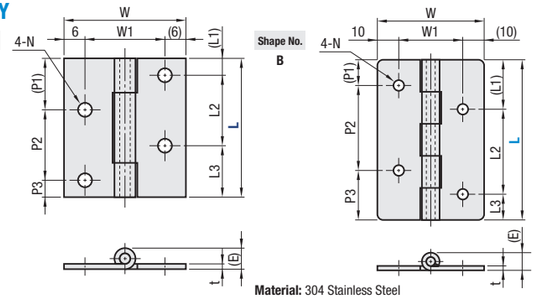
Hinges
with Offset Mounting Holes / Stepped Stainless Steel / Spring-Loaded

Hinges – Offset Mounting Holes

RoHS10

HHSOY



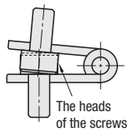
Material: 304 Stainless Steel

Part Number Type	L	Shape	L_1	L_2	L_3	W	W_1	P_1	P_2	P_3	N	t	E	*Allowable Load (N)	Weight (g)
HHSOY	40	A	5	20	15	35	23	15	20	5	4.2	1.5	6.3	58.8	21.6
	50		5.5	26	18.5			18.5	26	5.5				78.4	27.3
	75	B	23	40	12	50	30	12	40	23	5	2	8.8	147	75.7

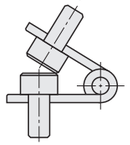
* The allowable load is the value when two pieces are used.

Application Example

Hinge with Staggered Holes



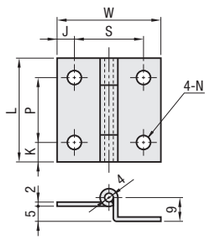
Other Hinges



Stepped Hinges – Stainless Steel

RoHS10

HHPSSD



The hinge nuts on **P.3255** are recommended when mating to panels, etc.

Material: 304 Stainless Steel

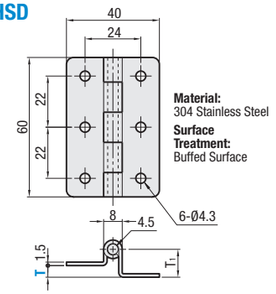
Part Number Type	No.	L	W	K	P	J	S	N	* Allowable Load (Kg)	Weight (g)
HHPSSD	5	41	36	8	25	7.5	21	5.5	4.5	32
	6	48	48	9	30	8	32	6.5	6	46

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

Stepped Hinges – Stainless Steel

RoHS10

HHSD



Material: 304 Stainless Steel
Surface Treatment: Buffed Surface

Part Number Type	T	T_1	* Allowable Load (Kg)	Weight (g)
HHSD	1.2	8.2	7	38
	2.3	9.3		
	3.2	10		40
	5	12		42

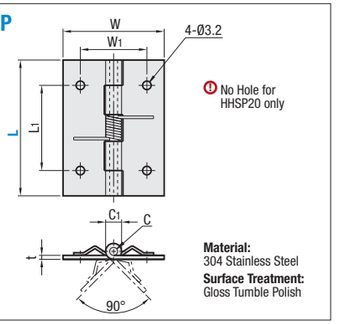
*The allowable load above is the value when two hinges are used.

Spring Loaded Hinges

The photo shows a spring-loaded hinge in an uninstalled condition (free state).

RoHS10

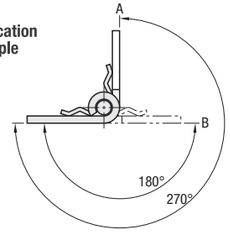
HHSP



No Hole for HHSP20 only

Material: 304 Stainless Steel
Surface Treatment: Gloss Tumble Polish

Application Example



Spring load is a value at (A) with the hinge plates folded at 270° as shown above.
HHSP20 (only) measures a value at (B) with the vanes at 180°.
Do not open the HHSP20 hinge plates beyond 180° (B). Small wire diameter spring may cause problems.

Part Number Type	L	W	W_1	L_1	C	C_1	t	*Spring Load (kgf)	Weight (g)
HHSP	20	14	—	—	1	(2.2)	0.5	0.38	11.5
	25	32	20	14	3	5.8	1.2	0.4	10
	38	32	20	26	3	6.5	1.5	1	25
	51	38	25	32	3	6.5	1.5	0.68	35

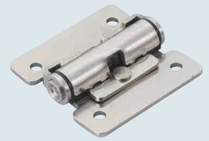
* The spring load is the value when two pieces are used.

Part Number Example

Part Number
HHSOY40
HHPSSD6
HHSD3.2
HHSP38

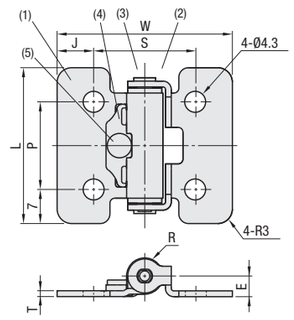
Torque Hinges
Fixed Torque / Adjustable Torque Type

Fixed Torque Type



RoHS10

HHPT



Operating Temp. Range: -10–50°C
Operating Humidity Range: 90% RH or Low
Caution
– Use two hinges.
– Align the axes of the two hinges.
– Do not use the hinges outdoors or in any places where oil or grease adheres to the hinges.
– Do not use the hinges in any places requiring continuous open-close movements.
– Vertical use is not assumed given product characteristics. For vertical use, adjust allowable load and torque value to the actual operating conditions.

