

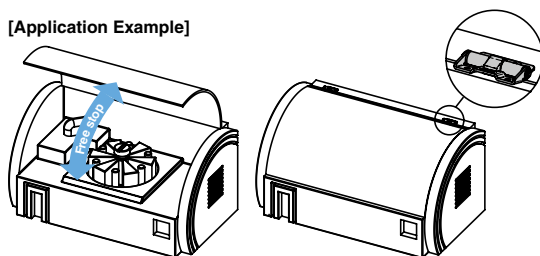
ONE WAY TORQUE HINGE HG-TQS15



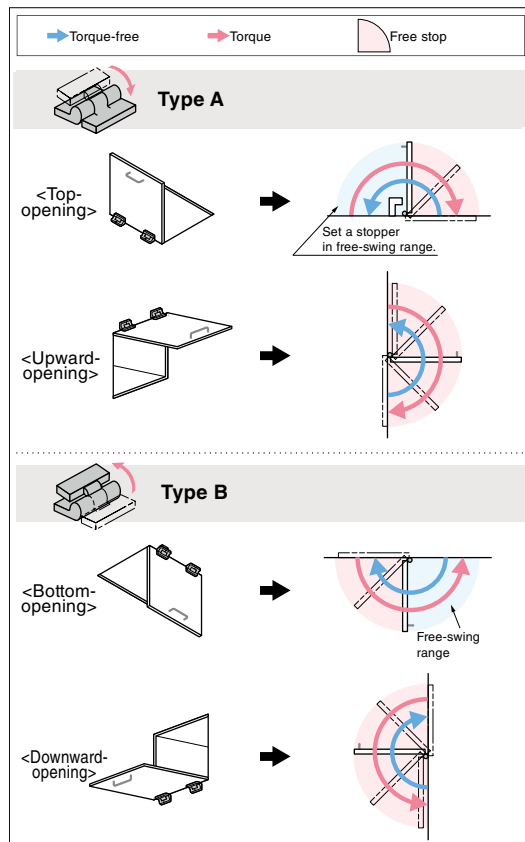
Free stop

Passed 20,000 open/
close private cycle tests

[Application Example]



[Torque Direction and Free-stop Range]



- Friction in one direction only: Allows for frictionless handling of the doors in the opposite direction.
- Can be used horizontally or vertically.

[Applications]

- Medical equipment, inspection equipment, various automatic devices

[Remarks]

- Be sure to read the "Cautions" 1.
- Set a stopper in free-swing range (see the figure below for details).
- When installing, ensure that both hinge shafts are aligned.
- In consideration of torque decrease due to aging, temperature, humidity, etc., the torque at shipping is set relatively high.
- A caution sticker is attached to keep the hinge from opening and closing during transport. Remove when installing the product.
- Install a catch or latch as well to keep lids or doors from sagging open.

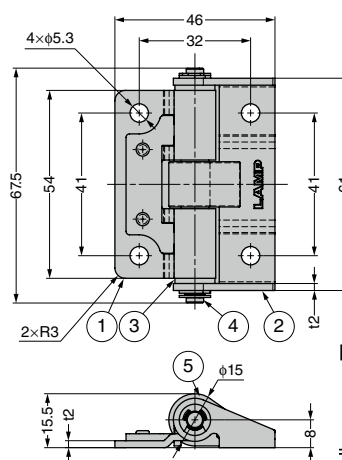
[Recommended Screws]

- M5 screws

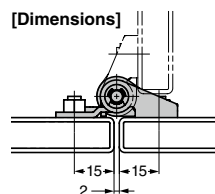
Selection Tool



Sasuga-kun

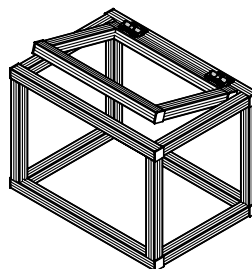


[Dimensions]



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Fixing Tube	Polycetal (POM)	Black
④	Shaft	Stainless Steel	-
⑤	Housing	Zinc Alloy	Nickel

[Aluminium Installation Frame]



Available for installation on aluminium frames of □30 or less.

RoHS	CAD	Item Code	Item Name	Torque Working Direction	Torque N-m	Torque kgf-cm	Weight (g)
6	3D	170-049-851	HG-TQS15-A	Hinge Opening Direction	1.5 ± 40% 20%	15.3 ± 40% 20%	89
6	3D	170-046-655	HG-TQS15-B	Hinge Closing Direction			

Refer to 1 : P.43

TORQUE HINGE **HG-TS**

SUS



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

[Specifications]

- Operating temperature: -10°C~50°C
- Operating humidity: 90%RH or less

[Applications]

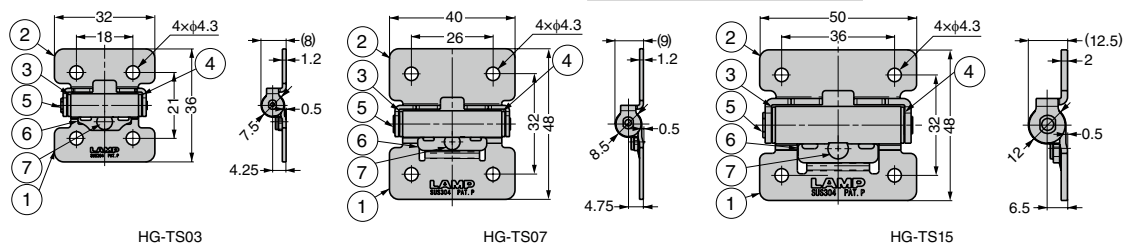
- Stereo equipment, FA equipment, and various automatic equipment

[Remarks]

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

[Application Example]**Selection Tool**

Sasuga-kun

TORQUE
HINGESDAMPER
HINGESLIFT
ASSIST
HINGESDETENT
HINGESCONCEALED
HINGESBUTT
HINGESPIANO
HINGESSTEP
HINGESLIFT-
OFF
HINGESPIVOT
HINGESSPRING
HINGESCLEAN
ROOM
HINGESHINGES FOR
ALUMINIUM
FRAMEDROP
HINGESGLASS
DOOR
HINGESSPECIAL
HINGES

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

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

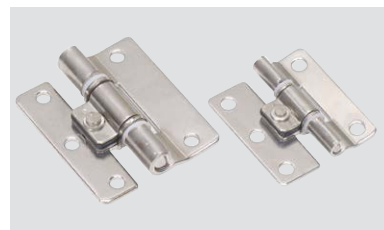
RoHS	CAD	Item Code	Item Name	Torque N·m/pc※	Torque kgf·cm/pc※	Weight (g)	Box (pcs)	Carton (pcs)
✓	3D	170-018-501	HG-TS03	0.35 +40% -20%	3.6 +40% -20%	15.0	50	500
✓	3D	170-018-502	HG-TS07	0.7 +40% -20%	7.1 +40% -20%	27.5	50	500
✓	3D	170-018-503	HG-TS15	1.5 +40% -20%	15.3 +40% -20%	64.1	20	200

