

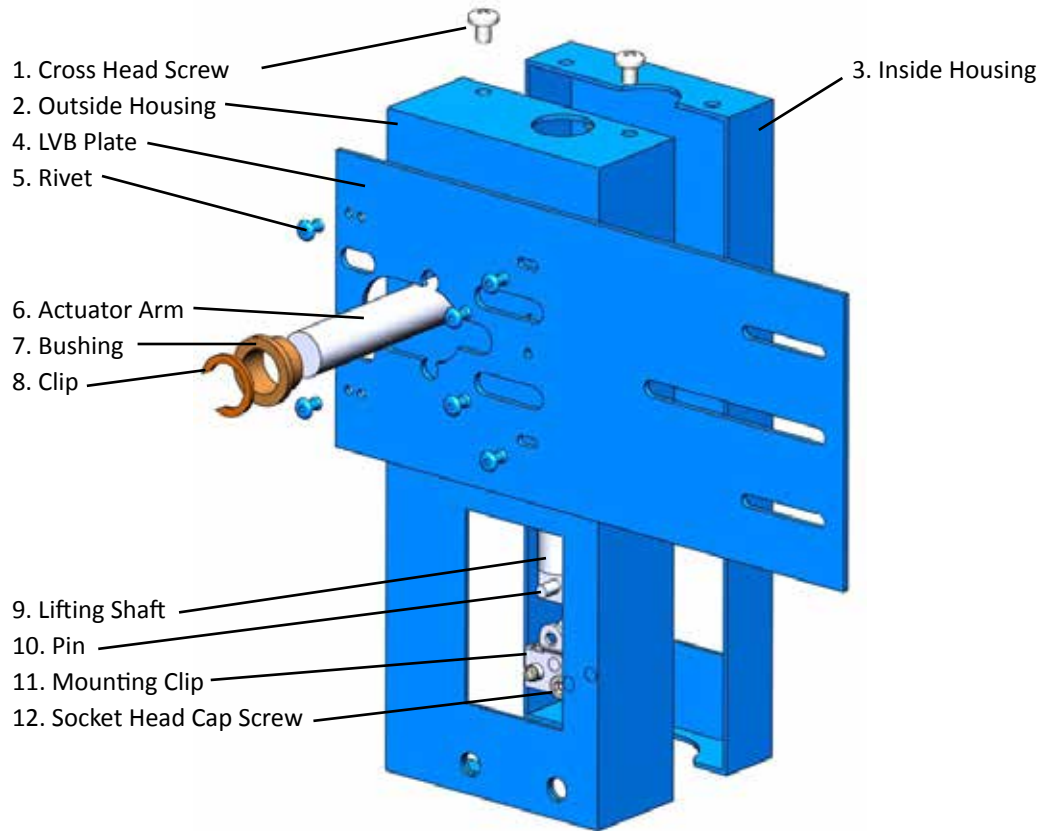
VSI



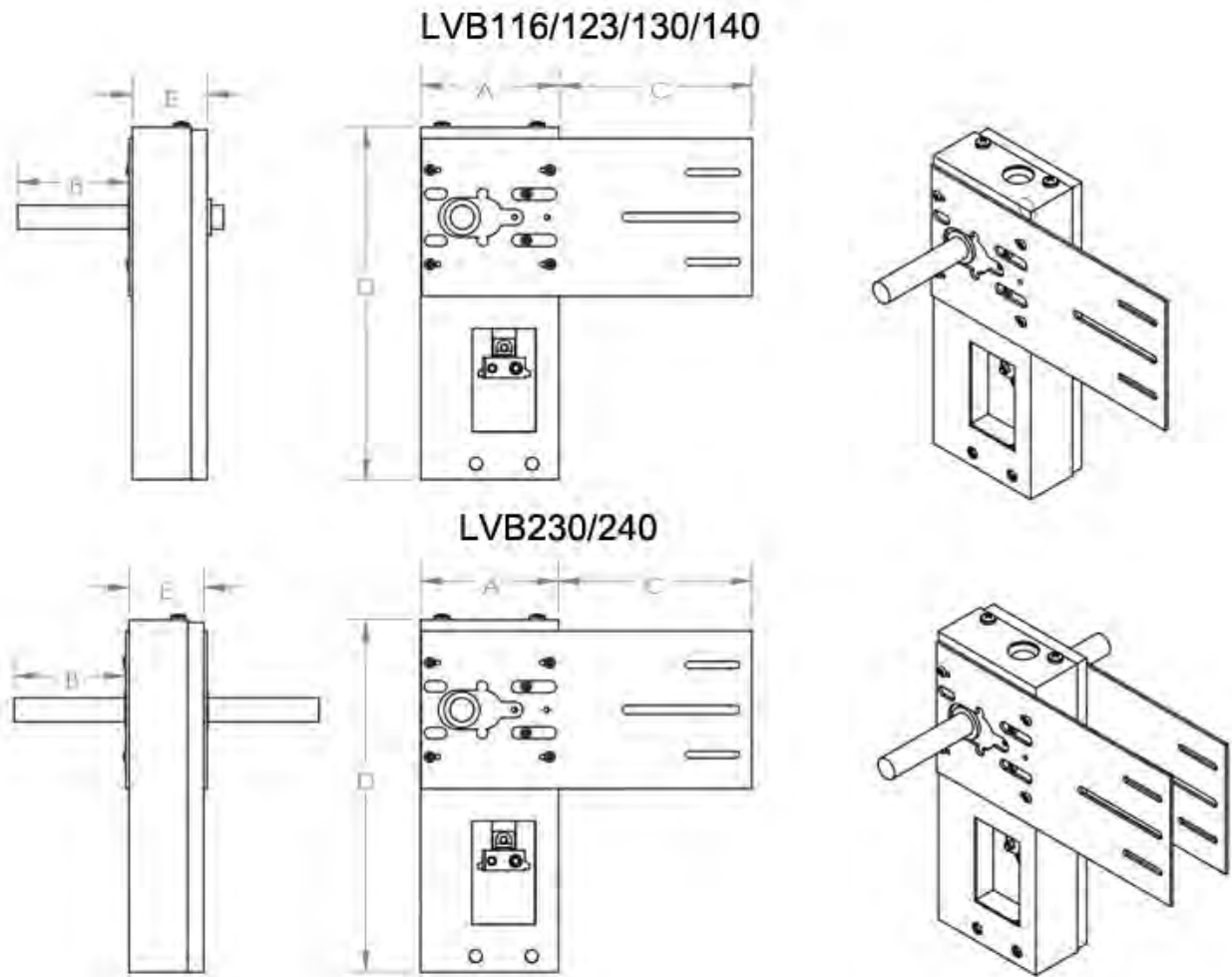
SERIES LVB

Universal Globe Valve Linkage

- LVB series linkages are available for 1/2" through 6" globe valves made by most manufacturers like Johnson Controls, Honeywell, Siemens (Landis), and Barber-Colman (Siebe).
- Flexible actuator orientation allows for various applications.
- Dual actuators can be mounted on the double plate units (LVB 230/240) for higher close-off applications.
- Custom-made collars and caps will fit perfectly for your valves. (See retrofit form)



