
New Products

Architectural and Furniture Hardware

Introducing new products
not included in 240A catalogue

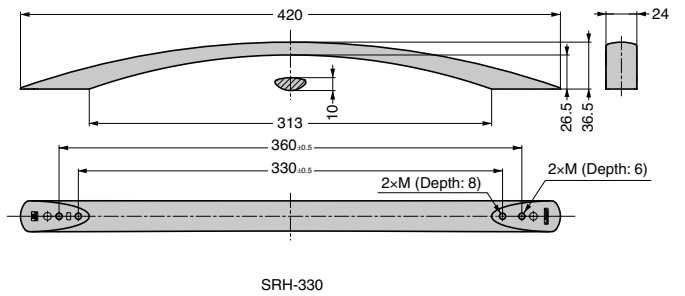
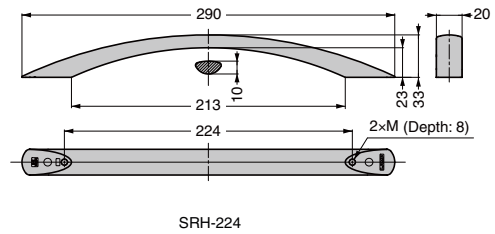
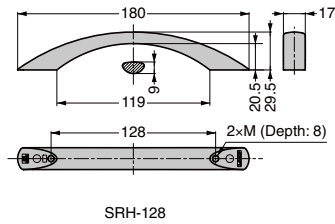
ALUMINIUM DOOR HANDLE SRH Antibacterial Type



- Sleek handle with flowing curve design.
- Designed to protrude only a small amount.
- Has anti-bacterial coating.

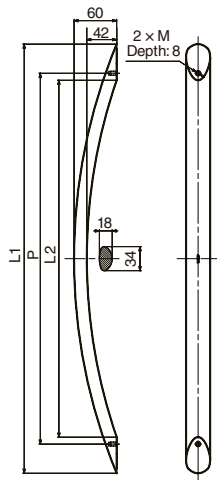
[Applications]

- Medical and diagnostic equipment.



RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	M	Load Capacity		Weight (g)	Box (pcs)	Carton (pcs)
							N	kgf			
●	●	100-044-288	SRH-128SL-M4	Aluminium Alloy (ADC)	Silver Enamel Finish	4	500	51	68	10	80
●	●	100-044-289	SRH-128SL-M5			5				10	80
●	●	100-044-290	SRH-128BL-M4		Matt Black Enamel Finish	4				10	80
●	●	100-044-291	SRH-128BL-M5			5				10	80
●	●	100-044-292	SRH-224SL-M4		Silver Enamel Finish	4				10	80
●	●	100-044-293	SRH-224SL-M5			5	10	80			
●	●	100-044-294	SRH-224BL-M4		Matt Black Enamel Finish	4	10	80			
●	●	100-044-295	SRH-224BL-M5			5	10	80			
●	●	100-044-296	SRH-330SL-M4		Silver Enamel Finish	4	400	41	233	10	40
●	●	100-044-297	SRH-330SL-M5			5				10	40
●	●	100-044-298	SRH-330BL-M4		Matt Black Enamel Finish	4				10	40
●	●	100-044-299	SRH-330BL-M5			5				10	40

ALUMINIUM DOOR HANDLE ASH



[Remarks]

- Designed for single-sided mount. (Not available with double-sided mount)

[Recommended Screw]

- M6 screw, M8 screw

[3 Finishes]



RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	L ₁	L ₂	P	M	Load Capacity		Weight (g)	Box (psc)				
										N	kgf						
●	●	100-042-506	ASH-400SL	Aluminium Alloy	Satin and Silver/Anodised	391.9	323	335	M6	500	51	482	10				
●	●	100-042-507	ASH-400BL		Satin and Black/Anodised								10				
●	●	100-042-508	ASH-400ST		Satin and Stainless Steel/Anodised								10				
●	●	100-042-509	ASH-600SL		Satin and Silver/Anodised	604	502	522					M6	500	51	725	10
●	●	100-042-510	ASH-600BL		Satin and Black/Anodised												10
●	●	100-042-511	ASH-600ST		Satin and Stainless Steel/Anodised												10
●	●	100-042-512	ASH-800SL		Satin and Silver/Anodised	822.7	686	710	M8	500	51	978	5				
●	●	100-042-513	ASH-800BL		Satin and Black/Anodised								5				
●	●	100-042-514	ASH-800ST		Satin and Stainless Steel/Anodised								5				

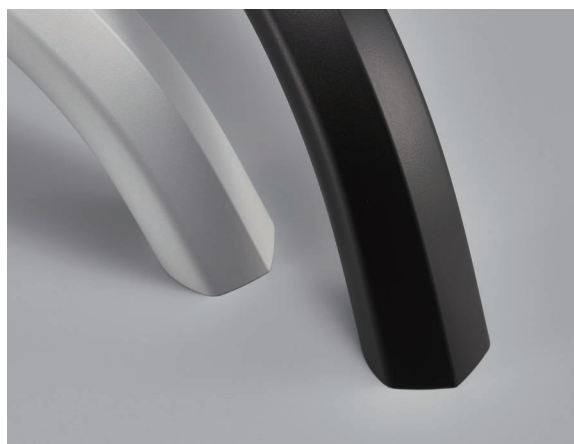
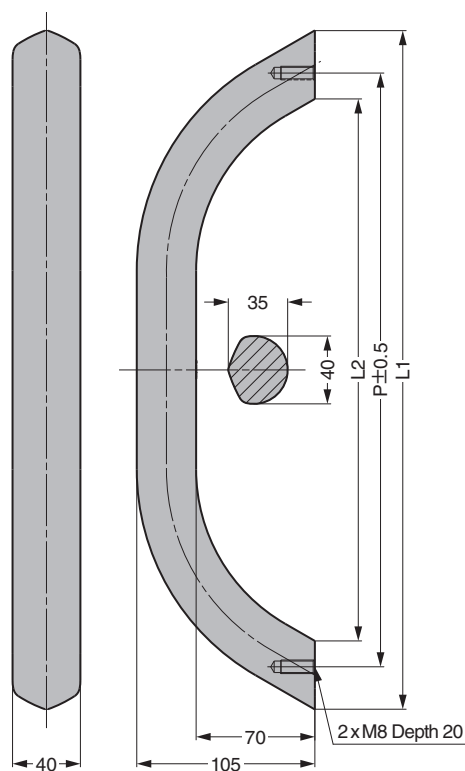
MACHINERY HANDLE MMH



- Cross-section is thicker than the MSH **1**, which makes this handle suitable for use in large machine tools.
- Ideal for inset sliding doors. The handle is designed to be higher than common handles, which prevents hands from accidentally hitting the doorframe when sliding.
- Back side of the handle is large and round, which prevents hands from hurting even when grasping tightly.
- Harmonious design. The handle has a centerline helping it harmonise with machine tools with chamfered edges.

[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 in places that are reinforced.
- Surface colour of installation side may discolour. This does not affect the performance.



RoHS	CAD	Item Code	Item Name	Material	Finish	L1	L2	P	Load Capacity		Weight (g)	Box (pc)
									N	kgf		
●	●	100-043-781	MMH-350SL	Aluminium Alloy	Matte Silver/Anodised	400	319.5	350	1000	102	1250	1
●	●	100-043-782	MMH-350BL		Matte Black/Anodised							1
●	●	100-043-783	MMH-550SL		Matte Silver/Anodised	600	519.5	550				1
●	●	100-043-784	MMH-550BL		Matte Black/Anodised							1
●	●	100-043-785	MMH-750SL		Matte Silver/Anodised	800	719.5	750				1
●	●	100-043-786	MMH-750BL		Matte Black/Anodised							1

Refer to **1** : No.240A P.11-6

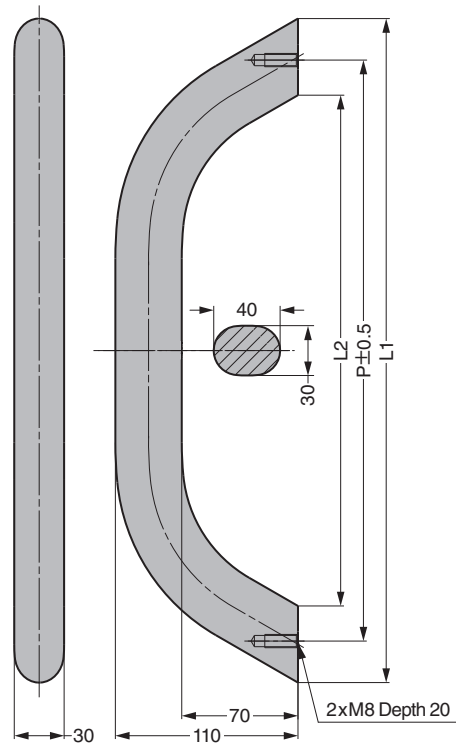
MACHINERY HANDLE MGH



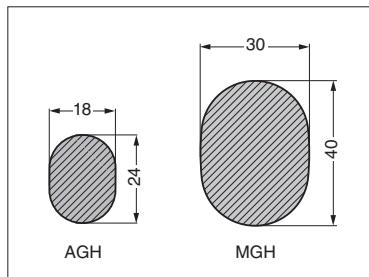
- Cross-section is thicker than the AGH **1**, which makes this handle suitable for use in large machine tools.
- Ideal for inset sliding doors. The handle is designed to be higher than common handles, which prevents hands from accidentally hitting the doorframe when sliding.
- Back side of the handle is large and round, which prevents hands from hurting even when grasping tightly.
- Easy-to-use design. The ellipse cross-section allows it to comfortably fit a human hand.

[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 in places that are reinforced.
- Surface colour of installation side may discolour. This does not affect the performance.



[Cross-section]



Can be used with the AGH **1** for design harmonisation.

RoHS	CAD	Item Code	Item Name	Material	Finish	L ₁	L ₂	P	Load Capacity		Weight (g)	Box (pc)
									N	kgf		
●	●	100-043-775	MGH-350SL	Aluminium Alloy	Matte Silver/Anodised	400	308	350	1000	102	1170	1
●	●	100-043-776	MGH-350BL		Matte Black/Anodised							1
●	●	100-043-777	MGH-550SL		Matte Silver/Anodised	600	508	550			1710	1
●	●	100-043-778	MGH-550BL		Matte Black/Anodised							1
●	●	100-043-779	MGH-750SL		Matte Silver/Anodised	800	708	750			2250	1
●	●	100-043-780	MGH-750BL		Matte Black/Anodised							1

Refer to **1** : No.240A P.11-7

STAINLESS STEEL DOOR HANDLE SLH

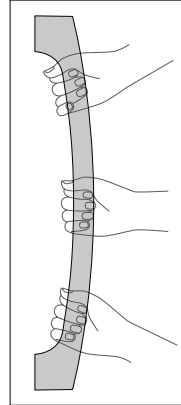
SUS



- All parts are made of stainless steel for high corrosion resistance.
- Has smooth streamlined shape and premium satin finish.
- Ergonomically designed. It is easy to hold any part of the handle.

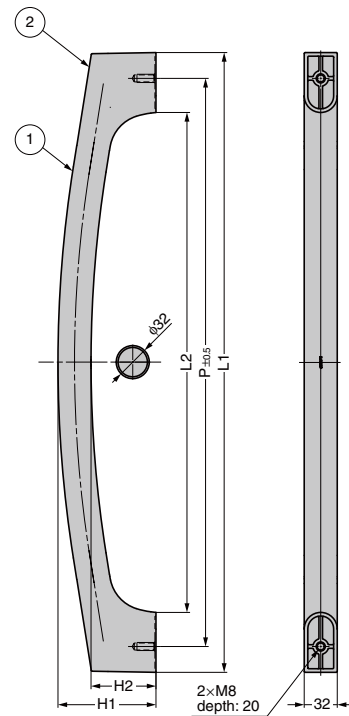


[Ergonomic Design]



Easy to hold any part of the handle.

[Premium Satin Finish]



No.	Part Name	Material
①	Pipe	Stainless Steel (SUS304)
②	Bracket	Stainless Steel (SCS13)

ReHS	CAD	Item Code	Item Name	Finish	L ₁	L ₂	P	H ₁	H ₂	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pc)
●	●	100-045-419	SLH-3240SH	Satin	400	284	350	87	55	600	61	2030	1
●	●	100-045-420	SLH-3260SH		600	484	550	95	63			2290	1
●	●	100-045-421	SLH-3280SH		800	684	750	102	70			2560	1

STAINLESS STEEL HANDLE ZL-2003



- Ultra-premium "Zwei L finish":
Using top-class polishing technology, the finish combines the elegance of Satin with the deep glow of Mirror.
- Can also be used on glass when used with the XL-2301 bracket. (optional part).
- Has sharper corners than the ZL-2001 and ZL-2002 handles.

[Remarks]

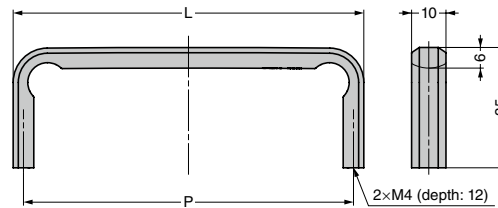
- When installing to thin sheet metal or acrylic sheet, mounting surface may not be horizontal and the sheet may warp. Please check with actual item.

[Parts Included]

- Truss head screw M4 x 30 (SUS)

[Optional Part]

- ZL-2301 bracket



RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Load Capacity N	Load Capacity kgf	Weight (g)
-	-	100-041-880	ZL-2003-32	Stainless Steel (SUS316)	Zwei L	38	32	150	15	33
-	-	100-041-881	ZL-2003-64			70	64			46
-	-	100-041-882	ZL-2003-96			102	96			59
-	-	100-041-883	ZL-2003-128			134	128			72
-	-	100-041-884	ZL-2003-160			166	160			86
-	-	100-041-885	ZL-2003-192			198	192			99
-	-	100-041-886	ZL-2003-256			262	256			125

STAINLESS STEEL HANDLE ZL-2004



- Ultra-premium "Zwei L finish":
Using top-class polishing technology, the finish combines the elegance of Satin with the deep glow of Mirror.
- Can also be used on glass when used with the XL-2301 bracket. (optional part).
- Has sharper corners than the ZL-2001 and ZL-2002 handles.

[Remarks]

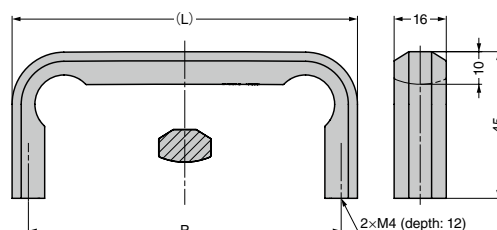
- When installing to thin sheet metal or acrylic sheet, mounting surface may not be horizontal and the sheet may warp. Please check with actual item.

[Parts Included]

- Truss head screw M4 x 30 (SUS)

[Optional Part]

- ZL-2301 bracket



RoHS	CAD	Item Code	Item Name	Material	Finish	L	P	Load Capacity N	Load Capacity kgf	Weight (g)
-	-	100-041-887	ZL-2004-96	Stainless Steel (SUS316)	Zwei L	106	96	250	25	172
-	-	100-041-888	ZL-2004-128			138	128			208
-	-	100-041-889	ZL-2004-160			170	160			244
-	-	100-041-890	ZL-2004-192			202	192			280
-	-	100-041-891	ZL-2004-256			266	256			351
-	-	100-041-892	ZL-2004-320			330	320			421
-	-	100-041-893	ZL-2004-416			426	416			526
-	-	100-041-894	ZL-2004-512			522	512			630

RECESSED PULL HH-DN (Previous Name: 5103)



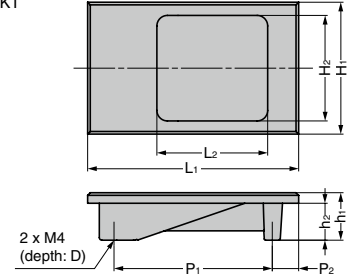
- Small flush pull handle made of metal.
- A new smaller size type is added to the lineup.
The new HH-DN-29WB perfectly fits one finger.
- Can also be used on sheet metal when using with HH-DN-BKT bracket.

[Parts Included]

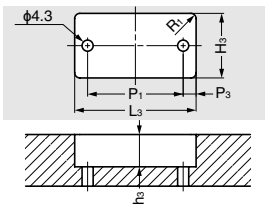
- Countersunk truss head screw M4 x 12 (for wood installation)

[Optional Parts]

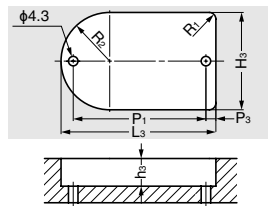
- Bracket for Sheet Metal HH-DN-BKT



[Installation on Wood]

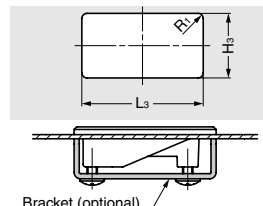


HH-DN-29WB / HH-DN-40WB

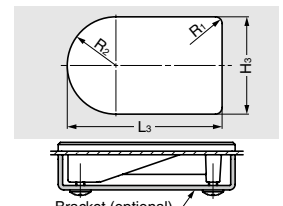


HH-DN-50WB

[Installation on Sheet Metal]



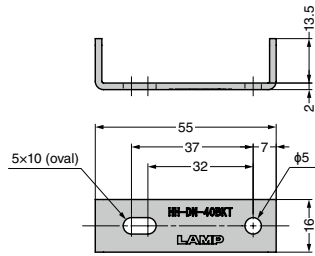
HH-DN-29WB / HH-DN-40WB



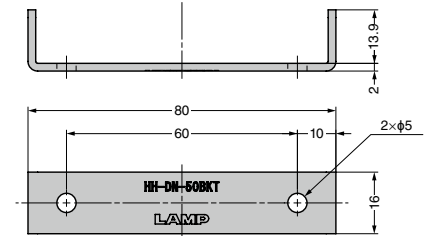
HH-DN-50WB

RoHS	CAD	Item Code	Item Name	Old Name	Material	Finish	L ₁	L ₂	H ₁	H ₂	h ₁	h ₂	P ₁	P ₂	D	L ₃	H ₃	P ₃	R ₁	R ₂	h ₃	Weight (g)	Box (pcs)	Carton (pcs)
●	●	100-049-509	HH-DN-29WB	-	Zinc Alloy (ZDC)	White	55	32	29	20	15.5	12.5	37	11	8.5	47	25	4	2	-	12.5	50	40	160
●	●	100-014-085	HH-DN-40WB	5103-55		Bronze	80	42	50	40	18	14	60	10	5	70	44	4.5	3	22	14	85	20	80
●	●	100-014-084	HH-DN-50WB	5103-80																				

Bracket for Sheet Metal HH-DN-BKT



HH-DN-40BKT



HH-DN-50BKT

[Parts Included]

- Cross-recessed truss head screw M4 x 10

RoHS	CAD	Item Code	Item Name	Material	Finish	Available Pull	Available Thickness	Weight (g)	Box (pcs)	Carton (pcs)
●	●	100-049-510	HH-DN-40BKT	Steel	Coloured Chromate (trivalent)	HH-DN-29WB / HH-DN-40WB	0.8 - 2.3	19	40	160
●	●	100-049-511	HH-DN-50BKT			HH-DN-50WB	0.8 - 3.2	26	40	160

BRASS PULL SNB



● Brass edge pull with stylish finishes.

[Parts Included]

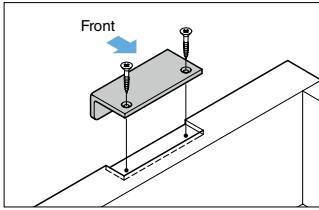
- Cross-recessed countersunk head wood screw 3.1 x 20
- * The finish of the included screws is the same as the pull.

[Remarks]

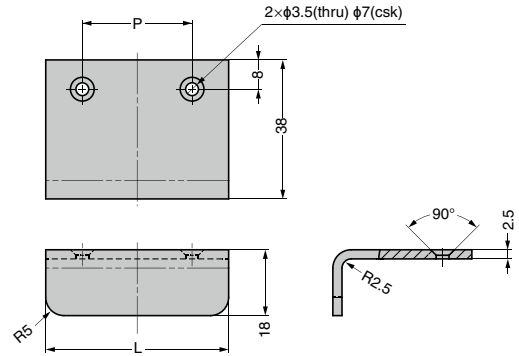
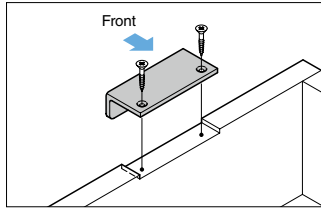
- As each finish has a different natural brass texture, it may look slightly different.

[Installation Example]

● On a thick board



● On a thin board



RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	L	P	Weight (g)	Box (pcs)	Carton (pcs)
-	●	100-048-925	SNB-50PB	Brass	Mirror Polished	Polished Brass	50	30	50	20	200
-	●	100-048-926	SNB-50SB		Satin	Satin Brass				20	200
-	●	100-048-927	SNB-50AB		Antique Plating	Antique Brass				20	200
-	●	100-048-928	SNB-70PB		Mirror Polished	Polished Brass				20	100
-	●	100-048-929	SNB-70SB		Satin	Satin Brass	70	46	70	20	100
-	●	100-048-930	SNB-70AB		Antique Plating	Antique Brass				20	100
-	●	100-048-931	SNB-95PB		Mirror Polished	Polished Brass				20	100
-	●	100-048-932	SNB-95SB		Satin	Satin Brass				20	100
-	●	100-048-933	SNB-95AB		Antique Plating	Antique Brass	95	65	95	20	100
-	●	100-048-933	SNB-95AB		Antique Plating	Antique Brass				20	100

PANEL CATCH AUH-C70 For Panel Hanger "AUH"



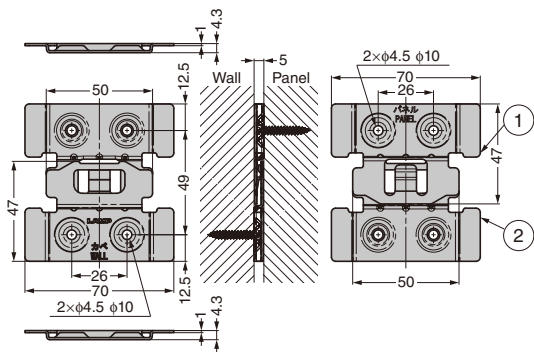
- Holds panels hung with the AUH in place.
This catching function prevents panels from moving or falling even when bumped.
- Specially designed for use with the AUH panel hanger.
- The correct mounting position can be found by simply aligning with the AUH.

[Remarks]

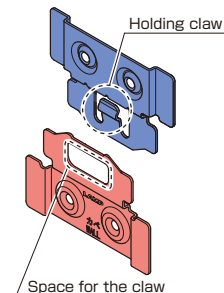
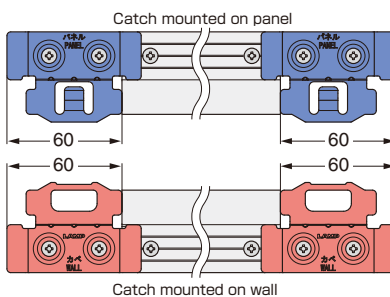
- Please make sure that the panel is not subject to a pulling force when using the AUH-C70 without the AUH.
- Recommended quantity per panel: two
- The retaining force may vary. Please confirm with actual products before use.

[Recommended Screw]

- Cross-recessed countersunk head tapping screw 4



[Drawing] when using two AUH-C70 and AUH



No.	Part Name	Material	Finish/Colour
①	Catch mounted on panel	Stainless Steel (SUS304)	Barrel Polished
②	Catch mounted on wall		

RoHS	CAD	Item Code	Item Name	Retaining Force N	Retaining Force kgf	Load Capacity N*	Load Capacity kgf*	Weight (g)
		110-044-905	AUH-C70	50	5.1	100	10.2	41

* The load capacity is a value when using the AUH-C70 alone. When using with the AUH, please see the load capacity of the AUH.

PANEL HANGER AUH



- Panel can be easily attached/detached without tools.
- Distance to wall is only 5 mm.
- Continuous panels can also be installed easily.
- Can prevent warping of large size panels.
- Mounting holes can be set in the groove of screw guide (see drawing).

[Applications]

- Exhibition panels, paintings, furniture.

[Remarks]

- Be sure to install panel to wall made from strong materials.
- Actual load capacity varies depending on use conditions.

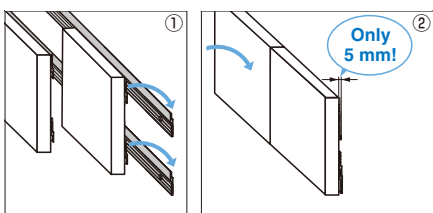
The load capacity in the catalog is based on the conditions below.

- Numbers of AUH: 2 pcs
- Length : 700mm
- Distance between 2 AUH : 780mm
- Panel Height : 900mm
- Panel Length : 700mm
- Panel Thickness : 25mm

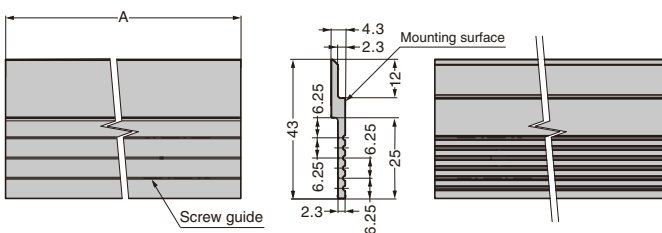
[Recommended Screws]

- Countersunk head tapping screw 4

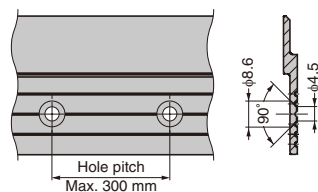
[Panel Installation]



[Example]

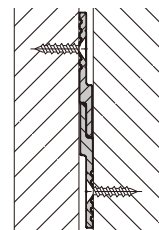


[Cut Out Dimensions]



Mounting holes should be located symmetrically to the centre of mounting surface, with the pitch below 300mm.

[Installation]



RoHS	CAD	Item Code	Item Name	A	Material	Finish	Load Capacity N	Load Capacity kgf	Weight (g)	Carton (pcs)
		110-021-888	AUH-900	900	Aluminium Alloy	Anodised Silver	294.2	30	35	10
		110-023-958	AUH-2700	2700					700	10

SILICONE HOOK PXB-GP05-101 Mini Flowers



*Shaped like flowers. Soft silicone cover.
The vivid colours brighten up spaces.*

- Can be easily fixed with a screw.
- Custom colours are available from 500 pcs of order.

[Remarks]

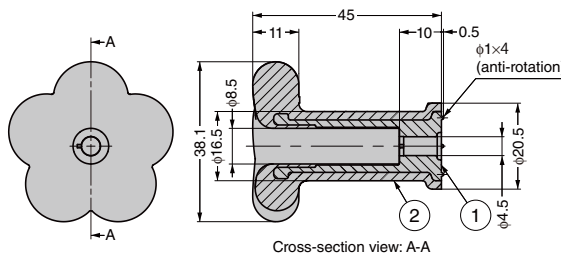
- The cover and base are integrated and cannot be separated.

[Applications]

- Kindergartens, preschool

[Parts Included]

- Cross-recessed pan head tapping screw
- Washer 4×8×0.8 (size: 4)



[Colour Variation]



No.	Part Name	Material
①	Base	PA
②	Cover	Silicone Rubber (Q)

RoHS	CAD	Item Code	Item Name	Colour	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
●	●	110-043-926	PXB-GP05-101-RD	Red	50	5.1	18	20	200
●	●	110-043-927	PXB-GP05-101-YE	Yellow				20	200
●	●	110-043-928	PXB-GP05-101-GN	Green				20	200
●	●	110-043-929	PXB-GP05-101-BU	Blue				20	200
●	●	110-043-930	PXB-GP05-101-WT	White				20	200
●	●	110-043-931	PXB-GP05-101-BL	Black				20	200

RECESSED HOOK NF-45D Soft-close Mechanism



- Self-retracting hook with soft-close mechanism.
- The hook tip is designed for easy opening.
- Becomes flat when retracted.
- The edges are gently rounded for safe use.

[Applications]

- Cabinet, trains

[Sold Separately]

- Hook bracket for sheet metal NF-45DB

[Recommended Screw]

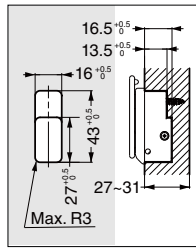
- 27 - 31 mm thick wood: cross-recessed countersunk tapping screw 4 × 25
- 32 mm or thicker wood: cross-recessed countersunk tapping screw 4 × 30

[Retractable]

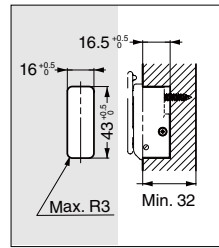


[Cut Out Dimensions]

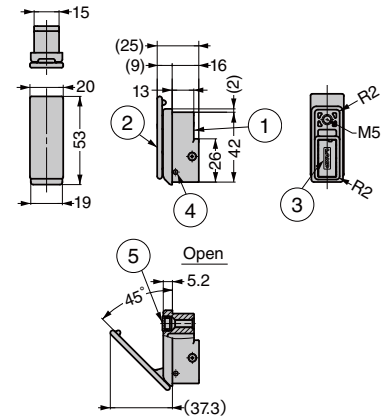
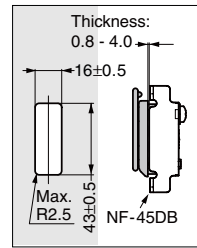
- Wood (27 - 31 mm thick)



- Wood (31 mm or thicker)



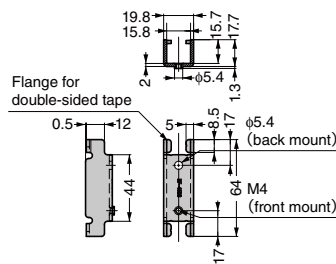
- Sheet metal



RoHS	CAD	Item Code	Item Name	Colour	Load Capacity of the Tip		Load Capacity of the Base		Weight (g)	Box (pcs)	Carton (pcs)
					N	kgf	N	kgf			
●	●	110-044-460	NF-45D-GR	Grey	93	9.5	500	51	32	10	200
●	●	110-044-461	NF-45D-BL	Black							
●	●	110-044-462	NF-45D-SSL	Silver							
●	●	110-046-695	NF-45D-WT	White							

No.	Part Name	Material	Finish/Colour
①	Body	Aluminium Alloy (ADC)	Black
②	Arm		Gray / Black / Silver / White
③	Cover		Black
④	Knurling Pin	Stainless Steel (SUS304)	Plain
⑤	Spring		
⑥	Cushion Rubber	Chloroprene Rubber (CR)	Black

HOOK BRACKET FOR SHEET METAL NF-45DB



- Allows for mount on metal sheet of the NF-45D hook.
- Can be mounted from both front and back sides of sheet metal.
- Has flanges for double-sided tapes.
This allows for temporary fixing before screwing.
(Recommended thickness of tape: 0.8 - 1.0 mm)

[Parts Included]

- For front mount: cross-recessed countersunk screw M4 × 25
- For back mount: cross-recessed pan head screw (washer assembled)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
●	●	110-044-075	NF-45DB	Steel (SPCC)	Yellow Zinc Chromate	40	40

RAISED COUNTER BRACKET CTB Series



- Allow for additional floating countertops, expanding your counter space. Comes in two mounting options: top-mounted and wall-mounted.
- Designed to allow cables to be put through. (Max. diameter: $\phi 10.5$)

[Applications]

- Commercial reception counters, kitchens, serving bars, and more.

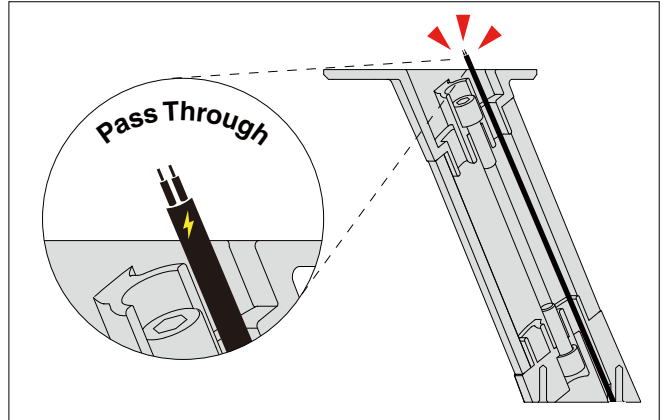
[Remarks]

- Please make sure the support structure that the bracket will be attached to is strong enough to handle the load.
- The length can be customized to your projects. Please contact us for more information.

[Colour Finishes]



[Wiring Cables]



Can be used with LED lights and electric appliances.

Series Lineup

		Mounting Options		
		Top-Mounted		Wall-Mounted
		Front-Screw	Back-Screw	Front-Screw
Angles	60°	CTB65-PMS60-240 1	CTB65-PM60-170 2 CTB50-PM60-170 (Slim-type) 6	CTB65-VM60-300 5
	90°	CTB65-PMS90-270 3	CTB65-PM90-200 4	

Refer to **1** **2** : PC2, **3** **4** : PC3, **5** **6** : PC4

Three finishes are available in each model.

RAISED COUNTER BRACKET CTB65-PMS60-240 60° / Top-mounted / Front-screw



- Allows for additional floating countertops, expanding your counter space.
- Designed to allow cables to be put through. (Max. diameter: ϕ 10.5)

[Applications]

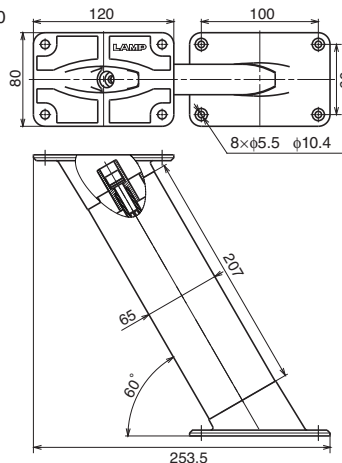
- Commercial reception counters, kitchens, serving bars, and more.

[Remarks]

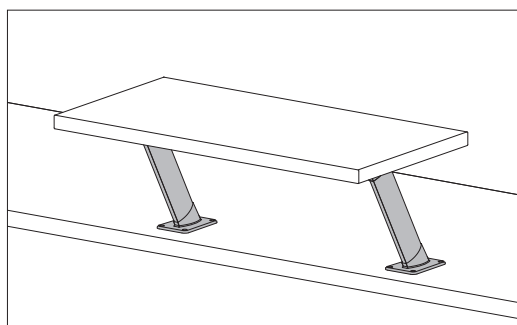
- Please make sure the support structure that the bracket will be attached to is strong enough to handle the load.
- Max. pitch of adjoining brackets is 900 mm.
- Max. size of countertop overhung is 1,000 mm in width and 400 mm in depth. (when using two brackets)
- Min. thickness of a countertop overhung is 20 mm.
- Min. thickness of a countertop that will support an additional countertop is 30 mm.

[Remarks]

- Countersunk tapping screw M5 \times 20



[Installation]



RoHS	CAD	Item Code	Item Name	Angle	Mount	Screw	Colour Finish	Material	Load Capacity N / pc	Load Capacity kgf / pc	Weight (g)	Box	Carton
CE	2D/3D	120-041-442	CTB65-PMS60-240-SL	60°	Top-mounted	Front	Stainless Steel	Aluminium Alloy	600	61.2	570	1 pc	10 pcs
CE	2D/3D	120-041-443	CTB65-PMS60-240-BL				Black					1 pc	10 pcs
CE	2D/3D	120-041-444	CTB65-PMS60-240-WT				White					1 pc	10 pcs

RAISED COUNTER BRACKET CTB65-PM60-170 60° / Top-mounted / Back-screw



- Allows for additional floating countertops, expanding your counter space.
- Designed to allow cables to be put through. (Max. diameter: ϕ 10.5)

[Applications]

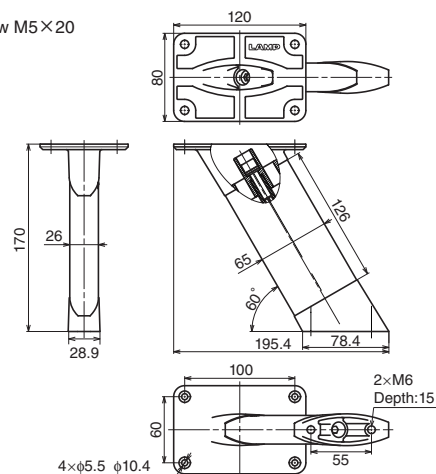
- Commercial reception counters, kitchens, serving bars, and more.

[Remarks]

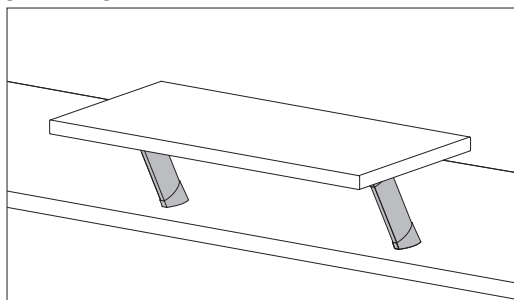
- Please make sure the support structure that the bracket will be attached to is strong enough to handle the load.
- Max. pitch of adjoining brackets is 900 mm.
- Max. size of countertop overhung is 1,000 mm in width and 400 mm in depth. (when using two brackets)
- Min. thickness of a countertop overhung is 20 mm.
- Min. thickness of a countertop that will support additional countertop is 30 mm.

[Parts Included]

- Countersunk tapping screw M5 \times 20
- Hex head bolt M6 \times 45
- Washer 6
- Spring washer 6



[Installation]



RoHS	CAD	Item Code	Item Name	Angle	Mount	Screw	Colour Finish	Material	Load Capacity N / pc	Load Capacity kgf / pc	Weight (g)	Box	Carton
CE	2D/3D	120-041-433	CTB65-PM60-170-SL	60°	Top-mounted	Back	Stainless Steel	Aluminium Alloy	600	61.2	450	1 pc	10 pcs
CE	2D/3D	120-041-434	CTB65-PM60-170-BL				Black					1 pc	10 pcs
CE	2D/3D	120-041-435	CTB65-PM60-170-WT				White					1 pc	10 pcs

RAISED COUNTER BRACKET CTB65-PMS90-270 90° / Top-mounted / Front-screw



- Allows for additional floating countertops, expanding your countertop space.
- Designed to allow cables to be put through. (Max. diameter: ϕ 10.5)

[Applications]

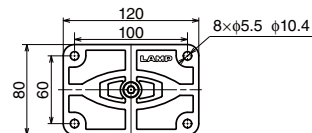
- Commercial reception counters, kitchens, serving bars, and more.

[Remarks]

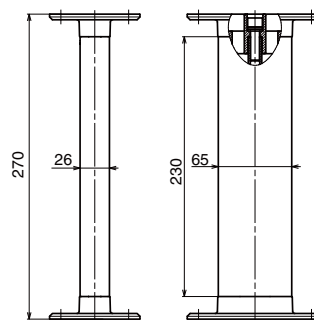
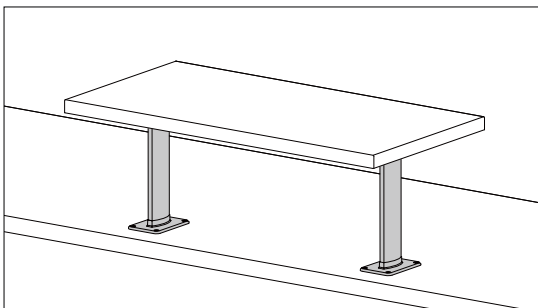
- Please make sure the support structure that the bracket will be attached to is strong enough to handle the load.
- Max. pitch of adjoining brackets is 900 mm.
- Max. size of countertop overhung is 1,000 mm in width and 400 mm in depth. (when using two brackets)
- Min. thickness of both countertops is 20 mm.

[Parts Included]

- Countersunk tapping screw M5×20



[Installation]



RoHS	CAD	Item Code	Item Name	Angle	Mount	Screw	Colour Finish	Material	Load Capacity N /pc	Load Capacity kgf /pc	Weight (g)	Box	Carton
CE	2D3D	120-041-439	CTB65-PMS90-270-SL	90°	Top-mounted	Front	Stainless Steel	Aluminium Alloy	600	61.2	595	1 pc	10 pcs
CE	2D3D	120-041-440	CTB65-PMS90-270-BL				Black					1 pc	10 pcs
CE	2D3D	120-041-441	CTB65-PMS90-270-WT				White					1 pc	10 pcs

RAISED COUNTER BRACKET CTB65-PM90-200 90° / Top-mounted / Back-screw



- Allows for additional floating countertops, expanding your countertop space.
- Designed to allow cables to be put through. (Max. diameter: ϕ 10.5)

[Applications]

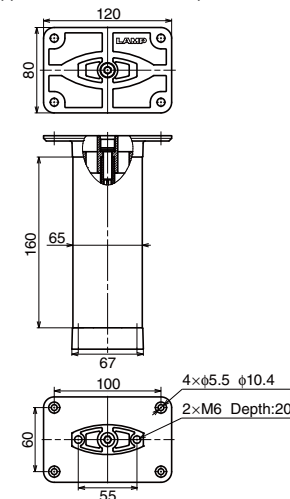
- Commercial reception counters, kitchens, serving bars, and more.

[Remarks]

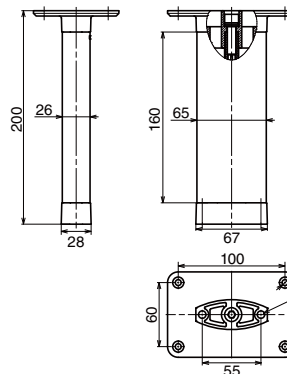
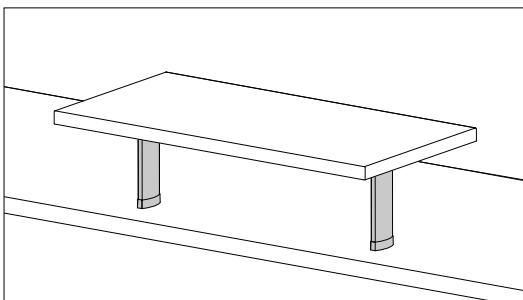
- Please make sure the support structure that the bracket will be attached to is strong enough to handle the load.
- Max. pitch of adjoining brackets is 900 mm.
- Max. size of countertop overhung is 1,000 mm in width and 400 mm in depth. (when using two brackets)
- Min. thickness of a countertop overhung is 20 mm.
- Min. thickness of a countertop that will support additional countertop is 30 mm.

[Parts Included]

- Countersunk tapping screw M5×20
- Hexagon top bolt M6
- Washer 6
- Spring washer 6



[Installation]



RoHS	CAD	Item Code	Item Name	Angle	Mount	Screw	Colour Finish	Material	Load Capacity N /pc	Load Capacity kgf /pc	Weight (g)	Box	Carton
CE	2D3D	120-041-430	CTB65-PM90-200-SL	90°	Top-mounted	Back	Stainless Steel	Aluminium Alloy	600	61.2	423	1 pc	10 pcs
CE	2D3D	120-041-431	CTB65-PM90-200-BL				Black					1 pc	10 pcs
CE	2D3D	120-041-432	CTB65-PM90-200-WT				White					1 pc	10 pcs

RAISED COUNTER BRACKET CTB65-VM60-300 60° / Wall-mounted / Front-screw



- Allows for additional floating countertops, expanding your countertop space.
- Designed to allow cables to be put through. (Max. diameter: $\phi 10.5$)

[Applications]

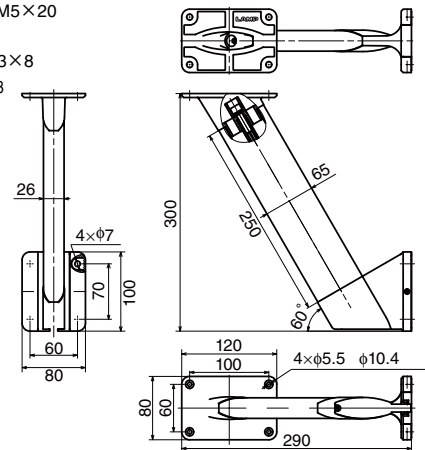
- Commercial reception counters, kitchens, serving bars, and more.

[Remarks]

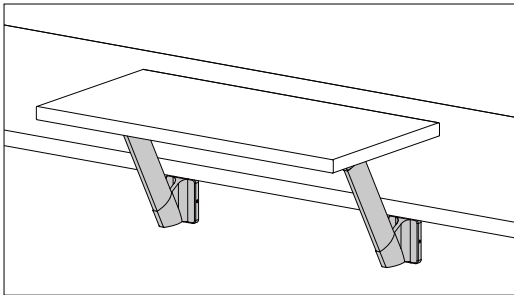
- Please make sure the support structure that the bracket will be attached to is strong enough to handle the load.
- Max. pitch of adjoining brackets is 900 mm.
- Max. size of countertop overhung is 1,000 mm in width and 400 mm in depth. (when using two brackets)
- Min. thickness of a countertop overhung is 20 mm.
- Min. thickness of a countertop that will support an additional countertop is 30 mm.

[Parts Included]

- Countersunk tapping screw M5 \times 20
- Hexagon top bolt M6 \times 40
- Hexagon countersunk bolt M3 \times 8
- Hexagon socket button bolt M3 \times 8
- Washer M3
- Hexagon wrench 2



[Installation]



RoHS	CAD	Item Code	Item Name	Angle	Mount	Screw	Colour Finish	Material	Load Capacity N / pc	Load Capacity kgf / pc	Weight (g)	Box	Carton
CE	2D/3D	120-041-436	CTB65-VM60-300-SL	60°	Wall-mounted	Front	Stainless Steel	Aluminium Alloy	600	61.2	930	1 pc	10 pcs
CE	2D/3D	120-041-437	CTB65-VM60-300-BL				Black					1 pc	10 pcs
CE	2D/3D	120-041-438	CTB65-VM60-300-WT				White					1 pc	10 pcs

RAISED COUNTER BRACKET CTB50-PM60-170 60° / Top-mounted / Back-screw / Slim-type



- Allows for additional floating countertops, expanding your countertop space.
- Designed to allow cables to be put through. (Max. diameter: $\phi 9.5$)
- Slim type: the bar is thinner than other CTB65 models.

[Applications]

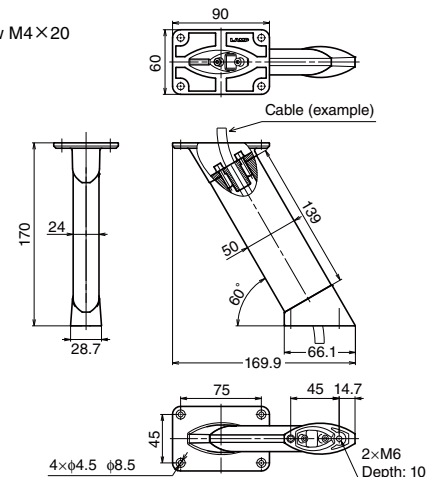
- Commercial reception counters, kitchens, serving bars, and more.

[Remarks]

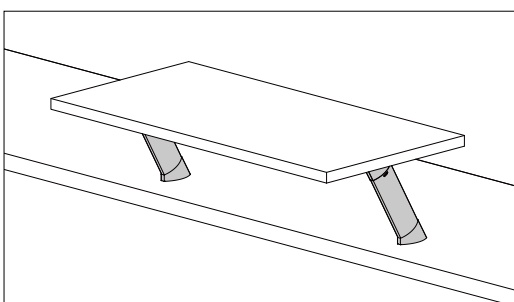
- Please make sure the support structure that the bracket will be attached to is strong enough to handle the load.
- Max. pitch of adjoining brackets is 900 mm.
- Max. size of countertop overhung is 1,000 mm in width and 400 mm in depth. (when using two brackets)
- Min. thickness of a countertop overhung is 20 mm.
- Min. thickness of a countertop that will support an additional countertop is 30 mm.

[Parts Included]

- Countersunk tapping screw M4 \times 20
- Hex head bolt M6 \times 40
- Washer 6
- Spring washer 6



[Installation]



RoHS	CAD	Item Code	Item Name	Angle	Mount	Screw	Colour Finish	Material	Load Capacity N / pc	Load Capacity kgf / pc	Weight (g)	Box	Carton
CE	2D/3D	120-044-785	CTB50-PM60-170-SL	60°	Top-mounted	Back	Stainless Steel	Aluminium Alloy	400	40.8	366	1 pc	10 pcs
CE	2D/3D	120-044-786	CTB50-PM60-170-BL				Black					1 pc	10 pcs
CE	2D/3D	120-044-787	CTB50-PM60-170-WT				White					1 pc	10 pcs

MONITOR ARM KA-TLG Tilt Angle Adjustment by Button



Passed 3,000 private cycle test (height adjustment)

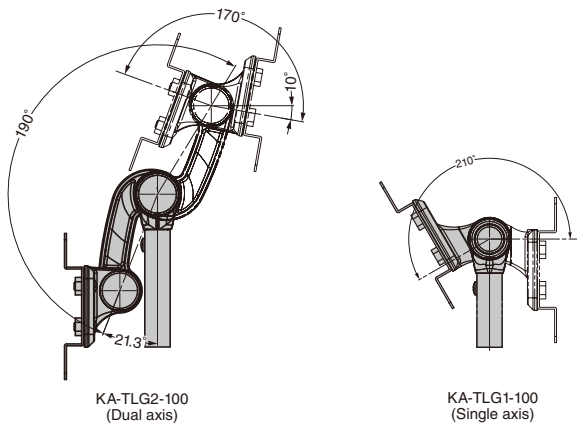
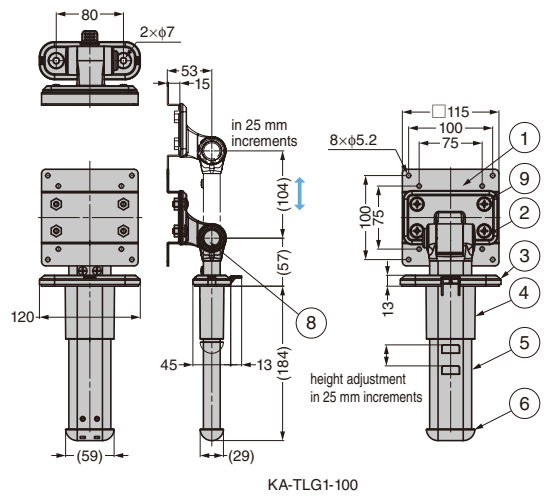
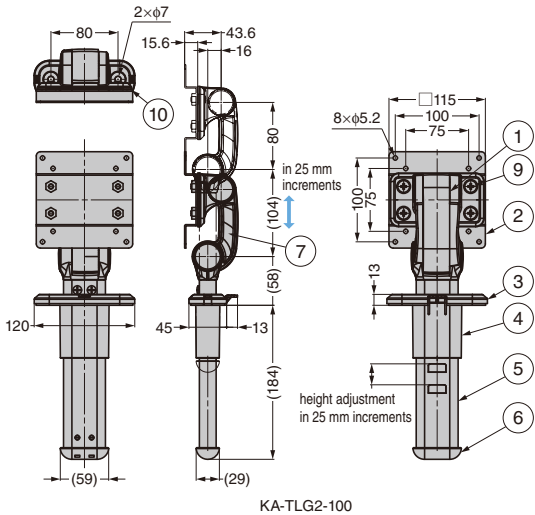
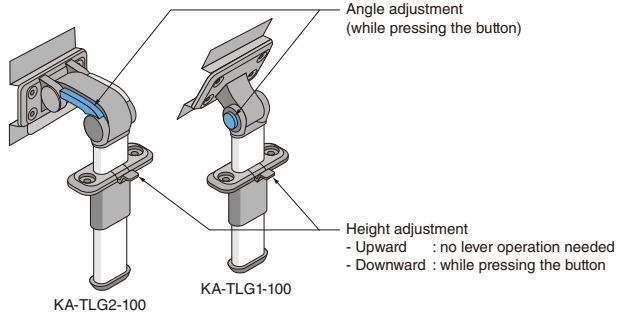


- The tilt angle can be adjusted in 10° increments while the button is pressed.
- The back lever allows for height adjustment in 25 mm increments (4 levels). It has a friction mechanism which prevents against accidental release.
- The monitor-mounting holes are compliant with the VESA standard. (75 x 75 mm, 100 x 100mm)
- Available monitor size: 12 - 22.9 inches (Weight: Max. 10 kg)

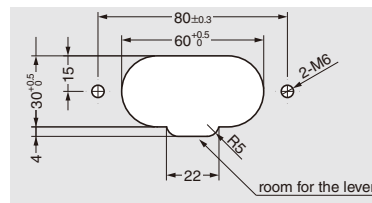
[Remarks]

- Please support the monitor with a hand when adjusting the angle and height.

[Tilt and Height Adjustments]



[Cut Out Dimensions]



No.	Part Name	Material	Finish/Colour
①	Bracket	Polyamide (PA)	Black
②	Mounting Plate	Steel (SPHC)	
③	Cover	Polycarbonate	
④	Outer Pipe	ABS	Anodized
⑤	Aluminium Pipe	Aluminium Alloy	
⑥	End Cap	ABS	Black
⑦	Button	Polyamide (PA)	Grey
⑧	Button	ABS	
⑨	Cross-recessed trus head screw	Steel	Black Chromate
⑩	Packing	Nitrile Rubber (NBR)	Black

RoHS	CAD	Item Code	Item Name	Axis	Vertical Load Capacity		Allowable Moment		Weight (g)	Box (pc)
					N	kgf	N.m	kgf.cm		
		210-044-071	KA-TLG2-100	Dual	100	10.2	15	153	705	1
		210-044-070	KA-TLG1-100	Single					545	1

MONITOR ARM KA-T100S50-W/P Free Stop and Lock / For Touch Screens

INSTRUCTION

Free Stop

Passed 20,000 private cycle test



KA-T100S50-W3-BL



KA-T100S50-P2-WT

- The robust structure securely holds monitors in position. It prevents touch screens from shaking or causing unintentional inputs.
- Allows for free-stop motion in tilt and swivel directions.
- Comes with auxiliary lock mechanism which prevents sagging.
- The auxiliary lock has a safety function. The lock temporarily releases to avoid breakage if an unintentional heavy load is applied on it.
- One-touch installation and removal.

[Specification]

- Compliant with the VESA standard. (75x75mm, 100x100mm)
- Available monitor size: 12 - 23 inches (Weight: Max. 10 kg)

[Application]

- Liquid crystal monitors for machine tools, OA equipment and medical equipment

[Remarks]

- Do not forcibly move the monitor after auxiliary lock is activated.
- After installing the monitor, make sure that the release lever is locked.
- Do not operate continuously (repeatedly in a short time).
- Avoid water, oil, and lubricant from getting on the product.

[Parts Included]

- Cable tie

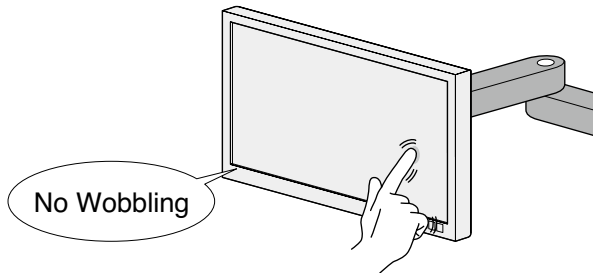
[Optional Parts]

- Rotation Bracket KA-T100S50-PMT **1**

Video Link

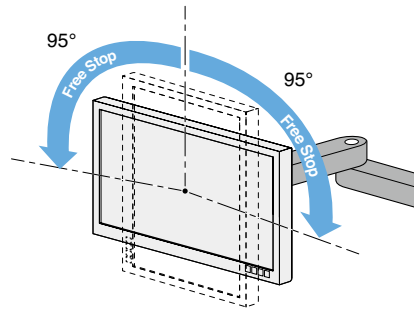


[Stable Operation]



Prevents touch screens from shaking or causing unintentional inputs.

[Rotational Motion]



The optional rotation bracket allows for free stop in the rotation direction. (Free-stop range: 95° on each side)

[Auxiliary Lock Operation]

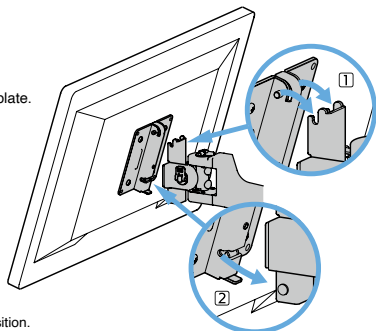
The auxiliary lock temporarily releases to avoid breakage if unintentional heavy load is applied to it.

*Do not forcibly move monitors when locked.

[Installation and Removal]

Installation

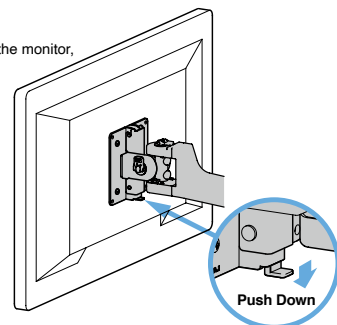
- 1 Fit the protrusion into the groove of the bracket.
- 2 Push the lower part of mounting plate.



*Make sure mark is in upward position.

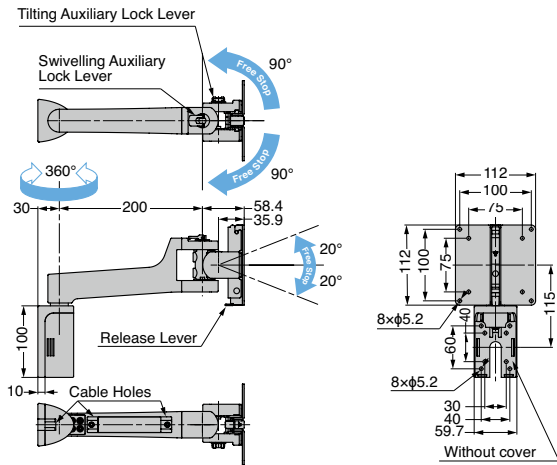
Removal

Push down the release lever and tilt the monitor, then the monitor can be removed.

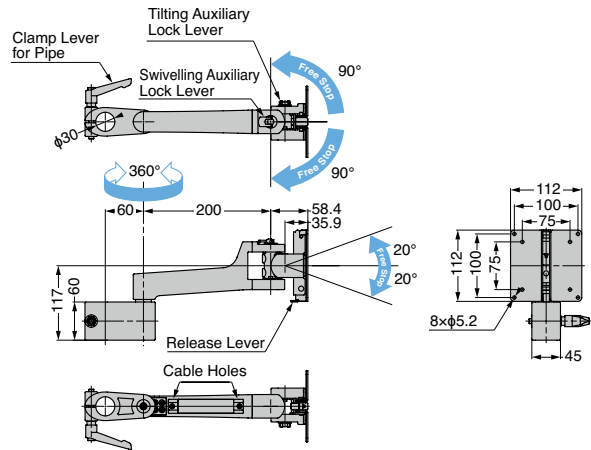


Refer to **1**:PCB

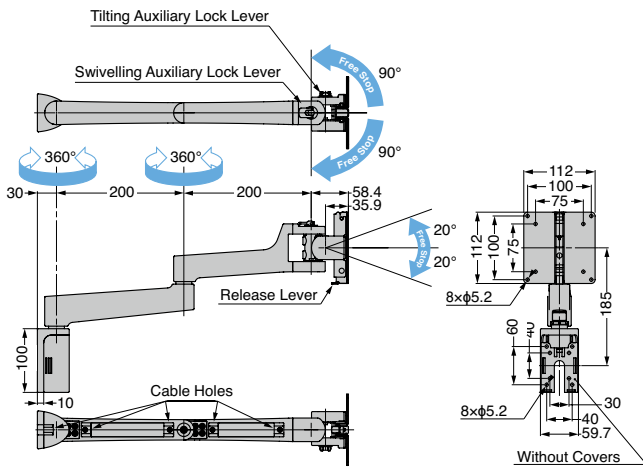
[KA-T100S50-W2] Wall Mount / Single Arm



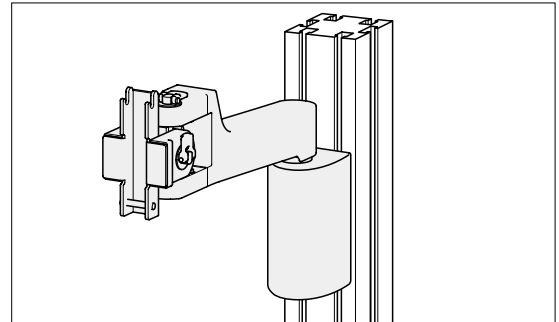
[KA-T100S50-P2] Pipe Mount (φ30) / Single Arm



[KA-T100S50-W3] Wall Mount / Double Arms

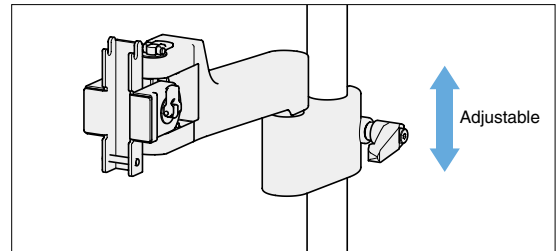


[Can be mounted on aluminium frame] For wall mount type

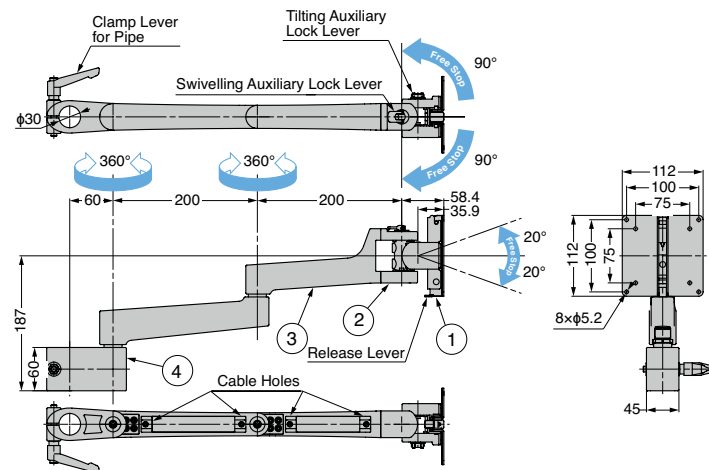


Available Aluminium Frame: 30 x 60 mm or 40 x 80 mm / 2 slots

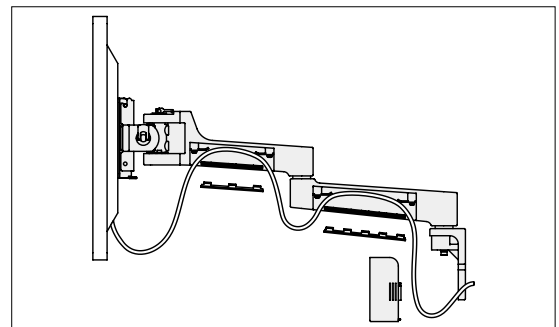
[Height Adjustment] For pipe mount type



[KA-T100S50-P3] Pipe Mount (φ30) / Double Arms



[Wiring Cables]



Comes with covers for cables.

