 N/pc (15 kgf/pc)	P.312
			L-195-JC	Holds When Fully Opened	○	147 N/pc (15 kgf/pc)	P.313
			L-FS140	Multi-angle Lock	○	58.8 N/pc (6 kgf/pc)	P.314
			L-SL140	Locks When Fully Opened	○	147 N/pc (15 kgf/pc)	P.315
			L-100S L-140S	Holds When Fully Opened	○	58.8 N/pc (6 kgf/pc)	P.316
			KLS	Stops When Fully Opened, Right-handed Only	–	–	P.317

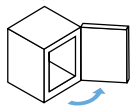
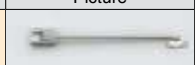
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Bottom-opening 	Soft Closing Stays		SDS-400-W	–	○	3.43~4.9 N・m/pc (35~50 kgf・cm/pc)	P.264

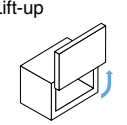
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Maximum Door Moment	Page
Swing Door 	Torque Stays		S-100T30	Free Stop	–	$3^{\pm 20\%}$ N・m/pc ($30.6^{\pm 20\%}$ kgf・cm/pc)	P.292
			S-52T15	Free Stop	–	$1.5^{\pm 20\%}$ N・m/pc ($15.3^{\pm 20\%}$ kgf・cm/pc)	P.293

Type	Picture	Item Name	Description	Non-handed	Tension Force	Compression Load	Page
Heavy Duty Locking Stays		YA-2020 (R/L) YA-2020W (R/L)	Locks When Fully Opened Keeps Unlocked	–	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)	P.294
		YA-0812 YA-1216	Locks When Fully Opened Keeps Unlocked	–	–	–	P.296

Type	Picture	Item Name	Description	Non-handed	Tension Force	Compression Load	Page
Foot Stays		YF-300W	Two-angle Lock	○	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)	P.298
		YF-200	Locks When Fully Opened	○	882 N/pc (90 kgf/pc)	490 N/pc (50 kgf/pc)	P.299
		YF-300					
		YF-300-T50			1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)	
		YFNS-300W	Two-angle Lock	○	–	–	P.300
		YFNS-300 YFNS-300-T50	Locks When Fully Opened	○	–	–	P.300

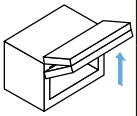
Products by Opening Direction

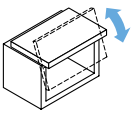
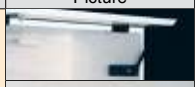
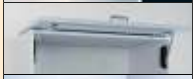
Opening Direction	Type	Picture	Item Name	Description	Non-handed	Compression Load	Page
Swing Door 	Lid Stays		L-FS350A	Multi-angle Lock	○	294 N/pc(30 kgf/pc)	P.307
			LSP-195B LSP-270B	Locks When Fully Opened	○	294 N/pc(30 kgf/pc)	P.309
			L-FS140	Multi-angle Lock	○	58.8 N/pc(6 kgf/pc)	P.314
	Type	Picture	Item Name	Description	Non-handed	Compression Load	Page
	Other Stay		SAD-160	For Swing Door Right-handed Only	–	–	P.323
			U-3005	Multi-angle Lock	○	–	P.324
			U-3031	Multi-angle Lock	○	–	P.324

Opening Direction	Type	Picture	Item Name	Description	Door Width	Door Height	Door Weight	Page
Lift-up 	Soft Closing Stay		SLU-ELAN	Lift-assist Free Stop Soft-close	Max.1800	390~500	5~11 kg	P.268
			SLUN-N	Lift-assist Soft-close	600~900	390~450	2.8~5.8 kg	P.270

Opening Direction	Type	Picture	Item Name	Description	Door Width	Door Height	Door Weight	Page
Lift-down 	Soft Closing Stay		SLD	Lift-assist Soft-close	600~900	360~400	3~6 kg	P.271

Opening Direction	Type	Picture	Item Name	Description	Door Width	Door Height	Door Weight	Page
Up & Over 	Soft Closing Stay		EZS-ELAN	Lift-assist Free Stop Soft-close	Max.1200	500~750	5~12.5 kg	P.272

Opening Direction	Type	Picture	Item Name	Description	Door Width	Door Height	Door Weight	Page
Bi-folding 	Soft Closing Stay		HBF-ELAN	Lift-assist Free Stop Soft-close	Max.1200	320~370	2.5~6.5 kg	P.274
			HBFN	Soft-close	450~900	320~420	2.5~6.5 kg	P.276

Opening Direction	Type	Picture	Item Name	Description	Door Width	Door Height	Door Thickness	Door Weight	Page
Over the Top 	Soft Closing Stay		OV-EZ	Lift-assist Soft-close	600~ 1200	370~ 450	Min.15	2.5~11.5 kg	P.278
			OVN	Soft-close	Max. 1500	370~ 450	Min.15	3~7 kg	P.280
			OV-1	Soft-close	700~ 1400	350~ 450	Min.20	3~5 kg	P.281

Picture	Item Name	Description	Door Width	Door Thickness	Maximum Door Moment	Page
	IF-102S (L/R)	Soft-close	Max. 1200	15~20	1.96~6.86 N・m/2 pcs (20~70 kgf・cm/2 pcs)	P.282
	IF-102W				3.92~13.72 N・m/2 pcs (40~140 kgf・cm/2 pcs)	
	IF-H102S (L/R)			18~30	1.96~6.86 N・m/2 pcs (20~70 kgf・cm/2 pcs)	
	IF-H102W				3.92~13.72 N・m/2 pcs (40~140 kgf・cm/2 pcs)	

[Concept of Moment]

When selecting soft-close, free stop and lift assist stays, the criterion is the moment of the door or lid.

Moment refers to the action of the force tending to make the object rotate around a point. If the moment matches the corresponding torque of the stay, it means that the stay is applicable.

Formula for Calculating Moment

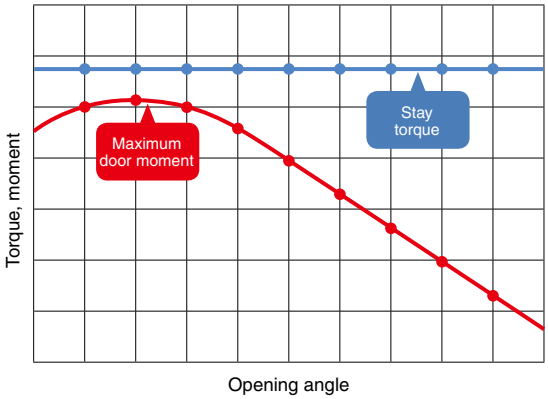
Door moment = Horizontal distance from rotation centre to centre of gravity × Door weight

Maximum door moment = Maximum horizontal distance from rotation centre to centre of gravity × Door weight

Relationship Between Applicable Stay and Door Moment

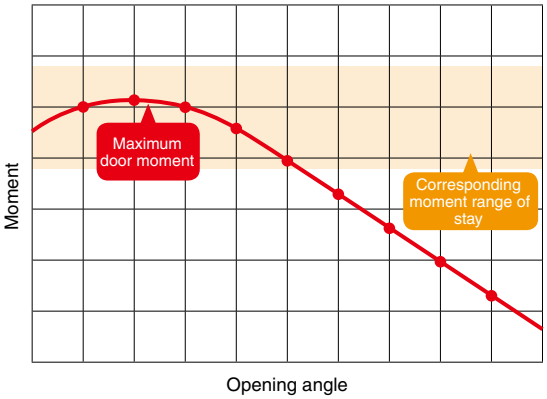
●In case of torque stay

If the stay torque is larger than the maximum door moment, then the stay is applicable.



●In case of damper stay

If the maximum door moment is within the corresponding moment range of the stay, then the stay is applicable.



※ The door moment is calculated according to horizontal distance from rotation centre to door centre of gravity. Therefore, it changes with the opening angle.

※ The door moment that is described in each product is the value for the installation in the catalogue.

※ Torque refers to the action of the force making an object rotate around the rotation axis, and moment refers to the action of the force tending to make a door or lid rotate around a point.

[Cautions]

Lift assist stays

- Be sure to observe the specified dimensions, levelness and perpendicularity for cabinet and door design and installation position of the product.

Soft closing stays

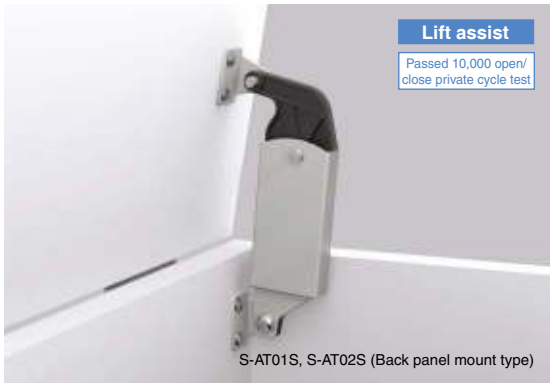
- Be sure to observe the specified dimensions, levelness and perpendicularity for cabinet and door design and installation position of the product. When multiple products are used for one door, difference in installation positions may concentrate load on a certain product, affecting product life and function. Pay full attention when installing.
- Incorrect installation dimension may cause malfunction (such as not able to close the door) or damage the product or hinge.
- Install to a firm and rigid cabinet. Insufficient rigidness may affect door opening and closing.
- Do not disassemble or modify the product.
- Add up door or handle weight when calculating door moment.
- Check the movement with actual item when door moment and door weight is close to the upper or lower limit of the specified range.
- Use a screw adhesive (when required) that will not penetrate into the resin part.

LIFT ASSIST STAY S-AT Side Mount, Back Panel Mount

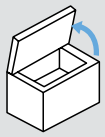
L=R INSTRUCTION SUS VIDEO



S-AT01, S-AT02 (Side mount type)



S-AT01S, S-AT02S (Back panel mount type)

Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
 Top-opening	S-AT01	Side mount	Yes	6.1~8.8 N・m/pc (62~90 kgf・cm/pc)
	S-AT02			8.8~11.8 N・m/pc (90~120 kgf・cm/pc)
	S-AT01S	Back panel mount		6.1~8.8 N・m/pc (62~90 kgf・cm/pc)
	S-AT02S			8.8~11.8 N・m/pc (90~120 kgf・cm/pc)

- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle (about 10° ~80°).
- Compact design maximises the space inside.
- Side mount and back panel mount are available. Both are non-handed.
- Can select spring tension hard or soft type depending on lid weight and dimension.
- S-AT02W 1 with doubled maximum door moment also available.

[Specifications]

- Operating temperature: 0˚C ~40˚C
- Operating humidity: 90%RH or less
- For other specification exceeding the above range, please contact local representatives.

[Remarks]

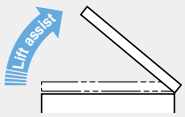
- Be sure to read the “Cautions” 2.
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Material of the mounting surface should be take into consideration. Low rigidness may cause deformation or damage.
- Continuous opening and closing is not allowed.
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).
- We recommend to test the assembly before final use.

Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

●Easy operation with lift assist

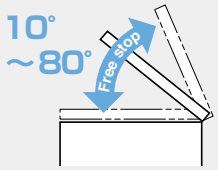




Spring mechanism assists in lifting the top-opening lid. You can select spring tension hard or soft type depending on lid weight and dimension.

●Free stop

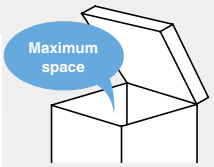




Easily holds the opening angle of top-opening lid at about 10° ~80° .

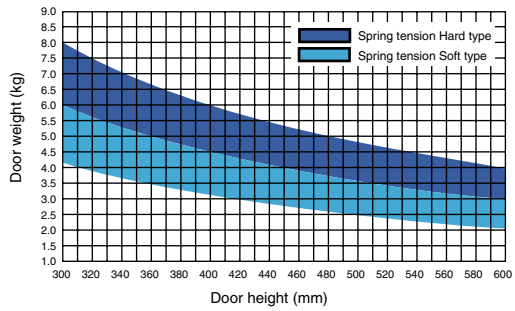
●Compact





Small body maximises space inside of the cabinet.

[Selection Graph]



Selection graph and door moment formula are obtained when door centre of gravity is at the height centre and installation is done according to dimensions in drawings on the next page.

[Applicable Range]

- Choose from 2 types according to the maximum door moment.
  Maximum Door Moment (N・m) = Door weight (kg) × 9.80665 × Distance from rotation centre to door centre of gravity (m)

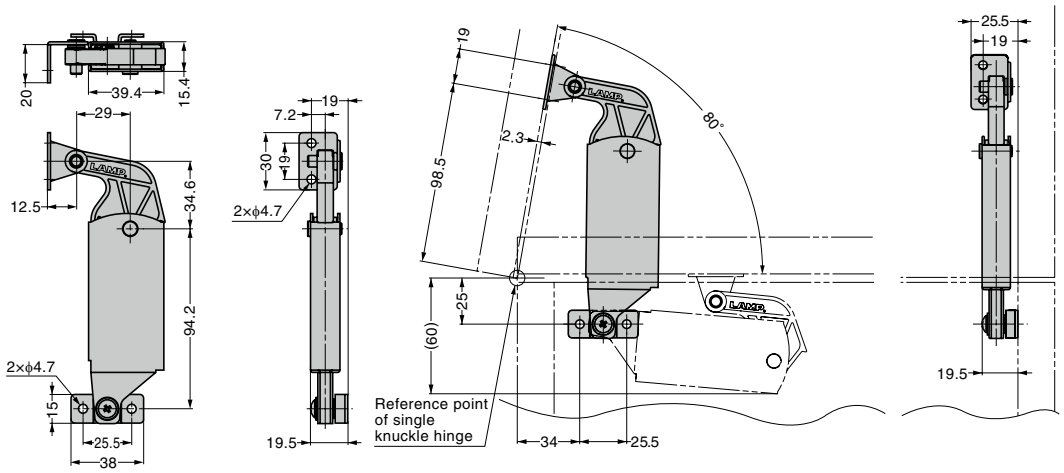
Maximum Door Moment N・m	Item Name	Qty
6.1~8.8	S-AT01 (S)	1pc
8.8~11.8	S-AT02 (S)	

- With 2 stays, the maximum door moment will be doubled.

Refer to 1 : P.210~211, 2 : P.207

LIFT ASSIST STAY S-AT01, S-AT02 Side Mount

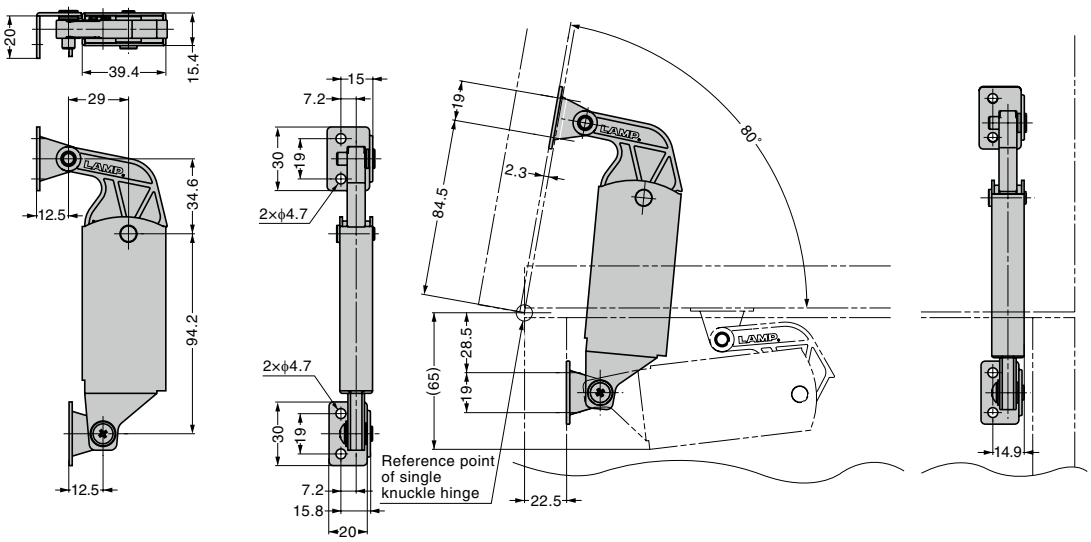
L=R INSTRUCTION SUS



RoHS	CAD	Item Code	Item Name	Spring Tension	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-017-544	S-AT01	Soft	Stainless Steel (SUS430)/ POM	Plain	6.1~8.8	62~90	195	10	50
G	3D	180-017-545	S-AT02	Hard			8.8~11.8	90~120	195	10	50

LIFT ASSIST STAY S-AT01S, S-AT02S Back Panel Mount

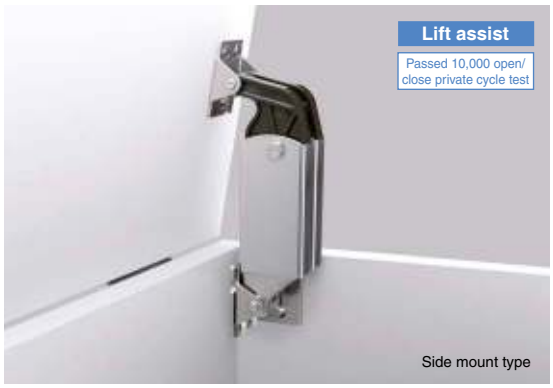
L=R INSTRUCTION SUS

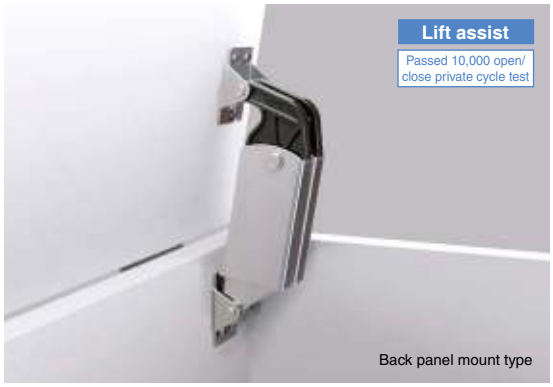


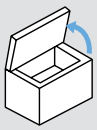
RoHS	CAD	Item Code	Item Name	Spring Tension	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-017-546	S-AT01S	Soft	Stainless Steel (SUS430)/ POM	Plain	6.1~8.8	62~90	195	10	50
G	3D	180-017-547	S-AT02S	Hard			8.8~11.8	90~120	195	10	50

LIFT ASSIST STAY S-AT02W Side Mount, Back Panel Mount

L=R INSTRUCTION SUS VIDEO





Opening Direction	Description	Non-handed	Maximum Door Moment
 Top-opening	Side Mount	Yes	17.6~21.0 N・m/pc (180~214 kgf・cm/pc)
	Back Panel Mount		15.0~16.5 N・m/pc (153~168 kgf・cm/pc)

- Doubled torque (※) compared with conventional S-AT 1. (※ For side mount)
- Spring mechanism assists in lifting heavy top-opening lid.
- Easily holds the lid at any angle (about 10° ~80°).
- Compact design maximises space inside of the cabinet.
- Non-handed for both side and back panel mount. Use side board bracket for side mount.

[Specifications]

- Operating temperature: 0˚c ~40˚c
- Operating humidity: 90%RH or less

※ For other specification exceeding the above range, please contact local representatives.

[Remarks]

- Be sure to read the "Cautions" 2.
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Because of high spring tension product, abnormal noise, deformation or damage may occur depending on cabinet and hinge used. Check if the cabinet has sufficient strength and rigidity before use.
- Continuous opening and closing is not allowed.
- Spring tension may vary over time.
- Do not use with concealed hinges (multiaxial hinges).
- We recommend to test assembly before final use.

Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

[Parts Included]

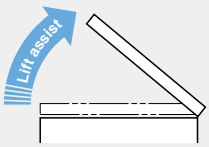
- Side board bracket (For side mount)
- Truss head screw M5×6 (Used for fixing the body and bracket in case of side mount)

[Recommended Screw]

- Truss head screw M5

- Easy operation with lift assist

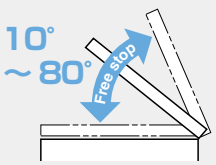




Built-in spring mechanism assists in lifting heavy top-opening lid.

- Free stop

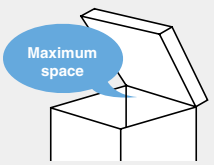




Easily holds the opening angle of top-opening lid at about 10°~80°.

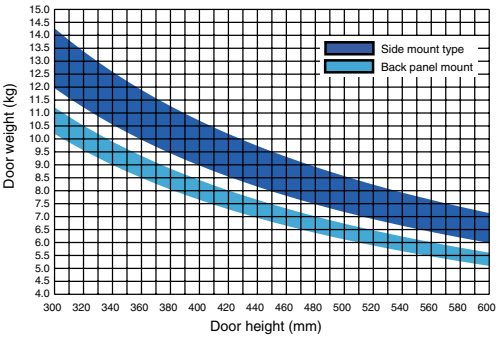
- Compact





Small body maximises space inside of the cabinet.

[Selection Graph]



Door size ranges and door moment formula are obtained when door centre of gravity is at the door centre and installation is done according to dimensions in drawings on the next page.

[Maximum Door Moment]

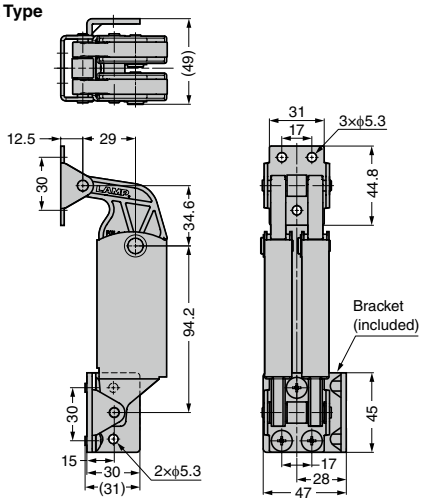
- Choose from 2 types of installation according to the maximum door moment. Maximum Door Moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum Door Moment N・m	Installation	Qty
17.6~21.0	Side Mount	1 pc
15.0~16.5	Back Panel Mount	

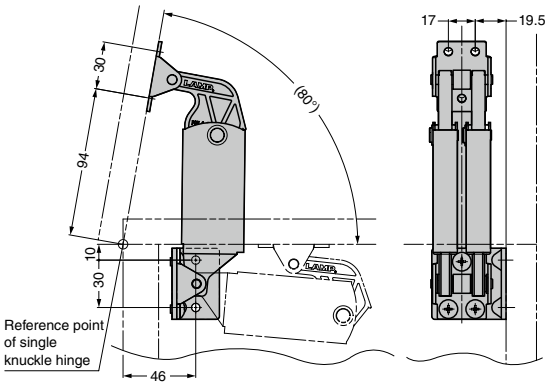
- With 2 stays, the maximum door moment will be doubled.

Refer to 1 : P.208, 2 : P.207

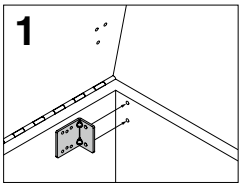
■Side Mount Type



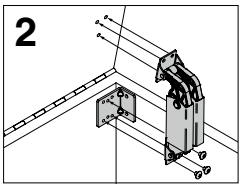
[Installation]



[How to Install]



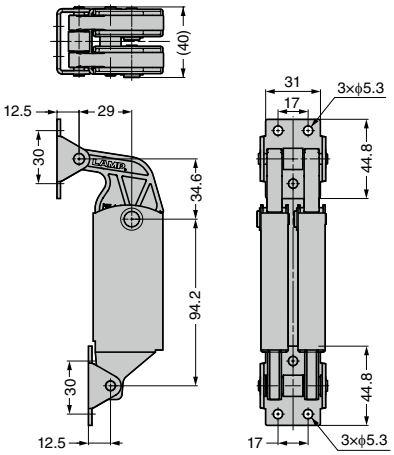
Install side board bracket (non-handed) to cabinet with mounting screws (※).
※Not included.



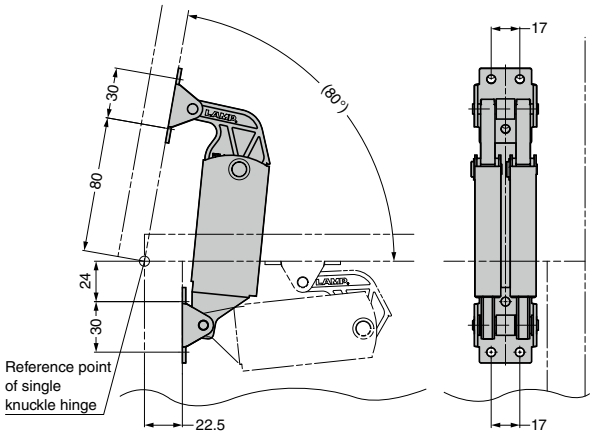
Fix stay body to side board bracket with supplied screws, and then install the body to top-opening lid with mounting screws (※).

For inset type or other non-specified installation types, please contact local representative.

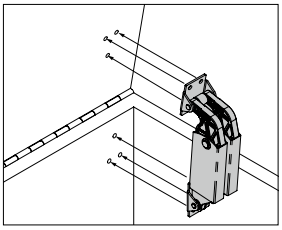
■Back Panel Mount Type



[Installation]



[How to Install]



Install the body to cabinet with mounting screws (※). Do not use the supplied side board bracket and truss head screws.
※Not included.

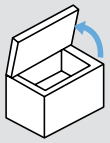
For inset type or other non-specified installation types, please contact local representative.

RoHS	CAD	Item Code	Item Name	Material	Finish/ Colour	Type	Side Mount Maximum Door Moment N·m/pc	Side Mount Maximum Door Moment kgf·cm/pc	Back Panel Mount Maximum Door Moment N·m/pc	Back Panel Mount Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)
GT	3D	180-025-461	S-AT02W	Stainless Steel (SUS430)/POM	Plain/ Black	Side Mount Back Panel Mount	17.6~21.0	180~214	15.0~16.5	153~168	490	10

LIFT ASSIST STAY S-ATH

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Opening Direction	Item Name	Non-handed	Maximum Door Moment
 Top-opening	S-ATH-60S	Yes	60 N・m/pc (611.6 kgf・cm/pc)
	S-ATH-70S		70 N・m/pc (713.6 kgf・cm/pc)

- Applicable to heavier top-opening lids.
- Spring mechanism assists in lifting heavy top-opening lid.
- Can choose from two types depending on the shape of top-opening lid.
- Torque adjustable (+0%, -10%) by turning the adjustment bolt.

[Specifications]

- Operating temperature: 0˚C ~40˚C
- Operating humidity: 90%RH or less

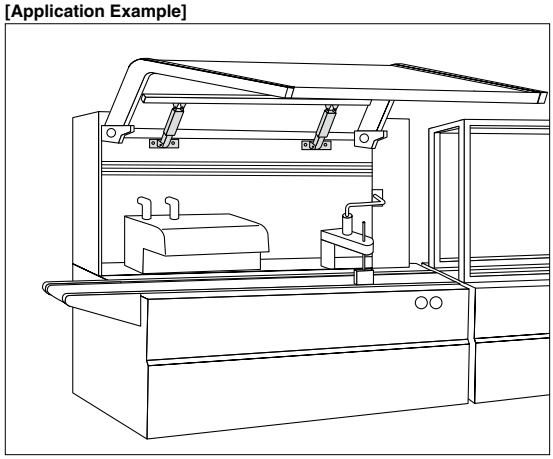
[Remarks]

- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Because of high spring tension product, abnormal noise, deformation or damage may occur depending on cabinet and hinge used. Check if the cabinet and hinge have sufficient strength and rigidity before use.
- Continuous opening and closing is not allowed.
- Do not use outdoors.
- Proper testing is necessary.
- Spring tension may vary over time.

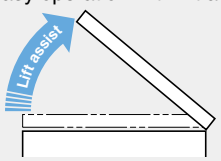
Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation. Available on Web!

Simulation at other installation positions than those in the catalogue may also be done.

[Application Example]



- Easy operation with lift assist.



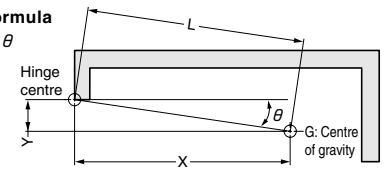
Easy to lift heavy top-opening lid with spring tension (lift assist function). Can choose from two types depending on the shape of top-opening lid.

[How to Select] Refer to the following 1~3 for model selection.

1. Calculating the maximum door moment

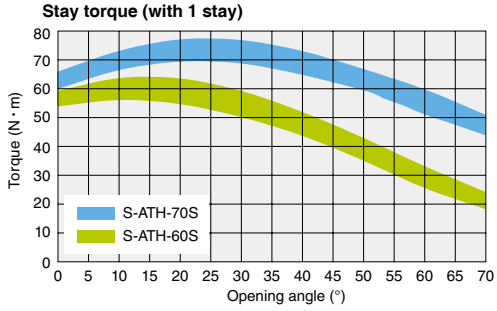
Calculation formula

$Mu = W \times L \times \cos\theta$



X	Horizontal distance from rotation centre to door centre of gravity
Y	Vertical distance from rotation centre to door centre of gravity
L	Distance from rotation centre to door centre of gravity
θ	Angle from horizontal line at hinge centre to door centre of gravity
W	Door weight
G	Door centre of gravity

2. Confirming stay torque



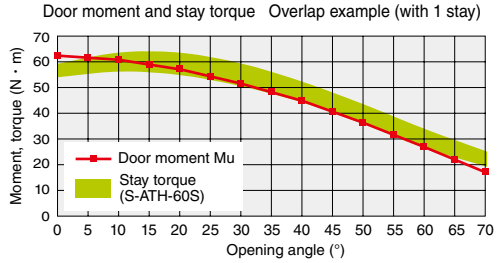
3. Selecting model

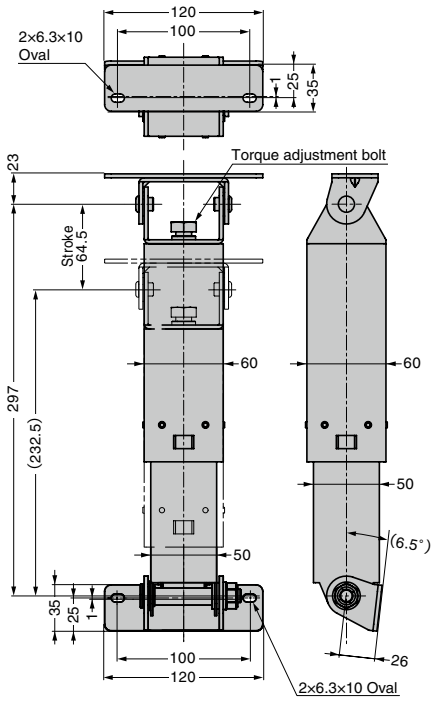
As shown in the graph on the right, if the door moment and stay torque overlap, the stay is considered to be consistent with the specifications.

Door moment Mu > Stay torque･･･Force is applied in the closing direction of door.
Door moment Mu < Stay torque･･･Force is applied in the opening direction of door.

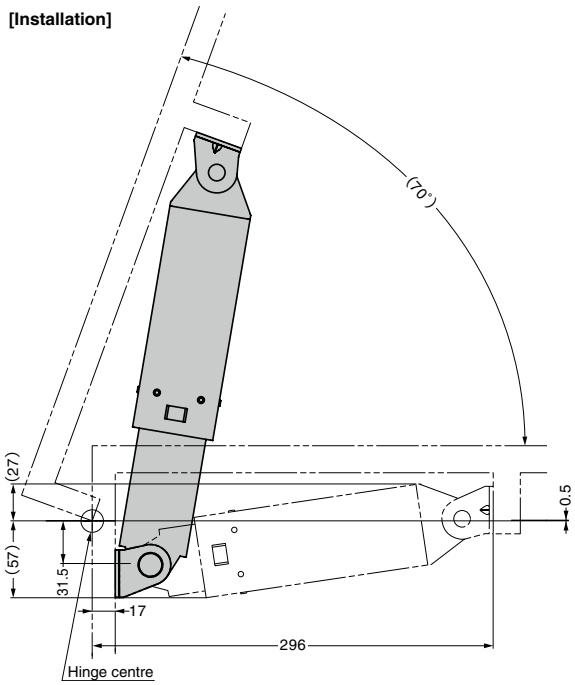
Conditions in the above example: X = 42cm, Y = 3cm, L = 42.1cm, W = 15kg
Stay in application example: S-ATH-60S (1 pc use)

Door moment and stay torque Overlap example (with 1 stay)



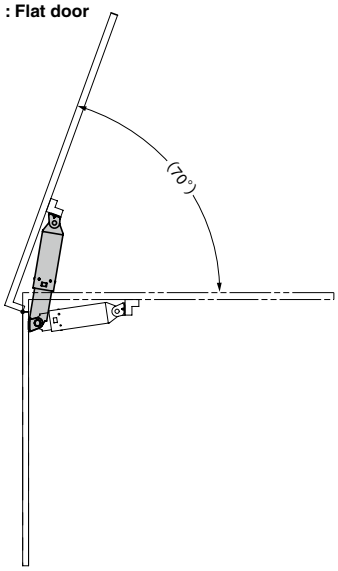


[Installation]

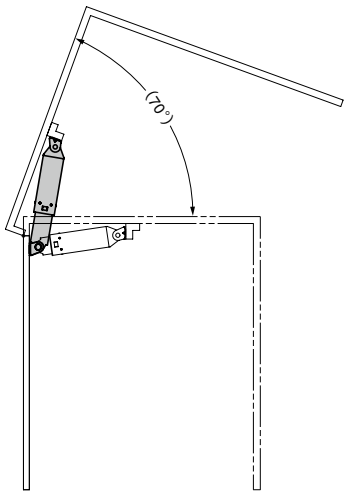


[Applicable Door Shape]

S-ATH-60S : Flat door



S-ATH-70S : L-shaped door

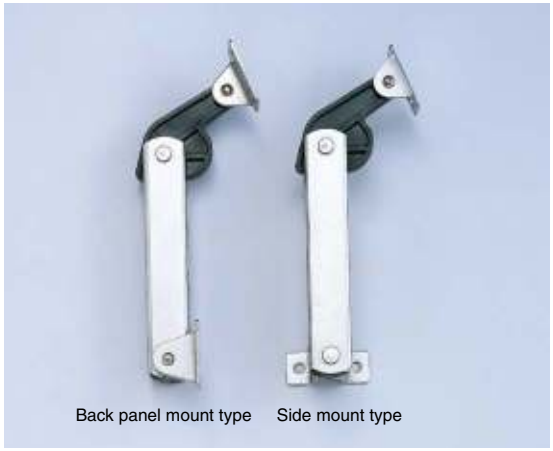


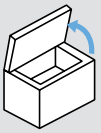
RoHS	CAD	Item Code	Item Name	Applicable Door Shape	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)
G	3D	180-033-866	S-ATH-60S	Flat Door	Stainless Steel (SUS304)	Satin	60	611.6	2500	1
G	3D	180-033-867	S-ATH-70S	L-shaped door			70	713.6		1

LIFT ASSIST STAY S-YT Side Mount, Back Panel Mount

SUS


Side mount type (right-handed)

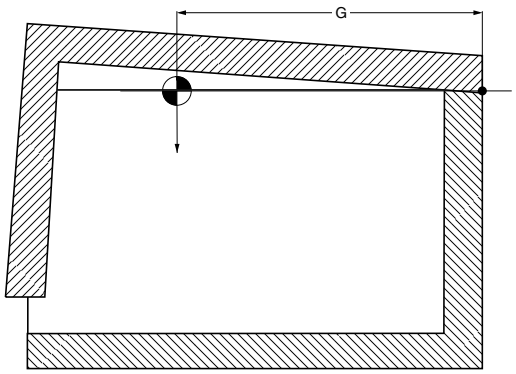

Back panel mount type　Side mount type

Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
 Top-opening	S-YT01	Side Mount	–	Max. 2.94 N・m/pc (Max. 30 kgf・cm/pc)
	S-YT02			Max. 3.92 N・m/pc (Max. 40 kgf・cm/pc)
	S-YT01S	Back Panel Mount	Yes	Max. 2.94 N・m/pc (Max. 30 kgf・cm/pc)
	S-YT02S			Max. 3.92 N・m/pc (Max. 40 kgf・cm/pc)

- Lid can be opened with a small force and held in fully opened position.
- Can choose from 2 types of spring tension depending on lid weight.
- Two installation types (side mount and back panel mount) are available, while side mount is divided into left side installation and right side installation.
- Body and spring are made of stainless steel (SUS304), suitable for corrosive environments.
- Plastic parts and metal parts can be easily separated.

[Remarks]

- Be sure to read the “Cautions” 1.
- Do not open the lid above the opening angle.
- Spring tension may vary over time.
- Do not use with concealed hinges (multiaxial hinges).



[Calculation of Maximum Door Moment]

Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity G (m)

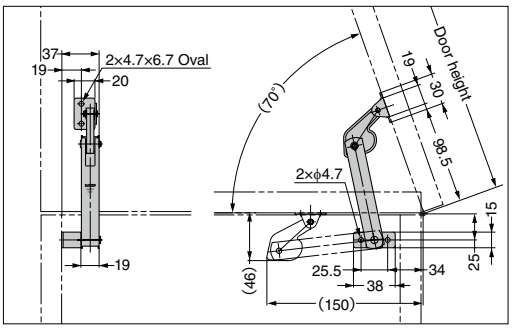
[Remarks]

- Since door moment varies depending on installation position, opening angle and centre-of-gravity position, the calculation result is only for reference in selection.
- Be sure to conduct verification before use.

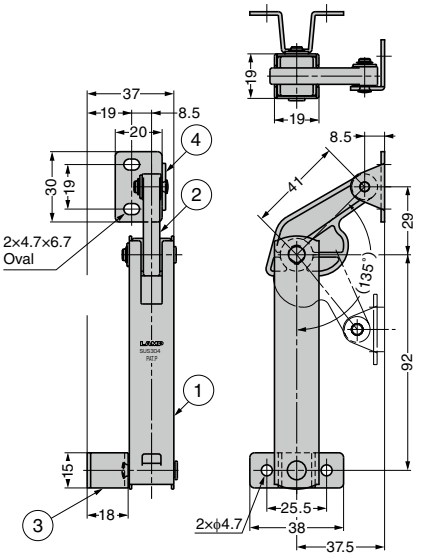
Refer to 1 : P.207

LIFT ASSIST STAY S-YT Side Mount

SUS

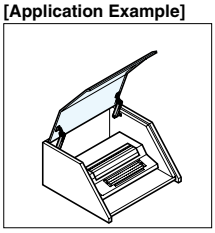


Installation for 70° opening (Left-handed)
Opening up to about 80° by changing installation position.



Left-handed type shown.

[Application Example]



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Arm	POM	Black
③	Case Bracket (For Side Board)	Stainless Steel (SUS304)	Barrel Polished
④	Arm Bracket		

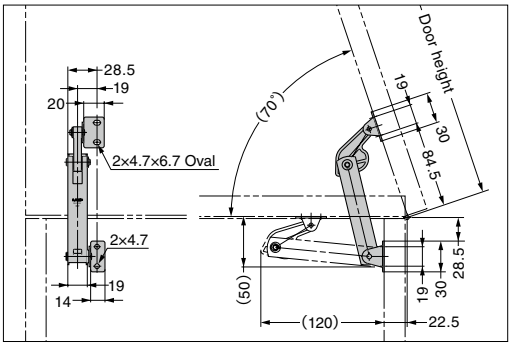
RoHS	CAD	Item Code	Item Name	Type	Spring Tension	Maximum Door Moment N · m/pc	Maximum Door Moment kgf · cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-083	S-YT01R	Right-handed	Soft	Max. 2.94	Max. 30	130	10	100
G	3D	180-100-084	S-YT01L	Left-handed				123	10	100
G	3D	180-100-085	S-YT02R	Right-handed	Hard	Max. 3.92	Max. 40	130	10	100
G	3D	180-100-086	S-YT02L	Left-handed				130	10	100

Refer to 1 : P.214

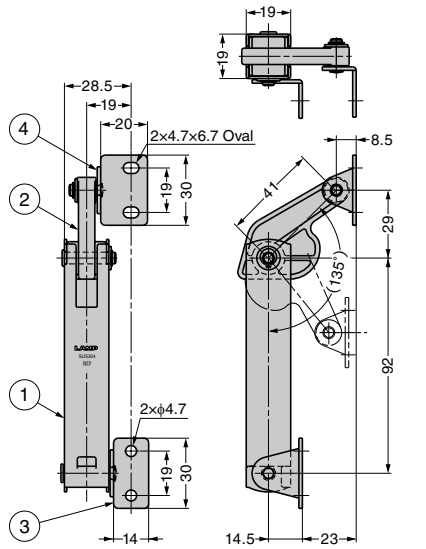
Refer to the calculation of maximum door moment 1.

LIFT ASSIST STAY S-YT Back Panel Mount

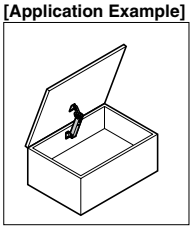
L=R SUS



Installation for 70° opening
Opening up to about 80° by changing installation position.



[Application Example]



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Arm	POM	Black
③	Case Bracket (For Side Board)	Stainless Steel (SUS304)	Barrel Polished
④	Arm Bracket		

RoHS	CAD	Item Code	Item Name	Spring Tension	Maximum Door Moment N · m/pc	Maximum Door Moment kgf · cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-081	S-YT01S	Soft	Max. 2.94	Max. 30	120	10	100
G	3D	180-100-082	S-YT02S	Hard	Max. 3.92	Max. 40	128	10	100

Refer to 1 : P.214

Refer to the calculation of maximum door moment 1.

Lapcon Series

Safe and smooth with Lapcon!



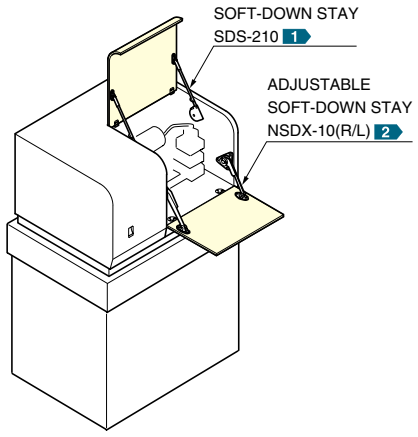
LAPCON refers to Sugatsune's patented damper mechanism which controls motion softly and smoothly. This damper mechanism with superior operability and safety has gained a high reputation from our customers, applicable to a wide variety of products such as stays, lift coat hangers, door closers, and storage beds, etc. These products are widely applied in Japan and overseas.

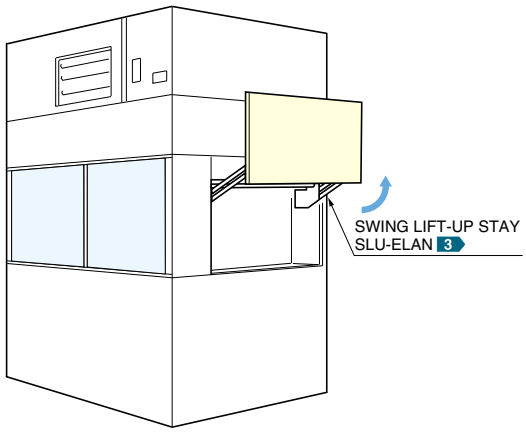


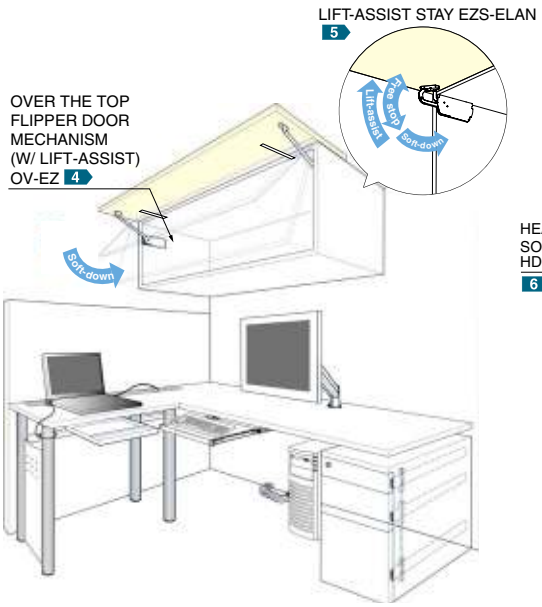


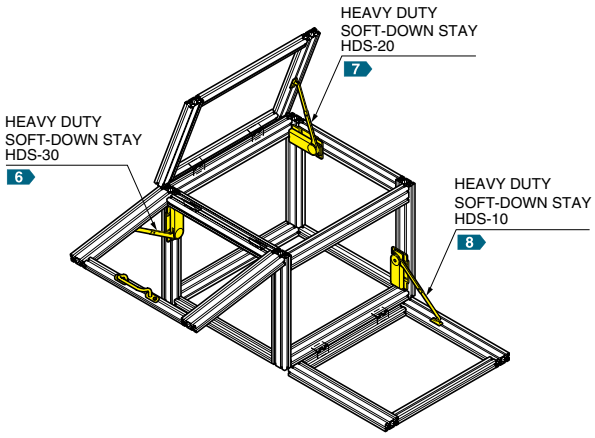
Motion DesignTec®

[Application Example]





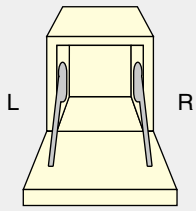




Refer to 1 : P.228, 2 : P.242, 3 : P.268, 4 : P.278, 5 : P.272, 6 : P.254, 7 : P.222, 8 : P.238

Soft-Down Stay Selection by lid/flap movement

When viewing from door opening side, located on the right side is right-handed (R) and on the left side is left-handed (L).



Lid/Flap Movement/Purpose	Hinge Type	Stay Type	Opening Angle
Top-opening	• Single knuckle hinge • Concealed hinge	HDS - 20S	75°
		HDS - 20	70°
		NSDX-20(R/L)	70°, 105°
	• Single knuckle hinge • Concealed hinge	SDS - 200, SDS - 201	70°
		SDS - 210	105°
		LAD - ST	95°
		LAD	–
Upward-opening	• Single knuckle hinge • Concealed hinge	SLS - ELAN, SLS - ELAN-TV	80°, 90°
		HDS - 30	80°
		HDSN - 30	80°, 90°
		NSDX - 35(R/L)	80°, 90°, 100°
		NSDX - 35(R/L)2S	80°/60°, 90°/65°, 100°/70°
		SDS - C301N	90°
Downward-opening	• Single knuckle hinge • Drop hinge • Concealed hinge	HDS - 10S	90°
		HDS - 10	
		NSDX - 10(R/L), NSDX - 10(R/L)K-TV	
		SDS - 100, SDS - C100	
		CSD - 10 - TV	
		SDS - 100TV, SDS - C100TV	
Bottom-opening	• Single knuckle hinge	SDS - 400 - W	70°

[Introduction of Selection Tool]

A tool for easily selecting Lapcon stays now available online!

Motion Design Tech
Selection Tool "Sasuga-kun"

1 Select kind of movement

Closes slowly
SOFT CLOSE
Click

DAMPENING HINGES
SOFT CLOSING STAYS
for various lid/flap movement
Go to selection tool page
Click

Holds its position
FREE STOP

Easy operation even with heavy doors
POWER ASSIST

2 Input conditions

step1 Select lid/flap movement
Top-opening / Upward-opening / Downward-opening / Bottom-opening

step2 Input lid/flap conditions
Based on lid/flap centre of gravity and weight
Input dimensions with lid/flap closed.

X-coordinate	20	mm
Y-coordinate	-225	mm
Lid/flap weight *m*	5	kg
Inside height	410	mm
	☐ Unknown	
Maximum lid/flap moment※1	11.08 N・m	

※1 Calculated with acceleration of gravity *g*=9.80665 m/s²

Based on lid/flap centre of gravity and weight
Rotation centre
Centre of gravity
Rotation centre
Centre of gravity
※Inside height is used for judging whether there is space required for installing stay.

step3 Select shape and qty

Shape	All	
Qty※2	2	pc(s)/per door

※2 Stay: 1 pc or 2 pcs recommended
Hinge: 2 pcs recommended

3 Choose a product !

Product selection

Selection result 7 items
Found it! Found it!

Item Name	SDS-C301N-xx
Item Code	180-100-283
Min. torque	7.84 N・m
Max. torque	13.72 N・m
Qty/door	2 pcs
Type	Stay
Minimum required inside height (approx.)	240 mm
Inside height judgment	○

Functions Supplied with catch mechanism that holds the etc.: door in fully opened and closed position.
Note: Three colours (white, grey, and black) with different item names and item codes are available. Refer to the catalogue for details.

Catalogue | CAD and Instructions, etc.

More details may also be obtained!

No Registration Required | Free

Let's try to use **"Sasuga-kun"** right now!

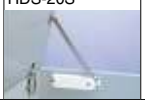
From PC
Enter by clicking the Sugatsune homepage.

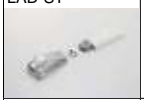
Selection Tool "Sasuga-kun"

From tablet
Scan the 2D barcode on the right.

SUGATSUNE

LAPCON STAY SERIES

Opening Direction	Description	Item Name	Qty 1 pc	Qty 2 pcs	Non-handed	Catch	Maximum Door Moment	Page
Upward-opening	Lift-assist Free Stop Soft-down	SLS-ELAN 	Yes	Yes	–	–	4.9~9.8 N・m (50~100 kgf・cm)	P.250
		SLS-ELAN-TV 	Yes	Yes	–	–	4.6~6.17 N・m (47~63 kgf・cm)	P.252
	Soft-down	HDS-30 	–	Yes	–	Yes	13.7~29.4 N・m (140~300 kgf・cm) ※	P.254
		HDSN-30 	–	Yes	–	Yes	13.7~34.3 N・m (140~350 kgf・cm) ※	P.256
		NSD-35 	Yes	Yes	–	Yes	1.96~6.86 N・m (20~70 kgf・cm)	P.259
		NSDX-35 (R/L) 	Yes	Yes	–	Yes	1.96~6.86 N・m (20~70 kgf・cm)	P.260
		NSDX-35 (R/L) 2S 	Yes	Yes	–	Yes (Two Angles)	1.96~4.9 N・m (20~50 kgf・cm)	P.262
		SDS-C301N 	Yes	Yes	Yes	Yes	3.92~6.86 N・m (40~70 kgf・cm)	P.263
	Self & Soft-opening	HDS-20S 	–	Yes	–	Yes	6.9~14.7 N・m (70~150 kgf・cm) ※	P.220
Top-opening	Soft-down	HDS-20 	–	Yes	–	Yes	13.7~29.4 N・m (140~300 kgf・cm) ※	P.222
		NSD-20 	Yes	Yes	–	Yes	1.96~6.86 N・m/pc (20~70 kgf・cm/pc)	P.225
		NSDX-20 (R/L) 	Yes	Yes	–	Yes	1.96~6.86 N・m (20~70 kgf・cm)	P.226
		SDS-200 SDS-201 	Yes	Yes	Yes	Yes	3.43~4.9 N・m (35~50 kgf・cm)	P.228
		SDS-210 				–		

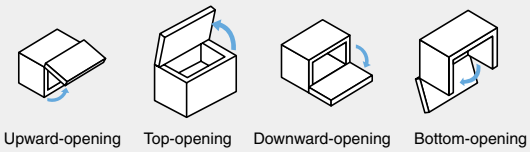
Opening Direction	Description	Item Name	Qty 1 pc	Qty 2 pcs	Non-handed	Catch	Maximum Door Moment	Page
Top-opening	Lift-assist Soft-close	LAD-ST 	Yes	Yes	Yes	–	8.0~16.0 N・m (81.6~163.2 kgf・cm)	P.230
		LAD 	Yes	Yes	Yes	–	8.0~16.0 N・m (81.6~163.2 kgf・cm)	P.232
		LADH 	Yes	Yes	Yes	–	25~50 N・m/pc (255~510 kgf・cm/pc)	P.234
Downward-opening	Self & Soft-close	HDS-10S 	–	Yes	–	Yes	5.9~17.6 N・m (60~180 kgf・cm) ※	P.236
	Soft-down	HDS-10 	–	Yes	–	Yes	13.7~29.4 N・m (140~300 kgf・cm) ※	P.238
		NSD-10 	Yes	Yes	–	Yes	1.96~6.86 N・m (20~70 kgf・cm)	P.241
		NSDX-10 (R/L) 	Yes	Yes	–	Yes	1.96~6.86 N・m (20~70 kgf・cm)	P.242
		SDS-100 	Yes	Yes	Yes	–	3.43~4.9 N・m (35~50 kgf・cm)	P.244
		SDS-C100 				Yes		
		CSD-10-TV 	Yes	Yes	Yes	–	1.0~4.0 N・m (10.2~40.8 kgf・cm)	P.246
		NSDX-10 (R/L) K-TV 	Yes	Yes	–	Yes	0.98~1.96 N・m (10~20 kgf・cm)	P.247
		SDS-100-TV 	Yes	Yes	Yes	–	0.49~1.18 N・m (5~12 kgf・cm)	P.248
		SDS-C100-TV 				Yes	1.62~3.68 N・m (16.5~37.6 kgf・cm)	
Bottom-opening	Soft-down	SDS-400-W 	Yes	Yes	Yes	–	3.43~4.9 N・m (35~50 kgf・cm)	P.264

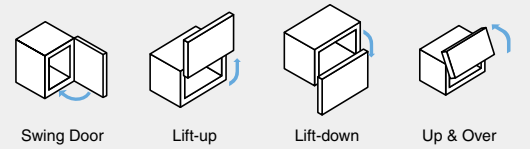
※ is the value when using 2 pcs.

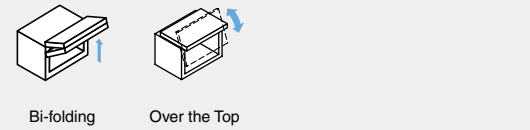
Opening Direction	Description	Item Name	Door Width	Door Height	Door Weight	Page
Lift-up	Lift-assist Free Stop Soft-close	SLU-ELAN 	Max. 1800	390~500	5~11 kg	P.268
	Lift-assist Soft-close	SLUN-N 	600~900	390~450	2.8~5.8 kg	P.270
Lift-down	Lift-assist Soft-close	SLD 	600~900	360~400	3~6 kg	P.271
Up & Over	Lift-assist Free Stop Soft-close	EZS-ELAN 	Max. 1200	500~750	5~12.5 kg	P.272
Bi-folding	Lift-assist Free Stop Soft-close	HBF-ELAN 	Max. 1200	320~370	2.5~6.5 kg	P.274
	Soft-close	HBFN 	450~900	320~420	2.5~6.5 kg	P.276
Over the Top	Lift-assist Soft-close	OV-EZ 	600 ~1200	370~450	2.5~11.5 kg	P.278
	Soft-close	OVN 	Max. 1500	370~450	3~7 kg	P.280
		OV-1 	700 ~1400	350~450	3~5 kg	P.281
		IF 	Max. 1200	–	–	P.282

[Notes]

●Opening Direction







●Description

Lift-assist



Door can be opened with a slight force.

Free stop



Door can be stopped in any position.

Soft-down, Soft-close



Door closes slowly.

SELF-OPENING STAY HDS-20S For Use in Pairs

Lapcon INSTRUCTION Video



Right side installation shown.

Opening Direction	Description	Non-handed	Model	Maximum door moment
Top-opening	With Self-opening For Use in Pairs	–	H	6.9~10.8 N·m/2 pcs (70~110 kgf·cm/2 pcs)
			S	10.9~14.7 N·m/2 pcs (111~150 kgf·cm/2 pcs)

- Ideal for top-opening lids.
- Opens automatically after a small impulse.
- Holds the door at closed position.
- For door hinge, piano/butt hinge or concealed hinge is suitable.

[Specifications]
- Operating temperature: 0˚c ~40˚c

[Remarks]
- Be sure to read the "Cautions" 1.
- Handed: Specific left and right-handed.
- Used in pairs.
- Do not push the door up over the max. opening angle. And do not roughly open and close the door.

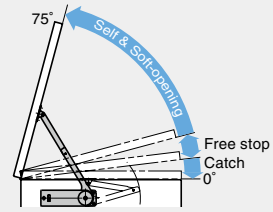
[Parts Included]
- Mounting plate
- Binding head tapping screw 3.5×15

Video Link

[Applicable Range]
- Choose from 2 types according to door moment.
  Maximum door moment (N·m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

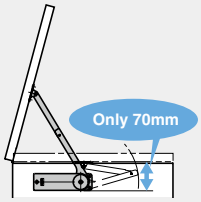
Maximum door moment N·m	Model	Qty
6.9~10.8	H	2pcs
10.9~14.7	S	2pcs

●Self & Soft-opening

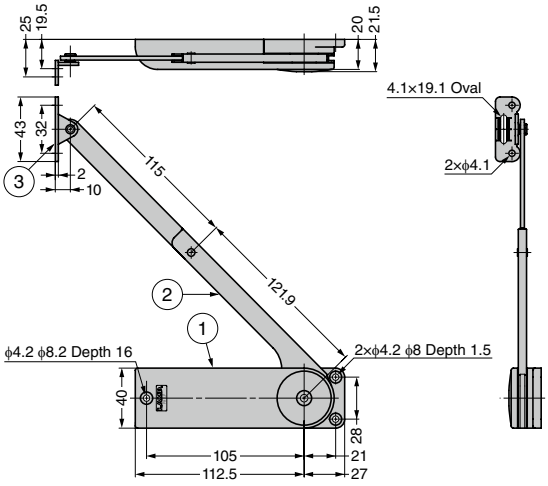


Opens automatically after a small impulse.

●Space-saving



Only 70mm mounting height maximises inside space.



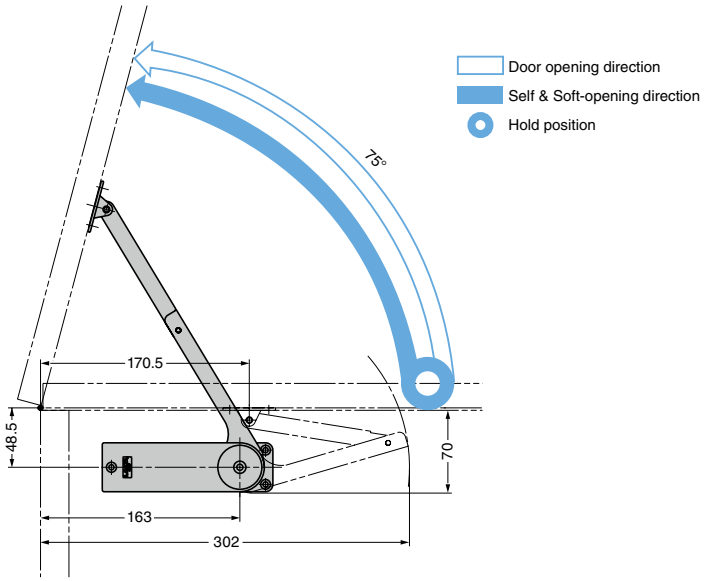
Right-handed type shown.

No.	Part Name	Material	Finish/Colour
①	Body	ABS	Black, White
②	Arm	Steel (SPCC)	Nickel
③	Mounting Plate		

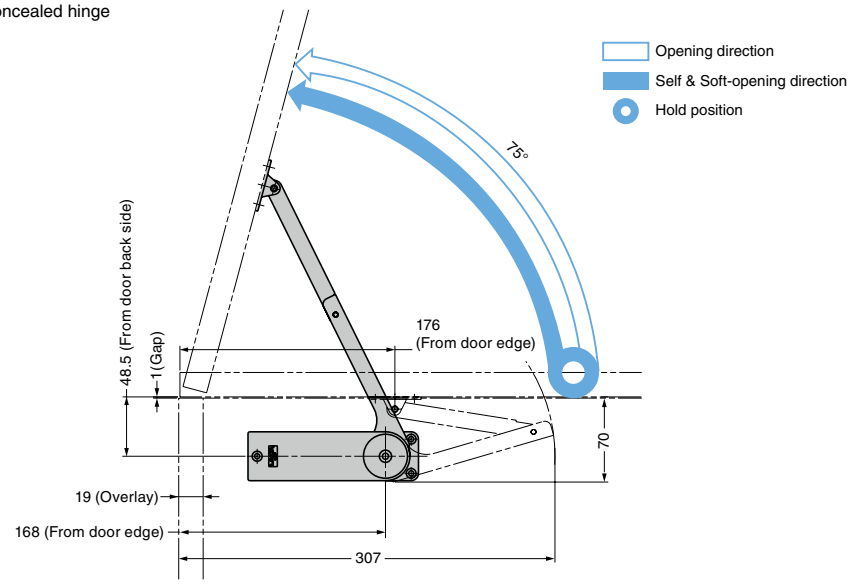
Refer to 1 : P.207

[Installation] Top-opening 75° and right side installation. Left side installation is symmetrical.

With piano/butt hinge



With concealed hinge



RoHS	CAD	Item Code	Item Name	Type	Material	Finish/Colour	Model	Maximum Door Moment N·m/2 pcs	Maximum Door Moment kgf·cm/2 pcs	Weight (g)	Box (pcs)
G'	3D	180-029-751	HDS-20S-HL-BL	Left-handed	Steel / ABS	Nickel plating / Black	H	6.9~10.8	70~110	298	40
G'	3D	180-029-752	HDS-20S-HR-BL	Right-handed						29	40
G'	3D	180-029-753	HDS-20S-HL-WT	Left-handed		Nickel plating / White				298	40
G'	3D	180-029-754	HDS-20S-HR-WT	Right-handed						298	40
G'	3D	180-029-755	HDS-20S-SL-BL	Left-handed		Nickel plating / Black	S	10.9~14.7	111~150	311	40
G'	3D	180-029-756	HDS-20S-SR-BL	Right-handed						311	40
G'	3D	180-029-757	HDS-20S-SL-WT	Left-handed		Nickel plating / White				311	40
G'	3D	180-029-758	HDS-20S-SR-WT	Right-handed						311	40

HEAVY DUTY SOFT-DOWN STAY HDS-20 For Use in Pairs



Opening Direction	Description	Non-handed	Model	Maximum door moment
Top-opening	With Catch For Use in Pairs	–	K	13.7~19.5 N·m/2 pcs (140~199 kgf·cm/2 pcs)
			M	19.6~24.4 N·m/2 pcs (200~249 kgf·cm/2 pcs)
			H	24.5~29.4 N·m/2 pcs (250~300 kgf·cm/2 pcs)

- For top-opening doors.
- Designed to hold the door in fully opened position.
- For door hinge, piano/butt hinge or concealed hinge is suitable.
- AS parts set 1 for installing to aluminium frame also available.

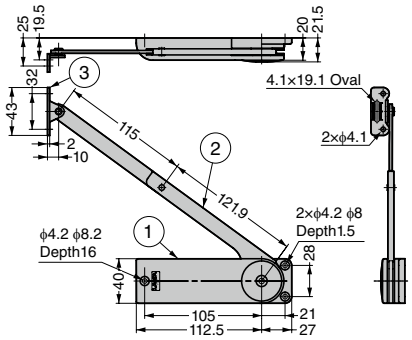
[Specifications]
- Operating temperature: 0˚C~40˚C

[Remarks]
- Be sure to read the "Cautions" 2.
- Used in pairs.
- Do not push the door up more than opening angle 70° . And do not roughly open and close the door.

[Parts Included]
- Mounting plate
- Binding head tapping screw 3.5×15

Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!



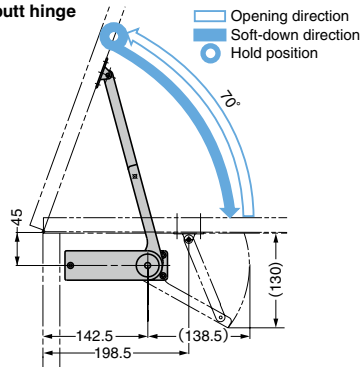
No.	Part Name	Material	Finish/Colour
①	Body	ABS	Black, White
②	Arm	Steel (SPCC)	Nickel
③	Mounting Plate		

[Installation] Top-opening 70° and right side installation. Left side installation is symmetrical.

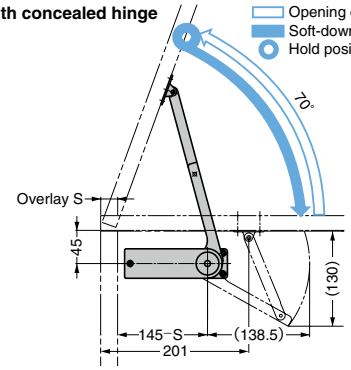
[Applicable Range]
- Choose from 3 types according to maximum door moment.
  Maximum door moment (N·m) = Door weight (kg)×9.80665× Distance from rotation centre to door centre of gravity (m)

Maximum door moment N · m	Model	Qty
13.7~19.5	K	2 pcs
19.6~24.4	M	
24.5~29.4	H	

With piano/butt hinge



With concealed hinge



RoHS	CAD	Item Code	Item Name	Type	Material	Finish/Colour	Model	Maximum Door Moment N·m/2 pcs	Maximum Door Moment kgf·cm/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-237	HDS-20KL-BL	Left-handed	ABS/ Steel	Nickel/Black	K	13.7~19.5	140~199	284	40	40
G	3D	180-109-236	HDS-20KR-BL	Right-handed						282	40	40
G	3D	180-109-243	HDS-20KL-WT	Left-handed		Nickel/White				310	40	40
G	3D	180-109-242	HDS-20KR-WT	Right-handed						283	40	40
G	3D	180-109-239	HDS-20ML-BL	Left-handed		Nickel/Black	M	19.6~24.4	200~249	288	40	40
G	3D	180-109-238	HDS-20MR-BL	Right-handed						289	40	40
G	3D	180-109-245	HDS-20ML-WT	Left-handed		Nickel/White				288	40	40
G	3D	180-109-244	HDS-20MR-WT	Right-handed						288	40	40
G	3D	180-109-241	HDS-20HL-BL	Left-handed		Nickel/Black	H	24.5~29.4	250~300	297	40	40
G	3D	180-109-240	HDS-20HR-BL	Right-handed						297	40	40
G	3D	180-109-247	HDS-20HL-WT	Left-handed		Nickel/White				299	40	40
G	3D	180-109-246	HDS-20HR-WT	Right-handed						299	40	40

Refer to 1 : P.223, 2 : P.207

AS Parts Set for Installing to Aluminium Frame

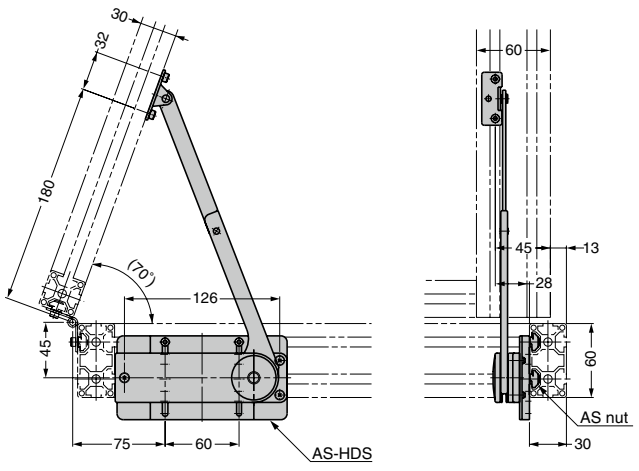
Please refer to the series introduction page 1 for details about AS series.



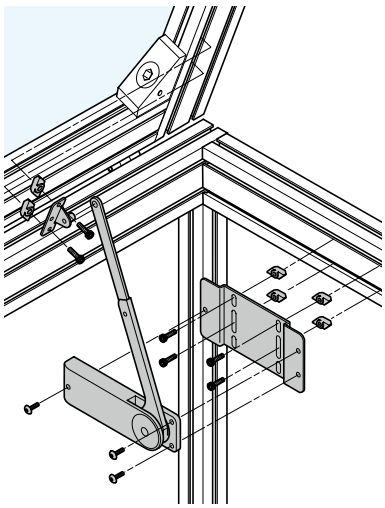
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts (Stays)	Parts (Others)	Weight (g)
G	3D	180-013-637	AS-HDS-20KR-BL-30-6	Groove Width 6 mm	HDS-20KR-BL : 1 pc	AS Nut AS-6M4 : 6pcs Pan Head Screw M4×8 : 3pcs Bracket AS-HDS : 1pc Hexagon Socket Head Cap Screw M4×10 : 6pcs	–
G	3D	180-013-638	AS-HDS-20KL-BL-30-6		HDS-20KL-BL : 1 pc		–
G	3D	180-013-639	AS-HDS-20KR-WT-30-6		HDS-20KR-WT : 1 pc		–
G	3D	180-013-640	AS-HDS-20KL-WT-30-6		HDS-20KL-WT : 1 pc		–
G	3D	180-013-641	AS-HDS-20MR-BL-30-6		HDS-20MR-BL : 1 pc		–
G	3D	180-013-642	AS-HDS-20ML-BL-30-6		HDS-20ML-BL : 1 pc		–
G	3D	180-013-643	AS-HDS-20MR-WT-30-6		HDS-20MR-WT : 1 pc		–
G	3D	180-013-644	AS-HDS-20ML-WT-30-6		HDS-20ML-WT : 1 pc		–
G	3D	180-013-645	AS-HDS-20HR-BL-30-6		HDS-20HR-BL : 1 pc		–
G	3D	180-013-646	AS-HDS-20HL-BL-30-6		HDS-20HL-BL : 1 pc		–
G	3D	180-013-647	AS-HDS-20HR-WT-30-6		HDS-20HR-WT : 1 pc		–
G	3D	180-013-648	AS-HDS-20HL-WT-30-6		HDS-20HL-WT : 1 pc		–
G	3D	180-013-649	AS-HDS-20KR-BL-30-8	Groove Width 8 mm	HDS-20KR-BL : 1 pc	AS Nut AS-8M4 : 6pcs Pan Head Screw M4×8 : 3pcs Bracket AS-HDS : 1pc Hexagon Socket Head Cap Screw M4×10 : 6pcs	–
G	3D	180-013-650	AS-HDS-20KL-BL-30-8		HDS-20KL-BL : 1 pc		–
G	3D	180-013-651	AS-HDS-20KR-WT-30-8		HDS-20KR-WT : 1 pc		–
G	3D	180-013-652	AS-HDS-20KL-WT-30-8		HDS-20KL-WT : 1 pc		–
G	3D	180-013-653	AS-HDS-20MR-BL-30-8		HDS-20MR-BL : 1 pc		–
–	3D	180-013-654	AS-HDS-20ML-BL-30-8		HDS-20ML-BL : 1 pc		–
G	3D	180-013-655	AS-HDS-20MR-WT-30-8		HDS-20MR-WT : 1 pc		–
G	3D	180-013-656	AS-HDS-20ML-WT-30-8		HDS-20ML-WT : 1 pc		–
G	3D	180-013-657	AS-HDS-20HR-BL-30-8		HDS-20HR-BL : 1 pc		–
G	3D	180-013-658	AS-HDS-20HL-BL-30-8		HDS-20HL-BL : 1 pc		–
G	3D	180-013-659	AS-HDS-20HR-WT-30-8		HDS-20HR-WT : 1 pc		–
G	3D	180-013-660	AS-HDS-20HL-WT-30-8		HDS-20HL-WT : 1 pc		–

[Dimensions]

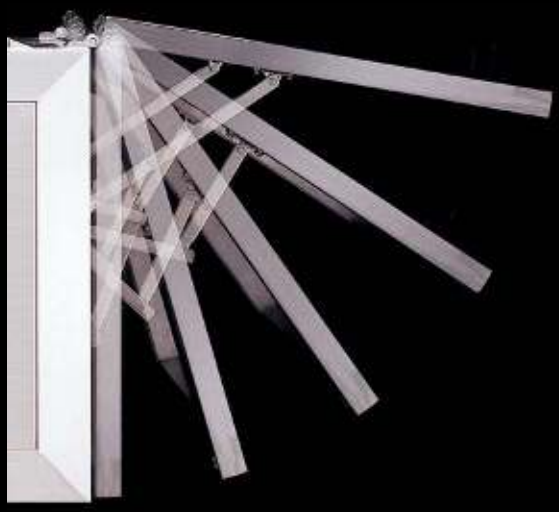


[How to Install]



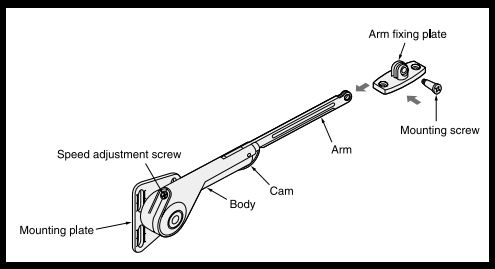
Refer to 1 : FRONT P.20

ADJUSTABLE SOFT-DOWN STAY NSD



- Keeps flap/lid from slamming shut.
- Successfully passed for 30,000 open/close private cycle tests.
- Opening/closing speed is adjustable.
- Opening angle is adjustable by changing mounting position.
- Handed.

[Remarks]
Designed to operate at room temperature 0°~40°C.



APPLICATION		MOUNTING SIDE	NSD-#
Downward-Opening Flap	90°	Right	NSD-10R
		Left	NSD-10L
Top-Opening Flap	70° ~ 105°	Right	NSD-20R
		Left	NSD-20L
Upward-Opening Flap	80° ~ 100°	Right	NSD-35R
		Left	NSD-35L

ADJUSTABLE SOFT-DOWN STAY NSD-20

Lapcon INSTRUCTION

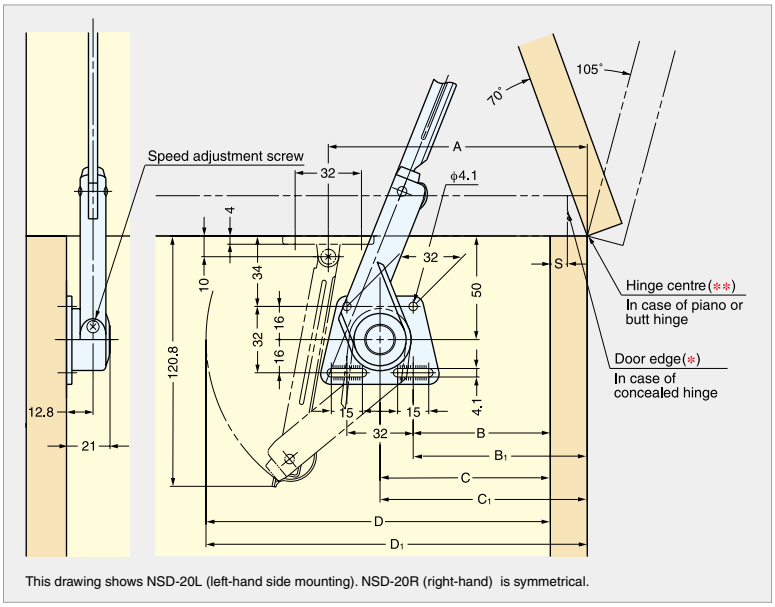


- For Top-opening flap door with piano, butt or concealed hinges.
- Opening angle adjustable from 70° to 105°
- Designed to hold door in fully opened position.

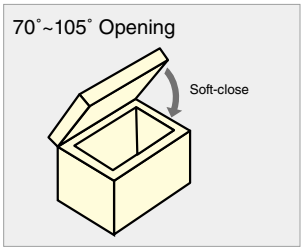
Torque Calculation :
Torque = Door Height x 1/2 x Door Weight.
Per Piece : 20~70 kg·cm.

Material	Finish
Zinc Alloy, Steel	Nickel





This drawing shows NSD-20L (left-hand side mounting). NSD-20R (right-hand) is symmetrical.



Opening Angle	Hinge Type	A	B	C	D	B_1	C_1	D_1
70°	Concealed Hinge	126	85-S	101-S	185-S	-	-	-
	Piano / Butt Hinge	125	-	-	-	84	100	184
105°	Concealed Hinge	103	62-S	78-S	162-S	-	-	-
	Piano / Butt Hinge	97	-	-	-	56	72	156

Note: "S" dimension is the overlay distance for concealed hinge(s).

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	180-104-103	NSD-20R	210	20	80
–	3D	180-104-102	NSD-20L	210	20	80

ADJUSTABLE SOFT-DOWN STAY NSDX-20 (R/L)

Lapcon AS INSTRUCTION VIDEO



Opening Direction	Description	Non-handed	Maximum Door Moment
 Top-opening	With Catch	–	1.96~6.86 N・m/pc (20~70 kgf・cm/pc)

- For top-opening doors.
- Designed to hold the door in fully opened position.
- Opening angle 70° or 105° .
- Closing speed adjustable with adjustment screw.
- AS parts set 1 for installing to aluminium frame also available.

[Specifications]
- Operating temperature: 0˚C~40˚C

[Remarks]
- Be sure to read the "Cautions" 2.
- Handed: Specific left and right-handed.
- Door closing speed varies depending on product difference and conditions.
- Do not push the door up over the max. opening angle. Also do not forcibly press the door down when closing.

[Sold Separately]
- Mounting plate 3
- SDS face plate and spacer for glass door (please order when using 3 mounting plate NSDX-GZ.)

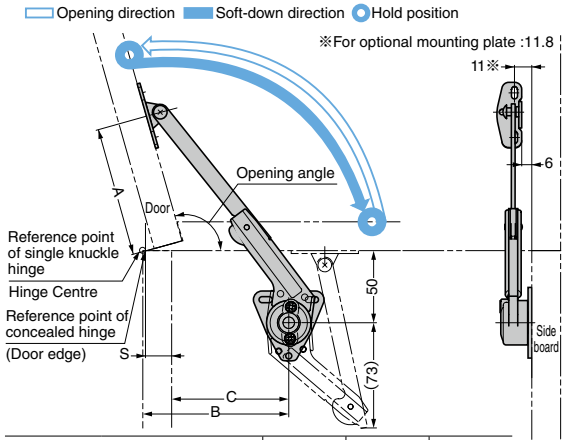
Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation.
Available on Web!

[Maximum Door Moment]
- With 1 stay
  Maximum door moment =1.96~6.86 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg) × 9.80665 × Distance from rotation centre to door centre of gravity (m)

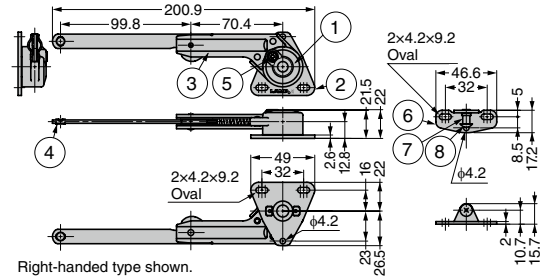
[Installation] Right side installation for top-opening 105° . Left side installation is symmetrical.

Comes down slowly and softly in closing direction. Installation with piano/butt hinge or concealed hinge shown below.



Hinge Type		A	B	C
70° Opening	Concealed Hinge	126	–	101–S
	Single Knuckle Hinge	125	100	–
105° Opening	Concealed Hinge	103	–	78–S
	Single Knuckle Hinge	97	72	–

Installation dimensions vary depending on hinge type and opening angle.



No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Mounting Plate	Steel (SPCC)	
③	Arm		
④	Sleeve	POM	Black
⑤	Adjustment Screw	Steel (SWCH)	Nickel
⑥	Arm Mounting Plate	Steel (SPCC)	
⑦	Shaft	Steel (SWCH)	
⑧	Truss Head Screw (M4×5)		

- S is overlay at hinge side. For concealed hinge, use our recommended hinge 230-26/19T.
- Reference point for each dimension: hinge centre for single knuckle hinge, while door edge for concealed hinge.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-481	NSDX-20R	Right-handed	Zinc Alloy (ZDC)/ Steel	Nickel	1.96~6.86	20~70	170	20	80
G	3D	180-109-480	NSDX-20L	Left-handed						20	80

[Mounting Plate] Sold separately 3

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-032	NSDX-SZ	Screw on	14	160	640
G	3D	180-109-460	NSDX-CZ	Clip on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip on for 20 mm width Aluminium Frame	11	320	1280
G	3D	180-109-459	NSDX-GZ	Clip on Mounting Plate for Glass Door	14	160	640

[SDS Face Plate and Spacer for Glass Door] Sold Separately 3
(Please use with mounting plate NSDX-GZ.)

RoHS	CAD	Item Code	Item Name	Material	Finish/ Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ ABS	Chrome/Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.227, 2 : P.207, 3 : P.267

AS Parts Set for Installing to Aluminium Frame

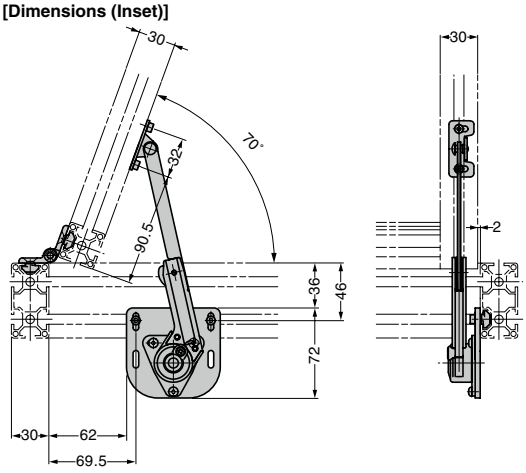
Please refer to the series introduction page 1 for details about AS series.



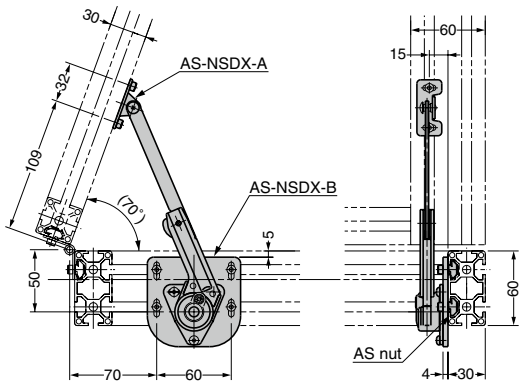
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	180-041-643	AS-NSDX-20RK-30-6	Groove Width 6 mm	NSDX-20RK : 1pc AS Nut AS-6M4 : 6pcs Hexagon Socket Button Head Screw M4×6 : 3pcs Bracket AS-NSDX-B : 1pc Hexagon Socket Head Cap Screw M4×12 : 4pcs Bracket AS-NSDX-A : 1pc Hexagon Socket Head Cap Screw M4×10 : 2pcs	–
G	3D	180-041-645	AS-NSDX-20LK-30-6		NSDX-20LK : 1 pc AS Nut AS-6M4 : 6pcs Hexagon Socket Button Head Screw M4×6 : 3pcs Bracket AS-NSDX-B : 1pc Hexagon Socket Head Cap Screw M4×12 : 4pcs Bracket AS-NSDX-A : 1pc Hexagon Socket Head Cap Screw M4×10 : 2pcs	–
G	3D	180-041-644	AS-NSDX-20RK-30-8	Groove Width 8 mm	NSDX-20RK : 1pc AS Nut AS-8M4 : 6pcs Hexagon Socket Button Head Screw M4×6 : 3pcs Bracket AS-NSDX-B : 1pc Hexagon Socket Head Cap Screw M4×12 : 4pcs Bracket AS-NSDX-A : 1pc Hexagon Socket Head Cap Screw M4×10 : 2pcs	–
G	3D	180-041-646	AS-NSDX-20LK-30-8		NSDX-20LK : 1pc AS Nut AS-8M4 : 6pcs Hexagon Socket Button Head Screw M4×6 : 3pcs Bracket AS-NSDX-B : 1pc Hexagon Socket Head Cap Screw M4×12 : 4pcs Bracket AS-NSDX-A : 1pc Hexagon Socket Head Cap Screw M4×10 : 2pcs	–

[Dimensions (Inset)]



[Dimensions (Overlay)]



Refer to 1 : FRONT P.20

SOFT-DOWN STAY SDS-200, SDS-201, SDS-210

Lapcon L=R INSTRUCTION VIDEO



Right side installation shown. (SDS-200-W)



Right side installation shown. (SDS-210-G)




Mounting plate SDS-A for SDS-210


Mounting plate SDS-B for SDS-200 and SDS-201

Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
 Top-opening	SDS-200	With Catch	Yes	3.43~4.9 N・m/pc (35~50 kgf・cm/pc)
	SDS-201			
	SDS-210	–		

- For top-opening doors.
- Non-handed: Can be installed either on left or right side.
- Designed to hold the door in fully opened position.
- Three types are available, depending on opening angle and type of hinge (sold separately).
  SDS-200: Opening angle 70° ※, piano/butt hinge
  SDS-201: Opening angle 70° ※, concealed hinge
  SDS-210 (wide angle opening): Opening angle 105° ※, piano/butt hinge or concealed hinge
  ※Fully opened angle of door at the installation position in the installation drawing next page.
- For opening angle or hinge type other than specified, please contact local representatives.

[Specifications]
- Operating temperature: 0˚C~40˚C

[Remarks]
- Be sure to read the "Cautions" 1.
- Do not push the door up over the max. opening angle. Also do not forcibly press the door down when closing.

[Parts Included]
- Mounting plate
- Countersunk head tapping screw 3.5×14

[Sold Separately]
- SDS face plate and spacer for glass door 2

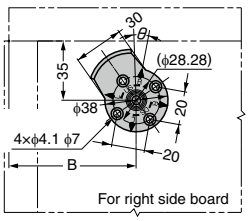
Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

[Maximum Door Moment]
- With 1 stay
  Maximum door moment = 3.43~4.9 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

[Installation for Mounting Plate]

SDS-200, SDS-201

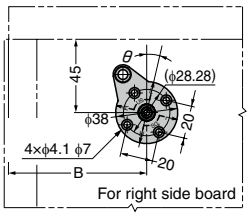


[Full Overlay]

Item Name	Hinge Type	Opening Angle	B	θ
SDS-200	Single Knuckle Hinge	70°	75	(0°)
SDS-201	Concealed Hinge 230-26/19T		74	
SDS-210	Single Knuckle Hinge	105°	81	(5°)
	Concealed Hinge 230-26/19T		87	(12°)

For right side board, install with the "→" mark of R at US side upwards.
For left side board, install with the "→" mark of L at US side upwards.

SDS-210

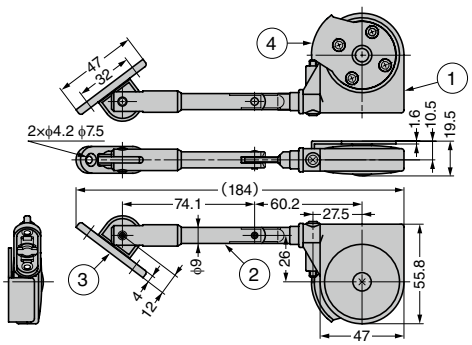


[Inset (Door Thickness 20mm)]

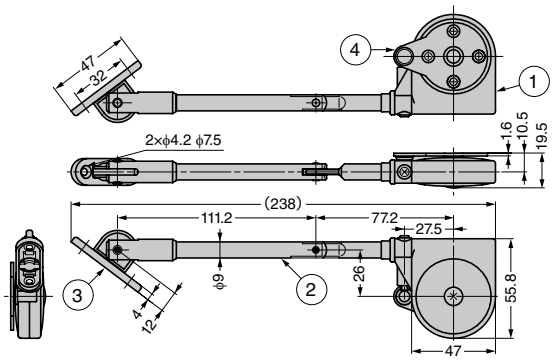
Item Name	Hinge Type	Opening Angle	B	θ
SDS-200	Single Knuckle Hinge	70°	63.5	(10°)
SDS-201	Concealed Hinge 230-26/0T		79	(0°)
SDS-210	Single Knuckle Hinge	105°	70	(15°)

For right side board, install with the "→" mark of R at US side upwards.
For left side board, install with the "→" mark of L at US side upwards.

Refer to 1 : P.207, 2 : P.267



SDS-200, SDS-201



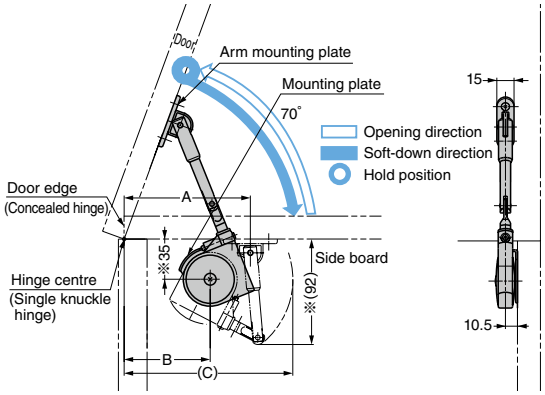
SDS-210

No.	Part Name	Material	Finish/Colour
①	Body	ABS	White, Grey, Umber
②	Arm	Steel (SPCC)	Nickel
③	Arm Mounting Plate		
④	Mounting Plate		

[Installation SDS-200 and SDS-201]

Right side installation for top-opening 70° . Left side installation is symmetrical.

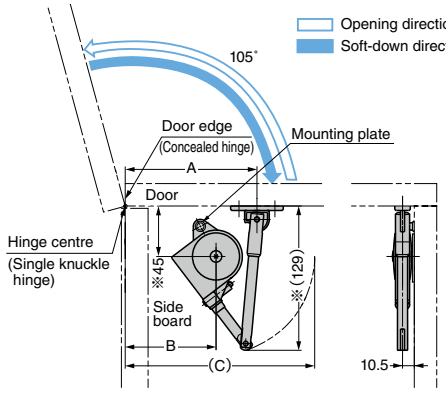
Comes down slowly and softly in closing direction. Installation with piano/butt hinge or concealed hinge shown below.



[Installation SDS-210]

Right side installation for top-opening 105° . Left side installation is symmetrical.

Comes down slowly and softly in closing direction. Installation with piano/butt hinge or concealed hinge shown below.



- Installation dimensions vary depending on hinge type. Reference point of installation dimension (A, B, C) : hinge centre for piano/butt hinge, while door edge for concealed hinge.
- Reference point of ※ marked dimensions is the back side of door.

[Full Overlay]

Item Name	Hinge Type	Opening Angle	A	B	C
SDS-200	Single knuckle hinge	70°	110	75	147
SDS-201	Concealed Hinge 230-26/19T		109	74	146
SDS-210	Single knuckle hinge	105°	117.5	81	169
	Concealed Hinge 230-26/19T		123.5	87	175

[Inset (Door Thickness 20mm)]

Item Name	Hinge Type	Opening Angle	A	B	C
SDS-200	Single knuckle hinge	70°	98.5	63.5	135
SDS-201	Concealed Hinge 230-26/0T		114	79	151
SDS-210	Single knuckle hinge	105°	108.3	70	157.3

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Maximum Door Moment (N·m/pc)	Maximum Door Moment (kgf·cm/pc)	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-268	SDS-200-W	ABS/Steel	Nickel/Grey	3.43~4.9	35~50	153	20	100
G	3D	180-100-269	SDS-200-G		Nickel/Umber				20	100
G	3D	180-100-270	SDS-200-U		Nickel/White				20	100
G	3D	180-100-271	SDS-201-W		Nickel/Grey				20	100
G	3D	180-100-272	SDS-201-G		Nickel/Umber				20	100
G	3D	180-100-273	SDS-201-U		Nickel/White				20	100
G	3D	180-100-274	SDS-210-W		Nickel/Grey			159	20	100
G	3D	180-100-275	SDS-210-G		Nickel/Umber				20	100
G	3D	180-100-276	SDS-210-U		Nickel/White				20	100

[SDS Face Plate and Spacer for Glass Door] Sold Separately 1

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ABS	Chrome/Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.267

LIFT-ASSIST DAMPER LAD-ST With Stopper

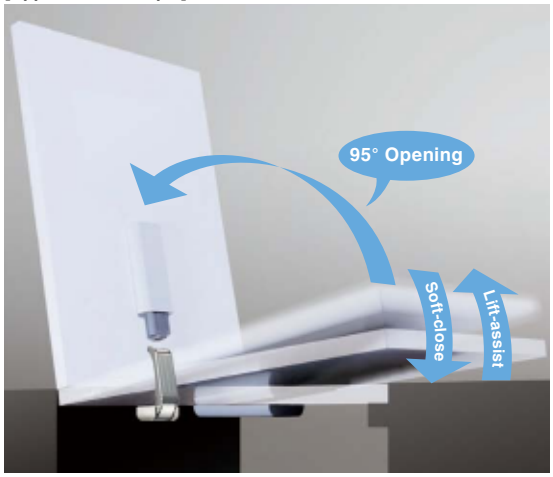
Lapcon L=R INSTRUCTION



Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
Top-opening	LAD-ST-L	Lift-assist Soft-close	Yes	8.0~10.5 N・m/pc (81.6~107.1 kgf・cm/pc)
	LAD-ST-M			10.5~13.5 N・m/pc (107.1~137.7 kgf・cm/pc)
	LAD-ST-H			13.5~16.0 N・m/pc (137.7~163.2 kgf・cm/pc)

- Ideal for counter flaps at bars, restaurants, and receptions.
- Smooth and soft close movement at the end, preventing flaps from slamming shut. Damper works even at a slight opening angle.
- Lift-assist mechanism with light opening.
- Stops flap at 95° opening with stopper.
- Suitable for door thickness 15~40mm.
- Can be post-installed to existing counters without processing.
- Installation position can be easily determined with the supplied template.

[Application Example]

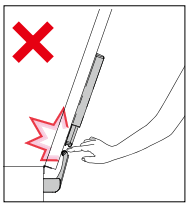


[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Simply holds rather than fixes flap in opened position.
- Make sure to have sufficient hinge strength and installation strength at door hanging side.
- Do not use concealed hinge.
- Closed flap cannot be held with only this product. Please install a catch at the front end of flap.
- Do not forcibly open and close flap more than necessary.
- Ensure that the distance from mounting surface of damper unit and stopper to flap surface is 15~40mm (see drawing).
- Be careful not to pinch fingers between arm unit and damper unit.
- Do not use with spacer LAD-DP 1 (for thick door) and bracket for back mount LAD-BKT 2 (for horizontal installation).

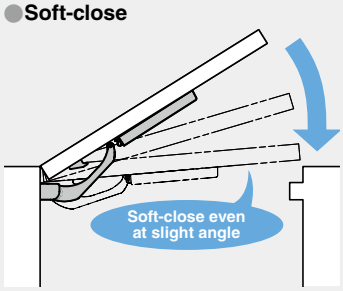


Selection Tool Sasuga-kun
Applicable Products
Used for Product Selection & Simulation. Available on Web!

[Parts Included]

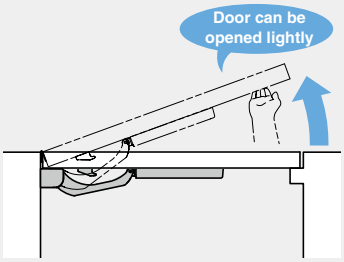
- Binding head tapping screw 4×16
- Template for positioning

Soft-close



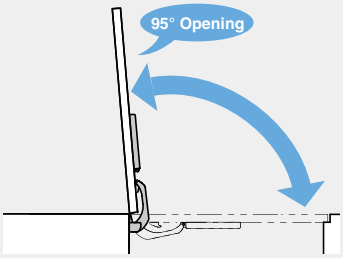
Damper works just before flap closes, preventing it from slamming shut and pinching fingers.

Lift-assist



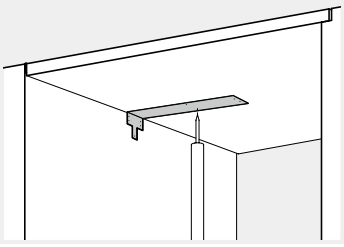
Lift-assist mechanism with light opening.

With stopper



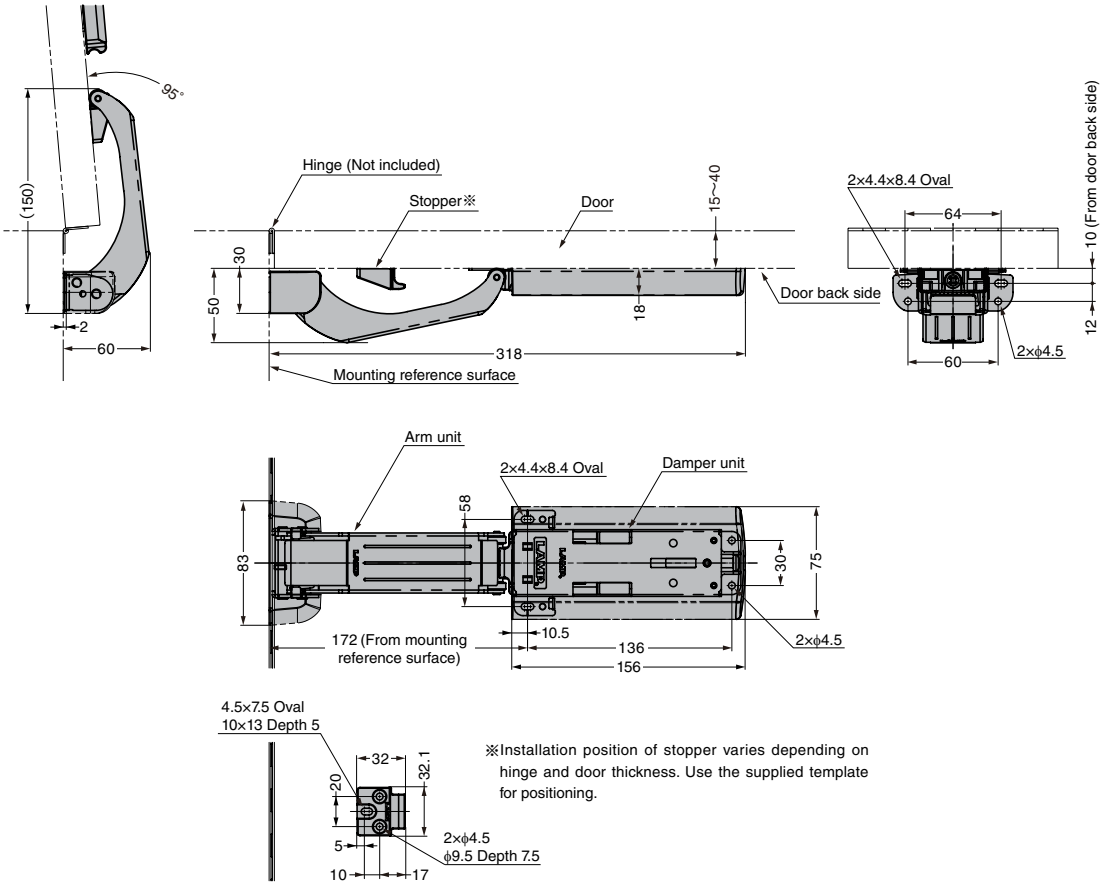
Stops flap at 95° opening.

Easy post-installation



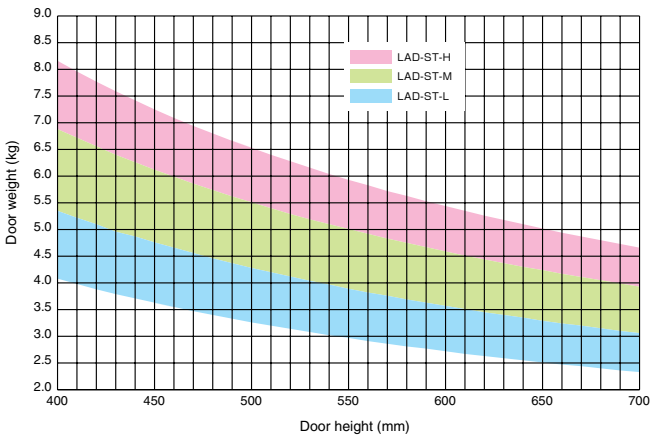
Can be post-installed to existing counters without processing. Simply by pressing against the supplied mounting template, installation position can be easily determined.

Refer to 1 2 : P.233



※Installation position of stopper varies depending on hinge and door thickness. Use the supplied template for positioning.

[Door Size Ranges] 1pc use only



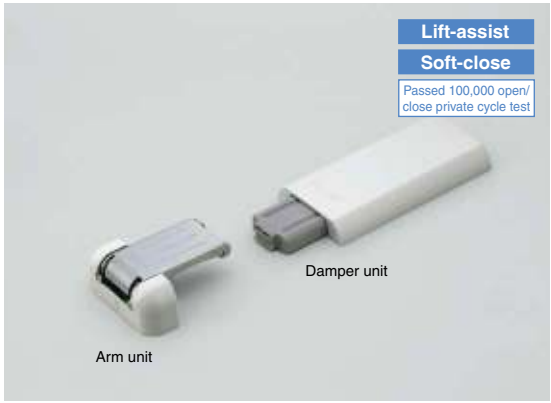
Refer to the left graph as a guide for model selection.
When using a door with size not given here, calculate the door moment as follows.
Door weight includes attached decorations.

Maximum Door Moment (N・m)
= Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Recommended Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-033-213	LAD-ST-L	ABS/POM/Steel/ Zinc Alloy (ZDC)	Zinc Chromate/ Nickel Chrome/ Nickel	8.0~10.5	81.6~107.1	15~40	750	1	10
G	3D	170-033-214	LAD-ST-M			10.5~13.5	107.1~137.7			1	10
G	3D	170-033-215	LAD-ST-H			13.5~16.0	137.7~163.2			1	10

LIFT-ASSIST DAMPER LAD

Lapcon L=R INSTRUCTION VIDEO



Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
Top-opening	LAD-L	Lift-assist Soft-close	Yes	8.0~10.5 N・m/pc (81.6~107.1 kgf・cm/pc)
	LAD-M			10.5~13.5 N・m/pc (107.1~137.7 kgf・cm/pc)
	LAD-H			13.5~16.0 N・m/pc (137.7~163.2 kgf・cm/pc)

- Ideal for counter flaps at bars, restaurants, and receptions.
- Smooth and soft close movement at the end, preventing flaps from slamming shut. Damper works even at a slight opening angle.
- Lift-assist mechanism with light opening.
- Can be installed to existing counters without additional processing.
- Installation position can be easily determined with the supplied template.
- Slim arm unit does not disturb the doorway. Projection is only 35mm when opened.
- 2 pairs use possible. Torque becomes double. 3 pairs or more not allowed.

[Application Example]



[Specifications]

- Operating temperature: 0˚C~40˚C

[Remarks]

- Use with single knuckle hinges or concealed hinges (sold separately) .
- Do not use with slide hinges. Otherwise, hinges may deform and flap may not close.
- No functions to hold flap in opened position and stop in opening direction. Install a safety device separately.
- Please prepare separate holder to support the flap in closed position. (see below※).
- Do not forcibly open and close flap more than necessary.
- Since load is applied to flap, side board and hinge, ensure that the frame structure has sufficient strength.
- Be careful not to pinch fingers between arm unit and damper unit.

Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

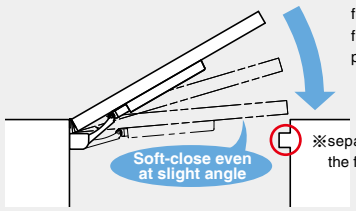
[Parts Included]

- Binding head tapping screw 4×16
- Template for positioning

[Sold Separately]

- Spacer LAD-DP 1
- Bracket for back mount LAD-BKT 1

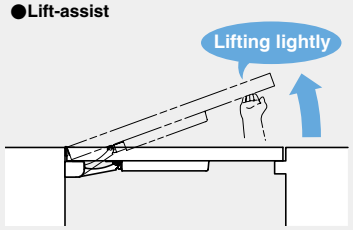
●Soft-Close



Damper works just before flap closes, preventing it from slamming shut and pinching fingers.

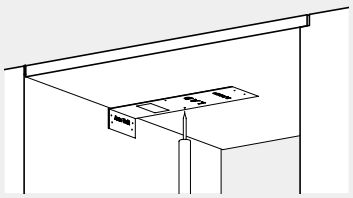
※separate holder to support the flap required.

●Lift-assist

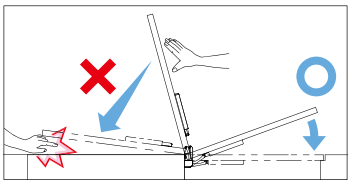


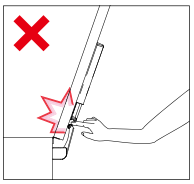
Top board can be lifted lightly.

●Easy post-installation



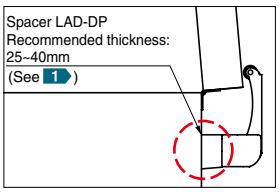
Can be post-installed to existing counters without processing. Simply by pressing against the supplied mounting template, installation position can be easily determined.

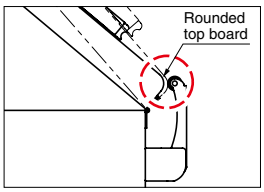




[For Door Thickness More Than 25 mm]

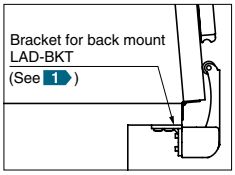
When door thickness exceeds 25mm, you may be able to use this product by using with spacer (sold separately) 1 or rounding the flap (figure below).



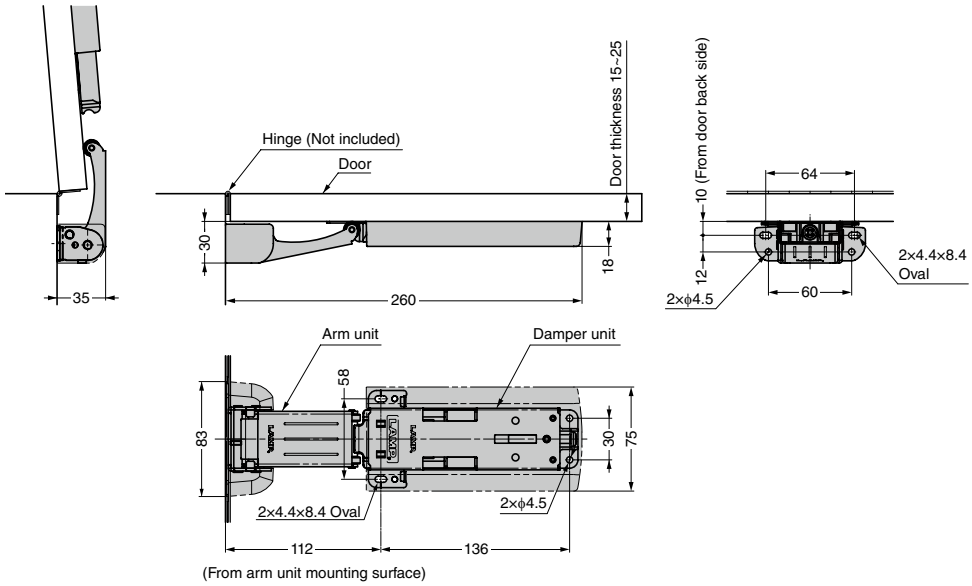


[For Installing on Horizontal Surface]

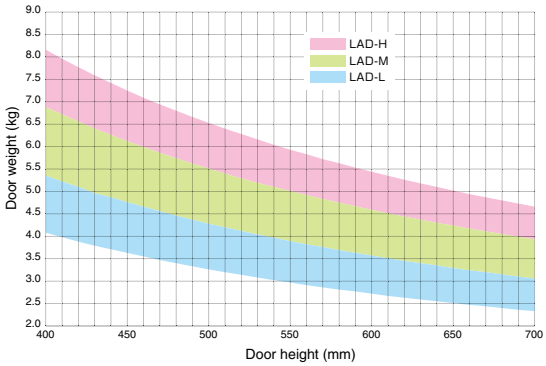
When installing on a horizontal surface, please use bracket for back mount (sold separately) 1 .



Refer to 1 : P.233



[Door Size Ranges] 1pc use (※2pcs use possible. Torque moment doubles)



Refer to the left graph as a guide for model selection.
When using a door with size not given here, calculate the door moment as follows.

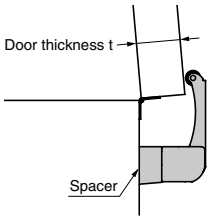
Maximum Door Moment (N・m)
= Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

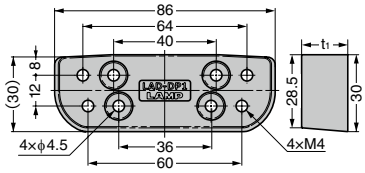
RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-025-804	LAD-L	ABS/POM/Steel	Zinc Chromate/ Nickel Chrome	8.0~10.5	81.6~107.1	15~25	545	1	20
G	3D	170-025-805	LAD-M			10.5~13.5	107.1~137.7		568	1	20
G	3D	170-025-806	LAD-H			13.5~16.0	137.7~163.2		571	1	20

SPACER LAD-DP

For over 25mm thickness door.

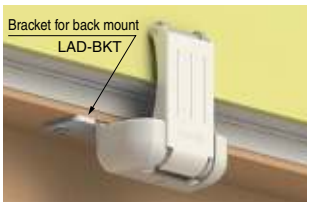


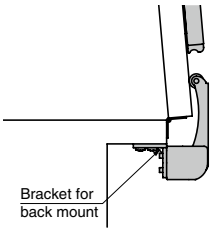


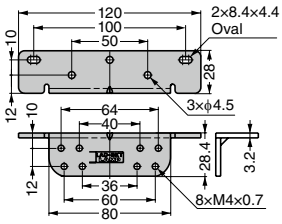


RoHS	CAD	Item Code	Item Name	t1	Door Thickness (t)	Material	Colour	Weight (g)	Box (pcs)
G	3D	170-028-234	LAD-DP1	18	25~35	POM	Grey	58	50
G	3D	170-028-235	LAD-DP2	25	30~40			67	50

BRACKET FOR BACK MOUNT LAD-BKT





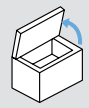


RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	170-028-236	LAD-BKT	Steel (SPCC)	Nickel	129	20	100

LIFT-ASSIST DAMPER (FOR HEAVY DUTY) LADH

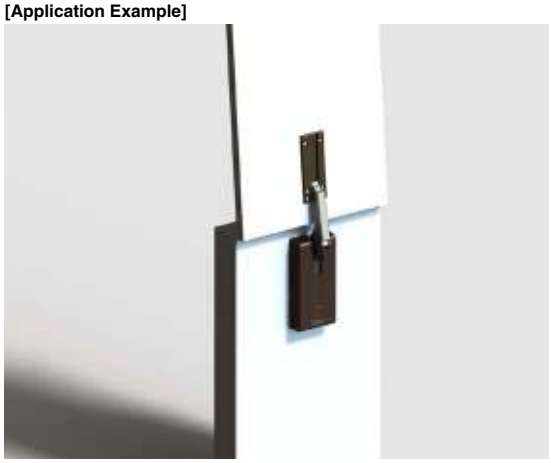
Lapcon INSTRUCTION



Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
 Top-opening	LADH-35	Lift-assist Soft-close	Yes	25~35 N・m/pc (255~357 kgf・cm/pc)
	LADH-50			35~50 N・m/pc (357~510 kgf・cm/pc)

- Ideal for counter flaps at bars, restaurants, and receptions.
- Smooth and soft close movement at the end, preventing flaps from slamming shut. Damper works even at a slight opening angle.
- Suitable for door moment 25~50N・m.
- Lift-assist mechanism with light opening.
- Stops flap at 95° opening with stopper.
- Installation position can be easily determined with the supplied template.
- Can be post-installed to existing counters without processing.

[Application Example]



[Applications]

- Counter flaps, etc.

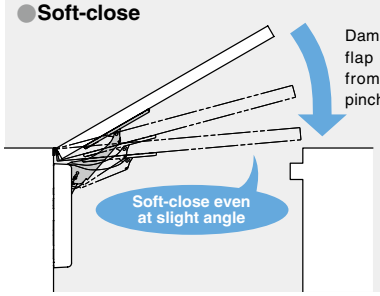
[Remarks]

- Simply holds rather than fixes flap in opened position.
- Make sure to have sufficient hinge strength and installation strength at damper mounting surface and door hanging side.
- Do not use concealed hinge.
- Closed flap cannot be held with only this product. Please install a catch at the front end of flap.

[Parts Included]

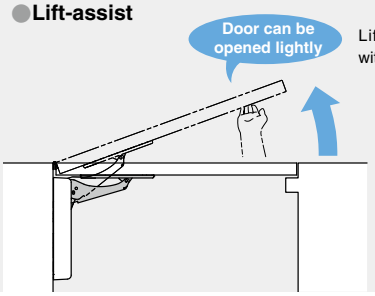
- Binding head tapping screw 5×16
- Binding head tapping screw 5×20
- Paper template

Soft-close



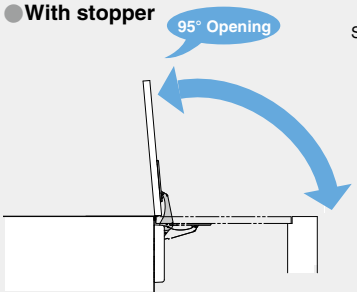
Damper works just before flap closes, preventing it from slamming shut and pinching fingers.

Lift-assist



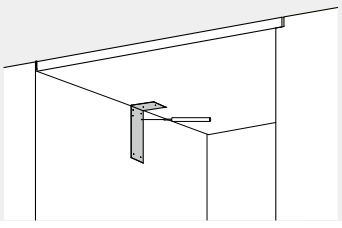
Lift-assist mechanism with light opening.

With stopper

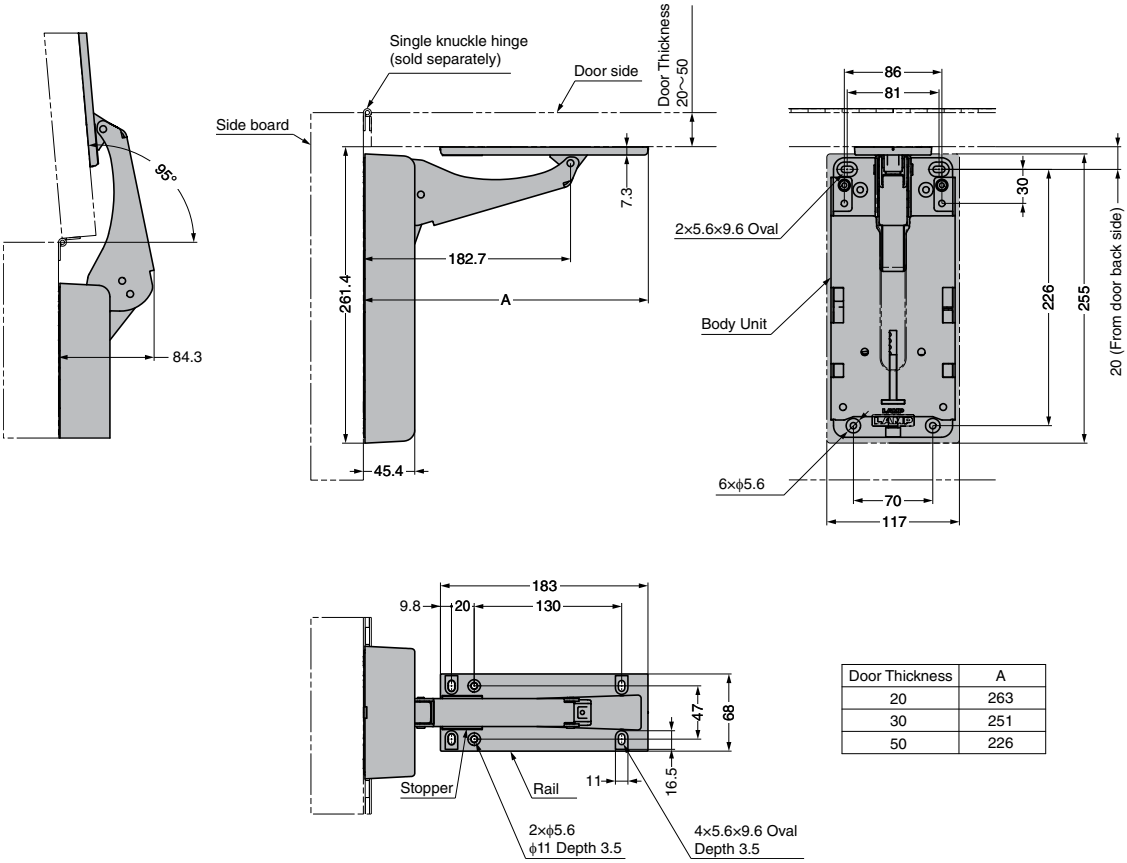


Stops flap at 95° opening.

Easy post-installation

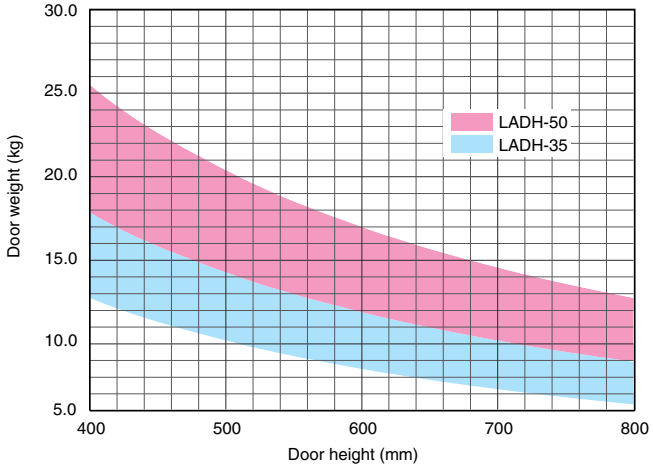


Can be post-installed to existing counters without processing. Simply by pressing against the supplied mounting template, installation position can be easily determined.



Door Thickness	A
20	263
30	251
50	226

[Door Size Ranges]



Refer to the left graph as a guide for model selection.
When using a door with size not given here, calculate the door moment as follows.
Door weight includes attached decorations.

Maximum Door Moment (N・m)
= Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

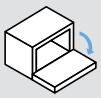
RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Recommended Thickness	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	170-034-868	LADH-35	Steel (SPCC)/ Polyacetal (POM)/ABS	Nickel Plating/Nickel	25~35	255~357	20~50	2	1	4
G	3D	170-034-869	LADH-50		Chrome/Dark Brown	35~50	357~510			1	4

SELF-CLOSE STAY HDS-10S For Use in Pairs

Lapcon INSTRUCTION VIDEO





Opening Direction	Description	Non-handed	Model	Maximum Door Moment
 Downward-opening	Self-close With Catch For Use in Pairs	–	K	5.9~9.3 N·m/2 pcs (60~95 kgf·cm/2 pcs)
			M	9.3~12.7 N·m/2 pcs (95~130 kgf·cm/2 pcs)
			H	10.8~15.7 N·m/2 pcs (110~160 kgf·cm/2 pcs)
			S	13.7~17.6 N·m/2 pcs (140~180 kgf·cm/2 pcs)

- For downward opening flaps.
- Self-closes after a small impulse.
- Holds door in fully closed or fully opened position.
- For door hinge, piano/butt hinge or 3-way adjustable drop hinge SDH-001 is suitable.

[Specifications]

- Operating temperature: 0˚C~40˚C

Video Link

[Remarks]

- Be sure to read the “Cautions” 1.
- Used in pairs.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.
- Do not roughly open and close the door.

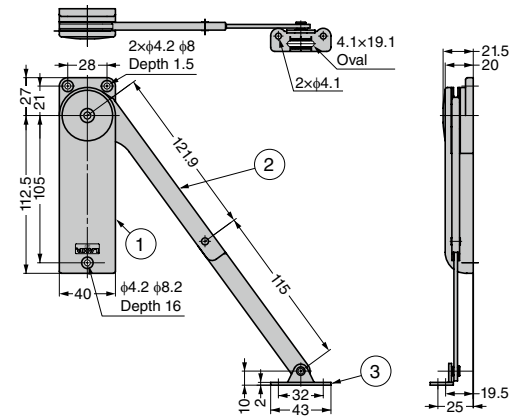
[Parts Included]

- Mounting plate
- Binding head tapping screw 3.5×15

[Applicable Range]

- Choose from 4 types according to maximum door moment.
  Maximum door moment (N・m) = Door weight (kg) × 9.80665 × Distance from rotation centre to door centre of gravity (m)

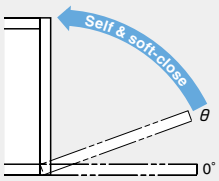
Maximum door moment N・m	Model	Qty
5.9~ 9.3	K	2 pcs
9.3~12.7	M	
10.8~15.7	H	
13.7~17.6	S	



Right-handed type shown.

●Self & Soft-close

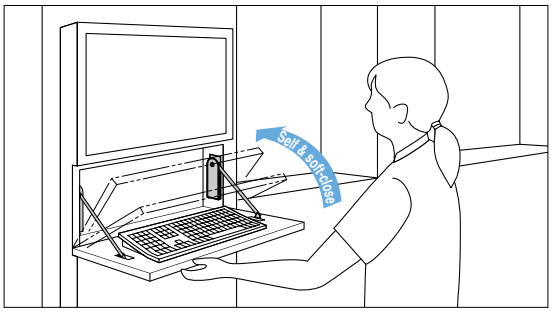
Self-closes after a small impulse.



Model	Self & Soft-close Starting Angle θ
K	5° ~35°
M	5° ~20°
H	
S	5° ~15°

No.	Part Name	Material	Finish
①	Body	ABS	Black, White
②	Arm	Steel (SPCC)	Nickel
③	Mounting Plate		

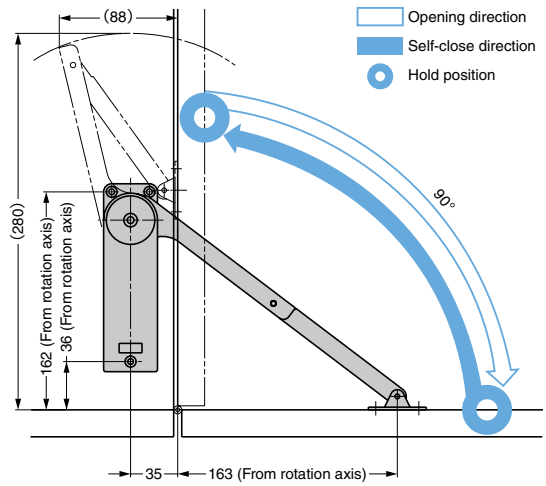
[Application Example]



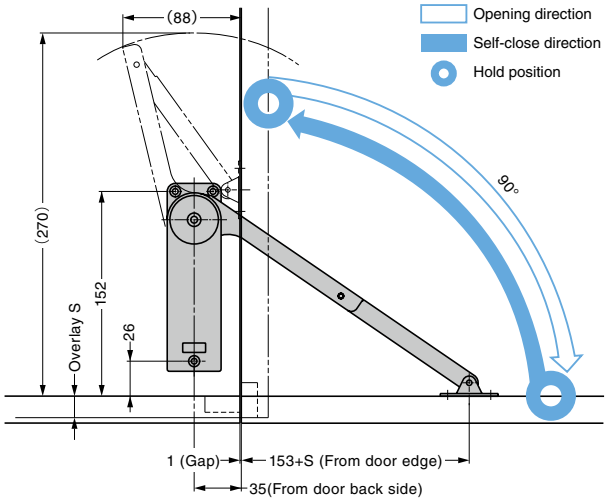
Refer to 1 : P.207, 2 : P.178

[Installation] Right side installation for downward-opening 90°. Left side installation is symmetrical.

With single knuckle hinge



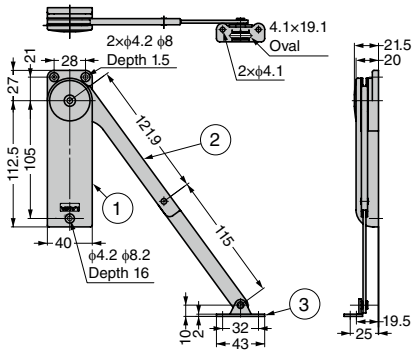
With drop hinge



RoHS	CAD	Item Code	Item Name	Type	Material	Finish/Colour	Model	Maximum Door Moment N·m/2 pcs	Maximum Door Moment kgf·cm/2 pcs	Weight (g)	Box (pcs)
G'	3D	180-025-872	HDS-10S-KL-BL	Left-handed	ABS/Steel	Nickel/Black	K	5.9~9.3	60~95	292	40
G'	3D	180-026-723	HDS-10S-KL-WT			Nickel/White				292	40
G'	3D	180-025-873	HDS-10S-KR-BL	Right-handed		Nickel/Black				292	40
G'	3D	180-026-724	HDS-10S-KR-WT			Nickel/White				292	40
G'	3D	180-025-874	HDS-10S-ML-BL	Left-handed		Nickel/Black	M	9.3~12.7	95~130	301	40
G'	3D	180-026-725	HDS-10S-ML-WT			Nickel/White				301	40
G'	3D	180-025-875	HDS-10S-MR-BL	Right-handed		Nickel/Black				301	40
G'	3D	180-026-726	HDS-10S-MR-WT			Nickel/White				301	40
G'	3D	180-025-876	HDS-10S-HL-BL	Left-handed		Nickel/Black	H	10.8~15.7	110~160	309	40
G'	3D	180-026-727	HDS-10S-HL-WT			Nickel/White				309	40
G'	3D	180-025-877	HDS-10S-HR-BL	Right-handed		Nickel/Black				309	40
G'	3D	180-026-728	HDS-10S-HR-WT			Nickel/White				309	40
G'	3D	180-025-902	HDS-10S-SL-BL	Left-handed		Nickel/Black	S	13.7~17.6	140~180	312	40
G'	3D	180-026-729	HDS-10S-SL-WT			Nickel/White				312	40
G'	3D	180-025-903	HDS-10S-SR-BL	Right-handed		Nickel/Black				312	40
G'	3D	180-026-730	HDS-10S-SR-WT			Nickel/White				312	40

HEAVY DUTY SOFT-DOWN STAY HDS-10 For Use in Pairs





No.	Part Name	Material	Finish
①	Body	ABS	Black, White
②	Arm	Steel (SPCC)	Nickel
③	Mounting Plate		

Opening Direction	Description	Non-handed	Model	Maximum Door Moment
Downward-opening	With Catch For Use in Pairs	–	K	13.7~19.5 N·m/2 pcs (140~199 kgf·cm/2 pcs)
			M	19.6~24.4 N·m/2 pcs (200~249 kgf·cm/2 pcs)
			H	24.5~29.4 N·m/2 pcs (250~300 kgf·cm/2 pcs)

- For downward-opening doors.
- Designed to hold the door in fully closed position.
- For door hinge, piano/butt hinge or 3-way adjustable drop hinge SDH-001 1 is suitable.
- AS parts set 2 for installing to aluminium frame also available.

[Specifications]
- Operating temperature: 0˚C~40˚C

[Remarks]
- Be sure to read the "Cautions" 3.
- Handed: Specific left and right-handed.
- Used in pairs.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.
- Do not roughly open and close the door.

[Parts Included]
- Mounting plate
- Binding head tapping screw 3.5×15

[Applicable Range]
- Choose from 3 types according to maximum door moment.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

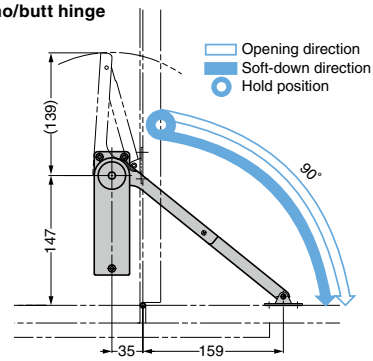
Maximum door moment N・m	Model	Qty
13.7~19.5	K	2 pcs
19.6~24.4	M	
24.5~29.4	H	

Video Link

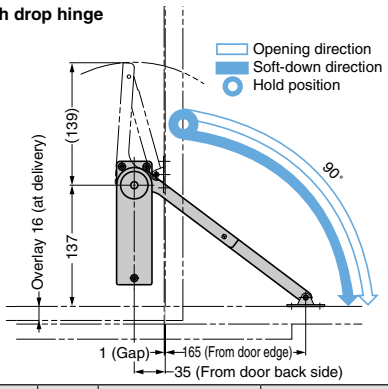
Selection Tool Sasuga-kun
Applicable Products
Used for Product Selection & Simulation. Available on Web!

[Installation] Left side installation for downward-opening 90˚. Right side installation is symmetrical.

With piano/butt hinge



With drop hinge

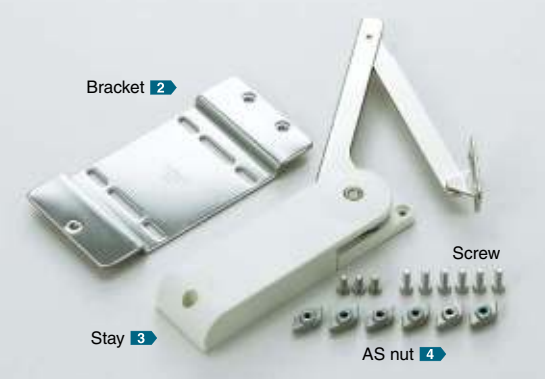


RoHS	CAD	Item Code	Item Name	Type	Material	Finish/Colour	Model	Maximum Door Moment N·m/2 pcs	Maximum Door Moment kgf·cm/2 pcs	Weight (g)	Box (pcs)
G	3D	180-104-067	HDS-10KL-BL	Left-handed	ABS/Steel	Nickel/Black	K	13.7~19.5	140~199	292	40
G	3D	180-104-066	HDS-10KR-BL	Right-handed						292	40
G	3D	180-104-073	HDS-10KL-WT	Left-handed		Nickel/White				292	40
G	3D	180-104-072	HDS-10KR-WT	Right-handed						292	40
G	3D	180-104-069	HDS-10ML-BL	Left-handed		Nickel/Black	M	19.6~24.4	200~249	302	40
G	3D	180-104-068	HDS-10MR-BL	Right-handed						302	40
G	3D	180-104-075	HDS-10ML-WT	Left-handed		Nickel/White				302	40
G	3D	180-104-074	HDS-10MR-WT	Right-handed						302	40
G	3D	180-104-071	HDS-10HL-BL	Left-handed		Nickel/Black	H	24.5~29.4	250~300	308	40
G	3D	180-104-070	HDS-10HR-BL	Right-handed						308	40
G	3D	180-104-077	HDS-10HL-WT	Left-handed		Nickel/White				308	40
G	3D	180-104-076	HDS-10HR-WT	Right-handed						308	40

Refer to 1 : P.178, 2 : P.238, 3 : P.207

AS Parts Set for Installing to Aluminium Frame

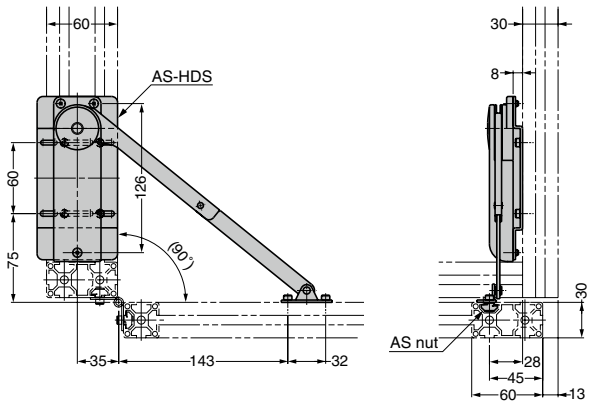
Please refer to the series introduction page 1 for details about AS series.



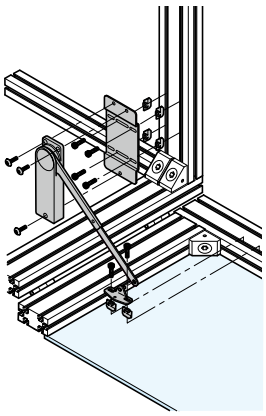
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts (Stays)	Parts (Others)	Weight (g)
G	3D	180-013-685	AS-HDS-10KR-BL-30-6	Groove Width 6 mm	HDS-10KR-BL : 1 pc	AS Nut AS-6M4 : 6 pcs Pan Head Screw M4×8 : 3 pcs Bracket AS-HDS : 1 pc Hexagon Socket Head Cap Screw M4×10 : 6 pcs	–
G	3D	180-013-686	AS-HDS-10KL-BL-30-6		HDS-10KL-BL : 1 pc		–
G	3D	180-013-687	AS-HDS-10KR-WT-30-6		HDS-10KR-WT : 1 pc		–
G	3D	180-013-688	AS-HDS-10KL-WT-30-6		HDS-10KL-WT : 1 pc		–
G	3D	180-013-689	AS-HDS-10MR-BL-30-6		HDS-10MR-BL : 1 pc		–
–	3D	180-013-690	AS-HDS-10ML-BL-30-6		HDS-10ML-BL : 1 pc		–
–	3D	180-013-691	AS-HDS-10MR-WT-30-6		HDS-10MR-WT : 1 pc		–
–	3D	180-013-692	AS-HDS-10ML-WT-30-6		HDS-10ML-WT : 1 pc		–
G	3D	180-013-693	AS-HDS-10HR-BL-30-6		HDS-10HR-BL : 1 pc		–
G	3D	180-013-694	AS-HDS-10HL-BL-30-6		HDS-10HL-BL : 1 pc		–
G	3D	180-013-695	AS-HDS-10HR-WT-30-6		HDS-10HR-WT : 1 pc		–
G	3D	180-013-696	AS-HDS-10HL-WT-30-6		HDS-10HL-WT : 1 pc		–
G	3D	180-013-697	AS-HDS-10KR-BL-30-8	Groove Width 8 mm	HDS-10KR-BL : 1 pc	AS Nut AS-8M4 : 6 pcs Pan Head Screw M4×8 : 3 pcs Bracket AS-HDS : 1 pc Hexagon Socket Head Cap Screw M4×10 : 6 pcs	–
G	3D	180-013-698	AS-HDS-10KL-BL-30-8		HDS-10KL-BL : 1 pc		–
G	3D	180-013-699	AS-HDS-10KR-WT-30-8		HDS-10KR-WT : 1 pc		–
G	3D	180-013-700	AS-HDS-10KL-WT-30-8		HDS-10KL-WT : 1 pc		–
G	3D	180-013-701	AS-HDS-10MR-BL-30-8		HDS-10MR-BL : 1 pc		–
–	3D	180-013-702	AS-HDS-10ML-BL-30-8		HDS-10ML-BL : 1 pc		–
–	3D	180-013-703	AS-HDS-10MR-WT-30-8		HDS-10MR-WT : 1 pc		–
–	3D	180-013-704	AS-HDS-10ML-WT-30-8		HDS-10ML-WT : 1 pc		–
G	3D	180-013-705	AS-HDS-10HR-BL-30-8		HDS-10HR-BL : 1 pc		–
G	3D	180-013-706	AS-HDS-10HL-BL-30-8		HDS-10HL-BL : 1 pc		–
G	3D	180-013-707	AS-HDS-10HR-WT-30-8		HDS-10HR-WT : 1 pc		–
G	3D	180-013-708	AS-HDS-10HL-WT-30-8		HDS-10HL-WT : 1 pc		–

[Dimensions]

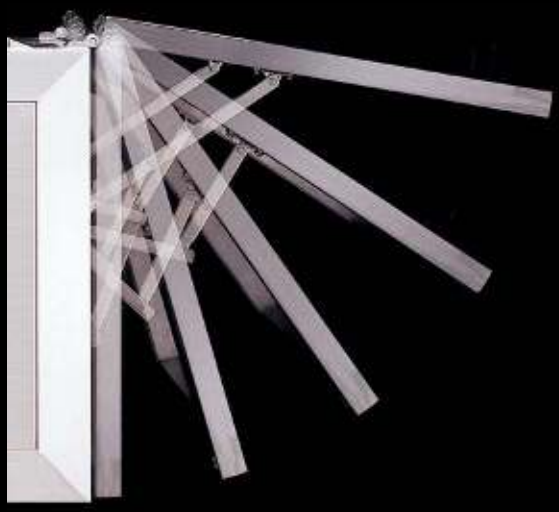


[How to Install]



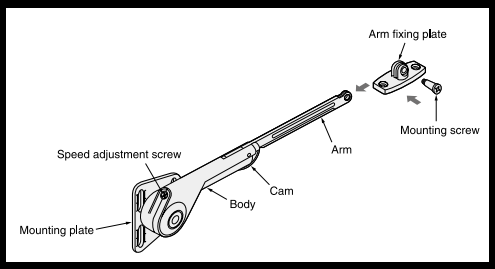
Refer to 1 : FRONT P.20, 2 : P.265, 3 : P.238, 4 : P.706

ADJUSTABLE SOFT-DOWN STAY NSD



- Keeps flap/lid from slamming shut.
- Successfully passed for 30,000 open/close private cycle tests.
- Opening/closing speed is adjustable.
- Opening angle is adjustable by changing mounting position.
- Handed.

[Remarks]
Designed to operate at room temperature 0°~40°C.



APPLICATION		MOUNTING SIDE	NSD-#
Downward-Opening Flap	90°	Right	NSD-10R
		Left	NSD-10L
Top-Opening Flap	70° ~ 105°	Right	NSD-20R
		Left	NSD-20L
Upward-Opening Flap	80° ~ 100°	Right	NSD-35R
		Left	NSD-35L

ADJUSTABLE SOFT-DOWN STAY NSD-10

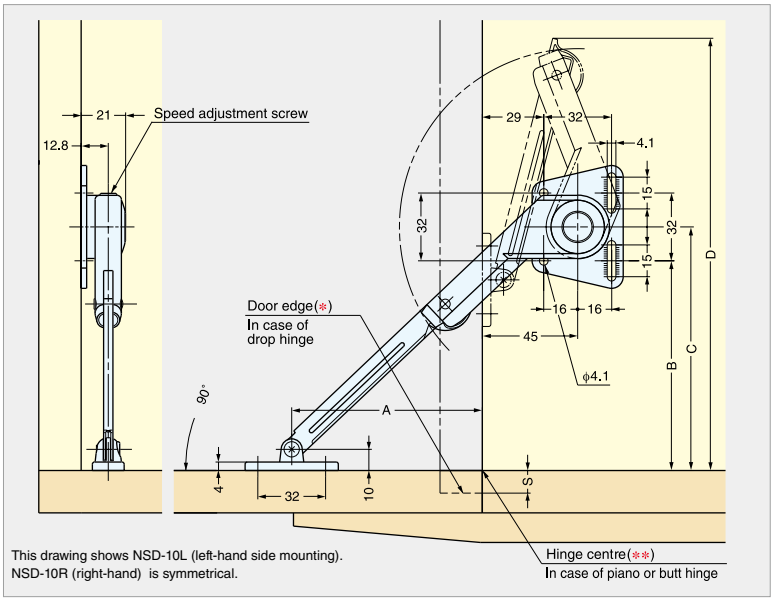
Lapcon INSTRUCTION

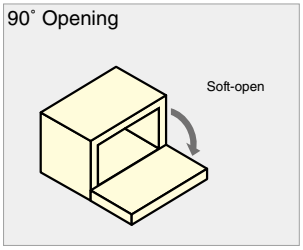


- For downward-opening flap door with piano, butt or drop Hinges.
- NSD-10 is designed to hold door in closed position.
- Torque Calculation :
  Torque = Door Height x 1/2 x Door Weight.
  Per Piece : 20~70 kg·cm.
  Per Pair : 40~140 kg·cm.

Material	Finish
Zinc Alloy, Steel	Bright Nickel







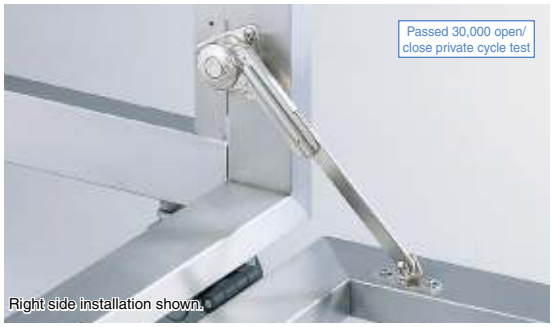
The distance for A, B, C is measured from "door edge (*)" and "top surface of bottom board" when drop hinges are used, and from "hinge centre (**)" and "top surface of bottom board" when piano or butt hinges are used.

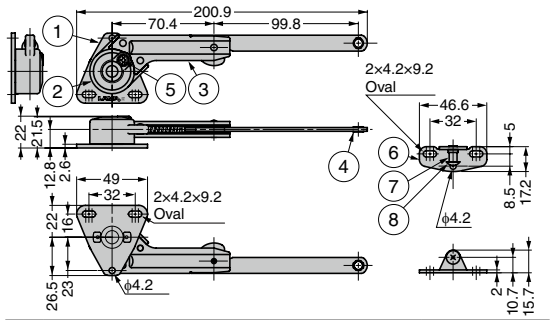
Hinge Type	A	B	C	D
Drop Hinge	97	106-S	122-S	211-S
Piano / Butt Hinge	90	99	115	204

Note: "S" dimension is the overlay distance for drop hinge(s).

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	180-109-376	NSD-10R	210	20	80
–	3D	180-109-381	NSD-10L	210	20	80

ADJUSTABLE SOFT-DOWN STAY NSDX-10 (R/L)

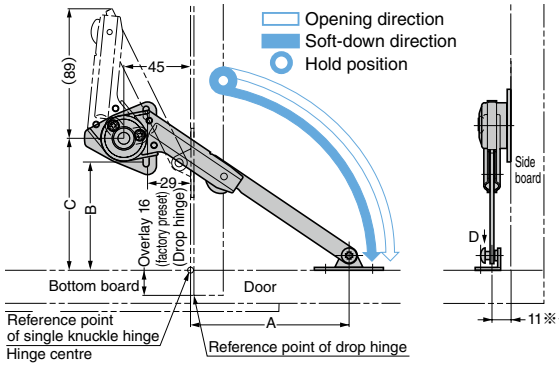




No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Mounting plate	Steel (SPCC)	
③	Arm		
④	Sleeve	POM	Black
⑤	Adjustment Screw	Steel (SWCH)	Nickel
⑥	Arm Mounting Plate	Steel (SPCC)	
⑦	Shaft	Steel (SWCH)	
⑧	Truss head screw (M4×5)		

[Installation] Right side installation for downward-opening 90°. Left side installation is symmetrical.

Comes down slowly and softly in opening direction.
Installation with piano/butt hinge or drop hinge shown below.



Opening Direction	Description	Non-handed	Maximum Door Moment
Downward-opening	With Catch	–	1.96~6.86 N・m/pc (20~70 kgf・cm/pc)

- For downward-opening doors.
- Designed to hold the door in fully closed position.
- Door opening speed can be adjusted with adjustment screw.
- AS parts set 1 for installing to aluminium frame also available.

[Specifications]
- Operating temperature: 0℃~40℃

[Remarks]
- Be sure to read the "Cautions" 2.
- Handed: Specific left and right-handed.
- Door opening speed varies depending on product and conditions.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.

[Sold Separately]
- Mounting plate 3
- SDS face plate and spacer for glass door 4

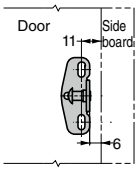
Video Link

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Applicable Products
Used for Product Selection & Simulation.
Available on Web!

[Maximum Door Moment]
- With 1 stay
  Maximum door moment = 1.96~6.86 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

[Installation for Mounting Plate]

D-view (refer to "Installation")



Hinge Type	A	B	C
Drop Hinge (SDH-001)	97※2	91	107
Drop Hinge (SDH-P)	98※3	88	104
Piano/Butt Hinge	90	99	115

Installation dimensions vary depending on hinge type.

- ※1: 11.8 for optional mounting plate.
- ※2: In case of overlay 16 mm (factory preset). For drop hinge, use our 3-way adjustable type SDH-001 5.
- ※3: In case of overlay 19mm (factory preset). Use SDH-P 6.
- Reference point for each dimension: hinge centre for single knuckle hinge, while door edge for drop hinge.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Maximum Door Moment N・m/pc	Maximum Door Moment kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-008	NSDX-10R	Right-handed	Zinc Alloy (ZDC)/ Steel	Nickel	1.96~6.86	20~70	170	20	80
G	3D	180-109-009	NSDX-10L	Left-handed						20	80

[Mounting Plate] Sold Separately 3

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-032	NSDX-SZ	Screw on	14	160	640
G	3D	180-109-460	NSDX-CZ	Clip on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip on for 20 mm width Aluminium Frame	11	320	1280
G	3D	180-109-459	NSDX-GZ	Clip on Mounting Plate for Glass Door	14	160	640

[SDS Face Plate and Spacer for Glass Door] Sold Separately 4
(Please use with mounting plate NSDX-GZ.)

RoHS	CAD	Item Code	Item Name	Material	Finish/ Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ ABS	Chrome/ Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.243, 2 : P.207, 3 4 : P.267, 5 : P.178, 6 : P.341

AS Parts Set for Installing to Aluminium Frame

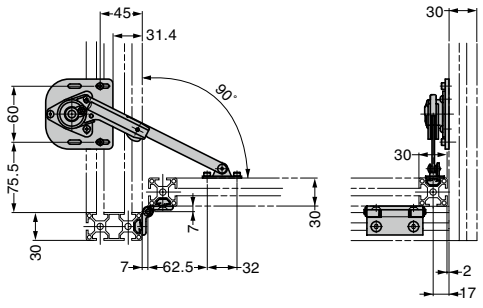
Please refer to the series introduction page 1 for details about AS series.



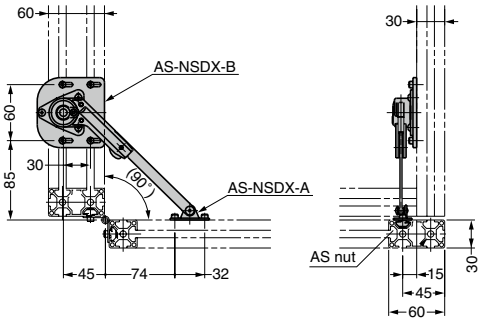
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	180-041-639	AS-NSDX-10RK-30-6	Groove Width 6 mm	NSDX-10RK : 1 pc AS Nut AS-6M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–
G	3D	180-041-641	AS-NSDX-10LK-30-6		NSDX-10LK : 1 pc AS Nut AS-6M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–
G	3D	180-041-640	AS-NSDX-10RK-30-8	Groove Width 8 mm	NSDX-10RK : 1 pc AS Nut AS-8M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–
G	3D	180-041-642	AS-NSDX-10LK-30-8		NSDX-10LK : 1 pc AS Nut AS-8M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–

[Dimensions (Inset)]



[Dimensions (Overlay)]



Refer to 1 : FRONTP.20, 2 : P.242, 3 : P.266, 4 : P.706

SOFT-DOWN STAY SDS-100, SDS-C100

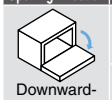
Lapcon L=R INSTRUCTION VIDEO



Right side installation shown. (SDS-C100-G)


White Grey Umber Black


Mounting Plate SDS-A

Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
 Downward-opening	SDS-100	–	Yes	3.43~4.9 N・m/pc (35~50 kgf・cm/pc)
	SDS-C100	With Catch		

- For downward-opening doors.
- Non-handed: Can be installed either on left or right side.
- SDS-C100 (with catch) is designed to hold the door in fully closed position. Catch is necessary when using SDS-100 (without catch).
- For door hinge, piano/butt hinge or 3-way adjustable drop hinge SDH-001 1 is suitable.

[Specifications]
- Operating temperature: 0˚C~40˚C

[Remarks]
- Be sure to read the "Cautions" 2.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.

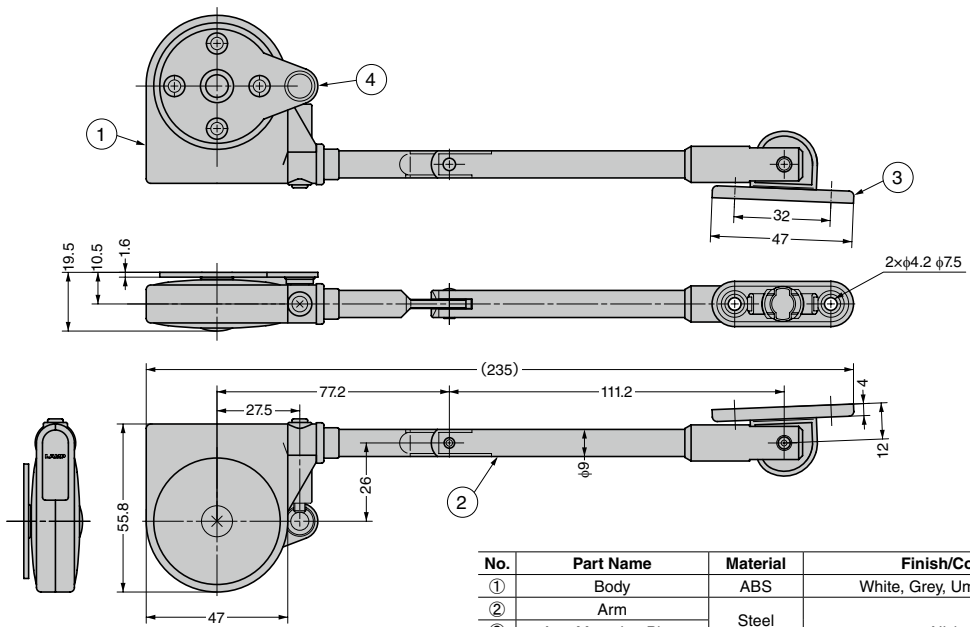
[Parts Included]
- Mounting plate SDS-A
- Countersunk head tapping screw 3.5×14

[Sold Separately]
- SDS face plate and spacer for glass door 3

Video Link

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[Maximum Door Moment]
- With 1 stay
  Maximum door moment = 3.43~4.9 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

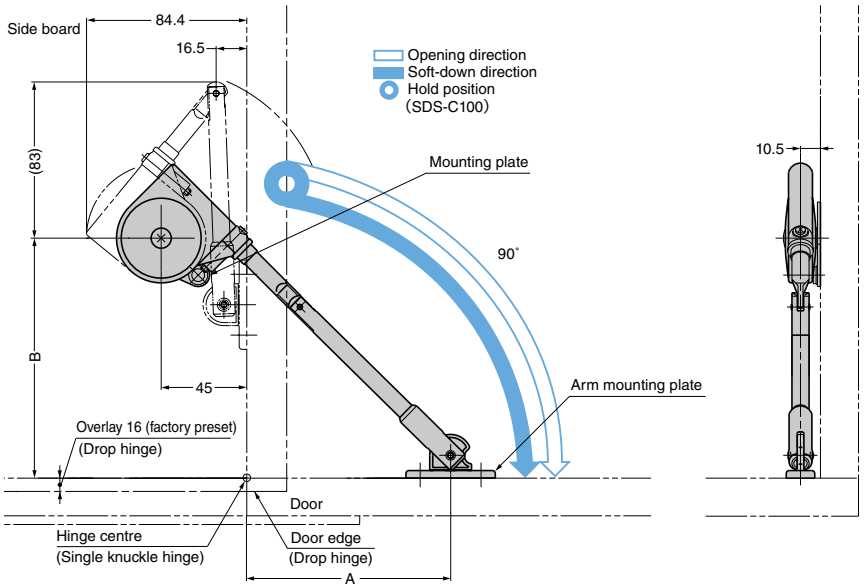


No.	Part Name	Material	Finish/Colour
①	Body	ABS	White, Grey, Umber, Black
②	Arm	Steel (SPCC)	Nickel
③	Arm Mounting Plate		
④	Mounting Plate		

Refer to 1 : P.178, 2 : P.207, 3 : P.267

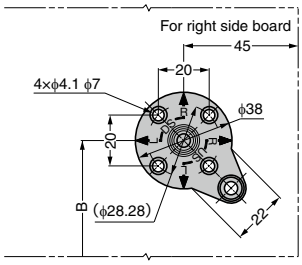
[Installation] Right side installation for downward-opening 90° . Left side installation is symmetrical.

Comes down slowly and softly in opening direction. Installation with piano/butt hinge or drop hinge shown below.



Installation dimensions vary depending on hinge type. Reference point of installation dimension: hinge centre for piano/butt hinge or two-piece piano hinge, while door edge for drop hinge 1 .

[Installation for Mounting Plate]



For right side board, install with the "→" mark of R at DS side directly upwards.
For left side board, install with the "→" mark of L at DS side directly upwards.

Hinge Type	Arm Mounting Plate Position	Mounting Plate Position
	A	B
Single Knuckle Hinge	100	135
Drop Hinge (SDH-001)	107※1	126
Drop Hinge (SDH-P)	108.5※2	124.5

※1 In case of overlay 16mm (factory preset)
※2 In case of overlay 19mm (factory preset)

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish/ Colour	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-261	SDS-100W	Without Catch	ABS/Steel	Nickel/ White	3.43~4.9	35~50	167	20	100
G	3D	180-014-892	SDS-C100-W	With Catch						20	100
G	3D	180-100-262	SDS-100G	Without Catch		Nickel/ Grey				20	100
G	3D	180-100-266	SDS-C100-G	With Catch						20	100
G	3D	180-100-263	SDS-100U	Without Catch		Nickel/ Umber				20	100
G	3D	180-100-267	SDS-C100-U	With Catch						20	100
G	3D	180-027-278	SDS-100-B	Without Catch		Nickel/ Black				20	100
G	3D	180-014-891	SDS-C100-B	With Catch						20	100

[SDS Face Plate and Spacer for Glass Door] Sold Separately 2

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ABS	Chrome/Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.178, 2 : P.267

COMPACT SOFT-DOWN STAY CSD-10-TV

Lapcon L=R INSTRUCTION





Opening Direction	Description	Non-handed	Model	Maximum Door Moment
Downward-opening	–	Yes	L	1.0 ~2.0 N・m/pc (10.2~20.4 kgf・cm/pc)
			M	2.0~3.0 N・m/pc (20.4~30.6 kgf・cm/pc)
			H	3.0~4.0 N・m/pc (30.6~40.8 kgf・cm/pc)

- For downward-opening doors.
- Easy-installed just by aligning the main body to the inside cabinet corner and then fixing with screws.
- Mounting plate can be positioned easily with a template.
- Non-handed.
- Installed on the bottom board of cabinet for maximum space inside the cabinet.
- Cover for mounting plate may be of the same colour as the main body.

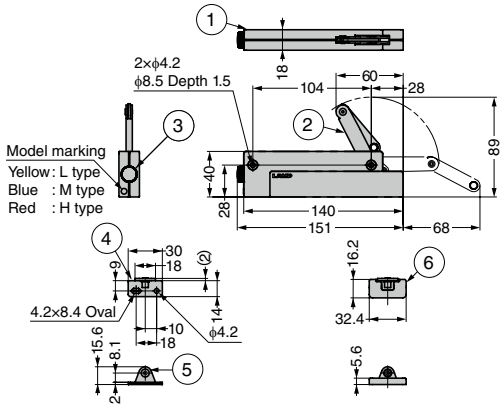
[Applicable Range]

- Choose from 3 types according to maximum door moment.

Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum door moment N・m	Model	Qty
1.0 ~ 2.0	L	1 pc
2.0 ~ 3.0	M	
3.0 ~ 4.0	H	

- With 2 stays, the maximum door moment will be doubled.



Mounting plate (without cover) Mounting plate (with cover)

No.	Part Name	Material	Finish/Colour
①	Body	PC/ABS	White, Black
②	Arm	Steel (SPCC)	Nickel
③	Adjustment Screw	Steel + Resin	White, Black
④	Mounting Plate	Steel (SPCC)	Nickel
⑤	Shaft	Stainless Steel	Plain
⑥	Cover	ABS	White, Black

[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

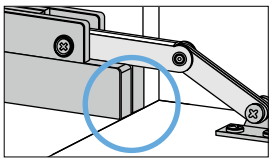
- CSD-10-TV does not have catch feature. Please install a catch separately.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.
- Do not use concealed hinge.

Selection Tool Sasuga-kun Applicable Products
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[Parts Included]

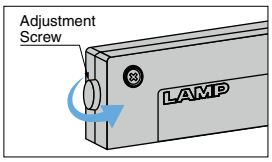
- Mounting plate
- Cover for mounting plate
- Binding head screw M4×4 (for connecting main body and mounting plate)
- Binding head tapping screw 3.5×30 (for main body)
- Binding head tapping screw 3.5×15 (for mounting plate)

[Easy to Position]



- Installation position is determined simply by pressing the main body against bottom and aligning to cabinet edge.

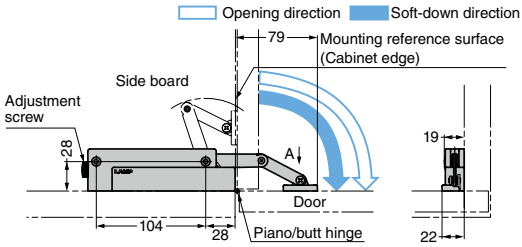
[Speed adjustment]



- Opening speed may be slightly changed.

[Installation] Right side installation for downward-opening 90°. Left side installation is symmetrical.

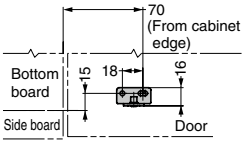
Comes down slowly and softly in opening direction. Installation with piano/butt hinge or drop hinge shown below.



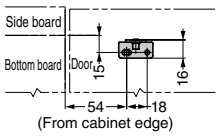
[Installation Position of Mounting Plate (Included)]
A-view (refer to "Installation")

Can easily position with the supplied template.

For left side board



For right side board



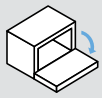
RoHS	CAD	Item Code	Item Name	Colour	Model	Maximum Door Moment N・m/pc	Maximum Door Moment kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-033-207	CSD-10-TV-L-WT	White	L	1.0~2.0	10.2~20.4	130	10	100
G	3D	180-033-208	CSD-10-TV-L-BL	Black					10	100
G	3D	180-033-209	CSD-10-TV-M-WT	White	M	2.0~3.0	20.4~30.6		10	100
G	3D	180-033-210	CSD-10-TV-M-BL	Black					10	100
G	3D	180-033-211	CSD-10-TV-H-WT	White	H	3.0~4.0	30.6~40.8		10	100
G	3D	180-033-212	CSD-10-TV-H-BL	Black					10	100

SHORT ARM SOFT-DOWN STAY NSDX-10 (R/L) K-TV

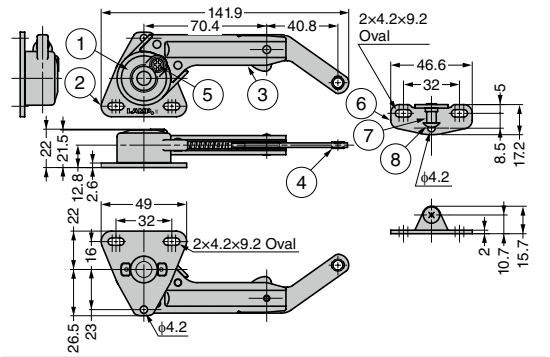
Lapcon INSTRUCTION VIDEO



Right side installation shown. (NSDX-10RK-TV)

Opening Direction	Description	Non-handed	Maximum Door Moment
 Downward-opening	With Catch	–	0.98~1.96 N・m/pc (10~20 kgf・cm/pc)

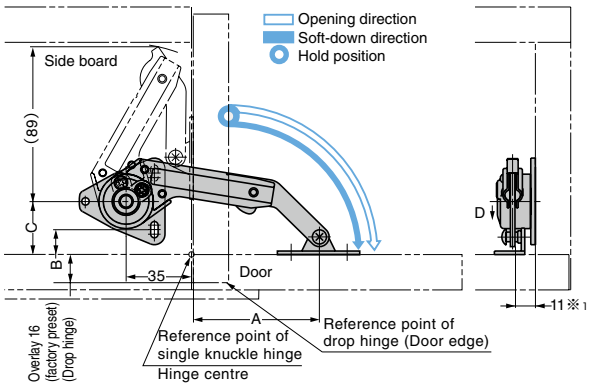
- For downward-opening doors.
- Designed to hold the door in fully closed position.
- Opening speed can be adjusted with adjustment screw.



No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Mounting plate	Steel (SPCC)	
③	Arm		
④	Sleeve	POM	Black
⑤	Adjustment Screw	Steel (SWCH)	Nickel
⑥	Arm Mounting Plate	Steel (SPCC)	
⑦	Shaft	Steel (SWCH)	
⑧	Truss Head Screw (M4×5)		

[Installation] Right side installation for downward-opening 90°. Left side installation is symmetrical.

Comes down slowly and softly in opening direction. Installation with piano/butt hinge or drop hinge shown below.



[Specifications]

- Operating temperature: 0˚C~40˚C

[Remarks]

- Be sure to read the "Cautions" 1.
- Handed: Specific left and right-handed.
- Door opening speed varies depending on product and conditions.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.

[Parts Included]

- Mounting plate NSDX-SZ
- Binding head tapping screw 3.5×15

[Sold Separately]

- Mounting plate 2
- SDS face plate and spacer for glass door 2

Video Link

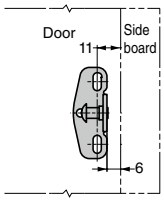
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[Maximum Door Moment]

- With 1 stay
  Maximum door moment = 0.98 N~1.96 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

[Installation for Mounting Plate]

D-view (refer to "Installation")



Hinge Type	A	B	C
Drop Hinge (SDH-001)	74※2	14	30
Drop Hinge (SDH-P)	75※3	12	28
Piano/Butt Hinge	71	27	43

Installation dimensions vary depending on hinge type.

- ※1 : 11.8 for optional mounting plate.
- ※2 : In case of overlay 16 mm (factory preset).
  For drop hinge, use our 3-way adjustable type SDH-001 3.
- ※3: In case of overlay 19mm (factory preset). Use SDH-P 4.
- Reference point for each dimension: hinge centre for single knuckle hinge, while door edge for drop hinge.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Maximum Door Moment N・m/pc	Maximum Door Moment kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-016-425	NSDX-10RK-TV	Right-handed	Zinc Alloy (ZDC)/ Steel	Nickel	0.98~1.96	10~20	143	20	80
G	3D	180-016-424	NSDX-10LK-TV	Left-handed						20	80

[Mounting Plate] Sold Separately 2

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-460	NSDX-CZ	Clip on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip on for 20 mm width Aluminium Frame	11	320	1280
G	3D	180-109-459	NSDX-GZ	Clip on for Glass Door	14	160	640

[SDS Face Plate and Spacer for Glass Door] Sold Separately 2
(Please use with mounting plate NSDX-GZ.)

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ ABS	Chrome/ Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.207, 2 : P.267, 3 : P.178, 4 : P.177

SUGATSUNE

SHORT ARM SOFT-DOWN STAY SDS-100-TV, SDS-C100-TV

Lapcon L=R INSTRUCTION VIDEO



Right side installation shown.


White Black


Mounting plate SDS-A

Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
Downward-opening	SDS-100W(B)-TV	–	Yes	0.49~1.18 N・m/pc (5~12 kgf・cm/pc)
	SDS-100W(B)-TVZ			1.62~3.68 N・m/pc (16.5~37.6 kgf・cm/pc)
	SDS-C100W(B)-TV	With Catch		0.49~1.18 N・m/pc (5~12 kgf・cm/pc)
	SDS-C100W(B)-TVZ			1.62~3.68 N・m/pc (16.5~37.6 kgf・cm/pc)

- For downward-opening doors.
- Non-handed: Can be installed either on left or right side.
- SDS-C100-TV (with catch) is designed to hold the door in fully closed position. Catch is necessary when using SDS-100-TV (without catch).
- 3-way adjustable drop hinge SDH-001 1 is suitable.

[Specifications]
- Operating temperature: 0˚C~40˚C

[Remarks]
- Be sure to read the "Cautions" 2.
- When placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.

[Parts Included]
- Mounting plate SDS-A
- Countersunk head tapping screw 3.5×14

[Sold Separately]
- SDS face plate and spacer for glass door 3

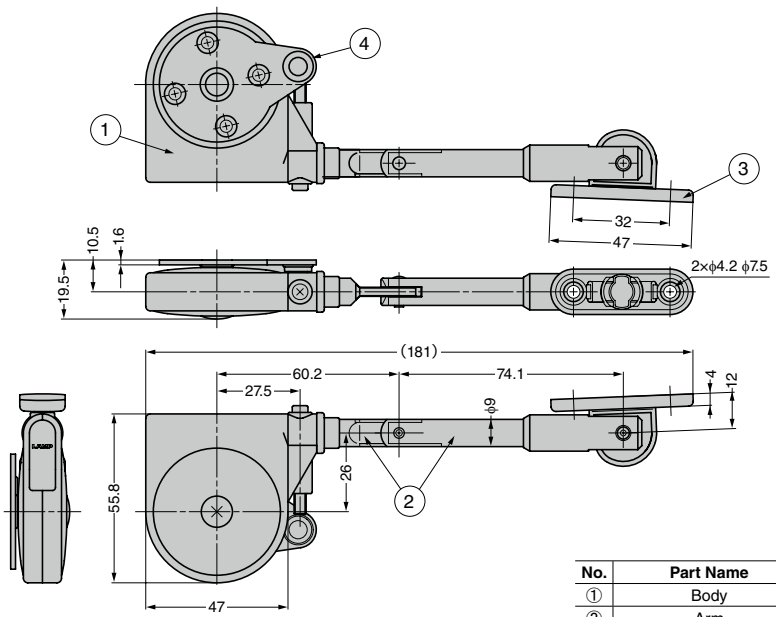
Video Link

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[Applicable Range]
- Choose from 2 types according to maximum door moment.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum door moment N・m	Item Name Suffix	Qty
0.49~1.18	TV	1 pc
1.62~3.68	TVZ	

- With 2 stays, the maximum door moment will be doubled.

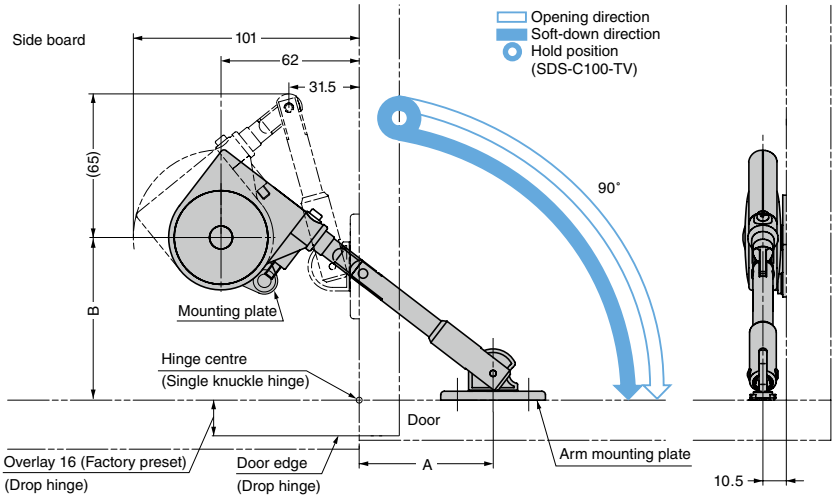


No.	Part Name	Material	Finish/Colour
①	Body	ABS	White, Black
②	Arm	Steel (SPCC)	Nickel
③	Arm Mounting Plate		
④	Mounting plate		

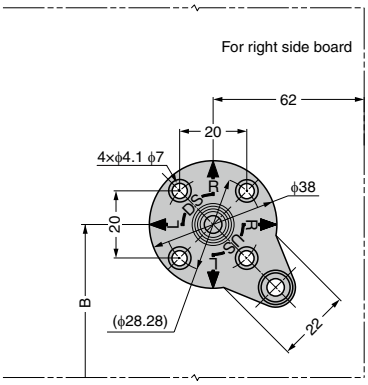
Refer to 1 : P.178, 2 : P.207, 3 : P.267

[Installation] Right side installation for downward-opening 90° .

Comes down slowly and softly in opening direction. Installation with piano/butt hinge or drop hinge shown below.



[Installation for Mounting Plate]



For right side board, install with the "→" mark of R at DS side directly upwards.
For left side board, install with the "→" mark of L at DS side directly upwards.

Hinge Type	A	B
Single Knuckle Hinge	60	73
Drop Hinge (SDH-001)	65※1	62
Drop Hinge (SDH-P)	66※2	60

●※1 In case of overlay 16 mm (factory preset).
●※2 In case of overlay 19mm (factory preset).
※Install according to the dimensions in the above figure and table after making door overlay, clearance and horizontal adjustment.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Colour	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-258	SDS-100W-TV	Without Catch	White	0.49~1.18	5~12	144	20	100
G	3D	180-100-259	SDS-100B-TV		Black			144	20	100
G	3D	180-100-006	SDS-C100W-TV	With Catch	White			154	20	100
G	3D	180-109-263	SDS-C100B-TV		Black			152	20	100
G	3D	180-014-181	SDS-100W-TVZ	Without Catch	White	1.62~3.68	16.5~37.6	147	20	100
G	3D	180-014-182	SDS-100B-TVZ		Black			147	20	100
G	3D	180-014-183	SDS-C100W-TVZ	With Catch	White			154	20	100
G	3D	180-014-184	SDS-C100B-TVZ		Black			158	20	100

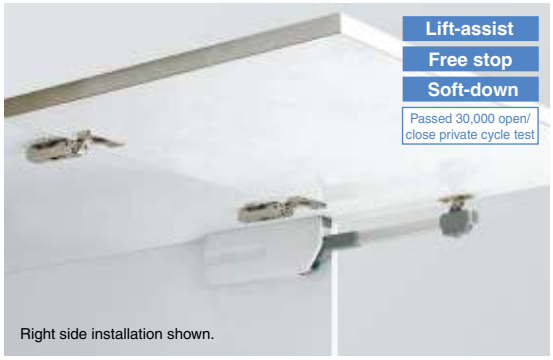
[SDS Face Plate and Spacer for Glass Door] Sold Separately 1

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ABS	Chrome/Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.267

EASY LIFT-UP STAY SLS-ELAN®

Lapcon INSTRUCTION VIDEO

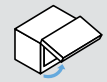


Right side installation shown.





Compact body saves space, not even affecting the shelf mounting.

Opening Direction	Description	Non-handed	Model	Maximum Door Moment
 Upward-opening	Lift-assist Free stop Soft-down	–	M	4.90~7.35 N·m/pc (50~75 kgf·cm/pc)
			H	7.35~9.80 N·m/pc (75~100 kgf·cm/pc)

- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
  - ・Door can be opened with a slight force (see Fig.1).
  - ・Door can be stopped in any position in the range of about 30° to fully opened position (see Fig.2).
  - ・Door closes slowly in the range of about 0° to 30° (see Fig. 3)
- Easy installation from the front for both left and right.

[Specifications]
- Operating temperature: 0˚C~40˚C

[Remarks]
- Be sure to read the “Cautions” 1.
- Handed: Specific left and right-handed.
- Never push down the arm of stay before door installation.
- Do not open the door further in fully opened position.
- Do not roughly open and close the door.

[Parts Included]
- Countersunk head tapping screw 3.5×35
- Binding head tapping screw 3.5×15
- Truss head screw M4×5 (for mounting plate)

[Sold Separately]
- Mounting plate SLS-ELAN-AZ 2
- Slider (for maintenance)

Video Link

Selection Tool Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

[3 Functions in 1 Stay]

Lift-assist
Door can be opened with a slight force.

Fig.1





Free stop
Door can be stopped in any position in the range of about 30° to fully opened position.

Fig.2





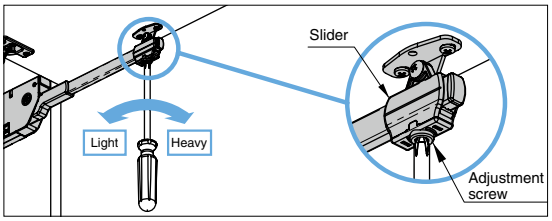
Soft-close
Door closes slowly in the range of about 0° to 30° even if you release your hands from the door.

Fig.3





[Adjustment of Lift-assisting Force]

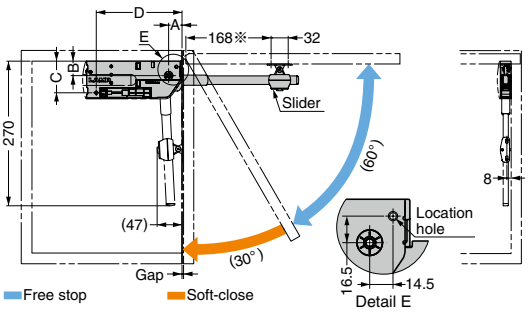


- If the door opens and closes improperly, turn the adjustment screw at the bottom of the slider to adjust door movement.

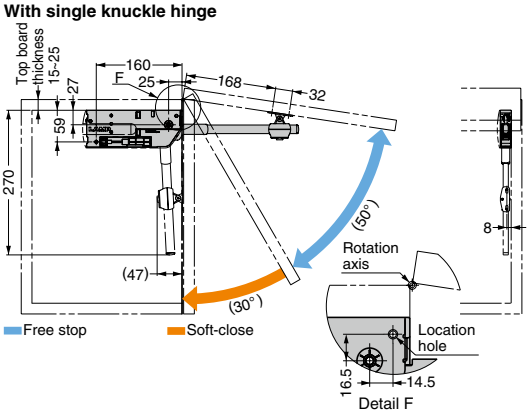
Refer to 1 : P.207, 2 : P.253

[Installation] Right side installation for upward-opening 90°. Left side installation is symmetrical.

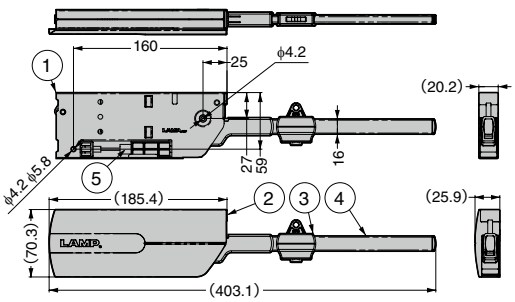
With concealed hinge

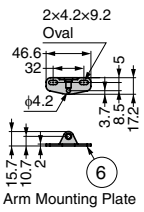


With single knuckle hinge



- If axis position of single knuckle hinge different from the figure above, please contact local representatives.
- Top board thickness is 15~25mm. For other thicknesses, please contact local representatives.





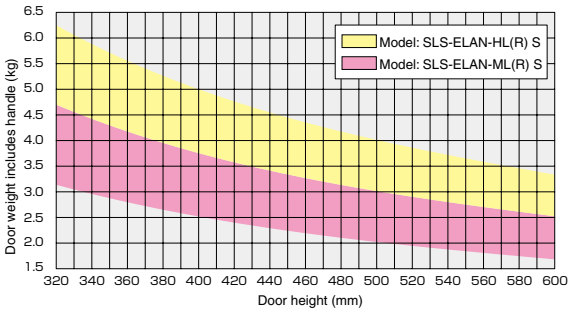
No.	Part Name	Material	Finish/Colour
①	Body	Steel (SECC)	–
②	Body Cover R	ABS	Light Grey
③	Slider	POM	Dark Grey
④	Tip Arm	Aluminium Alloy	Anodised
⑤	Damper	–	–
⑥	Arm Mounting Plate	Steel (SPCC)	Nickel

Hinge Type	Bore Distance	A	B	C	D
230-(C)26/19T (19 mm Overlay)	5	25	27	59	160
H230-(C)26/19T (26 mm Overlay)	7				
230-(C)26/9T (9 mm Overlay)	5		37	69	
H230-(C)26/16T (16 mm Overlay)	7				
230-(C)26/0T (Inset)	5	Door Thickness + 27	47	79	A+135
H230-(C)26/0T (Inset)	7		53	85	

Table above is the combination with mounting plate 230-P4W-30T or 230-P4W-32T.

If the clearance between cabinet and door is 4mm or more, install the mounting plate according to a dimension obtained by subtracting the clearance from ※ marked dimension (Installation position of the body unit is unchanged).
(Example) When the gap between cabinet and door is 5mm: 168 - 5 (Gap) =163
If the connection between the body and cabinet is weak due to cabinet material etc., tighten a screw additionally in the location hole shown left. (Additional screws are sold separately)

[Door Size Ranges]



Refer to the above graph as a guide for model selection.
For a door with size not given here, calculate as follows.
Door weight includes handle.

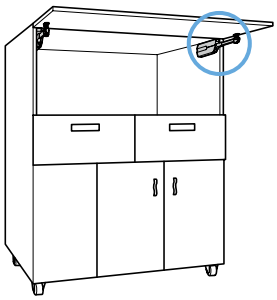
- Choose from 2 types according to maximum door moment.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum door moment N・m	Model	Qty
4.90~7.35	M	1 pc
7.35~9.80	H	

- With 2 stays, the maximum door moment will be doubled.

※Confirm the movement with actual item.

[Application Example]



[Installation]



[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish/Colour	Model	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)
G	3D	180-015-491	SLS-ELAN-MRS	Right-handed	Aluminium Alloy/ABS	Anodised/ Light Grey	M	4.90~7.35	50~75	600	20
G	3D	180-015-490	SLS-ELAN-MLS	Left-handed							20
G	3D	180-015-493	SLS-ELAN-HRS	Right-handed			H	7.35~9.80	75~100		20
G	3D	180-015-492	SLS-ELAN-HLS	Left-handed							20

[Mounting Plate for Aluminium Frame Door] Sold Separately 1

RoHS	CAD	Item Code	Item Name	Part Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-017-647	SLS-ELAN-AZ	Body	11	320	1280
G	–	180-018-555	SLS-ELAN-AZS	Screw Set	4	–	800

Refer to 1 : P.253

LAPCON STAY SLS-ELAN-TV

INSTRUCTION



Right side installation shown.

Opening Direction	Description	Non-handed	Maximum Door Moment
Upward-opening	Lift-assist Free stop Soft-down	–	4.60~6.17 N·m/pc (47~63 kgf·cm/pc)

- Short-arm type of easy lift-up stay SLS-ELAN 1.
- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
  Door can be opened with a slight force. (see Fig. 1)
  Door can be stopped in any position in the range of about 30° to fully opened position. (see Fig. 2)
  Door closes slowly in the range of about 0° to 30° . (see Fig. 3)
- Easy installation from the front for both left and right.



Compact body saves space, not even affecting the shelf mounting.

[Specifications]
- Operating temperature: 0˚C~40˚C

[Remarks]
- Be sure to read the “Cautions” 2.
- Handed: Specific left and right-handed.
- Never push down the arm of stay before door installation.
- Do not open the door further in fully opened position.
- Do not roughly open and close the door.

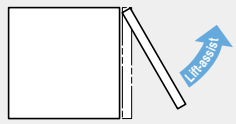
[Parts Included]
- Countersunk head tapping screw 3.5×35
- Binding head tapping screw 3.5×15
- Truss head screw M4×5 (for mounting plate)

[Sold Separately]
- Mounting plate SLS-ELAN-AZ 3
- Slider (for maintenance)

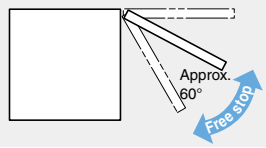
Selection Tool
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[3 Functions in 1 Stay]

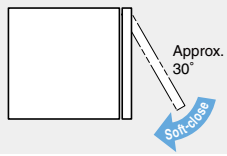
Lift-assist
Door can be opened with a slight force.

Fig.1


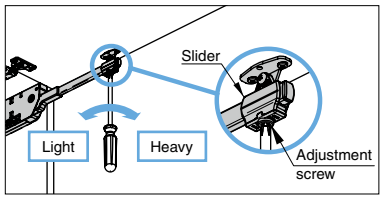
Free stop
Door can be stopped in any position in the range of about 30° to fully opened position.

Fig.2


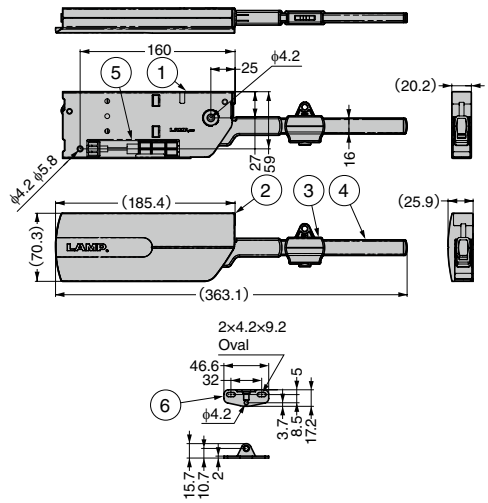
Soft-close
Door closes slowly in the range of about 0° to 30° even if you release your hands from the door.

Fig.3


[Adjustment of Lift-assisting Force]



- If the door opens and closes improperly, turn the adjustment screw at the bottom of the slider to adjust door movement.

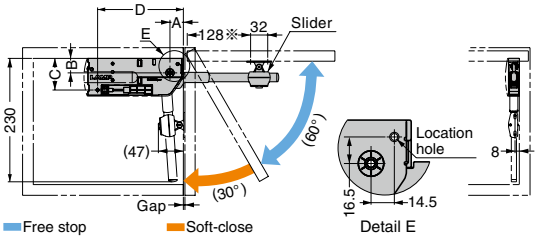


No.	Part Name	Material	Finish/Colour
①	Body	Steel (SECC)	–
②	Body Cover	ABS	Light Grey
③	Adjustment Slider	POM	Dark Grey
④	Tip Arm	Aluminium Alloy	Anodised
⑤	Damper	–	–
⑥	Mounting Plate	Steel (SPCC)	Nickel

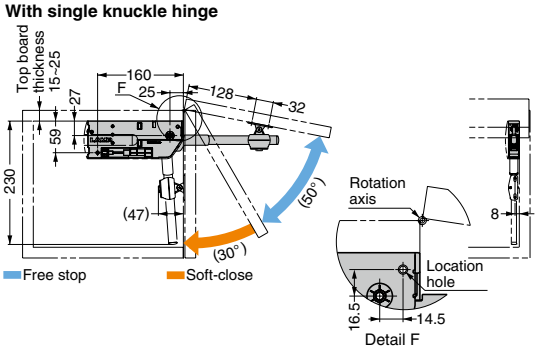
Refer to 1 : P.250, 2 : P.207, 3 : P.253

[Installation] Right side installation for upward-opening. Left side installation is symmetrical.

With concealed hinge



With single knuckle hinge



- If axis position of single knuckle hinge different from the figure above, please contact local representatives.
- Top board thickness is 15 ~ 25mm.For other thicknesses, please contact local representatives.

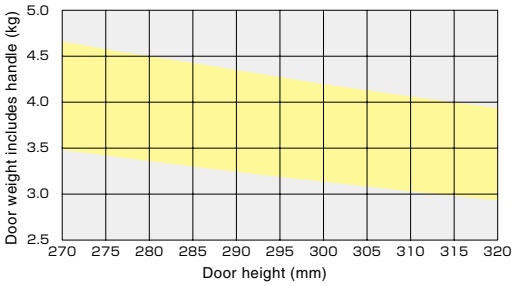
Hinge Type	Bore Distance	A	B	C	D
230-(C)26/19T (19 mm Overlay)	5	25	27	59	160
H230-(C)26/26T (26 mm Overlay)	7				
230-(C)26/9T (9 mm Overlay)	5		37	69	
H230-(C)26/16T (16 mm Overlay)	7				
230-(C)26/0T (Inset)	5	Door Thickness + 27	47	79	A+135
H230-(C)26/0T (Inset)	7		53	85	

Table above is the combination with mounting plate 230-P4W-30T or 230-P4W-32T.

If the clearance between cabinet and door is 4mm or more, install the mounting plate according to a dimension obtained by subtracting the clearance from ※ marked dimension (Installation position of the body unit is unchanged).)
(Example) When the gap between cabinet and door is 5 mm: 128 - 5 (Gap) =123

If the connection between the body and cabinet is weak due to cabinet material etc., tighten a screw additionally in the location hole shown left. (Additional screws are sold separately)

[Door Size Ranges]



Refer to the above graph as a guide for model selection.
For a door with size not given here, calculate as follows.
Door weight includes handle.

- With 1 stay
  Maximum door moment = 4.6~6.17 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

※Confirm the movement with actual item.

[Application Example]



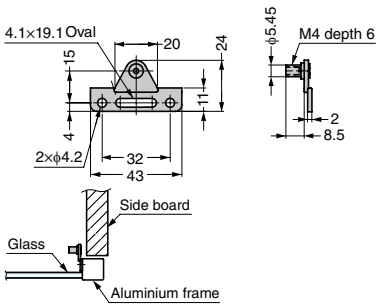
[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish/ Colour	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-018-057	SLS-ELAN-HR-TV-S	Right-handed	Aluminium	Anodised/ Light Grey	4.6~6.17	47~63	590	20	20
G	3D	180-018-056	SLS-ELAN-HL-TV-S	Left-handed	Alloy/ABS					20	20

MOUNTING PLATE FOR ALUMINIUM FRAME DOOR SLS-ELAN-AZ



Refer to 1 : P.250, 2 : P.252



- Used for installing SLS-ELAN 1, SLS-ELAN-TV 2 to aluminium frame.

[Sold Separately]

- Screw set
  Binding head tapping screw 3.5×12 (2 pcs)
  Truss head screw M4×5 (1 pc)

[Body]

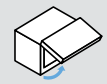
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-017-647	SLS-ELAN-AZ	Steel	Nickel	9.5	320	1280

[Screw Set] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	–	180-018-555	SLS-ELAN-AZS	Steel	Nickel	50	–	800

HEAVY DUTY SOFT-DOWN STAY HDS-30 For Use in Pairs


Right side installation shown.

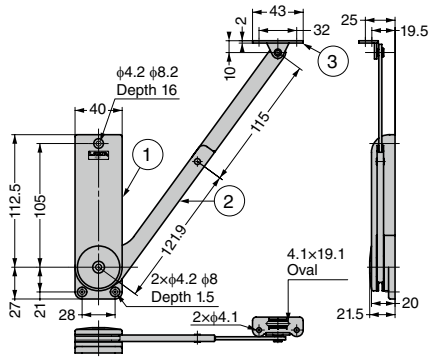
Opening Direction	Description	Non-handed	Model	Maximum Door Moment
 Upward-opening	With Catch For Use in Pairs	–	K	13.7~19.5 N·m/2 pcs (140~199 kgf·cm/2 pcs)
			M	19.6~24.4 N·m/2 pcs (200~249 kgf·cm/2 pcs)
			H	24.5~29.4 N·m/2 pcs (250~300 kgf·cm/2 pcs)

- For upward-opening doors.
- Designed to hold the door in fully opened and closed positions.
- For door hinge, piano/butt hinge or concealed hinge is suitable.
- AS parts set 1 for installing to aluminium frame also available.

[Applicable Range]

- Choose from 3 types according to maximum door moment.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum door moment N・m	Model	Qty
13.7~19.5	K	2 pcs
19.6~24.4	M	
24.5~29.4	H	



[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Be sure to read the "Cautions" 2.
- Used in pairs.
- Do not push the door further over 80°. And do not roughly open and close the door.

[Parts Included]

- Mounting plate
- Binding head tapping screw 3.5×15

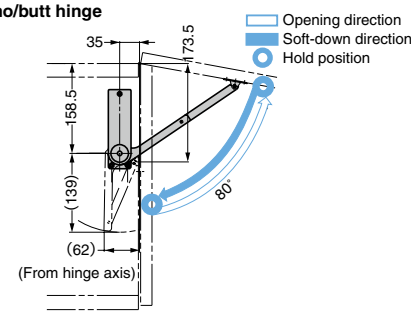
Video Link

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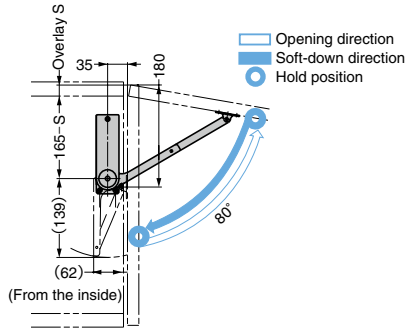
No.	Part Name	Material	Finish/Colour
①	Body	ABS	Black, White
②	Arm	Steel (SPCC)	Nickel
③	Mounting Plate		

[Installation] Right side installation for upward-opening 80°. Left side installation is symmetrical.

With piano/butt hinge



With concealed hinge



RoHS	CAD	Item Code	Item Name	Type	Material	Finish/Colour	Model	Maximum Door Moment N·m/2 pcs	Maximum Door Moment kgf·cm/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-104-078	HDS-30KR-BL	Right-handed	ABS/Steel	Nickel/Black	K	13.7~19.5	140~199	276	40	–
G	3D	180-104-079	HDS-30KL-BL	Left-handed						276	40	–
G	3D	180-109-270	HDS-30KR-WT	Right-handed		Nickel/White				276	40	–
G	3D	180-109-271	HDS-30KL-WT	Left-handed						276	40	–
G	3D	180-104-080	HDS-30MR-BL	Right-handed		Nickel/Black	M	19.6~24.4	200~249	294	40	–
G	3D	180-104-081	HDS-30ML-BL	Left-handed						294	40	–
G	3D	180-109-272	HDS-30MR-WT	Right-handed		Nickel/White				294	40	–
G	3D	180-109-273	HDS-30ML-WT	Left-handed						294	40	–
G	3D	180-104-082	HDS-30HR-BL	Right-handed		Nickel/Black	H	24.5~29.4	250~300	300	40	–
G	3D	180-104-083	HDS-30HL-BL	Left-handed						300	40	–
G	3D	180-109-274	HDS-30HR-WT	Right-handed		Nickel/White				300	40	–
G	3D	180-109-275	HDS-30HL-WT	Left-handed						300	40	–

Refer to 1 : P.255, 2 : P.207

AS Parts Set for Installing to Aluminium Frame

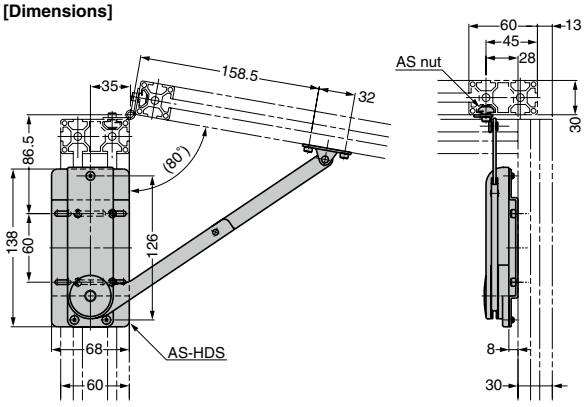
Please refer to the series introduction page 1 for details about AS series.



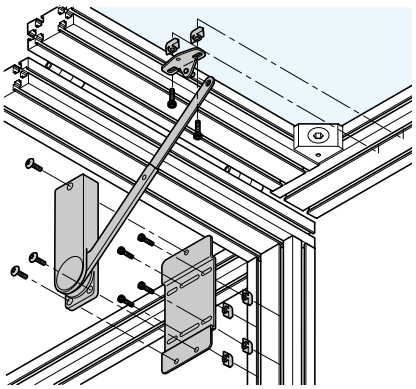
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts (Stays)	Parts (Others)	Weight (g)
G	3D	180-013-661	AS-HDS-30KR-BL-30-6	Groove Width 6 mm	HDS-30KR-BL : 1 pc	AS Nut AS-6M4 : 6 pcs Pan Head Screw M4×8 : 3 pcs Bracket AS-HDS : 1 pc Hexagon Socket Head Cap Screw M4×10 : 6 pcs	–
–	3D	180-013-662	AS-HDS-30KL-BL-30-6		HDS-30KL-BL : 1 pc		–
G	3D	180-013-663	AS-HDS-30KR-WT-30-6		HDS-30KR-WT : 1 pc		–
G	3D	180-013-664	AS-HDS-30KL-WT-30-6		HDS-30KL-WT : 1 pc		–
G	3D	180-013-665	AS-HDS-30MR-BL-30-6		HDS-30MR-BL : 1 pc		–
–	3D	180-013-666	AS-HDS-30ML-BL-30-6		HDS-30ML-BL : 1 pc		–
G	3D	180-013-667	AS-HDS-30MR-WT-30-6		HDS-30MR-WT : 1 pc		–
G	3D	180-013-668	AS-HDS-30ML-WT-30-6		HDS-30ML-WT : 1 pc		–
–	3D	180-013-669	AS-HDS-30HR-BL-30-6		HDS-30HR-BL : 1 pc		–
–	3D	180-013-670	AS-HDS-30HL-BL-30-6		HDS-30HL-BL : 1 pc		–
G	3D	180-013-671	AS-HDS-30HR-WT-30-6		HDS-30HR-WT : 1 pc		–
G	3D	180-013-672	AS-HDS-30HL-WT-30-6		HDS-30HL-WT : 1 pc		–
G	3D	180-013-673	AS-HDS-30KR-BL-30-8	Groove Width 8 mm	HDS-30KR-BL : 1 pc	AS Nut AS-8M4 : 6 pcs Pan Head Screw M4×8 : 3 pcs Bracket AS-HDS : 1 pc Hexagon Socket Head Cap Screw M4×10 : 6 pcs	–
–	3D	180-013-674	AS-HDS-30KL-BL-30-8		HDS-30KL-BL : 1 pc		–
G	3D	180-013-675	AS-HDS-30KR-WT-30-8		HDS-30KR-WT : 1 pc		–
G	3D	180-013-676	AS-HDS-30KL-WT-30-8		HDS-30KL-WT : 1 pc		–
G	3D	180-013-677	AS-HDS-30MR-BL-30-8		HDS-30MR-BL : 1 pc		–
–	3D	180-013-678	AS-HDS-30ML-BL-30-8		HDS-30ML-BL : 1 pc		–
G	3D	180-013-679	AS-HDS-30MR-WT-30-8		HDS-30MR-WT : 1 pc		–
G	3D	180-013-680	AS-HDS-30ML-WT-30-8		HDS-30ML-WT : 1 pc		–
–	3D	180-013-681	AS-HDS-30HR-BL-30-8		HDS-30HR-BL : 1 pc		–
–	3D	180-013-682	AS-HDS-30HL-BL-30-8		HDS-30HL-BL : 1 pc		–
G	3D	180-013-683	AS-HDS-30HR-WT-30-8		HDS-30HR-WT : 1 pc		–
G	3D	180-013-684	AS-HDS-30HL-WT-30-8		HDS-30HL-WT : 1 pc		–

[Dimensions]



[How to Install]



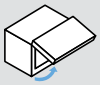
Refer to 1 : FRONT P.20

HEAVY DUTY SOFT-DOWN STAY HDSN-30 For Use in Pairs

Lapcon INSTRUCTION VIDEO



Right side installation shown.

Opening Direction	Description	Non-handed	Model	Maximum Door Moment
 Upward-opening	With Catch For Use in Pairs	–	K	13.7~19.5 N・m/2 pcs (140~199 kgf・cm/2 pcs)
			M	19.6~24.4 N・m/2 pcs (200~249 kgf・cm/2 pcs)
			H	24.5~29.3 N・m/2 pcs (250~299 kgf・cm/2 pcs)
			S	29.4~34.3 N・m/2 pcs (300~350 kgf・cm/2 pcs)

- For upward-opening doors.
- Designed to hold the door in closed and opened position and close the door softly.
- Secures enough space for shelf board.
- Can be easily and quickly installed on mounting plate.
- Maximum moment of HDSN is 34.3N・m (for opening angle 80° only), while conventional HDS is only 29.4N・m.
- Mounting plate (sold separately) suitable for 20mm aluminium frame available.

[Applicable Range]

- Choose from 4 types according to maximum door moment.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

Maximum door moment N・m		Model	Qty
Opening angle 90°	Opening angle 80°		
13.7~17.5	13.7~19.5	K	2 pcs
17.6~21.5	19.6~24.4	M	
21.6~25.4	24.5~29.3	H	
25.5~29.4	29.4~34.3	S	

[Specifications]

- Operating temperature: 0˚C~40˚C

[Remarks]

- Be sure to read the “Cautions” 1.
- Handed: Specific left and right-handed.
- Hinges not included. Customer should provide concealed hinges (without catch) or single knuckle hinges.
- 1 mounting plate (sold separately) is necessary for 1 stay body.
- Used in pairs.

[Parts Included]

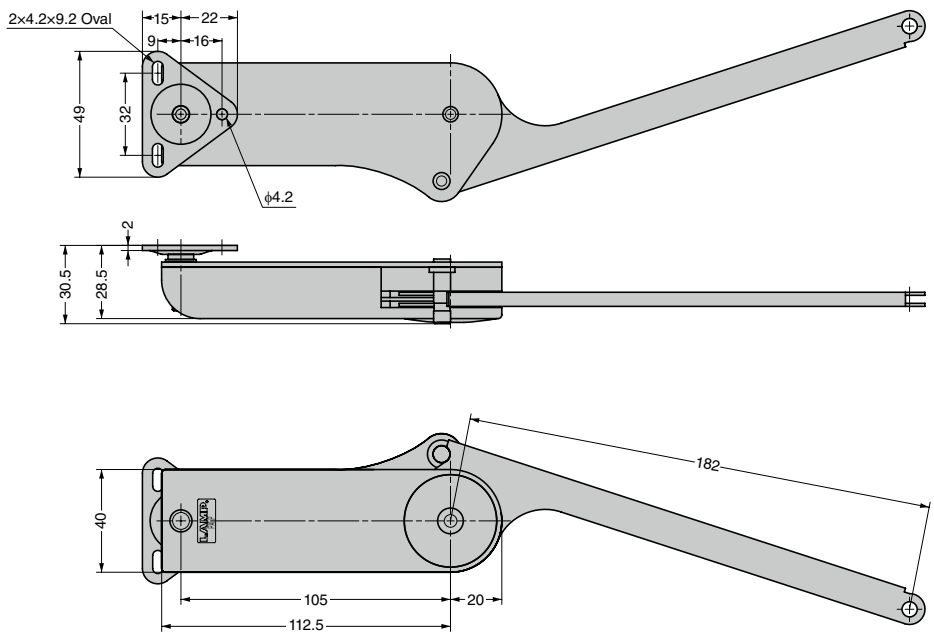
- Mounting plate
- Binding head tapping screw 3.5×15

[Sold Separately]

- Mounting Plate HDSN-SZ, HDSN-AZ 2

Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!



Refer to 1 : P.207, 2 : P.257

[Installation] 45mm or more aluminium frame door or wooden door (HDSN-SZ) and opening angle 90°

- ( ) Dimensions for 80° opening. Figures 1, 2 and 3 are in case of using mounting plate (HDSN-AZ) for 20mm aluminium frame.
- Dimensions for door with gasket shown. Without gasket, shift stay installation position towards back panel side by gasket thickness D.

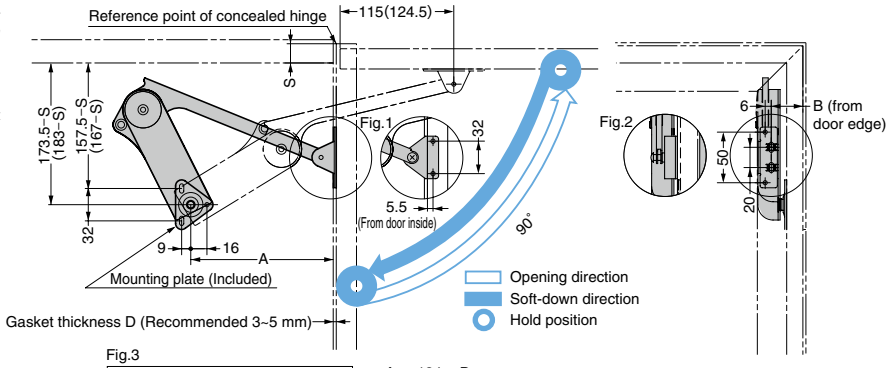
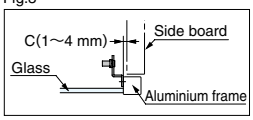


Fig.3



A = 134 − D

B = 15+T₀−($\frac{W_0 - W_1}{2}$)

C = Distance from the side board inside to the aluminium frame

T₀ = Cabinet side board thickness

W₀ = Cabinet overall width

W₁ = Door width

S = Overlay

RoHS	CAD	Item Code	Item Name	Type	Material	Finish/ Colour	Model	Maximum Door Moment/2 pcs				Weight (g)	Box (pcs)	Carton (pcs)
								Opening angle 90°/ (N·m)	Opening angle 90°/ (kgf·cm)	Opening angle 80°/ (N·m)	Opening angle 80°/ (kgf·cm)			
G	3D	180-109-601	HDSN-30KL	Left-handed	ABS/ Steel	Nickel/ Light Grey	K	13.7~17.5	140~179	13.7~19.5	140~199	366	40	–
G	3D	180-109-602	HDSN-30KR	Right-handed								283	40	–
G	3D	180-109-603	HDSN-30ML	Left-handed			M	17.6~21.5	180~219	19.6~24.4	200~249	415	40	–
G	3D	180-109-604	HDSN-30MR	Right-handed								415	40	–
G	3D	180-109-605	HDSN-30HL	Left-handed			H	21.6~25.4	220~259	24.5~29.3	250~299	415	40	–
G	3D	180-109-606	HDSN-30HR	Right-handed								415	40	–
G	3D	180-109-607	HDSN-30SL	Left-handed			S	25.5~29.4	260~300	29.4~34.3	300~350	415	40	–
G	3D	180-109-608	HDSN-30SR	Right-handed								393	40	–

ARM MOUNTING PLATE FOR HDSN HDSN-SZ, HDSN-AZ

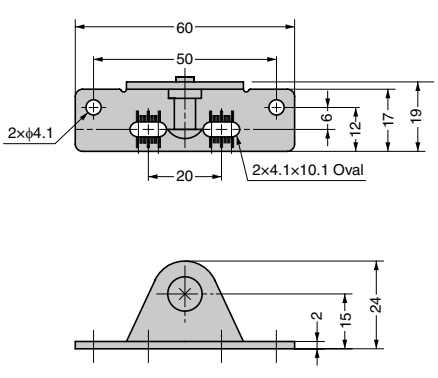

HDSN-SZ


HDSN-AZ

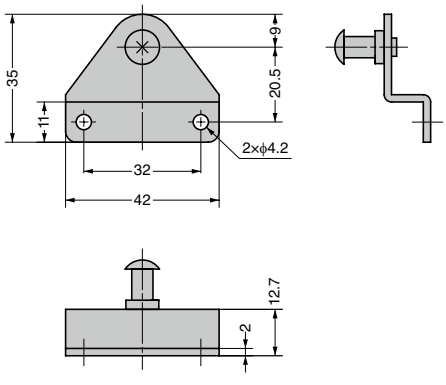
- For aluminium frame door.
- Two types are available.

[Recommended Screw]

- Binding head tapping screw 3.5×15



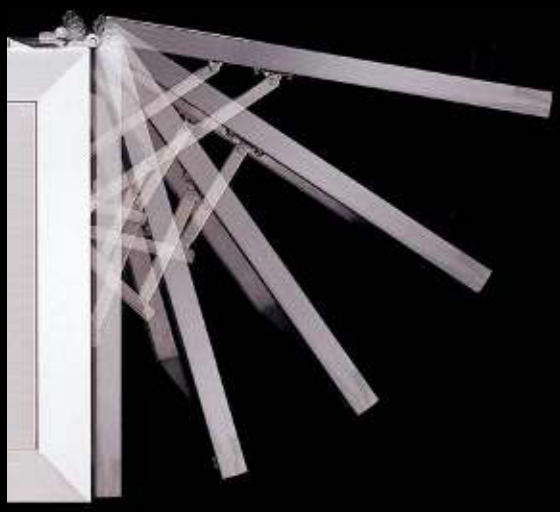
HDSN-SZ



HDSN-AZ

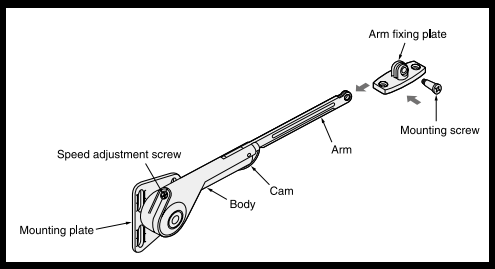
RoHS	CAD	Item Code	Item Name	Application	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-609	HDSN-SZ	For 45 mm or more Aluminium Frame Door / Wooden Door	Steel	Nickel	24	120	–
G	3D	180-109-610	HDSN-AZ	For 20 mm Aluminium Frame Door			25	120	–

ADJUSTABLE SOFT-DOWN STAY NSD



- Keeps flap/lid from slamming shut.
- Successfully passed for 30,000 open/close private cycle tests.
- Opening/closing speed is adjustable.
- Opening angle is adjustable by changing mounting position.
- Handed.

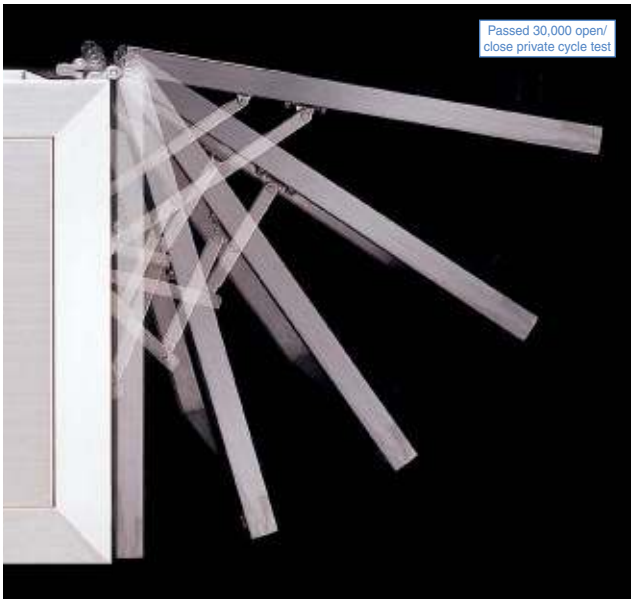
[Remarks]
Designed to operate at room temperature 0°~40°C.



APPLICATION		MOUNTING SIDE	NSD-#
Downward-Opening Flap	90°	Right	NSD-10R
		Left	NSD-10L
Top-Opening Flap	70° ~ 105°	Right	NSD-20R
		Left	NSD-20L
Upward-Opening Flap	80° ~ 100°	Right	NSD-35R
		Left	NSD-35L

ADJUSTABLE SOFT-DOWN STAY NSD-35

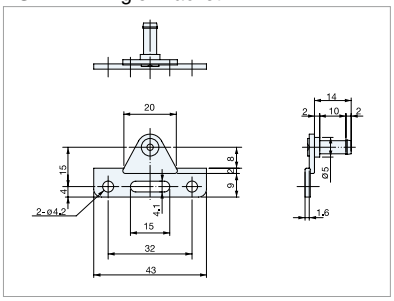
Lapcon INSTRUCTION



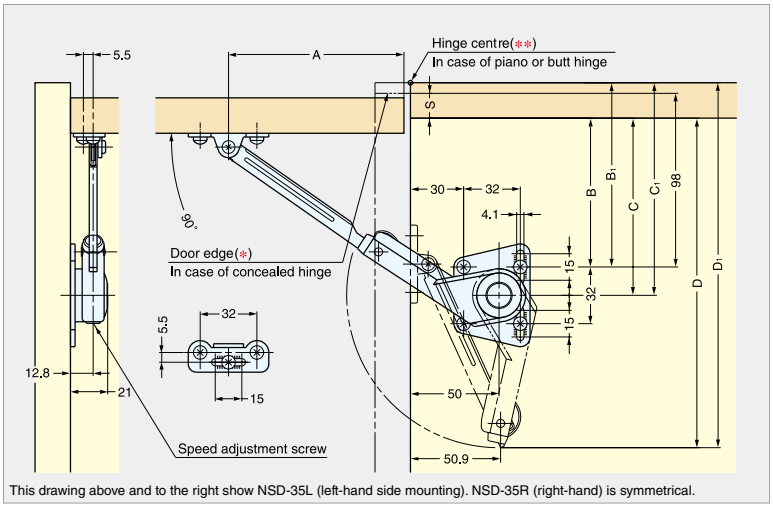
- For Upward-opening flap door with piano, butt or concealed hinges.
- Opening angle adjustable from 80° to 100° .
- Designed to hold door in fully opened position.
- Two stop version (holds door at 65° and 90°) is also available.
- Torque Calculation :
  Torque = Door Height x 1/2 x Door Weight.
  Per Piece : 20~70 kg·cm.
  Per Pair : 40~140 kg·cm.

Material	Finish
Zinc Alloy, Steel	Bright Nickel

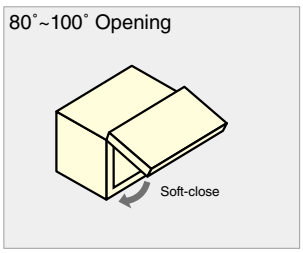
NSDX-AZ Angle Bracket

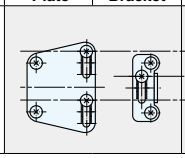
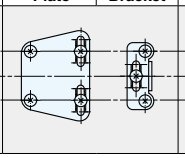
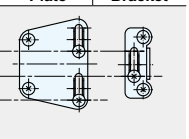


NSDX-AZ (angle bracket) for aluminium frame application available upon request.



This drawing above and to the right show NSD-35L (left-hand side mounting). NSD-35R (right-hand) is symmetrical.



Opening Angle	80°		90°		100°	
Position of Plates	Down		Middle		Up	
	Mounting Plate	Arm Bracket	Mounting Plate	Arm Bracket	Mounting Plate	Arm Bracket
For Hinge Centre (Up) ↑ ↓ (Down)						

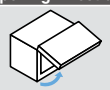
Hinge Type	A	B	C	D	B_1	C_1	D_1
Concealed Hinge	99	98-S	114-S	200-S	-	-	-
Piano / Butt Hinge	93	-	-	-	92	108	194

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	108-109-280	NSD-35R	210	20	80
–	3D	108-109-279	NSD-35L	210	20	80

ADJUSTABLE SOFT-DOWN STAY NSDX-35 (R/L)



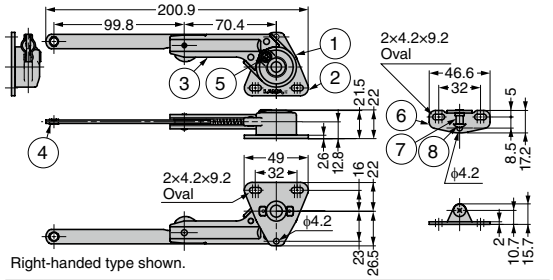
Right side installation shown.

Opening Direction	Description	Non-handed	Maximum Door Moment
 Upward-opening	With Catch	–	1.96~6.86 N・m/pc (20~70 kgf・cm/pc)

- For upward-opening doors.
- Designed to hold the door in fully opened and closed position.
- Opening angle 80° , 90° or 100° .
- Closing speed adjustable with adjustment screw.
- AS parts set 1 for installing to aluminium frame also available.

[Maximum Door Moment]

- With 1 stay
  Maximum door moment = 1.96~6.86 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

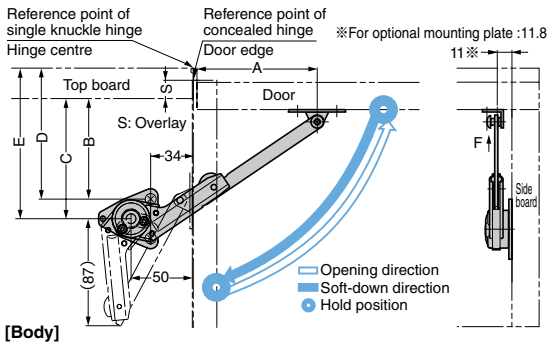


Right-handed type shown.

No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Mounting Plate	Steel (SPCC)	
③	Arm		
④	Sleeve	POM	Black
⑤	Adjustment Screw	Steel (SWCH)	Nickel
⑥	Arm Mounting Plate	Steel (SPCC)	
⑦	Shaft	Steel (SWCH)	
⑧	Truss Head Screw (M4×5)		

[Installation] Right side installation for upward-opening 90°.
Left side installation is symmetrical.

Comes down slowly and softly in closing direction. Installation with piano/butt hinge or concealed hinge shown below.



[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Be sure to read the "Cautions" 2.
- Handed: Specific left and right-handed.
- Door closing speed varies depending on product difference and use conditions.
- Do not push the door up more than opening angle. Also do not forcibly press the door down when closing.

[Sold Separately]

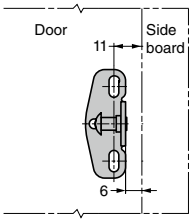
- Mounting plate 3
- SDS face plate and spacer for glass door 4 (Please order when using 5 mounting plate NSDX-GZ.)

Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

[Installation for Mounting Plate]

F-view (refer to "Installation")



Hinge Type		A	B	C	D	E
80° Opening	Concealed Hinge	106	105–S	121–S	–	–
	Single Knuckle Hinge	100	–	–	99	115
90° Opening	Concealed Hinge	98	97–S	113–S	–	–
	Single Knuckle Hinge	91.5	–	–	90.5	106.5
100° Opening	Concealed Hinge	92.5	91.5–S	107.5–S	–	–
	Single Knuckle Hinge	85	–	–	84	100

Installation dimensions vary depending on hinge type and opening angle.

- S is overlay at hinge side.
- Reference point for each dimension: hinge centre for single knuckle hinge, while door edge for concealed hinge.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-028	NSDX-35R	Right-handed	Zinc Alloy (ZDC)/Steel	Nickel	1.96~6.86	20~70	170	20	80
G	3D	180-109-029	NSDX-35L	Left-handed						20	80

[Mounting Plate] Sold Separately 3

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-032	NSDX-SZ	Screw on	14	160	640
G	3D	180-109-460	NSDX-CZ	Clip on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip on for 20 mm Aluminium Frame	11	320	1280
G	3D	180-109-459	NSDX-GZ	Clip on for Glass Door	14	160	640

[SDS Face Plate and Spacer for Glass Door] Sold Separately 4
(Please use with mounting plate NSDX-GZ 5.)

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ ABS	Chrome/ Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.261, 2 : P.207, 3 4 5 : P.267

AS Parts Set for Installing to Aluminium Frame

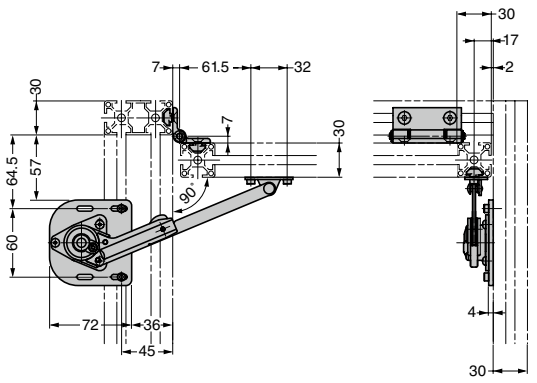
Please refer to the series introduction page 1 for details about AS series.



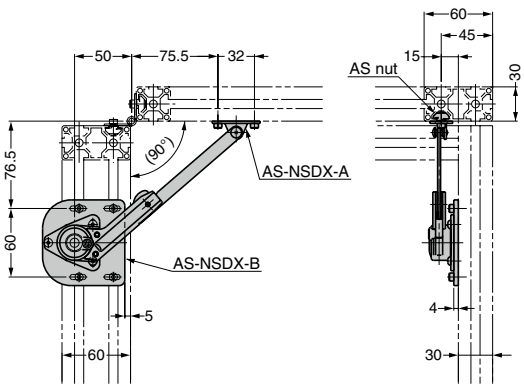
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	180-041-647	AS-NSDX-35RK-30-6	Groove Width 6 mm	NSDX-35RK : 1 pc AS Nut AS-6M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–
G	3D	180-041-649	AS-NSDX-35LK-30-6		NSDX-35LK : 1 pc AS Nut AS-6M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–
G	3D	180-041-648	AS-NSDX-35RK-30-8	Groove Width 8 mm	NSDX-35RK : 1 pc AS Nut AS-8M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–
G	3D	180-041-650	AS-NSDX-35LK-30-8		NSDX-35LK : 1 pc AS Nut AS-8M4 : 6 pcs Hexagon Socket Button Head Screw M4×6 : 3 pcs Bracket AS-NSDX-B : 1 pc Hexagon Socket Head Cap Screw M4×12 : 4 pcs Bracket AS-NSDX-A : 1 pc Hexagon Socket Head Cap Screw M4×10 : 2 pcs	–

[Dimensions (Inset)]



[Dimensions (Overlay)]



Refer to 1 : FRONT P.20

SOFT-DOWN STAY NSDX-35(R/L) 2S

Lapcon INSTRUCTION VIDEO

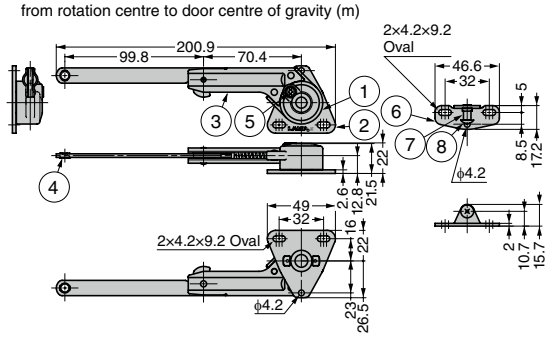


Opening Direction	Description	Non-handed	Maximum Door Moment
Upward-opening	With Catch	–	1.96~4.9 N・m/pc (20~50 kgf・cm/pc)

- For upward-opening doors.
- Holds the opened door at two angles.
- Designed to hold the door in fully closed position.
- Opening angle 80° , 90° or 100° .
- Closing speed adjustable with adjustment screw.

[Maximum Door Moment]

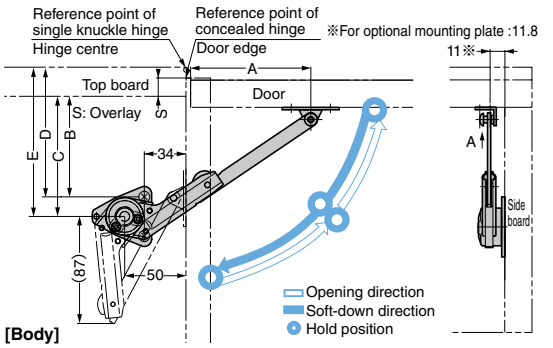
- With 1 stay
  Maximum door moment = 1.96~4.9 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)



No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Mounting Plate	Steel (SPCC)	
③	Arm		
④	Sleeve	POM	Black
⑤	Adjustment Screw	Steel (SWCH)	Nickel
⑥	Arm Mounting Plate	Steel (SPCC)	
⑦	Shaft	Steel (SWCH)	
⑧	Truss Head Screw (M4×5)		

[Installation] Right side installation for upward-opening 90° .
Left side installation is symmetrical.

Comes down slowly and softly in closing direction.Installation with piano/butt hinge or concealed hinge shown below.



[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Be sure to read the "Cautions" 1 .
- Handed: Specific left and right-handed.
- Door closing speed varies depending on product difference and use conditions.
- Do not push the door up more than opening angle. Also do not forcibly press the door down when closing.

[Sold Separately]

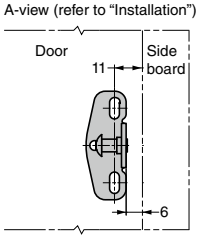
- Mounting plate 2
- SDS face plate and spacer for glass door 3

Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation.
Available on Web!

Installation for Mounting Plate]

A-view (refer to "Installation")



Hinge Type		A	B	C	D	E
80° /60° Opening	Concealed Hinge	106	105–S	121–S	–	–
	Single Knuckle Hinge	100	–	–	99	115
90° /65° Opening	Concealed Hinge	98	97–S	113–S	–	–
	Single Knuckle Hinge	91.5	–	–	90.5	106.5
100° /70° Opening	Concealed Hinge	92.5	91.5–S	107.5–S	–	–
	Single Knuckle Hinge	85	–	–	84	100

Installation dimensions vary depending on hinge type and opening angle.

- S is overlay at hinge side.
- Reference point for each dimension: hinge centre for single knuckle hinge, while door edge for concealed hinge.

[Body]

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-026	NSDX-35R2S	Right-handed	Zinc Alloy (ZDC)/ Steel	Nickel	1.96~4.9	20~50	170	20	80
G	3D	180-109-027	NSDX-35L2S	Left-handed						20	80

[Mounting Plate] Sold Separately 2

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-460	NSDX-CZ	Clip-on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip-on for 20 mm Aluminium Frame	11	320	1280
G	3D	180-109-459	NSDX-GZ	Clip-on for Glass Door	14	160	640

[SDS Face Plate and Spacer for Glass Door] Sold Separately 3
(Please use with mounting plate NSDX-GZ.)

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ ABS	Chrome/ Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.207, 2 3 : P.267

SOFT-DOWN STAY SDS-C301N

Lapcon L=R INSTRUCTION VIDEO







Opening Direction	Description	Non-handed	Maximum Door Moment
Upward-opening	With Catch	Yes	3.92~6.86 N・m/pc (40~70 kgf・cm/pc)

- For upward-opening doors.
- Non-handed: Can be installed either on left or right side.
- Designed to hold the door in fully opened and closed position.
- Use butt hinge or concealed hinge for door hinge. (In case of wooden door or metal door)

[Specifications]
- Operating temperature: 0˚C~40˚C

[Remarks]
- Be sure to read the "Cautions" 1.
- Do not push the door up more than opening angle. Also do not forcibly press the door down when closing.

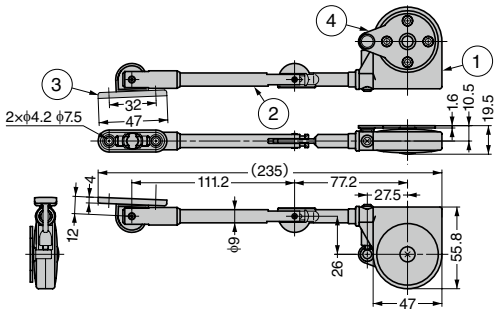
[Parts Included]
- Mounting plate SDS-A
- Countersunk head tapping screw 3.5×14

[Sold Separately]
- SDS face plate and spacer for glass door 2

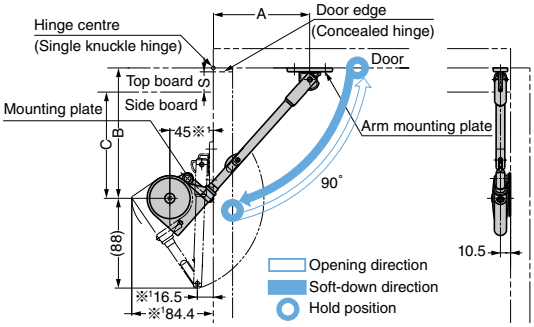
Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

[Maximum Door Moment]
- With 1 stay
  Maximum door moment = 3.92~6.86 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)
- Custom-made products (small door moment type) also available.

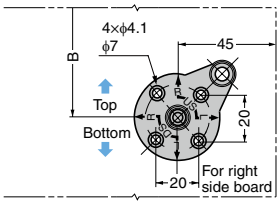


[Installation] Right side installation for upward-opening 90°. Left side installation is symmetrical.
Comes down slowly and softly in closing direction.Installation with piano/butt hinge or concealed hinge shown below.



No.	Part Name	Material	Finish/Colour
①	Body	ABS	White, Grey, Black
②	Arm	Steel (SPCC)	Nickel
③	Arm Mounting Plate		
④	Mounting plate		

[Installation for Mounting Plate]



For right side board, install with the "→" mark of R at US side directly upwards.
For left side board, install with the "→" mark of L at US side directly upwards.

Overlay	Hinge Type	A	B	C
Full Overlay	Single Knuckle Hinge	100	135	–
Full Overlay	Concealed Hinge	108	–	143–S
Inset	Single Knuckle Hinge	97※2	132※2	–

※2 In case the door thickness is 20 mm.

- S is overlay at hinge side.
- Installation dimensions vary depending on hinge type. Reference point of installation dimensions (A, B, C): hinge centre for piano/butt hinge, while door edge for concealed hinge.
- ※1 Reference point of ※1 marked dimensions is the back side of door.

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-012-151	SDS-C301NW	ABS/Steel	Nickel/White	3.92~6.86	40~70	165	20	100
G	3D	180-100-284	SDS-C301NG		Nickel/Grey				20	100
G	3D	180-100-285	SDS-C301NBL		Nickel/Black				20	100

[SDS Face Plate and Spacer for Glass Door] Sold Separately 2

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ABS	Chrome/Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish/Black		50	200

Refer to 1 : P.207, 2 : P.267

SUGATSUNE

SOFT-DOWN STAY SDS-400-W

Lapcon L=R INSTRUCTION VIDEO



Right side installation shown. (SDS-400-W)

Opening Direction	Description	Non-handed	Maximum Door Moment
 Bottom-opening	–	Yes	3.43~4.9 N・m/pc (35~50 kgf・cm/pc)

- For bottom-opening doors.
- Suitable for glove box, etc.
- Non-handed: Can be installed either on left or right side.
- Piano/butt hinge is suitable.
- When using hinges other than specified, please contact local representatives.

[Specifications]
- Operating temperature: 0˚C~40˚C

[Remarks]
- Be sure to read the "Cautions" 1.
- Customer should provide a catch to hold the door in fully closed position.
- Do not push the door down more than opening angle 70° . Also do not forcibly push the door up when closing.

[Parts Included]
- Mounting plate SDS-B
- Countersunk head tapping screw 3.5×14

[Sold Separately]
- SDS face plate and spacer for glass door 2

Video Link

Selection Tool Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

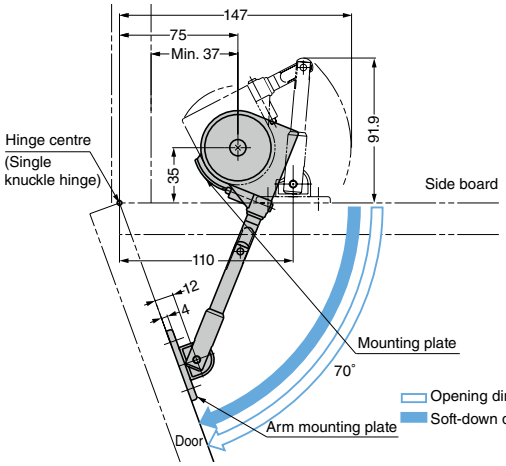

White

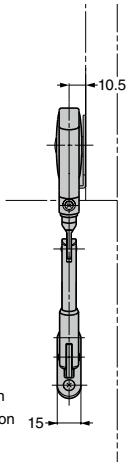

Mounting plate SDS-B

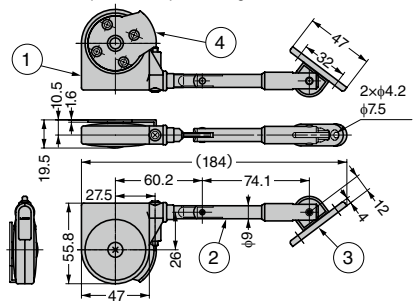
[Maximum Door Moment]
- With 1 stay
  Maximum door moment = 3.43~4.9 N・m
- With 2 stays, the maximum door moment will be doubled.
  Maximum door moment (N・m) = Door weight (kg)×9.80665×Distance from rotation centre to door centre of gravity (m)

[Installation] Right side installation for bottom-opening 70°. Left side installation is symmetrical.

Comes down slowly and softly in opening direction.Installation with piano/butt hinge shown below.

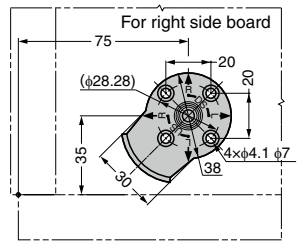






No.	Part Name	Material	Finish/Colour
①	Body	ABS	White
②	Arm	Steel (SPCC)	Nickel
③	Arm Mounting Plate		
④	Mounting plate		

[Installation for Mounting Plate]



(SDS-400 is marked with DS.)
For right side board, install with the "→" mark of R at DS side directly upwards.
For left side board, install with the "→" mark of L at DS side directly upwards.

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Maximum Door Moment N・m/pc	Maximum Door Moment kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-286	SDS-400-W	ABS/Steel	Nickel/White	3.43~4.9	35~50	146	20	100

[Mounting Plate] Sold Separately 2

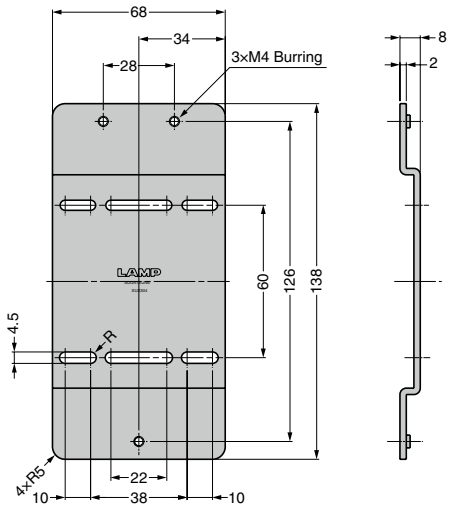
RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ABS	Chrome/Black	25	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish		50	200

Refer to 1 : P.207, 2 : P.267

AS BRACKET FOR HDS AS-HDS



●Used for installing soft-down stay HDS to aluminium frame.



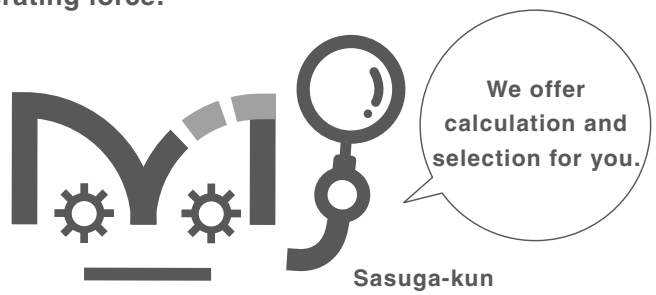
[Installation]



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-235	AS-HDS	Stainless Steel (SUS304)	Barrel Polished	198	10	100

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.



Access from here
Sasuga-kun Search
http://contents.sugatsune.co.jp/en/motion/selection/

NSDX BRANCKET FOR STAY AS-NSDX

AS SUS



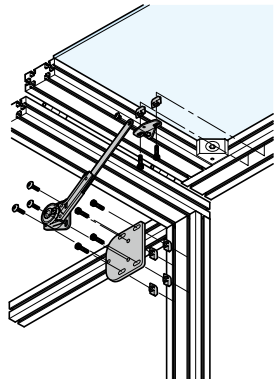
Application Example

- Used for installing soft-down stay NSDX to aluminium frame.
- Use AS nuts 1 for installation.

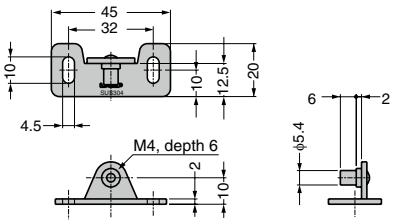
[Parts Included]

- AS-NSDX-A: Truss head screw M4×5 (SUS)
  AS-NSDX-B: None

[How to Install]

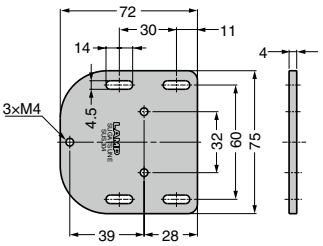



AS-NSDX-A



AS-NSDX-A


AS-NSDX-B



AS-NSDX-B

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
✓	✓	180-100-234	AS-NSDX-A	For Arm	Stainless Steel (SUS304)	Barrel Polished	15	100	1000
✓	✓	180-100-233	AS-NSDX-B	For Body			151	20	200

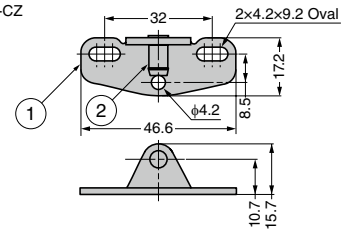
Refer to 1 : P.706

MOUNTING PLATE FOR NSDX NSDX-CZ, NSDX-AZ, NSDX-GZ

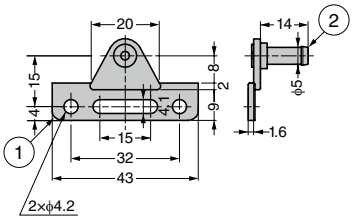


- For quick installation of NSDX stay.
- Three types are available.

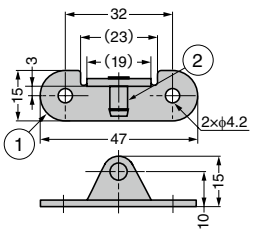
NSDX-CZ



NSDX-AZ



NSDX-GZ

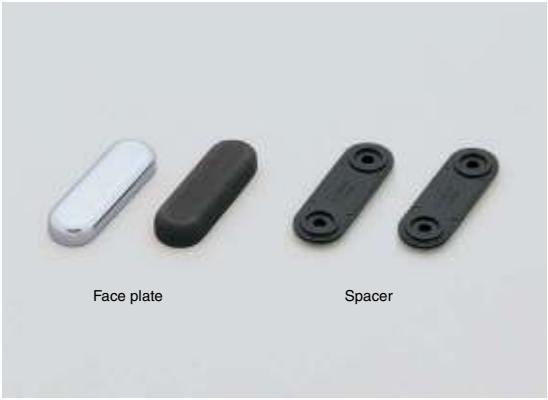


No.	Part Name	Material	Finish
①	Mounting Plate	Steel (SPCC)	Nickel
②	Shaft	Steel (SWCH)	

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-460	NSDX-CZ	Clip-on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip-on for 20 mm Aluminium Frame	11	320	1280
G	3D	180-109-459	NSDX-GZ	Clip-on for Glass Door	14	160	640

SDS FACE PLATE AND SPACER FOR GLASS DOOR SDS-50G

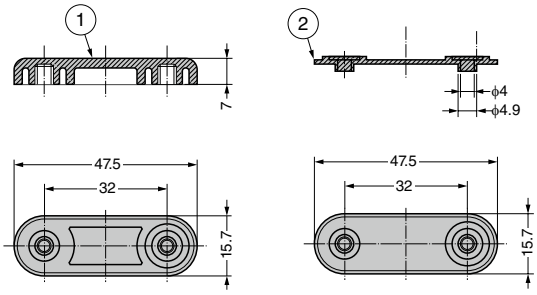
TEMPERED GLASS



- Glass door face plate for SDS and NSDX.

[Parts Included]

- Countersunk head screw M4×14 (2 pcs)

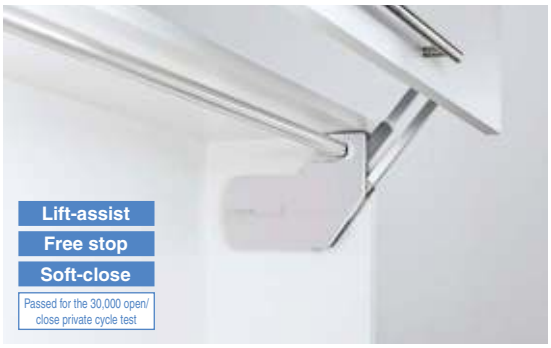


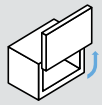
No.	Part Name	Material	Finish	Carton
①	Face Plate	Zinc Alloy (ZDC)	Chrome (CR), Black (BL)	1 pc
②	Spacer	ABS	Black	2 pcs

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	25	50	200
G	3D	180-928-046	SDS-50G-BL		50	200

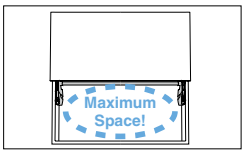
SWING LIFT-UP STAY SLU-ELAN

Lapcon INSTRUCTION VIDEO



Opening Direction	Description	Item Name	Door Width	Door Height	Door Weight※
 Lift-Up	Lift-assist Free stop Soft-close	SLU-ELAN-S4	Max. 1800	390~500	5~6.5 kg
		SLU-ELAN-L4			6.5~8 kg
		SLU-ELAN-M4			8~9.5 kg
		SLU-ELAN-H4			9.5~11 kg

※Door weight includes handle.



- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
  - ・Door can be opened with a slight force (see Fig. 1).
  - ・Door can be stopped in any position (see Fig. 2).
  - ・Door closes slowly even if you release your hands from the door (see Fig. 3).
- Door can be opened and closed smoothly regardless of handle position.
- Installed on the bottom of cabinet top board for maximum space inside the cabinet, not even affecting the shelf mounting.
- Installation position of the main body can be easily determined (see Fig.4).
- Mounting plate can be quickly attached to the main body (see Fig.5).

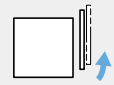
[3 Functions in 1 Stay]

Lift-assist

Can open the door with a slight force.



Fig. 1

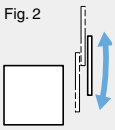


Free stop

Door can be stopped in any position.
※The operating range varies slightly depending on the door size and weight.



Fig. 2



Soft-close

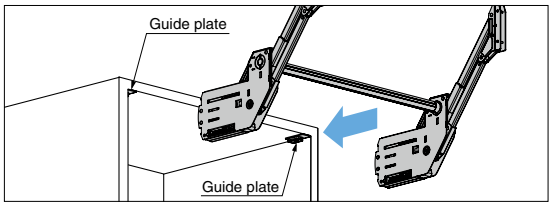
Door closes slowly even if you release your hands from the door.
※The operating range varies slightly depending on the door size and weight.



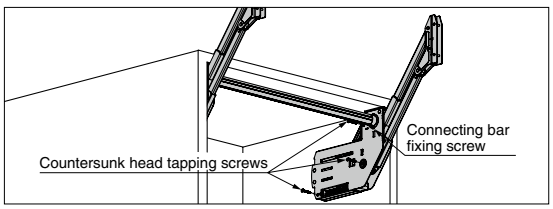
Fig. 3



[Easy Installation] Fig.4 ※1 connecting bar (sold separately) is necessary for 1 set of stay.



Install on left and right sides of top board bottom after aligning the guide plate with internal surface and edge of cabinet. Installation position is determined by inserting the main body with the main body and connecting bar temporarily assembled.



Fix the main body to cabinet with countersunk head tapping screws (included). Tighten connecting bar fixing screws (left and right sides).

Refer to 1 : P.207, 2 : P.269

[Specifications]

- Operating temperature: 0℃~40℃

[Remarks]

- Be sure to read the “Cautions” 1.
- 1 connecting bar (sold separately) is necessary for 1 set of stay.
- Use in pairs.
- Never push down the arm of single stay before installation.
- Do not open the door further in fully opened position. And do not roughly.

Video Link

[Parts Included]

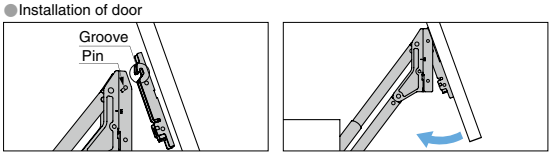
- Mounting plate (2 pcs)
- Guide plate (2 pcs)
- Countersunk head tapping screw 3.5×38 (6 pcs) for main body
- Binding head tapping screw 3.5×15 (6 pcs) for mounting plate

[Sold Separately]

- Connecting bar ELB 2

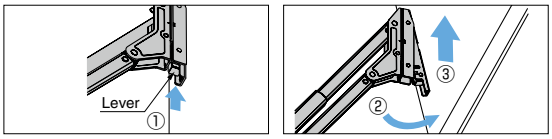
[Installation and Removal of Door] Fig. 5

- Installation of door

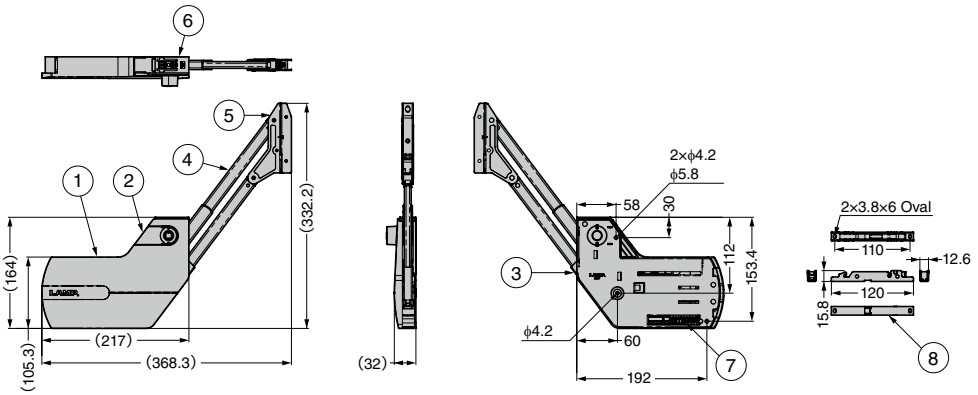


Hang the groove at the tip of mounting plate on the pin of main body, and then push the door along the arrow with a click feeling.

- Removal of door

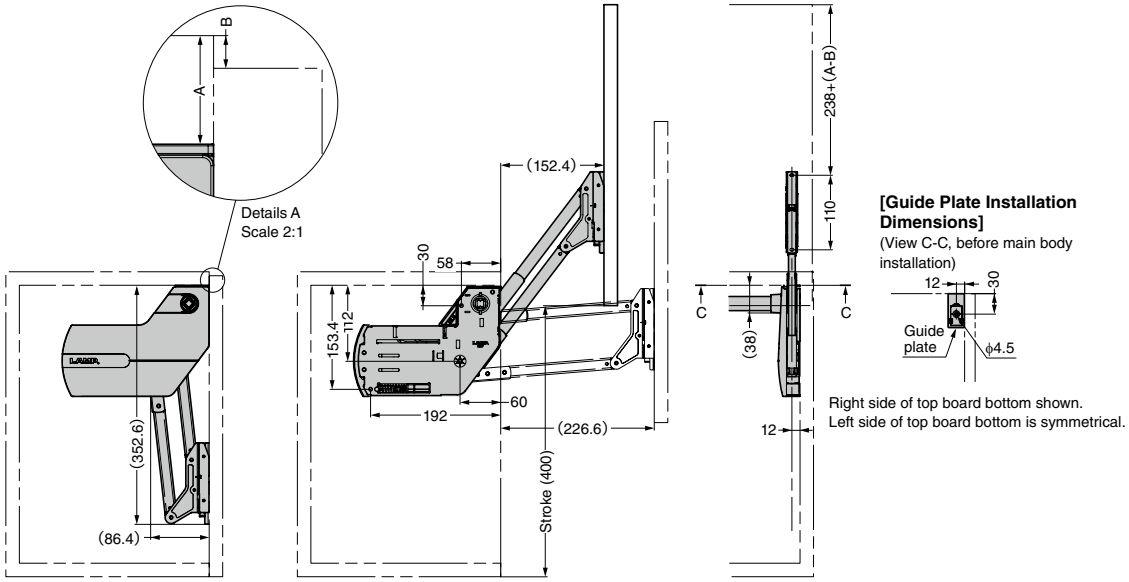


Lift the door along ② arrow while pushing the lever along ① arrow, and then move the door along ③ arrow to detach.



No.	Part Name	Material	Finish/Colour
①	Body Cover	ABS	Light Grey
②	Side Cover		
③	Main Body	Steel (SECC)	–
④	Arm	Aluminium Alloy	Anodised
⑤	Mounting Plate Body	Steel (SPCC)	Nickel
⑥	Guide Plate	POM	Dark Grey
⑦	Damper	–	–
⑧	Mounting Plate	Steel (SPCC)	Nickel

[Bracket for installing to frame]



[Guide Plate Installation Dimensions]
(View C-C, before main body installation)

Right side of top board bottom shown.
Left side of top board bottom is symmetrical.

For vertical continuous doors, the gap from upper door should be 3mm or more (for door thickness 16~22mm).

[Main Body]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Door Width	Door Height※1	Door Weight kg※2	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-022-312	SLU-ELAN-S4	Steel/ ABS	Nickel/ Light Grey	Max. 1800	390~500	5~6.5	2491	5	–
G	3D	180-022-313	SLU-ELAN-L4					6.5~8	2542	5	–
G	3D	180-022-314	SLU-ELAN-M4					8~9.5	2581	1	5
G	3D	180-022-315	SLU-ELAN-H4					9.5~11	2631	5	–

※1 Cabinet inside height is Min. 360 mm. ※2 Door weight includes handle.

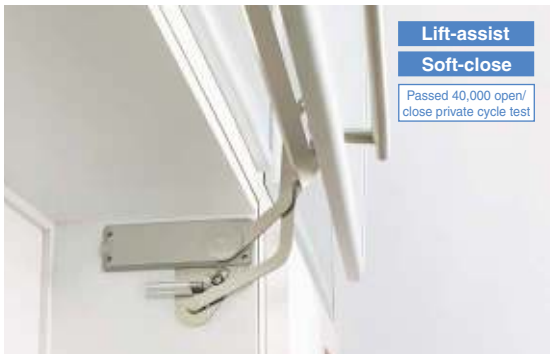
[Connecting Bar] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Cabinet Inside Width※3	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-022-319	ELB-480	Aluminium Alloy	Anodised	556~566	181	10	–
G	3D	180-022-320	ELB-780			856~866	294	10	–
G	3D	180-022-321	ELB-1080			1156~1166	407	10	–
G	3D	180-022-322	ELB-1380			1456~1466	520	10	–
G	–	180-026-323	ELB-1680			1756~1766	633	10	–

※3 For other cabinet inside widths, the bar can be cut on site (connecting bar length = cabinet inside width - 80mm).

SWING LIFT-UP STAY SLUN-N

Lapcon INSTRUCTION



Opening Direction	Item Name	Description	Door Width	Door Height	Door Weight
 Lift-up	SLUN-3N	Lift-assist Soft-close	600 ~900	390 ~450	2.8~3.8 kg
	SLUN-4N				3.8~4.8 kg
	SLUN-5N				4.8~5.8 kg

- Patented Lapcon mechanism helps open and close the door smoothly.
- Spring mechanism assists opening the door lightly when it is opened outwards by 50~70mm.
- Damper provides smooth and soft closing.
- Installed on the bottom of cabinet top board for maximum space inside the cabinet.

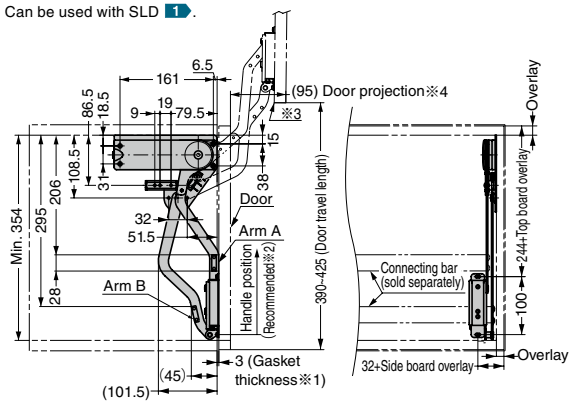




[Parts Included]
- Binding head tapping screw 3.5×15 (for main body)
- Countersunk head tapping screw 3.5 × 20 (for damper)
- Truss head tapping screw 4.5 ×12 (for connecting bar)

[Sold Separately]
- Connecting bar SLUB (below)

Can be used with SLD 1.



[Installation]

※1: Dimension with gasket attached on door. Without gasket, shift stay installation position towards back panel side by 3mm.

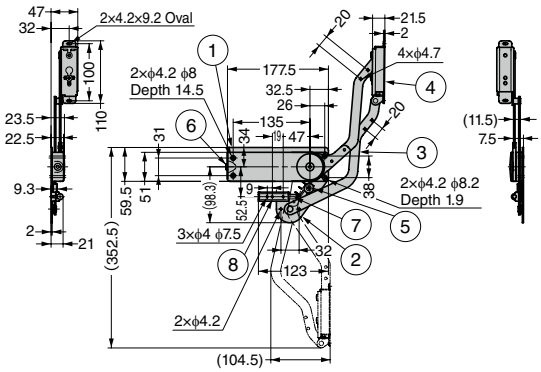
※2: Install handle above the bottom edge of door side mounting plate as shown above.

※3: If door height is 425mm or more, lower part of door will cover cabinet top board when door is fully opened.

※4: Maximum door projection is 267mm.

[Specifications]
- Operating temperature: 5˚C~35˚C

[Remarks]
- Be sure to read the "Cautions" 2.
- 1 connecting bar (sold separately) is necessary for 1 set of stay. Install 2 pcs to ensure lateral strength.
- For glass door, the frame width needs 75mm or more.
- Be sure to install a handle (sold separately) in the middle of door width. For easy door opening, install the handle above the bottom edge of door side mounting plate (see ※2 in the figure below).
- Used in pairs.



No.	Part Name	Material	Finish/Colour
①	Body	ABS	Grey
②	Mounting Plate	Steel (SPCC)	Chrome
③	Arm		
④	Mounting Plate		
⑤	Stopper	EPDM	Black
⑥	Adjustment Screw	Steel (SWCH)	Tin Cobalt Plating
⑦	Damper Core	POM	–
⑧	Damper Holder	PA	

[Body] 1 pair

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Door Width	Door Height	Door Weight kg	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-020-832	SLUN-3N	ABS/ Steel	Chrome/Grey	600~900	390~450	2.8~3.8	1972	5	–
G	3D	180-020-833	SLUN-4N					3.8~4.8	1967	5	–
G	3D	180-020-834	SLUN-5N					4.8~5.8	2012	5	–

[Connecting Bar] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Mounting Position	Length of Connecting Bar for Cabinet Overall Width 600	Length of Connecting Bar for Cabinet Overall Width 900	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-120-287	SLUB-535	Aluminium Alloy	Anodised	Arm A	535	–	191	10	–
G	3D	180-104-088	SLUB-551			Arm B※	551		196	10	–
G	3D	180-120-288	SLUB-835			Arm A	–	835	308	10	–
G	3D	180-100-131	SLUB-851			Arm B※		851	312	10	–

※ If the centre part of door is glass etc., install the connecting bar on arm B to make it inconspicuous.

Refer to 1 : P.271, 2 : P.207

- 2 types of connecting bars are available for cabinet overall width 600mm and 900mm.
- Dimensions in the left table are for standard products with side board thickness of cabinet 15mm. If the side board thickness is over 15mm, the connecting bar should be cut according to the below formula.

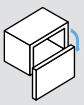
Arm A: Connecting bar length = Cabinet overall width - (Side board thickness×2) - 35

Arm B: Connecting bar length = Cabinet overall width - (Side board thickness×2) - 19

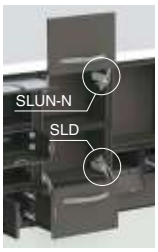
SWING DOWN STAY SLD

Lapcon INSTRUCTION



Opening Direction	Item Name	Description	Door Width	Door Height	Door Weight
 Lift-down	SLD-3	Lift-assist Soft-close	600 ~900	360 ~400	3~4 kg
	SLD-4				4~5 kg
	SLD-5				5~6 kg

- Patented Lapcon mechanism helps open and close the door smoothly.
- Unique swing down mechanism holds the door in fully opened position.
- Damper provides smooth and soft closing.
- Installed on the top of cabinet bottom board for maximum space inside the cabinet.





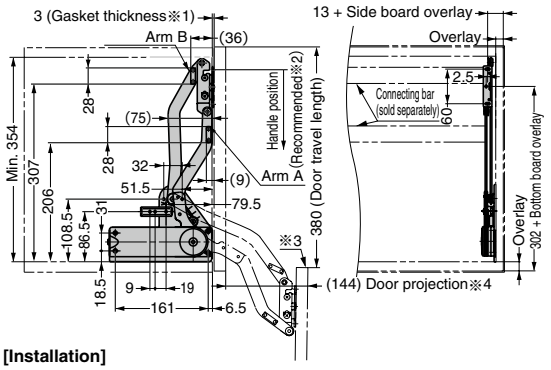
[Parts Included]
- Binding head tapping screw 3.5×15 (for main body)
- Countersunk head tapping screw 3.5 × 20 (for damper)
- Truss head tapping screw 4.5 ×12 (for connecting bar)

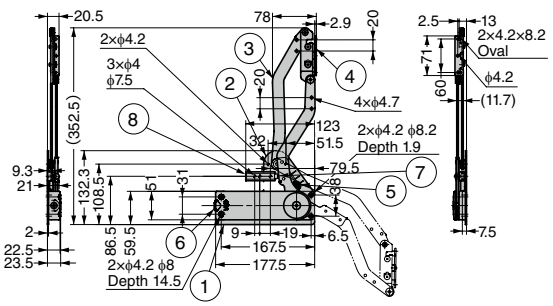
[Sold Separately]
- Connecting bar SLUB (below)

Can be used with SLUN-N 1 .

[Specifications]
- Operating temperature: 5˚C~35˚C

[Remarks]
- Be sure to read the "Cautions" 2 .
- 1 connecting bar (sold separately) is necessary for 1 set of stay.Install 2 pcs to ensure lateral strength.
- For glass door, the frame width needs 45mm or more.
- Be sure to install a handle (sold separately) in the middle of door width. For easy door opening, install the handle below the top edge of door mounting Plate (see ※2 in the figure below).
- Used in pairs.





[Installation]

※1: Dimension with gasket attached on door. Without gasket, shift stay installation position towards back panel side by 3mm.
※2: Install handle below the top edge of door side mounting Plate as shown above.
※3: If door height is 380mm or more, upper part of door will cover cabinet bottom board when door is fully opened.
※4: Maximum door projection is 242mm.

No.	Part Name	Material	Finish/Colour
①	Body	ABS	Grey
②	Mounting Plate	Steel (SPCC)	Chrome
③	Arm		
④	Mounting Plate		
⑤	Stopper	POM	Black
⑥	Adjustment Screw	Steel (SWCH)	Tin Cobalt Plating
⑦	Damper Core	POM	–
⑧	Damper Holder	PA	

[Body] 1 pair

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Door Width	Door Height	Door Weight kg	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-020-848	SLD-3	ABS/Steel	Chrome/Grey	600~900	360~400	3~4	1900	5	–
G	3D	180-020-849	SLD-4					4~5	1900	5	–
G	3D	180-020-850	SLD-5					5~6	1980	5	–

[Connecting Bar] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Mounting Position	Length of Connecting Bar for Cabinet Overall Width 600	Length of Connecting Bar for Cabinet Overall Width 900	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-120-287	SLUB-535	Aluminium Alloy	Anodised	Arm A	535	–	191	10	–
G	3D	180-104-088	SLUB-551			Arm B※	551		196	10	–
G	3D	180-120-288	SLUB-835			Arm A	–	835	308	10	–
G	3D	180-100-131	SLUB-851			Arm B※		851	312	10	–

※If the centre part of door is glass etc., install the connecting bar on arm B to make it inconspicuous.

Refer to 1 : P.270, 2 : P.207

- 2 types of connecting bars are available for cabinet overall width 600mm and 900mm.
- Dimensions in the left table are for standard products with side board thickness of cabinet 15mm. If the side board thickness is over 15mm, the connecting bar should be cut according to the below formula.

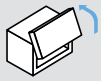
Arm A: Connecting bar length = Cabinet overall width - (Side board thickness×2) - 35
Arm B: Connecting bar length = Cabinet overall width - (Side board thickness×2) - 19

SUGATSUNE

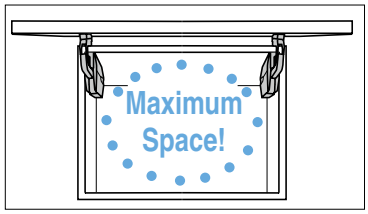
LIFT-ASSIST STAY EZS-ELAN®

Lapcon INSTRUCTION VIDEO



Opening Direction	Description	Door Width	Door Height	Door Weight※
 Up & Over	Lift-assist Free stop Soft-close	Max. 1200	500~750	5~12.5 kg

※Door weight includes handle.



Slim design maximises space inside of the cabinet.

- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
  - ・Door can be opened with a slight force (see Fig. 1).
  - ・Door can be stopped in any position in the range of about 30° to 70° (see Fig.2).
  - ・Door closes slowly in the range of about 0° to 20° (see Fig.3).
- Installed on the bottom of cabinet top board for maximum space inside the cabinet.
- No hinges and connecting bar required for installation.
- Installation position of the main body is determined simply by aligning to the bottom surface of top board and cabinet edge (see Fig.4).
- Mounting plate can be quickly attached to the main body (see Fig.5).
- Torque adjustment according to the door weight is unnecessary.

[3 Functions in 1 Stay]

●Lift-assist
Door can be opened with a slight force.

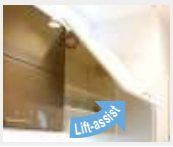
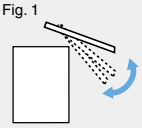
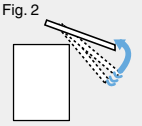


Fig. 1


●Free stop
Door can be stopped in any position in the range of about 30° to 70° .



Fig. 2


●Soft-close
Door closes slowly in the range of about 0° to 20° even if you release your hands from the door.

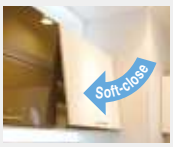
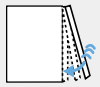


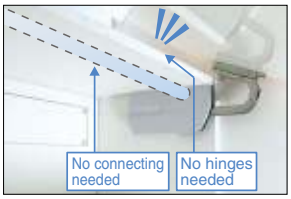
Fig. 3


[Specifications]
- Operating temperature: 0˚C~40˚C

[Remarks]
- Be sure to read the “Cautions” 1.
- Used in pairs.
- Never push down the arm of single stay before installation.
- Do not open the door further in fully opened position.
- Do not roughly open and close the door.

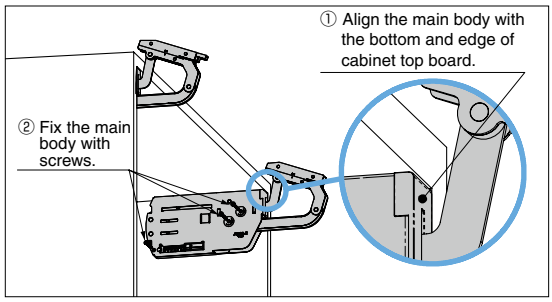
[Parts Included]
- Mounting plate
- Countersunk head tapping screw 3.5×38 (for main body)
- Binding head tapping screw 3.5×15 (for mounting plate)

Video Link



No need to install connecting bar and hinge separately, maximising space inside of the cabinet.

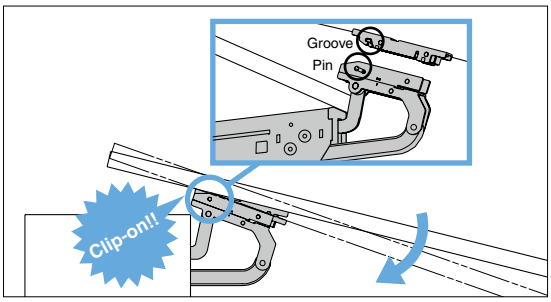
[Easy Installation] Fig.4



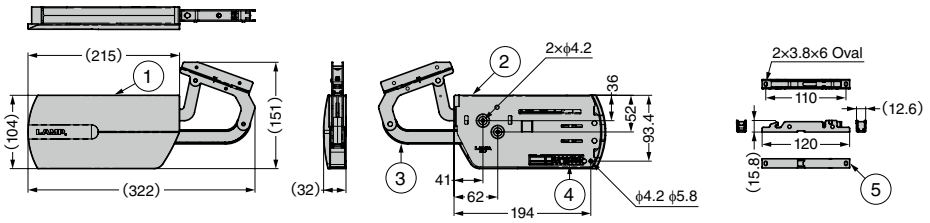
Installation position is determined simply by pressing the main body against the bottom surface of top board and aligning the surface indicated by ① with cabinet edge.

Refer to 1 : P.207

[Quick Door Installation] Fig.5

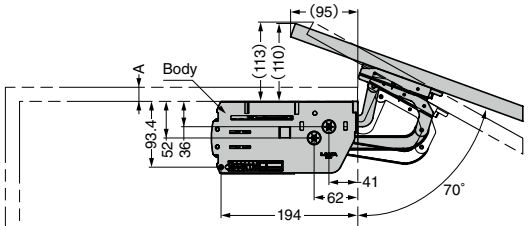


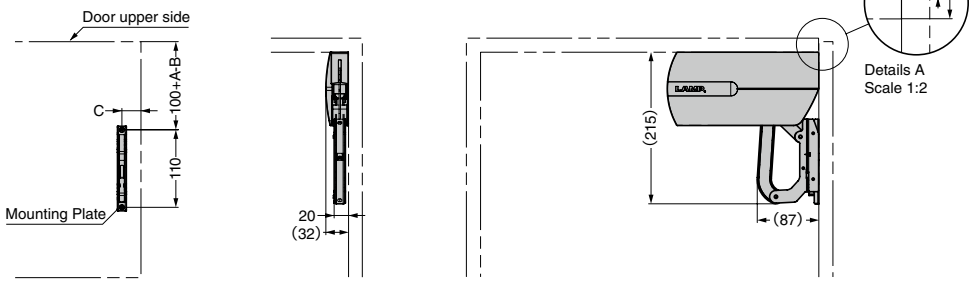
To install the door, simply hook the pin of main unit to the groove of mounting plate and lower the door until it clicks in place.



No.	Part Name	Material	Finish
①	Body Cover	ABS	–
②	Body	Steel (SECC)	
③	Arm	Steel (SPCC)/POM	Nickel
④	Damper	–	–
⑤	Mounting Plate	Steel (SPCC)	Nickel

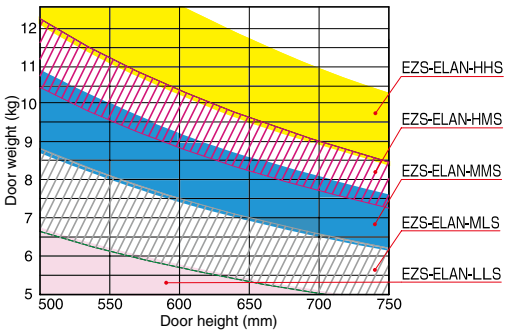
[Installation]





$$C = \frac{\text{Door width - Cabinet inside width}}{2} + 12$$

[Door Size Range]



Refer to the left graph or the following as a guide for model selection.

1. Calculation of lifting power

Lifting power = Door height [mm]×(Door weight [kg] - 1)

Door size

Door width: Max. 1200mm
Door height: 500~750 mm
Door weight: 5~12.5 kg

※ Confirm the movement with actual item if lifting power is at the upper or lower limit of each model.
※ Door weight includes handle.

2. Applicable models

Liftting Power	Model
1900~2860	EZS-ELAN-LLS
2820~3900	EZS-ELAN-MLS
3850~4950	EZS-ELAN-MMS
4700~5600	EZS-ELAN-HMS
5550~6930	EZS-ELAN-HHS

[Set Packing]

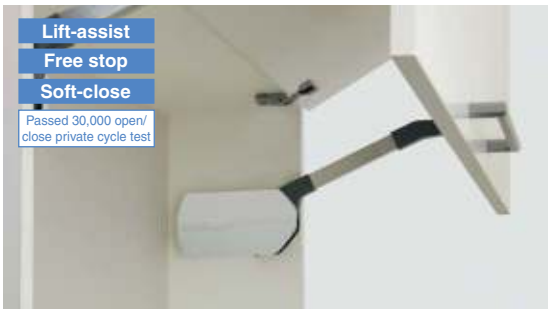
RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (sets)	Carton (sets)
G'	3D	180-018-903	EZS-ELAN-LLS	Steel/ABS	Nickel/Light Grey	2245	1	5
G'	3D	180-018-904	EZS-ELAN-MLS			2316	1	5
G'	3D	180-018-905	EZS-ELAN-MMS			2387	1	5
G'	3D	180-018-906	EZS-ELAN-HMS			2431	1	5
G'	3D	180-018-907	EZS-ELAN-HHS			2475	1	5

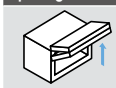
[Bulk Packing]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (sets)	Carton (sets)
G'	3D	180-018-923	EZS-ELAN-L	Steel/ABS	Nickel/Light Grey	2334	1	5
G'	3D	180-018-924	EZS-ELAN-M			2486	1	5
G'	3D	180-018-925	EZS-ELAN-H			2486	1	5
G'	3D	180-018-983	EZS-ELAN-COVER	ABS	Light Grey	160	1	5

BI-FOLD LIFT-ASSIST STAY HBF-ELAN

Lapcon INSTRUCTION VIDEO



Opening Direction	Description	Door Width	Door Height	Door Weight
 Bi-folding	Lift-assist Free stop Soft-close	Max. 1200	320~370	2.5~6.5 kg

Values above are for 1 bi-fold door.

- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
  - ・Door can be opened with a slight force (see Fig. 1).
  - ・Door can be stopped in any position in the range of about 50° to fully opened position (see Fig.2).
  - ・Door closes slowly in the range of about 0° to 40° even if you release your hands from the door (see Fig.3).
- Opening angle can be easily adjusted according to hinge used (see Fig.4).
- Quick installation due to innovative vertical adjustment function of mounting plate (see Fig.5~7).
- Easy installation by using supplied template.

[3 Functions in 1 Stay]

Lift-assist
Door can be opened with a slight force.

Fig. 1



Free stop
Door can be stopped in any position in the range of about 50° to fully opened position.

Fig. 2



Soft-close
Door closes slowly in the range of about 0° to 40° even if you release your hands from the door.

Fig. 3



[Specifications]
- Operating temperature: 0˚C~40˚C

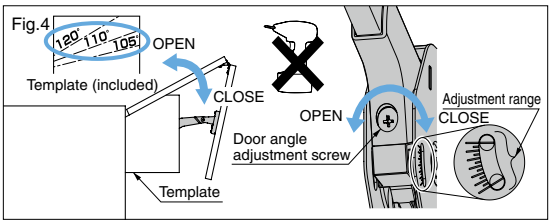
[Remarks]
- Be sure to read the “Cautions” 1.
- Never push down the arm of single stay before installation.
- Do not open the door further in fully opened position.
- Do not roughly open and close the door.
- Hinges not included. Customer should provide concealed hinges (without catch) or single knuckle hinges.
- Specified range of movement and door weight slightly vary depending on the type of hinge used (concealed hinge or piano/butt hinge).Confirm with actual item before use.
- Two centre hinges connecting the upper door and the lower door are included.
- For easy door opening, recommended to install the handle above the centre of the lower door mounting plate.
- Use in pairs.

Video Link

[Parts Included]
- Mounting plate
- Centre hinge
- Paper template
- Countersunk head tapping screw 3.5×38 (for main body)
- Binding head tapping screw 3.5×15 (for centre hinge)
- Binding head tapping screw 3.5×27 (for mounting plate)
- Truss head screw M4×5 (for mounting plate)

[Multiple Adjustments]

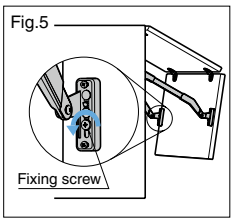
Fig.4



Place the template folded at the opening angle position of hinge against the hinge side of cabinet, and then turn the door angle adjustment screw to match the opening angle with the template.

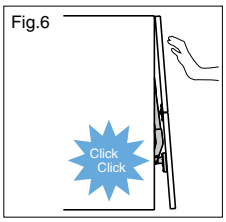
[Vertical Adjustment of Mounting Plate]Quick installation possible

Fig.5



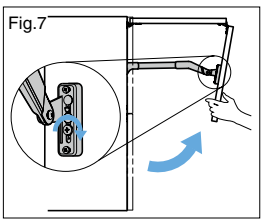
Loosen the fixing screws of the left and right mounting plates.

Fig.6



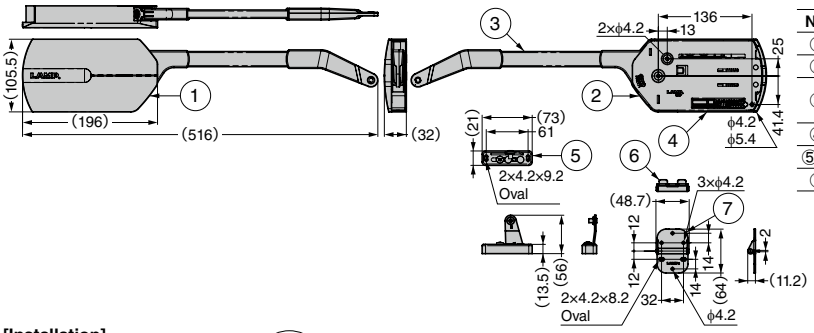
Press the upper door until the door is closed, then the mounting plates is adjusted to the appropriate position with a click sound.

Fig.7



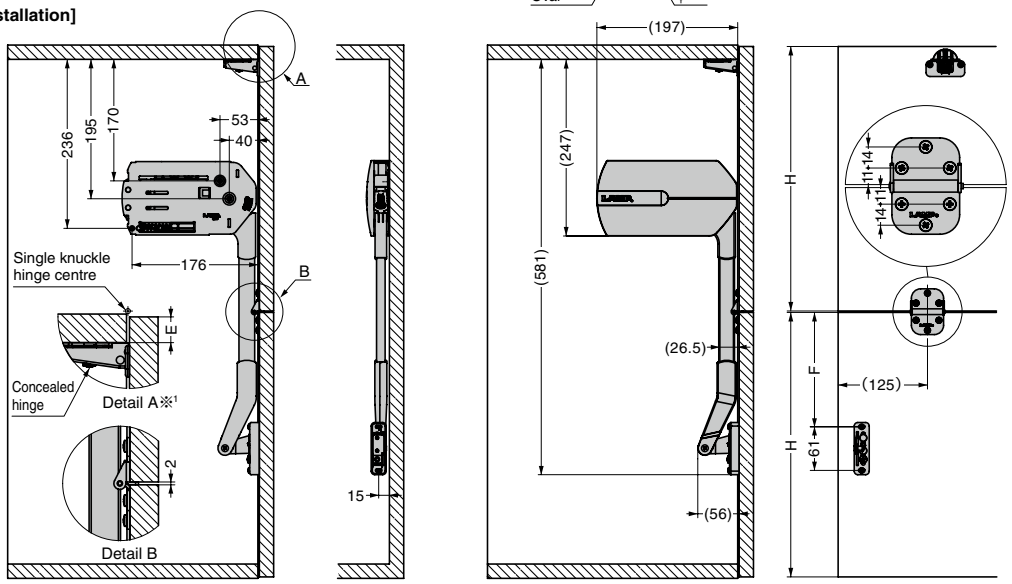
Grasp the lower part of the lower door, slowly open the door, and then tighten the fixing screws of the left and right mounting plates.

Refer to 1 : P.207



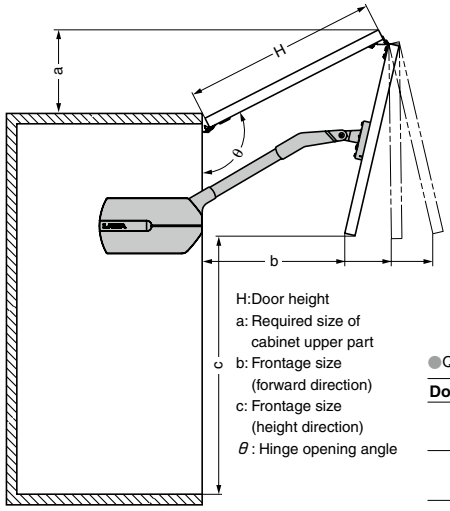
No.	Part Name	Material	Finish/Colour
①	Body Cover	ABS	–
②	Body	Steel (SECC)	
③	Arm	Aluminium Alloy/ABS	Anodised
④	Damper	–	–
⑤⑥	Mounting Plate	Steel (SPCE)	Nickel
⑦	Centre Hinge	Steel (SPCC)	

[Installation]



※1 Concealed hinge or piano/butt hinge not included.

F = 512 + E (Overlay) - H (Door height)



H:Door height
a: Required size of cabinet upper part
b: Frontage size (forward direction)
c: Frontage size (height direction)
θ: Hinge opening angle

[With concealed hinge]

●Hinge opening angle and door position

Opening Angle θ	Door Height H	a	b	c
105°	320	58	364	341
	350	65	348	373
	370	69	314	399
110°	320	85	364	369
	350	93	344	402
	370	99	303	431
120°	320	134	359	424
	350	148	330	459
	370	157	270	492

●Qty of Concealed Hinges

Door Weight kg	Door Width	Qty
2.5~5.5	~900	2 pcs
	900~1200	
5.6~6.5	~900	3 pcs
	900~1200	

[With single knuckle hinge]

●Hinge opening angle and door position

Opening Angle θ	Door Height H	a	b	c
120°	320	167	351	452
	350	181	313	490
110°	370	131	289	461

※When using single knuckle hinge, use the template (included) and adjust so that the opening angle θ of the hinge becomes 120 ° or less (see Fig. 4).

[Body]1 pair Values below are for 1 door (bi-fold door). 2 doors are necessary for 1 cabinet.

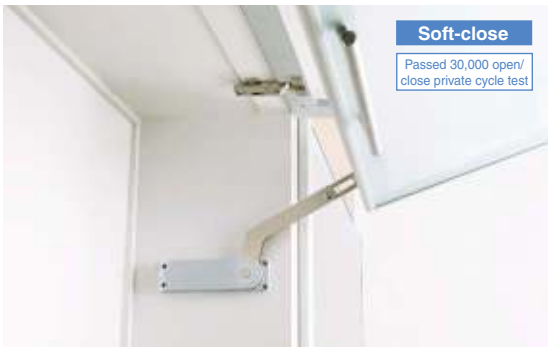
RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Door Width	Door Height※2	Door Weight kg※3	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-024-608	HBF-ELAN-LL	Aluminium Alloy/ ABS	Anodised/ Light Grey	Max. 1200	320~370	2.5~3.3	2245	1	5
G	3D	180-024-609	HBF-ELAN-ML					3.3~4.1	2316	1	5
G	3D	180-024-610	HBF-ELAN-MM					4.1~4.9	2387	1	5
G	3D	180-024-611	HBF-ELAN-HM					4.9~5.7	2431	1	5
G	3D	180-024-612	HBF-ELAN-HH					5.7~6.5	2475	1	5

For supplied centre hinge (2 pcs), use 2 pcs regardless of door width.

※2 Cabinet inside height is Min. 600mm. ※3 Door weight includes handle.

HORIZONTAL BI-FOLDING UNIT HBFN

Lapcon INSTRUCTION



Opening Direction	Item Name	Description	Door Width	Door Height	Door Thickness	Door Weight
Bi-folding	HBFN-(2~4)M	Soft-close	450~900	320~370	17~20	2.5 ~ 5.5 kg
	HBFN-(3~7)L			370~420		2.5 ~ 6.5 kg

- Patented Lapcon mechanism controls door closing softly and smoothly.
- Designed to hold the door in closed and opened position.
- Mounting plates (sold separately) suitable for 20mm and 45mm aluminium frames are available.

[Specifications]

- Operating temperature: 5˚C~35˚C

[Remarks]

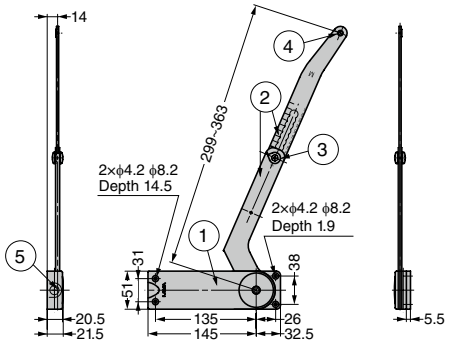
- Be sure to read the "Cautions" 1.
- 1 set of stays needs 1 set of mounting plates (sold separately).
- Hinges used for installing door to cabinet are not included. Customer should provide concealed hinges (overlay type, opening angle 105°).
- Two offset hinges used for connecting upper door and lower door are included.Order additionally if door width exceeds 600mm.
- For easy door opening, recommended to install the handle above the centre of the lower door mounting plate.

[Parts Included]

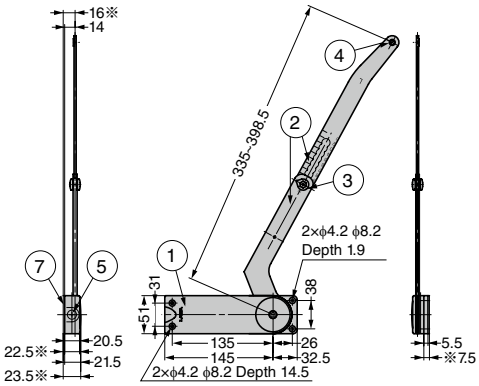
- Offset hinge HBFN-CH (2 pcs)
- Binding head tapping screw 3.5×15

[Sold Separately]

- Mounting plate HBFN-SZ, HBFN-AZ-S 2

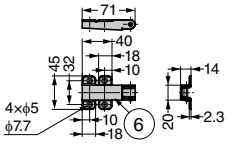


Arm Size M



※HBFN-5L, 6L and 7L supplied with reinforced plate.

Arm Size L



No.	Part Name	Material	Finish/Colour
①	Body	ABS	–
②	Arm	Steel (SPCC)	Nickel
③	Adjustment Dial	Zinc Alloy (ZDC)	
④	Sleeve	POM	Natural
⑤	Adjustment screw	Steel (SWCH)	Tin Cobalt Plating
⑥	Centre Hinge	Steel (SPCC)	Nickel
⑦	Reinforced Plate		

[Offset Hinge] 2 pcs supplied with the main body. Order additionally for door width more than 600mm.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-099-941	HBFN-CH	Steel	Nickel	64	40	160

[Body] 1 pair ※ Values below are only for 1 door.2 doors are necessary for 1 cabinet.

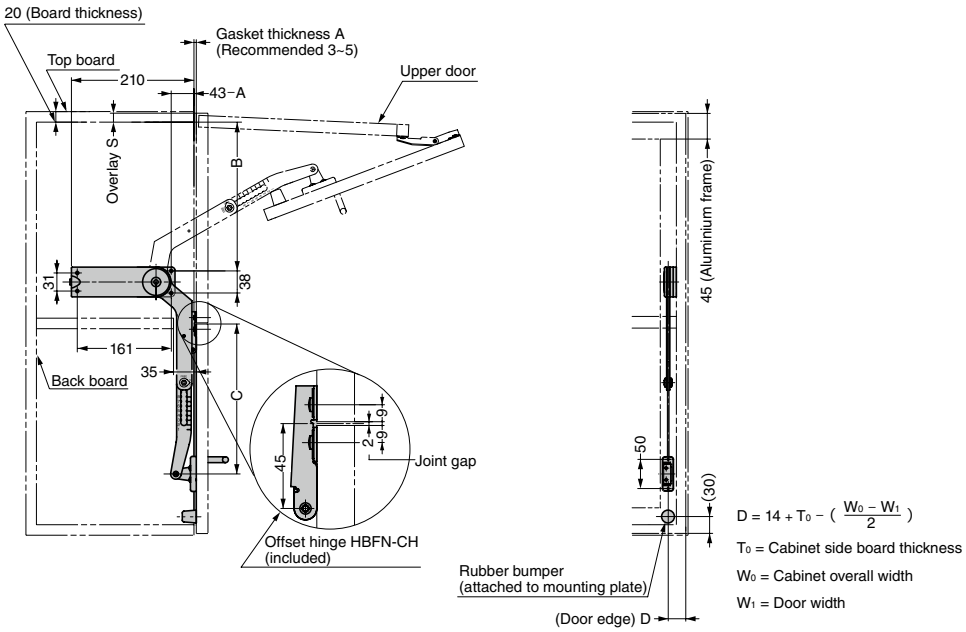
RoHS	CAD	Item Code	Item Name	Arm Size	Door Width	Door Height	Door Thickness	Door Weight kg	θ	L	t	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-109-615	HBFN-2M	M	450~900	320~370	17~20	2.5~3.5	171°	299~363	14	1500	10	–
G	3D	180-109-616	HBFN-3M					3.5~4.5				1500	10	–
G	3D	180-109-617	HBFN-4M					4.5~5.5				1600	10	–
–	3D	180-100-212	☆HBFN-3L	L		370~420		2.5~3.5	169°	335~398.5		–	10	10
–	3D	180-100-213	☆HBFN-4L					3.5~4.5				–	10	10
–	3D	180-100-211	☆HBFN-5L					4.5~5.5				–	10	10
–	3D	180-109-363	☆HBFN-6L					5.5~6.0			16	–	10	–
–	3D	180-109-318	☆HBFN-7L					6.0~6.5				–	10	–

Refer to 1 : P.207, 2 : P.277

☆Made to order.

[Installation]

※Dimensions for door with gasket shown. Without gasket, shift main body installation position towards back panel side by gasket thickness A.



[Installation Dimensions]

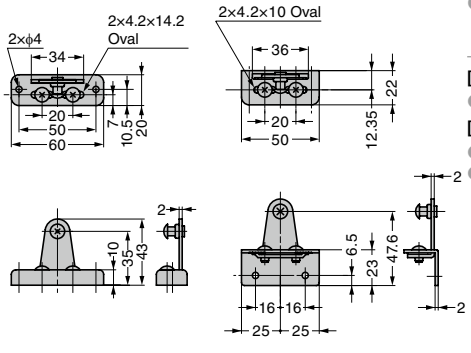
Arm Size	Door Height	Upper Opening Angle 90°			Upper Opening Angle 105°		
		Arm Adjustment Position	B	C	Arm Adjustment Position	B	C
M	320	1	247–S	241	4	226–S	244
	330	2	252–S	244	5	234–S	250
	340	3	258–S	248	6	243–S	257
	350	4	263–S	251	7	251–S	263
	360	5	269–S	255	8	259–S	269
	370	6	274–S	258	9	267–S	275
L	370	1	289–S	269	4	291–S	295
	380	2	295–S	273	5	300–S	302
	390	3	300–S	276	6	308–S	308
	400	4	306–S	280	7	317–S	315
	410	5	313–S	285	8	327–S	323
	420	6	320–S	290	9	336–S	330

ARM MOUNTING PLATE FOR HBFN HBFN-SZ, HBFN-AZ-S

INSTRUCTION


HBFN-SZ


HBFN-AZ-S (made to order)



HBFN-SZ　　HBFN-AZ-S (made to order)

- For wooden doors and aluminium frame doors. Only for HBFN.

[Remarks]
- Sold in pairs.

[Parts Included]
- Truss head screw M4×6
- Countersunk head tapping screw 3.5×25

RoHS	CAD	Item Code	Item Name	Application	Material	Finish	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-109-618	HBFN-SZ	For 45 mm or more Aluminium Frame Door / Wooden Door	Steel/ Rubber	Nickel	44	50	–
–	3D	–	☆HBFN-AZ-S	For 20mm Aluminium Frame Door			52	–	–

☆Made to order.

OVER THE TOP FLIPPER DOOR MECHANISM (W/ LIFT-ASSIST) OV-EZ

Lapcon VIDEO

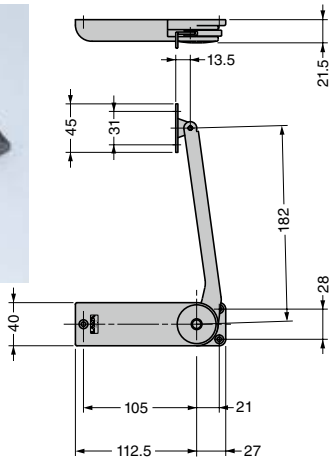




Opening Direction	Item Name	Description	Door Width	Door Height	Door Thickness	Door Weight
	OV-EZ-3	Lift-assist Soft-close	600 ~1200	370 ~450	Min. 15	2.5~6.5 kg
	OV-EZ-5					3.5~8.0 kg
	OV-EZ-7					4.5~10.0 kg
Over the Top	OV-EZ-9					5.5~11.5 kg

- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
- Lift-assist function allows extra-light opening.
- Storing the door horizontally on the top board maximises space inside of the cabinet.


OV-EZ Stay



[Specifications]
- Operating temperature: 5˚C~35˚C

[Remarks]
- Be sure to read the "Cautions" 1.
- 2 pcs of C1315 rail (sold separately) are necessary for 1 cabinet.Select required rails depending on travel length.
- Use either bumper or angle stopper (sold separately) for impact and noise prevention.
- Ensure that the door centre of gravity is at the centre of door.
- Operating range is for reference only. Confirm the movement with actual item.

Video Link

[Parts Included]
- Binding head tapping screw 3.5×16

[Sold Separately]
- C1315 rail
- BS clear bumper or angle stopper 2

[Body] 1 pair

RoHS	CAD	Item Code	Item Name	Material	Finish/ Colour	Door Weight kg ※for Lift-assist Function	Door Weight kg ※for Free Stop Function	Door Width	Door Height	Door Thickness	Weight (g)	Carton (sets)
–	3D	180-100-091	OV-EZ-3	ABS/ Steel	Nickel/ Black	2.5~4.0	4.0~6.5	600~1200	370~450	Min.15	564	1
–	3D	180-100-092	OV-EZ-5			3.5~5.0	5.0~8.0				538	1
–	3D	180-100-093	OV-EZ-7			4.5~6.0	6.0~10.0				600	1
–	3D	180-100-094	☆OV-EZ-9			5.5~7.0	7.0~11.5				–	1

☆Made to order

※ In case of each 1 pc for left and right and door height 380mm (including rail weight).

[C1315 Rail] Sold Separately


C1315

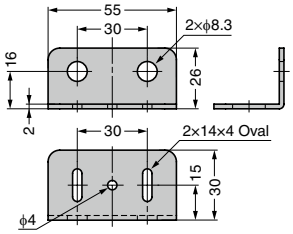
RoHS	CAD	Item Code	Item Name	Material	Finish	Slide Length	Travel Length	A	B	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	–	190-113-849	C1315-14	Steel	Clear Zinc Chromate (Trivalent)	350.6	262	186.7	310.5	320	20	–
G	–	190-113-850	C1315-18			450.6	362	286.7	410.5	390	20	–

Refer to 1 : P.207, 2 : P.279

2 rails are required when using OV-EZ. Select required rails depending on travel length.

[Angle Stopper] Sold Separately

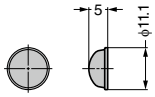




RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	180-109-402	OV-EZ-SP	Steel	Black Chromate	47	70	420

[BS Clear Bumper] Sold Separately





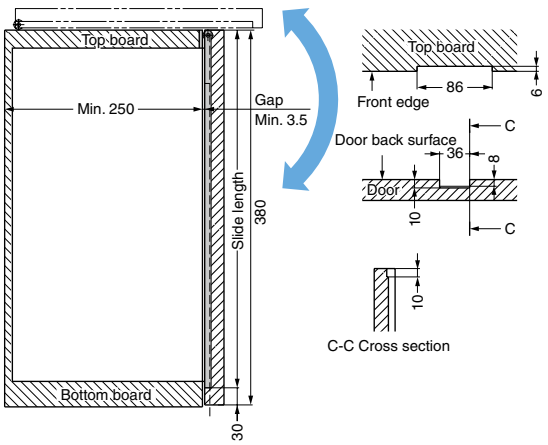
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (sheet)	Carton (sheet)
G	3D	210-030-568	BS-2	PUR	Clear	122	21	105

※Sold in sheets (242 pcs per sheet).

※BS clear bumper and angle stopper (sold separately) are used for impact and noise prevention. Be sure to use either one.

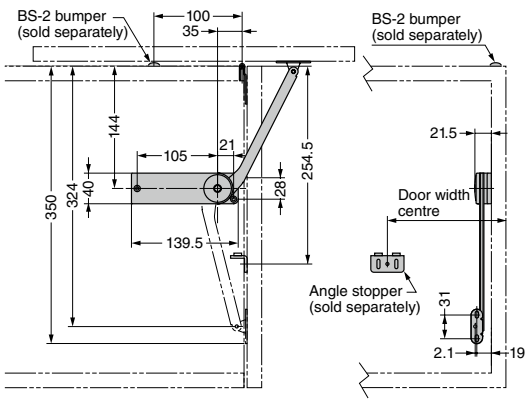
[Cut Out Dimensions]

Cabinet cutaway view



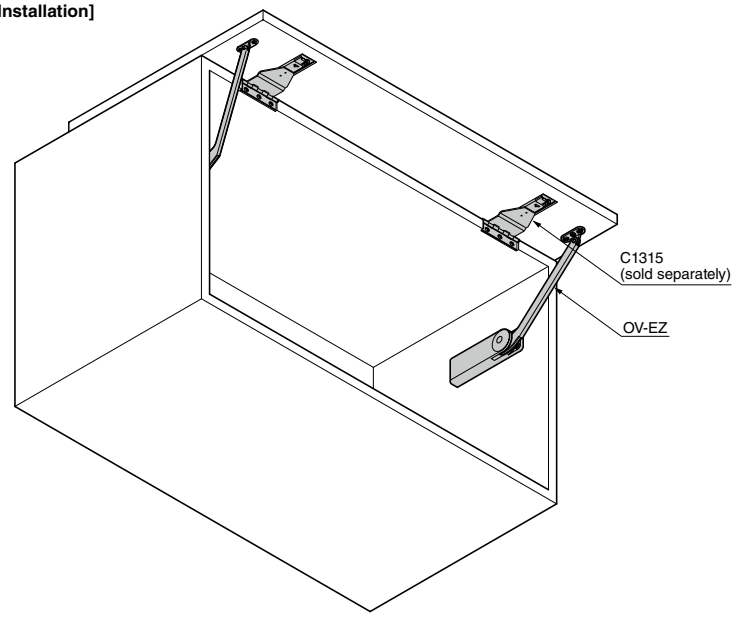
Dimensions shown for door height 380mm.

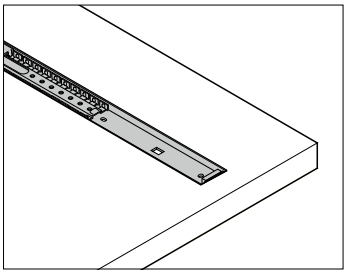
Cabinet front



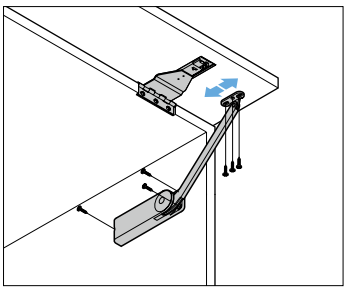
●Above is the installation drawing when the travel length of rail C1315-14 is 260mm.
Installation position changes with the travel length of rail.
Choose either BS clear bumper or angle stopper (sold separately) .

[Installation]





●Install C1315 rail.

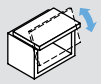


●Mount the OV-EZ mechanism to the side walls of the cabinet.

OVER THE TOP FLIPPER DOOR MECHANISM (W/ SOFT CLOSING) OVN





Opening Direction	Item Name	Description	Door Width	Door Height	Door Thickness	Door Weight
 Over the Top	OVN-3	Soft-close	Max. 1500	370~450	Min. 15	3~5 kg
	OVN-5					5~7 kg

- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
- Prevents from slamming shut and pinching fingers.
- Storing the door horizontally on the top board maximises space inside of the cabinet.

[Specifications]
- Operating temperature: 0˚C~40˚C

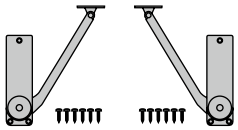
[Remarks]
- Be sure to read the "Cautions" 1.
- 2 pcs of C1315 rail (sold separately) are necessary for 1 cabinet.Select required rails depending on travel length.
- Ensure that the door centre of gravity is at the centre of door.

[Parts Included]
- Binding head tapping screw 3.5×16 (12 pcs) for 1 pair

[Sold Separately]
- C1315 rail

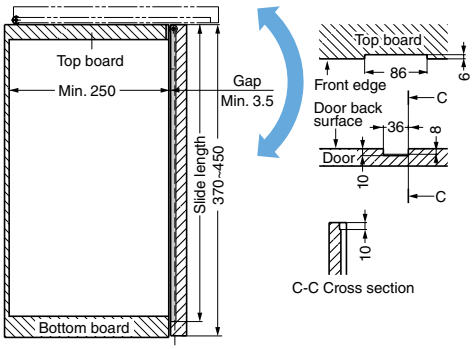
Video Link



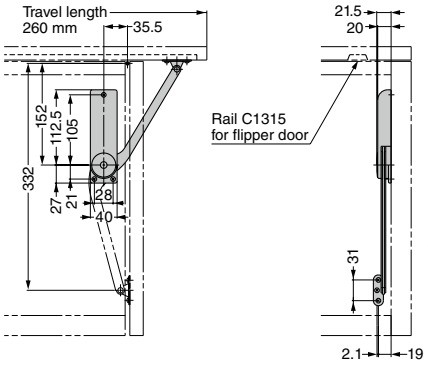


[Cut Out Dimensions]

Cabinet cutaway view



Cabinet front



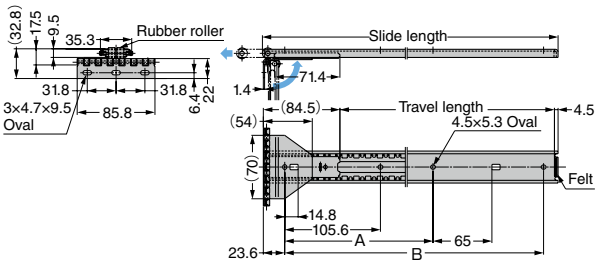
- Left is the installation drawing when the travel length of rail C1315-14 is 260mm. Installation position changes with the travel length of rail.

[Body] 1 pair

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Door Weight kg	Door Width	Door Height	Door Thickness	Weight (g)	Box (sets)	Carton (sets)
–	3D	180-091-040	OVN-3	ABS/ Steel	Nickel/Black	3~5	Max. 1500	370~450	Min. 15	510	1	1
–	3D	180-100-007	OVN-5			5~7				510	1	1

[C1315 Rail] Sold Separately





RoHS	CAD	Item Code	Item Name	Material	Finish	Slide Length	Travel Length	A	B	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	–	190-113-849	C1315-14	Steel	Clear Zinc Chromate (Trivalent)	350	260	186.7	310.5	320	20	–
G	–	190-113-850	C1315-18			450	360	286.7	410.5	390	20	–

When using OVN, two rails for flipper door are required. Select required rails depending on travel length.
Refer to 1 : P.207

OVER THE TOP FLIPPER DOOR MECHANISM (W/ SOFT CLOSING) OV-1

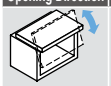
Lapcon INSTRUCTION VIDEO









Opening Direction	Description	Door Width	Door Height	Door Thickness	Door Weight
 Over the Top	Soft-close	700~1400	350~450	Min. 20	3~5 kg

- Patented Lapcon technology provides a smooth and quiet motion.
- Prevents from slamming shut.
- Adjustable closing speed.

[Remarks]

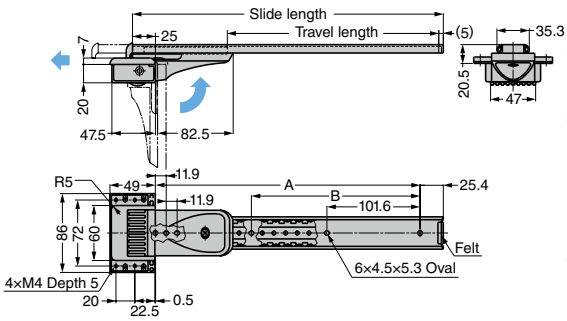
- 2 pcs of OV1-MBP-BL-TRN-N2 (Main body) and 2 pcs of OV-SLP RN (Rail) are necessary for 1 cabinet.

[Parts Included]

- Installation plate (4 pcs)
- Countersunk head screw M4×26 for wooden door (8 pcs)
- Binding head screw M4×8 for metal door (8 pcs)
- Binding head tapping screw 4×10 for rail installation (12 pcs)

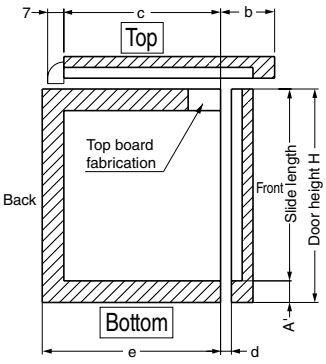
Video Link

[Installation Plate]

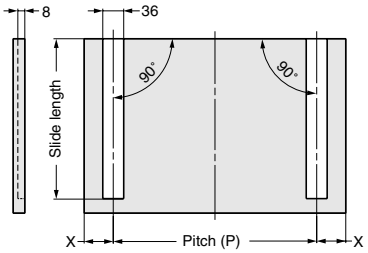


[Cut Out Dimensions]

Cabinet dimensions

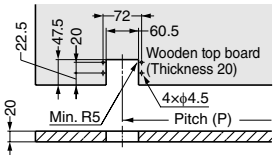


Door fabrication

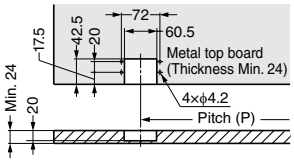


Top board fabrication

(Wooden panel)



(Sheet metal)



	b	c	d	e
Wooden Top Board	A'+81.4	H-b	2.5	Min. c+7
Metal Top Board	A'+86.4		7.5	

	X
Inset Application	80
Overlay Application	Side Board Thickness+80

[Main Body] 2 pcs are necessary for 1 cabinet.

RoHS	CAD	Item Code	Item Name	Material	Colour	Door Width	Door Height	Door Thickness	Door Weight kg	Torque Moment N·m	Torque Moment kgf·cm	Weight (g)	Carton (pcs)
–	3D	180-109-206	OV1-MBP-BL-TRN-N2	Steel & Plastic	Black	700~1400	350~450	Min. 20	3~5	5.9~9.8	60~100	282	40

[Rail] 2 pcs are necessary for 1 cabinet.

RoHS	CAD	Item Code	Item Name	Material	Finish	Slide Length	Travel Length	A	B	Weight (g)	Carton (pcs)
–	–	190-119-672	OV-13 SLP RN	Steel	Clear Zinc Chromate	330.2	223.8	279.4	177.8	270	20
–	–	190-119-673	OV-14 SLP RN			355.6	249.2	304.8	203.2	287	20
–	–	190-119-674	OV-15 SLP RN			381	274.6	330.2	228.6	310	20
–	–	190-119-675	OV-16 SLP RN			406.4	300	355.6	254	322	20

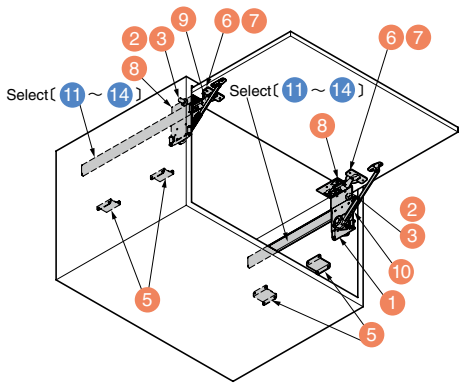
INSET RECEDING DOOR MECHANISM (W/ SOFT CLOSING) IF

Lapcon INSTRUCTION VIDEO



Opening Direction	Item Name	Description	Door Width	Door Thickness	Maximum Door Moment
Over the Top	IF-102S (L/R)	Soft-close	Max. 1200	15~20	1.96~6.86 N・m/2 pcs (20~70 kgf・cm/2 pcs)
	IF-102W				3.92~13.72 N・m/2 pcs (40~140 kgf・cm/2 pcs)
	IF-H102S (L/R)			18~30	1.96~6.86 N・m/2 pcs (20~70 kgf・cm/2 pcs)
	IF-H102W				3.92~13.72 N・m/2 pcs (40~140 kgf・cm/2 pcs)

※The circled numbers shown below are part numbers. Please check with the parts list 1.



