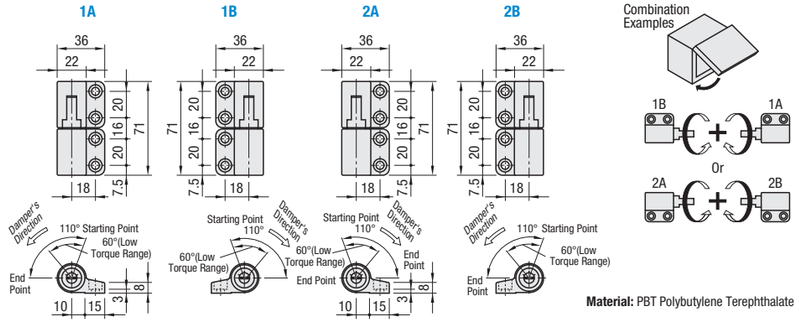
Damper Hinges

Damper Hinges

RoHS 10

HHPR



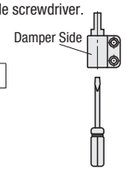
Material: PBT Polybutylene Terephthalate

Part Number Type	No.	Reverse Torque (N-m) *	Max. Operating Angle	Operating Temp. Range (°C)	Mass (g)
HHPR	1A	0.49–1.27	110	0–40	46
	1B				
	2A				
	2B				

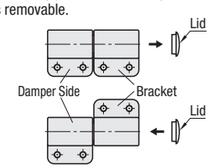
*Reverse Torque value is for a single damper hinge.

Application Example

How to adjust torque.
Torque can be easily adjusted with a flat-blade screwdriver.



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



Part Number Example

Part Number
HHPR1B

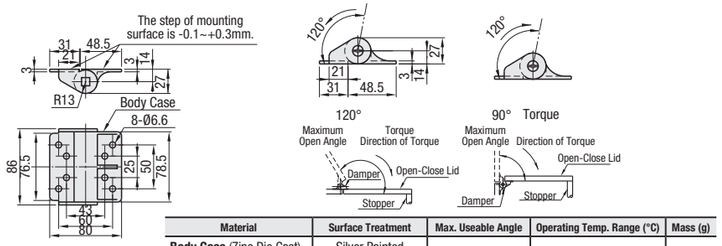
Damper Hinges

RoHS 10

MSDH

L Type
Direction of Torque: Counterclockwise

R Type
Direction of Torque: Clockwise



Material	Surface Treatment	Max. Useable Angle	Operating Temp. Range (°C)	Mass (g)
Body Case (Zinc Die Cast)	Silver Painted	120	-5–50	410
Hinge (304 Stainless Steel)	—			

Part Number Type	Max. Usable Torque (N-m)	Shaft Rotating Direction Selection	Max. Reverse Torque (N-m)
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

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

Part Number Example

Part Number	-	Shaft Rotating Direction
MSDH3	-	L

Basic Principle

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

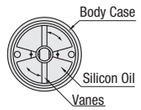
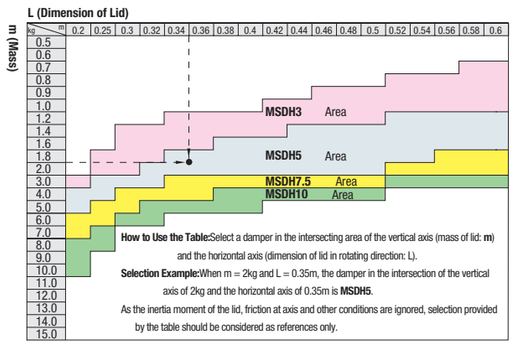
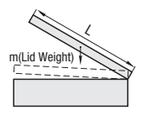


Table of Selection Guide



How to Select a Damper Hinge



The lid in a horizontal position generates maximum torque as shown on 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)

Example) When L = 0.4 m and m = 5 kg,

Max. Torque T = 0.4 / 2 x 5 x 9.8 = 9.8 N-m

→Select **MSDH10**

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.