No.	Part Name	Material	Finish
①	Mounting Plate	Steel (SPCC)	Electrodeposition
②	Body	Steel (SPCC) / ABS	
③	Arm	Aluminium Alloy (ADC) / ABS	Matte Anodized
④	Base	Aluminium Alloy (ADC)	

RoHS	CAD	Item Code	Item Name	Type	Colour	Torque N·m (Tilt)	Torque N·m (Rotation)			
							Monitor Part	Center Part	Mounting Part	
●	●	210-048-353	KA-T100S50-W2-BL	Wall Mount / Single Arm	Black	10 ±20%	5.0 ±20%	-	8.0 ±20%	
●	●	210-048-354	KA-T100S50-W2-WT		White					
●	●	210-048-349	KA-T100S50-P2-BL	Pipe Mount (φ30) / Single Arm	Black					
●	●	210-048-350	KA-T100S50-P2-WT		White					
●	●	210-048-355	KA-T100S50-W3-BL	Wall Mount / Double Arms	Black					4.0 ±20%
●	●	210-048-356	KA-T100S50-W3-WT		White					
●	●	210-048-351	KA-T100S50-P3-BL	Pipe Mount (φ30) / Double Arms	Black					
●	●	210-048-352	KA-T100S50-P3-WT		White					

ROTATION BRACKET KA-T100S50-PMT Free Stop

Free Stop



KA-T100S50-PMT-BL



KA-T100S50-PMT-WT

- Allows monitors to rotate and hold in position.
- Replace the original mounting plate with this bracket.

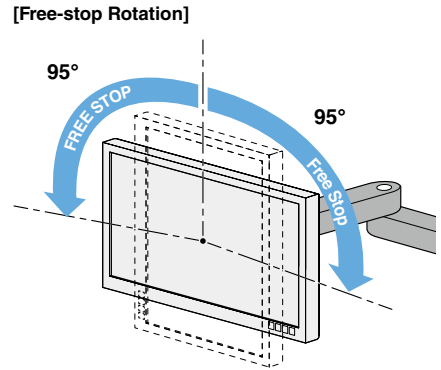
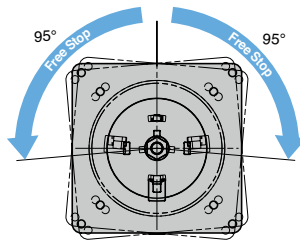
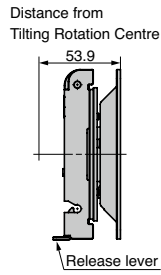
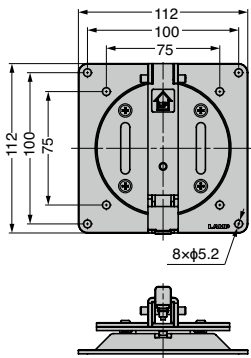
[Specification]

- Compliant with the VESA standard. (Hole interval: 75 x 75 mm / 100 x 100 mm)
- Available monitor size: 12 - 23 inches (Weight: Max. 8 kg)

[Compatible Product]

- Monitor Bracket KA-T100S50 **1**
- Monitor Arm KA-T100S50-W/P **2**

Video Link



RoHS	CAD	Item Code	Item Name	Colour	Torque N·m (Rotate)	Weight (g)
●	●	210-048-357	KA-T100S50-PMT-BL	Black	4.0 ±20%	641
●	●	210-048-358	KA-T100S50-PMT-WT	White		

Refer to **1** : No.240A P.155-11 to 155-12 **2** : P.C6 to C7

Series Lineup

Monitor Mount Series KA-T100S50

	Single Arm 1	Double Arms 1	Armless 2	Option 3
<ul style="list-style-type: none"> • Wall Mount • Aluminium Frame Mount 	 KA-T100S50-W2-BL KA-T100S50-W2-WT	 KA-T100S50-W3-BL KA-T100S50-W3-WT	 KA-T100S50	 KA-T100S50-PMT-BL KA-T100S50-PMT-WT
<ul style="list-style-type: none"> • Pipe Mount 	 KA-T100S50-P2-BL KA-T100S50-P2-WT	 KA-T100S50-P3-BL KA-T100S50-P3-WT		

Refer to **1** : P.C6 to C7 **2** : No.240A P.155-11 to 155-12 **3** : P.C8

FOLDING BRACKET **EB-DA** Built-in Damper



Soft-close



- Can be folded when not in use, allowing full use of space.
- The built-in damper allows for soft-close motion.
- Automatically locks when flap is in opened position.
The lock can be easily released by pushing the lever.
- Keeps in folded position and has click sound when fully closed.
- Can also be used with the EB-303 (without damper type). **1**
- No hinges are needed.

[Application]

• Shelves and tables (garages, recreational vehicles, commercial facilities, factories)

[Parts Included]

• Cross-recessed truss tapping screw ST4.8 x 38, Cross-recessed truss tapping screw ST4.8 x 16 (3 each)

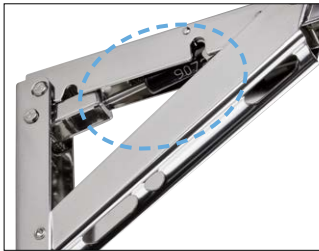
[Optional Parts]

• Folding Bracket EB **1**

[Remarks]

- Used in pairs. (Shelf width: Max. 1300 mm)
- Be careful not to get fingers caught in the bracket.
- Use a long screwdriver for installation.
- Make sure the release lever is attached to bottom of the shelf for correct installation

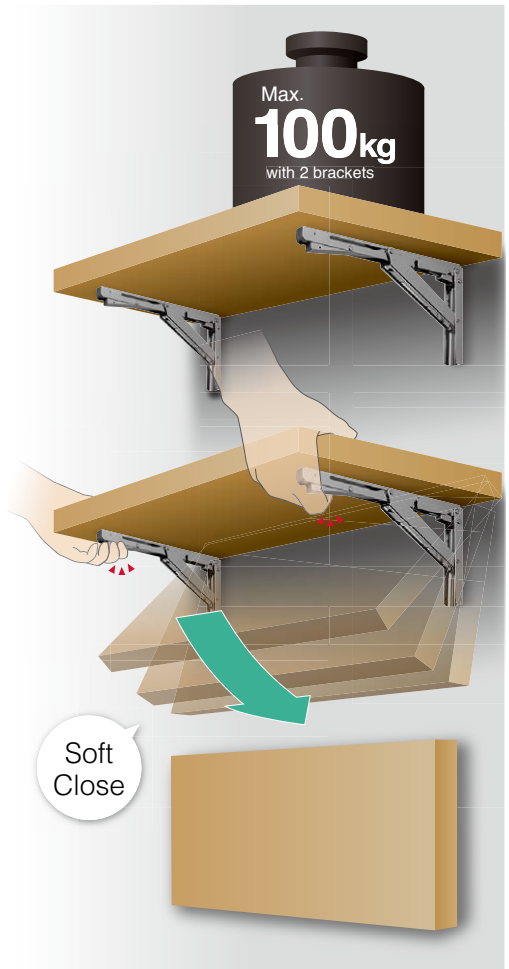
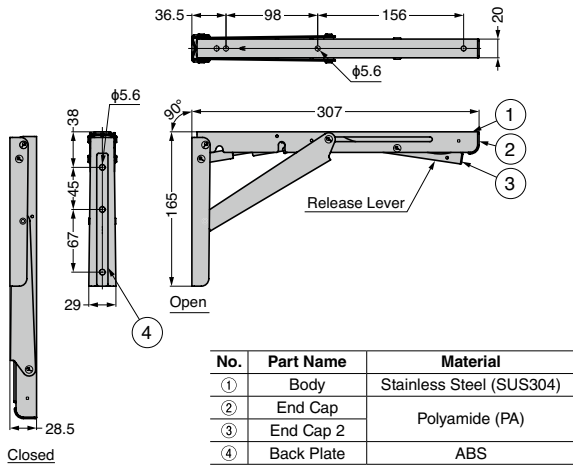
[Built-in Damper]



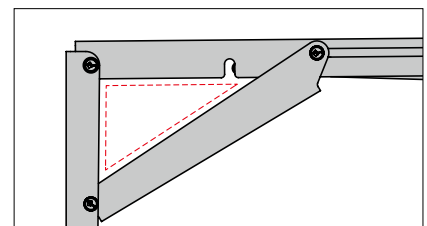
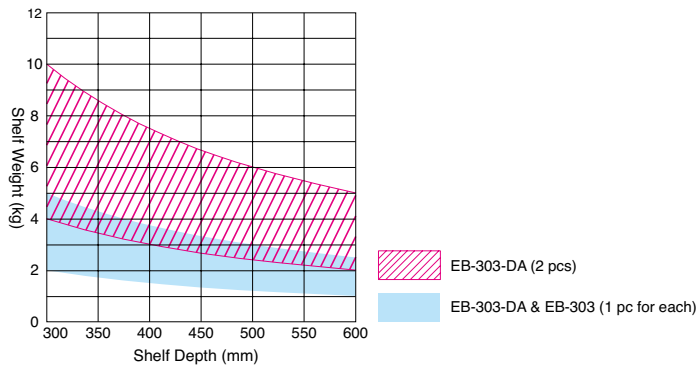
[End Cap]



Comes with end caps for safe use.



[Product Selection Graph]



Be careful not to get fingers caught in this space when folding.

RoHS	CAD	Item Code	Item Name	Material	Finish	Number of Mounting Holes	Load Capacity / 1 pc		Weight (g)	Box (pcs)
							N	kgf		
●	●	120-048-775	EB-303-DA	Stainless Steel (SUS304)	Mirror	6	495	50	525	20

Refer to **1** : No240A P.155-1

FOLDING BRACKET 388-D Built-in Damper



- Can be folded for saving space when not in use.
- The built-in damper allows for soft closing which prevents accidental shutting.
- Made of aluminium alloy for a lighter body.
- Can also be used together with the 388 bracket. (without damper model) 1

[Recommended Number of Bracket]

- Shelf width is under 600 mm : 1 pc
- Shelf width is 600-1300 mm : 2 pcs
- *See also the [Selection Guide].

[Parts Included]

- Cross-recessed truss head tapping screw ST4.8 x 38
- Cross-recessed truss head tapping screw ST4.8 x 16

[Optional Part]

- Folding hinge 388 H
- Folding bracket 388

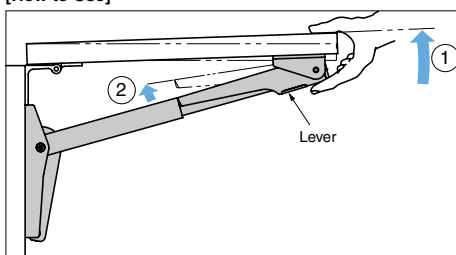
[Remarks]

- When folding/unfolding the brackets, please hold both the shelf and brackets with hands.
- Make enough space for the shelf to lift up. See the [How to Use].
- Recommended shelf thickness: 15 -35 mm
- The load capacity was measured at the position demonstrated in the [Dimensions] drawing below.

[Recommended Hinge] 2

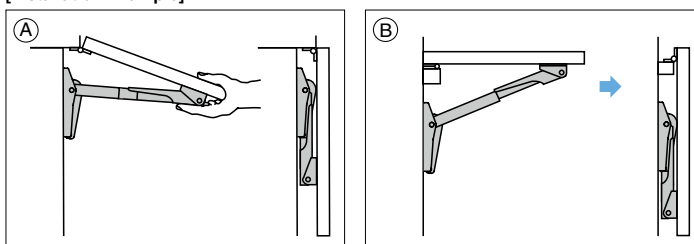


[How to Use]

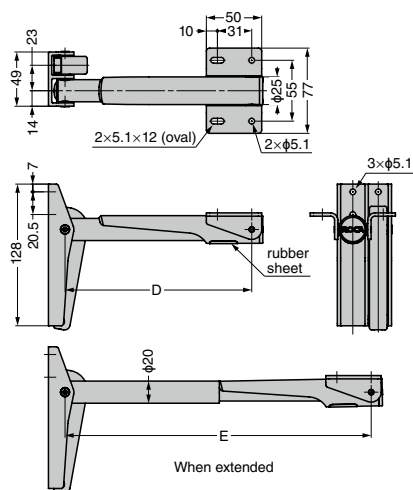


Note: ① Do not lift up the shelf forcibly. It may result in breakage.

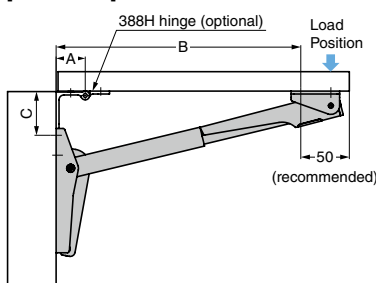
[Installation Example]



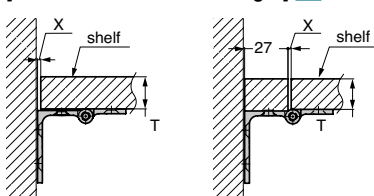
*Installation B: the 388H hinge can not be used.



[Dimensions]

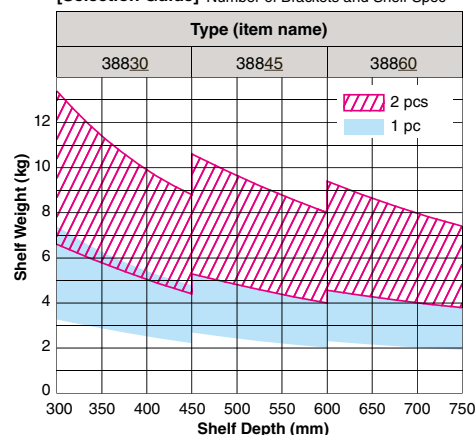


[Installation with the 388H Hinges] 1



Thickness T and Clearance X	
T	X
< 20	1
20 - 40	2

[Selection Guide] Number of Brackets and Shelf Spec



*If 388-D (1pc) is used together with 388 (1pc), please refer to 1 pc of graph above.

RoHS	CAD	Item Code	Item Name	Material	Finish / Colour	A	B	C	D	E	Load Capacity/pc		Weight (g)	Box	Carton
											N	kgf			
●	●	120-048-966	38830-25-D	Aluminium Alloy	Silver Anodised	28-39	252	45	168	275.9	309	31	341	5	50
●	●	120-048-967	38845-25-D			28-50	402	87	258.5	430.8	330	33	411	5	30
●	●	120-048-968	38860-25-D			28-40	549	137	368.5	585.8	360	36	491	5	30
●	●	120-048-969	38830-25-BL-D		Black Anodised	28-39	252	45	168	275.9	309	31	341	5	50
●	●	120-048-970	38845-25-BL-D			28-50	402	87	258.5	430.8	330	33	411	5	30
●	●	120-048-971	38860-25-BL-D			28-40	549	137	368.5	585.8	360	36	491	5	30

Refer to 1 : No.240A P.160

FOLDING HINGE 388H For Bracket 388



388H001

388H000

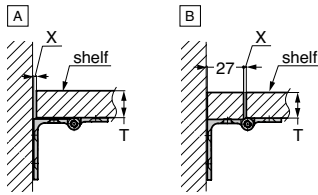
- For use with the folding brackets 388-D and 388. 1
- Easy to find the right position for the hinges.

[Parts Included]

- Cross-recessed countersunk tapping screw 4.8 x 35 (3 pc)
- Cross-recessed countersunk tapping screw 4.8 x 16 (2 pc)
- * Finish: anodised / black anodised

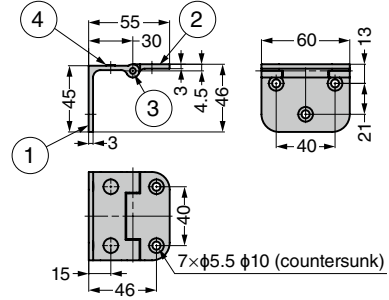


[Installation Example]



Thickness T and Clearance X

T	X
< 20	1
20 - 40	2



RoHS	CAD	Item Code	Item Name	Finish / Colour	Weight (g)	Box (pcs)
●	●	120-048-776	388H000	Silver Anodised	53	128
●	●	120-048-777	388H001	Black Anodised		128

No.	Part Name	Material
①	Base	Aluminium Alloy
②	Bracket	
③	Shaft	Stainless Steel
④	Cap	Elastomer (TPE)

Refer to 1 : No.240A P.160

FOLDING BRACKET EB-F Multi Angle Locking



Holds at 60/70/80/90 degrees, and folds to 0 degrees.

- Can be folded when not in use, allowing full use of space.
- Holds at 4 angles: 60°, 70°, 80°, 90° (multi angle locking). This makes it perfect for wall display shelves.
- The multi angle locking function prevents the brackets from fully collapsing if the lever is accidentally pulled up.
- Can be used with the interlock lever EB-90. **1** (optional part)
- No hinge is required.

[Application]

- Shelves in garages, commercial facilities, factories, camping vehicles, or workbenches.

[Parts Included]

- Cross-recessed truss head tapping screw ST4.8 x 35
- Cross-recessed truss head tapping screw ST4.8 x 16

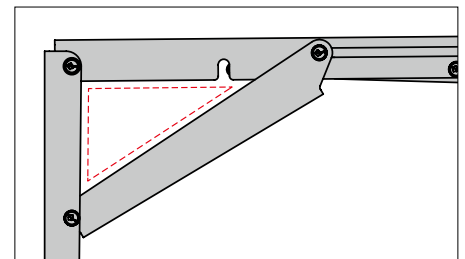
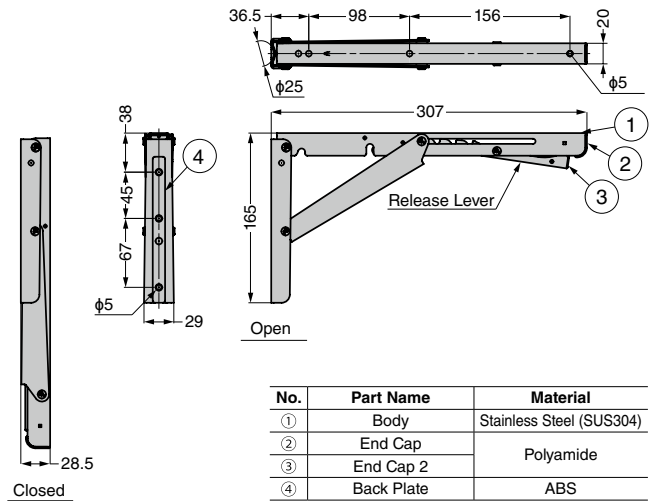
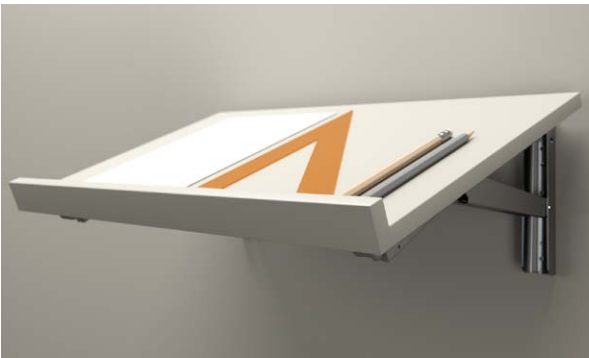
[Optional Parts]

- Interlock lever EB-90. **1**

[Remarks]

- When folding/unfolding the brackets, please hold both the shelf and brackets with your hands.
- If three brackets are used, please use together with the interlock lever EB-90.
- Be careful not to get fingers caught in the bracket.
- Please use a long screwdriver for easy installation.
- Please make sure the unlocking lever is installed on leading edge side of the shelf.
- Cannot be combined with EB or EB-DA.
- Please make sure the wall can sustain the load.

[Application Example]



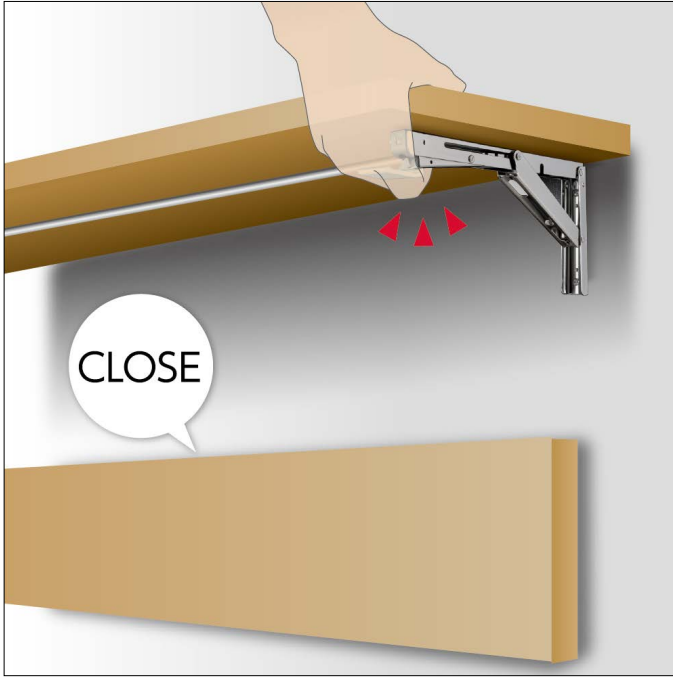
Be careful not to get fingers caught in this section when folding.

RcHS	CAD	Item Code	Item Name	Material	Finish	Number of Holes	Load Capacity N/1pc	Load Capacity kgf/1pc	Weight (g)	Box (pcs)
●	●	120-046-398	EB-303-F	Stainless Steel (SUS304)	Mirror Polished	6	495	50	511	20

Refer to **1** : PC13

INTERLOCK LEVER EB-90 For EB-DA and EB-F / For Wide Shelf

INSTRUCTION



- Multiple levers allow for one-handed operation.
- Can be used with the EB-DA **1** and EB-F **2** (folding brackets).
- Ideal for use on wide shelves.
- The rod can be cut to desired length.

[Remarks]

- If the rod is used with a length of 700 mm or more, please install the included additional mounting plate on the middle of the rod to prevent warping.
- When folding/unfolding the brackets, please hold both the shelf and brackets with your hands.

[Components]

- For 3 brackets



- For 2 brackets



- Rod



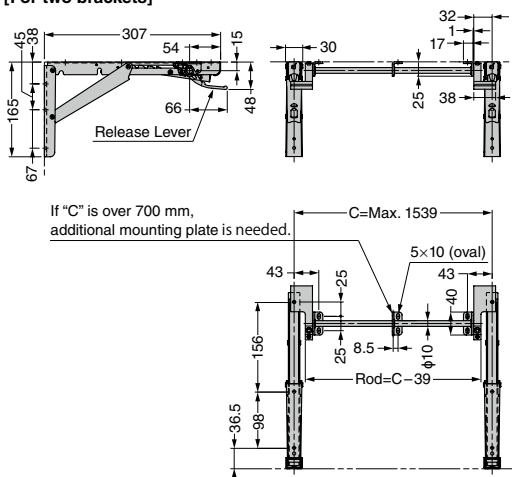
Used with the folding brackets.



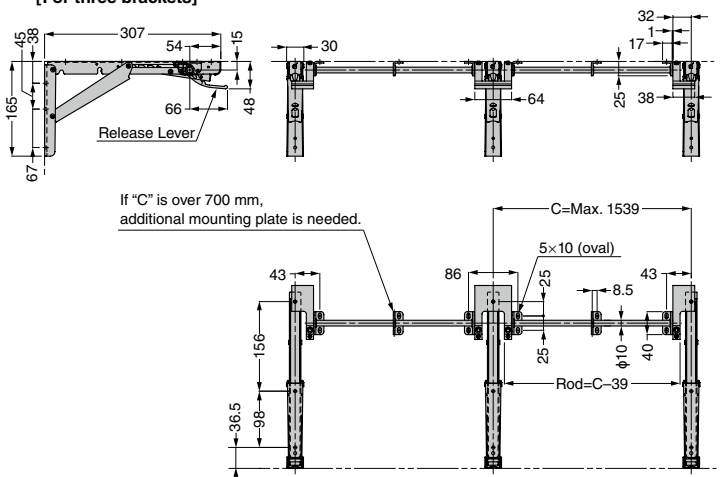
Video Link



[For two brackets]



[For three brackets]



[Lever]

ReHS	CAD	Item Code	Item Name	Type	Material	Finish	Weight (g)	Box (set)
●	●	120-046-395	EB-907560	For 2 brackets	Aluminium Alloy	Anodized	114	34
●	●	120-046-396	EB-907561	For 3 brackets			218	34

[Rod]

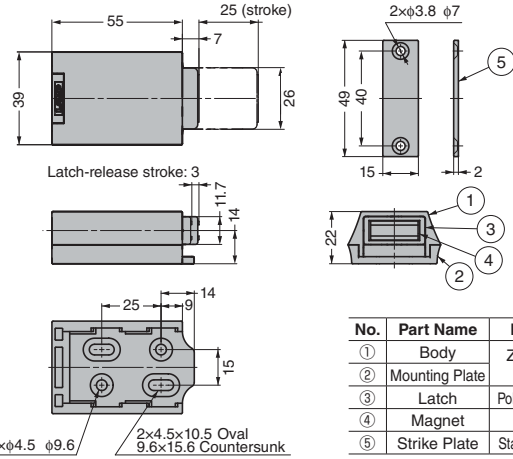
ReHS	CAD	Item Code	Item Name	Length	Material	Finish	Weight (g)	Box (pcs)
●	●	120-046-397	EB-907572	1500	Aluminium Alloy	Anodized	98	25

Refer to **1** : P.C9 **2** : P.C12

METAL MAGNETIC TOUCH LATCH ML-ZN80



Passed 100,000 open/close private cycle test



No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy (ZDC)	Enamel Finish
②	Mounting Plate	Zinc Alloy (ZDC)	Enamel Finish
③	Latch	Polyamide (PA)	-
④	Magnet	Ferrite	-
⑤	Strike Plate	Stainless Steel	Barrel Polished

- The body is made of metal for high durability.
- Designed for use on large doors due to its strong push force.
- The plastic part is flame resistant and compliant with the UL94V-0 standard.
- The magnet part has an allowance of 1.5° on each side to catch the strike plate correctly.
This helps the magnet to adjust even if there is a slight misalignment.
- The screws for the mounting plate are designed to be hidden from view.
- For overlay doors, please make sure there is correct clearance between the door and side board as shown in the drawings below.

[Application]

- Walk-in closets, concealed doors.

[Remarks]

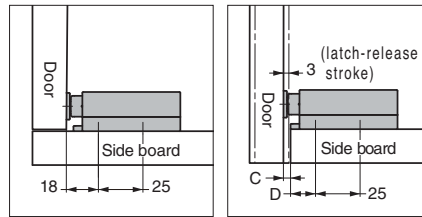
- The magnetic force may vary. Please confirm with actual products before use.
- Please install the body at the height where people are supposed to push.
- Please use hinges which do not have catch functions.

[Parts Included]

- Cross-recessed tapping screw M4 × 16
- Cross-recessed tapping screw M3 × 16

[Installation]

- Inset Doors
- Overlay Doors



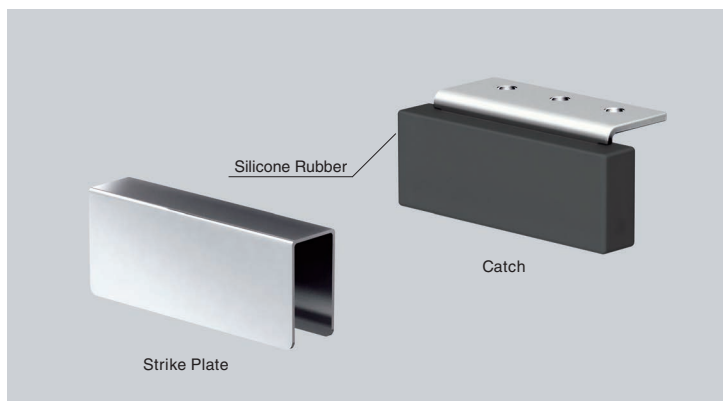
[Dimension]	
C (mm)	D (mm)
3	15
4	14

Please make sure there is the "C clearance" on the side board.
It makes the installation easier to align the edge of the body to the edge of the side board.

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force		Push Force		Max. Door Specs (reference)			Weight (g)	Box (pcs)	Carton (pcs)
					N	kgf	N	kgf	Height (mm)	Width (mm)	Weight (kg)			
●	●	140-043-880	ML-ZN80BL	Black	29.4	3	49	5	2440	915	125	160	10	100
●	●	140-043-881	ML-ZN80WT	White									10	100



DOORSTOP MAGNETIC CATCH HT-MSG62 For Glass Doors



- Works as a glass door stopper and also a magnetic catch.
- Can be used in areas exposed to water such as shower booths.
- The magnet is covered with silicone rubber to catch doors gently.
- Can be used on thin doorframes by installing the bracket in the opposite direction.

[Application]

- Shower rooms, bathrooms.

[Remarks]

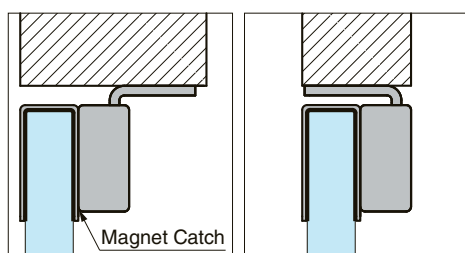
- Operating temperature: Max. 80°C
- Please do not scratch the part of the silicone rubber which comes into contact with the strike plate. It may cause the silicone to break.
If you do not use the strike plates sold separately, please make sure to use a flat one instead.
- The strike plate must be installed on the upper section of the door.
Installation on the bottom or side of the door may cause misalignment.
- The magnetic force is the value when using with the strike plate.

[Parts Included]

- Cross-recessed screw M4 × 12

[Different Installations Available]

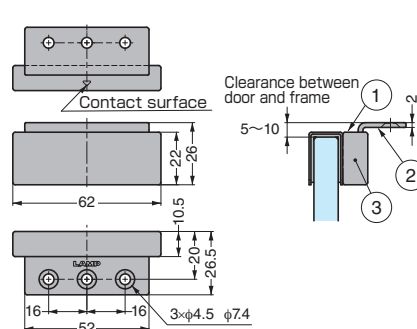
- On standard doorframes
- On thin doorframes



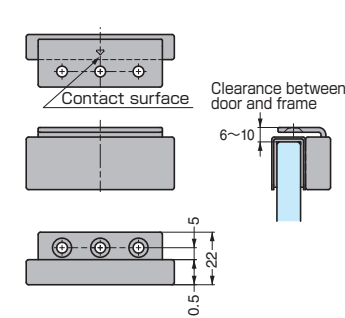
Can be used on thin doorframes by installing the strike plate in the opposite direction.

[Catch]

- For standard doorframes



- For thin doorframes

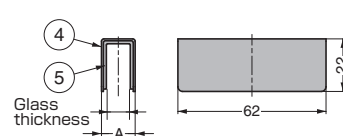


[Recommended Glass Hinges to Use with]



Can be used with the gravity hinges: GH-G02 [1](#) and GH-G07 [2](#).

[Strike Plate]



No.	Part Name	Material	Colour
①	Body	Silicone Rubber (Q)	Black
②	Bracket	Stainless Steel (SUS304)	—
③	Magnet	Neodymium	—
④	Strike Plate	Stainless Steel (SUS430)	—
⑤	Packing for Strike Plate	Chloroprene Rubber (CR)	Black

[Catch]

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)
—	—	270-043-849	HT-MSG62	35	3.6	52.2

[Strike Plate] Sold Separately

RoHS	CAD	Item Code	Item Name	Glass Thickness	A	Weight (g)
—	—	270-043-850	HT-MSG62-U8	8	12.1	22.3
—	—	270-043-851	HT-MSG62-U10	10	14.1	22.9
—	—	270-043-852	HT-MSG62-U12	12	16.4	23.7

[Packing for Strike Plate] Optional (only can be used with the HT-MSG62-U12, the strike plate for 12 mm glass)

RoHS	CAD	Item Code	Item Name	Glass Thickness	Weight (g)
—	—	270-043-853	HT-MSG62-P127	12.7	1.4
—	—	270-043-854	HT-MSG62-P135	13.5	1.1

Refer to [1](#) [2](#) : No.240A P.367-6

ULTRA-THIN MAGNETIC CATCH MC-421

Ultra-thin



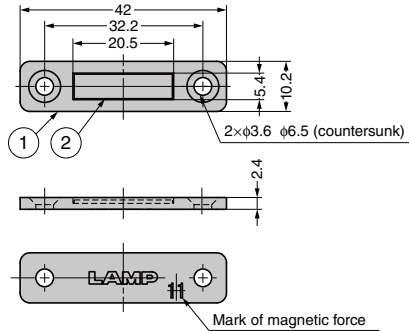
- Super-slim and compact design: 2.4 mm thick and 10.2 mm wide.

[Remarks]

- Be sure to read the "Cautions" **1**.
- Max. temperature: 80
- The counter plate should be in contact with the body.
Direct contact may damage the magnet.

[Recommended Screw]

- Countersunk head wood screw M3



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)
●	●	140-045-390	MC-421-11	11	1.1	6.4	250	1500
●	●	140-045-391	MC-421-30	30	3.1	6.6	250	1500

Refer to **1** : No.280 P.607

ULTRA-THIN MAGNETIC CATCH MC-421SUS Stainless Steel

SUS

Ultra-thin



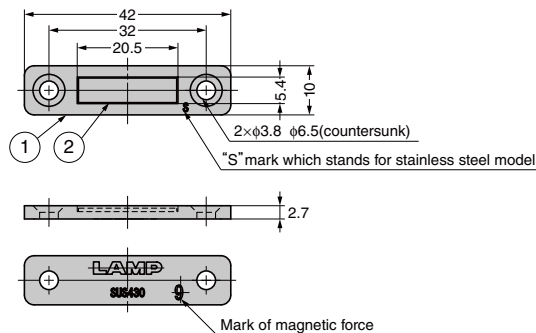
- Made of stainless steel for high corrosion resistance.
- Super-slim and compact design: 2.7 mm thick and 10 mm wide.

[Remarks]

- Be sure to read the "Cautions" **1**.
- Max. temperature: 80
- The counter plate should be in contact with the body.
Direct contact may damage the magnet.

[Recommended Screw]

- Countersunk head wood screw M3



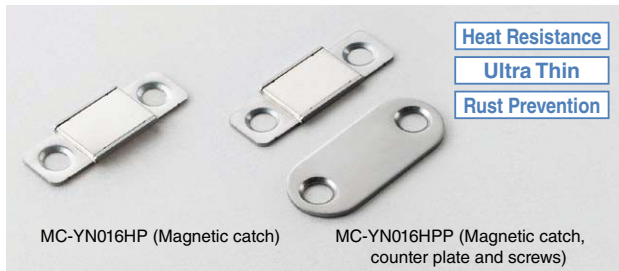
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS430)	Barrel Polished
②	Magnet	Neodymium	Nickel

RoHS	CAD	Item Code	Item Name	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
●	●	140-045-392	MC-421SUS-9	9	0.9	6.9	250	1500
●	●	140-045-393	MC-421SUS-24	24	2.4	7.1	250	1500

Refer to **1** : No.280 P.607

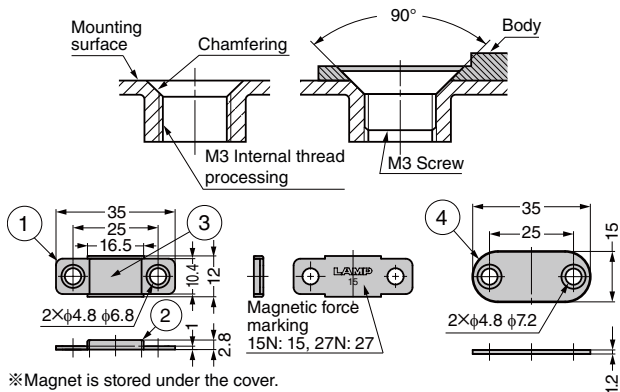
MAGNETIC CATCH MC-YN016HP

SUS



- Suitable for high temperature environments up to 250°C .
- 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



[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)
		140-033-220	MC-YN016HP-15	Magnetic Catch Only	15	1.5	4	100	2000
		140-033-221	MC-YN016HPP-15	Magnetic Catch · Counter Plate & Screws			10.4	100	2000
		140-033-222	MC-YN016HP-27	Magnetic Catch Only	27	2.8	5	100	2000
		140-033-223	MC-YN016HPP-27	Magnetic Catch · Counter Plate & Screws			11.4	100	2000

Refer to **1** : No.240A P.261, **2** : No.280 P.607

SEALED MAGNETIC CATCH **MC-JM38** Ultra-thin

- Covered with resin to prevent from rusting.
- Made of neodymium for strong magnetic force.
- The thickness is only 3.2 mm.
- Ideal for wet condition. It is recommended to use with the MC-JMP45 sealed counter plate. [1](#)

[Application]

- Washing machine, kitchen equipment.

[Sold Separately]

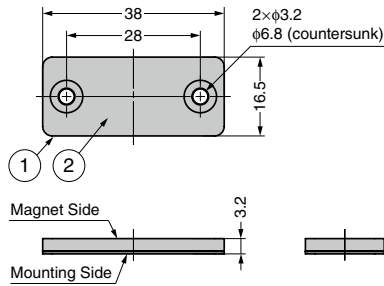
- MC-JMP45 sealed counter plate

[Recommended Screw]

- Countersunk screw M3

[Remarks]

- Max. temperature: 80°C
- Recommended tightening torque: Max. 31.5 N·cm (3.2 kgf·cm)



No.	Part Name	Material	Finish/Colour
①	Body	Polypropylene	White, Black
②	Magnet	Neodymium	Nickel

[Counter Plate] Sold Separately

RoHS	CAD	Item Code	Item Name
●	●	140-050-122	MC-JMP45WT
●	●	140-029-241	MC-JMP45BL

[Magnetic Catch]

RoHS	CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
●	●	140-050-608	MC-JM38WT	White	14.7	1.5	5	200	1,000
●	●	140-050-609	MC-JM38BL	Black				200	1,000

Refer to [1](#) : No.240A P.272

GLASS DOOR CAM LOCK GS-GL5W For Double Swing Doors/Million Lock Series

INSTRUCTION



Application	Door Material	Key Changes	Master Key	When Unlocked	Total Lock
Double swing doors	Glass	Max. 1 million	—	The key is not removable	Million Lock Series

*Max. 2,520 changes per master key (made to order)

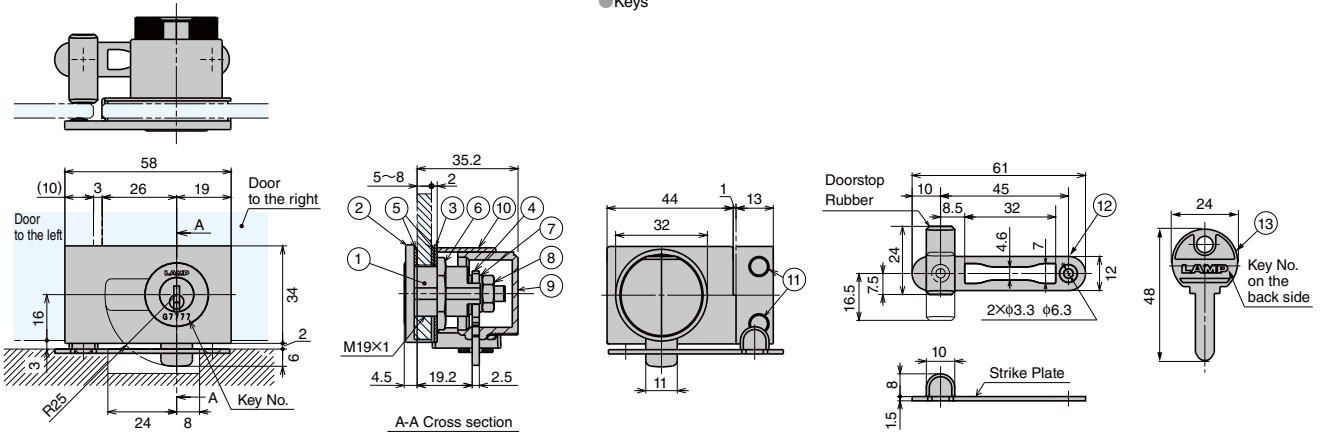
- A perfect cylinder lock for glass showcases.
- Recommended for use with the glass hinge GS-GH5 1 and bracket GS-GB5 2 for total design coordination.
- The keys are dimple type and reversible.
- Unlocks when the key is turned 90° clockwise. (The lock plate also rotates 90°)
- Comes with a door stopper which allows for 8-level depth adjustment.

[Remarks]

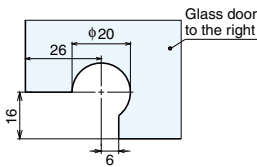
- The direction of the lock plate cannot be changed.
- Shatterproof films are recommended to be used on glass doors for safety.

[Parts Included]

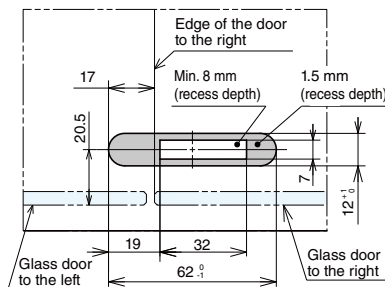
- Doorstop strike plate, GS-GL5HTU
- Countersunk head wood screw 2.7 × 13
- Keys



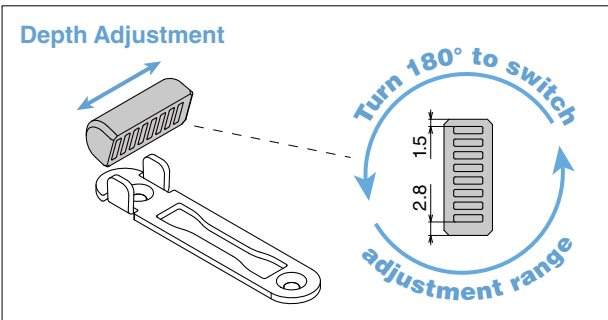
[Cut Out Dimensions]



[Installation Dimensions]



[8-level Depth Adjustment]



Allows for 4-level depth adjustment by changing the slits to insert. When turned 180°, additional 4-level adjustment are available. (Total 8-level)

No.	Part name	Material	Finish/Colour		
			CR	GP	BL
①	Body	Brass			
②	Front Plate	Zinc Alloy (ZDC)	Chrome	Gold (24K) Plated	Black
③	Back Plate				
④	Lock Plate	Stainless Steel (SUS304)	Mirror		
⑤	Gasket	Chloroprene Rubber (CR)	Black		
⑥	Hex Nut	Steel	Silver		
⑦	Washer				
⑧	Hex Nut	Polypropylene (PP)	Black		
⑨	Cover				
⑩	Ring	Stainless Steel (SUS304)	Black		
⑪	Bumper				
⑫	Doorstop Strike Plate	Stainless Steel (SUS403)/EPDM	Plain	Gold	Black
⑬	Key	Brass	Nickel		

RoHS	CAD	Item Code	Item Name	Finish/Colour	Key Type	Glass Thickness	Key Removal*	Key Rotation Angle	Box (pcs)	Carton (pcs)
✓	2D/3D	150-043-982	GS-GL5W-CR-B	Chrome	Key Different	5-8	Only one area	90°	12	60
✓	2D/3D	150-001-151	GS-GL5W-CR-D		Key Alike				12	60
✓	2D/3D	150-043-984	GS-GL5W-GP-B	Gold (24K Plated)	Key Different				12	60
✓	2D/3D	150-001-152	GS-GL5W-GP-D		Key Alike				12	60
✓	2D/3D	150-043-986	GS-GL5W-BL-B	Black	Key Different				12	60
✓	2D/3D	150-001-153	GS-GL5W-BL-D		Key Alike				12	60

Refer to 1 2 : No.240A P.367-3

*Key cannot be removed when unlocked

DOORSTOP STRIKE PLATE GS-GL5HTU



- Combines the functions of a strike plates and a door stopper. Compact and easy to install.
- Allows for 8-level depth adjustment depending on door fitting.
- Can be used with the glass door cam lock, GS-GL5 **1** and GS-GL5W **2**. (As the GS-GL5W already includes this, there is no need to order separately in that case.)

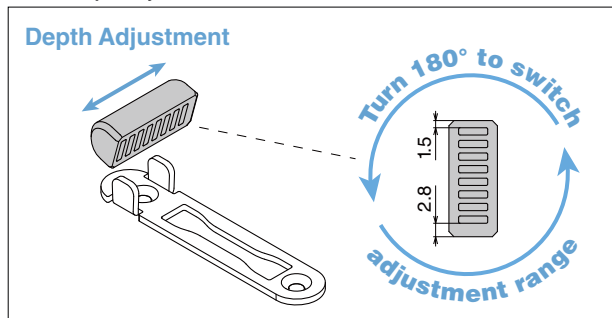
[Remarks]

- Installation direction is different for the GS-GL5 **1** and GS-GL5W **2**.

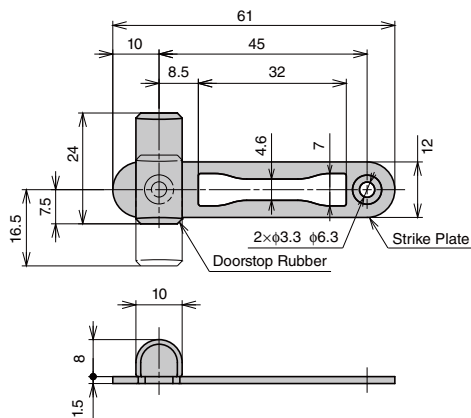
[Parts Included]

- Countersunk head wood screw 2.7 × 13

[8-level Depth Adjustment]



Allows for 4-level depth adjustment by changing the slits to insert. When turned 180°, additional 4-level adjustment are available. (Total 8-level)



RevS	CAD	Item Code	Item Name	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
1	2d3d	150-043-977	GS-GL5HTU-SM	Plain	9	60	360
1	2d3d	150-043-978	GS-GL5HTU-GA	Gold		60	360
1	2d3d	150-043-979	GS-GL5HTU-BL	Black		60	360

Part Name	Material	Finish/Colour
Strike Plate	Stainless Steel (SUS304)	-
Doorstop Rubber	EPDM	Black
Included Screws	-SM	Stainless Steel
	-GA	Stainless Steel
	-BL	Steel (SWCH)
		Black Chrome

Refer to **1** : No.240A P.309-9 **2** : Additional Products Catalogue for 240A : P.E2

GLASS DOOR LOCK GS-GL3



Application	Door Material	Key Changes	Master Key	When Unlocked	Total Lock
Single swing door	Glass	120	—	KF : Removable KT : Unremovable (key)	2650 Series*

*Available with the 22 and 30 mm thick types. The 16 mm thick type is not compatible.

- Cylinder lock designed for glass showcases.
- Comes in two key types:
 - One is removable when locked, and the other is not.
- The locking direction can be changed by turning the case lock and cylinder.
- The strike plate also works as a door stopper, providing stable locking operation.
- The only drilling required for the cabinet is a round hole. This makes the installation very quick.

[Remarks]

- Note that scratches on the black type may become conspicuous. Please handle it with care during installation.

- Shatter proof film is recommended to be used on glass for safety.

[Parts Included]

- Cross-recessed countersunk tapping screw 3 × 14
- Key
- Strike plate

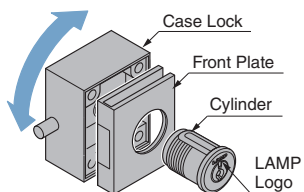
No.	Part Name	Material	Finish		
			CR	GP	BL
①	Cylinder	Zinc Alloy (ZDC)	Chrome	Gold Plated (24K)	Black Chrome
②	Front Plate				Enamel Black
③	Case Lock				Enamel Black
④	Back Plate	Steel (SPCC)			Clear Zinc Chromate
⑤	Packing	Chloroprene Rubber (CR)			-
⑥	Nut	Steel (SPCC)			Clear Zinc Chromate
⑦	Dead Bolt	Steel			Nickel
⑧	Strike Plate	Steel (SPCC)			Enamel Black
⑨	Cross-recessed countersunk screw M3 × 20	Steel			Black Chrome

[Round Dead Bolt]

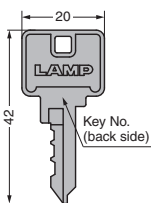
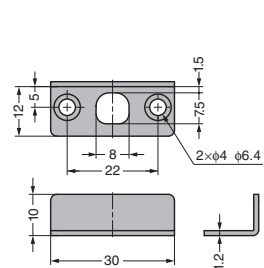
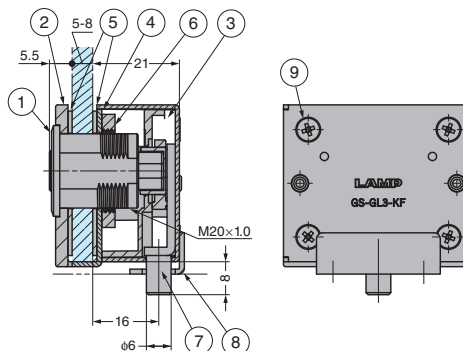
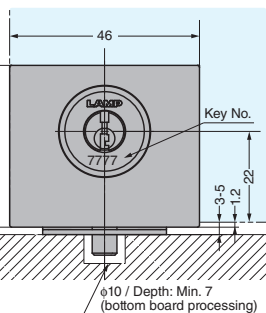
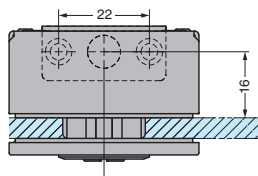


Only processing required for boards is a $\phi 10$ mm drilling.

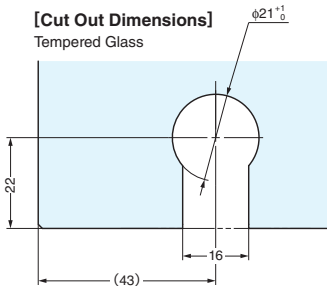
[Change Locking Direction]



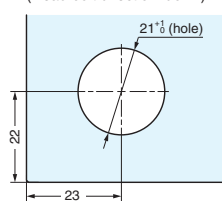
1. Remove the cylinder from the front plate.
2. Turn the case lock and front plate to the desired direction.
3. Fix them with nuts or screws. (Make sure the LAMP logo of the cylinder is always in the right direction.)



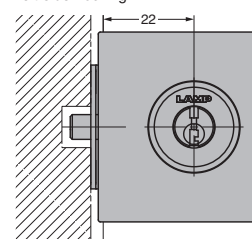
[Cut Out Dimensions] Tempered Glass



[Cut Out Dimensions] (Dead bolt direction: down)



[Installation Example] Left-side Locking



RoHS	CAD	Item Code	Item Name	Finish	Key Type	Glass Thickness	When Unlocked	Key Removal	Key Rotation Angle	Box (pcs)	Carton (pcs)
-	●	150-047-087	GS-GL3-KF-CR-B	Chrome	Key Different	5 - 8	Key is removable	Two Areas	360°	12	24
-	●	150-001-169	GS-GL3-KF-CR-D		Key Alike					12	24
-	●	150-047-088	GS-GL3-KF-GP-B	Gold Plated (24K)	Key Different					12	24
-	●	150-001-170	GS-GL3-KF-GP-D		Key Alike					12	24
-	●	150-047-089	GS-GL3-KF-BL-B	Black	Key Different					12	24
-	●	150-001-171	GS-GL3-KF-BL-D		Key Alike					12	24
-	●	150-047-084	GS-GL3-KT-CR-B	Chrome	Key Different		Key is NOT removable	One Area	90°	12	24
-	●	150-001-166	GS-GL3-KT-CR-D		Key Alike					12	24
-	●	150-047-085	GS-GL3-KT-GP-B	Gold Plated (24K)	Key Different					12	24
-	●	150-001-167	GS-GL3-KT-GP-D		Key Alike					12	24
-	●	150-047-086	GS-GL3-KT-BL-B	Black	Key Different					12	24
-	●	150-001-168	GS-GL3-KT-BL-D		Key Alike					12	24

GLASS DOOR LOCK **GS-GL50** Easy Key Change

[Round Dead Bolt]



Only processing required for boards is drilling.

[Reversible Key]



Comes with dimple keys.



[For Luxury Shops]

Smooth key operation and solid deadbolt enabling secure locking make the GS-GL50 ideal for luxury shops.

Application	Door Material	Key Changes	Master Key	When Unlocked	Total Lock
Single swing door	Glass	Max. 3 million	-	The key is removable	Super Rim Lock Series

*Max. 300 changes per master key (made to order)

- Cylinder lock designed for glass showcases.
- Designed for use with the GS-GH50 hinge **1** for design coordination.
- Thick stainless steel deadbolt for added security.
- The keys are dimple type and reversible.
- Key number can be changed without replacing the cylinder. (Easy key change system)
- A cover hides the key hole.
- The face plate can be used as a handle to open the door.
- The only drilling required for the cabinet is a round hole. This makes the installation very quick.

[Others]

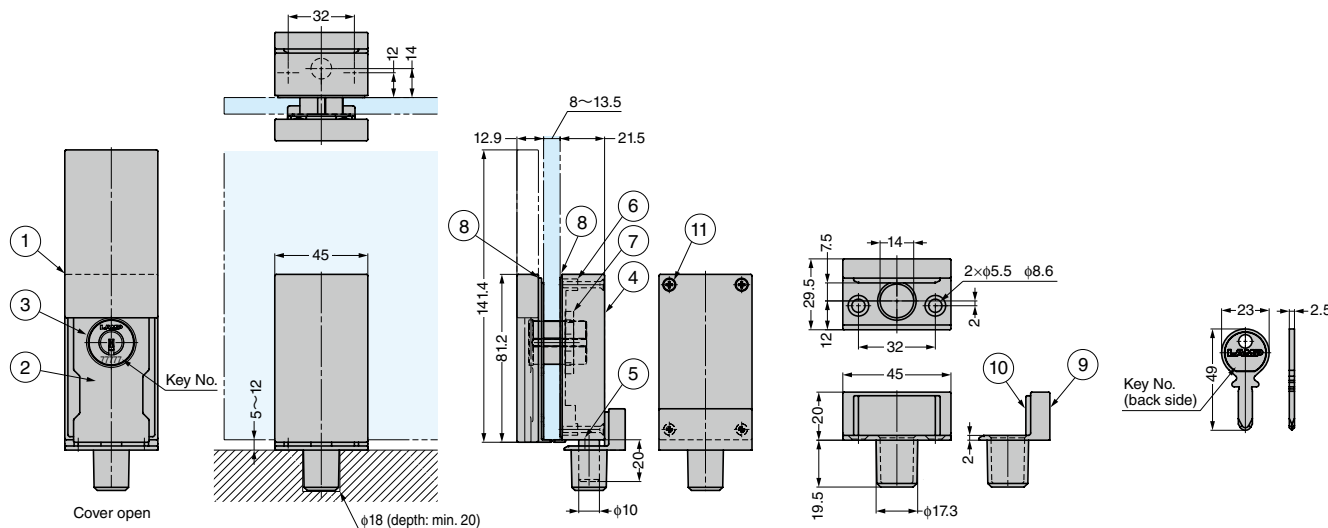
- Special type which does not have the construction key system is also available. (Key changes: 3,000 per master key)

[Remarks]

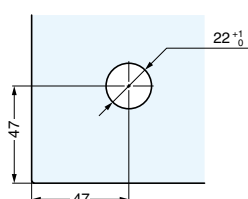
- Note that scratches on the black type may become conspicuous. Please handle it with care during installation.
- Shatter proof film is recommended to be used on glass for safety.
- The key number can be changed up to 2 times.
- Previous keys cannot be used again after changing key number.
- Read the remarks on handling the lock before use.

[Parts Included]

- Cross-recessed countersunk tapping screw 4 × 20 (The finish is the same as the strike plates.)
- Key
- Strike plate



[Cut Out Dimensions]

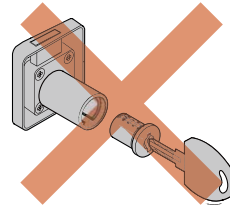
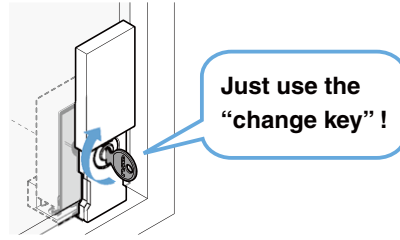
Refer to **1**: P.F31

No.	Part Name	Material	Finish		
			CR	GP	BL
①	Slide Cover	Zinc Alloy (ZDC)	Chrome	Gold Plated (24K)	Enamel Black
②	Face Plate				
③	Cylinder				
④	Case Lock	Zinc Alloy (ZDC)	Plain	Nickel	
⑤	Dead Bolt	Stainless Steel			
⑥	Back Plate	Zinc Alloy (ZDC)	Plain		
⑦	Nut	Brass	Black		
⑧	Packing	Chloroprene Rubber (CR)	Black		
⑨	Strike Plate	Zinc Alloy (ZDC)	Chrome	Gold Plated (24K)	Enamel Black
⑩	Strike Plate Rubber	EPDM	Black		
⑪	Cross-recessed countersunk screw M3 x 18	-	Chrome	Gold Plated (24K)	Enamel Black

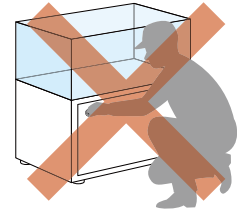
Easy Key Change. No Cylinder Replacements Needed.

The key number can be changed by simply using a "change key".

It is unnecessary to ask locksmith for replacing cylinders, for example, when the key is lost or tenants are changed.



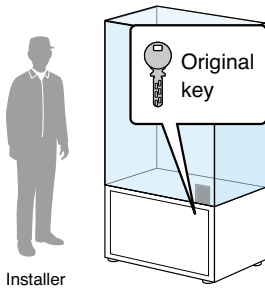
No cylinder replacements needed



No locksmith's help needed

Use Example in Tenant Shop

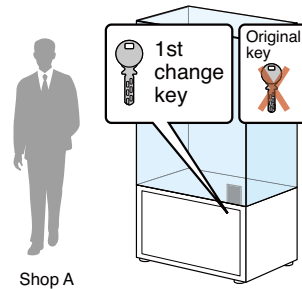
① During installation



Installer

"Original key" is used during installation.
(The "original key" is included.)

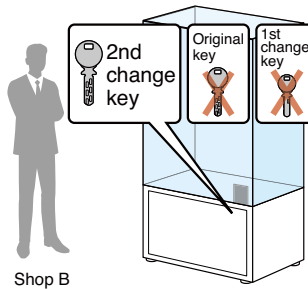
② When a new tenant moves in



Shop A

"1st change key" is used for "shop A".
The "original key" is no longer be used after this.
(The "1st change key" is made to order.)

③ When the tenant changes



Shop B

"2nd change key" is used for "shop B".
The "1st change key" is no longer be used after this.
(The "2nd change key" is made to order.)



Key numbers cannot be changed anymore.

[Combined Usage with Key and Master Key]

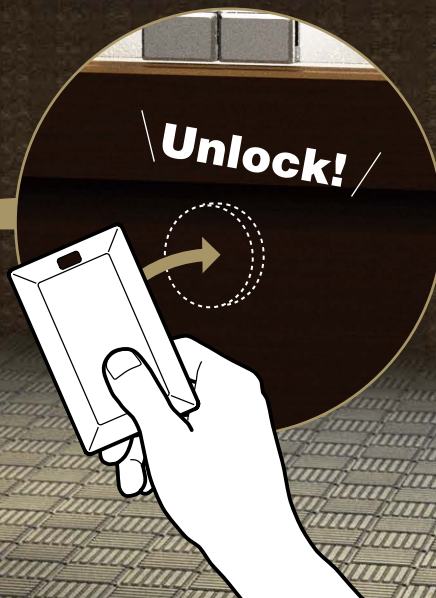
- There are also three kinds of Master Keys: Original Master Key, Master Keys for 1st change and 2nd change. They are available by made to order.
- Master Keys must also be changed after the lock's key number is changed.
- All key numbers will be changed by using new master key.
- In case only some of the locks' key numbers in Master Key system are changed, master keys for that portion should still be kept.