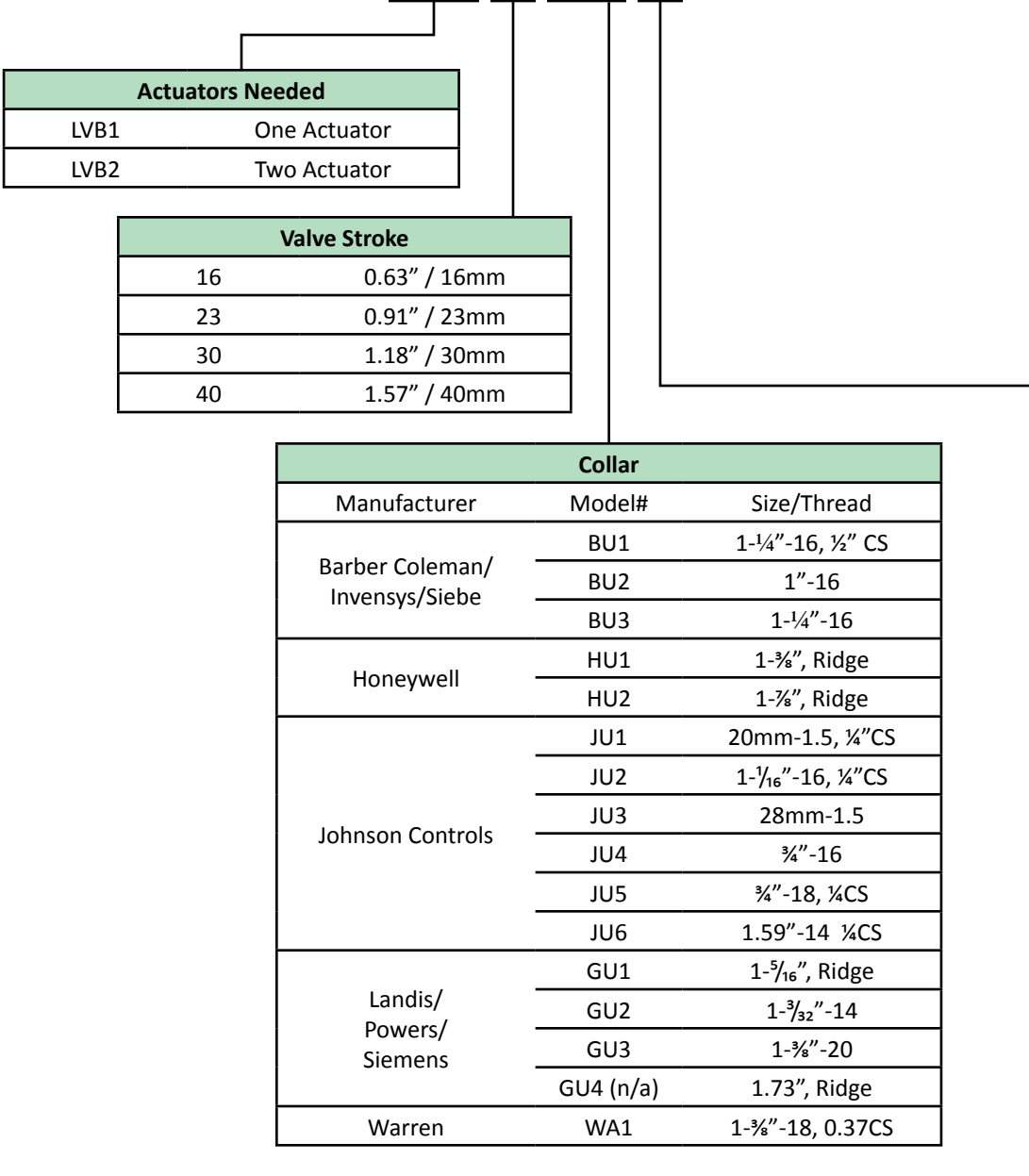
| Bill of Materials | | |
|-------------------|-----------------------|-------------------|
| Item | Part | Material |
| 1 | Cross Head Screw | Stainless Steel |
| 2 | Outside Housing | Cold Rolled Steel |
| 3 | Inside Housing | Cold Rolled Steel |
| 4 | LVB Plate | Cold Rolled Steel |
| 5 | Rivet | Stainless Steel |
| 6 | Actuator Arm | Stainless Steel |
| 7 | Bushing | Brass |
| 8 | Clip | Brass |
| 9 | Lifting Shaft | Steel |
| 10 | Pin | Steel |
| 11 | Mounting Clip | Cold Rolled Steel |
| 12 | Socket Head Cap Screw | Steel |



