

# HIGH-RIGIDITY SWIVEL TORQUE HINGE HG-S50-HR50 Unbalanced Load Type



**Free stop**

Passed 30,000 open/close private cycle test

- Has high rigidity and can handle unbalanced load.
- Can rotate 360° and hold at any angle.
- Centre hole for cable management.
- Rotation angle can be controlled with the supplied angle control bolt.

**[Applications]**

- Operation panel of machine tools and LCD, etc.

**[Others]**

- Usage conditions for vertical mounting is under verification.

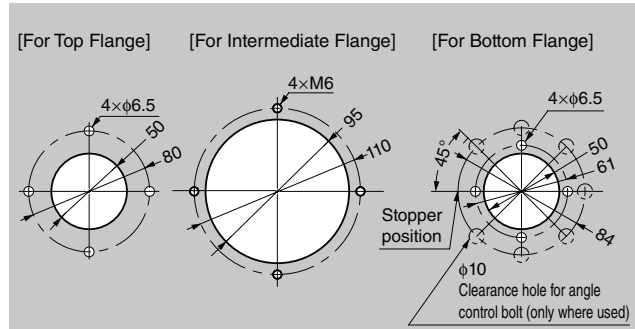
**[Remarks]**

- Be sure to read the "Cautions" [1](#).
- Never turn top flange screws (6 pcs), at risk of malfunction.

**[Parts Included]**

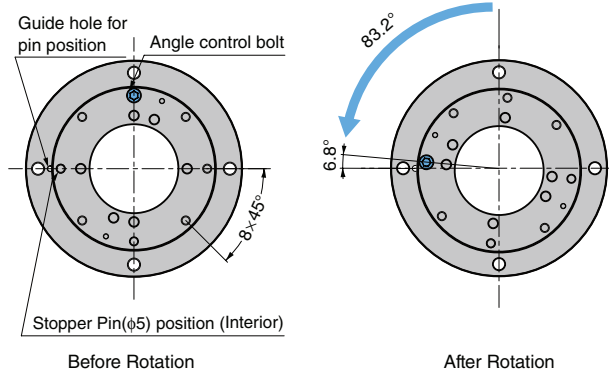
- Hexagon Socket Head Cap Screw M5x14 (2 pcs) for angle control
- Spring washer 5 (2 pcs)

**[Cut Out Dimensions]**



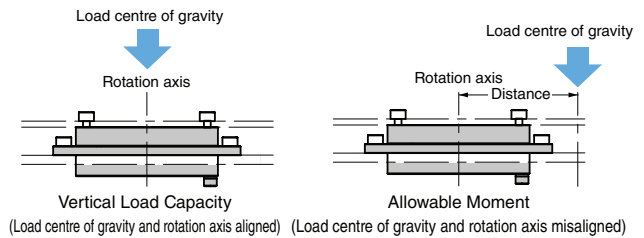
**[Rotation Angle Control Function]**

Rotation angle can be controlled by mounting the supplied angle control bolt.



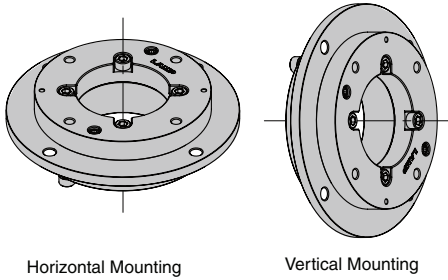
There are 8 angle control screw holes at 45° intervals; the actual rotation angles are 6.8° narrower because the stopper pins are blocked by bolts.