- ⑤ shown above is guard plate for preventing storage articles from contacting brackets and others.
- ⑦ is included in parts set d e f 1. ⑥ concealed hinge in d e f is not used.

- Patented Lapcon mechanism controls door opening and closing softly and smoothly.
- Prevents from slamming shut.
- Stores the door horizontally on the underside of cabinet top board.

[Specifications]

- Operating temperature: 0℃~40℃

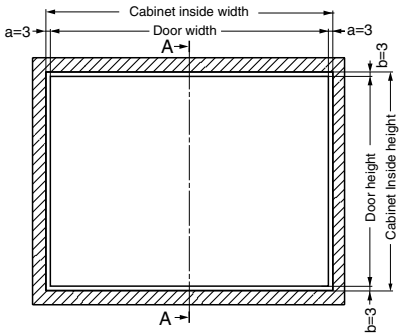
[Remarks]

- Ensure that the door centre of gravity is at the centre of door.
- When closing door, fully pull the door out first. Otherwise, it may cause a malfunction.

Video Link

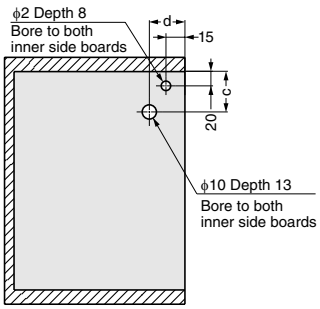
[Cut Out Dimensions]

Cabinet front

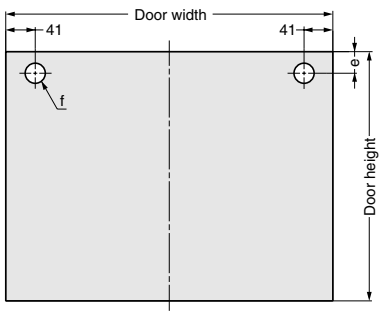


a: Clearance in the width direction (3 mm)
b: Clearance in the height direction (3 mm)

Cabinet cutaway view (A-A)



Door cut out dimensions

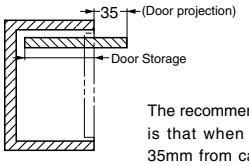


Item Name	c	d	e	f
IF-102SL	37.5	9.5+Door Thickness	22.5	ϕ35 Depth 11
IF-102SR				
IF-102W				
IF-H102SL	43.6		25	ϕ40 Depth 15
IF-H102SR				
IF-H102W				

[Door Storage and Recommended Door Height]

Item Name / Rail	Door Storage		Recommended Door Height	
	IF-102SL IF-102SR IF-102W	IF-H102SL IF-H102SR IF-H102W	IF-102SL IF-102SR IF-102W	IF-H102SL IF-H102SR IF-H102W
AL-78-14	263.7+Door Thickness	260.9+Door Thickness	298.7+Door Thickness	295.9+Door Thickness
AL-78-16	314.5+Door Thickness	311.7+Door Thickness	349.5+Door Thickness	346.7+Door Thickness
AL-78-19	390.7+Door Thickness	387.9+Door Thickness	425.7+Door Thickness	422.9+Door Thickness
AL-78-24	517.7+Door Thickness	514.9+Door Thickness	552.7+Door Thickness	549.9+Door Thickness

Refer to 1 : P.283



The recommended door height is that when door protrudes 35mm from cabinet with door stored as shown on the left.

When ordering IF ●Necessary Parts ..... Parts Set + Rails

Parts Set

Necessary parts. (See page 1 for details about dimensions and description of each part in the parts set)

Refer to "[Cut Out Dimensions]" and "[Door Storage and Recommended Door Height]" in the page 2 and order the necessary parts set.

Item Code	Item Name	Parts Included									
		1 Bracket	2 Roller	3 Insert	4 Slider	5 Guard Plate	6 Hinge 230-C26/19T	7 Hinge H230-C26/26T	8 Mounting Plate	9 Soft-down Stay (Left-handed)	10 Soft-down Stay (Right-handed)
											
a – 3D 180-122-081	IF-102SL	2 pcs	2 pcs	2 pcs	2 pcs	4 pcs	2 pcs	–	2 pcs	1 pc	–
b – 3D 180-122-082	IF-102SR									–	1 pc
c – 3D 180-122-083	IF-102W									1 pc	1 pc
d – 3D 180-122-084	※IF-H102SL	2 pcs	2 pcs	2 pcs	2 pcs	4 pcs	2 pcs	2 pcs	2 pcs	1 pc	–
e – 3D 180-122-085	※IF-H102SR									–	1 pc
f – 3D 180-122-086	※IF-H102W									1 pc	1 pc

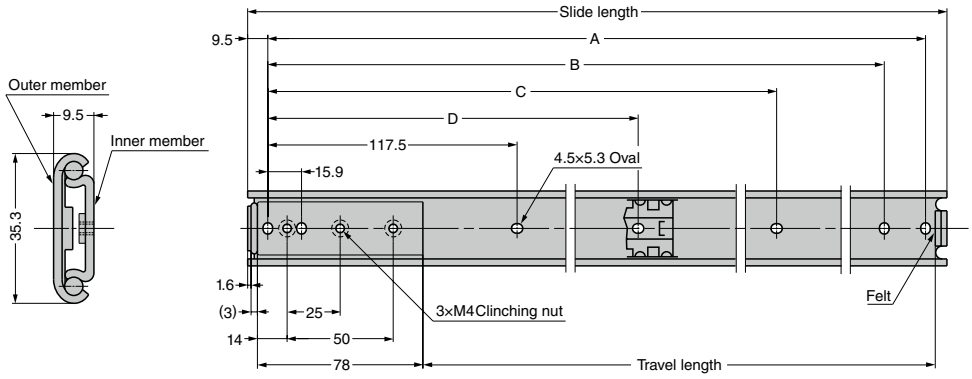
※Please use 7 concealed hinge H230-C26/26T (φ40) only. (Do not use 6 concealed hinge 230-C26/19T (φ35)).

Rails

Necessary Parts.

2 pcs are necessary for 1 cabinet. Please refer to the figure below and order the necessary rails.

No.	Slide Length	RoHS	CAD	Item Code	Parts Name	Description
11	Slide Length 355.6 mm	G	3D	190-113-945	Rail 	●Material Steel ●Finish Clear Zinc Chromate
				AL-78-14		
12	Slide Length 406.4 mm	G	3D	190-113-942		
				AL-78-16		
13	Slide Length 482.6 mm	G	3D	190-113-943		
				AL-78-19		
14	Slide Length 609.6 mm	G	3D	190-113-944		
				AL-78-24		

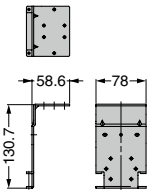
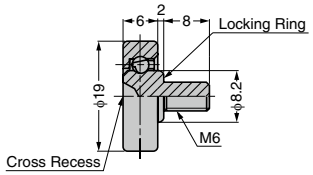
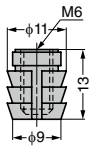
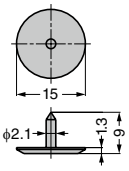
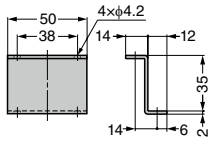
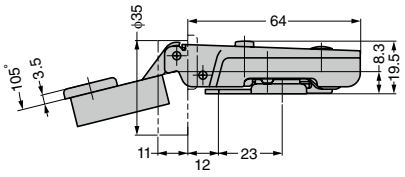
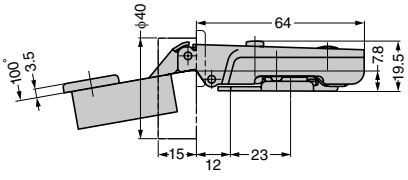


Item Name	Slide Length	Travel Length	A	B	C	D	Weight (g)
AL-78-14	355.6	267.6	336.6	320.7	219.1	–	–
AL-78-16	406.4	318.4	387.4	371.5	269.9		280
AL-78-19	482.6	394.6	463.6	447.7	346.1	231.8	350
AL-78-24	609.6	521.6	590.6	574.7	473.1	295.3	420

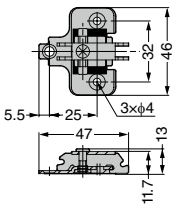
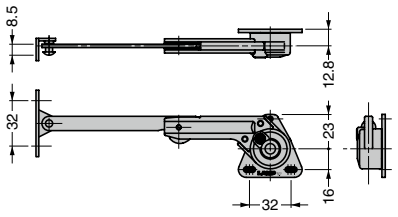
Refer to 1 : P.284, 2 : P.282

IF Parts Included

All parts except rails for item codes in 1 are in a set.

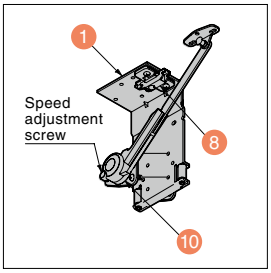
No.	Qty a	Qty b	Qty c	Qty d	Qty e	Qty f	Parts Name	Dimensions	Description
1	2 pcs			2 pcs			Bracket (For IF) 		●Material Steel ●Finish Clear Zinc Chromate
2	2 pcs			2 pcs			Roller 		Item Code : 210-140-587 Item Name : DR-19-B2 ●Material POM ●Colour Natural
3	2 pcs			2 pcs			Insert 		Item Code : 120-041-310 Item Name : SC-107-13 ●Material PA ●Colour White
4	2 pcs			2 pcs			Slider 		Item Code : 210-030-122 Item Name : F-15 ●Material POM ●Colour Natural
5	4 pcs			4 pcs			Guide Plate 		●Material Stainless Steel (SUS430) ●Finish Satin
6	2 pcs			2 pcs			Concealed Hinge (Body) 		Item Code : 160-070-033 Item Name : 230-C26/19T ●Material Steel ●Finish Nickel
7	–			2 pcs			Concealed Hinge (Body) For Thick Door 		Item Code : 160-079-410 Item Name : H230-C26/26T ●Material Steel ●Finish Nickel

Refer to 1 : P.283

No.	Qty a	b	c	d	e	f	Parts Name	Dimensions	Description
⑧	2 pcs			2 pcs			Mounting Plate 		Item Code : 160-070-041 Item Name : 230-P4W-32T ●Material Steel ●Finish Nickel
⑨	1 pc	–	1 pc	1 pc	–	1 pc	Soft-down Stay 		⑨Left-handed Item Code : 180-100-071 Item Name : NSDX-35LK ⑩Right-handed Item Code : 180-100-072 Item Name : NSDX-35RK ●Material Steel ●Finish Nickel
⑩	–	1 pc	1 pc	–	1 pc	1 pc			

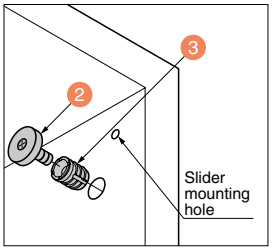
[Installation]

※The circled numbers are part numbers. Refer to the parts included 1 .



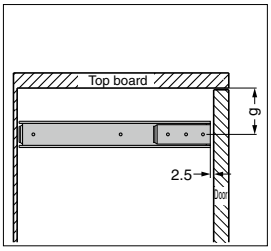
●Bracket assembling

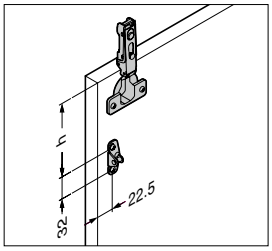
As shown left, use supplied mounting screws M4×8 and M3.5×6 to install the main body of soft-down stay NSDX-35(L/R) and mounting plate ⑧ (230-P4W-32T) to bracket ①, respectively.



●Parts installation to cabinet

Drive F type slider ④ (F-15) and insert ③ (SC-107-13) into mounting holes on the inner surface of cabinet side panel, respectively. Next, screw bearing roller ② (DR-19-B2) into the insert.





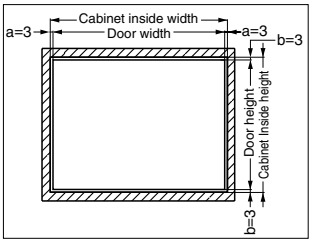
Item Name	g	h
IF-102SL	66.5	84
IF-102SR		
IF-102W		
IF-H102SL	71.5	82
IF-H102SR		
IF-H102W		

●Rail installation

Install rail at the position shown left. (Dimensions is the distance of the first hole)

●Parts installation to door

Install concealed hinge with the supplied screws (raised countersunk head tapping screws 3.5×16).Next, install the door side mounting plate of soft-down stay NSDX-35(L/R) at the position shown left with the supplied screws.

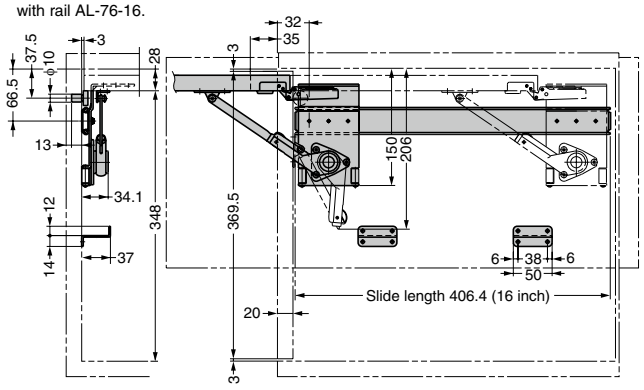


●How to adjust

1. When the door is installed to cabinet, if vertical dimensions of clearance (a) in opening direction and clearance (b) in height direction are different, make adjustment with the mounting plate adjustment screw of concealed hinge.
2. Door slowly closes under the action of soft-down stay. Adjust door closing speed with the speed adjustment screw of soft-down stay.

[Installation]

●Drawing below is an example of door thickness 20mm and using IF-102S in combination with rail AL-76-16.

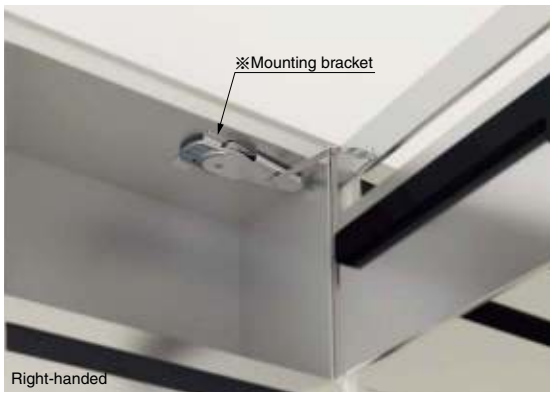


Refer to 1 : P.284~285

SUGATSUNE

SOFT-CLOSE STAY YMC DIGEST

Lapcon





Opening Direction	Description	Door Width	Door Weight
Swing Door	Soft-close	Max. 300	0.3~0.7 kg

- Suitable for small cabinets such as mailbox.
- Built-in damper realises gentle door closing.
- Slim design and top board mount type maximises space inside of the cabinet.
- Refer to 1 for details.

Refer to 1 : P.707

DISK DAMPER UDD DIGEST

Lapcon INSTRUCTION VIDEO

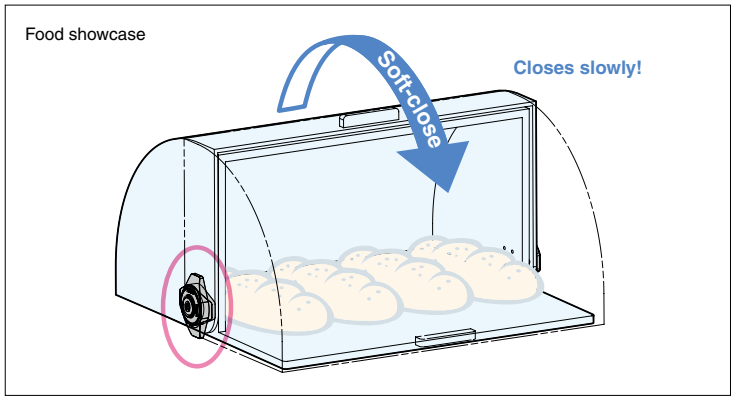


- Mounted at the rotation shaft of cover, etc.
- Simple design does not affect cabinet appearance.
- Ideal for food showcase, etc.
- Refer to 1 for details.

Video Link

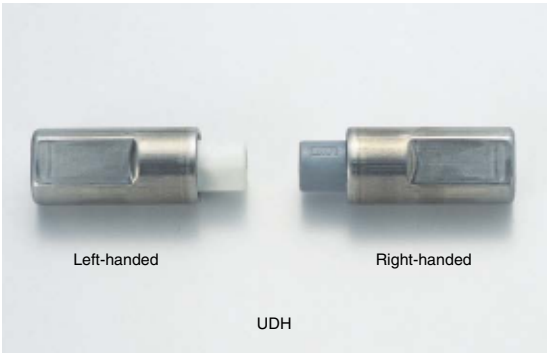
Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation. Available on Web!

[Application Example]



Refer to 1 : P.70

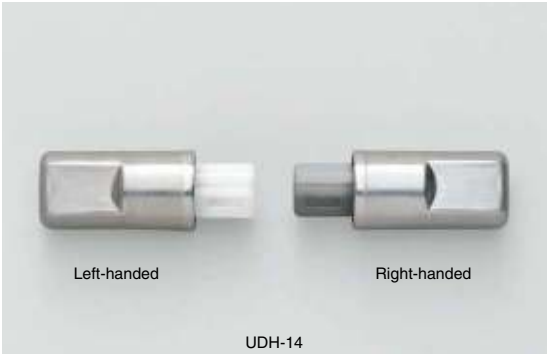
DAMPER HINGE UDH DIGEST



UDH

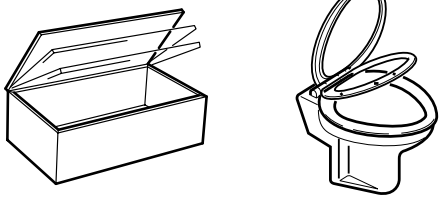
- Patented technology allows compact design.
- Can be detached as a single unit.
- Keeps lids / doors from slamming shut.
- Applicable to places with safety and motion quality requirements, also can effectively prevent noise and impact.
- Refer to 1 for details.

Video Link



UDH-14

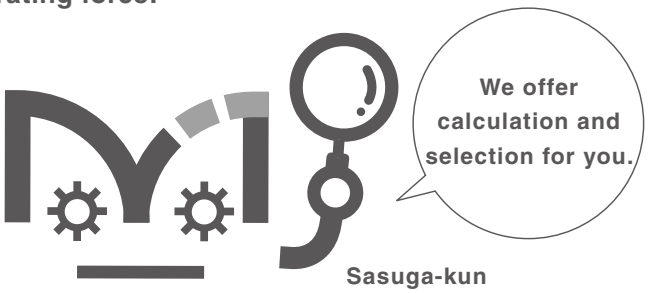
[Application Example]



Refer to 1 : P.66~68

Product Selection Tool Sasuga-kun

Just inputting the dimensions and weight of the flap/door, you can select suitable Motion Design Tech products or simulate (graphically display) moment and operating force.



Sasuga-kun

Access from here | Sasuga-kun | Search

http://www.sugatsune.co.jp/en/motion/selection/

FREE-STOP STAY (ONE WAY) S-TAR

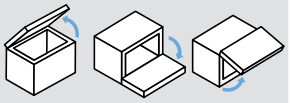
INSTRUCTION HEX KEY VIDEO



Right side installation for top-opening shown.


Picture above shows right side installation for downward-opening.


Picture above shows right side installation for upward-opening.

Opening Direction	Description	Torque
 Top-opening Downward-opening Upward-opening	Free stop	0~7 N・m (0~71 kgf・cm)

- Torque stay for upward-opening, downward-opening and top-opening.
- Free stop in any position when lifting up the door.
- Friction in one direction only, provides smooth opening.
- Optional mounting plates available. (Mounting plate, mounting plate for aluminium frame, and mounting plate for glass door)
- Torque adjustable with a hex key (included).

[Remarks]
- Be sure to read the "Cautions" 1.
- Refer to the graph 2 for applicable doors.
- Handed: Specific left and right-handed.
- Use S-TAR-2030 for upward-opening/top-opening and S-TAR-10 for downward-opening.
- For downward-opening, when placing objects or working on the surface of opened door, install a brace or reinforcement material to support the door in addition to the stay.
- When using 2 pcs, adjust free stop mechanisms evenly. Over loosening may cause free stop function failure.
- Without soft-close function.
- Install a catch (sold separately) to keep the door closed.

[Parts Included]
- Countersunk head tapping screw 4×20
- Binding head tapping screw 3.5×15
- Hex key 4
- Mounting plate

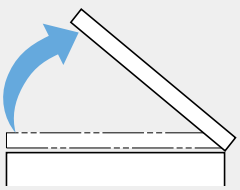
[Sold Separately]
- Mounting plate 3
- Face plate and spacer 4 for SDS glass door

Video Link

Selection Tool Sasuga-kun Applicable Products
Used for Product Selection & Simulation. Available on Web!

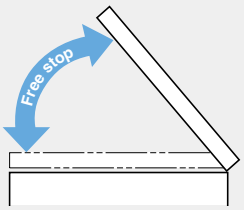
●One way torque

Door can be opened lightly by reducing unnecessary torque.



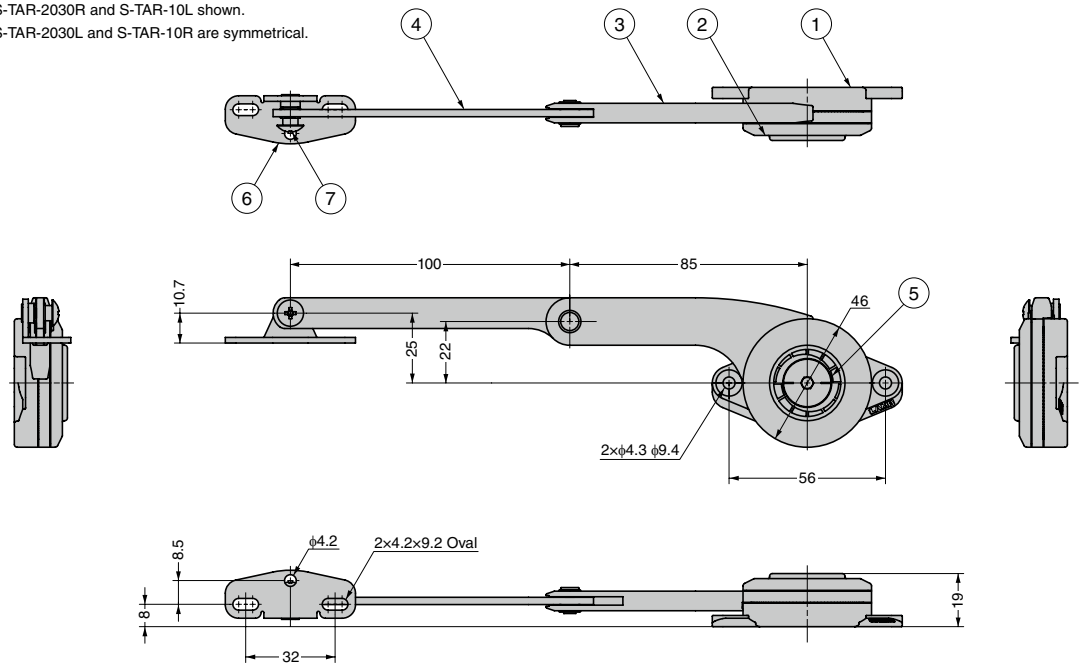
●Free stop

Door can be stopped in any position.



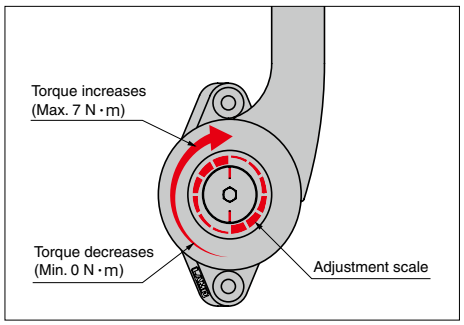
Refer to 1 : P.207, 2 : P.290~291, 3 4 : P.267

S-TAR-2030R and S-TAR-10L shown.
S-TAR-2030L and S-TAR-10R are symmetrical.



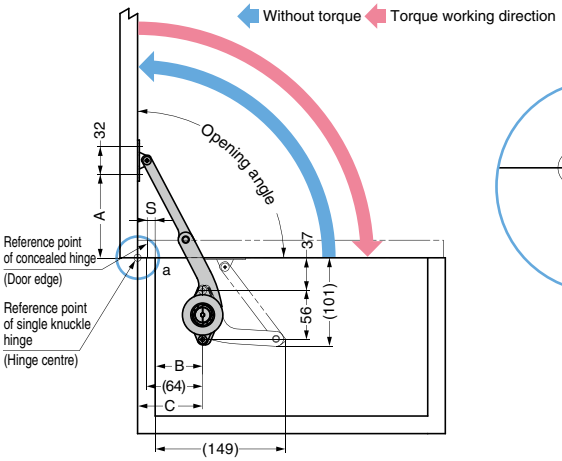
No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Nickel
②	Cover		
③	Root Arm		
④	Tip Arm	Steel (SPCC)	
⑤	Torque Adjustment Screw	Steel	
⑥	Mounting Plate	Steel (SPCC)	
⑦	Truss Head Screw	Steel	

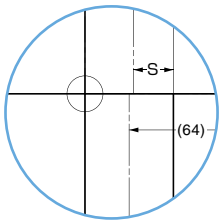
[How to Adjust Torque]



Adjustable with the supplied hex key.
By using adjustment scale, you can easily match the left torque with the right one when using 2 pcs.

[Installation (Top-opening)] For right side board

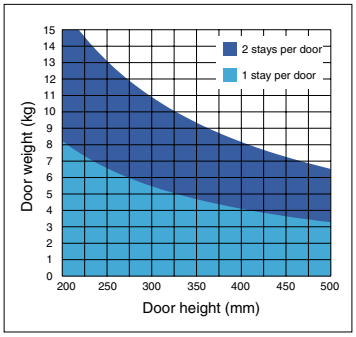




Detail a

S = Overlay by concealed hinge

[Door Size Ranges (Top-opening)]



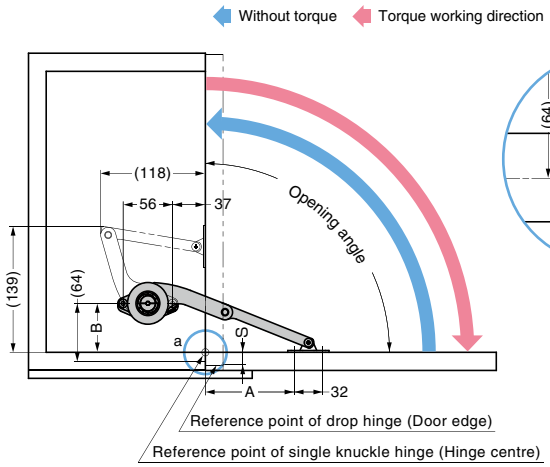
Hinge	Opening Angle	A	B	C
Concealed Hinge	70°	114	73-S	–
Concealed Hinge	90°	98		
Single Knuckle Hinge	70°	115	–	77
Single Knuckle Hinge	90°	93		

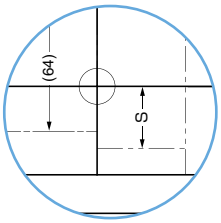
[Maximum Door Moment]

- With 1 stay
  Maximum door moment = Max. 8.1 N・m
- With 2 stays, the maximum door moment will be doubled.

Maximum door moment (N・m) = Door weight (kg) × 9.80665 × Distance from rotation centre to door centre of gravity (m)

[Installation (Downward-opening)] For right side board

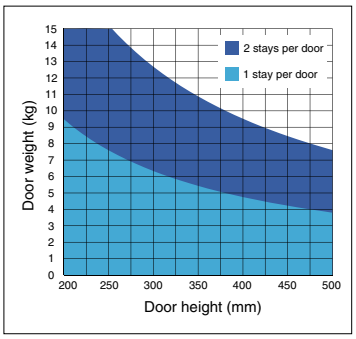




Detail a

S = Overlay by drop hinge

[Door Size Ranges (Downward-opening)]



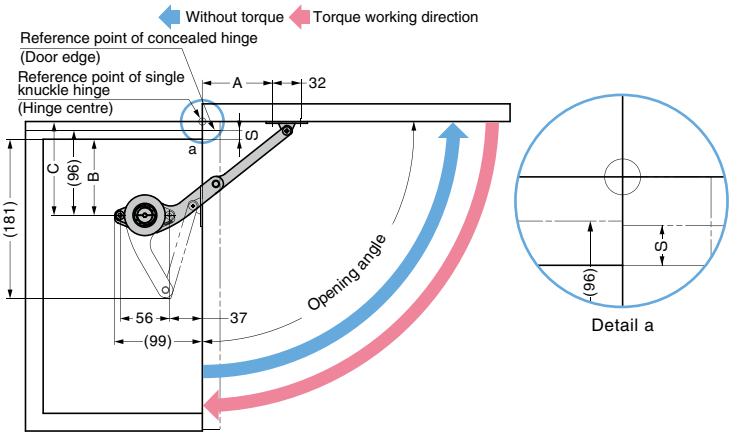
Hinge	Opening angle	A	B
Drop Hinge	90°	99	70-S
Single Knuckle Hinge		100	51

[Maximum Door Moment]

- With 1 stay
  Maximum door moment = Max. 9.3 N・m
- With 2 stays, the maximum door moment will be doubled.

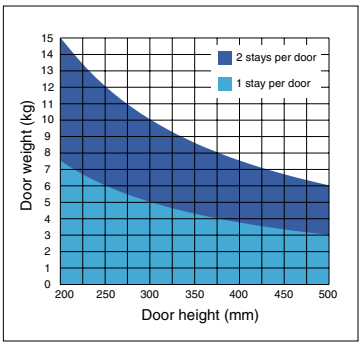
Maximum door moment (N・m) = Door weight (kg) × 9.80665 × Distance from rotation centre to door centre of gravity (m)

[Installation (Upward-opening)] For right side board



S = Overlay by concealed hinge

[Door Size Ranges (Upward-opening)]



Hinge	Opening Angle	A	B	C
Concealed Hinge	80°	98	105-S	–
Concealed Hinge	90°	88		
Concealed Hinge	100°	80		
Single Knuckle Hinge	80°	90	–	109
Single Knuckle Hinge	90°	77		
Single Knuckle Hinge	100°	66		

[Maximum Door Moment]

- With 1 stay
  Maximum door moment = Max. 7.4 N・m
- With 2 stays, the maximum door moment will be doubled.

Maximum door moment (N・m) = Door weight (kg) × 9.80665 × Distance from rotation centre to door centre of gravity (m)

[Body]

RoHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Type	Opening Direction	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-028-991	S-TAR-2030R	0~7	0~71	Right-handed	Upward-opening, Top-opening	234	20	40
G	3D	180-028-990	S-TAR-2030L			Left-handed			20	40
G	3D	180-028-993	S-TAR-10R			Right-handed	Downward-opening		20	40
G	3D	180-028-992	S-TAR-10L			Left-handed			20	40

[Mounting Plate] Sold Separately 2

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-460	NSDX-CZ	Clip-on	13	160	640
G	3D	180-109-019	NSDX-AZ	Clip-on for 20 mm Aluminium Frame Door	11	320	1280
G	3D	180-109-459	NSDX-GZ	Clip-on for Glass Door	14	160	640

[SDS Face Plate and Spacer for Glass Door] Sold Separately 1 **(Please use with mounting plate NSDX-GZ.)**

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-260	SDS-50G-CR	Zinc Alloy (ZDC)/ABS	Chrome/Black	26	50	200
G	3D	180-928-046	SDS-50G-BL		Black Enamel Finish	25	50	200

Refer to 1 2 : P.267

FREE-STOP STAY S-100T30

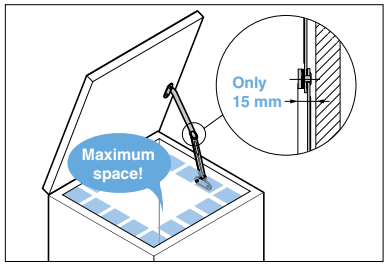
SUS VIDEO



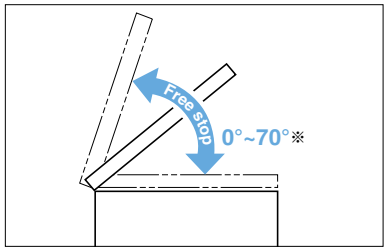
Picture above shows top-opening installation of S-100T30R (right-handed).



Picture above shows swing door installation of S-100T30R (right-handed).



Distance from the mounting surface to the disk surface of stay is only 15mm, maximising space inside of the cabinet.



※Opening angle changes depending on installation position.
(70° is for installation as per Fig.1)

Opening Direction	Torque
Top-opening Upward-opening Swing Door	$3^{\pm 20\%}$ N・m/pc ($30.6^{\pm 20\%}$ kgf・cm/pc)

●Disk structure that generates torque by the friction of metal plates is thin and space-saving, maximising space inside of the cabinet.

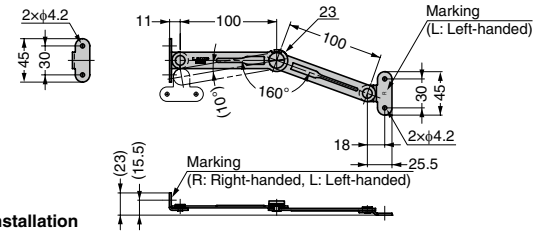
[Remarks]

●Do not operate continuously (repeatedly in a short time).
●Do not contact with water, oil and lubricant, etc.

[Example Chart for the Below Installation]

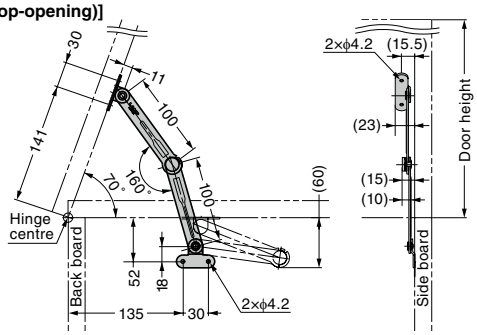
●Relations between door height and door weight for free stop are listed in the table below.
●The following table shows the values for installation as per Fig.1 and Fig. 2.For reference only.

Door height (door width for swing door)	Door Weight kg/pc	Door Weight kg/pair
200	Max. 3.9	Max. 7.8
250	Max. 3.1	Max. 6.2
300	Max. 2.6	Max. 5.2
350	Max. 2.2	Max. 4.4
400	Max. 1.9	Max. 3.8
450	Max. 1.7	Max. 3.4
500	Max. 1.5	Max. 3.0



[Right Side Installation (For Top-opening)]

Fig.1

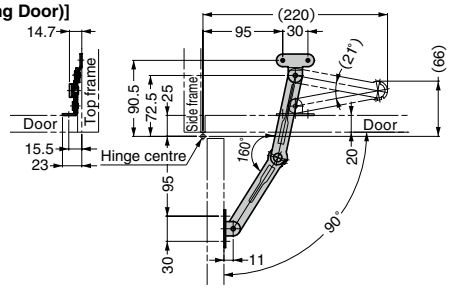


Video Link

Selection Tool
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Applicable Products
Used for Product Selection & Simulation. Available on Web!

[Right Side Installation (For Swing Door)]

Fig.2



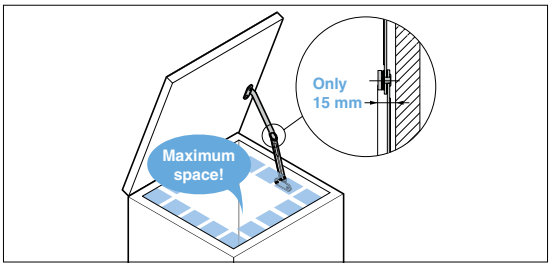
RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Torque N・m/pc	Torque kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-011-966	S-100T30R	Right-handed	Stainless Steel	Barrel Polished	$3^{\pm 20\%}$	$30.6^{\pm 20\%}$	100	30	120
G	3D	180-011-967	S-100T30L	Left-handed	(SUS430)					30	120

FREE-STOP STAY S-52T15

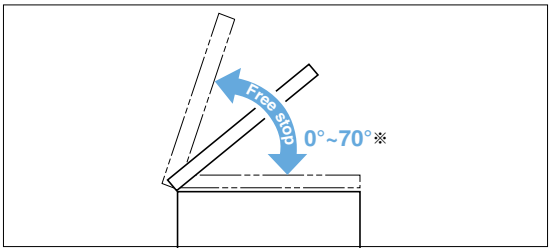
SUS



Picture above shows top-opening installation of S-52T15R (right-handed).



Distance from the mounting surface to the disk surface of stay is only 15mm, maximising space inside of the cabinet.



※Opening angle changes depending on installation position.
(70° is for installation as per Right)

Opening Direction	Torque
Top-opening, Downward-opening, Upward-opening, Swing Door	1.5±20% N・m/pc (15.3±20% kgf・cm/pc)

- Disk structure that generates torque by the friction of metal plates is thin and space-saving, maximising space inside of the cabinet.

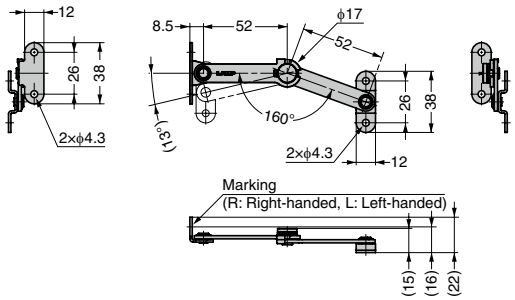
[Remarks]

- Do not operate continuously (repeatedly in a short time).
- Do not contact with water, oil and lubricant, etc.

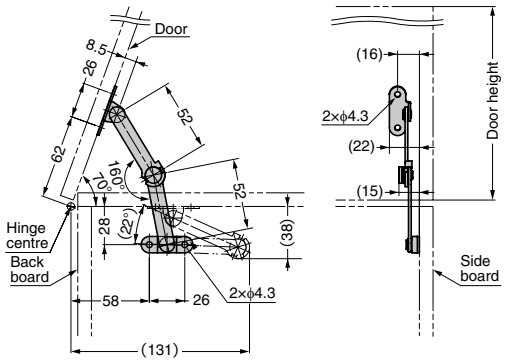
[Example Chart for the Below Installation]

- Relations between door height and door weight for free stop are listed in the table below.
- The following table shows the values for installation below. For reference only.

Door Height	Door Weight kg/pc	Door Weight kg/pair
200	Max. 1.8	Max. 3.6
250	Max. 1.4	Max. 2.8
300	Max. 1.2	Max. 2.4
350	Max. 1.0	Max. 2.0
400	Max. 0.9	Max. 1.8



[Right Side Installation (For Top-opening)]

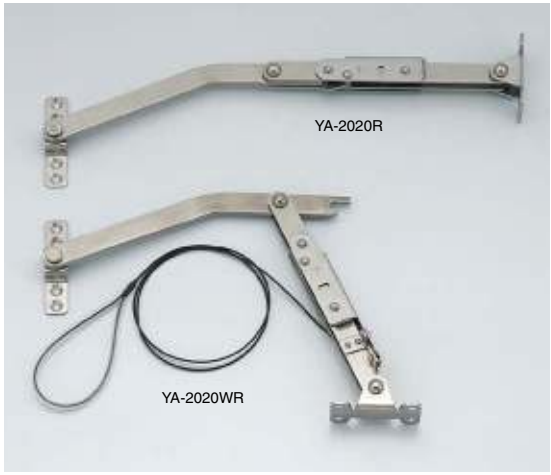


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Available on Web!

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Torque N・m/pc	Torque kgf・cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-023-579	S-52T15R	Right-handed	Stainless Steel (SUS430)	Barrel Polished	1.5±20%	15.3±20%	40	25	200
G	3D	180-023-580	S-52T15L	Left-handed						25	200

DOOR HOLDER YA-2020, YA-2020W

TEST METHOD 15 TEST METHOD 16 SUS



Opening Direction	Item Name	Description	Lock Release Part	Tension Force	Compression Load
Top-opening	YA-2020 (R/L)	Locks When Fully Opened	Grip	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)
Upward-opening	YA-2020W (R/L)	Keeps Unlocked	Wire		
Swing Door					

- Automatically locks door when fully opened.
- Slide the grip (see part ③ in the figure below) to release the lock. Slide the grip to the end to remain unlocked.
- Safe and reliable operation without closing the door while releasing the lock.
- Indicator turns red when locked.
- YA-2020W (R/L) (with lock release wire) available for tall application.
- Possible to use 2 pcs (left and right) for top-opening door and upward-opening door.

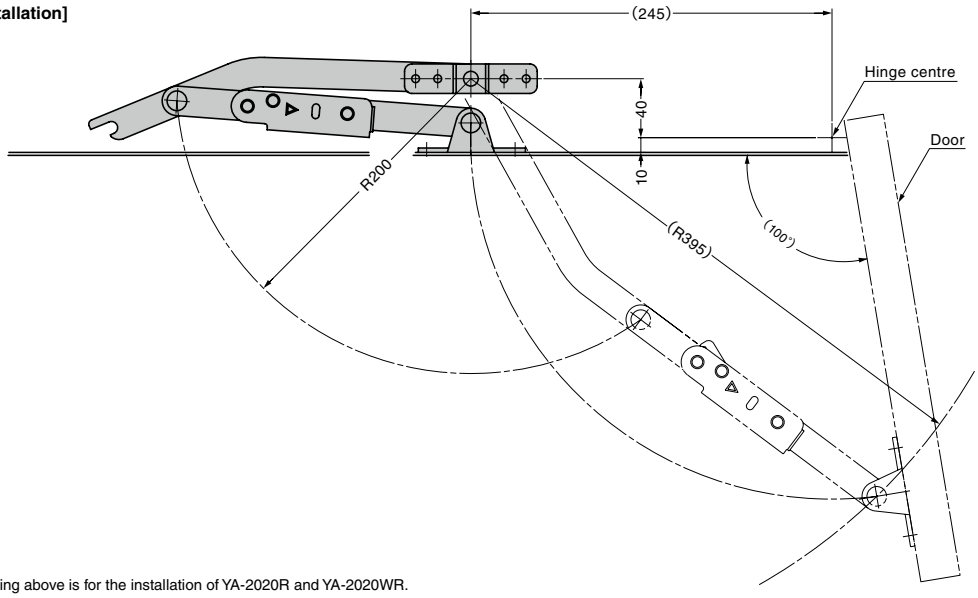
[Remarks]

- Release the lock while supporting the door.
- Opening angle and installation position change depending on the position of hinge centre.
  Determine the installation position based on the hinges used and cabinet shape.

[Application Example]



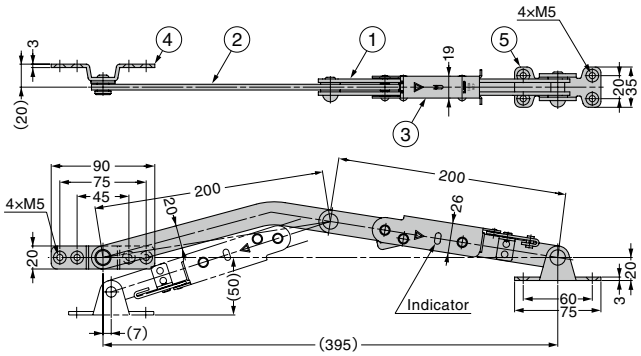
[Installation]



Drawing above is for the installation of YA-2020R and YA-2020WR.
This drawing shows the right-handed type seen from above. Left-handed type is symmetrical.

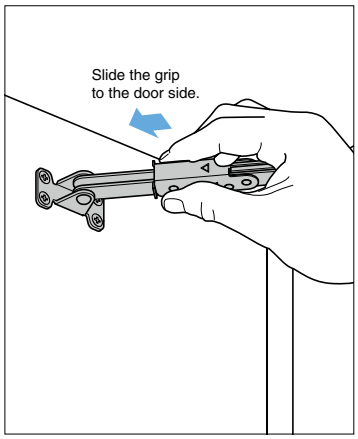
DOOR HOLDER YA-2020 Without Wire

TEST METHOD 15 TEST METHOD 16 SUS



Right-handed type shown. Left-handed type is symmetrical.

[Lock Release with Grip]

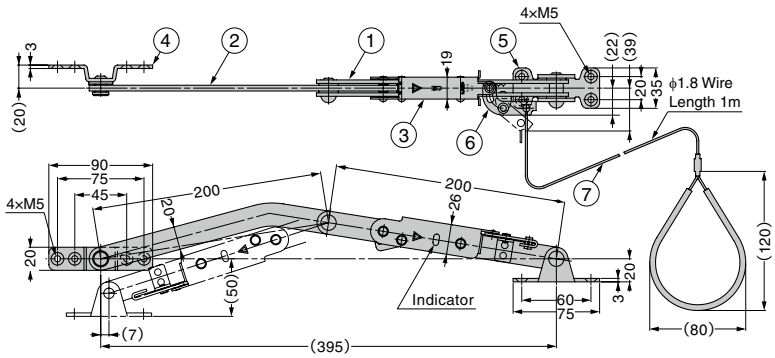


No.	Part Name	Material	Finish
①	Outer Plate	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Slide Grip		
④	Arm Bracket		
⑤	Base Bracket		

RoHS	CAD	Item Code	Item Name	Type	Tension Force N	Tension Force kgf	Compression Load N	Compression Load kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-200	YA-2020R	Right-handed	1470	150	588	60	630	4	16
G	3D	180-100-201	YA-2020L	Left-handed						4	16

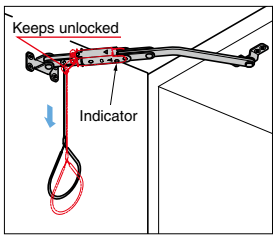
DOOR HOLDER YA-2020W With Wire

TEST METHOD 15 TEST METHOD 16 SUS



Right-handed type shown. Left-handed type is symmetrical.

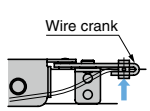
[Lock Release with Wire]



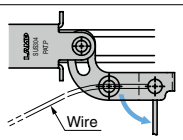


No.	Part Name	Material	Finish
①	Outer Plate	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Slide Grip		
④	Arm Bracket		
⑤	Base Bracket		
⑥	Wire Crank		
⑦	Wire	Stainless Steel (SUS304), PA	–

[How to Install Wire] ※ Already installed in the stay.



①Push the wire in from the slit on the back side of wire crank.



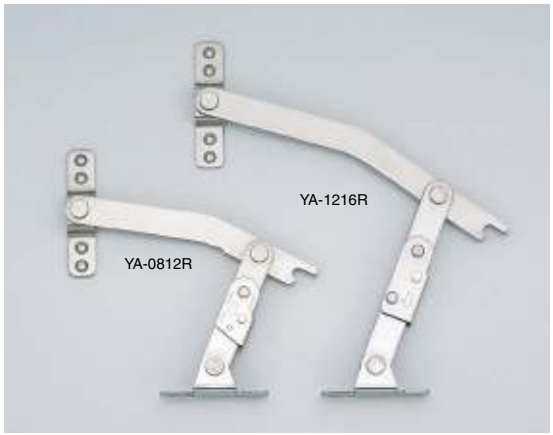
②Rotate the wire about 90° while the slit is pushed in..

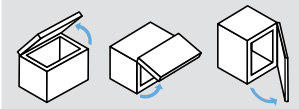
RoHS	CAD	Item Code	Item Name	Type	Tension Force N/pc	Tension Force kgf/pc	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-202	YA-2020WR	Right-handed	1470	150	588	60	650	4	16
G	3D	180-100-203	YA-2020WL	Left-handed						4	16

SUGATSUNE

DOOR HOLDER YA-0812, YA-1216

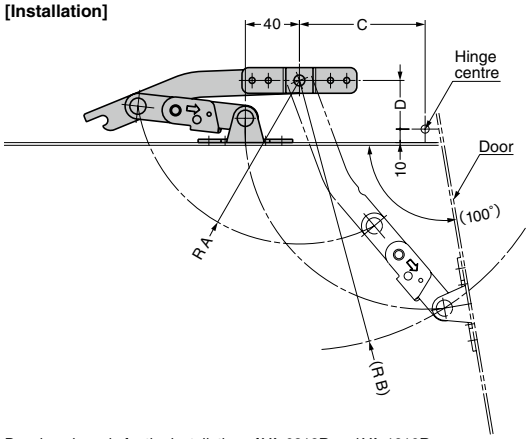
AS SUS



Opening Direction	Description	Lock Release Part	Tension Force	Compression Load
 Top-opening Upward-opening Swing Door	Locks When Fully Opened Keeps Unlocked	Grip	–	–

- Automatically locks door when fully opened.
- Slide the grip (see part ③ in the figure below) to release the lock. Slide the grip to the end to remain unlocked.
- Safe and reliable operation without closing the door while releasing the lock.
- Possible to use 2 pcs (left and right) for top-opening door and upward-opening door.
- AS parts set 1 for installing to aluminium frame also available.

[Installation]

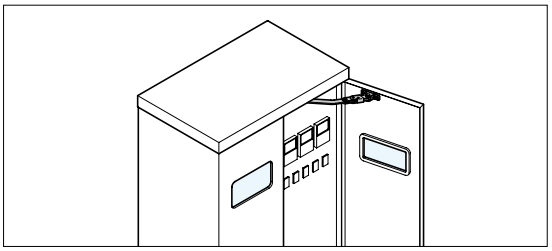


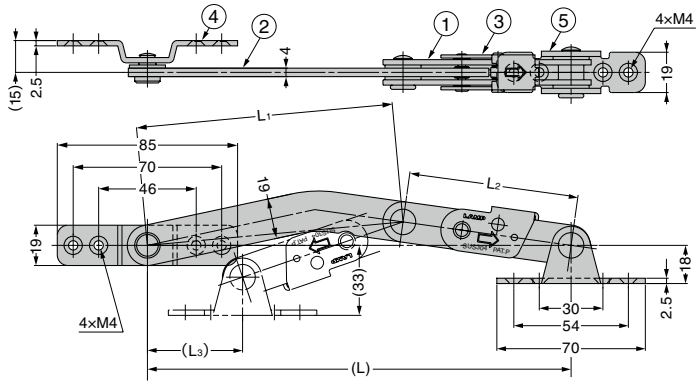
Drawing above is for the installation of YA-0812R and YA-1216R.
This drawing shows the right-handed type seen from above. Left-handed type is symmetrical.

[Remarks]

- Release the lock while supporting the door.
- Opening angle and installation position change depending on the position of hinge centre.
  Determine the installation position based on the hinges used and cabinet shape.

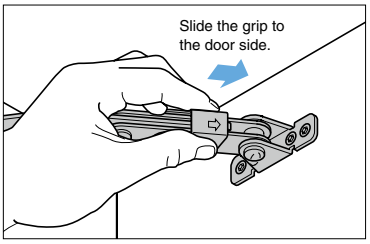
[Application Example] Right-handed





Right-handed type shown. Left-handed type is symmetrical.

[Lock Release]



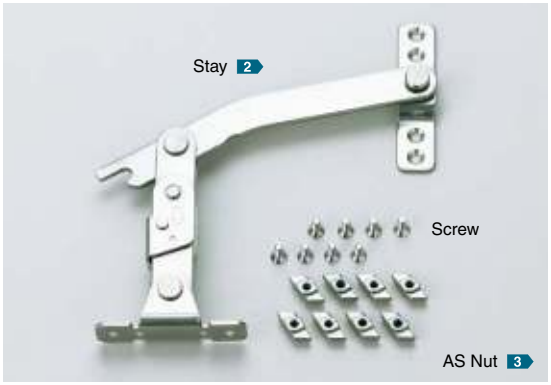
No.	Part Name	Material	Finish
①	Outer Plate	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Slide Grip		
④	Arm Bracket		
⑤	Base Bracket		

RoHS	CAD	Item Code	Item Name	Type	L	L_1	L_2	L_3	A	B	C	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-205	YA-0812L	Left-handed	200	121	80	45	121	200	93	36	275	5	30
G	3D	180-100-204	YA-0812R	Right-handed										5	30
G	3D	180-100-199	YA-1216L	Left-handed	280	161	120	44	161	280	145	40	340	5	30
G	3D	180-100-198	YA-1216R	Right-handed										5	30

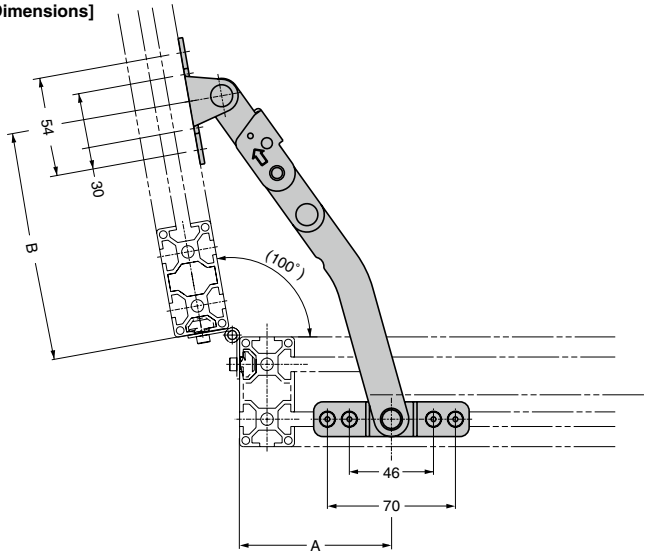
Refer to 1 : P.297

AS Parts Set for Installing to Aluminium Frame

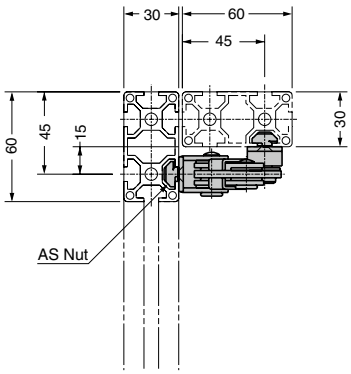
Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



Side view in closed state



[AS Parts Set] Parts set of screws and AS nuts

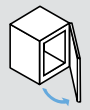
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	180-041-617	AS-YA-0812L-30-6	Groove Width 6 mm	YA-0812L (Left-handed) : 1 pc AS Nut AS-6M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-618	AS-YA-0812R-30-6		YA-0812R (Right-handed) : 1 pc AS Nut AS-6M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-619	AS-YA-0812L-30-8	Groove Width 8 mm	YA-0812L (Left-handed) : 1 pc AS Nut AS-8M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-620	AS-YA-0812R-30-8		YA-0812R (Right-handed) : 1 pc AS Nut AS-8M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-621	AS-YA-1216L-30-6	Groove Width 6 mm	YA-1216L (Left-handed) : 1 pc AS Nut AS-6M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-622	AS-YA-1216R-30-6		YA-1216R (Right-handed) : 1 pc AS Nut AS-6M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-623	AS-YA-1216L-30-8	Groove Width 8 mm	YA-1216L (Left-handed) : 1 pc AS Nut AS-8M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–
G	–	180-041-624	AS-YA-1216R-30-8		YA-1216R (Right-handed) : 1 pc AS Nut AS-8M4 : 8 pcs Hexagon Socket Countersunk Head Screw M4×10 : 8 pcs	–

Refer to 1 : FRONT P.20, 2 : P.296, 3 : P.706

FOOT STAY YF-300W Two-angle Lock

TEST METHOD 15 | TEST METHOD 16 | L=R



Opening Direction	Description	Lock Release Part	Tension Force	Compression Load
 Swing Door	Two-angle Lock	Body (Lifting with Foot)	1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)

- Locks the door at two angles: 85° and 110° (fully opened).
- Simply lift the stay with foot toe to release the lock.
- Non-handed: Can be installed on left or right side.
- Designed for bottom mount.
  (Vertical use not allowed)

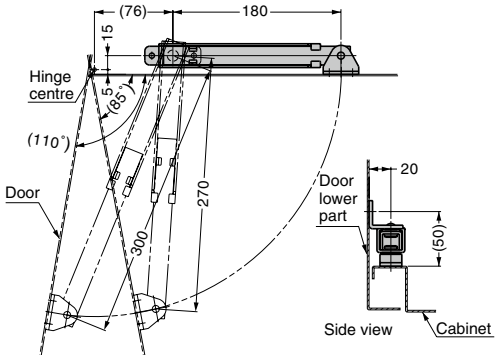
[Applications]

- Switch board, communication equipment, control panel, various display boards, etc.

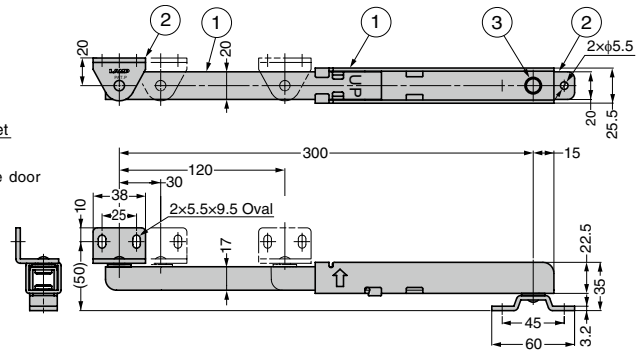
[Remarks]

- Release the lock while supporting the door.
- Do not step on the stay.
- Open or close the door slowly. Quick opening operation may not lock the door.
- Opening angle and installation position change depending on the position of hinge.

[Installation]



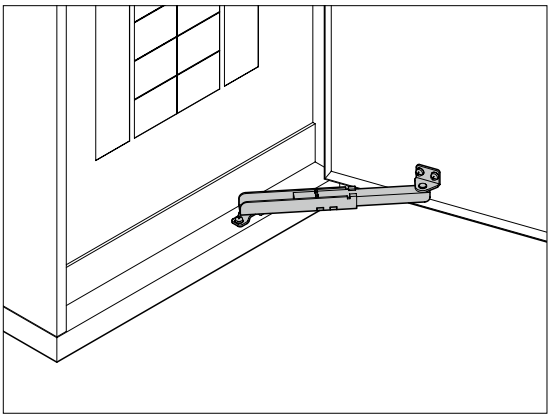
- Drawing above shows the state where the stay is installed to the door bottom, seeing the door from above.



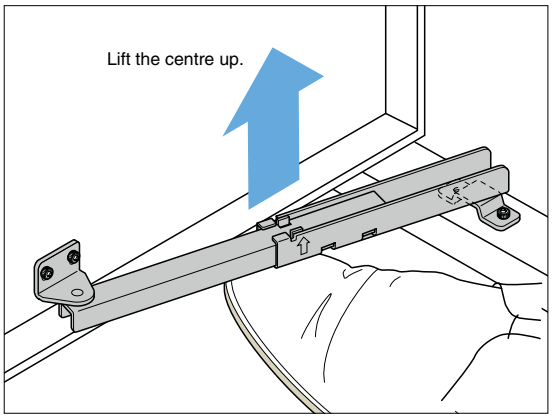
No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
②	Bracket		
③	Shaft	Stainless Steel (SUS304)	–

RoHS	CAD	Item Code	Item Name	Tension Force N/pc	Tension Force kgf/pc	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-158	YF-300W	1470	150	588	60	435	5	30

[Application Example]



[Lock Release]



FOOT STAY YF-200, YF-300, YF-300-T50

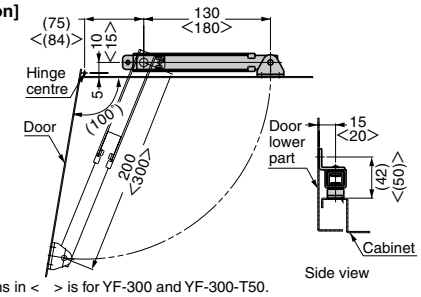
TEST METHOD 15 | TEST METHOD 16 | AS | L=R



Opening Direction	Item Name	Description	Lock Release Part	Tension Force	Compression Load
Swing Door	YF-200	Locks When Fully Opened	Body (Lifting with Foot)	882 N/pc (90 kgf/pc)	490 N/pc (50 kgf/pc)
	YF-300			1470 N/pc (150 kgf/pc)	588 N/pc (60 kgf/pc)

- Automatically locks door when fully opened.
- Simply lift the stay with foot toe to release the lock.
- Non-handed: Can be installed on left or right side.
- Designed for bottom mount. (Vertical use not allowed)
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.

[Installation]



※Dimensions in < > is for YF-300 and YF-300-T50.

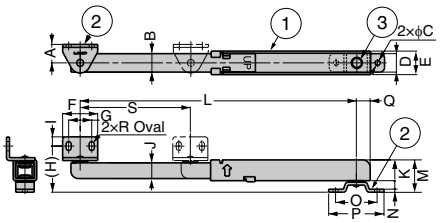
- Drawing above shows the state where the stay is installed to the door bottom, seeing the door from above.

[Applications]

- Switch board, communication equipment, control panel, various display boards, etc.

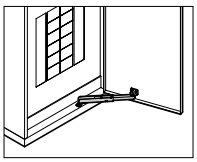
[Remarks]

- Release the lock while supporting the door.
- Do not step on the stay.
- Opening angle and installation position change depending on the position of hinge.

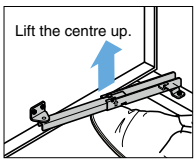


No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
②	Bracket		
③	Shaft	Stainless Steel (SUS304)	–

[Application Example]



[Lock Release]

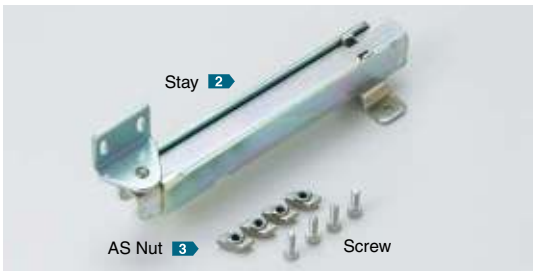


Item Name	L	S	A	B	C	D	E	F	G	H	I	J	K	M	N	O	P	Q	R
YF-200	200	70	15	15.9	5.5	17	20	33	20	42	8	15.7	20	30	2.3	35	50	10	5.5×8
YF-300	300	120	20	20		20	25.5	38	25	50	10	17	22.5	35	3.2	45	60	15	5.5×9.5
YF-300-T50					9											50	72		

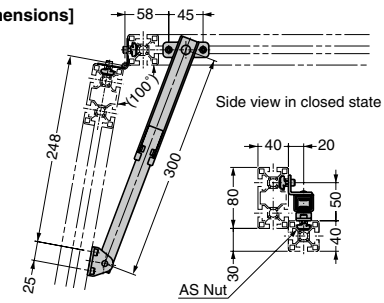
RoHS	CAD	Item Code	Item Name	Tension Force N/pc	Tension Force kgf/pc	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-090	YF-200	882	90	490	50	198	10	100
G	3D	180-100-157	YF-300	1470	150	588	60	438	5	30
G	3D	180-100-159	YF-300-T50					476	5	30

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



[AS Parts Set] Parts set of screws and AS nuts

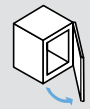
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	180-041-625	AS-YF-300-30-8	Groove Width 8 mm	YF-300 : 1 pc AS Nut AS-8M5 : 4 pcs Hexagon Socket Head Cap Screw M5×14 : 4 pcs	–
G	–	180-041-626	AS-YF-300-30-10	Groove Width 10 mm	YF-300 : 1 pc AS Nut AS-10M5 : 4 pcs Hexagon Socket Head Cap Screw M5×14 : 4 pcs	–

Refer to 1 : FRONT P.20, 2 : P.299, 3 : P.706

FOOT STAY YFNS-300W Two-angle Lock

Under Development | TEST METHOD 15 | TEST METHOD 16 | L=R



Opening Direction	Description	Lock Release Part	Tension Force	Compression Load
 Swing Door	Two-angle Lock	Body (Lifting with Foot)	–	–

- Locks the door at two angles: 85° and 110° (fully opened).
- Simply lift the stay with foot toe to release the lock.
- Non-handed: Can be installed on left or right side.
- Designed for bottom mount. (Vertical use not allowed)

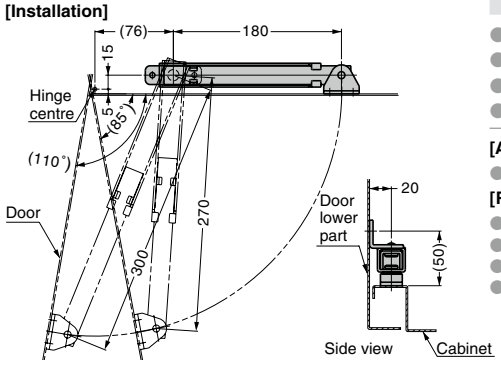
[Applications]

- Switch board, communication equipment, control panel, various display boards, etc.

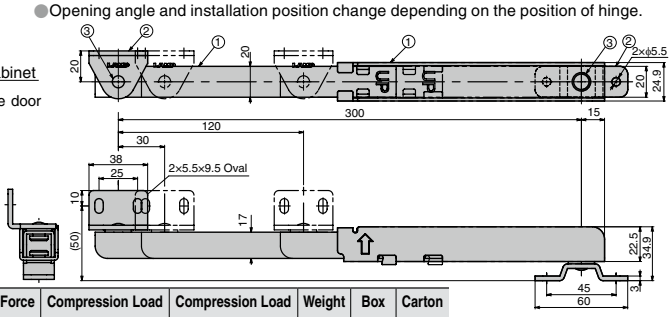
[Remarks]

- Release the lock while supporting the door.
- Do not step on the stay.
- Open or close the door slowly. Quick opening operation may not lock the door.
- Opening angle and installation position change depending on the position of hinge.

[Installation]



- Drawing above shows the state where the stay is installed to the door bottom, seeing the door from above.



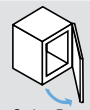
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel
②	Bracket		Polished
③	Shaft	Stainless Steel	–

RoHS	CAD	Item Code	Item Name	Tension Force N/pc	Tension Force kgf/pc	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-036-923	YFNS-300W	–	–	–	–	–	–	–

FOOT STAY YFNS-300, YFNS-300-T50

Under Development | L=R



Opening Direction	Description	Lock Release Part	Tension Force	Compression Load
 Swing Door	Locks When Fully Opened	Body (Lifting with Foot)	–	–
			–	–

- Automatically locks door when fully opened.
- Simply lift the stay with foot toe to release the lock.
- Non-handed: Can be installed on left or right side.
- Designed for bottom mount. (Vertical use not allowed)
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.

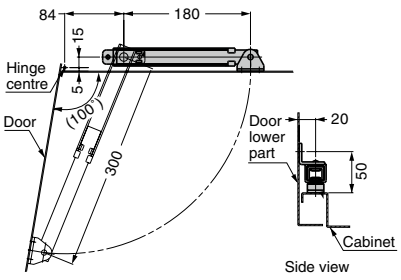
[Applications]

- Switch board, communication equipment, control panel, various display boards, etc.

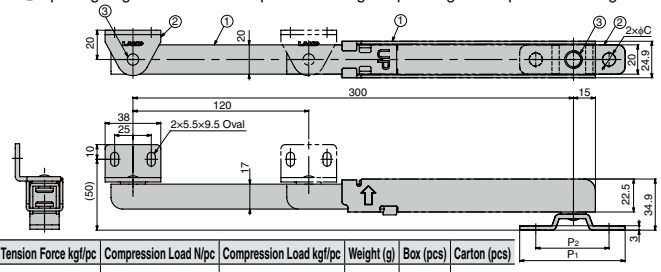
[Remarks]

- Release the lock while supporting the door.
- Do not step on the stay.
- Opening angle and installation position change depending on the position of hinge.

[Installation]



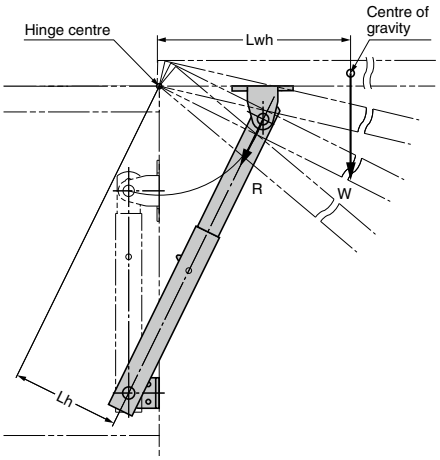
- Drawing above shows the state where the stay is installed to the door bottom, seeing the door from above.



No.	Part Name	Material	Finish
①	Body	Stainless Steel	Barrel
②	Bracket	(SUS304)	Polished
③	Shaft	Stainless Steel	–

RoHS	CAD	Item Code	Item Name	P1	P2	C	Tension Force N/pc	Tension Force kgf/pc	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-036-922	YFNS-300	60	45	5.5	–	–	–	–	–	–	–
G	3D	180-036-924	YFNS-300-T50	72	60	9					–	–	–

LID STAY L SERIES



[How to Select]

1. Calculate door moment Mt.
   Mt (mN・m) = W (kg) × 9.80665 × Lwh (mm)
   W(kg) : Door weight
   Lwh (mm) : Horizontal distance to door centre of gravity
2. Calculate load R applied in the axial direction of stay.

$$R\ (N) = \frac{Mt\ (mN \cdot m)}{Lh\ (mm) \times n}$$

   Lh (mm) : Distance from rotation centre of door to fixed point of stay
   n : Number of stays used (n=1 or 2)
3. Compare load R applied in the axial direction of stay with compressive load P of stay.
   Possible to use if P>R.

Product Name	Picture	Item Name	Opening Direction: Top-opening	Opening Direction: Upward-opening	Opening Direction: Swing Door	Qty: 1 Unit Per Door	Qty: 2 Units Per Door	Non-handed	Hold & Lock	Lock Release	Compression Load	Page
Lid Stay LB-200A LB-350A LB-500A		LB-200A	No ※1	Yes	No	Yes	Yes	Yes	Holds When Fully Opened	Releases When Fully Opened	294 N/pc (30 kgf/pc)	P.303
		LB-350A									245 N/pc (25 kgf/pc)	
		LB-500A									196 N/pc (20 kgf/pc)	
Heavy Duty Multi-angle Lid Stay LBTS-350 LBTS-450		LBTS-350	No ※1	Yes	No	Yes	No	No	Holds at Multiple Angles	Releases When Fully Opened	686 N/pc (70 kgf/pc)	P.304
		LBTS-450										
Heavy Duty Lid Stay LB-S350 LB-S450		LB-S350	No ※1	Yes	No	Yes	It depends ※2	Yes	Holds When Fully Opened	Releases When Fully Opened	1307 N/pc (133 kgf/pc)	P.305
		LB-S450									953 N/pc (97 kgf/pc)	
Lid Stay LK-222 LK-335 LK-380		LK-222	Yes	Yes	No	No	Yes	Yes	Holds When Fully Opened	–	Spring Tension/pc Extended: 31 N (3.2 kgf) Compressed: 68 N (7.0 kgf)	P.306
		LK-335									Spring Tension/pc Extended: 37 N (3.8 kgf) Compressed: 83 N (8.5 kgf)	
		LK-380									Spring Tension/pc Extended: 35 N (3.6 kgf) Compressed: 83 N (8.5 kgf)	
Multi-angle Lid Stay (W/ Lock) L-FS350A		L-FS350A	Yes	Yes	Yes	Yes	Yes	Yes	Multi-angle Lock	Slide to Release	294 N/pc (30 kgf/pc)	P.307

※1 Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.
※2 (It depends) More Consultation Needed.

SUGATSUNE

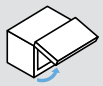
Product Name	Picture	Item Name	Opening Direction			Qty		Non-handed	Hold & Lock	Lock Release	Compression Load	Page
			Top-opening	Upward-opening	Swing Door	1 Unit Per Door	2 Units Per Door					
Lid Stay LB-215 LB-290		LB-215 LB-290	No※	Yes	No	Yes	Yes	Yes	Holds When Fully Opened	Releases When Fully Opened	147 N//pc (15 kgf//pc)	P.308
Lid Stay (W/ Lock) LSP-195B LSP-270B		LSP-195B LSP-270B	Yes	Yes	Yes	Yes	No	Yes	Locks When Fully Opened	Releases with Knob	294 N//pc (30 kgf//pc)	P.309
Lid Stay L-195 L-270	L-195A-TI (Titanium Alloy)  L-270B (Stainless Steel)	L-195 L-270	No※	Yes	No	Yes	No	Yes	Holds When Fully Opened	Releases When Fully Opened	147 N//pc (15 kgf//pc)	P.310
Lid Stay (Clean Room) LB-CV215A		LB-CV215A	No※	Yes	No	Yes	Yes	Yes	Holds When Fully Opened	Releases When Fully Opened	147 N//pc (15 kgf//pc)	P.311
Low Profile Lid Stay L-200P		L-200P	No※	Yes	No	Yes	No	Yes	Holds When Fully Opened	Releases When Fully Opened	147 N//pc (15 kgf//pc)	P.312
Lid Stay L-195-JC		L-195-JC	No※	Yes	No	Yes	No	Yes	Holds When Fully Opened	Releases When Fully Opened	147 N//pc (15 kgf//pc)	P.313
Mini Lid Stay (W/ Lock) L-FS140		L-FS140	Yes	Yes	Yes	Yes	Yes	Yes	Multi-angle Lock	Slide Release	58.8 N//pc (6 kgf//pc)	P.314
Mini Lid Stay (W/ Lock) L-SL140		L-SL140	Yes	Yes	No	Yes	No	Yes	Locks When Fully Opened	Safety Lock Release	147 N//pc (15 kgf//pc)	P.315
Mini Lid Stay L-100S L-140S		L-100S L-140S	No※	Yes	No	Yes	No	Yes	Holds When Fully Opened	Releases When Fully Opened	58.8 N//pc (6 kgf//pc)	P.316

※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

LID STAY LB-200A, LB-350A, LB-500A

TEST METHOD 16 | AS | L=R | SUS



Opening Direction	Item Name	Description	Non-handed	Qty	Compression Load
 Upward-opening※	LB-200A	Holds When Fully Opened	Yes	1 Unit Per Door 2 Units Per Door	294 N/pc (30 kgf/pc)
	LB-350A				245 N/pc (25 kgf/pc)
	LB-500A				196 N/pc (20 kgf/pc)

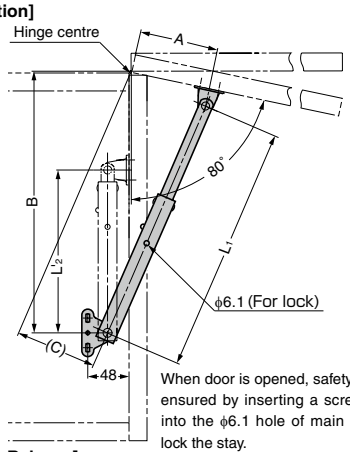
※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.
- Locks the stay by passing a screwdriver or pin through the lock hole.

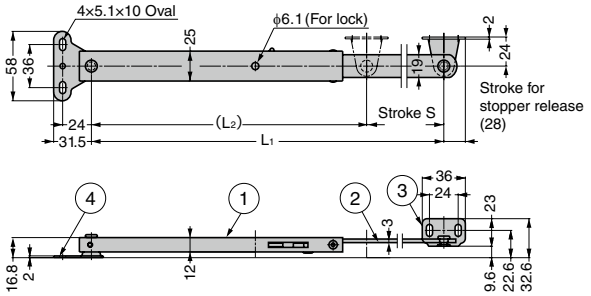
[Remarks]

- Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that L_2 of the installation example is larger than L_2 shown in the figure below. (Or the hinge and stay may be damaged.)
- Release stopper while supporting the door.
- Calculate suitable door size with reference to LID STAY L SERIES 1.

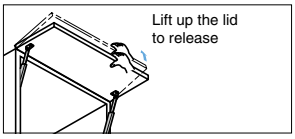
[Installation]



When door is opened, safety can be ensured by inserting a screwdriver into the ϕ6.1 hole of main body to lock the stay.



[Stopper Release]



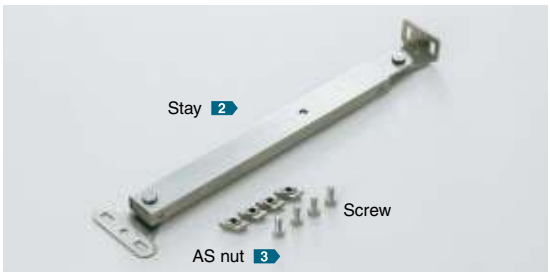
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Arm		
③	Arm Bracket		
④	Case Bracket		

RoHS	CAD	Item Code	Item Name	L_1	L_2	S	A	B	C	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-014-929	LB-200A	200	155	45	56	219	59.7	294	30	230	10	40
G	3D	180-100-122	LB-350A	350	230	120	128	364	129.9	245	25	314	10	40
G	3D	180-014-928	LB-500A	500	305	195	195	510	194.5	196	20	394	10	20

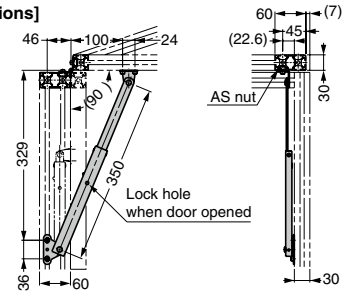
Refer to 1 : P.301

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



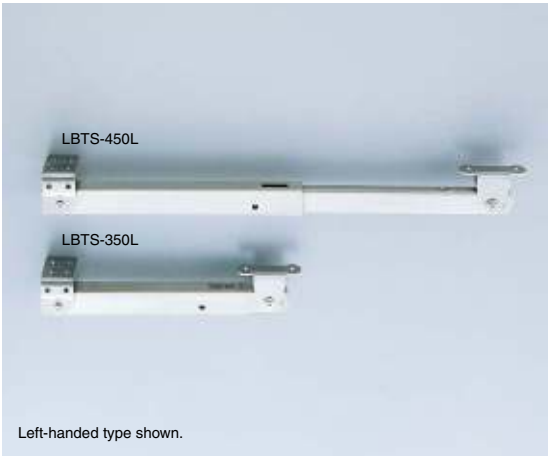
[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	180-041-627	AS-LB-350A-30-6	Groove Width 6 mm	LB-350A : 1 pc AS Nut AS-6M4 : 4 pcs Hexagon Socket Head Cap Screw M4×10 : 4 pcs	–
G	–	180-041-628	AS-LB-350A-30-8	Groove Width 8 mm	LB-350A : 1 pc AS Nut AS-8M5 : 4 pcs Hexagon Socket Head Cap Screw M5×10 : 4 pcs	–

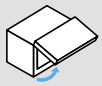
Refer to 1 : FRONT P.20, 2 : P.303, 3 : P.706

HEAVY DUTY MULTI-ANGLE LID STAY LBTS-350, LBTS-450

TEST METHOD 16 SUS



Left-handed type shown.

Opening Direction	Description	Non-handed	Qty	Compression Load
 Upward-opening※	Holds at Multiple Angles	–	1 Unit Per Door	686 N/pc (70 kgf/pc)

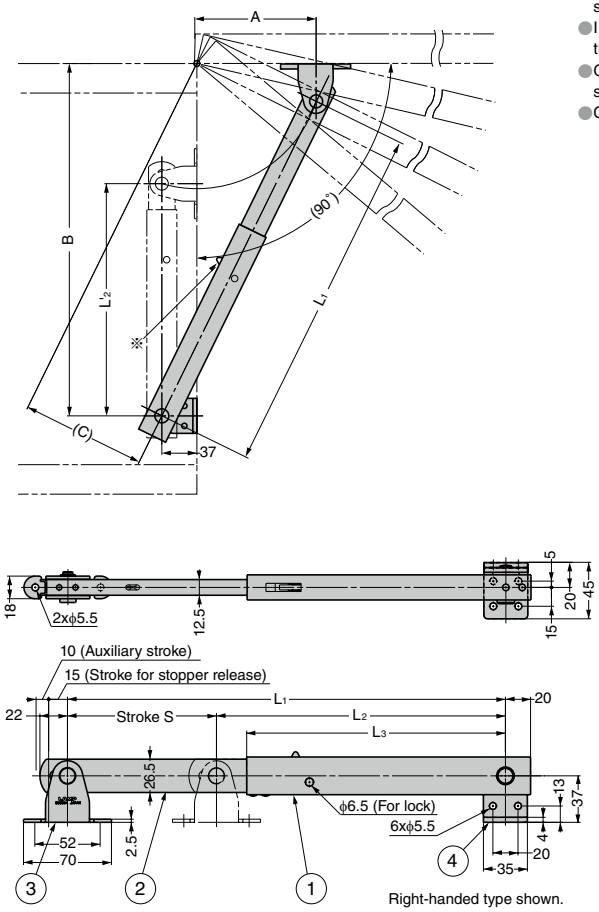
※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

- Ratchet stay holds the lid at multiple angles.
  Holding angles: LBTS-350…4 angles, LBTS-450…6 angles
- Lift up the lid in fully opened position to release stopper.
  When closing from the middle stop position, fully open the door first.
- Locks the stay in fully opened position by passing a pin through the lock hole.

[Remarks]

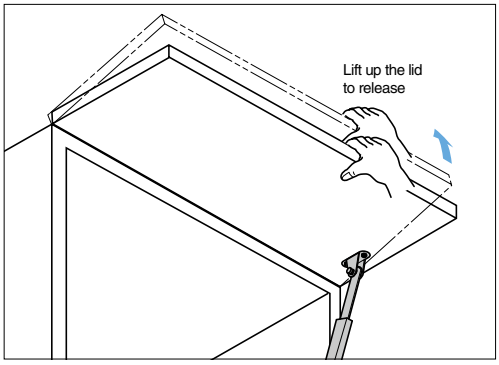
- Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that L2 of the installation example is within the range of 234 to 242 mm (for LBTS-350) or 284 to 292 mm (for LBTS-450). (Or the hinge and stay may be damaged, or the stopper may not operate with the stay extended.)
- Install with the side (※ in the figure) where stay rotor is exposed from the main body facing upward. Or the rotor may not operate properly.
- Generally use 1 pc. If using 2 pcs, left and right operation may not be synchronised.
- Calculate suitable door size with reference to LID STAY L SERIES 1.

[Installation]

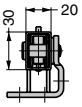


Right-handed type shown.

[Stopper Release]



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Arm		
③	Arm Bracket		Barrel Polished
④	Bracket		

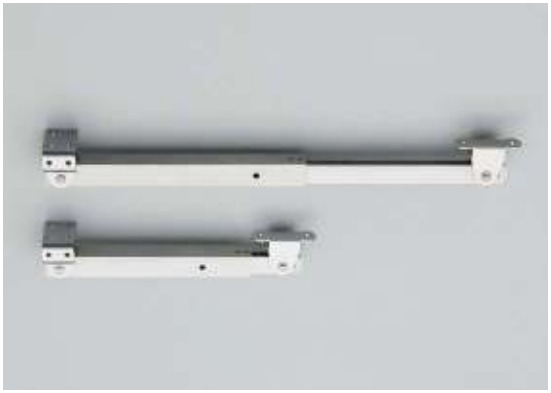


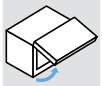
RoHS	CAD	Item Code	Item Name	Description	L1	L2	L3	S	A	B	C	Stop Positions	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-404	LBTS-350R	Right-handed	350	230	206	120	115	352	119.6	4	686	70	715	5	20
G	3D	180-109-403	LBTS-350L	Left-handed												5	20
G	3D	180-109-406	LBTS-450R	Right-handed	450	280	256	170	155	442	155.5	6			820	5	20
G	3D	180-109-405	LBTS-450L	Left-handed												5	20

Refer to 1 : P.301

HEAVY DUTY LID STAY LB-S350, LB-S450

TEST METHOD 16 | L=R | SUS

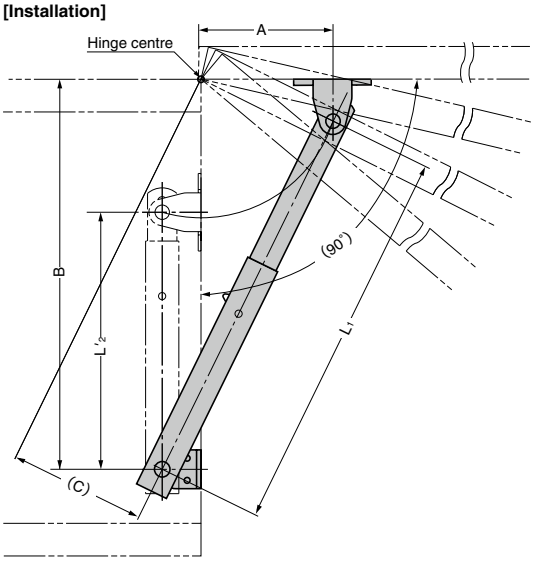


Opening Direction	Item Name	Description	Non-handed	Qty	Compression Load
 Upward-opening※	LB-S350	Holds When Fully Opened	Yes	1 Unit Per Door (More Consultation Needed for 2 Units per Door)	1307 N/pc (133 kgf/pc)
	LB-S450				953 N/pc (97 kgf/pc)

※ Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.
- Dimension A can be within 300mm~550mm by made to order. For further details, please contact local representatives.
- Locks the stay in fully opened position by passing a pin through the lock hole.

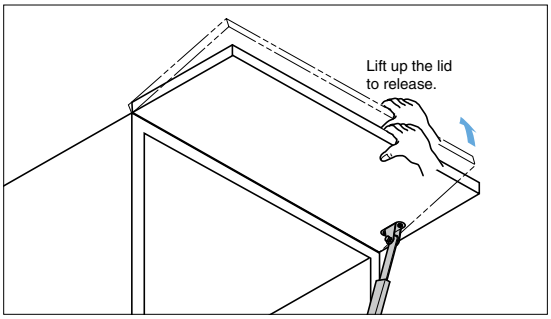
[Installation]

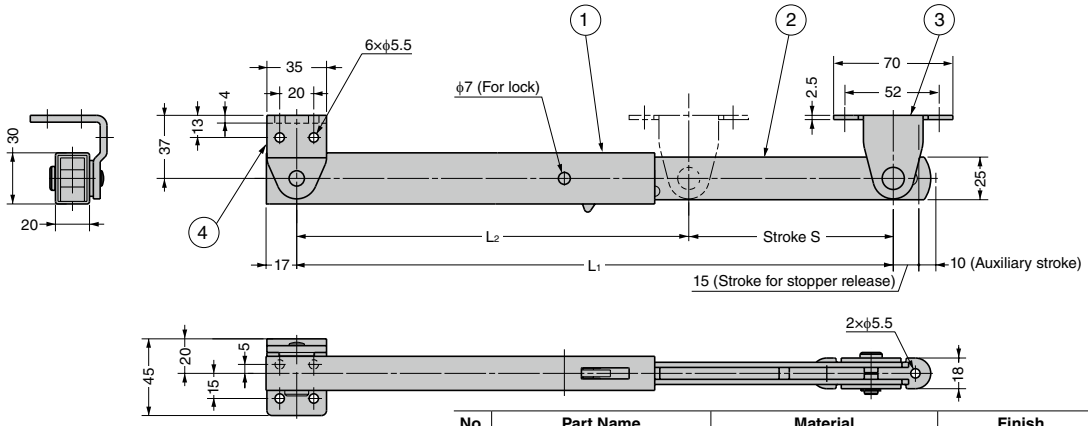


[Remarks]

- Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that L'2 of the installation example is above 235mm (for LB-S350) or above 285mm (for LB-S450). (Or the hinge and stay may be damaged, or the stopper may not operate with the stay extended.)
- Can be used singly or in pairs, depending on door width and door weight.For further details, please contact local representatives.
- Calculate suitable door size with reference to LID STAY L SERIES 1.

[Stopper Release]





No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Arm		
③	Arm Bracket		Barrel Polished
④	Bracket		

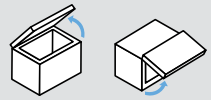
RoHS	CAD	Item Code	Item Name	L1	L2	S	A	B	C	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-168	LB-S350	350	230	120	115	352	119.6	1307	133	745	5	20
G	3D	180-100-169	LB-S450	450	280	170	155	442	155.5	953	97	865	5	20

Refer to 1 : P.301

LID STAY LK-222, LK-335, LK-380

NSF L=R SUS



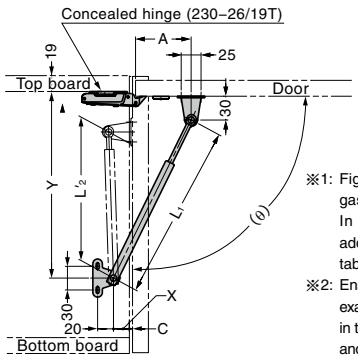
Opening Direction	Description	Non-handed	Qty	Compression Load
 Top-opening Upward-opening	Holds When Fully Opened	Yes	2 Units Per Door	–

●Spring mechanism assists lifting the door and holds in opened position and additional catch not required both for in opened position and closed position.

[Remarks]

●Never open more than the angle where the stay has completely extended. Otherwise, it may be damaged. Install a stopper to restrict the opening of the door. Use two units per door. (1 unit per door not allowed)

[Installation LK-222 and LK-335]



※1: Figure left shows when using gasket (gasket thickness C=4). In case of no gasket (C=0), add 4mm to dimension X in the table below.

※2: Ensure that L'2 of the installation example is larger than L 2 shown in the figure below. (Or the hinge and stay may be damaged.)

Item Name	Opening Angle θ	L1	A	X	Y	Door Weight kg
LK-222	90°	222	70	20	235	Max. 2.5
	85°		75		240	Max. 2.7
	75°		85		251	Max. 3.0
LK-335	90°	335	104		344	Max. 3.1
	85°		112		351	Max. 3.3
	75°		127		368	Max. 3.8

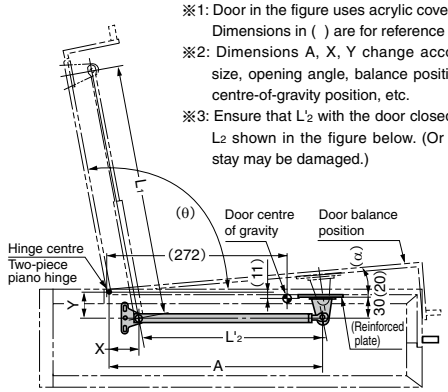
LK222: In case door height 350mm
LK335: In case door height 500mm

[Installation LK-335 and LK-380]

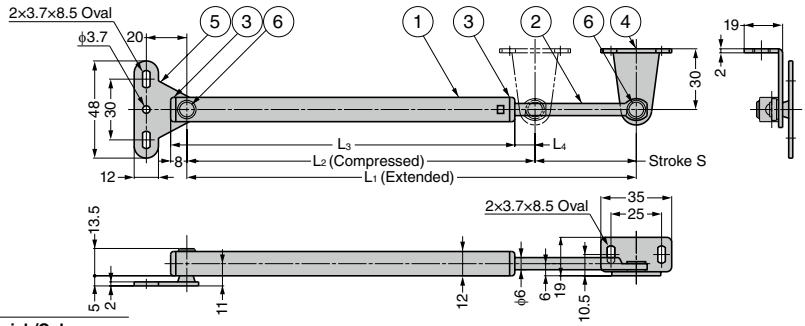
※1: Door in the figure uses acrylic cover (5mm thick). Dimensions in ( ) are for reference only.

※2: Dimensions A, X, Y change according to door size, opening angle, balance position setting and centre-of-gravity position, etc.

※3: Ensure that L'2 with the door closed is larger than L2 shown in the figure below. (Or the hinge and stay may be damaged.)



Item Name	Opening Angle θ	Door Balance Angle α	L1	A	X	Y	Door Weight kg
LK-335	90°	0.5°	335	295	45	38	2.5
		14°					3.0
	85°	12°				44	3.3
LK-380	110°	8°	380	330	40	36	2.5
	90°	3.5°		335	55	44	3.0
		4°		320	41	59	4.0
	80°	7.5°		335	56	60	4.3



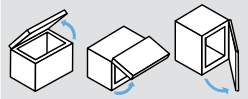
No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Stay		Polished
③	Cover	PA	Black
④	Arm Bracket	Stainless Steel (SUS304)	Satin
⑤	Case Bracket		
⑥	Shaft		–
–	Spring	Piano Wire	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	L1	L2	L3	L4	S	Spring Tension/pc				Weight (g)	Box (pcs)	Carton (pcs)
									Extended N	Extended kgf	Compressed N	Compressed kgf			
G	3D	180-100-045	LK-222	222	172	170	10	50	31	3.2	68	7.0	145	25	150
G	3D	180-100-046	LK-335	335	250	238	20	85	37	3.8	83	8.5	185	25	150
G	3D	180-100-047	LK-380	380	280	269	19	100	35	3.6			205	25	150

MULTI-ANGLE LID STAY (W/ LOCK) L-FS350A Slide release

AS L=R SUS



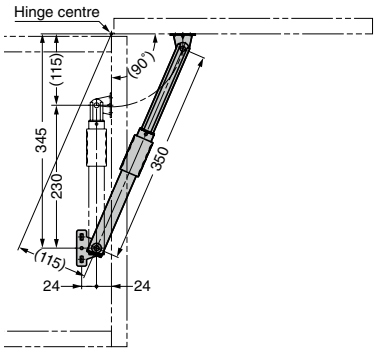
Opening Direction	Description	Non-handed	Qty	Compression Load
 Top-opening Upward-opening Swing Door	Multi-angle Lock	Yes	1 Unit Per Door 2 Units Per Door	294 N/pc (30 kgf/pc)

- Locks the lid at multiple angles with the lock lever. Slide the lock lever in any position to lock the extension direction and compression direction.
- Installation pitch is identical to LB-350A 1.
- Plastic parts and metal parts can be separated.

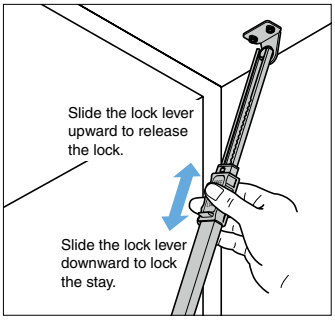
[Remarks]

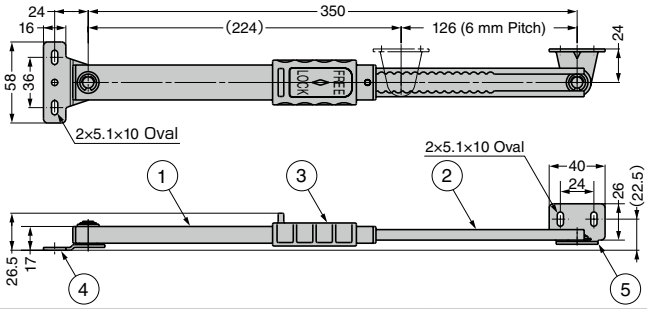
- Do not use this product as a stopper.
- Allow room for stroke when installing.
- Opening angle and installation position change depending on the position of hinge centre. Determine the installation position based on the hinges used and cabinet shape.
- Release the lock while supporting the door.
- Calculate suitable door size with reference to LID STAY L SERIES 2.

[Installation]



[Lock and Release]





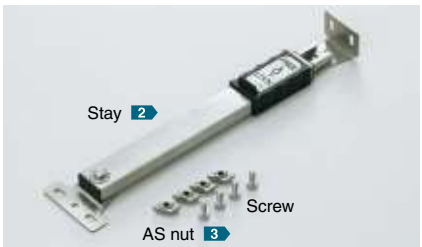
No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Arm		
③	Lock Lever	POM	Dark Grey
④	Case Bracket	Stainless Steel (SUS304)	Satin
⑤	Arm Bracket		

RoHS	CAD	Item Code	Item Name	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-617	L-FS350A	294	30	326	5	50

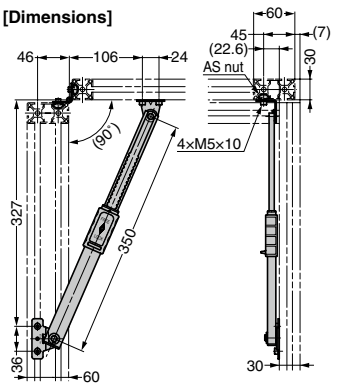
Refer to 1 : P.303, 2 : P.301

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Dimensions]



[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	3D	180-041-633	AS-L-FS350A-30-6	Groove Width 6 mm	L-FS350A : 1 pc AS Nut AS-6M4 : 4 pcs Hexagon Socket Head Cap Screw M4×10 : 4 pcs	–
G	3D	180-041-634	AS-L-FS350A-30-8	Groove Width 8 mm	L-FS350A : 1 pc AS Nut AS-8M5 : 4 pcs Hexagon Socket Head Cap Screw M5×10 : 4 pcs	–

Refer to 1 : FRONT P.20, 2 : P.307, 3 : P.706

LID STAY LB-215, LB-290

TEST METHOD 16 | L=R | SUS



Opening Direction	Description	Non-handed	Qty	Compression Load
Upward-opening※	Holds When Fully Opened	Yes	1 Unit Per Door 2 Units Per Door	147 N/pc (15 kgf/pc)

※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

●Holds the lid in fully opened position. Slightly lift up the lid to release stopper.

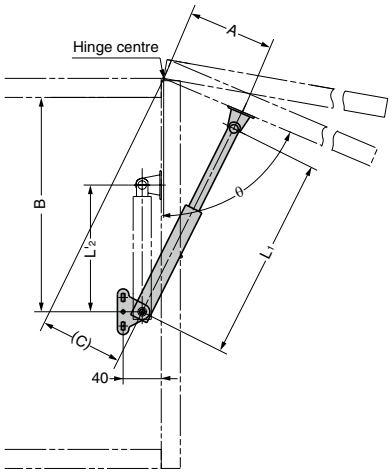
[Specifications]

●Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that L'2 of the installation example is larger than L2 shown in the figure below. (Or the hinge and stay may be damaged.)

●Release stopper while supporting the door.

●Calculate suitable door size with reference to LID STAY L SERIES 1.

[Installation]



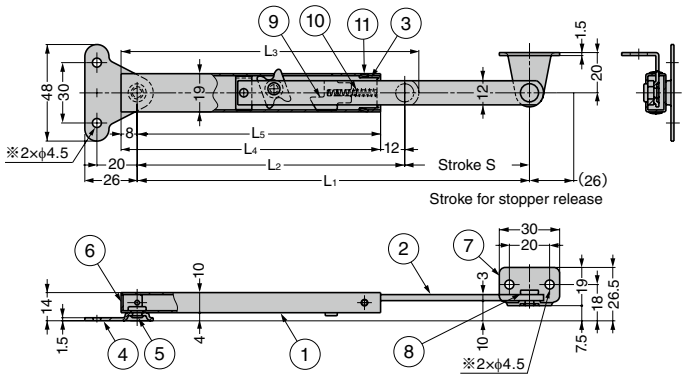
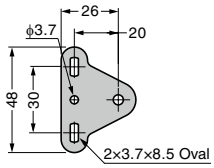
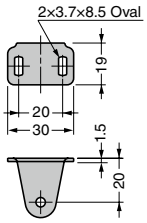


Figure above shows LB-215B or LB-290B.

Type A Case bracket

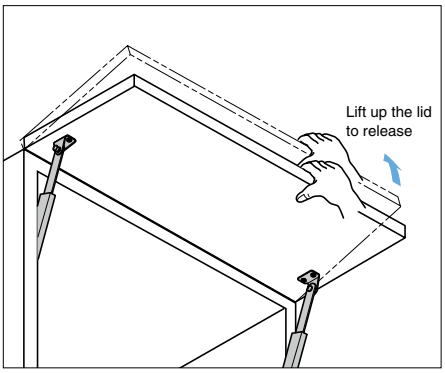


Type A Arm bracket



※Mounting hole shape of LB-215A and LB-290A shown above.

[Stopper Release]



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Arm		–
③	End Cap		Satin
④	Case Bracket		
⑤	Bottom Shaft	Stainless Steel	–
⑥	Bottom Cap	Stainless Steel (SUS304)	Satin
⑦	Arm Bracket		
⑧	Top Shaft	Stainless Steel	–
⑨	Slide Parts	Zinc Alloy (ZDC)	
⑩	Spring	Stainless Steel (SUS304)	
⑪	Blind Rivet	Stainless Steel	

RoHS	CAD	Item Code	Item Name	L1	L2	L3	L4	L5	S	A	B	C	θ	Approx. Door Height	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	180-100-110	LB-215A	215	153	168	149	141	62	90	225	91.8	67°	260~350	147	15	140	10	100
–	3D	180-100-112	LB-215B														140	10	100
–	3D	180-100-120	LB-290A	290	190	205	186	178	100	105	280	102.9	80°	340~500			166	10	100
–	3D	180-100-121	LB-290B														166	10	100

Refer to 1 : P.302

LID STAY (W/ LOCK) LSP-195B, LSP-270B

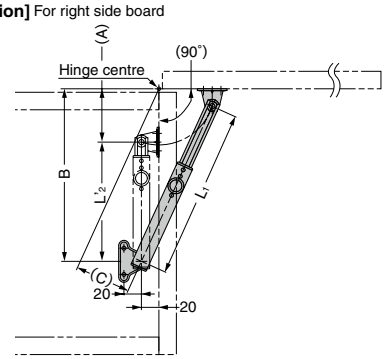
TEST METHOD 16 | AS | L=R | SUS



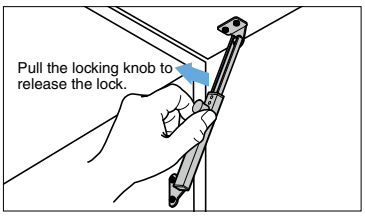
Opening Direction	Description	Non-handed	Qty	Compression Load
Top-opening / Upward-opening / Swing Door	Locks When Fully Opened	Yes	1 Units Per Door	294 N/pc (30 kgf/pc)

- Can be locked automatically at the door position fully opened.Pull the locking knob to release the lock.
- Installation pitch is identical to L-195B and L-270B 1.
- Plastic parts and metal parts can be separated.

[Installation] For right side board

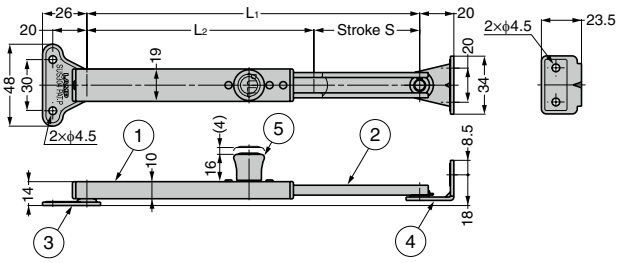


[Lock Release]



[Remarks]

- Do not use this product as a stopper other than for a door.
- Allow room for stroke depending on installation location and purpose.
- Use 1 pc for 1 door.
- Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that L'2 of the installation example is larger than L2. (Or the hinge and stay may be damaged.)
- Release the lock while supporting the door.
- Calculate suitable door size with reference to LID STAY L SERIES 2.



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Arm		
③	Case Bracket		
④	Arm Bracket		
⑤	Locking Knob	POM	Dark Grey

RoHS	CAD	Item Code	Item Name	L1	L2	S	A	B	C	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-358	LSP-195B	195	133	62	61	197	63.8	294	30	127	6	60
G	3D	180-100-357	LSP-270B	270	170	100	92	265	91.9			147	6	60

Refer to 1 : P.310, 2 : P.302

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

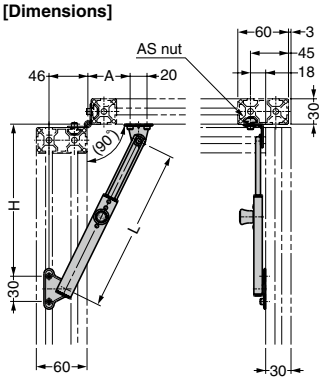


[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	A	Weight (g)
G	–	180-041-629	AS-LSP-195B-30-6	Groove Width 6 mm	LSP-195B : 1 pc AS Nut AS-6M4 : 4 pcs Hexagon Socket Head Cap Screw M4×10 : 4 pcs	50	–
G	–	180-041-630	AS-LSP-195B-30-8	Groove Width 8 mm	LSP-195B : 1 pc AS Nut AS-8M4 : 4 pcs Hexagon Socket Head Cap Screw M4×10 : 4 pcs		–
G	–	180-041-631	AS-LSP-270B-30-6	Groove Width 6 mm	LSP-270B : 1 pc AS Nut AS-6M4 : 4 pcs Hexagon Socket Head Cap Screw M4×10 : 4 pcs	80	–
G	–	180-041-632	AS-LSP-270B-30-8	Groove Width 8 mm	LSP-270B : 1 pc AS Nut AS-8M4 : 4 pcs Hexagon Socket Head Cap Screw M4×10 : 4 pcs		–

Refer to 1 : FRONT P.20, 2 : P.309, 3 : P.706

[Dimensions]



LID STAY L-195, L-270

TEST METHOD 16 | L=R | TITANIUM | SUS



Opening Direction	Description	Non-handed	Qty	Compression Load
Upward-opening※	Holds When Fully Opened	Yes	1 Units Per Door	147 N/pc (15 kgf/pc)

※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

●Holds the lid in fully opened position. Slightly lift up the lid to release stopper.

[Remarks]

- ●Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that L'2 of the installation example is larger than L2 shown in the figure below. (Or the hinge and stay may be damaged.)
- ●Use 1 pc for 1 door. If using 2 pcs, left and right operation may not be synchronised.
- ●Do not use this product as a stopper other than for a door.
- ●Allow room for stroke depending on installation location and purpose.
- ●Securely fix the mounting screws with screw adhesive.
- ●Calculate suitable door size with reference to LID STAY L SERIES 1.

[Installation] For right side board

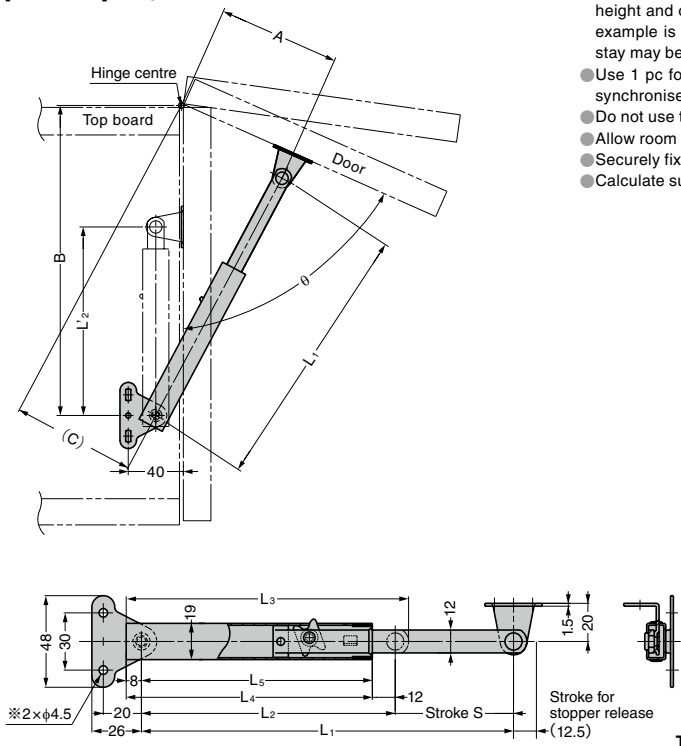
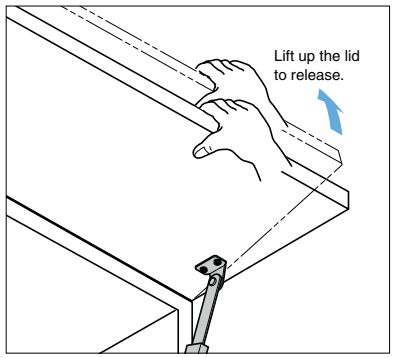
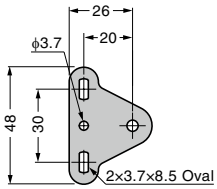


Figure above shows L-195B or L-270B.

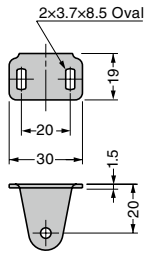
[Stopper Release]



Type A Case bracket



Type A Arm bracket



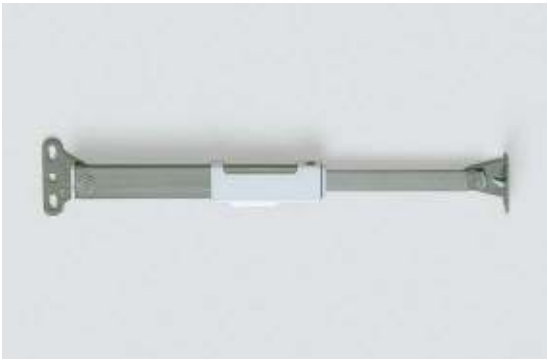
※Mounting hole shape of L-195A and L-270A shown above.

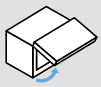
RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	L3	L4	L5	S	A	B	C	θ	Approx. Door Height	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-114	L-195A	Stainless Steel (SUS304)	Satin	195	133	148	129	121	62	90	225	91.5	66°	250~350	147	15	120	10	100
G	3D	180-100-115	L-195B																124	10	100
–	3D	180-100-118	L-195A-TI	Titanium	Satin														71	10	100
G	3D	180-100-116	L-270A	Stainless Steel (SUS304)	Satin	270	170	185	166	158	100	105	275	105.8	82°	320~500			150	10	100
G	3D	180-100-117	L-270B																183	10	100
–	3D	180-100-119	L-270A-TI	Titanium	Satin														87	10	100

Refer to 1 : P.302

LID STAY (CLEAN ROOM) LB-CV215A

L=R SUS



Opening Direction	Description	Non-handed	Qty	Compression Load
 Upward-opening※	Holds When Fully Opened	Yes	1 Unit Per Door 2 Units Per Door	147 N/pc (15 kgf/pc)

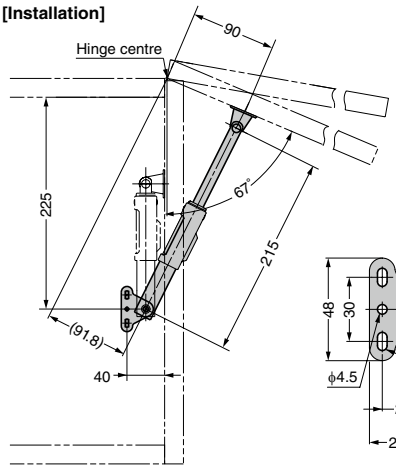
※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

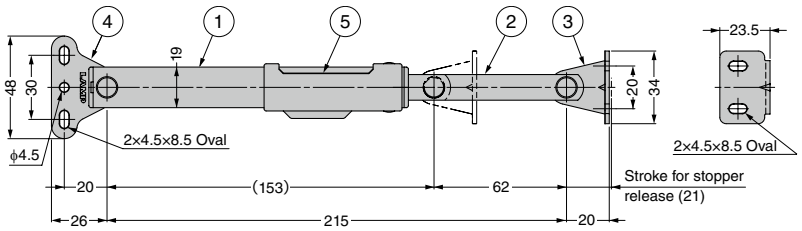
- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.
- Using plastic parts and plastic cover at the sliding part prevent metal powder scattering due to metal-to-metal wear.

[Remarks]

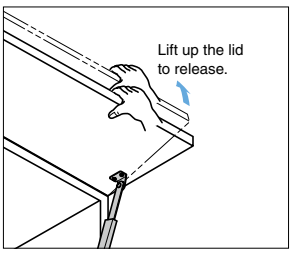
- Do not use this product as a stopper.
- Allow room for stroke depending on installation location and purpose.
- Securely fix the mounting screws with screw adhesive.
- Can be used singly or in pairs.
- Opening angle and installation position change depending on the position of hinge centre. Determine the installation position based on the hinges used and cabinet shape.
- Calculate suitable door size with reference to LID STAY SERIES 1.

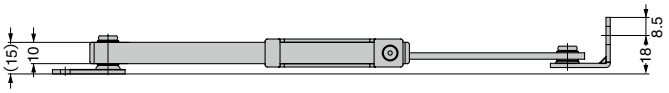
[Installation]





[Stopper Release]





No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Polished
②	Arm		
③	Arm Bracket		
④	Case Bracket		
⑤	Cover	ABS	White

RoHS	CAD	Item Code	Item Name	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-197	LB-CV215A	147	15	149	10	–

Refer to 1 : P.302

CLEAN ROOM MAGNETIC CATCH・CLEAN ROOM HINGE DIGEST

- The magnet is covered with resin, preventing metal powder scattering and rusting.



MC-JM45 1

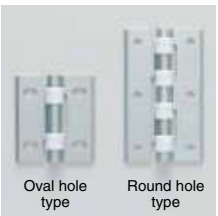


MC-JMS45WT 2

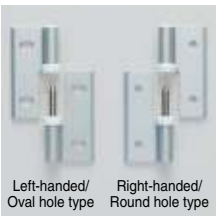


MC-JM63G 3

- Plastic cap at rotating part prevents metal powder scattering due to metal-to-metal wear.



HG-CV 4

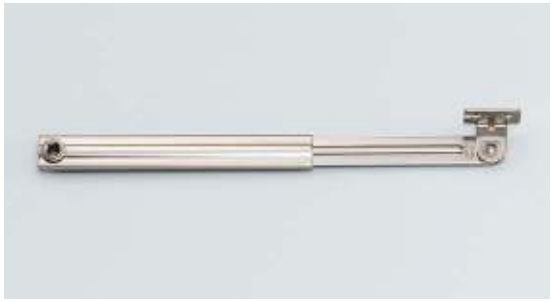


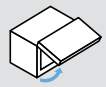
HG-CV-65N 5

Refer to 1 : P.624, 2 : P.627, 3 : P.628, 4 : P.170, 5 : P.171

LOW PROFILE LID STAY L-200P

TEST METHOD 16 | L=R | SUS



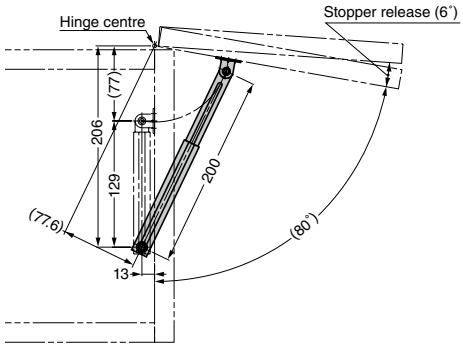
Opening Direction	Description	Non-handed	Qty	Compression Load
 Upward-opening※	Holds When Fully Opened	Yes	1 Units Per Door	147 N/pc (15 kgf/pc)

※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

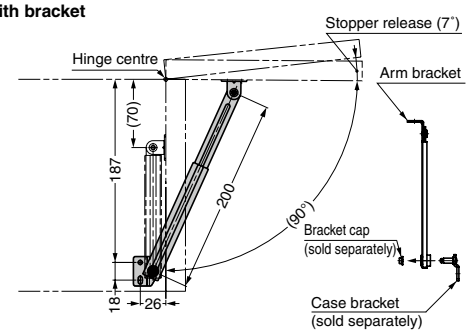
- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.
- Can be installed in a small space due to compact design.
- Used for opening and closing of device or door.

[Installation]

Without bracket



With bracket

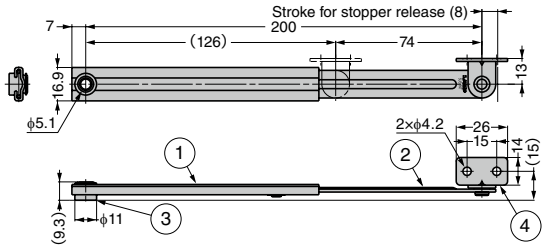


[Remarks]

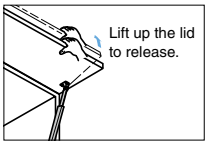
- Do not use this product as a stopper.
- Allow room for stroke when installing.
- Securely fix the mounting screws with screw adhesive.
- Use 1 pc for 1 door.
- Opening angle and installation position change depending on the position of hinge centre.Determine the installation position based on the hinges used and cabinet shape.
- For wooden door, use BRACKET L-200P-BT (sold separately) 1.
- Calculate suitable door size with reference to LID STAY List 2.

[Sold Separately]

- Mounting bracket L-200P-BT 1



[Stopper Release]



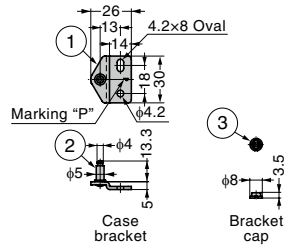
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Case Bracket	Stainless Steel (SUS304)	–
④	Arm Bracket (Plate)	Stainless Steel (SUS304)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-104	L-200P	147	15	68	30	300

Refer to 1 : P.312, 2 : P.302

BRACKET L-200P-BT For L-200P





- Bracket for L-200P 1.
- One-touch installation with the bracket cap.
- Refer to L-200P 1 for installation details.

[Remarks]

- For L-200P only.
- Do not apply excessive force in the direction of removing the cap.

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)	Carton (sets)
G	–	180-028-721	L-200P-BT	14	30	300

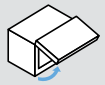
Refer to 1 : P.312

No.	Part Name	Material	Finish/Colour
①	Case Bracket	Stainless Steel (SUS304)	Barrel Polished
②	Shaft of Case Bracket	Stainless Steel (SUS303)	Plain
③	Bracket Cap	POM	Black

LID STAY L-195-JC

TEST METHOD 16 | L=R | INSTRUCTION | SUS



Opening Direction	Description	Non-handed	Qty	Compression Load
 Upward-opening※	Holds When Fully Opened	Yes	1 Units Per Door	147 N/pc (15 kgf/pc)

※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

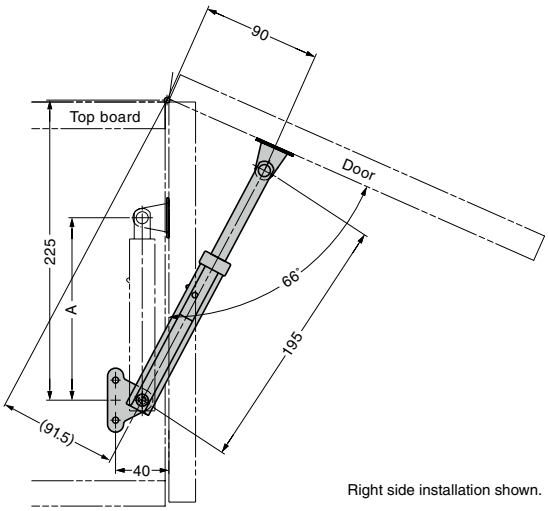
- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.
- Simplified version of the same size as L-195 type 1 with excellent cost performance.

[Remarks]

- Appropriate bracket position can be determined depending on door height and opening angle. In this case, ensure that the dimension A when door closed is larger than the minimum dimension when extending and compressing.
  Or the hinge and lid stay may be damaged.
- Use 1 pc for 1 door.If using 2 pcs, left and right operation may not be synchronised.
- Do not use this product as a stopper.
- Allow room for stroke depending on installation location and purpose.
- Securely fix the mounting screws with screw adhesive.
- Calculate suitable door size with reference to LID STAY SERIES 2.

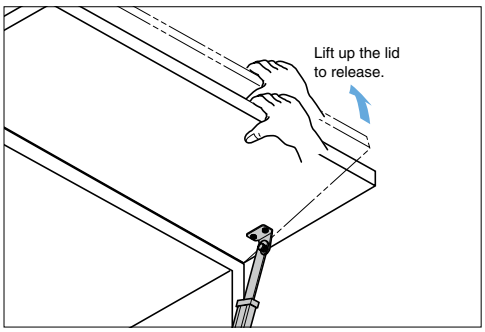
[Installation]

With single knuckle hinge



Right side installation shown.

[Stopper Release]



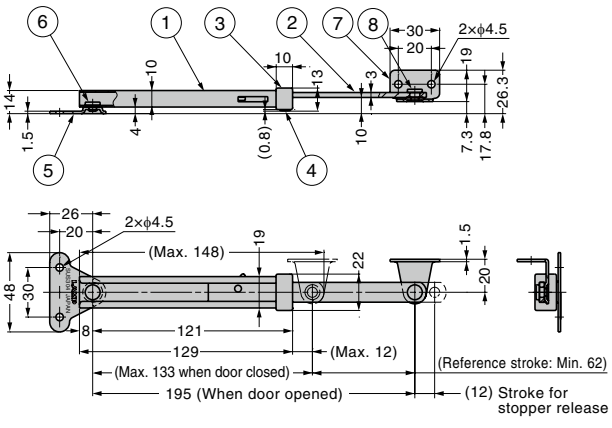
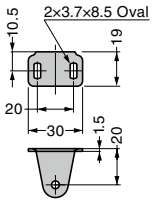
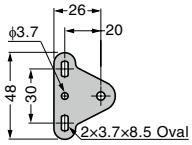


Figure above shows L-195-JC-B.

Type A Arm bracket



Type A Case bracket



※Mounting hole shape of L-195-JC-A shown above.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Arm	Stainless Steel	–
③	Cover	POM	Plain
④	Blind Rivet	Aluminium Alloy	–
⑤	Case Bracket	Stainless Steel (SUS304)	Barrel Polished
⑥	Shaft	Stainless Steel	Plain
⑦	Arm Bracket	Stainless Steel (SUS304)	Barrel Polished
⑧	Top Shaft	Stainless Steel	Plain

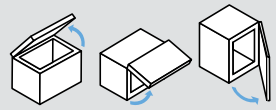
RoHS	CAD	Item Code	Item Name	Approx. Door Height	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-017-977	L-195-JC-A	250~350	147	15	100	10	100
G	3D	180-017-976	L-195-JC-B					10	100

Refer to 1 : P.310, 2 : P.302

MINI LID STAY (W/ LOCK) L-FS140 Slide release

TEST METHOD 16 | L=R | SUS

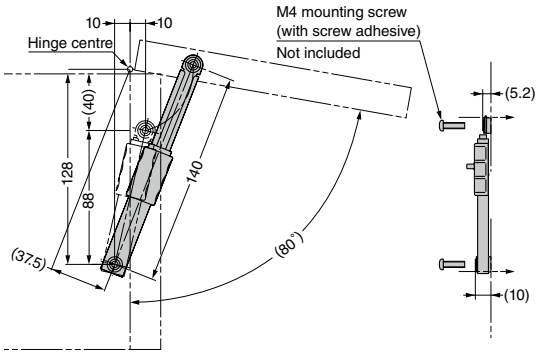


Opening Direction	Description	Non-handed	Qty	Compression Load
 Top-opening Upward-opening Swing Door	Multi-angle Lock	Yes	1 Unit Per Door 2 Units Per Door	58.8 N/pc (6 kgf/pc)

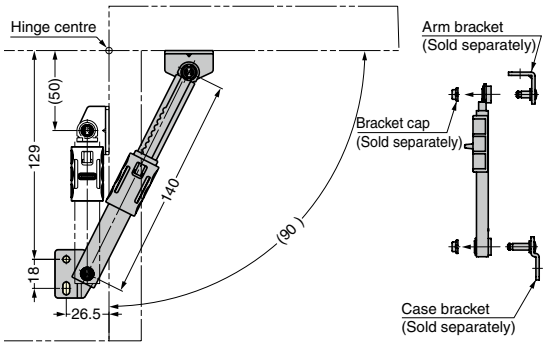
- Locks the lid at multiple angles.
  Sliding the lock lever in any position simultaneously locks the extension direction and compression direction.
- Installation pitch is identical to L-140S 1.
- Plastic parts and metal parts can be separated.

[Installation]

Without bracket



With bracket

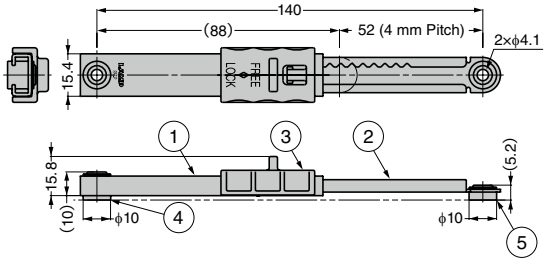


[Remarks]

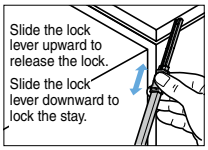
- Do not use this product as a stopper.
- Allow room for stroke when installing.
- Securely fix the mounting screws with screw adhesive.
- Opening angle and installation position change depending on the position of hinge centre.Determine the installation position based on the hinges used and cabinet shape.
- For wooden door, use BRACKET L-FS140-BT (sold separately) 2.
- Calculate suitable door size with reference to LID STAY SERIES 3.

[Sold Separately]

- Mounting bracket L-FS140-BT 2



[Lock and Release]



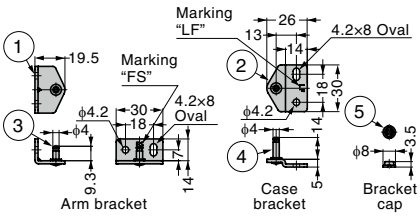
No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Lock Lever	POM	Dark Grey
④	Case Bracket	Stainless Steel (SUS304)	–
⑤	Arm Bracket		

RoHS	CAD	Item Code	Item Name	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-108	L-FS140	58.8	6	50	20	200

Refer to 1 : P.316, 2 :P.314, 3 : P.302

BRACKET L-FS140-BT For L-FS140





- Bracket for L-FS140 1.
- One-touch installation with the bracket cap.
- Refer to the stay page 1 for installation details.

[Remarks]

- For L-FS140 only.
- Do not apply excessive force in the direction of removing the cap.

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)	Carton (sets)
G	–	180-028-720	L-FS140-BT	27	40	400

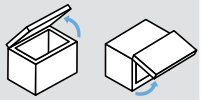
Refer to 1 : P.314

No.	Part Name	Material	Finish/Colour
①	Arm Bracket	Stainless Steel (SUS304)	Barrel Polished
②	Case Bracket		
③	Shaft of Arm Bracket	Stainless Steel (SUS303)	Plain
④	Shaft of Case Bracket		
⑤	Bracket Cap	POM	Black

MINI LID STAY (W/ LOCK) L-SL140 Safety Lock Release

L=R SUS



Opening Direction	Description	Non-handed	Qty	Compression Load
 Top-opening Upward-opening	Locks When Fully Opened	Yes	1 Unit Per Door	147 N/pc (15 kgf/pc)

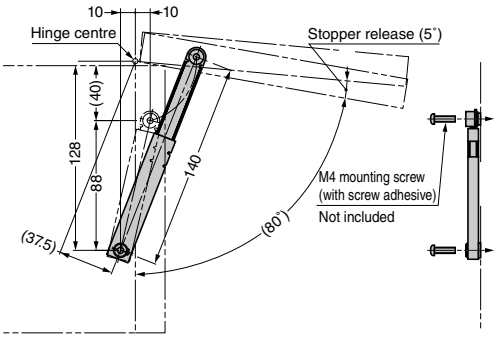
- Can be locked automatically at the door position fully opened. Releases by pushing the release button with the door opened and arm extended. (Safety lock release)
- Installation pitch is identical to L-140S 1.
- Can be installed in a small space due to compact design.
- Used for opening and closing of small device or door.

[Remarks]

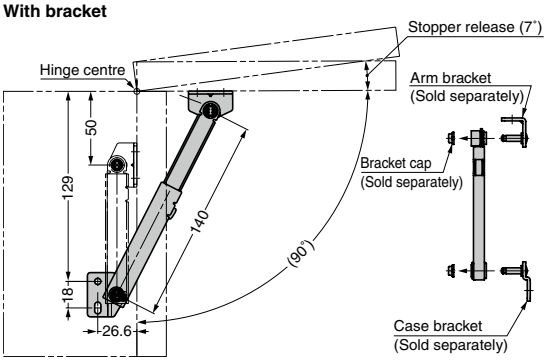
- Do not use this product as a stopper.
- Allow room for stroke when installing.
- Securely fix the mounting screws with screw adhesive.
- Use 1 pc for 1 door.
- Opening angle and installation position change depending on the position of hinge centre.Determine the installation position based on the hinges used and cabinet shape.
- For wooden door, use BRACKET L-SL140-BT (sold separately) 2.
- Calculate suitable door size with reference to LID STAY SERIES 3.

[Installation]

Without bracket

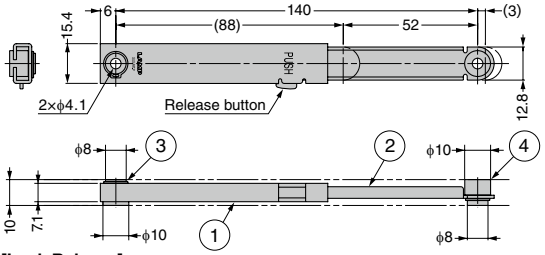


With bracket

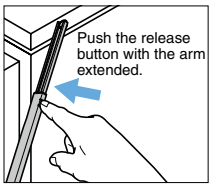


[Sold Separately]

- Mounting bracket L-SL140-BT 2



[Lock Release]



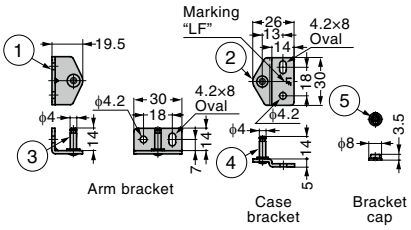
No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Case Bracket		–
④	Arm Bracket		

RoHS	CAD	Item Code	Item Name	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-354	L-SL140	147	15	51	30	300

Refer to 1 : P.316, 2 : P.315, 3 : P.302

BRACKET L-SL140-BT For L-SL140





- Bracket for L-SL140 1.
- One-touch installation with the bracket cap.
- Refer to L-SL140 1 for installation details.

[Remarks]

- For L-SL140 only.
- Do not apply excessive force in the direction of removing the cap.

No.	Part Name	Material	Finish/Colour
①	Arm Bracket	Stainless Steel (SUS304)	Barrel Polished
②	Case Bracket		
③	Shaft of Arm Bracket	Stainless Steel (SUS303)	Plain
④	Shaft of Case Bracket		
⑤	Bracket Cap	POM	Black

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)	Carton (sets)
G	–	180-028-719	L-SL140-BT	27	30	300

Refer to 1 : P.315

MINI LID STAY L-100S, L-140S

TEST METHOD 16 | L=R | SUS



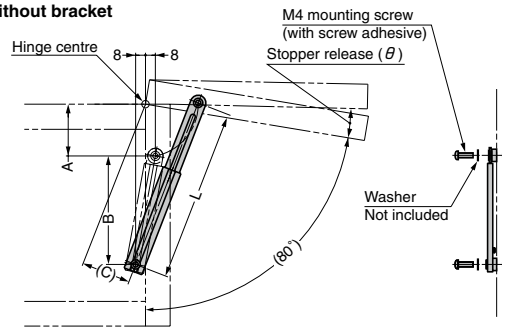
Opening Direction	Description	Non-handed	Qty	Compression Load
Upward-opening	Holds When Fully Opened	Yes	1 Unit Per Door	58.8 N/pc (6 kgf/pc)

※Can also be used for top-opening lid, depending on installation conditions. Please confirm with actual item in detail.

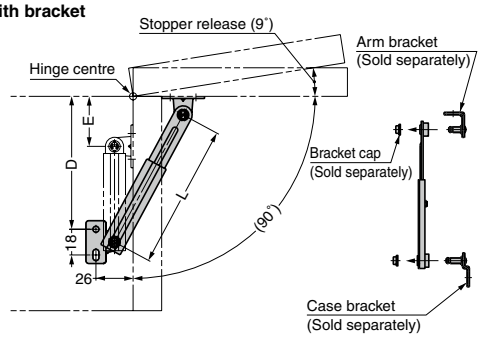
- Holds the lid in fully opened position. Slightly lift up the lid to release stopper.
- Can be installed in a small space due to compact design.
- Used for opening and closing of small device or door.

[Installation]

Without bracket



With bracket

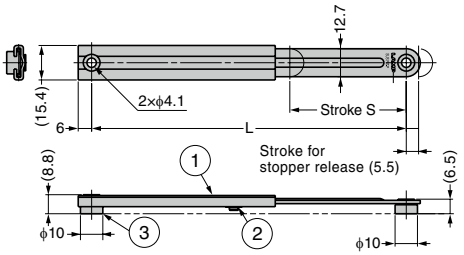


[Remarks]

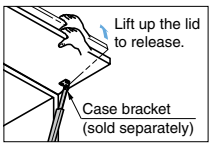
- Do not use this product as a stopper.
- Allow room for stroke depending on installation location and purpose.
- Securely fix the mounting screws with screw adhesive.
- Use 1 pc for 1 door.
- Opening angle and installation position change depending on the position of hinge centre. Determine the installation position based on the hinges used and cabinet shape.
- For wooden door, use BRACKET L-S-BT (sold separately) 1.
- Calculate suitable door size with reference to LID STAY SERIES 2.

[Sold Separately]

- Mounting bracket L-S-BT 1



[Stopper Release]



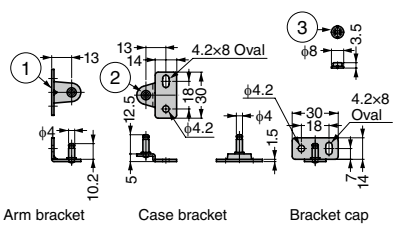
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Washer	PA	–
③	Bracket	Stainless Steel (SUS303)	–

RoHS	CAD	Item Code	Item Name	L	S	A	B	C	D	E	θ	Compression Load N/pc	Compression Load kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-109-118	L-100S	100	32	24	67	22.5	93	35	15°	58.8	6	31	30	300
G	3D	180-100-105	L-140S	140	52	42	88	39.7	131	48	9°			38	30	300

Refer to 1 : P.316, 2 : P.302

BRACKET L-S-BT For L-100S, L-140S





- Bracket for installing L-100S, L-140S 1 to wooden door.
- Can be easily fixed by fitting the cap.

[Remarks]

- For L-100S, L-140S only.
- Do not apply excessive force in the direction of removing the stay.

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)	Carton (sets)
G	3D	180-100-620	L-S-BT	17	40	400

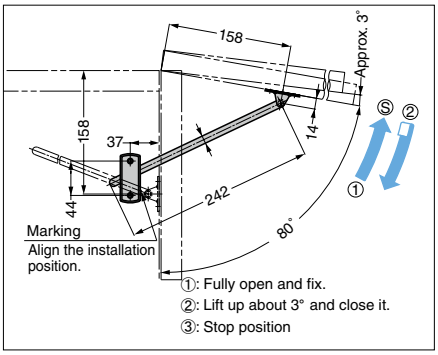
Refer to 1 : P.316

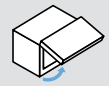
No.	Part Name	Material	Finish/Colour
①	Arm Bracket	Stainless Steel (SUS304)	Barrel Polished
②	Case Bracket		
③	Bracket Cap	POM	White

LID STAY KLS



[Installation] With single knuckle hinge

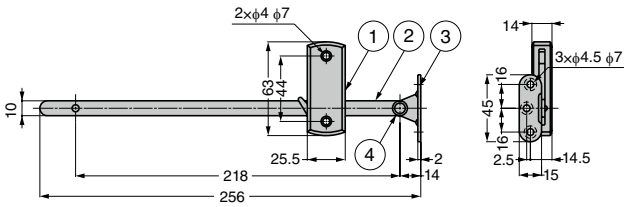


Opening Direction	Description
 Upward-opening	Stops When Fully Opened, Right-handed Only

- Holds the door in fully opened position. Lift up the door to release the stopper.
- Easy installation with a marking on the body for indicating installation position.

[Remarks]

- Right side installation only.
- Max. door height is 300mm.
- Height more than 300mm or applying force to the front end may cause deformation and damage.

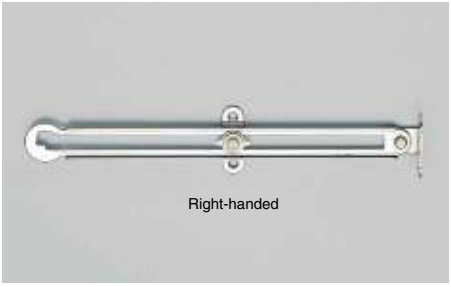


No.	Part Name	Material	Finish/Colour
①	Body	PA	White
②	Arm	Steel (SS)	Nickel
③	Bracket	Steel (SPCC)	
④	Spring	Steel	–

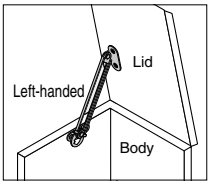
RoHS	CAD	Item Code	Item Name	Door Weight kg/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-052	KLS	Max. 8	85	20	200

LID STAY S-91, S-92, S-93

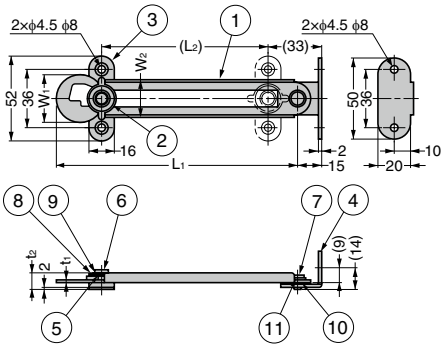
SUS



[Installation]



Opening Direction	Description
 Top-opening	–



Right-handed type shown.

No.	Part Name	Material	Finish
①	Rail Arm	Stainless Steel (SUS304)	Barrel Polished
②	Rotary		
③	Base Plate		
④	Bracket		
⑤	Spring	Stainless Steel (SUS301)	–
⑥	Shaft A	Stainless Steel (SUS303)	
⑦	Shaft B		
⑧	Washer	Stainless Steel (SUS304)	
⑨	N Washer	PA	
⑩	N Washer		
⑪	N Washer		

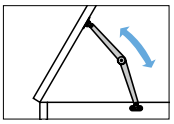
RoHS	CAD	Item Code	Item Name	Type	L_1	L_2	W_1	W_2	t_1	t_2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-055	S-91R	Right-handed	277	231	30	24	2	11	120	100	–
G	3D	180-103-001	S-91L	Left-handed								100	–
G	3D	180-100-056	S-92R	Right-handed	198	153	28	23	1.5	10.5	85	30	180
G	3D	180-103-002	S-92L	Left-handed								30	180
G	3D	180-100-057	S-93R	Right-handed	150	105					75	60	240
G	3D	180-100-070	S-93L	Left-handed								60	240

LID STAY F-300

L=R SUS



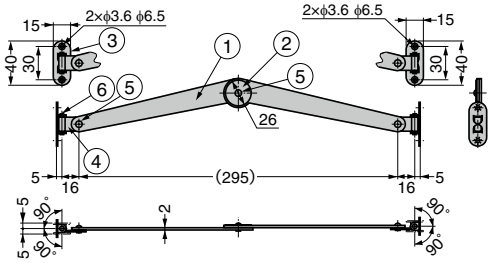
[Installation]



Opening Direction	Description
 Top-opening	Non-handed

[Remarks]

●When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.



No.	Part Name	Material	Finish
①	Arm	Stainless Steel (SUS304)	Satin
②	Cover		BA
③	Plain Washer		
④	Bracket		
⑤	Rivet	Copper	Nickel
⑥	Rivet	Brass	

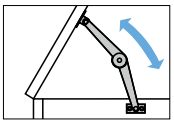
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)
G	3D	180-100-064	F-300	113	10

LID STAY F-150, F-200, F-250

SUS



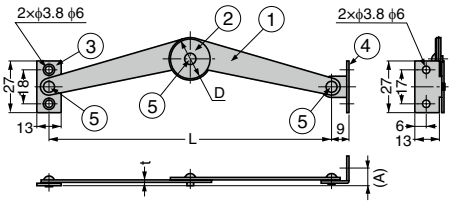
[Installation]



Opening Direction	Description
 Top-opening	–

[Remarks]

●When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.



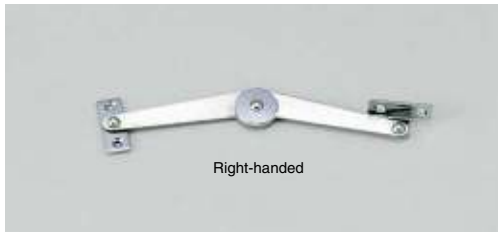
Right-handed type shown.

No.	Part Name	Material	Finish
①	Arm	Stainless Steel (SUS304)	Satin
②	Cover		BA
③	Plain Washer		
④	Bracket		
⑤	Rivet	Copper	Nickel

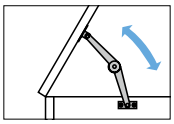
RoHS	CAD	Item Code	Item Name	Type	L	D	A	t	Weight (g)	Box (pcs)
G	3D	180-100-061	F-150R	Right-handed	150	22	9	1.2	30	40
G	3D	180-100-067	F-150L	Left-handed						40
G	3D	180-100-062	F-200R	Right-handed	198	22.5			37	30
G	3D	180-100-068	F-200L	Left-handed						30
G	3D	180-100-063	F-250R	Right-handed	250	25.5		1.5	65	30
G	3D	180-100-069	F-250L	Left-handed						30

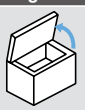
LID STAY F-100

SUS



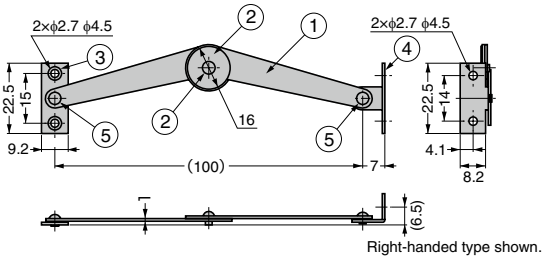
[Installation]



Opening Direction	Description
 Top-opening	–

[Remarks]

●When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.



Right-handed type shown.

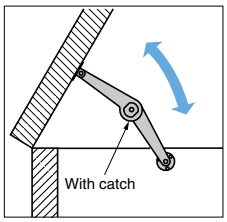
No.	Part Name	Material	Finish
①	Arm	Stainless Steel (SUS304)	Satin
②	Cover		BA
③	Plain Washer		
④	Bracket		
⑤	Rivet	Copper	Nickel

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)
G	3D	180-100-060	F-100R	Right-handed	13	50
G	3D	180-100-066	F-100L	Left-handed		50

LID STAY S-20 With Catch


S-20L (left-handed)

[Installation] Right-handed

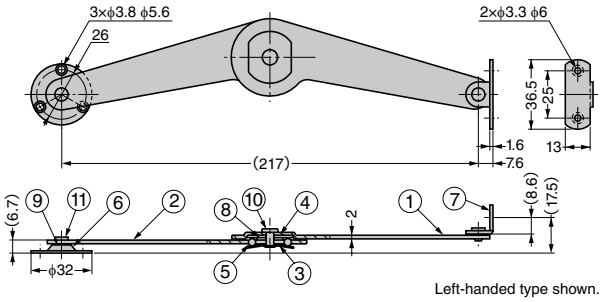


Opening Direction	Description
 Top-opening	With Catch

[Remarks]

- Catch mechanism may not work, depending on door weight.
- When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.

No.	Part Name	Material	Finish
①	Body A	Steel (SPCC)	Chrome
②	Body B		
③	Spring A	Steel (SK)	–
④	Spring B		
⑤	Ball	Steel (SWRCH)	
⑥	Bracket	Steel (SPCC)	Chrome
⑦	Bracket		
⑧	Washer		Nickel
⑨	Washer	PA	–
⑩	Centre Shaft	Steel (SWRM)	Chrome
⑪	Shaft	Brass	Tin Cobalt Plating



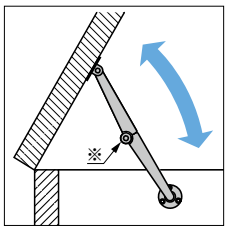
Left-handed type shown.

RoHS	CAD	Item Code	Item Name	Type	Tension Force N/pc	Tension Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-138	S-20R	Right-handed	410	41.8	122	40	160
G	3D	180-100-139	S-20L	Left-handed				40	160

LID STAY S-19


S-19L (left-handed)

[Installation] Right-handed

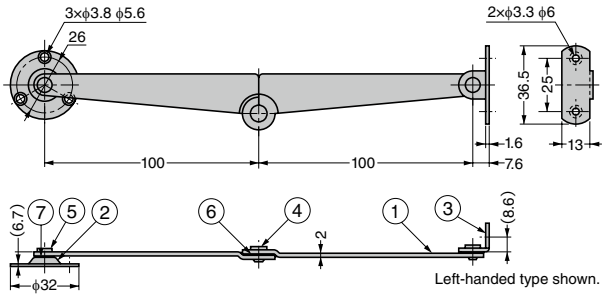


Opening Direction	Description
 Top-opening	–

[Remarks]

- When closing the door, operate while pulling the centre rivet (※ in left figure) toward you.
- When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.

No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Chrome
②	Bracket		
③	Bracket		
④	Centre Shaft	Brass	Tin Cobalt Plating
⑤	Shaft		
⑥	Washer A	PA	Natural
⑦	Washer B		



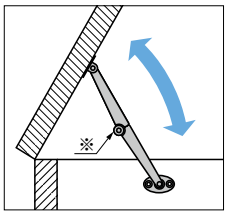
Left-handed type shown.

RoHS	CAD	Item Code	Item Name	Type	Tension Force N/pc	Tension Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-136	S-19R	Right-handed	425	43.4	66	50	300
G	3D	180-100-137	S-19L	Left-handed				50	300

LID STAY S-6, S-16


S-6L (left-handed)

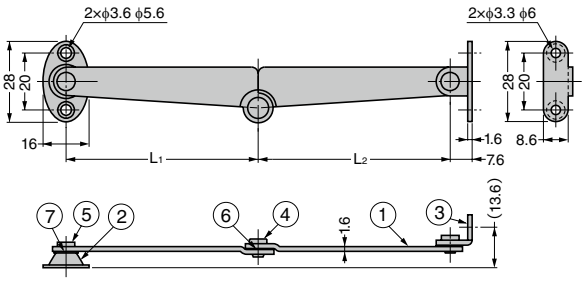
[Installation] Right-handed



Opening Direction	Description
 Top-opening	–

[Remarks]

- When closing the door, operate while pulling the centre rivet (※ in left figure) toward you.
- When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.



Left-handed type shown.

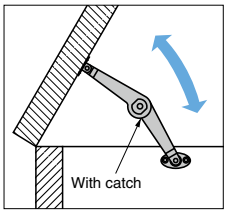
No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Chrome
②	Mounting Plate		
③	Bracket		
④	Centre Shaft	Brass	Tin Cobalt Plating
⑤	Shaft		
⑥	Washer A	PA	Natural
⑦	Washer B		

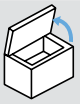
RoHS	CAD	Item Code	Item Name	Type	L_1	L_2	Tension Force N/pc	Tension Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-132	S-6R	Right-handed	53	53	318	32.4	20	100	1000
G	3D	180-100-133	S-6L	Left-handed						100	1000
G	3D	180-100-134	S-16R	Right-handed	67	67	336	34.3	31	60	600
G	3D	180-100-135	S-16L	Left-handed						60	600

LID STAY S-21 With catch


S-21L (left-handed)

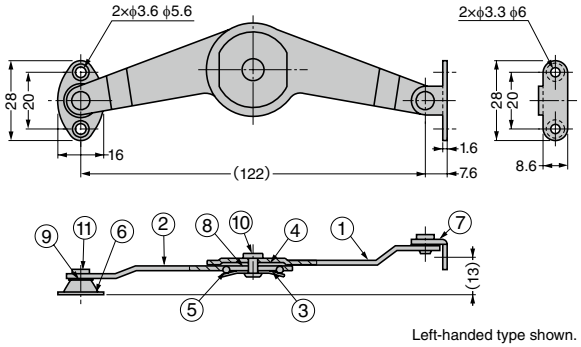
[Installation] Right-handed



Opening Direction	Description
 Top-opening	With catch

[Remarks]

- Catch mechanism may not work, depending on door weight.
- When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.



Left-handed type shown.

No.	Part Name	Material	Finish
①	Body A	Steel (SPCC)	Chrome
②	Body B		
③	Spring A	Steel (SK)	–
④	Spring B		
⑤	Balls	Steel (SWRCH)	
⑥	Mounting Plate	Steel (SPCC)	Chrome
⑦	Bracket		
⑧	Washer		Coloured Zinc Chromate (Trivalent)
⑨	Washer	PA	Natural
⑩	Centre Shaft	Brass	Tin Cobalt Plating
⑪	Shaft		

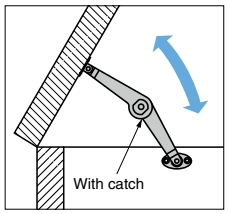
RoHS	CAD	Item Code	Item Name	Type	Tension Force N/pc	Tension Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-140	S-21R	Right-handed	309	31.5	49	50	500
G	3D	180-100-141	S-21L	Left-handed				50	500

LID STAY S-23 With catch



S-23L (left-handed)

[Installation] Right-handed

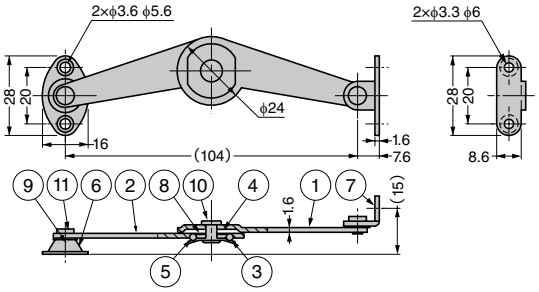


Opening Direction	Description
 Top-opening	With catch

[Remarks]

- Catch mechanism may not work, depending on door weight.
- When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.

No.	Part Name	Material	Finish
①	Body A	Steel (SPCC)	Chrome
②	Body B		
③	Spring A	Stainless Steel (SUS301)	–
④	Spring B		
⑤	Balls	Steel (SWRCH)	
⑥	Mounting Plate	Steel (SPCC)	Chrome
⑦	Bracket		
⑧	Washer		Coloured Zinc Chromate (Trivalent)
⑨	Washer	PA	Natural
⑩	Centre Shaft	Brass	Tin Cobalt Plating
⑪	Shaft		



Left-handed type shown.

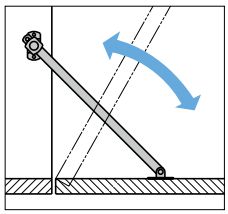
RoHS	CAD	Item Code	Item Name	Type	Tension Force N/pc	Tension Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-142	S-23R	Right-handed	298	30.4	33	50	500
G	3D	180-100-143	S-23L	Left-handed				50	500

LID STAY HS

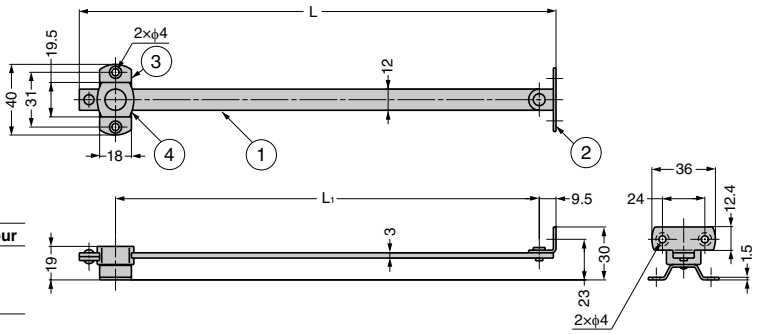
NSF L=R SUS



[Installation]



Opening Direction	Description
 Downward-opening	Non-handed



No.	Part Name	Material	Finish/Colour
①	Arm	Stainless Steel (SUS304)	Satin
②	Bracket		
③	Mounting Plate		
④	Body	PA	White

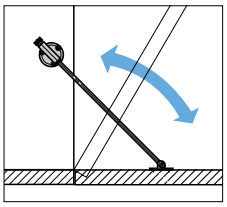
RoHS	CAD	Item Code	Item Name	L	L1	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-020	HS-180	210	180	80	20	220
G	3D	180-100-021	HS-210	240	210	90	20	220
G	3D	180-100-022	HS-240	270	240	100	20	220

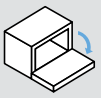
LID STAY S-35

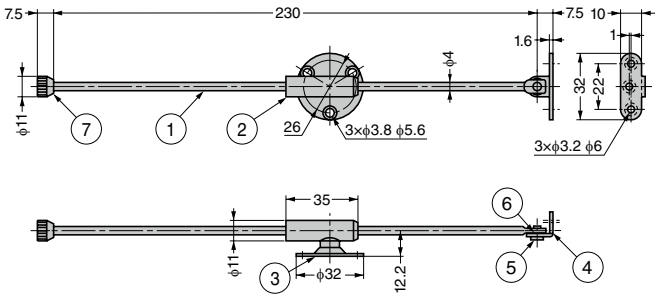
L=R



[Installation]



Opening Direction	Description
 Downward-opening	Non-handed



No.	Part Name	Material	Finish/Colour
①	Arm	Steel (SWRM)	Chrome
②	Arm Guide	PA	Brown
③	Bracket	Steel (SPCC)	Chrome
④	Bracket		
⑤	Shaft	Brass	Tin Cobalt Plating
⑥	N Washer	PA	Natural
⑦	Nut	Brass	Nickel

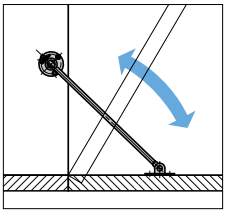
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-151	S-35	44	60	300

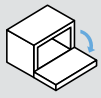
LID STAY S-34

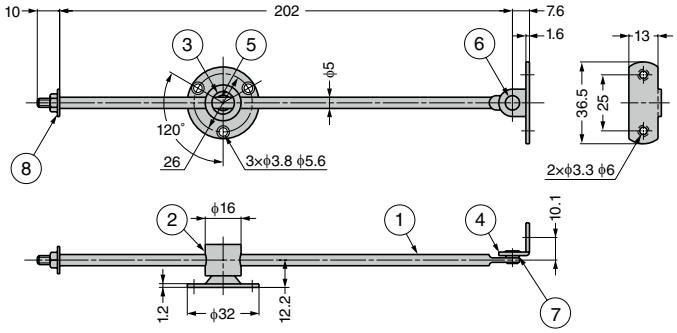
L=R



[Installation]



Opening Direction	Description
 Downward-opening	Non-handed



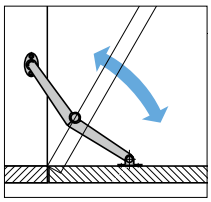
No.	Part Name	Material	Finish/Colour
①	Arm	Steel (SWRM)	Chrome
②	Arm Guide	PA	Natural
③	Bracket	Steel (SPCC)	Chrome
④	Bracket		
⑤	Shaft A	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
⑥	Shaft B	Brass	Tin Cobalt Plating
⑦	Washer	PA	Natural
⑧	Flanged Hexagon Nut	Steel (SWCH)	Nickel

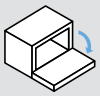
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-150	S-34	52	60	300

LID STAY S-24, S-27, S-25


Right-handed

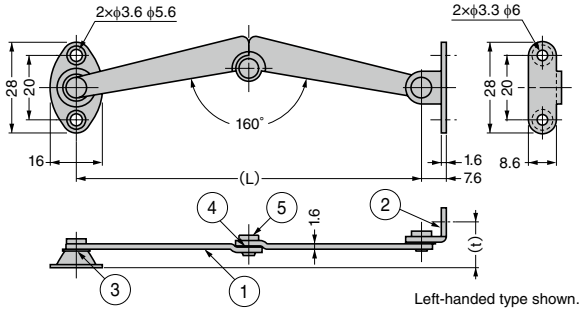
[Installation] Right-handed



Opening Direction	Description
 Downward-opening	–

[Remarks]

- When installing this stay to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side (cabinet side). In this way, screw head will not protrude when the stay is fixed.



Left-handed type shown.

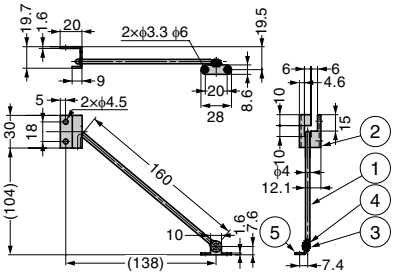
No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Chrome
②	Bracket		
③	Washer		
④	Washer	PA	Natural
⑤	Shaft	Brass	Tin Cobalt Plating

RoHS	CAD	Item Code	Item Name	Type	L	t	Tension Force N/pc	Tension Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-144	S-24R	Right-handed	105.5	13.6	326	33.3	21	100	1000
G	3D	180-100-145	S-24L	Left-handed						100	1000
G	3D	180-100-148	S-27R	Right-handed	133		325	33.2	31	60	600
G	3D	180-100-149	S-27L	Left-handed		13.4				60	600
G	3D	180-100-146	S-25R	Right-handed	163	13.6	287	29.3	35	60	600
G	3D	180-100-147	S-25L	Left-handed		13.4				60	600

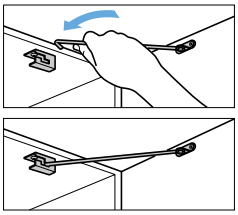
SWING DOOR LID STAY SAD-160

SUS

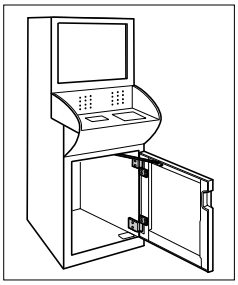


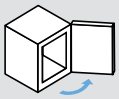


[Installation]



[Application Example]



Opening Direction	Description
 Swing Door	For Swing Door Right-handed Only

- Can be removed from the door.
- Horizontal installation at the upper part of the door. (Vertical use not allowed)

[Applications]

- Light doors of financial equipment, etc.

[Remarks]

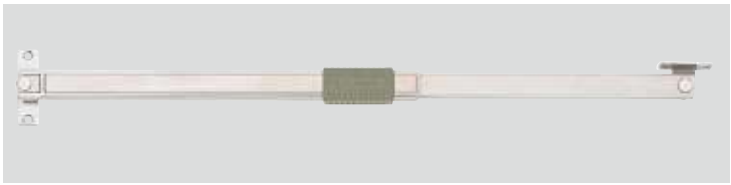
- For right hand door only.
- No lock mechanism. Stopper not included.
- Opening angle and installation position change depending on the position of hinge centre. Determine the installation position based on the hinges used and cabinet shape.

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)
G	3D	180-109-185	SAD-160	Right-handed	34	500

No.	Item Code	Item Name	Finish/Colour
①	Arm	Stainless Steel (SUS304)	Barrel Polished
②	Stopper		
③	Rivet	Stainless Steel	
④	Washer	PA	Natural
⑤	Bracket	Stainless Steel (SUS304)	Barrel Polished

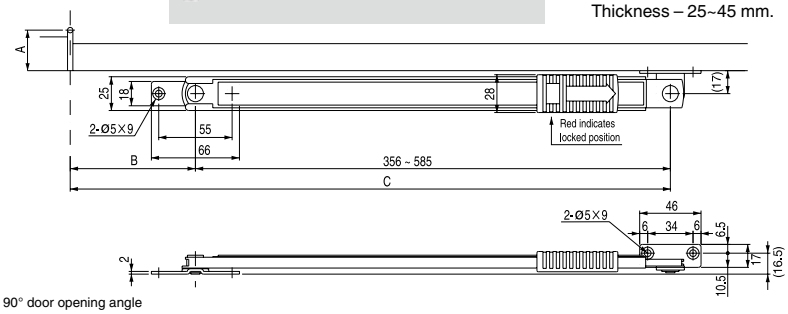
MULTI-ANGLE LID STAY U-3005

L=R SUS





- Locks lid in multiple positions by maually sliding lock lever.
- Slide back lever to lock / unlock.
- Ideal for vibration or shock applications.
- Can be installed individually or in pairs.
- Non-Handed: Can be installed on left or right side.
- Door opening angle : 100° maximum.
- Recommended door size.
  Height – Max. 2,000 mm.
  Width – 600~910 mm.
  Thickness – 25~45 mm.



A, B and C dimensions are for 90° door opening angle

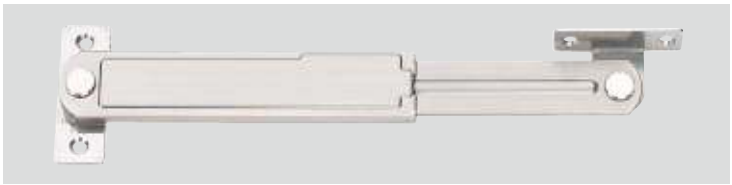
A	30	35	40	45	50
B	160	160	160	160	155
C	525	520	515	510	505

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	–	180-109-466	U-3005	338	6	60

Material	Finish/Colour
Stainless Steel (304)	Satin
Polyacetal	–

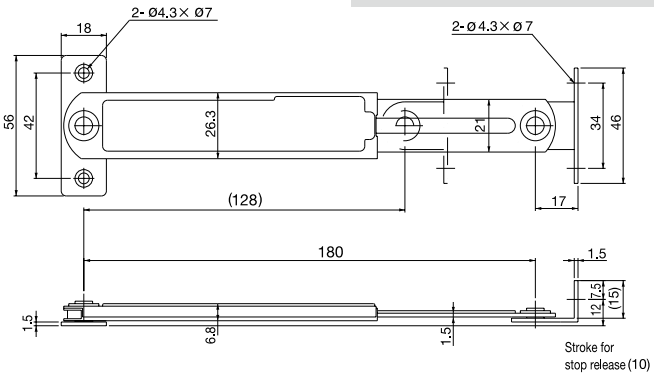
MULTI-ANGLE LID STAY U-3031

L=R SUS





- Ratchet stay holds flap lid at multiple angles.
- Non-handed.
- Thin and compact design.
- Completely open the door to release lock.
- Completely close the door to re-engage the lock.



Material	Finish
Stainless Steel (304)	Satin

RoHS	CAD	Item Code	Item Name	Stop Positions	Load Capacity (kg)	Weight (g)	Box (pcs)	Carton (pcs)
–	–	180-109-200	U-3031	15	7	127	10	100

LAMP®

CABINET DOOR HARDWARE & SHUTTER DOORS

Cabinet door hardware & shutter doors are more complex parts than hinges used for opening and closing doors or lids.
We offer many Sugatsune unique “opening modes” superior to conventional swing doors and sliding doors with small door projection and no interference with the passage.

SUGATSUNE

Updated 2017.10.27

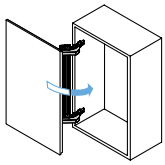
INDEX

Flush / Lateral Opening Door Systems

P.328~357

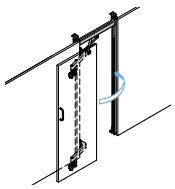
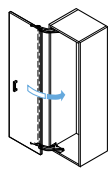
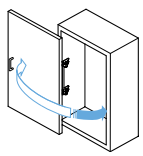
MonoFlat LIN-X Hinge

P.328~

Installation Image	Product Name	Size Per One Door				Page
		Door Weight	Door Width	Door Height	Door Thickness	
	MonoFlat LIN-X hinge. MonoFlat LIN-X Hinge LIN-X450, LIN-X600	LIN-X450 Max. 17 kg LIN-X600 Max. 24 kg	LIN-X450 400~500 mm LIN-X600 550~650 mm	600~2400 mm	15~24 mm	P.328
	MonoFlat LIN-X hinge. MonoFlat LIN-X Hinge LIN-X1000	Max. 90 kg	750~1100 mm	2400~2980 mm	24~40 mm	P.336

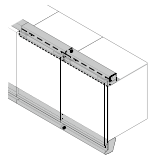
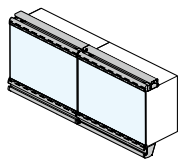
MonoFlat FAD

P.338~

Installation Image	Product Name	Size Per One Door				Page
		Door Weight	Door Width	Door Height	Door Thickness	
	MonoFlat FAD. MonoFlat FAD-54	Max. 35 kg	800~850 mm	FAD-54 Max. 2380 mm FAD-54L Max. 2980 mm	24~38 mm	P.338
	MonoFlat FAD. MonoFlat FAD-44	Max. 35 kg	800~850 mm	FAD-44 Max. 2380 mm FAD-44L Max. 2980 mm	24~38 mm	P.342
	MonoFlat FAD. MonoFlat FAD-20 For Medium Size Cabinet	Max. 20 kg	Cabinet Inside Width 500~550 mm	Cabinet Inside Height Max. 2420 mm	Max. 35 mm	P.346
	MonoFlat FAD. MonoFlat FAD-5 For Small Size Cabinet	Max. 5 kg	270~350 mm	260~650 mm	15~20 mm	P.348

MultiMo FLAT

P.350~

Installation Image	Product Name	Size Per One Door				Page
		Door Weight	Door Width	Door Height	Door Thickness	
	MultiMo FLAT. MultiMo FLAT (For Wood Panels)	1.5~6.8 kg	297, 447, 597, 897 mm	300~900 mm	15~23 mm	P.350
	MultiMo FLAT. MultiMo FLAT (For Glass Panels)	Glass Weight 1.5~6.7 kg	Glass Width 295, 445, 595, 895 mm	Glass Height 300~900 mm	Glass Thickness 5 mm	P.354

Sliding Door Systems

P.358~

Installation Image	Product Name	Size Per One Door				Aluminium Frame	Page
		Door Weight	Door Width	Door Height	Door Thickness		
	Aluminium Frame Sliding Door System AF-25H	Max. 70 kg (Including Aluminium Frame Weight)	Max. 1600 mm	Max. 3000 mm	Glass Thickness 5 mm 6 mm	Size: 40×40 mm Groove Width: 8, 10 mm	P.358

Folding Door Systems

P.362~

Installation Image	Product Name	Size Per One Door				Aluminium Frame	Page
		Door Weight	Door Width	Door Height	Door Thickness		
	Folding Door System KF111-MH	Max. 10 kg	Max. 450 mm	Max. 2400 mm	30 mm	Size: Door 30×60 mm, Frame : 30×60 mm, 40×40 mm Groove Width: Door 8 mm, Frame 10 mm	P.362
	Slidable Folding Door System KF111-R	Max. 10 kg	Max. 450 mm	Max. 2400 mm	18~34 mm	Size: Door 30×60 mm, Frame 40×40 mm, Groove Width: 6 mm	P.366

Shutter Door Systems

P.370~

Installation Image	Product Name	Open/Close Direction	Cabinet Size			Cabinet Material		Page
			Inside Width	Inside Height	Inside Depth	Metal	Wood	
	Design Shutter DIS-M (Surface Mount Type)	Vertical Open/Close	300~1200 mm	300~900 mm	Min. 330mm	Yes	Yes	P.370
		Horizontal Open/Close	300~900 mm For Double Door 600~1800 mm	100~1200 mm				
	Design Shutter DIS-H (Recessed Mount Type)	Vertical Open/Close	300~900 mm	300~900 mm	200~600 mm	Yes	Yes	P.376
		Horizontal Open/Close	300~900 mm For Double Door 600~1800 mm	100~1188 mm				
	AS High Rigidity Cabinet Shutter	Vertical Open/Close	Aluminium Frame Inside Width Max. 840 mm	Aluminium Frame Inside Height Max. 640 mm	Aluminium Frame Inside Depth Max. 900 mm	Yes	Yes	P.382

MONOFLAT LIN-X HINGE LIN-X450, LIN-X600

INSTRUCTION VIDEO

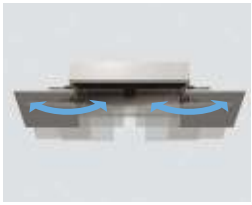
MonoFlat LIN-X hinge®

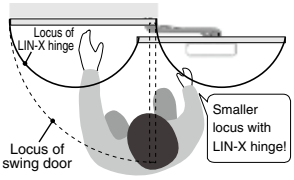


Door does not get in the way even when fully opened

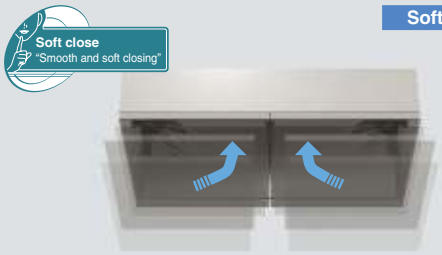
- Door will be flush with left and right doors when closed.
  - ・Door does not get in the way during and after being opened.
    Swings out laterally in small radius, ideal for tight front space application.
  - ・Full access to cabinet! Maximising inside space.
    Installed to cabinet side board, maximising space inside of cabinet.
  - ・Smooth operation
    Door can be opened and closed smoothly from any position.
  - ・Soft close
    Door closes smoothly and softly with damper.
  - ・Easy installation
    Arms are clipped or base.
  - ・4-way adjustable
    Adjustable in vertical, horizontal, depth and parallel directions.
  - ・Various applications
    Allows to combine single door and double door, suitable for various cabinets. L-shaped corner use also possible.

	LIN-X450 1	LIN-X600 2
Door Width	400~500 mm	550~650 mm
Door Height	600~2400 mm	
Door Thickness	15~24 mm	
Door Weight	Max. 17 kg/Door	Max. 24 kg/Door
Overlay	19 mm	
Specification	☐ Single Door (Overlay)	





●Allows to swing out laterally in small radius, ideal for tight front space application.



Closes smoothly and softly with damper.

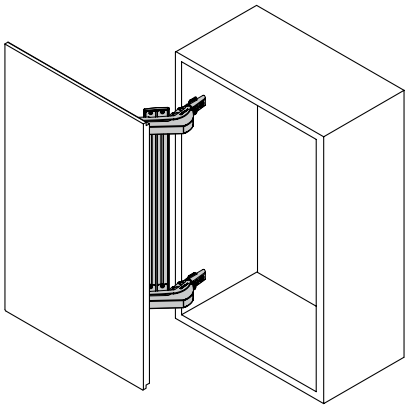




●Installed to side board, not interfering with taking in/out of articles. Suitable for hanging doors and floor cabinets.

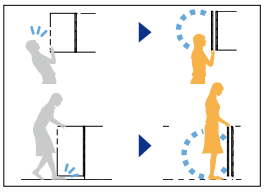


●Easy installation and removal.

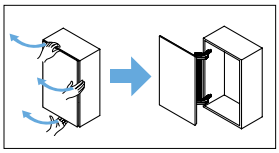


2 hinges per door shown.

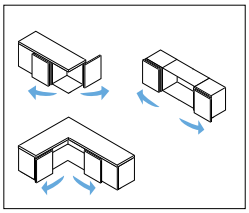
Video Link



●Door does not get in the way when opening and closing.



●Door can be opened and closed smoothly from any position.



●Suitable for various cabinets.

Refer to 1 : P.329, 2 : P.332

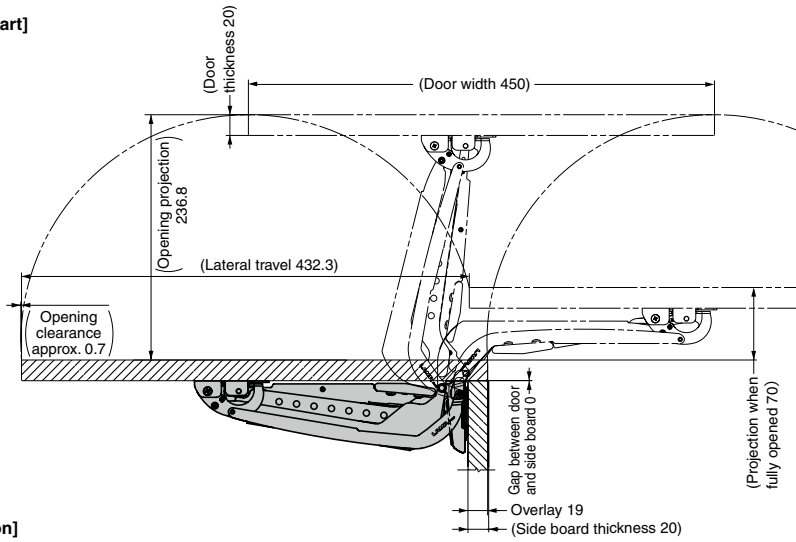
■LIN-X450 Installation Example

INSTRUCTION VIDEO

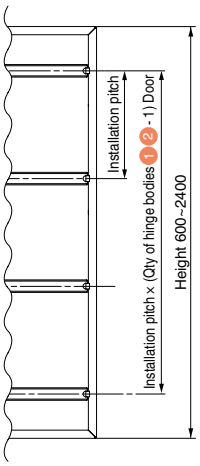
Door specifications [Width: 400~500mm] [Thickness: 15~24mm] [Height: 600~2400mm] [Weight: Max. 17kg/door] [Overlay: 19mm for standard type]

The circled numbers are part numbers. Please check with the parts list 1. For LIN-X600, refer to 2.

[Locus Chart]

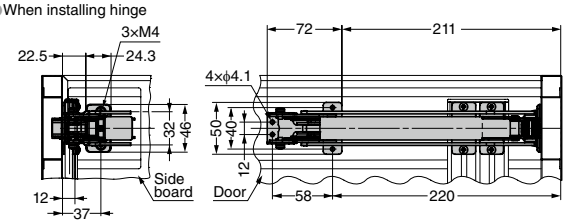


[Installation Pitch]

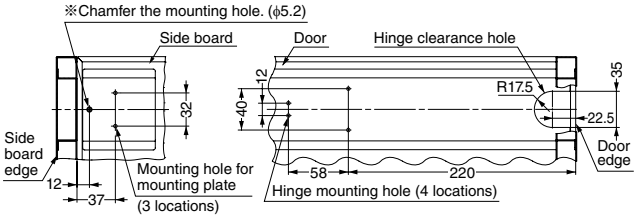


[Installation]

●When installing hinge



●Before installing hinge

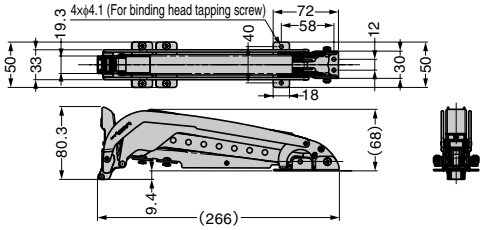


Qty of Hinge Bodies (1 + 2)	Item Name Suffix of Parts Set					
	09XX	12XX	15XX	18XX	21XX	24XX
	Connecting Bar 3 Length L					
	540	840	1140	1440	1740	2040
2 Hinges per Door	490	790	1090	–	–	–
3 Hinges per Door	245	395	545	695	845	–
4 Hinges per Door	–	263	363	463	563	663
5 Hinges per Door	–	–	272.5	347.5	422.5	497.5

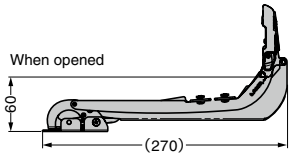
[Parts Drawings]

●Hinge body

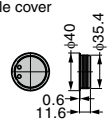
When closed



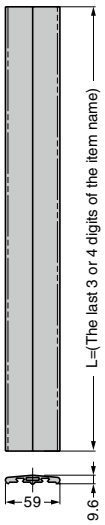
When opened



●Hole cover



●Connecting bar



●End cap for connecting bar



Refer to 1 : P.330~331, 2 : P.334

SUGATSUNE

When Ordering MonoFlat LIN-X Hinge LIN-X450

●Necessary Parts..... **Parts Set (Per Door)** + **Mounting Plate**

●Standard kit 1 including mounting plates also available, suitable for door height 600~900mm and door weight 7kg or less.

Parts Set (Per Door)

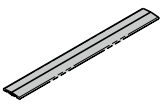
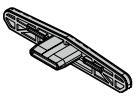
Necessary Parts
Choose based on applicable door height and door weight.
(Refer to 2 for details on dimensions and descriptions of parts included in the set.)

RoHS	CAD	Item Code	Item Name	Door Height mm	Door Weight kg	Parts Included (For LIN-X450)					Weight (g)
						① Hinge Set (With Catch & Damper)	② Hinge Set (Without Catch & Damper)	③ Connecting Bar		④ End Cap For Connecting Bar	
						Qty/set	Qty/set	Connecting Bar Item Name	Qty/pc	Qty/pc	
G	3D	250-016-701	LIN-X450S-0907	600~900	Max. 7	2	–	LIN-X45-L540	1	2	4046
G	3D	250-016-702	LIN-X450S-0910		7.1~10.5	3					4812
G	3D	250-016-703	LIN-X450S-1207	901~1200	Max. 7	2		LIN-X45-L840			4193
G	3D	250-016-704	LIN-X450S-1210		7.1~10.5	3					4959
G	3D	250-016-705	※1 LIN-X450S-1214		10.6~14		1				5661
G	3D	250-016-706	LIN-X450S-1507	1201~1500	Max. 7	2	–	LIN-X45-L1140			4416
G	3D	250-016-707	LIN-X450S-1510		7.1~10.5	3					5182
G	3D	250-016-708	※1 LIN-X450S-1514		10.6~14		1				5884
G	3D	250-016-709	※2 LIN-X450S-1517		14.1~17		2				6586
G	3D	250-016-710	LIN-X450S-1807	1501~1800	Max. 7		–	LIN-X45-L1440			5512
G	3D	250-016-711	LIN-X450S-1810		7.1~10.5						5512
G	3D	250-016-712	※1 LIN-X450S-1814		10.6~14		1				6214
G	3D	250-016-713	※2 LIN-X450S-1817		14.1~17		2				6916
G	3D	250-016-715	LIN-X450S-2107	1801~2100	Max. 7		–	LIN-X45-L1740			5648
G	3D	250-016-716	LIN-X450S-2110		7.1~10.5						5648
G	3D	250-016-717	※1 LIN-X450S-2114		10.6~14		1				6350
G	3D	250-016-718	※2 LIN-X450S-2117		14.1~17		2				7052
G	3D	250-016-721	※1 LIN-X450S-2407	2101~2400	Max. 7		1	LIN-X45-L2040			6669
G	3D	250-016-722	※1 LIN-X450S-2410		7.1~10.5						6669
G	3D	250-016-723	※1 LIN-X450S-2414		10.6~14						6669
G	3D	250-016-724	※2 LIN-X450S-2417		14.1~17		2				–

※1: 4 hinges per door. If installing hinge set (without catch & damper) 2, please use it as the second one from the bottom.
※2: 5 hinges per door. If installing hinge set (without catch & damper) 2, please use it as the second and third ones from the bottom.

[Parts Set Details] Refer to page 2 for the dimensions.

No.	Part Name	Description
1	**Hinge Set (With Catch & Damper)** Parts Included in 1 Set Hinge Body (With Catch & Damper)  ×1 Hole Cover  ×1 Binding Head Tapping Screw  ×4	G 3D Item Code : 250-016-240 Item Name : LIN-X450ACD Weight (g) : 766 ●Material Steel ●Finish Nickel
2	**Hinge Set (Without Catch & Damper)** Parts Included in 1 Set Hinge Body (With Catch & Damper)  ×1 Hole Cover  ×1 Binding Head Tapping Screw  ×4	G 3D Item Code : 250-016-242 Item Name : LIN-X450A Weight (g) : 702 ●Material Steel ●Finish Nickel

No.	Part Name	Description
3	**Connecting Bar** 	G 3D Item Code : 250-016-250 Item Name : LIN-X45-L540 Weight (g) : 481 G 3D Item Code : 250-016-252 Item Name : LIN-X45-L840 Weight (g) : 647 G 3D Item Code : 250-016-254 Item Name : LIN-X45-L1140 Weight (g) : 870 G 3D Item Code : 250-016-255 Item Name : LIN-X45-L1440 Weight (g) : 1200 G 3D Item Code : 250-016-256 Item Name : LIN-X45-L1740 Weight (g) : 1336 G 3D Item Code : 250-016-259 Item Name : LIN-X45-L2040 Weight (g) : 1655 ●Material Aluminium Alloy ●Finish Anodised
4	**End Cap for Connecting Bar** 	G – Item Code : 250-016-260 Item Name : LIN-X45C Weight (g) : 2 ●Material POM ●Colour Grey

Refer to 1 : P.331, 2 : P.329

Mounting Plate

Necessary Parts

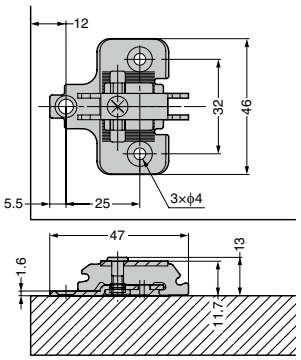
Mounting Plate 5 : Same qty as hinge (1 + 2) is necessary.

Countersunk Head Tapping Screw 6 : 3 pcs are necessary per 1 mounting plate.

No.	RoHS	CAD	Item Code	Dimensions
5	G	3D	160-070-041	Mounting Plate

Item Name : 230-P4W-32T
Weight (g) : 26





- Material Steel
- Finish Nickel

No.	RoHS	CAD	Item Code	Dimensions
6	G	–	160-070-030	Raised Countersunk Head Tapping Screw 3.5×15

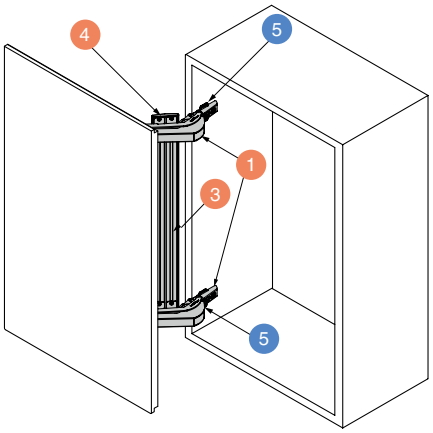
Item Name : TAP3515NI
Weight (g) : 1



For Mounting Plate

- Material Steel
- Finish Nickel

The circled numbers are part numbers. Please check with the parts list 1. For LIN-X600, refer to 2.



Refer to 1 : P.330~331, 2 : P.334

STANDARD KIT With Mounting Plate



Kit for LIN-X450

- Includes parts set and mounting plates.
- Suitable for door size (width 400~500mm, height 600~900mm, thickness 15~24mm) and door weight 7kg or less.

[Parts Included]

Hinge body ..... 2 pcs
Mounting plate ..... 2 pcs
Connecting bar ..... 1 pc
End cap for connecting bar ..... 2 pcs
Hole cover ..... 2 pcs
Raised countersunk head tapping screw 3.5×15 ..... 6 pcs
Binding head tapping screw 3.5×15 ..... 8 pcs

RoHS	CAD	Item Code	Item Name	Overlay mm	Door Height mm	Door Weight kg	Mounting Plate (Included)	Weight (g)	Box (sets)	Carton (sets)
G	3D	250-014-240	LIN-X450	19	600~900	Max. 7	230-P4W-32T	2162	1	6
G	3D	250-014-553	LIN-X450 + 5	14			230-P4W-32T+5	2200	1	6

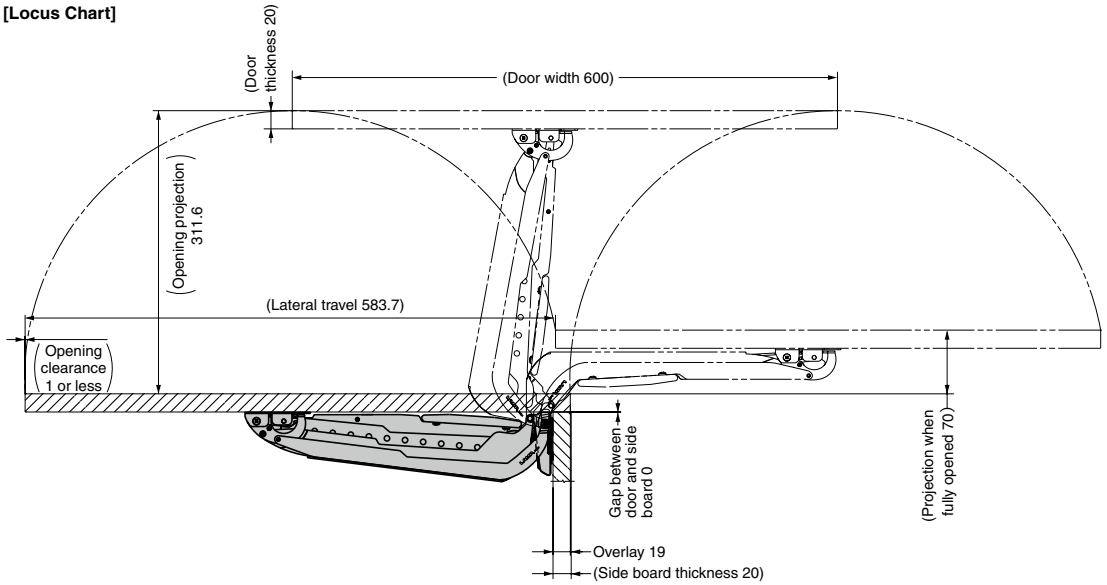
■LIN-X600 Installation Example

INSTRUCTION VIDEO

Door specifications [Width: 550~650 mm] [Thickness: 15~24 mm] [Height: 600~2400 mm] [Weight: Max. 24 kg/door] [Overlay: 19 mm for standard type]

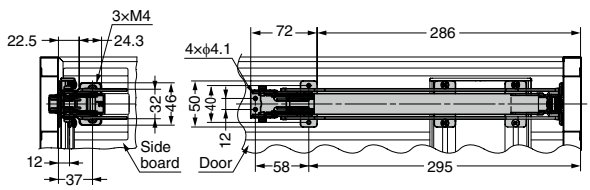
The circled numbers are part numbers. Please check with the parts list ①. For LIN-X450, refer to ②.

[Locus Chart]

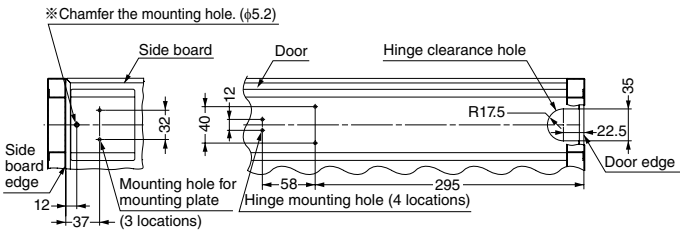


[Installation]

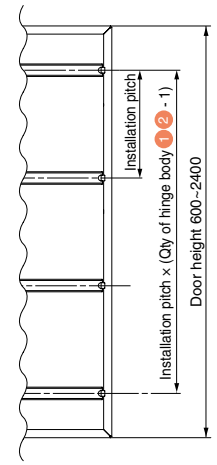
●When installing hinge



●Before installing hinge



[Installation Pitch]



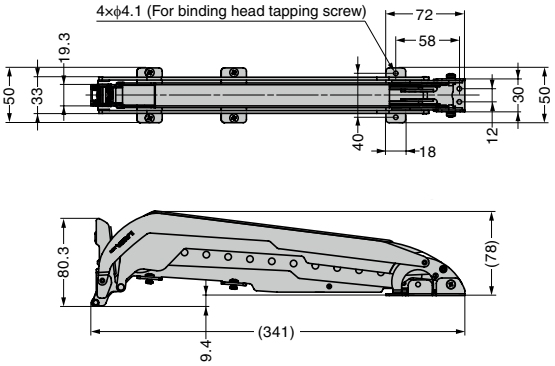
Qty of hinge bodies (① + ②)	Item Name Suffix of Parts Set					
	09XX	12XX	15XX	18XX	21XX	24XX
	Connecting Bar ③ Length L					
	540	840	1140	1440	1740	2040
2 Hinges per Door	490	790	–	–	–	–
3 Hinges per Door	245	395	545	695	845	–
4 Hinges per Door	–	–	363	463	563	663
5 Hinges per Door	–	–	–	347.5	422.5	497.5

Refer to ① : P.334, ② : P.330

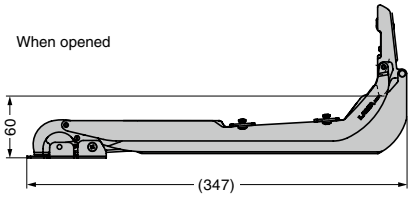
[Parts Drawings]

●Hinge body

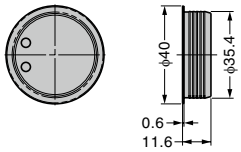
When closed



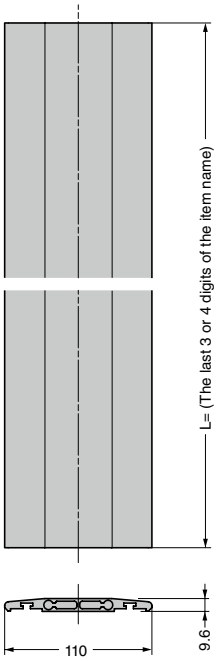
When opened



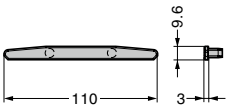
●Hole cover



●Connecting bar



●End cap for connecting bar



When Ordering MonoFlat LIN-X Hinge LIN-X600

●Necessary Parts..... **Parts Set (Per Door)** + **Mounting Plate**

●Standard kit 1 including mounting plates also available, suitable for door height 600~900mm and door weight 9kg or less.

Parts Set (Per Door)

Necessary Parts.
Choose based on applicable door height and door weight.
(Refer to 2 for details on dimensions and descriptions of parts included in the set.

RoHS	CAD	Item Code	Item Name	Door Height mm	Door Weight kg	Parts Included (For LIN-X600) ① Hinge Set (With Catch & Damper) Qty/set	② Hinge Set (Without Catch & Damper) Qty/set	③ Connecting Bar Qty/pc	④ End Cap For Connecting Bar Qty/pc	Weight (g)
G	3D	250-017-492	LIN-X600S-0909	600~	Max. 9	2	–	1	2	4913
G	3D	250-017-067	LIN-X600S-0912	900	9.1~12	3				5930
G	3D	250-017-068	LIN-X600S-1212	901~1200	Max. 12	2				5232
G	3D	250-017-069	LIN-X600S-1216		12.1~16	3				6270
G	3D	250-017-070	LIN-X600S-1512	1201~1500	Max. 12					6752
G	3D	250-017-071	LIN-X600S-1516		12.1~16					6752
G	3D	250-017-072	※1 LIN-X600S-1520		16.1~20		1			7748
G	3D	250-017-073	LIN-X600S-1812	1501~1800	Max. 12		–			7070
G	3D	250-017-074	LIN-X600S-1816		12.1~16					7070
G	3D	250-017-075	※1 LIN-X600S-1820		16.1~20		1			8066
G	3D	250-017-493	※2 LIN-X600S-1824		20.1~24		2			9062
G	3D	250-017-076	LIN-X600S-2112	1801~2100	Max. 12		–			7608
G	3D	250-017-077	LIN-X600S-2116		12.1~16					7608
G	3D	250-017-078	※1 LIN-X600S-2120		16.1~20		1			8604
G	3D	250-017-079	※2 LIN-X600S-2124		20.1~24		2			9600
G	3D	250-017-080	※1 LIN-X600S-2412	2101~2400	Max. 12		1			9066
G	3D	250-017-081	※1 LIN-X600S-2416		12.1~16					9066
G	3D	250-017-082	※1 LIN-X600S-2420		16.1~20					9066
G	3D	250-017-083	※2 LIN-X600S-2424		20.1~24		2			

※1: 4 hinges per door. If installing hinge set (without catch & damper) 2, please use it as the second one from the bottom.
※2: 5 hinges per door. If installing hinge set (without catch & damper) 2, please use it as the second and third ones from the bottom.

[Parts Set Details] Refer to page 2 for the dimensions.

No.	Part Name	Description
1	**Hinge Set (With Catch & Damper)** Parts Included in 1 Set Hinge Body (With Catch & Damper) ×1 Hole Cover ×1 Binding Head Tapping Screw ×4	Item Code : 250-016-962 Item Name : LIN-X600ACD Weight (g) : 1017 ●Material Steel ●Finish Nickel
2	**Hinge Set (Without Catch & Damper)** Parts Included in 1 Set Hinge Body (Without Catch & Damper) ×1 Hole Cover ×1 Binding Head Tapping Screw ×4	Item Code : 250-016-963 Item Name : LIN-X600A Weight (g) : 996 ●Material Steel ●Finish Nickel

No.	Part Name	Description
3	**Connecting Bar**	Item Code : 250-016-964 Item Name : LIN-X60-L540 Weight (g) : 860
		Item Code : 250-016-965 Item Name : LIN-X60-L840 Weight (g) : 1200
		Item Code : 250-016-966 Item Name : LIN-X60-L1140 Weight (g) : 1682
		Item Code : 250-016-967 Item Name : LIN-X60-L1440 Weight (g) : 2000
		Item Code : 250-016-968 Item Name : LIN-X60-L1740 Weight (g) : 2538
		Item Code : 250-016-969 Item Name : LIN-X60-L2040 Weight (g) : 3000
		●Material Aluminium Alloy ●Finish Anodised
4	**End Cap for Connecting Bar**	Item Code : 250-016-970 Item Name : LIN-X60C Weight (g) : 4 ●Material POM ●Colour Grey

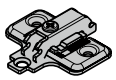
Refer to 1 : P.335, 2 : P.332~333

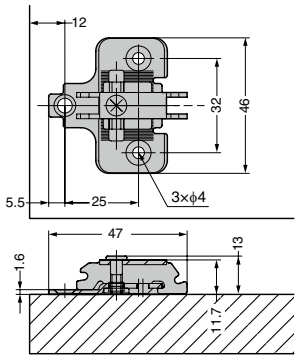
Mounting Plate

Necessary Parts.
Mounting Plate 5 : Same qty as hinge (1 + 2) is necessary.
Countersunk Head Tapping Screw 6 : 3 pcs are necessary per 1 mounting plate.

No.	RoHS	CAD	Item Code	Dimensions
5	G	3D	160-070-041	Mounting Plate

Item Name : 230-P4W-32T
Weight (g) : 26





- Material Steel
- Finish Nickel

No.	RoHS	CAD	Item Code	Dimensions
6	G	–	160-070-030	Raised Countersunk Head Tapping Screw 3.5×15

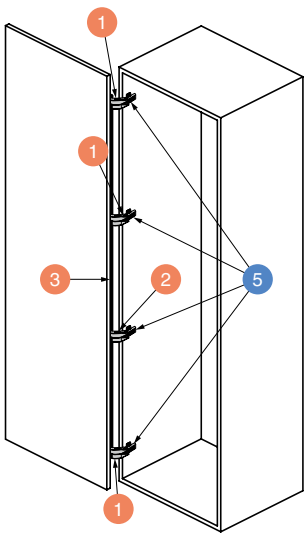
Item Name : TAP3515NI
Weight (g) : 1



For Mounting Plate

- Material Steel
- Finish Nickel

The circled numbers are part numbers. Please check with the parts list 1. For LIN-X450, refer to 2.



4 hinges per door shown.

Refer to 1 : P.334~335, 2 : P.330

STANDARD KIT With Mounting Plate

[Parts Included]

Hinge body ..... 2 pcs
Mounting plate ..... 2 pcs
Connecting bar ..... 1 pc
End cap for connecting bar ..... 2 pcs
Hole cover ..... 2 pcs
Raised countersunk head tapping screw 3.5×15 ..... 6 pcs
Binding head tapping screw 3.5×15 ..... 8 pcs

- Includes parts set and mounting plates.
- Suitable for door size (width 550~650mm, height 600~900mm, thickness 15~24mm) and door weight 9kg or less.

RoHS	CAD	Item Code	Item Name	Overlay mm	Door Height mm	Door Weight kg	Mounting Plate (Included)	Weight (g)	Box (sets)	Carton (sets)
G	–	250-017-590	LIN-X600	19	600~900	Max. 9	230-P4W-32T	3210	1	4

MONOFLAT LIN-X HINGE LIN-X1000 For Heavy Duty Door

INSTRUCTION VIDEO



MonoFlat LIN-X hinge®

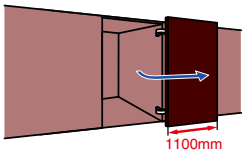
	LIN-X1000 For Heavy Duty
Door Width	750~1100 mm
Door Height	2400※1~2980 mm
Door Thickness	24~40 mm
Door Weight	Max. 90 kg/Door ※2
Overlay	19 mm
Specification	☐ Single Door (Overlay)

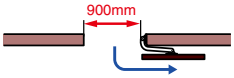
※1 Height may be 2400mm or less if cutting the connecting bar. For further details, please contact local representatives.
※2 Set the clearance between floor and door according to door weight. For details, refer to the drawings on P.337.

POINT 1

Max. door width 1100mm (effective opening width 900 mm)

Installed to side wall, not interfering with taking in/out of articles.





Wide access possible

POINT 2

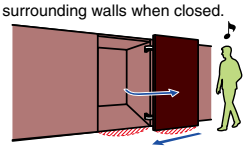
Max. door weight 90kg

Recommended for storage doors and walk-in closets.

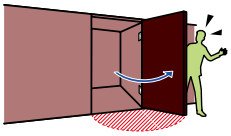
POINT 3

Door does not get in the way when opening and closing.

Opening projection is about half of swing door. Door will be flush with surrounding walls when closed.



In case of LIN-X1000

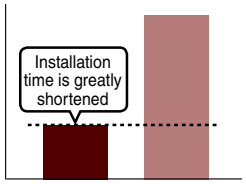


In case of swing door

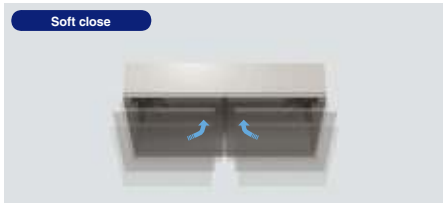
POINT 4

Greatly shortened installation time

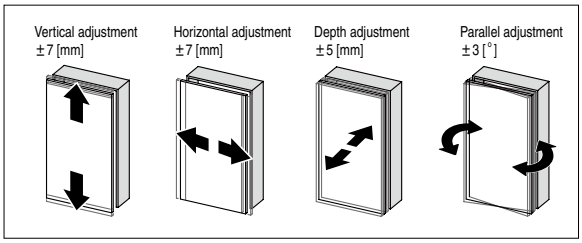
Sub-arm is unnecessary at the upper/lower part of door, remarkably shortening installation time.



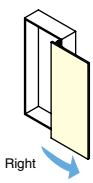
Other Features

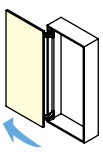


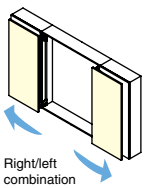
Door closes smoothly and softly with damper.
(Damping force 5-step adjustable)

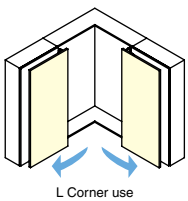


●Adjustable in vertical, horizontal, depth and parallel directions.


Right


Left


Right/left combination


L Corner use

●Suitable for various cabinets.

When ordering MonoFlat LIN-X Hinge LIN-X1000 For Heavy Duty Door

●Necessary Parts..... Parts Set (Per Door) + Connecting Bar

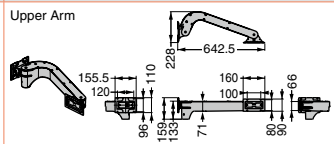
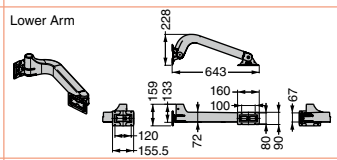
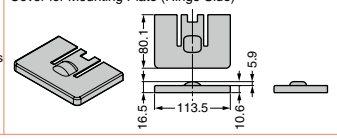
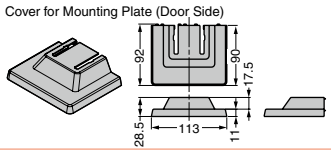
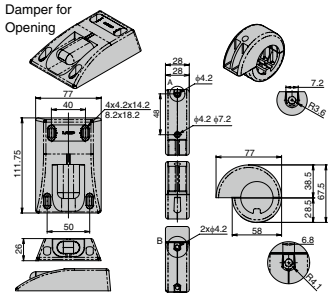
The circled numbers are part numbers. Please check with the drawings on the bottom.

Parts Set (Per Door)

Necessary Parts.

Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)
Parts Set	G	3D	250-034-706	LIN-X1000	12000

Parts Included

No.	Qty	Dimensions	Description
1	1 pc	Upper Arm 	●Material Aluminium Alloy Die-casting ●Finish Powder Coating/ White
2	1 pc	Lower Arm 	●Material Aluminium Alloy Die-casting ●Finish Powder Coating/ White
3	4 pcs	Cover for Mounting Plate (Hinge Side) 	●Material ABS ●Colour White
4	4 pcs	Cover for Mounting Plate (Door Side) 	●Material ABS ●Colour White
5	4 pcs	Damper for Opening 	●Material PBT ●Colour White

Connecting Bar

Necessary Parts1 pc is necessary for 1 door.

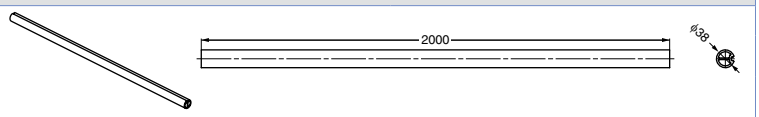
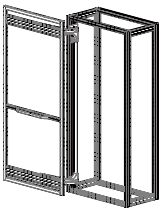
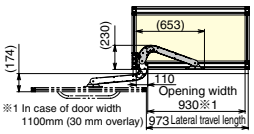
No.	Qty	RoHS	CAD	Item Code	Dimensions
6	1 pc	G	3D	250-034-707 Item Name : LIN-X1000-L2000 Weight (g) : 3300 ●Material Aluminium Alloy ●Finish White Anodised	

Table 1: Handle position area

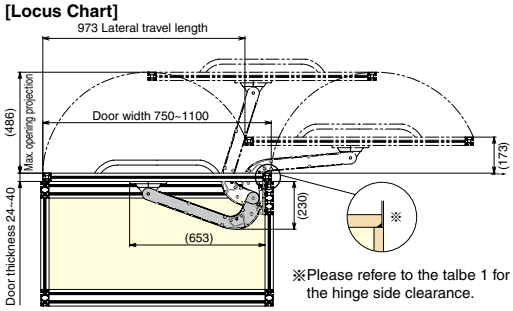
Door width \ Hinge side clearance	10mm	15mm	20mm
750mm~ 900mm	Max. 300mm	Max. 350mm	Max. 500mm
900mm~1000mm	Max. 200mm	Max. 250mm	Max. 400mm
1000mm~1100mm	Max. 100mm	Max. 150mm	Max. 300mm



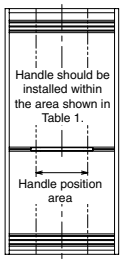
[Installation Example]



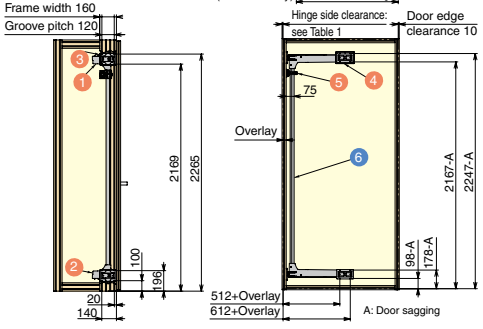
[Locus Chart]



※Please refere to the talbe 1 for the hinge side clearance.



※Handle position area is centred on the door width.



Please set door sagging A based on the following table so that the door will not contact the floor.

Door weight	A: Door sagging
20kg	2mm
30kg	3.5mm
40kg	5mm
50kg	6.5mm
60kg	8mm
70kg	9.5mm
80kg	11mm
90kg	12.5mm

・For carpeted floor, add the carpet thickness to the "door sagging" shown above.
・This product is vertically adjustable by ±7mm after installation. For adjustment method, please refer to the installation instruction.

SUGATSUNE

MONOFLAT FAD (FOR PARTITION USE) FAD-54

INSTRUCTION VIDEO

MonoFlat FAD®

	FAD-54	FAD-54L
Door Width	800~850 mm※1	
Door Height	Max. 2380 mm※2	Max. 2980 mm※2
Door Thickness	24~38 mm	
Door Weight	Max. 35 kg/Door※3	
Specification	☐ Single Door	

※1 When overlay is 25 mm both sides.
※2 Aluminium frame length: 2300mm (in case of FAD-54), 2900mm (in case of FAD-54L).
※3 Door weight has priority over door size.

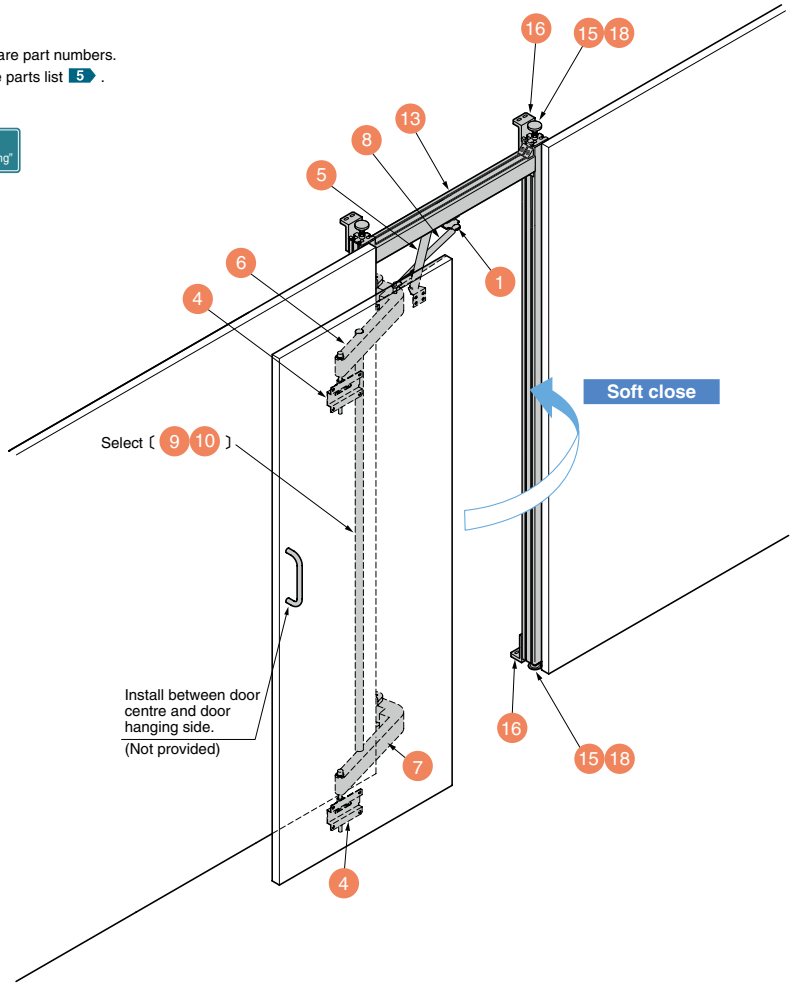
Provides large opening and flush appearance. Installed on aluminium frame with a smaller projection than swing door.

- Door will be flush with surrounding walls when closed, creating flat and clean appearance.
- Smaller projection maximises space in front of door.
- Possible to combine in double doors.
- All parts are installed to aluminium frame for long-term use.
- Direct mount type MonoFlat FAD-44 also available 1 .
- No bottom rail required.
- Door height can be set by cutting the arm connecting pipe.
- Holds door in fully opened and closed position.
- Door adjustable in vertical (-3 ~ +7mm), horizontal (±7mm), depth and parallel directions.
- Passed 20,000 open/close cycle test
- Other "MonoFlat Series" are available.

・MonoFlat Unison Neo for door weight up to 30 kg
・MonoFlat FAD-20 for door weight up to 20 kg 2
・MonoFlat FAD-5 for door weight up to 5 kg 3
・MonoFlat LIN-X hinge for door weight up to 24 kg 4

The circled numbers are part numbers.
Please check with the parts list 5 .

Soft close
"Smooth and soft closing"

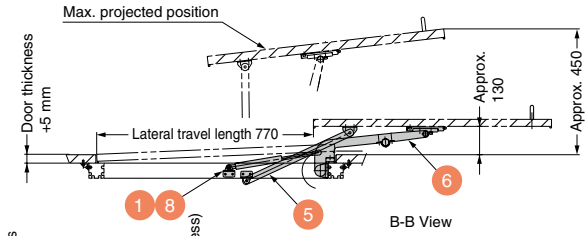


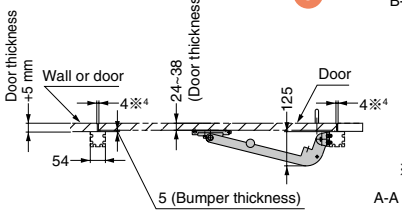
Video Link

Refer to 1 : P.342, 2 : P.346, 3 : P.348, 4 : P.328, 5 : P.340~341

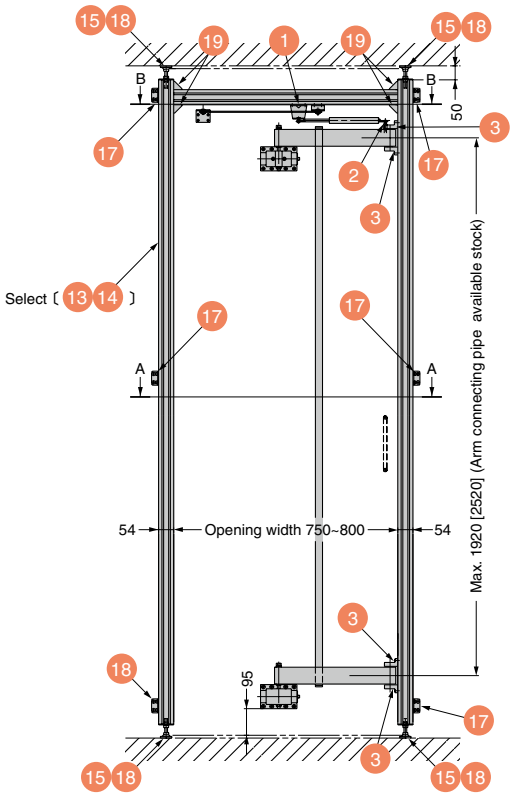
[Installation Example]

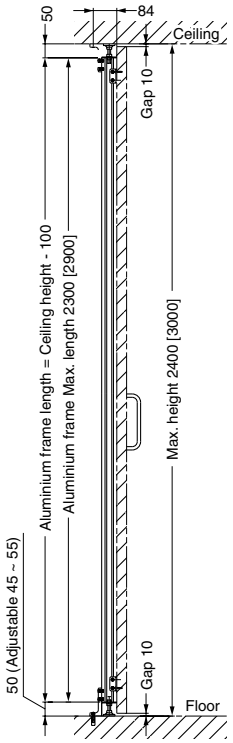
The circled numbers are part numbers.
Please check with the part list 1 .





※4 Be sure to reserve 4mm gap between door and side board.

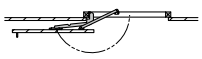




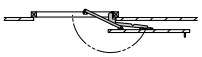
Dimension in [ ] shows FAD-54L.

[Opening Variations]

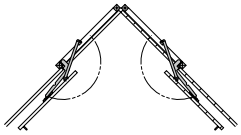
Left hand use



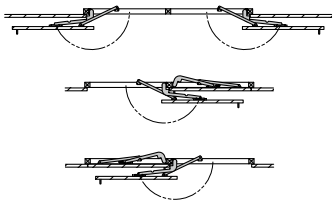
Right hand use



Corner use ※5



Right / Left combination ※5



※5 Install stopper on the floor for double doors.

Refer to 1 : P.340~341

When Ordering MonoFlat FAD-54

● Necessary Parts ..... Parts Set (Per Door)

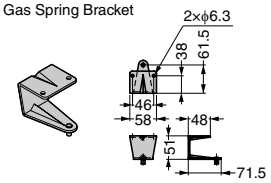
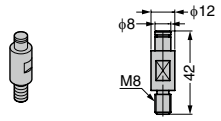
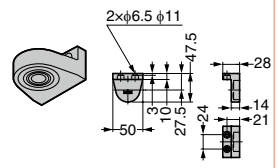
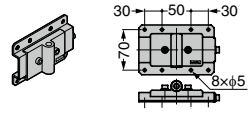
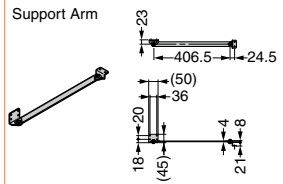
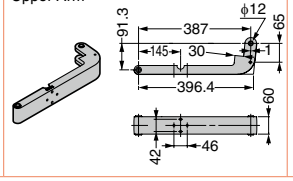
The circled numbers are part numbers. Please check with the drawings 1 .

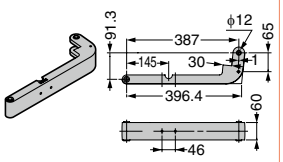
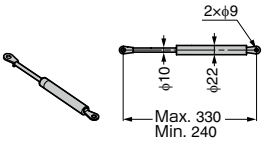
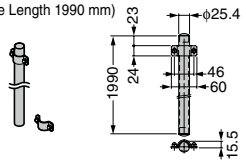
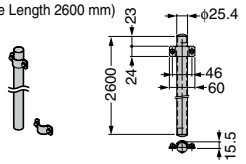
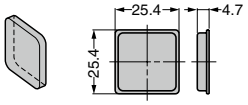
Parts Set (Per Door)

Necessary Parts
Please choose a or b depending on your door height.

Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)
a Parts Set (Max. Door Height 2380 mm)	–	3D	250-121-314	FAD-54	24700	1
b Parts Set (Max. Door Height 2980mm)	–	3D	250-021-876	FAD-54L	28100	1

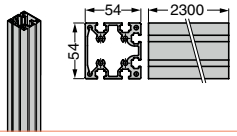
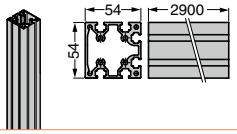
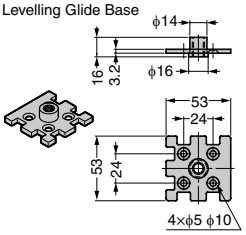
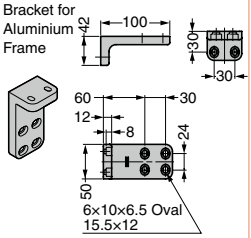
Parts Included

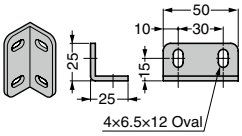
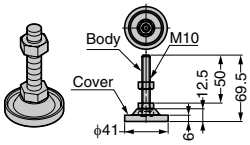
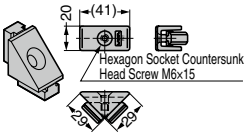
No.	Qty a	Qty b	Dimensions	Description
1	1 pc	1 pc	Gas Spring Bracket 	●Material Steel ●Finish Clear Zinc Chromate
2	1 pc	1 pc	Screw Pin 	●Material Steel ●Finish Clear Zinc Chromate
3	4 pcs	4 pcs	Bearing Housing 	●Material Aluminium Alloy ●Finish / Colour Silver Enamel Finish
4	2 pcs	2 pcs	Adjustment Bracket 	●Material Steel / POM ●Colour Silver
5	1 pc	1 pc	Support Arm 	●Material Steel / POM ●Finish / Colour Silver Enamel Finish
6	1 pc	1 pc	Upper Arm 	●Material Aluminium Alloy ●Finish / Colour Silver Enamel Finish

No.	Qty a	Qty b	Dimensions	Description
7	1 pc	1 pc	Lower Arm 	●Material Aluminium Alloy ●Finish / Colour Silver Enamel Finish
8	1 pc	1 pc	Gas Spring 	●Colour Grey
9	1 set	–	Arm Connecting & Clamp (Pipe Length 1990 mm) 	●Material Steel ●Finish / Colour Silver Enamel Finish
10	–	1 set	Arm Connecting & Clamp (Pipe Length 2600 mm) 	●Material Steel ●Finish / Colour Silver Enamel Finish
11	1 pc	1 pc	Clear Bumper 	Item Code : 210-030-639 Item Name : BS-36 Weight (g) : 181 ●Material PUR ●Finish Clear

Refer to 1 : P.339

The circled numbers are part numbers. Please check with the drawings 1 .

No.	Qty a	Qty b	Dimensions	Description
12	1 pc	1 pc	Strip Brush 	●Colour Grey
13	Vertical 2 pcs, Horizontal 1 pc	–	Aluminium Frame (Vertical 2300 mm, Horizontal 800 mm) 	●Material Aluminium Alloy ●Finish Anodised+Clear
14	–	Vertical 2 pcs, Horizontal 1 pc	Aluminium Frame (Vertical 2900 mm, Horizontal 800 mm) 	●Material Aluminium Alloy ●Finish Anodised+Clear
15	4 pcs	4 pcs	Levelling Glide Base 	●Material Steel ●Finish / Colour Silver Enamel Finish
16	4 pcs	4 pcs	Bracket for Aluminium Frame 	●Material Aluminium Alloy ●Finish Colour Silver Enamel Finish

No.	Qty a	Qty b	Dimensions	Description
17	6 pcs	6 pcs	Angle Connector 	●Material Steel ●Finish Clear Zinc Chromate
18	4 pcs	4 pcs	Levelling Glide 	Item Code : 200-140-593 Item Name : ADR37-10-50 Weight (g) : 82 ●Material Steel / Elastomer (TPE) ●Finish Clear Zinc Chromate / Black
19	8 pcs	8 pcs	Corner Connector 	Item Code : 120-040-456 Item Name : PJ-60 Weight (g) : 38 ●Material Aluminium Alloy (ADC) / Zinc Alloy (ZDC) ●Finish Silver Enamel Finish / Yellow Zinc Chromate

Refer to 1 : P.339

Updated 2017.10.27

MONOFLAT FAD (FOR LARGE SIZE CABINET) FAD-44

INSTRUCTION VIDEO

MonoFlat FAD®

	FAD-44	FAD-44L
Door Width	800~850 mm※1	
Door Height	Max. 2380 mm	Max. 2980 mm
Door Thickness	24~38 mm	
Door Weight	Max. 35 kg/Door ※2	
Specification	☐ Single Door (Overlay)	

※1 Cabinet inside width 750~800 mm and overlay 25 mm.
※2 Door weight has priority over door size.

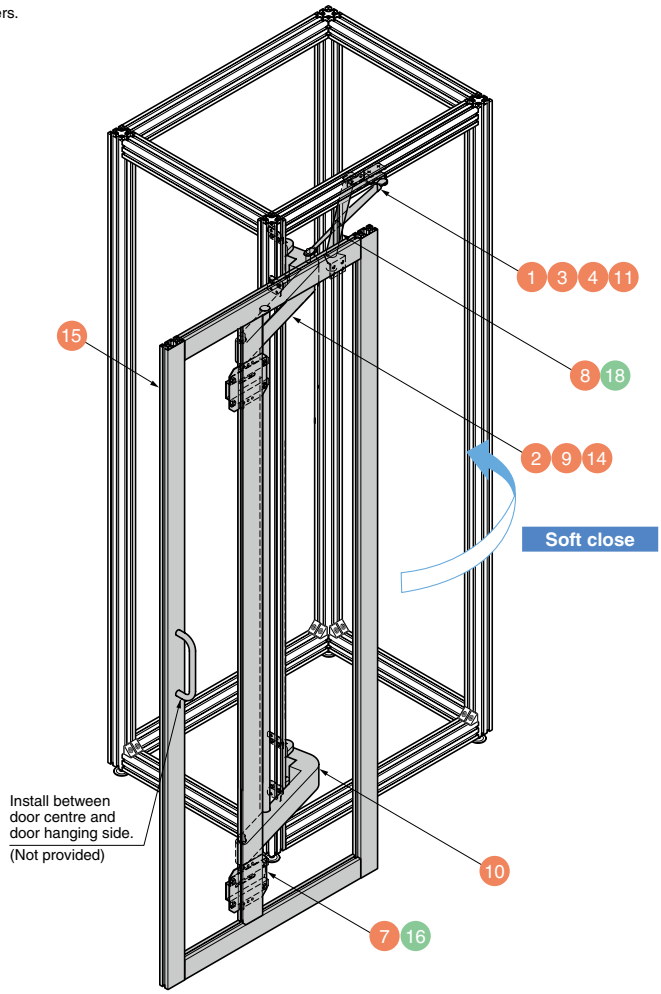
Door can be installed in a narrow space and does not get in the way when opened.

- For Contiguous cabinets, door will be flush with the front of the adjacent cabinets, creating flat and clean appearance.
- Smaller locus maximises space in front of door.
- Possible to combine in double door.
- FAD-54 installed to aluminium frame also available 1 .
- No bottom rail required.
- Door height can be set low by cutting the arm connecting pipe.
- Holds door in fully opened and closed position.
- Door adjustable in vertical (-3 ~ +7mm), horizontal (±7mm), depth and parallel directions.
- Passed 20,000 open/close cycle test
- Other "MonoFlat Series" are available.
  - MonoFlat Unison Neo for door weight up to 30 kg
  - MonoFlat FAD-20 for door weight up to 20 kg 2
  - MonoFlat FAD-5 for door weight up to 5 kg 3
  - MonoFlat LIN-X hinge for door weight up to 24 kg 4

[Remarks]
- Use AS nuts 5 when installing to aluminium frame.
- Aluminium frame not included.

The circled numbers are part numbers.
Please check with the part list 6 .

Soft close
"Smooth and soft closing"



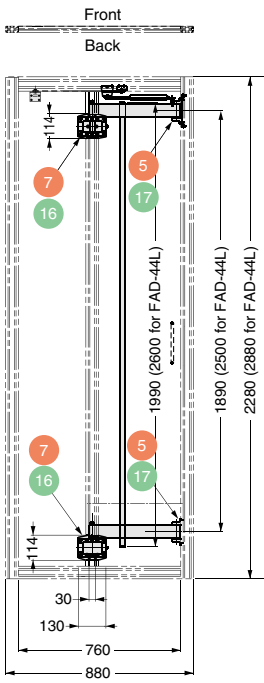
Video Link

Refer to 1 : P.338, 2 : P.346, 3 : P.348, 4 : P.328, 5 : P.706, 6 : P.344~345

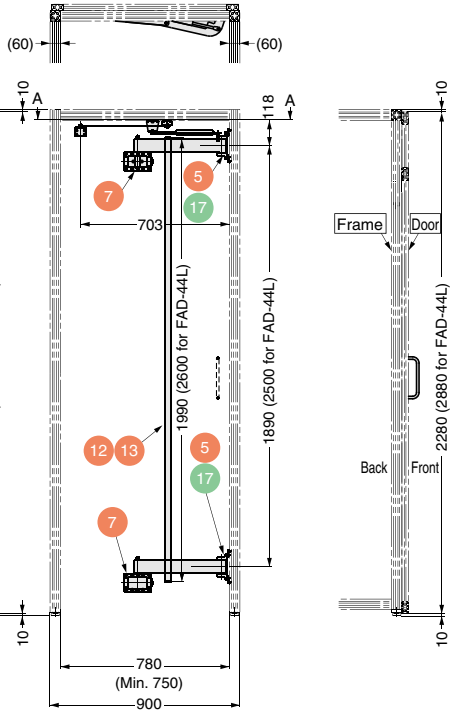
[Installation Example]

The circled numbers are part numbers.
Please check with the part list 1 .

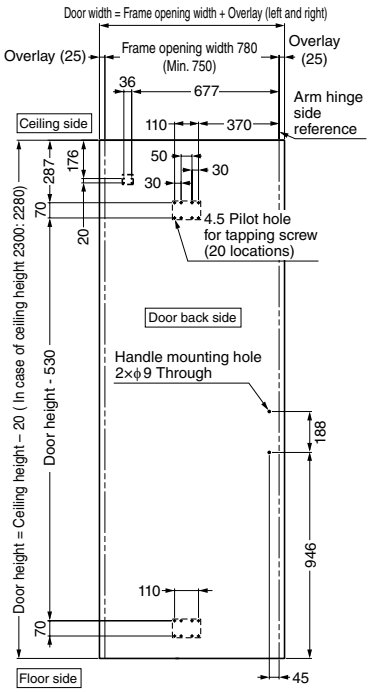
Door Side Installation Dimensions



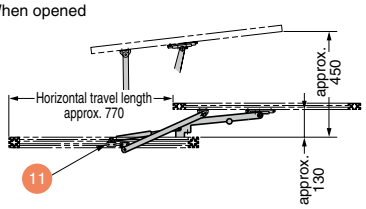
Frame Side Installation Dimensions



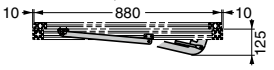
Door Cut Out Dimensions



When opened



When closed (Frame side installation dimensions View A-A)



※ Dimensions when installed to existing aluminium frame shown. If installed to sheet metal, please contact local representatives.

Refer to 1 : P.344~345

SUGATSUNE

When Ordering MonoFlat FAD-44

● Necessary Parts ..... Parts Set (Per Door)

● Please order according to application... Optional Parts

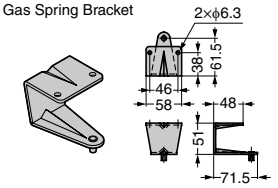
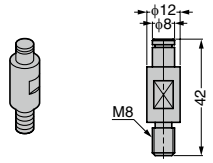
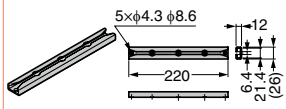
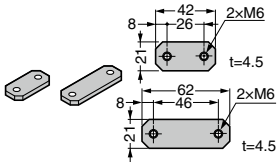
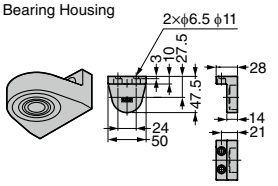
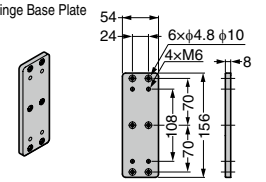
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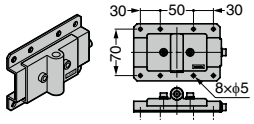
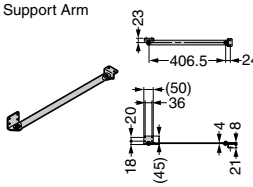
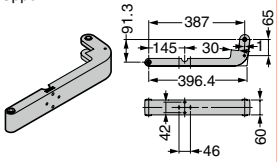
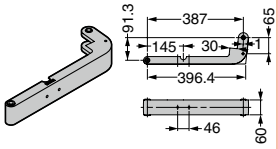
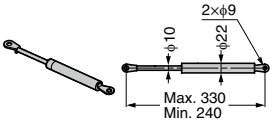
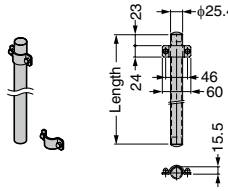
Parts Set (Per Door)

Necessary Parts.
Please choose a or b depending on your door height.

Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)	Carton (sets)
a Parts Set (Max. Door Height 2380mm)	–	3D	250-121-312	FAD-44	10500	1
b Parts Set (Max. Door Height 2980mm)	–	3D	250-021-950	FAD-44L	11100	1

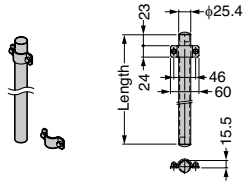
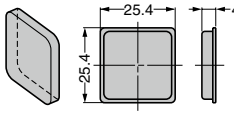
Parts Included

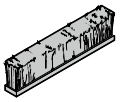
No.	Qty a	Qty b	Dimensions	Description
1	1 pc	1 pc	Gas Spring Bracket 	●Material Steel ●Finish Clear Zinc Chromate
2	1 pc	1 pc	Screw Pin 	●Material Steel ●Finish Clear Zinc Chromate
3	1 pc	1 pc	Channel Rail 	●Material Steel ●Finish Nickel
4	1 pc	1 pc	Square Nut (For Channel Rail) 	●Material Steel ●Finish Clear Zinc Chromate
5	4 pcs	4 pcs	Bearing Housing 	●Material Aluminium Alloy ●Finish / Colour Silver Enamel Finish
6	2 pcs	2 pcs	Hinge Base Plate 	●Material Zinc Alloy (ZDC) ●Finish / Colour Silver Enamel Finish

No.	Qty a	Qty b	Dimensions	Description
7	2 pcs	2 pcs	Adjustment Bracket 	●Material Steel / POM ●Colour Silver
8	1 pc	1 pc	Support Arm 	●Material Steel / POM ●Finish / Colour Silver Enamel Finish
9	1 pc	1 pc	Upper Arm 	●Material Aluminium Alloy ●Finish / Colour Silver Enamel Finish
10	1 pc	1 pc	Lower Arm 	●Material Aluminium Alloy ●Finish / Colour Silver Enamel Finish
11	1 pc	1 pc	Gas Spring 	●Colour Grey
12	1 set	–	Arm Connecting & Clamp (Pipe Length 1990 mm) 	●Material Steel ●Finish / Colour Silver Enamel Finish

Refer to 1 : P.342~343

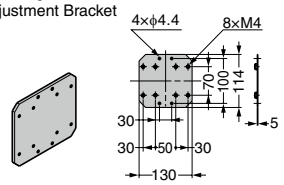
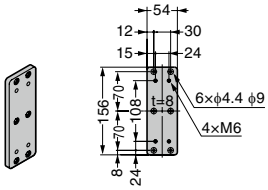
The circled numbers are part numbers. Please check with the drawings 1 .

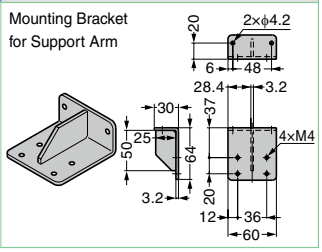
No.	Qty a	Qty b	Dimensions	Description
13	–	1 set	Arm Connecting & Clamp (Pipe Length 2600 mm) 	●Material Steel ●Finish / Colour Silver Enamel Finish
14	1 pc	1 pc	Clear Bumper 	Item Code : 210-030-639 Item Name : BS-36 Weight (g) : 181 ●Material PUR ●Finish Clear

No.	Qty a	Qty b	Dimensions	Description
15	1 pc	1 pc	Strip Brush 	●Colour Grey

Optional Parts

Please order according to application.

No.	RoHS	CAD	Item Code	Dimensions
16	–	–	–	Mounting Plate for Adjustment Bracket 
	Made to order Item Name : AS-FAD44-A Weight (g) : –			
	●Material Aluminium Alloy ●Finish Anodised Silver			
17	–	–	–	Hinge base 
	Made to order Item Name : AS-FAD44-B Weight (g) : –			
	●Material Aluminium Alloy ●Finish Anodised Silver			

No.	RoHS	CAD	Item Code	Dimensions
18	–	–	–	Mounting Bracket for Support Arm 
	Made to order Item Name : AS-FAD44-C Weight (g) : –			
	●Material Steel ●Finish Clear Zinc Chromate			

Refer to 1 : P.342~343

SUGATSUNE

MONOFLAT FAD-20 For Medium Size Cabinet

INSTRUCTION VIDEO

MonoFlat FAD®

Cabinet Inside Width	500~550 mm
Cabinet Inside Height	Max. 2420 mm
Door Thickness	Max. 35 mm
Door Weight	Max. 20 kg/Door
Specification	☐ Single Door (Overlay)

Door does not get in the way when opened with smaller projection than a swing door.

- Door will be flush with surrounding walls when closed.
- Smaller locus maximises space in front of door.
- Possible to combine various opening modes such as single door and double door.
- Door can be operated smoothly and held in fully opened and closed position.
- Passed 40,000 open/close cycle test
- Other "MonoFlat Series" are available. Refer to the following for details.
  - MonoFlat Unison Neo for door weight up to 30 kg
  - MonoFlat FAD-54 for door weight up to 35 kg 1
  - MonoFlat FAD-44 for door weight up to 35 kg 2
  - MonoFlat FAD-5 for door weight up to 5 kg 3
  - MonoFlat LIN-X hinge for door weight up to 24 kg 4

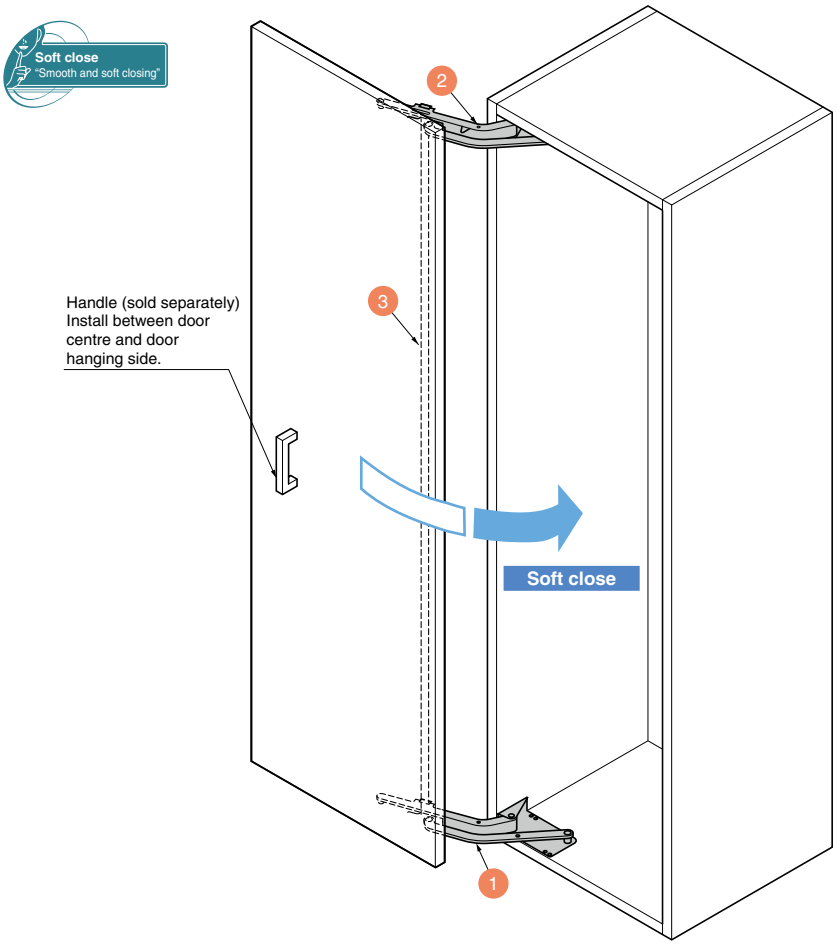
[Remarks]

- Door opening and closing speed varies depending on products.

[Parts Included]

- Binding head tapping screw 4.5×20 ..... 22 pcs
- Binding head screw M5×8 ..... 4 pcs
- Hexagon socket head cap screw M4×8 ..... 4 pcs
- Countersunk head tapping screw 4.5×20 ..... 2 pcs

The circled numbers are part numbers.
Please check with the parts list 5.



Video Link

Refer to 1 : P.338, 2 : P.342, 3 : P.348, 4 : P.328, 5 : P.347

When Ordering MonoFlat FAD-20

●Necessary Parts ..... **Parts Set (Per Door)**

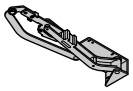
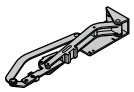
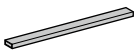
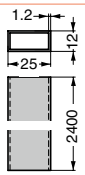
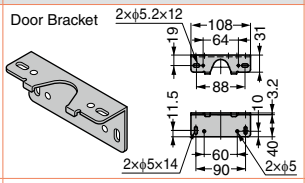
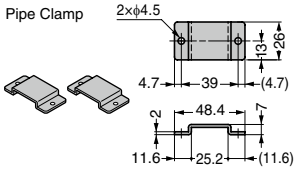
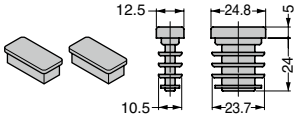
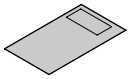
The circled numbers are part numbers. Please check with the drawings 1 .

Parts Set (Per Door)

Necessary Parts.

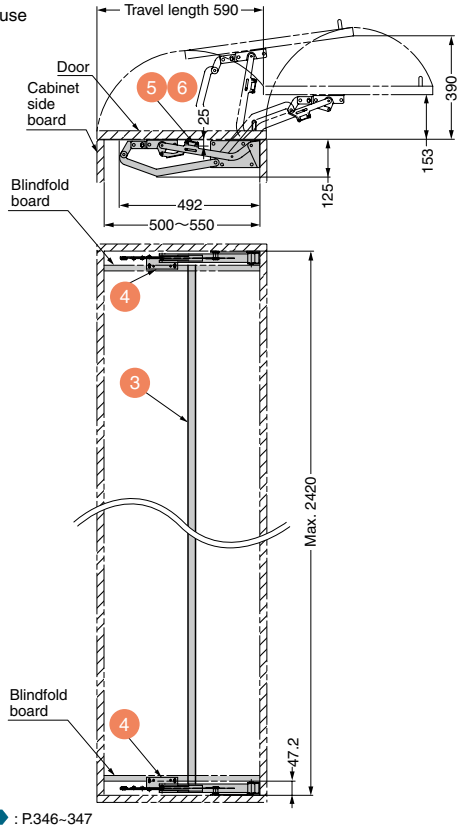
Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)	Carton (sets)
Parts Set	–	3D	250-180-908	FAD-20	7500	1

Parts Included

No.	Qty	Dimensions	Description
1	1 pc	Arm A  See below	●Material Aluminium Alloy / Steel ●Finish / Colour Paint / Silver
2	1 pc	Arm B  See below	●Material Aluminium Alloy / Steel ●Finish / Colour Paint / Silver
3	1 pc	Connecting Pipe  	●Material Steel ●Finish / Colour Paint / Silver
4	2 pcs	Door Bracket 	●Material Steel ●Finish / Colour Paint / Silver
5	2 pcs	Pipe Clamp 	●Material Steel ●Finish / Colour Paint / Silver
6	2 pcs	Cap 	●Material PE ●Colour Black
7	1 pc	Sticker 	–

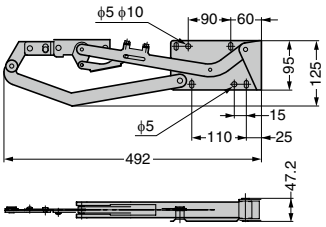
[Installation Example]

Left hand use



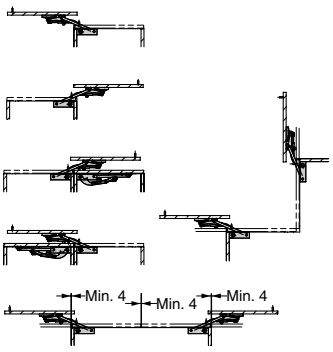
Refer to 1 : P.346~347

[Arm 1 2 Dimensions]



Shown is arm A 1. Arm B 2 is upside-down.

[Opening Variations]



Updated 2017.10.27

MONOFLAT FAD-5 For Small Size Cabinet

INSTRUCTION VIDEO

MonoFlat FAD®

Door Width	270~350 mm
Door Height	260~650 mm
Door Thickness	15~20 mm
Door Weight	Max. 5 kg/Door
Specification	☐ Single Door (Overlay)

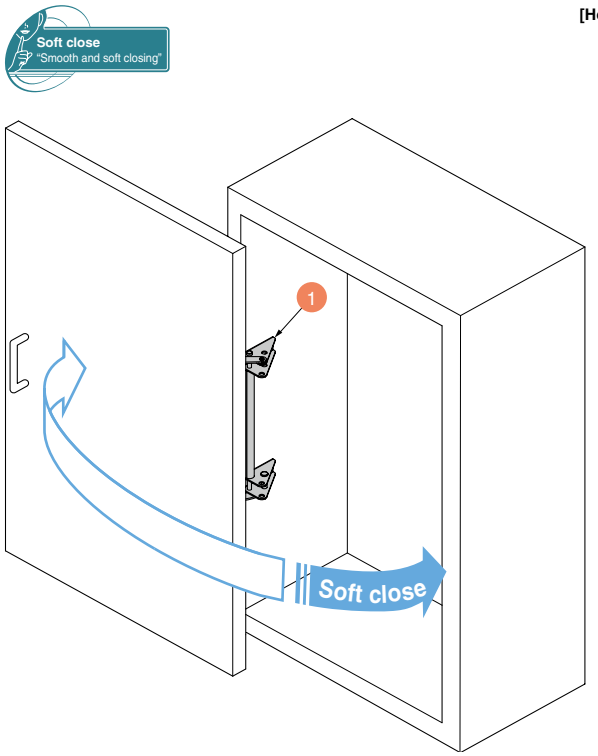
Door does not get in the way when opened with small projection than swing door, suitable for small cabinets.

- Allows to swing out laterally in small radius, ideal for tight front space application.
- Possible to combine various opening modes such as single door and double door.
- Possible to stop door at any position as shown below. And can close door slowly and quietly.
- Door adjustable in vertical (±3mm), horizontal (±2.5mm) and parallel (approx. 5°) directions.
- Passed 40,000 open/close cycle test.
- Other "MonoFlat Series" are available.
  - MonoFlat Unison Neo for door weight up to 30 kg
  - MonoFlat FAD-54 for door weight up to 35 kg 1
  - MonoFlat FAD-44 for door weight up to 35 kg 2
  - MonoFlat FAD-20 for door weight up to 20 kg 3
  - MonoFlat LIN-X hinge for door weight up to 24 kg 4

[Applications]
- Cupboards in toilet and kitchen, storage furniture like shoe boxes.

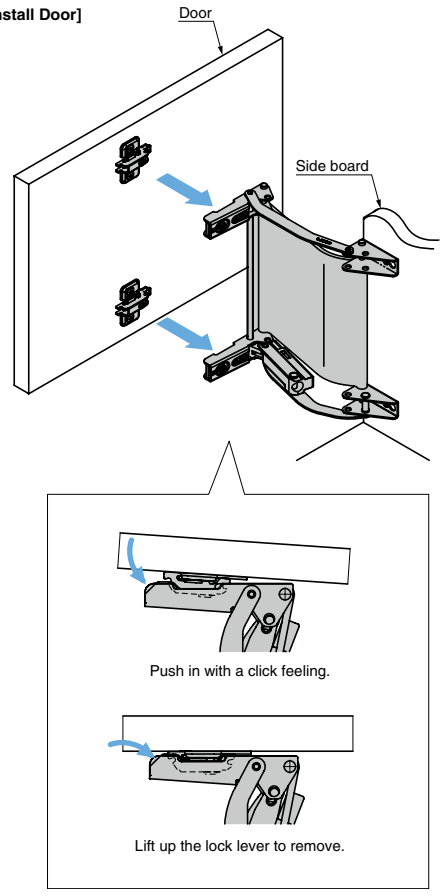
[Remarks]
- Door operation feeling varies depending on installation position. Please confirm by actual installation.
- For details when used for continuous door, please contact local representatives.

The circled numbers are part numbers.
Please check with the part list 5.



Video Link

[How to Install Door]



Refer to 1 : P.338, 2 : P.342, 3 : P.346, 4 : P.328, 5 : P.349

When Ordering MonoFlat FAD-5

●Necessary Parts ..... **Parts Set (Per Door)**

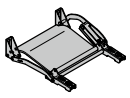
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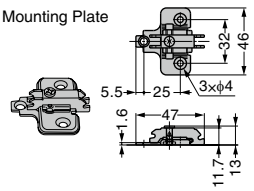
Parts Set (Per Door)

Necessary Parts.

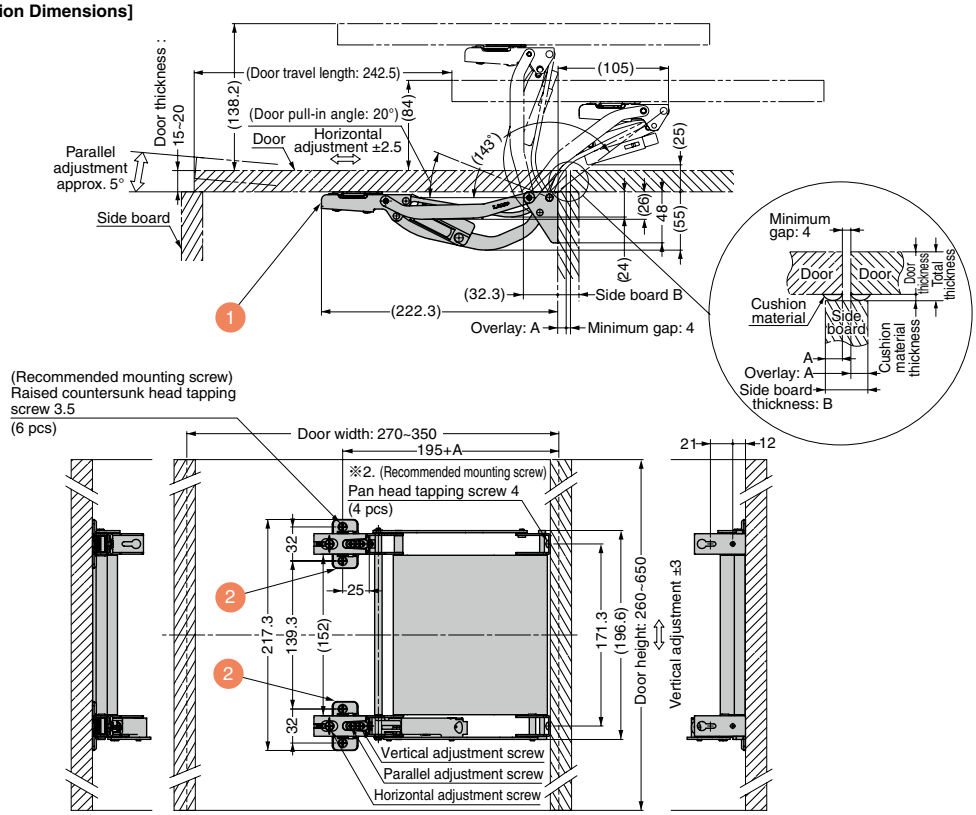
Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)	Carton (sets)
Parts Set	G	3D	250-016-605	FAD-5	781	1	15

Parts Included

No.	Qty	Dimensions	Description
1	1 pc	Hinge Body  Refer to the [Installation Dimensions] for details.	●Material Aluminium Alloy/POM/ Steel ●Finish Anodised Silver/Grey/ Nickel

No.	Qty	Dimensions	Description
2	2 pcs	Mounting Plate 	Item Code : 160-070-041 Item Name : 230-P4W-32T Weight (g) : 26 Box (pcs) : 400 ●Material Steel ●Finish Nickel

[Installation Dimensions]



※1 Pay attention to the thickness of cushion material (bumper etc.) when used for continuous door.
Hinge body may conflict with door depending on installation conditions. Confirm with drawings or actual item.
Design cabinet by reference to the installation conditions given in the table on the right.

Example: For side board thickness 20mm and 8mm overlay, the total thickness of door and cushion material is up to 23mm.
In this case, if the door thickness is 20mm, the thickness of cushion material will be:
・Available cushion material thickness = Total thickness – Door thickness
= 23 – 20 = 3
So the cushion material thickness shall be below 3mm.

※2 When installing this product on double door, pay attention to interference between mounting screws.

[Total thickness (Door+Cushion Material)]

Side board thickness B (mm)	Overlay A (mm)				
	5	6	7	8	Min. 8.5
15	21.5	–	–	–	–
16	22.5	21.5	–	–	–
17	23	22.5	–	–	–
18	23		22.5	–	–
19	23			–	–
20	23				–
Min. 21	23				

※For side board thickness above 21mm, set arbitrary overlay with minimum gap 4mm.

Refer to 1 : P.348~349

MULTIPLE MOTION DOOR SYSTEM (FOR WOOD PANELS)

INSTRUCTION VIDEO

Multiple Motion Door System
MultiMo FLAT®



Door Width	297 mm, 447 mm, 597 mm, 897 mm
Door Height	300~900 mm
Door Thickness	15~23 mm
Door Weight	1.5~6.8 kg/Door ※
Specification	☐ Connecting Multiple Sliding Units (Overlay)

※ Including mounting parts

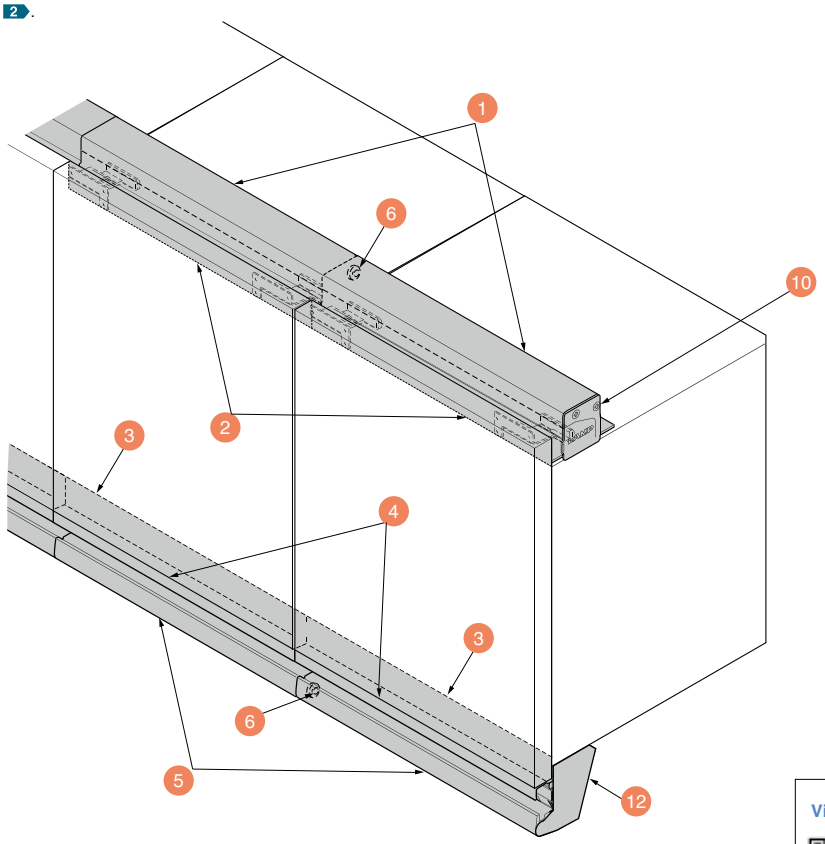
Door position can be changed freely like a puzzle.

- Opened doors can slide and close at any unoccupied position.
- All doors will be flush with others when in closed position.
- By adding more doors, the more opening patterns will be possible.
- Multiple doors can be added by connecting multiple sliding units. Odd number of doors can also be arranged.
- Hardware requires only 80 mm of depth. Ideal for shallow cabinets.
- Glass door version also available. Refer to 1 for details.

[Remarks]

- Recommend using 3 or more doors for interchangeable door.
- Maximum door height is twice of door width.
- 2 or more doors of the same size are necessary for interchange. Order at least 2 identical parts sets.
- Cannot be used together with glass door version on one cabinet.
- 1 end cap set is necessary for 1 unit.

The circled numbers are part numbers.
Please check with the part list 2.

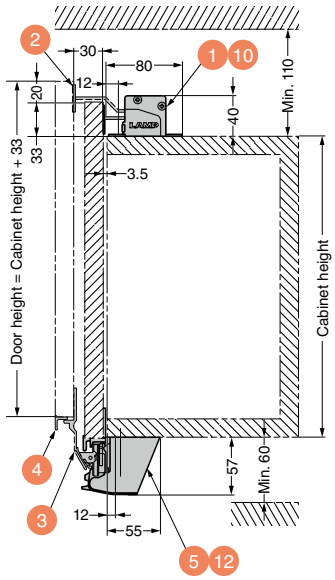


Video Link

Refer to 1 : P.354, 2 : P.352~353

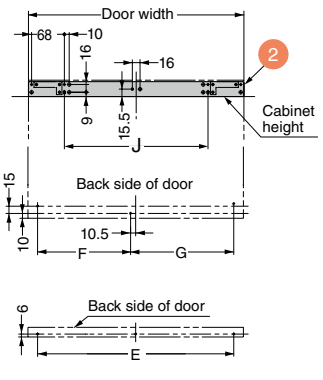
[Installation Example]

The circled numbers are part numbers. Please check with the part list 1.

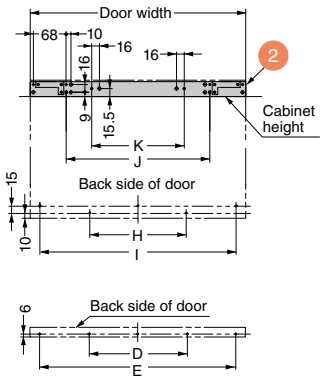


[Mounting Application for Door Brackets 2, Door Sliding Profile 3, Door Handle 4]

●Door width 297 mm, 447 mm



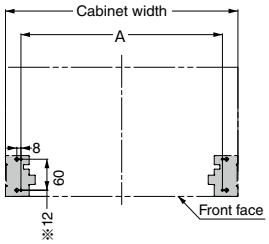
●Door width 597 mm, 897 mm



Door Width	D	E	F	G	H	I	J	K
297	–	257	118	139	–	–	148	–
447	–	407	193	214	–	–	298	–
597	278.5	557	–	–	300	557	448	200
897	428.5	857	–	–	400	857	748	300

[Mounting Application for Upper Rail 1]

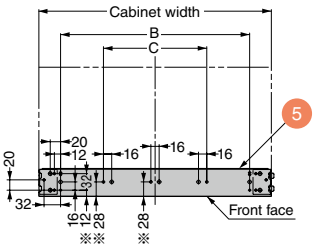
●Outside of top panel



Cabinet width	A
300	240
450	390
600	540
900	840

[Mounting Application for Lower Rail 5]

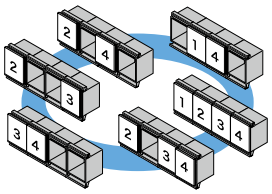
●Outside of bottom panel



Cabinet width	B	C
300	216	–
450	366	–
600	516	200
900	816	300

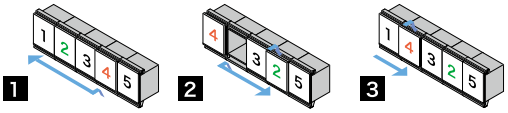
※ When using gasket thicker than 3 mm, subtract [gasket thickness - 3 mm] from the marked dimensions.

Door opening example (4 doors)



Doors can slide at any unoccupied position. By adding more doors, the more opening patterns will be possible.

Interchangeable door position (3 doors or more)



1 Pull out the door 4 and slide it laterally.

2 Pull out the door 2, slide it to the original position of the door 4, and then close it.

3 Slide the door 4 to the original position of the door 2 and close it, to complete door interchange.

Refer to 1 : P.352~353

When Ordering MultiMo Flat (For Wood Panels)

●Necessary Parts..... **Parts Set (Per Door)** + **End Cap Set**

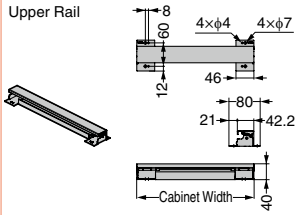
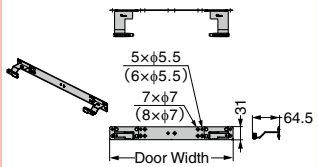
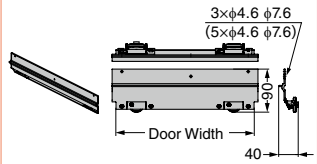
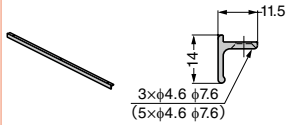
The circled numbers are part numbers. Please check with the drawings 1 .

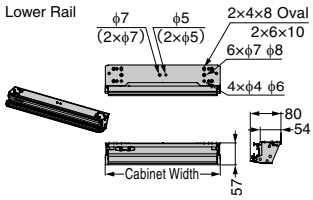
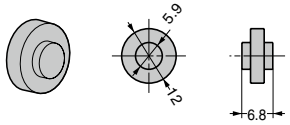
Parts Set (Per Door)

Necessary Parts.
Select 2 or more parts sets from a ~ i depending on door size.

Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)
a **Parts Set (Door Width 297 mm, Door Weight 1.5~2.4 kg)**	G	3D	250-121-211	MFS-W300/S2	1883
b **Parts Set (Door Width 447 mm, Door Weight 1.4~2.3 kg)**	G	3D	250-121-212	MFS-W450/S2	2572
c **Parts Set (Door Width 447 mm, Door Weight 2.4~3.3 kg)**	G	3D	250-121-213	MFS-W450/S3	2567
d **Parts Set (Door Width 597 mm, Door Weight 2.2~3.1 kg)**	G	3D	250-121-214	MFS-W600/S3	3156
e **Parts Set (Door Width 597 mm, Door Weight 3.2~4.1 kg)**	G	3D	250-121-215	MFS-W600/S4	3157
f **Parts Set (Door Width 597 mm, Door Weight 4.2~5.1 kg)**	G	3D	250-121-216	MFS-W600/S5	3156
g **Parts Set (Door Width 897 mm, Door Weight 3.9~4.8 kg)**	G	3D	250-121-217	MFS-W900/S5	4445
h **Parts Set (Door Width 897 mm, Door Weight 4.9~5.8 kg)**	G	3D	250-121-218	MFS-W900/S6	4433
i **Parts Set (Door Width 897 mm, Door Weight 5.9~6.8 kg)**	G	3D	250-121-219	MFS-W900/S7	4436

Parts Included

No.	Qty	Dimensions	Description
1	1 pc	Upper Rail  ※For cabinet width, refer to 1 [Mounting Application for Upper Rail].	●Material Aluminium Alloy / Steel ●Finish Anodised / Clear Zinc Chromate
2	1 pc	Door Brackets  ※ ( ) is for door width 597 mm, 897 mm. ※ Refer to 1 for door width.	●Material Steel / Elastomer (TPE) ●Finish Clear Zinc Chromate
3	1 pc	Door Sliding Profile  ※ ( ) is for door width 597 mm, 897 mm. ※ Refer to 1 for door width.	●Material Aluminium Alloy / Steel / POM / PUR ●Finish Anodised / Clear Zinc Chromate
4	1 pc	Door Handle  ※ ( ) is for door width 597 mm, 897 mm.	●Material Aluminium Alloy ●Finish Anodised

No.	Qty	Dimensions	Description
5	1 pc	Lower Rail  ※ ( ) is for door width 597 mm, 897 mm. ※ For cabinet width, refer to 1 [Mounting Application for Lower Rail].	●Material Aluminium Alloy / Steel / POM ●Finish Anodised / Clear Zinc Chromate
6	2 pcs	Connecting Pin 	●Material Stainless Steel
7	11 pcs (12 pcs)	Binding Head Tapping Screw 3.5×15 	–
8	13 pcs (18 pcs)	Countersunk Head Tapping Screw 3.5×14 	–

※ ( ) is qty for MFS-W600/S3, MFS-W600/S4, MFS-W600/S5, MFS-W900/S5, MFS-W900/S6 and MFS-W900/S7.

Refer to 1 : P.350~351

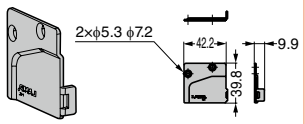
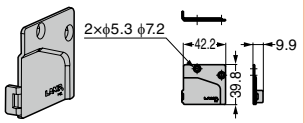
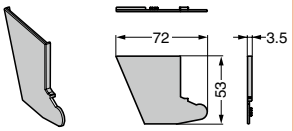
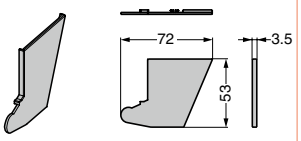
The circled numbers are part numbers. Please check with the drawings 1 .

End Cap Set

Necessary Parts.
1 set is necessary for 1 unit.

Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)
End Cap Set	G	3D	250-129-555	MFS-ED	57	100

Parts Included

No.	Qty	Dimensions	Description
9	1 pc	End Cap L 	●Material Steel (SPCC) ●Colour Grey
10	1 pc	End Cap R 	●Material Steel (SPCC) ●Colour Grey
11	1 pc	Lower Rail Cover L 	●Material ABS ●Colour Grey
12	1 pc	Lower Rail Cover R 	●Material ABS ●Colour Grey
13	4 pcs	Countersunk Head Tapping Screw 3.5×12 	●Material Stainless Steel

Refer to 1 : P.350~351

Updated 2017.10.27

MULTIPLE MOTION DOOR SYSTEM (FOR GLASS PANELS)

INSTRUCTION TEMPERED GLASS VIDEO

Multiple Motion Door System
MultiMo FLAT®



Glass Width	295, 445, 595, ※895 mm
Glass Height	300~900 mm
Glass Thickness	5 mm
Glass Weight	1.5~6.7 kg/Door
Specification	☐ Connecting Multiple Sliding Units (Overlay)

※ When glass width is 895mm, glass height is Max. 600mm.

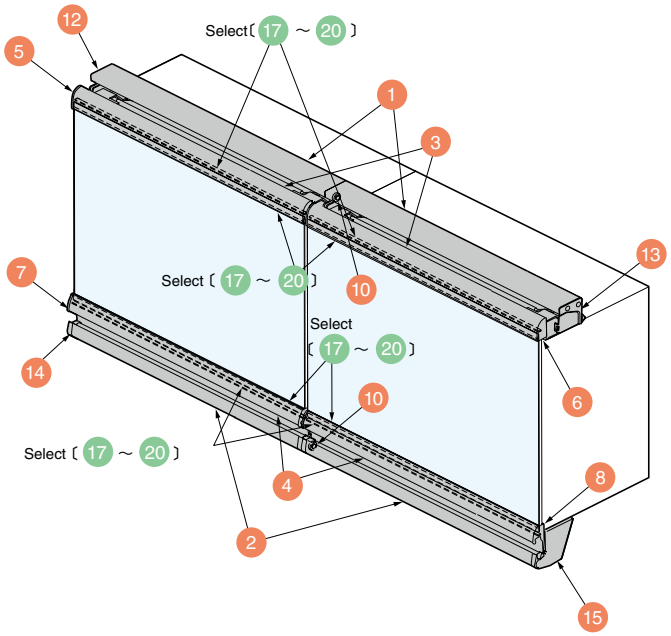
Door position freely can be changed like a puzzle.

- Opened doors can slide and close at any unoccupied position.
- All doors will be flush with others when in closed position.
- By adding more doors, the more opening patterns will be possible.
- Multiple doors can be added by connecting multiple sliding units. Odd number of doors can also be arranged.
- Hardware requires only 84mm of depth. Ideal for shallow cabinets.
- Wooden door version also available. Refer to 1 for details.

[Remarks]

- Recommend using 3 or more doors for interchangeable door feature.
- Maximum glass height is twice of glass width.
- 2 or more doors of the same size are necessary for interchange. Order at least 2 identical parts sets.
- Cannot be used together with wooden door version on one cabinet.
- Glass used for the door is not included. Please use tempered glass.
- When adhering glass and door frame with caulking agent, please use silicon-based one.
- Double-sided tape for adhering glass and door frame is not included. (Recommended double-sided tape: 3M Y-4910J, 15mm wide, 1mm thick)
- When using double-sided tape, the glass surface for pasting should be transparent and flat. Do not use glass with uneven surface.

The circled numbers are part numbers.
Please check with the part list 2.

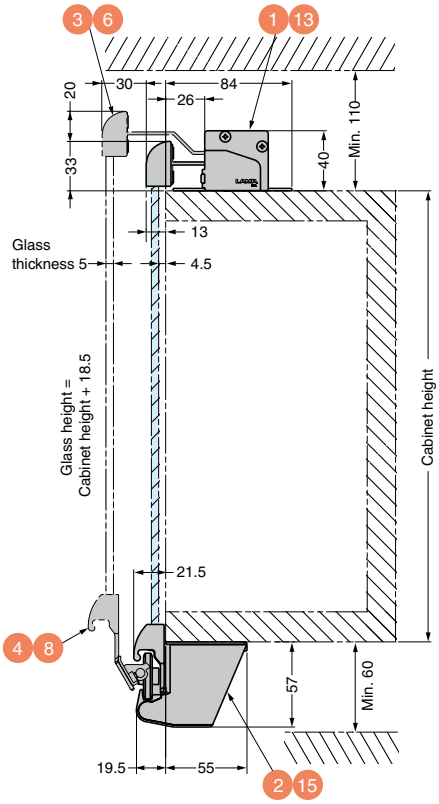


Video Link

Refer to 1 : P.350, 2 : P.356~357

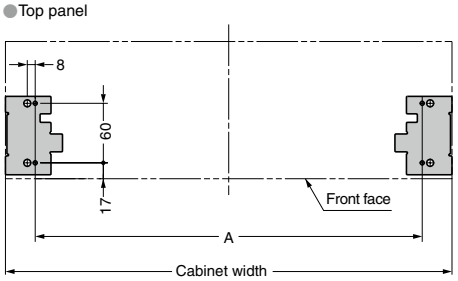
[Installation Example]

The circled numbers are part numbers.
Please check with the part list 1.



[Mounting Application for Upper Rail 1]

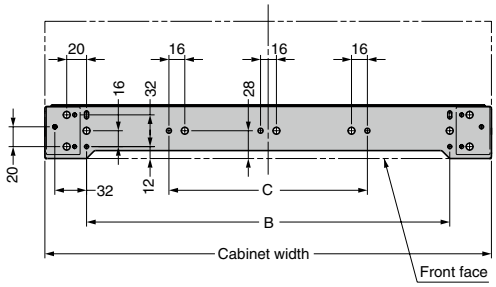
Top panel



Cabinet Width	A
300	240
450	390
600	540
900	840

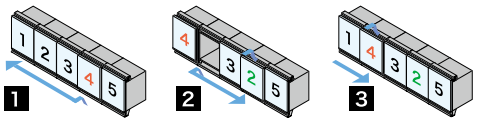
[Mounting Application for Lower Rail 2]

Bottom panel



Cabinet Width	B	C
300	216	–
450	366	–
600	516	200
900	816	300

Interchangeable door position (3 doors or more)

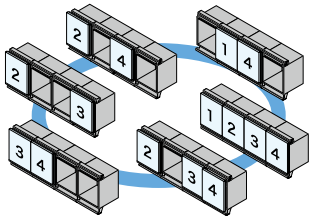


1 Pull out the door 4 and slide it laterally.

2 Pull out the door 2, slide it to the original position of the door 4, and then close it.

3 Slide the door 4 to the original position of the door 2 and close it, to complete door interchange.

Door opening example (4 doors)



Provides various opening patterns. By adding more doors, the more opening patterns will be possible.

Refer to 1 : P.356~357

When Ordering MultiMo Flat (For Glass Panels)

●Necessary Parts..... Parts Set (Per Door) + End Cap Set

●Please order according to application..... Optional Parts

The circled numbers are part numbers. Please check with the drawings 1 .

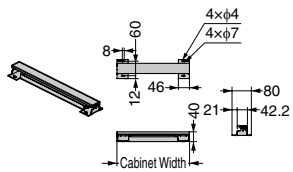
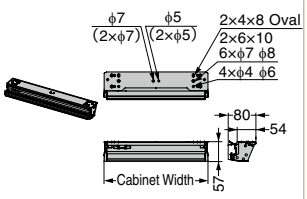
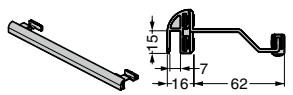
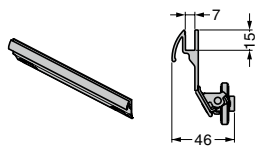
Parts Set (Per Door)

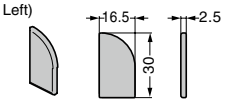
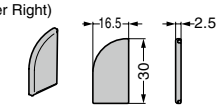
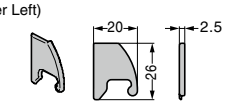
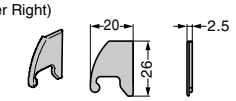
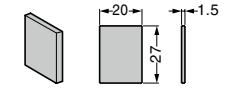
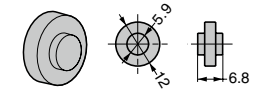
Necessary Parts.

Select 2 or more parts sets from a~i depending on door size. ★Made to order

Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)	Carton (sets)
a Parts Set (Glass Width 295 mm, Glass Weight 1.5~2.4 kg)	G	3D	250-014-166	MFS-G300/S2	1950	1	10
b Parts Set (Glass Width 445 mm, Glass Weight 1.3~2.2 kg)	G	3D	250-014-167	MFS-G450/S2	2576	1	5
c Parts Set (Glass Width 445 mm, Glass Weight 2.3~3.2 kg)	G	3D	250-014-168	MFS-G450/S3	2576	1	10
d Parts Set (Glass Width 595 mm, Glass Weight 2.1~3.0 kg)	G	3D	250-014-169	MFS-G600/S3	3232	1	10
e Parts Set (Glass Width 595 mm, Glass Weight 3.1~4.0 kg)	G	3D	250-014-170	MFS-G600/S4	3232	1	10
f Parts Set (Glass Width 595 mm, Glass Weight 4.1~5.0 kg)	G	3D	250-014-171	MFS-G600/S5	3235	1	5
g Parts Set (Glass Width 895 mm, Glass Weight 3.8~4.7 kg)	G	3D	250-014-172	★MFS-G900/S5	–	1	10
h Parts Set (Glass Width 895 mm, Glass Weight 4.8~5.7 kg)	G	3D	250-014-173	★MFS-G900/S6	–	1	10
i Parts Set (Glass Width 895 mm, Glass Weight 5.8~6.7 kg)	G	3D	250-014-174	★MFS-G900/S7	–	1	10

Parts Included

No.	Qty	Dimensions	Description
1	1 pc	Upper Rail  ※ For cabinet width, refer to 1 [Mounting Application for Upper Rail].	●Material Aluminium Alloy / Steel ●Finish Anodised / Clear Zinc Chromate
2	1 pc	Lower Rail  ※ ( ) is for door width 597 mm, 897 mm. ※ For cabinet width, refer to 1 [Mounting Application for Lower Rail].	●Material Aluminium Alloy / Steel / POM ●Finish Anodised / Clear Zinc Chromate
3	1 pc	Upper Door Frame 	●Material Aluminium Alloy / Steel ●Finish Anodised / Clear Zinc Chromate
4	1 pc	Lower Door Frame 	●Material Aluminium Alloy / Steel / POM ●Finish Anodised / Clear Zinc Chromate

No.	Qty	Dimensions	Description
5	1 pc	Door End Cap (Upper Left) 	●Material ABS ●Colour Grey
6	1 pc	Door End Cap (Upper Right) 	●Material ABS ●Colour Grey
7	1 pc	Door End Cap (Lower Left) 	●Material ABS ●Colour Grey
8	1 pc	Door End Cap (Lower Right) 	●Material ABS ●Colour Grey
9	4 pcs	Glass Fixing Holding Gasket 	●Material Urethane Sponge ●Colour Black
10	2 pcs	Connecting Pin 	●Material Stainless Steel
11	11 pcs (12 pcs)	Binding Head Tapping Screw 3.5×15 	–

※ ( ) is qty for MFS-G600/S3, MFS-G600/S4, MFS-G600/S5, MFS-G900/S5, MFS-G900/S6 and MFS-G900/S7.

Refer to 1 : P.354~355

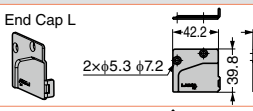
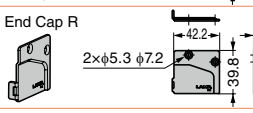
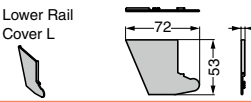
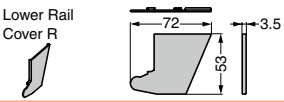
The circled numbers are part numbers. Please check with the drawings 1 .

End Cap Set

Necessary Parts.
1 set is necessary for 1 unit.

Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)	Box (sets)
End Cap Set	G	3D	250-129-555	MFS-ED	27	100

Parts Included

No.	Qty	Dimensions	Description
12	1 pc	End Cap L 	Material Steel (SPCC) Colour Grey
13	1 pc	End Cap R 	Material Steel (SPCC) Colour Grey
14	1 pc	Lower Rail Cover L 	Material ABS Colour Grey
15	1 pc	Lower Rail Cover R 	Material ABS Colour Grey
16	4 pcs	Countersunk Head Tapping Screw 3.5×12 	Material Stainless Steel

Optional Parts

Please order according to application.

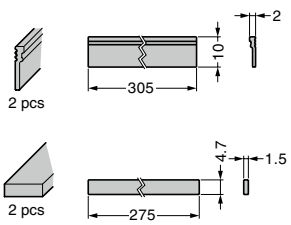
No.	RoHS	CAD	Item Code	Dimensions
17	G	–	250-014-208	Holding Gasket (Glass Width 295 mm)

Item Name : MFS-PK300
Weight (g) : 16
Box (sets) : 100

[Application]
When connecting glasses by double-sided tape, please order one set per glass.
Select 17~20 depend on glass width.

Gasket
Material EPDM
Colour Grey

Glass Protection Holding Gasket
Material Chloroprene Rubber (CR)
Colour Black



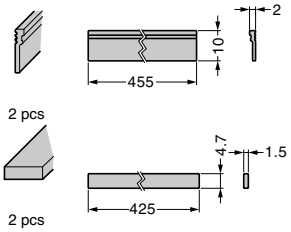
No.	RoHS	CAD	Item Code	Dimensions
18	G	–	250-014-209	Holding Gasket (Glass Width 445 mm)

Item Name : MFS-PK450
Weight (g) : 24
Box (sets) : 100

[Application]
When connecting glasses by double-sided tape, please order one set per glass.
Select 17~20 depend on glass width.

Gasket
Material EPDM
Colour Grey

Glass Protection Holding Gasket
Material Chloroprene Rubber (CR)
Colour Black



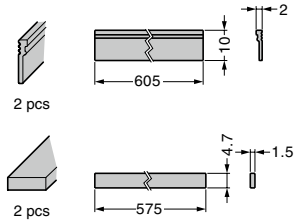
No.	RoHS	CAD	Item Code	Dimensions
19	G	–	250-014-210	Holding Gasket (Glass Width 595 mm)

Item Name : MFS-PK600
Weight (g) : 32
Box (sets) : 100

[Application]
When connecting glasses by double-sided tape , please order one set per glass.
Select 17~20 depend on glass width.

Gasket
Material EPDM
Colour Grey

Glass Protection Holding Gasket
Material Chloroprene Rubber (CR)
Colour Black



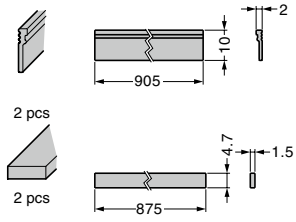
No.	RoHS	CAD	Item Code	Dimensions
20	G	–	250-014-211	Holding Gasket (Glass Width 895 mm)

Item Name : MFS-PK900
Weight (g) : 47
Box (sets) : 100

[Application]
When connecting glasses by double-sided tape, please order one set per glass.
Select 17~20 depend on glass width.

Gasket
Material EPDM
Colour Grey

Glass Protection Holding Gasket
Material Chloroprene Rubber (CR)
Colour Black



Refer to 1 : P.354~355

SUGATSUNE

ALUMINIUM FRAME SLIDING DOOR SYSTEM AF-25H

AS INSTRUCTION TEMPERED GLASS





Door opened

Aluminium frame provides excellent rigidity preventing door flex.
Smooth movements with doors up to 70kg.

- Strong upper rail and Sugatsune self-developed roller realise smooth opening and closing of 70kg doors.
- Suitable for making large doors which is only possible with AF-25.
- Obliquely cut vertical and horizontal frames and intermediate supports avoid dust accumulation.
- User may freely select the material of panels used inside the aluminium frame, for example, from tempered glass, laminated glass and resin plates.
- Handles (optional) are available. For installation to aluminium frame, refer to the installation Instruction supplied with the product.

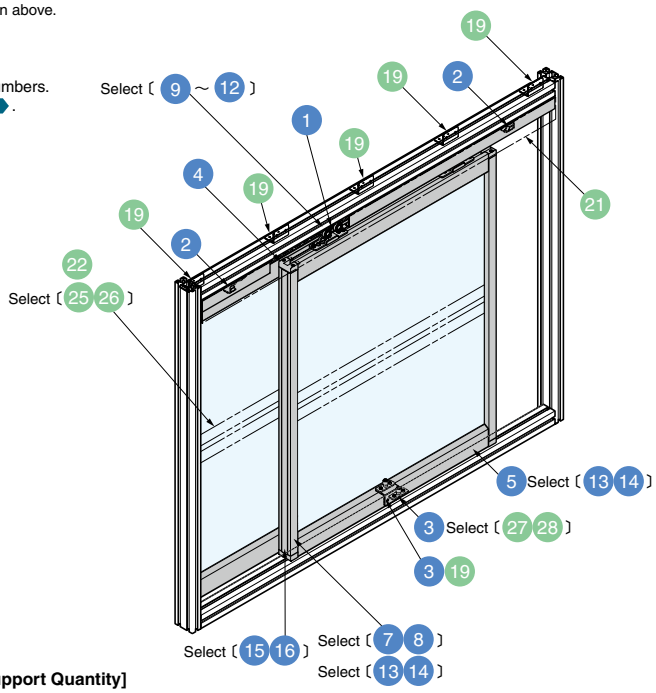
Door Width	Max. 1600 mm ※1
Door Height	Max. 3000 mm ※1
Door Size (W/o Intermediate Supports)	Less Than Width 900 × Height 2200 mm ※1
Glass Thickness	5, 6 mm
Door Weight	Max. 70 kg/Door (Including Aluminium Frame Weight)
Aluminium Frame	Size: 40×40 mm Groove Width : 8, 10 mm

※1 Do not exceed the values given above.

[Remarks]

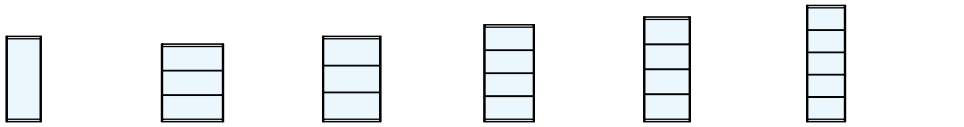
- When door width exceeds 900mm or door height exceeds 2200mm, be sure to install intermediate support 22. Refer to the following [Necessary Intermediate Support Quantity] for adding intermediate support.
- Doors are not supplied. Frame members are available.
- Be sure to use upper stopper 2 and door stopper.
- For upper rail with 3 or more members, use a combination of upper rail (single) and upper rail (double).
- Use AS nuts 1 for installing to aluminium frame.
- Aluminium frame of cabinet is not included.

The circled numbers are part numbers.
Please check with the part list 2.



[Necessary Intermediate Support Quantity]

- For glass thickness 5mm and door weight 70kg

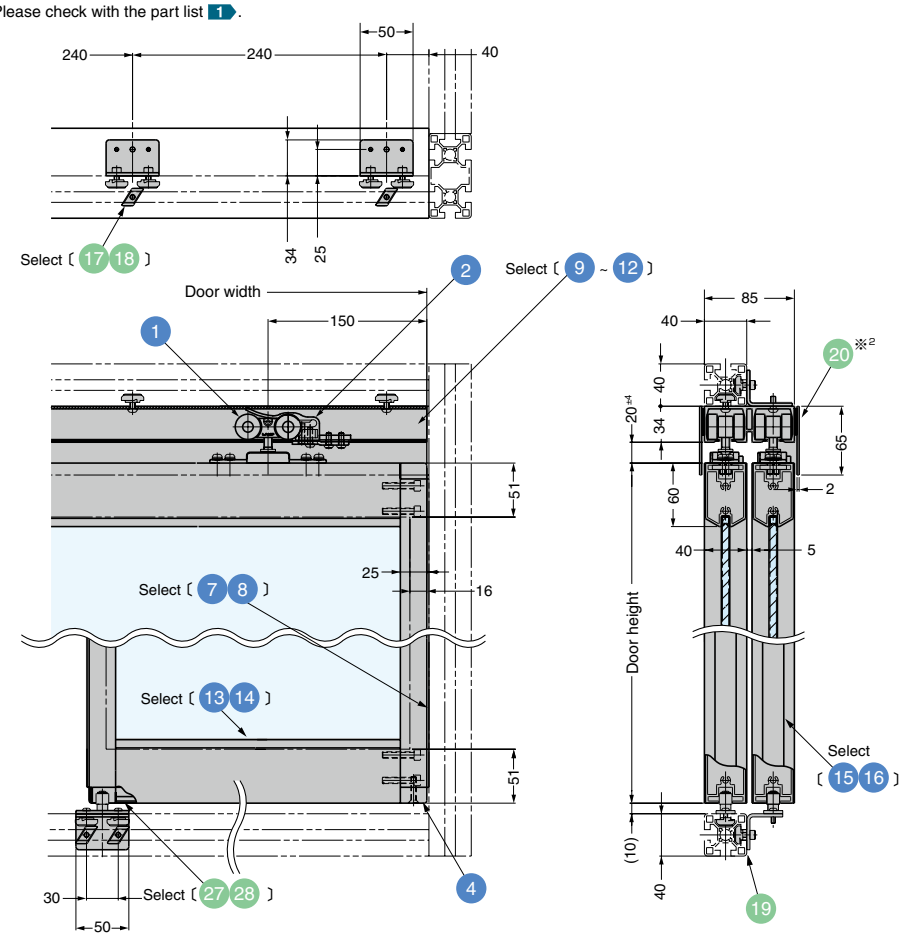


No Need Any Support	2 Supports	2 Supports	3 Supports	3 Supports	4 Supports
(Less than W900×H2200)	(Less than W1600×H2000)	(Less than W1500×H2200)	(Less than W1300×H2500)	(Less than W1200×H2700)	(Less than W1100×H3000)

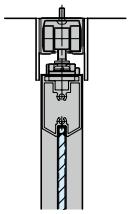
Refer to 1 : P.706, 2 : P.360~361

[Installation Example]

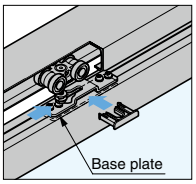
The circled numbers are part numbers.
Please check with the part list 1.



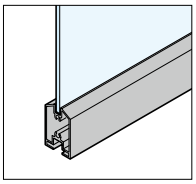
[In Case of One Door]



Dimensions when installed to existing aluminium frame shown. When installed to sheet metal, please contact local representatives.
※2 Fix with detachable hook-and-loop fastener.



●Upper roller making it easy to detach/attach door



●Horizontal frame hardly gathering dust

Refer to 1 : P.360~361

When Ordering Aluminium Frame Sliding Door System AF-25H

●Necessary Parts… Roller, Stopper, Guide, Corner Parts, Horizontal Frame + Vertical Frame, Upper Rail, Gasket, Cover

●Please order according to application ..... Optional Parts

The circled numbers are part numbers. Please check with the drawings 1 .

Roller, Stopper, Guide, Corner Parts, Horizontal Frame

Necessary Parts.

Please specify necessary qty of 5 horizontal frames based on door width.

No.	RoHS	CAD	Item Code	Dimensions
1	G	3D	250-121-105	Upper Roller Item Name : AF-25C-WR Weight (g) : 335 ●Material PA / Steel ●Finish White/Coloured Zinc Chromate [Qty for 1 Door] 2 pcs
2	G	3D	250-121-107	Upper Stopper Item Name : FD70-ST Weight (g) : 79 ●Material PBT / Steel ●Finish White/Coloured Zinc Chromate [Qty for 1 Door] 2 pcs
3	–	3D	250-120-033	Bottom Guide Item Name : RR-12 Weight (g) : 30 ●Material Stainless Steel (SUS304)/POM ●Finish Plain / Natural [Qty for 1 Door] 1 pc ※2 mounting screws supplied

No.	RoHS	CAD	Item Code	Dimensions
4	G	3D	250-120-056	Corner Parts Item Name : AF-25-P04 Weight (g) : 52 ●Material Zinc Alloy (ZDC) ●Finish Dull Chrome [Qty for 1 Door] 4 pcs
5	G	3D	250-120-070	Horizontal Frame (2000 mm) Item Name : AF-25-W02 Weight (g) : 2808 ●Material Aluminium Alloy ●Finish Matte Anodised Silver Weight : 1.4 kg/1000 mm
6	G	3D	250-181-199	Screw Set Item Name : AF-25-HS Weight (g) : 101 ●Material Stainless Steel ●Finish Plain ※Screws for 3 intermediate supports supplied Hexagon Socket Head Cap Screw M6×30: 8 pcs Hexagon Socket Head Cap Screw M4×30: 6 pcs Hexagon Socket Countersunk Head Screw M4×25: 8 pcs

Vertical Frame, Upper Rail, Glass Gasket, Cover

Necessary Parts.

Please specify necessary qty based on opening width and door size.

No.	Type	RoHS	CAD	Item Code	Dimensions
7	Length 2500 mm	G	3D	250-940-965	Vertical Frame Item Name : AF-25-W01-2.5M Weight (g) : 2667
8	Length 3000 mm	G	3D	250-121-116	Item Name : AF-25-W01-3M Weight (g) : 3000 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
9	Single Length 2000 mm	G	3D	250-121-117	Upper Rail Item Name : FD70-2000SIL Weight (g) : 1775
10	Single Length 3600 mm	G	3D	250-121-118	Item Name : FD70-3600SIL Weight (g) : 3200 ●Material Aluminium Alloy ●Finish Matte Anodised Silver

No.	Type	RoHS	CAD	Item Code	Dimensions
11	Double Length 2000 mm	G	3D	250-121-119	Upper Rail Item Name : FD70-W2000SIL Weight (g) : 300
12	Double Length 3600 mm	G	3D	250-121-120	Item Name : FD70-W3600SIL Weight (g) : 6400 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
13	Glass Thickness 5mm Length 2500mm	–	3D	250-940-960	Glass Gasket Item Name : AF-25-P02 Weight (g) : 43
14	Glass Thickness 6 mm Length 3000mm	G	3D	250-181-197	Item Name : AF-25-P15 Weight (g) : 10 ●Material Elastomer (TPE) ●Colour Light Grey
15	Length 2500 mm	–	3D	270-940-959	Cover Item Name : AF-25-P01-25 Weight (g) : 140
16	Length 3000 mm	–	3D	270-942-846	Item Name : AF-25-P01-30 Weight (g) : 137 ●Material Elastomer (TPE) ●Colour Light Grey

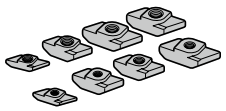
Refer to 1 : P.358~359

The circled numbers are part numbers. Please check with the drawings 1 .

Optional Parts

Please order according to application.

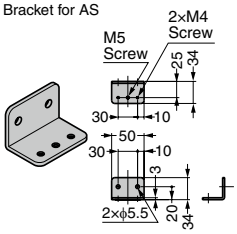
No.	Part Name	RoHS	CAD	Item Code	Dimensions
17	AS Nut (Aluminium Frame Groove Width 8 mm)	G	3D	120-040-685	Item Name : AS-8M4 Weight (g) : 4
18	AS Nut (Aluminium Frame Groove Width 10 mm)	G	3D	120-040-678	Item Name : AS-10M4 Weight (g) : 7



[Application]
For installing rail to existing aluminium frame.
AS nuts and M4 screws for rail mounting holes are required.
●Material Stainless Steel (SUS316)
●Finish Barrel Polished

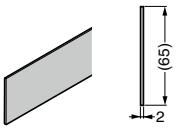
No.	Part Name	RoHS	CAD	Item Code	Dimensions
19	–	–	–	–	Made to order Item Name : AS-AF-25H-A Weight (g) : –

Bracket for AS



[Application]
For installing upper rail (double).
●Material Stainless Steel (SUS304)
●Finish Barrel Polished

No.	Part Name	RoHS	CAD	Item Code	Dimensions
20	AS Cover Panel (2000 mm)	–	–	–	Made to order Item Name : AS-AF-25H-B Weight (g) : –
21	Cover Panel (4000 mm)	–	–	250-188-718	Item Name : AF-25-FB Weight (g) : 1100

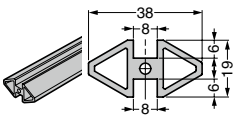


※Adhere on upper rail with hook-and-loop fastener.

[Application]
For installing upper rail (double).
●Material Aluminium Alloy
●Finish Anodised

No.	Part Name	RoHS	CAD	Item Code	Dimensions
22	–	G	3D	250-940-967	Item Name : AF-25-W03 Weight (g) : 1300 ●Material Aluminium Alloy ●Finish Matte Anodised Silver

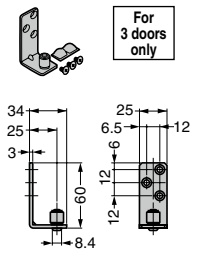
Intermediate Support (2000 mm)



Weight: 0.6 kg/1000 mm

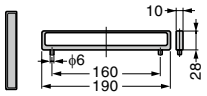
No.	Part Name	RoHS	CAD	Item Code	Dimensions
23	–	G	–	250-121-121	Item Name : RR-12L Weight (g) : 61 ●Material Stainless Steel (SUS304) / POM ●Finish Barrel Polished

Interlocking Bottom Guide



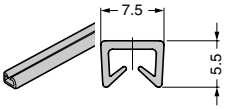
No.	Part Name	RoHS	CAD	Item Code	Dimensions
24	–	–	–	100-010-386	Item Name : MN799Z160E101 Weight (g) : 134 ●Material Zinc Alloy (ZDC) ●Colour Matte Silver

Handle



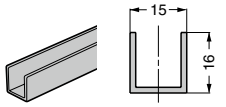
※Connect by drilling 2 holes of φ7 on the vertical frames 7 8.

No.	Part Name	RoHS	CAD	Item Code	Dimensions
25	Gasket (Glass Thickness 5 mm 2500 mm)	–	–	250-940-961	Item Name : AF-25-P03 Weight (g) : 40
26	Gasket (Glass Thickness 6 mm 2500 mm)	G	–	250-181-196	Item Name : AF-25-P16 Weight (g) : 100



[Application]
Please order when using intermediate support 22.
●Material Elastomer (TPE)
●Colour Light Grey

No.	Part Name	RoHS	CAD	Item Code	Dimensions
27	Bottom Guide Rail (3000 mm)	G	3D	250-125-178	Item Name : 1050-3M Weight (g) : 600
28	Bottom Guide Rail (4000 mm)	G	3D	250-125-179	Item Name : 1050-4M Weight (g) : 600



[Application]
Please order when using intermediate support 22.
●Material Aluminium Alloy
●Finish Anodised Silver

Refer to 1 : P.358~359

SUGATSUNE

FOLDING DOOR SYSTEM KF111-MH



Door opened



Folding door system with catch function.

- Holding rollers at the top and bottom achieve smooth opening and closing.
- For aluminium frame support system only.
- Centre hinge has catch function to hold the door at closed position.

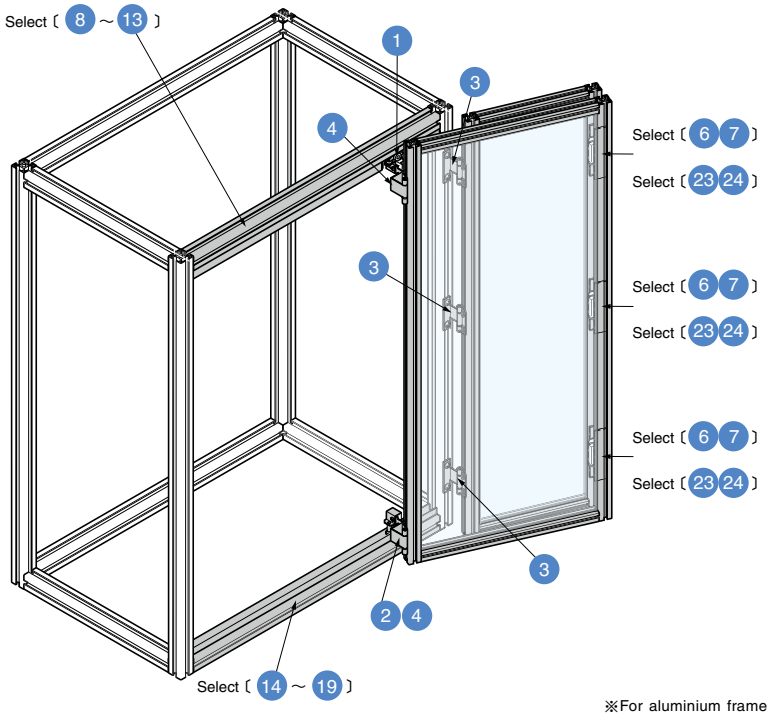
[Remarks]

- Opening and closing of overweight doors may become heavy. Do not exceed 10kg for large doors.
- Aluminium frame not included.

Door Width	Max. 450 mm
Door Height	Max. 2400 mm
Door Thickness	30 mm
Door Weight	Max. 10 kg/Door
Max. Overlay	24 mm
Aluminium Frame	Size: Door 30×60 mm, Frame 30×60 mm, 40×40 mm Groove Width: Door 8 mm, Frame 10 mm

※Please make or prepare door and aluminium frame within the range above.

The circled numbers are part numbers.
Please check with the part list 1.



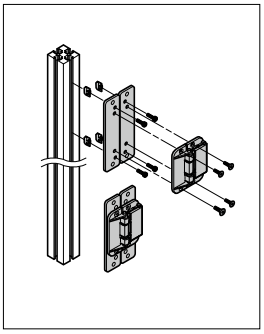
※For aluminium frame support system only. Figure above is for installing to existing aluminium frame.

Refer to 1 : P.364~365

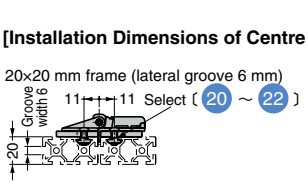
[Installation Example]

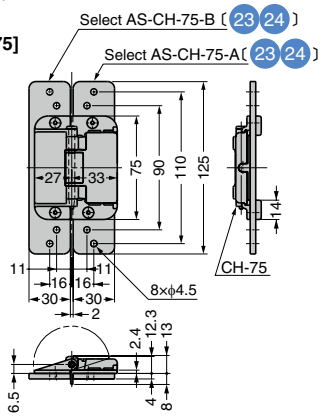
The circled numbers are part numbers. Please check with the part list 1.

[Centre Hinge Installation]

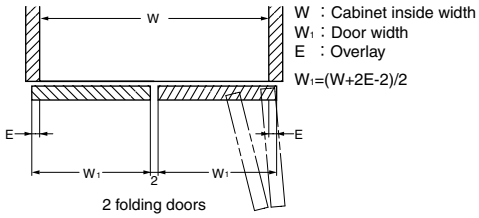


[Installation Dimensions of Centre Hinge CH75]



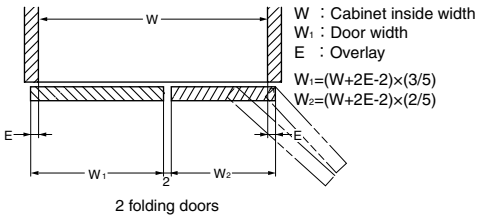


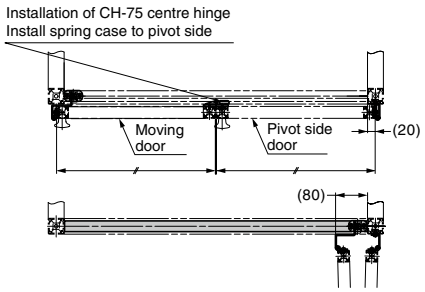
[Door Width Ratio1: 1]

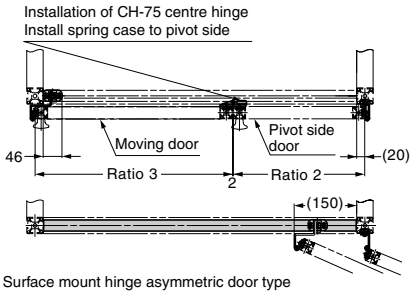


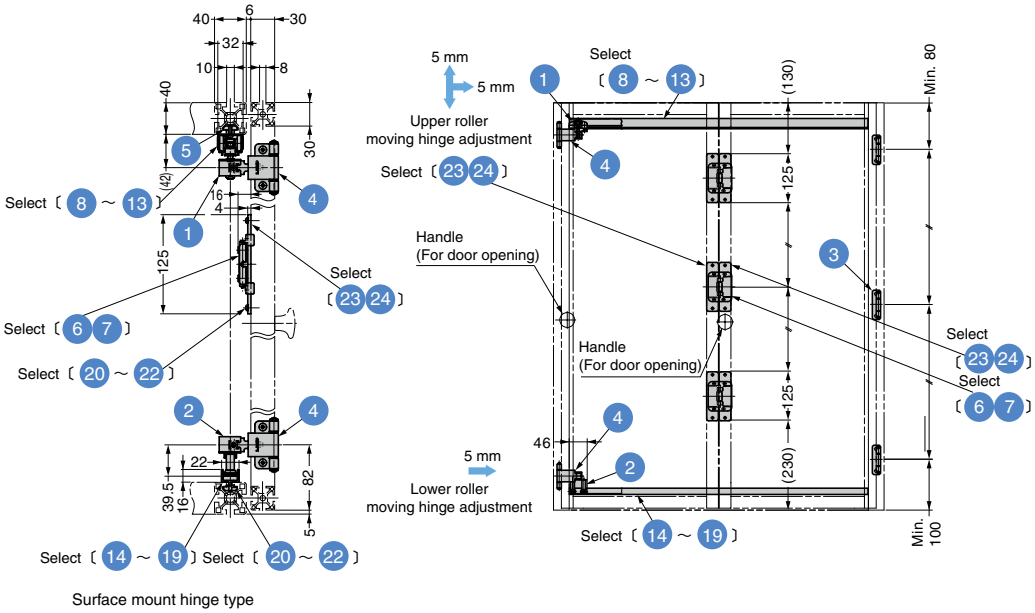
[Door Width Ratio 3: 2]

Minimum door projection when fully opened.









Surface mount hinge type

Refer to 1 : P.364~365

※ For aluminium frame support system only. Figure above is for installing to existing aluminium frame.

SUGATSUNE

When Ordering Folding Door System KF111-MH

●Necessary Parts… Roller, Hinge + AS Nut for Upper Track Installation + Centre Hinge, Upper Track + Bottom Guide Track + AS Nut + Centre Hinge Bracket

The circled numbers are part numbers. Please check with the drawings 1 .

Roller, Hinge

Necessary Parts.

No.	RoHS	CAD	Item Code	Dimensions
1	–	3D	250-120-021	Upper Roller Item Name : FD111-TRH Weight (g) : 154 ●Material Roller : POM Roller Guide : POM Roller Support : Steel Hinge Bracket : Steel Hinge: Zinc Alloy (ZDC) ●Finish Plastic Parts: Natural Steel Parts : Coloured Zinc Chromate Hinge : Nickel [Qty for 2 Doors] 1 set
2	–	3D	250-120-028	Lower Roller L Item Name : FD111-BRLH Weight (g) : 159 ●Material Roller : POM (With Synthetic Rubber Ring) Hinge Bracket: Steel Hinge: Zinc Alloy (ZDC) ●Finish Plastic Parts: Natural Steel Parts: Coloured Zinc Chromate Hinge: Nickel [Qty for 2 Doors] 1 set

No.	RoHS	CAD	Item Code	Dimensions
3	G	3D	170-090-689	Hanging Side Hinge Item Name : AS-OHT-68 Weight (g) : 99 ●Material Stainless Steel ●Finish Barrel Polished [Qty for 2 Doors] Door Height 900 mm or Less: 2 pcs Door Height 1600 mm or Less: 3 pcs Door Height 2000 mm or Less: 4 pcs Door Height 2400 mm or Less: 5 pcs
4	G	3D	170-090-688	Door End Side Hinge Item Name : AS-OHS-68 Weight (g) : 110 ●Material Stainless Steel ●Finish Barrel Polished [Qty for 2 Doors] Door Height 2400 mm or Less:2 pcs

AS Nut for Upper Track Installation

Necessary Parts. M4 screws not included.