| Dimension Table (Inch) | | | | | | | |
|------------------------|-----------------|---|-----------------|------------------|-----------------|-----------------|-------|
| Linkage | A | B | C | | D | E | SHAFT |
| | | | Small Plate | Large Plate | | | |
| LVB116 | 4 $\frac{3}{8}$ | 4 | 3 $\frac{7}{8}$ | 6 $\frac{1}{16}$ | 9 $\frac{1}{2}$ | 2 $\frac{1}{4}$ | Ø16mm |
| LVB123 | 4 $\frac{3}{8}$ | 4 | 3 $\frac{7}{8}$ | 6 $\frac{1}{16}$ | 9 $\frac{1}{2}$ | 2 $\frac{1}{4}$ | Ø16mm |
| LVB130/230 | 4 $\frac{3}{8}$ | 4 | 3 $\frac{7}{8}$ | 6 $\frac{1}{16}$ | 11 | 2 $\frac{1}{4}$ | Ø19mm |
| LVB140/240 | 4 $\frac{3}{8}$ | 4 | 3 $\frac{7}{8}$ | 6 $\frac{1}{16}$ | 11 | 2 $\frac{1}{4}$ | Ø19mm |

| Output Force Calculations | | | | |
|---------------------------|---|------------------------|-------------------------|----------------------------|
| Linkage | Linear Travel (mm/90°) | Linear Travel (in/90°) | Metric Multiplier (1/m) | Imperial Multiplier (1/in) |
| LVB116 | 16 | 0.63 | 78.54 | 1.995 |
| LVB123 | 23 | 0.91 | 55.70 | 1.415 |
| LVB130/230 | 30 | 1.18 | 40.47 | 1.028 |
| LVB140/240 | 40 | 1.57 | 30.64 | 0.778 |
| Formula | Output Force = Multiplier x Input Torque | | | |

Series Numbers: LVB1 16 HU1 T1



| Actuators Needed | |
|------------------|--------------|
| LVB1 | One Actuator |
| LVB2 | Two Actuator |

| Valve Stroke | |
|--------------|--------------|
| 16 | 0.63" / 16mm |
| 23 | 0.91" / 23mm |
| 30 | 1.18" / 30mm |
| 40 | 1.57" / 40mm |

| Collar | | |
|-----------------------------------|-----------|--------------------|
| Manufacturer | Model# | Size/Thread |
| Barber Coleman/ Invensys/Siebe | BU1 | 1-1/4"-16, 1/2" CS |
| | BU2 | 1"-16 |
| | BU3 | 1-1/4"-16 |
| Honeywell | HU1 | 1-3/8", Ridge |
| | HU2 | 1-7/8", Ridge |
| Johnson Controls | JU1 | 20mm-1.5, 1/4"CS |
| | JU2 | 1-1/16"-16, 1/4"CS |
| | JU3 | 28mm-1.5 |
| | JU4 | 3/4"-16 |
| | JU5 | 3/4"-18, 1/4CS |
| | JU6 | 1.59"-14 1/4CS |
| Landis/ Powers/ Siemens | GU1 | 1-5/16", Ridge |
| | GU2 | 1-3/32"-14 |
| | GU3 | 1-3/8"-20 |
| | GU4 (n/a) | 1.73", Ridge |
| Warren | WA1 | 1-3/8"-18, 0.37CS |

| Thread On Stem | |
|----------------|-------------------|
| Model # | Size/Thread |
| T1 | 1/4"-28 |
| T2 | 5/15"-24 |
| T3 | 3/8"-24 |
| T4 | 7/16"-20 |
| T5 | 1/2"-20 |
| T6 | Landis small clip |
| T7 | Landis large clip |
| T8 | M8-1.25 pitch |



