Hydraulic Swing Cylinders

Bottom Mounted, Double Acting

Description

- These cylinders are "Pull Type" cylinders where the piston rotates by 90° (in CW or CCW direction) during the swing stroke and then travels in a straight line during the clamping stroke. A solid, one piece construction ensures perfect alignment of internal components and maximum clamping rigidity

Features

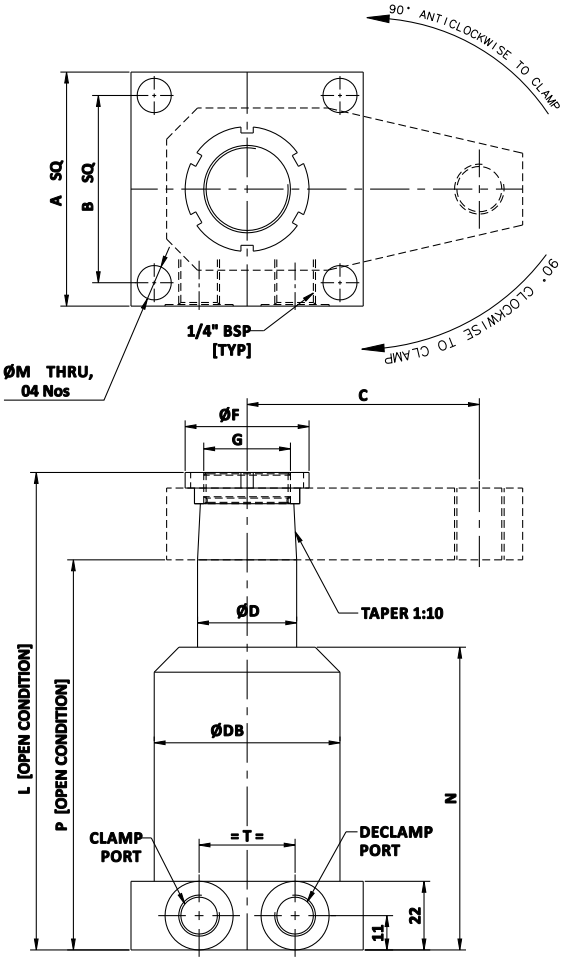
- Type : Double Acting
- Min. working pressure : 20 kg/cm^2
- Max. working pressure : 160 kg/cm^2
- Short swing stroke allows for compact design and maximum rigidity.
- Standard clamping stroke of 14 mm gives longer " working stroke ".

Application

- Hydraulic swing cylinders are used for clamping where it is necessary to keep the clamping area clear for unrestricted loading and unloading of work pieces.

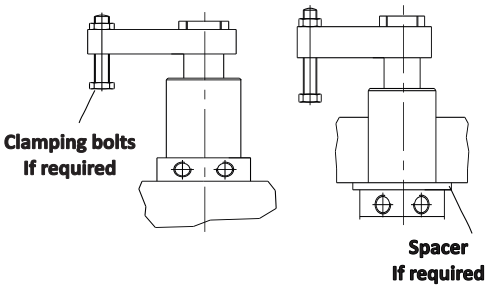
Important Notes

- Do not load the swing mechanism during tightening of the clamping strap.
- Clamp the job in the straight clamping stroke only.
- Adjust the oil flow rate such that total clamping time is more than one second.
- For seal kits, add prefix SK to Part no.
- For Clamping Strap details, refer 4.191



DIMENSIONAL DETAILS			
SIZE	4	5	6
A	75	85	105
B	60	65	80
C	75	100	120
DB	60	74	88
D	32	40	50
F	40	56	68
G	M28 x 1.5	M36 x 1.5	M46 x 2
M	11	11	17
L	153	184	184
N	97	116	116
P	125	144	144
T	15.5	15.5	18

