

VB Series

True Union Blocking Ball Valve

| | |
|-------------------------|---|
| Material: | PVC, CPVC (Corzan™), PP, PVDF |
| Size: | 1/2" - 4" |
| Pressure Rating: | 230 psi 1/2" - 2"; 150 psi 2 1/2" - 4" |
| Seats: | PTFE |
| Seals: | EPDM or VITON |
| Connections: | IPS Socket Metric Socket NPT Threaded ANSI 150 Flanged Metric Butt Fusion |



ISO 9002 CERTIFIED

Engineering Guide Specification

Materials of Construction:

- PVC:** Class 12454B per ASTM D1784
- CPVC:** Class 12454B per ASTM D1784
- PP:** Class PP 110B76383 per ASTM D4101
- PVDF:** Type 1 per ASTM D3222
- Seals:** EPDM or Viton
- Seats:** PTFE

Guide Specification: All ball valves constructed of the materials indicated. Valves shall be manufactured with an adjustable carrier, threaded into the body to ensure the valve is blocking in both directions. Valve stem shall be a safety shear stem with double O-ring seals. Body shall have unions on both ends and handle shall incorporate a spanner for adjusting and removing the carrier, teflon seat shall be energized by O-ring, ball shall be machined and tumbled to ensure roundness, as manufactured by SIMTECH.

Special Features

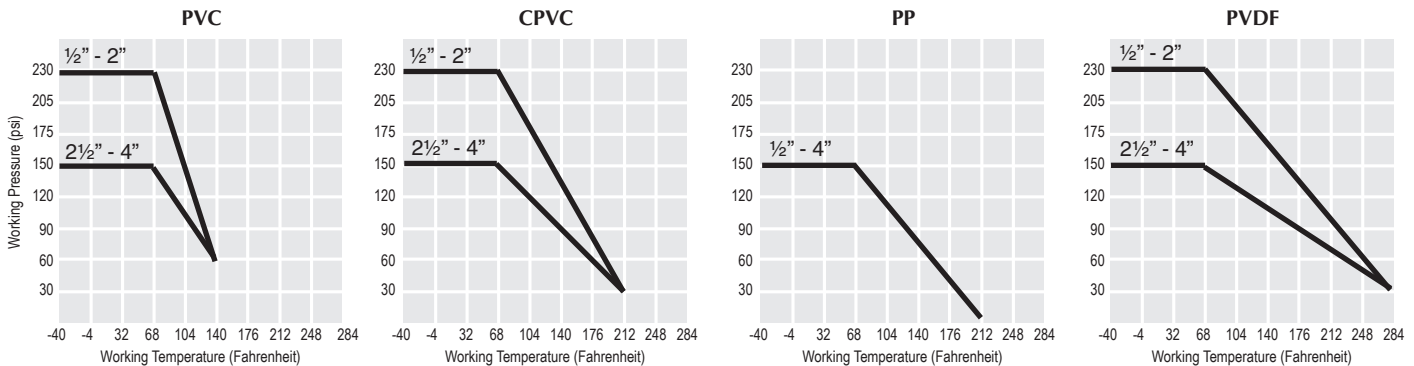
- Full port
- Bidirectional flow
- Low maintenance and extended operational life
- Handle equipped as a spanner device to adjust carrier
- Teflon seat energized by O-ring
- Ball machined and tumbled to ensure roundness
- Special mounting pads are molded on body for actuator mounting or valve anchoring
- Blowout proof stem
- Safety shear stem design
- Double O-Ring Seal on Stem

Flow Rate in Gallons Per Minute

| ND | 1/2 | 3/4 | 1 | 1 1/4 | 1 1/2 | 2 | 2 1/2 | 3 | 4 |
|----------------------|------|------|------|-------|-------|------|-------|------|------|
| Bore Size | .512 | .709 | .910 | 1.18 | 1.50 | 1.89 | 2.36 | 2.72 | 3.94 |
| C_v | 12.5 | 28 | 50.9 | 81 | 150 | 230 | 360 | 485 | 768 |

C_v is the number of gallons per minute of water at a temperature of 68°F that will flow through a valve with a 1 psi pressure differential at a specified travel.