Refer to **1** : P.43

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

STAINLESS STEEL TORQUE HINGE **SFTH**

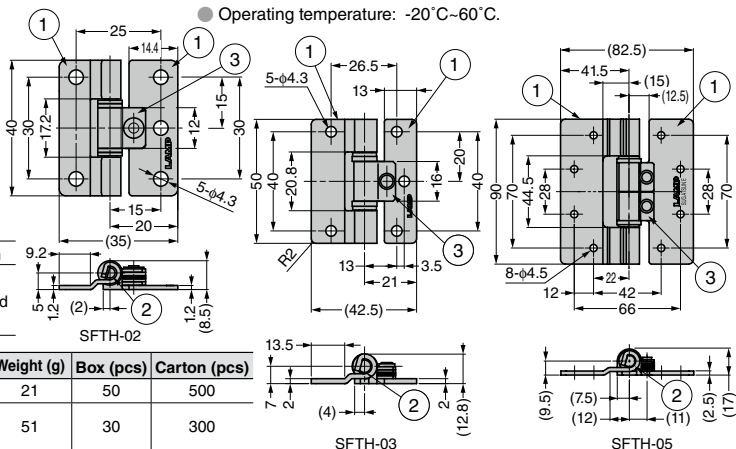
SUS



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

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

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



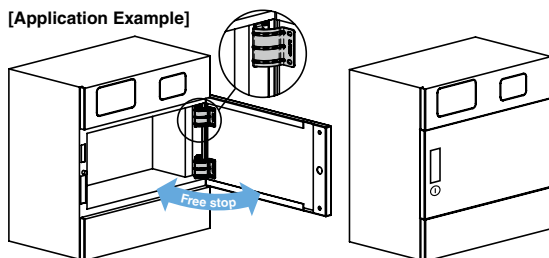
ONE WAY CONCEALED TORQUE HINGE HG-TQU15



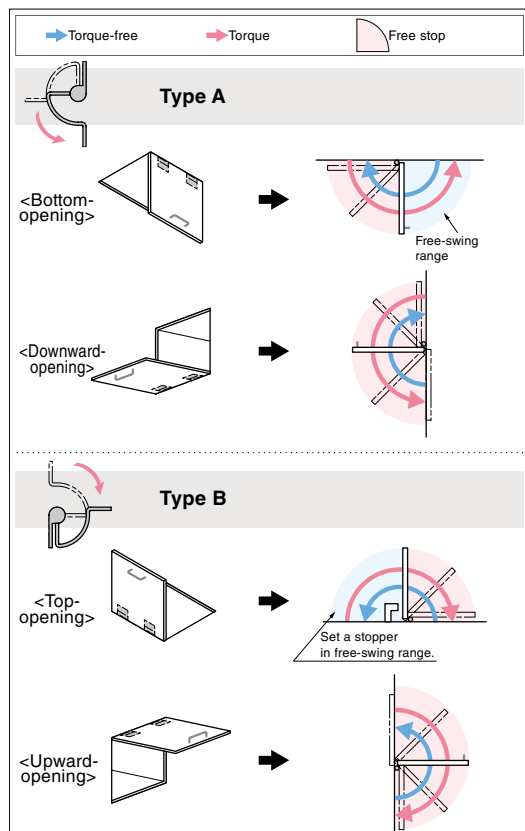
Free stop

Passed 20,000 open/
close private cycle tests

[Application Example]



[Torque Direction and Free-stop Range]



*Figure shows torque direction.
Check the actual opening and closing angles in the Reference Dimensions.

- Friction in one direction only: Allows for frictionless handling of the doors in the opposite direction.
- Can be used horizontally or vertically.

[Applications]

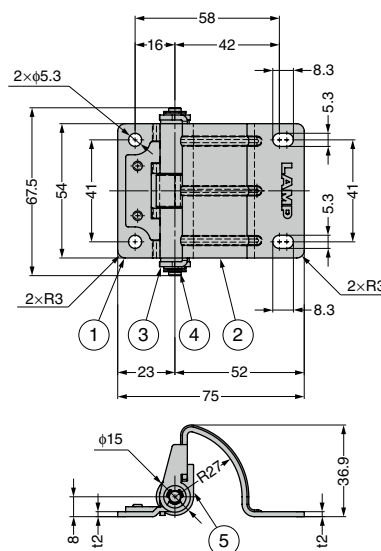
- Medical equipment, inspection equipment, various automatic devices

[Remarks]

- Be sure to read the "Cautions" 1.
- Set a stopper in free-swing range (see the figure below for details).
- When installing, ensure that both hinge shafts are aligned.
- In consideration of torque decrease due to aging, temperature, humidity, etc., the torque at shipping is set relatively high.
- A caution sticker is attached to keep the hinge from opening and closing during transport. Remove when installing the product.
- Install a catch or latch as well to keep lids or doors from sagging open.

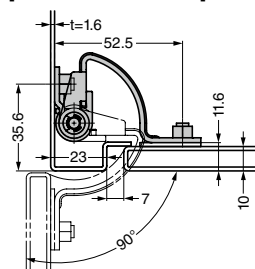
[Recommended Screws]

- M5 screws



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Fixing Tube	Polyacetal (POM)	Black
④	Shaft	Stainless Steel	-
⑤	Housing	Zinc Alloy	Nickel

[Reference Dimensions]



Selection Tool



Sasuga-kun

RoHS	CAD	Item Code	Item Name	Torque Working Direction	Torque N·m	Torque kgf·cm	Weight (g)
		170-049-852	HG-TQU15-A	Hinge Opening Direction	1.5 \pm 40% 20%	15.3 \pm 40% 20%	145
		170-046-656	HG-TQU15-B	Hinge Closing Direction			

Refer to 1 : P.43

ONE WAY CONCEALED TORQUE HINGE HG-TQWA15 Wide-opening



- Friction in one direction only: Allows for frictionless handling of the doors in the opposite direction.
- Can be used horizontally or vertically.

[Applications]

- Medical equipment, inspection equipment, various automatic devices

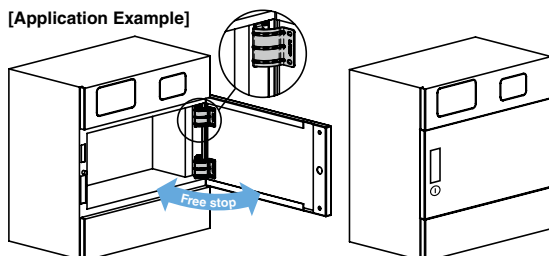
[Remarks]

- Be sure to read the "Cautions" 1D.
- Set a stopper in free-swing range (see the figure below for details).
- When installing, ensure that both hinge shafts are aligned.
- In consideration of torque decrease due to aging, temperature, humidity, etc., the torque at shipping is set relatively high.
- A caution sticker is attached to keep the hinge from opening and closing during transport. Remove when installing the product.
- Install a catch or latch as well to keep lids or doors from sagging open.