RoHS	CAD	Item Code	Item Name	Finish	Key Type	Master Key System	Glass Thickness	Key Removal	Key Rotation Angle	Box (pc)	Carton (pcs)
-	●	150-047-111	GS-GL50MK-CR-B	Chrome	Key Different	With	8 - 13.5	Two Areas	360°	1	12
-	●	150-047-112	GS-GL50-CR-B			Without				1	12
-	●	150-001-172	GS-GL50-CR-D		Key Alike	1				12	
-	●	150-047-113	GS-GL50MK-GP-B	Gold Plated (24K)	Key Different	With				1	12
-	●	150-047-114	GS-GL50-GP-B			Without				1	12
-	●	150-001-173	GS-GL50-GP-D		Key Alike	1				12	
-	●	150-047-115	GS-GL50MK-BL-B	Enamel Black	Key Different	With	1	12			
-	●	150-047-116	GS-GL50-BL-B			Without	1	12			
-	●	150-001-174	GS-GL50-BL-D		Key Alike	1	12				

LAMP®

EXCELOCK®

Contactless electronic lock system



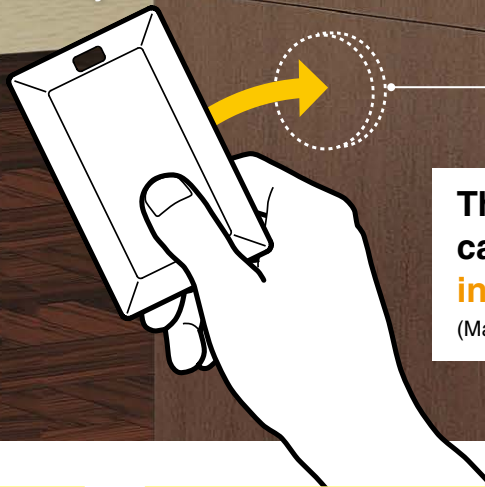
The key card system enhances both the design and functionality

The clever auto-lock



Hold up the card to smart unlock

Hold the key over the antenna to unlock the door.
When the door is closed, it will automatically lock.
Up to 20 locations can be unlocked
simultaneously with a single
system.



**Silent
lock!!**

The antenna unit
can be concealed
inside the cabinet
(Max. sensing distance 30 mm)

Design and functionality

IDEAL FOR SHOWCASES

The absence of keyholes makes a beautiful and clean design, and the discreet locking mechanism improves security. Ideal for high end showcases where appearance, function and security are important.

Combination of locks and strikes

FLEXIBILITY OF USE

Locks can be standardized, even for doors of various specifications. You can select from the XL-GC hinged or sliding door fittings or any other Sugatsune glass showcase solution.

* For more information about XL-GC series, please refer to the 240A Digital Book version.

Easy key registration and deletion

SIMPLE MANAGEMENT

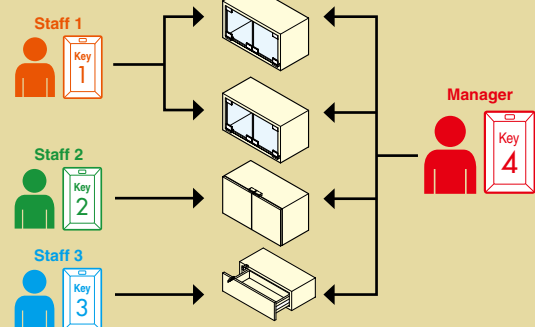
As keys are registered for each individual showcase, they can be used for one several locks. Adding or deleting a key is therefore very simple, and no computer or programming is necessary.

- Keys use a proprietary technology for added security.
- Keys do not need batteries.

Example of use

Individually unlockable

Group unlockable

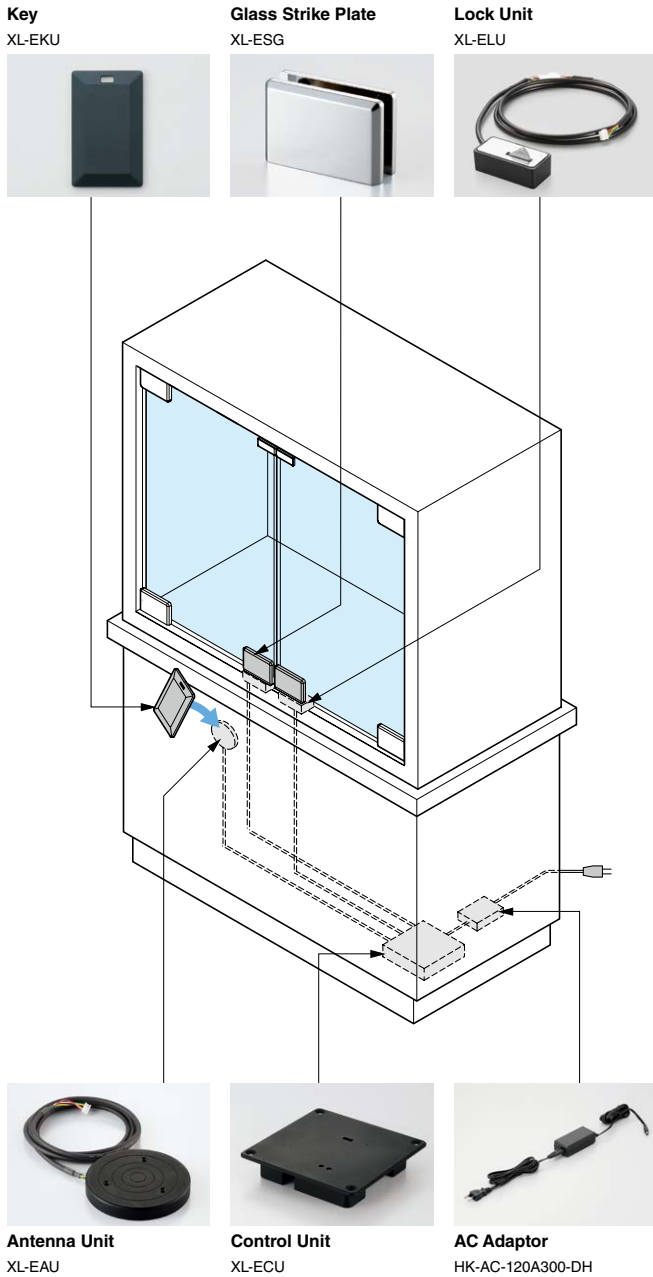


All elements have been carefully designed to make the system safe and easy to use.

- Improved sensitivity of the key and antenna unit
- The system prevents malfunctions caused by other radio interference
- Reduces electronic noise when unlocking
- The cables of the lock unit have been divided to improve the ease of installation and maintenance.

SIMPLE CONFIGURATION

[Example of a glass inset swinging door]



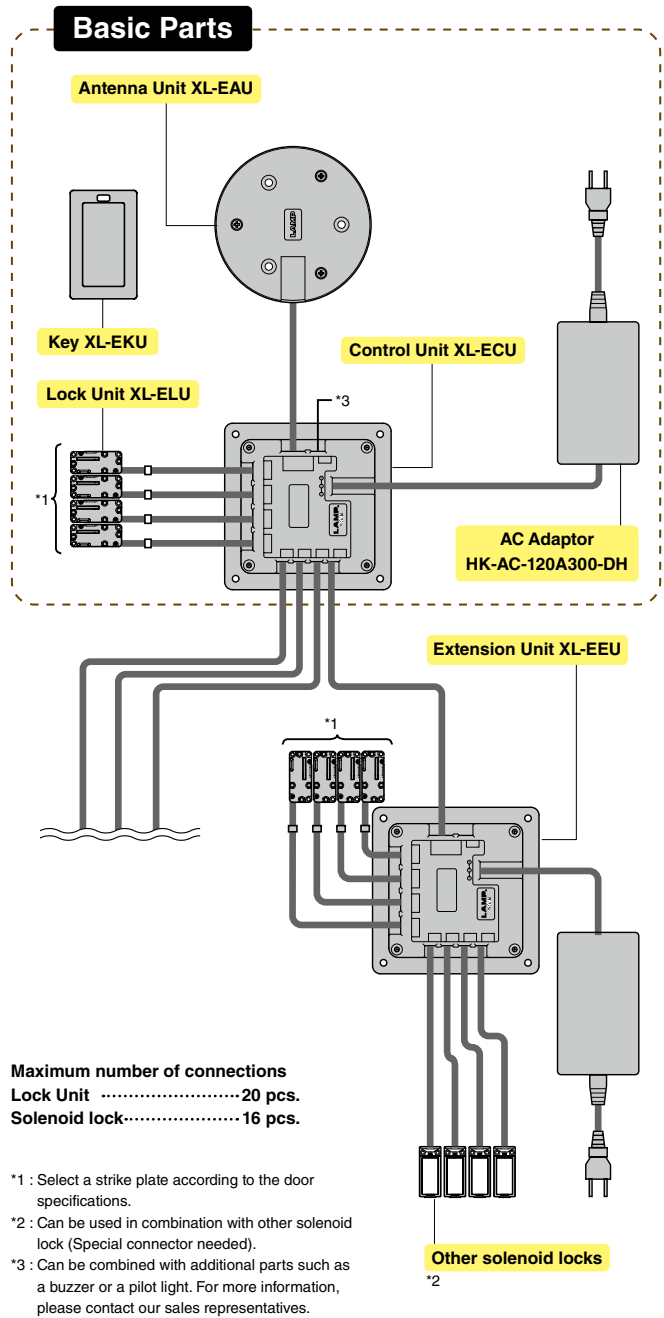
[Function Keys and Control Keys.]

Function keyA key to unlock the door.
Control keyA key to register/delete the function keys. The first registered key is used as the control key. The control key cannot be used to unlock the door.

[System Specification]

Communication Method		RF-ID 416 kHz
Operating Method		Motor driven
Power Supply		AC adaptor HK-AC-120 A 300-DH
Operating Temperature		0°C - 40°C
Sensing Distance		0 - 30 mm
Electrical Characteristics	Standby Current	20 mA (Unlocked)
	Operating Current	Max. 500 mA (Equivalent to 4 lock units)
Key Changes Registered		Max. 30 key changes + 2 control key

CONNECTION EXAMPLE



Maximum number of connections
Lock Unit 20 pcs.
Solenoid lock..... 16 pcs.

- *1 : Select a strike plate according to the door specifications.
- *2 : Can be used in combination with other solenoid lock (Special connector needed).
- *3 : Can be combined with additional parts such as a buzzer or a pilot light. For more information, please contact our sales representatives.

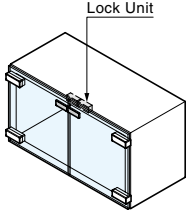
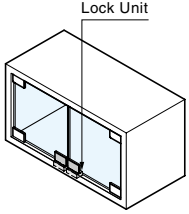
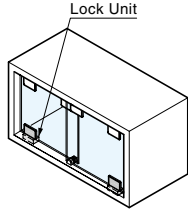
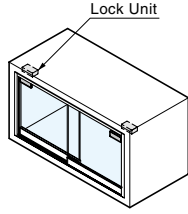
Controllable numbers of lock per extension unit

No. of Control Unit	No. of Extension Units	No. of lock units	No. of Solenoid units
1	0	4	4
	1	8	7
	2	12	10
	3	16	13
	4	20	16

⚠ Caution

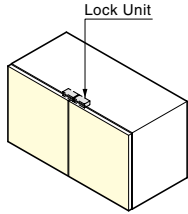
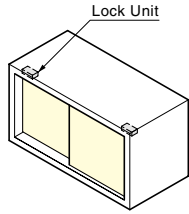
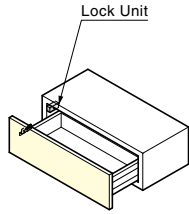
- This product is an electronic lock for wooden cabinets only. It cannot be used for sheet metal cabinets or fittings.
- Do not place any metal objects around the antenna unit.
- Do not place telecommunication devices (Such as Wi-Fi devices and smartphones) near this product.
- Communication distance may vary depending on the temperature of the operating environment.

EXCELOCK parts for different door/cabinet specifications (1/2)

Compatible Products			Door And Cabinet Specifications				Pattern	Required Quantity	
Page	Parts		①	②	③	④			
	Name	Item Code Item Name	Left/Right Handed						
				Glass Door					Door Material
				Swinging Door		Sliding Door (Top Installation)	Sliding Door (Bottom Installation)	Opening Style	
Frame-less		Frame-less	Door with metal frame	Door Design					
		Overlay	Inset	Inset	Inset				
E12	Control Unit	150-022-206 XL-ECU	-	1	1	1	1		
		150-022-209 XL-EEU	-	Add as needed					
	AC Adaptor	150-022-215 HK-AC-120A300-DH	-	1	1	1	1		
		150-022-207 XL-EAU	-	1	1	1	1		
E13	Key Unit	150-022-208 XL-EKU	-	4 ^{*1}	4 ^{*1}	4 ^{*1}	4 ^{*1}		
		150-022-205 XL-ELU	-	2	2	-	2		
E14	Lock Unit	150-025-451 XL-ELU-SDL	Left	-	-	1	-		
		150-025-452 XL-ELU-SDR	Right	-	-	1	-		
	For sliding glass door	150-025-450 XL-ESG-SD	-	-	-	2	-		
		150-022-210 XL-ESG-L	Left	-	1	-	-		
E15	Strike Plate	150-022-211 XL-ESG-R	Right	-	1	-	-		
		150-022-212 XL-ESW-L	Left	1	-	-	1		
		150-023-021 XL-ESW-R	Right	1	-	-	1		
		150-022-213 XL-ESD	-	-	-	-	-		
E16	Strike plate mounting bracket for glass door	150-022-214 XL-EBSG	-	2	-	-	2		

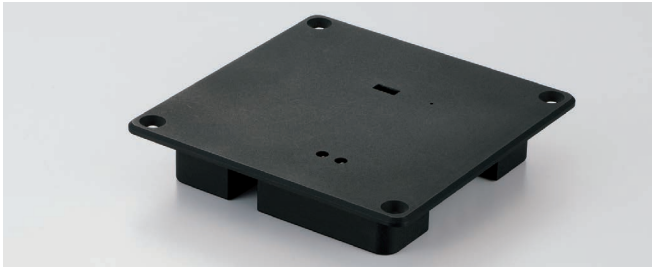
*1 : 2 control keys and 2 function keys

EXCELOCK parts for different door/cabinet specifications (2/2)

Compatible Products				Door And Cabinet Specifications					
Page	Parts		Left/Right Handed	⑤	⑥	⑦	Pattern		
	Name	Item Code Item Name							
				Wooden door				-	
				Swinging Door	Sliding Door	Drawer			
-	-	-							
				Overlay	Inset	-	Door Material		
							Opening Style		
							Door Design		
E12	Control Unit	150-022-206	-	1	1	1	Required Quantity		
		XL-ECU	-						
	Extension Unit	150-022-209	-	Add as Needed					
		XL-EEU	-						
AC Adaptor	150-022-215	-	1	1	1				
	HK-AC-120A300-DH	-							
Antenna Unit	150-022-207	-	1	1	1				
	XL-EAU	-							
E13	Key Unit	150-022-208	-	4 ¹	4 ¹	4 ¹			
		XL-EKU	-						
		150-022-205	-	2	2	1			
		XL-ELU	-						
E14	Lock Unit	For sliding glass door	150-025-451	Left	-	-	-		
			XL-ELU-SDL						
	For swinging glass door	150-025-452	Right	-	-	-			
		XL-ELU-SDR							
E15	Strike Plate	For sliding glass door	150-025-450	-	-	-			
			XL-ESG-SD						
		For swinging glass door	150-022-210	Left	-	-	-		
			XL-ESG-L						
			150-022-211	Right	-	-	-		
			XL-ESG-R						
150-022-212	Left	1	1	-					
XL-ESW-L									
150-023-021	Right	1	1	-					
XL-ESW-R									
E16	For Drawers	150-022-213	-	-	-	1			
		XL-ESD	-						
		Strike plate mounting bracket for glass door	150-022-214	-	-	-	-		
		XL-EBSG	-						

*1 : 2 control keys and 2 function keys

LAMP® EXCELOCK® CONTROL UNIT XL-ECU



- This unit is connected to the antenna unit **1** and lock unit **2** to integrate the entire system.
- In addition to being installed into cabinets, it can also be mounted on a surface using the included bracket.

[Features]

- An AC adaptor is required (Sold separately)

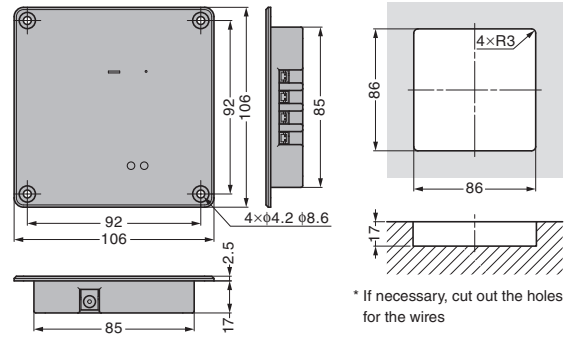
[Parts Included]

- Spacer for surface mounting
- Cross-hole countersunk screws 4x12
- Cross recessed flat head screws 4x30

[Sold Separately]

- AC Adaptor HK-AC-120A300-DH **3**

[Cut Out Dimensions]
(Inset installation)



* If necessary, cut out the holes for the wires

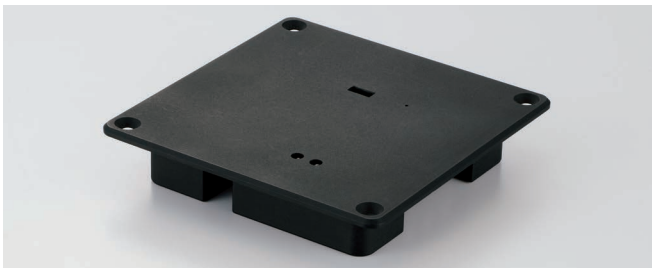


AC Adaptor HK-AC-120A300-DH **3** (Sold separately)

RoHS	CAD	Item Code	Item Name	Material	Colour
-		150-022-206	XL-ECU	ABS Resin	Black

Refer to **1**: PE12, **2**: PE13 - E14, **3**: PE5

LAMP® EXCELOCK® EXTENSION UNIT XL-EEU



- This unit is used to increase the number of lock units to be controlled at one time.
- It is connected to the control unit using the attached connection cord.
- In addition to being installed into cabinets, it can also be mounted on a surface using the included bracket.

[Features]

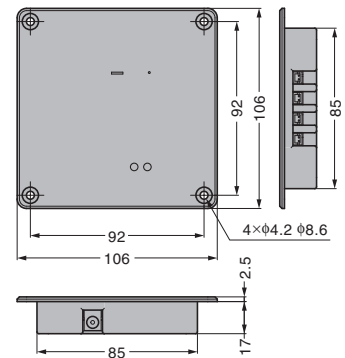
- An AC adaptor is required (Sold separately)
- It does not work by itself. Be sure to use it with the control unit XL-ECU **1**.

[Parts Included]

- Connection Cable (2000 mm)
- Spacer for surface mounting
- Cross-hole countersunk screws 4x12
- Cross recessed flat head screws 4x30

[Sold Separately]

- AC Adaptor HK-AC-120A300-DH **2**



* Please refer to the XL-ECU for installation drawings.

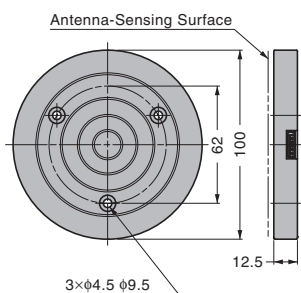


AC Adaptor HK-AC-120A300-DH **2** (Sold separately)

RoHS	CAD	Item Code	Item Name	Material	Colour
-		150-022-209	XL-EEU	ABS Resin	Black

Refer to **1**: PE12, **2**: PE17

LAMP® EXCELOCK® ANTENNA UNIT XL-EAU



- When a key **1** is placed within the antenna detection zone, a signal is sent to the control unit to unlock the doors connected to it. The antenna can be mounted either inside or outside the cabinet.

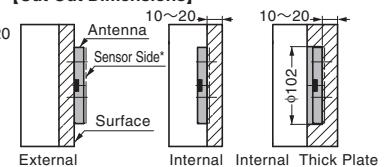
[Features]

- Do not install the unit on sheet metal or use it in an environment where there is metal around it.
- If necessary, cut out the holes for the wires (See the installation process diagram below).

[Parts Included]

- Connection Cable (1500 mm)
- Cross recessed flat head screws 4x20

[Cut Out Dimensions]

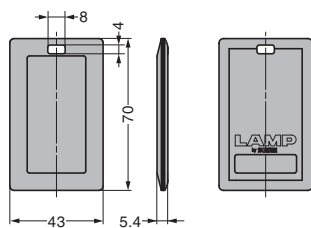


* Be sure to install it with the sensing surface facing outside

RoHS	CAD	Item Code	Item Name	Material	Colour	Sensor Distance
-		150-022-207	XL-EAU	ABS Resin	Black	0 - 30

Refer to **1**: PE13

LAMP® EXCELOCK® KEY XL-EKU PAT



- This is a contactless card key used in combination with the antenna unit XL-EAU 1 to unlock the door.
- It can be used as both control key and function key.
- Up to 2 control keys and 30 function keys can be registered in one control unit.

[Features]

- At least two cards are required (1 Control Key and 1 Function Key).

RoHS	CAD	Item Code	Item Name	Material	Colour
-	2030	150-022-208	XL-EKU	ABS Resin	Black

Refer to 1: P.E12

LAMP® EXCELOCK® LOCK UNIT XL-ELU PAT



- This is an electric lock unit for glass and wood swinging doors and wood drawers.
- It can be unlocked by holding the key 1 over the antenna unit 2.
- When the cable length is insufficient please use the additional extension cable. When using this product, please remove the extension cable 5 and connect it to the optional extension cable.
- In addition to being installed into cabinets, it can also be mounted on a surface using the included bracket.

[Features]

- The door needs to be properly closed for the lock to engage. We recommend the use of a stopper or door guide for sliding doors, and a door stopper or magnetic catch for hinged doors.

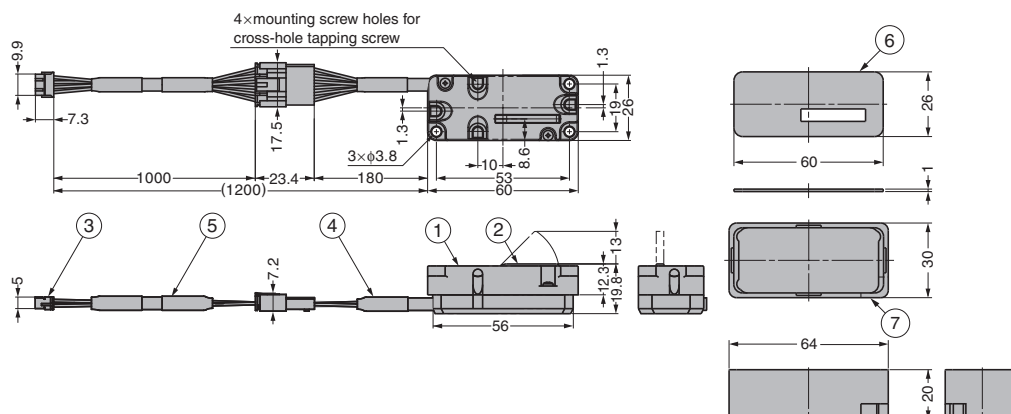
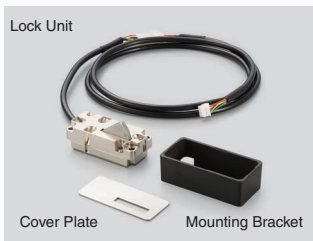
[Parts Included]

- Cross-hole pan-head tapping screw 3.5 x 12 (For installation in the drilled hole)
- Cross-hole pan-head tapping screw 3.5 x 30 (For mounting on a face-mounted bracket)

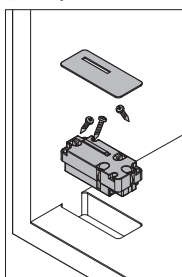
[Optional Parts]

- Relay Cable

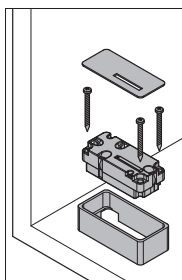
[Component Parts]



[Example]



In addition to the installation shown in the figure, it can also be attached to the top or side of the cabinet

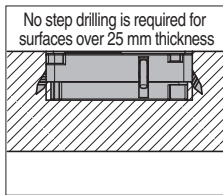
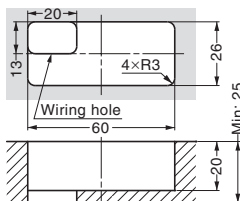


Mounting Bracket
(For surface mounting, use vertical threaded holes)

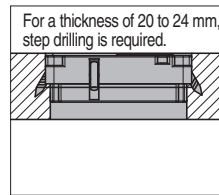
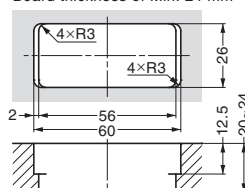
No.	Item Name	Material	Finish/Colour
①	Lock Unit Body	Zinc Alloy (ZDC)	Nickel
②	Deadbolt	Stainless Steel	Barrel Polishing
③	Connector	Polyamide (PA)	Natural
④	Connection Cable	-	-
⑤	Relay Cable	-	-
⑥	Cover Plate	Stainless Steel (SUS304)	Chrome
⑦	Bracket	ABS Resin	Black

[Cut Out Dimensions]

Board thickness of Min: 25 mm



Board thickness of Min: 24 mm



[Body]

RoHS	CAD	Item Code	Item Name	Max. Width (Sliding Door)	Max. Width (Swinging Door)	Max. Door Height
-	2030	150-022-205	XL-ELU	800	500	1200

Refer to 1: P.E13, 2: P.E12

[Relay Cable] Option

RoHS	CAD	Item Code	Item Name	Length
-	20	150-045-836	XL-ELU-EC2000	2000
-	20	150-045-837	XL-ELU-EC4000	4000

LAMP® EXCELOCK® LOCK UNIT FOR GLASS SLIDING DOOR XL-ELU-SD PAT



- The lock unit can be unlocked by holding the key ① over the antenna unit ②.
- Used in combination with the strike plate for glass sliding door XL-ESG-SD ③.
- When the cable length is insufficient please use the additional extension cable. When using this product, please remove the extension cable ⑤ and connect it to the optional extension cable.
- For full coordination, use in combination with the upper bracket XL-GC06-CR ④.

[Features]

- The door needs to be properly closed for the lock to engage. We recommend the use of a stopper or door guide for sliding doors, and a door stopper or magnetic catch for hinged doors.

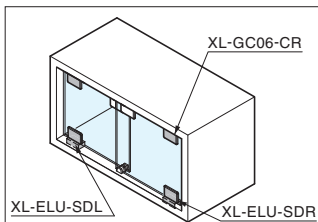
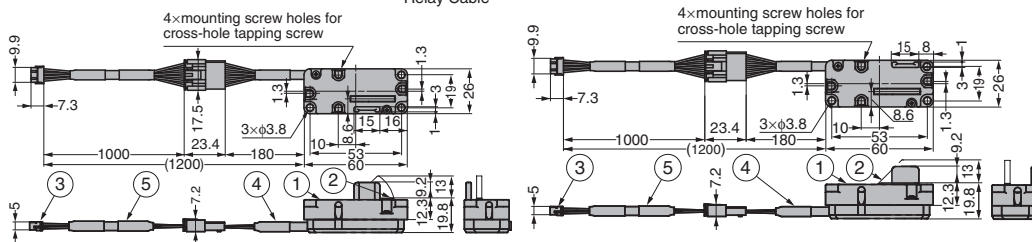
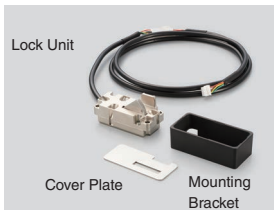
[Parts Included]

- Cross-hole pan-head tapping screw 3.5 × 12 (Inset installation)
- Cross-hole pan-head tapping screw 3.5 × 30 (Surface installation)

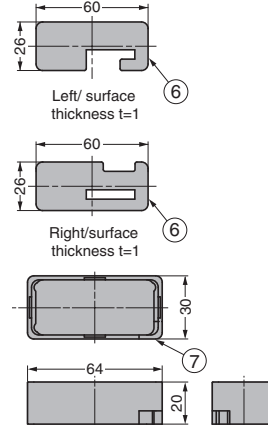
[Optional Parts]

- Relay Cable

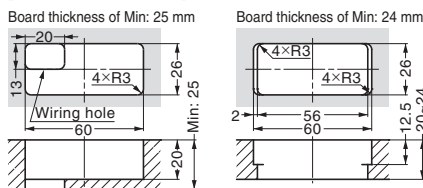
[Component Parts]



No.	Item Name	Material	Finish/Colour
①	Lock Unit Body	Zinc Alloy (ZDC)	Nickel
②	Deadbolt	Stainless Steel	Barrel Polishing
③	Connector	Polyamide (PA)	Natural
④	Connection Cable	-	-
⑤	Relay Cable	-	-
⑥	Cover Plate	Stainless Steel (SUS304)	Chrome
⑦	Bracket	ABS Resin	Black



[Cut Out Dimensions]



[Body]

RoHS	CAD	Item Code	Item Name	Specification	Max. Door Width	Max. Door Height	Glass Thickness
-	2c3c	150-025-452	XL-ELU-SDR	Right	800	1200	8
-	2c3d	150-025-451	XL-ELU-SDL	Left			

Refer to ① : P.E13, ② : P.E12, ③ : P.E14, ④ : No.240A P.642

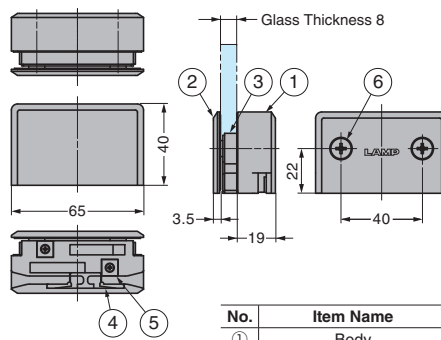
[Relay Cable] Option

RoHS	CAD	Item Code	Item Name	Length
-	2d	150-045-836	XL-ELU-EC2000	2000
-	2d	150-045-837	XL-ELU-EC4000	4000

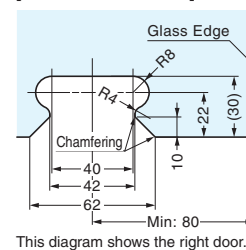
LAMP® EXCELOCK® STRIKE PLATE FOR GLASS SLIDING DOOR XL-ESG-SD



- Used with the XL-ELU-SD lock unit for glass sliding doors ①.
- Can be used for both left and right handed doors.



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Max. Door Width	Max. Door Height	Glass Thickness
-	-	150-025-450	XL-ESG-SD	800	1200	8

Refer to ① : P.E14

No.	Item Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Chrome
②	Cover		
③	Edge Packing	Polyacetal (POM)	Natural
④	Guide Catch		
⑤	Sensor Magnet	Neodymium	Nickel
⑥	Screw	Stainless Steel	Plain

LAMP EXCELOCK[®] STRIKE PLATE FOR GLASS DOOR XL-ESG For Swing Door



• It perfectly matches style when used in combination with the glass hinge XL-GC04-CR **1**.

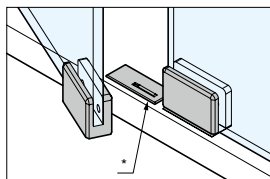
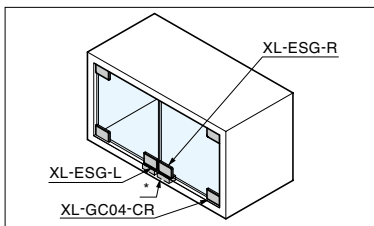
[Features]

• The door needs to be properly closed for the lock to engage. We recommend the use of a door stopper or magnetic catch.

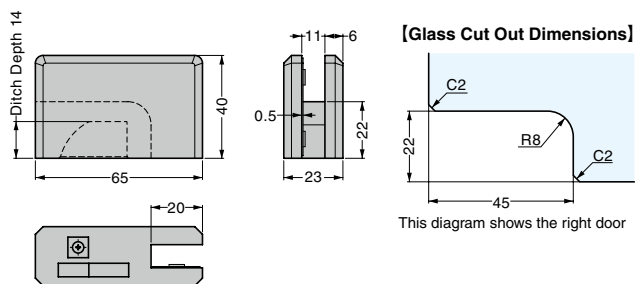
[Parts Included]

• Installation adjustment spacer

[Installation]



* XL-ELU lock unit **2** (Sold separately)



[Glass Cut Out Dimensions]

This diagram shows the right door

XL-ESG-R is shown. XL-ESG-L is symmetrically opposite.

RoHS	CAD	Item Code	Item Name	Specification	Material	Finish	Max. Door Width	Max. Door Height	Glass Thickness
-	2D/3D	150-022-211	XL-ESG-R	Right	Zinc Alloy (ZDC)	Chrome	500	1200	5, 6, 8
-	2D/3D	150-022-210	XL-ESG-L	Left					

Refer to **1**: No.240A P.449, **2**: P.E13

LAMP EXCELOCK[®] STRIKE PLATE FOR WOOD DOOR XL-ESW



• It can be used with both a swing door and a slide door.

[Features]

• The door needs to be properly closed for the lock to engage. We recommend the use of a stopper or door guide for sliding doors, and a door stopper or magnetic catch for hinged doors.

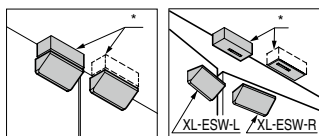
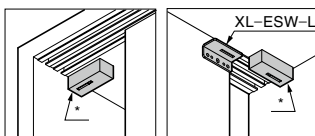
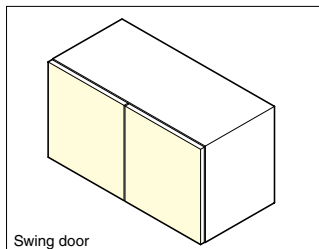
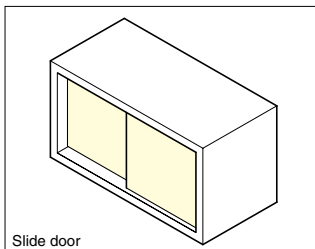
[Parts Included]

• Cross-hole pan-head tapping screw 4x16

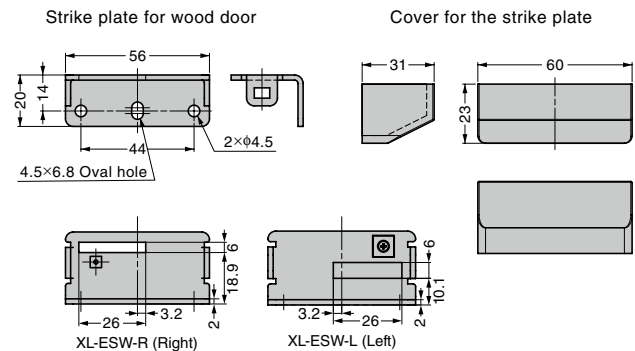
[Sold Separately]

• Lock unit XL-ELU **1**

[Installation]



* Lock unit XL-ELU **1** (Sold separately)



RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	Max. Width/Slide door	Max. Width/Swing door	Max. Height
-	2D/3D	150-023-021	XL-ESW-R	Stainless Steel (SUS304) / ABS resin	Barrel Polishing	Black	800	500	1200
-	2D/3D	150-022-212	XL-ESW-L						

Refer to **1**: P.E13

LAMP® EXCELOCK® DRAWER STRIKE PLATE XL-ESD



- Strike plate for drawers
- Can be used with a slide rail

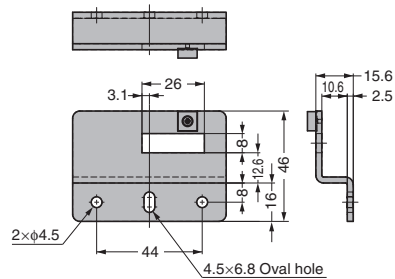
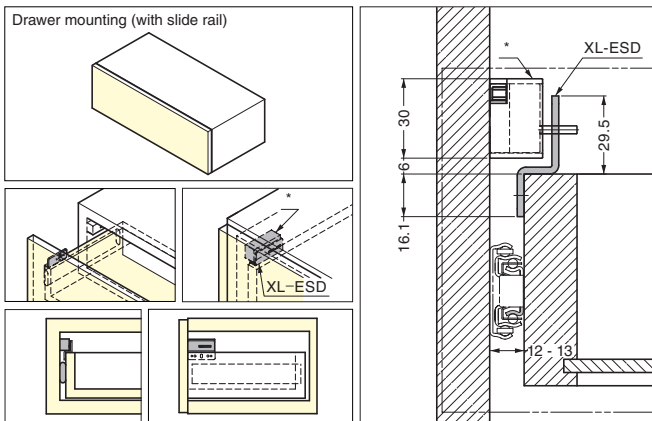
[Features]

- Use with a 12 to 13 mm thickness slide rail.

[Parts Included]

- Cross-hole pan-head screw 4x16

[Application Example]



* Lock unit XL-ELU 1 (Sold separately)

RoHS	CAD	Item Code	Item Name	Material	Finish
-	2020	150-022-213	XL-ESD	Stainless Steel (SUS304)	Barrel Polishing

Refer to 1: P.E13

LAMP® EXCELOCK® STRIKE PLATE GLASS MOUNT BRACKET XL-EBSG

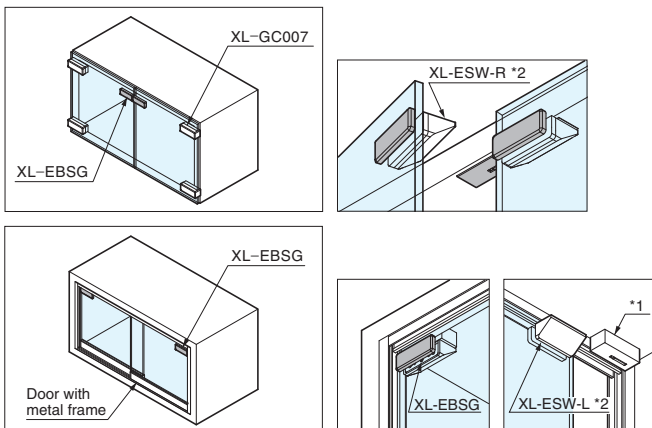


- Gives a perfect style match when used with the XL-GC07-CR glass hinge 1.
- You can use it in combination with a glass sliding door.
- Use it in combination with the strike plate for wood doors (XL-ESW 2).

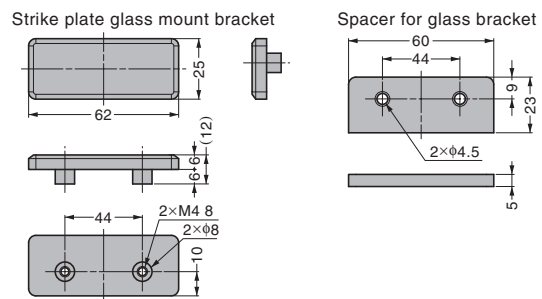
[Parts Included]

- Cross-hole pot screw 4x14

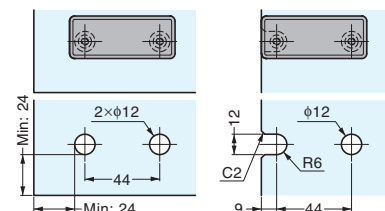
[Application Example]



*1 Lock unit XL-ELU 3 (Sold separately)
*2 Optional strike plate for wood door XL-ESW 2.



[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Material	Finish	Colour	Glass Thickness
-	2020	150-022-214	XL-EBSG	Zinc alloy (ZDC) / ABS resin	Chrome	Black	5, 6, 8

Refer to 1: No.240A P.449, 2: P.E15, 3: P.E13

EXCELOCK® AC ADAPTOR **HK-AC-120A300-DH**

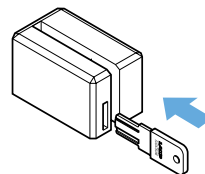
- 12V DC Max 3.0A adaptor for the Excelock® series.
- Use one adaptor per XL-ECU control unit **1**.
- CE, GS, UL and FCC approved.
- Output cable may need to be replaced for local use.

ReHS	CAD	Item Code	Item Name	Input	Output	Dimension(mm)	Wire Length(mm)
-		150-022-215	HK-AC-120A300-DH	100-240V AC 50/60Hz 1.5A	12V DC Max.3.0A	W52 x H31.5 x L110	1500

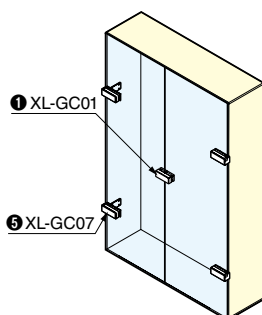
Refer to : P.E12

LAMP® GLASS SHOWCASE HARDWARE SERIES DIGEST **XL-GC**

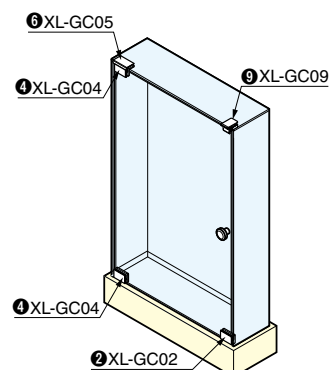
- Hinges, Locks and Sliding door hardware with integrated design.
- Swing and Sliding Doors can be operated with a single key.
- Key hole is located on the side for clean appearance.
- Insert key to unlock.
- Locks when key is pulled out.



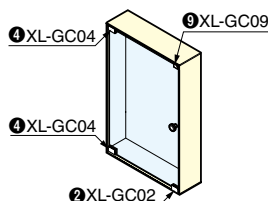
Double Door



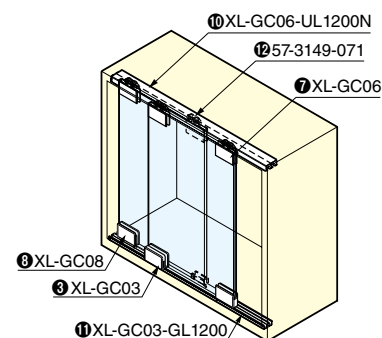
Swing Door



Can be installed on wooden cabinet.



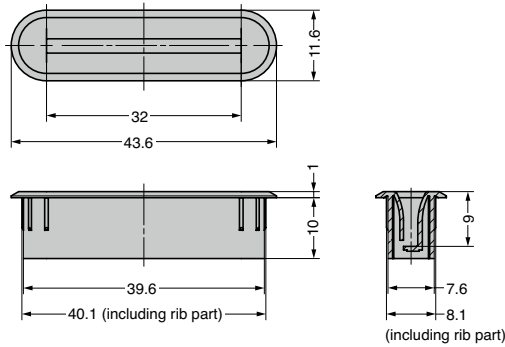
Sliding Door



Refer to: No.240A

- ①②③ P.337
- ④⑤⑥ P.449
- ⑦⑧ P.642
- ⑨ P.274
- ⑩⑪⑫ P.641

RECESSED COUNTER PLATE **GL-UU32** For Glass Door Locks



RoHS	CAD	Item Code	Item Name	Colour	Material	Weight (g)	Box (pcs)	Carton (pcs)
●		150-047-547	GL-UU32-WT	White	ABS	1.4	150	1,500
●		150-047-548	GL-UU32-BL	Black			150	1,500

- Easy push-in installation. No screws are needed.
- Gives a subtle clean look.
- Processed wood surface cannot be seen through the hole.
- Has ramped wedges inside to reduce the gap and prevent doors from rattling.

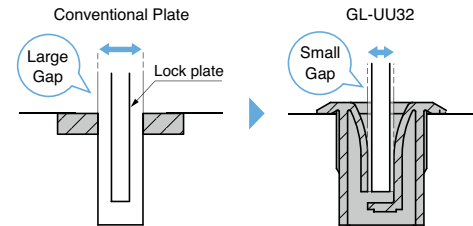
[Specifications]

- Can be used with GS-GL5 and 1310GL locks.

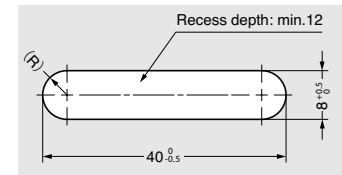
[Remarks]

- If the installation is loose, please use adhesive bond to fix the plate.
- Thickness of the lock plate should be less than 3 mm.

[Rattle-free Mechanism]



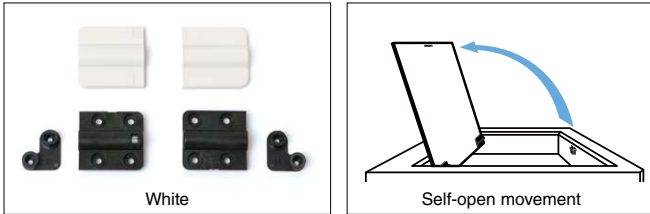
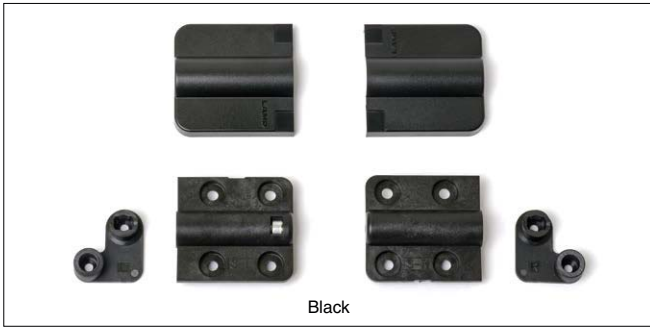
[Cut Out Dimensions]



SELF-OPEN DAMPER HINGE



HG-JHS11



Features

- Small damper hinge with self-opening function for top-opening lids. Using with a touch latch enables pop-up function of the lid.
- Inset type.
- Opening speed is adjustable with a hex key.
- Applicable into surface mount with Bracket UKZ11-BL (sold separately).
- Cover hides mounting screws for clean appearance.
- Easy to cut out with a router.

Specification

- Operation temperature: 0 – 40°C

Application

- Small covers for machine or wire manager, etc.

Remarks

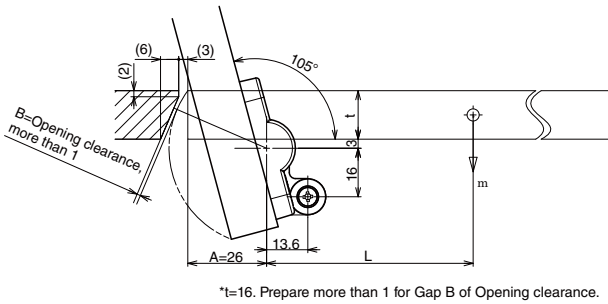
- Applicable moment of door: 0.25 – 0.4N·m. Use a pair/door.
- Install Spring unit on left side and damper unit for right side of the door.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Please install with touch latch separately to keep the door closed.

Sold Separately

- Bracket for HG-JHS11 Surface Mount UKZ11-BL

Recommended Screws

- Countersunk tapping screw 3, bind tapping screw 4



Calculation of maximum door moment

$$T = m \times 9.80665 \times L$$

T:Max. door torque (N/mm)

m:Door weight (kg)

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

$$L = \frac{D}{2} - A \quad (\text{Formula for assuming that the centre of gravity is in the centre of door})$$

D:Door length (mm)

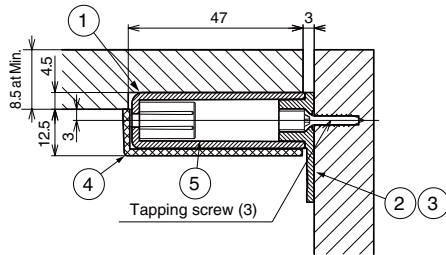
A:Bracket installation dimension (mm)

[Example] D=180 mm, A=26 mm, m=0.63kg

$$T = 0.63 \times 9.80665 \times \left(\frac{180}{2} - 26 \right) = 395 \text{ (mN}\cdot\text{m)} \\ = 0.395 \text{ (N}\cdot\text{m)}$$

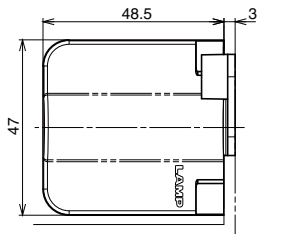
Installation

Cross-section Drawing



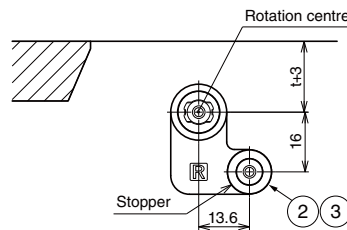
Top View

When closed door

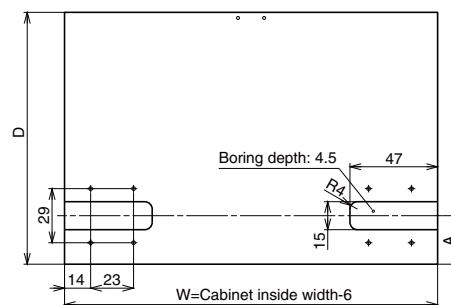


Installation

Bracket

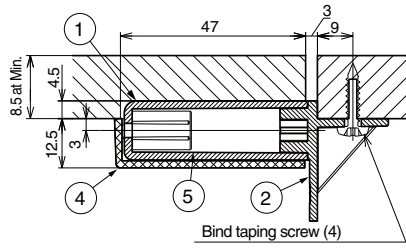


Cut Out Dimensions

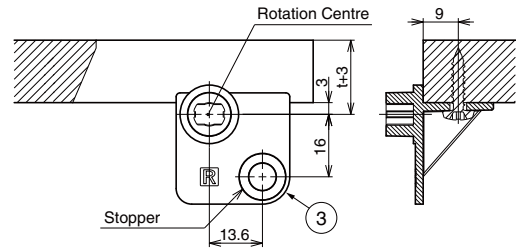


No.	Part Name	Material	Colour
①	Body	Polyacetal (POM)	Black
②	Bracket for side mount R	PBT	
③	Bracket for side mount L		
④	Cover	ABS	Black/White
⑤	Damper	-	-

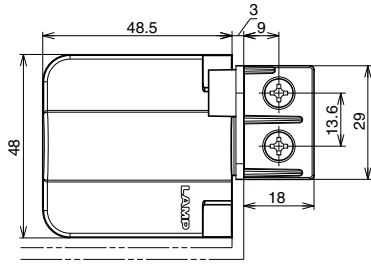
Surface Mount Type
(Installed with Bracket for Surface Mount UKZ11-BL)
Cross-section Drawing



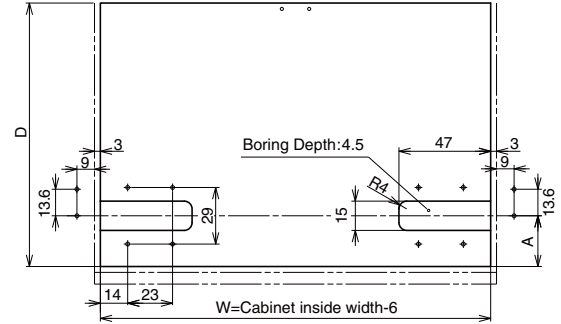
Installation
Bracket



Top View



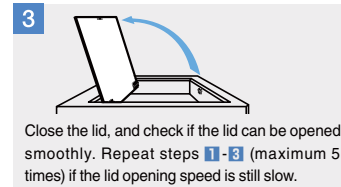
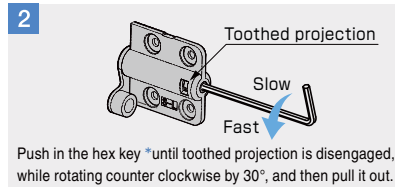
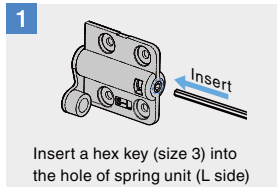
Cut Out Dimensions



No.	Part Name	Material	Colour
①	Body	Polyacetal (POM)	Black
②	Bracket for side mount R	PBT	
③	Bracket for side mount L		
④	Cover	ABS	Black / White
⑤	Damper	-	-

Adjustment of Lid Opening Speed

When increasing lid opening speed



When decreasing lid opening speed (returning to the speed before adjustment)
Loosen the force following the hex key rotating clockwise.

*Make sure to rotate counter clockwise following pushing in the hex key and disengaging the projection. Forced rotation may cause damage.

Body

Sold by set.

RoHS	CAD	Item Code	Item Name	Colour	Torque N-m/pair	Torque kgf/pair	Opening Angle	Weight	Box	Carton
-		170-041-214	HG-JHS11-2BL	Black	0.1 – 0.25	1.02 – 2.55	105°	56 g	12 set	50 set
-		170-041-215	HG-JHS11-2WT	White					12 set	50 set
-		170-041-216	HG-JHS11-4BL	Black	0.25 – 0.4	2.55 – 4.08			12 set	50 set
-		170-041-217	HG-JHS11-4WT	White					12 set	50 set



Bracket for Surface Mount

Sold by set.

RoHS	CAD	Item Code	Item Name	Colour	Weight	Box	Carton
		170-041-218	UKZ11-BL	Black	12 g	50 set	500 set

HG-JHM Damper hinges series - Supported lid digest

- This table gives a general guideline of the different lid weight and measurements that can be used with HG-JHM series.
- Lid measurements have been calculated using the maximum torque available for the product model. (for example, for HG-JHM16 series we used HG-JHM16-50)

- The lid measurements are just an example of the various possible combinations of length, width and thickness.
- The torque value is calculated using one pair of HG-JHM installed on one lid.

Model	Torque force	Lid size (example)
HG-JHM9-S4(U4) 1 	0.027 ~ 0.043 N · m (0.275 ~ 0.44 kgf · cm)	
HG-JHM9-S(U) 2 	0.054 ~ 0.086 N · m (0.55 ~ 0.88 kgf · cm)	
HG-JHM11 3 	0.05 ~ 0.4 N · m (0.51 ~ 4.08 kgf · cm)	
HG-JHM14 4 	0.5 ~ 2 N · m (5.1 ~ 20.4 kgf · cm)	 <p style="text-align: center;">Lid with internal mirror</p>
HG-JHM16 5 	2 ~ 5 N · m (20.4 ~ 51 kgf · cm)	 <p style="text-align: center;">Lid with internal mirror</p>
HG-JHM20 6 	6 ~ 8 N · m (61.2 ~ 81.6 kgf · cm)	 <p style="text-align: center;">Lid with internal mirror</p>
HG-JHM20T 7 		

Refer to 1 2 : No.240 P.422, 3 : No.328 P.8, 4 : No.240 P.424, 5 : No.240 P.426, 6 : No.240 P.427, 7 : No.328 P.3

[How to calculate the maximum torque moment]

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

T = Maximum moment of the lid

m = Lid weight [kg]

L = Distance from the rotation point to the centre of gravity of the lid (mm)
(In case the centre of gravity is situated in the middle of the lid)

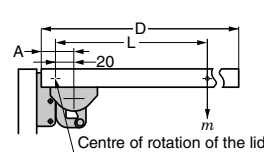
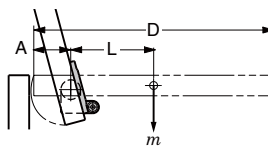
$$L = \frac{D}{2} - A \quad (\text{For HG-JHM20T, } L = \frac{D}{2} - A + 20)$$

D = Lid length [mm]

A = Distance from the rotation point to the back edge of the lid [mm]
(For HG-JHM20T, A : Installation measurements of the bracket)

Calculation example (for HG-JHM14)

If D = 180mm, A = 26mm, m = 0.96kg... $T = 0.96 \times 9.80665 \times (\frac{180}{2} - 26) \times \frac{1}{1000} = 0.6 \text{ [N·m]}$

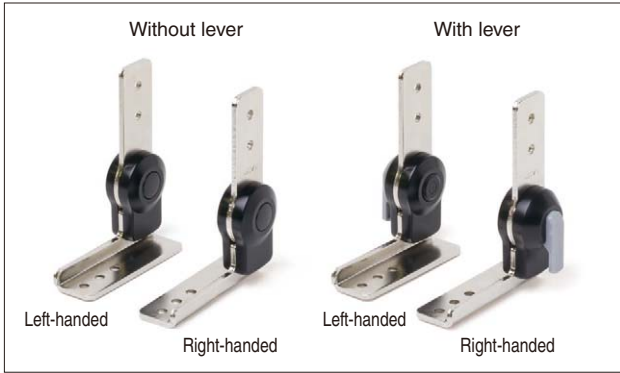


Material	Specific gravity
Acrylic	1.2
MDF	0.6
Mirror	2.5

Model	A
HG-JHM9	18
HG-JHM11	26
HG-JHM14	26
HG-JHM16	32
HG-JHM20	36

Model	A
HG-JHM20T	36 ~ 38

LAMP MULTI ANGLE LOCKING HINGE HG-MA95B



- Easily adjusts the flap angle by toggling the lever.
- Lock allows the hinge to be held in position from 0° to 180° in 10° increments.
- The flap is temporarily unlocked while the lever is pushed.
- The flap stays unlocked when the lever is lifted.
- Both hinge types can be used together.

[Applications]

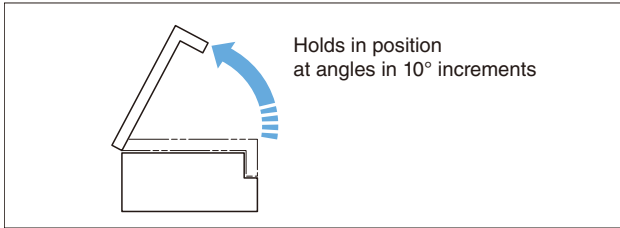
- Medical equipment, analytical instruments, semiconductor equipment.

[Remarks]

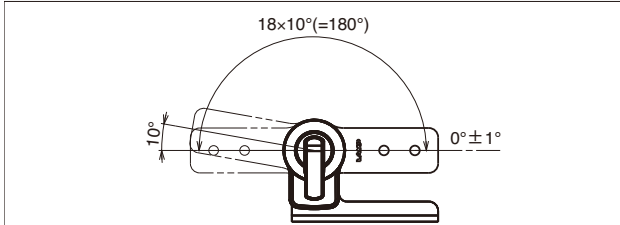
- Be sure to read the "Cautions" **1**.

[Recommended screws]

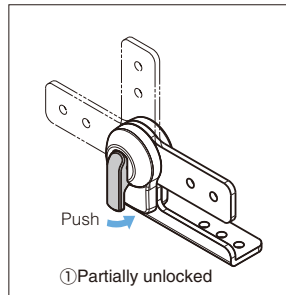
- M5 screw



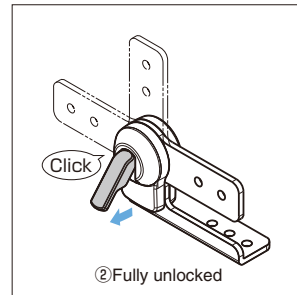
[Locus chart]



[Two ways to unlock]

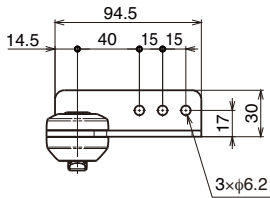


The flap is temporarily unlocked while the lever is pushed.

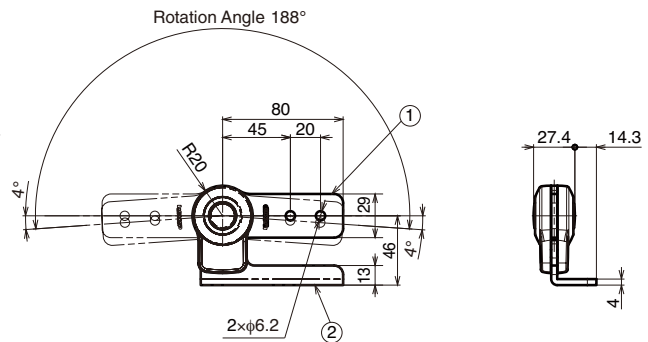
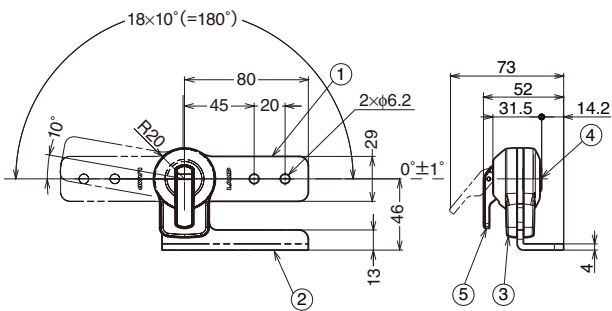
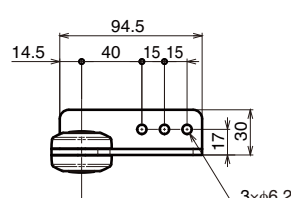


The flap stays unlocked when the lever is lifted.