LVB UNIVERSAL GLOBE VALVE LINKAGE

| Globe Valve Linkage Selection Chart | | | | | | | | | | | | |
|--|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------------|---------------------|------------------------|-----------------|-----------------|
| Manufacturer's Valve and Linkage Model Numbers | | | | | | | | | | | | |
| Valve Models | | Valve Size | | | | | | | | | | |
| Manufacturer | Model# | 1/2" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 4" | 5" | 6" |
| Johnson Control | V90AD-1C thru 7C V90DD-1C thru 7C | LVB116 JU5T1 | LVB116 JU5T1 | LVB123 JU5T1 | - | LVB123 JU5T1 | - | - | - | - | - | - |
| | V90CA-1 thru 8 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU2T3 | LVB130/230 JU2T3 | - | - | - |
| | VG 7000/2000 Series | LVB116 JU1T1 | LVB116 JU1T1 | LVB116 JU3T1 | LVB116 JU3T1 | LVB123 JU3T1 | LVB123 JU3T1 | LVB123 JU4T3 | LVB130/230 JU4T3 | LVB230 JU4T3/ T5 | LVB240 JU4T5 | LVB240 JU4T5 |
| | VTM Series VB-3752 | LVB116 JU5T1 | LVB116 JU5T1 | LVB116 JU5T1 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU2T3 | LVB130/230 JU2T3 | LVB230 JU2T3 | LVB240 JU6T5 | LVB240 JU4T5 |
| | VB-3754-1 thru 8 VB-3970 | LVB116 JU5T1 | LVB116 JU5T1 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU2T3 | LVB130/230 JU2T3 | LVB230 JU2T3 | LVB240 JU6T5 | LVB240 JU6T5 |
| | VB-3974-1 thru 7 VB-4324-1 thru 7 VB-4322 | LVB116 JU5T1 | LVB116 JU5T1 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU5T1 | LVB123 JU2T3 | LVB130/230 JU2T3 | LVB230 JU2T3 | LVB240 JU6T5 | LVB240 JU6T5 |
| | V-5462 | - | - | - | - | - | - | - | LVB123 JU6T3 | LVB130/230 JU6T3 | LVB230 JU6T5 | LVB240 JU6T5 |
| Honeywell | V5011 V5013 | LVB123 HU1T1 | LVB123 HU1T1 | LVB123 HU1T1 | LVB123 HU1T1 | LVB123 HU1T1 | LVB123 HU1T1 | LVB123 HU1T1 | LVB123 HU1T1 | LVB240 HU2T4 | LVB240 HU2T4 | LVB240 HU2T4 |
| Siemens Landis Powers | 590 (3-way) | - | - | - | - | LVB116 GU2T1 | LVB116 GU2T1 | LVB123 GU3T3 | LVB123 GU3T3 | LVB230 GU3T3 | LVB240 GU3T3 | LVB240 GU3T3 |
| | 591 (2-way) | - | - | - | - | LVB130 GU2T1 | LVB130 GU2T1 | LVB123 GU3T3 | LVB123 GU3T3 | LVB230 GU3T3 | LVB240 GU3T3 | LVB240 GU3T3 |
| | 658 | LVB116 GU1T1 | LVB116 GU1T1 | LVB116 GU1T1 | LVB116 GU1T1 | - | - | - | - | - | - | - |
| | 599 | LVB123 ** | LVB123 ** | LVB123 ** | LVB123 ** | LVB123 ** | LVB123 ** | LVB123 ** | LVB123 ** | LVB240 ** | LVB240 ** | LVB240 ** |
| Siebe Barber Colman Invensys | VB-111-0-X-1 thru 9 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | - | - | - | - | - | - | - |
| | VB-921X-0-X-1 thru 13 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB130 BU2T1 | LVB130 BU2T1 | LVB130/230 BU3T5 | LVB140/240 BU3T5 | - | - | - |
| | VB-922X-9-X-1 thru 13 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB130 BU2T1 | LVB130 BU2T1 | LVB130/230 BU3T5 | LVB130/230 BU3T5 | - | - | - |
| | VB-925X-0-X-1 thru 13 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB130 BU2T1 | LVB130 BU2T1 | LVB130/230 BU3T5 | LVB130/230 BU3T5 | - | - | - |
| | VB-926X-0-X-1 thru 13 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB130 BU2T1 | LVB130 BU2T1 | LVB130/230 BU3T5 | LVB130/230 BU3T5 | - | - | - |
| | VB-927X-0-X-1 thru 11 VB-928X-0-X-1 thru 11 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB130 BU2T1 | LVB130 BU2T1 | - | - | - | - | - |
| | VB-931X-0-X-1 thru 14 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB130 BU2T1 | LVB130 BU2T1 | LVB130/230 BU3T5 | LVB130/230 BU3T5 | LVB240 BU3T5 | - | - |
| | VB-932X-0-X-1 thru 11 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB130 BU2T1 | LVB130 BU2T1 | LVB123 WA1T3 | LVB123 WA1T3 | LVB230 WA1T3 | LVB230 WA1T3 | LVB240 WA1T3 |
| | VB-7213 VB-7313 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | LVB116 BU1T1 | - | - | - | - | - |

