



Series SIT Hydraulic Cylinders

Single acting Internal Thread



Pressure: 2,500 psi Working
3,500 psi Non-Shock

Bore Sizes: 1.25" to 3.25"

Rod Sizes: 1.00" to 3.00"

Ports: 1/8" to 1/2" NPT

Attachments: Spherical Bearings
Clevis
Cross Hole
Front Flange Mount
Rear Flange Mount

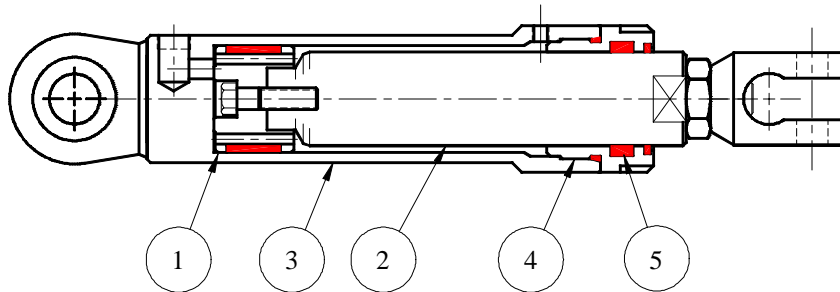
Series SIT Cylinder

Our Series **SIT** is a **Single acting Internal Thread** displacement cylinder. With a pressure rating of 2500 psi working and 3500 psi non-shock, the pressure acts on the rod to create an extend force that is equal to that of the pressure times the rod area. An external force, generally gravity, retracts the rod once the oil is allowed to leave the cylinder. The piston supports and guides the rod.

The cylinder is well sealed at the rod end which will keep the inside of the cylinder barrel from becoming contaminated. The advantage of this design is that the inside of the barrel is not exposed to atmosphere and the rod is always immersed in oil when retracted which will keep the rod from corroding. Also, only one hydraulic pressure line is required in order to operate the cylinder, thus simplifying the hose routing.

Since pressure acts on the area of the rod and not on the piston area, it is necessary to use a larger bore than a non-displacement type of cylinder design to exert the same force.

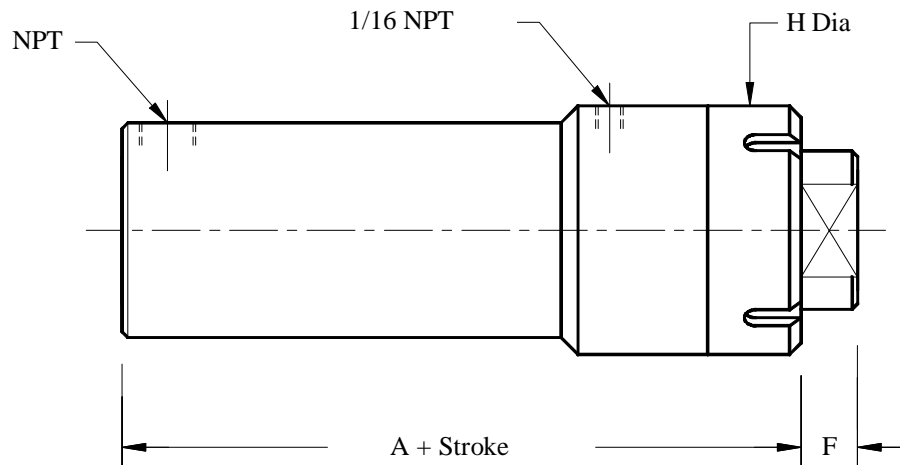
There is a 1/16" NPT plug at the rod end of the cylinder barrel which is provided to bleed air out of the cylinder during installation. This must be done in order to prevent the cylinder from becoming "spongy" due to the compressibility of the air trapped inside the cylinder.



| PART NUMBERS | | Item 1 | Item 2 | Item 3 | Item 4 | Item 5 | Shipping weight (lb) (c/w clevis ends) | |
|--------------|-------|----------|---|--------|--------|----------|---|----------------|
| Bore | Rod | Piston | Rod | Barrel | Gland | Seal Kit | Base weight | lb/inch Stroke |
| 1 1/4 | 1 | B3365-13 | Part Number is Model number and Stroke Followed by: B for barrel R for rod | | B3696 | 12661 | 4.46 | 0.46 |
| 1 1/2 | 1 1/4 | B3365-15 | | B3379 | 12435 | 5.85 | 0.63 | |
| 1 3/4 | 1 1/2 | B3365-18 | | B3375 | 12434 | 6.94 | 0.82 | |
| 2 | 1 3/4 | B3365-20 | | B3373 | 12433 | 9.16 | 1.05 | |
| 2 1/4 | 2 | B3365-23 | | B3371 | 12432 | 11.63 | 1.45 | |
| 2 3/4 | 2 1/2 | B3365-28 | | B3363 | 12412 | 15.28 | 2.06 | |
| 3 1/4 | 3 | B3365-33 | | B3477 | 12539 | 20.39 | 2.78 | |