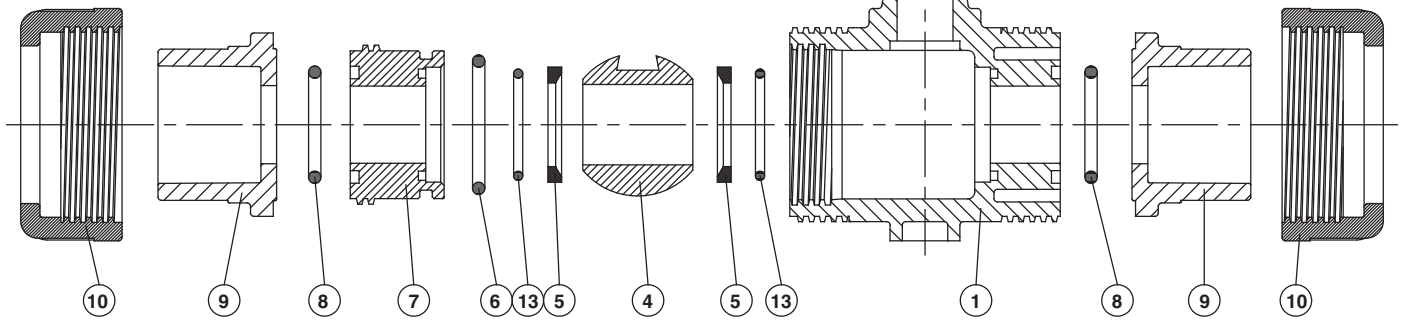
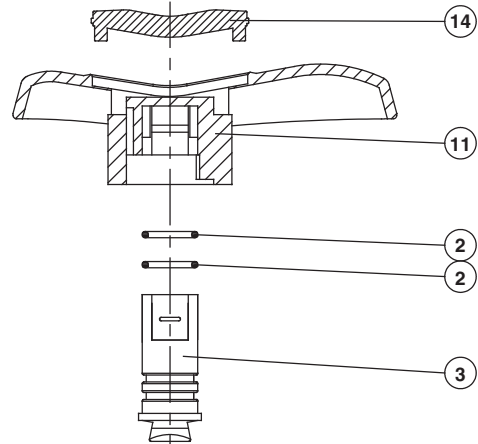
Pressure/Temperature Graph: Working PSI/Fahrenheit



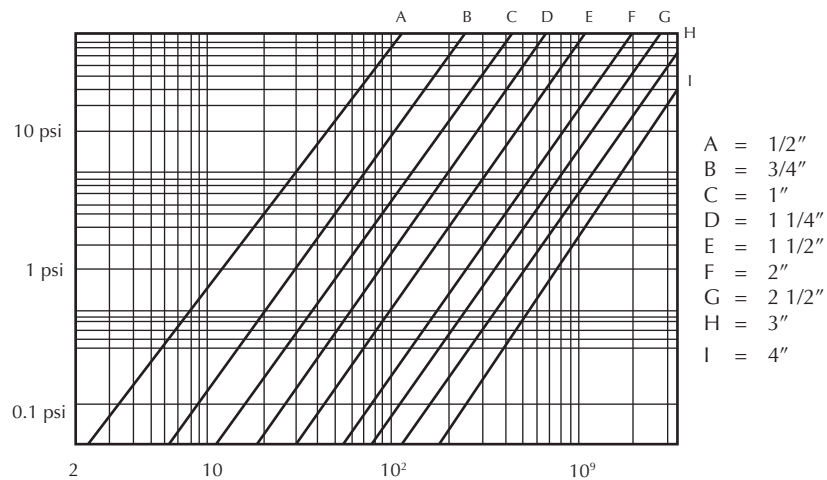
VB Series

Parts Listing

| NO. | PART | MATERIAL | QTY |
|-----|----------------|---------------------|-----|
| 1 | BODY | PVC, CPVC, PP, PVDF | 1 |
| 2 | STEM O-RING | EPDM, FPM | 2 |
| 3 | STEM | PVC, CPVC, PP, PVDF | 1 |
| 4 | BALL | PVC, CPVC, PP, PVDF | 1 |
| 5 | SEAT SEAL | PTFE | 2 |
| 6 | CARRIER O-RING | EPDM, FPM | 1 |
| 7 | SEAL CARRIER | PVC, CPVC, PP, PVDF | 1 |
| 8 | UNION O-RING | EPDM, FPM | 2 |
| 9 | END CONNECTOR | PVC, CPVC, PP, PVDF | 2 |
| 10 | UNION NUT | PVC, CPVC, PP, PVDF | 2 |
| 11 | HANDLE | ABS | 1 |
| 12 | INSERTED NUT | BRASS | 2 |
| 13 | BODY O-RING | EPDM, FPM | 2 |
| 14 | HANDLE COVER | ABS | 1 |