[HG-MA95B-L]



[HG-MA95BF-L]



No.	Part Name	Material	Finish/Colour
①	Bracket	Steel	Nickel
②	Base		
③	Plastic Cover	PC	Black
④	Pin	ABS	
⑤	Lever	PA	Light Gray

Left-handed shown. Right-handed is symmetrical.

RoHS	CAD	Item Code	Item Name	Position	Type	Max Torque N-m / pc	Max Torque kgf-cm/pc	Weight (g)	Box (pc)	Carton (pc)
✓	3D	170-043-820	HG-MA95B-R	Right-handed	With lever	45	459	305	5	20
✓	3D	170-043-821	HG-MA95B-L	Left-handed				305	5	20
✓	3D	170-043-824	HG-MA95BF-R	Right-handed	Without lever	-	-	305	5	20
✓	3D	170-043-825	HG-MA95BF-L	Left-handed				305	5	20

Refer to **1** : No.280 P.15

TORQUE HINGE HG-TP



- A combination of plastic and metal is used for friction in order to prevent metallic dust caused by metal to metal contact.

[Specifications]

- Operating temperature: -10°C~40°C
- Can be used in both vertical and horizontal directions.

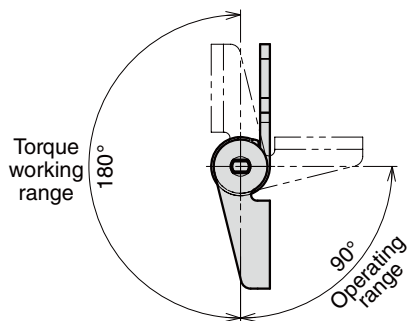
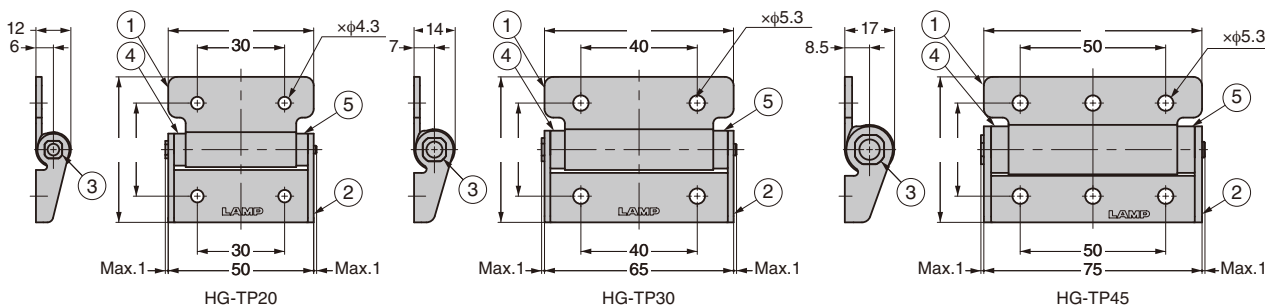
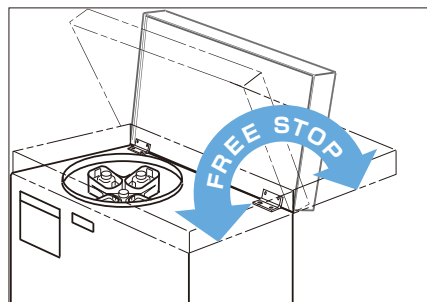
[Applications]

- Stereo equipment, FA equipment, and various automatic equipment

[Remarks]

- Be sure to read the "Cautions" **1**.
- Ensure that hinge shafts are leveled and aligned.
- Install a lid to the bracket A.

[Application Example]



No.	Part Name	Material	Finish / Colour
①	Bracket A	Stainless Steel (SUS304)	Barrel Polished
②	Bracket B		
③	Shaft	Stainless Steel (SUS303)	—
④	Plug	POM	Black
⑤	Washer		

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

RoHS	CAD	Item Code	Item Name	Torque N.m/pc	Torque kgf.cm/pc	Weight (g)	Box (pc)	Carton (pc)
		170-043-653	HG-TP20	2 ^{±25%}	20.3 ^{±25%}	60	50	200
		170-043-654	HG-TP30	3 ^{±25%}	30.5 ^{±25%}	90	25	100
		170-043-655	HG-TP45	4.5 ^{±25%}	45.8 ^{±25%}	150	25	100

Refer to **1** : No.280 P.15

STAINLESS STEEL HEAVY-DUTY BUTT HINGE HG-LSC210

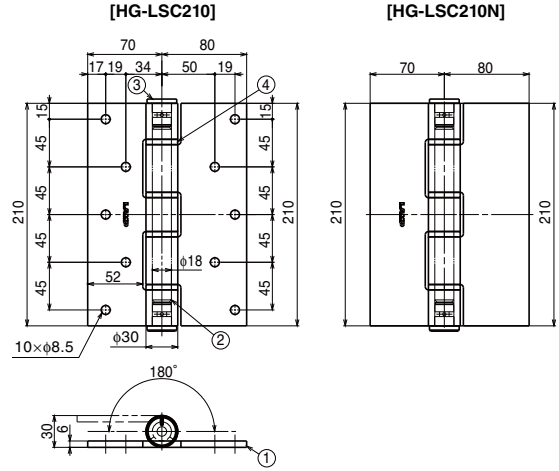
SUS



- 6mm thick stainless steel makes the hinge very strong.
- Made with special rings (oil-impregnated bearings) for smooth movement.
- Head caps hide shaft for clean appearance.

[Applications]

- Large doors, gate doors, and other heavy objects.



*Open/close test is under the following conditions:
 -Hinge: Using three hinges vertically
 -Door size: W900 × H2000
 -Door weight: 250kg

No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Satin
②	Shaft		Plain
③	Head Cap		-
④	Ring		Plain

RoHS	CAD	Item Code	Item Name	Type	Load Capacity N / 2pcs	Load Capacity kgf / 2pcs	Weight (g)	Box (pc)	Carton (pcs)
☑	☑	170-043-696	HG-LSC210	With screw holes	1960	200	2275	1	6
☑	☑	170-043-697	HG-LSC210N	Without screw holes			2300	1	6

ANGLE-ADJUSTABLE DETENT HINGE HG-CHJ70

INSTRUCTION



HG-CHJ70WT

HG-CHJ70BL

- Holds at 4 angles: -3°, -90°, 90°, and 177°. (Factory setting)
- The holding angle of 90° can be switched to 45° or 135°.
- Can be used both vertically and horizontally.

[Applications]

- Environmental test equipment, laboratory equipment.

[Remarks]

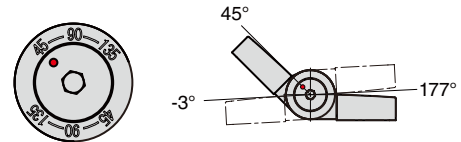
- Adjustment of detent angles must be done when the hinge is open.
- The retaining torque may vary.

[Recommended Screw]

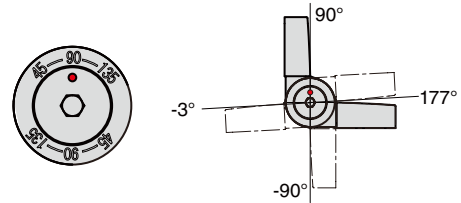
- Hexagon socket head bolt M5

[Available Detent Angles]

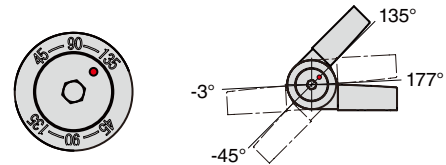
- 45°



- 90° (factory setting)



- 135°



[Without Covers]

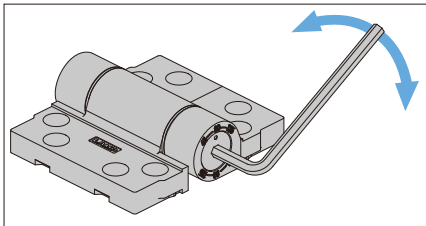


[Application Example]



Detent angle: 45°

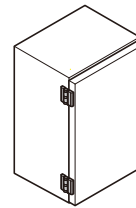
[Switching 45° ↔ 90° ↔ 135°]



Can be adjusted by a hex key.

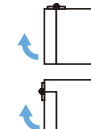
[Available Door Specs] When using two hinges

- Lateral opening



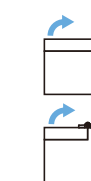
- Weight: Max. 8kg
- Width: Max. 500mm
- Height: Max. 1,000mm

- Upward opening

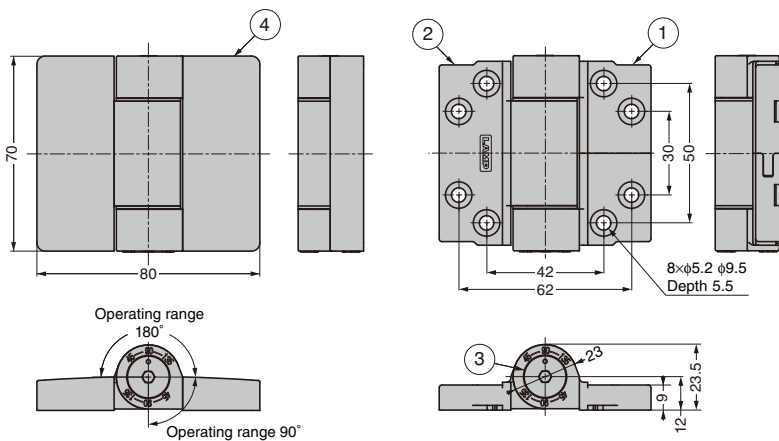


- Moment: Max. 1.7N·m
- Height: Max. 250mm

- Top opening



- Moment: Max. 2.4N·m
- Height: Max. 300mm



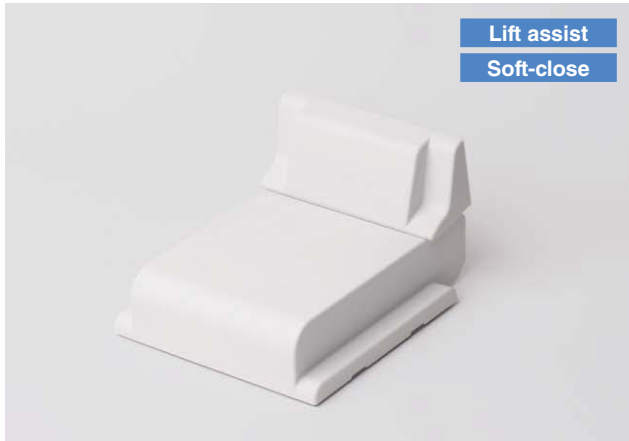
Video Link



No.	Part Name	Material
①	Fixed Bracket	POM
②	Movable Bracket	
③	Shaft	Stainless Steel
④	Cover	ABS

ReHS	CAD	Item Code	Item Name	Colour	Retaining Torque N·m / pc	Retaining Torque kgf·cm / pc	Weight (g)	Box (pcs)	Carton (pcs)
		170-043-659	HG-CHJ70BL	Black	2	20.4	115	10	80
		170-043-660	HG-CHJ70WT	White				10	80

BALANCE-ADJUSTABLE LIFT-ASSIST HINGE HG-PA300-15 OUTSIDE MOUNT



- Easy to lift heavy top-opening lids due to spring tension (lift-assist).
- Balance adjustment allows for use in a wider range of lids than conventional lift-assist hinges.
- The built-in damper prevents lids from slamming shut (soft-close).
- Torque is adjustable by turning the adjustment screw ($\pm 10\%$).
- Comes with a plastic cover for clean appearance.

[Applications]

- Medical equipment, analytical instruments, semiconductor equipment.

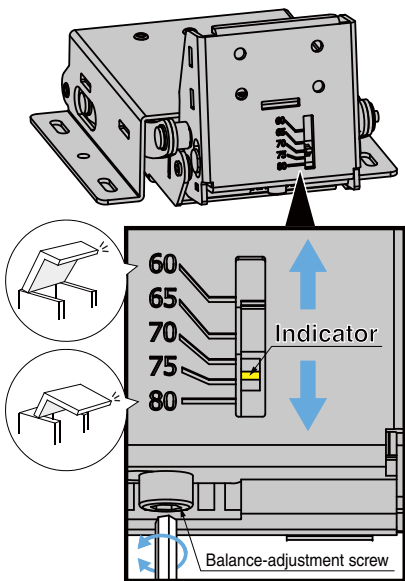
[Remarks]

- Be sure to read the "Cautions" 1.



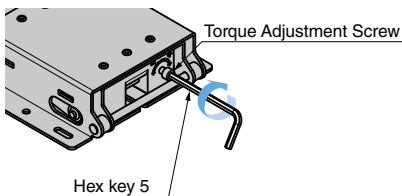
Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available online!

[Balance Adjustment]

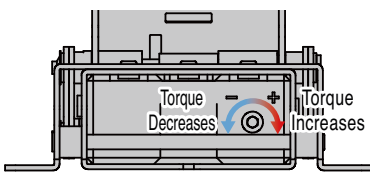


Angle of peak torque is adjustable with hex key 5. This feature allows adjustment to the location of center of gravity

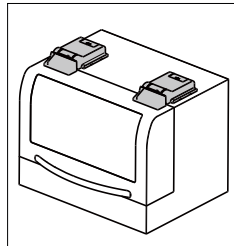
[How to Adjust Torque]



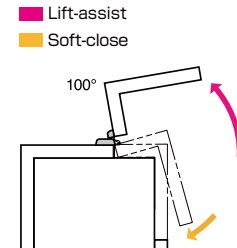
Turn the screw with a hex key



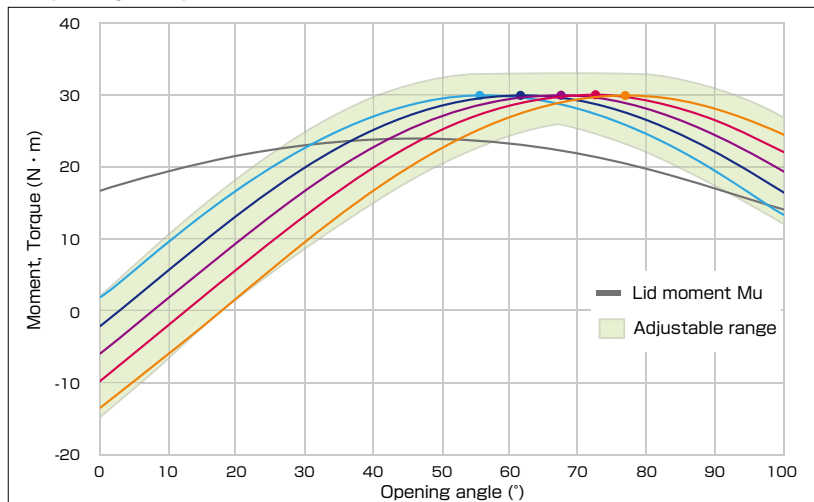
[Installation]



[Working range]



[Torque-Angle Graph] showing the adjustable range of peak torque's angle



[Indicator's Scale]

- 60 — 65 — 70 (default) — 75 — 80 ● Angle of peak torque

Lid moment $\mu >$ Hinge torque . . . Force is applied in the closing direction of lid.

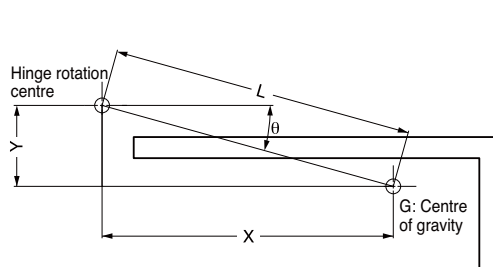
Lid moment $\mu <$ Hinge torque . . . Force is applied in the opening direction of lid.

Lid specs (example) : X=170mm Y=175mm L=244mm m=8.6kg

(Setting the indicator to 60 is the right adjustment in this case.)

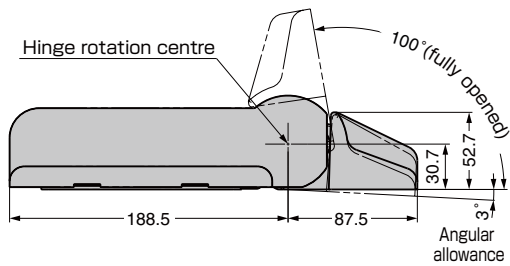
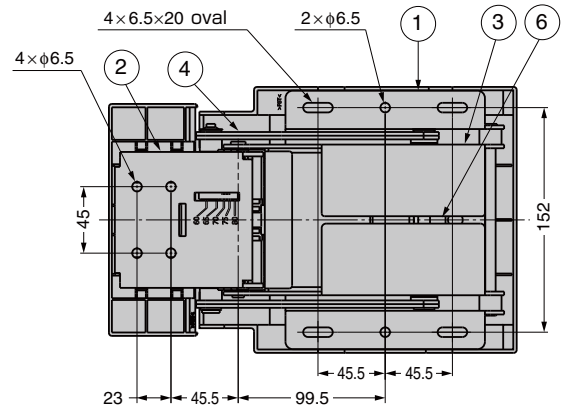
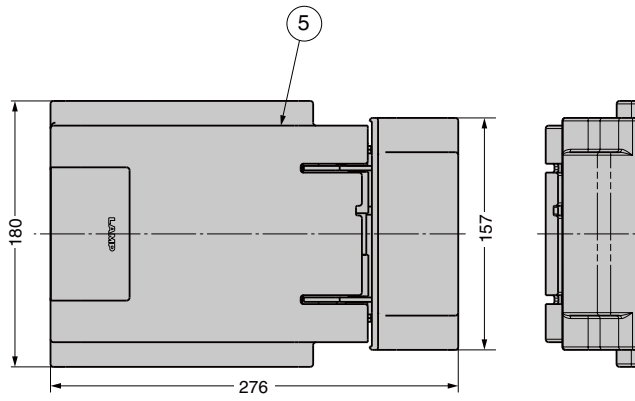
[Calculating Lid Moment]

Calculation formula $\mu = m \times L \times \cos \theta$



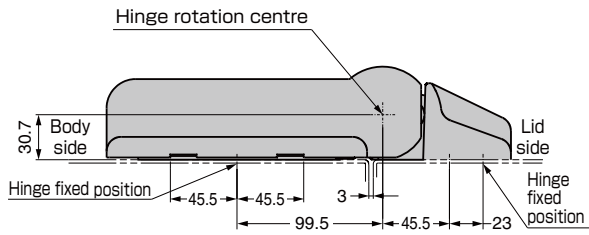
X	Horizontal distance from rotation centre to lid centre of gravity
Y	Vertical distance from rotation centre to lid centre of gravity
L	Distance from rotation centre to lid centre of gravity
θ	Angle from the horizontal line at the rotation centre to lid centre of gravity
m	Lid weight
G	Lid centre of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

Refer to 1 : No.280 P.15

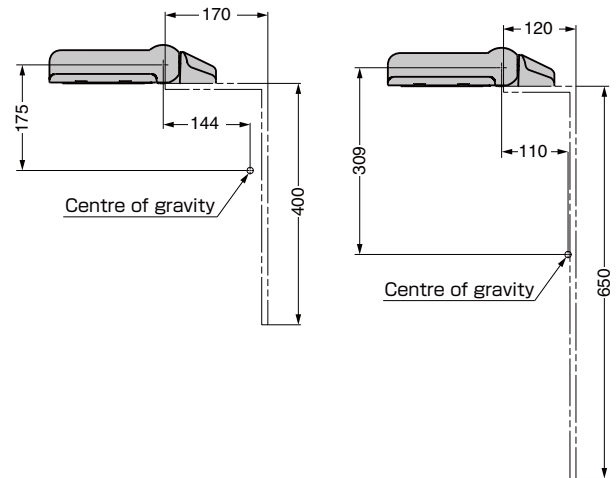


No.	Part Name	Material / Colour
①	Base A	Stainless Steel (SUS430)
②	Base B	
③	Case	PBT / Light Grey
④	Link Arm	
⑤	Plastic Cover	POM
⑥	Slider	
⑦	Spring	Steel (SWO)

[Installation]



[Installation Example]



RdHS	CAD	Item Code	Item Name	Description	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
		170-044-367	HG-PA300-15	Peak torque 60°-80°	15±10%	153±10%	3400	1	-

19 mm overlay / 105° opening, 85° opening

LAMP®

With damper function (5 levels)



Damper power adjustment lever

The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

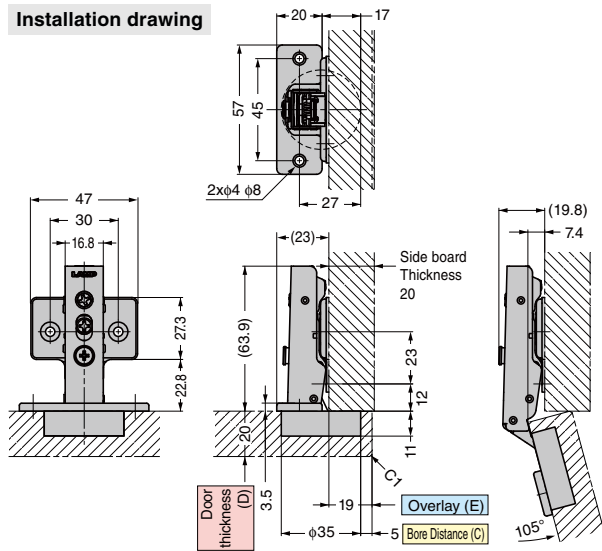
- Overlay**
15-19mm (when bore distance is 5mm)
- Cup size $\phi 35$**
Bore Depth 11mm Door Thickness 15-20mm
- 3D adjustment**
Depth: +1.5, -2.5mm, Vertical: ± 2.5 mm,
Overlay: +0, -4mm

Sold separately:

- Mounting plates Glass door face plate
- Countersunk head tapping screw 3.5 x 15NI Other
- Recommended screws: (Countersunk head wood/tapping screw 3.5)

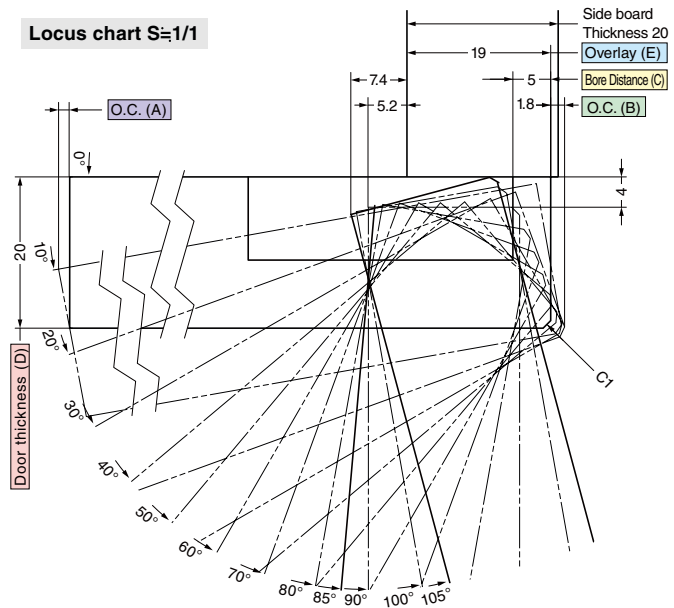
► The installation drawing and locus chart shown are for a 20 mm thick door and side board, 19mm overlay and a 5mm bore distance. Opening angle is 105°.

Installation drawing



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Locus chart $S \approx 1/1$



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.

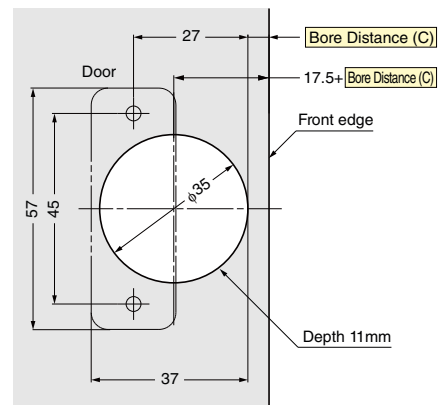
Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C)		
	3	4	5
15	0.6	0.6	0.5
16	0.8	0.8	0.7
17	1.0	1.0	1.0
18	1.3	1.3	1.2
19	1.6	1.6	1.5
20	2	1.9	1.8
21*	2.4	2.3	2.2
22*	2.8	2.7	2.6
O.C. (B)			

* The table above shows O.C. (B) for C1 chamfering (chamfer plane).

* 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.

Cut out dimensions (wooden doors)



Bore distance (C) and overlay (E) relationship

Bore Distance (C)	3	4	5
Overlay (E)	17	18	19

Overlay can be decreased by up to 4mm by turning the overlay adjustment screw.

Opening clearance (A) and door width relationship (for 20mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.13	0.09	0.07	0.06

Item code	Item name	Opening angle	Type	Material	Finish	Carton
160-026-840	360-D26-19T	105°	With damper (5 levels)	Steel	Nickel	100pcs
160-026-836	360-26-19T		Without catch			
160-026-832	360-C26-19T		With catch			
160-042-389	360-U26-19T	85°	Sprung-open			100pcs
160-034-889	360-D26-19T85		With damper (5 levels)			
160-034-886	360-26-19T85		Without catch			200pcs
160-034-883	360-C26-19T85		With catch			

14mm overlay / 105° opening, 85° opening

LAMP

With damper function (5 levels)



Damper power adjustment lever

The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

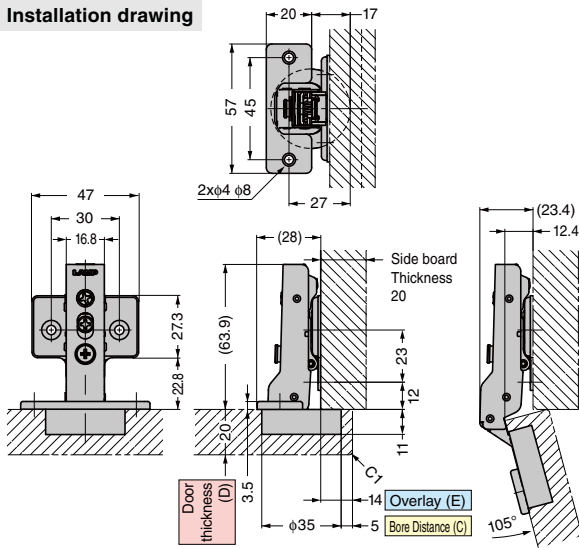
Overlay 10-14mm (when bore distance is 5mm)
Cup size $\phi 35$ Bore Depth 11mm Door Thickness 15-20mm
3D adjustment Depth: +1.5, -2.5mm, Vertical: ± 2.5 mm, Overlay: +0, -4mm

Sold separately:

- Mounting plates Glass door face plate
- Countersunk head tapping screw 3.5 x 15NI Other
- Recommended screws: (Countersunk head wood/tapping screw 3.5)

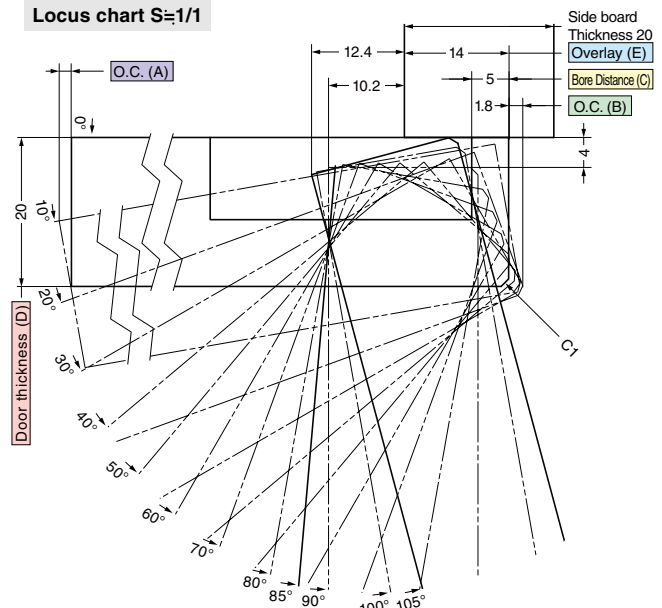
► The installation drawing and locus chart shown are for a 20 mm thick door and side board, 14mm overlay and a 5mm bore distance. Opening angle is 105°.

Installation drawing

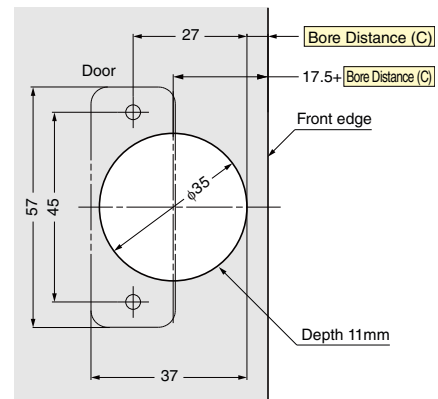


Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Locus chart S=1/1



Cut out dimensions (wooden doors)



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.

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C)		
	3	4	5
15	0.6	0.6	0.5
16	0.8	0.8	0.7
17	1.0	1.0	1.0
18	1.3	1.3	1.2
19	1.6	1.6	1.5
20	2	1.9	1.8
21*	2.4	2.3	2.2
22*	2.8	2.7	2.6
O.C. (B)			

* The table above shows O.C. (B) for C1 chamfering (chamfer plane).
* 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.

Bore distance (C) and overlay (E) relationship

Bore Distance (C)	3	4	5
Overlay (E)	12	13	14

Overlay can be decreased by up to 4mm by turning the overlay adjustment screw.

Opening clearance (A) and door width relationship (for 20mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.13	0.09	0.07	0.06

Item code	Item name	Opening angle	Type	Material	Finish	Carton
160-026-841	360-D26-14T	105°	With damper (5 levels)	Steel	Nickel	100pcs
160-026-837	360-26-14T		Without catch			
160-026-833	360-C26-14T		With catch			
160-042-390	360-U26-14T	85°	Sprung-open			200pcs
160-034-890	360-D26-14T85		With damper (5 levels)			100pcs
160-034-887	360-26-14T85		Without catch			200pcs
160-034-884	360-C26-14T85		With catch			

9 mm overlay / 105° opening, 85° opening

LAMP®

With damper function (5 levels)



Damper power adjustment lever

The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

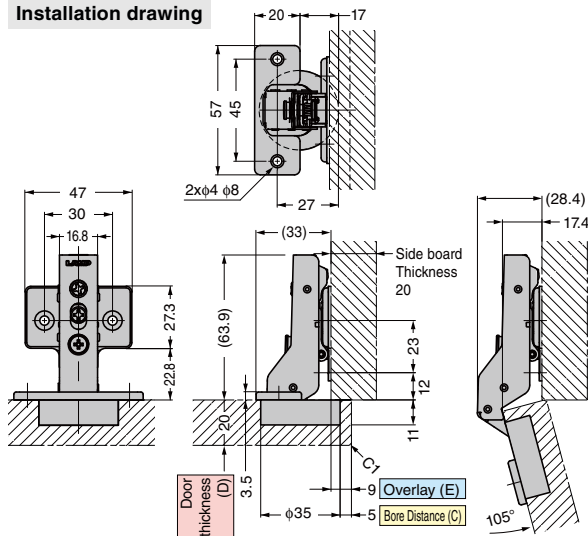
Overlay 5-9mm (when bore distance is 5mm)
Cup size $\phi 35$ Bore Depth 11mm Door Thickness 15-20mm
3D adjustment Depth: +1.5, -2.5mm, Vertical: ± 2.5 mm, Overlay: +0, -4mm

Sold separately:

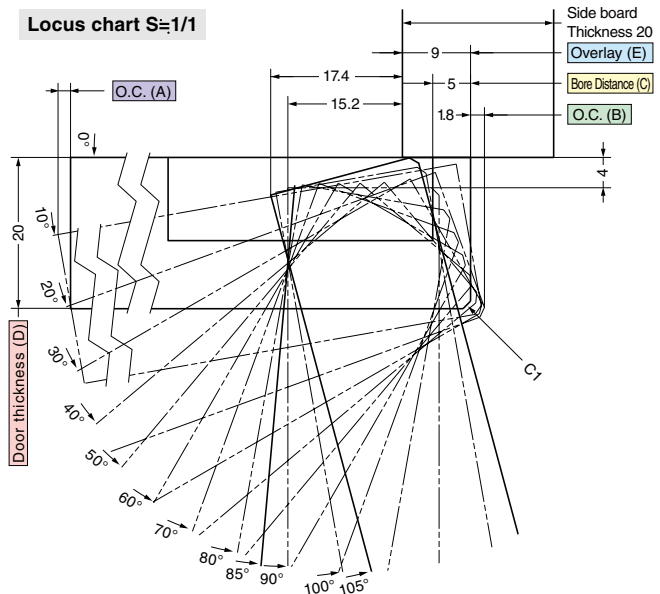
- Mounting plates Glass door face plate
- Countersank head tapping screw 3.5 x 15NI Other
- Recommended screws: (Countersank head wood/tapping screw 3.5)

► The installation drawing and locus chart shown are for a 20 mm thick door and side board, 9mm overlay and a 5mm bore distance. Opening angle is 105°.

Installation drawing



Locus chart S=1/1



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

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.

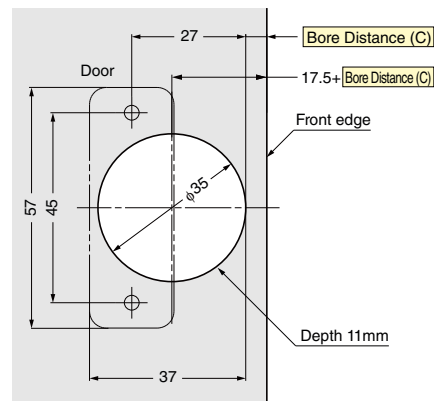
Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C)		
	3	4	5
15	0.6	0.6	0.5
16	0.8	0.8	0.7
17	1.0	1.0	1.0
18	1.3	1.3	1.2
19	1.6	1.6	1.5
20	2	1.9	1.8
21*	2.4	2.3	2.2
22*	2.8	2.7	2.6
O.C. (B)			

* The table above shows O.C. (B) for C1 chamfering (chamfer plane).

* 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.

Cut out dimensions (wooden doors)



Bore distance (C) and overlay (E) relationship

Bore Distance (C)	3	4	5
Overlay (E)	7	8	9

Overlay can be decreased by up to 4mm by turning the overlay adjustment screw.

Opening clearance (A) and door width relationship (for 20mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.13	0.09	0.07	0.06

Item code	Item name	Opening angle	Type	Material	Finish	Carton
160-026-842	360-D26-9T	105°	With damper (5 levels)	Steel	Nickel	100pcs
160-026-838	360-26-9T		Without catch			
160-026-834	360-C26-9T		With catch			200pcs
160-042-391	360-U26-9T	85°	Sprung-open			100pcs
160-034-891	360-D26-9T85		With damper (5 levels)			
160-034-888	360-26-9T85		Without catch			
160-034-885	360-C26-9T85		With catch	200pcs		

Inset / 93° opening

LAMP[®]

With damper function (5 levels)



Damper power adjustment lever

The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

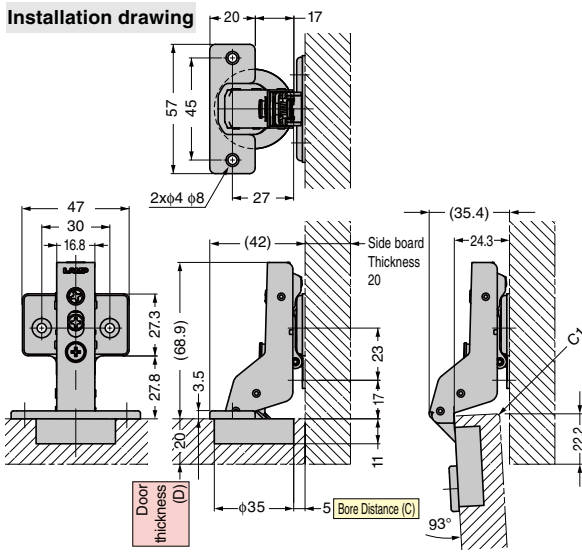
Cup size $\phi 35$
Bore Depth 11mm Door Thickness 15-20mm

3D adjustment
Depth: +1.5, -2.5mm, Vertical: ± 2.5 mm,
Overlay: +0, -4mm

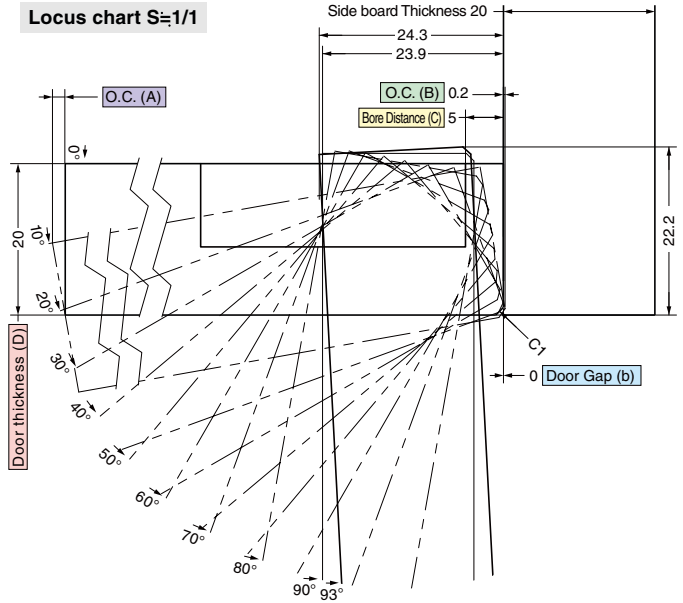
Sold separately:

- Mounting plates Glass door face plate
- Countersunk head tapping screw 3.5 x 15NI Other
- Recommended screws: (Countersunk head wood/tapping screw 3.5)

► The installation drawing and locus chart shown are for a 20 mm thick door and side board, a 5mm bore distance and inset installation.



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).



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.

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C)		
	3	4	5
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
19	0.1	0.1	0.1
20	0.3	0.3	0.2
21*	0.5	0.4	0.4
22*	1.0	0.7	0.7

O.C. (B)

* The table above shows O.C. (B) for C1 chamfering (chamfer plane).

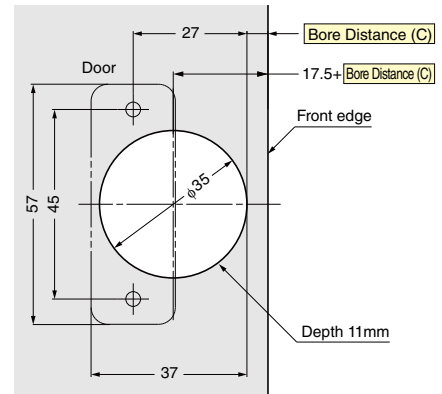
* Please refer to the locus chart if door thickness is over 20mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Bore distance (C) and Door Gap (b) relationship

Bore Distance (C)	3	4	5
Door Gap (b)	2	1	0

Door Gap (b) adjustment (+4mm) by turning the overlay adjustment screw. Please check required O.C. (B) at the table below.

Cut out dimensions (wooden doors)



Opening clearance (A) and door width relationship (for 20mm thick door)

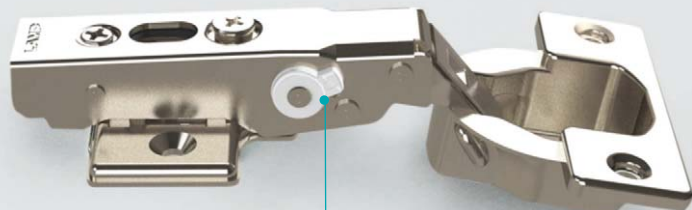
Door Width	300	400	500	600
O.C. (A)	0.44	0.32	0.25	0.21

	Item code	Item name	Opening angle	Type	Material	Finish	Carton
	160-026-843	360-D26-0T	93°	With damper (5 levels)	Steel	Nickel	100pcs
	160-026-839	360-26-0T		Without catch			
	160-026-835	360-C26-0T		With catch			
	160-042-392	360-U26-0T		Sprung-open			

Thick doors 26mm overlay / 100° opening

LAMP

With damper function (5 levels)



Damper power adjustment lever

The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

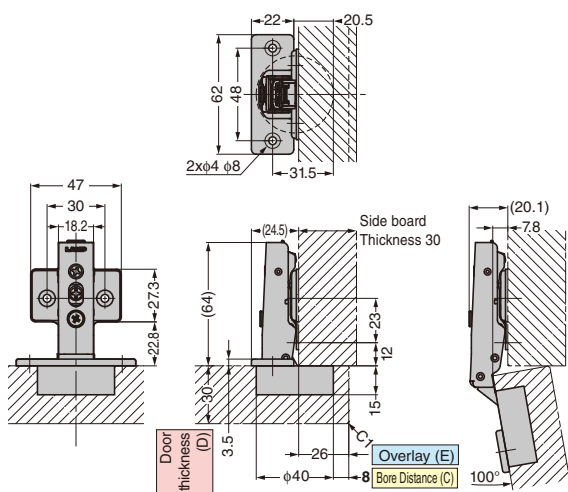
- Overlay**
22-26mm (when bore distance is 8mm)
- Cup size $\phi 40$**
Bore Depth 15mm Door Thickness 18-30mm
- 3D adjustment**
Depth: +1.7, -2.8mm, Vertical: ± 2.5 mm,
Overlay: +0, -4mm

Sold separately:

- Mounting plates
- Countersank head tapping screw 3.5 x 15NI
- Recommended screws: (Countersank head wood/tapping screw 3.5)

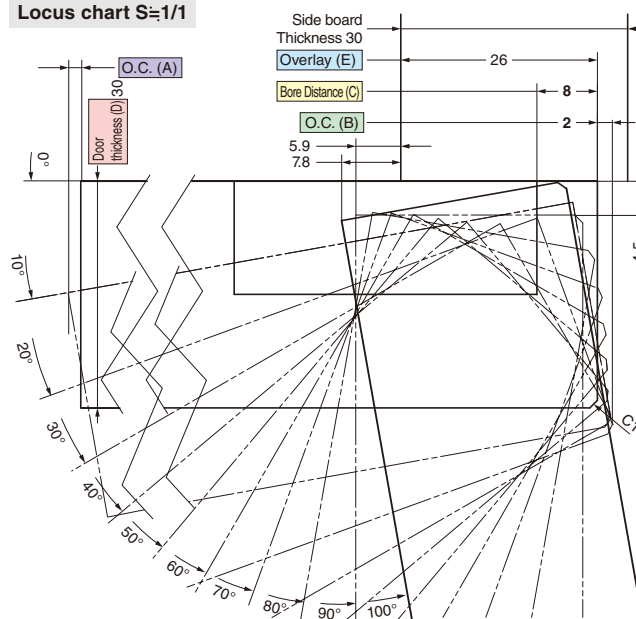
► The installation drawing and locus chart shown are for a 30 mm thick door and side board, 26mm overlay and a 8mm bore distance.

Installation drawing



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Locus chart $S=1/1$



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.

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C)						
	3	4	5	6	7	8	
18	0.1	0.1	0.1	0.1	0.1	0.1	
20	0.3	0.3	0.3	0.3	0.3	0.3	
22	0.5	0.5	0.5	0.5	0.5	0.5	
24	0.8	0.8	0.8	0.8	0.8	0.8	
26	1.3	1.2	1.2	1.1	1.1	1.1	
28	3.6	2.6	1.6	1.6	1.5	1.5	
30	6.0	5.0	4.0	3.0	2.1	2.0	
32*	8.4	7.4	6.4	5.4	4.4	3.4	
34*	10.8	9.8	8.8	7.8	6.8	5.8	

O.C. (B)

* The table above shows O.C. (B) for C1 chamfering (chamfer plane).
* Please refer to the locus chart if door thickness is over 30mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Bore distance (C) and overlay (E) relationship

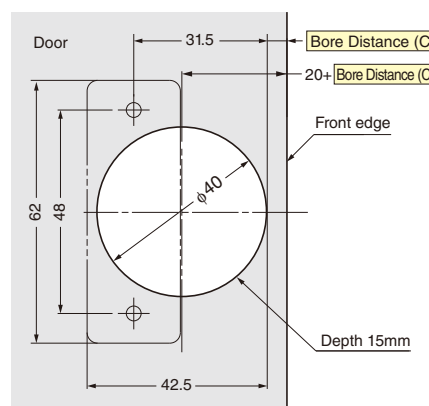
Bore Distance (C)	3	4	5	6	7	8
Overlay (E)	21	22	23	24	25	26

Overlay can be decreased by up to 4mm by turning the overlay adjustment screw.

Opening clearance (A) and door width relationship (for 30mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.35	0.25	0.19	0.16

Cut out dimensions (wooden doors)

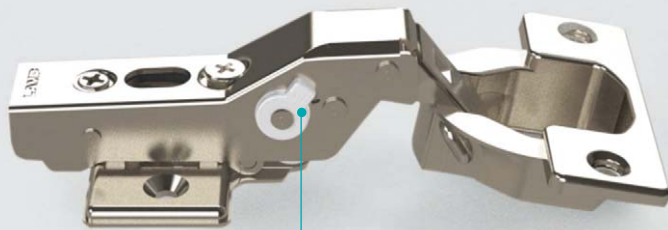


Item code	Item name	Opening angle	Type	Material	Finish	Carton
160-029-084	H360-D26-26T	100°	With damper (5 levels)	Steel	Nickel	100pcs
160-029-081	H360-26-26T		Without catch			
160-029-078	H360-C26-26T		With catch			

Thick doors 16 mm overlay / 100° opening

LAMP®

With damper function (5 levels)



Damper power adjustment lever

The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

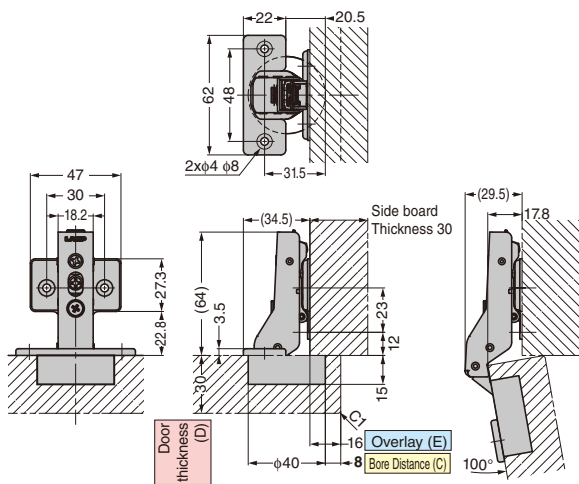
Overlay 12-16mm (when bore distance is 8mm)
Cup size $\phi 40$ Bore Depth 15mm Door Thickness 18-30mm
3D adjustment Depth: +1.7, -2.8mm, Vertical: ± 2.5 mm, Overlay: +0, -4mm

Sold separately:

- Mounting plates
- Countersank head tapping screw 3.5 x 15N1
- Recommended screws: (Countersank head wood/tapping screw 3.5)

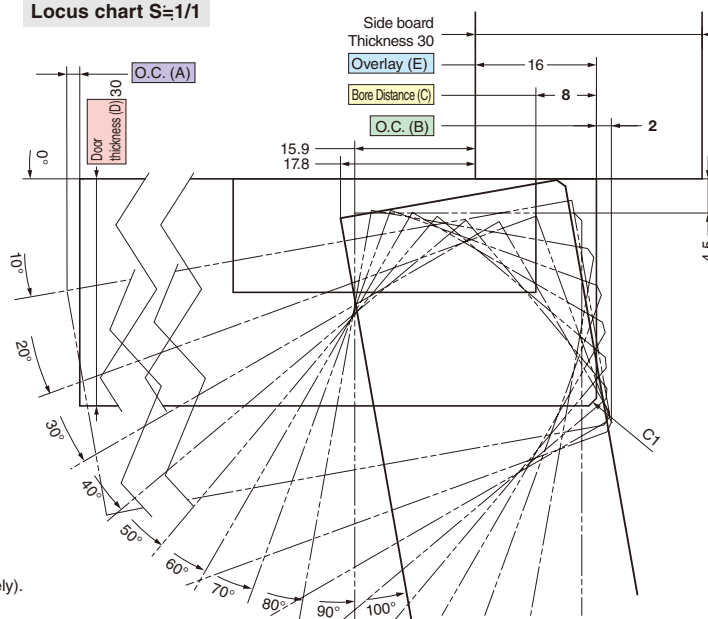
The installation drawing and locus chart shown are for a 30 mm thick door and side board, 16mm overlay and a 8mm bore distance.

Installation drawing



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

Locus chart $S=1/1$



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.

Opening clearance (B), door thickness (D) and bore distance (C) relationship

Door Thickness (D)	Bore Distance (C)					
	3	4	5	6	7	8
18	0.1	0.1	0.1	0.1	0.1	0.1
20	0.3	0.3	0.3	0.3	0.3	0.3
22	0.5	0.5	0.5	0.5	0.5	0.5
24	0.8	0.8	0.8	0.8	0.8	0.8
26	1.3	1.2	1.2	1.1	1.1	1.1
28	3.6	2.6	1.6	1.6	1.5	1.5
30	6.0	5.0	4.0	3.0	2.1	2.0
32*	8.4	7.4	6.4	5.4	4.4	3.4
34*	10.8	9.8	8.8	7.8	6.8	5.8

O.C. (B)

* The table above shows O.C. (B) for C1 chamfering (chamfer plane).

* Please refer to the locus chart if door thickness is over 30mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Bore distance (C) and overlay (E) relationship

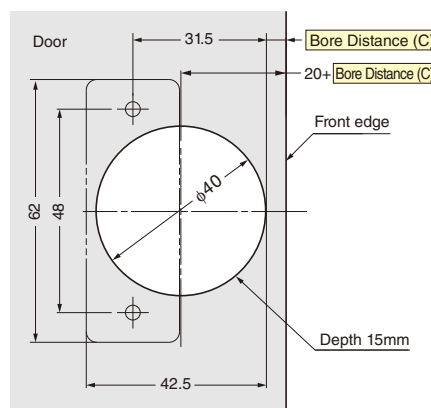
Bore Distance (C)	3	4	5	6	7	8
Overlay (E)	11	12	13	14	15	16

Overlay can be decreased by up to 4mm by turning the overlay adjustment screw.

Opening clearance (A) and door width relationship (for 30mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.35	0.25	0.19	0.16

Cut out dimensions (wooden doors)

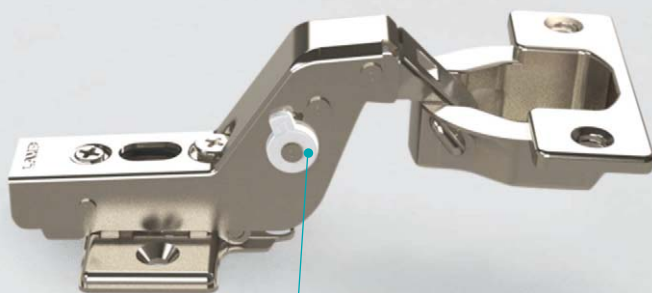


Item code	Item name	Opening angle	Type	Material	Finish	Carton
NEW CAD G 160-029-085	H360-D26-16T	100°	With damper (5 levels)	Steel	Nickel	100pcs
NEW CAD G 160-029-082	H360-26-16T		Without catch			
NEW CAD G 160-029-079	H360-C26-16T		With catch			

Thick doors Inset / 93° opening

LAMP®

With damper function (5 levels)



Damper power adjustment lever

The picture above shows a combination of a concealed hinge (with damper) and a mounting plate (sold separately).

Cup size $\phi 40$
Bore Depth 15mm Door Thickness 18-30mm

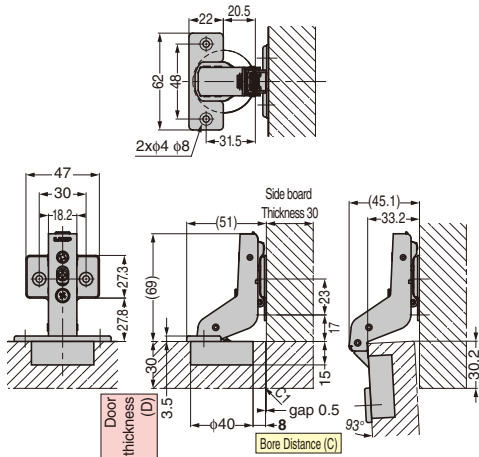
3D adjustment
Depth: +1.7, -2.8mm, Vertical: ± 2.5 mm,
Overlay: +0, -4mm

Sold separately:

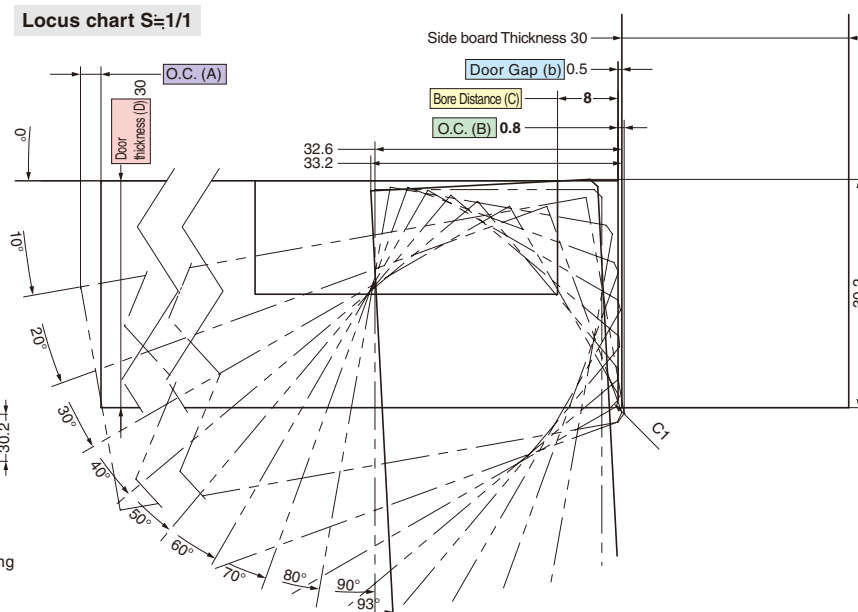
- Mounting plates
- Countersunk head tapping screw 3.5 x 15NI
- Recommended screws: (Countersunk head wood/tapping screw 3.5)

► The installation drawing and locus chart shown are for a 30 mm thick door and side board, a 8mm bore distance and inset installation.

Installation drawing



Locus chart S=1/1



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

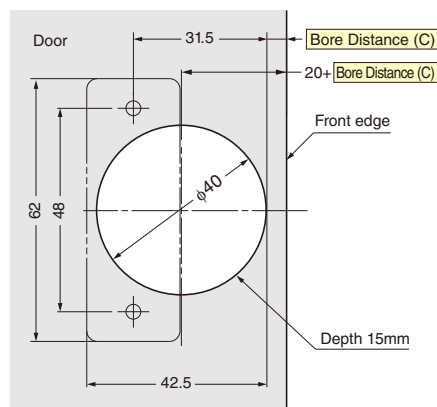
Opening Clearance (O.C.)

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.

Opening clearance (B), door thickness (D) and bore distance (C) relationship

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	0	0	0	0	0	
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	0.7	0.5	0.5	0.5	0.5	
30	3.9	2.9	2.0	1.4	0.8	0.8	
32*	5.9	4.9	3.9	3.3	2.6	2.1	
34*	8.1	7.1	6.1	5.1	4.5	3.9	
O.C. (B)							

Cut out dimensions (wooden doors)



* The table above shows O.C. (B) for C1 chamfering (chamfer plane).

* Please refer to the locus chart if door thickness is over 30mm. O.C. (B) can be made smaller by R chamfering (round chamfer) and C chamfering (chamfer plane) on the door.

Bore distance (C) and Door Gap (b) relationship

Bore Distance (C)	3	4	5	6	7	8
Door Gap (b)	5.5	4.5	3.5	2.5	1.5	0.5

Door Gap (b) adjustment (+4mm) by turning the overlay adjustment screw. Please check required O.C. (B) at the table below.

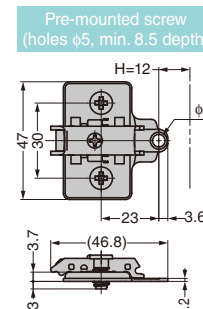
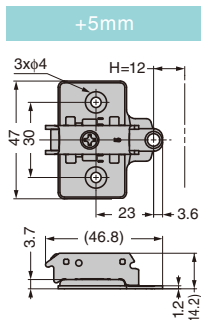
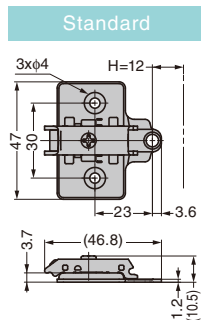
Opening clearance (A) and door width relationship (for 30mm thick door)

Door Width	300	400	500	600
O.C. (A)	0.78	0.55	0.43	0.35

Item code	Item name	Opening angle	Type	Material	Finish	Carton
NEW CAD 160-029-086	H360-D26-0T	93°	With damper (5 levels)	Steel	Nickel	100pcs
NEW CAD 160-029-083	H360-26-0T		Without catch			
NEW CAD 160-029-080	H360-C26-0T		With catch			

LAMP Mounting plates **360-P4W-30T**

System 30

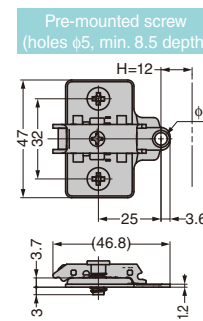
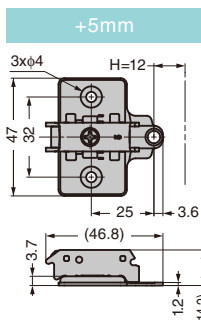
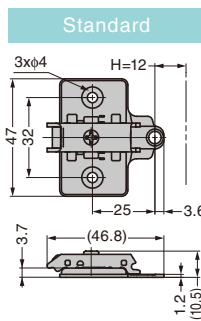


- Value of H for inset installation is "door thickness + 17 mm".
- When using with the GH-360FP, value of H is "door thickness + 19 mm".

Item code	Item name	Type	Height adjustment	Material	Finish	Carton
160-026-844	360-P4W-30T	Standard				
160-035-077	360-P4W-30T+5	+5mm	±2.5mm	Steel	Nickel	400pcs
160-042-394	360-P4W-30T-DS	Pre-mounted screw				

LAMP Mounting plates **360-P4W-32T**

System 32

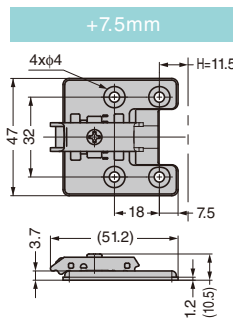
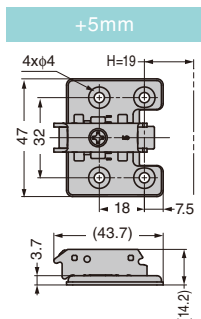
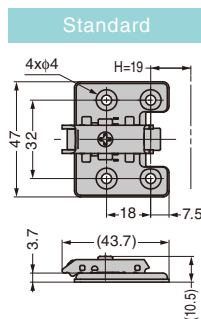


- Value of H for inset installation is "door thickness + 17 mm".
- When using with the GH-360FP, value of H is "door thickness + 19 mm".

Item code	Item name	Type	Height adjustment	Material	Finish	Carton
160-026-845	360-P4W-32T	Standard				
160-035-078	360-P4W-32T+5	+5mm	±2.5mm	Steel	Nickel	400pcs
160-042-395	360-P4W-32T-DS	Pre-mounted screw				

LAMP Mounting plates **360-P6WT**

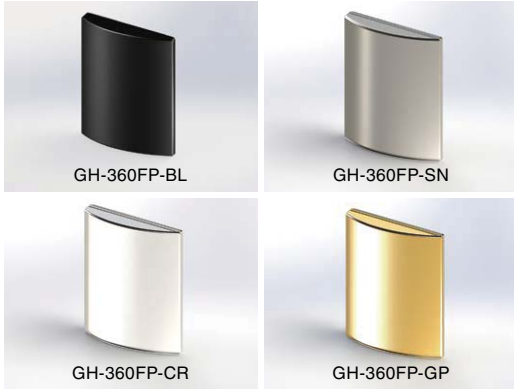
System 32 with 4 holes



- For the standard and +5mm types:
 - Value of H for inset installation is "door thickness + 24 mm".
 - When using with the GH-360FP, value of H is "door thickness + 26 mm".
- For the +7.5mm type:
 - Value of H for inset installation is "door thickness + 16.5 mm".
 - When using with the GH-360FP, value of H is "door thickness + 18.5 mm".