**[Vertical Load Capacity & Allowable Moment]**

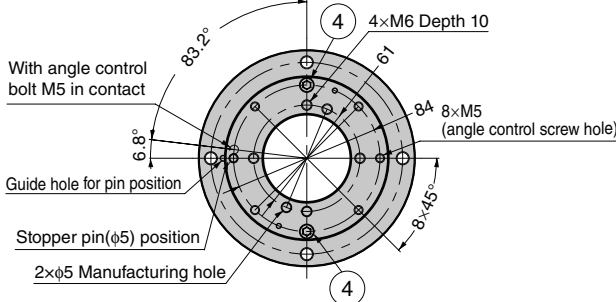
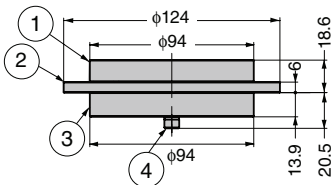
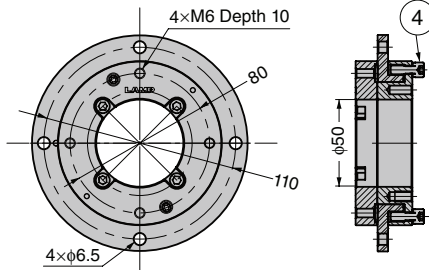
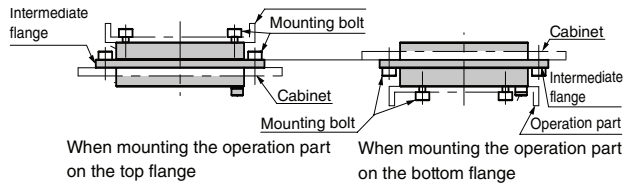


No.	Part Name	Material	Finish / Colour
①	Top Flange	Steel	Clear Zinc Chromate
②	Intermediate Flange		
③	Bottom Flange		
④	Spring Washer Embedded Hexagon Socket Head Cap Screw M5x14	-	-

**[Mounting Direction]**



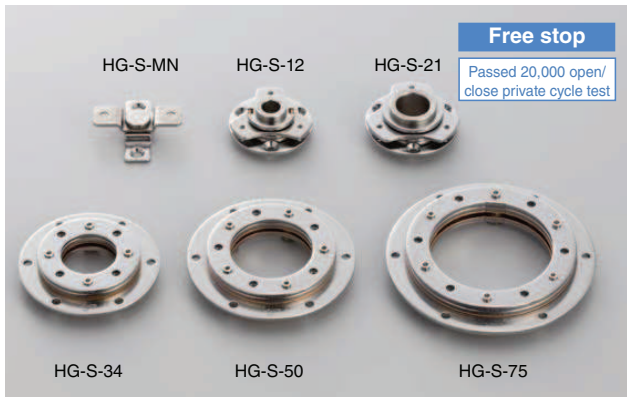
**[Horizontal Installation Example]**



RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque		Vertical Load Capacity		Allowable Moment		Weight (g)
						N·m	kgf·cm	N	kgf	N·m	kgf·cm	
		170-051-124	HG-S50-HR50	124	50	5.0±20%	51.0±20%	600	61.2	80	816	1330

Refer to [1](#): P.43

# SWIVEL TORQUE HINGE HG-S



- HG-S-MN, HG-S-21 and HG-S-75 are newly launched.
- Rotation angle: 360°
- Centre hole for easy cable management (except for HG-S-MN). Five types of hole diameters ( $\phi 12$ ,  $\phi 21.5$ ,  $\phi 34$ ,  $\phi 50$ , and  $\phi 75$ ) are available.

### [Applications]

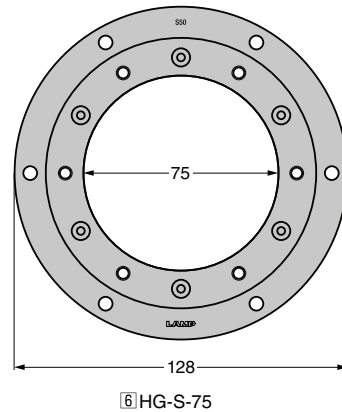
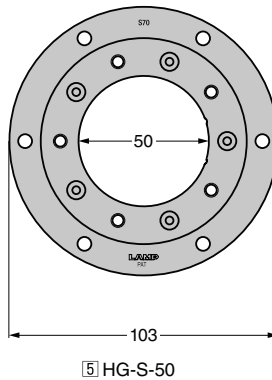
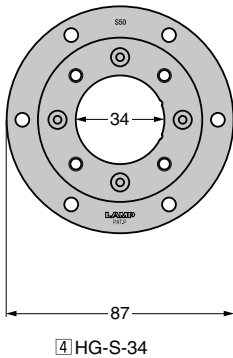
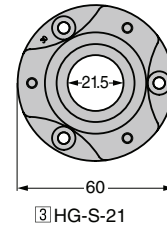
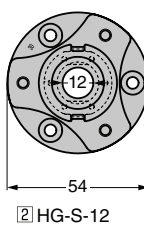
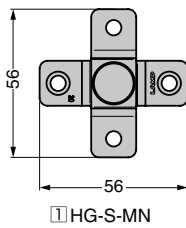
- Operation panel of machine tools and LCD, etc.

