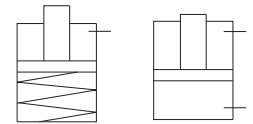




Swing Cylinder

with overload protection, single acting / double acting



Description

Swing cylinders are pull type cylinders. The piston rotates by 90° during the swing stroke, followed by straight clamping stroke due to the internal cam.

Application

Loading and unloading of the job is very easy due to swing action. In the unclamped position, the workpiece area is free from the strap.

Overload Protection

The built-in slip mechanism prevents the damage of the swing mechanism in case of overload.

Versions

Mounting style

TM - Top mounting

BM - Bottom mounting

Swing direction

(While clamping & looking from rod side)

CW - Clockwise

CCW - Counter clockwise

Specifications

- ◆ Maximum oil pressure - 200 bar.
- ◆ Minimum oil pressure - 30 bar.

Important notes

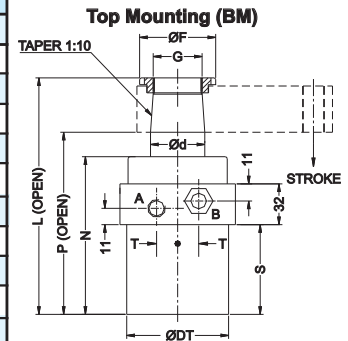
- ◆ These cylinders can be used as **single acting** cylinders by using air breather at port 'B'.
- ◆ These cylinders can be used as **double acting** cylinders by removing air breather and connecting return line to port 'B'.
- ◆ Adjust the oil flow rate in such a way that the total clamping time will be between one to three seconds.
- ◆ Use only meter in circuit.
- ◆ Clamp the job in the straight clamping stroke only.
- ◆ For height adjustment, either use a spacer or an adjusting bolt on the strap as shown in figure.
- ◆ For horizontal mounting of single acting cylinders, weight of the strap should assist the declamping swing stroke.
- ◆ Do not exceed the standard strap length.
- ◆ Breather should be protected from cutting liquids and coolants.
- ◆ Angular tolerance $\pm 3^\circ$
- ◆ Strap has to be ordered separately.
- ◆ For ordering the seal kit, add the prefix "S" to the part number.

FORCE §	3.5kN	8.9 kN	13.9 kN	22.6 kN
Ø BORE	25	40	50	63
d	20	32	40	50
A	65	75	85	105
B	54	60	65	80
C	48	75	100	120
DB	51	60	74	88
DT	NA	60	75	90
F	30	40	56	68
G	M18x1.5	M28x1.5	M36x1.5	M46x 2
M	6.5	11	11	17
L	127.3	153	184	184
N	84.5	97	116	116
P	107.5	125	144	144
S	NA	52	67	67
T	15.5	16.5	15.5	18
Stroke total	18	24	24	24
SWING	9	10	10	10
CLAMP	9	14	14	14
Oil vol clamp	3 cc	11 cc	18 cc	28 cc
Oil volume Declamp	9 cc	30 cc	48 cc	75 cc
Weight	2.2 kg	3.2 kg	4 kg	6 kg

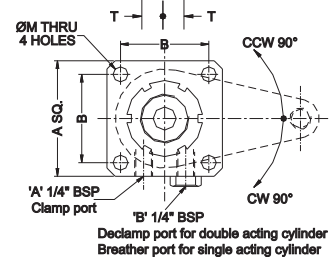
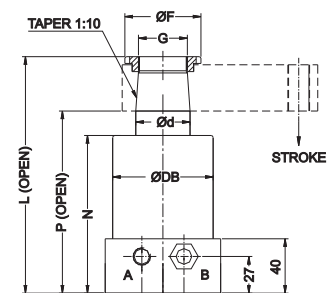
PART NOS. (WITHOUT STRAP)

TM CW	--	3510100	3520100	3530100
TM CCW	--	3510200	3520200	3530200
BM CW	3505100	3510300	3520300	3530300
BM CCW	3505200	3510400	3520400	3530400
STRAP NO.	3610900	3605200	3601400	3603100

§ Force is specified at 200 bar.

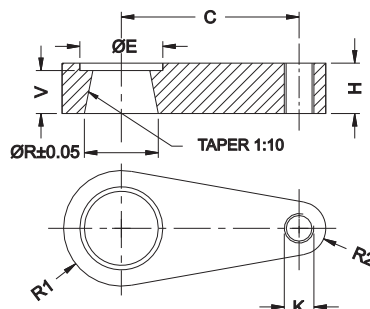


Bottom Mounting (BM)

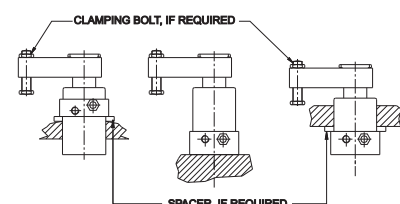


STRAP

PART NO.	R1	R2	C	H	V	E	R	K	WEIGHT
3610900	16	9	48	16	11	25	19.8	M 10	1 kg
3605200	27	15	75	23	18	34	31.8	M 16	1.3 kg
3601400	30	14	100	34	28	45.5	39.8	M 16	1.7 kg
3603100	40	18	120	34	28	56	49.8	M 20	2.5 kg



Application Example



All dimensions are in mm
Overall dimension tolerance ± 0.5 mm