Pressure Loss—Flow Diagram



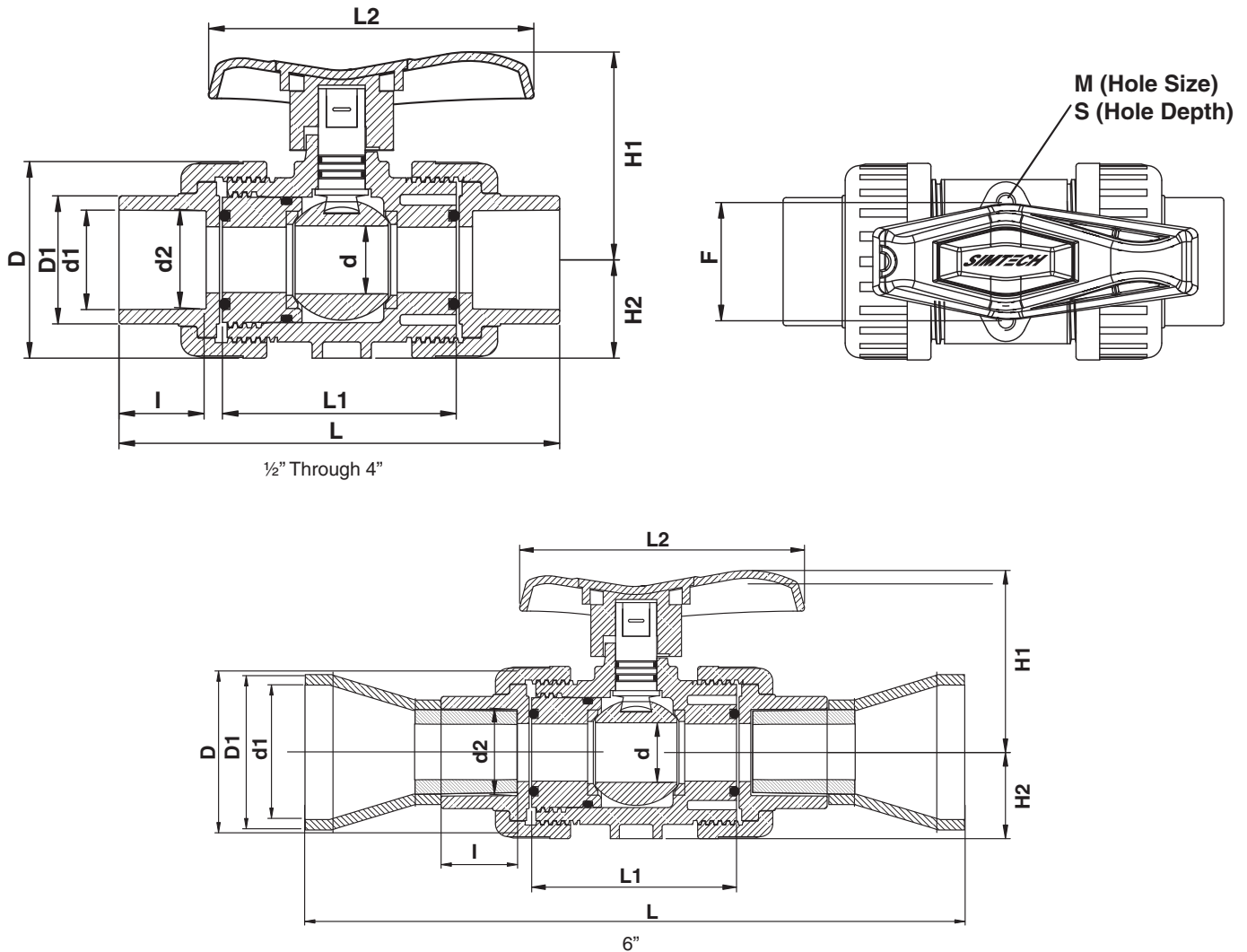
VB Series

Dimensional Data - True Union

| Nom. Size | PVC & CPVC | | | | PP & PVDF | | | | | | | | | | | | |
|--------------|------------|------|------|-------|-----------|------|------|-------|------|------|------|-------|------|------|------|------|------|
| | I | d1 | d2 | L | I | d1 | d2 | L | D | D1 | L1 | L2 | H1 | H2 | F | M | S |
| ½" | 0.87 | 0.85 | 0.84 | 4.49 | 0.58 | 0.76 | 0.75 | 4.27 | 1.82 | 1.19 | 2.36 | 3.03 | 1.81 | 0.83 | 1.18 | 0.20 | 0.28 |
| ¾" | 1.00 | 1.06 | 1.05 | 5.31 | 0.64 | 0.94 | 0.94 | 4.87 | 2.19 | 1.43 | 2.87 | 3.74 | 2.24 | 1.02 | 1.30 | 0.24 | 0.31 |
| 1" | 1.13 | 1.32 | 1.31 | 5.87 | 0.74 | 1.23 | 1.22 | 5.45 | 2.62 | 1.70 | 3.11 | 4.33 | 2.76 | 1.30 | 1.57 | 0.24 | 0.43 |
| 1¼" | 1.25 | 1.67 | 1.66 | 6.69 | 0.85 | 1.53 | 1.53 | 6.10 | 3.23 | 2.08 | 3.46 | 5.00 | 2.95 | 1.54 | 1.85 | 0.31 | 0.43 |
| 1½" | 1.38 | 1.91 | 1.89 | 6.93 | 0.96 | 1.92 | 1.91 | 6.10 | 3.88 | 2.46 | 3.74 | 5.63 | 3.58 | 1.61 | 2.05 | 0.31 | 0.43 |
| 2" | 1.50 | 2.39 | 2.37 | 8.15 | 1.12 | 2.44 | 2.43 | 7.20 | 4.72 | 3.01 | 4.49 | 6.46 | 4.45 | 2.05 | 2.76 | 0.31 | 0.59 |
| 2½" | 1.75 | 2.89 | 2.87 | 10.83 | 1.22 | 2.90 | 2.90 | 9.57 | 5.51 | 3.62 | 5.35 | 7.09 | 4.57 | 2.56 | - | - | - |
| 3" | 1.88 | 3.52 | 3.49 | 11.97 | 1.41 | 3.50 | 3.50 | 10.59 | 6.42 | 4.25 | 6.22 | 8.82 | 5.12 | 2.95 | - | - | - |
| 4" | 2.25 | 4.52 | 4.49 | 13.07 | 1.63 | 4.29 | 4.28 | 11.30 | 8.86 | 5.75 | 6.93 | 10.94 | 7.01 | 4.06 | - | - | - |
| 6" * | 6.63 | 4.49 | 2.25 | 26.57 | - | - | - | - | 7.00 | 5.75 | 6.93 | 10.94 | 7.01 | 4.06 | - | - | - |

*4" Valve Ventured to 6"