No.	RoHS	CAD	Item Code	Part Name
5	G	3D	120-040-678	AS Nut (For Groove Width 10 mm) Item Name : AS-10M4 Weight (g) : 7 ●Material Stainless Steel (SUS316) ●Finish Barrel Polished [Necessary Qty] FD111-910 Upper Track: 5 pcs FD111-1220 Upper Track: 6 pcs FD111-1820 Upper Track: 7 pcs FD2216-910 Bottom Guide Track: 4 pcs FD2216-1220 Bottom Guide Track: 5 pcs FD2216-1820 Bottom Guide Track: 7 pcs

Centre Hinge, Upper Track

Necessary Parts.
Please order necessary qty of centre hinges based on door size and qty.
Please order necessary qty of upper tracks based on track length.

No.	Type	RoHS	CAD	Item Code	Dimensions
6	Nickel	–	3D	250-129-208	Centre Hinge Item Name : CH-75-NI Weight (g) : 101
7	Bronze	–	3D	250-120-031	Item Name : CH-75-GB Weight (g) : 99
					●Material Zinc Alloy (ZDC) / POM [Qty for 2 Doors] Door Height 1600 mm or Less:3 pcs Door Height 2400 mm or Less:4 pcs

No.	Type	RoHS	CAD	Item Code	Dimensions
8	Silver Length 910 mm	G	3D	250-120-006	Upper Track Item Name : FD111-910-SIL Weight (g) : 335
9	Silver Length 1220 mm	G	3D	250-120-004	Item Name : FD111-1220-SIL Weight (g) : 409
10	Silver Length 1820 mm	G	3D	250-120-002	Item Name : FD111-1820-SIL Weight (g) : 600
11	Bronze Length 910 mm	G	3D	250-120-005	Item Name : FD111-910-GB Weight (g) : 307
12	Bronze Length 1220 mm	G	3D	250-120-003	Item Name : FD111-1220-GB Weight (g) : 387
13	Bronze Length 1820 mm	G	3D	250-120-001	Item Name : FD111-1820-GB Weight (g) : 600
					●Material Aluminium Alloy ●Finish Anodised ※Convex R-shaped travel surface is effective for dust removing . Pitch End 15 mm

Refer to 1 : P.362~363

The circled numbers are part numbers. Please check with the drawings 1 .

Bottom Guide Track

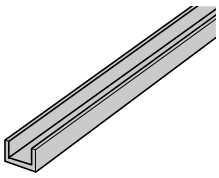
Necessary Parts. Please order necessary qty based on track length.

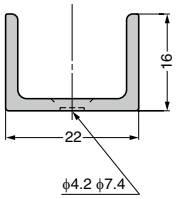
No.	Type	RoHS	CAD	Item Code
14	Silver Length 910 mm	G	3D	250-120-015 Item Name : FD2216-910-SIL Weight (g) : 240
15	Silver Length 1220 mm	G	3D	250-120-013 Item Name : FD2216-1220-SIL Weight (g) : 325
16	Silver Length 1820 mm	G	3D	250-120-011 Item Name : FD2216-1820-SIL Weight (g) : 500
17	Bronze Length 910 mm	G	3D	250-120-014 Item Name : FD2216-910-GB Weight (g) : 238
18	Bronze Length 1220 mm	G	3D	250-120-012 Item Name : FD2216-1220-GB Weight (g) : 324
19	Bronze Length 1820 mm	G	3D	250-120-010 Item Name : FD2216-1820-GB Weight (g) : 400

●Material Aluminium Alloy
●Finish Anodised Clear

Dimensions

Bottom Guide Track





Pitch End 15 mm

AS Nut

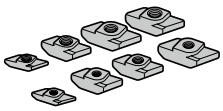
Necessary Parts. M4, M5 screws not included.

No.	Type	RoHS	CAD	Item Code
20	Aluminium Frame Groove Width 8 mm M4	G	3D	120-040-685 Item Name : AS-8M4 Weight (g) : 4
21	Aluminium Frame Groove Width 8 mm M5	G	3D	120-040-686 Item Name : AS-8M5 Weight (g) : 4
22	Aluminium Frame Groove Width 10 mm M5	G	3D	120-040-687 Item Name : AS-10M5 Weight (g) : 7

●Material Stainless Steel (SUS316)
●Finish Barrel Polished

Part Name

AS Nut



[Qty for 2 Doors]	AS-8M4	AS-8M5	AS-10M5
Door Height 900 mm or Less:	12 pcs,	8 pcs,	4 pcs
Door Height 1600 mm or Less:	12 pcs,	12 pcs,	6 pcs
Door Height 2000 mm or Less:	16 pcs,	16 pcs,	8 pcs
Door Height 2400 mm or Less:	16 pcs,	20 pcs,	10 pcs

Centre Hinge Bracket

Necessary Parts.

No.	RoHS	CAD	Item Code
23	G	3D	170-090-694 Item Name : AS-CH-75-A Weight (g) : 110
24	G	3D	170-090-695 Item Name : AS-CH-75-B Weight (g) : 109

●Material
Stainless Steel (SUS430)
●Finish Barrel Polished

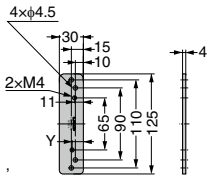
Dimensions

Bracket for Centre Hinge



[Qty for 2 Doors]
Door Height 1600 mm or Less:
23 3 pcs, 24 3 pcs
Door Height 2400 mm or Less:
23 4 pcs, 24 4 pcs

Y = 14 (AS-CH-75-A)
Y = 11 (AS-CH-75-B)
※AS-CH-75-A is marked with “R” ,
and AS-CH-75-B marked with “L” .



Refer to 1 : P.362~363

Updated 2017.10.27

SLIDABLE FOLDING DOOR SYSTEM KF111-R

AS INSTRUCTION



Can slide left and right when folded





Folded doors can slide for easy access.

- Can fold door to the left or right side and then slide it.
- Ball bearing used in upper roller achieves smooth opening and closing.
- Centre hinge has catch to hold the door at closed position.

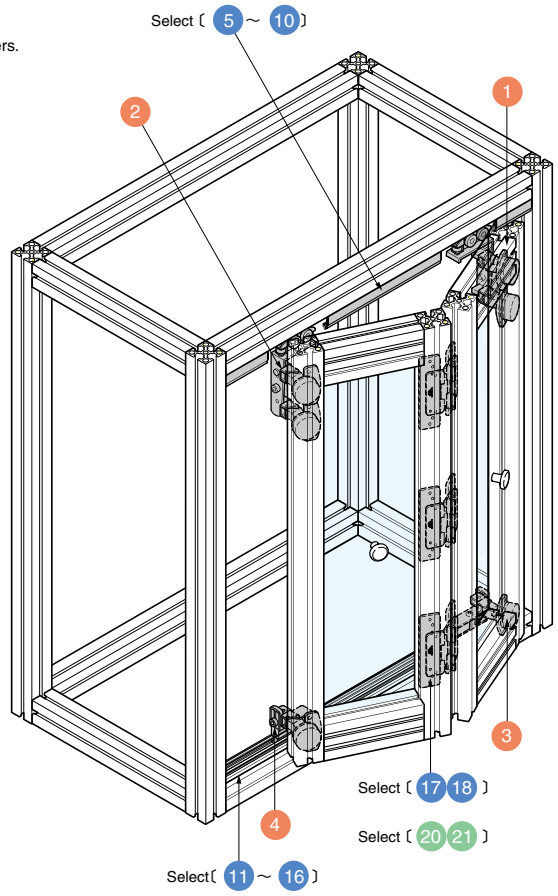
[Remarks]

- Opening and closing of overweight doors may become heavy. Do not exceed 10kg for large doors.
- Use AS nuts and centre hinge brackets when installing to aluminium frame.
- Aluminium frame not included.

Door Width	Max. 450 mm
Door Height	Max. 2400 mm
Door Thickness	18~34 mm
Door Weight	Max. 10 kg/Door
Max. Overlay	23 mm
Aluminium Frame	Size : Door 30×60 mm, Frame 40×40 mm, Groove Width : 6 mm

※Please make or prepare door and aluminium frame within the range above.

The circled numbers are part numbers.
Please check with the part list 1.

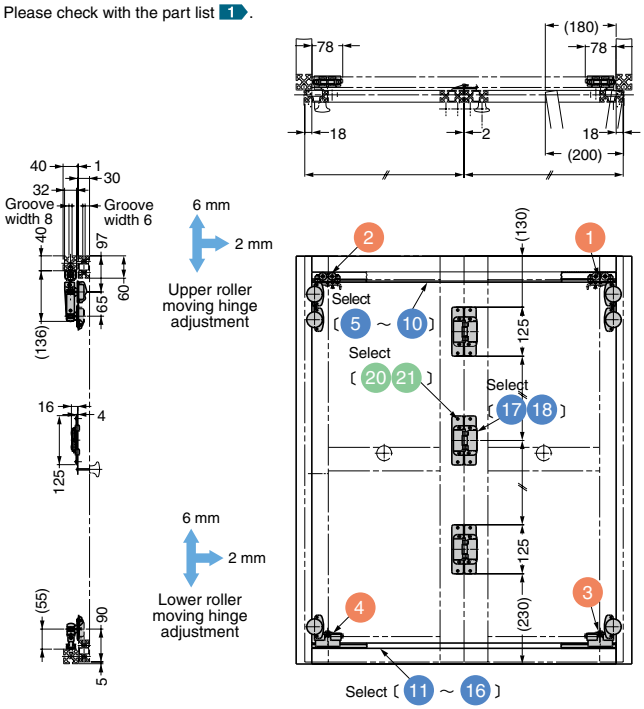


※Dimensions when installed to existing aluminium frame shown. When installed to sheet metal, please contact local representatives.

Refer to 1 : P.368~369

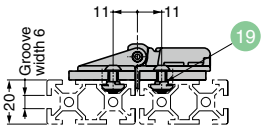
[Installation Example]

The circled numbers are part numbers.
Please check with the part list 1.

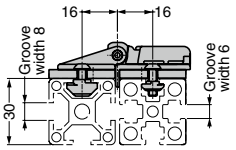


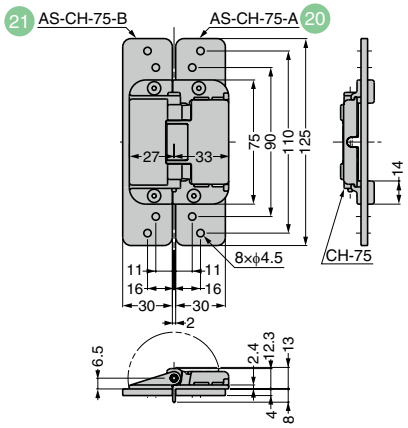
[Installation Dimensions of Centre Hinge CH75]

20×20 mm frame (lateral groove 6 mm)

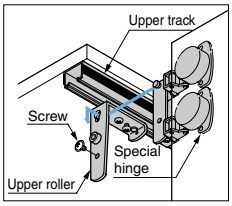


30×30 mm frame (lateral groove 6, 8 mm)



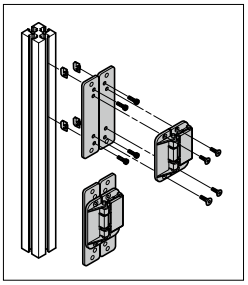


[Door installation]

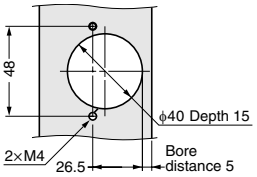


- Fold the door connected with centre hinges in half. As shown above, hook the hinge base shafts to the key holders of left and right upper rollers, and then temporarily fix with supplied mounting screws.

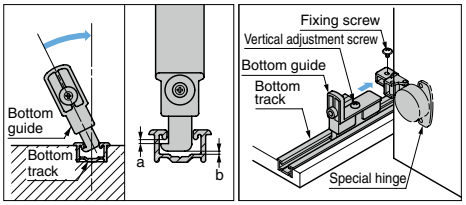
[Centre Hinge Installation]



[Cut Out Dimensions]



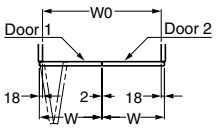
[Installation of Bottom Guide]



- Insert the bottom guide into the bottom track as shown above.
- Next, insert the special hinge into the bottom guide and temporarily fasten with the fixing screws.
- As shown above, adjust with the vertical adjustment screw, so that the upper and lower clearances a and b of the plastic part of bottom guide with respect to the bottom guide track are nearly equal.
- Temporarily tighten all screws, and adjust the door to ensure smooth movement. Finally tighten all screws securely.

[Door Opening Size] For 18 mm overlay

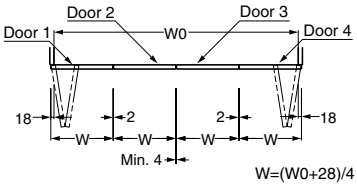
2 folding doors



W0 : Cabinet inside width
W : Door width

W=(W0+34)/2

4 folding doors



W=(W0+28)/4

※ Dimensions when installed to existing aluminium frame shown. When installed to sheet metal, please contact local representatives.

Refer to 1 : P.368~369

When Ordering Slidable Folding Door System KF111-R

● Necessary Parts… Parts Set + Track + Centre Hinge

● Please order according to application … Optional Parts

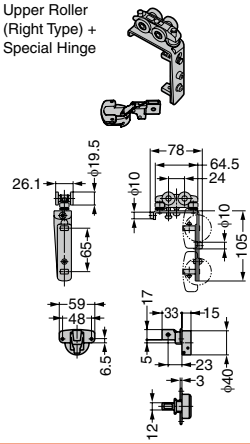
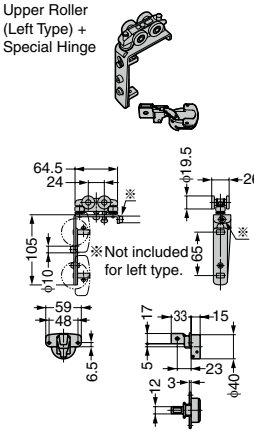
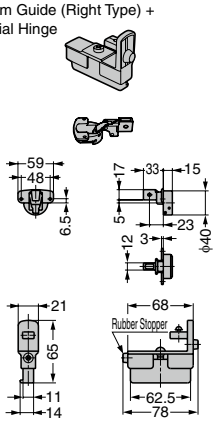
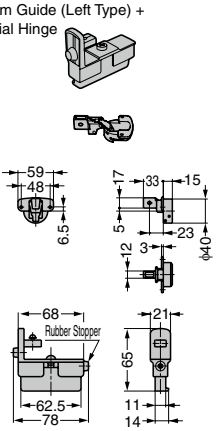
The circled numbers are part numbers. Please check with the drawings 1 .

Parts Set (Per Door)

Necessary Parts.

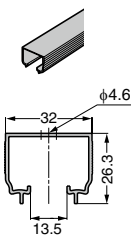
Set Name	RoHS	CAD	Item Code	Item Name	Weight (g)
Parts Set	–	3D	250-122-119	KF111RP	1044

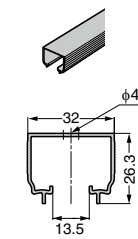
Parts Included

No.	Qty	Dimensions	Description
1	1 pc	Upper Roller (Right Type) + Special Hinge 	Item Code : 250-120-086 Item Name : R111-T-R Weight (g) : 359 ●Material Roller: POM (With Bearing) Bracket: Steel Hinge Base: Zinc Alloy (ZDC) Hinge: Zinc Alloy (ZDC) ●Finish Plastic Parts: Natural Bracket: Nickel Hinge Base: Nickel Hinge: Nickel
2	1 pc	Upper Roller (Left Type) + Special Hinge 	Item Code : 250-120-087 Item Name : R111-T-L Weight (g) : 347 ●Material Roller: POM (With Bearing) Bracket: Steel Hinge Base: Zinc Alloy (ZDC) Hinge: Zinc Alloy (ZDC) ●Finish Plastic Parts: Natural Bracket: Nickel Hinge Base: Nickel Hinge: Nickel
3	1 pc	Bottom Guide (Right Type) + Special Hinge 	Item Code : 250-120-088 Item Name : R111-S-R Weight (g) : 169 ●Material Body: Zinc Alloy (ZDC) Guide: POM Hinge: Zinc Alloy (ZDC) ●Finish Body: Nickel Guide: Natural Hinge: Nickel
4	1 pc	Bottom Guide (Left Type) + Special Hinge 	Item Code : 250-120-089 Item Name : R111-S-L Weight (g) : 169 ●Material Body: Zinc Alloy (ZDC) Guide: POM Hinge: Zinc Alloy (ZDC) ●Finish Body: Nickel Guide: Natural Hinge: Nickel

Tracks

Necessary Parts. Please specify necessary length, qty and finish of 5 ~ 10 based on cabinet width.

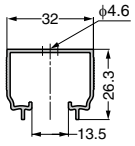
No.	Type	RoHS	CAD	Item Code	Dimensions
5	Silver Length 910 mm	G	3D	250-120-006	Upper Track  Pitch End 15 mm
				Item Name : FD111-910-SIL Weight (g) : 335	
6	Silver Length 1220 mm	G	3D	250-120-004	
				Item Name : FD111-1220-SIL Weight (g) : 409	
				●Material Aluminium Alloy ●Finish Anodised ※Convex R-shaped travel surface is effective for dust removing.	

No.	Type	RoHS	CAD	Item Code	Dimensions
7	Silver Length 1820 mm	G	3D	250-120-002	Upper Track  Pitch End 15 mm
				Item Name : FD111-1820-SIL Weight (g) : 600	
8	Bronze Length 910 mm	G	3D	250-120-005	
				Item Name : FD111-910-GB Weight (g) : 307	
				●Material Aluminium Alloy ●Finish Anodised ※Convex R-shaped travel surface is effective for dust removing.	

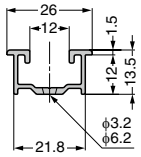
Refer to 1 : P.366~367

The circled numbers are part numbers. Please check with the drawings 1 .

No.	Type	RoHS	CAD	Item Code	Dimensions
9	Bronze Length 1220 mm	G	3D	250-120-003	Upper Track Item Name : FD111-1220-GB Weight (g) : 387
10	Bronze Length 1820 mm	G	3D	250-120-001	Item Name : FD111-1820-GB Weight (g) : 600
					●Material Aluminium Alloy ●Finish Anodised ※Convex R-shaped travel surface is effective for dust removing.
11	Silver Length 910 mm	G	3D	250-120-090	Bottom Track Item Name : FD2612-910-SIL Weight (g) : 232
12	Silver Length 1820 mm	G	3D	250-120-092	Item Name : FD2612-1820-SIL Weight (g) : 1000
					●Material Aluminium Alloy ●Finish Anodised

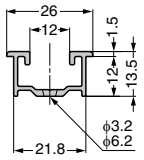



Pitch End 15 mm

Pitch End 25 mm

No.	Type	RoHS	CAD	Item Code	Dimensions
13	Silver Length 2730 mm	G	3D	250-120-094	Bottom Track Item Name : FD2612-2730-SIL Weight (g) : 600
14	Bronze Length 910 mm	G	3D	250-120-091	Item Name : FD2612-910-GB Weight (g) : 212
15	Bronze Length 1820 mm	G	3D	250-120-093	Item Name : FD2612-1820-GB Weight (g) : 400
16	Bronze Length 2730 mm	G	3D	250-120-095	Item Name : FD2612-2730-GB Weight (g) : 600
					●Material Aluminium Alloy ●Finish Anodised

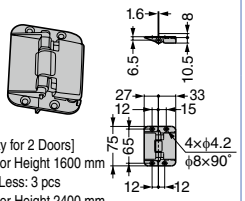



Pitch End 25 mm

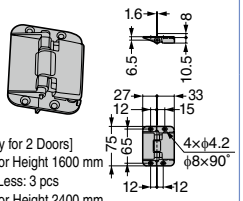
Centre Hinge

Necessary Parts. Please specify necessary finish and qty of 17 18 based on door size and qty.

No.	Type	RoHS	CAD	Item Code	Dimensions
17	Nickel	–	3D	250-129-208	Centre Hinge Item Name : CH-75-NI Weight (g) : 101 ●Material Zinc Alloy (ZDC) / POM [Qty for 2 Doors] Door Height 1600 mm or Less: 3 pcs Door Height 2400 mm or Less: 4 pcs



No.	Type	RoHS	CAD	Item Code	Dimensions
18	Bronze	–	3D	250-120-031	Centre Hinge Item Name : CH-75-GB Weight (g) : 99 ●Material Zinc Alloy (ZDC) / POM [Qty for 2 Doors] Door Height 1600 mm or Less: 3 pcs Door Height 2400 mm or Less: 4 pcs



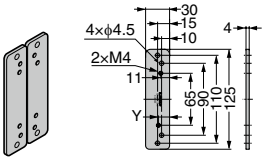
Optional Parts

Please order according to application.

No.	RoHS	CAD	Item Code	Dimensions
19	G	3D	120-040-684	AS Nut (For Groove Width 6 mm) Item Name : AS-6M4 Weight (g) : 1 ●Material Stainless Steel (SUS316) ●Finish Barrel Polished [Application] For installing track to existing aluminium frame. AS nuts and M4 screws for rail mounting holes are required. [Necessary Qty] Door Height 1600 mm or Less: 12 pcs Door Height 2400 mm or Less: 16 pcs



No.	RoHS	CAD	Item Code	Dimensions
20	G	3D	170-090-694	Centre Hinge Bracket Item Name : AS-CH-75-A Weight (g) : 110
21	G	3D	170-090-695	Item Name : AS-CH-75-B Weight (g) : 109
				●Material Stainless Steel (SUS430) ●Finish Barrel Polished [Application] For installing centre hinge to existing aluminium frame. [Qty for 2 Doors] Door Height 1600 mm or Less: 20 3 pcs, 21 3 pcs Door Height 2400 mm or Less: 20 4 pcs, 21 4 pcs Y=14 (AS-CH-75-A) Y=11 (AS-CH-75-B) ※AS-CH-75-A is marked with "R", and AS-CH-75-B marked with "L".



Refer to 1 : P.366~367

DESIGN SHUTTER DIS-M Surface Mount Type

Refer to 1 for quotation request.

INSTRUCTION VIDEO



- Guide rail is installed inside the cabinet, without cabinet processing.
- Slats with only R20 for clean appearance.
- Can be used for both vertical and horizontal types.

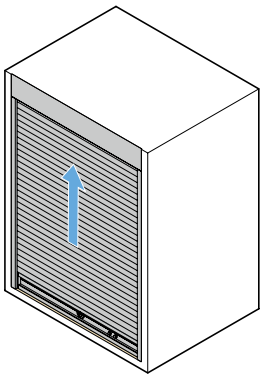
[Remarks]

- Do not lean against or apply body weight to the shutter. Damage, personal injury or accident may occur.

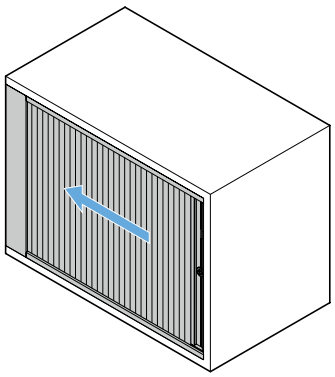
	Vertical Type	Horizontal Type	Horizontal Type (Double Door)
Cabinet Inside Width	300~1200 mm	300~900 mm	600~1800 mm
Cabinet Inside Height	300~900 mm	100~1200 mm	100~1200 mm
Cabinet Inside Depth	Min. 330 mm	Min. 330 mm	Min. 330 mm

Video Link

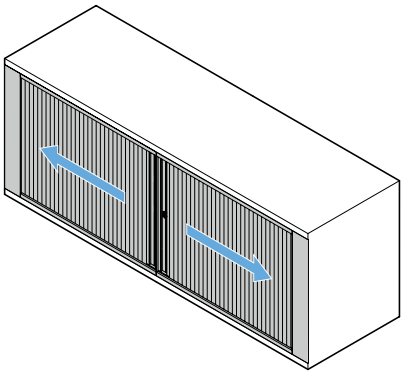
[Example for Vertical Type]



[Example for Horizontal Type, Left-opening]



[Example for Horizontal Type, Double Door]

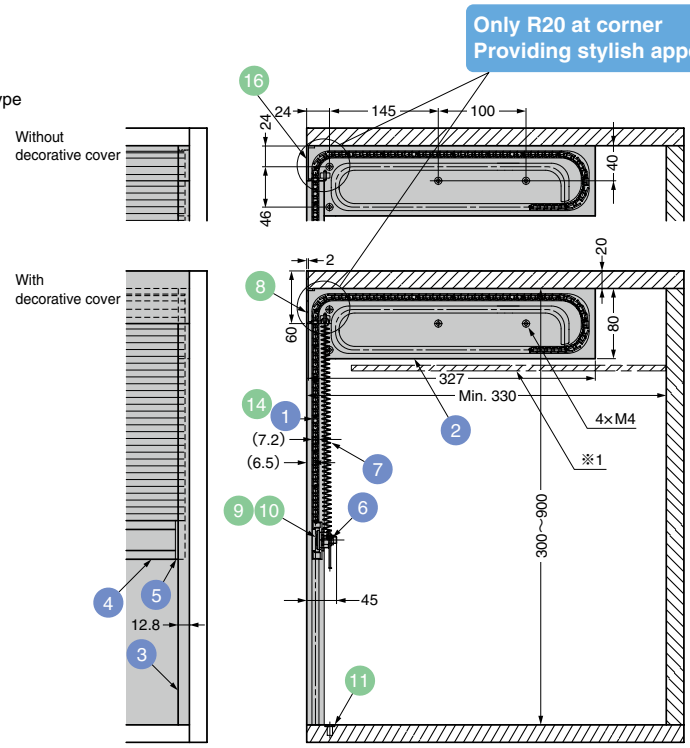


Refer to 1 : P.389

[Installation Example]

The circled numbers are part numbers.
Please check with the part list 1.

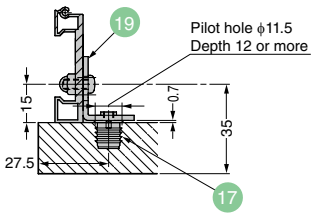
In case of vertical type



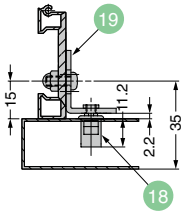
※1 When storing objects apt to fall in horizontal type, the wrapped shutter may contact the stored objects.
If necessary, install a mullion next to the surface mount parking.
Please use detachable mullion for easy installation and maintenance.

[Installation of Magnetic Catch and Middle Bracket]

(For vertical type and cabinet inside width 600mm or less.)

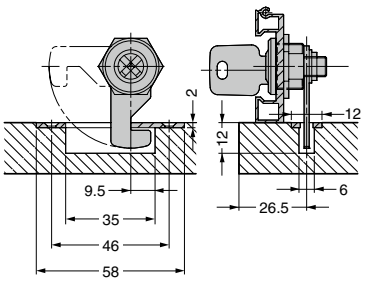


In case of wooden cabinet



In case of metal cabinet

[Installation of Cylinder Lock and Cam]



Refer to 1 : P.372~373

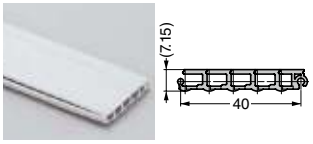
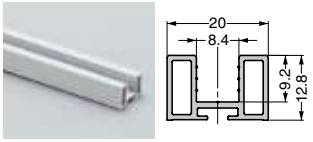
■Design Shutter DIS-M (Surface Mount Type) Parts List

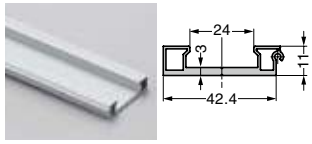
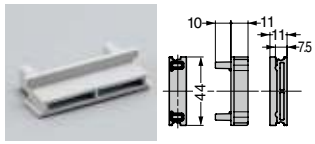
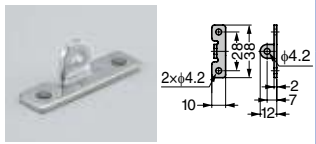
Refer to 1 for quotation request.

The circled numbers are part numbers. Please check with the drawings 2.

Basic Parts

Necessary Parts. Please specify necessary qty.

No.	RoHS	CAD	Item Code	Dimensions
1	–	3D	180-018-588	Slat (1200 mm)
			Item Name : DIS-001-1200 Weight (g) : 263 ●Material PVC ●Colour Grey	
2	G	3D	180-018-592	Surface Mount Parking
			Item Name : DIS-004-R Weight (g) : 112 Right Type ●Materia POM ●Colour Grey	
	G	3D	180-018-591	
			Item Name : DIS-004-L Weight (g) : 112 Left Type ●Material POM ●Colour Grey	Left type shown.
3	G	3D	180-018-593	Surface Mount Guide Rail (860 mm)
			Item Name : DIS-005-860 Weight (g) : 64 ●Material PP ●Colour Grey With Double-sided Tape	

No.	RoHS	CAD	Item Code	Dimensions
4	G	3D	180-018-595	End Slat (Large) (1200 mm)
			Item Name : DIS-007-1200 Weight (g) : 500 ●Material Aluminium Alloy ●Finish Matte Anodised Silver	
5	G	3D	180-018-597	End Slider
			Item Name : DIS-009 Weight (g) : 4 ●Material POM ●Colour Grey	
6	–	3D	180-018-600	Balance Holder (For Vertical Type Only)
			Item Name : DIS-012 Weight (g) : 55 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished	
7	–	–	–	Balance Spring (For Vertical Type Only)
			●Material Steel Made to Order Designed to customer's specifications.	

Refer to 1 : P.389, 2 : P.371

The circled numbers are part numbers. Please check with the drawings 1.

Optional Parts

Please order according to application.

No.	RoHS	CAD	Item Code	Dimensions
⑧	–	3D	180-018-594	Decorative Cover (1200 mm) Item Name : DIS-006-1200 Weight (g) : 248 ●Material PVC ●Colour Grey With Double-sided Tape
⑨	G	3D	150-018-944	Cylinder Lock Item Name : DIS-022R-D Weight (g) : 50 ●Material Brass ●Finish Chrome/Coloured Zinc Chromate (Trivalent)/ Nickel
⑩	–	3D	180-018-598	Cam Item Name : DIS-010 Weight (g) : 7 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
⑪	–	3D	180-018-599	Strike Item Name : DIS-011 Weight (g) : 7 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
⑫	–	3D	180-018-602	Surface Mount Centre Stopper (For Horizontal Type and Double Door) Item Name : DIS-017 Weight (g) : 4 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
⑬	–	3D	180-018-605	Strike for Double Door (For Horizontal Type and Double Door) Item Name : DIS-021 Weight (g) : 15 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
⑭	G	3D	180-018-604	Intermediate Slat (1198 mm) Item Name : DIS-019 Weight (g) : 149 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
⑮	G	3D	180-018-942	Handle Slat (1198 mm) Item Name : DIS-023 Weight (g) : 149 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
⑯	G	3D	180-018-943	Surface Mount Parking Cover Item Name : DIS-024 Weight (g) : 1 ●Material ABS ●Colour Grey With Double-sided Tape
⑰	G	3D	140-050-189	Magnetic Catch (For Vertical Type Only For Wooden Cabinets) Item Name : IND10-WT Weight (g) : 4 ●Material PP ●Colour White
⑱	G	3D	140-050-086	Magnetic Catch (For Vertical Type Only For Metal Cabinets) Item Name : MC-FP5W Weight (g) : 9 ●Material ABS ●Colour White
⑲	G	3D	210-010-541	Middle Bracket (For Vertical Type Only) Item Name : AS-PTB Weight (g) : 20 ●Material Stainless Steel (SUS430) ●Finish Barrel Polished

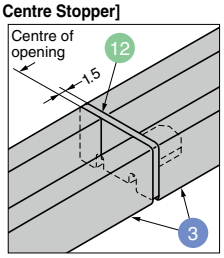
●Optional parts Purpose

⑧ Decorative cover … For shutter winding portion.
⑨ Cylinder lock, ⑩ Cam … For shutter locking.
⑪ Strike … Strike plate of ⑩.
⑫ Surface mount centre stopper … Stops shutter at the centre of opening in case of double door.
⑬ Strike for double door … Strike plate for cylinder lock installed to ④ in case of double door.
⑭ Intermediate slat … Reinforcing slat for vertical type above W600 (horizontal type above H600).
⑮ Handle slat … Slat integrated to handle.
⑯ Surface mount parking cover … Used without ⑧.
⑰⑱ Magnetic catch … For vertical type below W600.
⑲ Middle bracket…Bracket of ⑰ and ⑱.

●Recommended Screws

Pan head screw 4×10 (for ⑥⑬⑲)
Binding head tapping screw 4×20 (for ②) M4 cap nut (for ⑲)

[Installation Position of Surface Mount Centre Stopper]

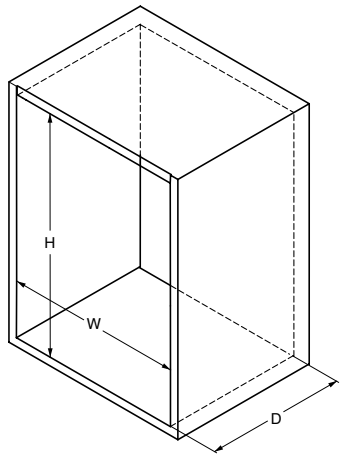


Refer to 1 : P.371

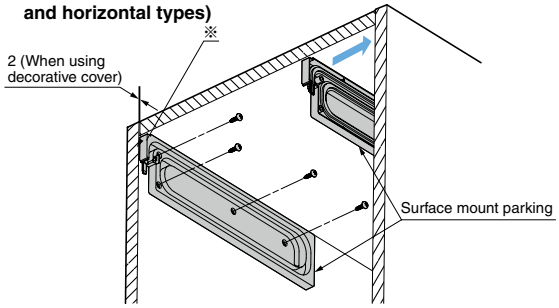
■Design Shutter DIS-M (Surface Mount Type) Installation Outline

[Parts Requiring to be Processed]

Part Name	Vertical Type W=300~1200 H=300~900 D=330 or More		Horizontal Type (Single Door) W=300~900 H=100~1200 D=330 or More		Horizontal Type (Double Door) W=600~1800 H=100~1200 D=330 or More	
	Necessary Qty	Cutting Size	Necessary Qty	Cutting Size	Necessary Qty	Cutting Size
Slat	Below W600 H/40 pcs Above W600 H/48 pcs (Round Up)	W–10	Below W600 W/40 pcs Above W600 W/48 pcs (Round Up)	H–10	Below W600 {(W/2)/40×2 (Round Up)} ×2 pcs Below W600 {(W/2)/48×2 (Round Up)} ×2 pcs	H–10
Surface Mount Guide Rail	2 pcs	H–40	2 pcs	W–40	2 pcs 2 pcs	(W/2)–40 (W/2)–41.5
End Slat (Large)	1 pc	W–30	1 pc	H–30	2 pcs	H–30
Decorative Cover (Optional)	1 pc For Below W600	W	1 pc For Below H600	H	2 pcs For Below H600	H
Intermediate Slat (Optional)	H/48 pc (Round Up) For Above W600	W–12	W/48 pc (Round Up) For Above H600	H–12	{(W/2)/48 (Round Up)} ×2 pcs For Below H600	H–12
Handle Slat (Optional)	1 pc	W–12	1 pc	H–12	1 pc	H–12

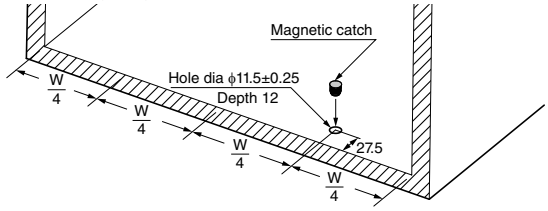


1. Assembling surface mount parking (common to vertical and horizontal types)

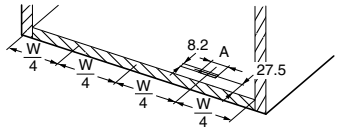


Fix the surface mount parking. Press it tightly against the back side of top board. When using decorative cover, recess the ※ surface by 2mm from left and right side boards, and fix there with screws. Noted that surface mount parking may be left-handed and right-handed.

2. Installing magnetic catch (vertical type only)



For vertical type below W600, please use magnetic catch and middle bracket. For wooden cabinet, drill a hole at the position of W/4 as shown above.



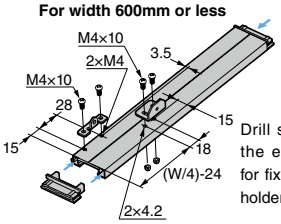
Thickness	A*1
0.8	34.1
1.0	34.1
1.2	34.5
1.4	34.5
1.6	35
1.8	35.5
2.0	36.5

For metal cabinet, drill a hole at the position of W/4 as shown above.

3. Processing and assembling end slat (common to vertical and horizontal types)

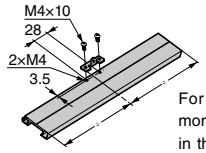
●In case of vertical type

For width 600mm or less



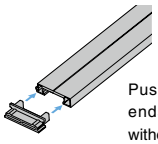
Drill screw holes on the end slat (large) for fixing the balance holder.

For width 600mm or more



For width 600mm or more, drill screw holes in the middle for fixing the balance holder.

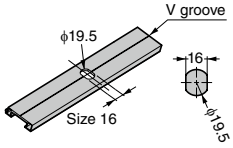
●In case of horizontal type



Push end sliders to both ends of end slat (large) without clearance. Note the direction with reference to the figure.

●When using cylinder lock (optional)

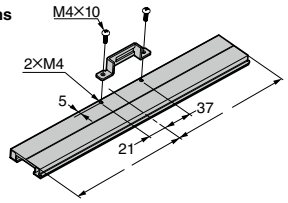
(Common to vertical and horizontal types)



When using cylinder lock, drill additional hole in the longitudinal centre part as shown left. The V groove is at the centre position of width.

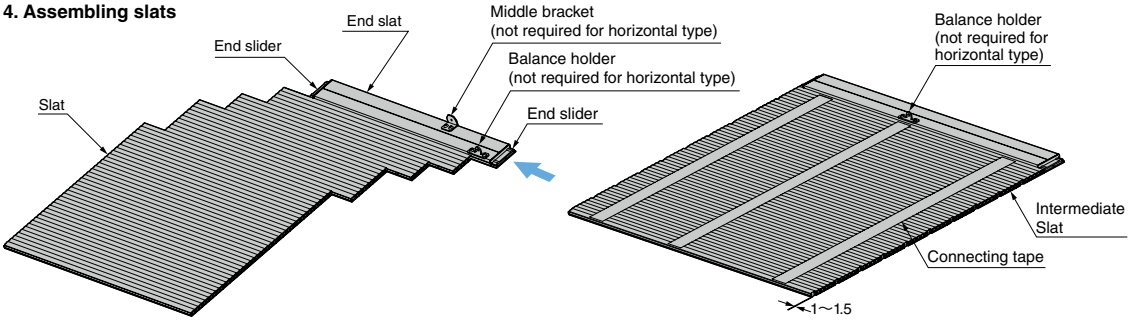
●Bracket side in case of horizontal type and double door

The specifications and processing methods of end slat at the key side and the bracket side are different.



Also drill screw holes with reference to the longitudinal centre part as shown. Install the strike for double door. Note the direction and position of the end slat (large).

4. Assembling slats

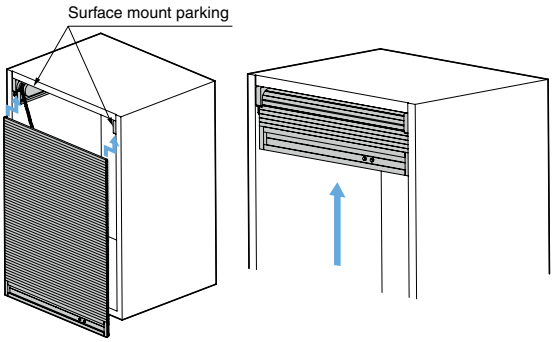


Connect the required number of slats by using multi-purpose elastic adhesive or connecting tape.
Use multi-purpose elastic adhesive for vertical type below W600 (horizontal type below H600).
Use multi-purpose elastic adhesive or connecting tape for vertical type above W600 (horizontal type above H600).Adhesive is used for preventing dislocation. Please use a very small amount at a pitch of 100mm ~150mm.
Proceed to the next step after the adhesive is completely solid.

For easy opening and closing, install handle slat (optional) if necessary.
In this case, be sure to install handle slat between main slats. Do not connect handle slat with intermediate slats. Like intermediate slat, cut its width 2~3mm shorter than that of main slats, so that both ends retract 1~1.5mm after fixing.

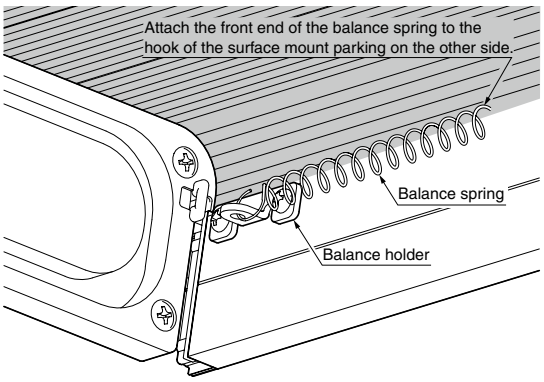
In case of vertical type above W600 (horizontal type above H600), insert the intermediate slats between the main slats. As liquid adhesive for PVC pipes can not be bonded to aluminium alloy, please fix with multi-purpose elastic adhesive. Or attach the connecting tape to the back side (cabinet inside) of slats and fix them so that no dislocation occur.
For intermediate slat, cut its width 2~3mm shorter than that of main slats, so that both ends retract 1~1.5mm after fixing.

5. Incorporating in a cabinet



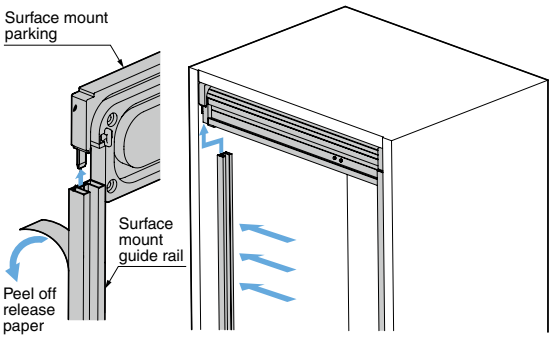
Slowly incorporate the assembled slats into the surface mount parking.
Then wind them up to the top.

6. Installing balance spring (vertical type only)



Hook the balance spring on the balance holder.
Hook 1 spring on the balance holder below W600, while 2 springs above W600.
※Balance springs with optimum strength based on shutter size are available.

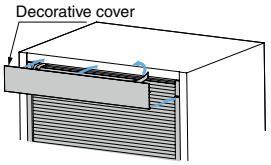
7. Installing surface mount guide rail



Peel off the release paper of the double-sided tape affixed to the surface mount guide rail, stick it to the cabinet inside while inserting the surface mount parking.
For double door type, cut surface mount guide rails by a length equal to the stopper thickness, i.e., 1.5mm at one side.

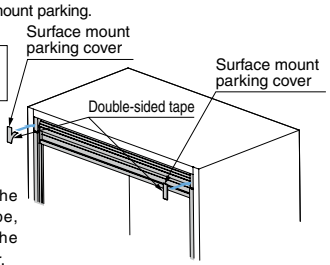
8. Installing decorative cover and surface mount parking cover (optional)

For vertical type below W600
(For vertical type below H600)



Peel off the release paper of the double-sided tape affixed to the decorative cover, stick it to the edge of cabinet top board while paying attention to claws to be fitted with the surface mount parking.

For vertical type above W600
(For vertical type above H600)



As shown right, peel off the supplied double-sided tape, and attach 2 pieces to the surface mount parking cover.

DESIGN SHUTTER DIS-H Recessed Mount Type

Refer to 1 for quotation request.

INSTRUCTION



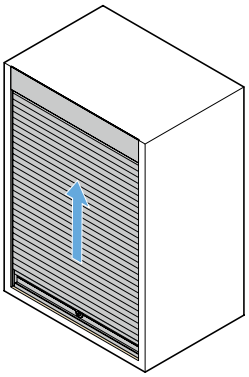
- Guide rail is recessed in cabinet inside.
- Slats with only R20 for clean appearance.
- Can be used for both vertical and horizontal types.

[Remarks]

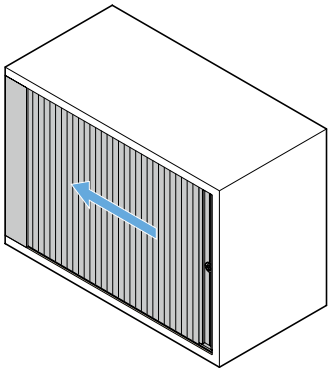
- Do not lean against or apply body weight to the shutter. Damage, personal injury or accident may occur.
- Recommended Screws
  Binding head tapping screw 4×20 (for ⑦)
  Pan head screw 4×10 (for ⑭)

	Vertical Type	Horizontal Type	Horizontal Type (Double Door)
Cabinet Inside Width	300~900 mm	300~ 900 mm	600~1800 mm
Cabinet Inside Height	300~900 mm	100~1188 mm	100~1188 mm
Cabinet Inside Depth	200~600 mm	200~ 600 mm	200~ 600 mm

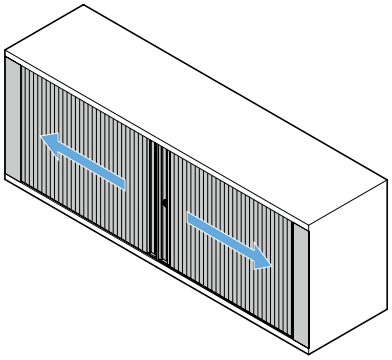
[Example for Vertical Type]



[Example for Horizontal Type, Left-opening]



[Example for Horizontal Type, Double Door]

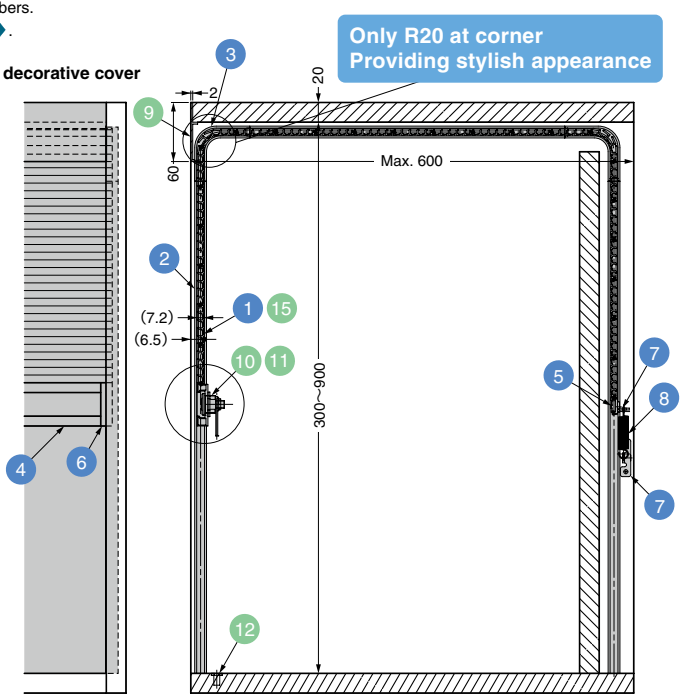


Refer to 1 : P.390

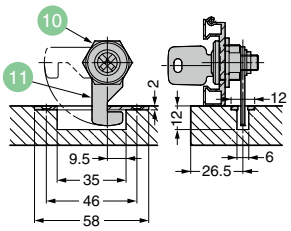
■Installation Example

The circled numbers are part numbers.
Please check with the part list 1.

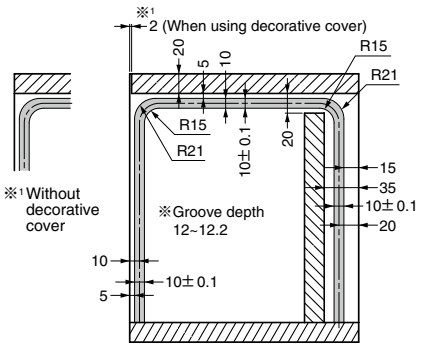
When using vertical type and decorative cover



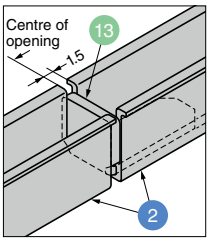
[Installation of Cylinder Lock and Cam]



[Cut Out Dimensions] Vertical Type



[Installation Position of Recessed Mount Centre Stopper]



Refer to 1 : P.378~379

■Design Shutter DIS-H (Recessed Mount Type) Parts List

Refer to 1 for quotation request.

The circled numbers are part numbers. Please check with the drawings 2.

Basic Parts

Necessary Parts. Please specify necessary qty.

No.	RoHS	CAD	Item Code	Dimensions
1	–	3D	180-018-588	Slat (1200 mm) Item Name : DIS-001-1200 Weight (g) : 263 ●Material PVC ●Colour Grey
2	G	3D	180-018-589	Recessed mount guide rail (2000 mm) Item Name : DIS-002-2000 Weight (g) : 62 ●Material PP ●Colour Grey
3	G	3D	180-018-590	90 Guide rail Item Name : DIS-003-90 Weight (g) : 5 ●Material POM ●Colour Grey
4	G	3D	180-018-595	End Slat (Large) (1200 mm) Item Name : DIS-007-1200 Weight (g) : 500 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
5	G	3D	180-018-596	End Slat (Small) (1200 mm) Item Name : DIS-008-1200 Weight (g) : 200 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
6	G	3D	180-018-597	End Slider Item Name : DIS-009 Weight (g) : 4 ●Material POM ●Colour Grey
7	–	3D	180-018-600	Balance Holder (For Vertical Type Only) Item Name : DIS-012 Weight (g) : 55 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
8	–	–	–	Balance Spring (For Vertical Type Only) Made to order ●Material Steel Designed to customer's specifications. –

Refer to 1 : P.390, 2 : P.377

The circled numbers are part numbers. Please check with the drawings 1.

Optional Parts

Please order according to application.

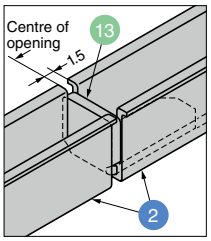
No.	RoHS	CAD	Item Code	Dimensions
⑨	–	3D	180-018-594	Decorative Cover (1200 mm) Item Name : DIS-006-1200 Weight (g) : 248 ●Material PVC ●Colour Grey With Double-sided Tape
⑩	G	3D	150-018-944	Cylinder Lock Item Name : DIS-022R-D Weight (g) : 50 ●Material Brass ●Finish Chrome / Zinc Chromate (Trivalent) / Nickel
⑪	–	3D	180-018-598	Cam Item Name : DIS-010 Weight (g) : 7 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
⑫	–	3D	180-018-599	Strike Item Name : DIS-011 Weight (g) : 7 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished

No.	RoHS	CAD	Item Code	Dimensions
⑬	–	3D	180-018-601	Recessed Mount Centre Stopper (For Horizontal Type and Double Door) Item Name : DIS-016 Weight (g) : 3 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
⑭	–	3D	180-018-605	Strike for Double Door (For Horizontal Type and Double Door) Item Name : DIS-021 Weight (g) : 15 ●Material Stainless Steel (SUS304) ●Finish Barrel Polished
⑮	G	3D	180-018-604	Intermediate Slat (1198 mm) Item Name : DIS-019 Weight (g) : 149 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
⑯	G	3D	180-018-942	Handle Slat (1198 mm) Item Name : DIS-023 Weight (g) : 149 ●Material Aluminium Alloy ●Finish Matte Anodised Silver

●Optional parts Purpose

⑨ Decorative cover … For shutter winding portion.
⑩ Cylinder lock, ⑪ Cam … For shutter locking.
⑫ Strike … Strike plate of ⑪.
⑬ Recessed mount centre stopper … Stops shutter at the centre of opening in case of double door.
⑭ Strike for double door … Strike plate for cylinder lock installed to ④ in case of double door.
⑮ Intermediate slat … Reinforcing slat for vertical type above W586 (horizontal type above H586).
⑯ Handle slat … Slat integrated to handle.

[Installation Position of Recessed Mount Centre Stopper]



●Recommended Screws

Binding head tapping screw 4×20 (for ⑦)
Pan head screw 4×10 (for ⑭)

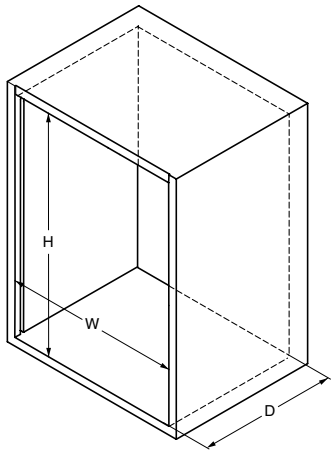
Refer to 1 : P.377

Updated 2017.10.27

■Design Shutter DIS-H (Recessed Mount Type) Installation Outline

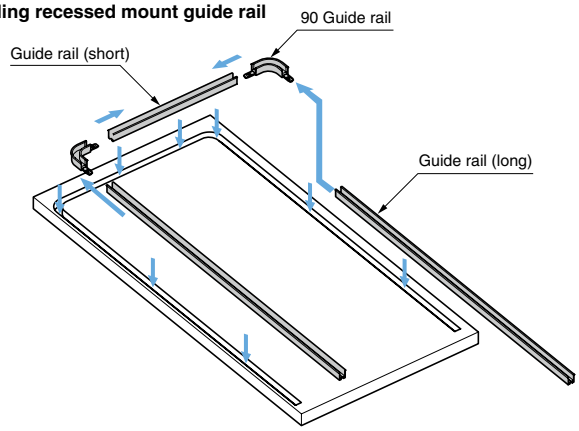
[Parts Requiring to be Processed]

Part Name	Vertical Type W=300~900 H=300~900 D = 200 or More		Horizontal Type (Single Door) W=300~900 H=100~1188 D = 200 or More		Horizontal Type (Double Door) W=600~1800 H=100~1188 D = 200 or More	
	Necessary Qty	Cutting Size	Necessary Qty	Cutting Size	Necessary Qty	Cutting Size
Slat	Below W586 (H+D–43)/40 pcs	W+12	Below W586 W/40 pcs	H+12	Below W586 {(W/2)/40×2 (Round Up)} ×2 pcs	H+12
	Above W586 (H+D–43)/48 pcs (Round Off)		Above W586 W/48 pcs (Round Up)		Above W586 {(W/2)/48×2 (Round Up)} ×2 pcs	
Guide Rail (Long)	4 pcs	H–60	4 pcs	W–60	2 pcs (Front Side) 2 pcs (Back Side) 2 pcs (Back Side)	(W/2)–60 (W/2)–61.5※1 W–120
Guide Rail (Short)	2 pcs	H–130	2 pcs	W–130	4 pcs	(W/2)–130
End Slat (Large)	2 pcs	W–10	1 pc	H–10	2 pcs	H–10
End Slat (Small)	1 pc	W+10	Not Used		Not Used	
Decorative Cover (Optional)	1 pc For Below W586	W	1 pc For Below H586	H	2 pcs For Below H586	H
Intermediate Slat (Optional)	(H+D–43)/48 pcs (Round Off) For Above W586	W+10	W/48 pcs (Round Up) For Above H586	H+10	{(W/2)/48 (Round Up)} ×2 pcs For Below H586	H+10
Handle Slat (Optional)	1 pc	W+10	1 pc	H+10	2 pcs	H+10



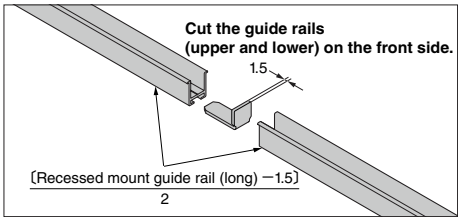
※1 For horizontal type (double door), cut guide rails (2/4 pcs) by 1.5mm at one side for installing recessed mount centre stopper on the front side.

1. Installing recessed mount guide rail



Connect recessed mount guide rails and 90 guide rails as shown, then drive them into the groove processed on the side board. Remove burrs and dust in the groove in advance to avoid poor slat movement.
Install them for left and right.

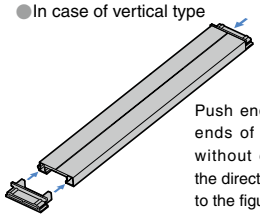
For horizontal type (double door), cut the guide rails (long) on the front side by 1.5mm and insert the recessed mount centre stopper at the end.



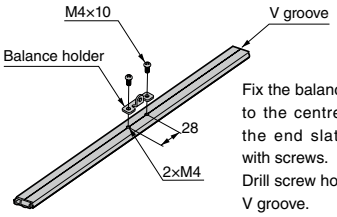
2. Processing end slat

[Processing and Assembling End Slat]

●In case of vertical type

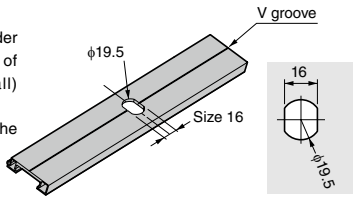


Push end sliders to both ends of end slat (large) without clearance. Note the direction with reference to the figure.



Fix the balance holder to the centre part of the end slat (small) with screws.
Drill screw hole on the V groove.

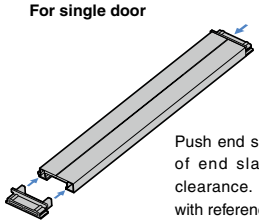
●When using cylinder lock
(Common to vertical and horizontal types)



When using cylinder lock, drill additional hole in the longitudinal centre part as shown above. The V groove is at the centre position of width.

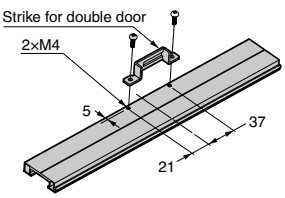
●In case of horizontal type

For single door



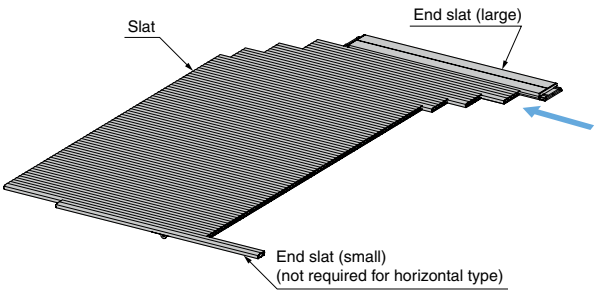
Push end sliders to both ends of end slat (large) without clearance. Note the direction with reference to the figure.

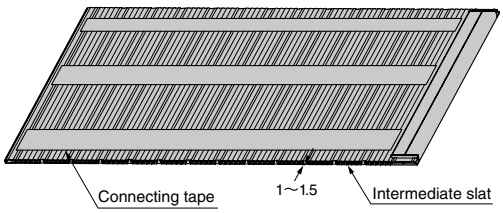
For double door



For double door type with a lock, as shown, drill screw holes with reference to the longitudinal centre part, and then install a strike for double door type. Note the direction and position of the end slat (large).

3. Assembling slats





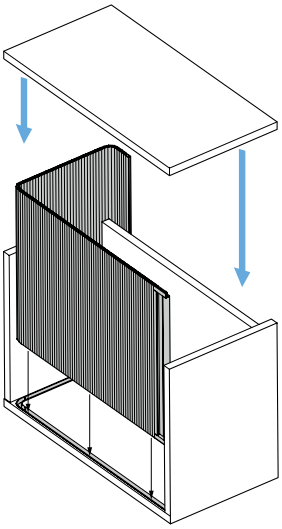
Connect the required number of slats by using multi-purpose elastic adhesive or connecting tape.
Adhesive is used for preventing dislocation. Please use a very small amount at a pitch of 100mm ~150mm.
Proceed to the next step after the adhesive is completely solid.

For easy opening and closing, install handle slat if necessary. In this case, be sure to install handle slat between main slats and be careful not to connect with intermediate slat. Like intermediate slat, its width should be 2 mm shorter than that of main slats. Ensure that both ends retract 1mm after fixing.

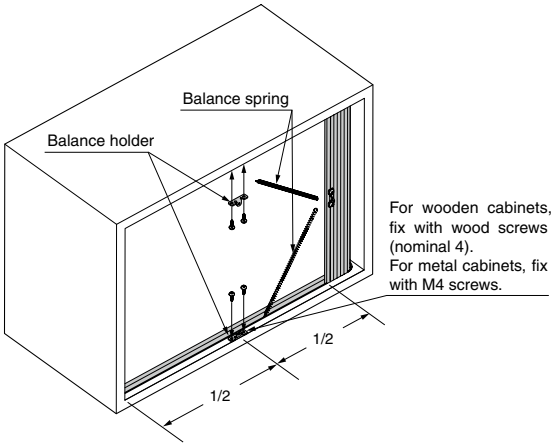
In case of vertical type above W586 (horizontal type above H586), insert the intermediate slats between the main slats alternately one by one. As liquid adhesive for PVC pipes can not be bonded to aluminium alloy, please fix with multi-purpose elastic adhesive. Or attach the connecting tape to the back side (cabinet inside) of slats and fix them so that no dislocation occur. (Use within 72 hours may not achieve adequate adhesion.

The intermediate slats are set 2mm shorter in width than the main slats. Ensure that both ends retract 1mm after fixing.

4. Incorporating in a cabinet



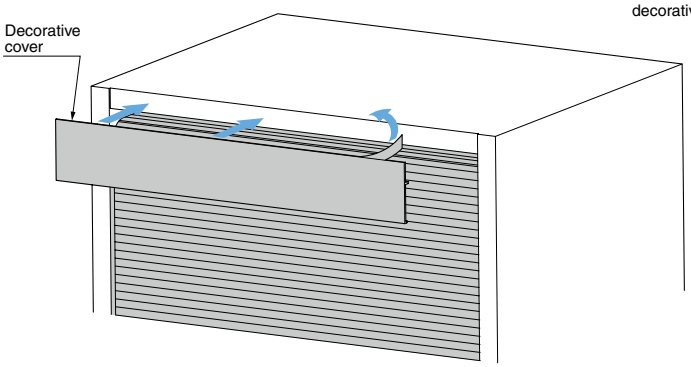
It is recommended to apply lubricant such as our “Teflodry” to groove inside recessed mount guide rails and 90 guide rails. Regular application may maintain smooth movement.
Also, applying Teflon grease can realise long-term smooth movement. Recommended for high frequency use.



For wooden cabinets, fix with wood screws (nominal 4).
For metal cabinets, fix with M4 screws.

Install balance holders when the shutter is fully opened. As shown above, seen from front of the cabinet, install to the position half the distance from the back slat end to the bottom board. After that, hook 2 balance springs in a V shape as shown.

5. Installing decorative cover (optional)



Peel off the release paper of the double-sided tape affixed to the decorative cover, stick it to the edge of cabinet top board.

If using the decorative cover for width or height above 600mm, warped slat or decorative cover may touch each other and be damaged.

HIGH RIGIDITY CABINET SHUTTER AS

Refer to 1 for quotation request.

INSTRUCTION



- Suitable for 30×30mm and 8mm groove width aluminium frame.
- High rigidity by connecting slat panel with aluminium slat frame.
- By replacing slat panel, suitable for various applications. For further details, please contact local representatives.
- Aluminium alloy material, light weight and excellent design.
- Shock absorbing damper keeps shutter from slamming shut
- Slat panel also available. For further details, please contact local representatives.
- Besides optional DL-150S 2, handle can also be selected from the handle item INDEX 3.

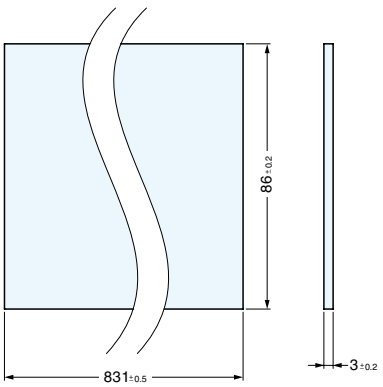
[Remarks]

- For vertical use only.
- Aluminium frame not included.
- When installing aluminium frame, confirm that frames are horizontal or vertical each other and free from distortion.

	Vertical Type (L-shaped type)
Aluminium Frame Inside Width	Max. 840 mm
Aluminium Frame Inside Height	Max. 640 mm
Aluminium Frame Inside Depth	Max. 900 mm

[Cut Out Dimensions of Slat Panel]

※Slat panel not included.
(Or supplied by us on request. For further details, please contact local representatives.)





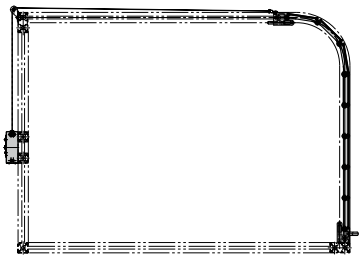


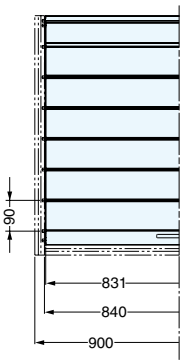
Refer to 1 : P.391, 2 : P.501, 3 : P.452

[Dimensions] For Width 900 mm, Height 700 mm, Depth 970 mm

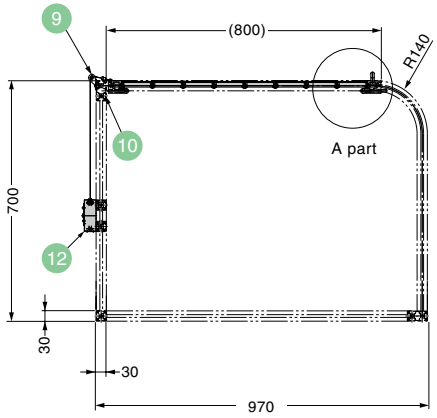
The circled numbers are part numbers. Please check with the part list 1.

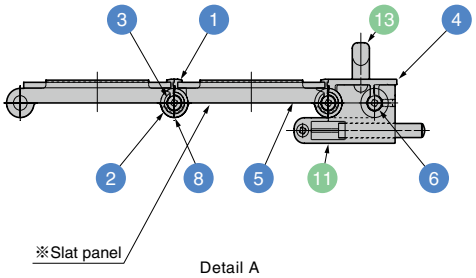
Shutter closed





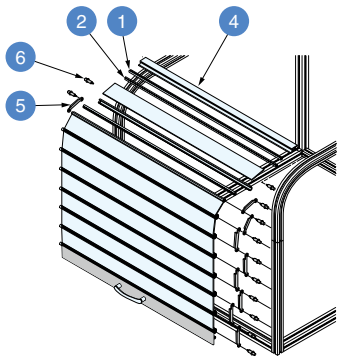
Shutter opened

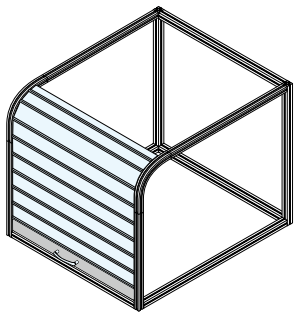


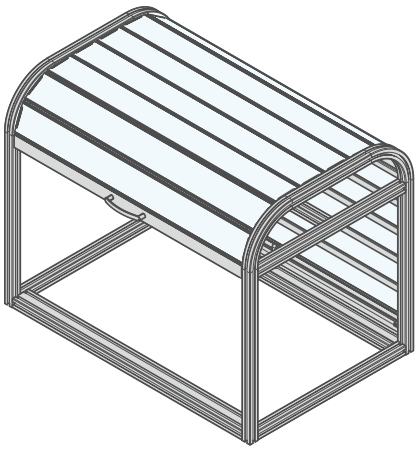


Detail A

※Slat panel not included.
(Or supplied by us on request. For further details, please contact local representatives.)







Can also be used for U-shaped aluminium frame.
For further details, please contact local representatives. (Made to order)

Refer to 1 : P.384~385

■AS High Rigidity Cabinet Shutter Parts List

Refer to 1 for quotation request.

The circled numbers are part numbers. Please check with the drawings 2.

Basic Parts

Necessary Parts. Please specify necessary qty.

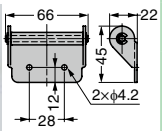
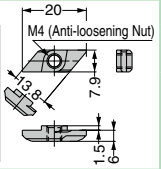
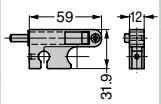
No.	RoHS	CAD	Item Code	Dimensions
1	G	3D	270-011-615	Horizontal Frame (Male) (831 mm) Item Name : AS-S900-FO Weight (g) : 174 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
2	G	3D	270-011-616	Horizontal Frame (Female) (831 mm) Item Name : AS-S900-FM Weight (g) : 186 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
3	G	3D	270-011-614	Horizontal Frame (Ring) (790 mm) Item Name : AS-S900-FR Weight (g) : 48 ●Material POM ●Colour Natural
4	G	3D	270-011-617	Horizontal Frame (End) (831 mm) Item Name : AS-S900-FS Weight (g) : 533 ●Material Aluminium Alloy ●Finish Matte Anodised Silver
5	G	3D	270-014-985	Slat Joint Item Name : AS-S900-SJ Weight (g) : 10 ●Material Stainless Steel (SUS430) ●Finish Barrel Polished
6	G	3D	270-014-986	Guide Pin Item Name : AS-S900-GP-R Weight (g) : 2 Right Type ●Material POM ●Colour Natural
	G	3D	270-014-987	Item Name : AS-S900-GP-L Weight (g) : 2 Left Type ●Material POM ●Colour Natural
7	G	–	270-014-988	Double-sided Tape (For Fixing Slat Panel and Horizontal Frame) Item Name : AS-S900-RT Weight (g) : 3 1 Sheet : 48 pcs (Width 3 mm × 50 mm) For Fixing 8 pcs of Slats
8	G	3D	270-014-989	Slider Washer Item Name : AS-S900-SW Weight (g) : 1 ●Material POM ●Colour Natural

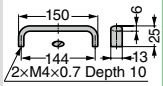
Refer to 1 : P.391, 2 : P.383

The circled numbers are part numbers. Please check with the drawings 1.

Optional Parts

Please order according to application.

No.	RoHS	CAD	Item Code	Dimensions
9	G	3D	270-010-644	Reaction Force Roller
			Item Name : AS-S900-HR Weight (g) : 58 ●Material Stainless Steel (SUS430)/ POM ●Finish Barrel Polished/Plain	 
10	G	3D	120-040-685	AS Nut
			Item Name : AS-8M4 Weight (g) : 4 ●Material Stainless Steel (SUS316) ●Finish Barrel Polished	 
11	G	–	270-011-989	Damper
			Item Name : AS-S900-DP Weight (g) : 28 ●Material Aluminium Alloy / ABS ●Finish / Colour Paint Silver	 

No.	RoHS	CAD	Item Code	Dimensions
12	–	–	–	Flat Spiral Spring
			–	 –
			–	
13	G	3D	100-011-110	Handle
			Item Name : DL-150S Weight (g) : 93 ●Material Stainless Steel (SUS303) ●Finish Satin	 

●Optional parts Purpose

⑨ Reaction force roller … For hooking ⑫ wire. For L-shaped type only.

⑩ AS nut … Used for installing ⑨ and ⑫.

⑪ Damper … For reducing the shock caused by contact with aluminium frame when closing shutter.

⑫ Flat spiral spring … For relieving the weight feeling during opening and closing of the shutter.

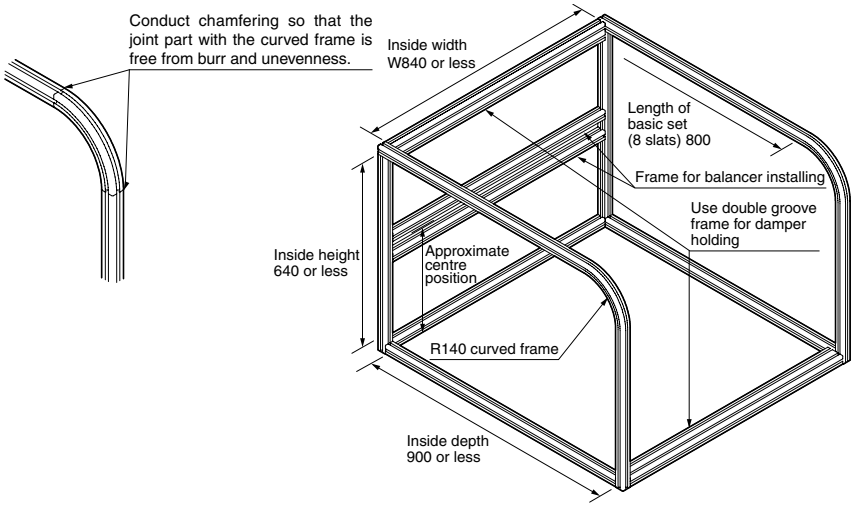
⑬ Handle … Installed to ④. (A handle other than ⑬ can also be selected.)

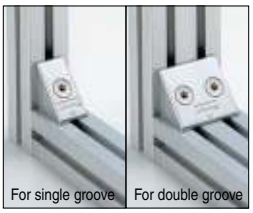
Refer to 1 : P.383

Updated 2017.10.27

■AS High Rigidity Cabinet Shutter Installation Outline

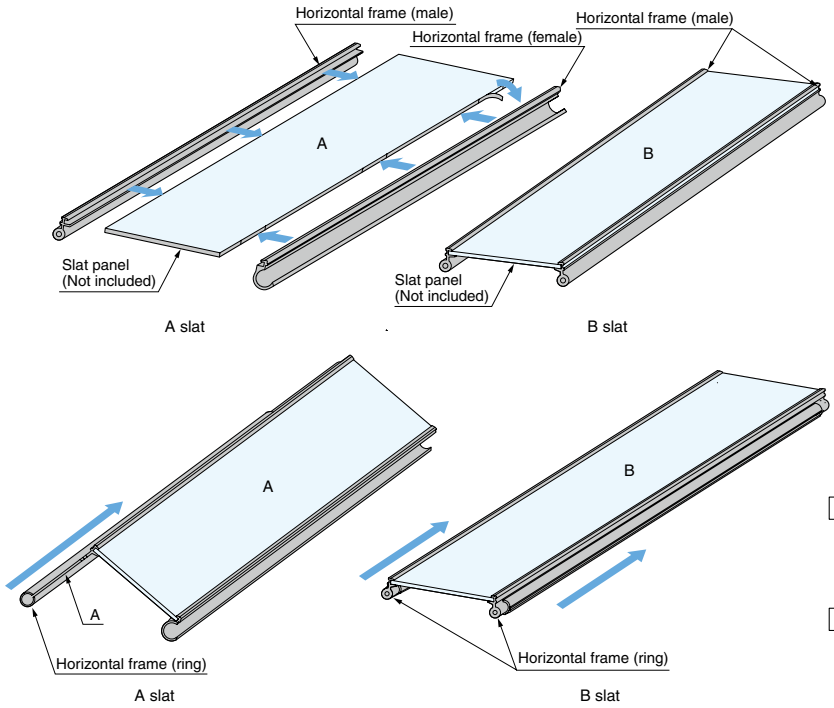
1. Preparing the frame





Our PJ joint system 1 can reduce work time and provides clean appearance.

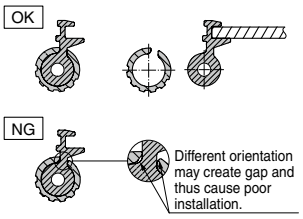
2. Assembling slats



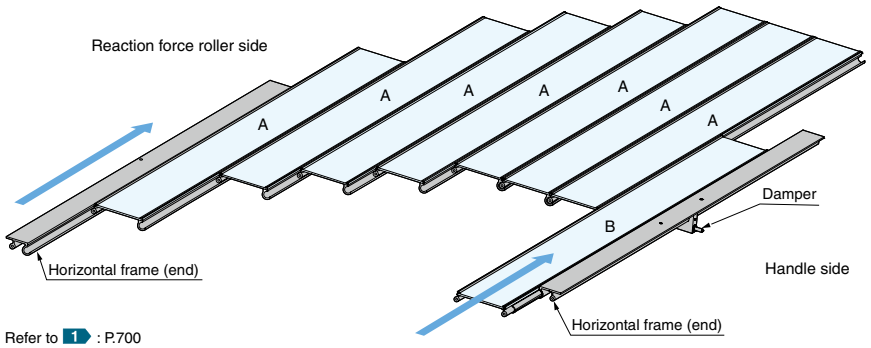
Prepare 7 pcs of A slats with slat panel (with double-sided tape adhesive at edge) affixed with horizontal frame (male) and horizontal frame (female) and 1 piece of B slat with only horizontal frame (male).
When assembling, press the slat panel firmly into the groove of the horizontal frame and pay attention to avoid longitudinal dislocation.

Install the horizontal frame (ring) to the horizontal frame (male). Use 1 pc for A slat and 2 pcs for B slat.

[Remarks]
Install the sectional shape of the horizontal frame (ring) and that of the horizontal frame (male) in the direction shown below.



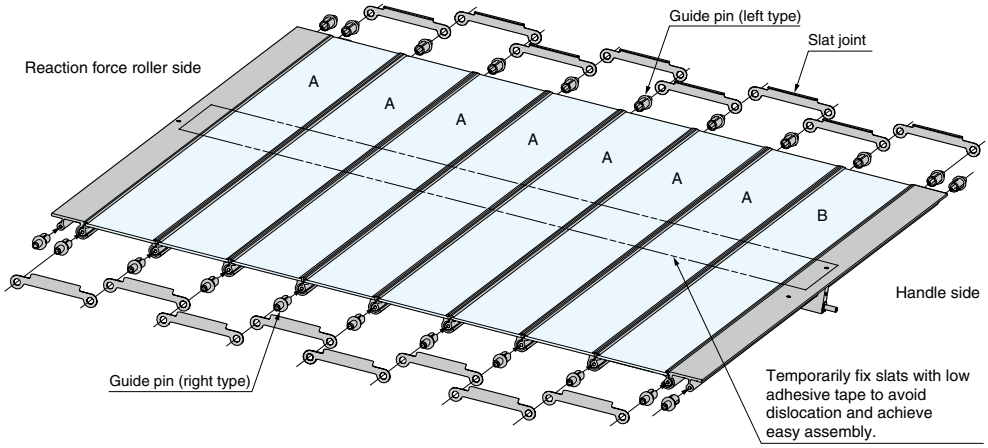
3. Connecting slats 1



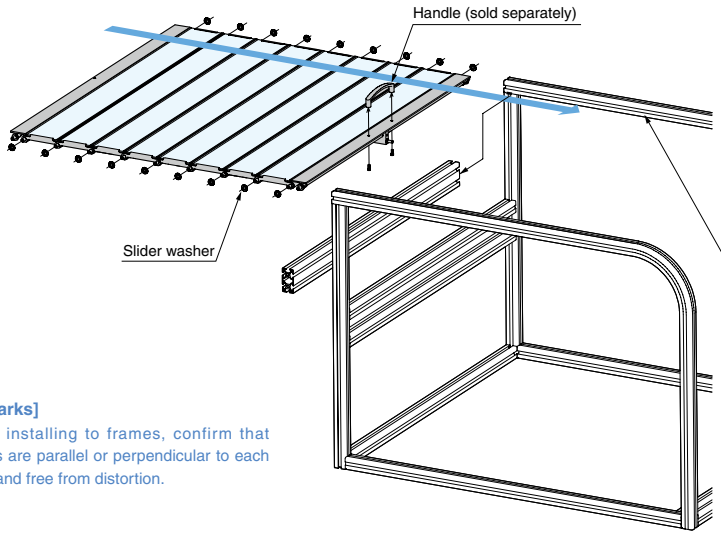
When assembling, slide each slat from the side as shown left.

Refer to 1 : P.700

4. Connecting slats 2



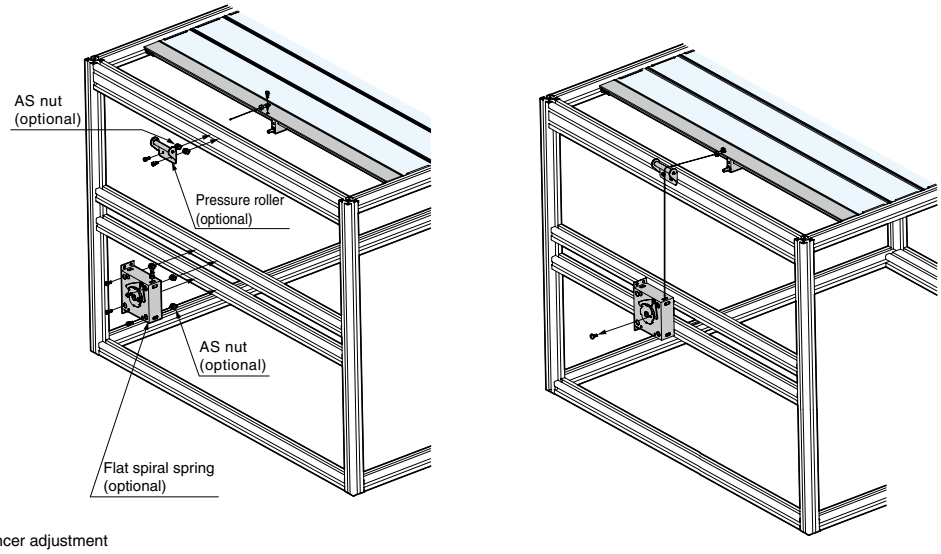
5. Installing to the frame



[Remarks]

When installing to frames, confirm that frames are parallel or perpendicular to each other and free from distortion.

6. Assembling in flat spiral spring



●Balancer adjustment

Remove the fixing screws, and adjust the wire pull-in force according to the balancer adjusting method.
As a guide, adjust to the extent that shutter fully closed can be lifted up with a force of 30N (3kgf) or less.

How to Use the Shutter Quotation Request Sheet (P.389~P.391)

Please copy the quotation request page where the relevant product is included, complete all necessary items and then send back by FAX or E-mail. We will give a reply according to the content of the quotation request.

■Example

Confirm the cabinet type

Fill in the shutter opening direction and cabinet dimensions

Select the optional parts as necessary

Fill in the necessary quantity and the desired delivery date

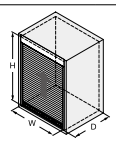
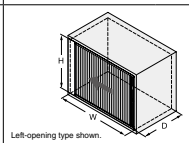
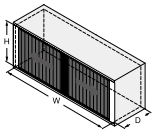
Fill in your contact information

Shutter Quotation Request

Design Shutter DIS-M (Surface Mount Type) P.370

Cabinet Type	☑ Metal ☐ Wood

Shutter Opening Direction

☐ Vertical Type	☑ Horizontal Type (Right-opening) ☐ Horizontal Type (Left-opening)	☐ Horizontal Type (Double Door)
	 Left-opening type shown.	
Cabinet Inside Width W (300–1200mm) mm	Cabinet Inside Width W (300–900mm) 700 mm	Cabinet Inside Width W (600–1800mm) mm
Cabinet Inside Height H (300–900mm) mm	Cabinet Inside Height H (100–1200mm) 950 mm	Cabinet Inside Height H (100–1200mm) mm
Cabinet Inside Depth D (Min. 330mm) mm	Cabinet Inside Depth D (Min. 330mm) 500 mm	Cabinet Inside Depth D (Min. 330mm) mm

Optional Parts (Please select the following parts as necessary.)

Part Name	Yes	No	
Key	☑	☐	Used when a key is necessary. Key Alike ☑ Key Different ☐
Decorative Cover (1200mm)	☑	☐	Used for shutter winding portion. Used for vertical type below W600 (horizontal type below H600).
Balance Spring	☑	☐	Stops the shutter in any position. Used for vertical type only. (Made to order)
Handle Slat (1198mm)	☑	☐	Installed in the centre of shutter for easy opening/closing.
Connecting Tape	☐	☑	Used for temporarily fixing slats and intermediate slats.
Surface Mount Parking Cover	☐	☑	Used for vertical type above W600 (horizontal type above H600).

Cutting of Parts	☑ Yes ☐ No (Delivery in Standard Size)
Necessary Qty.	3 unit(s)
Desired Delivery Date	Day / Month / Year: 15/12/2016

●Your Contact Information

Company	○○ Kogyo Co., Ltd.	Name	John Smith
Division	Purchasing Department	TEL	03-1234-xxxx
E-mail	xxxx.x@xxx.co.jp	FAX	03-5678-xxxx
Address	Postcode 1000000 (Number, Street): 5F KANAMONO Building, 1-2 No. 000, △△△ Street		
	(City, State/ Prefecture): Chiyoda-ku, Tokyo, Japan		

SUGATSUNE

To: Sugatsune Kogyo Co., Ltd.

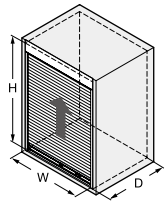
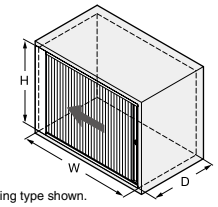
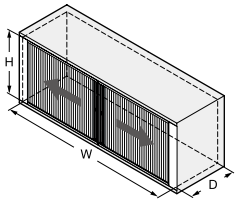
Shutter Quotation Request Sheet

Design Shutter DIS-M (Surface Mount Type)

P.370

Cabinet Type	☐ Metal ☐ Wood

Shutter Opening Direction

☐ Vertical Type		☐ Horizontal Type (Right-opening) ☐ Horizontal Type (Left-opening)		☐ Horizontal Type (Double Door)	
		 Left-opening type shown.			
Cabinet Inside Width W (300~1200mm)	mm	Cabinet Inside Width W (300~900mm)	mm	Cabinet Inside Width W (600~1800mm)	mm
Cabinet Inside Height H (300~900mm)	mm	Cabinet Inside Height H (100~1200mm)	mm	Cabinet Inside Height H (100~1200mm)	mm
Cabinet Inside Depth D (Min. 330mm)	mm	Cabinet Inside Depth D (Min. 330mm)	mm	Cabinet Inside Depth D (Min. 330mm)	mm

Optional Parts (Please select the following parts as necessary.)

Part Name	Yes	No	
Key	☐	☐	Used when a key is necessary. Key Alike ☐ Key Different ☐
Decorative Cover (1200mm)	☐	☐	Used for shutter winding portion. Used for vertical type below W600 (horizontal type below H600).
Balance Spring	☐	☐	Stops the shutter in any position. Used for vertical type only. (Made to order)
Handle Slat (1198mm)	☐	☐	Installed in the centre of shutter for easy opening/closing.
Connecting Tape	☐	☐	Used for temporarily fixing slats and intermediate slats.
Surface Mount Parking Cover	☐	☐	Used for vertical type above W600 (horizontal type above H600).

Cutting of Parts	☐ Yes ☐ No (Delivery in Standard Size)

Necessary Qty.	unit(s)	Desired Delivery Date	Day / Month / Year:

●Your Contact Information

Company		Name	
Division		TEL	
E-mail		FAX	
Address	Postcode (Number, Street):		
	(City, State/ Prefecture):		

SUGATSUNE

To: Sugatsune Kogyo Co., Ltd.

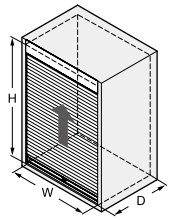
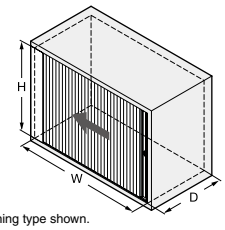
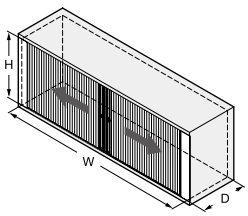
Shutter Quotation Request Sheet

Design Shutter DIS-H (Recessed Mount Type)

P.376

Cabinet Type	☐ Metal ☐ Wood

Shutter Opening Direction

☐ Vertical Type	☐ Horizontal Type (Right-opening) ☐ Horizontal Type (Left-opening)	☐ Horizontal Type (Double Door)
	 Left-opening type shown.	
Cabinet Inside Width W (300~900mm) ☐ mm	Cabinet Inside Width W (300~900mm) ☐ mm	Cabinet Inside Width W (600~1800mm) ☐ mm
Cabinet Inside Height H (300~900mm) ☐ mm	Cabinet Inside Height H (100~1188mm) ☐ mm	Cabinet Inside Height H (100~1188mm) ☐ mm
Cabinet Inside Depth D (200~600mm) ☐ mm	Cabinet Inside Depth D (200~600mm) ☐ mm	Cabinet Inside Depth D (200~600mm) ☐ mm

Optional Parts (Please select the following parts as necessary.)

Part Name	Yes	No	
Key	☐	☐	Used when a key is necessary. Key Alike ☐ Key Different ☐
Decorative Cover (1200mm)	☐	☐	Used for shutter winding portion. Used for vertical type below W586 (horizontal type below H586).
Balance Spring	☐	☐	Stops the shutter in any position. Used for vertical type only. (Made to order)
Handle Slat (1198mm)	☐	☐	Installed in the centre of shutter for easy opening/closing.
Connecting Tape	☐	☐	Used for temporarily fixing slats and intermediate slats.

Cutting of Parts	☐ Yes ☐ No (Delivery in Standard Size)

Necessary Qty.	unit(s)	Desired Delivery Date	Day / Month / Year:

●Your Contact Information

Company		Name	
Division		TEL	
E-mail		FAX	
Address	Postcode (Number, Street):		
	(City, State/ Prefecture):		

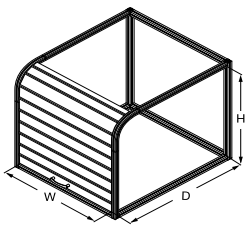
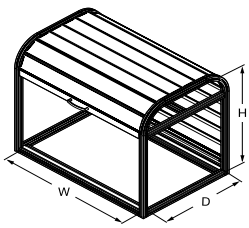
To: Sugatsune Kogyo Co., Ltd.

Shutter Quotation Request Sheet

AS High Rigidity Cabinet Shutter

P.382

Shutter Opening Direction

☐ L-shaped Type		☐ U-shaped Type	
			
Opening Inside Width W (Max. 840mm)	mm	Opening Inside Width W (Max. 840mm)	mm
Inside Height H (Max. 640mm)	mm	Opening Inside Height H	mm
Effective Inside Depth D (Max. 900mm)	mm	Effective Inside Depth D	mm

Slat Panel	☐ Prepared by yourself ☐ Prepared by us (For details, please contact our sales representative.)

Optional Parts (Please select the following parts as necessary.)

Part Name	Yes	No	
Reaction Force Roller	☐	☐	Used for L-shaped type only.
Damper	☐	☐	For reducing the shock caused by contact with aluminium frame when closing shutter.
Handle	☐	☐	Installed at the horizontal frame end.
Flat Spiral Spring	☐	☐	For relieving the weight feeling during opening and closing of the shutter. Used for L-shaped type only.
Balance Spring	☐	☐	Used for U-shaped type only. (Made to order)

Cutting of Parts	☐ Yes ☐ No (Delivery in Standard Size)

Necessary Qty.	unit(s)	Desired Delivery Date	Day / Month / Year:

●Your Contact Information

Company		Name	
Division		TEL	
E-mail		FAX	
Address	Postcode (Number, Street):		
	(City, State/ Prefecture):		

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・Use product selection tool

Refer to Back Cover



・Download installation instructions

SUGATSUNE Search

LAMP®

DRAWER SLIDES

Drawer slides are parts of linear motion mechanism.

[Drawer Slides]
Sugatsune offers a broadest line of products in the industry, from small and thin slides to ultra heavy duty ones with a load capacity up to 272 kgf/pair.
In terms of functionality, standard products are equipped with self & soft-close, push-to-open, 2-ways, bumper and other functions.
Besides, we also offer made-to-order specifications even for small lot, such as setting a pocket or claw for installing on the slide, or processing a clinching nut in advance for screwing.

[Linear Slides]
Linear slides are used for the linear motion parts of various kinds of equipment. In recent years, they are also used for opening/closing of station platform doors, etc. Sugatsune mainly offer roller type, ball type and ball bearing-less (sliding) type.

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Updated 2017.10.27

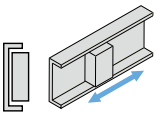
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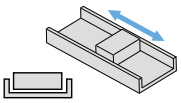
Drawer Slides

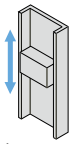
- For one cabinet, select slides from the same series. Or the sliding feeling and noise may change greatly.
- Some stainless steel slides use certain plastic parts. Please confirm when using under high temperature and chemical environment.
- Detachable ball bearing type slides (not including those with drawer bracket) combine the inner member and outer member with high precision fitting, so do not change the combination arbitrarily.
- For slides with holding function in closed/opened position, holding force varies depending on their structure.
- The structure of self-closing mechanism varies depending on slides.
- Slides with a bumper reduce the metal-to-metal noise at the end of the course, but cannot completely mute the noise. Also noted that the noise from retainer movement cannot be relaxed.

Linear Slides

- Linear slide has different load capacity for vertical use and horizontal use.
- For vertical movement, some linear slides can be used, some cannot or unsuitable. Refer to relevant product pages for details.


Vertical use


Horizontal use


Vertical movement

Functions

LOAD CAPACITY — The range of load capacity is in N (Newton).

LOCK CLOSED — The drawer can be locked in fully closed position. Released by lever operation.

LOCK OPENED — The drawer can be locked in fully opened position. Released by lever operation.

FRICTION — The drawer can be stopped at any position by the resistance of the ball retainer. The drawer can be detached by pulling outward.

DETACH — The drawer is detachable.

L=R — Non-handed.

HOLD CLOSED — The drawer can be held in fully closed position.

HOLD OPENED — The drawer can be held in fully opened position.

BUMPER — With a bumper to avoid metal-to-metal noise at the end of the course.

2-WAYS — The drawer can be moved to two ways.

CATCH — Self-closing system catches the drawer when closing.

INDEX

Drawer Slides

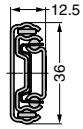
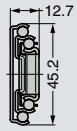
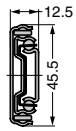
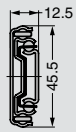
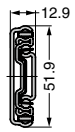
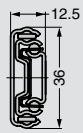
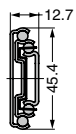
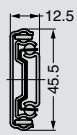
INDEX by Specifications P.395
Cautions for Slide Selection and Installation P.399

Linear Slides

INDEX by Specifications P.401

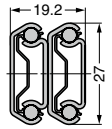
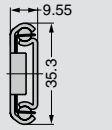
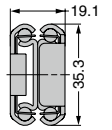
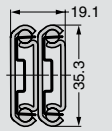
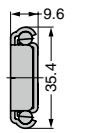
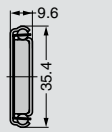
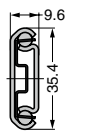
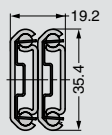
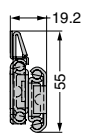
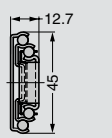
INDEX by Drawer Slide Specifications

Slides are summarised by specifications and listed in ascending order of slide height.

Type	Material	Product Name	Load Capacity N/pair (200 / 400 / 600 / 800 / 1000)	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Self & Soft-Close Slides	Steel	3670 	147~196	3 Members				○			○		P.402
	Stainless Steel	ESR4670 With Self & Soft Closing Mechanism 	157~343					○	○				P.403
	Steel	4670 With Self & Soft Closing Mechanism 	147~392					○			○		P.404
		4670 Black 	147~392					○			○		P.405
		L52145 With Self & Soft Closing Mechanism 	540					○					P.406
Push-to-Open Slides		3660 	147~196					○			○		P.407
		4638 With Push-to-Open Mechanism 	265~441					○		○			P.408
		4660 With Push-to-Open Mechanism 	147~441					○			○		P.409

Type	Material	Product Name	Load Capacity N/pair	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Mini Slides	Stainless Steel	SCR3	98~118	3 Members									P.412
		SCR3-15S	98~118										P.412
		SCRW2	137~177	2 Members								○	P.413
		SCRW2-15S	137~177									○	P.413
	Aluminium Alloy	AR3-16	20~39	3 Members									P.410
		ARW2-16	11~69	2 Members								○	P.411

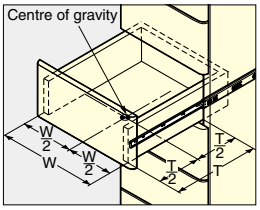
Type	Material	Product Name	Load Capacity N/pair	Slide	Lock When Opened	Detachable	With Bumper	Page
Medium Size Slides (Stainless Steel)	Stainless Steel	ESR-4513	392~510	3 Members				P.416
		ESR-3813	284~441					P.417
		ESR2021	108~157	2 Members				P.418
		ESR2031	127~167	3 Members				P.419
		SNS27S	176~255	2 Members				P.420
		SNS27D	275~373	3 Members				P.421
		272SL	137~177	2 Members		○		P.422

Type	Material	Product Name	Load Capacity N/pair (200 400 600 800 1000)	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Medium Size Slides (Stainless Steel)	Stainless Steel	273SL 	118~177	3 Members				○					P.423
		SNS35S 	245~481	2 Members									P.424
		SNS35D 	441~588	3 Members									P.425
		SNS35W 	355~623					○		○			P.426
		ESR1 	245~481	2 Members			○	○					P.427
		ESR13 	245~481						○				P.428
		ESR8 	245~481			○		○					P.429
		ESR7 	355~623	3 Members		○		○					P.430
		ESR3 	422~637					○			○		P.431
		ESR4658 	314~490					○	○				P.432

Type	Material	Product Name	Load Capacity N/pair	Slide	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	Page
Medium Size Slides (Stainless Steel)	Stainless Steel	5302S For Heavy Duty	627~1137	3 Members				○		P.433
		ESR5 For Heavy Duty	785~1118	2 Members						P.434
		ESR10 For Heavy Duty	1785~2667	3 Members						P.435
Medium Size Slides (Aluminium Alloy)	Aluminium Alloy	AR2 For Light Weight	80~150	2 Members						P.436
		AR3 For Light Weight	30~110	3 Members						P.436
		AR2-K With Hold-out Detent	85~125	2 Members					○	P.437
		AR3-K With Hold-out Detent	85~105	3 Members					○	P.437

Type	Material	Product Name	Load Capacity N/pair	Slide	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	With Bumper	2-ways	Page
Medium Size Slides (Others)	Stainless Steel	RKA5	147	2 Members				○					P.438

Cautions for Slide Selection and Installation

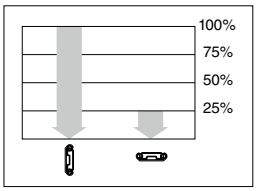


Calculation of slide centre of gravity

The load capacity is determined with the drawer centre of gravity at the centre of travel length and width in the lateral direction. (Refer to left figure). Conditions are set to slide installation width 300mm, about 10 times of withdrawal per month, static load, and the slide is securely fixed to the cabinet and drawer and installed vertically.

※Load capacity change by installation method

Load capacity changes greatly with slide not installed vertically.
For example, the load capacity with slide installed horizontally may be less than 25% of that listed in this catalogue.



[Cautions for Slide Selection]

Slide performance varies depending on its use condition. The durability and load capacity of slide varies greatly depending on cabinet dimensions and centre-of-gravity position, frequency of use, slide installation method, cabinet installation place, etc.

●Slide selection reference

Application examples

※The slide must be installed properly.

Load: 588N (60kgf) Frequency: 1 time / 3 months Installation place: Laboratory, computer room	Load: 196N (20kgf) Frequency: 10 times / day Installation place: Office	Load: 588N (60kgf) Frequency: 1 time / day Installation place: Special places
Recommended slide: Models with load capacity of 588N (60kgf)	**Recommended slide: Models with load capacity of 588N (60kgf)**	**Recommended slide: Models with load capacity of 1176~1960N (120~200kgf)**

●Do not change the combination of inner member and outer member.

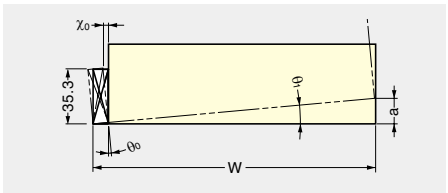
[Temperature Range]

5˚C ~35˚C

Cautions for Slide Installation

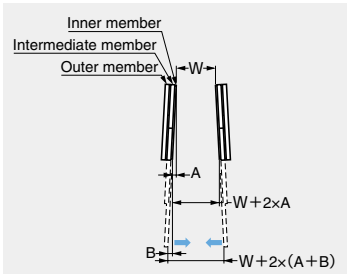
[Installation Parallelism]

1. Front



Although it depends on the parallelism (θ_0), even if the angle is small, the wider the front width (W), the greater the value of a. Large front width and inconsistent parallelism of left and right slides may cause lateral swing. So please minimise the parallelism.

2. Front / Rear



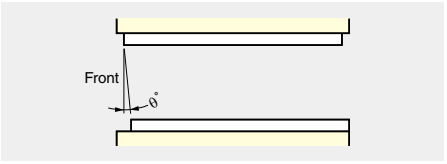
When the rear side is narrowly [widely] installed

When the slide is fully closed, the installation width difference between the front and rear sides is A for single side. When the slide is fully opened, it becomes A+B. The installation width difference between the rear side when fully closed and the front side when fully opened is 2×(A+B). Even if the parallelism deviation is very small, the installation width difference when fully opened becomes larger with the increase of travel length. This difference may cause a force pulling to the inside [outside] on the slide. As the force increases, the ball sliding surface may sag and the strength may be decreased. Also, the slide may not move smoothly. Therefore, please minimise the value of A while considering the installation-side accuracy and installation method (refer to 1 <Installation Example>).

※Allowable range of A: Varies depending on the slide length, travel length, model, and slide use conditions, etc.

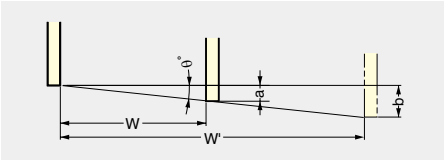
Refer to 1 : P.400

[Installation Perpendicularity]



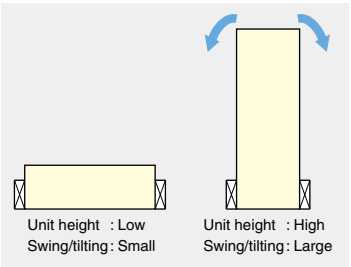
Please minimise the perpendicularity ($\theta°$) to reduce the occurrence of ※ ball creep 1 and lateral swing.

[Installation Width]



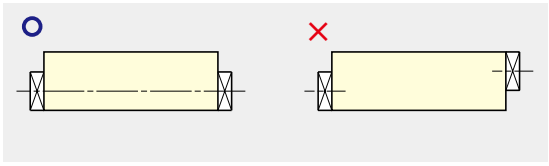
When the slide installation width is large, even if the swing factor of slide is small, the swing becomes strong as the width increases. Also, depending on the handle position and shape, swing may be caused by unstable opening/closing operation of drawer (opening/closing operation is not performed at the centre of the front plate).

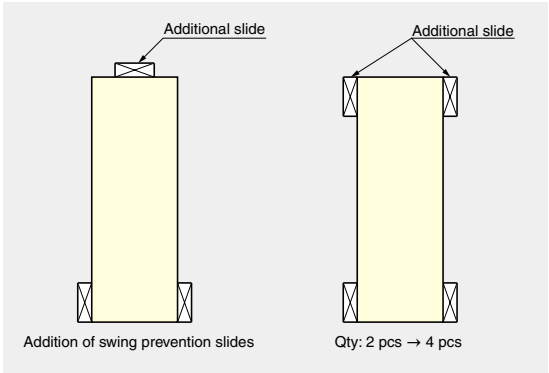
[Drawer Unit Height]



If the drawer unit is high, depending on the installation position, the swing (tilting) of the drawer unit may apply large load to the slide, causing deflection or damage.

[Installation Position of Left and Right Slides with Respect to Drawer Unit]



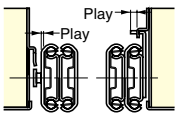


Therefore, please consider model selection, installation position, number of used slides (adding slides for preventing swing) and other conditions such as load.
Refer to <Installation Example>

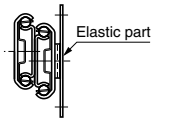
The allowable swing and tolerance may be larger for more flexible slide installation part. For increasing the allowance, please devise the installation method carefully.

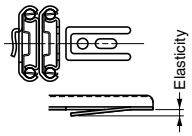
<Installation Example>

1. Give a play between the slide and the installation part.

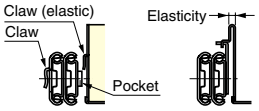


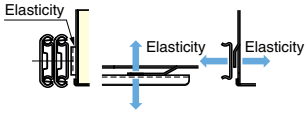
2. Make the slide elastic.



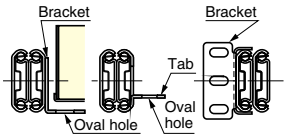


3. Make the installation part elastic.

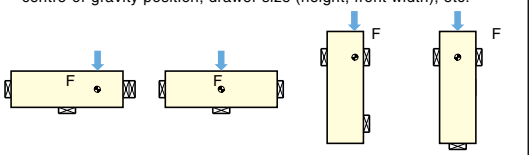




4. Use bracket and tab to make oval mounting hole.



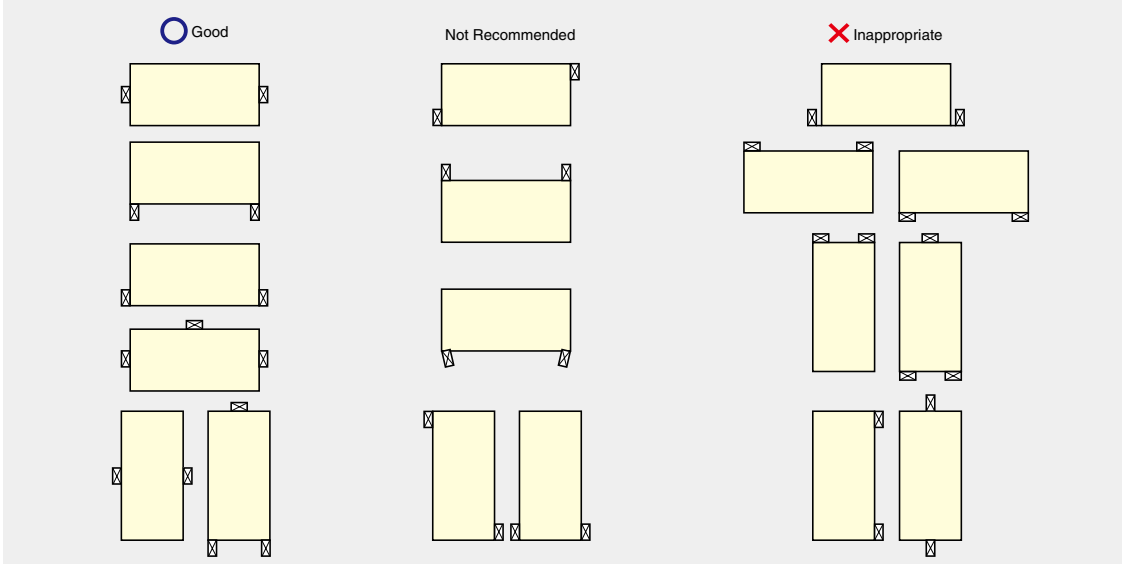
5. Determine the number and models of slides depending on the load, centre-of-gravity position, drawer size (height, front width), etc.



Load: Heavy Centre of gravity: Eccentric Front width: Wide	Load: Heavy Centre of gravity: Centre Front width: Wide	Load: Heavy Centre of gravity: Eccentric Drawer: High	Load: Heavy Centre of gravity: Centre Drawer: High

[Installation of Drawer Slides]

There are following possible installation methods, which may be good, not recommended or inappropriate.
The most important thing for slide installation is to install the slides in parallel.



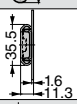
※What is ball creep?

Sometimes the slide can only move within a range less than the travel length. This is called ball creep. Ball creep is likely to occur when slides are not installed in parallel, when not using all the travel length, when not moving smoothly, or when sliding up and down, etc.
Ball creep may be corrected by forcibly opening the slide fully. At this time, please pull it out slowly. Fast opening or strong shock may cause damage.

INDEX by Linear Slide Specifications

Slides are summarised by specifications and listed in ascending order of slide height.

Type	Material	Product Name	Load Capacity N/pc: Vertical Use (100 200 300 400 500)	Load Capacity N/pc: Horizontal Use (100 200 300 400 500)	Page
Mini Guide Rails	Aluminium Alloy	MRS15 	30	100	P.440
		MRS20 	175	300	P.440
		MRS30 	305	520	P.440

Type	Material	Product Name	Load Capacity N/pc: Vertical Use (pair) (100 200 300 400 500)	Load Capacity N/pc: Horizontal Use (pair) (100 200 300 400 500)	Page
Linear Slides	Stainless Steel	SCRL2 	177~235		P.414
		SCRL2-15S 	177~235		P.414
		ESR9 For Light Weight ※Suitable for 2 slides use and door weight below 5kg. 			P.448
		TSSL 			P.448
	Aluminium Alloy	ARL2-16 	20~49	8~18	P.411

INDEX (Others)

Type	Material	Product Name	Load Capacity N/pc (100 200 300 400 500)	Slide: 2 Members	Lock When Closed	Lock When Opened	Friction Stop	Detachable	Hold When Closed	Hold When Opened	2-ways	With Bumper	Page
Others	Stainless Steel	ESR2 Under-mount Type 	49~78				○	○					P.449

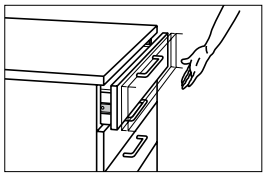
FULL EXTENSION SOFT-CLOSE SLIDE 3670

LOAD CAPACITY 147~196 N/pair | L=R | DETACH | BUMPER | CATCH | INSTRUCTION

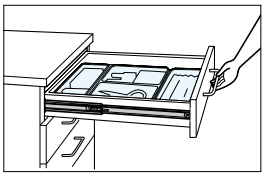


- Full extension (3 members).
- The drawer can be fully pulled out for slide length 300mm or above.
- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- The maximum width of the drawer is the slide length + 200mm.
- Sliding smoothly even with some deflection of the outer member installation part.
- The drawer is detachable by lifting the lever.
- Type 4670 with slide width 45.5mm, load capacity 15~40kgf / pair (black chromate: 1, clear zinc chromate 2) also available.

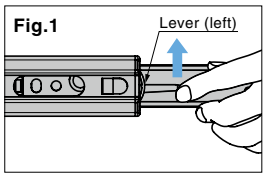
[Self & Soft Closing]



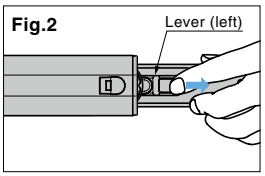
[Full Extension (3 Members)]



[Easy to Detach]



Simultaneously move the left lever upwards and the right lever downwards.



Move the left and right levers towards you at the same time.

[Remarks]

- Be sure to read the "Cautions" 3.
- Gap between drawer and cabinet beyond the range ※1 in the drawing below may cause unexpected damage to the slide.
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.

[Parts Included]

- Truss head tapping screw 4x12

Fig.3

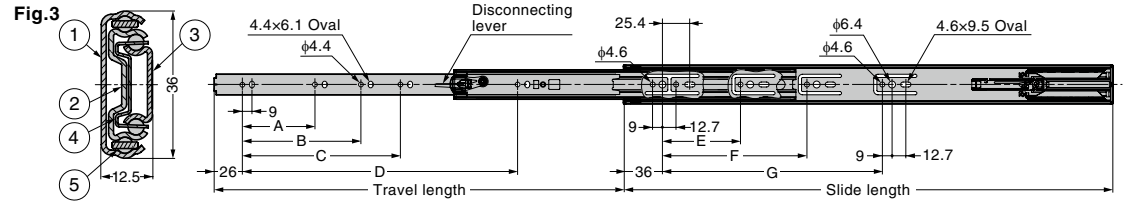
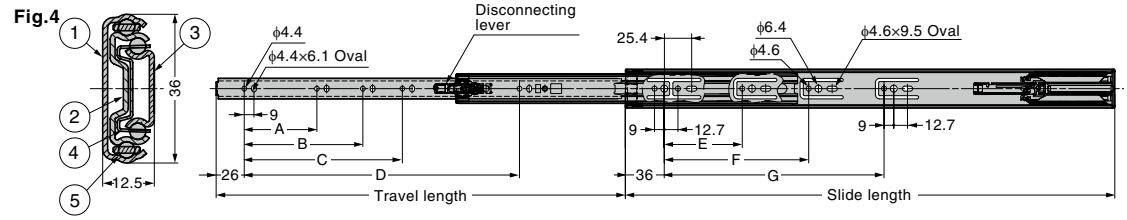
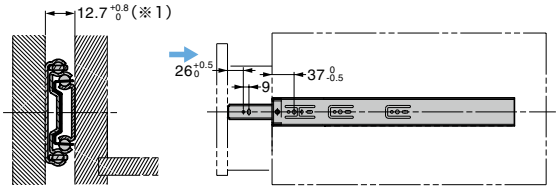


Fig.4





No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel	Clear Zinc Chromate (Trivalent)
②	Intermediate Member		
③	Inner Member		
④	Retainer		(Zinc Chromate Steel)
⑤	Balls		–

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	–	190-027-543	3670-250	250	200	124	–	–	–	87	–	–	147	15	0.54	20	–
G	3D	190-027-544	3670-300	300	300	174				119					0.66	20	–
–	3D	190-027-545	3670-350	350	350	96	224				183				0.78	10	–
–	–	190-027-546	3670-400	400	400	160	256				199		196	20	0.9	10	–
–	–	190-027-547	3670-450	450	450	96	192	306			247				1.02	10	–
–	–	190-027-548	3670-500	500	500	128	224	356			215	295			1.12	10	–
–	–	190-027-549	3670-550	550	550			352	406			343			1.24	10	–
G	–	190-027-550	3670-600	600	600			384	456		247	375			1.38	10	–

Refer to 1 : P.405, 2 : P.404, 3 : P.399

※ As soon as the stock of this product runs out, the slide detaching method is changed from Fig.1 to Fig 2, and the drawing is changed from Fig.3 to Fig.4.

FULL EXTENSION SOFT-CLOSE SLIDE ESR4670 Stainless steel

LOAD CAPACITY 157~343 N | L=R | DETACH | HOLD CLOSED | CATCH | INSTRUCTION | SUS

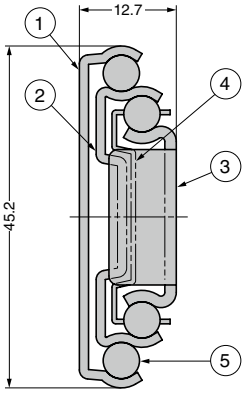


- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- With self & soft closing mechanism built-in, possible to install as with conventional slides.
- Full extension (3 members).
- The drawer is detachable by lifting the lever.
- The maximum width of the drawer is the slide length + 200mm.

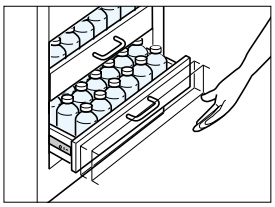
[Remarks]
- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.

[Recommended Screws]
- For metal: M4 screw (except for countersunk head)
- For wood: M4 tapping screw (except for countersunk head)

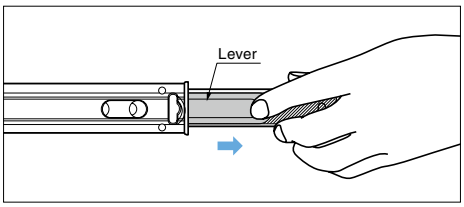
- Slide cross section S=1/1



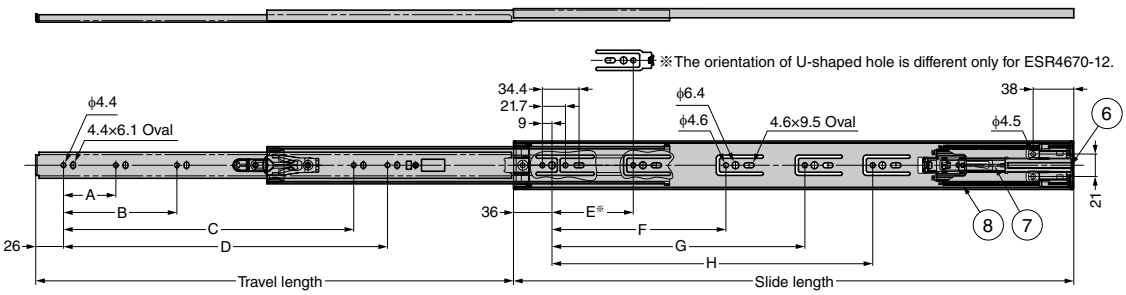
[Self & Soft Closing]



[Easy to Detach]



The drawer can be detached by pulling the lever in the direction of the arrow.



No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Intermediate Member	
③	Inner Member	
④	Retainer	
⑤	Balls	
⑥	Damper Case	POM
⑦	Shaft	Stainless Steel (SUS303)
⑧	Spring	Stainless Steel (SUS304)

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-033-964	ESR4670-12	300	265	–	–	–	174	145	–	–	–	157	16	0.78	10	–
G	3D	190-033-965	ESR4670-14	350	340				224	151						0.93	10	–
G	3D	190-033-966	ESR4670-16	400	400	96			256	167				196	20	1.07	10	–
G	3D	190-033-967	ESR4670-18	450	450	128			306	119	215			294	30	1.21	10	–
G	3D	190-033-968	ESR4670-20	500	500	96	160		344		279			343	35	1.36	10	–
G	3D	190-033-969	ESR4670-22	550	550				394		215	311				1.46	10	–
G	3D	190-033-970	ESR4670-24	600	600		192		444		247	375				1.66	10	–
G	3D	190-033-971	ESR4670-26	650	650	128	224	416	494		215	311	407			1.81	10	–
G	3D	190-033-972	ESR4670-28	700	700			480	544			343	471			1.96	10	–

Refer to 1 : P.399

SUGATSUNE

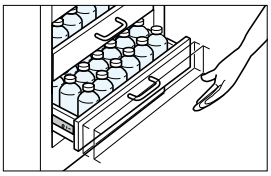
FULL EXTENSION SOFT-CLOSE SLIDE 4670

LOAD CAPACITY 147~392 N/pair | L=R | DETACH | BUMPER | CATCH | INSTRUCTION

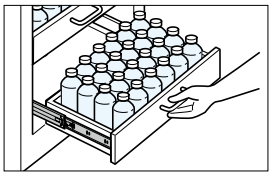


- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- With self & soft closing mechanism built-in, easy to install as with conventional slides.
- Full extension (3 members).
- The drawer can be pulled out beyond the slide length for slide length above 350mm.
- The maximum width of the drawer is the slide length + 200mm.
- Sliding smoothly even with some deflection of cabinet due to shock absorbing effect of the outer member installation part.
- The drawer is detachable by lifting the lever.

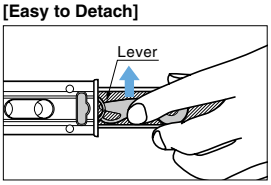
[Self & Soft Closing]



[Full Extension (3 Members)]



[Easy to Detach]



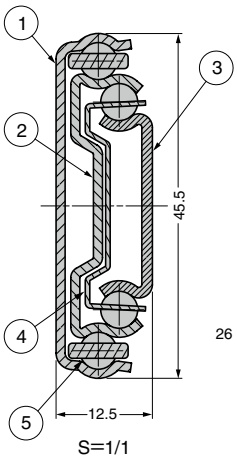
Simultaneously move the left lever upwards and the right lever downwards.

[Remarks]

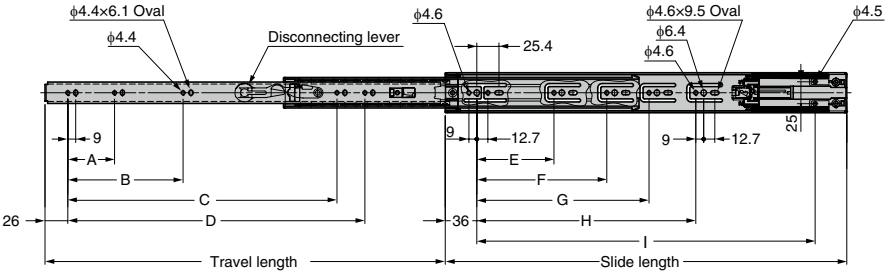
- Be sure to read the "Cautions" 1.
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.

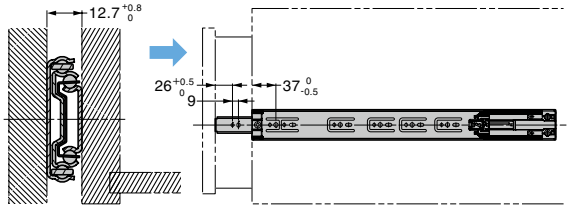
[Parts Included]

- Truss head tapping screw 4x12



S=1/1





No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel	Clear Zinc Chromate (Trivalent)
②	Intermediate Member		
③	Inner Member		
④	Retainer		(Zinc Chromate Steel)
⑤	Balls		–

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-021-265	4670-250	250	175	–		124		87	–			179	147	15	0.71	10	–
G	3D	190-021-266	4670-300	300	275			174						229	196	20	0.85	10	–
G	3D	190-021-267	4670-350	350	353	96	–	224			183	–		279	245	25	0.99	10	–
G	3D	190-021-268	4670-400	400	404			254	–		199		–	329			1.13	10	–
G	3D	190-021-269	4670-450	450	455	128		294			247			379	294	30	1.27	10	–
G	3D	190-021-270	4670-500	500	505	96	160	344		119	295			429	343	35	1.44	10	–
G	3D	190-021-271	4670-550	550	556			394						479	392	40	1.59	6	–
G	3D	190-021-272	4670-600	600	606		192	444			215	343		529			1.77	6	–
G	3D	190-021-273	4670-650	650	653	128	224	416	494				439	579	294	30	1.92	6	–
G	3D	190-021-274	4670-700	700	704			480	544				487	629			2.07	6	–

Refer to 1 : P.399

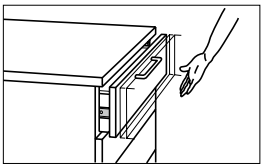
FULL EXTENSION SOFT-CLOSE SLIDE 4670 Black

LOAD CAPACITY 147~392 N/pair | L=R | DETACH | BUMPER | CATCH | INSTRUCTION

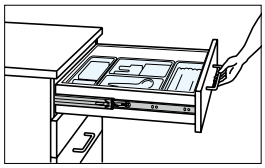


- Full extension (3 members).
- Black version of slide 4670 1.
- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- With self & soft closing mechanism built-in, easy to install as with conventional slides.
- The drawer can be fully pulled out for slide length 350mm or above.
- The maximum width of the drawer is the slide length +200mm.
- Sliding smoothly even with some deflection of cabinet due to shock absorbing effect of the outer member installation part.
- The drawer is detachable by lifting the lever.

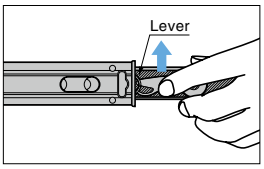
[Self & Soft Closing]



[Full Extension (3 Members)]



[Easy to Detach]



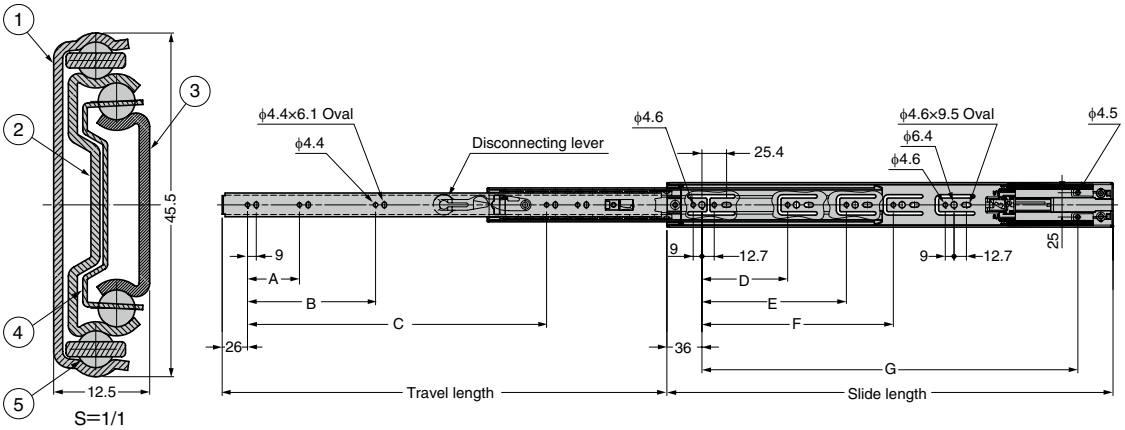
Simultaneously move the left lever upwards and the right lever downwards.

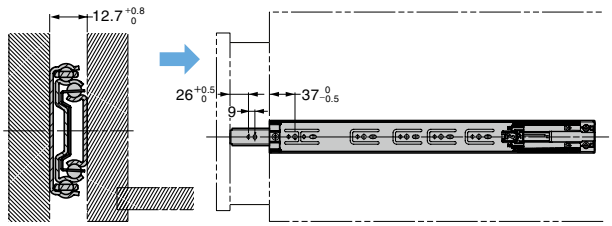
[Remarks]

- Be sure to read the "Cautions" 2.
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.
- Noted that scratch is conspicuous on black surface.

[Parts Included]

- Truss head tapping screw 4x12 (black chromate)





No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel	Black Chromate
②	Intermediate Member		
③	Inner Member		
④	Retainer		(Zinc Chromate Steel)
⑤	Balls		–

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
–	–	190-028-947	4670-250BL	250	175	–	–	124	87	–	–	179	147	15	0.71	10	–
–	–	190-028-948	4670-300BL	300	275			174				229	196	20	0.85	10	–
–	–	190-028-949	4670-350BL	350	353	96	–	224		183	–	279	245	25	0.99	10	–
–	–	190-028-950	4670-400BL	400	404			254		199		329			1.13	10	–
–	–	190-028-951	4670-450BL	450	455	128		294	119	247		379	294	30	1.27	10	–
–	–	190-028-952	4670-500BL	500	505	96	160	344		295		429	343	35	1.44	10	–
–	–	190-028-953	4670-550BL	550	556			394		215	343	479	392	40	1.59	6	–
–	–	190-028-954	4670-600BL	600	606	128	192	444				529	294	30	1.77	6	–

Refer to 1 : P.404, 2 : P.399

SUGATSUNE

FULL EXTENSION SOFT-CLOSE SLIDE L52145

LOAD CAPACITY 540 N/pair | L=R | DETACH | CATCH



- Full extension (3 members).
- Soft-closes at 50mm distance from closed position.
- With self & soft closing mechanism built-in, easy to install as with conventional slides.
- Travel length is slide length – 50mm (approx.).
- Larger load capacity compared with our company's other products with the same mechanism.
- The drawer is detachable by lifting the lever.

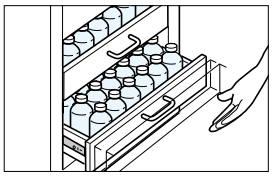
[Remarks]

- Be sure to read the "Cautions" 1.
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.

[Recommended Screws]

- For outer member
  Oval hole: M4 or nominal 4 screw
  Round hole: M5 or nominal 5 low head screw
- For inner member
  M4 or nominal 4 low head screw

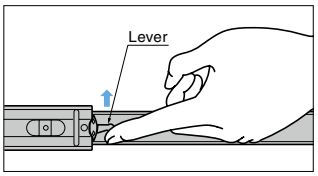
[Self & Soft Closing]



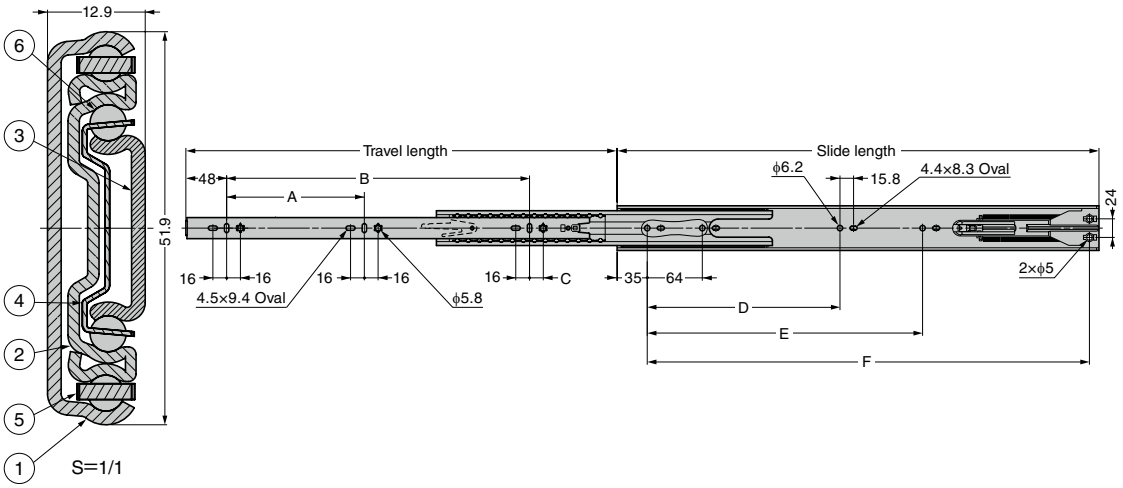
[Full Extension (3 Members)]

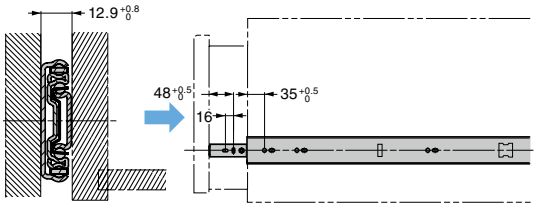


[Easy to Detach]



Simultaneously move the left lever upwards and the right lever downwards.





No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
②	Intermediate Member		
③	Inner Member		
④	Retainer	Steel (SECC)	(Zinc Chromate Steel)
⑤		PA	–
⑥	Balls	Steel	

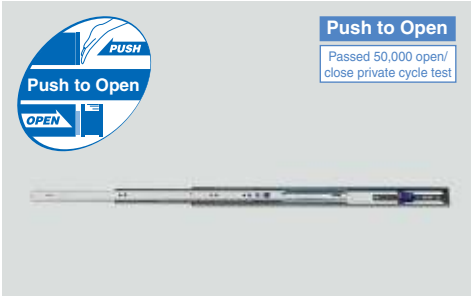
Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-012-982	L52145-410	410	360	96	224	–	160	–	362.5	540	55	1.6	10	–
G	3D	190-012-983	L52145-460	460	403	128	256	16	224		412.5			1.8	10	–
G	3D	190-012-984	L52145-510	510	453		288		256		462.5			2.1	10	–
G	3D	190-012-985	L52145-560	560	502	160	352		224	320	512.5			2.3	8	–
G	3D	190-012-986	L52145-610	610	552	192	384			352	562.5			2.5	8	–
G	3D	190-012-987	L52145-660	660	604		416			416	612.5			2.7	6	–
G	3D	190-012-988	L52145-710	710	651	224	480				662.5			3.0	6	–

Refer to 1 : P.399

FULL EXTENSION PUSH-TO-OPEN SLIDE 3660

LOAD CAPACITY 147~196 N/pair | L=R | DETACH | BUMPER | INSTRUCTION | HEX KEY



- Push-to-open mechanism. No handle or knobs required for a sleek, modern look.
- The drawer is easily opened by slightly pushing the front plate.
- Full extension (3 members).
- New mechanism PPD (pull protection device) minimises damage to slide.
- Our patented new mechanism PAE (push area expander, see※1 below) may reduce swing during close, and the drawer can be opened even though the push position of front board (push area, see※2 below) is slightly staggered with the centre..
- Passed 50,000 open/close private cycle test.
- The drawer is detachable by lifting the lever.
- Type 4660 with slide width 45.5mm, load capacity 15~45kgf / pair also available. Refer to 1.

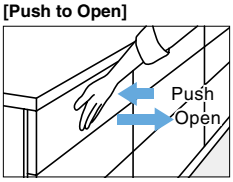
[Remarks]

- Be sure to read the "Cautions" 2.
- Do not apply strong shock. Otherwise, the drawer may be opened unexpectedly.
- PPD is not for routine use.
- Operate the push-to-open mechanism by pushing the centre part of the front plate. To widening the push area, adjust the gap with PAE.
- PAE has no effect if the gap between drawer and cabinet is beyond the range※3 shown below.
- The gap between drawer and cabinet beyond the range※3 shown below may cause unexpected damage to the slide.

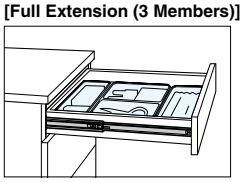
[Parts Included]

- Truss head tapping screw 4x12
- Hex key

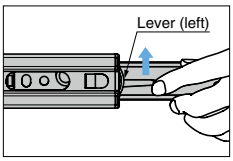
[Push to Open]



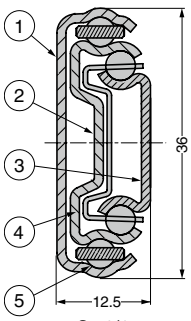
[Full Extension (3 Members)]

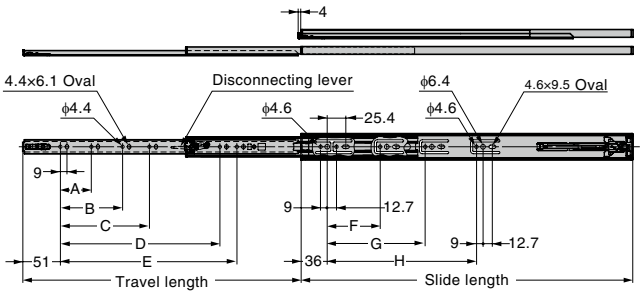


[Easy to Detach]

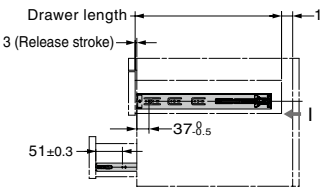


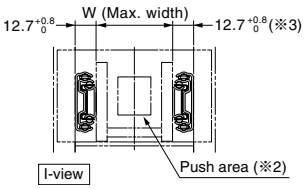
Simultaneously move the left lever upwards and the right lever downwards.



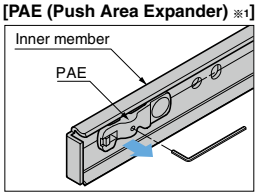


No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel	Clear Zinc Chromate (Trivalent)
②	Intermediate Member		
③	Inner Member		
④	Retainer		(Zinc Chromate Steel)
⑤	Balls		–





[PAE (Push Area Expander) ※1]



Turning the hex key (included) clockwise will cause the PAE to bulge in the direction of the arrow, which may reduce rattling when closed and expand the push-to-open area.

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	W	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-027-551	3660-250	250	250	–				121	87	–		450			0.56	20	–
G	3D	190-027-552	3660-300	300	300	71	–			171				500	147	15	0.68	20	–
G	3D	190-027-553	3660-350	350	350			–		221		183	–	550			0.80	10	–
G	3D	190-027-554	3660-400	400	400		231		–	271		199		600			0.92	10	–
G	3D	190-027-555	3660-450	450	450		263			321	119	247		650			1.04	10	–
G	3D	190-027-556	3660-500	500	500	103	167	295		371		215	295	700	196	20	1.16	10	–
G	3D	190-027-557	3660-550	550	550		199	327		421			345	750			1.28	10	–
G	3D	190-027-558	3660-600	600	600				391	471		247	375	800			1.40	10	–

Refer to 1 : P.409, 2 : P.399

SUGATSUNE

FULL EXTENSION PUSH-TO-OPEN SLIDE 4638

LOAD CAPACITY 265~441 N/pair | L=R | DETACH | HOLD OPENED



- Push-to-open mechanism. No handle or knobs required for a sleek, modern look.
- The drawer is easily opened by slightly pushing the front plate.
- With push-to-open mechanism built-in, easy to install as with conventional slides.
- Full extension (3 members).
- The drawer can be held in fully opened position. Release by pressing the front plate.
- The drawer is detachable by lifting the lever.
- High load capacity due to sequential mechanism.

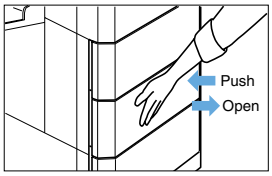
[Remarks]

- Be sure to read the "Cautions" 1.
- When the drawer is closed, pressing the front plate may unexpectedly open the drawer.
- Do not apply strong shock. Otherwise, the drawer may be opened unexpectedly.
- Do not pull the drawer strongly in closed position. Otherwise, the slide may be damaged.

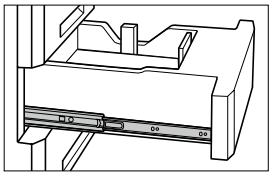
[Recommended Screws]

- M4 round head screw, nominal 4 or M4 binding head screw , nominal 4 or M4 truss head screw.

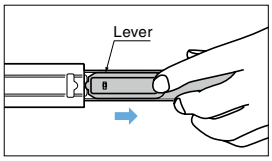
[Push to Open]



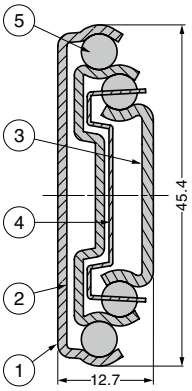
[Full Extension (3 Members)]



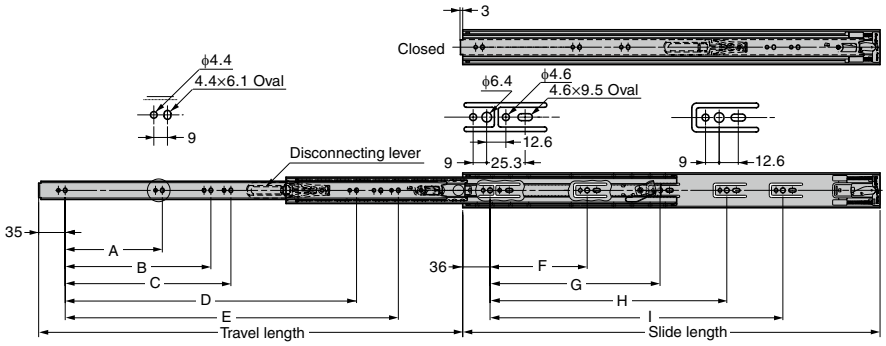
[Easy to Detach]

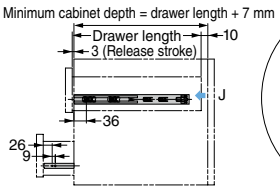


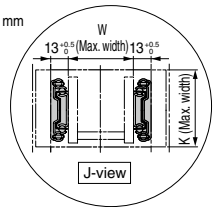
The drawer can be detached by pulling the lever in the direction of the arrow.

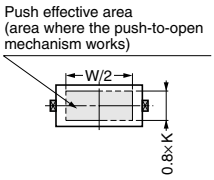


S=1/1









No.	Part Name	Material	Finish
①	Outer Member	Steel	Clear Zinc Chromate
②	Intermediate Member		
③	Inner Member		
④	Retainer		
⑤	Balls		–

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Max. Drawer Length W	Max. Drawer Length K	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-012-468	4638-14	350	356	–	128	448	–	224	128	–	–	224	550	215	441	45	1	20	–
G	3D	190-012-469	4638-16	400	406					288		256			600	250	422	43	1.14	20	–
G	3D	190-012-470	4638-18	450	457					320			320		650	280	392	40	1.28	10	–
G	3D	190-012-471	4638-20	500	508					384		224	352		700	310	373	38	1.42	10	–
G	3D	190-012-472	4638-22	550	559				192	416			320	416	750	340	353	36	1.56	10	–
G	3D	190-012-473	4638-24	600	610				416	480		–	352	448	800	375	333	34	1.7	10	–
G	3D	190-012-474	4638-26	650	660		224			512				512	850	405	304	31	1.84	10	–
G	3D	190-012-475	4638-28	700	711					576				544	900	435	265	27	1.98	10	–

Refer to 1 : P.399

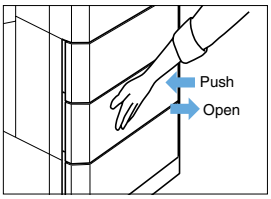
FULL EXTENSION PUSH-TO-OPEN SLIDE 4660

LOAD CAPACITY 147~441 N/pair | L=R | DETACH | BUMPER | INSTRUCTION | HEX KEY

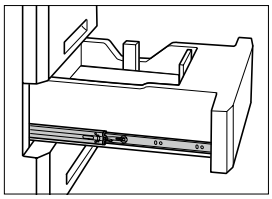


- Push-to-open mechanism. No handle or knobs required for a sleek, modern look.
- The drawer is easily opened by slightly pushing the front plate.
- New mechanism PPD (pull protection device) minimises damage to slide.
- Our patented new mechanism PAE (push area expander, see ※2 below) may expand the front plate pushing area when opening the drawer (push area, see ※3 below).
- Plastic spring reduces the metal-to-metal noise at the end of the course.
- Passed 50,000 open/close private cycle test.
- The drawer is detachable by lifting the lever.

[Push to Open]



[Full Extension (3 Members)]

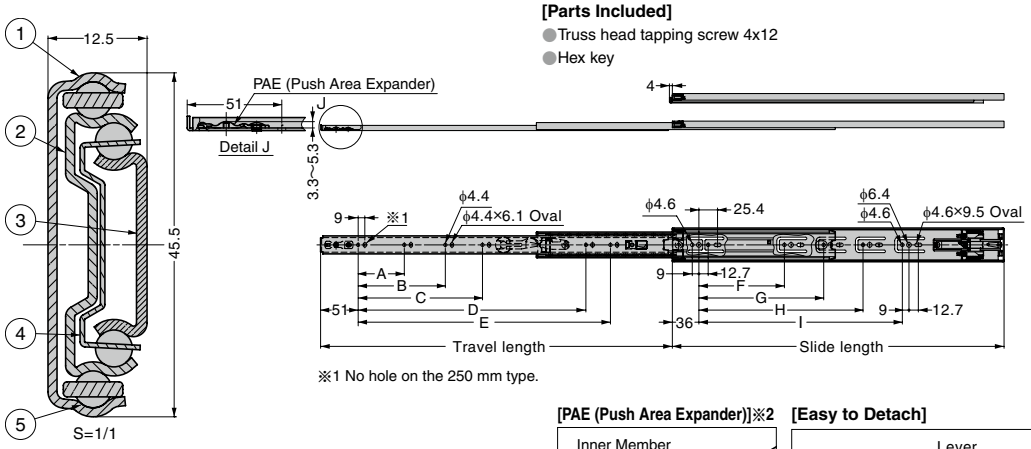


[Remarks]

- Be sure to read the "Cautions" 1.
- Do not apply strong shock. Otherwise, the drawer may be opened unexpectedly.
- PPD is not for routine use.
- Operate the push-to-open mechanism by pushing the centre part of the front plate. To widening the push area, adjust the gap with PAE.
- PAE has no effect if the gap between drawer and cabinet is beyond the range ※4 shown below.
- The gap between drawer and cabinet beyond the range ※4 shown below may cause unexpected damage to the slide.

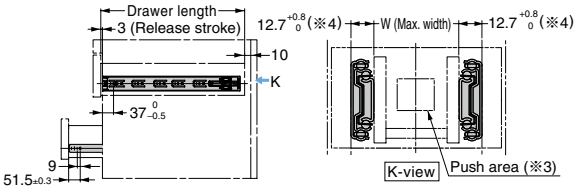
[Parts Included]

- Truss head tapping screw 4x12
- Hex key

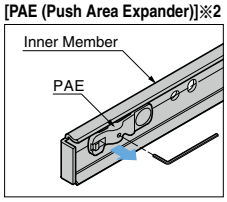


※1 No hole on the 250 mm type.

Minimum cabinet depth = drawer length +10 mm

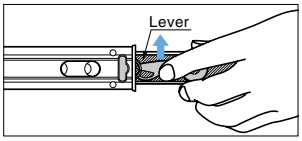


[PAE (Push Area Expander)]※2



Turning the hex key (included) clockwise will cause the PAE to bulge in the direction of the arrow, which may reduce rattling when closed and expand the push-to-open area.

[Easy to Detach]



No.	Part Name	Material	Finish
①	Outer Member	Steel	Clear Zinc Chromate (Trivalent) (Zinc Chromate Steel)
②	Intermediate Member		
③	Inner Member		
④	Retainer		
⑤	Balls		–

Sold in pairs (2 pcs).

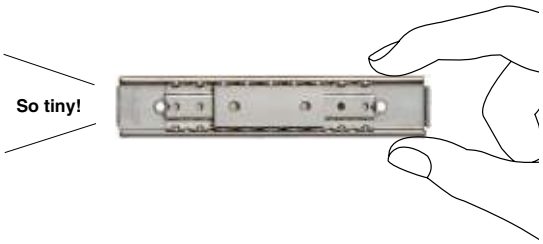
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	W	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-021-275	4660-250	250	200	–	–	–	117	–	87	–	–	–	450	147	15	0.72	10	–
G	3D	190-021-276	4660-300	300	296				167		119				500	196	20	0.86	10	–
G	3D	190-021-277	4660-350	350	348	71			217	–		183	–		550	245	25	1.01	10	–
G	3D	190-021-278	4660-400	400	406	103			267			215		–	600	294	30	1.16	10	–
G	3D	190-021-279	4660-450	450	458	71	135	–	317			279			650	343	35	1.31	10	–
G	3D	190-021-280	4660-500	500	509				327	367		215	335		700	392	40	1.46	10	–
G	3D	190-021-281	4660-550	550	560	103	167		359	417			343		750	441	45	1.62	6	–
G	3D	190-021-282	4660-600	600	611		199		391	467				439	800	343	35	1.78	6	–
G	3D	190-021-283	4660-650	650	661				441	517				471	850			1.94	10	–
G	3D	190-021-284	4660-700	700	712			263	491	567				535	900			2.11	6	–

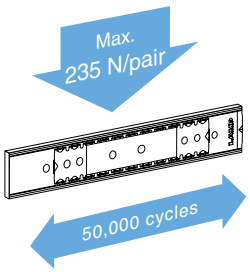
Refer to 1 : P.399

SUGATSUNE

COMPACT SLIDE RAIL – SERIES DIGEST

- Special inner and intermediate profile allows ultra thin size.
- All SCR types successfully passed for the 50,000 open/close cycle test.





16
15.5
(mm)



Item Name	SCR3	SCRW2	SCRL2	ARW2-16	AR3-16	ARL2-16
Load Capacity (N)	98~118	137~177	177~235	11~69	20~39	8~49
Material	Stainless Steel			Aluminium Alloy		

ALUMINIUM MINI SLIDE (FULL EXTENSION) AR3-16

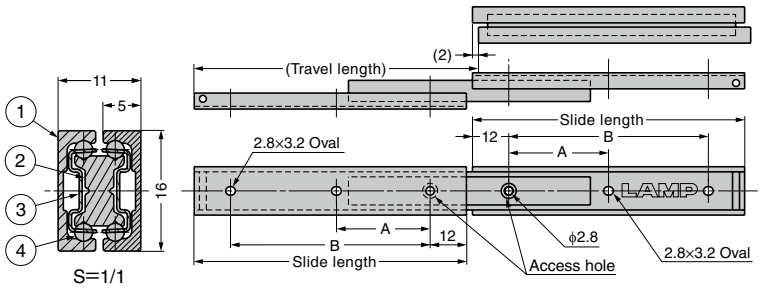
LOAD CAPACITY 20~39 N/pair L=R



- Full extension (3 members).
- Only 16mm in height, suitable for various places.
- Light weight outer and inner members made of aluminium alloy extruded material.

[Remarks]
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.5 low head screw



No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Retainer	Steel (SECC)	(Zinc Chromate Steel)
④	Balls	Steel (SWCH)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-012-581	AR3-16-80	80	77	–	56	20	2	31.44	50	–
G	3D	190-012-582	AR3-16-100	100	117	38	76	29	3	35.6	50	–
G	3D	190-012-583	AR3-16-150	150	151	63	126	39	4	54.3	50	–

ALUMINIUM MINI SLIDE (2-WAY) ARW2-16

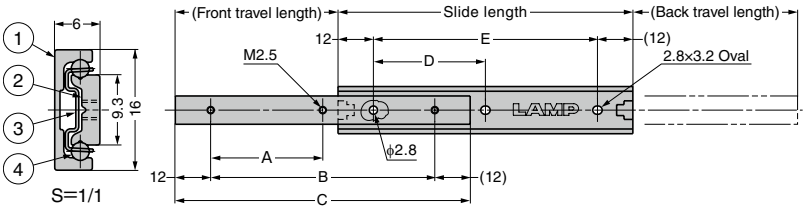
LOAD CAPACITY 11~69 N/pair | L=R | 2-WAYS



- 3/4 extension (2 members).
- Retainer allows smooth movement.
- Only 16mm in height with small deflection, suitable for various places.
- Light weight outer and inner members made of aluminium alloy extruded material.

[Remarks]
- Load capacity varies depending on installation method (vertical/horizontal) Refer to the table below.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- For outer member: M2.5 low head screw
- For inner member: M2.5 screw



Slide Installation Direction

Vertical Horizontal

No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Retainer	Steel (SECC)	(Zinc Chromate Steel)
④	Balls	Steel (SWCH)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length		A	B	C	D	E	Vertical Installation		Horizontal Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
					Front	Back						Load Capacity N/pair	Load Capacity kgf/pair	Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-012-578	ARW2-16-70	70	32	32	–	46	70	–	46	29	3	11	1.1	15.34	100	–
G	3D	190-012-579	ARW2-16-100	100	40	40	38	76	100	38	76	49	5	20	2	21.2	100	–
G	3D	190-012-580	ARW2-16-150	150	79	79	63	126	150	63	126	69	7	30	3.1	29.1	100	–

ALUMINIUM MINI GUIDE ARL2-16

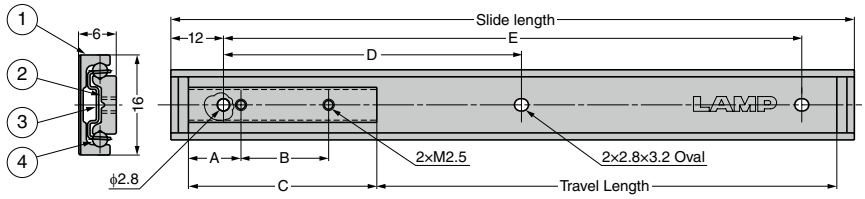
LOAD CAPACITY 8~49 N/pair | L=R



- Only 16mm in height, suitable for various places.
- Light weight outer and inner members made of aluminium alloy extruded material.

[Remarks]
- Load capacity varies depending on installation method (vertical/horizontal) Refer to the table below.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- For outer member: M2.5 low head screw
- For inner member: M2.5 screw



Slide Installation Direction

Vertical Horizontal

No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Retainer	Steel (SECC)	(Zinc Chromate Steel)
④	Balls	Steel (SWCH)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	Vertical Installation		Horizontal Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
											Load Capacity N/pair	Load Capacity kgf/pair	Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-012-584	ARL2-16-70	70	30	5	18	28	–	46	20	2	8	0.8	13.37	100	–
G	3D	190-012-585	ARL2-16-100	100	52	10	19	39	38	76	49	5	18	1.8	17.98	100	–
G	3D	190-012-586	ARL2-16-150	150	96				63	126					23.28	100	–

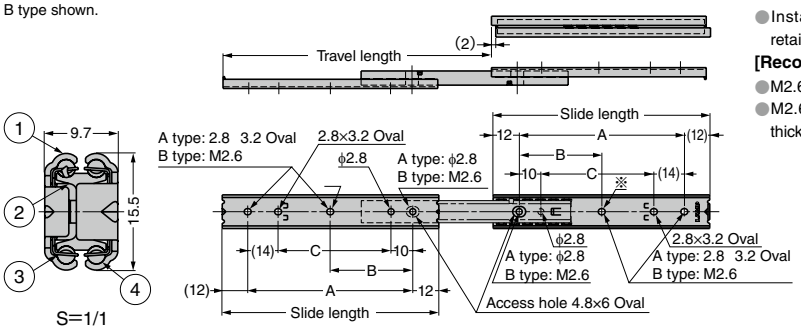
STAINLESS STEEL MINI SLIDE (FULL EXTENSION) SCR3

LOAD CAPACITY 98~118 N/pair | L=R | SUS



B type shown.

- Full extension (3 members).
- Little change in operating force due to mechanism hardly causing ball creep 1.
- Only 15.5mm in height with small deflection, suitable for various places.



[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for A type)
- M2.6 screw (for B type) Screw length = Panel thickness + Max. 1.7 mm

No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Steel (SUJ)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Holes	Slide Length	Travel Length	A	B	C	Vertical Installation: Load Capacity N/pair	Vertical Installation: Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-026-614	SCR3-15-80A	A Type (Through Hole)	80	97	56	–	32	98	10	36	50	200
G	3D	190-026-615	SCR3-15-100A		100	125	76	38	52	108	11	45	50	200
G	3D	190-026-616	SCR3-15-150A		150	177	126	63	102	118	12	70	50	200
G	3D	190-026-617	SCR3-15-80B	B Type (Screw Hole)	80	97	56	–	32	98	10	36	50	200
G	3D	190-026-618	SCR3-15-100B		100	125	76	38	52	108	11	45	50	200
G	3D	190-026-619	SCR3-15-150B		150	177	126	63	102	118	12	70	50	200

Refer to 1 : P.400

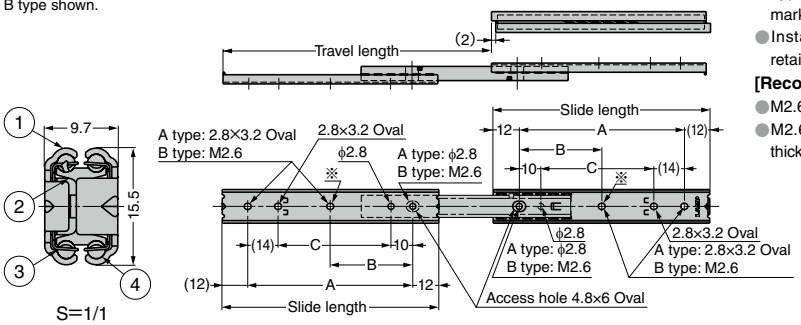
STAINLESS STEEL MINI SLIDE (FULL EXTENSION) SCR3-15S

LOAD CAPACITY 98~118 N/pair | L=R | SUS



B type shown.

- Full extension (3 members).
- Little change in operating force due to mechanism hardly causing ball creep 1.
- Only 15.5mm in height with small deflection, suitable for various places.
- Grease (NSF H1 Registered Food Grade Lubricants) for food machinery is used.



[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for A type)
- M2.6 screw (for B type) Screw length = Panel thickness + Max. 1.7 mm

No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Stainless Steel (SUS440)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Holes	Slide Length	Travel Length	A	B	C	Vertical Installation: Load Capacity N/pair	Vertical Installation: Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-034-800	SCR3-15S-80A	A Type (Through Hole)	80	97	56	–	32	98	10	36	–	–
G	3D	190-034-801	SCR3-15S-100A		100	125	76	38	52	108	11	45	–	–
G	3D	190-034-802	SCR3-15S-150A		150	177	126	63	102	118	12	70	–	–
G	3D	190-034-803	SCR3-15S-80B	B Type (Screw Hole)	80	97	56	–	32	98	10	36	–	–
G	3D	190-034-804	SCR3-15S-100B		100	125	76	38	52	108	11	45	–	–
G	3D	190-034-805	SCR3-15S-150B		150	177	126	63	102	118	12	70	–	–

Refer to 1 : P.400

STAINLESS STEEL MINI SLIDE (2-WAY) SCRW2

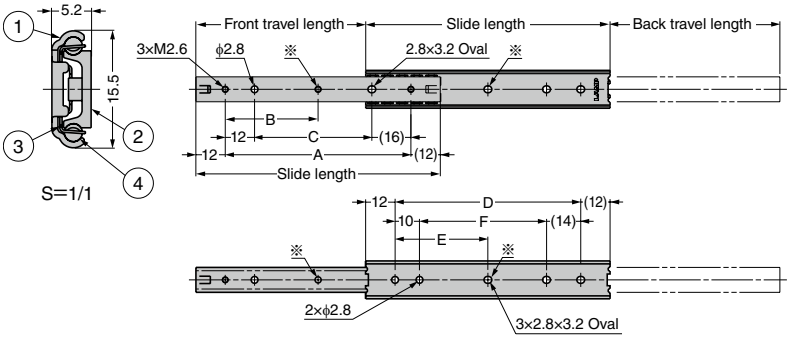
LOAD CAPACITY 137~177 N/pair | L=R | 2-WAYS | SUS



- 3/4 extension (2 members).
- Only 15.5mm in height with small deflection, suitable for various places.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for outer member)
- M2.6 screw (for inner member) Screw length = Panel thickness + Max. 1.5 mm



No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Steel (SUJ)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length Front	Travel Length Back	A	B	C	D	E	F	Vertical Installation Load Capacity N/pair	Vertical Installation Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-026-620	SCRW2-15-80A	80	48.5	48.5	56	–	28	56	–	32	137	14	21	200	400
G	3D	190-026-621	SCRW2-15-100A	100	68.5	68.5	76	38	48	76	38	52	157	16	26	200	400
G	3D	190-026-622	SCRW2-15-150A	150	94.5	94.5	126	63	98	126	63	102	177	18	41	100	200

STAINLESS STEEL MINI SLIDE (2-WAY) SCRW2-15S

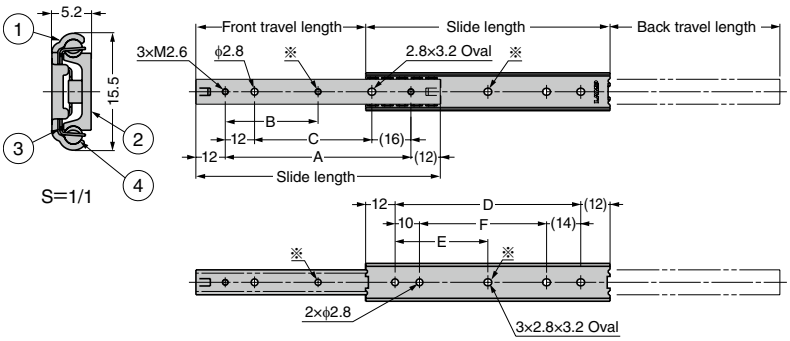
LOAD CAPACITY 137~177 N/pair | L=R | 2-WAYS | SUS



- 3/4 extension (2 members).
- Only 15.5mm in height with small deflection, suitable for various places.
- Grease (NSF H1 Registered Food Grade Lubricants) for food machinery is used.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for outer member)
- M2.6 screw (for inner member) Screw length = Panel thickness + Max. 1.5 mm



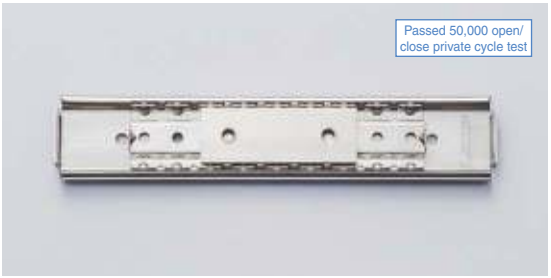
No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Stainless Steel (SUS440)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length Front	Travel Length Back	A	B	C	D	E	F	Vertical Installation Load Capacity N/pair	Vertical Installation Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-034-806	SCRW2-15S-80A	80	48.5	48.5	56	–	28	56	–	32	137	14	21	–	–
G	3D	190-034-807	SCRW2-15S-100A	100	68.5	68.5	76	38	48	76	38	52	157	16	26	–	–
G	3D	190-034-808	SCRW2-15S-150A	150	94.5	94.5	126	63	98	126	63	102	177	18	41	–	–

STAINLESS STEEL MINI GUIDE SCRL2

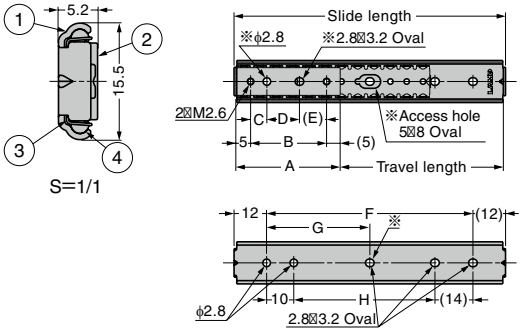
LOAD CAPACITY 177~235 N/pair L=R SUS



- Only 15.5mm in height with small deflection, suitable for various places.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for outer member)
- M2.6 screw (for inner member) Screw length = Panel thickness + Max. 1.5 mm



No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Steel (SUJ)

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Vertical Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
														Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-026-623	SCRL2-15-80A	80	49	28	18	–	–	–	56	–	32	177	18	16	50	200
G	3D	190-026-624	SCRL2-15-100A	100	59	38	28	6	12	10	76	38	52	206	21	20	50	200
G	3D	190-026-625	SCRL2-15-150A	150	109						126	63	102			29	50	200
G	3D	190-026-626	SCRL2-15-200A	200	149	48	38	10	14	14	176	88	152	235	24	38	50	200

STAINLESS STEEL MINI GUIDE SCRL2-15S

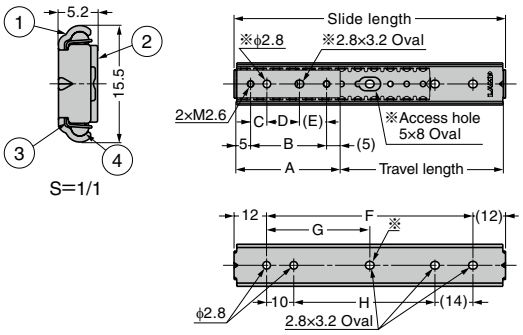
LOAD CAPACITY 177~235 N/pair L=R SUS



- Only 15.5mm in height with small deflection, suitable for various places.
- Grease (NSF H1 Registered Food Grade Lubricants) for food machinery is used.

[Remarks]
- Types with slide length 80mm have no holes marked with ※.
- Install stopper separately to protect rails and retainers from strong shock.

[Recommended Screws]
- M2.6 low head screw (for outer member)
- M2.6 screw (for inner member) Screw length = Panel thickness + Max. 1.5 mm



No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Inner Member	
③	Retainer	
④	Balls	Stainless Steel (SUS440)

Sold by piece.

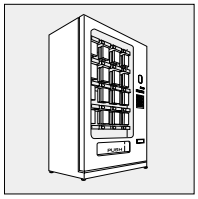
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Vertical Installation		Weight (g/pc)	Box (pcs)	Carton (pcs)
														Load Capacity N/pair	Load Capacity kgf/pair			
G	3D	190-034-809	SCRL2-15S-80A	80	49	28	18	–	–	–	56	–	32	177	18	16	–	–
G	3D	190-034-810	SCRL2-15S-100A	100	59	38	28	6	12	10	76	38	52	206	21	20	–	–
G	3D	190-034-811	SCRL2-15S-150A	150	109						126	63	102			29	–	–
G	3D	190-034-812	SCRL2-15S-200A	200	149	48	38	10	14	14	176	88	152	235	24	38	–	–

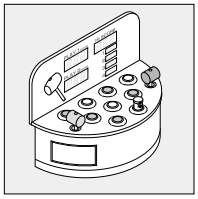
MINI GUIDE BLOCK & RAIL MRS, MR DIGEST





- Ideal for small stroke application.
- No grease needed.





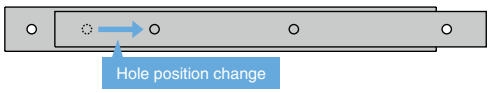


Refer to 1 : P.439~443

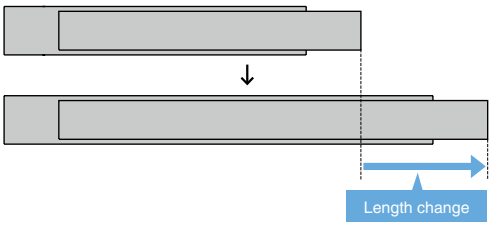
Made to Order Examples

Hole pitch change

The spacing of mounting holes can be changed.



Slide length change



Finish change



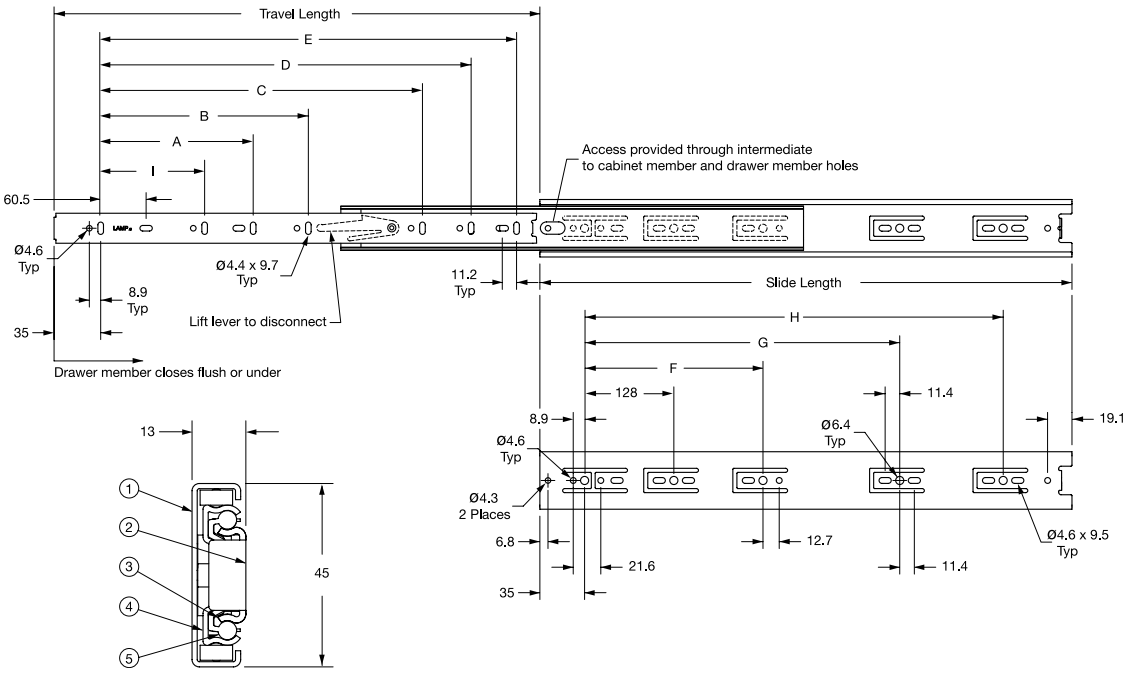
FULL EXTENSION SLIDE ESR-4513

LOAD CAPACITY 40~52 kgf | DETACH | HOLD CLOSED | L=R | SUS

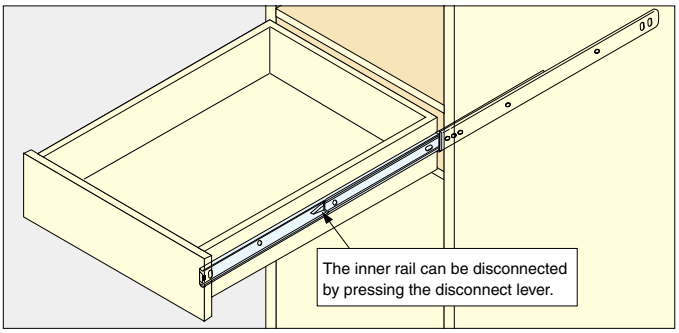


- Full extension.
- Front disconnect.
- Positive stop.
- Hold-in detent.
- Non-handed.

* Mount with M4 or #8 Binding, Pan, or Truss head screws.



[Installation]



No.	Part Name	Material
①	Outer Rail	Stainless Steel (304)
②	Inner Rail	
③	Retainer	
④	Intermediate Member	
⑤	Balls	

Sold in pairs.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Rating (kgf/pair)	Weight (kg/pair)	Box (pairs)	Carton (pairs)
–	3D	190-118-867	ESR-4513-10	250	243	–	–	–	–	192	–	–	–	–	52	0.74	10	–
–	3D	190-118-868	ESR-4513-12	300	305					242	224			128	50	0.93	10	–
–	3D	190-118-869	ESR-4513-14	350	355					292			–		49	1.07	10	–
–	3D	190-118-870	ESR-4513-16	400	406					342		320			47	1.22	10	–
–	3D	190-118-871	ESR-4513-18	450	457					392		352			46	1.37	10	–
–	3D	190-118-872	ESR-4513-20	500	508			320		442		416			44	1.53	10	–
–	3D	190-118-873	ESR-4513-22	550	559				416	492		352	448		43	1.68	10	–
–	3D	190-118-874	ESR-4513-24	600	610	224		416	–	542			480		42	1.83	10	–
–	3D	190-118-875	ESR-4513-26	650	660				544	592			544		41	1.98	10	–
–	3D	190-118-876	ESR-4513-28	700	711		288			642					40	2.14	10	–

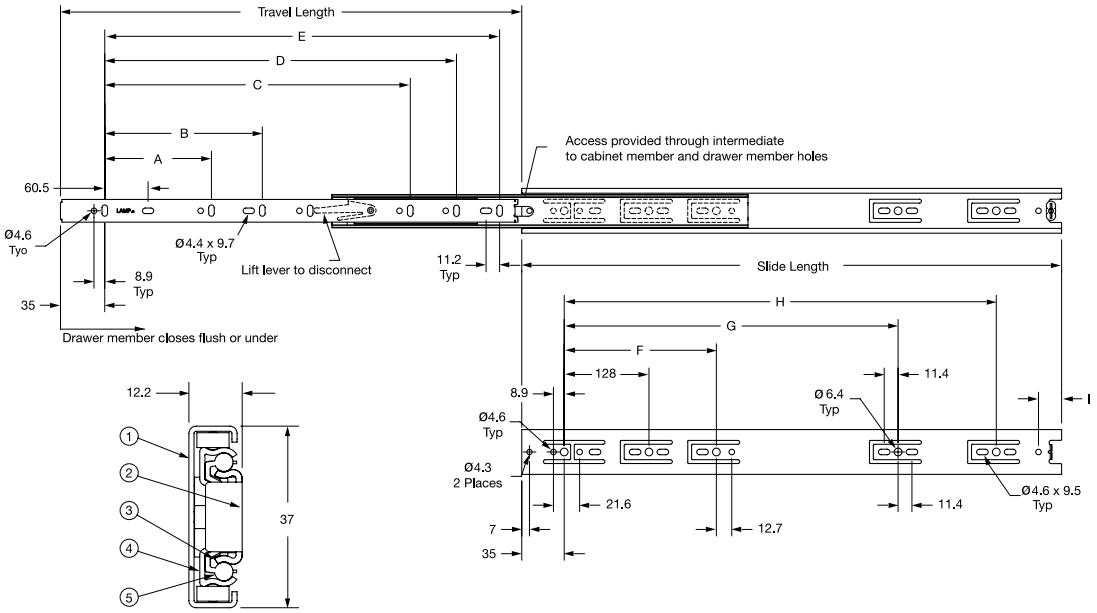
FULL EXTENSION SLIDE ESR-3813

LOAD CAPACITY 29~45kgf | DETACH | HOLD CLOSED | L=R | SUS

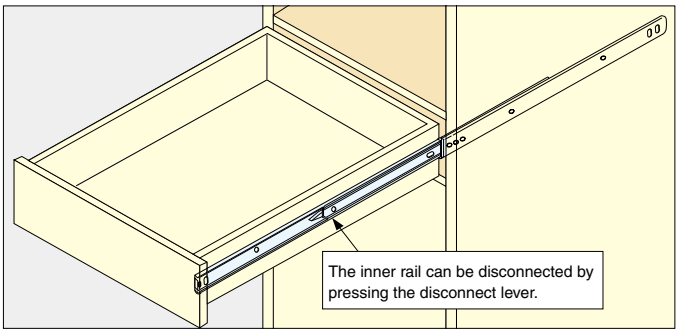


- Full extension.
- Front disconnect.
- Positive stop.
- Hold-in detent.
- Non-handed.

* Mount with M4 or #8 Binding, Pan, or Truss head screws.



[Installation]



No.	Part Name	Material
①	Outer Rail	Stainless Steel (304)
②	Inner Rail	
③	Retainer	
④	Intermediate Member	
⑤	Balls	

Sold in pairs.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Rating (kgf/pair)	Weight (kg/pair)	Box (pairs)	Carton (pairs)
–	3D	190-118-877	ESR-3813-8	200	200	–				142	–			–	45	0.40	10	–
–	3D	190-118-878	ESR-3813-10	250	243					192		–		19.1	42	0.53	10	–
–	3D	190-118-879	ESR-3813-12	300	305	128	–	–	–	242	224		–		42	0.63	10	–
–	3D	190-118-880	ESR-3813-14	350	355					292					38	0.72	10	–
–	3D	190-118-881	ESR-3813-16	400	406					342		320			36	0.81	10	–
–	3D	190-118-882	ESR-3813-18	450	457					392		352			34	0.91	10	–
–	3D	190-118-883	ESR-3813-20	500	508			320		442		416			33	1	10	–
–	3D	190-118-884	ESR-3813-22	550	559				416	492		352	448		31	1.09	10	–
–	3D	190-118-885	ESR-3813-24	600	610		224	416	–	542			480		29	1.18	10	–

3/4 EXTENSION SLIDE ESR2021

LOAD CAPACITY 108~157 N/pair | L=R | SUS



- 3/4 extension (2 members).

[Others]

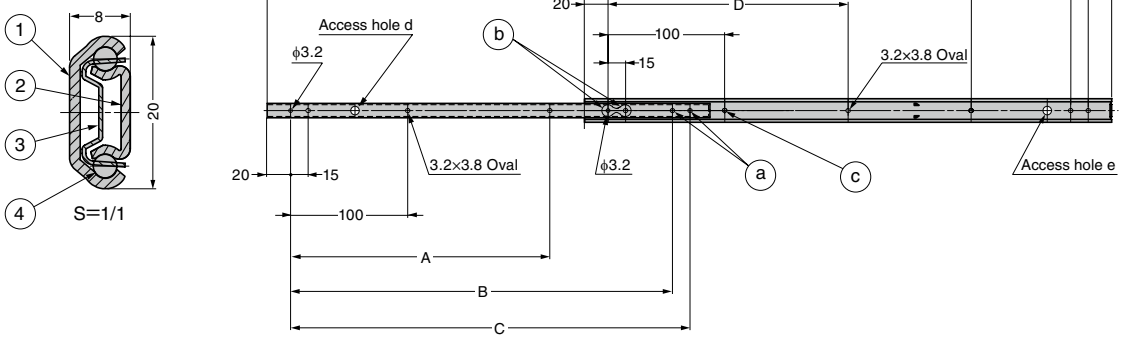
- When fixing the mounting hole ⓑ, move the inner member backwards and use access hole "e".
- When fixing the mounting hole ⓒ for slides above 450mm, move the inner member backwards and use access hole "d".
- Mounting hole ⓐ is unnecessary in normal installation.

[Remarks]

- Be sure to read the "Cautions" 1.

[Recommended Screws]

- M3 screw with binding or truss head



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls		–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-011-649	ESR2021-200	200	134	–	145	160	–	–	145	160	127	13	0.10	200	–
G	3D	190-011-650	ESR2021-250	250	184	150	195	210			195	210	147	15	0.13	100	–
G	3D	190-011-651	ESR2021-300	300	224	190	245	260		160	245	260	157	16	0.15	100	–
G	3D	190-011-652※	ESR2021-350	350	244	225	295	310		210	295	310			0.18	100	–
G	3D	190-011-653	ESR2021-400	400	294	265	345	360		260	345	360	147	15	0.20	100	–
G	3D	190-011-654	ESR2021-450	450	334	300	395	410	205	310	395	410	127	13	0.23	100	–
G	3D	190-011-655	ESR2021-500	500	384	337	445	460	230	360	445	460	108	11	0.25	100	–

Refer to 1 : P.399 ※From the next production lot, A=190.

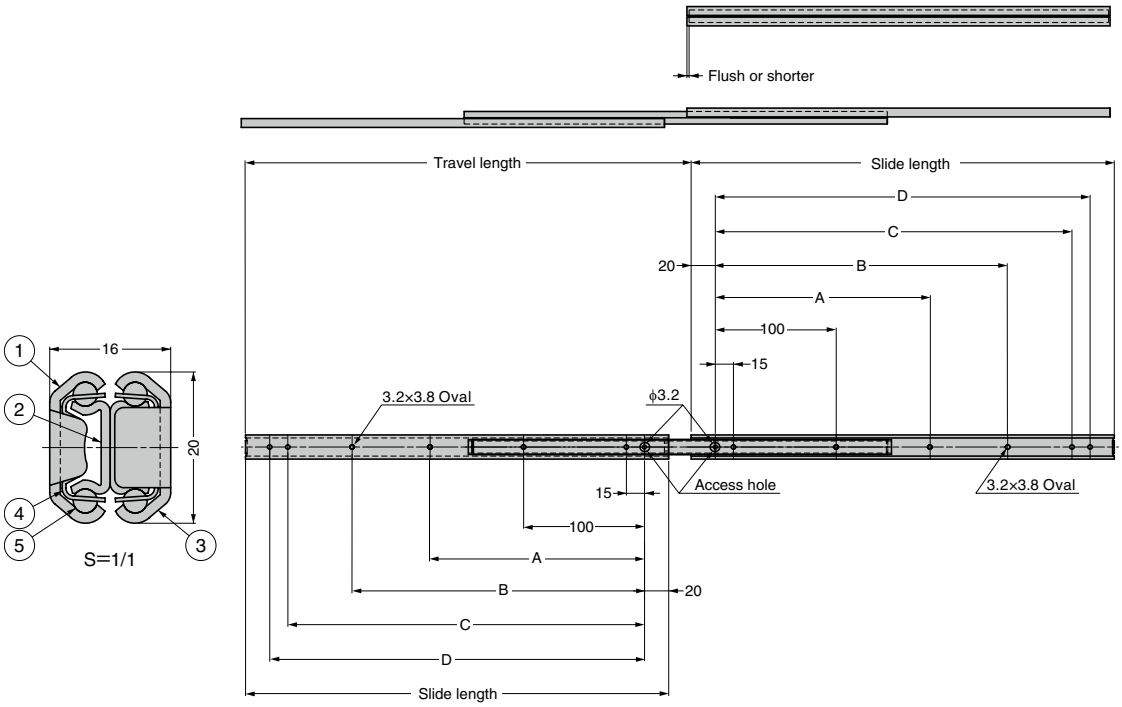
FULL EXTENSION SLIDE ESR2031

LOAD CAPACITY 127~167 N/pair | L=R | SUS



●Full extension (3 members).

[Remarks]
●Be sure to read the "Cautions" 1.
[Recommended Screws]
●M3 screw with binding or truss head



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Intermediate Member		
③	Inner Member		
④	Retainer		
⑤	Balls		–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-011-656	ESR2031-200	200	229	–	–	145	160	167	17	0.20	96	–
G	3D	190-011-657	ESR2031-250	250	269			195	210			0.25	48	–
G	3D	190-011-658	ESR2031-300	300	329		160	245	260			0.30	48	–
G	3D	190-011-659	ESR2031-350	350	369		210	295	310			0.35	48	–
G	3D	190-011-660	ESR2031-400	400	429		260	345	360			0.40	48	–
G	3D	190-011-661	ESR2031-450	450	469	205	310	395	410	157	16	0.45	48	–
G	3D	190-011-662	ESR2031-500	500	529	230	360	445	460	127	13	0.50	48	–

Refer to 1 : P.399

3/4 EXTENSION SLIDE SNS27S

LOAD CAPACITY 176~255 N/pair | L=R | SUS



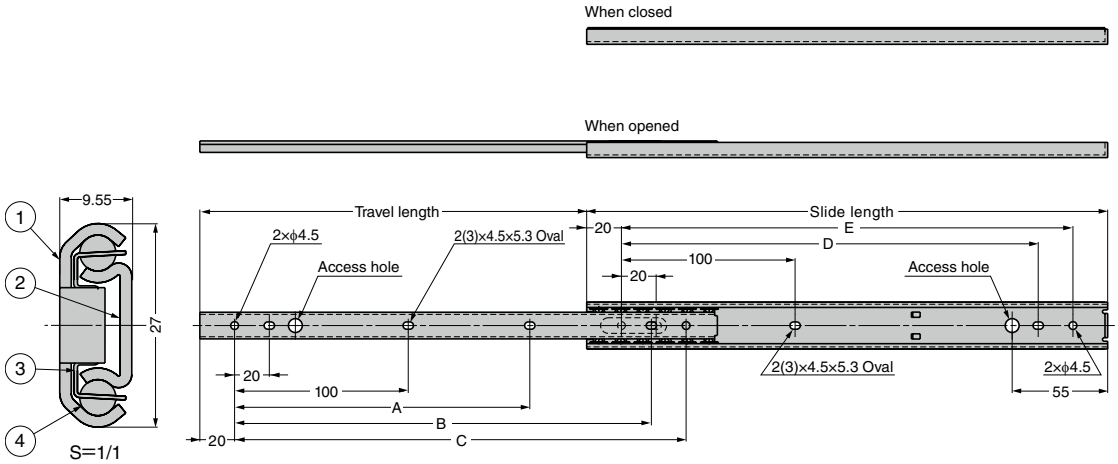
●3/4 extension (2 members).

[Remarks]

●Be sure to read the "Cautions" 1.

[Recommended Screws]

●M4 pan head screw or nominal 4 pan head tapping screw



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls	Stainless Steel (SUS440)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-177	SNS27S-20	200	135	–	140	160	140	160	255	26	0.17	40	–
G	3D	190-110-178	SNS27S-25	250	185	150	190	210	190	210	235	24	0.21	40	–
G	3D	190-110-179	SNS27S-30	300	222	190	240	260	240	260			0.25	40	–
G	3D	190-110-180	SNS27S-35	350	260	225	290	310	290	310	225	23	0.29	40	–
G	3D	190-110-181	SNS27S-40	400	297	265	340	360	340	360	206	21	0.33	40	–
G	3D	190-110-182	SNS27S-45	450	334	300	390	410	390	410	196	20	0.37	40	–
G	3D	190-110-183	SNS27S-50	500	371	337	440	460	440	460	176	18	0.41	40	–

Refer to 1 : P.399

FULL EXTENSION SLIDE SNS27D

LOAD CAPACITY 275~373 N/pair | L=R | SUS



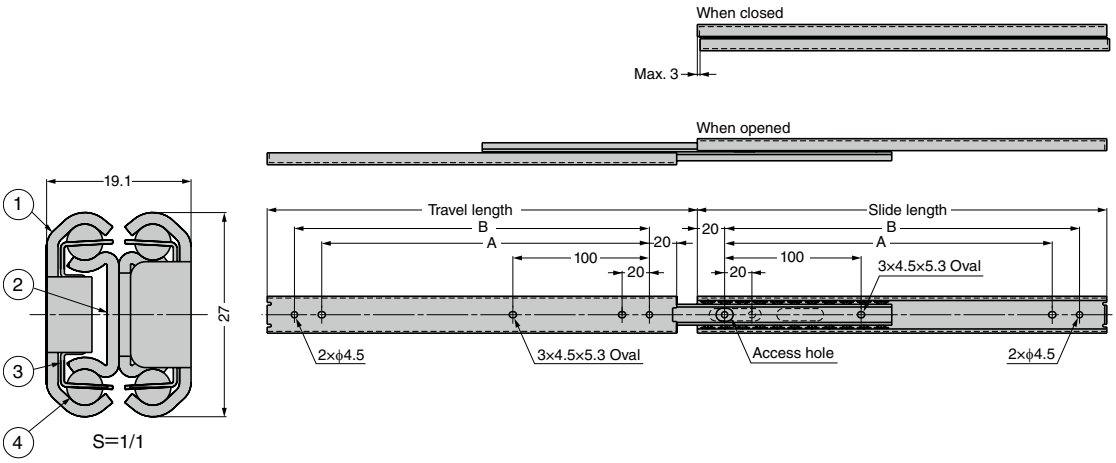
- Full extension (3 members).

[Remarks]

- Be sure to read the "Cautions" 1.

[Recommended Screws]

- M4 pan head screw or nominal 4 pan head tapping screw



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls	Stainless Steel (SUS440)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-184	SNS27D-20	200	216.8	140	160	373	38	0.34	20	–
G	3D	190-110-185	SNS27D-25	250	266	190	210	363	37	0.42	20	–
G	3D	190-110-186	SNS27D-30	300	315.2	240	260	353	36	0.50	20	–
G	3D	190-110-187	SNS27D-35	350	364.4	290	310	333	34	0.58	20	–
G	3D	190-110-188	SNS27D-40	400	413.6	340	360	313	32	0.66	20	–
G	3D	190-110-189	SNS27D-45	450	462.8	390	410	294	30	0.74	20	–
G	3D	190-110-190	SNS27D-50	500	512	440	460	275	28	0.82	20	–

Refer to 1 : P.399

3/4 EXTENSION SLIDE 272SL

LOAD CAPACITY 137~177 N/pair

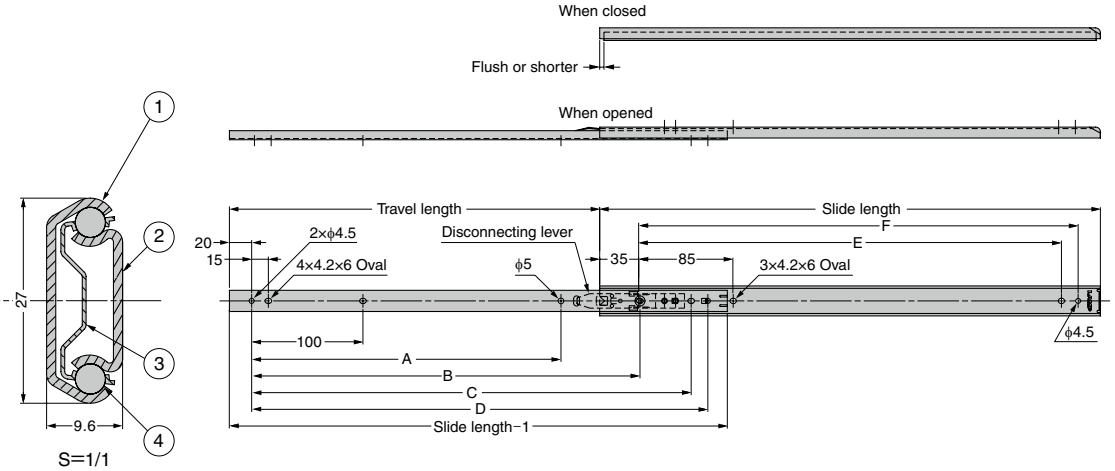
L=R DETACH SUS



- 3/4 extension (2 members).
- The drawer is detachable by lifting the lever.

[Remarks]

- Be sure to read the "Cautions" 1.
- Polyamide is used inside the slide.
- Noted that contact noise may be produced when the disconnecting lever passes over the leaf spring on the outer member.



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls		–

Sold in pairs (2pcs)

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-116-707	272SL-300	300	220	165	236	–	–	230	245	177	18	0.43	20	–
G	3D	190-116-708	272SL-350	350	261	206	277			280	295	167	17	0.5	20	–
G	3D	190-116-709	272SL-400	400	301	246	317		362.5	330	345	157	16	0.56	20	–
G	3D	190-116-710	272SL-450	450	333	278	349	395	410	380	395	147	15	0.65	20	–
G	3D	190-116-711	272SL-500	500	373	318	389	445	460	430	445	137	14	0.7	20	–

Refer to 1 : P.399

FULL EXTENSION SLIDE 273SL

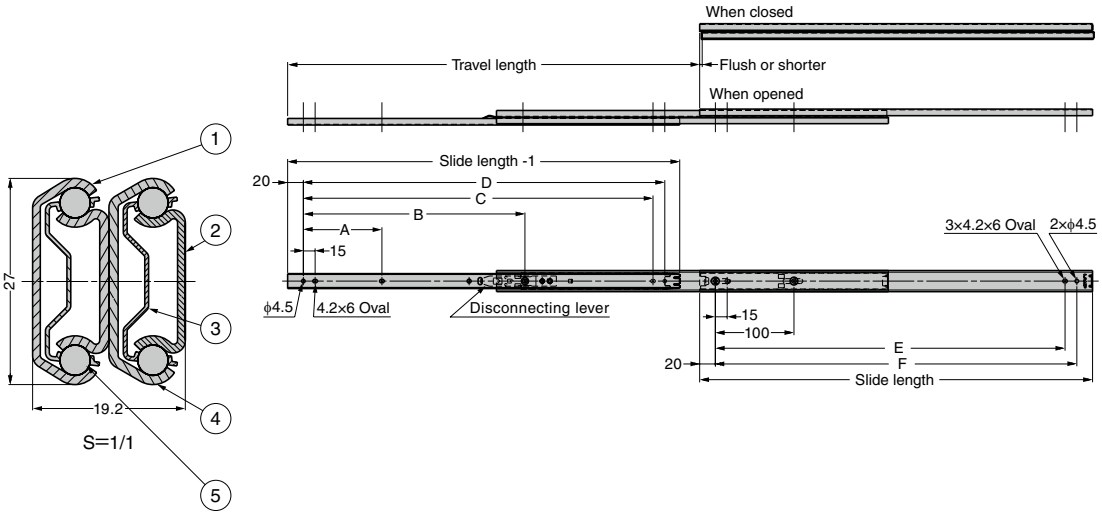
LOAD CAPACITY 118~177 N/pair | L=R | DETACH | SUS



- Full extension (3 members).
- The drawer is detachable by lifting the disconnecting lever.

[Remarks]

- Be sure to read the "Cautions" 1.
- Polyamide is used inside the slide.
- Noted that contact noise may be produced when the disconnecting lever passes over the leaf spring on the outer member.



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Intermediate Member		
⑤	Balls		–

Sold in pairs (2pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pairs)	Carton (pairs)
G	3D	190-116-712	273SL-200	200	221	–	135	–	–	145	160	177	18	0.6	10	–
G	3D	190-116-713	273SL-250	250	280		143.5	195	210	195	210	167	17	0.7	10	–
G	3D	190-116-714	273SL-300	300	327	100	188	245	260	245	260	157	16	0.8	10	–
G	3D	190-116-715	273SL-350	350	376		211.5	295	310	295	310	147	15	1	10	–
G	3D	190-116-716	273SL-400	400	426		236	345	360	345	360	137	14	1.1	10	–
G	3D	190-116-717	273SL-450	450	478		261.5	395	410	395	410	128	13	1.2	10	–
G	3D	190-116-718	273SL-500	500	524		282	445	460	445	460	118	12	1.4	10	–

Refer to 1 : P.399

3/4 EXTENSION SLIDE SNS35S

LOAD CAPACITY 245~481 N/pair | L=R | SUS



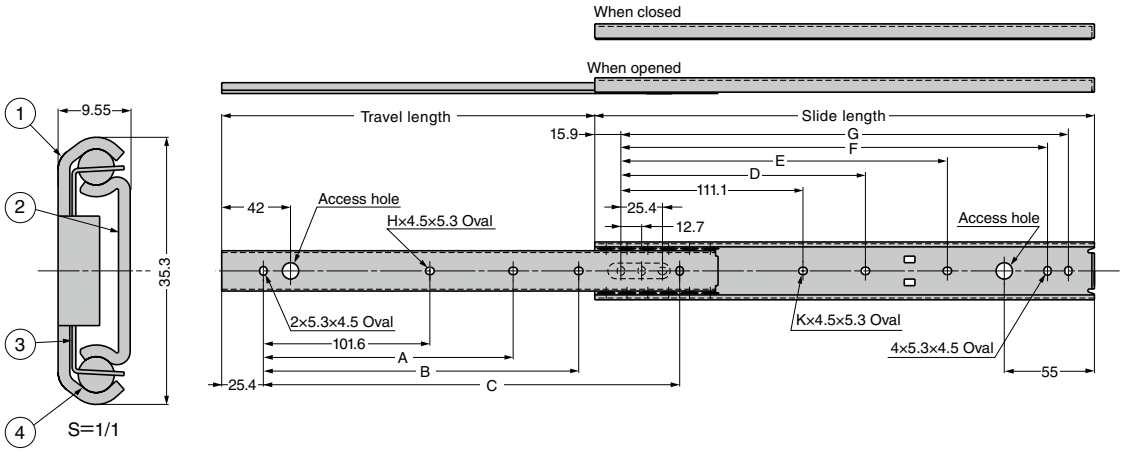
●3/4 extension (2 members).

[Remarks]

●Be sure to read the "Cautions" 1.

[Recommended Screws]

●M4 pan head screw or nominal 4 pan head tapping screw



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls	Stainless Steel (SUS440)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	K	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-191	SNS35S-30	304.8	228.6	–	152.4	254	–	149.2	260.3	273	2	3	481	49	0.31	40	–
G	3D	190-110-192	SNS35S-35	355.6	279.4		203.2	304.8		200	311.1	323.8			461	47	0.36	40	–
G	3D	190-110-193	SNS35S-40	406.4	304.8		254	355.6		250.8	361.9	374.6			422	43	0.41	40	–
G	3D	190-110-194	SNS35S-45	457.2	330.2	203.2	304.8	406.4	212.7	301.6	412.7	425.4	3	4	402	41	0.46	40	–
G	3D	190-110-195	SNS35S-50	508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2			363	37	0.51	40	–
G	3D	190-110-196	SNS35S-55	558.8	406.4	254	406.4	508	263.5	403.2	514.3	527			333	34	0.56	40	–
G	3D	190-110-197	SNS35S-60	609.6	431.8	279.4	457.2	558.8	288.9	454	565.1	577.8			294	30	0.61	40	–
G	3D	190-110-198	SNS35S-65	660.4	482.6	304.8	508	609.6	314.3	504.8	615.9	628.6			265	27	0.66	40	–
G	3D	190-110-199	SNS35S-70	711.2	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4			245	25	0.71	40	–

Refer to 1 : P.399

FULL EXTENSION SLIDE SNS35D

LOAD CAPACITY 441~588 N/pair | L=R | SUS



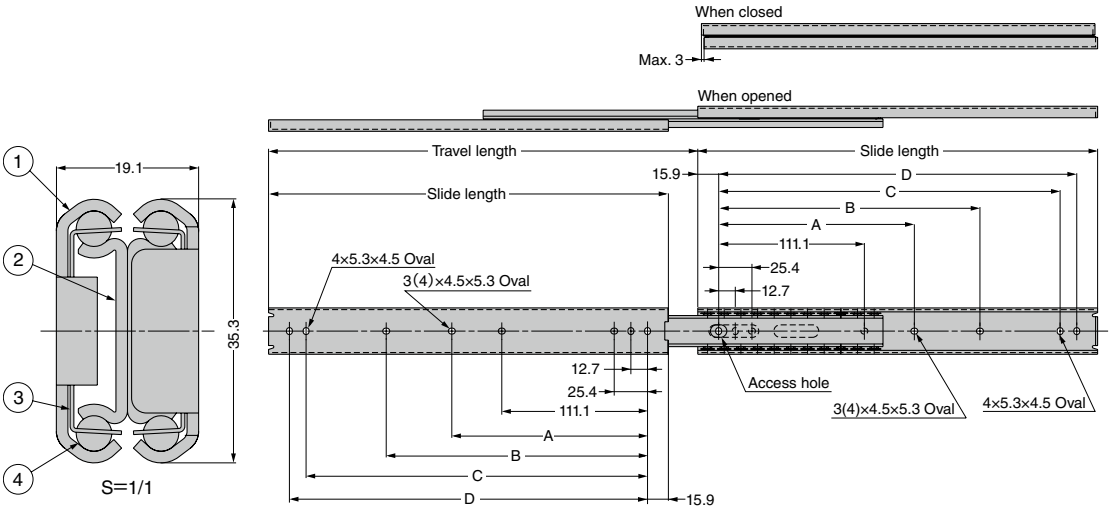
●Full extension (3 members).

[Remarks]

●Be sure to read the "Cautions" 1.

[Recommended Screws]

●M4 pan head screw or nominal 4 pan head tapping screw



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls	Stainless Steel (SUS440)	–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-200	SNS35D-30	304.8	327.2	–	149.2	260.3	273	588	60	0.62	10	–
G	3D	190-110-201	SNS35D-35	355.6	377.9		200	311.1	323.8	579	59	0.72	10	–
G	3D	190-110-202	SNS35D-40	406.4	428.7		250.8	361.9	374.6	559	57	0.82	10	–
G	3D	190-110-203	SNS35D-45	457.2	479.5	212.7	301.6	412.7	425.4	549	56	0.92	10	–
G	3D	190-110-204	SNS35D-50	508	530.3	238.1	352.4	463.5	476.2	530	54	1.03	10	–
G	3D	190-110-205	SNS35D-55	558.8	580.3	263.5	403.2	514.3	527	500	51	1.13	10	–
G	3D	190-110-206	SNS35D-60	609.6	631.9	288.9	454	565.1	577.8	481	49	1.23	10	–
G	3D	190-110-207	SNS35D-65	660.4	682.7	314.3	504.8	615.9	628.6	461	47	1.33	10	–
G	3D	190-110-208	SNS35D-70	711.2	733.5	339.7	555.6	666.7	679.4	441	45	1.43	10	–

Refer to 1 : P.399

SUGATSUNE

FULL EXTENSION SLIDE SNS35W

LOAD CAPACITY 355~623 N/pair | L=R | DETACH | HOLD OPENED | SUS



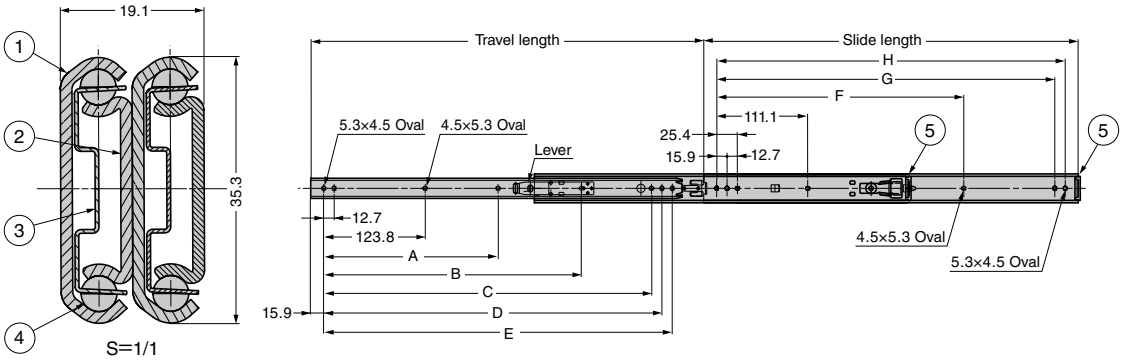
- Full extension (3 members).
- The drawer is detachable by lifting the lever.
- The drawer can be held in fully opened position.

[Remarks]

- Be sure to read the “Cautions” 1.
- Some parts of this product are made of plastic.

[Recommended Screws]

- M4 pan head screw or nominal 4 pan head tapping screw



No.	Part Name	Material	Finish / Colour
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls	Stainless Steel (SUS440)	–
⑤	Bumper	Elastomer (TPE)	Black

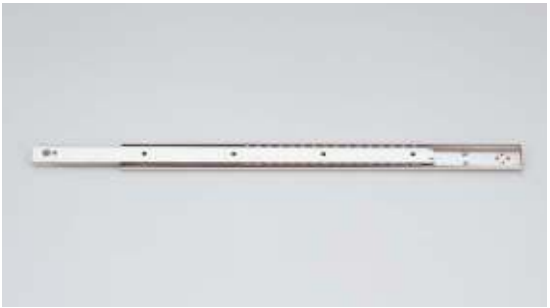
Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-112-231	SNS35W-30	304.8	327.2			–	260.3	273		260.3	273	623	62	0.78	10	–
G	3D	190-112-232	SNS35W-35	355.6	377.9	–	–	298.4	311.1	323.8	–	311.1	323.8	586	59	0.903	10	–
G	3D	190-112-233	SNS35W-40	406.4	428.7			349.2	361.9	374.6	250.8	361.9	374.6	555	56	1.028	10	–
G	3D	190-112-234	SNS35W-45	457.2	479.5	212.7		400	412.7	425.4	301.6	412.7	425.4	516	52	1.151	10	–
G	3D	190-112-235	SNS35W-50	508	530.3	238.1	365.1	450.8	463.6	476.2	352.4	463.6	476.2	475	48	1.275	10	–
G	3D	190-112-236	SNS35W-55	558.8	581.2	263.5	415.9	501.6	514.3	527	403.2	514.3	527	444	44	1.399	10	–
G	3D	190-112-237	SNS35W-60	609.6	631.9	288.9	466.7	552.4	565.1	577.8	454	565.1	577.8	413	41	1.523	10	–
G	3D	190-112-238	SNS35W-65	660.4	682.7	314.3	517.5	603.2	615.9	628.6	504.8	615.9	628.6	382	38	1.647	10	–
G	3D	190-112-239	SNS35W-70	711.2	733.5	339.7	568.3	654	666.7	679.4	555.6	666.7	679.4	355	36	1.77	10	–

Refer to 1 : P.399

3/4 EXTENSION SLIDE ESR1

LOAD CAPACITY 245~481 N/pair | TEST METHOD 12 | L=R | FRICTION | DETACH | SUS



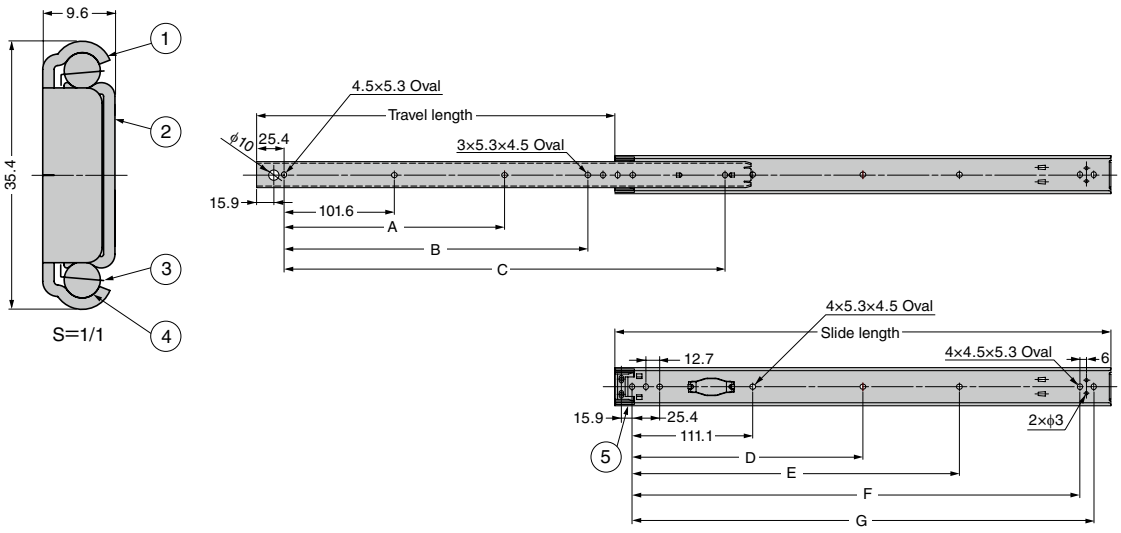
- 3/4 extension (2 members).
- The drawer can be stopped at any position by the resistance of the ball retainer. The drawer can be detached by pulling outward.

[Remarks]

- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.

[Recommended Screws]

- M4 binding head screw or M4 truss head screw



No.	Part Name	Material	Finish / Colour
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls		–
⑤	Guide	POM	White

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-301	ESR1-12	304.8	228.6	–	152.4	254	–	149.2	260.3	273	481	49	0.33	30	–
G	3D	190-111-302	ESR1-14	355.6	279.4		203.2	304.8		200	311.1	323.8	461	47	0.38	30	–
G	3D	190-111-303	ESR1-16	406.4	304.8		254	355.6		250.8	361.9	374.6	422	43	0.44	30	–
G	3D	190-111-304	ESR1-18	457.2	330.2	203.2	304.8	406.4	212.7	301.6	412.7	425.4	402	41	0.49	30	–
G	3D	190-111-305	ESR1-20	508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2	363	37	0.55	30	–
G	3D	190-111-306	ESR1-22	558.8	406.4	254	406.4	508	263.5	403.2	514.3	527	333	34	0.60	30	–
G	3D	190-111-307	ESR1-24	609.6	432.8	279.4	457.2	558.8	288.9	454	565.1	577.8	294	30	0.65	30	–
G	3D	190-111-308	ESR1-26	660.4	482.6	304.8	508	609.6	314.3	504.8	615.9	628.6	265	27	0.71	30	–
G	3D	190-111-309	ESR1-28	711.2	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	245	25	0.77	30	–

Refer to 1 : P.399

SUGATSUNE

3/4 EXTENSION SLIDE ESR13

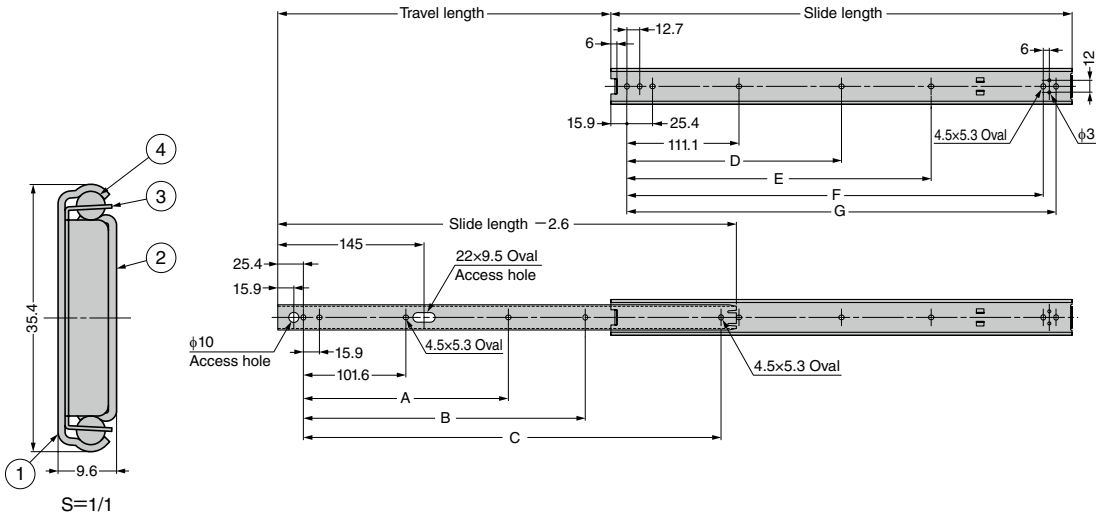
LOAD CAPACITY 245~481 N/pair | L=R | HOLD CLOSED | SUS



- 3/4 extension (2 members).
- The drawer can be held in fully closed position.

[Remarks]

- Be sure to read the “Cautions” 1.



S=1/1

No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls		–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-345	ESR13-12	304.8	228.6	–	177.8	258	–	149.2	260.3	273	481	49	0.33	30	–
G	3D	190-111-346	ESR13-14	355.6	279.4		228.6	308.8		200	311.1	323.8	461	47	0.38	30	–
G	3D	190-111-347	ESR13-16	406.4	304.8		254	359.6		250.8	361.9	374.6	422	43	0.42	30	–
G	3D	190-111-348	ESR13-18	457.2	330.2	203.2	279.4	410.4	212.7	301.6	412.7	425.4	402	41	0.49	30	–
G	3D	190-111-349	ESR13-20	508	381	228.6	330.2	461.2	238.1	352.4	463.5	476.2	363	37	0.54	30	–
G	3D	190-111-350	ESR13-22	558.8	406.4		355.6	512	263.5	403.2	514.3	527	333	34	0.59	30	–
G	3D	190-111-351	ESR13-24	609.6	431.8	254	381	562.8	288.9	454	565.1	577.8	294	30	0.63	30	–
–	3D	190-111-352	ESR13-26	660.4	482.6		431.8	613.6	314.3	504.8	615.9	628.6	265	27	0.68	30	–
–	3D	190-111-353	ESR13-28	711.2	508	279.4	457.2	664.4	339.7	555.6	666.7	679.4	245	25	0.75	30	–

Refer to 1 : P.399

3/4 EXTENSION SLIDE ESR8

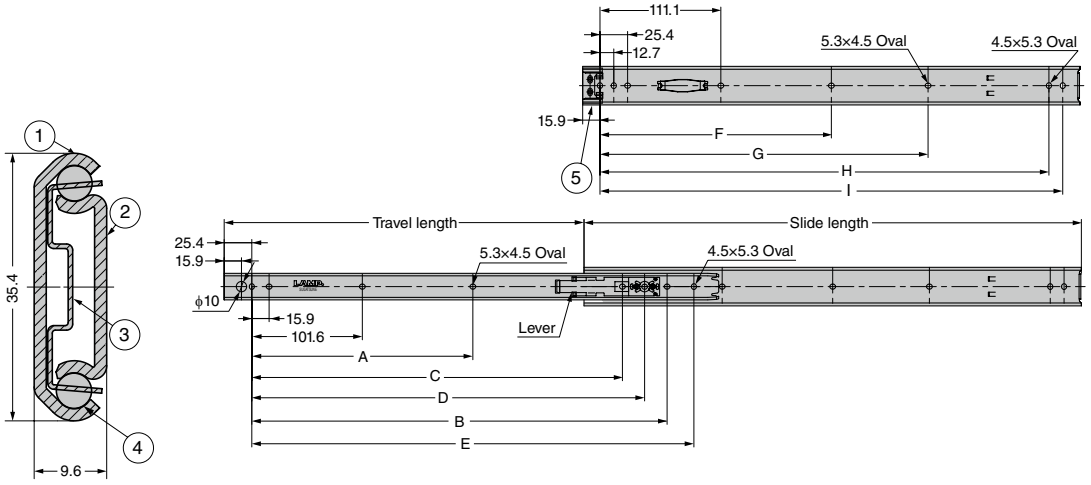
LOAD CAPACITY 245~481 N/pair | L=R | LOCK OPENED | DETACH | SUS



- 3/4 extension (2 members).
- The drawer can be held in fully opened position. Released by lever operation.
- The drawer is detachable by lifting the lever.

[Remarks]

- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.



Side view (S=1/1)

No.	Part Name	Material	Finish / Colour
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls		–
⑤	Guide	POM	White

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-327	ESR8-12	304.8	228.6	152.4	–	–	259.5	–	–	149.2	260.3	273	481	49	0.3	30	–
G	3D	190-111-328	ESR8-14	355.6	279.4	203.2			310.3			200	311.1	323.8	461	47	0.4	30	–
G	3D	190-111-329	ESR8-16	406.4	304.8				335.7	355.6		250.8	361.9	374.6	422	43	0.4	30	–
G	3D	190-111-330	ESR8-18	457.2	330.2			340.7	366.1	406.4	212.7	301.6	412.7	425.4	402	41	0.5	30	–
G	3D	190-111-331	ESR8-20	508	381	228.6		391.5	411.9	457.2	238.1	352.4	463.5	476.2	363	37	0.5	30	–
G	3D	190-111-332	ESR8-22	558.8	406.4	254		416.9	437.3	508	263.5	403.2	514.3	527	333	34	0.6	30	–
G	3D	190-111-333	ESR8-24	609.6	432.8	279.4		443.3	463.7	558.8	288.9	454	565.1	577.8	294	30	0.6	30	–
G	3D	190-111-334	ESR8-26	660.4	482.6	304.8		493.1	513.5	609.6	314.3	504.8	615.9	628.6	265	27	0.7	30	–
G	3D	190-111-335	ESR8-28	711.2	508	330.2	558.9	538.9	558.8	660.4	339.7	555.6	666.7	679.6	245	25	0.7	30	–

Refer to 1 : P.399

FULL EXTENSION SLIDE ESR7

LOAD CAPACITY 355~623 N/pair | L=R | LOCK OPENED | DETACH | SUS



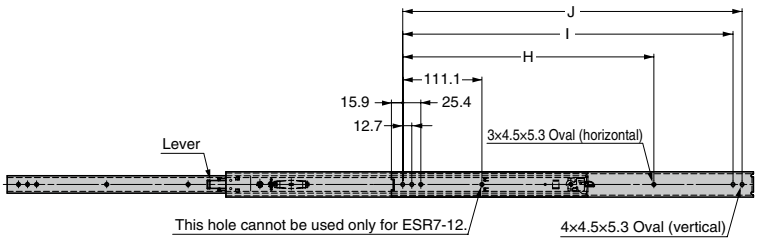
- Full extension (3 members).
- The drawer can be held in fully opened position. Released by lever operation.
- The drawer is detachable by lifting the lever.

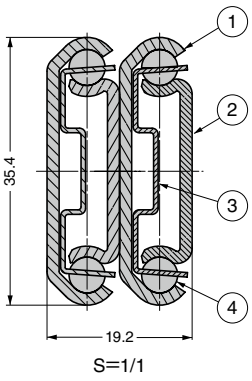
[Remarks]

- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.

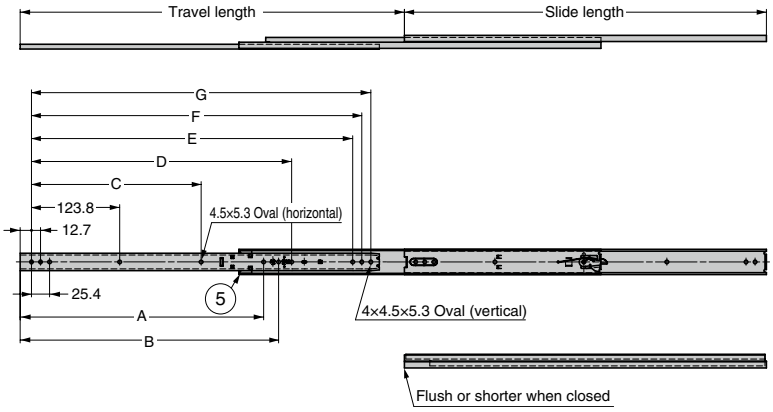
[Recommended Screws]

- M4 binding head screw or M4 truss head screw





S=1/1



For mounting holes of inner and outer members, the first and second from both ends are vertical oval holes. The rest are horizontal oval holes.

No.	Part Name	Material	Finish / Colour
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	Balls		–
⑤	Guide	POM	White

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	J	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-318	ESR7-12	304.8	336	228	248.4				260.3	273		260.3	273	623	63.5	0.62	16	–
G	3D	190-111-319	ESR7-14	355.6	386.8	278.8	299.2	–		–	311.1	323.8	–	311.1	323.8	586	59.8	0.73	16	–
G	3D	190-111-320	ESR7-16	406.4	437.6	291.5	311.9		–	349.2	361.9	374.6	250.8	361.9	374.6	555	56.6	0.84	16	–
G	3D	190-111-321	ESR7-18	457.2	488.4	316.9	337.3	212.7		400	412.7	425.4	301.6	412.7	425.4	516	52.6	0.94	16	–
G	3D	190-111-322	ESR7-20	508	539.2	342.3	362.7	238.1		450.8	463.5	476.2	352.4	463.5	476.2	476	48.5	1.06	16	–
G	3D	190-111-323	ESR7-22	558.8	590	367.7	388.1	263.5	415.9	501.6	514.3	527	403.2	514.3	527	444	45.3	1.17	16	–
G	3D	190-111-324	ESR7-24	609.6	640.8	393.1	413.5	288.9	466.7	552.4	565.1	577.8	454	565.1	577.8	413	42.1	1.27	16	–
G	3D	190-111-325	ESR7-26	660.4	691.6	418.5	438.9	314.3	517.5	603.2	615.9	628.6	504.8	615.9	628.6	383	39	1.38	16	–
G	3D	190-111-326	ESR7-28	711.2	742.4	443.9	464.3	339.7	568.3	654	666.7	679.4	555.6	666.7	679.4	355	36.2	1.49	16	–

Refer to 1 : P.399

FULL EXTENSION SLIDE ESR3

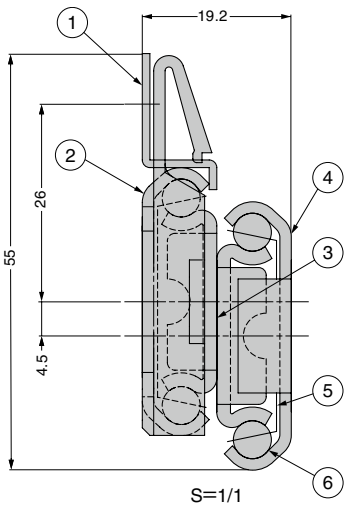
LOAD CAPACITY 422~637 N/pair | DETACH | BUMPER | SUS

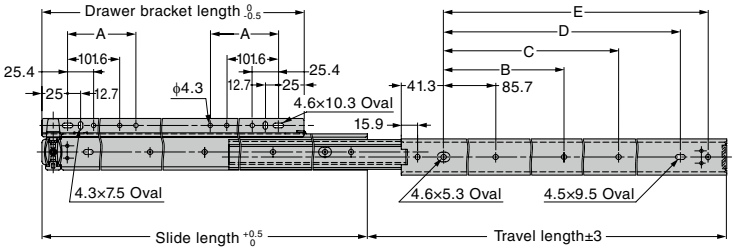


- Full extension (3 members).
- The drawer can be easily detached by using drawer bracket.

[Remarks]
- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.

[Recommended Screws]
- M4 binding head screw





Right-handed shown.

No.	Part Name	Material	Finish
①	Drawer Bracket	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Intermediate Member		
④	Outer Member		
⑤	Retainer		
⑥	Balls		–

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	Drawer Bracket Length	A	B	C	D	E	Outer Member Holes	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-115-206	ESR3-12	304.8	348.4	273	–	–	123.1	218.3	245.3	6	637	65	1.35	6	–
G	3D	190-115-207	ESR3-14	355.6	399.2				173.9	269.1	296.1		598	61	1.56	6	–
G	3D	190-115-208	ESR3-16	406.4	450	375			224.7	319.9	346.9				1.83	6	–
G	3D	190-110-413	ESR3-18	457.2	500.8			187.3	275.5	370.7	397.7	7	549	56	2.05	6	–
G	3D	190-115-210	ESR3-20	508	551.6			212.7	326.3	421.5	448.5		510	52	2.25	6	–
G	3D	190-115-211	ESR3-22	558.8	602.4	527	177.8	238.1	377.1	472.3	499.3				2.57	6	–
G	3D	190-115-212	ESR3-24	609.6	653.2			263.5	427.9	523.1	550.1		471	48	2.76	6	–
G	3D	190-110-417	ESR3-26	660.4	704	575.3		288.9	478.7	573.9	600.9		422	43	2.99	6	–
G	3D	190-115-214	ESR3-28	711.2	754.8			314.3	529.5	624.7	651.7				3.19	6	–

Refer to 1 : P.399

SUGATSUNE

FULL EXTENSION SLIDE ESR4658

LOAD CAPACITY 314~490 N/pair | L=R | DETACH | HOLD CLOSED | SUS



- Full extension (3 members).
- The drawer is detachable by lifting the lever.

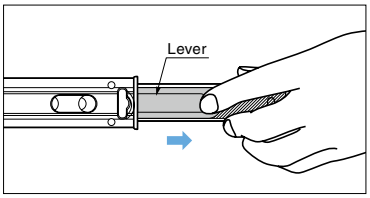
[Remarks]

- Be sure to read the "Cautions" 1.
- Some parts of this product are made of plastic.

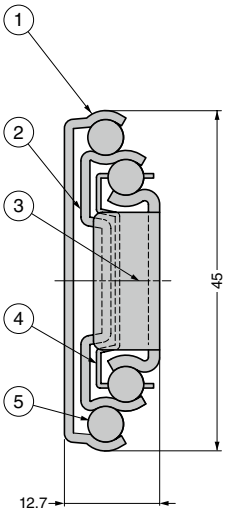
[Recommended Screws]

- For metal: M4 screw (except for countersunk head)
- For wood: nominal 4 tapping screw (except for countersunk head)

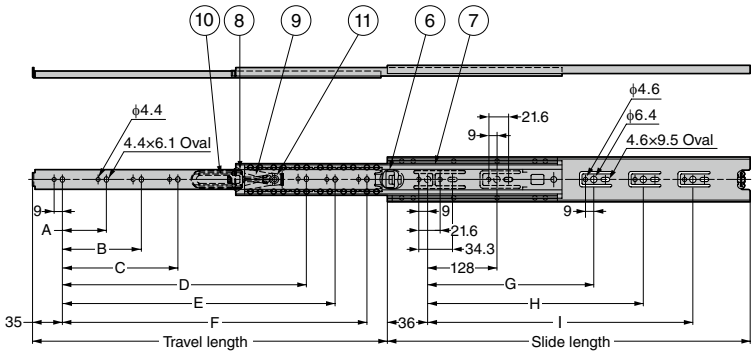
[Easy to Detach]



The drawer can be detached by pulling the lever in the direction of the arrow.



S=1/1



No.	Part Name	Material	Finish/Colour
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Intermediate Member		
③	Inner Member		
④	Retainer		
⑤	Balls		–
⑥	Rubbing Prevention Bumper	PP	Natural
⑦	Retainer	PE	Grey
⑧	Guide Block	PA	Black
⑨	Lever 1	POM	
⑩	Lever 2	PE	
⑪	Rivet	Stainless Steel (SUS302)	–

Sold in pairs (2 pcs).

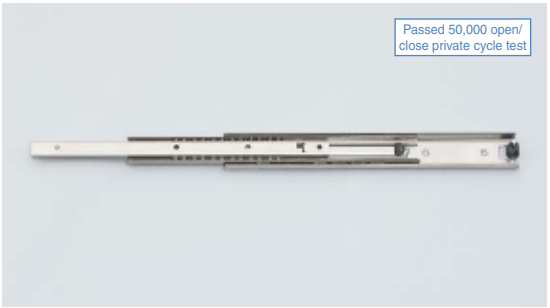
RoHS	CAD	Item Code	Item Name	Old Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-110-706	ESR4658-14	4658-14	350	356	–	128	–	416	544	292	224	–	–	490	50	0.99	10	–
G	3D	190-110-707	ESR4658-16	4658-16	400	406			320			342		320		470	48	1.13	10	–
G	3D	190-110-708	ESR4658-18	4658-18	450	457	128					392		352		441	45	1.28	10	–
G	3D	190-110-709	ESR4658-20	4658-20	500	508			352			442		416		421	43	1.42	10	–
G	3D	190-110-710	ESR4658-22	4658-22	550	559			–			492		352	448	402	41	1.57	10	–
G	3D	190-110-711	ESR4658-24	4658-24	600	610						542			480	382	39	1.71	10	–
G	3D	190-110-712	ESR4658-26	4658-26	650	660		224				592			544	353	36	1.86	10	–
G	3D	190-110-713	ESR4658-28	4658-28	700	711				448		642				314	32	2	10	–

Refer to 1 : P.399

※Item name has been revised.

FULL EXTENSION SLIDE 5302S For Heavy Duty

LOAD CAPACITY 627~1137 N/pair | L=R | HOLD CLOSED | SUS



- Full extension (3 members).
- The drawer can be held in fully closed position.

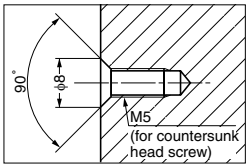
[Remarks]

- Some parts of this product are made of plastic.
- The head of mounting screw (countersunk head screw) may protrude from the slide. Please make countersink processing as shown below.

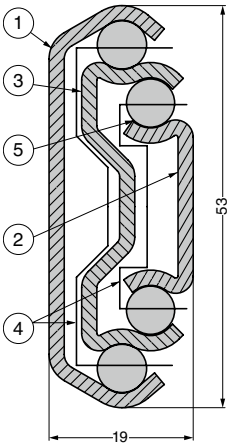
[Recommended Screws]

- nominal 5 countersunk head tapping screw or M5 countersunk head screw

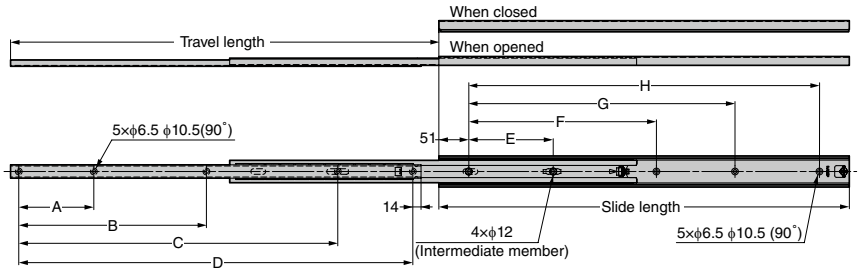
[Cut Out Dimensions]



The same processing for outer member and inner member.



S=1/1



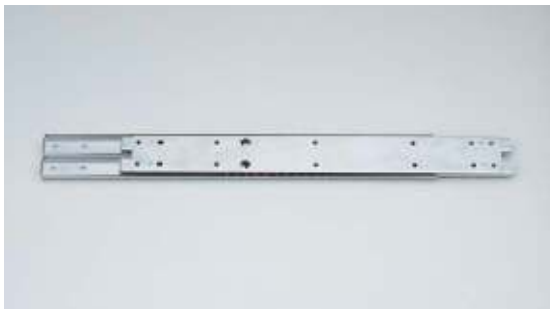
No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Intermediate Member		
④	Retainer		
⑤	Balls		–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-112-730	5302S-300	300	334	128	256	–		112	192	–		1137	116	0.86	20	–
G	3D	190-112-731	5302S-350	350	384	160	320			144	240			1088	111	1	20	–
G	3D	190-112-732	5302S-400	400	433		256	352			224	304		970	99	1.14	16	–
G	3D	190-112-733	5302S-450	450	482	128	288	416	–	80	272	352	–	941	96	1.28	16	–
G	3D	190-112-734	5302S-500	500	532			448		112		384		902	92	1.43	10	–
G	3D	190-112-735	5302S-550	550	580	192	320	512			288	448		843	86	1.57	10	–
G	3D	190-112-736	5302S-600	600	630	208	336	544			336	496		794	81	1.71	10	–
–	3D	190-112-737	5302S-650	650	677	128	288	480	608		272	416	544	745	76	1.85	10	–
G	3D	190-112-738	5302S-700	700	728		336	544	672	144	304	448	592	696	71	2	8	–
G	3D	190-112-739	5302S-750	750	777	192	370	530	722	176	336	496	648	666	68	2.14	8	–
G	3D	190-112-740	5302S-800	800	826	224	388	548	772	192	384	576	688	627	64	2.28	8	–

3/4 EXTENSION SLIDE ESR5 For Heavy Duty

LOAD CAPACITY 785~1118 N/pair | L=R | SUS



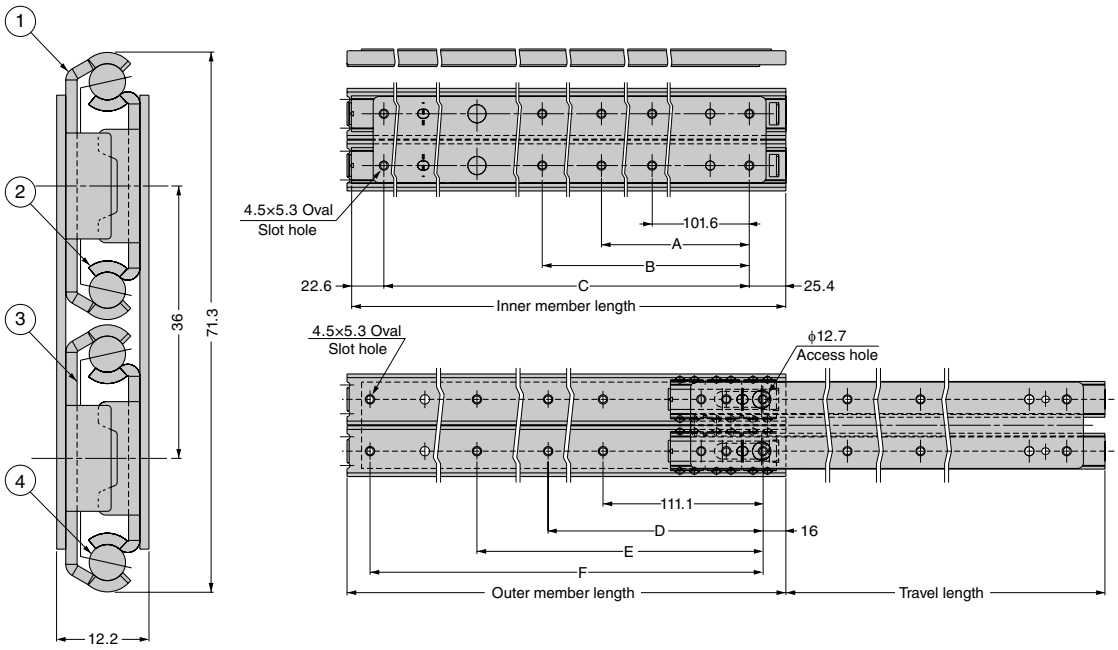
●3/4 extension (2 members).

[Remarks]

●Be sure to read the "Cautions" 1.

[Recommended Screws]

●M4 binding head screw or M4 truss head screw



S=1/1

No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Polished
②	Inner Member		
③	Retainer		Plain
④	Balls		

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Holes		Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pc)	Box (pcs)
												Inner Member	Outer Member				
G	3D	190-110-428	ESR5-12	305	221.8	–	152.4	254	–	149.2	273	6	8	1118	114	0.9	12
G	3D	190-110-429	ESR5-14	355.8	259.9		203.2	304.8		200	323.8			1069	109	1	12
G	3D	190-110-430	ESR5-16	406.6	298		254	355.6		250.8	374.6			1020	104	1.2	12
G	3D	190-110-431	ESR5-18	457.4	348.8	203.2	304.8	406.4	212.7	301.6	425.4		10	1000	102	1.3	12
G	3D	190-110-432	ESR5-20	508.2	361.5	228.6	355.6	457.2	238.1	352.4	476.2			971	99	1.6	12
G	3D	190-110-433	ESR5-22	559	425	254	406.4	508	263.5	403.2	527			922	94	1.7	12
G	3D	190-110-434	ESR5-24	609.8	450.4	279.4	457.2	558.8	288.9	454	577.8			873	89	1.8	12
G	3D	190-110-435	ESR5-26	660.6	463.1	304.8	508	609.6	314.3	504.8	628.6			843	86	1.9	12
G	3D	190-110-436	ESR5-28	711.4	501.2	330.2	558.8	660.4	339.7	555.6	679.4			785	80	2.1	12

Refer to 1 : P.399

FULL EXTENSION SLIDE ESR10 For Heavy Duty

LOAD CAPACITY 1785~2667 N/pair L=R SUS



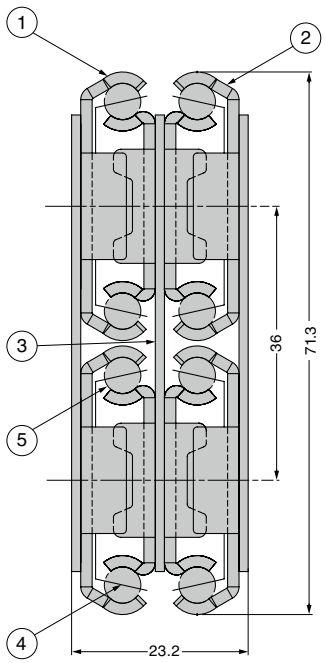
●Full extension (3 members).

[Remarks]

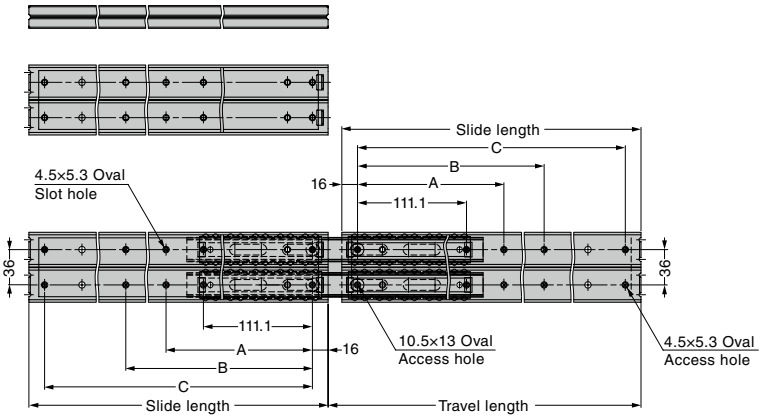
●Be sure to read the "Cautions" 1.

[Recommended Screws]

●M4 round head screw



S=1/1



No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Polished
②	Inner Member		
③	Intermediate Member		
④	Retainer		–
⑤	Balls		

Sold by piece.

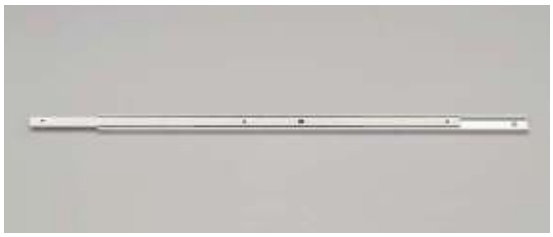
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pcs)	Carton (pcs)
G	3D	190-110-419	ESR10-12	305	319	–	149.2	273	2667	272	1.7	8	–
G	3D	190-110-420	ESR10-14	355.8	369.8		200	323.8	2628	268	1.9	8	–
G	3D	190-110-421	ESR10-16	406.6	420.6		250.8	374.6	2540	259	2.4	6	–
G	3D	190-110-422	ESR10-18	457.4	471.4	212.7	301.6	425.4	2452	250	2.5	6	–
G	3D	190-110-423	ESR10-20	508.2	522.2	238.1	352.4	476.2	2363	241	2.8	6	–
G	3D	190-110-424	ESR10-22	559	573	263.5	403.2	527	2246	229	3.1	6	–
G	3D	190-110-425	ESR10-24	609.8	623.8	288.9	454	577.8	2118	216	3.5	4	–
G	3D	190-110-426	ESR10-26	660.6	674.6	314.3	504.8	628.6	1961	200	3.8	4	–
G	3D	190-110-427	ESR10-28	711.4	725.4	339.7	555.6	679.4	1785	182	4	4	–

Refer to 1 : P.399

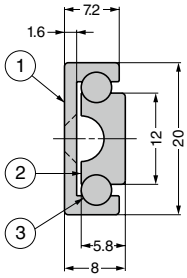
SUGATSUNE

3/4 EXTENSION SLIDE AR2 For Light Weight

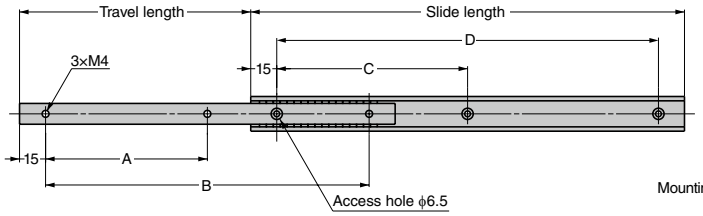
LOAD CAPACITY 80~150 N/pair L=R



- 3/4 extension (2 members).
- Small size and light weight.



S=1/1





Mounting hole of the outer member

No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Balls	Steel (SWCH)	–

Sold by piece.

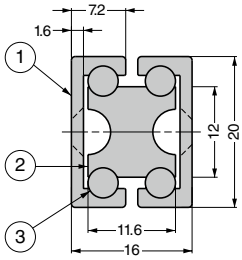
RoHS	CAD	Item Code	Item Name	Slide length	Travel length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-119-533	AR2-100	100	60	–	70	–	70	150	15.3	31	1000	–
G	3D	190-119-534	AR2-200	200	120	85	170	85	170	120	12.2	63	500	–
G	3D	190-119-535	AR2-300	300	180	135	270	135	270	100	10.2	76	250	–
G	3D	190-119-536	AR2-400	400	240	185	370	185	370	90	9.2	129	200	–
G	3D	190-119-537	AR2-500	500	300	235	470	235	470	80	8.2	161	200	–

FULL EXTENSION SLIDE AR3 For Light Weight

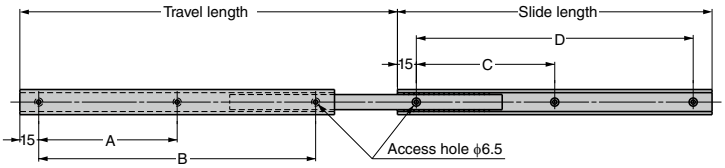
LOAD CAPACITY 30~110 N/pair L=R



- Full extension (3 members).
- Small size and light weight.



S=1/1





Mounting hole of the outer member

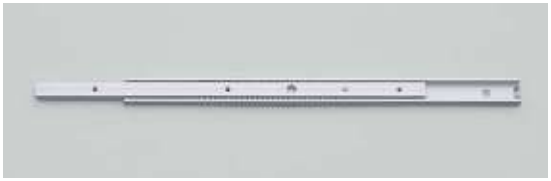
No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Balls	Steel (SWCH)	–

Sold by piece.

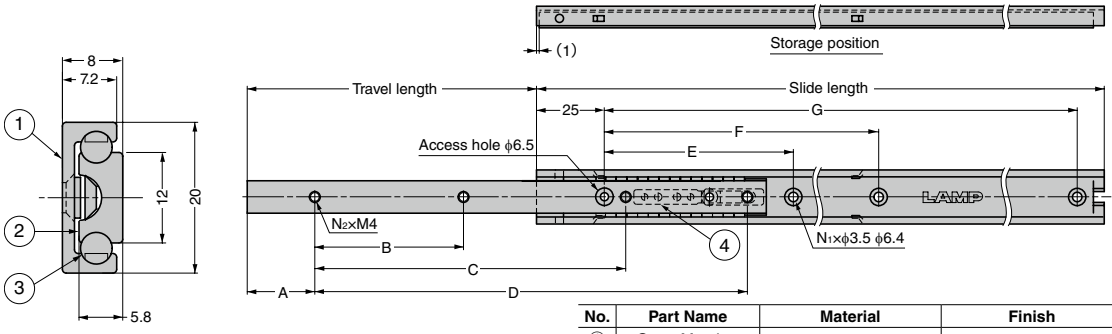
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-119-538	AR3-100	100	100	–	70	–	70	110	11.2	63	500	–
G	3D	190-119-539	AR3-200	200	223	85	170	85	170	90	9.2	128	250	–
G	3D	190-119-540	AR3-300	300	345	135	270	135	270	70	7.1	194	125	–
G	3D	190-119-541	AR3-400	400	460	185	370	185	370	50	5.1	260	100	–
G	3D	190-119-542	AR3-500	500	576	235	470	235	470	30	3.1	325	100	–

3/4 EXTENSION SLIDE AR2-K With Hold-out Detent

LOAD CAPACITY 85~125 N/pair | HOLD OPENED | L=R



- 3/4 extension (2 members).
- The drawer can be held in fully opened position.
- Small size and light weight.



S=1/1

No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Balls	Steel (SWCH)	–
④	Detent Catch	Stainless Steel (SUS304)	

Sold by piece.

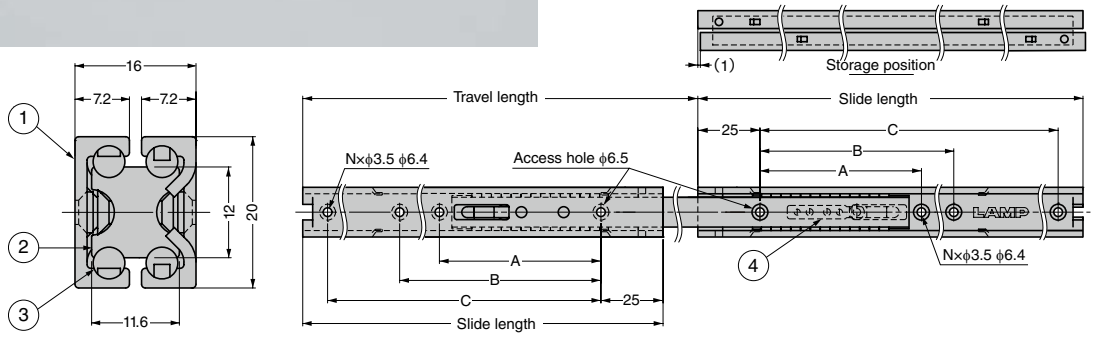
RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	N1	N2	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-112-251	AR2-K200	200	110	25	60	160	–	150	–	–	2	3	125	12.7	64	500	–
G	3D	190-112-252	AR2-K300	300	170	45	100	230		130	250		3		110	11.2	97	250	–
G	3D	190-112-253	AR2-K400	400	230		150	270	330		280	350	4	4	95	9.7	130	200	–
G	3D	190-112-254	AR2-K500	500	290		190	340	430			450			85	8.7	162	200	–

FULL EXTENSION SLIDE AR3-K With Hold-out Detent

LOAD CAPACITY 85~105 N/pair | HOLD OPENED | L=R



- Full extension (3 members).
- The drawer can be held in fully opened position.
- Small size and light weight.



S=1/1

No.	Part Name	Material	Finish
①	Outer Member	Aluminium Alloy	Anodised Silver
②	Inner Member		
③	Balls	Steel (SWCH)	–
④	Detent Catch	Stainless Steel (SUS304)	

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	N	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-112-255	AR3-K200	200	214	150	–	–	2	105	10.7	130	250	–
G	3D	190-112-256	AR3-K300	300	314	130	250		3	100	10.2	198	125	–
G	3D	190-112-257	AR3-K400	400	414		280	350	4	90	9.2	263	100	–
G	3D	190-112-258	AR3-K500	500	514			450		85	8.7	304	100	–

3/4 EXTENSION SLIDE RKA5

LOAD CAPACITY 147 N/pair

DETACH

CATCH



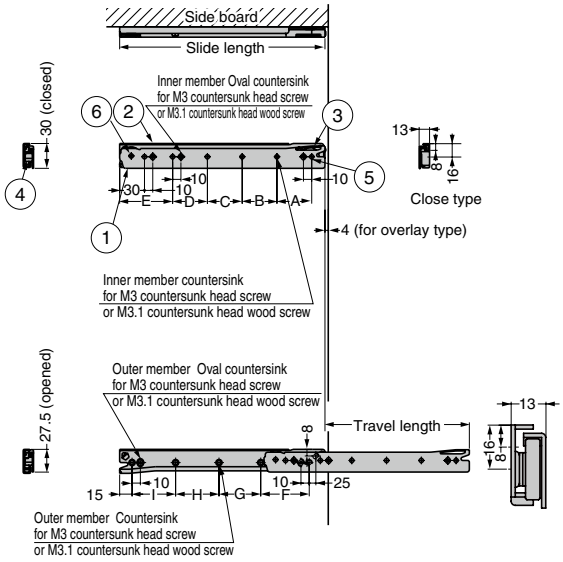
- 3/4 extension (2 members).
- R-shaped (inclined) slide ends allow complete closing.
- Urethane roller provides silent and smooth movement.
- Reduced in left and right backlash of the drawer.

[Remarks]

- Be sure to read the "Cautions" 1.

[Recommended Screws]

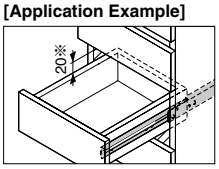
- M3/M3.5 countersunk head tapping screw or M3/M3.5 countersunk head screw



Right-handed shown.
(Right inner member: Close type)

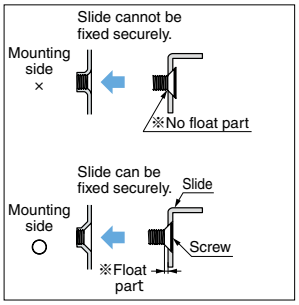
Side view of left slide shown.
(Left inner member: Open type)

[Application Example]



Dimension marked with ※ is that required for drawer attaching/detaching.

[Installing to Metal]



No.	Part Name	Material	Finish/Colour
①	Inner Member	Stainless Steel (SUS430)	–
②	Outer Member		
③	Roller	PUR/POM	Black/White
④	Rail Guide	POM	White
⑤	Roller Washer	Stainless Steel (SUS430)	–
⑥	Shaft		

Sold in pairs (2 pcs).

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	Inner Member A	B	C	D	E	Holes	Outer Member F	G	H	I	Holes	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
G	3D	190-110-170	RKA5-300 (SUS430)	296	205	165	–	–	–	115	6	112.5	112.5	–	–	6	147	15	0.48	20	–
G	3D	190-110-171	RKA5-350 (SUS430)	346	250	105	105			120	7	91.5	92	91.5		7			0.57	20	–
G	3D	190-110-172	RKA5-400 (SUS430)	396	295	127.5	127.5			125		108.5	108	108.5					0.65	20	–
G	3D	190-110-173	RKA5-450 (SUS430)	446	340	100	100	100		130	8	125	125	125					0.7	10	–
G	3D	190-110-174	RKA5-500 (SUS430)	496	380	113	114	113		140		106	106.5	106.5	106	8			0.82	10	–
G	3D	190-110-175	RKA5-550 (SUS430)	546	420	126.5	127	126.5		150		119	118.5	118.5	119				0.9	10	–
G	3D	190-110-176	RKA5-600 (SUS430)	596	460	105	105	105	105	160	9	131.5	131	131	131.5				0.98	10	–

Refer to 1 : P.399

MINI GUIDE RAIL & BLOCK MRS, MR



- Compact design, suitable for various places.
- Vibration-resistant simple structure.
- Plastic guide block with excellent wear resistance and sliding characteristics, unnecessary to apply grease or oil.
- Suitable for moving objects with low precision requirement.

[Applications]

- Vending machine, amusement equipment, cash machine, medical equipment, semiconductor equipment, material handling equipment, ship equipment, food processing equipment, washing machine, etc.

[Combination of Guide Rail & Block]



Guide rail

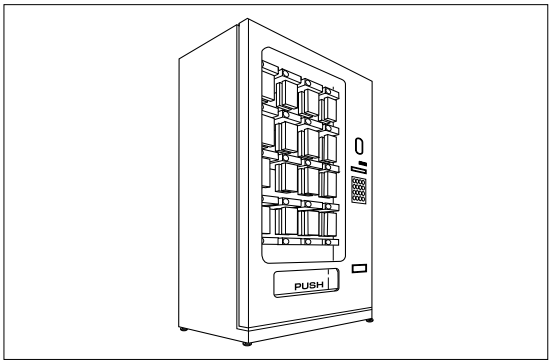




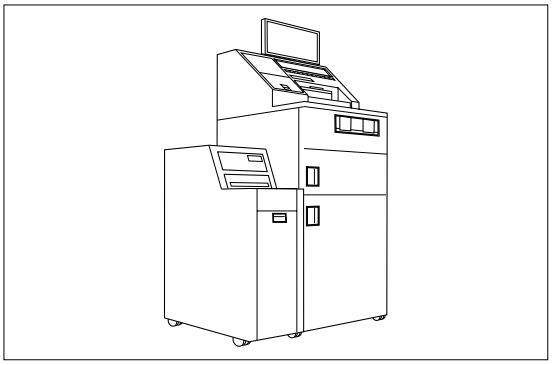


Guide block

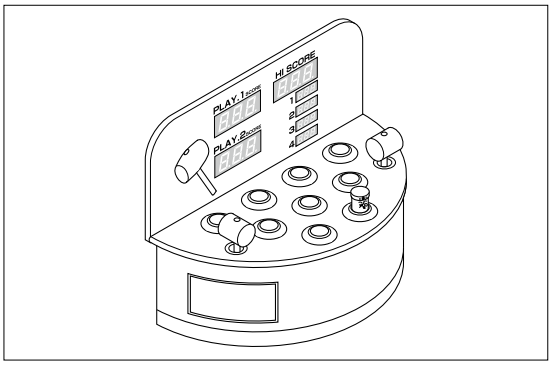
Refer to 1 for details on guide rail.
Refer to 2 for details on guide block.



Vending machine



Cash machine



Amusement equipment

Refer to 1 : P.440, 2 : P.441, 442

MINI GUIDE RAIL MRS



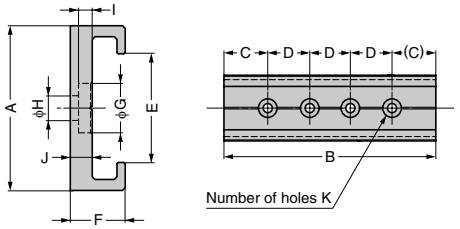
- Light and durable.
- Anodised finish for excellent corrosion resistance.
- Recyclable.
- Type with width of 15mm is newly launched.

[Recommended Screws]

- M3 hexagon socket button head screw or M3 pan head screw (for MRS15)
- M4 hexagon socket button head screw (for MRS20, 30)

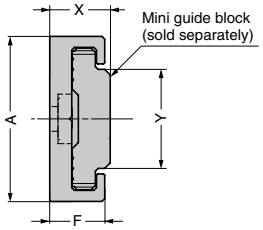
[Remarks]

- Mounting holes and both ends are not surface treated.



[How to Combine Guide Rails and Blocks]

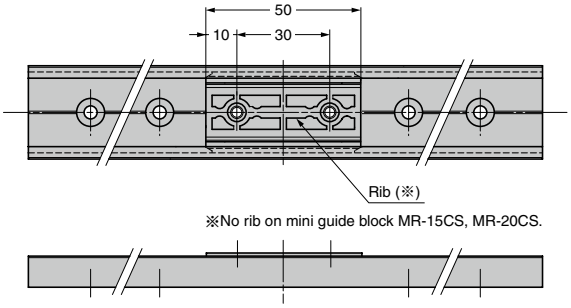
Mini guide block 1 is sold separately.



Mini Guide Rail			Mini Guide Block		
Item Name	A	F	Item Name	X	Y
MRS15	15	6	MR-15CS	7	7.8
MRS20	20	7.2	MR-20CS	8.2	11.2
MRS30	30	10	※MR-30CS	11	18

※Old item name : MR50CN

Combination example: Mini guide rail MRS30 & Mini guide block MR-30CN



※No rib on mini guide block MR-15CS, MR-20CS.

RoHS	CAD	Item Code	Item Name	A	B	C	D	E	F	G	H	I	J	K	Material	Finish	Weight (g/pc)	Guide Block	Box (pcs)	Carton (pcs)
G	3D	190-027-331	MRS15-100	15	100	25	50	8.7	6	6.5	3.5	1.8	2.8	2	Aluminium Alloy	Anodised Silver	14.5	MR-15CS	600	–
G	3D	190-027-332	MRS15-200		200									4			29		300	–
G	3D	190-027-333	MRS15-400		400									8			58		200	–
G	3D	190-027-334	MRS15-800		800									16			117		100	–
G	3D	190-111-491	MRS20-100	20	100			12.4	7.2	7.6	4.5		3	2			20	MR-20CS	200	–
G	3D	190-111-492	MRS20-200		200									4			40		200	–
G	3D	190-111-493	MRS20-400		400									8			80		100	–
G	3D	190-111-494	MRS20-800		800									16			160		80	–
G	3D	190-111-495	MRS20-2000		2000									40			400		30	–
G	3D	190-112-860	MRS30-100	30	100	10	40	19.8	10	8.5		2.5	4	3			39	MR-30CS	200	–
G	3D	190-112-861	MRS30-200		200	20								5			79		100	–
G	3D	190-112-862	MRS30-400		400									10			159		50	–
G	3D	190-112-863	MRS30-800		800									20			312		40	–
G	3D	190-112-864	MRS30-2000		2000									50			790		15	–

Refer to 1 : P.441, 442

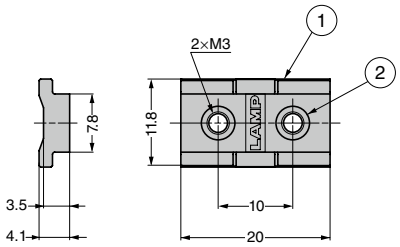
MINI GUIDE BLOCK MR-15CS



- No grease needed.
- Excellent chemical resistance.
- Flame resistance (UL94HB).
- Use with MRS15 mini guide rail.

[Remarks]

- Refer to "Rated Load Reference Values" 1 to prevent moment from being applied.

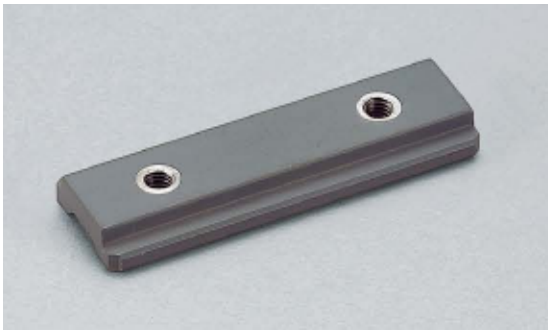


No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

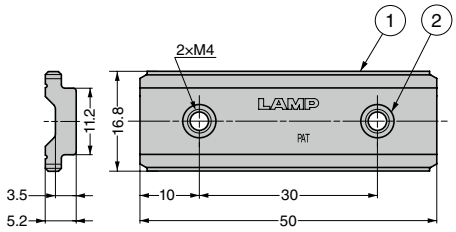
RoHS	CAD	Item Code	Item Name	Weight (g)	Guide Rail	Box (pcs)	Carton (pcs)
G	3D	190-027-335	MR-15CS	1	MRS15	150	3000

Refer to 1 : P.442

MINI GUIDE BLOCK MR-20CS



- No grease needed.
- Excellent chemical resistance.
- Flame resistance (UL94HB).
- Use with MRS20 mini guide rail.



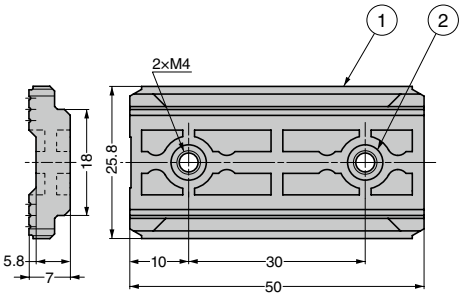
No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Weight (g)	Guide Rail	Box (pcs)	Carton (pcs)
G	3D	190-111-496	MR-20CS	6	MRS20	50	1000

MINI GUIDE BLOCK MR-30CS



- No grease needed.
- Excellent chemical resistance.
- Flame resistance (UL94HB).
- Use with MRS30 mini guide rail.



No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Old Item Name	Weight (g)	Guide Rail	Box (pcs)	Carton (pcs)
G	3D	190-111-489	MR-30CS	MR-50CN	7	MRS30	50	1000

※Item name has been revised.

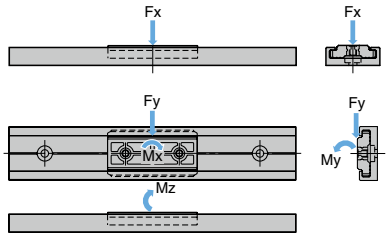
[Rated Load Reference Values] **The rated load refers to the limit load.**

- Max. load = Static rated load × Static safety coefficient
- Operating load = Max. load × Dynamic safety coefficient
- Max. moment = Static rated moment × Static safety coefficient
- Operating moment = Max. moment × Static safety coefficient

Use Conditions	Static Safety Coefficient	Dynamic Safety Coefficient
Low movement frequency with gentle movement	0.4~0.5	0.9~1.0
High movement frequency with smooth movement	0.3~0.4	0.6~0.8
High movement frequency with vibration or impact	0.2~0.3	0.3~0.5

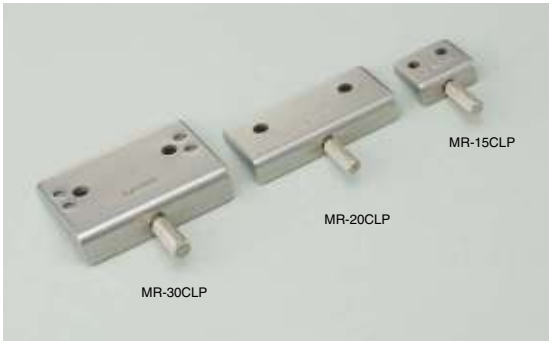
Item Name	Horizontal Static Rated Load Fx		Vertical Static Rated Load Fy		Vertical Static Rated Moment Mx	
	N	kgf	N	kgf	N·m	kgf·cm
MR-15CS	100	10.2	30	3.0	–	–
MR-20CS	300	30.6	175	17.8	3	30.6
MR-30CS	520	53.0	305	31.1	5	51.0

Item Name	Horizontal Static Rated Moment My		Horizontal Static Rated Moment Mz	
	N·m	kgf·cm	N·m	kgf·cm
MR-15CS	–	–	–	–
MR-20CS	1.5	15.3	1.5	15.3
MR-30CS	2.5	25.5	2.5	25.5



The calculation formula above is only a guide.
Please check with actual item.
When using MR-15CS, ensure that no moment is applied to it.

CLAMP MR-CLP For Mini Guide Rail MRS

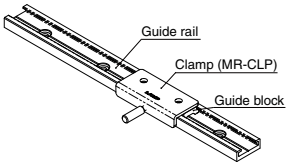


- Temporary fixing and positioning clamp for mini guide rail MRS 1.
- Push the side of rail to simply fix.
- Install to mini guide block MR 2 with screws.

[Remarks]

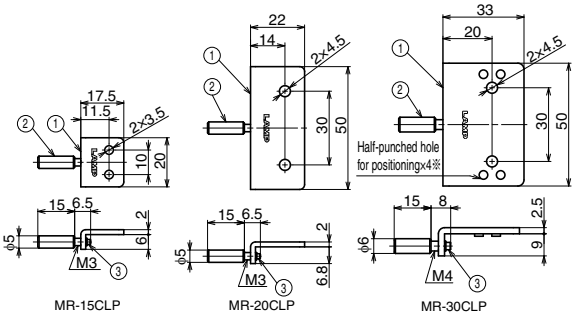
- Do not use under moment load.
- Fixing position may shift when an external force more than the retaining force (reference value) is applied.
- Knob tip may be damaged when the knob tightening torque is exceeded.
- Mounting screws not included.

[Application Example]

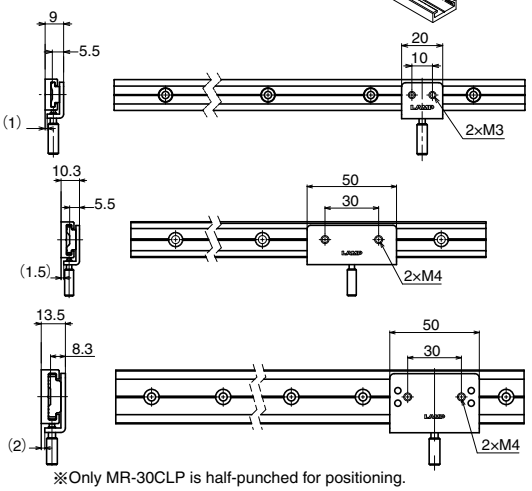


[Application Image]





MR-15CLP MR-20CLP MR-30CLP



※Only MR-30CLP is half-punched for positioning.

No.	Product Name	Material	Finish / Colour
①	Plate	Stainless Steel (SUS304)	Barrel Polished
②	Knob Body	Stainless Steel (SUS303)	Plain
③	Knob Tip	POM	Black

RoHS	CAD	Item Code	Item Name	Retaining N (Reference)	Knob Tightening Torque N·m	Weight (g)	Guide Block	Box (pcs)	Carton (pcs)
G	3D	190-035-310	MR-15CLP	Max. 7	Max. 0.05	8.6	MR-15CS	250	1000
G	3D	190-035-311	MR-20CLP	Max. 7	Max. 0.05	22.6	MR-20CS	50	200
G	3D	190-035-312	MR-30CLP	Max. 14	Max. 0.1	40.8	MR-30CS	50	200

Refer to 1 : P.440, 2 : P.441~ 442

MINI GUIDE RAIL & BLOCK MRS, MR



- Compact design, suitable for various places.
- Vibration-resistant simple structure.
- Plastic guide block with excellent wear resistance and sliding characteristics, unnecessary to apply grease or oil.
- Suitable for moving objects with low precision requirement.

[Applications]

- Vending machine, amusement equipment, cash machine, medical equipment, semiconductor equipment, material handling equipment, ship equipment, food processing equipment, and washing machine, etc.

[Combination of Guide Rail & Block]



Guide rail 1



Guide block 2

Refer to 1 : P.440, 2 : P.441~442

LINEAR ROLLER GUIDE RAIL LGB30



Guide rail, guide block and stopper are used in combination.
For combination drawings, refer to 1.



Mounting plate is available. Refer to 2 for details.

Refer to 1 : P.447, 2 : P.446, 3 4 : P.445

- Bearing roller used in guide block allows for smooth movement.
- LGB-30CM guide block features a noise-reducing design bearing roller using with plastic outer ring.
- Clearance between guide rail and guide block provides versatility.

[Applications]

- Vending machine, amusement machine, medical equipment, semiconductor equipment, food processing equipment, and washing machine, etc.



Guide rail LGB30 3



Guide block LGB-30CM 4



Stopper LGB30-ST 2



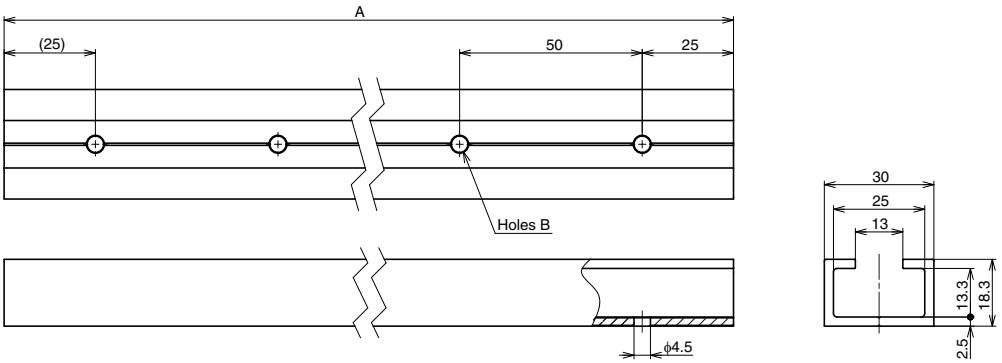
Mounting plate LGB30-P65-100 2

GUIDE RAIL LGB30



[Recommended Screws]
- Hexagon socket button head screw M4
- Binding head screw M4
- Binding head tapping screw 4

[Remarks]
- Mounting holes and both ends are not surface treated.
- Do not use under moment load.



RoHS	CAD	Item Code	Item Name	A	B	Material	Finish	Weight (g/pc)	Box (pcs)	Carton (pcs)
G	3D	190-036-273	LGB30-400	400	8	Aluminium Alloy	Anodised Silver	195	50	–
G	3D	190-036-274	LGB30-800	800	16			390	25	–
G	3D	190-036-275	LGB30-2000	2000	40			875	10	–

GUIDE BLOCK LGB-30CM Silent Type

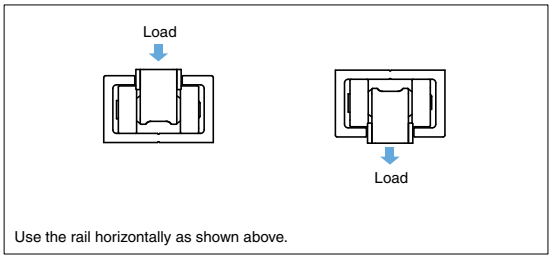
LOAD CAPACITY Max. 294N

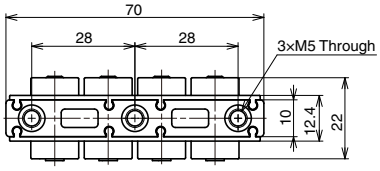


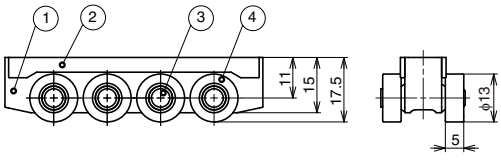
- Bearing roller used in guide block allows for smooth movement.
- Plastic outer ring type bearing roller.
- For guide rail LGB30 1 only.

[Remarks]
- Do not use under moment load.

[Load Direction]







No.	Product Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Clear Zinc Chromate (Trivalent)
②	Slide Protector	PE	Black
③	Roller Shaft	Stainless Steel (SUS304)	Plain
④	Roller	Steel/POM	Outer Ring: Black

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-036-158	LGB-30CM	Max. 294	Max. 30	76	200	2000

Refer to 1 : P.444

SUGATSUNE

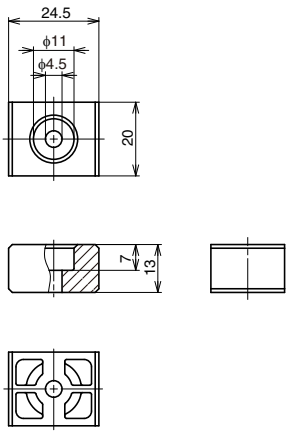
STOPPER LGB30-ST



- Used for preventing guide block LGB-30CM 1 from coming off.
- Install to guide rail LGB30 2 with screws. Mounting screws not included.

[Remarks]

- Do not use for stopping guide block collision.



RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-036-127	LGB30-ST	POM	Black	5.6	240	960

Refer to 1 : P.445, 2 : P.444

MOUNTING PLATE LGB30-P65-100

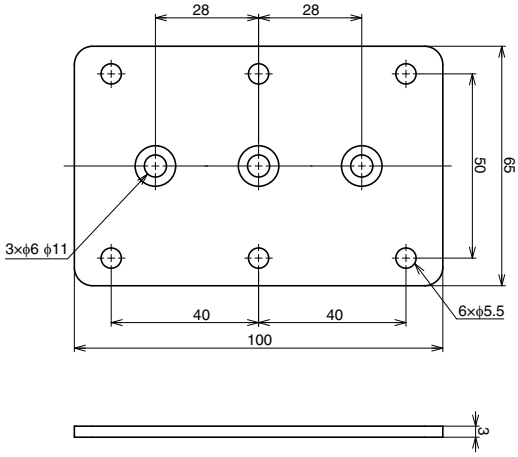


- Install to guide block LGB-30CM 1 with supplied screws.

[Parts Included]

Hexagon socket countersunk head screw M5 × 16 3 pcs (SUS)

[Dimensions]



[Installation]



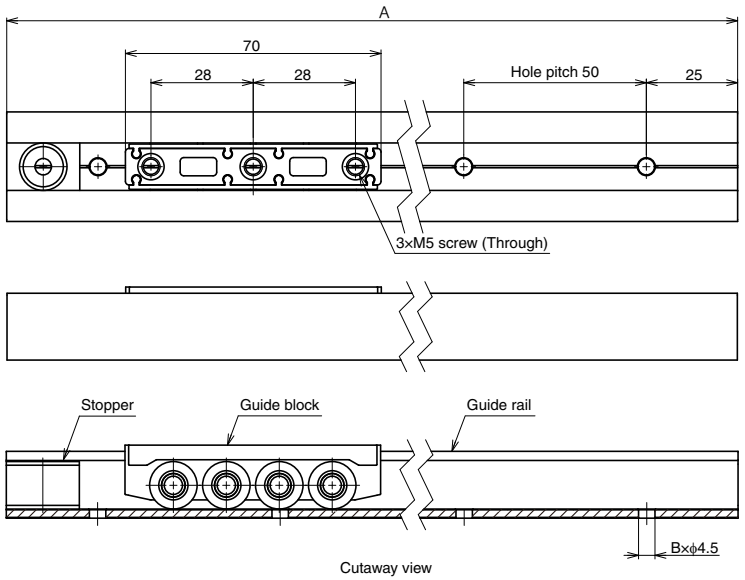
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-036-465	LGB30-P65-100	Stainless Steel (SUS304)	Barrel Polished	137	50	–

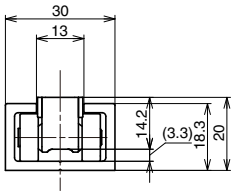
Refer to 1 : P.445

[Combination Drawings of Linear Roller Guide Rail LGB30]

Combination dimensions of guide rail, guide block and stopper

Combination example: Guide rail LGB30 1, guide block LGB-30CM 2 and stopper LGB30-ST 3





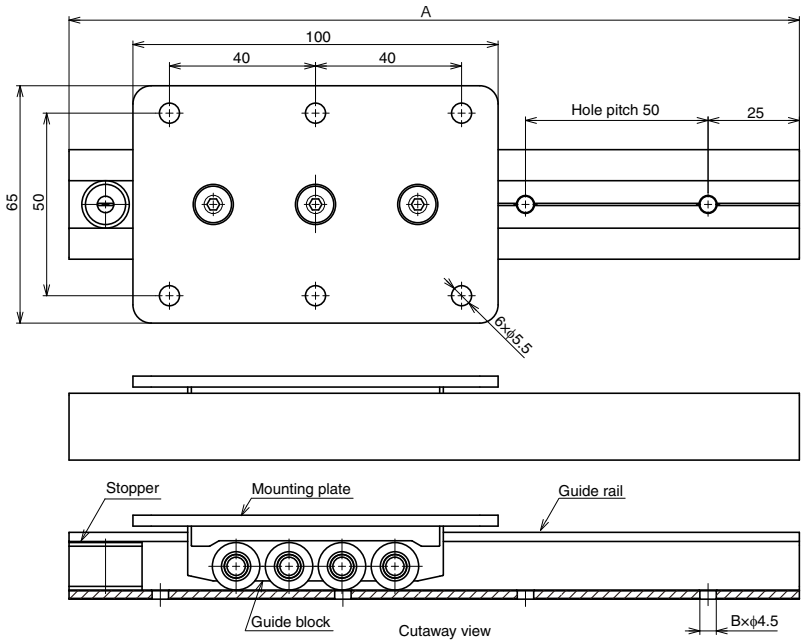
Guide rail

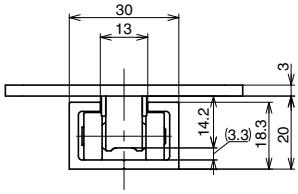
Item Name	Slide Length A	Holes B
LGB30-400	400	8
LGB30-800	800	16
LGB30-2000	2000	40

Refer to 1 : P.444, 2 : P.445, 3 : P.446

Combination dimensions of guide rail, guide block, stopper and mounting plate

Combination example: Guide rail LGB30 1, guide block LGB-30CM 2, stopper LGB30-ST and mounting plate LGB30-P65-100 3





Guide rail

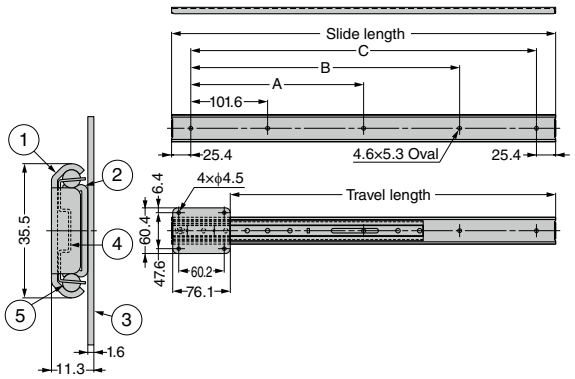
Item Name	Slide Length A	Holes B
LGB30-400	400	8
LGB30-800	800	16
LGB30-2000	2000	40

Refer to 1 : P.444, 2 : P.445, 3 : P.446

LINEAR BALL BEARING GUIDE ESR9 For Light Weight

L=R SUS





- Inner member is located inside the retainer for precise movement.
- Ideal for doors of small cabinets. 2 slides can support up to 5 kg.

[Remarks]

- Outer member cannot be used in full stroke since the erected parts at its both ends are low in strength against strong shock and continuous movement. Install a stopper with a space from the erected part.
- Ball retainer may shift depending on inner member movement frequency and other conditions. In this case, correct by moving the inner member left or right to the end.
- Retainer may shift downwards In case of moving in the vertical direction.

No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Mounting Plate		
④	Retainer		
⑤	Balls		–

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	A	B	C	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-111-336	ESR9-12	304.8	225	–	152.4	254	0.14	24	–
G	3D	190-111-337	ESR9-14	355.6	276		203.2	304.8	0.16	24	–
G	3D	190-111-338	ESR9-16	406.4	327		254	355.6	0.17	24	–
G	3D	190-111-339	ESR9-18	457.2	378	203.2	304.8	406.4	0.19	24	–
G	3D	190-111-340	ESR9-20	508	428	228.6	355.6	457.2	0.20	24	–
G	3D	190-111-341	ESR9-22	558.8	479	254	406.4	508	0.22	24	–
G	3D	190-111-342	ESR9-24	609.6	530	279.4	457.2	558.8	0.24	24	–
–	3D	190-111-343	ESR9-26	660.4	581	304.8	508	609.6	0.25	22	–
G	3D	190-111-344	ESR9-28	711.2	632	330.2	558.8	660.4	0.27	24	–

LINEAR BALL BEARING GUIDE TSSL

SUS



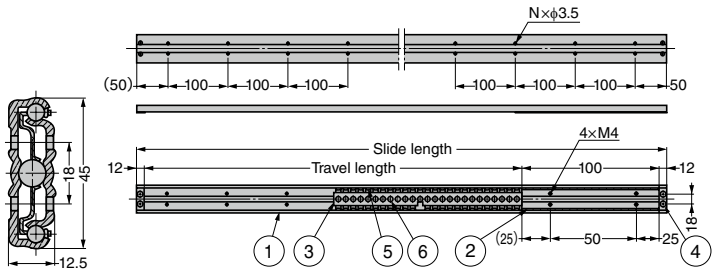
- Inner and outer members are supported with 3 steel balls for smooth movement.
- Inner member is located inside the retainer for precise movement.

[Others]

- Slide length up to 2000mm can be made to order.

[Remarks]

- Movement is affected by the use environment. Please check with actual item.
- Do not use for vertical movement.



No.	Part Name	Material	Finish/Colour
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Retainer		
④	End Stopper	PA	Black
⑤	Balls	Carbon Steel	–
⑥			

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide Length	Travel Length	Holes N	Weight (kg/pc)	Box (pcs)	Carton (pcs)
G	3D	190-110-600	TSSL-300-100	300	176	6	0.44	12	–
G	3D	190-110-601	TSSL-400-100	400	276	8	0.57	12	–
G	3D	190-110-602	TSSL-500-100	500	376	10	0.68	12	–
G	3D	190-110-603	TSSL-600-100	600	476	12	0.82	12	–
G	3D	190-110-604	TSSL-800-100	800	676	16	1.04	12	–
G	3D	190-110-605	TSSL-1000-100	1000	876	20	1.33	12	–

3/4 EXTENSION SLIDE ESR2 Under-mount Type

LOAD CAPACITY 49~78 N/pc | L=R | FRICTION | DETACH | SUS

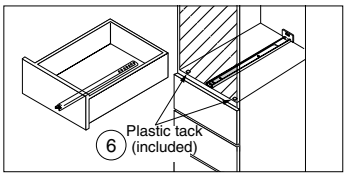


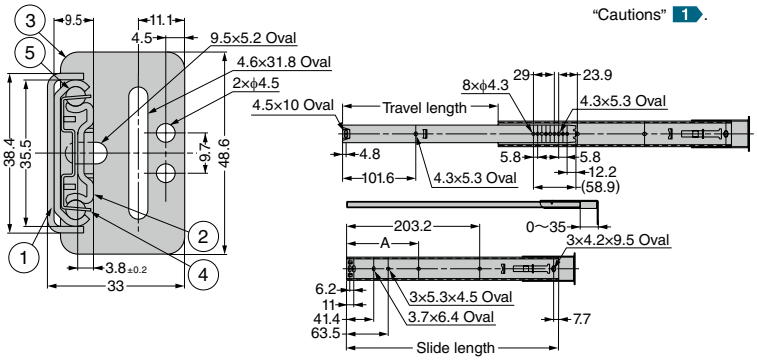
- 3/4 extension (2 members).
- Installed to the bottom of the drawer.
- The drawer can be stopped at any position by the resistance of the ball retainer. The drawer can be detached by pulling outward.

[Remarks]

- Be sure to read the "Cautions" 1.

[Application Example]





No.	Part Name	Material	Finish
①	Outer Member	Stainless Steel (SUS304)	Plain
②	Inner Member		
③	Bracket		
④	Retainer		
⑤	Balls		–
⑥	Plastic Tack	Plastic	

Sold by piece.

RoHS	CAD	Item Code	Item Name	Slide length	Travel length	A	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg/pc)	Box (pcs)	Carton (pcs)
–	3D	190-111-310	ESR2-12	323.8	215.9	109.9	78	8	0.4	20	–
–	3D	190-111-311	ESR2-14	374.6	266.7	160.7	74	7.5	0.43	20	–
–	3D	190-111-312	ESR2-16	425.4	304.8	–	69	7	0.48	20	–
–	3D	190-111-313	ESR2-18	476.2	317.5	262.3			0.53	20	–
–	3D	190-111-314	ESR2-20	527	368.3	313.1	64	6.5	0.57	20	–
–	3D	190-111-315	ESR2-22	577.8	419.1	363.9	59	6	0.62	20	–
–	3D	190-111-316	ESR2-24	628.6	444.5	414.7	54	5.5	0.66	20	–
–	3D	190-111-317	ESR2-26	679.4	495.3	465.5	49	5	0.71	20	–

Refer to 1 : P.399

DRAWER DAMPER GDSR144-R

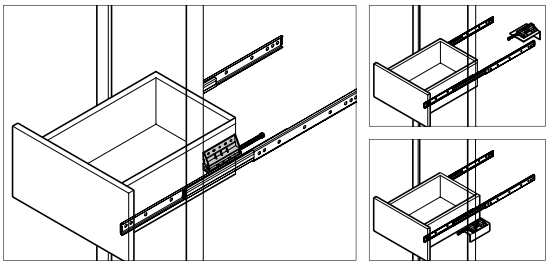


- Used with the slide to reduce the shock when closing the drawer.

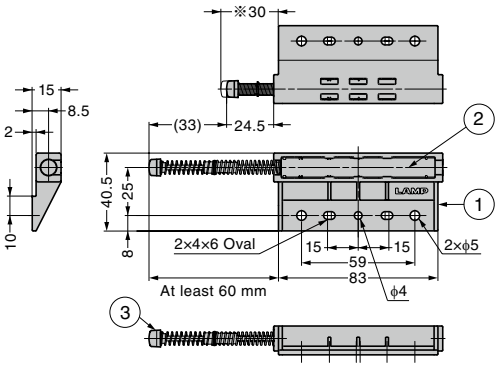
[Remarks]

- Latch is required to hold the drawer in closed position.
- It is an oil damper. Noted that oil leak may occur due to failure.
- Conduct verification before use.
- Noted that the dimension marked with ※ below shall be 30mm or more.
- This product is right type. For left type, please contact local representatives.
- Use with the slide to ensure straight contact with the damper.

[Installation]



With a damper, drawers in the kitchen and office can be soft-closed.



No.	Part Name	Material	Colour
①	Bracket	ABS	Light Grey
②	Body	POM	Grey
③	Bumper	PUR	Red

RoHS	CAD	Item Code	Item Name	Reaction Force N	Reaction Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	190-118-835	GDSR144-R	20	2	24	240	–

Understandable! Selectable! Usable!

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・Download installation instructions

SUGATSUNE Search

LAMP®

HANDLES, PULLS & KNOBS

Handles, pulls & knobs are a kind of hardware used as handgrip when opening/closing doors or lids.

In recent years, for handles which affect the appearance of the device, high requirements are imposed in terms of not only functionality and operability, but also appearance design.
Sugatsune has developed a wide range of products, such as those with delicate appearance and those made of SUS316, carbon fibre, titanium and PVC, suitable for various applications and environments.

SUGATSUNE

Updated 2017.10.27

[Handle Type]

Large Handles P.462
Handles (Back Screw Mount) ... P.479
Pulls & Knobs P.523
Handles (Front Screw Mount) ... P.472
Recessed Pulls P.505
Latch Handles P.531

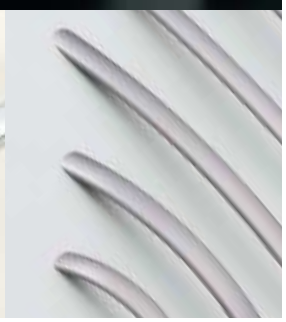
[Search by Series]

Design Handle Series

P.460~







Large Handle

MDH



MTH



SSH



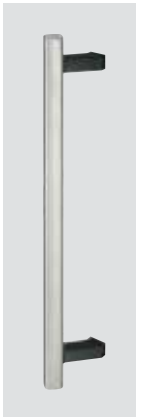
SOR



TBH



SBH



MSH



AGH-L/AGH-T



Handle (Front / Back Screw Mount)

KMH



ZL-2001



Recessed Pull

XLA-HHA



Latch Handle

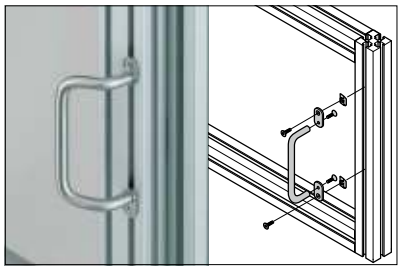
MDHL



Aluminium Frame Support System AS Series

P.483~488

Innovative system for installing various functional parts to aluminium frame by post-installation. Besides, parts for connecting aluminium frame also available.



Handle H-42-C



Bracket AS-H30



SEMI Standard-Compliant Series

P.472~

MG



MH-P



HH-P



HH



HH-KL160



HH-KP150



MJH



MG



HH-UD



[Search by Type]

Large Handles P.462~


DESIGN DOOR HANDLE MDH P.462


ALUMINIUM PIPE HANDLE MTH P.463


ALUMINIUM PIPE HANDLE APH P.463


MACHINERY HANDLE TBH P.464


MACHINERY HANDLE SBH P.465


MACHINERY HANDLE MSH P.466


ALUMINIUM GRIP HANDLE AGH-L/AGH-T P.467


ALUMINIUM GRIP HANDLE AGH-F P.468


EXTRUDED ALUMINIUM HANDLE ALH P.469


ALUMINIUM DOOR HANDLE SYH P.469


ALUMINIUM DOOR HANDLE SOR P.470


ALUMINIUM DOOR HANDLE EP-330 P.470


STAINLESS STEEL DOOR HANDLE SSH P.471


STAINLESS STEEL DOOR HANDLE RH-760 P.471


STAINLESS STEEL DOOR HANDLE MP P.472

Handles (Front Screw Mount) P.472~


STAINLESS STEEL HANDLE MG P.472


STAINLESS STEEL HANDLE FT-R P.473


STAINLESS STEEL HANDLE FT-T P.473


STAINLESS STEEL HANDLE FT-S280 P.474


STAINLESS STEEL HANDLE FT P.474


HANDLE (STAINLESS, TITANIUM) 2LC P.474


STAINLESS STEEL HANDLE 4LC P.475


STAINLESS STEEL HANDLE 3LC P.475


STAINLESS STEEL HANDLE EC-Y P.475


STAINLESS STEEL HANDLE EC-H P.476


STAINLESS STEEL HANDLE FT P.476


STAINLESS STEEL HANDLE FT P.476


STAINLESS STEEL HANDLE FT-100-6.4 P.477


STAINLESS STEEL HANDLE FT-110S P.477


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HANDLE KMH P.478


HANDLE MJH P.479


HANDLE CJH P.480


HANDLE SJH P.481


HANDLE MH-P P.482

Handles (Back Screw Mount) P.479~


HANDLE MJH P.479


HANDLE CJH P.480


HANDLE SJH P.481


WIRE PULL SWP P.482


WIRE PULL SWF P.482

STAINLESS STEEL HANDLE H-42-C P.483

STAINLESS STEEL HANDLE H-42-F14 P.484

STAINLESS STEEL HANDLE MG P.484

HANDLE T-100-8 P.484

STAINLESS STEEL HANDLE H-75-BL-100 P.484

STAINLESS STEEL HANDLE LF-12 P.485

STAINLESS STEEL HANDLE H-75-C P.486

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TITANIUM HANDLE H-42-BT P.487

TITANIUM HANDLE H-42-CT P.487

BRACKET FOR HANDLE AS-H30 P.488

BRACKET FOR STAINLESS STEEL HANDLE H-42-Z P.488

ALUMINIUM HANDLE AM P.489

PLASTIC HANDLE PC P.489

HANDLE SGH-200 P.490

STAINLESS STEEL HANDLE HGH P.490

STAINLESS STEEL HANDLE ZL-2001 P.491

STAINLESS STEEL HANDLE ZL-2002 P.491

BRACKET FOR STAINLESS STEEL HANDLE ZL-2301 P.492

STAINLESS STEEL HANDLE XL-JS P.492

STAINLESS STEEL HANDLE XL-JSR P.492

STAINLESS STEEL HANDLE KC-S P.493

STAINLESS STEEL HANDLE KC-R P.493

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STAINLESS STEEL HANDLE EK-R P.494

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STAINLESS STEEL HANDLE H-29 P.494

STAINLESS STEEL HANDLE 82 SERIES P.495

STAINLESS STEEL HANDLE I333 P.495

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STAINLESS STEEL HANDLE DIH P.496

STAINLESS STEEL HANDLE I1014 P.496

STAINLESS STEEL HANDLE I100 P.497

Handles (Back Screw Mount) P.497~


STAINLESS STEEL HANDLE 40 SERIES P.497


STAINLESS STEEL HANDLE DSI-110 P.497


STAINLESS STEEL HANDLE DSI-120 P.498


STAINLESS STEEL HANDLE I163 P.498


STAINLESS STEEL HANDLE 30 SERIES P.498


STAINLESS STEEL HANDLE XL-CU P.499


STAINLESS STEEL HANDLE XL-CUR P.499


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STAINLESS STEEL HANDLE KB-SUS304 P.502


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FOLDING HANDLE HK P.503


HANDLE SAZ-121CR P.503


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HANDLE 937-102SCR P.504


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PULL AOT35 P.504

Recessed Pulls P.505~


RECESSED PULL HH-JS P.505


RECESSED PULL HH-JW P.505


RECESSED PULL HH-P P.506


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RECESSED PULL WITH VENTILATOR UTA-105 P.509


RECESSED PULL UP-600 P.510


RECESSED PULL XLA-HHA P.510


RECESSED PULL HH-M P.511


RECESSED PULL ES-611 P.511


STAINLESS STEEL RECESSED PULL HH P.512


STAINLESS STEEL RECESSED PULL HH-AS2 P.512


RECESSED PULL HH-AS3 P.512


RECESSED PULL HH-KL160 P.513

RECESSED PULL HH-KP150 P.513

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TRUNK HANDLE MUD-140 P.518

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STAINLESS STEEL RING PULL 980643 P.520

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STAINLESS STEEL RING PULL 26700 P.521

STAINLESS STEEL RING PULL 26901 P.521

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STAINLESS STEEL HATCH PULL ST-90, ST-115 P.522

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STAINLESS STEEL HATCH PULL HR P.523

STAINLESS STEEL HATCH PULL HR-RS P.523

Pulls & Knobs

P.523~


KNOB
GD-20
P.523


STAINLESS STEEL PULL
HS
P.524


STAINLESS STEEL KNOB
RS-38S
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KNOB
EXSEL
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STAINLESS STEEL KNOB
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GLA
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STAINLESS STEEL PULL
SD
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KNOB
MKZ
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STAINLESS STEEL KNOB
CU-L-35
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STAINLESS STEEL PULL
RD
P.527


PULL
RD
P.527


PUSH KNOB
PK04
P.528


STAINLESS STEEL
PUSH KNOB
ZL-1908
P.529


KNOB (SMALL)
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P.530


KNOB (MEDIUM)
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KNOB (LARGE)
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KNOB (MEDIUM)
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Latch Handles

P.531~

Picture	Product Name	Door Thickness
	FLUSH SLAM LATCH P10-55H P.531	–
	FLUSH SLAM LATCH LJ-61 P.531	–
	FLUSH SLAM LATCH LC-65A P.532	2~3.2
	FLUSH SLAM LATCH LC-48 P.532	1~2.3
	SNAP LOCK SX-48 P.533	0.8~2.3
	PULL ATL-64 P.533	0.8~2.3
	PANEL LATCH LC-PK32, LC-PL32 P.534	1.2, 1.5, 1.6
	LATCH HANDLE LH-203 P.535	–
	LATCH HANDLE MDHL P.536	–

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Pitch	Item Name	Material	Installation	Page
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	KB-30M			
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	DS-30M-SUS304			P.502
	DS-30S-SUS304			
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30	ALH-50BL	Aluminium		P.469
	ALH-50SL			
	ALH-50ST			
32	ZL-2001-32	Stainless Steel		P.491
	XL-JSR40TT			P.492
35	PC-45-B	Plastic		P.489
	PC-45-W			
40	H-42-B-9	Stainless Steel		P.487
45	DS-50M			P.501
	DS-50S			
	KB-50M			
	KB-50S			
	DS-50M-SUS304			P.502
	DS-50S-SUS304			
	KB-50M-SUS304			
	KB-50S-SUS304			
50	AM-60B	Aluminium		P.489
	AM-60I			
54	US-70M	Stainless Steel	Front Screw Mount	P.477
	US-70S			
55	936-55-SCR	Zinc Alloy	Back Screw Mount	P.504
	936-55-SNI			
57	FT-65	Stainless Steel	Front Screw Mount	P.476
60	ALH-100BL	Aluminium	Back Screw Mount	P.469
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	H-42-C-8	Stainless Steel		P.483
	H-75-C-66			P.486
	H-42-B-8			P.487
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	4LC-82	Stainless Steel		P.475
	ZL-2001-64		Back Screw Mount	P.491
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	H-29-64-SS			
	DL-70M			P.501
	DL-70S			
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	DL-70S-SUS304			
65	DS-70M	Stainless Steel		P.501
	DS-70S			
	KB-70M			
	KB-70S			
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	KB-70M-SUS304			
	KB-70S-SUS304			
68	H-42-C-1			P.483
	MG-68			P.484
	H-42-B-1			P.487

Pitch	Item Name	Material	Installation	Page
68	PC-80-B	Plastic	Back Screw Mount	P.489
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70	AM-80I	Aluminium		P.489
	XL-CUR80TT	Stainless Steel		P.499
72	FT-80		Front Screw Mount	P.476
	XL-CU80TT		Back Screw Mount	P.499
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75	ALH-200BL	Aluminium		P.469
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	ECH-75M	Stainless Steel		P.500
	ECH-75S			
76.2	SWP-630/S			P.482
80	H-42-C-14			P.483
	H-42-F14			P.484
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	H-42-B-14			P.487
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82	FB-90			P.499
84	DL-90M			P.501
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85	DS-90M			P.501
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	KB-90M			
	KB-90S			
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93	MJH-93	Plastic	Front Screw Mount, Back Screw Mount	P.479
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	4LC-114	Stainless Steel		P.475
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100	ALH-150BL	Aluminium		P.469
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	KMH-100	Zinc Alloy	Front Screw Mount	P.478
	MH-P120	Plastic		P.482
	H-42-C-2	Stainless Steel	Back Screw Mount	P.483
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	T-100-8S	Stainless Steel		
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	H-42-CT-2			
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	AKH-108	Zinc Alloy		P.504
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101.5	SWF-640	Stainless Steel		P.482
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	PC-120-B	Plastic	Back Screw Mount	P.489
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	TBH-400SL			
	TBH-600BL			
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	FT-110S	Stainless Steel	Front Screw Mount	P.477

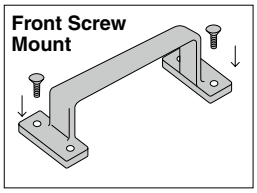
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110	H-42-C-3	Stainless Steel	Back Screw Mount	P.483
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115	3LC-130		Front Screw Mount	P.475
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117	CJH-117BL	Plastic	Front Screw Mount, Back Screw Mount	P.480
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	MJH-120	Plastic	Front Screw Mount, Back Screw Mount	P.479
	H-42-C-4	Stainless Steel	Back Screw Mount	P.483
	H-75-C-128			P.486
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	FB-130	Stainless Steel		P.499
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	I1014128			
	I1020128			
	40128			P.497

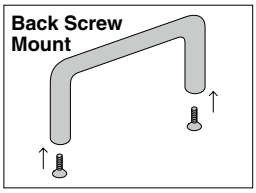
Pitch	Item Name	Material	Installation	Page
128	DSI-110-128	Stainless Steel	Back Screw Mount	P.497
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	MJH-150	Plastic	Front Screw Mount, Back Screw Mount	P.479
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	I333160			
	I1020160			P.496

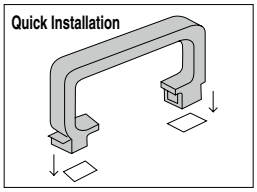
Pitch	Item Name	Material	Installation	Page
160	40160	Stainless Steel	Back Screw Mount	P.497
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	HGH-200SM	Stainless Steel		P.490
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	AM-310S	Aluminium	Back Screw Mount	P.489
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305	SWF-6120			P.482
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	I1020320			P.496
	DSI-110-320			P.497
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	AOT35-340	Aluminium		P.504
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335	SOR-400BL			
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342	I333342	Stainless Steel		P.495
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350	MDH-PC350	Plastic		P.462
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	I1020492			

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	APH-P500	Aluminium	Front Screw Mount	P.463
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	AGH-T500BL			
	AGH-T500SL			
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512	ZL-2002-512	Stainless Steel		P.491
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	I100512			
	DSI-120-512			P.498
516	SSH-2560			P.471
	SSH-3260			
522	SOR-600BL	Aluminium		P.470
	SOR-600S			
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592	DIH-592	Stainless Steel		P.496
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	MTH-T600			
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714	MP-750	Stainless Steel	Front Screw Mount	P.472
716	SSH-2580		Back Screw Mount	P.471
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750	MSH-750BL	Aluminium		P.466
	MSH-750SL			
760	RH-760	Stainless Steel		P.471
800	MDH-PC800	Plastic		P.462
	MDH-PS800	Stainless Steel		
964	MP-1000		Front Screw Mount	P.472
975	SOR-1000BL	Aluminium	Back Screw Mount	P.470
	SOR-1000S			
1200	MDH-PC1200	Plastic		P.462
	MDH-PS1200	Stainless Steel		







Toughness & Beautility

HANDLE





Sugatsune offers a wide range of handles that combine rugged and durable construction "toughness" for a range of operating environments with functional beauty "beautility" that provides optimum ease of use.

Lineup



MSH
» P.466



TBH
» P.464



SBH
» P.465



AGH-L
AGH-T
» P.467



AGH-F
» P.468



SOR
» P.470



MDH
» P.462



MDHL
» P.536



CJH
» P.480



SJH
» P.481



KMH
» P.478



SYH
» P.469



ALH
» P.469



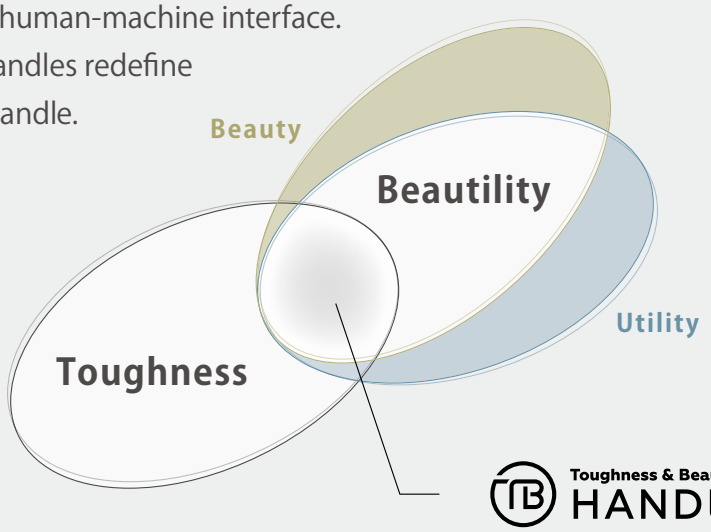
HGH
» P.490



HH-UD
» P.517

Concept

The "Toughness and Beautility"
range of functional handles from Sugatsune
Handles are the ultimate human-machine interface.
Toughness & Beautility handles redefine
the very concept of the handle.





Toughness

Sugatsune handles are designed and manufactured in accordance with stringent load testing standards and production criteria that are based on client requirements and specifications across a wide range of industries.

Beautility

Sugatsune produces handles that are stylish in their own right while blending in beautifully with any environment, as well as comfortable and easy to use.



DESIGN DOOR HANDLE MDH

INSTRUCTION SUS



- Brackets and pipes can be combined freely.
- Two types of brackets available: In-line type and offset type.
- Pipes are made of stainless steel or carbon fibre reinforced plastic, either has 5 lengths available. By cutting the pipe, the total length can be changed freely.
- Carbon fibre reinforced plastic pipes are subject to UV-cut treatment to prevent discoloration.
  ※Features of Carbon fibre reinforced plastic.
  It is a light weight, high-strength materials also widely used for aircraft, etc., contributing to the weight reduction of structure.
  Also, the delicate mesh pattern brings a unique texture and high-quality feeling.
- Pipes may be sold separately.
- Latch handle MDHL 1 of the same design used for sliding doors also available.

[Applications]

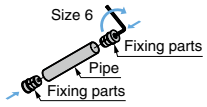
- Machine tools and large doors, etc.

[Remarks]

- Brackets and pipes have separate item numbers. Please order together by indicating each specification.
- Bracket is sold in pairs.

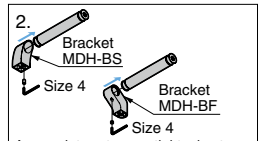
[How to Install]

1.
Appropriate screw tightening torque:
12.5 N・m (127 kgf・cm)



Insert the fixing parts (attached to the bracket) into both ends of the pipe until their flanges contact the pipe ends, and then tighten the screws with a hex key size 6 (not included).

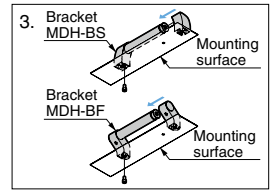
2.



Appropriate set screw tightening torque
12.5 N・m (127 kgf・cm)
※Please use screw adhesive.

Insert one bracket into the pipe, and tighten the set screws (attached to the bracket) with a hex key size 4 (not included).

