



LIFT-ASSIST HINGE HG-PA SERIES



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

[Specifications]

- Operating temperature: 0°C ~40°C

[Applications]

- Medical equipment, analytical instruments, semiconductor equipment etc.

[Remarks]

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

Video Link

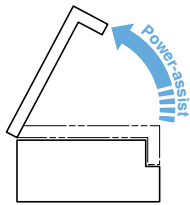


Video Design Tec
Video Lift Assist

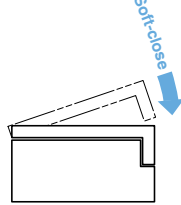


Selection Tool
Sasuga-kun
Applicable Products
Used for Product Selection & Simulation.
Available on Web!

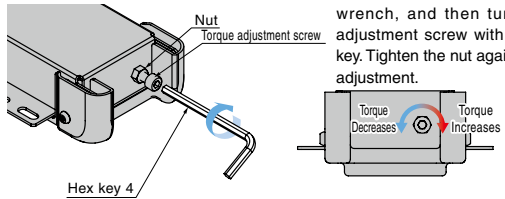
Lift assist function



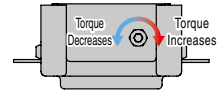
Soft-close function



[How to Adjust Torque]



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



[HG-PA Series]

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

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

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

Please visit by clicking the banner on the website

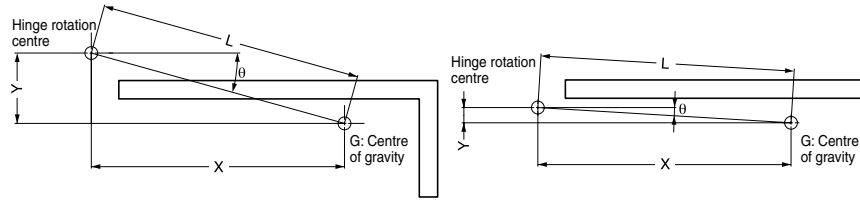


[How to Select] Refer to the following 1~3 for model selection.

1. Calculating lid moment

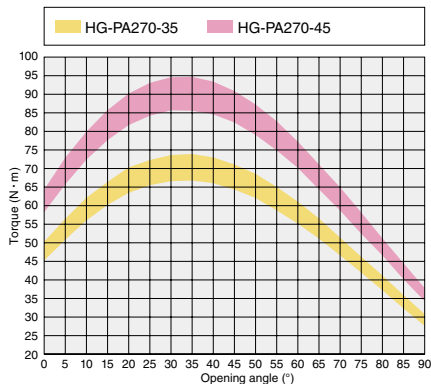
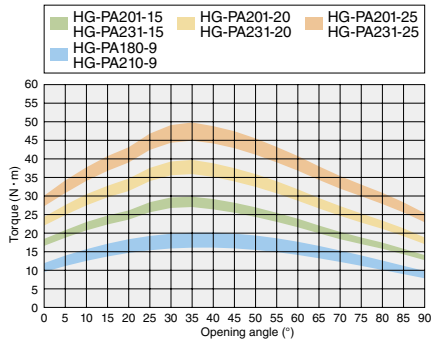
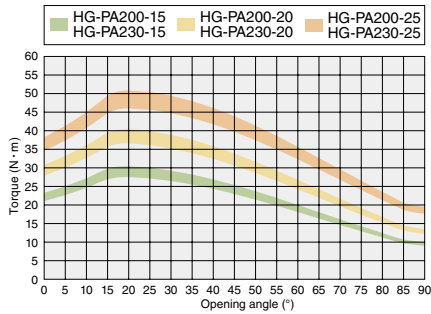
Calculation formula $Mu = m \times g \times L \times \cos \theta$

- Outside mount type (HG-PA180, HG-PA200, HG-PA201, HG-PA270)
- Inside mount type (HG-PA210, HG-PA230, HG-PA231)