* For metric spigot dimensions, contact factory

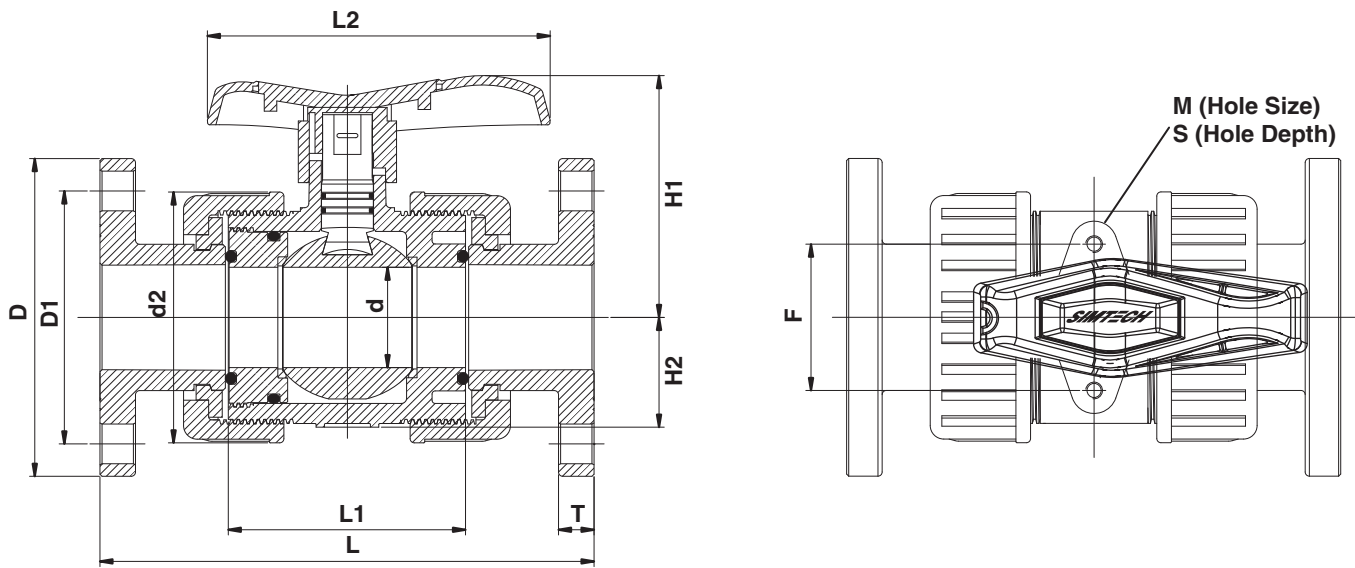


VB Series

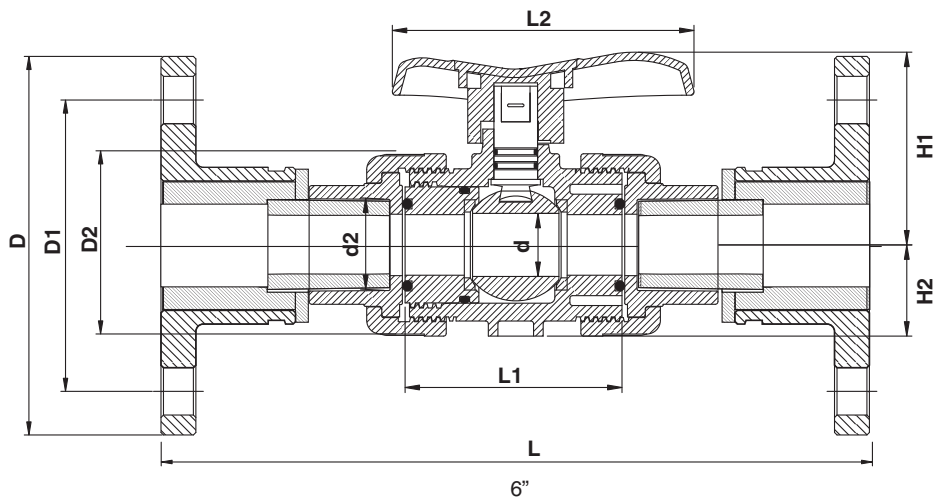
Dimensional Data - Flanged

| Nom. | PVC & CPVC | PP & PVDF | | | | | | | | | | | | | # | Hole |
|------|------------|-----------|------|------|-------|------|------|-------|------|------|------|------|------|------|-------|------|
| Size | L | L | d2 | d | D | D1 | L1 | L2 | H1 | H2 | F | M | S | T | Holes | Size |
| ½" | 5.63 | 6.20 | 1.82 | 0.51 | 3.50 | 2.40 | 2.36 | 3.03 | 1.81 | 0.83 | 1.18 | 0.20 | 0.28 | 0.51 | 4 | 0.63 |
| ¾" | 6.77 | 6.82 | 2.19 | 0.71 | 3.86 | 2.76 | 2.87 | 3.74 | 2.24 | 1.02 | 1.30 | 0.24 | 0.31 | 0.59 | 4 | 0.63 |
| 1" | 7.36 | 7.64 | 2.62 | 0.91 | 4.25 | 3.11 | 3.11 | 4.33 | 2.76 | 1.30 | 1.57 | 0.24 | 0.43 | 0.59 | 4 | 0.63 |