3.



Install one bracket to the mounting surface with M8 screws (not included). Install the other bracket in the same procedure after being preliminarily assembled.

[Bracket]



MDH-BS
(Straight type)



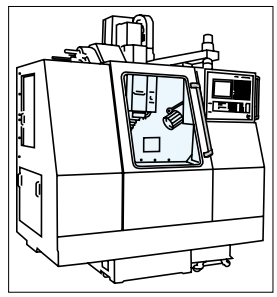
MDH-BF
(Offset type)

[Fixing Parts]

Attached to the bracket

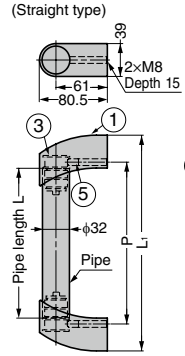


[Application Example]

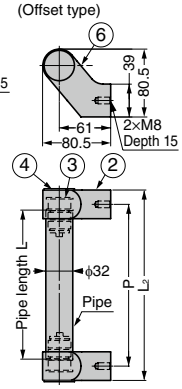


[Installation of Bracket and Pipe]

Bracket MDH-BS
(Straight type)



Bracket MDH-BF
(Offset type)





[Bracket]

RoHS	CAD	Item Code	Item Name	Type	Parts	Weight (g)	Box (sets)	Carton (sets)
G	3D	100-022-158	MDH-BS	Straight	①③⑤ (Each 2 pcs)	1010	1	1
G	3D	100-022-159	MDH-BF	Offset	②③④⑥ (Each 2 pcs)	1122	1	1

[Bracket]

No.	Part Name	Material	Finish/Colour
①	Bracket (Straight)	Zinc Alloy (ZDC)	Matte Chrome
②	Bracket (Offset)		
③	Fixing Parts		Plain
④	Cover	POM	Black
⑤	Hexagon Socket Set Screw M8×15	Stainless Steel	Plain
⑥	Hexagon Socket Set Screw M8×8		

[Pipe]

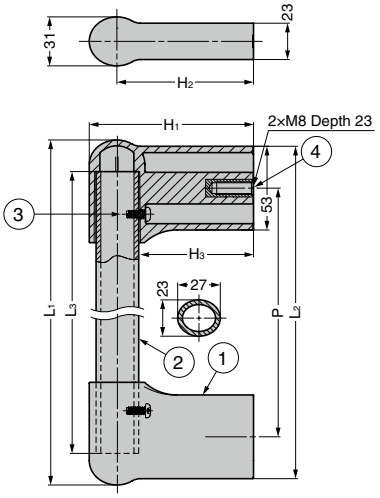
RoHS	CAD	Item Code	Item Name	Material	Finish	Pipe Length L	L_1	L_2	P	Pipe Thickness	Load capacity N	Load capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-022-161	MDH-PS192	Stainless Steel (SUS304)	Satin	177	256	226	192	2	490	50	384	1	10
G	3D	100-022-162	MDH-PS350			335	414	384	350				727	1	10
G	3D	100-022-163	MDH-PS500			485	564	534	500				1050	1	10
G	3D	100-022-164	MDH-PS800			785	864	834	800				1700	1	10
G	3D	100-022-165	MDH-PS1200			1185	1264	1234	1200				2570	1	7
G	3D	100-022-166	MDH-PC192	Carbon Fibre Reinforced Polymer (CFRP)	Paint/ Clear	177	256	226	192	2.5			70	1	1
G	3D	100-022-167	MDH-PC350			335	414	384	350				132	1	1
G	3D	100-022-168	MDH-PC500			485	564	534	500				191	1	1
G	3D	100-022-169	MDH-PC800			785	864	834	800				309	1	1
G	3D	100-022-170	MDH-PC1200			1185	1264	1234	1200				467	1	1

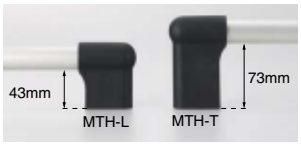
Refer to 1 : P.536

ALUMINIUM PIPE HANDLE MTH

LOAD CAPACITY 500 N | TEST METHOD 1







- Position of bracket (MTH-T) is higher than common handles, suitable for inset sliding door of machine tool.
- MTH-L with the same height as common handles for total coordination with handle of machine tool.
- Pipe and bracket are connected with screws, preventing pipe loosening and idling.
- Elliptical pipe shape allows for easy gripping and sliding.

[Applications]
- Machine tools and large doors, etc.

[Remarks]
- For single-sided mount. Cannot be used for double-sided mount.

[Recommended Screws]
- M8 screw

No.	Part Name	Material	Finish / Colour
①	Bracket	Glass Filled Polyamide	Black
②	Pipe	Aluminium Alloy	Anodised Silver
③	Countersunk head tapping screw 5×12	Steel	Coloured Zinc Chromate (Trivalent)
④	Nut	Brass	Plain

RoHS	CAD	Item Code	Item Name	L_1	L_2	L_3	P	H_1	H_2	H_3	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-032-610	MTH-L300	360	352	320	300	74	56.5	43	500	51	360	1	15
–	3D	100-032-611	MTH-L450	510	502	470	450						445	1	15
–	3D	100-032-612	MTH-L600	660	652	620	600						530	1	15
–	3D	100-032-613	MTH-T300	360	352	320	300	104	86.5	73			430	1	15
–	3D	100-032-614	MTH-T450	510	502	470	450						515	1	15
–	3D	100-032-615	MTH-T600	660	652	620	600						600	1	15

ALUMINIUM PIPE HANDLE APH

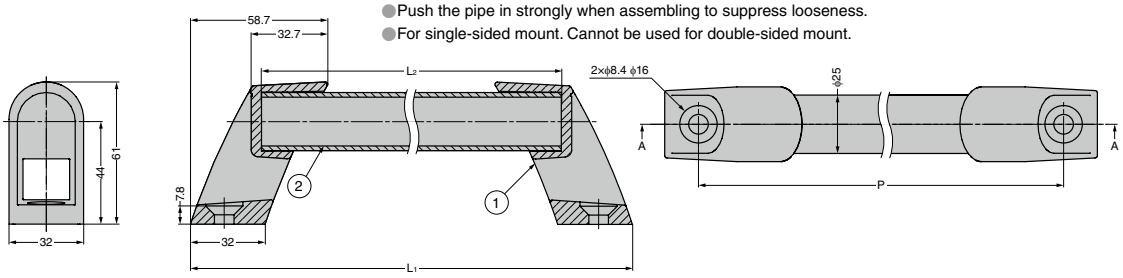


- Possible to fix with screws from the front.
- 4 lengths of pipes are available. By cutting the pipe, the handle length can be changed freely.
- Other handle sizes are possible at surcharge. For lot quantity and available lengths, please contact local representatives.
- High precision assembly of pipe and bracket.

[Applications]
- Machine tools and large doors, etc.

[Remarks]
- Push the pipe in strongly when assembling to suppress looseness.
- For single-sided mount. Cannot be used for double-sided mount.

[Recommended Screws]
- Countersunk head screw M8



A-A Cutaway view

[Bracket]

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-029-942	APH-B	34	150	600

No.	Part Name	Material	Finish / Colour
①	Bracket	PA	Black
②	Pipe	Aluminium Alloy	Anodised Silver

[Pipe]

RoHS	CAD	Item Code	Item Name	L_1	L_2	P	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-035-462	APH-P300	328.9	268	300	104.8	–	100
–	3D	100-035-463	APH-P400	428.9	368	400	119.3	–	100
–	3D	100-035-464	APH-P500	528.9	468	500	133.7	–	100
–	3D	100-035-465	APH-P600	628.9	568	600	287.9	–	100

MACHINERY HANDLE TBH Straight Type



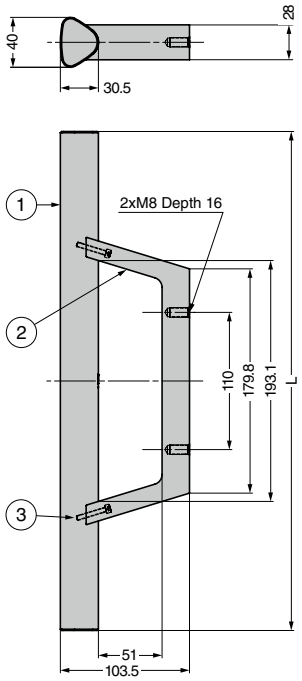
TBH-600SL



- Revolutionary design aesthetic combines purity of form with solidity of feel.
- Consists of a triangle-shaped bar and a bracket in the centre.
- Rich individuality and excellent overall coordination.

[Applications]

- Main doors of machine tools, etc.



No.	Part Name	Material	Finish
①	Bar	Aluminium Alloy	Matte Silver/Anodised (SL) Matte Black/Anodised (BL)
②	Bracket	Zinc Alloy (ZDC)	Paint/Black
③	Hexagon Socket Head Bolt M4x35	Stainless steel	–

RoHS	CAD	Item Code	Item Name	Bar / Finish	L	Load Capacity N (kgf)	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-948	TBH-400SL	Matte Silver/Anodised	400	–	1877	–	–
G	3D	100-036-949	TBH-400BL	Matte Black/Anodised				–	–
G	3D	100-036-950	TBH-600SL	Matte Silver/Anodised	600		2363	–	–
G	3D	100-036-951	TBH-600BL	Matte Black/Anodised				–	–

MACHINERY HANDLE SBH Offset Type

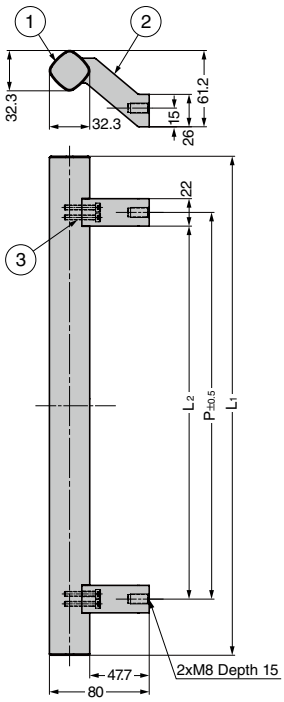


SBH-600SL



- A minimalist yet functional profile.
- Square handle fits perfectly in the hand.
- The unique design creates the impression of a floating handle.

[Applications]
- Main doors of machine tools, etc.



No.	Part Name	Material	Finish
①	Bar	Aluminium Alloy	Matte Silver/Anodised (SL) Matte Black/Anodised (BL)
②	Bracket	Zinc Alloy (ZDC)	Paint/Black
③	Hexagon Socket Head Bolt M4x35	Stainless steel	–

RoHS	CAD	Item Code	Item Name	Finish	L1	L2	P	Load Capacity N (kgf)	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-952	SBH-400SL	Matte Silver/Anodised	400	288	310	–	1079	–	–
G	3D	100-036-953	SBH-400BL	Matte Black/Anodised						–	–
G	3D	100-036-954	SBH-600SL	Matte Silver/Anodised	600	488	510		1456	–	–
G	3D	100-036-955	SBH-600BL	Matte Black/Anodised						–	–
G	3D	100-036-956	SBH-800SL	Matte Silver/Anodised	800	688	710		1833	–	–
G	3D	100-036-957	SBH-800BL	Matte Black/Anodised						–	–

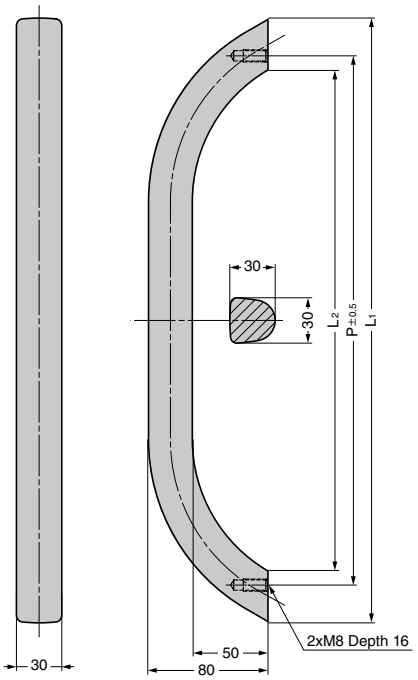
MACHINERY HANDLE MSH Straight Type



- Flat surface creates a refined impression.
- A beautifully simple design with weight and size that provides a firm and comfortable grip.

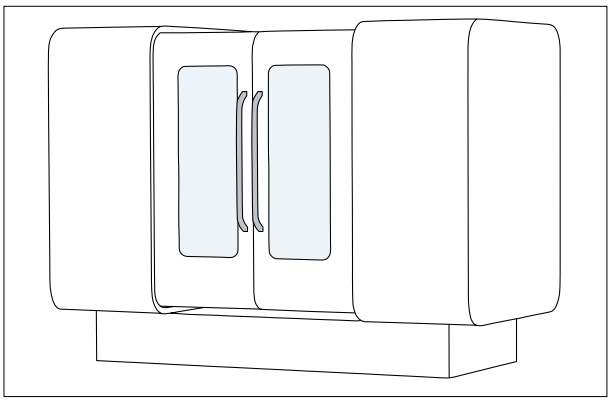
[Applications]

- Main doors of machine tools, etc.









RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-942	MSH-350SL	Aluminium Alloy	Matte Silver/Anodised	400	330.7	350	500	51	850	–	–
G	3D	100-036-943	MSH-350BL		Matte Black/Anodised							–	–
G	3D	100-036-944	MSH-550SL		Matte Silver/Anodised	600	530.7	550			1256	–	–
G	3D	100-036-945	MSH-550BL		Matte Black/Anodised							–	–
G	3D	100-036-946	MSH-750SL		Matte Silver/Anodised	800	730.7	750			1663	–	–
G	3D	100-036-947	MSH-750BL		Matte Black/Anodised							–	–

ALUMINIUM GRIP HANDLE AGH-L/AGH-T Straight Type

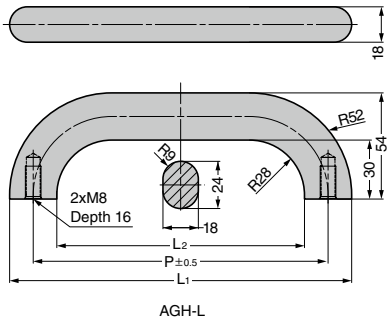
TEST METHOD 1



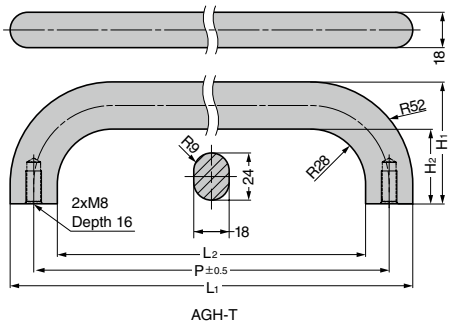
- Elliptical profile combines minimalist look with maximum grip.
- Choice of heights.

[Applications]

- Handle for operation panel.

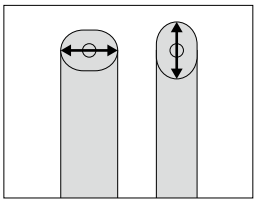


AGH-L



AGH-T





Standard handle (flat ellipse) | This product (tall ellipse)

RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-962	AGH-L150SL	Aluminium Alloy	Matte Silver/Anodised	174	126	150	350	36	191	–	–
G	3D	100-036-963	AGH-L150BL		Matte Black/Anodised							–	–
G	3D	100-036-964	AGH-L200SL		Matte Silver/Anodised	224	176	200			240	–	–
G	3D	100-036-965	AGH-L200BL		Matte Black/Anodised							–	–
G	3D	100-036-966	AGH-L350SL		Matte Silver/Anodised	374	326	350			387	–	–
G	3D	100-036-967	AGH-L350BL		Matte Black/Anodised							–	–
G	3D	100-036-968	AGH-L500SL		Matte Silver/Anodised	524	476	500			536	–	–
G	3D	100-036-969	AGH-L500BL		Matte Black/Anodised							–	–

RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	H1	H2	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-958	AGH-T350SL	Aluminium Alloy	Matte Silver/Anodised	374	326	62	38	350	350	36	402	–	–
G	3D	100-036-959	AGH-T350BL		Matte Black/Anodised									–	–
G	3D	100-036-960	AGH-T500SL		Matte Silver/Anodised	524	476	64	40	500			553	–	–
G	3D	100-036-961	AGH-T500BL		Matte Black/Anodised									–	–

ALUMINIUM GRIP HANDLE AGH-F Offset Type

TEST METHOD 1

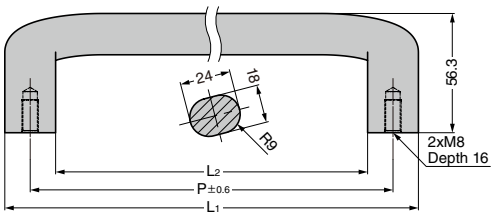


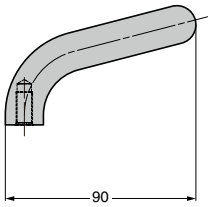


- Handles that are delightful to hold.

[Applications]

- Handle for operation panel.





RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-970	AGH-F300SL	Aluminium Alloy	Matte Silver/Anodised	324	276	300	500	51	443	–	–
G	3D	100-036-971	AGH-F300BL		Matte Black/Anodised							–	–
G	3D	100-036-972	AGH-F400SL		Matte Silver/Anodised	424	376	400			540	–	–
G	3D	100-036-973	AGH-F400BL		Matte Black/Anodised							–	–

EXTRUDED ALUMINIUM HANDLE ALH

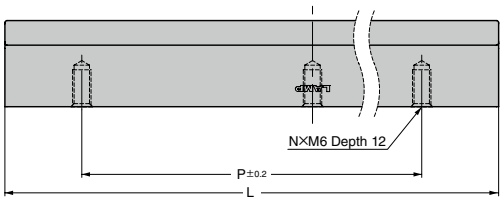


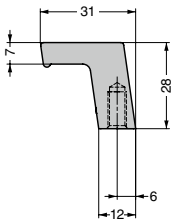


- Stylish in form and function.
- Design innovations include anti-slip bump along the edges and angled surface to prevent dust accumulation.

[Applications]

- Control equipment, measuring equipment, drawers, etc.





RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	N	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-037-006	ALH-50SL	Aluminium Alloy	Matte Silver Anodised	50	30	2	500	51	58	–	–
G	3D	100-037-007	ALH-50BL		Matte Black Anodised							–	–
G	3D	100-037-008	ALH-50ST		Satin and Stainless Steel Anodised							–	–
G	3D	100-037-009	ALH-100SL		Matte Silver Anodised	100	60				118	–	–
G	3D	100-037-010	ALH-100BL		Matte Black Anodised							–	–
G	3D	100-037-011	ALH-100ST		Satin and Stainless Steel Anodised							–	–
G	3D	100-037-012	ALH-150SL		Matte Silver Anodised	150	100				178	–	–
G	3D	100-037-013	ALH-150BL		Matte Black Anodised							–	–
G	3D	100-037-014	ALH-150ST		Satin and Stainless Steel Anodised							–	–
G	3D	100-037-015	ALH-200SL		Matte Silver Anodised	200	75	3			237	–	–
G	3D	100-037-016	ALH-200BL		Matte Black Anodised							–	–
G	3D	100-037-017	ALH-200ST		Satin and Stainless Steel Anodised							–	–
G	3D	100-037-018	ALH-1000SL		Matte Silver Anodised	1000	150	7			1191	–	–
G	3D	100-037-019	ALH-1000BL		Matte Black Anodised							–	–
G	3D	100-037-020	ALH-1000ST		Satin and Stainless Steel Anodised							–	–

ALUMINIUM DOOR HANDLE SYH

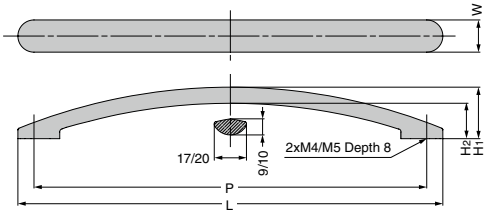
TEST METHOD 1 ANTIBACTERIAL



- A flowing handle with a feature line down the centre.
- Aluminium material and streamline shape create a soft impression. Low profile design ensures that the handle will not noticeably protrude.
- With anti-bacterial coating to reduce risk of infection.

[Applications]

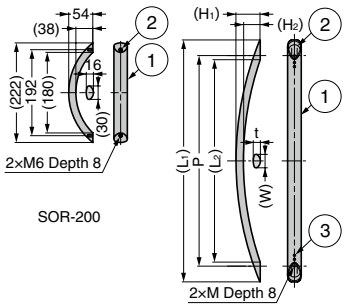
- Medical and analytical equipment, etc.



RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	H1	H2	W	M	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-037-002	SYH-128SL-M4	Aluminium Alloy	Antibacterial Paint/Silver	165	128	30	21	17	M4	500	51	53	–	–
G	3D	100-037-003	SYH-128SL-M5								M5				–	–
G	3D	100-037-004	SYH-224SL-M4			264	224	32	22	20	M4			105	–	–
G	3D	100-037-005	SYH-224SL-M5								M5				–	–

ALUMINIUM DOOR HANDLE SOR





- Flowing cureves that adapt gracefully to any surface.
- Other handle sizes are possible at surcharge.

[Applications]
- Machine tools and railway vehicles, etc.

[Remarks]
- For single-sided mount. Cannot be used for double-sided mount.

[Recommended Screws]
- M6 screw, M8 screw

No.	Part Name	Material
①	Body	Aluminium Alloy
②	Insert	Stainless Steel (SCS13)
③	Screws	Stainless Steel

※SCS13 is equivalent of SUS304.

RoHS	CAD	Item Code	Item Name	Finish	L_1	L_2	P	H_1	H_2	W	t	M	Load capacity N	Load capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-028-297	SOR-200S	Stainless Steel/Anodised	As Above	As Above	As Above	As Above	As Above	As Above	As Above	As Above	490	50	228	10	50
G	3D	100-028-298	SOR-200BL	Black/Anodised												10	50
G	3D	100-010-961	SOR-400S	Stainless Steel/Anodised	390	323	335	60	42	34	18	M6			385	30	1
G	3D	100-010-963	SOR-400BL	Black/Anodised												30	1
G	3D	100-010-962	SOR-600S	Stainless Steel/Anodised	600	502	522								495	20	–
G	3D	100-010-964	SOR-600BL	Black/Anodised												20	–
G	3D	100-010-960	SOR-800S	Stainless Steel/Anodised	816	686	710					M8			605	15	–
G	3D	100-010-965	SOR-800BL	Black/Anodised												15	–
G	3D	100-028-299	SOR-1000S	Stainless Steel/Anodised	1090	939.8	975	80	59.8	38	20.2				1647	–	4
G	3D	100-028-300	SOR-1000BL	Black/Anodised												–	4

ALUMINIUM DOOR HANDLE EP-330

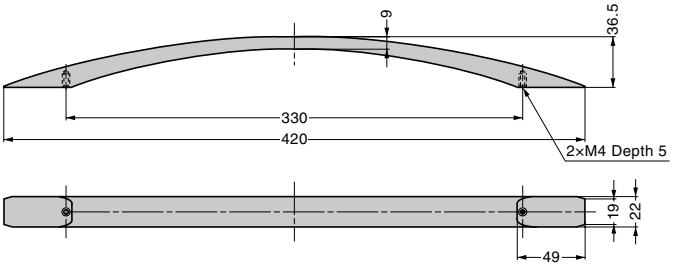
Made to Order



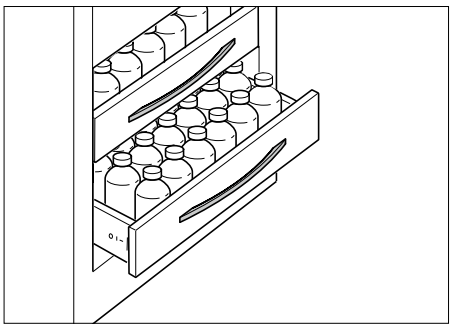
- Designs with smooth flowing curve that blend in perfectly.

[Recommended Screws]
- M4

[Dimensions]



[Application Example]

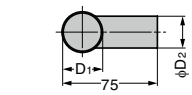


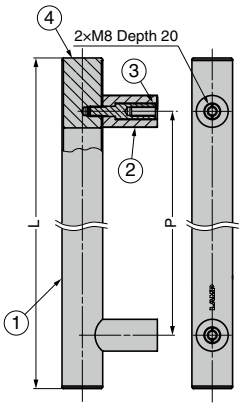
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	–	–	EP-330	Aluminium Alloy	Grey Enamel Finish	240	–	–

STAINLESS STEEL DOOR HANDLE SSH

SUS







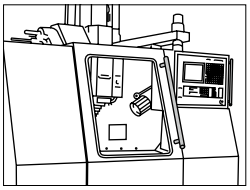
- Stainless steel handle with simple design.
- Other handle sizes are possible at surcharge. For lot quantity and available lengths, please contact local representatives.

[Applications]
- Machine tools and large doors, etc.

[Remarks]
- For single-sided mount. Cannot be used for double-sided mount.

[Recommended Screws]
- M8 screw

[Application Example]



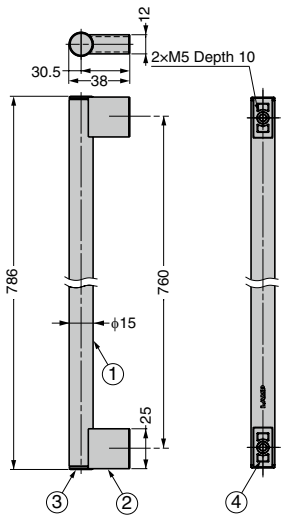
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Stem		
③	Screws		
④	Cover		

RoHS	CAD	Item Code	Item Name	L	P	D1	D2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-181-413	SSH-2540	400	316	25	19	665	10	–
G	3D	100-181-414	SSH-2560	600	516			750	10	–
G	3D	100-181-415	SSH-2580	800	716			840	10	–
G	3D	100-181-416	SSH-3240	400	316	32	25	1175	5	–
G	3D	100-181-417	SSH-3260	600	516			1290	5	–
G	3D	100-181-418	SSH-3280	800	716			1400	5	–

STAINLESS STEEL DOOR HANDLE RH-760

SUS





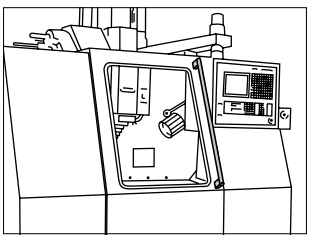
- Stainless steel handle with small projection from mounting surface and simple design.
- Other handle sizes are possible at surcharge. For lot quantity and available lengths, please contact local representatives.

[Applications]
- FA equipment, OA equipment, and specially-equipped vehicles, etc.

[Remarks]
- For single-sided mount. Cannot be used for double-sided mount.

[Recommended Screws]
- M5 screw

[Application Example]



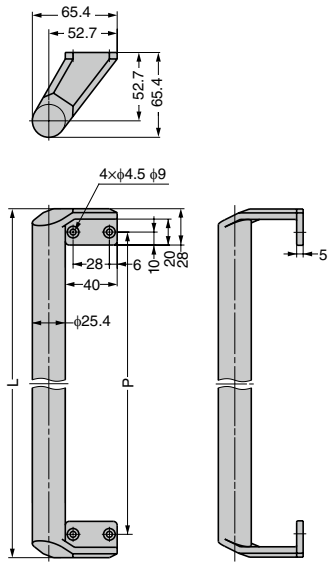
No.	Part Name	Material	Finish / Colour
①	Pipe	Stainless Steel (SUS304)	Satin
②	Stem		
③	End Cap	Stainless Steel (SUS303)	
④	Spacer	PP	Natural

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-341	RH-760	340	–	20

STAINLESS STEEL DOOR HANDLE MP

SUS316





- Simple design and front screw mount.
- Other handle sizes are possible at surcharge. For lot quantity and available lengths, please contact local representatives.

[Applications]
- Railway vehicles, specially-equipped vehicles, ships, large doors, and auxiliary handrails, etc.

[Recommended Screws]
- Countersunk head screw M4
- Countersunk head tapping screw 4
- Countersunk head wood screw 4.1

[Application Example]



RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-500	MP-500	Stainless Steel (SUS316)	Polished	500	464	1000	2	20
G	3D	100-010-501	MP-750			750	714	1300	2	16
G	3D	100-010-502	MP-1000			1000	964	1600	2	12

STAINLESS STEEL HANDLE MG SEMI Compliance

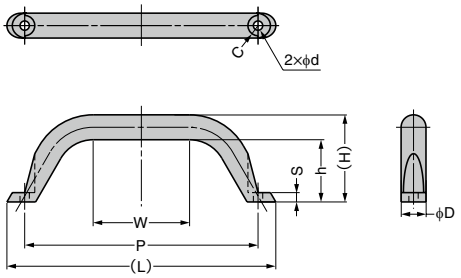
NSF SUS316



- Compliant with SEMI standard (SEMI S8-0701).
- Passed 1960N (200kgf) load capacity test.
- Larger height and width allows for easy gripping with gloved hand.
- For mounting screws, truss head can be used. (Screws not included)

[Applications]
- Semiconductor manufacturing equipment, special vehicles, large doors, and transport equipment, etc.

[Recommended Screws]
- MG-150: Hexagon socket head cap screw M5
- MG-190, MG-250: Hexagon socket head cap screw M6
- MG-230T, MG-300T: Hexagon socket head cap screw M8



RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	D	W	h	S	C	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-483	MG-150	Stainless Steel (SUS316)	Polished	172.8	56	150	16	62	40	6	R6.5	6	295	10	40
G	3D	100-010-484	MG-190			216.7	63	190	18	92	45	8	R7.5	7	460	5	20
G	3D	100-010-485	MG-250			275.5	68	250		145	50				595	5	20
G	3D	100-021-952	MG-230T			260	70	230	20	129		10	R9	9	665	5	20
G	3D	100-021-953	MG-300T			330		300		199					820	5	20

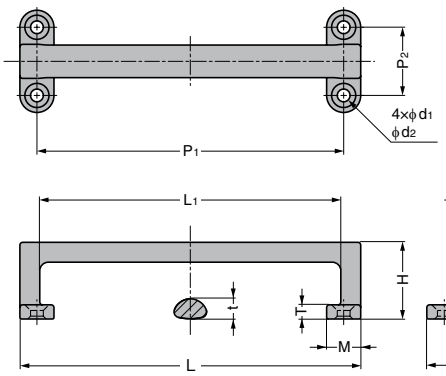
STAINLESS STEEL HANDLE FT-R

SUS



- A rounded handle for a comfortable grip.
- Wide grip.

[Parts Included]
- FT-R-120: Raised countersunk head tapping screw 4×15 (SUS)
- FT-R-160: Raised countersunk head tapping screw 5×20 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	B1	B2	H	T	t	M	P1	P2	d1	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-034-130	FT-R-120	Stainless Steel (SCS13)	Polished	120	106	36	12	27	5	7	12	108	24	4.5	8.5	140	–	–
G	3D	100-034-131	FT-R-160			160	142	48	16	36	6.5	9	16	144	32	5.5	10.5	285	–	–

※SCS13 is equivalent of SUS304.

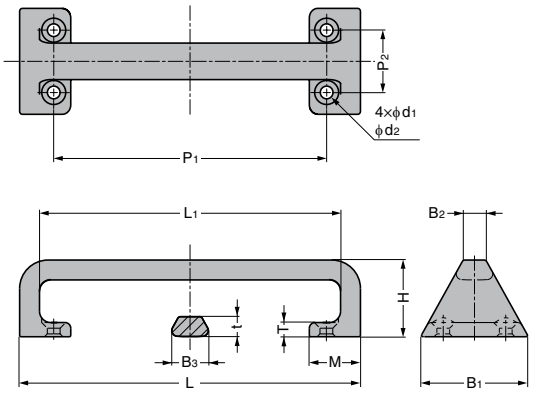
STAINLESS STEEL HANDLE FT-T

SUS316



- A shape with heavy feeling and rounded inside allows for easy gripping.
- Wide grip.

[Parts Included]
- FT-T-120: Raised countersunk head tapping screw 4×15 (SUS)
- FT-T-170: Raised countersunk head tapping screw 5×20 (SUS)
- FT-T-220: Raised countersunk head tapping screw 6×25 (SUS)



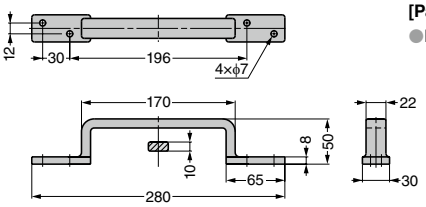
RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	B1	B2	B3	H	T	t	M	P1	P2	d1	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-034-132	FT-T-120	Stainless Steel (SCS14)	Polished	120	105	40	10	15.1	28.5	5.5	7.5	19	96	24	4.5	8.5	225	–	–
G	3D	100-034-133	FT-T-170			170	150	54	12	18.7	38	7	10	25.5	135	32	5.5	10.5	500	–	–
G	3D	100-034-134	FT-T-220			220	200	70	15	24.3	49.5	9	13		176	41	6.5	12.5	1000	–	–

※SCS14 is equivalent of SUS316.

STAINLESS STEEL HANDLE FT-S280 Large Type

NSF SUS316





[Parts Included]
- Binding head tapping screw 6×35 (SUS)

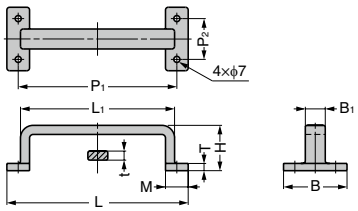
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-071	FT-S280	Stainless Steel (SCS14)	Polished	612	1	20

※The item will be discontinued after current stock is sold out. ※SCS14 is equivalent of SUS316.

STAINLESS STEEL HANDLE FT Large Type

NSF SUS316





[Parts Included]
- Binding head tapping screw 6×35 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L_1	B	B_1	H	T	t	M	P_1	P_2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-069	FT-200	Stainless Steel (SCS14)	Polished	200	170	70	22	50	8	10	25	175	45	586	1	20
G	3D	100-010-070	FT-280			280	250	80	26	62	10	12	27	253	55	1088	1	10

※SCS14 is equivalent of SUS316.

HANDLE (STAINLESS, TITANIUM) 2LC

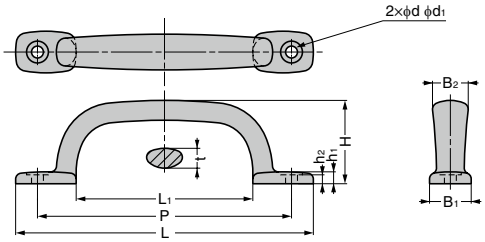
NSF TITANIUM SUS316



- Easy to grab.
- 2 types of materials available: Light weight and strong titanium with excellent corrosion resistance, and cast steel SCS14 equivalent to stainless steel SUS316.
- Titanium handle hardly causes metal allergy. In addition, since it is non-magnetic, suitable for medical devices such as MRI.

[Remarks]
- Screws are not included for titanium handles. Titanium screws are sold separately.
- Recommended screws given in the table below not included.

[Parts Included]
- For only stainless handle: Pan head tapping screw (SUS)



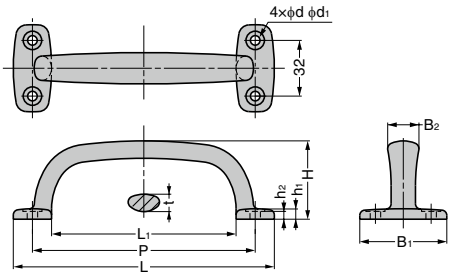
RoHS	CAD	Item Code	Item Name	Material	Finish	L	L_1	P	B_1	B_2	H	h_1	h_2	t	d	d_1	Weight (g)	Screw	Recommended Screw	Box (pcs)	Carton (pcs)
–	3D	100-010-355	2LC-80TI	Titanium	Shot Blast	80	32	64	16	14	35	5.5	4	8	5	9.5	37	–	M4	12	144
–	3D	100-010-354	2LC-120TI			120	64	96	18	16	36		4.5	9			62			8	96
–	3D	100-010-353	2LC-150TI			150	89	128	21	18	42	6		10	6	11	96		M5	6	72
G	3D	100-010-131	2LC-80	Stainless Steel (SCS14)	Polished	80	32	64	16	14	35	5.5	4	8	5	9.5	70	4×	M4	12	144
G	3D	100-010-132	2LC-120			120	64	96	18	16	36		4.5	9			106	20		8	96
G	3D	100-010-133	2LC-150			150	89	128	21	18	42	6		10	6	11	172	5×	M5	6	72
G	3D	100-010-134	2LC-180			180	118	160	23	20	45	6.5	5				225	30		3	36

※SCS14 is equivalent of SUS316.

STAINLESS STEEL HANDLE 4LC

NSF SUS316





- Titanium handle is available as a special order.

[Remarks]
- Recommended screws given in the table below not included.

[Parts Included]
- 4LC-82, 4LC-114: Pan head tapping screw (SUS) 4×20
- 4LC-150, 4LC-180: Pan head tapping screw (SUS) 5×30

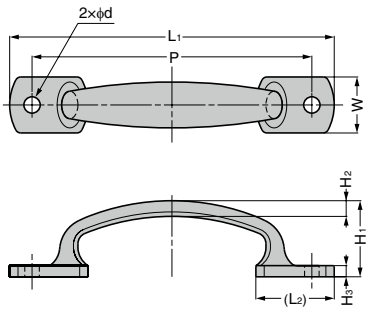
RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	P	B1	B2	H	h1	h2	t	d	d1	Weight (g)	Recommended Screw	Box (pcs)	Carton (pcs)
G	3D	100-010-135	4LC-82	Stainless Steel (SCS14)	Polished	82	46	64	48	16	36.5	5.5	4	8	5	9.5	110	M4	8	96
G	3D	100-010-136	4LC-114			114	78	96			40	6	4.5	9			148		6	72
G	3D	100-010-137	4LC-150			150	106	128	50	18	45			10	6	11	210	M5	3	36
G	3D	100-010-138	4LC-180			180	140	160		20	48	6.5	5				270		2	24

※SCS14 is equivalent of SUS316.

STAINLESS STEEL HANDLE 3LC

SUS316





[Applications]
- Indoor and outdoor medium sized doors.

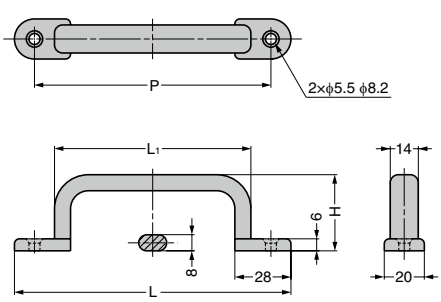
RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	W	H1	H2	H3	P	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-846	3LC-120	Stainless Steel (SCS14)	Polished	120	29	20	30	6	5	105	5.5	90	100	–
G	3D	100-019-845	3LC-130			130	30	22	33	7	6	115		120	–	–
G	3D	100-019-747	3LC-145			145	35	25	34			125	6.5	155	150	–

※SCS14 is equivalent of SUS316.

STAINLESS STEEL HANDLE EC-Y

SUS





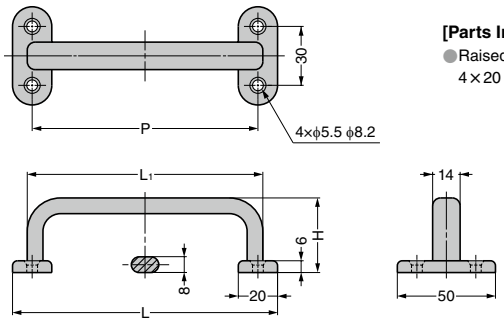
[Parts Included]
- Raised countersunk head tapping screw 4×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-831	EC-Y-140	Stainless Steel (SUS303)	Polished	140	100	38	120	142	5	100
G	3D	100-012-832	EC-Y-160			160	120	40	140	160	3	51
G	3D	100-012-833	EC-Y-190			190	150	42	170	185	2	50

STAINLESS STEEL HANDLE EC-H

SUS





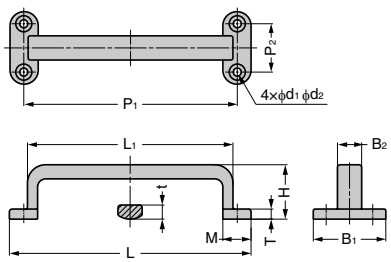
[Parts Included]
- Raised countersunk head tapping screw 4×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-056	EC-H-135	Stainless Steel (SUS303)	Polished	135	120	40	115	191	5	50
G	3D	100-010-057	EC-H-165			165	150	42	145	216	3	48

STAINLESS STEEL HANDLE FT Double-hole Type

NSF SUS





[Parts Included]
- FT-120: Raised countersunk head wood screw (SUS) 3.8×20
- FT-150: Raised countersunk head wood screw (SUS) 5.1×25

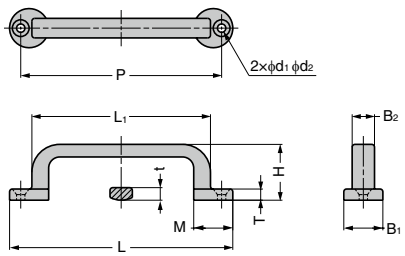
RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	B1	B2	H	T	t	M	P1	P2	d1	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-067	FT-120	Stainless Steel (SCS13)	Polished	120	102	36	12	27	5	7	14	106	24	4.1	8	105	10	120
G	3D	100-010-068	FT-150			150	129	45	15	33	6	8	18	132	30	5.3	10.4	191	5	40

※SCS13 is equivalent of SUS304.

STAINLESS STEEL HANDLE FT Single-hole Type

NSF SUS





[Parts Included]
- FT-65, FT-80: Raised countersunk head wood screw (SUS) 3.1×16
- FT-100: Raised countersunk head wood screw (SUS) 3.8×20

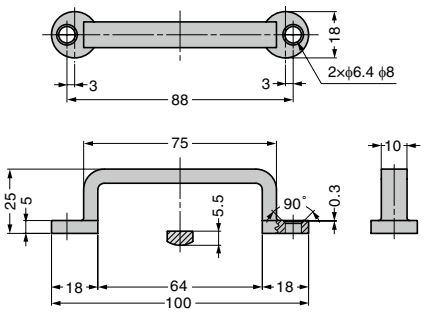
RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	B1	B2	H	T	t	M	P	d1	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-847	FT-65	Stainless Steel (SCS13)	Polished	65	47	13	7	16	3.5	4	13	57	3.3	6.4	19	40	480
G	3D	100-012-848	FT-80			80	61	14	8	20	4	4.5	14	72			32	30	360
G	3D	100-012-849	FT-100			100	75	18	10	25	5	5.5	18	88	4.1	8	58	20	240

※SCS13 is equivalent of SUS304.

STAINLESS STEEL HANDLE FT-100-6.4

SUS





- Wider mounting hole relative to conventional FT handle.

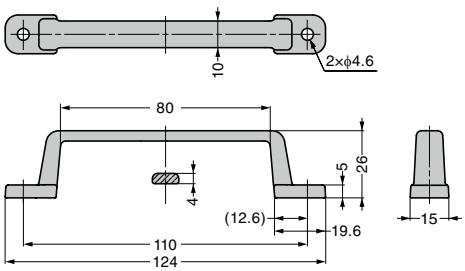
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-167	FT-100-6.4	Stainless Steel (SCS13)	Polished	54	20	200

※SCS13 is equivalent of SUS304.

STAINLESS STEEL HANDLE FT-110S

SUS





[Recommended Screws]

- M4 screw

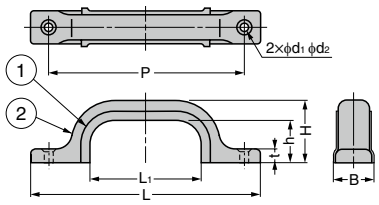
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-029	FT-110S	Stainless Steel (SCS13)	Satin	60	50	200

※SCS13 is equivalent of SUS304.

STAINLESS STEEL HANDLE US

NSF SUS





- Rubber grip allows for an easy and comfortable grip.
- Stainless steel (SUS304) is used for the surface part of the handle.
- Knob type HS 1 also available.

[Parts Included]

- Raised countersunk head wood screw (SUS)

No.	Part Name	Material	Finish / Colour
①	Pad	Elastomer (TPE)	Black
②	Frame	Stainless Steel (SUS304)	Satin and Polished Combination

RoHS	CAD	Item Code	Item Name	Finish	L	L1	P	B	H	h	t	d1	d2	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	100-012-243	US-70S	Satin	70	20	54	17	28	21	5.5	3.3	6.6	20	3.1×16	20	200
G	3D	100-012-240	US-70M	Polished												20	200
G	3D	100-012-244	US-120S	Satin	120	57	102	19	32		6.5	3.8	7.6	45	3.5×20	20	200
G	3D	100-012-241	US-120M	Polished												20	200
G	3D	100-012-245	US-160S	Satin	160	88	140	22	37.5	23	7.5	4.1	8.1	70	4.1×25	10	100
G	3D	100-012-242	US-160M	Polished												10	100

Refer to 1 : P.524

HANDLE KMH

TEST METHOD 1



※Caps are sold separately.

- Cap hides screw heads for clean appearance (option). 4 colours available.
- Stylish flat surface.
- Rounded inside allows for easy gripping.
- Caps are tightly fixed to prevent from falling off.
- Possible to customise cap colour from 10,000 pcs.

[Remarks]
- Truss head screws can not be used.
- Caps are sold separately. Sold by piece. Please order together with handle.

[Recommended Screws]
- Hexagon socket head cap screw M5 or Pan head screw M5

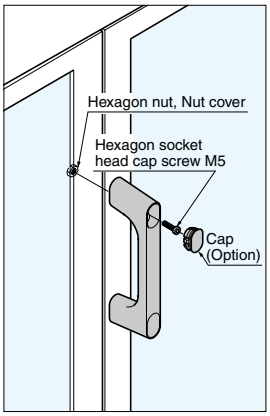
[Caps] Option

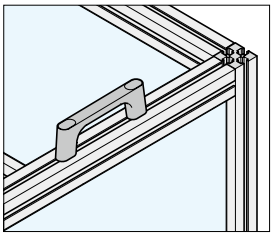


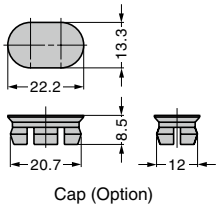
[Without Cap]

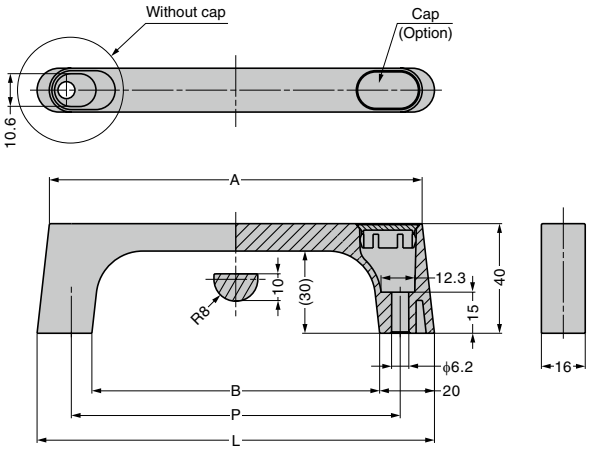


[Installation]









[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	L	A	B	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-024-063	KMH-100	Zinc Alloy (ZDC)	Satin Chrome	125	116	85	100	500	51	162	10	100
G	3D	100-024-064	KMH-120			145	136	105	120			180	10	60
G	3D	100-024-065	KMH-150			175	166	135	150			206	10	60

[Caps] Option (Sold by piece)

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	–	100-024-066	KMHC-WT	PBT	White	0.7	100	2000
G	–	100-024-067	KMHC-GR		Grey		100	2000
G	–	100-024-068	KMHC-BU		Light Blue		100	2000
G	–	100-024-924	KMHC-BL		Black		100	2000

HANDLE MJH

TEST METHOD 1



※Caps are sold separately.

- Handle can be installed from both front and back. Cap hides screw heads for clean appearance (option). 3 colours available.
- Rounded inside allows for easy gripping.
- Caps are tightly fixed to prevent from falling off.
- Possible to customise cap colour from 3,000 pcs.
- MJH-150 is compliant with SEMI standard (SEMI S8-0308).

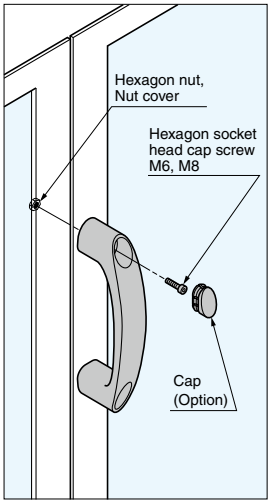
[Remarks]
- Only hexagon socket head cap screws are applicable.
- Caps are sold separately. Sold by piece. Please order together with handle.

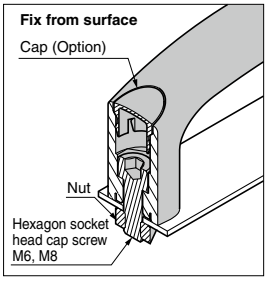
[Recommended Screws]
- MJH-93 : Hexagon socket head cap screw M6
- MJH-120, MJH-150 : Hexagon socket head cap screw M8

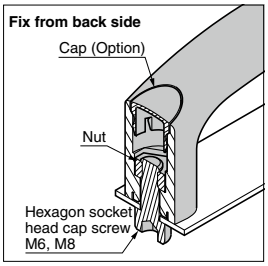
[Caps] Option



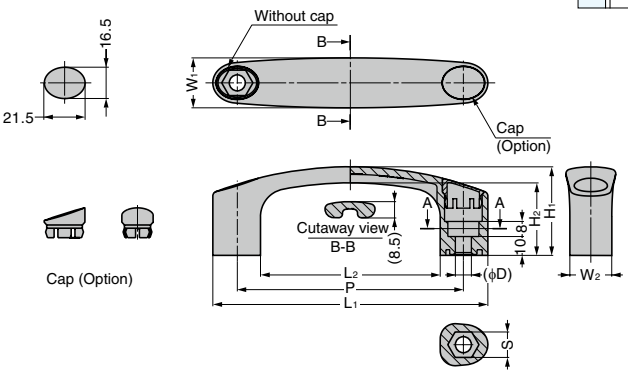
[Installation]







- Screws are applicable from both inside and outside.



[Body]

RoHS	CAD	Item Code	Item Name	Material	Colour	P	L1	L2	D	S	H1	H2	W1	W2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-026-534	MJH-93	Reinforced Nylon	Black	93	119	67	6.5	10.2	42	33.5	25	21.3	450	46	41	100	–
G	3D	100-026-535	MJH-120			120	146	94	8.5	13.2	47	38.5	26.5	22.4			48	50	–
G	3D	100-026-536	MJH-150			150	176	124			52	43.5	28	22.5			58	50	–

[Caps] Option (Sold by piece)

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-026-537	MJHC-BL	Reinforced Nylon	Black	1.4	100	–
G	3D	100-026-538	MJHC-GR		Grey		100	–
G	3D	100-026-539	MJHC-YE		Yellow		100	–

HANDLE CJH

Toughness & Beautility HANDLE

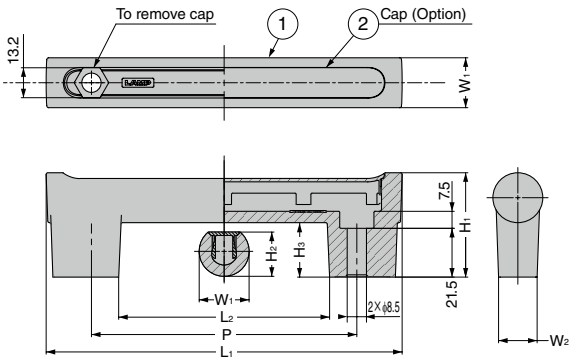


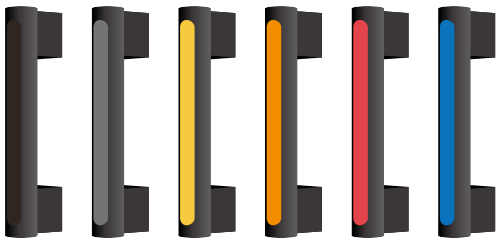
CJH-117/CJHC-117GR

- Long colour cap facilitates intuitive operation.
- The cover colours are used for indicating dangerous regions and different work areas.
- Handle can be fixed from either the front or back with screws.

[Applications]

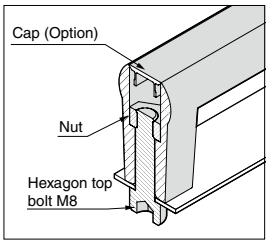
- Maintenance doors, etc.



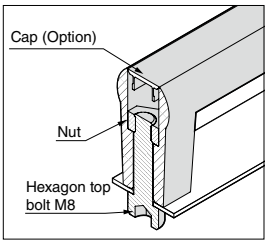


BL GR YE YR RD BU

[Fix from surface]



[Fix from back side]



No.	Part Name	Material
①	Body	Reinforced nylon
②	Cap	PA

[Body]

RoHS	CAD	Item Code	Item Name	Material	L1	L2	W1	W2	H1	H2	H3	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-974	CJH-117BL	Reinforced nylon	157	93	22	17	46	19.5	24	117	–	–	67	–	–
G	3D	100-036-975	CJH-150BL		190	125.5	24	18.5	52	21.4	28	150			91	–	–

[Cap] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-976	CJHC-117BL	PA	Black	4	–	–
G	3D	100-036-977	CJHC-117GR		Grey		–	–
G	3D	100-036-978	CJHC-117YE		Yellow		–	–
G	3D	100-036-979	CJHC-117YR		Orange		–	–
G	3D	100-036-980	CJHC-117RD		Red		–	–
G	3D	100-036-981	CJHC-117BU		Blue		–	–
G	3D	100-036-982	CJHC-150BL		Black	6	–	–
G	3D	100-036-983	CJHC-150GR		Grey		–	–
G	3D	100-036-984	CJHC-150YE		Yellow		–	–
G	3D	100-036-985	CJHC-150YR		Orange		–	–
G	3D	100-036-986	CJHC-150RD		Red		–	–
G	3D	100-036-987	CJHC-150BU		Blue		–	–

HANDLE SJH

Toughness & Beautility
HANDLE

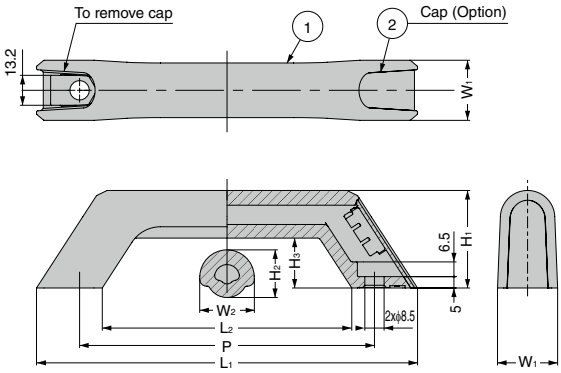


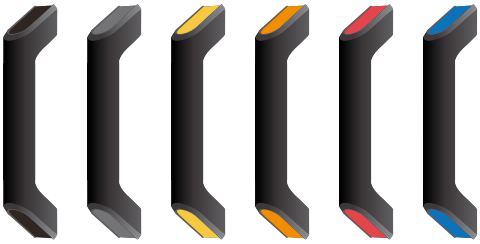
SJH-162/SJHC-162YR

- A rounded handle for a comfortable grip.
- Handle can be fixed from either the front or back with screws.

[Applications]

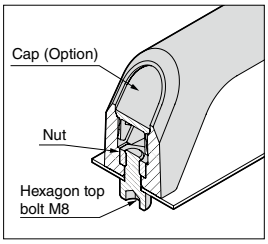
- Maintenance doors, etc.



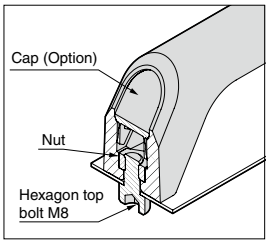


BL GR YE YR RD BU

[Fix from surface]



[Fix from back side]



No.	Part Name	Material
①	Body	Reinforced nylon
②	Cap	PA

[Body]

RoHS	CAD	Item Code	Item Name	Material	L1	L2	W1	W2	H1	H2	H3	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-988	SJH-130	Reinforced nylon	168	110	26.5	24	43	21	22	130	–	–	76	–	–
G	3D	100-036-989	SJH-160		198	140	28.5	26	49	23	26	160			103	–	–

[Cap] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-036-990	SJHC-130BL	PA	Black	1.5	–	–
G	3D	100-036-991	SJHC-130GR		Grey		–	–
G	3D	100-036-992	SJHC-130YE		Yellow		–	–
G	3D	100-036-993	SJHC-130YR		Orange		–	–
G	3D	100-036-994	SJHC-130RD		Red		–	–
G	3D	100-036-995	SJHC-130BU		Blue		–	–
G	3D	100-036-996	SJHC-160BL		Black	1.9	–	–
G	3D	100-036-997	SJHC-160GR		Grey		–	–
G	3D	100-036-998	SJHC-160YE		Yellow		–	–
G	3D	100-036-999	SJHC-160YR		Orange		–	–
G	3D	100-037-000	SJHC-160RD		Red		–	–
G	3D	100-037-001	SJHC-160BU		Blue		–	–

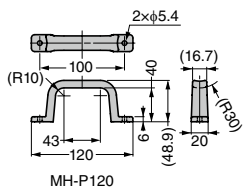
HANDLE MH-P SEMI Compliance



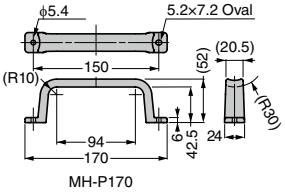
- Clear body suitable for acrylic, etc.
- Allows for easy gripping with glove on (compliant with SEMI standard, SEMI S8-0308).
- Made from weather-proof, chemical-resistance, lead-free PVC.

[Recommended Screws]

- M5 screw



MH-P120



MH-P170

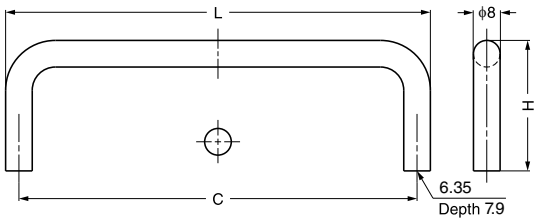
RoHS	CAD	Item Code	Item Name	Material	Colour	Load capacity N	Load capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-021-823	MH-P120	PVC	Clear	200	20	34	64	–
G	3D	100-019-999	MH-P170			262	27	56	48	–

WIRE PULL SWP

NSF SUS316



- Ideal for harsh and high corrosion environments.



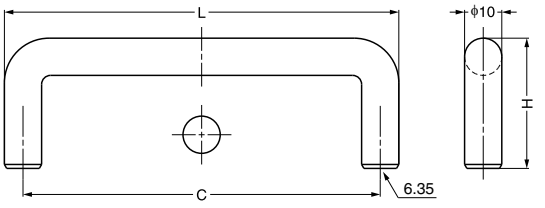
RoHS	CAD	Item Code	Item Name	L	C	H	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-023-434	SWP-630/S	84.2	76.2	34	Stainless Steel (SUS316)	Satin	71	20	200
–	–	100-023-435	SWP-635/S	96.9	88.9	34			78	20	200
–	–	100-023-436	SWP-640/S	109.6	101.6	34			85	20	200
–	–	100-023-437	SWP-696/S	104	96	34			91	20	200

WIRE PULL SWF

NSF SUS316



- Ideal for harsh and high corrosion environments.

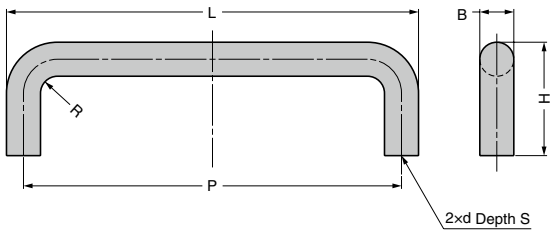


RoHS	CAD	Item Code	Item Name	L	C	H	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-023-438	SWF-640	111	101.5	35	Stainless Steel (SUS316)	Satin	90	20	200
G	–	100-023-439	SWF-650	136.5	127	35			110	20	200
G	–	100-023-440	SWF-660	162	152.5	35			130	20	200
–	–	100-023-441	SWF-690	238	228.5	35			200	20	200
G	–	100-023-442	SWF-6120	314.5	305	35			270	20	200

STAINLESS STEEL HANDLE H-42-C



- Optional bracket H-42-Z 1 is available.
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.
- Titanium handles 2 of the same size as H-42-C-2, H-42-C-4 and H-42-C-15 also available.(L and B dimensions are slightly different from H-42-C-2)



[Handle]

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	B	P	R	d	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-560	H-42-C-8	Stainless Steel (SUS304)	Polished	66	22	6	60	3	M4	7	18	100	500
G	3D	100-010-562	H-42-C-14			86			80				25	50	250
G	3D	100-010-561	H-42-C-1			75	30	7	68	3.5	M5	8	30	50	250
G	3D	100-010-563	H-42-C-2			109		9	100	4.5			65	50	150
G	3D	100-010-564	H-42-C-3			120	40	10	110	5	M6		100	50	150
G	3D	100-010-565	H-42-C-4			130			120				105	50	150
G	3D	100-010-566	H-42-C-15			162	50	12	150	6	M8	10	185	30	60
G	3D	100-010-567	H-42-C-5			200			188				220	30	60
G	3D	100-010-568	H-42-C-6			250			238				265	20	40
G	3D	100-010-569	H-42-C-7			300			288				300	20	40

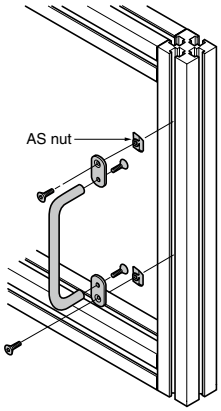
Refer to 1 : P.488, 2 : P.487

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[How to Install]



[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

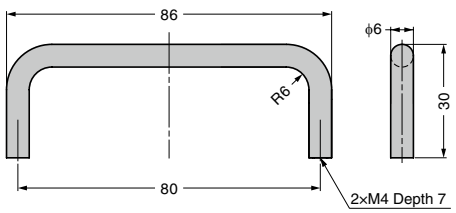
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	100-041-484	AS-H-42-C-1-8	Groove Width 8 mm	Handle H-42-C-1 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-485	AS-H-42-C-1-10	Groove Width 10 mm	Handle H-42-C-1 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–
G	–	100-041-486	AS-H-42-C-2-8	Groove Width 8 mm	Handle H-42-C-2 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-487	AS-H-42-C-2-10	Groove Width 10 mm	Handle H-42-C-2 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–

Refer to 1 : FRONT P.20, 2 : P.488, 3 : P.706

STAINLESS STEEL HANDLE H-42-F14

SUS316



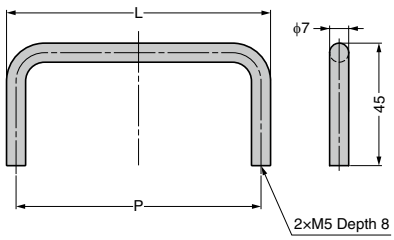


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-233	H-42-F14	Stainless Steel (SUS316)	Polished	25	50	250

STAINLESS STEEL HANDLE MG

SUS





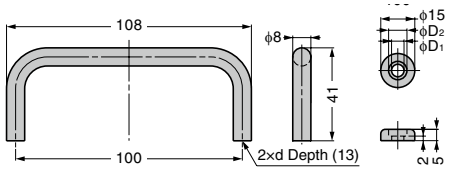
- Higher profile allows for easy gripping with glove on.
- MG-68 is compliant with SEMI standard (SEMI S8-0307).

RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-488	MG-68	Stainless Steel (SUS304)	Polished	75	68	42	100	300
G	3D	100-010-073	MG-90			97	90	48	100	300

HANDLE T-100-8

SUS





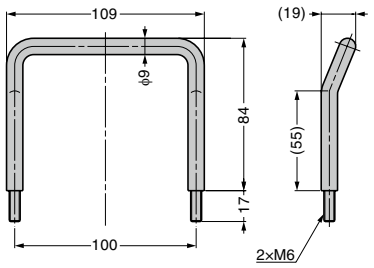
- Higher profile allows for easy gripping with glove on.

RoHS	CAD	Item Code	Item Name	Material	Finish	d	D_1	D_2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-224	T-100-8S	Stainless Steel (SUS304)	Polished	M5	5.5	8.2	72	100	300
G	3D	100-019-855	T-100-8CR	Brass	Chrome	M4	4.5	8	78	50	–

STAINLESS STEEL HANDLE H-75-BL-100

NSF SUS





- Angled grip for a comfortable grip.

[Remarks]

- Please use washers for wood or melamine resin. (Not included)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-604	H-75-BL-100	Stainless Steel (SUS304)	Polished	130	20	80

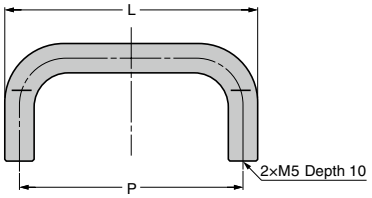
STAINLESS STEEL HANDLE LF-12

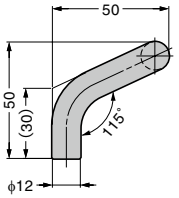


- Angled grip for a comfortable grip.
- ϕ12mm stable and strong handle.
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.

[Parts Included]

- Truss head screw M5×30





[Handle]

RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Load capacity N	Load capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-520	LF-12-96	Stainless Steel (SUS304)	Satin	108	96	441	45	182	10	80
G	3D	100-010-521	LF-12-128			140	128			211	10	60
G	3D	100-010-522	LF-12-160			172	160			236	10	60

AS Parts Set for Installing to Aluminium Frame

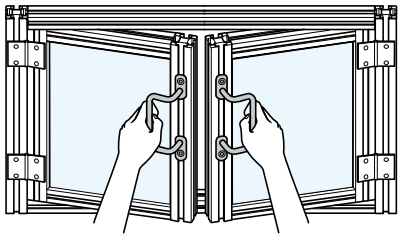
Please refer to the series introduction page 1 for details about AS series.



[Application Example]

For double door

No worry of pinching your fingers by handles.



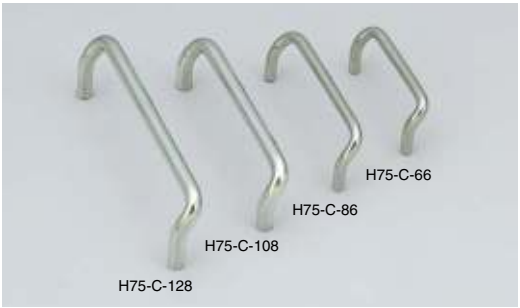
[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	100-041-492	AS-LF-12-96-8	Groove Width 8 mm	Handle LF-12-96 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-493	AS-LF-12-96-10	Groove Width 10 mm	Handle LF-12-96 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–
G	–	100-041-494	AS-LF-12-128-8	Groove Width 8 mm	Handle LF-12-128 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-495	AS-LF-12-128-10	Groove Width 10 mm	Handle LF-12-128 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–
G	–	100-041-496	AS-LF-12-160-8	Groove Width 8 mm	Handle LF-12-160 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-497	AS-LF-12-160-10	Groove Width 10 mm	Handle LF-12-160 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–

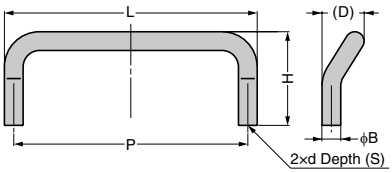
Refer to 1 : FRONT P.20, 2 : P.488, 3 : P.706

STAINLESS STEEL HANDLE H-75-C

AS SUS



- Angled grip for a comfortable grip.
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.



[Handle]

RoHS	CAD	Item Code	Old Item Code	Item Name	Material	Finish	L	H	D	B	P	d	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-605	100-010-600	H-75-C-66	Stainless Steel (SUS304)	Polished	66	30	16	6	60	M4	7	23	100	400
G	3D	100-010-606	100-010-601	H-75-C-86			86	31.5			80			28	100	400
G	3D	100-010-607	100-010-602	H-75-C-108			108	32	18	8	100	M5	10	54	50	200
G	3D	100-010-608	100-010-603	H-75-C-128			128	40			120			70	50	200

※Item code has been revised.

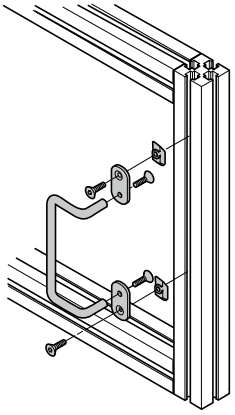
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

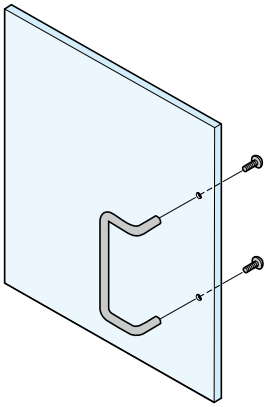


[How to Install]

Frame Installation



Panel Installation



[AS Parts Set] Parts set of brackets, screws and AS nuts used for installing to aluminium frame.

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	100-041-488	AS-H-75-C-108-8	Groove Width 8 mm	Handle H-75-C-108 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-489	AS-H-75-C-108-10	Groove Width 10 mm	Handle H-75-C-108 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–
G	–	100-041-490	AS-H-75-C-128-8	Groove Width 8 mm	Handle H-75-C-128 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-8M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 4pcs	–
G	–	100-041-491	AS-H-75-C-128-10	Groove Width 10 mm	Handle H-75-C-128 : 1pc Bracket for Handle AS-H30 : 2pcs AS Nut AS-10M5 : 2pcs M5×10 Hexagon Socket Countersunk Head Screw : 2pcs M5×12 Hexagon Socket Countersunk Head Screw : 2pcs	–

Refer to 1 : FRONT P.20, 2 : P.488, 3 : P.706

STAINLESS STEEL HANDLE H-42-B

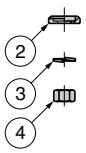
SUS

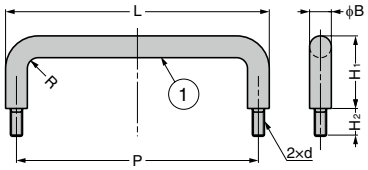


- Bracket H-42-Z 1 is included. Bracket can also be ordered separately.

[Remarks]
- Be sure to use supplied brackets for installation.

[Parts Included]
- Bracket H-42-Z 1
- Spring washer
- Hexagon nut





No.	Part Name	Material	Finish
①	Handle	Stainless Steel (SUS304)	Polished
②	Bracket H-42-Z		Barrel Polished
③	Spring Washer		Plain
④	Hexagon Nut		

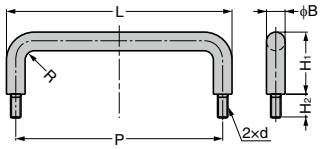
RoHS	CAD	Item Code	Item Name	L	H1	H2	B	P	R	d	Weight (g)	Bracket	Box (pcs)	Carton (pcs)
G	3D	100-019-765	H-42-B-9	46	22	8.5	6	40	3	M4	15	H-42-Z-6	50	500
G	3D	100-010-550	H-42-B-8	66		7		60			20		100	500
G	3D	100-010-552	H-42-B-14	86		10		80			27		50	250
G	3D	100-010-551	H-42-B-1	75	30	11	7	68	3.5	M5	40	H-42-Z-7	50	250
G	3D	100-010-553	H-42-B-2	109			9	100	4.5		80	H-42-Z-9	50	150
G	3D	100-010-554	H-42-B-3	120	40		10	110	5	M6	120	H-42-Z-10	50	150
G	3D	100-010-555	H-42-B-4	130				120			125		50	150
G	3D	100-010-556	H-42-B-15	162	50	20	12	150	6	M8	235	H-42-Z-12	30	60
G	3D	100-010-557	H-42-B-5	200				188			270		30	60
G	3D	100-010-558	H-42-B-6	250				238			320		20	40
G	3D	100-010-559	H-42-B-7	300				288			365		20	40

Refer to 1 : P.488

TITANIUM HANDLE H-42-BT

TITANIUM





[Recommended Screws]
- Hexagon nut (back screw mount)

- Ideal for places with light weight and rust resistance requirements.
- Titanium handle hardly causes metal allergy.
- Since it is non-magnetic, suitable for medical devices such as MRI.
- Titanium brackets and mounting nuts also available.
- Stainless steel handle H-42-B 1 of the same shape also available.

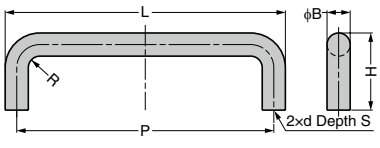
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H1	H2	B	P	R	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-350	H-42-BT-2	Titanium	Polished	108	30	11	8	100	4.5	M5	40	20	80
G	3D	100-010-349	H-42-BT-4			130	40		10	120	5	M6	63	20	80
G	3D	100-010-348	H-42-BT-15			162	50	20	12	150	6	M8	112	20	80

Refer to 1 : P.487

TITANIUM HANDLE H-42-CT

TITANIUM





[Recommended Screws]
- d × (Door thickness+5~S)

- Ideal for places with light weight and rust resistance requirements.
- Titanium handle hardly causes metal allergy.
- Since it is non-magnetic, suitable for medical devices such as MRI.
- Titanium mounting screws also available.
- Stainless steel handle H-42-C 1 of the same shape also available.

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	B	P	R	d	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-352	H-42-CT-2	Titanium	Polished	108	30	8	100	4.5	M5	8	37	20	80
G	3D	100-010-351	H-42-CT-4			130	40	10	120	5	M6		59	20	80
G	3D	100-010-549	H-42-CT-15			162	50	12	150	6	M8	10	105	20	80

Refer to 1 : P.483

Updated 2017.10.27

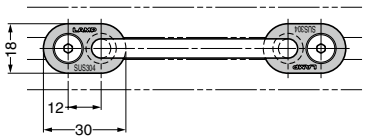
BRACKET FOR HANDLE AS-H30

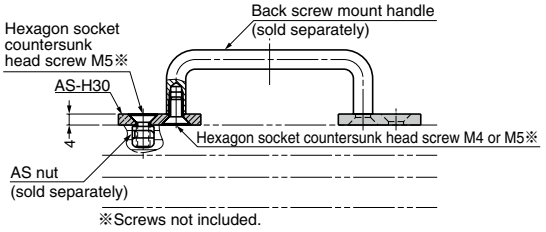
AS SUS



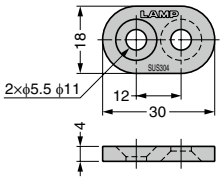
- Used for installing back screw mount handle from the front side of aluminium frame.
- Use AS nuts 1 for installation.
- Nuts not included for installing to 6mm groove width aluminium frame.

[Dimensions]





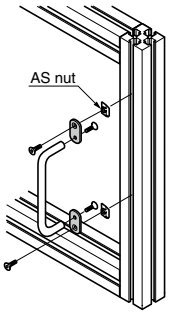
※Screws not included.



[Application Example]



[How to Install]



1. Fix bracket AS-H30 and back screw mount handle (sold separately) with mounting screws.
2. Lightly fix AS nut (sold separately) and bracket with mounting screws.
3. Put AS nut (sold separately) into the groove of aluminium frame, and fix it by tightening the screw.

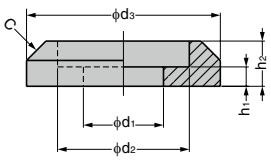
RoHS	CAD	Item Code	Item Name	Material	Finish	Aluminium Frame	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-080-026	AS-H30	Stainless Steel (SUS304)	Barrel Polished	Groove Width 8, 10	13	100	1000

Refer to 1 : P.706

BRACKET FOR STAINLESS STEEL HANDLE H-42-Z

SUS





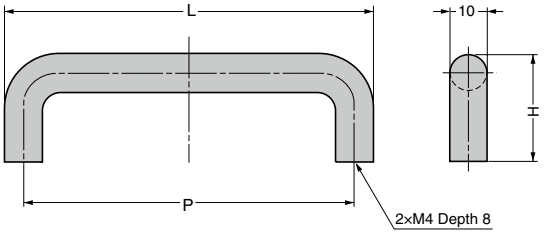
- Bracket for wire pull.
- Suitable sizes of handle diameter and screw are as below.

RoHS	CAD	Item Code	Item Name	Material	Finish	h_1	h_2	d_1	d_2	d_3	C	Handle Diameter	Screw Size	Weight (g)	1 pack	Box (packs)	Carton (packs)
G	3D	100-010-570	H-42-Z-6	Stainless Steel (SUS304)	Barrel Polished	1.5	2.5	4.5	6.2	10	1	6	M4	1	2 pcs	200	2000
G	3D	100-010-571	H-42-Z-7			1	3	5.2	7.2			7	M5	0.9		200	2000
G	3D	100-010-572	H-42-Z-9						9.2	13		9		1.6		200	2000
G	3D	100-010-573	H-42-Z-10			1.5	3.5	6.2	10.2	15	1.5	10	M6	2.7		200	2000
G	3D	100-010-574	H-42-Z-12				4.5	8.2	12.2	18		12	M8	4.9		200	2000

ALUMINIUM HANDLE AM



[Parts Included]
- Truss head screw M4×28



RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-017-600	AM-60I	Aluminium Alloy	Paint	Ivory	60	29	50	15.8	30	–
–	3D	100-017-603	AM-80I				80		70	19.8	30	–
–	3D	100-017-609	AM-120I				120		110	26.8	30	–
–	3D	100-017-601	AM-60B			Black	60		50	15.8	30	–
–	3D	100-017-610	AM-120B				120		110	26.8	30	–
–	3D	100-017-608	AM-100S		Anodised Silver	–	100		90	23.4	30	600
–	3D	100-017-611	AM-120S				120		110	26.8	30	–
–	3D	100-017-614	AM-310S				310	38	300	67	10	–

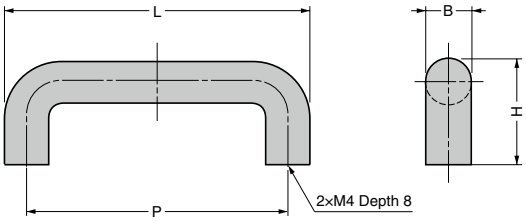
PLASTIC HANDLE PC



- Plastic handle contributes to weight reduction of doors.

[Remarks]
- Size and finish varies. Please check with actual item.

[Parts Included]
- Truss head screw M4×28



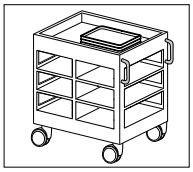
RoHS	CAD	Item Code	Item Name	Material	Colour	L	H	P	B	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-015-502	PC-45-W	PS	White	45	28	35	10	7.5	60	–
–	3D	100-015-503	PC-80-W			80		68	12	14	60	–
–	3D	100-015-504	PC-120-W			120	29	108		18.3	60	–
–	3D	100-015-505	PC-45-B		Black	45	28	35	10	7.5	60	–
–	3D	100-015-506	PC-80-B			80		68	12	14	60	–
–	3D	100-015-507	PC-120-B			120	29	108		18.3	60	–

HANDLE SGH-200 Antistatic & Antibacterial Type

ANTIBACTERIAL



[Application Example]



- Elastomer coating provides static eliminating and antibacterial effect.
- Designed to reduce discomfort caused by static when touching a metal handle.
- Textured, soft handle surface improves grip in manufacturing environments where lubricants are used.

[Specifications]

- Operating temperature: -30˚C ~80˚C

[Applications]

- Wagon, medical equipment, pharmaceutical manufacturing equipment, semiconductor manufacturing and measurement equipment, school facilities, and other facilities requiring static elimination and antibacterial, etc.

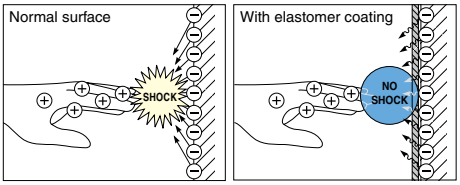
[Remarks]

- Install to a conductive surface to eliminate static. Non-conductive surface has no static eliminating effect. Discharge by grounding is required.
- This product can reduce the pain feeling, but not eliminate it. The sense of pain varies for different people.

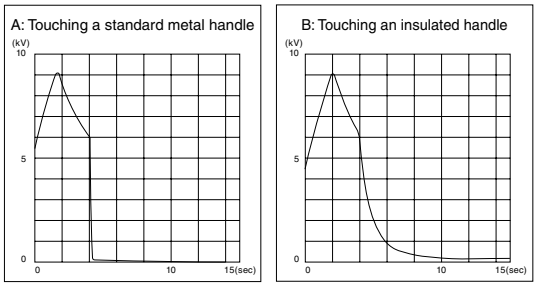
[Parts Included]

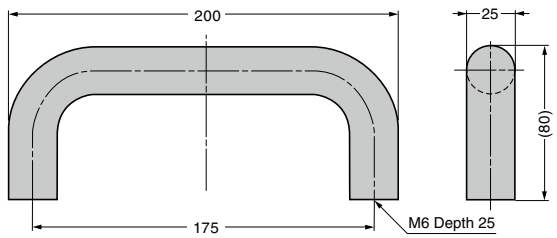
- Pan head screw with spring washer M6×20 (SUS)

[Pathway of Releasing Electrical Discharge]



[Properties of Special Elastomer Coating]





RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-013-022	SGH-200	Base Material: PA, Coating: Elastomer	Blue	250	1	20

STAINLESS STEEL HANDLE HGH

SUS





The silicone rubber mount provides a snug fit between the handle and the mounting surface.

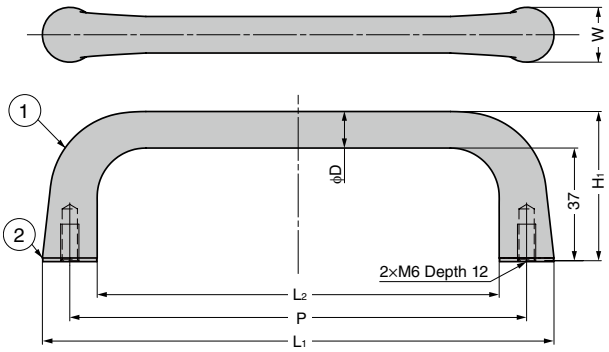


The handle shape and the mirror finish are designed to discourage dust accumulation. This helps to suppress bacterial propagation and allows for faster and easier cleaning.

- Wider base for easy cleaning.
- Silicone rubber gasket is compliant with the Food Sanitation Act.

[Applications]

- Food processing and production machinery.



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Mirror
②	Gasket	Silicone rubber (Q)	Blue

RoHS	CAD	Item Code	Item Name	L_1	L_2	W	H_1	P	D	Weight (g)
–	–	100-037-021	HGH-115SM	130	100	15	47	115	10	144
–	–	100-037-022	HGH-150SM	168	132	18	49	150	12	244
–	–	100-037-023	HGH-200SM	222.5	177.5	22.5	52	200	15	463

Zwei L STAINLESS STEEL HANDLE ZL-2001

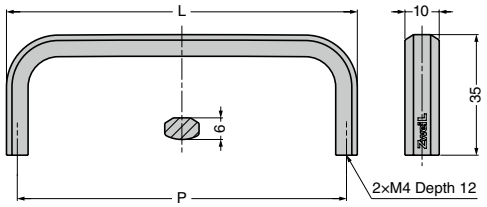
SUS316



●Superior “Zwei L Finish” .
Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give jewel like highlights which flatter any architectural space.

[Remarks]
●When installing to thin sheet metal or acrylic sheet, mounting surface may not be horizontal and the sheet may warp. Please check with actual item.

[Parts Included]
●Truss head screw M4×30 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-000	ZL-2001-32	Stainless Steel (SUS316)	Zwei L Finish	38	32	34	20	–
G	3D	100-011-001	ZL-2001-64			70	64	46	12	–
G	3D	100-011-002	ZL-2001-96			102	96	59	12	–
G	3D	100-011-003	ZL-2001-128			134	128	72	10	–
–	3D	100-011-037	ZL-2001-160			166	160	86	10	–
–	3D	100-011-038	ZL-2001-192			198	192	100	6	–
–	3D	100-011-039	ZL-2001-256			262	256	125	6	–

Zwei L STAINLESS STEEL HANDLE ZL-2002

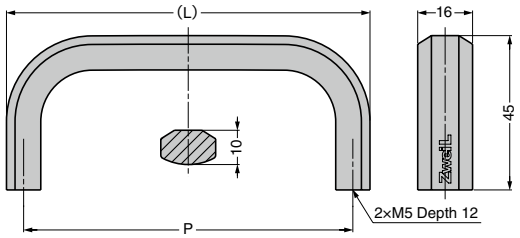
SUS316



●Superior “Zwei L Finish” .
Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give jewel like highlights which flatter any architectural space.

[Remarks]
●when installing to thin sheet metal or acrylic sheet, mounting surface may not be horizontal and the sheet may warp. Please check with actual item.

[Parts Included]
●Truss head screw M5×30 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-004	ZL-2002-96	Stainless Steel (SUS316)	Zwei L Finish	106	96	165	12	–
G	3D	100-011-005	ZL-2002-128			138	128	194	12	–
G	3D	100-011-006	ZL-2002-160			170	160	233	12	–
G	3D	100-011-007	ZL-2002-192			202	192	265	6	–
G	3D	100-011-008	ZL-2002-256			266	256	332	6	–
G	3D	100-011-009	ZL-2002-320			330	320	395	6	–
G	3D	100-014-431	ZL-2002-416			426	416	491	4	–
G	3D	100-014-432	ZL-2002-512			522	512	587	4	–

Zwei L BRACKET FOR STAINLESS STEEL HANDLE ZL-2301 For Handle ZL-2001 and ZL-2002 SUS316 TEMPERED GLASS



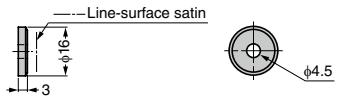
Handles are sold separately.

- Bracket for installing handle ZL-2001 and ZL-2002 of Zwei L series on glass door.
- Superior "Zwei L Finish" .
  Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give jewel like highlights which flatter any architectural space.
- For glass door of 4, 5 and 6mm thickness.

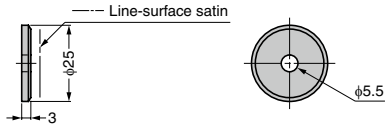
[Remarks]

- When installing to thin sheet metal or acrylic sheet, mounting surface may not be horizontal and the sheet may warp. Please check with actual item.

①ZL glass mounting bracket ϕ16



②ZL glass mounting bracket ϕ25



③Gasket for ZL glass mounting bracket ϕ14
④Gasket for ZL glass mounting bracket ϕ20

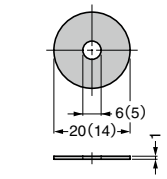
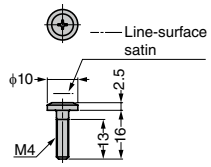


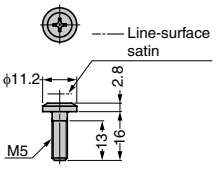
Figure above shows ④.
Dimensions in ( ) are for ③.

⑤ZL countersunk head screw M4×16



Glass processing hole
ϕ5 (glass thickness 4, 5)
ϕ6 (glass thickness 6)

⑥ZL countersunk head screw M5×16



Glass processing hole ϕ6

[Bracket Set for ZL-2001 ϕ16] w/Screw
Parts set

No.	Part Name	Material	Finish / Colour	Carton (pcs)
①	Bracket (ϕ16)	Stainless Steel (SUS316)	Zwei L Finish	2
③	Gasket (ϕ14)	Elastomer (TPE)	Clear	4
⑤	Truss Head Screw M4×16	Stainless Steel	Zwei L Finish	2

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-978	ZL-2301-2016	18	4	–

[Bracket Set for ZL-2002 ϕ25] w/Screw
Parts set

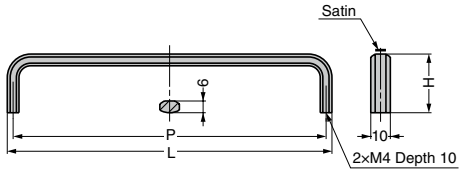
No.	Part Name	Material	Finish / Colour	Carton (pcs)
②	Bracket (ϕ25)	Stainless Steel (SUS316)	Zwei L Finish	2
③	Gasket (ϕ14)	Elastomer (TPE)	Clear	
④	Gasket (ϕ20)			
⑥	Truss Head Screw M5×16	Stainless Steel	Zwei L Finish	

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-979	ZL-2301-2025	34	4	–

STAINLESS STEEL HANDLE XL-JS

SUS316





- Finish: Combination of polished and satin.

[Parts Included]

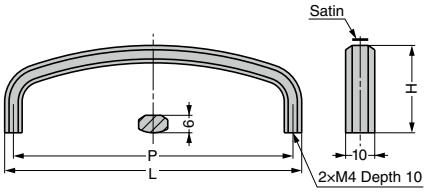
- Truss head screw M4×25 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	H	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-792	XL-JS165TT	Stainless Steel (SUS316)	Polished and Satin Combination	166	160	30	81	15	150
G	3D	100-012-793	XL-JS260TT			260	254	33	122	10	100
G	3D	100-012-794	XL-JS360TT			358	352	36	166	10	100

STAINLESS STEEL HANDLE XL-JSR

SUS316





- Finish: Combination of polished and satin.

[Parts Included]

- Truss head screw M4×25 (SUS)

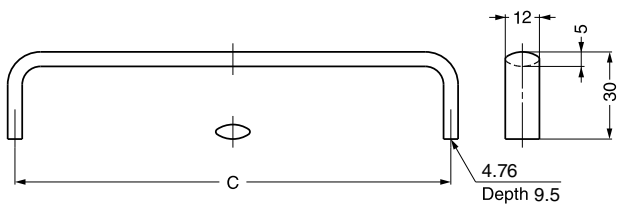
RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	H	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-795	XL-JSR40TT	Stainless Steel (SUS316)	Polished and Satin Combination	38	32	27	26	30	300
G	3D	100-012-796	XL-JSR70TT			70	64	30	35	20	200
G	3D	100-012-797	XL-JSR100TT			102	96		51	20	200
G	3D	100-012-798	XL-JSR135TT			134	128		63	15	150

STAINLESS STEEL HANDLE KC-S

NSF SUS316



●Ideal for harsh and high corrosion environments.



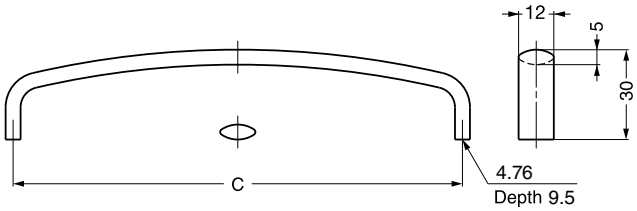
RoHS	CAD	Item Code	Item Name	Material	Finish	C	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-023-410	KC-S635/M	Stainless Steel (SUS316)	Mirror	88.9	67	20	200
–	–	100-023-414	KC-S635/S		Satin			20	200
–	–	100-023-411	KC-S640/M		Mirror	101.6	71	20	200
–	–	100-023-415	KC-S640/S		Satin			20	200
–	–	100-023-412	KC-S650/M		Mirror	127	85	20	200
–	–	100-023-416	KC-S650/S		Satin			20	200
–	–	100-023-413	KC-S660/M		Mirror	152.4	95	20	200
–	–	100-023-417	KC-S660/S		Satin			20	200

STAINLESS STEEL HANDLE KC-R

NSF SUS316



●Ideal for harsh and high corrosion environments.



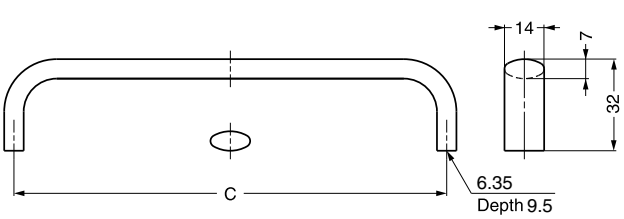
RoHS	CAD	Item Code	Item Name	Material	Finish	C	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-023-418	KC-R635/M	Stainless Steel (SUS316)	Mirror	88.9	60	20	200
–	–	100-023-422	KC-R635/S		Satin			20	200
–	–	100-023-419	KC-R640/M		Mirror	101.6	67	20	200
–	–	100-023-423	KC-R640/S		Satin			20	200
–	–	100-023-420	KC-R650/M		Mirror	127	78	20	200
–	–	100-023-424	KC-R650/S		Satin			20	200
–	–	100-023-421	KC-R660/M		Mirror	152.4	88	20	200
–	–	100-023-425	KC-R660/S		Satin			20	200

STAINLESS STEEL HANDLE EK-S

NSF SUS316



●Ideal for harsh and high corrosion environments.



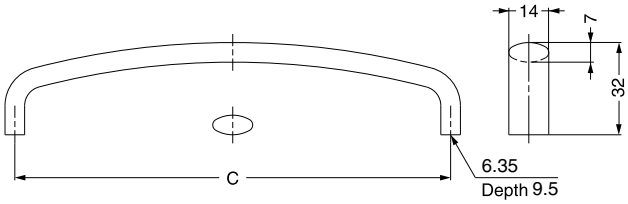
RoHS	CAD	Item Code	Item Name	Material	Finish	C	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-023-426	EK-S635/M	Stainless Steel (SUS316)	Mirror	88.9	106	20	200
–	–	100-023-430	EK-S635/S		Satin			20	200
–	–	100-023-427	EK-S640/M		Mirror	101.6	116	20	200
–	–	100-023-431	EK-S640/S		Satin			20	200
–	–	100-023-428	EK-S650/M		Mirror	127	134	20	200
–	–	100-023-432	EK-S650/S		Satin			20	200
–	–	100-023-429	EK-S660/M		Mirror	152.4	152	20	200
–	–	100-023-433	EK-S660/S		Satin			20	200

STAINLESS STEEL HANDLE EK-R

NSF SUS316



● Ideal for harsh and high corrosion environments.



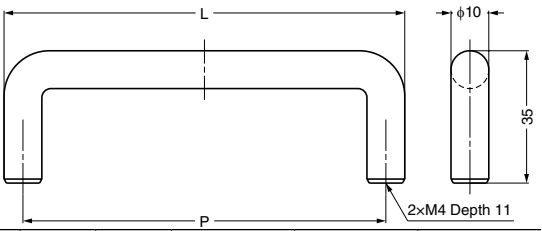
RoHS	CAD	Item Code	Item Name	Material	Finish	C	Weight (g)	Box (pcs)	Carton (pcs)
G	–	100-010-460	EK-R635/M	Stainless Steel (SUS316)	Mirror	88.9	95	20	200
G	–	100-010-464	EK-R635/S		Satin			20	200
G	–	100-010-461	EK-R640/M		Mirror	101.6	106	20	200
G	–	100-010-465	EK-R640/S		Satin			20	200
G	–	100-010-462	EK-R650/M		Mirror	127	123	20	200
G	–	100-010-466	EK-R650/S		Satin			20	200
G	–	100-010-463	EK-R660/M		Mirror	152.4	141	20	200
G	–	100-010-467	EK-R660/S		Satin			20	200

STAINLESS STEEL HANDLE H-35

SUS



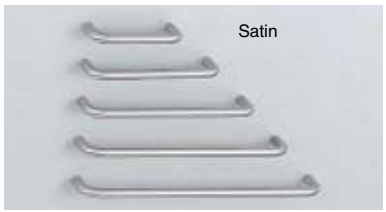
[Parts Included]
● Truss head screw M4×45



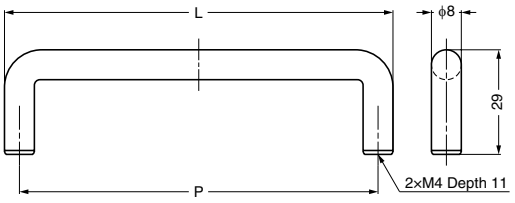
RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-036-723	H-35-96-SS	Stainless Steel (SUS304)	Mirror	106	96	95	25	–
–	–	100-036-724	H-35-96-SM		Satin	106	96	95	25	–
–	–	100-036-725	H-35-128-SS		Mirror	138	128	113	25	–
–	–	100-036-726	H-35-128-SM		Satin	138	128	113	25	–
–	–	100-036-727	H-35-160-SS		Mirror	170	160	133	25	–
–	–	100-036-728	H-35-160-SM		Satin	170	160	133	25	–
–	–	100-036-729	H-35-192-SS		Mirror	202	192	153	25	–
–	–	100-036-730	H-35-192-SM		Satin	202	192	153	25	–
–	–	100-036-731	H-35-288-SS		Mirror	298	288	208	25	–
–	–	100-036-732	H-35-288-SM		Satin	298	288	208	25	–

STAINLESS STEEL HANDLE H-29

SUS



[Parts Included]
● Truss head screw M4×45

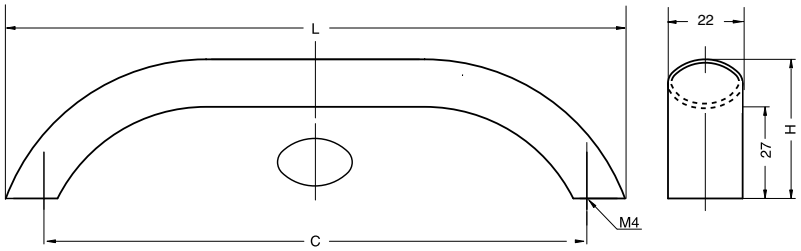


RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-036-733	H-29-64-SS	Stainless Steel (SUS304)	Mirror	72	64	46	25	–
–	–	100-036-734	H-29-64-SM		Satin	72	64	46	25	–
–	–	100-036-735	H-29-96-SS		Mirror	104	96	58	25	–
–	–	100-036-736	H-29-96-SM		Satin	104	96	58	25	–
–	–	100-036-737	H-29-128-SS		Mirror	136	128	–	25	–
–	–	100-036-738	H-29-128-SM		Satin	136	128	–	25	–
–	–	100-036-739	H-29-160-SS		Mirror	168	160	64	25	–
–	–	100-036-740	H-29-160-SM		Satin	168	160	64	25	–
–	–	100-036-741	H-29-192-SS		Mirror	200	192	98	25	–
–	–	100-036-742	H-29-192-SM		Satin	200	192	98	25	–

STAINLESS STEEL HANDLE 82 SERIES

SUS



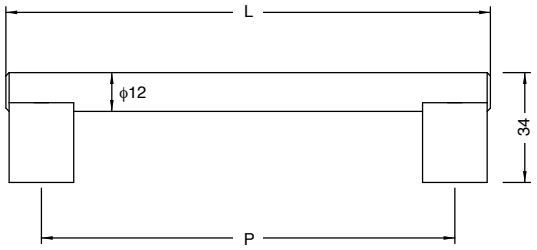


RoHS	CAD	Item Code	Item Name	Material	Finish	L	C	H	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-035-675	8261	Stainless Steel (SUS304)	Satin	182	160	41	166	25	250
–	–	100-035-676	8262			214	192		179	25	250
–	–	100-035-677	8263			246	224		192	25	250
–	–	100-035-678	8264			342	320		231	25	250

STAINLESS STEEL HANDLE I333

SUS



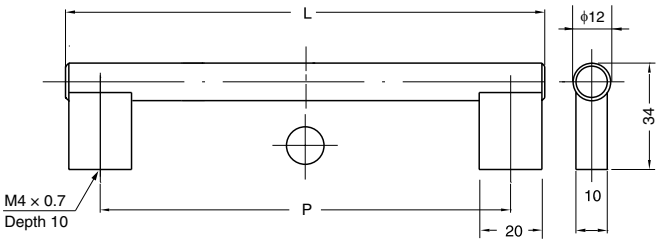


RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-023-456	I333128	Stainless Steel (SUS304)	Satin	150	128	203	25	150
–	–	100-023-457	I333160			182	160	228	25	100
–	–	100-023-458	I333192			214	192	253	10	40
–	–	100-023-459	I333292			314	292	347	10	80
–	–	100-023-460	I333320			342	320	364	10	80
–	–	100-023-461	I333342			364	342	384	10	80

STAINLESS STEEL HANDLE I1020

SUS



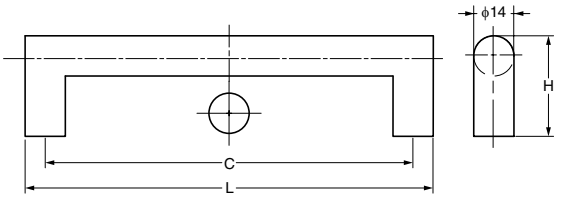


RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-012-961	I1020128	Stainless Steel (SUS304)	Satin	150	128	159	25	–
–	3D	100-012-962	I1020160			182	160	85	25	–
–	3D	100-012-963	I1020192			214	192	93	25	–
–	3D	100-012-964	I1020320			342	320	128	25	–
–	3D	100-012-965	I1020492			514	492	175	25	–

STAINLESS STEEL HANDLE DIH

SUS





RoHS	CAD	Item Code	Item Name	Material	Finish	L	C	H	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-035-679	DIH-096	Stainless Steel (SUS304)	Satin	110	96	35	57	25	250
–	–	100-035-555	DIH-128			142	128		66	25	250
–	–	100-035-680	DIH-192			206	192		83	25	250
–	–	100-035-681	DIH-342			356	342		123	25	250
–	–	100-035-682	DIH-492			506	492		163	25	250
–	–	100-035-683	DIH-592			606	592		189	25	250

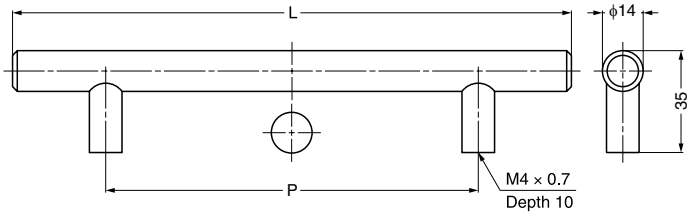
STAINLESS STEEL HANDLE I1014

SUS



[Recommended Screw]

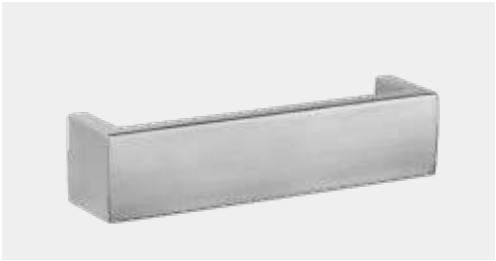
●Truss head screw M4 × (Door thickness + 5~10)

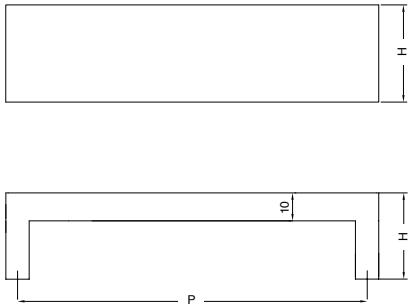


RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-012-629	I1014128	Stainless Steel (SUS304)	Satin	192	128	113	25	–
–	3D	100-012-628	I1014192			256	192	136	25	–
–	3D	100-012-627	I1014342			406	342	187	25	–
–	3D	100-012-626	I1014492			556	492	216	25	–

STAINLESS STEEL HANDLE I100

SUS



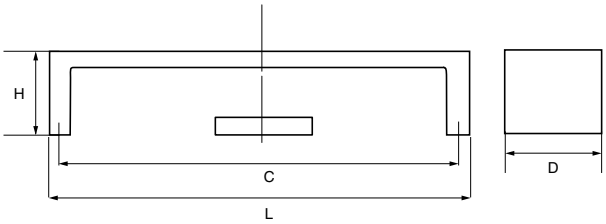


RoHS	CAD	Item Code	Item Name	Material	Finish	P	H	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-023-468	I100096	Stainless Steel (SUS304)	Satin	96	40	155	5	–
–	–	100-023-469	I100128			128	40	137	5	–
–	–	100-023-470	I100160			160	40	153	5	–
–	–	100-023-471	I100192			192	40	182	5	–
–	–	100-023-472	I100320			320	40	263	5	–
–	–	100-023-473	I100512			512	40	443	5	–

STAINLESS STEEL HANDLE 40 SERIES

SUS





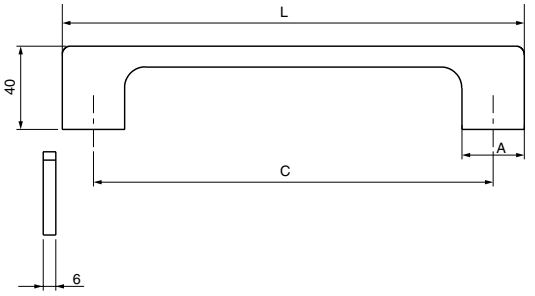
RoHS	CAD	Item Code	Item Name	Material	Finish	L	C	H	D	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-035-656	40128	Stainless Steel (SUS304)	Satin	138	128	35	40	166	30	–
–	–	100-035-657	40160			170	160			198	30	–
–	–	100-035-658	40192			202	192			219	30	–

STAINLESS STEEL HANDLE DSI-110

SUS





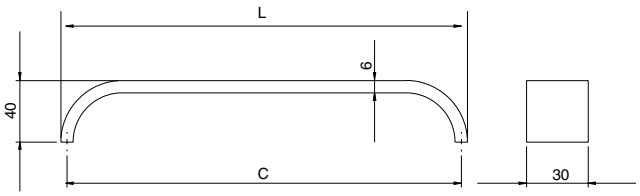


RoHS	CAD	Item Code	Item Name	Material	Finish	C	L	P	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-035-659	DSI-110- 96	Stainless Steel (SUS304)	Satin	96	126	30	135	25	–
–	–	100-035-660	DSI-110-128			128	158		152	25	–
–	–	100-035-661	DSI-110-160			160	190		190	25	–
–	–	100-035-662	DSI-110-192			192	222		230	25	–
–	–	100-035-663	DSI-110-320			320	350		380	10	–
–	–	100-035-664	DSI-110-512			512	542		610	10	–

STAINLESS STEEL HANDLE DSI-120

SUS



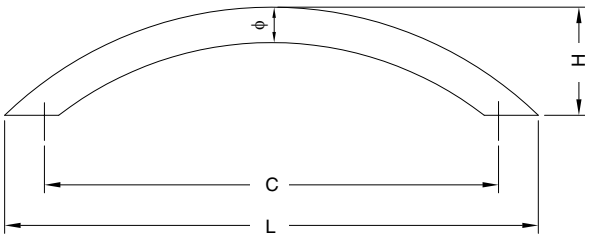


RoHS	CAD	Item Code	Item Name	Material	Finish	L	C	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-035-665	DSI-120- 96	Stainless Steel (SUS304)	Satin	102	96	186	10	–
–	–	100-035-666	DSI-120-128			134	128	248	10	–
–	–	100-035-667	DSI-120-160			166	160	275	10	–
–	–	100-035-668	DSI-120-192			196	192	375	10	–
–	–	100-035-669	DSI-120-320			326	320	620	5	–
–	–	100-035-670	DSI-120-512			518	512	992	5	–

STAINLESS STEEL HANDLE I163

SUS



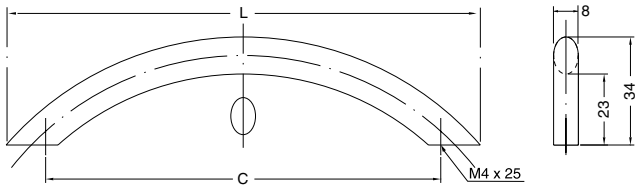


RoHS	CAD	Item Code	Item Name	Material	Finish	L	C	H	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-023-474	I163160	Stainless Steel (SUS304)	Satin	200	160	35	228	25	100
–	–	100-023-475	I163192			244	192	35	262	25	100
–	–	100-023-476	I163320			400	320	36	427	10	80

STAINLESS STEEL HANDLE 30 SERIES

SUS



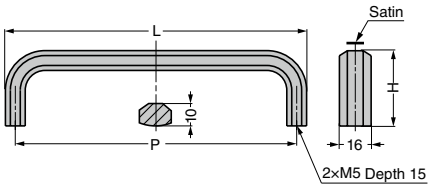


RoHS	CAD	Item Code	Item Name	Material	Finish	L	C	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-035-671	3096	Stainless Steel (SUS304)	Satin	118	96	72	25	200
–	–	100-035-672	3097			151	128	90	25	200
–	–	100-035-673	3098			189	160	108	25	200
–	–	100-035-674	3099			224	192	128	25	200

STAINLESS STEEL HANDLE XL-CU

NSF SUS





- Finish: Combination of polished and satin.

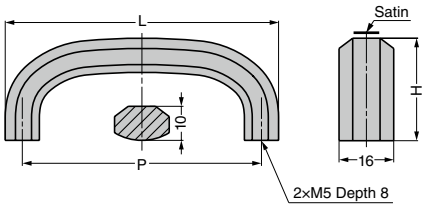
[Parts Included]
- Truss head screw M5×30 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-470	XL-CU80TT	Stainless Steel (SUS303)	Polished and Satin Combination	82	32	72	112	10	100
G	3D	100-010-471	XL-CU100TT			102	34	92	136	10	100
G	3D	100-010-472	XL-CU120TT			122	36	112	163	10	100
G	3D	100-010-473	XL-CU150TT			152	38	142	200	8	80
G	3D	100-010-474	XL-CU180TT			182	40	172	234	8	80
G	3D	100-010-475	XL-CU220TT			222	42	212	282	8	40
G	3D	100-010-476	XL-CU300TT			302	44	292	372	6	30

STAINLESS STEEL HANDLE XL-CUR

SUS





- Finish: Combination of polished and satin.

[Parts Included]
- Truss head screw M5×25 (SUS)

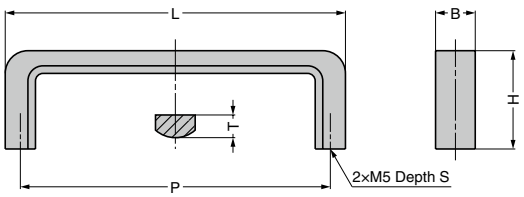
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-012-825	XL-CUR80TT	Stainless Steel (SUS303)	Polished and Satin Combination	80	30	70	101	10	150
–	3D	100-012-826	XL-CUR100TT			100	32	90	125	10	150
–	3D	100-012-827	XL-CUR120TT			120	34	110	150	10	100
–	3D	100-012-828	XL-CUR150TT			150	36	140	183	5	75

STAINLESS STEEL HANDLE FB

SUS



[Parts Included]
- Pan head screw M5×25



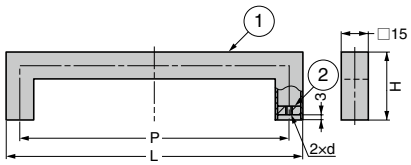
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	B	T	P	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-074	FB-90	Stainless Steel (SCS13)	Polished	90	26	10.5	6	82	10	45	35	280
G	3D	100-010-075	FB-110			110	28	12.5	7	102	12	60	25	200
G	3D	100-010-076	FB-130			130	32	14.5	8	120	14	93	20	160

※SCS13 is equivalent of SUS304.

STAINLESS STEEL HANDLE KPH

SUS





- Light handle with hollow body.

[Recommended Screws]
- d × (Door thickness +10~15)

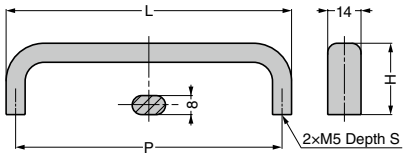
No.	Part Name	Material	Finish
①	Body	Stainless Steel	Satin
②	Nut	(SUS304)	Plain

RoHS	CAD	Item Code	Item Name	L	H	P	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-195	KPH-160	176	40	160	M4	100	10	100
G	3D	100-019-196	KPH-192	208		192		115	10	100
G	3D	100-019-197	KPH-224	240	50	224	M5	130	10	100
G	3D	100-019-198	KPH-256	272		256		143	10	100
G	3D	100-019-199	KPH-288	304		288		160	10	100

STAINLESS STEEL HANDLE EC

NSF SUS





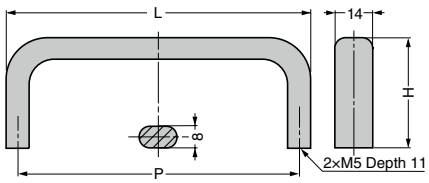
[Parts Included]
- Truss head screw M5 × 28

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-017-232	EC-80S	Stainless Steel (SUS304)	Satin	80	30	72	10	84	20	200
G	3D	100-017-226	EC-80M		Polished						20	200
G	3D	100-017-233	EC-100S		Satin	100	32	92		102	15	150
G	3D	100-017-227	EC-100M		Polished						15	150
G	3D	100-017-234	EC-120S		Satin	120	34	112	12	120	15	150
G	3D	100-017-228	EC-120M		Polished						15	150
G	3D	100-017-235	EC-150S		Satin	150	36	142		148	10	100
G	3D	100-017-229	EC-150M		Polished						10	100
G	3D	100-017-236	EC-180S		Satin	180	37	172		174	10	100
G	3D	100-010-049	EC-180M		Polished						10	100
G	3D	100-017-237	EC-220S		Satin	220	38	212		205	8	80
G	3D	100-010-050	EC-220M		Polished						8	80

STAINLESS STEEL HANDLE ECH

SUS





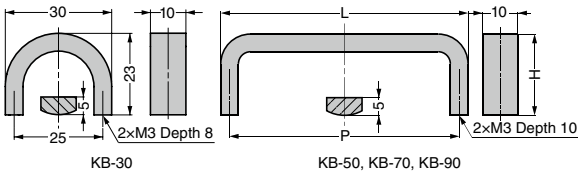
[Parts Included]
- Truss head screw M5 × 28

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-017-249	ECH-75S	Stainless Steel (SUS303)	Satin	83	40	75	115	10	100
G	3D	100-017-241	ECH-75M		Polished					10	100
G	3D	100-017-252	ECH-100S		Satin	108		100	135	15	150
G	3D	100-017-242	ECH-100M		Polished					15	150
G	3D	100-017-251	ECH-125S		Satin	133		125	153	10	100
G	3D	100-017-243	ECH-125M		Polished					10	100
G	3D	100-017-244	ECH-150M			158	50	150	190	7	70
G	3D	100-017-245	ECH-200M			208		200	244	10	100
G	3D	100-017-246	ECH-250M			258		250	280	5	50
–	3D	100-017-247	ECH-300M			308		300	306	5	50

STAINLESS STEEL HANDLE KB



[Parts Included]
- Truss head screw M3×28 (SUS)

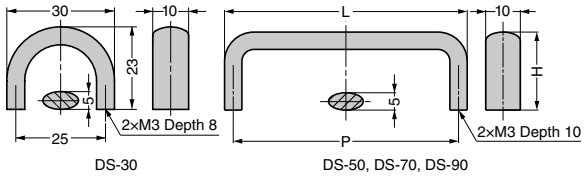


RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-094	KB-30S	Stainless Steel (SUS303)	Satin	As Above	As Above	As Above	18	40	400
G	3D	100-011-093	KB-30M		Polished					40	400
G	3D	100-011-096	KB-50S		Satin	50	22	45	26	30	300
G	3D	100-011-095	KB-50M		Polished					30	300
G	3D	100-011-098	KB-70S		Satin	70	22.5	65	33	30	300
G	3D	100-011-097	KB-70M		Polished					30	300
G	3D	100-011-100	KB-90S		Satin	90	23	85	40	20	200
G	3D	100-011-099	KB-90M		Polished					20	200

STAINLESS STEEL HANDLE DS



[Parts Included]
- Truss head screw M3×28 (SUS)

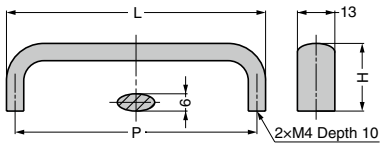


RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-112	DS-30S	Stainless Steel (SUS303)	Satin	As Above	As Above	As Above	15	40	400
G	3D	100-011-111	DS-30M		Polished					40	400
G	3D	100-011-114	DS-50S		Satin	50	22	45	22	30	300
G	3D	100-011-113	DS-50M		Polished					30	300
G	3D	100-011-116	DS-70S		Satin	70	22.5	65	28	30	300
G	3D	100-011-115	DS-70M		Polished					30	300
G	3D	100-011-118	DS-90S		Satin	90	23	85	35	20	200
G	3D	100-011-117	DS-90M		Polished					20	200

STAINLESS STEEL HANDLE DL



[Parts Included]
- Truss head screw M4×28 (SUS)



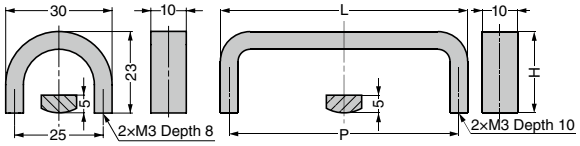
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-102	DL-70S	Stainless Steel (SUS303)	Satin	70	23	64	44	20	200
G	3D	100-011-101	DL-70M		Polished					20	200
G	3D	100-011-104	DL-90S		Satin	90	23.5	84	55	20	200
G	3D	100-011-103	DL-90M		Polished					20	200
G	3D	100-011-106	DL-110S		Satin	110	24	104	65	15	150
G	3D	100-011-105	DL-110M		Polished					15	150
G	3D	100-011-108	DL-130S		Satin	130	24.5	124	75	15	150
G	3D	100-011-107	DL-130M		Polished					15	150
G	3D	100-011-110	DL-150S		Satin	150	25	144	86	15	150
G	3D	100-011-109	DL-150M		Polished					15	150

STAINLESS STEEL HANDLE KB-SUS304

SUS



[Parts Included]
- Truss head screw M3×28 (SUS)



KB-30 KB-50, KB-70, KB-90

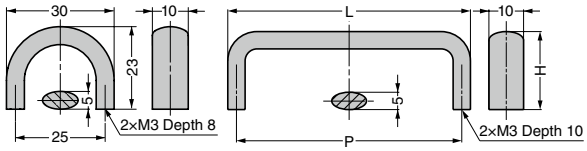
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-904-581	KB-30S-SUS304	Stainless Steel (SUS304)	Satin	As Above	As Above	As Above	18	40	400
G	3D	100-904-580	KB-30M-SUS304		Polished					40	400
G	3D	100-904-583	KB-50S-SUS304		Satin	50	22	45	26	30	300
G	3D	100-904-582	KB-50M-SUS304		Polished					30	300
G	3D	100-904-585	KB-70S-SUS304		Satin	70	22.5	65	33	30	300
G	3D	100-904-584	KB-70M-SUS304		Polished					30	300
G	3D	100-904-587	KB-90S-SUS304		Satin	90	23	85	40	20	200
G	3D	100-904-586	KB-90M-SUS304		Polished					20	200

STAINLESS STEEL HANDLE DS-SUS304

SUS



[Parts Included]
- Truss head screw M3×28 (SUS)



DS-30 DS-50, DS-70, DS-90

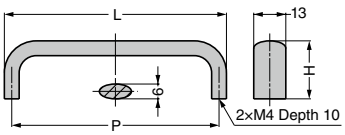
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-904-573	DS-30S-SUS304	Stainless Steel (SUS304)	Satin	As Above	As Above	As Above	15	40	400
G	3D	100-904-572	DS-30M-SUS304		Polished					40	400
G	3D	100-904-575	DS-50S-SUS304		Satin	50	22	45	22	30	300
G	3D	100-904-574	DS-50M-SUS304		Polished					30	300
G	3D	100-904-577	DS-70S-SUS304		Satin	70	22.5	65	28	30	300
G	3D	100-904-576	DS-70M-SUS304		Polished					30	300
G	3D	100-904-579	DS-90S-SUS304		Satin	90	23	85	35	20	200
G	3D	100-904-578	DS-90M-SUS304		Polished					20	200

STAINLESS STEEL HANDLE DL-SUS304

SUS



[Parts Included]
- Truss head screw M4×28 (SUS)



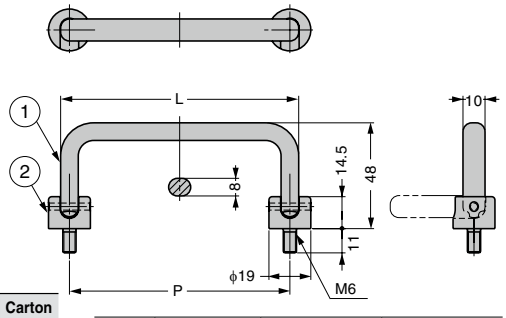
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-904-563	DL-70S-SUS304	Stainless Steel (SUS304)	Satin	70	23	64	44	20	200
G	3D	100-904-562	DL-70M-SUS304		Polished					20	200
G	3D	100-904-565	DL-90S-SUS304		Satin	90	23.5	84	55	20	200
G	3D	100-904-564	DL-90M-SUS304		Polished					20	200
G	3D	100-904-567	DL-110S-SUS304		Satin	110	24	104	65	15	150
G	3D	100-904-566	DL-110M-SUS304		Polished					15	150
G	3D	100-904-569	DL-130S-SUS304		Satin	130	24.5	124	75	15	150
G	3D	100-904-568	DL-130M-SUS304		Polished					15	150
G	3D	100-904-571	DL-150S-SUS304		Satin	150	25	144	86	15	150
G	3D	100-904-570	DL-150M-SUS304		Polished					15	150

FOLDING HANDLE HK

NSF TEST METHOD 1 SUS



- 90-degree folding handle.
- Handle clicks into open and closed position.
- Oval profile for optimum grip.



[Applications]

- Storage handles for various kinds of equipment, etc.

[Parts Included]

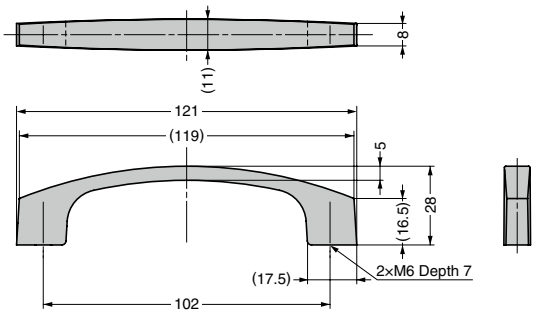
- Toothed washer size 6 (SUS)
- Hexagon nut for M6 (SUS)

RoHS	CAD	Item Code	Item Name	L	P	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-011	HK-80	88	80	490	50	125	10	100
G	3D	100-010-012	HK-100	108	100			136	10	100
G	3D	100-010-013	HK-120	128	120			146	10	100

No.	Part Name	Material	Finish
①	Handle	Stainless Steel (SUS304)	Polished
②	Base		

HANDLE SAZ-121CR

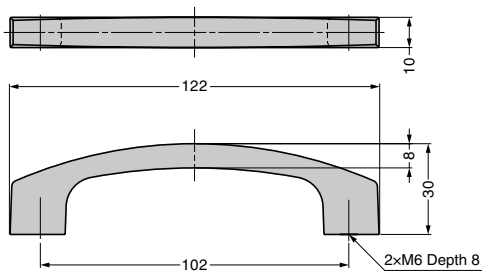




RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-105	SAZ-121CR	Zinc Alloy (ZDC)	Chrome	63	50	200

HANDLE SAZ-122

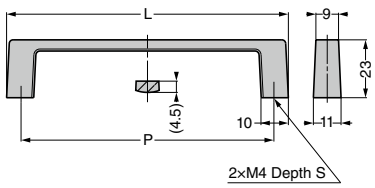




RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-790	SAZ-122	Zinc Alloy (ZDC)	Chrome	85	1	–

HANDLE 936





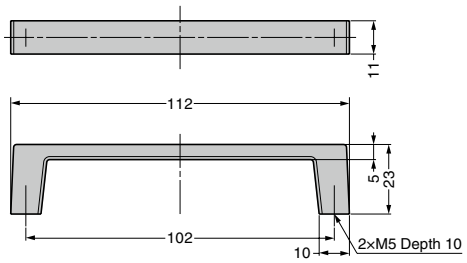
[Remarks]
- Screws are not included in nickel finish.

[Parts Included]
- 936-55-SCR Truss head screw M4×25
- 936-100-DC Truss head screw M4×28

RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	S	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-101	936-55-SCR	Zinc Alloy (ZDC)	Satin Chrome	66.5	55	8	40	50	200
G	3D	100-019-096	936-55-SNI		Nickel					50	300
G	3D	100-010-003	936-100-DC		Dull Chrome + Enamel Finish/Clear	112	100.5	10	52	50	200
G	3D	100-019-127	936-100-SNI		Nickel					50	200

HANDLE 937-102SCR

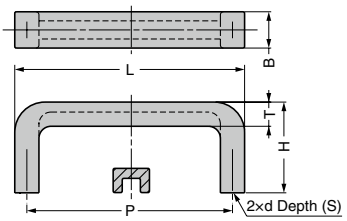




RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-520	937-102SCR	Zinc Alloy (ZDC)	Satin Chrome	50	–	1

HANDLE AKH





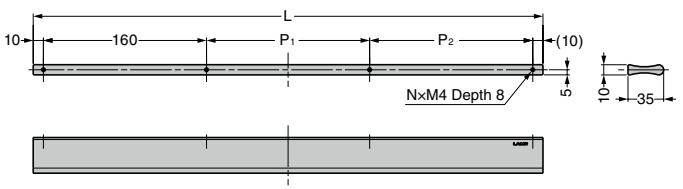
- Simple design allows for harmonising with various kinds of equipment.

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	B	T	P	d	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-803	AKH-76	Zinc Alloy (ZDC)	Satin Chrome	76	30	12	8	68	M5	8	55	30	300
G	3D	100-019-799	AKH-108			108		14		100			80	10	240
G	3D	100-019-802	AKH-120			120	40	16	10	110	M6		130	1	–
G	3D	100-019-801	AKH-130			130				120			145	–	1
G	3D	100-010-575	AKH-200			200	50	18	12	188	M8	10	250	10	–

PULL AOT35



- Smooth and beautiful appearance.

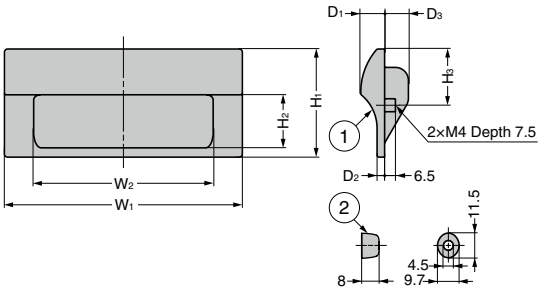


RoHS	CAD	Item Code	Item Name	Material	Finish	L	P1	P2	N	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-523	AOT35-180	Aluminium Alloy	Anodised	180	–	–	2	129	100	–
G	3D	100-012-524	AOT35-340			340	160		3	243	50	–
G	3D	100-012-525	AOT35-500			500		160	4	358	30	–

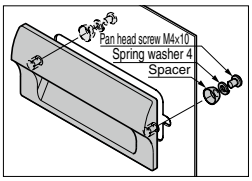
RECESSED PULL HH-JS Screw Mount



[Parts Included]
- Pan head screw M4 × 10
- Spring washer 4

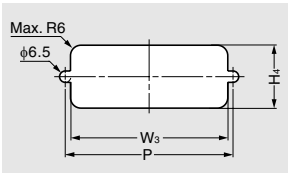


[How to Install]



Designed to install by pinching the mounting panel with supplied spacers, spring washers and screws.

[Cut Out Dimensions]



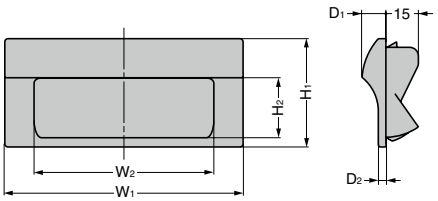
No.	Part Name	Material	Finish / Colour
①	Body	ABS + PC	Black, Ivory
②	Spacer	Steel	Clear Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Colour	W1	W2	H1	H2	H3	D1	D2	D3	P	W3	H4	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-024-573	HH-JS70-BL	Black	70	43	38	17	19	10.5	3	9	58	48	25	0.5~3.2	20	10	200
G	3D	100-024-574	HH-JS70-IV	Ivory													20	10	200
G	3D	100-024-575	HH-JS90-BL	Black	90	63	44	21.5	22	11		11	78	68	31		25	10	200
G	3D	100-024-576	HH-JS90-IV	Ivory													25	10	200
G	3D	100-024-577	HH-JS110-BL	Black	110	82	50	24.4	26		3.5		96	90	36		38	10	200
G	3D	100-024-578	HH-JS110-IV	Ivory													34	10	200
G	3D	100-024-579	HH-JS140-BL	Black	140	109	64	34	33	11.5			126	116	48		56	10	200
G	3D	100-024-580	HH-JS140-IV	Ivory													56	10	200

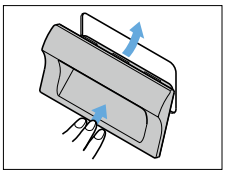
RECESSED PULL HH-JW Quick Installation



- Easy installation by snap-in.

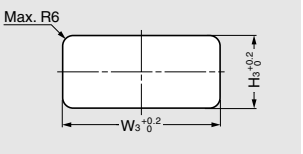


[How to Install]



One-touch installation.

[Cut Out Dimensions]



[Hole Dimensions]

Item Name	W3	H3			
		Board Thickness 0.8	Board Thickness 1.0~1.2	Board Thickness 1.5~2.0	Board Thickness 2.3
HH-JW70	46	28.7	29	29.4	30.8
HH-JW90	66	34.7	35	35.4	36.8
HH-JW110	88	40.7	41	41.4	42.8
HH-JW140	114	54.7	55	55.4	56.8

RoHS	CAD	Item Code	Item Name	Material	Colour	W1	W2	H1	H2	D1	D2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-024-581	HH-JW70-BL	ABS + PC	Black	70	43	38	18.5	10.5	3	14	10	200
G	3D	100-024-582	HH-JW70-IV		Ivory							14	10	200
G	3D	100-024-583	HH-JW90-BL		Black	90	63	44	22.9	11		21	10	200
G	3D	100-024-584	HH-JW90-IV		Ivory							21	10	200
G	3D	100-024-585	HH-JW110-BL		Black	110	83	50	26.8	11.5	3.5	35	10	200
G	3D	100-024-586	HH-JW110-IV		Ivory							35	10	200
G	3D	100-024-587	HH-JW140-BL		Black	140	109	64	37.8			53	10	200
G	3D	100-024-588	HH-JW140-IV		Ivory							54	10	200

RECESSED PULL HH-P SEMI Compliance



- Rounded design allows for easy gripping and handling with gloved hand (compliant with SEMI standard, SEMI S8-0308).
- Clear body suitable for transparent door such as acrylic.
- Lead-free PVC material with excellent weather and chemical resistance.

[Applications]

- Semiconductor manufacturing equipment and liquid crystal manufacturing equipment, etc.

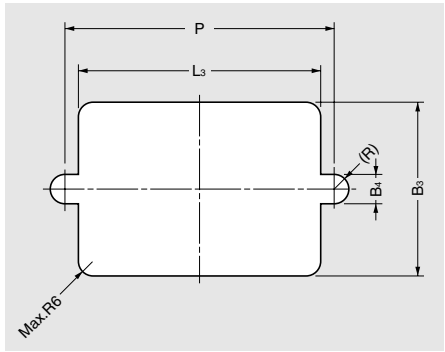
[Remarks]

- Supplied screws are suitable for panel thickness 1~5mm.Other than that, please prepare screws with threaded length above 10mm according to the panel thickness.

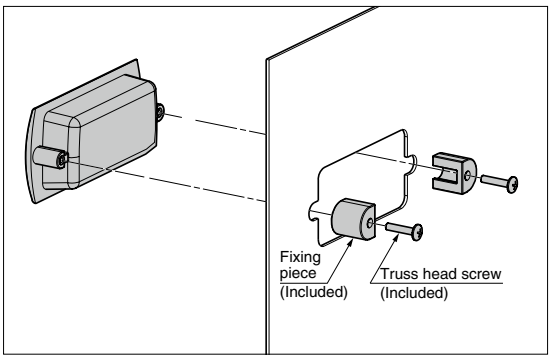
[Parts Included]

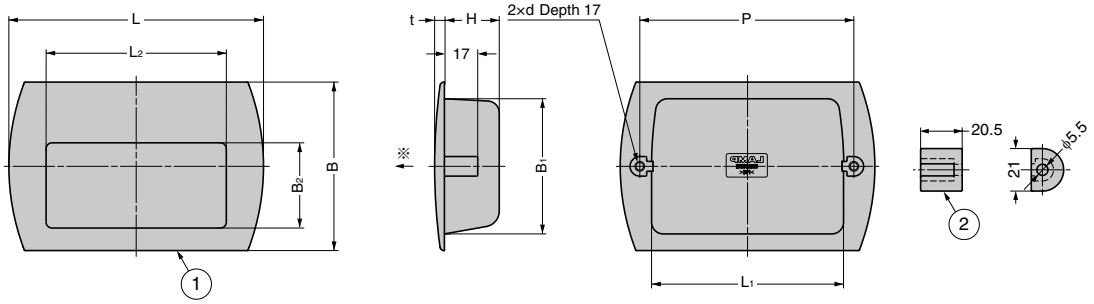
- Fixing piece
- Truss head screw M4×20 (HH-P118)
- Truss head screw M5×20 (HH-P130)

[Cut Out Dimensions]



[Installation]





No.	Part Name	Material	Colour
①	Body	PVC	Clear
②	Fixing Piece		

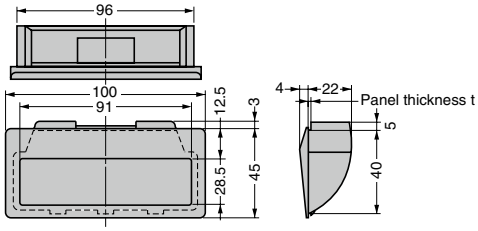
RoHS	CAD	Item Code	Item Name	L	L1	L2	B	B1	B2	H	P	d	t	L3	B3	B4	Board Thickness	Load Capacity N※	Load Capacity kgf※	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-021-824	HH-P118	118	93	90	58	47	25.5	21.5	104	M4	4	95	48	11	1~11	312	31.8	43	45	–
G	3D	100-013-957	HH-P130	130	98	92	86	69	43.5	28	110	M5	5	99	71	12		460	47	100	30	–

Load capacity is for the direction of ※ marked on above drawings.

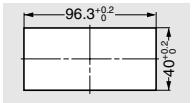
RECESSED PULL AT-100 Quick Installation



●Easy installation by snap-in.

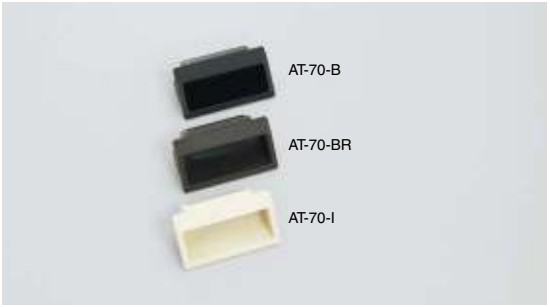


[Cut Out Dimensions]

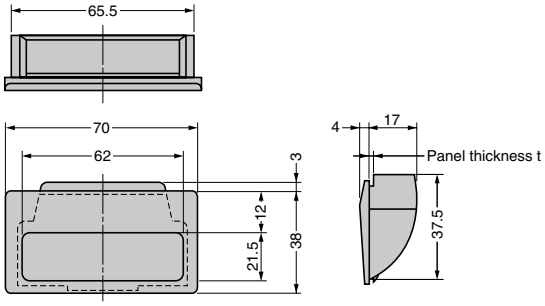


RoHS	CAD	Item Code	Item Name	Material	Colour	Panel Thickness t	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-017-625	AT-100-I	ABS	Ivory	0.8	23	250	–
G	3D	100-017-626	AT-100-BR		Brown			250	–
G	3D	100-019-414	AT-100-B		Black			250	–
G	3D	100-013-211	AT-100-10I		Ivory	1.0	22.6	250	–
G	3D	100-013-212	AT-100-10BR		Brown			250	–
G	3D	100-013-213	AT-100-10B		Black			250	–
G	3D	100-013-214	AT-100-12I		Ivory	1.2	22.4	250	–
G	3D	100-013-215	AT-100-12BR		Brown			250	–
G	3D	100-013-216	AT-100-12B		Black			250	–
G	3D	100-013-217	AT-100-16I		Ivory	1.6	22.3	500	–
G	3D	100-013-218	AT-100-16BR		Brown			250	–
G	3D	100-013-219	AT-100-16B		Black			250	–

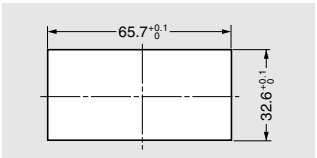
RECESSED PULL AT-70 Quick Installation



●Easy installation by snap-in.

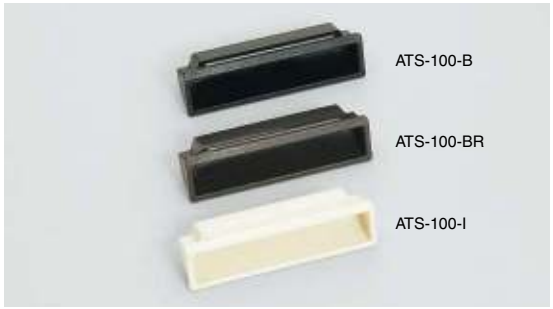


[Cut Out Dimensions]

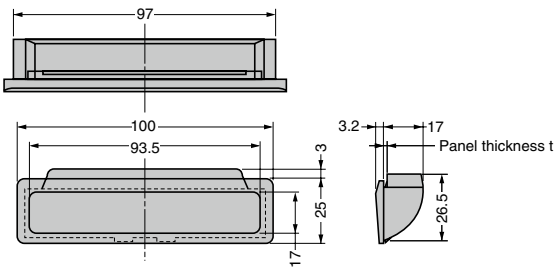


RoHS	CAD	Item Code	Item Name	Material	Colour	Panel Thickness t	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-015-001	AT-70-I	ABS	Ivory	0.8	12	550	–
G	3D	100-017-627	AT-70-BR		Brown			550	–
G	3D	100-015-000	AT-70-B		Black			550	–
G	3D	100-013-220	AT-70-12I		Ivory	1.2	12.8	1100	–
G	3D	100-013-221	AT-70-12BR		Brown			1100	–
G	3D	100-013-222	AT-70-12B		Black			1100	–
G	3D	100-013-223	AT-70-16I		Ivory	1.6		1100	–
G	3D	100-013-224	AT-70-16BR		Brown			1100	–
G	3D	100-013-225	AT-70-16B		Black			1100	–

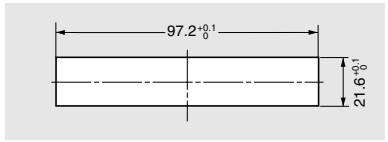
RECESSED PULL ATS-100 Quick Installation



- Easy installation by snap-in.



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Colour	Panel Thickness t	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-180	ATS-100-I	ABS	Ivory	0.8	12.5	550	–
G	3D	100-015-002	ATS-100-BR		Brown			50	–
G	3D	100-019-476	ATS-100-B		Black			550	–
G	3D	100-013-226	ATS-100-16I		Ivory	1.6	12	1100	–
G	3D	100-013-227	ATS-100-16BR		Brown			1100	–
G	3D	100-013-228	ATS-100-16B		Black			1100	–

RECESSED PULL HH-PS99



- Designed to install from the back side of cabinet with screws (see below).Pull and screws do not appear on the panel surface for clean appearance.
- Finger hooking part inclined upwards allows for easy holding.

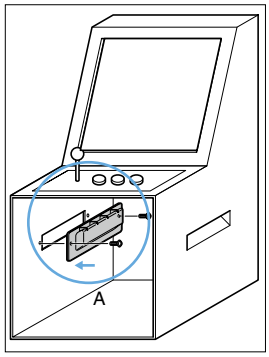
[Applications]

- Amusement equipment, PA (for carrying music apparatus), and furniture, etc.

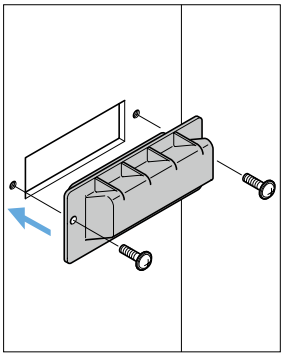
[Parts Included]

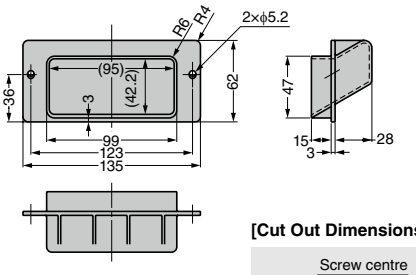
- Binding head tapping screw 4×12

[Application Example]

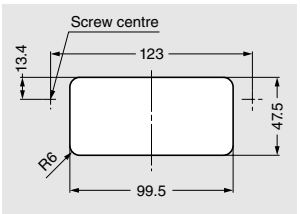


[Enlarged View of A]





[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Colour	Panel Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-343	HH-PS99	PP	Black	15	41	200	–

RECESSED PULL WITH VENTILATOR UTA-105

SUS



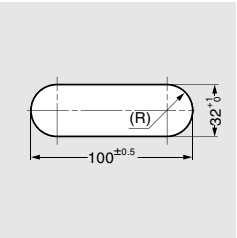


- With finger hooking part.
- With ventilator function.
- Ventilating area is invisible from the front.
- Excellent chemical resistance.

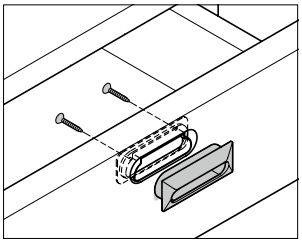
[Parts Included]

- Countersunk head tapping screw 4×20 (SUS)

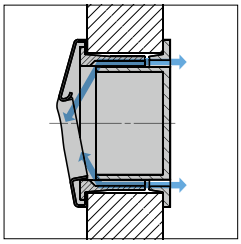
[Cut Out Dimensions]

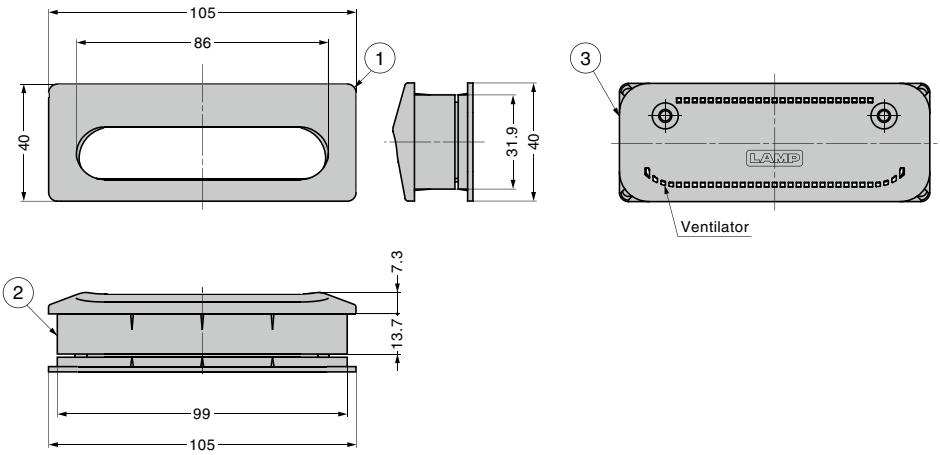


[Installation]



[Air Flow]





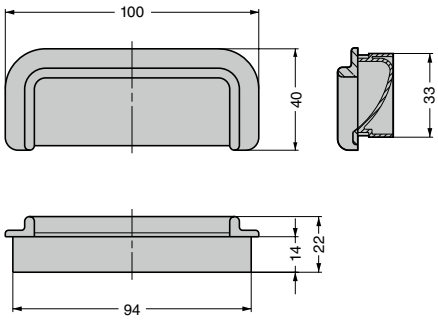
No.	Material	Finish
①	Stainless Steel (SUS304)	Satin
②	ABS	–
③		

RoHS	CAD	Item Code	Item Name	Colour	Max. Exhaust Area mm²	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-026-733	UTA-105BL	Black	136	18~25	40	15	150
G	3D	100-026-734	UTA-105GR	Light Grey				15	150
G	3D	100-026-735	UTA-105IV	Ivory				15	150

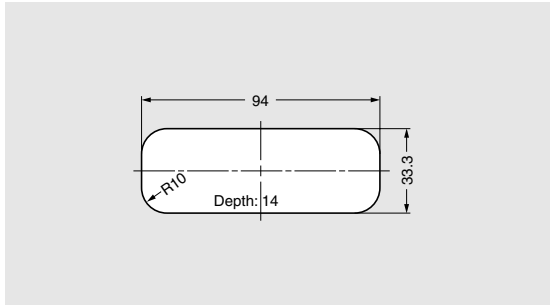
Updated 2017.10.27

RECESSED PULL UP-600





[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-236	UP-600	ABS	Chrome, Black	25	50	300

RECESSED PULL XLA-HHA



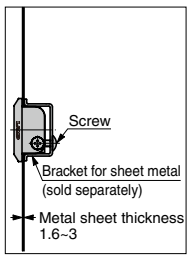
- Two types of total lengths available: 300mm and 600mm.
- Can be cut into appropriate length.
- Beautiful design based on lines and faces.
- Size can also be made to order. For further details, please contact local representatives.

[Remarks]
- For lateral use, check if the door is strong enough before use.
- Use 4 brackets (sold separately) for one pull.

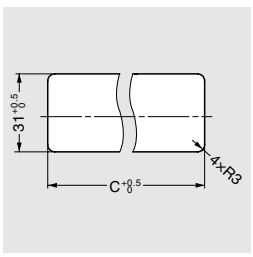
[Parts Included]
- Truss head screw M4×10 (SUS)

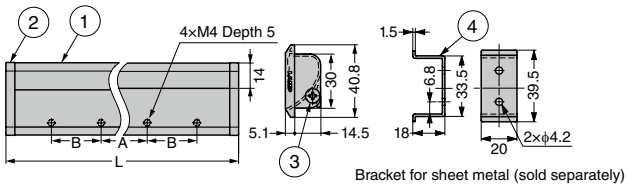
[Sold Separately]
- Bracket for sheet metal XLA-HHA40B

[Installation]



[Cut Out Dimensions]





Bracket for sheet metal (sold separately)

No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Silver Anodised
②	Cover	Zinc Alloy (ZDC)	Chrome
③	Countersunk Head Screw M4×10	Stainless Steel	–
④	Bracket for Sheet Metal (Sold Separately)	Stainless Steel (SUS430)	Barrel Polished

[Body]

RoHS	CAD	Item Code	Item Name	L	A	B	C	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-190	XLA-HHA300	300	100	50	297	140	100	–
G	3D	100-010-191	XLA-HHA600	600	200	150	597	245	50	–

[Bracket for Sheet Metal] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-189	XLA-HHA40B	330	500	–

LARGE RECESSED PULL HH-M

SUS


HH-M400

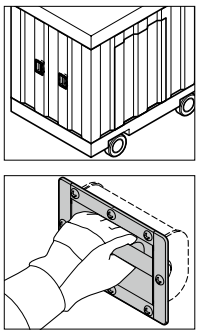
- Large type allows for easy handling with glove on.
- Handlebar does not protrude from the face of the handle.
- All stainless steel pull with handlebar length 200mm and 400mm.

[Applications]
- Special vehicles, containers, large doors and ships, etc.

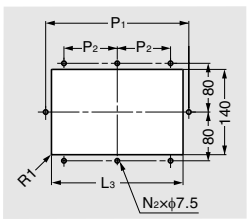
[Remarks]
- Load capacity represents the strength of the pull itself. Actual load capacity may vary depending on wall and cabinet materials. Please install the pull at places with sufficient strength or places reinforced.

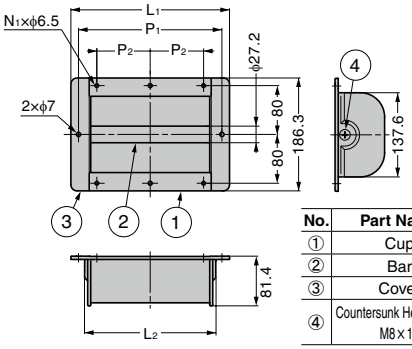
[Parts Included]
- Truss head screw M6×16 (SUS)
- Nut M6 (SUS)

[Application Example]



[Cut Out Dimensions]





No.	Part Name	Material	Finish
①	Cup	Stainless Steel (SUS304)	Polished
②	Bar		
③	Cover	Stainless Steel (SCS13)	
④	Countersunk Head Screw M8×15	Stainless Steel	–

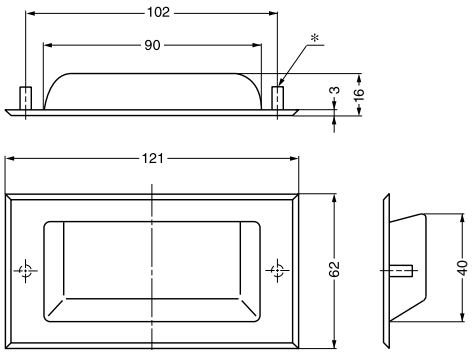
※SCS13 is equivalent of SUS304.

RoHS	CAD	Item Code	Item Name	L_1	L_2	L_3	P_1	P_2	N_1	Holes N_2	Load Capacity N	Load Capacity kgf	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	100-012-306	HH-M200	260	215	218	235	87.5	6	8	4500	459	2.6	1	4
G	3D	100-012-305	HH-M400	460	415	418	435	125	8	10	2200	224	3.7	1	2

RECESSED PULL ES-611

NSF SUS



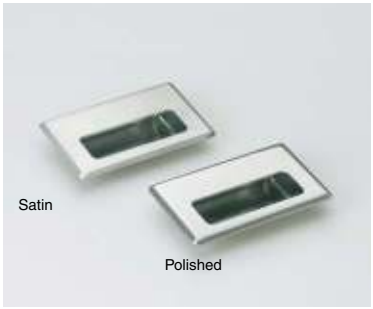



ET
(*Male Studs / Copper M5×0.8 Depth 10)


IT
(*Female Studs / Copper M4×0.7 Depth 6)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	–	100-017-659	ES-611/ET	Stainless Steel (SUS304)	Satin	68	20	200
–	–	100-012-957	ES-611/IT			60		

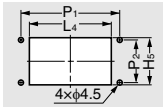
STAINLESS STEEL RECESSED PULL HH

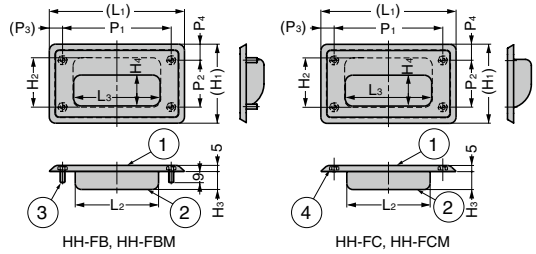


- Simple design.
- Satin and polished finish available.
- HH-FB-1, HH-FC-1, HH-FB-1M and HH-FC-1M are compliant with SEMI standard (SEMI S8-0308).

[Parts Included]
- Only for M4 bolt type: Hexagon nut M4 (SUS), washer 4, spring washer 4

[Cut Out Dimensions]





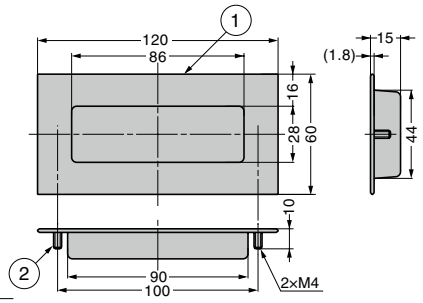
HH-FB, HH-FBM　　HH-FC, HH-FCM

No.	Part Name	Material	Finish
①	Front Plate	Stainless Steel (SUS304)	Satin, Polished
②	Back Cover		Barrel Polished
③	Hexagon Head Bolt M4 × 10		Plain
④	Hexagon Nut M4		

RoHS	CAD	Item Code	Item Name	Bolt/Nut	Material	Finish	L_1	L_2	L_3	L_4	H_1	H_2	H_3	H_4	H_5	P_1	P_2	P_3	P_4	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-090	HH-FB-1	M4 Bolt	Stainless Steel (SUS304)	Satin	138	96	95	99	88	62	21	35	64	110	65	14	11.5	170	10	50
G	3D	100-010-091	HH-FC-1	M4 Nut																	10	50
G	3D	100-010-092	HH-FB-2	M4 Bolt			109.5	71	70	73	64	40	14.5	25	42	88	38	10.75	13	100	10	100
G	3D	100-010-093	HH-FC-2	M4 Nut																	10	100
G	3D	100-010-094	HH-FB-3	M4 Bolt			94	61	60	63	60	43	12		45	76	32	9	14	80	10	100
G	3D	100-010-095	HH-FC-3	M4 Nut																	10	100
G	3D	100-012-104	HH-FB-1M	M4 Bolt		Polished	138	96	95	99	88	62	21	35	64	110	65	14	11.5	170	10	50
G	3D	100-012-105	HH-FC-1M	M4 Nut																	10	50
G	3D	100-012-106	HH-FB-2M	M4 Bolt			109.5	71	70	73	64	40	14.5	25	42	88	38	10.75	13	100	10	100
G	3D	100-012-107	HH-FC-2M	M4 Nut																	10	100
G	3D	100-012-108	HH-FB-3M	M4 Bolt			94	61	60	63	60	43	12		45	76	32	9	14	80	10	100
G	3D	100-012-109	HH-FC-3M	M4 Nut																	10	100

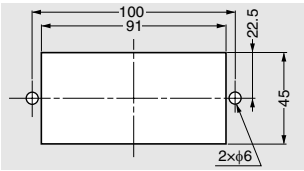
STAINLESS STEEL RECESSED PULL HH-AS2





[Parts Included]
- M4 nut, washer 4 (both clear zinc chromate)

[Cut Out Dimensions]

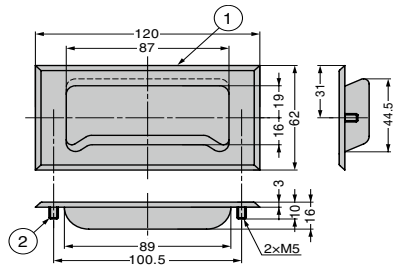


No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Thread Part	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-030	HH-AS2	50	12	240

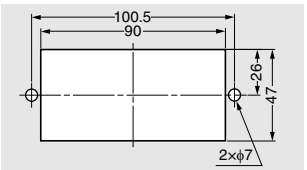
STAINLESS STEEL RECESSED PULL HH-AS3





[Parts Included]
- M5 nut (clear zinc chromate)

[Cut Out Dimensions]



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Thread Part	Steel	Copper Plating

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-008	HH-AS3	50	12	240

STAINLESS STEEL RECESSED PULL HH-KL160 SEMI Compliance

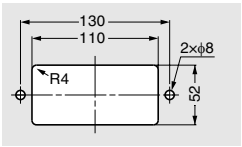


- All-metal material suitable for equipment with electromagnetic shielding requirements.
- Compliant with SEMI standard (SEMI S8-0600).
- Use optional spacer when installing to sheet metal.

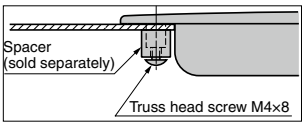
[Parts Included]
- Truss head screw M4×8 (SUS)

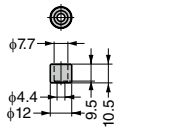
[Sold Separately]
- Spacer BSP-8

[Cut Out Dimensions]

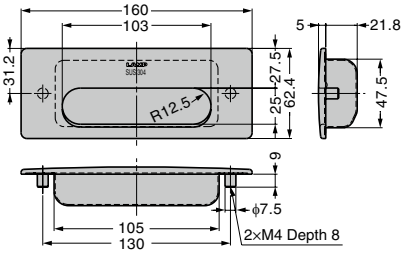


[Installation]





Spacer (sold separately)



[Body]

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-959	HH-KL160	260	8	48

No.	Part Name	Material	Finish
①	Pull	Stainless Steel (SCS13)	Satin
②	Cup	Stainless Steel (SUS304)	

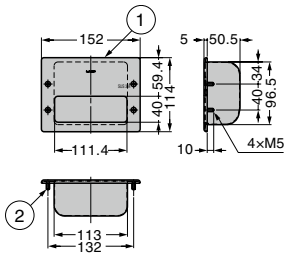
※SCS13 is equivalent of SUS304.

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-635	BSP-8	Steel (SUM)	Coloured Zinc Chromate	6	–	4000

STAINLESS STEEL RECESSED PULL HH-KP150 SEMI Compliance

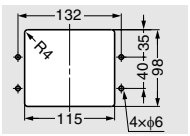




- All-metal material suitable for equipment with electromagnetic shielding requirements.
- Compliant with SEMI standard (SEMI S8-0600).

[Parts Included]
- M5 Hexagon nut (SUS)

[Cut Out Dimensions]



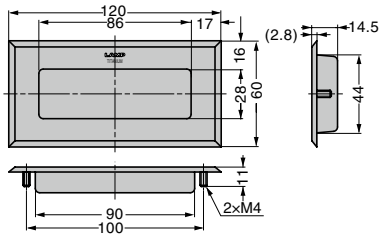
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Thread Part	Steel	Copper Plating

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-960	HH-KP150	390	5	50

TITANIUM RECESSED PULL HH-AS2-TI

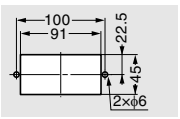
TITANIUM





- Ideal for places with light weight and rust resistance requirements.
- Titanium pull hardly causes metal allergy.
- Titanium mounting screws also available.

[Cut Out Dimensions]

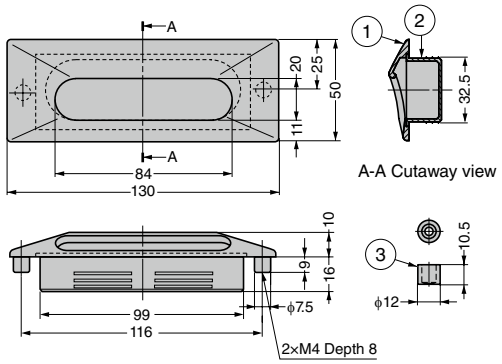


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-582	HH-AS2-TI	Titanium	Blast	30	12	240

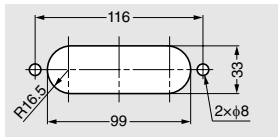
RECESSED PULL UTZ-130



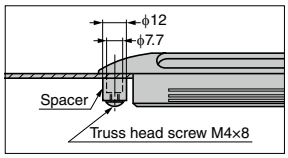
[Parts Included]
- Truss head screw M4×8
- Spacer



[Cut Out Dimensions]



[Installation]



No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Chrome, Satin Nickel, Bronze
②	Cup	Plastic (HIPS)	Black
③	Spacer	Steel (SUM)	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-225	UTZ-130WB	Satin Nickel	105	10	60
G	3D	100-010-226	UTZ-130CR	Chrome		10	60
G	3D	100-010-717	UTZ-130SCP	Bronze		10	60

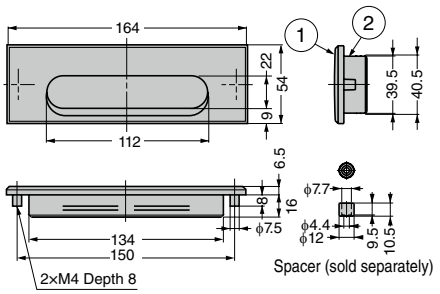
RECESSED PULL SD-160



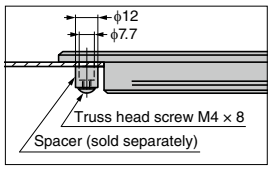
[Parts Included]
- Truss head screw M4×28 (for wood)

[Sold Separately]
- Spacer BSP-8

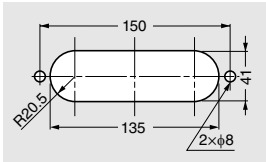
[Recommended Screws]
- Truss head screw M4×8



[Installation]



[Cut Out Dimensions]



[Body]

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-194	SD-160WB	White Bronze Plating	184	10	60
G	3D	100-010-181	SD-160CR	Chrome	176	10	60

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-635	BSP-8	Steel (SUM)	Coloured Zinc Chromate	6	–	4000

No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	White Bronze Plating, Chrome
②	Cup	ABS	Black

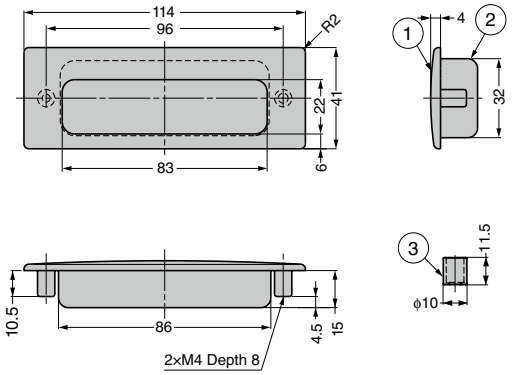
STAINLESS STEEL RECESSED PULL HH-KS114

SUS316

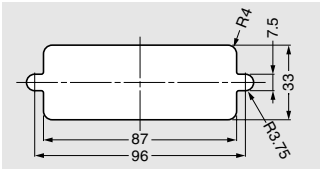


[Parts Included]

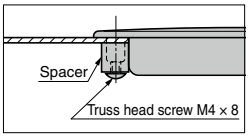
- Spacer
- For sheet metal t = 2: truss head tapping screw M4 × 8 (SUS)
- For wood panel t = 20: truss head tapping screw M4 × 15 (SUS)



[Cut Out Dimensions]



[Installation]



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Polished/Satin
②	Cup	Stainless Steel (SUS304)	Satin
③	Spacer		–

※SCS14 is equivalent of SUS316.

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-583	HH-KS114M	Polished	110	10	60
G	3D	100-010-584	HH-KS114S	Satin		10	60

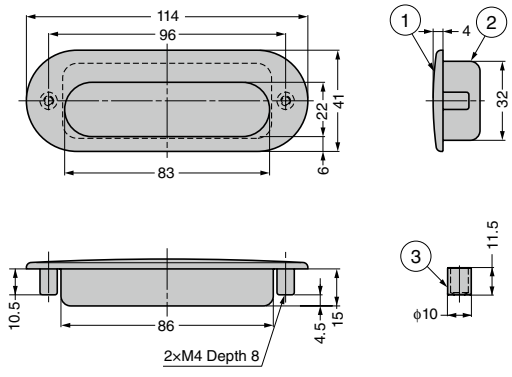
STAINLESS STEEL RECESSED PULL HH-DS114

SUS316

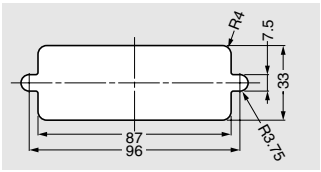


[Parts Included]

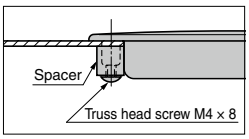
- Spacer
- For sheet metal t = 2: truss head tapping screw M4 × 8 (SUS)
- For wood panel t = 20: truss head tapping screw M4 × 15 (SUS)



[Cut Out Dimensions]



[Installation]



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Polished/Satin
②	Cup	Stainless Steel (SUS304)	Satin
③	Spacer		–

※SCS14 is equivalent of SUS316.

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-585	HH-DS114M	Polished	105	10	60
G	3D	100-010-586	HH-DS114S	Satin		10	60

STAINLESS STEEL RECESSED PULL HH-K

NSF SUS316

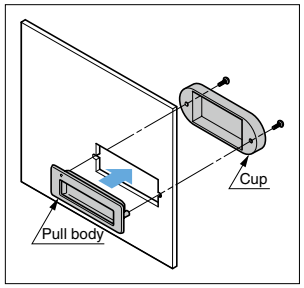


- Designed to install by pinching the door with body and cup. (Sheet metal thickness: Max. 2mm).

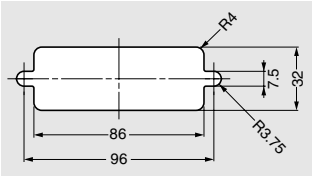
[Parts Included]

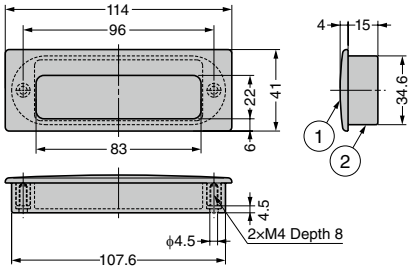
- For sheet metal t = 2: truss head tapping screw M4 × 10 (SUS)
- For wood panel t = 20: truss head tapping screw M4 × 15 (SUS)

[How to Install]



[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SCS14)	Polished
②	Cup	ABS	Black

※SCS14 is equivalent of SUS316.

RoHS	CAD	Item Code	Item Name	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-952	HH-K	Max. 2	90	10	60

STAINLESS STEEL RECESSED PULL HH-D

NSF SUS316

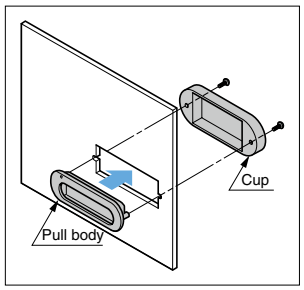


- Designed to install by pinching the door with body and cup. (Sheet metal thickness: Max. 2mm).

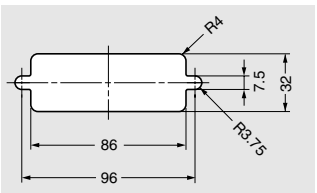
[Parts Included]

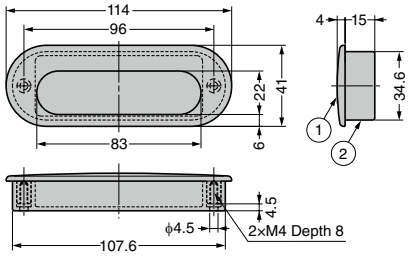
- For sheet metal t = 2: truss head tapping screw M4 × 10 (SUS)
- For wood panel t = 20: truss head tapping screw M4 × 15 (SUS)

[How to Install]



[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SCS14)	Polished
②	Cup	ABS	Black

※SCS14 is equivalent of SUS316.

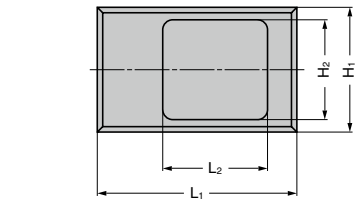
RoHS	CAD	Item Code	Item Name	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-951	HH-D	Max. 2	85	10	60

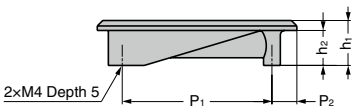
RECESSED PULL 5103



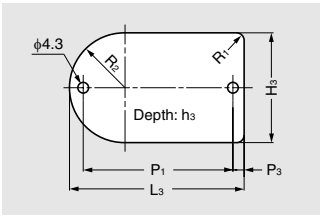
[Remarks]
- Bracket for sheet metal not included.

[Parts Included]
- Truss head screw M4×12

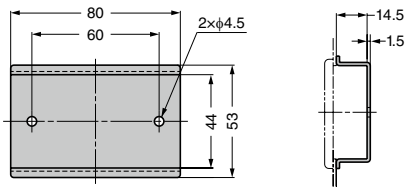




[Cut Out Dimensions]



[Bracket for Sheet Metal] Example (for 5103-80)



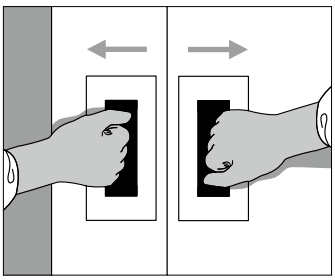
RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	H1	H2	h1	h2	P1	P2	L3	H3	P3	R1	R2	h3	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-014-085	5103-55	Zinc Alloy (ZDC)	White Bronze Plating	55	31.5	40	31.5	15.5	12.5	32	16	46	35	10	2	18	12.5	42	40	160
G	3D	100-014-084	5103-80			80	42	50	40	18	14	60	10	70	44	4.5	3	22	14	88	20	80

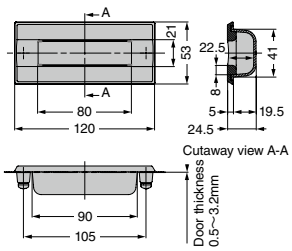
RECESSED PULL HH-UD

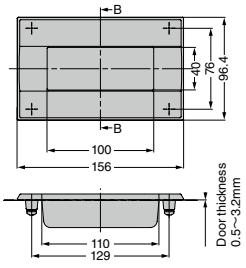
Under Development SUS

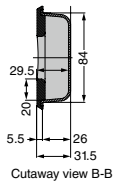


- Grips on both sides allow the door to be moved in either direction.
- Solid grip interior with rounded edges for optimum comfort.
- SEMI-compliant large size (SEMI S8-0915) and mini size with clean appearance are available.









RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-037-024	HH-UD120SH	Stainless steel (SCS13)/ ABS+PC	Satin	–	–	–	–	–
G	3D	100-037-025	HH-UD120SM		Mirror			–	–	–
G	3D	100-037-026	HH-UD156SH		Satin			–	–	–
G	3D	100-037-027	HH-UD156SM		Mirror			–	–	–

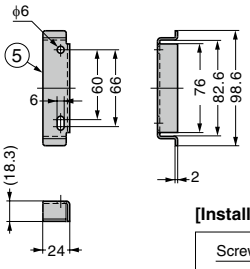
STAINLESS STEEL TRUNK HANDLE HCT-150 High Load Capacity

INSTRUCTION SUS316



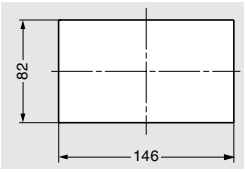
- The handle retracts automatically by a spring.

[Parts Included]
- Truss head screw M5x12 (SUS)
- Bracket for sheet metal (SUS)

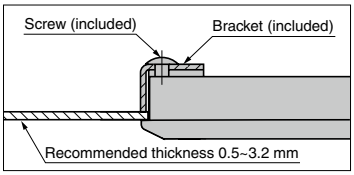


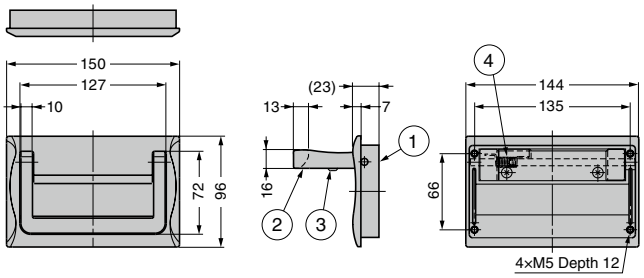
Bracket

[Cut Out Dimensions]



[Installation]





No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SCS14)	Polished
②	Handle		
③	Bumper	EPDM	Black
④	Spring	Stainless Steel (SUS316)	–
⑤	Bracket for Sheet Metal		Barrel Polished

※SCS14 is equivalent of SUS316.

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-017-557	HCT-150	980	100	990	1	1

TRUNK HANDLE MUD-140

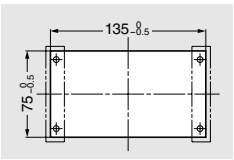
TEST METHOD 1 INSTRUCTION



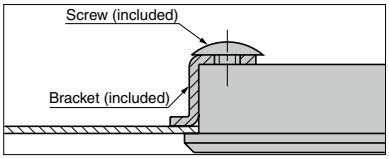
- The handle retracts automatically by a spring.

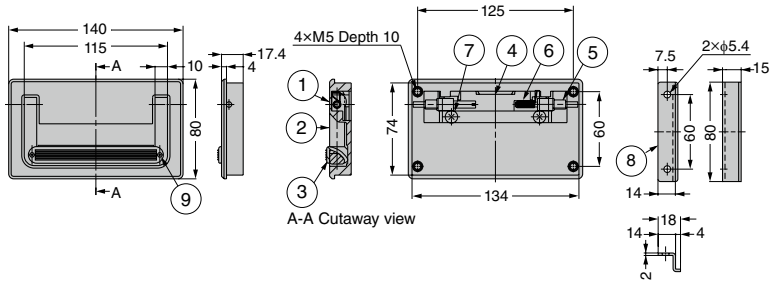
[Parts Included]
- Truss head screw M5x8
- Bracket for sheet metal

[Cut Out Dimensions]



[Installation]





No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Chrome
②	Handle		
③	Grip	Elastomer (TPE)	Dark Blue
④	Back Cover	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
⑤	Shaft	Zinc Alloy (ZDC)	
⑥	Spring	Steel (SWP)	
⑦	Screw	Steel (SWCH)	–
⑧	Bracket	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
⑨	Screw	Stainless Steel	Black

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-901-272	MUD-140	294	30	620	5	20

TRUNK HANDLE TMU-115

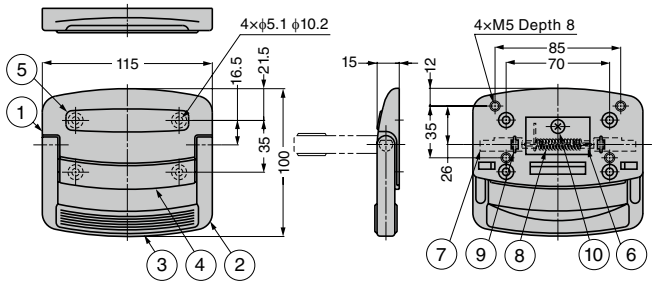
TEST METHOD 1 INSTRUCTION



- Both back screw mount and front screw mount is available.
- Spring loaded trunk handle.
- Small type (TMU-100) also available. For further details, please contact local representatives.

[Parts Included]

- For back screw mount: Truss head screw M5×6
- For front screw mount: Countersunk head wood screw 4.8×25 and 4.8×20



No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Chrome
②	Handle		
③	Grip	Elastomer (TPE)	Dark Blue
④	Case Cover 1		
⑤	Case Cover 2		
⑥	Back Cover	Steel (SPCC)	Coloured Zinc Chromate
⑦	Shaft	Zinc Alloy (ZDC)	Nickel
⑧	Spring	Steel SWP	Coloured Zinc Chromate
⑨	Pivot Ring	–	5103-31
⑩	Screw	Steel (SWCH)	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-901-273	TMU-115	392	40	460	10	40

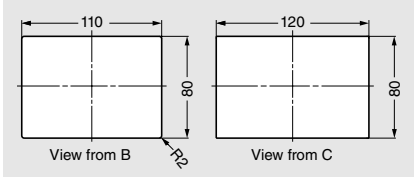
TRUNK HANDLE PT-148

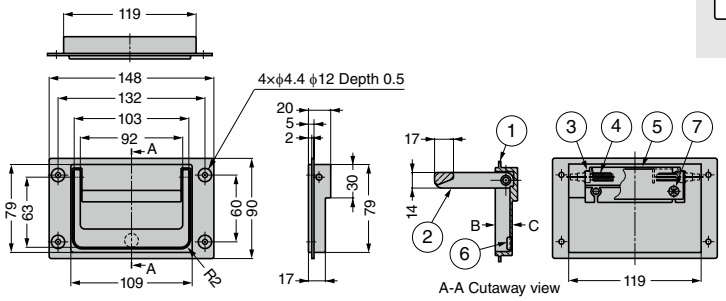
TEST METHOD 1



- Spring loaded trunk handle.

[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Grey Enamel
②	Handle		Finish
③	Shaft		Plain
④	Spring	Steel (SW)	Clear Zinc Chromate (Trivalent)
⑤	Back Cover	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
⑥	Bumper	PUR	Clear
⑦	Countersunk Head Screw	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	100-019-183	PT-148	490	50	645	20	–

STAINLESS STEEL RING PULL 980643

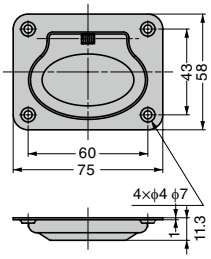
TEST METHOD 2 SUS

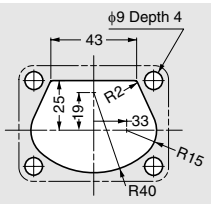


●The handle retracts automatically by a spring when not in use.

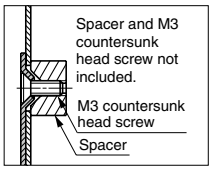
[Parts Included]
●Tapping screw 3.5×16 (SUS)

[Cut Out Dimensions]





[For Sheet Metal]



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-739	980643	Stainless Steel (SUS304)	Polished	245	25	51	10	200

STAINLESS STEEL RING PULL 980641, 980642

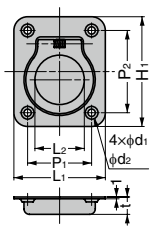
TEST METHOD 2 SUS

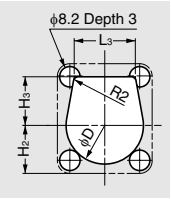


●The handle retracts automatically by a spring when not in use.

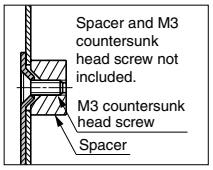
[Parts Included]
●980641: Tapping screw 3×16 (SUS)
●980642: Tapping screw 3.5×16 (SUS)

[Cut Out Dimensions]





[For Sheet Metal]



RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	L3	H1	H2	H3	D	t	P1	P2	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-737	980641	Stainless Steel (SUS304)	Polished	38	18	24.5	44	19	19.5	31	10	28	34	4	6.2	196	20	21	10	500
G	3D	100-011-738	980642			50	27	25	60	25	25	41	9.5	35	45	4.4	7	245	25	36	10	200

STAINLESS STEEL RING PULL 980640

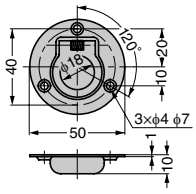
TEST METHOD 2 SUS

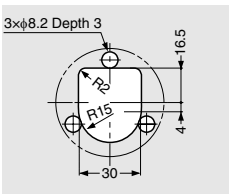


●The handle retracts automatically by a spring when not in use.

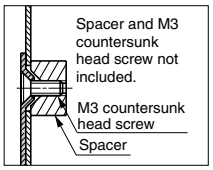
[Parts Included]
●Tapping screw 3×16 (SUS)

[Cut Out Dimensions]





[For Sheet Metal]



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-740	980640	Stainless Steel (SUS304)	Polished	196	20	23	10	300

STAINLESS STEEL RING PULL 26700

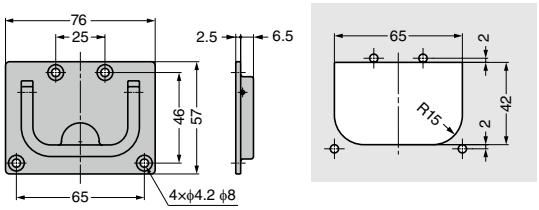
SUS316



[Remarks]
- Please install the top and bottom correctly to prevent handle from hanging out.

[Recommended Screws]
- Countersunk head tapping screw 3.5

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	100-096-011	26700	Stainless Steel (SCS14)	Polished	120	10	100

※SCS14 is equivalent of SUS316.

STAINLESS STEEL RING PULL 26901

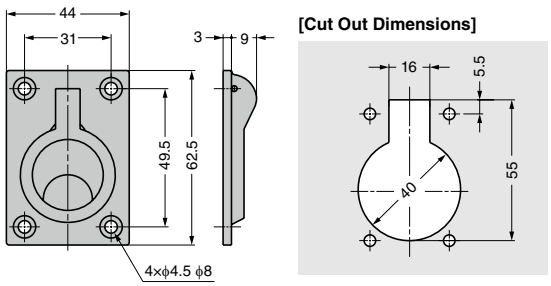
SUS316



[Remarks]
- Please install the top and bottom correctly to prevent handle from hanging out.

[Recommended Screws]
- Countersunk head tapping screw 3.5

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	100-096-010	26901	Stainless Steel (SCS14)	Polished	85	20	100

※SCS14 is equivalent of SUS316.

STAINLESS STEEL RING PULL 26900

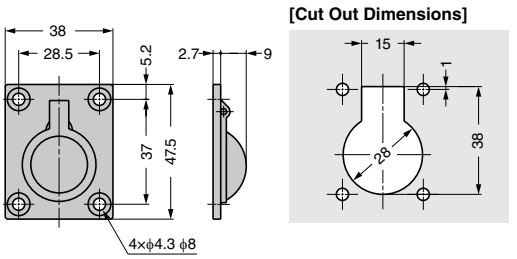
SUS316



[Remarks]
- Please install the top and bottom correctly to prevent handle from hanging out.

[Recommended Screws]
- Countersunk head tapping screw 3.5

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	100-096-009	26900	Stainless Steel (SCS14)	Polished	45	20	100

※SCS14 is equivalent of SUS316.

STAINLESS STEEL HATCH PULL ST-90, ST-115



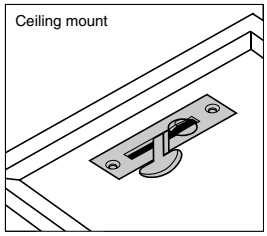
- Ideal for use in places where projection from surface is not permitted, such as switch boards and inspection ports.
- Built-in spring prevents handle from hanging out.
- Vertical use and ceiling mount are possible.

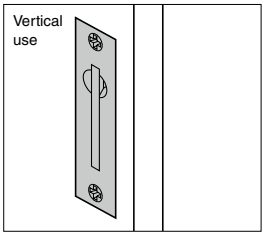
[Applications]
- Control panels, switch boards, and inspection ports, etc.

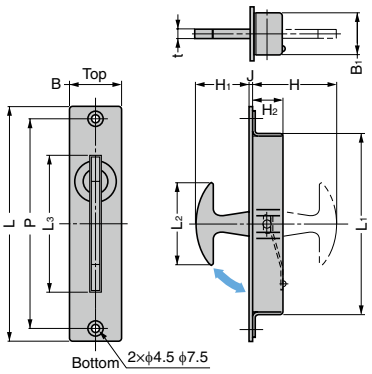
[Remarks]
- For vertical use and ceiling mount only. Do not use on the floor.
- For vertical use, please install the top and bottom correctly.

[Parts Included]
- ST-90: Countersunk head wood screw 3.5×22 (SUS)
- ST-115: Countersunk head wood screw 3.5×25 (SUS)

[Application Example]







RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	L2	L3	H	H1	H2	J	B	B1	t	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-240	ST-90	Stainless Steel (SUS304)	Satin	90	66.2	30.2	57	35.5	23.2	10.5	2.2	22	18.5	3.8	80	68	30	300
–	3D	100-010-241	ST-115			115	86.2	40	67	42	26	13	2.5	25	20	4	102	102	20	200

STAINLESS STEEL HATCH PULL ST-80, ST-100



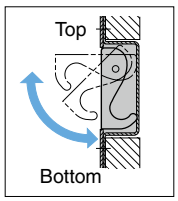
- Ideal for use in places where projection from surface is not permitted, such as switch boards and inspection ports.
- Thick and smooth handle.

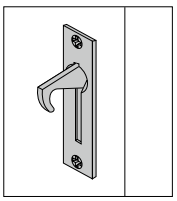
[Applications]
- Control panels, switch boards, and inspection ports, etc.

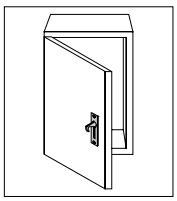
[Remarks]
- For vertical use only.Do not use on the ceiling and floor.
- Please install the top and bottom correctly.

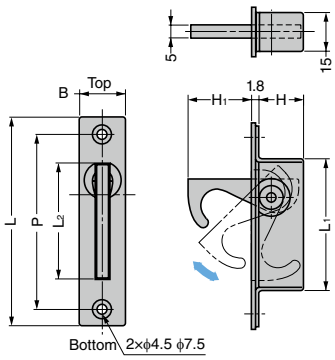
[Parts Included]
- ST-80: Countersunk head wood screw 3.5×16 (SUS)
- ST-100: Countersunk head wood screw 3.5×20 (SUS)

[Application Example]







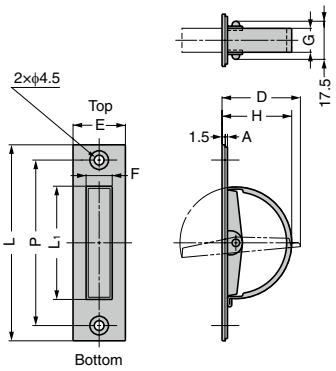


RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	L2	H	H1	B	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-010-244	ST-80	Stainless Steel (SUS304)	Satin	80	50	45	18	25	18	68	48	30	300
G	3D	100-010-245	ST-100			100	63	55.2	21	32	20	85	66	20	200

STAINLESS STEEL HATCH PULL HR

TEST METHOD 2 SUS





- Ideal for use in places where projection from surface is not permitted, such as switch boards and inspection ports.

[Applications]
- Control panels, switch boards, and inspection ports, etc.

[Remarks]
- For vertical use, please install the top and bottom correctly.

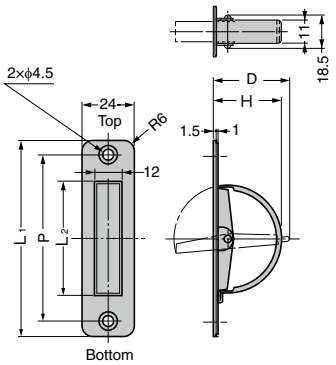
[Parts Included]
- HR-90S: Countersunk head wood screw 3.5×22 (SUS)
- HR-110S & HR-135S: Countersunk head wood screw 3.5×25 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	L1	P	H	D	A	E	F	G	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-614	HR-90S	Stainless Steel (SUS304)	Satin	90	52	76	32	36	1	24	12	11	127	13	49	30	300
G	3D	100-012-615	HR-110S			110	64	94	38	42					98	10	59	20	200
G	3D	100-012-817	HR-135S			135	90	115	50	55	1.2	25	12.2	12	74	7.5	88	15	150

STAINLESS STEEL HATCH PULL HR-RS

TEST METHOD 2 SUS





- Ideal for use in places where projection from surface is not permitted, such as switch boards and inspection ports.

[Applications]
- Control panels, switch boards, and inspection ports, etc.

[Remarks]
- For vertical use, please install the top and bottom correctly.

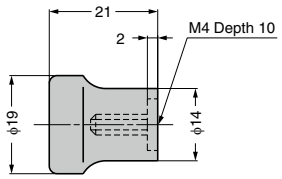
[Parts Included]
- Countersunk head wood screw 3.5×22 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	P	H	D	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-058	HR-90RS	Stainless Steel (SUS304)	Satin	90	52	76	32	36	127	13	46	30	300
G	3D	100-019-059	HR-110RS			110	64	94	38	42	98	10	55	20	200

KNOB GD-20



[Parts Included]
- Truss head screw M4×25

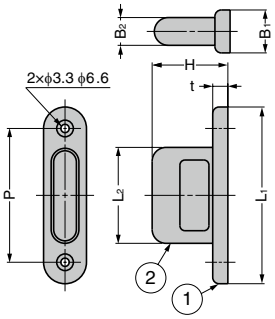


RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-074	GD-20	ABS	Black	5	50	500

STAINLESS STEEL PULL HS

SUS





- Elastomer material provides soft and comfortable touch feeling.
- Stainless steel is used for the base part.
- Stainless steel pull US 1 also available.

[Parts Included]
- Raised Countersunk head wood screw 3.1×20 (SUS)

No.	Part Name	Material	Finish / Colour
①	Base	Stainless Steel (SUS304)	Satin
②	Knob	Elastomer (TPE)	Black

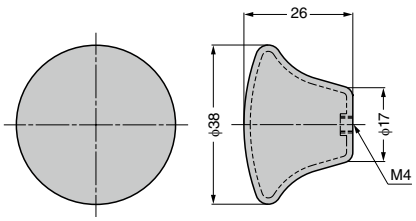
RoHS	CAD	Item Code	Item Name	L_1	L_2	P	B_1	B_2	H	t	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-192	HS-60S	60	30	44	16	9	25	5	13	40	400
G	3D	100-012-193	HS-70S	70	38	53	17	11	30	6	20	30	300

Refer to 1 : P.477

STAINLESS STEEL KNOB RS-38S

NSF SUS



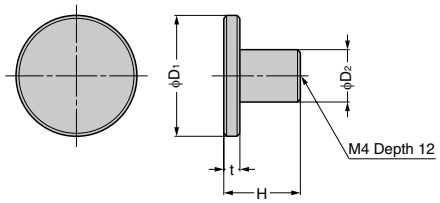


[Parts Included]
- Truss head screw M4×30 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-198	RS-38S	Stainless Steel (SUS304)	Satin	20	20	200

KNOB EXSEL





[Parts Included]
- Truss head screw M4×25

RoHS	CAD	Item Code	Item Name	Material	Finish	D_1	D_2	H	t	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-080	EXSEL20	Aluminium Alloy	Anodised	20	10	18	4	5	48	1152
G	3D	100-012-081	EXSEL25			25	11	18.5	4.5	8.5	48	1152
G	3D	100-012-082	EXSEL30			30	12	19	5	15	48	1152
G	3D	100-012-083	EXSEL35			35	13			16.5	24	576

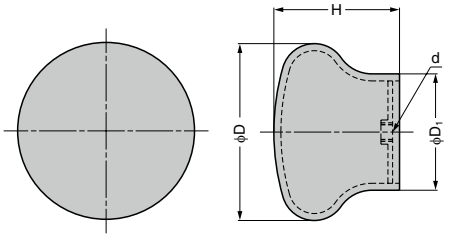
STAINLESS STEEL KNOB RSS



- Hollow and light.

[Applications]
- Medical/professional sinks, cars, and ships, etc.

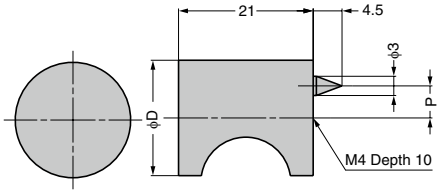
[Parts Included]
- RSS-25S, RSS-25M, RSS-30S, RSS-30M: Truss head screw M4×30 (SUS)
- RSS-38S, RSS-38M, RSS-50S, RSS-50M: Truss head screw M5×30 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	H	D	D_1	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-194	RSS-25S	Stainless Steel (SUS304)	Satin	22	25	18	M4	8.5	20	200
G	3D	100-011-190	RSS-25M		Polished						20	200
G	3D	100-011-195	RSS-30S		Satin	23	30	20		11	20	200
G	3D	100-011-191	RSS-30M		Polished						20	200
G	3D	100-011-196	RSS-38S		Satin	27	38	25	M5	16	20	200
G	3D	100-011-192	RSS-38M		Polished						20	200
G	3D	100-011-197	RSS-50S		Satin	34	50	35		30	20	200
G	3D	100-011-193	RSS-50M		Polished						20	200

KNOB MRB





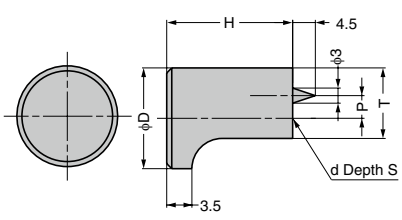
[Remarks]
- Pin position and size may vary.

[Parts Included]
- Truss head screw M4×25

RoHS	CAD	Item Code	Item Name	Material	Finish	D	P	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-721	MRB-18	Brass	White Bronze Plating	18	5	38	30	300
–	3D	100-010-722	MRB-24			24	5.5	70	30	300

KNOB GLA





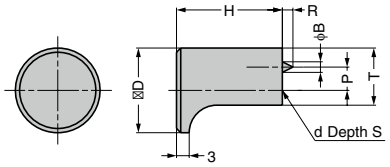
[Remarks]
- Pin position and size may vary.

[Parts Included]
- GLA-12: Truss head screw M3×25
- GLA-16, GLA-20: Truss head screw M4×25

RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	T	P	d	S	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-010-718	GLA-12	Brass	White Bronze Plating	12	18	8.5	3.5	M3	8	14	50	–
–	3D	100-012-323	GLA-16			16	22	11	4	M4	10	29	40	400
–	3D	100-010-720	GLA-20			20	25	14	4.5			52	40	400

KNOB SGL





- Compliant with flame retardancy standard UL94-HB.

[Remarks]
- Pin position and size may vary.

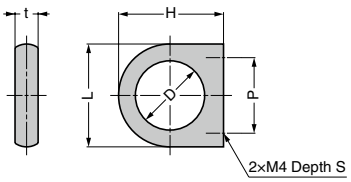
[Parts Included]
- SGL-12: Truss head screw M3×28
- SGL-16, SGL-20: Truss head screw M4×28

RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	T	P	B	R	d	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-016	SGL-12	ABS	Satin Chrome	12	18	8.5	3	2	2	M3	9.5	1	60	1800
G	3D	100-012-017	SGL-16			16	22	11	4		2.5	M4	13.5	2	40	1200
G	3D	100-012-018	SGL-20			20	25	13.5	5	2.5			15.5	3.5	30	900

STAINLESS STEEL PULL SD

SUS



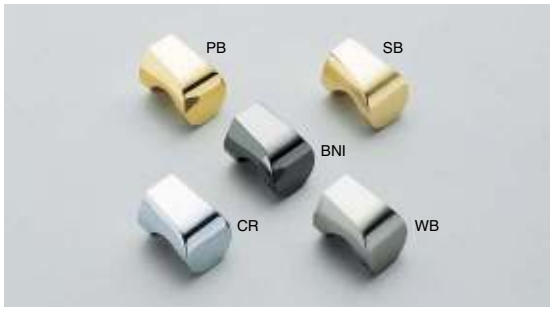


[Parts Included]
- Truss head screw M4×25

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	t	D	P	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-015-022	SD-24S	Stainless Steel (SCS13)	Satin	24.5	25	5.5	16.5	18	5	10	80	800
G	3D	100-015-023	SD-24M		Polished								80	800
G	3D	100-015-020	SD-30S		Satin	30.5	31.5	6.5	20.5	21	6	22	50	500
G	3D	100-015-021	SD-30M		Polished								50	500

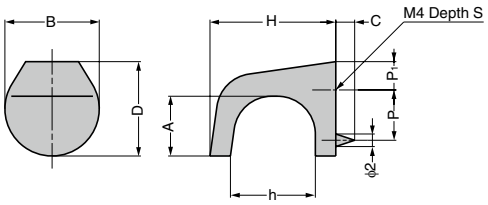
※SCS13 is equivalent of SUS304.

KNOB MKZ



[Remarks]
- Pin position and size may vary.

[Parts Included]
- Truss head screw M4×25

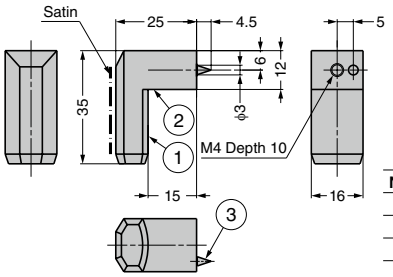


RoHS	CAD	Item Code	Item Name	Material	Finish	D	A	B	C	H	h	P	P_1	S	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-018-042	MKZ-15PB	Zinc Alloy (ZDC)	Brass/Clear	16	8	15	2	20	13.5	8	5.5	6	11	50	500
–	3D	100-018-043	MKZ-15CR		Chrome											50	500
–	3D	100-018-044	MKZ-15BNI		Black Nickel											50	500
G	3D	100-018-045	MKZ-15WB		White Bronze Plating											50	500
–	3D	100-018-046	MKZ-15SB		Satin Gold											50	500
–	3D	100-018-047	MKZ-21PB		Brass/Clear	21	12.5	20	3	26	17	12	4.5	7	29	50	500
–	3D	100-018-048	MKZ-21CR		Chrome											50	500
–	3D	100-018-049	MKZ-21BNI		Black Nickel											50	500
G	3D	100-018-050	MKZ-21WB		White Bronze Plating											50	500
G	3D	100-018-051	MKZ-21SB		Satin Gold											50	500

STAINLESS STEEL KNOB CU-L-35

SUS





●Finish: Combination of polished and satin.

[Remarks]
●Pin position and size may vary.

[Parts Included]
●Truss head screw M4×25 (SUS)

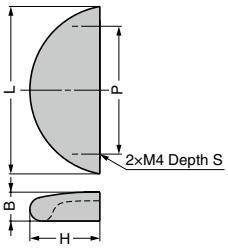
No.	Part Name	Material	Finish
①	Body 1	Stainless Steel (SUS303)	Polished and Satin Combination
②	Body 2	Stainless Steel (SUS304)	Polished
③	Pin	Stainless Steel (SUS303)	

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-012-824	CU-L-35	60	10	–

STAINLESS STEEL PULL RD

SUS316





●Easy to grasp.

[Parts Included]
●Truss head screw M4×25 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	B	P	S	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-901-049	RD-55SM	Stainless Steel (SCS14)	Polished	55	23	9.5	42	8	50	30	360
G	3D	100-901-050	RD-90SM			90	25.5	10.5	74	10	80	20	240

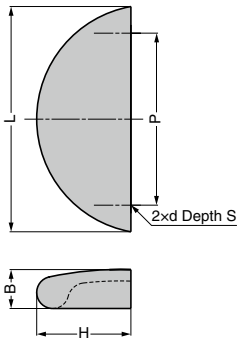
※SCS14 is equivalent of SUS316.

PULL RD



●Easy to grasp.

[Parts Included]
●Truss head screw



RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	H	B	d	S	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	100-012-331	RD-45CR	Zinc Alloy (ZDC)	Chrome	45	32	19	8.2	M3	7	22	M3×28	40	480
G	3D	100-012-333	RD-45WB		White Bronze Plating									40	480
–	3D	100-012-330	RD-45BN		Black Nickel									40	480
G	3D	100-012-387	RD-45SL		Paint/Silver									40	480
G	3D	100-012-335	RD-55CR		Chrome	55	42	23	9.5	M4	8	35	M4×28	30	360
G	3D	100-012-337	RD-55WB		White Bronze Plating									30	360
G	3D	100-012-334	RD-55BN		Black Nickel									30	360
G	3D	100-012-162	RD-90CR		Chrome	90	74	25.5	10.5		9.5	63		20	240
G	3D	100-012-341	RD-90WB		White Bronze Plating									20	240
G	3D	100-012-338	RD-90BN		Black Nickel									20	240

PUSH KNOB PK04

INSTRUCTION



- Knob can be pushed in when not in use. And no projection from the door surface.
- Able to install to door thickness 15~35mm with cap included, 29~39mm with PK04VB (sold separately).

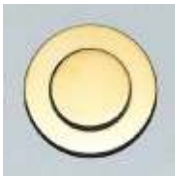
[Remarks]
- When processing the mounting holes on wooden door, please clear wood scraps before installation.
- When installing knob body and supplied screws, do not tighten with excessive force. (Recommended tightening torque: 4kgf・cm)
- Bracket for sheet metal not included.

[Parts Included]
- Truss head screw M3×20

[Sold Separately]
- Cap for thick door (PK04VB)


BN

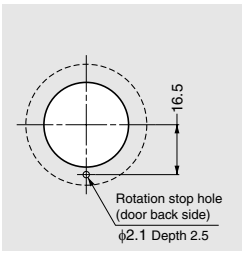

CR

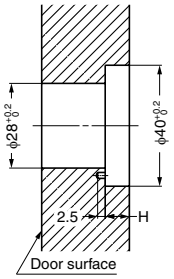

GA


DN

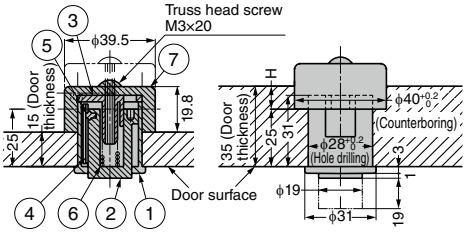

PK04VB (sold separately)

[Cut Out Dimensions]

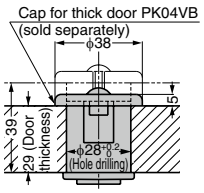




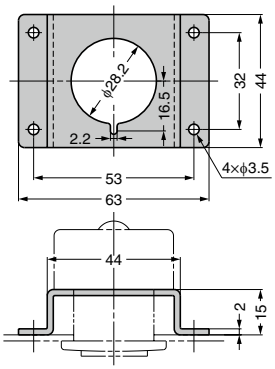
[Door Thickness 15~25] **[Door Thickness 26~35]**



[Door Thickness 29~39]



[Bracket for Sheet Metal] Example



No.	Part Name	Material	Finish / Colour
①	Body	ABS	See Below
②	Knob	Zinc Alloy (ZDC)	
③	Cover		Coloured Zinc Chromate
④	Guide Plate		
⑤	Rotor		
⑥	Spring	Stainless Steel	Plain
⑦	Cap	ABS	Black
–	Spring Pin	Stainless Steel	–

[Body]

RoHS	CAD	Item Code	Item Name	Finish	Door Thickness (DT) ※	Bore Depth H	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-015-025	PK04GA	Gold	15~35	DT 15~25 : H = None (ϕ28 Hole), DT 26~35 : H = DT - 25	76	20	200
G	3D	100-015-024	PK04CR	Chrome				20	200
–	3D	100-015-026	PK04BN	Black Nickel				20	200
G	3D	100-012-554	PK04DN	Nickel				20	200

※ When using the supplied cap.

[Cap for Thick Doors] Option

RoHS	CAD	Item Code	Item Name	Door Thickness	Bore Depth H	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	–	100-910-039	PK04VB	29~39	None (ϕ28 Hole)	Stainless Steel (SUS430)	Plain	13	100	800

Zwei L STAINLESS STEEL PUSH KNOB ZL-1908

INSTRUCTION SUS316

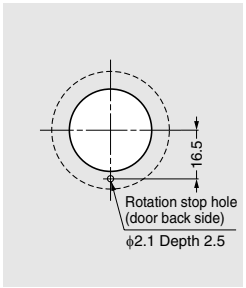


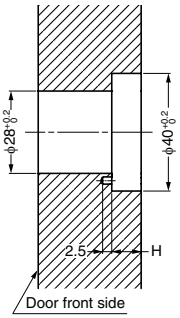
- Knob can be pushed in when not in use. And no projection from the door surface.
- Superior “Zwei L Finish” .
  Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give jewel like highlights which flatter any architectural space.

[Parts Included]

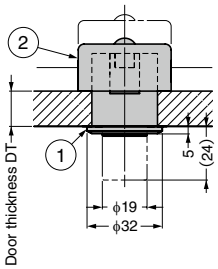
- Truss head screw M3×25 (SUS)

[Cut Out Dimensions]

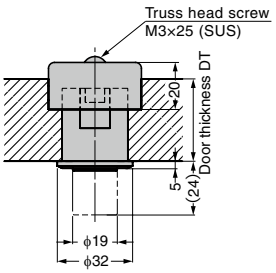




[Door Thickness 13~23 mm]



[Door Thickness 24~23 mm]

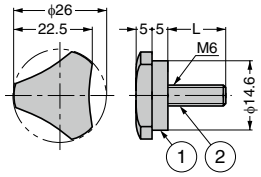


No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS316)	Zwei L Finish
②	Cap	ABS	Black

RoHS	CAD	Item Code	Item Name	Door Thickness DT	Bore Depth H	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	100-011-033	ZL-1908	13~33	DT 13~23 : H = None (ϕ28 Hole), DT 24~33 : H = DT - 23	134	1	–

KNOB (SMALL) 117





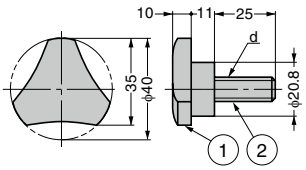
[Applications]
- Medical equipment, OA equipment, and testing equipment, etc.

No.	Part Name	Material	Finish / Colour
①	Knob	PP	White, Black
②	Screw	Steel (SWCH)	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	Colour	L	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-932-007	117-10110	White	10	7	200	–
–	3D	100-906-561	117-10108	Black	15	8	100	–
–	3D	100-048-063	117-10102	White		8	200	–

KNOB (MEDIUM) 117





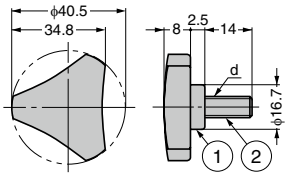
[Applications]
- Medical equipment, OA equipment, and testing equipment, etc.

No.	Part Name	Material	Finish / Colour
①	Knob	PA	Black
②	Screw	Steel (SWCH)	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	d	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-048-053	117-10701	M8	27	200	–
–	3D	100-048-052	117-10702	M10	39	100	–

KNOB (LARGE) 117





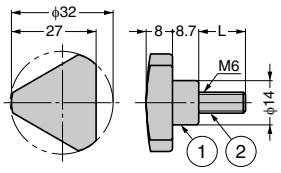
[Applications]
- Medical equipment, OA equipment, and testing equipment, etc.

No.	Part Name	Material	Finish / Colour
①	Knob	PE	Black
②	Screw	Steel (SWCH)	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	d	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	100-014-103	117-10313	M6	10	100	–
G	3D	100-022-300	117-10327	M8	15	100	–

KNOB (MEDIUM) 117





[Applications]
- Medical equipment, OA equipment, and testing equipment, etc.

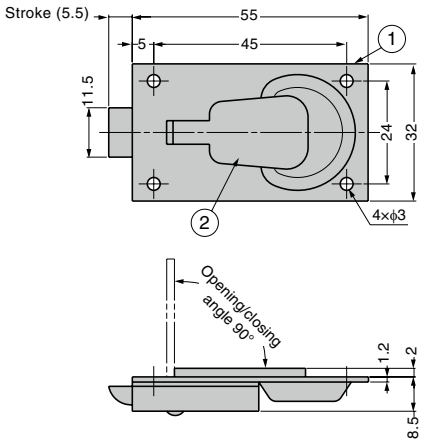
No.	Part Name	Material	Finish / Colour
①	Knob	ABS	Black
②	Screw	Steel (SWCH)	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	L	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-022-049	117-11707	12	10	200	–
–	3D	100-014-104	117-11703	15	11	200	–

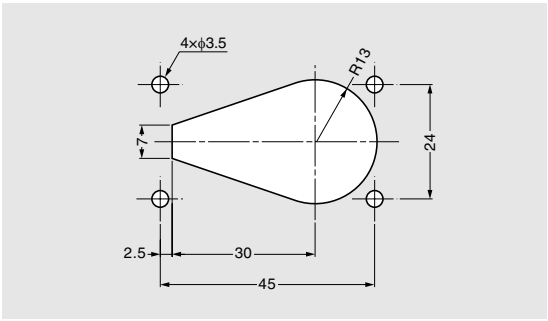
FLUSH SLAM LATCH P10-55H



- Low profile allows for directly installing to panel surface.
- Pull lever to open.
- Lever can be held in the raised state.
- Latch bolt comes out when lever is pushed down.
- Lever snaps to the end when slightly pushed down.



[Cut Out Dimensions]



No.	Part Name	Material	Finish
①	Body	Brass	Nickel
②	Lever		

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-049-306	P10-55H	40	500	–

FLUSH SLAM LATCH LJ-61



- Suitable for various door thicknesses.
- Can also be installed to a thin panel by changing the installation position of back plate.
- Recessed latch with little projection from door surface.
- Can be released from inside.

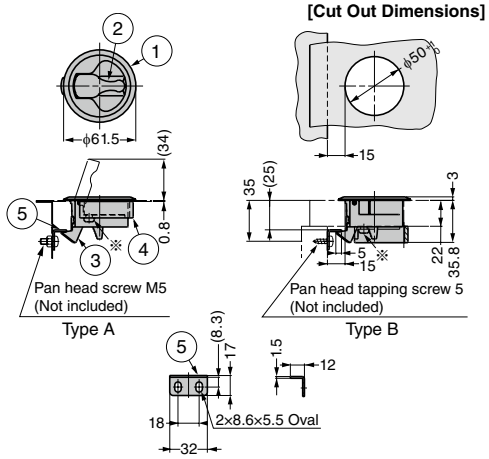
[Parts Included]
- Pan head screw M5×12 (SUS316)
- Pan head screw M5×18 (SUS316)

No.	Part Name	Material	Finish / Colour
①	Cup	PC	Black, White
②	Lever		
③	Latch	POM	
④	Back Plate	PC	
⑤	Counter Plate	Stainless Steel (SUS316)	Barrel Polished

[Screws] ※marked part on the drawings

Type	Door Thickness	Screw
Type A	0.8~7.5	Pan Head Tapping Screw M5×12
	8~12	Pan Head Tapping Screw M5×18
Type B	12.5~18.5	Pan Head Tapping Screw M5×12
	19~22	Pan Head Tapping Screw M5×18

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-031	LJ-61-BL	Black	147	15	60	10	120
G	3D	140-059-200	LJ-61-WT	White				10	120

FLUSH SLAM LATCH LC-65A



- Pull paddle handle to open.
- Door will be latched when closed.
- Mounting screws are invisible from door surface.
- Easy installation. Insert the latch body through cut out section and simply screw-on the back plate.
- Latching margin: 5mm (Small R is required at the corners on the frame side)

[Remarks]

- Please contact us when using other than the recommended door thickness.

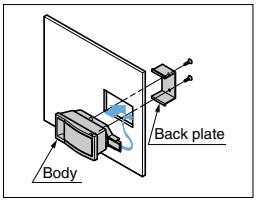
[Parts Included]

- Pan head screw M4×8 (SUS)

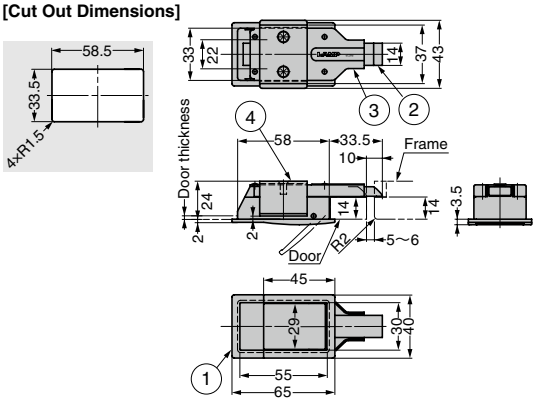
[Application Example]



[Installation]



[Cut Out Dimensions]



No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Silver
②	Latch Bolt	POM	White
③	Cover	Stainless Steel (SUS304)	Barrel Polished
④	Back plate		

RoHS	CAD	Item Code	Item Name	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-206	LC-65A	2~3.2	108	10	100

FLUSH SLAM LATCH LC-48

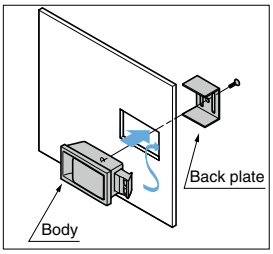


- Door will be latched when closed.
- Low profile eliminates worries about protruding to the inside of equipment.
- Mounting screws are invisible from door surface.
- UL94V-0 rated flame retardant material.
- Non-Handed. Can be installed on left or right side.
- Easy installation. Insert the latch body through cut out section and simply screw-on the back plate.

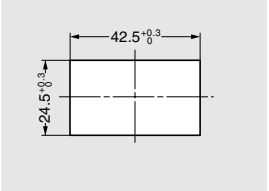
[Parts Included]

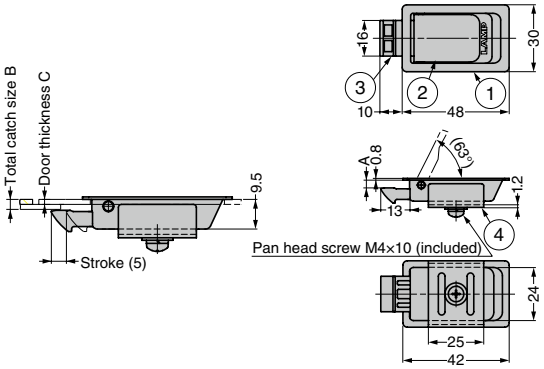
- Pan head screw M4×10 (SUS)

[Installation]



[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Handle		
③	Latch	PBT (Glass Reinforced)	White
④	Back Plate	Stainless Steel (SUS304)	Barrel Polished

RoHS	CAD	Item Code	Item Name	A	Total Catch Size B	Door Thickness C	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-021-199	LC-48-3	3.5	3.2	1~1.6	35	40	400
G	3D	140-021-200	LC-48-5	5.1	4.6	1~2.3		40	400

SNAP LOCK SX-48 Quick Installation & Temporary Holding

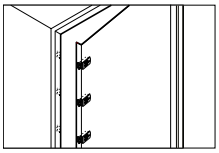
TEST METHOD 11



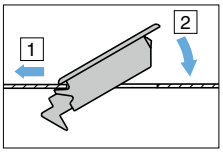
- Door or lid can be opened/closed with a single touch.
- Easy installation by one-touch.
- With temporary holding function.
  Even if multiple latches are installed, door can also be opened at once by keeping all of them temporarily held.
- Compliant with flame retardancy standards and UL94 standard.

[Remarks]
- If the door may fall off like a ceiling door, please fix it separately with screws.

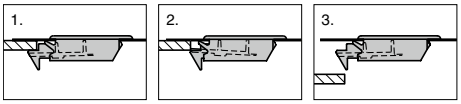
[Application Example]



[Installation]

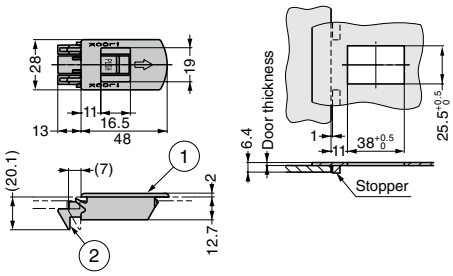


[How to Operate]



1. The door will be latched when closed.
2. To temporarily hold the door, slide the lever to the end.
3. The lever and latch return to their original positions when the door is opened.

[Cut Out Dimensions]



No.	Part Name	Material
①	Body	PA (UL94V-2)
②	Latch	POM (UL94HB)
–	Spring	Stainless Steel (SUS304)

RoHS	CAD	Item Code	Item Name	Door thickness	Colour	Retaining Force N/pc	Retaining Force kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-037	SX-48	0.8~2.3	Black	49	5	11	40	400

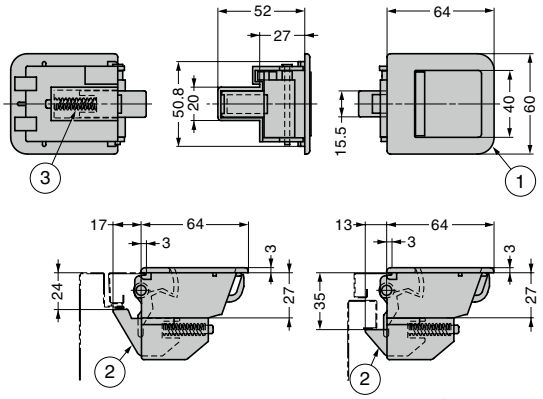
PULL ATL-64 Quick Installation



ATL-64-IN ATL-64-OT

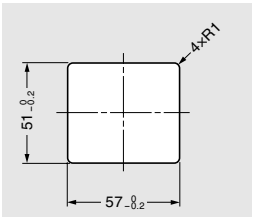
- Easy installation by one-touch.
- Pull lever to open.
- Door will be latched when closed.
- Suitable for thin sheet metal (thickness: 0.7~1mm) with types for inset and overlay doors available.

[Applications]
- Storage cabinets, lockers, small article cases, and dust boxes, etc.



ATL-64-IN ATL-64-OT

[Cut Out Dimensions]



No.	Part Name	Material	Finish / Colour
①	Body	ABS	Dark Ivory
②	Latch	PA	Natural
③	Spring	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Description	Door thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-012-014	ATL-64-IN	For Inset Door	0.7~1	44.5	175	–
G	3D	140-012-019	ATL-64-OT	For Overlay Door			175	–

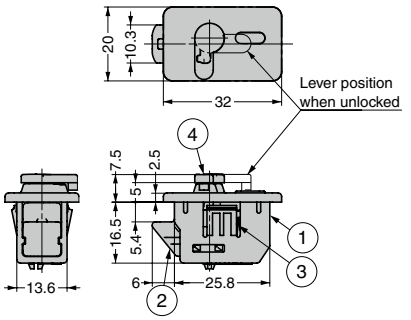
PANEL LATCH LC-PK32, LC-PL32 Quick Installation




LC-PL32-L-GR
(sold separately)


LC-PK32-K
(sold separately)

- Two types of lock/unlock methods available: lever type and key type.
- Lever and key are compatible.
- Turning the lever or key 90° counterclockwise to unlock the latch.
- With temporary holding function that holds the latch in unlocked state. Even if multiple latches are installed, door can also be opened at once by keeping all of them temporarily held.
- Key type prevents the door from opening unexpectedly.
- Compliant with flame retardancy standard UL94 V-0.Built-in spring is made of stainless steel (SUS304).

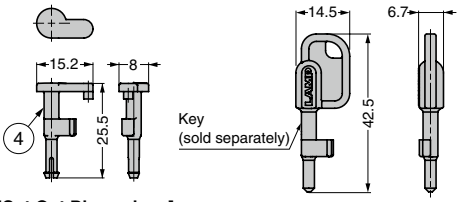


LC-PL32 type shown.

[Product Ordering]
- Lock/unlock with key: Order body (without lever) + key.
- Lock/unlock with lever: Order body (with lever).
- Change from key to lever: Order lever.

[Remarks]
- Do not use the lever or key as a knob. It may cause damage.
- Do not reuse the lever once removed from the body.

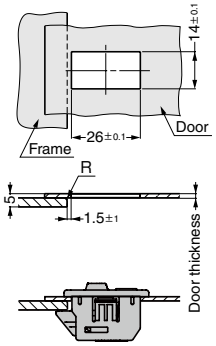
[Sold Separately]
- Lever (attached to LC-PL32)
- Key



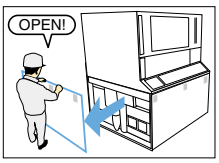
No.	Part Name	Material
①	Body	PP
②	Latch	PBT
③	Spring	Stainless Steel (SUS304)
④	Lever ※	PBT

※The lever attached to LC-PL32 is the same as the optional lever.

[Cut Out Dimensions]

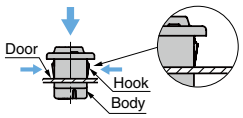


[Application Example]

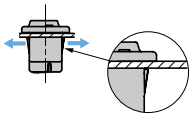


[Quick Installation]

1. When inserting the body in the mounting hole, the hook is stored inside the body.

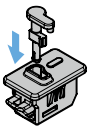


2. After installing, the hook returns to its original position.



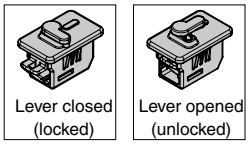
[How to Install the Lever]

1. Insert the lever straight.



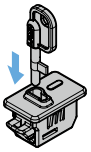
2. Until it snaps, check if the lever tip completely protrudes the body bottom.



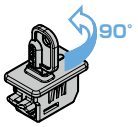


[How to Unlock with Key]

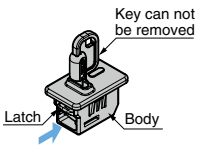
1. Insert the key.



2 Turn the key left by 90° .



3. The latch is stored in the body. At this moment, the latch will not return to its original position even if you release the key.



[Body]

RoHS	CAD	Item Code	Item Name	Colour	Door thickness	Description	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-020-694	LC-PK32-L-BL	Black	1.2, 1.5, 1.6	Without Lever	6	75	750
G	3D	140-020-695	LC-PK32-L-GR	Grey			6	75	750
G	3D	140-023-570	LC-PL32-BL	Black		With Lever	7	72	720
G	3D	140-023-569	LC-PL32-GR	Grey			7	72	720

[Lever] Sold Separately

RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-023-568	LC-PL32-L-BL	Black	1	200	2000
G	3D	140-023-567	LC-PL32-L-GR	Grey	1	200	2000

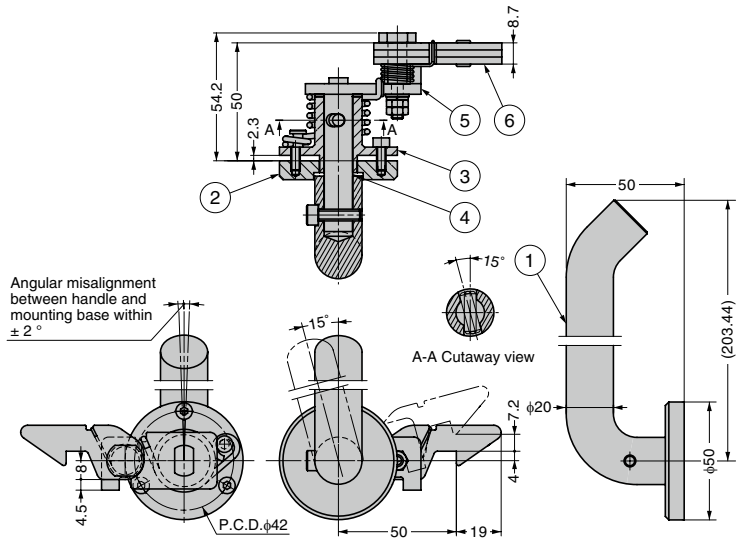
[Key] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-020-696	LC-PK32-K	Zinc Alloy (ZDC)	Nickel	7	200	2000

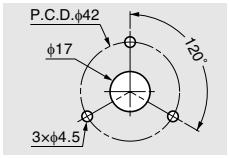
LATCH HANDLE LH-203



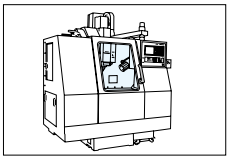
- Handle with latch.
- Suitable for sliding covers.



[Cut Out Dimensions]



[Application Example]



No.	Part Name	Material	Finish
①	Handle	Aluminium Alloy	Black Enamel Finish
②	Bracket	Brass	
③	Body	Steel (S45C)	Coloured Zinc Chromate
④	Shaft		
⑤	Plate A	Steel (SPHC)	
⑥	Plate B	Steel (SPCC)	

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-010-223	LH-203	500	2	24

Zwei L STAINLESS STEEL DOOR HANDLE ZL-1506 DIGEST

SUS316 TEMPERED GLASS



- Superior “Zwei L Finish” .
  Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give jewel like highlights which flatter any architectural space.
- Suitable for double-sided mount for glass/wooden/metal doors and single-sided mount for wooden/glass doors.



LATCH HANDLE MDHL

SUS



- Latch handle for sliding doors of machine tools, etc.
- Latch is released when pulling the handle.
- Brackets and pipes can be combined freely.
- Two types of brackets available: In-line type and offset type.
- Pipes are made of stainless steel or carbon fibre reinforced plastic, either has 6 lengths available. By cutting the pipe, the total length can be changed freely.
- Carbon fibre reinforced plastic pipes are subject to UV-cut treatment to prevent discoloration.
  What is carbon fibre reinforced plastic?
  It is a light weight, high-strength materials also widely used for aircraft, etc., contributing to the weight reduction of structure. Also, the delicate mesh pattern brings a unique texture and high-quality feeling.
- Pipes may be sold separately.
- Linear rail for sliding doors with latch handles also available.
- Design door handle MDH 1 of the same appearance without latch also available.

[Remarks]

- Brackets and pipes have separate item numbers. Please order together by indicating each specification.
- Bracket is sold by piece.
- Hold the centre of handle for operation. Otherwise, the latch may not operate properly.

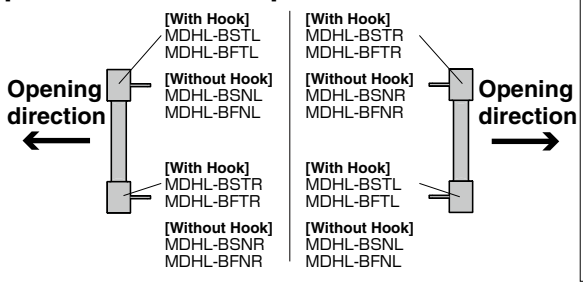
[Bracket]


MDHL-BSTL


MDHL-BFTL

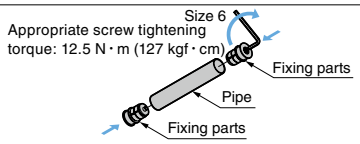

DESIGN DOOR HANDLE MDH 1

[Installation Direction of Bracket]



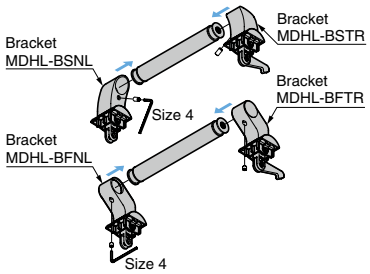
[How to Install]

1.



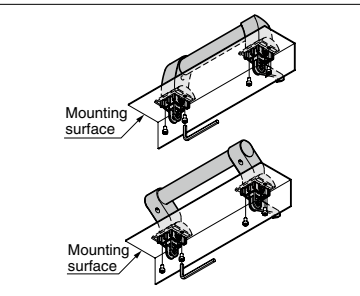
Insert the fixing parts (attached to the bracket) into both ends of the pipe until their flanges contact the pipe ends, and then tighten the screws with a hex key size 6 (not included).

2.



Insert the brackets on both sides into the pipe, and tighten the set screws (attached to the bracket) with a hex key size 4 (not included).

3.

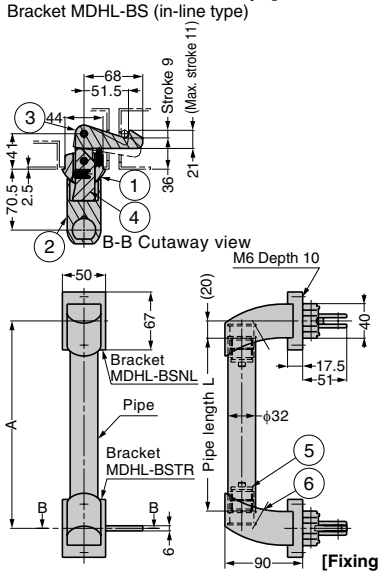


Fix on the mounting surface with M6 screws (not included).

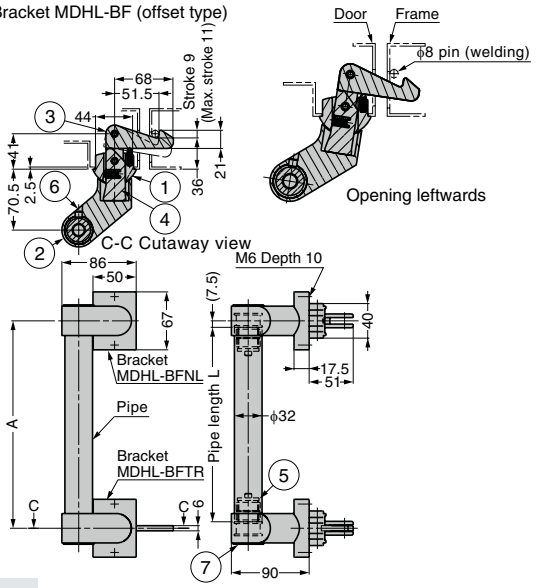
Refer to 1 : P.462

[Installation of Bracket and Pipe]

Bracket MDHL-BS (in-line type)



Bracket MDHL-BF (offset type)



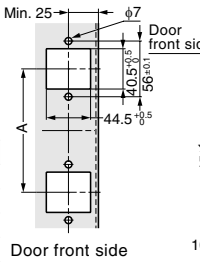
[Bracket]

No.	Part Name	Material	Finish / Colour
①	Base	Zinc Alloy (ZDC)	Matte Chrome
②	Arm		
③	Hook	Steel (SPHC)	
④	Rotating Parts	Zinc Alloy (ZDC)	
⑤	Fixing Parts		Plain
⑥	Hexagon Socket Set Screw M8×8	Stainless Steel	
⑦	Cap	POM	Black

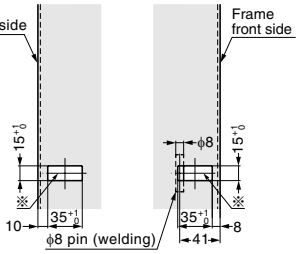
[Fixing Parts⑤]



[Cut Out Dimensions for Door]



[Cut Out Dimensions for Frame]



In the above drawings, the upper parts are for MDHL-BSNL or MDHL-BFNL, and the lower parts are for MDHL-BSTR or MDHL-BFTR.

When processing ※ marked part, noted to align it with the centre of hook ③ of bracket.

[Bracket]

RoHS	CAD	Item Code	Item Name	Hook	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-025-544	MDHL-BSTL	w/	1004	1	1
G	3D	140-025-545	MDHL-BSNL	w/o	940	1	1
G	3D	140-025-546	MDHL-BSTR	w/	999	1	1
G	3D	140-025-547	MDHL-BSNR	w/o	935	1	1
G	3D	140-025-548	MDHL-BFTL	w/	1091	1	1
G	3D	140-025-549	MDHL-BFNL	w/o	1026	1	1
G	3D	140-025-550	MDHL-BFTR	w/	1095	1	1
G	3D	140-025-551	MDHL-BFNR	w/o	1028	1	1

[Pipe]

RoHS	CAD	Item Code	Item Name	Bracket	Material	Finish	Pipe Length L	Mounting Hole Pitch A	Pipe Thickness	Load capacity N	Load capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-025-552	MDHL-SPS240	MDHL-BS	Stainless Steel (SUS304)	Satin	200	240	2	490	50	285	1	10
G	3D	140-025-553	MDHL-SPS340				300	340				430	1	10
G	3D	140-025-554	MDHL-SPS440				400	440				566	1	10
G	3D	140-025-555	MDHL-SPS540				500	540				712	1	10
G	3D	140-025-556	MDHL-SPS640				600	640				845	1	10
G	3D	140-025-557	MDHL-SPS740				700	740				997	1	10
G	3D	140-025-558	※MDHL-SPC240		Carbon Fibre Reinforced Polymer (CFRP)	Paint/ Clear	200	240	2.5			–	25	–
G	3D	140-025-559	MDHL-SPC340				300	340				107	25	–
G	3D	140-025-560	MDHL-SPC440				400	440				142	25	–
G	3D	140-025-561	※MDHL-SPC540				500	540				–	25	–
G	3D	140-025-562	※MDHL-SPC640				600	640				–	13	–
G	3D	140-025-563	※MDHL-SPC740				700	740				–	13	–
G	3D	140-025-564	MDHL-FPS240	MDHL-BF	Stainless Steel (SUS304)	Satin	225	240	2			318	1	10
G	3D	140-025-565	MDHL-FPS340				325	340				465	1	10
G	3D	140-025-566	MDHL-FPS440				425	440				603	1	10
G	3D	140-025-567	MDHL-FPS540				525	540				749	1	10
G	3D	140-025-568	MDHL-FPS640				625	640				883	1	10
G	3D	140-025-569	MDHL-FPS740				725	740				1032	1	10
G	3D	140-025-570	※MDHL-FPC240		Carbon Fibre Reinforced Polymer (CFRP)	Paint/ Clear	225	240	2.5			–	25	–
G	3D	140-025-571	※MDHL-FPC340				325	340				–	25	–
G	3D	140-025-572	※MDHL-FPC440				425	440				–	25	–
G	3D	140-025-573	※MDHL-FPC540				525	540				–	25	–
G	3D	140-025-574	※MDHL-FPC640				625	640				–	13	–
G	3D	140-025-575	※MDHL-FPC740				725	740				–	13	–

※Made to order.

Updated 2017.10.27

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  Refer to Back Cover
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LAMP®

HOOKS & BRACKETS

Hooks & brackets are a kind of hardware used for suspending or hanging objects.
Sugatsune has a long history of manufacturing hooks & brackets, setting industrial standards with basic design and highly-durable stainless steel material.
We offer a wide range of hooks & brackets, from large ones used for hanging thick cables and chains, to those suitable for various installation places.

SUGATSUNE

Updated 2017.10.27

■INDEX by Type

Recessed Hooks

●Hook automatically closes and retracts into body when not used.

Product Name	Material	Load Capacity
 📖P.543 Recessed Hook NF-60	Aluminium Alloy (ADC)	196 N (20 kgf)
 📖P.544 Recessed Hook NF-R64	Zinc Alloy (ZDC)	196 N (20 kgf)
 📖P.543 Recessed Hook NF-60D With Soft Closing Mechanism	Aluminium Alloy (ADC)	294 N (30 kgf)
 📖P.544 Bracket for sheet metal NF-50D	Steel (SPCC)	Bracket for NF-60D
 📖P.544 Bracket for sheet metal NF-50	Steel (SPCC)	Bracket for NF-60, NF-R64

Latch Hooks

●Hook is spring loaded to retract, preventing hooked items from falling off.

Product Name	Material	Load Capacity
 📖P.545 Counter Hook HK-CH35	Aluminium Alloy (ADC)	98 N (10 kgf)
 📖P.549 Latch Hook WH	SUS	147 N (15 kgf)
 📖P.547 Latch Hook EN-R80	SUS316	196 N (20 kgf)
 📖P.547 Latch Hook EN-R80-K Suitable for Padlock	SUS316	196 N (20 kgf)
 📖P.546 Latch Hook EN-K	SUS316	196 N (20 kgf) 588 N (60 kgf)
 📖P.546 Latch Hook EN-E107	SUS316	392 N (40 kgf)
 📖P.548 Large Latch Hook JN-T100 With Friction	SUS	392 N (40 kgf)
 📖P.548 Latch Hook EN-R100F With Friction	SUS316	588 N (60 kgf)

Swing Hooks

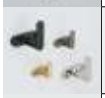
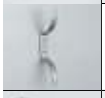
●Hooks are swivellable, and types that swinging is prevented by friction (resistance function) also available.

Product Name	Friction	Material	Load Capacity
 📖P.553 Rotating Hook RF-50S	–	SUS	40 N (4 kgf)/hook
 📖P.552 Swing Hook UC	–	SUS	55 N (5.6 kgf) 66 N (6.7 kgf)
 📖P.550 Butterfly Hook TZ-360	–	SUS	60 N (6 kgf) ※Flat Surface Mount
 📖P.553 Rotating Swing Hook RF-U50	–	SUS	60 N (6 kgf)/hook
 📖P.552 Rotating Swing Hook UJ	–	SUS	66 N (7 kgf) 87 N (9 kgf)
 📖P.550 Swing Hook TK, TKF	○	SUS	90 N (9 kgf) 118 N (12 kgf)
 📖P.551 Butterfly Hook DZ-270	–	SUS	100 N (10 kgf) ※Flat Surface Vertical Mount
 📖P.551 Swing Hook RF-D35	–	SUS	150 N (15 kgf) ※Ceiling Mount
 📖P.549 Swing Hook (w/friction) JF-T	○	SUS	170 N (17 kgf) 392 N (40 kgf)
 📖P.552 Swing Hook XL-JSF40TT High Load Capacity	–	SUS	490 N (50 kgf)
 📖P.553 Heavy Duty Folding Pad Eye EY-R	○	SUS316	4900 N (500 kgf) 7840 N (800 kgf) 11760 N (1200 kgf)

Small Hooks

Product Name	Material	Load Capacity
 📖P.563 Magnetic Hook MJ-30	Aluminium Alloy ABS	9.8 N (1 kgf)
 📖P.556 Hanger Bracket CK	SUS	14.7 N (1.5 kgf)
 📖P.563 Magnetic Hook MJ-45	ABS	19.6 N (2 kgf)
 📖P.556 Double Hook RI-074	SUS	50 N (5 kgf)

Small Hooks

	Product Name	Material	Load Capacity
	P.555 Hook 2H	SUS	60 N (6 kgf) 98 N (10 kgf)
	P.561 Rubber Hook (Nordic Colour) PXB-GN	Stainless Steel Silicon Rubber	80 N (8.1 kgf)
	P.554 Hook DS-H	SUS	98 N (10 kgf)
	P.558 Hook HK-FH	Zinc Alloy (ZDC)	98 N (10 kgf) 147 N (15 kgf)
	P.555 Hook HJU	SUS	98 N (10 kgf)
	P.560 Hook FC	SUS	98 N (10 kgf) 117.6 N (12 kgf) 222 N (23 kgf) 294 N (30 kgf)
	P.561 Rubber Hook (Vivid Colour) PXB-GR05-2	Stainless Steel Silicon Rubber	100 N (10.2 kgf)
	P.562 Rubber Hook (Pastel Colour) PXB-GR05-1	Stainless Steel Silicon Rubber	100 N (10.2 kgf)
	P.556 Double Hook RB-102	SUS	130 N (13 kgf)
	P.555 Hook HJ	SUS	140 N (14 kgf)
	P.554 Hook XL-HJT	SUS	150 N (15 kgf) 200 N (20 kgf)
	P.554 Hook HJT	SUS	150 N (15 kgf) 200 N (20 kgf)
	P.559 Stainless Steel Hook HK-DF-G	SUS	150 N (15.2 kgf)
	P.559 Stainless Steel Hook HK-DF	SUS	150 N (15.2 kgf)
	P.557 Hook TA3	SUS	180 N (18 kgf)
	P.558 Hook HK-RH	SUS	196 N (20 kgf) 245 N (25 kgf)
	P.554 Hook EU	SUS316	196 N (20 kgf) 294 N (30 kgf)
	P.558 Hook EW	SUS	200 N (20 kgf)

	Product Name	Material	Load Capacity
	P.557 Hook EP	SUS	240 N (24 kgf)
	P.557 Hook EL	SUS	240 N (24 kgf)
	P.557 Hook KB-H	SUS	280 N (29 kgf) 340 N (35 kgf)
	P.560 Hook KB-F-70	SUS	–
	P.560 Hook KB-F-75	SUS	–

Large Hooks

	Product Name	Material	Load Capacity
	P.566 Large Utility Hook JF45M, JF70M, JF110M	SUS	98 N (10 kgf) 150 N (15 kgf)
	P.567 Large Utility Hook JFT180M, JFT260M For Ceiling Mount	SUS	98 N (10 kgf) 147 N (15 kgf)
	P.568 Large Utility Hook JF1B	SUS	98 N (10 kgf)
	P.568 Large Utility Hook JF2B-55M	SUS	100 N (10.2 kgf)
	P.565 Large Utility Hook XL-CUJ	SUS	138 N (14 kgf) 200 N (20 kgf)
	P.565 Large Utility Hook XL-CUF	SUS	147 N (15 kgf) 314 N (32 kgf)
	P.566 Large Utility Hook JF50M, JF80M, JF120M	SUS	150 N (15 kgf) 196 N (20 kgf) 216 N (22 kgf)
	P.563 Large Utility Hook 4H	SUS	170 N (17 kgf) 260 N (27 kgf) 290 N (30 kgf)
	P.564 Large Utility Hook 5H	SUS	330 N (34 kgf) 350 N (36 kgf) 370 N (38 kgf)
	P.564 Large Utility Hook XL-SF	SUS	360 N (39 kgf)
	P.567 Large Utility Hook XL-SB Large Hat Hook	SUS	380 N (39 kgf) ※Bottom Hook

Angle Brackets, Brackets

P.1432~

Angle Brackets, Brackets


Angle Bracket SV


Angle Bracket XL-SA01


Folding Bracket BOS

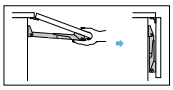

Bracket BT, BTK


Angle Bracket SSA

Product Name	Support Part Depth (mm) ~100 ~200 ~300 ~400 ~500	Material	Load Capacity N/pc	Load Capacity kgf/pc	Page
Angle Bracket SSA	25mm	SUS	1470N	150kgf	P.577
Angle Bracket SU	30~60mm	SUS	39~59N	4~6kgf	P.577
Angle Bracket SV	40~80mm	SUS	78.4~137.2N	8~14kgf	P.575
Angle Bracket SU-B	50~80mm	SUS	98~127N	10~13kgf	P.576
Angle Bracket SU-A	70~180mm	SUS	88~235N	9~24kgf	P.576
Angle Bracket XL-SA01	120~240mm	SUS	118~226N	12~23kgf	P.575
Folding Bracket BOS	181~240mm	SUS	325~392N	33~40kgf	P.573
Bracket BTK-UB	199~318mm	Steel	117.6~245N	12~25kgf	P.571
Folding Bracket EB	199.5~317mm	SUS	1716~1961N	175~200kgf	P.572
Folding Bracket BTO	241~320mm	Steel, SUS	200N	20.4kgf	P.574
Bracket BT, BTK	69~400mm	Steel, SUS	147~808.5N	15~82.5kgf	P.570

Spring Loaded Folding Brackets, Folding Brackets

Product Name	Material	Load Capacity N/pc	Load Capacity kgf/pc	Page
Spring Loaded Folding Bracket GTS-300	SUS	58.8 N/2 pcs	6 kgf/2 pcs	P.574
Folding Bracket 388	Aluminium Alloy	343~784N	35~80kgf	P.573



Shelf Standards & Shelf Supports

P.578~

●Sugatsune's shelf standards and shelf supports with the widest range of types in Japan. ※ Please select from the product list of P.578 and P.579 according to the load capacity. ※ According to our investigation.

SPHL Shelf Standard Series For Heavy Duty



Heavy duty shelf standard with 1.2 mm thickness.

SUS P.580

SPE Shelf Standard Series



Thin shelf standard of 3mm thickness.

SUS P.582

SPN Shelf Standard Series



Only 8 mm width with large load capacity.

SUS P.583

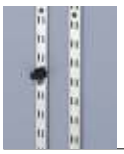
SPW Shelf Standard Series



Mounting holes for shelf support invisible from the front.

SUS P.584

SPH Shelf Standard Series



Not apt to deform due to load.

SUS P.585~

SP, SPS Shelf Standard Series



Standard type with rich varieties.

SUS P.587~

SM Shelf Standard Series With Blind



With blind to cover mounting hole for shelf support.

SUS P.590

AP Aluminium Shelf Support Series



Easy to cut to desired length.

P.591~

Plenty of optional parts also available.


Angle Adjustable Shelf


Support Bracket for Shelf Standard

RECESSED HOOK NF-60D With Soft Closing Mechanism

TEST METHOD 18 VIDEO



NF-60D-DG NF-60D-SL NF-60D-MSL

- Arm automatically and slowly closes when hooked items removed.
- Handhold at hook tip allows for easy opening.
- Little projection when hook retracted.
- Possible to install to sheet metal by using bracket NF-50D 1.
- Special colours can be made to order. For further details, please contact local representatives.

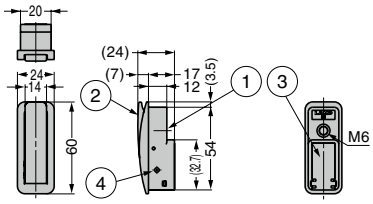
[Applications]
- Cabinet, vehicle, etc.

[Remarks]
- Please take off the cushion rubber when installing on a wooden panel.

[Sold Separately]
- Bracket NF-50D 1

[Recommended Screws]
- Countersunk head tapping screw 5

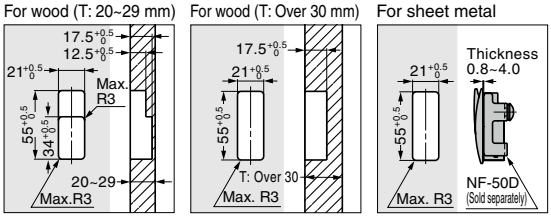
Video Link



No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy (ADC)	Dark Grey, Silver, Metallic Silver Enamel Finish
②	Arm		
③	Cover	POM	Dark Grey
④	Knurled Pin	Stainless Steel (SUS304)	Plain
–	Spring		
⑤	Cushion Rubber	CR	Black

[Cut Out Dimensions]

For wood (T: 20~29 mm) For wood (T: Over 30 mm) For sheet metal



[Body]

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-022-191	NF-60D-GR	Dark Grey	294	30	49	10	200
G	3D	110-024-598	NF-60D-SL	Silver				10	200
G	3D	110-027-560	NF-60D-MSL	Metallic Silver				10	200

Refer to 1 : P.544

RECESSED HOOK NF-60

TEST METHOD 18


When closed


When opened

- Hook automatically closes and retracts into body when hooked items removed.
- Handhold at hook tip allows for easy opening.
- Little projection when hook retracted.
- Possible to install to sheet metal by using bracket NF-50 1.
- Special colours can be made to order. For further details, please contact local representatives.

[Applications]
- Cabinet, vehicle, etc.

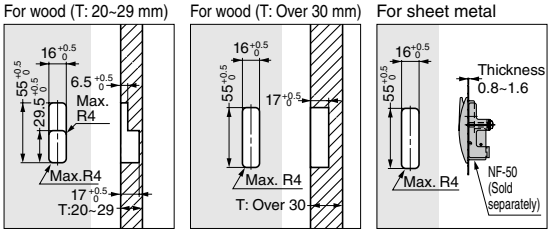
[Remarks]
- Please take off the cushion rubber when installing on a wooden panel.

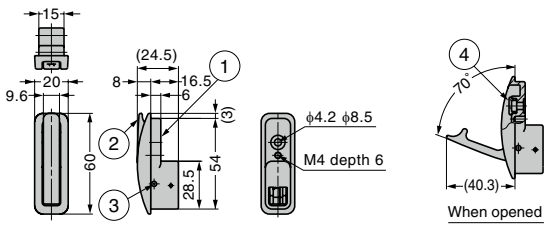
[Sold Separately]
- Bracket NF-50 1

[Recommended Screws]
- Pan head tapping screw 4

[Cut Out Dimensions]

For wood (T: 20~29 mm) For wood (T: Over 30 mm) For sheet metal





No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy (ADC)	Dark Grey Enamel Finish
②	Arm		
③	Knurled Pin	Stainless Steel (SUS304)	Plain
–	Spring		
④	Cushion Rubber	CR	Black

[Body]

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-067	NF-60	196	20	31	10	200

Refer to 1 : P.544

RECESSED HOOK NF-R64

TEST METHOD 4


When closed



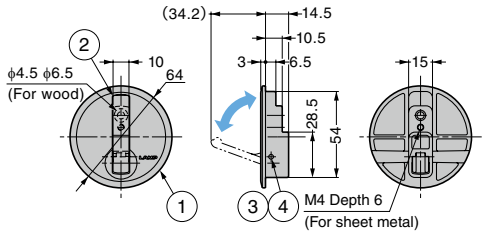
When opened

- Hook automatically closes and retracts into body when hooked items removed.
- Little projection when hook retracted.
- Possible to install to sheet metal by using bracket NF-50 (sold separately).

[Remarks]
- Please take off the cushion rubber when installing on a wooden panel.

[Sold Separately]
- Bracket NF-50 1

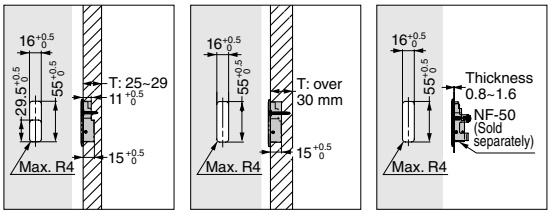
[Recommended Screws]
- For wood (T: 25~29 mm): Countersunk head tapping screw 4x19
- For wood (T: over 30 mm): Countersunk head tapping screw 4x25



No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy	Pearl Chrome
②	Arm		
③	Spring	Stainless Steel	Plain
④	Knurled Pin		
–	Cushion Rubber	Rubber	Grey

[Cut Out Dimensions]

For wood (T: 25~29 mm) / For wood (T: Over 30 mm) / For sheet metal

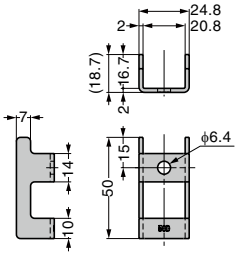


RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-068	NF-R64	196	20	90	10	120

Refer to 1 : P.544

BRACKET FOR SHEET METAL NF-50D





- Bracket for sheet metal applications of NF-60D 1.

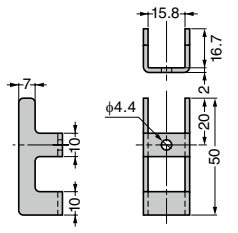
[Parts Included]
- Pan head screw M6×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-024-599	NF-50D	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)	25	20	400

Refer to 1 : P.543

BRACKET FOR SHEET METAL NF-50





- Bracket for sheet metal applications of NF-60 1 and NF-R64 2.

[Parts Included]
- Pan head screw M4×20 (SUS) for NF-60
- Pan head screw M4×14 (SUS) for NF-R64

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-021	NF-50	Steel (SPCC)	Coloured Zinc Chromate (Trivalent) / Clear Enamel Finish	22	20	400

Refer to 1 : P.543, 2 : P.544

COUNTER HOOK HK-CH35

TEST METHOD 1 TEST METHOD 4



Colour shown on the picture might differ slightly from the actual products.

- Recessed mount on the back of top board provides clean appearance.
- Hook can be seen at the edge when unused.
- Hook will not protrude top board when used.
- Hook closes and retracts into body when hooked items removed.
- Hook slowly closes thank to damper mechanism.
- Applicable board thickness: Min.26mm.For board thickness below 26mm, please use optional spacer and adjust the hook installation position.

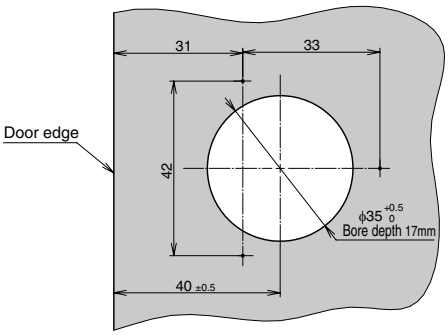
[Applications]
- Shop, facility, housing, etc.

[Remarks]
- Install to top board with adequate strength.

[Parts Included]
- Countersunk head tapping screw 4×20

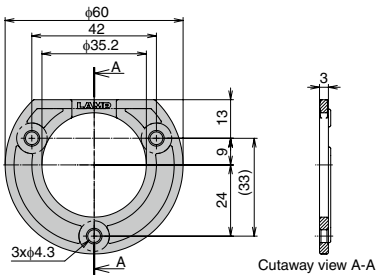
[Sold Separately]
- Spacer

[Cut Out Dimensions]

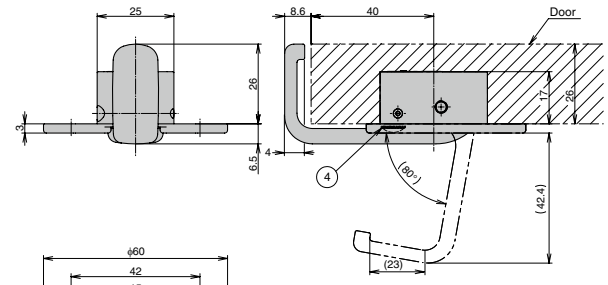


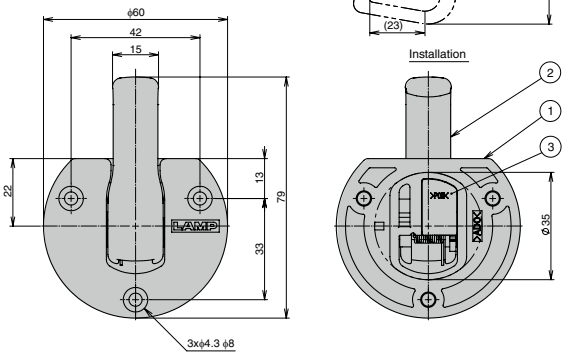
Board Thickness	Qty of Spacers	Bore Depth
Min. 26mm	None	17mm
23~26mm	1 pcs	14mm
20~23mm	2 pcs	11mm
17~20mm	3 pcs	8mm

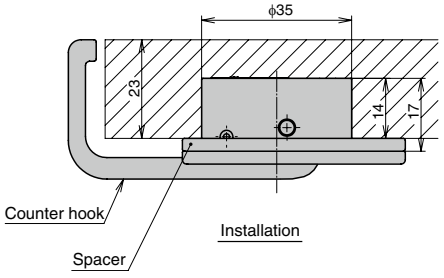
[Spacer]



[Hook]







No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy (ADC)	Enamel Finish/Black, Silver, Brown
②	Arm	Aluminium Alloy (ADC)	Enamel Finish/Black, Silver, Brown
③	Cover	POM	–
④	Bumper	PUR	Clear
⑤	Spacer	PA	Black

[Hook]

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-037-828	HK-CH35-BL	Black	98	10	–	–	–
G	3D	110-037-829	HK-CH35-BR	Brown			–	–	–
G	3D	110-037-830	HK-CH35-SL	Silver			–	–	–

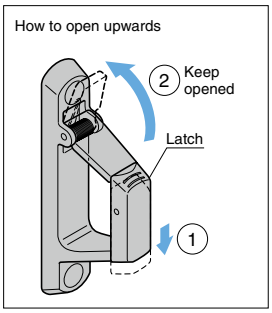
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RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-037-831	HK-CH35-DP3	–	–	–	–	–

LATCH HOOK EN-E107

TEST METHOD 4 SUS316


When opened upwards

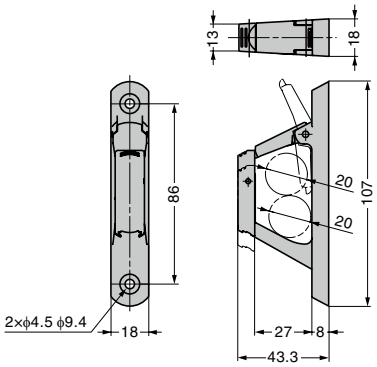



When closed


When opened downwards

- One push release for wide opening.
- Hook is spring loaded to retract, preventing hooked items from falling off.
- Up to two chains or ropes (up to ϕ20 in diameter) can be hung.
- Suitable for exterior use. (e.g. marine, housing, shops and leashes for pets).
- Slim design allows installing to door or window frame.

[Parts Included]
- Countersunk head tapping screw 4×25 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	Applicable Rope Dia.	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-028-722	EN-E107	Stainless Steel (SCS14)	Polished	ϕ20×2	392	40	131	10	60

※SCS14 is equivalent of SUS316.

LATCH HOOK EN-K

NSF TEST METHOD 4 SUS316



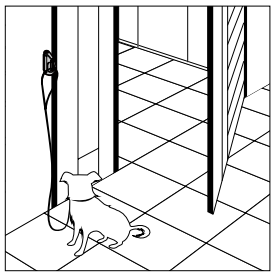
When closed

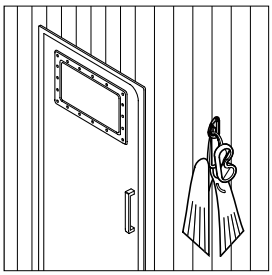

When opened

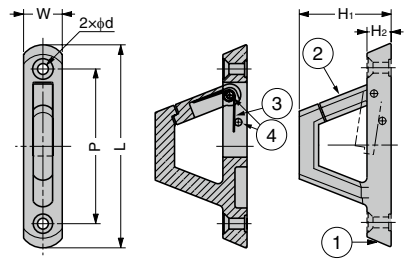
- Hook is spring loaded to retract, preventing hooked items from falling off.
- Chain or rope up to ϕ10 (for EN-K84) or ϕ20 (for EN-K120) can be hung.
- Suitable for exterior use. (e.g. marine, housing, shops and leashes for pets)
- Slim design allows installing to door or window frame.

[Parts Included]
- EN-K84: Countersunk head tapping screw 4×25
- EN-K120: Countersunk head tapping screw 5×30

[Application Example]







No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Polished
②	Arm		
③	Spring	Stainless Steel (SUS316)	Plain
④	Shaft		

※SCS14 is equivalent of SUS316.

RoHS	CAD	Item Code	Item Name	L	P	H_1	H_2	W	d	Applicable Rope Dia.	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-026	EN-K84	84	64	38	10	16	ϕ4.5 ϕ8.5	Max. ϕ10	196	20	92	10	120
G	3D	110-010-109	EN-K120	120	96	54	12	22	ϕ5.4 ϕ10.5	Max. ϕ20	588	60	280	10	60

LATCH HOOK EN-R80

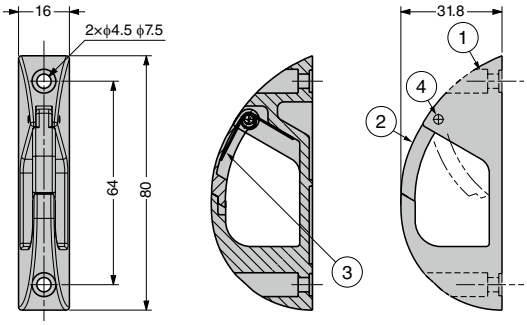
NSF TEST METHOD 4 SUS316


When closed

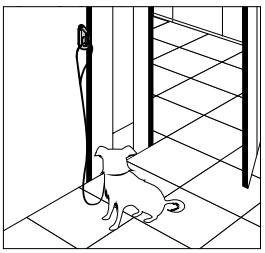

When opened

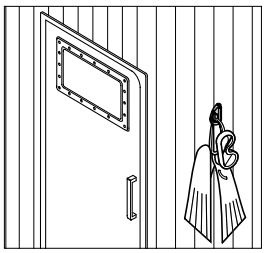
- Hook is spring loaded to retract, preventing hooked items from falling off.
- Suitable for exterior use. (e.g. marine and leashes for pets).
- Slim design allows installing to door or window frame.
- Chain or rope up to ϕ10 in diameter can be hung.

[Parts Included]
- Pan head tapping screw 4×25



[Application Example]





No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Polished
②	Arm		
③	Spring	Stainless Steel (SUS316)	Plain
④	Shaft		

※SCS14 is equivalent of SUS316.

RoHS	CAD	Item Code	Item Name	Applicable Rope Dia.	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-025	EN-R80	Max. ϕ10	196	20	85	10	120

LATCH HOOK EN-R80-K Suitable for Padlock

TEST METHOD 4 SUS316

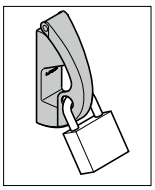

When closed

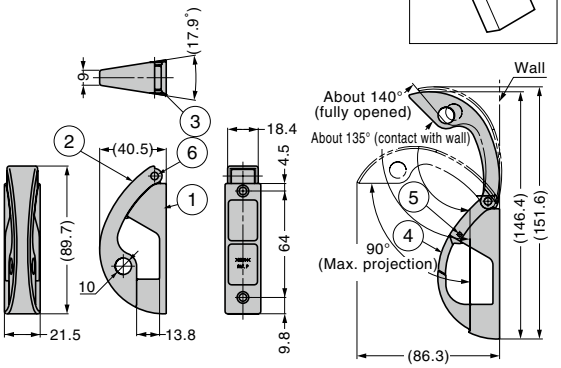

When opened

- Latch type tip prevents hooked items from falling off.
- With a hole for optional padlock 1.
- Chain or rope up to ϕ12 in diameter can be hung.
- Slim design allows installing to door or window frame.

[Others]
- Recommended padlock PWL-30, PWL-30L 1

[Parts Included]
- Pan head tapping screw 4×25 (SUS)





No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Polished
②	Cover	Stainless Steel (SUS316)	
③	O-Ring	Ethylene Propylene Rubber (EPDM)	Black
④	Lever	Stainless Steel (SCS14)	Polished
⑤	Shaft	Stainless Steel (SUS316)	Plain
⑥	Cover Shaft		

※SCS14 is equivalent of SUS316.

RoHS	CAD	Item Code	Item Name	Applicable Rope Dia.	Padlock Hole Dia.	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-022-201	EN-R80-K	Max. ϕ12	10	196	20	180	10	60

Refer to 1 : P.748

LATCH HOOK EN-R100F With Friction

SUS316

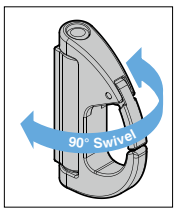

When closed

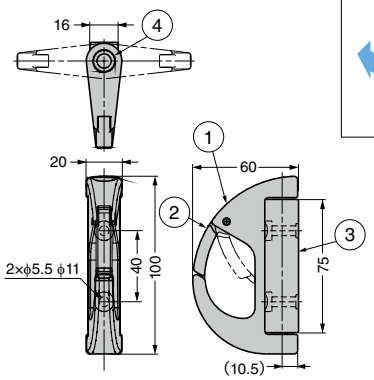

When opened

- Hook is spring loaded to retract, preventing hooked items from falling off.
- Swivels 90° . Can be folded when not in use.
- Friction function prevents swinging around.
- Suitable for exterior use. (e.g. marine).
- Chain or rope up to ϕ16 in diameter can be hung.

[Parts Included]

- Binding head tapping screw 5×30 (SUS)





No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Polished
②	Arm		
③	Base		
④	Shaft	Stainless Steel (SUS316)	Plain

※SCS14 is equivalent of SUS316.

RoHS	CAD	Item Code	Item Name	Applicable Rope Dia.	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-018-675	EN-R100F	Max. ϕ16	588	60	350	10	50

LARGE LATCH HOOK JN-T100 With Friction

SUS


When closed


When opened

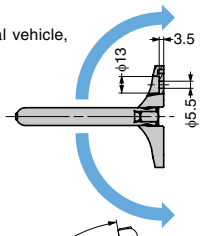
- Swivels 180° and prevents unexpected swinging by friction.
- Closed arm prevents hooked items from falling off.
- Suitable for hanging cables, ropes and pipes, etc.

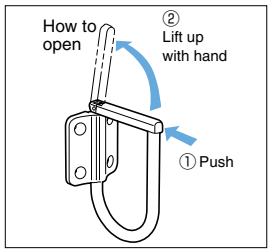
[Applications]

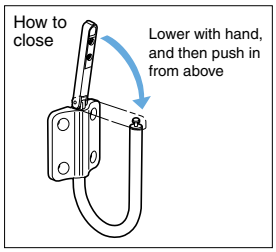
- Medical equipment, medical stand, special vehicle, garage, ship, etc.

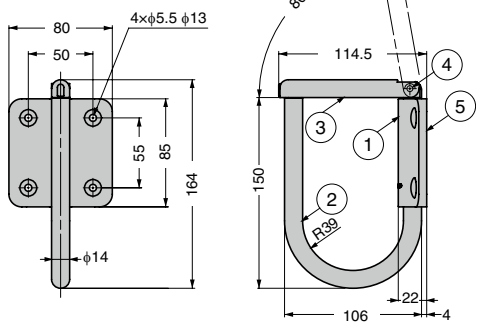
[Parts Included]

- Binding head tapping screw 5×30 (SUS)









No.	Part Name	Material	Finish
①	Strike	Stainless Steel (SCS13)	Polished
②	Hook	Stainless Steel (SUS303)	
③	Arm	Stainless Steel (SCS13)	
④	Shaft	Stainless Steel (SUS303)	Plain
⑤	Back Plate	Stainless Steel (SUS304)	

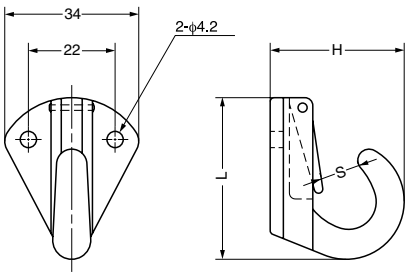
RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-022-111	JN-T100	392	40	800	5	20

LATCH HOOK WH

NSF SUS



●Keep items hooked, ideal for vibration or shock applications.



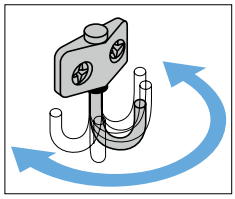
RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	S	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	–	110-029-158	WH-1	Stainless Steel	Polished	38	25	7	147	15	40	20	200
G	–	110-029-122	WH-2			41	34	10			55	20	200

SWING HOOK JF-T With Friction

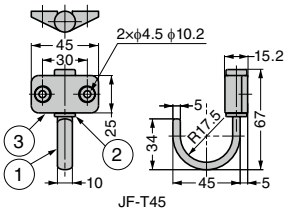
NSF TEST METHOD 4 SUS



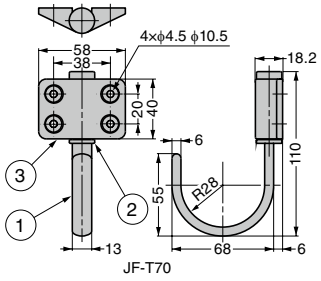
●Large type JF-T100 with load capacity of 392N (40kgf) is newly launched.
●Swivels 180 ° and prevents swinging by friction.



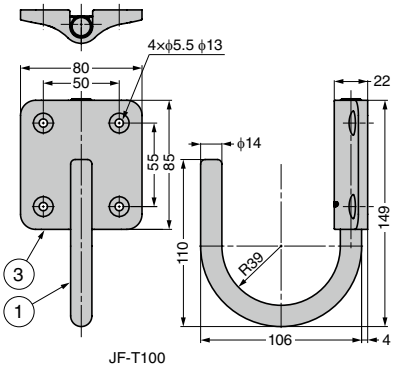
[Parts Included]
●JF-T45, JF-T70: Truss head tapping screw 4×20 (SUS)
●JF-T100: Binding Head Tapping Screw 5×30 (SUS)



JF-T45



JF-T70



JF-T100

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-083	JF-T45	170	17	90	10	120
G	3D	110-020-084	JF-T70			225	10	60
G	3D	110-032-414	JF-T100	392	40	638	5	20

No.	Part Name	Material	Finish / Colour
①	Hook	Stainless Steel (SUS304), Stainless Steel (SUS303): JF-T100 Only	Polished
②	Bracket	POM	Black
③	Strike	Stainless Steel (SCS13)	Polished

※SCS13 is equivalent of SUS304.

SUGATSUNE

BUTTERFLY HOOK TZ-360

TEST METHOD 4 SUS


Flat surface mount


Corner mount

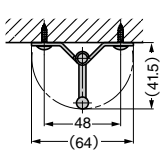

Edge mount

- Can be installed on flat surface, corner and edge, etc.
- Can be used in various applications.
- The rounded tip provides safety.

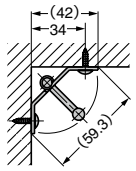
[Parts Included]

- Truss head tapping screw 4×12 (SUS)

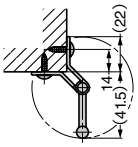
[Installation]



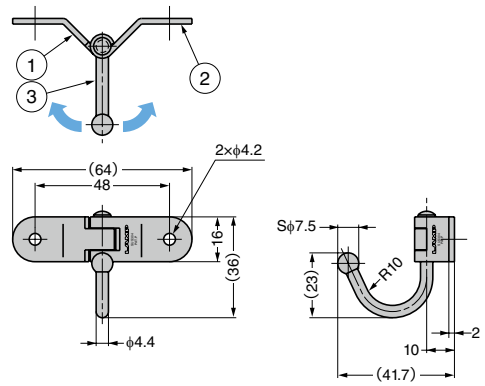
Flat surface mount (180°)



Corner mount (270°)



Edge mount (90°)



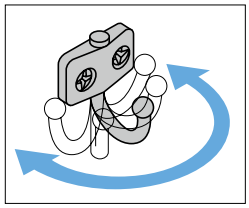
No.	Part Name	Material	Finish
①	Leaf (L)	Stainless Steel (SUS304)	Barrel Polished
②	Leaf (R)		
③	Hook		Polished

RoHS	CAD	Item Code	Item Name	Load Capacity						Weight (g)	Box (pcs)	Carton (pcs)
				Flat Surface Mount N	Flat Surface Mount kgf	Corner Mount N	Corner Mount kgf	Edge Mount N	Edge Mount kgf			
G	3D	110-020-009	TZ-360	60	6	55	5.6	29	3	27	50	500

SWING HOOK TK, TKF

TEST METHOD 4 SUS

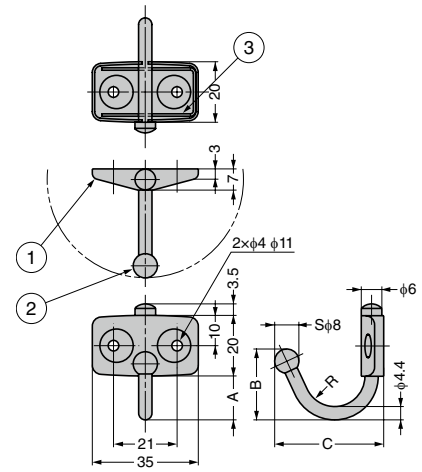




- Swivels 180° and prevents unexpected swinging by friction.
- The rounded tip provides safety.

[Parts Included]

- Countersunk head wood screw 3.5×20 (SUS)



No.	Part Name	Material	Finish
①	Mounting Plate	Stainless Steel (SUS304)	Polished
②	Hook		
③	Spring	Stainless Steel (SUS304WPB)	Plain

RoHS	CAD	Item Code	Item Name	Type	A	B	C	R	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-250	TK-30	Without Friction	14.5	23.4	36	10	118	12	17	100	1000
G	3D	110-020-254	TK-45		19.4	28.4	44.3	15	90	9	20	100	1000
G	3D	110-020-018	TK-30F	With Friction	14.5	23.4	36	10	118	12	17	100	1000
G	3D	110-020-019	TK-45F		19.5	28.4	44.3	15	90	9	20	100	1000

SWING HOOK RF-D35

SUS



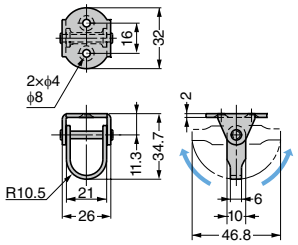
Ceiling mount



- Can be installed on ceiling and wall.

[Parts Included]

- Raised countersunk head wood screw 3.5×16



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity				Weight (g)	Box (pcs)	Carton (pcs)
						Flat Surface Horizontal Mount N	Flat Surface Horizontal Mount kgf	Ceiling Mount N	Ceiling Mount kgf			
G	3D	110-020-249	RF-D35	Stainless Steel (SUS304)	Barrel Polished/Satin	70	7	150	15	27	50	400

BUTTERFLY HOOK DZ-270

SUS



Flat surface mount



Corner mount

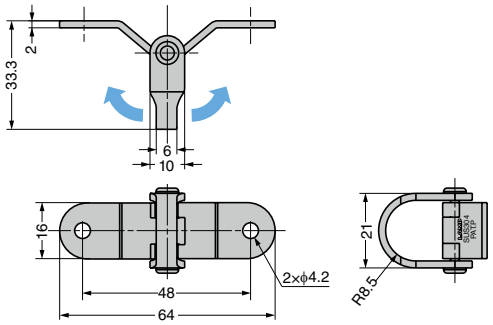


Edge mount

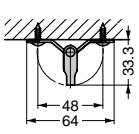
- Can be installed on flat surface, corner and edge.
- Both vertical and horizontal use possible.

[Parts Included]

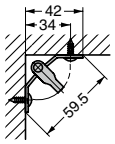
- Truss head tapping screw 4×12



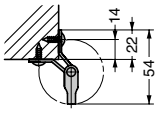
[Installation]



Flat surface mount (180°)



Corner mount (270°)



Edge mount (90°)

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity												Weight (g)	Box (pcs)	Carton (pcs)
						Flat Surface Horizontal Mount		Flat Surface Vertical Mount		Edge Horizontal Mount		Edge Vertical Mount		Corner Horizontal Mount		Corner Vertical Mount				
						N	kgf	N	kgf	N	kgf	N	kgf	N	kgf	N	kgf			
G	3D	110-020-248	DZ-270	Stainless Steel (SUS304)	Polished	59	6	100	10	29	3	78	8	55	5.6	59	6	29	50	500

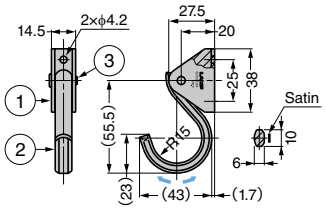
SWING HOOK XL-JSF40TT High Load Capacity

TEST METHOD 4 SUS



Ceiling mount





- High load capacity up to 490N (50kgf).
- Swings forward and backward. Possible to install in various places like ceiling and wall.
- Finish: Combination of polished and satin.

[Parts Included]

- Binding head tapping screw 4×20 (SUS)

No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS304)	Polished
②	Hook	Stainless Steel (SUS303)	Polished/Satin
③	Shaft	Stainless Steel	–

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-011	XL-JSF40TT	490	50	70	20	120

SWING HOOK UC

TEST METHOD 4 SUS



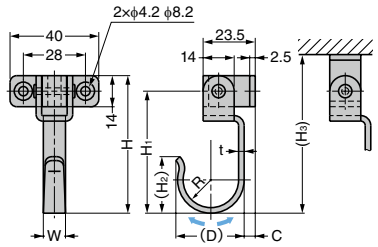
Ceiling mount



- Swings forward and backward. Possible to install in various places like ceiling and wall.

[Parts Included]

- Raised countersunk head tapping screw 4×16 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	W	D	H	H1	H2	H3	C	R	t	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	–	110-020-003	UC-048	Stainless Steel (SUS304)	Polished	9	24.9	55	48	21.4	64.5	6.5	10	2	55	5.6	37	40	400
G	3D	110-020-002	UC-055			10	30.8	62	55	25.5	71.5	5	12.5	2.5	66	6.7	45	25	250

ROTATING SWING HOOK UJ

NSF TEST METHOD 4 SUS



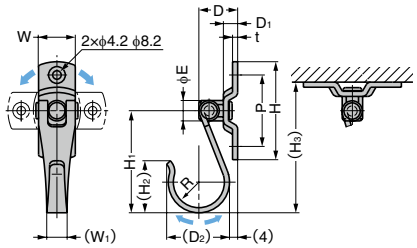
Ceiling mount



- Rotates 360° and swings 180°.
- Possible to install in various places like ceiling and wall.

[Parts Included]

- Raised countersunk head tapping screw 4×16 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	W	W1	D	D1	D2	H	H1	H2	H3	P	E	R	t	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	–	110-020-001	UJ-040	Stainless Steel (SUS304)	Polished	16	9	16.5	5.5	24.9	42	40	21.4	52.5	30	9	10	2	66	7	27	50	500
G	–	110-020-000	UJ-050			18	10	19	7	30.8	48	50	25.5	64	35	10	12.5	2.5	87	9	45	30	300

ROTATING SWING HOOK RF-U50

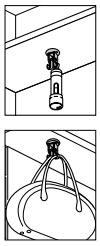
TEST METHOD 4 SUS

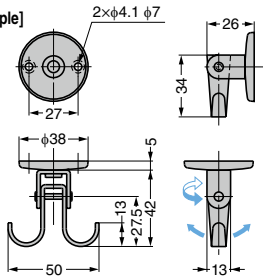


Ceiling mount



[Application Example]





- Rotates 360° and swings 180°.
- Possible to install in various places like ceiling and wall.

[Parts Included]

- Raised countersunk head tapping screw 3×25 (SUS)

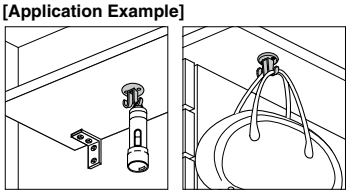
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/hook	Load Capacity kgf/hook	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-007	RF-U50	Stainless Steel (SUS304)	Satin	60	6	40	25	250

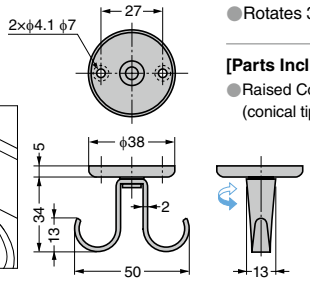
ROTATING HOOK RF-50S

TEST METHOD 4 SUS



[Application Example]





- Rotates 360°.

[Parts Included]

- Raised Countersunk head tapping screw (conical tip) 3×25 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/hook	Load Capacity kgf/hook	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-082	RF-50S	Stainless Steel (SUS304)	Satin	40	4	33	25	500

HEAVY DUTY FOLDING PAD EYE EY-R

TEST METHOD 2 SUS316



- Arm can be folded for safety.
- Friction function prevents the arm from sounding caused by vibration.
- Arm is made of special stainless steel with high strength. (Corrosion resistance is equivalent to SUS 304)
- Buffering effect of body protects the mounting surface from scratches.

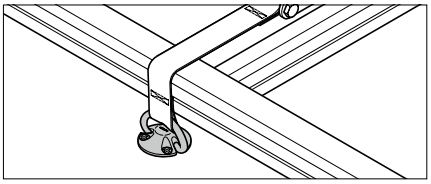
[Applications]

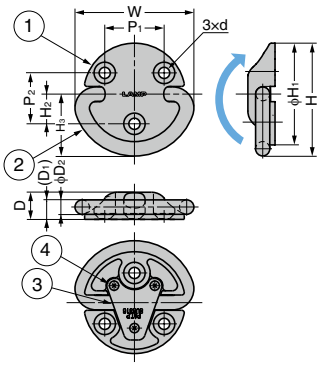
- Marine furniture or offshore facilities, etc.

[Parts Included]

- EY-R50: Hexagon socket countersunk head screw M5×16 (SUS)
- EY-R60: Hexagon socket countersunk head screw M6×16 (SUS)
- EY-R80: Hexagon socket countersunk head screw M8×16 (SUS)

[Application Example]





No.	Part Name	Material	Finish
①	Body	Stainless Steel (SCS14)	Barrel
②	Arm	Stainless Steel	Polished
③	Back Plate	Stainless Steel (SUS304-CSP)	Plain
④	Pan Head Tapping Screw M3×5	Stainless Steel (SUS316)	–

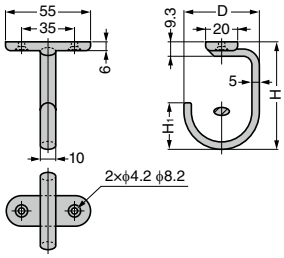
※SCS14 is equivalent of SUS316.

RoHS	CAD	Item Code	Item Name	W	H	H1	H2	H3	D	D1	D2	P1	P2	d	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-012-542	EY-R50	56.5	54	48	13	30	14.5	10.5	7.5	28	24	ϕ5.5 ϕ10.4	4900	500	116	10	120
G	3D	110-012-543	EY-R60	70	66.5	60	17.5	36.5	16	11.5	8.5	35	30	ϕ6.6 ϕ12.6	7840	800	202	10	60
G	3D	110-012-544	EY-R80	94	88.5	80	23	48.5	19	14	11	45	40	ϕ9 ϕ17.3	11760	1200	431	5	30

HOOK DS-H

TEST METHOD 4 SUS





- Can be installed on ceilings.

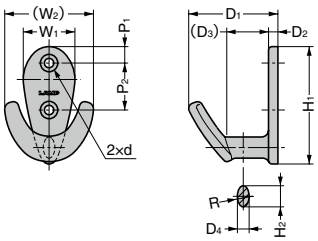
[Parts Included]
- Raised countersunk head tapping screw 4×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	H1	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-205	DS-H-50	Stainless Steel (SUS303)	Polished	50	70	30	98	10	88	5	50
G	3D	110-020-206	DS-H-60			60	100	40			105	5	50

HOOK EU

NSF SUS316





- Can hang 3 items at same time.
- Two-tip shape provides stable hanging.

[Parts Included]
- EU50: Raised countersunk head wood screw 3.5×20 (SUS) (2 pcs)
- EU72: Raised countersunk head wood screw 4.1×20 (SUS) (2 pcs)

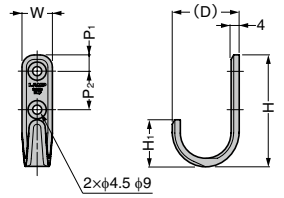
RoHS	CAD	Item Code	Item Name	Material	Finish	H1	H2	W1	W2	D1	D2	D3	D4	P1	P2	d	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-270	EU-50	Stainless Steel (SCS14)	Polished	50	9	22	38	38	4	17.8	5	7	20	ϕ4ϕ7.4	196	20	42	20	120
G	3D	110-020-271	EU-72			72	14	32	56	52	6	23	8	10	34	ϕ4.6ϕ8.6	294	30	118	10	60

※SCS14 is equivalent of SUS316.

HOOK XL-HJT

TEST METHOD 4 SUS





- Chamfered HJT 1.

[Parts Included]
- Raised countersunk head wood screw 4.1×16 (SUS)

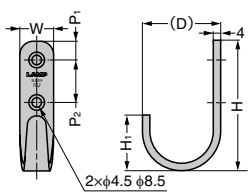
RoHS	CAD	Item Code	Item Name	Material	Finish	D	W	H	H1	P1	P2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-935	XL-HJT55M	Stainless Steel (SUS304)	Polished	33	15.5	55	23	8	19	200	20	34	30	300
G	3D	110-020-936	XL-HJT55TT		Polished and Satin Combination										30	300
G	3D	110-020-937	XL-HJT70M		Polished	43	18.5	70	30	10	23	150	15	53	20	200
G	3D	110-020-938	XL-HJT70TT		Polished and Satin Combination										20	200

Refer to 1 : P.554

HOOK HJT

NSF TEST METHOD 4 SUS





- Black colour (matte) is newly launched.
- Pressing type of EL 1. (Plate thickness 4mm)

[Remarks]
- Noted that scratch is conspicuous on black surface.

[Parts Included]
- Raised countersunk head wood screw 4.1×16 (SUS)

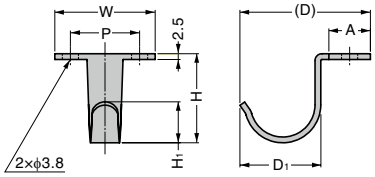
RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	D	W	H	H1	P1	P2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-028	HJT-55S	Stainless Steel (SUS304)	Satin	33	15	55	23	8	19	200	20	34	30	300
G	3D	110-028-966	HJT-55SBL		Paint/Black										30	300
G	3D	110-020-027	HJT-70S		Satin	43	18	70	30	10	23	150	15	53	20	200
G	3D	110-028-967	HJT-70SBL		Paint/Black										20	200

Refer to 1 : P.557

HOOK HJU

SUS





- Wide Hook allows for easy hanging.
- Can be installed from above or below.

[Parts Included]
- Truss head tapping screw 3.5×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	W	P	H	H1	A	D	D1	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-017-524	HJU-30S	Stainless Steel (SUS304)	Satin	32.5	20	25	13	13	41.8	25.5	98	10	15	30	600
G	3D	110-017-525	HJU-50S			43.5	30	38.5	18	18	59	37.5			30	40	800

HOOK HJ

NSF TEST METHOD 4 SUS

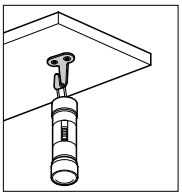


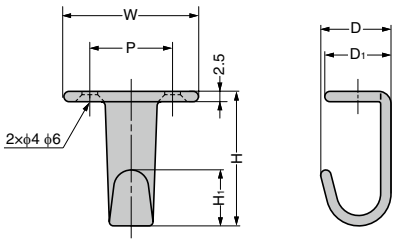
- Black colour (matte) is newly launched.

[Remarks]
- Noted that scratch is conspicuous on black surface.

[Parts Included]
- HJ-20S: Raised countersunk head wood head screw 3.1×16 (SUS)
- HJ-30S, HJ50S: Raised countersunk head wood head screw 3.5×16 (SUS)

[Application Example]



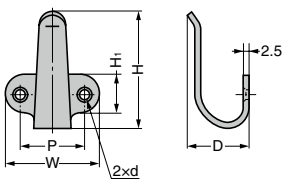


RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	W	P	H	H1	D	D1	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-029	HJ-20S	Stainless Steel (SUS304)	Satin	28	18	27	11	17	13	140	14	11	120	1200
G	3D	110-028-963	HJ-20SBL		Paint/Black										60	600
G	3D	110-020-078	HJ-30S		Satin	32.5	20	33	13.5		16			15	30	600
G	3D	110-028-964	HJ-30SBL		Paint/Black										30	360
G	3D	110-020-079	HJ-50S		Satin	43.5	30	47	19.6	22	21			30	40	800
G	3D	110-028-965	HJ-50SBL		Paint/Black										40	400

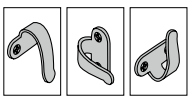
HOOK 2H

NSF TEST METHOD 4 SUS





[Application Example]



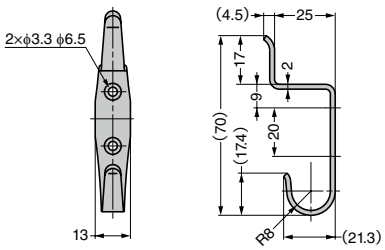
[Parts Included]
- 2H-20S: Raised countersunk head wood head screw 3.1×16 (SUS)
- 2H-30S, SH-40S, 2H50S: Raised countersunk head wood head screw 3.5×16 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	W	P	H	H1	D	d	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-010-142	2H-20S	Stainless Steel (SUS304)	Satin	28	18	30	10	18	φ4φ6.2	98	10	13	120	1200
G	3D	110-010-143	2H-30S			32.5	20	39	13					18	100	1000
G	3D	110-010-144	2H-40S			35	21.5	44	16	23	φ4φ7	60	6	23	80	800
G	3D	110-010-145	2H-50S			43	30	56	18	25				34	50	500

DOUBLE HOOK RI-074

TEST METHOD 4 SUS





- Unique two-in-one hook.

[Parts Included]
- Raised countersunk head tapping screw 3×16 (SUS)

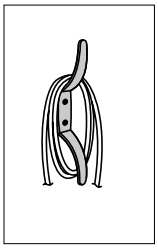
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N		Load Capacity kgf		Weight (g)	Box (pcs)	Carton (pcs)
						Top	Bottom	Top	Bottom			
G	3D	110-020-006	RI-074	Stainless Steel (SUS304)	Satin	50	60	5	6	16	40	400

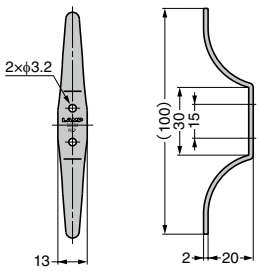
DOUBLE HOOK RB-102

TEST METHOD 4 SUS



[Application Example]





- Ideal for winding up ropes or using as a hook.

[Parts Included]
- Truss head tapping screw 3×16 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-004	RB-102	Stainless Steel (SUS304)	Satin	130	13	16	40	400

HANGER BRACKET CK

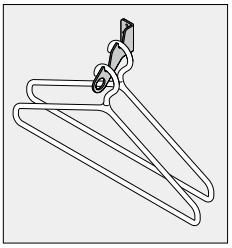
TEST METHOD 4 SUS



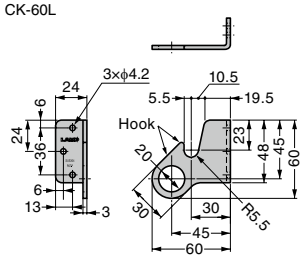
- Polished corners for protecting hands.
- Smart satin finish without curved trace.
- Ideal for hanging hangers.
- Large hook suitable for thick hangers.

[Parts Included]
- Truss tapping screw 4×20 (SUS)

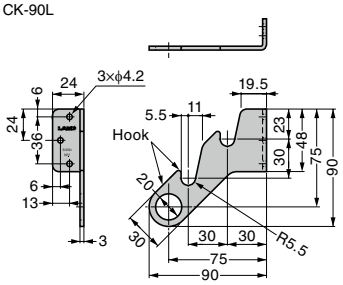
[Application Example]



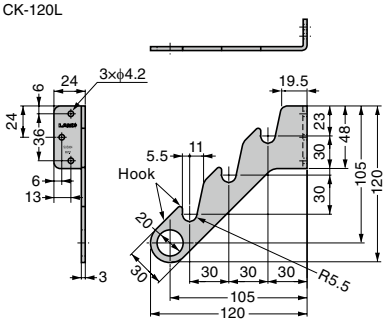
CK-60L



CK-90L



CK-120L

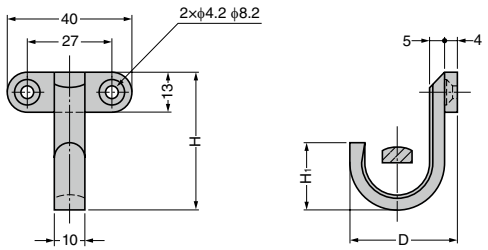


RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/position	Load Capacity kgf/position	Hooks	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-260	CK-60L	Stainless Steel (SUS304)	Satin	14.7	1.5	2	66	15	150
G	3D	110-020-261	CK-90L					3	90	15	150
G	3D	110-020-262	CK-120L					4	113	10	100

HOOK KB-H

TEST METHOD 4 SUS





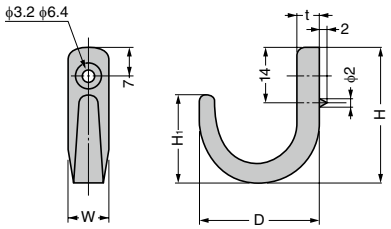
[Parts Included]
- Raised countersunk head tapping screw 4×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	H1	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-029-076	KB-H-35	Stainless Steel (SUS303)	Polished	35	45	22	340	35	49	10	–
G	3D	110-029-077	KB-H-40			40	50	25	280	29	48	10	–

HOOK TA3

TEST METHOD 4 SUS





[Parts Included]
- TA3S : Raised countersunk head wood screw 3.1×16 (SUS)
- TA3L : Raised countersunk head wood screw 3.1×16 (SUS)

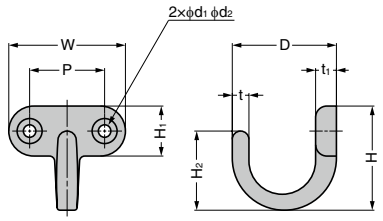
RoHS	CAD	Item Code	Item Name	Material	Finish	D	W	H	H1	t	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-026-008	TA3S	Stainless Steel (SUS13)	Polished	22	9	29	16	4	180	18	10	30	600
G	3D	110-026-009	TA3L			30	10	34	22	5.5			19	20	400

※SCS13 is equivalent of SUS304.

HOOK EP

NSF TEST METHOD 4 SUS





[Parts Included]
- EP-25: Raised countersunk head wood screw 2.7×16 (SUS)
- EP-40: Raised countersunk head wood screw 3.8×20 (SUS)

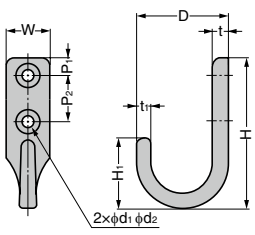
RoHS	CAD	Item Code	Item Name	Material	Finish	D	W	H	H1	H2	t1	t	P	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-026-000	EP-25	Stainless Steel (SUS13)	Polished	25	28	25	12	19	5	4	18	3	6	240	24	16	30	300
G	3D	110-026-001	EP-40			32	36	33	16	25	6	5	23	4	8			31	20	200

※SCS13 is equivalent of SUS304.

HOOK EL

NSF TEST METHOD 4 SUS





[Parts Included]
- EL-25: Raised countersunk head wood screw 2.7×16 (SUS)
- EL-30: Raised countersunk head wood screw 3.8×20 (SUS)

RoHS	CAD	Item Code	Item Name	Material	Finish	D	W	H	H1	t	t1	P1	P2	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-026-004	EL-25	Stainless Steel (SUS13)	Polished	26	12	40	19	5.5	4	5	12	3	6	240	24	19	30	300
G	3D	110-026-005	EL-30			32	15	54.5	25	6	5	6	16	4	8			32	20	200

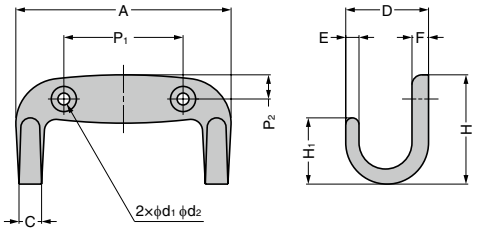
※SCS13 is equivalent of SUS304.

HOOK EW

NSF TEST METHOD 4 SUS



[Parts Included]
- EW-65E: Raised countersunk head wood screw 3.1×16 (SUS)
- EW-80E: Raised countersunk head wood screw 3.8×20 (SUS)



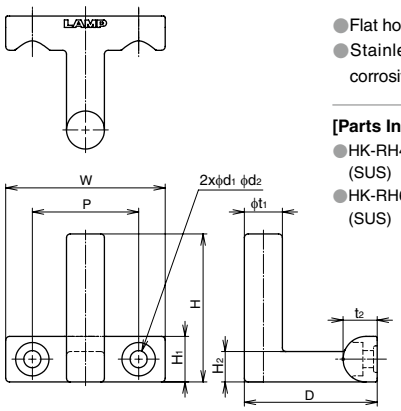
RoHS	CAD	Item Code	Item Name	Material	Finish	A	P1	C	D	E	F	P2	H	H1	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-026-002	EW-65E	Stainless Steel (SCS13)	Polished	65	36	6.5	25	4	5	7.3	33	20	3.6	7.6	200	20	52	10	100
G	3D	110-026-003	EW-80E			80	44	8	32	5	6	9	42	25	4.2	8.8			93	10	100

※SCS13 is equivalent of SUS304.

HOOK HK-RH

TEST METHOD 1 TEST METHOD 4 SUS





- Flat hook bottom.
- Stainless steel construction suitable for corrosive environments.

[Parts Included]
- HK-RH40 : Binding head tapping screw 4×20 (SUS)
- HK-RH60 : Binding head tapping screw 5×30 (SUS)

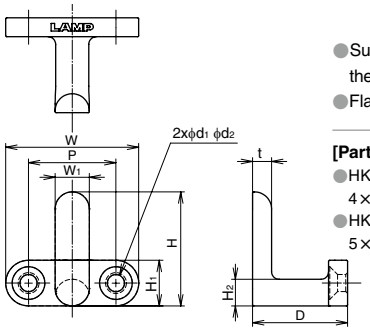
RoHS	CAD	Item Code	Item Name	Material	Finish	D	d1	d2	H	H1	H2	P	t1	t2	W	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-037-670	HK-RH40	Stainless Steel (SCS13)	Polished	35	4.5	8.8	39	12	8	28	10	9	42	196	20	57	–	–
G	3D	110-037-671	HK-RH60			51.5	5.5	10.8	58	16	11	40	15	12	63	245	25	175	–	–

※SCS13 is equivalent of SUS304.

HOOK HK-FH

TEST METHOD 1 TEST METHOD 4





- Supplied screws are of the same finish as the body.
- Flat hook bottom.

[Parts Included]
- HK-FH30 : Countersunk head tapping screw 4×20 (steel)
- HK-FH50 : Countersunk head tapping screw 5×30 (steel)

RoHS	CAD	Item Code	Item Name	Material	Finish	D	d1	d2	H	H1	H2	P	t	W	W1	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	–	HK-FH30-CR	Zinc Alloy (ZDC)	Chrome	25	4.5	8.6	30	12	7	23	5	35	9	98	10	23	–	–
G	3D	–	HK-FH30-BL		Black													23	–	–
G	3D	–	HK-FH30-GB		GB													23	–	–
G	3D	–	HK-FH30-PB		Brass													23	–	–
G	3D	–	HK-FH50-CR		Chrome	39	5.3	10.6	45	16	9.5	34	7	50	13	147	15	68	–	–
G	3D	–	HK-FH50-BL		Black													68	–	–
G	3D	–	HK-FH50-GB		GB													68	–	–
G	3D	–	HK-FH50-PB		Brass													68	–	–

STAINLESS STEEL HOOK HK-DF-G

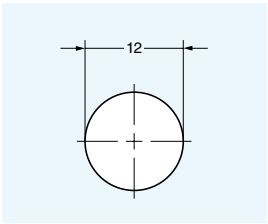
TEST METHOD 4 TEMPERED GLASS SUS

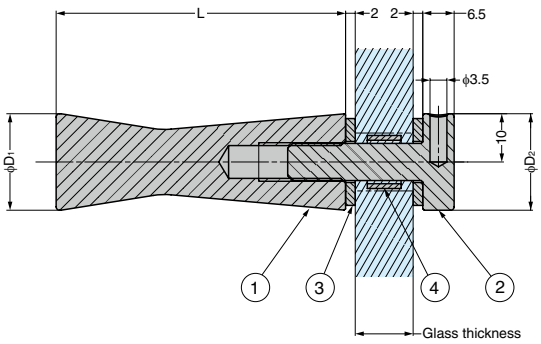


- For shower booth or glass partition, etc.
- Integrated design with HK-DF for wood (see below).
- Clean appearance without visible screws.
- Symmetrical design for easy installation.

[Parts Included]
- Gasket
- Tube

[Cut Out Dimensions for Glass]





No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS303)	Polished
②	Base		
③	Gasket	POM	Plain/Black
④	Tube	PVC	Plain/Clear

RoHS	CAD	Item Code	Item Name	D_1	D_2	L	Glass Thickness	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-033-706	HK-DF-18G	18	18	38	8, 10, 12	150	15.2kgf	70	25	100
G	3D	110-033-707	HK-DF-20G	20	20	60				123	25	100

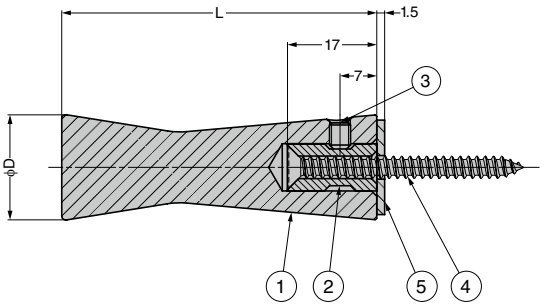
STAINLESS STEEL HOOK HK-DF

TEST METHOD 4 SUS



- Integrated design with HK-DF-G for glass (see above).
- Symmetrical design for easy installation.

[Parts Included]
- Countersunk head tapping screw 4×50
- Washer



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS303)	Polished
②	Block		Plain
③	Hexagon Socket Set Screw M4×5	Stainless Steel	
④	Binding Head Tapping Screw	Steel	Coloured Zinc Chromate
⑤	Washer	Stainless Steel	Plain

RoHS	CAD	Item Code	Item Name	D_1	L	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-033-704	HK-DF-18	18	38	150	15.2kgf	50	25	100
G	3D	110-033-705	HK-DF-20	20	60			100	25	100

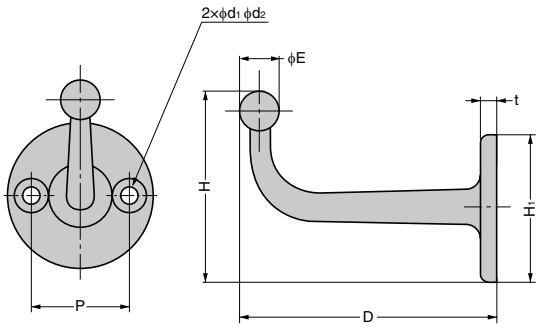
HOOK FC

NSF TEST METHOD 4 TITANIUM SUS



- The rounded tip provides safety.
- Titanium handle hardly causes metal allergy.
- Titanium screws available by special order.