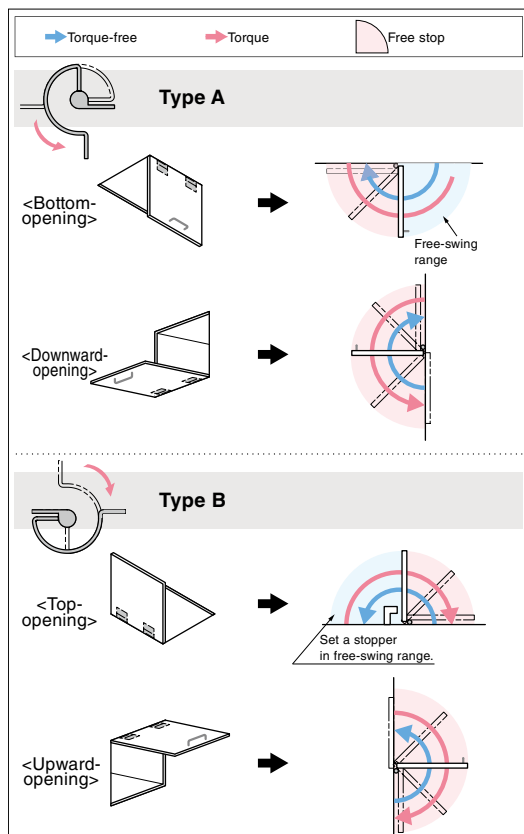
[Recommended Screws]

- M5 screws

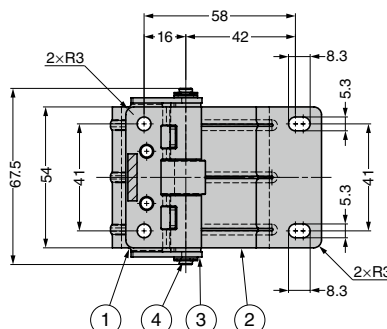
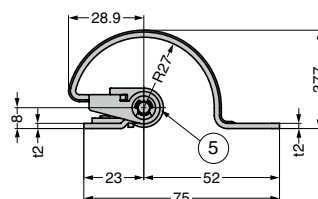
[Application Example]



[Torque Direction and Free-stop Range]

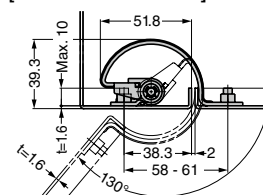


*Figure shows torque direction.
Check the actual opening and closing angles in the Reference Dimensions.



No.	Part Name	Material	Finish/Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Fixing Tube	Polyacetal (POM)	Black
④	Shaft	Stainless Steel	-
⑤	Housing	Zinc Alloy	Nickel

[Reference Dimensions]



Selection Tool

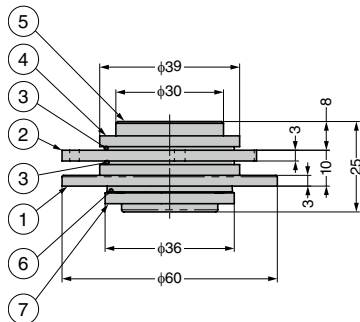
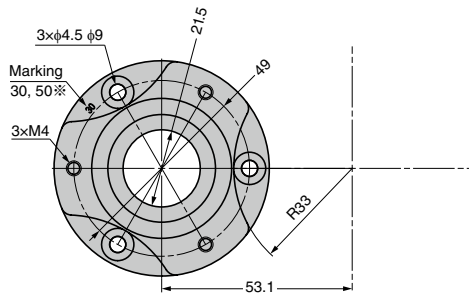


Sasuga-kun

RoHS	CAD	Item Code	Item Name	Torque Working Direction	Torque N-m	Torque kgf-cm	Weight (g)
		170-049-853	HG-TQWA15-A	Hinge Opening Direction	1.5 ± 40% 20%	15.3 ± 40% 20%	183
		170-046-657	HG-TQWA15-B	Hinge Closing Direction			

Refer to 1D : P.43

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

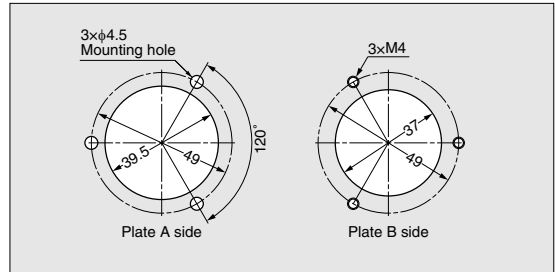


※30: HG-S30-21, 50: HG-S50-21.

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

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

[Cut Out Dimensions]



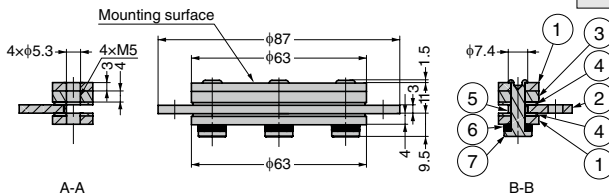
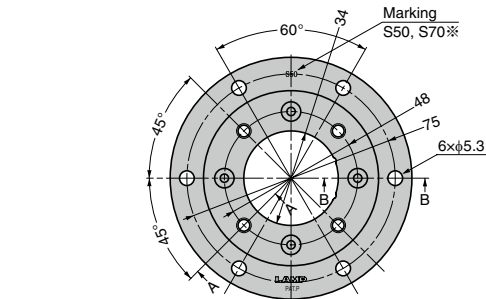
[Installation]



Video Link



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

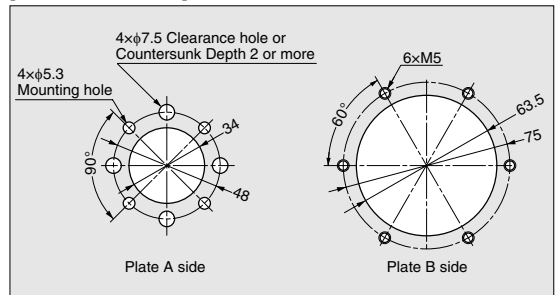


※S50: HG-S50-34, S70: HG-S70-34.

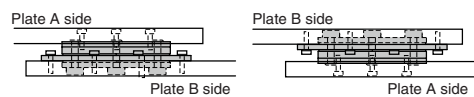
Max. load capacity : 400N (40.8kgf)/pc

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

[Cut Out Dimensions]



[Installation]



Video Link



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

TORQUE HINGE (DUAL AXIS) HG-T70S30



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

[Specifications]

- Operating temperature: 0°C~40°C

[Applications]

- LCD, monitoring camera, etc.