### [Remarks]

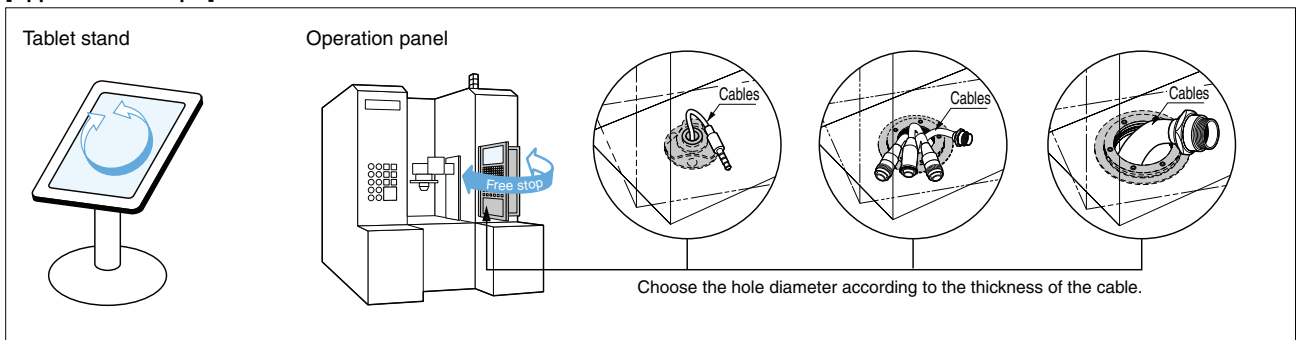
- Be sure to read the "Cautions" **1**.
- Hinges can be used upside down. However, fix the screws from the mounting surface (refer to the "Installation" in relevant pages). Otherwise, the products will not function.
- \* is horizontal use only.

### [Selection Guide]

RoHS	CAD	Item Code	Item Name	No.	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Page
RoHS	CAD	170-029-726	HG-S7-MN	1	56	-	0.7 $\pm 20\%$	7.1 $\pm 20\%$	2
RoHS	CAD	170-029-727	HG-S20-MN				2.0 $\pm 20\%$	20.4 $\pm 20\%$	
RoHS	CAD	170-021-976	HG-S30-12	2	$\phi 54$	12	3.0 $\pm 20\%$	30.6 $\pm 20\%$	3
RoHS	CAD	170-021-975	HG-S50-12				5.0 $\pm 20\%$	51.0 $\pm 20\%$	
RoHS	CAD	170-029-728	HG-S30-21	3	$\phi 60$	21.5	3.0 $\pm 20\%$	30.6 $\pm 20\%$	3
RoHS	CAD	170-029-729	HG-S50-21				5.0 $\pm 20\%$	51.0 $\pm 20\%$	
RoHS	CAD	170-023-959	HG-S50-34	4 *	$\phi 87$	34	5.0 $\pm 20\%$	51.0 $\pm 20\%$	4
RoHS	CAD	170-023-960	HG-S70-34				7.0 $\pm 20\%$	71.4 $\pm 20\%$	
RoHS	CAD	170-023-961	HG-S70-50	5 *	$\phi 103$	50	7.0 $\pm 20\%$	71.4 $\pm 20\%$	4
RoHS	CAD	170-023-962	HG-S100-50				10.0 $\pm 20\%$	102.0 $\pm 20\%$	
RoHS	CAD	170-029-730	HG-S50-75	6 *	$\phi 128$	75	5.0 $\pm 20\%$	51.0 $\pm 20\%$	4
RoHS	CAD	170-029-731	HG-S70-75				7.0 $\pm 20\%$	71.4 $\pm 20\%$	