[Parts Included]
- Raised countersunk head wood screw (SUS)



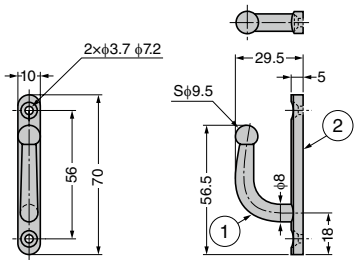
RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	H1	t	P	d1	d2	E	Load Capacity N	Load Capacity kgf	Weight (g)	Screw	Box (pcs)	Carton (pcs)
–	3D	110-020-121	FC-50TI	Titanium	Shot Blast	47	37	28	3	18.5	3.3	6.5	6.5	222	23	17	–	–	–
–	3D	110-020-120	FC-65TI			65	44	35	4	22.5	4.2	8	8	294	30	34		–	–
G	3D	110-026-006	FC-50	Stainless Steel (SCS13)	Polished	47	37	28	3	18.5	3.3	6.5	6.5	98	10	25	3.1×16	40	480
G	3D	110-026-007	FC-65			65	44	35	4	22.5	4.2	8	8	117.6	12	54.5	3.8×20	20	240

※SCS13 is equivalent of SUS304.

HOOK KB-F-70

SUS





- The rounded tip provides safety.

[Parts Included]
- Raised countersunk head tapping screw 3.5×20 (SUS)

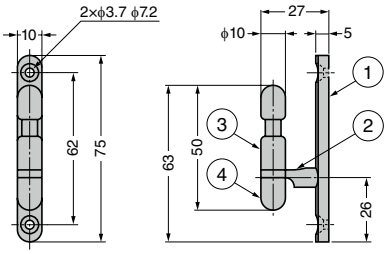
No.	Part Name	Material	Finish
①	Hook	Stainless Steel (SUS304)	Polished
②	Counter Plate	Stainless Steel (SUS303)	

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	110-020-207	KB-F-70	47	5	100

HOOK KB-F-75

SUS





- The rounded tip provides safety.

[Parts Included]
- Raised countersunk head tapping screw 3.5×20 (SUS)

No.	Part Name	Material	Finish
①	Plate	Stainless Steel (SUS303)	Polished
②	Arm	Stainless Steel (SUS304)	
③	Upper Hook Part	Stainless Steel (SUS303)	
④	Lower Hook Part		

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	110-020-208	KB-F-75	55	5	100

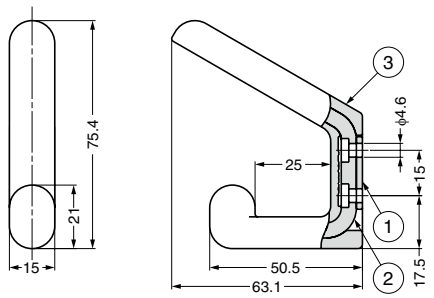
RUBBER HOOK (VIVID COLOUR) PXB-GR05-2

TEST METHOD 4



- Simple and safe design.
- Base made of SUS304 provides high-durability.
- Available in a wide range of colours.

[Parts Included]
- Pan head tapping screw 4×30



No.	Part Name	Material	Finish
①	Base Plate	Stainless Steel (SUS304)	Plain
②	Base	Stainless Steel (SUS304)	Plain
③	Cover	Silicone Rubber (Q)	–

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-033-287	PXB-GR05-211-RD	Red	100	10.2	66	10	100
G	3D	110-033-288	PXB-GR05-211-YE	Yellow				10	100
G	3D	110-033-289	PXB-GR05-211-GN	Green				10	100
G	3D	110-033-290	PXB-GR05-211-BU	Blue				10	100
G	3D	110-033-291	PXB-GR05-211-WT	White				10	100

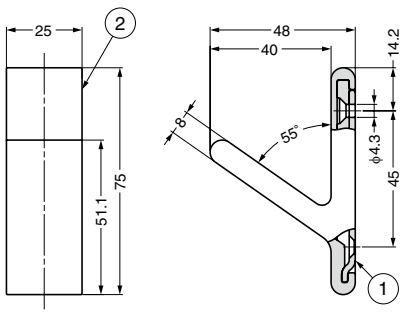
RUBBER HOOK (NORDIC COLOUR) PXB-GN

TEST METHOD 4



- Simple and safe design.
- Base made of SUS304 provides high-durability.
- Designed to fit in all kinds of interior.

[Parts Included]
- Countersunk head tapping screw 4×30



No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS304)	Plain
②	Cover	Silicone Rubber (Q)	Plain

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-033-279	PXB-GN05-111-DG	Dark Grey	80	8.1	85	10	100
G	3D	110-033-278	PXB-GN05-111-BR	Brown				10	100
G	3D	110-033-277	PXB-GN05-111-BE	Beige				10	100

Updated 2017.10.27

RUBBER HOOK (PASTEL COLOUR) PXB-GR05-1

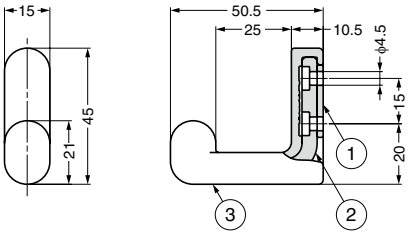
TEST METHOD 4



- Simple and safe design.
- Base made of SUS304 provides high-durability.
- Available in a wide range of colours.

[Parts Included]

- Pan head tapping screw 4×30

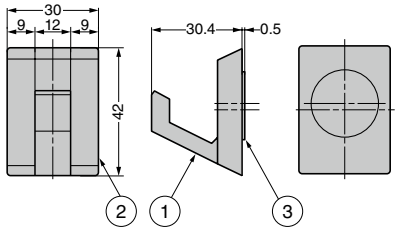


No.	Part Name	Material	Finish
①	Base Plate	Stainless Steel (SUS304)	Plain
②	Base	Stainless Steel (SUS304)	Plain
③	Cover	Silicone Rubber (Q)	–

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-033-282	PXB-GR05-111-LRD	Red	100	10.2	38	10	100
G	3D	110-033-283	PXB-GR05-111-LYE	Yellow				10	100
G	3D	110-033-284	PXB-GR05-111-LGN	Green				10	100
G	3D	110-033-285	PXB-GR05-111-LBU	Blue				10	100
G	3D	110-033-286	PXB-GR05-111-WT	White				10	100

MAGNETIC HOOK MJ-30





- Hard-edged design.
- The magnet covered with silicone prevents from scratching the wall.
- Easy to remove by pulling down the hook tip toward you.

[Remarks]

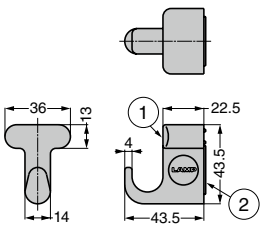
- Load capacity varies depending on the finished state of the steel sheet adsorbed. Please verify before use.

No.	Part Name	Material	Finish
①	Hook	Aluminium Alloy	Matter Anodised
②	Body	ABS	White
③	Magnet	Neodymium	–

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-421	MJ-30	9.8	1	28	20	400

MAGNETIC HOOK MJ-45





- Prevents from slipping down by arranging two magnets in a T shape.
- Three colours available for the body. Please select the colour according to the usage places such as desk, locker, refrigerator, car, etc.

[Remarks]

- Do not move the body in the adsorbed state to avoid scratching the adsorption surface.
- Load capacity varies depending on the finished state of the steel sheet adsorbed. Please verify before use.

No.	Part Name	Material	Colour
①	Body	ABS	Ivory/Orange/Brown
②	Yoke	Steel (SPCC)	–

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-051-070	MJ-45I	Ivory	19.6	2	58	20	240
G	3D	110-051-071	MJ-45RA	Orange				20	240
G	3D	110-051-073	MJ-45BR	Brown				20	240

LARGE UTILITY HOOK 4H

TEST METHOD 4 SUS

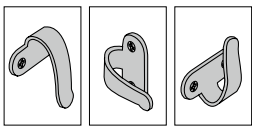


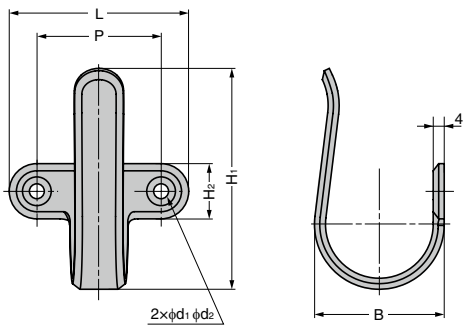
- Chamfered design.
- Can be used in various ways, such as pulls, wall hooks and cloth hangers, etc.
- Two types of finishes available.

[Parts Included]

- 4H-40, 4H-55 : Raised countersunk head wood screw 4.1×16 (SUS)
- 4H-65 : Raised countersunk head wood screw 5.1×20 (SUS)

[Application Example]





RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	H1	H2	B	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	–	110-028-559	4H-40M	Stainless Steel (SUS304)	Polished	40	27	47	13	30	4.4	8.4	290	30	43	20	200
–	–	110-028-560	4H-40TT		Polished and Satin										44	20	200
–	–	110-028-561	4H-55M		Polished	55	38	65	17	40			260	27	80	15	150
–	–	110-028-562	4H-55TT		Polished and Satin										81	15	150
–	–	110-028-563	4H-65M		Polished	65	45	80	20	47	5.4	10.4	170	17	119	10	100
–	–	110-028-564	4H-65TT		Polished and Satin										120	10	100

LARGE UTILITY HOOK 5H

TEST METHOD 4 SUS

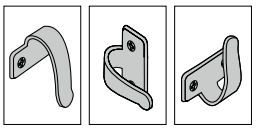


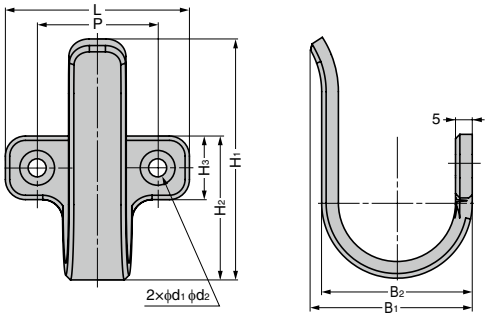
- Chamfered design.
- Can be used in various ways, such as pulls, wall hooks and cloth hangers, etc.-
- Two types of finish available.

[Parts Included]

- 5H-45 : Raised countersunk head wood screw 4.1×20 (SUS)
- 5H-60 : Raised countersunk head wood screw 4.1×25 (SUS)
- 5H-85 : Raised countersunk head wood screw 5.8×25 (SUS)

[Application Example]





RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	H1	H2	H3	B1	B2	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-028-553	5H-45M	Stainless Steel (SUS304)	Polished	45	30	56	34.5	15	37.9	32.5	4.5	9	370	38	74	20	160
G	3D	110-028-554	5H-45TT		Polished and Satin													20	160
G	3D	110-028-555	5H-60M		Polished	60	40	72.7	43.4	19	47.7	43.5	5.5	10.5	350	36	132	10	100
G	3D	110-028-556	5H-60TT		Polished and Satin													10	100
G	3D	110-028-557	5H-85M		Polished	85	60	94	60.6	25	66.7	58.2	6.5	12.4	330	34	237	5	50
G	3D	110-028-558	5H-85TT		Polished and Satin												238	5	50

LARGE UTILITY HOOK XL-SF

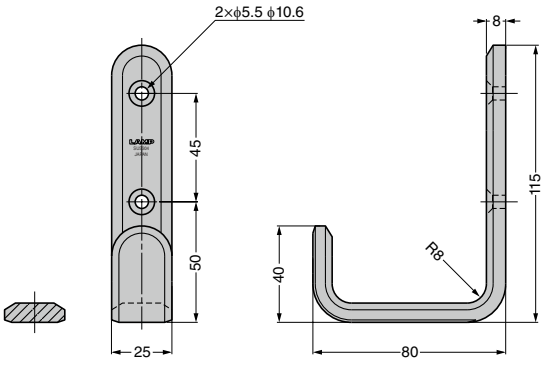
TEST METHOD 4 SUS



- Chamfered design.

[Parts Included]

- Raised countersunk head tapping screw 5×30 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-142	XL-SF-115-S	Stainless Steel (SUS304)	Satin	360	39	280	4	24
G	3D	110-020-143	XL-SF-115-M		Polished				4	24

LARGE UTILITY HOOK XL-CUJ

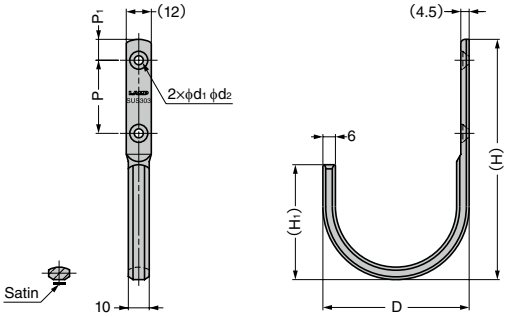
TEST METHOD 4 SUS



- Finish: Combination of Polished and satin.
- Large hook XL-CUF 1 with the same combination finish also available.

[Parts Included]

- XL-CUJ45TT : Raised countersunk head tapping screw 3.5×20 (SUS)
- XL-CUJ70TT : Raised countersunk head tapping screw 4×20 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	H1	P	P1	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-012	XL-CUJ45TT	Stainless Steel (SUS303)	Polished/ Satin	46	75	36	20	8.5	3.8	7.2	200	20	54	20	120
G	3D	110-020-013	XL-CUJ70TT			72	112	56	35	10	4.3	8.6	138	14	84	10	60

Refer to 1 : P.565

LARGE UTILITY HOOK XL-CUF

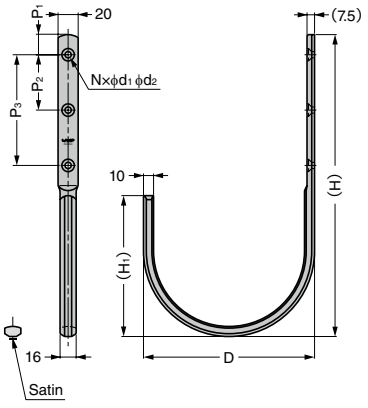
TEST METHOD 4 SUS



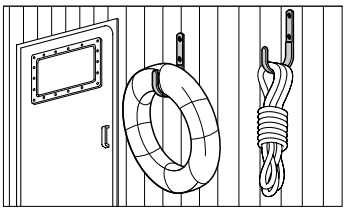
- Easy to hang big items.
- Finish: Combination of Polished and satin.
- Small hook XL-CUJ 1 with the same combination finish also available.

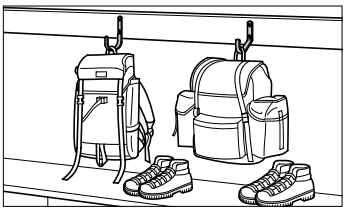
[Parts Included]

- XL-CUF110TT: Raised countersunk head tapping screw 5×30 (SUS)
- XL-CUF170TT: Raised countersunk head tapping screw 6×30 (SUS)



[Application Example]





RoHS	CAD	Item Code	Item Name	Material	Finish	D	H	H1	P1	P2	P3	N	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	110-020-014	XL-CUF110TT	Stainless Steel (SUS303)	Polished/ Satin	112	198	91	17	–	70	2	5.2	10.5	314	32	362	5	30
–	3D	110-020-015	XL-CUF170TT			173	300	138.5	20	55	110	3	6.2	12.5	147	15	569	5	20

Refer to 1 : P.565

LARGE UTILITY HOOK JF45M, JF70M, JF110M

NSF TEST METHOD 4 SUS

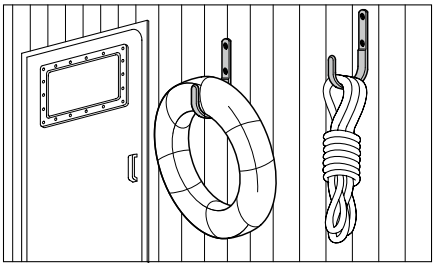


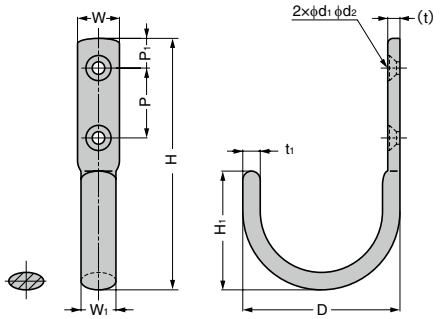
- Easy to hang big items.
- Polished finish.

[Parts Included]

- JF45M : Raised countersunk head wood screw 3.5×16 (SUS)
- JF70M : Raised countersunk head wood screw 4.1×20 (SUS)
- JF110M : Raised countersunk head wood screw 5.1×32 (SUS)

[Application Example]

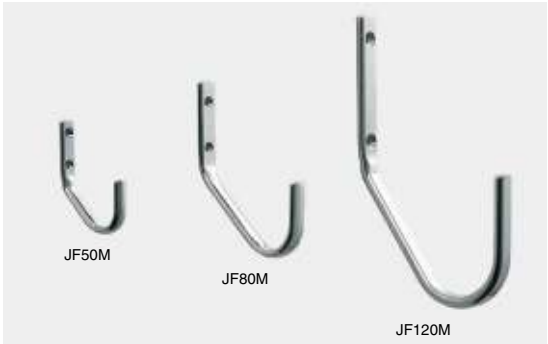




RoHS	CAD	Item Code	Item Name	Material	Finish	D	W	W1	H	H1	P	P1	t	t1	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-071	JF45M	Stainless Steel (SUS303)	Polished	45	12	10	72	34	20	8.5	3.5	5	3.8	7.2	98	10	40	20	120
G	3D	110-020-043	JF70M			68	16	13	120	55	35	15	4	6	4.3	8.6			95	6	36
G	3D	110-020-073	JF110M			110	18	14	200	90	70	17	5.5	8	5.3	10.6	150	15	270	5	30

LARGE UTILITY HOOK JF50M, JF80M, JF120M

NSF TEST METHOD 4 SUS

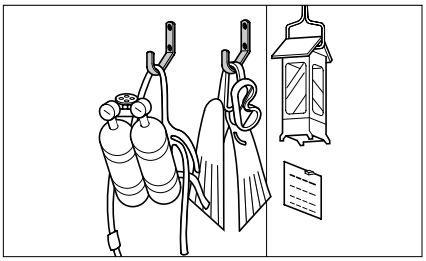


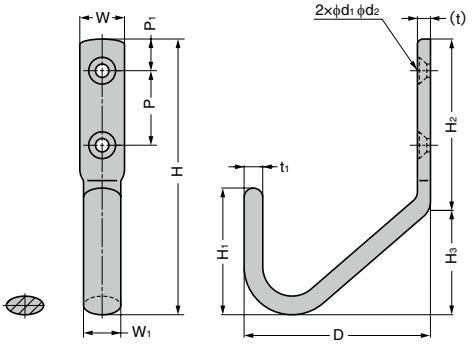
- Easy to hang big items.
- Polished finish.

[Parts Included]

- JF50M : Raised countersunk head wood screw 3.5×16 (SUS)
- JF80M : Raised countersunk head wood screw 4.1×20 (SUS)
- JF120M : Raised countersunk head wood screw 5.1×32 (SUS)

[Application Example]





RoHS	CAD	Item Code	Item Name	Material	Finish	D	W	W1	H	H1	H2	H3	P	P1	t	t1	d1	d2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-072	JF50M	Stainless Steel (SUS303)	Polished	50	12	10	74	34	46	28	20	8.5	3.5	5	3.8	7.2	150	15	40	20	120
G	3D	110-020-044	JF80M			80	16	13	115	50	65	50	30	15	4	6	4.3	8.6	196	20	95	6	36
G	3D	110-020-074	JF120M			120	18	14	200	90	112	88	70	17	5.5	8	5.3	10.6	216	22	260	5	30

LARGE UTILITY HOOK JFT180M, JFT260M For Ceiling Mount

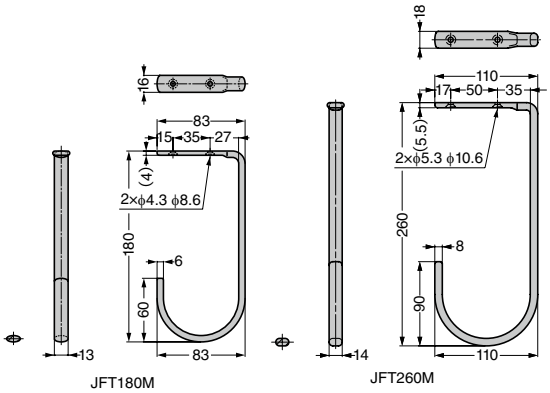
NSF TEST METHOD 4 SUS



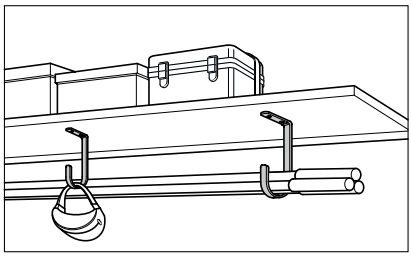
- Easy to hang big items.
- Polished finish.

[Parts Included]

- JFT180M : Raised countersunk head wood screw 4.5×25 (SUS)
- JFT260M : Raised countersunk head wood screw 5.1×38 (SUS)



[Application Example]



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-020-080	JFT180M	Stainless Steel (SUS303)	Polished	98	10	180	5	30
G	3D	110-020-081	JFT260M			147	15	380	5	30

LARGE UTILITY HOOK XL-SB Large Hat Hook

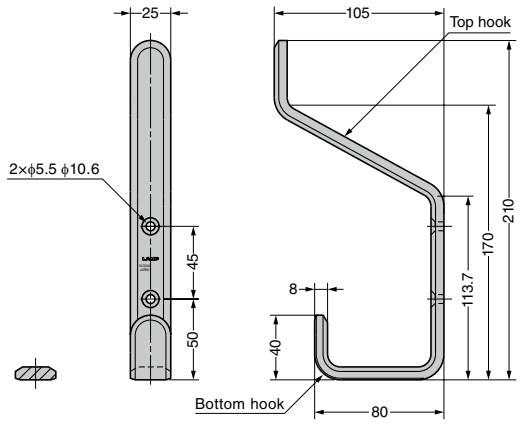
SUS



- Chamfered design.

[Parts Included]

- Raised countersunk head tapping screw 5×30 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity				Weight (g)	Box (pcs)	Carton (pcs)
						Top Hook N	Top Hook kgf	Bottom Hook N	Bottom Hook kgf			
G	3D	110-020-144	XL-SB-210-S	Stainless Steel (SUS304)	Satin finish	200	20	380	39	500	2	12
G	3D	110-020-145	XL-SB-210-M		Polished						2	12

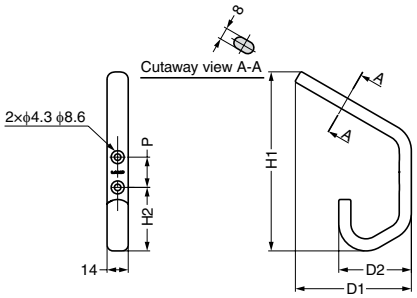
LARGE UTILITY HOOK JF1B

TEST METHOD 4 SUS



[Parts Included]

- Countersunk head tapping screw 4×32 (SUS)



RoHS	CAD	Item Code	Item Name	Material	H_1	H_2	D_1	D_2	P	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-033-760	JF1B80M	Stainless Steel	118.4	42	76.7	48	20	Mirror	98	10	157	5	40
G	3D	110-033-761	JF1B90M	(SUS303)	138.5	46	87.6	56	26				186	5	40

LARGE UTILITY HOOK JF2B-55M

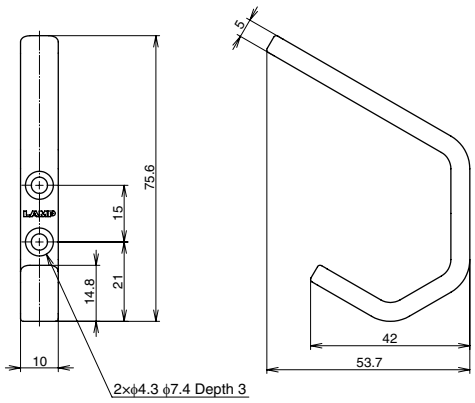
Under Development TEST METHOD 4 SUS



- Suitable for modern style space.
- Large size hook made of stainless steel
- Allows big items such as marine hose to be hung outdoors.

[Parts Included]

- Pan head tapping screw 4x32 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	–	110-033-274	JF2B-55M	Stainless Steel (SUS304)	Polished	100	10.2	–	–	–

PANEL HANGER AUH



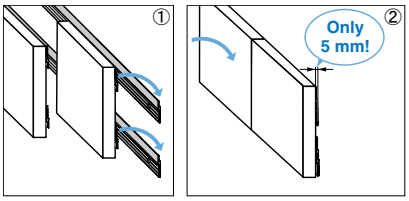
- Panel can be easily attached/detached without using tools.
- Distance to wall is only 5 mm.
- Continuous panels can also be installed easily.
- Can prevent warp of large size panels.
- Mounting holes can be set in the groove of screw guide (see drawing).

[Applications]
- Exhibition panels, paintings, furniture, etc.

[Remarks]
- Be sure to install panel and wall in a position with pillar or other solid substrates at the back.

[Recommended Screws]
- Countersunk head tapping screw 4

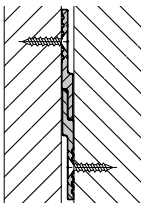
[Panel Installation]



[Example]

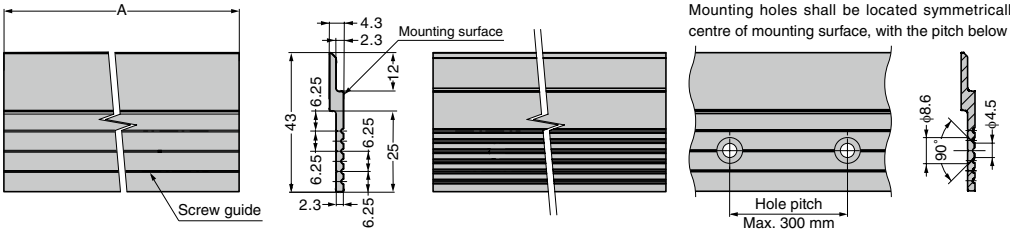


[Installation]



[Cut Out Dimensions]

Mounting holes shall be located symmetrically to the centre of mounting surface, with the pitch below 300mm.

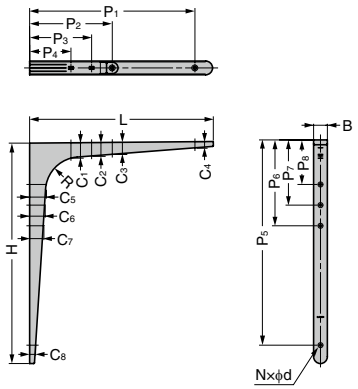


RoHS	CAD	Item Code	Item Name	A	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	110-021-888	AUH-900	900	Aluminium Alloy	Anodised Silver	35	10	–
G	3D	110-023-958	AUH-2700	2700			700	10	–

BRACKET BT, BTK

NSF TEST METHOD 6 SUS





- Strong and safe structure.
- Can be used as reinforcement or connecter in the corner as well.
- BT is made of stainless steel, suitable for corrosive environments.
- BTK is made of steel, with three colours available: White, black and umber.

[Remarks]

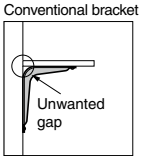
- To prevent inclination due to the load when using as a shelf bracket, the opening angle is slightly more than 90°. Please check with actual item.

[Parts Included]

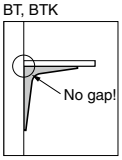
- Raised countersunk head wood screw

	Material	Finish / Colour	Screw
BT (Satin)	Stainless Steel (SUS304)	Satin	Stainless Steel
BTK (White)	Steel (SECE)	White Powder Coating	White Enamel Finish
BTK (Black)		Black Powder Coating	Black Enamel Finish
BTK (Umber)		Umber Enamel Finish	Umber Enamel Finish

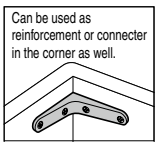
Conventional bracket



BT, BTK





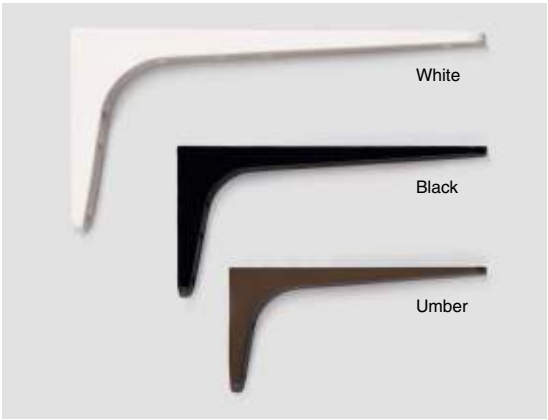


RoHS	CAD	Item Code	Item Name	Finish / Colour	H	L	B	P1	P2	P3	P4	P5	P6	P7	P8	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-078	BT-85	Satin	86	69	15	58	27	–	–	75	26	–	–	147	15	45	20	240
–	3D	120-030-093	BTK-85W	White														46	20	240
–	3D	120-030-172	BTK-85B	Black														46	20	240
–	3D	120-030-189	BTK-85UM	Umber														46	20	240
G	3D	120-030-079	BT-120	Satin	120	100		85	43			106	42			196	20	64.4	20	100
–	3D	120-030-094	BTK-120W	White														63	20	100
–	3D	120-030-173	BTK-120B	Black														68.3	20	100
–	3D	120-030-190	BTK-120UM	Umber														62	20	100
G	3D	120-030-080	BT-180	Satin	180.5	148.5		131	71	50	–	162.5	72.5	51.5	–	245	25	123	20	–
–	3D	120-030-095	BTK-180W	White														124	20	–
–	3D	120-030-174	BTK-180B	Black														127	20	–
–	3D	120-030-191	BTK-180UM	Umber														122	20	–
G	3D	120-030-081	BT-240	Satin	240	199	18	176	91	59		217	92	60		274.4	28	221	10	–
–	3D	120-030-096	BTK-240W	White														237	10	–
–	3D	120-030-175	BTK-240B	Black														234	10	–
–	3D	120-030-192	BTK-240UM	Umber														232	10	–
G	3D	120-030-082	BT-300	Satin	301	238.5	20	206.5	92.5	60.5		269	95	63		343	35	307	10	–
–	3D	120-030-097	BTK-300W	White														323	10	–
–	3D	120-030-176	BTK-300B	Black														323	10	–
–	3D	120-030-193	BTK-300UM	Umber														323	10	–
G	3D	120-030-083	BT-380	Satin	378	318	23	285	145	110	75	345	145	110	75	637	65	519	10	40
–	3D	120-030-085	BTK-380W	White														519	10	–
–	3D	120-030-177	BTK-380B	Black														519	10	–
–	3D	120-030-194	BTK-380UM	Umber														519	10	–
G	3D	120-030-155	BT-480	Satin	480	400	30	360	180	135	90	440	180	135	90	808.5	82.5	1200	6	–
–	3D	120-030-156	BTK-480W	White														1230	6	–
–	3D	120-030-178	BTK-480B	Black														1220	6	–
–	3D	120-030-195	BTK-480UM	Umber														1329	6	–

Item Name	d	Holes N	Weight	C1	C2	C3	C4	C5	C6	C7	C8	R	Screw (Countersunk Head Wood Screw)
BT-85	4	4	40	–	–	(9)	(5)	–	–	(12)	(5)	(25)	3.5×16 (3 pcs), 3.5×25 (1 pc)
BTK-85													
BT-120			60			(10)				(13)			
BTK-120													
BT-180		6	110		(14)	(12)			(15)			(30)	3.5×16 (2 pcs), 3.5×20 (1 pc), 3.5×25 (1 pc), 3.8×32 (2 pcs)
BTK-180													
BT-240			200		(16)	(13)	(8)		(16)	(14)	(7.5)	(35)	
BTK-240													
BT-300			310		(19.5)	(17)			(19)	(17.5)	(9)		3.5×16 (1 pc), 3.5×25 (2 pcs), 3.5×32 (1 pc), 3.8×38 (2 pcs)
BTK-300													
BT-380	5	8	470	(22.5)	(20)	(18)	(8.5)	(25)	(20)	(18)	(10)	(50)	3.5×20 (1 pc), 3.8×32 (3 pcs), 4.5×25 (1 pc), 4.5×38 (2 pcs), 4.5×45 (1 pc)
BTK-380													
BT-480	5.5		1100	(35)	(30)	(27)	(14)	(37)	(33)	(30)	(13)	(70)	5×30 (2 pcs), 5×40 (2 pcs), 5×50 (3 pcs), 5×60 (1 pc)
BTK-480													

BRACKET BTK-UB Compact Type

TEST METHOD 6



- Height is less than half of that of bracket BTK 1. Compact design with short wall mount surface.
- Maximises space under the top board.
- Strong and safe design.
- With reinforcement rubber to prevent from sinking into the wall of plasterboard.
- Perfectly fits at the corner.

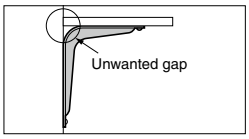
[Remarks]

- To prevent inclination due to the load when using as a shelf bracket, the opening angle is slightly more than 90°. Please check with actual item.

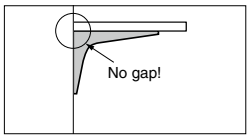
[Parts Included]

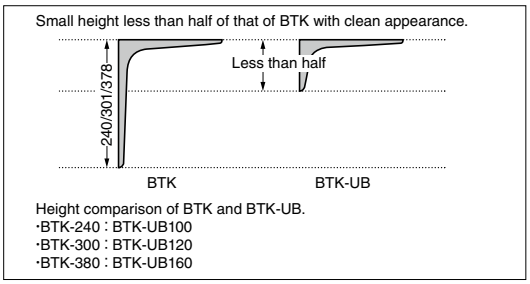
- Raised countersunk head wood screw

Conventional bracket

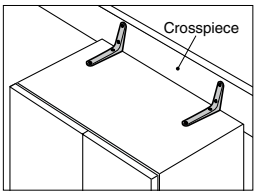


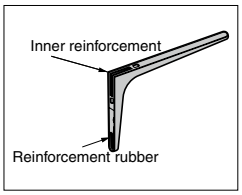
BTK-UB

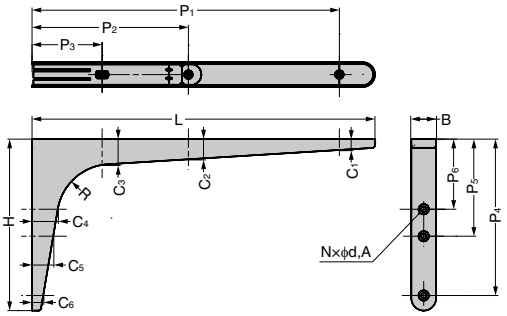




[For Fall Prevention]







Part Name	Material	Finish / Colour	Countersunk Head Wood Screw (Head Only)
BTK-UB (White)	Steel (SECC)	White Powder Coating	White Enamel Finish
BTK-UB (Black)		Black Powder Coating	Black Enamel Finish
BTK-UB (Umber)		Umber Enamel Finish	
Reinforcement Rubber	Rubber (EPM)	–	

[Body]

RoHS	CAD	Item Code	Item Name	Colour	H	L	B	P1	P2	P3	P4	P5	P6	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-033-596	BTK-UB100W	White	99.5	199	18	176	91	45	85	45	–	117.6	12	171	10	–
–	3D	120-033-597	BTK-UB100B	Black													10	–
–	3D	120-033-598	BTK-UB100UM	Umber													10	–
–	3D	120-033-599	BTK-UB120W	White	119.5	238.5	20	206.5	92.5		105.5	71.5	45	196	20	232	10	–
–	3D	120-033-600	BTK-UB120B	Black													10	–
–	3D	120-033-601	BTK-UB120UM	Umber													10	–
–	3D	120-033-602	BTK-UB160W	White	159	318	23	285	145	65	145	91	65	245	25	382	10	–
–	3D	120-033-603	BTK-UB160B	Black													10	–
–	3D	120-033-604	BTK-UB160UM	Umber													10	–

Item Name	d	Holes N	Weight (g)	A	C1	C2	C3	C4	C5	C6	R	Screw (Countersunk Head Wood Screw)
BTK-UB100	4	5	170	8	(7)	(14)	(19)	(12)	–	(10)	(35)	3.5×16 (1 pc) 3.5×25 (1 pc) 3.8×32 (2 pcs) 3.8×38 (1 pc)
BTK-UB120		6	230		(8)	(16)	(21)	(21.5)	(18)			3.5×16 (1 pc) 3.5×25 (1 pc) 3.5×32 (2 pcs) 3.5×38 (1 pc) 3.5×45 (1 pc)
BTK-UB160	5		380	10	(9)	(19.5)	(24.5)	(25)	(22)		(52)	3.5×20 (1 pc) 3.8×32 (1 pc) 3.8×38 (1 pc) 4.5×25 (1 pc) 4.5×45 (2 pcs)

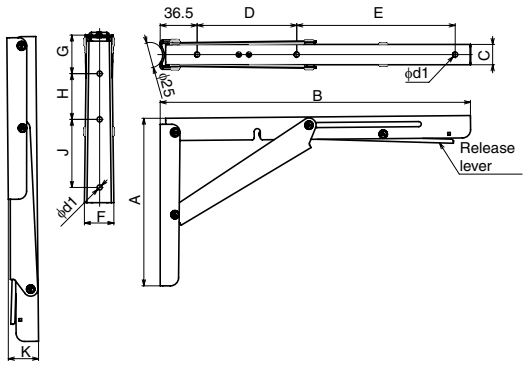
Refer to 1 : P.570

FOLDING BRACKET EB

LOAD CAPACITY 200 kgf NSF SUS



- Automatically locks when flap is in opened position.
- Press lever to release the lock.
- Bracket with hinge function in one unit.



Item Name	A	B	C	D	E	F	G	H	J	K	d1
EB-200/EP	116	199.5	20	155	–	29	21	80	–	28.5	5
EB-303/EP	165	305.5		98	156		38	45	67		
EB-317/EP	171	317	24			36				30	6

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-277	EB-200/EP	Stainless Steel (SUS304)	Mirror	1716	175	332	50	–
G	3D	120-018-226	EB-303/EP	Stainless Steel (SUS304)	Mirror	1471	150	500	25	–
G	3D	120-041-278	EB-317/EP	Stainless Steel (SUS304)	Mirror	1961	200	750	25	–

DAMPER FOR EB FOLDING BRACKET EBD

Lapcon INSTRUCTION



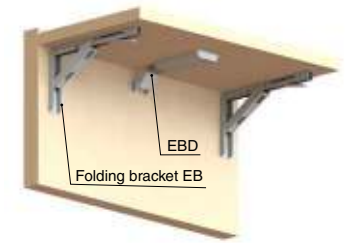
- Designed for EB folding bracket.
- Lapcon mechanism prevents shelf from sudden drop.
- Installation position can be easily determined with the supplied template.

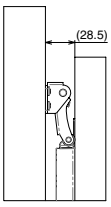
[Remarks]
- Make sure to have sufficient mounting surface strength.
- Please completely close shelf board with hands.
- Shelf board must be assembled to the arm with release lever.

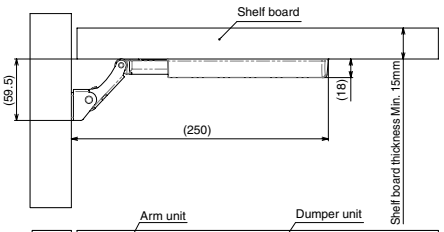
[Parts Included]
- Binding head tapping screw 4×16
- Template

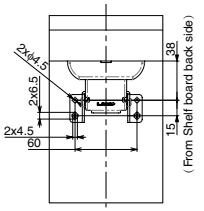
[Sold Separately]
- Folding bracket EB

[Application Example]

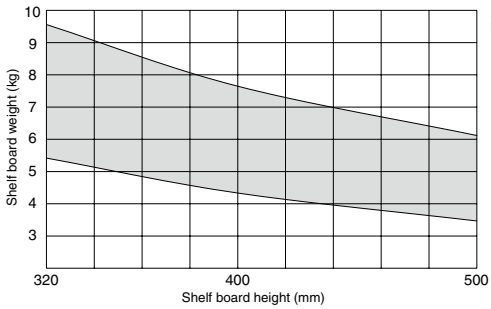


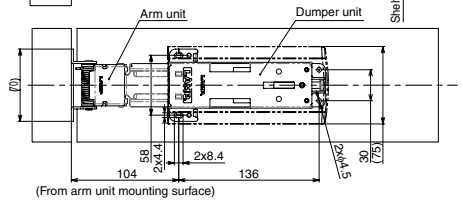






[Shelf board Size Range]





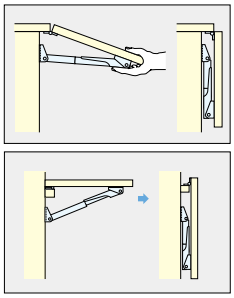
RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m	Maximum Door Moment kgf·cm	Flap thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-034-867	EBD	ABS/POM/Steel	Off-White/Zinc/Chrome	8.5~15	86.7~153.0	Min. 15	400	1	20

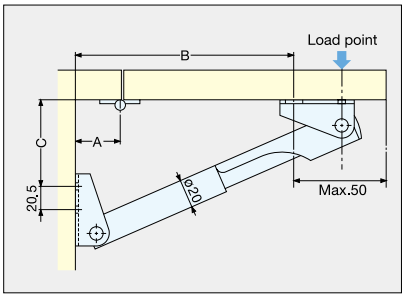
FOLDING BRACKET 388

LOAD CAPACITY 35~80 kgf

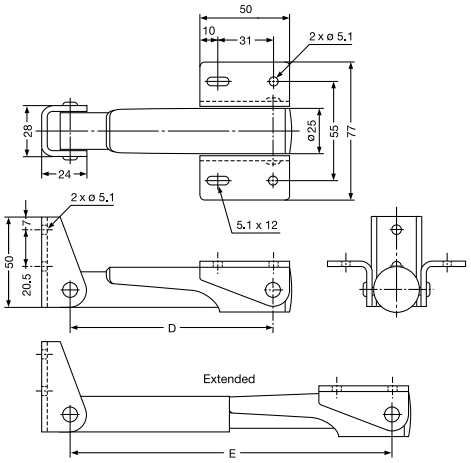


- Automatically locks when flap is in opened position.
- Press lever to release the lock.
- For panel thickness 15~35mm
- Required Quantity:
  - Width up to 600mm · · · 1pc
  - Width 600~1300mm · · · 2pcs





Installation example for 38820-25



RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	C	D	E	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-105-060	38820-25	Aluminium	Anodised	25~30	161	15	114	180	343	35	149	5	50
G	3D	120-105-061	38830-25	Aluminium	Anodised	25~39	252	45	168	275.9	539	55	187	5	50
G	3D	120-105-062	38845-25	Aluminium	Anodised	25~50	402	87	258.5	430.8	588	60	266	5	50
G	3D	120-105-063	38860-25	Aluminium	Anodised	25~40	549	137	368.5	585.8	784	80	342	5	50

FOLDING BRACKET BOS-180, BOS-240

TEST METHOD 6 SUS



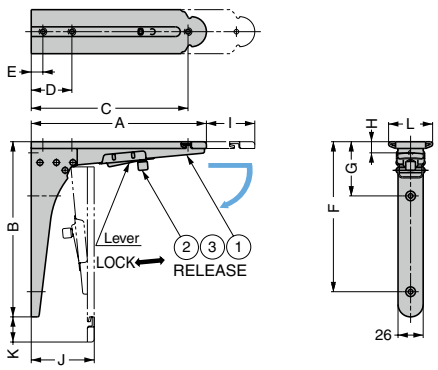
- With locking lever to prevent unexpected folding.

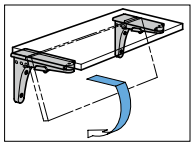
[Remarks]

- Please hold the shelf board when folding.Improper use or applying load to it may cause accidental injury or damage.

[Parts Included]

- BOS-180
  - Countersunk head tapping screw 4×20 (SUS)
  - Pan head tapping screw 4.5×25 (SUS)
  - Raised countersunk head tapping screw 4.5×25 (SUS)
  - Raised countersunk head tapping screw 4.5×50 (SUS)
- BOS-240
  - Countersunk head tapping screw 4×20 (SUS)
  - Pan head tapping screw 5×30 (SUS)
  - Raised countersunk head tapping screw 5×30 (SUS)
  - Raised countersunk head tapping screw 5×70 (SUS)





No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Lever	Brass	Nickel
③	Cover	EPDM	Black

RoHS	CAD	Item Code	Item Name	A	B	C	D	E	F	G	H	I	J	K	L	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-111	BOS-180	181	181	162	42	12	155	56	11.5	50	65	26	45.5	392	40	476	1	20
G	3D	120-030-090	BOS-240	240	250	215	80	25	220	70	15	64	81	29	49	325	33	770	1	20

FOLDING BRACKET BTO

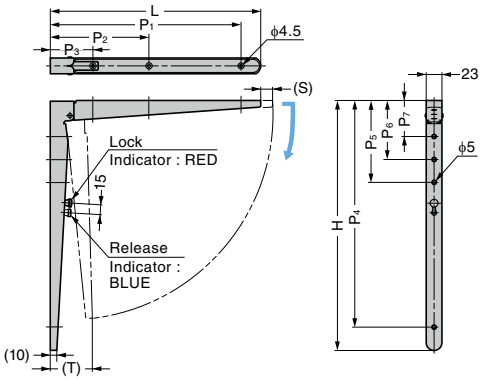
SUS

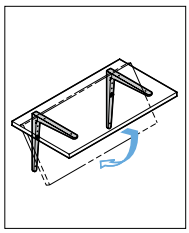


- Folding type of bracket BT and BTK 1.
- With locking lever to prevent unexpected folding.

[Remarks]
- When using as a bracket, be sure to lock the lever.
- Please hold the shelf board when folding.Improper use or applying load to it may cause accidental injury or damage.

[Parts Included]
- Raised countersunk head wood screw (see the table below for size and qty)





Item Name	Shelf Board		Wall	
	Size	Qty	Size	Qty
BTO-300	3.5×20	1 pc	4.5×25	1 pc
	3.8×38		4.5×45	2 pcs
BTO-380	3.5×25		4.5×32	1 pc
	3.8×38		4.5×50	3 pcs
	3.8×45		–	–

Stainless steel (Plain) for BTO-300S, BTO-380S
Steel (White Enamel Finish) for BTO-300W, BTO-380W.

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	H	L	P1	P2	P3	P4	P5	P6	P7	S	T	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-014-937	BTO-300S	Stainless Steel (SUS304)	Satin	300	241	211	–	61	270	80	50	–	15	57	200	20.4	510	2	20
–	3D	120-030-091	BTO-300W	Steel	White Powder Coating															2	20
–	3D	–	☆ BTO-380S	Stainless Steel (SUS304)	Satin	380	320	290	150	65	345	125	90	55	18	64	–	–	–	–	–
–	3D	–	☆ BTO-380W	Steel	White Powder Coating															–	–

Refer to 1 : P.570

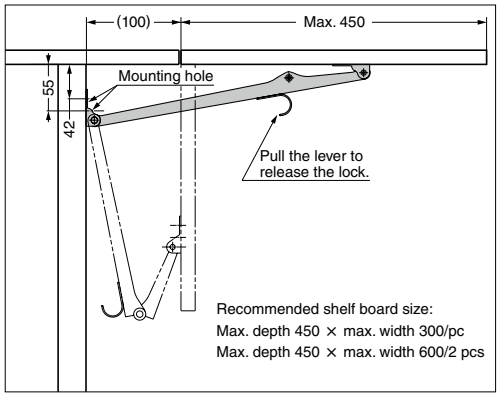
☆Made to order with a minimum order of 2,000 pcs.

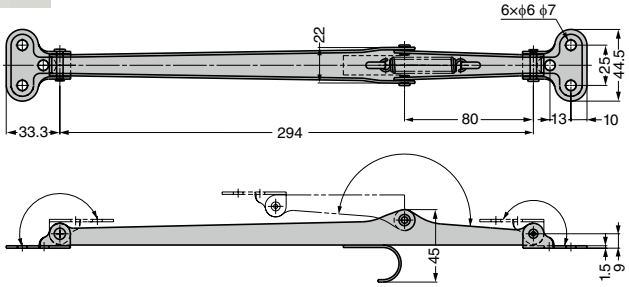
SPRING LOADED FOLDING BRACKET GTS-300

SUS



[Remarks]
- Please hold the shelf board when folding.Improper use or applying load to it may cause accidental injury or damage.
- Shelf board depth : Max. 450 mm.
- Horizontal use only.





RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/pc	Load Capacity kgf/pc	Load Capacity N/ 2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-109-116	GTS-300	Stainless Steel (SUS304)	Polished	29.4	3	58.8	6	190	12	96

ANGLE BRACKET SV

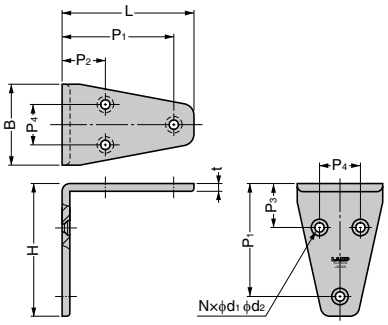
NSF TEST METHOD 6 SUS



- Made of stainless steel with excellent rust resistance, ideal for use as reinforcement fittings and brackets for partition panel in various places such as bathroom, kitchen, marine, and medical field, etc.

[Parts Included]

- Raised countersunk head wood screw (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P1	P2	P3	P4	B	t	d1	d2	Holes N	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	120-030-060	SV-40S	Stainless Steel (SUS304)	Satin	40	40	34	17	17	–	25	3	3.3	6.5	4	78.4	8	29	3.1×	40	640
G	3D	120-030-056	SV-40M		Polished															20	40	640
G	3D	120-030-061	SV-55S		Satin	55	55	47	18	18	17	36.5		3.8	7.5	6			58	3.5×	20	320
G	3D	120-030-057	SV-55M		Polished															20	20	320
G	3D	120-030-062	SV-80S		Satin	80	80	71	24	24	27	52	4	4.3	8.5		137.2	14	162	3.8×	10	120
G	3D	120-030-058	SV-80M		Polished															20	10	120

ANGLE BRACKET XL-SA01

TEST METHOD 6 SUS



- Chamfered profile provides excellent safety and design.
- Made of stainless steel with excellent rust resistance, ideal for use as reinforcement fittings and brackets for partition panel in various places such as medical field, marine, bathroom, and kitchen, etc.
- Rounded corners for safety.

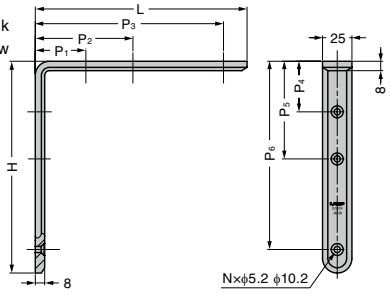
[Remarks]

- To prevent inclination due to the load when using as a shelf bracket, the opening angle is slightly more than 90° . Please check with actual item.

[Parts Included]

- Raised countersunk head tapping screw 5×30 (SUS)





RoHS	CAD	Item Code	Item Name	Material	Finish	L	H	P1	P2	P3	P4	P5	P6	Holes N	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-303	XL-SA01-120S	Stainless Steel (SUS304)	Satin	120	120	38	–	100	38	–	100	4	226	23	312	8	40
G	3D	120-030-307	XL-SA01-120M		Polished													8	40
G	3D	120-030-304	XL-SA01-150S		Satin	150	150	43		130	43		130		177	18	400	6	30
G	3D	120-030-308	XL-SA01-150M		Polished													6	30
G	3D	120-030-305	XL-SA01-180S		Satin	180	180		83	160		83	160	6	137	14	483	6	30
G	3D	120-030-309	XL-SA01-180M		Polished													6	30
G	3D	120-030-306	XL-SA01-240S		Satin	240	240			220			220		118	12	660	4	20
G	3D	120-030-310	XL-SA01-240M		Polished													4	20

ANGLE BRACKET SU-A

NSF TEST METHOD 6 SUS



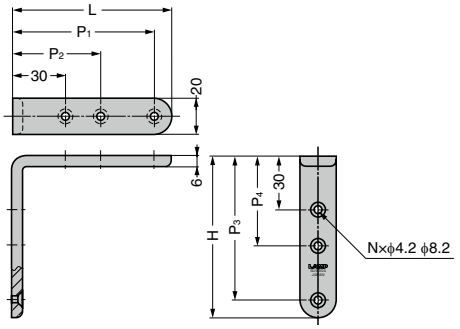
- Made of stainless steel with excellent rust resistance, ideal for use as reinforcement fittings and brackets for partition panel in various places such as medical field, marine, bathroom, and kitchen, etc.
- Rounded corners for safety.
- Please contact us for satin finish.

[Remarks]

- To prevent inclination due to the load when using as a shelf bracket, the opening angle is slightly more than 90°. Please check with actual item.

[Parts Included]

- Raised countersunk head tapping screw 4×25 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	H	L	P_1	P_2	P_3	P_4	Holes N	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-180	SU-A70M	Stainless Steel (SUS304)	Polished	70	70	–	60	–	60	4	235	24	107	10	100
G	3D	120-030-181	SU-A90M			90	90	80	50	80	50	6	167	17	140	10	100
G	3D	120-030-182	SU-A120M			120	120	110		110			127	13	194	8	80
G	3D	120-030-183	SU-A150M			150	150	140	60	140	60		98	10	248	6	60
G	3D	120-030-179	SU-A180M			180	180	170		170			88	9	302	6	30

ANGLE BRACKET SU-B

TEST METHOD 6 SUS



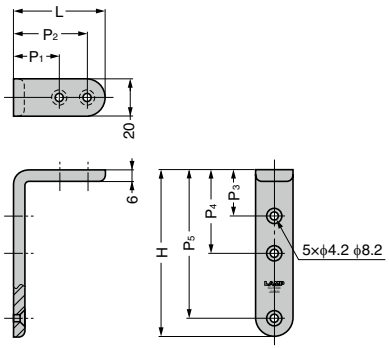
- Made of stainless steel with excellent rust resistance, ideal for use as reinforcement fittings and brackets for partition panel in various places such as medical field, marine, bathroom, and kitchen, etc.
- Rounded corners for safety.
- Please contact us for satin finish.

[Remarks]

- To prevent inclination due to the load when using as a shelf bracket, the opening angle is slightly more than 90°. Please check with actual item.

[Parts Included]

- Raised countersunk head tapping screw 4×25 (SUS)



RoHS	CAD	Item Code	Item Name	Material	Finish	H	L	P_1	P_2	P_3	P_4	P_5	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-184	SU-B50M	Stainless Steel (SUS304)	Polished	90	50	25	40	25	45	80	127	13	106	10	100
G	3D	120-030-185	SU-B65M			120	65	30	55	30	60	110			145	10	100
G	3D	120-030-186	SU-B80M			150	80		70			140	98	10	186	8	80

ANGLE BRACKET SU

NSF TEST METHOD 6 SUS

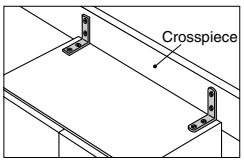


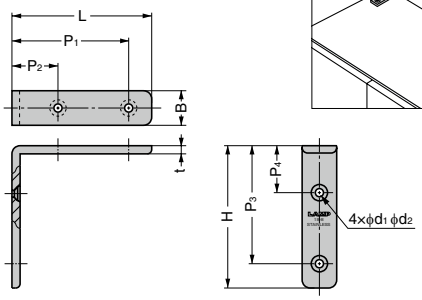
- Made of stainless steel with excellent rust resistance, ideal for use as reinforcement fittings and brackets for partition panel in various places such as medical field, marine, bathroom, and kitchen, etc.
- Rounded corners for safety.

[Parts Included]

- Raised countersunk head wood screw (SUS)

[For Fall Prevention]





RoHS	CAD	Item Code	Item Name	Material	Finish	L	B	H	P1	P2	P3	P4	t	d1	d2	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	120-030-070	SU-30S	Stainless Steel (SUS304)	Satin	30	12	30	24	11	24	11	2.5	3.5	6.5	59	6	11	3.1×20	60	960
G	3D	120-030-065	SU-30M		Polished															60	960
G	3D	120-030-071	SU-45S		Satin	45	13	45	37	17	37	17	3			49	5	23		50	800
G	3D	120-030-066	SU-45M		Polished															50	800
G	3D	120-030-072	SU-60S		Satin	60	15	60	50	20	50	20		4	7.5	39	4	36	3.5×20	40	640
G	3D	120-030-067	SU-60M		Polished															40	640

ANGLE BRACKET SSA

TEST METHOD 9 SUS



- L-shaped bracket with wide and stable support part.
- Shelf board hides the installation part for clean appearance.
- An oval hole at the middle allows to adjust the position vertically in 2 mm.

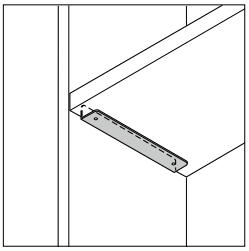
[Remarks]

- Please install to side board.If installed to back board, it may fall off due to the inability to withstand the load.
- Please firmly install in a place with adequate strength.
- When installing to a plasterboard, please screw in the core material.
- Load capacity of below table is the value when using 2 angle brackets for 1 shelf board.

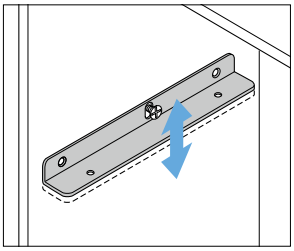
[Parts Included]

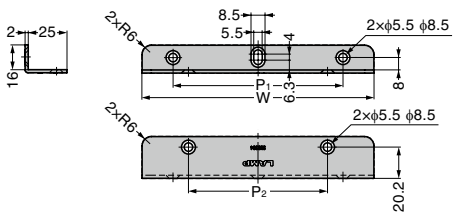
- countersunk head tapping screw 3.5×16 (SUS)
- countersunk head tapping screw 3.5×12 (SUS)

[Installation]



[Adjustable in a Vertical Direction]



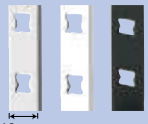
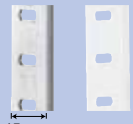
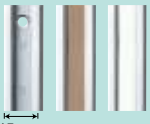


RoHS	CAD	Item Code	Item Name	Material	Finish	W	P1	P2	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-027-253	SSA-100H	Stainless Steel (SUS304)	Satin	100	60	40	1470	150	64.6	30	240
G	3D	120-027-254	SSA-150H			150	110	90			96.8	20	160
G	3D	120-027-255	SSA-200H			200	160	130			129.6	15	120

SHELF STANDARD AND SHELF SUPPORT LIST

For the products listed below, numerous patents and design rights have been applied or registered.

Load capacity is the value for 1 shelf board (using 4 shelf supports).

Load Capacity kgf		45			60	80	
Choose Shelf Standard	Feature	 12 mm **AP-DH Mortise Mount** AL ▸P.591 Can be easily cut on site! Press-fit type without using screws. Clean appearance!	 12 mm **AP-DM Surface Mount** AL ▸P.591 Recommended Can be easily cut on site! With the thickness of only 3mm, surface mount is recommended!	 15 mm **SP, SPS** SUS ▸P.587 With the largest number of applicable shelf supports!	 15 mm **SM** SUS ▸P.590 With blind to cover the inside of mounting hole for shelf support!	 15 mm **SP, SPS** SUS ▸P.587 With the largest number of applicable shelf supports!	 15 mm **SPW-1820** SUS ▸P.584 Excellent design with shelf support mounting hole invisible. Mounting screws can also be hidden with cover installed.
	Thickness	1 mm (Mortise part excluded)	3 mm	5 mm	5 mm	5 mm	5 mm
	Total Length	1820 mm 2600 mm	1820 mm 2600 mm	455 mm ~ 2600 mm	1820 mm 2600 mm	455 mm ~ 2600 mm	1820 mm
	End Cap	–	**AP-EC20** ▸P.592	**SPW-EC20** ▸P.584 **SP-18E** ▸P.586	**SPW-EC20** ▸P.584 **SP-18E** ▸P.586	**SPW-EC20** ▸P.584 **SP-18E** ▸P.586	**SPW-EC20** ▸P.584 **SP-18E** ▸P.586
Choose Shelf Support and Accessories		**AP-FB20** ▸P.592 Thin and space-saving! Also suitable for glass shelf with cap installed. Shelf Support Cap & Cover: Not Included **AP-FC20** ▸P.592 **Other Accessories** Shelf Holder With Angle Adjusting Function AP-FK20 ▸P.596 Shelf Support Hook AP-FK20D ▸P.595 Dowel AP-FK20C ▸P.596 Shelf Holder AP-FA20 ▸P.595 New arrivals! Shelf Holder AP-FB120 ▸P.597 AP-DM (FOR AP-DM)	**SPB-20** ▸P.588 Not apt to come off in case of vibration Shelf Support Cap & Cover: Not Used **Other Accessories** Hook For Shelf Standard SP-35 ▸P.587 Shelf Holder SPB-200 ▸P.589	**SPM-20B** ▸P.590 Thin and space-saving! Shelf Support Cap & Cover: Not Used	**SPF-20LC** ▸P.589 Not apt to slide with a cover! Suitable for glass shelf Height is adjustable by +2mm Shelf Support Cap & Cover: Included **SPF-20** ▸P.588 Thin and space-saving! Shelf Support Cap & Cover: Not Used **Other Accessories** Hook For Shelf Standard SP-35 ▸P.587 Shelf Holder SPB-200 ▸P.589 Shelf Holder SPF-20A ▸P.589	**SPW-20** ▸P.584 With cover of the same colour as the shelf standard cover. Shelf Support Cap & Cover: Included

SUS Made of stainless steel.

AL Made of aluminium alloy.

SHELF STANDARD AND SHELF SUPPORT LIST

For the products listed below, numerous patents and design rights have been applied or registered.

Load capacity is the value for 1 shelf board (using 4 shelf supports).

80

SPN-1820 SUS
▸P.583



8 mm

8mm wide ultra slim body!

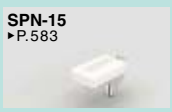
5 mm

1820 mm

SPN-17EC
▸P.583



SPN-15
▸P.583



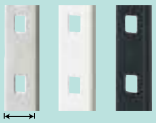
Slim body matching with shelf standard! Holds more securely with cap installed.

Shelf Support Cap & Cover
Not Included

SPN-15C
▸P.583

SPE SUS
▸P.582

Recommended!



12 mm

Thin type of 3mm thickness! Surface mount is recommended!

3 mm

1820 mm
2620 mm

AP-EC20
▸P.592





SPE-FB20S ▸P.582

Thin and space-saving! Also suitable for glass shelf with cover installed

Shelf Support Cap & Cover
Not Included

SPE-FC20
▸P.582

Other Accessories

Shelf Holder With Angle Adjusting Function AP-FK20
▸P.596

Shelf Support Hook AP-FK20D
▸P.595

Dowel AP-FK20C
▸P.596

Shelf Holder AP-FA20
▸P.595

90

SM SUS
▸P.590



15 mm

With blind to cover the inside of mounting hole for shelf support!

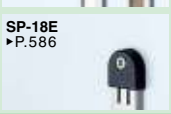
5 mm

1820 mm
2600 mm

SPW-EC20
▸P.584



SP-18E
▸P.586



SMB-15R
▸P.590



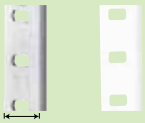
Not apt to slide with a cover!

Shelf Support Cap & Cover
Included

100

SP, SPS SUS
▸P.587

Recommended!



15 mm

With the largest number of applicable shelf supports!

5 mm

455 mm
~
2600 mm

SPW-EC20
▸P.584



SP-18E
▸P.586



SPB-15R
▸P.587



Not apt to slide with a cover! Suitable for glass shelf

Shelf Support Cap & Cover
Included

Other Accessories

Hook for Shelf Standard SP-35
▸P.587

Shelf Holder SPB-200
▸P.589

130

SPH SUS
▸P.585



15 mm

Not apt to deform due to load!

5 mm

1820 mm
2524 mm

SPW-EC20
▸P.584



SP-18E
▸P.586



SPH-5
▸P.586



With cover and holder, suitable for glass shelf.

Shelf Support Cap & Cover
Included

SPH-20
▸P.585



Not apt to slide with a cover! Suitable for glass shelf

Shelf Support Cap & Cover
Included

SPH-15
▸P.586



Compact design with clean appearance.

Shelf Support Cap & Cover
Not Used

150

SPHL-1820 SUS
▸P.580



20 mm

Door thickness 1.2mm! Not apt to deform due to load!

8 mm

1820 mm

SPHL-23E
▸P.580



SPHL-30
▸P.580



Not apt to slide with a cover! Suitable for glass shelf

Shelf Support Cap & Cover
Included

SPHL-25
▸P.580



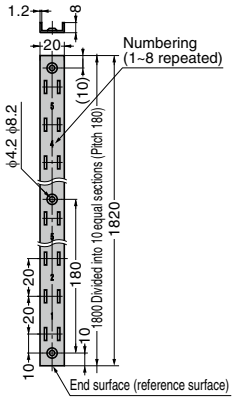
Compact design with clean appearance.

Shelf Support Cap & Cover
Not Used

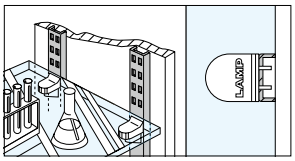
HEAVY DUTY SHELF STANDARD SPHL-1820 For Heavy Duty

NSF SUS

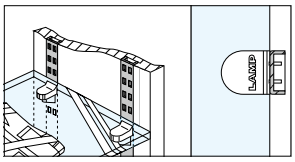




[Surface Mount]



[Mortise Mount]



- Heavy duty shelf standard with 1.2 mm thickness.
- The shelf supports are adjustable every 20mm.
- Made of stainless steel (SUS304) with excellent durability.
- Use with shelf support SPHL-30 or SPHL-25 (sold separately).
- End cap SPHL-23E for shelf standard is sold separately.

[Sold Separately]

- Shelf support SPHL-30 1
- Shelf support SPHL-25 2
- End cap SPHL-23E 3

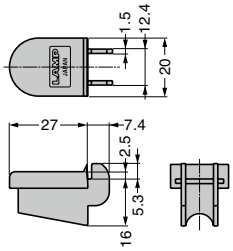
RoHS	CAD	Item Code	Item Name	Material	Finish	Holes	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-912	SPHL-1820	Stainless Steel (SUS304)	Satin	11	500	30	–

Refer to 1 2 3 : P.580

SHELF SUPPORT SPHL-30 For SPHL-1820

NSF TEST METHOD 9 SUS





- For shelf standard SPHL-1820 1.
- Can be attached/detached quickly and firmly.
- Elastomer cover (black) prevents glass shelf from sliding.
- Has resistance to vibration.

[Remarks]

- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

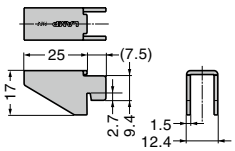
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-913	SPHL-30	Stainless Steel (SUS304)	Satin	1470	150	12	100	1000

Refer to 1 : P.580

SHELF SUPPORT SPHL-25 For SPHL-1820

NSF TEST METHOD 9 SUS





- For shelf standard SPHL-1820 1.
- Compact design does not affect cabinet appearance.

[Remarks]

- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-914	SPHL-25	Stainless Steel (SUS304)	Satin	1470	150	11	200	1200

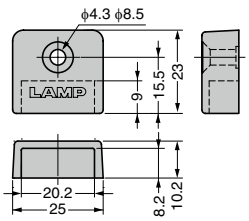
Refer to 1 : P.580

END CAP SPHL-23E For SPHL-1820



[Application Example]





- For shelf standard SPHL-1820 1.
- Installed at the end of shelf standard for safe use.

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-018-660	SPHL-23E-WT	PP	White	2	400	4000
G	3D	120-018-661	SPHL-23E-BL		Black		400	4000

Refer to 1 : P.580

SHELF HOLDER SPHL-FB200 For SPHL-1820

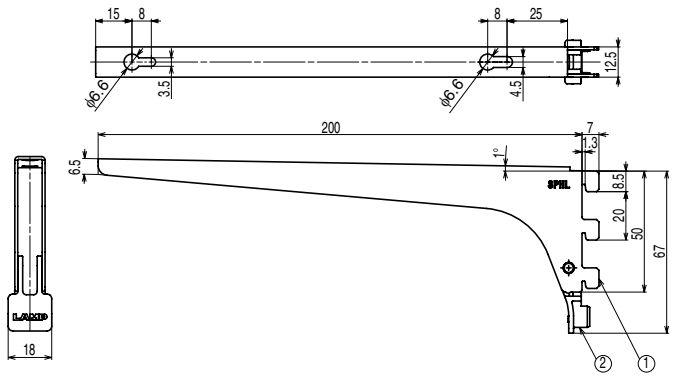
SUS

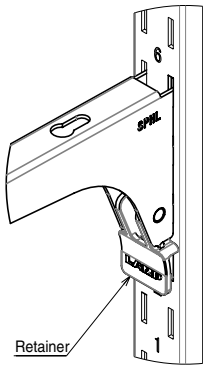


- For shelf standard SPHL-1820 1.
- 2 brackets required for 1 shelf.
- With retainer to prevent from coming off from shelf standard.

[Remarks]
- Max. shelf board width: 900mm.
- Load capacity varies depending on shelf board depth.(See table)
- Load capacity includes shelf board weight.
- When fixing shelf standard on wall, be sure to install it in the position with pillar or other solid substrates.

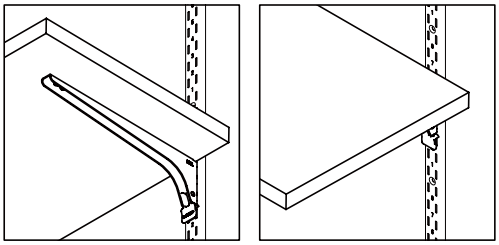
[Parts Included]
- Pan head tapping screw 3×12 (SUS)



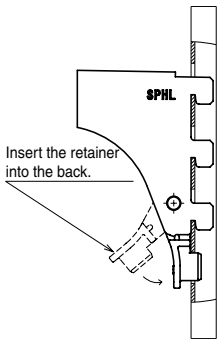


No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS430)	Satin
②	Retainer	PP	White

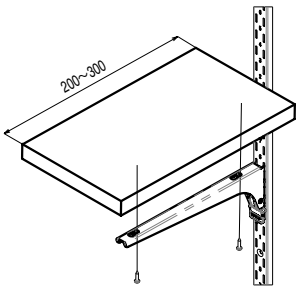
[Application Example]



●Shelf Standard Installation



●Shelf Board Installation



Install the shelf board with screws.

RoHS	CAD	Item Code	Item Name	Shelf Board Depth 200~250mm		Shelf Board Depth 250~300mm		Weight (g)	Box (pcs)	Carton (pcs)
				Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs			
G	3D	120-036-485	SPHL-FB200	196	20	137	14	75	20	200

Refer to 1 : P.580

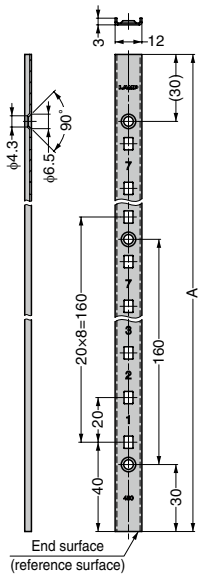
SUGATSUNE

SHELF STANDARD SPE

SUS







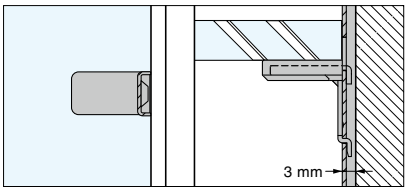
- 3 types of colours (Plain, White & Black) available.
- Ultra thin shelf standard of 3mm thickness.
- The shelf supports are adjustable every 20mm.
- Use with shelf support SPE-FB20S (sold separately).
- End cap AP-EC20 for shelf standard is sold separately.

[Remarks]
- Noted that scratch is conspicuous on black surface.

[Sold Separately]
- Shelf support SPE-FB20S 1
- End cap AP-EC20 2

[Recommended Screws]
- Countersunk head tapping screw 3 or Countersunk head wood screw 3.1

[Installation]
- Combination with shelf support SPE-FB20S 1



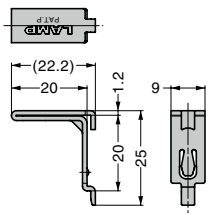
RoHS	CAD	Item Code	Item Name	Material	Finish	A	Screw Hole	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-019-532	SPE-1820	Stainless Steel (SUS430)	Plain	1820	12	156	100	–
G	3D	120-020-757	SPE-1820WT		White Enamel Finish				100	–
G	3D	120-025-833	SPE-1820BL		Black Enamel Finish				100	–
G	3D	120-021-423	SPE-2620		Plain	2620	17	224	60	–

Refer to 1 : P.582, 2 : P.592

SHELF SUPPORT SPE-FB20S For SPE

TEST METHOD 9 SUS

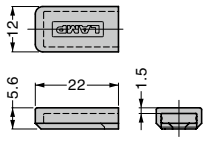




Shelf support



With cover (sold separately)

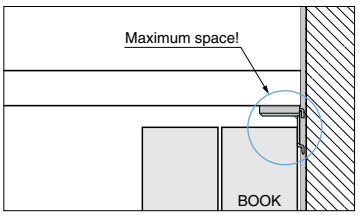


Shelf support cover

- 3 types of colours (Plain, White & Black) available.
- For shelf standard SPE 1.
- Can be attached/detached quickly and firmly.
- Shelf support cover (sold separately) prevents glass shelf from sliding.
- Designed to maximise the space under the shelf.

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.
- Noted that scratch is conspicuous on black surface.

[Sold Separately]
- Shelf support cover SPE-FC20



[Shelf Support]

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-020-903	SPE-FB20S	Stainless Steel (SUS430)	Barrel Polished	785	80	4.5	300	3000
G	3D	120-021-678	SPE-FB20SWT		White Enamel Finish				300	3000
G	3D	120-025-834	SPE-FB20SBL		Black Enamel Finish				300	3000

[Cover] Sold Seperately

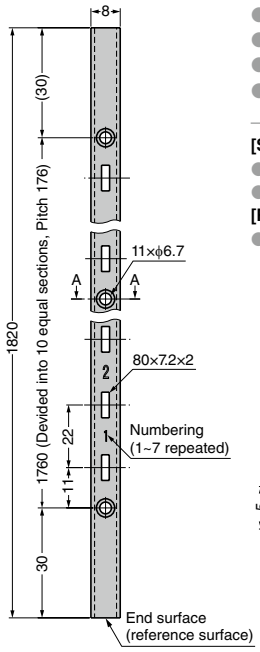
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-019-642	SPE-FC20	Elastomer (TPE)	Light Grey	0.8	300	3000
–	3D	120-028-504	SPE-FC20-BL		Black		300	3000

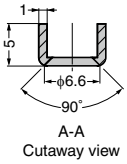
Refer to 1 : P.582

SHELF STANDARD SPN-1820

SUS







- Only 8 mm width with large load capacity.
- The shelf supports are adjustable every 22mm.
- With shelf support holes to securely hold the shelf support.
- Use with shelf support SPN-15 (sold separately).
- End cap SPN-17EC 1 for shelf standard is sold separately.

[Sold Separately]
- Shelf support SPN-15 2
- End cap SPN-17EC 1

[Recommended Screws]
- Countersunk head tapping screw 3 or Countersunk head wood screw 3.1

RoHS	CAD	Item Code	Item Name	Material	Finish	Holes	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-129	SPN-1820	Stainless Steel (SUS430)	Satin	11	205	60	–

Refer to 1 2 : P.583

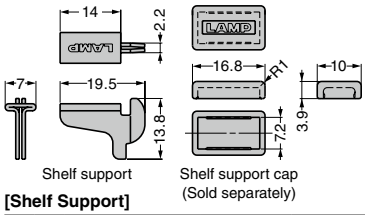
SHELF SUPPORT SPN-15 For SPN-1820

TEST METHOD 9 SUS



Picture above is the combination with cap (sold separately).

Refer to 1 : P.583



- For shelf standard SPN-1820 1.
- Holds more securely with optional cap (use without cap is also possible).

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

[Sold Separately]
- Shelf support cap SPN-15C

[Shelf Support]

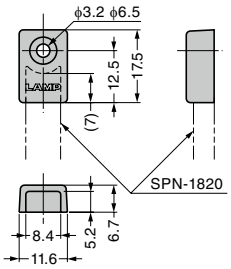
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4pcs	Load Capacity kgf/4pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-692	SPN-15	Stainless Steel (SUS304)	Barrel Polished	785	80	2	400	2000

[Shelf Support Cap] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-693	SPN-15C	Elastomer (TPE)	White	0.5	400	4000

END CAP SPN-17EC For SPN-1820





- For shelf standard SPN-1820 1.

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-694	SPN-17EC	PP	White	0.9	400	4000

Refer to 1 : P.583

SHELF STANDARD SPW-1820

SUS

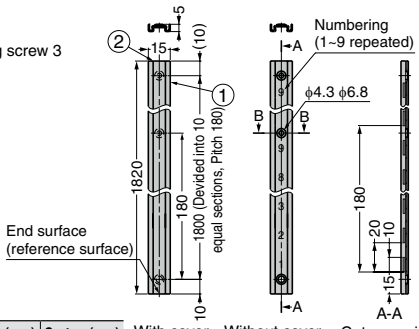


- Mounting holes for shelf support invisible from the front.
- Screw holes and slots are concealed when used with cover (sold separately). Two colours available for the cover.
- Mortise mount also available as shown in the "B-B Cutaway view" below.
- The shelf supports are adjustable every 20 mm.
- Use with shelf support SPW-20 (sold separately).
- End cap for shelf standard is sold separately. Besides SPW-EC20, SP-18E can also be used.

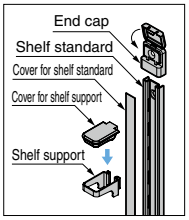
[Sold Separately]
- Cover
- Shelf support SPW-20 1
- End cap SPW-EC20 2
- End cap SP-18E 3

[Recommended Screws]
- Countersunk head tapping screw 3

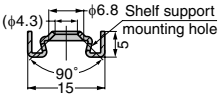




[Installation]



※Items except shelf standard are sold separately.



[Shelf Standard]

RoHS	CAD	Item Code	Item Name	Holes	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-699	SPW-1820	11	335	60	–

[Cover] Sold Separately

RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-017-817	SPW-CV1820-WT	White	8	1000	1
–	3D	120-017-816	SPW-CV1820-BR	Brown		1000	–

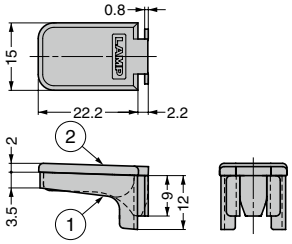
No.	Part Name	Material	Finish / Colour
①	Shelf Standard	Stainless Steel (SUS430)	Satin
②	Cover	Rigid Polyvinyl Chloride	White, Brown

Refer to 1 2 : P.584, 3 : P.586

SHELF SUPPORT SPW-20 For SPW-1820

TEST METHOD 9 SUS





- For shelf standard SPW-1820 1.
- With cover of the same colour as cover for shelf standard SPW-1820.
- Has resistance to vibration.

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

No.	Part Name	Material	Finish / Colour
①	Shelf Support	Stainless Steel (SUS304)	Barrel Polished
②	Cover	Elastomer (TPE)	White, Brown

RoHS	CAD	Item Code	Item Name	Cover Colour	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-696	SPW-20-WT	White	785	80	4.5	200	2000
G	3D	120-017-695	SPW-20-BR	Brown				200	2000

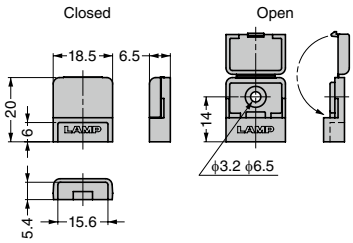
Refer to 1 : P.584

END CAP SPW-EC20 For SPW-1820, SPH, SP, SPS, SM



[Installation]





- For shelf standard SPW-1820.
- The mounting screw is concealed with the integrated end cap closed.
- Also suitable for the following products besides SPW-1820 1.
  SPH 2
  SP, SPS 3
  SM 4

[Recommended Screws]
- Countersunk head tapping screw 3

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-017-698	SPW-EC20-WT	PP	White	2	400	2000
G	3D	120-017-697	SPW-EC20-BR		Brown		400	2000

Refer to 1 : P.584, 2 : P.585, 3 : P.587, 4 : P.590

HEAVY DUTY SHELF STANDARD SPH

SUS





Shelf support SPH-20 (sold separately)



Shelf support SPH-5 (sold separately)

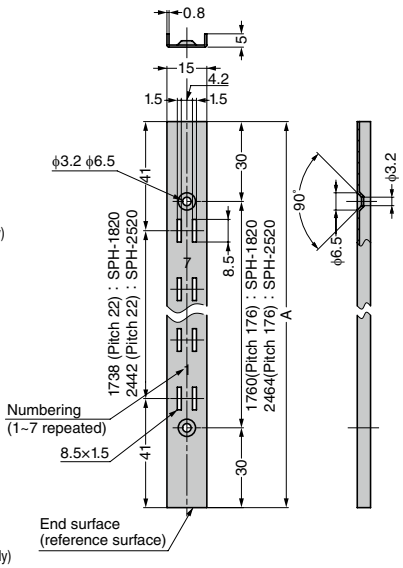


Shelf support SPH-15 (sold separately)

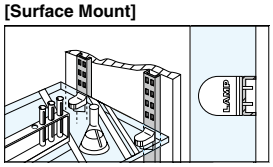
- The shelf supports are adjustable every 22mm.
- Made of stainless steel: Not apt to deform due to load.
- Ideal for shelf supports of laboratory chemical shelf (glass shelf), storage furniture, cosmetics, clothing, and food showcase, etc.
- Use with SPH-20, SPH-5, SPH-15 (sold separately).
- End cap for shelf standard is sold separately.Please select SP-18E or SPW-EC20.

[Sold Separately]

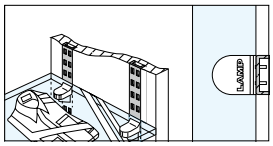
- Shelf support SPH-20 1
- Shelf support SPH-5 2
- Shelf support SPH-15 3
- End cap SP-18E 4
- End cap SPW-EC20 5



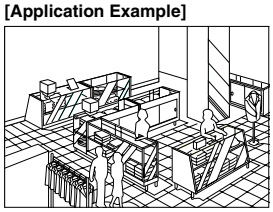
[Surface Mount]



[Mortise Mount]



[Application Example]



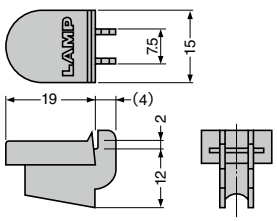
RoHS	CAD	Item Code	Item Name	Material	Finish	A	Holes	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-673	SPH-1820	Stainless Steel (SUS304)	Satin	1820	11	230	80	–
G	3D	120-030-682	SPH-2520			2524	15	330	30	–

Refer to 1 : P.585, 2 3 4 : P.586, 5 : P.584

SHELF SUPPORT SPH-20 For SPH

NSF TEST METHOD 9 SUS



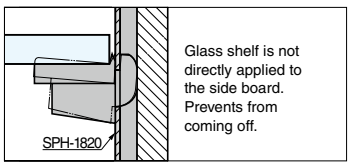


- For shelf standard SPH 1.
- Rubber cover (NBR/black) prevents glass shelf from sliding.
- Can be attached/detached quickly and firmly.
- Has resistance to vibration.

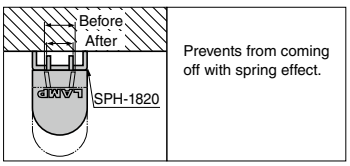
[Remarks]

- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

[Key Points]

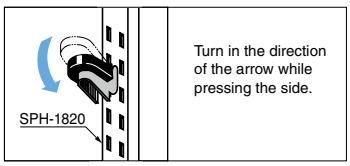


Glass shelf is not directly applied to the side board. Prevents from coming off.



Prevents from coming off with spring effect.

[Installation]



Turn in the direction of the arrow while pressing the side.

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-375	SPH-20	Stainless Steel (SUS304)	Satin	1280	130	4.5	300	3000

Refer to 1 : P.585

SHELF SUPPORT (W/HOLDER) SPH-5 For SPH

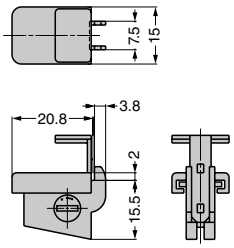
NSF TEST METHOD 9 SUS



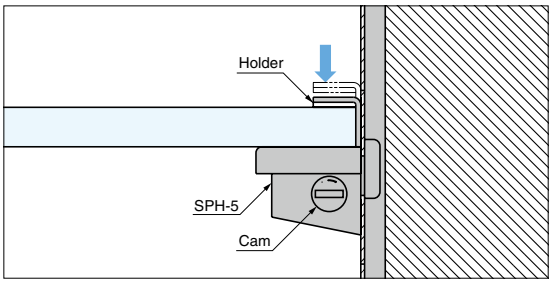
- For shelf standard SPH 1.
- Rubber cover (NBR/black) and holder prevent glass shelf from sliding.
- Can be attached/detached quickly and firmly.
- Has resistance to vibration.

[Applications]
- Suitable glass thickness: 4~8 mm

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.
- This shelf support can only be used for preventing the glass shelf from shifting. Do not use it for corner bracket, or pull it up.



[Installation]



When glass shelf is placed, insert holder between shelf and shelf standard. Tighten cam on the side with a flat-head screwdriver to complete the installation.

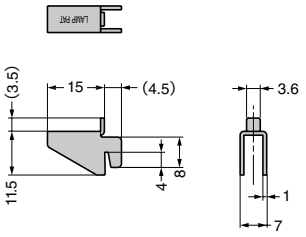
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-041-374	SPH-5	Stainless Steel (SUS304)	Satin	1280	130	8	100	1000

Refer to 1 : P.585

SHELF SUPPORT SPH-15 For SPH

NSF TEST METHOD 9 SUS





- For shelf standard SPH 1.
- Compact design does not affect cabinet appearance.

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-665	SPH-15	Stainless Steel (SUS304)	Satin	1280	130	2.6	400	4000

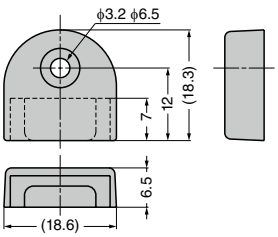
Refer to 1 : P.585

END CAP SP-18E For SPH, SP, SPS, SM, SPW

NSF







- Rounded corner for safe use.
- Installed at the end of shelf standard.
- Can be used for the following shelf standards.

SPW-1820 1
SPH 2
SP, SPS 3
SM 4

[Optional Parts]
- Countersunk head wood screw 3.1

RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-030-214	SP-18E-BL	Black	ABS	1.0	500	5000
G	3D	120-030-215	SP-18E-WT	White		1.2	500	5000

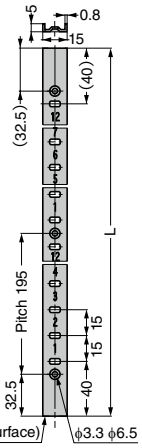
Refer to 1 : P.584, 2 : P.585, 3 : P.587, 4 : P.590

SHELF STANDARD SP, SPS

SUS







- The shelf supports are adjustable every 15mm.
- Use with SPB-15R, SPB-20, SPF-20, SPF-20LC (sold separately). Hook SP-35 suitable for vertical or horizontal shelf standard and bracket SPB for simply holding shelf also available.
- End cap for shelf standard is sold separately.Please select SP-18E or SPW-EC20.
- Models without protection tape available.

[Sold Separately]

- Hook for shelf standard SP-35 1
- Shelf support SPB-15R 2
- Shelf support SPB-20 3
- Shelf support SPF-20 4
- Levelling shelf support SPF-20LC 5
- Shelf holder SPF-20A 6
- Bracket for shelf standard SPB 7
- End cap SPW-EC20 8
- End cap SP-18E 9

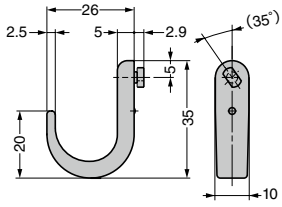
Shelf support SPB-20 and Hook SP-35 are sold separately.

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	L	Holes	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-685	SP-455	With Protection Tape	Stainless Steel (SUS304)	Satin	455	3	57	60	–
G	3D	120-030-686	SP-650				650	4	81	60	–
G	3D	120-030-687	SP-845				845	5	105	60	–
G	3D	120-030-688	SP-1040				1040	6	129	60	–
G	3D	120-030-827	SP-1820	Without Protection Tape			1820	10	222	60	–
G	3D	120-030-692	SP-1820WT	With Protection Tape	Stainless Steel (SUS430)	White Enamel Finish				60	–
G	3D	120-030-668	SP-2600		Stainless Steel (SUS304)	Satin	2600	14	317	30	–
G	3D	120-030-669	SPS-1820	Without Protection Tape	Stainless Steel (SUS430)		1820	10	222	60	–
G	3D	120-030-667	SPS-2600	With Protection Tape			2600	14	317	30	–
G	3D	120-018-227	SPS-2600T	Without Protection Tape						30	–

Refer to 1 2 : P.587, 3 4 : P.588, 5 6 7 : P.589, 8 : P.584, 9 : P.586

HOOK FOR SHELF STANDARD SP-35 For SP, SPS





- For shelf standard SP, SPS 1.
- Can be used with a vertical or horizontal standard.

[Application Example]





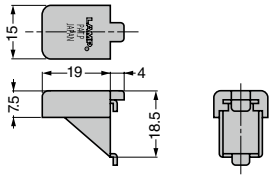
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-020-234	SP-35	Zinc Alloy (ZDC)	Nickel	49	5	15.5	150	600

Refer to 1 : P.587

SHELF SUPPORT SPB-15R For SP, SPS

NSF TEST METHOD 9 SUS



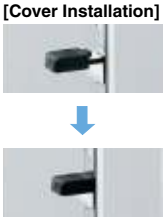


- 2 colours (Black & White) for cover available.
- For shelf standard SP, SPS 1.
- Can be attached/detached quickly and firmly.
- Elastomer cover prevents glass shelf from sliding.

[Remarks]

- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

[Cover Installation]



RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-026	SPB-15R	Stainless Steel (SUS304)	Satin	Black	980	100	6	300	3000
–	3D	120-036-306	SPB-15R-WT			White				–	–

Refer to 1 : P.587

SHELF SUPPORT SPB-20 For SP, SPS

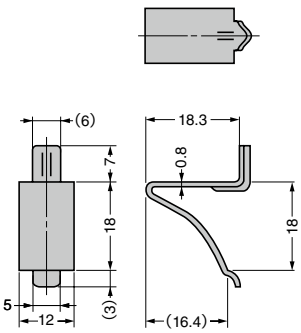
NSF TEST METHOD 9 SUS


SPB-20

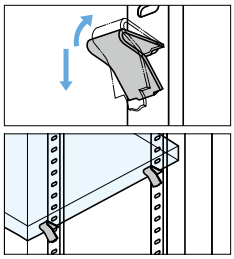

SPB-20WT

- For shelf standard SP, SPS 1.
- Can be attached/detached quickly and firmly.
- Has resistance to vibration.
- Satin finish with/without protection tape available.

[Remarks]
- By its structure, SPB-20 cannot be installed in the position to hide the mark "12" on shelf standard.
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.



[Installation]
Lift the lower side of the shelf support and insert.



RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-015	SPB-20	With Protection Tape	Stainless Steel (SUS304)	Satin	441	45	3.6	300	3000
G	3D	120-031-474	SPB-20T	Without Protection Tape						300	3000
G	3D	120-030-693	SPB-20WT			White Enamel Finish				300	3000

Refer to 1 : P.587

SHELF SUPPORT SPF-20 For SP, SPS

TEST METHOD 9 SUS

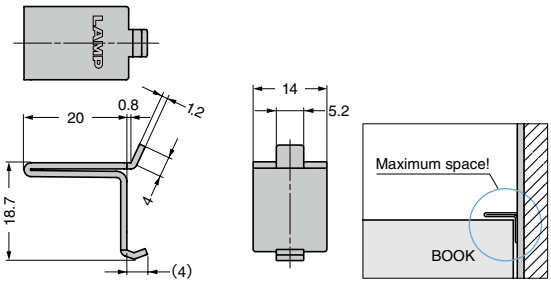

SPF-20


SPF-20WT

- For shelf standard SP, SPS 1.
- Can be firmly installed to shelf standard.
- Designed to maximise the space under the shelf.
- Satin finish with/without protection tape available.

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

[Sold Separately]
- Shelf holder SPF-20A 2



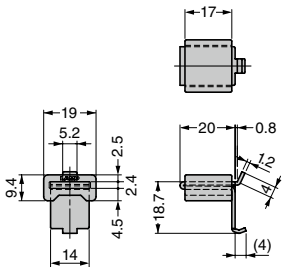
RoHS	CAD	Item Code	Item Name	Type	Material	Finish / Colour	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-116	SPF-20	With Protection Tape	Stainless Steel (SUS304)	Satin	785	80	7	300	3000
G	3D	120-030-117	SPF-20T	Without Protection Tape						300	3000
G	3D	120-030-684	SPF-20WT			White Enamel Finish				300	3000

Refer to 1 : P.587, 2 : P.589

SHELF SUPPORT SPF-20LC For SP, SPS

NSF TEST METHOD 9 TEMPERED GLASS





- For shelf standard SP, SPS 1.
- Shelf level is adjustable by turning the silicone cap upside down.
- Silicone cap prevents glass shelf from sliding.

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.





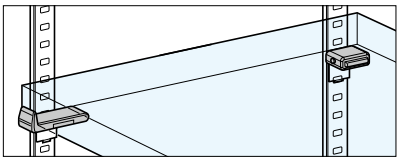
RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-335	SPF-20LC	Stainless Stee (SUS304) /Silicone (Q)	Satin/Natural	785	80	9.5	200	2000

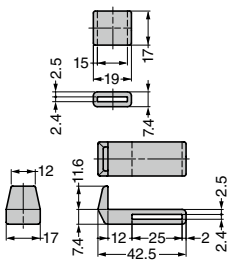
Refer to 1 : P.587

SHELF HOLDER SPF-20A For SPF-20



[Installation]





- To be used together with SPF-20 1.
- Prevents shelf from coming off.

[Remarks]
- Distance from centre of the shelf standard to edge of the shelf board should be within 19mm to 30mm.
- One each of front and back holder as set.

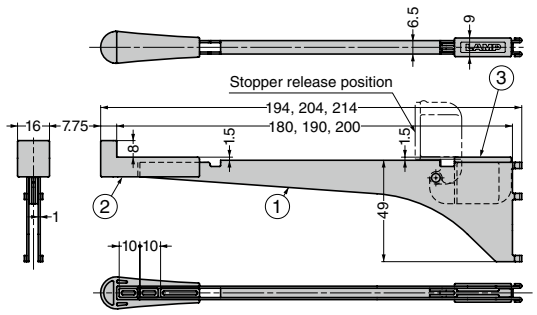
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-548	SPF-20A	PE	White	4	100	2500

Refer to 1 : P.588

SHELF HOLDER SPB-200 For SP, SPS

SUS TEMPERED GLASS



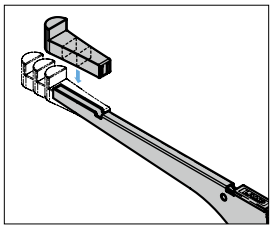


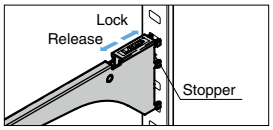
No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Holder	PP	White
③	Stopper		

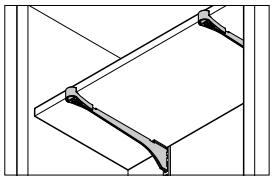
- For shelf standard SP, SPS 1.
- Use 2 or 3 pcs for installing 1 shelf.
- With holder to simply fix shelf.
- Able to adjust depth in 3 different positions.
- With drop off prevention function.
- Can be used for glass shelf.

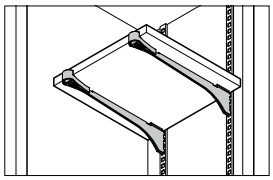
[Remarks]
- Maximum size of shelf board is Width 900 × Depth 200.
- Load capacity (2 pcs/3 pcs) of below table is the value including the weight of shelf board.
- When fixing shelf standard on wall, please use nominal 3 screws with length above 20mm and install in a position with pillar or other solid substrates.

[Installation]









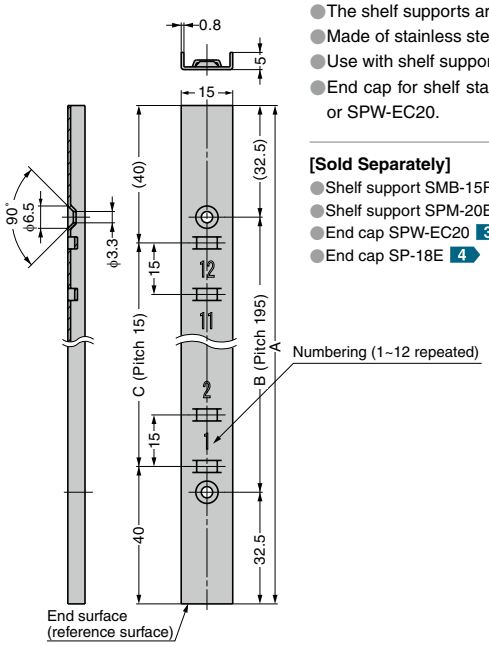
RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Load Capacity N/3 pcs	Load Capacity kgf/3 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-022-204	SPB-200	98	10	147	15	65	50	200

Refer to 1 : P.587

SHELF STANDARD SM With Blind

NSF SUS





- With blind to cover mounting hole for shelf support.
- The shelf supports are adjustable every 15mm.
- Made of stainless steel with excellent durability.
- Use with shelf support SMB-15R, SPM-20B (sold separately).
- End cap for shelf standard is sold separately. Please select SP-18E or SPW-EC20.

[Sold Separately]

- Shelf support SMB-15R 1
- Shelf support SPM-20B 2
- End cap SPW-EC20 3
- End cap SP-18E 4

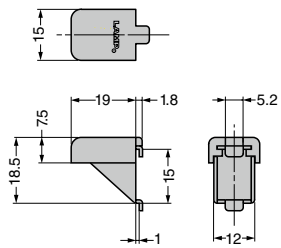
RoHS	CAD	Item Code	Item Name	A	B	C	Material	Finish	Holes	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-675	SM-1820	1820	1755	1740	Stainless Steel (SUS304)	Satin	10	245	60	–
G	3D	120-030-846	SM-2600	2600	2535	2520			14	352	30	–

Refer to 1 2 : P.590, 3 : P.584, 4 : P.586

SHELF SUPPORT SMB-15R For SM

NSF TEST METHOD 9 SUS





- For shelf standard SM 1.
- Can be attached/detached quickly and firmly.
- Elastomer cover (grey) prevents shelf from sliding.

[Remarks]

- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

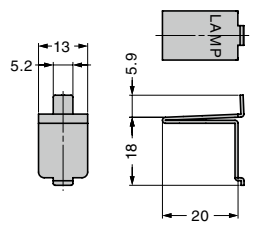
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-674	SMB-15R	Stainless Steel (SUS304)	Satin	883	90	6	300	3000

Refer to 1 : P.590

SHELF SUPPORT SPM-20B For SM

TEST METHOD 9 SUS

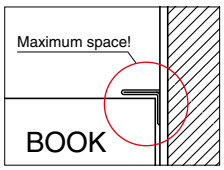




- For shelf standard SM 1.
- Designed to maximise the space under the shelf.

[Remarks]

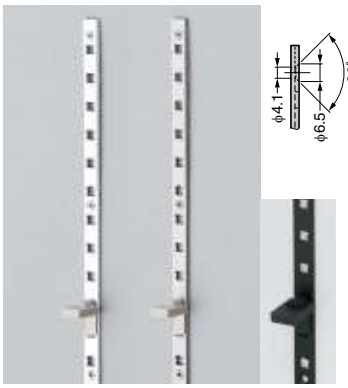
- By its structure, SPM-20B cannot be installed in the position to hide the mark "12" on shelf standard.
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.

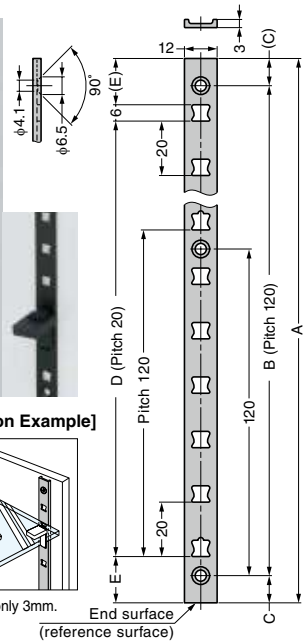


RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-915	SPM-20B	Stainless Steel (SUS304)	Satin	588	60	5	300	3000

Refer to 1 : P.590

SHELF STANDARD AP-DM Surface Mount



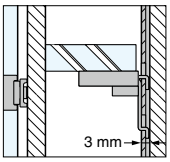


- 3 finishes (Plain, White & Black) available.
- Easy to cut to desired length.
- Ultra thin shelf standard of 3mm thickness.
- Screw hole located every 120 mm.
- New slot shape to prevent shelf support from falling off.
- Use with shelf support AP-FB20 (sold separately).
- End cap AP-EC20 for shelf standard is sold separately.

[Remarks]
- Please install with the concave of mounting hole (every 120mm) upward.
- Noted that scratch is conspicuous on black anodised surface.
- The colour of black anodised finish may vary. Please check with actual item.

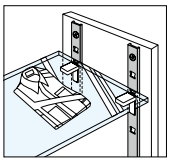
[Sold Separately]
- Shelf support AP-FB20 1
- Shelf support cap AP-FC20 2
- End cap AP-EC20 3

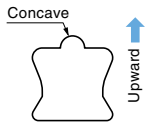
[Installation]



Clean appearance with the thickness of only 3mm.

[Application Example]

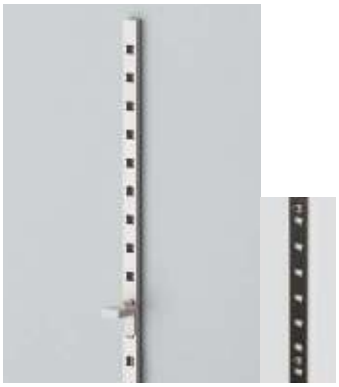


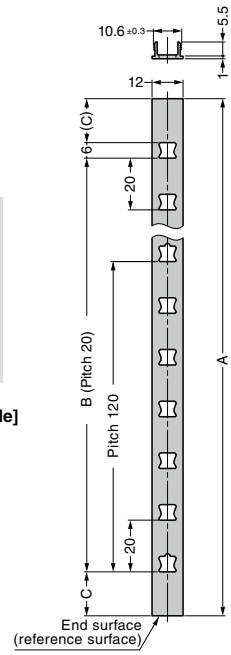


RoHS	CAD	Item Code	Item Name	Type	A	B	C	D	E	Material	Finish	Holes	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-086	AP-DM1820	Surface Mount	1820	1800	10	1780	17	Aluminium Alloy	Anodised Silver	16	100	100	–
G	3D	120-016-209	AP-DM1820WT								White Enamel Finish		106	–	100
G	3D	120-025-260	AP-DM1820BL								Black Anodised		100	100	–
G	3D	120-030-087	AP-DM2600		2600	2520	40	2500	47		Anodised Silver	22	150	60	–

Refer to 1 2 3 : P.592

SHELF STANDARD AP-DH Mortise Mount



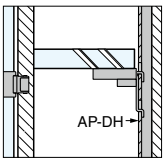


- 3 finishes (Plain, White & Black) available.
- Easy to cut to desired length.
- Press-fit type without using screws.
- New slot shape to prevent shelf support from falling off.
- Use with shelf support AP-FB20 (sold separately).
- End cap AP-EC20 for shelf standard is sold separately.

[Remarks]
- Please install with the concave of mounting hole (every 120mm) upward.
- Please groove for press-fit according to actual item.
- Noted that scratch is conspicuous on black anodised surface.
- The colour of black anodised finish may vary.Please check with actual item.

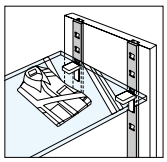
[Sold Separately]
- Shelf support AP-FB20 1
- Shelf support cap AP-FC20 2
- End cap AP-EC20 3

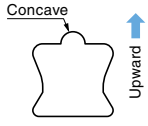
[Installation]



Press-fit mount without using screws for clean appearance.

[Application Example]





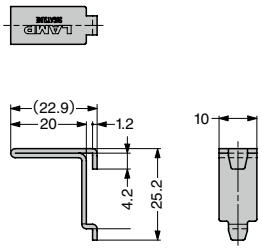
RoHS	CAD	Item Code	Item Name	Type	A	B	C	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-088	AP-DH1820	Mortise Mount	1820	1780	17	Aluminium Alloy	Anodised Silver	100	100	–
G	3D	120-030-089	AP-DH2600		2600	2500	47			165	60	–
G	3D	120-036-269	AP-DH1820BL		1820	1780	17		Black Anodised	–	–	–

Refer to 1 2 3 : P.592

SHELF SUPPORT AP-FB20 For AP-DM, AP-DH

TEST METHOD 9 SUS



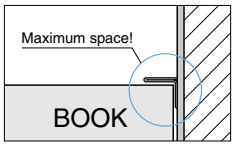


- 3 finishes (Barrel Polished, Black & White) available.
- For shelf standard AP-DM, AP-DH 1.
- Designed to maximise the space under the shelf.

[Remarks]
- Load capacity of below table is the value for 1 shelf board (using 4 shelf supports).
- Clearance between shelf and shelf standard should be less than 1mm.
- Noted that the black or white surface is easily scratched.

[Sold Separately]
- Shelf support cap AP-FC20 2
- Shelf holder AP-FA20 3
- Shelf holder AP-FK20 4
- Dowel AP-FK20C 5

[Application Example]



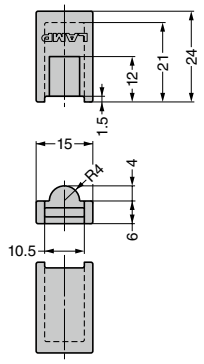
Ideal for bookshelf, etc.

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-158	AP-FB20	Stainless Steel (SUS430)	Barrel Polished	441	45	5.3	300	3000
G	3D	120-025-835	AP-FB20BL		Black Enamel Finish				300	3000
–	3D	120-036-305	AP-FB20WT		Whtie Paint				300	3000

Refer to 1 : P.591, 2 : P.592, 3 : P.595, 4 5 : P.596

SHELF SUPPORT CAP AP-FC20 For AP-FB20

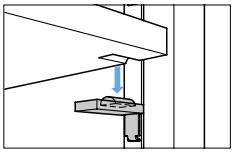




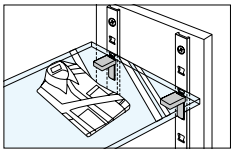
- Light Grey & Black colour available.
- For shelf support AP-FB20 1.
- Ideal for glass shelf.
- Insert the cap with half round shape facing up, and cutout the shelf to prevent from sliding.

[Remarks]
- Noted that the black surface is easily scratched.

[Installation]



[Application Example]

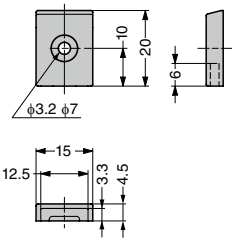


RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-159	AP-FC20	Elastomer (TPE)	Light Grey	1.6	400	4000
–	3D	120-028-502	AP-FC20-BL		Black	1.0	400	4000

Refer to 1 : P.592

END CAP AP-EC20 For SPE, AP-DM





- Light Grey & Black colour available.
- For shelf standard SPE 1, AP-DM 2.
- Installed at the end of shelf standard to protect the end surface.
- Stylish design with square shape.

[Remarks]
- Noted that black surface is easily scratched.

[Application Example]



RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-157	AP-EC20	ABS	Light Grey	0.8	400	4000
–	3D	120-028-503	AP-EC20-BL		Black	1.0	400	4000

Refer to 1 : P.582, 2 : P.591

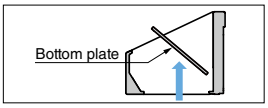
STORAGE TRAY FOR SHELF STANDARD AP-SB350-SL For AP-DM

INSTRUCTION

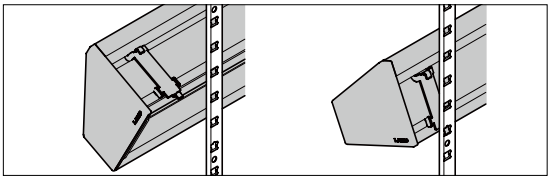


[Application Example] With bottom plate removed





[How to Install]



- Designed to install to the shelf standard for storing small articles.
- Can be used as a towel rack when bottom plate is removed.
- Recommended to install on the back side of the cabinet door using heavy duty concealed hinge J95.

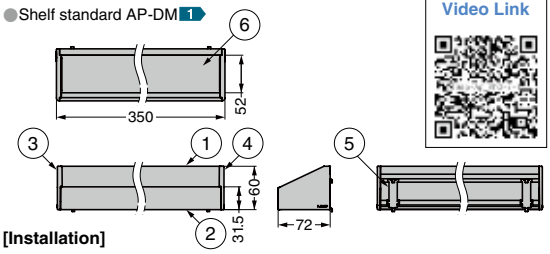
[Remarks]

- The spacing between shelf standards shall be within 320mm.
- Before attaching/detaching the product or removing the bottom plate, please read the label attached to the product or the installation instruction on our website.
- After installation, check if the upper end of the box and A part is as shown in the detail A. Covering of the holes in the shelf standard or bending of the box may cause falling. In this case, please remove and install it once again.

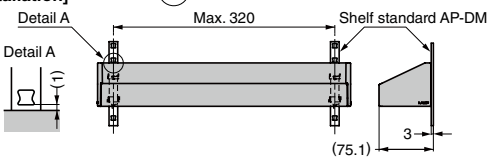
[Sold Separately]

- Shelf standard AP-DM 1

Video Link



[Installation]



No.	Part Name	Material	Finish / Colour
①	Base Plate A	Aluminium Alloy	Anodised Silver
②	Base Plate B		
③	End Cap L	ABS	White
④	End Cap R		
⑤	Bracket	Stainless Steel (SUS304)	Barrel Polished
⑥	Bottom Plate	Aluminium Alloy	Anodised Silver

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-036-232	AP-SB350-SL	49	5	540	1	20

Refer to 1 : P.591

PLATE FOR SHELF STANDARD AP-SP345-SL For AP-DM

INSTRUCTION



- Designed to install to the shelf standard for hanging hooks.
- Installation method is the same as the box 1.

[Remarks]

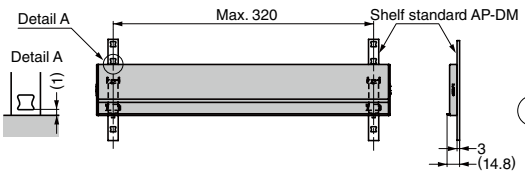
- The spacing between shelf standards shall be within 320mm.
- Before attaching/detaching the product or removing the bottom plate, please read the label attached to the product or the installation instruction on our website.
- After installation, check if the upper end of the plate and A part is as shown in the detail A.Covering of the holes in the shelf standard or bending of the plate may cause falling.In this case, please remove and install it once again.

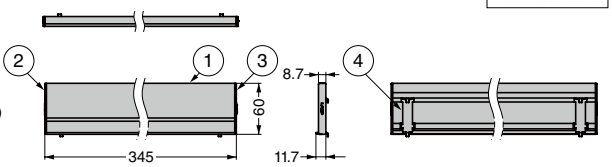
[Sold Separately]

- Shelf Standard AP-DM 2
- Hook for shelf standard AP-SH-WT 3
- Pipe socket (holder) for shelf standard AP-S32PS 4

Video Link

[Installation]





No.	Part Name	Material	Finish / Colour
①	Base Plate A	Aluminium Alloy	Anodised Silver
②	End Cap L	ABS	White
③	End Cap R		
④	Bracket	Stainless Steel (SUS304)	Polished

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-036-233	AP-SP345-SL	219	1	40

Refer to 1 : P.593, 2 : P.591, 3 4 : P.594

SUGATSUNE

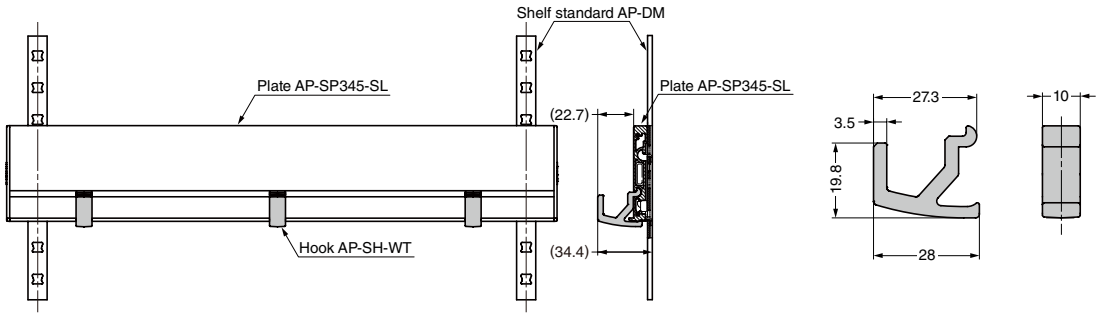
HOOK FOR SHELF STANDARD AP-SH-WT For AP-DM

- Designed to install to the plate for shelf standard AP-SP345-SL 1.

[Remarks]
- Up to 5 hooks can be installed to 1 plate.

[Sold Separately]
- Shelf standard AP-DM 2
- Plate for shelf standard AP-SP345-SL 1

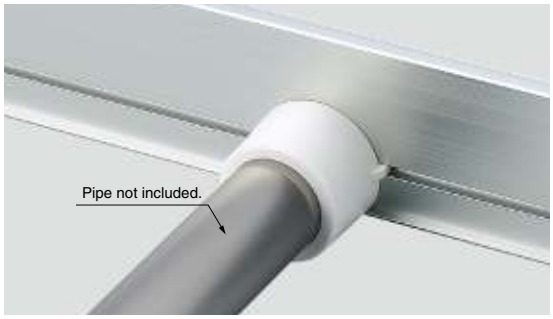
[Installation]



RoHS	CAD	Item Code	Item Name	Material	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-036-234	AP-SH-WT	ABS	White	9.8	1	2	60	600

Refer to 1 : P.593, 2 : P.591

PIPE SOCKET FOR SHELF STANDARD AP-S32PS For AP-DM

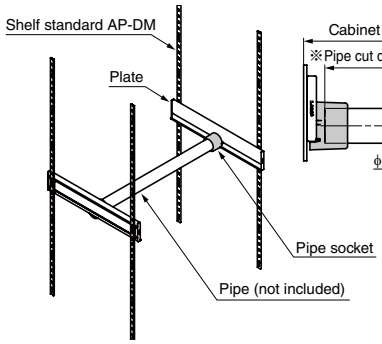


- Used for installing hanger pipe to the plate for shelf standard AP-SP345-SL 1.
- Sold in pairs.

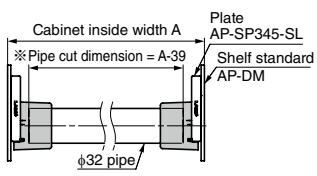
[Remarks]
- 4 shelf standards and 2 plates are required for installing a hanger pipe with this product.
- Hanger pipe not included.
- For hanger pipe length, please contact local representatives.
- Up to 2 pcs of pipe sockets can be installed on 1 pair of plates.

[Sold Separately]
- Shelf standard AP-DM 2
- Plate for shelf standard AP-SP345-SL 1

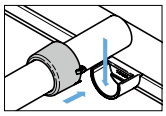
[Installation Example]

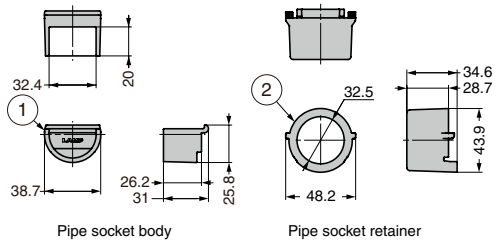


[Installation]



[How to Install]





Pipe socket body　　Pipe socket retainer

No.	Part Name	Material	Finish / Colour
①	Pipe Socket Body	Zinc Alloy (ZDC)	Clear Zinc Chromate (Trivalent)
②	Pipe Socket Retainer	ABS	White

RoHS	CAD	Item Code	Item Name	Pipe Dia.	Load Capacity N/set	Load Capacity kgf/set	Weight (g)	Box (sets)	Carton (sets)
–	3D	120-036-235	AP-S32PS	32	441	45	57	8	80

Refer to 1 : P.593, 2 : P.591

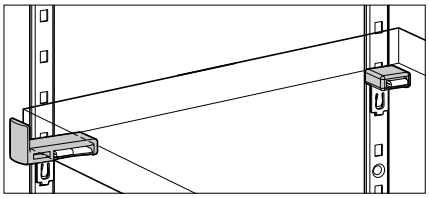
SHELF HOLDER AP-FA20 For SPE, AP-DM, AP-DH



- Use with SPE-FB20S 1, AP-FB20 2.
- Prevents shelf from coming off.

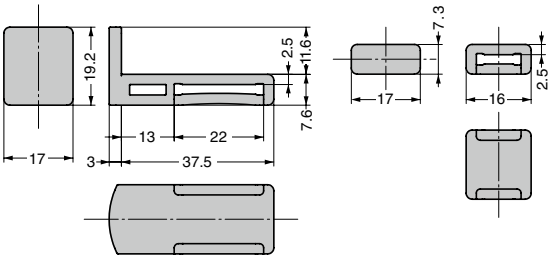
[Remarks]
- Sold in sets (2 parts). 2 sets are necessary for 1 shelf.

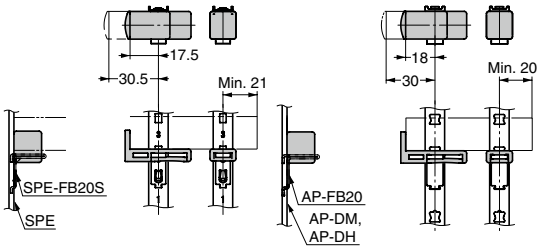
[Installation]



For shelf standard SPE 1

For shelf standard AP-DM, AP-DH 3





RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-024-539	AP-FA20-WT	White	PE	4.9	100	2500
G	3D	120-026-164	AP-FA20-BL	Black			100	2500

Refer to 1 : P.582, 2 : P.592, 3 : P.591

Shelf Support	Board Thickness	Distance (Centre of the shelf standard to edge of the shelf board)
AP-FB20	Min. 12	18 ~ 30
SPE-FB20S	Min. 12	17.5 ~ 30.5
SPE-FB20SWT	Min. 12	17.5 ~ 30.5

SHELF SUPPORT HOOK AP-FK20D For SPE, AP-DM, AP-DH

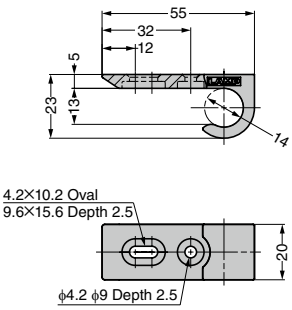


- Shelf support hook to be used with dowel AP-FK20C 1 and shelf support.
- Recommended angle: 0~60° .
- Installed on the back side of shelf with screws.
- Temporary holding feature.

[Remarks]
- Used in pairs.
- Dowel AP-FK20C and shelf support are sold separately. 4 pcs are necessary for 1 shelf.
- The supplied screws are suitable for board thickness above 18mm. Please prepare screws separately depending on the board thickness used.

[Parts Included]
- Truss head tapping screw 4×16 (SUS) 2 pcs.

[Sold Separately]
- Dowel AP-FK20C 1



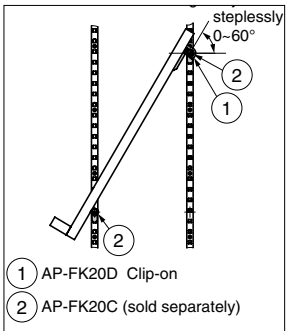
[Installation]



[Application Example]

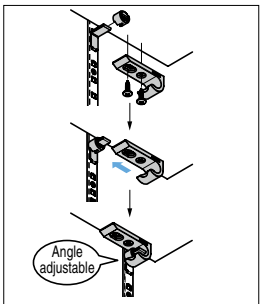


[Application Example]



1 AP-FK20D Clip-on
2 AP-FK20C (sold separately)

[How to Install]



Fit the dowel into the hook part to prevent from coming off.

RoHS	CAD	Item Code	Item Name	Material	Colour	Board Thickness	Load Capacity N※	Load Capacity kgf※	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-030-482	AP-FK20D	POM	White	Min. 18	294	30	11.2	40	400

Refer to 1 : P.596

※AP-FK20D × 2 pcs. / Angle: 60°

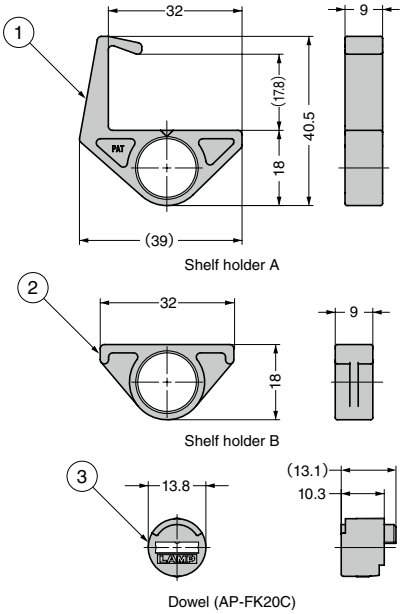
SHELF HOLDER WITH ANGLE ADJUSTING FUNCTION AP-FK20 For SPE, AP-DM, AP-DH



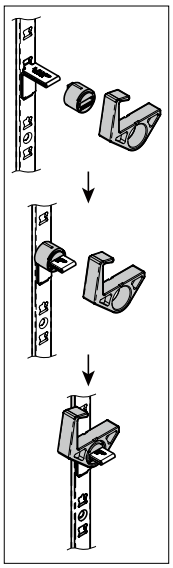
●Use with SPE-FB20S 1, AP-FB20 2.

[Remarks]
●Sold in sets (① 2 pcs, ② 2 pcs, ③ AP-FK20C 4 pcs).
●To prevent shelf from falling, please order 2 dowels (AP-FK20C) for 1 shelf separately 3.

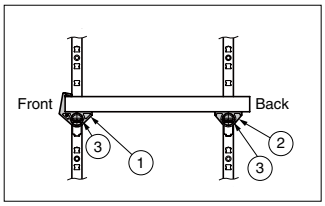
[Sold Separately]
●Dowel AP-FK20C 3.

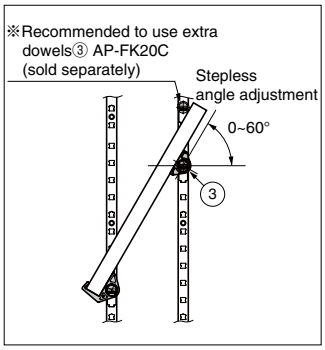


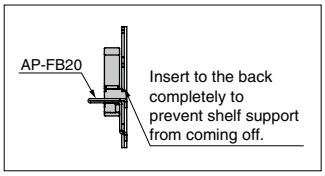
[How to Install]



[Application Example]







[Installation]





[Application Example]



No.	Part Name	Colour	Material
①	Shelf holder A	White	POM
②	Shelf holder B		
③	Dowel		PE

RoHS	CAD	Item Code	Item Name	Board Thickness	Load Capacity N/set	Load Capacity kgf/set	Weight (g)	Box (sets)	Carton (sets)
G	3D	120-024-536	AP-FK20	18~20	98	10	20	200	600

Refer to 1 : P.582, 2 : P.592, 3 : P.596
※Angle: 60°

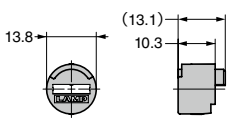
DOWEL AP-FK20C For SPE, AP-DM, AP-DH

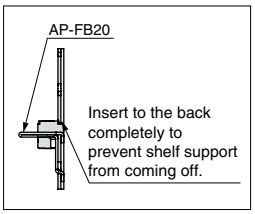


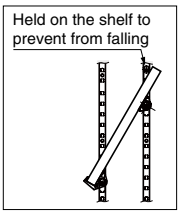
[Installation]



●Recommended to use extra pieces for AP-FK20 1 to hold angled shelf.
●Use alone or together with SPE-FB20S 2 or AP-FB20 3.







RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-024-538	AP-FK20C	White	PE	1	1000	5000

Refer to 1 : P.596, 2 : P.582, 3 : P.592

SHELF HOLDER AP-FB120 For AP-DM

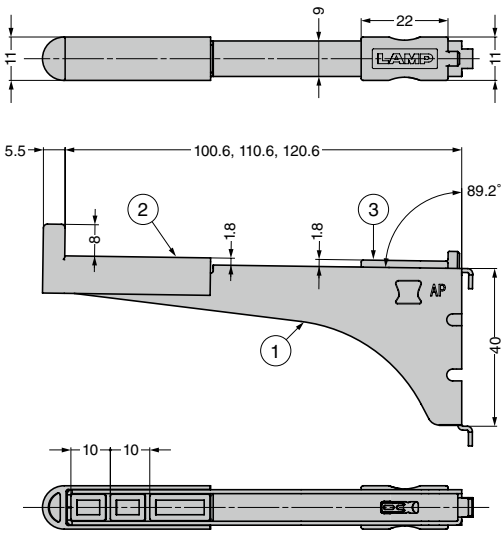
SUS TEMPERED GLASS

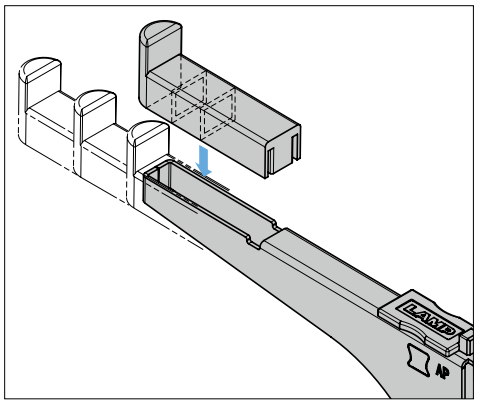


- For shelf standard AP-DM 1.
- Use 2 pcs for installing 1 shelf.
- With holder to simply fix shelf.
- Able to adjust depth in 3 different positions.
- With drop off prevention function.
- Can be used for glass shelf.

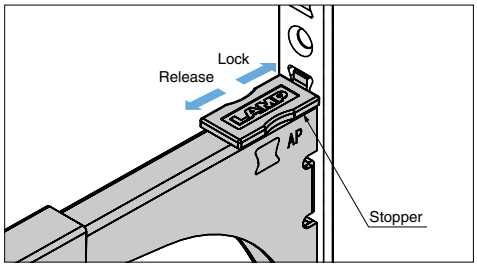
[Remarks]

- Maximum size of shelf board is Width 900 mm × Depth 120 mm.
- Load capacity of below table is the value including the weight of shelf board.
- When fixing shelf standard on wall, please use nominal 3 screws with length above 20mm and install in a position with pillar or other solid substrates.





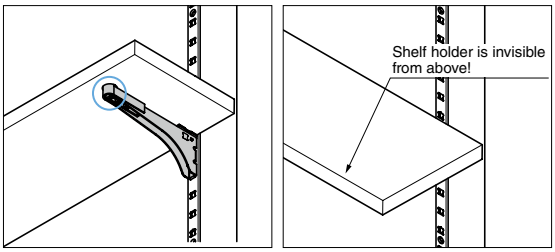
Depth is adjustable in 3 different positions.



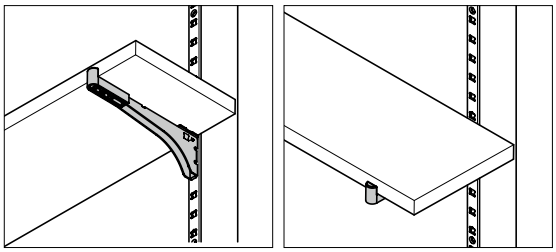
No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS430)	Satin
②	Holder	PP	White
③	Stopper		

[Application Example]

■With Dowel Hole



■Without Dowel Hole



RoHS	CAD	Item Code	Item Name	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-032-997	AP-FB120	49	5	33	20	200

Refer to 1 : P.591

SUGATSUNE

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Sugatsune Website

http://www.sugatsune-intl.com

You can visit the website to

- Check new product information
- View product introduction video
- Browse digital web catalogue
  Refer to Back Cover
- Use product selection tool
  Refer to Back Cover
- Download installation instructions

SUGATSUNE Search

LAMP®

CATCHES, LATCHES & FASTENERS

Catches and latches are a kind of hardware used for holding doors in closed position.

[Latches]
"Latch" means hasp or clasp, which mainly refers to a mechanism that requires operation “releasing the hasp caught on the counter plate”. By using various “releasing” mechanisms such as lever or pusher, easy operation can be realised.

[Catches]
Unlike latch, catch uses other mechanisms than “hasp” for holding, and it mainly refers to a mechanism which "can be released by pulling". Among others, a wide variety of magnetic catches is a core advantage of Sugatsune. We offer various catches with different size, magnetic force and heat resistance.

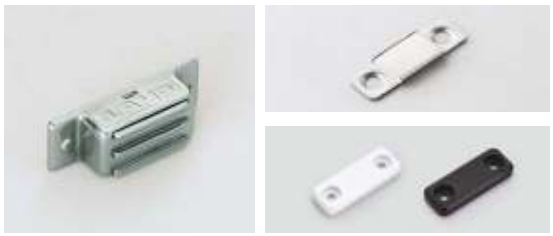
SUGATSUNE

Updated 2017.10.27

MAGNETIC CATCHES
KNUCKLE CATCHES & TENSION CATCHES
TOUCH LATCHES
LEVER LATCHES
SLIDE / BARREL BOLTS
DRAW LATCHES
PUSH LOCK FASTENERS & KNOB FASTENERS
ALUMINIUM FRAME CORNER CONNECTORS
DOOR DAMPERS

■INDEX by Type

Magnetic Catches P.608~



Used for keeping doors closed, our wide range of magnets include strong force type with neodymium earth, heat resistance type, types compliant to food sanitation law, and types specially designed for clean rooms.

Knuckle Catches & Tension Catches P.640~



Used for keeping the door closed with ball and roller.
Can be used in places sensitive to magnetic force with no magnet used.

Touch Latches P.648~



Door can be opened/closed by single touch, without the need of handle or knob.

Lever Latches P.661~



Door can only be opened by operating latch, so it will not open easily even in case of earthquake or other movement.

Slide / Barrel Bolts P.662~



Locked and unlocked positions can be held simply by operating the knob.

Draw Latches P.673~



By operating the lever, door can be pulled in and held together with the cabinet.

Push Lock Fasteners & Knob Fasteners P.687~



Panel can be attached / detached by simple operation such as pushing and rotating.

Aluminium Frame Corner Connectors P.700~



Aluminium frames can be easily joined together.

Door Dampers P.707~



Damper and door pull-in functions work just before the door fully closes, preventing the door from slamming shut.

■INDEX by Specification

Magnetic Catches

For magnetic catches, refer to P.606~.

Knuckle Catches & Tension Catches

P.641~

Picture	Product Name	Material	Push-in Force N (kgf)	Pulling Force N (kgf)
	Knuckle Catch NAC P.641	POM	55.8N (5.7kgf)	69.5N (7.1kgf)
	Knuckle Catch JC-T50 P.641	POM	19N (1.94kgf)	19N (1.94kgf)
	Rotary Catch (Mortise Type) RCU P.642	POM	29.4N (3.0kgf)	31.4N (3.2kgf)
	Rotary Catch RC6900, RC6901 P.642	POM	10.8N (1.1kgf) 21.6N (2.2kgf)	15.7N (1.6kgf) 31.4N (3.2kgf)
	Knuckle Catch JC-24, JC-26 P.643	POM	30.4N (3.1kgf) 21.6N (2.2kgf)	26.5N (2.7kgf) 16.7N (1.7kgf)
	Knuckle Catch (Mortise Type) JCU P.643	POM	19.6N (2.0kgf)	22.5N (2.3kgf)
	Knuckle Catch (Mortise Type) JCU-F P.644	POM	19.6N (2.0kgf)	19.6N (2.0kgf)
	Adjustable Knuckle Catch ESO-6732 P.644	PA	127.4~254.8N (13~26kgf)	78.4~196N (8~20kgf)
	Roller Catch S-1080 (STBRC) P.645	SUS	9.8N (1.0kgf)	26.5N (2.7kgf)
	Tension Catch BCTS P.645	SUS316	20N (2 kgf) 23N (2.3kgf) 56N (5.7kgf)	13N (1.3kgf) 18N (1.8kgf) 38N (3.9kgf)

Picture	Product Name	Material	Push-in Force N (kgf)	Pulling Force N (kgf)
	Tension Catch BCU P.646	Zinc Alloy (ZDC)	35.3N (3.6kgf) 40.2N (4.1kgf)	23.5N (2.4kgf) 38.2N (3.9kgf)
	Tension Catch BCT P.646	Zinc Alloy (ZDC)	43.1N (4.4kgf) 40.2N (4.1kgf) 45.1N (4.6kgf)	29.4N (3.0kgf) 32.3N (3.3kgf) 34.3N (3.5kgf)
	Tension Catch BCT-60W P.647	Zinc Alloy (ZDC)	31.4N (3.2kgf)	26.5N (2.7kgf)
	Roller Catch R500R P.647	Steel (SPCC)	25N (2.6kgf)	64N (6.5kgf)
	Roller Catch R265, R325 P.647	SUS	12.7N (1.3kgf) 9.8N (1kgf)	23.5N (2.4kgf) 30.4N (3.1kgf)
	Roller Catch C882 P.648	PE	–	–

MAGNETIC CATCHES
KNUCKLE CATCHES & TENSION CATCHES
TOUCH LATCHES
LEVER LATCHES
SLIDE / BARREL BOLTS
DRAW LATCHES
PUSH LOCK FASTENERS & KNOB FASTENERS
ALUMINIUM FRAME CORNER CONNECTORS
DOOR DAMPERS

Touch Latches

P.648~

Picture	Product Name	Material	Retaining Force N (kgf)
	Non-magnetic Touch Latch MLC-100DS-WT P.648	Reinforced Nylon / PBT	90N (9.2kgf)
	Non-magnetic Touch Latch MLC-100 P.649	Reinforced Nylon / PBT	90N (9.2kgf)
	Non-magnetic Touch Latch MLC-HT130BL P.649	Reinforced PA / PBT	117.6N (12kgf)
	Non-magnetic Touch Latch MC-37F P.650	ABS	78N (8kgf)
	Non-magnetic Touch Latch MC-20 P.650	PP	40N (4kgf)
	Non-magnetic Touch Latch PR-21P P.651	ABS	–
	Non-magnetic Touch Latch PR-20P P.651	ABS	–
	Non-magnetic Touch Latch MC-28 P.652	ABS	29N (3kgf)
	Non-magnetic Touch Latch ESN-195/BLK P.652	POM	34N (3.5kgf)
	Non-magnetic Mini Touch Latch PR4PK-B P.653	POM	12N (1.2kgf)
	Non-magnetic Mini Touch Latch NS2 P.653	PC	–
	Non-magnetic Touch Latc PR3PK P.654	ABS	–

Picture	Product Name	Material	Retaining Force N (kgf)
	Magnetic Touch Latch ML-120 P.654	ABS	23.5N (2.4kgf)
	Magnetic Touch Latch ML-80 P.655	ABS	15.7N (1.6kgf)
	Magnetic Touch Latch ML-30S P.655	ABS	11.8N (1.2kgf)
	Magnetic Touch Latch ML-30W P.656	ABS	11.8N (1.2kgf)
	Magnetic Touch Latch MC-25 P.656	PP	4.9N (0.5kgf)
	Magnetic Touch Latch MC-S60 P.657	ABS / POM	10.8N (1.1kgf)
	Magnetic Touch Latch (Mortise Type) MC-U60 P.657	ABS/POM	10.8N (1.1kgf)
	Push Knob Latch TLP-S P.658	Brass	196N (20kgf)
	Push Knob Latch DPL-RO P.659	Zinc Alloy (ZDC) / ABS	98N (10kgf)
	Push Knob Latch DPL-OV P.659	Zinc Alloy (ZDC) / ABS	98N (10kgf)
	Push Knob Latch DPL-SQ P.660	Zinc Alloy (ZDC) / ABS	98N (10kgf)

Lever Latches

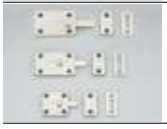
P.661~

Picture	Product Name	Material	Retaining Force N (kgf)
	Stainless Steel Lever Latch LL-66S P.661	SUS316	196N (20kgf)
	Lever Latch LL-66 P.661	PA	196N (20kgf)

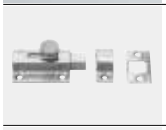
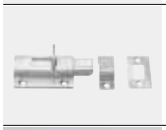
Picture	Product Name	Material	Retaining Force N (kgf)
	Sliding Door Latch HC-30R P.662	SUS	–
	Lever Bolt HR35 P.663	SUS	–

Slide / Barrel Bolts

P.662~

Picture	Product Name	Material
	Bar Latch SSL P.662	SUS
	Bar Latch BLT P.663	SUS
	Bar Latch BLL P.664	SUS
	Stainless Steel Hasp HP P.665	SUS
	Stainless Steel Hasp (Weld-on) HP-635, 645,660 P.666	SUS316
	Stainless Steel Hasp HP-635S, 645S,660S P.666	SUS316
	Slide Bolt FL4 P.667	SUS

Picture	Product Name	Material
	Slide Bolt FL2 P.667	SUS
	Slide Bolt KR75 P.668	SUS
	Slide Bolt KR65 P.668	SUS
	Spring Loaded Barrel Bolt BSS2, BSS3 P.669	SUS
	Spring Loaded Barrel Bolt BSS P.669	SUS
	Spring Loaded Barrel Bolt BLS P.670	SUS
	Spring Loaded Barrel Bolt BL-S P.670	SUS

Picture	Product Name	Material
	Gate Latch SSG P.671	SUS
	Push Barrel Bolt PRS-40 P.671	SUS
	Slide Bolt B-KR P.672	–
	Slide Bolt KR-50 P.672	SUS
	Flush Slam Latch P10 P.672	–

Draw Latches

P.673~

Functions

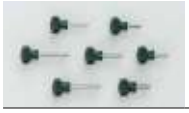
- Adjustment…Clamping margin adjustable after installation.
- With safety lock…With safety lock for preventing accidental release.
- With hole for padlock or sealing tool…Can be used with padlock (P.748) or sealing tool.
- With cam lock…With cam lock for preventing mischief.

Picture	Product Name	Load Capacity	Functions				Clean Room	Corner Mount	Page
			Adjustment	With Safety Lock	Padlock Sealing Tool	With Cam Lock			
	Draw Latch (Clean Room) STF-CV150	3300N (330kgf)	●				●		P.673
	Draw Latch 93416	1500N (153kgf)	●		●				P.677

Picture	Product Name	Load Capacity	Functions				Clean Room	Corner Mount	Page
			Adjustment	With Safety Lock	Padlock Sealing Tool	With Cam Lock			
	Draw Latch 93415	1000N (102kgf)	●		●				P.677
	Draw Latch (W/ Handle) THF-100	980N (100kgf)	●	●	●				P.674
	Stainless Steel Draw Latch (W/ Safety Lock) STF100	784N (80kgf)		●					P.675
	Stainless Steel Draw Latch (W/ Safety Lock) STF82L	784N (80kgf)		●					P.676
	Stainless Steel Draw Latch (Spring Loaded) STF80	784N (80kgf)							P.676
	Draw Latch THF-75	730N (75kgf)	●	●	●				P.675
	Stainless Steel Draw Latch PN-51	686N (70kgf)							P.685
	Stainless Steel Compression Latch STF-CP140	600N (61kgf)	●	●	●				P.680
	Stainless Steel Draw Latch (Spring Loaded) SCC-60	600N (61kgf)							P.681
	Stainless Steel Draw Latch SCC-TF30	500N (51kgf)	●						P.673
	Corner Fastener (W/ Lock) STF-C64A/STF-C64B	330N (34kgf)		●	●			●	P.678
	Draw Latch (Spring Loaded) SCCA-60	330N (34kgf)							P.682
	Stainless Steel Draw Latch STF40	300N (30.6kgf)							P.677
	Stainless Steel Draw Latch (Spring Loaded) SCC-40	250N (25kgf)							P.681
	Stainless Steel Draw Latch (Spring Loaded) SCC-30	200N (20kgf)							P.681
	Draw Latch (Spring Loaded) SCCA-40	200N (20kgf)							P.682
	Stainless Steel Draw Latch (Spring Loaded) SCC-25	100N (10kgf)							P.681
	Corner Fastener STF-A56AH/STF-A56AC	–						●	P.679
	Corner Fastener PS34A	–			●			●	P.679
	Draw Latch P91	–							P.682
	Draw Latch P34	–			●				P.682
	Draw Latch PS, P	–			●				P.683
	Draw Latch P11	–			●				P.683
	Stainless Steel Draw Latch P100SUS	–							P.683
	Draw Latch P	–							P.684
	Stainless Steel Draw Latch PS35	–							P.684
	Draw Latch P1040	–							P.685
	Draw Latch P102H	–							P.686

Push Lock Fastener & Knob Fastener

P.687~

Picture	Product Name	Panel Thickness
	Push Lock Fastener 251F, 151F Large/Flush Type P.688	0.6~12.7 0.8~
	Push Lock Fastener 252F, 152F Mini/Flush Type P.689	0.6~12.7 0.8~
	Push Lock Fastener 255F, 155F Mini/Button Type P.692	0.6~12.7 0.8~
	Push Lock Fastener 149F Push-Turn Type For Horizontal Mount Only P.695	0.6~2.2
	Stainless Steel Knob Fastener SRT Fall-preventing Screw P.696	–
	Knob Fastener BRT Fall-preventing Screw P.696	–
	Knob Fastener DBN Snap-in Installation P.697	Max. 5

Picture	Product Name	Panel Thickness
	Stainless Steel Knob Fastener SRT Full Thread Type P.697	–
	Knob Fastener BRT-L6-10CR, SRT-L6-10S P.697	–
	Knob Fastener BRT-NC P.698	–
	Knob Fastener BRF P.698	–
	Knob Fastener (Urea) UN P.698	–
	Knob Fastener (Phenol) UN P.699	–

Aluminium Frame Corner Connectors

P.700~

Picture	Product Name	Aluminium Frame Groove Width
	Corner Connector PJ One-touch Connector Post-installation Type P.701	For 6 mm 8 mm 10 mm
	Corner Connector PJ One-touch Connector For Single-groove P.702	For 6 mm 8 mm 10 mm
	Corner Connector PJ One-touch Connector For Double-groove P.703	For 6 mm 8 mm

Picture	Product Name	Aluminium Frame Groove Width
	Panel Fixing Middle Bracket AS-PTB P.705	–
	Stainless Steel AS Nut Post-installation Type P.706	For 6 mm 8 mm 10 mm

Door Dampers

P.707~

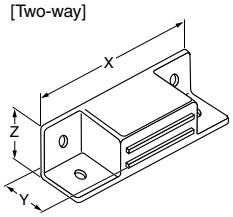
Picture	Product Name	Door Width	Door Weight
	Damper Catch DC P.707	Max. 450 Max. 600	Max. 4kg Max. 7kg
	Soft-Close Stay YMC P.709	Max. 300	0.3~0.7kg
	Door Damper LDD-V P.710	Max. 900	15~40kg

Picture	Product Name	Door Width	Door Weight
	Door Damper LDD-S P.713	Max. 900	15~40kg
	Door Damper LDD-V100 P.715	Max. 900	40~100kg

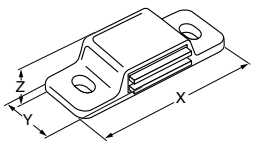
■INDEX by Specification

Magnetic Catches (Magnetic Force · Size · Mounting direction · Description)

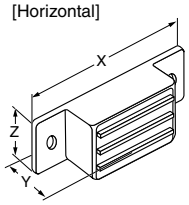
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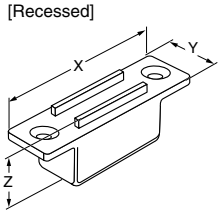
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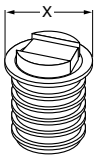
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[Recessed]



[Rounded]

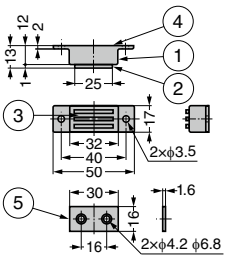


Item Name	Magnetic Force N	Size			Mounting direction	Description	Material	Page
		X	Y	Z				
MCH-105	147	105	21.5	21.4	Two-way	–	Zinc Alloy (ZDC)	P.633
MC0083HP-140	140	50	14.1	17	Horizontal	Heat Resistance, Anti rust	Stainless Steel (SUS304)	P.608
MC0083-N	137	50	14.1	17	Horizontal	–	Stainless Steel (SUS304)	P.608
MCH-80	137	80	21.5	20	Two-way	–	Zinc Alloy (ZDC)	P.633
MCH-61	107	61	21.5	20	Two-way	–	Zinc Alloy (ZDC)	P.633
MC0083D	98	80	13	17	Horizontal	–	Brass	P.608
MC12S	88.2	75.5	24	13	Vertical	–	Aluminium Alloy	P.612
MC-159-8	78.4	41	3	16.5	Horizontal	Ultra Thin	Steel	P.621
MC-110NF	78.4	45	10	11	Two-way	–	PC	P.633
MC-YN005-N	73.5	39	7	11	Horizontal	–	Stainless Steel (SUS430)	P.609
MC0083HP-70	70	50	14.1	17	Horizontal	Heat Resistance, Anti rust	Stainless Steel (SUS304)	P.608
MC-FS-4SW	69	45	6.7	9.7	Recessed	Snap-in Installation	ABS	P.634
SB11A-AA-1	68.6	86.5	26.5	15.3	Vertical	–	Aluminium Alloy	P.610
MC0083	68.6	50	13	17	Horizontal	–	Brass	P.608
MCH-50	68	50	21.5	20	Two-way	–	Zinc Alloy (ZDC)	P.633
MC-FS17W	58.8	64	10	14	Recessed	Snap-in Installation	ABS	P.636
MC-SPL	54.9	106	20.5	16	Vertical	Anti rust	PBT	P.612
MC200-1	53.9	48	22.5	12	Vertical	–	PE	P.613
MC0051	53.9	46	12	14.8	Recessed	–	ABS	P.637
MC0099GP	51	45	14.5	11.5	Two-way	–	PC	P.632
MC-YN005HP-50	50	39	7	11	Horizontal	Heat Resistance, Anti rust	Stainless Steel (SUS430)	P.610
MC12	49	75.5	24	13	Vertical	–	Aluminium Alloy	P.612
MC009S	49	45	15	12	Vertical	–	PE	P.613
MC-111	49	64	7.5	24.5	Horizontal	–	ABS	P.616
MC-159-SUS	49	41	2.8	16.5	Horizontal	Ultra Thin, Anti rust	Stainless Steel (SUS430)	P.621
MC-JM63G-50	49	63	19	14	Two-way	Clean room, Anti rust	POM	P.628
MC-SPM	47	86	17	13	Vertical	Anti rust	PBT	P.612
MC-YC-06	44.1	34	13.5	8	Two-way	–	Zinc Alloy (ZDC)	P.612
MC-FP5S	44.1	40	10	13.5	Recessed	Snap-in Installation	ABS	P.635
MC-FS10	44.1	64	10	14	Recessed	Snap-in Installation	ABS	P.636
SB11B-AA-1	39.2	56.5	26.5	15.3	Vertical	–	Aluminium Alloy	P.610
MS6	39.2	36.5	22	19	Vertical	–	Plastic	P.617
MC-MS50	39.2	50	6.6	17	Horizontal	Clean room, Anti rust	Silicone Rubber (Q)	P.622
MC-MSH50BU	39.2	50	6.6	17	Horizontal	Hygienic, Anti rust	Silicone Rubber (Q)	P.623
MC-159	39	41	2.6	16.5	Horizontal	Ultra Thin	Steel (SPCC)	P.620
MC0099S	37.2	45	14.5	11.5	Two-way	–	ABS	P.632
MC200	34.3	48	22.5	12	Vertical	–	PE	P.613
MC0097-1	34.3	41	18.5	10	Vertical	–	PE	P.613
MC-FS-2SW	34	26.5	6.7	9.7	Recessed	Snap-in Installation	ABS	P.634
SMC-103	29.4	45	17	11.2	Two-way	Built-in reed switch	PC	P.630
MC-YN005	29.4	39	7	11	Horizontal	–	Stainless Steel (SUS430)	P.609
MC-YS001	29.4	34	13.5	6	Vertical	–	PBT	P.611
MC84	29.4	46	25	14.2	Vertical	–	ABS	P.613

Item Name	Magnetic Force N	Size			Mounting direction	Description	Material	Page
		X	Y	Z				
MC17	29.4	50	14	10	Vertical	–	Aluminium Alloy	P.614
MC-112	29.4	53	6.7	23.5	Horizontal	–	ABS	P.616
MC-JM45	29.4	45	5.6	17	Horizontal	Clean room, Anti rust	PP	P.624
MC-JM50	29.4	50	21	13	Vertical	Clean room, Anti rust	POM	P.626
MC-JMS45WT	29.4	45	27	19	Vertical	Clean room, Anti rust	Stainless Steel (SUS304)	P.627
MC-JM63G-30	29.4	63	19	14	Two-way	Clean room, Anti rust	POM	P.628
MC-JM74SW-30	29.4	74	30	14	Two-way	Clean room, Anti rust, Built-in reed switch	POM	P.632
MC-SS30	29.4	29	17	24	Recessed	Snap-in Installation	ABS	P.636
MC-YSW02	29	41	14.6	14.6	Vertical	Snap-in Installation	POM	P.611
MCH-40	29	40	21.5	20	Two-way	–	Zinc Alloy (ZDC)	P.633
MC-KL	27.4	60	18	16	Vertical	–	PBT	P.614
MC-YN016HP-27	27	35	2.8	12	Horizontal	Heat Resistance, Ultra Thin, Anti rust	Stainless Steel (SUS430)	P.618
MC-YN001	26.5	35	2.2	12	Horizontal	Ultra Thin	Steel (SPCC)	P.619
MC-JMF54	25	54	16.5	10	Recessed	Clean room, Anti rust, Snap-in Installation	PP	P.627
MC-FS-4W	25	45	6.7	9.7	Recessed	Snap-in Installation	ABS	P.634
MC009	24.5	45	15	12	Vertical	–	PE	P.613
MC0750	24.5	42	6.7	18	Horizontal	–	Steel (SPCC)	P.616
MC-125	24.5	26.5	30.1	16.5	Vertical	–	ABS	P.617
MC-IS4F	24.5	14	–	–	Rounded	–	PA	P.637
MC-IS4	24.5	14	–	–	Rounded	–	PA	P.637
MC-KM-S	23.5	50.5	17	12	Vertical	–	PBT	P.614
MC-EL	23.5	60	18	16	Vertical	–	PE	P.614
MS4	23.5	33	22	16.5	Vertical	–	Plastic	P.617
MC-YN015S	22.5	35	2.2	12	Horizontal	Ultra Thin, Anti rust	Stainless Steel (Equivalent)	P.618
MC-FS34G	21.6	26	9.8	12.5	Recessed	Snap-in Installation	PA	P.635
MC-FP5	21.6	40	10	13.5	Recessed	Snap-in Installation	ABS	P.635
MC-YN005HP-20	20	39	7	11	Horizontal	Heat Resistance, Anti rust	Stainless Steel (SUS430)	P.610
MC-SM10	20	39	11.5	11	Vertical	–	Aluminium Alloy	P.614
MC-EM-S	19.6	49.5	16	14	Vertical	–	PE	P.614
MC800	19.6	34	27	16.5	Vertical	–	PP	P.617
MC-MS45	19.6	45	6.6	17	Horizontal	Clean room, Anti rust	Silicone Rubber (Q)	P.622
MC-MSH45BU	19.6	45	6.6	17	Horizontal	–	Silicone Rubber (Q)	P.623
MC-YN003	16.6	36	4.5	9	Horizontal	–	Steel (SPCC)	P.616
MC-YN016HP-15	15	35	2.8	12	Horizontal	Heat Resistance, Ultra Thin,Anti rust	Stainless Steel (SUS430)	P.618
MC-FS-2W	15	26.5	6.7	9.7	Recessed	Snap-in Installation	ABS	P.634
MC0097	14.7	41	18.5	10	Vertical	–	PE	P.613
MC-S88	14.7	46	21	15	Vertical	–	Aluminium Alloy	P.615
MC-158	14.7	41	2.6	16.5	Horizontal	Ultra Thin	Steel (SPCC)	P.620
MC-JM63G-15	14.7	63	19	14	Two-way	Clean room, Anti rust	POM	P.628
MC-FS3	12.7	24.2	9.6	12.3	Recessed	Snap-in Installation	ABS	P.634
MC-FS34W	12.7	26	9.8	12.5	Recessed	Snap-in Installation	PA	P.635
MC-YS002	12	34	13.5	6	Vertical	–	PBT	P.611
MC-YSW01	12	41	14.6	14.6	Vertical	Snap-in Installation	POM	P.611
MC16S	11.8	36	11	10	Vertical	–	Aluminium Alloy	P.615
MC0099	10.8	45	14.5	11.5	Two-way	–	ABS	P.632
NB01	10.78	9.5	–	–	Rounded	–	PA	P.637
SMC-101B	9.8	45	17	11.2	Two-way	Built-in reed switch	PC	P.630
MC-113	9.8	43	6.5	17	Horizontal	–	ABS	P.616
MC-IS2	9.8	10	–	–	Rounded	–	PA	P.637
MC-S78	7.8	38	18	11	Vertical	–	Aluminium Alloy	P.615
CM-2B	3.9	13	5	7.9	Recessed	Snap-in Installation	PA	P.636

MAGNETIC CATCH MC0083





[Remarks]
- Be sure to read the "Cautions" 1

[Parts Included]
- Counter plate

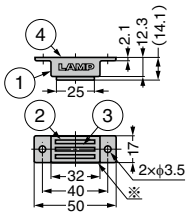
No.	Part Name	Material	Finish
①	Body	Brass	Nickel
②	Yoke	Steel (SPCC)	
③	Magnet	Ferrite	–
④	Cover	Aluminium Alloy	Anodised
⑤	Counter plate	Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-058-068	MC0083	68.6	7.0	32	40	400

Refer to 1 : P.607

MAGNETIC CATCH MC0083-N Strong Force Type





※part is marked with item name

- Strong magnetic force.

[Applications]
- Kitchen, experimental equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80℃

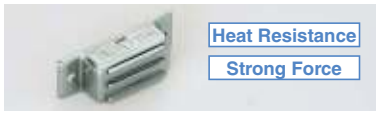
RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-026-513	MC0083-N	137	14	41	40	400

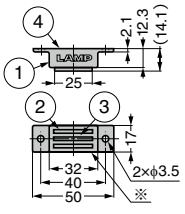
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Yoke	Steel	Nickel
③	Magnet	Neodymium	
④	Cover	Stainless Steel (SUS304)	Plain

Refer to 1 : P.607

MAGNETIC CATCH MC0083HP

NSF SUS





※part is marked with item name

- Suitable for high temperature environments up to 250℃. Small with strong magnetic force.
- Anti rust: made of stainless steel.

[Applications]
- Kitchen, experimental equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 1.

[Sold Separately]
- Counter plate (SUS) AS-68 2

[Counter Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-138	AS-68	17	100	1000

[Body]

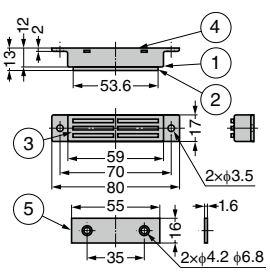
RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-012-729	MC0083HP-70	70	7.1	40	40	400
G	3D	140-012-613	MC0083HP-140	140	14.3		40	400

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel
②	Yoke	Stainless Steel (SUS430)	Polished
③	Magnet	Samarium Cobalt	Plain
④	Cover	Stainless Steel (SUS304)	

Refer to 1 : P.607, 2 : P.639

MAGNETIC CATCH MC0083D





[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Counter plate

No.	Part Name	Material	Finish
①	Body	Brass	Nickel
②	Yoke	Steel (SPCC)	
③	Magnet	Ferrite	–
④	Cover	Aluminium Alloy	Anodised
⑤	Counter plate	Steel (SPCC)	Nickel

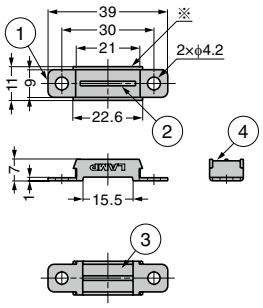
RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-058-067	MC0083D	98	10	63	20	200

Refer to 1 : P.607

MAGNETIC CATCH MC-YN005 Centre Yoke Type

NSF AS SUS





- Thin magnetic catch ideal for tight spaces.
  Heat resistance type MC-YN005HP 1 of the same shape also available.
- Small body with strong magnetic force.
- MC-YN005 (ferrite magnet type) made of stainless steel with excellent rust prevention.
- AS parts set (below) for installing to aluminium frame also available.
- Neodymium magnet type MC-YN005N is newly launched.
  ※part is marked with item name for identification.

[Applications]
- Food equipment, kitchen equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 2.

[Body]

RoHS	CAD	Item Code	Item Name	Magnet	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-558	MC-YN005	Ferrite	29.4	3	9	200	1000
G	3D	140-026-512	MC-YN005-N	Neodymium	73.5	7.5	10	200	1000

Refer to 1 : P.610, 2 : P.607

No.	Part Name	Material		Finish	
		MC-YN005	MC-YN005-N	MC-YN005	MC-YN005-N
①	Yoke	Stainless Steel (SUS430)	Stainless Steel (SUS430)	Plain	Barrel Polished
②	Yoke				Barrel Polished
③	Magnet	Ferrite	Neodymium		Nickel
④	Cover	Stainless Steel (SUS304)	Stainless Steel (SUS304)		Plain

AS Parts Set for Installing to Aluminium Frame

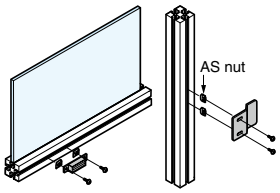
Please refer to the series introduction page 1 for details about AS series.



[AS Parts Set] Parts set of brackets, counter plate, screws and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	140-041-501	AS-MC-YN005-30-6	30×30 Groove Width 6 mm	Magnetic Catch MC-YN005 : 1 pc Counter Plate AS-YN005F : 1 pc AS Nut AS-6M4 : 4 pcs M4×10 Hexagon Socket Button Head Screw : 4 pcs	–
G	–	140-041-502	AS-MC-YN005-30-8	30×30 Groove Width 8 mm	Magnetic Catch MC-YN005 : 1 pc Counter Plate AS-YN005F : 1 pc AS Nut AS-8M4 : 4 pcs M4×10 Hexagon Socket Button Head Screw : 4 pcs	–
G	–	140-041-503	AS-MC-YN005-40-8	40×40 Groove Width 8 mm		–
G	–	140-041-504	AS-MC-YN005-40-10	40×40 Groove Width 10 mm	Magnetic Catch MC-YN005 : 1 pc Counter Plate AS-YN005F : 1 pc AS Nut AS-10M4 : 4 pcs M4×12 Hexagon Socket Button Head Screw : 4 pcs	–
G	–	140-041-505	AS-MC-YN005-40-8-30-6	Door: 30×30 Groove Width 6 mm Frame: 40×40 Groove Width 8 mm	Magnetic Catch MC-YN005 : 1 pc Counter Plate AS-YN005D : 1 pc AS Nut AS-6M4 : 2 pcs AS Nut AS-8M4 : 2 pcs M4×10 Hexagon Socket Button Head Screw : 4 pcs	–
G	–	140-041-506	AS-MC-YN005-40-10-30-8	Door: 30×30 Groove Width 8 mm Frame: 40×40 Groove Width 10 mm	Magnetic Catch MC-YN005 : 1 pc Counter Plate AS-YN005D : 1 pc AS Nut AS-8M4 : 2 pcs AS Nut AS-10M4 : 2 pcs M4×10 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs	–

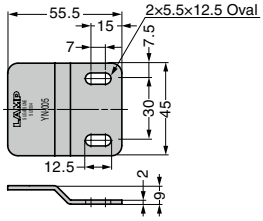
[Installation] **[Counter Plate Installation]**



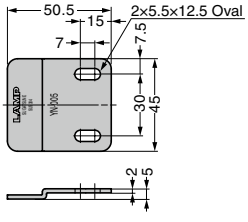
Refer to 1 : FRONT P.20, 2 : P.706

STAINLESS STEEL COUNTER PLATE AS-YN005

SUS



Counter Plate AS-YN005F
(Flat type)



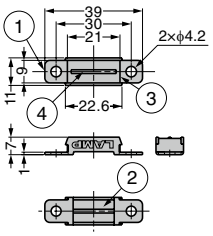
Counter Plate AS-YN005D
(Stepped type)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-090-696	AS-YN005D	Stainless Steel (SUS430)	Barrel Polished	–	50	300
G	3D	140-090-697	AS-YN005F			38	50	300

MAGNETIC CATCH MC-YN005HP Centre Yoke Type



No.	Part Name	Material	Finish
①	Yoke	Stainless Steel (SUS430)	Barrel Polished
②	Magnet	Samarium Cobalt	Plain
③	Cover	Stainless Steel (SUS304)	
④	Yoke	Stainless Steel (SUS430)	Barrel Polished



- Suitable for high temperature environments up to 250˚C . Non-heat resistance type MC-YN005 1 of the same shape also available.
- Anti rust: made of stainless steel.
- Thin magnetic catch ideal for tight spaces.
- Small body with strong magnetic force.

[Applications]
- Kitchen, experimental equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 2 .

[Sold Separately]
- Counter plate (SUS) MC-JM49 3

[Body]

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-012-617	MC-YN005HP-20	20	2	11	200	1000
G	3D	140-012-625	MC-YN005HP-50	50	5.1		200	1000

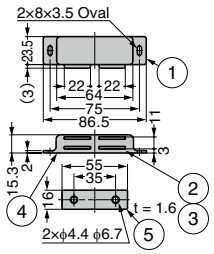
[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-149	MC-JM49	10	100	1000

Refer to 1 : P.609, 2 : P.607, 3 : P.639

MAGNETIC CATCH SB11A-AA-1 With Spring





- Built-in spring in the yoke reduces impact.

[Remarks]
- Be sure to read the "Cautions" 1 .

[Parts Included]
- Counter Plate

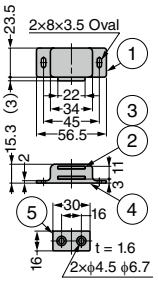
No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Gold Anodised
②	Yoke	Steel (SPCC)	Nickel
③	Magnet	Ferrite	–
④	Cover	Aluminium Alloy	
⑤	Counter Plate	Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-160	SB11A-AA-1	68.6	7	72	25	250

Refer to 1 : P.607

MAGNETIC CATCH SB11B-AA-1 With Spring





- Built-in spring in the yoke reduces impact.

[Remarks]
- Be sure to read the "Cautions" 1 .

[Parts Included]
- Counter plate

No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Gold Anodised
②	Yoke	Steel (SPCC)	Nickel
③	Magnet	Ferrite	–
④	Cover	Aluminium Alloy	
⑤	Counter Plate	Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-161	SB11B-AA-1	39.2	4	36.7	30	300

Refer to 1 : P.607

MAGNETIC CATCH MC-YS

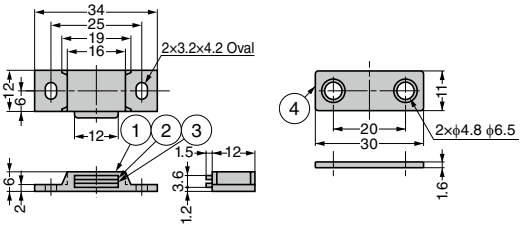


- Thin magnetic catch of 6mm high ideal for tight spaces.
- Small body with strong magnetic force by using neodymium magnet: MC-YS001, MC-YS001P.
- Weaker magnetic force (ferrite magnet): MC-YS002, MC-YS002P.
- Zinc alloy MC-YC-06 1 with strong magnetic force also available.

[Remarks]
- Be sure to read the "Cautions" 2.
- Max. temperature for neodymium magnet: 80˚c

[Parts Included]
For MC-YS001P, MC-YS002P only
- Counter Plate
- Countersunk head wood screw 2.9×13, pan head wood screw 3.1×13

No.	Part Name	Material		Finish / Colour	
		MC-YS001 MC-YS001P	MC-YS002 MC-YS002P	MC-YS001 MC-YS001P	MC-YS002 MC-YS002P
①	Body	PBT		White	
②	Yoke	Steel (SPCC)		Coloured Zinc Chromate (Trivalent)	Clear Zinc Chromate (Trivalent)
③	Magnet	Neodymium	Ferrite	Nickel	–
④	Counter Plate	Steel		Coloured Zinc Chromate (Trivalent)	



RoHS	CAD	Item Code	Item Name	Type	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-298	MC-YS001	Magnetic Catch Only	29.4	3	6	100	1000
G	3D	140-050-296	MC-YS001P	Magnetic Catch・Counter Plate & Screws				100	1000
G	3D	140-050-297	MC-YS002	Magnetic Catch Only	12	1.2	5	100	1000
G	3D	140-050-295	MC-YS002P	Magnetic Catch・Counter Plate & Screws				100	500

Refer to 1 : P.612, 2 : P.607

MAGNETIC CATCH MC-YSW SNAP-IN TYPE

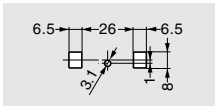


- Snap-in magnetic catch for sheet metal applications.
- Thin magnetic catch of 6mm high ideal for tight spaces.
- Small body with strong magnetic force by using neodymium magnet: MC-YSW02.
- Weaker magnetic force (ferrite magnet) also available: MC-YSW01

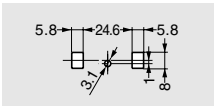
[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature for neodymium magnet: 80˚c
- For 1mm and 2mm door, please use spacer YS-P05 (not need for 1.6mm and 2.6mm door).

[Sold Separately]
- Spacer YS-P05

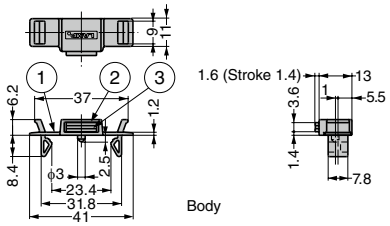
[Cut Out Dimensions]
For 1mm door (Need YS-P05)
For 1.6mm door (No need YS-P05)



For 2mm door (Need YS-P05)
For 2.6mm door (No need YS-P05)



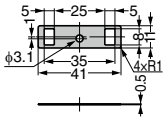
No.	Part Name	Material		Finish / Colour	
		MC-YSW01	MC-YSW02	MC-YSW01	MC-YSW02
①	Body	POM		White, Black	
②	Yoke	Steel (SPCC)		Clear Zinc Chromate	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	Neodymium	Plain	Nickel



Body



Spacer YS-P05



Spacer

[Body]

RoHS	CAD	Item Code	Item Name	Colour	Magnet	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-050-001	MC-YSW01W	White	Ferrite	12	1.2	5	100	1000
–	3D	140-050-028	MC-YSW01B	Black					100	1000
–	3D	140-050-002	MC-YSW02W	White	Neodymium	29	3	5.5	100	1000
–	3D	140-050-029	MC-YSW02B	Black					100	1000

[Spacer] Sold Separately

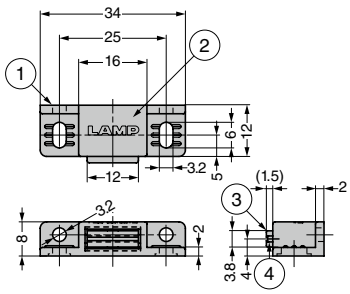
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-003	YS-P05	PP	Natural	0.16	1000	10000

Refer to 1 : P.607

Updated 2017.10.27

MAGNETIC CATCH MC-YC-06





- Strong die-cast body.
- Small body with strong magnetic force by using neodymium magnet.
- Can be installed vertically or horizontally.

[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80°C

[Recommended Screws]
- M3 Pan head screw
  MC-YS 2 with PBT body also available.

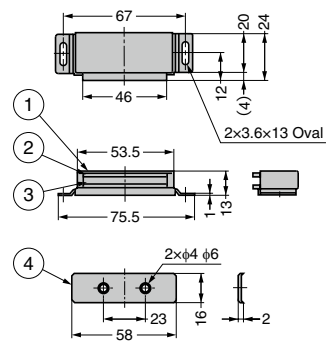
No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Nickel
②	Case Bracket	Stainless Steel (SUS304)	–
③	Yoke	Steel	Clear Zinc Chromate (Trivalent)
④	Magnet	Neodymium	Nickel

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-028-432	MC-YC-06	44.1	4.5	12	100	1000

Refer to 1 : P.607, 2 : P.611

MAGNETIC CATCH MC12





[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Counter Plate

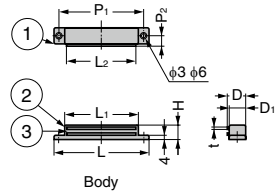
No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	MC12: Gold Anodised
			MC12S: Paint/Metallic Brown
②	Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	MC12: Clear Zinc Chromate (Trivalent)
			MC12S: Chrome

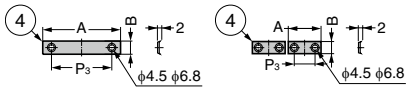
RoHS	CAD	Item Code	Item Name	Finish	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-093	MC12	Gold Anodised	49	5	72.9	20	200
G	3D	140-050-094	MC12S	Paint/Metallic Brown	88.2	9		20	200

Refer to 1 : P.607

MAGNETIC CATCH MC-SP







- Sponge inside reduces noise when the door closed.

[Remarks]
- Be sure to read the "Cautions" 1.

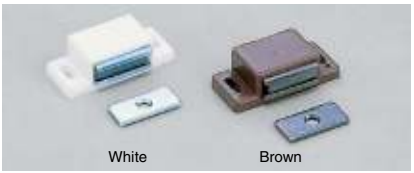
[Parts Included]
- Counter plate
- Sponge cushion
- Countersunk head wood screw 2.7×1.6 (SUS)

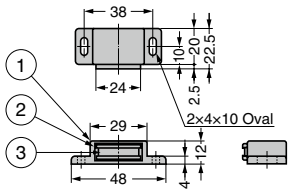
No.	Part Name	Material	Colour
①	Body	PBT	White
②	Yoke	Stainless Steel (SUS430)	Plain
③	Magnet	Ferrite	
④	Counter Plate	Stainless Steel (SUS430)	

RoHS	CAD	Item Code	Item Name	L	L1	L2	D	D1	H	P1	P2	t	A	B	P3	Magnetic Force N	Magnetic Force kgf	Weight (g)	Screw (pc)	Box (pcs)	Carton (pcs)
G	3D	140-050-070	MC-SPM-S	86	68.4	63	17	15	13	77	9.5	1.5	70	12	57	47	4.8	57	4	12	360
G	3D	140-050-071	MC-SPM-W										30	11	20			53.5	6	12	360
G	3D	140-050-072	MC-SPL-S	106	85.6	80	20.5	18	16	94	11.5	2	79	14	65	54.9	5.6	100	4	6	180
G	3D	140-050-073	MC-SPL-W										38		25				6	6	180

Refer to 1 : P.607

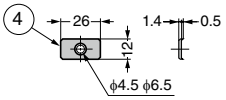
MAGNETIC CATCH MC200





[Remarks]
- Be sure to read the "Cautions" 1

[Parts Included]
- Counter plate

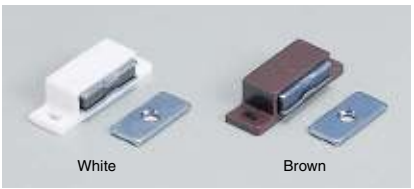


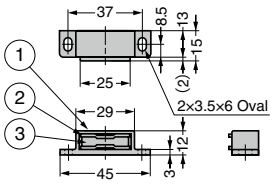
No.	Part Name	Material	Finish / Colour
①	Body	PE	White, Brown
②	Yoke	Steel (SPCC)	(White) Clear Zinc Chromate
			(Brown) Bronze
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	(White) Clear Zinc Chromate
			(Brown) Bronze

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	140-058-030	MC200W	White	34.3	3.5	20	100	1000
G'	3D	140-058-031	MC200BR	Brown				100	1000
G'	3D	140-058-032	MC200W-1	White	53.9	5.5		100	1000
G'	3D	140-058-033	MC200BR-1	Brown				100	1000

Refer to 1 : P.607

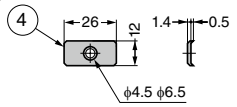
MAGNETIC CATCH MC009





[Remarks]
- Be sure to read the "Cautions" 1

[Parts Included]
- Counter plate



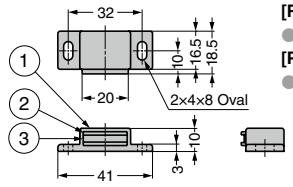
No.	Part Name	Material	Finish / Colour
①	Body	PE	White, Brown
②	Yoke	Steel (SPCC)	Clear Zinc Chromate
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	140-040-008	MC009W	White	24.5	2.5	17	100	1000
G'	3D	140-058-010	MC009BR	Brown				100	1000
G'	3D	140-040-009	MC009SW	White	49	5		100	1000
–	3D	140-058-012	MC009SBR	Brown				100	1000

Refer to 1 : P.607

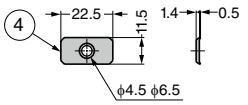
MAGNETIC CATCH MC0097





[Remarks]
- Be sure to read the "Cautions" 1

[Parts Included]
- Counter plate



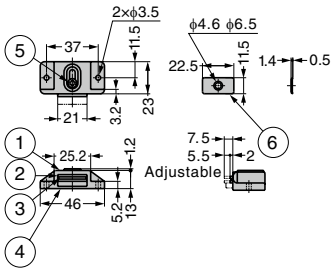
No.	Part Name	Material	Finish / Colour
①	Body	PE	White, Black
②	Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Clear Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	140-050-331	MC0097W	White	14.7	1.5	12	100	1000
G'	3D	140-050-332	MC0097B	Black				100	1000
G'	3D	140-050-329	MC0097W-1	White	34.3	3.5		100	1000
G'	3D	140-050-330	MC0097B-1	Black				100	1000

Refer to 1 : P.607

MAGNETIC CATCH MC84





- Yoke position adjustable 5.5mm back and forward.

[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Counter plate
- Pan head wood screw 3.1×13
- Countersunk head wood screw 2.7×13

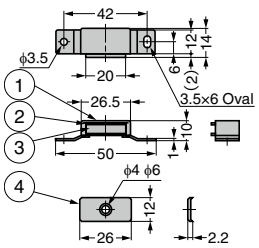
No.	Part Name	Material	Finish / Colour	
			BR	BG
①	Body	ABS	Brown	Beige
②	Yoke	Steel (SPCC)	Bronze	Nickel
③	Magnet	Ferrite	–	–
④	Back Cover	ABS	Brown	White
⑤	Screw	Steel (SS)	Bronze	Nickel
⑥	Counter Plate	Steel (SPCC)		

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	140-058-046	MC84BR	Brown	29.4	3	18	100	1000
G'	3D	140-058-047	MC84BG	Beige				100	1000

Refer to 1 : P.607

MAGNETIC CATCH MC17





[Remarks]
- Be sure to read the "Cautions" 1

[Parts Included]
- Counter plate

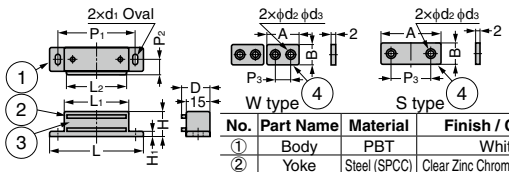
No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Gold Anodised
②	Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Clear Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-097	MC17	Gold Anodised	29.4	3	15.3	200	1600

Refer to 1 : P.607

MAGNETIC CATCH MC-K





- Sponge inside reduces noise when the door closed.

No.	Part Name	Material	Finish / Colour
①	Body	PBT	White
②	Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Chrome

[Remarks]
- Be sure to read the "Cautions" 1.

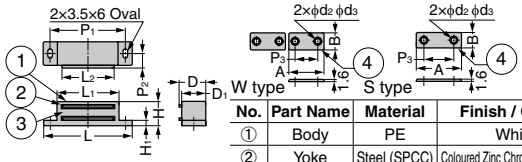
[Parts Included]
- Counter plate
- Sponge cushion
- Pan head wood screw 3.1×13
- Countersunk head wood screw 2.9×13

RoHS	CAD	Item Code	Item Name	L	L1	L2	D	H	H1	P1	P2	d1	A	B	P3	d2	d3	Magnetic Force N	Magnetic Force kgf	Weight (g)	Screw (pcs)	Box (pcs)	Carton (pcs)
G	3D	140-050-290	MC-KM-S	50.5	33	30	17	12	3	42	10	3.2×6.2	30	11.5	20	4.2	6.7	23.5	2.4	26	4	12	720
G	3D	140-050-291	MC-KL-S	60	42	38	18	16	3.2	50	10.5	3.2×6	38	14	25	4.3	6.4	27.4	2.8	45		12	360
G	3D	140-050-292	MC-KL-W										20	13	10						6	12	360

Refer to 1 : P.607

MAGNETIC CATCH MC-E





[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Counter plate
- Pan head wood screw 3.1×13
- Countersunk head wood screw 2.9×13

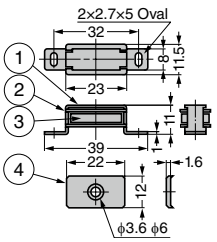
No.	Part Name	Material	Finish / Colour
①	Body	PE	White
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	L	L1	L2	D	D1	H	H1	P1	P2	A	B	P3	d2	d3	Magnetic Force N	Magnetic Force kgf	Weight (g)	Screw (pcs)	Box (pcs)	Carton (pcs)
G	3D	140-050-058	MC-EM-S	49.5	33	28	16	15	14	4	41.5	9	30	11	20	4.8	6.5	19.6	2	26	4	24	720
G	3D	140-050-059	MC-EL-S	60	41	35	18	16	16	3.5	50	9.5	38	14	25	4.3	6.4	23.5	2.4	38		24	360
G	3D	140-050-060	MC-EL-W										20	13	10	4.4					6	24	360

Refer to 1 : P.607

MAGNETIC CATCH MC-SM10





[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Counter plate
- Round head wood screw 2.7×13 (2 pcs)
- Countersunk head wood screw 2.4×13 (1 pc)

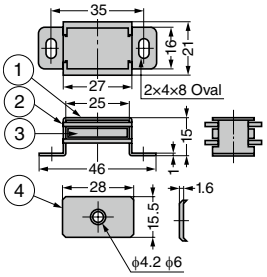
No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Anodised
②	Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Clear Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-202	MC-SM10	20	2	12	100	1600

Refer to 1 : P.607

MAGNETIC CATCH MC-S88





[Remarks]
- Be sure to read the "Cautions" 1

[Parts Included]
- Counter plate
- Round head wood screw 3.1×13 (2 pcs)
- Countersunk head wood screw 2.9×13 (1 pc)

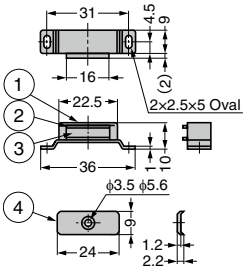
No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Plain
②	Yoke	Steel (SPCC)	Clear Zinc Chromate
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-050-032	MC-S88	14.7	1.5	28.5	24	720

Refer to 1 : P.607

MAGNETIC CATCH MC16S





[Remarks]
- Be sure to read the "Cautions" 1

[Parts Included]
- Counter plate

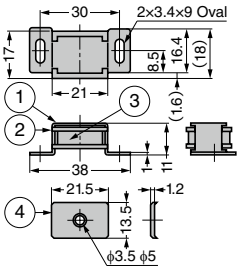
No.	Part Name	Material	Finish
①	Body	Aluminium Alloy	Paint/Metallic Brown
②	Yoke	Steel (SPCC)	GB
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Chrome

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-096	MC16S	11.8	1.2	7.5	200	2000

Refer to 1 : P.607

MAGNETIC CATCH MC-S78





[Remarks]
- Be sure to read the "Cautions" 1

[Parts Included]
- Counter plate
- Pan head wood screw 3.1×13 (2 pcs)
- Countersunk head wood screw 2.4×13 (1 pc)

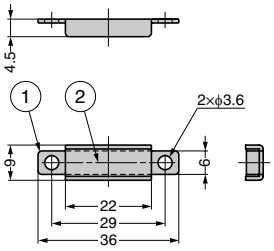
No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Brown Enamel Finish
②	Yoke	Steel (SPCC)	Clear Zinc Chromate
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-050-030	MC-S78	7.8	0.8	17	36	720

Refer to 1 : P.607

MAGNETIC CATCH MC-YN003





●Thin magnetic catch of 4.5mm thick ideal for tight spaces.

[Remarks]
●Be sure to read the "Cautions" 1.
●Please install so that the counter plate contacts the yoke on both sides. Direct contact with magnet may cause magnet breaking.

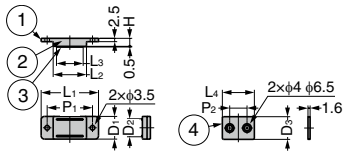
No.	Part Name	Material	Finish
①	Yoke	Steel (SPCC)	Nickel
②	Magnet	Ferrite	–

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-540	MC-YN003	16.6	1.7	5	500	2500

Refer to 1 : P.607

MAGNETIC CATCH MC-111, MC-112, MC-113





●Surface mount type thin magnetic catch ideal for tight spaces.

[Remarks]
●Be sure to read the "Cautions" 1.
[Parts Included]
●Counter plate

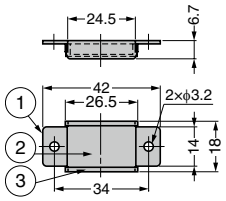
No.	Part Name	Material	Finish / Colour
①	Body	ABS	Black, Ivory
②	Magnet	Ferrite	–
③	Yoke	Steel	Clear Zinc Chromate
④	Counter Plate	(SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Colour	L1	L2	L3	L4	D1	D2	D3	P1	P2	H	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-463	MC-111B	Black	64	46	42	45	24.5	21	24	55	30	7	49	5	48	50	500
G	3D	140-059-464	MC-111IV	Ivory														50	500
–	3D	140-059-465	MC-112B	Black	53	35	31	34	23.5	20	23	44	20	6.2	29.4	3	32	50	500
–	3D	140-059-466	MC-112IV	Ivory														50	500
G	3D	140-059-467	MC-113B	Black	43	25	20	24	17	13.5	17	34	13	6	9.8	1	14	100	1000
G	3D	140-059-468	MC-113IV	Ivory														100	1000

Refer to 1 : P.607

MAGNETIC CATCH MC0750





[Remarks]
●Be sure to read the "Cautions" 1.

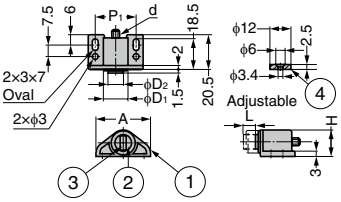
No.	Part Name	Material	Finish
①	Yoke	Steel (SPCC)	Nickel
②	Magnet	Ferrite	–
③	Cover	Stainless Steel (SUS304)	Polished

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-057-000	MC0750	24.5	2.5	19	150	750

Refer to 1 : P.607

MAGNETIC CATCH MS





- Yoke position adjustable back and forward.

[Remarks]
- Be sure to read the "Cautions" 1.
- Screws not included.
- Magnet yoke without surface finish may rust.

[Parts Included]
- Counter plate W4 2

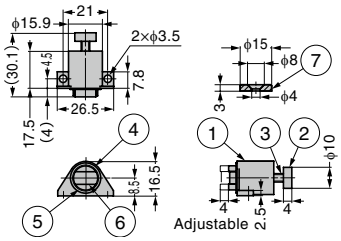
No.	Part Name	Material	Finish / Colour
①	Body	Plastic	White, Brown
②	Yoke	Steel	Plain
③	Magnet	Ferrite	–
④	Counter Plate W4	Steel (SPHC)	Coloured Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Colour	A	P1	D1	D2	d	H	L	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-050-506	MS4WP	White	33	25.5	14	9	M4	16.5	5	23.5	2.4	11.7	–	1000
–	3D	140-050-507	MS4BRP	Brown											–	1000
–	3D	140-050-508	MS6WP	White	36.5	28	17	11	M5	19	3	39.2	4	17.7	–	1000
–	3D	140-050-509	MS6BRP	Brown											–	1000

Refer to 1 : P.607, 2 : P.639

MAGNETIC CATCH MC-125





- Yoke position adjustable 4mm back and forward.
- Yoke position adjustable back and forward by turning the knob on the back side of the body.

[Remarks]
- Be sure to read the "Cautions" 1.
- Screws not included.

[Parts Included]
- Counter plate W12 2

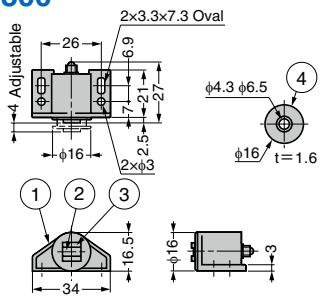
No.	Part Name	Material	Finish / Colour
①	Body	ABS	White, Black
②	Knob	Brass	Nickel
③	Bolt	ABS	White, Black
④	Tube	Brass	Nickel
⑤	Yoke	Steel (SS)	Clear Zinc Chromate
⑥	Magnet	Ferrite	–
⑦	Counter Plate W12	Steel (SUM)	Nickel

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-021-954	MC-125WTP	White	24.5	2.5	14.5	20	1000
G	3D	140-021-955	MC-125BLP	Black				20	1000

Refer to 1 : P.607, 2 : P.639

MAGNETIC CATCH MC800





- Yoke position adjustable 4mm back and forward.

[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Counter plate

No.	Part Name	Material	Finish / Colour
①	Body	PP	Brown
②	Magnet	Ferrite	–
③	Yoke	Steel (SPCC)	Bronze
④	Counter Plate		

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-058-048	MC800	19.6	2	8	100	1000

Refer to 1 : P.607

MAGNETIC CATCH MC-YN015S, MC-YN015SP

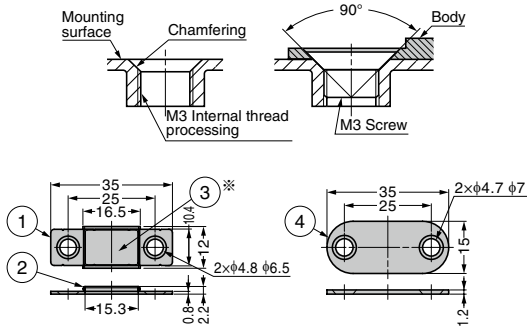
SUS



MC-YN015S (Magnetic catch)　MC-YN015SP (Magnetic catch, counter plate and screws)

- Ultra thin magnetic catch of 2.2mm thick ideal for tight space.
- Stainless steel type of the same size as conventional MC-YN001 1.
- Anti rust: made of stainless steel and acrylic resin coated magnet.
- Small body with strong magnetic force by using neodymium magnet.
- Magnetic catch only or set including magnetic catch, counter plate and screws available.
- Installation with rivet is also possible.

[Cut Out Dimensions and Installation Example] For M3 screw



※Magnet is stored under the cover.

[Remarks]

- Be sure to read the “Cautions” 2.
- Rust may occur when using in direct water exposure or high temperature and high humidity environment.
- Max. temperature: 80℃
- The counter plate should be in contact with the yokes on both sides and should not be in contact directly with the cover. Direct contact may break the magnet.
- Be sure to chamfer the mounting surface for screws and rivets.In this way, screw head will not project when the body is fixed (refer to “Cut Out Dimensions and Installation Example”).

[Parts Included]

For MC-YN015SP only
- Counter plate
- Countersunk head tapping screw 3×14 (SUS)

[Recommended Screws]

- Countersunk head screw M3 or Countersunk head wood screw nominal 3.1

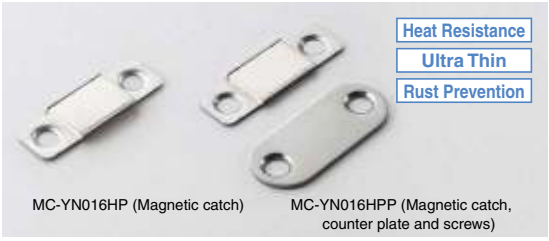
No.	Part Name	Material	Finish
①	Yoke	Stainless Steel (Equivalent)	Barrel Polished
②	Cover	Stainless Steel (SUS304)	Plain
③	Magnet	Neodymium	Plastic Coating
④	Counter Plate	Stainless Steel (Equivalent)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Type	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-020-672	MC-YN015S	Magnetic Catch Only	22.5	2.3	3.6	100	2000
G	3D	140-020-673	MC-YN015SP	Magnetic catch・Counter Plate & Screws			7.3	100	2000

Refer to 1 : P.619, 2 : P.607

MAGNETIC CATCH MC-YN016HP

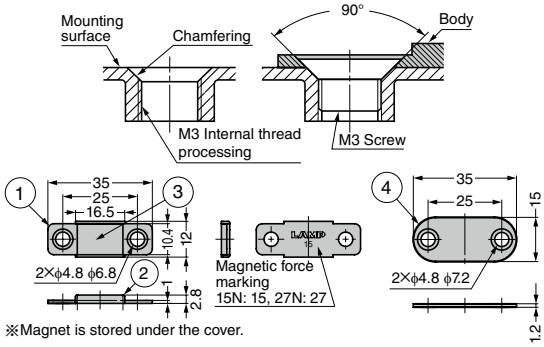
SUS



MC-YN016HP (Magnetic catch)　MC-YN016HPP (Magnetic catch, counter plate and screws)

- Suitable for high temperature environments up to 250℃ .
- Anti rust: made of stainless steel.
- Ultra thin magnetic catch of 2.8mm thick ideal for tight spaces.
- Small body with strong magnetic force (samarium cobalt magnet).
- Magnetic catch only or set including magnetic catch, counter plate and screws available.
- Installation with rivet is also possible.
- Non-heat resistance type MC-YN015S 1 of the same shape also available.

[Cut Out Dimensions and Installation Example] For M3 screw



※Magnet is stored under the cover.

[Remarks]

- Be sure to read the “Cautions” 2.
- The counter plate should be in contact with the yokes on both sides and should not be in contact directly with the cover. Direct contact may break the magnet.
- Be sure to chamfer the mounting surface for screws and rivets. In this way, screw head will not project when the body is fixed (refer to “Cut Out Dimensions and Installation Example”).

[Parts Included]

For MC-YN016HPP only
- Counter plate
- Countersunk head tapping screw 3×14 (SUS)

[Recommended Screws]

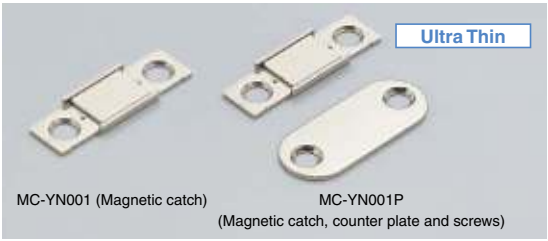
- Countersunk head screw M3 or Countersunk head wood screw nominal 3.1

No.	Part Name	Material	Finish
①	Yoke	Stainless Steel (SUS430)	Barrel Polished
②	Cover	Stainless Steel (SUS304)	Plain
③	Magnet	Samarium Cobalt	
④	Counter Plate	Stainless Steel (SUS430)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Type	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-033-220	MC-YN016HP-15	Magnetic Catch Only	15	1.5	4	100	2000
G	3D	140-033-221	MC-YN016HPP-15	Magnetic Catch・Counter Plate & Screws			10.4	100	2000
G	3D	140-033-222	MC-YN016HP-27	Magnetic Catch Only	27	2.8	5	100	2000
G	3D	140-033-223	MC-YN016HPP-27	Magnetic Catch・Counter Plate & Screws			11.4	100	2000

Refer to 1 : P.618, 2 : P.607

MAGNETIC CATCH MC-YN001, MC-YN001P



MC-YN001 (Magnetic catch)

MC-YN001P
(Magnetic catch, counter plate and screws)

- Ultra thin magnetic catch of 2.2mm thick ideal for tight spaces.
- Small body with strong magnetic force by using neodymium magnet.
- Magnetic catch only or set including magnetic catch, counter plate and screws available.
- Installation with rivet is also possible.

[Remarks]

- Be sure to read the "Cautions" 1.
- Max. temperature: 80℃
- The counter plate should be in contact with the yokes on both sides and should not be in contact directly with the magnet. Direct contact may break the magnet.
- Be sure to chamfer the mounting surface for screws and rivets. In this way, screw head will not project when the body is fixed (refer to "Cut Out Dimensions and Installation Example").

[Parts Included]

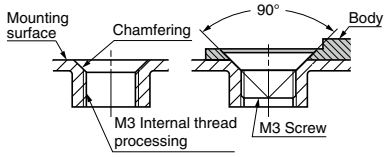
For MC-YN001P only

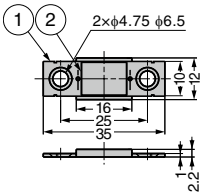
- Counter plate MC-YN001U 2
- Countersunk head tapping screw 3×14

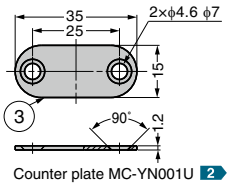
[Recommended Screws]

- Countersunk head screw M3 or Countersunk head wood screw nominal 3.1

[Cut Out Dimensions and Installation Example] For M3 screw







Counter plate MC-YN001U 2

No.	Part Name	Material	Finish
①	Yoke	Steel (SPCC)	Nickel
②	Magnet	Neodymium	
③	Counter Plate	Steel (SPCC)	

RoHS	CAD	Item Code	Item Name	Type	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (sets)	Carton (sets)
G	3D	140-050-257	MC-YN001	Magnetic Catch Only	26.5	2.7	4.0	100	1000
G	3D	140-050-000	MC-YN001P	Magnetic Catch・Counter Plate & Screws			7.5	100	1000

Refer to 1 : P.607, 2 : P.640

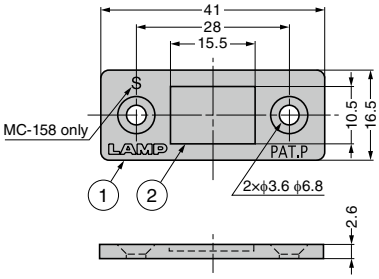
MAGNETIC CATCH MC-158, MC-159



- Ultra thin magnetic catch of 2.6mm thick ideal for tight spaces.
- Small body with strong magnetic force by using neodymium magnet.
- Similar items (extra strong magnetic force): MC-159-8 1, MC-159-SUS 2.
- AS parts set (below) for installing to aluminium frame also available.

[Remarks]
- Be sure to read the "Cautions" 3.
- Max. temperature: 80℃
- The counter plate should be in contact with the body. Direct contact with the magnet may break the magnet.
- Only MC-158 is marked with "S" to differentiate it from MC-159 (see the drawing below)

[Recommended Screws]
- Countersunk head screw M3 or Countersunk head wood screw 3.1



No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Nickel
②	Magnet	Neodymium	

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-014	MC-158	14.7	1.5	12	200	1000
G	3D	140-058-061	MC-159	39	4		200	1000

Refer to 1 2 : P.621, 3 : P.607

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

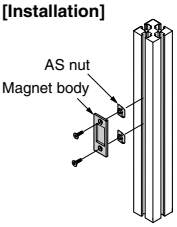


[AS Parts Set] Parts set of counter plate, screws and AS nuts used for installing to aluminium frame

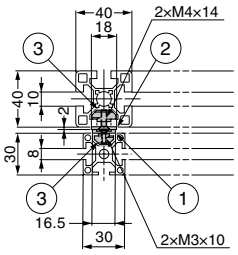
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	140-041-498	AS-MC-159-30-6	30×30 Groove Width 6 mm	Magnetic Catch MC-159 : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-6M3 : 2 pcs AS Nut AS-6M4 : 2 pcs M3×10 Hexagon Socket Countersunk Head Screw : 2 pcs M4×10 Hexagon Socket Countersunk Head Screw : 2 pcs	36
G	–	140-041-499	AS-MC-159-30-8	30×30 Groove Width 8 mm	Magnetic Catch MC-159 : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M3 : 2 pcs AS Nut AS-8M4 : 2 pcs M3×10 Hexagon Socket Countersunk Head Screw : 2 pcs M4×10 Hexagon Socket Countersunk Head Screw : 2 pcs	44
G	–	140-041-500	AS-MC-159-40-8	40×40 Groove Width 8 mm		48

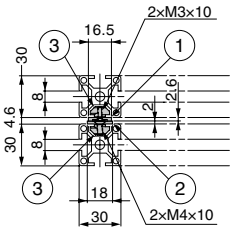
※Item names correspond to MC-159.

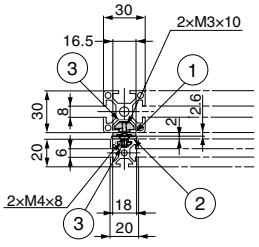
[Installation]



[Dimensions]







No.	Product Name
①	Magnetic Catch MC-159
②	Counter Plate AS-68
③	AS Nut

Refer to 1 : FRONT P.20, 2 : P.639, 3 : P.706

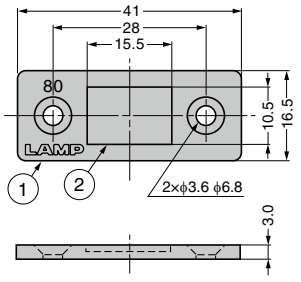
MAGNETIC CATCH MC-159-8 Strong Force Type



- Ultra thin magnetic catch of 3mm thick ideal for tight spaces.
- Small body with extra strong magnetic force by using neodymium magnet.
- Similar items (different magnetic force): MC-158, MC-159 1, MC-159-SUS 2.

[Remarks]
- Be sure to read the "Cautions" 3.
- Max. temperature: 80℃
- The counter plate should be in contact with the body. Direct contact with the magnet may break the magnet.

[Recommended Screws]
- Countersunk head screw M3 or Countersunk head wood screw 3.1



No.	Part Name	Material	Finish
①	Body	Steel	Nickel
②	Magnet	Neodymium	

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-026-510	MC-159-8	78.4	8	14	200	1000

Refer to 1 : P.620, 2 : P.621, 3 : P.607

MAGNETIC CATCH MC-159-SUS

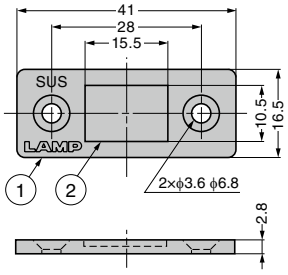
SUS



- Anti rust: made of stainless steel and acrylic resin coated magnet.
- Ultra thin magnetic catch of 2.8mm thick ideal for tight spaces.
- Small body with strong magnetic force by using neodymium magnet.
- Similar items (different magnetic force): MC-158, MC-159 1, MC-159-8 2.

[Remarks]
- Be sure to read the "Cautions" 3.
- Max. temperature: 80℃
- The counter plate should be in contact with the body. Direct contact with the magnet may break the magnet.

[Recommended Screws]
- Countersunk head screw M3 or Countersunk head wood screw 3.1



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS430)	Barrel Polished
②	Magnet	Neodymium	Acrylic Coating

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-026-511	MC-159-SUS	49	5	13	200	1000

Refer to 1 : P.620, 2 : P.621, 3 : P.607

SEALED MAGNETIC CATCH MC-MS45

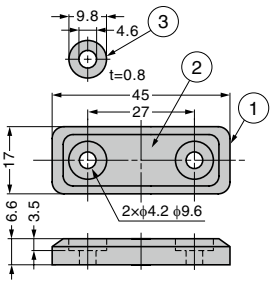


- The body covered with silicon rubber reduces the noise when the door closed.
- Small body with strong magnetic force by using neodymium magnet.
- Washer fitted in the body fixing hole prevents silicone rubber from tearing when screwed.
- Similar item (larger size and stronger magnetic force): MC-MS50 1.

[Remarks]
- Be sure to read the "Cautions" 2.
- Do not use in strong acid and strong alkaline environment.
- Do not use in contact with steam, hot water and water.
- Max. temperature: 80°C
- Do not scrape strongly, as damaged magnetic surface may tear. Please use flat counter plate without irregularities.

[Sold Separately]
- Counter plate MC-JMP45 3
- Counter plate AS-68 4, MC-JM49 5

[Recommended Screws]
- Truss head screw M4



[Body]

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-033-799	MC-MS45LGR	Light Grey	19.6	2	12	100	1000
G	3D	140-033-800	MC-MS45DGR	Dark Grey				100	1000

[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-122	MC-JMP45WT	7	100	1000
G	3D	140-029-241	MC-JMP45BL	7	100	1000
G	3D	140-050-138	AS-68	17	100	1000
G	3D	140-050-149	MC-JM49	10	100	1000

No.	Part Name	Material	Finish / Colour
①	Body	Silicone Rubber (Q)	Light Grey, Dark Grey
②	Magnet	Neodymium	Nickel
③	Washer	Stainless Steel (SUS304)	Plain

Refer to 1 : P.622, 2 : P.607, 3 : P.638, 4 5 : P.639

SEALED MAGNETIC CATCH MC-MS50

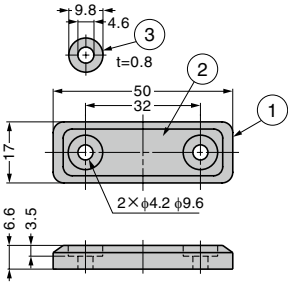


- The body covered with silicon rubber reduces the noise when the door closed.
- Small body with strong magnetic force by using neodymium magnet.
- Washer fitted in the body fixing hole prevents silicone rubber from tearing when screwed.
- Similar item (smaller size and weaker magnetic force): MC-MS45 1

[Remarks]
- Be sure to read the "Cautions" 2.
- Do not use in strong acid and strong alkaline environment.
- Do not use in contact with steam, hot water and water.
- Max. temperature: 80°C
- Do not scrape strongly, as damaged magnetic surface may tear. Please use flat counter plate without irregularities.
- Recommended tightening torque is 39N・cm (4kgf・cm).

[Sold Separately]
- Counter plate MC-JMP45 3
- Counter plate AS-68 4, MC-JM49 5

[Recommended Screws]
- Truss screw M4



[Body]

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-024-468	MC-MS50LGR	Light Grey	39.2	4	15	100	1000
G	3D	140-024-469	MC-MS50DGR	Dark Grey				100	1000

[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-122	MC-JMP45WT	7	100	1000
G	3D	140-029-241	MC-JMP45BL	8	100	1000
G	3D	140-050-138	AS-68	17	100	1000
G	3D	140-050-149	MC-JM49	10	100	1000

No.	Part Name	Material	Finish / Colour
①	Body	Silicone Rubber (Q)	Light Grey, Dark Grey
②	Magnet	Neodymium	Nickel
③	Washer	Stainless Steel (SUS304)	Plain

Refer to 1 : P.622, 2 : P.607, 3 : P.638, 4 5 : P.639

SEALED MAGNETIC CATCH MC-MSH Food Sanitation Act Compliant Material



- Body material is compliant with the Food Sanitation Act (standard test for rubber implement (except baby bottles), containers and packaging).
- Blue body is easy to find even if it is mixed in food and other parts can also be detected with a metal detector.
- The body covered with silicon rubber reduces the noise when the door closed.
- Small body with strong magnetic force by using neodymium magnet.
- Washer fitted in the body fixing hole prevents silicone rubber from tearing when screwed.

[Remarks]

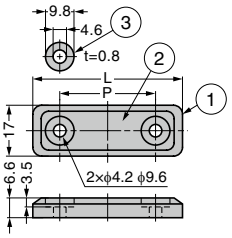
- Be sure to read the "Cautions" 1.
- Do not use in strong acid and strong alkaline environment.
- Do not use in contact with steam, hot water and water.
- Max. temperature: 80℃
- Do not scrape strongly, as damaged magnetic surface may tear.Please use flat counter plate without irregularities.

[Sold Separately]

- Counter plate AS-68 2, MC-JM49 3

[Recommended Screws]

- Truss screw M4



[Body]

RoHS	CAD	Item Code	Item Name	L	P	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-033-801	MC-MSH45BU	45	27	19.6	2	12	100	1000
G	3D	140-033-802	MC-MSH50BU	50	32	39.2	4	15	100	1000

[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-138	AS-68	17	100	1000
G	3D	140-050-149	MC-JM49	10	100	1000

Refer to 1 : P.607, 2 3 : P.639

No.	Part Name	Material	Finish / Colour
①	Body	Silicone Rubber (Q)	Blue
②	Magnet	Neodymium	Nickel
③	Washer	Stainless Steel (SUS304)	Plain

SEALED MAGNETIC CATCH MC-JM45



- The body covered with resin prevents rusting.
- Small body with strong magnetic force by using neodymium magnet.
- Thin magnetic catch of 5.6mm thick ideal for tight spaces.
- Ideal for kitchen or bath equipment by using with the counter plate MC-JMP45 (sold separately).
- AS parts set 1 for installing to aluminium frame also available.

[Applications]
- Washing machine, kitchen equipment, etc.

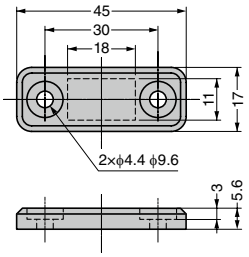
[Remarks]
- Be sure to read the "Cautions" 2.
- Max. temperature: 80°C
- The material, shape of this product are identical to sealed magnetic catch MC-JMP45. The back of MC-JMP45 is partially blue to differentiate from this product.

[Sold Separately]
- Counter plate MC-JMP45 3, Counter plate AS-68, MC-JM49 4

[Recommended Screws]
- M4 screw, tapping screw nominal 4 (truss or binding head, SUS)

[Body]

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-154	MC-JM45WT	29.4	3	8.5	100	1000
G	3D	140-029-240	MC-JM45BL				100	1000



[Counter Plate] Sold Seperately

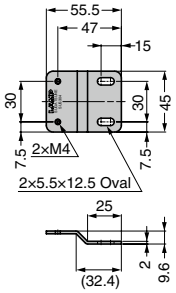
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-122	MC-JMP45WT	7	100	1000
G	3D	140-029-241	MC-JMP45BL	8	100	1000
G	3D	140-050-138	AS-68	17	100	1000
G	3D	140-050-149	MC-JM49	10	100	1000

Part Name	Material	Colour
Body	PP	White, Black
Magnet	Neodymium	–

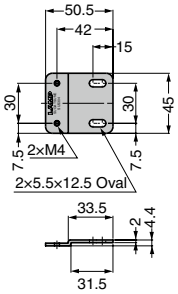
Refer to 1 : P.625, 2 : P.607, 3 : P.638, 4 : P.639

BRACKET AS-JM-45

SUS



AS-JM-45F (Flat type)



AS-JM-45D (Stepped type)

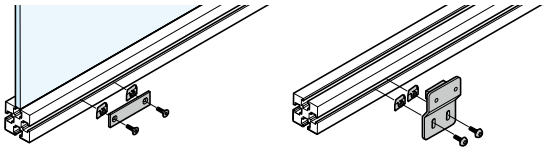
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-136	AS-JM-45F	Stainless Steel (SUS304)	Barrel Polished	39	50	500
G	3D	140-050-137	AS-JM-45D			32	50	500

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



[Installation]

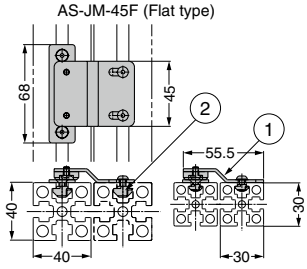


[AS Parts Set] Parts set of brackets, counter plate, screws and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	–	140-041-509	AS-MC-JM45WTF-30-6	30×30 Groove Width 6 mm	Magnetic Catch MC-JM45WT : 1 pc Bracket AS-JM-45F : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-6M4 : 4 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	73
G	–	140-041-510	AS-MC-JM45WTF-40-8	40×40 Groove Width 8 mm	Magnetic Catch MC-JM45WT : 1 pc Bracket AS-JM-45F : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M4 : 4 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Countersunk Head Screw : 2 pcs	86
G	–	140-041-511	AS-MC-JM45WTF-30-8	30×30 Groove Width 8 mm	Magnetic Catch MC-JM45WT : 1 pc Bracket AS-JM-45F : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M4 : 4 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	85
G	–	140-041-512	AS-MC-JM45WTF-40-10	40×40 Groove Width 10 mm	Magnetic Catch MC-JM45WT : 1 pc Bracket AS-JM-45F : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-10M4 : 2 pcs AS Nut AS-10M5 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M5×12 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Countersunk Head Screw : 2 pcs	97
G	–	140-041-513	AS-MC-JM45WTD-40-8-30-6	Door: 30×30 Groove Width 6 mm Frame: 40×40 Groove Width 8 mm	Magnetic Catch MC-JM45WT : 1 pc Bracket AS-JM-45D : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-6M4 : 2 pcs AS Nut AS-8M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	75
G	–	140-041-514	AS-MC-JM45WTD-40-10-30-8	Door: 30×30 Groove Width 8 mm Frame: 40×40 Groove Width 10 mm	Magnetic Catch MC-JM45WT : 1 pc Bracket AS-JM-45D : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M4 : 2 pcs AS Nut AS-10M5 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M5×12 Hexagon Socket Button Head Screw : 2 pcs M4×10 Hexagon Socket Countersunk Head Screw : 2 pcs	87

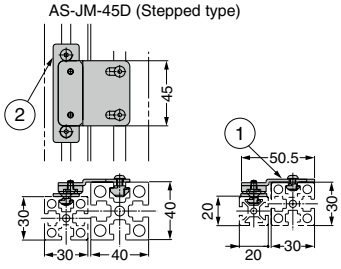
[Dimensions]

AS-JM-45F (Flat type)



No.	Product Name
①	Bracket AS-JM-45F
②	AS Nut

AS-JM-45D (Stepped type)



No.	Product Name
①	Bracket AS-JM-45D
②	Counter Plate AS-68

Refer to 1 : FRONT P.20, 2 : P.639, 3 : P.706

SEALED MAGNETIC CATCH MC-JM50 For Clean Room



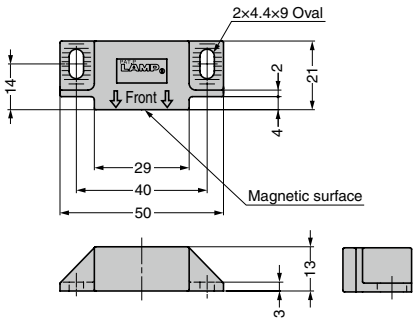
- Resin coated body prevents rusting.
- Ideal for clean rooms by using with the counter plate MC-JM49 (sold separately).
- AS parts set (below) for installing to aluminium frame also available.

[Applications]
- Washing machine, kitchen equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- Do not use in contact with steam, hot water and water. Do not leave strongly acidic or basic detergents to avoid deteriorating.
- Max. temperature: 80°C

[Sold Separately]
- Counter plate MC-JM49 2

[Recommended Screws]
- M4 screw, tapping screw nominal 4 (truss or binding head, SUS)



Part Name	Material	Colour
Body	POM	White, Black
Magnet	Neodymium	–

[Body]

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-156	MC-JM50WT	White	29.4	3	21	24	480
G	3D	140-050-155	MC-JM50BL	Black				24	480

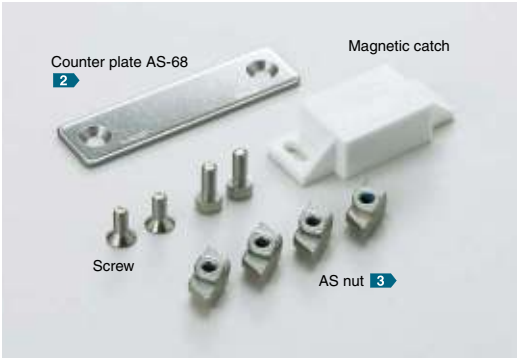
Refer to 1 : P.607, 2 : P.639

[Counter Plate] Sold Seperately

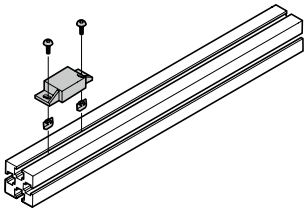
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-149	MC-JM49	10	100	1000

AS Parts Set for Installing to Aluminium Frame

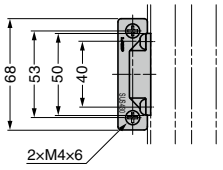
Please refer to the series introduction page 1 for details about AS series.

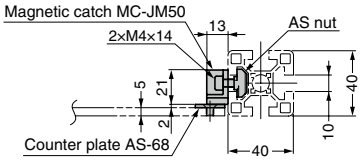


[Installation]



[Dimensions]





[AS Parts Set] Parts set of screws, AS nuts and counter plate used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	–	140-041-507	AS-MC-JM50WT-40-10	40×40 Groove Width 10 mm	Magnetic Catch MC-JM50 : 1 pc AS Nut AS-10M4 : 2 pcs	54
G	–	140-041-508	AS-MC-JM50BL-40-10		M4×14 Hexagon Socket Head Cap Screw : 2 pcs Counter Plate AS-68 : 1 pc	54

Refer to 1 : FRONT P.20, 2 : P.639, 3 : P.706

SEALED MAGNETIC CATCH MC-JMS45WT With Swing Function




Cover removed

- Resin coated body prevents rusting.
- Magnetic surface can pivot for better contact with counter plate.
- Suitable for kitchen equipment using with MC-JMP45 (sold separately).

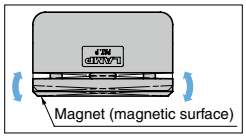
[Applications]
- Washing machine, kitchen equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80℃

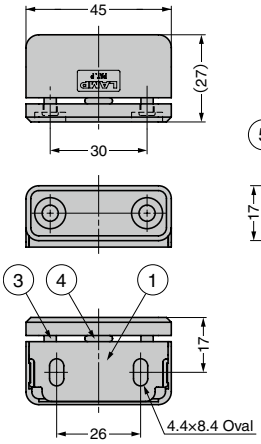
[Sold Separately]
- Counter plate MC-JMP45 2
- Counter plate AS-68 3, MC-JM49 4

[Recommended Screws]
- M4 screw, tapping screw nominal 4 (truss or binding head, SUS)

[Movement of Magnet]



Magnet face can pivot.



No.	Part Name	Material	Finish / Colour
①	Body (Thickness t = 1.5)	Stainless Steel (SUS304)	Barrel Polished
②	Cover	PP	White
③	Shaft	Stainless Steel (SUS303)	Plain
④	O-ring	Rubber (FKM)	Black
⑤	Magnet (MC-JM45WT 5)	PP/Neodymium	White

[Body]

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	140-024-597	MC-JMS45WT	29.4	3	26	24	240

Refer to 1 : P.607, 2 : P.638, 3 4 : P.639, 5 : P.624

[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	140-050-122	MC-JMP45WT	7	100	1000
G'	3D	140-029-241	MC-JMP45BL	8	100	1000
G'	3D	140-050-138	AS-68	17	100	1000
G'	3D	140-050-149	MC-JM49	10	100	1000

MAGNETIC CATCH MC-JMF54 Snap-in Installation


MC-JMF54BL

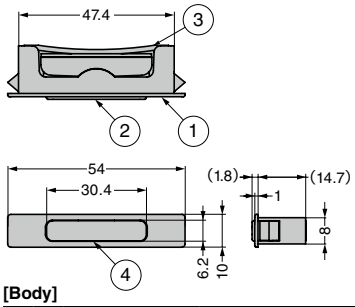

MC-JMF54WT

- The body covered with resin prevents rusting and avoids scattering of metal powder. Contact noise also can be reduced.
- Snap-in magnetic catch for sheet metal application.
- Magnetic surface can pivot for better contact with counter plate.

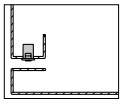
[Applications]
- Steel cabinet, washing machine, kitchen equipment, bathroom, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80℃

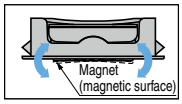
[Sold Separately]
- Counter plate MC-JMP45 2
- Counter plate AS-68 3, MC-JM49 4



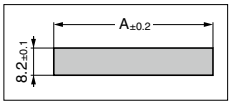
[Installation]



[Movement of Magnet]



[Cut Out Dimensions]



Door Thickness	A
0.7	48
0.8	
1.0	
1.2	
1.6	49
2.0	50

No.	Part Name	Material	Finish / Colour
①	Body	PP	Black/White
②	Body		
③	Spring	POM	White
④	Magnet	Neodymium	Nickel

[Body]

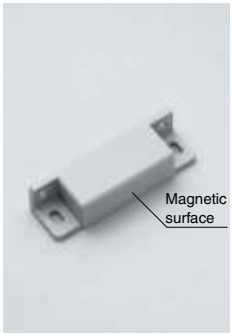
RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	140-026-601	MC-JMF54BL	Black	25	2.6	13	100	1000
G'	3D	140-026-602	MC-JMF54WT	White				100	1000

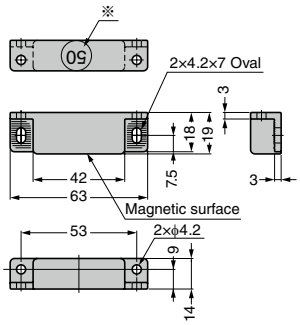
Refer to 1 : P.607, 2 : P.638, 3 4 : P.639

[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	140-050-122	MC-JMP45WT	7	100	1000
G'	3D	140-029-241	MC-JMP45BL	8	100	1000
G'	3D	140-050-138	AS-68	17	100	1000
G'	3D	140-050-149	MC-JM49	10	100	1000

SEALED MAGNETIC CATCH MC-JM63G





※The last 2 digits of number of the item name.

- Can be installed vertically or horizontally.
- The body coated with resin prevents rusting, dust and spark.
- Ideal for kitchen or bath equipment by using with the counter plate MC-JMP45 (sold separately).
- Ideal for clean rooms by using with the counter plate MC-JM49 (sold separately).
- AS parts set 1 for installing to aluminium frame also available.

[Applications]
- Clean room, washing machine, kitchen equipment, etc.

[Remarks]
- Be sure to read the "Cautions" 2
- Do not use in contact with steam, hot water and water.
  Do not leave strongly acidic or basic detergents to avoid deteriorating.
- Max. temperature: 80℃

[Sold Separately]
- Counter plate MC-JMP45 3
- Counter plate AS-68, MC-JM49 4

[Recommended Screws]
- M4 or nominal 4 tapping screw (truss or binding head, SUS)

Part Name	Material	Finish / Colour
Body	POM	Grey
Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
Magnet	Neodymium	–
Neoprene Sponge	Chloroprene Rubber	
Cover	POM	Grey

[Body]

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-153	MC-JM63G-15	14.7	1.5	24	50	500
G	3D	140-050-152	MC-JM63G-30	29.4	3	29	50	500
G	3D	140-050-151	MC-JM63G-50	49	5	40	50	250

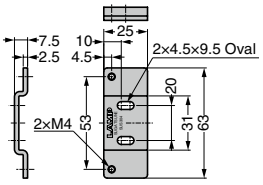
Refer to 1 : P.629, 2 : P.607, 3 : P.638, 4 : P.639

[Counter Plate] Sold Seperately

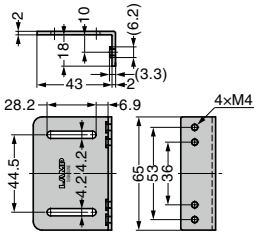
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-122	MC-JMP45WT	7	100	1000
G	3D	140-029-241	MC-JMP45BL	8	100	1000
G	3D	140-050-138	AS-68	17	100	1000
G	3D	140-050-149	MC-JM49	10	100	1000

BRACKET AS-JM-63G, AS-JM63-SMC-FD

SUS



AS-JM-63G



AS-JM63-SMC-FD

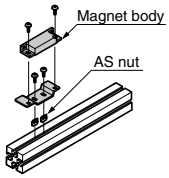
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-135	AS-JM-63G	Stainless Steel (SUS304)	Barrel Polished	29	50	500
G	3D	140-010-544	AS-JM63-SMC-FD	Stainless Steel (SUS430)		41	50	400

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.



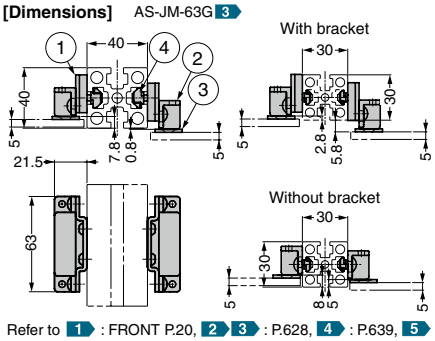
[Installation]



[AS Parts Set] Parts set of brackets, counter plate, screws and AS nuts used for installing to aluminium frame

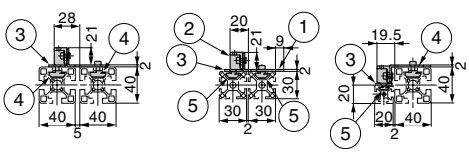
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	–	140-041-515	AS-MC-JM63G-15-40-8	40×40 Groove Width 8 mm +5 Acrylic	Sealed Magnetic Catch MC-JM63G-15 : 1 pc Bracket AS-JM-63G : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	85
G	–	140-041-516	AS-MC-JM63G-15-40-10	40×40 Groove Width 10 mm +5 Acrylic	Sealed Magnetic Catch MC-JM63G-15 : 1 pc Bracket AS-JM-63G : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-10M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	91
G	–	140-041-517	AS-MC-JM63G-30-40-8	40×40 Groove Width 8 mm +5 Acrylic	Sealed Magnetic Catch MC-JM63G-30 : 1 pc Bracket AS-JM-63G : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	91
G	–	140-041-518	AS-MC-JM63G-30-40-10	40×40 Groove Width 10 mm +5 Acrylic	Sealed Magnetic Catch MC-JM63G-30 : 1 pc Bracket AS-JM-63G : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-10M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	96
G	–	140-041-519	AS-MC-JM63G-50-40-8	40×40 Groove Width 8 mm +5 Acrylic	Sealed Magnetic Catch MC-JM63G-50 : 1 pc Bracket AS-JM-63G : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-8M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	101
G	–	140-041-520	AS-MC-JM63G-50-40-10	40×40 Groove Width 10 mm +5 Acrylic	Sealed Magnetic Catch MC-JM63G-50 : 1 pc Bracket AS-JM-63G : 1 pc Counter Plate AS-68 : 1 pc AS Nut AS-10M4 : 2 pcs M4×6 Hexagon Socket Button Head Screw : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs M4×8 Hexagon Socket Countersunk Head Screw : 2 pcs	107

[Dimensions] AS-JM-63G 3



No.	Product Name
①	Bracket AS-JM-63G
②	Sealed Magnetic Catch MC-JM63G
③	Counter Plate AS-68
④	AS Nut

AS-JM63-SMC-FD 3



No.	Product Name
①	Bracket AS-JM63-SMC-FD
②	Sealed Magnetic Catch MC-JM63G
③	Counter Plate AS-68
④	AS Nut AS-8M4 or AS-10M4
⑤	AS Nut AS-8M4 or AS-6M4

Refer to 1 : FRONT P.20, 2 3 : P.628, 4 : P.639, 5 : P.706

MAGNETIC CATCH (W/SWITCH) SMC



- Reed switch built-in magnetic catch.
- AS parts set 1 for installing to aluminium frame also available.

[Remarks]

- For the installation that the surface marked with ※ on the drawing below does not contact the magnetic body, install the back plate (included) or the equivalent magnetic body on the surface marked with ※.
- Avoid strong impact to protect the reed switch.
- Do not use or store in a strong magnetic field.
- Make sure that no magnetic body (powder) or adhesive matter adhere to the magnetic surface of the product.
- During use, ensure that the magnetic surface of the body will not project from the couter plate. Otherwise, it may not operate properly.
- When using a counter plate other than the supplied one, please contact local representatives.

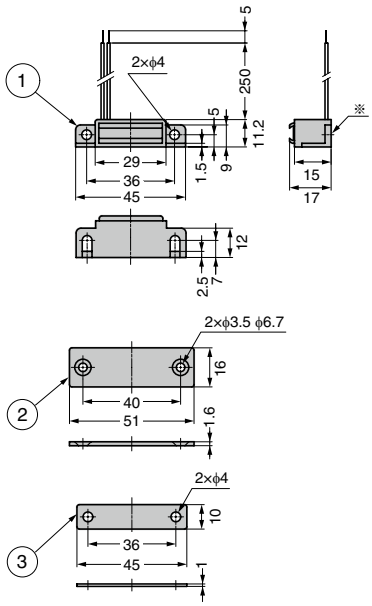
[Parts Included]

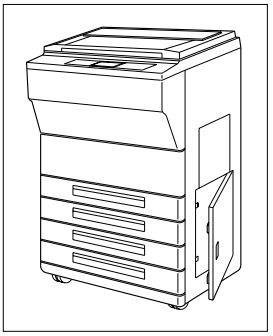
- Counter plate, back plate

[Properties]

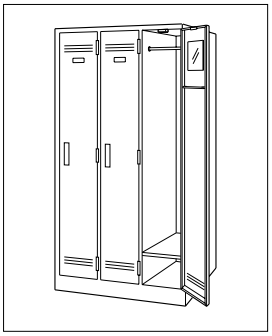
Max. Wattage	10W
Max. Switching Voltage	100V DC
Max. Switching Current	0.5A DC
Max. Contact Resistance	0.15Ω ※1
Operating Temperature	0 ～ 60˚C
Lead Wire	UL3385 AWG＃26/Black
Tensile Strength of Lead Wire	Min. 1kgf

※1: Lead wire conductor resistance excluded.





Copying machine



Locker

No.	Part Name	Material	Finish / Colour
①	Body	PC	Black
②	Counter plate	Steel (SPCC)	Nickel
③	Back Plate		

※2 Switch type A: Switch is OFF when the counter plate and magnet are in contact.
Switch type B: Switch is ON when the counter plate and magnet are in contact.
※3 Measured with a weigh installed to the counter plate of 29×16×1.6mm (steel).

RoHS	CAD	Item Code	Item Name	Switch Type ※2	Magnetic Force N ※3	Magnetic Force kgf ※3	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-416	SMC-101B	B	Min. 9.8	Min. 1	28	50	200
G	3D	140-059-417	SMC-103A	A	Min. 29.4	Min. 3		50	200
G	3D	140-059-418	SMC-103B	B				50	200

Refer to 1 : P.631

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

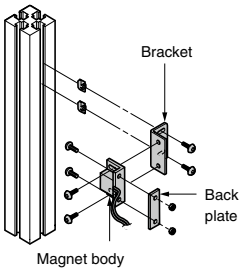


[AS Parts Set] Parts set of brackets, screws ,counter plate, back plate and AS nuts used for installing to aluminium frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	–	140-013-894	AS-SMC-101B-FD-30-6	30×30 Groove Width 6 mm	Bracket AS-JM63-SMC-FD : 1 pc AS Nut AS-6M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 2 pcs Magnetic Catch SMC : 1 pc M4×6 Hexagon Socket Head Cap Screw : 2 pcs Magnetic Catch Counter Plate (Included) : 1 pc AS Nut AS-6M3 : 2 pcs M3×10 Hexagon Socket Countersunk Head Screw : 2 pcs	83
G	–	140-013-895	AS-SMC-103A-FD-30-6			82
G	–	140-013-896	AS-SMC-103B-FD-30-6			80
G	–	140-013-897	AS-SMC-101B-FD-30-8	30×30 Groove Width 8 mm	Bracket AS-JM63-SMC-FD : 1 pc AS Nut AS-8M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 2 pcs Magnetic Catch SMC型 : 1 pc M4×6 Hexagon Socket Head Cap Screw : 2 pcs Magnetic Catch Counter Plate (Included) : 1 pc AS Nut AS-8M3 : 2 pcs M3×10 Hexagon Socket Countersunk Head Screw : 2 pcs	95
G	–	140-013-898	AS-SMC-103A-FD-30-8			94
G	–	140-013-899	AS-SMC-103B-FD-30-8			94
G	–	140-013-900	AS-SMC-101B-FD-40-8	40×40 Groove Width 8 mm	Bracket AS-JM63-SMC-FD : 1 pc AS Nut AS-8M4 : 2 pcs M4×12 Hexagon Socket Head Cap Screw : 2 pcs Magnetic Catch SMC型 : 1 pc M4×6 Hexagon Socket Head Cap Screw : 2 pcs Magnetic Catch Counter Plate (Included) : 1 pc AS Nut AS-8M3 : 2 pcs M3×12 Hexagon Socket Countersunk Head Screw : 2 pcs	95
G	–	140-013-901	AS-SMC-103A-FD-40-8			94
G	–	140-013-902	AS-SMC-103B-FD-40-8			94

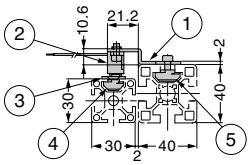
※For the item name of the magnetic catch in the set, please confirm with the above item name. (Included in the above item name)

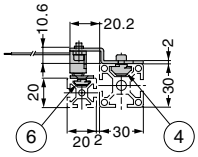
[Installation]



[Dimensions]

Bracket AS-SMC-D

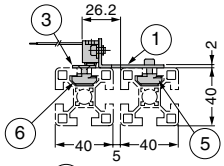


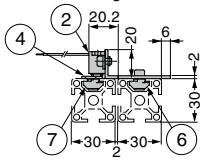


No.	Product Name
①	Bracket AS-SMC-D
②	Magnetic Catch (W/Switch) SMC
③	Counter Plate (Attached to ②)
④	AS Nut AS-8M3 or AS-6M3
⑤	AS Nut AS-8M4 or AS-10M4
⑥	AS Nut AS-6M3

※No item name combined with bracket AS-SMC-D.

BRACKET AS-JM63-SMC-FD (Flat type)



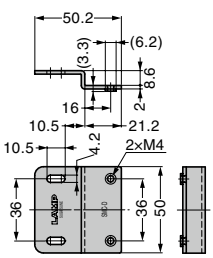


No.	Product Name
①	Bracket AS-JM63-SMC-FD
②	Magnetic Catch (W/Switch) SMC
③	Counter Plate AS-68
④	Counter Plate (Attached to ②)
⑤	AS Nut AS-8M4 or AS-10M4
⑥	AS Nut AS-8M4 or AS-6M4
⑦	AS Nut AS-8M3 or AS-6M3

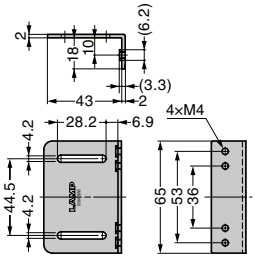
Refer to 1 : FRONT P.20, 2 : P.706

BRACKET AS-SMC-D, AS-JM63-SMC-FD

SUS



AS-SMC-D



AS-JM63-SMC-FD

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-010-545	AS-SMC-D	Stainless Steel (SUS430)	Barrel Polished	41	50	200
G	3D	140-010-544	AS-JM63-SMC-FD				50	400

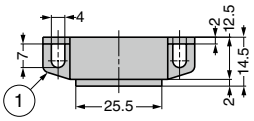
MAGNETIC CATCH MC0099

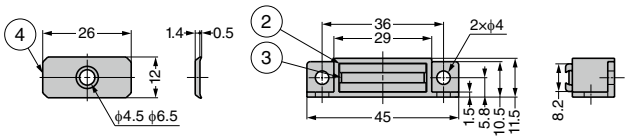


●Can be installed vertically or horizontally.

[Remarks]
●Be sure to read the "Cautions" 1.
●Only grey body with magnetic force 51N (5.2kgf).

[Parts Included]
●Counter plate SP0207 2.





No.	Part Name	Material	Finish / Colour
①	Body	ABS	White, Black
		PC	Grey
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate
③	Magnet	Ferrite	–
④	Counter Plate	Steel	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-501	MC0099BP	Black	10.8	1.1	16.3	100	1000
G	3D	140-050-502	MC0099WP	White				100	1000
G	3D	140-050-503	MC0099SBP	Black	37.2	3.8		100	1000
G	3D	140-050-504	MC0099SWP	White				100	1000
G	3D	140-050-505	MC0099GP	Grey	51	5.2		100	1000

Refer to 1 : P.607, 2 : P.639

SEALED MAGNETIC CATCH (W/SWITCH) MC-JM74SW-30

IP

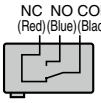


●Waterproof switch built-in magnetic catch. It functions as a catch and power switch depending on opening/closing of door or lid.
●Single-pole double-throw switch.
●Conforms to the specified electrical appliances and materials in the Electrical Appliances and Material Safety Act (PSE).
●Can be installed vertically or horizontally.Processing for passing through power cord is required for horizontal installation.
●The body coated with resin prevents rusting and dust. And the built-in switch is designed to meet IP67.
●Movable adsorption sheet of counter plate prevents malfunction of catch and switch.

[Specifications]

Rated Voltage and Current	AC250V 5A (Load Resistance) AC125V 5A (Load Resistance) DC30V 5A (Load Resistance)
Insulation Resistance	Min. 100MΩ (DC500V)
Contact Resistance (Initial Value)	Max. 100MΩ
Min. Applicable Load	DC5V 160mA
Operating Temperature	-40~+80℃, Max. 60% RH (No Freezing and Condensation)
Lead Wire	Single Core Heat Resistant PVC Cord 0.75 mm² (<PS> E Certification)

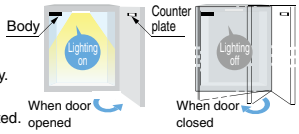
[Switch Contact Type]



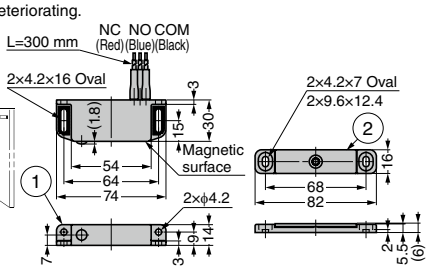
NC (Red) = Normally Close
NO (Blue) = Normally Open
COM (Black) = Common
The power switch operates depending on opening/closing of door or lid.

[Two Types of Operation Can Be Choosen by Selecting Connection]

●Connecting NO (Blue) and COM (Black)
Energised when the counter plate is in contact with the body.
●Connecting NC (Red) and COM (Black)
Energised when the counter plate and the body are separated.
Example) To turn on the inspection light when the door opens in cabinet etc., connect NC (red) and COM (black).



[Parts Included]
●Counter plate



[Remarks]
●Be sure to read the "Cautions" 1.
●Do not use as a door stopper. Otherwise, it may be damaged.
●If the product containing this product falls under other category than the specified electrical appliances and materials, please report to the regulatory agency.
●Do not use in contact with steam, hot water and water. Do not leave strongly acidic or basic detergents to avoid deteriorating.

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-017-555	MC-JM74SW-30	29.4	3	80	10	80

No.	Part Name	Material	Finish / Colour
①	Body	POM/Neodymium	Black
②	Counter Plate	POM/Stainless Steel (SUS430)	Black/Barrel Polished

Refer to 1 : P.607

HEAVY DUTY MAGNETIC CATCH MCH

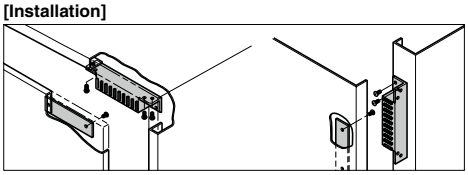


- Can be installed vertically or horizontally.
- Robust die casted body suitable for strong magnetic force.

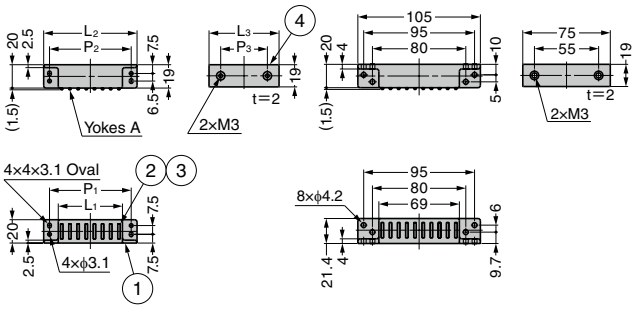
[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Counter plate

[Installation]



No.	Part Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Counter Plate	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)



MCH-40~MCH-80

MCH-105

RoHS	CAD	Item Code	Item Name	L1	L2	L3	P1	P2	P3	A	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-145	MCH-40	20	40	22	30	30	12	3	29	3	56	300	3000
G	3D	140-050-144	MCH-50	27	50	29	40	40	18	4	68	7	74	250	2500
G	3D	140-050-143	MCH-61	41	61	43	50	50	27	6	107	11	110	200	2000
G	3D	140-050-142	MCH-80	55	80	60	70	70	40	8	137	14	140	150	1500
G	3D	140-050-141	MCH-105	See drawing at the upper right	See drawing at the upper right	See drawing at the upper right	See drawing at the upper right	See drawing at the upper right	See drawing at the upper right	See drawing at the upper right	147	15	206	24	120

Refer to 1 : P.607

MAGNETIC CATCH MC-110NF Compact & Strong Force Type

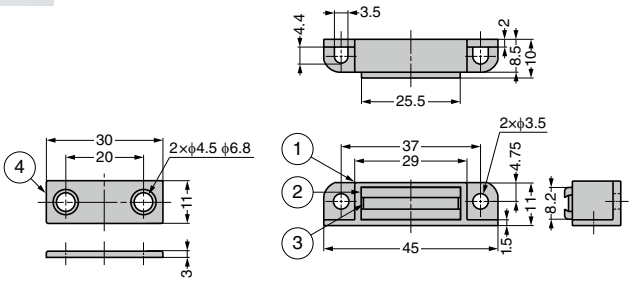


- Can be installed vertically or horizontally.
- Small body with strong magnetic force by using neodymium magnet.

[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature: 80°C
- When adsorbing to sheet metal without using counter plate, the sheet thickness shall be 3mm or more.Otherwise, the magnetic force decreases.
- Colours in the picture may be somewhat different from the actual item.

[Parts Included]
- Counter plate
- Pan head wood screw 3.1×13
- Countersunk head wood screw 2.9×13

No.	Part Name	Material	Finish / Colour
①	Body	PC	White/Grey
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Neodymium	–
④	Counter Plate	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)



RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-335	MC-110NF-WT	White	78.4	8	10	100	800
G	3D	140-050-336	MC-110NF-GR	Grey				100	800

Refer to 1 : P.607

MAGNETIC CATCH MC-FS Snap-in & Single Yoke Type

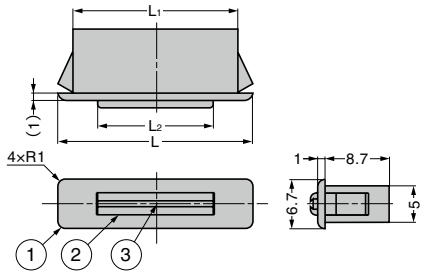


●Thin body for tight spaces.

[Remarks]
●Be sure to read the "Cautions" 1.
●Max. temperature for neodymium magnet: 80˚c

[Cut Out Dimensions]





[Bore Dimensions]

Item Name	Door Thickness	A
MC-FS-2	0.8	22.65 $^{0.15}_{0}$
	1.0	22.8 $^{0.1}_{0}$
	1.2	22.9 $^{0.1}_{0}$
MC-FS-4	0.8	39.9 $^{0.2}_{0}$
	1.0	40.5 $^{0.2}_{0}$
	1.2	41.8 $^{0.2}_{0}$

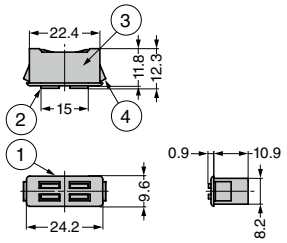
No.	Part Name	Material	Finish / Colour
①	Body	ABS	White
②	Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Magnet	Ferrite, Neodymium	–

RoHS	CAD	Item Code	Item Name	Material	L	L1	L2	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-013-016	MC-FS-2W	Ferrite	26.5	22.4	16	15	1.5	3.5	400	4000
G	3D	140-013-017	MC-FS-2SW	Neodymium				34	3.5		400	4000
G	3D	140-013-015	MC-FS-4W	Ferrite	45	39.6	30.3	25	2.5	5.8	200	2000
G	3D	140-013-014	MC-FS-4SW	Neodymium				69	7		200	2000

Refer to 1 : P.607

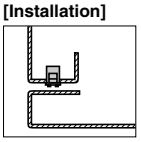
MAGNETIC CATCH MC-FS3 Snap-in Installation



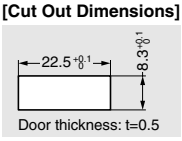


[Remarks]
●Be sure to read the "Cautions" 1.

[Installation]



[Cut Out Dimensions]



No.	Part Name	Material	Finish / Colour
①	Body	ABS	White, Black
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Spring	POM	Natural

RoHS	CAD	Item Code	Item Name	Body Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-005	MC-FS3W	White	12.7	1.3	5	60	2160
G	3D	140-050-006	MC-FS3B	Black				60	2160

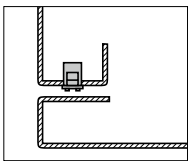
Refer to 1 : P.607

MAGNETIC CATCH MC-FS34 Snap-in Installation

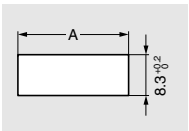


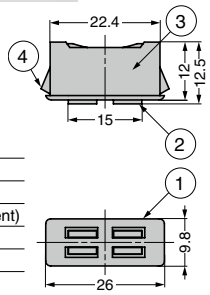
[Remarks]
- Be sure to read the "Cautions" 1.

[Installation]



[Cut Out Dimensions]





[Bore Dimensions]

Item Name	Door Thickness	A
MC-FS34 WW/GW	0.5	$22.6^{+0.2}_{0}$
	0.8	$23.7^{+0.2}_{0}$
MC-FS34 WB/BB/GB	1.0	$22.7^{\pm0.1}$
	1.2	$23.5^{\pm0.1}$
	1.4	$24.0^{\pm0.1}$
MC-FS34 WG/GG	1.6	$22.7^{\pm0.1}$
	2.0	$23.8^{\pm0.1}$

No.	Part Name	Material	Finish / Colour
①	Body	PA	White, Black, Grey
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Spring	POM	White, Blue, Green

RoHS	CAD	Item Code	Item Name	Body Colour	Spring Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-033-951	MC-FS34WW	White	White	12.7	1.3	5.3	200	2000
G	3D	140-033-952	MC-FS34GW	Grey		21.6	2.2		200	2000
G	3D	140-033-953	MC-FS34WB	White	Blue	12.7	1.3		200	2000
G	3D	140-033-954	MC-FS34BB	Black		21.6	2.2		200	2000
G	3D	140-033-955	MC-FS34GB	Grey					200	2000
G	3D	140-033-956	MC-FS34WG	White	Green	12.7	1.3		200	2000
G	3D	140-033-957	MC-FS34GG	Grey		21.6	2.2		200	2000

Refer to 1 : P.607

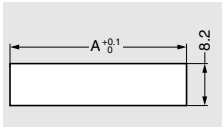
MAGNETIC CATCH MC-FP5 Snap-in Installation



- MC-FP5S: Small body with strong magnetic force by using neodymium magnet.

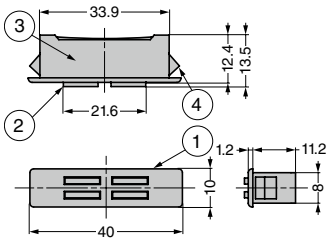
[Remarks]
- Be sure to read the "Cautions" 1.
- Max. temperature for MC-FP5S: 80˚C

[Cut Out Dimensions]

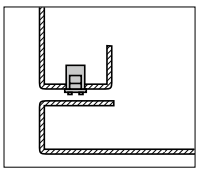


[Bore Dimensions]

Door Thickness	A
0.8	34.1
1.0	
1.2	34.5
1.4	
1.6	35
2.0	36.5



[Installation]



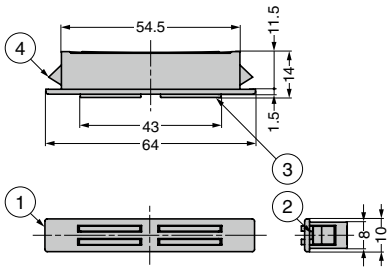
No.	Part Name	Material	Finish / Colour
①	Body	ABS	White, Black
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite (MC-FP5), Neodymium (MC-FP5S)	–
④	Spring	POM	Natural, Green

RoHS	CAD	Item Code	Item Name	Body Colour	Spring Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-086	MC-FP5W	White	Natural	21.6	2.2	9	200	2000
G	3D	140-050-087	MC-FP5B	Black					200	2000
G	3D	140-050-268	MC-FP5SWT	White	Green	44.1	4.5		200	2000
G	3D	140-050-269	MC-FP5SBL	Black					200	2000

Refer to 1 : P.607

MAGNETIC CATCH MC-FS10, MC-FS17W Snap-in Installation

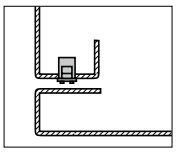




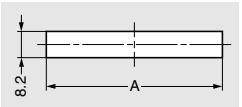
●MC-FS17W has stronger magnetic force than MC-FS10.

[Remarks]
●Be sure to read the "Cautions" 1.

[Installation]



[Cut Out Dimensions]



[Bore Dimensions]

Door Thickness	A
0.8	55
1.0	
1.2	55.5
1.6	56
2.0	56.5

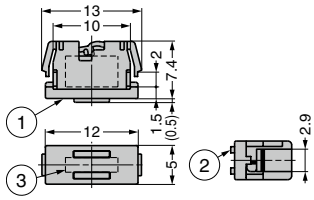
No.	Part Name	Material	Finish / Colour
①	Body	ABS	White, Black (MC-FS10B)
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–
④	Spring	POM	White (MC-FS10), Red (MC-FS17W)

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-293	MC-FS10W	White	44.1	4.5	17.1	50	1000
G	3D	140-050-294	MC-FS10B	Black				50	1000
G	3D	140-050-334	MC-FS17W	White	58.8	6	17.8	50	1000

Refer to 1 : P.607

MAGNETIC CATCH CM-2B Snap-in Installation



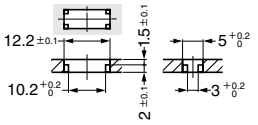


●Small body allows easy installation around the door.
●Flam retardant resin (UL94V-2).

[Specifications]
●Operating temperature: -10˚C ~60˚C

[Remarks]
●Be sure to read the "Cautions" 1.

[Cut Out Dimensions]

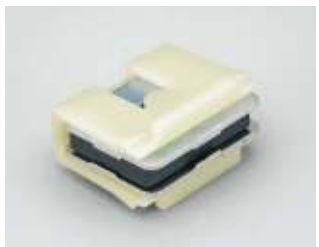


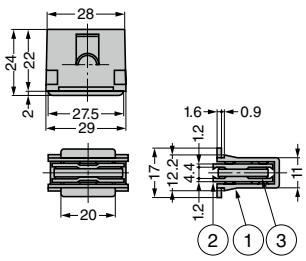
No.	Part Name	Material	Finish / Colour
①	Body	PA	Black
②	Yoke	Steel (SPCC)	Black Chromate (Trivalent)
③	Magnet	Ferrite	–

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-011-122	CM-2B	3.9	0.4	1	200	–

Refer to 1 : P.607

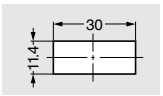
MAGNETIC CATCH MC-SS30 Snap-in Installation





[Remarks]
●Be sure to read the "Cautions" 1.

[Cut Out Dimensions]



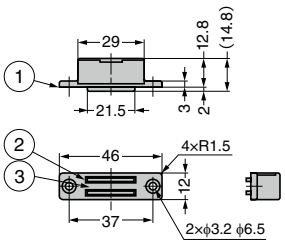
No.	Part Name	Material	Finish / Colour
①	Body	ABS	Ivory
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–

RoHS	CAD	Item Code	Item Name	Door Thickness	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-036	MC-SS30	0.8	29.4	3	22	60	600

Refer to 1 : P.607

MAGNETIC CATCH MC0051





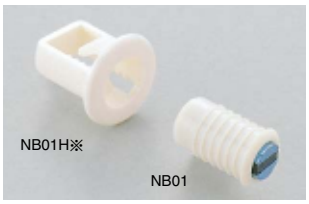
[Remarks]
- Be sure to read the "Cautions" 1.

No.	Part Name	Material	Finish / Colour
①	Body	ABS	Black
②	Yoke	Steel (SPCC)	Clear Zinc Chromate
③	Magnet	Ferrite	–

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-053-503	MC0051	53.9	5.5	17	100	1000

Refer to 1 : P.607

MAGNETIC CATCH NB01



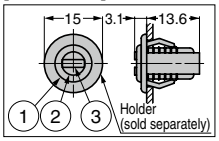
※Holder sold separately.

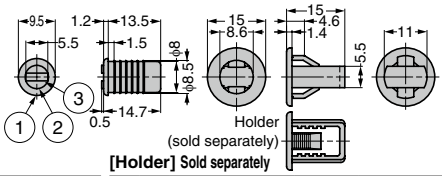
No.	Part Name	Material	Finish / Colour
①	Body	PA	White
②	Yoke	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Magnet	Ferrite	–

[Remarks]
- Be sure to read the "Cautions" 1.

[Sold Separately]
- Holder NB01H

[Installation]





Door Thickness	ϕHole Dia.
0.8~1.4	11.5
1.5~3	12

[Body]

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-322	NB01	10.78	1.1	2	500	5000

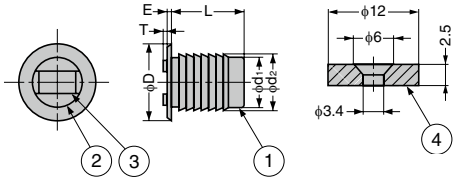
Refer to 1 : P.607

[Holder] Sold separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-205	NB01H	PA	White	0.5	500	5000

MAGNETIC CATCH MC-IS





[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Counter plate W4 2

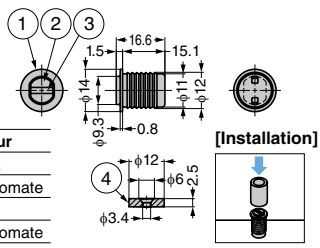
No.	Part Name	Material	Finish / Colour
①	Body	PA	White, Black
②	Yoke	Steel	Coloured Zinc Chromate
③	Magnet	Ferrite	–
④	Counter Plate	Steel	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Colour	D	L	E	T	d_1	d_2	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-515	MC-IS2WP	White	10	13.8	1	0.7	8	8.6	9.8	1.0	4.7	200	5000
G	3D	140-050-517	MC-IS2BP	Black										200	5000
G	3D	140-050-516	MC-IS4WP	White	14	14	0.7	1.2	11	12	24.5	2.5	7.7	100	3000
G	3D	140-050-518	MC-IS4BP	Black										100	3000

Refer to 1 : P.607, 2 : P.639

MAGNETIC CATCH MC-IS4F Yoke Movable Type





- Movable magnet yoke allows better contact with counter plate and ensures full magnetic force.

[Remarks]
- Be sure to read the "Cautions" 1.
- When installing, please use a cylindrical thing to strike in the front flange part of magnetic catch shown as left.
- Do not use glue. (Or the yoke part may be stuck.)

[Installation]

[Remarks]
- Counter plate W4 2

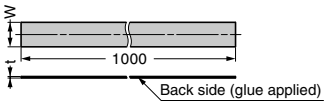
No.	Part Name	Material	Finish / Colour
①	Body	PA	White, Black
②	Yoke	Steel	Coloured Zinc Chromate
③	Magnet	Ferrite	–
④	Counter Plate	Steel	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-519	MC-IS4FWTP	White	24.5	2.5	7.7	100	1000
G	3D	140-050-520	MC-IS4FBLP	Black				100	1000

Refer to 1 : P.607, 2 : P.639

MAGNETIC RUBBER SHEET KMS Strong Force Type





- Easy to cut.
- Easy to apply with glue.

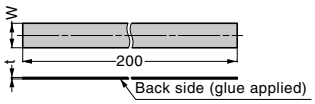
[Remarks]
- Be sure to read the "Cautions" 1.
- Don't use outside.
- Do not use in contact with steam, hot water and water. The cut surface may rust.
- Do not use for installing fragile or heavy items vertically.

RoHS	CAD	Item Code	Item Name	Material	W	t	Magnetic Force N/cm²	Magnetic Force gf/cm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-474	KMS-1-1000	Ferrite/ CPE	12.7	0.8	0.588	60	42	100	–
G	3D	140-059-475	KMS-2-1000		19.1				62	100	–
G	3D	140-059-476	KMS-3-1000		25.4				83	100	–
G	3D	140-059-453	KMS-4-1000		12.7	1.5	0.931	95	73	100	–
G	3D	140-059-492	KMS-5-1000		19.1				110	100	–
G	3D	140-059-493	KMS-6-1000		25.4				146	100	–

Refer to 1 : P.607

MAGNETIC RUBBER SHEET NMS Extra Strong Force Type





- Easy to cut.
- Easy to apply with glue.
- Ultra thin but strong magnetic force by using neodymium magnet.
- Weaker magnetic type (KMS 1) available.

[Remarks]
- Be sure to read the "Cautions" 2.
- Don't use outside.
- Do not use in contact with steam, hot water and water. The cut surface may rust.
- Max. temperature: 80°C
- Do not use for installing fragile or heavy items vertically.

RoHS	CAD	Item Code	Item Name	Material	W	t	Magnetic Force N/cm²	Magnetic Force kgf/cm²	Weight (g)	Box (pcs)	Carton (pcs)
G	–	140-021-209	NMS-1-200	Neodymium/ Nitrile Rubber (NBR)	12.7	0.8	3.8	0.39	10	100	–
G	–	140-021-210	NMS-2-200		19.1				16	100	–
G	–	140-021-211	NMS-3-200		25.4				21	100	–
G	–	140-021-212	NMS-4-200		12.7	1.5	5.4	0.55	19	100	–
G	–	140-021-213	NMS-5-200		19.1				30	100	–
G	–	140-021-214	NMS-6-200		25.4				39	100	–

Refer to 1 : P.638, 2 : P.607

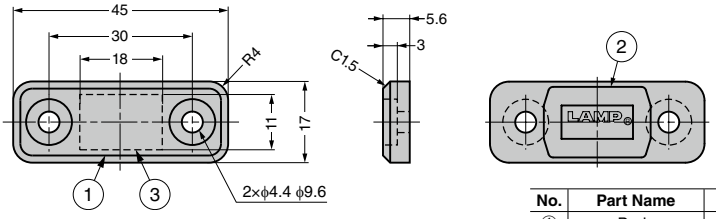
SEALED COUNTER PLATE MC-JMP45



- For resin coated magnetic catch.
- The couter plate coated with resin prevents rusting, dust and spark.
- Completely sealed, ideal for high corrosion environments such as kitchen and bath equipment.

[Remarks]
- Do not use in contact with steam, hot water and water. And do not leave strongly acidic or basic detergents
- Coated with resin may decrease the magnetic force of the magnetic catch used together.Please check with actual item.

[Recommended Screws]
- M4 screw, tapping screw nominal 4 (truss or binding head, SUS)



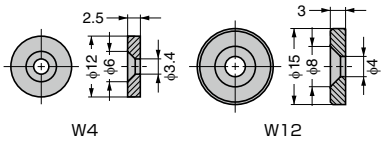
No.	Part Name	Material	Finish / Colour
①	Body	PP	White, Black
②	Body (Back Side)		Blue
③	Plate	Steel (SPCC)	Clear Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-122	MC-JMP45WT	White	7.3	100	1000
G	3D	140-029-241	MC-JMP45BL	Black		100	1000

COUNTER PLATE W



W4 shown.

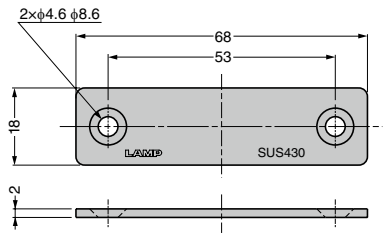


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-051	W4	Steel (SPHC)	Coloured Zinc Chromate (Trivalent)	1.7	1000	10000
G	3D	140-050-113	W12	Steel (SUM)	Nickel	3.3	600	3000

STAINLESS STEEL COUNTER PLATE AS-68

NSF SUS



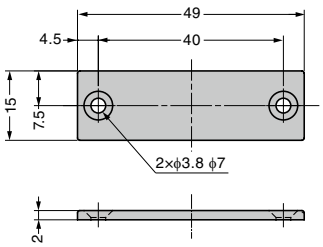


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-138	AS-68	Stainless Steel (SUS430)	Barrel Polished	17	100	1000

STAINLESS STEEL COUNTER PLATE MC-JM49

NSF SUS

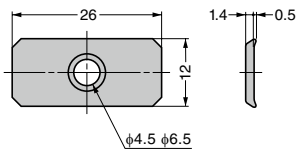




RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-149	MC-JM49	Stainless Steel (304 Equivalent)	Polished	10	100	1000

COUNTER PLATE SP0207

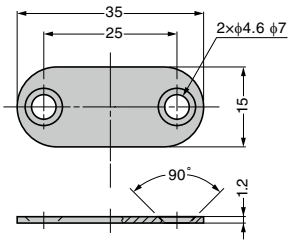




RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-323	SP0207	Steel	Clear Zinc Chromate	3.1	5000	–

COUNTER PLATE MC-YN001U



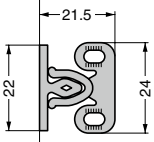


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-555	MC-YN001U	Steel (SPCC)	Nickel	4	5000	–

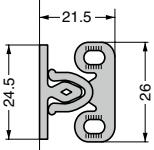
Plastic Catch Size Correlation Diagram (S≒1/2)

[Surface Mount (Vertical) Type]

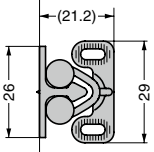
Knuckle Catch
JC-24, JC-24B (P.643)
Push-in Force: 30.4 N (3.1 kgf)
Pulling Force: 26.5 N (2.7 kgf)
Weight: 1.5 g



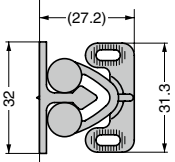
Knuckle Catch
JC-26 (P.643)
Push-in Force: 21.6 N (2.2 kgf)
Pulling Force: 16.7 N (1.7 kgf)
Weight: 2 g



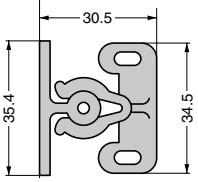
Rotary Catch
RC6900 (P.642)
Push-in Force: 10.8 N (1.1 kgf)
Pulling Force: 15.7 N (1.6 kgf)
Weight: 3 g



Rotary Catch
RC6901 (P.642)
Push-in Force: 21.6 N (2.2 kgf)
Pulling Force: 31.4 N (3.2 kgf)
Weight: 4 g

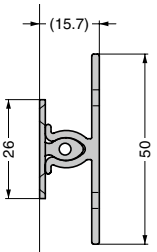


Knuckle Catch
NAC (P.641)
Push-in Force: 55.8 N (5.7 kgf)
Pulling Force: 69.5 N (7.1 kgf)
Weight: 4.5 g



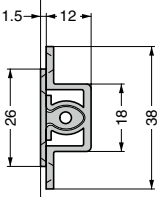
[Surface Mount (Horizontal) Type]

Knuckle Catch
JC-T50 (P.641)
Push-in Force: 32 N (3.3 kgf)
Pulling Force: 37 N (3.8 kgf)
Weight: 3 g

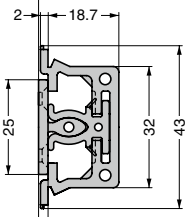


[Mortise Type]

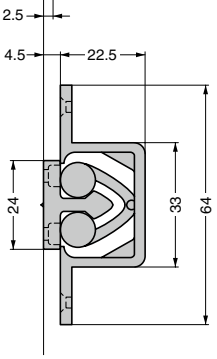
Knuckle Catch
JCU (P.643)
Push-in Force: 19.6 N (2 kgf)
Pulling Force: 22.5 N (2.3 kgf)
Weight: 3.5 g



Knuckle Catch
JCU-F (P.644)
Push-in Force: 19.6 N (2 kgf)
Pulling Force: 19.6 N (2 kgf)
Weight: 5.2 g



Rotary Catch
RCU (P.642)
Push-in Force: 29.4 N (3 kgf)
Pulling Force: 31.4 N (3.2 kgf)
Weight: 8 g



Approx. 50 mm

※Two surface mount types available: vertical or horizontal to mounting surface.

KNUCKLE CATCH NAC

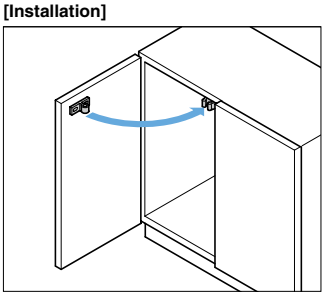
TEST METHOD 10

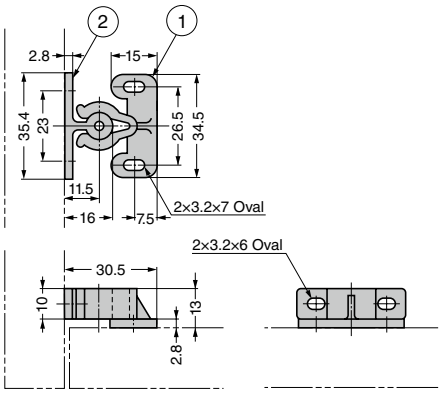


- Holds door tightly and suitable for large door.
- High durability.
- Can be used for overlay and inset door.

[Remarks]
- Catch force varies.Please check with actual item.
- The body colour is different from the striker.

[Installation]



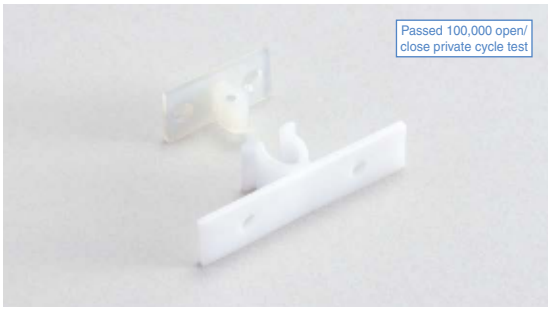


No.	Part Name	Material	Colour
①	Body	POM	Natural
②	Striker	PA	

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-051-013	NAC	55.8	5.7	69.5	7.1	4.5	100	1000

KNUCKLE CATCH JC-T50

TEST METHOD 10



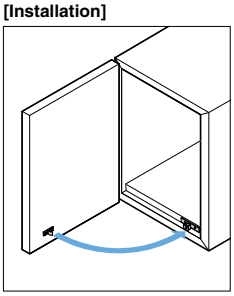
- Can be used for overlay and inset door.
- Suitable for various applications such as swing doors, and drawers, etc.

[Applications]
- Furniture, kitchen equipment and marine hardware, etc.

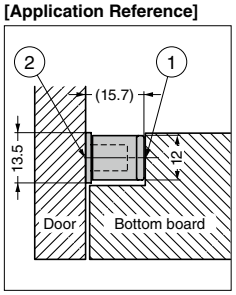
[Remarks]
- Catch force varies.Please check with actual item.

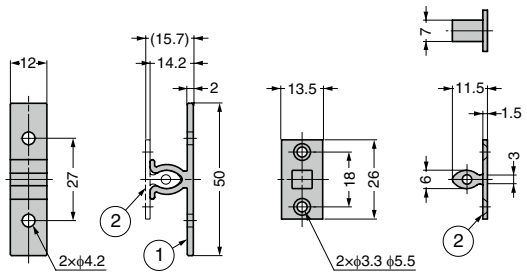
[Parts Included]
- Binding head tapping screw 4×16 (for body installation)
- Countersunk head tapping wood screw 2.7×16 (for striker installation)

[Installation]



[Application Reference]





No.	Part Name	Material	Colour
①	Body	POM	Natural
②	Striker	PA	

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-019-545	JC-T50	19	1.94	19	1.94	3	50	500

RROTARY CATCH (MORTISE TYPE) RCU

TEST METHOD 10

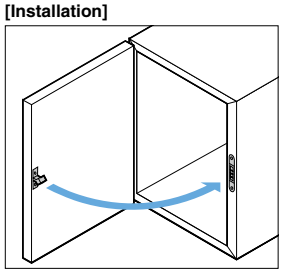


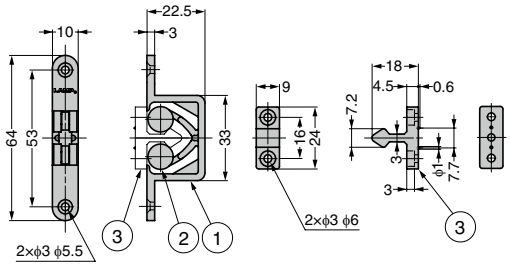
- Mortise type.
- For overlay doors.

[Applications]
- Furniture, kitchen equipment and marine hardware, etc.

[Remarks]
- Catch force varies. Please check with actual item.

[Installation]





No.	Part Name	Material	Colour
①	Body	POM	Natural
②	Roller	PE	
③	Striker	POM	

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-051-014	RCU	29.4	3.0	31.4	3.2	8	100	800

ROTARY CATCH RC6900, RC6901

TEST METHOD 10

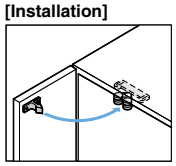


- High durability (passed 100,000 times durability test).
- Light open/close touch by combining polyacetal resin and roller.
- Can be used for overlay and inset door.
- Brown colour available as special order.(RC6901 only).

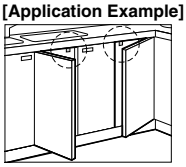
[Applications]
- Suitable for general furniture, kitchen equipment and marine hardware.

[Remarks]
- Catch force varies. Please check with actual item.

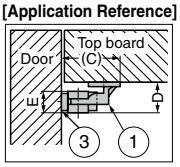
[Installation]

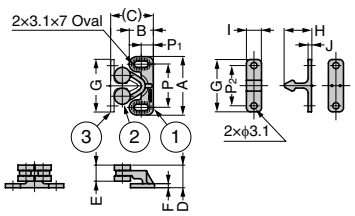


[Application Example]



[Application Reference]





Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf
RC6900	10.8	1.1	15.7	1.6
RC6901	21.6	2.2	31.4	3.2

No.	Part Name	Material	Colour
①	Body	POM	Natural
②	Roller	PE	
③	Striker	POM	

RoHS	CAD	Item Code	Item Name	A	B	C	D	E	F	P	P1	G	H	I	J	P2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-209	RC6900	29	12	21.2	11.3	8	2	21.5	6	26	13.5	7.5	1.7	20	3	100	2000
G	3D	140-051-015	RC6901	31.3	14	27.2	12.6	9	2.3	24.4	7.5	32	16.5	9	2	23.6	4	100	2000

KNUCKLE CATCH JC-24, JC-26

TEST METHOD 10

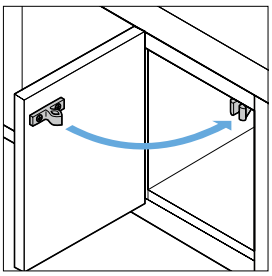


- Can be used for overlay and inset door.

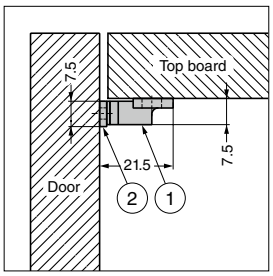
[Applications]
- Furniture, kitchen equipment and marine hardware, etc.

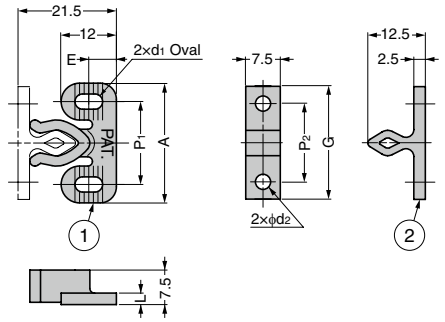
[Remarks]
- Catch force varies. Please check with actual item.

[Installation]



[Application Reference]



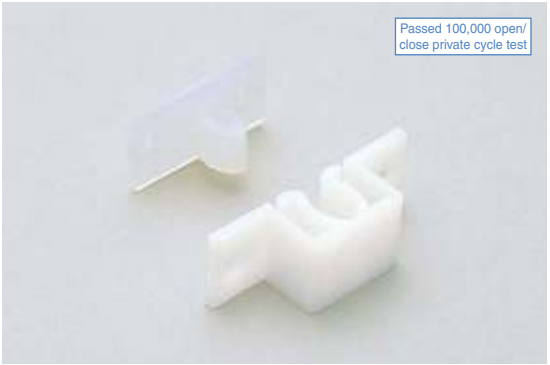


No.	Part Name	Material	Colour
①	Body	POM	Natural/Black
②	Striker	PA	

RoHS	CAD	Item Code	Item Name	A	P1	E	G	P2	L	d1	d2	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-046	JC-24	24	17	7	22	15.5	2	2.5×5.5	2.5	30.4	3.1	26.5	2.7	1.5	100	2000
G	3D	140-916-119	JC-24B														100	2000
G	3D	140-051-018	JC-26	26	18	6	24.5	17	2.5	3.3×6	3.3	21.6	2.2	16.7	1.7	2	100	5000

KNUCKLE CATCH (MORTISE TYPE) JCU

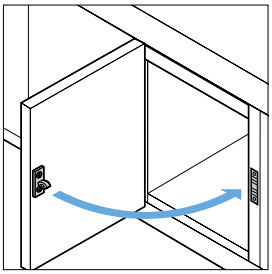
TEST METHOD 10

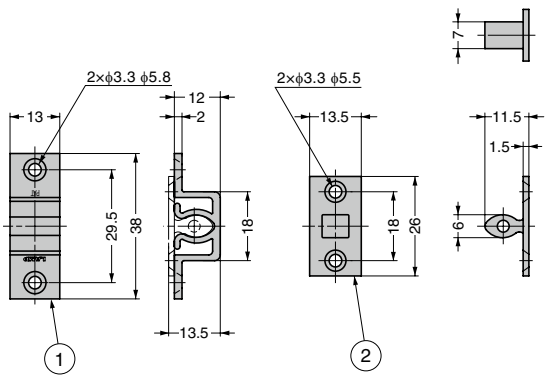


- Durable and reliable.
- For overlay doors.

[Remarks]
- Catch force varies. Please check with actual item.
- The body colour is different from the striker.

[Application Example]



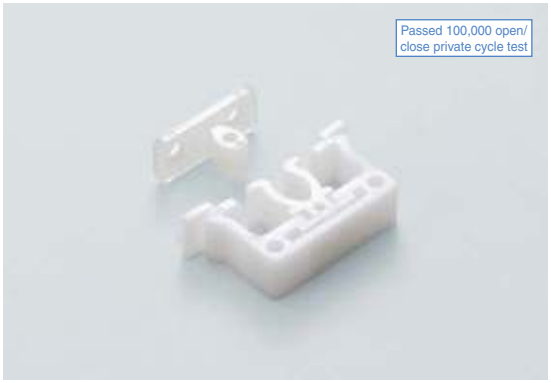


No.	Part Name	Material	Colour
①	Body	POM	Natural
②	Striker	PA	

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-051-020	JCU	19.6	2.0	22.5	2.3	3.5	50	1000

KNUCKLE CATCH (MORTISE TYPE) JCU-F Snap-in Installation

TEST METHOD 10



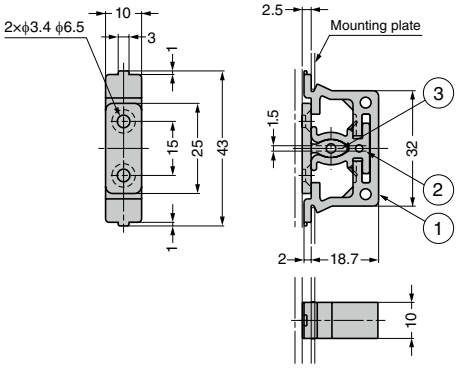
- Body ① can be snapped in the mounting hole.
- Catch ② slides 1.5mm for better alignment with striker ③.

[Remarks]

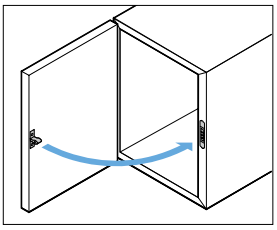
- Catch force varies. Please check with actual item.

[Recommended Screws]

- Countersunk screw M3



[Application Example]



[Cut Out Dimensions]

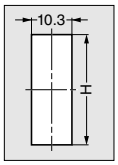


Plate Thickness	Height H
0.8	32.3
1.0	32.9
1.2	33.8

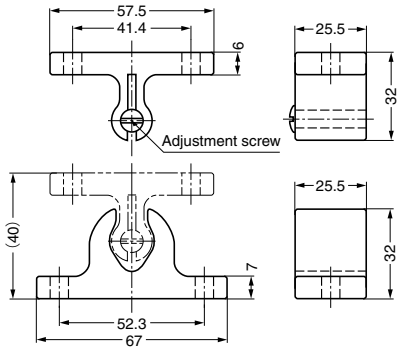
No.	Part Name	Material	Colour
①	Body	POM	Natural
②	Catch		
③	Striker	PA	

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-051-112	JCU-F	19.6	2.0	19.6	2.0	5.2	40	800

ADJUSTABLE KNUCKLE CATCH ESO-6732



- Grabs and holds doors tightly.
- Strong catch force.
- Catch force is adjustable by turning adjustment screw.

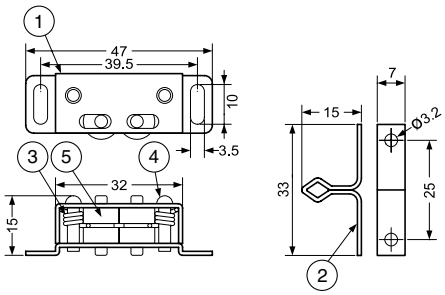


RoHS	CAD	Item Code	Item Name	Material	Colour	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-036-055	ESO-6732/WHT	PA	White	127.4~254.8	13~26	78.4~196	8~20	42	20	200
G	3D	140-036-056	ESO-6732/BK		Black	127.4~254.8	13~26	78.4~196	8~20	42	20	200

ROLLER CATCH S-1080 (STBRC)

SUS





No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Plain
②	Counter Plate		
③	Spring		
④	Rivet	Stainless Steel (SUS430)	
⑤	Roller	PE	White

RoHS	CAD	Item Code	Item Name	Push-in Force kgf	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-098-005	S-1080 (STBRC)	1.0	2.7	18	60	1200

TENSION CATCH BCTS

TEST METHOD 10 SUS316



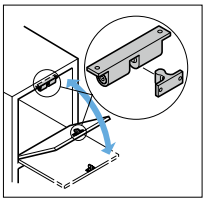
●Can be installed vertically or horizontally.

[Remarks]

●Catch force is not adjustable.Do not turn the slot part.

●Push-in and pulling force may vary. Please check with actual item.

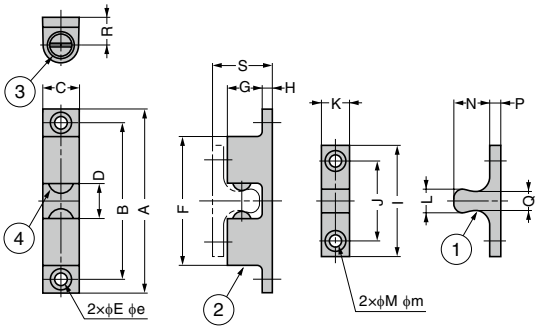
[Application Example]



Can also be installed vertically.

No.	Part Name	Material	Finish
①	Counter Plate	Stainless Steel (SCS14)	Barrel Polished
②	Body		
③	Cover	Stainless Steel (SUS316)	Plain
④	Ball		Barrel Polished
–	Spring	Stainless Steel (SUS304)	Plain

※SCS14 is equivalent of SUS316.



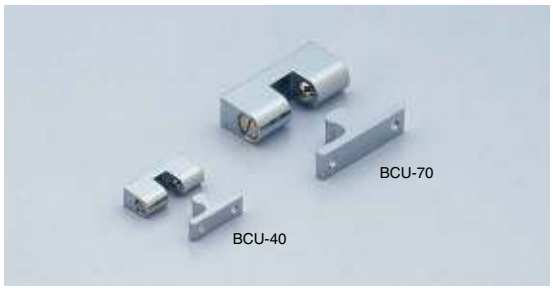
Item Name	A	B	C	D	E	e	F	G	H	I	J	K	L	M	m	N	P	Q	R	S
BCTS-40	43	35	8	5.9	3.2	6.2	28.4	7.5	2.5	25	16	7.5	4.5	3.2	6.2	8.5	2.5	2.7	6	13.5
BCTS-50	50	40	10	7.5	4.2	8.2	31.5	9.3	2.9	30	20	9	6	4.2	8.2	10.3	2.9	3.8	7.2	16.1
BCTS-70	70	60	13	13			51	13	4	42	30	10.5	10			15	4	8	10.5	23

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-242	BCTS-40	20	2	13	1.3	18	50	500
G	3D	140-050-241	BCTS-50	23	2.3	18	1.8	30	50	500
G	3D	140-050-240	BCTS-70	56	5.7	38	3.9	83	25	250

Updated 2017.10.27

TENSION CATCH BCU

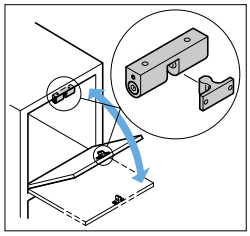
TEST METHOD 10



- Can be installed vertically or horizontally.

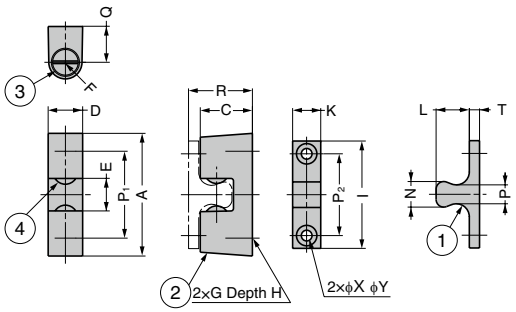
[Remarks]
- Catch force is not adjustable. Do not turn the slot part.
- Push-in and pulling force may vary. Please check with actual item.

[Application Example]



Can also be installed vertically.

No.	Part Name	Material	Finish
①	Counter Plate	Zinc Alloy (ZDC)	Chrome
②	Body		
③	Cover	Brass	Nickel
④	Ball	Steel	Polished
–	Spring	BCU-40: Steel (SWP)	Plain
		BCU-70: Steel (SW)	



Item Name	A	P_1	C	D	E	F	G	H	I	P_2	K	L	N	P	T	X	Y	Q	R
BCU-40	28.5	20	12.5	8.3	6.5	R4	M3	5	25	16	7.5	8.8	5.5	3.7	3	3.2	6.4	8.5	15.7
BCU-70	48	34	20.5	13.5	12.7	R6.5	M5	6	42	32	11	13	10	7.3	4	4.2	8.4	14	24.9

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-103	BCU-40	35.3	3.6	23.5	2.4	18	100	400
G	3D	140-050-104	BCU-70	40.2	4.1	38.2	3.9	75	50	200

TENSION CATCH BCT

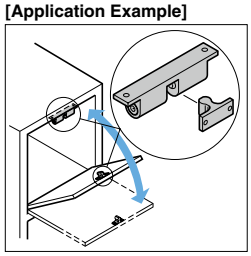
TEST METHOD 10



- Can be installed vertically or horizontally.
- Stainless steel BCTS 1 of the same shape also available.

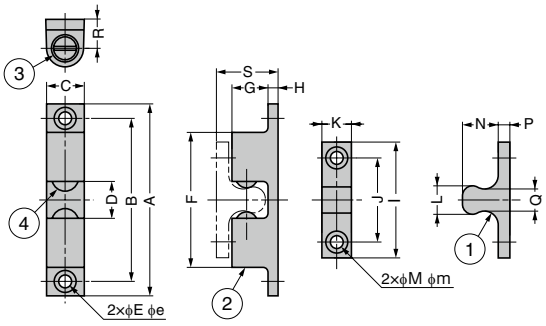
[Remarks]
- Catch force is not adjustable. Do not turn the slot part.
- Push-in and pulling force may vary. Please check with actual item.

[Application Example]



Can also be installed vertically.

No.	Part Name	Material	Finish
①	Male	Zinc Alloy (ZDC)	Chrome
②	Female		
③	Cover	Brass	Nickel
④	Ball	Steel	Polished
–	Spring	Steel (SW)	Plain



Item Name	A	B	C	D	E	e	F	G	H	I	J	K	L	M	m	N	P	Q	R	S
BCT-40	42.5	35	8	6.3	3.2	6.2	26.7	7.5	2.5	25	16	7.5	5.5	3.2	6.2	8.8	2.5	3.7	6.25	13.8
BCT-50	50	40	10	8.4	4.2	8.2	29.8	9.5	3	30	20	9	7.3	4.2	8.2	9.8		4.7	7.75	15.3
BCT-70	70	60	13.5	12			49	13	4	42	30	10.5	11			14.2	3	8.2	10.5	21.2

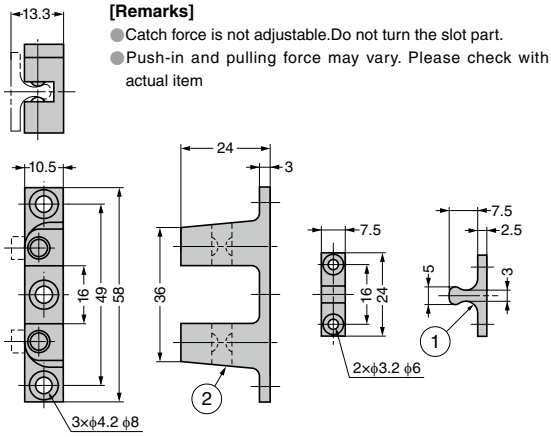
RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-108	BCT-40	43.1	4.4	29.4	3.0	16	100	400
G	3D	140-050-107	BCT-50	40.2	4.1	32.3	3.3	26	100	400
G	3D	140-050-106	BCT-70	45.1	4.6	34.3	3.5	70	50	200

Refer to 1 : P.645

TENSION CATCH BCT-60W

TEST METHOD 10



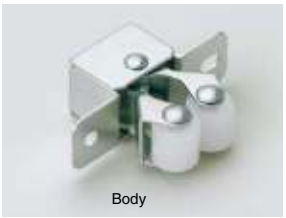


[Remarks]
- Catch force is not adjustable.Do not turn the slot part.
- Push-in and pulling force may vary. Please check with actual item

No.	Part Name	Material	Finish
①	Counter Plate	Zinc Alloy (ZDC)	Chrome
②	Body		

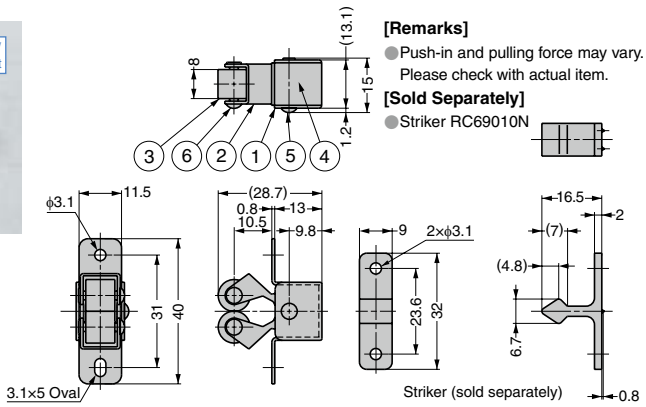
RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-035	BCT-60W	31.4	3.2	26.5	2.7	39.5	80	320

ROLLER CATCH (Mortise Type) R500R


Body



Striker (sold separately)



[Remarks]
- Push-in and pulling force may vary. Please check with actual item.

[Sold Separately]
- Striker RC69010N

No.	Part Name	Material	Finish / Colour
①	Body	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
②	Arm		
③	Roller	PP	Natural
④	Spring	Steel (SWP)	Coloured Zinc Chromate (Trivalent)
⑤	Rivet A	Steel (SWCH)	
⑥	Rivet B		

[Body] Push-in and pulling force are for using striker RC69010N.

RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-051-039	R500R	25	2.6	64	6.5	14	100	1000

[Striker] Sold Separately

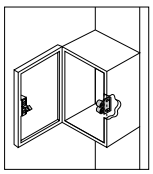
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-916-813	RC69010N	POM	White	1	500	5000

ROLLER CATCH R265, R325 Oval Hole

TEST METHOD 3 SUS



[Application Example]



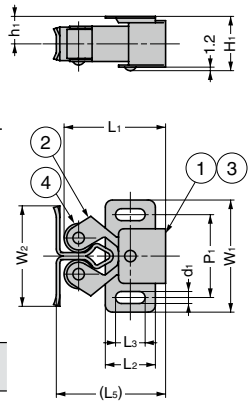
- Polyethylene roller is easy to insert and remove.

[Applications]
- Small switchboard, measuring equipment, kitchen cabinet, etc

[Remarks]
- Push-in and pulling force may vary. Please check with actual item.

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS430)	Plain
②	Arm		
③	Spring	Stainless Steel (SUS304)	
④	Roller	PE	Natural

[Parts Included]
- Counter plate



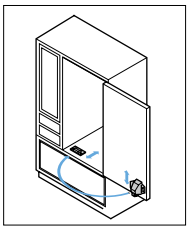
Item Name	L1	L2	L3	L4	L5	W1	W2	H1	h1	P1	P2	d1	d2
R265-SUS	23	12	8	7.2	24	26.9	24.5	13.5	7	19.7	18	3	2.8
R325-SUS	29	14	8.5	9.5	31	31.8	28.5	15.5	7.8	23.5	20	3.5	3.8

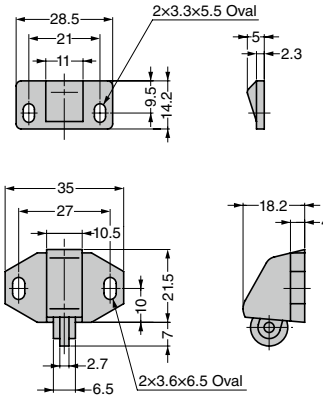
RoHS	CAD	Item Code	Item Name	Push-in Force N	Push-in Force kgf	Pulling Force N	Pulling Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-057-003	R265-SUS	12.7	1.3	23.5	2.4	8	120	1200
G	3D	140-057-005	R325-SUS	9.8	1	30.4	3.1	15	60	1200

ROLLER CATCH C882



[Application Example]

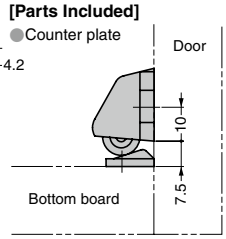




- The catch pulls the door in to ensure proper closing.

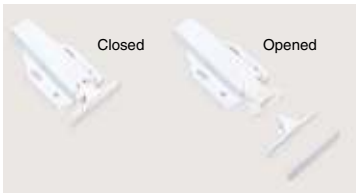
[Remarks]
- Please note the direction of counter plate.

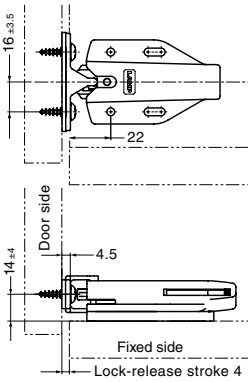
[Parts Included]
- Counter plate



RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-050-203	C882W	PE	White	5	150	1800
–	3D	140-050-204	C882BR		Brown	5	150	1800

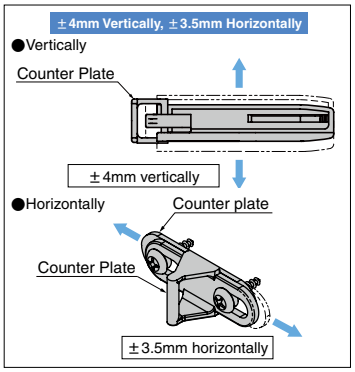
NON-MAGNETIC TOUCH LATCH MLC-100DS-WT ±4mm Vertical Adjustment Type PAT





- Wider vertical adjustment range compared with MLC-100 1.
- Adjustment range of counter plate installation position: ±4mm vertically and ±3.5mm horizontally.
- Long stroke.
- No handle needed, just push to open/close.
- Non magnetic.
- Lightly push to open the door.When closing, arm will catch the counter plate and hold the door by lightly pushing, too.
- Installation with rivet is also possible.
- Similar item (vertical adjustment range: ±2mm): MLC-100 1.

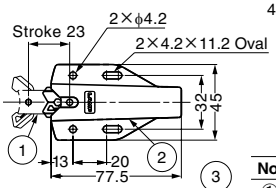
[Adjustment]

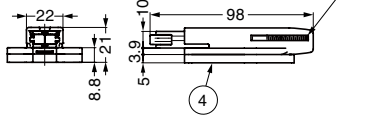


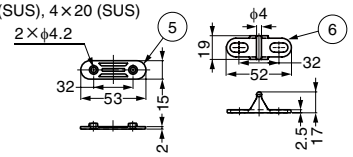
[Specifications]
- Passed 100,000 open/close private cycle test

[Recommended Screws]
- M4 pan or truss head screw, No.4 rivet

[Parts Included]
- Truss head tapping screw 4×16 (SUS), 4×20 (SUS)







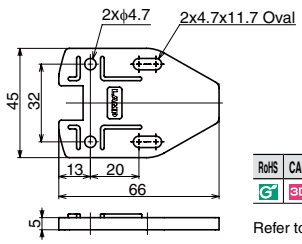
No.	Part Name	Material	Finish/Colour
①	Body 1	Reinforced Nylon	White
②	Body 2	PBT	
③	Spring	Steel	Coloured Zinc Chromate (Trivalent)
④	Spacer	POM	White
⑤	Counter Plate	PBT	
⑥	Counter Plate	POM	

RoHS	CAD	Item Code	Item Name	Colour	Retaining Force N	Retaining Force kgf	Push Force N	Push Force kgf	Weight (g)
G	3D	140-036-531	MLC-100DS-WT	White	90	9.2	14	1.4	51

Refer to 1 : P.649

SPACER MLC-100-DP5-WT





- Spacer for MLC-100 1, MLC-100DS-WT 2.
  Can adjust counter plate installation position +5mm.
- One spacer is included in MLC-100DS-WT.

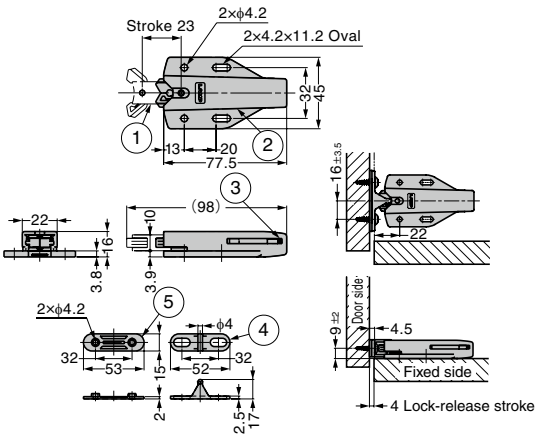
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)
G	3D	140-035-318	MLC-100-DP5-WT	POM	White	16

Refer to 1 : P.649, 2 : P.648

NON-MAGNETIC TOUCH LATCH MLC-100



- Long stroke.
- No handle needed, just push to open/close.
- Non magnetic.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.
- Wide adjustment range: ±2mm vertically and ±3.5mm horizontally.
- Installation with rivet is also possible.
- Similar item (heat resistance, stroke 40mm): MLC-HT130BL 1.



[Specifications]
- Passed 100,000 open/close private cycle test

[Parts Included]
- Truss head tapping screw 4×16 (SUS)

[Recommended Screws]
- M4 pan or truss head screw, No.4 rivet

No.	Part Name	Material	Finish / Colour
①	Body 1	Reinforced Nylon	White
②	Body 2	Reinforced PBT	Black
③	Spring	Steel	Coloured Zinc Chromate (Trivalent)
④	Counter Plate	POM	White
⑤	Counter Plate	PBT	Black

RoHS	CAD	Item Code	Item Name	Old Item Name	Colour	Retaining Force N	Retaining Force kgf	Push Force N	Push Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-028-540	MLC-100WT	PR-25	White	90	9.2	14	1.4	32	20	240
G	3D	140-033-090	MLC-100BL	–	Black						20	240

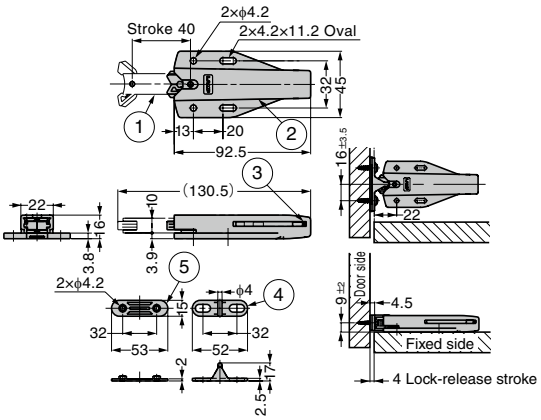
Refer to 1 : P.649

※Item name has been revised.

NON-MAGNETIC TOUCH LATCH MLC-HT130BL



- Heat-resistance (up to 120℃) and long stroke.
- No handle needed, just push to open/close.
- Non magnetic.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.
- Wide adjustment range: ±2mm vertically and ±3.5mm horizontally.
- Installation with rivet is also possible.
- Similar item (non-heat resistance, stroke 23mm): MLC-100WT 1.



[Specifications]
- Passed 100,000 open/close private cycle test

[Remarks]
- Retaining force may decrease at high temperature.The retaining force at 120℃ is about 29.4N (3kgf), which may vary depending on the environment and conditions.

[Parts Included]
- Truss head tapping screw 4×16 (SUS)

[Recommended Screws]
- M4 pan or truss head screw, No.4 rivet

No.	Part Name	Material	Finish / Colour
①	Body 1	Reinforced PA	Black
②	Body 2	Reinforced PBT	
③	Spring	Stainless Steel (SUS304)	Plain
④	Counter Plate	Reinforced PA	Black
⑤	Counter Plate	Reinforced PBT	

RoHS	CAD	Item Code	Item Name	Old Item Name	Retaining Force N	Retaining Force kgf	Push Force N	Push Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-028-539	MLC-HT130BL	PRW-40	117.6	12	16.7	1.7	40	20	240

Refer to 1 : P.649

※Item name has been revised.

NON-MAGNETIC TOUCH LATCH MC-37F

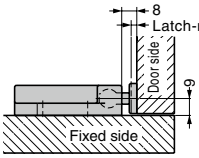


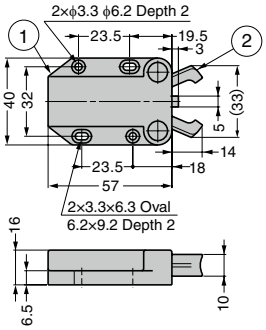
- No handle needed, just push to open/close.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.
- Floating counter plate for easy alignment.

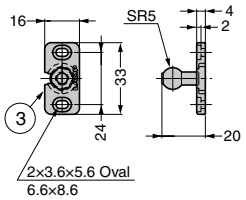
[Specifications]
- Passed 100,000 open/close private cycle test

[Parts Included]
- Round head wood screw 3.5×10, 3.1×13

[Installation]







No.	Part Name	Material	Colour
①	Body	ABS	Black, Brown, White
②	Arm	POM	
③	Counter Plate	PA	

RoHS	CAD	Item Code	Item Name	Colour	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-058-064	MC-37F-BK	Black	78	8	24	30	300
G	3D	140-058-066	MC-37F-BR	Brown				30	300
G	3D	140-058-065	MC-37F-WH	White				30	300

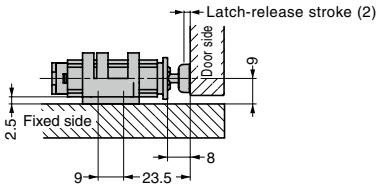
NON-MAGNETIC TOUCH LATCH MC-20

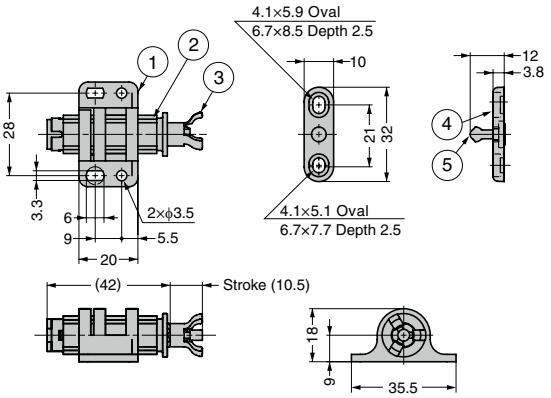


- No handle needed, just push to open/close.
- Easy adjustment (13mm back and forward) by revolving the body.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.

[Parts Included]
- Round head wood screw 3.1×13

[Installation]





No.	Part Name	Material	Colour
①	Base	PP	Black, White
②	Body		
③	Latch		
④	Counter Plate		
⑤	Counter Plate		

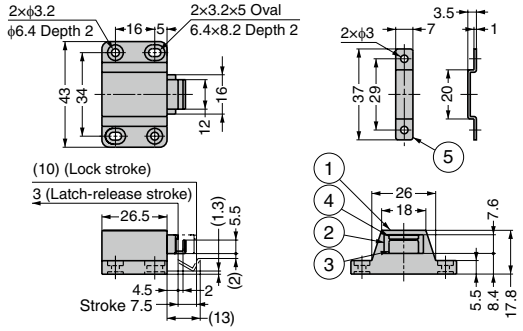
RoHS	CAD	Item Code	Item Name	Colour	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-022-344	MC-20BL	Black	40	4	6	30	600
G	3D	140-022-345	MC-20WT	White				30	600

NON-MAGNETIC TOUCH LATCH PR-21P



- No handle needed, just push to open/close.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.