Series SIT Cylinder

See the Accessories section of the catalogue for rod end & blind end options. The 'CD' (Pin Dia), the 'F' (Rod Extension) and 'KK' (Thread) dimensions given are standard but they can be changed to suit any special requirements. Threaded and welded ends are both available.



| Bore | Rod | CD | A | F | H | NPT |
|--------|--------|------|------|------|------|-----|
| 1 1/4" | 1" | 0.38 | 3.69 | 0.38 | 2.00 | 1/8 |
| 1 1/2" | 1 1/4" | 0.50 | 4.00 | 0.50 | 2.25 | 1/4 |
| 1 3/4" | 1 1/2" | 0.63 | 4.00 | 0.50 | 2.50 | 1/4 |
| 2" | 1 3/4" | 0.75 | 4.75 | 0.50 | 2.75 | 3/8 |
| 2 1/4" | 2" | 1.00 | 4.75 | 0.50 | 3.00 | 3/8 |
| 2 3/4" | 2 1/2" | 1.00 | 4.88 | 0.50 | 3.50 | 1/2 |
| 3 1/4" | 3" | 1.25 | 5.00 | 0.50 | 4.00 | 1/2 |

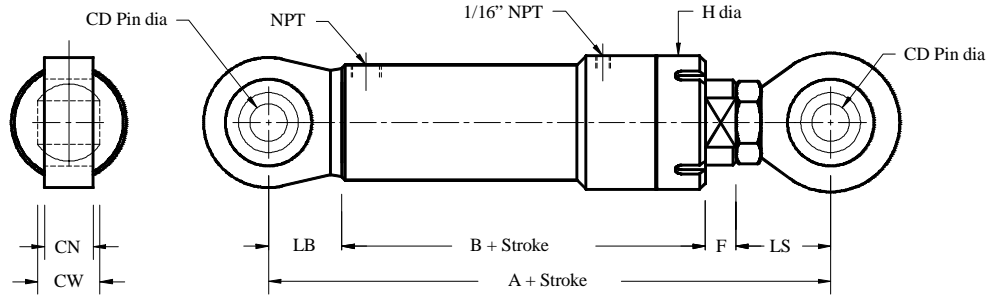
MATERIAL SPECIFICATIONS

| | |
|--|------------------------------------|
| <i>Barrel:</i> DOM Tubing ASTM 513/519 Gr. 1020/1026 | <i>Rod seal:</i> Polyurethane |
| <i>Head:</i> Ductile Iron ASTM A536 (65-45-12) | <i>Wear Ring:</i> Reinforced Nylon |
| <i>Piston:</i> Ductile Iron ASTM A536 (65-45-12) | <i>Wiper:</i> Polyurethane |
| <i>Rod:</i> C1045 Chrome Plated | <i>O-Ring:</i> Nitrile |
| <i>Accessories:</i> Steel CSA G40-21 Gr. 44W | <i>Back-Up:</i> Nitrile |
| <i>Bolts:</i> SAE Grade 8 | |

Seal Temperature Range: -65° F to 225° F (-54° C to 107° C)