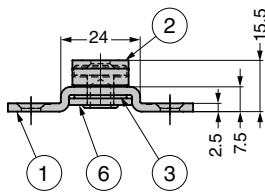
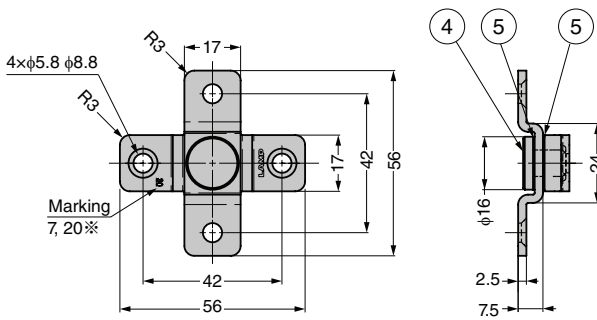


### [Application Example]



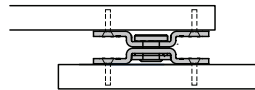
Refer to **1** : P.43, **2** : P.60, **3** : P.61, **4** : P.62

## SWIVEL TORQUE HINGE HG-S-MN Small Type



※7: HG-S7-MN, 20: HG-S20-MN.

### [Installation]



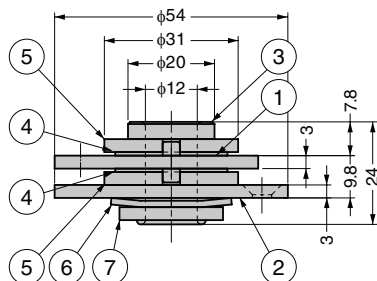
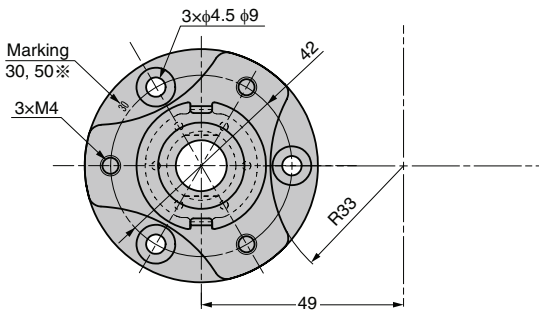
Video Link



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

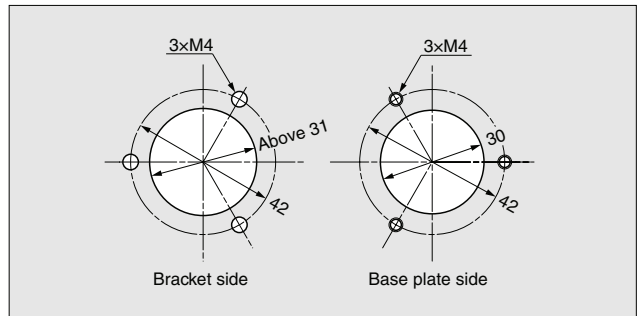
RoHS	CAD	Item Code	Item Name	Size	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
		170-029-726	HG-S7-MN	56	0.7±20%	7.1±20%	48	25	200
		170-029-727	HG-S20-MN		2.0±20%	20.4±20%	49	25	200

## SWIVEL TORQUE HINGE HG-S-12 Hole Dia. φ 12

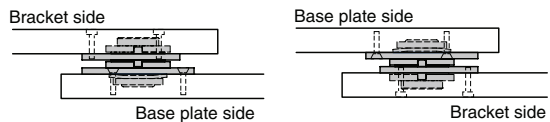


※30: HG-S30-12, 50: HG-S50-12.

