

Damper Hinges

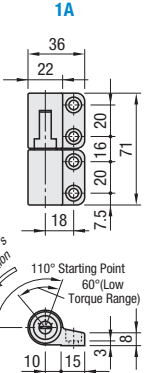
Damper Hinges



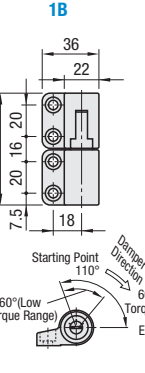
RoHS 10

HHPR

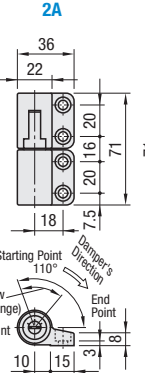
1A



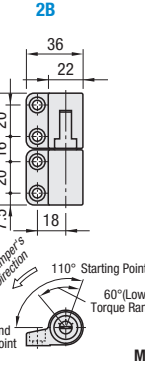
1B



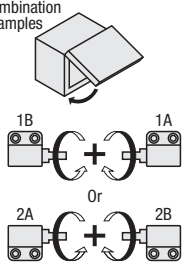
2A



2B

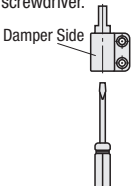


Combination Examples



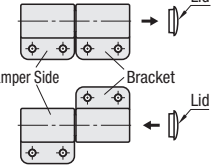
Material: PBT Polybutylene Terephthalate

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

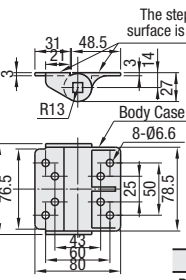
*Reverse Torque value is for a single damper hinge.

Damper Hinges



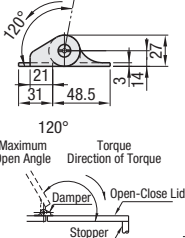
RoHS 10

MSDH



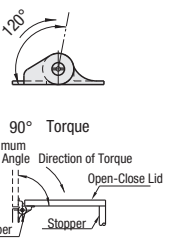
L Type

Direction of Torque: Counterclockwise



R Type

Direction of Torque: Clockwise



Material

Surface Treatment

Max. Useable Angle

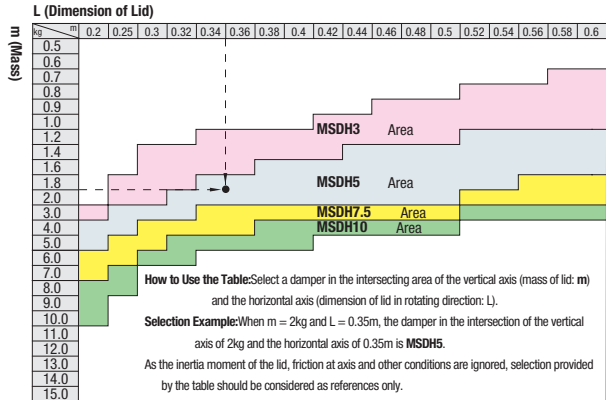
Operating Temp. Range (°C)

Mass (g)

Body Case (Zinc Die Cast)	Silver Painted	120	-5-50	410
Hinge (304 Stainless Steel)	—			

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

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.

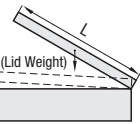
Formula

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.

Detachable Hinges

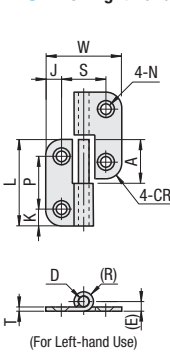
Stainless Steel

Detachable Hinges – Stainless Steel

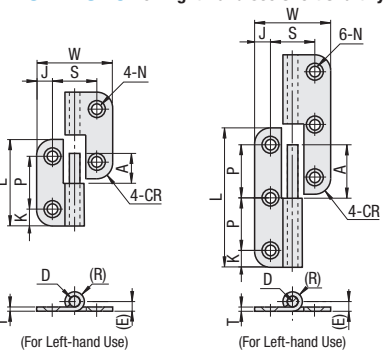


RoHS 10

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



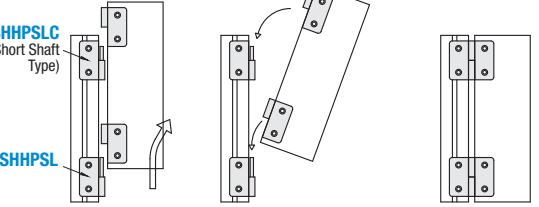
SHHPSLC For Left-hand Use Short Shaft Type
SHHPSRC For Right-hand Use Short Shaft Type



Part Number		Holes on One Side	* Allowable Load	Mass (g)	L	W	SHHPSL SHHPSR	SHHPSLC SHHPSRC	K	P	J	S	N		T	(E)	(R)	CR	D	Applicable Screw	
Type	No.		kg	N			A						Through	Countersunk						Screws	Quantity
SHHPSL SHHPSLC For Left-hand Use	5	2	9	88	34	41	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												SHFBS4-10	6
	6	2	12	117	49	48	22	17	9	30	8	32									4
		3	15	147	80	78	37	32													6
SHHPSR SHHPSRC For Right-hand Use	8	2	25	245	111	59	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	34	29													4
		3	40	392	266	113	56	51	13.5	43	16.5	47									6

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

Application Example



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
				6	3
				8	2
					3
				845	2
					3

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.

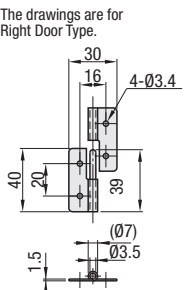
Detachable Hinges – Stainless Steel



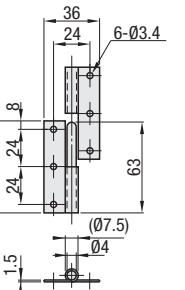
RoHS 10

HNS2L Left Door Type
HNS2R Right Door Type

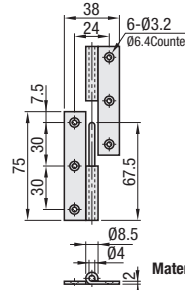
The drawings are for Right Door Type.



HNS3L Left Door Type
HNS3R Right Door Type



HNS4L Left Door Type
HNS4R Right Door Type



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

Part Number	*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.