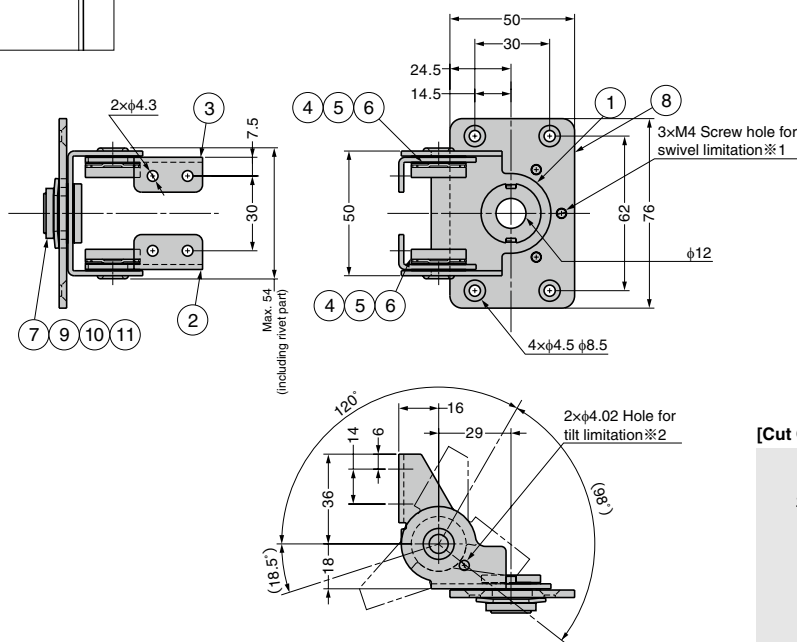
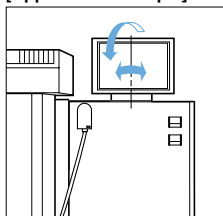
[Remarks]

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

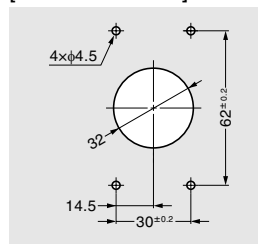
Video Link



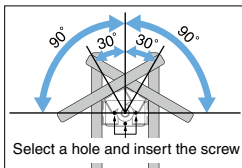
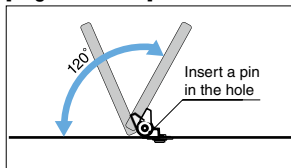
[Application Example]



[Cut Out Dimensions]



[Angle Limitation]

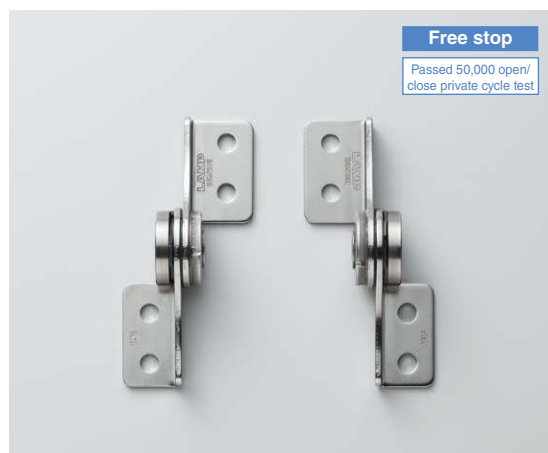


No.	Part Name	Material	Finish
①	Base	Stainless Steel (SUS430)	Barrel Polished
②	Bracket L		
③	Bracket R		
④	Spring Washer	Steel (SK85)	-
⑤	F Plate B	Bronze	
⑥	Shaft	Stainless Steel (SUS303)	
⑦	Sleeve	Stainless Steel (SUS430)	Barrel Polished
⑧	Base plate		
⑨	F Plate		
⑩	Washer	Stainless Steel (SUS430)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

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

Refer to 1 : P.43

TORQUE HINGE HG-TC45H



- With wire hole.
- Excellent durability.

[Specifications]

- Operating temperature: 0°C ~ 40°C

[Applications]

- LCD, monitoring camera, etc.

[Remarks]

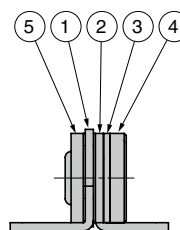
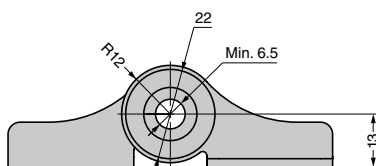
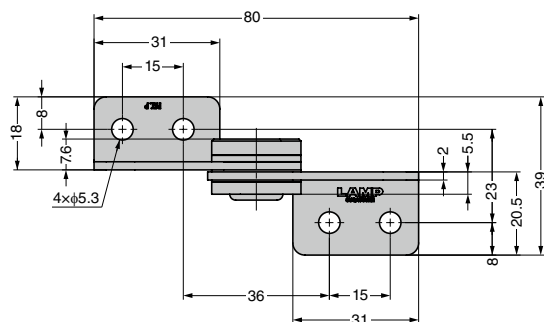
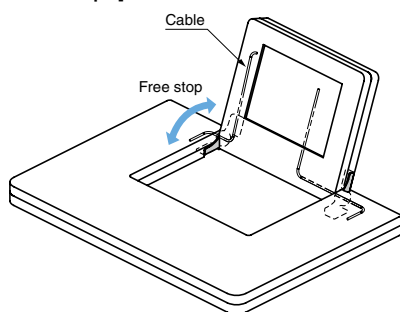
- Be sure to read the "Cautions" **1**.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.

Selection Tool



Sasuga-kun

[Application Example]



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

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

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

Refer to **1** : P.43

STAINLESS STEEL TORQUE HINGE HG-TAS

SUS



- Stainless steel construction suitable for corrosive environments.

[Specifications]

- Operating temperature: 0°C ~ 40°C

[Applications]

- LCD, monitoring camera, etc.

[Remarks]

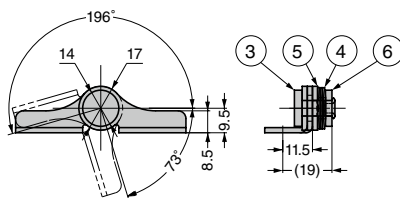
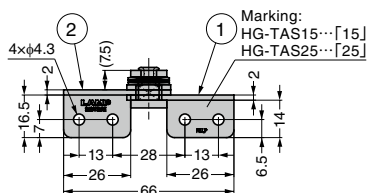
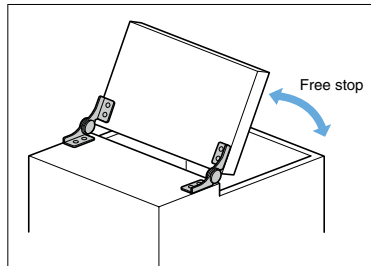
- Be sure to read the "Cautions" 1.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.