Notes: if linkage information is not found on this chart, please contact our customer service to see if the linkage is available to be customized.

Johnson Controls VG7000 Series are available from 1/2" to 2", VG2000 Series are available from 2 1/2"-6".

** Siemens 599 Series globe valves come with collars and caps built into the valve.



| Actuator Close-Off Chart | | | | | | | | | | | | |
|--------------------------|------------|---------------------------|-------------|-------------|-------------|-----------------|------------|---------------------------|-------------|-------------|-------------|------|
| Actuator Torque | Valve Size | Close-Off Pressure in PSI | | | | Actuator Torque | Valve Size | Close-Off Pressure in PSI | | | | |
| | | 16mm Stroke | 23mm Stroke | 30mm Stroke | 40mm Stroke | | | 16mm Stroke | 23mm Stroke | 30mm Stroke | 40mm Stroke | |
| 35in-lb | 1/2" | >250 | 215 | 190 | - | 132in-lb | 1/2" | >250 | >250 | - | - | |
| | 3/4" | 130 | 100 | 90 | - | | 3/4" | >250 | >250 | - | - | |
| | 1" | 80 | 60 | 50 | - | | 1" | >250 | 215 | 165 | 125 | |
| | 1-1/4" | 50 | 40 | 30 | - | | 1-1/4" | 180 | 135 | 110 | 85 | |
| 44in-lb | 1/2" | >250 | >250 | 230 | - | | 1-1/2" | 125 | 95 | 75 | 60 | |
| | 3/4" | 165 | 130 | 110 | - | | 2" | 70 | 50 | 45 | 35 | |
| | 1" | 100 | 80 | 70 | - | | 2-1/2" | - | 40 | 30 | 20 | |
| | 1-1/4" | 65 | 50 | 45 | - | | 140in-lb | 1/2" | >250 | >250 | >250 | >250 |
| 53in-lb | 1/2" | >250 | >250 | >250 | - | | | 3/4" | >250 | >250 | >250 | 230 |
| | 3/4" | 200 | 155 | 135 | - | | | 1" | >250 | 240 | 175 | 135 |
| | 1" | 115 | 90 | 80 | - | 1-1/4" | | 200 | 160 | 115 | 90 | |
| | 1-1/4" | 75 | 60 | 50 | - | 1-1/2" | | 140 | 110 | 80 | 60 | |
| | 1-1/2" | 55 | 40 | 35 | - | 2" | | 80 | 65 | 45 | 35 | |
| | 2" | 30 | 25 | 20 | - | 2-1/2" | | - | 40 | 30 | 25 | |
| 62in-lb | 1/2" | >250 | >250 | >250 | - | 3" | | - | 30 | 20 | 15 | |
| | 3/4" | 225 | 175 | 145 | - | 177in-lb | | 1" | - | >250 | 225 | 170 |
| | 1" | 130 | 100 | 80 | - | | | 1-1/4" | - | 200 | 145 | 110 |
| | 1-1/4" | 80 | 60 | 50 | - | | 1-1/2" | - | 140 | 105 | 80 | |