| 1¼" | 7.48 | 8.54 | 3.23 | 1.18 | 4.61 | 3.50 | 3.46 | 5.00 | 2.95 | 1.54 | 1.85 | 0.31 | 0.43 | 0.63 | 4 | 0.63 |
| 1½" | 8.35 | 8.90 | 3.88 | 1.50 | 5.00 | 3.90 | 3.74 | 5.63 | 3.58 | 1.61 | 2.05 | 0.31 | 0.43 | 0.67 | 4 | 0.63 |
| 2" | 9.21 | 10.33 | 4.72 | 1.89 | 5.98 | 4.76 | 4.49 | 6.46 | 4.45 | 2.09 | 2.76 | 0.31 | 0.59 | 0.67 | 4 | 0.75 |
| 2½" | 10.20 | 12.58 | 5.51 | 2.40 | 7.01 | 5.51 | 5.31 | 7.09 | 4.57 | 2.56 | - | - | - | 0.71 | 4 | 0.75 |
| 3" | 11.97 | 14.27 | 6.30 | 2.72 | 7.52 | 5.98 | 6.14 | 8.82 | 5.12 | 2.95 | - | - | - | 0.71 | 4 | 0.75 |
| 4" | 14.65 | 15.20 | 8.86 | 3.90 | 9.02 | 7.52 | 6.93 | 10.94 | 7.01 | 4.06 | - | - | - | 0.71 | 8 | 0.75 |
| 6** | 29.85 | - | 8.86 | 3.90 | 10.70 | 9.49 | 6.93 | 10.94 | 6.97 | 4.06 | - | - | - | 0.71 | 8 | 0.75 |

*4" Valve Ventured to 6"



½" Through 4"



6"