



Square cylinder-type rotary clamp without cushion

Model Representation

HBTU ① - ② (Example: HBTU06-R)

① Dimensions (refer to specification sheet)

② Rotation direction (during clamping)

<b>HBTU</b>	<b>02</b>	-	
	<b>04</b>		
	<b>06</b>		
	<b>10</b>		
	<b>16</b>		
	<b>25</b>		

Specification

Model		HBTU02	HBTU04	HBTU06	HBTU10	HBTU16	HBTU25	
Cylinder capacity (when oil pressure is 7MPa)	(kN)	2.8	4.4	6.3	9.9	16.3	25.8	
Clamping force ※1	When the oil pressure is 7MPa	(kN)	2.4	3.8	5.3	8.3	13.5	21.2
	Clamping arm length (LH)	(mm)	35	40	50	60	70	90
Bore of cylinder	(mm)	29	36	42	52	65	82	
Main rod diameter	(mm)	18	22.4	25	30	35.5	45	
Cylinder area (clamping)	(cm <sup>2</sup> )	4.1	6.2	8.9	14.2	23.3	36.9	
Rotation angle		90° ± 3°						
Locating pin groove position accuracy		± 1°						
Clamping repeatability position accuracy		± 0.5°						
Full stroke	(mm)	18	20.5	23.5	26.5	28.5	36	
Rotation stroke	(mm)	10	12.5	13.5	16.5	18.5	23	
Clamping stroke	(mm)	8	8	10	10	10	13	
Maximum rotation torque ※2	(N · m)	0.7	1.6	1.8	3.4	5.6	9.3	
Cylinder capacity	Clamping	(cm <sup>3</sup> )	7.3	12.8	21.0	37.5	66.4	132.9
	Release	(cm <sup>3</sup> )	11.9	20.9	32.6	56.3	94.6	190.1
Mass	(kg)	1.4	1.9	2.6	4.4	6.9	12.9	

Operating oil pressure range: 1 to 7MPa    Guaranteed pressure resistance: 10.5MPa    Operating ambient temperature: 0-70°C

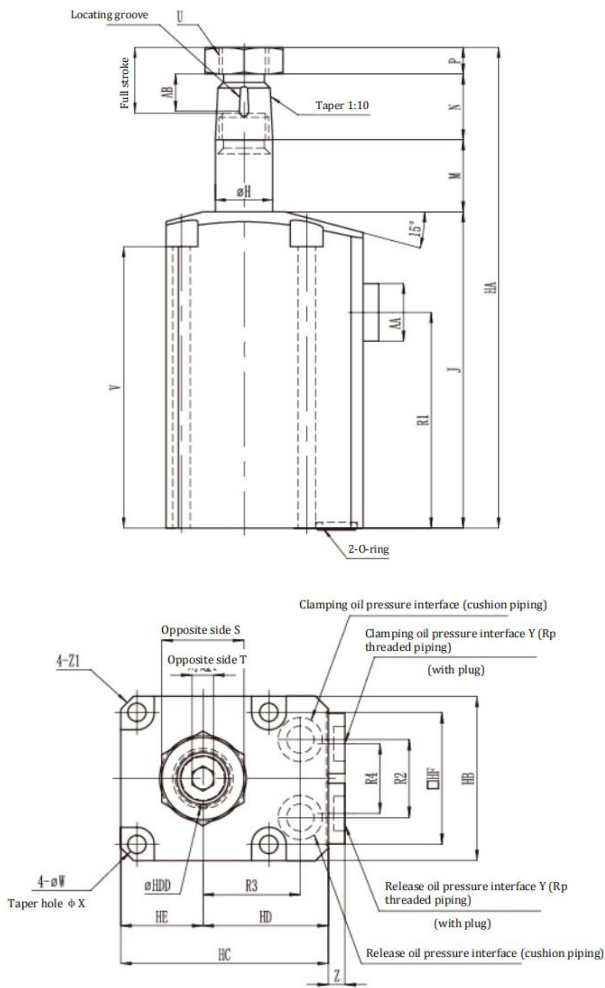
Operating fluid: ordinary mineral oil-based hydraulic oil (equivalent to ISO-VG32)

※1: The clamping force varies depending on the length of the clamping arm.

※2: Limit value that can lift the clamping arm with a pressure of 1MPa when installed horizontally.