| | 1-1/2" | 55 | 45 | 35 | - | | 2" | - | 80 | 60 | 45 | |
| | 2" | 30 | 25 | 20 | - | | 2-1/2" | - | 55 | 40 | 30 | |
| 70in-lb | 1/2" | >250 | >250 | >250 | - | | 3" | - | 35 | 25 | 20 | |
| | 3/4" | >250 | 205 | 180 | - | 210in-lb | 1" | - | >250 | - | - | |
| | 1" | 155 | 120 | 105 | - | | 1-1/4" | - | 240 | - | - | |
| | 1-1/4" | 100 | 80 | 70 | - | | 1-1/2" | - | 170 | - | - | |
| | 1-1/2" | 70 | 55 | 50 | - | | 2" | - | 95 | - | - | |
| | 2" | 40 | 30 | 25 | - | | 2-1/2" | - | 62 | 45 | 35 | |
| 75in-lb | 1/2" | >250 | >250 | >250 | - | | 3" | - | 44 | 30 | 25 | |
| | 3/4" | >250 | 215 | 180 | - | 310in-lb | 2" | - | 140 | 105 | 80 | |
| | 1" | 165 | 120 | 100 | - | | 2-1/2" | - | 90 | 65 | 50 | |
| | 1-1/4" | 105 | 80 | 65 | - | | 3" | - | 65 | 45 | 35 | |
| | 1-1/2" | 70 | 55 | 45 | - | | 4" | - | 35 | 25 | 20 | |
| | 2" | 40 | 30 | 25 | - | | 5" | - | 25 | 15 | 15 | |
| 88in-lb | 1/2" | >250 | >250 | >250 | - | | 6" | - | 15 | 10 | 10 | |
| | 3/4" | >250 | >250 | 210 | - | 360in-lb | 2" | - | 180 | 150 | 105 | |
| | 1" | 190 | 140 | 120 | - | | 2-1/2" | - | 120 | 95 | 75 | |
| | 1-1/4" | 120 | 90 | 75 | - | | 3" | - | 85 | 60 | 30 | |
| | 1-1/2" | 85 | 65 | 50 | - | | 4" | - | 60 | 45 | 25 | |
| | 2" | 45 | 35 | 30 | - | | 5" | - | 35 | 20 | 20 | |
| | | | | | 6" | | - | 20 | 15 | 15 | | |

| Dual Actuator Close-Off Chart | | | |
|-------------------------------|------------|---------------------------|-------------|
| Actuators Torque | Valve Size | Close-Off Pressure in PSI | |
| | | 30mm Stroke | 40mm Stroke |
| 280in-lb | 2" | 95 | 70 |
| | 2-1/2" | 60 | 45 |
| | 3" | 40 | 30 |
| | 4" | 20 | 15 |
| | 5" | 15 | 10 |
| | 6" | 9 | 8 |
| 420in-lb | 2" | - | - |
| | 2-1/2" | 85 | 65 |
| | 3" | 60 | 45 |
| | 4" | 35 | 30 |
| | 5" | 20 | 15 |
| | 6" | 15 | 10 |
| 560in-lb | 2-1/2" | 115 | 85 |
| | 3" | 75 | 60 |
| | 4" | 45 | 35 |
| | 5" | 25 | 20 |
| | 6" | 20 | 15 |
| 620in-lb | 2-1/2" | >125 | 95 |
| | 3" | 95 | 60 |
| | 4" | 55 | 40 |
| | 5" | 35 | 25 |
| | 6" | 25 | 20 |
| 720in-lb | 2-1/2" | >125 | >125 |
| | 3" | 105 | 75 |
| | 4" | 65 | 40 |
| | 5" | 45 | 35 |
| | 6" | 30 | 25 |