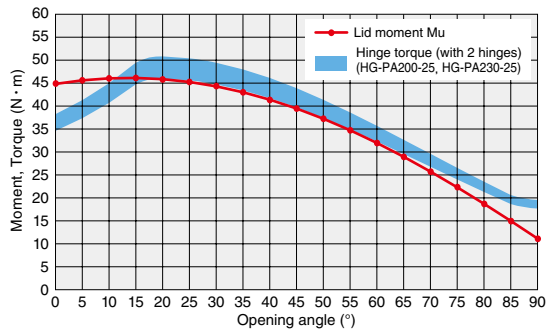
X	Horizontal distance from rotation centre to lid centre of gravity
Y	Vertical distance from rotation centre to lid centre of gravity
L	Distance from rotation centre to lid centre of gravity
θ	Angle from the horizontal line at the rotation centre to lid centre of gravity
m	Lid weight
G	Lid centre of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

2. Torque of the hinge (using 2 pcs)



3. Selecting model

Example



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

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

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

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

TORQUE HINGES

DAMPER HINGES

LIFT ASSIST HINGES

DETENT HINGES

CONCEALED HINGES

BUTT HINGES

PIANO HINGES

STEP HINGES

LIFT-OFF HINGES

PIVOT HINGES

SPRING HINGES

CLEAN ROOM HINGES

HINGES FOR ALUMINIUM FRAME

DROP HINGES

GLASS DOOR HINGES

SPECIAL HINGES

LIFT-ASSIST HINGE HG-PA180-9 Outside Mount



Lift assist
Soft-close

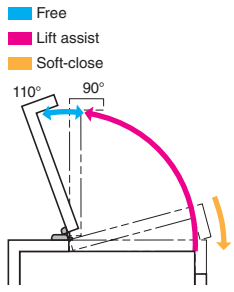


- Easy to lift heavy top-opening lid with spring tension (lift assist function).
- Smooth and soft-closing movement at the end, preventing lid from slamming shut.
- Torque is adjustable by turning the adjustment screw ($\pm 11\%$).
- With plastic cover for clean appearance.

[Remarks]

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

[Operating Range]



Video Link

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

Video
Lift Assist

TORQUE HINGES

DAMPER HINGES

LIFT ASSIST HINGES

DETENT HINGES

CONCEALED HINGES

BUTT HINGES

PIANO HINGES

STEP HINGES

LIFT-OFF HINGES

PIVOT HINGES

SPRING HINGES

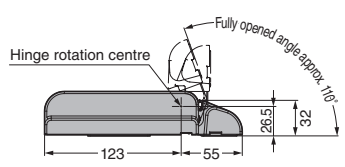
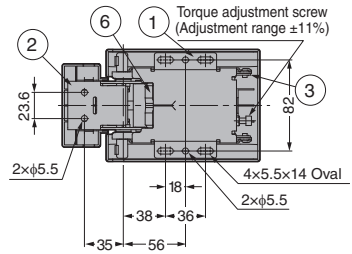
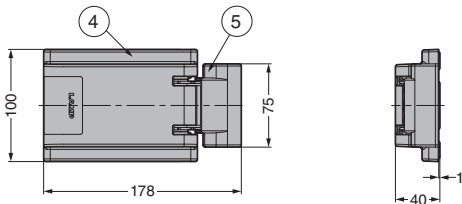
CLEAN ROOM HINGES

HINGES FOR ALUMINIUM FRAME

DROP HINGES

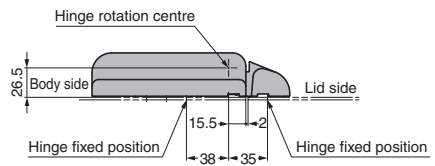
GLASS DOOR HINGES

SPECIAL HINGES



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

[Installation]



RHS	CAD	Item Code	Item Name	Torque N·m/pc	Torque kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
		170-029-739	HG-PA180-9	$9 \pm 10\%$	$91 \pm 10\%$	800	1	12

Refer to **1** : P.15.