[Parts Included]
- Counter plate



No.	Part Name	Material	Finish / Colour
①	Body	ABS	Black, Brown
②	Slide	POM	
③	Arm	Steel (SPCC)	Paint/Brown
④	Yoke		GB
⑤	Counter Plate		Chrome

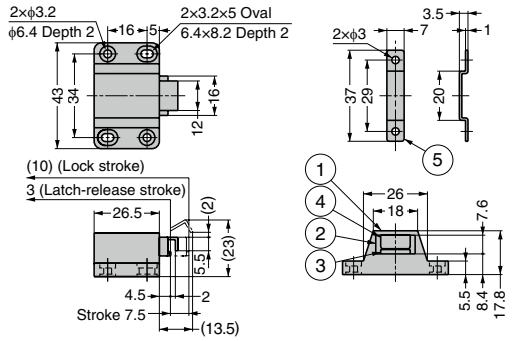
RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-277	PR-21PK	Black	16.3	100	800
G	3D	140-050-272	PR-21PD	Brown		100	800

NON-MAGNETIC TOUCH LATCH PR-20P



- No handle needed, just push to open/close.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.

[Parts Included]
- Counter plate



No.	Part Name	Material	Finish / Colour
①	Body	ABS	Black, Brown
②	Slide	POM	
③	Arm	Steel (SPCC)	Paint/Brown
④	Yoke		GB
⑤	Counter Plate		Chrome

RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-276	PR-20PK	Black	16.3	100	800
G	3D	140-050-274	PR-20PD	Brown		100	800

NON-MAGNETIC TOUCH LATCH MC-28



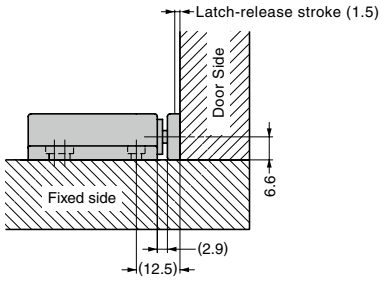
- No handle needed, just push to open/close.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.

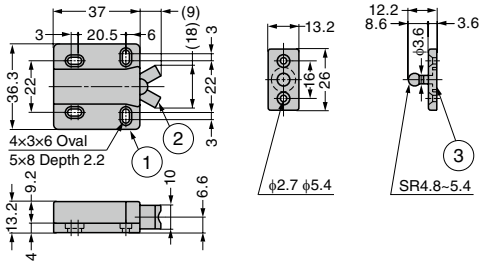
[Specifications]
- Passed 30,000 open/close private cycle test

[Remarks]
- For overlay door, make a 3mm gap between door and cabinet frame.

[Parts Included]
- Pan head wood screw 2.7×13
- Countersunk head wood screw 2.4×10

[Application Example]





No.	Part Name	Material	Colour
①	Body	ABS	Black
②	Arm	POM	
③	Counter Plate	PA	

RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-203	MC-28	29	3	15	50	500

NON-MAGNETIC TOUCH LATCH ESN-195/BLK Snap-in Installation

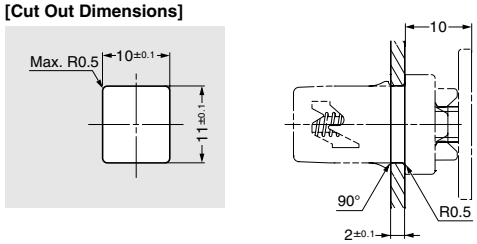


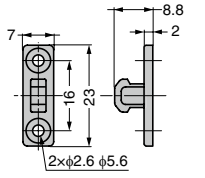
- Compact design with strong retaining force.
- Snap-in type body.
- No handle needed, just push to open/close.
- Lightly push to open the door.When closing, arm will catch the counter plate (sold separately) and hold the door by lightly pushing, too.

[Sold Separately]
- Counter plate ESN-195-ST

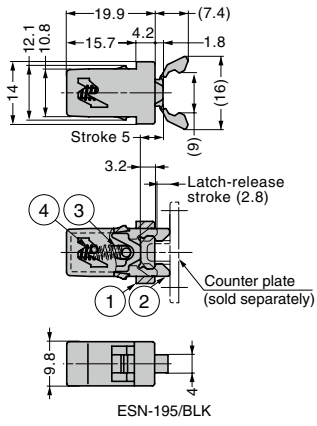
[Recommended Screws]
For counter plate (sold separately)
- Countersunk head screw M2.5
- Countersunk head wood screw nominal 2.4

[Cut Out Dimensions]





ESN-195-ST (sold separately)



ESN-195/BLK

[Body]

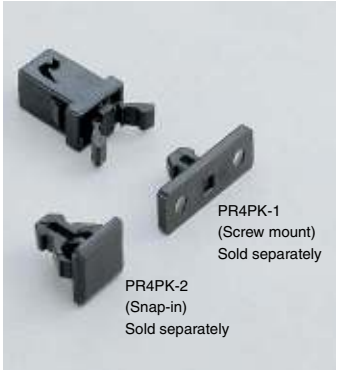
RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-195	ESN-195/BLK	34	3.5	2.3	1000	5000

[Counter Plate] Sold Seperately

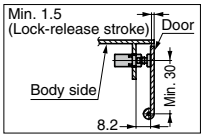
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-014-075	ESN-195-ST	POM	Black	1	1000	4000

No.	Part Name	Material	Colour
①	Body	PBT	Black
②	Catch	PA	
③	Arm	LCP	
④	Spring	Steel (SUP)	–

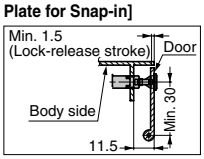
NON-MAGNETIC MINI TOUCH LATCH PR4PK-B Snap-in Installation



[Combination with Counter Plate for Screw Mount]



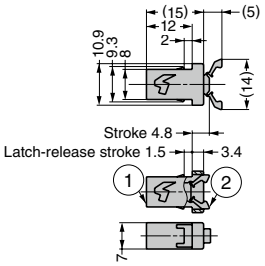
[Combination with Counter Plate for Snap-in]

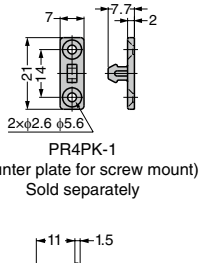


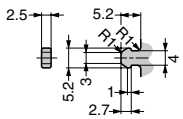
- Snap-in type (body, counter plate for snap-in).
- No handle needed, just push to open/close.
- Lightly push to open the door. When closing, arm will catch the counter plate (sold separately) and hold the door by lightly pushing, too.

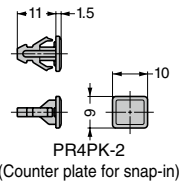
[Sold Separately]

- PR4PK-1 (Counter plate for screw mount)
- PR4PK-2 (Counter plate for snap-in)

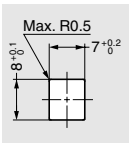


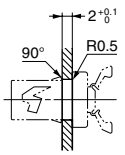




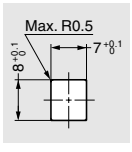


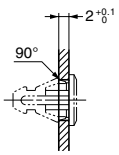
[Cut Out Dimensions for Body]





[Cut Out Dimensions (Counter Plate for Snap-in)] PR4PK-2





[Body]

RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-118	PR4PK-B	12	1.2	2	0.7	1000	10000

[Counter Plate] Sold Seperately

RoHS	CAD	Item Code	Item Name	Product Name	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-019	PR4PK-1	Counter Plate for Screw Mount	POM	0.4	–	1000
G	3D	140-059-018	PR4PK-2	Counter Plate for Snap-in	POM	0.5	–	500

No.	Part Name	Material	Colour
①	Body	POM	Black
②	Arm	PA	

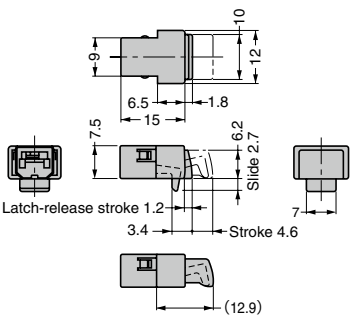
NON-MAGNETIC MINI TOUCH LATCH NS2 Snap-in Installation



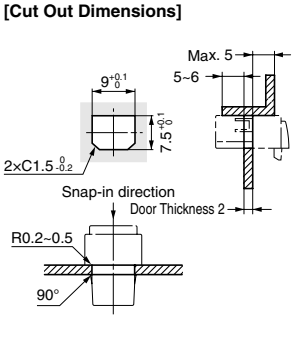
- Miniature design is ideal for small door applications.
- Latch is less likely to be damaged even if forcibly removing the door when locked.
- Snap-in type.
- No handle needed, just push to open/close.
- Lightly push to open the door. When closing, arm will catch the counter plate and hold the door by lightly pushing, too.

[Remarks]

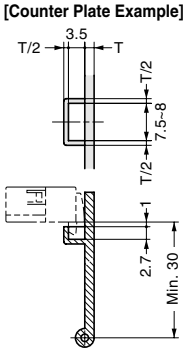
- Counter plate not included. Please prepare the counter plate , for example by forming on the door side.



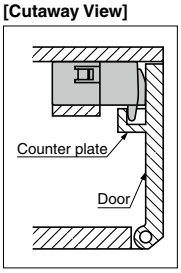
[Cut Out Dimensions]



[Counter Plate Example]



[Cutaway View]



RoHS	CAD	Item Code	Item Name	Material	Colour	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-059-098	NS2	Polycarbonate	Black	2	1.1	500	–

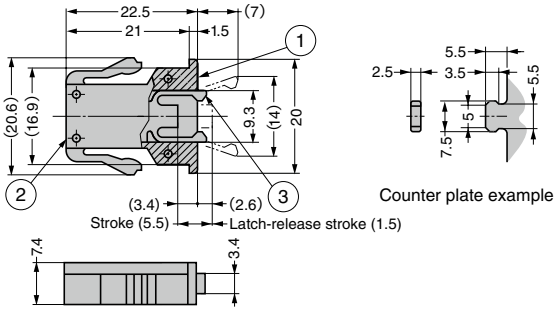
NON-MAGNETIC TOUCH LATCH PR3PK Snap-in Installation



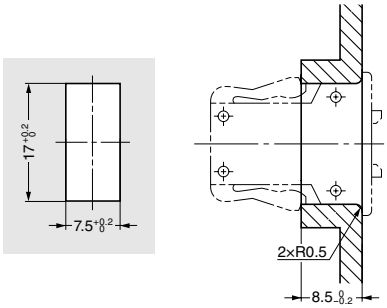
- No handle needed, just push to open/close.

[Remarks]

- Counter plate not included. Please prepare the counter plate, for example by forming on the door side.



[Cut Out Dimensions]



No.	Part Name	Material	Colour
①	Body	ABS	Black
②	Base		Clear
③	Arm	POM	Black

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-239	PR3PK	2.5	400	3200

MAGNETIC TOUCH LATCH ML-120



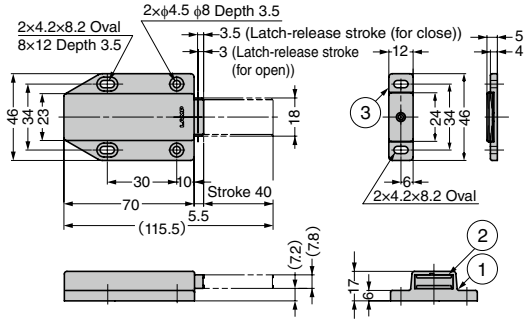
- Large stroke. Can also be used for heavy doors or large doors (tested with W600×H1800×t30 door).
- Lightly push to open the door.
- When closing, magnet will catch the door by lightly pushing.
- Counter plate is movable.
- For overlay door, leave a space between side board and door as shown below.

[Remarks]

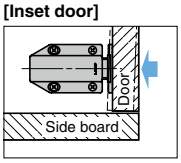
- Be sure to read the "Cautions" 1.
- Please use hinges without catch. (Or hinges with catch may cause malfunction).
- Do not use as a door stopper.Excessive force may cause damage.
- Pay attention to not pinching fingers when using with a small door.

[Parts Included]

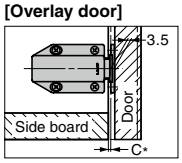
- Counter plate
- Countersunk head tapping screw 4×16



[Inset door]



[Overlay door]



* without including thickness of mounting plate.

To ensure a push-in allowance of 3.5mm or above in the latch part as shown, please leave a clearance C between door and side board. (Sponge rubber, PVC packing may be used in the gap for good appearance and dust removal).

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-338	ML-120BR	Brown	23.5	2.4	53	20	240
G	3D	140-050-337	ML-120W	White				20	240

No.	Part Name	Material	Finish / Colour
①	Body	ABS	Brown, White
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate
③	Counter Plate	ABS/Steel (SPCC)	Brown, White/Zinc Chromate

Refer to 1 : P.607

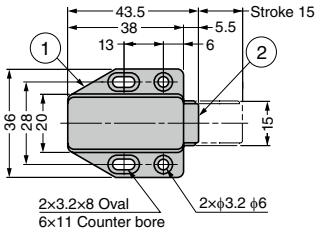
MAGNETIC TOUCH LATCH ML-80

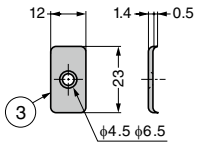


- Lightly push to open the door.
- When closing, magnet will catch the door by lightly pushing.
- For overlay doors, make a 3.5mm gap between door and cabinet frame.

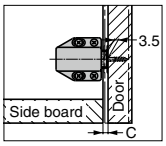
[Remarks]
- Be sure to read the "Cautions" 1.
- For large door, please use ML120 2.
- Please use hinges without catch.

[Parts Included]
- Counter plate
- Round head wood screw 3.1×13 (4 pcs)
- Countersunk head wood screw 2.7×13 (1 pc)

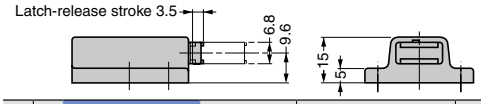




[Overlay door]



To ensure a push-in allowance of 3.5mm or above in the latch part, please leave a clearance C at the side board.



No.	Part Name	Material	Finish / Colour
①	Body	ABS	Brown, White
②	Yoke	Steel (SPCC)	Coloured Zinc Chromate
③	Counter Plate		

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-270	ML-80BR	Brown	15.7	1.6	22	20	400
G	3D	140-050-271	ML-80W	White				20	400

Refer to 1 : P.607, 2 : P.654

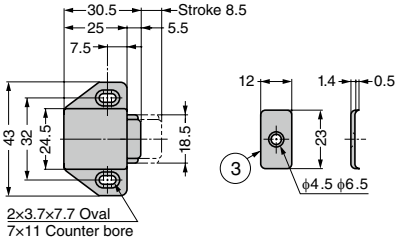
MAGNETIC TOUCH LATCH ML-30S

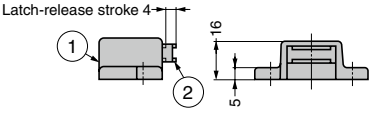


- Lightly push to open the door.
- When closing, magnet will catch the door by lightly pushing.

[Remarks]
- Be sure to read the "Cautions" 1.
- Do not use for large doors.
- Please use hinges without catch.

[Parts Included]
- Counter plate
- Round head wood screw 3.1×13 (2 pcs)
- Countersunk head wood screw 3.1×13 (1 pc)





No.	Part Name	Material	Finish / Colour
①	Body	ABS	Brown, White
②	Yoke	Steel (SPCC)	Nickel
③	Counter Plate		

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-054	ML-30SW	White	11.8	1.2	22.5	50	750
G	3D	140-050-055	ML-30SBR	Brown				50	750

Refer to 1 : P.607

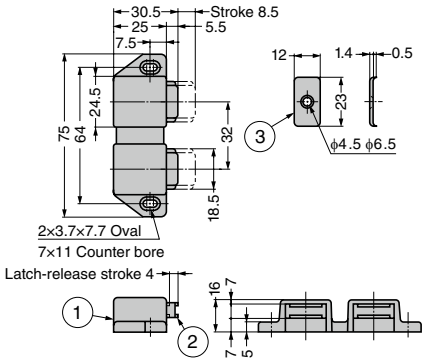
MAGNETIC TOUCH LATCH ML-30W



- Lightly push to open the door.
- When closing, magnet will catch the door by lightly pushing.

[Remarks]
- Be sure to read the "Cautions" 1.
- Do not use for large doors.
- Please use hinges without catch.

[Parts Included]
- Counter plate
- Round head wood screw 3.1×13 (2 pcs)
- Countersunk head wood screw 3.1×13 (2 pc)



No.	Part Name	Material	Finish / Colour
①	Body	ABS	Brown, White
②	Yoke	Steel (SPCC)	Nickel
③	Counter Plate		

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-056	ML-30WW	White	11.8	1.2	42	30	450
G	3D	140-050-057	ML-30WBR	Brown				30	450

Refer to 1 : P.607

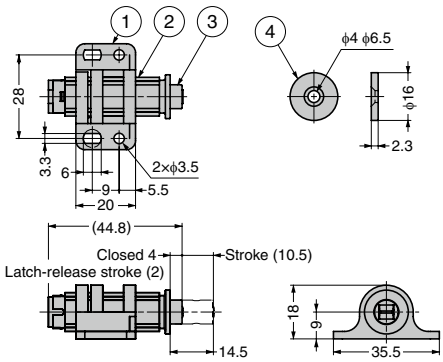
MAGNETIC TOUCH LATCH MC-25



- Lightly push to open the door.
- Easy adjustment (13mm back and forward) by revolving the body.
- When closing, magnet will catch the door by lightly pushing.

[Remarks]
- Be sure to read the "Cautions" 1.
- Do not use for large doors.
- Please use hinges without catch.

[Parts Included]
- Counter plate
- Round head wood screw 3.1×13 (4 pcs)
- Countersunk head wood screw 3.1×13 (1 pc)



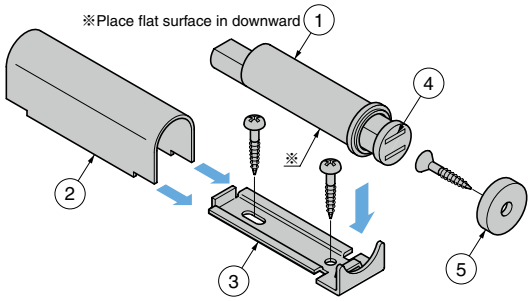
No.	Part Name	Material	Finish / Colour
①	Base	PP	Black, White
②	Body		
③	Latch		
④	Counter Plate	Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Colour	Retaining Force (Magnetic Force) N	Retaining Force (Magnetic Force) kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-022-347	MC-25BL	Black	4.9	0.5	10	30	600
G	3D	140-022-346	MC-25WT	White				30	600

Refer to 1 : P.607

MAGNETIC TOUCH LATCH MC-S60

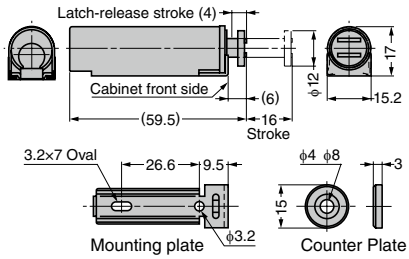




- Can be used for overlay and inset door.
- Stylish design with stainless steel cover.

[Remarks]
- Be sure to read the "Cautions" 1.
- For small doors.Do not use for large doors.
- Please use hinges without catch.

[Parts Included]
- Counter plate W12 2
- Pan head wood screw 3.1×13, Countersunk head wood screw 3.8×16



No.	Part Name	Material	Finish / Colour
①	Body	ABS/POM	Brown
②	Cover	Stainless Steel (SUS430)	–
③	Mounting Plate	Steel (SPCC)	Nickel
④	Yoke		
⑤	Counter Plate	Steel (SUM)	

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-129	MC-S60	10.8	1.1	28.5	30	600

Refer to 1 : P.607, 2 : P.639

MAGNETIC TOUCH LATCH (MORTISE TYPE) MC-U60

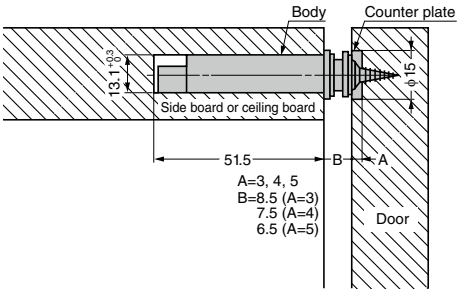


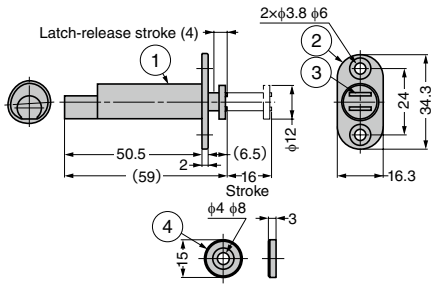
- For overlay doors: Can be embedded in the edge of side board, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- Please provide a ϕ15 counterbore of 3~5mm deep at the door for installing the counter plate (for the relation between counterbore depth A and door clearance B, see "Cut Out Dimensions" in the lower left).
- For small overlay door.Do not use for large doors.
- Please use hinges without catch.

[Parts Included]
- Counter plate W12 2
- Pan head wood screw 2.9×13, Countersunk head wood screw 3.8×16

[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Body	ABS/POM	Brown
②	Mounting Plate	Stainless Steel (SUS430)	–
③	Yoke	Steel (SPCC)	Nickel
④	Counter Plate	Steel (SUM)	

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-016	MC-U60	10.8	1.1	19	30	600

Refer to 1 : P.607, 2 : P.639

PUSH KNOB LATCH TLP-S

TEST METHOD 11 | L=R | INSTRUCTION



- Knob is stored flush when pushed in and not in use.
- Knob pops out when pressed to open the door.
- Latch securely locks the door with dead bolt.
- Flexible to suit door thickness (19~30mm) by adjusting screw.
- Can be used for overlay and inset door.
- Rounded push knob and base are also available.

[Specifications]

- Applicable door thickness: 19~30mm

[Remarks]

- Please order Push Knob・Base and Latch Body・Counter plate for complete set.
- The spring loaded latch and the dead bolt are reversed up and down when using for right and left installation.
- Door stopper is required when installing to inset door.

[Parts Included]

- Door thickness adjustment screw: M4×24, M4×30 (attached to ①②)
- Latch body mounting screw: Pan-head tapping screw 3×20 (SUS, attached to ③④)
- Counter plate mounting screw: Pan-head tapping screw 3×16 (SUS, attached to ③④)

[Push Knob and Base]



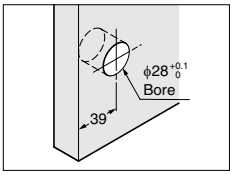
TLP-S-BB-WB TLP-S-BB-G TLP-S-BB-CR

Brown is also available as special order.

[Latch Body and Counter Plate]

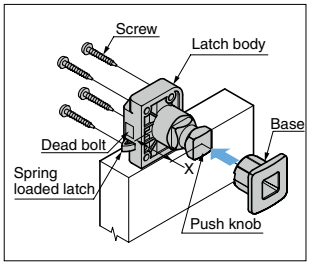


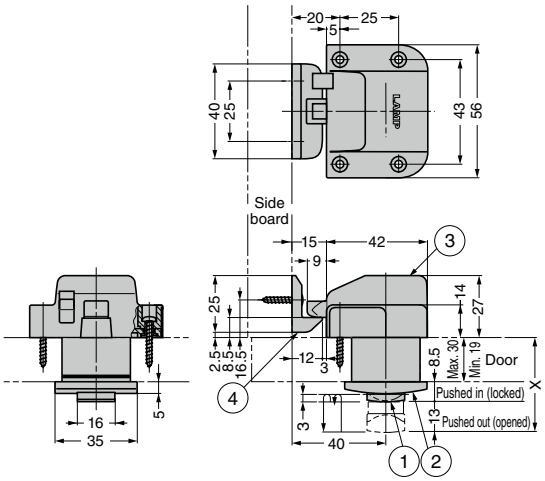
[Bore Dimensions (Door)]



Dimension above is for inset door. Refer to the right figure for overlay door.

[Parts Structure]





[X Dimension]

Screw Length	Door Thickness	X
24	19	40.5
	20	41.5
	21	42.5
	22	43.5
	23	44.5
	24	45.5

Screw Length	Door Thickness	X
30	25	46.5
	26	47.5
	27	48.5
	28	49.5
	29	50.5
	30	51.5

No.	Part Name	Material	Finish / Colour
①	Push knob	Brass	White Bronze Plating, Gold, Chrome
②	Base	Zinc Alloy (ZDC)	
③	Latch Body	PA	White
④	Counter Plate		

[Push Knob① · Base②]

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-014-264	TLP-S-BB-WB	Satin Nickel	84	30	150
G	3D	140-014-265	TLP-S-BB-G	Gold	84	30	180
G	3D	140-012-390	TLP-S-BB-CR	Chrome	84	30	150

[Latch Body③ · Counter Plate④] Supplied with Installation Instruction

RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-060-934	TLP-LBMW	196	20	47	10	100

PUSH KNOB LATCH DPL-RO

TEST METHOD 11 | L=R | INSTRUCTION



- Safe and smart design: Door will be locked when knob is pushed in.
- Door is locked when closing the door and push in the knob. Push the knob again to unlock the door.
- Can be used for overlay and inset door.
- Door stopper is not needed.
- Latch and knob are sold as a set.

[Specifications]
- Applicable door thickness: 15~25mm

[Remarks]
- Be sure to close the door and then push the knob. Closing the door after pushing the knob may cause damage.

[Parts Included]
- Binding head tapping screw 4×20 (SUS)
- Pan head tapping screw 3×14 (SUS)

[Push Knob and Surface Ring]

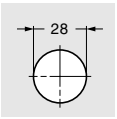


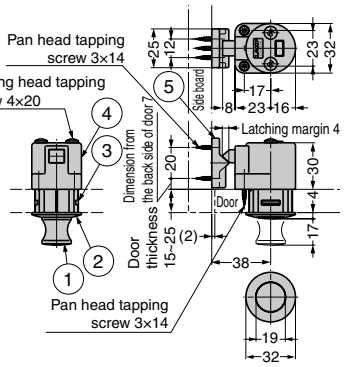
DPL-RO-G DPL-RO-CR

[Latch Body and Counter Plate]



[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Knob	Zinc Alloy (ZDC)	Gold (Paint/Clear), Chrome
②	Surface Ring		
③	Case Body	ABS	Black
④	Latch Body		
⑤	Counter Plate		

RoHS	CAD	Item Code	Item Name	Finish	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-014-739	DPL-RO-G	Gold (Paint/Clear)	98	10	72	10	80
G	3D	140-014-740	DPL-RO-CR	Chrome				10	80

PUSH KNOB LATCH DPL-OV

TEST METHOD 11 | L=R | INSTRUCTION



- Safe and smart design: Door will be locked when knob is pushed in.
- Door is locked when closing the door and push in the knob. Push the knob again to unlock the door.
- Can be used for overlay and inset door.
- Door stopper is not needed.
- Latch and knob are sold as a set.

[Specifications]
- Applicable door thickness: 15~25mm

[Remarks]
- Be sure to close the door and then push the knob.Closing the door after pushing the knob may cause damage.

[Parts Included]
- Binding head tapping screw 4×20 (SUS)
- Pan head tapping screw 3×14 (SUS)

[Push Knob and Surface Ring]

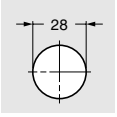


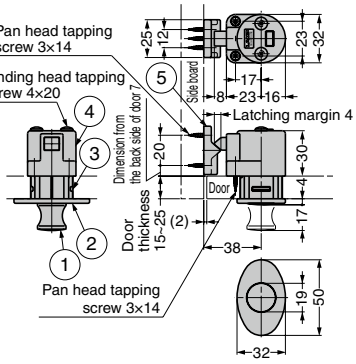
DPL-OV-G DPL-OV-CR

[Latch Body and Counter Plate]



[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Knob	Zinc Alloy (ZDC)	Gold (Paint/Clear), Chrome
②	Surface Ring		
③	Case Body	ABS	Black
④	Latch Body		
⑤	Counter Plate		

RoHS	CAD	Item Code	Item Name	Finish	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-014-734	DPL-OV-G	Gold (Paint/Clear)	98	10	83	10	80
G	3D	140-014-735	DPL-OV-CR	Chrome				10	80

PUSH KNOB LATCH DPL-SQ

TEST METHOD 11 | L=R | INSTRUCTION



- Safe and smart design: door will be locked when knob is pushed in.
- Door is locked when closing the door and push in the knob. Push the knob again to unlock the door.
- Can be used for overlay and inset door.
- Door stopper is not needed.
- Latch and knob are sold as a set.

[Specifications]
- Applicable door thickness: 15~25mm

[Remarks]
- Be sure to close the door and then push the knob.Closing the door after pushing the knob may cause damage.

[Parts Included]
- Binding head tapping screw 4×20 (SUS)
- Pan head tapping screw 3×14 (SUS)

[Push Knob and Surface Ring]

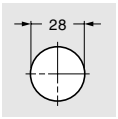


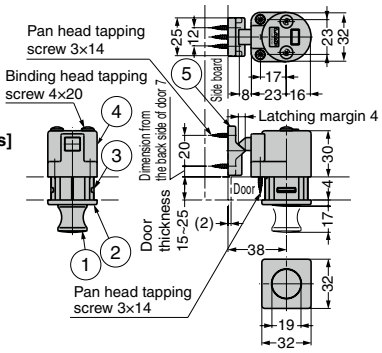
DPL-SQ-G DPL-SQ-CR DPL-SQ-SN

[Latch Body and Counter Plate]



[Cut Out Dimensions]





No.	Part Name	Material	Finish / Colour
①	Knob	Zinc Alloy (ZDC)	Gold (Paint/Clear), Chrome
②	Surface Ring		
③	Case Body	ABS	Black
④	Latch Body		
⑤	Counter Plate		

RoHS	CAD	Item Code	Item Name	Finish	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-014-737	DPL-SQ-G	Gold (Paint/Clear)	98	10	78	10	80
G	3D	140-014-738	DPL-SQ-CR	Chrome				10	80
G	3D	140-014-736	DPL-SQ-SN	Satin Nickel				10	80

Latch with Lever Digest

FLUSH SLAM LATCH LC-48 1



SNAP LOCK SX-48

Snap-in Installation & Temporary Holding 2



PANEL LATCH LC-PK32, LC-PL32

Snap-in Installation 3



LC-PK32-L-BL LC-PL32-GR



LC-PL32-L-GR
(Sold separately)



LC-PK32-K
(Sold separately)

Refer to 1 : P.532, 2 : P.533, 3 : P.534

STAINLESS STEEL LEVER LATCH LL-66S

INSTRUCTION SUS316



- Corrosion resistance: Made of 316 stainless steel.
- Used for overlay doors beyond the lower side of cabinet bottom.
- Latch designed to be used on a door without knobs and handles.
- Door will not open even with shake such as an earthquake.
- Can be installed to a door with gasket.
- Installation position can be adjusted. (body: vertical ±1.5mm, counter plate: horizontal ±1.5mm)

[Cut Out Dimensions]

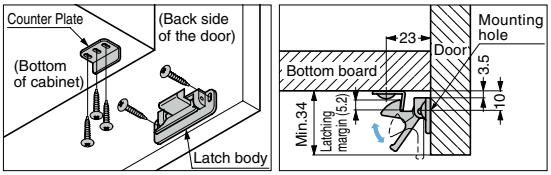
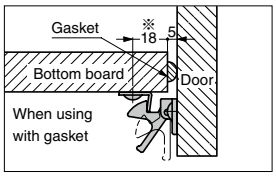
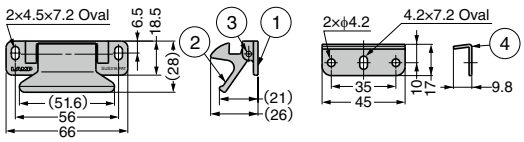


Figure on the right is for the case where the clearance between the bottom board and door is 5mm.
※marked dimension is 23 − (clearance between bottom board and door).





[Applications]
- Marine related furniture and equipment etc.

[Remarks]
- Ensure that the latching margin of body and counter plate is 5.2mm.
- Do not store heavy objects in cabnet since excessive impact may get the door opened.

[Parts Included]
- Truss head tapping screw 4×12 (SUS)

No.	Part Name	Material	Finish
①	Latch Body	Stainless Steel (SCS14)	Polished
②	Lever		
–	Spring	Stainless Steel (SUS316)	Plain
③	Shaft		
④	Counter Plate		Polished

※SCS14 is equivalent of SUS316.

RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-051-030	LL-66S	196	20	85	20	100

LEVER LATCH LL-66

TEST METHOD 11 INSTRUCTION



- Used for overlay doors beyond the lower side of cabinet bottom.
- Latch designed to be used on a door without knobs and handles.
- Door will not open even with shake such as an earthquake.
- Can be installed to a door with gasket.
- Installation position can be adjusted. (body: vertical ±1.5mm, counter plate: horizontal ±1.5mm)
- Choose fire proof type LL-66GR (UL94V-0 grade) for use near a fire, for example, around a cooker in kitchen.
  ※Fire proof type is grey only.

[Cut Out Dimensions]

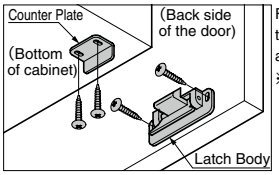
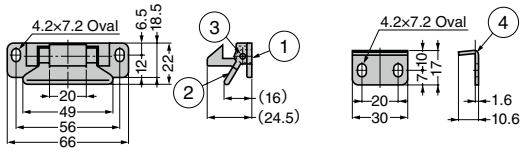


Figure on the right is for the case where the clearance between the bottom board and door is 5mm.
※marked dimension is 24 − (clearance between bottom board and door).



[Remarks]
- It may not operate properly in case of door warp or sagging due to long-term use. In this case, please adjust the fitting state of the door or the installation position of the product.
- Ensure that the latching margin of body and counter plate is 6.5mm.
- Do not store heavy objects in cabinet since excessive impact may get the door opened.

[Parts Included]
- Truss head tapping screw 4×12

No.	Part Name	Material	Finish / Colour
①	Latch Body	Chrome: ABS	White, Brown, Grey,
②	Lever	Others: PA	Chrome
–	Spring	Stainless Steel (SUS304)	–
③	Shaft	Steel	Coloured Zinc Chromate
④	Counter Plate	Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Type	Colour	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-051-028	LL-66BR	–	Brown	196	20	25	30	300
G	3D	140-051-027	LL-66WT		White				30	300
G	3D	140-051-029	LL-66GR	Fire Proof Type	Grey				30	300
G	3D	140-036-236	LL-66CR	–	Chrome			31	30	300

SLIDING DOOR LATCH HC-30R Double-sided Thumb Type

L=R SUS

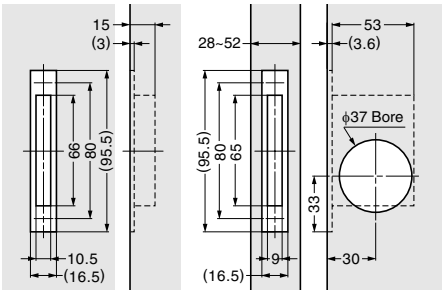


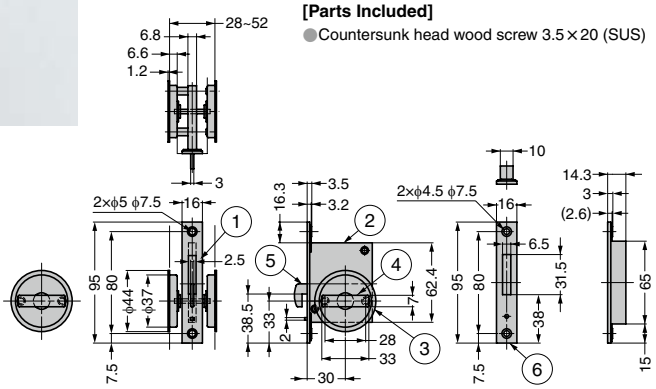
- Ideal for harsh and high corrosion environments.
- Can be latched from both side and prevents unexpected open/close.
- Easy installation, flat and compact design for various application.
- Type combining thumb and indicator and type with large lever on thumb in the same series also available.

[Remarks]
- The dimensions in the "Cut Out Dimensions" are for reference.Please check with actual item.

[Parts Included]
- Countersunk head wood screw 3.5×20 (SUS)

[Cut Out Dimensions]





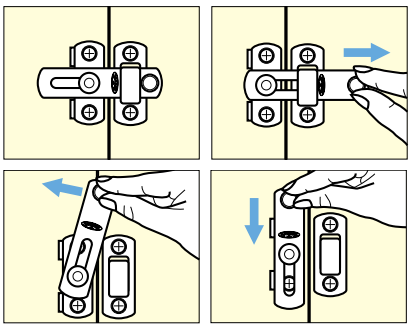
No.	Part Name	Material	Finish
①	Front Plate	Stainless Steel (SUS304)	Satin
②	Body	Steel (SECC)	(Zinc Chromate)
③	Body	Stainless Steel (SUS304)	Polished
④	Thumb	Zinc Alloy (ZDC)	Chrome
⑤	Dead Bolt	Stainless Steel (SUS304)	Barrel Polished
⑥	Counter Plate		Satin

RoHS	CAD	Item Code	Item Name	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-022-282	HC-30R	28~52	290	5	50

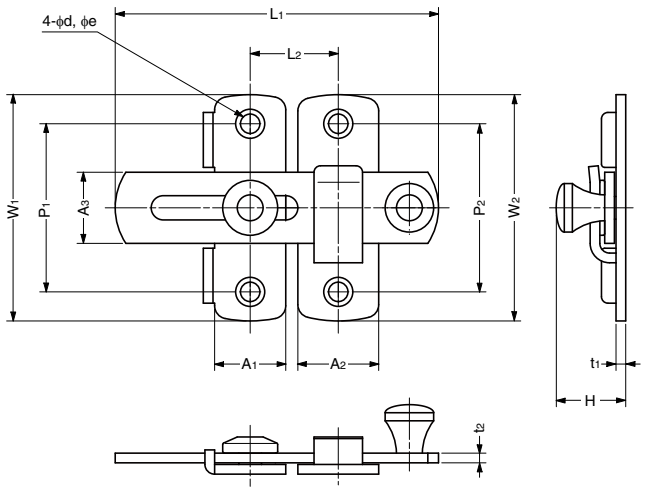
BAR LATCH SSL

NSF SUS





- Unique slide-in bar keeps latch locked.
- Slide out and lift the bar to release.



Material	Finish
Stainless Steel (SUS304)	Electro Polished

RoHS	CAD	Item Code	Item Name	L1	L2	W1	W2	A1	A2	A3	P1	P2	H	t1	t2	d	e	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-014-008	SSL-50	50	20±4	35	35	13	15	13	26	26	14.5	2	5	4.2	6.2	32	10	150
G	3D	140-014-009	SSL-70	70	28±6	50	50	18	20	18	37	37	19	2	2.5	5.2	8	68	10	150
G	3D	140-014-010	SSL-100	100	45±15	70	70	22	25	22	52	52	21.5	3	3	5.8	9	142	5	80

LEVER BOLT HR35

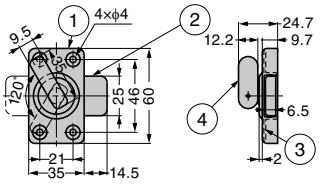
L=R SUS



- Turn the latch knob to open/close.
- Easy installation, flat and compact design for various application.
- Two different counter plates included for different mountings.

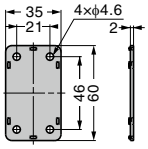
[Parts Included]
- Countersunk wood screw 3.5×20 (SUS)

[Sold Separately]
- Spacer HR35SP-B

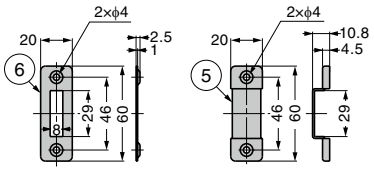


[Spacer] Sold Separately

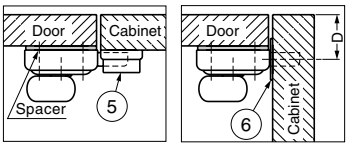




Spacer (Sold separately)



[Spacer Application Example]



Use when there is a level difference on the mounting surface of the main body and the counter plate (left figure) or increase of dimension D is required (right figure). (Overlap spacer as necessary).

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Slide Plate		Plain
③	Back Plate		Satin
④	Lever Knob		
⑤	Counter Plate A		
⑥	Counter Plate B		

[Body]

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	140-180-135	HR35	108	10	100

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-180-002	HR35SP-B	PA	Black	5	250	2500

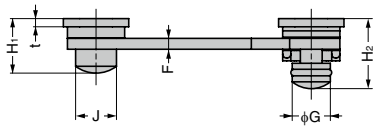
BAR LATCH BLT

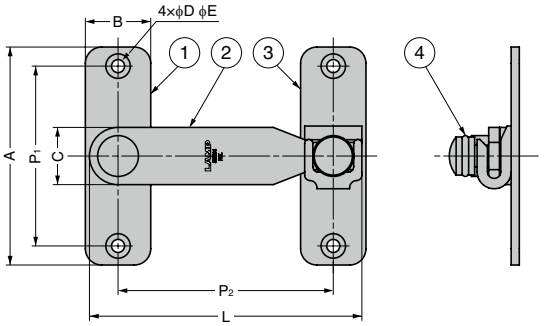
L=R SUS



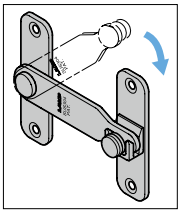
- Thick material used for durability.
- With thumb screw on bar to prevent accidental release.

[Parts Included]
- Countersunk head wood screw (SUS)





[Movement of Latch Bolt]



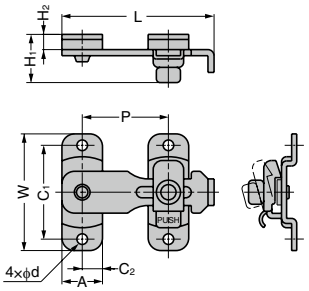
No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Polished
②	Latch Bolt		
③	Counter Plate		
④	O-ring	Nitrile Rubber (NBR)	Black

RoHS	CAD	Item Code	Item Name	L	P1	P2	A	B	C	D	E	F	G	H1	H2	J	t	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	140-050-252	BLT-45	45	30	33	40	14	12	3.5	6	2	9	12	16	9	2	31	3.1×20	20	400
G	3D	140-050-253	BLT-60	60	37	45	48	17	15	3.8	7.5	2.5	10	14.5	17.5	10.8		54		20	400
G	3D	140-050-254	BLT-80	80	53	62	65	21	18	4.3	8	3	12	17	22	13	3	95	3.5×20	10	200
G	3D	140-050-255	BLT-100	100	66	79	80	24	21	4.8	9	4	14	19.8	25.5	15		177	3.8×20	10	100
G	3D	140-050-256	BLT-120	120	73	98	90	28	24	5.1	10		16	22	27.5	18.5	4	243	4.5×20	8	80

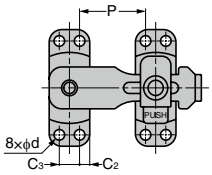
BAR LATCH BLL

NSF AS L=R SUS





BLL-45, 60, 80, 100



BLL-120, 150

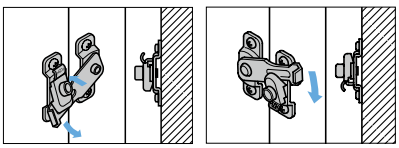
Material	Finish
Stainless Steel (SUS304)	Polished

- Latch bolt snaps into the strike to prevent accidental release.
- Push tab on strike to release.
- When installed reversely, latch bolt is easily released just by pushing the PUSH part (see “Application Example”).
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.

[Parts Included]

- Pan head tapping screw (SUS)

[Application Example]



Reverse position — Normal position

Can be used in either normal or reverse position.
When installed reversely, latch bolt is easily released just with a single push.

RoHS	CAD	Item Code	Item Name	L	W	A	C1	C2	C3	H1	H2	P	d	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	140-059-073	BLL-45	48	40	13	32	6.5	–	17	4.5	23±3	3.2	28	3×10	20	400
G	3D	140-059-074	BLL-60	63	46	16	37	8		20	6	34±4	4.2	50	3.5×16	20	400
G	3D	140-059-075	BLL-80	85	65	20	53	10		22.5	7	47±7	5	100	4.5×16	10	200
G	3D	140-059-076	BLL-100	105	80	25	66	12.5		26.5	8	59±7	5.5	182	5×20	10	100
G	3D	140-059-183	BLL-120	127	100	28.5	80	6.75	15	28		56±10	5.2	270		8	80
G	3D	140-059-184	BLL-150	155	120	30.5	95	7.25	16			74±14		350		6	60

AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

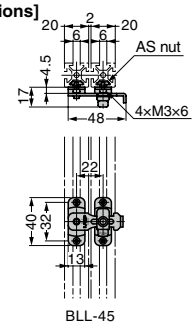
[AS Parts Set] Parts set of screws and AS nuts used for installing to aluminium frame



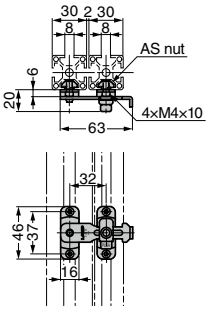


RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	–	140-041-521	AS-BLL-60-30-6	30×30 Groove Width 6 mm	Bar Latch BLL-60 : 1 pc AS Nut AS-6M4 : 4 pcs M4×10 Hexagon Socket Button Head Screw : 4 pcs	61
G	–	140-041-522	AS-BLL-60-30-8	30×30 Groove Width 8 mm	Bar Latch BLL-60 : 1 pc AS Nut AS-8M4 : 4 pcs M4×10 Hexagon Socket Button Head Screw : 4 pcs	85
G	–	140-041-523	AS-BLL-60-40-8-30-6	Frame: 40×40 Groove Width 8 mm Door: 30×30 Groove Width 6 mm	Bar Latch BLL-60 : 1 pc AS Nut AS-8M4 : 2 pcs M4×10 Hexagon Socket Button Head Screw : 2 pcs AS Nut AS-6M4 : 2 pcs M4×12 Hexagon Socket Button Head Screw : 2 pcs	66
G	–	140-041-524	AS-BLL-60-40-10-30-8	Frame: 40×40 Groove Width 10 mm Door: 30×30 Groove Width 8 mm	Bar Latch BLL-60 : 1 pc AS Nut AS-10M4 : 2 pcs M4×10 Hexagon Socket Button Head Screw : 2 pcs AS Nut AS-8M4 : 2 pcs M4×14 Hexagon Socket Button Head Screw : 2 pcs	76
G	–	140-041-525	AS-BLL-80-40-8	40×40 Groove Width 8 mm	Bar Latch BLL-80 : 1 pc AS Nut AS-8M4 : 4 pcs M4×12 Hexagon Socket Button Head Screw : 4 pcs	119
G	–	140-041-526	AS-BLL-80-40-10	40×40 Groove Width 10 mm	Bar Latch BLL-80 : 1 pc AS Nut AS-10M5 : 4 pcs M5×14 Hexagon Socket Button Head Screw : 4 pcs	131

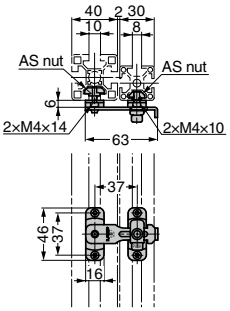
[Dimensions]



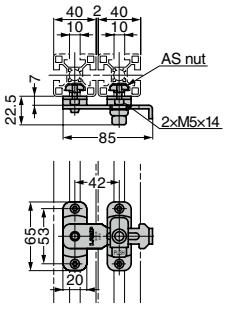
BLL-45



BLL-60



BLL-60



BLL-80

Refer to 1 : FRONT P.20, 2 : P.706

MAGNETIC CATCHES
KNUCKLE CATCHES & TENSION CATCHES
TOUCH LATCHES
LEVER LATCHES
SLIDE / BARREL BOLTS
DRAW LATCHES
PUSH LOCK FASTENERS & KNOB FASTENERS
ALUMINUM FRAME CORNER CONNECTORS
DOOR DAMPERS

STAINLESS STEEL HASP HP

NSF L=R SUS

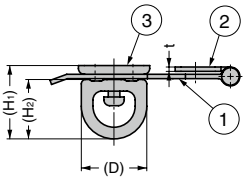


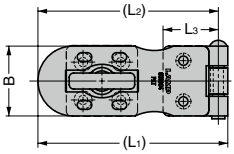
- Rotating pad eye stays fastened tight by four projections without a padlock.
- Installation position can be determined according to the holes on the surface.
- Can be used with padlock 1.
  Please check with actual item.

[Parts Included]
- Countersunk head wood screw (SUS)

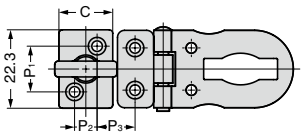
No.	Part Name	Material	Finish
①	Latch Bolt	Stainless Steel (SUS304)	Polished
②	Mounting Plate		
③	Counter Plate		

HP-65

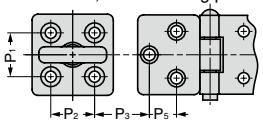




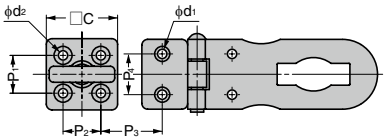
HP-40, 50 When opened



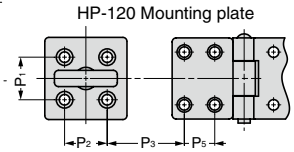
HP-75, 100 Mounting plate



When opened



HP-120 Mounting plate



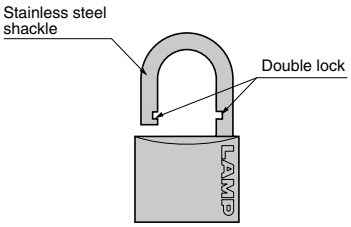
RoHS	CAD	Item Code	Item Name	L1	L2	L3	B	P1	P2	P3	P4	P5	H1	H2	C	D	t	d1	d2	Weight (g)	Screw	Box (pcs)	Carton (pcs)
G	3D	140-050-224	HP-40	40	37	13	22	13	6.4	10.8	12	–	22	17.9	15.3	17.7	1.2	2×φ3	2×φ3	21.5	2.4×13	30	300
G	3D	140-050-225	HP-50	50	47		22.3		9	16					18.3					24		25	250
G	3D	140-050-226	HP-65	65	62	19	24		13	21.5	14		24.5	20.4	24.5	22.5	1.5	2×φ3.2	4×φ3.2	41.5	2.7×16	20	200
G	3D	140-050-227	HP-75	75	72	24.8	27	15	15	15.7	16	9.5	27.4	22	27.8	23.2		3×φ3.8	4×φ3.8	51.5		15	150
G	3D	140-050-228	HP-100	100	95	30	35.5	19	19	29	21	10	32.2	27.9	35.5	31	2	3×φ4	4×φ4.5	118.5	3.5×20	10	100
G	3D	140-050-229	HP-120	120	115	35.5	40	21	21	38	26	15	34.8		40.5		2.5	4×φ5.2	4×φ5.2	172		8	80

Refer to 1 : P.748

HIGH SECURITY PADLOCK PWL Digest



- Provides high security with stainless steel shackle and double lock. Besides, no key number marked in the body prevents illegal use.
- 110 key changes and Master Key system are available.
  Refer to LOCKS 1 for details.



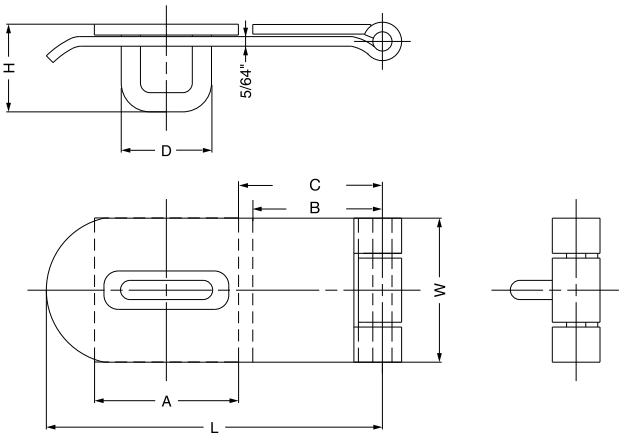
Refer to 1 : P.748

STAINLESS STEEL HASP (WELD-ON) HP-635, 645, 660

NSF SUS316



- Ideal for harsh and high corrosion environments.



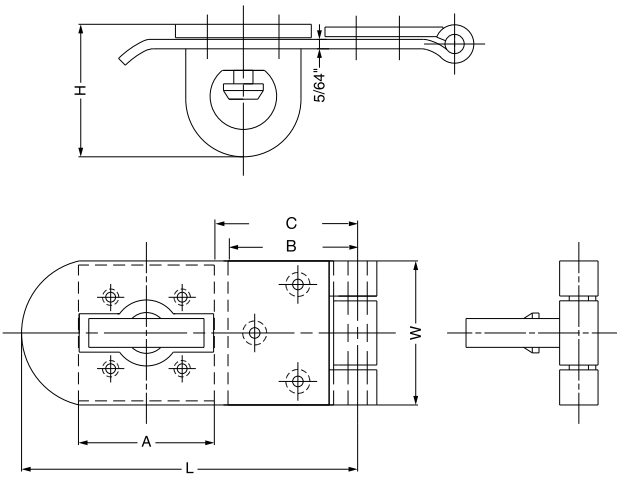
RoHS	CAD	Item Code	Item Name	Material	Finish	L	W	A	B	C	D	H	Weight (g)	Box (pcs)	Carton (pcs)
–	–	140-039-602	HP-635	Stainless Steel (SUS316)	Electro Polished	88.9	38.1	38.1	33.3	41.3	23.8	20.6	110	25	200
–	–	140-039-601	HP-645			114.3	38.1	38.1	57.2	64.3	23.8	20.6	173	20	160
–	–	140-039-600	HP-660			152.4	50.8	38.1	69.9	100.4	23.8	20.6	290	10	100

STAINLESS STEEL HASP HP-635S, 645S, 660S

NSF SUS316



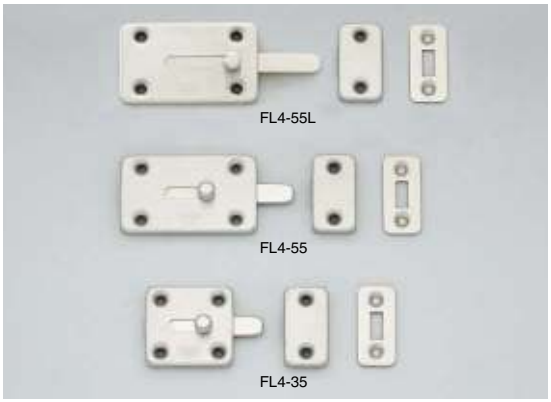
- Rotating pad eye stays fastened tight by four projections without a padlock.
- Ideal for harsh and high corrosion environments



RoHS	CAD	Item Code	Item Name	Material	Finish	L	W	A	B	C	H	Weight (g)	Box (pcs)	Carton (pcs)
–	–	140-039-603	HP-635S	Stainless Steel (SUS316)	Electro Polished	88.9	38.1	38.1	33.3	40.5	34.9	130	25	200
–	–	140-039-604	HP-645S			114.3	38.1	38.1	57.2	61.9	34.9	184	20	160
–	–	140-039-605	HP-660S			152.4	50.8	38.1	69.9	98.4	34.9	302	10	100

SLIDE BOLT FL4

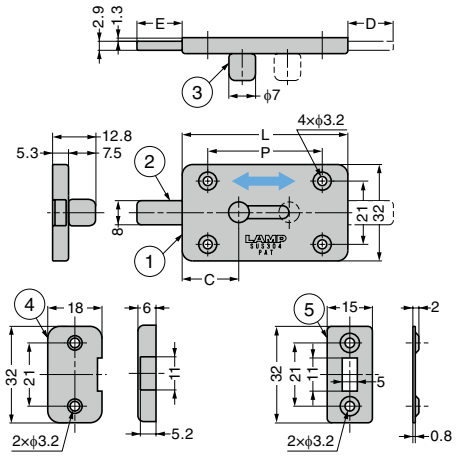
L=R SUS



- Slide the latch knob to lock/release.
- Easy installation, flat and compact design for various application.
- Two different counter plates included for different mountings.

[Parts Included]

- Countersunk head tapping screw 2.7×16 (SUS)



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Bar		Barrel Polished
③	Knob		Satin
④	Counter Plate A		
⑤	Counter Plate B		

RoHS	CAD	Item Code	Item Name	L	P	C	D	E	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-180-863	FL4-35	35	23	11.5	12	12	32	30	300
G	3D	140-180-864	FL4-55	55	38	20	15	15	47	30	300
G	3D	140-012-131	FL4-55L				25			30	300

SLIDE BOLT FL2

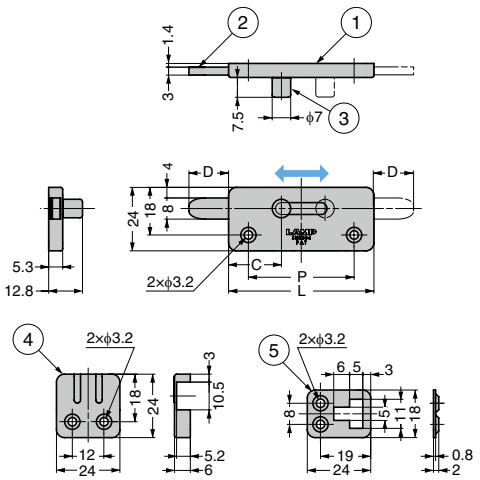
L=R SUS



- Slide the latch knob to lock/release.
- Easy installation, flat and compact design for various application.
- Two different counter plates included for different mountings.

[Parts Included]

- Countersunk head tapping screw 2.7×16 (SUS)



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Bar		Barrel Polished
③	Knob		Satin
④	Counter Plate A		
⑤	Counter Plate B	Stainless Steel	

RoHS	CAD	Item Code	Item Name	L	P	C	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-180-136	FL2-35	35	21	11.5	12	28	30	300
G	3D	140-180-137	FL2-55	55	40	20	15	39	30	300

SLIDE BOLT KR75

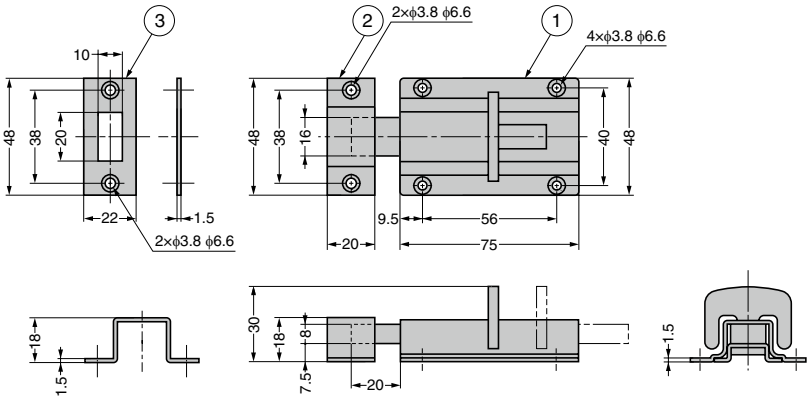
SUS



●Two different counter plates included for different mountings.

[Parts Included]

●Countersunk head wood screw 3.1×20 (SUS304)

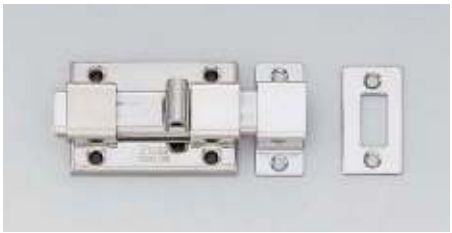


No.	Part Name	Material	Finish
①	Body	Stainless Steel	Satin
②	Counter Plate A		
③	Counter Plate B		

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-059-042	KR75	225	10	100

SLIDE BOLT KR65

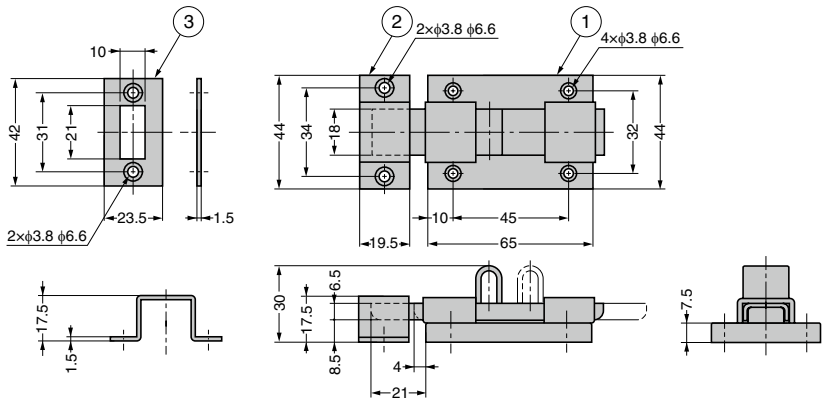
SUS



●Two different counter plates included for different mountings.

[Parts Included]

●Countersunk head wood screw 3.1×20 (SUS304)



No.	Part Name	Material	Finish
①	Body	Stainless Steel	Barrel Polished
②	Counter Plate A		
③	Counter Plate B		

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-054-050	KR65	125	10	100

SPRING LOADED BARREL BOLT BSS2, BSS3 With Position Fixing Function

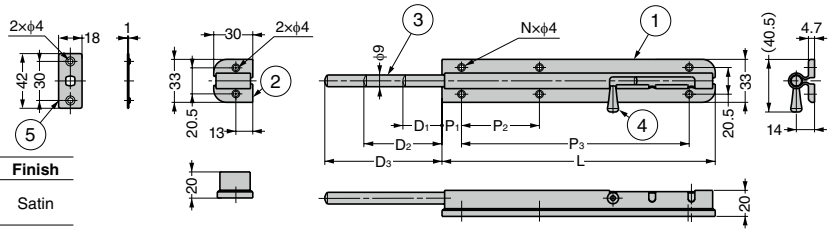
L=R SUS



- Extra sleeve for locking offers flexibility in application.
- Knob springs back into sleeve to keep bolt in locked or unlocked position.
- Can be installed vertically or horizontally.
- Two counter plates included for different mountings.

[Parts Included]

- Countersunk head wood screw 3.5×20 (SUS)



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Strike		
③	Bar	Stainless Steel (SUS303)	–
④	Knob		
⑤	Counter Plate	Stainless Steel (SUS304)	Satin
–	Spring		–

RoHS	CAD	Item Code	Item Name	L	P1	P2	P3	D1	D2	D3	N	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-042	BSS2-90	90	13	–	60	21	42	–	4	140	15	150
G	3D	140-050-041	BSS2-150	150	15		115	30	60			212	10	100
G	3D	140-050-043	BSS3-240	240		60	205			90	6	320	6	60

SPRING LOADED BARREL BOLT BSS With Position Fixing Function

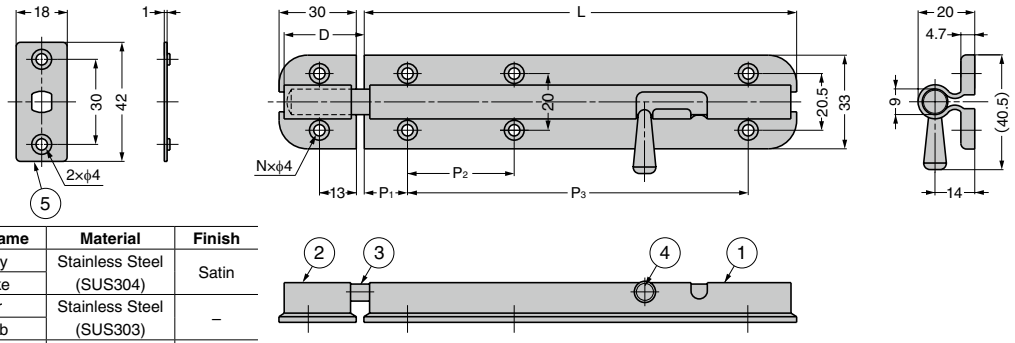
NSF L=R SUS



- Knob springs back into sleeve to keep bolt in locked or unlocked position.
- Can be installed vertically or horizontally.
- Two counter plates included for different mountings.

[Parts Included]

- Countersunk head wood screw 3.5×20 (SUS)



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Strike		
③	Bar	Stainless Steel (SUS303)	–
④	Knob		
⑤	Counter Plate	Stainless Steel (SUS304)	Satin
–	Spring		–

RoHS	CAD	Item Code	Item Name	L	P1	P2	P3	D	N	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-052-002	BSS-90	90	13	–	60	24	6	142	15	150
G	3D	140-052-003	BSS-150	150	15		115	32		215	10	100
G	3D	140-052-004	BSS-240	240		60	205		8	330	6	60

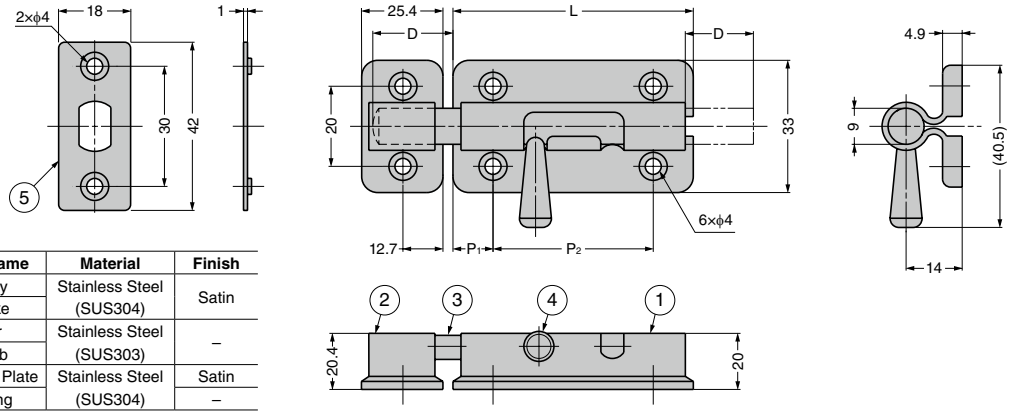
SPRING LOADED BARREL BOLT BLS With Position Fixing Function

NSF L=R SUS



- Knob springs back into sleeve to keep bolt in locked or unlocked position.
- Can be installed vertically or horizontally.
- Two counter plates included for different mountings.

[Parts Included]
- Countersunk head wood screw 3.5×20 (SUS)



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Strike		
③	Bar	Stainless Steel (SUS303)	–
④	Knob		
⑤	Counter Plate	Stainless Steel (SUS304)	Satin
–	Spring		–

RoHS	CAD	Item Code	Item Name	L	P1	P2	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-052-000	BLS-60	60	10	40	17	109	20	200
G	3D	140-052-001	BLS-90	90	12.5	65	24	147	15	150

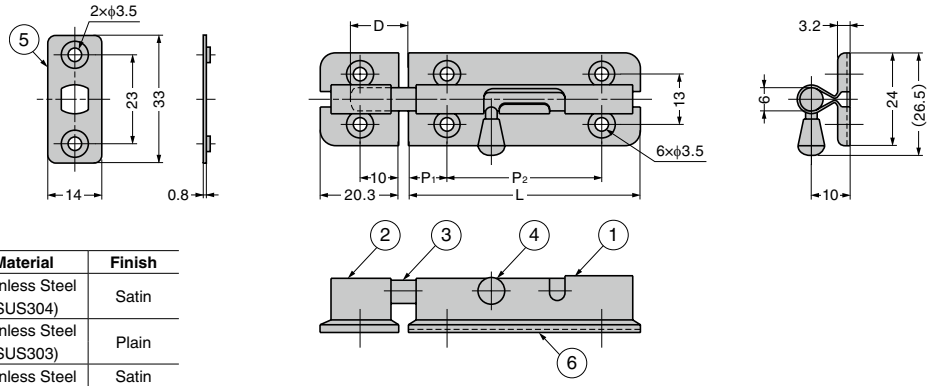
SPRING LOADED BARREL BOLT BL-S With Position Fixing Function

L=R SUS



- Knob springs back into sleeve to keep bolt in locked or unlocked position.
- Can be installed vertically or horizontally.
- Two counter plates included for different mountings.

[Parts Included]
- Countersunk head wood screw 2.7×16 (SUS)



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Strike		
③	Bar	Stainless Steel (SUS303)	Plain
④	Knob		
⑤	Counter Plate	Stainless Steel (SUS304)	Satin
⑥	Plate		Polished

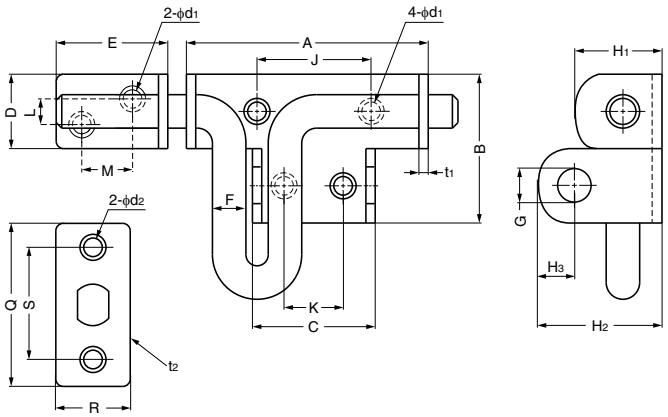
RoHS	CAD	Item Code	Item Name	L	P1	P2	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-050-245	BL-40S	40	7.5	25	11	36	30	450
G	3D	140-050-246	BL-60S	60	10	40	15	50	30	450

GATE LATCH SSG

SUS



- Gate latch with holes for pad lock. (Pad lock not included.)
- Lift and drop design keeps handle out of the way when not in use.



Material	Finish
Stainless Steel (SUS304)	Polished

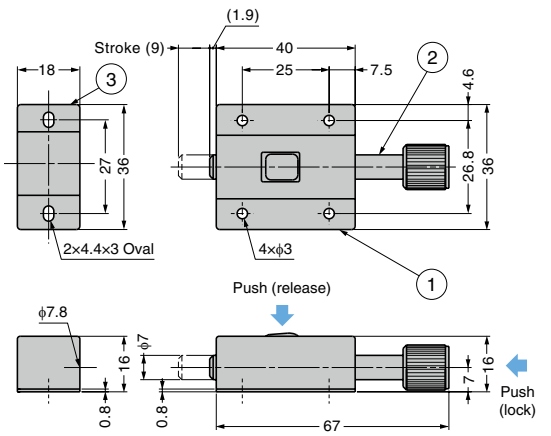
RoHS	CAD	Item Code	Item Name	A	B	C	D	E	F	G	H1	H2	H3	J	K	L	M	Q	R	S	d1	d2	t1	t2	Weight (g)	Box (pcs)	Carton (pcs)
–	–	140-059-177	SSG-45	45	28	26	14	21	6	7	16	20.5	7.5	22	11	2	8	32	15	22	4.8	4.8	2.0	1.2	65	20	240
–	–	140-059-178	SSG-65	65	40	33	20	29	9	10	21.5	29	10	30	14	4	14	40	18	28	5.9	5.9	2.5	1.5	175	10	100
–	–	140-179-391	SSG-85	85	46	42	26	34	12	10	28	35.5	11	38	21	8	17	48	22	35	6	5.2	3.0	1.5	400	5	60

PUSH BARREL BOLT PRS-40

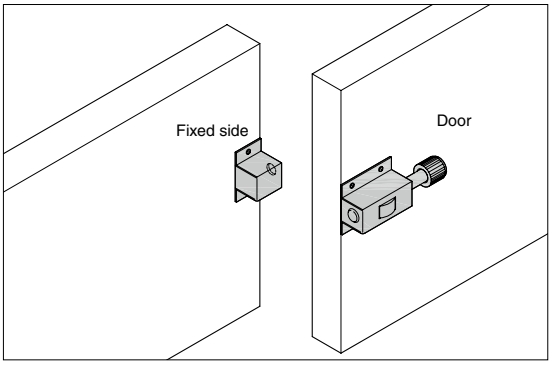
SUS



- Simply push black knob to latch and push front button to release.



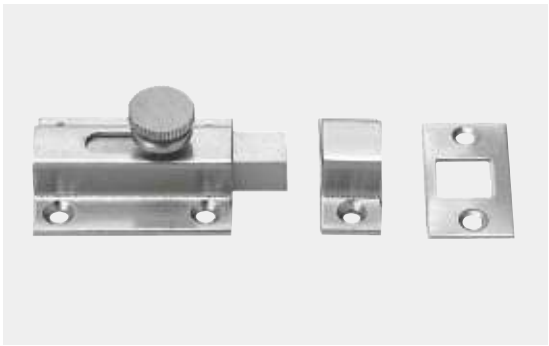
[Installation]



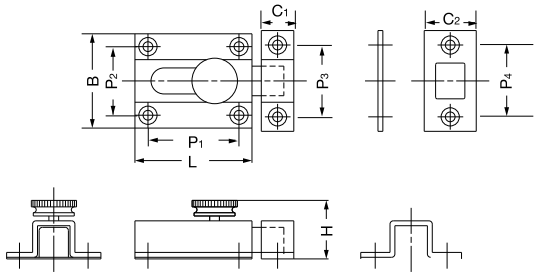
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Bar		
③	Strike		

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	140-049-402	PRS-40	55	–	1

SLIDE BOLT B-KR



- Knurled knob provides easy grip.
- 2 counterplates included for different mountings.

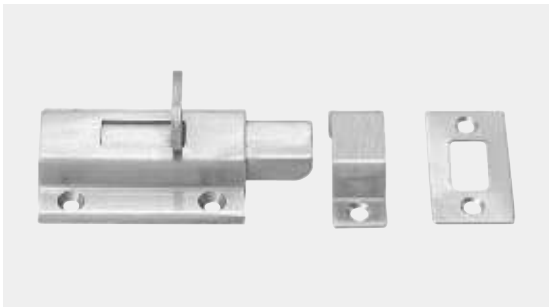


Material	Finish
Brass	Satin Nickel

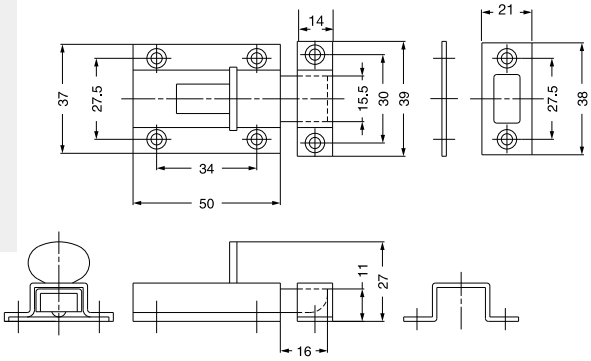
RoHS	CAD	Item Code	Item Name	L	B	H	C1	C2	P1	P2	P3	P4	Weight (g)	Box (pcs)	Carton (pcs)
–	–	140-054-048	B-KR-35	36	29	18	11	16	26.5	19	20	21	60	20	200
–	–	140-059-040	B-KR-45	45	30	18.5	12.5	17	33	20	22.5	21.5	80	10	200

SLIDE BOLT KR-50

NSF SUS



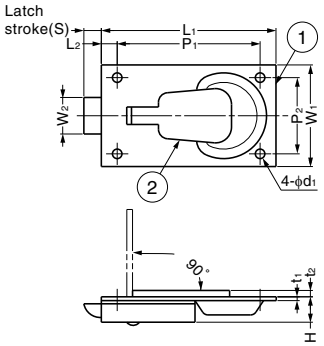
- Tab style knob provides an easy grip.
- 2 counterplates included for different mountings.



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	–	140-913-942	KR-50	Stainless Steel (SUS304)	Satin	80	20	200

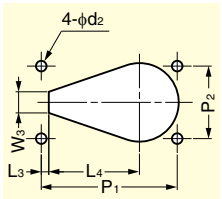
FLUSH SLAM LATCH P10





- Flush slam latch ideal for cover panels and small applications.
- Panel is latched when tab is flush, and released by pulling up the tab.
- Tab will stay in both flush and extended position.
- Ideal for multiple latch panels.

[Bore Dimensions]



No.	Part Name	Material	Finish
①	Body	Brass	Nickel
②	Lever	Brass	Nickel

RoHS	CAD	Item Code	Item Name	L1	L2	L3	L4	W1	W2	W3	H	t1	t2	P1	P2	d1	d2	R	S	Weight (g)	Box (pcs)	Carton (pcs)
G	–	140-049-310	P10-26H	26	1.5	4	14	13	5	5	6	0.8	1.5	23	10	1.5	2	5	2.5	6	–	–
–	–	140-049-309	P10-30H	30	3	1.5	18	17	5.8	6	6.5	1.2	2	25	13	1.5	2	6	3	11	–	–
–	–	140-049-308	P10-38H	38	3	2	22.5	22	7.5	6	7.5	1.2	2	33	17.5	2	2.5	8.5	3.5	18	–	–
G	–	140-049-307	P10-45H	45	4	2.5	26.5	26	10	6	8	1.2	2	37	20	2.5	3	9.5	4.5	28	–	–
G	–	140-049-306	P10-55H	55	5	2.5	30	32	11.5	7	8.5	1.2	2	45	24	3	3.5	13	5.5	40	–	–
G	–	140-049-305	P10-61H	61	5.5	5	32	45	15	11	11.5	1.2	2	50	38	3	3.5	14	7	66	–	–

STAINLESS STEEL DRAW LATCH SCC-TF30 Clamping Margin Adjustable

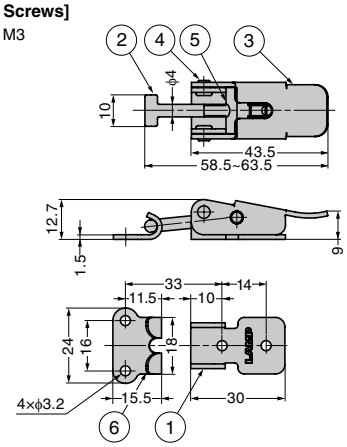
LOAD CAPACITY 500 N | TEST METHOD 7 | SUS



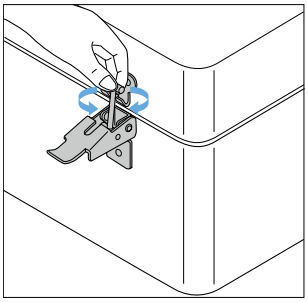
- Screw type arm allows for easy clamping margin adjustment after installation.

[Recommended Screws]

- Pan head screw M3



[Adjustment]



No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS304)	Barrel Polished
②	Arm	Stainless Steel	–
③	Lever	Stainless Steel (SUS304)	Barrel Polished
④	Shaft	Stainless Steel (SUS303)	Plain
⑤	Adjustment Shaft		
⑥	Counter plate	Stainless Steel (SUS304)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-028-716	SCC-TF30	500	51	32	100	400

DRAW LATCH (CLEAN ROOM) STF-CV150 Clamping Margin Adjustable

LOAD CAPACITY 3300 N | SUS316



- Ideal for clean room, semiconductor, and food industry applications.
- No metal-to-metal contact.
- Clamping margin is adjustable.

[Remarks]

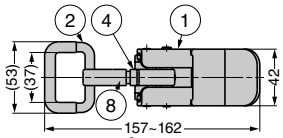
- The load capacities in the table below are values when used with a hook sold separately.

[Sold Separately]

- Heavy Duty Counterplate TF40C 1

[Recommended Screws]

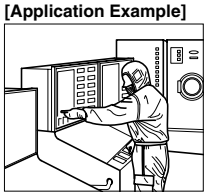
- Countersunk head screw M5



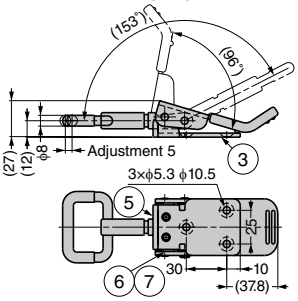
No.	Part Name	Material	Finish / Colour
①	Handle	Stainless Steel (SUS316)/ Cellulose Acetate (CA)	Barrel Polished/White
			Polished/White
②	Hook	Stainless Steel (SCS14)	Barrel Polished/PA Coating
			Polished/PA Coating
③	Base	Stainless Steel (SUS316)	Barrel Polished/Polished
④	Hook Screw	Stainless Steel (SCS14)	
⑤	Bumper	POM	Natural
⑥	Bush		
⑦	Washer		
⑧	O-ring	CR	Black

※SCS14 is equivalent of SUS316.

[Application Example]



Clean room equipment, etc.



[Strike Hook] Sold Separately

RoHS	CAD	Item Code	Item Name	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-014-142	TF40C-ST	Barrel Polished	48	5	20
G	3D	120-014-143	TF40C-STM	Polished		5	50

[Body]

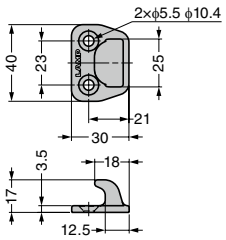
RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-481	STF-CV150	Stainless Steel (SUS316)	Barrel Polished	3300	330	248	5	40
G	3D	120-014-141	STF-CV150M		Polished				5	40

Refer to 1 : P.674

STAINLESS STEEL COUNTERPLATE TF40C

SUS316


TF40C-ST



- For STF-CV150 1.
- Strong structure thanks to lost wax casting.

[Recommended Screws]
- Countersunk head screw M5

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-014-142	TF40C-ST	Stainless Steel (SCS14)	Barrel Polished	48	5	20
G	3D	120-014-143	TF40C-STM		Polished		5	50

Refer to 1 : P.673

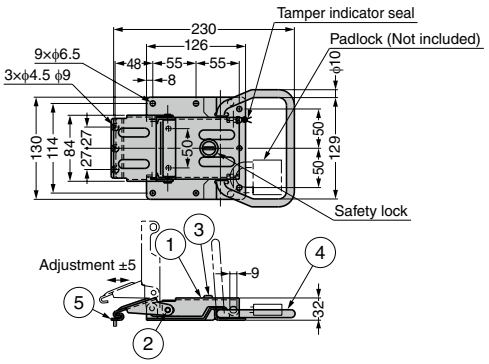
※SCS14 is equivalent of SUS316.

DRAW LATCH (W/ HANDLE) THF-100 Clamping Margin Adjustable

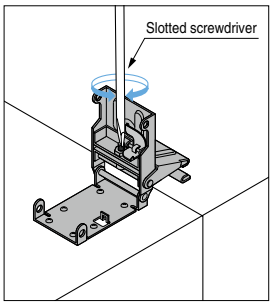
LOAD CAPACITY 980 N | TEST METHOD 7 | TEST METHOD 17



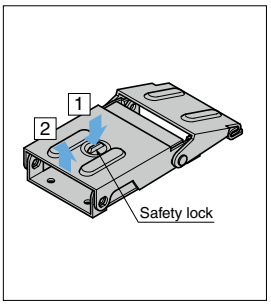
- With safety lock to prevent accidental release.
- Clamping margin is adjustable.
- Clamping adjustment: ±5mm
- Can be used with padlock 1.
- Handle compliant with SEMI standard.



[Adjustment]



[Safety Lock]



No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
②	Shaft	Stainless Steel (SUS304)	–
③	Safety Lever		
④	Handle	Steel (SWRCH)	Coloured Zinc Chromate (Trivalent)
⑤	Strike	Steel (SPCC)	

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-040-506	THF-100	980	100	1064	10	–

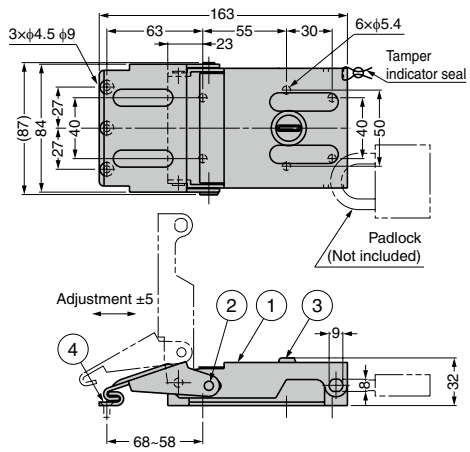
Refer to 1 : P.748

DRAW LATCH THF-75 Clamping Margin Adjustable

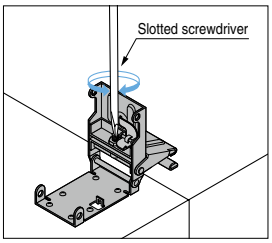
LOAD CAPACITY 730 N | TEST METHOD 7 | TEST METHOD 17



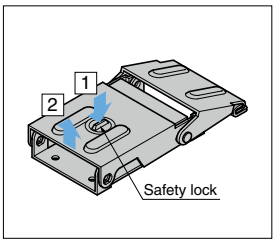
- With safety lock to prevent accidental release.
- Clamping margin is adjustable.
- Clamping adjustment: ±5mm
- Can be used with padlock 1.



[Adjustment]



[Safety Lock]



No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
②	Shaft	Stainless Steel (SUS304)	–
③	Safety Lever		
④	Strike	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-040-505	THF-75	730	75	657	20	–

Refer to 1 : P.748

STAINLESS STEEL DRAW LATCH (W/ SAFETY LOCK) STF100

LOAD CAPACITY 784 N | NSF | TEST METHOD 7 | TEST METHOD 8 | TEST METHOD 17 | INSTRUCTION | SUS



- With safety lock to prevent accidental release.
- Spring loaded latch provides constant holding tension for secure latching.

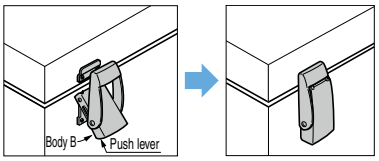
[Remarks]

- The installation pitch between mounting plate ⑥ of body B and strike ⑦ shall be $32^{+0.5}_{0}$. Other installation pitch than that specified may interfere with locking operation. Confirm the actual item before use.
- Clamping force varies at standard installation. Please check with actual item.

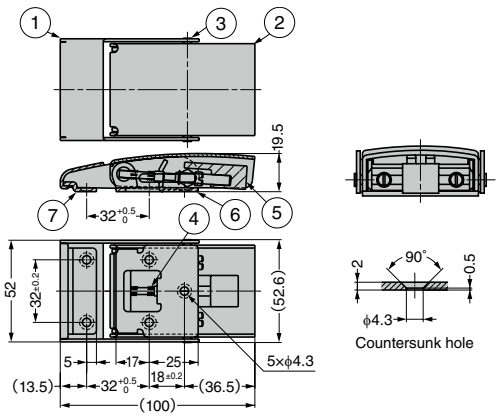
[Recommended Screws]

- M4 countersunk head screw

[How to Operate]



1. Releasing: push the lever while lifting the body B.
2. Locking: Just push down the body B to lock by the latch mechanism.



No.	Part Name	Material	Finish/Colour
①	Body A	Stainless Steel (SUS304)	Satin
②	Body B		
③	Shaft	Stainless Steel (SUS303)	–
④	Spring	Stainless Steel (SUS304)	
⑤	Push Lever	Nitrile Rubber (NBR)	Black
⑥	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished
⑦	Strike		Satin

RoHS	CAD	Item Code	Item Name	Clamping Force N	Clamping Force kgf	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-044-024	STF100	137.2	14	784	80	190	6	120

STAINLESS STEEL DRAW LATCH (W/ SAFETY LOCK) STF82L

LOAD CAPACITY 784 N | TEST METHOD 7 | TEST METHOD 17 | INSTRUCTION | SUS



●With safety lock to prevent accidental release.

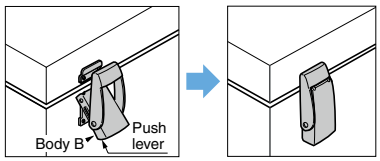
[Remarks]

●Gap occurs between mounting plate and strike in the installation determined by the specified dimensions. To eliminate the gap, please provide Cushion material as shown in Fig.1 between mounting plate ⑥ side and strike ⑦ side of the cabinet.

[Recommended Screws]

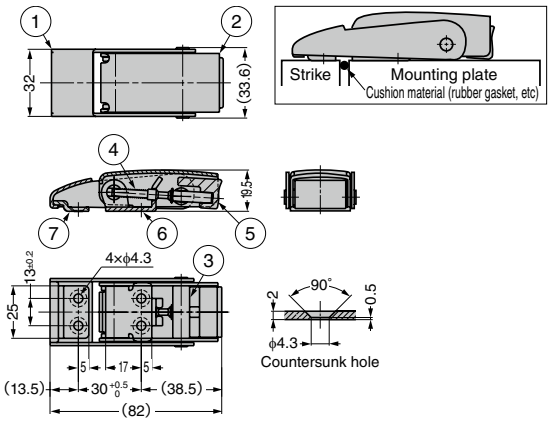
●M4 countersunk head screw

[How to Operate]



1. Releasing: push the lever while lifting the body B.
2. Locking: Just push down the body B to lock by the latch mechanism.

[Installation on Cabinet] Fig.1



No.	Part Name	Material	Finish / Colour
①	Body A	Stainless Steel (SUS304)	Satin finish
②	Body B		
③	Shaft	Stainless Steel (SUS303)	–
④	Spring	Stainless Steel (SUS304)	
⑤	Push lever	Nitrile Rubber (NBR)	Black
⑥	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished
⑦	Strike		Satin finish

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-913-101	STF82L	784	80	111	12	180

STAINLESS STEEL DRAW LATCH (SPRING LOADED) STF80

LOAD CAPACITY 784 N | TEST METHOD 7 | TEST METHOD 8 | TEST METHOD 17 | INSTRUCTION | SUS



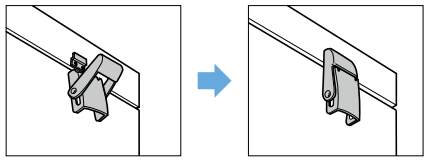
●Spring loaded latch provides constant holding tension for secure latching.

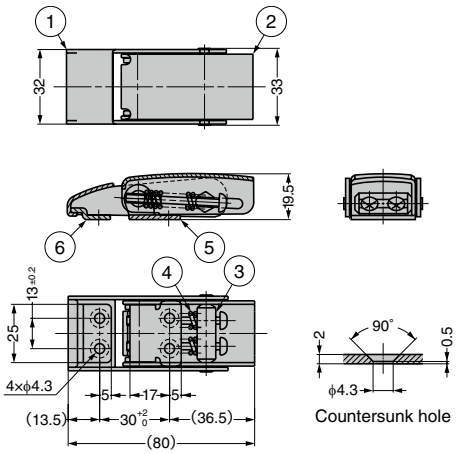
[Remarks]

●Clamping force varies at standard installation. Please check with actual item.

[Recommended Screws]

●M4 countersunk head screw





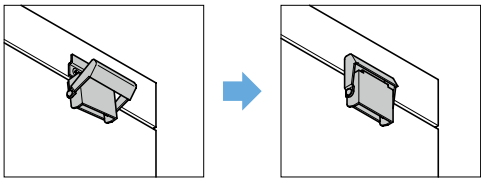
No.	Part Name	Material	Finish
①	Body A	Stainless Steel (SUS304)	Satin finish
②	Body B		
③	Shaft		–
④	Spring		
⑤	Mounting Plate		Barrel Polished
⑥	Strike		Satin finish

RoHS	CAD	Item Code	Item Name	Clamping Force N	Clamping Force kgf	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-914-490	STF80	58.8	6	784	80	110	12	180

STAINLESS STEEL DRAW LATCH STF40

LOAD CAPACITY 300 N | TEST METHOD 8 | SUS

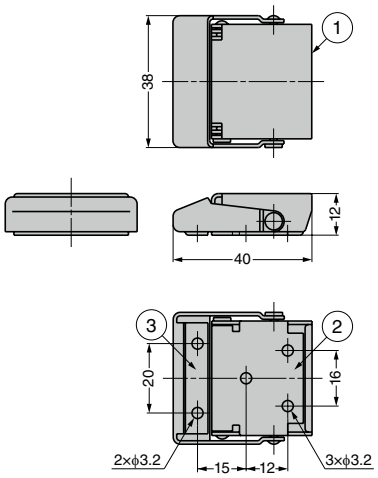




- Ideal for industrial equipment, vehicle equipment and leisure equipment, etc.

[Recommended Screws]

- M3 pan head screw



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Mounting Plate		
③	Strike		

RoHS	CAD	Item Code	Item Name	Clamping Force N	Clamping Force kgf	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-044-025	STF40	49	5	300	30.6	30	30	300

DRAW LATCH 9341 Clamping Margin Adjustable

LOAD CAPACITY 1000, 1500 N | TEST METHOD 7 | TEST METHOD 17 | SUS316



- Clean appearance.
- Concealed mounting screws prevent mischief.
- Can be used with padlock 1.
- Clamping margin is adjustable.

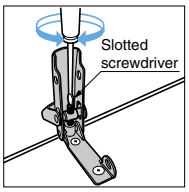
[Applications]

- Ships, etc.

[Recommended Screws]

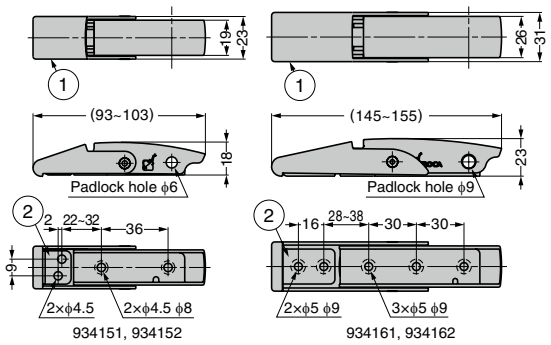
- 934151, 934152: M4 countersunk head screw (for body), M4 truss head screw (for strike)
- 934161, 934162 : M5 countersunk head screw

[Adjustment]



[Application Example]





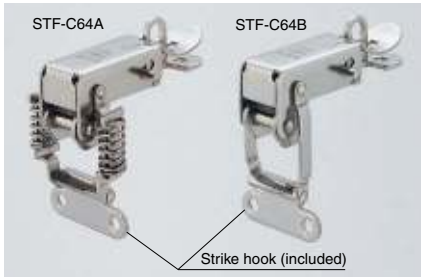
No.	Part Name	Material	Finish
①	Body	Stainless Steel	Polished, Satin
②	Strike	(SUS316)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-025-088	934151	Polished	1000	102	83	200	–
G	3D	120-025-089	934152	Satin				200	–
G	3D	120-025-090	934161	Polished	1500	153	208	50	–
G	3D	120-025-091	934162	Satin				50	–

Refer to 1 : P.748

CORNER FASTENER (W/ LOCK) STF-C64A/STF-C64B With/Without Spring

LOAD CAPACITY 330 N SUS



- Designed to allow front operation.
- Can be used with corner fastener hinge STH-C64 1.
- With safety lock to prevent accidental release.
- Can be used with padlock 2.
- Available with or without spring.
- Strike hooks are also sold separately.

[Applications]
- Doors and covers required for dust proof, drip proof and vibration prevention, measuring equipment, communication equipment, machine tools, etc.

[Remarks]
- The clamping margin of STF-C64A shall not exceed 4mm.

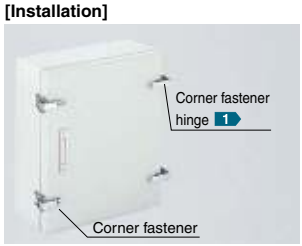
[Parts Included]
- Strike hook

[Sold Separately]
- Sealing pin 502-7SS, 502-9SS, 613-9SS
- Strike hook 01-613SS, 02-613SS, 07-613SS



Corner fastener hinge 1 also available.

[Installation]



When locked

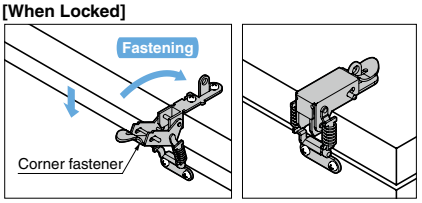


Pull lever and lift latch to open.



When opened

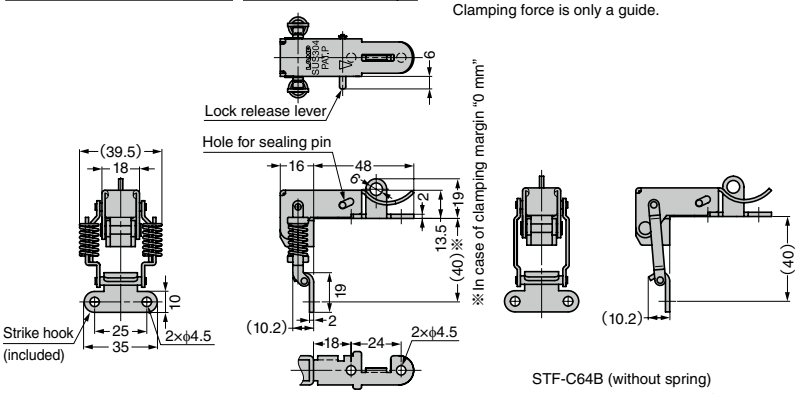
[When Locked]



[STF-C64A Clamping Force]

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	15	1.5
2	30	3.1
3	45	4.6
4	60	6.1

Clamping force is only a guide.



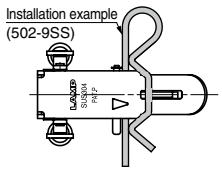
[Body]

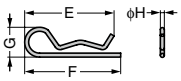
RoHS	CAD	Item Code	Item Name	Type	Door Thickness	Load Capacity N	Load Capacity kgf	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-042-200	STF-C64A	With Spring	14~28	330	34	Stainless Steel (SUS304)	Barrel	66.5	15	210
G	3D	120-042-201	STF-C64B	Without Spring					Polished	60	15	210

[Sealing Pin] Sold Separately

Material	Finish
Stainless Steel (SUS304)	Plain

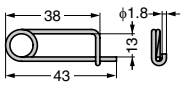
Used for preventing malfunction of lock release lever.





RoHS	CAD	Item Code	Item Name	E	F	G	H	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-823	502-9SS	63	66	18	2.6	–	1	–
G	3D	120-041-825	613-9SS	55	59	15	2.3	4	1	–

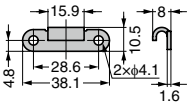
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-822	502-7SS	3	1	–



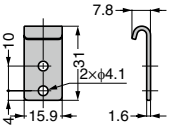
[Strike Hook] Sold Separately

Material	Finish
Stainless Steel (SUS304)	Barrel Polished

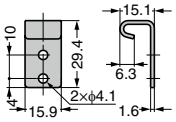
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-415	01-613SS	5	1	–



RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-421	02-613SS	7	1	–



RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-452	07-613SS	10	1	–



Refer to 1 : P.194, 2 : P.748

CORNER FASTENER STF-A56AH/STF-A56AC Parallel Mount Type / Perpendicular Mount Type

SUS

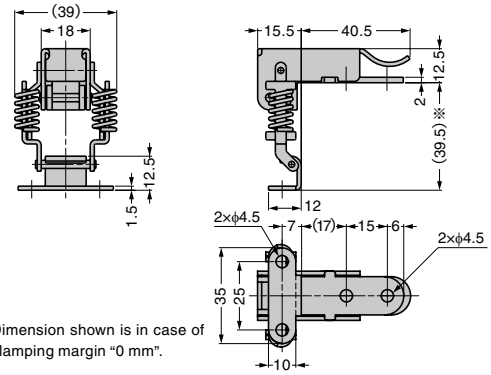


- Designed to allow front operation.

[Applications]

- Doors and covers required for dust proof and drip proof, etc.
- Doors and covers required for fastening, etc.
- Measuring equipment, communication equipment, machine tools, etc.

STF-A56AH (Parallel mount type)

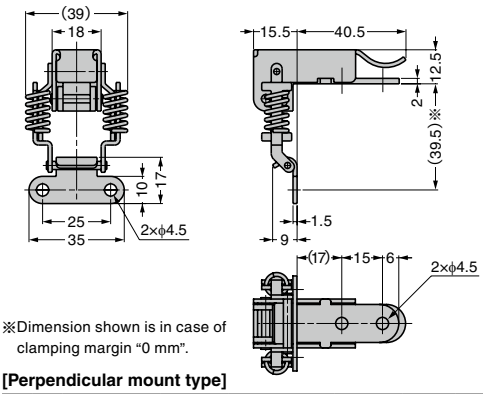


※Dimension shown is in case of clamping margin “0 mm”.

[Parallel mount type]

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-480	STF-A56AH	Stainless Steel (SUS304)	Barrel Polished	56	–	–

STF-A56AC (Perpendicular mount type)



※Dimension shown is in case of clamping margin “0 mm”.

[Perpendicular mount type]

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-479	STF-A56AC	Stainless Steel (SUS304)	Barrel Polished	55	100	–

CORNER FASTENER PS34A

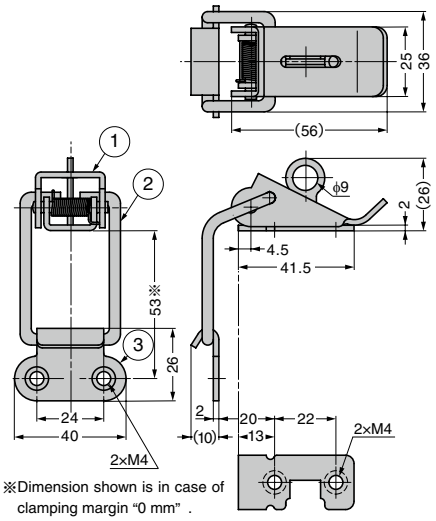
SUS



- Designed to allow front operation.
- Can be used with padlock 1.

[Applications]

- Doors and covers required for dust proof and drip proof, etc.
- Doors and covers required for fastening, etc.
- Measuring equipment, communication equipment, machine tools, etc.



※Dimension shown is in case of clamping margin “0 mm” .

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Hook		
③	Counter Plate		

RoHS	CAD	Item Code	Item Name	Tension Force※N	Tension Force※kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-193	PS34A	147	15	88	1	–

Refer to 1 : P.748

※In case of clamping margin “0.5mm”

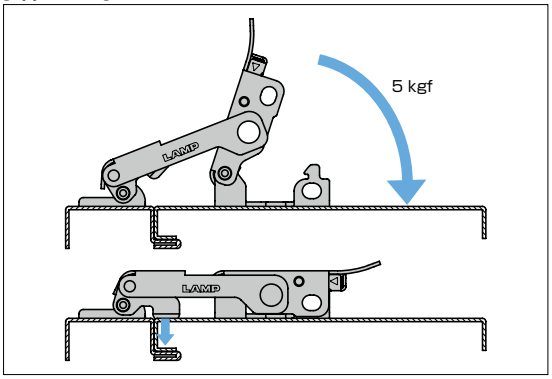
STAINLESS STEEL COMPRESSION LATCH STF-CP140 Compressing Force Adjustable

LOAD CAPACITY 600 N SUS

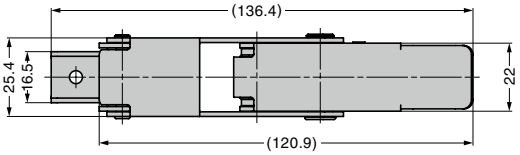


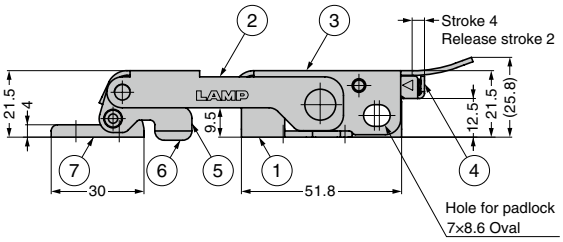
- Compression arm with rubber allows to fasten the door tightly.
- Compressing force is adjustable.
- With safety lock to prevent accidental release.
- Push safety button to release the lock.
- Can be used with padlock 1 or sealing tool series.

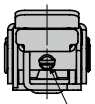
[Application]



Compressing force works in the direction (↓ in the figure) vertical to the mounting surface .

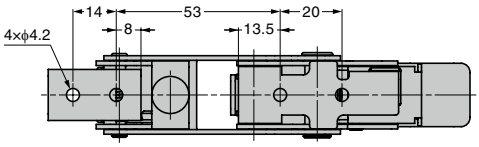




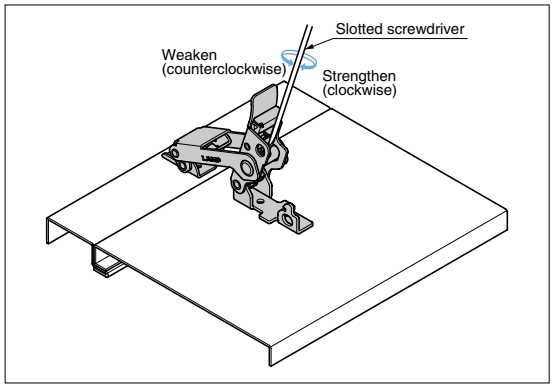


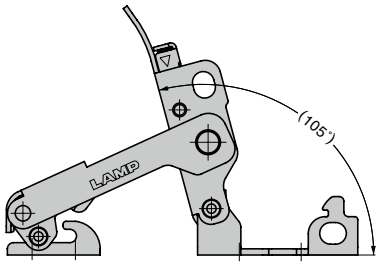
Adjustment slit

Compressing force adjustable by adjusting the ※ marked value ±2mm



[How to Adjust Compressing Force]





Fully opened

No.	Part Name	Material	Finish / Colour
①	Base	Stainless Steel (SUS304)	Barrel Polished
②	Arm		
③	Lever		
④	Safety Button		
⑤	Compression Arm		
⑥	Rubber	EPDM	Black
⑦	Counter Plate	Stainless Steel (SUS304)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Compressing Force N	Compressing Force kgf	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	CAD	120-025-504	STF-CP140	245	25	600	61	130	10	80

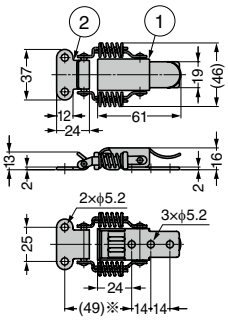
Refer to 1 : P.748

※In case of the lever operation force in 5kgf.

STAINLESS STEEL DRAW LATCH (SPRING LOADED) SCC-60

LOAD CAPACITY 600 N SUS





※In case of clamping margin "0 mm".

●Spring loaded design ideal for doors and covers required for dust proof and drip proof.

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	80	8.2
2	120	12.2
3	160	16.3

※Clamping force is only a guide.

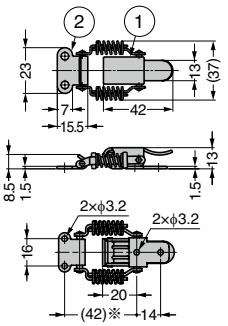
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-043-981	SCC-60	600	61	75	20	200

STAINLESS STEEL DRAW LATCH (SPRING LOADED) SCC-40

LOAD CAPACITY 250 N SUS





※In case of clamping margin "0 mm".

●Spring loaded design ideal for doors and covers required for dust proof and drip proof.

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	55.5	5.7
2	68	6.9
3	80.5	8.2

※Clamping force is only a guide.

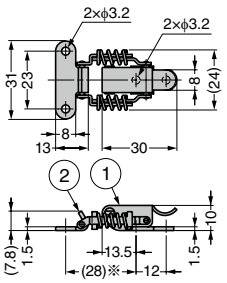
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-043-980	SCC-40	250	25	36	40	400

STAINLESS STEEL DRAW LATCH (SPRING LOADED) SCC-30

LOAD CAPACITY 200 N SUS





※In case of clamping margin "0 mm".

●Spring loaded design ideal for doors and covers required for dust proof and drip proof.

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	30	3.1
2	45	4.6

※Clamping force is only a guide.

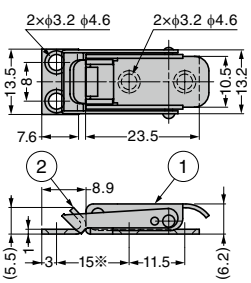
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-693	SCC-30	200	20	14	100	1000

STAINLESS STEEL DRAW LATCH (SPRING LOADED) SCC-25

LOAD CAPACITY 100 N SUS





※In case of clamping margin "0 mm".

●Concealed spring provides clean appearance.
●Spring loaded design ideal for doors and covers required for dust proof and drip proof.

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	75	7.6

※Clamping force is only a guide.

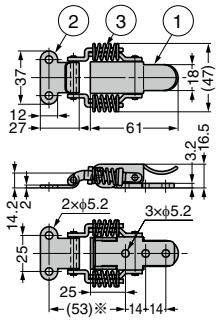
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-021-949	SCC-25	100	10	6	100	1000

DRAW LATCH (SPRING LOADED) SCCA-60

LOAD CAPACITY 330 N





※In case of clamping margin "0 mm".

●Spring loaded design ideal for doors and covers required for dust proof and drip proof.

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	60	6.1
2	80	8.2
3	100	10.2

※Clamping force is only a guide.

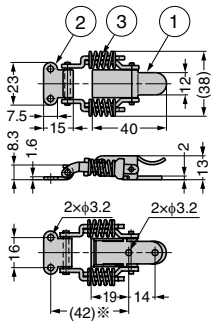
No.	Part Name	Material	Finish
①	Body	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
②	Counter Plate		
③	Spring	Steel (SW)	–

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-049-303	SCCA-60	330	34	102	100	–

DRAW LATCH (SPRING LOADED) SCCA-40

LOAD CAPACITY 200 N





※In case of clamping margin "0 mm".

●Spring loaded design ideal for doors and covers required for dust proof and drip proof.

Clamping Margin mm	Clamping Force N	Clamping Force kgf
1	80	8.2
2	97.5	9.9
3	115	11.7

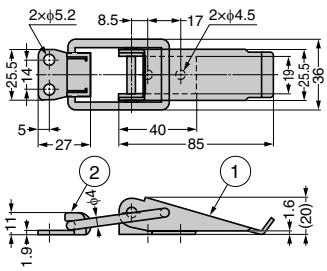
※Clamping force is only a guide.

No.	Part Name	Material	Finish
①	Body	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
②	Counter Plate		
③	Spring	Steel (SW)	–

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-049-179	SCCA-40	200	20	38	200	–

DRAW LATCH P91



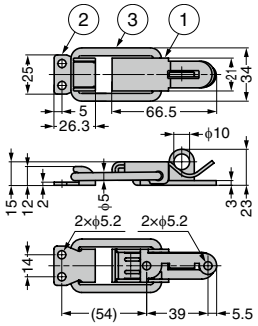


No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
②	Counter Plate		

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-040-507	P91	79	500	–

DRAW LATCH P34





●Can be used with padlock 1.

[Recommended Screws]

●Pan head screw M5

No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
②	Counter Plate		
③	Arm	Steel (SWRM)	

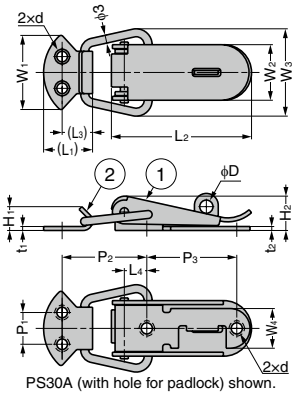
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-049-015	P34	89	1	–

Refer to 1 : P.748

DRAW LATCH PS, P

SUS





PS30A (with hole for padlock) shown.

- Spring loaded to hold lever in retracted position.
- Available with or without hole for padlock 1.
- Stainless steel and brass material available.

[Applications]

- Control boards, measuring equipment, distribution boards, machine tools, etc.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		

[Stainless Steel PS Type]

RoHS	CAD	Item Code	Item Name	Type	L1	L2	L3	L4	W1	W2	W3	W4	H1	H2	t1	t2	P1	P2	P3	D	d	Tension Force N	Tension Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-476	PS31A	With Hole	16	40	10	8	23	16	26	13	9	9.5	1.2	1	10	30	23	5	Counterbore for	98	10	27	–	400
G	3D	120-040-475	PS30A	for Padlock	18	53	11.5	8.5	28	21	32	15	10	13	1.5	1.5	12	33	34	5.5	M3	147	15	38	–	200
G	3D	120-049-188	PS31	Without Hole	19	39	11	7	24	16	25.5	13	8	9.5	1.2	1	10	(30)	23	–	φ3.4φ5.2	98	10	18	500	–
G	3D	120-049-671	PS30	for Padlock	18	53	11.5	8.5	28	21	32	15	10	13	1.5	1.5	12	33	34		Counterbore for M3	147	15	40	500	–

No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Counter Plate		

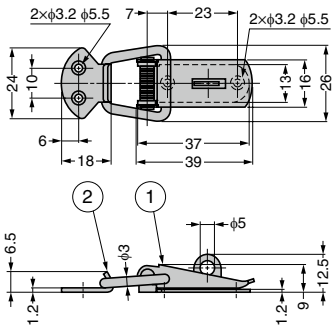
[Brass P Type]

RoHS	CAD	Item Code	Item Name	Type	L1	L2	L3	L4	W1	W2	W3	W4	H1	H2	t1	t2	P1	P2	P3	D	d	Tension Force N	Tension Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-313	P31A	With Hole	18	39	10.5	7	24	16	26	13	8	9.5	1.2	1	10	(28)	23	5	φ3.4φ5.2	78	8	4	500	–
G	3D	120-049-311	P30A	for Padlock	18.5	52	11.5	8.5	28	22	31.5	15	9	13	1.5	1.5	12	(32)	34	5.2	φ3.2φ6.2	98	10	43	500	–
G	3D	120-049-314	P31	Without Hole	18	39	10.5	7	24	16	26	13	8	9.5	1.2	1	10	(28)	23	–	φ3.4φ5.2	78	8	21	500	–
G	3D	120-049-312	P30	for Padlock	18.5	52	11.5	8.5	28	22	31.5	14.8	9	13	1.5	1.5	12	(32)	34		φ3.2φ6.2	98	10	–	500	–

Refer to 1 : P.748

DRAW LATCH P11





- Spring loaded to hold lever in retracted position.
- Can be used with padlock 1.

No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Nickel
②	Counter Plate		

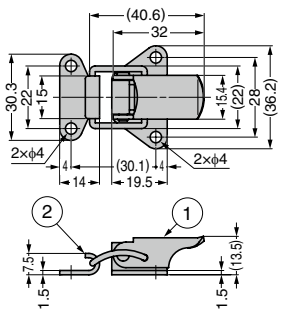
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-044-004	P11	17.3	200	1000

Refer to 1 : P.748

STAINLESS STEEL DRAW LATCH P100SUS

SUS





No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-044-003	P100SUS	22.5	200	800

DRAW LATCH P

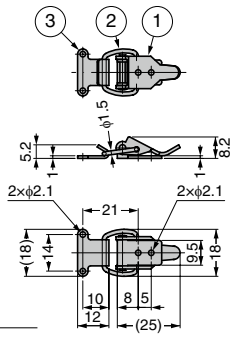
SUS



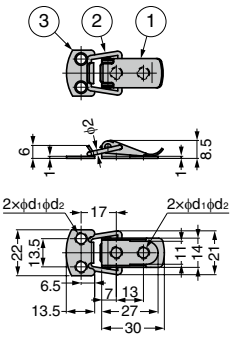
●Spring loaded to hold lever in opened/closed position (PS32, P32).

[Applications]

●Small measuring equipment, control boards, distribution boards, etc.



PS33



PS32, P32

In case of clamping margin "0mm"

No.	Part Name	Material			Finish		
		PS33	PS32	P32	PS33	PS32	P32
①	Body	Stainless Steel (SUS304)		Steel (SPCC)	Barrel Polished		Clear Zinc Chromate (Trivalent)
②	Hook			Steel (SWRH)	–		
③	Counter Plate			Steel (SPCC)	Barrel Polished		

[Without Lever Holding Function]

RoHS	CAD	Item Code	Item Name	Material	Tension Force N	Tension Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-672	PS33	Stainless Steel (SUS304)	49	5	6	200	2000

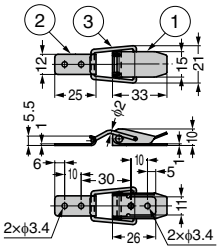
[With Lever Holding Function When Opened / Closed]

RoHS	CAD	Item Code	Item Name	Material	d_1	d_2	Tension Force N	Tension Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-059-452	PS32	Stainless Steel (SUS304)	3.2	5.2	78	8	11	500	–
G	3D	120-049-318	P32	Steel	4.8	6.2			12	500	–

STAINLESS STEEL DRAW LATCH PS35

SUS





[Applications]

●Small measuring equipment, lightweight boxes, etc.

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Counter Plate		
③	Hook		–

RoHS	CAD	Item Code	Item Name	Material	Finish	Tension Force N※	Tension Force kgf※	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-345	PS35	Stainless Steel (SUS304)	Barrel Polished	19	2	15	500	–

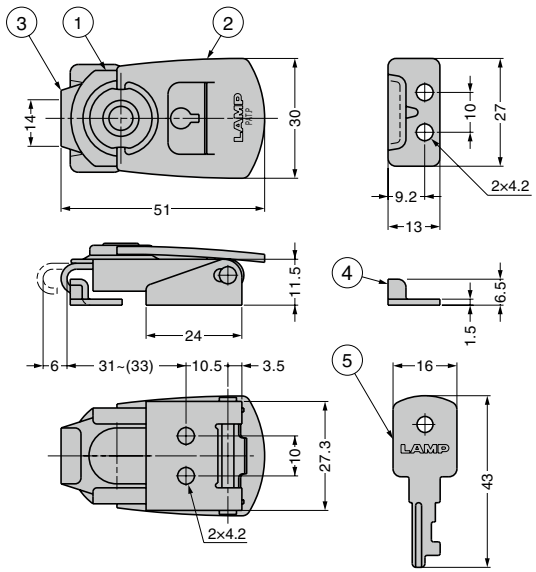
※In case of clamping margin "0.5mm"

STAINLESS STEEL DRAW LATCH PN-51 With Spring

LOAD CAPACITY 686 N | TEST METHOD 7 | TEST METHOD 17 | SUS



[Remarks]
- When locked, check if the lever does not rise.
- Key changes are not available.



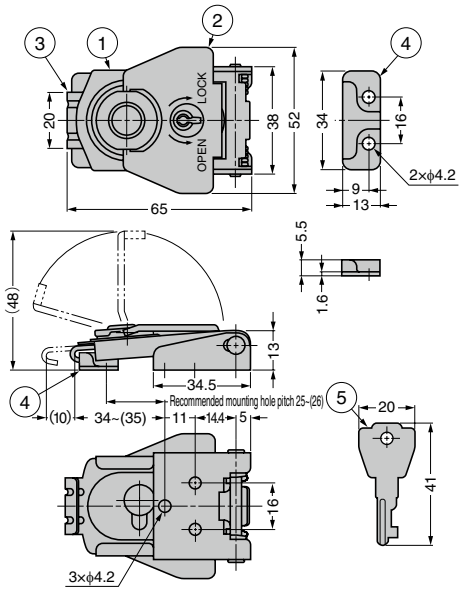
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Plain
②	Lever		
③	Hook		
④	Counter Plate		
⑤	Key	Steel (SPCC)	Chrome

RoHS	CAD	Item Code	Item Name	Key Type	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-040-489	PN-51	Key Alike	686	70	50	40	240

DRAW LATCH P1040 With Spring



[Remarks]
- When locked, check if the lever does not rise.



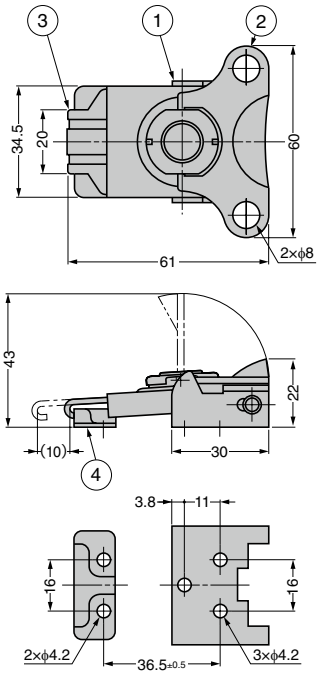
No.	Part Name	Material	Finish
①	Body	Steel	Chrome
②	Lever		
③	Hook	Stainless Steel (SUS430)	–
④	Counter Plate (P100H02)	Steel (SPCC)	Chrome
⑤	Key		Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-049-240	P1040SCR	Key Alike	105	60	–
GT	3D	120-049-413	P1040SUS		105	60	240

DRAW LATCH P102H With Spring



●Available in steel and stainless steel.



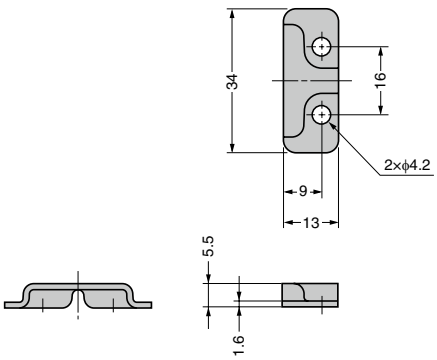
No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Chrome
②	Lever		
③	Hook	Stainless Steel (SUS430)	–
④	Counter Plate (P100H02)	Steel (SPCC)	Chrome

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-233	P102HSCR	85	60	240
G	3D	120-049-234	P102HSUS		60	600

COUNTER PLATE P100H02



●Counter plate for draw latches P1040 1 and P102H 2 draw latch.



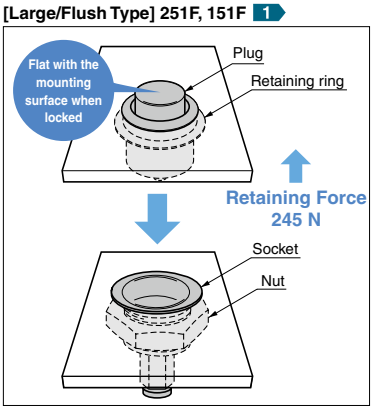
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-231	P100H02	Steel (SPCC)	Chrome	6	1	–

Refer to 1 : P.685, 2 : P.686

Introduction of Push Lock Fastener Series

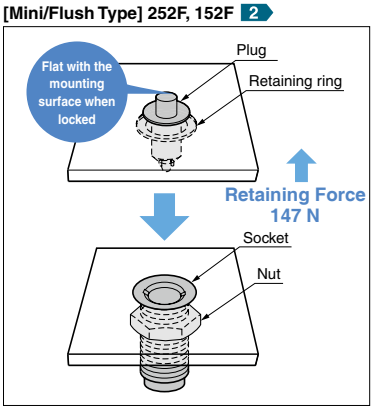
- Ideal connector for easy and reliable assembly, detachment and disassembly of aircraft, OA equipment, medical equipment, laboratory equipment, and maintenance equipment, etc.
- Insert plug into socket and push to lock/unlock.
- Fast and easy installation/removal of panel.
- Locked cam prevents release by vibration.
- There are flush/button types that the plug becomes flat with/comes out from the mounting surface when locked.Large and mini sizes are available, and large size is flush type only.
- AS parts set available for mini size.
- Resin and metal types available.

[Large/Flush Type] 251F, 151F 1



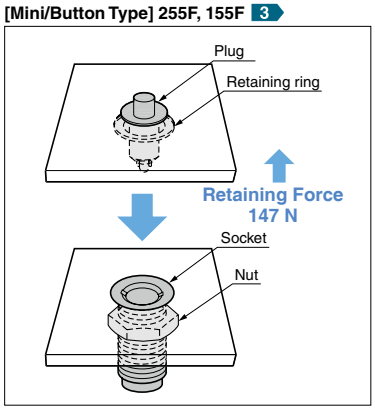


[Mini/Flush Type] 252F, 152F 2



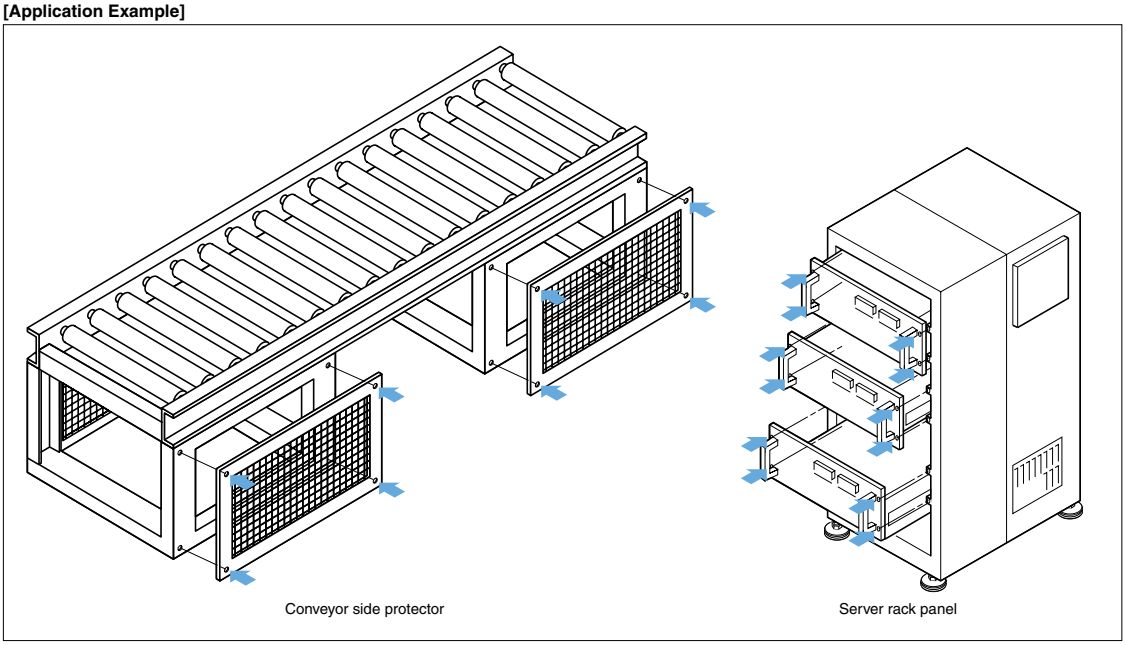


[Mini/Button Type] 255F, 155F 3





[Application Example]



Refer to 1 : P.688, 2 : P.689, 3 : P.692

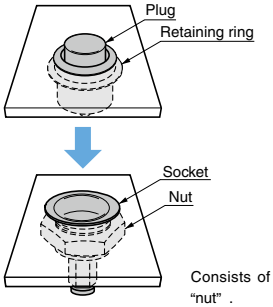
PUSH LOCK FASTENER 251F, 151F Large/Flush Type



- Insert plug into socket and push to lock/unlock.
- Resin and metal types available.
- Flush locked design prevents snagging.
- Fast and easy installation/removal of panel.
- Locked cam prevents release by vibration.

[Remarks]

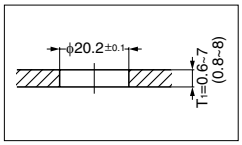
- Load applied directly to the body may cause damage.



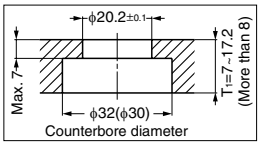
Consists of four parts: "plug", "ring" , "socket" and "nut" .

[Preparation (Plug)]

Board thickness T_1=0.6~7 (0.8~8)



Board thickness T_1= 7~17.2 (More than 8)

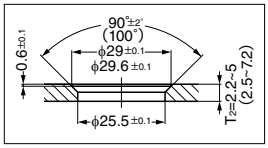


( ) dimension for 151F

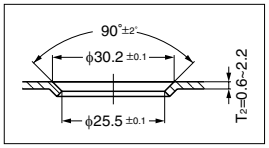
[Preparation (Socket)]

Countersink hole

Board thickness T_2= 2.2~5 (2.5~7.2)



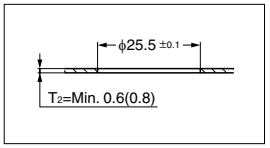
Board thickness T_2= 0.6~2.2

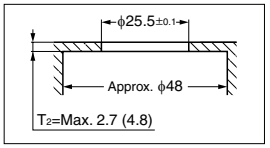


( ) dimension for 151F

[Straight hole]

Board thickness T_2= 0.6~2.7 (0.8~4.8)





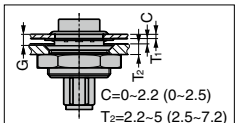
( ) dimension for 151F

[Grip Dimensions]

Please set so that the grip dimension G is within 1.2~6.

Countersink hole

In case of clearance C=0~2.2(0~ 2.5), grip dimension G = T_1+C+0.7



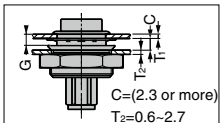
( ) dimension for 151F

How to select

In case of T_1=1, C=0.7 and T_2=3, grip dimension G=1+0.7+0.7=2.4
Set item name…251F-02-3

Straight hole 1

In case of clearance C=2.3 or more, grip dimension G=T_1+C-1.4

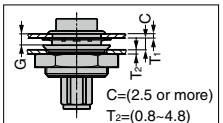


How to select

In case of T_1=1, C=2.5 and T_2=1, grip dimension G=1+2.5-1.4=2.1
Set item name…251F-02-3

Straight hole 2

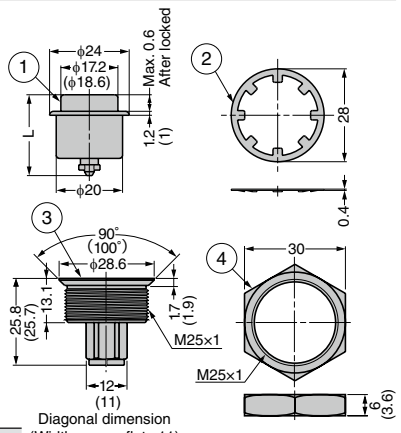
In case of clearance C=2.5 or more, grip dimension G=T_1+C-1.7



( ) dimension for 151F

How to select

In case of T_1=1, C=2.5 and T_2=1, grip dimension G=1+2.5-1.7=1.8
Set item name…151F-01-2



Diagonal dimension (Width across flats 11)

( ) dimension for 151F

[251F] Resin type

RoHS	CAD	Item Code	Set Item Name	Grip Dimension G	Plug Dimension L	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-040-259	251F-01-3	1.2~2	20.5	245	25	15	1	1
–	3D	120-040-260	251F-02-3	2~2.8	21				1	1
G	3D	120-040-261	251F-03-3	2.8~3.6	22				1	1
G	3D	120-040-262	251F-04-3	3.6~4.4	23				1	1
–	3D	120-040-263	251F-05-3	4.4~5.2	23.5				1	1
–	3D	120-040-264	251F-06-3	5.2~6	24.5			16	1	1

No.	Part Name	Material	Finish / Colour
①	Plug	POM	Black
②	Retaining Ring	Steel	Phosphate Coating
③	Socket	POM	Black
④	Nut		

[151F] Metal type

RoHS	CAD	Item Code	Set Item Name	Grip Dimension G	Plug Dimension L	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-013-718	151F-01-2	1.2~2	20.5	245	25	15	–	1
–	3D	120-013-719	151F-02-2	2~2.8	21				–	1
–	3D	120-013-720	151F-03-2	2.8~3.6	22				–	1
–	3D	120-013-721	151F-04-2	3.6~4.4	23				–	1
–	3D	120-013-722	151F-05-2	4.4~5.2	23.5				–	1
–	3D	120-013-723	151F-06-2	5.2~6	24.5			16	–	1

No.	Part Name	Material	Finish
①	Plug	Brass	Chrome
②	Retaining Ring	Steel	Phosphate Coating
③	Socket	Brass	Nickel
④	Nut	Zinc Alloy (ZDC)	

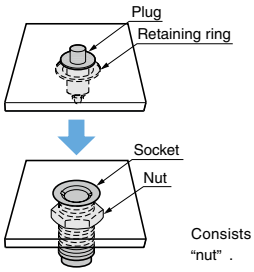
PUSH LOCK FASTENER 252F, 152F Mini/Flush Type



- Insert plug into socket and push to lock/unlock.
- Flush locked design prevents accidental release.Push with sharp-pointed object to release.
- Resin and metal types available.
- Fast and easy installation/removal of panel.
- Locked cam prevents release by vibration.
- AS part set for installing to aluminium frame also available 1.

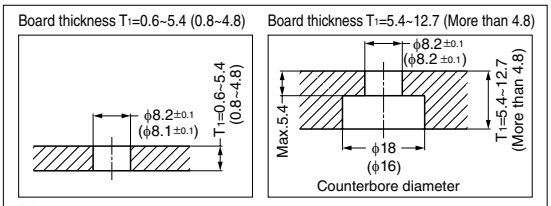
[Remarks]

- Load applied directly to the body may cause damage.



Consists of four parts: “plug”, “ring” , “socket” and “nut” .

[Preparation (Plug)]

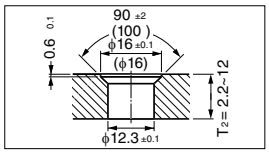


( ) dimension for 151F

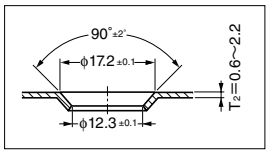
[Preparation (Socket)]

Countersink hole

Board thickness T2 = 2.2~12

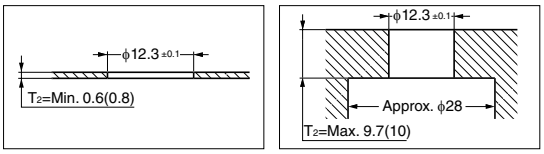


Board thickness T2 = 0.6~2.2



Straight hole

Board thickness T2=0.6~9.7 (0.8~1.0)



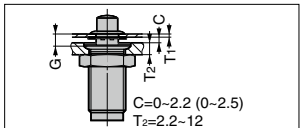
( ) dimension for 151F

[Grip Dimensions]

Please set so that the grip dimension G is within 1.2~6.

Countersink hole

In case of clearance C=0~2.2 (0~2.5), grip dimension G=T1+C+0.7



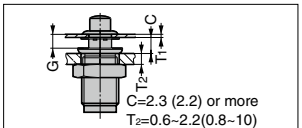
( ) dimension for 151F

How to select

In case of T1=1, C=1 and T2=1, grip dimension G=1+1+0.7=2.7
Set item name…252F-02-3

Straight hole

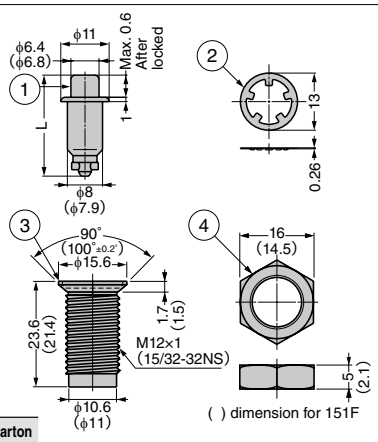
In case of clearance C=2.3 (2.2) or more, grip dimension G=T1+C-1.4



( ) dimension for 151F

How to select

In case of T1=3, C=2.6 and T2=1, grip dimension G=3+2.6-1.4=4.2
Set item name…152F-04-1



( ) dimension for 151F

[252F] Resin type

RoHS	CAD	Item Code	Set Item Name	Grip Dimension G	Plug Dimension L	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-279	252F-01-3	1.2~2	18.5	147	15	6	1	1
G	3D	120-040-280	252F-02-3	2~2.8	19.0				1	1
G	3D	120-040-281	252F-03-3	2.8~3.6	20				1	1
–	3D	120-040-282	252F-04-3	3.6~4.4	20.5				1	1
–	3D	120-040-283	252F-05-3	4.4~5.2	21.5				1	1
–	3D	120-040-284	252F-06-3	5.2~6	22.5				1	1

No.	Part Name	Material	Finish / Colour
①	Plug	POM	Black
②	Retaining Ring	Steel	Phosphate Coating
③	Socket	POM	Black
④	Nut		

[152F] Metal type

RoHS	CAD	Item Code	Set Item Name	Grip Dimension G	Plug Dimension L	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-013-709	152F-01-1	1.2~2	16.5	147	15	6	–	1
–	3D	120-013-710	152F-02-1	2~2.8	17				–	1
–	3D	120-013-711	152F-03-1	2.8~3.6	18				–	1
–	3D	120-013-712	152F-04-1	3.6~4.4	18.5				–	1
–	3D	120-013-713	152F-05-1	4.4~5.2	19.5				–	1
–	3D	120-013-714	152F-06-1	5.2~6	20.5				–	1

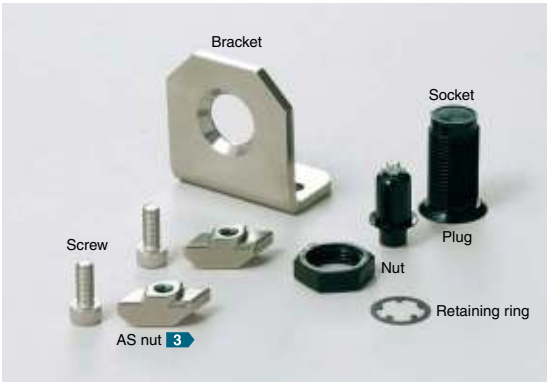
No.	Part Name	Material	Finish
①	Plug	Brass	Chrome
②	Retaining Ring	Stainless Steel (SUS304)	Passivation
③	Socket	Zinc Alloy (ZDC)	Clear Zinc Chromate
④	Nut	Steel	Chromate

Refer to 1 : P.690~691

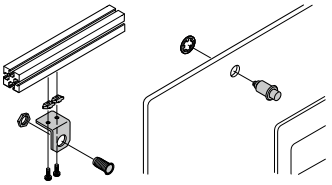
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

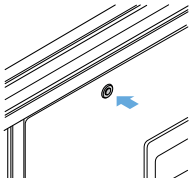
[AS Parts Set : For Push Lock Fastener 252F Resin Type 2] Parts set of brackets, screws and AS nuts used for installing to aluminium frame



[Installation]

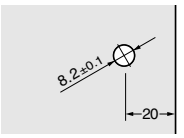


[Lock Release]



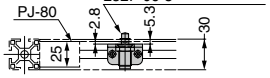
Push plug head with sharp-pointed object.

[Cut Out Dimensions of Panel]



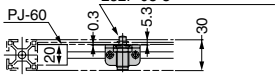
[Dimensions]

Plug dmension 22.3mm 252F-06-3



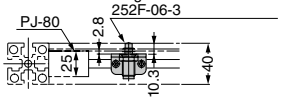
In case of PJ-80+30×30 mm frame

Plug dimension 19.9 mm 252F-03-3



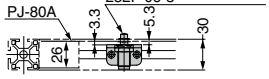
In case of PJ-60+30×30 mm frame

Plug dimension 22.3mm 252F-06-3



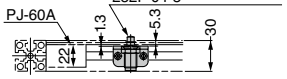
In case of PJ-80+40×40 mm frame

Plug dmension 22.3mm 252F-06-3



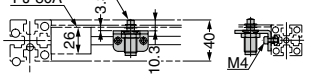
In case of PJ-80A+30×30 mm frame

Plug dimension 20.7 mm 252F-04-3



In case of PJ-60A+30×30 mm frame

Plug dimension 22.3mm 252F-06-3



In case of PJ-80A+40×40 mm frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	–	120-014-252	AS-252F-03-3-30-6	30×30 Groove Width 6mm	Push Lock Fastener 252F-03-3 : 1pc Bracket AS-252F : 1pc AS Nut AS-6M4 : 2pcs M4×10 Hexagon Socket Head Cap Screw : 2pcs	45
–	–	120-014-253	AS-252F-06-3-40-8	40×40 Groove Width 8mm	Push Lock Fastener 252F-06-3 : 1pc Bracket AS-252F : 1pc AS Nut AS-8M4 : 2pcs M4×12 Hexagon Socket Head Cap Screw : 2pcs	50
–	–	120-014-254	AS-252F-06-3-30-8	30×30 Groove Width 8mm	Push Lock Fastener 252F-06-3 : 1pc Bracket AS-252F : 1pc AS Nut AS-8M4 : 2pcs M4×10 Hexagon Socket Head Cap Screw : 2pcs	51

※The push lock fastener sets suitable for installing to aluminium frame are above item names only. Please contact us for other than above.

Refer to 1 : FRONT P.20, 2 : P.689, 3 : P.706

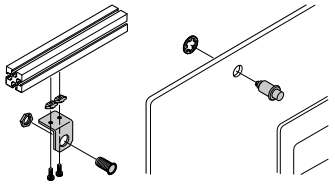
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

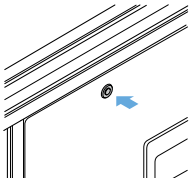
[AS Parts Set : For Push Lock Fastener 152F Metal Type 2] Parts set of brackets, screws and AS nuts used for installing to aluminium frame



[Installation]

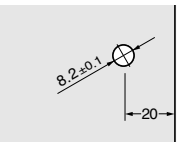


[Lock Release]

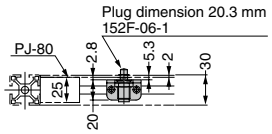


Push plug head with sharp-pointed object.

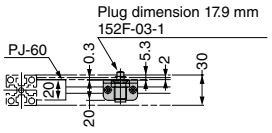
[Cut Out Dimensions of Panel]



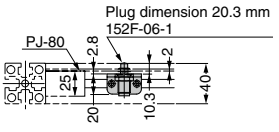
[Dimensions]



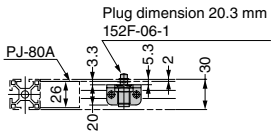
In case of PJ-80+30×30 mm frame



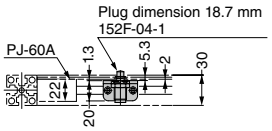
In case of PJ-60+30×30 mm frame



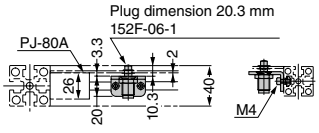
In case of PJ-80+40×40 mm frame



In case of PJ-80A+30×30 mm frame



In case of PJ-60A+30×30 mm frame



In case of PJ-80A+40×40 mm frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
–	–	120-014-255	AS-152F-03-1-30-6	30×30 Groove Width 6mm	Push Lock Fastener 152F-03-1 : 1 pcs Bracket AS-252F : 1 pcs AS Nut AS-6M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 2 pcs	51
–	–	120-014-256	AS-152F-06-1-40-8	40×40 Groove Width 8mm	Push Lock Fastener 152F-06-1 : 1 pcs Bracket AS-252F : 1 pcs AS Nut AS-8M4 : 2 pcs M4×12 Hexagon Socket Head Cap Screw : 2 pcs	58
–	–	120-014-257	AS-152F-06-1-30-8	30×30 Groove Width 8mm	Push Lock Fastener 152F-06-1 : 1 pcs Bracket AS-252F : 1 pcs AS Nut AS-8M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 2 pcs	58

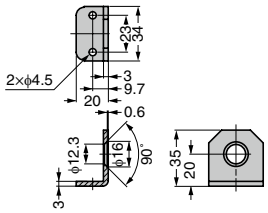
※ The push lock fastener sets suitable for installing to aluminium frame are above item names only.Please contact us for other than above.

Refer to 1 : FRONT P.20, 2 : P.689, 3 : P.706

BRACKET FOR PUSH LOCK FASTENER AS-252F

SUS

●Used for installing push lock fastener to aluminium frame.



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	120-010-542	AS-252F	Stainless Steel (SUS430)	Barrel Polished	32	50	400

PUSH LOCK FASTENER 255F, 155F Mini/Button Type

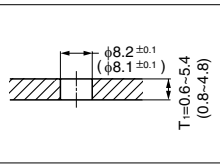


- Insert plug into socket and push to lock/unlock.
- No special tool is required for locking and unlocking.
- Resin and metal types available.
- Fast and easy installation/removal of panel.
- Locked cam prevents release by vibration.
- AS parts set 1 for installing to aluminium frame also available.

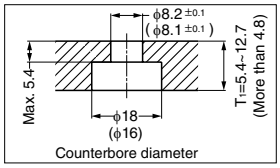
[Remarks]
- Load applied directly to the body may cause damage.

[Preparation (Plug)]

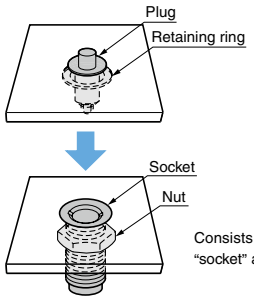
Board thickness T_1=0.6~5.4 (0.8~4.8)



Board thickness T_1=5.4~12.7 (More than 4.8)



( ) dimension for 151F

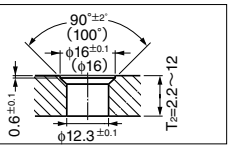


Consists of four parts: “plug”, “ring” , “socket” and “nut” .

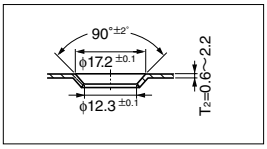
[Preparation (Socket)]

Countersink hole

Board thickness T_2=2.2~12



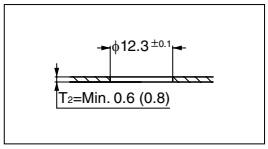
Board thickness T_2=0.6~2.2

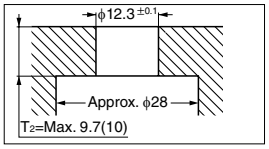


( ) dimension for 151F

Straight hole

Board thickness T_2=0.6~9.7 (0.8~10)





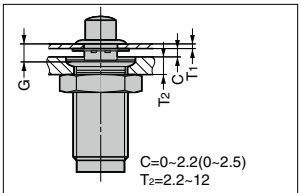
( ) dimension for 151F

[Grip Dimensions]

Please set so that the grip dimension G is within 1.2~6.

Countersink hole

In case of clearance C=0~2.2 (0~2.5), grip dimension G=T_1+C+0.7



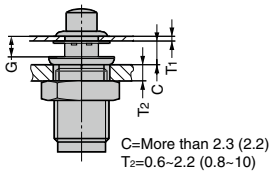
( ) dimension for 151F

How to select

In case of T_1=1, C=1 and T_2=1, grip dimension G=1+1+0.7=2.7
Set item name…255F-01-3

Straight hole

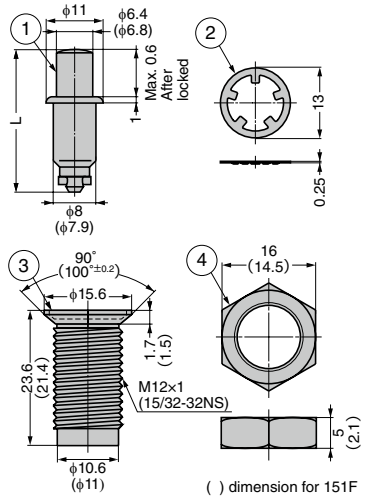
In case of clearance C=2.3 (2.2) or more, grip dimension G=T_1+C-1.4



( ) dimension for 151F

How to select

In case of T_1=3, C=2.6 and T_2=1, grip dimension G=3+2.6-1.4=4.2
Set item name…155F-03-1



( ) dimension for 151F

[255F] Resin type

RoHS	CAD	Item Code	Set Item Name	Grip Dimension G	Plug Dimension L	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-299	255F-01-3	1.2~2.8	23.5	147	15	6	1	1
–	3D	120-040-300	255F-03-3	2.8~4.4	25				1	1
–	3D	120-040-301	255F-05-3	4.4~6	26.5				1	1

No.	Part Name	Material	Finish / Colour
①	Plug	POM	Black
②	Retaining Ring	Steel	Phosphate Coating
③	Socket	POM	Black
④	Nut		

[155F] Metal type

RoHS	CAD	Item Code	Set Item Name	Grip Dimension G	Plug Dimension L	Retaining Force N	Retaining Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-013-715	155F-01-1	1.2~2.8	21.5	147	15	6	–	1
–	3D	120-013-716	155F-03-1	2.8~4.4	23				–	1
–	3D	120-013-717	155F-05-1	4.4~6	24.5				–	1

No.	Part Name	Material	Finish
①	Plug	Brass	Chrome
②	Retaining Ring	Stainless Steel (SUS304)	Passivation
③	Socket	Zinc Alloy (ZDC)	Clear Zinc Chromate
④	Nut	Steel	Chromate

Refer to 1 : P.693~694

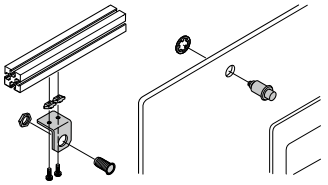
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

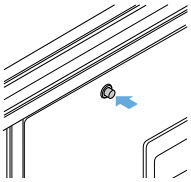
[AS Parts Set : For Push Lock Fastener 255F Resin Type 2] Parts set of brackets, screws and AS nuts used for installing to aluminium frame



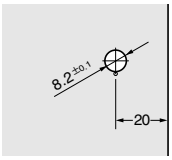
[Installation]



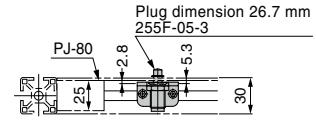
[Lock Release]



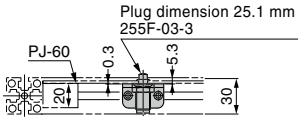
[Cut Out Dimensions of Panel]



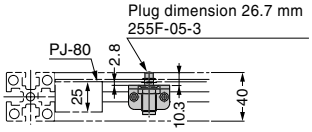
[Dimensions]



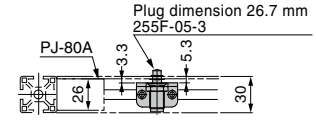
In case of PJ-80＋30×30 mm frame



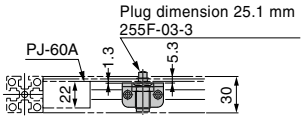
In case of PJ-60＋30×30 mm frame



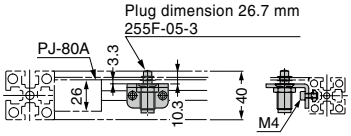
In case of PJ-80＋40×40 mm frame



In case of PJ-80A＋30×30 mm frame



In case of PJ-60A＋30×30 mm frame



In case of PJ-80A＋40×40 mm frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
–	–	120-014-246	AS-255F-03-3-30-6	30×30 Groove Width 6 mm	Push Lock Fastener 255F-03-3 : 1 pc Bracket AS-252F : 1 pc AS Nut AS-6M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 2 pcs	46
–	–	120-014-247	AS-255F-05-3-40-8	40×40 Groove Width 8 mm	Push Lock Fastener 255F-05-3 : 1 pc Bracket AS-252F : 1 pc AS Nut AS-8M4 : 2 pcs M4×12 Hexagon Socket Head Cap Screw : 2 pcs	51
–	–	120-014-248	AS-255F-05-3-30-8	30×30 Groove Width 8 mm	Push Lock Fastener 255F-05-3 : 1 pc Bracket AS-252F : 1 pc AS Nut AS-8M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 2 pcs	52

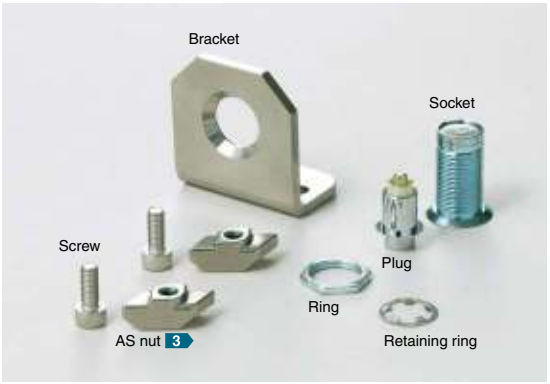
※ The push lock fastener sets suitable for installing to aluminium frame are above item names only. Please contact us for other than above.

Refer to 1 : FRONT P.20, 2 : P.692, 3 : P.706

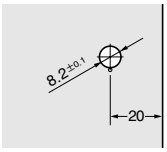
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

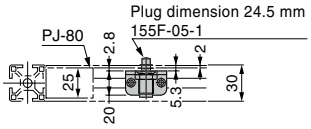
[AS Parts Set : For Push Lock Fastener 155F Metal Type 2] Parts set of brackets, screws and AS nuts used for installing to aluminium frame



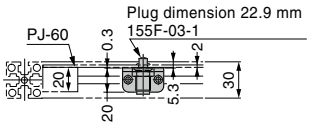
[Cut Out Dimensions of Panel]



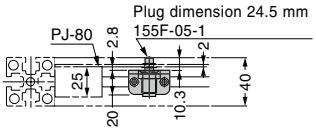
[Dimensions]



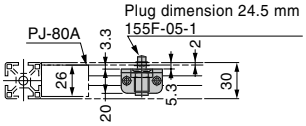
In case of PJ-80+30×30 mm frame



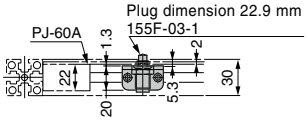
In case of PJ-60+30×30 mm frame



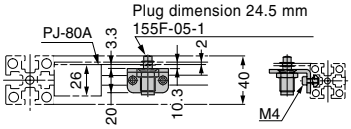
In case of PJ-80+40×40 mm frame



In case of PJ-80A+30×30 mm frame



In case of PJ-60A+30×30 mm frame



In case of PJ-80A+40×40 mm frame

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
–	–	120-014-249	AS-155F-03-1-30-6	30×30 Groove Width 6 mm	Push Lock Fastener 155F-03-1 : 1 pc Bracket AS-252F : 1 pc AS Nut AS-6M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 2 pcs	53
–	–	120-014-250	AS-155F-05-1-40-8	40×40 Groove Width 8 mm	Push Lock Fastener 155F-05-1 : 1 pcs Bracket AS-252F : 1 pc AS Nut AS-8M4 : 2 pcs M4×12 Hexagon Socket Head Cap Screw : 2 pcs	58
–	–	120-014-251	AS-155F-05-1-30-8	30×30 Groove Width 8 mm	Push Lock Fastener 155F-05-1 : 1 pc Bracket AS-252F : 1 pc AS Nut AS-8M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 2 pcs	59

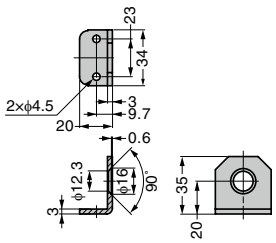
※ The push lock fastener sets suitable for installing to aluminium frame are above item names only. Please contact us for other than above.

Refer to 1 : FRONT P.20, 2 : P.692, 3 : P.706

BRACKET FOR PUSH LOCK FASTENER AS-252F

SUS

●Used for installing push lock fastener to aluminium frame.



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-010-542	AS-252F	Stainless Steel (SUS430)	Barrel Polished	32	50	400

PUSH LOCK FASTENER 149F Push-Turn Type For Horizontal Mount Only

SUS



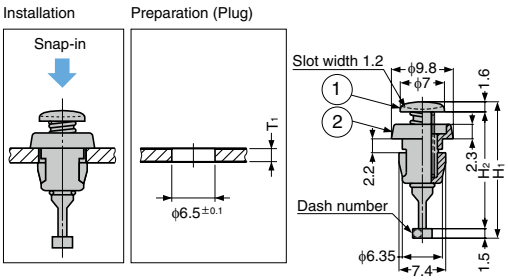
- Push plug in to lock and turn plug head to release. Reliable connection by simple operation.
- Turn the plug head 90° either clockwise or counterclockwise to unlock.
- Quick installation.

※Dash number on plug and socket indicates the part size.

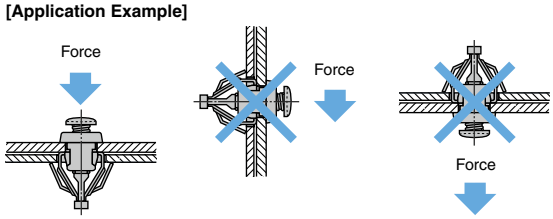
[Remarks]

- Use only on horizontal surface. Installing on vertical surface or ceiling where load is directly applied to the body may cause damage.

[Plug]



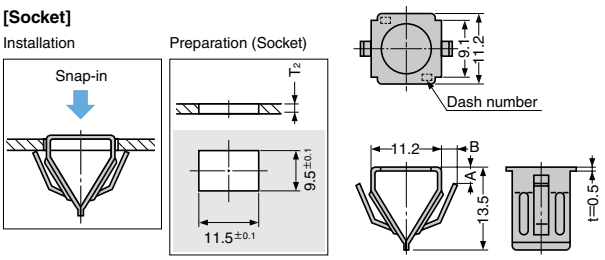
[Application Example]



No.	Part Name	Material	Finish / Colour
①	Plug	Stainless Steel (SUS430)	Plain
②	Socket	POM	Grey

RoHS	CAD	Item Code	Item Name	H1	H2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-045-318	149S06-1-1AA	19.2	16.1	2	500	2000
G	3D	120-049-416	149S06-2-1AA	20	16.9		500	2000

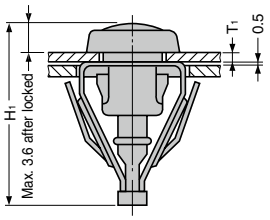
[Socket]



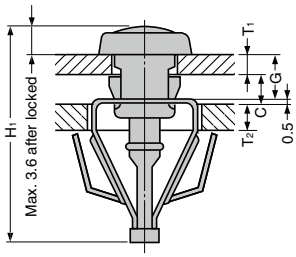
RoHS	CAD	Item Code	Item Name	A	B	Board Thickness T2	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-045-322	149R02-2-1AA	2.6	1.7	1.2~1.8	Stainless Steel (SUS304)	1	1000	–
G	3D	120-045-323	149R02-3-1AA	3.6	7.9	1.8~2.6			1000	–

[How to Select the Plug]

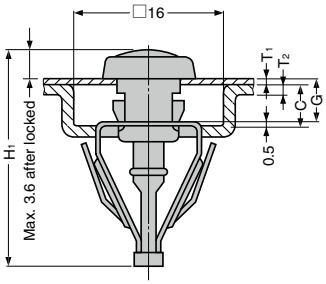
Ⓐ When board thickness T1 is thin (0.6~2.2 mm)



Ⓑ When providing gap C between board thickness T1 and board thickness T2



Ⓒ When eliminating gap C between board thickness T1 and board thickness T2



[Ⓐ]

Item Name	Board Thickness T1	H1
149S06-1-1AA	0.6~1.4	19.2
149S06-2-1AA	1.4~2.2	20

[Ⓑ, Ⓒ]

Item Name	G = T1+C-0.5	Board Thickness T1	C
149S06-1-1AA	0.6~1.4	0.6~1.4	1.3~0.5
149S06-2-1AA	1.4~2.2	0.6~2.2	2.1~0.5

Note) The combination of T1 and C in each row of the above table shall meet [T1+C-0.5≦ Maximum value of G].
1. T1 (0.8)+C (1.0)–(0.5)=G
G=1.3→Select 149S06-1-1AA
2. T1 (0.8)+C (1.3)–(0.5)=G
G = 1.6→Select 149S06-2-1AA

SUGATSUNE

STAINLESS STEEL KNOB FASTENER SRT Fall-preventing Screw

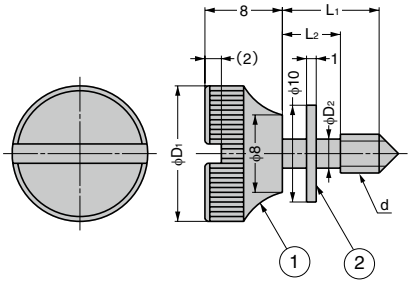
SUS



- With washer for fall prevention.
- Washer can be fixed with single push.

[Applications]

- Switch boards, control boards, distribution boards, etc.



No.	Part Name	Material	Finish / Colour
①	Knurled Knob	Stainless Steel (SUS303)	Polished
②	Resin Washer	PA	Natural

RoHS	CAD	Item Code	Item Name	L1	L2	D1	D2	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-893	SRT4-10	10	6	14	3	M4	7	350	–
G	3D	100-019-892	SRT4-15	15	10				8	500	–
G	3D	100-019-891	SRT4-20	20	12				9	100	–
G	3D	100-019-890	SRT4-27	27	17				10	–	–
G	3D	100-019-889	SRT5-22	22	14	15	3.9	M5	11	–	–
G	3D	100-019-888	SRT5-27	27	17				12	–	–
G	3D	100-019-887	SRT5-37	37	22				13	–	–

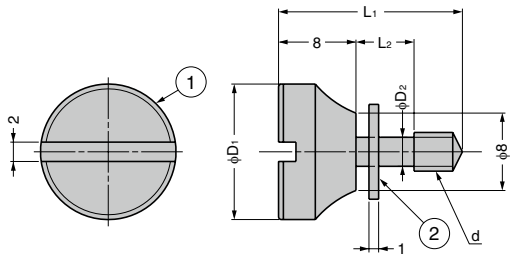
KNOB FASTENER BRT Fall-preventing Screw



- With washer for fall prevention.

[Applications]

- Switch boards, control boards, distribution boards, etc.



No.	Part Name	Material	Finish / Colour
①	Knurled Knob	Brass	Chrome
②	Resin Washer	PA	Natural

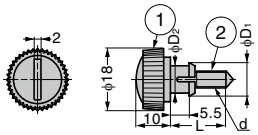
RoHS	CAD	Item Code	Item Name	L1	L2	D1	D2	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-231	BRT4-10CR	19	6	14	3	M4	7	1	–
G	3D	100-019-244	BRT4-15CR	24.5	10				8	1	–
G	3D	100-014-070	BRT4-20CR	29.5	12				9	1	–
G	3D	100-014-069	BRT4-27CR	37	17				10	1	–
G	3D	100-014-068	BRT5-22CR	32	14	15	4	M5	11	1	–
G	3D	100-014-067	BRT5-27CR	37	17				12	1	–
G	3D	100-019-809	BRT5-37CR	46.5	22				13	1	–

KNOB FASTENER DBN Snap-in Installation



- Push into the mounting hole of panel to snap-in. Few installation steps reduce cost.
- No retaining ring or washer is required for installation.
- Resin installation part prevents scratches on the painted surface.

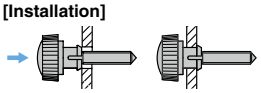
[Applications]
- Switch boards, control equipment, distribution boards, etc.



[Cut Out Dimensions]



[Installation]



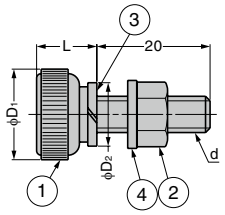
No.	Part Name	Material	Finish / Colour
①	Knob	POM	Black
②	Screw	See Below	See Below

RoHS	CAD	Item Code	Item Name	Screw Material	Screw Finish	L	D1	D2	d	Hole Dia. D3	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-011-915	DBN4-21SUS	Stainless Steel	Plain	22	9.5	8.2	M4	8.5	Max. 5	4.8	100	2000
G	3D	100-011-916	DBN4-27SUS			27						5.3	100	2000
G	3D	100-011-917	DBN5-21SUS			21	10.5	9	M5	9.5		6.4	100	2000
G	3D	100-011-918	DBN5-26SUS			26						7	100	2000
G	3D	100-011-919	DBN5-36SUS			36						8.2	100	2000
G	3D	100-011-920	DBN6-21SUS			21	11.5	10	M6	10.5		8.5	100	2000
G	3D	100-011-921	DBN6-26SUS			26						9.3	100	2000
G	3D	100-011-922	DBN6-36SUS			36						11	100	2000
G	3D	100-011-907	DBN4-21	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)	22	9.5	8.2	M4	8.5		4.5	100	2000
G	3D	100-011-908	DBN4-27			27						5.2	100	2000
G	3D	100-011-909	DBN5-21			21	10.5	9	M5	9.5		6.4	100	2000
G	3D	100-011-910	DBN5-26			26							100	2000
G	3D	100-011-911	DBN5-36			36						8.1	100	2000
G	3D	100-011-912	DBN6-21			21	11.5	10	M6	10.5		8.4	100	2000
G	3D	100-011-913	DBN6-26			26						9.2	100	2000
G	3D	100-011-914	DBN6-36			36						11	100	2000

STAINLESS STEEL KNOB FASTENER SRT Full Thread Type

SUS





[Applications]
- Switch boards, control boards, distribution boards, etc.

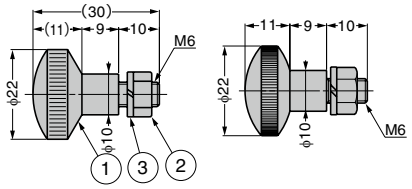
RoHS	CAD	Item Code	Item Name	L	D1	D2	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-842	SRT-N3-20S	8	11	8	M3	6	500	–
G	3D	100-019-841	SRT-N4-20S	10	16	11	M4	15	–	1
G	3D	100-019-843	SRT-N5-20S				M5	16	1	–

No.	Part Name	Material	Finish / Colour
①	Knurled Knob	Stainless Steel (SUS303)	Polished
②	Hexagon Nut		Clear Zinc Chromate
③	Spring Washer		
④	Resin Washer	POM	Natural

KNOB FASTENER BRT-L6-10CR, SRT-L6-10S

SUS





BRT-L6-10CR SRT-L6-10S

[Applications]
- Switch boards, control equipment, distribution boards, etc.

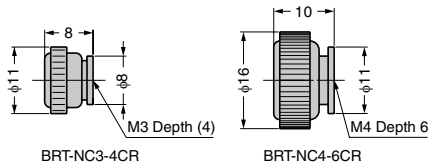
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-847	BRT-L6-10CR	Refer to the right table	Refer to the right table	40	1	–
G	3D	100-010-160	SRT-L6-10S	Stainless Steel (SUS304)	Polished		100	400

BRT-L6-10CR Parts List

No.	Part Name	Material	Finish
①	Knurled Knob	Brass	Chrome
②	Hexagon Nut	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
③	Spring Washer	Steel	

KNOB FASTENER BRT-NC





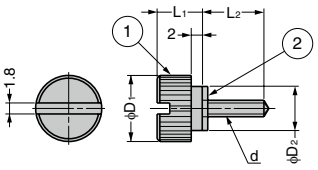
BRT-NC3-4CR　　BRT-NC4-6CR

[Applications]
- Switch boards, control boards, distribution boards, etc.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-849	BRT-NC3-4CR	Brass	Chrome	4	1	–
G	3D	100-019-052	BRT-NC4-6CR			12	1	–

KNOB FASTENER BRF





[Applications]
- Switch boards, control equipment, distribution boards, etc.

No.	Part Name	Material	Finish / Colour
①	Knurled Knob	Brass	Chrome
②	Resin Washer	PA	Natural

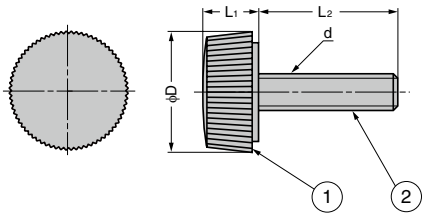
RoHS	CAD	Item Code	Item Name	L1	L2	D1	D2	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	100-019-825	BRF-A3-6CR	8	6.5	12	8	M3	6	1	–
G	3D	100-019-823	BRF-A4-8CR	10	8	15	10	M4	13	1	–
G	3D	100-019-822	BRF-A4-13CR		13				14	1	–
G	3D	100-019-821	BRF-A5-7CR		7.5		12	M5		1	–
G	3D	100-019-820	BRF-A5-12CR		12.5				15	1	–

KNOB FASTENER (UREA) UN



- Specified screw length within allowable dimension range available by made to order.
  In this case, minimum order quantity is 5000~10000 pcs.

[Applications]
- Switch boards, control equipment, distribution boards, etc.



No.	Part Name	Material	Finish / Colour
①	Knob	Urea Resin (UF)	White
②	Screw	Steel (SWRCH)	Coloured Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	L1	L2	D	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-541	UN-2000W	5	6	11	M3	1	1000	–
G	–	120-040-549	UN-2003W		16			1	1000	–
G	3D	120-040-494	UN-2006W		8		M4	2	1000	–
G	3D	120-040-496	UN-2007W		12			2	1000	–
G	3D	120-040-615	UN-2008W		16			2	1000	–
G	–	120-040-495	UN-2010W	6.2	8	14		2	500	–
G	3D	120-040-617	UN-2011W		10			2	500	–
G	3D	120-040-618	UN-2012W		12			2	500	–
G	–	120-040-620	UN-2013W		16			3	500	–
G	3D	120-040-508	UN-2016W		9		M5	3	500	–
G	–	120-040-509	UN-2017W		15			4	500	–
G	3D	120-040-622	UN-2018W		27			5	500	–
G	3D	120-040-510	UN-2022W	8	9	17		4	300	–
G	3D	120-140-254	UN-2026W		12		M6	6	300	–
G	3D	120-040-516	UN-2030W	10.5	15	20		8	150	–

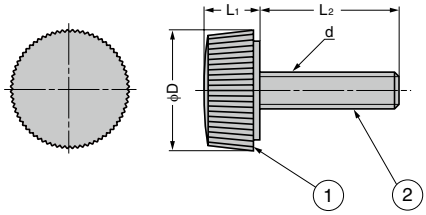
KNOB FASTENER (PHENOL) UN



●Specified screw length within allowable dimension range available by made to order.In this case, minimum order quantity is 5,000~10,000 pcs.

[Applications]

●Switch boards, control equipment, distribution boards, etc.



No.	Part Name	Material	Finish / Colour
①	Knob	Phenol Resin (PF)	Black
②	Screw	Steel (SWRCH)	Coloured Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	L_1	L_2	D	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-788	UN-2000B	5	6	11	M3	1	1000	–
G	3D	120-040-610	UN-2003B		16			1	1000	–
G	3D	120-040-492	UN-2006B		8		M4	2	1000	–
G	3D	120-040-544	UN-2010B	6.2		14		2	500	–
G	–	120-040-104	UN-2011B		10			2	500	–
G	3D	120-040-621	UN-2013B		16			3	500	–

QUICK RELEASE LATCH DIGEST

Panel fasteners with latch also available.

Flush Slam Latch LC-65A 1



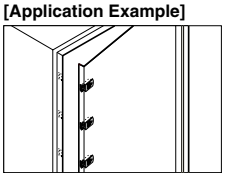
[Application Example]



Quick Release Latch SX-48 Snap-in Installation & Temporary Holding 3



[Application Example]

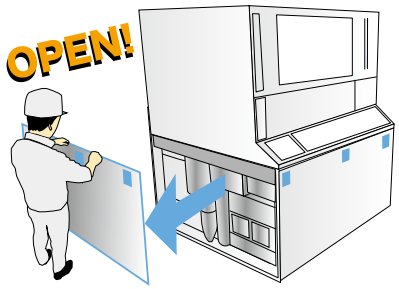


Quick Release Latch With Locking LC-PK32, LC-PL32 Snap-in Installation 2



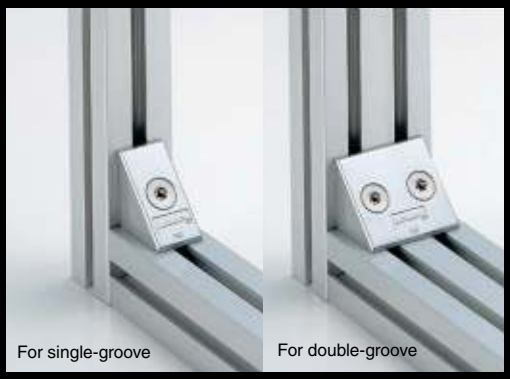
[Application Example]

Three latches can be released by one person.



Refer to 1 : P.532, 2 : P.534, 3 : P.533

CORNER CONNECTOR PJ Series Introduction



- Aluminium frame can be easily connected with only 1 screw (for single-groove).
- No nut or pre-positioning is required, shortening working time.
- Widely applied to various aluminium frames.
- Clean appearance.
- Type with screw hole for mounting panel also available.

[Parts Example]One-touch Connector (For Double-groove)



[One-touch Connector] Post-installation Type (For single-groove)
Refer to 1 for details.



- Can be post-installed to aluminium frame.
- Only 1 screw is necessary for installation.
- Only 3 parts allows for easy installation.

[Applicable Groove Width]

Groove Width		6mm	8mm	10mm
Item Name	Without Screw Hole	PJ-60A	PJ-80A	—
		PJ-60AE	PJ-80AE	—
	With Screw Hole M4	PJ-60AT	PJ-80AT	—
		PJ-60ATE	PJ-80ATE	—
	With Screw Hole M5	—	PJ-80HA	PJ-100HA

[One-touch Connector] (For Single-groove)
Refer to 2 for details.



- Only 1 screw is necessary for installation.
- Only 3 parts allows for easy installation.

[Applicable Groove Width]

Groove Width		6mm	8mm	10mm
Item Name	Without Screw Hole	PJ-60	PJ-80	PJ-100
	With Screw Hole M4	PJ-60T	PJ-80T	PJ-100T

[For Double-groove]
Refer to 3 for details.



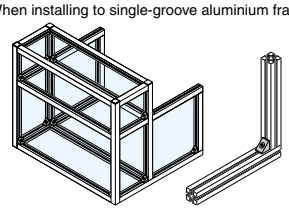
- Can be installed to aluminium frame with 2 grooves.
- Only 5 parts allows for easy installation.

[Applicable Groove Width]

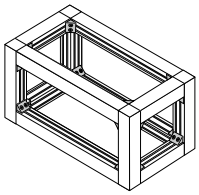
Groove Width		6mm	8mm
Item Name	Without Screw Hole	PJ-60W30	PJ-80W30
	With Screw Hole M4	PJ-60W30T	PJ-80W30T

[Application Example]

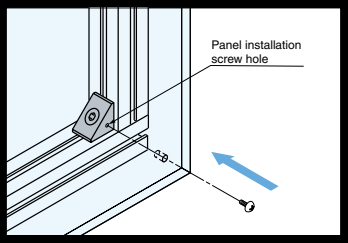
When installing to single-groove aluminium frame



When installing to double-groove aluminium frame



[Panel Installation]



As shown in the figure, acrylic panel can be installed to the connector with screw hole at one side.

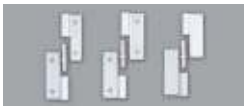
Refer to 1 : P.701, 2 : P.702, 3 : P.703

ALUMINIUM FRAME SUPPORT SYSTEM AS SERIES DIGEST

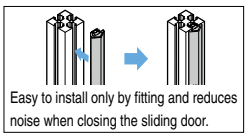
[Various Functional Hardware]
"AS series" is a new system used for installing various fuctional hardware such as hinges, catches and door hardware to aluminium frame.Refer to the product page 1 for details on AS series.


Soft-down stay
Refer to 1 : FRONT P.20


Damper hinge




Lift-off hinge

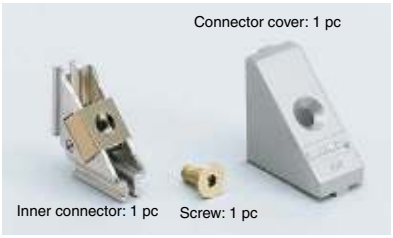
Rubber gasket

CORNER CONNECTOR PJ One-touch Connector Post-installation Type



- Used for easily installing single-groove aluminium frames to each other.
- Conductive type and standard type are available.
- Can be directly installed to the desired position (see installation procedure below).
- Easy connection of aluminium frames with one screw.
- Unique installation system shortens working time.
- Widely applied to various aluminium frames.
- Only 3 parts.
- PJ-80HA and PJ-100HA can be used to install 5mm panel by changing the direction of connector cover (choose the type with screw hole).
- Clean appearance.

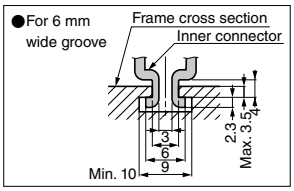
[Parts]

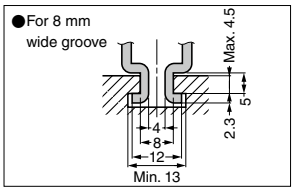


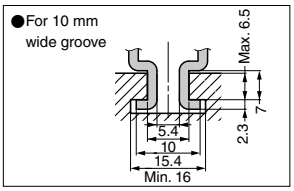
[Remarks]

- Aluminium frames to be connected shoud be of the same size and shape.
- Applicable frame size is for reference. Please check with actual item.
- Recommended tightening torque varies depending on installation conditions. Determine torque value by test before use.
- Conductive type cannot guarantee perfect conduction.In addition, reusing corner connector may cause poor conductivity. Please make conductivity check after assembly.
- The failure load in the table below is the static load when the corner connector is damaged and the aluminium frames dropped out by the "Failure load test method". It does not guarantee the strength.

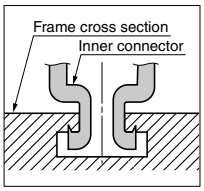
[Applicable Frame Reference Dimensions]



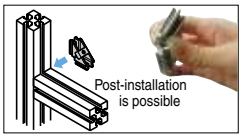




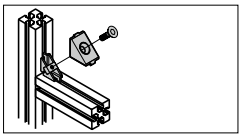
[Conductive Type Cutaway View]



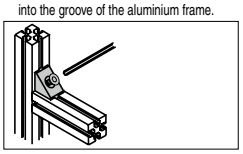
[Installation]



1. As show in the figure, fit the Inner connector into the groove of the aluminium frame.

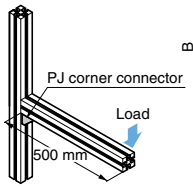


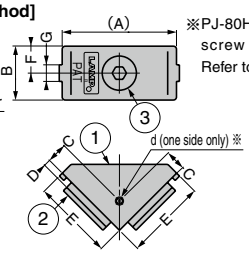
2. Put the connector cover on the Inner connector.



3. Tighten with the supplied mounting screw.

[Failure load Test Method]





※PJ-80HA and PJ-100HA have screw holes on both sides. Refer to 1 for details.

No.	Part Name	Material	Finish
①	Connector cover	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Inner connector	Steel	Coloured Zinc Chromate (Trivalent)
③	Hexagon Socket Countersunk Head Screw		Nickel

[Conductive Type]

RoHS	CAD	Item Code	Item Name	d	Groove Width	A	B	C	D	E	F	G	③Size	Recommended Tightening Torque N·m	Recommended Tightening Torque kgf·cm	Failure Load N	Failure Load kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-012-423	PJ-60AE	w/o	For 6 mm	55	22	10	1~3	39	11	6	M6×16	6	61.2	284	29	69	40	240
G	3D	120-012-424	PJ-60ATE	M4														67	40	240
G	3D	120-012-425	PJ-80AE	w/o	For 8 mm		26		1.5~4.5		13	8	M8×16	13	133	392	40	82	35	210
G	3D	120-012-426	PJ-80ATE	M4														83	35	210

[Standard Type]

RoHS	CAD	Item Code	Item Name	d	Groove Width	A	B	C	D	E	F	G	③Size	Recommended Tightening Torque N·m	Recommended Tightening Torque kgf·cm	Failure Load N	Failure Load kgf	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-251	PJ-60A	w/o	For 6 mm	55	22	10	1~3	39	11	6	M6×16	6	61.2	284	29	67	40	240
G	3D	120-041-250	PJ-60AT	M4														67	40	240
G	3D	120-041-253	PJ-80A	w/o	For 8 mm		26		1.5~4.5		13	8	M8×16	13	133	392	40	81	35	210
G	3D	120-041-252	PJ-80AT	M4														82	35	210
G	3D	120-040-557	PJ-80HA	M5		57	25	12	1.5~4.7	40	15		M6×18	6	61.2			80	35	210
G	3D	120-040-558	PJ-100HA		For 10 mm	71	32.5		4.5~7	50		10	M8×25	13	133	833	85	165	15	90

Refer to 1 : P.704

CORNER CONNECTOR PJ One-touch Connector For Single-groove

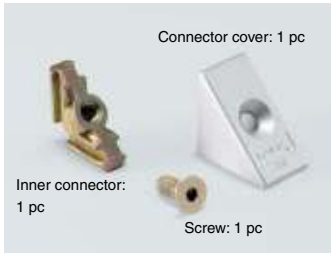


- Used for easily installing single-groove aluminium frames to each other.
- Easy connection of aluminium frames with one screw.
- Unique installation system shortens working time.
- Widely applied to various aluminium frames.
- Only 3 parts.
- Clean appearance.
- Type for 4mm wide groove also available by made to order.

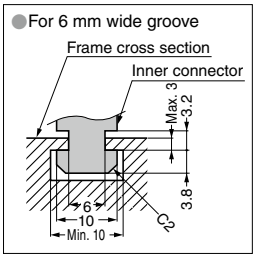
[Remarks]

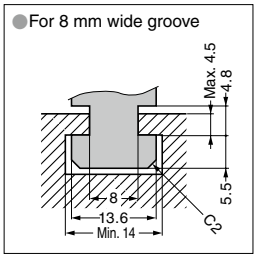
- Aluminium frames to be connected shoud be of the same size and shape.
- Applicable frame size is for reference. Please check with actual item.
- This type cannot be post-installed. It is necessary to insert the inner connector into the aluminium frame to be connected in advance.
- Recommended tightening torque varies depending on installation conditions. Determine torque value by test before use.

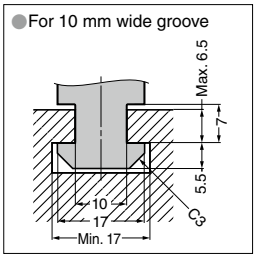
[Parts]



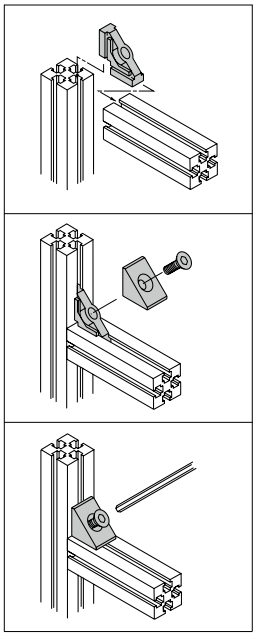
[Applicable Frame Reference Dimensions]



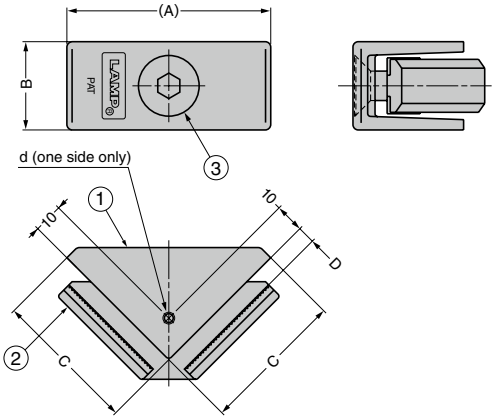




[Installation]



1. Insert the AS nut into the groove of the aluminium frame.
2. Put the connector cover on the Inner connector.
3. Tighten with the supplied mounting screw.



No.	Part Name	Material	Finish
①	Connector Cover	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Inner Connector	Zinc Alloy (ZDC)	Coloured Zinc Chromate
③	Hexagon Socket Countersunk Head Screw	Steel	Nickel

RoHS	CAD	Item Code	Item Name	d	Groove width	A	B	C	D	③Size	Recommended Tightening Torque N·m	Recommended Tightening Torque kgf·cm	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-040-456	PJ-60	w/o	For 6 mm	41	20	29	1.5~3	M6×15	6	61.2	38	40	400
G	3D	120-040-554	PJ-60T	M4									35	40	400
–	3D	120-040-490	PJ-80	w/o	For 8 mm	55	25	39	1.5~4.5	M8×20	13	133	96	20	240
G	3D	120-040-555	PJ-80T	M4									96	20	240
G	3D	120-040-551	PJ-100	w/o	For 10 mm	70	30	49	3.5~6.5	M10×25	26	265	201	15	60
G	3D	120-040-550	PJ-100T	M4									200	15	60

CORNER CONNECTOR PJ One-touch Connector For Double-groove

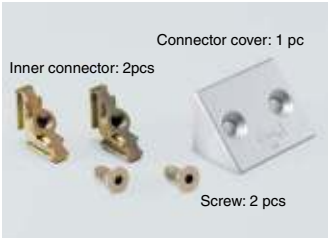


- Used for easily installing double-groove aluminium frames to each other.
- Easy connection of aluminium frames with 2 screws.
- Unique installation system shortens working time.
- Widely applied to various aluminium frames.
- Clean appearance.
- Groove pitch and width can be made to order.

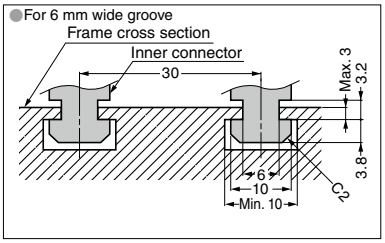
[Remarks]

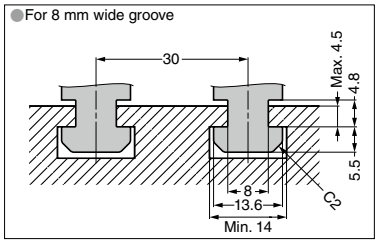
- Aluminium frames to be connected shoud be of the same size and shape.
- Applicable frame size is for reference. Please check with actual item.
- This type cannot be post-installed. It is necessary to insert the inner connector into the aluminium frame to be connected in advance.
- Recommended tightening torque varies depending on installation conditions. Determine torque value by test before use.

[Parts]

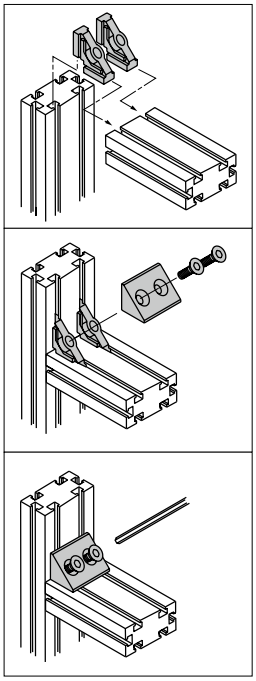


[Applicable Frame Reference Dimensions]

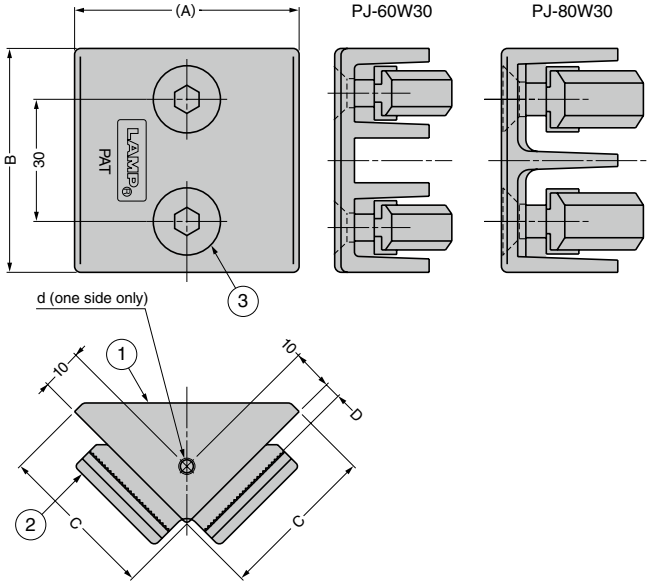




[Installation]



1. Insert the AS nut into the groove of the aluminium frame.
2. Put the connector cover on the Inner connector.
3. Tighten with the supplied mounting screws.

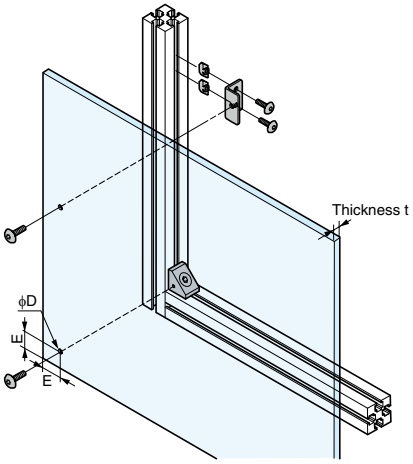


No.	Part Name	Material	Finish
①	Connector Cover	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Inner Connector	Zinc Alloy (ZDC)	Coloured Zinc Chromate
③	Hexagon Socket Countersunk Head Screw	Steel	Nickel

RoHS	CAD	Item Code	Item Name	d	Groove width	A	B	C	D	③Size	Recommended Tightening Torque N·m	Recommended Tightening Torque kgf·cm	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-488	PJ-60W30	w/o	For 6 mm	41	50	29	1~3	M6×15	6	61.2	79	20	240
G	3D	120-040-556	PJ-60W30T	M4									80	20	240
G	3D	120-040-552	PJ-80W30	w/o	For 8 mm	55	55	39	1.5~4.5	M8×20	13	133	190	10	120
G	3D	120-040-553	PJ-80W30T	M4									189	10	120

[Panel Installation Dimensions]

Processing dimensions when installing the panel inside the aluminium frame.



	Frame Size 30×30 mm	Frame Size 40×40 mm	Frame Size 45×45 mm	Frame Size 30×60 mm	D	E
	Thickness t	Thickness t	Thickness t	Thickness t		
PJ-60T	5	–	–	–	6	9
PJ-80T	2.5	7.5				
PJ-100T	–	5				
PJ-60AT	4	–				
PJ-60ATE						
PJ-80AT	2	7				
PJ-80ATE						
PJ-80HA	5	5			8.5	11
PJ-100HA	–		5			
PJ-60W30T		–	–	5	6	9
PJ-80W30T				2.5		

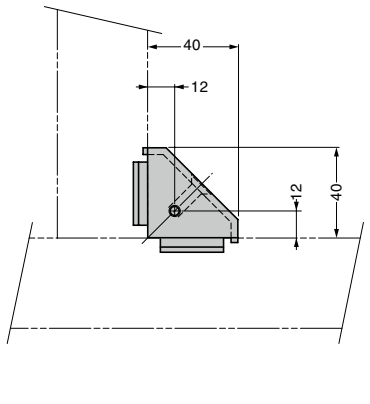
※Installation example with 1 mm gap provided between panel and frame.

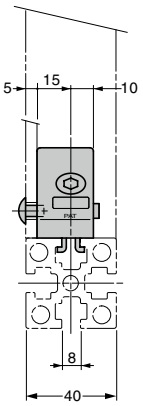
CORNER CONNECTOR PJ One-touch Connector Post-installation Type Installation Example

PJ-80HA 1

●Frame size 40×40

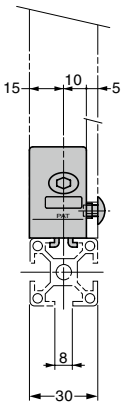
Groove width 8mm type

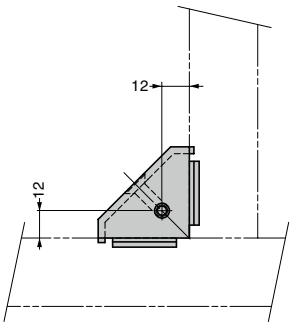




●Frame size 30×30

Groove width 8mm type

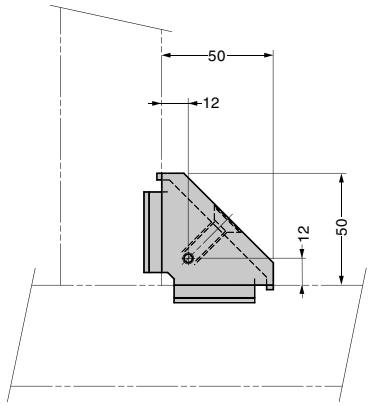


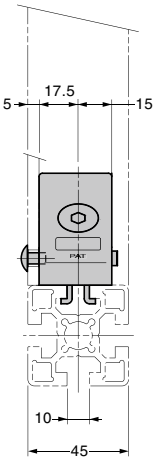


PJ-100HA 1

●Frame size 45×45

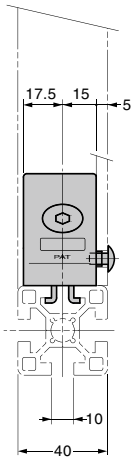
Groove width 10 mm type

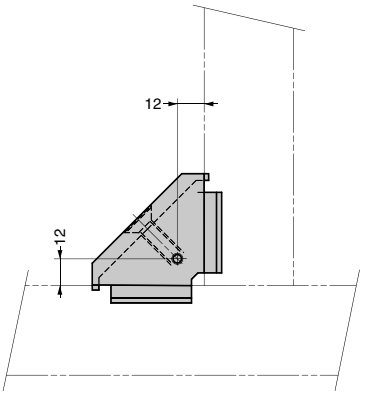




●Frame size 40×40

Groove width 10 mm type

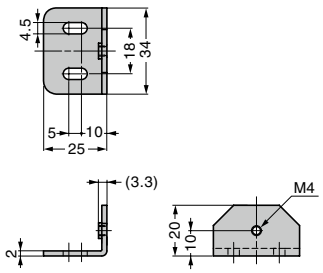




Refer to 1 : P.701

PANEL FIXING MIDDLE BRACKET AS-PTB





- Used for preventing panel flapping when installed to aluminium frame.
- For corner connector PJ type with screw hole.
- For recommended panel thickness, see panel installation dimensions 1.
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.

[Remarks]

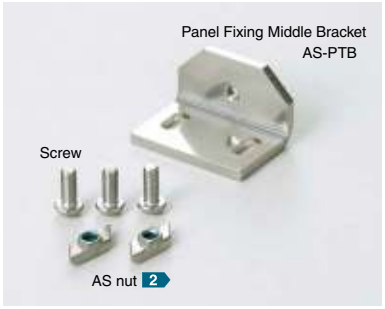
- Mounting screws not included when ordering single bracket. Please prepare mounting screws of appropriate length according to aluminium frames.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-010-541	AS-PTB	Stainless Steel (SUS430)	Barrel Polishe	20	50	400

Refer to 1 : P.704

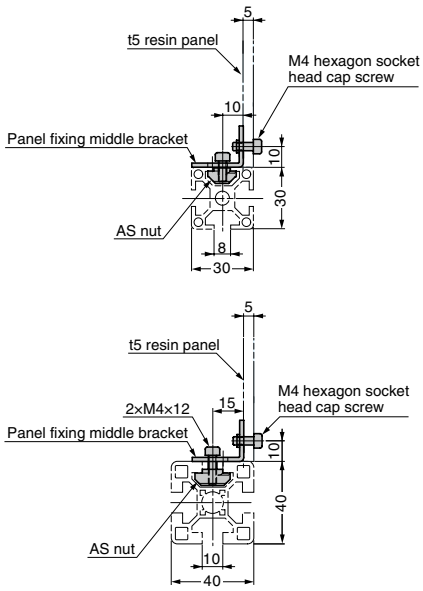
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

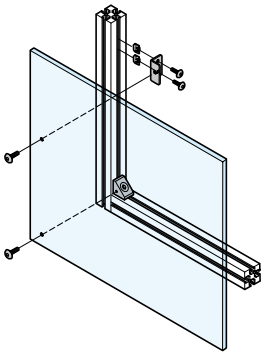




[Dimensions]



[Installation]



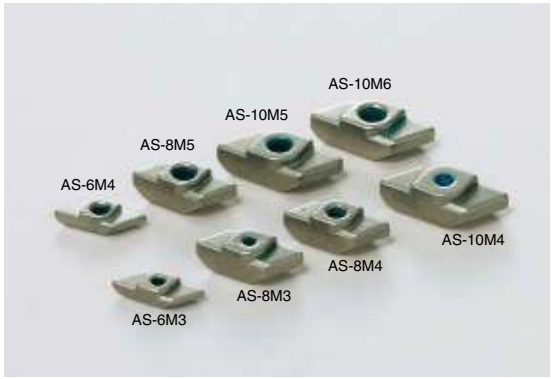
[AS Parts Set] Parts set of screws and AS nuts

RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (set)
G	–	210-041-815	AS-PTB-30-6	30×30 Groove Width 6 mm	Panel Fixing Middle Bracket AS-PTB : 1 pc AS Nut AS-6M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 3 pcs	29
G	–	210-041-816	AS-PTB-40-8	40×40 Groove Width 8 mm	Panel Fixing Middle Bracket AS-PTB : 1 pc AS Nut AS-8M4 : 2 pcs M4×12 Hexagon Socket Head Cap Screw : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 1 pc	34
G	–	210-041-817	AS-PTB-30-8	30×30 Groove Width 8 mm	Panel Fixing Middle Bracket AS-PTB : 1 pc AS Nut AS-8M4 : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 3 pcs	35
G	–	210-041-818	AS-PTB-40-10	40×40 Groove Width 10 mm	Panel Fixing Middle Bracket AS-PTB : 1 pc AS Nut AS-10M4 : 2 pcs M4×12 Hexagon Socket Head Cap Screw : 2 pcs M4×10 Hexagon Socket Head Cap Screw : 1 pc	40

Refer to 1 : FRONT P.20, 2 : P.706

STAINLESS STEEL AS NUT Post-installation Type

AS SUS316

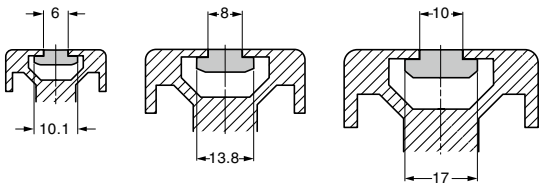


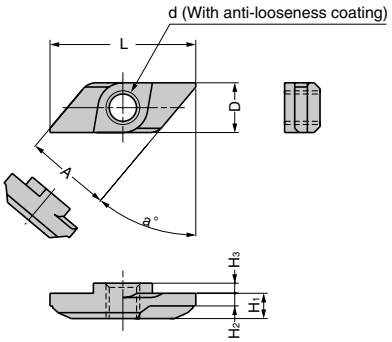
- Used for fixing a part to aluminium frame and makes post-installation possible.
- With coating to prevent looseness of screw.
- Can fix aluminium frame and hardware securely.
- Improved work efficiency with few installation mistakes.
- Widely applied to various aluminium frames.
- Refer to the product page 1 for details on AS series.

[Remarks]

- Install with the recommended tightening torque. AS nut not included in the parts set of AS series (for installing to aluminium frame).
- The effect of anti-looseness coating weakens when used repeatedly. Please use at most 2~3 times as a guide.
- Mounting screws not included when ordering single AS nut. Please prepare mounting screws of appropriate length according to aluminium frames.

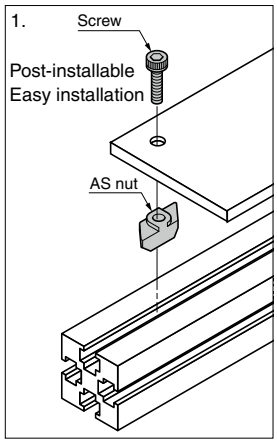
[Applicable Groove Width]



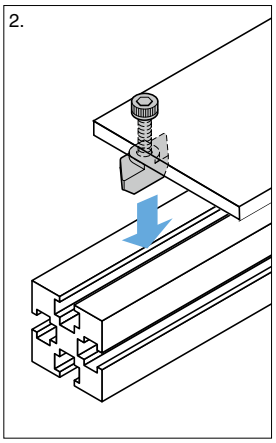


RoHS	CAD	Item Code	Item Name	Type	d	L	D	A	H_1	H_2	H_3	a	Material	Finish	Recommended Tightening Torque N·m	Recommended Tightening Torque kgf·cm	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-040-676	AS-6M3	For 6 mm Groove	M3	17.3	5.9	10.1	3	1.5	1.2	40	Stainless Steel (SUS316)	Barrel Polished	0.63~1.14	6.4~11.6	1.9	1000	10000
G	3D	120-040-684	AS-6M4		M4										1.5~2.7	15.3~27.5	1.3	1000	10000
G	3D	120-040-677	AS-8M3	For 8 mm Groove	M3	20	7.9	13.8	6	3	1.5	32			0.63~1.14	6.4~11.6	4.3	500	3000
G	3D	120-040-685	AS-8M4		M4										1.5~2.7	15.3~27.5	4.1	500	3000
G	3D	120-040-686	AS-8M5		M5										3~5.4	30.6~55.1	3.9	500	3000
G	3D	120-040-678	AS-10M4	For 10 mm Groove	M4	24	9.8	17			1.8				1.5~2.7	15.3~27.5	7	250	1500
G	3D	120-040-687	AS-10M5		M5										3~5.4	30.6~55.1		250	1500
G	3D	120-040-679	AS-10M6		M6										5.2~9.2	53~93.8	6	250	1500

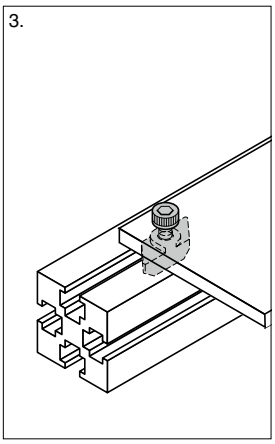
[Installation]



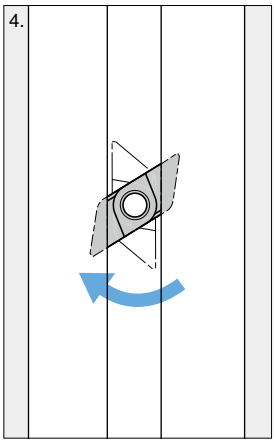
1. Temporarily fix the AS nut to the functional hardware with mounting screw.



2. Insert the AS nut into the groove of the aluminium frame.



3. Make sure that the AS nut is in the groove, and then tighten the screw.



4. When tightening the screw, AS nut rotates and is caught on the aluminium frame and fixes the functional hardware securely.

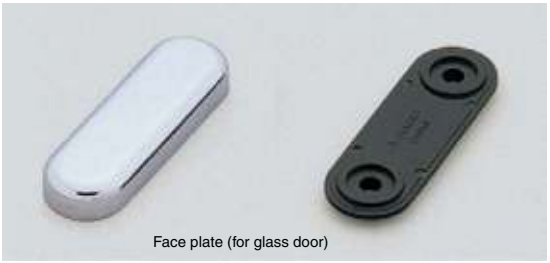
Refer to 1 : FRONT P.20

DAMPER CATCH DC

L=R INSTRUCTION TEMPERED GLASS VIDEO



※Face plate (below) is included for glass door



- For swing doors.
- Suitable for both right and left opening.
- Four models available depending on door specification, installation method, weight and size.
- DC-90 is installed vertically to the front of cabinet, not interfering with storage.
- DC-100 can be positioned simply by pressing the body against the top board bottom and aligning it with the cabinet edge.

Video Link

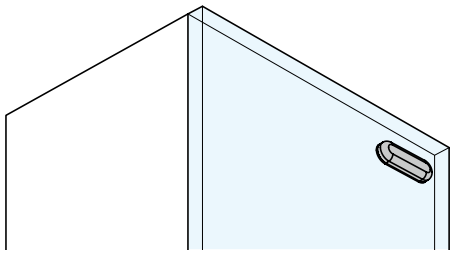
[Remarks]

- Screws are not included for installing to sheet metal (recommended screw: truss head screw M4).

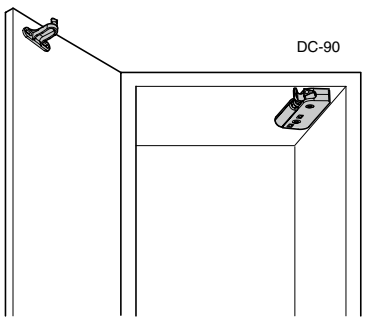
[Parts Included]

- Truss head tapping screw 4×30
- Truss head tapping screw 4×16
- Truss head screw 4×12 (Only included in DC-90G, DC-100G)
- Counter plate Jig
- Face plate (Only included in DC-90G, DC-100G)

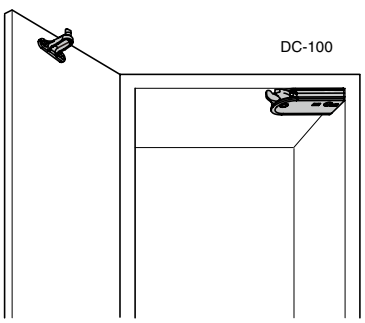
[Face Plate Installation]



[Installation]

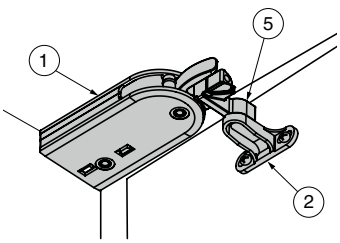


Installing vertically to the cabinet door.



Installing horizontally to the cabinet door.

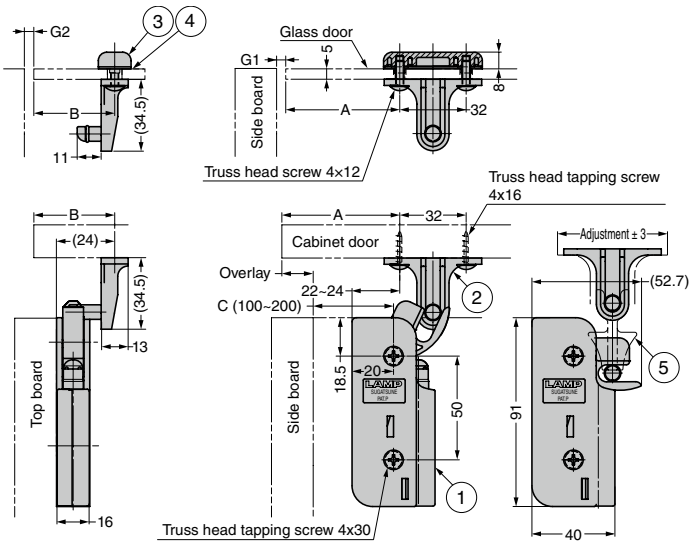
[Counter Plate Installation]



If installing jig ⑤ to body ① as shown in the figure, the installation position of counter plate ② on the door is determined. (View from the inside of door)

RoHS	CAD	Item Code	Item Name	Type	Door Width	Door height	Glass Thickness	Door Weight kg	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	140-021-697	DC-90	–	Max. 450	Max. 600	–	Max. 4	46	25	200
G	3D	140-021-698	DC-90G	For Glass Door			5		71	25	200
G	3D	140-021-699	DC-100	–	Max. 600	Max. 800	–	Max. 7	66	25	200
G	3D	140-021-700	DC-100G	For Glass Door			5		91	25	200

[DC-90]

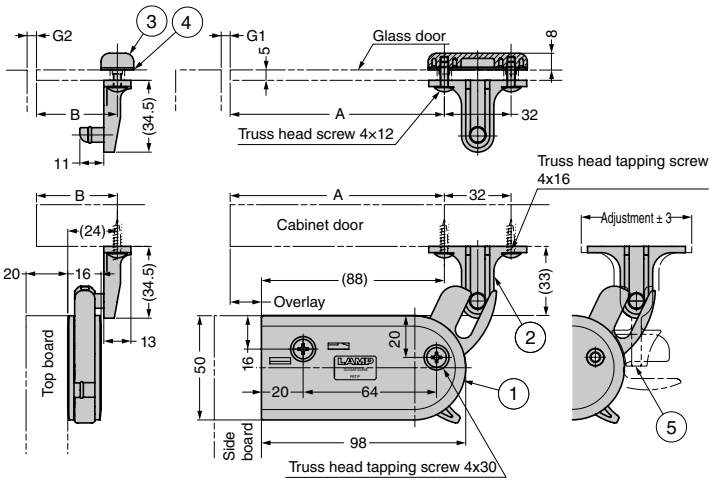


[Counter Plate Installation Position for DC-90]

	A	B
Inset Door	C-G1+3	24-G2
Overlay Door	C+Overlay+3	Overlay+24

※For inset door, please shift the installation position of body away from cabinet edge to the inside by the door thickness.

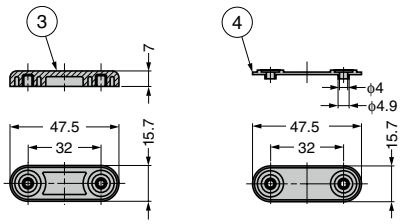
[DC-100]



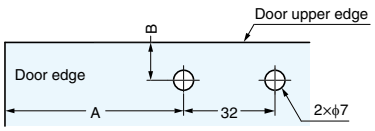
[Counter Plate Installation Position for DC-100]

	A	B
Inset Door	88-G1	24-G2
Overlay Door	Overlay+88	Overlay+24

※For inset door, please shift the installation position of body away from cabinet edge to the inside by the door thickness.



[Cut Out Dimensions for Glass Door]



No.	Product Name	Material	Finish / Colour
①	Body	POM /PBT	Dark Grey/Light Grey
②	Counter Plate	POM	Dark Grey
③	Face Plate	Zinc Alloy (ZDC)	Chrome
④	Spacer	ABS	Black
⑤	Jig	PBT	Light Grey

SOFT-CLOSE STAY YMC For Swing Door



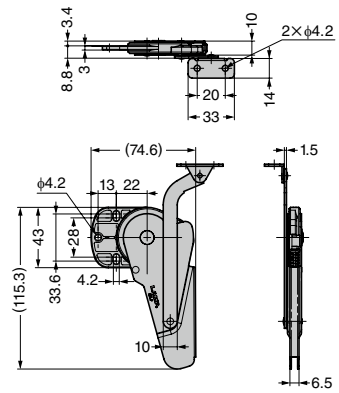


Opening Direction	Description	Door Width	Door Weight
Swing Door	Soft-close	Max. 300	0.3~0.7 kg

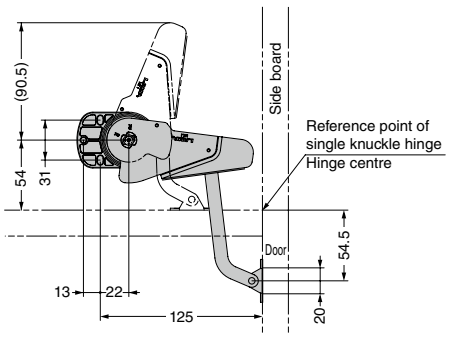
- Suitable for small cabinets such as mailbox.
- Built-in damper realises gentle door closing.
- Slim design and top board mount type maximises space inside of the cabinet.

[Remarks]
- Handed: Specific left and right-handed.
- Mounting bracket (※ part in the picture, thickness 5mm) and screws not included.
  Please prepare separately.

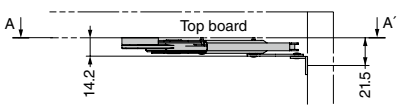
[Recommended Screws]
- Tapping screw nominal 4



[Installation With Single Knuckle Hinge]

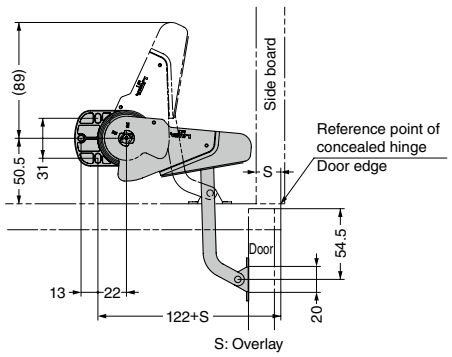


Cutaway view A-A´

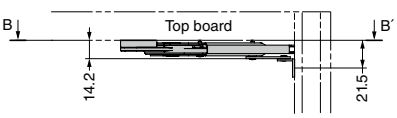


※Right-handed type shown.

[Installation With Concealed Hinge]



Cutaway view B-B´



※Right-handed type shown.

RoHS	CAD	Item Code	Item Name	Material	Colour	Door Width	Door Weight kg	Opening/Closing Angle	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	180-100-103	YMC-R	Stainless Steel/PBT	Grey	Max. 300	0.3~0.7	0° ~90°	103	50	–
G	3D	180-100-102	YMC-L							50	–

DOOR DAMPER LDD-V

Lapcon INSTRUCTION VIDEO



LDD-V-R (right-handed) shown. LDD-V-L (left-handed) is symmetrical.

- Damper body is completely hidden when the door is closed.
- Damper and door pull-in functions work just before the door fully closes, preventing the door from slamming shut.
- Door can be opened more easily as compared with door closer.
- Damper force can be switched between two levels.
- Counter plate is 3-way adjustable.
- Can be used with the following hinges.
  - 3-way adjustable concealed hinge HES3D 1
    ※Can not be used with HES3D-90 2.
  - Spring hinge ST150-6314-05 3
  - Aluminium spring lift-off hinge PM120 4
  - Spring hinge SA 5
- Surface mount door damper LDD-S 6 also available.

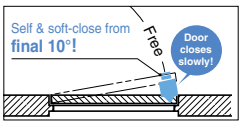
[Parts Included]

- Binding head tapping screw 4×45
- Binding head tapping screw 3.5×20



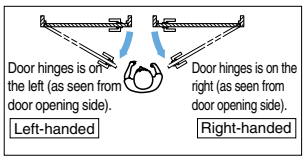
Door damper is completely hidden when the door is closed. (Picture: right-handed)

[Door Movement]

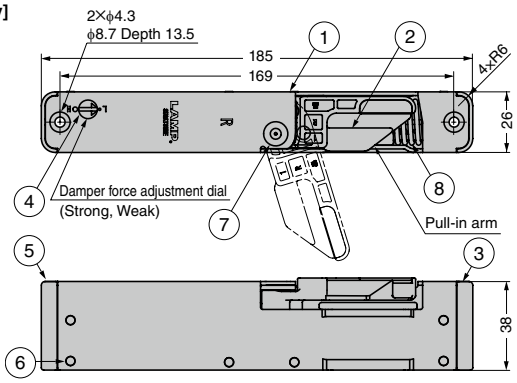


LDD-V-R (right-handed) shown.
LDD-V-L (left-handed) is symmetrical.

[Door Hinge Side]

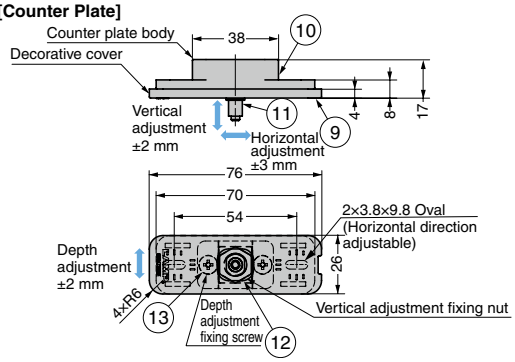


[Body]



Video Link

[Counter Plate]



No.	Part Name	Material	Finish / Colour
①	Body Case	Steel (SPCC)	Clear Zinc Chromate
②	Arm	POM	Grey
③	Spring Base		
④	Damper Force Adjustment Shaft		
⑤	Damper Base		
⑥	Countersunk Hollow Pin	Steel (SWCH)	Clear Zinc Chromate
⑦	Shoulder Shaft	Steel (SUM)	Nickel
⑧	Spring	Steel SWP	Clear Zinc Chromate
⑨	Counter Plate Cover	POM	Grey
⑩	Counter Plate Case		
⑪	Counter Plate Shaft	Steel (SUM)	Nickel
⑫	Vertical Adjustment Screw	Steel (SWRCH)	Clear Zinc Chromate
⑬	Depth Adjustment Screw	Steel (SWCH)	

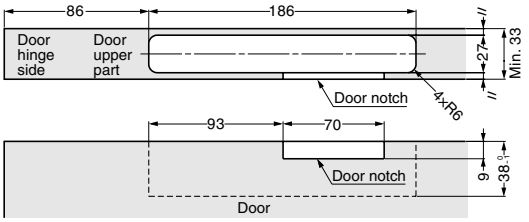
※Refer to 7 for the cut out dimensions, installation and safety cautions.

RoHS	CAD	Item Code	Item Name	Type	Door Width	Door Thickness	Door Weight kg	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	270-017-563	LDD-V-R	Right-handed	Max. 900	Min. 33	15~40	427	1	24
G	3D	270-017-564	LDD-V-L	Left-handed				427	1	24

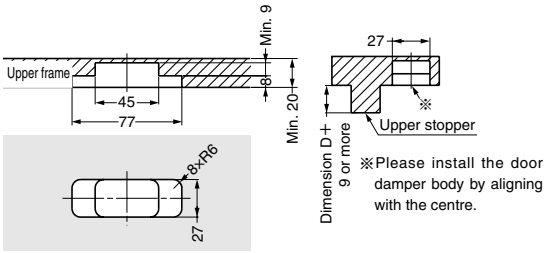
Refer to 1 : P.90, 2 : P.95, 3 4 : P.167, 5 : P.166, 6 : P.713, 7 : P.711

[Cut Out Dimensions] Door Damper Body

Figure below is for LDD-V-R (right-handed). LDD-V-L (left-handed) is symmetrical.



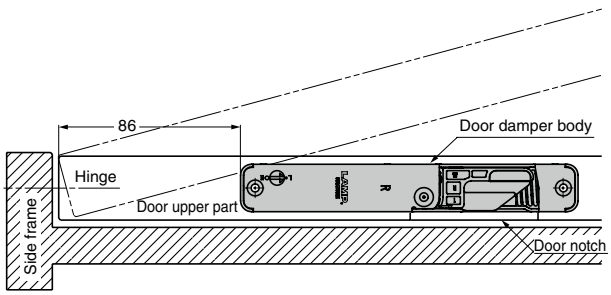
[Cut Out Dimensions] Counter Plate



※Please install the door damper body by aligning with the centre.

[Installation]

LDD-V-R (right-handed) shown. LDD-V-L (left-handed) is symmetrical.



The installation position of counter plate from door hinge side varies depending on the hinges used.

The installation position of counter plate from door hinge side varies depending on the hinges used.

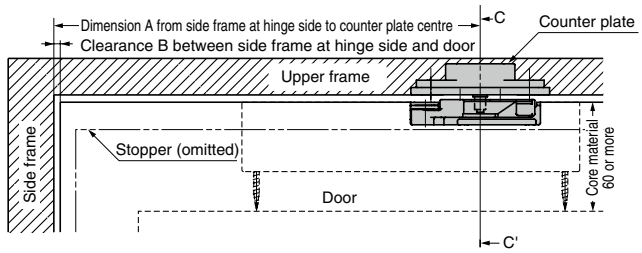
[Dimension A from Side Frame at Hinge Side to Counter Plate Centre]

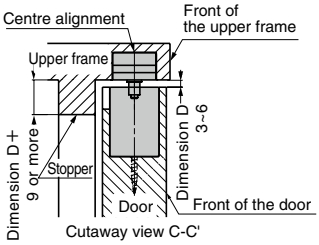
Door Hinge	Clearance B Between Side Frame at Hinge Side and Door				
	1	2	3	4	5
HES3D-120	220	221	222	223	224
HES3D-160 HES3D-E190	221	222	223	224	225
HES3D-V135LGR	218	219	220	221	222
Butt Hinges	224	225	226	227	228

※If the clearance between the side frame at hinge side and the door is beyond the range of the above table, calculate as per the table below.

Door Hinge	Dimension A from side frame at hinge side to counter plate centre
HES3D-120	219+Clearance B Between Side Frame at Hinge Side and Door
HES3D-160 HES3D-E190	220+Clearance B Between Side Frame at Hinge Side and Door
HES3D-V135LGR	217+Clearance B Between Side Frame at Hinge Side and Door
Butt Hinges	223+Clearance B Between Side Frame at Hinge Side and Door

※ Refer to 1 for 3-way adjustable concealed hinge HES3D.





Embed the door damper body into the upper edge of the door and the counter plate into the upper frame.

⚠ Safety Cautions

- **Do not drop or give strong impact to this product.**
- This product can not resist strong wind. Do not use under strong wind, or the damper effect will decrease.
- If you close the door with excessive force, the damper effect may decrease.
- The door may not close enough depending on the case lock used.
- This product is designed for interior use. Do not use it outdoors.
- Do not use it at places subject to moisture and water.
- At the entrance of highly airtight room, the door closing speed and damper force may change, and the door may not close enough.
- The closing speed varies depending on the use environment (temperature, wind and hinges used on the door, etc.). Operating temperature: 0˚C ~ 40˚C .
- Do not apply a load in the vertical direction or excessive force to pull-in arm. Otherwise, it may be damaged.
- Please install and adjust this product after adjusting the door hinges.
- Please use the door hinges within the adaptive door weight range of this product.
- Please install this product horizontally.Otherwise, it may not operate properly.
- After vertical adjustment of counter plate, tighten the fixing nut firmly.
- This product is supplied with installation instruction. Be sure to read before installation or use.
- Regularly check for looseness or dropout of screws during use.

Refer to 1 : P.90

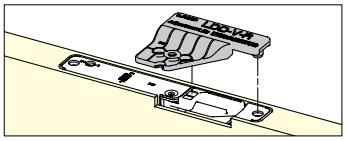
ADJUSTMENT JIG FOR COUNTER PLATE OF LDD-V LDD-V-JIG

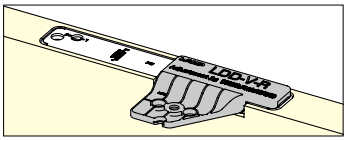


- For Lapcon door damper LDD-V 1 only.
- Used for adjusting the counter plate position of LDD-V.

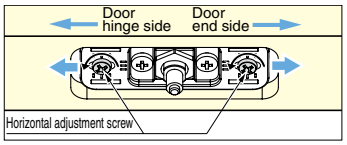
[How to Use]

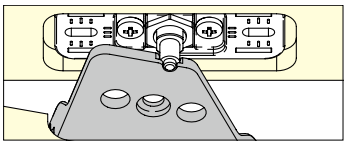
●1. Install the adjustment jig
①Fit the adjustment jig firmly into the body.
※Right-handed and left-handed available.
※Be sure to adjust the counter plate position after adjusting the installation position of the hinges.



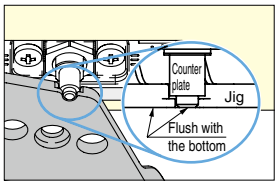


●2. Horizontally adjust the counter plate
①Loosen the horizontal adjustment screws.
②While holding the adjustment jig by hand, slowly close the door and align the counter plate shaft with the groove.
③Tighten the horizontal adjustment screws.

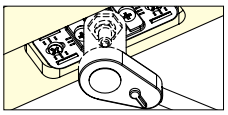




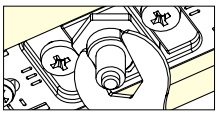
●3. Vertically adjust the counter plate
①Loosen the fixing nut.
②While holding the adjustment jig by hand, slowly close the door and align the top of counter plate shaft with the bottom of jig.
③Tighten the fixing nut or the counter plate shaft firmly.



Finally tighten the fixing nut or counter plate shaft in either of the following ways

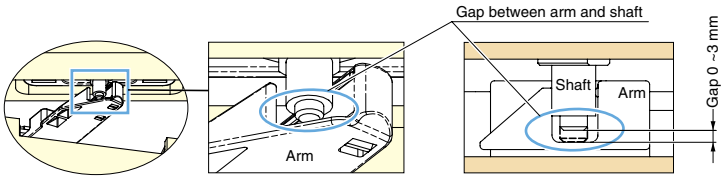


Finally tighten the fixing nut with a socket wrench (14mm) or a spanner (14mm).

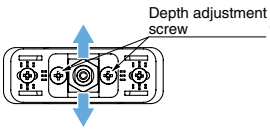


Tighten the counter plate shaft with a spanner (8mm).

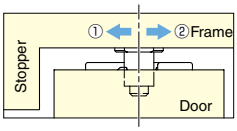
●4. Check
①When removing the jig and closing the door slowly to the end, “click” sounds once.
※If the door does not close to the end or “click” sounds twice, perform depth adjustment.
②When opening the door, “click” sounds once, and the arm is pulled out.
※If the arm can not be pulled out, perform depth adjustment.
③Check if the clearance between the arm and the counter plate shaft is appropriate.



※Depth adjustment of the counter plate (adjustment jig LDD-V-JIG can not be used for depth adjustment).
①Loosen the depth adjustment screws.
②Align the centre of the counter plate shaft with that of the door thickness.
③Tighten the depth adjustment screws.



①When the door does not close to the end or “click” sounds twice (door stopper side)



②When the arm can not be pulled out

RoHS	CAD	Item Code	Item Name	Type	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	–	270-025-276	LDD-V-R-JIG	Right-handed	ABS	Orange	11	500	–
G	–	270-025-275	LDD-V-L-JIG	Left-handed			11	500	–

Refer to 1 : P.710

TEMPLATE FOR LDD-V LDD-V-TMP



- Easy to make mortise on wood door and frame for LDD-V 1 .
- Possible to use repeatedly.
- Two templates included: for door & frame.

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	–	270-024-568	LDD-V-TMP	Methacrylic Resin (PMMA)	Clear	194	1	50

Refer to 1 : P.710

DOOR DAMPER LDD-S

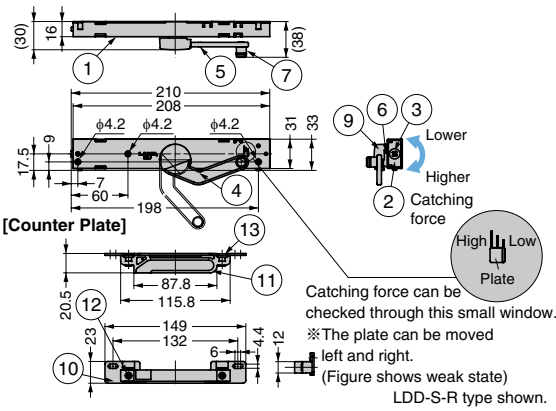
Lapcon INSTRUCTION VIDEO



LDD-S-R DBR (right-handed)


When opening, the arm comes off from the counter plate and the door can rotate freely!





- Surface mount type.
- Easy to determine installation position.
- Counter plate position and pull-in force (catching force) adjustable after installation.
- Unobtrusive design: damper unit is only 20mm high, easily fits most door frames.
- Self & soft-close from final 15°. Door starts to close slowly from a earlier position compared with conventional products, reducing the load applied on the hinges.
- Door can be opened more easily as compared with door closer.
- Suitable for maximum door weight 40kg.
- Self & soft-close function can be turned off when the arm is pulled in with door opened. (When the arm is pulled out, self & soft-close function can be turned on again.)
- Can be used with the following hinges.
  - 3-way adjustable concealed hinge HES3D 1
    ※Can not be used with HES3D-90 2.
  - Spring hinge ST150-6314-05 3
  - Aluminium spring lift-off hinge PM120 4
  - Spring hinge SA 5
- Concealed type door damper LDD-V 6 also available.

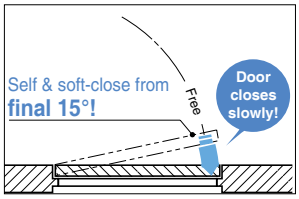
[Specifications]

- Passed 100,000 open/close private cycle test.

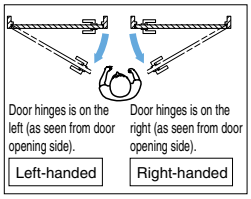
[Parts Included]

- Countersunk head tapping screw 3.5×30
- Binding head tapping screw 4×16

[Door Movement]

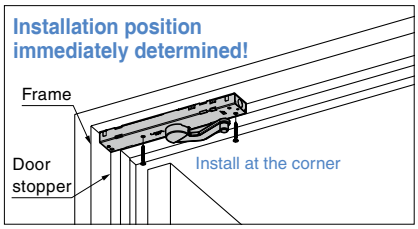


[Door Hinge Side]



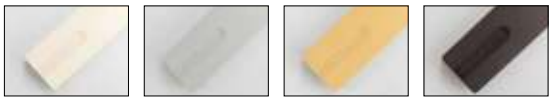
Right-handed type shown.Left-handed type is symmetrical.

[Easy to Install and Adjust]



Video Link

[Available Colours]


White　Light grey　Light brown　Dark brown

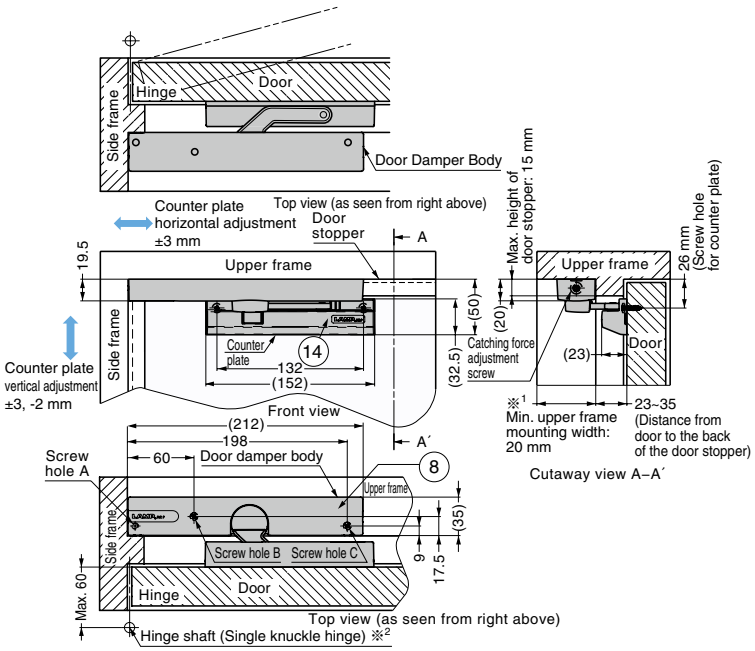
No.	Part Name	Material	Finish / Colour
①	Case	Steel (SGCC)	Chromate
②	Block	POM	Natural
③	Catching Force Adjustment Screw	Steel	Chromate
④	Arm	Stainless Steel (SUS304)	Plain
⑤	Arm Spacer	POM	See Below
⑥	Arm Axis	Zinc Alloy (ZDC)	Chromate
⑦	Roller	POM	Grey
⑧	Body Cover 7	ABS	See Below
⑨	Arm Cover		
⑩	Counter Plate	Steel (SPCC)	Chromate
⑪	Guide	Zinc Alloy (ZDC)	
⑫	Screw	Steel (SWCH)	Nickel
⑬	Nut	Steel (SPCC)	
⑭	Counter Plate Cover 7	ABS	See Below

RoHS	CAD	Item Code	Item Name	Colour	Type	Door Width	Door Weight kg	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	270-018-984	LDD-S-RWT	White	Right-handed	Max. 900	15~40	550	1	20
G	3D	270-018-985	LDD-S-LWT		Left-handed			550	1	20
G	3D	270-018-986	LDD-S-RLGR	Light Grey	Right-handed			550	1	20
G	3D	270-018-987	LDD-S-LLGR		Left-handed			550	1	20
G	3D	270-018-988	LDD-S-RLBR	Light Brow	Right-handed			550	1	20
G	3D	270-018-989	LDD-S-LLBR		Left-handed			550	1	20
G	3D	270-018-990	LDD-S-RDBR	Dark Brown	Right-handed			550	1	20
G	3D	270-018-991	LDD-S-LDBR		Left-handed			550	1	20

Refer to 1 : P.90, 2 : P.95, 3 4 : P.167, 5 : P.166, 6 : P.710, 7 : P.714

SUGATSUNE

[Installation]



※1 Top view above is for the upper frame mounting width above 25mm.When the distance from door to the back of the door stopper is 20mm~25mm, please use the screw hole A and C.
※2 Refer to 1 for 3-way adjustable concealed hinge HES3D. ※Can not be used with HES3D-90 2.

Refer to 1 : P.90, 2 : P.95

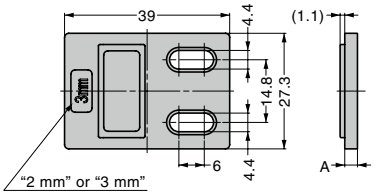
Safety Cautions

- **Do not drop or give strong impact to this product.**
- This product can not resist strong wind.Do not use under strong wind, or the damper effect will decrease.
- If you close the door with excessive force, the damper effect may decrease.
- The door may not close enough depending on the case lock used.
- This product is designed for interior use.Do not use it outdoors.
- Do not use it at places subject to moisture and water.
- At the entrance of highly airtight room, the door closing speed and damper force may change, and the door may not close enough.
- The closing speed varies depending on the use environment (temperature, wind and hinges used on the door, etc.). Operating temperature: 0˚C ~ 40˚C .
- Do not apply a load in the vertical direction or excessive force to pull-in arm. Otherwise, it may be damaged.
- Please install and adjust this product after adjusting the door hinges.
- Please use the door hinges within the adaptive door weight range of this product.
- This product is supplied with installation instruction.
  Be sure to read before installation or use.
- Regularly check for looseness or dropout of screws during use.

SPACER FOR LDD-S LDD-S-P

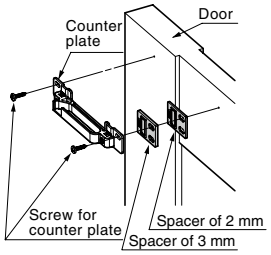


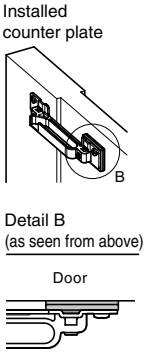
- For Lapcon door damper LDD-S 1.
- Used when installing LDD-S to a door with gap.
- Two types available: 2mm thickness and 3mm thickness.
- Two spacers can be used in combination for gaps of 4, 5, 6mm.
- Counter plate of LDD-S adjustable vertically and horizontally with the spacer installed.



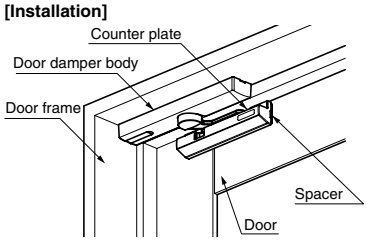
[Installation] In case of 5mm thickness gap

- Place the counter plate spacer on the gap part of the door and pinch it with the counter plate.



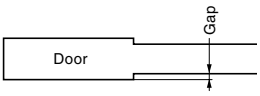


[Installation]



[Remarks Before Installation]

- Check the gap of the door surface and choose the suitable spacer (combination of spacers).



RoHS	CAD	Item Code	Item Name	Material	Colour	A	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	270-021-019	LDD-S-P2BL	ABS	Black	2	1.8	100	1000
G	3D	270-021-020	LDD-S-P3BL			3	2.8	100	1000

Refer to 1 : P.713

DOOR DAMPER LDD-V100

Lapcon INSTRUCTION



LDD-V100-NI-L shown.



Counter plate cover (Nickel/Dark brown)

- Unique door damper applicable to door weight up to 100 kg.
- Suitable for door weight 40~100 kg.
- Damper body is completely hidden when the door is closed.
- Damper and door pull-in functions work just before the door fully closes, preventing the door from slamming shut.
- Door can be opened more easily as compared with door closer.
- Damper force is adjustable.
- Counter plate is 3-way adjustable.
- Can be used with the following hinges.
  - HES3D-E190 1
  - HES3D-160 2

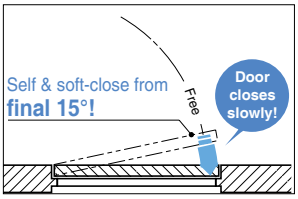
[Applications]

- Heavy duty interior door (shop, housing)

[Parts Included]

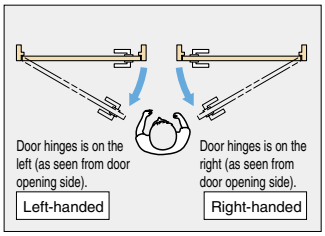
- Tapping screw 3.5×20
- Attachment Jig
- Cutout template

[Door Movement]

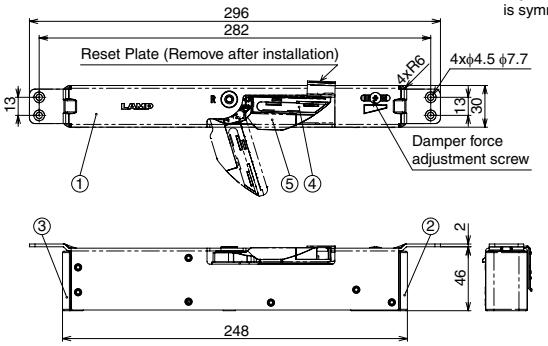


Right-handed type shown.Left-handed type is symmetrical.

[Door Hinge Side]

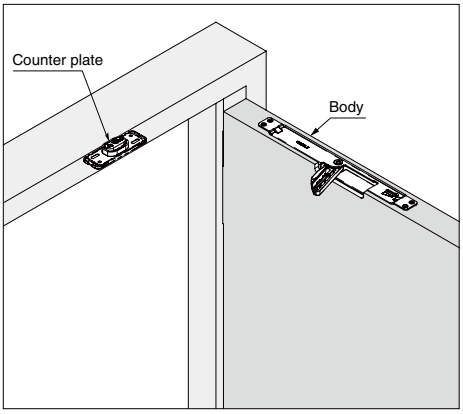


[Body]

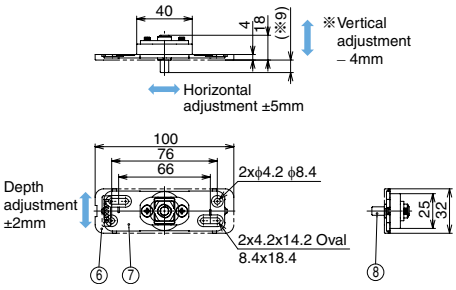


※Below drawing shows right-handed type. Left-handed type is symmetrica

- **Installation**



[Counter Plate]



No.	Part Name	Material	Finish / Colour
①	Case	Steel (SPCC)	Nickel
②	Damper Base	POM	Grey
③	Spring Base	POM	Grey
④	Arm Cover	POM	Grey
⑤	Arm	Zinc Alloy (ZDC)	Nickel
⑥	Counter Plate Cover	ABS	Dark Brown/Nickel
⑦	Counter Plate Base	Zinc Alloy (ZDC)	–
⑧	Counter Plate Shaft	Steel (SUM)	Nickel

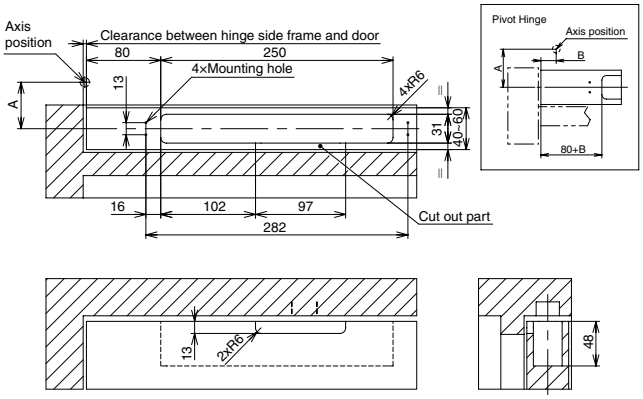
RoHS	CAD	Item Code	Item Name	Type	Counter Plate Cover	Door Width	Door Thickness	Door Weight (kg)	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	270-034-821	LDD-V100-DBR-R	Right-handed	Dark Brown	Max. 900	40~60	40~100	920	1	10
G	3D	270-034-822	LDD-V100-DBR-L	Left-handed					920	1	10
G	3D	270-034-823	LDD-V100-NI-R	Right-handed	Nickel				920	1	10
G	3D	270-034-824	LDD-V100-NI-L	Left-handed					920	1	10

Refer to 1 : P.92, 2 : P.93

SUGATSUNE

[Cut Out Dimensions for Door]

LDD-V100-R (right-handed) shown. LDD-V100-L (left-handed) is symmetrical.



Dimension from frame to bore position of counter plate (mm)

Door Hinge		Clearance Between Hinge Side Frame and Door (mm)				
		1	2	3	4	5
HES3D-160, E190		217	218	219	220	221
Butt Hinge	A=20~35	220	221	222	223	224
	A=35~50	223	224	225	226	227
Pivot Hinge	A=20~35	220+B	221+B	222+B	223+B	224+B
	A=35~50	223+B	224+B	225+B	226+B	227+B

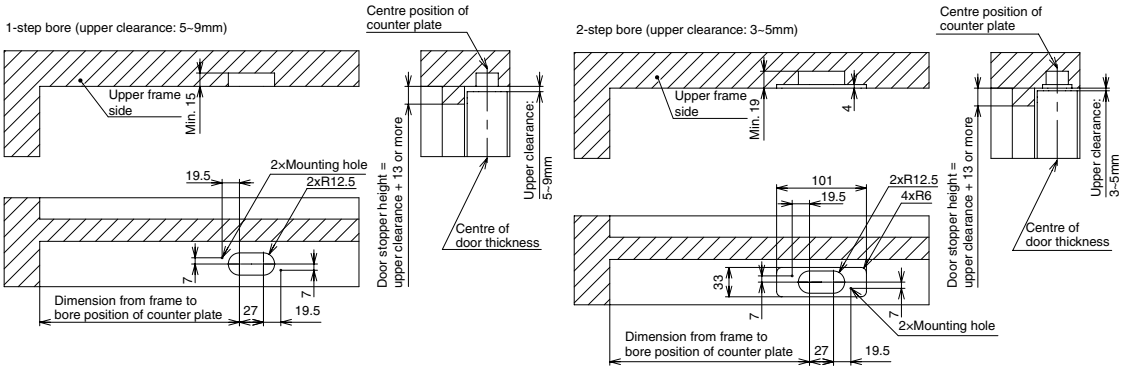
※If clearance between hinge side frame and door is beyond the range in the table above, calculate as per the table below.

Door Hinge		Dimension from Frame to Bore Position of Counter Plate (mm)
HES3D-160, E190		216 + Clearance Between Hinge Side Frame and Door
Butt Hinge	A=20~35	219 + Clearance Between Hinge Side Frame and Door
	A=35~50	222 + Clearance Between Hinge Side Frame and Door
Pivot Hinge	A=20~35	219 + B + Clearance Between Hinge Side Frame and Door
	A=35~50	222 + B + Clearance Between Hinge Side Frame and Door

※ Refer to 1 for 3-way adjustable concealed hinge HES3D.

[Cut Out Dimensions for Frame]

LDD-V100-R (right-handed) shown. LDD-V100-L (left-handed) is symmetrical.



Safety Cautions

- **Do not drop or give strong impact to this product.**
- This product can not resist strong wind. Do not use it under strong wind, or the damper effect will decrease.
- If you close the door with excessive force, the damper effect may decrease.
- The door may not close enough depending on the case lock used.
- This product is designed for interior use. Do not use it outdoors.
- Do not use it at places subject to moisture and water.
- At the entrance of highly airtight room, the door closing speed and damper force may change, and the door may not close enough.
- The closing speed varies depending on the use environment (temperature, wind and hinges used on the door, etc.). Operating temperature: 0˚C ~ 40˚C
- Do not apply a load in the vertical direction or excessive force to pull-in arm. Otherwise, it may be damaged.
- Please install and adjust this product after adjusting the door hinges.
- Please use the door hinges within the adaptive door weight range of this product.
- Please install this product horizontally. Otherwise, it may not operate properly.
- After vertical adjustment of counter plate, tighten the fixing nut firmly.
- This product is supplied with installation instruction. Be sure to read before installation or use.
- Regularly check for looseness or dropout of screws during use.

Refer to 1 : P.90

LAMP®

LOCKS

Locks are fittings used to secure sensitive areas. Sugatsune offers a wide range of locks of various sizes, with different security levels as well as for various applications.

[Total lock system]
The total lock system allows you to have a unique key to open several types of locks within this series. Master key systems are also available.

[Cam locks]
A wide variety of cam locks, including stainless steel, are available for metal sheet, wood and glass applications. Some locks can also be modified in order to better suit your needs.

[Glass locks]
From tablet holders, to assembly lines, vending machines or gaming applications, the Sugatsune range of glass locks is truly extensive.

SUGATSUNE

Updated 2017.10.27

[Cautions]

- Do not apply excessive load on the cam and do not attempt to force the key to turn.
- Do not attempt to turn the key unless it is fully inserted in the lock.
- Removal of the key should only be done in the locked position. Some locks also allow removal in the open position as well.
- When tightening the cam hexagonal nut, insert the key in the lock and hold the cam, in order to avoid breaking the lock pin.
- Most locks parts and made of zinc alloy or brass. Their service life might therefore be reduced when exposed to corrosive environments such as spa or seaside locations.
- We recommend a regular lubrication of the locks, using specific lubricant such as Teflon or graphite based ones.
- Please consult Sugatsune for specific key numbers and combinations before making the final key plan.

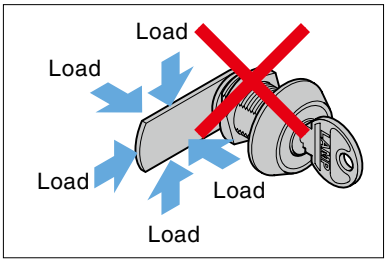


Fig.1

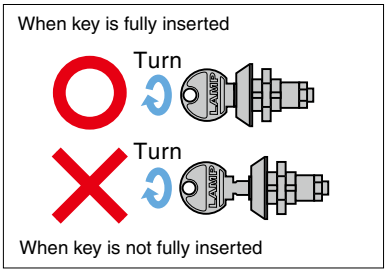


Fig.2

[Key Alike and Key Different]

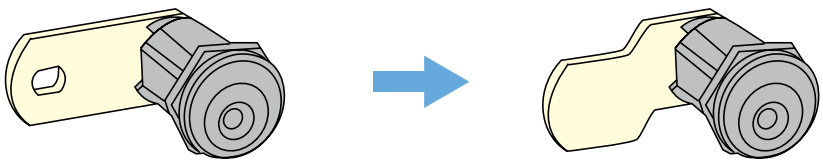
- Locks have two types: Key alike and key different. Key alike indicates identical key number of multiple locks. Key different indicate different key numbers of multiple locks.
- If ordering 3 locks for 3 different keys with the numbers of A, B and C, key alike will be A, A, A (or B, B, B or C, C, C), while key different will be A, B, C.
- Locks with key alike are suitable for places (like dustbins at the station) where the worker wants to unlock multiple locks with one key; While locks with key different cannot be unlocked with the same key, suitable for places (like lockers) where strict security management is required.
- For the locks herein, to differentiate the types with key alike from those with key different, the item name of a lock with key alike is suffixed with “-D”, while that of a lock with key different is suffixed with “-B”.
- For key numbers and their combination, please consult us before determining specifications.

[Exclusive Number]

- Exclusive key numbers not overlapping with other customers are available depending on the products. Please consult us for made to order.

Sugatsune Also Offers Made-to-order Products!

Example of Specification Change



Cam shape or length change, etc.

For OEM and ODM request form with required items at consultation, refer to ▸ P.923~925

INDEX by Series (Total Lock Series)

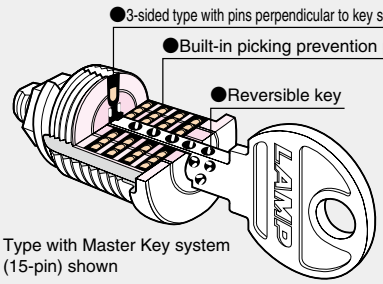
In the same series, locks for various cabinets can be managed collectively by one key.

Million Lock Series

All locks in this series can be opened with a single key. Moreover all keys are reversible dimple type, making them difficult to duplicate, or the locks difficult to pick. A maximum of 1 million key numbers are available (except for the 1300SK melamine door lock). Master key system is also available, with a maximum of 2,520 key numbers per master key.

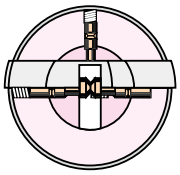
Picture	Product Name	Applicable Cabinet	Cylinder Diameter (Bore Diameter)	Door Thickness
	Cam Lock 900 P.724	Sheet Metal Swing Door	(ϕ19.1) Width Across Flats 15.9	0.8~8
	Glass Door Cam Lock 1310GL P.730	Glass Single Swing Door	(ϕ20)	5~8
	Glass Door Cam Lock 1300GL-D P.730	Glass Single Swing Door	(ϕ20)	5~8

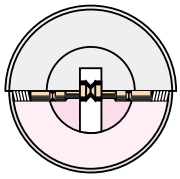
Picture	Product Name	Applicable Cabinet	Cylinder Diameter (Bore Diameter)	Door Thickness
	Push Lock 2300M P.735	Sheet Metal/ Wooden Double Sliding Door	ϕ16 (ϕ24)	30
	Cabinet Lock 7810W P.739	Double Swing Door	ϕ22	22~24 28~30 34~36
	Cam Lock 1300SK P.743	Melamine Swing Door	(ϕ20)	13



Type with Master Key system (15-pin) shown

- Types with master key system and types with grand master key system by made to order also available.
- Noted that the structure is different from interchangeable cylinder lock series and they are not compatible.


With master key system (15-pin)


Without master key system (10-pin)

2100 Lock Series

Keys can be shared with the same series.12 key changes available.

Picture	Product Name	Applicable Cabinet	Cylinder Diameter (Bore Diameter)	Door Thickness
	Glass Door Cam Lock 2100GL P.731	Glass Single Swing Door	(ϕ19)	4~6
	Glass Door Cam Lock 2100GLK P.732	Glass Single Sliding Door	ϕ20 (ϕ19)	4~6
	Glass Door Lock MKL-2100-D P.732	Glass Single Swing Door	ϕ18.6	5~8
	Push Lock 2100B P.733	Sheet Metal Double Sliding Door	ϕ18.6	20

Picture	Product Name	Applicable Cabinet	Cylinder Diameter (Bore Diameter)	Door Thickness
	Push Lock 2110B P.733	Sheet Metal Double Sliding Door	ϕ18.6	20
	Push Lock 2110M P.735	Wooden Double Sliding Door	ϕ18.6	20
	Push Lock 2100M P.736	Wooden Double Sliding Door	ϕ18.6	20 25

INDEX by Type

Cam Locks P.722~

Ideal for sheet metal swing doors of vending machine, ATM, game machine, coin locker, and mail box, etc



Security Cam Lock
NO990
(P.722)



Cam Lock
920BS
(P.723)



Cam Lock
NAL
(P.727)

Dial Locks P.729

Dial lock without need of key.



Cabinet Lock With Dial
DIT-19
(P.729)

Glass Door Locks P.730~

Types for single swing door, double swing door, single sliding door and double sliding door are available.



Glass Door Cam Lock
1310GL
(P.730)

Cabinet Door Locks P.735~

Types for drawer, swing door and double sliding door are available.



Cabinet Lock with Indicator
2200QL
(P.738)

Other Locks P.743~

Locks for storage boxes, padlocks are available.



High Security Padlock
PWL
(P.748)

Cam Locks P.722~

Picture	Product Name	Key Changes
	Security Cam Lock NO990 Magnet Embedded Key Type P.722	40,000
	Security Cam Lock DCY-34 High Security Type P.723	2,000
	Cam Lock 920BS With Hole Shutter P.723	Max. 3,200
	Million Lock Cam Lock 900 P.724	Max. 1 million
	Stainless Steel Cam Lock 3800S P.724	300
	Cam Lock SN-711-8-D P.725	Max. 1,500

Picture	Product Name	Key Changes
	Cam Lock CLI-31 Clip-on Installation P.725	108
	Cam Lock DIS-022R-D P.726	–
	Cam Lock 910MS P.726	Max. 47,000
	Cam Lock NAL P.727	5,000
	Mini Cam Lock NAL-XS Ultra Compact P.728	10
	Mini Cam Lock NAL-S P.728	25

Dial Locks P.729

Picture	Product Name	Key Changes
	Cabinet Lock With Dial DIT-19 Clip-on Installation P.729	4 Digits

Glass Door Locks

P.730~

Picture	Product Name	Key Changes
	Million Lock Glass Door Cam Lock 1310GL P.730	Max. 1 million
	Million Lock Glass Door Cam Lock 1300GL-D P.730	Max. 1 million
	Glass Door Cam Lock 2100GL 2100 Lock Series P.731	12
	Glass Door Cam Lock 1100GLM-B P.731	25
	Glass Door Cam Lock 2100GLK 2100 Lock Series P.732	12
	Glass Door Lock MKL-2100-D 2100 Lock Series P.732	1
	Push Lock 2100B 2100 Lock Series P.733	12
	Push Lock 2110B 2100 Lock Series P.733	12
	Push Lock 2150B, 2160B P.734	24
	Glass Door Lock 6300-D P.734	Max. 96
	Million Lock Push Lock 2300M P.735	Max. 1 million
	Push Lock 2400M P.736	Max. 47,000

Cabinet Door Locks

P.735~

Picture	Product Name	Key Changes
	Million Lock Push Lock 2300M P.735	Max. 1 million
	Push Lock 2110M 2100 Lock Series P.735	12
	Push Lock 2400M P.736	Max. 47,000
	Push Lock 2100M 2100 Lock Series P.736	12
	Stainless Steel Cabinet Lock 3810S P.737	12
	Cabinet Lock with Indicator 2200QL 2200 Lock Series P.738	300

Cabinet Door Locks

Picture	Product Name	Key Changes
	Million Lock Cabinet Lock 7810W For Double Swing Door / Drawer Interlocking Type P.739	Max. 1 million
	Cabinet Lock 8810 With Key Number Change System P.740	Max. 3 million
	Cabinet Lock 6830-30MK Interchangeable Cylinder Lock Series P.741	Max. 7,800
	Cabinet Lock 5830 P.742	3,120
	Million Lock Cam Lock 1300SK P.743	Max. 1 million

Other Locks

P.743~

Picture	Product Name	Key Changes
	Stainless Steel Door Chain CS P.743	–
	Security Lock for Laptop WL-N1800 Off-set Type P.744	Max. 10,000
	Security Lock for Laptop WL-S1800 P.745	Max. 250
	Security Lock for Laptop WL-S2200-B Double Cylinder Type P.746	Max. 250
	Security Lock for Laptop WL-P1800-B Slim Type P.747	Max. 250
	Box Latch with Lock BL-70Y P.748	5
	High Security Padlock PWL P.748	Max. 110

SECURITY CAM LOCK NO990 Magnet Embedded Key Type





Without ring (Made to order)

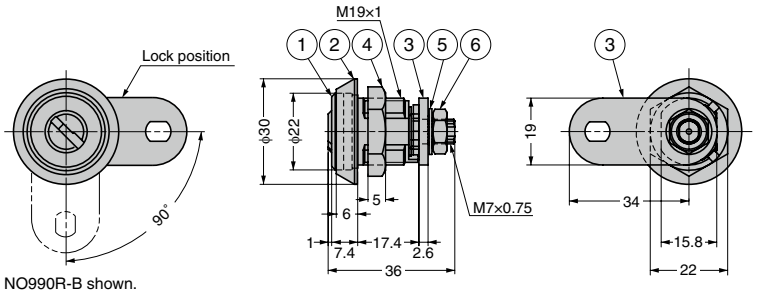
- Cam lock with pin cylinder using the repulsive force of the magnet.
- Specially designed key with magnet prevents from lock-picking and duplication of the key.
- Key can only be removed only when locked (90°clockwise rotation), in order to ensure that the application is properly locked.
- With/without drill-protection cover available.
- Max. 40,000 key changes available.
- Lock without ring can be made to order.
- Compliant with Japan Vending Machine Manufactures Association Standard (JVMA1001).

[Applications]

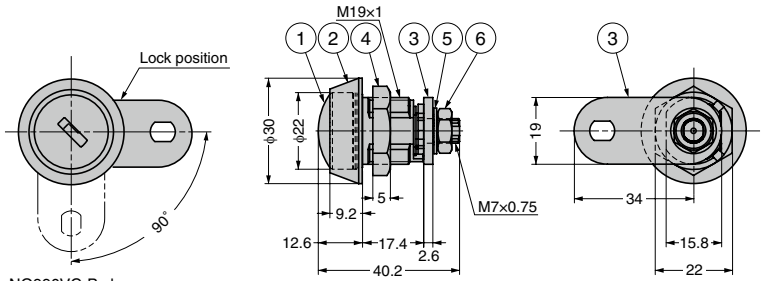
- Vending machine, ATM, automatic fare adjustment machine, etc.

[Remarks]

- Be sure to read the "Cautions" 1.
- Do not apply strong magnetic force to the lock body or key.
- Without Master Key.
- Use the recommended tightening torque for installation. Please use screw adhesive when tightening.
  Recommended tightening torque:
  Mounting nut ④ 294~343N・cm (30~35kgf・cm)
  Cam nut ⑥ 196~245N・cm (20~25kgf・cm)

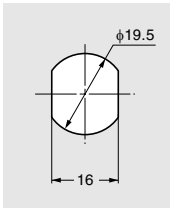


NO990R-B shown.

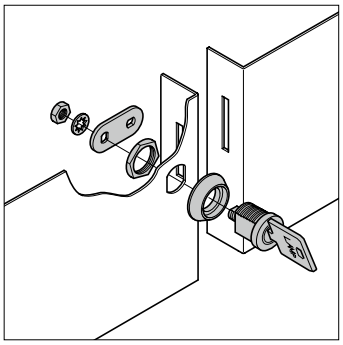


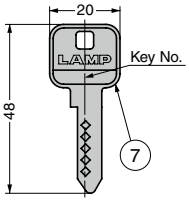
NO990VC-B shown.

[Cut Out Dimensions]



[Installation]





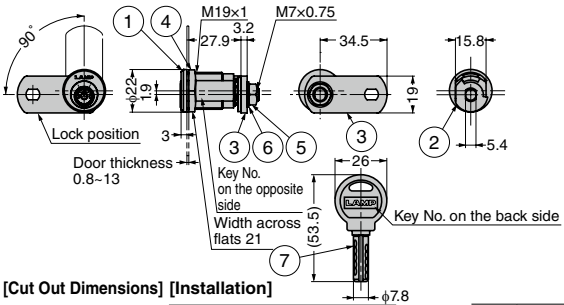
No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Ring	NO990R-B : Brass NO990VC-B: Zinc Alloy (ZDC)	
③	Cam	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
④	Nut M19×1	Zinc Alloy (ZDC)	Clear Zinc Chromate (Trivalent)
⑤	Washer for M7	Steel	Coloured Zinc Chromate (Trivalent)
⑥	Nut M7×0.75		
⑦	Key	Brass/Ferrite	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Drill-Protection Cover	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-013-020	NO990R-B	Key Different	Without	0.8~8	103	25	100
G	3D	150-013-019	NO990VC-B		With		109	25	100

Refer to 1 : P.718

SECURITY CAM LOCK DCY-34 High Security Type



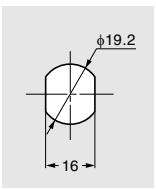


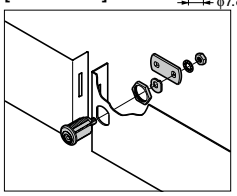
- Specially designed key provides high security.
- Durability with thick cam ③.
- Reversible key can be removed when locked (90° rotation). In order to ensure that the application is properly locked.
- Cam direction changeable.
- Key number is stamped on the side of the body.
- 2,000 key changes available.Master Key system available at surcharge. (Max. 866 key changes/Master Key.)

[Remarks]

- Be sure to read the "Cautions" 1.

[Cut Out Dimensions] **[Installation]**





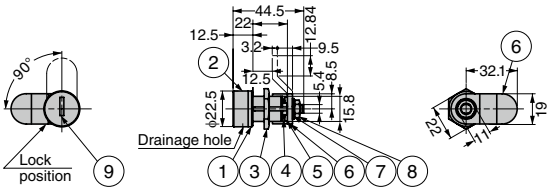
No.	Part Name	Material	Finish/Colour
①	Body	Brass	Chrome
②	90° Cam	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Cam		
④	M19 Hex Nut	Steel (SS)	
⑤	M7 Hex Nut	Steel (SWCH)	
⑥	Washer	Steel (S65C)	
⑦	Key	Brass/ABS	Nickel/Black

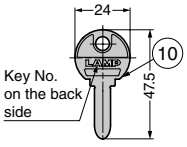
RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-014-159	DCY-34-B	Key Different	0.8~13	101	10	50
G	3D	150-014-158	DCY-34-D	Key Alike			10	50

Refer to 1 : P.718

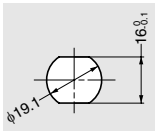
CAM LOCK 920BS With Hole Shutter





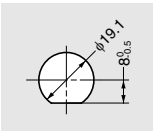


[Cut Out Dimensions]



Standard type

[Cut Out Dimensions]



Master Key system type
(Made to order)

- Cylinder lock with key hole shutter.
- Reversible key can be removed when locked (90° rotation). In order to ensure that the application is properly locked.
- 3,200 key changes available. Master Key system available at surcharge. (Max. 120 key changes/Master Key.)
- Cam can be changed to straight type at surcharge.

[Applications]

- Mailbox, etc.

[Remarks]

- Be sure to read the "Cautions" 1.
- Place drainage hole in downward.
- Key number is stamped on the screw part of the body.

No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Cover		
③	M19 Hex Nut	Steel (SS)	Coloured Zinc Chromate (Trivalent)
④	Ring	Stainless Steel	–
⑤	Revolving Part	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
⑥	Cam		
⑦	Washer	Steel	
⑧	M7 Hex Nut	Steel (SS)	
⑨	Shutter	Stainless Steel	–
⑩	Key	Brass	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-025-144	920BS-B	Key Different	0.8~12	97.4	12	60
–	3D	150-001-237	920BS-D	Key Alike			–	1

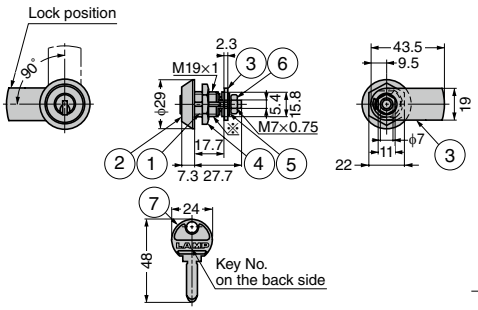
Refer to 1 : P.718

MILLION LOCK CAM LOCK 900

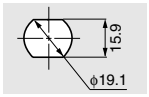


- Suitable for vending machine, ATM and coin locker, etc.
- Reversible key can be removed when locked (90° rotation). In order to ensure that the application is properly locked.
- 1 million key changes available. Master Key system available at surcharge. (Max. 2,520 key changes/Master Key.)
- Other shapes of cam can be made to order.
- Keys can be shared with Million Lock series 1.

[Remarks]
- Be sure to read the "Cautions" 2.
- Key number is stamped on the screw part (※ marked on left drawing) of the body .

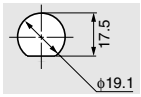


[Cut Out Dimensions]



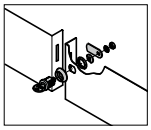
Standard type

[Cut Out Dimensions]



Master Key system type

[Installation]



No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Ring		
③	Cam	Steel (SPCC)	Coloured Zinc Chromate
④	Hex Nut	Steel (SS)	
⑤	Washer	Steel	Nickel
⑥	Hex Nut	Steel (SS)	Coloured Zinc Chromate
⑦	Key	Brass	Nickel

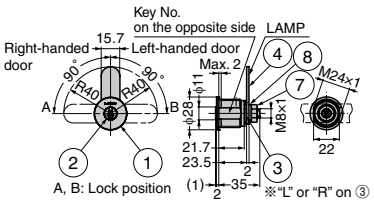
RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-060-247	900-B	Key Different	0.8~8	120	12	60
–	3D	150-001-080	900-D	Key Alike			–	1

Refer to 1 : P.719, 2 : P.718

STAINLESS STEEL CAM LOCK 3800S

INSTRUCTION SUS

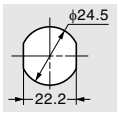




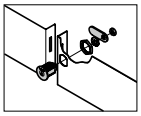
- Nickel silver key with excellent corrosion and abrasion resistance.Durability with thick cam.
- Non-handed.
- Reversible key can be removed when locked (90° rotation). In order to ensure that the application is properly locked.
- 300 key changes available.
- Master Key system (300 key changes) available at surcharge. (1 Master Key only.)
- Cabinet lock 3810S 1 of the same material also available.

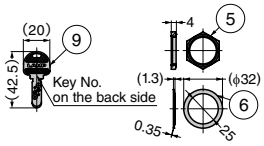
[Remarks]
- Be sure to read the "Cautions" 2.
- Not waterproof.

[Cut Out Dimensions]



[Installation]

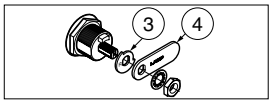




No.	Part Name	Material	Finish
①	Cylinder (Outer)	Stainless Steel (SUS303)	Satin
②	Cylinder (Inner)		2B Finish
③	Cylinder Cam	Stainless Steel (SUS304)	
④	Cam		Plain
⑤	Nut (for Installing the Body)	Stainless Steel (SUS303)	
⑥	Washer (for Body)	Stainless Steel (SUS304)	
⑦	Nut (for Installing the Cam)	Stainless Steel	
⑧	Washer	Stainless Steel (SUS304)	
⑨	Key	Nickel Silver	
–	Key Ring	Stainless Steel (SUS304)	

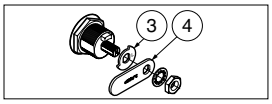
※Cylinder pin is made of brass.

[Installing to Right-handed Door]



After installation, ensure that the "R" mark on cylinder cam and the "LAMP" mark on cam are in normal direction (as seen from the back of lock).

[Installing to Left-handed Door]



After installation, ensure that the "L" mark on cylinder cam is in normal direction and the "LAMP" mark on cam is reversed (as seen from the back of lock).

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-012-921	3800S-B	Key Different	2~10	120	12	60
G	3D	150-012-920	3800S-D	Key Alike			12	60

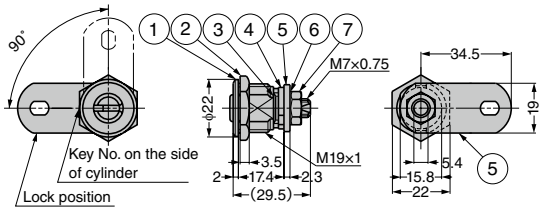
Refer to 1 : P.737, 2 : P.718

CAM LOCK SN-711-8-D

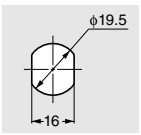


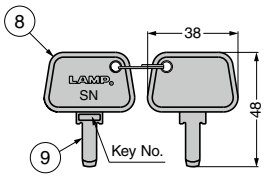
- Ideal for vending machine, ATM and game machine, etc.
- Reversible key can be removed when locked (90° rotation). In order to ensure that the application is properly locked.
- 1 Key Alike available. For Key Different, Max. 1,500 key changes available by made to order.

[Remarks]
- Be sure to read the "Cautions" 1.



[Cut Out Dimensions]





No.	Part Name	Material	Finish/Colour
①	Body	Brass	Chrome
②	Large Hex Nut	Steel (SUM)	Coloured Zinc Chromate
③	Ring	Stainless Steel (SUS304)	Plain
④	Angle Restricting Cam	Steel (SPCC)	Clear Zinc Chromate
⑤	Cam		
⑥	Washer	Steel (SUP)	
⑦	Small Hex Nut	Steel (SWRM)	Coloured Zinc Chromate
⑧	Cover	ABS	Black
⑨	Key	Brass	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-621	SN-711-8-D	Key Alike	0.1~9	77	100	400

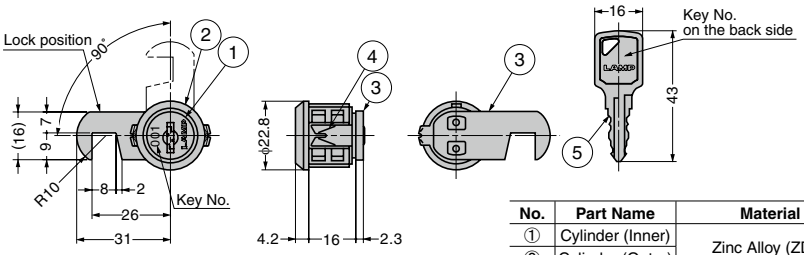
Refer to 1 : P.718

CAM LOCK CLI-31 Clip-on Installation

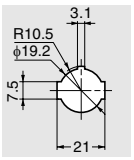


- Easy installation by one-touch.
- Key is removable in locked position only (90° rotation). In order to ensure that the application is properly locked.
- Types applicable for door thicknesses other than 0.8mm also available by made to order.
- 108 key changes available.

[Remarks]
- Be sure to read the "Cautions" 1.
- Cam caulked to the body cannot be removed.
- For sheet metal use.Please contact local representatives when installing to resin board.



[Cut Out Dimensions]



No.	Part Name	Material	Finish
①	Cylinder (Inner)	Zinc Alloy (ZDC)	Dull Chrome
②	Cylinder (Outer)		
③	Cam	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
④	Clip	Stainless Steel (SUS304)	–
⑤	Key	Brass	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-014-155	CLI-31-B	Key Different	0.8	58	27	216
G	3D	150-014-154	CLI-31-D	Key Alike			27	216

Refer to 1 : P.718

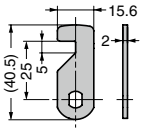
CAM LOCK DIS-022R-D



- Thin cylinder lock with dimple key.
- Reversible key can be removed when locked and unlocked (90° rotation).

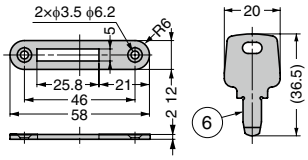
[Remarks]
- Be sure to read the "Cautions" 1.
- Cam and strike are sold separately.Please order them separately.

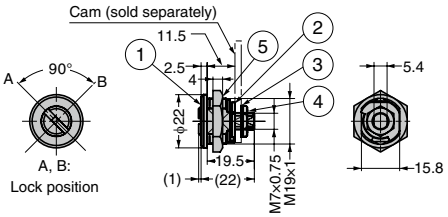
[Sold Separately]
- Stainless cam DIS-010
- Stainless strike DIS-011



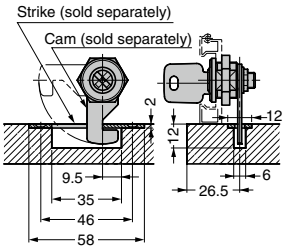
Cam (sold separately)

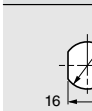

Strike (sold separately)





[Installation]



Cut Out Dimensions	Lock Position
	
	

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-018-944	DIS-022R-D	Key Alike	Max. 5	50	50	–

[Cam] Sold Seperately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	180-018-598	DIS-010	Stainless Steel (SUS304)	Barrel Polished	7	500	–

[Strike] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	180-018-599	DIS-011	Stainless Steel (SUS304)	Barrel Polished	7	1	1

No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Angle Restricting Cam	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Washer	Steel	
④	M7 Hex Nut		
⑤	M19 Hex Nut	Zinc Alloy (ZDC)	
⑥	Key	Brass	Nickel

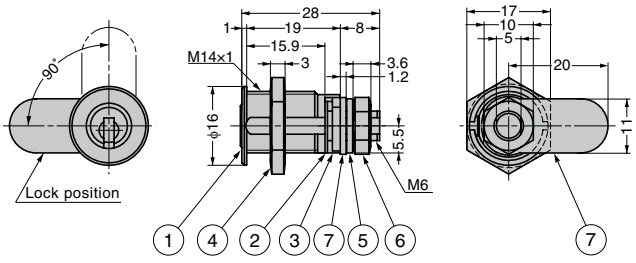
Refer to 1 : P.718

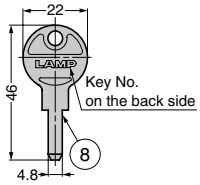
CAM LOCK 910MS



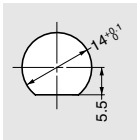
- Small cylinder lock with dimple key.
- Reversible key can be removed when locked (90° rotation). In order to ensure that the application is properly locked.
- 47,000 key changes available. Master Key system available at surcharge. (Max. 1,000 key changes/Master Key.)

[Remarks]
- Be sure to read the "Cautions" 1.
- Key number is stamped on the screw part (lower side) of the body.





[Cut Out Dimensions]



No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Ring	Steel	Phosphated Treatment
③	Angle Restricting Cam	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
④	M14 Hex Nut	Steel (S20C)	
⑤	Washer	Steel	
⑥	M6 Hex Nut	Steel (S20C)	
⑦	Cam	Steel (SPCC)	
⑧	Key	Brass	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-025-141	910MS-B	Key Different	0.8~12	25.5	12	60
–	3D	150-001-238	910MS-D	Key Alike			12	60

Refer to 1 : P.718

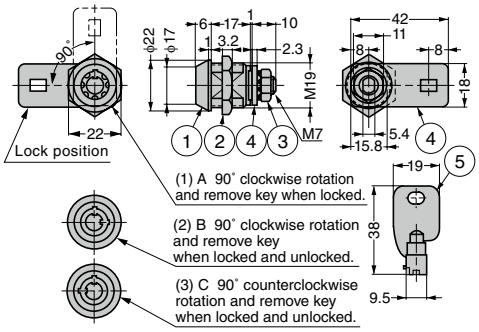
CAM LOCK NAL



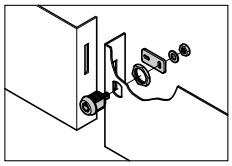
- Suitable for vending machine, parking meter, game machine, and coin locker, etc.
- Key removing angle: (1) rotate clockwise by 90° and remove when locked (2) rotate clockwise by 90° and remove when locked and unlocked ※ (3) rotate counterclockwise by 90° and remove when locked and unlocked ※ (※ made to order)
- Key is removable only in locked position (90° rotation). In order to ensure that the application is properly locked.
- 5,000 key changes available.

[Remarks]

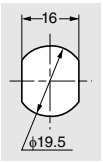
- Be sure to read the "Cautions" 1.
- Spring works key to pull back. Push the key tightly and turn to lock and unlocked.



[Installation]



[Cut Out Dimensions]



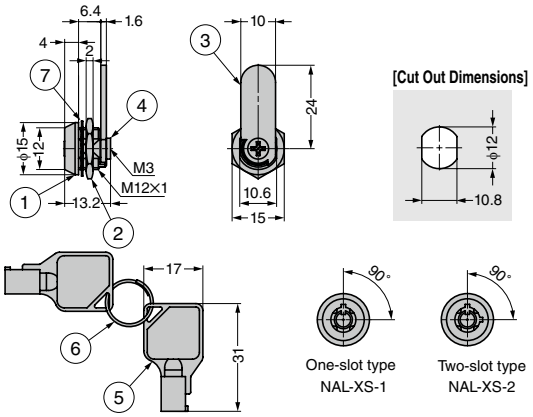
No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Hex Nut	Zinc Alloy (ZDC)	Coloured Zinc Chromate (Trivalent)
③		Steel (SWRCH)	
④	Cam	Steel (SPCC)	
⑤	Key		Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-061-067	NAL-B	Key Different	19 (width: 15.8)	Max. 10	55	100	300
–	3D	150-061-068	NAL-D	Key Alike				100	300

Refer to 1 : P.718

MINI CAM LOCK NAL-XS Ultra Compact





[Cut Out Dimensions]

Refer to 1 : P.718

- Ultra compact type of only 13.2mm thick maximises space inside of cabinet.
- Ideal for coin-operated devices such as vending machine, ATM, and game machine, etc.
- NAL-XS-1: Key is removable in locked position only. (In order to ensure that the application is properly locked.)
  NAL-XS-2: Key is removable in both locked and unlocked positions.
- Cam is reversible (clockwise rotation at delivery).
- 1 Key Alike available. Key different is also available (10 key changes).

[Remarks]

- Be sure to read the "Cautions" 1.
- Spring works key to pull back. Push the key tightly and turn to lock and unlocked.
- Do not use at places subject to frequent vibrations. Otherwise, the hexagonal nuts may loosen.

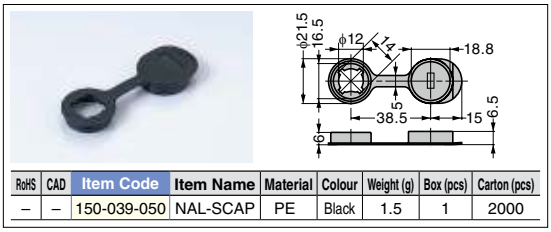
No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Chrome
②	Hex Nut	Steel	Clear Zinc Chromate (Trivalent)
③	Cam		Chrome
④	Screw (for Installing Cam)		Clear Zinc Chromate (Trivalent)
⑤	Key	Steel/Brass	Chrome / –
⑥	Key Ring	Stainless Steel (SUS304)	–
⑦	Washer	Steel	Clear Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	Slots	Key Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-034-270	NAL-XS-1-B	One Key	Key Different	21	100	500
G	3D	150-034-271	NAL-XS-1-D		Key Alike		100	500
G	3D	150-034-272	NAL-XS-2-B	Two Key	Key Different		100	500
G	3D	150-034-273	NAL-XS-2-D		Key Alike		100	500

MINI CAM LOCK NAL-S



[Cap] Sold Separately



RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
–	–	150-039-050	NAL-SCAP	PE	Black	1.5	1	2000

No.	Part Name	Material	Finish
①	Body	Zinc Alloy	Chrome
②	Hex Nut	Steel	Clear Zinc Chromate (Trivalent)
③	Cam		Chrome
④	Screw (for Installing Cam)		Clear Zinc Chromate (Trivalent)
⑤	Key		Chrome

- Ideal for coin-operated devices such as vending machine, ATM, and game machine, etc.
- NAL-S-1: Key is removable in locked position only. (In order to ensure that the application is properly locked.)
  NAL-S-2: Key is removable in both locked and unlocked positions.
- Cam is reversible (clockwise rotation at delivery).
- 1 Key Alike available. Key different is also available (25key changes).

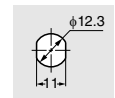
[Remarks]

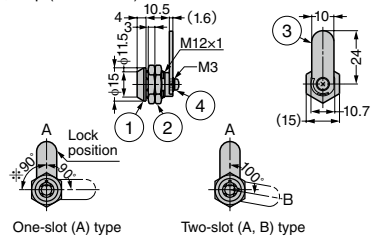
- Be sure to read the "Cautions" 1.
- Spring works key to pull back. Push the key tightly and turn to lock and unlocked.

[Sold Separately]

- Cap (NAL-SCAP)

[Cut Out Dimensions]





RoHS	CAD	Item Code	Item Name	Slots	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-034-274	NAL-S-1-B	One Key	Key Different	Max. 2	25	100	500
G	3D	150-060-667	NAL-S-1-D		Key Alike			100	500
G	3D	150-034-275	NAL-S-2-B	Two Key	Key Different			100	500
G	3D	150-060-666	NAL-S-2-D		Key Alike			100	500

Refer to 1 : P.718

CABINET LOCK WITH DIAL DIT-19 Clip-on Installation

INSTRUCTION



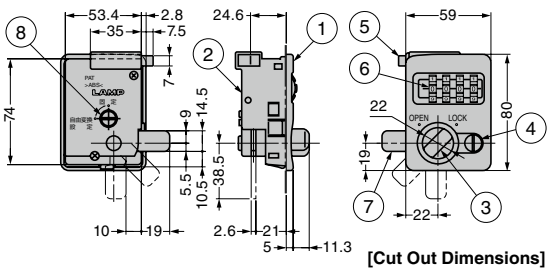
Search key DIT-SK (sold separately)

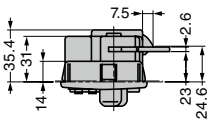
- Turn the dial to lock/unlock.
- Able to switch to Changing Mode or Fixing Mode:
  Changing Mode - Changing the key number according to users.
  Fixing Mode - Applied the same number as registered.
- One-touch installation.
- Possible to search the number to unlock with Search Key (sold separately).
- Case with latch.
- Possible to engrave any number on body above the dial.

[Applications]
- Lockers in public space, etc.

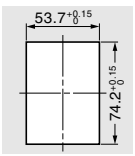
[Remarks]
- For setting work, turn the dial to the password being used and open the door.
- First dial number is "0000".
- For security, please turn all dials when locking.
- Adjust number along the centre line to avoid malfunction.
- For sheet metal use. Bracket (for door thickness 8~18mm) available by made to order when installing to wood board.

[Sold Separately]
- Search key DIT-SK

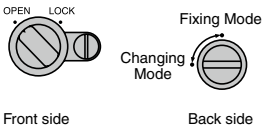




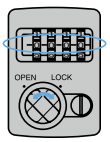
[Cut Out Dimensions]



[Changing Mode]

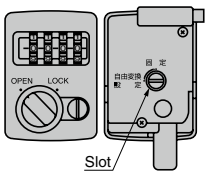


1. Turn the knob to "OPEN" on front side. Turn the slot to "Changing Mode" on back side.

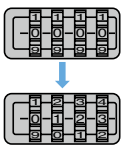


2. Set new number and turn the knob to "LOCK" on front side.

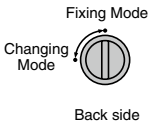
[Fixing Mode]



1. Turn the knob to "OPEN" on front side. Turn the slot to "Changing Mode" on back side.



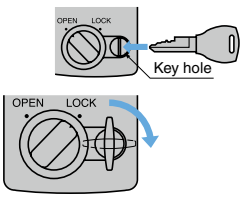
2. Set new number.



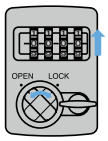
3. Turn the slot to "Fixing Mode" on back side.

※Before setting new number, please open the door.

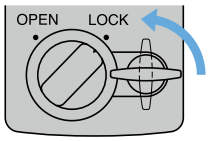
[How to Search Dial Number] Using Search Key



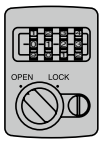
1. Insert Search Key and turn clockwise.



2. Turn each dials till click (the number clicked is your dial number).
※Do not turn the dial with excessive force.



3. Turn Search Key counterclockwise and remove.



4. Turn the knob to "OPEN" to unlock.

No.	Part Name	Material	Finish/Colour
①	Body	ABS	White
②	Case		
③	Knob		
④	Cover		
⑤	Latch	POM	
⑥	Dial	PC	–
⑦	Cam	Steel (SPCC)	Coloured Zinc Chromate
⑧	Switching Shaft	PC	–

[Body]

RoHS	CAD	Item Code	Item Name	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-014-156	DIT-19	0.8	162	1	80

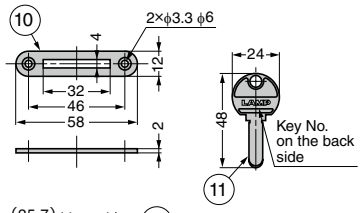
[Search Key] Sold Separately

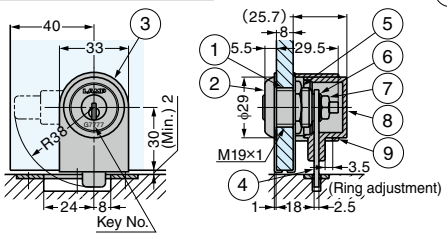
RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-014-157	DIT-SK	11	1	–

MILLION LOCK GLASS DOOR CAM LOCK 1310GL

TEMPERED GLASS





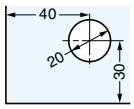


- For single door application.
- Black chrome finish is newly launched.
- Turn reversible key clockwise by 90° to unlock (cam also rotates by 90°).
  Key is removable in locked position only.
- 1 million key changes available.
  Master Key system available at surcharge. (Max. 2,520 key changes/Master Key.)
- Keys can be shared with Million Lock series 1.
- Glass door hinges GH-450 and GH-450G matching with the finish of this product also available.
- Million lock series glass door cam lock 1310GLW of the same design also available.

[Remarks]
- Be sure to read the "Cautions" 2.
- Cam direction is not changable.

[Parts Included]
- Countersunk head wood screw 2.7×13 (SUS)

[Cut Out Dimensions]



No.	Part Name	Material	Finish/Colour		
			SN	CR	BL
①	Body	Brass	Satin Nickel	Chrome	Black Chrome
②	Ring				
③	Plate	Stainless Steel (SUS304)	Satin	Polished	
④	Cam		Plain		
⑤	Hex Nut	Steel (SS400)	Special Anti-rust Painting/Silver		
⑥	Washer	Stainless Steel (SUS304)			
⑦	Hex Nut	Steel (SS400)			
⑧	Cover	PP	Black		
⑨	Ring				
⑩	Strike	Stainless Steel (SUS304)	Polished		Black Chrome
⑪	Key	Brass	Nickel		

※③ includes one convex plate and one concave plate.

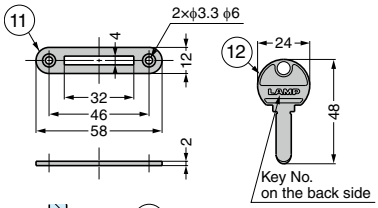
RoHS	CAD	Item Code	Item Name	Key Type	Finish	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-944	1310GL-SN-D	Key Alike	Satin Nickel	5~8	139	12	60
G	3D	150-060-947	1310GL-CR-B	Key Different	Chrome			12	60
G	3D	150-060-946	1310GL-CR-D	Key Alike				12	60
–	3D	150-028-535	1310GL-BL-B	Key Different	Black Chrome			12	60
–	3D	150-001-248	1310GL-BL-D	Key Alike				12	60

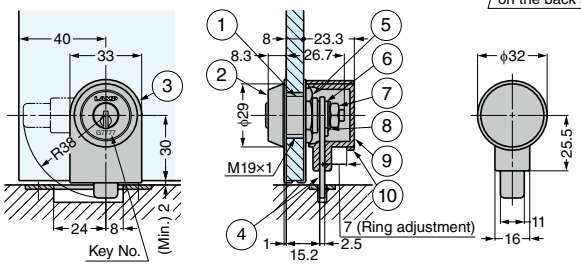
Refer to 1 : P.719, 2 : P.718

MILLION LOCK GLASS DOOR CAM LOCK 1300GL-D

TEMPERED GLASS







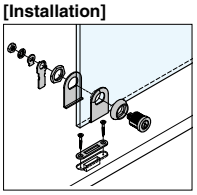
- For single door application.
- When turning reversible key clockwise by 360°, cam rotates by 90°.
- Key is removable in locked and unlocked positions. 1310GL 1 for which the key is not removable in unlocked position also available.
- 1 million key changes available.
  Master Key system available at surcharge. (Max. 2,520 key changes/Master Key.)
- Keys can be shared with Million Lock series 2.

[Remarks]
- Be sure to read the "Cautions" 3.
- Cam direction is not changable.

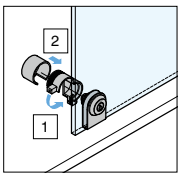
[Parts Included]
- Countersunk head wood screw 2.7×13 (SUS)

No.	Part Name	Material	Finish/Colour
①	Body	Brass	Satin Nickel
②	Ring		
③	Plate	Stainless Steel (SUS304)	Polished
④	Cam		Plain
⑤	Hex Nut	Steel (SS)	Special Anti-rust Painting/Silver
⑥	Cam	Brass	Nickel
⑦	Hex Nut	Steel (SS)	Special Anti-rust Painting/Silver
⑧	Washer	Steel	
⑨	Cover	PP	Black
⑩	Ring		
⑪	Strike	Stainless Steel (SUS304)	Polished
⑫	Key	Brass	Nickel

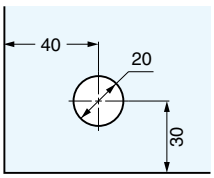
[Installation]



[How to Install ⑨ Cover & ⑩ Ring]



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Key Type	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-056	1300GL-D	Key Alike	5~8	140	12	60

Refer to 1 : P.730, 2 : P.719, 3 : P.718

GLASS DOOR CAM LOCK 2100GL 2100 Lock Series

TEMPERED GLASS

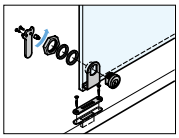


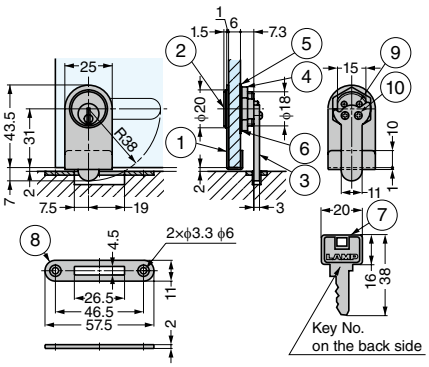
- For glass single swing doors. Ideal for application of audio rack and showcase, etc.
- Available for both right and left swing door.
- Key can be removed when locked.
- 12 key changes available.
- Keys can be shared with 2100 Lock Series 1.
- 2100 GLK 2 with clawed cam also available.

[Remarks]

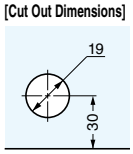
- Be sure to read the "Cautions" 3.

[Installation]





[Cut Out Dimensions]



No.	Part Name	Material	Finish/Colour
①	Front Plate	Stainless Steel (SUS304)	Polished
②	Body	Brass	Satin Nickel
③	Cam	Steel	Nickel
④	Hex Nut	Brass	
⑤	Plastic Washer	PA	Natural
⑥	Washer	Steel	Chrome
⑦	Key	Brass	Nickel
⑧	Strike	Steel	Chrome
⑨	Screw (Stopper for the Cam)	Brass	Plain
⑩	Screw (for Installing Cam) (Pan Head Screw M2.5×8)	Steel	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-057	2100GL-B	Key Different	4~6	75	12	120
–	3D	150-001-058	2100GL-D	Key Alike			12	120

Refer to 1 : P.719, 2 : P.732, 3 : P.718

GLASS DOOR CAM LOCK 1100GLM-B

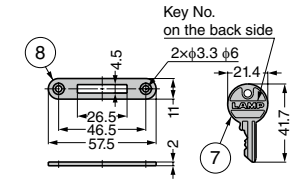
TEMPERED GLASS



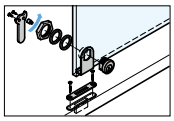
- Key is removable in locked position only.
- Available for both right and left swing door.
- 25 key changes available.

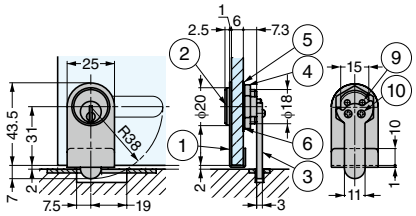
[Remarks]

- Be sure to read the "Cautions" 1.

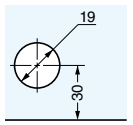


[Installation]





[Cut Out Dimensions]



No.	Part Name	Material	Finish/Colour
①	Front Plate	Brass	Clear Coated
②	Body	Brass	Clear Coated
③	Cam	Steel	Brass
④	Hex Nut	Brass	Plain
⑤	Plastic Washer	PA	Natural
⑥	Washer	Steel	Chrome
⑦	Key	Brass	Clear Coated
⑧	Counter Plate	Steel	Brass
⑨	Screw (Stopper for the Cam)	Brass	Plain
⑩	Screw (for Installing Cam) (Pan Head Screw M2.6×6)	Steel	Clear Zinc Chromate

RoHS	CAD	Item Code	Item Name	Key Type	Glass Thickness	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-061-276	1100GLM-B	Key Difference	4~6	Clear Coated	65	25	250

Refer to 1 : P.718

GLASS DOOR CAM LOCK 2100GLK 2100 Lock Series

INSTRUCTION TEMPERED GLASS

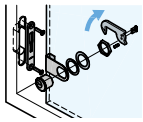


- For glass single sliding doors. Ideal for showcase application, etc.
- Available for both right and left swing door.
- Key is removable only when locked.
- 12 key changes available.
- Keys can be shared with 2100 Lock Series 1.

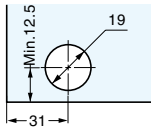
[Remarks]
- Be sure to read the "Cautions" 2.

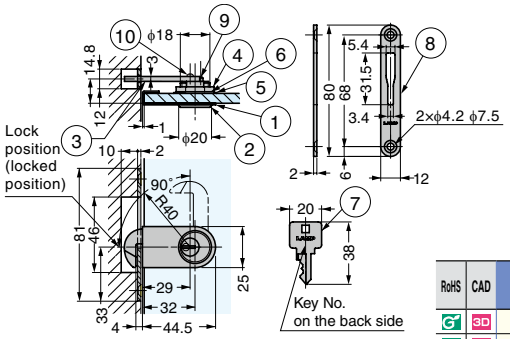
[Recommended Screws]
- Countersunk head tapping screw 3.5

[Installation]



[Cut Out Dimensions]





No.	Part Name	Material	Finish/Colour
①	Front Plate	Stainless Steel (SUS304)	Satin
②	Body	Brass	Satin Nickel
③	Cam	Steel (SPHC)	Nickel
④	Hex Nut	Brass	
⑤	Plastic Washer	PA	Natural
⑥	Washer	Steel	Nickel
⑦	Key	Brass	
⑧	Strike	Steel (SPCC)	
⑨	Screw (Stopper for the Cam)	Brass	Plain
⑩	Screw (for Installing Cam) (Pan Head Screw M2.5×8)	Steel	Nickel

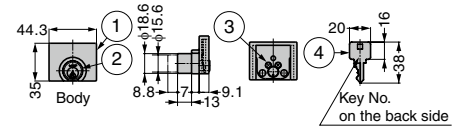
RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-020-475	2100GLK-B	Key Different	20	4~6	75	12	120
G	3D	150-001-147	2100GLK-D	Key Alike				12	120

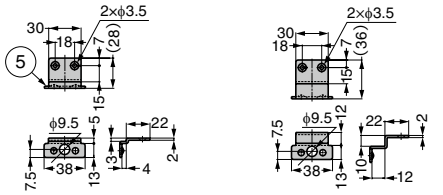
Refer to 1 : P.719, 2 : P.718

GLASS DOOR LOCK MKL-2100-D 2100 Lock Series

TEMPERED GLASS







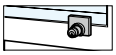
- Pre-drilling on glass not required.
- For inset door. MKL-B strike (sold separately) is available for overlay.
- 1 Key Alike available. Key different type possible as special order (12 key changes).
- Keys can be shared with 2100 Lock Series 1.

[Remarks]
- Be sure to read the "Cautions" 2.
- Please hold the cylinder part when removing.

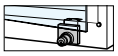
[Parts Included]
- Strike for inset door
- Countersunk head wood screw 3.1×16 (SUS)

[Sold Separately]
- MKL-B strike for overlay door

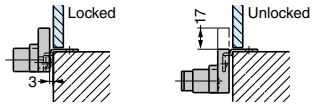
[Inset Door Locked]



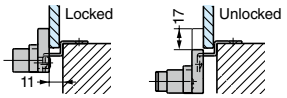
[Overlay Door Unlocked]



[Inset Door]



[Overlay Door]



No.	Part Name	Material	Finish
①	Mounting Plate	Zinc Alloy (ZDC)	Nickel
②	Push Lock 2100B		Satin Chrome
③	Countersunk Head Screw M3×5	Steel	Coloured Zinc Chromate (Trivalent)
④	Key	Brass	Nickel
⑤	Strike for Inset Door	Stainless Steel (SUS304)	Tumbling

Refer to 1 : P.719, 2 : P.718

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-069-709	MKL-2100-D	Key Alike	5~8	125	12	60

[Strike for Overlay Door] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-069-538	MKL-B	Stainless Steel (SUS304)	Barrel Polished	25	60	360

PUSH LOCK 2100B 2100 Lock Series

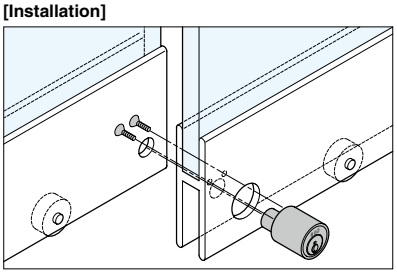


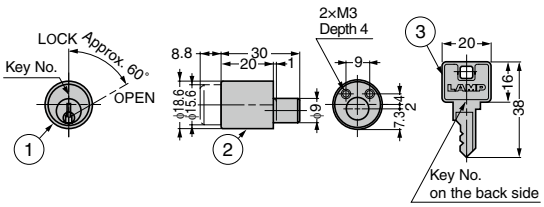
- For metal-framed glass doors or sheet metal double sliding doors.
- Push the cylinder to lock.2110B 1 of the same type with a key required for locking also available.
- Insert and turn key to unlock.
- 12 key changes available.
- Keys can be shared with 2100 Lock Series 2.

[Remarks]
- Be sure to read the "Cautions" 3.

[Parts Included]
- Countersunk head screw M3×5

[Installation]





No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Nickel
②	Cylinder Case	Brass	
③	Key		Nickel
–	Key Ring	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-001-070	2100B-B	Key Different	18.6	20	50	40	400
G	3D	150-001-071	2100B-D	Key Alike				40	400

Refer to 1 : P.733, 2 : P.719, 3 : P.718

PUSH LOCK 2110B 2100 Lock Series

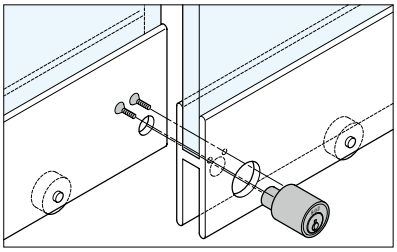


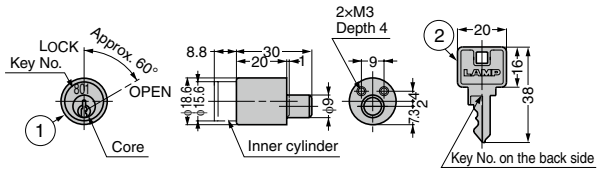
- For metal-framed glass doors or sheet metal double sliding doors.2100B 1 of the same type without need of key also available.
- To Lock: Insert key and turn 60° clockwise. Push-in the cylinder with key and turn 60° back.
- To Unlock: Insert key and turn 60° clockwise and lock will automatically disengage. Turn the key 60° back and remove.
- 12 key changes available.
- Keys can be shared with 2100 Lock Series 2.

[Remarks]
- Be sure to read the "Cautions" 3.

[Parts Included]
- Countersunk head screw M3×5

[Installation]





No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Satin Nickel (Core: Buffing Nickel Coating)
②	Key	Brass	Nickel
–	Key Ring	Steel	

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-001-072	2110B-B	Key Different	18.6	20	50	40	400
G	3D	150-001-073	2110B-D	Key Alike				40	400

Refer to 1 : P.733, 2 : P.719, 3 : P.718

PUSH LOCK 2150B, 2160B

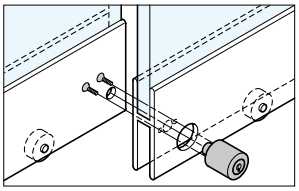


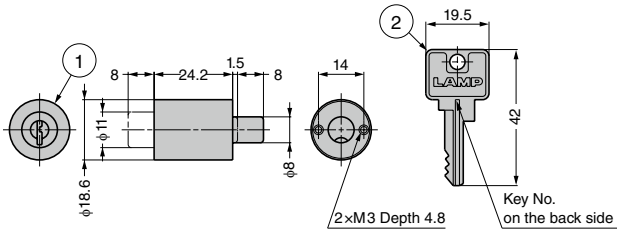
- For metal-framed glass doors or sheet metal double sliding doors. 2150M, 2160M of the same type for wood board also available.
- How to lock: 2150B - push cylinder to lock. 2160B - turn key to lock and unlock.
- Insert and turn key to unlock.
- 24 key changes available.

