

Conical sleeve type workpiece support with greatly improved reliability

### Model Representation

**HCSU** ① - ② ③ (Example: HCSU06-L)

① Dimensions (refer to specification sheet)

② Rising spring force

③ Special specification mark

<b>HCSU</b>	<b>04</b>	-	L: Standard type H: Strong type	Unmarked: standard type B: air pressure sensor (workpiece contact confirmation)
	<b>06</b>			
	<b>10</b>			
	<b>16</b>			
	<b>25</b>			

### Specification

Model		HCSU04	HCSU06	HCSU10	HCSU16	HCSU25
Workpiece support force (when oil pressure is 7MPa) ※1	(KN)	5	7	10	16	25
Cylinder capacity	(cm <sup>3</sup> )	1.2	1.8	2.6	3.9	5.7
Rising spring force※2	L: Standard type (N)	5.2~4.4	5.1~9.9	8.4~14.2	6.1~12.5	7.2~16.8
	H: Strong type (N)	6.9~11	7.9~12.6	10.8~16.6	11.3~20.6	13.8~23.4
Support plunger stroke	(mm)	8	12	12	16	16
Maximum allowable mass of cap	(kg)	0.15	0.2	0.2	0.3	0.3
Mass	(kg)	0.6	1.0	1.2	2.0	3.3

Operating oil pressure range: 2.5 ~ 7MPa    Guaranteed pressure resistance: 10.5MPa    Operating ambient temperature: 0-70°C

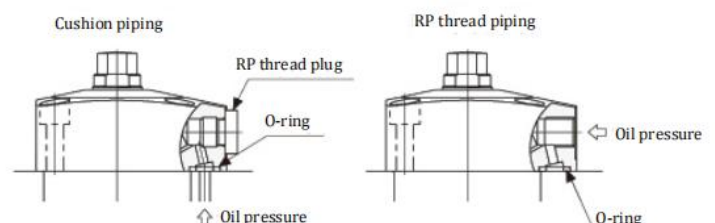
Operating fluid: ordinary mineral oil-based hydraulic oil (equivalent to ISO-VG32)

※ 1: When the workpiece support is used opposite to the clamp, in order to make the support force reach more than 1.5 times of (clamping force + cutting load), please select the workpiece support and clamp with matching model.

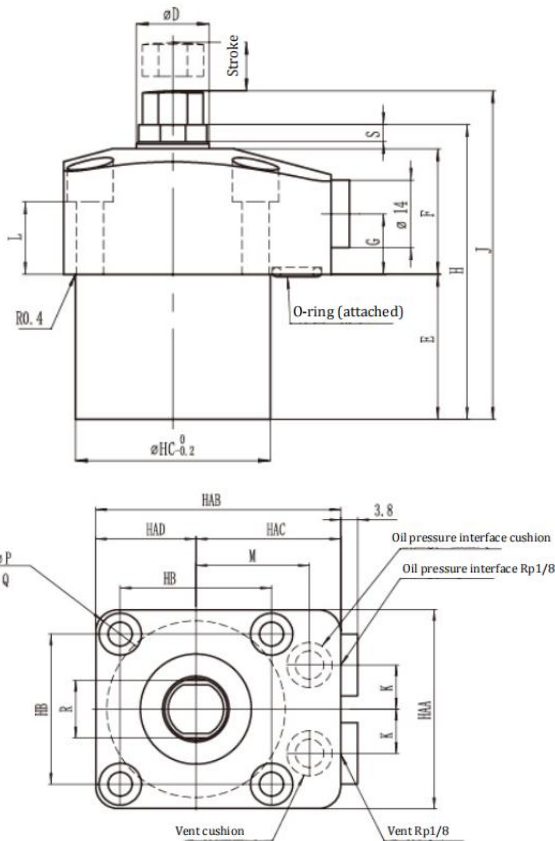
※ 2: The rising spring force indicates the spring force supporting the rising end and the falling end of the plunger rod.