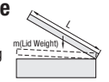
Part Name	Material
(1) Vane	304 Stainless Steel
(2) Resin Barrel	Polyacetal
(3) Shaft	303 Stainless Steel
(4) Plate	304 Stainless Steel
(5) Swage Pin	JIS SUSXM7 Stainless Steel

Part Number Type	No.	Rated Torque* N m	Rated Torque* kgf / cm	Mass (g)	L	W	P	J	S	T	E	R	Applicable Screws/Nuts for Aluminum Extrusion Screw	Quantity	Nut	Quantity
HHPT	3	0.35	3.4	15	32	36	18	7.5	21	1.2	4.25	7.5	Hex Socket Head Cap Screw 4-6	4	HNTT5-4	4
	7	0.7	6.9	28	40	48	26	8	32	1.2	4.75	8.5	Hex Socket Head Cap Screw 4-10		HNTT6-4	
	15	1.5	14.7	64	50	48	36	8	32	2	6.5	12				

* Rated torque has a margin of error between +40% and -20%.
* Rated torque value is for a single hinge.

How to Select a Torque Hinge

Basically, the lid is operated as shown on right. Calculate necessary torque according to the following formula before selecting a torque hinge that satisfies the specifications. (Assume that the lid's center of gravity lies in the middle.)

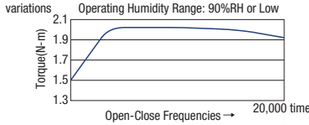


Formula

Max. Torque T = L / 2 x m (Weight: kg) x 9.8 (Newton: N)
(Example) When L = 0.3 m and m = 2kg,
Max. Torque T = 0.3 / 2 x 2 x 9.8 = 2.94 N m.
→ Select two pieces of HHPT15

Application Example

Reference: Torque variations — Ambient Temp.(20±15°C), Operating Humidity Range: 90%RH or Low



Data above are not guaranteed values but reference values of HHPT.
Open-Close intervals: 5 times /min. (Single open-close operation=0° ⇔160°)
* Considering torque deteriorations caused by aging, temperature and humidity variation, the torque value is set higher than the rated torque value at shipping.

Part Number Example

Part Number
HHPT7

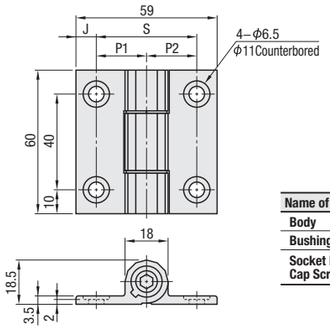
Part Number Alterations

Part Number	-	(SET / SST)
HHPT7	-	SET

Alteration	Code	Spec.	Hinge	No.
Applicable Screw & Nut Set	SET	Applicable screws and nuts come in a set. ! Stainless steel screws and nuts are included.	HHPT	3
				7
				15

Adjustable Torque Type

HHPTF
HHPTFB



Name of Parts	Material	Surface Treatment
Body	6063 Aluminum Alloy	Anodizing
Bushing	Polyacetal (White)	—
Socket Head Cap Screws	JIS SUSXM7 Stainless Steel	—

Part Number Type	No.	*Allowable Load kg	*Allowable Load N	** Rated Torque N m	** Rated Torque kgf / cm	Mass (g)	S	P_1	P_2	J	Applicable Screws/Nuts for Aluminum Extrusion Screws	Quantity	Nuts	Quantity
HHPTF HHPTFB Black Anodize	6	10	98	0–4.9	0–50	54	32	16	16	13.5	Socket Head Cap Screw 6-10	4	HNTT6-6	4
	8-6						37	16	21	13.5	Socket Head Cap Screw 6-10	2	HNTT6-6	2
											Socket Head Cap Screw 6-12	2	HNTT8-6	2
	8						42	21	21	8.5	Socket Head Cap Screw 6-12	4	HNTT8-6	4

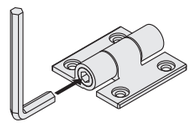
* The allowable load is the value when two pieces are used.
** Rated torque value is for a single hinge.

Part Number Example

Part Number
HHPTF8

Application Example

Use a hex wrench to adjust torque value.
! If tightened with a force of 1.5 N-m or more, a hex wrench might be damaged.



Part Number Alterations

Part Number	-	(SET / SST)
HHPTF6	-	SET

Alteration	Code	Spec.	Hinge	No.
Applicable Screw & Nut Set	SET SST (Stainless Steel)	Include applicable screws and nuts as a set. When SST is specified, screws and nuts will be in stainless steel. ! When - SET is specified, the product is not RoHS compliant. (When - SET is specified, the material of the screws is Bright Chromate SCM35.	HHPTF HHPTFB	6
				8-6
				8