### [Cut Out Dimensions]



### [Installation]



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

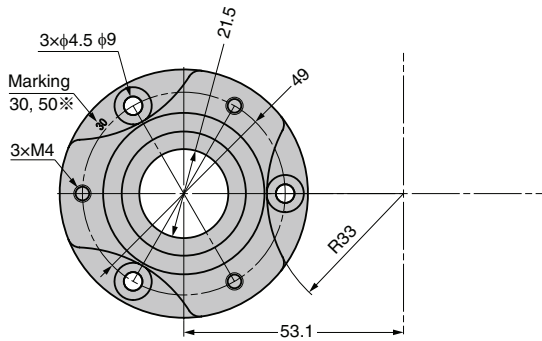
Max. load capacity : 200N (20.4kgf)/pc

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

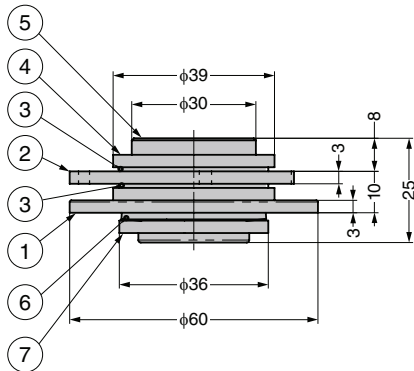
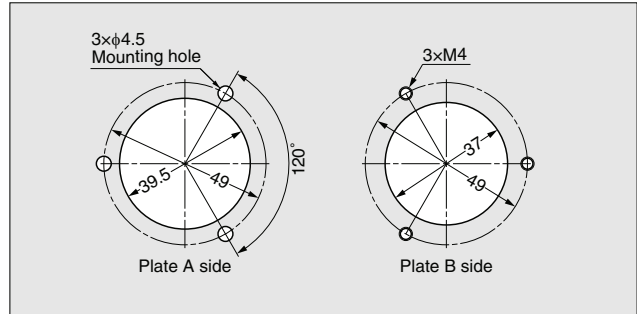
Video Link



## SWIVEL TORQUE HINGE HG-S-21 Hole Dia. $\phi$ 21.5



### [Cut Out Dimensions]



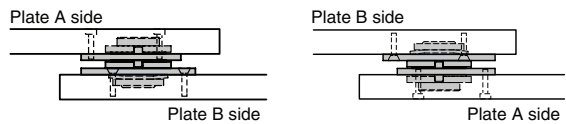
※30: HG-S30-21, 50: HG-S50-21.

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

Video Link



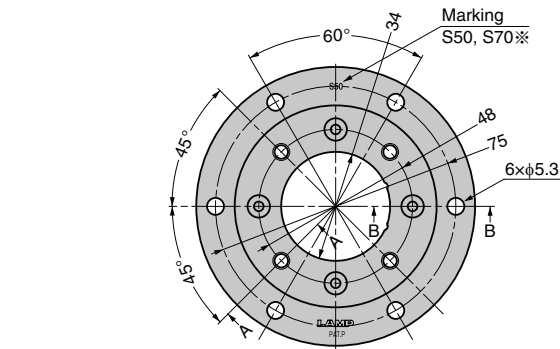
### [Installation]



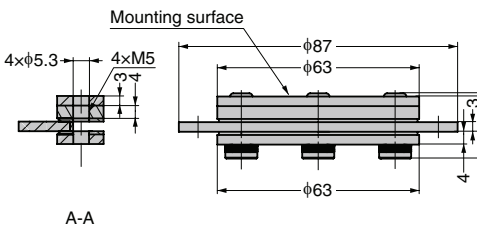
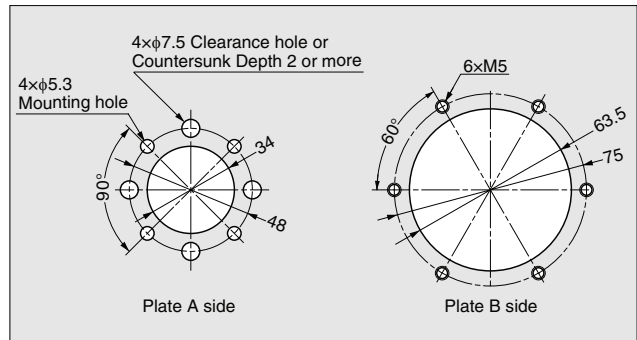
No.	Part Name	Material	Finish
①	Plate B	Stainless Steel (SUS430)	Barrel Polished
②	Plate A		
③	F Plate	Bronze	Barrel Polished
④	Washer	Stainless Steel (SUS430)	Barrel Polished
⑤	Sleeve	Stainless Steel (SUS303)	Plain
⑥	Spring Washer	Stainless Steel	-
⑦	Washer	Stainless Steel (SUS430)	-