### Piping Method

HCSU workpiece holder can be piped in cushion piping and RP thread piping. When using RP thread piping, remove the RP thread plug. (Do not remove the O-ring.)



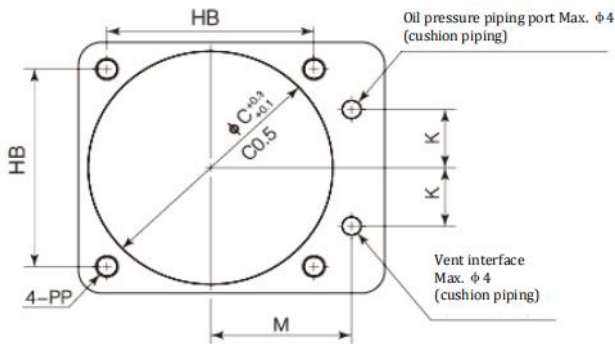
Overall Dimension



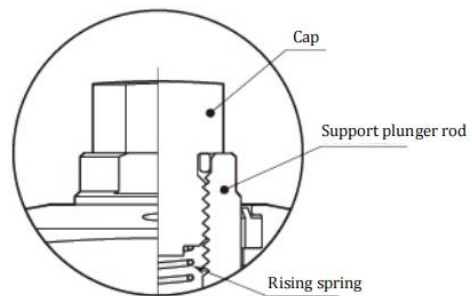
Model	HCSU04 $-\frac{L}{H}$	HCSU06 $-\frac{L}{H}$	HCSU10 $-\frac{L}{H}$	HCSU16 $-\frac{L}{H}$	HCSU25 $-\frac{L}{H}$
HAA	45	52	56	65	78
HAB	55.1	61.1	65.1	73.1	85.1
HAC	32.5	35	37	40.5	46
HAD	22.5	26	28	32.5	39
HB	34	40	44	52	62
HC	40	47	52	60	72
D	15f7	16f7	20f7	22f7	25f7
E	30	41	42	57	76
F	26	26	28	30	30
G	12.5	12.5	12.5	12.5	12.5
H	61	72	75	93	113
J	68.1	79.1	82.1	102.1	122.1
K	10	12	13	15	18
L	15	15	16.5	15.9	12
M	25.5	28	30	33.5	39
P	5.5	5.5	5.5	6.8	9
PP	M5	M5	M5	M6	M8
Q	9.5	9.5	9.5	11	14
R	13	13	17	19	22
S	4	4	4.5	5	6
O-ring Z	6.8×1.9	6.8×1.9	6.8×1.9	6.8×1.9	6.8×1.9

- Note 1. The maximum surface roughness of the installation surface shall be processed to Rz6.3 or less.  
 2. Please be sure to install the cap before use. (Otherwise the rising spring will not be able to support the workpiece)  
 3. Installation bolts are not included.

Installation Hole Processing Drawing



Top Detail of Support Plunger Rod



Oil Pressure (Mpa)	Workpiece Support Force (KN)				
	HCSU04	HCSU06	HCSU10	HCSU16	HCSU25
2.5	1.4	2.0	2.8	4.5	7.0
3.0	1.8	2.6	3.6	5.8	9.0
3.5	2.2	3.1	4.4	7.1	11.0
4.0	2.6	3.7	5.2	8.3	13.0
4.5	3.0	4.2	6.0	9.6	15.0
5.0	3.4	4.8	6.8	10.9	17.0
5.5	3.8	5.3	7.6	12.2	19.0
6.0	4.2	5.9	8.4	13.4	21.0
6.5	4.6	6.4	9.2	14.7	23.0
7.0	5.0	7.0	10.0	16.0	25.0

Load(KN)	Deformation Amount (μm)				
	HCSU04	HCSU06	HCSU10	HCSU16	HCSU25
0	0	0	0	0	0
5	23	19	16	13	9
7		27	22	18	13
10			31	26	18
15				38	27
20					36
25					45

When the oil pressure is 7MPa