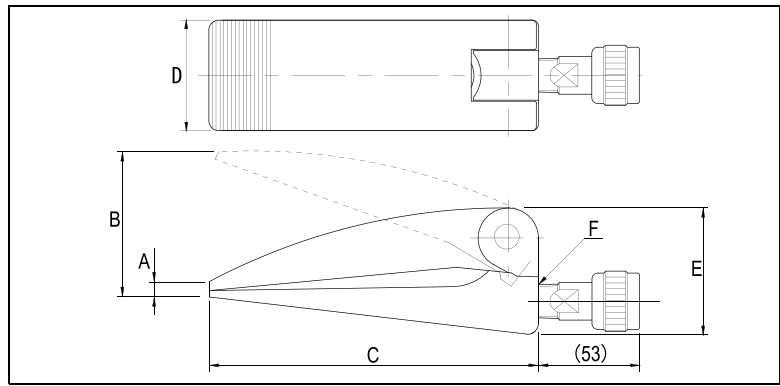


Wedge Ram W series

Description of the type

W O 1 — Maximum output
 W series 0 1 : 10 kN
 0 2 : 20 kN

● A single-acting and return-by-spring type.



Specification

Type	Maximum operating pressure	Maximum output (tip)	Maximum output (base)	Effective area	Collapsed height	Full open height	Overall length	Overall width	Overall height	Coupler connection diameter	Attached coupler	Necessary oil level	Approximate weight
	MPa	kN	kN										
W-01	70	10	40	6.42	10	80	167	56	60.4	Rc3/8	S-1R	10	2.4
W-02	70	20	100	14.52	20	150	320	118	129			50	16

Pull Cylinder MSP/SP series (return-by-spring type)

Description of the type

MSP O 5 - 150
 Maximum output
 0 5 : 50 kN
 MSP series Stroke (mm)

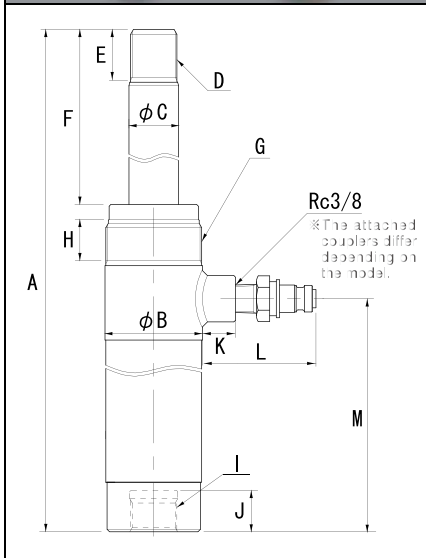
Description of the type

SP O 5 - 150
 Maximum output
 0 5 : 50 kN
 1 : 100 kN
 SP series Stroke (mm)



Specification

Type		50kN		
		MSP05-150	SP05-150	SP1-150
Maximum operating pressure	MPa	70	70	70
Maximum output	kN	50	50	100
Effective area	cm ²	7.45	7.45	14.16
Stroke	mm	150	150	150
Maximum overall length	A	460	460	470
Inner diameter of the cylinder	φ	43	43	52
Outside diameter of the cylinder	φ B	59	58	71
Piston diameter	φ C	30	30	30
Piston screw diameter	D	M28 × 2	1 1/4-11.5NPT	M28 × 2
Piston screw length	E	29	30	29
Piston ejection length	F	184	184	187
Collar thread diameter	G	M58 × 2	2 1/4-14NS	M70 × 2
Collar thread length	H	25	25	25
Base screw diameter	I	M28 × 2	1 1/4-11.5NPT	M28 × 2
Base screw depth	J	25	25	30
Boss height	K	20	20	20
Coupler ejection length	L	≒ 69	≒ 73	≒ 72
Coupler position	M	219	219	226
Coupler connection diameter	-	Rc3/8	Rc3/8	Rc3/8
Attached coupler	-	ROC-13R	S-1R	S-1R
Necessary oil level	cm ³	112	112	213
Approximate weight	kg	4.6	4.5	6.9



Available attachments

		MSP05-150	SP05-150	SP1-150
Piston	Cap	R-10PM	R-10P	R-10PM
	Piston base	RB-10M	RB-10	RB-10M
	Clevis	CLF-10-1 (2)	CLF-10-A (B)	CLF-10-1 (2)
Flange		10FM	10F	-
Base	Cylinder base	CB-10M	CB-10	CB-10M
	Clevis	CLM-10-1 (2)	CLM-10-A (B)	CLM-10-1 (2)