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

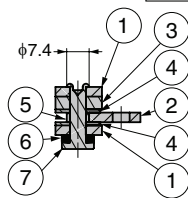
## SWIVEL TORQUE HINGE HG-S-34 Hole Dia. $\phi$ 34



### [Cut Out Dimensions]



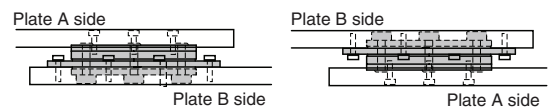
A-A



B-B

※S50: HG-S50-34, S70: HG-S70-34.

### [Installation]



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

Video Link

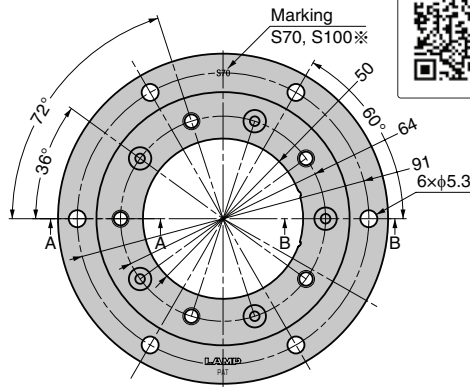


Max. load capacity : 400N (40.8kgf)/pc

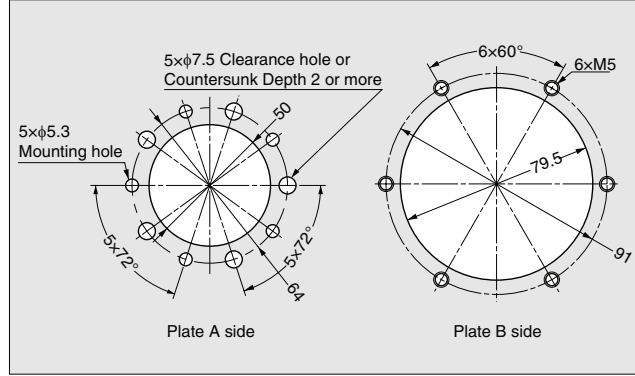
RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
		170-023-959	HG-S50-34	87	34	5.0 $\pm$ 20%	51.0 $\pm$ 20%	280	5	40
		170-023-960	HG-S70-34			7.0 $\pm$ 20%	71.4 $\pm$ 20%	282	5	40

# SWIVEL TORQUE HINGE HG-S-50 Hole Dia. $\phi$ 50

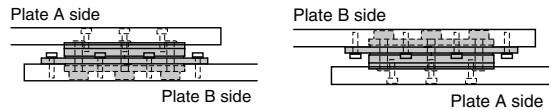
Video Link



### [Cut Out Dimensions]



### [Installation]



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

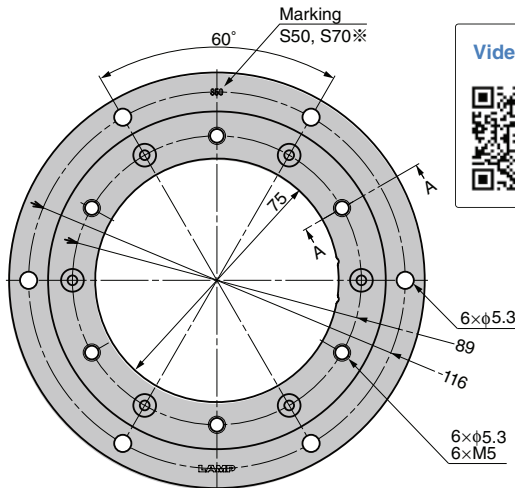
\*S70: HG-S70-50, S100: HG-S100-50.