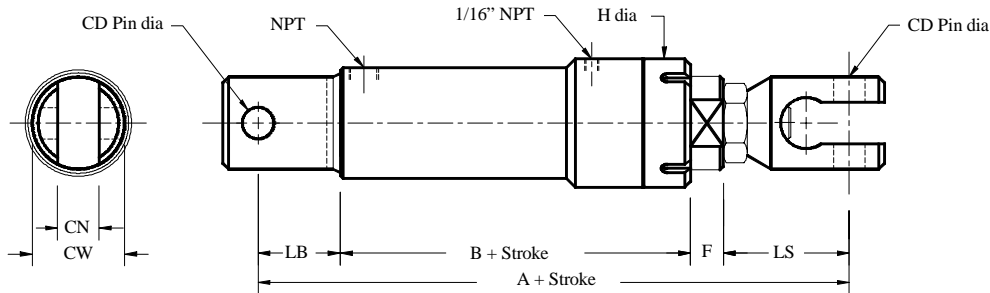
Series SIT Cylinder

Spherical Blind End / Spherical Rod End



| Bore | Rod | CD | A | B | F | H | NPT | LB | LS | CN | CW |
|-------|-------|------|------|------|------|------|-----|------|------|------|------|
| 1 1/4 | 1 | 0.38 | 7.01 | 3.69 | 0.38 | 2.00 | 1/8 | 0.88 | 0.75 | 0.41 | 0.50 |
| 1 1/2 | 1 1/4 | 0.50 | 7.38 | 4.00 | 0.50 | 2.25 | 1/4 | 1.00 | 1.19 | 0.50 | 0.63 |
| 1 3/4 | 1 1/2 | 0.63 | 7.38 | 4.00 | 0.50 | 2.50 | 1/4 | 1.13 | 1.31 | 0.56 | 0.75 |
| 2 | 1 3/4 | 0.75 | 8.13 | 4.75 | 0.50 | 2.75 | 3/8 | 1.25 | 1.44 | 0.69 | 0.88 |
| 2 1/4 | 2 | 1.00 | 9.05 | 4.75 | 0.50 | 3.00 | 3/8 | 1.50 | 2.30 | 0.75 | 0.88 |
| 2 3/4 | 2 1/2 | 1.00 | 9.18 | 4.88 | 0.50 | 3.50 | 1/2 | 1.50 | 2.30 | 0.75 | 0.88 |
| 3 1/4 | 3 | 1.25 | 9.30 | 5.00 | 0.50 | 4.00 | 1/2 | 1.88 | 3.10 | 0.94 | 1.09 |

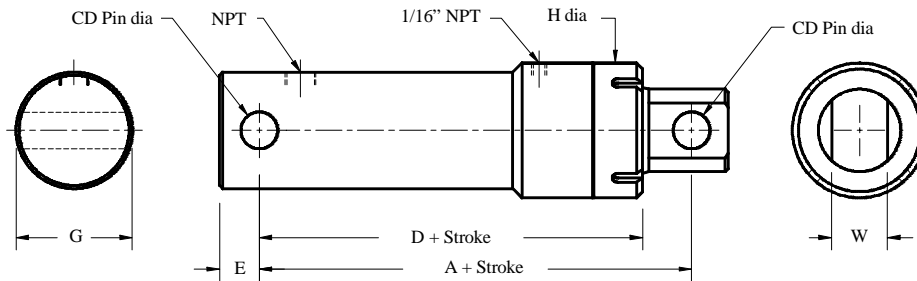
Clevis Blind End / Clevis Rod End



| Bore | Rod | CD | A | B | F | H | NPT | LB | LS | CB | CS |
|-------|-------|------|-------|------|------|------|-----|------|------|------|------|
| 1 1/4 | 1 | 0.38 | 6.60 | 3.69 | 0.38 | 2.00 | 1/8 | 1.00 | 1.47 | 0.51 | 1.19 |
| 1 1/2 | 1 1/4 | 0.50 | 7.75 | 4.00 | 0.50 | 2.25 | 1/4 | 1.31 | 1.94 | 0.66 | 1.47 |
| 1 3/4 | 1 1/2 | 0.63 | 8.26 | 4.00 | 0.50 | 2.50 | 1/4 | 1.50 | 2.26 | 0.76 | 1.69 |
| 2 | 1 3/4 | 0.75 | 9.48 | 4.75 | 0.50 | 2.75 | 3/8 | 1.69 | 2.55 | 0.88 | 1.97 |
| 2 1/4 | 2 | 1.00 | 10.43 | 4.75 | 0.50 | 3.00 | 3/8 | 2.00 | 3.18 | 1.13 | 2.47 |
| 2 3/4 | 2 1/2 | 1.00 | 10.55 | 4.88 | 0.50 | 3.50 | 1/2 | 2.00 | 3.18 | 1.13 | 2.47 |
| 3 1/4 | 3 | 1.25 | 10.68 | 5.00 | 0.50 | 4.00 | 1/2 | 2.50 | 3.73 | 1.38 | 2.88 |

