


Damper Hinges

HHPR



1A

1B

2A

2B

Material: PBT Polybutylene Terephthalate

Part Number	Reverse Torque (N-m) *	Max. Operating Angle	Operating Temp. Range (°C)	Mass (g)
1A	0.49-1.27	110	0-40	46
1B				
2A				
2B				


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 **HHPR1B**

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)	-			

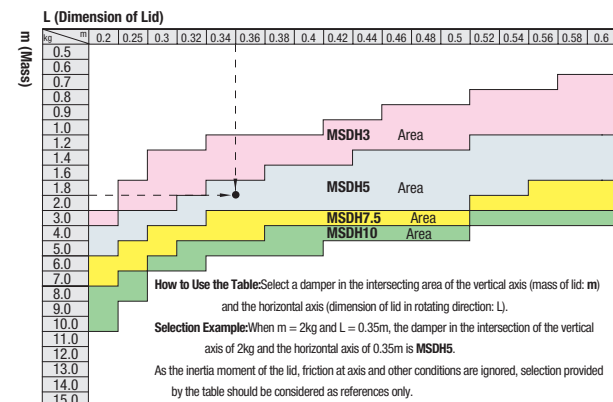
Basic Principle

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

Part Number Example **MSDH3 - L**

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

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

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.	* Allowable Load		Mass (g)	L	W	SHHPSL SHHPSR	SHHPSLC SHHPSRC	K	P	J	S	N					Applicable Screw			
			kg	N										Through	Countersunk	T	(E)	(R)	CR	D	Screws	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	2	4.6	4.6	4	5	SHFBS4-8	4
		3	11	108	55	66	48	22	17	9	30	8	32								SHFBS4-10	4
		6	12	117	49	48	80	37	32	11	37	10	42								SHFBS5-12	4
SHHPSR SHHPSRC For Right-hand Use	8	2	25	245	111	59	62	29	24	11	37	10	42	6.5	10.6	3	6.1	6.1	5	6	SHFBS5-12	4
		3	38	372	185	96	80	47	42	13.5	43	16.5	47								SHFBS5-12	6
		845	2	30	294	162	70	34	29	56	51	13.5	43								16.5	47
			40	392	266	113	80	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 **SHHPSL5 - 3**

Part Number Alterations **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	3
				845	2

- Remove the panel from the frame.
- 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).
- Installing and removing the panel is easy since positioning is set first by the lower hinge, and then inserted into the upper hinge.

HNS2L Left Door Type

HNS2R 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	*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.