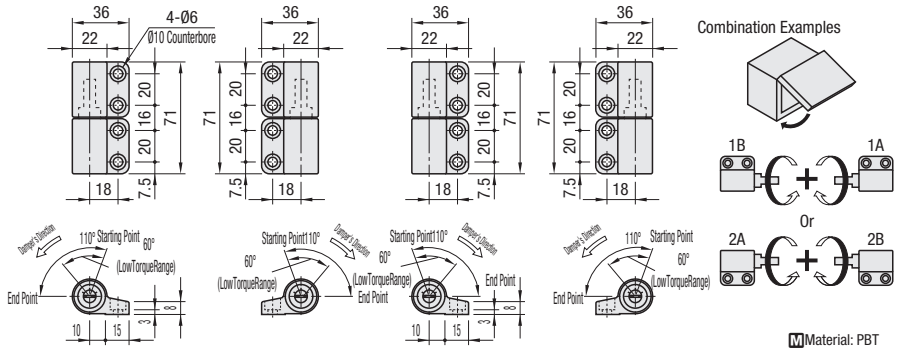
Damper Hinges

■Damper Hinges

RoHS10

HHPR



Material: PBT

Part Number Type	No.	Reverse Torque (N·m)*	Max. Operating Angle	Operating Temp. Range (°C)	Mass (g)	Unit Price 1 ~ 19 pc (s).	Volume Discount Rate 20~50
HHPR	1A	0.49~1.27	110	0~40	46		
	1B						
	2A						
	2B						

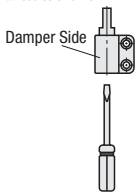
* Reverse torque value is for a single damper hinge.

Ordering Example — Part Number: HHPR1B

Example

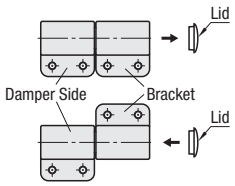
■How to Adjust Torque

Torque can be easily adjusted with a flathead screwdriver.



■Bracket Position Change

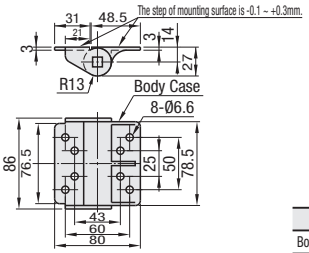
Bracket mounting position can be adjusted. The lid is removable.



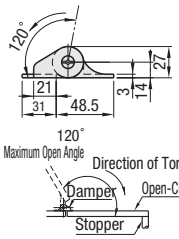
■Damper Hinges

RoHS10

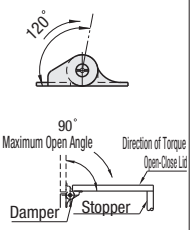
MSDH



L Type (Direction of Torque: Counterclockwise)



R Type (Direction of Torque: Clockwise)



Material	Surface Treatment	Max. Operating Angle	Operating Temp. Range (°C)	Mass (g)
Body Case (Zinc Die Cast)	Silver Paint	120	-5~50	410
Hinge (SUS304)	-			

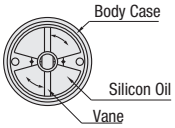
Part Number Type	Max. Usable Torque {N·m}	Shaft Rotating Direction	Max. Reverse Torque (N·m)	Unit Price
MSDH	3	L (Counterclockwise) R (Clockwise)	0.4 or Less	
	5		0.6 or Less	
	7.5		0.8 or Less	
	10		1.0 or Less	

Ordering Example — Part Number: MSDH3 - L (Shaft Rotating Direction)

Torque value is for a single hinge.
Reverse torque is torque in the opposite direction.

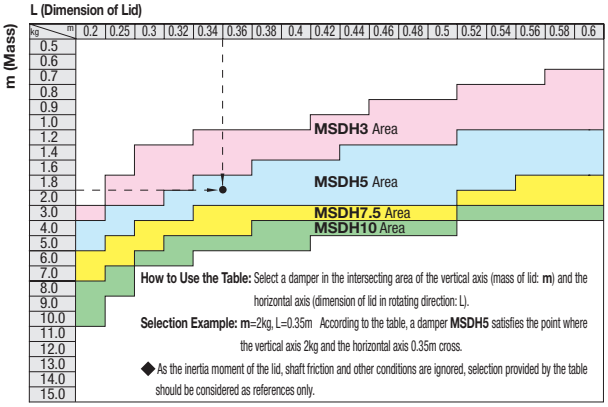
<Basic Principle>

The rotation of the vanes compresses the oil and generates control (brake) force to act against work force.



■Table of Selection Guide

L (Dimension of Lid)

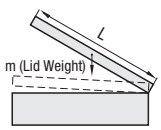


How to Use the Table: Select a damper in the intersecting area of the vertical axis (mass of lid: **m**) and the horizontal axis (dimension of lid in rotating direction: L).

Selection Example: **m**=2kg, L=0.35m According to the table, a damper **MSDH5** satisfies the point where the vertical axis 2kg and the horizontal axis 0.35m cross.

◆As the inertia moment of the lid, shaft friction and other conditions are ignored, selection provided by the table should be considered as references only.

■How to Select a Damper Hinge



The lid in a horizontal position generates maximum torque as shown on the left. Calculate maximum torque according to the following formula before selecting a damper that satisfies the specifications.

[Formula]

Max. Torque T= L/2 x m (Weight: kg) x 9.8 (Newton: N)

Ex.) When L=0.4m and m=5kg,

Max. Torque T =0.4/2x5x9.8=9.8N·m

⇒ **MSDH10** is selected.

Note) The selection made by the calculation above is for reference only.
The friction resistance and the effect of inertia moment at the hinge were not taken into consideration in the example above.

The viscosity of the oil in the damper changes depending on the temperature of the operating environment. Generally, the damping characteristic decreases with rising temperature, whereas it increases with lowering temperature.