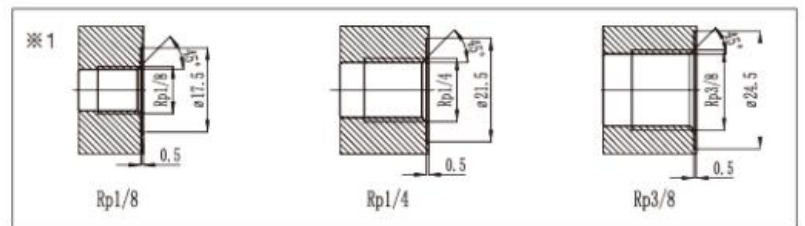
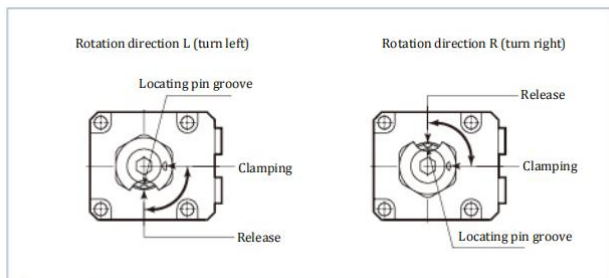
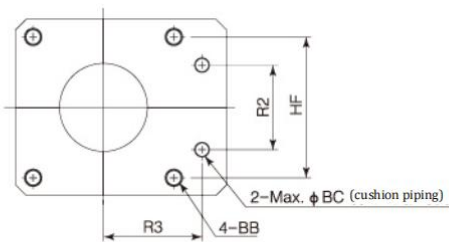
## Overall Dimension

(mm)



Model	HBTU02 - <sup>L</sup> / <sub>R</sub>	HBTU04 - <sup>L</sup> / <sub>R</sub>	HBTU06 - <sup>L</sup> / <sub>R</sub>	HBTU10 - <sup>L</sup> / <sub>R</sub>	HBTU16 - <sup>L</sup> / <sub>R</sub>	HBTU25 - <sup>L</sup> / <sub>R</sub>
HA	131.1	148.6	158.6	178.6	201.6	244.1
HB	45	50	57	70	86	108
HC	55	60	66	82	96	120
HD	32.5	35	37.5	47	53	66
HE	22.5	25	28.5	35	43	54
HF	35.1	40.1	46.1	56.1	68.1	88.1
H	18 f7	22.4 f7	25 f7	30 f7	35.5 f7	45 f7
J	81.5	90.5	97.5	111.5	123	147
M	21.5	24	27	30	31.5	39
N (clamping arm thickness)	20	25	25	27	35	45
P (nut thickness)	8	9	9	10	12	13
R1	52.5	57	60	70	76	92
R2	22	24	28	36	45	50
R3	25	28	30.5	36	42	57
R4	20	22	26	30	38	50
S (width of opposite side of nut)	22	27	30	36	46	55
T (inner hexagon hole)	6	6	8	8	10	14
U (recommended tightening torque)	M14×1.5 (26N·m)	M18×1.5 (51N·m)	M20×1.5 (60N·m)	M24×1.5 (86N·m)	M30×1.5 (120N·m)	M39×1.5 (180N·m)
V	71	80	85	95	102.5	121.5
W	5.5	5.5	6.8	9	11	14
X	9.5	9.5	11	14	17.5	20
Y※1	Rp1/8	Rp1/8	Rp1/8	Rp1/4	Rp1/4	Rp3/8
Z	3.8	3.8	3.8	4.8	4.8	4.8
Z1	C3	C3	C3	C4	C6	C6.5
O-Ring ※2	6.8×1.9	6.8×1.9	6.8×1.9	7.8×1.9	7.8×1.9	9.8×1.9
AA	14	14	14	19	19	22
AB	10.5	10.5	10.5	12.5	12.5	14.5
BB	M5	M5	M6	M8	M10	M12
BC	4	4	4	6	6	8
HDD	4 <sup>+0.018</sup> <sub>0</sub>	4 <sup>+0.018</sup> <sub>0</sub>	5 <sup>+0.018</sup> <sub>0</sub>	6 <sup>+0.018</sup> <sub>0</sub>	6 <sup>+0.018</sup> <sub>0</sub>	6 <sup>+0.018</sup> <sub>0</sub>
Locating pin	Φ4(h8)×10	Φ4(h8)×10	Φ5(h8)×10	Φ6(h8)×12	Φ6(h8)×12	Φ6(h8)×14

## Installation Hole Processing Drawing



Note 1. This figure shows the released state of the rotation direction L (left rotation).

When clamping, the locating pin groove faces the oil pressure interface side.

Refer to the left figure for the relationship between rotation direction and locating pin groove.

2. The maximum surface roughness of the installation surface shall be processed below Rz6.3.

3. The locating pin and installation bolt are not attached.