



Swing Cylinder (With Overload Protection)

Top mounting / bottom mounting, single acting / double acting

Top mounting :



Bottom mounting :



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 :

The clamping strap rotates by 90° while clamping and decamping. Due to the swing action, loading and unloading of the job is very easy. In the unclamped position, the workpiece area is free from the strap.

Versions :

Type of Cylinder

- **SW** - Single Acting (Spring Return)
- **DSW** - Double Acting

Mounting style

- **TM** - Top Mounting
- **BM** - Bottom mounting

Swing direction (While clamping & looking from rod side)

- **CW** - Clockwise
- **CCW** - Counter clockwise

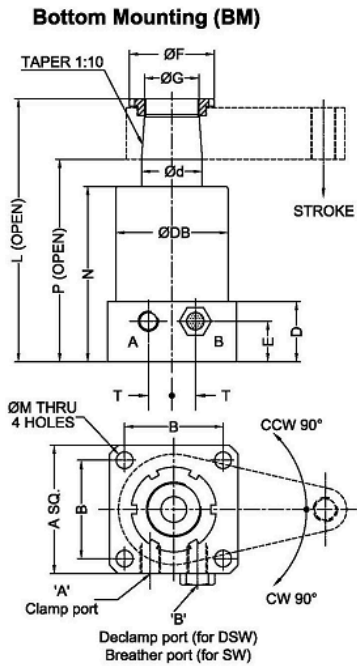
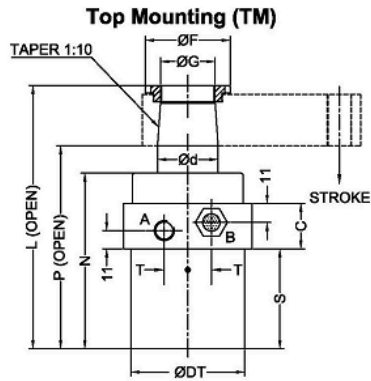
Specifications :

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

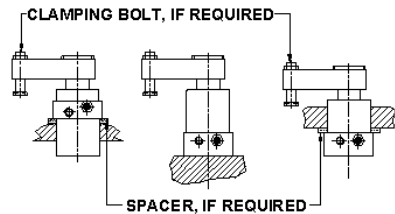
Notes :

- Single acting cylinders are suitable with Hydropneumatic Intensifier and should not be used with hydraulic power unit 'B'.
- Double acting cylinders are suitable with hydraulic power unit 'B'.
- Clamp the job in the straight clamping stroke only.
- Do not exceed the standard strap length.
- Adjust the oil flow rate in such a way so that the total clamping time will be between one to three seconds.
- For height adjustment, either use a spacer at the mounting plate or adjust the clamping bolt on the strap. (fig. below)
- For horizontal mounting of single acting cylinders, weight of the strap should assist the decamping swing stroke.
- For single acting, spring return cylinder, a breather is provided. It should be protected from cutting liquids and coolants.
- Use only meter in circuit.
- Assemble the strap when cylinder is in clamp condition without putting work piece.
- Angular tolerance $\pm 3^\circ$
- Strap has to be ordered separately.
- For ordering the seal kit, add the prefix "S" to the part number.
- **For Non-standard cylinder requirements, Please contact sales@hypowerclamps.com.**

DIMENSION DETAILS FOR THREADED PORT CYLINDER :

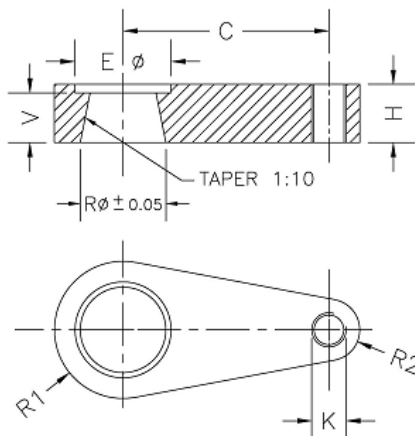


Application Example :



Clamping Force @ 150 bar	4.5 kN	7 kN	10 kN	17 kN
Ø BORE	32	40	50	63
Ø d	25	32	40	50
A	65	75	85	105
B	50	60	65	80
C	30	32	32	32
D	34	40	40	40
E	22	27	27	27
Ø M	9	11	11	17
Ø DB	50	60	74	88
Ø DT	50	60	75	90
Ø F	32	40	56	68
Ø G	M22x1.5	M28x1.5	M36x1.5	M46x2
L	130	153	184	184
N	83	97	116	116
P	105	125	144	144
S	42	52	67	67
T	14	16.5	15.5	18
Clamp / Declamp Port	1/8"BSP	1/4"BSP	1/4"BSP	1/4"BSP
TOTAL STROKE±1	20	24	24	24
SWING STROKE	10	10	10	10
STRAIGHT STROKE	10	14	14	14
OIL VOLUME CLAMP	6 cc	11 cc	18 cc	28 cc
OIL VOLUME DECLAMP	16 cc	30 cc	48 cc	75 cc
Weight	1.7 kg	3.2 kg	4 kg	6 kg
PART NOS. (WITHOUT STRAP)				
Single Acting Top Mounting CW	3508100	3510100	3520100	3530100
Single Acting Top Mounting CCW	3508200	3510200	3520200	3530200
Single Acting Bottom mounting CW	3508300	3510300	3520300	3530300
Single Acting Bottom mounting CCW	3508400	3510400	3520400	3530400
Double Acting Top Mounting CW	3508500	3510500	3520500	3530500
Double Acting Top Mounting CCW	3508600	3510600	3520600	3530600
Double Acting Bottom mounting CW	3508700	3510700	3520700	3530700
Double Acting Bottom mounting CCW	3508800	3510800	3520800	3530800
STRAP				
PART NO.	3608900	3605200	3601400	3603100