Selection Tool

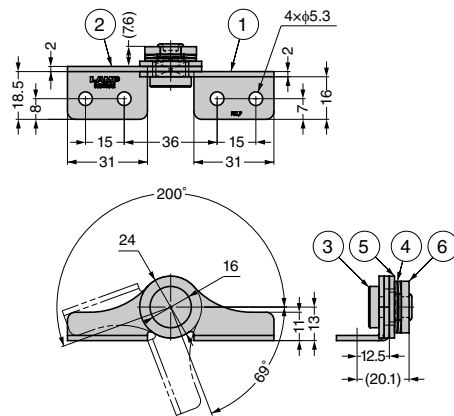


Sasuga-kun

[Application Example]



HG-TAS15L, 25L



HG-TAS40L

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

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

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

Refer to 1 : P.43

ADJUSTABLE TORQUE HINGE **HG-TASJ40****SUS**

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

[Specifications]

- Operating temperature: 0°C ~ 40°C

[Remarks]

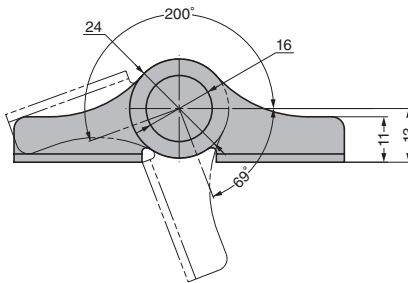
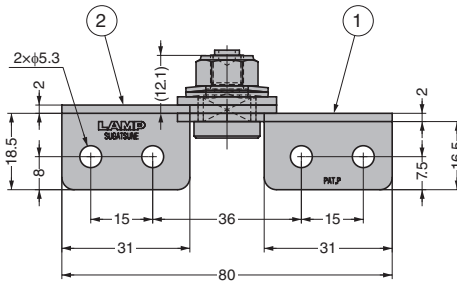
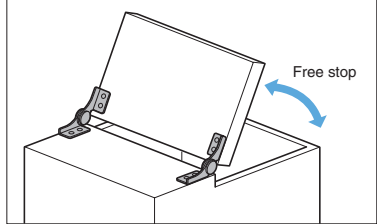
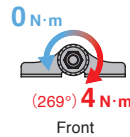
- Be sure to read the "Cautions" **1**.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Use a spanner (nominal size 13) for torque adjustment.
- Do not forcibly remove the torque adjustment nut.
- The factory setting of torque is 4.0N · m. Adjust if necessary.

Selection Tool

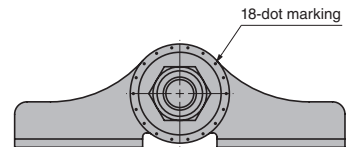
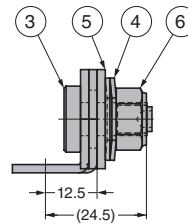
Sasuga-kun

[Application Example]

Adjustable with wrench
(a nominal diameter 13).



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



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

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

Refer to **1** : P.43

TORQUE
HINGESDAMPER
HINGESLIFT
ASSIST
HINGESDETENT
HINGESCONCEALED
HINGESBUTT
HINGESPIANO
HINGESSTEP
HINGESLIFT-
OFF
HINGESPIVOT
HINGESSPRING
HINGESCLEAN
ROOM
HINGESHINGES FOR
ALUMINIUM
FRAMEDROP
HINGESGLASS
DOOR
HINGESSPECIAL
HINGES

STAINLESS STEEL TORQUE HINGE HG-TBS

SUS



● Stainless steel construction suitable for corrosive environments.

[Specifications]

● Operating temperature: 0°C ~ 40°C

[Applications]

● LCD, monitoring camera, etc.

[Remarks]

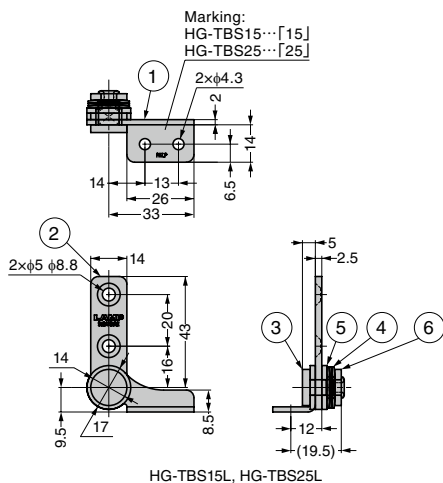
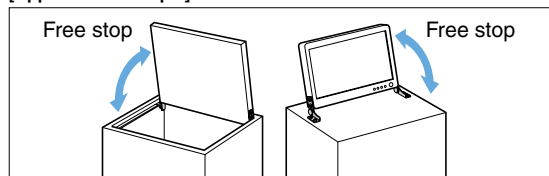
- Be sure to read the "Cautions" 1.
- For pair using: Please use the same torque in both hinges.
- When installing, ensure that both hinge shafts are levelled and aligned.

Selection Tool

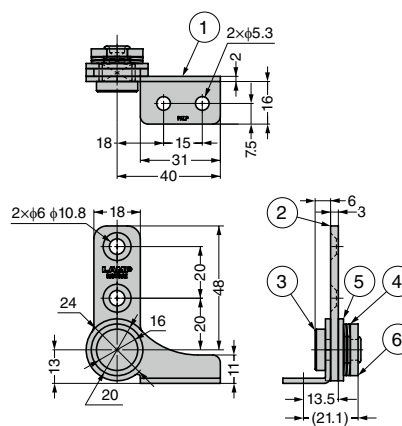


Sasuga-kun

[Application Example]



HG-TBS15L, HG-TBS25L



HG-TBS40L

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

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

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

Refer to 1 : P.43

ADJUSTABLE TORQUE HINGE **HG-TBSJ40****SUS**

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

[Specifications]

- Operating temperature: 0°C ~ 40°C

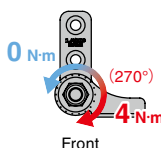
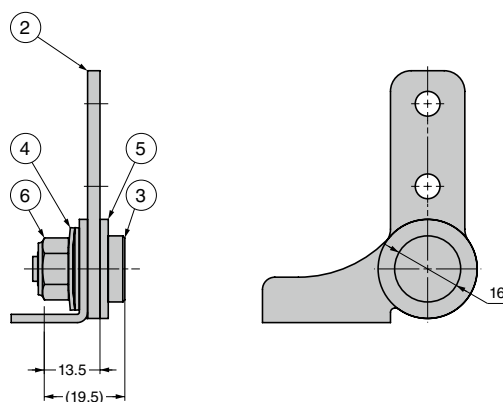
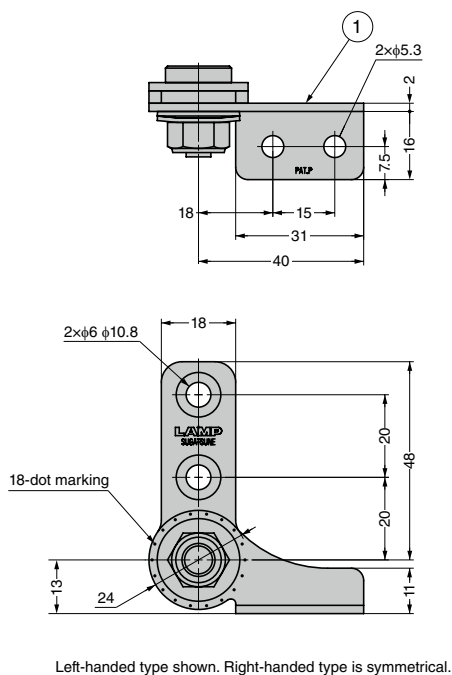
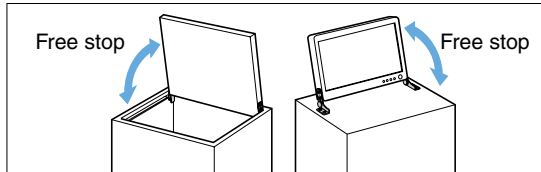
[Remarks]

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

Selection Tool

Sasuga-kun

Adjustable with
a hex key 13.