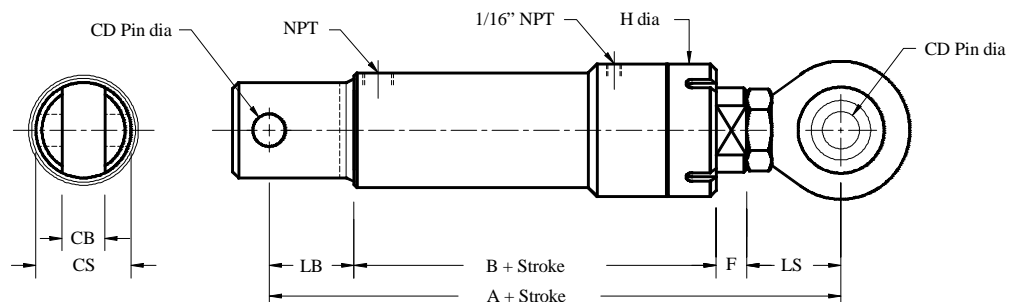
Series SIT Cylinder

Cross Hole Blind End / Cross Hole Rod End



| Bore | Rod | CD | A | D | E | G | H | W | NPT |
|-------|-------|------|------|------|------|------|------|------|-----|
| 1 1/4 | 1 | 0.38 | 4.50 | 3.88 | 0.38 | 1.50 | 2.00 | 0.75 | 1/8 |
| 1 1/2 | 1 1/4 | 0.50 | 4.88 | 4.13 | 0.50 | 1.75 | 2.25 | 0.88 | 1/4 |
| 1 3/4 | 1 1/2 | 0.63 | 5.13 | 4.25 | 0.63 | 2.13 | 2.50 | 1.00 | 1/4 |
| 2 | 1 3/4 | 0.75 | 6.13 | 5.13 | 0.81 | 2.38 | 2.75 | 1.25 | 3/8 |
| 2 1/4 | 2 | 1.00 | 6.63 | 5.25 | 0.81 | 2.63 | 3.00 | 1.50 | 3/8 |
| 2 3/4 | 2 1/2 | 1.00 | 6.75 | 5.38 | 0.94 | 3.13 | 3.50 | 2.00 | 1/2 |
| 3 1/4 | 3 | 1.25 | 7.13 | 5.50 | 1.06 | 3.75 | 4.00 | 2.25 | 1/2 |

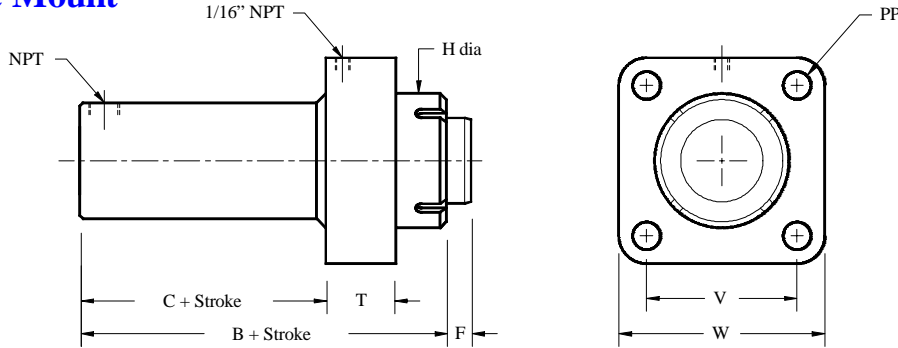
Clevis Blind End / Spherical Rod End



| Bore | Rod | CD | A | B | F | H | NPT | LB | LS | CB | CS |
|-------|-------|------|-------|------|------|------|-----|------|------|------|------|
| 1 1/4 | 1 | 0.38 | 5.44 | 3.69 | 0.38 | 2.00 | 1/8 | 1.00 | 0.75 | 0.51 | 1.19 |
| 1 1/2 | 1 1/4 | 0.50 | 6.50 | 4.00 | 0.50 | 2.25 | 1/4 | 1.31 | 1.19 | 0.66 | 1.47 |
| 1 3/4 | 1 1/2 | 0.63 | 6.81 | 4.00 | 0.50 | 2.50 | 1/4 | 1.50 | 1.31 | 0.76 | 1.69 |
| 2 | 1 3/4 | 0.75 | 7.88 | 4.75 | 0.50 | 2.75 | 3/8 | 1.69 | 1.44 | 0.88 | 1.97 |
| 2 1/4 | 2 | 1.00 | 9.06 | 4.75 | 0.50 | 3.00 | 3/8 | 2.00 | 2.30 | 1.13 | 2.47 |
| 2 3/4 | 2 1/2 | 1.00 | 9.19 | 4.88 | 0.50 | 3.50 | 1/2 | 2.00 | 2.30 | 1.13 | 2.47 |
| 3 1/4 | 3 | 1.25 | 10.60 | 5.00 | 0.50 | 4.00 | 1/2 | 2.50 | 3.10 | 1.38 | 2.88 |