STRAP :

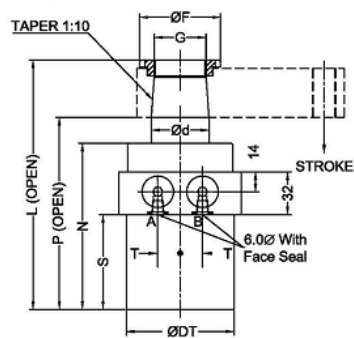


PART NO.	R1	R2	C	H	V	E	R	K	WEIGHT
3608900	22	11.5	60	20	16	26.5	24.9	M 12	0.4 kg
3605200	27	15	75	23	18	35	31.8	M 16	1.3 kg
3601400	30	14	100	34	28	46	39.8	M 16	1.7 kg
3603100	40	18	120	34	28	56	49.8	M 20	2.5 kg

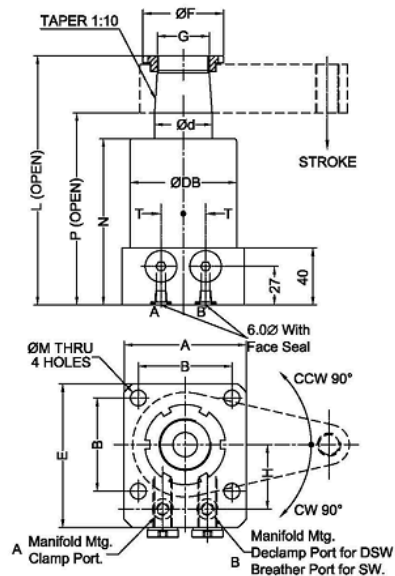
All dimensions are in mm, Overall dimension tolerance ± 0.5 mm.
Subject to change for improvement. (Revision - August 24)

DIMENSION DETAILS FOR MANIFOLD PORT CYLINDER :

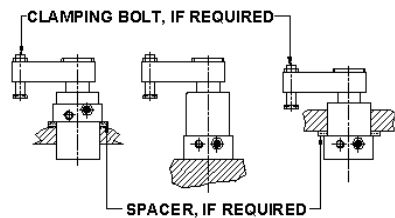
Top Manifold Mounting (TM)



Bottom Manifold Mounting (BM)

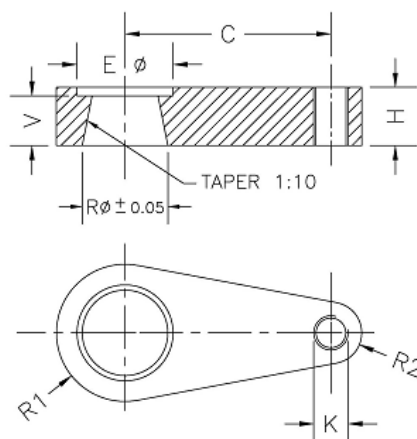


Application Example :



Clamping Force @ 150 bar	7 kN	10 kN	17 kN
Ø BORE	40	50	63
Ø d	32	40	50
A	75	85	105
B	60	65	80
Ø M	11	11	17
Ø DB	60	74	88
Ø DT	60	75	90
Ø F	40	56	68
Ø G	M28x1.5	M36x1.5	M46x2
L	153	184	184
N	97	116	116
P	125	144	144
S	52	67	67
T	16.5	15.5	18
E	89.00	101.50	118.00
H	37.50	45.00	51.50
TOTAL STROKE±1	24	24	24
SWING STROKE	10	10	10
STRAIGHT STROKE	14	14	14
OIL VOLUME CLAMP	11 cc	18 cc	28 cc
OIL VOLUME DECLAMP	30 cc	48 cc	75 cc
Weight	3.2 kg	4 kg	6 kg
PART NOS. (WITHOUT STRAP)			
Single Acting Top Mounting CW	3510105	3520105	3530105
Single Acting Top Mounting CCW	3510205	3520205	3530205
Single Acting Bottom mounting CW	3510305	3520305	3530305
Single Acting Bottom mounting CCW	3510405	3520405	3530405
Double Acting Top Mounting CW	3510505	3520505	3530505
Double Acting Top Mounting CCW	3510605	3520605	3530605
Double Acting Bottom mounting CW	3510705	3520705	3530705
Double Acting Bottom mounting CCW	3510805	3520805	3530805
STRAP			
PART NO.	3605200	3601400	3603100

STRAP :



PART NO.	R1	R2	C	H	V	E	R	K	WEIGHT
3605200	27	15	75	23	18	35	31.8	M 16	1.3 kg
3601400	30	14	100	34	28	46	39.8	M 16	1.7 kg
3603100	40	18	120	34	28	56	49.8	M 20	2.5 kg

All dimensions are in mm, Overall dimension tolerance ± 0.5 mm.
Subject to change for improvement. (Revision - August 24)

Application Example :