[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Countersunk head screw M3×5

[Installation]





RoHS	CAD	Item Code	Item Name	Key Type	How to Lock	Cylinder Diameter	Frame Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-060-410	2150B-B	Key Different	Without Key	18.6	24	50	24	240
–	3D	150-060-411	2150B-D	Key Alike					24	240
–	3D	150-060-069	2160B-B	Key Different	With Key				24	240
–	3D	150-060-070	2160B-D	Key Alike					24	240

No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Nickel
②	Key	Brass	

Refer to 1 : P.718

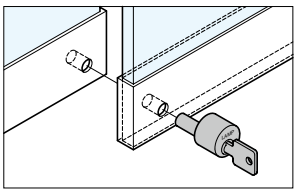
GLASS DOOR LOCK 6300-D

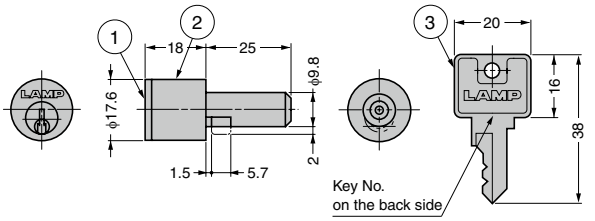


- For metal-framed glass doors or sheet metal double sliding doors.
- Easy installation. Just 10mm bore required on the door.
- When locking, insert cylinder along with key into the bore. Turn the key to lock and remove the key.
- Remove cylinder along with key to unlock.
- 96 key changes available.

[Remarks]
- Be sure to read the "Cautions" 1.

[Installation]





RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Frame Thickness	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-145	6300-D	Key Alike	9.8	19	1.2	50	24	240

No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	White Bronze Plating
②	Cylinder Case	Brass	Nickel
③	Key		
–	Key Ring	Steel	

Refer to 1 : P.718

MILLION LOCK PUSH LOCK 2300M

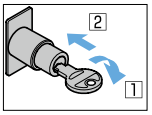


- For wooden double sliding doors. Can also be used for metal-framed glass doors and sheet metal double sliding doors when mounting plate is removed.
- 1 million key changes available. Master Key system available at surcharge. (Max. 2,520 key changes/Master Key.)
- Keys can be shared with Million Lock Series 1.

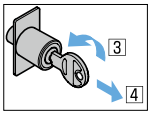
[Remarks]
- Be sure to read the "Cautions" 2.

[Parts Included]
- Countersunk head wood screw 2.7×16 (SUS)

[Lock]

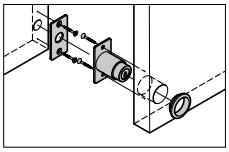


Turn key 90° to the right, push in.

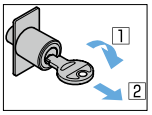


Turn key 90° to the left, and remove.

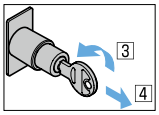
[Installation]



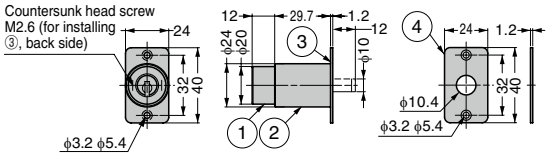
[Unlock]

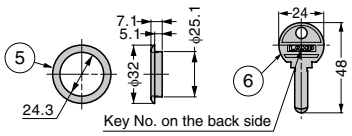


Turn key 90° to the right and lock will automatically disengage.



Turn the key 90° back and remove.





No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Cylinder Case	Zinc Alloy (ZDC)	
③	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished
④	Strike		
⑤	Ring	Brass	Chrome
⑥	Key		Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-022-924	2300M-B	Key Different	16	30	100	12	60
–	3D	150-001-232	2300M-D	Key Alike				12	60

Refer to 1 : P.719, 2 : P.718

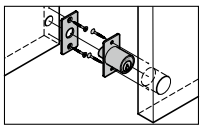
PUSH LOCK 2110M 2100 Lock Series



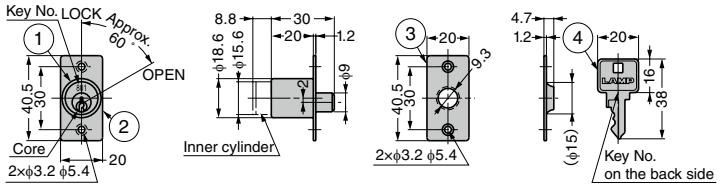
- Ideal for wooden double sliding doors. 2100M 1 of the same type without need of key also available.
- To Lock: Insert key and turn 60° clockwise. Push-in the cylinder with key and turn 60° back.
- To Unlock: Insert the key and turn 60° clockwise.Turn the key 60° back and remove.
- 12 key changes available.
- Keys can be shared with 2100 Lock Series 2.

[Remarks]
- Be sure to read the "Cautions" 3.

[Installation]



[Parts Included]
- Countersunk head wood screw 2.7×16



No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Satin Nickel (Core: Buffing Nickel Coating)
②	Mounting Plate	Brass	Nickel
③	Strike		
④	Key		
–	Key Ring	Steel	

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-889	2110M-B	Key Different	18.6	20	60	12	240
G	–	150-001-045	2110M-D	Key Alike				12	240

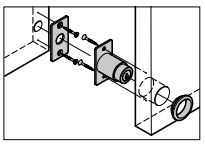
Refer to 1 : P.736, 2 : P.719, 3 : P.718

PUSH LOCK 2400M



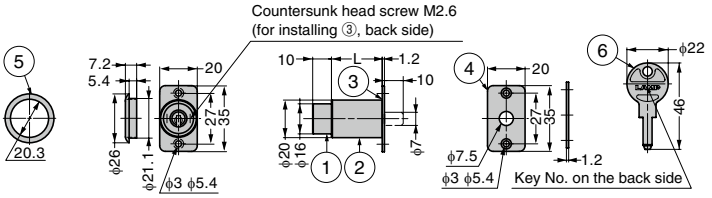
- Ideal for wooden double sliding doors. Can also be used for metal-framed glass doors and sheet metal double sliding doors when mounting plate is removed.
- Push the cylinder to lock without using the key.
- Turn key 45° to the right to unlock. Turn key 45° to the left to lock and remove the key.
- 47,000 key changes available. Master Key system available at surcharge. (Max. 1,000 key changes/Master Key.)

[Installation]



[Remarks]
- Be sure to read the "Cautions" 1.

[Parts Included]
- Countersunk head wood screw 2.7×16 (SUS)



RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	L	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-022-926	2400M-20-B	Key Different	16	20	22	65	12	60
–	3D	150-001-230	2400M-20-D	Key Alike					12	60
–	3D	150-022-925	2400M-25-B	Key Different		25	27	70	12	60
–	3D	150-001-231	2400M-25-D	Key Alike					12	60

No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Cylinder Case	Zinc Alloy (ZDC)	
③	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished
④	Strike		
⑤	Ring	Brass	Chrome
⑥	Key		Nickel

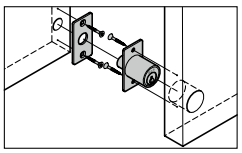
Refer to 1 : P.718

PUSH LOCK 2100M 2100 Lock Series



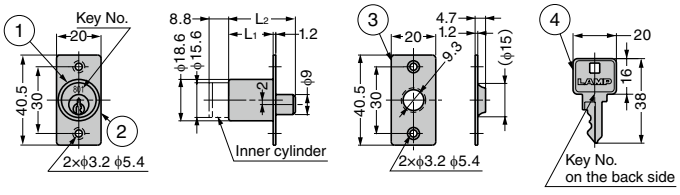
- Ideal for wooden double sliding doors.
- Push the cylinder to lock without using the key. 2110M 1 of the same type with a key required for locking also available.
- Insert and turn key to unlock.
- 12 key changes available.
- Keys can be shared with 2100 Lock Series 2.

[Installation]



[Remarks]
- Be sure to read the "Cautions" 3.

[Parts Included]
- Countersunk head wood screw 2.7×16



RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness L1	L2	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-060-812	2100M-B	Key Different	18.6	20	30	60	12	240
–	3D	150-001-044	2100M-D	Key Alike					12	240
–	3D	150-063-742	2100M-25-B	Key Different		25	35	70	12	240
–	3D	150-001-043	2100M-25-D	Key Alike					12	240

No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Satin Nickel
②	Mounting Plate	Brass	Nickel
③	Strike		
④	Key		
–	Key Ring	Steel	

Refer to 1 : P.735, 2 : P.719, 3 : P.718

STAINLESS STEEL CABINET LOCK 3810S

SUS



- Nickel silver key with excellent corrosion and abrasion resistance. Durability with thick cam.
- Reversible key can be removed when locked and unlocked (360° rotation).
- For drawer and cabinet door application.
- Suitable for overlay doors.
- 12 key changes available. (Max. 300 key changes as special order)
- Master Key system (300 key changes) available at surcharge. (1 Master Key only.)
- Cam lock 3800S 1 of the same material also available.

[Remarks]
- Be sure to read the "Cautions" 2
- Not waterproof.

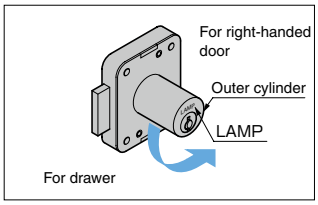
[Parts Included]
- Countersunk head wood screw 3.1 × 20, 2.1 × 10 (SUS)

[Sold Separately]
- Spacer 6810-SP



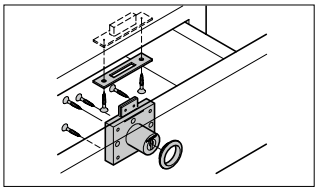
Spacer 6810-SP (sold separately)

[How to Switch: for Drawer/Right-handed Door Application]

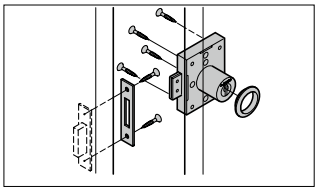


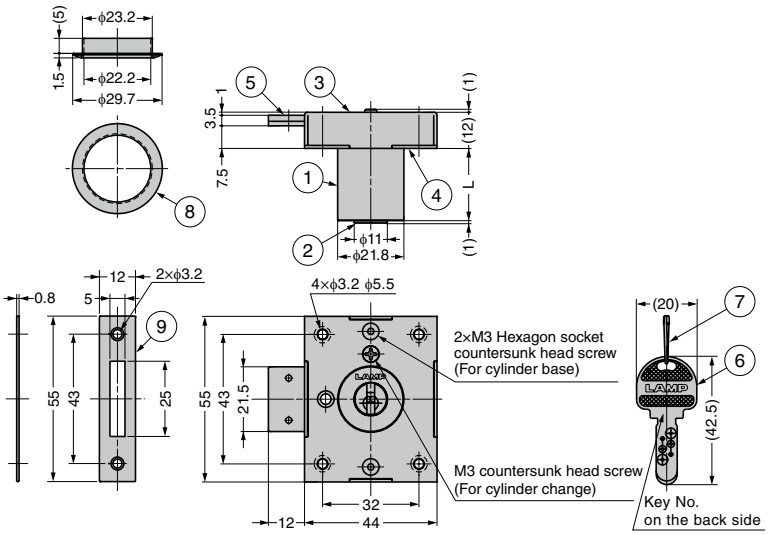
Turn the outer cylinder to the position for drawer or right-handed door and then fix with screws. The logo "LAMP" is to be forwarded upside.

[Installing to the drawer]



[Installing to the right-handed doors]





No.	Part Name	Material	Finish
①	Cylinder (Outer)	Stainless Steel (SUS303)	Satin
②	Cylinder (Inner)		Plain
③	Body	Stainless Steel (SUS304)	
④	Cylinder Base		
⑤	Dead Bolt		
⑥	Key	Nickel Silver	
⑦	Key Ring	Stainless Steel (SUS304)	
⑧	Surface Ring		
⑨	Strike		

※Cylinder pin is made of brass.

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-206	6810-SP	4	150	1500

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	L	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-012-923	3810S-24-B	Key Different	21.8	24	24	180	12	60
G	3D	150-012-922	3810S-24-D	Key Alike					12	60
G	3D	150-012-925	3810S-30-B	Key Different		30	30	195	12	60
G	3D	150-012-924	3810S-30-D	Key Alike					12	60

Refer to 1 : P.724, 2 : P.718

CABINET LOCK WITH INDICATOR 2200QL 2200 Lock Series

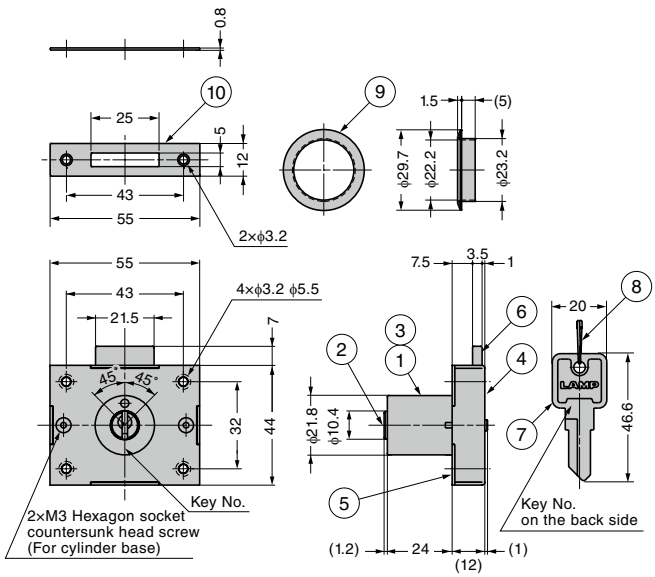


- Only 45° rotation is needed to unlock/lock the door. Key automatically returns to original position.
- With indicator: Unlocked - Blue, Locked - Red.
- For drawer application.
- Types for right-handed door also available by made to order.
- 300 key changes available.
- Master Key system available at surcharge. (Max. 170 key changes/ Master Key.)
- Keys can be shared with 2200 Lock Series.

[Remarks]
- Be sure to read the "Cautions" 1
- For locking or unlocking, please rotate the key until the indicator completely turns red or blue.

[Parts Included]
- Countersunk head wood screw 3.1 × 20, 2.1 × 10 (SUS)

[Sold Separately]
- Spacer 6810-SP

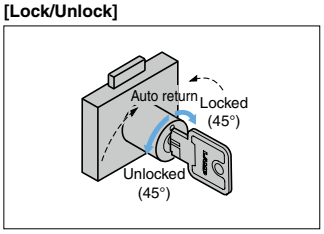


No.	Part Name	Material	Finish
①	Cylinder (Outer)	Zinc Alloy (ZDC)	Coloured Zinc Chromate (Trivalent)
②	Cylinder (Inner)		Satin Nickel
③	Body Pipe	Brass	
④	Body	Stainless Steel (SUS304)	Plain
⑤	Cylinder Base		
⑥	Dead Bolt	Zinc Alloy (ZDC)	Nickel
⑦	Key	Brass	
⑧	Key Ring	Stainless Steel (SUS304)	Plain
⑨	Surface Ring	Brass	Satin Nickel
⑩	Strike	Stainless Steel (SUS304)	Plain



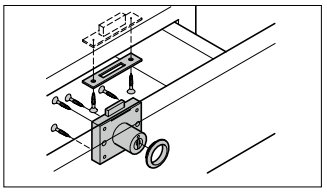
Spacer 6810-SP (sold separately)

[Lock/Unlock]

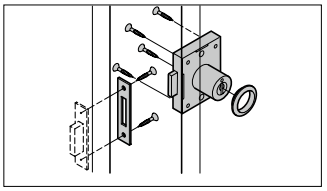


Key automatically returns to original position.

[Installation]



[Installing to Right-handed Door]



※Types for right-handed doors are made to order.

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-206	6810-SP	4	150	1500

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-012-927	2200QL-24-B	Key Different	21.8	24	200	12	60
G	3D	150-012-926	2200QL-24-D	Key Alike				12	60

Refer to 1 : P.718

MILLION LOCK CABINET LOCK 7810W For Double Swing Door / Drawer Interlocking Type

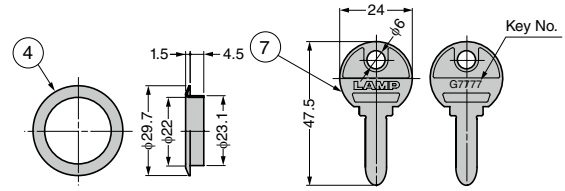


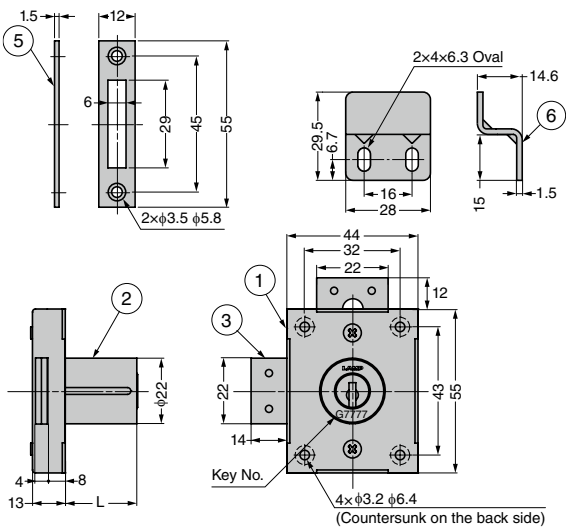
- With 2 dead bolts, suitable for double swing doors and drawers, etc.
- Can lock upper and lower drawers by using one lock.
- Reversible key. Turn the key 360° to lock or unlock.
- Body and dead bolt are made of stainless steel (SUS304) with excellent rust resistance.
- 1 million key changes available.
  Master Key system available at surcharge. (Max. 2,520 key changes/ Master Key.)
- Polished and clear finish for cylinder and ring also available by made to order.
- Keys can be shared with other Million Lock Series 1.

[Remarks]
- For key numbers and their combination, please consult our sales representative.
- Be sure to read the "Cautions" 2.

[Parts Included]
- Countersunk head wood screw 2.7×13, 3.1×22 (SUS)

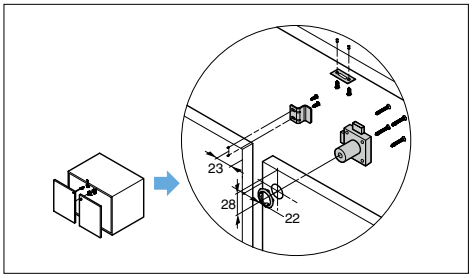
[Sold Separately]
- Spacer 6810-SP



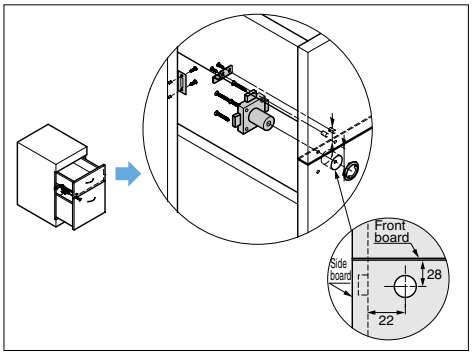


No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Cylinder	Brass	Satin Nickel, Chrome
③	Dead Bolt	Stainless Steel (SUS304)	Plain
④	Ring	Brass	Satin Nickel, Chrome
⑤	Strike A	Stainless Steel (SUS304)	Satin
⑥	Strike B		
⑦	Key	Brass	Nickel

[Installation on Double Swing Door]



[Installation on Drawer]



RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	Finish	L	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-034-439	7810W-24NI-B	Key Different	22	22~24	Dull Nickel	24	170	12	60
G	3D	150-001-259	7810W-24NI-D	Key Alike						12	60
G	3D	150-034-441	7810W-24CR-B	Key Different			Chrome			12	60
G	3D	150-001-260	7810W-24CR-D	Key Alike						12	60
G	3D	150-034-443	7810W-30NI-B	Key Different		28~30	Dull Nickel	30	180	12	60
G	3D	150-001-261	7810W-30NI-D	Key Alike						12	60
G	3D	150-034-445	7810W-30CR-B	Key Different			Chrome			12	60
G	3D	150-001-262	7810W-30CR-D	Key Alike						12	60
G	3D	150-034-447	7810W-36NI-B	Key Different		34~36	Dull Nickel	36	195	12	60
G	3D	150-001-263	7810W-36NI-D	Key Alike						12	60
G	3D	150-034-449	7810W-36CR-B	Key Different			Chrome			12	60
G	3D	150-001-264	7810W-36CR-D	Key Alike						12	60

Refer to 1 : P.719, 2 : P.718

CABINET LOCK 8810

INSTRUCTION



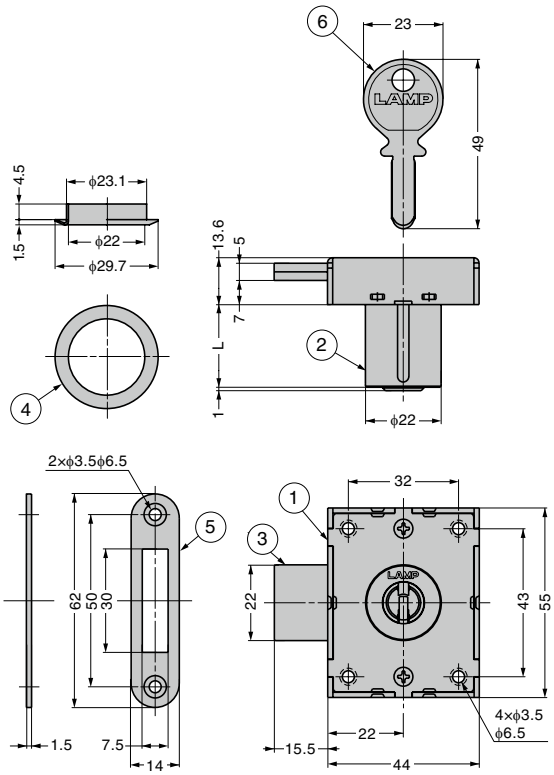
8810-24

- Brass cylinder lock with stainless steel body.
- Construction Key System - Key number is changeable without replacing cylinder. (Key number can be changed twice.)
- Reversible key can be removed when locked and unlocked. (360° rotation)
- Master Key (made to order) can be used for unified management.
- 3 million key changes available (Max. 300 key changes/Master Key).
- Types with key number unchanged also available by made to order (Max. 3,000 key changes/Master Key).
- Spacer 6810-SP (sold separately) can be used.

[Remarks]
- Be sure to read the "Cautions" 1.
- Previous key becomes invalid by using a new key.
- Previous key and key number cannot be used again after changing key number.
- Key number can be changed twice.

[Parts Included]
- Countersunk head wood screw 3.1 × 25 (for body)
- Countersunk head wood screw 3.1 × 13 (for strike)

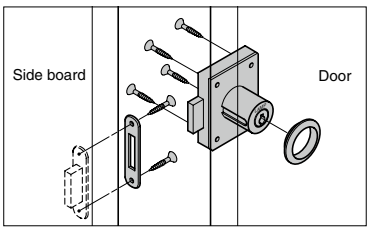
[Sold Separately]
- Master Key (made to order), 1st change key (made to order) and 2nd change key (made to order)
- Spacer 6810-SP



[How to Change Key]
- Each lock includes keys for the original key number only.
- There are three kinds of keys: Original key, 1st change key and 2nd change key.
- 1st and 2nd change keys are sold separately (made to order).
- For the first key number change, insert the 1st change key and rotate 360° .
- For the second key number change, insert the 2nd change key and rotate 360° .
- After using the 1st change key, the original key cannot open the lock. Likewise, when the 2nd change key is used, the 1st change key will be invalid.

[Combined Usage with Key and Master Key]
- There are also three kinds of Master Keys: Original Master Key, Master Keys for 1st change and 2nd change.
  They are available by made to order.
- Master Keys must also be changed after the lock's key number is changed.
- All key numbers will be changed by using new master key.
- In case only some of the locks' key numbers in Master Key system are changed, master keys for that portion should still be kept.

[Installation]



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Cylinder	Brass	Nickel
③	Dead Bolt	Stainless Steel (SUS304)	–
④	Ring	Brass	Satin Nickel
⑤	Strike	Stainless Steel (SUS304)	Satin
⑥	Key	Nickel Silver	Barrel Polished

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness	L	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-022-338	8810-24MK-B	Key Different, With Master Key System	22	22~24	24	190	12	60
G	3D	150-022-337	8810-24-B	Key Different, Without Master Key System					12	60
G	3D	150-001-221	8810-24-D	Key Alike					–	1
–	–	150-029-317	8810-36MK-B	Key Different, With Master Key System		34~36	36	220	12	60
–	–	150-029-316	8810-36-B	Key Different, Without Master Key System					12	60
–	–	150-001-241	8810-36-D	Key Alike					–	1

Refer to 1 : P.718

CABINET LOCK 6830-30MK Million Lock Interchangeable Cylinder Series



※Cylinder and key are sold separately.

- Interchangeable cylinder lock series with Master Key system.
- Easy to replace the cylinder by using the Change Key MD-K1.
- Reversible key can be removed when locked and unlocked. (180° rotation).
- 7,800 key changes available. (Max. 750 key changes/Master Key)
- Keys can be shared with interchangeable cylinder lock series. Besides, the Master Key (sold separately) can also be used for unified management.

[Remarks]

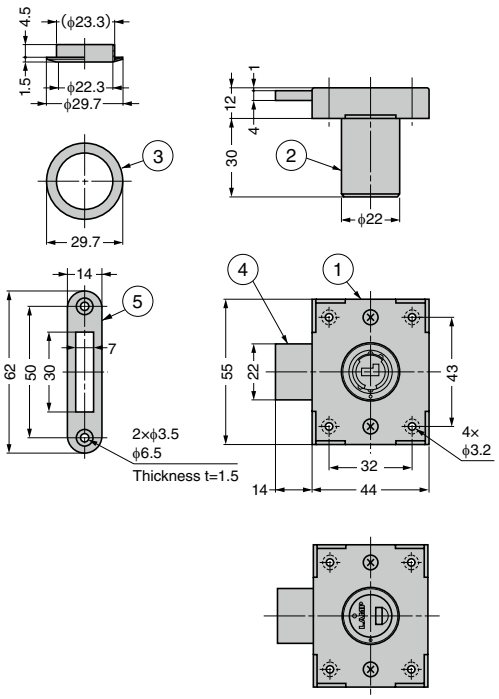
- Be sure to read the "Cautions" 1.
- To remove the cylinder MD-N1 (sold separately), Change Key MD-K1 (sold separately) is required. Change Key MD-K1 also serves as a master key system.

[Parts Included]

- Countersunk head wood screw 2.7 × 13, 3.1 × 22 mm (SUS)

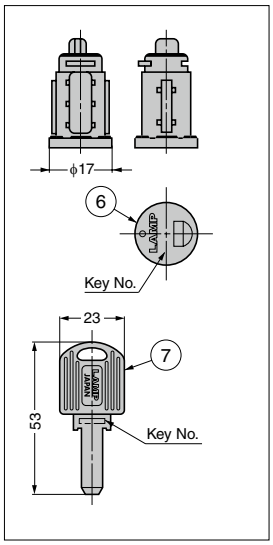
[Sold Separately]

- Cylinder MD-N1
- Master Key MD-MK1, Change Key MD-K1
- Spacer 6810-SP



MD-N1 (sold separately) installed

[Cylinder] Sold Separately





Spacer 6810-SP (sold separately)

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Housing	Zinc Alloy (ZDC)	GA: Gold, Paint/Clear DN: Satin Nickel
③	Ring	Brass	
④	Dead Bolt	Stainless Steel (SUS304)	–
⑤	Strike		Satin
⑥	Cylinder' (Sold Separately)	Stainless Steel (SUS304)/ Zinc Alloy (ZDC)	Barrel Polished/ Coloured Zinc Chromate
⑦	Key (Sold Separately)	Brass/ABS	Nickel/Black

[Cylinder] Sold Separately

RoHS	CAD	Item Code	Item Name	Key Type	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-003	MD-N1-B	Key Different	180	–	1
–	3D	150-001-126	MD-N1-D	Key Alike	180	–	1

[Master Key/Change Key] Sold Separately

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-002	MD-MK1	Master Key	12	–	1
–	3D	150-001-001	MD-K1	Change Key	16	–	1

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-206	6810-SP	4	150	1500

[Body]

RoHS	CAD	Item Code	Item Name	Finish	Cylinder Diameter	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-196	6830-30MKGA	Gold, Paint/Clear	22	30	180	12	60
G	3D	150-060-193	6830-30MKDN	Satin Nickel				12	60

Refer to 1 : P.718

SUGATSUNE

CABINET LOCK 5830

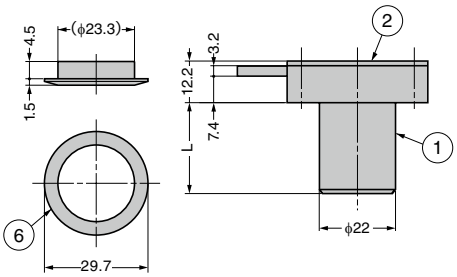

5830-30MK

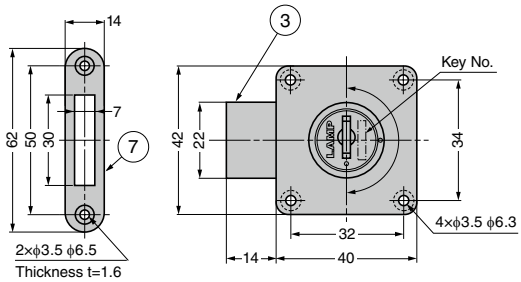
- Interchangeable cylinder lock with Master Key system.
- Easy to replace cylinder by using Change Key 5830-K1.
- Reversible key can be removed when locked and unlocked (180° rotation).
- Max. 3,120 key changes available. (Max. 780 key changes/Master Key)
- Longer dead bolt stroke.
- Gold finish for cylinder ring and cylinder case can be made to order.

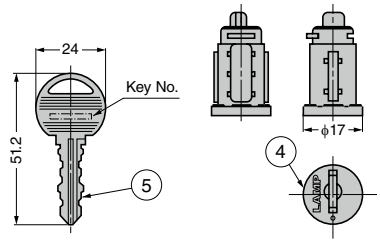
[Remarks]
- Be sure to read the "Cautions" 1.
- To remove the cylinder, Change Key 5830-K1 (sold separately) is required.
- Replaceable cylinder is made to order.

[Parts Included]
- Countersunk head wood screw 3.1×13, 3.1×22 (SUS)

[Sold Separately]
- Master Key 5830-MK1
- Change Key 5830-K1
- Spacer 5830-SP

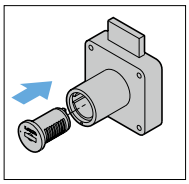






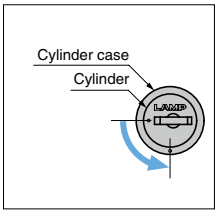
No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Satin Nickel
②	Case Cover	Steel (SPCC)	Nickel
③	Dead Bolt		
④	Cylinder (Inner)	Zinc Alloy (ZDC)	Satin Nickel
⑤	Key	Brass	Nickel
⑥	Ring		Satin Nickel
⑦	Strike	Steel (SPCC)	Nickel

[Installation]

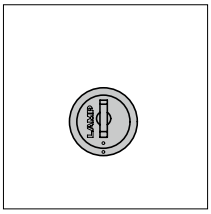



Spacer 5830-SP (sold separately)

[How to Remove]



Insert the Change Key and turn the cylinder 90° counter clockwise.



Place two dots in the same position and remove the cylinder.

[Master Key] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-001-009	5830-MK1	9	–	1

[Change Key] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-001-008	5830-K1	13	–	1

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-060-569	5830-SP	3	200	2000

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Cylinder Diameter	Door Thickness L	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	150-001-006	5830-24MK-B	Key Different	22	24	155	–	1
G	3D	150-060-060	5830-24MK-D	Key Alike				12	60
–	3D	150-001-007	5830-30MK-B	Key Different		30	202	–	1
G	3D	150-060-025	5830-30MK-D	Key Alike				12	60

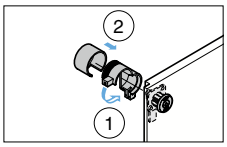
Refer to 1 : P.718

MILLION LOCK CAM LOCK 1300SK

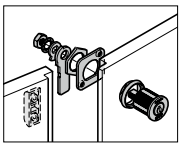
INSTRUCTION

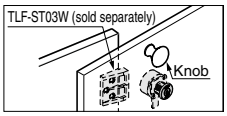


[How to Install ④ Cover & ⑤ Ring]

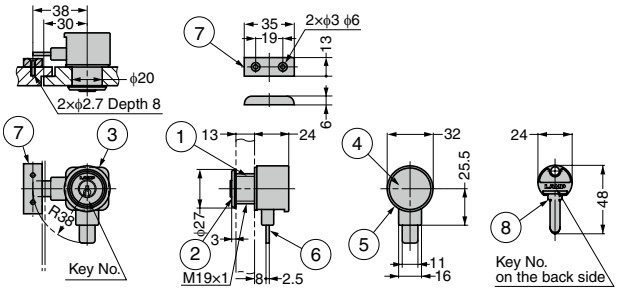


[Installation]





For overlay door, use counter plate TLF-ST03W (sold separately) as one side strike.



- Ideal for cabinet of public toilet booth, etc.
- Reversible key can be removed when locked and unlocked.
- When turning the key clockwise by 360°, cam rotates by 90°.
- 1 Key Alike available. Key different type possible as special order (1 million key changes). Master Key system available at surcharge. (Max. 2,520 key changes/Master Key.)
- Keys can be shared with Million Lock series 1.

[Remarks]

- Be sure to read the "Cautions" 2
- Do not use in shower booth and other water surroundings.

[Parts Included]

- Countersunk head screw M3×12 (SUS)

[Sold Separately]

- Counter plate TLF-ST03W

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Door Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-060-858	1300SK-D	Key Alike	13	115	12	60

[Strike] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-060-235	TLF-ST03W	8	1	1000

Refer to 1 : P.719, 2 : P.718

No.	Part Name	Material	Finish/Colour
①	Body	Brass	Satin
②	Ring		Nickel
③	Key Plate	Steel (SPCC)	Coloured Zinc Chromate
④	Cover	PP	Black
⑤	Ring		
⑥	Cam	Stainless Steel (SUS304)	Plain
⑦	Strike	ABS	Brown
⑧	Key	Brass	Nickel

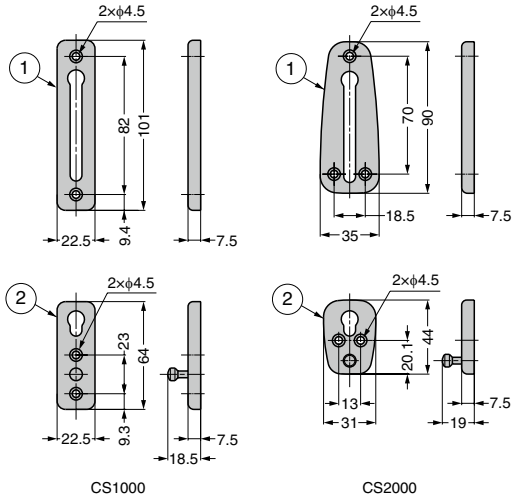
STAINLESS STEEL DOOR CHAIN CS

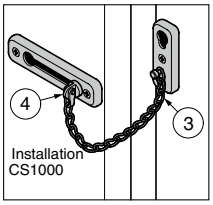
SUS

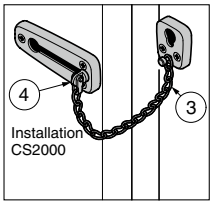


[Parts Included]

- Raised countersunk head wood screw 4×25 (SUS)







RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	270-051-060	CS1000	115	15	150
G	3D	270-051-061	CS2000	120	15	150

No.	Part Name	Material	Finish
①	Body (1)	Stainless Steel (SUS304)	Satin
②	Body (2)		
③	Chain (150 mm length)		Barrel Polished
④	Knob	Brass	Nickel

SECURITY LOCK FOR LAPTOP



- Wire lock suitable for security of laptop and TV with D terminal.
- 4 types available: WL-N1800, WL-S1800, WL-S2200-B, WL-P1800-B.
- High security against picking by applying cylinder locks.
- WL-N1800 and WL-P1800-B can be installed to thin laptop.

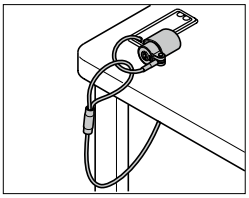
Refer to 1 : P.744, 2 : P.745, 3 : P.746, 4 : P.747

SECURITY LOCK FOR LAPTOP WL-N1800 Off-set Type

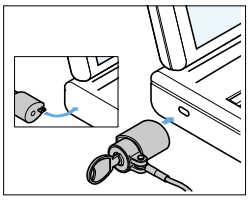


- Wire lock suitable for security of laptop and TV with D terminal※.
  ※Optional adapter 1 is needed. Can also connect with RS-232C connector port and RGB terminal.
- Off-set hook for thin laptop.
- Wire length: 1,800 mm
- Rotatable lock body and wire mounting part allow for flexible wire movement (Fig.1).
- 10,000 key changes available. Master Key system available at surcharge. (Max. 200 key changes/Master Key.)
- Key can be removed when locked (90° rotation).
- Wire dia. ϕ4 mm.

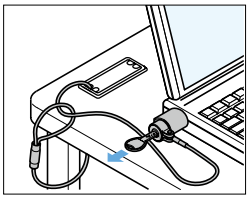
[Installation]



1. Put the wire through a hole on desk and loop.

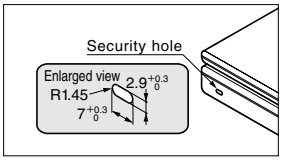


2. Insert the cylinder into the security hole. Please do so in unlocked position as shown left.



3. Turn the key 90° counterclockwise to lock and remove the key. Ensure that the lock is securely locked.

[Before Installation] ⚠



Please make sure security hole is as shown left.
Otherwise, it cannot be installed.

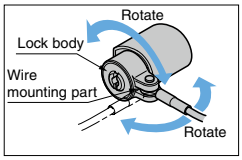
[Remarks]

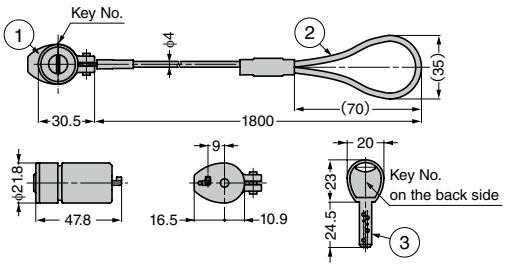
- Be sure to read the "Cautions" 2
- Locks with master key system is Key Different only, and the Master Key may be made to order.

[Sold Separately]

- Master Key (made to order)
- Adapter PC20K 1

[Movement] Fig.1





No.	Part Name	Material	Finish
①	Lock Body	Zinc Alloy (ZDC)	Satin Nickel
②	Wire	Steel (SWRH)	PVC Coating
③	Key	Brass	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Master Key System	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-081	WL-N1800-B	Key Different	With	194.2	10	100
–	3D	150-001-148	WL-N1800-D	Key Alike	Without		10	100

Refer to 1 : P.747, 2 : P.718

SECURITY LOCK FOR LAPTOP WL-S1800

INSTRUCTION





Packed in a blister pack.

- Wire lock suitable for security of laptop and TV with D terminal※.
  ※Optional adapter 1 is needed. Can also connect with RS-232C connector port and RGB terminal.
- Wire length: 1,800 mm.
- Rotatable lock body and wire mounting part allow for flexible wire movement (Fig.1).
- 250 key changes available. Master Key system available at surcharge. (Max. 250 key changes/Master Key.)
- Key can be removed when locked (90° rotation).
- Wire dia. ϕ3.3 mm.

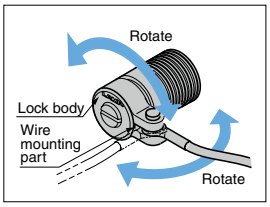
[Remarks]

- Be sure to read the "Cautions" 2

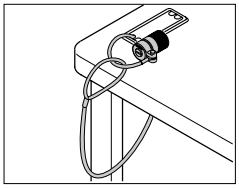
[Sold Separately]

- Master Key WL-S1800MK1 (made to order)
- Adapter PC20K 1

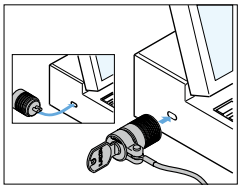
[Movement] Fig.1



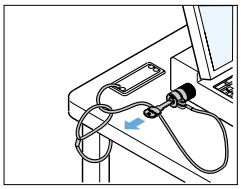
[Installation]



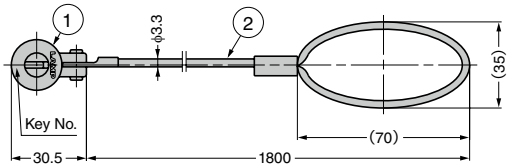
1. Put the wire through a hole on desk and loop.

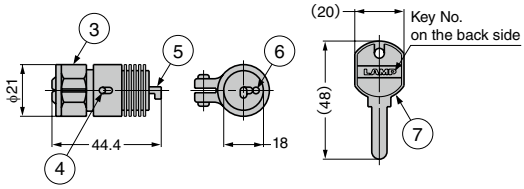


2. Insert the cylinder into the security hole. Please do so in unlocked position as shown left.

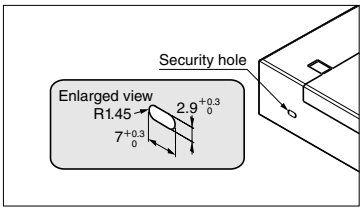


3. Turn the key 90 ° counterclockwise to lock and remove the key. Ensure that the lock is securely locked.





[Before Installation] ⚠



Please make sure security hole is as shown above.
Otherwise, the lock can not be installed.

No.	Part Name	Material	Finish
①	Lock Body	Zinc Alloy (ZDC)	Satin Nickel
②	Wire	Steel	PVC Coating/Black
③	Cover	Zinc Alloy (ZDC)	Nickel
④	Cover Retaining Shaft	Steel (SWCH)	
⑤	Engaging Section	Stainless Steel (SUS304)	Plain
⑥	Rotation Stopping Shaft	Stainless Steel (SUS303)	
–	Spring	Stainless Steel (SUS304)	
⑦	Key	Brass	Nickel
–	Key Ring	Stainless Steel	Plain

[Master Key] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-082	WL-S1800MK1	9	–	1

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Master Key System	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-127	WL-S1800-B	Key Different	With	165	–	1
–	3D	150-060-675	WL-S1800-D	Key Alike	Without		5	50

Refer to 1 : P.747, 2 : P.718

Updated 2017.10.27

SECURITY LOCK FOR LAPTOP WL-S2200-B Double Cylinder Type

INSTRUCTION

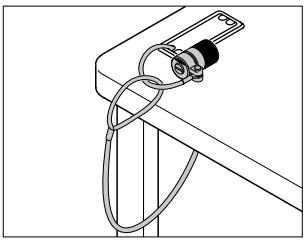


- Wire lock suitable for security of laptop and TV with D terminal※.
  ※Optional adapter 1 is needed. Can also connect with RS-232C connector port and RGB terminal.
- Wire length: 1,800 mm.
- Rotatable lock body and wire mounting part allow for flexible wire movement (Fig.1).
- With Master Key system (250 key changes/Master Key).
- Key can be removed when locked (90° rotation).
- Wire dia. ϕ3.3 mm.

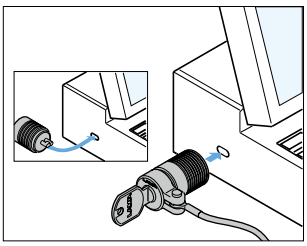
[Remarks]
- Be sure to read the "Cautions" 2
- Both sides of lock has the same key number.

[Sold Separately]
- Master Key WL-S1800MK1
- Adapter PC20K 1

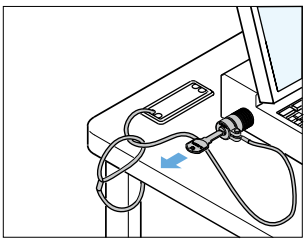
[Installation]



1. Put the wire through a hole on desk and loop.

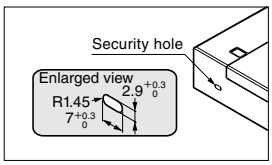


2. Insert the cylinder into the security hole. Please do so in unlocked position as shown left.



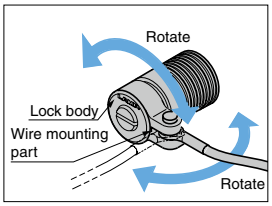
3. Turn the key 90° counterclockwise to lock and remove the key. Ensure that the lock is securely locked.

[Before Installation] ⚠

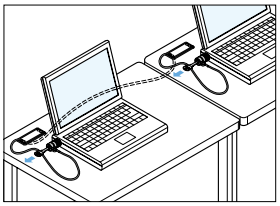


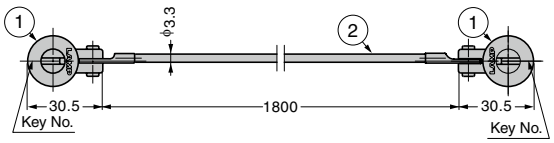
Please make sure security hole is as shown above.
Otherwise, the lock cannot be installed.

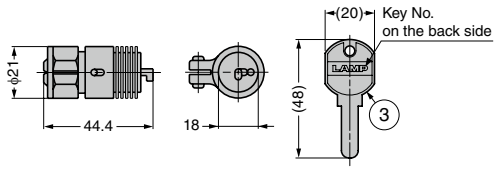
[Movement] Fig.1



[Application Example]







No.	Part Name	Material	Finish
①	Lock Body	Zinc Alloy (ZDC)	Satin Nickel
②	Wire	Steel	PVC Coating
③	Key	Brass	Nickel

[Master Key] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-082	WL-S1800MK1	9	–	1

[Body]

RoHS	CAD	Item Code	Item Name	Key Type	Master Key System	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-069-339	WL-S2200-B	Key Different	With	220	1	100

Refer to 1 : P.747, 2 : P.718

SECURITY LOCK FOR LAPTOP WL-P1800-B Slim Type

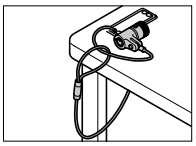


- Wire lock suitable for security of laptop and TV with D terminal※.
  ※Optional adapter 1 is needed. Can also connect with RS-232C connector port and RGB terminal.
- Slim type for thin laptop.
- Wire length: 1,800 mm.
- Rotatable lock body and wire mounting part allow for flexible wire movement (Fig.1).
- 250 key changes available.
- Applying cam Lock.
- Key can be removed when locked (90° rotation).
- Wire dia. ϕ4 mm.

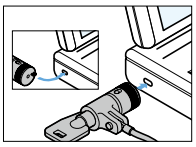
[Remarks]
- Be sure to read the "Cautions" 2
- The Spring works key to pull back.Push the key tightly and turn to lock and unlocked.

[Sold Separately]
- Adapter PC20K 1

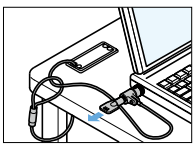
[Installation]



1. Put the wire through a hole on desk and loop.

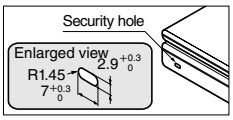


2. Insert the cylinder into the security hole. Please do so in unlocked position as shown left.



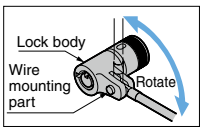
3. Turn the key 90° counterclockwise to lock and remove the key. Ensure that the lock is securely locked.

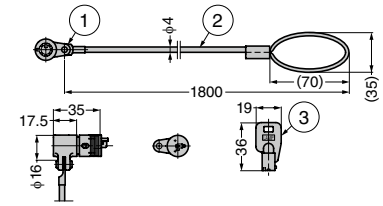
[Before Installation] ⚠



Please make sure security hole is as shown above.
Otherwise, the lock can not be installed.

[Movement] Fig.1





No.	Part Name	Material	Finish
①	Lock Body	Zinc Alloy (ZDC)	Satin Nickel
②	Wire	Steel	PVC Coating
③	Key	Brass	Nickel

RoHS	CAD	Item Code	Item Name	Key Type	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-060-063	WL-P1800-B	Key Different	134	10	100

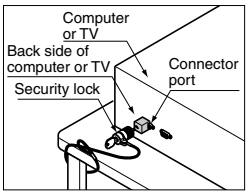
Refer to 1 : P.747, 2 : P.718

ADAPTER PC20K

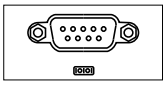
INSTRUCTION



[Installation]

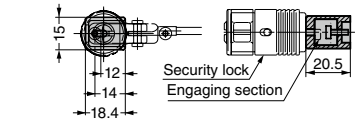


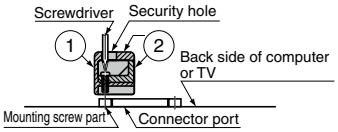
["RS-232C" Connector Port]



A connector attached on the back side of the computer (as shown above), which is also known as serial connector.

[How to Install]





No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Nickel
②	Cover	ABS	Black

- Adapter to connect security lock 1 with laptop and terminals. Terminal can be connected with: RS-232C, D Terminal, RGB Terminal
- Align with one side of terminal mounting screw part on the back side of laptop or TV and fix with screw. And then secure engaging section of security lock to security hole of adapter.

[Remarks]
- Please install so that engaging section (L-shaped part) of security lock is at the side marked with ※ as shown left.

[Parts Included]
- Pan head screw No.4-40UNC×8

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-060-008	PC20K	Zinc Alloy (ZDC)	Nickel	19	40	400

Refer to 1 : P.744~747

BOX LATCH WITH LOCK BL-70Y



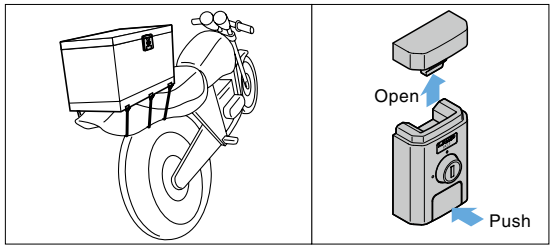
- Automatically latches the lid when closed.
- Push button to release.
- Locked with a key.
- 5 key changes available.

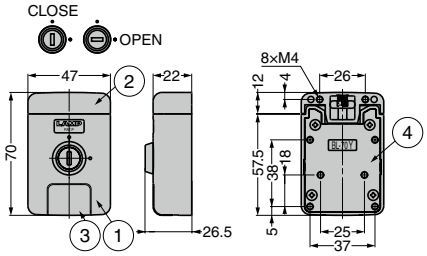
[Application]
- Storage box, especially for cars and transport, etc.

[Remarks]
- Be sure to read the "Cautions" 1.
- Install body and striker on the same plane.Stepped mounting surface may cause malfunction or damage.

[Parts Included]
- Countersunk binding head screw M4 × 12 (SUS)
- Spring lock washer 4 (SUS)

[Installation]





RoHS	CAD	Item Code	Item Name	Key Type	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	150-001-076	BL-70Y-B	Key Different	220	–	1
–	–	150-001-077	BL-70Y-D	Key Alike		–	1

Refer to 1 : P.718

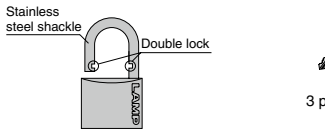
No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Paint/Silver
②	Striker		
③	Button	Polyacetal (POM)	Grey
④	Cover	Zinc Alloy (ZDC)	Paint/Silver

HIGH SECURITY PADLOCK PWL



- Provides high security with stainless steel shackle and double lock. Besides, no key number marked on the body prevents illegal use.
- 110 key changes available.
- Sealing tool series also available.

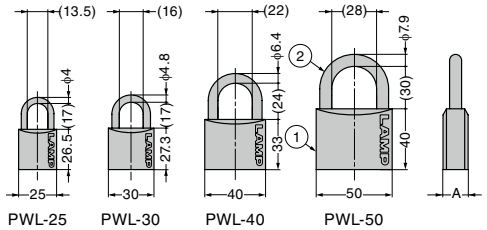
[Remarks]
- Be sure to read the "Cautions" 1.
- Cannot specify key number when ordering.

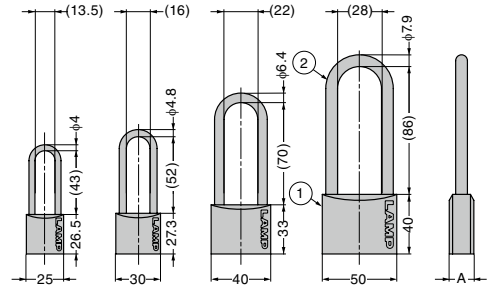




3 pcs (included)

No.	Part Name	Material	Finish
①	Body	Brass	Chrome
②	Shackle	Stainless Steel (SUS304)	–
③	Key	Brass	Nickel





RoHS	CAD	Item Code	Item Name	A	Weight (g) ※	Box (pcs)	Carton (pcs)
–	3D	150-013-023	PWL-25	11.5	54	10	100
–	3D	150-013-024	PWL-30	12.8	78	10	100
–	3D	150-013-025	PWL-40	13.8	143	10	100
–	3D	150-013-026	PWL-50	16.5	254	5	50
–	3D	150-013-027	PWL-25L	11.5	63	10	100
–	3D	150-013-028	PWL-30L	12.8	91	10	100
–	3D	150-013-029	PWL-40L	13.8	168	10	100
–	3D	150-013-030	PWL-50L	16.5	297	5	50

Refer to 1 : P.718

※Weight may greatly vary depending on different lots. Please check with the actual item.

LAMP®

CASTERS

Casters are a kind of hardware for moving carts or equipment smoothly by using wheels.
Sugatsune offers a characteristic series of casters with various load capacities and heights, and medical casters with excellent design and easy field operation, etc. You can select appropriate products by various factors such as the wheel material suitable for the floor surface, the shaft mechanism vital to smooth movement, as well as locking, braking and other additional functions.

SUGATSUNE

Updated 2017.10.27

HEAVY DUTY CASTERS
SINGLE WHEEL CASTERS
TWIN WHEEL CASTERS
CASTERS WITH LEVELLING GLIDES
BALL CASTERS
SLIDING DOOR ROLLERS

■Outline of Casters

■Heavy Duty Casters
P.756~



■Single Wheel Casters
P.765~



■Twin Wheel Casters
P.769~



■Casters With Levelling Glides
P.790~



■Ball Casters
P.792



■Sliding Door Rollers
P.793~



A caster is used for easily moving or handling objects. It is attached to various conveyors and equipment and used by human force on indoor flat floor surface.
Please select the proper caster as per the application and use conditions, and install it correctly.

■Cautions for selection

- Please select casters within the load capacity range that meet the required conditions. Overload may cause damage, cracks or deformation of the product. Load capacity is just an example of measurement values obtained in the test under our company's reliable data and specific conditions, not guaranteed value.
  For example, when using 4 casters, the total load shall be multiplied by safety factor (0.75).

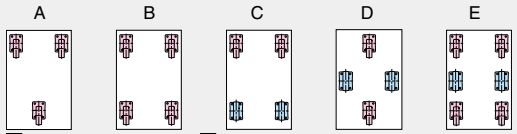
  Total load N (kgf) = Load capacity N (kgf) × 4 (pcs) × 0.75

  In addition, the safety factor (0.75) may vary depending on use conditions such as movement surface and movement speed. Before use, please select types suitable for your purpose.
- Do not use for power traction and mechanical parts. High speed rotation or continuous movement may cause damage, cracks and deformation of the products due to overload, impact, thermal accumulation, etc.
- Do not use in special environment. Use in environments such as low temperature, high temperature and high humidity or under the influence of acids, alkalis, salts, solvents, oils, etc. may significantly shorten the service life, or cause deterioration and breakage of the product.
- Since rubber wheels may contaminate the floor surface, please confirm with the actual item.

■Cautions for use

- Please use it on a flat floor. Vibration due to uneven surfaces like asphalt or impact incurred by level difference may cause damage, cracks or deformation of the products.
- Do not apply excessive load to the caster.Overload, impact produced by putting down heavy objects or excessive force applied in a direction different from the rotation direction of the wheel may cause damage, cracks or deformation of the products.
- Do not apply excessive force to the stopper.Load on the stopper due to placing on an inclined surface, travelling with the stopper locked or using as a brake during movement, etc. may damage the product, cause injuries or damage the surrounding objects.

■Effective characteristics can be obtained by combining swivel type and non-swivel type caster.



A | Compared with B, using (2+1) swivel type casters is more economical, but the stability is poor.

B | Using 4 swivel type casters can realise effective movement even in a narrow place.

C | The combination of 2 swivel type casters and 2 non-swivel type casters is common. Installing the handle at the swivel type caster side may improve operability.

D | Compared with C, combining 2 swivel type casters and 2 non-swivel type casters in the centre is more effective in a narrow place. A central non-swivel type caster larger than the swivel type caster may bear most of the load and provides better operability.

E | Combining 4 swivel type casters and 2 non-swivel type casters arranged in the centre is suitable for cases with increased load.

High

Economy	Stability	Operability※	Load Capacity
A	B / C	A / B	E
C / D	D / E	D / E	B / C / D
B	A	C	A

※Operability indicates whether it is suitable for "use in a narrow place" .

■Outline of Casters

Heavy Duty Casters

P.756~764

Product Name	Load Capacity N (kgf)	Wheel: Single/Twin Wheel	Wheel: Dia. (φ mm)	Wheel: Width (mm)	Wheel: Material	Installation Type: Plate Type	Installation Type: Threaded Bolt Type	Installation Type: Insert Bolt Type	Swivel: Swivel Type	Swivel: Non-Swivel Type	Lock/Brake Operation: Wheel Lock	Lock/Brake Operation: Wheel Brake	Lock/Brake Operation: Swivel Lock	Page
Heavy Duty Casters SDYHU (Made to Order) 	6860 (700) ~ 17150 (1750)	Single Wheel	100	65	PUR	●	–	–	●	●	–	–	–	P.756
			125			●	–	–	●	●	–	–	–	
			150			●	–	–	●	●	–	–	–	
			200			●	–	–	●	●	–	–	–	
Low Profile Heavy Duty Caster UHG 	4000 (408) ~ 8000 (816)	Single Wheel	50	38	Phenol Resin (PF)	●	–	–	●	–	–	–	–	P.757
			65	48	MC Reinforced (PA) Reinforced Polyamide	●	–	–	●	–	–	–	–	
			75		Conductive MC Reinforced (PA)	●	–	–	●	–	–	–	–	
			80		MC Polyamide	●	–	–	●	–	–	–	–	
			100			●	–	–	●	–	–	–	–	
Low Profile Heavy Duty Caster HG 	1600 (163.2)	Single Wheel	50	28	Reinforced (PA)	●	–	–	●	–	–	–	–	P.757
	3000 (306)		65	38	Phenol Resin (PF)	●	–	–	●	–	–	–	–	
	3200 (326.4)		75			●	–	–	●	–	–	–	–	
Shock-Absorbing Caster TP 	749.7 (76.5) ~ 6272 (640)	Single Wheel	151	44	PUR	●	–	–	●	●	–	–	–	P.758 ~ P.759
			201.5			●	–	–	●	●	–	–	–	
			203.2	70		●	–	–	●	●	–	–	–	
Dual Brake System Caster MX 	1176 (120)	Single Wheel	125	36	PA / PUR	●	●	–	●	–	●	–	●	P.760 ~ P.761
Dual Brake System Caster EX-100 	980 (100)	Single Wheel	100	32	PA / PUR	●	●	–	●	–	–	●	●	P.762 ~ P.763

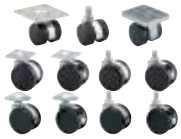
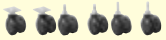
Single Wheel Casters

P.765~768

Product Name	Load Capacity N (kgf)	Wheel: Single/Twin Wheel	Wheel: Dia. (φ mm)	Wheel: Width (mm)	Wheel: Material	Installation Type: Plate Type	Installation Type: Threaded Bolt Type	Installation Type: Insert Bolt Type	Swivel: Swivel Type	Swivel: Non-Swivel Type	Lock/Brake Operation: Wheel Lock	Lock/Brake Operation: Wheel Brake	Lock/Brake Operation: Swivel Lock	Page
Stainless Steel Caster SUS-SJ SUS 	686 (70)	Single Wheel	65	25	Polyamide	●	–	–	●	–	–	●	–	P.766
	784 (80)		75		Polyamide/Urethane	●	–	–	●	–	–	●	–	
	1176 (120)		100	32		●	–	–	●	–	–	●	–	
Stainless Steel Caster SUS-SK SUS 	686 (70)	Single Wheel	65	25	Polyamide/Urethane	●	–	–	–	●	–	–	–	P.767
	784 (80)		75			●	–	–	–	●	–	–	–	
	1176 (120)		100	32		●	–	–	–	●	–	–	–	
PLN Design Caster 	785 (80)	Single Wheel	50	14	PA	●	–	–	●	–	–	–	–	P.768
						–	●	–	●	–	–	–	–	
Stainless Steel Caster SUS-ET SUS 	380 (38.8)	Single Wheel	50	–	Urethane Rubber (UR)	–	●	–	●	–	–	●	–	P.765
	400 (40.8)		65			–	●	–	●	–	–	●	–	
	450 (45.9)		75			–	●	–	●	–	–	●	–	
	600 (61.2)		100			–	●	–	●	–	–	●	–	

Twin Wheel Casters

P.769~789

Product Name	Load Capacity	Wheel				Installation Type			Swivel		Lock/Brake Operation			Page
											Wheel		Swivel	
	N (kgf)	Single/ Twin Wheel	Dia. (ϕ mm)	Width (mm)	Material	Plate Type	Threaded Bolt Type	Insert Bolt Type	Swivel Type	Non-Swivel Type	Lock	Brake	Lock	
Twin Wheel Caster GX 	1960 (200)	Twin Wheel	50	64.5	POM	●	●	–	●	●	–	–	–	P.769 ~ P.771 , P.773
	980 (100)			(52.5)	PA	●	●	–	●	–	●	–	–	
	1470 (150)		60	44		●	●	–	●	–	●	–	–	
	1960 (200)		75	58		●	●	–	●	–	●	–	–	
Parts Separable Caster CNP SUS 	588 (60)	Twin Wheel	50	70	PA	●	–	–	●	–	–	–	–	P.772
	1176 (120)		75	85		●	–	–	●	–	–	–	–	
Parts Separable Caster CNB SUS 	588 (60)	Twin Wheel	50	70	PA	–	●	–	●	–	–	–	–	P.772
	1176 (120)		75	85		–	●	–	●	–	–	–	–	
Twin Wheel Caster T, TSD 	784 (80)	Twin Wheel	76	61	PA, PUR	●	●	–	●	–	●	–	●	P.774 ~ P.775
	980 (100)		100	69		●	●	–	●	–	●	–	●	
Design Caster FS (Made to Order) 	490 (50)	Twin Wheel	–	–	–	●	●	–	–	–	●	–	–	P.775
Twin Wheel Caster MFD 	686 (70)	Twin Wheel	75	52	PA, PUR	●	●	–	●	–	●	–	●	P.776
	784 (80)		100	64		●	●	–	●	–	●	–	●	
	882 (90)		125	74		●	●	–	●	–	●	–	●	
Twin Wheel Caster DB, DS 	490 (50)	Twin Wheel	40.5	39.5	PA	●	●	–	●	–	●	–	–	P.777
	784 (80)		50.5	46		●	●	–	●	–	●	–	–	
Twin Wheel Caster MUDR 	784 (80)	Twin Wheel	100	64	PA, PUR	●	–	–	–	●	–	–	–	P.778
Twin Wheel Caster FAU55 	686 (70)	Twin Wheel	59	(46)	PA + Elastomer (TPE)	●	●	●	●	–	●	–	–	P.780
Twin Wheel Caster FPU55 	490 (50)	Twin Wheel	59	(46)	PA + Elastomer (TPE)	●	●	●	●	–	●	–	–	P.781
Twin Wheel Caster FA55 	784 (80)	Twin Wheel	59	(46)	PA	●	●	–	●	–	●	–	–	P.782
Twin Wheel Caster FP55 	490 (50)	Twin Wheel	59	(46)	PA	●	●	–	●	–	●	–	–	P.782 ~ P.783
Twin Wheel Caster FA45 	490 (50)	Twin Wheel	47	43	PA	●	●	–	●	–	●	–	–	P.783
Twin Wheel Caster FP45 	392 (40)	Twin Wheel	47	43	PA	●	●	–	●	–	●	–	–	P.784

Twin Wheel Casters

P.769~789

Product Name	Load Capacity	Wheel				Installation Type			Swivel		Lock/Brake Operation			Page
											Wheel		Swivel	
	N (kgf)	Single/ Twin Wheel	Dia. (ϕ mm)	Width (mm)	Material	Plate Type	Threaded Bolt Type	Insert Bolt Type	Swivel Type	Non-Swivel Type	Lock	Brake	Lock	
Twin Wheel Caster NB,NS 	392 (40)	Twin Wheel	40	45	PA	●	●	–	●	–	●	–	–	P.785
						●	●	–	●	–	–	–	–	
	588 (60)		50	53		●	●	–	●	–	●	–	–	
						●	●	–	●	–	–	–	–	
Twin Wheel Caster JP 	490 (50)	Twin Wheel	50	57	PA	●	●	–	●	–	●	–	–	P.786
	588 (60)		60	65		●	●	–	●	–	●	–	–	
Twin Wheel Caster BR 	294 (30)	Twin Wheel	45	42	PA	●	●	●	●	–	●	–	–	P.787 ~ P.788
	392 (40)		53	48		●	●	●	●	–	●	–	–	
Twin Wheel Caster BU 	392 (40)	Twin Wheel	53	48	PA / PUR	●	●	●	●	–	●	–	–	P.788 ~ P.789
Twin Wheel Caster PT-30 	200 (20.4)	Twin Wheel	30	32	PA	●	–	–	●	–	–	–	–	P.789

With Levelling Glides

P.790~791

Product Name	Load Capacity	Wheel				Installation Type			Swivel		Lock/Brake Operation			Page
											Wheel		Swivel	
	N (kgf)	Single/ Twin Wheel	Dia. (ϕ mm)	Width (mm)	Material	Plate Type	Threaded Bolt Type	Insert Bolt Type	Swivel Type	Non-Swivel Type	Lock	Brake	Lock	
Caster With Levelling Glide AF 	2499 (255)	Single Wheel	50	45	PA	●	–	–	●	–	–	–	–	P.790
			65			●	–	–	●	–	–	–	–	
Parts Separable Caster (w/Glide) CAP 	588 (60)	Twin Wheel	50	70	PA/Elastomer (TPE)	●	–	–	●	–	–	–	–	P.791
	1176 (120)		75	85		●	–	–	●	–	–	–	–	
Parts Separable Caster (w/Glide) CAB 	588 (60)	Twin Wheel	50	70	PA/Elastomer (TPE)	–	●	–	●	–	–	–	–	P.791
	1176 (120)		75	85		–	●	–	●	–	–	–	–	

Ball Casters

P.792

Product Name		Ball Dia. (ϕmm)	Installation Type: Front Screw Mount	Installation Type: Recessed Mount	Load Capacity N (kgf)	Page
Ball Caster (Surface Mount Type) 	BM	11.9, 14.3, 17.5, 22.2, 25.4	●	–	98 (10), 118 (12), 147 (15), 245 (25), 392 (40)	P.792
Plastic Caster (Threaded Bolt Type) 	NT	25	–	●	245 (25)	P.792
Plastic Caster (Surface Mount Type) 	NS	25	●	–	245 (25)	P.792
Ball Caster (Recessed Mount Type) 	BH	17.5, 22.2, 25.4	–	●	98 (10), 147 (15), 196 (20)	P.792
Mini Ball Caster (Recessed Mount Type) 	BHB-12	12	–	●	78.4 (8)	P.792

Sliding Door Rollers

P.793~800

With Bracket Non-bracket

Wheel Shape		Product Name	Wheel Dia. (ϕmm)	Load Capacity N (kgf)	Page		Product Name	Wheel Dia. (ϕmm)	Page
L-shaped		SUS Stainless Steel Sliding Door Roller JS315	120, 150 200	14700 (1500) ~ 27440 (2800)	P.793		SUS Stainless Steel Sliding Door Roller JS325	120, 150 200	P.793
V-shaped		SUS Stainless Steel Sliding Door Roller JS300	50, 60 75, 90 110, 150 200	3920 (400) ~ 27440 (2800)	P.794		SUS Stainless Steel Sliding Door Roller JS310	50, 60 75, 90 110, 150 200	P.794
U-shaped		SUS Stainless Steel Sliding Door Roller JS365	50, 60 75, 90 110, 150 200	3920 (400) ~ 27440 (2800)	P.795		SUS Stainless Steel Sliding Door Roller JS380	50, 60 75, 90 110, 150 200	P.795
Flat		SUS Stainless Steel Sliding Door Roller JS375	50, 60 75, 90 110, 150 200	3920 (400) ~ 27440 (2800)	P.796		SUS Stainless Steel Sliding Door Roller JS385	50, 60 75, 90 110, 150 200	P.796
V-shaped		Sliding Door Roller JC100	50, 60 75, 90 105, 120 150, 200	3430 (350) ~ 24500 (2500)	P.797		Sliding Door Roller JC110	50, 60 75, 90 105, 120 150, 200	P.797
U-shaped		Sliding Door Roller JC135	50, 60 75, 90 105, 120 150, 200	3430 (350) ~ 24500 (2500)	P.798		Sliding Door Roller JC145	50, 60 75, 90 105, 120 150, 200	P.798
Flat		Sliding Door Roller JC140	50, 60 75, 90 105, 120 150, 200	3430 (350) ~ 24500 (2500)	P.799		Sliding Door Roller JC150	50, 60 75, 90 105, 120 150, 200	P.799
L-shaped		Sliding Door Roller JC115	90, 120 150, 200	6370 (650) ~ 24500 (2500)	P.800		Sliding Door Roller JC120	90, 120 150, 200	P.800

Understandable! Selectable! Usable!

Sugatsune Website

http://www.sugatsune-intl.com

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- View product introduction video
- Browse digital web catalogue
  Refer to Back Cover
- Use product selection tool
  Refer to Back Cover
- Download installation instructions

SUGATSUNE Search

HEAVY DUTY CASTERS SDYHU

Made to Order | LOAD CAPACITY 6860~17150 N



- Thrust bearing and tapered bearing at swivelling part of swivel type caster provide excellent swivel performance.
- Small play between body and wheel reduces noise.
- Anti-static urethane wheel prevents dust from adhering.
- Operating temperature: -10℃~ 60℃.

[Applications]

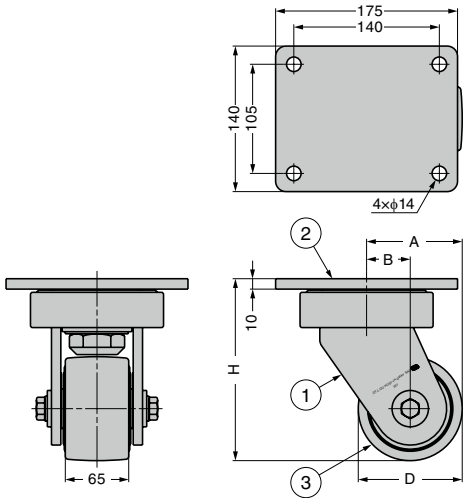
- LCD manufacturing equipment, semiconductor manufacturing equipment, etc.

[Remarks]

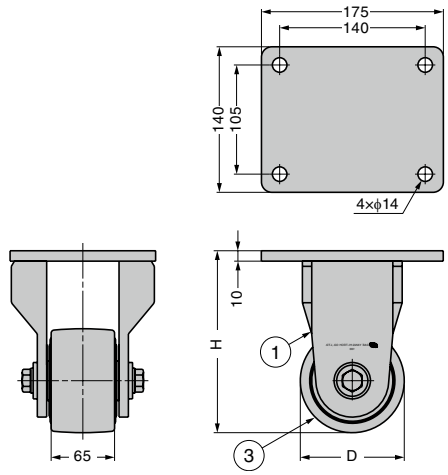
- Please use at a speed less than 4km/h.

[Urethane Roller Physical Properties]

	Test Result	Test Method
Hardness	95	ASTM D-2240
Tensile Strength	40MPa	ASTM D-412
Elongation	350%	
Tear Strength	10MPa	ASTM D-624



Swivel type



Non-swivel type

No.	Part Name	Material	Finish/Colour
①	Body	Steel	Black Chromate
②	Plate		
③	Wheel	PUR	Yellow

[Swivel Type]

RoHS	CAD	Item Code	Item Name	D	H	A	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	–	SDYHU-100SF	100	175	92	42	6860	700	8.1	–	–
–	3D	–	SDYHU-125SF	125	198	111	48	10290	1050	8.6	–	–
–	3D	–	SDYHU-150SF	150	222	125	50	14210	1450	9.55	–	–
–	3D	–	SDYHU-200SF	200	270	160	60	17150	1750	11.55	–	–

[Non-swivel Type]

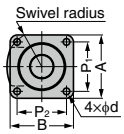
RoHS	CAD	Item Code	Item Name	D	H	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	–	SDYHU-100RF	100	175	6860	700	5.23	–	–
–	3D	–	SDYHU-125RF	125	198	10290	1050	5.95	–	–
–	3D	–	SDYHU-150RF	150	222	14210	1450	6.83	–	–
–	3D	–	SDYHU-200RF	200	270	17150	1750	8.95	–	–

LOW PROFILE HEAVY DUTY CASTER UHG Plate Type

LOAD CAPACITY 4000~8000 N

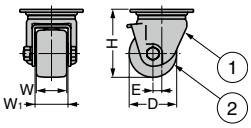


- Small heavy duty type with low profile.
- High performance bearing reduces starting force.
- Carburised and quenched main metal parts provide outstanding durability and load capacity.



[Applications]

- Medical equipment, automatic equipment, semiconductor equipment, financial equipment, other heavy equipment required for space-saving, long-term fixed heavy equipment, etc.



[Phenol Wheel] Item Name Suffix "PB"



High surface hardness and excellent resistance against oil, heat and compression.

[MC Polyamide Wheel] Item Name Suffix "MC"



Excellent load capacity, friction resistance, heat resistance and cold resistance and low starting resistance provide low probability of floor damage.

[Conductive MC Polyamide Wheel] Item name suffix "MCE"



Conductive MC polyamide wheel can play the role of earthing.

[Reinforced Polyamide Wheel] Item name suffix "GFB"



Excellent load capacity and impact resistance compared with polyamide wheel.

No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
②	Wheel	Item Name Suffix "PB" : Phenol Resin (PF)	Black
		Item Name Suffix "MC" : MC Reinforced (PA)	Blue
		Item Name Suffix "MCE" : Conductive MC Reinforced (PA)	Black
		Item Name Suffix "GFB" : Reinforced (PA)	

RoHS	CAD	Item Code	Item Name	Wheel Material	D	H	E	W	W1	A	B	P1	P2	d	Swivel Radius	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	–	200-130-840	UHG-50-PB	Phenol Resin (PF)	50	79	12	38	42	84	84	64	64	8.5	49	4000	408	814	20	–
G	3D	200-130-290	UHG-50-MC	MC Polyamide														810	20	–
G	–	200-130-291	UHG-50-MCE	Conductive MC Reinforced Polyamide														815	20	–
G	–	200-130-841	UHG-65-PB	Phenol Resin (PF)	65	97	14	48	51.5	100	100	78	78	10.5	57	5000	510	1581	12	–
G	3D	200-130-292	UHG-65-GFB	Reinforced Polyamide												4000	408	1469	12	–
G	3D	200-130-293	UHG-65-MC	MC Polyamide												6000	612	1600	12	–
G	–	200-130-294	UHG-65-MCE	Conductive MC Reinforced Polyamide														1600	12	–
G	3D	200-130-842	UHG-75-PB	Phenol Resin (PF)	75	107												1677	12	–
G	3D	200-130-295	UHG-75-GFB	Reinforced Polyamide												5000	510	1521	12	–
G	–	200-130-296	UHG-75-MC	MC Polyamide												7000	714	1800	12	–
G	–	200-130-297	UHG-75-MCE	Conductive MC Reinforced Polyamide														1670	12	–
G	–	200-130-298	UHG-80-MC	MC Polyamide	80	120	20				85	80	60	9.0	62	8000	816	1695	12	–
G	–	200-139-432	UHG-100-MC		100	140				150	110	121	59	13.0	72			2145	8	–

LOW PROFILE HEAVY DUTY CASTERS HG Plate Type

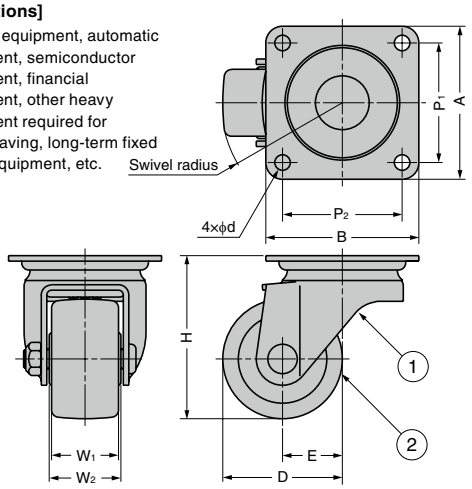
LOAD CAPACITY 1600~3200 N



- Small heavy duty type with low profile.
- High performance bearing reduces starting force (HG-50GNB excluded).
- Carburised and quenched main metal parts provide outstanding durability and load capacity.

[Applications]

- Medical equipment, automatic equipment, semiconductor equipment, financial equipment, other heavy equipment required for space-saving, long-term fixed heavy equipment, etc.



[Reinforced Polyamide Wheel] Item Name Suffix "GNB"



Excellent load capacity and impact resistance compared with polyamide wheel.

[Phenol Wheel] Item Name Suffix "PB"



High surface hardness and excellent resistance against oil, heat and compression.

No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
②	Wheel	Item Name Suffix "GNB" : Reinforced (PA)	Black
		Item Name Suffix "PB" : Phenol Resin (PF)	

RoHS	CAD	Item Code	Item Name	Wheel Material	D	H	E	W1	W2	A	B	P1	P2	d	Swivel Radius	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-399	HG-50GNB	Reinforced Polyamide	50	68	25	28	30	64	64	50	50	6.5	51	1600	163.2	320	36	–
G	3D	200-130-400	HG-65PB	Phenol Resin (PF)	65	92	22	38	42	90	90	71	71	10.5	57	3000	306	880	20	–
G	3D	200-130-401	HG-75PB		75	106									61	3200	326.4	970	20	–

SHOCK-ABSORBING CASTER TP Plate Type

LOAD CAPACITY 749.7~6272 N



TP-150LF-A-RD shown.

- Quiet movement: Elastic polyurethane wheel reduces noise during movement. (Refer to the moving noise comparison below).
- Stable movement: Excellent wheel side runout prevention, even travelling on a bad road.
- Long wheel life: Stable movement and small wheel wear ensure long service life of the wheel.
- Reduced starting force: Damping mechanism allows for easily moving a pallet carrying heavy load with a small force.

[Choose From Six Types of Springs According to Application]
(Refer to item name table for details.)


Yellow


Blue

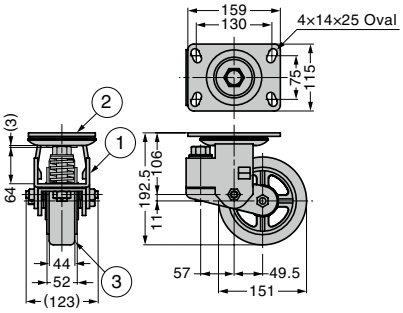

Red


Red

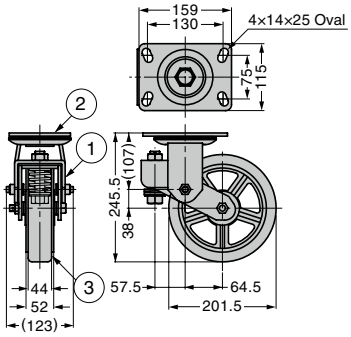

Green


Brown

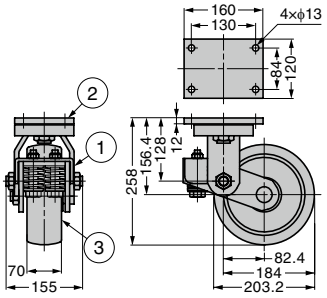
[TP-150LF]



[TP-200LF]

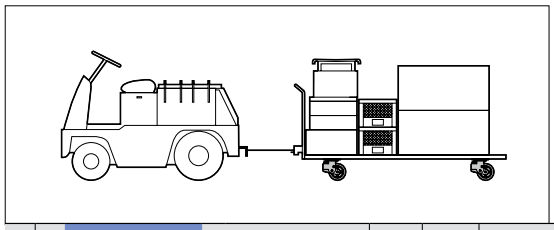


[TPAH-200LF] Made to Order



Please also refer to [Application Example] 1.

- Swivel type and non-swivel type casters are used in combination. Refer to 2 for the arrangement.



[Moving Noise Comparison]

	Nomal Rubber Caster	Shock-Absorbing Caster (This Product)
Loaded	83dB	59dB
Unloaded	94dB	65dB

No.	Part Name	Material	Finish/Colour
①	Body	Steel	Clear Zinc Chromate
②	Plate		
③	Wheel	PUR	Red
④	Spring	Steel	Paint/See Below

The standard load of shock-absorbing caster represents the load at which the best impact absorption effect can be obtained.

RoHS	CAD	Item Code	Item Name	Wheel Dia.	Spring Colour	Load Capacity N/pc	Load Capacity kgf/pc	Standard Load N/pc	Standard Load kgf/pc	Max. Spring Compressed Length	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	200-130-714	TP-150LF-A-YE	151	Yellow	980	100	749.7	76.5	20	5.1	4	–
–	3D	200-130-715	TP-150LF-A-BU		Blue	2116	216	1481.7	151.2			4	–
–	3D	200-130-716	TP-150LF-A-RD		Red	3136	320	2195.2	224	16		4	–
–	3D	200-130-717	TP-200LF-A-YE	201.5	Yellow	980	100	749.7	76.5	20	6.7	2	–
–	3D	200-130-718	TP-200LF-A-BU		Blue	2116	216	1481.7	151.2			2	–
–	3D	200-130-719	TP-200LF-A-RD		Red	3136	320	2195.2	224	16		2	–
–	3D	200-012-504	※TPAH-200LF-A-RD	203.2		4900	500	3724	380	14.4	15	2	–
–	3D	200-012-505	※TPAH-200LF-A-GN		Green	7056	720	5096	520	10.8		2	–
–	3D	200-012-506	※TPAH-200LF-A-BR		Brown	7840	800	6272	640	9		2	–

Refer to 1 : P.759, 2 : P.750

※Made to order (production lead time: about 60 days).

SHOCK-ABSORBING CASTER TP Plate & Non-swivel Type

LOAD CAPACITY 749.7~6272 N



TP-150LC-A-RD shown.

- Quiet movement: Elastic polyurethane wheel reduces noise during movement. (Refer to the moving noise comparison below).
- Stable movement: Excellent wheel side runout prevention, even travelling on a bad road.
- Long wheel life: Stable movement and small wheel wear ensure long service life of the wheel.
- Reduced starting force: Damping mechanism allows for easily moving a pallet carrying heavy load with a small force.

[Choose From Six Types of Springs According to Application]
(Refer to item name table for details.)


Yellow


Blue

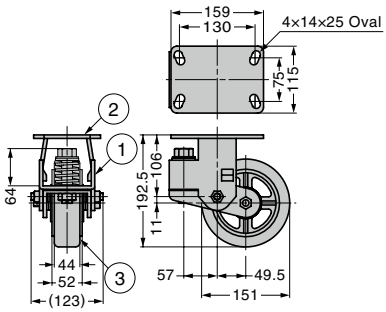

Red


Red

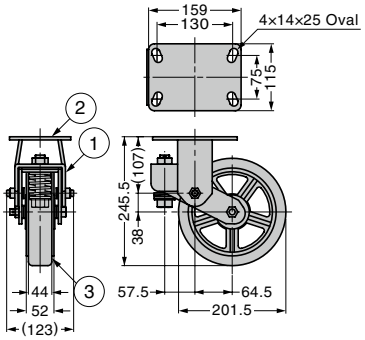

Green


Brown

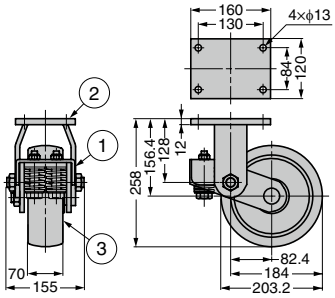
[TP-150LC]



[TP-200LC]



[TPAH-200LC] Made to Order



Please also refer to [Application Example] 1.

- Swivel type and non-swivel type casters are used in combination. Refer to 2 for the arrangement.



[Moving Noise Comparison]

	Nomal Rubber Caster	Shock-Absorbing Caster (This Product)
Loaded	83dB	59dB
Unloaded	94dB	65dB

No.	Part Name	Material	Finish/Colour
①	Body	Steel	Clear Zinc Chromate
②	Plate		
③	Wheel	PUR	Red
④	Spring	Steel	Paint/See Below

The standard load of shock-absorbing caster represents the load at which the best impact absorption effect can be obtained.

RoHS	CAD	Item Code	Item Name	Wheel Dia.	Spring Colour	Load Capacity N/pc	Load Capacity kgf/pc	Standard Load N/pc	Standard Load kgf/pc	Max. Spring Compressed Length	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	200-130-720	TP-150LC-A-YE	151	Yellow	980	100	749.7	76.5	20	5.1	4	–
–	3D	200-130-721	TP-150LC-A-BU		Blue	2116	216	1481.7	151.2			4	–
–	3D	200-130-722	TP-150LC-A-RD		Red	3136	320	2195.2	224	16		4	–
–	3D	200-130-723	TP-200LC-A-YE	201.5	Yellow	980	100	749.7	76.5	20	6.7	2	–
–	3D	200-130-724	TP-200LC-A-BU		Blue	2116	216	1481.7	151.2			2	–
–	3D	200-130-725	TP-200LC-A-RD		Red	3136	320	2195.2	224	16		2	–
–	3D	200-012-507	※TPAH-200LC-A-RD	203.2		4900	500	3724	380	14.4	13.5	2	–
–	3D	200-012-508	※TPAH-200LC-A-GN		Green	7056	720	5096	520	10.8		1	–
–	3D	200-012-509	※TPAH-200LC-A-BR		Brown	7840	800	6272	640	9		2	–

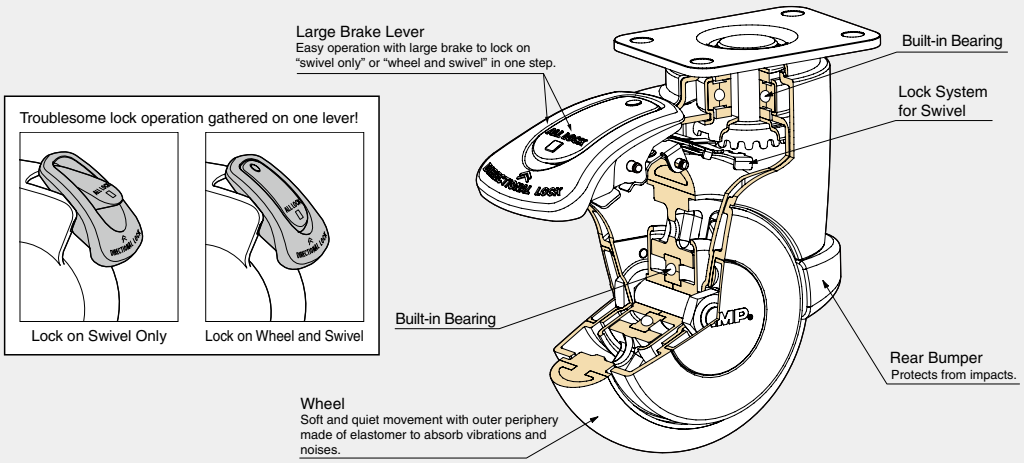
Refer to 1 : P.758, 2 : P.750

※Made to order (production lead time: about 60 days).

SUGATSUNE

DUAL BRAKE SYSTEM CASTER MX-125

Design with Excellent User-friendliness



DUAL BRAKE SYSTEM CASTER MX-125P Plate Type

LOAD CAPACITY 1176 N



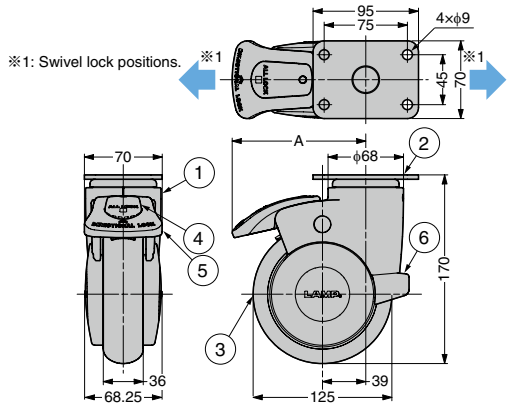
- Ideal for frequent use such as equipment in hospitals and laboratories.
- Easy switching between "swivel" lock and "wheel+swivel" lock with one lock lever.
- Large lock lever for easy operation.
- Works as non-swivel type when swivel is locked.
- Ball bearing equipped in both swivel and wheel to provide maximum smooth movement.

[Others]

- Colour of logo, cover and lock lever can be changed.

[Remarks]

- To align swivel lock positions (see ※1 in the drawing below) for caster with brake, fix the caster with the plate longitudinal direction consistent with the moving direction when installing to a cart.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PP	Light Grey
②	Plate	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Wheel	PA/PUR	Dark Grey
④	Brake	PA	Dark Blue
⑤	Brake		Light Blue
⑥	Rear Bumper	PUR	Dark Grey

RoHS	CAD	Item Code	Item Name	Type	A	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-053	MX-125PS	With Brake	120.5	1176	120	1444	2	8
G	3D	200-130-052	MX-125P	Without Brake	101.5			1357	2	8

DUAL BRAKE SYSTEM CASTER MX-125N Threaded Bolt Type

LOAD CAPACITY 1176 N



- Ideal for frequent use such as equipment in hospitals and laboratories.
- Easy switching between “swivel” lock and “wheel+swivel” lock with one lock lever.
- Large lock lever for easy operation.
- Works as non-swivel type when swivel is locked.
- Ball bearing equipped in both swivel and wheel to provide maximum smooth movement.

[Others]

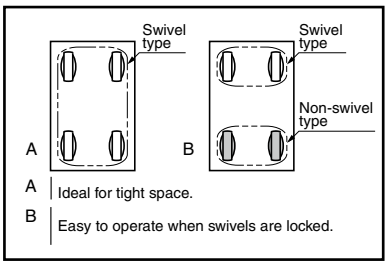
- Colour of logo, cover and lock lever can be changed.

[Remarks]

- To align swivel lock positions (see ※1 in the drawing below) for caster with brake, fix the caster with the slit direction consistent with the pushing direction when installing to a cart.

[Application Example]

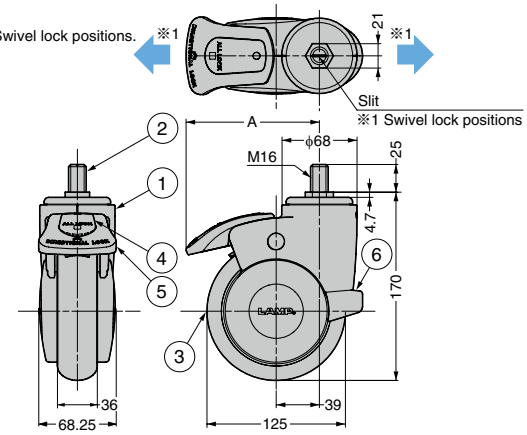
- w/ Brake type is easy to switch the types of carriage as below.



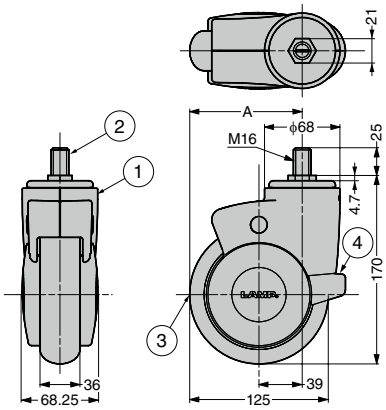
HEAVY DUTY CASTERS
SINGLE WHEEL CASTERS
TWIN WHEEL CASTERS
CASTERS WITH LEVELLING GLIDES
BALL CASTERS
SLIDING DOOR ROLLERS

- w/ Brake

※1 : Swivel lock positions.



- w/o Brake



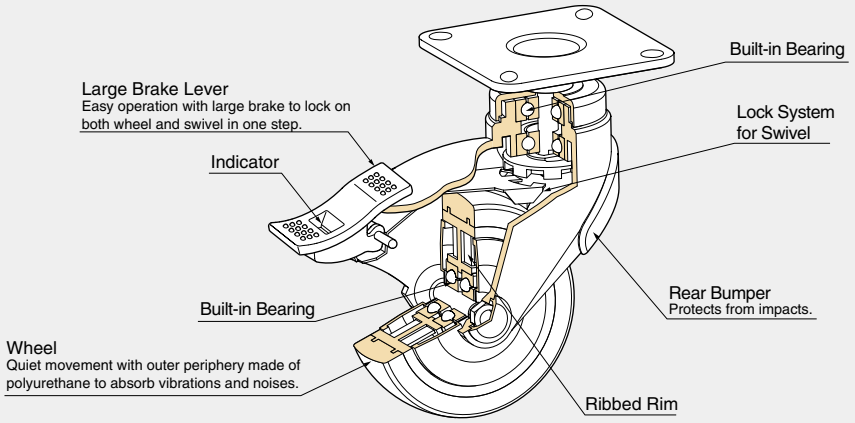
No.	Part Name	Material	Finish/Colour
①	Body	PP	Light Grey
②	Threaded Bolt	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Wheel	PA/PUR	Dark Grey
④	Brake	PA	Dark Blue
⑤	Brake		Light Blue
⑥	Rear Bumper	PUR	Dark Grey

No.	Part Name	Material	Finish/Colour
①	Body	PP	Light Grey
②	Screw	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Wheel	PA/PUR	Dark Grey
④	Rear Bumper	PUR	

RoHS	CAD	Item Code	Item Name	Type	A	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-055	MX-125N16S	w/ Brake	120.5	1176	120	1301	2	8
G	3D	200-130-054	MX-125N16	w/o Brake	101.5			1209	2	8

DUAL BRAKE SYSTEM CASTER EX-100

Functional Caster Designed for Easy Operation

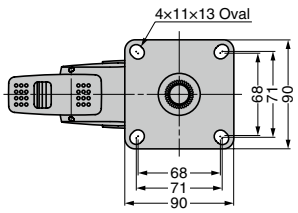


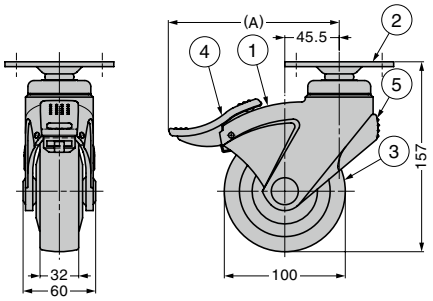
DUAL BRAKE SYSTEM CASTER EX-100P Plate Type

LOAD CAPACITY 980 N



- Brake indicator for easy recognition.
- Locks both wheel and swivel.
- Large brake lever for easy operation.
  Since the brake lever protrudes the wheel, operation is unaffected even if the installation position of the caster is slightly inward from the edge of upper cabinet.
- Ball bearing equipped in both swivel and wheel to provide smooth movement.
- Rear bumper protects from impacts.
- W/o brake type has also front rubber bumper to protect foot.





No.	Part Name	Material	Finish/Colour
①	Body	PA	Light Grey
②	Plate	Steel (SPHC)	Clear Zinc Chromate
③	Wheel	PA/PUR	Grey
④	Brake	PA	
⑤	Rear Bumper	Elastomer (TPE)	

RoHS	CAD	Item Code	Item Name	Type	A	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-132-735	EX-100PS	With Brake	139	980	100	888	20	–
–	3D	200-132-734	EX-100P	Without Brake	105			873	20	–

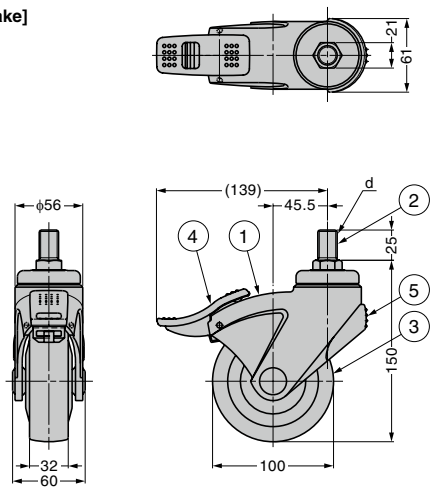
DUAL BRAKE SYSTEM CASTER EX-100N Threaded Bolt Type

LOAD CAPACITY 980 N

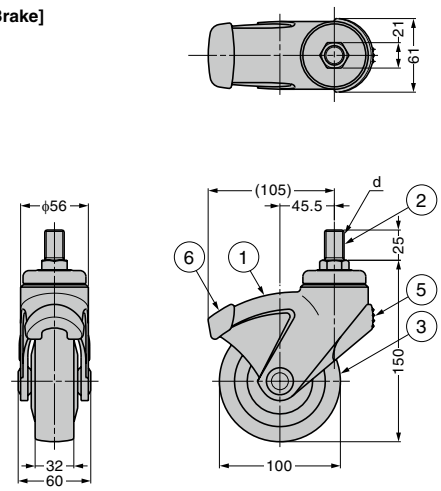


- Brake indicator for easy recognition.
- Locks both wheel and swivel.
- Large brake lever for easy operation.
  Since the brake lever protrudes the wheel, operation is unaffected even if the installation position of the caster is slightly inward from the edge of upper cabinet.
- Ball bearing equipped in both swivel and wheel to provide smooth movement.
- Rear bumper protects from impacts.
- W/o brake type has also front rubber bumper to protect foot.

[w/ Brake]



[w/o Brake]



No.	Part Name	Material	Finish/Colour
①	Body	PA	Light Grey
②	Threaded Bolt	Steel (SWCH)	Clear Zinc Chromate
③	Wheel	PA/PUR	Grey
④	Brake	PA	
⑤	Rear Bumper	Elastomer (TPE)	
⑥	Front Bumper		

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-132-736	EX-100N12S	w/ Brake	M12	980	100	680	20	–
–	3D	200-132-730	EX-100N12	w/o Brake				641	20	–
–	3D	200-132-733	EX-100N16S	w/ Brake	M16			686	20	–
–	3D	200-132-732	EX-100N16	w/o Brake				661	20	–

HIGH DURABILITY URETHANE ROLLER DIGEST

Made to Order



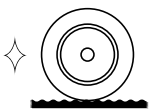


Twin wheel, swivel type　Swivel type　Non-swivel

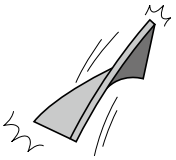
- High durability.
- Can be used for various purposes such as driving wheel, caster, and bearing roller, etc. Especially suitable for handling system and stacker for semiconductors and glass substrates and FA system, etc.
- Wheel diameters can be made to order. (Minimal order quantity 4 pcs~)
- Operating temperature: -10˚C~ 80˚C.

[Remarks]

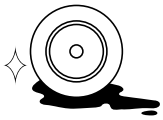
- Please use at a speed less than 10km/h.
- Wheel may discolour after long-term use, but the performance is not affected.



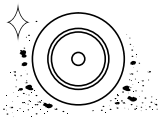
Wear resistant!



Break resistant!



Oil proof!



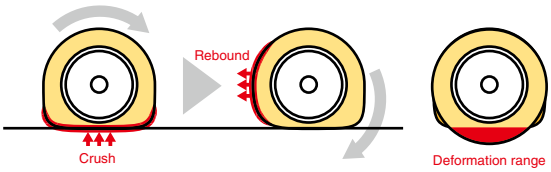
Prevents dust adhesion

(Anti-static urethane/electrical resistance: 10^6~10^9 Ω cm)

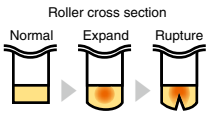
Physical Properties

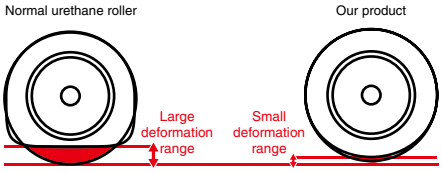
Hardness	Shore A95
100% Tensile Modulus	12.5 MPa
300% Tensile Modulus	19.1 MPa
Tear Strength	151 KN/m
Tensile Strength	50 MPa
Elongation	560%
Rebound Resilience	**63%**
Compression Set	24%

Excellent Rebound Resilience



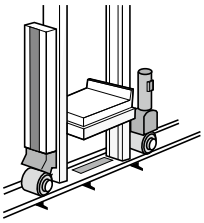
Repeated process of deformation by compression and restoration may occur in the ground contact part as the roller rotates. The heat generated by such deformation may expand urethane and thus rupture it.



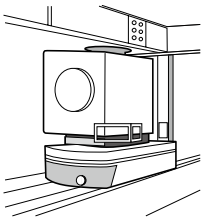


The product has excellent rebound resilience (capacity of restoring to the original shape) and small deformation range, which may suppress heat generation.Besides, the heat resistance of urethane itself is also high, making it less susceptible to deterioration.

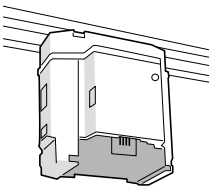
Stacker



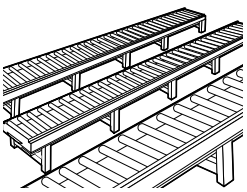
RGV(AGV)



OHT



Conveyor



STAINLESS STEEL CASTER SUS-ET Threaded Bolt Type

LOAD CAPACITY 380~600 N SUS



- Stainless steel (SUS304) body provides excellent corrosion resistance.
- Conductive rubber wheels also available.
- Anti-static urethane wheel with diameter ϕ100 also available.

[How to order] When installing caster to aluminium frame.

※Please select both caster (single item) and base installation parts set 1 and specify the item names of both.

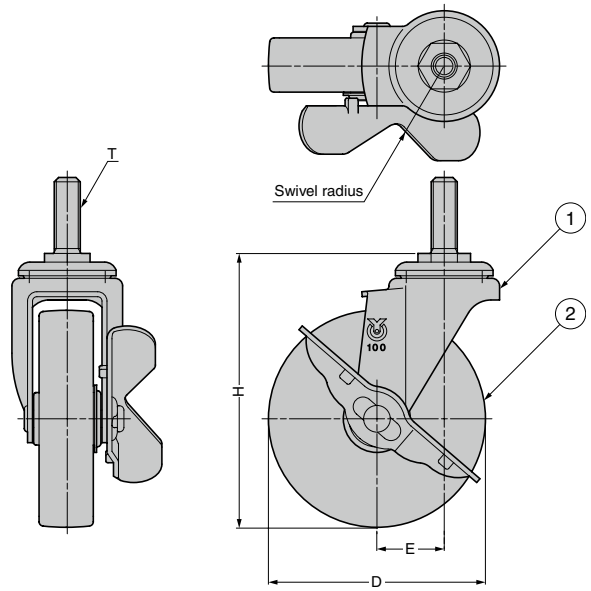
※Refer to the relevant pages when ordering base 2 and AS nut 3 separately.

[Sold Separately]

- Base installation parts set

[Base Installation Parts Set] Sold Separately





Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Wheel	Urethane Rubber (UR)	Brown + White

RoHS	CAD	Item Code	Item Name	Type	D	H	E	T	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-867	SUS-ET-50UR	Without Brake	50	68	22	M12	380	38.8	175	100	–
G	3D	200-130-883	SUS-ET-65URS	With Brake	65	85	23		400	40.8	220	60	–
G	3D	200-130-870	SUS-ET-65UR	Without Brake							195	70	–
G	3D	200-130-886	SUS-ET-75URS	With Brake	75	95	27		450	45.9	230	50	–
G	3D	200-130-873	SUS-ET-75UR	Without Brake							210	60	–
G	3D	200-130-890	SUS-ET-100URS	With Brake	100	126	31		600	61.2	470	20	–
G	3D	200-130-877	SUS-ET-100UR	Without Brake							405	24	–

Refer to 1 2 : P.832, 3 : P.706

STAINLESS STEEL CASTER SUS-SJ Plate Type

LOAD CAPACITY 686~1176 N SUS



Picture above is a urethane wheel with built-in bearing.


N: Polyamide wheel

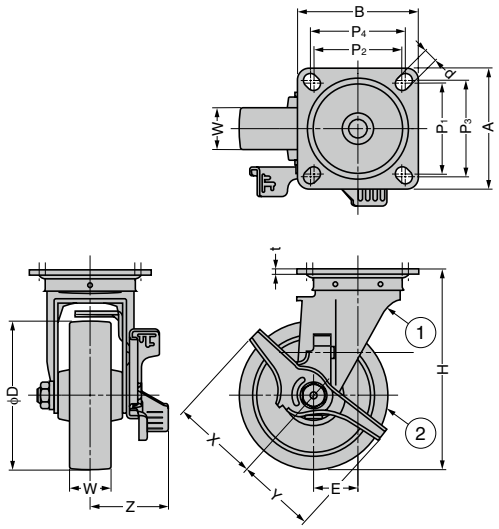

NWB: Polyamide wheel (w/ Bearing)


UWB: Polyurethane wheel (w/ Bearing)

- Made of 304 stainless steel with excellent corrosion resistance. Ideal for humid environments, laboratories, and kitchens, etc.

[Remarks]

- When ordering, please confirm the type of wheel and the presence/absence of brake in the table below.



Drawing above shows the model with brake.

No.	Material	Finish/Colour
①	Stainless Steel (SUS304)	Polished
②	Polyamide	As below
	Urethane	

w/ B: With Bearing

RoHS	CAD	Item Code	Item Name	Type	Wheel	Wheel Colour	D	W	H	E	A	B	P_1	P_2	P_3	P_4	d	t	X	Y	Z	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-134-218	SUS-SJ65-S-N	With Brake	Polyamide	White	65	25	85	29	70	58	55	42	–	–	8.8	2	38	37	45	686	70	320	40	–
G	3D	200-134-220	SUS-SJ65-S-UWB		Urethane (w/ B)	Ivory/Dark Brown																		340	40	–
G	3D	200-134-217	SUS-SJ65-N	Without Brake	Polyamide	White													–	–	–			280	50	–
G	3D	200-134-219	SUS-SJ65-UWB		Urethane (w/ B)	Ivory/Dark Brown																		300	50	–
G	3D	200-134-224	SUS-SJ75-S-N	With Brake	Polyamide	White	75		93	28									38	37	45	784	80	360	40	–
G	3D	200-134-226	SUS-SJ75-S-UWB		Urethane (w/ B)	Ivory/Dark Brown																		380	40	–
G	3D	200-134-223	SUS-SJ75-N	Without Brake	Polyamide	White													–	–	–			310	50	–
G	3D	200-134-225	SUS-SJ75-UWB		Urethane (w/ B)	Ivory/Dark Brown																		320	50	–
G	3D	200-134-232	SUS-SJ100-S-N	With Brake	Polyamide	White	100	32	132	35	90	90	68	68	71	71	11	3	55	53	60	1176	120	950	15	–
G	–	200-134-234	SUS-SJ100-S-NWB		Polyamide (w/ B)																			1030	15	–
G	3D	200-134-236	SUS-SJ100-S-UWB		Urethane (w/ B)	Ivory/Dark Brown																		1070	15	–
G	3D	200-134-231	SUS-SJ100-N	Without Brake	Polyamide	White													–	–	–			820	15	–
G	–	200-134-233	SUS-SJ100-NWB		Polyamide (w/ B)																			900	15	–
G	3D	200-134-235	SUS-SJ100-UWB		Urethane (w/ B)	Ivory/Dark Brown																		940	15	–

STAINLESS STEEL CASTER SUS-SK Plate & Non-swivel Type

LOAD CAPACITY 686~1176 N SUS



Urethane wheel with bearing shown.

- Made of 304 stainless steel with excellent corrosion resistance. Ideal for humid environments, laboratories, and kitchens, etc.

[Remarks]

- The mounting hole shapes vary depending on the size of the caster.
- When ordering, please confirm the type of wheel in the table below.



N: Polyamide wheel

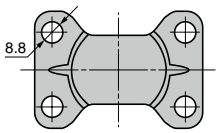


NWB: Polyamide wheel (w/Bearing)

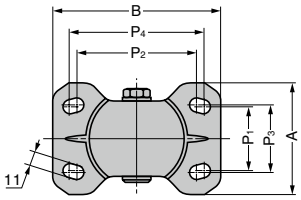


UWB: Polyurethane wheel (w/ Bearing)

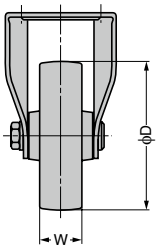
[Mounting Hole]

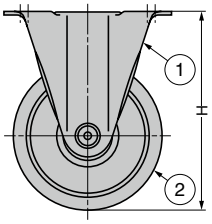


For ϕD65·75 mm



For ϕD100 mm





No.	Material	Finish/Colour
①	Stainless Steel (SUS304)	Polished
②	Polyamide / Urethane	As below

w/ B: With Bearing

RoHS	CAD	Item Code	Item Name	Wheel	Wheel Colour	D	W	H	A	B	P_1	P_2	P_3	P_4	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-134-255	SUS-SK65-N	Polyamide	White	65	25	85	47	70	28	55	–	–	686	70	160	50	–
G	3D	200-134-257	SUS-SK65-UWB	Urethane (w/ B)	Ivory/Dark Brown												180	50	–
G	–	200-134-261	SUS-SK75-N	Polyamide	White	75		93							784	80	200	50	–
G	3D	200-134-263	SUS-SK75-UWB	Urethane (w/ B)	Ivory/Dark Brown												220	50	–
G	–	200-134-269	SUS-SK100-N	Polyamide	White	100	32	132	78	110	45	80	50	90	1176	120	570	15	–
G	–	200-134-271	SUS-SK100-NWB	Polyamide (w/ B)													650	15	–
G	3D	200-134-273	SUS-SK100-UWB	Urethane (w/ B)	Ivory/Dark Brown												690	50	–

PLN DESIGN CASTER



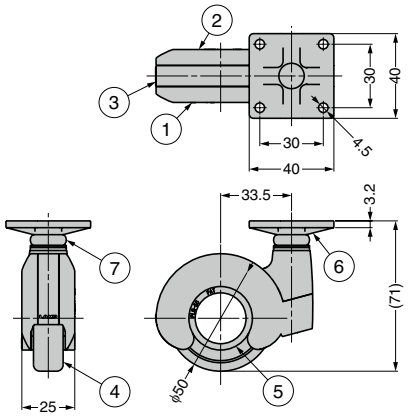


- Improved PL caster provides higher load capacity and operability.
- Excellent design
  Unique design with hollow wheel centre. Combination of smooth curve and black or chrome plating.
- Improved load capacity and operability
  Steel ball bearing improves load capacity and rotation smoothness.
- Wide range of applications
  Medical equipment, audio products, beauty equipment, wagons, chairs, travel bags, and displays, etc.

DESIGN CASTER PLN50P Plate Type

LOAD CAPACITY 785 N





[Remarks]
- Do not use it on a nonsmooth surface. Deformation, damage or wheel detachment may occur.
- The load capacities in the table below are static load values.

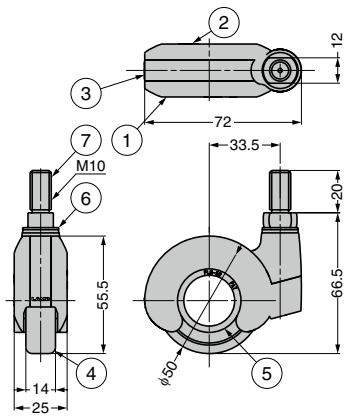
No.	Part Name	Material	Finish/Colour
①	Body (Right)	Zinc Alloy (ZDC)	As below.
②	Body (Left)		
③	Cover	POM	Dark Grey
④	Wheel	PA	Black
⑤	Inner Ring		Dark Grey
⑥	Plate	Steel	Coloured Zinc Chromate
⑦	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished

RoHS	CAD	Item Code	Item Name	Finish/Colour (Body)	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-022-220	PLN50PBL	Paint/Black	785	80	220	1	28
G	3D	200-022-221	PLN50PCR	Chrome				1	28

DESIGN CASTER PLN50N Threaded Bolt Typ

LOAD CAPACITY 785 N





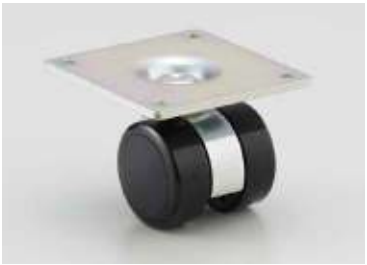
[Remarks]
- Do not use it on a nonsmooth surface. Deformation, damage or wheel detachment may occur.
- The load capacities in the table below are static load values.

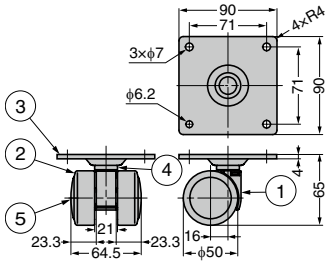
No.	Part Name	Material	Finish/Colour
①	Body (Right)	Zinc Alloy (ZDC)	As below.
②	Body (Left)		
③	Cover	POM	Dark Grey
④	Wheel	PA	Black
⑤	Inner Ring		Dark Grey
⑥	Mounting Plate	Stainless Steel (SUS304)	Barrel Polished
⑦	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Finish/Colour (Body)	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-022-218	PLN50N10BL	Paint/Black	785	80	203	1	40
G	3D	200-022-219	PLN50N10CR	Chrome				1	40

TWIN WHEEL CASTER GX-W50GP Plate Type

LOAD CAPACITY 1960 N





- Low profile and heavy duty. Ideal for OA equipment, etc.
- Stable twin wheel structure provides smooth movement and excellent durability.
- Use in combination with GX-W50K 1 for easy handling.

[Remarks]

- The load capacities in the table below indicate the loads when moving on a smooth surface.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy	Barrel Polished
②	Wheel	POM	Black
③	Plate	Steel (SPCC)	Coloured Zinc Chromate
④	Shaft	Steel (SWCH)	
⑤	Cover	PA	Black

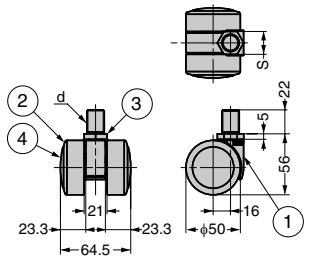
RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	–	200-130-027	GX-W50GP	1960	200	420	2	40

Refer to 1 : P.769

TWIN WHEEL CASTER GX-W50GN Threaded Bolt Type

LOAD CAPACITY 1960 N





- Low profile and heavy duty. Ideal for OA equipment, etc.
- Stable twin wheel structure provides smooth movement and excellent durability.

[Remarks]

- The load capacities in the table below indicate the loads when moving on a smooth surface.

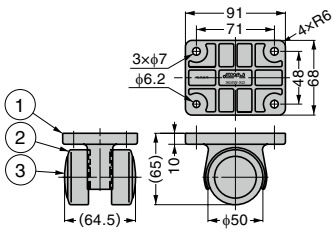
No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy	Barrel Polished
②	Wheel	POM	Black
③	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate
④	Cover	PA	Black

RoHS	CAD	Item Code	Item Name	d	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-028	GX-W50GN12	M12	19	1960	200	208	4	80
G	3D	200-130-029	GX-W50GN16	M16	21			223	4	80

TWIN WHEEL CASTER GX-W50K Non-swivel Plate Type

LOAD CAPACITY 1960 N





- Stable twin wheel structure provides smooth movement and excellent durability.
- Use in combination with GX-W50GP 1 for easy handling.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Barrel Polished
②	Wheel	POM	Black
③	Cover	PA	

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-032	GX-W50K	1960	200	300	2	48

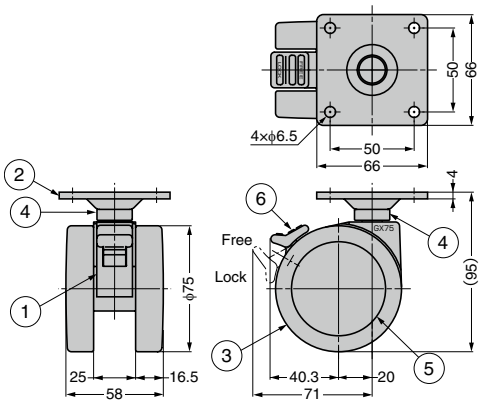
Refer to 1 : P.769

TWIN WHEEL CASTER GX75P Plate Type

LOAD CAPACITY 1960 N



●Stable twin wheel structure provides smooth movement and excellent durability.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Barrel Polished
②	Plate	Steel	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Shaft	Steel (SWCH)	Coloured Zinc Chromate
⑤	Cover	PA	Black
⑥	Lever		

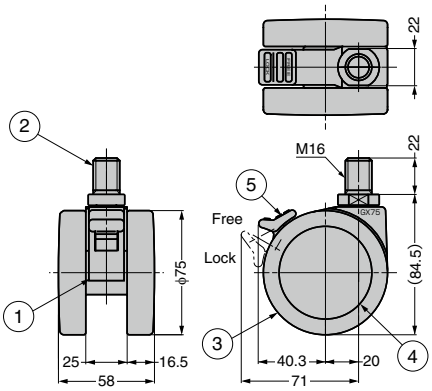
RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-218	GX75PS	With Brake	1960	200	445	2	24
G	3D	200-133-217	GX75P	Without Brake			430	2	24

TWIN WHEEL CASTER GX75N16 Threaded Bolt Type

LOAD CAPACITY 1960 N



●Stable twin wheel structure provides smooth movement and excellent durability.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Barrel Polished
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover		
⑤	Lever		

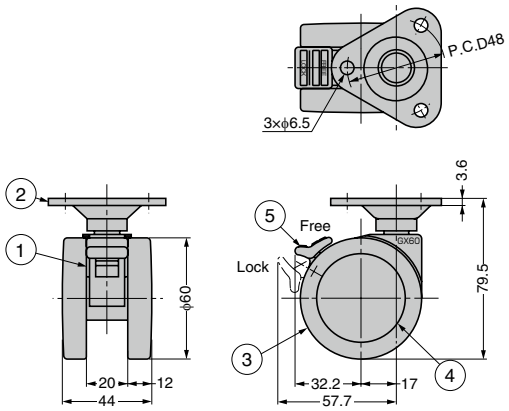
RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	–	200-133-220	GX75N16S	With Brake	1960	200	350	2	24
G	–	200-133-219	GX75N16	Without Brake			340	2	24

TWIN WHEEL CASTER GX60P Plate Type

LOAD CAPACITY 1470 N



●Stable twin wheel structure provides smooth movement and excellent durability.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Barrel Polished
②	Plate	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)
③	Wheel	PA	Black
④	Cover		
⑤	Lever		

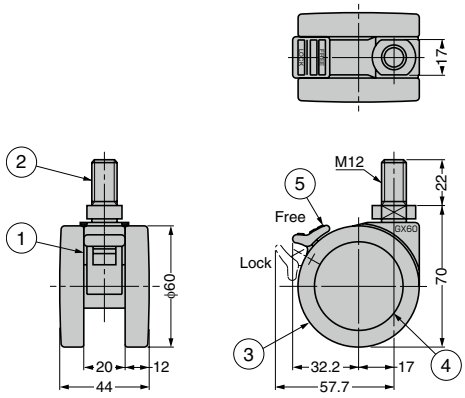
RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-181	GX60PS	With Brake	1470	150	225	4	60
G	3D	200-130-033	GX60P	Without Brake				4	60

TWIN WHEEL CASTER GX60N12 Threaded Bolt Type

LOAD CAPACITY 1470 N



●Stable twin wheel structure provides smooth movement and excellent durability.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Barrel Polished
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
③	Wheel	PA	Black
④	Cover		
⑤	Lever		

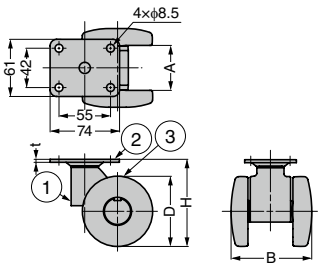
RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-183	GX60N12S	With Brake	1470	150	185	4	60
G	3D	200-133-182	GX60N12	Without Brake			180	4	60

PARTS SEPARABLE CASTER CNP Plate Type

LOAD CAPACITY 588~1176 N SUS


Black

●Non-levelling glide type of caster CAP 1.



No.	Part Name	Material	Finish/Colour
①	Body	PA	Black (B)/White (W)
②	Plate	Steel	Coloured Zinc Chromate
		Stainless Steel (SUS304)	Passivation※
③	Wheel	PA	Black (B)/White (W)

※ Passivation is a kind of surface treatment providing rust protection for stainless steel.

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	D	H	A	B	t	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-242	CNPF50B	Steel, PA	Coloured Zinc Chromate, Black	50	63	40	70	3.2	588	60	270	40	–
G	3D	200-130-243	CNPF50W		Coloured Zinc Chromate, White									40	–
G	3D	200-130-244	CNPF75B		Coloured Zinc Chromate, Black	75	92	50	85		1176	120	390	20	–
G	3D	200-130-245	CNPF75W		Coloured Zinc Chromate, White									20	–
G	3D	200-130-252	CNPS50W	Stainless Steel, PA	Passivation, White	50	63	40	70	3	588	60	270	40	–
G	3D	200-130-253	CNPS75W			75	92	50	85		1176	120	390	20	–

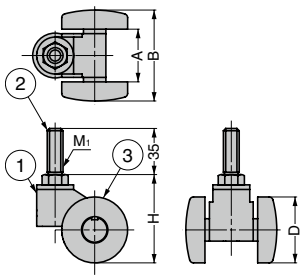
Refer to 1 : P.791

PARTS SEPARABLE CASTER CNB Threaded Bolt Type

LOAD CAPACITY 588~1176 N SUS


White

●Non-levelling glide type of caster 1.



No.	Part Name	Material	Finish/Colour
①	Body	PA	Black (B)/White (W)
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
		Stainless Steel (SUS304)	Passivation※
③	Wheel	PA	Black (B)/White (W)

※ Passivation is a kind of surface treatment providing rust protection for stainless steel.

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	D	H	A	B	M_1	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-234	CNBF50B	Steel, PA	Coloured Zinc Chromate, Black	50	67	40	70	M12	588	60	230	40	–
G	3D	200-130-235	CNBF50W		Coloured Zinc Chromate, White									40	–
G	3D	200-130-236	CNBF75B		Coloured Zinc Chromate, Black	75	96	50	85	M16	1176	120	360	20	–
G	3D	200-130-237	CNBF75W		Coloured Zinc Chromate, White									20	–
G	3D	200-130-248	CNBS50W	Stainless Steel, PA	Passivation, White	50	67	40	70	M12	588	60	230	40	–
G	3D	200-130-249	CNBS75W			75	96	50	85	M16	1176	120	360	20	–

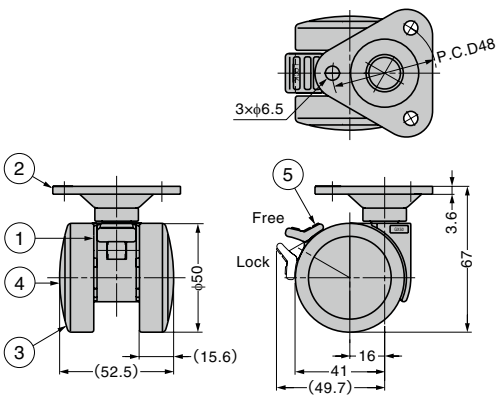
Refer to 1 : P.791

TWIN WHEEL CASTER GX50P Plate Type

LOAD CAPACITY 980 N



●Stable twin wheel structure provides smooth movement and excellent durability.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy	Barrel Polished
②	Plate	Steel	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover		
⑤	Lever		

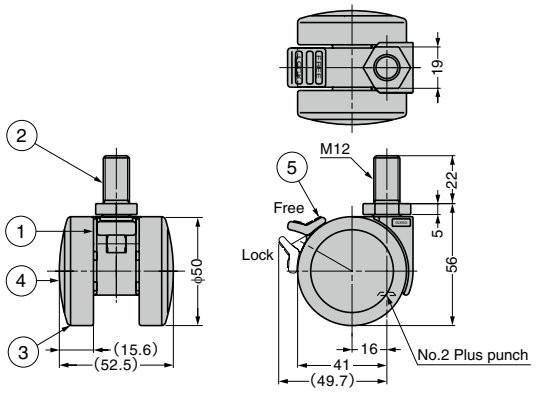
RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-173	GX50PS	With Brake	980	100	235	4	72
G	3D	200-133-172	GX50P	Without Brake			230	4	72

TWIN WHEEL CASTER GX50N12 Threaded Bolt Type

LOAD CAPACITY 980 N



●Stable twin wheel structure provides smooth movement and excellent durability.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy	Barrel Polished
②	Threaded Bolt	Steel	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover		
⑤	Lever		

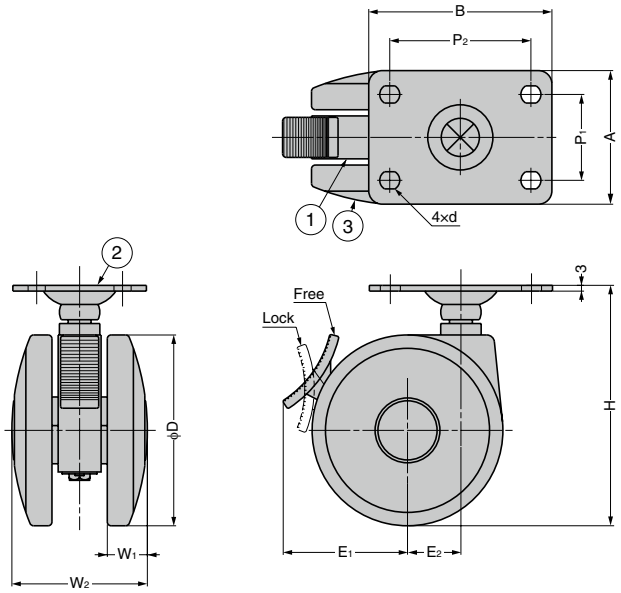
RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-175	GX50N12S	With Brake	980	100	175	4	72
G	3D	200-133-174	GX50N12	Without Brake			170	4	72

TWIN WHEEL CASTER T, TSD Plate Type

LOAD CAPACITY 784~980 N



- Easy operation to lock on both wheel and swivel in one step.
- Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement.



TSD-100P shown.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Light Grey
②	Plate	Steel	Clear Zinc Chromate (Trivalent)
③	Wheel	PA + PUR	Light Grey

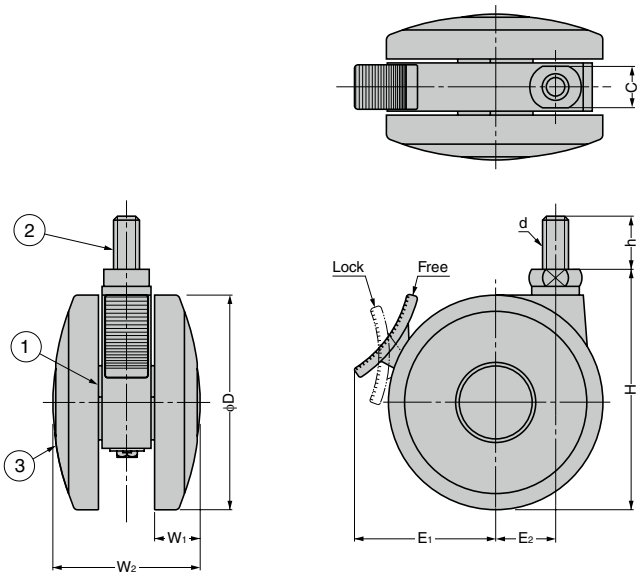
RoHS	CAD	Item Code	Item Name	Type	D	W1	W2	H	A	B	P1	P2	E1	E2	d φ	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-167	TSD-75P	With Brake	76	19	61	94	58	70	42	55	45	21	8.5	784	80	340	–	60
G	3D	200-130-166	T-75P	Without Brake														320	–	60
G	3D	200-130-431	TSD-100P	With Brake	100	20	69	126.5	70	96	45	74	64	28	9×10.5 Oval	980	100	710	–	20
G	3D	200-130-432	T-100P	Without Brake														700	–	20

TWIN WHEEL CASTER T, TSD Threaded Bolt Type

LOAD CAPACITY 784~980 N



- Easy operation to lock on both wheel and swivel in one step.
- Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement.



TSD-100B shown.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Light Grey
②	Threaded Bolt	Steel	Clear Zinc Chromate (Trivalent)
③	Wheel	PA + PUR	Light Grey

RoHS	CAD	Item Code	Item Name	Type	D	W_1	W_2	H	h	E_1	E_2	C	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-169	TSD-75B	With Brake	76	19	61	86	20	45	21	17	M10	784	80	260	60	–
G	3D	200-130-165	T-75B	Without Brake												240	60	–
G	3D	200-130-430	TSD-100B	With Brake	100	20	69	117.5	25	64	28	21	M12×1.25	980	100	565	20	–
G	3D	200-130-168	T-100B	Without Brake												555	20	–

DESIGN CASTER FS Plate Type/Threaded Bolt Type

Made to Order

LOAD CAPACITY 490 N



- 8 cover colours available.
- The cover is removable.
- With lock level to lock the wheel.
- Wheel diameter is φ75.
- Minimum order is 60 pcs.

[Remarks]

- Be careful not to scratch the cover when removing it.

[Colours]



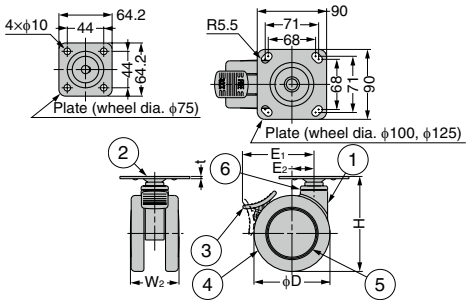
TWIN WHEEL CASTER MFD Plate Type

LOAD CAPACITY 686~882 N





- The brake can lock the wheel rotation and mounting part swivel at the same time.
- Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement.



No.	Part Name	Material	Finish/Colour
①	Body	PA	Light Grey ※
②	Plate	Steel	Coloured Zinc Chromate
③	Stopper Pedal	PA	Light Grey
④	Wheel	PA, PUR	
⑤	Cover	PP	Light Grey ※
⑥	Shaft Cover	PA	Light Grey

※Item name suffix "GWP" means white colour.

RoHS	CAD	Item Code	Item Name	Type	D	E1	E2	H	W2	t	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-130-359	MFDB-75GP	With Brake	75	71	21.5	104	52	3.2	686	70	408	50	–
–	3D	200-130-358	MFD-75GP	Without Brake		–							384	50	–
–	3D	200-130-363	MFDB-100GP	With Brake	100	94	29	132.5	64	4	784	80	831	24	–
–	3D	200-130-362	MFD-100GP	Without Brake		–							793	24	–
–	3D	200-130-370	MFDB-125GWP	With Brake	125	119	39	158.5	74		882	90	1112	24	–
–	3D	200-130-369	MFD-125GWP	Without Brake		–							1066	24	–

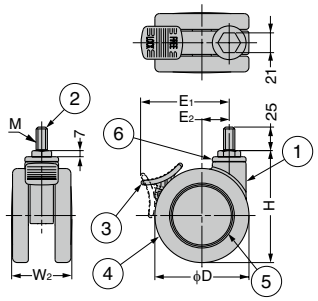
TWIN WHEEL CASTER MFD Threaded Bolt Type

LOAD CAPACITY 686~882 N





- The brake can lock the wheel rotation and mounting part swivel at the same time.
- Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement.



No.	Part Name	Material	Finish/Colour
①	Body	PA	Light Grey ※
②	Threaded Bolt	Steel	Coloured Zinc Chromate
③	Stopper Pedal	PA	Light Grey
④	Wheel	PA, PUR	
⑤	Cover	PP	Light Grey ※
⑥	Shaft Cover	PA	Light Grey

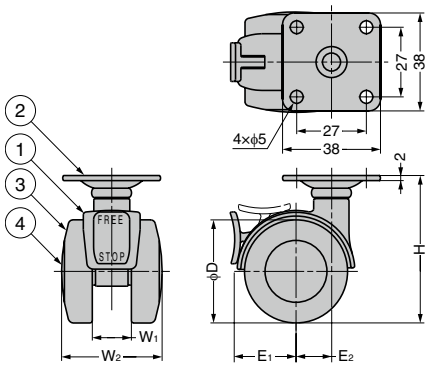
※Item name suffix "GWT" means white colour.

RoHS	CAD	Item Code	Item Name	Type	D	E1	E2	H	W2	M	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-130-361	MFDB-75GT	With Brake	75	71	21.5	95	52	M12	686	70	321	600	–
–	3D	200-130-360	MFD-75GT	Without Brake									295	60	–
–	3D	200-130-365	MFDB-100GT	With Brake	100	94	29	122.5	64		784	80	689	24	–
–	3D	200-130-364	MFD-100GT	Without Brake									642	24	–
–	3D	200-130-368	MFDB-125GWT	With Brake	125	119	39	149	74	M16	882	90	900	24	–
–	3D	200-130-367	MFD-125GWT	Without Brake									841	24	–

TWIN WHEEL CASTER DB, DS Plate Type

LOAD CAPACITY 490~784 N





Drawing above shows the model with brake.

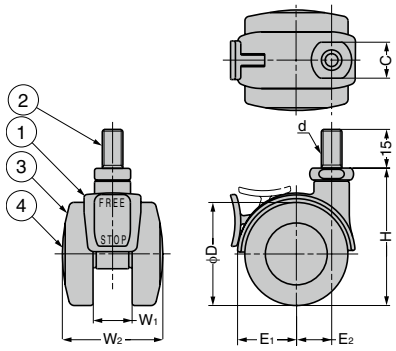
No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Chrome
②	Plate	Steel	Clear Zinc Chromate
③	Wheel	PA	Black
④	Cover	Stainless Steel (SUS430)	–

RoHS	CAD	Item Code	Item Name	Type	D	W1	W2	H	E1	E2	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-506	DB-40P	With Brake	40.5	15	39.5	58.5	27	12.5	490	50	130	120	–
G	3D	200-132-505	DS-40P	Without Brake					23.5				117	120	–
G	3D	200-132-510	DB-50P	With Brake	50.5	18	46	71.5	33.5	17	784	80	210	100	–
G	3D	200-132-509	DS-50P	Without Brake					29				196	100	–

TWIN WHEEL CASTER DB, DS Threaded Bolt Type

LOAD CAPACITY 490~784 N





Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Chrome
②	Threaded Bolt	Steel	Metric Screw Thread: Clear Zinc Chromate Inch Screw Thread: Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover	Stainless Steel (SUS430)	–

RoHS	CAD	Item Code	Item Name	Type	D	W1	W2	H	C	d	E1	E2	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-184	DB-40-3	With Brake	40.5	15	39.5	53.5	14	W3/8	27	12.5	490	50	120	120	–
G	3D	200-132-504	DS-40-3	Without Brake							23.5				107	120	–
G	3D	200-943-860	DB-40-8	With Brake						M8	27				120	120	–
G	3D	200-943-859	DS-40-8	Without Brake							23.5				107	120	–
G	3D	200-132-502	DB-40-10	With Brake						M10	27				120	120	–
G	3D	200-132-501	DS-40-10	Without Brake							23.5				107	120	–
G	3D	200-132-508	DB-50-3	With Brake	50.5	18	46	67.5	17	W3/8	33.5	17	784	80	204	100	–
G	3D	200-132-507	DS-50-3	Without Brake							29				190	100	–
G	3D	200-943-866	DB-50-8	With Brake						M8	33.5				204	100	–
G	3D	200-943-865	DS-50-8	Without Brake							29				190	100	–
G	3D	200-943-868	DB-50-10	With Brake						M10	33.5				204	100	–
G	3D	200-943-867	DS-50-10	Without Brake							29				190	100	–

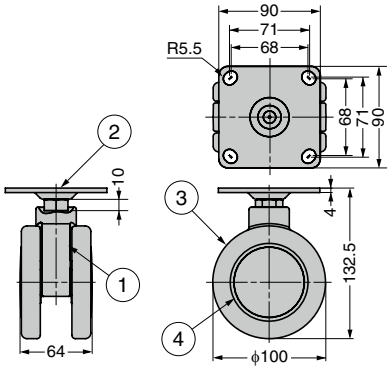
HEAVY DUTY CASTERS
SINGLE WHEEL CASTERS
TWIN WHEEL CASTERS
CASTERS WITH LEVELLING GLIDES
BALL CASTERS
SLIDING DOOR ROLLERS

TWIN WHEEL CASTER MUDR-100GP Plate & Non-swivel Type

LOAD CAPACITY 784 N



- Non-swivel type of MFD caster. Use in combination with MFDB-100GP and MFD-100GP 1 for stable movement.Besides, swivel type and non-swivel type can be unified with the same design.
- Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement.



No.	Part Name	Material	Finish/Colour
①	Body	Reinforced Polyamide	Light Grey
②	Plate	Steel	Coloured Zinc Chromate
③	Wheel	PA, PUR	Light Grey
④	Cover	PP	

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-130-366	MUDR-100GP	784	80	775	24	–

Refer to 1 : P.776

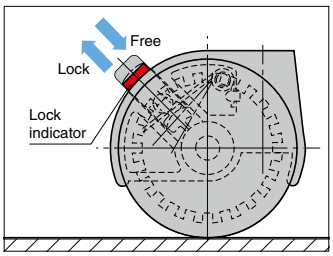
TWIN WHEEL CASTER F-SERIES



- Interior casters with smooth movement, excellent durability and smart design.
- Ideal for use on carpet etc.
- <Plate type>, <threaded bolt type> and <insert bolt type> available for different installation methods.
- All models are equipped with locking mechanism.
- Various types available for different purposes.

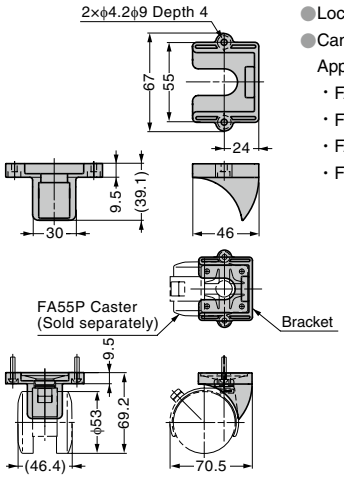
FAU55	Wheel dia. ϕ53 (Elastomer wheel)	Aluminium body
FPU55	Wheel dia. ϕ53 (Elastomer wheel)	Polyamide body
FA55	Wheel dia. ϕ53	Aluminium body
FP55	Wheel dia. ϕ53	Polyamide body
FA45	Wheel dia. ϕ47	Aluminium body
FP45	Wheel dia. ϕ47	Polyamide body

[Locking Mechanism]



BRACKET FOR CASTER FA55-FIX For Caster FAU55P, FPU55P, FA55P, FP55P



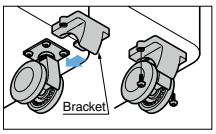


- Locks swivelling.
- Can be installed on following plate type casters.
  Applicable casters :
  - FAU55P 1
  - FPU55P 2
  - FA55P 3
  - FP55P 4

[Application Example]



[Installation]



RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-012-101	FA55-FIX	Reinforced Polyamide	Black	23	500	–

Refer to 1 : P.780, 2 : P.781, 3 4 : P.782

SUGATSUNE

Updated 2017.10.27

TWIN WHEEL CASTER FAU55P Plate Type

LOAD CAPACITY 686 N





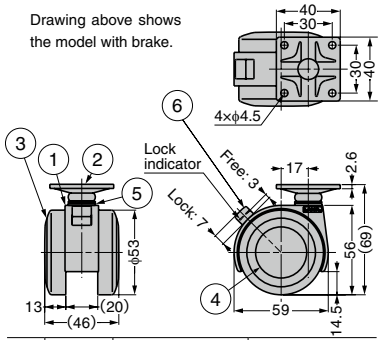
Caster bracket FA55-FIX 1 to lock swivel available.

- Wheels are coated in elastomer which absorbs vibration and gives an extra smooth and quiet movement.
- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle.Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.

Drawing above shows the model with brake.



No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Plate	Steel (SPCC)	Coloured Zinc Chromate
③	Wheel	PA + Elastomer (TPE)	Black
④	Cover	PA	
⑤	Bush		
⑥	Stopper		Black + Red

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-278	FAU55PSR	With Brake	686	70	179	4	72
G	3D	200-133-283	FAU55PR	Without Brake			175	4	72

Refer to 1 : P.779

TWIN WHEEL CASTER FAU55N Threaded Bolt Type

LOAD CAPACITY 686 N

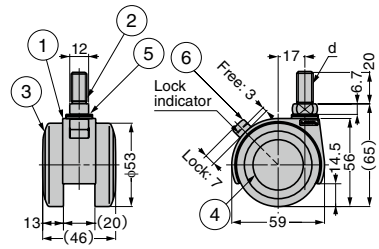


- Wheels are coated in elastomer which absorbs vibration and gives an extra smooth and quiet movement.
- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.
- The threaded bolt has a dished dent at the upper end for N10 only.

Drawing above shows the model with brake.



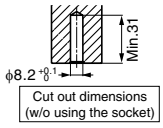
No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA + Elastomer (TPE)	Black
④	Cover	PA	
⑤	Bush		
⑥	Stopper		Black + Red

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-279	FAU55N3SR	With Brake	W3/8	686	70	155	4	72
G	3D	200-133-284	FAU55N3R	Without Brake				151	4	72
G	3D	200-133-280	FAU55N10SR	With Brake	M10			155	4	72
G	3D	200-133-285	FAU55N10R	Without Brake				151	4	72
–	3D	200-133-281	FAU55N12SR	With Brake	M12			155	4	72
G	3D	200-133-286	FAU55N12R	Without Brake				151	4	72

TWIN WHEEL CASTER FAU55S Insert Bolt Type

LOAD CAPACITY 686 N





- Wheels are coated in elastomer which absorbs vibration and gives an extra smooth and quiet movement.
- With red indicator to show locked state.

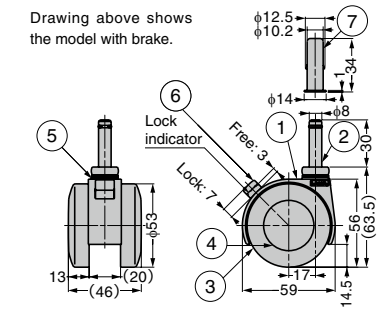
[Remarks]

- Push the stopper to handle.Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.

[Parts Included]

- Socket

Drawing above shows the model with brake.



No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Plate	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA + Elastomer (TPE)	Black
④	Cover	PA	
⑤	Bush		
⑥	Stopper		Black + Red
⑦	Socket	Steel (STKM)	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-909	FAU55SSR	With Brake	686	70	158	–	1
–	3D	200-130-910	FAU55SR	Without Brake			154	–	1

TWIN WHEEL CASTER FPU55P Plate Type

LOAD CAPACITY 490 N

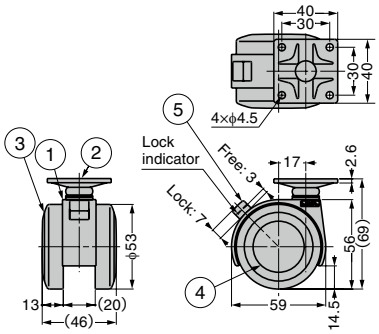


- Wheels are coated in elastomer which absorbs vibration and gives an extra smooth and quiet movement.
- With red indicator to show locked state.

[Remarks]
- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.



Caster bracket FA55-FIX 1 to lock swivel available.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Plate	Steel (SPCC)	Coloured Zinc Chromate
③	Wheel	PA + Elastomer (TPE)	Black
④	Cover	PA	
⑤	Stopper		Black + Red

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-288	FPU55PSR	With Brake	490	50	151	4	72
G	3D	200-133-293	FPU55PR	Without Brake			146	4	72

Refer to 1 : P.779

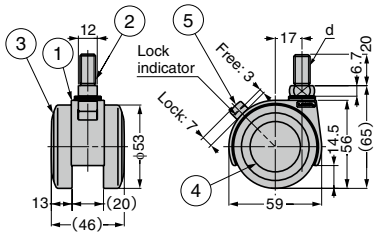
TWIN WHEEL CASTER FPU55N Threaded Bolt Type

LOAD CAPACITY 490 N



- Wheels are coated in elastomer which absorbs vibration and gives an extra smooth and quiet movement.
- With red indicator to show locked state.

[Remarks]
- Push the stopper to handle.Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.
- The threaded bolt has a dished dent at the upper end for N10 only.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA + Elastomer (TPE)	Black
④	Cover	PA	
⑤	Stopper		Black + Red

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-289	FPU55N3SR	With Brake	W3/8	490	50	128	4	72
G	3D	200-133-294	FPU55N3R	Without Brake				123	4	72
G	3D	200-133-290	FPU55N10SR	With Brake	M10			128	4	72
G	3D	200-133-295	FPU55N10R	Without Brake				123	4	72
G	3D	200-133-291	FPU55N12SR	With Brake	M12			128	4	72
G	3D	200-133-296	FPU55N12R	Without Brake				123	4	72

TWIN WHEEL CASTER FPU55S Insert Bolt Type

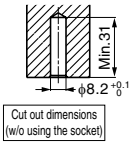
LOAD CAPACITY 490 N



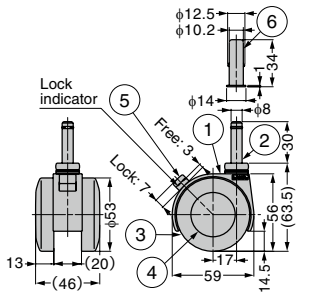
- Wheels are coated in elastomer which absorbs vibration and gives an extra smooth and quiet movement.
- With red indicator to show locked state.

[Remarks]
- Push the stopper to handle.Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.

[Parts Included]
- Socket



Cut out dimensions (w/o using the socket)



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Insert Bolt	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA + Elastomer (TPE)	Black
④	Cover	PA	
⑤	Stopper		Black + Red
⑥	Socket	Steel (STKM)	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-911	FPU55SSR	With Brake	490	50	131	–	1
G	3D	200-130-912	FPU55SR	Without Brake			126	–	1

TWIN WHEEL CASTER FA55P Plate Type

LOAD CAPACITY 784 N



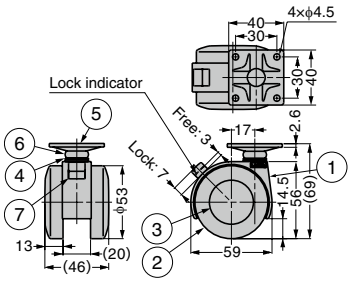


Caster bracket FA55-FIX 1 to lock swivel available.

- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.



Drawing above shows the model with brake.

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-258	FA55PSR	With Brake	784	80	176	4	72
G	3D	200-133-263	FA55PR	Without Brake			171	4	72

Refer to 1 : P.779

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Wheel	PA	Black
③	Cover		
④	Bush		
⑤	Plate	Steel (SPCC)	Coloured Zinc Chromate
⑥	Shaft	Steel (SWCH)	
⑦	Stopper	POM	Black, Red

TWIN WHEEL CASTER FA55N Threaded Bolt Type

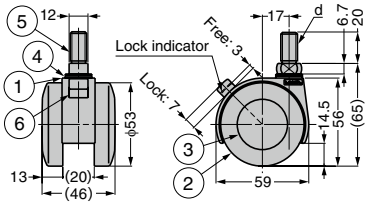
LOAD CAPACITY 784 N



- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle.Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.
- The threaded bolt has a dished dent at the upper end for N10 only.



Drawing above shows the model with brake.

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-259	FA55N3SR	With Brake	W3/8	784	80	152	4	72
G	3D	200-133-264	FA55N3R	Without Brake				147	4	72
G	3D	200-133-260	FA55N10SR	With Brake	M10			152	4	72
G	3D	200-133-265	FA55N10R	Without Brake				147	4	72
G	3D	200-133-261	FA55N12SR	With Brake	M12			152	4	72
G	3D	200-133-266	FA55N12R	Without Brake				147	4	72

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Wheel	PA	Black
③	Cover		
④	Bush		
⑤	Mounting Screw Axis	Steel (SWCH)	Coloured Zinc Chromate
⑥	Stopper	PA	Black, Red

TWIN WHEEL CASTER FP55P Plate Type

LOAD CAPACITY 490 N



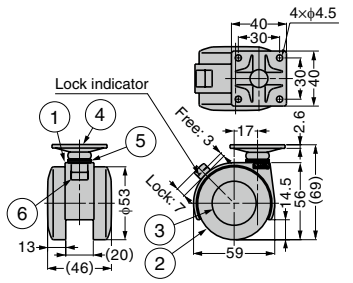


Caster bracket FA55-FIX 1 to lock swivel available.

- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle.Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.



Drawing above shows the model with brake.

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-268	FP55PSR	With Brake	490	50	148	4	72
G	3D	200-133-273	FP55PR	Without Brake			144	4	72

Refer to 1 : P.779

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
③	Cover		
④	Plate	Steel (SPCC)	Coloured Zinc Chromate
⑤	Shaft	Steel (SWCH)	
⑥	Stopper	POM	Black, Red

TWIN WHEEL CASTER FP55N Threaded Bolt Type

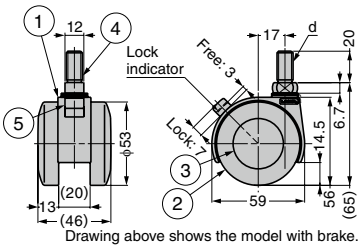
LOAD CAPACITY 490 N



- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.
- The threaded bolt has a dished dent at the upper end for N10 only.



Drawing above shows the model with brake.

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-269	FP55N3SR	With Brake	W3/8	490	50	126	4	72
G	3D	200-133-274	FP55N3R	Without Brake				121	4	72
G	3D	200-133-270	FP55N10SR	With Brake	M10			126	4	72
G	3D	200-133-275	FP55N10R	Without Brake				121	4	72
G	3D	200-133-271	FP55N12SR	With Brake	M12			126	4	72
G	3D	200-133-276	FP55N12R	Without Brake				121	4	72

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
③	Cover		
④	Mounting Screw	Steel (SWCH)	Coloured Zinc Chromate
⑤	Stopper	PA	Black, Red

TWIN WHEEL CASTER FA45P Plate Type

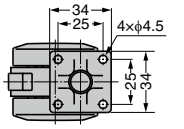
LOAD CAPACITY 490 N

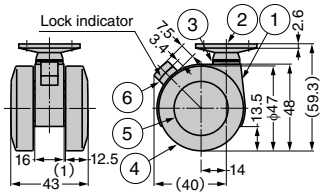


- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.





Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Plate	Steel (SPCC)	Coloured Zinc Chromate
③	Shaft	Steel (SWCH)	
④	Wheel	PA	Black
⑤	Cover		
⑥	Stopper		Black, Red

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-213	FA45PSR	With Brake	490	50	117	4	100
G	3D	200-133-212	FA45PR	Without Brake			113	4	100

TWIN WHEEL CASTER FA45N Threaded Bolt Type

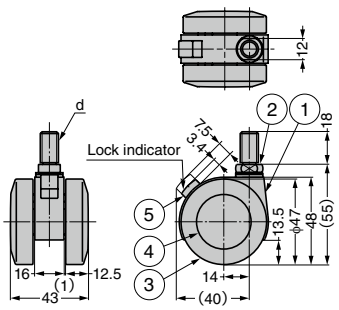
LOAD CAPACITY 490 N



- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Silver Enamel Finish
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover		
⑤	Stopper		Black, Red

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-133-211	FA45N3SR	With Brake	W3/8	490	50	100	4	100
G	3D	200-133-210	FA45N3R	Without Brake				97	4	100
G	3D	200-133-215	FA45N10SR	With Brake	M10			100	4	100
G	3D	200-133-209	FA45N10R	Without Brake				97	4	100

TWIN WHEEL CASTER FP45P Plate Type

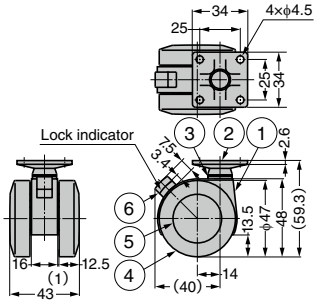
LOAD CAPACITY 392 N



- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.



Drawing above shows the model with brake.

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-202	FP45PSR	With Brake	392	40	98	4	100
G	3D	200-133-201	FP45PR	Without Brake			94	4	100

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Plate	Steel (SPCC)	Coloured Zinc Chromate
③	Shaft	Steel (SWCH)	
④	Wheel	PA	Black
⑤	Cover		
⑥	Stopper		Black, Red

TWIN WHEEL CASTER FP45N Threaded Bolt Type

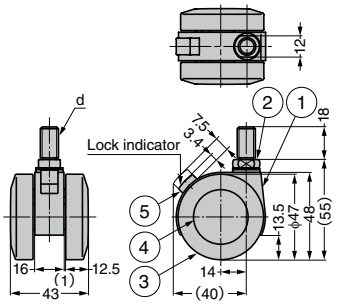
LOAD CAPACITY 392 N



- With red indicator to show locked state.

[Remarks]

- Push the stopper to handle. Red lock indicator means locked state.
- The load capacities in the table below indicate the loads when moving on a smooth surface.



Drawing above shows the model with brake.

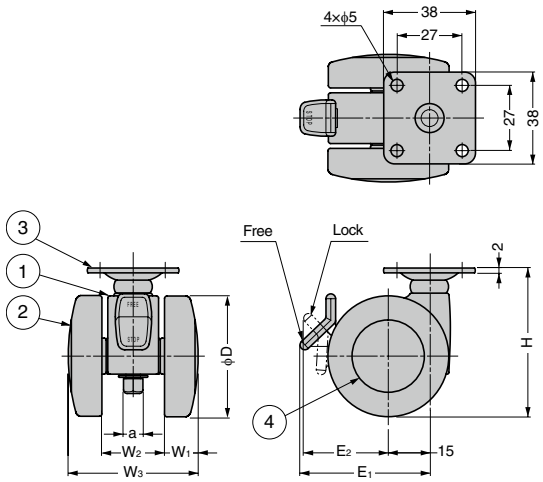
RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-204	FP45N3SR	With Brake	W3/8	392	40	84	4	100
G	3D	200-133-203	FP45N3R	Without Brake				79	4	100
G	3D	200-133-206	FP45N10SR	With Brake	M10			84	4	100
G	3D	200-133-205	FP45N10R	Without Brake				79	4	100

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover		
⑤	Stopper		Black, Red

TWIN WHEEL CASTER NB, NS Plate Type

LOAD CAPACITY 392~588 N





Drawing above shows the model with brake.

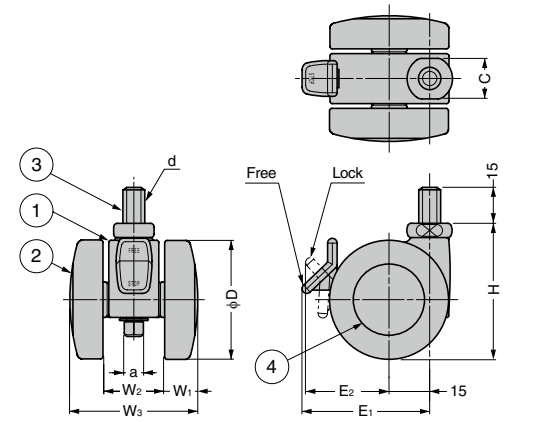
No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
③	Plate	Steel	Clear Zinc Chromate
④	Cover	Stainless Steel (SUS430)	Plain

RoHS	CAD	Item Code	Item Name	Type	D	H	E1	E2	W1	W2	W3	a	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-148	NB-40P	With Brake	40	49	48	32	12	21	45.5	7	392	40	89	200	–
G	3D	200-132-500	NS-40P	Without Brake			–	–							88	200	–
G	3D	200-132-515	NB-50P	With Brake	50	61	52	36	14	25	53	8	588	60	132	120	–
G	3D	200-132-514	NS-50P	Without Brake			–	–							128	120	–

TWIN WHEEL CASTER NB, NS Threaded Bolt Type

LOAD CAPACITY 392~588 N





Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
③	Threaded Bolt	Steel	Metric Screw Thread: Clear Zinc Chromate Inch Screw Thread: Coloured Zinc Chromate
④	Cover	Stainless Steel (SUS430)	Plain

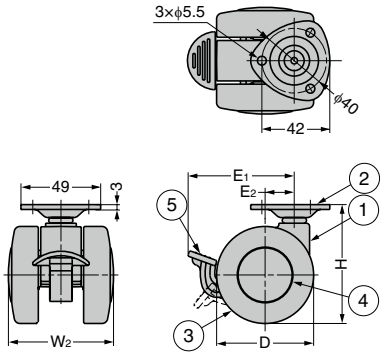
RoHS	CAD	Item Code	Item Name	Type	D	H	E1	E2	W1	W2	W3	C	d	a	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-517	NB-40-3	With Brake	40	45	48	32	12	21	45	14	W3/8	7	392	40	76	200	–
G	3D	200-132-511	NS-40-3	Without Brake			–	–									73	200	–
G	3D	200-943-844	NB-40-8	With Brake			48	32					M8				73	200	–
G	3D	200-943-843	NS-40-8	Without Brake			–	–									70	200	–
G	3D	200-132-516	NB-40-10	With Brake			48	32					M10				76	200	–
G	3D	200-132-503	NS-40-10	Without Brake			–	–									76	200	–
G	3D	200-132-513	NB-50-3	With Brake	50	58	52	36	14	25	53	17	W3/8	8	588	60	128	120	–
G	3D	200-132-512	NS-50-3	Without Brake			–	–									117	120	–
G	3D	200-943-850	NB-50-8	With Brake			52	36					M8				121	120	–
G	3D	200-943-849	NS-50-8	Without Brake			–	–									115	120	–
G	3D	200-943-852	NB-50-10	With Brake			52	36					M10				129	120	–
G	3D	200-943-851	NS-50-10	Without Brake			–	–									119	120	–

TWIN WHEEL CASTER JP Plate Type

LOAD CAPACITY 490~588 N



●Stable twin wheel structure provides smooth movement.



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Plate	Steel	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover	ABS	
⑤	Stopper Pedal	PA	

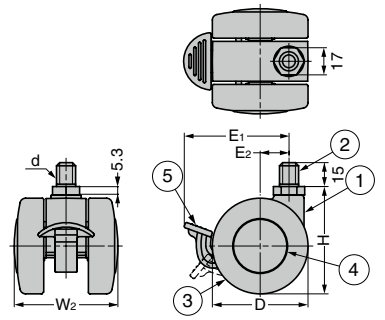
RoHS	CAD	Item Code	Item Name	Type	D	E_1	E_2	H	W_2	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-130-374	JPB-50BKP	With Brake	50	55	15	62	57	490	50	157	100	–
–	3D	200-130-373	JP-50BKP	Without Brake								151	100	–
–	3D	200-130-378	JPB-60BKP	With Brake	60	66	18	73	65	588	60	204	100	–
–	3D	200-130-377	JP-60BKP	Without Brake								192	100	–

TWIN WHEEL CASTER JP Threaded Bolt Type

LOAD CAPACITY 490~588 N



●Stable twin wheel structure provides smooth movement.



Drawing above shows the model with brake.

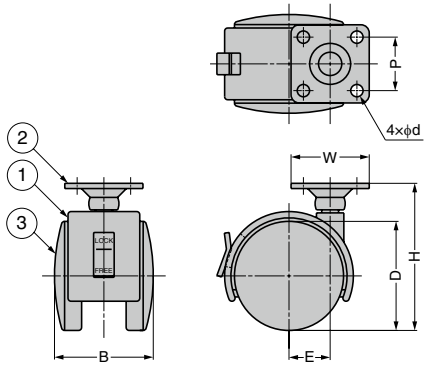
No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Threaded Bolt	Steel	Coloured Zinc Chromate
③	Wheel	PA	Black
④	Cover	ABS	
⑤	Stopper Pedal	PA	

RoHS	CAD	Item Code	Item Name	Type	D	E_1	E_2	H	W_2	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-130-372	JPB-50BKT	With Brake	50	55	15	56	57	M10	490	50	126	100	–
–	3D	200-130-371	JP-50BKT	Without Brake									121	100	–
–	3D	200-130-376	JPB-60BKT	With Brake	60	66	18	67	65	M12×1.25	588	60	175	100	–
–	3D	200-130-375	JP-60BKT	Without Brake									164	100	–

TWIN WHEEL CASTER BR Plate Type

LOAD CAPACITY 294~392 N





Drawing above shows the model with brake.

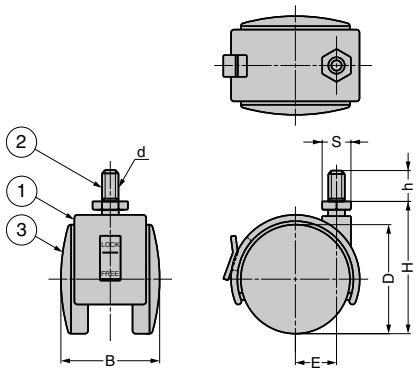
No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Plate	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
③	Wheel	PA	Black

RoHS	CAD	Item Code	Item Name	Type	D	H	B	W	P	E	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-028	BR-20PS	With Brake	45	61.5	42	38	26	16	6	294	30	104	200	–
G	3D	200-132-022	BR-20P	Without Brake										95	200	–
G	3D	200-132-038	BR-25PS	With Brake	53	71.5	48			20		392	40	149	120	–
G	3D	200-132-032	BR-25P	Without Brake										138	120	–

TWIN WHEEL CASTER BR Threaded Bolt Type

LOAD CAPACITY 294~392 N





Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Threaded Bolt	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
③	Wheel	PA	Black

RoHS	CAD	Item Code	Item Name	Type	D	H	h	B	E	S	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-026	BR-20N8S	With Brake	45	54	15	42	16	14	M8	294	30	79	200	–
G	3D	200-132-020	BR-20N8	Without Brake										69	200	–
G	3D	200-132-036	BR-25N8S	With Brake	53	64		48	20			392	40	117	150	–
G	3D	200-132-030	BR-25N8	Without Brake										106	150	–
G	3D	200-132-037	BR-25N3S	With Brake							W3/8			119	150	–
G	3D	200-132-031	BR-25N3	Without Brake										108	150	–

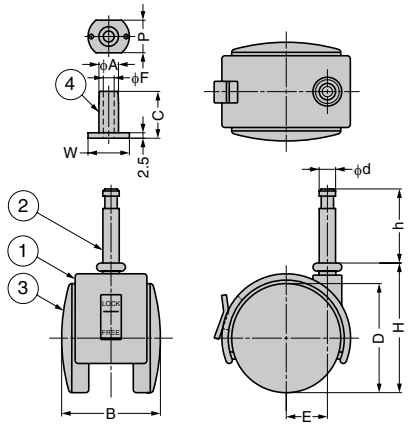
TWIN WHEEL CASTER BR Insert Bolt Type

LOAD CAPACITY 294~392 N



[Parts Included]

●Socket



Drawing above shows the model with brake.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Insert Bolt	Steel	Clear Zinc Chromate (Trivalent)
③	Wheel	PA	Black
④	Socket	Polyethylene (PE)	–

RoHS	CAD	Item Code	Item Name	Type	D	H	h	B	E	d	A	W	C	F	P	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-935-963	BR-20SS	With Brake	45	53	36	42	16	8	11.5	22	30	7	17	294	30	85	200	–
G	3D	200-132-025	BR-20S	Without Brake														75	200	–
G	3D	200-936-244	BR-25SS	With Brake	53	63		48	20							392	40	124	140	–
G	3D	200-132-035	BR-25S	Without Brake														113	140	–

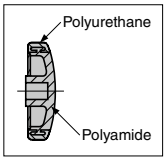
TWIN WHEEL CASTER BU-25P Plate Type

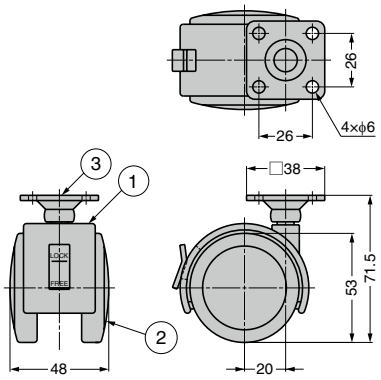
LOAD CAPACITY 392 N



●Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement. Also, unlikely to slip.

[Cross-section Drawing]





Drawing above shows the model with brake.

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-047	BU-25PS	With Brake	392	40	157	120	–
G	3D	200-132-040	BU-25P	Without Brake			150	120	–

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
②	Wheel	PUR	
③	Plate	Steel (SPHC)	Clear Zinc Chromate (Trivalent)

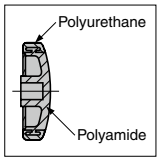
TWIN WHEEL CASTER BU-25N Threaded Bolt Type

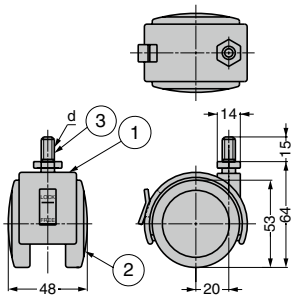
LOAD CAPACITY 392 N



●Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement. Also, unlikely to slip.

[Cross-section Drawing]





Drawing above shows the model with brake.

RoHS	CAD	Item Code	Item Name	Type	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-045	BU-25N8S	With Brake	M8	392	40	125	150	–
G	3D	200-132-042	BU-25N8	Without Brake				118	150	–
G	3D	200-132-046	BU-25N3S	With Brake	W3/8			126	150	–
G	3D	200-132-043	BU-25N3	Without Brake				119	150	–

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
②	Wheel	PUR	
③	Threaded Bolt	Steel	Clear Zinc Chromate (Trivalent)

TWIN WHEEL CASTER BU-25S Insert Bolt Type

LOAD CAPACITY 392 N

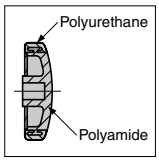


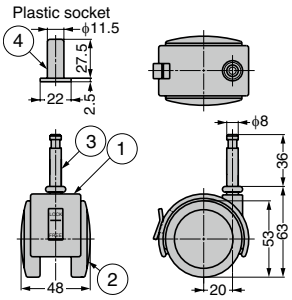
●Wheels are coated in polyurethane which absorbs vibration and gives an extra smooth and quiet movement. Also, unlikely to slip.

[Parts Included]

●Socket

[Cross-section Drawing]





Drawing above shows the model with brake.

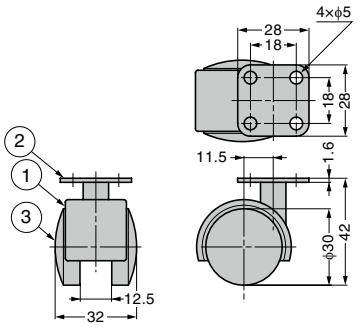
RoHS	CAD	Item Code	Item Name	Type	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-132-048	BU-25SS	With Brake	392	40	132	140	–
G	3D	200-132-044	BU-25S	Without Brake			125	140	–

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Wheel		
②	Wheel	PUR	
③	Insert Bolt	Steel	Clear Zinc Chromate (Trivalent)
④	Socket	Polyethylene (PE)	–

TWIN WHEEL CASTER PT-30P Plate Type & Economical Version

LOAD CAPACITY 200 N





No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Plate	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
③	Wheel	PA	Black

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-013-009	PT-30P	200	20.4	34	1	400

CASTER WITH LEVELLING GLIDE AF Plate Type

LOAD CAPACITY 2499 N



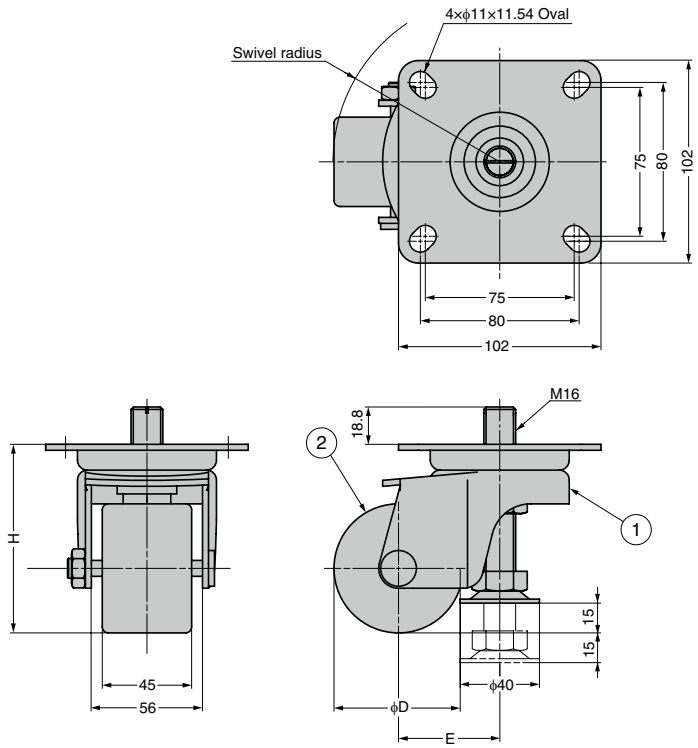
Using caster　　Using levelling glide

- With integrated levelling glide.
- Low profile and heavy duty
- Ideal for fixtures and devices without frequent movement (long fixation period).
- Built-in bearing of wheel shaft provides excellent rotation and smooth movement.
- Can be installed at the four corners of cabinet.

[Applications]

- Medical equipment, automatic equipment, semiconductor equipment, financial equipment, other heavy equipment required for space saving, heavy equipment fixed for a long time, etc.

HEAVY DUTY CASTERS
SINGLE WHEEL CASTERS
TWIN WHEEL CASTERS
CASTERS WITH LEVELLING GLIDES
BALL CASTERS
SLIDING DOOR ROLLERS



No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
②	Wheel	PA	Black

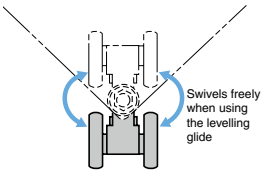
RoHS	CAD	Item Code	Item Name	D	H	E	Swivel Radius	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-130-390	AF-50	50	74	46	73	2499	255	1.19	18	–
G	3D	200-130-391	AF-65	65	95	51	84			1.32	12	–

PARTS SEPARABLE CASTER (W/GLIDE) CAP Plate Type

LOAD CAPACITY 588~1176 N SUS



- Caster with built-in levelling glide.
- Ideal for fixtures and devices without frequent movement (long fixation period).
- Two types of wheels available: Polyamide and elastomer.
- Model without levelling glide 1 and options such as shockproof plate, rubber seat and double-sided adhesive cushion sheet used for levelling glide also available.



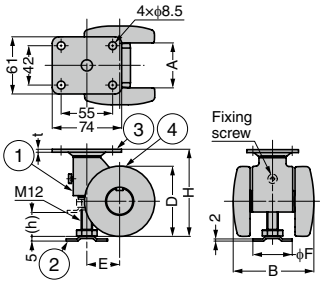
After installing the levelling glide, caster direction can be changed. Caster will not interfere with operation when its direction is set to the inside of cabinet.

[Remarks]

- Please loose the fixing screw when using as a caster.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black (B)/White (W)
②	Levelling Glide	Steel	Coloured Zinc Chromate
		Stainless Steel (SUS304)	Passivation※
③	Plate	Steel	Coloured Zinc Chromate
		Stainless Steel (SUS304)	Passivation※
④	Wheel	PA/Elastomer (TPE)	Black (B)/White (W)

※Passivation is a kind of surface treatment providing rust protection for stainless steel.



RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	D	H	h	E	F	A	B	t	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-238	CAPF50B	Steel, PA	Coloured Zinc Chromate, Black	50	63	10	30	34	40	70	3.2	588	60	306	40	–
G	3D	200-130-239	CAPF50W		Coloured Zinc Chromate, White												40	–
G	3D	200-130-808	CAPF50UB	Steel, Elastomer (TPE)	Coloured Zinc Chromate, Black											300	40	–
G	3D	200-130-809	CAPF50UW		Coloured Zinc Chromate, White												40	–
G	3D	200-130-240	CAPF75B	Steel, PA	Coloured Zinc Chromate, Black	75	92	24	35	42	50	85		1176	120	424	20	–
G	3D	200-130-241	CAPF75W		Coloured Zinc Chromate, White												20	–
G	3D	200-130-810	CAPF75UB	Steel, Elastomer (TPE)	Coloured Zinc Chromate, Black											460	20	–
G	3D	200-130-811	CAPF75UW		Coloured Zinc Chromate, White												20	–
G	3D	200-130-250	CAPS50W	Stainless Steel, PA	Passivation, White	50	63	10	30	34	40	70	3	588	60	300	40	–
G	3D	200-130-820	CAPS50UW	Stainless Steel, Elastomer (TPE)													40	–
G	3D	200-130-251	CAPS75W	Stainless Steel, PA		75	92	24	35	42	50	85		1176	120	420	20	–
G	3D	200-130-821	CAPS75UW	Stainless Steel, Elastomer (TPE)												460	20	–

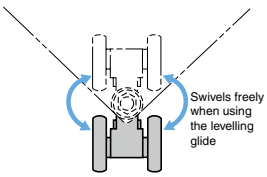
Refer to 1 : P.772

PARTS SEPARABLE CASTER (W/GLIDE) CAB Threaded Bolt Type

LOAD CAPACITY 588~1176 N SUS



- Caster with built-in levelling glide.
- Ideal for fixtures and devices without frequent movement (long fixation period).
- Two types of wheels available: Polyamide and elastomer.
- Model without levelling glide 1 and options such as shockproof plate, rubber seat and double-sided adhesive cushion sheet used for levelling glide also available.



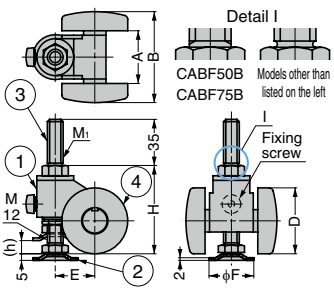
After installing the levelling glide, caster direction can be changed. Caster will not interfere with operation when its direction is set to the inside of cabinet.

[Remarks]

- Please loose the fixing screw when using as a caster.

No.	Part Name	Material	Finish/Colour
①	Body	PA	Black (B)/White (W)
②	Levelling Glide	Steel (SS)	Coloured Zinc Chromate (Trivalent)
		Stainless Steel (SUS304)	Passivation※
③	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
		Stainless Steel (SUS304)	Passivation※
④	Wheel	PA/Elastomer (TPE)	Black (B)/White (W)

※Passivation is a kind of surface treatment providing rust protection for stainless steel.



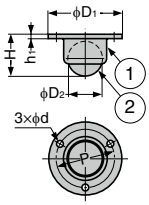
RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	D	H	h	E	F	A	B	M1	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-230	CABF50B	Steel, PA	Coloured Zinc Chromate, Black	50	67	10	30	34	40	70	M12	588	60	260	40	–
G	3D	200-130-231	CABF50W		Coloured Zinc Chromate, White												40	–
G	3D	200-130-800	CABF50UB	Steel, Elastomer (TPE)	Coloured Zinc Chromate, Black												40	–
G	3D	200-130-801	CABF50UW		Coloured Zinc Chromate, White												40	–
G	3D	200-130-232	CABF75B	Steel, PA	Coloured Zinc Chromate, Black	75	96	24	35	42	50	85	M16	1176	120	400	20	–
G	3D	200-130-233	CABF75W		Coloured Zinc Chromate, White												20	–
G	3D	200-130-802	CABF75UB	Steel, Elastomer (TPE)	Coloured Zinc Chromate, Black											430	20	–
G	3D	200-130-803	CABF75UW		Coloured Zinc Chromate, White												20	–
G	3D	200-130-246	CABS50W	Stainless Steel, PA	Passivation, White	50	67	10	30	34	40	70	M12	588	60	262	40	–
G	3D	200-130-816	CABS50UW	Stainless Steel, Elastomer (TPE)												230	40	–
G	–	200-130-247	CABS75W	Stainless Steel, PA		75	96	24	35	42	50	85	M16	1176	120	402	20	–
G	–	200-130-817	CABS75UW	Stainless Steel, Elastomer (TPE)												430	20	–

Refer to 1 : P.772

BALL CASTER (SURFACE MOUNT TYPE) BM

LOAD CAPACITY 98~392 N





[Remarks]
- Dimensions in the figure are for reference. Also, steel ball may scratch the floor contact surface. Please confirm the actual item before use.

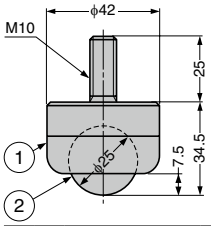
No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Brass
②	Ball	Steel (SWCH), Steel (SUJ): BM12 Only	Polished

RoHS	CAD	Item Code	Item Name	D_1	D_2	H	P	h_1	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-013-982	BM-12	28.9	11.9	15.2	21.8	1.7	2.5	98	10	17.5	100	800
G	3D	200-013-983	BM-15	33.7	14.3	19.3	26.6	2.1	2.8	118	12	31.5	8	400
G	3D	200-133-020	BM-20	37	17.5	23	29.5	3	2.7	147	15	52	8	400
G	3D	200-133-021	BM-25	44	22.2	27	36	3.2	2.8	245	25	93	4	200
G	3D	200-133-022	BM-32	57	25.4	32	47		4.7	392	40	150	4	200

PLASTIC CASTER (THREADED BOLT TYPE) NT

LOAD CAPACITY 245 N





[Remarks]
- Inbuilt ball bearing is made of steel.
- The load capacity is static load value.
- Do not use it on a vertical surface. It may cause noise, deformation or damage.

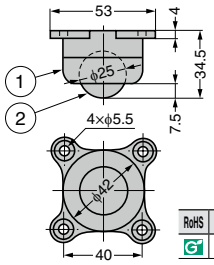
No.	Part Name	Material	Colour
①	Body	PA	Brown
②	Ball	Melamine Resin (MF)	Ivory

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-010	NT-25	245	25	58	20	200

PLASTIC CASTER (SURFACE MOUNT TYPE) NS

LOAD CAPACITY 245 N





[Remarks]
- Inbuilt ball bearing is made of steel.
- The load capacity is static load value.
- Do not use it on a vertical surface. It may cause noise, deformation or damage.

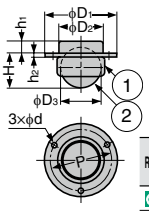
No.	Part Name	Material	Colour
①	Body	PA	Brown
②	Ball	Melamine Resin (MF)	Ivory

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-422	NS-25	245	25	43	20	200

BALL CASTER (RECESSED MOUNT TYPE) BH

LOAD CAPACITY 98~196 N





[Remarks]
- Dimensions in the figure are for reference. Also, steel ball may scratch the floor contact surface. Please confirm the actual item before use.

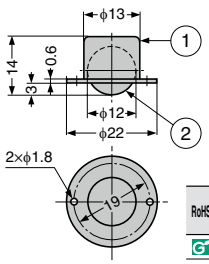
No.	Part Name	Material	Colour
①	Body	Steel (SPCC)	Brass
②	Ball	Steel (SWCH)	Polished

RoHS	CAD	Item Code	Item Name	D_1	D_2	D_3	H	P	h_1	h_2	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-030	BH-20	30	18.3	17.5	16	24	5	1.6	2	98	10	35	8	400
G	3D	200-133-031	BH-25	41	24.7	22.2	19.5	36	6	2.3	2.6	147	15	73	4	200
G	3D	200-133-032	BH-32	48	29.3	25.4	24.5	41				196	20	113	4	200

MINI BALL CASTER (RECESSED MOUNT TYPE) BHB-12

LOAD CAPACITY 78.4 N





[Remarks]
- Dimensions in the figure are for reference. Also, steel ball may scratch the floor contact surface. Please confirm the actual item before use.

No.	Part Name	Material	Finish
①	Body	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
②	Ball	Steel (SUJ)	Polished

RoHS	CAD	Item Code	Item Name	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-133-040	BHB-12	78.4	8	11	100	2000

STAINLESS STEEL SLIDING DOOR ROLLER JS315 L Type w/ Bracket

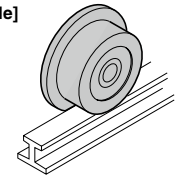
LOAD CAPACITY 14700~27440 N SUS

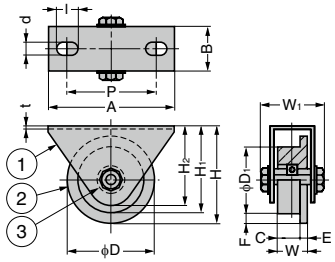


- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.
- Welding or screwing is possible for installation.

[Applications]
- Gates, etc.

[Application Example]





No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS304)	Polished ※
②	Wheel	Stainless Steel (SUS303)	–
③	Bearing	Stainless Steel (SUS440C)	

※ Mirror polished for wheel diameter more than ϕ150.

RoHS	CAD	Item Code	Item Name	D	D1	W	W1	A	B	C	E	F	H	H1	H2	d	l	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-778	JS315-100L	120	100	36	70	145	46	27	9	10	124	114	87	11	15	115	3	14700	1500	3	1	4
G	3D	200-024-779	JS315-150L	150	130	43	88	250	57	33	10		165	155	137	20	35	185	4	21560	2200	6.8	1	2
G	3D	200-024-780	JS315-200L	200	170	50	96	290	70	36.5	13.5	15	215	200	160			216	6	27440	2800	13.4	1	1

STAINLESS STEEL SLIDING DOOR ROLLER JS325 L Type w/o Bracket

SUS



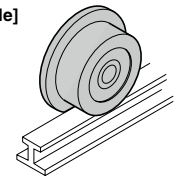
- Non-bracket type of JS315 1.
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.

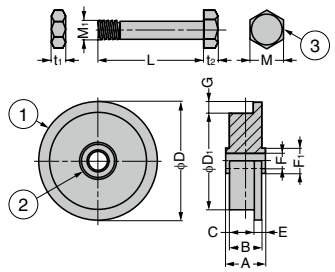
[Applications]
- Gates, etc.

[Remarks]
- The boss width A of wheel diameter ϕ150 and ϕ200 contains the thickness of supplied washer.

[Parts Included]
- Bolt, nut, spring washer, spacer × 2

[Application Example]





No.	Part Name	Material	Finish
①	Wheel	Stainless Steel (SUS303)	–
②	Bearing	Stainless Steel (SUS440C)	
③	Bolt	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	D	D1	A	B	C	E	F	F1	G	L	M	M1	t1	t2	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-781	JS325-100L	120	100	40	36	27	9	16	25	10	60	27	M16	10.5	10	0.7	1	4
G	3D	200-024-782	JS325-150L	150	130	43	43	33	10	20	40		75	30	M20	12	13	4.9	1	2
G	3D	200-024-783	JS325-200L	200	170	50	50	36.5	13.5	25		15	86		M24	14	10	9.4	1	1

Refer to 1 : P.793

SUGATSUNE

STAINLESS STEEL SLIDING DOOR ROLLER JS300 V Type w/ Bracket

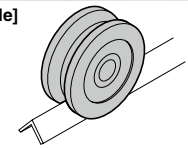
LOAD CAPACITY 3920~27440 N SUS



- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.
- Welding or screwing is possible for installation.

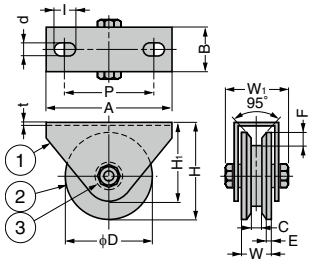
[Applications]
- Gates, etc.

[Application Example]



No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS304)	Polished※
②	Wheel	Stainless Steel (SUS303)	–
③	Bearing	Stainless Steel (SUS440C)	

※Mirror polished for wheel diameter more than ϕ150.



RoHS	CAD	Item Code	Item Name	D	W	W1	A	B	C	E	F	H	H1	d	l	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-736	JS300-50V	50	20	47	100	30	7.5	3.5	7	62	57	11	15	75	3	3920	400	0.5	1	20
G	3D	200-024-737	JS300-60V	60								67						4900	500	0.6	1	20
G	3D	200-024-738	JS300-75V	75			120					87.5	76.5			85		6370	650	0.9	1	10
G	3D	200-024-739	JS300-90V	90								95				95		11760	1200	1.2	1	10
G	3D	200-024-740	JS300-110V	110	24	53	145	34	10.5	4.6	8	120	93.5			114		13720	1400	2	1	5
G	3D	200-024-741	JS300-150V	150	43	88	250	57	13	8	18	165	137	20	35	185	4	21560	2200	6.8	1	2
G	3D	200-024-742	JS300-200V	200	50	96	290	70	15	7	20	215	160			216	6	27440	2800	13	1	1

STAINLESS STEEL SLIDING DOOR ROLLER JS310 V Type w/o Bracket

SUS



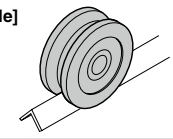
- Non-bracket type of JS300 1.
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.

[Applications]
- Gates, etc.

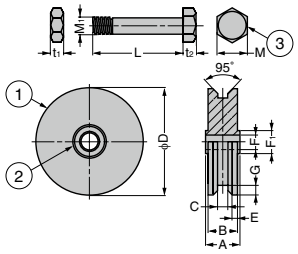
[Remarks]
- The dimension A of wheel diameter ϕ150 and ϕ200 contains the thickness of supplied washer.

[Parts Included]
- Bolt, nut, spring washer, spacer × 2

[Application Example]



No.	Part Name	Material	Finish
①	Wheel	Stainless Steel (SUS303)	–
②	Bearing	Stainless Steel (SUS440C)	
③	Bolt	Stainless Steel (SUS304)	



RoHS	CAD	Item Code	Item Name	D	A	B	C	E	F	F1	G	L	M	M1	t1	t2	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-743	JS310-50V	50	24	20	7.5	3.5	10	18	7	40	17	M10	6	7	0.2	1	20
G	3D	200-024-744	JS310-60V	60													0.3	1	20
G	3D	200-024-745	JS310-75V	75													0.6	1	20
G	3D	200-024-746	JS310-90V	90													0.8	1	20
G	3D	200-024-747	JS310-110V	110	28	24	10.5	4.6	12	20	8	45	19	M12	7	8	1.5	1	10
G	3D	200-024-748	JS310-150V	150	43	43	13	8	20	40	18	75	30	M20	12	13	4.9	1	2
G	3D	200-024-749	JS310-200V	200	50	50	15	7	25		20	86		M24	14	10	9	1	1

Refer to 1 : P.794

STAINLESS STEEL SLIDING DOOR ROLLER JS365 U Type w/ Bracket

LOAD CAPACITY 3920~27440 N

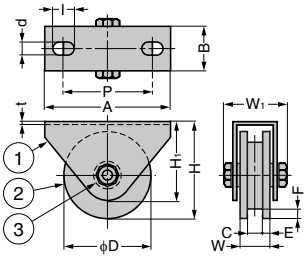
SUS



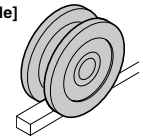
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.
- Welding or screwing is possible for installation.

[Applications]

- Gates, etc.



[Application Example]



No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS304)	Polished※
②	Wheel	Stainless Steel (SUS303)	–
③	Bearing	Stainless Steel (SUS440C)	

※ Mirror polished for wheel diameter more than ϕ150.

RoHS	CAD	Item Code	Item Name	D	W	W1	A	B	C	E	F	H	H1	d	l	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-750	JS365-50H	50	20	47	100	30	7.5	6.3	7	62	57	11	15	75	3	3920	400	0.5	1	20
G	3D	200-024-751	JS365-60H	60								67						4900	500	0.6	1	20
G	3D	200-024-752	JS365-75H	75			120					87.5	76.5			85		6370	650	0.9	1	10
G	3D	200-024-753	JS365-90H	90					10.5	4.8		95				95		11760	1200	1.2	1	10
G	3D	200-024-754	JS365-110H	110	24	53	145	34	14	5	8	120	93.5			114		13720	1400	2	1	5
G	3D	200-024-755	JS365-150H	150	43	88	250	57	27	8	15	165	137	20	35	185	4	21560	2200	6.5	1	2
G	3D	200-024-756	JS365-200H	200	50	96	290	70		11.5	14	215	160			216	6	27440	2800	14	1	1

STAINLESS STEEL SLIDING DOOR ROLLER JS380 U Type w/o Bracket

SUS



- Non-bracket type of JS365 1.
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.

[Applications]

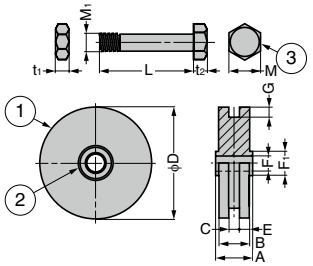
- Gates, etc.

[Remarks]

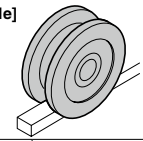
- The dimension A of wheel diameter ϕ150 and ϕ200 contains the thickness of supplied washer.

[Parts Included]

- Bolt, nut, spring washer, spacer × 2



[Application Example]



No.	Part Name	Material	Finish
①	Wheel	Stainless Steel (SUS303)	–
②	Bearing	Stainless Steel (SUS440C)	
③	Bolt	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	D	A	B	C	E	F	F1	G	L	M	M1	t1	t2	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-757	JS380-50H	50	24	20	7.5	6.3	10	18	7	40	17	M10	6	7	0.2	1	20
G	3D	200-024-758	JS380-60H	60													0.3	1	20
G	3D	200-024-759	JS380-75H	75													0.6	1	20
G	3D	200-024-760	JS380-90H	90			10.5	4.8									0.8	1	20
G	3D	200-024-761	JS380-110H	110	28	24	14	5	12	20	8	45	19	M12	7	8	1.5	1	10
G	3D	200-024-762	JS380-150H	150	43	43	27	8	20	40	15	75	30	M20	12	13	4.6	1	4
G	3D	200-024-763	JS380-200H	200	50	50		11.5	25		14	86		M24	14	10	10	1	1

Refer to 1 : P.795

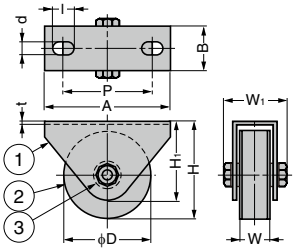
STAINLESS STEEL SLIDING DOOR ROLLER JS375 Flat Type w/ Bracket

LOAD CAPACITY 3920~27440 N SUS



- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.
- Welding or screwing is possible for installation.

[Applications]
- Gates, etc.



No.	Part Name	Material	Finish
①	Bracket	Stainless Steel (SUS304)	Polished※
②	Wheel	Stainless Steel (SUS303)	–
③	Bearing	Stainless Steel (SUS440C)	

※Mirror polished for wheel diameter more than ϕ150.

RoHS	CAD	Item Code	Item Name	D	W	W1	H	H1	A	B	d	l	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-764	JS375-50F	50	20	47	62	57	100	30	11	15	75	3	3920	400	0.5	1	20
G	3D	200-024-765	JS375-60F	60			67								4900	500	0.7	1	20
G	3D	200-024-766	JS375-75F	75			87.5	76.5	120				85		6370	650	1	1	10
G	3D	200-024-767	JS375-90F	90			95						95		11760	1200	1.3	1	10
G	3D	200-024-768	JS375-110F	110	24	53	120	93.5	145	34			114		13720	1400	2.3	1	5
G	3D	200-024-769	JS375-150F	150	43	88	165	137	250	57	20	35	185	4	21560	2200	7.8	1	2
G	3D	200-024-770	JS375-200F	200	50	96	215	160	290	70			216	6	27440	2800	15.7	1	1

STAINLESS STEEL SLIDING DOOR ROLLER JS385 Flat Type w/o Bracket

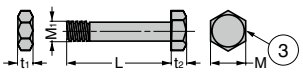
SUS



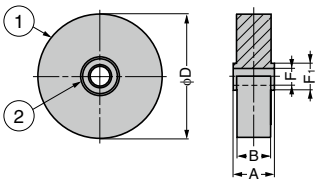
- Non-bracket type of JS375 1.
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ150, providing smooth movement even for heavy doors.

[Applications]
- Gates, etc.

[Remarks]
- The dimension A of wheel diameter ϕ150 and ϕ200 contains the thickness of supplied washer.



[Parts Included]
- Bolt, nut, spring washer, spacer × 2



No.	Part Name	Material	Finish
①	Wheel	Stainless Steel (SUS303)	–
②	Bearing	Stainless Steel (SUS440C)	
③	Bolt	Stainless Steel (SUS304)	

RoHS	CAD	Item Code	Item Name	D	A	B	F	F1	L	M	M1	t1	t2	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-771	JS385-50F	50	24	20	10	18	40	17	M10	6	7	0.3	1	20
G	3D	200-024-772	JS385-60F	60										0.4	1	20
G	3D	200-024-773	JS385-75F	75										0.6	1	20
G	3D	200-024-774	JS385-90F	90										1	1	10
G	3D	200-024-775	JS385-110F	110	28	24	12	20	45	19	M12	7	8	1.8	1	10
G	3D	200-024-776	JS385-150F	150	43	43	20	40	75	30	M20	12	13	5.9	1	2
G	3D	200-024-777	JS385-200F	200	50	50	25		86		M24	14	10	11.7	1	1

Refer to 1 : P.796

SLIDING DOOR ROLLER JC100 V Type w/ Bracket

LOAD CAPACITY 3430~24500 N

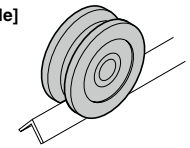


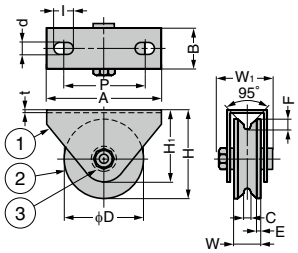
- For wheel diameter above ϕ75, bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ75, providing smooth movement even for heavy doors.
- Gap between bracket and wheel absorbs deformation and allows for smooth movement.

[Applications]

- Gates, etc.

[Application Example]





No.	Part Name	Material	Finish
①	Bracket	Steel (SPHC)	Clear Zinc Chromate
②	Wheel	Ductile Cast Iron	Black Enamel Finish
③	Bearing	–	–

RoHS	CAD	Item Code	Item Name	D	W	W1	A	B	C	E	F	H	H1	d	I	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	200-024-785	JC100-50V	50	20	41	100	33	5	4.7	6	64	60	11	11	70	3.2	3430	350	0.5	1	30
–	3D	200-024-786	JC100-60V	60	26	46		38	7	5.7	8	67	58					4410	450	0.7	1	15
G	3D	200-024-787	JC100-75V	75			120	37		4.5	8.5	88	76.5		15	94		5880	600	1	1	10
G	3D	200-024-788	JC100-90V	90						4.6	9	95.5						6860	700	1.3	1	10
G	3D	200-024-789	JC100-100V	105	28	50	145	39.5		4.8	11	118	93.5			115		7840	800	1.7	1	10
G	3D	200-024-790	JC100-120V	120								125.5						9800	1000	2	1	8
G	3D	200-024-791	JC100-150V	150	43	88	250	60	13.5	7.7	18	165	137	20	35	185	6	19600	2000	6.4	1	2
G	3D	200-024-792	JC100-200V	200	50	105	290	70	15	7	20	215	160			216		24500	2500	11	1	1

SLIDING DOOR ROLLER JC110 V Type w/o Bracket



- Non-bracket type of JC100 1.
- For wheel diameter above ϕ75, bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ75, providing smooth movement even for heavy doors.

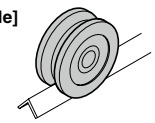
[Applications]

- Gates, etc.

[Remarks]

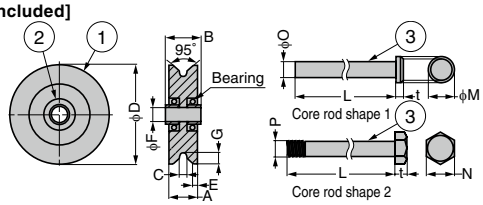
- Core rod for wheel diameter ϕ50~ϕ120 is not grooved for E-ring. Core rod for ϕ150~ϕ200 consists of one bolt and one nut.
- The shape of core rod varies depending on its size. Please confirm with the figure below.

[Application Example]



[Parts Included]

- Wheel shaft



No.	Part Name	Material	Finish
①	Wheel	Ductile Cast Iron	Black Enamel Finish
②	Bearing	–	–
③	Core Rod	Steel (SWCH)	

RoHS	CAD	Item Code	Item Name	D	A	B	C	E	F	G	L	M	N	O	P	t	Weight (kg)	Core Rod Shape	Box (pcs)	Carton (pcs)
–	3D	200-024-793	JC110-50V	50	20	25	5	4.7	13	6	75	19	–	12.9	–	4	0.2	1	1	40
–	3D	200-024-794	JC110-60V	60	26	30	7	5.7		8							0.4		1	20
G	3D	200-024-795	JC110-75V	75		29		4.5		8.5							0.5		1	20
G	3D	200-024-796	JC110-90V	90				4.6		9							0.8		1	20
G	3D	200-024-797	JC110-100V	105	28	32		4.8	16	11		24		15.9		5	1.1		1	10
G	3D	200-024-798	JC110-120V	120													1.3		1	10
–	3D	200-024-799	JC110-150V	150	43	48	13.5	7.7	20	18	100	–	30	–	M20	13	3.3	2	1	4
–	3D	200-024-800	JC110-200V	200	50	58	15	7	24	20	120		36		M24	15	7		1	2

Refer to 1 : P.797

SLIDING DOOR ROLLER JC135 U Type w/ Bracket

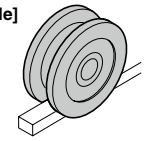
Made to Order | LOAD CAPACITY 3430~24500 N

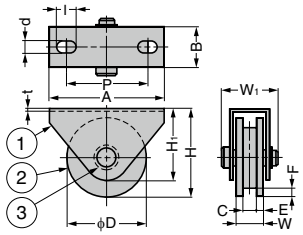


- For wheel diameter above ϕ75, bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ75, providing smooth movement even for heavy doors.
- Gap between bracket and wheel absorbs deformation and allows for smooth movement.

[Applications]
- Gates, etc.

[Application Example]





No.	Part Name	Material	Finish
①	Bracket	Steel (SPHC)	Clear Zinc Chromate
②	Wheel	Ductile Cast Iron	Black Enamel Finish
③	Bearing	–	–

RoHS	CAD	Item Code	Item Name	D	W	W1	C	E	F	H	H1	A	B	d	I	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	200-024-801	JC135-50H	50	20	41	7.5	6.3	5	64	60	100	33	11	11	70	3.2	3430	350	0.5	1	30
–	3D	200-024-802	JC135-60H	60	26	46		9.3	6	67	58		38					4410	450	0.7	1	30
G	3D	200-024-803	JC135-75H	75						88	76.5	120	37	11	15	94		5880	600	1	1	20
G	3D	200-024-804	JC135-90H	90			10.5	7.8	8	95.5								6860	700	1.3	1	20
G	3D	200-024-805	JC135-100H	105	28	50	14	7		118	93.5	145	39.5			115		7840	800	1.7	1	20
G	3D	200-024-806	JC135-120H	120						125.5								9800	1000	2	1	16
G	3D	200-024-807	JC135-150H	150	43	88	27	8	10	165	137	250	60	20	35	185	6	19600	2000	6	1	4
G	3D	200-024-808	JC135-200H	200	50	105		11.5	14	215	160	290	70			216		24500	2500	11	1	2

SLIDING DOOR ROLLER JC145 U Type w/o Bracket

Made to Order



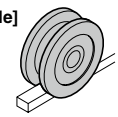
- Non-bracket type of JC135 1.
- For wheel diameter above ϕ75, bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ75, providing smooth movement even for heavy doors.

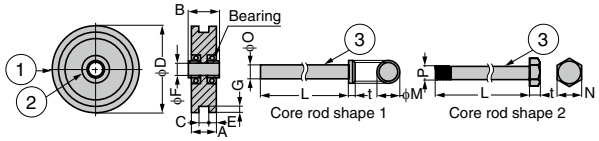
[Applications]
- Gates, etc.

[Remarks]
- Core rod for wheel diameter ϕ50~ϕ120 is not grooved for E-ring. Core rod for ϕ150~ϕ200 consists of one bolt and one nut.
- The shape of core rod varies depending on its size.Please confirm with the figure below.

[Parts Included]
- Wheel shaft

[Application Example]





No.	Part Name	Material	Finish
①	Wheel	Ductile Cast Iron	Black Enamel Finish
②	Bearing	–	–
③	Core Rod	Steel (SWCH)	

RoHS	CAD	Item Code	Item Name	D	A	B	C	E	F	G	L	M	N	O	P	t	Weight (kg)	Core Rod Shape	Box (pcs)	Carton (pcs)
–	3D	200-024-809	JC145-50H	50	20	25	7.5	6.3	13	5	75	19	–	12.9	–	4	0.2	1	1	40
–	3D	200-024-810	JC145-60H	60	26	30		9.3		6							0.4		1	40
G	3D	200-024-811	JC145-75H	75		29											0.6		1	20
G	3D	200-024-812	JC145-90H	90			10.5	7.8		8							0.9		1	20
G	3D	200-024-813	JC145-100H	105	28	32	14	7	16			24		15.9		5	1.1		1	20
G	3D	200-024-814	JC145-120H	120													1.3		1	20
–	3D	200-024-815	JC145-150H	150	43	48	27	8	20	10	100	–	30	–	M20	13	3.4	2	1	4
–	3D	200-024-816	JC145-200H	200	50	58		11.5	24	14	120		36		M24	15	7		1	2

Refer to 1 : P.798

SLIDING DOOR ROLLER JC140 Flat Type w/ Bracket

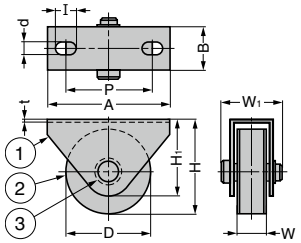
Made to Order | LOAD CAPACITY 3430~24500 N



- For wheel diameter above ϕ75, bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ75, providing smooth movement even for heavy doors.
- Gap between bracket and wheel absorbs deformation and allows for smooth movement.

[Applications]

- Gates, etc.



No.	Part Name	Material	Finish
①	Bracket	Steel (SPHC)	Clear Zinc Chromate
②	Wheel	Ductile Cast Iron	Black Enamel Finish
③	Bearing	–	–

RoHS	CAD	Item Code	Item Name	D	W	W1	H	H1	A	B	d	l	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	200-024-817	JC140-50F	50	20	41	64	60	100	33	11	11	70	3.2	3430	350	0.5	1	30
–	3D	200-024-818	JC140-60F	60	26	46	67	58		38					4410	450	0.7	1	30
G	3D	200-024-819	JC140-75F	75			88	76.5	120	37		15	94		5880	600	1.1	1	20
G	3D	200-024-820	JC140-90F	90			95.5								6860	700	1.4	1	20
G	3D	200-024-821	JC140-100F	105	28	50	118	93.5	145	39.5			115		7840	800	2	1	20
G	3D	200-024-822	JC140-120F	120			125.5								9800	1000	2.2	1	16
G	3D	200-024-823	JC140-150F	150	43	88	165	137	250	60	20	35	185	6	19600	2000	7	1	4
G	3D	200-024-824	JC140-200F	200	50	105	215	160	290	70			216		24500	2500	12.5	1	2

SLIDING DOOR ROLLER JC150 Flat Type w/o Bracket

Made to Order



- Non-bracket type of JC140 1.
- For wheel diameter above ϕ75, bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel diameter above ϕ75, providing smooth movement even for heavy doors.

[Applications]

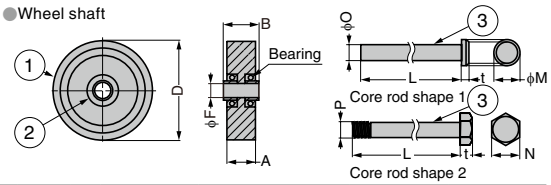
- Gates, etc.

[Remarks]

- Core rod for wheel diameter ϕ50~ϕ120 is not grooved for E-ring. Core rod for ϕ150~ϕ200 consists of one bolt and one nut.
- The shape of core rod varies depending on its size. Please confirm with the figure below.

[Parts Included]

- Wheel shaft



No.	Part Name	Material	Finish
①	Wheel	Ductile Cast Iron	Black Enamel Finish
②	Bearing	–	–
③	Core Rod	Steel (SWCH)	

RoHS	CAD	Item Code	Item Name	D	A	B	F	L	M	N	O	P	t	Weight (kg)	Core Rod Shape	Box (pcs)	Carton (pcs)
–	3D	200-024-825	JC150-50F	50	20	25	13	75	19	–	12.9	–	4	0.3	1	1	40
–	3D	200-024-826	JC150-60F	60	26	30								0.4		1	40
G	3D	200-024-827	JC150-75F	75		29								0.7		1	20
G	3D	200-024-828	JC150-90F	90										1		1	20
G	3D	200-024-829	JC150-100F	105	28	32	16		24		15.9		5	1.3		1	20
G	3D	200-024-830	JC150-120F	120										1.6		1	20
–	3D	200-024-831	JC150-150F	150	43	48	20	100	–	30	–	M20	13	4.2	2	1	4
–	3D	200-024-832	JC150-200F	200	50	58	24	120		36		M24	15	8.5		1	2

Refer to 1 : P.799

SLIDING DOOR ROLLER JC115 L Type w/ Bracket

Made to Order | LOAD CAPACITY 6370~24500 N



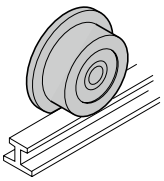
JC115-100L

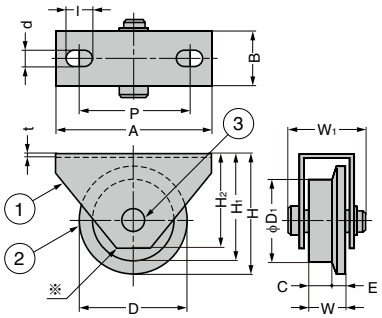
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel, providing smooth movement even for heavy doors.
- Gap between bracket and wheel absorbs deformation and allows for smooth movement.

[Applications]

- Gates, etc.

[Application Example]





※JC115-75L shown. Brackets other than above are of the same shape as the picture.

No.	Part Name	Material	Finish
①	Bracket	Steel (SPHC)	Clear Zinc Chromate
②	Wheel	Ductile Cast Iron	Black Enamel Finish
③	Bearing	–	–

RoHS	CAD	Item Code	Item Name	D	D1	W	W1	A	B	C	E	H	H1	H2	d	l	P	t	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-833	JC115-75L	90	75	32	52	120	42.5	24	8	95.5	88	67	11	15	94	3.2	6370	650	1.3	1	10
G	3D	200-024-834	JC115-100L	120	100	36	57	145	47	26	10	125	115	90			115		11760	1200	2.3	1	6
G	3D	200-024-835	JC115-150L	150	130	43	88	250	60	33		165	155	137	20	35	185	6	21560	2200	6	1	4
G	3D	200-024-836	JC115-200L	200	170	50	105	290	70	36.5	13.5	215	200	160			216		24500	2500	10.5	1	2

SLIDING DOOR ROLLER JC120 L Type w/o Bracket

Made to Order



- Non-bracket type of JC115 1.
- Bearing with rubber seal (dustproof seal type) provides excellent water resistance.
- Ideal for exterior application.
- 2 bearings are used for wheel, providing smooth movement even for heavy doors.

[Applications]

- Gates, etc.

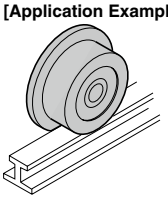
[Remarks]

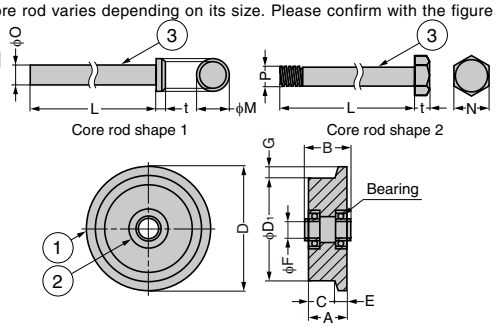
- Core rod for wheel diameter φ90~φ120 is not grooved for E-ring.
  Core rod for φ150~φ200 consists of one bolt and one nut.
- The shape of core rod varies depending on its size. Please confirm with the figure below.

[Parts Included]

- Wheel shaft

[Application Example]





No.	Part Name	Material	Finish
①	Wheel	Ductile Cast Iron	Black Enamel Finish
②	Bearing	–	–
③	Core Rod	Steel (SWCH)	

RoHS	CAD	Item Code	Item Name	D	D1	A	B	C	E	F	G	L	M	N	O	P	t	Weight (kg)	Core Rod Shape	Box (pcs)	Carton (pcs)
G	3D	200-024-837	JC120-75L	90	75	32	36	24	8	13	7.5	75	19	–	12.9	–	6.3	0.9	1	1	20
G	3D	200-024-838	JC120-100L	120	100	36	40	26	10	16	10		24		15.9		5	1.7		1	20
G	3D	200-024-839	JC120-150L	150	130	43	48	33		20		100	–	30	–	M20	13	3.3	2	1	4
G	3D	200-024-840	JC120-200L	200	170	50	58	36.5	13.5	24	15	136		36		M24	15	6.5		1	2

Refer to 1 : P.800

LAMP®

LEVELLING GLIDES & BASE

Levelling glides are a kind of hardware used as device legs for height adjustment.
Sugatsune offers a wide range of sizes and base materials, from ultra heavy duty type with load capacity of 11,000 kgf to mini type which can be adjusted easily by hand. Besides, we can also provide plenty of additional functions, such as seismic isolation for avoiding shake due to earthquake and swivel function to compensate for uneven floors.

“Medical leg" is a five-pronged base from Sugatsune. It is stable and has smooth shape which makes it easy to clean, ideal for medical sites such as intravenous drip tables, mobile carts and stand type lighting.

SUGATSUNE

Updated 2017.10.27

■INDEX

Special Levelling Glides — P.804~805



Protects server racks, precision instruments and medical equipment, etc. from severe shaking in case of earthquake.

Heavy Duty Levelling Glides — P.806~810



Ideal for heavy duty applications such as machine tools, conveyors and semiconductor manufacturing equipment, etc.

Medium-sized Levelling Glides — P.810~817



Typical levelling glide of medium size.

Small Levelling Glides — P.818~830



Typical levelling glide of small size.

Base for Levelling Glides — P.830~832



Can add screw hole for levelling glide on cabinet.

Case Feet — P.833~834



One-touch installation with washer.

Base — P.835~838



Suitable for medical applications such as intravenous drip tables and carts.

Product Specifications

[Special Levelling Glides]

Product Name	Load Capacity N (kgf)	Threaded Bolt Material	Parts Included/ Function	Threaded Bolt Size M8	W5/16	M10	M12	W3/8	W1/2	M14	M16	M18	M20	M24	M30
MDSF P.804	2000 (204) ~ 7500 (765)	Steel	–			●					●		●		

[Heavy Duty Levelling Glides]

Product Name	Load Capacity N (kgf)	Threaded Bolt Material	Parts Included/ Function	Threaded Bolt Size M12	W3/8	W1/2	M14	M16	M18	M20	M24	M30	M42	Tr52	Tr60
SDY-TRSB P.806	63700 (6500) ~ 107800 (11000)	SUS	WITH NUT										●	●	●
SDY-MS P.807	24500 (2500) ~ 29400 (3000)	SUS	WITH NUT									●	●		
SDY-MSR P.807	19600 (2000) ~ 24500 (2500)	SUS	WITH NUT								●	●			
SDY-MAS P.808	19600 (2000) ~ 24500 (2500)	SUS	SWIVEL WITH NUT								●	●			
SDY-MASR P.808	14700 (1500) ~ 19600 (2000)	SUS	SWIVEL WITH NUT							●	●				
ADHS, ADHSK, ADH P.809	29400 (3000) ~ 44100 (4500)	SUS Steel	WITH NUT								●	●			
SDY-TRAS P.810	63700 (6500) ~ 107800 (11000)	SUS	WITH NUT										●	●	●
LB P.810	14700 (1500) ~ 39200 (4000)	Steel	WITH NUT	●			●		●	●	●				

[Medium-sized Levelling Glides]

Product Name	Load Capacity N (kgf)	Threaded Bolt Material	Parts Included/ Function	Threaded Bolt Size M12	W3/8	W1/2	M14	M16	M18	M20	M24	M30	M42	Tr42	Tr52	Tr60
ADCR P.811	6664 (680) ~ 14112 (1440)	Steel	WITH NUT	●						●						
ADCS, ADC P.811	2940 (300) ~ 8624 (880)	SUS Steel	WITH NUT	●				●		●						

Product Name	Load Capacity N (kgf)	Threaded Bolt Material	Parts Included/ Function	Threaded Bolt Size M6	M8	W5/16	M10	M12	W3/8	W1/2	M14	M16	M18	M20	M24
ADRS, ADR P.812	196 (20) ~ 1470 (150)	SUS Steel	WITH NUT		●		●	●				●		●※	
ADPS, ADP P.813	2940 (300) ~ 8624 (880)	SUS Steel	WITH NUT		●		●	●				●		●※	
ADWS, ADWHS P.814	3724 (380) ~ 17150 (1750)	SUS	WITH NUT		●		●	●				●		●	
ADW, ADWH P.815	3332 (340) ~ 16856 (1720)	Steel	WITH NUT		●		●	●				●		●	
MKPLS P.816	1960 (200) ~ 3332 (340)	SUS	SWIVEL				●	●				●			
MKRLS P.816	784 (80) ~ 980 (100)	SUS	SWIVEL				●	●				●			
MKRL P.817	588 (60) ~ 784 (80)	Steel	SWIVEL				●	●				●		●	

※Except models made of steel.

[Small Levelling Glides]

Product Name	Load Capacity N (kgf)	Threaded Bolt Material	Parts Included/ Function	Threaded Bolt Size M6	M8	W5/16	M10	M12	W3/8	W1/2	M14	M16	M18	M20	M24
KYW P.818	–	Steel	–									●			
PM P.818	1176 (120) ~ 2744 (280)	Steel	–				●								
AD-502-P P.819	2744 (280)	Steel			●										
AD-502 P.819	2744 (280)	Steel	–		●										
AD-501 P.820	980 (100) ~ 1372 (140)	Steel	–		●		●								
TN-S P.821	1372 (140)	Steel	–				●								
TN P.821	784 (80) ~ 980 (100)	Steel	–		●		●								
AD-503KB, AD-503 P.822	–	Steel	–				●								
TG P.822	343 (35) ~ 1764 (180)	Steel	–		●		●								
SG P.823	1176 (120) ~ 1568 (160)	Steel	SWIVEL		●										
MK8AD P.823	588 (60)	Steel	SWIVEL		●		●								
RP P.824	588 (60) ~ 6100 (622)	Steel	SWIVEL	●	●	●	●	●		●					
RPS P.824	588 (60) ~ 1568 (160)	SUS	SWIVEL	●	●		●								
EA P.825	490 (50) ~ 2646 (270)	Steel	SWIVEL	●	●		●	●							
MN P.825	1176 (120) ~ 1568 (160)	Steel	SWIVEL		●	●	●	●	●	●					
MKPS P.826	1960 (200) ~ 3920 (400)	SUS	SWIVEL				●	●	●						
MKRS P.826	392 (40) ~ 980 (100)	SUS	SWIVEL				●	●	●		●				
MKP P.827	1176 (120) ~ 1568 (160)	Steel	SWIVEL				●	●	●		●				
MKR P.827	392 (40) ~ 784 (80)	Steel	SWIVEL				●	●	●		●				
MKR-N P.828	588 (60) ~ 784 (80)	Steel	SWIVEL				●								
MKR-N32DG32 P.828	454 (46)	Steel	SWIVEL		●										
SAJ P.829	490 (50)	Steel	–	●	●	●	●		●						
A800 P.830	588 (60)	Steel			●		●								

[Base for Levelling Glides] ■ ···Applicable threaded bolt size



Glide Base SDY-L
M42 M52 M60 Tr 42×6 Tr 52×7 Tr 60×8 P.806



Snap-in Glide Base AD-438
M8 P.831



Glide Base AD-558
M8 P.831



Glide Base AD-561
M8 P.831



Stainless Steel Glide Base AP36
M8 M10 3/8-16UNC M12 P.832



Glide Base AD-559
M12 M14 1/2-20UNF P.832



Glide Base AS-AJ
M10 M12 M16 P.832



Glide Base ADZS, ADZ
P.830



Cover For AD-501, AD-502 ADKW, ADKB
P.831

[Case Feet] ■ ···Mounting hole diameter



Case Foot (PL Type) PL
φ8 P.833



Case Foot (A Type) FF
φ5 P.833



Case Foot (B Type) FF
φ4.1 P.833



Case Foot (Mini Type) FF
φ3.1 φ4.1 φ3.6 P.833



Rubber Foot SK
φ3 φ4 φ5 P.834



Rubber Foot K
φ2 φ3 φ4 φ5 φ6 φ7 P.834

[Base] ■ ···Applicable pipe diameter. ( ): When using optional parts.



BASE HS-550
φ38.1 P.836



BASE HO500
φ50.8 (φ25, φ32, φ38) P.837



BASE BJ610
φ50.8 (φ25, φ32, φ38) P.838



MULTI-STEP TABLE LEG RTL-KUS
P.835

SWAY-FOOT LEVELLING GLIDE MDSF

LOAD CAPACITY 2000~7500 N

INSTRUCTION VIDEO



- Suitable for server racks, precision instruments, medical equipment, cabinets and furniture, etc.
- The base isolation structure absorbs vibrations and shocks.
- Reduces installation cost.
- Reduces the risk of falling furniture or equipment.
- Can be used on raised floor.
- Applied to server systems of major manufacturers.
- Sold in set of 4 pcs.
- Bolt lengths and screw diameters can be made to order.

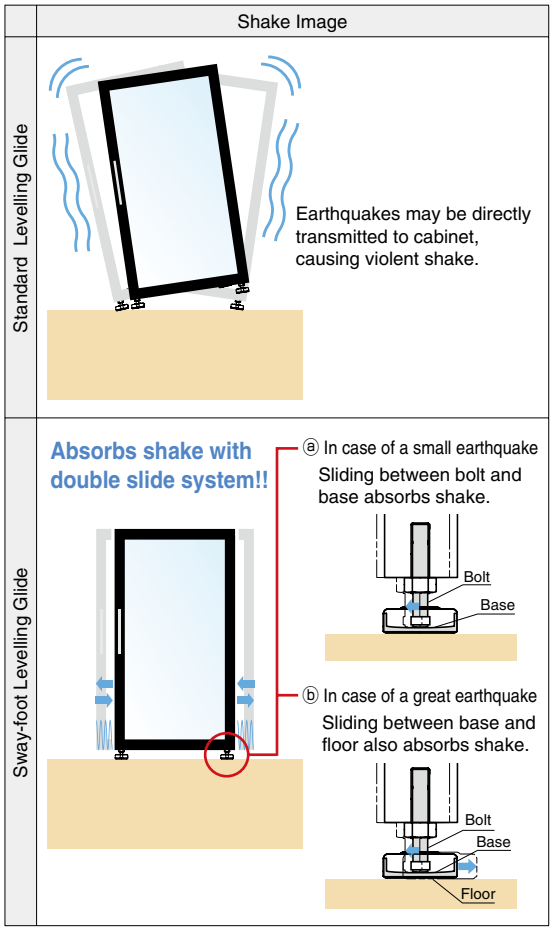
[Applications]

- Server racks, medical equipment, semiconductor manufacturing equipment, measuring instruments, fixtures for school facilities, kitchen appliances, furniture, fixtures for works of art, and other precision instruments, etc.

[Remarks]

- Keep 30cm or above away from structures and places with large flow of people.
- Use on a level floor.
- When installing the bolt to a cabinet, ensure that it is perpendicular to the base.
- The cabinet supported by this product may move during earthquake, depending on how the earthquake shakes.
- Do not touch the sliding surface as it is coated with lubricant.

[Comparison with Standard Levelling Glides]

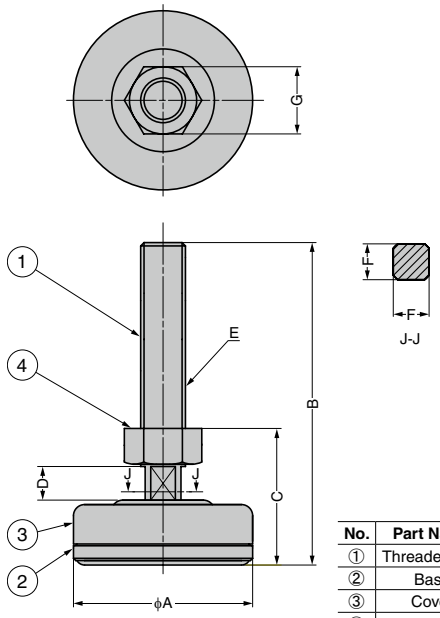


[Parts Structure (For 1 pc)]



Video Link Video Link

You can see the performance evaluation test where the Great Hanshin Awaji Earthquake 7.3 magnitude is completely reproduced.



No.	Part Name	Material	Finish
①	Threaded Bolt	Steel	Nickel
②	Base	Steel/Teflon	
③	Cover	Nitrile Rubber (NBR)	–
④	Hex Nut	Steel	Clear Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	A	B	C	D	E	F	G	Max. Size	Load Capacity N/4 pcs	Load Capacity kgf/4 pcs	Weight (g)	Box (sets)	Carton (sets)
G	3D	200-014-807	MDSF58-10-40	58	65.5	34.5	7.5	M10	8	17	W410×D630×H390	2000	204	180	1	–
G	3D	200-014-805	MDSF58-16-80		114	48	10.5	M16	13	24	W730×D730×H1460	5000	510	300	1	–
G	3D	200-014-806	MDSF80-20-100	80	144	61	15	M20	16	30	W1000×D1000×H2000	7500	765	580	1	–

4 pcs make a set.

EARTHQUAKE PROOF PRODUCTS DIGEST



Stainless Steel Lever Latch
LL-66S

1

Latch prevents door from opening unexpectedly.



Angle Bracket
XL-SA01

2

Can be used as falling prevention metal fittings for fixing cabinet or shelf to wall.





Spring Loaded Bar Latch BLL & BLT





Push Knob Latch TLP-S

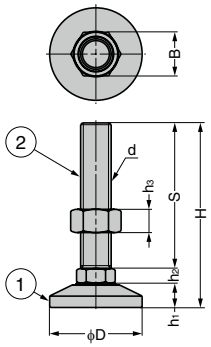
Refer to 1 : P.661, 2 : P.575

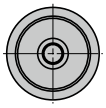
Updated 2017.10.27

ULTRA HEAVY DUTY LEVELLING GLIDE SDY-TRSB

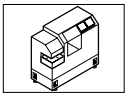
LOAD CAPACITY 63700 N~107800 N SUS







[Application Example]



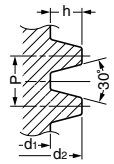
- Levelling glide subject to galling preventive treatment.
- Threaded bolt with trapezoidal screw thread. Tr42~Tr60 available.
- With bearing to provide easy and smooth level adjustment.
- Steel models also available by made to order (minimum order 10 pcs).

[Remarks]
- Use in combination with the base (sold separately).

[Sold Separately]
- Glide base SDY-L 1

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		

30° trapezoidal screw thread



	P	d1	d2	h
Tr42	6	34.3	41.8	3.75
Tr52	7	43.1	51.8	4.35
Tr60	8	49.9	59.8	4.95

d1 : Minimum diameter
d2 : Maximum diameter
h : Thread height

RoHS	CAD	Item Code	Item Name	d	D	H	h1	h2	h3	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-378	SDY-TRSB-42-200	Tr42	127	253.5	33.5	20	32	200	60	63700	6500	4.82	1	–
G	3D	200-024-379	SDY-TRSB-42-300			353.5				300				5.72	1	–
G	3D	200-024-380	SDY-TRSB-52-200	Tr52	137	260.5	38.5	22	42	200	80	88200	9000	7.68	1	–
G	3D	200-024-381	SDY-TRSB-52-300			360.5				300				9.08	1	–
G	3D	200-024-382	SDY-TRSB-60-200	Tr60	147	266.5	42.5	24	48	200	90	107800	11000	10.34	1	–
G	3D	200-024-383	SDY-TRSB-60-300			366.5				300				12.14	1	–

Refer to 1 : P.806

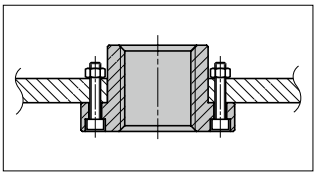
GLIDE BASE SDY-L

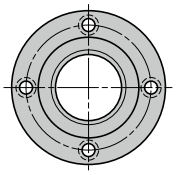


- For SDY-TRSB 1, SDY-TRAS 2 and SDY-MS 3 (for M42).
- Metric screw thread and trapezoidal screw thread available.
- Steel models (nickel plating) also available by made to order (minimum order 10 pcs).

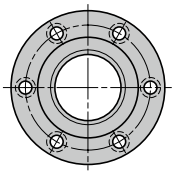
[Recommended Screws]
- Hexagon socket head cap screw M8

[Installation]

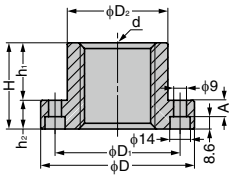




SDY-LMB-42
SDY-LTB-42



SDY-LMB-52
SDY-LMB-60
SDY-LTB-52
SDY-LTB-60



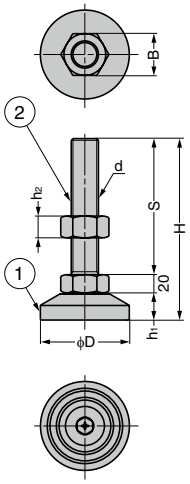
RoHS	CAD	Item Code	Item Name	Material	Finish	d	D	D1	D2	H	h1	h2	A	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-353	SDY-LMB-42	Brass	Nickel	Metric Screw Thread (M42)	97	77	60	40	22	18	9.4	1.2	2	–
G	3D	200-024-354	SDY-LMB-52			Metric Screw Thread (M52)	107	87	70	50	30	20	11.4	1.64	1	–
G	3D	200-024-355	SDY-LMB-60			Metric Screw Thread (M60)	117	97	80	60	40			2.15	1	–
G	3D	200-024-356	SDY-LTB-42			Trapezoidal Screw Thread (Tr42×6)	97	77	60	50	32	18	9.4	1.33	1	–
G	3D	200-024-357	SDY-LTB-52			Trapezoidal Screw Thread (Tr52×7)	107	87	70	60	40	20	11.4	1.8	1	–
G	3D	200-024-358	SDY-LTB-60			Trapezoidal Screw Thread (Tr60×8)	117	97	80	70	50			2.36	1	–

Refer to 1 : P.806 2 : P.810 3 : P.807

HEAVY DUTY LEVELLING GLIDE SDY-MS

LOAD CAPACITY 24500~29400 N SUS





- Levelling glide subject to galling preventive treatment.
- Different bolt lengths, bolt diameters (M16, M20 and M24) and steel models also available by made to order (minimum order 10 pcs).

[Sold Separately]

- Glide base SDY-L (for 1 M42 only)

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		

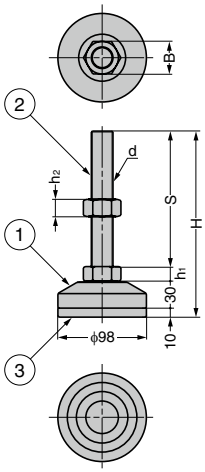
RoHS	CAD	Item Code	Item Name	d	ϕD	H	h1	h2	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-359	SDY-MS-30-150	M30	98	200	30	24	150	46	24500	2500	2.65	1	–
G	3D	200-024-360	SDY-MS-30-200			250			200				2.95	1	–
G	3D	200-024-361	SDY-MS-42-150	M42	127	203	33	32	150	60	29400	3000	4.68	1	–
G	3D	200-024-362	SDY-MS-42-200			253			200				5.17	1	–
G	3D	200-024-363	SDY-MS-42-250			303			250				5.6	1	–
G	3D	200-024-364	SDY-MS-42-300			353			300				6.06	1	–

Refer to 1 : P.806

HEAVY DUTY LEVELLING GLIDE SDY-MSR

LOAD CAPACITY 19600~24500 N SUS





- Levelling glide subject to galling preventive treatment.
- Base made of nitrile rubber to prevent from skidding and scratching the floor.
- Different bolt lengths, bolt diameters (M16, M20) and steel models also available by made to order (minimum order 10 pcs). In addition, levelling glides with conductive rubber base also available (minimum order 200 pcs).

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		
③	Base	Nitrile Rubber (NBR)	Black

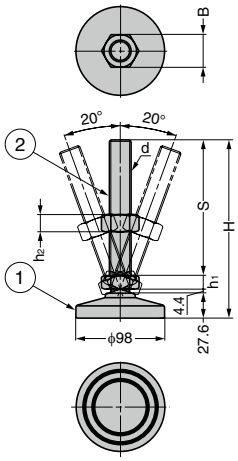
RoHS	CAD	Item Code	Item Name	d	H	h1	h2	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-365	SDY-MSR-24-150	M24	206	16	19	150	36	19600	2000	2.14	1	–
G	3D	200-024-366	SDY-MSR-24-200		256			200				2.3	1	–
G	3D	200-024-367	SDY-MSR-30-150	M30	210	20	24	150	46	24500	2500	2.78	1	–
G	3D	200-024-368	SDY-MSR-30-200		260			200				3.08	1	–

HEAVY DUTY LEVELLING GLIDE SDY-MAS With Swivel Function

LOAD CAPACITY 19600~24500 N SUS



- Levelling glide subject to galling preventive treatment.
- Swivels approximately 40° to compensate for uneven floors.
- Different bolt lengths, bolt diameters (M16, M20) and steel models also available by made to order (minimum order 10 pcs).



No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		

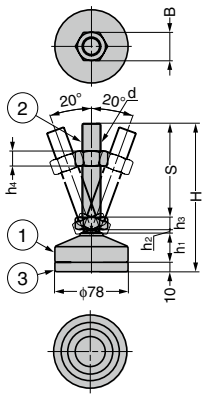
RoHS	CAD	Item Code	Item Name	d	H	h1	h2	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-369	SDY-MAS-24-150	M24	197	15	19	150	36	19600	2000	1.75	1	–
G	3D	200-024-370	SDY-MAS-24-200		247			200				1.91	1	–
G	3D	200-024-371	SDY-MAS-30-150	M30	202	20	24	150	46	24500	2500	2.24	1	–
G	3D	200-024-372	SDY-MAS-30-200		252			200				2.54	1	–

HEAVY DUTY LEVELLING GLIDE SDY-MASR With Swivel Function

LOAD CAPACITY 14700~19600 N SUS



- Levelling glide subject to galling preventive treatment.
- Base made of nitrile rubber to prevent from skidding and scratching the floor.
- Swivels approximately 40° to compensate for uneven floors.
- Different bolt lengths, bolt diameters (M16) and steel models also available by made to order (minimum order 10 pcs). In addition, levelling glides with conductive rubber base also available (minimum order 200 pcs).



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		
③	Base	Nitrile Rubber (NBR)	Black

RoHS	CAD	Item Code	Item Name	d	H	h1	h2	h3	h4	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-024-373	SDY-MASR-20-100	M20	158	31	4	13	16	100	30	14700	1500	0.98	1	–
G	3D	200-024-374	SDY-MASR-20-150		208					150				1.08	1	–
G	3D	200-024-375	SDY-MASR-20-200		258					200				1.18	1	–
G	3D	200-024-376	SDY-MASR-24-150	M24	219	39.6	4.4	15	19	150	36	19600	2000	1.3	1	–
G	3D	200-024-377	SDY-MASR-24-200		269					200				1.46	1	–

HEAVY DUTY LEVELLING GLIDE ADHS, ADHSK, ADH

LOAD CAPACITY 29400~44100 N | TEST METHOD 14 | SUS



- Three types available: Steel ADH, stainless steel ADHS and ADHSK with anti-galling stainless steel bolt (See the following galling preventive treatment)
- ADHSK: Galling preventive treatment allows smoother vertical adjustment.
- Two types of M24 and M30 screw diameter. enables application to large machines and furniture.
- Recess for hex key at the screw head allows effective adjustment.

[Applications]

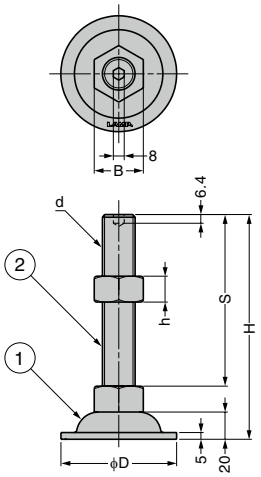
- Machine tools, conveyors, semiconductors, LCD production equipment.

[Galling Preventive Treatment]

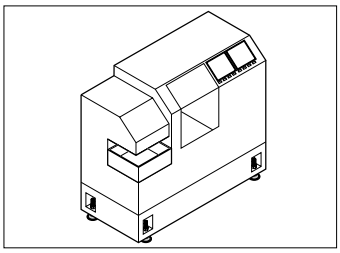
Stainless steel is a material with low thermal conductivity and high thermal expansion coefficient. For this reason, the threaded bolt may expand due to the frictional heat during tightening, and the male and female thread may be galled and the bolt may be locked. Even when using ADHS, galling preventive treatment is recommended.
In ADHSK, by applying a lubricating paint to the threaded bolt and going through the firing treatment to enhance the slipperiness and adhesiveness, thread galling is hard to occur.

[Remarks]

- To prevent looseness after use, it is recommended to tighten with a double nut.



[Application Example]



[ADHSK] Galling Preventive Stainless Steel

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		Baking Finish

RoHS	CAD	Item Code	Item Name	D	d	H	S	h	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-012-538	ADHS-85-24-150K	83	M24	189	150	19	36	29400	3000	970	1	12
G	3D	200-012-539	ADHS-85-24-200K			239	200			34300	3500	1080	1	24
G	3D	200-012-540	ADHS-85-30-150K		M30	194	150	24	46	39200	4000	1500	1	24
G	3D	200-012-541	ADHS-85-30-200K			244	200			44100	4500	1680	1	24

[ADHS] Stainless Steel

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		

RoHS	CAD	Item Code	Item Name	D	d	H	S	h	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-012-534	ADHS-85-24-150	83	M24	189	150	19	36	29400	3000	970	1	24
G	3D	200-012-535	ADHS-85-24-200			239	200			34300	3500	1080	1	24
G	3D	200-012-536	ADHS-85-30-150		M30	194	150	24	46	39200	4000	1500	1	24
G	3D	200-012-537	ADHS-85-30-200			244	200			44100	4500	1680	1	24

[ADH] Steel

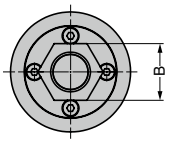
No.	Part Name	Material	Finish
①	Body	Steel (SPHC)	Clear Zinc Chromate (Trivalent)
②	Threaded Bolt		

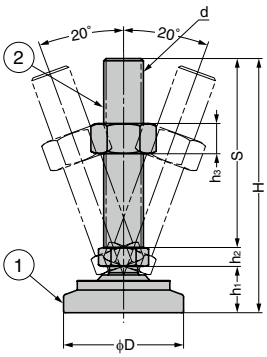
RoHS	CAD	Item Code	Item Name	D	d	H	S	h	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-012-530	ADH-85-24-150	84	M24	189	150	19	36	29400	3000	970	1	24
G	3D	200-012-531	ADH-85-24-200			239	200			34300	3500	1090	1	24
–	3D	200-012-532	ADH-85-30-150		M30	194	150	24	46	39200	4000	1530	1	24
G	3D	200-012-533	ADH-85-30-200			244	200			44100	4500	1750	1	24

ULTRA HEAVY DUTY LEVELLING GLIDE SDY-TRAS With Swivel Function

LOAD CAPACITY 63700~107800 N SUS





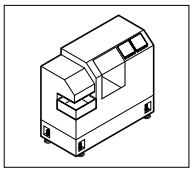


- Levelling glide subject to galling preventive treatment.
- Swivels approximately 40° to compensate for uneven floors. Also, load is distributed evenly for excellent durability.
- Threaded bolt with trapezoidal screw thread. Tr42~Tr60 available.
- Steel models also available by made to order (minimum order 10 pcs).

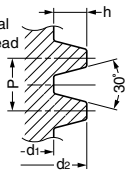
[Remarks]
- Use in combination with the base (sold separately).

[Sold Separately]
- Glide base SDY-L 1

[Application Example]



30° Trapezoidal screw thread



	P	d_1	d_2	h
Tr42	6	34.3	41.8	3.75
Tr52	7	43.1	51.8	4.35
Tr60	8	49.9	59.8	4.95

d_1 : Minimum diameter
d_2 : Maximum diameter
h : Thread height

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		

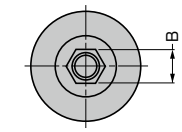
RoHS	CAD	Item Code	Item Name	d	D	H	h_1	h_2	h_3	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-034-532	SDY-TRAS-42-200	Tr42	127	269	49	20	32	200	60	63700	6500	6.22	1	–
G	3D	200-034-533	SDY-TRAS-42-300			369				300				7.04	1	–
G	3D	200-034-534	SDY-TRAS-52-200	Tr52	137	227	55	22	42	200	80	88200	9000	9.14	1	–
G	3D	200-034-535	SDY-TRAS-52-300			377				300				10.48	1	–
G	3D	200-034-536	SDY-TRAS-60-200	Tr60	147	291	67	24	48	200	90	107800	11000	12.50	1	–
G	3D	200-034-537	SDY-TRAS-60-300			391				300				14.28	1	–

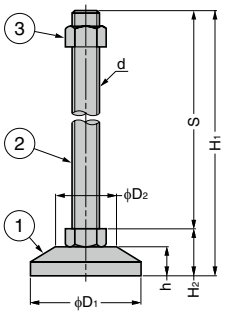
Refer to 1 : P.806

LONG BOLT LEVELLING GLIDE LB

LOAD CAPACITY 14700~39200 N



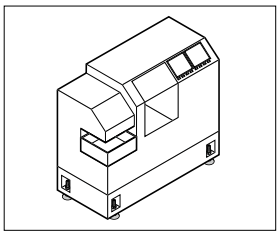




- Cross-recessed bottom allows easy installation with pneumatic screwdriver.
- Made-to-order specifications and stainless steel types also available.

[Applications]
- Machine tools, vending machines, etc.

[Application Example]



No.	Part Name	Material	Finish
①	Body	Steel (FC)	Coloured Zinc Chromate (Trivalent)
②	Threaded Bolt	Steel (SS)	
③	Hex Nut		

RoHS	CAD	Item Code	Item Name	D_1	D_2	H_1	H_2	h	S	B	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-140-740	LB12-200	60	40	225	25	17	200	19	M12	14700	1500	660	30	–
G	3D	200-140-234	LB16-250	80	45	282	32	22	250	24	M16	19600	2000	880	25	–
G	3D	200-140-235	LB16-300			332			300					940	25	–
G	3D	200-140-741	LB16-350			382			350					1010	20	–
G	3D	200-140-742	LB20-250			285	35		250	30	M20	39200	4000	1140	20	–
G	3D	200-140-233	LB20-300			335			300					1240	20	–
G	3D	200-140-743	LB20-350			385			350					1330	16	–
G	3D	200-140-744	LB20-400			435			400					1440	8	–
G	3D	200-140-232	LB24-280			317	37		280	36	M24			1520	20	–

LEVELLING GLIDE ADCR

LOAD CAPACITY 6664~14112 N

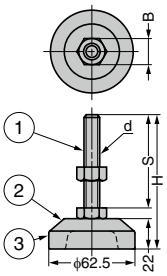


- Bottom cover made of nitrile rubber to prevent from skidding and scratching the floor.
- Cross-recessed bottom allows easy installation with pneumatic screwdriver.

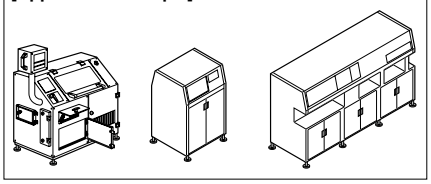
[Others]
- For special size, please contact local representatives.

[Remarks]
- Do not move horizontally under load. Cover may come off or wear out.

[Sold Separately]
- Washer for Levelling glide ADZS (SUS) 1
- Washer for Levelling glide ADZ (steel) 2



[Application Example]



No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SWRCH)	Clear Zinc Chromate
②	Body	Steel (SS)	(Trivalent)
③	Cover	Nitrile Rubber (NBR)	Black

RoHS	CAD	Item Code	Item Name	H	S	B	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-508	ADCR60-12-50	80	50	19	M12×1.75	6664	680	332	50	–
G	3D	200-140-072	ADCR60-20-180	215	180	30	M20×2.5	14112	1440	768	25	–

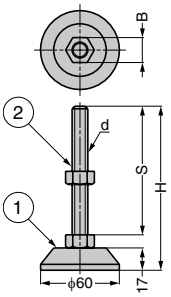
Refer to 1 2 : P.830

LEVELLING GLIDE ADCS, ADC

LOAD CAPACITY 2940~8624 N SUS



- ADC (Steel): Cross-recessed bottom allows easy installation.



[ADCS] Stainless Steel

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		

RoHS	CAD	Item Code	Item Name	H	S	B	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-220	ADCS60-12-120	145	120	19	M12	2940	300	365	60	–
G	3D	200-141-222	ADCS60-16-100	127	100					440	50	–
G	3D	200-141-223	ADCS60-16-130	157	130	24	M16	5488	560	480	50	–
G	3D	200-141-225	ADCS60-16-180	207	180					550	35	–
G	3D	200-141-226	ADCS60-20-100	130	100					590	40	–
G	3D	200-141-227	ADCS60-20-130	160	130	30	M20	8624	880	650	40	–
G	3D	200-141-229	ADCS60-20-180	210	180					750	30	–

[ADC] Steel

No.	Part Name	Material	Finish
①	Body	Steel (SS)	Clear Zinc Chromate
②	Threaded Bolt	Steel (SWRCH)	(Trivalent)

RoHS	CAD	Item Code	Item Name	H	S	B	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-533	ADC60-12-120	145	120	19	M12	2940	300	355	60	–
G	3D	200-141-535	ADC60-16-100	127	100					440	50	–
G	3D	200-141-536	ADC60-16-130	157	130	24	M16	5488	560	480	50	–
G	3D	200-141-538	ADC60-16-180	207	180					540	35	–
G	3D	200-141-540	ADC60-20-100	130	100					580	40	–
G	3D	200-141-541	ADC60-20-130	160	130					640	40	–
G	3D	200-141-542	ADC60-20-150	180	150	30	M20	8624	880	680	35	–
G	3D	200-140-071	ADC60-20-180	210	180					740	30	–

LEVELLING GLIDE ADRS, ADR

LOAD CAPACITY 196~1470 N SUS



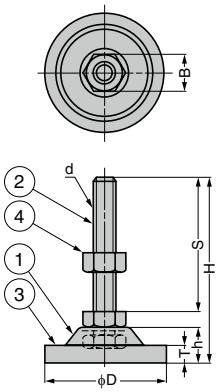
- Bottom cover made of elastomer with excellent impact resistance.
- Hexagon nut at the bottom for easy installation.
- For special size, please contact local representatives.

[Remarks]

- Do not move horizontally under load. Cover may come off or wear out.

[Sold Separately]

- Washer ADZS (Stainless steel) 1
- Washer ADZ (Steel) 2



[ADRS] Stainless Steel

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		
③	Cover	Elastomer (TPE)	Black
④	Nut	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	D	d	H	h	T	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-147-034	ADRS37-8-60	41	M8	78	12.5	6	60	13	196	20	58	200	–
G	3D	200-147-035	ADRS37-10-50		M10	69.5			50	17			83	170	–
G	3D	200-147-036	ADRS55-12-100	62	M12	126.5	18.5	9	100	19	784	80	190	80	–
G	3D	200-147-037	ADRS55-12-120			146.5			120				200	70	–
G	3D	200-147-041	ADRS75-16-150	80	M16	182.5	22.5		150	24	1470	150	400	30	–
G	3D	200-147-045	ADRS75-20-150		M20	185.5				30			616	30	–

[ADR] Steel

No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPCC)	Clear Zinc Chromate (Trivalent)
②	Threaded Bolt	Steel (SWRCH)	
③	Cover	Elastomer (TPE)	Black
④	Nut	Steel (SWRCH)	Clear Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	D	d	H	h	T	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-003	ADR37-8-50	41	M8	68	12.5	6	50	13	196	20	55	200	–
G	3D	200-140-593	ADR37-10-50		M10	69.5				17			81	170	–
G	3D	200-140-506	ADR55-12-50	62	M12	76.5	18.5	9		19	784	80	145	70	–
G	3D	200-141-544	ADR55-12-100			126.5			100				181	80	–
G	3D	200-141-545	ADR55-12-120			146.5			120				196	70	–
G	3D	200-141-546	ADR55-12-150			176.5			150				220	60	–
G	3D	200-141-547	ADR75-16-100	80	M16	132.5	22.5		100	24	1470	150	329	40	–
G	3D	200-141-548	ADR75-16-130			162.5			130				369	35	–
G	3D	200-141-550	ADR75-16-180			212.5			180				436	25	–
G	3D	200-141-551	ADR75-16-200			232.5			200				463	20	–

Refer to 1 2 : P.830

LEVELLING GLIDE ADPS, ADP

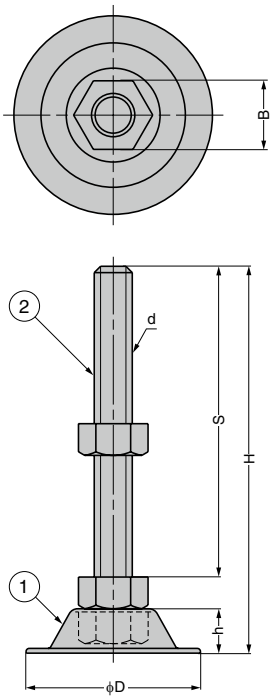
LOAD CAPACITY 2940~8624 N SUS



- Hexagon nut at the bottom for easy installation.
- Wide variety of size variations available.

[Sold Separately]

- Washer ADZS (Stainless steel 1)
- Washer ADZ (Steel 2)



[ADPS] Stainless Steel

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Polished
②	Threaded Bolt		

RoHS	CAD	Item Code	Item Name	d	D	H	h	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-182	ADPS37-8-60	M8	37	76	10.5	60	13	2940	300	56	200	–
G	3D	200-141-183	ADPS37-10-50	M10		67.5		50	17			78	200	–
G	3D	200-141-184	ADPS55-12-100	M12	55	122	14	100	19			174	100	–
G	3D	200-141-185	ADPS55-12-120			142		120				184	80	–
G	3D	200-141-186	ADPS55-12-150			172		150				210	70	–
G	3D	200-141-187	ADPS75-16-100	M16	75	128	18	100	24	5488	560	318	50	–
G	3D	200-141-188	ADPS75-16-130			158		130				358	40	–
G	3D	200-141-189	ADPS75-16-150			178		150				382	30	–
G	3D	200-141-190	ADPS75-16-180			208		180				426	30	–
G	3D	200-141-191	ADPS75-20-100	M20		131		100	30	8624	880	490	40	–
G	3D	200-141-192	ADPS75-20-130			161		130				553	30	–
G	3D	200-141-194	ADPS75-20-180			211		180				655	25	–

[ADP] Steel

No.	Part Name	Material	Finish
①	Body	Steel	Clear Zinc Chromate
②	Threaded Bolt		

RoHS	CAD	Item Code	Item Name	d	D	H	h	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-002	ADP37-8-50	M8	37	66	10.5	50	13	2940	300	55	200	–
G	3D	200-140-594	ADP37-10-50	M10		67.5			17			80	200	–
G	3D	200-140-505	ADP55-12-50	M12	55	72	14		19			135	100	–
G	3D	200-141-520	ADP55-12-100			122		100				165	100	–
G	3D	200-141-521	ADP55-12-120			142		120				180	80	–
G	3D	200-141-522	ADP55-12-150			172		150				200	70	–
G	3D	200-141-523	ADP75-16-100	M16	75	128	18	100	24	5488	560	310	50	–
G	3D	200-141-524	ADP75-16-130			158		130				350	40	–
G	3D	200-141-525	ADP75-16-150			178		150				375	30	–
G	3D	200-141-526	ADP75-16-180			208		180				410	30	–

Refer to 1 2 : P.830

STAINLESS STEEL LEVELLING GLIDE ADWS, ADWHS

LOAD CAPACITY 3724~17150 N SUS

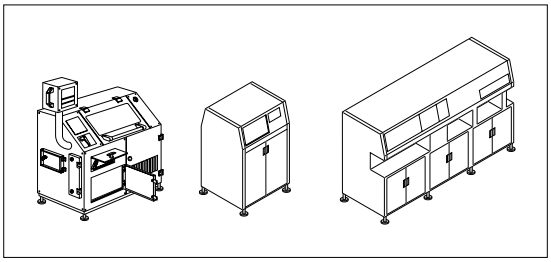


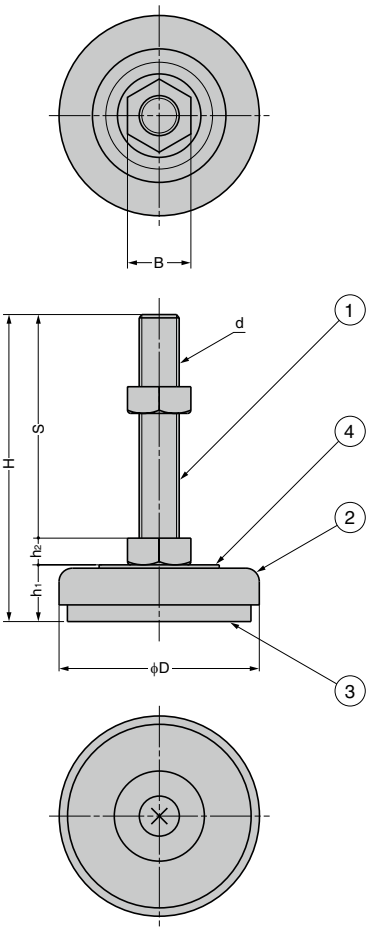
- Cross-recessed bottom allows easy installation with impact wrench.
- ADWS: Excellent weather resistance.
- ADWHS: Excellent heat / weather resistance with non-stain transfer base.

[Applications]

- Machine tools, vending machines, conveyors, computer racks, control boards, laboratory equipment, OA equipment, various furniture, etc.

[Application Example]





No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Stainless Steel (SUS304)	Polished
②	Cover		
③	Base	ADWS/CR	Black
		ADWHS/EPDM	White
④	Washer	PA	–

RoHS	CAD	Item Code	Item Name	Base Material	d	D	H	h1	h2	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-605	ADWS40-8-60	CR	M8	40	78.5	13	5.5	60	13	3724	380	75	150	–
G	3D	200-140-606	ADWS40-10-50		M10		70		7	50	17	6272	640	95	120	–
G	3D	200-140-607	ADWS50-12-70		M12	50	93	15	8	70	19	8722	890	176	60	–
G	3D	200-140-609	ADWS50-12-120				143			120		7644	780	215	60	–
G	3D	200-140-611	ADWS60-16-70		M16	60	97	17	10	70	24	14308	1460	292	40	–
G	3D	200-140-612	ADWS60-16-100				127			100		14210	1450	332	35	–
G	3D	200-140-616	ADWS60-20-100		M20		130		13		30	17150	1750	484	25	–
G	3D	200-140-617	ADWS60-20-130				160			130		15876	1620	570	20	–
G	3D	200-140-620	ADWHS40-8-60	EPDM	M8	40	78.5	13	5.5	60	13	4214	430	73	150	–
G	3D	200-140-621	ADWHS40-10-50		M10		70		7	50	17	5978	610	96	120	–
G	3D	200-140-622	ADWHS50-12-70		M12	50	93	15	8	70	19	8330	850	167	60	–
G	3D	200-140-627	ADWHS60-16-100		M16	60	127	17	10	100	24	12348	1260	1260	35	–
G	3D	200-140-628	ADWHS60-16-130				157			130		11760	1200	1200	30	–

LEVELLING GLIDE ADW, ADWH

LOAD CAPACITY 3332~16856 N

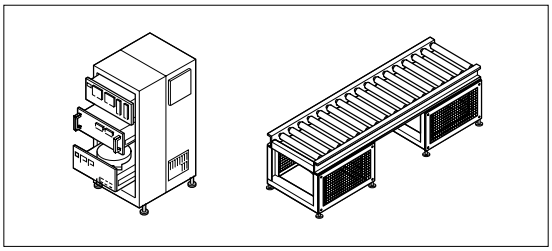


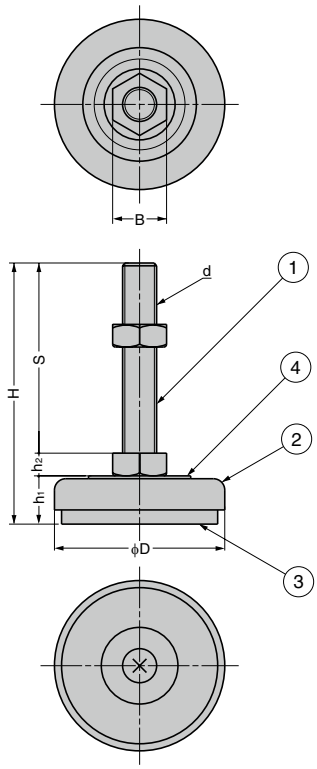
- Cross-recessed bottom of threaded bolt allows easy installation with impact wrench.
- ADW: Excellent weather resistance.
- ADWH: Excellent heat / weather resistance with non-stain transfer base.
- Wide variety of size variations available.

[Applications]

- Machine tools, vending machines, conveyors, computer racks, control boards, laboratory equipment, OA equipment, various furniture, etc.

[Application Example]





No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SS)	Black Chromate
②	Cover	Steel (SPCC)	
③	Base	ADW/CR	Black
		ADWH/EPDM	White
④	Washer	PA	–

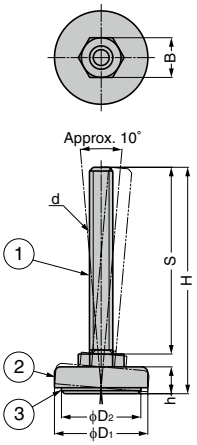
RoHS	CAD	Item Code	Item Name	Base Material	d	D	H	h_1	h_2	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-635	ADW40-8-60	CR	M8	40	78.5	13	5.5	60	13	3332	340	79	150	–
G	3D	200-140-636	ADW40-10-50		M10		70		7	50	17	5684	580	100	120	–
G	3D	200-140-637	ADW50-12-70		M12	50	93	15	8	70	19	8232	840	170	60	–
G	3D	200-140-638	ADW50-12-100				123			100		6762	690	195	60	–
G	3D	200-140-639	ADW50-12-120				143			120		6860	700	218	60	–
G	3D	200-140-641	ADW60-16-70		M16	60	97	17	10	70	24	12838	1310	300	40	–
G	3D	200-140-642	ADW60-16-100				127			100		12544	1280	332	35	–
G	3D	200-140-643	ADW60-16-130				157			130		11858	1210	386	30	–
G	3D	200-140-647	ADW60-20-100		M20		130		13	100	30	13034	1330	492	25	–
G	3D	200-140-648	ADW60-20-130				160			130		14406	1470	557	20	–
G	3D	200-140-652	ADWH40-8-60	EPDM	M8	40	78.5	13	5.5	60	13	3332	340	78	150	–
G	3D	200-140-653	ADWH40-10-50		M10		70		7	50	17	5684	580	95	120	–
G	3D	200-140-654	ADWH50-12-70		M12	50	93	15	8	70	19	8036	820	176	60	–
G	3D	200-140-655	ADWH50-12-100				123			100		7056	720	200	60	–
G	3D	200-140-656	ADWH50-12-120				143			120		6566	670	207	60	–
G	3D	200-140-657	ADWH50-12-150				173			150		6076	620	298	50	–
G	3D	200-140-658	ADWH60-16-70		M16	60	97	17	10	70	24	12054	1230	241	40	–
G	3D	200-140-659	ADWH60-16-100				127			100		10780	1100	336	35	–
G	3D	200-140-664	ADWH60-20-100		M20		130		13		30	15288	1560	493	25	–
G	3D	200-140-665	ADWH60-20-130				160			130		16856	1720	559	20	–

STAINLESS STEEL LEVELLING GLIDE MKPLS With Swivel Function

LOAD CAPACITY 1960~3332 N | TEST METHOD 14 | SUS







- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg. Height adjustment also possible with spanner.

No.	Part Name	Material	Finish
①	Body	Stainless Steel	Satin
②	Cover	Stainless Steel (SUS304)	
③	Base		Plain

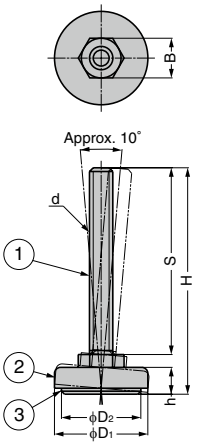
RoHS	CAD	Item Code	Item Name	d	D1	D2	H	h	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-347	MKPLS-32-10-80	M10	32	27	96	10.5	80	17	1960	200	79	30	240
G	3D	200-141-336	MKPLS-40-12-80	M12	40	34	97	11.5			2940	300	125	30	240
G	3D	200-141-337	MKPLS-50-12-80		50	44					3332	340	150	20	160
G	3D	200-141-338	MKPLS-50-16-78	M16			100		78.5	24	3136	320	220	15	120

STAINLESS STEEL LEVELLING GLIDE MKRLS With Swivel Function

LOAD CAPACITY 784~980 N | TEST METHOD 14 | SUS







- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg. Height adjustment also possible with spanner.
- Levelling glide with elastomer base to prevent from skidding.

No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel	Satin
②	Cover	Stainless Steel (SUS304)	
③	Base	Elastomer (TPE)	Black

RoHS	CAD	Item Code	Item Name	d	D1	D2	H	h	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-130-348	MKRLS-32-10-80	M10	32	27	96	11	80	17	784	80	76	30	240
G	3D	200-141-339	MKRLS-40-12-80	M12	40	34	97	11.5					120	30	240
G	3D	200-141-340	MKRLS-50-12-80		50	44					980	100	140	20	160
G	3D	200-141-341	MKRLS-50-16-78	M16			100		78.5	24	784	80	215	15	120

LEVELLING GLIDE MKRL With Swivel Function

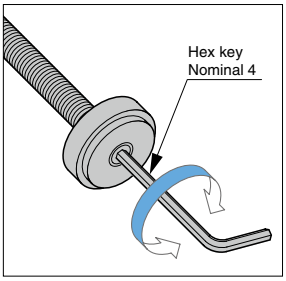
LOAD CAPACITY 588~784 N | TEST METHOD 14



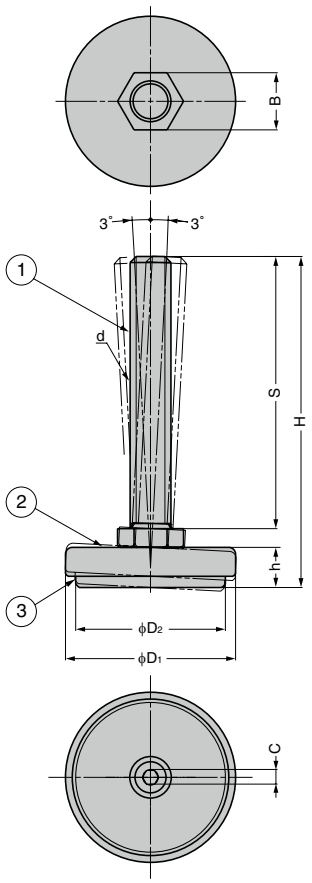
- Black chromate finish.
- Swivels approximately 6° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.
- Hexagon socket at the bottom for easy installation.

[Others]

- For special size, please contact local representatives.



Can be easily turned with a hex key. (Hex key not included.)



No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SWCH)	Black Chromate (Trivalent)
②	Cover	Steel (SPCC)	
③	Base	Elastomer (TPE)	Black

RoHS	CAD	Item Code	Item Name	d	D1	D2	H	h	S	B	C	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-159	MKRL-32-10-80B6	M10	32	27	95.8	10.8	80	17	4	588	60	80	30	300
G	3D	200-147-014	MKRL-32-12-66B6	M12			81.8		66			735	75	85	30	300
G	3D	200-141-120	MKRL-32-12-80B6				95.8		80			588	60	93	30	300
G	3D	200-141-160	MKRL-40-10-80B6	M10	40	34	96.2	11.2						95	25	250
G	3D	200-141-115	MKRL-40-12-32B6	M12			48.2		32					79	30	300
G	3D	200-141-110	MKRL-40-12-43B6				59.2		43					85	25	250
G	3D	200-141-124	MKRL-40-12-55B6				71.2		55					94	25	250
G	3D	200-149-111	MKRL-40-12-80B6				96.2		80					111	25	250
G	3D	200-141-111	MKRL-40-12-120B6				136.2		120					143	15	150
G	3D	200-149-112	MKRL-50-12-80B6		50	44	96.8	11.8	80					136	20	200
G	3D	200-141-112	MKRL-50-12-120B6				136.8		120					169	10	100
–	3D	200-149-113	MKRL-50-16-78B6	M16			100.3		78.5	24		784	80	214	15	120
G	3D	200-141-113	MKRL-70-20-101B6	M20	70	64	124.5	11.5	101	30				448	8	64

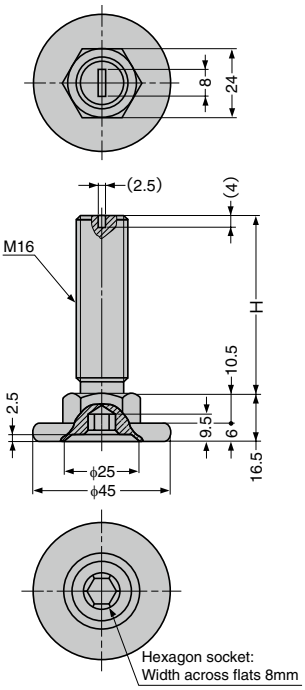
LEVELLING GLIDE KYW



- Slotted top of threaded bolt and hexagon socket at the bottom allows easy installation and adjustment.

[Applications]

- Machine tools, vending machines, etc.



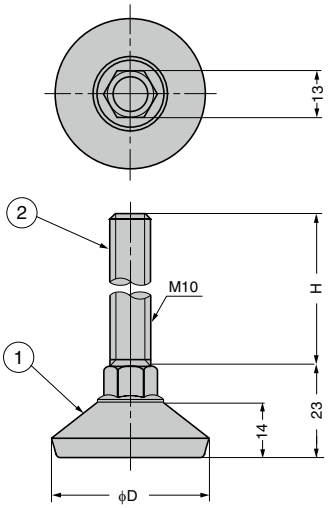
RoHS	CAD	Item Code	Item Name	Material	Finish	H	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	200-147-000	KYW16-60-6B	Steel (SWRM)	Black Chromate	60	180	120	–
GT	3D	200-140-712	KYW16-75-6B			75	195	100	–
–	3D	200-147-001	KYW16-80-6B			80	205	80	–
–	3D	200-140-710	KYW16-100-6B			100	235	90	–
GT	3D	200-140-713	KYW16-120-6B			120	250	60	60

LEVELLING GLIDE PM

LOAD CAPACITY 1176~2744 N | TEST METHOD 14



- Black appearance without compromising the device design.



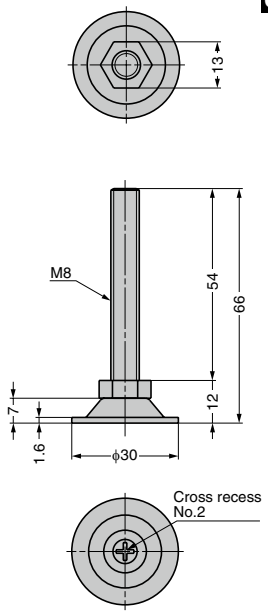
No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Threaded Bolt	Steel (SWCH)	Black Chromate

RoHS	CAD	Item Code	Item Name	D	H	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-145-030	PM-30	30	60	1176	120	48	40	400
–	3D	200-145-034	PM-40	38		2744	280	50	30	300
–	3D	200-149-032	PM-40-70		47			49	30	300
–	3D	200-149-161	PM-50	50	60	1960	200	55	20	200

LEVELLING GLIDE AD-502-P

LOAD CAPACITY 2744 N | TEST METHOD 14





- Cross-recessed bottom allows easy installation with electric screwdriver.
- Cover 1 installed at the bottom to prevent from scratching the floor available.

[Sold Separately]

- Wrench for AD-502: AD-502-SP



[Base]



[Wrench for AD-502: AD-502-SP] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	–	200-936-204	AD-502-SP	Steel	Coloured Zinc Chromate	14	1	–

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-024-440	AD-502P	Steel	Coloured Zinc Chromate (Trivalent)	2744	280	30	100	400
G	3D	200-024-441	AD-502P-BZC		Black Chromate (Trivalent)				100	400

Refer to 1 : P.831

LEVELLING GLIDE AD-502

LOAD CAPACITY 2744 N | TEST METHOD 14

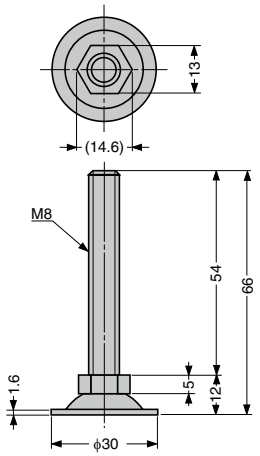


- Cover 1 installed at the bottom to prevent from scratching the floor available.

[Sold Separately]

- Wrench for AD-502: AD-502-SP





[Wrench for AD-502: AD-502-SP] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	–	200-936-204	AD-502-SP	Steel	Coloured Zinc Chromate	14	250	1000

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-059	AD-502	Steel	Coloured Zinc Chromate (Trivalent)	2744	280	30	100	400
–	3D	200-149-237	AD-502BZC		Black Chromate				100	400

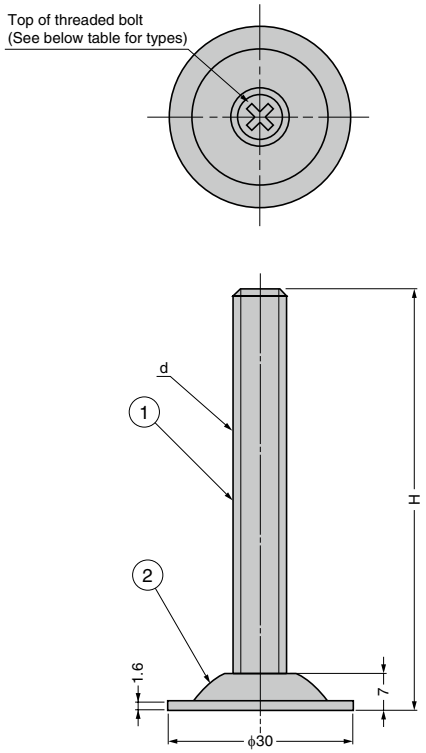
Refer to 1 : P.831

LEVELLING GLIDE AD-501

LOAD CAPACITY 980~1372 N | TEST METHOD 14



- Special surface finishes and dimensions also available by made to order.
- Height adjustable on cross-recessed (M8) or slotted (M10) top of threaded bolt with screwdriver.
- Cover 1 installed at the bottom to prevent from scratching the floor available.



No.	Part Name	Material	Finish
①	Shaft	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
②	Base	See Below	

RoHS	CAD	Item Code	Item Name	Base/Material	d	Bolt Top/Type	H	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-060	AD-501-30E	Steel (SPCC)	M8	Cross Recess	30	980	100	17	100	400
G	3D	200-140-580	AD-501-50E	Steel (SPHC)			50			22	100	400
G	3D	200-140-057	AD-501-60E	Steel (SPCC)			60			25	100	400
G	3D	200-140-581	AD-501-70E	Steel (SPHC)			70			28	50	200
G	3D	200-140-582	AD-501-75E				75			30	50	200
G	3D	200-140-583	AD-501-80E				80			31	50	200
G	3D	200-140-056	AD-501-90E	Steel (SPCC)			90			35	50	200
G	3D	200-140-584	AD-501-105E	Steel (SPHC)			105			38	50	200
G	3D	200-140-585	AD-501-120E				120			43	50	200
G	3D	200-140-586	AD-501-130E				130			45	50	200
G	3D	200-140-061	AD-501-30G	Steel (SPCC)	M10	Slot	30	1372	140	20	100	400
G	3D	200-140-063	AD-501-60G				60			37	100	400
G	3D	200-140-590	AD-501-90G				90			50	50	200
G	3D	200-140-591	AD-501-120G				120			65	50	200

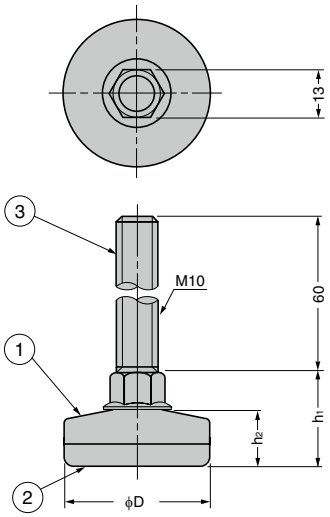
Refer to 1 : P.831

LEVELLING GLIDE TN-S

LOAD CAPACITY 1372 N | TEST METHOD 14



●Levelling glide with plastic base to prevent from scratching the floor.



No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPCC)	Chrome
②	Base	PP	Natural
③	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)

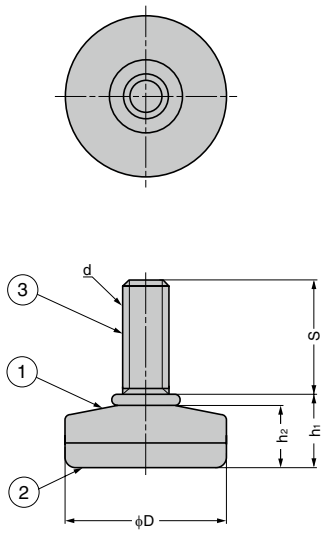
RoHS	CAD	Item Code	Item Name	D	h1	h2	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-249	TN-25S	25	21	12	1372	140	50	50	500
G	3D	200-140-250	TN-35S	35	22.5	13.5			60	30	300
G	3D	200-140-251	TN-45S	43.5					70	20	200

LEVELLING GLIDE TN

LOAD CAPACITY 784~980 N | TEST METHOD 14



●Levelling glide with plastic base to prevent from scratching the floor.



No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPCC)	Chrome
②	Base	PP	Natural
③	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)

RoHS	CAD	Item Code	Item Name	d	D	h1	h2	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-246	TN-25	M8	25	15	12	25	784	80	20	100	1000
G	3D	200-140-247	TN-35	M10	35	16.5	13.5		980	100	30	50	500
G	3D	200-140-248	TN-45		43.5			32			40	40	400

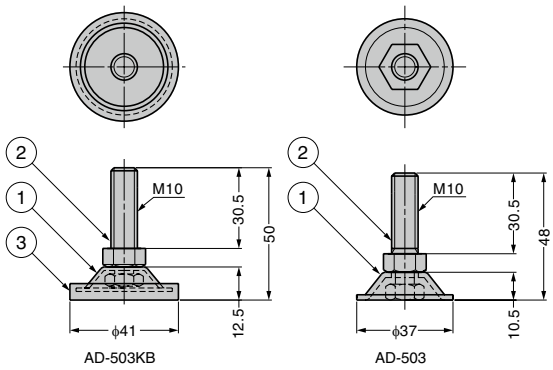
LEVELLING GLIDE AD-503KB, AD-503



- Hexagon nut at the bottom allows easy installation with impact wrench.
- AD-503KB: With non-slip elastomer cover.

[Sold Separately]

- Washer for Levelling glide ADZS (SUS) 1
- Washer for Levelling glide ADZ (steel) 2



[AD-503KB] With Cover

No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPCC)	Coloured Zinc Chromate
②	Threaded Bolt	Steel (SWRCH)	(Trivalent)
③	Cover	Elastomer (TPE)	Black

[AD-503] Without Cover

No.	Part Name	Material	Finish/Colour
①	Body	Steel (SPCC)	Coloured Zinc Chromate
②	Threaded Bolt	Steel (SWCH)	(Trivalent)

RoHS	CAD	Item Code	Item Name	Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-013-623	AD-503KB	With Cover	62	–	200
G	3D	200-013-624	☆ AD-503	Without Cover	59	–	200

Refer to 1 2 : P.830

☆The item will be discontinued after current stock is sold out.

LEVELLING GLIDE TG

LOAD CAPACITY 343~1764 N TEST METHOD 14

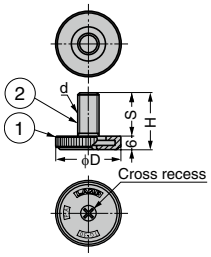


- Models with a grippy ethylene vinyl acetate (EVA) base to prevent slipping are newly launched (with “GP” in the item name).
- Thin structure without compromising the cabinet design.
- Base with knurled outer periphery for easy installation.
- Cross-recessed bottom allows easy installation.

[Remarks]

- For products with “GP” in the item name, the base is made of non-slip material. To prevent scraping or peeling off, please do not forcibly drag.





No.	Part Name	Material	Finish/Colour
①	Body	PA, EVA	Dark Grey, White, Black
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate

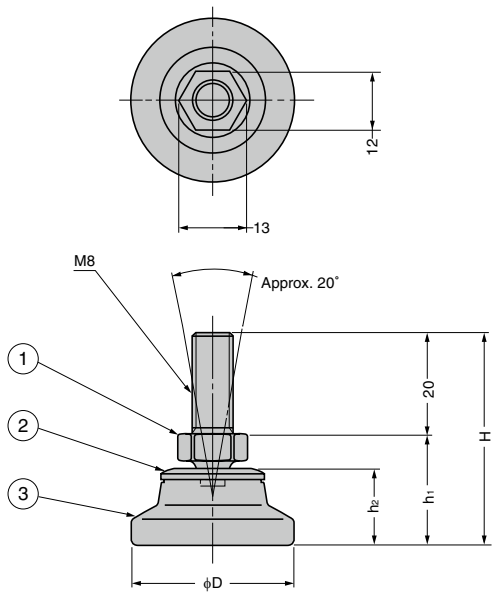
RoHS	CAD	Item Code	Item Name	Colour	d	D	H	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-240	TG-20	Dark Grey	M8	20	21	15	980	100	11	120	720
G	3D	200-936-848	TG-20WT	White								120	720
G	3D	200-035-374	TG-20GP-BL	Black					343	35		120	720
G	3D	200-035-375	TG-20GP-WT	White								120	720
G	3D	200-142-501	TG-30	Dark Grey	M10	30	26	20	1470	150	25	100	600
G	3D	200-936-849	TG-30WT	White								100	600
G	3D	200-035-376	TG-30GP-BL	Black					980	100		100	600
G	3D	200-035-377	TG-30GP-WT	White								100	600
G	3D	200-142-520	TG-40	Dark Grey		40			1764	180	36	60	360
G	3D	200-936-850	TG-40WT	White								60	360
G	3D	200-035-378	TG-40GP-BL	Black					687	70		60	360
G	3D	200-035-379	TG-40GP-WT	White								60	360

LEVELLING GLIDE SG With Swivel Function

LOAD CAPACITY 1176~1568 N | TEST METHOD 14



- Swivels approximately 20° to compensate for uneven floors.



No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SWCH)	Black Chromate
②	Cap	PA	Dark Grey
③	Base	POM	

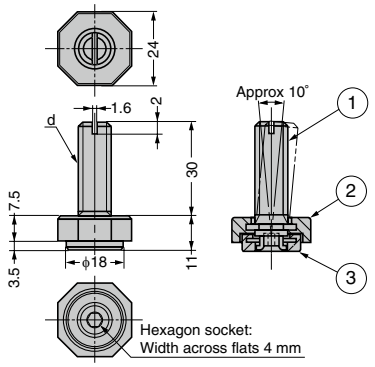
RoHS	CAD	Item Code	Item Name	D	H	h_1	h_2	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	200-142-506	SG-32M8	32	42	22	15.5	1176	120	25	60	480
GT	3D	200-142-504	SG-40M8	40	42.5	22.5	16	1568	160	30	35	210

OCTAGONAL LEVELLING GLIDE MK8AD With Swivel Function

LOAD CAPACITY 588 N | TEST METHOD 14



- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Slotted top of threaded bolt and hexagon socket at the bottom allows easy installation and adjustment.
- Octagonal base allows easy adjustment by hand or wrench (width across flats: 24 mm).
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.
- Levelling glide with elastomer base to prevent from skidding.



No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SWCH)	Black Chromate (Trivalent)
②	Cover	PA	Black
③	Base	Elastomer (TPE)	

RoHS	CAD	Item Code	Item Name	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	200-018-798	MK8AD-M8	M8	588	60	18	80	480
GT	3D	200-140-039	MK8AD	M10			20	80	480

LEVELLING GLIDE RP With Swivel Function

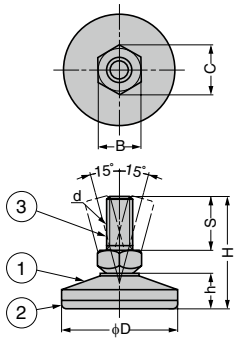
LOAD CAPACITY 588~6100 N | TEST METHOD 14



- Swivels approximately 30° to compensate for uneven floors.
- Polyamide base.
- Wide variations of available bolts: M6~M14.
- RPS 1 with stainless steel threaded bolt also available.

[Remarks]

- Extended threaded bolt S available by made to order.



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Base	PA	Natural
③	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	d	D	H	h	S	B	C	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-028	RP-25M6-G	M6	25	31	9.7	14	8	9.2	588	60	11	50	500
G	3D	200-140-029	RP-30M8-G	M8	30	37.5	11.2	19	10	11.5	1078	110	21	35	350
G	3D	200-140-023	RP-30N25	W5/16										35	350
G	3D	200-140-031	RP-40M10-G	M10	40	42.5	13.7	20	13	15	1568	160	38	25	250
G	3D	200-140-032	RP-40N3-G	W3/8										25	250
G	3D	200-140-033	RP-50M12-G	M12	50	51	16	25	17	19.6	3136	320	70	15	150
G	3D	200-140-027	RP-70M14-G	M14	70	66.5	24.7	30	19	22	6100	622	150	10	100

Refer to 1 : P.824

STAINLESS STEEL LEVELLING GLIDE RPS With Swivel Function

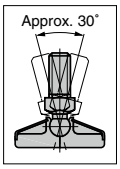
LOAD CAPACITY 588~1568 N | TEST METHOD 14 | SUS

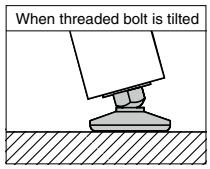


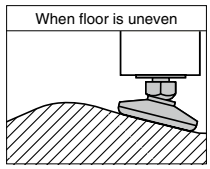
- Swivels approximately 30° to compensate for uneven floors.
- Polyamide base.
- RP 1 with steel threaded bolt also available.

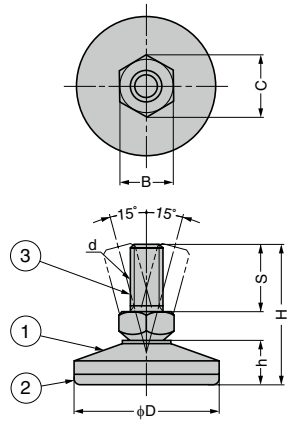
[Remarks]

- Extended threaded bolt S available by made to order.









No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Base	PA	Natural
③	Threaded Bolt	Stainless Steel (SUS303)	Plain

RoHS	CAD	Item Code	Item Name	d	D	H	h	S	B	C	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-026-994	RPS-25M6-G	M6	25	31	9.7	14	8	9.2	588	60	11	50	500
–	3D	200-026-995	RPS-30M8-G	M8	30	37.5	11.2	19	10	11.5	1078	110	21	35	350
–	3D	200-026-996	RPS-40M10-G	M10	40	42.5	13.7	20	13	15	1568	160	38	25	250

Refer to 1 : P.824

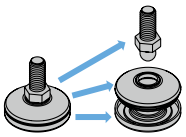
LEVELLING GLIDE EA With Swivel Function

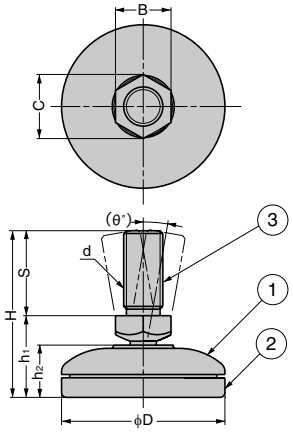
LOAD CAPACITY 490~2646 N



- Parts can be easily separated for recycling purpose.
- Bolt swivels to compensate for uneven floors (see below table for swivel angle).

Parts can be easily separated for recycling purpose.





No.	Part Name	Material	Finish/Colour
①	Cover	ABS	Dark Grey
②	Base		
③	Threaded Bolt	Steel (SWRM)	Coloured Zinc Chromate (Trivalent)

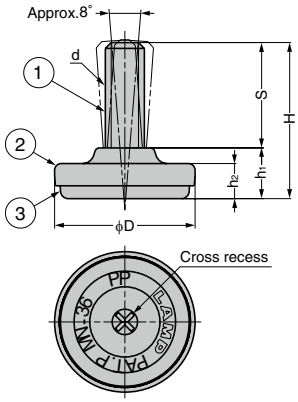
RoHS	CAD	Item Code	Item Name	d	D	H	h1	h2	S	B	C	θ°	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-911	EA-25M6	M6	25	31	14	8.5	17	8	9.2	10	490	50	10	120	1200
G	3D	200-140-912	EA-30M8	M8	30	37.5	17	10.5	20.5	10	11.5	15	980	100	20	80	800
G	3D	200-140-913	EA-40M10	M10	40	42.5	20.5	13	22	13	15	12.5	1274	130	32	40	400
G	3D	200-140-910	EA-50M12	M12	50	51	25	16	26	17	19.6	10	2646	270	60	20	200

LEVELLING GLIDE MN With Swivel Function

LOAD CAPACITY 1176~1568 N NSF TEST METHOD 14



- Swivels approximately 8° to compensate for uneven floors.
- Levelling glide with plastic base to prevent from scratching the floor.



No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SWCH)	Chrome
②	Cover	Stainless Steel (SUS304)	–
③	Base	PP	Natural

RoHS	CAD	Item Code	Item Name	d	D	H	h1	h2	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-401	MN-25M8	M8	25	40	13	9	27	1176	120	26	100	600
G	3D	200-140-400	MN-25N2.5	W5/16									100	600
G	3D	200-140-403	MN-32M10	M10	32					1568	160	34	80	480
G	3D	200-140-402	MN-32N3	W3/8									80	480
G	3D	200-140-405	MN-36M10	M10	36							39	60	360
G	3D	200-140-404	MN-36N3	W3/8									60	360
G	3D	200-140-407	MN-40M10	M10	40							42	50	300
G	3D	200-140-406	MN-40N3	W3/8									50	300
G	3D	200-140-409	MN-50M12	M12	50	50	16	11	34			77	20	120
G	3D	200-140-408	MN-50N4	W1/2									20	120

STAINLESS STEEL LEVELLING GLIDE MKPS With Swivel Function

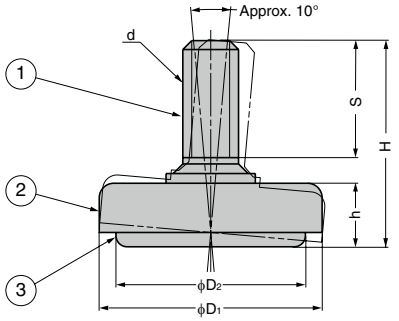
LOAD CAPACITY 1960~3920 N | NSF | TEST METHOD 14 | SUS



- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.

[Base]





No.	Part Name	Material	Finish
①	Body	Stainless Steel	Satin
②	Cover	Stainless Steel	
③	Base	(SUS304)	Plain

RoHS	CAD	Item Code	Item Name	d	D_1	D_2	H	h	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-320	MKPS-32M10	M10	32	27	36	11	21	1960	200	50	60	480
G	3D	200-141-321	MKPS-32N3	W3/8									60	480
G	3D	200-141-322	MKPS-40M10	M10	40	34	37	11.4		3136	320	70	40	320
G	3D	200-141-323	MKPS-40N3	W3/8									40	320
G	3D	200-141-324	MKPS-50M10	M10	50	44	37.5	11.5		3528	360	95	30	240
G	3D	200-141-325	MKPS-50N3	W3/8									30	240
G	3D	200-141-326	MKPS-60M12	M12	60	54	51.5		35	3920	400	140	15	120

STAINLESS STEEL LEVELLING GLIDE MKRS With Swivel Function

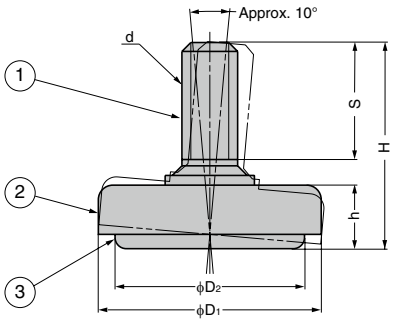
LOAD CAPACITY 392~980 N | TEST METHOD 14 | SUS



- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.
- Levelling glide with elastomer base to prevent from skidding and scratching the floor.

[Base]





No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel	Satin
②	Cover	Stainless Steel (SUS304)	
③	Base	Elastomer (TPE)	Black

RoHS	CAD	Item Code	Item Name	d	D_1	D_2	H	h	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-328	MKRS-32M10	M10	32	27	36	11	21	392	40	50	60	480
G	3D	200-141-329	MKRS-32N3	W3/8									60	480
G	3D	200-141-330	MKRS-40M10	M10	40	34	37	11.4		784	80	70	40	320
G	3D	200-141-331	MKRS-40N3	W3/8									40	320
G	3D	200-141-332	MKRS-50M10	M10	50	44	37.5	11.5		980	100	90	30	240
G	3D	200-141-333	MKRS-50N3	W3/8									30	240
G	3D	200-141-334	MKRS-60M12	M12	60	54	51.5		35			150	15	120
G	3D	200-141-335	MKRS-70M14	M14	70	64						200	15	120

LEVELLING GLIDE MKP With Swivel Function

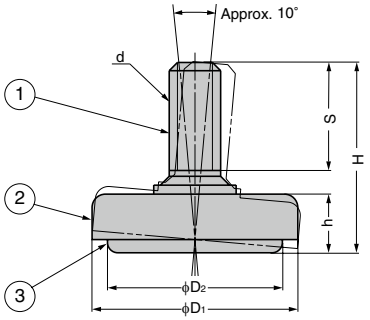
LOAD CAPACITY 1176~1568 N | TEST METHOD 14



- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.

[Base]





No.	Part Name	Material	Finish
①	Body	Steel (SWCH)	Chrome
②	Cover	Steel (SPCC)	
③	Base		

RoHS	CAD	Item Code	Item Name	d	D_1	D_2	H	h	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-503	MKP-32M10	M10	32	27	36	11	21	1568	160	44	80	480
G	3D	200-140-090	MKP-32N3	W3/8									80	480
G	3D	200-140-094	MKP-40M10	M10	40	34	37	11.4				65	50	300
G	3D	200-140-091	MKP-40N3	W3/8									50	300
G	3D	200-140-095	MKP-50M10	M10	50	44	37.5	11.5		1176	120	90	20	120
G	3D	200-140-092	MKP-50N3	W3/8									20	120
G	3D	200-141-100	MKP-60M12	M12	60	54	51.5		35	1568	160	155	15	120
G	3D	200-141-101	MKP-70M14	M14	70	64						195	15	120

LEVELLING GLIDE MKR With Swivel Function

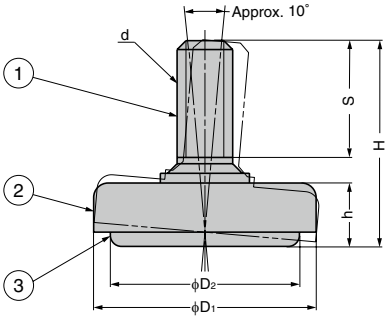
LOAD CAPACITY 392~784 N | TEST METHOD 14



- Levelling glide with elastomer base to prevent from skidding and scratching the floor.
- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.

[Base]





No.	Part Name	Material	Finish/Colour
①	Body	Steel (SWCH)	Chrome
②	Cover	Steel (SPCC)	
③	Base	Elastomer (TPE)	Black

RoHS	CAD	Item Code	Item Name	d	D_1	D_2	H	h	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-513	MKR-32M10	M10	32	27	36	11	21	392	40	41	80	480
G	3D	200-140-096	MKR-32N3	W3/8									80	480
G	3D	200-141-514	MKR-40M10	M10	40	34	37	11.4		588	60	60	50	300
G	3D	200-140-097	MKR-40N3	W3/8									50	300
G	3D	200-141-515	MKR-50M10	M10	50	44	37.5	11.5				87	20	120
G	3D	200-140-098	MKR-50N3	W3/8									20	120
G	3D	200-141-103	MKR-60M12	M12	60	54	51.5		35	784	80	150	15	120
–	3D	200-141-102	MKR-70M14	M14	70	64						215	15	120

Updated 2017.10.27

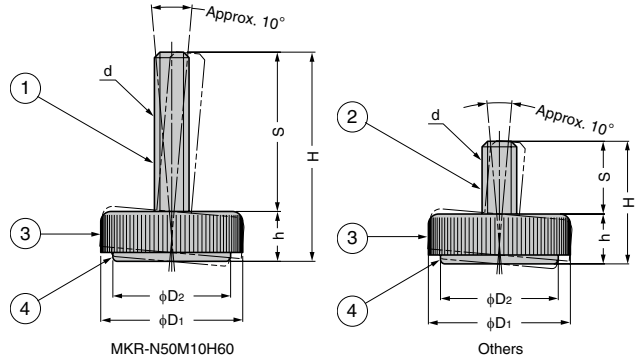
LEVELLING GLIDE MKR-N With Swivel Function

LOAD CAPACITY 588~784 N



- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.
- Levelling glide with elastomer base to prevent from skidding and scratching the floor.

[Remarks]
- If the levelling glide can not be turned by hand, slightly lift it to adjust.



No.	Part Name	Material	Finish/Colour
①	Body	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
②			Chrome
③	Cover	PA	Black
④	Base	Elastomer (TPE)	

RoHS	CAD	Item Code	Item Name	d	D1	D2	H	h	S	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-300	MKR-N32M10	M10	33	27	36	14	22	588	60	35	80	480
G	3D	200-141-302	MKR-N40M10		41	34	37	15		686	70	45	50	300
G	3D	200-141-304	MKR-N50M10		51	44	37.5	15.5		784	80	60	20	120
G	3D	200-140-100	MKR-N50M10H60				60		44.5				20	120

LEVELLING GLIDE MKR-N32DG32 With Swivel Function

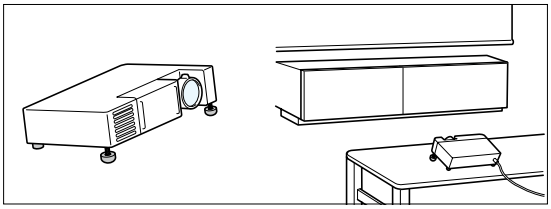
LOAD CAPACITY 454 N

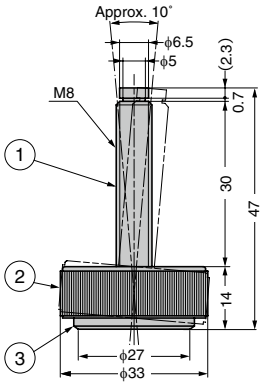


- Swivels approximately 10° to compensate for uneven floors.
- With swivel function to distribute the load evenly for excellent durability.
- Base with knurled outer periphery for easy installation.
- Double structure of cover/bolt and base allow easy height adjustment without lifting the leg.
- Levelling glide with elastomer base to prevent from skidding and scratching the floor.

[Remarks]
- If the levelling glide can not be turned by hand, slightly lift it to adjust.

[Application Example]





No.	Part Name	Material	Finish/Colour
①	Body	Steel (SWCH)	Chrome
②	Cover	PA	Dark Grey
③	Base	Elastomer (TPE)	Black

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-149-228	MKR-N32DG32	Dark Grey	454	46	31	50	300

SELF-LEVELLING GLIDE SAJ

LOAD CAPACITY 490 N



- Gel inside adjusts automatically to uneven floor.
- Easy to rearrange table, etc.
- Self adjustment up to 3mm or 6mm.
- Easy to replace existing levelling glides to SAJ.

[Specifications]

- Operating temperature: -20˚C~75˚C

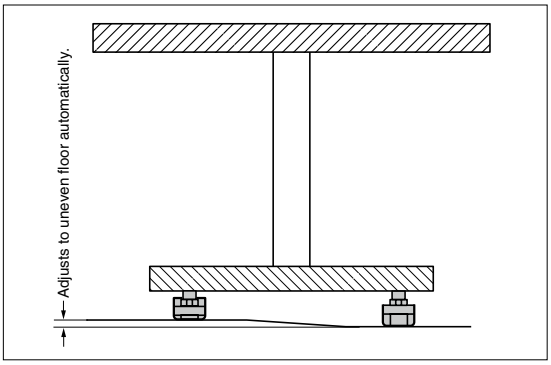
[Remarks]

- Special wrench (sold separately) is necessary for installation.
- Self-levelling glide is used for absorbing impact caused by the table rattle. It is not intended to keep the table horizontal. Slight sloping may occur depending on the inclined surface of the floor.

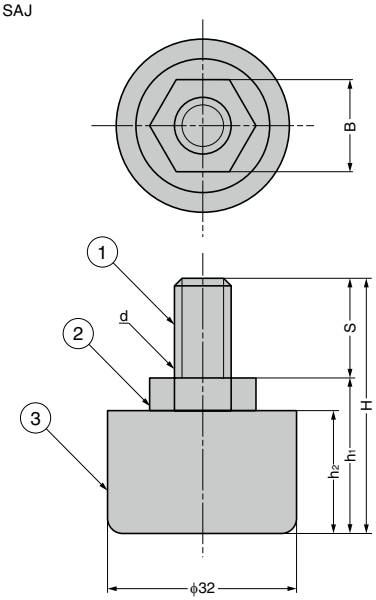
[Sold Separately]

- Wrench SAJ

[Installation]

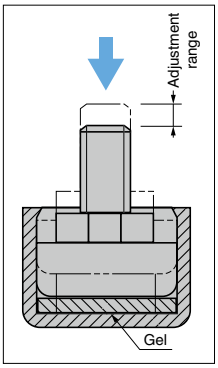


Rattle caused by uneven floor can be automatically eliminated.



No.	Part Name	Material	Finish/Colour
①	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate/SAJ30-10
②	Hex Nut		Clear Zinc Chromate/SAJ30-12
③	Cover	PE	Black

[Self Adjustment]



[SAJ-Wrench] Sold Separately



[Wrench] Sold Separately

RoHS	CAD	Item Code	Item Name	Nominal	Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-140-390	SAJ10	10	1.6	18	100	–
G	3D	200-140-391	SAJ13	13	2.0	19	100	1000
–	3D	200-140-392	SAJ14	14		20	50	–
G	3D	200-140-393	SAJ17	17	2.2	21	80	800

[Body]

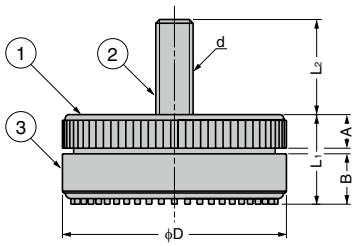
RoHS	CAD	Item Code	Item Name	Adjustment Range	d	H	h₁	h₂	S	B	Load Capacity N/pc	Load Capacity kgf/pc	Appropriate Table Weight kg 4 pcs	5 pcs	6 pcs	Wrench	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-149-309	SAJ30-10N2.5	3	W5/16	33	24	19	9	14	490	50	7~12	8~15	10~18	SAJ14	26	40	400
–	3D	200-149-308	SAJ30-10N3		W3/8	37	25		12	17						SAJ17	36	40	400
–	3D	200-149-307	SAJ30-10M6		M6	34	24		10	10						SAJ10	21	40	400
–	3D	200-149-306	SAJ30-10M8		M8	33			9	13						SAJ13	25	40	400
–	3D	200-149-305	SAJ30-10M10		M10	37	26		11	17						SAJ17	38	40	400
–	3D	200-149-304	SAJ30-12N2.5		W5/16	33	24		9	14			12~24	15~30	18~36	SAJ14	26	40	400
–	3D	200-149-303	SAJ30-12N3		W3/8	37	25		12	17						SAJ17	36	40	400
–	3D	200-149-302	SAJ30-12M6		M6	34	24		10	10						SAJ10	21	40	400
–	3D	200-149-301	SAJ30-12M8		M8	33			9	13						SAJ13	25	40	400
–	3D	200-149-300	SAJ30-12M10		M10	37	26		11	17						SAJ17	38	40	400
–	3D	200-140-105	SAJ30-12-6N2.5	6	W5/16	42	31	24		14						SAJ14	29	40	400
–	3D	200-140-104	SAJ30-12-6N3		W3/8					17						SAJ17	39	40	400
–	3D	200-140-103	SAJ30-12-6M6		M6	44	32		12	10						SAJ10	29	40	400
–	3D	200-140-102	SAJ30-12-6M8		M8	42			10	13						SAJ13	22	40	400
–	3D	200-140-101	SAJ30-12-6M10		M10	41	31			17						SAJ17	41	40	400

LEVELLING GLIDE A800

LOAD CAPACITY 588 N



- Body and base can be rotated separately, making it possible to adjust after installation.
- Levelling glide with plastic base to prevent from scratching the floor.