Item code	Item name	Type	Height adjustment	Material	Finish	Carton
160-026-846	360-P6WT	Standard				
160-035-079	360-P6WT+5	+5mm	±2.5mm	Steel	Nickel	400pcs
160-042-393	360-P6W-30-32T	+7.5mm				

LAMP Glass door face plate **GH-360FP**

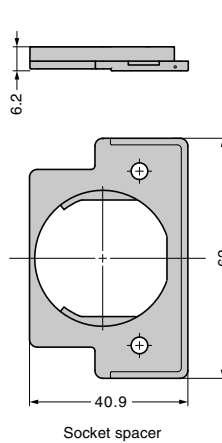
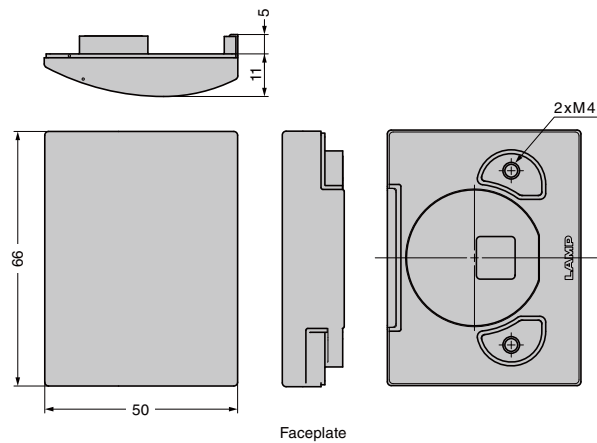


- Glass door face plate designed specifically for the Olympia hinge.
(Not suitable for the H360 hinge).
- For tempered glass doors.
- Use the screws supplied and tighten to 0.75~1.5N.m

<Accessory>

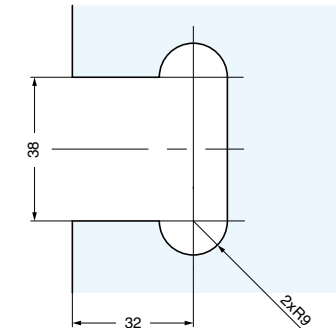
- Cross Recessed Flat Head Machine Screw M4 x 14

	Item code	Item name	Finish / Colour	Material
NEW CAD	160-043-631	GH-360FP-CR	Chrome plating	Zinc Alloy (ZDC) Polyacetal (POM)
NEW CAD	160-043-632	GH-360FP-SN	Satin nickel	
NEW CAD	160-043-724	GH-360FP-GP	24K Gold plating	
NEW CAD	160-043-633	GH-360FP-BL	Black	



Cut Out Dimensions

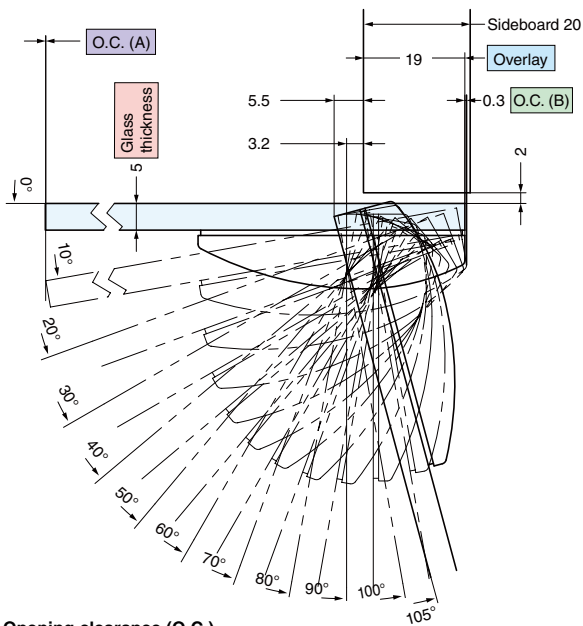
- Please use 4 - 6mm tempered glass.
- Use of shatterproof film is recommended.



Side board and face plate relationship

► For a 5mm door, 20mm sideboard and 19mm overlay.

Locus chart S=7/10 Overlay (19mm)



Opening clearance (O.C.)

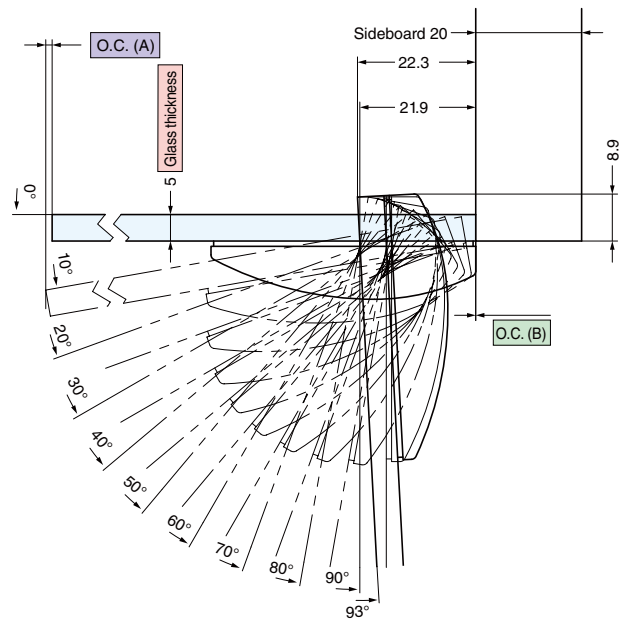
Glass thickness	4	5	6
O.C. (B)	0.2	0.3	0.5

Opening clearance (A) and door width relationship (for 5mm door)

Glass width	300	400	500	600
O.C. (A)	0.07	0.05	0.04	0.03

► For a 5mm door, 20mm sideboard and inset installation.

Locus chart S=7/10 Inset



Opening clearance (O.C.)

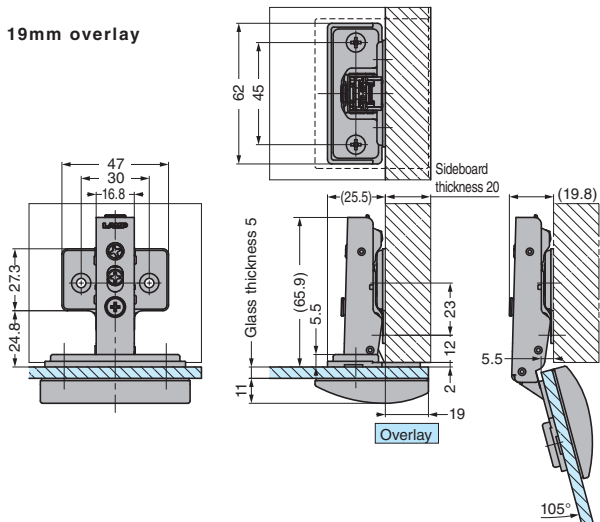
Glass thickness	4	5	6
O.C. (B)	0	0	0

Opening clearance (A) and door width relationship (for 5mm door)

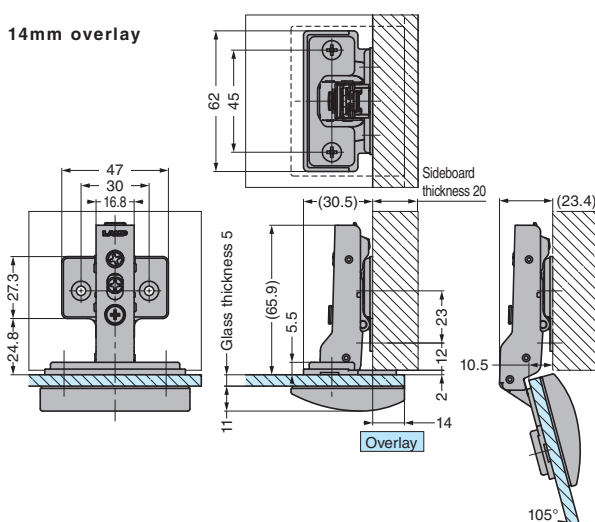
Glass width	300	400	500	600
O.C. (A)	0.34	0.25	0.19	0.16

Installation drawing

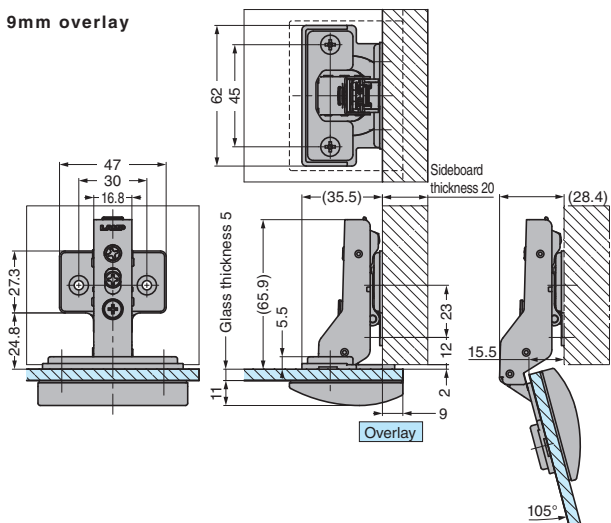
19mm overlay



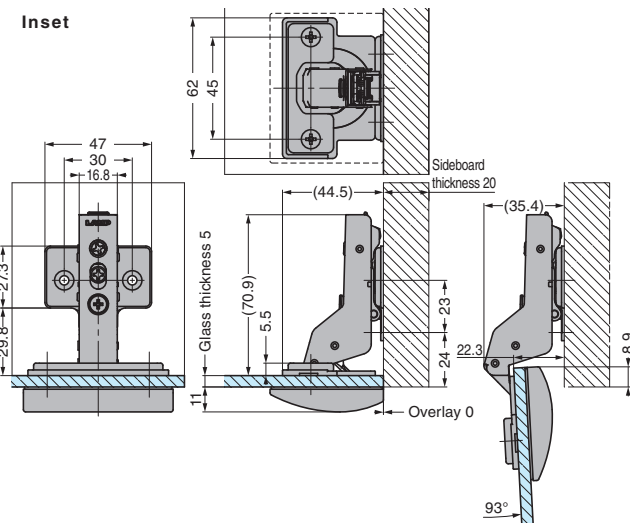
14mm overlay



9mm overlay

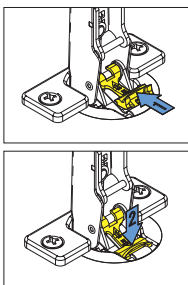
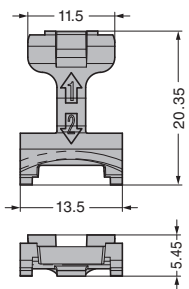


Inset



Drawings show a hinge, face plate and 360-P4W-30T mounting plate (sold separately).

LAMP® 85° angle limiter 360-85



○ Can be retrofitted to a 105° opening Olympia hinge (standard door) to limit the opening angle to 85°.

[Remarks]

● Not available for inset use.

Item code	Item name
NEW CAD G 160-042-335	360-85

LAMP® Installation jig 360-JIG overlay installation



○ For easy installation and alignment of the Olympia hinge mounting plate.

○ Cannot be used in combination with 360-P6W32-32T and pre-mounted screw mounting plates.

Item code	Item name	Box	Carton
NEW CAD G 160-042-396	360-JIG	50pc	500pcs

PIVOT TORQUE HINGE HG-PTH30



- No tools are needed to attach and detach doors, allowing for easy maintenance.
- The safety retainer prevents doors and windows from falling off.

[Remarks]

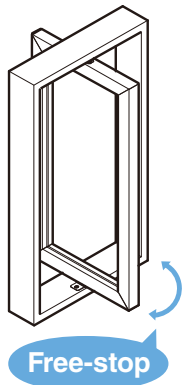
- Be sure to read the "Cautions"
- When installing, ensure that both hinge shafts are leveled and aligned.
- Force for operation varies depending on use environment, including air temperature and wind.
- Do not use with a door and window enduring strong wind pressure.

[Parts Included]

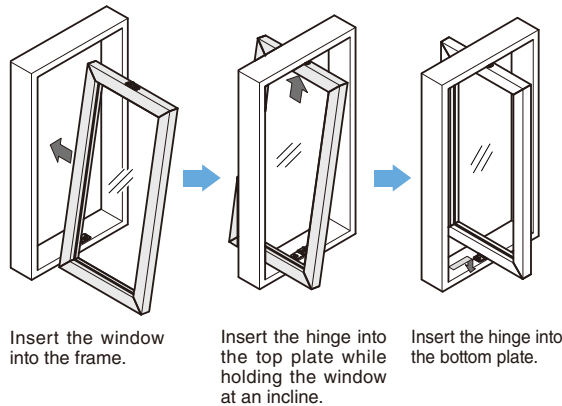
- Binding head tapping screw 4x20 (for the pivot hinge)
- Countersunk head tapping screw 4x20 (for the mouting plates and torque hinge)



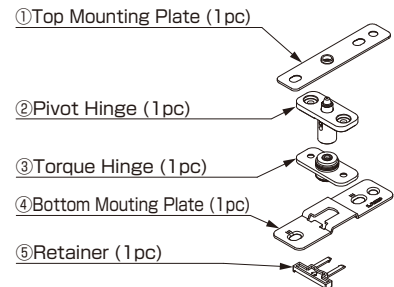
[Holds in any position]



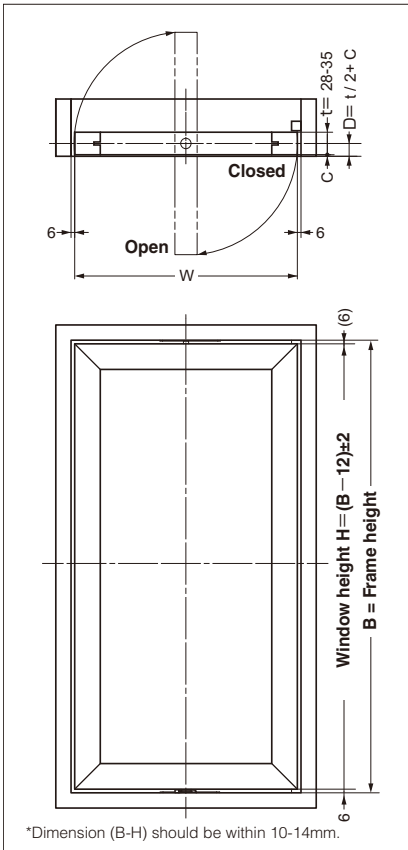
[Easy Installation]



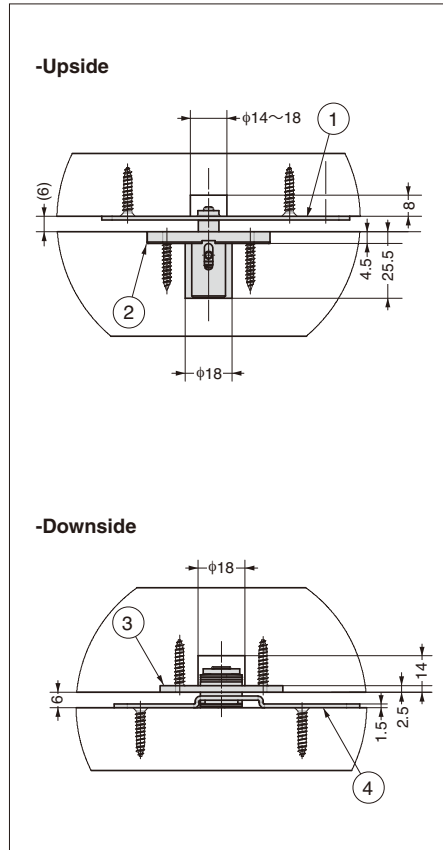
[Component Parts]



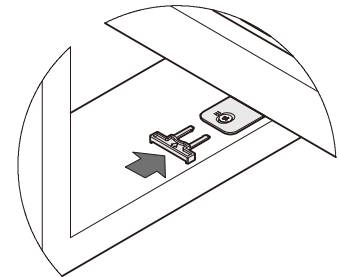
[Installation]



[Detailed Drawings]

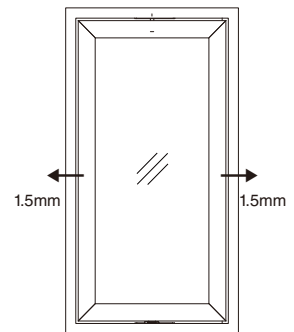


[Prevents Doors From Falling Off]



The retainer prevents doors from falling off. It only needs to be inserted into the bottom plate.

[Adjustable Side Spaces]



Can be adjusted horizontally after installation.

Sold in sets of two hinges.

RoHS	CAD	Item Code	Item Name	Material	Door Width	Door Height	Door Thickness	Door Weight kg/set	Weight (g)	Box (set)	Carton (set)
G	3D	170-043-673	HG-PTH30	Stainless Steel	350-500	700-1200	28-35	Max. 10	95	15	120

Refer to : No.280 P.15

3-WAY ADJUSTABLE CONCEALED HINGE HES3D-120-A100 100° Opening



- Can limit opening angle when used in combination with door restrictors.
- The small bore depth (21 mm) allows for easy mortising of doors and frames.
- Vertical, horizontal, and depth adjustments are available even post installation.
- Easy and quick installation features:
 - Can separate into two parts during installation. (One is for doors. The other is for frames.)
 - Can be provisionally hung on doors before fixing the screws.

[Remarks]

- Please use with door restrictors or door stoppers to prevent doors from opening over 100°.
- When using with door dampers or door closers, please chose from the LDD-S, LDD-V, and LDC-N2. Please note that the door weight should meet moment conditions of both door closers and door dampers.
- Please note that there is a possibility that the hinge will be damaged or will not close fully depending on the door closers used. Please confirm in advance
- When using a concealed door closers, the HES3D-160 is recommended.

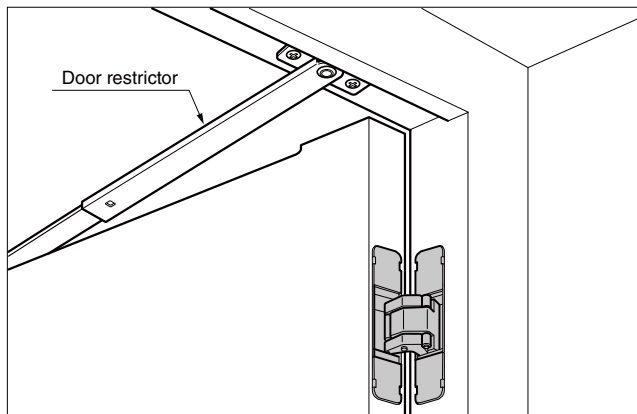
[Parts Included]

- Cross-recessed countersunk tapping screw 5×20 4 pcs (made of stainless steel)
- Hex key spanner 3

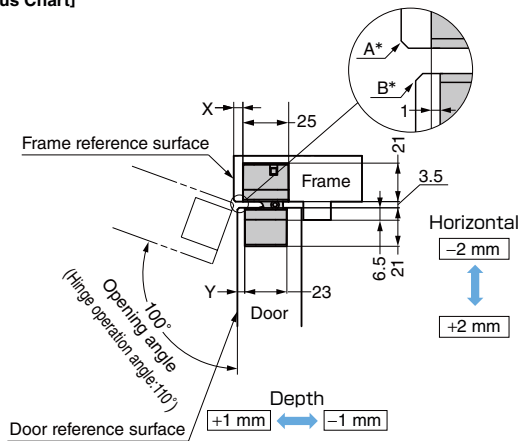
[Optional Parts]

- HES3D-120TMP, installation template 1 (This reusable jig allows for easy mortising of doors and frames using routers.)
- HES3D-120BKT, bracket for sheet metal 2

[Using with a Door Restrictor]

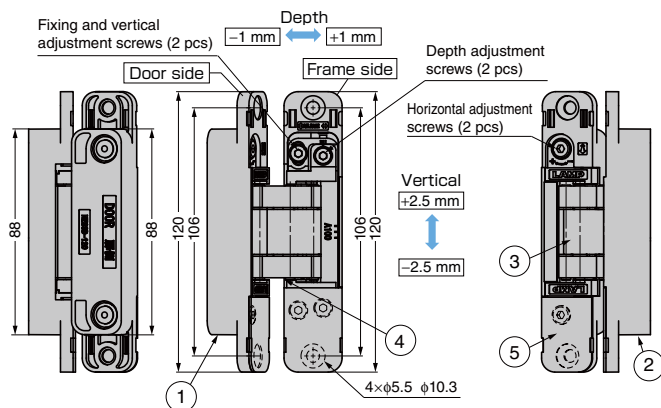


[Locus Chart]



Y : Door Clearance	B : Door Chamfering	X : Frame Clearance	A : Frame Chamfering
4	1	5	1
	2	6	2
5	3	7	3
		5	

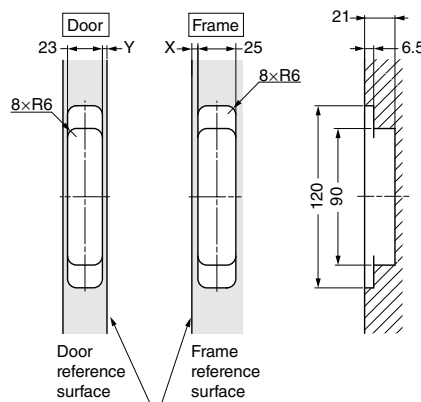
The table above shows the clearance and chamfering required for the door to open properly.



*The upper screw covers are removed in the drawing above.

No.	Part Name	Material	Finish/Colour		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Satin Nickel	Black
②	Base Frame				
③	Arm	Stainless Steel	-	-	-
④	Shaft				
⑤	Screw Cover (Door side: 2 pcs) (Frame side: 2 pcs)	ABS	Satin Chrome	Satin Nickel	Black

[Cut Out Dimensions]



RoHS	CAD	Item Code	Item Name	Finish	Door Specs			Load Capacity				Opening Angle	Box (pcs)	Carton (pcs)
					Width	Height	Thickness	N / 2 pcs	kgf / 2 pcs	N / 3 pcs	kgf / 3 pcs			
		170-044-569	HES3D-120-A100DC	Silver	Max. 900	Max. 2400	Min. 29	294	30	392	40	100°	2	24
		170-044-570	HES3D-120-A100DN	Champagne Gold										
		170-044-571	HES3D-120-A100BL	Black										

Refer to 1: No.240A P.474 2: No.240A P.475

HINGE INSTALLATION JIG HES3D-120-JIG

INSTRUCTION VIDEO



Video Link



Sold in sets of three pieces.

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)
		170-044-186	HES3D-120-JIG	POM	Red	4

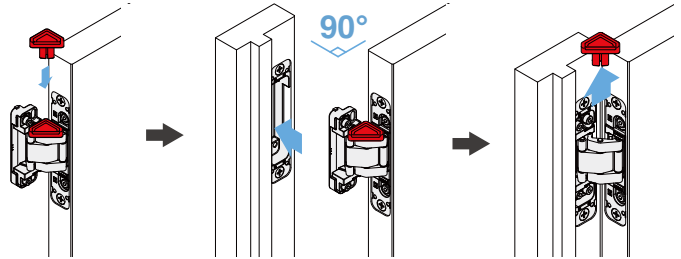
Refer to : No.240A P.471

- Specially designed for the HES3D-120 , 3-way adjustable concealed hinge.
- Keeps hinge angle at 90° for easy installation.

[Remarks]

- Please do not open or close the hinge while the jig is attached.
This may cause unintentional damage to the hinge and the door.

[How to Use]



*Please do not detach the jig until the hinge is installed.

160° Opening

Overlay: 25 mm

Overlay Range: 21 - 25 mm
(when the bore distance is 8 mm)

**Recommended Door Thickness:
18 - 36 mm**

WIDE-ANGLE HEAVY-DUTY CONCEALED HINGE J160 Built-in Damper



- The built-in damper allows doors to close slowly providing premium door motion.
- Comes with a mounting plate and screw covers.

[Specification]

- 3-way adjustment of door position is available as below:
 - Depth : +1.5 mm / -2.5 mm
 - Vertical : ±3 mm
 - Overlay (horizontal) : +0 mm / -4 mm

[Remarks]

- Comes with a red holding pin which holds the hinge angle. Please do not detach it until the hinge is installed
- Please do not open and close the hinge while the holding pin is attached.

[Parts Included]

- Cross-recessed raised countersunk tapping screw 5×18

RoHS	CAD	Item Code	Item Name	Specification	Material	Finish	Weight (g)	Carton (pcs)
RoHS	3D	160-044-973	J160-D22-25T-NI	Built-in Damper	Steel, Zinc Alloy (ZDC), Glass Filled Polyamide (PA)	Nickel	710	50
RoHS	3D	160-044-974	J160-D22-25T-BN			Black Nickel	710	50

[Drawing]

[Locus Chart]
(How to use the locus chart 1)

[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
34 and under	0.1 and under					
36	0.2	0.2	0.2	0.2	0.2	0.2
38*	0.5	0.5	0.5	0.5	0.6	0.6
40*	1.0	1.0	1.1	1.2	1.3	1.4
O.C. (B)						

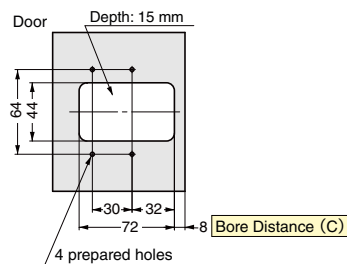
*Please refer to the locus chart if door thickness is over 36 mm. (O.C. (B) can be made smaller by R chamfering (round chamfer) or C chamfering (chamfer plane) on the door)

[O.C. (A)]

Table-3

Door Thickness (D)	Door Width						
	300	400	500	600	700	800	900
20	1.6	1.2	1.0	0.8	0.7	0.6	0.5
30	1.9	1.4	1.2	1.0	0.8	0.7	0.7
36	1.9	1.5	1.2	1.0	0.8	0.7	0.7
O.C. (A)							

[Cut Out Dimensions]



[Door Dimensions and Number of Hinges] 2

Refer to 1: No.280 P.111 2: No.280 P.100

LIFT-ASSIST HINGE HG-PA202 Outside Back Mount

INSTRUCTION

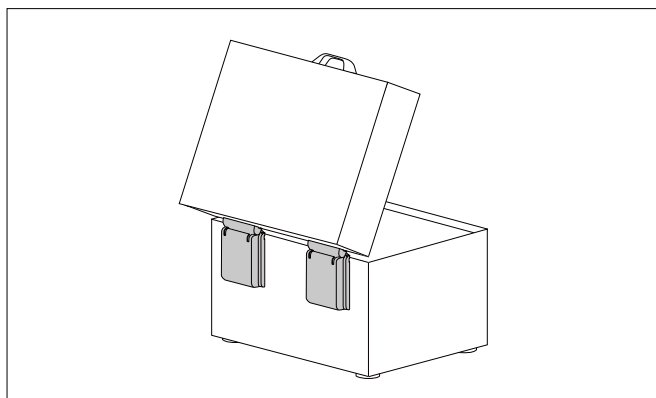


- Easy to lift heavy top-opening lids due to spring tension. (Lift-assist)
- The built-in damper prevents lids from slamming shut. (Soft-close)
- Torque is adjustable by turning the adjustment screw. ($\pm 5\%$)
- Comes with a cover to hide the mounting screws.
- Designed for use under the condition that lid's centre of gravity is at a higher position than the rotational centre. (The angle of torque peak is about 20° .)

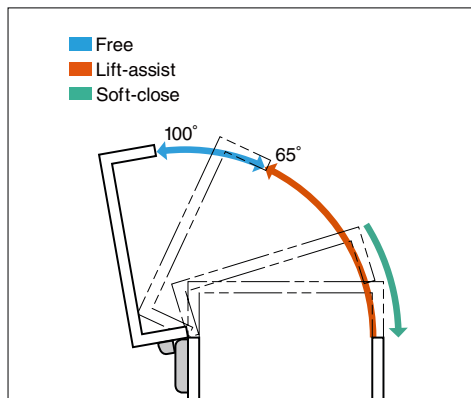
[Remarks]

- Be sure to read the "Cautions" 1.
- Please make sure that the lid will not fall backward when fully opened.

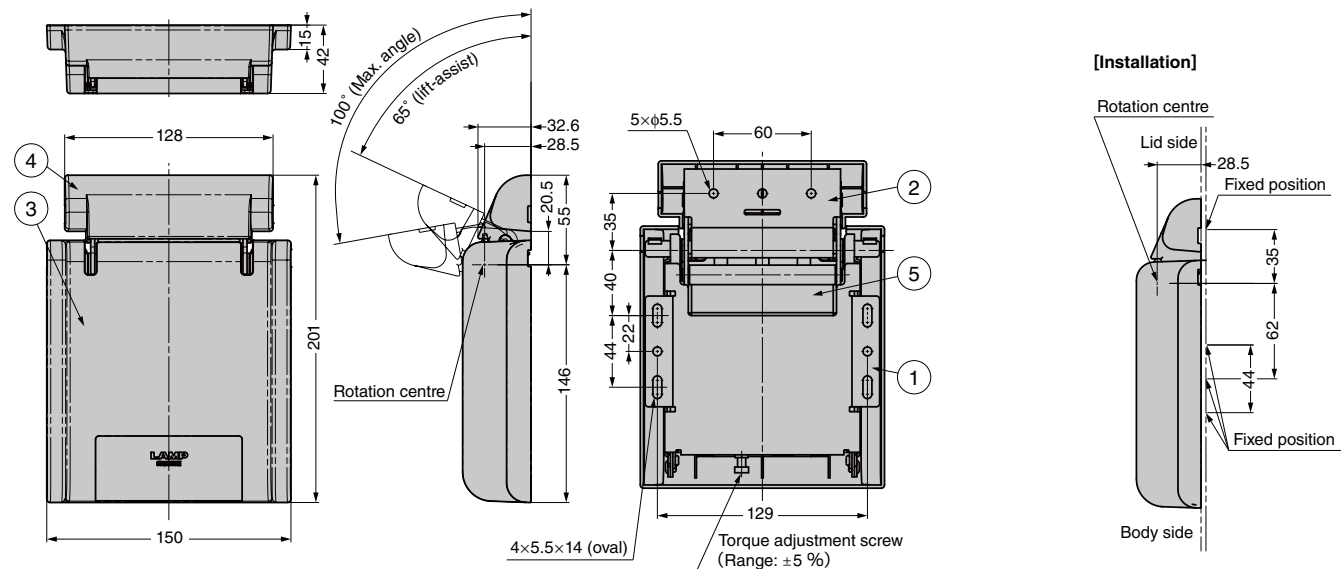
[Outside Back Mount]



[Operating Range]



S Selection Tool
Sasuga-kun
Applicable Products
Used for Product
Selection &
Simulation.
Available online!



No.	Part Name	Material/Colour
①	Base A	Stainless Steel (SUS304)
②	Base B	Stainless Steel (SUS304)
③	Cover A	PBT/
④	Cover B	Light Grey
-	Slider	POM
-	Spring	Steel (SWO)

RoHS	CAD	Item Code	Item Name	Torque N·m	Torque kgf·cm	Weight (g)	Box (pcs)	Carton (pcs)
3D	3D	170-045-365	HG-PA202-15	15 $\pm 10\%$	153 $\pm 10\%$	1385	1	8
3D	3D	170-045-366	HG-PA202-20	20 $\pm 10\%$	204 $\pm 10\%$		1	8
3D	3D	170-045-367	HG-PA202-25	25 $\pm 10\%$	255 $\pm 10\%$		1	8

Refer to 1 : No.280 P.15

LIFT-ASSIST HINGE HG-PA182-9 Outside Back Mount

INSTRUCTION

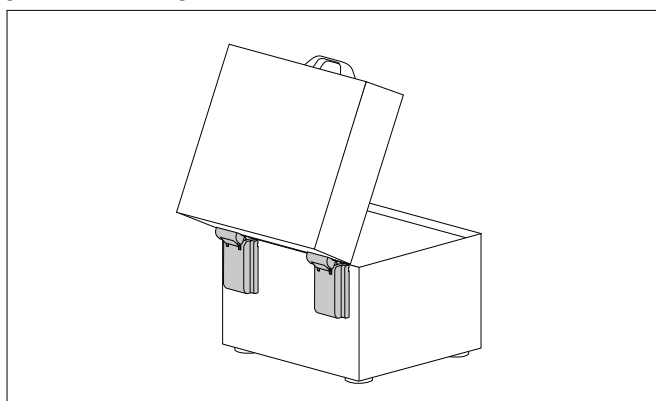


- Easy to lift heavy top-opening lids due to spring tension. (Lift-assist)
- The built-in damper prevents lids from slamming shut. (Soft-close)
- Torque is adjustable by turning the adjustment screw. ($\pm 11\%$)
- Comes with a cover to hide the mounting screws.
- Designed for use under the condition that lid's centre of gravity is at a higher position than the rotational centre. (The angle of torque peak is about 20° .)

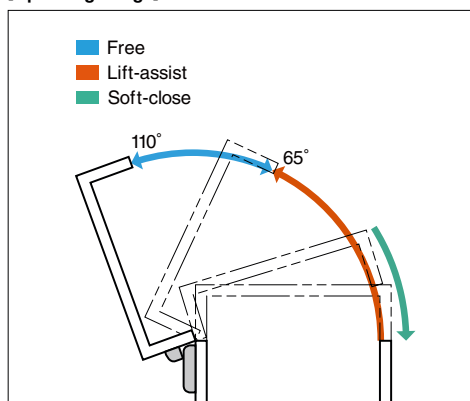
[Remarks]

- Be sure to read the "Cautions" 1.
- Please make sure that the lid will not fall backward when fully opened.

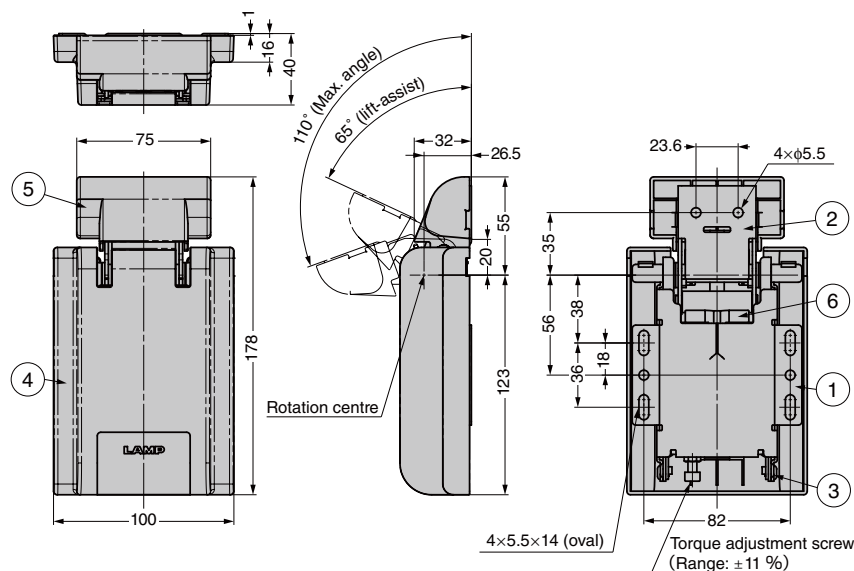
[Outside Back Mount]



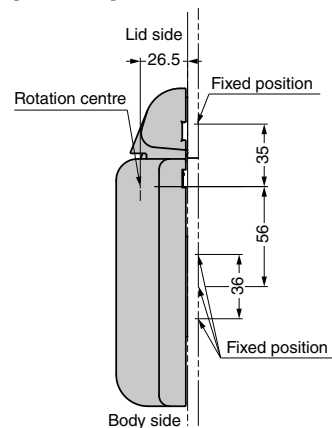
[Operating Range]



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



[Installation]



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

RoHS	CAD	Item Code	Item Name	Torque N·m	Torque kgf·cm	Weight (g)	Box (pcs)	Carton (pcs)
Green	Red	170-045-364	HG-PA182-9	9 $\pm 10\%$	91 $\pm 10\%$	800	1	12

Refer to 1 : No.280 P.15

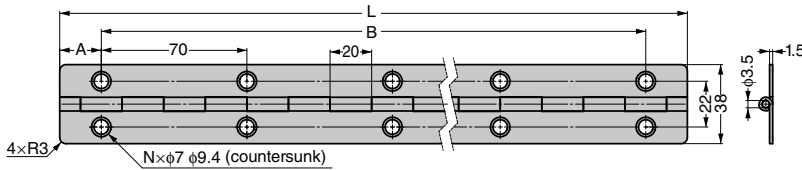
STAINLESS STEEL PIANO HINGE LSN-C

SUS

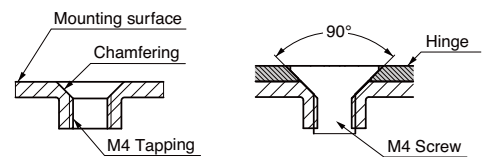


[Remarks]

- The load capacity is the value when using one hinge. For calculation conditions, please refer to the "Concept of Load-bearing" 1.
- Please note this product is designed for use on wood. Hole positioning on wood should be done by aligning the actual hinge. This product is not suitable for sheet metal or installations with hole pitch limitations.
- When installing to sheet metal, be sure to perform thread relief processing (chamfering) on the mounting surface side. In this way, the screw head will not protrude when the hinge is fixed.



[Processing and Installation]



RoHS	CAD	Item Code	Item Name	Material	Finish	L	A	B	Number of Holes (N)	Load Capacity		Weight (g)	Box (pcs)	Carton (pcs)
										N/pc	kgf/pc			
		170-045-408	LSN15-38-450C	Stainless Steel (SUS304)	Polished	450	15	420	14	392	40	270	10	40
		170-045-409	LSN15-38-600C			600	20	560	18	519	53	360	10	40

Refer to 1 : No.280 P.15

Recommended Series LIFT-ASSIST DAMPERS



- Ideal damper system for counter flaps.
- Slowly close flaps near closing radius.
- The soft-close mechanism works even if the flap is only opened slightly.
- Lightly open flaps with the lift-assist mechanism
- Can be attached to already installed counters without extra processing.
- Come with an installation template for easy alignment.

[Recommended Hinge]

Stainless Steel Piano Hinge LSN-C

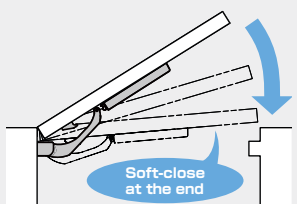


Firmly fixes flaps with M4 screws

Video Link

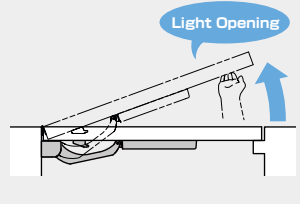


[Soft-close]



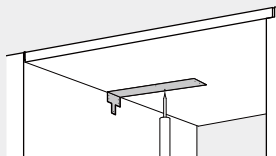
Prevents from slamming shut

[Lift-assist]



Helps you open flaps lightly

[Easy Installation]



- Can be attached to already installed counters without extra processing.
- Come with an installation template for easy alignment.

[Lift-assist Dampers]

	Model	Required Quantity	Angle Stopper	Max. Moment of Flap
	LAD 1	1 pc / 2 pcs	Without	8.0-16.0 N·m (81.6-163.2 kgf·cm)
	LAD-ST 2	1 pc	With (Stop at 95°)	8.0-16.0 N·m (81.6-163.2 kgf·cm)
	LADH 3	1 pc	With (Stop at 95°)	25.0-50.0 N·m (254.9-509.9 kgf·cm)

Refer to 1 : No.240A P.524 2 : No.240A P.491-1 3 : No.240A P.491-3

CUP COVER J95CC For J95 Concealed Hinges



RoHS	CAD	Item Code	Item Name	Material	Finish/Colour	Weight (g)	Box (pcs)
●	●	160-045-369	J95CC-GR	ABS	Grey	3.2	50
●	●	160-045-370	J95CC-NI		Nickel		50
●	●	160-045-371	J95CC-BC		Black Nickel		50

- Special cover for J95 hinges to hide the screws.
- Comes with a double-sided tape to bond the cover and hinge.

[Remarks]

- Please make sure that the surface is clean before taping.

[No Visible Screws]

The following optional covers are used:

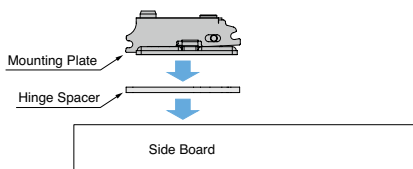


The J95 hinge above is the 25 mm overlay model. (Nickel colour)

HINGE SPACER J95-DP2 2 mm Thickness / For J95 Concealed Hinges



[How to Use]



Set the spacer between the mounting plate and side board.

- Decreases overlay of outset doors by 2 mm.
- Increases clearance of inset doors by 2 mm.
- Can be doubled for 4 mm thickness.

[Available Mounting Plate]

- J96-P9T

[Sold Separately]

- Raised Countersunk Head Tapping Screw 5 x 25

[Recommended Screw]

- Countersunk Screw 5 x 25 / Raised Countersunk Head Tapping Screw / Wood Screw (nominal dia. 5.1)

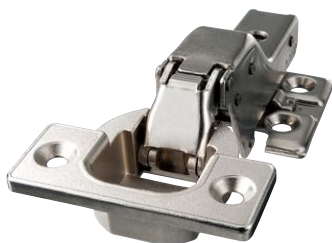
RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Pack (pcs)	Carton (pcs)
●	●	160-048-095	J95-DP2	POM	Grey	5	100	600

[Tapping Screw 5 x 25] Sold Separately

RoHS	CAD	Item Code	Item Name	Material	Finish
●	—	160-048-096	TAP525NI	Steel	Nickel
●	—	160-048-097	TAP525BN		Black Nickel

Recommended Series

HEAVY-DUTY CONCEALED HINGES J95



Max. 25 kg with 2 pcs

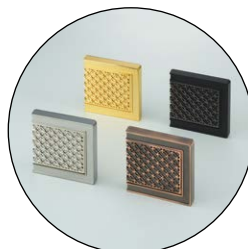
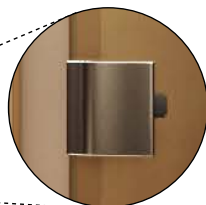
Max. 40 kg with 3 pcs

*Glass door: Max. 35 kg



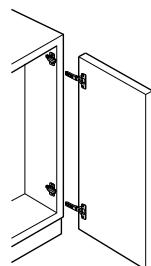
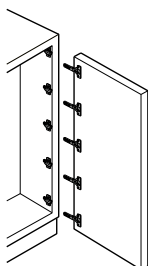
Face Plate for Glass Doors

Optional plates are available for use on glass doors.



Normal Hinges: 5 pcs

J95 Hinges: 2 pcs



Quick Installation

Less Hinges, More Efficiency.

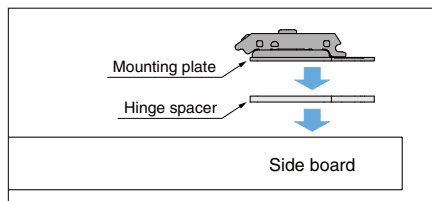
Reduce installation time and provide clean appearance



HINGE SPACER 360-DP2-P4 2 mm Thick / 2 Holes / OLYMPIA Series



[How to Use]



Set the spacer between the mounting plate and side board.

- Decreases overlay of outset doors by 2 mm.
- Increases clearance of inset doors by 2 mm.
- Can be doubled for 4 mm thickness.

[Available Mounting Plate]

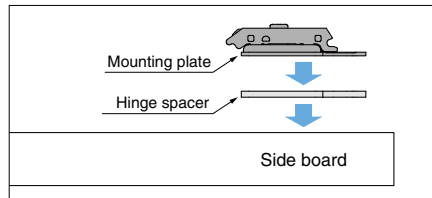
- 360-P4W-30T
- 360-P4W-30T+5
- 360-P4W-32T
- 360-P4W-32T+5

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
●	●	160-046-075	360-DP2-P4	POM	Grey	2.6	50	500

HINGE SPACER 360-DP2-P6 2 mm Thick / 4 Holes / OLYMPIA Series



[How to Use]



Set the spacer between the mounting plate and side board.

- Decreases overlay of outset doors by 2 mm.
- Increases clearance of inset doors by 2 mm.
- Can be doubled for 4 mm thickness.

[Available Mounting Plate]

- 360-P6WT
- 360-P6WT+5

RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
●	●	160-046-076	360-DP2-P6	POM	Grey	2.9	50	500

Recommended Series OLYMPIA CONCEALED HINGES 360

5 Levels of Soft Close. Innovative Damper Technology.



[Damper Adjustment Lever]

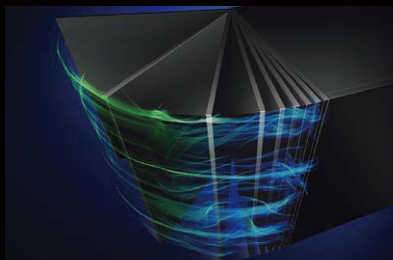
OLYMPIA

OLYMPIA is the first concealed hinge ever built with Lapcon technology. The innovative rotary damper is not only extremely compact, for sleek overall design, its force can also be adjusted to 5 levels for a perfect match regardless of the door size or weight.

From the initial design stage to the final inspection of the OLYMPIA hinge, we are proud to stamp it with our LAMP brand, a guarantee of long-term quality.



[Soft-closing Speed Control]



[Video]



SURFACE MOUNTING BRACKET GS-GH5-MU-BL

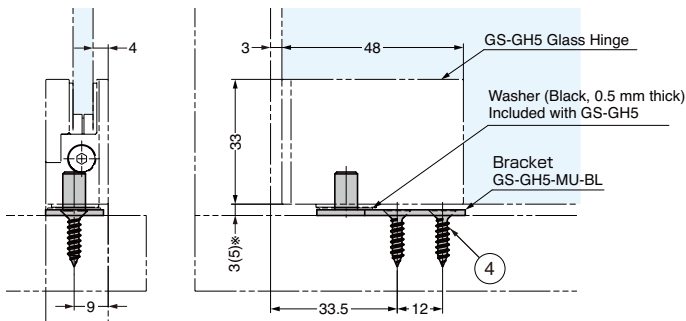


- Specially designed for use with GS-GH5 glass hinge 1.
- Can be simply installed with screws without need for recessing and insert nuts.
- Comes with a spacer which can increase gap below doors from 3 to 5 mm.

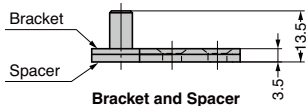
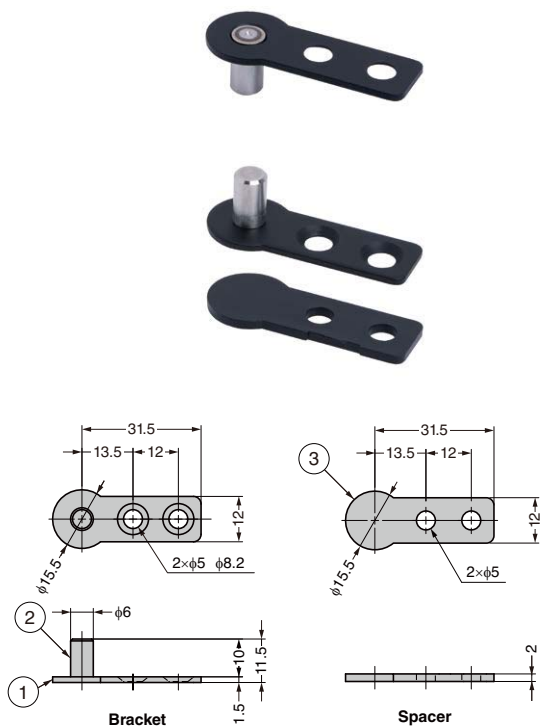
[Parts Included]

- Spacer
- Cross-recessed head tapping screw 3.5 × 15

[Installation]



() Indicates the dimensions when the spacer is attached.



Sold in set: two brackets and one spacer

RoHS	CAD	Item Code	Item Name	Box (set)	Carton (set)
●	●	170-045-786	GS-GH5-MU-BL	40	360

Refer to 1 : No.240A P.367-3

No.	Part Name	Material	Finish/Colour
①	Strike Plate	Stainless Steel (SUS430)	Enamel Black
②	Shaft	Stainless Steel (SUS303)	Plain
③	Spacer	POM	Black
④	Included Screw	Stainless Steel	Enamel Black

SURFACE MOUNTING BRACKET GS-GH20-MU



- Specially designed for the GS-GH20 glass hinge 1.
- Allows for easier installation with only screws. There is no need for recessing or insert nuts.
- Comes with a spacer which can increase gap below doors from 3 to 5 mm.

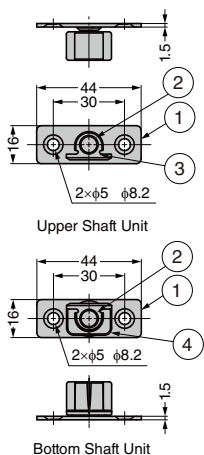
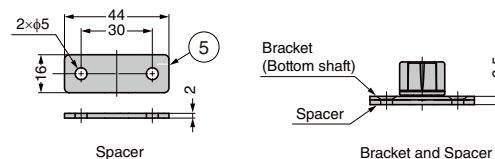
[Parts Included]

- Spacer
- Cross-recessed countersunk head tapping screw 3.5 × 15

[Replacement Parts]



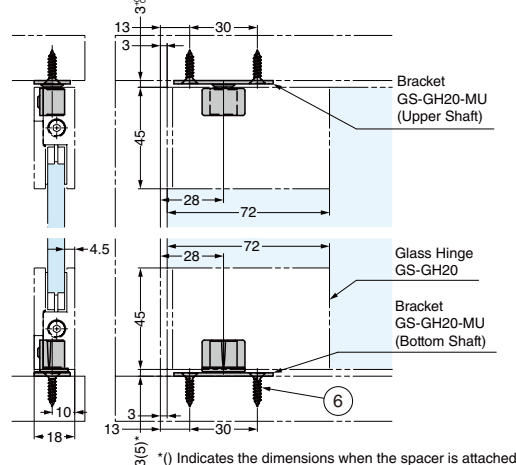
Replace the parts of GS-GH20 hinge for surface mounting.



Sold in sets of an upper shaft unit, bottom shaft unit, and spacer.

RoHS	CAD	Item Code	Item Name	Finish	Box (sets)	Carton (sets)
●	●	170-045-787	GS-GH20-MU-SM	Plain	30	270
●	●	170-045-788	GS-GH20-MU-GA	Gold Substitute Plating	30	270
●	●	170-045-789	GS-GH20-MU-BL	Enamel Black	30	270

Refer to 1 : No.240A P.367-4



(*) Indicates the dimensions when the spacer is attached.

No.	Part Name	Material	Finish/Colour
①	Bracket Plate	Stainless Steel (SUS430)	SM : Plain GA : Gold Substitute Plating BL : Enamel Black
②	Shaft	Stainless Steel (SUS340)	Plain
③	Upper Plastic Bush	POM	Black
④	Bottom Plastic Bush		
⑤	Spacer		
⑥	Included Screw	Stainless Steel	SM : Plain GA : Gold Substitute Plating BL : Enamel Black

GLASS DOOR HINGE GS-GH50 For Inset Doors



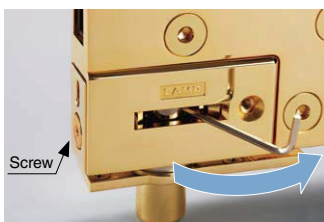
- Designed for large inset glass showcases.
- Recommended for use with the GS-GL50 lock 1 for design coordination.
- Doors can be temporary held in frames before fixing screws for easy installation.
- The door position can be adjusted by ± 3 mm right and left post installation. (Horizontal adjustment screw)
- The gap below the door can be adjusted from 7 up to 12 mm post installation. (Height adjustment ring)

[Remarks]

- Be sure to read the "Cautions" 2.
- Prioritize the door weight when determining the glass size.
- For 8 mm thick glass, use with a packing A, B, and spacer.
- For 10 mm thick glass, use with a packing A and B.
- For 12/12.7 mm thick glass, use with two packing A.
- Shatter proof films are recommended to be used on glass doors for safety.

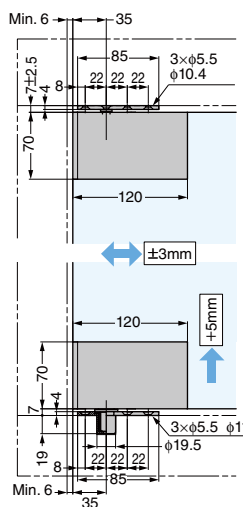
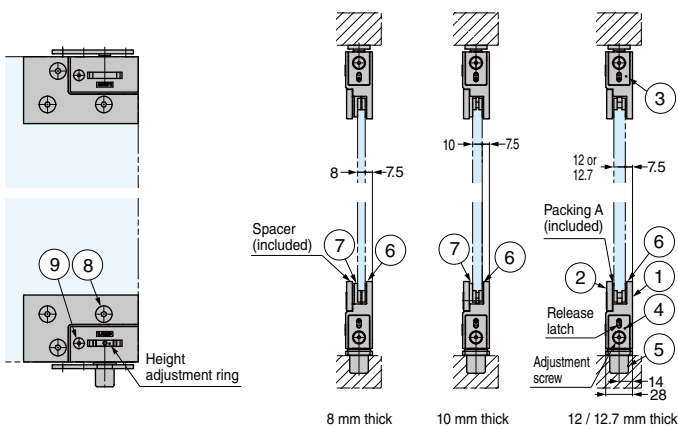
[Parts Included]

- Cross-recessed countersunk tapping screw 5×30
- Hex key 3 (for door position adjustments)
- Hex key 5 (for hinge assembly)
- Packing A
- Spacer (for 8 mm thick glass)

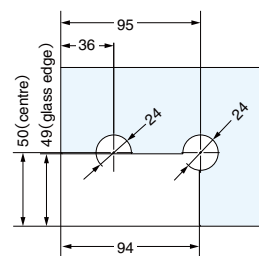


[Door Position Adjustments]

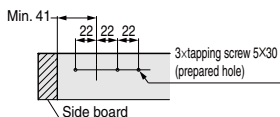
Door height can be adjusted by turning the ring with a hex key. It can also be done post installation. Lateral adjustment can be done with the screw.



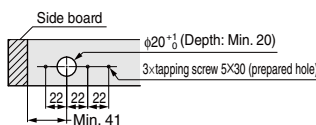
[Cut Out Dimensions]



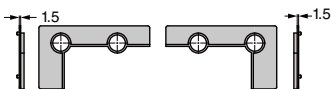
[Mounting Position on Top Board]



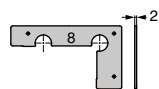
[Processing on Bottom Board]



[Packing A]

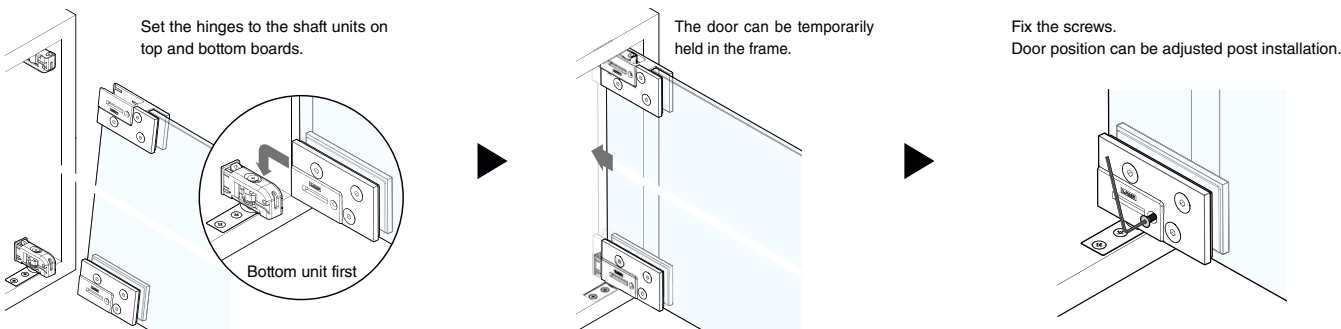


[Spacer] (for 8 mm thick glass)



No.	Part Name	Material	Finish		
			CR	GP	BL
①	Body (front)	Zinc Alloy (ZDC)	Chrome	Gold Plated (24K)	Enamel Black
②	Body (back)				
③	Upper Shaft Unit				
④	Bottom Shaft Unit				
⑤	Bottom Mounting Plate				
⑥	Packing A (t: 1.5)	Chloroprene Rubber (CR)	Black		
⑦	Packing B (t: 3.5)				
⑧	Hex socket bolt M8×16	Steel	Chrome	Gold Plated (24K)	Enamel Black
⑨	Hex socket bolt M5×10				

Easy Installation



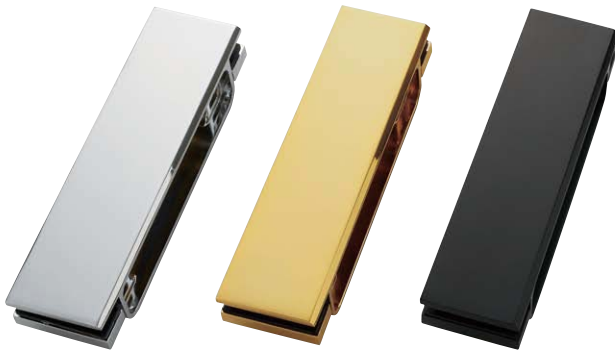
Sold in sets of two hinges.

RoHS	CAD	Item Code	Item Name	Finish/Colour	Available Glass Size			Load Capacity /set		Box (set)	Carton (set)
					Width	Height	Thickness	N	kgf		
-	●	170-046-839	GS-GH50-CR	Chrome	Max. 900	Max. 2500	8, 10, 12, 12.7	490	50	1	4
-	●	170-046-840	GS-GH50-GP	Gold Plated (24K)						1	4
-	●	170-046-841	GS-GH50-BL	Enamel Black						1	4

Refer to 1: P.E5, 2: No.280 P.15

GLASS DOOR BRACKET HES3D-G120BKT

INSTRUCTION

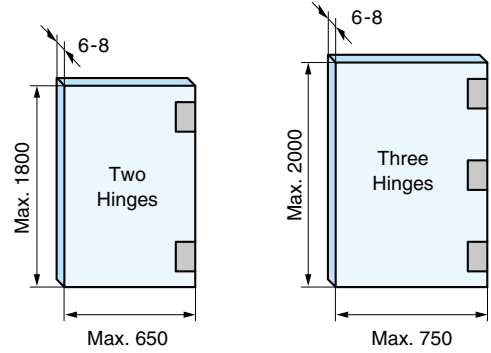


- Allows the HES3D-120 hinge **1** to be installed on glass doors.
- The silver and gold types come with screw covers in the same colours. For the black type, please use the ones included with HES3D-120BL.

[Parts Included]

- Hexagon socket countersunk head screw M5 × 12
- Countersunk head screw M4 × 12
- Hex key (size: 3)

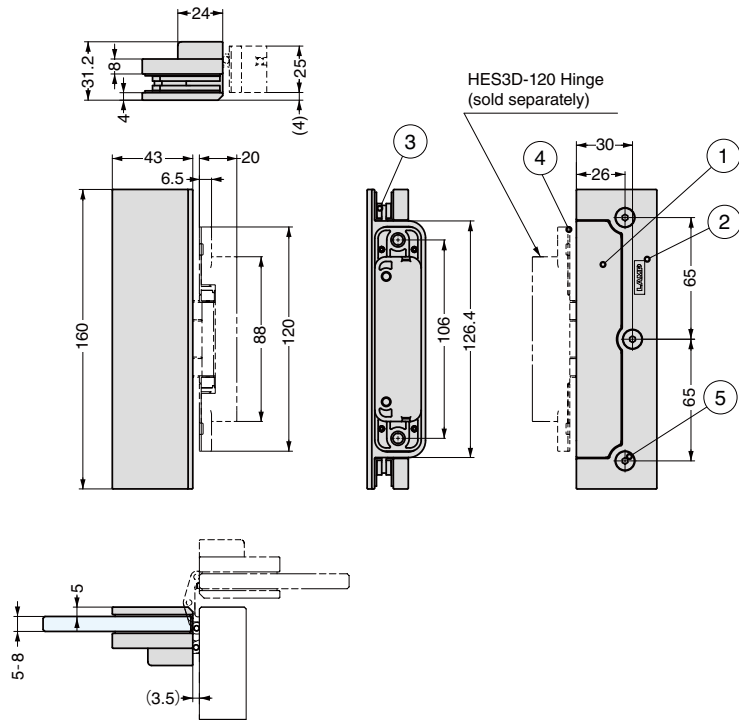
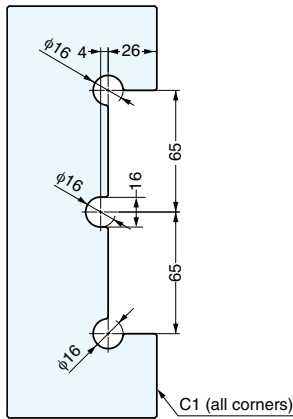
[Door Sizes and Number of Hinges]



[Component Parts]



[Cut Out Dimensions]

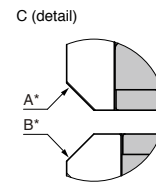
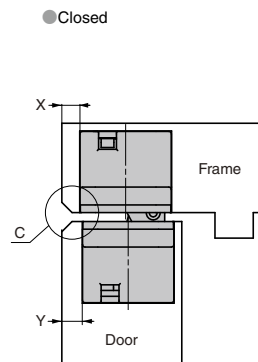
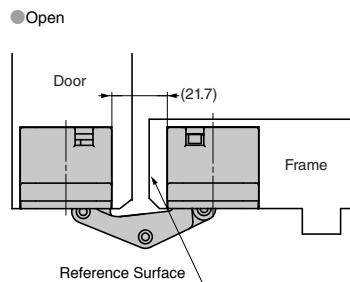
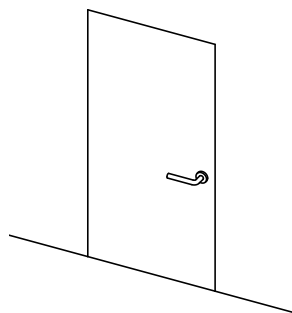


No.	Part Name	Material	Finish		
			CR	GP	BL
①	Body	Zinc Alloy (ZDC)	Chrome	24K Gold Plating	Black Enamel
②	Back Plate				
③	Gasket	Chloroprene Rubber (CR)	-	-	-
④	Screw Cover	ABS			
⑤	Hexagon Socket Countersunk Head Screw M5 x 14	Steel	Chrome	24K Gold Plating	Black Paint

ReHS	CAD	Item Code	Item Name	Colour	Glass Thickness	Box (pcs)	Carton (pcs)
●	●	170-043-469	HES3D-G120BKT-CR	Silver	6-8	2	12
●	●	170-043-470	HES3D-G120BKT-GP	Gold		2	12
●	●	170-043-471	HES3D-G120BKT-BL	Black		2	12

Refer to **1**: No.240A P.471

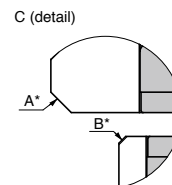
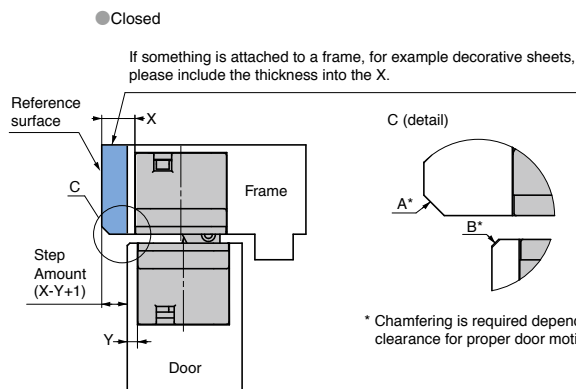
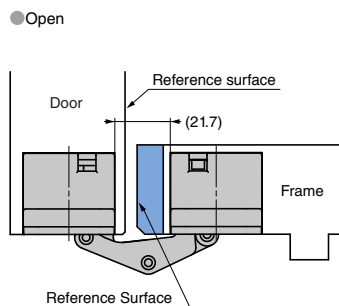
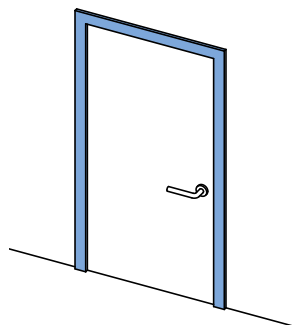
[Flush Installation]



* Chamfering is required depending on clearance for proper door motion.