MiSUMi

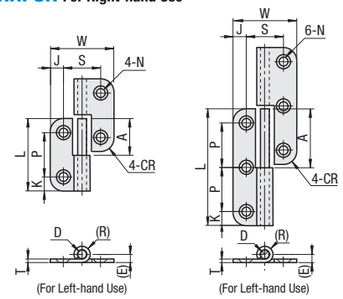
Detachable Hinges

Stainless Steel

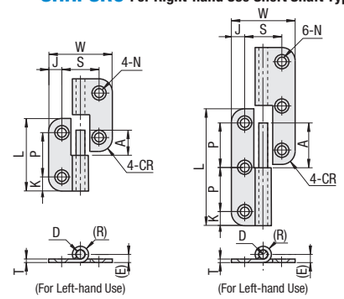
Detachable Hinges – Stainless Steel

RoHS 10

SHHPSL For Left-hand Use
SHHPSR For Right-hand Use



SHHPSLC For Left-hand Use Short Shaft Type
SHHPSRC For Right-hand Use Short Shaft Type

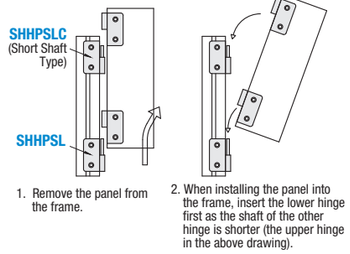


Material: 304 Stainless Steel

Part Number Type	No.	Holes on One Side	* Allowable Load kg	* Allowable Load N	Mass (g)	L	W	SHHPSL SHHPSR A	SHHPSLC SHHPSRC A	K	P	J	S	N Through	N Countersunk	T	(E)	(R)	CR	D	Applicable Screw Screws	Applicable Screw Quantity
SHHPSL SHHPSLC For Left-hand Use	5	2	9	88	34	41	36	19	14	8	25	7.5	21	5.5	8.6 For M4 Screws	2	4.6	4.6	4	5	SHFBS4-8	4
		3	11	108	55	66		31	26													6
	6	2	12	117	49	48	48	22	17	9	30	8	32								SHFBS4-10	4
		3	15	147	80	78		37	32													6
SHHPSR SHHPSRC For Right-hand Use	8	2	25	245	111	59	62	29	24	11	37	10	42	6.5	10.6 For M5 Screws	3	6.1	6.1	5	6	SHFBS5-12	4
		3	38	372	185	96		47	42													6
	845	2	30	294	162	70	80	34	29	13.5	43	16.5	47									4
		3	40	392	266	113		56	51													6

* The allowable load is the value when two pieces are used.

Application Example



1. Remove the panel from the frame.
2. When installing the panel into the frame, insert the lower hinge first as the shaft of the other hinge is shorter (the upper hinge in the above drawing).
3. Installing and removing the panel is easy since positioning is set first by the lower hinge, and then inserted into the upper hinge.

Part Number Example

Part Number	-	Holes on One Side
SHHPSL5	-	3

Part Number Alterations

Part Number	-	Number of Holes on One Side	-	(SET / SST)
SHHPSL5	-	2	-	SST

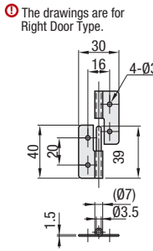
Alteration	Code	Spec.	Hinge	No.	Per Side Holes
Applicable Screw & Nut Set	SST (Stainless Steel)	Applicable screws and nuts come in a set. When SST is specified, screws and nuts will be in stainless steel. (Ex.) Screw: SHFBS4-8 Nut: HNTTSN5-4	SHHPSL SHHPSLC SHHPSR SHHPSRC	5	2
					3
				6	2
					3
				8	2
					3
				845	2
					3

Detachable Hinges – Stainless Steel

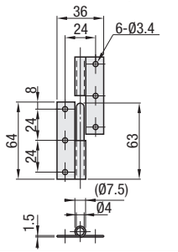
RoHS 10

HNS2L Left Door Type
HNS2R Right Door Type

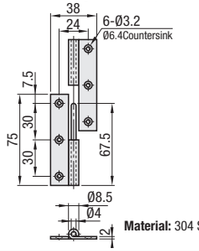
The drawings are for Right Door Type.



HNS3L Left Door Type
HNS3R Right Door Type



HNS4L Left Door Type
HNS4R Right Door Type



Material: 304 Stainless Steel

The Right Door Type has a door on the right side.

Part Number Type	*Allowable Load (N)	Weight (g)
HNS2L	48	21
HNS2R		
HNS3L	68	44
HNS3R		
HNS4L	147	65
HNS4R		

* The allowable load is the value when two pieces are used.

Part Number Example

Part Number
HNS2L