

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]

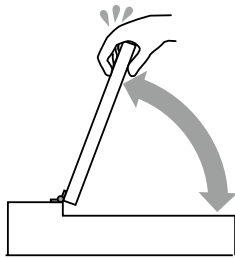
- Do not open/close the hinge before installation. The spring could accidentally pinch fingers.
- When installing, ensure that both hinge shafts are levelled and aligned.
- Do not detach the torque adjustment nut.
- Do not tighten the torque adjustment nut with a force of over 10 N.m. It may damage the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

[Sold Separately]

- Cover

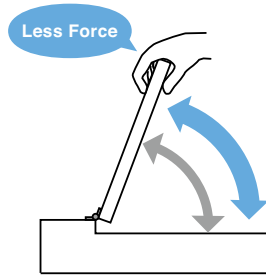
[Smoother than ever before]

Normal Torque Hinge



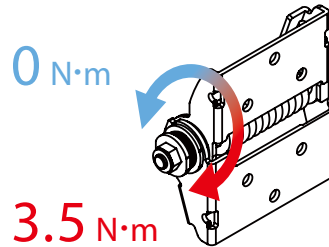
Only Retaining Torque

Spring-assist Torque Hinge



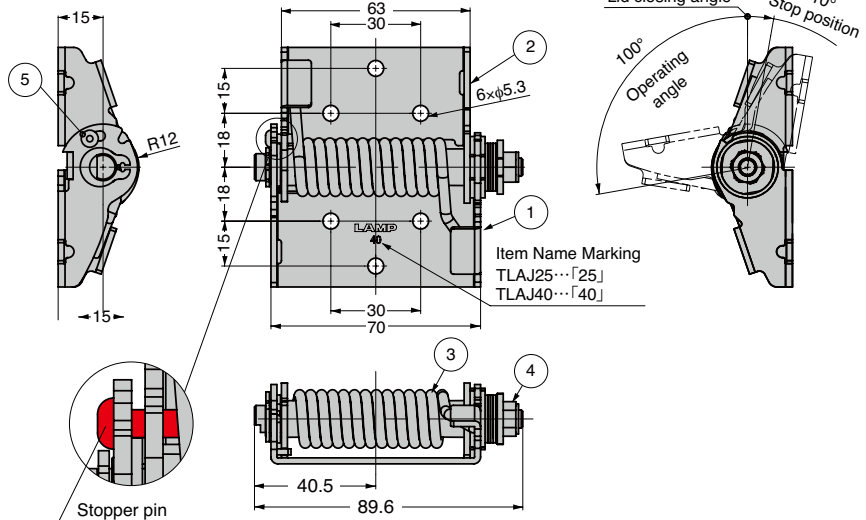
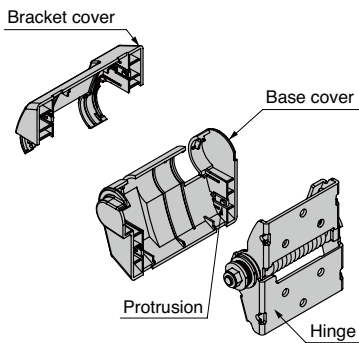
Retaining Torque
+
Spring-assist Force

[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]

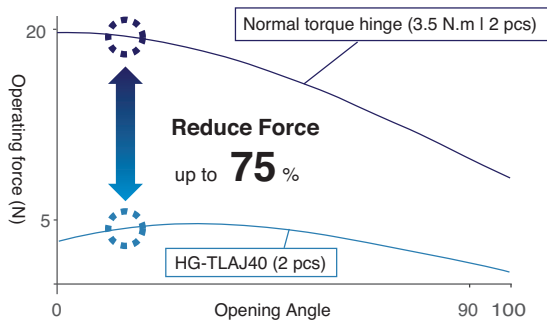
RoHS	CAD	Item Code	Item Name	Spring-assist Force		Retaining Torque		Weight (g)	Box (pcs)	Carton (pcs)
				N·m	kgf·cm	N·m	kgf·cm			
●	●	170-045-749	HG-TLAJ25	2.2 - 2.9	22 - 30	0 - 3.5	0 - 36	218	10	40
●	●	170-045-750	HG-TLAJ40	3.5 - 4.4	36 - 45			222	10	40

[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]

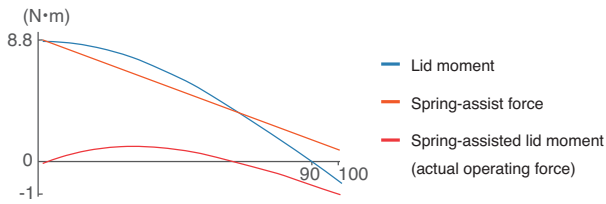


[Conditions]

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

[Lift Assist Mechanism]

The spring-assist force offsets the lid moment.

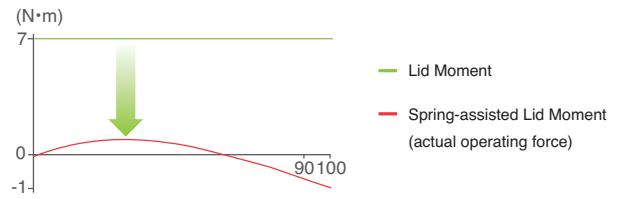


Force Formula

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

[Free-stop Mechanism]

The retaining torque keeps the lid in position.



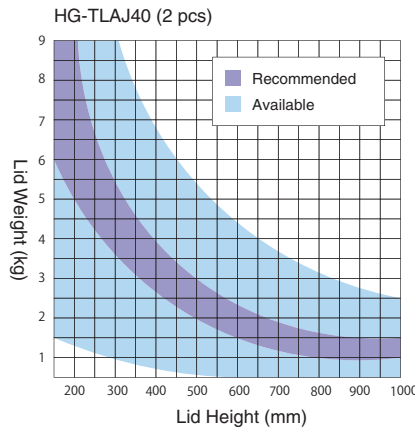
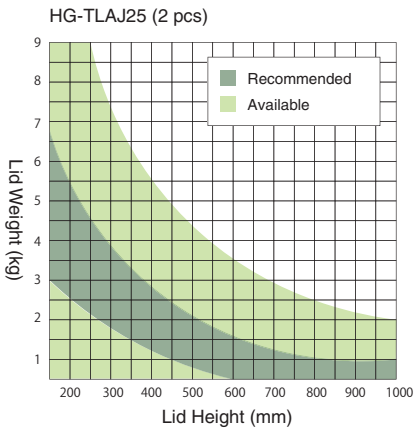
Free-stop Formula

"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]



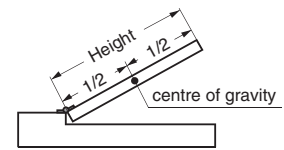
Available Range

- 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.