Y	B	X	A
Door Clearance	Door Chamfering	Frame Clearance	Frame Chamfering
4 and under	0	3 and under	0
5	1	4	1
6	2	5	2
7	3	6	3
8	4	7	4
9	6	8	6

[Cladded Installation]



* Chamfering is required depending on clearance for proper door motion.

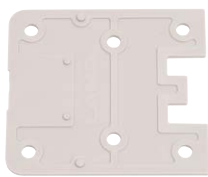
Available on doors which are not aligned flush to the wall or frame.

Y	B	X	A	X-Y+1
Door Clearance	Door Chamfering	Frame Clearance	Frame Chamfering	Step Amount
3	0	3 to 12	0	1 to 10
		13	1	11
		14	2	12
		15	4	13
4	1	3 to 10	0	0 to 7
		11	1	8
		12	2	9
		13	3	10
5	2	3 to 6	0	-1 to 2
		7	1	3
		8	2	4
		9	3	5
6	3	3 to 6	0	-4 to -1
		7	1	0
		8	3	2
		9	5	4
7	4	3 to 6	0	-3 to 0
		7	1	1
		8	2	2
		9	3	3
8	5	3 to 6	0	-3 to 0
		7	1	1
		8	2	2
		9	3	3
9	6	3 to 6	0	-4 to -1
		7	1	0
		8	3	2
		9	5	4

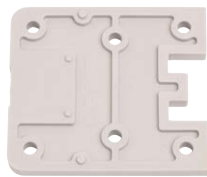
Y	B	X	A	X-Y+1
Door Clearance	Door Chamfering	Frame Clearance	Frame Chamfering	Step Amount
3	0	3 to 6	0	-2 to 1
		7	1	2
		8	2	3
		9	3	4
4	1	3 to 6	0	-3 to 0
		7	1	1
		8	2	2
		9	3	3
5	2	3 to 6	0	-4 to -1
		7	1	0
		8	3	2
		9	5	4
6	3	3 to 6	0	-3 to 0
		7	1	1
		8	2	2
		9	3	3
7	4	3 to 6	0	-4 to -1
		7	1	0
		8	3	2
		9	5	4
8	5	3 to 6	0	-4 to -1
		7	1	0
		8	3	2
		9	5	4
9	6	3 to 6	0	-4 to -1
		7	1	0
		8	3	2
		9	5	4

RoHS	CAD	Item Code	Item Name	Colour	Door Size			Load Capacity				Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
					Width	Height	Thickness	N/2pcs	kgf/2pcs	N/3pcs	kgf/3pcs				
●	●	170-047-901	HES3D-W190DC	Silver	Max. 915	Max. 2440	Min. 42	981	100	1230	125	180°	-	2	12
●	●	170-047-902	HES3D-W190DN	Champagne Gold										2	12
●	●	170-047-903	HES3D-W190BL	Black										2	12
●	●	170-047-904	HES3D-W190PN	Nickel										2	12

AILERON SPACER ARN-DP 2 and 5 mm Thick



ARN-DP2
(2 mm)



ARN-DP5
(5 mm)

- Specially designed for use with the AILERON stay [1](#).
- The ARN-DP2 decreases overlay of outset doors by 2 mm.
- The ARN-DP5 decreases overlay of outset doors by 5 mm.
- The ARN-DP2 can be doubled for 4 mm thickness.

[Available Mounting Plate]

- ARN-SZ [2](#)

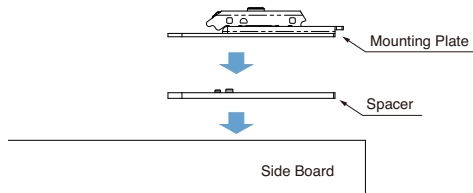
[Remarks]

- The included screws are for fixing the spacer (ARN-DP5) and mounting plate (ARN-SZ).
- Please use the optional screws if two ARN-DP2 are used.

[Parts Included]

- Cross-recessed binding head tapping screw 3.5 × 20
(Only the ARN-DP5 comes with these screws.)

[How to Use]



Set the spacer between the mounting plate and side board.

[Spacer]

RoHS	CAD	Item Code	Item Name	Colour	Type	Material	Box (pcs)	Carton (pcs)
●	●	180-046-667	ARN-DP2	Grey	+ 2 mm	POM	80	640
●	●	180-047-915	ARN-DP5		+ 5 mm (screw included)		80	640

Refer to [1](#) : P. G8 [2](#) : P. G10

[Optional screw when using two ARN-DP2]

RoHS	CAD	Item Code	Item Name
●	—	180-046-669	TAP3520NI

Sold in sets of 4 screws.

SPRING-ASSIST TORQUE HINGE HG-TLAJ Torque Adjustment

Lift Assist Free-stop Passed 50,000 open/close private test



Hinge



Cover
(sold separately)

[Application]



- The built-in spring makes lids feel lighter to open and close. (The hinge is for top-opening lids.)
- The retaining torque is adjustable with a hex key. (0 to 3.5 N.m)
- Optional cover is sold separately.

[Specifications]

- Operating temperature: - 0° to 40°.

[Application]

- Medical equipment, analytical instruments

[Remarks]

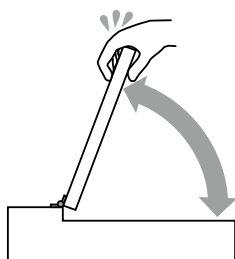
- Do not open/close the hinge before installation. The spring could accidentally pinch fingers.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Do not detach the torque adjustment nut.
- Do not tighten the torque adjustment nut with a force of over 10 N.m. It may damage the hinge.

[Sold Separately]

- Cover

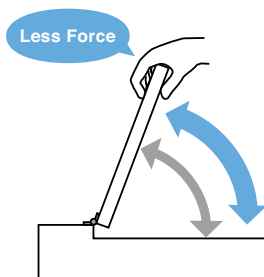
[Smoother than ever before]

Normal Torque Hinge



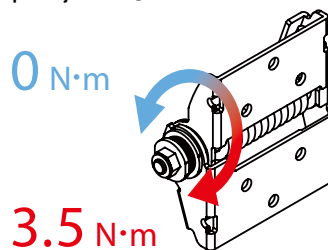
Only Retaining Torque

Spring-assist Torque Hinge



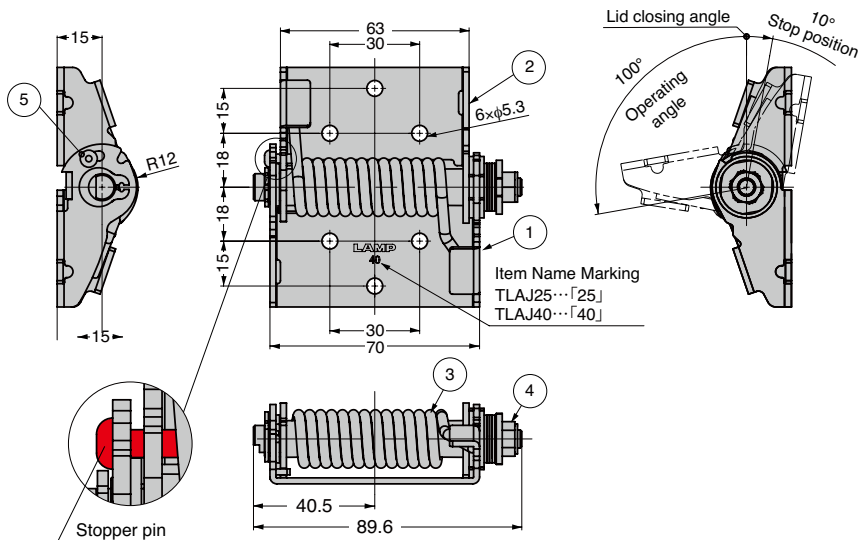
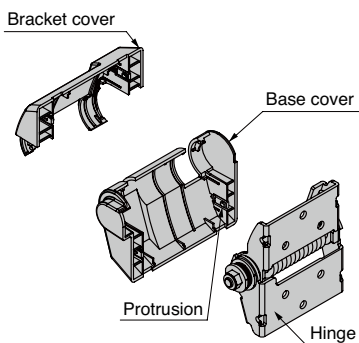
Retaining Torque
+
Spring-assist Force

[Retaining Torque Adjustment]



A hex key is needed (size: 10). 0 N.m is the factory preset.

[Component Parts]



[How to Attach the Covers]

1. Install the hinge to a lid.
2. Close the lid.
3. Attach the covers to the hinge.
4. Make sure the protrusion properly fits into the hinge.

The hinge is delivered with the pin attached.
It keeps the hinge open. Please do not detach it until the hinge is installed.

[Hinge]

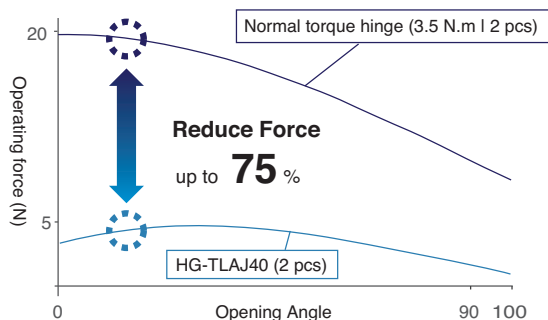
RoHS	CAD	Item Code	Item Name	Spring-assist Force		Retaining Torque		Weight (g)	Box (pcs)	Carton (pcs)
				N·m	kgf·cm	N·m	kgf·cm			
●	●	170-045-749	HG-TLAJ25	2.2 - 2.9	22 - 30	0 - 3.5	0 - 36	218	10	40
●	●	170-045-750	HG-TLAJ40	3.5 - 4.4	36 - 45			222	10	40

[Cover] Sold separately

RoHS	CAD	Item Code	Item Name	Material	Weight (g)	Box (pcs)	Carton (pcs)
●	●	170-043-831	HG-TLAJC	PBT	41	10	40

No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS304)	Barrel
②	Bracket	Stainless Steel (SUS430)	Polished
③	Spring	Stainless Steel	
④	Torque Adjustment Nut M6	-	-
⑤	Stopper Pin	Stainless Steel	

[Compare Required Force]

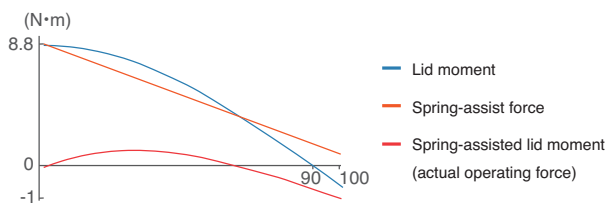


[Conditions]

- Height: 400 mm
- Weight: 4 kg
- Centre of gravity: centre of lid

[Lift Assist Mechanism]

The spring-assist force offsets the lid moment.

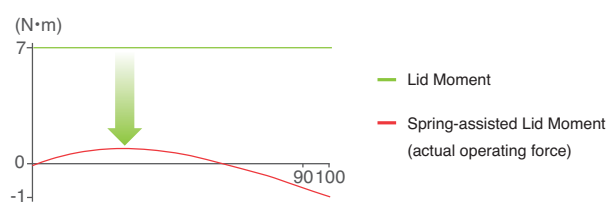


Force Formula

"Spring-assisted lid moment" = "Lid moment" - "Spring-assist force"

[Free-stop Mechanism]

The retaining torque keeps the lid in position.



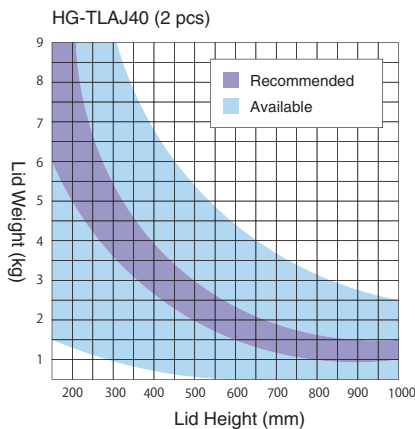
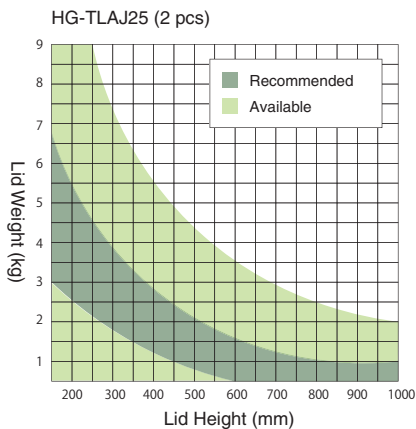
Free-stop Formula

"Retaining Torque" - "Spring-assisted Lid Moment" > 0

Tips for Smoother Movement

The closer retaining torque is to spring-assisted lid moment, the more lightly a lid moves. (The retaining torque is adjustable.)

[Available Lid Size]



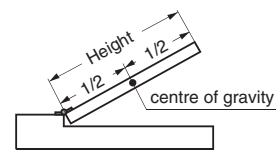
Available Range

- Free-stop: 0° to 100°

Recommended Range

- Free-stop: 0° to 100°
- Moves very lightly: 1° to 99°

* Spring-assisted lid moment is close to 0 N.m.



Calculation Condition:
The centre of gravity is at the centre of the lid.



Product Selection Tool Sasuga-kun

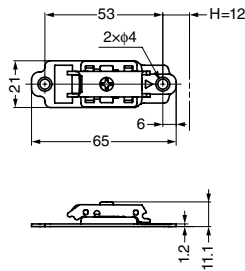
Access here



You can easily find suitable products on the website.
This can simulate moment, force, and more.

MOUNTING PLATE 360-P3W-53T Straight Type

OLYMPIA



● The slim design gives a sleek look.

[Specification]

- Vertical adjustment : ± 2.5 mm
- Standard height : 0 mm
- Value of H : door thickness + 17 mm in case of inset.
- Value of H : door thickness + 19 mm in use of GH-360FP. 1

[Remarks]

- When using with two H360 hinges, door spec should be as below:
 - Door width : max. 450 mm
 - Door weight : max. 7 kg

[Sold Separately]

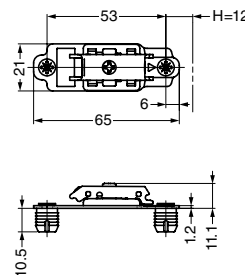
- Raised countersunk head tapping screw 3.5 x 15

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
●	●	160-046-697	360-P3W-53T	Steel	Nickel Plating	20	400

Refer to 1: P.F19

MOUNTING PLATE 360-P3W-53T-D10 Straight Type / With Dowels

OLYMPIA



- The slim design gives a sleek look.
- Pre-attached with press-in dowels.

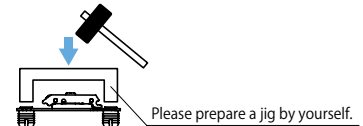
[Specification]

- Vertical adjustment : ± 2.5 mm
- Standard height : 0 mm
- Value of H : door thickness + 17 mm in case of inset.
- Value of H : door thickness + 19 mm in use of GH-360FP. 1
- Mounting hole : φ10 (depth: 11mm and more)

[Remarks]

- Press in the dowels at the same time.
- When using with two H360 hinges, door spec should be as below:
 - Door width : max. 450 mm
 - Door weight : max. 7 kg

[Installation]



RoHS	CAD	Item Code	Item Name	Material	Finish	Dowel Material	Weight (g)	Box (pcs)
●	●	160-046-698	360-P3W-53T-D10	Steel	Nickel Plating	Polyamide (PA)	24	400

Refer to 1: P.F19

RAISED COUNTERSUNK HEAD TAPPING SCREW 3.5x15 For OLYMPIA and 230 Hinges

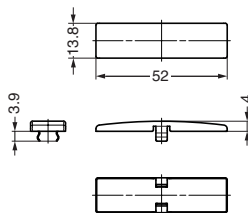


Nickel Type : Sold in 400 pieces.
Black Nickel Type : Sold in one piece.

RoHS	CAD	Item Code	Item Name	Material	Finish
●	-	160-070-030	TAP3515NI	Steel	Nickel Plating
●	-	160-034-786	TAP3515BN		Black Nickel Plating

BODY COVER 360HC-19H26-NI For 19 and 26 mm Overlay

OLYMPIA



● Hides screws for a sleek look.

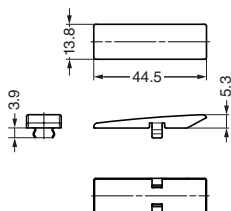
[Available Hinge]

- 360 (19 mm overlay type)
- H360 (26 mm overlay type)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
●	●	160-046-883	360HC-19H26-NI	Steel	Nickel Plating	2.6	400

BODY COVER 360HC-9H16-NI For 9 and 16 mm Overlay

OLYMPIA



● Hides screws for a sleek look.

[Available Hinge]

- 360 (9 mm overlay type)
- H360 (16 mm overlay type)

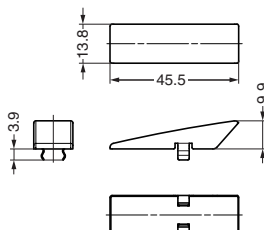
[Remarks]

- Cannot be used in 14 mm overlay installation.

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
●	●	160-046-884	360HC-9H16-NI	Steel	Nickel Plating	2.2	400

BODY COVER 360HC-0H0-NI For Inset

OLYMPIA



● Hides screws for a sleek look.

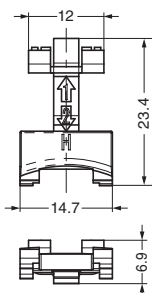
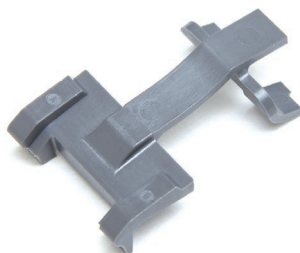
[Available Hinge]

- 360 (inset type)
- H360 (inset type)

RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)
●	●	160-046-885	360HC-0H0-NI	Steel	Nickel Plating	2.7	400

85° ANGLE LIMITER H360-85 For Thick Doors

OLYMPIA

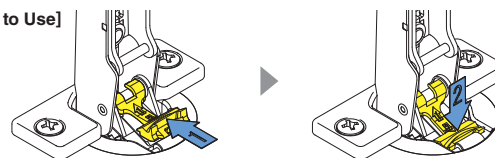


● Limits the opening angle from 100° to 85° of the H360 hinge.
(The H360 is a thick door model of OLYMPIA hinge series.)

[Remarks]

- Not available for inset use.

[How to Use]



RoHS	CAD	Item Code	Item Name	Material	Colour	Box (pcs)
●	●	160-044-151	H360-85	PBT	Grey	1,000

FOLDING HINGE HG-RCT1S-90 90° Locking



- Locks at 90°. Produces click sound when locked.
- Unlocks when the angle goes over 90° and can be folded.
- Ratchet mechanism allows for high load capacity.
- HG-RCT12-C ratchet hinge with multiple locking angles is also available. **1**

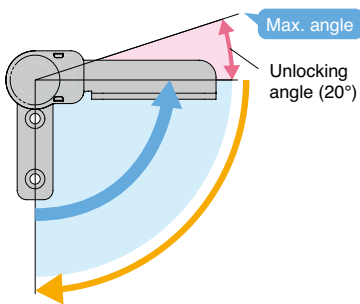
[Application]

- Foldable tables and shelves.

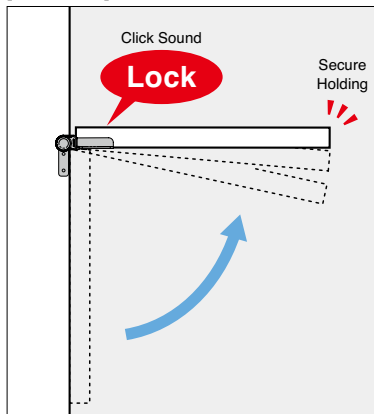
[Remarks]

- Used in pairs. (right and left)
- Make sure the housing has sufficient strength so that the ratchet mechanism can function properly.
- If the length between two hinges is more than 400 mm, the ratchets may not activate at the same time.
- The hinge does not have free-stop mechanism. Please hold a shelf with hands when closing.

[Operating Angle]

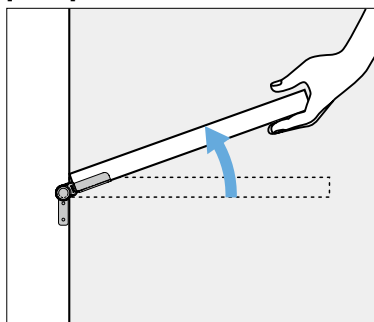


[Lock at 90°]

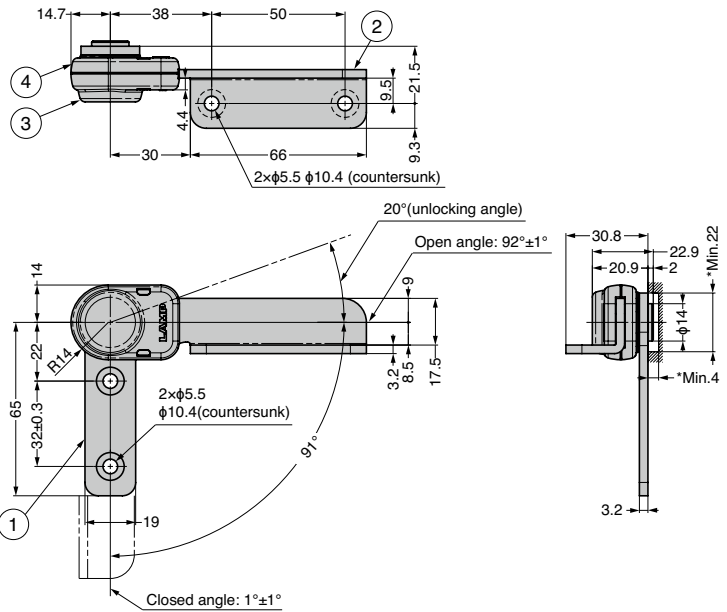


Provides click sound with ratchet mechanism.

[Unlock]



The lock will be released if the angle is more than 90°.



- Right-handed type is shown. Right and left handed types are symmetrical.
- Make space indicated by * marks when installing.

No.	Part Name	Material	Finish/Colour
①	Bracket	Steel	Nickel
②	Arm		
③	Upper Cover	Polycarbonate (PC)	Light Grey
④	Lower Cover		

Sold in set of two hinges. (right and left)

RoHS	CAD	Item Code	Item Name	Moment Load Capacity / set		Weight (g)	Box (set)	Carton (set)
				N.m	kgf.cm			
●	●	170-048-682	HG-RCT1S-90	40	408	310	10	40

Refer to **1**: No.240A P.367-23

GRAVITY SOFT-CLOSE HINGE HG-JG150 Self and Soft Close

INSTRUCTION

Passed 50,000 open/close private test



Self-close Hinge
(for lower)



Soft-close Hinge
(for upper)

- Automatically and slowly close doors from 65 degrees.
(The self-close feature uses gravity, and the soft-close feature is due to a built-in damper.)
- Can separate into two parts for easy installation and disassembly.
- The closing speed of doors is adjustable.
- Doors cannot be removed when closed for security purposes. (0°)
- Door position can be adjusted for depth and in a horizontal direction (± 3 mm).

[Specification]

- Temperature : 0 - 40 °C

[Remarks]

- Set door stopper to prevent doors from opening over 180°.
- Sold in set of two hinges. (soft-close hinge and self-close hinge)

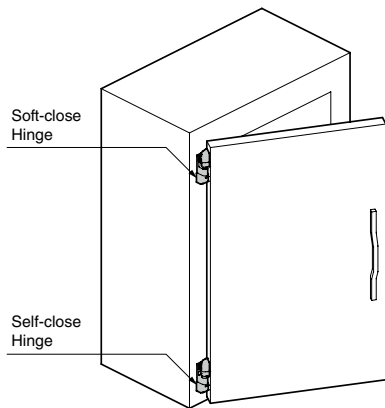
[Parts Included]

- Cover
- Adjustment Plate

[Recommended Screw]

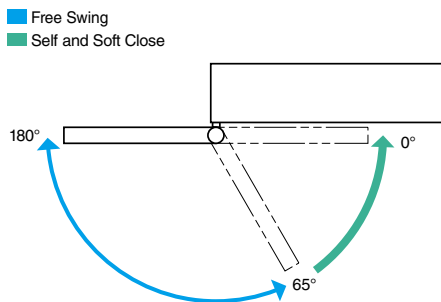
- M6 Binding head screw / Pan head screw
- M6 Hexagon socket head bolt / Button bolt

[Installation of Left-handed Type]

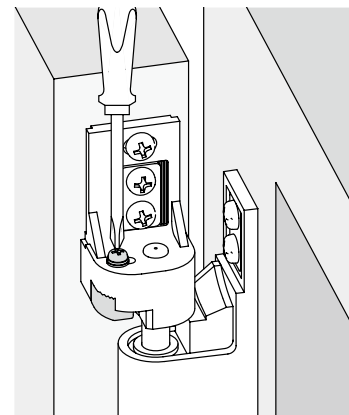


* Pitch between hinges: Min. 1200 mm

[Door Motion]

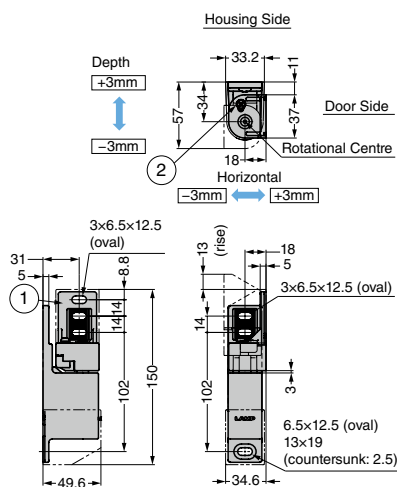


[Speed Adjustment]

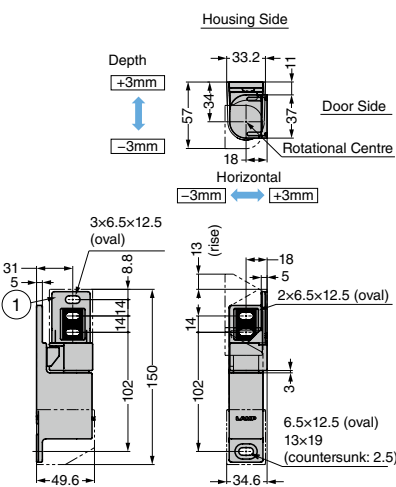


Closing speed can be adjusted with the screw of the soft-close hinge which is for the upper side.

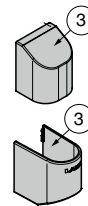
[Soft-close Hinge]



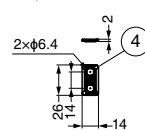
[Self-close Hinge]



[Covers]



[Adjustment Plate]



No.	Part Name	Material	Finish
①	Body	Zinc Alloy (ZDC)	Chrome
②	Speed Adjustment Screw	Steel	Nickel
③	Cover	ABS	Chrome
④	Adjustment Plate	Zinc Alloy (ZDC)	Chrome

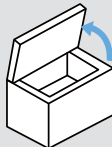
* Left-handed type is shown.

Sold in set of two hinges. (soft-close hinge and self-close hinge)

RoHS	CAD	Item Code	Item Name	Position	Finish	Door Width	Door Height	Load Capacity kgf / set	Weight (g)	Carton (set)
●	●	170-048-340	HG-JG150R-CR	Right-handed	Chrome	Max. 900	Max. 2400	10 to 20	995	10
●	●	170-048-341	HG-JG150L-CR	Left-handed						10

BALANCE-ADJUSTABLE LIFT-ASSIST STAY S-ATJ Side Mount



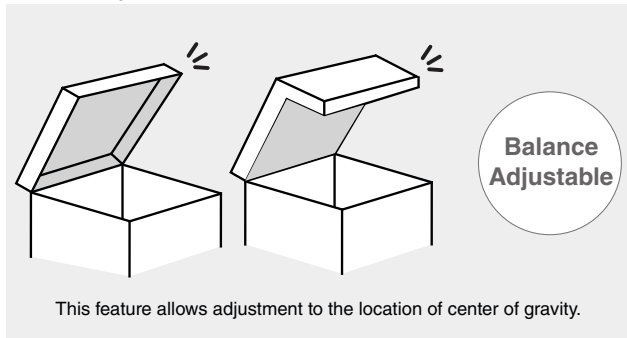
Opening Direction	Description	Non-handed	Maximum Door Moment*
 Top-opening	Side mount (damper option available)	Yes	6.1-8.8 N · m/pc (62-90 kgf · cm/pc)
			8.8-11.8 N · m/pc (90-120 kgf · cm/pc)

*The max. door moment depends on the following factors:

- Location of center of gravity
- Installation point of stays
- Balance adjustment

- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle.
- The balance adjustment allows for use in wider range of lids than conventional S-AT stays can be used.
- The locking hole prevents accidental close by inserting a screw driver into it.
- The optional damper S-ATD 1 provides soft closing.

[Balance Adjustment]



[Specifications]

- Operating temperature : 0°C~40°C
- Operating humidity : 90%RH or less
- For other specifications exceeding the above range, please contact local representatives.

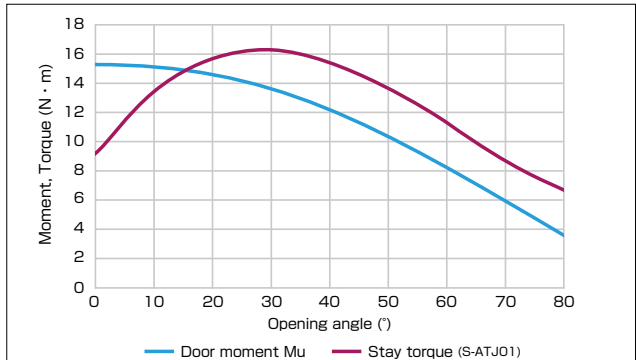
[Remarks]

- 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 rigidity may cause deformation or damage.
- Was not designed for continuous opening and closing .
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).
- Installation points must be parallel when using more than one stay.

[Recommended Screw]

- Truss head screw M5)

[Door Moment and Stay Torque] (when using two stays, setting adjustment C)



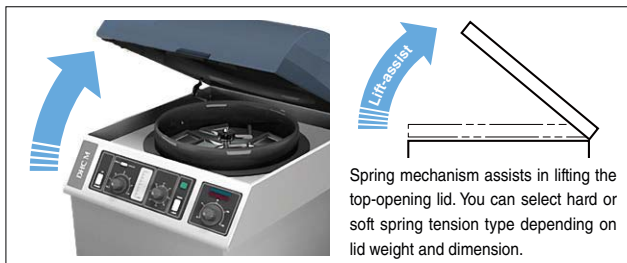
The graph above shows a ideal example of curves.

The stay torque should be above the door moment from the middle of the opening.

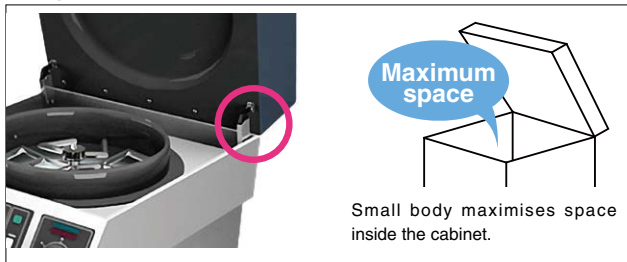
- Door moment Mu > Stay torque : Force is applied in the closing direction of door.
- Door moment Mu < Stay torque : Force is applied in the opening direction of door.
- Door specs (example) : X=500mm Y=20mm L=500.4mm m=3kg

*The installation point is the same as the drawings on the page of the HG-PA300-15.

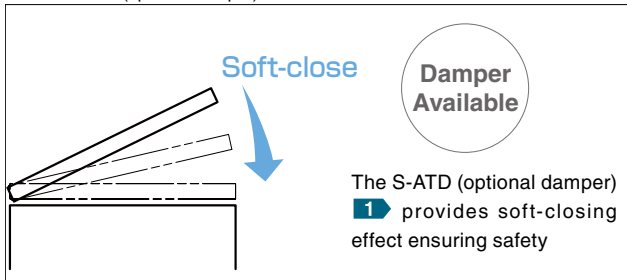
[Lift-assist]



[Compact]

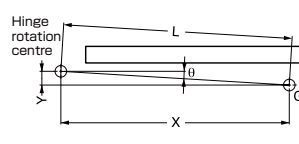


[Soft-close] (optional damper)



[Calculating Door Moment]

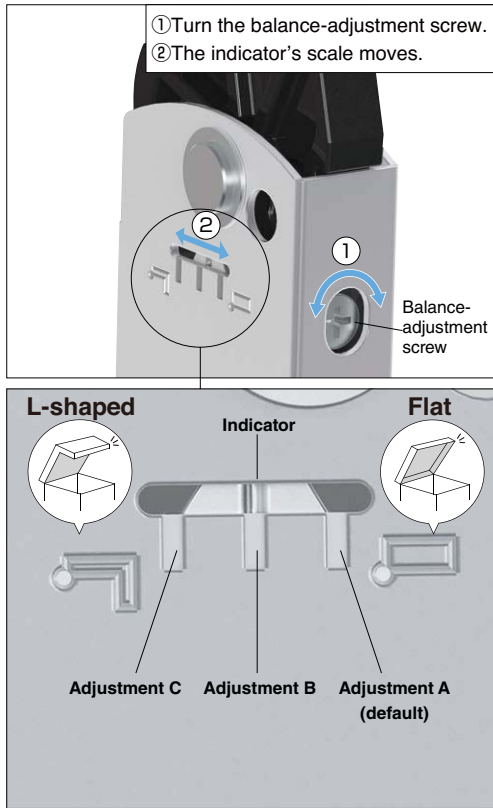
Calculation formula: $Mu = m \times L \times \cos\theta$



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

Refer to 1 : P.G7, 2 : No.280 P.15

[Balance Adjustment]

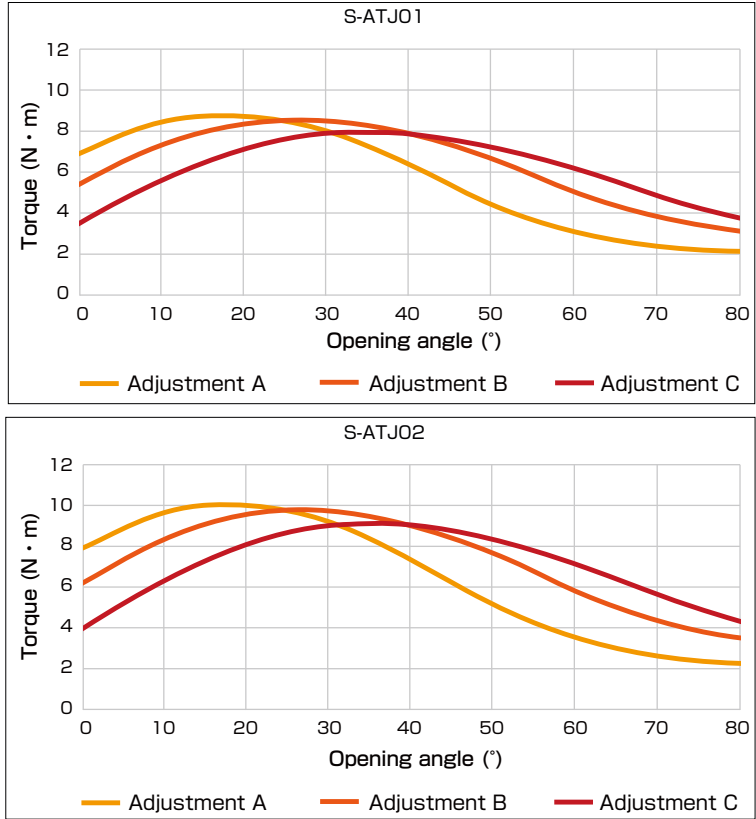


The indicator shows how much balance-adjustment is applied. Balance-adjustment should depend on the location of the center of gravity. When used in:

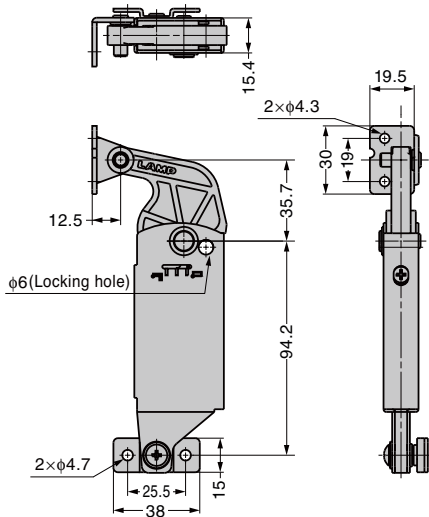
- a flat lid, "Adjustment A" becomes better setting.*
- a L-shaped lid, "Adjustment C" becomes better setting.*

*A flat lid's center of gravity is higher than its rotational center.
*A L-shaped lid's center of gravity is lower than its rotational center.

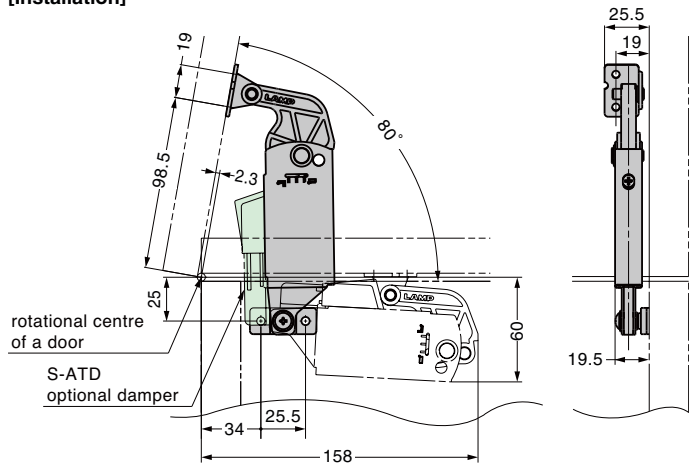
[Torque-Angle Graph] showing the variation of peak torque when balance-adjusted



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



[Installation]



[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
		180-043-515	S-ATJ01	Stainless Steel (SUS430) /	Plain	6.1~8.8	62~90	200	10	50
		180-043-518	S-ATJ02	POM		8.8~11.8	90~120		10	50

*The Max. door moment depends on location of center of gravity, installation point of stays, and balance adjustment.

[Damper Unit] option

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
		180-043-521	S-ATD-30	15	50	-

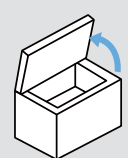
BALANCE-ADJUSTABLE LIFT-ASSIST STAY S-ATJD Back Panel Mount

L=R

INSTRUCTION

VIDEO



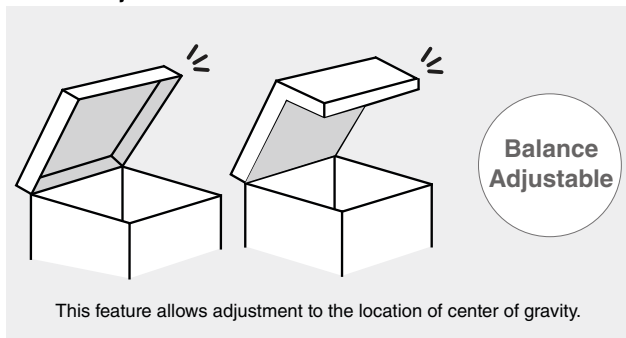
Opening Direction	Description	Non-handed	Maximum Door Moment*
 Top-opening	Back panel mount (damper option available)	Yes	6.1-8.8 N · m/pc (62-90 kgf · cm/pc)
			8.8-11.8 N · m/pc (90-120 kgf · cm/pc)

*The max. door moment depends on the following factors:

- Location of center of gravity
- Installation point of stays
- Balance adjustment

- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle.
- The balance adjustment allows for use in wider range of lids than conventional S-AT stays can be used.
- The locking hole prevents accidental close by inserting a screw driver into it.
- The optional damper S-ATD 1 provides soft closing.

[Balance Adjustment]



[Specifications]

- Operating temperature : 0°C~40°C
- Operating humidity : 90%RH or less
- For other specifications exceeding the above range, please contact local representatives.

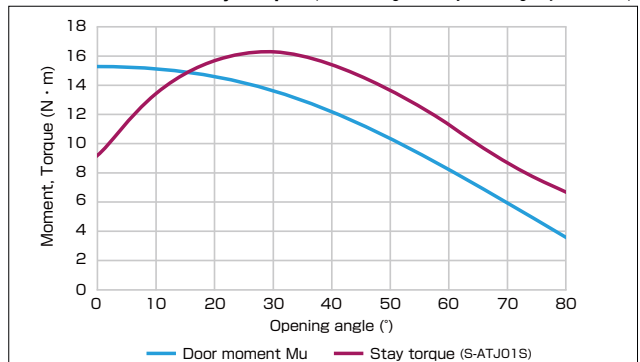
[Remarks]

- 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 rigidity may cause deformation or damage.
- Was not designed for continuous opening and closing .
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).
- Installation points must be parallel when using more than one stay.

[Recommended Screw]

- Truss head screw M4

[Door Moment and Stay Torque] (when using two stays, setting adjustment C)



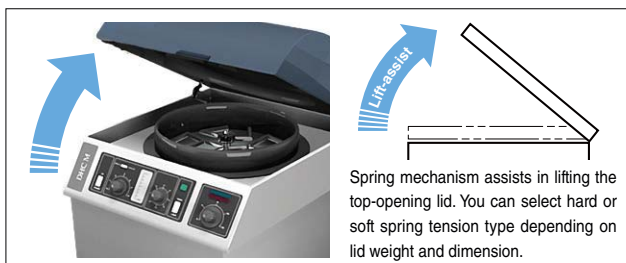
The graph above shows a ideal example of curves.

The stay torque should be above the door moment from the middle of the opening.

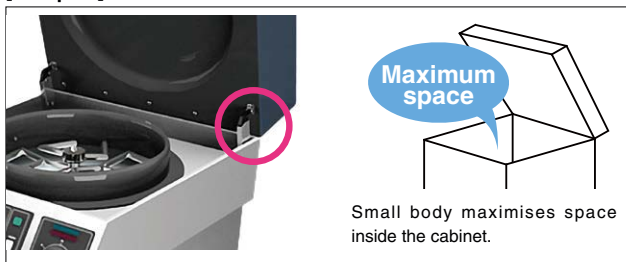
- Door moment Mu > Stay torque : Force is applied in the closing direction of door.
- Door moment Mu < Stay torque : Force is applied in the opening direction of door.
- Door specs (example) : X=500mm Y=20mm L=500.4mm m=3kg

*The installation point is the same as the drawings on the page of the HG-PA300-15.

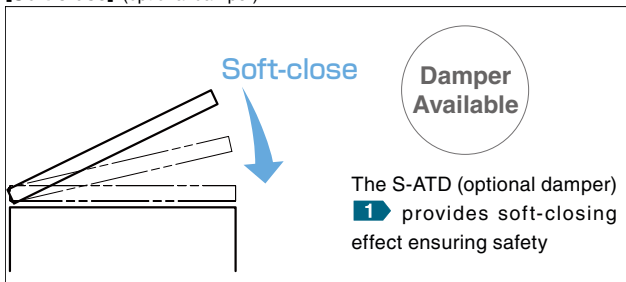
[Lift-assist]



[Compact]



[Soft-close] (optional damper)



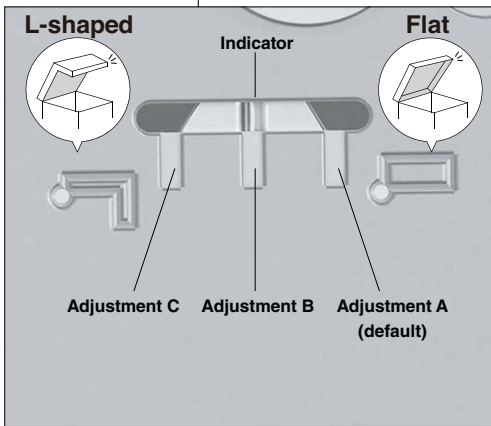
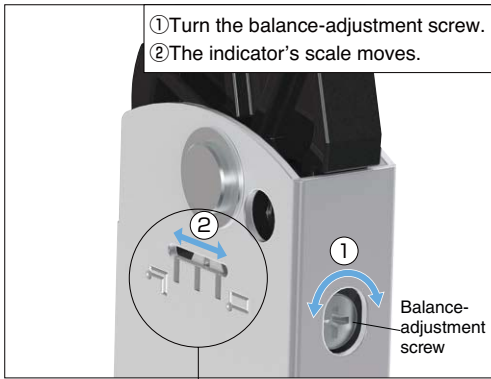
[Calculating Door Moment]

Calculation formula: $Mu = m \times L \times \cos\theta$

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

Refer to 1 : P.G7, 2 : No.280 P.15

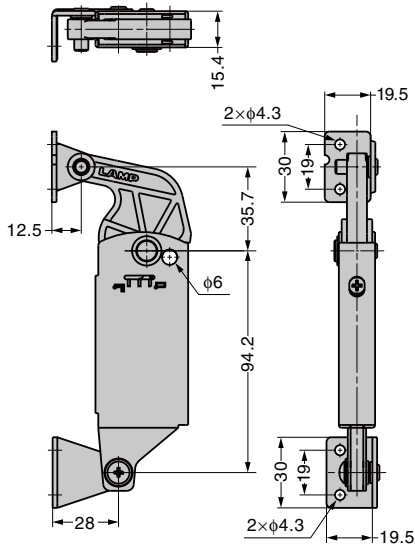
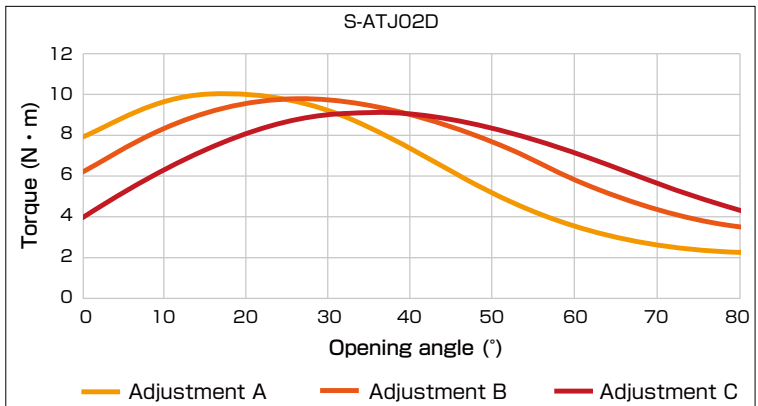
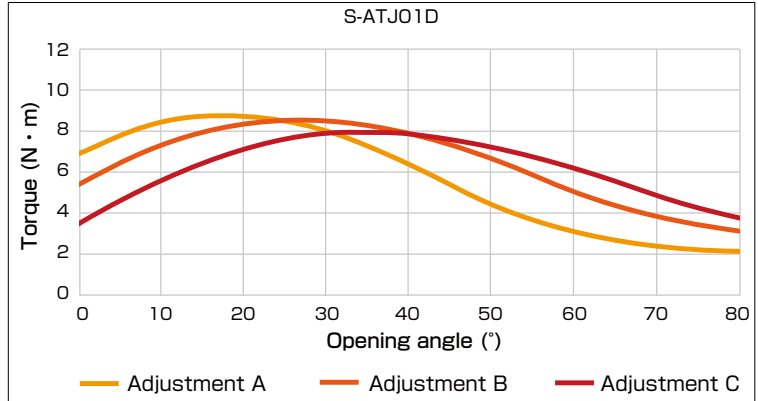
[Balance Adjustment]



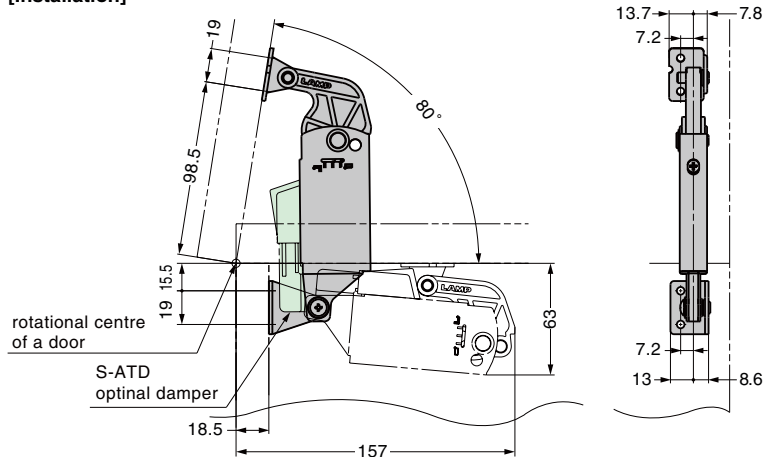
The indicator shows how much balance-adjustment is applied. Balance-adjustment should depend on the location of the center of gravity. When used in:

- a flat lid, "Adjustment A" becomes better setting.*
 - a L-shaped lid, "Adjustment C" becomes better setting.*
- *A flat lid's center of gravity is higher than its rotational center.
*A L-shaped lid's center of gravity is lower than its rotational center.

[Torque-Angle Graph] showing the variation of peak torque when balance-adjusted



[Installation]



[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
		180-043-516	S-ATJ01D	Stainless Steel (SUS430) / POM	Plain	6.1~8.8	62~90	210	10	50
		180-043-519	S-ATJ02D			8.8~11.8	90~120		10	50

*The Max. door moment depends on location of center of gravity, installation point of stays, and balance adjustment.

[Damper Unit] option

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
		180-043-521	S-ATD-30	15	50	-

BALANCE-ADJUSTABLE LIFT-ASSIST STAY S-ATJS Back Panel Mount



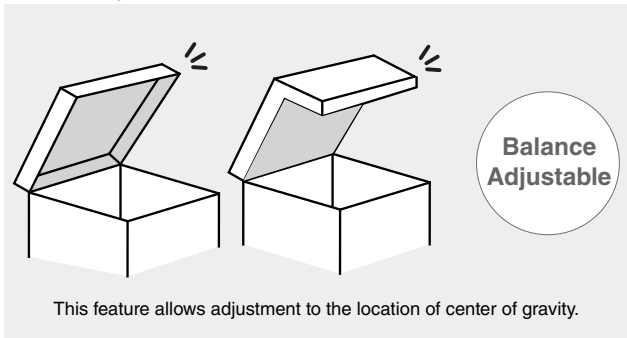
Opening Direction	Description	Non-handed	Maximum Door Moment*
 Top-opening	Back panel mount (damper option available)	Yes	6.1-8.8 N · m/pc (62-90 kgf · cm/pc)
			8.8-11.8 N · m/pc (90-120 kgf · cm/pc)

*The max. door moment depends on the following factors:

- Location of center of gravity
- Installation point of stays
- Balance adjustment

- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle.
- The balance adjustment allows for use in wider range of lids than conventional S-AT stays can be used.
- The locking hole prevents accidental close by inserting a screw driver into it.

[Balance Adjustment]



[Specifications]

- Operating temperature : 0°C~40°C
- Operating humidity : 90%RH or less
- For other specifications exceeding the above range, please contact local representatives.

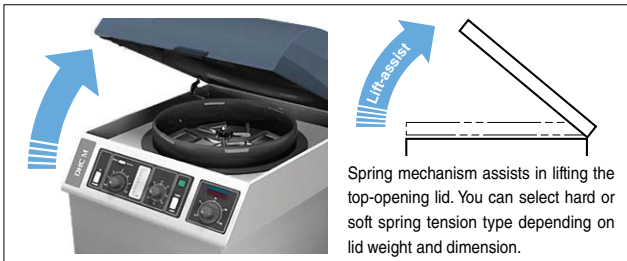
[Remarks]

- Be sure to read the "Cautions" 1.
- 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 taken into consideration. Low rigidity may cause deformation or damage.
- Was not designed for continuous opening and closing .
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).
- Installation points must be parallel when using more than one stay.

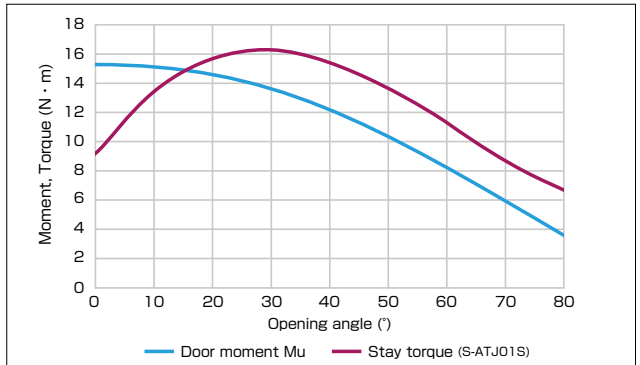
[Recommended Screw]

- Truss head screw M4

[Lift-assist]



[Door Moment and Stay Torque] (when using two stays, setting adjustment C)



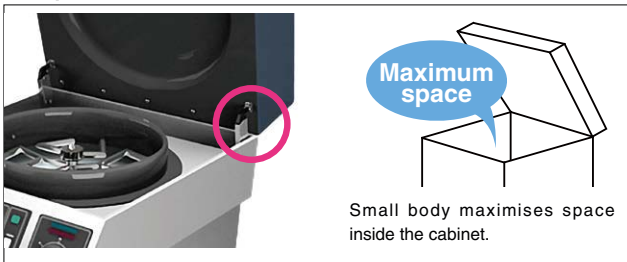
The graph above shows a ideal example of curves.

The stay torque should be above the door moment from the middle of the opening.

- 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.
- Door specs (example) : X=500mm Y=20mm L=500.4mm m=3kg

*The installation point is the same as the drawings on the page of the HG-PA300-15.

[Compact]

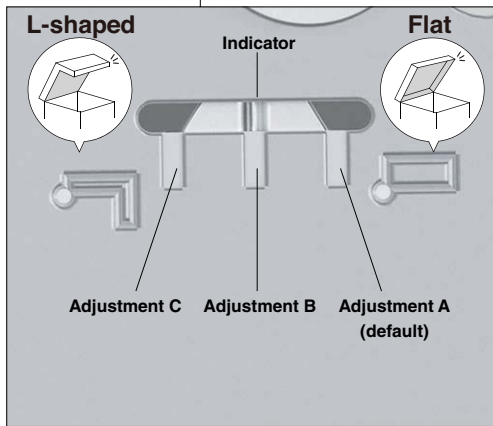
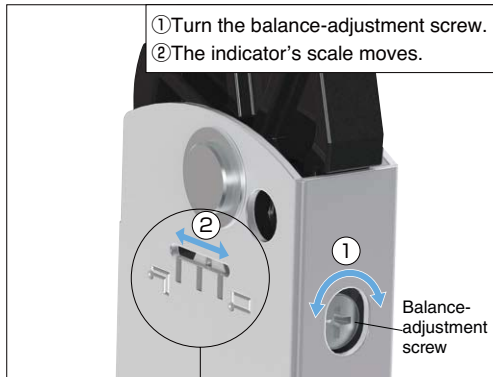


[Calculating Door Moment]

Calculation formula: $Mu = m \times L \times \cos\theta$

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

[Balance Adjustment]



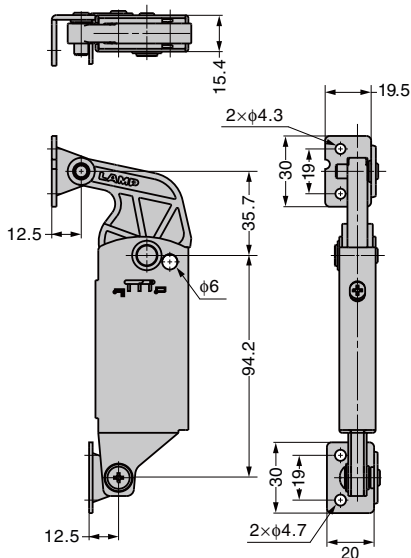
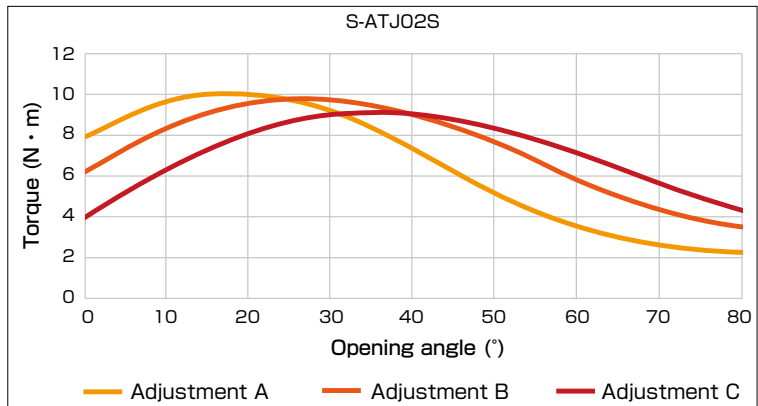
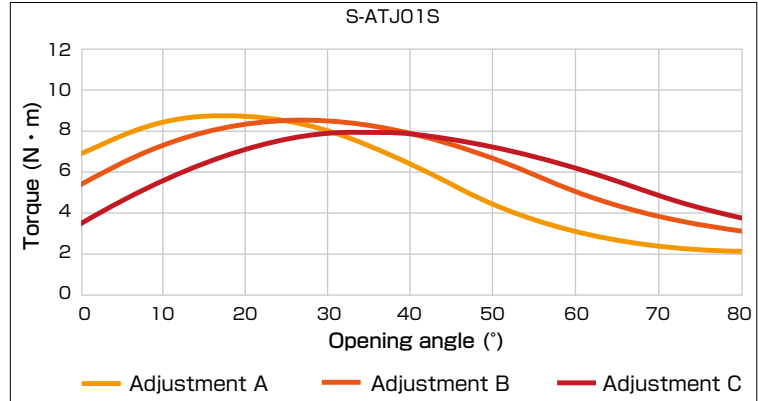
The indicator shows how much balance-adjustment is applied. Balance-adjustment should depend on the location of the center of gravity. When used in:

- a flat lid, "Adjustment A" becomes better setting.*
- a L-shaped lid, "Adjustment C" becomes better setting.*

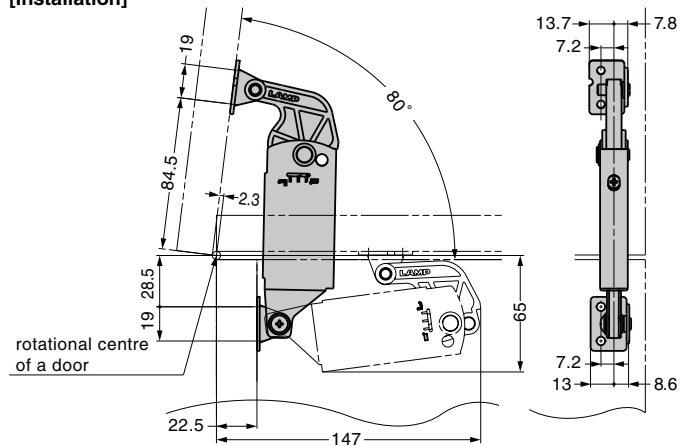
*A flat lid's center of gravity is higher than its rotational center.

