

2023-2025

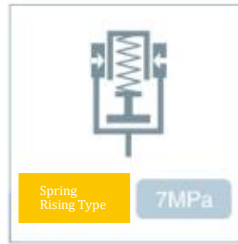


WORK

CLAMPING
SYSTEM

COMPREHENSIVE PRODUCT SAMPLES





Conical sleeve type workpiece support with greatly improved reliability

Model Representation

HH33 — ① ② (Example: HH33-03T)

① Dimensions (refer to specification sheet)

② Rising spring force

③ Special specification mark

HH33	-	02T 03T 05T 07T	L: Standard type H: Strong type	Unmarked: standard type B: air pressure sensor
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Specification

Model		HH33-02T	HH33-03T	HH33-05T	HH33-07T
Workpiece support force (when oil pressure is 7Mpa) ※1 (kN)		2.5	3	5	7
Cylinder capacity (cm ³)		0.3	0.7	0.7	1.2
Rising spring force ※2	L: Standard type (N)	2.4~3.1	4~6.3	4~8.8	5.1~8.5
	H: Strong type (N)	4.2~6.5	6~8.4	7.8~13.4	7.9~13.6
Support plunger stroke (mm)		6.5	8	8	10
Maximum allowable mass of cap (kg)		0.05		0.1	
Mass (kg)		0.2	0.3	0.4	0.7

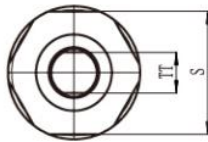
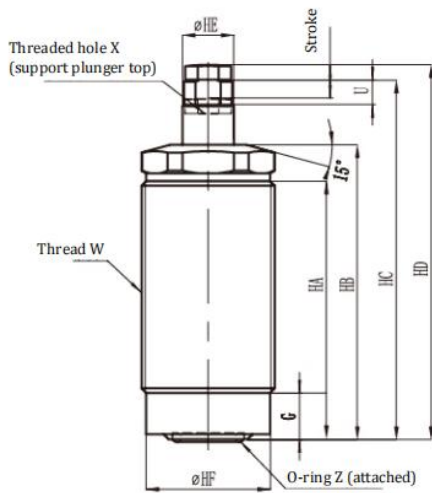
Operating oil pressure range: 2.5 ~ 7MPa Guaranteed pressure resistance: 10.5MPa Operating ambient temperature: 0-70°C

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

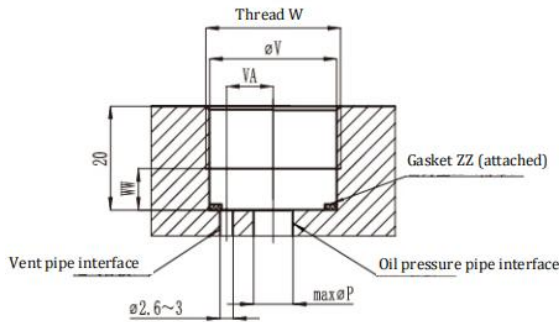
※ 1: When the workpiece support is used opposite to the clamp, in order to make the support force reach more than 1.5 times of (clamping force + cutting load), please select the workpiece support and clamp with matching model.

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

Overall Dimension



Installation hole machining drawing



Model	HH33-02T	HH33-03T	HH33-05T ※2	HH33-07T
HA	50.1	54.1	49.1	59.1
HB	57	62	58	71
HC	70	77	73	88
HD	73	81	77	92
HE	10 f7	12 f7	15 f7	16 f7
HF	24.3 ⁰ _{-0.1}	28.2 ⁰ _{-0.1}	34.2 ⁰ _{-0.1}	43.2 ⁰ _{-0.1}
G	9	9	9	9.5
S	24	27	32	36
TT	8	10	11	11
U	4.7	4	3.6	4.9
V	24.5	28.5	34.5	43.5
VA	9	11	13	16
W (nominal diameter × pitch)	M26×1.5	M30×1.5	M36×1.5	M45×1.5
WW	8	9	9	9
X (nominal diameter × pitch depth)	M6×1 deep 7.5	M8×1.25 deep 8	M10×1.5 deep 10	M10×1.5 deep 10
Z※1	10.82×1.78	12.42×1.78	12.42×1.78	14×1.78
ZZ※1	20×24×1.25	23×28×1.3	28×34×1.25	43×38×1.25
Main body tightening torque	35~45 N·m	40~50 N·m	45~55 N·m	55~65 N·m
Cap tightening torque	10 N·m	20 N·m	30 N·m	30 N·m
Φp	7.5	9	9	9

※ 1: attached O-ring

※ 2: sample size changes when compared with that in the previous period

Note 1. When using bench vise and other tools to fix the hexagon of the main body, please tighten it with a force of less than 2.5kN.

2. This figure shows the state of screwing the cap into the support plunger rod when it is not pressurized.

Oil Pressure (Mpa)	Workpiece Support Force (KN)			
	HH33-02T	HH33-03T	HH33-05T	HH33-07T
2.5	0.6	0.8	1	1.8
3.0	0.8	1	1.3	2.3
3.5	1	1.3	1.7	3
4.0	1.2	1.5	2	3.5
4.5	1.4	1.8	2.3	4.1
5.0	1.7	2	2.7	4.7
5.5	1.9	2.3	3	5.3
6.0	2.1	2.5	3.3	5.9
6.5	2.3	2.8	3.6	6.4
7.0	2.5	3	4	7

Load(KN)	Deformation amount (μm) is the unusable range			
	HH33-02T	HH33-03T	HH33-05T	HH33-07T
0	0	0	0	0
1	8.4	6.7	5	3.6
2	16.8	13.3	10	7.1
3		20	15	10.7
4			20	14.3
5				17.9
6				21.4
7				25