**[Application Example]**

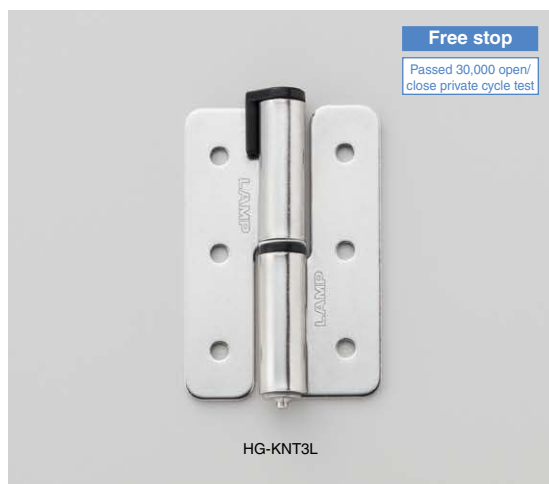
No.	Part Name	Material	Finish
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Base		
③	Shaft	Stainless Steel (SUS303)	—
④	Spring Washer	Stainless Steel (SUS304)	
⑤	Plate		Barrel Polished
⑥	Lock Nut	Stainless Steel	—

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

Refer to **1** : P.43

LIFT-OFF TORQUE HINGE HG-KNT

INSTRUCTION



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

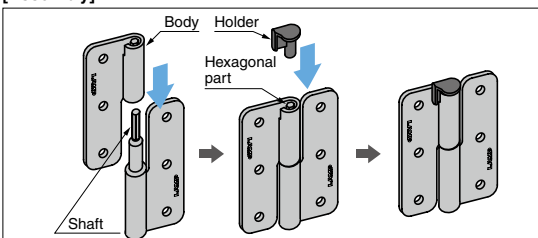
[Applications]

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

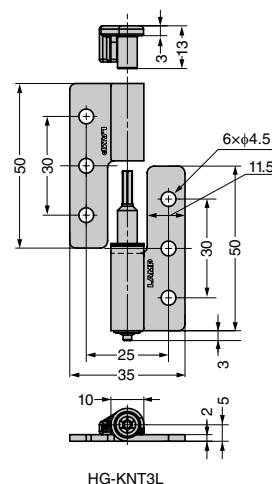
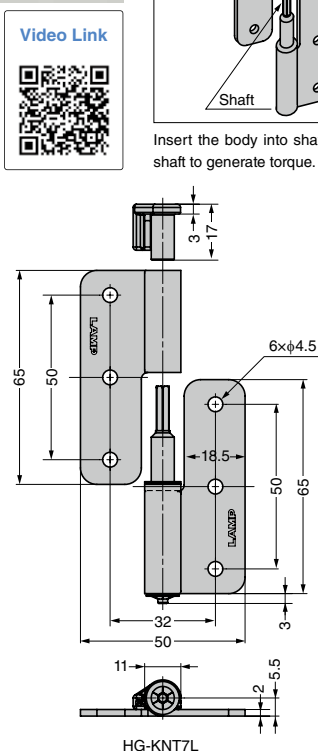
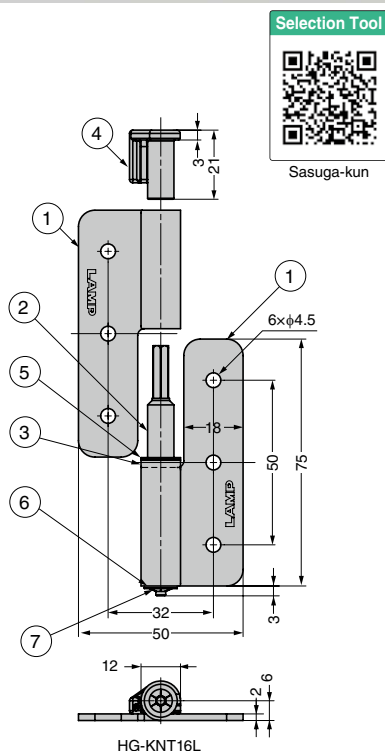
[Remarks]

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

[Assembly]



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



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

No.	Part Name	Material	Finish / Colour
①	Body	Stainless Steel (SUS304)	Barrel Polished
②	Shaft	Stainless Steel (SUS303)	—
③	Plug	POM	Black
④	Holder	PA	
⑤	Washer	PTFE	Natural
⑥	Washer	POM	
⑦	Push Nut	Stainless Steel (SUS304)	—

RHS	CAD	Item Code	Item Name	Type	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
6	3D	170-035-380	HG-KNT3L	Left-handed	0.3 ^{±67%}	3.1 ^{±67%}	42	50	200
6	3D	170-035-381	HG-KNT3R	Right-handed				50	200
6	3D	170-035-382	HG-KNT7L	Left-handed	0.7 ^{±36%}	7.1 ^{±36%}	76	40	160
6	3D	170-035-383	HG-KNT7R	Right-handed				40	160
6	3D	170-035-384	HG-KNT16L	Left-handed	1.6 ^{±20%}	16.3 ^{±20%}	96	30	120
6	3D	170-035-385	HG-KNT16R	Right-handed				30	120

Refer to 1 : P.43

DAMPER HINGE HG-JH14-50 Stainless Steel Bracket



INSTRUCTION

SUS



Sold in pairs.