*A L-shaped lid's center of gravity is lower than its rotational center.

[Torque-Angle Graph] showing the variation of peak torque when balance-adjusted



[Installation]



[Body]

RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
		180-043-517	S-ATJ01S	Stainless Steel (SUS430) /	Plain	6.1~8.8	62~90	200	10	50
		180-043-520	S-ATJ02S	POM		8.8~11.8	90~120			

*The Max. door moment depends on location of center of gravity, installation point of stays, and balance adjustment.

DAMPER UNIT S-ATD For S-ATJ and S-ATJD

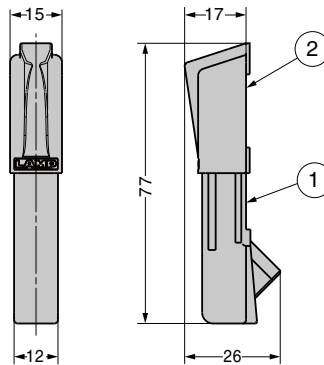


- Specially designed for use with the S-ATJ **1** and S-ATJD **2**.
Adds soft-closing feature to the stays.
- Easy to attach to the S-ATJ and S-ATJD stays by simply inserting it.
The thickness is designed to fit the stays allowing for maximum space inside cabinets.

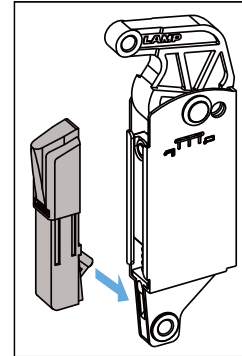
[Remarks]

- Only for use with the S-ATJ and S-ATJD. Can not be used with other items in the S-AT series.
- Other installation points than those in this catalogue may not be available.
For details, please check with the product search engine called "Sasuga-kun" .

[When attached to the S-ATJD]



[Attaching]



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

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
		180-043-521	S-ATD-30	15	50	-

Refer to **1** : PG1, **2** : PG3

No.	Part Name	Material
①	Damper Case	POM
②	Slider	PBT

AILERON STAY FOR OLYMPIA ARN-3 Upward Opening Model

L=R INSTRUCTION



Opening	Description	Non-handed	Type	Maximum Door Moment
Upward	Lift-assist Soft-close Free-stop	Yes	M	4.0~6.0 N·m/pc (40.8~61.2 kgf·cm/pc)
			H	6.0~8.0 N·m/pc (61.2~81.6 kgf·cm/pc)

- Smooth door movement. It is specially designed for use with the OLYMPIA concealed hinge (360-D26-19 / H360-D26-26T).
- The lift-assist function allows for light opening of doors.
- The force of lift-assist is adjustable.
- The soft-close function makes doors close gently (0°~30° degrees).
- Integrated design combines a concealed hinge and lid stay.
- The free-stop function enables doors to hold in position.
- Closing speed of doors is adjustable.

[Specifications]

- Operating temperature: 0°C - 40°C

[Parts Included]

- Door-side mounting plate
- Countersunk head tapping screw 3.5 x 1.5 (for attaching the mounting plate to AILERON)
- Binding head tapping screw 3.5 x 1.5 (for attaching the door-side mounting plate, mounting plate for AILERON, and AILERON)

[Sold Separately]

- Mounting plate for AILERON
- OLYMPIA concealed hinge
- Mounting plate for OLYMPIA
- Screw for OLYMPIA

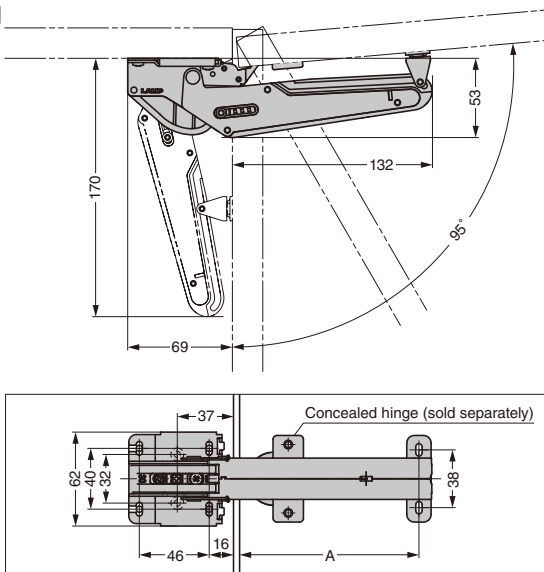
[Video Link](#)



[Door Movements]

Lift-assist	Soft-close	Free-stop
Allows for light opening of doors	OLYMPIA's damper makes doors close slowly. (0° - 30°)	Enables doors to hold in position.
Light opening	Gently closing	Holds in position

[Installation]



Hinge Used	A
360-D26-19T	118
H360-D26-26T	116

Please see pages of Olympia hinges for installation dimensions.

[Application Example]



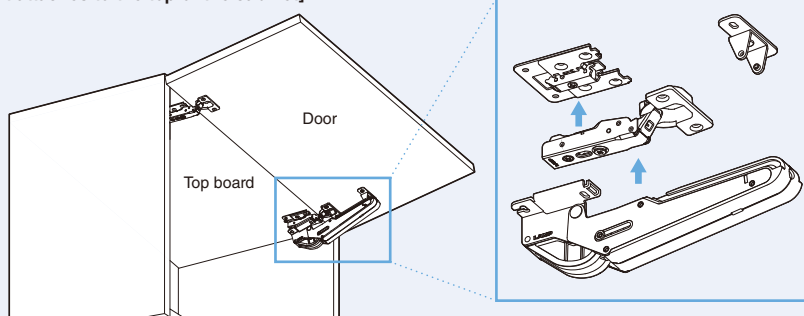
[Aileron Stay] Sold singly

RohS	CAD	Item Code	Item Name	Material	Finish / Colour	Type	Max. Door Moment N·m/pc	Max. Door Moment kgf·cm/pc	Box (pc)	Carton (pc)
✓	2D/3D	180-043-947	ARN-3-M	Steel (SPCC) / POM	Nickel plating / Grey	M	4.0~6.0	40.8~61.2	1	20
✓	2D/3D	180-043-948	ARN-3-H			H	6.0~8.0	61.2~81.6	1	20

[Standard Set] Including parts sold separately

RohS	CAD	Item Code	Item Name	Door Width	Max. Door Moment N·m	Max. Door Moment kgf·cm	Set Contents	Box (pc)	Carton (pc)
✓	2D/3D	180-045-659	ARN-3-M-S	450~900	4.0~6.0	40.8~61.2	Aileron stay, Mounting plate for Aileron stay, Olympia hinge, Mounting plate for Olympia hinge, Screws	1	10
✓	2D/3D	180-045-660	ARN-3-H-S		6.0~8.0	61.2~81.6		1	10

[Combined unit attaches to the top of the cabinet]



Simple installation only requires AILERON to be placed on OLYMPIA with a mounting plate designed for AILERON

AILERON STAY FOR OLYMPIA ARN-2 Top-opening Model

L=R INSTRUCTION



Lift-assist

Soft-close

Free-stop

Passed 40,000 open/close
private cycle test

Opening	Description	Non-handed	Type	Maximum Door Moment
Top-opening	Lift-assist Soft-close Free-stop	Yes	M	4.0–6.0 N·m/pc (40.8–61.2 kgf·cm/pc)
			H	6.0–8.0 N·m/pc (61.2–81.6 kgf·cm/pc)

- Smooth door movement. It is specially designed for use with the OLYMPIA concealed hinge (360-D26-19 / H360-D26-26T).
- The lift-assist function allows for light opening of doors.
- The force of lift-assist is adjustable.
- The soft-close function makes doors close gently (0°–30° degrees).
- Integrated design combines a concealed hinge and lid stay.
- The free-stop function enables doors to hold in position.
- Closing speed of doors is adjustable.

[Specifications]

- Operating temperature: 0°C – 40°C

[Parts Included]

- Door-side mounting plate
- Countersunk head tapping screw 3.5 × 1.5
(for attaching the mounting plate to AILERON)
- Binding head tapping screw 3.5 × 1.5
(for attaching the door-side mounting plate, mounting plate for AILERON, and AILERON)

[Sold Separately]

- Mounting plate for AILERON
- OLYMPIA concealed hinge
- Mounting plate for OLYMPIA
- Screw for OLYMPIA

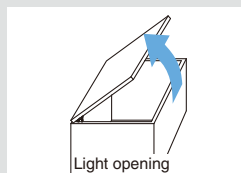
Video Link



[Door Movements]

Lift-assist

Allows for light opening of doors



Light opening

Soft-close

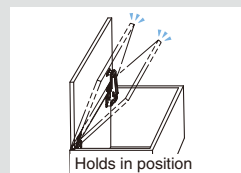
OLYMPIA's damper makes doors close slowly. (0° - 30°)



Gently closing

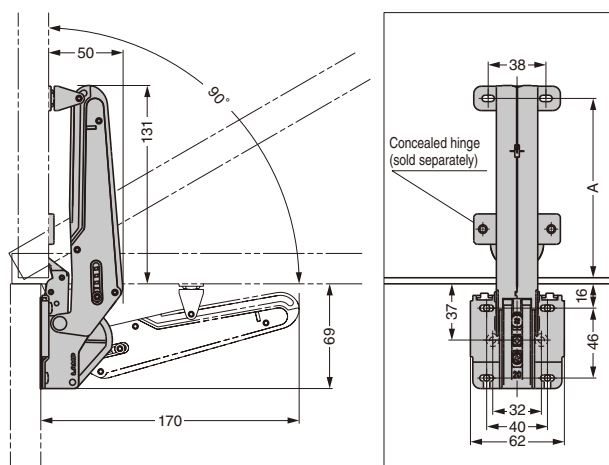
Free-stop

Enables doors to hold in position.



Holds in position

[Installation]



Hinge Used	A
360-D26-19T	118
H360-D26-26T	116

Please see pages of Olympia hinges for installation dimensions.

[Application Example]



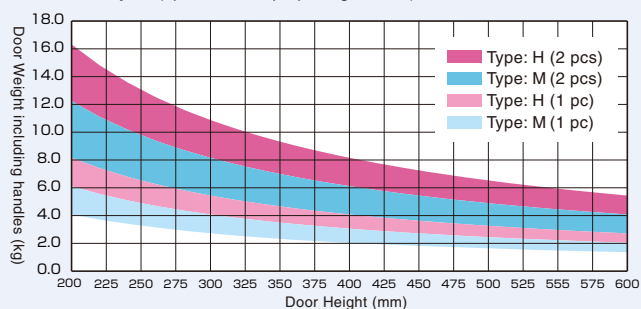
[Aileron Stay] Sold singly

RtHS	CAD	Item Code	Item Name	Material	Finish / Colour	Type	Max. Door Moment N·m/pc	Max. Door Moment kgf·cm/pc	Box (pc)	Carton (pc)
GT	ECO	180-043-945	ARN-2-M	Steel (SPCC) / POM	Nickel plating / Grey	M	4.0~6.0	40.8~61.2	1	20
GT	ECO	180-043-946	ARN-2-H			H	6.0~8.0	61.2~81.6	1	20

[Standard Set] Including parts sold separately

RtHS	CAD	Item Code	Item Name	Door Width	Max. Door Moment N·m	Max. Door Moment kgf·cm	Set Contents	Box (pc)	Carton (pc)
GT	ECO	180-045-661	ARN-2-M-S	450~900	4.0~6.0	40.8~61.2	Aileron stay, Mounting plate for Aileron stay, Olympia hinge, Mounting plate for Olympia hinge, Screws	1	10
GT	ECO	180-045-662	ARN-2-H-S		6.0~8.0	61.2~81.6			

[Selection Graph] (upward and top-opening models)

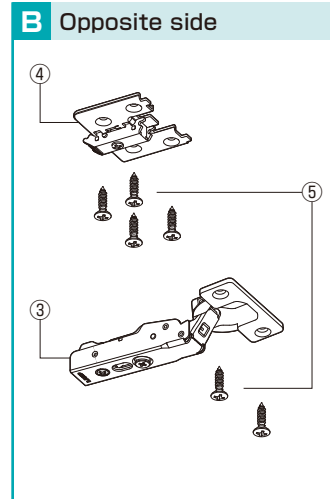
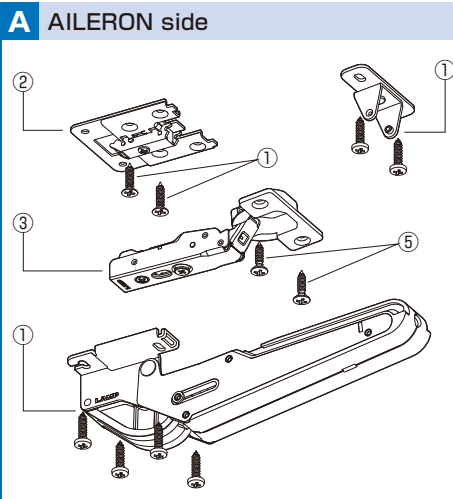
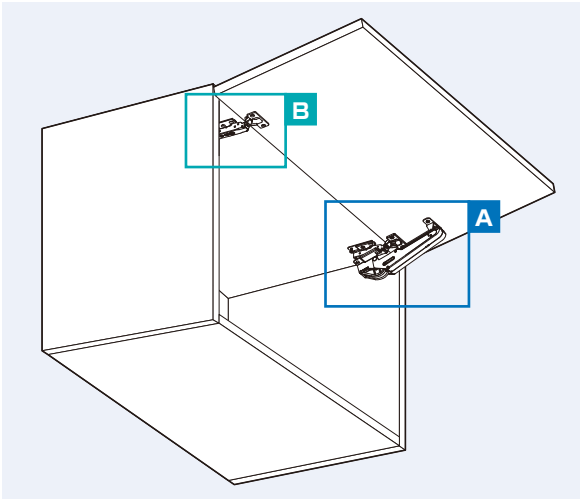


Maximum Door Moment	Type	Number of AILERON
4.0–6.0	M	1 pc
6.0–8.0	H	
8.0–12.0	M	2 pcs
12.0–16.0	H	

As a guide for model selection, please refer to the graph on the left.
For use with doors outside of the scope of this graph, use the calculation below.
(The door weight includes attached decorations such as handles.)

- The selection should be based on Max. door moment. (Two types are available.)
- Maximum Door Moment (N·m) =
Door weight (kg) × 9.80665 × Distance from rotation centre to door centre of gravity (m)

Components for a single door



Necessary parts per door (A + B)

[Notes]

The required quantity depends on door width and moment.

*This is the required quantity when using with the 360-P6WT.
The required number of screws is reduced by one for each unit of 360-P4W-32T or 360-P4W-30T that is used.

		Item Code		Item Name		Door Width [mm]											
						450 ~ 900				900 ~ 1600				1600 ~ 2000			
						Door Moment [N · m]											
		4.0	6.0	8.0	12.0	4.0	6.0	8.0	12.0	4.0	6.0	8.0	12.0				
		6.0	8.0	12.0	16.0	6.0	8.0	12.0	16.0	6.0	8.0	12.0	16.0				
AILERON	① Stay	180-043-947/ 180-043-945	ARN-3-M/ ARN-2-M	1	-	2	-	1	-	2	-	1	-	2	-		
		180-043-948/ 180-043-946	ARN-3-H/ ARN-2-H	-	1	-	2	-	1	-	2	-	1	-	2		
	② Plate	180-043-949	ARN-SZ	1	2	1	2	1	2	1	2	1	2				
OLYMPIA	③ Hinge	160-026-840/ 160-029-084	360-D26-19T/ H360-D26-26T (Built-in damper)	2	3	2	3	2	3	2	3						
		160-026-836/ 160-029-081	360-26-19T/ H360-26-26T (Without catch)		-	1	-	1	-	2	-						
		160-026-832/ 160-029-078	360-C26-19T/ H360-C26-26T (With catch)		-		-		-		-		1				
④ Plate	160-026-846	360-P6WT (System 32 · 4 holes)															
	160-026-845	360-P4W-32T (System 32 · 3 holes)		1			2	1			3	2					
	160-026-844	360-P4W-30T (System 30 · 3 holes)															
⑤ Screw	160-070-030	TAP3515NI	8*	10*	14*	10*	20*	16*									

TWO-WAY CATCH FOR SLIDES



JC-30TW



Features

- Holds a slide in position from both directions.
- Retaining force can be adjusted by rotating the strike.
- Designed to be used with a two-way travel slide, holding it in the center.
- Can be used with slides between 19 and 21 mm in thickness.

Applications

- A two-way travel slide to hold in the center.
- A one-way travel slide to hold in open or closed position.
- A one-way travel slide to hold in the middle.

Remarks

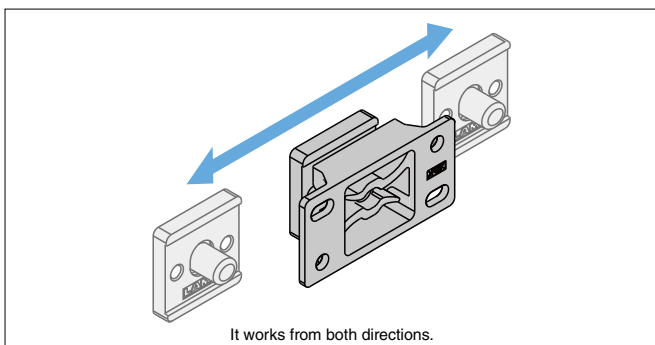
- Should be used with slides.
- It is recommended to use one per slide.
- Retaining force may vary. Please check actual performance with an actual product.

Parts Included

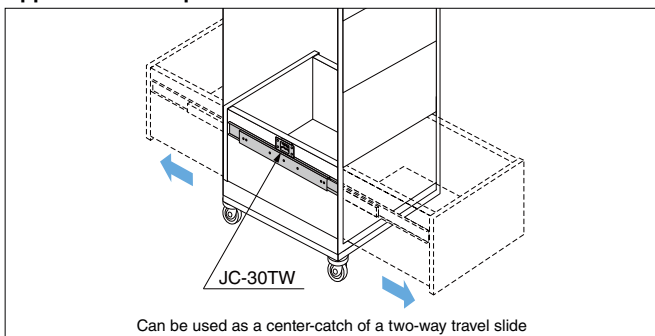
- Truss head tapping tapping screw 4 × 16

Recommended Screw

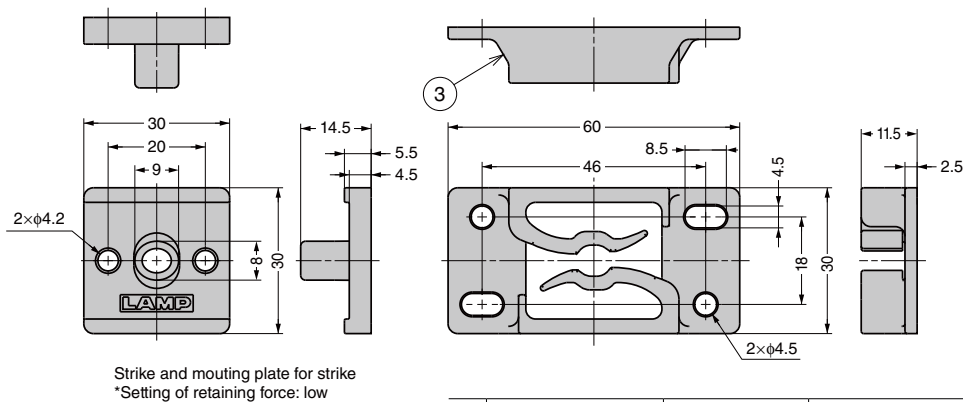
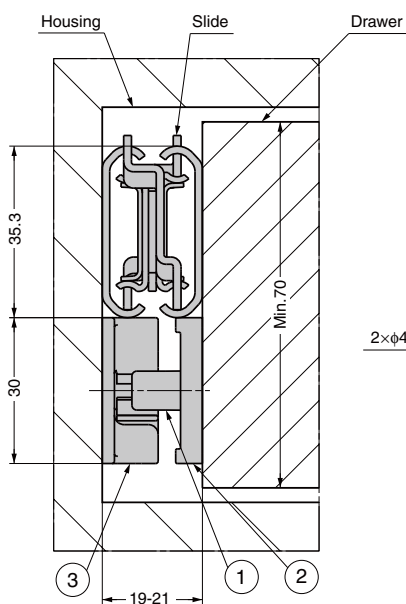
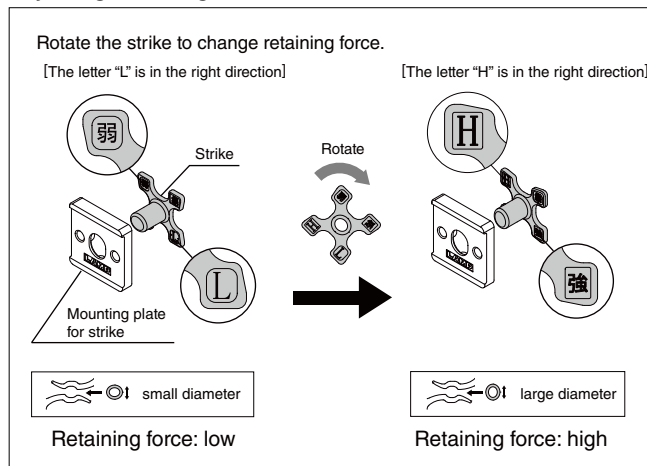
- M4 binding head screw, M4 truss head screw



Application Example



Adjusting Retaining Force



No.	Part Name	Material	Finish / Colour
①	Strike	Polyamide (PA)	Grey
②	Mounting plate for strike	POM	Grey
③	Strike plate	POM	Grey

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)
			Low	High	Low	High	Low	High	Low	High			
203D	140-041-094	JC-30TW	18.5	27.9	1.9	2.8	32.6	65.9	3.3	6.7	12.4	30	300

FULL EXTENSION SOFT-CLOSE SLIDE ESR4670 Stainless steel

LOAD CAPACITY 157~343 N

L=R

DETACH

HOLD CLOSED

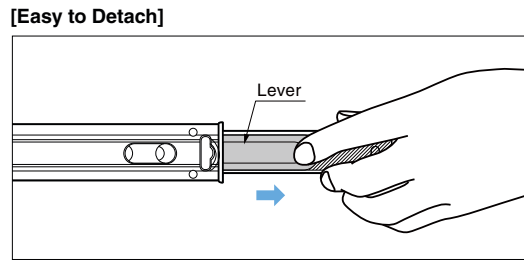
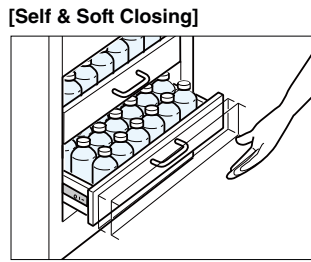
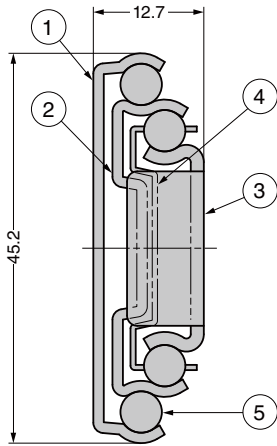
CATCH

INSTRUCTION

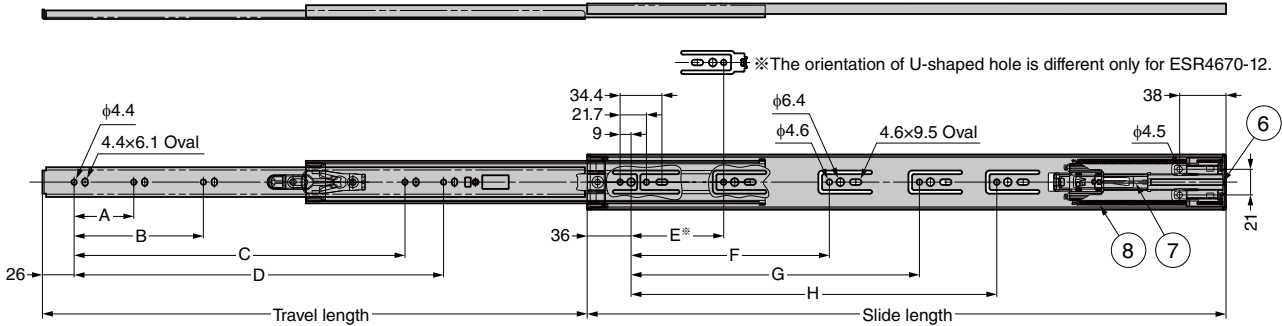
SUS



● Slide cross section S=1/1



The drawer can be detached by pulling the lever in the direction of the arrow.



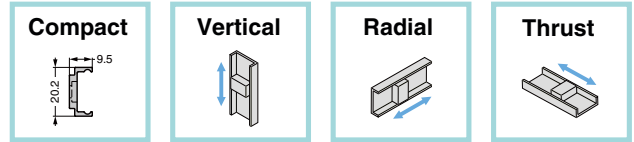
No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Intermediate Member	
③	Inner Member	
④	Retainer	
⑤	Balls	
⑥	Damper Case	POM
⑦	Shaft	Stainless Steel (SUS303)
⑧	Spring	Stainless Steel (SUS304)

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)
✓	3D	190-033-964	ESR4670-12	300	265	-	-	-	174	145	-	-	-	157	16	0.78	10	-
✓	3D	190-033-965	ESR4670-14	350	340	-	-	-	224	151	-	-	-	196	20	1.07	10	-
✓	3D	190-033-966	ESR4670-16	400	400	96	-	-	256	167	-	-	-	294	30	1.21	10	-
✓	3D	190-033-967	ESR4670-18	450	450	128	-	-	306	-	215	-	-	343	35	1.36	10	-
✓	3D	190-033-968	ESR4670-20	500	500	96	160	-	344	119	279	-	1.46			10	-	
✓	3D	190-033-969	ESR4670-22	550	550	96	160	-	394	119	215	311	1.66			10	-	
✓	3D	190-033-970	ESR4670-24	600	600	128	192	-	444	119	247	375	1.81			10	-	
✓	3D	190-033-971	ESR4670-26	650	650	128	224	416	494	119	215	311	407			1.96	10	-
✓	3D	190-033-972	ESR4670-28	700	700	128	224	480	544	119	215	343	471	1.96	10	-		

Refer to 1 : No.280 P.399

MULTI-ROLLER LINEAR SLIDE SYSTEM MLG Mini Type



● Allows for smooth movement with the unique mechanism called "multi-roller".

[Application]

● Medical equipment, food machine, amusement machine, analytical instruments.

[Recommended Bolt]

● Hexagon socket bolt M4 (for the rail)

[Remarks]

- Please use with stoppers.
- The finish of the mounting holes and the rail edge is plain.

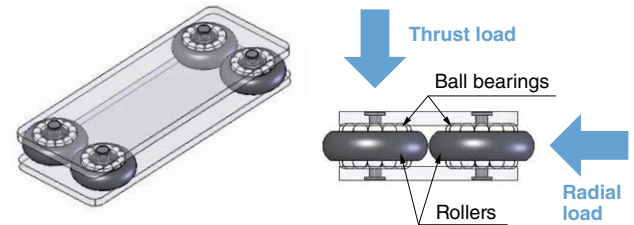
[Parts Included]

● #0-1 pan head screw M2.6 × 4 (for the mounting plate)

[Recommended Screw]

- Hexagon socket bolt M4 (for the rail)
- Screw M2.6 × 4 (Max. length: sheet thickness + 4 mm)
- Screw M4 (for the plate)

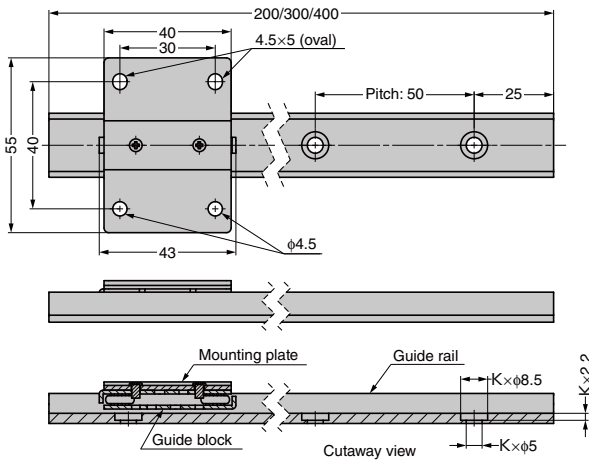
[The Unique Mechanism]



The multi-roller mechanism makes it possible to have smooth movements even with loads applied in radial or thrust directions.

[Combination Drawings]

The guide rail, guide block, and mounting plate are used.



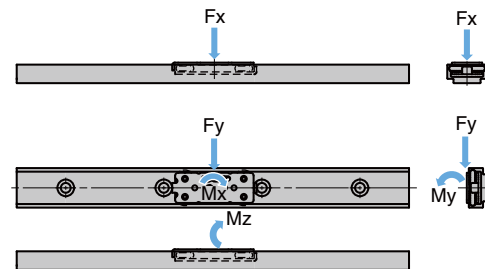
[Rated Load Reference Values] The rated load refers to the load limit .

- 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	
	N	kgf	N	kgf
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	
	N	kgf	N	kgf
MLG-20C	40	4.0	40	4.0

Item Name	Vertical Static Rated Moment Mx		Horizontal Static Rated Moment My		Horizontal Static Rated Moment Mz	
	N·m	kgf·cm	N·m	kgf·cm	N·m	kgf·cm
MLG-20C	1.2	12.2	0.4	4.0	0.8	8.1

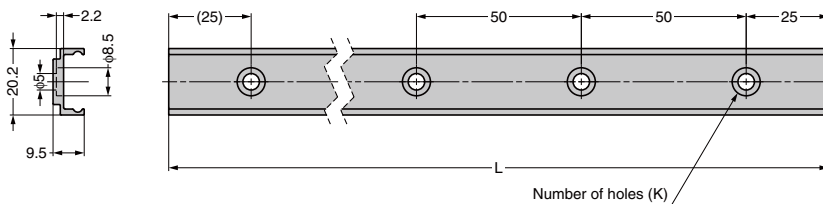


The calculation formula above is for reference purpose only. Please confirm with the actual item before use.

GUIDE RAIL MLG20 MLG Series



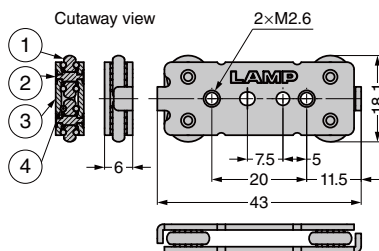
[Recommended Screw]
● Hexagon socket bolt M4



RoHS	CAD	Item Code	Item Name	Length (L)	Number of Holes (K)	Material	Finish	Weight (g)	Box (pcs)
●	●	190-045-763	MLG20-200	200	4	Aluminium Alloy	Anodised Silver	36	200
●	●	190-045-764	MLG20-300	300	6			54	100
●	●	190-045-765	MLG20-400	400	8			72	100

MULTI-ROLLER GUIDE BLOCK MLG-20C MLG Series

[Recommended Screw]
● Screw M2.6 (Max. length: sheet thickness + 4 mm)



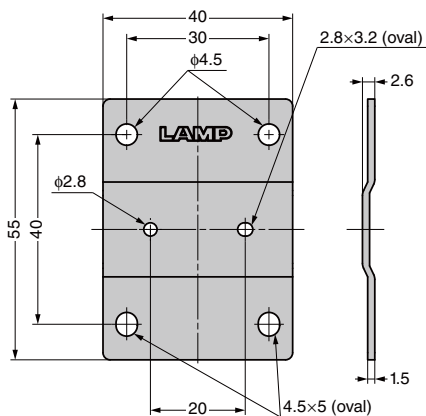
No.	Part Name	Material
①	Roller	POM
②	Pin	Stainless Steel (SUS303)
③	Plate	Stainless Steel (SUS304)
④	Ball	Steel (SUJ)

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)
●	●	190-045-762	MLG-20C	13	200

MOUNTING PLATE MLG-20-P55-40 MLG Series



[Parts Included]
● #0-1 pan head screw M2.6 × 4
[Recommended Screw]
● Screw M4



RoHS	CAD	Item Code	Item Name	Material	Weight (g)	Box (pcs)
●	●	190-045-766	MLG20-P55-40	Stainless Steel (SUS304)	26	100

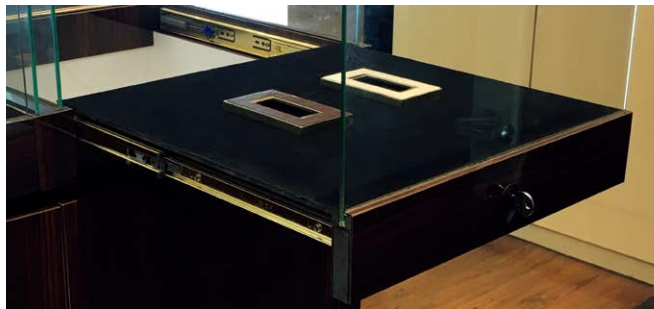
FULL EXTENSION SOFT-CLOSE SLIDE 3670 Gold Finish

INSTRUCTION

Self and Soft Closing



Application



- Gold-plated version of the 3670 slide.
- Full extension (3 members).
- Slides smoothly even if cabinet is slightly deformed due to shock absorbing effect of the outer member.
- The drawer can be detached by lifting the lever.

[Specification]

- Self and soft closing position:
 - 300-350 type: 20 mm distance from closed position
 - 400-500 type: 36 mm distance from closed position
- The maximum width of the drawer is the slide length + 200mm.

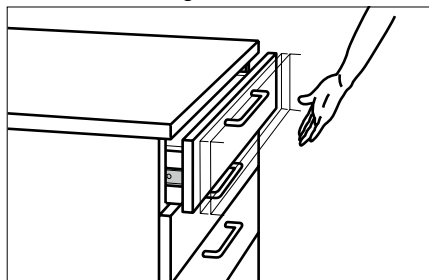
[Remarks]

- Do not push with a strong force to prevent oil leakage when soft-closing mechanism is in operation.
- Scratches on gold plating may become conspicuous. Please handle it with care during installation.

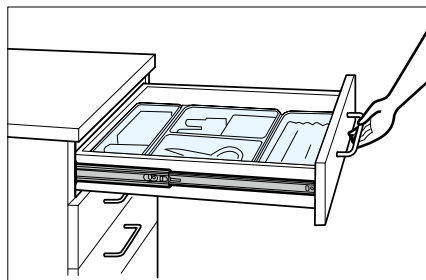
[Parts Included]

- Truss head tapping screw 4 x 12 (Gold plating)

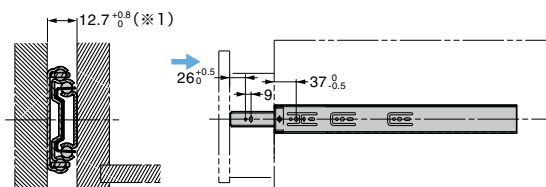
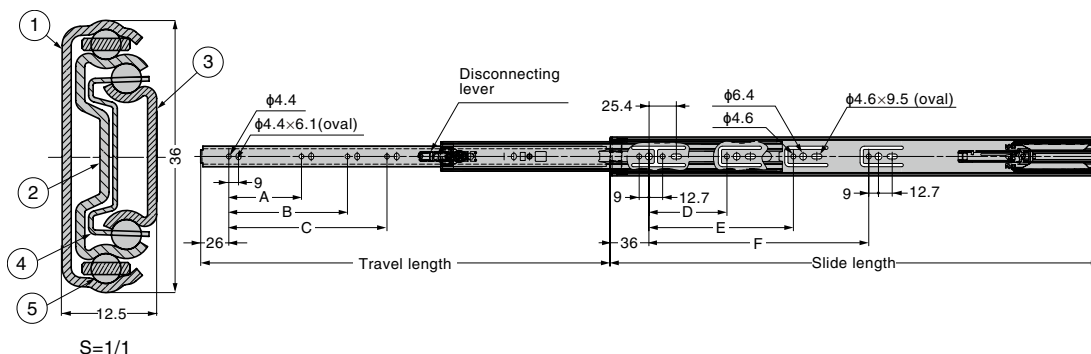
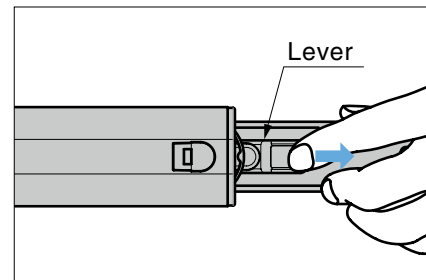
Self and Soft Closing



Full Extension (3 Members)



Easy to Detach



No.	Part Name	Material	Finish / Colour
①	Outer Member	Steel	Gold Plating
②	Intermediate Member		
③	Inner Member		(Zinc Chromate Steel)
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	Load Capacity / pair		Weight / pair (g)	Box (set)
												N	kgf		
-	●	190-037-612	3670-300GA	300	300	174	-	-	-	-	-	147	15	660	20
-	●	190-037-613	3670-350GA	350	350	96	224	-	-	183	-	-	-	780	10
-	●	190-037-614	3670-400GA	400	400	160	256	-	119	199	-	-	-	900	10
-	●	190-037-615	3670-450GA	450	450	96	192	306	-	247	-	196	20	1020	10
-	●	190-037-616	3670-500GA	500	500	128	224	356	-	215	295	-	-	1120	10

FULL EXTENSION SOFT-CLOSE SLIDE 4670 Gold Finish

INSTRUCTION

Self and Soft Closing



- Gold-plated version of the 4670 slide.
- Full extension (3 members).
- Slides smoothly even if cabinet is slightly deformed due to shock absorbing effect of the outer member.
- The drawer can be detached by lifting the lever.

[Specification]

- Self and soft closing position:
 - 300-350 type: 20 mm distance from closed position
 - 400-500 type: 36 mm distance from closed position
- The maximum width of the drawer is the slide length + 200mm.

[Remarks]

- Do not push with a strong force to prevent oil leakage when soft-closing mechanism is in operation.
- Scratches on gold plating may become conspicuous. Please handle it with care during installation.

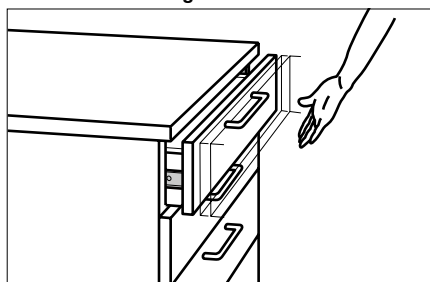
[Parts Included]

- Truss head tapping screw 4 x 12 (Gold plating)

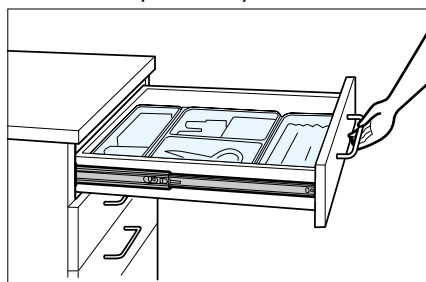
Application



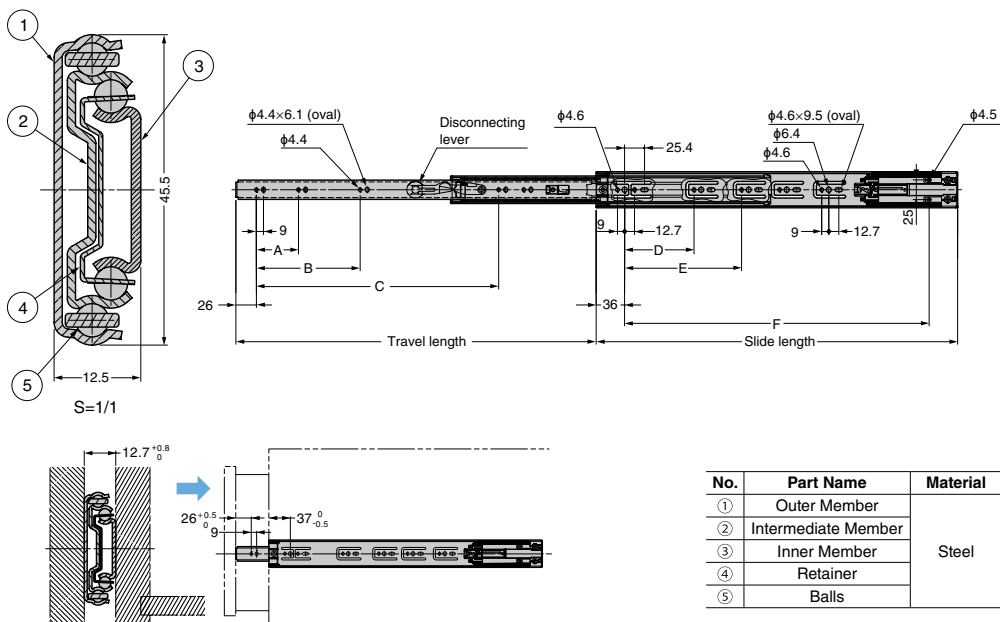
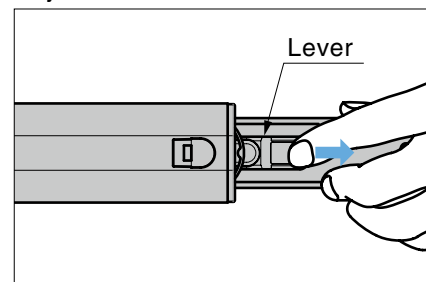
Self and Soft Closing



Full Extension (3 Members)



Easy to Detach



No.	Part Name	Material	Finish / Colour
①	Outer Member	Steel	Gold Plating
②	Intermediate Member		
③	Inner Member		(Zinc Chromate Steel)
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	Load Capacity / pair		Weight / pair (g)	Box (set)
												N	kgf		
-	●	190-037-617	4670-300GA	300	275	-	-	174	-	-	229	196	20	850	10
-	●	190-037-618	4670-350GA	350	353	-	-	224	-	183	279	245	25	990	10
-	●	190-037-619	4670-400GA	400	404	96	-	254	119	199	329	294	30	1130	10
-	●	190-037-620	4670-450GA	450	455	128	-	294	-	247	379	294	30	1270	10
-	●	190-037-621	4670-500GA	500	505	96	160	344	-	295	429	343	35	1440	10

FULL EXTENSION SOFT-CLOSE SLIDE 3670 Black Finish

INSTRUCTION

Self and Soft Closing



Smooth Black Finish



- Black version of the 3670 slide.
- Full extension (3 members).
- Slides smoothly even if cabinet is slightly deformed due to shock absorbing effect of the outer member.
- The drawer can be detached by lifting the lever.

[Specification]

- Self and soft closing position:
 - 250-350 type: 20 mm distance from closed position
 - 400-600 type: 36 mm distance from closed position
- The maximum width of the drawer is the slide length + 200mm.

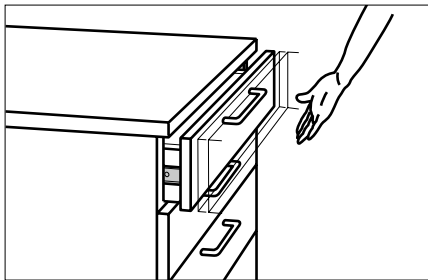
[Remarks]

- Do not push with a strong force to prevent oil leakage when soft-closing mechanism is in operation.
- Scratches on black surface may become conspicuous. Please handle it with care during installation.

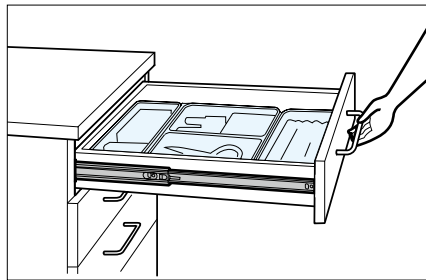
[Parts Included]

- Truss head tapping screw 4 x 12 (black chrome)

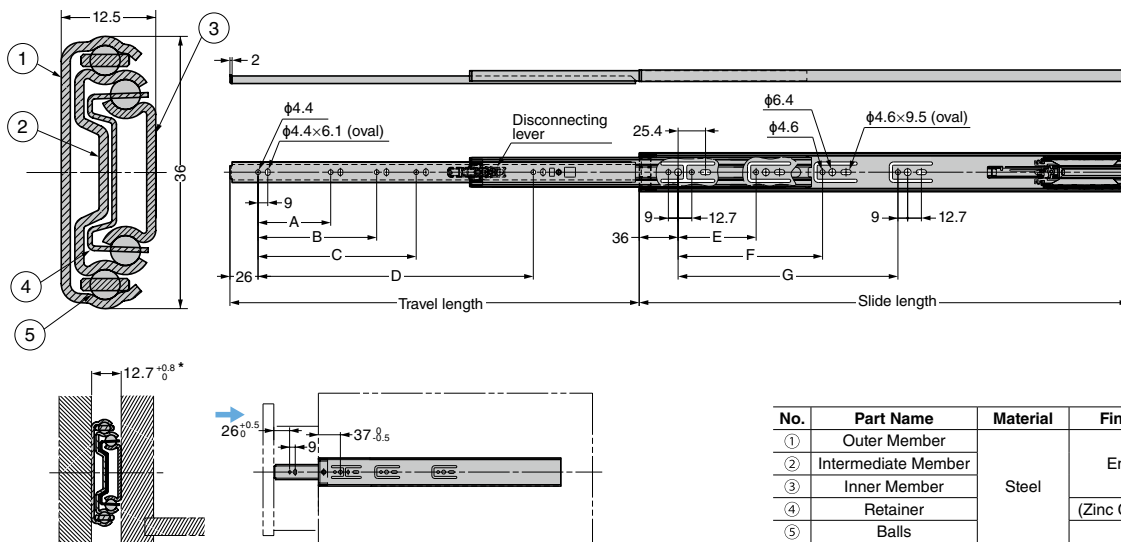
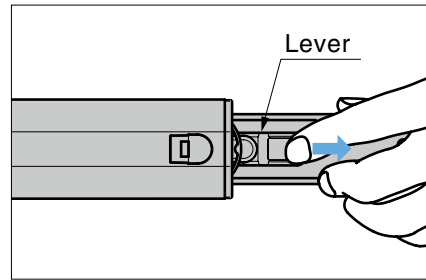
Self and Soft Closing



Full Extension (3 Members)



Easy to Detach



* Clearance between the drawer and cabinet must be within the range of the allowance.

No.	Part Name	Material	Finish / Colour
①	Outer Member	Steel	Enamel Black
②	Intermediate Member		
③	Inner Member		(Zinc Chromate Steel)
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	Load Capacity / pair		Weight / pair (g)	Box (set)
													N	kgf		
-	●	190-048-809	3670-250BL	250	200	124	-	-	-	87	-	-	147	15	540	20
-	●	190-048-810	3670-300BL	300	300	174	-	-	-	-	-	-	147	15	660	20
-	●	190-048-811	3670-350BL	350	350	96	224	-	-	-	183	-	147	15	780	10
-	●	190-048-812	3670-400BL	400	400	160	256	-	-	-	199	-	147	15	900	10
-	●	190-048-813	3670-450BL	450	450	96	192	306	-	119	247	-	196	20	1020	10
-	●	190-048-814	3670-500BL	500	500	-	-	356	-	-	247	295	196	20	1120	10
-	●	190-048-815	3670-550BL	550	550	128	224	352	406	-	215	343	196	20	1240	10
-	●	190-048-816	3670-600BL	600	600	-	-	384	456	-	247	375	196	20	1380	10

FLUSH SLIDING DOOR SYSTEM MFU1200 Two-way Damper

INSTRUCTION



	MFU1200-40	MFU1200-70
Width	800 - 1200 mm	
Height	Max. 2700 mm	
Thickness	30 - 40 mm	
Weight	20 - 40 kg	40 - 70 kg
Adjustment	Depth : ± 4 mm	
	Height : ± 4 mm	

Flush door system with 2-way damper, for doors up to 70kg.

- Doors will be flush with walls when closed.
- Door can be pushed open and no handle is necessary on the door front.
- The two-way damper allows doors to be both opened and closed softly.
- Limited number of parts for easy installation.
- Improved adjustments for a perfect result.
- No bottom rail or floor groove is necessary.

[Application]

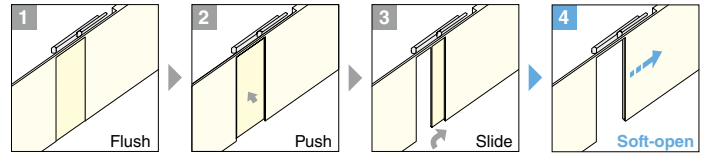
- Walk-in closets, hidden rooms, shop storage space.

[Remarks]

- The bottom bracket protrude from the door bottom. Make sure to leave enough clearance when opening the door.
- Installation positions and door workings have changed from the MFU-1000. Please make sure to download the latest installation instructions.

[Opening Motion]

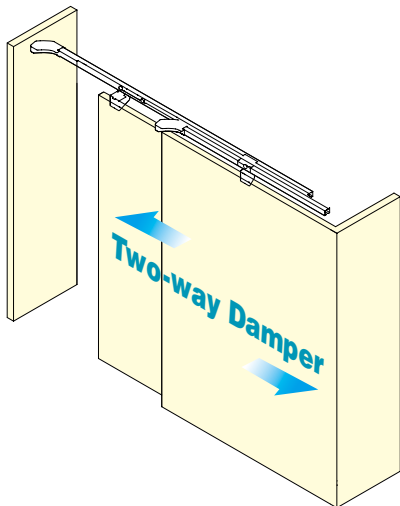
No handle is needed on the door front for opening.



[Black Parts]

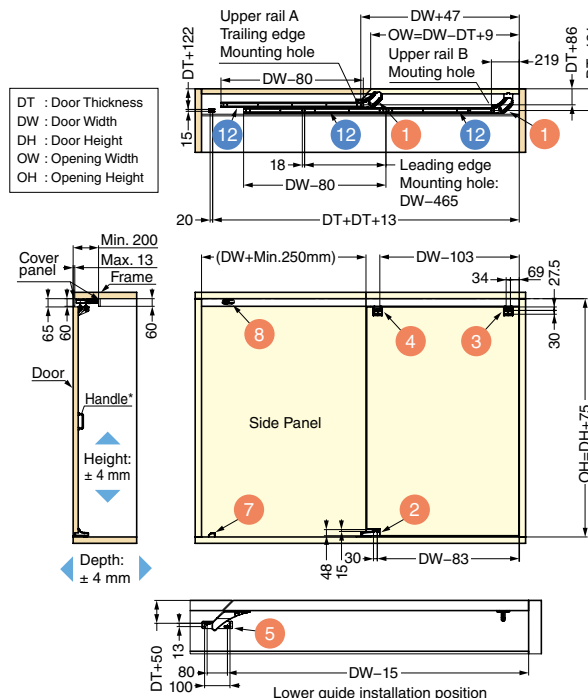


[Two-way Damper]

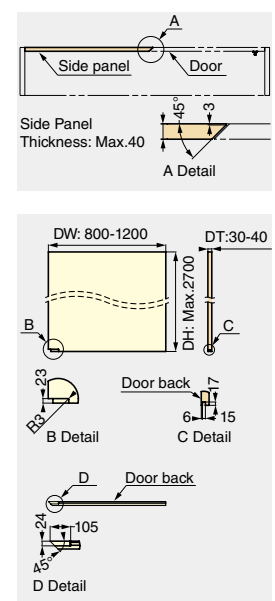


- Soft open and close.
- 100 mm long damper stroke.
- Light opening and closing force.

[Installation Example]



[Video Link]



Circled number represents the part number in the parts table 1. Refer to 1: P.12

* Drawings are for a Left to Right opening (MFU1200-L). Right to Left opening (MFU1200-R) is symmetrically opposed.
* The door cannot be opened from the inside without a handle (not included).

For a complete set of MFU1200

Order: **Bracket Set** + **Closer Set** + **Rail Set**

Bracket Set Necessary parts

Set Name	RoHS	CAD	Item Code	Item Name
Bracket set (L type)	-		250-047-832	MFU1200-L-BL
Bracket set (R type)	-		250-047-833	MFU1200-R-BL

Detail

No.	Qty	Part Name	Drawing (L type)	Description
1	2	Guiding track (top)		<ul style="list-style-type: none"> Material: aluminium alloy Finish: enamel / black
2	1	Guiding track (bottom)		<ul style="list-style-type: none"> Material: aluminium alloy Finish: enamel / black
3	1	Bracket (leading edge)		<ul style="list-style-type: none"> Material: steel Finish: enamel / black
4	1	Bracket (trailing edge)		<ul style="list-style-type: none"> Material: steel Finish: enamel / black
5	1	Bottom guide		<ul style="list-style-type: none"> Material: steel / POM Finish/Colour: electro-deposition / black
6	1	Connecting plate		<ul style="list-style-type: none"> Material: steel Finish: electro-deposition / black
7	1	Door stopper (floor)		<ul style="list-style-type: none"> Material: zinc alloy / elastomer Finish/Colour: chromate treatment (trivalent)/grey
8	1	Bumper block		<ul style="list-style-type: none"> Material: steel/elastomer Finish/Colour: chromate/grey
9	2	Trigger		<ul style="list-style-type: none"> Material: steel Finish: chromate treatment (trivalent)
10	1	Jig	Can be ordered separately	<ul style="list-style-type: none"> Item Code: 250-036-530 Item Name: FD80-TRJ Material: POM Colour: green

Closer Set Necessary parts

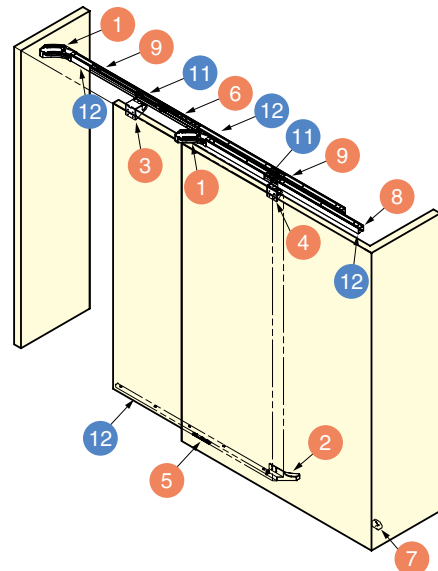
Select the appropriate part depending on door weight

No.	Type	RoHS	CAD	Item Code	Part Name	Drawing	Description
11	Door Weight 20-40 (kg)	-		250-047-834	Soft closer (leading edge)		<ul style="list-style-type: none"> Material: steel/POM Finish: electro-deposition / black
				[Item Name] MFU1200-40DSC-BL	1 pc		
11	Door Weight 40-70 (kg)	-		250-047-835	Door roller (trailing edge)		<ul style="list-style-type: none"> Material: steel Finish: electro-deposition / black
				[Item Name] MFU1200-70DSC-BL	1 pc		

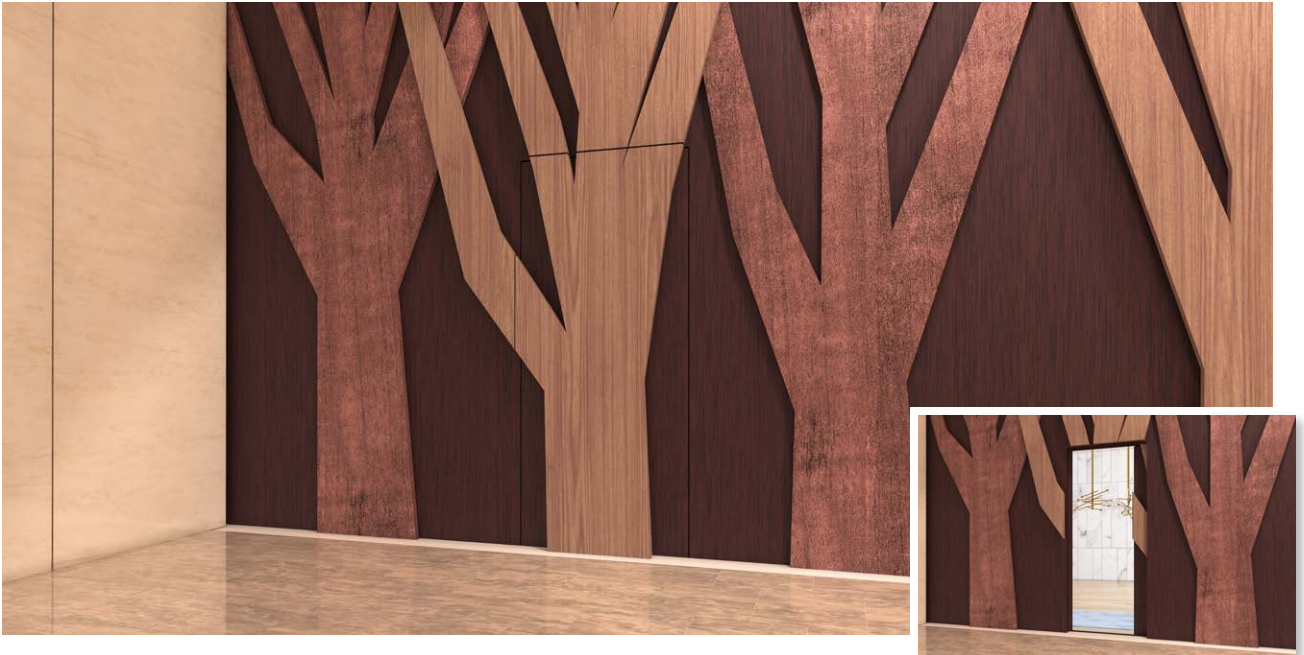
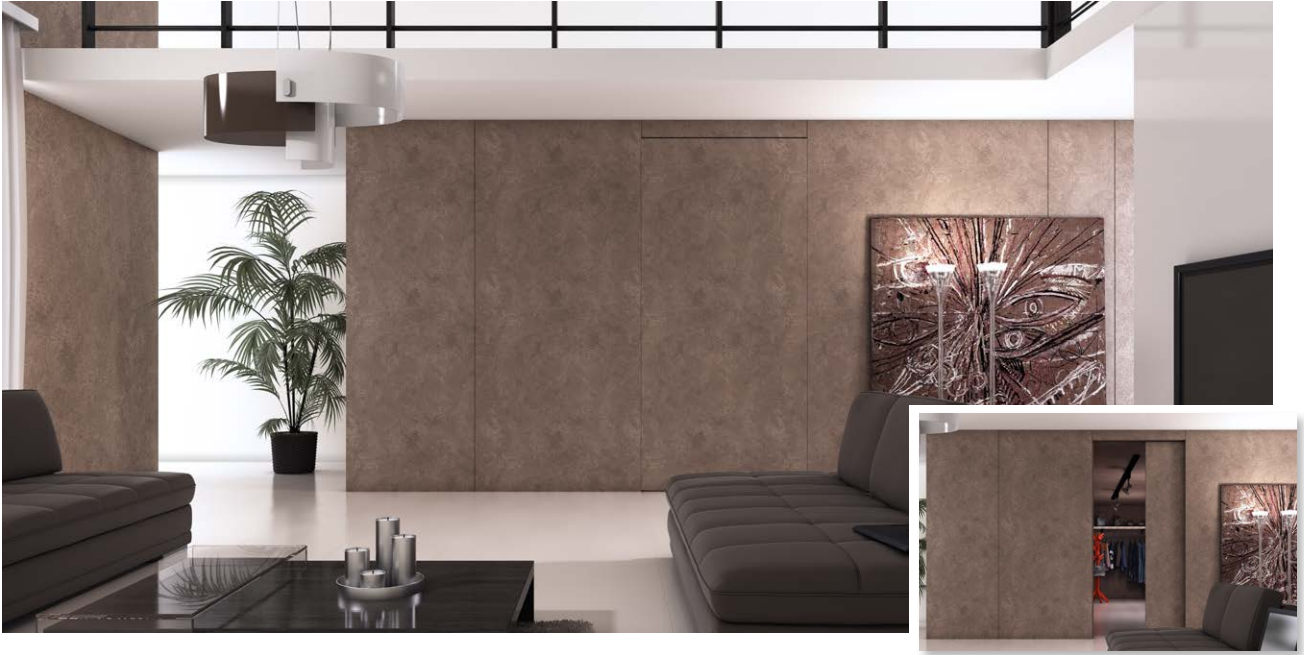
Rail Set Necessary parts

No.	RoHS	CAD	Item Code	Part Name	Drawing	Description
12	-		250-047-836	Upper track A		<ul style="list-style-type: none"> Material: aluminium alloy Finish: black anodising + coating / clear
			[Item Name] MFU1200-RS-BL	1120mm 2 pcs		
				Upper track B		850mm 1 pc
	Bottom track		1100mm 1 pc	<ul style="list-style-type: none"> Material: aluminium alloy Finish: silver anodising + coating / clear 		

* Cut upper track A and bottom track according to the door size.