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

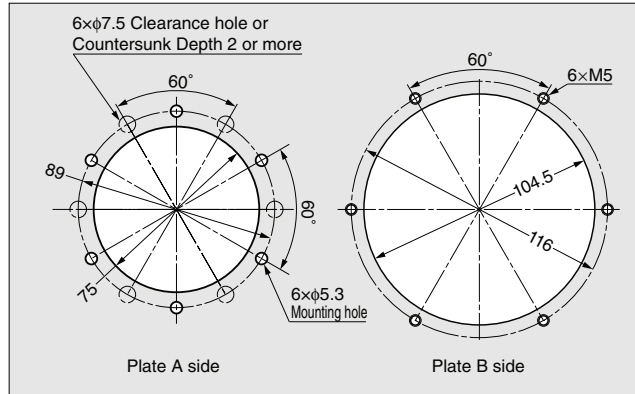
RoHS	CAD	Item Code	Item Name	Size	Hole Diameter	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
		170-023-961	HG-S70-50	103	50	7.0 $\pm$ 20%	71.4 $\pm$ 20%	365	5	40
		170-023-962	HG-S100-50			10.0 $\pm$ 20%	102.0 $\pm$ 20%	371	5	40

# SWIVEL TORQUE HINGE HG-S-75 Hole Dia. $\phi$ 75

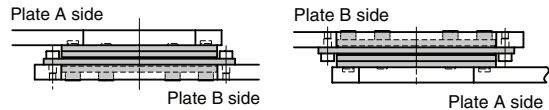
Video Link



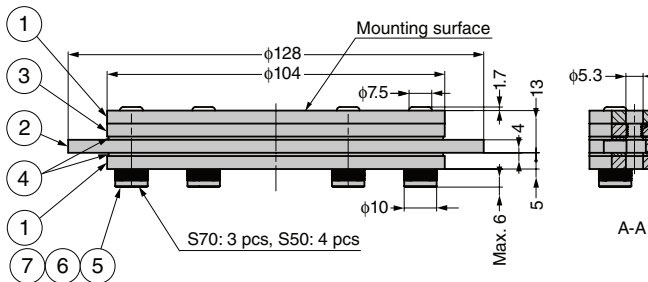
### [Cut Out Dimensions]



### [Installation]



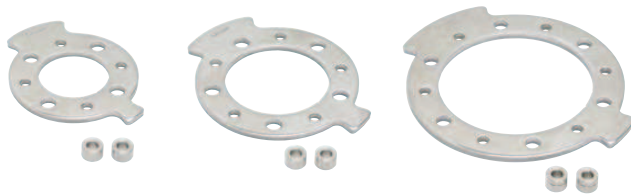
No.	Part Name	Material	Finish
①	Plate A	Stainless Steel (SUS430)	Barrel Polished
②	Plate B		
③	Plate C		
④	F Plate	Bronze	
⑤	Bush	POM	
⑥	Spring Washer	Stainless Steel	
⑦	Shaft	Stainless Steel (SUS303)	



\*S50: HG-S50-75, S70: HG-S70-75.

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

# ANGLE LIMITER PLATE FOR SWIVEL TORQUE HINGE HG-S-ARP

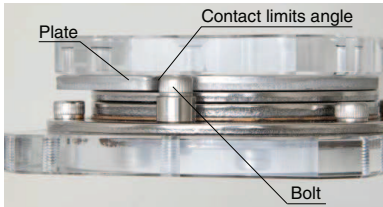


HG-S-34-ARP

HG-S-50-ARP

HG-S-75-ARP

## [Angle limit Mechanism]



The angle is limited by contact between the stopper co-fastening bolt (to be prepared by the customer) and the plate.

- Plate and stopper form a set which can be installed to control the swivel angle of Swivel Torque Hinge HG-S **1**.
- Two swivel directions and five angles can be selected according to the stopper installation position.

## [Other]

- Contact Sugatsune for angles other than 30°, 60°, 90°, 120°, or 150°.