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

[Applications]

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

[Remarks]

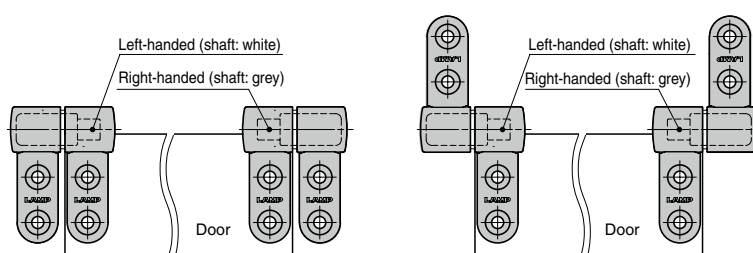
- Be sure to read the "Cautions" **2**.
- Install a stopper such as a stay at the lid opening/closing position (0~115 degree or less) for not exceeding the specified rotation range. Damper may be damaged if exceeding the rotation range.
- When installing, ensure that both hinge shafts are levelled and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

Selection Tool

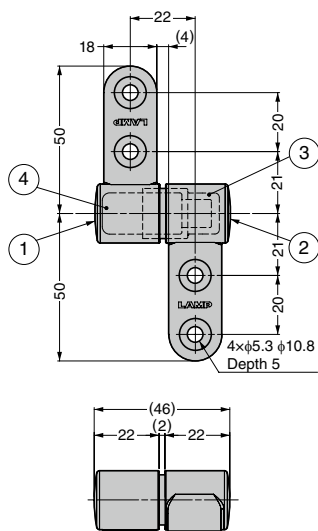


Sasuga-kun

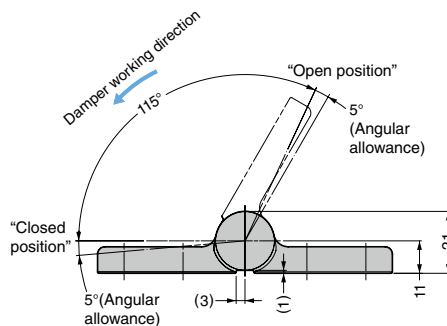
[Installation]



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



Left-handed type shown.



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

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

Refer to **1** : P.117, **2** : P.43

STAINLESS STEEL LIFT-ASSIST HINGE HG-JH210

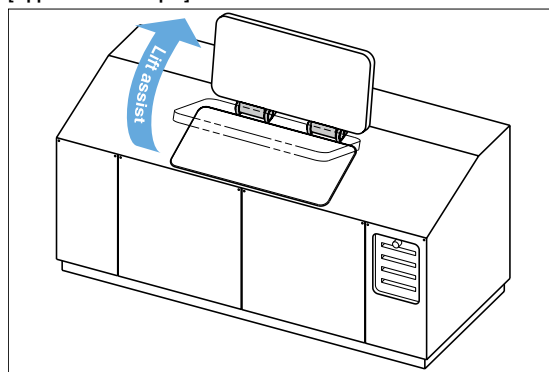


INSTRUCTION

SUS316



[Application Example]



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

[Specifications]

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

[Applications]

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

[Remarks]

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

[Calculation Formula and Graph of Moment]

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

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

$$\text{Residual moment } Mz = Mh - Mt$$

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

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

The meaning of residual moment $Mz = (Mh - Mt)$ is as follows.

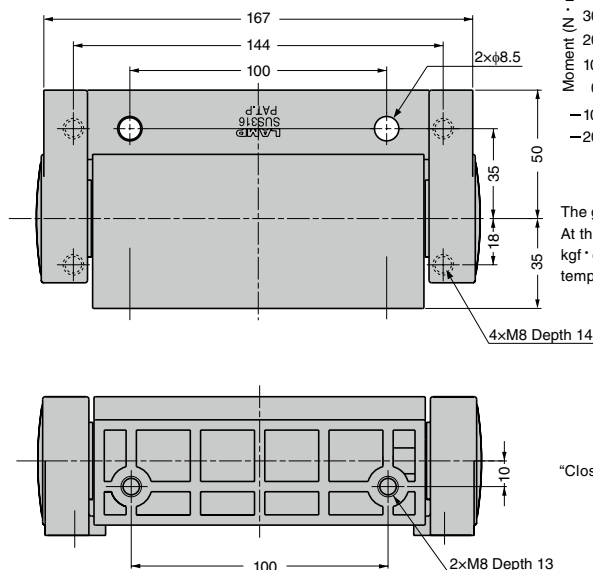
- “-” means that the force is applied in the closing direction of lid.
- “+” means that the force is applied in the opening direction of lid.

Selection Tool

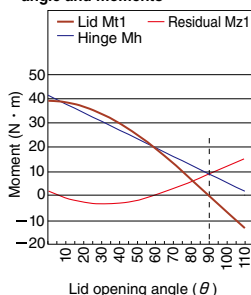


Sasuga-kun

Video Link

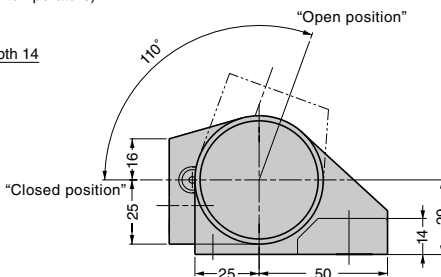
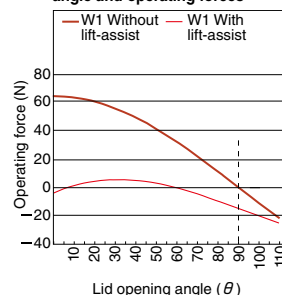
TORQUE
HINGESDAMPER
HINGESLIFT
ASSIST
HINGESDETENT
HINGESCONCEALED
HINGESBUTT
HINGESPIANO
HINGESSTEP
HINGESLIFT-
OFF
HINGESPIVOT
HINGESSPRING
HINGESCLEAN
ROOM
HINGESHINGES FOR
ALUMINIUM
FRAMEDROP
HINGESGLASS
DOOR
HINGESSPECIAL
HINGES

Relationship between lid opening angle and moments



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

Relationship between lid opening angle and operating forces



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

※SCS14 is equivalent to SUS316.


<https://global.sugatsune.com/>

Industrial Component Hardware Catalogue
No.400

LIFT-OFF HINGE (WELD-ON) HG-LSH

SUS



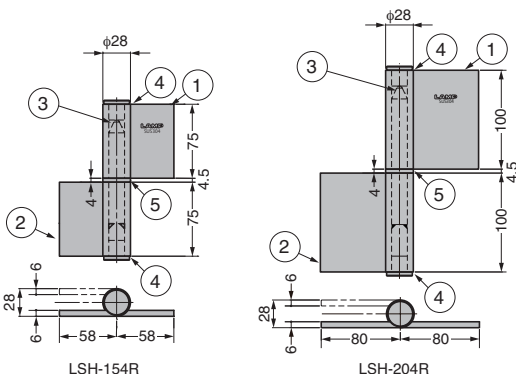
- Uses 6mm thick stainless steel for heavy duty doors.
- Oilless ring provides smooth movement.

[Applications]

- Large doors, gate doors, and other rotation mechanism of heavy objects, etc.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1.