No.	Part Name	Material	Finish/Colour
①	Body	PA	Black
②	Threaded Bolt	Steel (SWCH)	Coloured Zinc Chromate (Trivalent)
③	Base	PUR	Black

RoHS	CAD	Item Code	Item Name	L_1	L_2	D	d	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-532	A800-40L	23	24	40	M8	588	60	35	200	–
G	3D	200-140-530	A800-40HL	54	32					71	120	–
G	3D	200-140-533	A800-50L	24	25.5	50	M10			58	160	–
G	3D	200-140-534	A800-50HL	54	34					113	60	–
G	3D	200-140-531	A800-60L	24	26	60				69	100	–

GLIDE BASE ADZS, ADZ

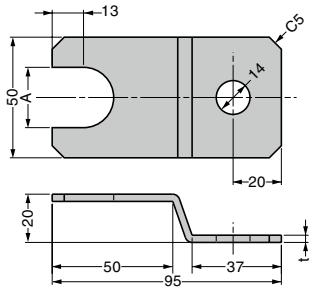
SUS



- 2 types of materials: Steel and stainless steel (SUS304) with excellent rust resistance.
- Easy installation by inserting on the hexagon nut (of the Levelling glide) and fixing to floor with an anchor bolt.
- For M12, M16, M20 levelling glide.

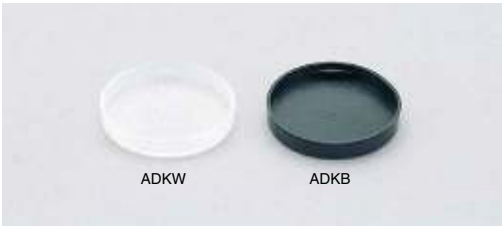
[Applications Example]

- Machine tools, conveyor belts, any equipment with vibration, etc.

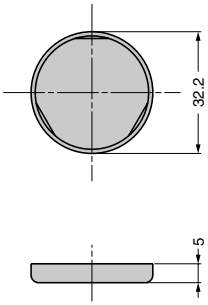


RoHS	CAD	Item Code	Item Name	A	t	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-243	ADZS-M12	19	3	Stainless Steel (SUS304)	Barrel Polished	104	50	100
G	3D	200-141-244	ADZS-M16	24.5				100	50	100
G	3D	200-141-245	ADZS-M20	30.5				96	50	100
–	3D	200-141-240	ADZ-M12	19	3.2	Steel (SPHC)	Clear Zinc Chromate	115	50	100
–	3D	200-141-241	ADZ-M16	24.5				110	50	100
–	3D	200-141-242	ADZ-M20	30.5				106	50	100

COVER FOR AD-501, AD-502 ADKW, ADKB



- Installed on the base of levelling glides AD-501 1, AD-502 2 and AD-502-P2 3 to prevent from scratching the floor.



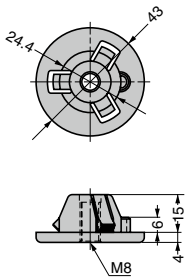
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-088	ADKW	PE	Natural (Semi-transparent)	1	250	2500
G	3D	200-140-089	ADKB		Black		250	2500

Refer to 1 : P.820, 2 3 : P.819

SNAP-IN GLIDE BASE AD-438 For M8

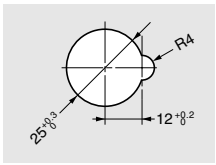
LOAD CAPACITY 490 N



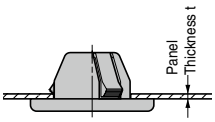


- For sheet metal.
- Easy installation simply by pushing into the mounting hole.

[Cut Out Dimensions]

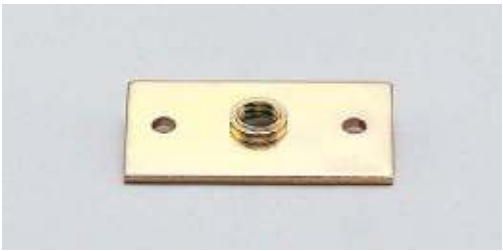


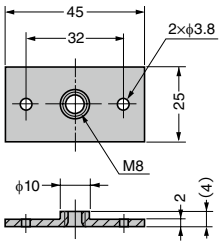
[Installation]



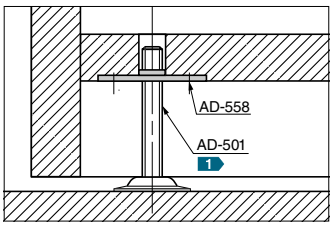
RoHS	CAD	Item Code	Item Name	Material	Colour	Panel Thickness t	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-014-819	AD-438	POM	Grey	0.8~1.6	490	50	11	1000	–

GLIDE BASE AD-558 For M8





[Installation]

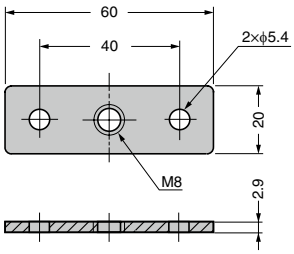


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-140-080	AD-558	Steel (SPCC)	Coloured Zinc Chromate	16	250	1000

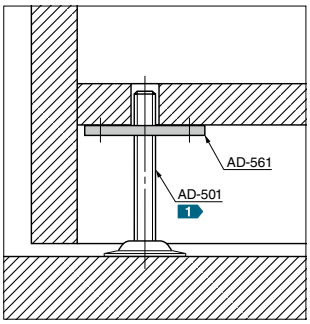
Refer to 1 : P.820

GLIDE BASE AD-561 For M8





[Installation]



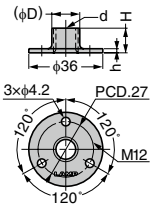
RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-068	AD-561	Steel (SPCC)	Coloured Zinc Chromate (Trivalent)	30	100	1000

Refer to 1 : P.820

STAINLESS STEEL GLIDE BASE AP36

SUS



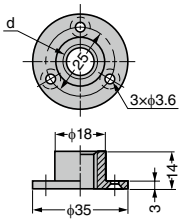


AP36-M12 shown.

RoHS	CAD	Item Code	Item Name	Material	Finish	d	D	h	H	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-501	AP36-M8	Stainless Steel (SUS304)	Barrel Polished	M8	9.6	1.5	12	13	100	1000
G	3D	200-140-502	AP36-M10			M10	11			13	100	1000
G	3D	200-140-503	AP36-N3			3/8-16UNC	10.9			12	100	1000
G	3D	200-140-504	AP36-M12			M12	13.9	2	11.5	19	80	800

GLIDE BASE AD-559





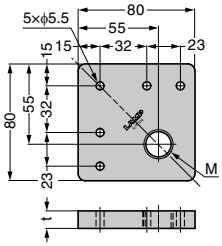
RoHS	CAD	Item Code	Item Name	Material	Finish	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-141-310	AD-559M12	Zinc Alloy (ZDC)	Clear Zinc Chromate	M12	26.5	100	400
G	3D	200-141-311	AD-559M14			M14	23.5	100	400
G	3D	200-140-073	AD-559U1/2			1/2-20UNF	24.6	100	400

GLIDE BASE AS-AJ

AS SUS



- Used for installing levelling glides and threaded bolt type casters to aluminium frame.
- AS parts set for installing to aluminium frame also available. Content of the parts set is as follows.



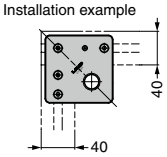
RoHS	CAD	Item Code	Item Name	M	t	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-455	AS-AJ-M10	M10	6	Stainless Steel (SUS430)	Barrel Polished	278	50	–
G	3D	200-140-456	AS-AJ-M12	M12				276	50	–
G	3D	200-140-457	AS-AJ-M16	M16	9			414	30	–

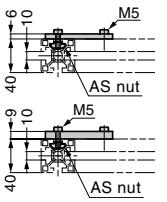
AS Parts Set for Installing to Aluminium Frame

Please refer to the series introduction page 1 for details about AS series.

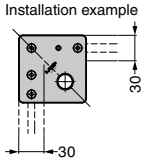
[Dimensions]

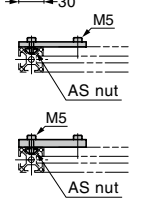
40×40 mm aluminium frame Installation example





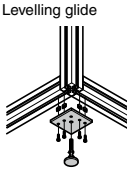
30×30 mm aluminium frame Installation example



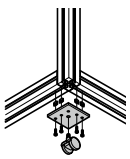


[Installation]

Levelling glide



Caster



Refer to 1 : FRONT P.20

[AS Parts Set] Parts set of glide base, screws and AS nuts used for installing to aluminium frame.

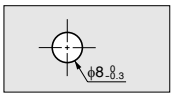
RoHS	CAD	Item Code	Item Name	Aluminium Frame	Parts	Weight (g)
G	–	200-041-678	AS-AJ-M10-8	Groove Width 8 mm	Glide Base AS-AJ-M10 : 1 pc AS Nut AS-8M5 : 5 pcs M5×16 Hexagon Socket Head Cap Screw : 5 pcs	–
G	–	200-041-679	AS-AJ-M10-10	Groove Width 10 mm	Glide Base AS-AJ-M10 : 1 pc AS Nut AS-10M5 : 5 pcs M5×16 Hexagon Socket Head Cap Screw : 5 pcs	–
G	–	200-041-680	AS-AJ-M12-8	Groove Width 8 mm	Glide Base AS-AJ-M12 : 1 pc AS Nut AS-8M5 : 5 pcs M5×16 Hexagon Socket Head Cap Screw : 5 pcs	–
G	–	200-041-681	AS-AJ-M12-10	Groove Width 10 mm	Glide Base AS-AJ-M12 : 1 pc AS Nut AS-10M5 : 5 pcs M5×16 Hexagon Socket Head Cap Screw : 5 pcs	–
G	–	200-041-682	AS-AJ-M16-8	Groove Width 8 mm	Glide Base AS-AJ-M16 : 1 pc AS Nut AS-8M5 : 5 pcs M5×20 Hexagon Socket Head Cap Screw : 5 pcs	–
G	–	200-041-683	AS-AJ-M16-10	Groove Width 10 mm	Glide Base AS-AJ-M16 : 1 pc AS Nut AS-10M5 : 5 pcs M5×20 Hexagon Socket Head Cap Screw : 5 pcs	–

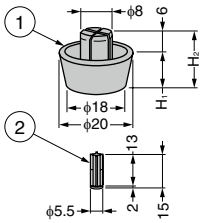
CASE FOOT (PL TYPE) PL



- Easy installation by using locking pin.
- Improved work efficiency compared with screw fixing method.

[Cut Out Dimensions]





No.	Part Name	Material	Colour
①	Body	Elastomer (TPE)	Black
②	Pin	PP	–

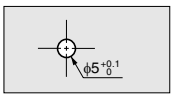
RoHS	CAD	Item Code	Item Name	H_1	H_2	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-149-085	PL-15	15	21	0.7~3.2	1.5	200	–

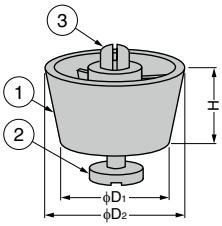
CASE FOOT (A TYPE) FF



- Easy installation simply by spreading out rivet with threaded pin.
- Detachable with flat-head screwdriver.

[Cut Out Dimensions]





No.	Part Name	Material	Colour
①	Body	Elastomer (TPE)	Black
②	Threaded Pin	POM	
③	Rivet	PA	

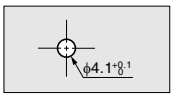
RoHS	CAD	Item Code	Item Name	D_1	D_2	H	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-149-066	FF-001	20	24	14	1~2.3	3.4	200	–
G	3D	200-149-151	FF-004	18	20	10		2.2	200	–

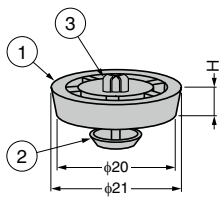
CASE FOOT (B TYPE) FF



- Easy installation simply by spreading out rivet with threaded pin.

[Cut Out Dimensions]





No.	Part Name	Material	Colour
①	Body	Elastomer (TPE)	Black
②	Pin	PA	
③	Rivet		

RoHS	CAD	Item Code	Item Name	H	Board Thickness※	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-482	FF-005	4.2	0.8~1.8	1.2	500	–
G	3D	200-149-063	FF-008	6		1.5	200	–
G	3D	200-049-389	FF-009	8	0.8~2	1.9	200	–

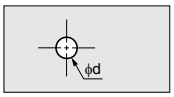
※Models suitable for other thicknesses available by made to order.

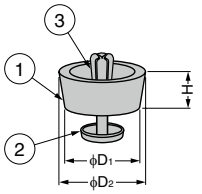
CASE FOOT (MINI TYPE) FF



- Easy installation simply by spreading out rivet with threaded pin.

[Cut Out Dimensions]





No.	Part Name	Material	Colour
①	Body	Elastomer (TPE)	Black
②	Pin	PA	
③	Rivet		

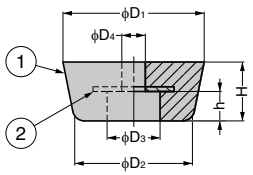
RoHS	CAD	Item Code	Item Name	D_1	D_2	H	d	Board Thickness※	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-149-108	FF-003	13.5	14.2	5.5	$3.1^{+0.1}_{0}$	0.8~1	0.7	500	–
G	3D	200-149-086	FF-006	14	15	6	$4.1^{+0.1}_{0}$	1~2	0.9	500	–
G	3D	200-149-100	FF-010			9			1.2	500	–
G	3D	200-149-105	FF-013	10	10.8	4	$3.6^{+0.05}_{0}$	0.6~1	0.3	1000	–

※Models suitable for other thicknesses available by made to order.

RUBBER FOOT K



- With washer.
- Hardness: 65



No.	Material	Colour
①	Styrene-Butadiene Rubber (SBR)	Black
②	Stainless Steel (SUS430)	–

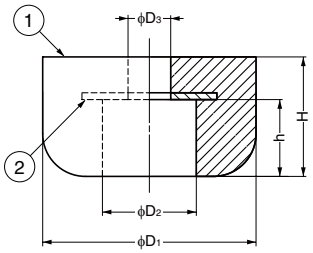
RoHS	CAD	Item Code	Item Name	D_1	D_2	H	D_3	D_4	h	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-445	K-95	9	7	5	4	2	3	0.5	200	–
G	3D	200-140-420	K-10	10	9		5	3			1000	–
G	3D	200-140-421	K-12	12	8	9			4	1	200	–
G	3D	200-140-422	K-15	15	8	6			5	1.5	200	–
G	3D	200-140-423	K-1510		10	10	5				1000	–
G	3D	200-140-424	K-16	16	14		6			2.5	200	–
G	3D	200-140-425	K-18	18	15	11	7	4	7	3	200	–
G	3D	200-140-450	K-209	20	16	9		3	5		200	–
G	3D	200-140-451	K-2010			10	8		4	3.5	200	–
G	3D	200-140-426	K-20			12	7	4	7	4	200	–
G	3D	200-140-454	K-2017		15	17		3	8	5.5	500	–

RoHS	CAD	Item Code	Item Name	D_1	D_2	H	D_3	D_4	h	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-427	K-22	22	18	24	7	3	11	10	200	–
G	3D	200-140-428	K-23	23	19	14		4	5	6	200	–
G	3D	200-140-440	K-2320		20	20	8		10	9.5	200	–
G	3D	200-140-429	K-24	24		10			5	5.5	200	–
G	3D	200-140-452	K-259	25	19	9	10	5		5	200	–
G	3D	200-140-430	K-26	26	20	15	9	4	10	8	1000	–
G	3D	200-140-431	K-28	28	22	18	12		11	11	200	–
G	3D	200-140-432	K-29	29	24	15	14		10	10	200	–
G	3D	200-140-433	K-30	30		19				13.5	200	–
G	3D	200-140-441	K-3215	32	28	15		5		14	200	–
G	3D	200-140-442	K-3220		26	20	15		10	16.5	200	–
G	3D	200-140-443	K-3225		28	25	14		9	22.5	200	–
G	3D	200-140-434	K-34	34	27	18	17		10	16	1	–
G	3D	200-140-444	K-3617	36	20	17		6	9	16.5	200	–
G	3D	200-140-435	K-36		30	22	12	5	12	25	200	–
G	3D	200-140-436	K-38	38	32	24			13	31	200	–
G	3D	200-140-437	K-40	40	30	22	14		9	28	1000	–
G	3D	200-140-438	K-45	45	35	27	12		12	46	200	–
G	3D	200-140-439	K-63	63	48	26	14	7	15	87.5	200	–

RUBBER FOOT SK



- With washer.
- Hardness: 65



No.	Material	Colour
①	Styrene-Butadiene Rubber (SBR)	Black
②	Stainless Steel (SUS430)	Plain

RoHS	CAD	Item Code	Item Name	D_1	D_2	D_3	H	h	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-140-446	SK-13	13	6	3	5	2	1	10	1 pcs
G	3D	200-140-447	SK-156	15	7		6	3	1.5	16	1 pcs
G	3D	200-140-448	SK-1910	19			10	5	3.5	20	1 pcs
G	3D	200-140-449	SK-1912		9	4	12	7	4.5	30	1 pcs
G	3D	200-140-453	SK-2519	25	11	5	14	9	7	45	1 pcs

MULTI-STEP TABLE LEG RTL-KUS







- Height can be raised just by lifting up with hands.
- Ideal for workbench and equipment required for barrier-free, etc.
- Mark on inner pipe is a rough standard for height alignment.
- Recommended to use 2~4 pcs to prevent distortion.

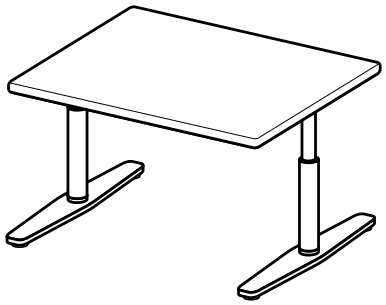
[Remarks]

- The tabletop will tilt in case of height adjustment.
- Be sure to hold the tabletop with hands while lowering it.
- The leg pitch shall be 900mm or less.

[Others]

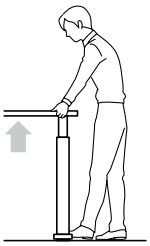
- Change to stroke, pitch and pipe colour is possible.For diameter, shape and load capacity change, please consult us.
- Oil adhered to the inner pipe will decrease the friction at the time of descent.Besides, if the lower movement is not so smooth, wipe the inner pipe gently with a cloth containing a little industrial lubricating oil.Please gently wipe excessive oil (if any) with a clean cloth.
- Models with single leg and lifting lock function also available.

[Application Example]



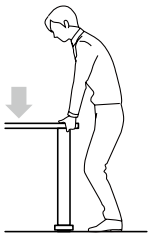
[How to Raise and Lower]

When raising

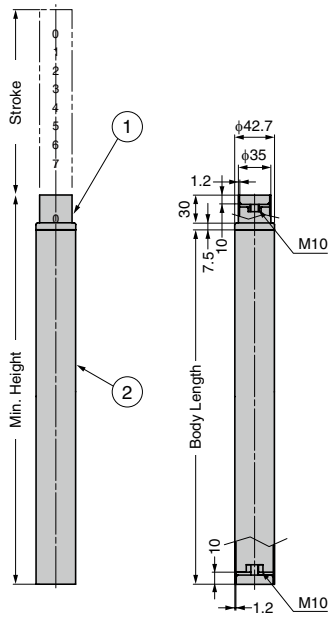


With the ground contact part fixed, slowly lift the tabletop until you hear a click at every step.

When lowering



Lifting to the maximum stroke will release the lock. At this moment, hold the tabletop and lower it to the minimum height, and then raise it to the desired step.



No.	Part Name	Material	Finish / Colour
①	Inner Pipe	Steel	Chrome
②	Body	Steel	Paint/Black

RoHS	CAD	Item Code	Item Name	Min. Height	Stroke	Body Length	Adjustable Pitch	Adjustable Steps	Load Capacity N/pc	Load Capacity kgf/pc	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	200-035-569	RTL-KUS-5	320	100	282.5	20	5	400	40	0.86	–	–
G	3D	200-035-570	RTL-KUS-10	420	200	382.5		10			1.1	–	–
G	3D	200-035-571	RTL-KUS-15	520	300	482.5		15			1.35	–	–

BASE HS-550


Paint/White

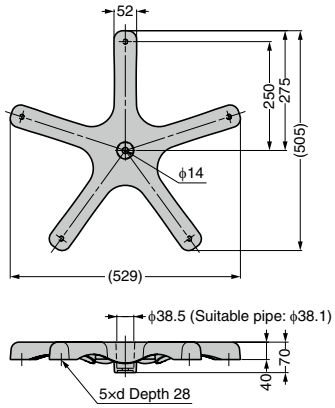

Polished

- Flat surface with stain resistance.
- 2 finishes (White & Polished) available.
- Recommended caster: M10 type of FA55N 1 for HS-550M10, EX-100N 2 for HS-550M12.
- For ϕ38.1 pipe.
- Use with optional weight for base HSW-2 to prevent falling. Up to 5 pcs can be installed.

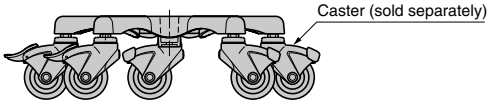
[Applications]
- Medical equipment, OA equipment, household appliances, beauty equipment, etc.

[Remarks]
- When using casters with swivel lock, please take anti-loosening measures before installing the casters.
- Do not use for chairs.

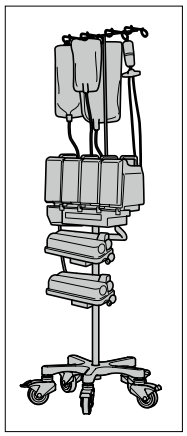
[Sold Separately]
- Caster
- Weight for base



[Use with Caster]



[Application Example]



[Caster] Sold Separately

FA55N
Threaded bolt type 1



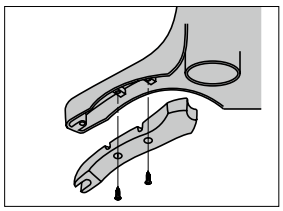
EX-100N
Threaded bolt type 2



[Weight for Base] Sold Separately



[Installation of Optional Weight for Base]



※Screws not included. Please prepare separately.
Recommended Screw: Hexagon socket head cap screw M5×15

[Weight for Base] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (kg)	Box (pcs)	Carton (pcs)
–	3D	200-021-233	HSW-2	Cast Iron (FC)	Paint/White	Approx. 1.9	1	1

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	d	Weight (g)	Box (units)	Carton (pcs)
G	3D	200-013-966	HS-550M10W	Aluminium Alloy (ADC)	Paint/White	M10	1773	5	1
G	3D	200-012-545	HS-550M12W			M12	2200	5	1
G	3D	200-017-128	HS-550M10M		Polished	M10	2400	5	–
G	3D	200-014-984	HS-550M12M			M12	2200	5	–

Refer to 1 : P.782 2 : P.763

BASE HO500



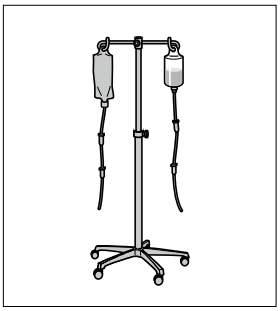
- Light and tough aluminium body.
- For ϕ50.8 pipe.
- Can be used for ϕ25, ϕ32, ϕ38 pipe with spacer (sold separately).

[Applications]
- Medical equipment, OA equipment, household appliances, etc.

[Remarks]
- Do not use for chairs with backrest.
- When using a spacer, fix it with fixing plate and screw from the bottom of the body. (Screw not included.)

[Sold Separately]
- Spacer HOS
- Fixing plate HOS-Z
- Caster

[Application Example]



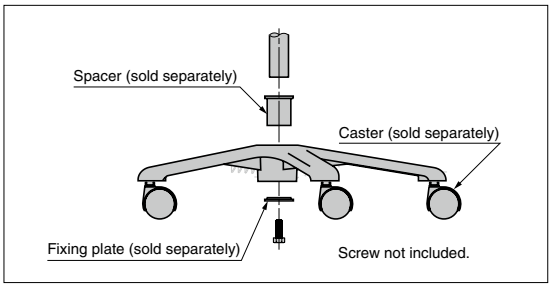
[Spacer] Sold Separately

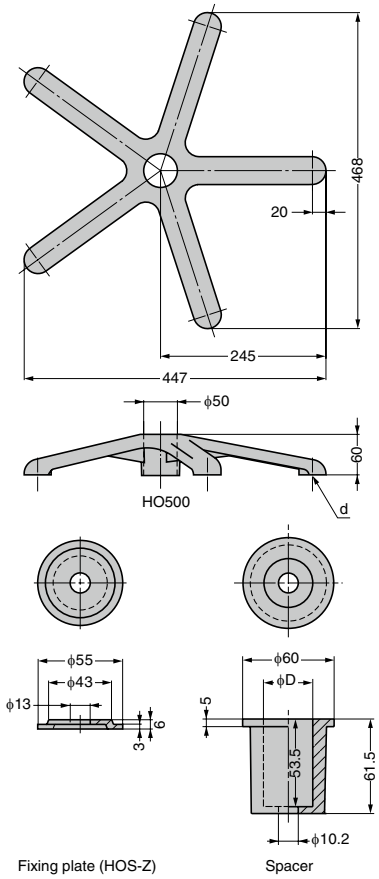




Caster (sold separately)

[Installation]





Fixing plate (HOS-Z) Spacer

[Body] Caster, spacer and fixing plate are sold separately.

RoHS	CAD	Item Code	Item Name	d	Material	Finish	Custom Finish	Weight (g)	Box (units)	Carton (units)
G	3D	200-881-326	HO500N3	W3/8	Aluminium Alloy	Polished	Enamel	1297	5	–
G	–	200-025-048	HO500M10	M10			Finish	1269	5	–

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-881-320	HOS-25	PA	Black	25	102	100	–
G	3D	200-881-321	HOS-32			32	85	100	–
G	3D	200-881-322	HOS-38			38	62	100	–

[Fixing Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-881-323	HOS-Z	Stainless Steel (SUS304)	Barrel Polished	50	500	–

BASE BJ610



Use with caster (sold separately) shown.

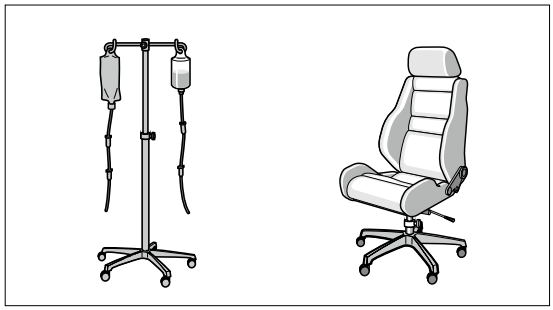
- Reinforced polyamide body with excellent durability and resistance against chemicals, weather and wear.
- For ϕ50.8 pipe.
- Can be used for ϕ25, ϕ32, ϕ38 pipe with spacer (sold separately).

[Applications]
- Medical equipment, OA equipment, household appliances, etc.

[Remarks]
- When using a spacer, fix it to the bottom of the pipe with fixing plate and screw.
- Screw not included.

[Sold Separately]
- Spacer HOS
- Fixing plate HOS-Z
- Caster CTW38

[Application Example]



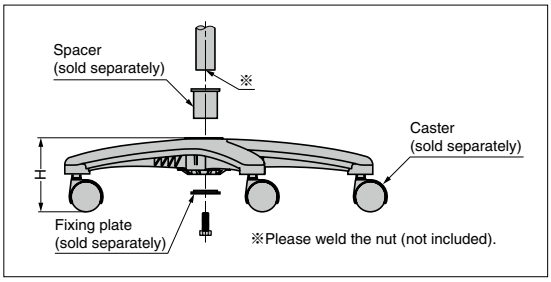
[Spacer] Sold Separately

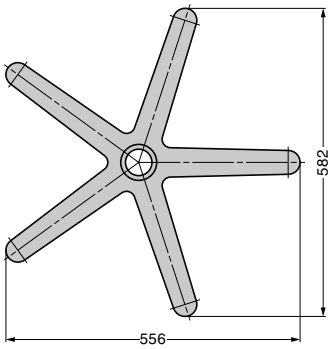




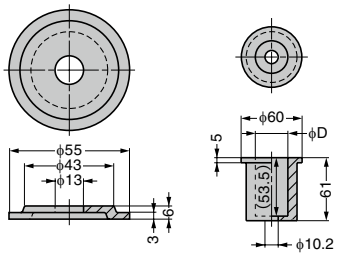
Caster (sold separately)

[Installation]





BJ610



Fixing plate (HOS-Z)

Spacer

[Body] Caster, spacer and fixing plate are sold separately.

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (units)	Carton (units)
–	3D	200-881-319	BJ610	Reinforced Polyamide	Dark Grey	1770	10	–

[Spacer] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-881-320	HOS-25	PA	Black	25	102	100	–
G	3D	200-881-321	HOS-32			32	85	100	–
G	3D	200-881-322	HOS-38			38	62	100	–

[Fixing Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	200-881-323	HOS-Z	Stainless Steel (SUS304)	Barrel Polished	50	500	–

[Caster] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Wheel Dia.	H	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	200-881-324	CTW38	PA/Urethane	Black	50	126	119	100	–

LAMP®

MISCELLANEOUS

Sugatsune offers a variety of products from bearings, shelf standards and other general-purpose items to belt reel partition, glass point fix and multi-purpose lids, etc.

SUGATSUNE

Updated 2017.10.27

BEARINGS
SWIVELS
MULTI-PURPOSE LIDS
VENTILATORS
MULTI-PURPOSE CAPS
GROMMETS
CABLE GROMMETS
GASKET
BELT REEL PARTITION
GLASS POINT FIX
OTHERS
LED LIGHTS

■ INDEX

AS Series Corner Caps

P.880



● "AS series" is an innovative system used for installing various functional parts such as hinges, catchs and door hardware to aluminium frame.



● Parts for connecting aluminium frames also available.
For details on aluminium frame support system AS series, refer to FRONT P.20.

Bearings

P.844~

● Numerous types are available, such as non-magnetic stainless steel bearings, anti-rust resin bearings, standard plastic bearings, ect.



Non-magnetic Stainless Steel Bearing
P.844



Medium Duty Anti-rust Resin Bearing KSUS
P.846



Anti-rust Resin Bearing CD, MCD, RCD
P.846, 847



Steel Bearing
Heavy Duty Type
P.848



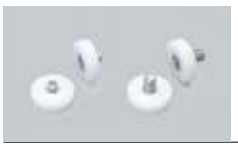
Medium Duty Bearing DT
Steel Insert Type
P.849



Medium Duty Bearing IDS
Steel Insert Type
P.850



Plastic Bearing
P.851~



Plastic Roller
P.856

Swivels

P.857



● Ideal for rotary workbench.

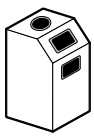
Multi-purpose Lids

P.858~

● Total 50 types. A wide variety of types are available, such as those with/without Door, and those with top mount / side mount / inclined mount, etc. All types are made of stainless steel with a sense of quality.

● There is also a product list by size (P.868)

Without Lid





Ring Cover For Refuse Box
AN-DH
AN-LH
P.859



Square Cover For Refuse Box
AN-KH
P.860

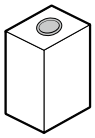


Multi-Purpose Grommet
Slim Type
AN-SH026-HL
P.866



Square Cover For Refuse Box
AZ-ND
P.865

With Lid & Top Mount





Multi-purpose Lid (W/Damper)
AD-GD
Soft Close
P.858



Multi-purpose Lid
AD-DH015-HL
P.858

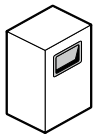


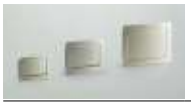
Multi-purpose Lid (W/Damper)
AD-KH015-HL
Soft Close
P.860

Multi-purpose Lids

P.858~

With Lid & Side Mount





Multi-purpose Lid (W/Damper)
AZ-GD
Soft Close
P.861, P.862



Multi-purpose Lid (W/Damper) Back Mount Type
AZ-GD231-HL
Soft Close
P.863

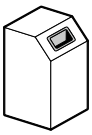


Multi-purpose Lid (W/Handle)
AZ-HD
P.864



Multi-purpose Lid (Double Door)
AZ-DD310-HL
P.865

With Lid & Inclined Mount





Multi-purpose Lid (W/Damper) Inclined Mount Type
AZ-GD232-HL
Soft Close
P.863

Optional Parts



Guide for Multi-purpose Lid
AZ-SLP
P.864

Funnels

P.866, 867



Stainless Steel Funnel
AE-DH
P.866



Hose for AE-DH
AE-DH4540-1
P.867



Strainer for AE-DH
AE-DH020K-45
P.867

●For throwing away leftovers like drinks.

Ventilators

P.869~

Oval Type

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	APD-KH66	610	66×28	62.5×24.6	P.869
	APD-KH170	1690	176×41	167.5×35	
	APD-KH260	3150	260×70	250×60	

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	SA-D150	≒1880	150×40	143.5×34	P.873
	SA-D200	≒3800	200.5×50	194×44	

Round Type

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	SA-M37	≒ 290	ϕ 36	ϕ 31.5	P.873
	SA-M45	≒ 570	ϕ 46	ϕ 41.5	
	SA-M60	≒1000	ϕ 60	ϕ 53.5	
	SA-M85	≒2150	ϕ 85	ϕ 77.8	
	SA-M120	≒4480	ϕ 120	ϕ 110.5	
	ASM-37	≒ 65	ϕ 36	ϕ 31	P.874
	ASM-45	≒ 104	ϕ 46	ϕ 41	
	ASM-60	≒ 224	ϕ 60	ϕ 53	
	ASM-85	≒ 478	ϕ 85	ϕ 77	
	AST-45	≒ 65	ϕ 45	–	P.874
	AST-55	≒ 104	ϕ 55	–	
	AST-70	≒ 224	ϕ 70	–	
	AST-100	≒ 478	ϕ 100	–	

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	481311	≒1835	ϕ102	ϕ77~80	P.876
	481312	≒2860	ϕ127	ϕ95~100	
	481440	≒ 750	ϕ102	ϕ77~80	P.876
	481430	≒1250	ϕ127	ϕ95~100	
	487220	≒3055	ϕ200	ϕ100	P.877
	487200	≒5032	ϕ200	ϕ100	

Square Type

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	APK-K160A	859	160×36	150×30.5	P.870
	APK-K210A	1145	212×36	200×30.5	
	APK-K400A	3958	400×60	390×50	
	APK-K400AW	5938	400×80	390×70	
	APK-KHA152P	700	152×42	146×36	P.871
	APK-KHW226P	1343	226×42	220×36	
	APK-KHA226P	1050	226×42	220×36	
	APK-K70P	350	70×36	64×30	P.872
	APK-KH70P	643	70×36	64×30	

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	48079	1276	85×85	ϕ76	P.875
	48176				
	48081	2136	125×125	ϕ101	P.875
	48282				
	48080	3700	200×100	–	P.875
	480970	1600	82×82	ϕ75	P.877

Ventilators

P.869~

Square Type

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	G58-3020	55000	340×240	305×200	P.878
	G57-1707AA	8300	210×106	173×73	P.878
	G57-2208AA	12000	260×116	223×83	
	1-2222	7500	215×215	–	P.878

Picture	Item Name	Max. Exhaust Area mm²	External Dimensions	Cut Out Dimensions	Page
	1-1122	3700	105×215	–	P.879
	1-2211	3700	215×105	–	P.879
	1-1212	1900	115×115	–	P.879

Multi-purpose Caps

P.880~

●Used for blocking off unused holes, etc.



Multi-purpose Cap KD
Mounting Hole Dia. 6.4~51
Total 19 Sizes
P.880



Multi-purpose Cap KD-772-65
Mounting Hole Dia.10
P.881



Multi-purpose Cap KD-771-6
Mounting Hole Dia.5
P.881



Multi-purpose Cap KD-772-3
Mounting Hole Dia.10
P.881



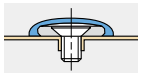
Multi-purpose Cap KD-771-65
Mounting Hole Dia.8
P.881



Multi-purpose Cap KD-773W
Mounting Hole Dia.8.6
P.881

Washers, Caps for Washer

P.882



●Washer for using countersunk head screw without countersinking and cover for hiding the washer.



Stainless Steel Countersunk Washer SETUP
For M3, M4, M5, M6
P.882



Cap for SETUP
CS-492
For M3, M4, M5, M6
P.882

Cable Grommets

P.885~

For Control Board

P.885~887

Wire Manager for Cable Grommet WSM-150



●Prevents oil mist intrusion, suitable for the control board of processing machine.
●Can pass through multiple cables of different sizes. Up to 3 pcs of cables with up to ϕ30 can be passed through.
P.885

Cable Clamp for Cable Grommet WSD



●For simply preventing dust intrusion.
●Nitrile rubber gasket and pile improve sealability and can block gaps caused by size differences or multiple cables.
P.887

Round Type

P.888~891

Picture	Item Name	Cut Out Dimensions	Page
	V60	ϕ60.5	P.888
	V80	ϕ80	
	S70	ϕ60	P.888
	S91	ϕ80	
	S445	ϕ39	P.889
	S51	ϕ45	
	S60	ϕ49	
	S76	ϕ65	
	S89	ϕ77	

Picture	Item Name	Cut Out Dimensions	Page
	ST70	ϕ60	P.889
	ST88	ϕ80	
 (One-sided Type)	LSU60S	ϕ48.5	P.890
	LS60S		
	LS76S	ϕ64.2	
 (Double Sided Type)	LSU60	ϕ48.5	P.890
	LS60		
	LS76	ϕ64.2	
	ALU25-20-325	ϕ60	P.891
	ALU25-20-330	ϕ80	

Oval Type

P.891~894

Picture	Item Name	External Dimensions	Cut Out Dimensions	Page
	SI2520	111×38	105×32	P.891
	SI2520-315	155×63	149×57	
	SI2520-316	255×63	249×57	
	S165-76	166.5×75	156.5×65.5	P.892
 (One-sided Type)	LN72S	72×37	67×32	P.893

Picture	Item Name	External Dimensions	Cut Out Dimensions	Page
 (Double Sided Type)	LN72	72×37	67×32	P.893
	LN72SF	72×37	67×32	P.894
	LN72P	72×37	67×32	P.892

Cable Grommets

P.885~

Square Type

P.895~898

Picture	Item Name	External Dimensions	Cut Out Dimensions	Page
	V2000	189×104	183.5×98.5	P.895
	ART973	108.2×56.4	97.8×46.5 (Mounting Hole on Sheet Metal)	P.895
	S1015-51	104×52	97.5×45.5	P.896
	S100-50	101.5×51	95.5×45	P.896

Picture	Item Name	External Dimensions	Cut Out Dimensions	Page
	LSU60KS	60×60	ϕ48	P.897
	LSU60K	60×60	ϕ48	P.897
	LS76KS	76×76	ϕ64	P.898
	LS76K	76×76	ϕ64	P.898

Cautions for Cable Grommet Installation [Applicable Products] P.888~898

- Please install by pushing from above.
- When installing to sheet metal, please use glue.

Gaskets

P.899~

Rubber Gaskets for Aluminium Frame

P.899



Rubber Gasket
AS-PAA

- Can be easily installed to the groove of the aluminium frame without using glue.

P.899

CR Gaskets

P.900



CR Gaskets

- A variety of sizes and cross-sectional shapes are available for purpose of use.

P.900

Silicone Trims

P.901



P.901

Belt Reel Partition

P.902~



Belt Reel Partition
AP-BR351
Wall Mount Type

- Belt Colour: Red, Blue



SUS

P.902



Belt Reel Partition
AP-BR057
Wall Mount Type

- Belt Colour: Red

SUS

P.903



Belt Reel Partition
AP-BR06
Mortise Mount Type

- Belt Colour: Red



SUS

P.903

Glass Point Fix

P.904~

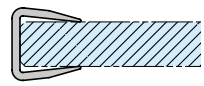
Point Fix



- Point fix is a part for fixing glass to structure or frame when using glass as a wall or panel.

P.904~

Glass Edge Protectors



- Seal material for protecting the edge of glass.

P.907

Others

P.908~

Plastic Sockets



- Ideal for holding pipes (ϕ25) in wardrobes.

P.908

Snap-on Windows



- One-touch installation.

P.908

LED Lights

P.909~



LED Tough Light
SL-TGH

P.909



ANGLE ADJUSTABLE MOUNTING BRACKET FOR TOUGH LIGHT
SL-WPG-Z

P.910

NON-MAGNETIC STAINLESS STEEL BEARING

SUS

- Excellent resistance against corrosion, rust and heat.
- Made of non-magnetic stainless steel: suitable for conveyance parts of medical equipment such as MRI and semiconductor manufacturing equipment, etc.
- Supplied with screw loosening prevention agent.
- Stainless steel rollers make it excellent in weather resistance and suitable for outdoor applications. (Depending on the environment of use, rust and dust adhesion may occur and affect the movemont of bearing.
- Made to order (grease designation, without grease, different size, etc.) is available.

[Applications]

- Suitable for conveyance parts of commercial kitchen equipment, MRI, medical equipment and semiconductor manufacturing equipment, commercial refrigerator, water exposure environment (rather than purposes involving personal safety like passenger equipment)

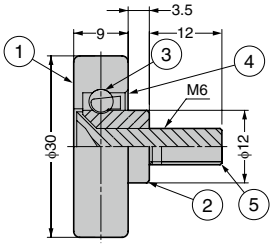
[Use Conditions]

- Operating temperature: -40˚C~+110˚C
- Limit load and rotational speed: 392 N×1000 r.p.m
- Friction coefficient: 0.005
- Clearance: Radial clearance 0.1~0.3mm

NON-MAGNETIC STAINLESS STEEL BEARING FSUS309/S3.5 Flat Outer Periphery Type

SUS





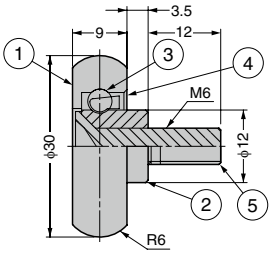
No.	Part Name	Material	Finish / Colour
①	Outer Ring	Stainless Steel (SUS303)	Plain
②	Inner Ring		
③	Balls	Stainless Steel (SUS304)	
④	Retainer	PA	Black
⑤	Shaft	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-850	FSUS309/S3.5	294	30	46.35	200	–

NON-MAGNETIC STAINLESS STEEL BEARING MSUS309/S3.5 Convex Outer Periphery Type

SUS



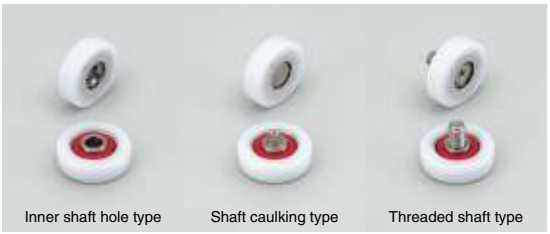


No.	Part Name	Material	Finish / Colour
①	Outer Ring	Stainless Steel (SUS303)	Plain
②	Inner Ring		
③	Balls	Stainless Steel (SUS304)	
④	Retainer	PA	Black
⑤	Shaft	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-849	MSUS309/S3.5	294	30	43.10	200	–

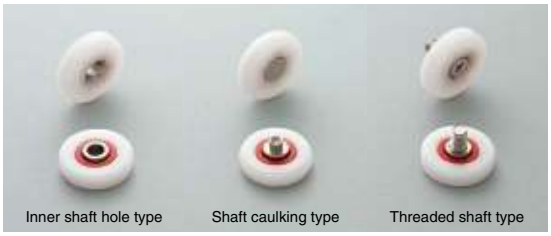
ANTI-RUST RESIN BEARING

[KSUS]



Inner shaft hole type　Shaft caulking type　Threaded shaft type

[CD, MCD, RCD]



Inner shaft hole type　Shaft caulking type　Threaded shaft type

- Stainless steel inner ring, ball and shaft with excellent rust resistance.
- Made of non-magnetic stainless steel: Suitable for conveyance parts of medical equipment such as MRI and semiconductor manufacturing equipment, etc.
- Customised versions (grease designation, without grease, different size, etc.) are available.

[Applications]

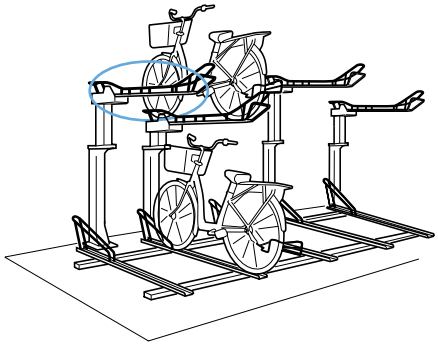
- Suitable for conveyance parts of commercial kitchen equipment, MRI, semiconductor manufacturing equipment, outdoors or water exposure environment, ect.

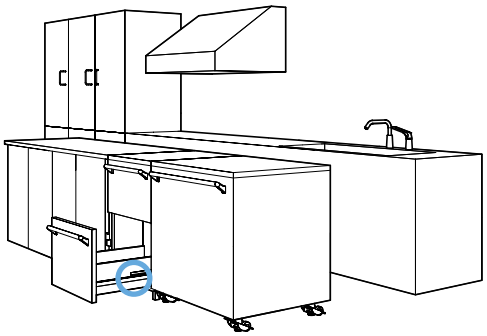
[Use Conditions]

- Operating temperature: 0˚C~+60˚C
- Limit load and rotational speed: 40 kg×1000 r.p.m for CD, MCD and RCD, 60 kg×1000 r.p.m for KSUS
- Friction coefficient: 0.005
- Clearance: Radial clearance 0.1~0.3mm

[Remarks]

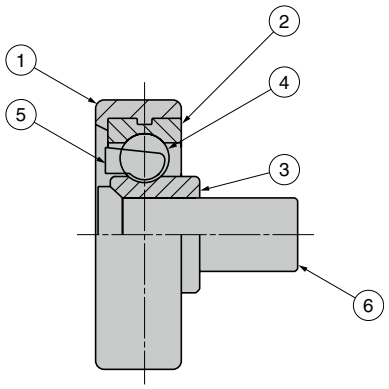
- Do not use for purposes involving personal safety like passenger equipment.





[KSUS] 1

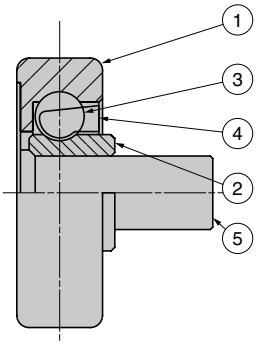
Compared with conventional CD, MCD and RCD 2, load capacity is improved by inserting stainless steel ring (② in the figure below) between the outer tyre and the inner ring.



No.	Part Name	Material	Finish / Colour
①	Outer Tyre	POM	Natural
②	Outer Ring	Stainless Steel (SUS304)	Plain
③	Inner Ring		
④	Balls		
⑤	Retainer	POM	Red
⑥	Shaft	※1	Plain

※1 Shaft caulking type: stainless steel (SUS304)
Threaded shaft type: stainless steel

[CD, MCD, RCD] 2



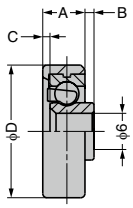
No.	Part Name	Material	Finish / Colour
①	Outer Ring	POM	Natural
②	Inner Ring	Stainless Steel (SUS303)	Plain
③	Balls	Stainless Steel (SUS304)	
④	Retainer	POM	Red
⑤	Shaft	※2	Plain

※2 Shaft caulking type: stainless steel (SUS303)
Threaded shaft type: stainless steel

Refer to 1 : P.846, 2 : P.846~847

MEDIUM DUTY ANTI-RUST RESIN BEARING KSUS Flat Outer Periphery Type

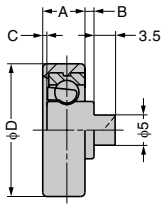

KSUS-268/68SUS



[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	ϕD	A	B	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-024-097	KSUS-227/68SUS	22	7	1.5	1.2	392	40	9.0	200	–
G	3D	210-024-098	KSUS-268/68SUS	26	8	0.5	1.2			11.1	200	–
G	3D	210-024-099	KSUS-309/68SUS	30	9	–	1.7			13.4	200	–

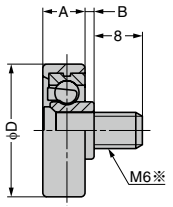

KSUS-268/P5SUS



[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	ϕD	A	B	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-024-100	KSUS-227/P5SUS	22	7	1.5	0.7	392	40	11.5	200	–
G	3D	210-024-101	KSUS-268/P5SUS	26	8	0.5				13.6	200	–
G	3D	210-024-102	KSUS-309/P5SUS	30	9	–	1.2			15.9	200	–


KSUS-268/S1SUS



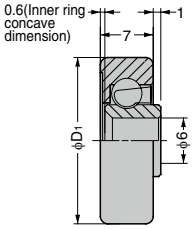
※Body and threaded shaft are separate parts.

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	ϕD	A	B	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-024-103	KSUS-227/S1SUS	22	7	1.5	392	40	11.8	200	–
G	3D	210-024-104	KSUS-268/S1SUS	26	8	0.5			13.9	200	–
G	3D	210-024-105	KSUS-309/S1SUS	30	9	–			16.2	200	–

ANTI-RUST RESIN BEARING CD Flat Outer Periphery Type

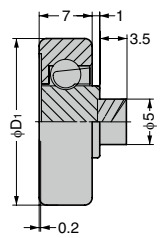




[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D1	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-801	CD-227/68SUS	22	196	20	5.75	200	–
G	3D	210-140-802	CD-247/68SUS	24			6.40	200	–
G	3D	210-140-803	CD-267/68SUS	26			7.15	200	–
G	3D	210-140-804	CD-287/68SUS	28			7.80	200	–
G	3D	210-140-805	CD-307/68SUS	30			8.60	200	–
G	3D	210-140-806	CD-357/68SUS	35			11.05	200	–

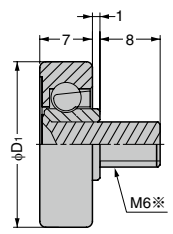




[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D1	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-807	CD-227/P5SUS	22	196	20	8.20	200	–
G	3D	210-140-808	CD-247/P5SUS	24			8.85	200	–
G	3D	210-140-809	CD-267/P5SUS	26			9.60	200	–
G	3D	210-140-810	CD-287/P5SUS	28			10.30	200	–
G	3D	210-140-811	CD-307/P5SUS	30			11.05	200	–
G	3D	210-140-812	CD-357/P5SUS	35			13.50	200	–





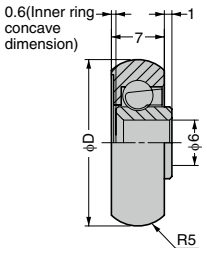
※Body and threaded shaft are separate parts.

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D1	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-813	CD-227/S-1SUS	22	196	20	8.55	200	–
G	3D	210-140-814	CD-247/S-1SUS	24			9.20	200	–
G	3D	210-140-815	CD-267/S-1SUS	26			9.95	200	–
G	3D	210-140-816	CD-287/S-1SUS	28			10.65	200	–
G	3D	210-140-817	CD-307/S-1SUS	30			11.45	200	–
G	3D	210-140-818	CD-357/S-1SUS	35			13.85	200	–

ANTI-RUST RESIN BEARING MCD Convex Outer Periphery Type

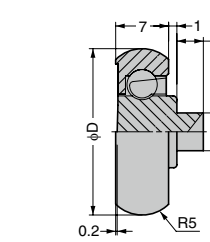




[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-819	MCD-227/68SUS	22	196	20	5.55	200	–
G	3D	210-140-820	MCD-247/68SUS	24			6.1	200	–
G	3D	210-140-821	MCD-267/68SUS	26			6.85	200	–
G	3D	210-140-822	MCD-287/68SUS	28			7.55	200	–
G	3D	210-140-823	MCD-307/68SUS	30			8.3	200	–
G	3D	210-140-824	MCD-357/68SUS	35			10.75	200	–

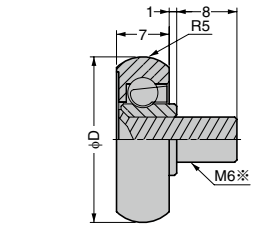




[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-825	MCD-227/P5SUS	22	196	20	8	200	–
G	3D	210-140-826	MCD-247/P5SUS	24			8.6	200	–
G	3D	210-140-827	MCD-267/P5SUS	26			9.3	200	–
G	3D	210-140-828	MCD-287/P5SUS	28			10.05	200	–
G	3D	210-140-829	MCD-307/P5SUS	30			10.8	200	–
G	3D	210-140-830	MCD-357/P5SUS	35			13.2	200	–





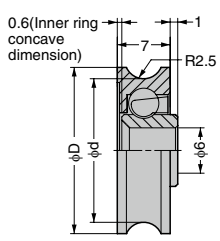
※Body and threaded shaft are separate parts.

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-831	MCD-227/S-1SUS	22	196	20	8.35	200	–
G	3D	210-140-832	MCD-247/S-1SUS	24			8.9	200	–
G	3D	210-140-833	MCD-267/S-1SUS	26			9.65	200	–
G	3D	210-140-834	MCD-287/S-1SUS	28			10.4	200	–
G	3D	210-140-835	MCD-307/S-1SUS	30			11.15	200	–
G	3D	210-140-836	MCD-357/S-1SUS	35			13.55	200	–

ANTI-RUST RESIN BEARING RCD Grooved Outer PeripheryType

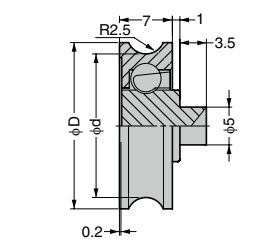




[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	d	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-837	RCD-227/68SUS	22	19	156.8	16	5.4	200	–
G	3D	210-140-838	RCD-247/68SUS	24	21			6	200	–
G	3D	210-140-839	RCD-267/68SUS	26	23			6.55	200	–
G	3D	210-140-840	RCD-287/68SUS	28	25			7.35	200	–
G	3D	210-140-841	RCD-307/68SUS	30	27			8.05	200	–
G	3D	210-140-842	RCD-247T/68SUS	24	20			5.65	200	–

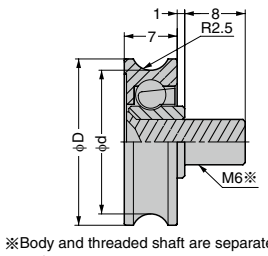




[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	d	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-851	RCD-227/P5SUS	22	19	156.8	16	7.85	200	–
G	3D	210-140-852	RCD-247/P5SUS	24	21			8.45	200	–
G	3D	210-140-853	RCD-267/P5SUS	26	23			9	200	–
G	3D	210-140-854	RCD-287/P5SUS	28	25			9.8	200	–
G	3D	210-140-855	RCD-307/P5SUS	30	27			10.5	200	–
G	3D	210-140-856	RCD-247T/P5SUS	24	20			8.1	200	–





※Body and threaded shaft are separate parts.

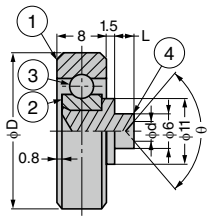
[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	d	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-843	RCD-227/S-1SUS	22	19	156.8	16	8.2	200	–
G	3D	210-140-844	RCD-247/S-1SUS	24	21			8.8	200	–
G	3D	210-140-845	RCD-267/S-1SUS	26	23			9.35	200	–
G	3D	210-140-846	RCD-287/S-1SUS	28	25			10.15	200	–
G	3D	210-140-847	RCD-307/S-1SUS	30	27			10.85	200	–
G	3D	210-140-848	RCD-247T/S-1SUS	24	20			8.45	200	–

STEEL BEARING Heavy Duty & Flat Outer Periphery Type

●Made to order (different size, etc.) is available.





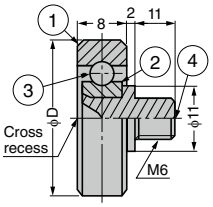
No.	Part Name	Material	Finish / Colour
①	Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
②	Inner Ring	Steel (SWCH)	
③	Balls		Plain
④	Shaft		Clear Zinc Chromate (Trivalent)

[Shaft Caulking/Full Ball Type]

This type does not use a retainer.

RoHS	CAD	Item Code	Item Name	D	(d×θ)	L	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-211	AS-22-A1.5-5.5	22	5×110°	5.5	686	70	19.7	1000	–
G	3D	210-140-214	AS-26-A1.5	26	5.5×90°	3.5			28.2	800	–





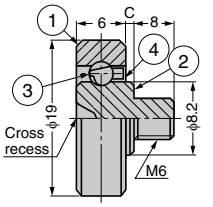
No.	Part Name	Material	Finish / Colour
①	Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
②	Inner Ring	Steel (SWCH)	
③	Balls		Plain
④	Shaft		Clear Zinc Chromate (Trivalent)

[Threaded Shaft/Full Ball Type]

This type does not use a retainer.

RoHS	CAD	Item Code	Item Name	D	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-212	AS-22-B2-11	22	686	70	20.9	1000	–
G	3D	210-140-215	AS-26-B2-11	26			29.7	500	–



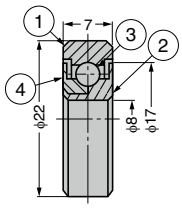


No.	Part Name	Material	Finish / Colour
①	Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
②	Inner Ring	Steel (SWCH)	
③	Balls		Plain
④	Retainer	PP	Natural

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Remarks	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-209	A-19-B1	1	490	50	With Locking Ring	12.0	1000	–
G	3D	210-140-210	A-19-B2	2				12.1	1000	–





No.	Part Name	Material	Finish / Colour
①	Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
②	Inner Ring A	Steel (SUM)	
③	Balls	Steel (SWCH)	Plain
④	Inner Ring B	Steel (SUM)	Alkaline Blackening

[Inner Shaft Hole/Full Ball Type]

This type does not use a retainer.

RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-137-037	※AS-608ZZ-2	294	30	14.8	1000	–

※Made to order (delivery time: about 60 days).

MEDIUM DUTY BEARING Steel Insert Type

- Steel bearing part provides higher load capacity than plastic bearing 1.
- Customised versions (different size, etc.) are available.

[Applications]

- Transportation machinery (material handling equipment, conveyors, elevators, various doors)
- Industrial machinery (various labor-saving machines, various automatic machines)
- Medical and laboratory equipment (medical equipment, various measuring instrument, development processing equipment)
- Electrical equipment (stereos, vending machines, exhaust equipment)
- Construction (door rollers, rain shutter doors, shutters)
- Office equipment (electronic printers, desks, cabinets, registers, copying machines)
- Household and leisure equipment (fishing reels, toys, bicycles)

[Use Conditions]

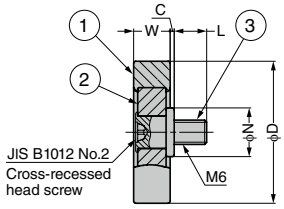
- Operating temperature: 0˚C~40˚C
- Rotational speed: 300 r.p.m

Refer to 1 : P.851

MEDIUM DUTY BEARING DT Steel Insert Type

- JIS-compliant steel bearing.
- With shield to prevent dust from invading compared with IDS 1.


DT-18-BH1-L1260ZZ





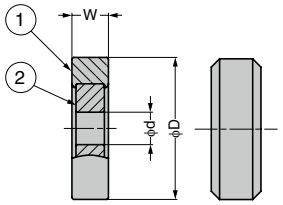
No.	Part Name	Material	Finish / Colour
①	Outer Ring	POM	Natural
②	Inner Ring	Steel	Plain
③	Screw	Steel (SWCH)	Clear Zinc Chromate (Trivalent)

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	W	C	L	N	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-034-419	DT-18-BH1-L1260ZZ	18	6	1	8	9	392	40	5.9	1	–
G	3D	210-034-420	DT-19-BH1-L1260ZZ	19							6.1	1	–
G	3D	210-034-421	DT-20-BH1-L1260ZZ	20							6.4	1	–
G	3D	210-034-422	DT-22-BH1-688ZZ	22	7			12	441	45	10.6	1	–
G	3D	210-034-423	DT-24-BH1-626ZZ	24	8			9	490	50	13.4	1	–
G	3D	210-034-424	DT-26-BH1-626ZZ	26							14.3	1	–
G	3D	210-034-425	DT-30-BH1-608ZZ	30	9			12	686	70	21.8	1	–
G	3D	210-034-426	DT-35-BH1-608ZZ-9	35					784	80	24.8	1	–
G	3D	210-034-427	DT-26-BH0.5-626ZZ	26	8	0.5		10	490	50	14.3	1	–
G	3D	210-034-428	DT-26-BH2-9.5-626ZZ			2	9.5				15.4	1	–
G	3D	210-034-429	DT-26-BH4-626ZZ			4	8				16.3	1	–
G	3D	210-034-430	DT-26-BH6-14-626ZZ			6	14				18.7	1	–


DT-17-604ZZ-CB


DT-18-L1260ZZ



DT-17-604ZZ-CB
※DT-17-604ZZ-CB has different outer ring shape.

No.	Part Name	Material	Finish / Colour
①	Outer Ring	POM	Natural, Black (DT-17-604ZZ-CB)
②	Inner Ring	Steel	Plain

[Inner Shaft Hole Type]

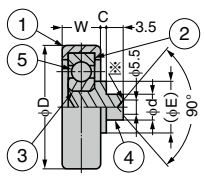
RoHS	CAD	Item Code	Item Name	D	d	W	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-034-410	DT-17-604ZZ-CB	17	4	6	98	10	3.1	1	–
G	3D	210-034-411	DT-18-L1260ZZ	18	6		392	40	2.9	1	–
G	3D	210-034-412	DT-19-L1260ZZ	19					3.1	1	–
G	3D	210-034-413	DT-20-L1260ZZ	20					3.4	1	–
G	3D	210-034-414	DT-22-688ZZ	22	8	7	441	45	5.7	1	–
G	3D	210-034-415	DT-24-H6-626ZZ	24	6	8	490	50	9.9	1	–
G	3D	210-034-416	DT-26-H6-626ZZ	26					10.8	1	–
G	3D	210-034-417	DT-30-608ZZ	30	8	9	686	70	16.1	1	–
G	3D	210-034-418	DT-35-608ZZ	35			784	80	19.1	1	–

Refer to 1 : P.850

MEDIUM DUTY BEARING IDS Steel Insert & Flat Outer Periphery Type

●Made to order (different size, etc.) is available.





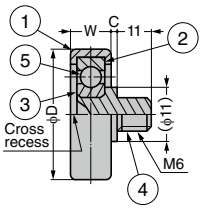
※marked hole is only for IDS-26 A1.5.

No.	Part Name	Material	Finish / Colour
①	Outer Ring	POM	Natural
②	Steel Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
③	Inner Ring	Steel (SWCH)	
④	Shaft		
⑤	Balls		–

[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	E	d	W	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-216	IDS-22-A2.5	22	9	5	7	2.5	392	40	13.2	1000	–
G	3D	210-140-218	IDS-26-A1.5	26	11	6	8	1.5	588	60	18.1	800	–



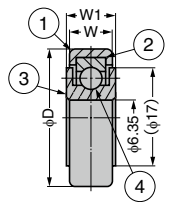


No.	Part Name	Material	Finish / Colour
①	Outer Ring	POM	Natural
②	Steel Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
③	Inner Ring	Steel (SWCH)	
④	Shaft		
⑤	Balls		–

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	W	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-217	IDS-22-B1.5-11	22	7	1.5	392	40	14.5	1000	–
G	3D	210-140-219	IDS-26-B2-11	26	8	2	588	60	20.0	500	–





No.	Part Name	Material	Finish / Colour
①	Outer Ring	POM	Natural
②	Steel Outer Ring	Steel (STKM)	Clear Zinc Chromate (Trivalent)
③	Inner Ring	Steel (SWCH)	
④	Balls		–

[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	W	W_1	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-220	IDS-26-H6.35W0.8	26	8	9.6	294	30	19.5	800	–
G	3D	210-140-221	IDS-35-H6.35W0.26	35	9	9.52			25.2	500	–

PLASTIC BEARING

- Polyacetal bearing provides excellent wear resistance and low friction coefficient.
- Excellent resistance against corrosion, chemicals and weather.
- Low cost thanks to injection moulding process.
- Customised versions (different size, etc.) are available.

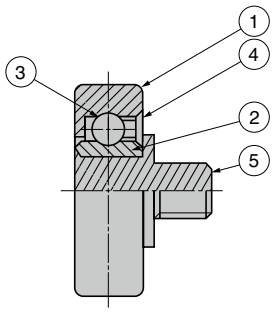
[Applications]

- Office equipment (electronic printers, desks, cabinets, registers, copying machines)
- Transportation machinery (conveyors, elevators, various doors)
- Electrical equipment (stereos, vending machines, exhaust equipment)
- Industrial machinery (various labor-saving machines, various automatic machines)
- Medical and laboratory equipment (medical equipment, various measuring instrument, development processing equipment)
- Household and leisure equipment (fishing reels, toys, bicycles)
- Construction (door rollers, rain shutter doors, shutters)

[Use Conditions]

(Conditions for DR. For other types, please consult us.

- Operating temperature: 0˚C~+40˚C
- Rotational speed: 300 r.p.m

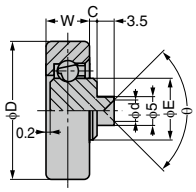


[Plastic Bearing Parts Structure]

No.	Part Name	Material
①	Outer Ring	POM
②	Inner Ring	Steel
③	Balls	Steel
④	Retainer	PP
⑤	Shaft	Steel
–	Lubricant	Grease

PLASTIC BEARING Flat Outer Periphery Type

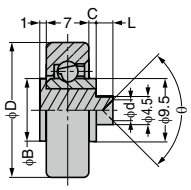




[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	E	(d×θ)	W	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-040	DR-19-A0.5	19	8.2	4×120°	6	0.5	29.4	3	5.0	2000	–
G	3D	210-140-041	DR-22-A1	22	9.5	4.4×90°	7	1	78.4	8	8.2	1000	–

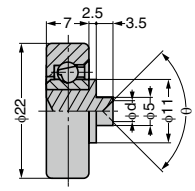




[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	(d×θ)	C	L	B	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-107	DR-22-AH(1)3.5-8019	22	3×100°	0	3.5	10	196	20	8.2	1000	–
G	3D	210-140-108	DR-26-AH	26							9.5	1000	–
G	3D	210-140-133	DR-22-AH2.5-3.65	22	2.5×100°	2.5	3.65	9.5			9.4	1000	–

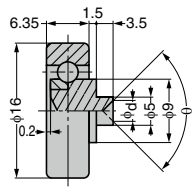




[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	(d×θ)	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-134	DR-22-AH2.5	4×110°	196	20	9.4	1000	–





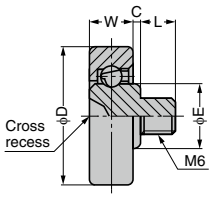
[Shaft Caulking/Full Ball Type]

This type does not use a retainer.

RoHS	CAD	Item Code	Item Name	(d×θ)	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-130	DRS-16-A1.5	4.5×90°	19.6	2	5.6	2500	–

PLASTIC BEARING Flat Outer Periphery Type



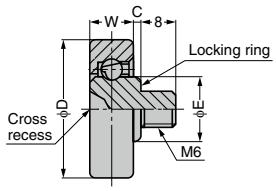


[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	E	W	C	L	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-050	DR-19-B0.5	19	8.2	6	0.5	8	49	5	5.8	2000	–
G	3D	210-140-051	DR-22-B0.5	22	9.5	7			196	20	8.7	1000	–
G	3D	210-140-052	DR-24-B0.5	24							9.4	1000	–
G	3D	210-140-053	DR-26-B0.5	26							10.1	1000	–
G	3D	210-140-152	DR-22-B3-10.5	22			3	10.5			10.4	1000	–
G	3D	210-140-153	DR-26-B3-10.5	26							11.8	800	–
G	3D	210-140-156	※DR-26-B3.6-12.4				3.6	12.4			12.5	800	–

※Made to order (production lead time: about 60 days).



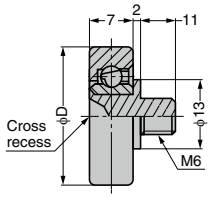


[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	E	W	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-135	DR-19-B1	19	8.2	6	1	49	5	6	2000	–
G	3D	210-140-587	DR-19-B2				2			6.4	2000	–
G	3D	210-140-137	DR-22-B2	22	9.5	7		196	20	9.6	1000	–
G	3D	210-931-985	DR-22-B3				3			10	1000	–
G	3D	210-140-139	DR-22-B4				4			10.7	1000	–
G	3D	210-140-140	DR-22-B5				5			11.2	1000	–
G	3D	210-140-141	DR-22-B6				6			11.7	1000	–
G	3D	210-140-142	DR-24-B2	24			2			10.2	1000	–
G	3D	210-140-143	※DR-24-B3				3			11.4	1000	–
G	3D	210-140-144	※DR-24-B4				4			11.7	1000	–
G	3D	210-140-106	※DR-24-B5				5			12.2	1000	–
G	3D	210-140-146	※DR-24-B6				6			12.7	1000	–
G	3D	210-140-147	DR-26-B2	26			2			11	800	–
G	3D	210-935-645	DR-26-B3				3			11.4	800	–
G	3D	210-140-149	DR-26-B4				4			12.1	800	–
G	3D	210-140-151	DR-26-B6				6			13.1	800	–
G	3D	210-140-157	DR-28-B2	28			2			11.8	500	–

※Made to order (production lead time: about 60 days).





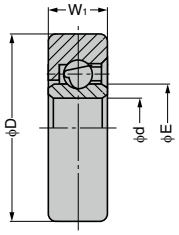
[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-154	※DR-22-BH2-11	22	196	20	10.9	1000	–
G	3D	210-140-155	※DR-26-BH2-11	26			12.3	800	–

※Made to order (production lead time: about 60 days).

PLASTIC BEARING Flat Outer Periphery Type



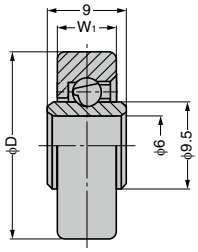


[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	d	E	W1	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	JIS Equivalent Number	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-159	※DR-18-H6	18	6	8.2	6	49	5	–	2.9	2500	–
–	3D	–	※DR-18-H8		8	11	5				2.8	3000	–
G	3D	210-140-045	DR-19-H5	19	5	8.2	6			635	3.5	2500	–
G	3D	210-140-161	DR-20-H8	20	8	11		29.4	3	–	4	1500	–
G	3D	210-140-046	DR-22-H6	22	6	9.5	7	196	20	636	5.7	1500	–
G	3D	210-140-162	DR-24-H6	24						–	6.4	1000	–
G	3D	210-140-047	DR-26-H6	26							7.2	1000	–
G	3D	210-140-163	DR-28-H6	28							8.8	500	–
G	3D	210-140-164	※DR-22-H8	22	8	11		49	5	608	5	1500	–
–	3D	–	※DR-24-H10.5	24	10.5	13				–	5.8	–	–
G	3D	210-140-168	DR-30-H10-8	30	10	14.5	8	245	25		12	500	–
G	3D	210-140-171	DR-30-H10-9				9			6200	13.3	500	–
G	3D	210-140-172	DR-32-H12	32	12	17	10	294	30	6201	17.5	500	–
G	3D	210-140-173	DR-35-H15	35	15	21	11			6202	25	400	–
G	3D	210-140-174	DR-40-H17	40	17		12			6203	26.8	250	–
G	3D	210-140-175	DR-47-H20	47	20	27	14	343	35	6204	50.1	150	–

※Made to order (production lead time: about 60 days).

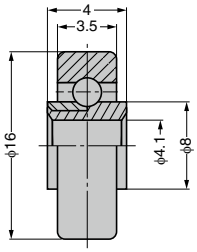




[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	W1	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-165	DR-22-H6W1	22	7	196	20	6.4	1000	–
G	3D	210-140-166	DR-26-H6W1	26				7.7	1000	–
G	3D	210-140-169	DR-35-H6W1	35				10.1	500	–
G	3D	210-140-170	DR-40-H6W0.5	40	8			13.3	400	–





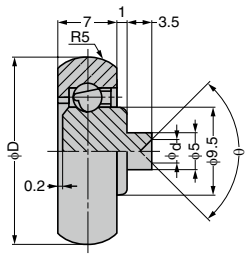
[Inner Shaft Hole/Full Ball Type]

This type does not use a retainer.

RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-158	DRS-16-H4.1-W0.25	49	5	2.1	5000	–

PLASTIC BEARING Convex Outer Periphery Type

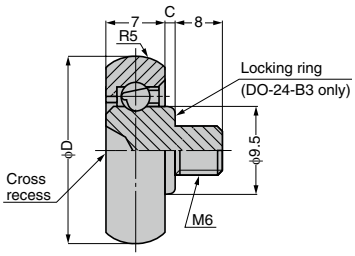




[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	(d × θ)	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-183	DO-22-A1	22	4.4 × 90°	78.4	8	7.8	1000	–
G	3D	210-140-184	DO-24-A1	24				8.5	1000	–
G	3D	210-140-185	DO-26-A1	26				9.2	1000	–

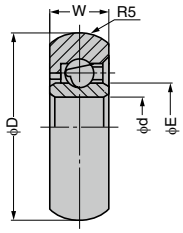




[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	C	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-177	DO-22-B0.5	22	0.5	196	20	8.6	1000	–
G	3D	210-140-178	DO-24-B0.5	24				9.3	1000	–
G	3D	210-140-179	DO-26-B0.5	26				9.8	1000	–
G	3D	210-140-186	DO-24-B3	24	3			10.4	1000	–

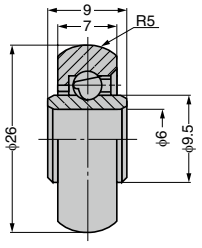




[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	E	d	W	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-176	DO-19-H5	19	8.2	5	6	49	5	3.3	2500	–
G	3D	210-140-180	DO-22-H6	22	9.5	6	7	196	20	5.3	1500	–
G	3D	210-140-181	DO-24-H6	24						6.1	1000	–
G	3D	210-140-182	DO-26-H6	26						6.7	1000	–



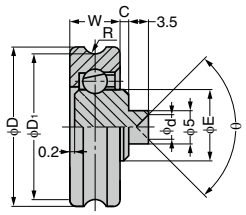


[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-188	DO-26-H6W1	196	20	7.4	1000	–

PLASTIC BEARING Grooved Outer Periphery Type

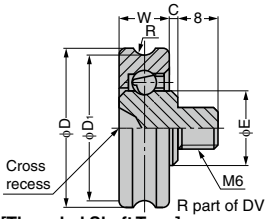




[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	D1	E	(d × θ)	W	C	R	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	210-140-189	DU-19-A0.5	19	17	8.2	4×120°	6	0.5	1.75	29.4	3	5.1	2000	–
G'	3D	210-140-190	DU-22-A1	22	19.2								7.7	1000	–
G'	3D	210-140-191	DU-24-A1	24	21.2	9.5	4.4×90°	7	1	2.5	58.8	6	8.4	1000	–
G'	3D	210-140-192	DU-26-A1	26	23.2								9	1000	–





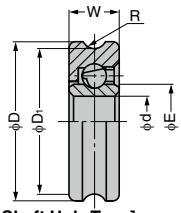
R part of DV is V-groove.

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	D1	E	W	C	R	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	210-140-193	DU-19-B0.5	19	17	8.2	6		1.75	39.2	4	6.2	2000	–
G'	3D	210-140-194	DU-22-B0.5	22	19.2							8.3	1000	–
G'	3D	210-140-195	DU-24-B0.5	24	21.2	9.5	7	0.5	2.5	156.8	16	8.9	1000	–
G'	3D	210-140-196	DU-26-B0.5	26	23.2							9.6	1000	–
G'	3D	210-140-202	※DV-32.5-B1.5-2R	32.5	20.5		9.5	1.5	2R×15°	–	–	10.4	400	–

※Made to order (production lead time: about 60 days).



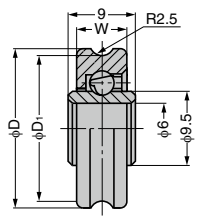


[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	D1	E	d	W	R	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	210-140-197	DU-19-H5	19	17	8.2	5	6	1.75	39.2	4	3.2	2500	–
G'	3D	210-140-198	DU-22-H6	22	19.2							5.3	1500	–
G'	3D	210-140-199	DU-24-H6	24	21.2	9.5	6	7	2.5	156.8	16	5.9	1000	–
G'	3D	210-140-200	DU-26-H6	26	23.2							6.5	1000	–
G'	3D	210-140-201	※DU-30-H6-M	30	25.7							6.7	500	–

※Made to order (production lead time: about 60 days).



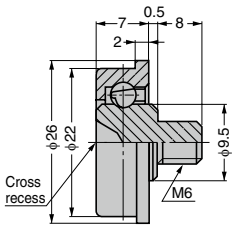


[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	D	D1	W	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	210-140-203	DU-35-H6W1	35	31	7	156.8	16	9.2	500	–
G'	3D	210-140-204	DU-40-H6W0.5	40	36	8			11.9	400	–

PLASTIC BEARING Flanged Outer PeripheryType

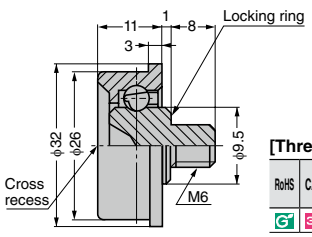




[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-206	DF-22-B0.5	196	20	9.2	1000	–

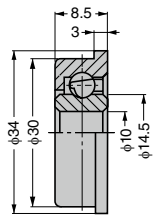




[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	Load Capacity N/300r.p.m	Load Capacity kgf/300r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-207	DF-26-B1	196	20	13.4	400	–



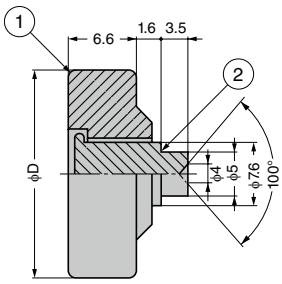


[Inner Shaft Hole Type]

RoHS	CAD	Item Code	Item Name	Outer Roller Load Capacity N/300 r.p.m	Outer Roller Load Capacity kgf/300 r.p.m	Inner Shaft Load Capacity N/300 r.p.m	Inner Shaft Load Capacity kgf/300 r.p.m	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-208	DF-30-H10-3	245	25	58.8	6	13.4	500	–

Plastic Roller Flat Outer Periphery Type



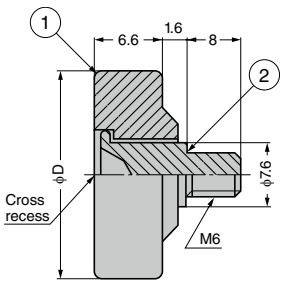


No.	Part Name	Material	Finish
①	Outer Ring	POM	Natural
②	Inner Ring	Steel (SWCH)	Clear Zinc Chromate (Trivalent)

[Shaft Caulking Type]

RoHS	CAD	Item Code	Item Name	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-222	DL-19-A1.6	19	5.0	2000	–
G	3D	210-140-223	DL-22-A1.6	22	6.1	1000	–
G	3D	210-140-224	DL-26-A1.6	26	8.4	1000	–





No.	Part Name	Material	Finish
①	Outer Ring	POM	Natural
②	Inner Ring	Steel (SWCH)	Clear Zinc Chromate (Trivalent)

[Threaded Shaft Type]

RoHS	CAD	Item Code	Item Name	D	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-140-225	DL-19-B1.6	19	5.9	1500	–
G	3D	210-140-226	DL-22-B1.6	22	6.8	1000	–
G	3D	210-140-227	DL-26-B1.6	26	8.0	1000	–

SWIVEL HF

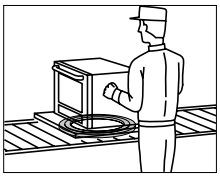


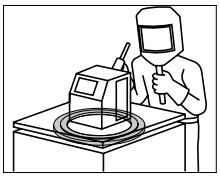
●Rubber stoppers prevent from slipping.

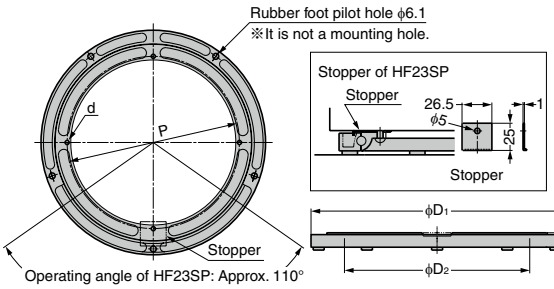
[Applications]
●Workbenches
●For TV monitors, etc.

[Remarks]
●Picture on the left shows HF23SP, HF30, HF45 and HF60 from inside.
●Drawing below is HF23SP (with stopper). (No stopper for other sizes.)

[Application Example]







HF23SP (with stopper) shown.

No.	Part Name	Material	Finish / Colour
①	Top Plate	Aluminium Alloy	As below
②	Balls	Steel	–
③	Base plate	Aluminium Alloy	As below
④	Leg	Rubber	White

RoHS	CAD	Item Code	Item Name	Stopper	Finish / Colour	D₁	D₂	P	H	h	d	Holes	Load Capacity N/pc	Load Capacity kgf/pc	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-035-222	HF23SP	With	Barrel Polished	230	166	176	16	15	ϕ4.8	4	392	40	370	40	–
G	3D	210-035-220	HF30	Without		327	265	275.5				6	588	60	550	20	–
G	3D	210-035-221	HF45			441	380	392	22	16.5	ϕ4.8 ϕ10		980	100	1600	10	100
G	3D	210-035-226	HF60		Silver Enamel Finish	600	520	538	24	18.5	ϕ4.8 ϕ12	4	1960	200	3200	5	–

MULTI-PURPOSE LID (W/DAMPER) AD-GD With Lid

SUS VIDEO



- With damper to keep lid from slamming shut.
- Corrosion resistant.
- Small type AD-GD011-HL is newly launched.
- Wide opening.
- Balance weight restores lid to horizontal position.
- AD-GD011-HL is not for plastic bottles, suitable for separation.

Video Link

[Specifications]

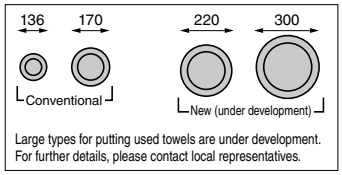
- Operating temperature: 0˚C~40˚C

[Remarks]

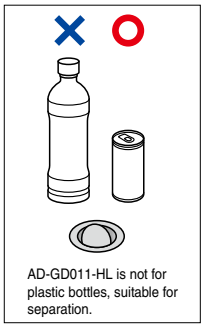
- Indoor use only.
- The closing speed varies depending on the operating temperature. For product stored below the freezing point, leave it indoor above 0˚C for several hours before use.

[Installation]

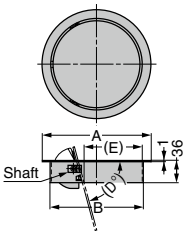




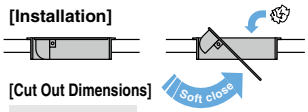
Large types for putting used towels are under development.
For further details, please contact local representatives.



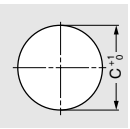
AD-GD011-HL is not for plastic bottles, suitable for separation.



[Installation]



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Old Item Name	Material	Finish	A	B	C	D	E	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-029-219	AD-GD011-HL	AD-DH011-HL	Stainless Steel (SUS304)	Satin	136	106	107	87	62	460	1	10
–	3D	210-022-107	AD-GD015-HL	AD-DH017-HL			170	146	147	75	90	1000	1	–

※Item name has been revised.

MULTI-PURPOSE LID AD-DH015-HL With Lid

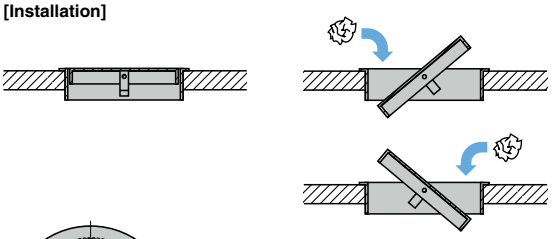
SUS

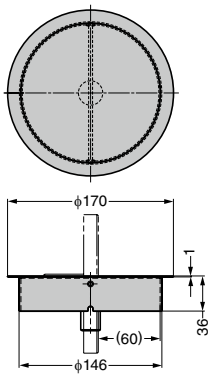




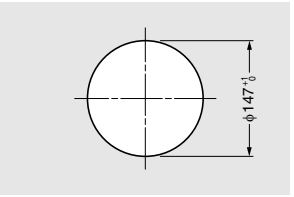
- 360° rotation.
- Corrosion resistant.
- Balance weight restores lid to horizontal position.

[Installation]





[Cut Out Dimensions]



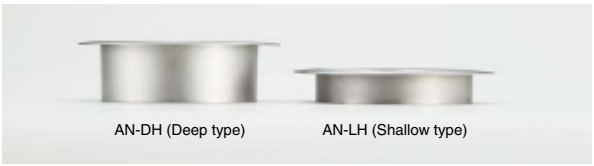
RoHS	CAD	Item Code	Item Name	Old Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-170-079	AD-DH015-HL	AD-DH015	Stainless Steel (SUS304)	Satin	560	1	10

※Item name has been revised.

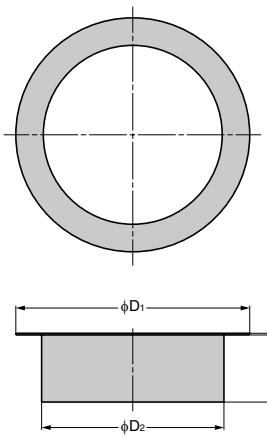
RING COVER FOR REFUSE BOX AN-DH, AN-LH

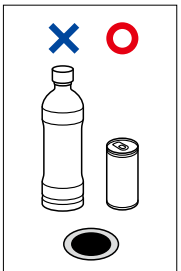
SUS



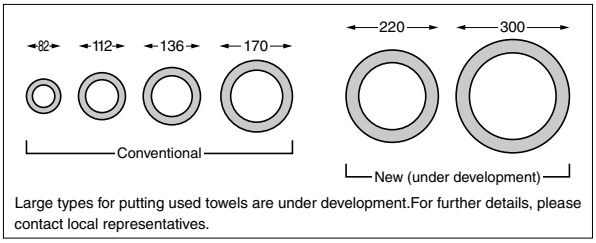


- Small type AN-DH005 and AN-LH005 are newly launched.
- Corrosion resistant.
- Wide variations (Size/Depth/Finish).
- AN-DH005 and AN-LH005 are not for plastic bottles, suitable for separation.





AN-DH005 and AN-LH005 are not for plastic bottles, suitable for separation.

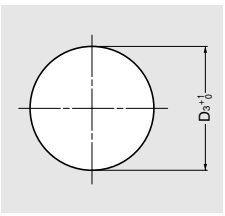


Large types for putting used towels are under development.For further details, please contact local representatives.

[Installation]



[Cut Out Dimensions]



[AN-DH (Deep Type)]

RoHS	CAD	Item Code	Item Name	Old Item Name	A	D1	D2	D3	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-779	AN-DH005-GP	–	36	82	58	59	Stainless Steel (SUS304)	24K Gold Plating+Clear	66	1	50
G	3D	210-032-780	AN-DH005-MR	–						Polished		1	100
G	3D	210-032-781	AN-DH005-HL	–						Satin		1	100
G	3D	210-022-094	AN-DH008-GP	AN-DH001-GP		112	82	83		24K Gold Plating+Clear	107	1	10
G	3D	210-022-095	AN-DH008-MR	AN-DH001-MR						Polished		1	10
G	3D	210-022-096	AN-DH008-HL	AN-DH001-HL						Satin		1	10
G	3D	210-170-078	AN-DH011-GP	–	40	136	106	107		24K Gold Plating+Clear	137	1	10
G	3D	210-170-076	AN-DH011-MR	–						Polished		1	10
G	3D	210-170-077	AN-DH011-HL	–						Satin		1	10
G	3D	210-172-533	AN-DH015-GP	–	36	170	146	147		24K Gold Plating+Clear	182	1	10
G	3D	210-172-532	AN-DH015-MR	–						Polished		1	10
G	3D	210-172-531	AN-DH015-HL	–						Satin		1	10

[AN-LH (Shallow Type)]

RoHS	CAD	Item Code	Item Name	Old Item Name	A	D1	D2	D3	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-782	AN-LH005-GP	–	22	82	58	59	Stainless Steel (SUS304)	24K Gold Plating+Clear	50	1	50
G	3D	210-032-783	AN-LH005-MR	–						Polished		1	100
G	3D	210-032-784	AN-LH005-HL	–						Satin		1	100
G	3D	210-022-097	AN-LH008-GP	AN-LH001-GP		112	82	83		24K Gold Plating+Clear	77	1	10
G	3D	210-022-098	AN-LH008-MR	AN-LH001-MR						Polished		1	10
G	3D	210-022-099	AN-LH008-HL	AN-LH001-HL						Satin		1	10
G	3D	210-022-100	AN-LH011-GP	–		136	106	107		24K Gold Plating+Clear	92	1	10
G	3D	210-022-101	AN-LH011-MR	–						Polished		1	10
G	3D	210-022-102	AN-LH011-HL	–						Satin		1	10
G	3D	210-022-103	AN-LH015-GP	–		170	146	147		24K Gold Plating+Clear	122	1	10
G	3D	210-022-104	AN-LH015-MR	–						Polished		1	10
G	3D	210-022-105	AN-LH015-HL	–						Satin		1	10

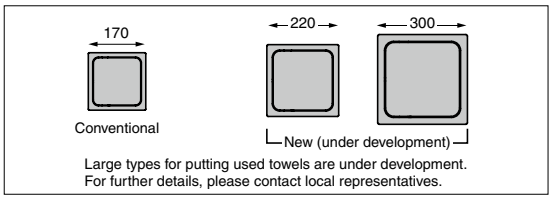
※Item name has been revised.

MULTI-PURPOSE LID (W/DAMPER) AD-KH015-HL With Lid

SUS VIDEO







Large types for putting used towels are under development.
For further details, please contact local representatives.

- With damper to keep lid from slamming shut.
- Corrosion resistant.
- Wide opening.
- Balance weight restores lid to horizontal position.

Video Link

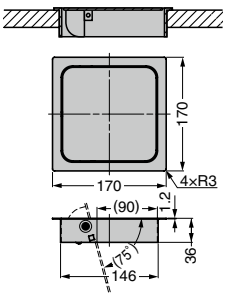
[Specifications]

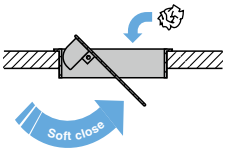
- Operating temperature: 0˚C~40˚C

[Remarks]

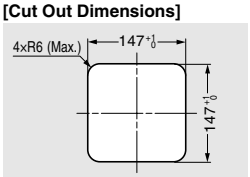
- Indoor use only.
- The closing speed varies depending on the operating temperature. For product stored below the freezing point, leave it indoor above 0˚C for several hours before use.

[Installation]





[Cut Out Dimensions]



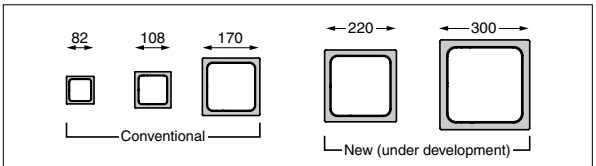
RoHS	CAD	Item Code	Item Name	Old Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	210-022-108	AD-KH015-HL	AD-KH017-HL	Stainless Steel (SUS304)	Satin	970	1	10

※Item name has been revised.

SQUARE COVER FOR REFUSE BOX AN-KH

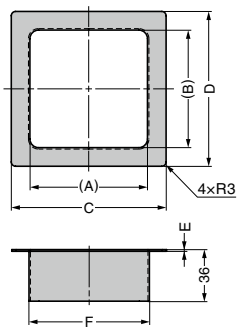
SUS

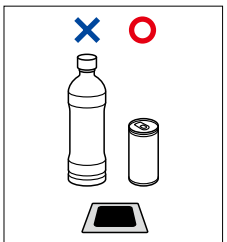




Large types for putting used towels are under development. For further details, please contact local representatives.

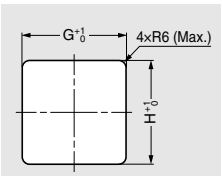
- Corrosion resistant.
- Small type AN-KH005-HL and AN-KH008-HL are newly launched.
- AN-KH005-HL is not for plastic bottles, suitable for separation.





AN-KH005-HL is not for plastic bottles, suitable for separation.

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Old Item Name	Material	Finish	A	B	C	D	E	F	G	H	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-785	AN-KH005-HL	–	Stainless Steel (SUS304)	Satin	56	56	82	82	1.2	58	59	59	87	1	150
G	3D	210-028-436	AN-KH008-HL	AN-KH001			82	82	108	108		84	85	85	126	1	10
G	3D	210-022-109	AN-KH015-HL	AN-KH017			144	144	170	170		146	147	147	217	1	10

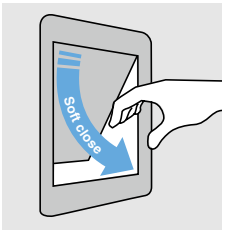
※Item name has been revised.

MULTI-PURPOSE LID (W/DAMPER) AZ-GD With Lid / Key

SUS







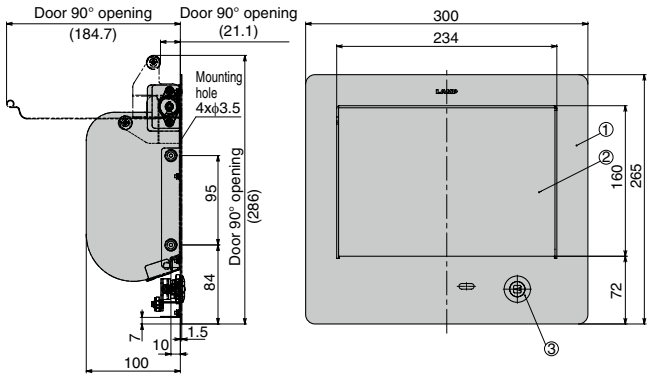
- Soft-closes to prevent lid from slamming shut. Reduces noise and impact when lid closes.
- Integrated anti-pinching plates.
- For vertical use.
- Corrosion resistant.
- Possible to prohibit the use of lid by using key. Also suitable for transportation vehicles, etc. (Rattling may occur depending on vibration conditions.

[Specifications]

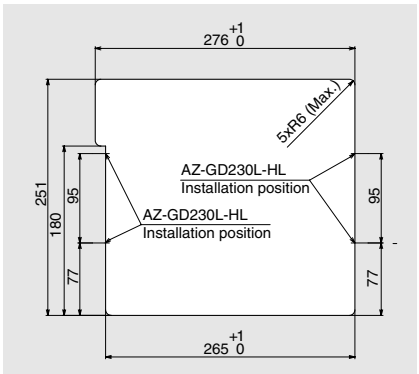
- Operating temperature: 0˚C~40˚C

[Remarks]

- Indoor use only.
- The closing speed varies depending on the operating temperature. For damper stored below the freezing point, leave it indoor above 0˚C for several hours before use.



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
GT	3D	210-037-892	AZ-GD230L-HL	Stainless Steel (SUS304)	Satin	1897	1	10

MULTI-PURPOSE LID (W/DAMPER) AZ-GD With Lid

INSTRUCTION SUS VIDEO



AZ-GD180-HL AZ-GD230-HL AZ-GD310-HL

- With damper to keep lid from slamming shut.
- Integrated anti-pinching plates.
- For vertical use only.
- Small type AZ-GD180-HL is newly launched.
- Corrosion resistant.
- Back mount type 1 and inclined mount type 2 of the same shape also available.
- Guide (sold separately) 3 for guiding rubbish into waste box inside also available.

Video Link

[Specifications]

- Operating temperature: 0˚C~40˚C

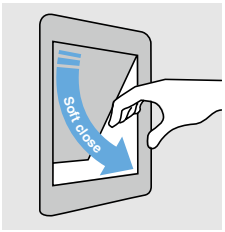
[Remarks]

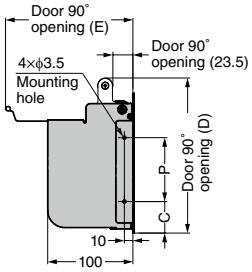
- Indoor use only.
- The closing speed varies depending on the operating temperature.For product stored below the freezing point, leave it indoor above 0˚C for several hours before use.

[Sold Separately]

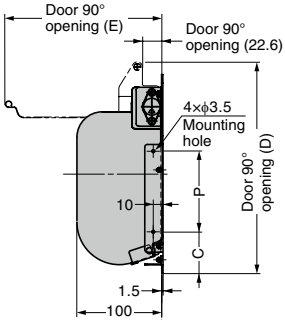
- Guide AZ-SLP 3



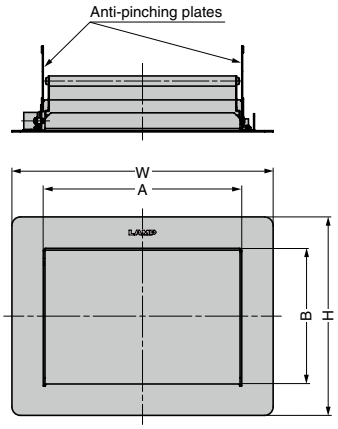




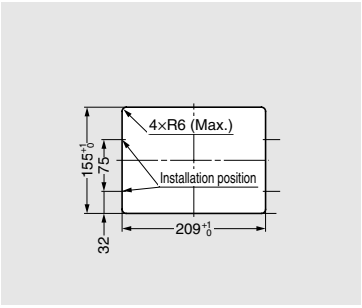
AZ-GD180-HL



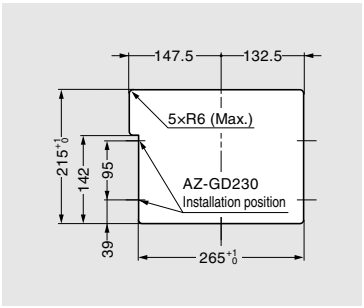
AZ-GD230-HL
AZ-GD310-HL



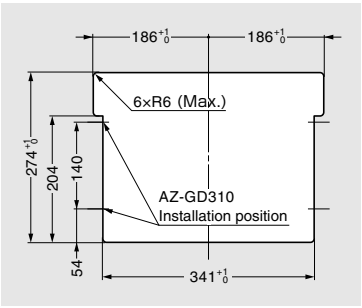
[Cut Out Dimensions]



AZ-GD180-HL



AZ-GD230-HL



AZ-GD310-HL

RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	W	H	C	D	E	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-033-487	AZ-GD180-HL	Stainless Steel (SUS304)	Satin	182	128	218	164	37	182	149.5	75	1042	1	10
G	3D	210-017-089	AZ-GD230-HL			234	160	308	234	49	249	184.7	95	1486	1	10
G	3D	210-022-110	AZ-GD310-HL			310	220	384	294	64	310	244.7	140	2236	1	10

Refer to 1 2 : P.863, 3 : P.864

MULTI-PURPOSE LID (W/DAMPER) AZ-GD231-HL With Lid Back Mount Type

INSTRUCTION SUS



- Installed from inside the waste box for clean appearance.
- With damper to keep lid from slamming shut.
- Integrated anti-pinching plates.
- Corrosion resistant.
- Guide (sold separately) 1 for guiding rubbish into waste box inside also available.

[Specifications]
- Operating temperature: 0˚C~40˚C

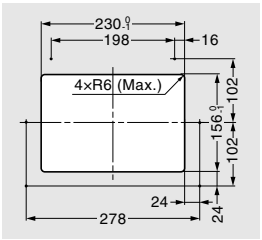
[Remarks]
- Indoor use only.
- The closing speed varies depending on the operating temperature.For product stored below the freezing point, leave it indoor above 0˚C for several hours before use.

[Sold Separately]
- Guide AZ-SLP 1

[Application Example]



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Old Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-027-508	AZ-GD231-HL	AZ-GD231	Stainless Steel (SUS304)	Satin	1486	1	10

Refer to 1 : P.864

※Item name has been revised.

MULTI-PURPOSE LID (W/DAMPER) AZ-GD232-HL With Lid / Inclined Mount Type

INSTRUCTION SUS



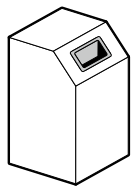
- Able to install the lid up to 45° .
- Inclined mount allows putting into rubbish easily.
- Easy to adjust angle just by changing weight position.
- With damper to keep lid from slamming shut.
- Integrated anti-pinching plates.
- Corrosion resistant.
- Guide (sold separately) 1 for guiding rubbish into waste box inside also available.

[Specifications]
- Operating temperature: 0˚C~40˚C

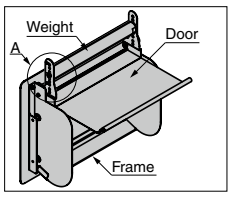
[Remarks]
- Indoor use only.
- The closing speed varies depending on the operating temperature. For product stored below the freezing point, leave it indoor above 0˚C for several hours before use.

[Sold Separately]
- Guide AZ-SLP 1

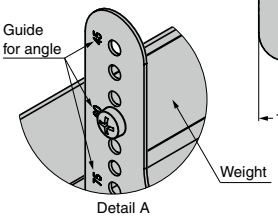
[Installation]

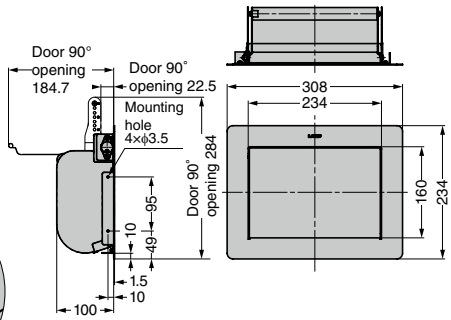


[How to Adjust Angle]

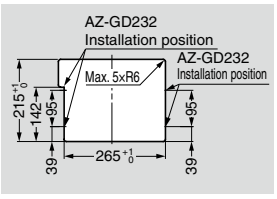








[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-975	AZ-GD232-HL	Stainless Steel (SUS304)	Satin	2200	1	10

Refer to 1 : P.864

GUIDE FOR MULTI-PURPOSE LID AZ-SLP

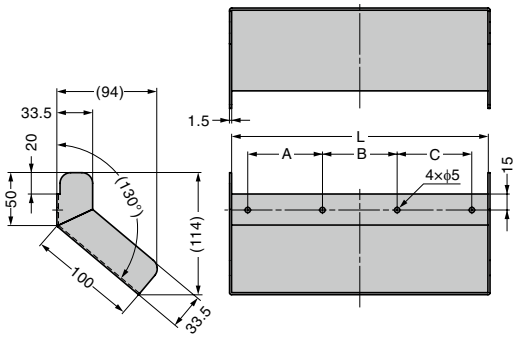
SUS



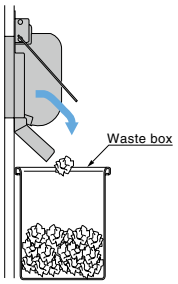
●Use with AZ-GD 1, AZ-GD231-HL 2 and AZ-GD232-HL 3 to guide rubbish into waste box inside.

[Application Example]





[Installation]



RoHS	CAD	Item Code	Item Name	Compatible Items	Material	Finish	L	A	B	C	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-026-554	AZ-SLP230	AZ-GD230, AZ-GD231, AZ-GD232	Stainless Steel (SUS304)	Plain	241	70	70	70	450	20	–
G	3D	210-026-555	AZ-SLP310	AZ-GD310			317	80	80	80	570	20	–

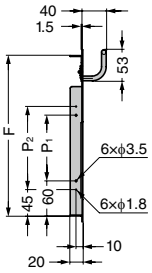
Refer to 1 : P.862, 2 3 : P.863

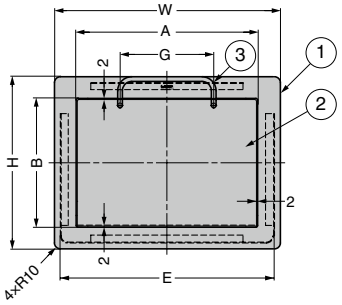
MULTI-PURPOSE LID (W/HANDLE) AZ-HD

INSTRUCTION SUS



●Pushing down the handle to open.
●Corrosion resistant.

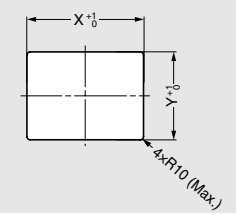






Easy to open/close with handle.

[Cut Out Dimensions]



No.	Part Name	Material	Finish
①	Front Plate	Stainless Steel (SUS304)	Satin
②	Door		
③	Handle		Satin

RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	W	H	E	F	G	P1	P2	X	Y	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	210-180-601	AZ-HD230-HL	Stainless Steel (SUS304)	Satin	234	160	308	234	288	214	120	60	90	289	215	540	1	10
–	3D	210-180-602	AZ-HD310-HL			310	220	384	294	364	274	160	112	142	365	275	2200	5	10

MULTI-PURPOSE LID (DOUBLE DOOR) AZ-DD310-HL

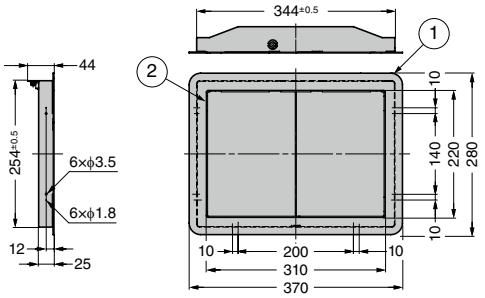
INSTRUCTION SUS



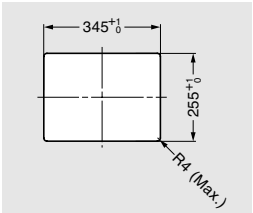


Synchronised doors.

- Synchronised doors allow easy opening.
- Doors open to the left and right, improving operability.
- Corrosion resistant.



[Cut Out Dimensions]



No.	Part Name	Material	Finish
①	Panel	Stainless Steel (SUS304)	Satin
②	Door		

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	210-180-600	AZ-DD310-HL	Stainless Steel (SUS304)	Satin	2000	1	10

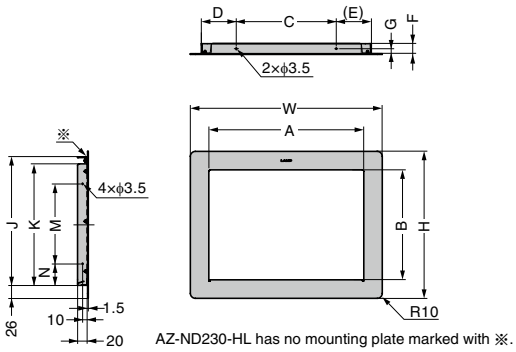
SQUARE COVER FOR REFUSE BOX AZ-ND

INSTRUCTION SUS



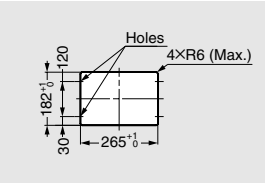
AZ-ND230-HL AZ-ND310-HL

- Corrosion resistant.
- Large type AZ-ND310-HL is newly launched.

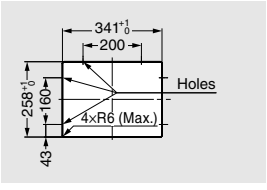


AZ-ND230-HL has no mounting plate marked with ※.

[Cut Out Dimensions]



AZ-ND230-HL



AZ-ND310-HL

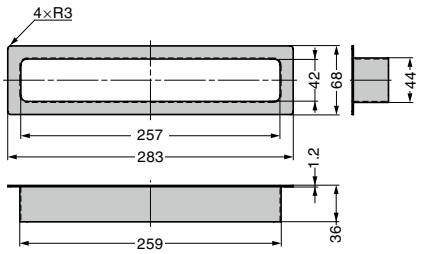
RoHS	CAD	Item Code	Item Name	Material	Finish	A	B	W	H	C	D	E	F	G	J	K	M	N	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-017-986	AZ-ND230-HL	Stainless Steel (SUS304)	Satin	234	160	308	234	–	–	–	–	–	–	170	120	30	720	1	10
G	3D	210-026-553	AZ-ND310-HL			310	220	384	294	200	70	70	20	10	257	243	160	43	1050	1	10

MULTI-PURPOSE GROMMET AN-SH026-HL Slim Type

SUS



- Corrosion resistant.
- Ideal for magazine/newspaper waste box.

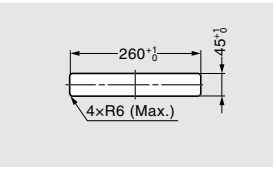




[Installation]



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Old Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-028-437	AN-SH026-HL	AN-SH026	Stainless Steel (SUS304)	Satin	290	1	10

Refer to 1 : P.859, 2 : P.865

※Item name has been revised.

FUNNEL AE-DH

SUS

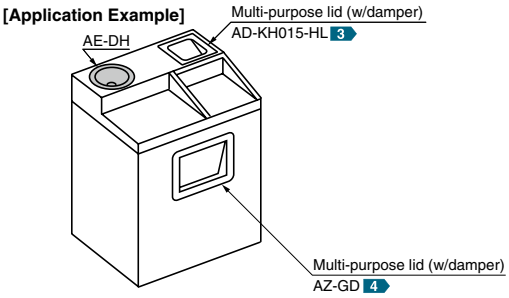


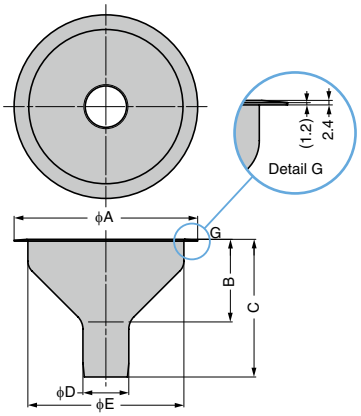
- For throwing away leftovers like drinks.
- Corrosion resistant.
- Small type AE-DH015 is newly launched.
- Hose 1, strainer 2 are sold separately.

[Sold Separately]

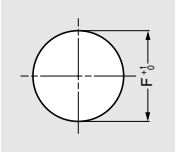
- Hose AE-DH4540-1 1
- Strainer AE-DH020K-45 2

[Application Example]

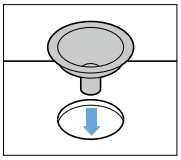




[Cut Out Dimensions]



[Easy Installation]



RoHS	CAD	Item Code	Item Name	A	B	C	D	E	F	Material	Finish	Hose Diameter	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-026-556	AE-DH015-MR	150	55	95	38	120	121	Stainless Steel (SUS304)	Polished	38	270	1	12
G	3D	210-026-557	AE-DH015-HL								Satin			1	12
G	3D	210-022-106	AE-DH020-MR	200	90	150	50	170	171		Polished	50	490	1	12
G	3D	210-023-509	AE-DH020-HL								Satin			1	12

Refer to 1 2 : P.867, 3 : P.860, 4 : P.861

HOSE FOR AE-DH AE-DH4540-1 For AE-DH

INSTRUCTION



- For AE-DH 1.
- Fixed with fastener for preventing water leakage.

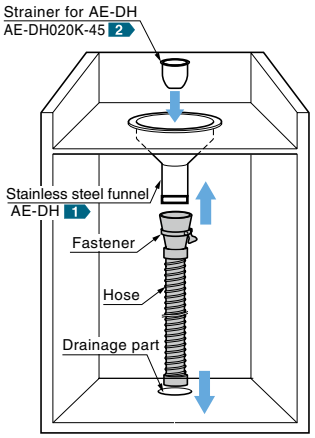
[Specifications]

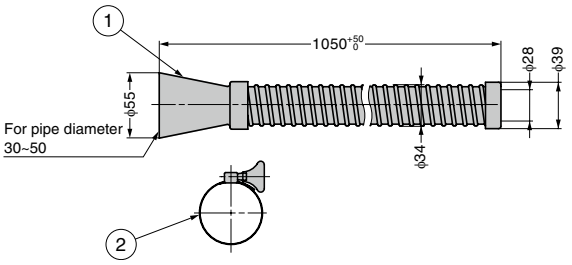
- Operating temperature: 1℃~60℃

[Application Example]



[Application Example]





No.	Part Name	Material	Finish / Colour
①	Hose	PVC	Grey
②	Fastener	Stainless Steel	Plain

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	–	210-026-942	AE-DH4540-1	170	10	50

Refer to 1 : P.866, 2 : P.867

STRAINER FOR AE-DH AE-DH020K-45 For AE-DH020

SUS



- Installed from the top of funnel to prevent solids from flowing into.
- Optional part for AE-DH020 1.

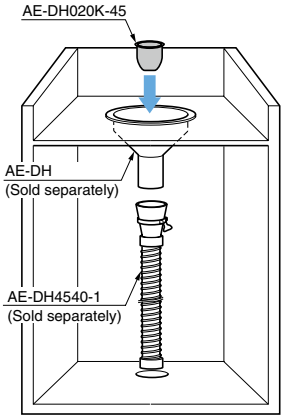
[Remarks]

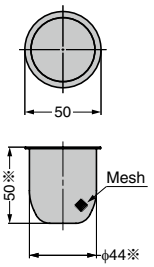
- Sold per 2 pieces.
- For AE-DH020-MR, AE-DH020-HL 1.

[Application Example]



[Installation]



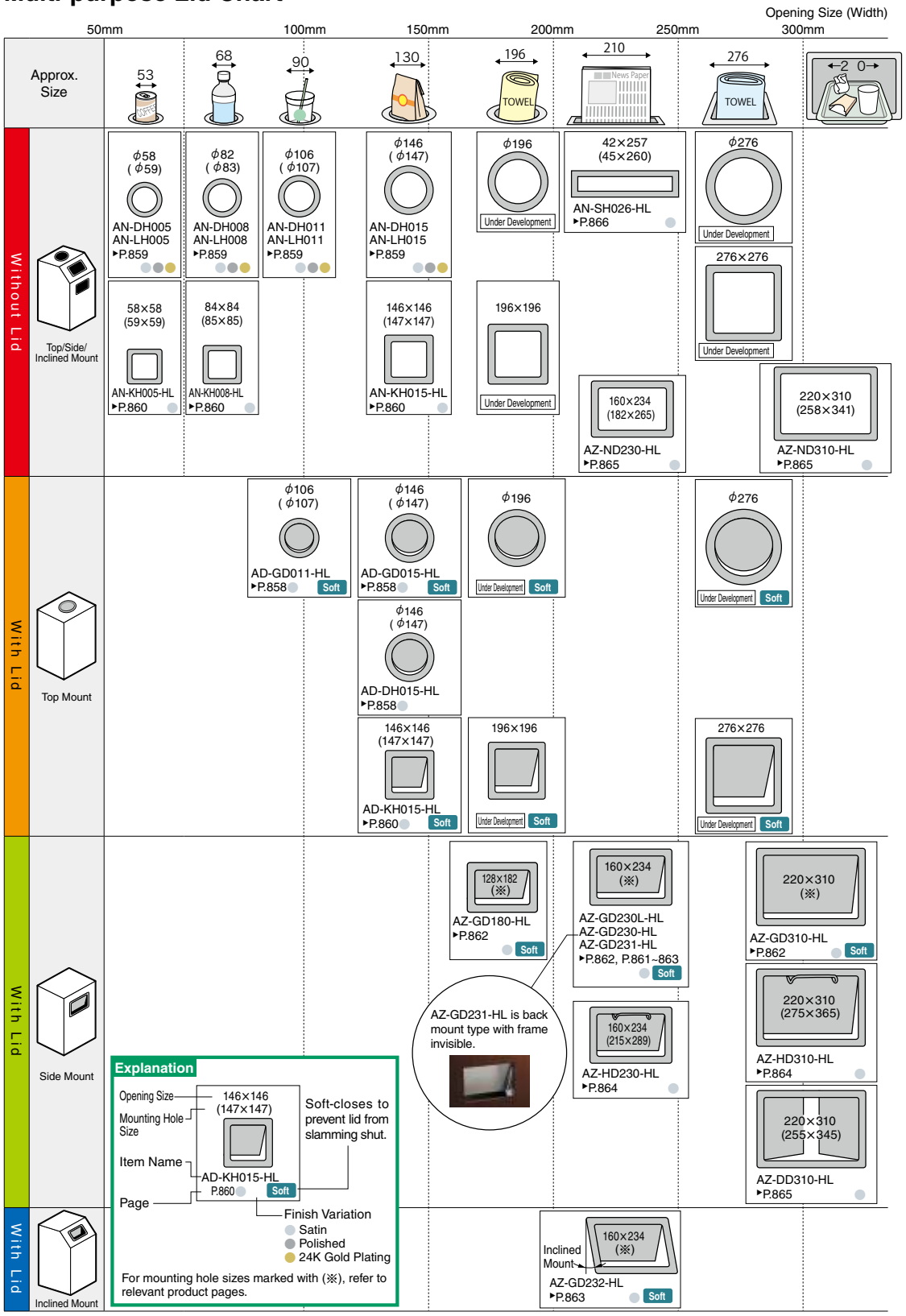


※Approx. dimension of mesh part.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	210-032-187	AE-DH020K-45	Stainless Steel (SUS304)	Barrel Polished	8	10	60

Refer to 1 : P.866

Multi-purpose Lid Chart



Guide (P.864) and funnel (P.866, 867) also available.

VENTILATOR APD-KH Oval Type with Cable Grommet



- Ventilator and cable grommet in one unit.
- 3 sizes (small, medium, large) and 5 colours available. (3 colours for APD-KH260.)

[Remarks]

- For APD-KH170 and APD-KH260, please use glue for installation.
- Max. exhaust area of the lower cover is the value with no cable passing through.
- Please use glue when installing to sheet metal.

[Colour Variation]


Chrome

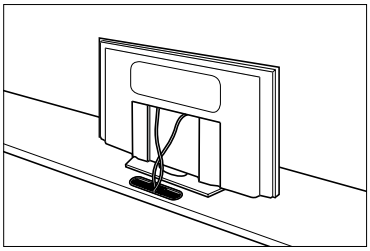

Ivory

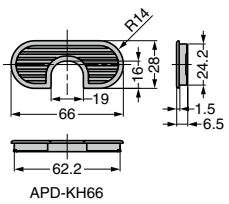

Black


Brown

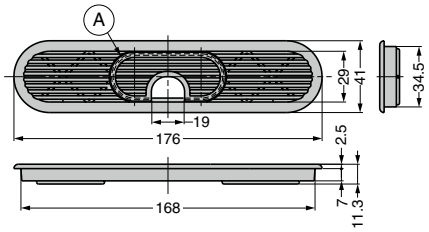

White

[Application Example]



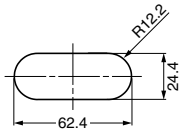


APD-KH66



Ⓐ is removable.
APD-KH170

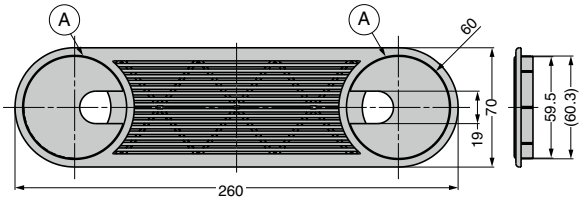
[Hole Size (With Ⓐ Removed)]

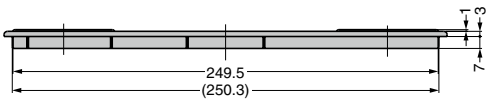


APD-KH170



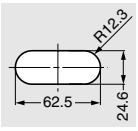
APD-KH260



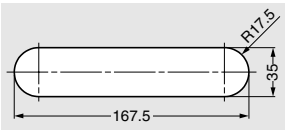


Ⓐ is removable.
APD-KH260

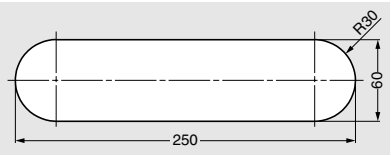
[Cut Out Dimensions]



APD-KH66



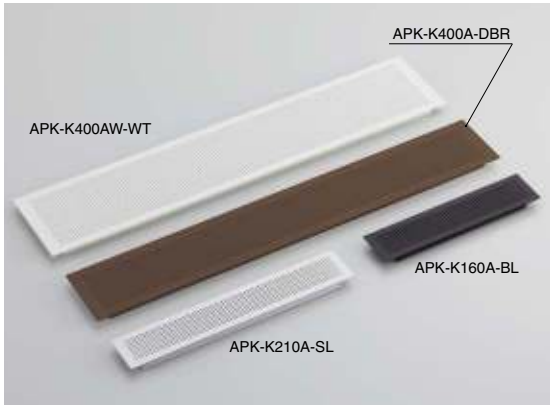
APD-KH170



APD-KH260

RoHS	CAD	Item Code	Item Name	Finish / Colour	Material	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-020-910	APD-KH66-CR	Chrome	ABS	610	3.7	100	500
G	3D	210-020-912	APD-KH66-IV	Ivory			3	100	500
G	3D	210-020-914	APD-KH66-BL	Black				100	500
G	3D	210-020-911	APD-KH66-BR	Brown				100	500
G	3D	210-020-913	APD-KH66-WT	White				100	500
G	3D	210-020-564	APD-KH170-CR	Chrome		1690	24	40	320
G	3D	210-020-566	APD-KH170-IV	Ivory			20	40	320
G	3D	210-020-568	APD-KH170-BL	Black				40	320
G	3D	210-020-565	APD-KH170-BR	Brown				40	320
G	3D	210-020-567	APD-KH170-WT	White				40	320
G	3D	210-020-570	APD-KH260-IV	Ivory		3150	55	10	80
G	3D	210-020-571	APD-KH260-BL	Black				10	80
G	3D	210-020-569	APD-KH260-BR	Brown				10	80

ALUMINIUM VENTILATOR APK-K





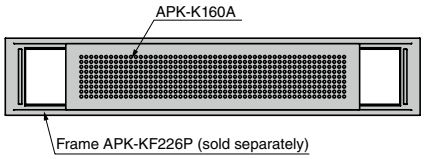
Made of aluminium alloy.

- Smart and simple design.
- Small holes (ϕ1.5 mm) prevents insects from entering.
- APK-K160 and APK-K210: When used with optional frame 1, ventilator can be removed for cleaning.

[Remarks]
- Please use glue for installation.

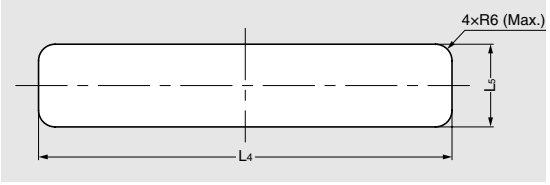
[Sold Separately]
- Frame APK-KF226P 1

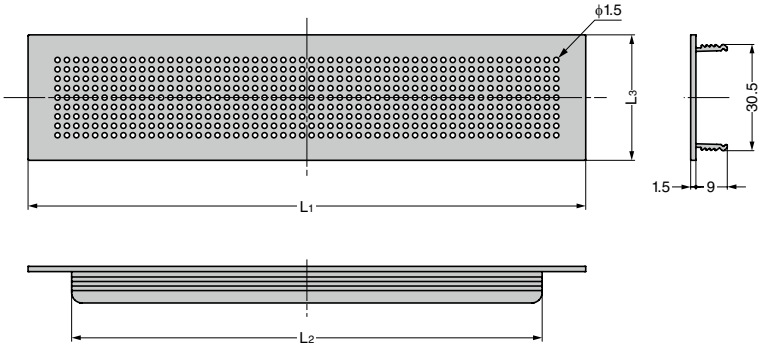
[Application Example]



Can be used as cable grommet by combining APK-K160A with frame APK-KF226P (sold separately).

[Cut Out Dimensions]





RoHS	CAD	Item Code	Item Name	Colour	Material	Max. Exhaust Area mm²	L1	L2	L3	L4	L5	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-545	APK-K160A-SL	Anodised Silver	Aluminium Alloy	859	160	135	36	150	30.5	27	30	180
G	3D	210-032-544	APK-K160A-BL	Black Anodised									30	180
G	3D	210-032-547	APK-K210A-SL	Anodised Silver		1145	212	187		200		37	30	180
G	3D	210-032-546	APK-K210A-BL	Black Anodised									30	180
G	3D	210-034-399	APK-K400A-SL	Anodised Silver		3958	400	375	60	390	50	95	20	80
G	3D	210-034-400	APK-K400A-BL	Black Anodised									20	80
G	3D	210-034-401	APK-K400A-DBR	Dark Brown Anodised									20	80
G	3D	210-034-402	APK-K400A-WT	White Electrodeposition									20	80
G	3D	210-034-403	APK-K400AW-SL	Anodised Silver		5938			80		70	130	20	80
G	3D	210-034-404	APK-K400AW-BL	Black Anodised									20	80
G	3D	210-034-405	APK-K400AW-DBR	Dark Brown Anodised									20	80
G	3D	210-034-406	APK-K400AW-WT	White Electrodeposition									20	80

Refer to 1 : P.872

VENTILATOR APK-K With Cable Grommet



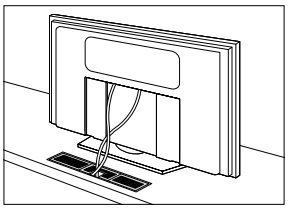
Picture above is a combination example of ventilator/cable grommet and frame.

- Combination of ventilator/cable grommet and frame can be customised.
- Small holes (ϕ1.5mm) prevents insects from entering.
- When used with frame, ventilator and cable grommet can be removed for cleaning.
- Sold in a set or separately (Frame, ventilator and cable grommet).

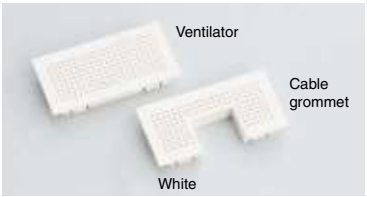
[Remarks]

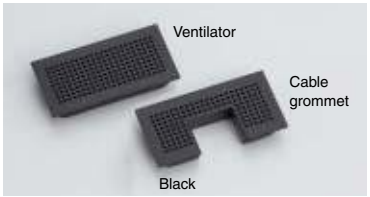
- Please use glue for installation.

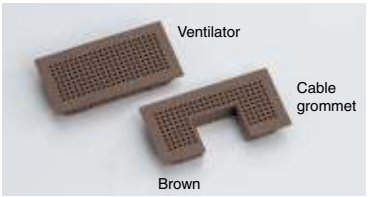
[Application Example]

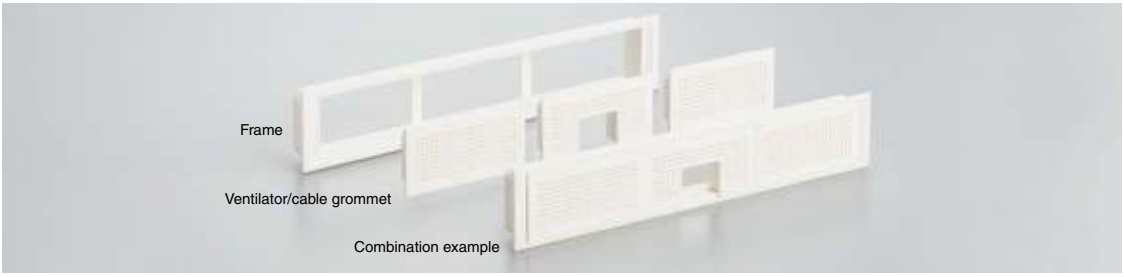


[Colour Variation]



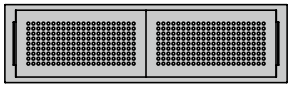




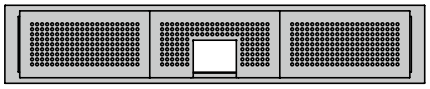


■Set Overview

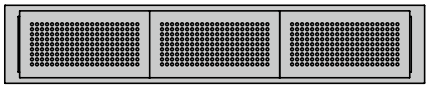
Below shows combinations of frame and ventilator/cable grommet. 3 combination patterns available.



Ⓐ APK-KHA152P



Ⓑ APK-KHW226P



Ⓒ APK-KHA226P

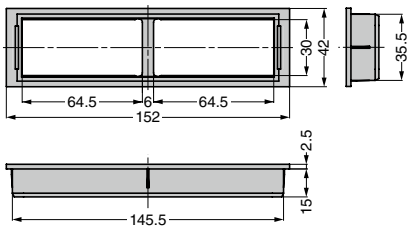
[Ventilator/Cable Grommet + Frame Set]

RoHS	CAD	Item Code	Item Name	No.	Colour	Material	Max. Exhaust Area mm²	Weight (g)	Combination	Box (pcs)	Carton (pcs)
G	3D	210-033-477	APK-KHA152P-WT	Ⓐ	White	ABS	700	39	Cable Grommet Frame×1 Ventilator×2	20	200
G	3D	210-033-478	APK-KHA152P-BL		Black					20	200
G	3D	210-033-479	APK-KHA152P-BR		Brown					20	200
G	3D	210-032-578	APK-KHW226P-WT	Ⓑ	White		1343	46	Cable Grommet Frame×1 Ventilator with Cable Grommet×1 Ventilator×2	20	200
G	3D	210-032-579	APK-KHW226P-BL		Black					20	200
G	3D	210-032-580	APK-KHW226P-BR		Brown					20	200
G	3D	210-032-575	APK-KHA226P-WT	Ⓒ	White		1050		Cable Grommet Frame×1 Ventilator×3	20	200
G	3D	210-032-576	APK-KHA226P-BL		Black					20	200
G	3D	210-032-577	APK-KHA226P-BR		Brown					20	200

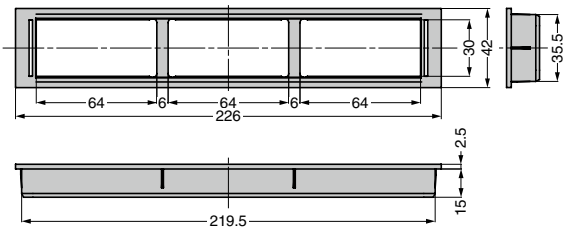
■Individual Parts

Frame and ventilator/cable grommet can be select freely for various applications.

[Frame]

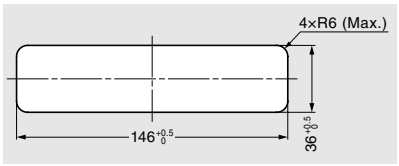


APK-KF152P

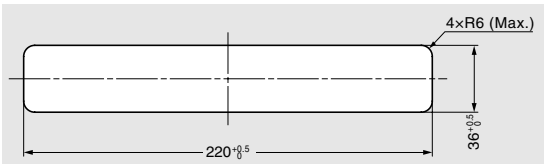


APK-KF226P

[Cut Out Dimensions]



APK-KF152P

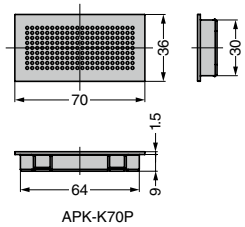


APK-KF226P

[Frame]

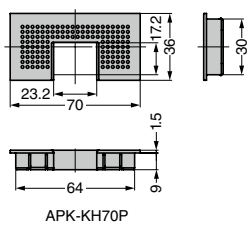
RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-807	APK-KF152P-WT	White	ABS	18	25	250
G	3D	210-032-808	APK-KF152P-BL	Black			25	250
G	3D	210-032-809	APK-KF152P-BR	Brown			25	250
G	3D	210-032-548	APK-KF226P-WT	White		25	25	250
G	3D	210-032-549	APK-KF226P-BL	Black			25	250
G	3D	210-032-550	APK-KF226P-BR	Brown			25	250

[Ventilator]



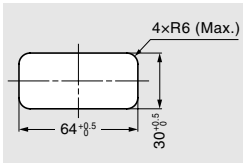
APK-K70P

[Cable Grommet]



APK-KH70P

[Cut Out Dimensions]



APK-K70P, APK-KH70P

[Ventilator] Can be used separately.

RoHS	CAD	Item Code	Item Name	Colour	Material	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-538	APK-K70P-WT	White	ABS	350	7	50	500
G	3D	210-032-539	APK-K70P-BL	Black				50	500
G	3D	210-032-540	APK-K70P-BR	Brown				50	500

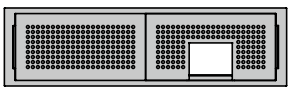
[Cable Grommet] Can be used separately.

RoHS	CAD	Item Code	Item Name	Colour	Material	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-032-541	APK-KH70P-WT	White	ABS	643	7	50	500
G	3D	210-032-542	APK-KH70P-BL	Black				50	500
G	3D	210-032-543	APK-KH70P-BR	Brown				50	500

[Combination Example] Individual parts above can be combined as follows.



Frame APK-KF226P : 1 pc
Ventilator APK-K70P : 2 pcs

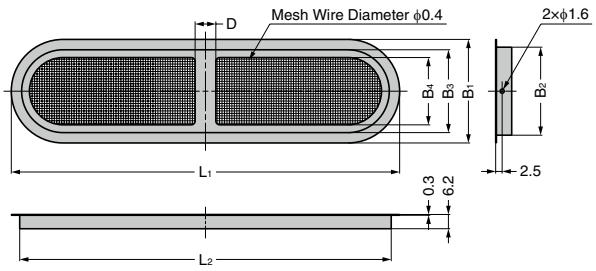


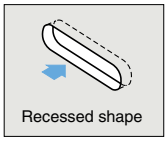
Frame APK-KF152P : 1 pc
Ventilator APK-K70P : 1 pc, Cable grommet APK-KH70P : 1 pc

STAINLESS STEEL VENTILATOR SAD Mesh Type



[Parts Included]
- Round head nail 1.2×10 (SUS)

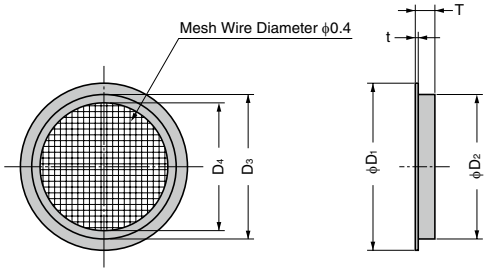


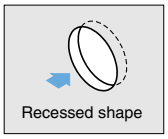


RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	B1	B2	B3	B4	D	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-030-169	SA-D150	Stainless Steel (SUS304)	Satin	150	143.5	40	34	32	26	8	1880	18.5	30	600
G	3D	210-030-170	SA-D200			200.5	194	50	44	42	35	10	3800	30	30	300

STAINLESS STEEL VENTILATOR SAM Mesh Type







RoHS	CAD	Item Code	Item Name	Material	Finish	D1	D2	D3	D4	T	t	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-030-164	SA-M37	Stainless Steel (SUS304)	Satin	36	31.5	30	25	5.2	0.3	290	4.5	70	1400
G	3D	210-030-165	SA-M45			46	41.5	40	35			570	6	60	1200
G	3D	210-030-166	SA-M60			60	53.5	52	46	6.5		1000	9.5	50	1000
G	3D	210-030-167	SA-M85			85	77.8	76.5	68	7.0		2150	16.5	30	600
G	3D	210-030-168	SA-M120			120	110.5	108	99	7.2	0.5	4480	46.5	20	200

STAINLESS STEEL VENTILATOR ASM

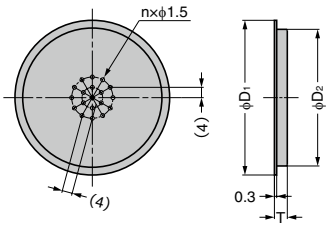
SUS

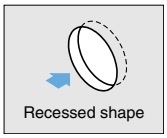


●Small holes (ϕ1.5mm) prevents insects from entering.

[Remarks]

●Finish in the table below is only for recessed part surface.





RoHS	CAD	Item Code	Item Name	Material	Finish	D1	D2	T	n	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-030-010	ASM-37	Stainless Steel (SUS304)	Satin	36	31	4.5	37	65	3	100	3600
G	3D	210-030-011	ASM-45			46	41		59	104	5	100	3600
G	3D	210-030-012	ASM-60			60	53	5	127	224	8	100	2400
G	3D	210-030-013	ASM-85			85	77		271	478	13.5	50	1000

STAINLESS STEEL VENTILATOR AST Nailing Installation

SUS



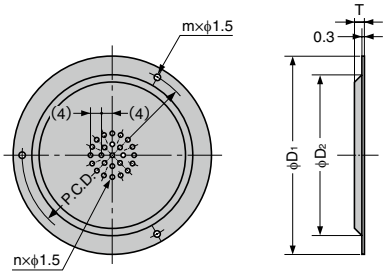
●Small holes (ϕ1.5mm) prevents insects from entering.

[Remarks]

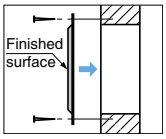
●In case of surface mount, use the convex surfce as the front.

[Parts Included]

●Round head nail 1.2×10 (SUS)



[Installation]

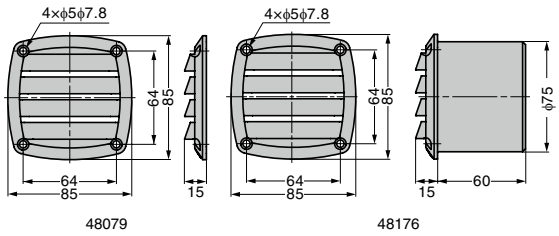


RoHS	CAD	Item Code	Item Name	Material	Finish	D1	D2	T	P.C.D.	m	n	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-030-044	AST-45	Stainless Steel (SUS304)	Satin	45	34	3	ϕ40	3	37	65	4	100	3600
G	3D	210-030-045	AST-55			55	44		ϕ50		59	104	5	100	3600
G	3D	210-030-046	AST-70			70	55		ϕ64		127	224	9	100	2400
G	3D	210-030-047	AST-100			100	81	4	ϕ91	4	271	478	19	50	500

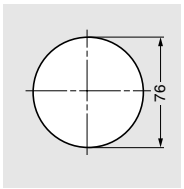
VENTILATOR 48079, 48176



- Standard type (surface mount) and flange type (recessed mount) are available.
- Suitable for various applications such as marine, etc.



[Cut Out Dimensions]
(48176)

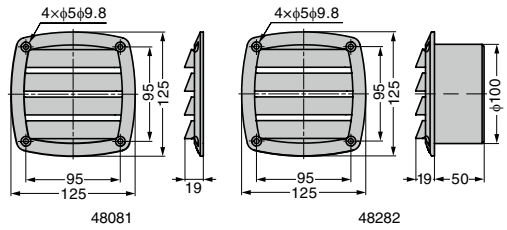


RoHS	CAD	Item Code	Item Name	Type	Material	Colour	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
–	–	210-028-872	480794	Standard (Surface Mount)	PA	White	1276	30	500	–
–	–	210-028-871	480792			Black			500	–
–	–	210-028-874	481764	Flange (Recessed Mount)		White		85	100	–
–	–	210-028-873	481762			Black			100	–

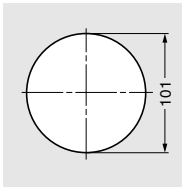
VENTILATOR 48081, 48282



- Standard type (surface mount) and flange type (recessed mount) are available.
- Suitable for various applications such as marine, etc.



[Cut Out Dimensions]
(48282)

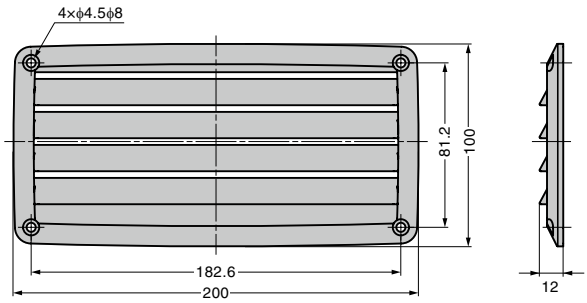


RoHS	CAD	Item Code	Item Name	Type	Material	Colour	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
–	–	210-028-868	480814	Standard (Surface Mount)	PA	White	2136	68	200	–
–	–	210-028-867	480812			Black			200	–
–	–	210-028-870	482824	Flange (Recessed Mount)		White		128	100	–
–	–	210-028-869	482822			Black			100	–

VENTILATOR 48080



- Surface mount type.
- Suitable for various applications such as marine, etc.



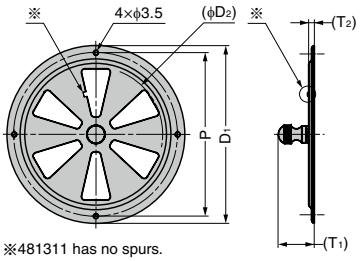
RoHS	CAD	Item Code	Item Name	Material	Colour	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
–	–	210-028-876	480804	PA	White	3700	86	200	–
–	–	210-028-875	480802		Black			200	–

STAINLESS STEEL ADJUSTABLE VENTILATOR 4813

SUS

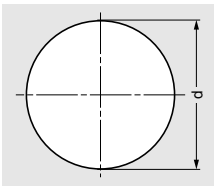


- Air flow is adjustable by turning the knob.
- The knob is tight for anti-vibration.
- Suitable for various applications such as marine and housing, etc.



※481311 has no spurs.

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	D1	D2	P	T1	T2	d	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
–	–	210-028-882	481311	Stainless Steel (SUS304)	Satin	102	77	92	24.4	2.7	77~80	1835	61	300	–
–	–	210-028-881	481312			127	95	117	25.6	3.9	95~100	2860	86	200	–

STAINLESS STEEL VENTILATOR 4814

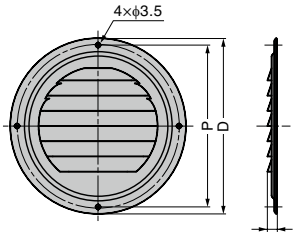
SUS



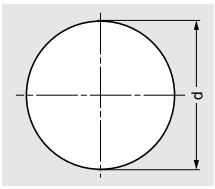
- Ventilator cover (sold separately) for preventing influx of rainwater.
- Suitable for various applications such as marine and housing, etc.

[Optional Parts]

- Stainless steel ventilator cover 4818 1



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	D	P	T	d	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
–	–	210-028-880	481440	Stainless Steel (SUS304)	Polished	102	92	5	77~80	750	38	500	–
–	–	210-028-879	481430			127	117	7	95~100	1250	59	300	–

Refer to 1 : P.876

STAINLESS STEEL VENTILATOR COVER 4818 For 4814

SUS

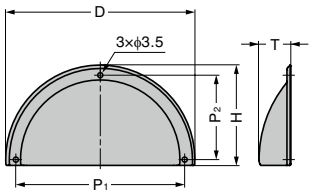


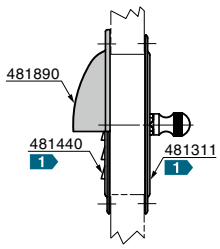


- For 4814 ventilator 1, prevents influx of rainwater.
- Suitable for various applications such as marine and housing, etc.

[Application Example]

For exterior use: Ventilator 4814 1 with cover 4818,
For interior use: Ventilator 4813 1.





RoHS	CAD	Item Code	Item Name	Use With	Material	Finish	D	H	P1	P2	T	Weight (g)	Box (pcs)	Carton (pcs)
–	–	210-028-884	481890	481440	Stainless Steel (SUS304)	Polished	107	57	92	46	20	40	300	–
–	–	210-028-883	481850	481430			131	69	117	58.5	22	60	300	–

Refer to 1 : P.876

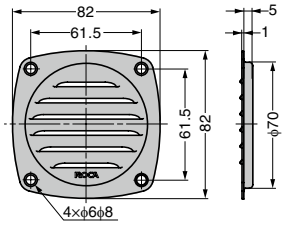
STAINLESS STEEL VENTILATOR 480970

SUS316

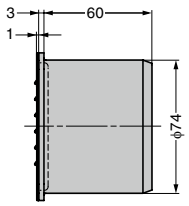




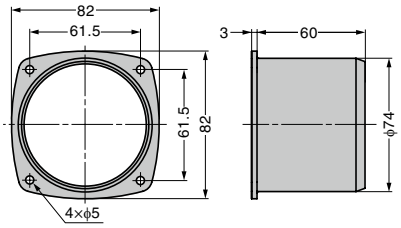
- Can be used with adaptor (sold separately).
- Suitable for various applications such as marine and housing, etc.



Ventilator body

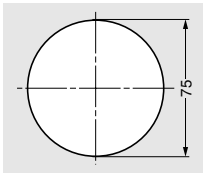


With adaptor (sold separately)



Adaptor (sold separately)

[Cut Out Dimensions]



[Ventilator Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
–	–	210-028-877	480970	Stainless Steel (SUS316)	Polished	1600	49	300	–

[Adaptor] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
–	–	210-028-878	480966	PA	White	51	100	–

VENTILATOR 4872 With Rainproof Function



When ventilating



Push the knob (※4 in the figure below).

When un-ventilating



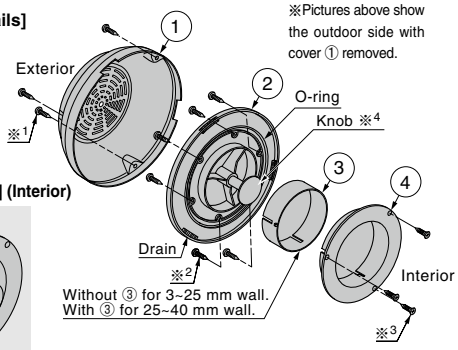
Pull the knob (※4 in the figure below).
※Pictures above show the outdoor side with cover ① removed.

- Can be used for the exterior due to the rainproof function.
- Can be used both for wooden wall and sheet metal wall. Please arrange the bolts and nuts when using with sheet metal.
- Suitable for specially-equipped vehicles like campers, etc.

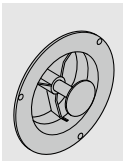
[Parts Included]

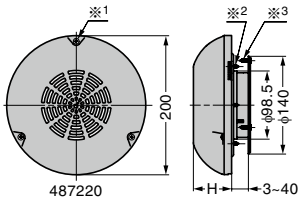
- Pan head tapping screw 4×12 (3 pcs) / for Cover ① on Base ② (※1 in the figure)
- Pan head tapping screw 4×18 (6 pcs) / for Base ② on the wall (※2 in the figure)
- Countersunk head tapping screw 4×16 (3 pcs) / for Flange ④ on the wall (※3 in the figure)

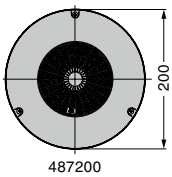
[Parts Details]



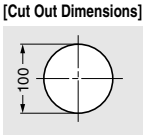
[Installation] (Interior)

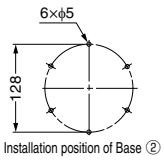






[Cut Out Dimensions]





RoHS	CAD	Item Code	Item Name	Cover Material	Cover Finish/ Colour	H	Wall Thickness	≒Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
–	–	210-028-886	487220	Stainless Steel (SUS304)	Polished	55	3~40	3055	394	1	40
–	–	210-028-885	487200	PP	Off-white	62		5032	328	1	40

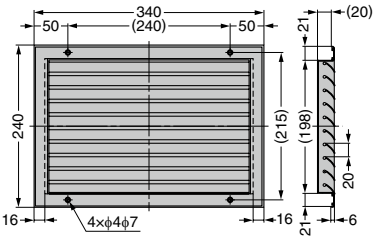
No.	Part Name	Material	Colour
①	Cover	See the left table	See the left table
②	Base	PP	Off-white
③	Adaptor		
④	Flange		

ALUMINIUM VENTILATOR G58-3020

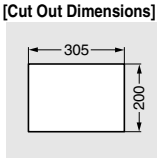


[Remarks]
- Dimensions may vary. Please check with actual item. Also, edge treatment may vary with each product.

[Parts Included]
- Raised countersunk head tapping screw 3.5×32
- Plug



[Cut Out Dimensions]



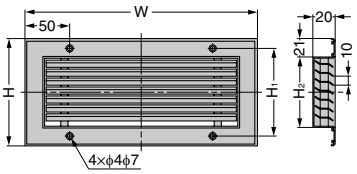
RoHS	CAD	Item Code	Item Name	Material	Finish	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-730	G58-3020	Aluminium Alloy	Anodised Silver	55000	578	7	–

ALUMINIUM VENTILATOR G57

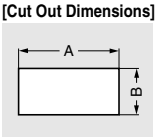


[Remarks]
- Dimensions may vary. Please check with actual item. Also, edge treatment may vary with each product.

[Parts Included]
- Raised countersunk head tapping screw 3.5×32
- Plug



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	W	H	H_1	H_2	A	B	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-731	G57-1707AA	Aluminium	Anodised	210	106	85	68	173	73	8300	208	6	–
G	3D	210-031-732	G57-2208AA	Alloy	Silver	260	116	95	78	223	83	12000	250	4	–

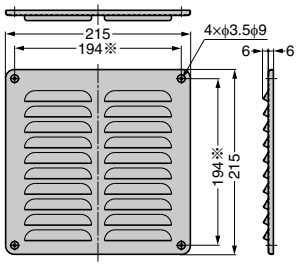
STAINLESS STEEL VENTILATOR 1-2222

SUS316



- Screw fixing type.

[Remarks]
- Mounting hole pitch※ may vary.Please check with actual item.
- Noted that the direction of satin finish is not uniform.
- Do not place your fingers in the exhaust part.Or the edge of opening may cause injuries.



RoHS	CAD	Item Code	Item Name	Material	Finish	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-172-014	1-2222	Stainless Steel (SUS316)	Satin	7500	308	10	–

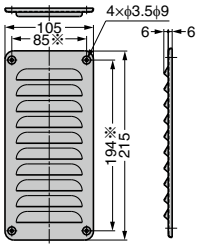
STAINLESS STEEL VENTILATOR 1-1122

SUS316



●Screw fixing type.

[Remarks]
●Mounting hole pitch※ may vary. Please check with actual item.
●Do not place your fingers in the exhaust part. Or the edge of opening may cause injuries.
●Noted that the direction of satin finish is not uniform.



RoHS	CAD	Item Code	Item Name	Material	Finish	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-172-011	1-1122	Stainless Steel (SUS316)	Satin	3700	156	20	–

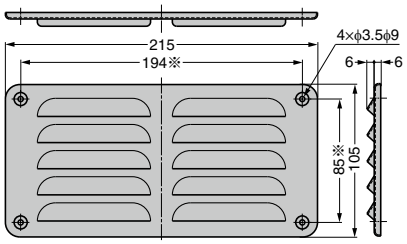
STAINLESS STEEL VENTILATOR 1-2211

SUS316



●Screw fixing type.

[Remarks]
●Mounting hole pitch※ may vary. Please check with actual item.
●Noted that the direction of satin finish is not uniform.
●Do not place your fingers in the exhaust part. Or the edge of opening may cause injuries.



RoHS	CAD	Item Code	Item Name	Material	Finish	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-172-013	1-2211	Stainless Steel (SUS316)	Satin	3700	154	20	–

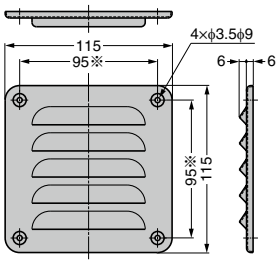
STAINLESS STEEL VENTILATOR 1-1212

SUS316



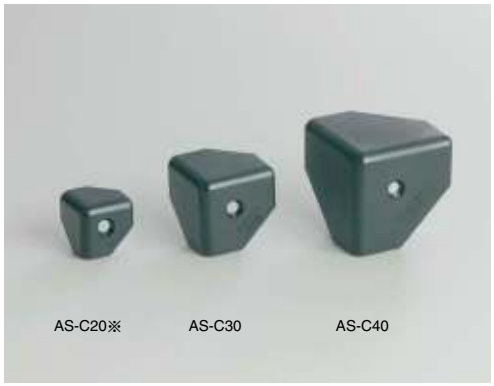
●Screw fixing type.

[Remarks]
●Mounting hole pitch※ may vary. Please check with actual item.
●Noted that the direction of satin finish is not uniform.
●Do not place your fingers in the exhaust part. Or the edge of opening may cause injuries.



RoHS	CAD	Item Code	Item Name	Material	Finish	Max. Exhaust Area mm²	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-172-012	1-1212	Stainless Steel (SUS316)	Satin	1900	89	20	–

CORNER CAP AS-C For Single-groove

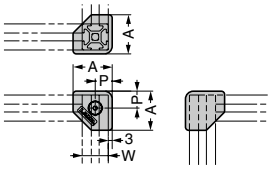


- Rounded plastic corner cap prevents from injurying or scratching and beautifies the corner of aluminium frame.
- Easy to install with only one position to be tightened with screw.
- Glue or double-sided tape can also be used for fixation.

[Remarks]
- Do not use on corners of a door.

[Application Example]



[Corner Cap AS-C]

RoHS	CAD	Item Code	Item Name	Aluminium Frame	A	P	W	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-040-680	AS-C20	20×20 Groove Width 6 mm	30	13	20	PA	Black	6	200	1600
G	3D	210-040-681	AS-C30	30×30 Groove Width 8 mm	43	18	30			14	50	400
G	3D	210-040-682	AS-C40	40×40 Groove Width 8 mm, 40×40 Groove Width 10 mm	58	23	40			29	25	200

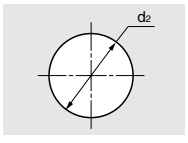
MULTI-PURPOSE CAP KD

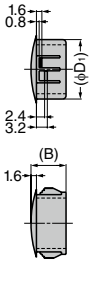


- One-touch installation.
- Can be used on sheet metal and wooden board, ideal for cable grommet.
- KD-380-350B can also be used for holes of concealed hinge.

[Specifications]
- Flam retardant material (UL94V-2).

[Cut Out Dimensions]





RoHS	CAD	Item Code	Item Name	Material	Colour	A	B	D1	d2	Board Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-049-322	KD-80-64B	PA	Black	8	8	6.1	6.4	1.6	0.2	100	–
G	3D	120-049-323	KD-95-80B			9.5		7.7	8		0.2	100	–
G	3D	120-049-324	KD-120-95B			12	10.3	9.3	9.5	0.8~3.2	1.0	100	–
G	3D	120-049-325	KD-135-110B			13.5		10.9	11		0.5	100	–
G	3D	120-049-326	KD-146-127B			14.6		12.5	12.7		0.5	100	–
G	3D	120-049-327	KD-167-143B			16.7		14.1	14.3		0.8	100	–
G	3D	120-049-328	KD-182-159B			18.2		15.8	15.9		8.8	100	–
G	3D	120-049-329	KD-200-175B			20		17.3	17.5		1.1	100	–
G	3D	120-049-330	KD-232-190B			23.2		18.9	19		1.0	100	–
G	3D	120-049-331	KD-226-206B			22.6		20.4	20.6		1.5	100	–
G	3D	120-049-332	KD-258-222B			25.8	11.5	22	22.2		2.0	100	–
G	3D	120-049-333	KD-305-255B			30.5		25.3	25.5		2.5	100	–
G	3D	120-049-334	KD-310-280B			31		27.6	28		2.5	100	–
G	3D	120-049-335	KD-333-301B			33.3		30	30.1		2.7	100	–
G	3D	120-049-336	KD-349-320B			34.9		31.8	32		3.4	100	–
G	3D	120-049-337	KD-380-350B			38		34.9	35		3.7	100	–
G	3D	120-049-338	KD-427-380B			42.7		37.9	38		5.0	100	–
G	3D	120-049-339	KD-484-450B			48.4		44.6	45		6.0	100	–
G	3D	120-499-340	KD-550-510B			55		50.6	51		7.0	100	–

MULTI-PURPOSE CAP KD-771, KD-772, KD-773W

[KD-771-6] (Mounting hole: ϕ5)



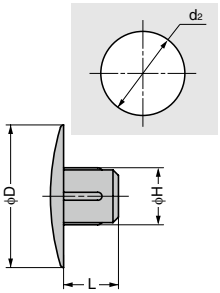
[KD-771-65] (Mounting hole: ϕ8)



[KD-772-65] (Mounting hole: ϕ10)



[Cut Out Dimensions]



[Remarks]

●Please check with actual item for fitting with the mounting hole.

RoHS	CAD	Item Code	Item Name	Type	Material	Colour	H	D	L	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-050	KD-771-6W	A	PP	White	5.2	13	5	5	0.13	2500	25000
G	3D	120-041-054	KD-771-6I	B		Ivory						2500	25000
G	3D	120-049-037	KD-771-6SGR	I		Grey						2500	25000

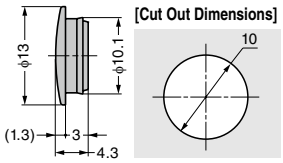
RoHS	CAD	Item Code	Item Name	Type	Material	Colour	H	D	L	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-060	KD-771-65W	A	PP	White	8.1	12	6.5	8	0.19	2000	20000
G	3D	120-041-065	KD-771-65I	B		Ivory						2000	20000
G	3D	120-041-066	KD-771-65GR	C		Grey						2000	20000
G	3D	120-041-063	KD-771-65RBR	E		Camel						2000	20000
G	3D	120-041-062	KD-771-65DBR	F		Dark Brown						2000	20000
G	3D	120-041-061	KD-771-65BR	G		Brown						2000	20000
G	3D	120-041-064	KD-771-65B	H		Black						2000	20000

RoHS	CAD	Item Code	Item Name	Type	Material	Colour	H	D	L	d2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-070	KD-772-65W	A	PP	White	10.3	13	7	10	0.29	1500	15000
G	3D	120-041-075	KD-772-65I	B		Ivory						1500	15000
G	3D	120-049-216	KD-772-65GR	C		Grey						1500	15000
G	3D	120-049-257	KD-772-65MN	D		Maple						1500	15000
G	3D	120-041-073	KD-772-65RBR	E		Camel						1500	15000
G	3D	120-041-072	KD-772-65DBR	F		Dark Brown						1500	15000
G	3D	120-041-071	KD-772-65BR	G		Brown						1500	15000
G	3D	120-041-074	KD-772-65B	H		Black						1500	15000

[KD-772-3] (Mounting hole: ϕ10)



[Cut Out Dimensions]

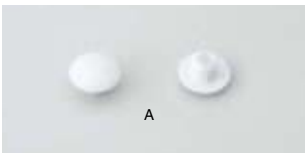


[Remarks]

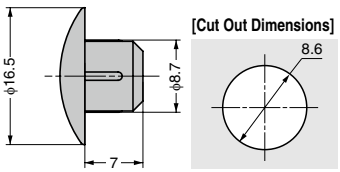
●Please check with actual item for fitting with the mounting hole.

RoHS	CAD	Item Code	Item Name	Type	Material	Colour	Hole Dia.	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-080	KD-772-3W	A	PP	White	10	0.22	2000	20000
G	3D	120-041-083	KD-772-3I	B		Ivory			2000	20000
G	3D	120-041-081	KD-772-3BR	G		Brown			2000	20000
G	3D	120-041-084	KD-772-3B	H		Black			2000	20000

[KD-773W] (Mounting hole: ϕ8.6)



[Cut Out Dimensions]



[Remarks]

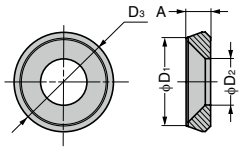
●Please check with actual item for fitting with the mounting hole.

RoHS	CAD	Item Code	Item Name	Type	Material	Colour	Hole Dia.	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-041-003	KD-773W	A	PE	White	8.6	0.5	1000	10000

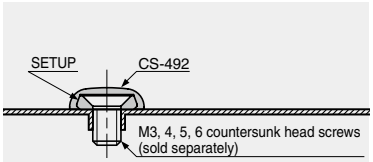
STAINLESS STEEL COUNTERSUNK WASHER SETUP For M3, M4, M5, M6



- For surface mount of M3, M4, M5 and M6 countersunk head screw.
- Conceals screw head when used with cap CS-492.
- Washers for M3, M5 and M6 are newly launched.



[Installation]



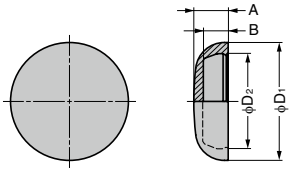
RoHS	CAD	Item Code	Item Name	Old Item Name	Type	Material	Finish	A	D1	D2	D3	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-028-701	SETUP-SUS-M3	–	M3	Stainless Steel (SUS303)	Plain	1.9	6.5	4	9	0.60	1000	10000
G	3D	120-049-172	SETUP-M4	SETUP	M4	Brass			8	5	13	1.5	2000	8000
G	3D	120-040-504	SETUP-SUS-M4	SETUP-SUS		Stainless Steel (SUS303)							1000	10000
G	3D	120-028-702	SETUP-SUS-M5	–	M5			3	10.6	6	14	2.02	500	5000
G	3D	120-028-703	SETUP-SUS-M6		M6			3.7	12.8	7	15	2.66	500	5000

※Item name has been revised.

CAP FOR SETUP CS-492 For M3, M4, M5, M6



- Conceals screw head when used with countersunk washer SETUP for M3, M4, M5 and M6.
- Caps for M3, M5 and M6 are newly launched.



RoHS	CAD	Item Code	Item Name	Old Item Name	Type	Material	Colour	A	B	D1	D2	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-028-704	CS492-M3-IV	–	M3	PE	Ivory	3.1	2.1	12.5	9	0.16	2000	20000
G	3D	120-028-705	CS492-M3-WT				White						2000	20000
G	3D	120-028-706	CS492-M3-LGR				Light Grey						2000	20000
G	3D	120-028-707	CS492-M3-DGR				Dark Grey						2000	20000
G	3D	120-041-032	CS-492-M4-IV	CS-492I	M4		Ivory	3.7	2.4	16.5	12.4	0.23	2000	20000
G	3D	120-041-033	CS-492-M4-WT	CS-492W			White						2000	20000
G	3D	120-041-034	CS-492-M4-BR	CS-492BR			Brown						2000	20000
G	3D	120-041-035	CS-492-M4-BL	CS-492B			Black						2000	20000
G	3D	120-049-039	CS-492-M4-SGR	CS-492SG			Grey						2000	20000
G	3D	120-028-924	CS-492-M4-LGR	CS-492-LGR			Light Grey						2000	20000
G	3D	120-028-925	CS-492-M4-DGR	CS-492-DGR			Dark Grey						2000	20000
G	3D	120-028-708	CS492-M5-IV	–	M5		Ivory	4.4	3.2	17.5	14	0.35	1000	10000
G	3D	120-028-709	CS492-M5-WT				White						1000	10000
G	3D	120-028-710	CS492-M5-LGR				Light Grey						1000	10000
G	3D	120-028-711	CS492-M5-DGR				Dark Grey						1000	10000
G	3D	120-028-712	CS492-M6-IV		M6		Ivory	5.4	3.9	18.5	15	0.47	1000	10000
G	3D	120-028-713	CS492-M6-WT				White						1000	10000
G	3D	120-028-714	CS492-M6-LGR				Light Grey						1000	10000
G	3D	120-028-715	CS492-M6-DGR				Dark Grey						1000	10000

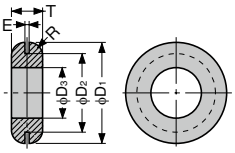
※Item name has been revised.

GROMMET BW



Material	Hardness	Colour
EPDM	50° ±5°	Black

●Flam retardant material (UL94V-0) available by made to order.



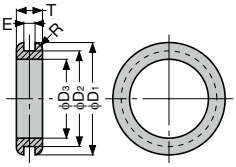
RoHS	CAD	Item Code	Item Name	D1	D2	D3	E	T	R	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	210-040-130	BW-188	18	12	6	1	7	3	2.5	200	–
G'	3D	210-040-131	BW-189				2	8			200	–
G'	3D	210-040-132	BW-208	20	14	8	1	7			200	–
G'	3D	210-040-133	BW-209				2	8			200	–
G'	3D	210-040-134	BW-228	22	16	10	1			3.5	200	–
G'	3D	210-040-135	BW-229				2	9			200	–
G'	3D	210-040-136	BW-2610	26	19	12	1	10	4	5	200	–
G'	3D	210-040-137	BW-2611				2	11		6	200	–
G'	3D	210-040-138	BW-2910	29	22	14	1	10			200	–
G'	3D	210-040-139	BW-2911				2	11		7	200	–
G'	3D	210-040-140	BW-3210	32	25	16	1	10		8	200	–
G'	3D	210-040-141	BW-3211				2	11		8.5	200	–
G'	3D	210-040-142	BW-3512	35	28	19	1	12	5	9.5	200	–
G'	3D	210-040-143	BW-3513				2	13		10	200	–
G'	3D	210-040-144	BW-4012	40	32	22	1	12		15	200	–
G'	3D	210-040-145	BW-4013				2	13			200	–
G'	3D	210-040-146	BW-4414	44	36	25	1	14	6	20	200	–
G'	3D	210-040-147	BW-4415				2	15			200	–
G'	3D	210-040-148	BW-4814	48	40	28	1	14		25	200	–
G'	3D	210-040-149	BW-4815				2	15			200	–
G'	3D	210-040-150	BW-5218	52	44	32	1	18	8	30	200	–
G'	3D	210-040-151	BW-5219				2	19			200	–
G'	3D	210-040-152	BW-5618	56	48	36	1	18		35	200	–
G'	3D	210-040-153	BW-5619				2	19			200	–

GROMMET NG



Material	Hardness	Colour
EPDM	50° ±5°	Black

●Flam retardant material (UL94V-0) available by made to order.



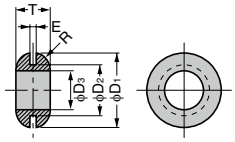
RoHS	CAD	Item Code	Item Name	D1	D2	D3	E	T	R	Weight (g)	Box (pcs)	Carton (pcs)
G'	3D	210-040-111	NG-937	9	6	3.5	1.2	3.7	0.6	0.5	200	–
G'	3D	210-040-112	NG-1145	11	8	5	1.5	4.5			200	–
G'	3D	210-040-113	NG-1160				3	6		0.7	200	–
G'	3D	210-040-114	NG-1345	13	10	7	1.5	4.5		0.5	200	–
G'	3D	210-040-115	NG-1360				3	6		1	200	–
G'	3D	210-040-116	NG-1545	15	12	9	1.5	4.5			200	–
G'	3D	210-040-117	NG-1560				3	6			200	–
G'	3D	210-040-118	NG-1955	19	15	11	1.5	5.5	1	1.5	200	–
G'	3D	210-040-119	NG-1970				3	7			200	–
G'	3D	210-040-120	NG-2155	21	17	13	1.5	5.5		1.7	200	–
G'	3D	210-040-121	NG-2170				3	7		2	200	–
G'	3D	210-040-122	NG-2355	23	19	15	1.5	5.5		1.7	200	–
G'	3D	210-040-123	NG-2370				3	7		2.5	200	–
G'	3D	210-040-124	NG-3065	30	25	20	1.5	6.7	1.2	3	200	–
G'	3D	210-040-125	NG-3080				3	8		3.5	200	–
G'	3D	210-040-126	NG-3565	35	30	25	1.5	6.7		4	200	–
G'	3D	210-040-127	NG-3580				3	8		5	200	–
G'	3D	210-040-128	NG-4275	42	36	30	1.5	7.5		7	200	–
G'	3D	210-040-129	NG-4290				3	9		8	200	–

GROMMET KG



Material	Hardness	Colour
EPDM	50° ±5°	Black

●Flam retardant material (UL94V-0) available by made to order.



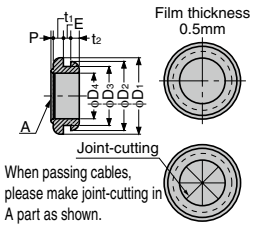
RoHS	CAD	Item Code	Item Name	D1	D2	D3	E	T	R	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-040-105	KG-74	7	5	3	1	4	1	0.5	200	–
G	3D	210-040-106	KG-95	9	7		0.8	5.5	1.5		200	–
G	3D	210-040-107	KG-115	11	8	5	1	5			200	–
G	3D	210-040-108	KG-135	13		5.5				1	200	–
G	3D	210-040-109	KG-146	14	10	8		6	3	0.7	200	–
G	3D	210-040-110	KG-178	17	12	9	1.2	8	4	1.5	200	–

GROMMET SG



Material	Hardness	Colour
EPDM	50° ±5°	Black

●Flam retardant material (UL94V-0) available by made to order.

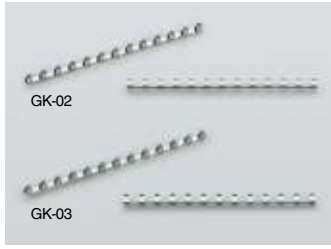


When passing cables, please make joint-cutting in A part as shown.

RoHS	CAD	Item Code	Item Name	D1	D2	D3	D4	t2	t1	E	P	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-040-154	SG-23	23	20	15	11	2	3.5	1.6	1	2.5	200	–
G	3D	210-040-155	SG-25	25	22	18	12			2.3		3	200	–
G	3D	210-040-156	SG-27	27	24	20	15	2.5	4	1.6		3.5	200	–
G	3D	210-040-157	SG-29	29	26	22	17			2.3		4.5	200	–
G	3D	210-040-158	SG-31	31	28	24	19	3	5			5	200	–
G	3D	210-040-159	SG-35	35	31	26				3.2			200	–
G	3D	210-040-160	SG-37	37	33	28	21			2.3	1.5		200	–
G	3D	210-040-161	SG-39	39	35	30	23			3.2		7.5	200	–
G	3D	210-040-162	SG-41	41	37	32	25			2.3			200	–
G	3D	210-040-163	SG-43	43	39	34	27			3.2		10	200	–
G	3D	210-040-164	SG-45	45	42	36	28	4	6	2.3		12	200	–
G	3D	210-040-165	SG-46	48	44	38	30			3.2		15	200	–

CENTIPEDE GROMMET GK

SUS



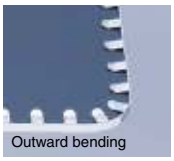
●Easy to install in a short time without using glue. Sorting and disposal is also easy.
●Made of all stainless steel with conductivity and excellent thermal durability.
●Can be post-installed or on-site handled for edge processing of finished equipment.
●Inward or outward bending available with bending radius more than 10mm.
●Can be easily cut with pliers.

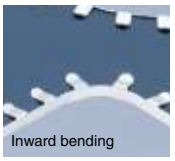
[Remarks]

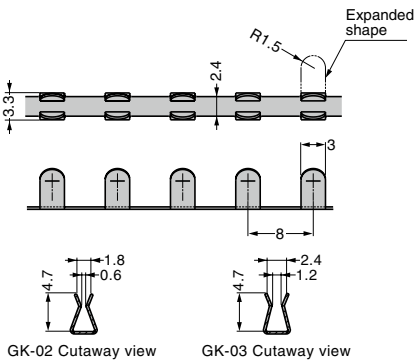
●Please cut at the edge of foot and do not leave the dorsal part. (Refer to the following figure: How to cut the grommet) .
●Please do not reuse. Otherwise, the catch force of the grommet weakens and may not be fixed securely.
●Please use a grommet suitable for board thickness. Do not use for applications other than adaptable board thickness, as it may not be securely fixed.

[Installation]





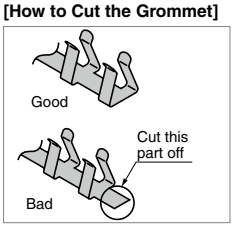


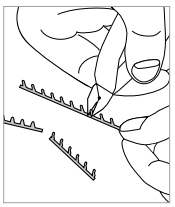


[How to Install]



[How to Cut the Grommet]





Can be easily cut with pliers.

RoHS	CAD	Item Code	Item Name	Board Thickness	Material	Finish	Length m/Roll	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-030-016	GK-02	0.8~1.2	Stainless Steel (SUS304)	Plain	10	15.5	10	100
G	3D	210-030-017	GK-03	1.5~2.0				16.5	10	100

※Sold in metric units (including the fee for one cutting). Cutting to lengths other than metric units or multiple cutting not available.

WIRE MANAGER

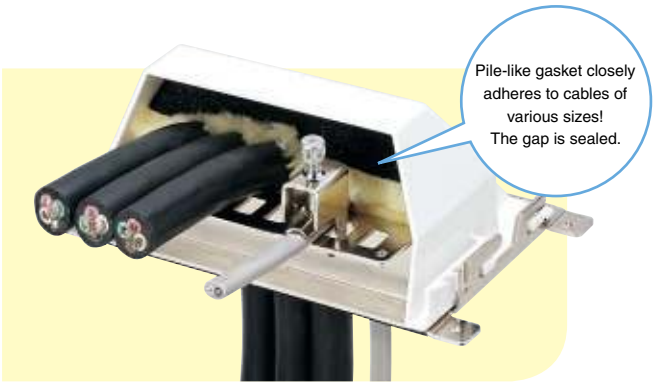
Wire Manager is compliant with IP54F.

Dust Proof Type
Although the intrusion of dust can be completely prevented, it does not interfere with the normal operation and safety of the electrical equipment.

Protects against splashing water
Splashing water from all directions will not have adverse effect.

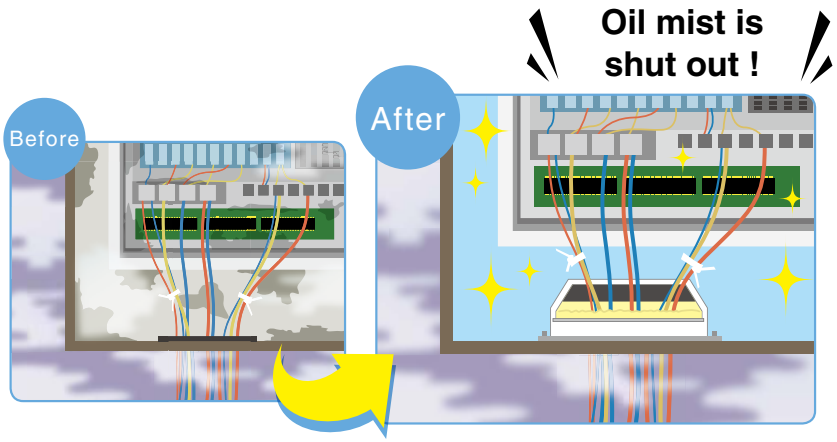
Oilproof Type
Oil drop or oil foam from all directions will not have adverse effect.

※When using in an environment beyond the protection range of IP54F, please check with actual item and make trial manufacture.

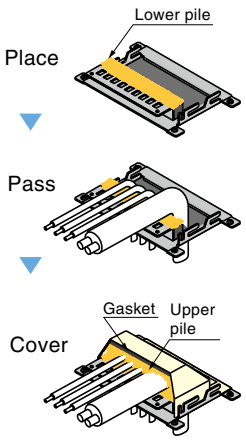


Cable installation example

Oil mist may enter the control boards of processing machines and machine tools, causing troubles or failures of the electrical system.
Wire Manager can block the entry route (gap between the cables) of oil mist and dust, reducing unnecessary maintenance cost.



[How to Install]



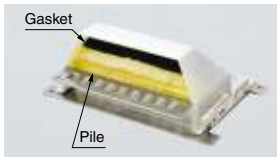
[Application Example]





WIRE MANAGER WSM-150





- Prevents oil mist intrusion, suitable for the control board of processing machine.
- IP54F oilproof, waterproof (splashing water) and dustproof. Only for the case where the opening is downward as shown in the figure below.
- Can pass through multiple cables of different sizes. Up to 3 pcs of cables with up to ϕ30 can be passed through.
- Gasket tightening force is adjustable in two steps (see the gasket tightening force adjustment in the figure below).
- Cables can be easily replaced without using tools during maintenance.
- Grounding can be connected from the grommet body fixing screw.
- For other sizes, please contact local representatives.

[Applications]

- Processing machines, machine tools, etc.

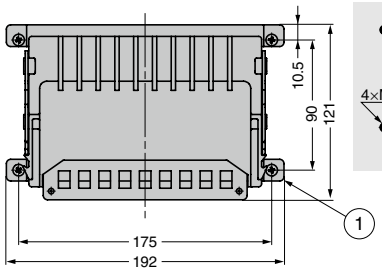
[Remarks]

- When using in an environment beyond the protection range of IP54F, please check with actual item and make trial manufacture and verification by customer.

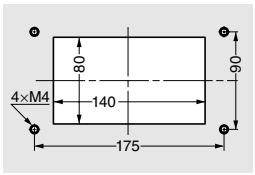
[Sold Separately]

- Wire bracket (for grounding)

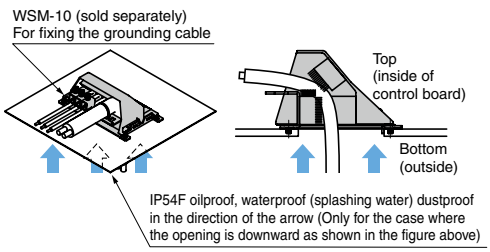
[Body]

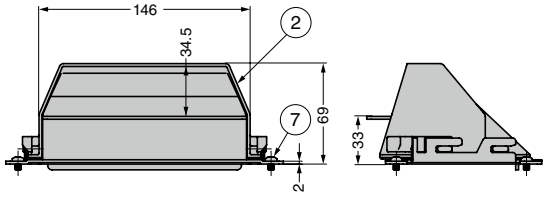


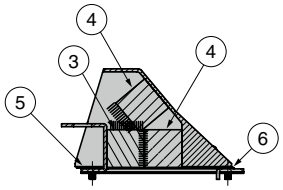
[Cut Out Dimensions]



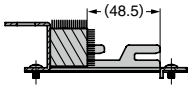
[Installation]





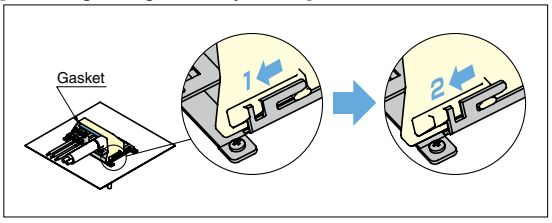


Cutaway view in sealed state



Cutaway view without cover

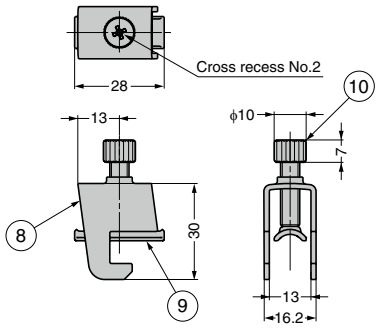
[Gasket Tightening Force Adjustment]



Adjustable in two steps, gasket firmly presses cables and prevents oil mist from entering.

No.	Part Name	Material	Finish / Colour
①	Body	Steel (SPCC)	Nickel
②	Cover	ABS	White
③	Gasket A	Nitrile Rubber (NBR), Pile	Black (Pile: Beige)
④	Gasket B		
⑤	Gasket C	Nitrile Rubber (NBR)	
⑥	Gasket D		
⑦	Pan Head Screw M4×6	Stainless Steel	Plain

[Wire Bracket] For Max. ϕ12



[Body]

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-024-553	WSM-150	438	1	20

No.	Part Name	Material	Finish
⑧	Body	Steel (SPCC)	Nickel
⑨	Wire Presser		
⑩	Wire Clamping Bolt	Steel (SWRM)	Coloured Zinc Chromate

[Wire Bracket] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-024-554	WSM-10	23	50	500

WIRE MANAGER WSD Dustproof Type





- For simply preventing dust intrusion.
- Nitrile rubber gasket and pile improve sealability and can block gaps caused by size differences or multiple cables.
- Parts replacement or grommet addition can be performed without inserting and removing cables.
- Cables can be easily replaced without using tools during maintenance.
- Can pass through multiple cables of different sizes up to ϕ20. For ϕ20, up to 3 pcs (WSD-70), 6 pcs (WSD-140) and 12 pcs (WSD-280) can be passed through.
- Gasket tightening force is adjustable in two steps.
- Grounding can be connected from the grommet body fixing screw.

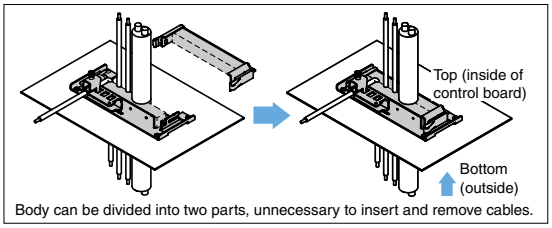
[Applications]
- Control boards, switch boards of processing machines and machine tools, etc.

[Remarks]
- This product is not waterproof and oilproof.

[Sold Separately]
- Cable fastening bracket
  (WSD-70: 1 pc, WSD-140: up to 2 pcs, WSD-280: up to 4 pcs)
- Wire bracket (for grounding)

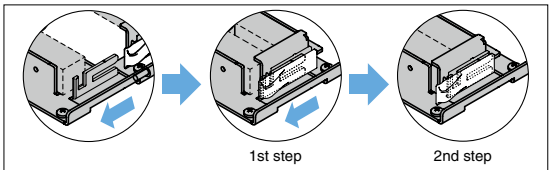
[Recommended Screws]
- Cross-recessed head screw M4

[Post-Installation]



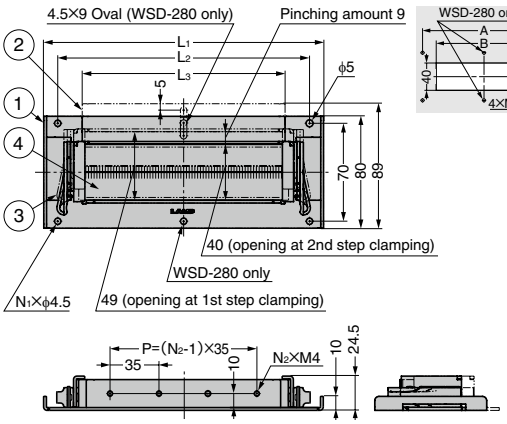
Body can be divided into two parts, unnecessary to insert and remove cables.

[Gasket Tightening Force Adjustment]



Adjustable in two steps, gasket firmly presses cables and prevents dust from entering.

[Body]



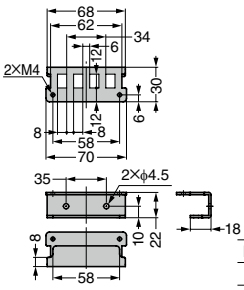
[Cut Out Dimensions]

No.	Part Name	Material	Finish / Colour
①	Base Plate	Steel (SPCC)	Nickel
②	Guide Plate		
③	Joint	POM	White
④	Gasket	Nitrile Rubber (NBR), Pile	Black

[Body]

RoHS	CAD	Item Code	Item Name	L1	L2	L3	P	N1	N2	A	B	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-034-656	WSD-70	130	110	75	35	3	2	110	70	298	1	40
G	3D	210-034-657	WSD-140	200	180	145	105		4	180	140	433	1	30
G	3D	210-034-658	WSD-280	340	320	285	245	4	8	320	280	793	1	20

[Cable Fastening Bracket] Sold Separately

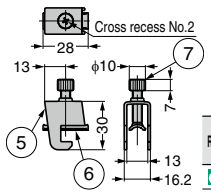


[Parts Included]
Pan head screw M4×4 (SUS)
2 pcs

Part Name	Material	Finish
Body	Steel (SPCC)	Nickel

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-034-659	WSD-B	61	60	180

[Wire Bracket] Sold Separately
※ For Max. ϕ12



No.	Part Name	Material	Finish
⑤	Body	Steel (SPCC)	Nickel
⑥	Wire Presser		
⑦	Wire Clamping Bolt	Steel (SWRM)	Coloured Zinc Chromate

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-024-554	WSM-10	23	50	500

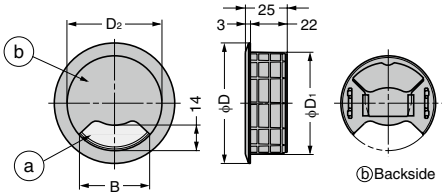
CABLE GROMMET V60, V80



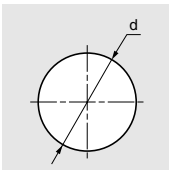
- Remove the part ⓐ for thin cables and keep on the backside pocket.
- Cap ⓑ is removable for wide opening.

[Remarks]

- Be sure to read the "Cautions" 1.



[Cut Out Dimensions]

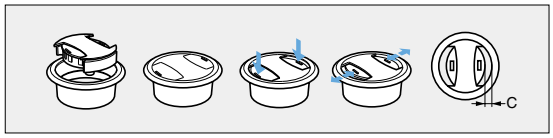


RoHS	CAD	Item Code	Item Name	Colour	Material	D	D1	D2	B	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-857	V60W	White	HIPS	72	61	56.7	41	60.5	25.5	15	150
G	3D	210-031-859	V60BE	Beige								15	150
G	3D	210-031-858	V60DBE	Dark Beige								15	150
G	3D	210-031-866	V60SL	Silver								15	150
G	3D	210-031-865	V60RG	Light Brown								15	150
G	3D	210-031-856	V60B	Black	ABS							15	150
G	3D	210-031-853	V80W	White	HIPS	92	80.5	77	50	80	39	10	80
G	3D	210-031-855	V80BE	Beige								10	80
G	3D	210-031-854	V80DBE	Dark Beige								10	80
G	3D	210-031-867	V80SL	Silver								10	80
G	3D	210-031-864	V80RG	Light Brown								10	80
G	3D	210-031-852	V80B	Black	ABS							10	80

Refer to 1 : P.843

CABLE GROMMET S70, S91

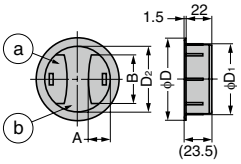




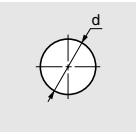
- For thin cables, slide the part ⓐ.
- When taking out cables at both sides, slide part ⓐ on the left and right sides.
- Cap ⓑ is removable for wide opening.

[Remarks]

- Be sure to read the "Cautions" 1.
- Since a spring is incorporated in the cap part, the parts may be disassembled. Please be careful when attaching/detaching the cap.



[Cut Out Dimensions]



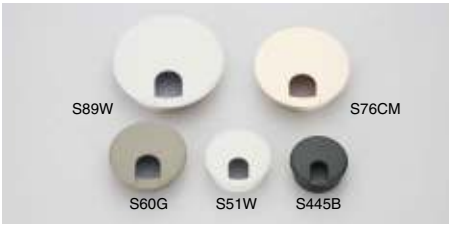
[Application Example]



RoHS	CAD	Item Code	Item Name	Colour	Material	D	D1	D2	A	B	C	d	Weight (g)	Box (pcs)	Carton (pcs)
G	–	210-028-542	S70W	White	ABS	70.5	60	56	19	41.5	7	60	29	15	150
G	–	210-028-543	S70CM	Ivory										15	150
G	–	210-028-544	S70G	Grey										15	150
G	–	210-028-545	S70BR	Brown										15	150
G	–	210-028-546	S70B	Black										15	150
G	–	210-028-547	S91W	White		91	80	76	25	55	10	80	39	10	90
G	–	210-028-548	S91CM	Ivory										10	90
G	–	210-028-549	S91G	Grey										10	90
G	–	210-028-550	S91BR	Brown										10	90
G	–	210-028-551	S91B	Black										10	90

Refer to 1 : P.843

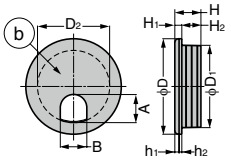
CABLE GROMMET S445, S51, S60, S76, S89



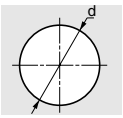
- Cap ⓑ is removable for wide opening.
- Made of resin material compliant with UL94-HB standard for flame retardance.

[Remarks]

- Be sure to read the "Cautions" 1.



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Material	D	D1	D2	H	H1	H2	h1	h2	A	B	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-830	S445CM	Ivory	ABS	45	38.8	34	19.7	3.3	16.4	2	1.3	16.7	12.5	39	9	50	450
G	3D	210-031-831	S445W	White													9	50	450
G	3D	210-031-829	S445G	Grey													9	50	450
G	3D	210-031-828	S445B	Black													9	50	450
G	3D	210-031-834	S51CM	Ivory		51	44.8	39.7	19.9	3.6	16.3		1.6	19	15.5	45	11	30	300
G	3D	210-031-835	S51W	White													11	30	300
G	3D	210-031-833	S51G	Grey													11	30	300
G	3D	210-031-832	S51B	Black													11	30	300
G	3D	210-031-838	S60CM	Ivory		60.5	48.8	44	19.8		16.2			20.8	19	49	14	25	250
G	3D	210-031-839	S60W	White													14	25	250
G	3D	210-031-837	S60G	Grey													14	25	250
G	3D	210-031-836	S60B	Black													14	25	250
G	3D	210-031-814	S76CM	Ivory		76.5	64.8	59	20.3	4.2	16.1	2.6		21.5	21.5	65	22	15	150
G	3D	210-031-815	S76W	White													22	15	150
G	3D	210-031-813	S76G	Grey													22	15	150
G	3D	210-031-812	S76B	Black													22	15	150
G	3D	210-031-818	S89CM	Ivory		89.4	76.8	71.4	20.6	4.1	16.5		1.5	25	22	77	30	10	90
G	3D	210-031-819	S89W	White													30	10	90
G	3D	210-031-817	S89G	Grey													30	10	90
G	3D	210-031-816	S89B	Black													30	10	90

Refer to 1 : P.843

CABLE GROMMET ST70, ST88

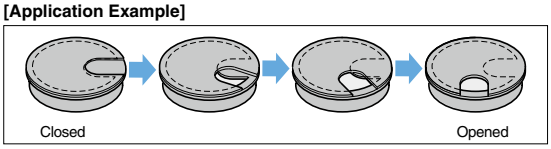


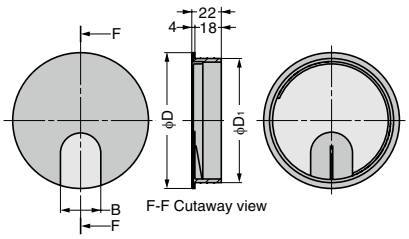
- Cover rotates for opening and closing.
- Cover can be closed when no cable passes through.

[Remarks]

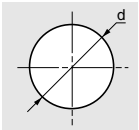
- Be sure to read the "Cautions" 1.

[Application Example]





[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Material	D	D1	B	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-802	ST70W	White	ABS	70	60	22	60	13.7	15	150
G	3D	210-031-803	ST70CM	Ivory							15	150
G	3D	210-031-804	ST70SL	Silver							15	150
G	3D	210-031-805	ST70G	Grey							15	150
G	3D	210-031-806	ST70B	Black							15	150
G	3D	210-031-807	ST88W	White		88	80	26	80	13.2	10	80
G	3D	210-031-808	ST88CM	Ivory							10	80
G	3D	210-031-809	ST88SL	Silver							10	80
G	3D	210-031-810	ST88G	Grey							10	80
G	3D	210-031-811	ST88B	Black							10	80

Refer to 1 : P.843

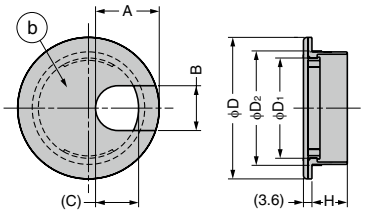
CABLE GROMMET LSU, LS



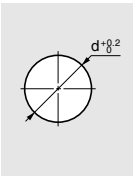
- One-sided cable grommet.
- Cap ⓑ is removable for wide opening.

[Remarks]

- Be sure to read the "Cautions" 1.



[Cut Out Dimensions]



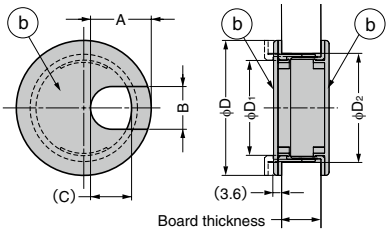
RoHS	CAD	Item Code	Item Name	Colour	Material	D	D1	D2	H	A	B	C	d	Weight (g)	Box (pcs)	Carton (pcs)
–	–	210-029-540	LSU60S-WT	White	ABS	60	42.5	48.5	11.5	27	19	18	48	10	20	160
–	–	210-029-541	LSU60S-BE	Beige											20	160
–	–	210-029-542	LSU60S-LBR	Light Brown											20	160
–	–	210-029-543	LSU60S-DBR	Dark Brown											20	160
–	–	210-029-544	LSU60S-BL	Black											20	160
–	–	210-029-545	LS60S-WT	White					15					11	20	160
–	–	210-029-546	LS60S-BE	Beige											20	160
–	–	210-029-547	LS60S-LBR	Light Brown											20	160
–	–	210-029-548	LS60S-DBR	Dark Brown											20	160
–	–	210-029-549	LS60S-BL	Black											20	160
–	–	210-029-550	LS76S-WT	White		76	58.2	64.2	23.5	34	22	25.1	64	18	12	96
–	–	210-029-551	LS76S-BE	Beige											12	96
–	–	210-029-552	LS76S-LBR	Light Brown											12	96
–	–	210-029-553	LS76S-DBR	Dark Brown											12	96
–	–	210-029-554	LS76S-BL	Black											12	96

Refer to 1 : P.843

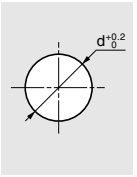
CABLE GROMMET LSU, LS Double Sided Type



- Double sided cable grommet.
- 5 colours available.
- 3 suitable board thicknesses from 12 to 40mm.
- Cap ⓑ on both sides is removable for wide opening.
- One-sided type 1 of the same shape also available.



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Material	D	D1	D2	A	B	C	Board Thickness	d	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	210-017-353	LSU60WT	White	ABS	60	42.5	48.5	27	19	18	12~18	48	19	20	160
–	3D	210-029-534	LSU60BE	Beige											20	160
–	3D	210-029-533	LSU60LBR	Light Brown											20	160
–	3D	210-029-532	LSU60DBR	Dark Brown											20	160
–	3D	210-017-354	LSU60BL	Black											20	160
–	3D	210-035-071	LS60WT	White								18~24		20	20	160
–	3D	210-029-126	LS60BE	Beige											20	160
–	3D	210-029-535	LS60LBR	Light Brown											20	160
–	3D	210-029-536	LS60DBR	Dark Brown											20	160
–	3D	210-035-070	LS60BL	Black											20	160
–	3D	210-031-304	LS76WT	White		76	58.2	64.2	34	22	25.1	25~40	64	25	12	96
–	3D	210-029-537	LS76BE	Beige											12	96
–	3D	210-029-538	LS76LBR	Light Brown											12	96
–	3D	210-029-539	LS76DBR	Dark Brown											12	96
–	3D	210-031-305	LS76BL	Black											12	96

Refer to 1 : P.890

CABLE GROMMET ALU25



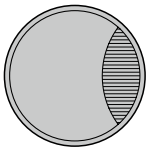
●Square type cable grommet with brush also available.

[Remarks]

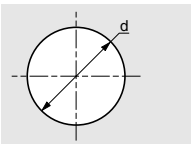
●Be sure to read the "Cautions" 1.

[Application]





[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Finish / Colour	Material	D	D1	d	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	210-030-162	ALU25-20-325	Anodised Silver/Black	Aluminium Alloy/PA	66	60	60	45.0	240	–
–	3D	210-030-163	ALU25-20-330			86	80	80	79.4	240	–

Refer to 1 : P.843

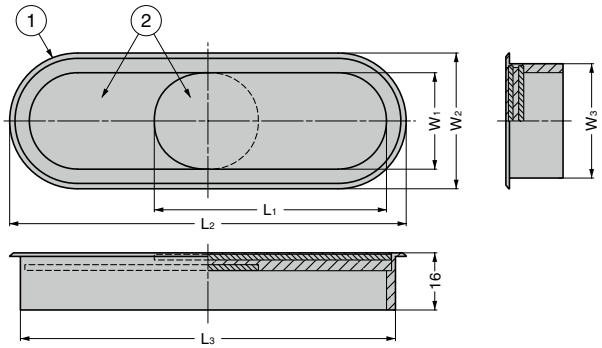
CABLE GROMMET SALSA



●With sliding type cover for opening adjustment.

[Remarks]

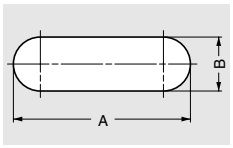
●Be sure to read the "Cautions" 1.



[Application]



[Cut Out Dimensions]



No.	Part Name	Material	Finish / Colour
①	Body	PE※	Black
②	Cover	Stainless Steel	Satin

※ ABS resin for SI2520-316. As soon as the stock runs out, PE will be used.

RoHS	CAD	Item Code	Item Name	L1	L2	L3	W1	W2	W3	A	B	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-473	SI2520	65	111	105	27	38	32	105	32	35	20	200
G	3D	210-019-742	SI2520-315	102	155	149	55	63	57	149	57	86	20	100
G	3D	210-019-743	SI2520-316	152	255	249				249		134	20	100

Refer to 1 : P.843

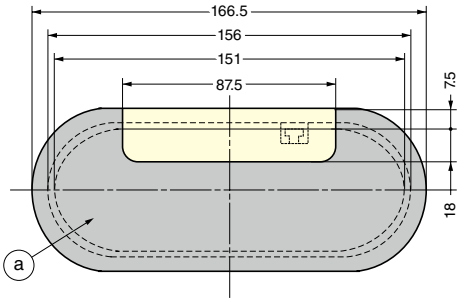
CABLE GROMMET S165-76

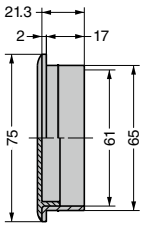


- Please push ☐ part into back when using thin cables.
- Cap ⓐ is removable for wide opening.

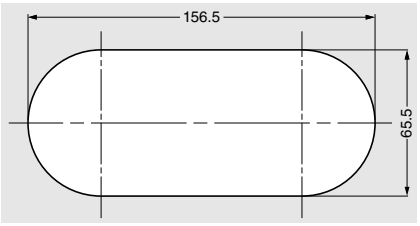
[Remarks]

- Be sure to read the “Cautions” 1.





[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-827	S165-76CM	Ivory	ABS	48	5	50
G	3D	210-031-826	S165-76W	White		48	5	50
G	3D	210-031-825	S165-76G	Grey		48	5	50
G	3D	210-031-824	S165-76B	Black		48	5	50

Refer to 1 : P.843

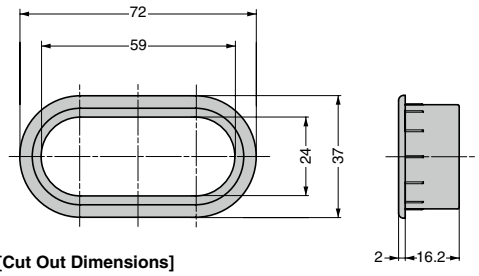
CABLE GROMMET LN72P



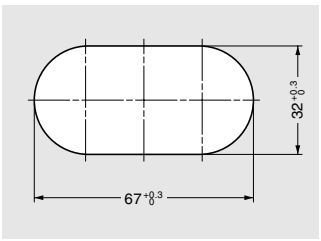
- Without cap version of LN72S 1.
- Plating finish provides a sense of quality.

[Remarks]

- Be sure to read the “Cautions” 2.



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Finish	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	–	210-024-225	LN72P-CR	Chrome	ABS	8	40	320
G	–	210-026-235	LN72P-DC	Dull Chrome		8	40	320
G	–	210-024-226	LN72P-GC	Gold		8	40	320

Refer to 1 : P.893, 2 : P.843

CABLE GROMMET LN72S

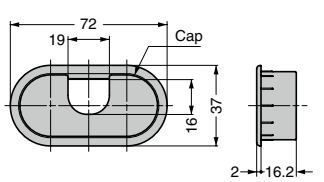


- Cap is removable for wide opening.

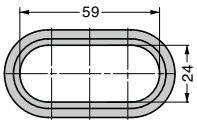
[Remarks]

- Be sure to read the "Cautions" 1.

[Cut Out Dimensions]



[Opening Size Without Cap]



RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-021-706	LN72S-WT	White	ABS	9	40	320
G	3D	210-021-707	LN72S-BL	Black		9	40	320

Refer to 1 : P.843

CABLE GROMMET LN72 Double Sided Type

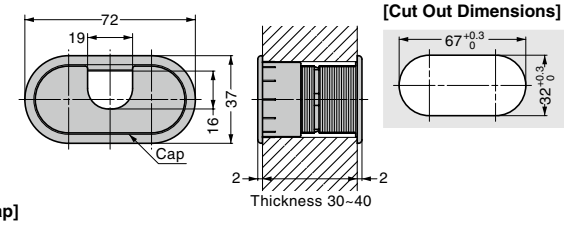


- Double sided cable grommet.
- Applicable board thickness: 30 mm~40 mm. Also available for 18 mm~30 mm thickness board by cutting the slit on body.
- Cap is removable for wide opening.

[Remarks]

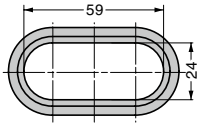
- After cutting the slit, ensure that the cut edge is free from burrs.

[Cut Out Dimensions]

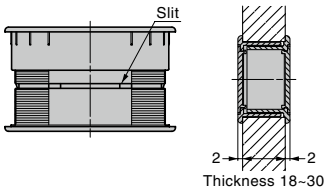




[Opening Size Without Cap]



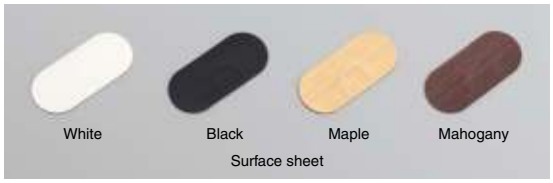
[After Cutting Slit]



RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-020-562	LN72-WT	White	ABS	19	40	320
G	3D	210-020-563	LN72-BL	Black		19	40	320

CABLE GROMMET LN72SF





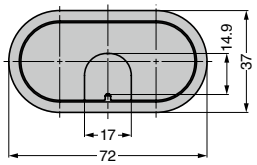
- 4 surface sheets (with double-sided tape) available for matching the finishes of desks or tables.
- When used as cable grommet, plate can be stored on the back side of cap (see the figure below).
- Cap is removable for wide opening.

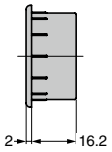
[Remarks]

- Be sure to read the "Cautions" 1.
- Surface sheet is sold separately in pieces. Please order with the main body.

[Sold Separately]

- Surface sheet LN72SF-ST



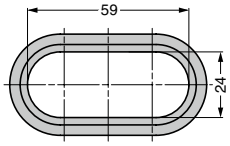


[Combination Example]

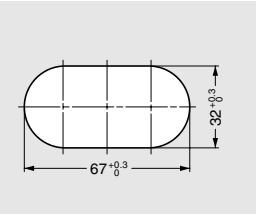
Main bodies and surface sheets can be combined in total 8 patterns.



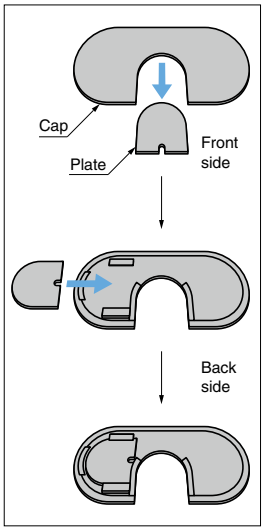
[Opening Size Without Cap]



[Cut Out Dimensions]



[How to Store Plate]



[Main Body]

RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-024-223	LN72SF-WT	White	ABS	9.0	40	320
G	3D	210-024-224	LN72SF-BL	Black		9.0	40	320

[Surface Sheet] Sold Separately

RoHS	CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-025-807	LN72SF-ST-WT	White: HWS5414 (AICA)	0.9	1500	–
G	3D	210-025-808	LN72SF-ST-BL	Black: HWS7101S (AICA)	0.9	1500	–
G	3D	210-026-450	LN72SF-STMAP	Maple: JWS1550V (AICA)	0.8	700	–
G	3D	210-026-449	LN72SF-STMAO	Mahogany: AWS2021G (AICA)	0.8	700	–

Refer to 1 : P.843

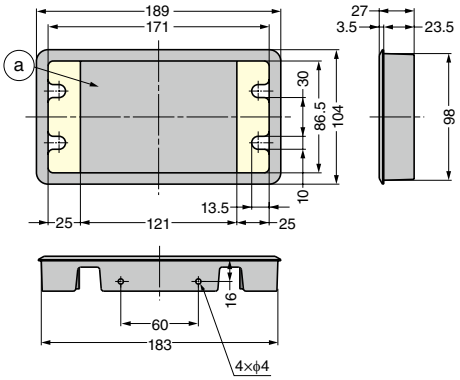
CABLE GROMMET V2000



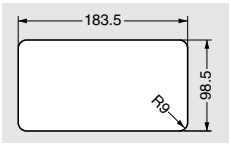
- Please fold and remove ▭ part according to the size of cables and location. Cover of ▭ part can be stored on the back side when unused.
- Cap ⓐ is removable for wide opening.

[Remarks]

- Be sure to read the "Cautions" 1.
- Do not use it on the side.



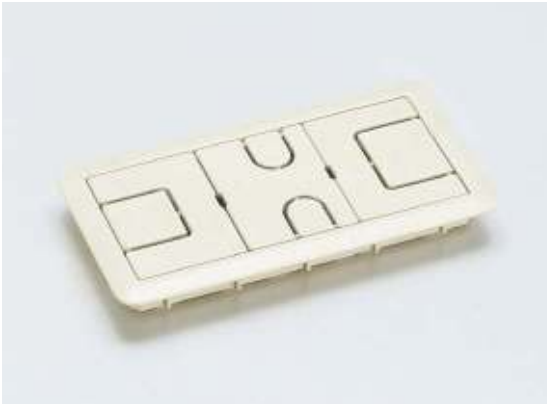
[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-861	V2000W	White	HIPS	104	33	–
G	3D	210-031-863	V2000BE	Beige			33	–
G	3D	210-031-862	V2000DBE	Dark Beige			33	–
G	3D	210-031-860	V2000B	Black			33	–

Refer to 1 : P.843

CABLE GROMMET ART973

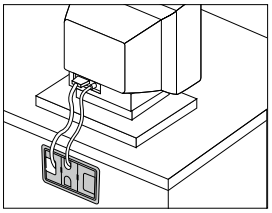


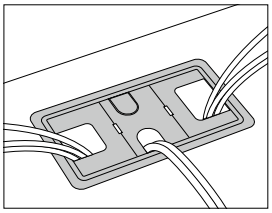
- Please fold and remove ▭ part according to the size of cables and location.
- Cap ⓐ is removable for wide opening.
- Cut out dimensions for sheet metal: 97.8×46.5 (Thickness 0.8~1) mm
- Cut out dimensions for wood: 97.5×45.8 mm

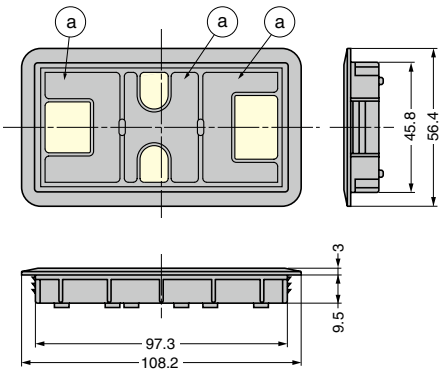
[Remarks]

- Be sure to read the "Cautions" 1.

[Application Example]







RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-035-132	ART973	White	ABS	17	140	–

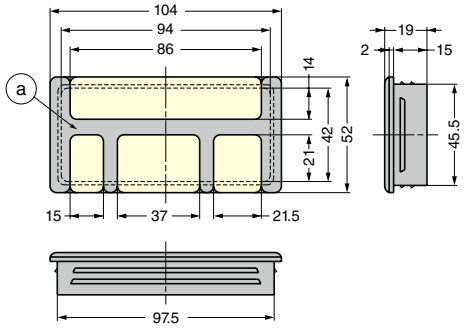
Refer to 1 : P.843

CABLE GROMMET S1015-51

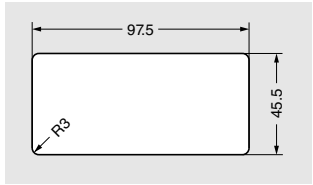


●Please fold and remove ▭ part according to the size of cables and location.
●Cap ⓐ is removable for wide opening.

[Remarks]
●Be sure to read the “Cautions” 1.



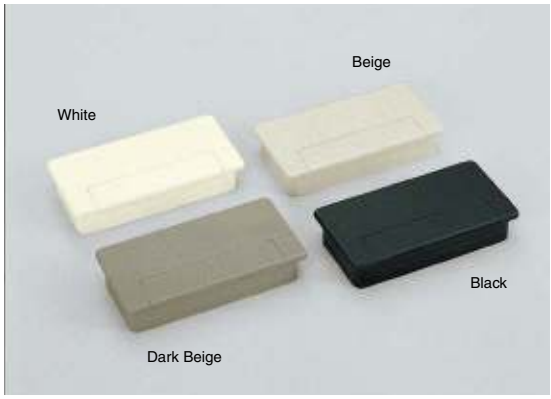
[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-822	S1015-51CM	Ivory	ABS	22	15	150
G	3D	210-031-823	S1015-51W	White		21	15	150
G	3D	210-031-821	S1015-51G	Grey		21	15	150
G	3D	210-031-820	S1015-51B	Black		22	15	150

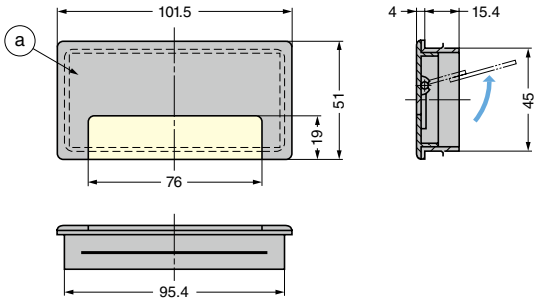
Refer to 1 : P.843

CABLE GROMMET S100-50

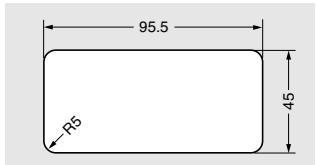


●Please push ▭ part into back when using thin cables.
●Cap ⓐ is removable for wide opening.

[Remarks]
●Be sure to read the “Cautions” 1.



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-031-800	S100-50W	White	ABS	24	15	150
G	3D	210-031-801	S100-50BE	Beige			15	150
G	3D	210-031-840	S100-50DBE	Dark Beige			15	150
G	3D	210-031-841	S100-50BL	Black			15	150

Refer to 1 : P.843

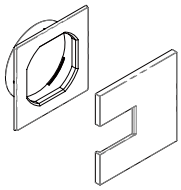
CABLE GROMMET LSU60KS One-sided Type



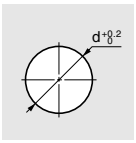
- Cap is removable for wide opening.
- Body is fixed with nails for anti-rotation. When installation, please use nails to pierce into 2 thin-walled locations on the backside of the body.
  (Recommended nail: Pan head nail 1.2×10 with head diameter 4mm or less and shank diameter 1.9mm or less)

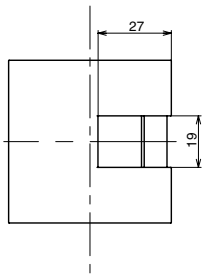
[Remarks]
- Please install by pushing from above.

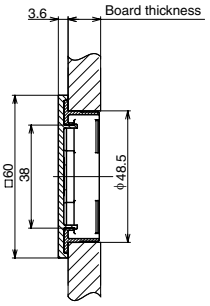
[Application Example]



[Cut Out Dimensions]

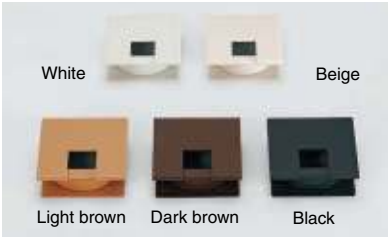






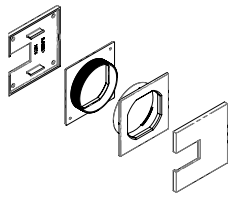
RoHS	CAD	Item Code	Item Name	Colour	Material	Board Thickness	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-035-866	LSU60KS-WT	White	ABS	Min. 12	48.0	13	20	160
G	3D	210-035-867	LSU60KS-BE	Beige					20	160
G	3D	210-035-868	LSU60KS-LBR	Light Brown					20	160
G	3D	210-035-869	LSU60KS-DBR	Dark Brown					20	160
G	3D	210-035-870	LSU60KS-BL	Black					20	160
G	3D	210-035-871	LS60KS-WT	White		Min. 16			20	160
G	3D	210-035-872	LS60KS-BE	Beige					20	160
G	3D	210-035-873	LS60KS-LBR	Light Brown					20	160
G	3D	210-035-874	LS60KS-DBR	Dark Brown					20	160
G	3D	210-035-875	LS60KS-BL	Black					20	160

CABLE GROMMET LSU60K Double Sided Type

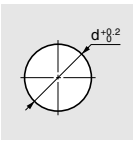


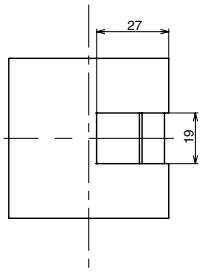
- Double sided cable grommet.
- Applicable board thickness: 12 mm ~26mm.
- Cap is removable for wide opening.
- One-sided type 1 of the same shape also available.
- Body is fixed with a nail for anti-rotation. When installation, please use nails to pierce into 2 thin-walled locations on the backside of the body.
  (Recommended nail: Pan head nail 1.2×10 with head diameter 4mm or less and shank diameter 1.9mm or less)

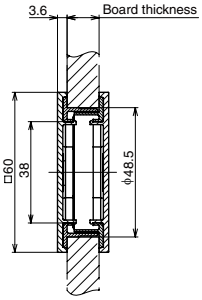
[Application Example]



[Cut Out Dimensions]







RoHS	CAD	Item Code	Item Name	Colour	Material	Board Thickness	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-035-851	LSU60K-WT	White	ABS	12~18	48.0	13	20	160
G	3D	210-035-852	LSU60K-BE	Beige					20	160
G	3D	210-035-853	LSU60K-LBR	Light Brown					20	160
G	3D	210-035-854	LSU60K-DBR	Dark Brown					20	160
G	3D	210-035-855	LSU60K-BL	Black					20	160
G	3D	210-035-856	LS60K-WT	White		16~26			20	160
G	3D	210-035-857	LS60K-BE	Beige					20	160
G	3D	210-035-858	LS60K-LBR	Light Brown					20	160
G	3D	210-035-859	LS60K-DBR	Dark Brown					20	160
G	3D	210-035-860	LS60K-BL	Black					20	160

Refer to 1 : P.897

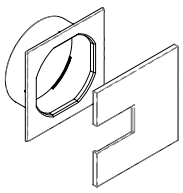
CABLE GROMMET LS76KS One-sided Type



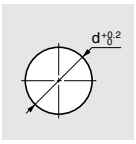
- Cap is removable for wide opening.
- Body is fixed with a nail for anti-rotation. When installation, please use nails to pierce into 2 thin-walled locations on the backside of the body. (Recommended nail: Pan head nail 1.2×10 with head diameter 4mm or less and shank diameter 1.9mm or less)

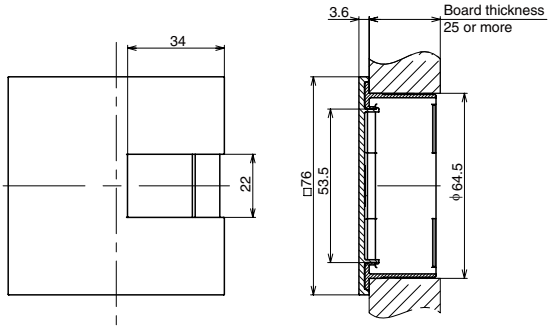
[Remarks]
- Please install by pushing from above.

[Application Example]



[Cut Out Dimensions]





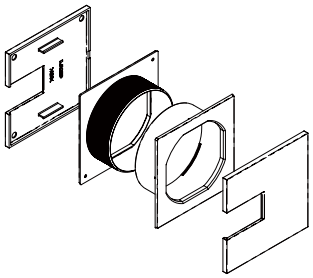
RoHS	CAD	Item Code	Item Name	Colour	Material	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-035-876	LS76KS-WT	White	ABS	64.0	22	12	96
G	3D	210-035-877	LS76KS-BE	Beige				12	96
G	3D	210-035-878	LS76KS-LBR	Light Brown				12	96
G	3D	210-035-879	LS76KS-DBR	Dark Brown				12	96
G	3D	210-035-880	LS76KS-BL	Black				12	96

CABLE GROMMET LS76K Double Sided Type

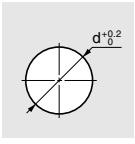


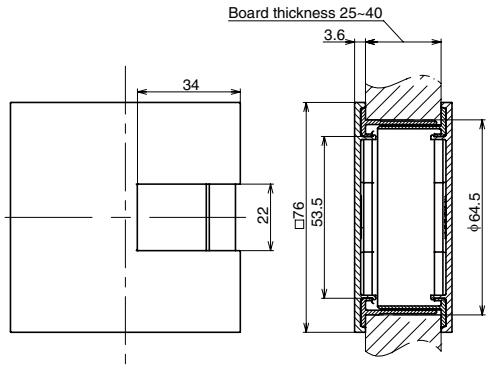
- Double sided cable grommet.
- Applicable board thickness: 25 mm~40mm.
- Cap is removable for wide opening.
- One-sided type 1 of the same shape also available.
- Body is fixed with a nail for anti-rotation. When installation, please use nails to pierce into 2 thin-walled locations on the backside of the body. (Recommended nail: Pan head nail 1.2×10 with head diameter 4mm or less and shank diameter 1.9mm or less)

[Application Example]



[Cut Out Dimensions]





RoHS	CAD	Item Code	Item Name	Colour	Material	d	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	210-035-861	LS76K-WT	White	ABS	64.0	42	12	96
G	3D	210-035-862	LS76K-BE	Beige				12	96
G	3D	210-035-863	LS76K-LBR	Light Brown				12	96
G	3D	210-035-864	LS76K-DBR	Dark Brown				12	96
G	3D	210-035-865	LS76K-BL	Black				12	96

Refer to 1 : P.898

GASKET AS-PAA For Aluminium Frame

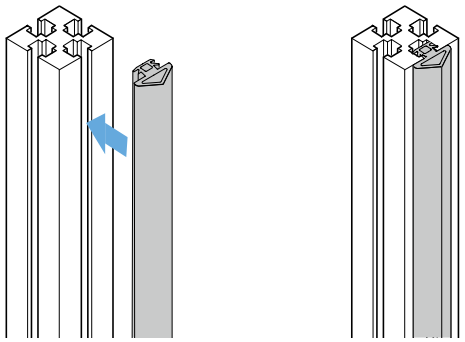


- Can be easily installed to aluminium frame groove without using glue. When installed to sliding door, it reduces the noise when closing the door and prevents scratches on the frame.
- 2 types for 6mm and 8 & 10mm width groove are available.
- Made of PVC with excellent resistance against weather, water, acid and alkali.
- Suitable for aluminium frames from various manufacturers.

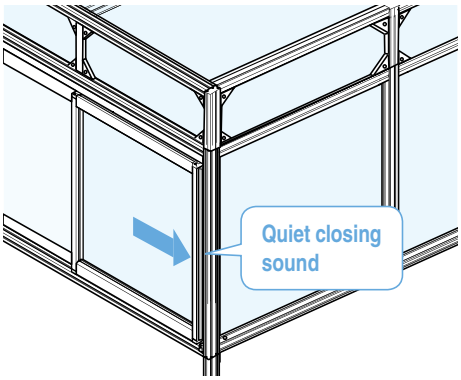
[Remarks]

- For details such as applicable aluminium frames, please contact local representatives.

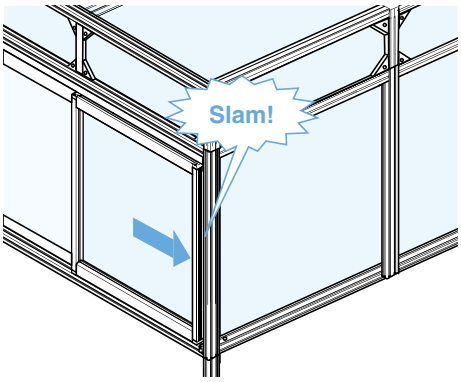
[Installation]

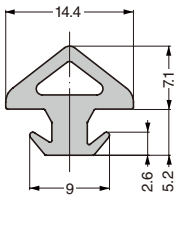


[With Gasket]

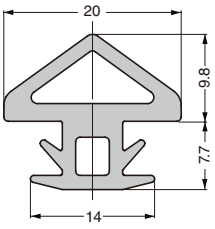


[Without Gasket]





AS-PAA-6



AS-PAA-810

Sold in metres.

RoHS	CAD	Item Code	Item Name	Material	Colour	Groove Width	Length m/Roll	Weight (g)	Box (m)	Carton (m)
G	3D	210-010-503	AS-PAA-6	PVC	Grey	6	50	99	50	100
G	3D	210-010-504	AS-PAA-810			8, 10		160	50	100

GASKET CR



- A variety of materials, sizes and cross-sectional shapes available for different purposes.

[Applications]

- Instrument, control boards, machine tools, home appliances, medical equipment, furniture, and office equipment, etc.

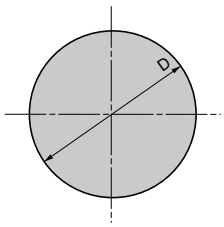
[Remarks]

- Sold in metres. Specified length and multiple cutting can be made to order.

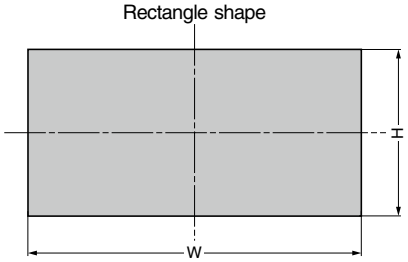
[Property of Chloroprene Gasket]

Material		CR
Colour		Black
Apparent Density (g/cm³)		0.40
Hardness		20
Tensile Strength (MPa)		1.5
M100 (100% Modulus) (MPa)		0.3
Elongation (%)		300
Coefficient of Water Absorption (wt%)		Max. 5
Compressive Stress (gf/cm²)		400
Ozone Resistance		48hr Non-crack
Operating Temperature (℃)		–25~100
Heat Aging Resistance	Hardness	22
	Elongation (%)	250

Round shape



Rectangle shape



[Round Shape]

RoHS	CAD	Item Code	Item Name	D	Length m/Roll	Weight (g)	Box (m)	Carton (m)
G	3D	210-049-535	CR-M4	4	300	7.0	1	–
G	3D	210-049-536	CR-M5	5		14.2	1	–

[Rectangle Shape]

RoHS	CAD	Item Code	Item Name	W	H	Length m/Roll	Weight (g)	Box (m)	Carton (m)
G	3D	210-039-799	CR-1003	10	3	200	30.5	200	–
G	3D	210-039-017	CR-2003	20			26.3	200	–
G	3D	210-039-984	CR-3003	30		100	39.5	100	–
G	3D	210-039-411	CR-1505	15	5		32.0	100	–
G	3D	210-039-642	CR-2505	25			41.3	100	–
G	3D	210-039-924	CR-2006	20	6		48	100	–
G	3D	210-039-090	CR-1508	15	8		70.0	100	–
G	3D	210-039-931	CR-2010	20	10		107.6	100	–
G	3D	210-039-976	CR-2510	25			90.6	100	–
G	3D	210-030-851	CR-2515		15		150	100	–
G	3D	210-039-978	CR-2518		18		180	100	–
G	3D	210-039-998	CR-4025	40	25	50	400	50	–

Gaskets, Resin Protective Materials & Cushions

Made to Order

Protective material and cushion material series with excellent heat resistance and high slidability, etc.

For sizes and minimum order, please contact local representatives.



Silicone Trim

- Silicone rubber edge protective material with excellent heat resistance, high chemical resistance and long service life.
- Can be easily installed to sheet metal without using glue.
- Conductive type of different shapes and colours also available.



Eco-resin Trim

- Edge protective material with built-in hard resin frame.
- Can be easily installed to sheet metal without using glue.
- Made entirely from resin to prevent core material from rusting.
- Can be welded (endless processing, etc.) including frame.



Silicone Sponge Sheet & Silicone Rubber Extruded Material

- Excellent heat resistance and durability.
- Can be used as cushion materials for various purposes.
- Sponge sheet can be sliced to the desired size from 1 to 20mm thick, suitable for thin applications.



Sube-up

- Coated with special activated resin, it has excellent slidability and wear resistance, providing superior functionality as sealing material and gasket.
- Can be used for preventing fixation and improving slidability.



Gel Gasket

- Composite extruded gasket used for improving usability by moulding vibration damping and water tightness gel simultaneously with elastomer.
- Ideal for vibration damping material of motors and pumps, etc.

BELT PARTITION SERIES

- Suitable for simple partitions at the station's platforms and factories.
- Long type with belt length 7m and stacking type available.

[Wall Mount Type] P.902~903

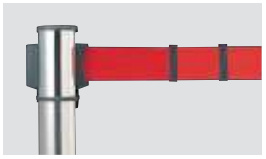


[Self-standing Type]



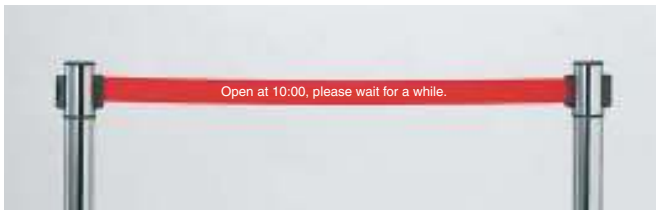
RD (red)	BU (blue)	YE (yellow)
GN (green)	BR (brown)	GR (grey)
BL (black)		







■Letters and symbols can be optionally printed on the belt.





WALL MOUNT BELT PARTITION AP-BR351

SUS


AP-BR351 (MR)

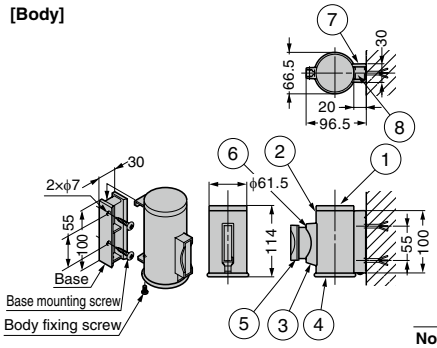

AP-BR351 (SL)


Hook catch (sold separately)

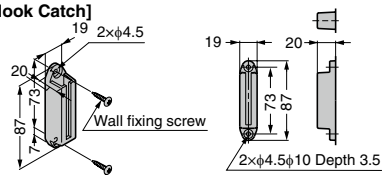
[Application Example]



[Body]



[Hook Catch]



- Use hook catch (included) to fix the pulled out belt.

[Remarks]

- Hook catch is supplied with the body. Please order separately if additional hook catches are required.
- Please install the body and hook catch as shown in the application example. If the belt is twisted with respect to the body and hook catch, the twisted part may rub and cause fraying or wearing out.

[Parts Included]

- Hook catch

No.	Part Name	Material	Finish / Colour
①	Head	ABS	Dark Grey
②	Slit Pipe (MR)	Stainless Steel	Polished
	Slit Pipe (SL)	Steel	Powder Coating/Silver
③	Hook Catch A	ABS	Dark Grey
④	Wall Mount Type Resin Sleeve		
⑤	Hook		
⑥	Belt	Polyester	–
⑦	Base	ABS	Dark Grey
⑧	Hook Bracket	Stainless Steel (SUS304)	Powder Coating/Dark Grey

[Body]

RoHS	CAD	Item Code	Item Name	Belt Colour	Belt Length m	Weight (kg)	Box (pcs)	Carton (pcs)
–	–	290-893-247	AP-BR351 (MR)RD	Red	2	0.5	1	40
–	–	290-893-306	AP-BR351 (MR)BU	Blue			1	40
–	–	290-893-246	AP-BR351 (SL)RD	Red			1	40
–	–	290-893-301	AP-BR351 (SL)BU	Blue			1	40

[Hook Catch] Sold Separately

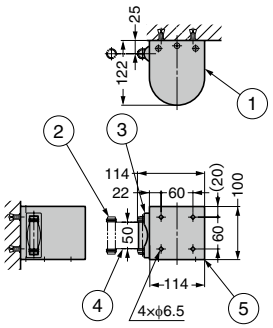
RoHS	CAD	Item Code	Item Name	Material	Colour	Size	Weight (g)	Box (pcs)	Carton (pcs)
–	–	290-885-590	AP-BR349M (GR)	ABS	Dark Grey	W19×D20×H87	19	200	–

WALL MOUNT BELT PARTITION AP-BR057

SUS







Right-handed type shown. Left-handed type is symmetrical.

- Long type with belt length 7m.
- Use hook catch (sold separately) to fix the pulled out belt.

[Remarks]

- Belt part may collapse due to product characteristics.
- Hook catch is not supplied with the body.Please order separately.
- Please install the body and hook catch as shown in the application example. If the belt is twisted with respect to the body and hook catch, the twisted part may rub and cause fraying or wearing out.

[Sold Separately]

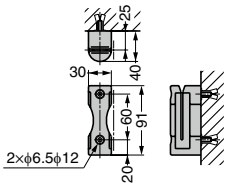
- Hook catch

[Body]

RoHS	CAD	Item Code	Item Name	Type	Belt Length m	Weight (kg)	Box (pcs)	Carton (pcs)
–	–	290-885-004	AP-BR057R(SH)	Right-handed	7	1.46	1	–
–	–	290-885-005	AP-BR057L(SH)	Left-handed			1	–

No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Satin
②	Hook	Aluminium Alloy	–
③	Belt Pull-out Opening	ABS	Black
④	Belt (7m)	Polyester	Red
⑤	Bracket	Stainless Steel (SUS304)	–





[Application Example]



[Hook Catch] Sold Separately

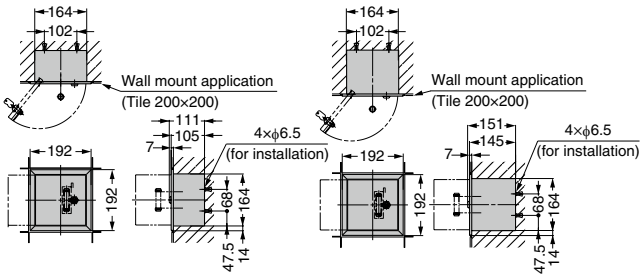
RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	Size	Weight (g)	Box (pcs)	Carton (pcs)
–	–	290-885-006	AP-BR050(AS)	Aluminium Alloy	Anodised Silver	W30 × D40 × H91	223.5	50	–

BELT PARTITION AP-BR06 Mortise Mount Type

SUS





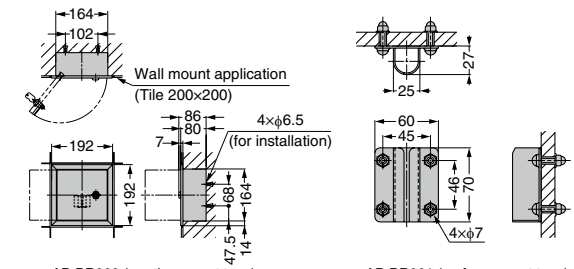


- Can be recessed inside of the wall.
- Types with belt length 3.5m and 5m available.
- Door with lock to prevent mischief.
- Use hook catch (sold separately) to fix the pulled out belt.
- Surface mount type and mortise mount type available for optional hook catches.Like the partition, the mortise mount type has a lock on the door.
- Silk printing on belt available by made to order.

[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Belt Colour	Belt Length m	Weight (g)	Box (pcs)	Carton (pcs)
–	–	290-885-007	AP-BR063(SH)	Stainless Steel	Satin	Red	3.5	2510.0	1	–
–	–	290-885-008	AP-BR065(SH)	(SUS304)			5	3595.0	1	–





[Remarks]

- Belt part may collapse due to product characteristics.
- Silk printing on belt available at surcharge.
- Please install the body and hook catch as shown in the picture.If the belt is twisted with respect to the body and hook catch, the twisted part may rub and cause fraying or wearing out.

[Sold Separately]

- Hook catch



[Hook Catch] Sold Separately

RoHS	CAD	Item Code	Item Name	Type	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
–	–	290-885-009	AP-BR060(SH)	Mortise Mount	Stainless Steel	Satin	1460	1	–
GT	3D	290-885-010	AP-BR061(SH)	Surface Mount	(SUS304)		1680	1	–

POINT FIX



Point fix is a part for fixing glass to structure or frame when using glass as a wall or panel.







Zwei L

Zwei L is the flagship brand of Sugatsune and represents premium Japanese hardware quality. Zwei L stands for "Zwei Lichter" in German: a dual highlight of mirror finish and lustrous satin on a faceted profile.
Manufactured from solid billets of the finest quality 316 stainless steel, **Zwei L** brings the space luxury and dazzles your eyes.





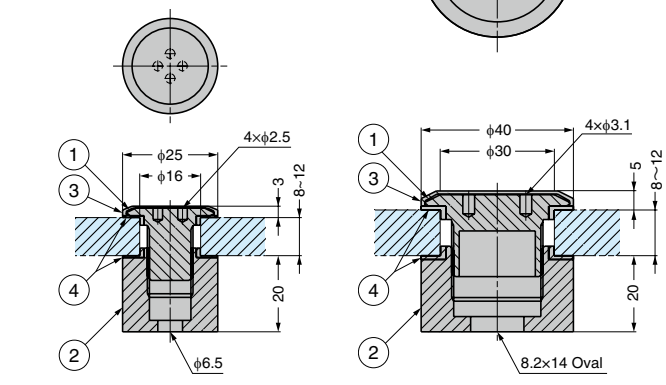


Video Link

Zwei L STAINLESS STEEL POINT FIX ZL-2801

SUS316 TEMPERED GLASS





ZL-2801-25 ZL-2801-40

- Superior "Zwei L Finish".
  Zwei L represents the very pinnacle of ultra-premium Japanese hardware design. Contrasting bands of mirror finish and lustrous satin on a faceted profile give jewel like highlights which flatter any architectural space.

[Remarks]
- Special tool (sold separately) is required for installation.

[Sold Separately]
- Special tool Z059, Z058





No.	Part Name	Material	Finish / Colour
①	Pin	Stainless Steel (SUS316)	Plain
②	Clamp		Polished (Partially)
③	Cover		Zwei L Finish
④	Spacer	POM	Black

[Body]

RoHS	CAD	Item Code	Item Name	Glass Thickness	Special Tool	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-040-674	ZL-2801-25	8~12	Z059	115.2	2	–
–	3D	120-040-675	ZL-2801-40		Z058	260.0	1	–

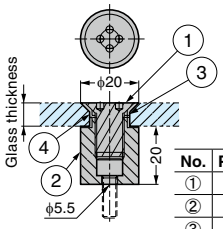
[Special Tool] Sold Separately

RoHS	CAD	Item Code	Item Name	Length	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-388	Z059	115	38	20	–
–	3D	270-180-387	Z058	160	111	20	–

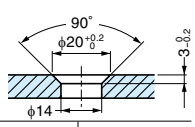
POINT FIX PE-20SR

TEMPERED GLASS





Cut Out Dimensions



No.	Part Name	Material
①	Pin	Stainless Steel (SUS304)
②	Clamp	
③	Sleeve	POM
④	Spacer	

Special tool Z059



T-shaped holder PTH-5 1



[Remarks]
- Special tool Z059 is required for installation.

[Sold Separately]
- Special tool Z059
- T-shaped holder PTH-5 1 for point fix.

[Recommended Screws]
- Hexagon socket head cap screw M5

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-180-982	PE-20SR	8~12	51.7	50	200

Refer to 1 : P.907

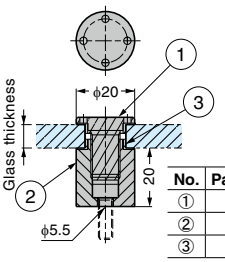
[Special Tool] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-388	Z059	38	20	–

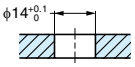
POINT FIX PE-20ST

TEMPERED GLASS





Cut Out Dimensions



No.	Part Name	Material
①	Pin	Stainless Steel (SUS304)
②	Clamp	
③	Spacer	POM

Special tool Z059



T-shaped holder PTH-5 1



[Remarks]
- Special tool Z059 is required for installation.

[Sold Separately]
- Special tool Z059
- T-shaped holder PTH-5 1 for point fix.

[Recommended Screws]
- Hexagon socket head cap screw M5

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-180-981	PE-20ST	8~12	56	50	200

Refer to 1 : P.907

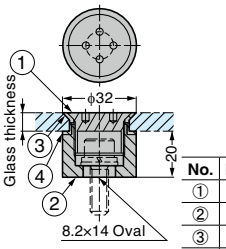
[Special Tool] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-388	Z059	38	20	–

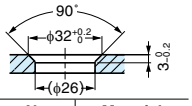
POINT FIX PE-32SR

TEMPERED GLASS





Cut Out Dimensions



No.	Part Name	Material
①	Pin	Stainless Steel (SUS304)
②	Clamp	
③	Sleeve	POM
④	Spacer	

Special tool Z058



T-shaped holder PTH-8 1



[Remarks]
- Special tool Z058 is required for installation.

[Sold Separately]
- Special tool Z058
- T-shaped holder PTH-8 1 for point fix.

[Recommended Screws]
- Hexagon socket head cap screw M8

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-180-592	PE-32SR	8~12	112	10	80

Refer to 1 : P.907

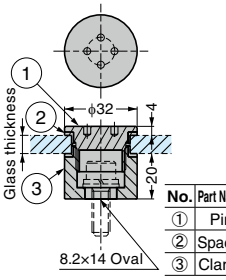
[Special Tool] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-387	Z058	111	20	–

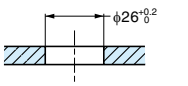
POINT FIX PE-32ST

TEMPERED GLASS





Cut Out Dimensions



No.	Part Name	Material	Finish
①	Pin	Stainless Steel (SUS304)	Satin
②	Spacer	POM	Black
③	Clamp	Stainless Steel (SUS304)	Plain

Special tool Z058



T-shaped holder PTH-8 1



[Remarks]
- Special tool Z058 is required for installation.

[Sold Separately]
- Special tool Z058
- T-shaped holder PTH-8 1 for point fix.

[Recommended Screws]
- Hexagon socket head cap screw M8

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-022-236	PE-32ST	8~12	140	10	80

Refer to 1 : P.907

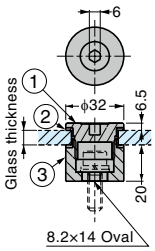
[Special Tool] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-387	Z058	111	20	–

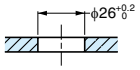
POINT FIX PE-32HT

TEMPERED GLASS





Cut Out Dimensions



No.	Part Name	Material	Finish
①	Pin	Stainless Steel (SUS304)	Satin
②	Spacer	POM	Black
③	Clamp	Stainless Steel (SUS304)	Plain

T-shaped holder PTH-8 1



[Remarks]
- Hex key (nominal 6) is required for installation.

[Sold Separately]
- T-shaped holder PTH-8 1 for point fix

[Recommended Screws]
- Hexagon socket head cap screw M8

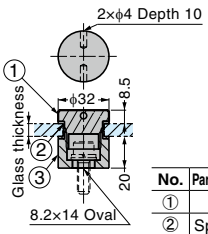
RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-022-238	PE-32HT	8~12	140	10	80

Refer to 1 : P.907

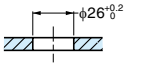
POINT FIX PE-32YT

TEMPERED GLASS





Cut Out Dimensions



No.	Part Name	Material	Finish
①	Pin	Stainless Steel (SUS304)	Satin
②	Spacer	POM	Black
③	Clamp	Stainless Steel (SUS304)	Plain

Special tool Z060



T-shaped holder PTH-8 1



[Remarks]
- Special tool Z060 is required for installation.

[Sold Separately]
- Special tool Z060
- T-shaped holder PTH-8 1 for point fix

[Recommended Screws]
- Hexagon socket head cap screw M8

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-022-237	PE-32YT	8~12	140	10	80

Refer to 1 : P.907

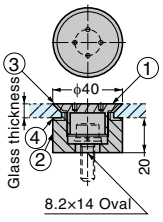
[Special Tool] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-181-398	Z060	112	30	–

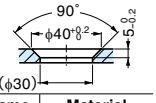
POINT FIX PE-40SR

TEMPERED GLASS





Cut Out Dimensions



No.	Part Name	Material
①	Pin	Stainless Steel (SUS304)
②	Clamp	
③	Sleeve	POM
④	Spacer	

Special tool Z058



T-shaped holder PTH-8 1



[Remarks]
- Special tool Z058 is required for installation.

[Sold Separately]
- Special tool Z058
- T-shaped holder PTH-8 1 for point fix

[Recommended Screws]
- Hexagon socket head cap screw M8

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-180-980	PE-40SR	8~12	182	10	80

Refer to 1 : P.907

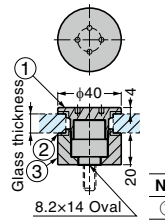
[Special Tool] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-387	Z058	111	20	–

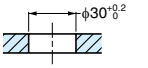
POINT FIX PE-40ST

TEMPERED GLASS





Cut Out Dimensions



No.	Part Name	Material	Finish
①	Pin	Stainless Steel (SUS304)	Satin
②	Spacer	POM	Black
③	Clamp	Stainless Steel (SUS304)	Plain

Special tool Z058



T-shaped holder PTH-8 1



[Remarks]
- Special tool Z058 is required for installation.

[Sold Separately]
- Special tool Z058
- T-shaped holder PTH-8 1 for point fix

[Recommended Screws]
- Hexagon socket head cap screw M8

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	120-022-235	PE-40ST	8~12	196	10	60

Refer to 1 : P.907

[Special Tool] Sold Separately

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-387	Z058	111	20	–

T-SHAPED HOLDER FOR POINT FIX PTH

L=R TEMPERED GLASS



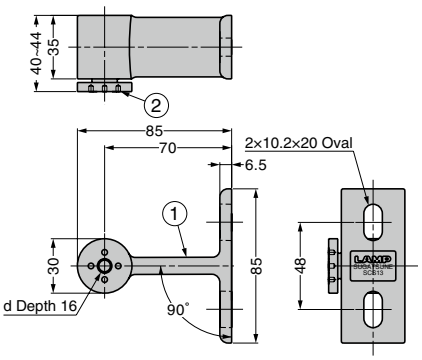
- For point fix (sold separately).
- Used for installing glass to the handrail post with point fix. Please use with point fix recommended in the table below.
- M5 screw type (PTH-5) and M8 screw type (PTH-8) available.
- Non-Handed. Can be installed on left or right side.
- Adjustment range: vertical ±5mm, depth 4mm. Horizontal adjustment is possible by using point fix (PTH-8 only).
- Ideal for exterior application. Acceptable glass weight: 36kg (4 pcs, vertical mounting).

[Remarks]

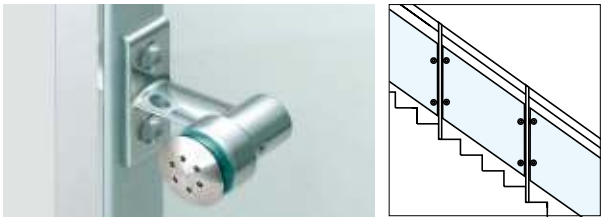
- When installing the recommended point fix to the glass, either special tool Z058, Z059, Z060 (sold separately) or hex key (nominal 6) is required. Special tools vary depending on the point fix used. Please confirm with the table below.
- When adjusting the depth adjustment screw and body of PTH-5 or PTH-8, special tool Z058 or Z059 is required.

[Recommended Screws]

- Hexagon socket button head screw M10
- Recommended tightening torque: 44 N·m (443 kgf·cm)



[Application Example]



No.	Part Name	Material	Finish
①	Body	SCS13	Polished
②	Depth Adjustment Screw	Stainless Steel (SUS304)	Satin

※SCS13 is equivalent of SUS304.

[Body]

RoHS	CAD	Item Code	Item Name	d	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-014-673	PTH-5	M5	419	2	24
G	3D	120-014-672	PTH-8	M8	413	2	24

[Special Tool] Sold Separately



Z059 Z058 Z060

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	270-180-388	Z059	38	20	–
–	3D	270-180-387	Z058	111	20	–
–	3D	270-181-398	Z060	112	30	–

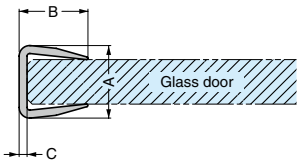
Refer to 1 : P.905, 2 : P.906

[Recommended Point Fix] Sold Separately

RoHS	CAD	Item Code	Item Name	Page	Horizontal Adjustment	T-shaped Holder	Special Tool	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	120-180-982	PE-20SR	1	–	PTH-5	Z059	51.7	50	200
–	3D	120-180-981	PE-20ST					56.0	50	200
–	3D	120-180-592	PE-32SR		±3	PTH-8	Z058	112.0	10	80
G	3D	120-022-236	PE-32ST					140.0	10	80
G	3D	120-022-238	PE-32HT	2			Hex Key 6	140.0	10	80
G	3D	120-022-237	PE-32YT				Z060	140.0	10	80
–	3D	120-180-980	PE-40SR				Z058	182.0	10	80
G	3D	120-022-235	PE-40ST					196.0	10	60

GLASS EDGE PROTECTOR GP

TEMPERED GLASS



- Sealing materail for protecting the edge of glass door.
- One-touch installation.
- Highly transparent.

[Remarks]

- Please choose according to the glass thickness.
- Sold at 3000mm. Can be cut to a required length by customers.

RoHS	CAD	Item Code	Item Name	Material	Colour	A	B	C	Length	Glass Thickness	Weight (kg)	Box (pcs)	Carton (pcs)
G	3D	270-021-586	GP-06	PC	Clear	8.8	10	1.2	3000	6	104	35	–
G	3D	270-021-587	GP-08			11.5	12	1.4		8	144	27	–
G	3D	270-021-588	GP-10			13.7	13	1.5		10	240	25	–
G	3D	270-021-589	GP-12			16.3	14	1.7		12	220	22	–
G	3D	270-021-590	GP-15			19.5	15	1.8		15	250	20	–

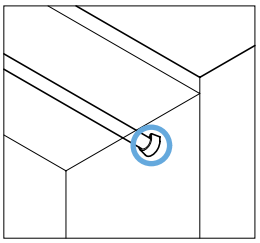
Updated 2017.10.27

PLASTIC SOCKET PS-37

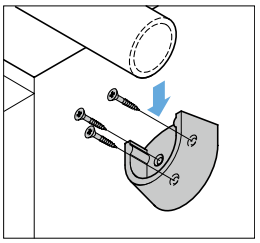


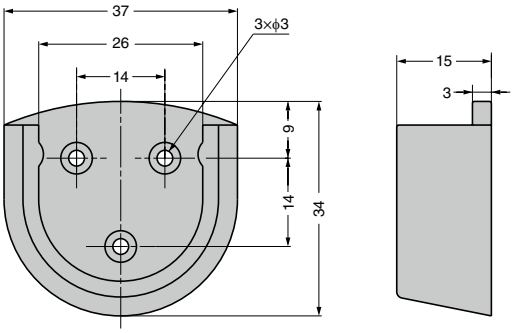
●Ideal for holding pipes (ϕ 25mm) in wardrobes.

[Installation]



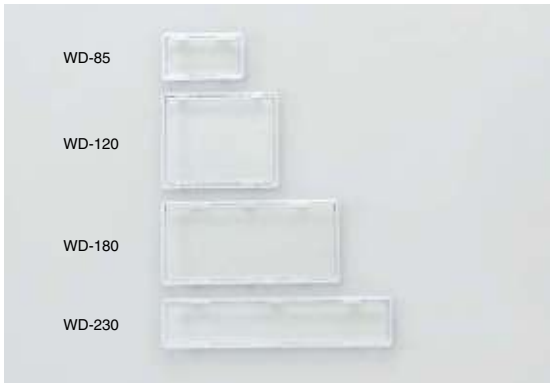
[Cut Out Dimensions]



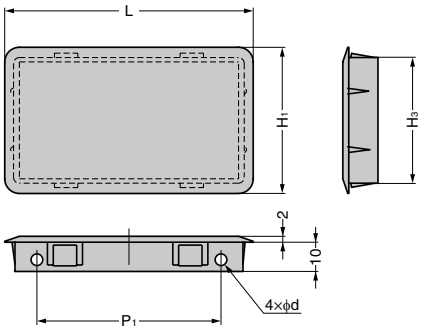


RoHS	CAD	Item Code	Item Name	Material	Colour	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
–	3D	110-030-118	PS-37	Polystyrene	White	196	20	8	100	900

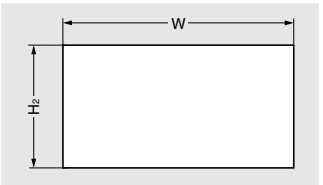
SNAP-ON WINDOW WD



●One-touch installation.
●Crack resistant.



[Cut Out Dimensions]



Dimensions in ( ) of H_2 are for board thickness 1.2.

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	L	P_1	ϕ d	H_1	H_2	H_3	W	Board Thickness	Weight (g)	Box (pcs)
G	3D	210-012-214	WD-85	PC	Clear	85	63	4	50	43.3 (43.5)	43	79	0.8, 1.0, 1.2	14.2	500
G	3D	210-012-215	WD-120			120	54	2.5	100	94 (94.2)	94	113.6		36.6	250
G	3D	210-012-216	WD-180			180	88	4	85	78.4 (78.7)	78	173.5		44	140
G	3D	210-012-217	WD-230			230	138		50	43.3 (43.5)	43	224		36	250

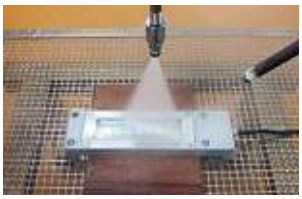
LED TOUGH LIGHT SL-TGH

INSTRUCTION





From above to below
SL-TGH1 (Wide flood type)
SL-TGH2 (Medium flood type)
SL-TGH3 (Narrow spot type)



Can withstand high pressure and high temperature water.

- Conforms to IP69K (high temperature and high pressure water resistant) and IP67F (oilproof, waterproof and dustproof) standards.
- Special fluoro rubber allows direct contact with oil and water.
- Stainless steel body cover and tempered cover glass provide anti-rust and scratch proof properties.
- 3 types (wide flood type, medium flood type and narrow spot type) available depending on the light quantity required and the illumination range.
- Bracket 1 used for adjusting the illumination direction also available.

[Application]

- Lighting of machinery and equipment, spotlights for stores, for exterior use (street lights, porch lights, sign lights, etc.)

[Remarks]

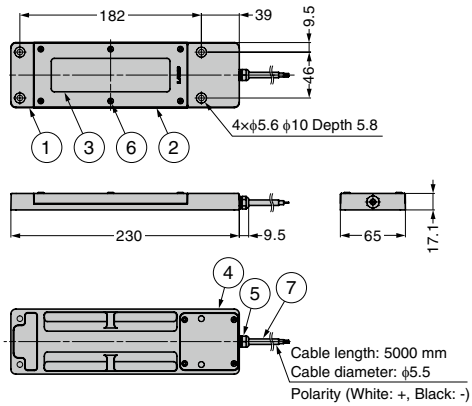
- To ensure heat dissipation, be sure to install the light by pressing the back tightly against the metal surface (steel: above 60,000mm^2). Besides, please reserve a clearance of 10mm or more around.
- Luminescent colour and brightness vary due to the characteristics of LED.
- Do not use in the following environment where the aluminium alloy may corrode.
  - ・Places where the body in contact with metal may be subject to electrolyte splash.
  - ・Acid and alkaline environment

[Sold Separately]

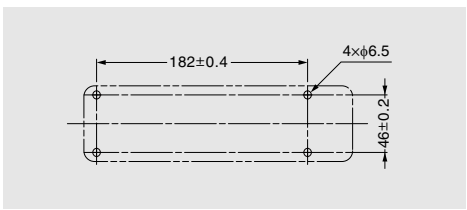
- AC adaptor STD-24010T
- AC adaptor ATS050-A240
- DC connector DC-CNT

[Optional Parts]

- Angle adjustable mounting bracket for tough light SL-WPG-Z 1

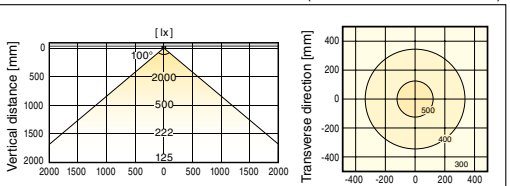


[Cut Out Dimensions] (Common to 3 Types)

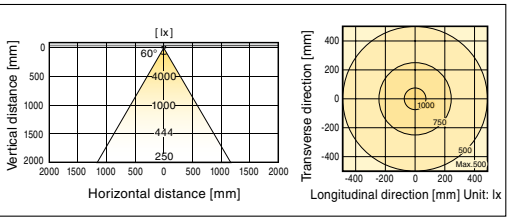


[Illumination Image] Luminous intensity distribution characteristics / Horizontal illuminance (illumination distance 1 m)

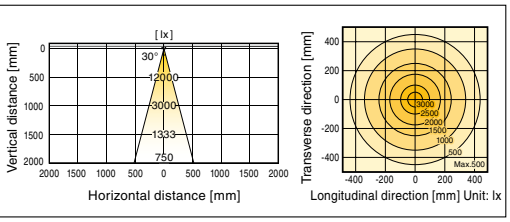
Ⓐ
〈Applicable model〉
SL-TGH1
Wide flood type
DC24V
Neutral white
12.5W



Ⓑ
〈Applicable model〉
SL-TGH2
Medium flood type
DC24V
Neutral white
12.5W



Ⓒ
〈Applicable model〉
SL-TGH3
Narrow spot type
DC24V
Neutral white
12.5W

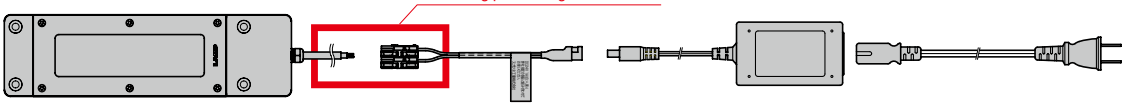


No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy	Silver Enamel Finish
②	Cover	Stainless Steel (SUS304)	Plain
③	Cover Glass	Tempered Glass	Clear
④	Back Cover	Stainless Steel (SUS304)	Plain
⑤	Cable Gland	Brass	Nickel
⑥	Fixing Screw	Stainless Steel (SUS304)	Plain
⑦	Cable	Heat Resistant & Oil Resistant PVC	–

Refer to 1 : P.910

[Wiring Drawing]

●1 light



LED tough light SL-TGH

DC connector DC-CNT
(Sold separately)

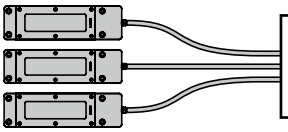
AC adaptor STD-24010T
(Sold separately)

Wiring part enlarged view

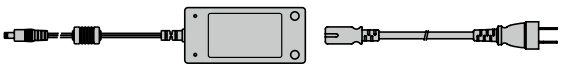


※When connecting to DC connector, please connect white to white and black to black. (Polarity. White: +, Black: -)

●3 lights



When connecting more than 2 lights, customer should perform wiring without using DC connector.



LED tough light SL-TGH

AC adaptor ATS050-A240 high power type
(Sold separately)

RoHS	CAD	Item Code	Item Name	Type	Illumination Image	Illuminance lx※1	Rated Input Voltage	Rated Power Consumption	Colour Temperature K	Luminescent Colour	Illumination Angle	Luminous Flux lm	Weight (g)※2	Box (pcs)	Carton (pcs)
G	3D	220-026-705	SL-TGH1-24-WNSL	Wide Flood Type	Ⓐ	500	DC24V	12.5W	5000	Neutral White	100°	1000	450	1	10
G	3D	220-026-706	SL-TGH2-24-WNSL	Medium Flood Type	Ⓑ	1000					60°	1100		1	10
G	3D	220-026-707	SL-TGH3-24-WNSL	Narrow Spot Type	Ⓒ	3000					30°			1	10

※1 Illuminance at the place 1000mm away from the light. ※2 Excluding cable part.

ANGLE ADJUSTABLE MOUNTING BRACKET FOR TOUGH LIGHT SL-WPG-Z For SL-TGH





●For adjusting the illumination direction of tough light SL-TGH 1.

[Remarks]

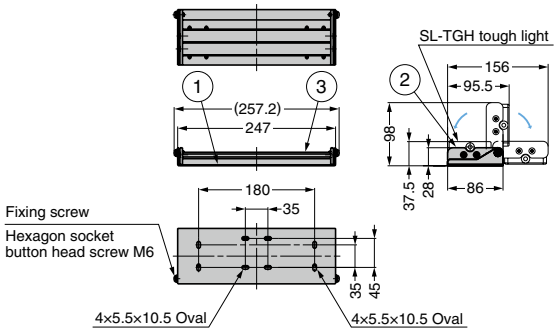
●When installing the bracket to wall or installing tough light to the bracket, please secure with screws.

●Loose the fixing screws before adjusting the angle. Please make sure the fixing screws is tightened when fixing the angle. Do not apply excessive force after fixing.

●Specifications are subject to change without prior notice.

[Parts Included]

●Hexagon socket head cap screw M5×20 (Each 4 pcs for bracket and tough light installation)



No.	Part Name	Material	Finish
①	Base Plate	Stainless Steel (SUS304)	Plain
②	Side Plate		Barrel Polished
③	Flat Frame	Aluminium Alloy	Anodised

RoHS	CAD	Item Code	Item Name	Installation Type	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	220-021-892	SL-WPG-Z	Screw Fixing	560	1	10

Refer to 1 : P.909

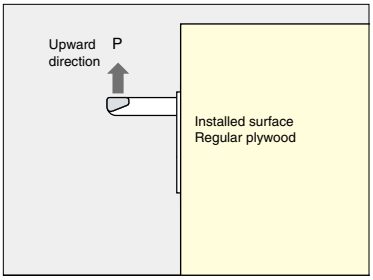
TEST METHODS

■Test Methods

In this catalogue, various values about products with TEST△ icon in the product specification columns are determined by the tests as described below. Values are to provide guidance for the safe use of our products.

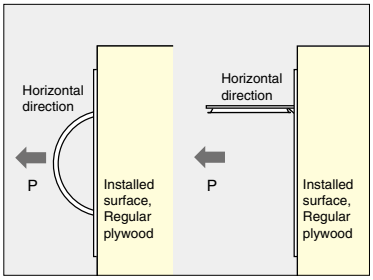
Product without TEST△ icon may not be based on these criteria in some cases.

LOAD CAPACITY TEST (TEST 1)



The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

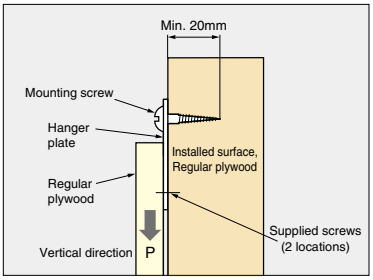
LOAD CAPACITY TEST (TEST 2)



The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

Product may fail or distort if the force is applied in a direction other than the frontal direction. Please do not use on application other than in the pull direction.

HANGING-LOAD CAPACITY TEST (TEST 3)

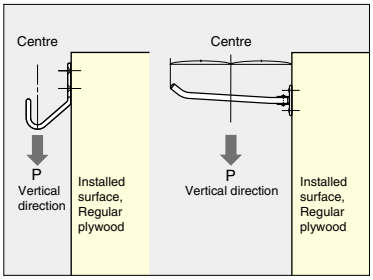


The hanging-load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

This value will vary according to the diameter / length of the screw(s) used and strength of the installed surface.

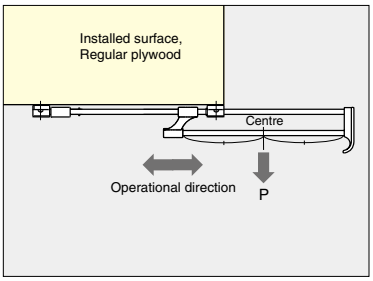
Hanging load of 10 kgf, in case of using round head wood screw 3.8 x 25.

HANGING-LOAD CAPACITY TEST (TEST 4)



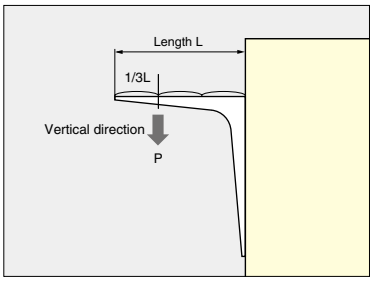
The hanging-load capacity is measured when the force (P) is gently applied at the centre of the product in the direction of the arrow under the condition indicated by the figure.

MAXIMUM HANGING-LOAD TEST (TEST 5)



The maximum hanging-load capacity is measured when the force (P) is gently applied in the direction of the arrow and operated under the condition indicated by the figure. If the load is concentrated at the front tip of the hanger, the front tip may sag or the movement may become heavy.

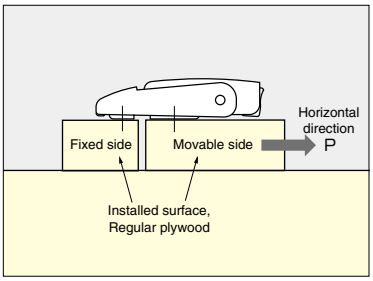
LOAD CAPACITY TEST (TEST 6)



The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

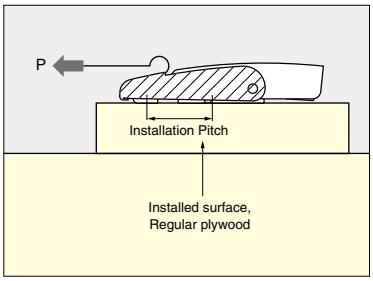
(This is based on the force (W) applied at the centre of the shelf board with its length 4/3 times longer than the shelf bracket or angle bracket.)

LOAD CAPACITY TEST (TEST 7)



The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

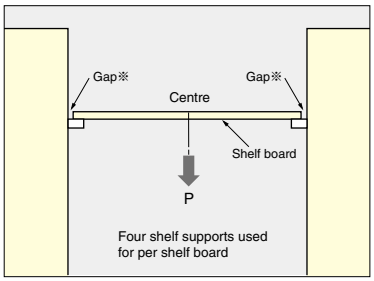
CLAMPING FORCE TEST UNDER STANDARD INSTALLATION (TEST 8)



The capacity of the clamping force under standard installation is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure, and when the shaded portion begins to slide.

ITEM NAME INDEX

LOAD CAPACITY TEST (TEST 9)



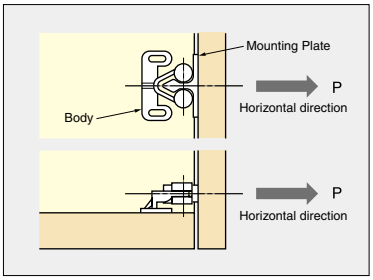
The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.
Follow the conditions below to prevent the shelf supports or shelf board from falling off.

Condition 1 The gap (※) between the shelf board and the side board shall be 1mm or less.
※ The gap between the shelf board and the shelf standard if shelf support is installed on a shelf standard.

Condition 2 Use shelf board which has sufficient durability.

Condition 3 The mounting hole processing dimension of the shelf dowel shall be less than the recommended mounting hole dimension.
(The processing dimension may vary depending on the material of the side board.

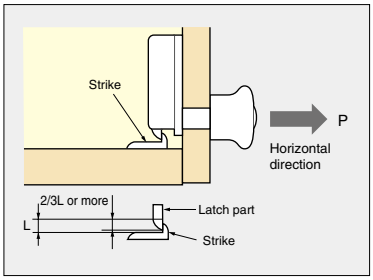
CATCH FORCE TEST (TEST 10)



The catch force is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

Note: Misalignment of the mounting plate and body parts may cause the catch force to decrease or parts failure.

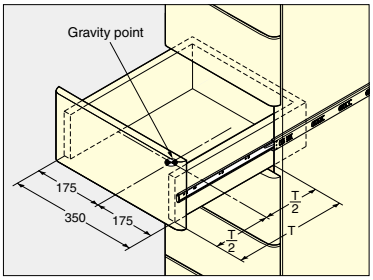
RETAINING FORCE TEST (TEST 11)



The retaining force is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

Note: Latch and strike must be engaged at least 2/3L or more (see the figure).

LOAD CAPACITY TEST (TEST 12)



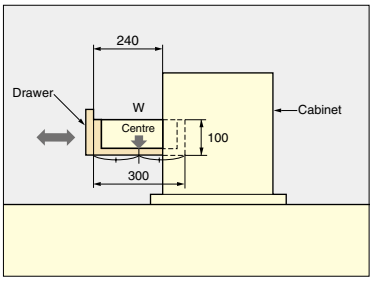
Calculation of slide centre of gravity

The load capacity is measured based on the condition:

- Continuous open-close 50,000 cycles
- Speed 10 cycles per minute
- Load is applied on the gravity point.
  The figure of load capacity includes drawer itself.

Drawer width 350mm

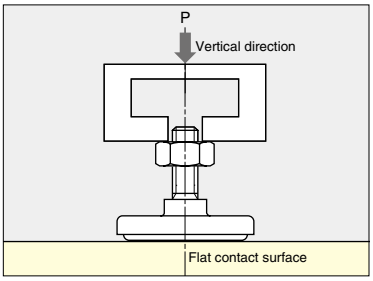
LOAD CAPACITY TEST (TEST 13)



The load capacity is measured when the weight (W) is applied at the centre of the drawer under the condition indicated by the figure and the operation to pull out the drawer by 240mm is repeated.
The gap between drawer and cabinet shall be 1 mm or less.

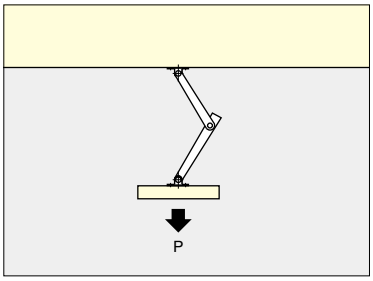
ITEM
NAME
INDEX

LOAD CAPACITY TEST (TEST 14)



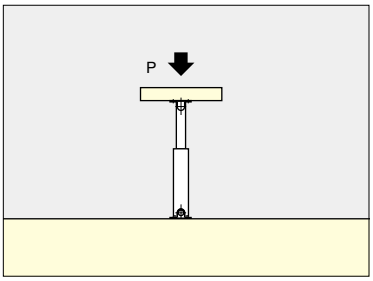
The load capacity is measured when the force (P) is applied in the direction of the arrow under the condition indicated in the figure.
Product may break or distort if the contact surface is not flat.

PULL LOAD TEST (TEST 15)



The pull load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

COMPRESSION LOAD TEST (TEST 16)



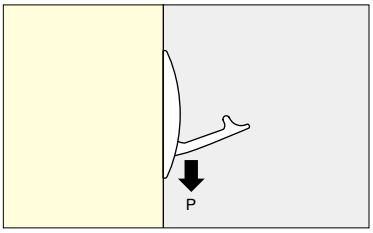
The compression load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

PERMISSIBLE LOAD OF FASTENER (TEST 17)

Permissible load kgf = Ultimate Load ÷ 3

The safety factor will vary depending on the conditions of use.
When used under adverse conditions, please test the fastener in intended application.

HOOK LOAD CAPACITY TEST (TEST 18)



The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

Load capacity kgf = Ultimate Load ÷ 3

However, the safety factor will vary depending on the conditions of use.
When used under adverse conditions, please test the hook in intended application.

For the calculation of hinge load capacity,
Refer to INDEX 📖 P.15 of “HINGES” .

RoHS Directive (2011/65/EU)

(※ For details on our RoHS compliance, please refer to 📖 FRONT P.25.)

Directive for restricting the use of specified hazardous substances to electrical and electronic equipment enforced by the EU (European Union).
(Abbreviation for the Restriction of the use of certain Hazardous Substances in electrical and electronic equipment)
Six types of substances restricted in use: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl, polybrominated diphenyl ether
From late July 2019, the use of di-2-ethylhexyl phthalate, dibutyl phthalate, butyl benzyl phthalate, diisobutyl phthalate is restricted.

SURFACE TREATMENT

Finish	Characteristics
Zinc Plating	Zinc plating is commonly used on steel to prevent oxidation. Chromate is generally applied over zinc to enhance corrosion resistance.
Chromate Conversion Coating	Major coating mainly applied on parts after zinc plated or cadmium plated. Parts are immersed in a solution mainly consisting of chromic acid or heavy chromic acid to create the coating. This is used to improve corrosion resistance and appearance of metals, metal colouration, and is also used as a pre-treatment for painting. Various chromate coatings are developed such as yellow chromate (rainbow colour), clear chromate, black chromate, green chromate, etc.
Chrome Plating	Common electroplating for various industrial purposes. Reflective finish can be achieved by polishing. High hardness and good corrosion resistance along with thermal resistance, abrasion resistance and good adhesion characteristics. Generally used as final finish for various decorative parts and products due to its uniquely deep colouration.
Nickel Plating	Nickel is commonly used for decorative and anti-corrosion purpose because of its stability against air or humidity compared to iron. However, since the surface of the nickel plating will slightly discolour through exposure to air, chrome is often used after nickel to keep the finish/colour. Nickel plating has moderate hardness / corrosion-resistance and widely used on industrial application.
Alumite or Anodising (Anodic Oxidation Film Processing)	Also called the “anodic oxidation film processing” . This process thickens and toughens natural oxide layer on metal, commonly applied to aluminium for corrosion resistance and dyeing. In aluminium anodising, aluminium object serves as the anode (the positive electrode) when electrolysed in the sulfuric acid. This will create a layer of porous oxide film which has high electric insulation and abrasion resistance. The film is normally transparent when it is thin, although it becomes dull as the thickness increases.The pores produced by anodising are closed by a process called sealing, which is done by high-pressurised or boiling-hot deionised water. This process fills the pores and creates a thin layer that is corrosion resistant, suitable for various aluminium parts / products.

※Hexavalent-Chromium (CR6) Free
Sugatsune is strictly controlling the use of chemicals that would adversely impact the environment. We are designing and developing products with minimum use of materials which has adverse environmental impact. Hexavalent chromium compound is especially known for its adverse effects on the human body. We are actively substituting this Hexavalent-chromium (CR6) with the environment friendly Trivalent-chromium (CR3).

MATERIALS

In this catalogue, materials are indicated below. (For some items, only the materials of main parts are shown due to space limitations)

Irons and Steels

Material	Name
Steel	Iron-based screw, washer, etc.
Steel (SS)	Rolled steel for general structure
Steel (S※※C)	Carbon steel for machine structural use (Enter number for ※)
Steel (SECC)	Electrogalvanised steel sheet and steel strip
Steel (SF)	Carbon steel forging
Steel (SGCC)	Hot-dip galvanised steel sheet and steel strip
Steel (SK)	Carbon tool steel
Steel (SPCC)	Cold-rolled steel sheet and steel strip
Steel (SPHC)	Hot-rolled mild steel sheet and steel strip
Steel (SUM)	Sulfur and sulfur-composite free cutting steel
Steel (SUP)	Spring steel
Steel (SW)	Hard steel wire
Steel (SWP)	Piano wire
Steel (SWRH)	High carbon steel wire rod
Steel (SWRM)	Low carbon steel wire rod
Steel (SWCH)	Carbon steel for cold heading
Cast Iron (FC)	Grey iron casting
Stainless Steel	Stainless steel screw, washer, etc.
Stainless Steel (SUS301)	Austenitic stainless steel
Stainless Steel (SUS303)	Austenitic stainless steel
Stainless Steel (SUS304)	Austenitic stainless steel
Stainless Steel (SUS316 SUS316L)	Austenitic stainless steel
Stainless Steel (SUS420)	Martensitic stainless steel
Stainless Steel (SUS430)	Ferritic stainless steel
Stainless Steel (SUS440)	Martensitic stainless steel
Stainless Steel (SUS631)	Precipitation hardening stainless steel
Stainless Steel (SCS13)	Stainless steel casting
Stainless Steel (SCS14)	Stainless steel casting

Non-ferrous Metals

Material	Name
Aluminium Alloy	–
Aluminium Alloy (ADC)	Aluminium alloy die casting
Aluminium Alloy (AC)	Aluminium alloy casting
Zinc Alloy	–
Zinc Alloy (ZDC)	Zinc alloy die casting
Zinc Alloy (BRIC)	A kind of zinc alloy die casting
Brass	–
Free Cutting Brass	–
Phosphor Bronze	–
Phosphor Bronze for Spring	–
Nickel Silver	–
Copper Alloy Casting (CAC)	–
Magnesium Alloy (MDC)	Magnesium alloy die casting
Titanium Alloy	–

Magnets

Material	Name
Ferrite	–
Neodymium	–
Samarium Cobalt	Samarium-cobalt
Alnico	–

Plastics

Material	Name
ABS Resin	Acrylonitrile butadiene styrene
AES Resin	Acrylonitrile ethylene propylene rubber styrene
AS Resin	Acrylonitrile styrene
Cellulose Acetate (CA)	–
Casein (CS)	–
Epoxy Resin (EP)	–
Ethylene Vinyl Acetate (EVA)	–
EVOH Resin	Ethylene vinyl alcohol
FRP	Unsaturated polyester + glass fibre
Melamine Resin (MF)	Melamine formaldehyde resin
Polyamide (PA)	–
Polycarbonate (PC)	–
Polyethylene (PE)	–
PEEK Resin	Polyether ether ketone
High Density Polyethylene (HDPE)	–
Chlorinated Polyethylene (CPE)	–
PBT Resin	Polybutylene terephthalate
PET Resin	Polyethylene terephthalate
Phenol resin (PF)	Phenol formaldehyde resin
Methacrylic Resin (PMMA)	Polymethyl methacrylate
Polyacetal (POM)	–
Polypropylene (PP)	–
PPO Resin	Polypropylene oxide
PPS Resin	Polyphenylene sulfide
PPE Resin	Polyphenylene ether
Polystyrene (PS)	–
High Impact Polystyrene (HIPS)	–
Polytetrafluoroethylene (PTFE)	Polytetrafluoroethylene
Polyvinyl Chloride (PVC)	Polyvinyl chloride
Polyimide (PI)	–
Polyamideimide (PAI)	–
Polyetherimide (PEI)	–
Silicone Resin (SI)	Silicone plastic
Urea Resin (UF)	Urea formaldehyde resin
Unsaturated polyester Resin (UP)	–
~Elastomer	Elastomer

Rubbers

Material
Natural Rubber (NR)
Styrene Butadiene Rubber (SBR)
Butadiene Rubber (BR)
Isoprene Rubber (IR)
Nitrile Rubber (NBR)
Chloroprene Rubber (CR)
Ethylene Propylene Rubber (EPDM)
Isobutylene Isoprene Rubber (IIR)
Urethane Rubber (UR)
Polyurethane Rubber (PUR)
Silicone Rubber (Q)
Fluoro Rubber (FKM)

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SUGATSUNE

Sugatsune is a comprehensive manufacturer of

industrial components for industrial equipment.

With the motion and design of industrial components and comprehensive strength,

we expand the potential of industrial equipment.

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Updated 2017.10.27



30,000 Products

Sugatsune's product lineup includes various industrial components such as hinges, stays, slides and high-quality general-purpose items such as handles, magnet catches, hooks, and casters, etc. Based on our own brand "LAMP®" products, we add state-of-the-art overseas products, proposing a wide range of options for the customers.

For details about product lineup, refer to… FRONT P.26 "Outline INDEX"



Motion — Motion Design Tech

Motion Design Tech is Sugatsune's patented technology giving further motion functions to "opening and closing". With 5 types of motion, it improves the operability of doors or lids. Meanwhile, it can also improve the efficiency of work involving opening and closing movements, increasing the added value of the device and equipment. Different types of motion can also be combined to accommodate fine requirements.



For Motion Design Tech, refer to … FRONT P.4



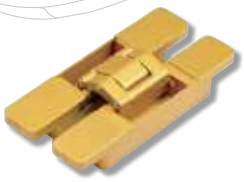
Design

Now, enterprises are making every endeavour to improve the users' satisfaction. As an important ring of brand promotion, design improvement is also required even for industrial equipment. At Sugatsune, the development staff developed many products with beautiful design. A number of products have been awarded the Good Design Award, greatly improving the design of equipment.



Building the future: 2020 and forward.

Sugatsune has always focused on developing new products, solutions and markets in order to better serve our customers.
Gearing towards the year 2020, which will mark not only Sugatsune's 90th anniversary, but also the Tokyo Olympic and Paralympic games, we will strive to find more universal solutions, better looking products and a closer service for our customers.
The next step is of course the magic 100th anniversary in 2030!



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Comprehensive Strength — From Development, Production to Logistics

We offer original, fast and careful OEM and ODM service. It's our manufacturing and testing equipment and a large number of development, design and manufacturing personnel accounting for 15% of the staff to realise all of those.



Machine tools



3D printer



Constant temperature and humidity chamber



Handle made by 3D printer

Motion Design Tech Lab
(Development laboratory)



Development



Design



Planning



Production



Quality Control



Distribution

Focusing on prompt shipment, we will always have various kinds of products in stock in a space of over 34,500m^2 in total floor area combined with the main Chiba Logistics Centre (S.B.C) and the Osaka Logistics Centre (S.B.W) newly built in 2016.



For details on OEM and ODM, refer to… P.923

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SUGATSUNE

Commitment to Quality and the Environment

All departments from planning, manufacturing to sales have a high awareness of quality, and through unremitting efforts, all the domestic bases in Japan have achieved ISO 9001 certification (registration No.: JSAQ384).We also actively engaged in environmental conservation activities, and achieved ISO 14001 certification (registration No.: JSAE597) at our development bases, namely Chiba Factory of Chiba Production Division and Logistics Centre of Logistics Division.

Quality Management System ISO 9001 certification (certification/registration) approved

Quality Policy: We pursue truth, essence and ideal





<Scope of Registration>
Design, development, production and purchase and sales of furniture fittings, architectural hardware, machinery hardware, components for electronic and communication equipment, metal furniture and lobby furnishings.
<Registered Organisation>
Domestic bases in Japan



Sugatsune America also achieved ISO 9001 certification (certification/registration)

In 2011, SUGATSUNE AMERICA, INC. also achieved ISO9001 certification/registration.

Environmental Management System ISO 14001 certification (certification/registration) approved





Environmental Policy (2016)
Sugatsune Kogyo's Chiba Production Division – Chiba Factory and Logistics Division – Logistics Centre, which conduct activities related to the design, development, production and logistics of furniture fittings, architectural hardware, machinery hardware, components for electronic and communication equipment, metal furniture and lobby furnishings, recognise the importance of protecting the global environment and focus on the following items in promoting environmentally friendly business activities.

1. Sugatsune will provide environment-friendly products to our customers while considering resource saving, durability, recyclability, and cleanliness beginning from development stage.
2. Sugatsune will comply with laws and regulations for environmental preservation and other requirements agreed by Chiba Factory of Chiba Production Division and Logistics Centre of Logistics Division.
3. In order to reduce our environmental impact, Sugatsune will continue to perform the following activities.
   (1) Reduce our consumption of electricity
   (2) Reduce industrial wastes (waste plastic, waste oil and combustible refuse, etc.)
   (3) Promote separation and recycling of garbage
   (4) Actively conduct greening and landscape maintenance
4. Every one of our employees will work to save energy, conserve resources and reduce wastes, create a beautiful global environment and coexist with the local community.
5. Sugatsune will maintain its environment management system, make continuous improvements and prevent pollution through environmental audits and environmental education.

RoHS Directive Compliance

In our original products (LAMP, Zwei L), we sequentially take substitution and prohibition measures aiming at conformity to the "RoHS Directive" enforced in EU. For purchased items, we also grasp the content information.
In addition to the six substances specified in RoHS Directive, we also grasp the information on the content and use of environmentally hazardous substances specified by us and make it available to our customers.
We have equipped our Logistics Centre of Logistics Division with X-ray fluorescence spectrometer (XRF) as an instrument for verifying environmentally hazardous substances and conducting in-house analysis and testing.



X-ray fluorescence spectrometer (XRF)

For icon of RoHS compliant products in this catalogue, refer to... FRONT P.25

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Global Expansion

Besides setting up bases overseas, we are also exporting to more than 60 countries and regions worldwide.

We are SUGATSUNE


Reading, UK


Dusseldorf, Germany


Shanghai, China


Los Angeles, USA


Montreal, Canada


Guangzhou, China


Chicago, USA


Mumbai, India

Business Partner Countries & Regions
Sweden/Netherlands/Belgium/Spain/Portugal/France/Maltese/Monaco/Denmark/Sweden/Finland/Norway/Cyprus/Greece/Brazil/Argentina/Brazil/Argentina/Chile/Britain/Ireland/Germany/Italy/Austria/Oman/Bahrain/Jordan/Iran/Egypt/Qatar/India/Pakistan/Sri Lanka/Bangladesh/South Africa/Russia/Poland/Romania/Bulgaria/Estonia/Lithuania/Turkey/Israel/Lebanon/Saudi Arabia/Kuwait/Australia/New Zealand/Indonesia/Singapore/Malaysia/Thailand/Myanmar/Vietnam/Philippines/Mongolia/China/Hong Kong/Taiwan/Korea

For details about each base, refer to... P.920

Overseas Showrooms

Please make use of them for information sharing with local corporations and local purchase.


Shanghai **Renewed in 2015!**


Mumbai


Chicago

For details about locations, etc., refer to ... P.920

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Overseas Subsidiaries

Asia

China / SUGATSUNE SHANGHAI CO.,LTD.



Shanghai Office & Showroom

1F No.2 Wan Rong Yi Road, Jingan District,
Shanghai 200436, China

TEL +86-21-3632-1858
400-680-2780 (toll-free within China)
FAX +86-21-3632-1868



Guangzhou Office

Room 206, Fu Du Bulding, No.11-13
Jie Jin Zhong Road, Shi Qiao, Panyu District,
Guangzhou 511405, China

TEL +86-20-6639-3554
FAX +86-20-6230-9772

Europe

United Kingdom / SUGATSUNE KOGYO (UK) LIMITED



Unit 635 Wharfedale Road, Winnersh Triangle,
Wokingham RG41 5TP England

TEL +44-118-9272-955

India / SUGATSUNE KOGYO INDIA PRIVATE LIMITED



Mumbai Office & Showroom

No. G-002 & B-02, Ground Floor, KANAKIA ATRIUM - 2 Next to
Courtyard Marriott Hotel, Andheri Kurla Road,
Andheri East, Mumbai-400093, Maharashtra, India

TEL +91-22-28314490 / 91 / 92
FAX +81-3-3866-4447 (Domestic Export Department)

Germany / SUGATSUNE EUROPE GMBH



Heerdter Lohweg 87-89 D-40549 Düsseldorf Germany

TEL +49-211-53812-900
FAX +49-211-53812-901

Canada / SUGATSUNE CANADA, INC.



3775 Boulevard du Tricentenaire Montreal, Quebec H1B-5W3
Canada

TEL +1-514-312-5267
FAX +1-514-399-0538

North America

USA / SUGATSUNE AMERICA, INC.



Corporate Headquarters & Distribution

18101 Savarona Way. Carson, CA 90746 U.S.A.

TEL +1-310-329-6373
FAX +1-310-329-0819



Chicago Office & Showroom

121 West Wacker Drive #1007, Chicago, IL 60601 U.S.A.

TEL +1-312-461-1081
FAX +1-312-461-1082

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SUGATSUNE

Updated 2017.10.27

History of SUGATSUNE

1930
"Sugatsune Shoten" is founded by Tsunesaburo Sugasawara.
Sells European style furniture hardware.

1943
The company changes its name to
"Sugatsune Kogyo Co., Ltd.",
manufacturing metal accessories for communication until the end of the war.


The first home shop after the war (1946)

1949
The company starts manufacture furniture hardware and architectural hardware.

1968
Capital is increased to 50 million yen. Shin-ohashi Sales Office is moved to the site of Tokyo Factory (Adachi-ku, Tokyo), and Adachi Sales Office is set up.

1969
Chiba Factory is constructed on the Trading Estate at Matsuo-cho in Chiba. This marked the beginning of mass production.

1975
Osaka Sales Office (current Osaka Branch) is opened.

1982
A logistics centre (S.B.C) with a floor area of 4,026m^2 is completed at the site of Chiba Factory.
Sugatsune America Inc. is established in the United States.

1987
Sugatsune Kogyo comes up with an original damper technology "Lapcon".

1992
Sugatsune Kogyo's President Sugasawara is presented with a Medal with a Blue Ribbon by the government of Japan.
A new logistics centre (S.B.C) with modern facilities is completed. (Floor area of 8,884m^2)

1998
Sugatsune Kogyo's President Sugasawara receives Gold and Silver Rays, an Order of the Sacred Treasure.
A technical centre is built at the site of Chiba Factory.
Nagoya Sales Office is opened. The company registers for ISO 9001 certification.

2004
Sendai and Fukuoka sales offices are opened. An office and showroom are established in Shanghai, China.

2005
The largest showroom in the industry in Japan is opened at Iwamoto-cho, Chiyoda-ku, Tokyo. A large exhibition is held to commemorate the opening of the new showrooms in Tokyo and Osaka, and a new product presentation is held in Fukuoka and Sendai. Sugatsune UK is established in Great Britain. Shanghai Office is changed to Sugatsune Shanghai.

2006
A showroom is opened in Nagoya, and an exhibition is held to commemorate the opening of the new showroom.
New head office building No.4 and No.5 are completed.

2007
A new building at logistics centre (S.B.C) is completed. (Floor area of 7,413m^2)
Nagoya Sales Office is moved from Naka-ku to Kita-ku.

2009
The product concept "Motion Design Tech" is presented for giving further motion functions to the "opening and closing of doors or lids".

2011
Kanagawa Sales Office is opened. Fukuoka Sales Office is moved and a showroom is opened.
A showroom and sales office are opened in Chicago by Sugatsune America.

2012
Kyoto Sales Office is opened.

2013
Kyoto showroom is opened.

2015
Sugatsune Kogyo India Private Limited is established in India. A showroom is opened in Mumbai, India.
A new logistics centre (SBW) is established in Osaka .

2016
Sugatsune Europe GmbH is established in Germany.
Sugatsune Canada, Inc is established in Canada.

Why it is called LAMP? Origin of Brand

HAND_LAMP Mark
Founding time ~ Around 1990

LAMP Mark
Around 1990 ~ Now

It is inspired by turning one kanji character in the founder's name Tsunesaburo Sugasawara to "", using lamp as trademark to express the "use of fire" which is the symbol of wisdom and courage.
At that time, it was just the chaotic period after the end of the war.It expressed the desire to brighten society with Sugatsune' s products even a little.
Even if nowadays the world has changed completely, it is still used as a logo to promise Sugatsune' s solid quality.

Company Outline

Company Name	**Sugatsune Kogyo Co., Ltd.**
President	Jun Sugasawara
Founded	February 11, 1930
Established	November 20, 1943
Capital	400 million yen (January, 2016)
Number of Employees	460 (January, 2016)
Business Segment	Industrial equipment related components / Industrial components / Components for electronic and communication equipment / Lighting apparatus / Metal furniture / Metal fixtures / Metal custom-made items / Furniture hardware / Architectural hardware / Decorative hardware / Imported hardware / Others
Correspondent Banks	Bank of Tokyo-Mitsubishi UFJ Mizuho Bank Sumitomo Mitsui Banking Corporation Resona Bank

Business Partner Countries & Regions
Sweden/Netherlands/Belgium/Spain/Portugal/France/Maltese/Monaco/Denmark/Sweden/Finland/Norway/Cyprus/Greece/Brazil/Argentina/Brazil/Argentina/Chile/Britain/Ireland/Germany/Italy/Austria/Oman/Bahrain/Jordan/Iran/Egypt/Qatar/India/Pakistan/Sri Lanka/Bangladesh/South Africa/Russia/Poland/Romania/Bulgaria/Estonia/Lithuania/Turkey/Israel/Lebanon/Saudi Arabia/Kuwait/Australia/New Zealand/Indonesia/Singapore/Malaysia/Thailand/Myanmar/Vietnam/Philippines/Mongolia/China/Hong Kong/Taiwan/Korea

Registration ISO9001 : JSAQ384
ISO14001 : JSAE597
(ISO 9001: Sugatsune' s bases in Japan, ISO 14001: Chiba Factory of Chiba Production Division and Logistics Centre of Logistics Division)
General Construction Business Licence No.: Tokyo Metropolitan Governor Licence (General – 25) No.140997

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Tokyo SR & Office





Osaka SR & Office





Nagoya SR & Office




Kyoto SR & Office





Fukuoka SR & Office





Sendai Office



Kanagawa Office



Factory /Motion design tech labo




Warehouse & Distribution centre





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Sugatsune Also Offers Made-to-order Products! For more information, please refer to 🕮 FRONT P.2.

What is your special order?

OEM

Specification change of ready-made item (Semi order)

We will customise according to your requests, such as change of size/colour from the items in the catalogue.

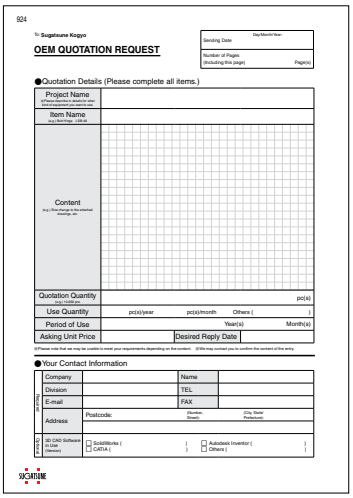
ODM

Planning and design from scratch (Full order)

We will plan and design original products from scratch based on our rich experience and know-how.

Please complete the quotation request form

Please select the quotation request form according to your custom requirements, and fill in the necessary items.


924

To: Sugatsune Kogyo

OEM QUOTATION REQUEST

Sending Date (Day/Month/Year)

Number of Pages (including this page) Page(s)

●Quotation Details (Please complete all items.)

Project Name	
Item Name	
Content	
Quotation Quantity	pc(s)
Use Quantity	pc(s)/year pc(s)/month Others ( )
Period of Use	Year(s) Month(s)
Asking Unit Price	Desired Reply Date

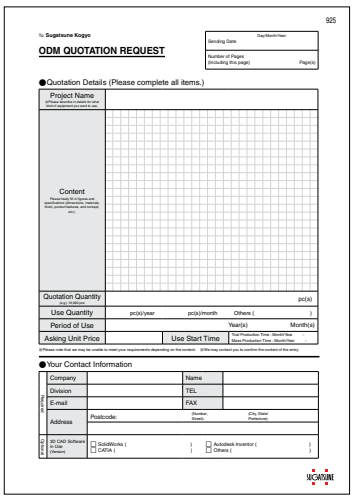
※Please note that we may be unable to meet your requirements depending on the content. ※We may contact you to confirm the content of the entry.

●Your Contact Information

Company		Name	
Division		TEL	
E-mail		FAX	
Address	Postcode: (Number, Street) (City, State/ Prefecture)		
3D CAD Software in Use (Version)	☐ SolidWorks ( ) ☐ CATIA ( )	☐ Autodesk Inventor ( ) ☐ Others ( )	

SUGATSUNE

OEM Quotation Request


925

To: Sugatsune Kogyo

ODM QUOTATION REQUEST

Sending Date (Day/Month/Year)

Number of Pages (including this page) Page(s)

●Quotation Details (Please complete all items.)

Project Name	
Content	
Quotation Quantity	pc(s)
Use Quantity	pc(s)/year pc(s)/month Others ( )
Period of Use	Year(s) Month(s)
Asking Unit Price	Use Start Time Total Production Time: Month/Year Mass Production Time: Month/Year

※Please note that we may be unable to meet your requirements depending on the content. ※We may contact you to confirm the content of the entry.

●Your Contact Information

Company		Name	
Division		TEL	
E-mail		FAX	
Address	Postcode: (Number, Street) (City, State/ Prefecture)		
3D CAD Software in Use (Version)	☐ SolidWorks ( ) ☐ CATIA ( )	☐ Autodesk Inventor ( ) ☐ Others ( )	

SUGATSUNE

ODM Quotation Request

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SUGATSUNE

To: **Sugatsune Kogyo**

OEM QUOTATION REQUEST

Sending Date	Day/Month/Year:
Number of Pages (Including this page)	Page(s)

●Quotation Details (Please complete all items.)

Project Name ※Please describe in details for what kind of equipment you want to use.			
Item Name (e.g.) Butt Hinge LSB-40			
Content (e.g.) Size change to the attached drawings, etc.			
Quotation Quantity (e.g.) 10,000 pcs	pc(s)		
Use Quantity	pc(s)/year	pc(s)/month	Others ( )
Period of Use	Year(s)	Month(s)	
Asking Unit Price		Desired Reply Date	

※Please note that we may be unable to meet your requirements depending on the content. ※We may contact you to confirm the content of the entry.

●Your Contact Information

Required	Company		Name	
	Division		TEL	
	E-mail		FAX	
	Address	Postcode:	(Number, Street):	(City, State/ Prefecture):
Optional	3D CAD Software in Use (Version)	☐ SolidWorks ( ) ☐ CATIA ( )		☐ Autodesk Inventor ( ) ☐ Others ( )

SUGATSUNE

To: **Sugatsune Kogyo**

ODM QUOTATION REQUEST

Sending Date	Day/Month/Year:
Number of Pages (Including this page)	Page(s)

●Quotation Details (Please complete all items.)

Project Name ※Please describe in details for what kind of equipment you want to use.			
Content Please freely fill in figures and specifications (dimensions, materials, finish, product features, and concept, etc.).			
Quotation Quantity (e.g.) 10,000 pcs	pc(s)		
Use Quantity	pc(s)/year pc(s)/month Others ( )		
Period of Use	Year(s) Month(s)		
Asking Unit Price		**Use Start Time**	Trial Production Time : Month/Year ~ Mass Production Time : Month/Year ~

※Please note that we may be unable to meet your requirements depending on the content. ※We may contact you to confirm the content of the entry.

●Your Contact Information

Required	Company		Name	
	Division		TEL	
	E-mail		FAX	
	Address	Postcode: (Number, Street): (City, State/ Prefecture):		
Optional	3D CAD Software in Use (Version)	☐ SolidWorks ( ) ☐ CATIA ( )	☐ Autodesk Inventor ( ) ☐ Others ( )	

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100-C46/19SUS304B	160-073-870	P.114
100-C46/9SUS304B	160-073-884	P.116
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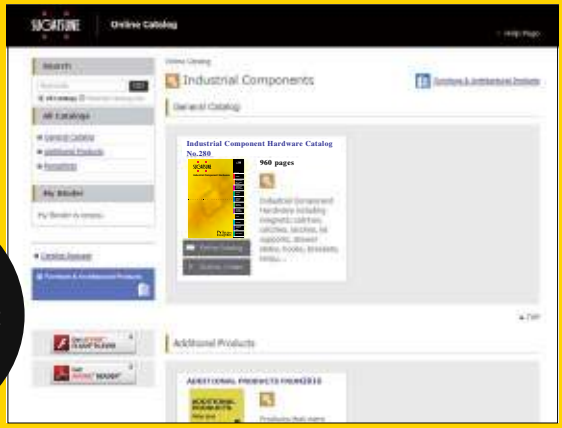
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Full of convenient functions! Please use the digital web catalogue



Batch search from all catalogues

You can search for the required information from all catalogues of Sugatsune.

Catalogue List

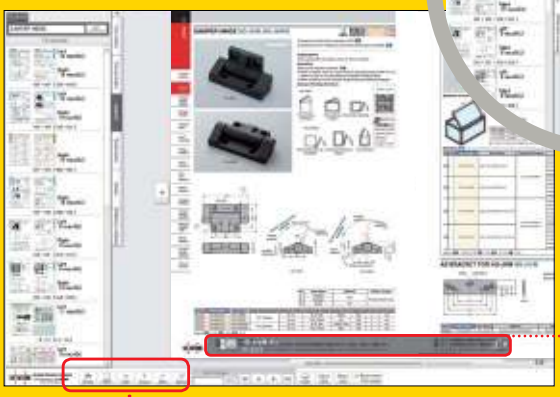
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Displays all pages you want to see at one time

You can search for the pages on which the specified keyword is included.
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Easy Operation



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You can print the displayed page. By checking “Including sticky note and pen”, the recorded sticky note/pen will be printed.

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When you select an area, the wording included in the selected area is extracted as text.



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Easy to use as it is

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You can add a sticky note of the selected colour and write a memo to the displayed page. You can list only the pages with sticky notes.



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How to select components such as Lapcon stays and torque hinges?

Sasuga-kun can address such concerns!!



What is… Sasuga-kun

It's a web-based tool that can automatically calculate the torque required and select (※) suitable hinges, stays and other products, simply by entering the movement, size, weight and centre of gravity of a door.

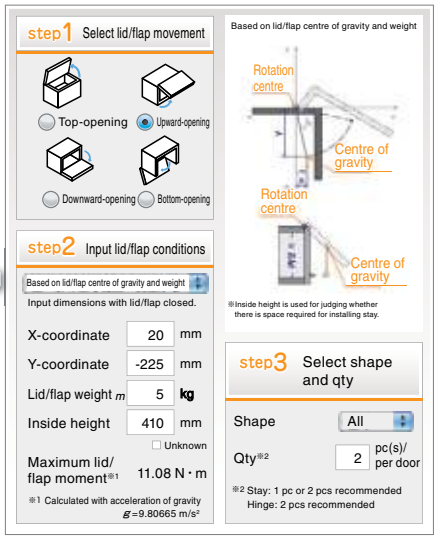
※For some products, there is also a simulation tool that can check the movement of a door by displaying a graph instead of selection. The selection is the result of calculation and for reference only. Be sure to confirm by real equipment or test machine before making a use decision.

It's very simple to use!!

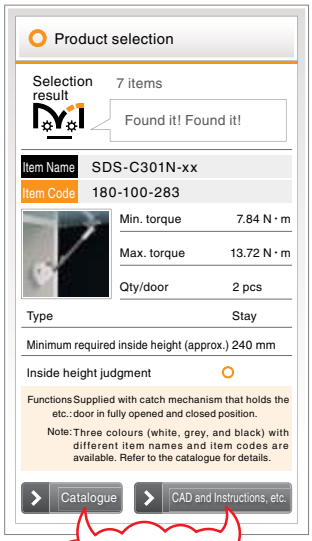
1 Select kind of movement



2 Input conditions



3 Choose a product !



More details may also be obtained!

●Can also select a variety of products such as torque stays and SLS-ELAN, etc.!

No Registration Required Free

Let's try to use **"Sasuga-kun"** right now!

From PC

Enter by clicking the Sugatsune homepage.

Selection Tool "Sasuga-kun"

From tablet

Scan the 2D barcode on the right.

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SUGATSUNE

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