Application Example MFU1200



[Top Hung Sliding System]



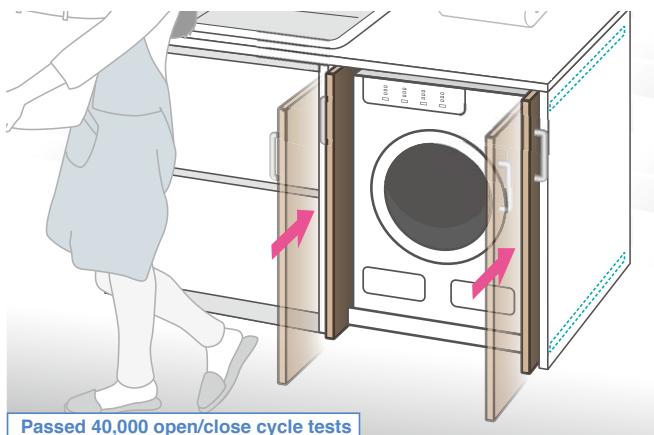
[View from the Inside]



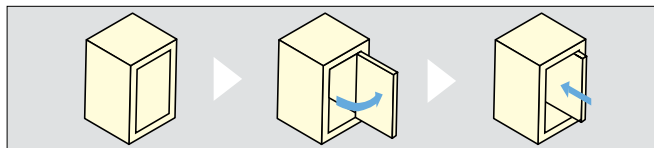
[No Groove on a Floor]



POCKET DOOR SYSTEM ALT-2V-360 Inset



[Door Motion]



[Item Name of Parts Set]

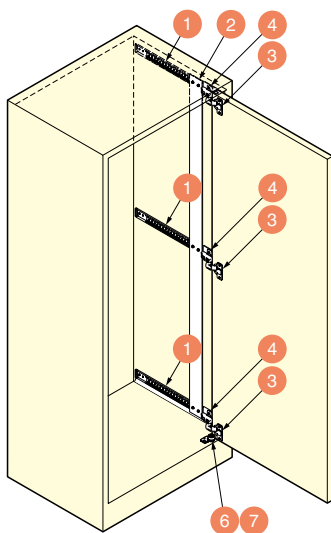
ALT-2V- C/D 360 S - 16

C: with catch
D: with damper

Size type

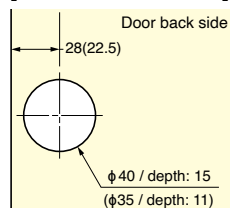
Last letter of item name of slides
(See 2)

[Installation Example]



Details about parts: 3

[Cut Out Dimensions]



Note that there are some differences with the ALT-2V-220. (previous model)

The () shows the dimensions when usign with 360-C26-0T and 360-D26-0T .

Refer to 1 : P. F14 2 :P.J27 3 :P.J27 to J28

	ALT-2V-C/D360S	ALT-2V-C/D360M	ALT-2V-C/D360L	ALT-2V-C/D360LL
Size Type	S (2 slides)	M (3 slides)	L (3 slides)	LL (4 slides)
Width	Max. 560mm	Max. 560mm	Max. 560mm	Max. 600mm
Height	820 - 1060mm	1240 - 1500mm	1640 - 1840mm	1980 - 2300mm
Thickness	18 - 30mm (In case of using with 360-C26-0T or 360-D26-0T: 18 - 20mm)			
Weight	Max. 5kg	Max. 6kg	Max. 8kg	Max. 10kg

Inset pocket door system with various size options.

- Sliding system allows doors to retract inside cabinets. Doors will not occupy space, providing full access to inside of cabinets.
- Has slides for smooth door motion.
- The slides hold doors in position when they slide out of cabinets. This prevents doors from sagging.
- Has easier hinge position adjustment than previous model.
- 2 types are available: "with catch" and "with damper" types.
- Can also be used with 360-C26-0T and 360-D26-0T hinges 1. The 360-26-0T (without catch type) is also available.

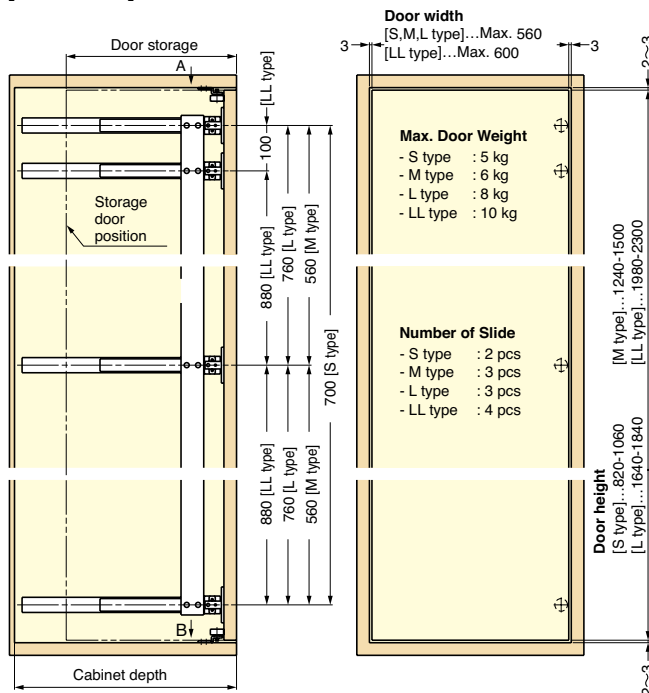
[Remarks]

- To get best performance of this product, cabinet requires precise mortice. Please contact us for details.
- Never cut the slides.
- Do not close doors until they slide out and catch has activated.

[Video Link](#)



[Installation]



Last Letter of Item Name (parts set)	Door Storage Amount	Min. Cabinet Depth
16	269 + DT (270 + DT)	412 + DT
19	345 + DT (346 + DT)	488 + DT
22	421 + DT (422 + DT)	564 + DT
24	472 + DT (473 + DT)	615 + DT
28	574 + DT (575 + DT)	717 + DT

*DT: Door Thickness

Parts set		Necessary to order. Each item includes required parts as a set.						
Type	Door Spec (Thickness: 18 - 30mm*)	C	D (minimum)	RoHS	CAD	With	Item Code	Item Name
S		269	412	-	203D	catch	180-046-756	ALT-2V-C360S-16
		+ DT	+ DT	-	203D	damper	180-046-776	ALT-2V-D360S-16
		345	488	-	203D	catch	180-046-757	ALT-2V-C360S-19
		+ DT	+ DT	-	203D	damper	180-046-777	ALT-2V-D360S-19
		421	564	-	203D	catch	180-046-758	ALT-2V-C360S-22
		+ DT	+ DT	-	203D	damper	180-046-778	ALT-2V-D360S-22
M		472	615	-	203D	catch	180-046-759	ALT-2V-C360S-24
		+ DT	+ DT	-	203D	damper	180-046-779	ALT-2V-D360S-24
		574	717	-	203D	catch	180-046-760	ALT-2V-C360S-28
		+ DT	+ DT	-	203D	damper	180-046-780	ALT-2V-D360S-28
		269	412	-	203D	catch	180-046-761	ALT-2V-C360M-16
		+ DT	+ DT	-	203D	damper	180-046-781	ALT-2V-D360M-16
L		345	488	-	203D	catch	180-046-762	ALT-2V-C360M-19
		+ DT	+ DT	-	203D	damper	180-046-782	ALT-2V-D360M-19
		421	564	-	203D	catch	180-046-763	ALT-2V-C360M-22
		+ DT	+ DT	-	203D	damper	180-046-783	ALT-2V-D360M-22
		472	615	-	203D	catch	180-046-764	ALT-2V-C360M-24
		+ DT	+ DT	-	203D	damper	180-046-784	ALT-2V-D360M-24
LL		574	717	-	203D	catch	180-046-765	ALT-2V-C360M-28
		+ DT	+ DT	-	203D	damper	180-046-785	ALT-2V-D360M-28
		269	412	-	203D	catch	180-046-766	ALT-2V-C360L-16
		+ DT	+ DT	-	203D	damper	180-046-786	ALT-2V-D360L-16
		345	488	-	203D	catch	180-046-767	ALT-2V-C360L-19
		+ DT	+ DT	-	203D	damper	180-046-787	ALT-2V-D360L-19
LL		421	564	-	203D	catch	180-046-768	ALT-2V-C360L-22
		+ DT	+ DT	-	203D	damper	180-046-788	ALT-2V-D360L-22
		472	615	-	203D	catch	180-046-769	ALT-2V-C360L-24
		+ DT	+ DT	-	203D	damper	180-046-789	ALT-2V-D360L-24
		574	717	-	203D	catch	180-046-770	ALT-2V-C360L-28
		+ DT	+ DT	-	203D	damper	180-046-790	ALT-2V-D360L-28
LL		269	412	-	203D	catch	180-046-771	ALT-2V-C360LL-16
		+ DT	+ DT	-	203D	damper	180-046-791	ALT-2V-D360LL-16
		345	488	-	203D	catch	180-046-772	ALT-2V-C360LL-19
		+ DT	+ DT	-	203D	damper	180-046-792	ALT-2V-D360LL-19
		421	564	-	203D	catch	180-046-773	ALT-2V-C360LL-22
		+ DT	+ DT	-	203D	damper	180-046-793	ALT-2V-D360LL-22
LL		472	615	-	203D	catch	180-046-774	ALT-2V-C360LL-24
		+ DT	+ DT	-	203D	damper	180-046-794	ALT-2V-D360LL-24
		574	717	-	203D	catch	180-046-775	ALT-2V-C360LL-28
		+ DT	+ DT	-	203D	damper	180-046-795	ALT-2V-D360LL-28

*In case of using with 360-C26-0T and 360-D26-0T, available door thickness is 18 - 20 mm.

* DT: Door Thickness

Option

Qty	RoHS	CAD	Item Code	Part Name
1	G	-	180-120-340	Bracket

Item Name: ALT-BR

Dimensions

Specification

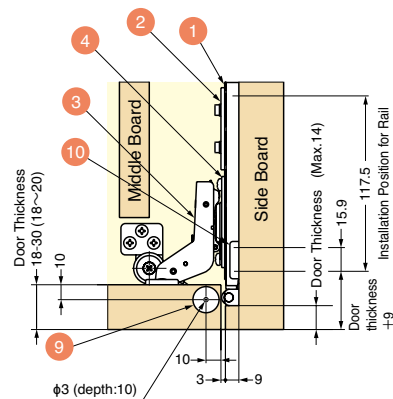
- Material: Steel
- Finish: Coloured Chromate (trivalent)

[Application]

Use this bracket when there is space between door and floor. For installation, see 1.

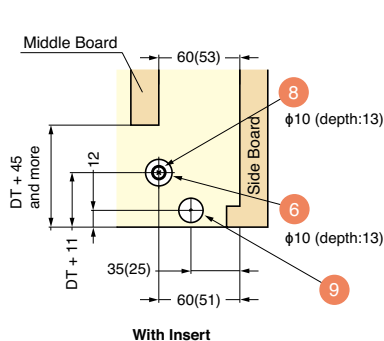
Installation of Slide

[Cross section A] 2

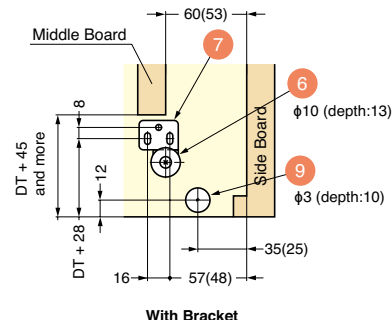


If slides need to be concealed, install a middle board.

[Cross section B] 2



With Insert




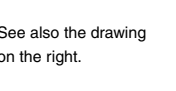

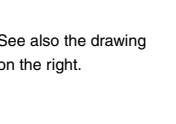

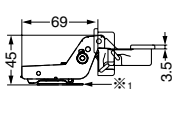

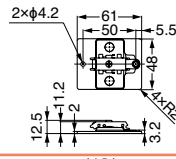

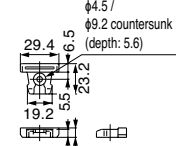
With Bracket

The () shows the dimensions when using with 360-C26-0T and 360-D26-0T.

Refer to 1 : P.J29 2 : P.J25 3 : P.J27 to J28

ALT-2V-360 Parts Set Details

These parts are included in the parts set, and are also sold separately.

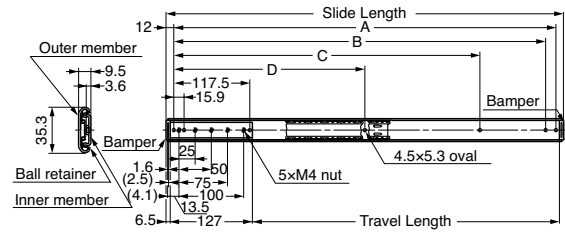
No.	Quantity				Parts	Dimension	RefS	CAD	Item Code
	S	M	L	LL					
1	2	3	3	4	 <p>Slide</p> <p>See also the drawing on the right.</p>		G	-	190-113-867
									Item Name: AL127C-16 (included in ALT-2V-***-16)
									190-113-868
									Item Name: AL127C-19 (included in ALT-2V-***-19)
									190-113-869
									Item Name: AL127C-22 (included in ALT-2V-***-22)
									190-113-870
Item Name: AL127C-24 (included in ALT-2V-***-24)									
190-113-871									
Item Name: AL127C-28 (included in ALT-2V-***-28)									
<p>Spec</p> <ul style="list-style-type: none"> Material: Steel Finish: Chrome 									
2	1	1	1	1	 <p>Connecting Plate</p> <p>See also the drawing on the right.</p>		G	-	180-120-526
									Item Name: ALT55-S (included in S type)
									180-120-525
									Item Name: ALT55-M (included in M type)
									180-120-524
Item Name: ALT55-L (included in L type)									
180-120-523									
Item Name: ALT55-LL (included in LL type)									
<p>Spec</p> <ul style="list-style-type: none"> Material: Aluminium Alloy Finish: Silver Anodized 									
3	2	3	3	4	 <p>Hinge</p>		G	2D-CAD	160-029-080
									[With catch type] H360-C26-0T
<p>Spec</p> <ul style="list-style-type: none"> Main Material: Steel Finish: Nickel 									
4	2	3	3	4	 <p>Mounting Plate</p>		-	-	160-046-459
									Item Name: ALT-MP360
<p>Spec</p> <ul style="list-style-type: none"> Material: Steel Finish: Nickel 									
5	1	2	2	2	 <p>Catch</p>		G	-	180-120-522
									Item Name: AL127-CH
<p>Spec</p> <ul style="list-style-type: none"> Material: Polyurethane Colour: Black 									

※ For numbers of parts which are included in the parts set, please see the instruction manual.
※! The mounting plate is not included.

Refer to 1 : P.J25 to J26

Option 11 is not included.

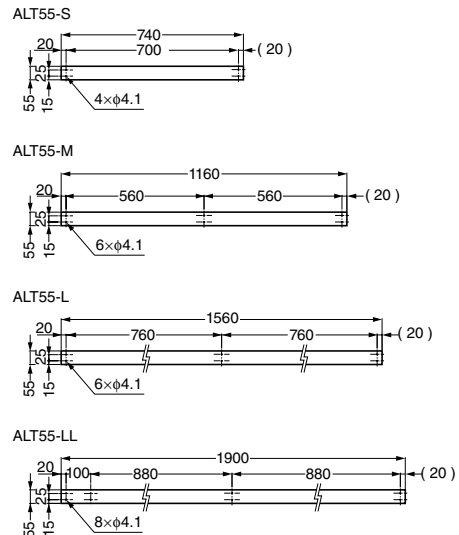
Drawing of Slide



For details about size type: 1

Item Name	Slide Length	Travel	Door Storage	A	B	C	D
AL127C-16	411.4	269.4	269	387.4	371.5	269.9	-
AL127C-19	487.6	345.6	345	463.6	447.7	346.1	231.8
AL127C-22	563.8	421.8	421	539.8	523.9	422.3	269.9
AL127C-24	614.6	472.6	472	590.6	574.7	473.1	295.3
AL127C-28	716.2	574.2	574	692.2	676.3	574.7	346.1

Drawing of Connecting Plate



Components Set 6 - 10

Each item includes required parts as a set.

[S type]

- Item Code : 180-046-917
- Item Name : ALT-2V-360SP


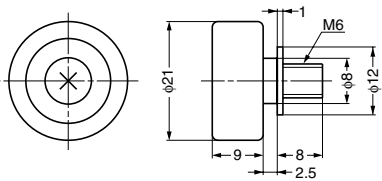


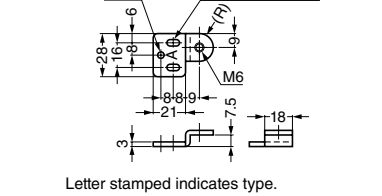

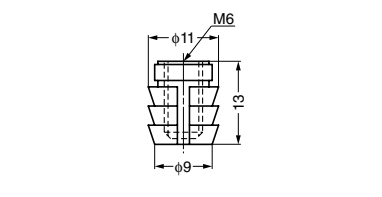


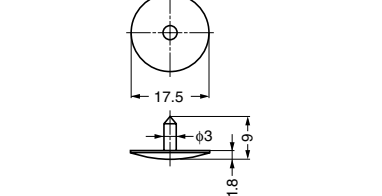


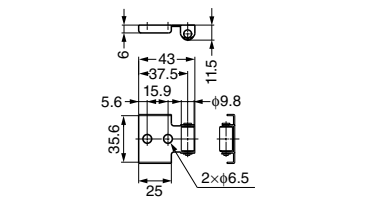

[M/L type]

- Item Code : 180-046-918
- Item Name : ALT-2V-360LP

[LL type]

- Item Code : 180-046-919
- Item Name : ALT-2V-360LLP

Details These parts are included in the components set, and are also sold separately.

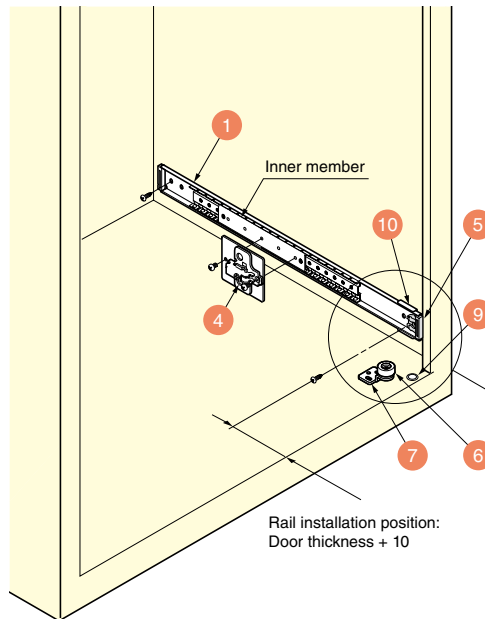
No.	Quantity			Parts	Drawing	Specs	Rev	CAD
	S type	M/L type	LL type					
6	2	2	2	Roller 		Item Code : 180-940-144 Item Name : DU19-B4SBR ● Material: Ethylene propylene rubber (EPDM)/Steel ● Finish/Colour: Chromate (trivalent)/White		-
7	1 (Left and Right)	1 (Left and Right)	1 (Left and Right)	Roller Bracket 	 <p>Letter stamped indicates type.</p>	[Type A] Item Code : 180-930-145 Item Name : ALT-2V-AB [Type B] Item Code : 180-930-146 Item Name : ALT-2V-BB ● Material : Steel ● Finish : Yellow Zinc Chromate	-	-
8	2	2	2	Insert 		Item Code : 120-041-310 Item Name : SC-107-13 ● Material : Polyamide (PA) ● Colour : White		2D 3D
9	2	2	2	Slider 		Item Code : 210-030-123 Item Name : G-175 ● Material : polyethylene (PE) ● Colour : Natural		2D 3D
10	2	3	4	Door Stopper 		Item Code : 180-930-416 Item Name : ALT-AD ● Material: Steel / Ethylene propylene rubber (EPDM) ● Finish/Colour: Chrome / White		2D 3D

Included Parts

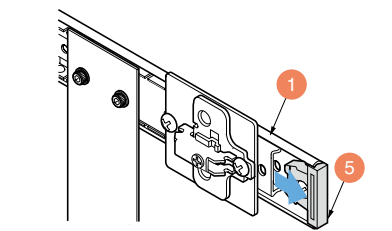
Hex key, Pan head screw M4 x 6, binding head tapping screw, countersunk head tapping screw, hexagon top bolt M4 x 6
(These are not included in parts which are sold singly.)

Temporary Installation of Rail 1

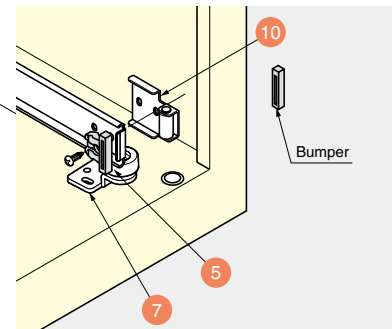
- Fix 1 onto 10.
- Mount 1 inside the cabinet (temporary).
- Fix 4 onto inner member of 1.
- Attach 5 to 1 as per the drawing on the right.



Catch 5 (AL127-CH)

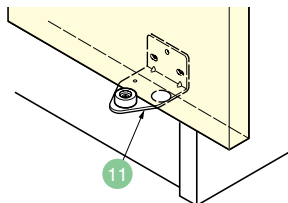


Installation of Catch 5

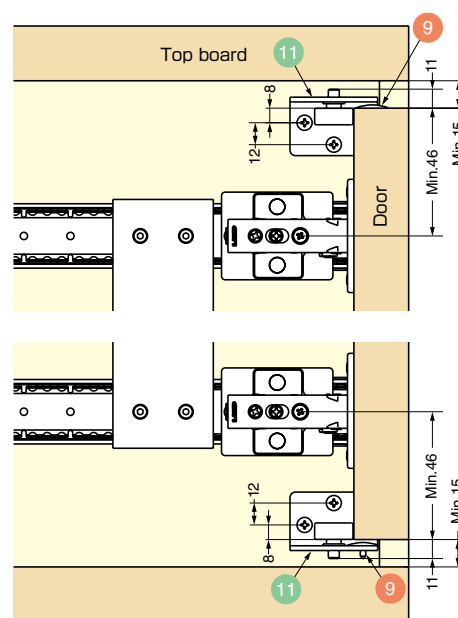


Remove bumpers from the lower two rails, and replace with the catches 5. If the number of rails is two (S type), replace on the lower rail only.

Installation of Bracket 11

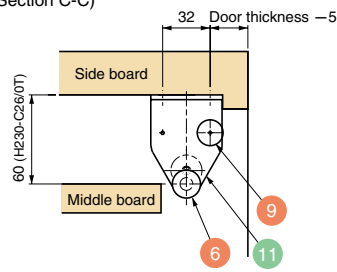


Installation Dimensions of Bracket 11



Installation of Slider 9

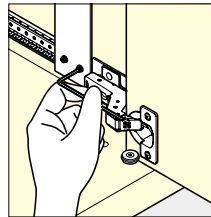
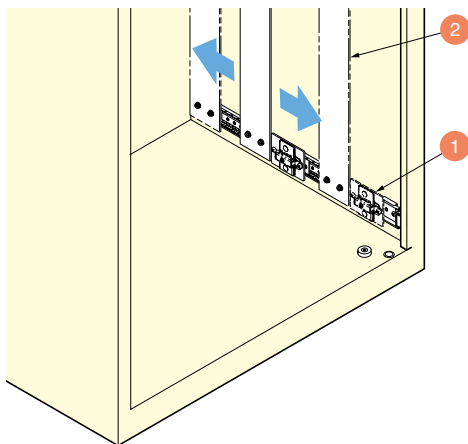
(Section C-C)



Details about parts: 1

Installation of Connecting Plate

- Mount the connecting plate on the rails temporarily.
- Make sure that the connecting plate moves smoothly.
- Tighten the screws of the connecting plate.

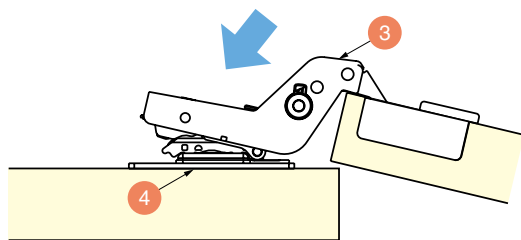


If the door is sagging or does not move smoothly:

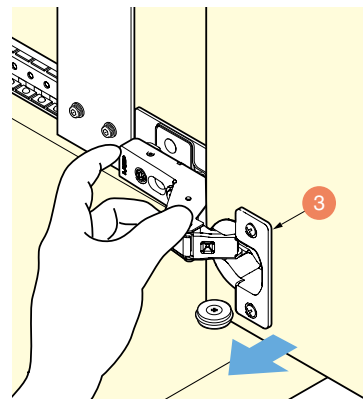
1. Loosen the screw of connecting board .
2. Slightly lift up the door.
3. Tighten the screw again.

Door Installation

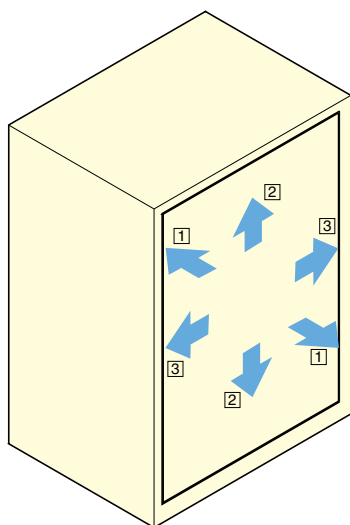
One-touch installation



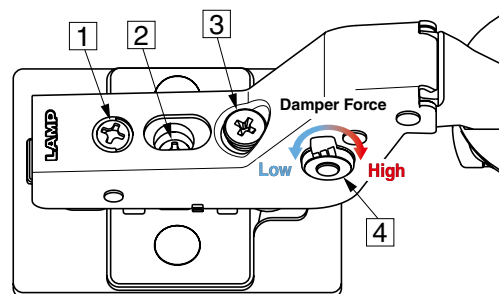
Easy to remove



Door Adjustment



- 1 Front/Back adjustment
- 2 Height adjustment
- 3 Left/Right adjustment



Soft Close Speed Adjustment

The lever 4 allows for soft-close adjustment

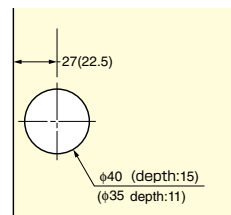
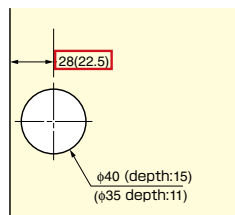
ALT-2V-360's changes from ALT-2V-220 (previous model)

Installation	No
Cut Out Dimensions	Yes (see below)
Parts Set	Yes (item code and item name)
Option	No
Drawing of Slide	No
Parts Set Details	Yes (hinge and mouting plate)
Components Set	Yes (item code and item name)
Installation of Slide	No
Installation of Bracket	Yes (there is no change in dimensions)
Drawing of Connecting Board	No
Door Installation	Yes
Door Adjustment	Yes

ALT-2V-360

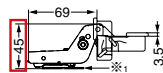
ALT-2V-220

Door cut out dimensions

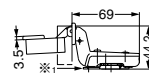


Hinge dimensions

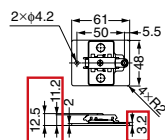
Body



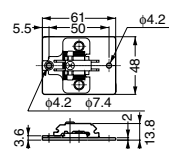
Body



Mounting plate



Mounting plate



POCKET DOOR SYSTEM ALT-2V-10 Overlay

INSTRUCTION



	ALT-2V-10S	ALT-2V-10M	ALT-2V-10L	ALT-2V-10LL
Size Type	S (2 slides)	M (3 slides)	L (3 slides)	LL (4 slides)
Width	Max. 560 mm	Max. 560 mm	Max. 560 mm	Max. 600 mm
Height	830-1060 mm	1250-1500 mm	1650-1840 mm	1990-2300 mm
Thickness	18 - 20 mm			
Weight	Max. 5 kg	Max. 6 kg	Max. 8 kg	Max. 10 kg

Outset pocket door system with various size options.

- Sliding system allows doors to retract inside cabinets. Doors will not occupy space, providing full access to inside of cabinets.
- The slides hold doors in position when they slide out of cabinets. This prevents doors from sagging.
- Overlay amount is up to 10 mm.
- Has easier hinge position adjustment than previous model.

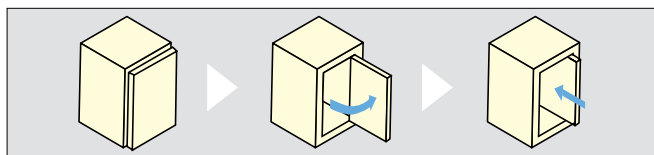
[When Closed]



[Remarks]

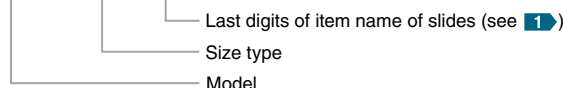
- For use on wooden doors only.
- Mount hinge cups into door side, so the movable section will not get dislodged.
- To get best performance of this product, cabinet requires precise mortise.
- Never cut the slides.
- Do not close doors until they slide out and catch has activated.
- Please prepare a door stopper, in case of use on double doors. Top and bottom boards are inset.

[Door Motion]

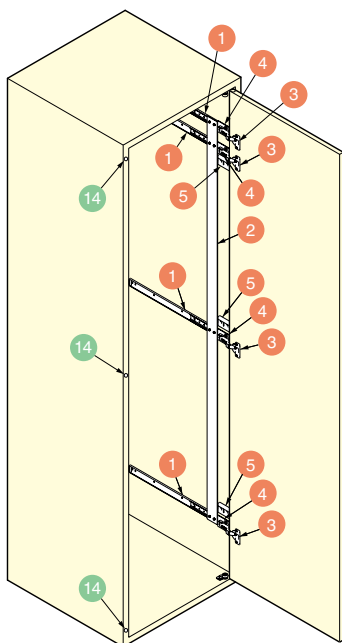


[Item Name of Parts Set]

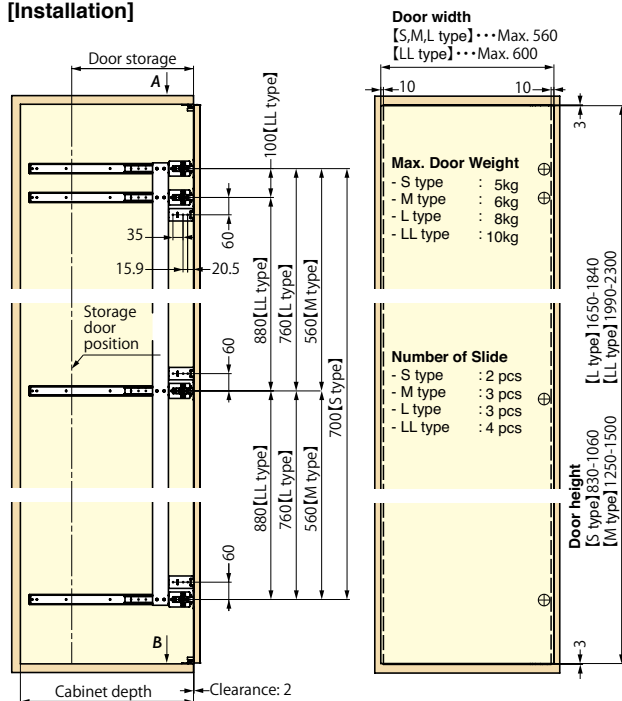
ALT-2V-10 S - 16



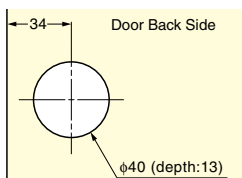
[Installation Example] Details about parts: 2



[Installation]



[Cut Out Dimensions]



Last Digits of Item Name (parts set)	Door Storage Amount	Min. Cabinet Depth
16	268	420
19	344	496
22	420	572
24	471	623
28	573	725

Refer to 1: P.J34 2: P.J33 to J34

For a complete set of ALT-2V-10

Parts Set		Necessary to order. Each item includes required parts as a set.					
Type	Door Spec (Thickness: 20mm)	C	D (minimum)	RHS	CAD	Item Code	Item Name
S		268	420	-		180-048-724	ALT-2V-10S-16
		344	496	-		180-048-725	ALT-2V-10S-19
		420	572	-		180-048-726	ALT-2V-10S-22
		471	623	-		180-048-727	ALT-2V-10S-24
		573	725	-		180-048-728	ALT-2V-10S-28
W=Max. 560mm Weight=Max. 5kg H=830-1060mm							
M		268	420	-		180-048-729	ALT-2V-10M-16
		344	496	-		180-048-730	ALT-2V-10M-19
		420	572	-		180-048-731	ALT-2V-10M-22
		471	623	-		180-048-732	ALT-2V-10M-24
		573	725	-		180-048-733	ALT-2V-10M-28
W=Max. 560mm Weight=Max. 6kg H=1250-1500mm							
L		268	420	-		180-048-734	ALT-2V-10L-16
		344	496	-		180-048-735	ALT-2V-10L-19
		420	572	-		180-048-736	ALT-2V-10L-22
		471	623	-		180-048-737	ALT-2V-10L-24
		573	725	-		180-048-738	ALT-2V-10L-28
W=Max. 560mm Weight=Max. 8kg H=1650-1840mm							
LL		268	420	-		180-048-739	ALT-2V-10LL-16
		344	496	-		180-048-740	ALT-2V-10LL-19
		420	572	-		180-048-741	ALT-2V-10LL-22
		471	623	-		180-048-742	ALT-2V-10LL-24
		573	725	-		180-048-743	ALT-2V-10LL-28
W=Max. 600mm Weight=Max. 10kg H=1990-2300mm							

Option

No.	Type	Qty	RHS	CAD	Item Code	Part Name
12	Installation position: bottom-right/ top-left (see 1)	1	-	-	180-120-342	Bracket
					Item Name: ALT-2V5BR1	
13	Installation position: top-right/ bottom left (see 1)	1	-	-	180-120-343	Bracket
					Item Name: ALT-2V5BR2	

Dimensions

Specification

- Material: Steel
- Finish: Coloured Chromate (trivalent)
- [Application] Use this bracket when there is space between door and floor. (Installation: 1)

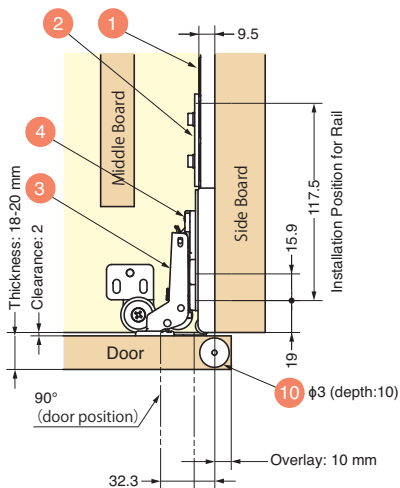
No.	Qty	RHS	CAD	Item Code	Part Name
14	450 pcs /sheet (12 sheets in total)	-		210-032-020	Bamper
				Item Name: BS-27	

Specification

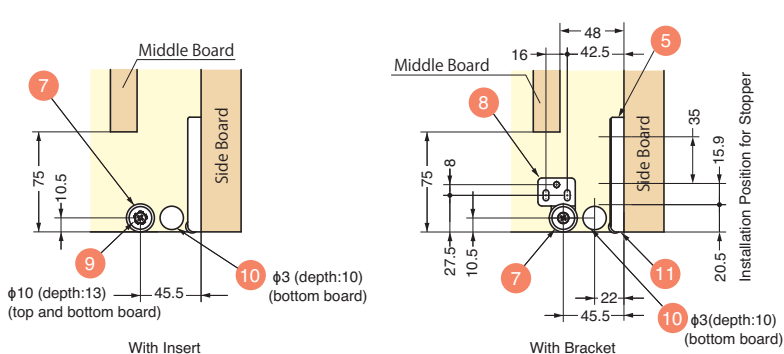
- Material: PUR
- Colour: Clear
- Application: Single swing door (make a clearance of 2 mm on door end)

Installation of Slide

[Cross section A] 2



[Cross section B] 2


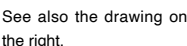

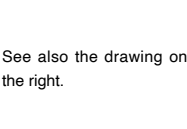

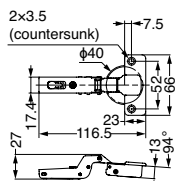

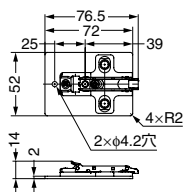

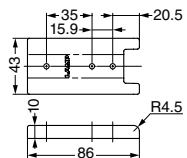


Parts Set Detail: 3

Refer to 1: P.J36 2: P.J32 3: P.J34 to J35

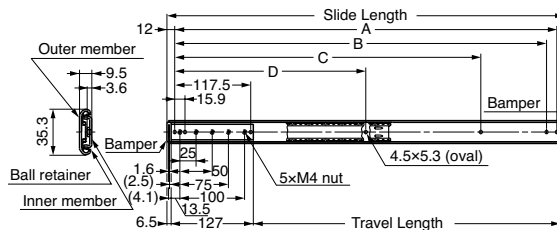
ALT-2V-10 Parts Set Details

These parts are included in the parts set, and are also sold separately

No.	Quantity				Parts	Dimensions	RefS	CAD	Item Code																																	
	S	M	L	LL																																						
1					 <p>Slide</p> <p>See also the drawing on the right.</p>		<ul style="list-style-type: none"> ● 2D 3D 190-113-867 <p>Item Name: AL127C-16 (included in ALT-2V-***-16)</p> <ul style="list-style-type: none"> ● 2D 3D 190-113-868 <p>Item Name: AL127C-19 (included in ALT-2V-***-19)</p> <ul style="list-style-type: none"> ● 2D 3D 190-113-869 <p>Item Name: AL127C-22 (included in ALT-2V-***-22)</p> <ul style="list-style-type: none"> ● 2D 3D 190-113-870 <p>Item Name: AL127C-24 (included in ALT-2V-***-24)</p> <ul style="list-style-type: none"> ● 2D 3D 190-113-871 <p>Item Name: AL127C-28 (included in ALT-2V-***-28)</p> <p>Spec</p> <ul style="list-style-type: none"> ● Material: Steel ● Finish: Chromate 																																			
										2	1	1	1	 <p>Connecting Plate</p> <p>See also the drawing on the right.</p>		<ul style="list-style-type: none"> ● 2D 3D 180-120-526 <p>Item Name: ALT55-S (included in S type)</p> <ul style="list-style-type: none"> ● 2D 3D 180-120-525 <p>Item Name: ALT55-M (included in M type)</p> <ul style="list-style-type: none"> ● 2D 3D 180-120-524 <p>Item Name: ALT55-L (included in L type)</p> <ul style="list-style-type: none"> ● 2D 3D 180-120-523 <p>Item Name: ALT55-LL (included in LL type)</p> <p>Spec</p> <ul style="list-style-type: none"> ● Material: Aluminium Alloy ● Finish: Plain 																										
																			3	3	3	 <p>Hinge</p> <p>See also the drawing on the right.</p>		<ul style="list-style-type: none"> - 2D 160-046-187 <p>Item Name: SCAF-7G99</p> <p>Spec</p> <ul style="list-style-type: none"> ● Material: Zinc Alloy (ZDC) ● Finish: Nickel 																		
																											4	3	3	 <p>Mounting Plate</p> <p>See also the drawing on the right.</p>		<ul style="list-style-type: none"> - 2D 180-047-960 <p>Item Name: ALT-MPS</p> <p>Spec</p> <ul style="list-style-type: none"> ● Material: Steel (SPCC) ● Zinc Alloy(ZDC) ● Finish: Nickel 										
																																			5	3	3	 <p>Protector</p> <p>See also the drawing on the right.</p>		<ul style="list-style-type: none"> ● 2D 3D 180-047-931 <p>Item Name: ALT-ADP</p> <p>Spec</p> <ul style="list-style-type: none"> ● Material: POM ● Colour: Grey 		

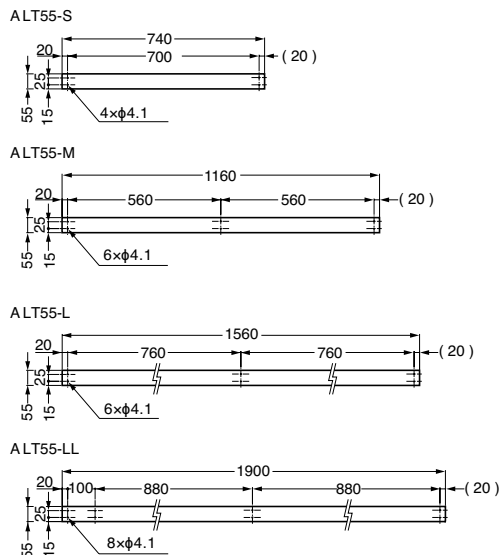
Option 12-14 are not included.

Drawing of Slide



Item Name	Slide Length	Travel	Door Storage	A	B	C	D
AL127C-16	411.4	269.4	268	387.4	371.5	269.9	-
AL127C-19	487.6	345.6	344	463.6	447.7	346.1	231.8
AL127C-22	563.8	421.8	420	539.8	523.9	422.3	269.9
AL127C-24	614.6	472.6	471	590.6	574.7	473.1	295.3
AL127C-28	716.2	574.2	573	692.2	676.3	574.7	346.1

Drawing of Connecting Plate



*For numbers of parts which are included in the parts set, please see the instruction manual.

Refer to P.J33

Components Set 6-11 Each item includes required parts as a set.

[S type]

- Item Code: 180-048-963
- Item Name: ALT-2V-10SP


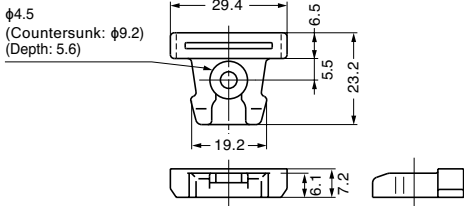

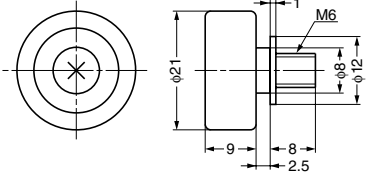

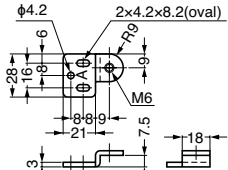

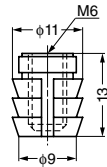

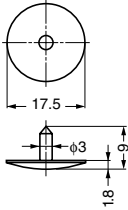

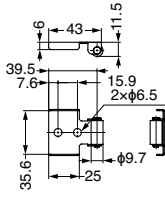
[M/L type]

- Item Code: 180-048-964
- Item Name: ALT-2V-10LP

[LL type]

- Item Code: 180-048-965
- Item Name: ALT-2V-10LLP

Details These parts are included in the components set, and are also sold separately.

No.	Quantity			Parts	Dimensions	Specifications
	S Type	M/L Type	LL Type			
6	1	2	2			Item Code: 180-120-522 Item Name: AL127-CH ●Material: PUR ●Colour: Black
7	2	2	2			Item Code: 180-940-144 Item Name: DU19-B4SBR ●Material: EPDM/steel ●Finish/Colour: Chromate/White
8	Left/Right 1 each	Left/Right 1 each	Left/Right 1 each		 <p>The drawing shows A type (bottom right/upper left)</p>	Item Code: 180-930-145 Item Name: ALT-2V-AB * Type A (bottom right/ upper left) Item Code: 180-930-146 Item Name: ALT-2V-BB * Type B (upper right/bottom left) ●Material: Steel ●Finish: Yellow Zinc Chromate
9	2	2	2			Item Code: 120-041-310 Item Name: SC-107-13 ●Material: Polyamide (PA) ●Colour: White
10	2	2	2			Item Code: 210-030-123 Item Name: G-175 ●Material: Polyethylene (PE) ●Colour: Natural
11	2	3	3			Item Code: 180-048-461 Item Name: ALT-ADS ●Material: Steel / EPDM ●Finish/Colour: Chrome / White

Included Parts

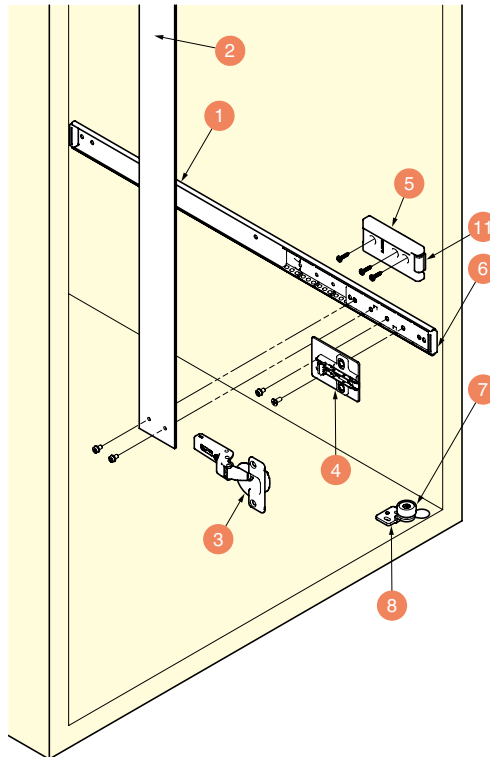
Cross-recessed binding tapping screw 3.5×15, Cross-recessed binding tapping 4×16, Cross-recessed countersunk tapping screw 3.5×15, Cross-recessed countersunk screw M4×8, Hexagon top bolt M4×6, Hex key
(These are not included in parts which are sold singly)

Installation of Slide

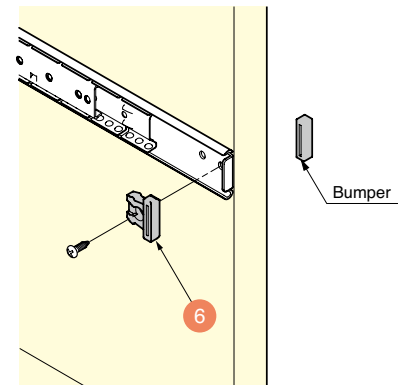
- Fix 6 onto 1.
- Mount 4 on the inner member of slide.
- Assemble 11 and 5 and fix them in position.

* Make sure that 6 is installed on the front side of 1.

*By installing another 6 on back side of the slides, doors can be kept in position when doors are retracted.



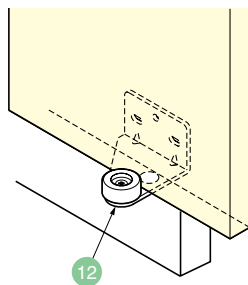
Installation of Catch 6



Install 6 on the front side of 1.
Do not attach the bumper until the rail and catch are installed.

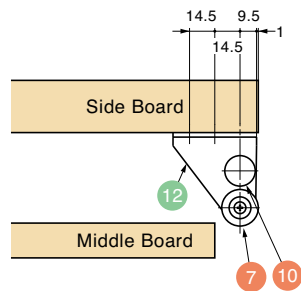
Details about parts: [1](#)

Installation of Bracket 12



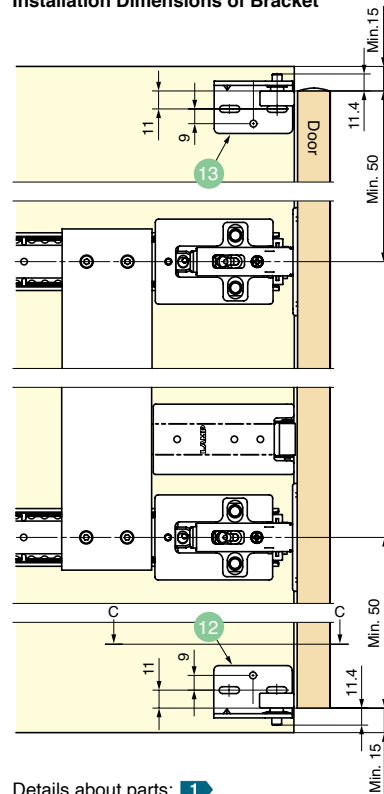
Installation of Slider

[Cross-section C]



The drawing shows an example of a right side installation.
Left side installation will be symmetrical to it.

Installation Dimensions of Bracket

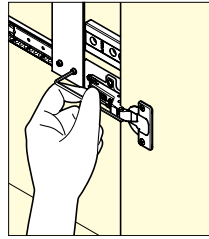
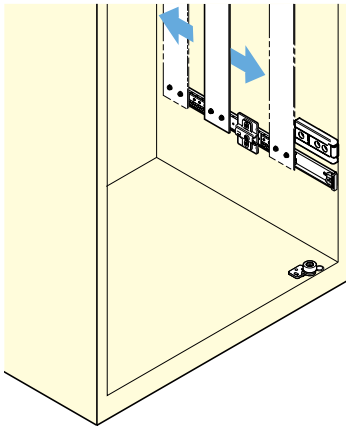


Details about parts: [1](#)

Refer to [1](#) : P.J33 to J35

Installation of Connecting Plate ②

- Mount the connecting plate on the slides temporarily.
- Make sure that the connecting plate moves smoothly.
- Tighten the screws of the connecting plate.

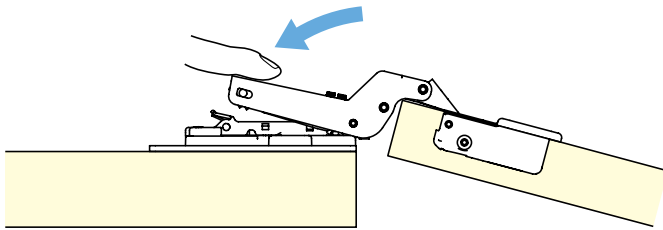


If the door is sagging or does not move smoothly:

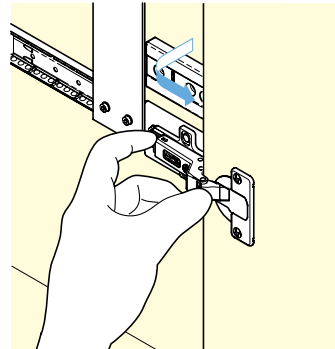
1. Loosen the screw of connecting board .
2. Slightly lift up the door.
3. Tighten the screw again.

Door Installation

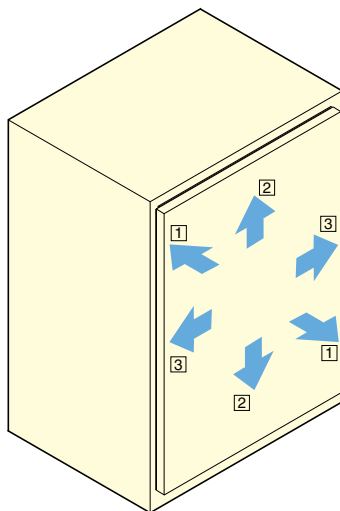
One-touch installation



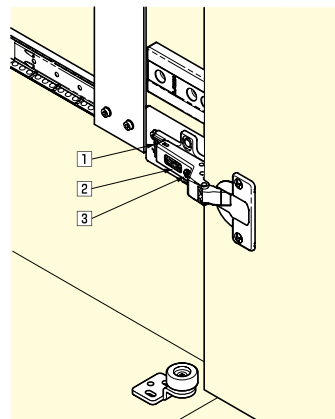
Easy to remove



Door Adjustment



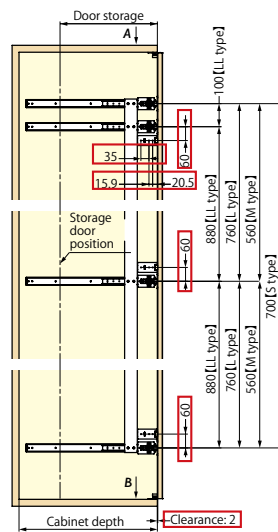
- ① Front/Back adjustment
- ② Height adjustment
- ③ Left/Right adjustment



ALT-2V-10's summary of changes from ALT-2V-5 (previous model)

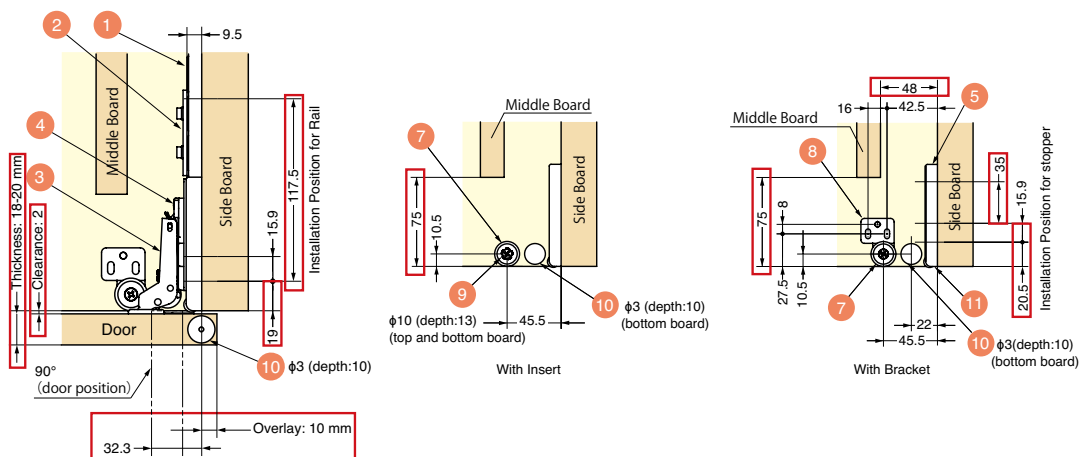
Door Thickness	Changed Old: Max. 20 mm New: 18 - 20 mm
Installation	Changed (See below) (Installation of slide: P. J37)
Cut Out Dimensions	No Changes
Parts Set Details	Changed (item code and item name) hinge / mounting plate / protector
Option	Changed (bumper)
Components Set	Changed (item code and item name)
Installation of Bracket	No Changes
Drawing of Connecting Board	No Changes
Door Installation	Changed (Door now can be disattached by pushing the lever of mounting plate)
Door Adjustment	Changed (Door adjustment now can be done by screws)

Installation



 → Changes from ALT-2V-5 (previous model)

[Installation of Slide]



CABLE GROMMET LS50F, LS60F Sheet Metal / One-touch Installation



- One-touch easy installation on sheet metal.
- Folding flap can close the opening when not in use.
- Can be used for thickness from 0.8 to 2.0 mm.
- Compliant with flame retardancy standard UL94 V-0.

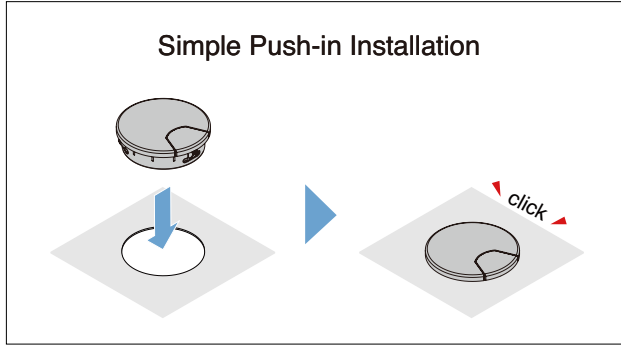
[Application]

- Operation consoles, steel cabinets, self-checkout

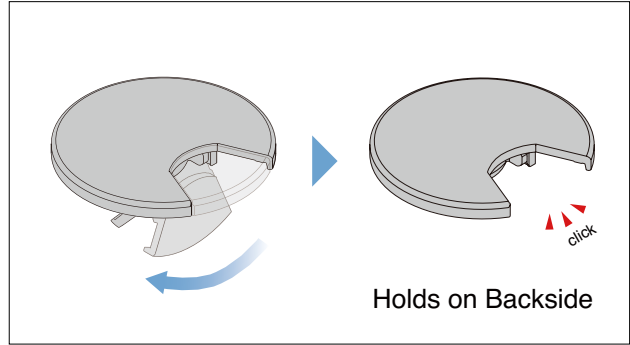
[Remarks]

- Cannot be installed on wood boards.

[Quick Installation to Sheet Metal]

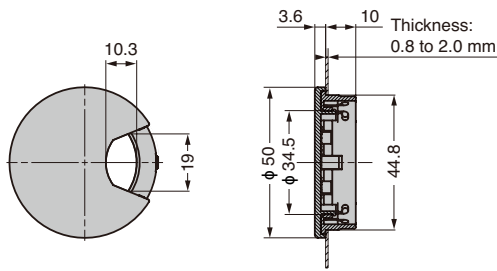


[Flap Cover]

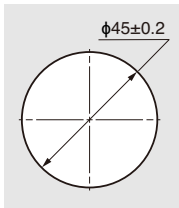


The cover can be folded and held on backside to prevent misplacement. The whole cap is removable for a wider opening.

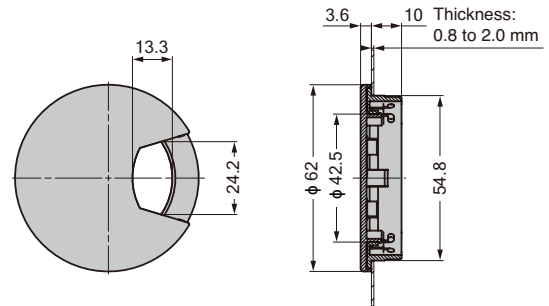
[LS50F]



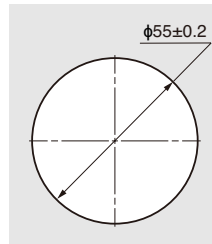
Cut Out Dimension



[LS60F]



Cut Out Dimension



[Video Link](#)



[LS50F] Hole diameter: 45 mm

RoHS	CAD	Item Code	Item Name	Colour	Material	Available Thickness	Weight (g)
●	●	210-045-891	LS50F-WT	White	ABS	0.8 to 2.0	9.8
●	●	210-045-892	LS50F-GR	Grey			
●	●	210-045-893	LS50F-BL	Black			

[LS60F] Hole diameter: 55 mm

RoHS	CAD	Item Code	Item Name	Colour	Material	Available Thickness	Weight (g)
●	●	210-045-894	LS60F-WT	White	ABS	0.8 to 2.0	15.3
●	●	210-045-895	LS60F-GR	Grey			
●	●	210-045-896	LS60F-BL	Black			

SPLIT CABLE GROMMET LS50S-S Metallic / With Lid



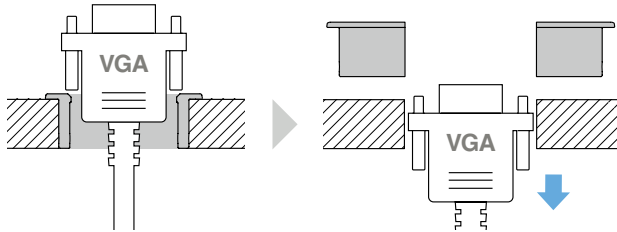
LS50S-S-SN

LS50S-S-DB

LS50S-S-BL

- Comes with a removable lid to fit most wires.
- Made of zinc alloy with stylish finishes.
- Can be split into two parts for easy cable replacement. Even when exchanging with cables which have bigger plugs than the grommet, there is no need to take apart them.
- The lid is equipped with rubbers on the back side to prevent it from coming off unintentionally.

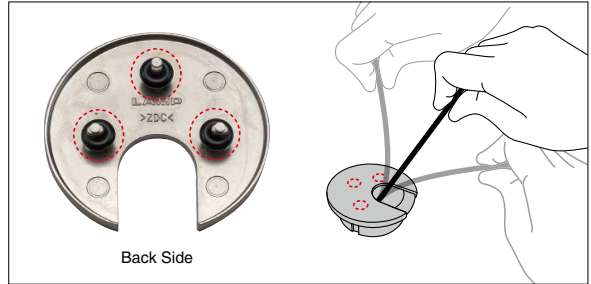
[Split System] Easy to replace cables.



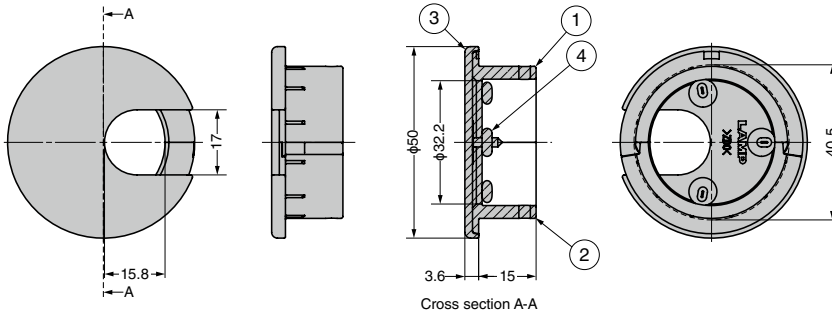
[Remarks]

- Do not change the combination of the split parts.
- Each antique brass finish looks slightly different because it is polished by hand.

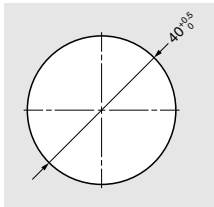
[Securely Hold the Lid]



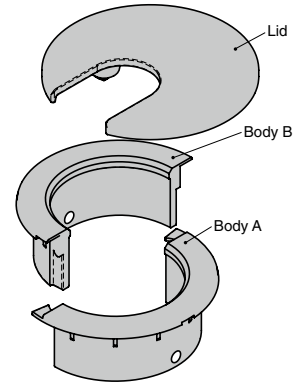
The o-ring rubbers hold the lid in position even when cables are moved.



[Cut Out Dimensions]



[Components]



RoHS	CAD	Item Code	Item Name	Finish/Colour	Weight (g)	Box (pcs)	Carton (pcs)
●	●	210-047-811	LS50S-S-SN	Satin Nickel	64	20	160
●	●	210-047-813	LS50S-S-DB	Antique Brass		20	160
●	●	210-047-814	LS50S-S-BL	Chrome/Matte Black		20	160

No.	Part Name	Material	Finish/Colour
①	Body A	Zinc Alloy (ZDC)	See the table on the left
②	Body B		
③	Lid		
④	O-ring	Nitrile Rubber (NBR)	Black