No.	Part Name	Material	Finish
①	Door Side Leaf	Stainless Steel (SUS304)	Satin
②	Frame Side Leaf		Plain
③	Pin		
④	Finial		
⑤	Ring		

※ Open/close test under the following conditions:

Three hinges used vertically, door size W900×H2000

When using HG-LSH-154: Door weight 250kg

When using HG-LSH-204: Door weight 280kg

RHS	CAD	Item Code	Item Name	Type	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
①	③	170-034-219	HG-LSH-154L	Left-handed	1961	200	1020	6	12
②	③	170-034-220	HG-LSH-154R	Right-handed				6	12
③	③	170-034-221	HG-LSH-204L	Left-handed	2177	222	1540	—	6
④	③	170-034-222	HG-LSH-204R	Right-handed				—	6

Refer to 1 : P.43

HEAVY-DUTY STAINLESS STEEL BUTT HINGE (INSTALLATION HOLE TYPE) HG-LSW

SUS



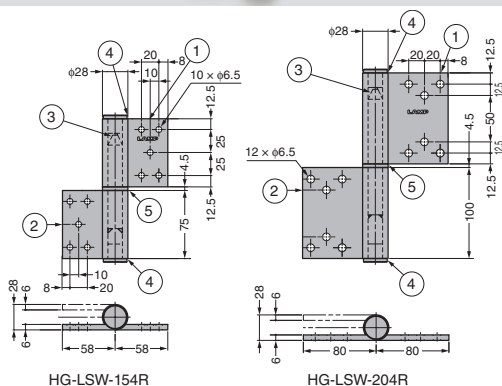
- Made from 6 mm thick stainless steel.
- Made with special rings (oiled bearings) for smooth movement.

[Application]

- Rotating mechanisms for large doors, gates and other heavy objects.

[Remarks]

- Load capacity is the value when using two hinges. For calculation conditions, please refer to INDEX 1.



Selection Tool

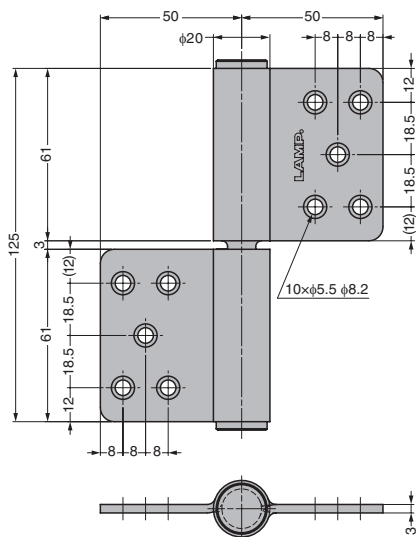
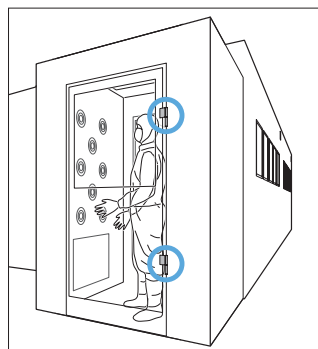


Hinge Selection

No.	Part Name	Material	Finish
①	Door Side Hinge Plate	Stainless Steel (SUS304)	Satin
②	Frame Side Hinge Plate		Plain
③	Pin		
④	Head Cap		
⑤	Ring		Barrel Polished

RHS	CAD	Item Code	Item Name	Type	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Box (pcs)	Carton (pcs)
①	③	170-041-019	HG-LSW-154L	Left Side	1960	200	6	12
②	③	170-041-020	HG-LSW-154R	Right Side			6	12
③	③	170-041-021	HG-LSW-204L	Left Side	2180	222	—	6
④	③	170-041-022	HG-LSW-204R	Right Side			—	6

Refer to 1 : P.43



Drawing above is HG-CV-127R.

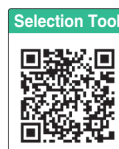
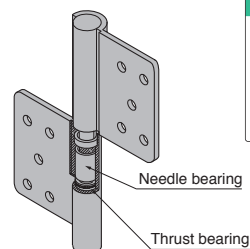
- Suitable for use in a clean room.
- Built-in thrust bearing and needle bearing reduce metal-to-metal friction.
- Seal of rotating part prevents metal powder from scattering.
- Welded curl part provides excellent durability.

[Applications]

- Semiconductor manufacturing equipment, clean room, etc.

[Remarks]

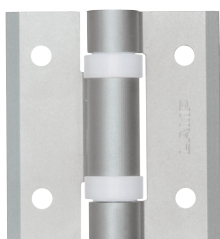
- Install the shaft downwards on the door side.
- Load capacity and open/close test under the following conditions: door size H2000×W900mm, door weight 100kg, two hinges used, installation pitch 1600mm.
- The shaft may be difficult to pull out because there is very little clearance in the structure. Forceful removal may result in damage.



Hinge Selection

RH#s	CAD	Item Code	Item Name	Type	Material	Finish	Load Capacity N/2 pcs	Load Capacity kgf/2 pcs	Weight (g)	Box (pcs)	Carton (pcs)
		170-013-013	HG-CV-127L	Left-handed	Stainless Steel	Satin/	981	100	388	10	50
		170-014-422	HG-CV-127R	Right-handed	(SUS304)	Polished				10	50

CLEAN ROOM TORQUE HINGE HG-CVT



Free stop

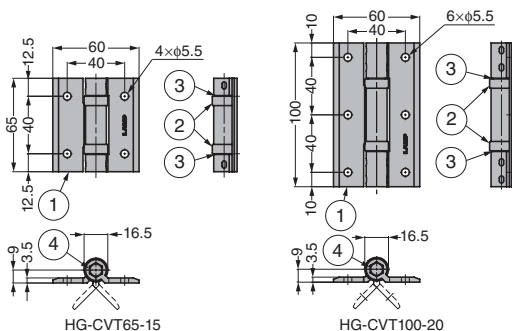
- Retains the door at any angle.
- Plastic caps at rotating part prevent metal-to-metal friction and metal powder scattering.
- Can be used horizontally or vertically.

[Applications]





- Semiconductor manufacturing equipment, clean room, aluminium frame, household equipment, etc.

[Remarks]

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



No.	Part Name	Material	Finish / Colour
①	Body	Aluminium Alloy	Anodised Silver
②	Cap	POM	Natural
③	Washer	PTFE	White
④	Shaft	Stainless Steel (SUS303)	—

RoHS	CAD	Item Code	Item Name	Torque N·m	Torque kgf·cm	Weight (g)
		170-053-302	HG-CVT65-15	1.5 $\pm 30\%$	15.3 $\pm 30\%$	62
		170-053-303	HG-CVT100-20	2.0 $\pm 25\%$	20.4 $\pm 25\%$	102

Refer to **1** : P.43

TORQUE
HINGES

DAMPER HINGES

LIFT
ASSIST
HINGES

DETENT
HINGES

CONCEALED HINGES

BUTT HINGES

PIANO
HINGES

STEP HINGES

LIFT-OFF HINGES

PIVOT HINGES

SPRING HINGES

**CLEAN
ROOM
HINGES**

HINGES FOR
ALUMINIUM
FRAME

DROP HINGES

GLASS DOOR HINGES

SPECIAL HINGES