Series SIT Cylinder

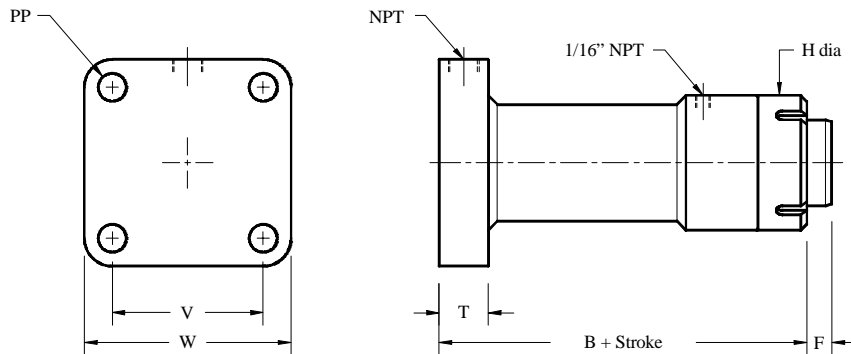
Front Flange Mount



See the Accessories section of the catalogue for rod ends.

| Bore | Rod | B | C | F | H | T | V | W | PP | NPT |
|-------|-------|------|------|------|------|------|------|------|-------|-----|
| 1 1/4 | 1 | 3.69 | 1.31 | 0.38 | 2.00 | 1.38 | 2.00 | 2.75 | 13/32 | 1/8 |
| 1 1/2 | 1 1/4 | 4.00 | 1.63 | 0.50 | 2.25 | 1.38 | 2.13 | 3.00 | 13/32 | 1/4 |
| 1 3/4 | 1 1/2 | 4.00 | 1.63 | 0.50 | 2.50 | 1.38 | 2.50 | 3.50 | 15/32 | 1/4 |
| 2 | 1 3/4 | 4.75 | 2.25 | 0.50 | 2.75 | 1.50 | 2.63 | 3.63 | 15/32 | 3/8 |
| 2 1/4 | 2 | 4.75 | 2.25 | 0.50 | 3.00 | 1.50 | 3.00 | 4.25 | 17/32 | 3/8 |
| 2 3/4 | 2 1/2 | 4.88 | 2.38 | 0.50 | 3.50 | 1.50 | 3.50 | 4.75 | 17/32 | 1/2 |
| 3 1/4 | 3 | 5.00 | 2.38 | 0.50 | 4.00 | 1.50 | 4.00 | 5.25 | 11/16 | 1/2 |

Rear Flange Mount



See the Accessories section of the catalogue for rod ends.

| Bore | Rod | B | F | H | T | V | W | PP | NPT |
|-------|-------|------|------|------|------|------|------|-------|-----|
| 1 1/4 | 1 | 3.56 | 0.38 | 2.00 | 0.75 | 2.00 | 2.75 | 13/32 | 1/8 |
| 1 1/2 | 1 1/4 | 3.81 | 0.50 | 2.25 | 1.00 | 2.13 | 3.00 | 13/32 | 1/4 |
| 1 3/4 | 1 1/2 | 3.88 | 0.50 | 2.50 | 1.00 | 2.50 | 3.50 | 15/32 | 1/4 |
| 2 | 1 3/4 | 4.44 | 0.50 | 2.75 | 1.00 | 2.63 | 3.63 | 15/32 | 3/8 |
| 2 1/4 | 2 | 4.44 | 0.50 | 3.00 | 1.00 | 3.00 | 4.25 | 9/16 | 3/8 |
| 2 3/4 | 2 1/2 | 4.69 | 0.50 | 3.50 | 1.25 | 3.50 | 4.75 | 9/16 | 1/2 |
| 3 1/4 | 3 | 4.81 | 0.50 | 4.00 | 1.25 | 4.00 | 5.50 | 11/16 | 1/2 |