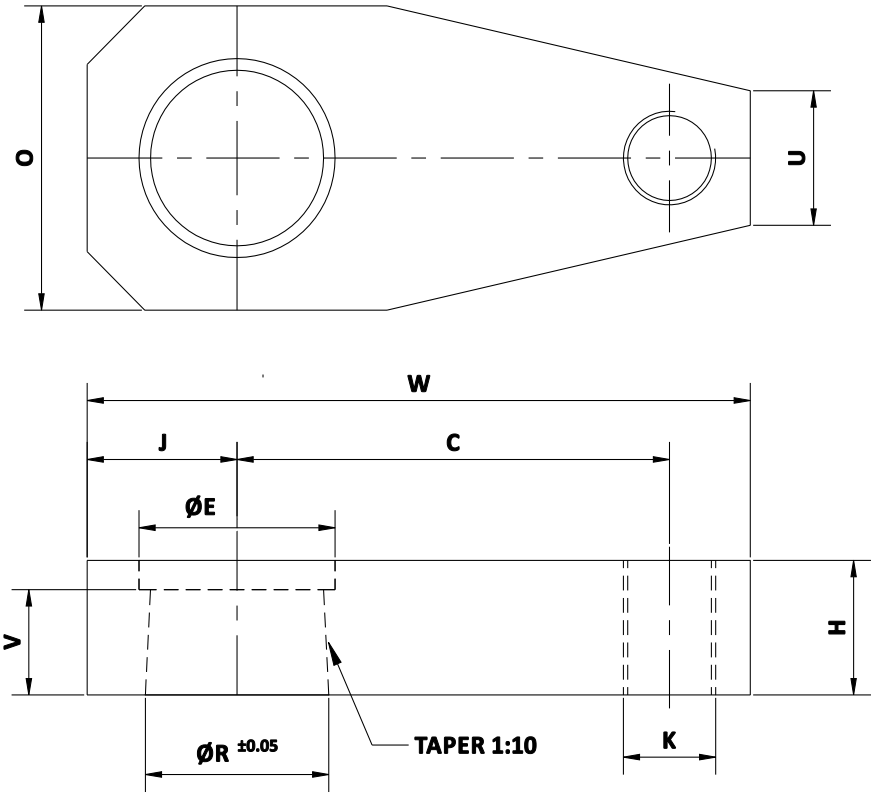
Mounting Arrangement



- All dimensions are in mm
- Overall dimensional tolerance ±0.5

SPECIFICATIONS									
SIZE	BORE (mm)	ROD (mm)	CLAMP STROKE (mm)	TOTAL STROKE (mm)	CLAMP FORCE at 160 kg/cm^2 (kgf)	CLAMP VOLUME (cc)	DECLAMP VOLUME (cc)	STANDARD PART No's (Without Clamping Strap)	
								COUNTER CLOCK WISE	CLOCK WISE
4	40	32	14	24	350	10.9	30.2	**4120-426**	**4120-429**
5	50	40	14	24	550	16.9	47.5	**4120-526**	**4120-529**
6	63	50	14	24	900	27.6	74.7	**4120-626**	**4120-629**

Clamping Strap
for Hydraulic Swing Cylinders



DIMENSIONAL DETAILS			
SIZE	4	5	6
W	115	144	178
C	75	100	120
J	26	30	40
H	23	34	34
V	18	28	28
E	34	45.5	56
R	31.8	39.8	49.8
K	M16	M16	M20
U	23	25	40
O	52	60	78
PART No.	**4191-452**	**4191-552**	**4191-652**

- **All dimensions are in mm**
- **Overall dimensional tolerance ±0.5 mm**

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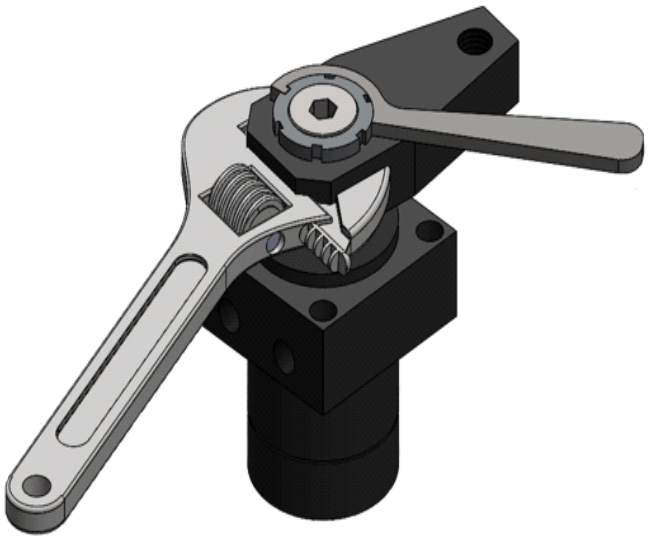
How to fix the Clamping Strap on a Swing Cylinder

If the Piston Rod is subjected to excessive torque or shock, it could damage the internal swing mechanism.

To prevent this:

During Installation:

1. Place the clamping strap on the piston rod in the required position and lock it by gently tapping it.
2. Tighten the locknut firmly by hand.
3. Bring the swing mechanism to the middle of the swing stroke, hold the strap in place using an adjustable spanner, as illustrated alongside, and tighten the lock nut with a C-spanner. **Ensure the strap does not rotate during tightening.**



During Removal:

1. Bring the swing mechanism to the middle of the swing stroke and follow the above procedure in reverse.
2. After removing the locknut, gently tap the strap to remove it from the piston rod.

By carrying out these steps carefully, the swing mechanism will continue to function satisfactorily.