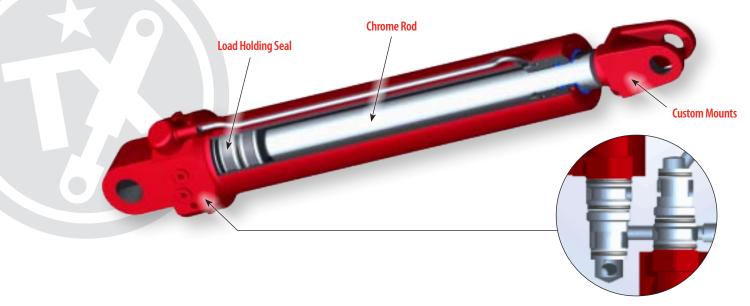
# Valve Integrated Hydraulic Cylinders

Our Valve Integration option eliminates hoses and tubing from the manifold block, reducing the use and cost of additional purchased parts and preventing contamination during machine assembly. Valve integrated cylinders are streamlined for a better fit, better appearance, and increased clearance on equipment.



### **Product Description**

- Counterbalance
- Overload Protection
- Regenerative Circuits
- Load Locking
- Sequence Control
- Flow Control/ Velocity Fuse
- Thermal Protection
- Master / Slave Circuits
- Directional Control
- Pressure Control
- Proportional Flow

### **Product Advantages**

- Eliminates hoses and tubing from the manifold block
- Reduces the use of and cost of additional purchased parts
- Streamlined for a better fit, a better aesthetic appearance, and increased clearances on the equipment
- Prevents contamination during machine assembly





# **Cylinder Dead Length**

The charts below show the standard cylinder dead length in inches, it does not include end mounts or stroke. Add 1" to for every 10" of stroke beyond 40". For base end mounted valve block add 1.75" for up to 15 GPM, 2.00" for up to 30 GPM and 2.38" for up to 60 GPM. Any required cushion length is additive. Standard bore-rod combinations and lengths are shown, please consult Texas Hydraulics for availability of sizes not shown, or if the shorter lengths are required. These dimensions are for reference only, some applications may require more dead length than shown.

## **Medium-Heavy Duty Cylinders**

|      | 2.00 | 2.25 | 2.50 | 2.75 | 3.00 | 3.25 | 3.50 | 3.75 | 4.00 | 4.25 | 4.50 | 5.00 | 5.50 | 6.00 | 6.50 | 7.00  | 8.00  | 9.00  | 10.00 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|
| 0.75 | 4.75 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |
| 0.88 | 4.75 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |
| 1.00 | 4.88 | 4.88 | 5.00 |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |
| 1.13 | 4.88 | 4.88 | 5.00 |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |
| 1.25 | 5.00 | 5.13 | 5.25 | 5.75 | 6.38 | 6.50 | 6.88 |      |      |      |      |      |      |      |      |       |       |       |       |
| 1.38 | 5.31 | 5.31 | 5.31 | 5.75 | 6.38 | 6.50 | 6.88 | 6.88 |      |      |      |      |      |      |      |       |       |       |       |
| 1.50 | 6.00 | 5.63 | 5.63 | 5.75 | 6.38 | 6.50 | 6.88 | 6.88 | 7.13 |      |      |      |      |      |      |       |       |       |       |
| 1.63 |      | 5.75 | 5.75 | 5.88 | 6.38 | 6.50 | 6.88 | 6.88 | 7.13 | 7.13 |      |      |      |      |      |       |       |       |       |
| 1.75 |      | 6.00 | 6.00 | 6.19 | 6.38 | 6.50 | 7.00 | 6.88 | 7.25 | 7.25 |      |      |      |      |      |       |       |       |       |
| 2.00 |      |      |      | 7.25 | 6.75 | 6.88 | 7.13 | 7.00 | 7.38 | 7.38 | 7.63 | 8.13 |      |      |      |       |       |       |       |
| 2.25 |      |      |      |      |      | 6.88 | 7.13 | 7.13 | 7.38 | 7.38 | 7.63 | 8.38 |      |      |      |       |       |       |       |
| 2.50 |      |      |      |      |      |      | 7.38 | 7.13 | 7.38 | 7.38 | 7.63 | 8.50 | 8.88 |      | _=_  |       |       |       |       |
| 2.75 |      |      |      |      |      |      |      | 7.38 | 7.38 | 7.38 | 7.88 | 8.75 | 8.88 | 9.13 | 9.13 |       |       |       |       |
| 3.00 |      |      |      |      |      |      |      |      | 7.63 | 7.63 | 8.00 | 8.75 | 9.00 | 9.13 | 9.13 |       |       |       |       |
| 3.25 |      |      |      |      |      |      |      |      |      |      | 8.25 | 8.75 | 9.00 | 9.25 | 9.25 | 9.63  | 9.88  |       |       |
| 3.50 |      |      |      |      |      |      |      |      |      |      | 8.50 | 8.88 | 9.25 | 9.50 | 9.50 | 9.63  | 9.88  |       |       |
| 3.75 |      |      |      |      |      |      |      | - 15 |      |      |      | 8.88 | 9.50 | 9.75 | 9.75 | 10.13 | 10.13 |       |       |
| 4.00 |      |      |      |      |      |      |      |      |      |      |      | 8.88 | 9.50 | 9.75 | 9.75 | 10.13 | 10.13 | 12.00 | 12.00 |
| 4.50 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 12.25 | 10.38 | 12.25 | 12.25 |
| 5.00 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       | 10.38 | 12.50 | 12.50 |
| 5.50 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       | 12.50 | 12.50 |
| 6.00 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       | 13.00 | 13.00 |

## **Light-Medium Duty Cylinders**

|      | 1.00 | 1.25 | 1.50 | 1.75 | 2.00 | 2.25 | 2.50 | 2.75 | 3.00 | 3.25 | 3.50 | 3.75 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0.50 | 3.44 |      |      |      |      |      |      |      |      |      |      |      |
| 0.63 |      | 3.75 | 4.00 |      |      |      |      |      |      |      |      |      |
| 0.75 |      | 3.75 | 4.13 | 4.25 | 4.13 |      |      |      |      |      |      |      |
| 0.88 |      |      | 4.13 | 4.25 | 4.25 |      |      |      |      |      |      |      |
| 1.00 |      |      |      | 4.38 | 4.38 | 4.38 | 4.50 |      |      |      |      |      |
| 1.13 |      |      |      |      | 4.38 | 4.38 | 4.50 |      |      |      |      |      |
| 1.25 |      |      |      |      | 5.00 | 4.50 | 4.75 | 4.88 | 5.13 | 5.13 | 5.25 |      |
| 1.38 |      |      |      |      | 5.00 | 4.75 | 5.00 | 4.88 | 5.13 | 5.13 | 5.25 | 5.25 |
| 1.50 |      |      |      |      |      | 5.00 | 5.00 | 5.00 | 5.13 | 5.13 | 5.25 | 5.25 |
| 1.63 |      |      |      |      |      | 5.50 | 5.50 | 5.50 | 5.38 | 5.38 | 5.38 | 5.38 |
| 1.75 |      |      |      |      |      |      |      | 6.00 | 5.50 | 5.50 | 5.50 | 5.50 |
| 2.00 |      |      |      |      |      |      |      |      |      | 6.00 | 5.50 | 5.75 |
| 2.25 |      |      |      |      |      |      |      |      |      |      | 6.00 | 6.00 |
| 2.50 |      |      |      |      |      |      |      |      |      |      |      | 6.25 |



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