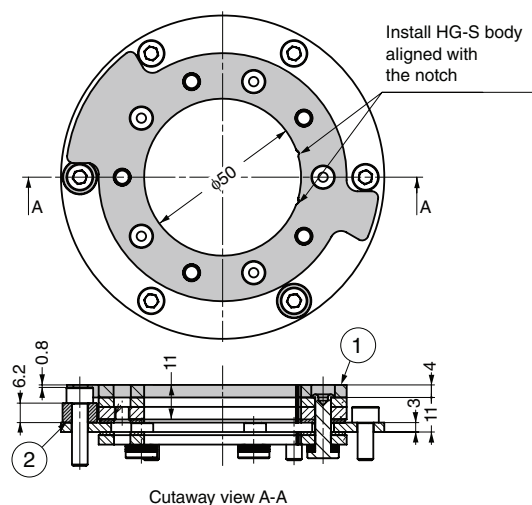
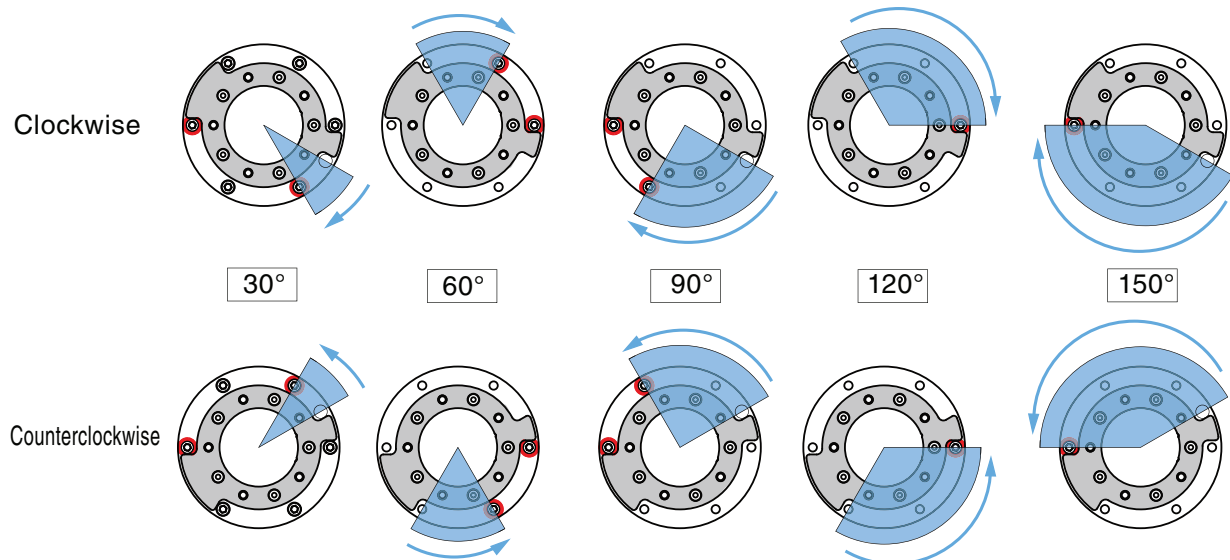
## [Remarks]

- Use screw loosening prevention adhesive when mounting screws.
- To fix the HG-S body, use hex socket head cap bolts (JIS B 1176).

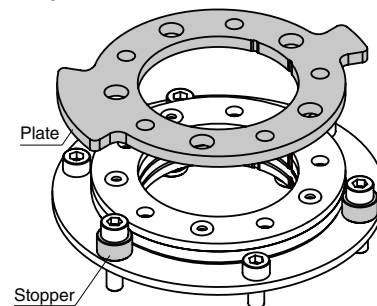
## [Parts Included]

- Stopper
- HG-S-34-ARP: Height 6.2 mm/2 pcs
- HG-S-50-ARP: Height 6.2 mm/2 pcs
- HG-S-70-ARP: Height 7.2 mm/2 pcs (height differs from other models. Cannot be used together.)

## [Stopper Installation Position, Swivel Direction & Control Angle]



## [Part Configuration]



No.	Part Name	Material	Finish
①	Angle limiter Plate	Stainless Steel (SUS430)	Barrel Polished
②	Angle limiter Stopper	Stainless Steel (SUS303)	-

RoHS	CAD	Item Code	Item Name	Corresponding Hinge	Weight (g)
		170-046-597	HG-S-34ARP	HG-S-34	77.6
		170-046-598	HG-S-50ARP	HG-S-50	99.7
		170-046-599	HG-S-75ARP	※HG-S-75	148.5

Refer to **1**: P.58-P.62

※ Corresponding to HG-S50-75 Only (Not to HG-S75-75).