Note: The listed close-off pressures are estimated numbers for all commercial manufacturers.

| Linkage Installation | |
|----------------------|---|
| <p>Step 1</p> | <p>Remove any existing linkages then screw the cap onto the valve stem.</p> |
| <p>Step 2</p> | <p>Screw the collar onto the valve neck and tighten.</p> |
| <p>Step 3</p> | <p>Attach the stem cap to the mounting clips and tighten the screws.</p> |
| <p>Step 4</p> | <p>Use two bolts to secure the valve into the inside</p> |



VSI Limited Product Warranty

This limited warranty applies in the United States to products manufactured by VSI, LLC. VSI, LLC. warrants the product purchased from it or its authorized reseller to be free from defects in material and workmanship under normal use during the two year warranty period from the date of its purchase. Other products not manufactured by VSI, LLC. which are provided as part of an assembly may carry additional warranties from that manufacturer or supplier.

During the warranty period, VSI, LLC. will repair or replace defective parts of the product, or, at VSI, LLC. sole option, issue a credit for the original purchase price of the product. Repaired or replaced product will be warranted hereunder only for the remaining portion of the original warranty period. All exchanged products under this Limited Warranty will become the property of VSI, LLC. A proper Return Material Authorization (RMA) number will have to be obtained for all products to be returned under this Limited Warranty. Any claim under this Limited Warranty must include a description of the problem encountered and any relevant information that may assist VSI, LLC. in the replication or resolution of the problem.

This Limited Warranty is transferable during its term to the end user of the product. Any transfer shall not extend or alter the terms of this Limited Warranty.

This Limited Warranty extends only to products purchased from VSI, LLC. or its authorized reseller and does not extend to any product that has been damaged or rendered defective as a result of (a) modification, repair, alteration or improper installation by any person other than VSI, LLC. or its authorized representative; (b) unreasonable or improper use or storage, use beyond rated conditions, operation other than per VSI, LLC. or the manufacturer's instructions, or being otherwise subjected to improper maintenance, negligence or accident; or (c) any use of the product after purchaser has knowledge of any defect in the product.

The warranties provided above are in lieu of and exclude all other warranties, statutory, express or implied, including without limitation any warranty or merchantability or fitness for a particular purpose. VSI, LLC. expressly disclaims all warranties not stated in this limited warranty. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty.

VSI, LLC. warranty liability shall not exceed the original purchase price of the defective product. VSI, LLC. is not liable for any damages caused by the product or other products or the failure of the product or other products to perform, including any lost profits, lost savings, incidental or consequential damages. VSI, LLC. is not responsible for charges resulting from the removal and/or replacement of the product. VSI, LLC. is not liable for any claims made by third parties or by the purchaser for a third party. This limitation applies whether damages are sought, or a claim is made, under the Limited Warranty or as a tort claim, product liability claim, contract claim, or any other claim. This limitation cannot be waived by any person. This limitation of liability will be effective even if VSI, LLC. or its authorized representative has been advised by the purchaser of the possibility of such damages.

VSI, LLC.
tel: +1 (770) 740 0800
fax: +1 (770) 740 8777
email: sales@valvesolutions.com



Copyright © 2012 VSI, LLC.

www.valvesolutions.com

As part of an on-going product development process, VSI reserves the right to amend or change specifications without prior notice. Published data may be subject to change. For the latest version, visit our website at www.valvesolutions.com