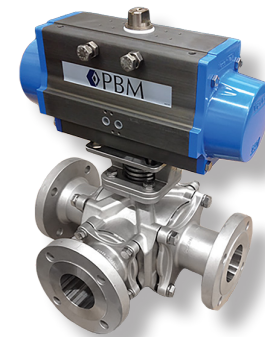


PBM INDUSTRIAL 3, 4, or 5-WAY MULTI-PORT BALL VALVES, 150#, 1/2" - 4"



DESIGN FEATURES:

- Unique Adjust-O-Seal® feature allows in-line valve adjustment to compensate for normal wear on valve seats. Note: valves DO NOT have o-rings.
- Choose from 4-way and 5-way flow patterns available offering for 90°, 180° and 360° operation
- Full-port diameters minimize pressure drops (1/2 - 4")
- Upstream and downstream bubble-tight sealing capability allows valve body cleaning, purging, and draining.
- Stem assembly accommodates PBM Direct Mount Actuation for accurate alignment and increased cycling life.
- In some processes, a single Multi-Port ball valve can replace several 2-way valves in a piping system, reducing costs and simplifying flow control with actuation.
- Full port design
- Valves are full vacuum
- Specify PBM flow pattern for 3, 4, or 5-way valves.
- Piggable "Y" Port valves are also available. Contact PBM.



| SPECIFICATIONS | Multi-Ported Ball Valves |
|--------------------------------|--|
| Sizes | 1/2" - 4" Series 5 |
| Material | 316/316L |
| Temperatures | Ambient for TFM™ to 400° F, S-TEF® to 450° F |
| End Connections | Buttweld for pipe, flange, NPT, Socket weld, or other |
| Seats, Seals and Stem Packings | TFM™ material standard, others available |
| Body Bolts & Nuts | 18-8 Stainless Steel |
| Maximum Working Pressure | up to 275 psig CWP depending on valve size and temperature |

| Size | CV Values (gpm) | | | |
|--------|-----------------|----------|--------|---------|
| | L-Port | T-Port | | LL-Port |
| | | Straight | Branch | |
| 1/2" | 6.6* | 6.6* | 5.4* | 6.0* |
| 3/4" | 16* | 16* | 12* | 14* |
| 1" | 33 | 33 | 21 | 30 |
| 1-1/2" | 80 | 80 | 49 | 72 |
| 2" | 147 | 147 | 89 | 126 |
| 3" | 351 | 351 | 212 | 295 |
| 4" | 613 | 613 | 368 | 443 |

* FNPT ends

How To Order:

| PRODUCT (1-2) MATERIAL (3-4) | | | SIZE (5) SERIES (6) | | END CONN. (7-8) | | SEAT & SEAL (9) | | FLOW PATTERNS (10-11) | | BALL & STEM (12) | | OPERATOR (13-14) | | POLISH (15-16) | | |
|---------------------------------|----|-----------------------|------------------------|--------|--------------------|----|-----------------------|---|---|----|--------------------------------------|---|----------------------------------|----|---|---|--|
| MP | H- | Cast 316/ 316L S/S | C | 1/2" | 5 | B- | Sch. 40 Butt Weld | G | TFM Seats / Seals | 01 | 3-Way Side Entry T-Port Ball 90° | - | Standard Ball and Stem | -- | W/ Standard Lever Handle (1/2" thru 3") | - | 125 Ra ID Standard |
| | HL | Cast 316L S/S | D | 3/4" | | D- | Sch. 10. Butt Weld | J | TFM Seats / Seals VTFE Cavity Fillers | 02 | 3-Way Side Entry T-Port Ball 90° | F | Internal / External Grounding | 02 | W/O Handle W/ Stem Actuator Prep | A | 20 Ra ID |
| | | | E | 1" | | L- | 150# Flange | H | S-TEF® Seats / Seals | 18 | 3-Way Btm. Entry LL-Port Ball 90° | G | 17-4PH Stem | 04 | Locking Lever Handle (1/2" thru 2") | C | 20 Ra ID / 32 Ra OD |
| | | | G | 1-1/2" | | Q- | Female NPT | I | S-TEF® Seats / Seals VTFE Cavity Fillers | 26 | 4-Way Btm. Entry L-Port Ball 360° | | | 08 | Gear Operator (Req'd for 4") | | |
| | | | H | 2" | | U- | Socket Weld | K | UHMWPE Seats / Seals | 37 | 4-Way Side Entry LL-Port Ball 90° | | | 20 | DA 80psig actuator | F | 20 Ra ID after Electro Polish |
| | | | K | 3" | | | | L | UHMWPE Seats / Seals VTFE Cavity Fillers | 44 | 5-Way Btm. Entry L-Port Ball 360° | | | 27 | DA 60psig actuator | | |
| | | | L | 4" | | | | | | | | | | 34 | SR 80psig actuator Fail Position must be specified | | More polish available - Contact PBM |
| | | | | | | | | | | | | | | 41 | SR 60psig actuator - Fail Position must be specified | | |

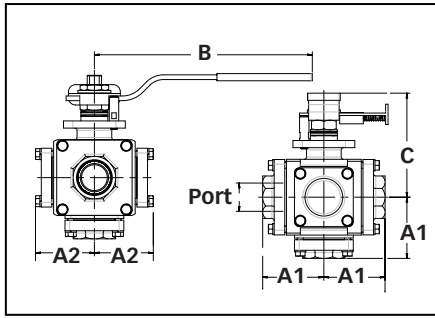
<http://pbmvalve.com/build-a-part-number>

Other seat/seal options available - Contact PBM
Other Flow Pattern Options available - Contact PBM

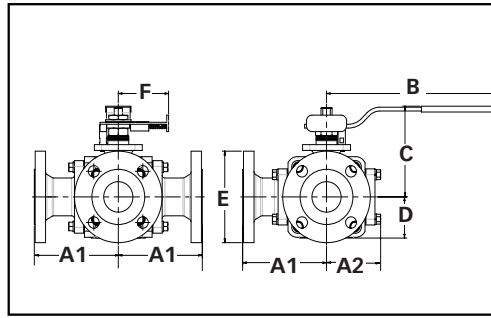
Other operator options available - Contact PBM

PBM Industrial Multi-ported Ball Valves

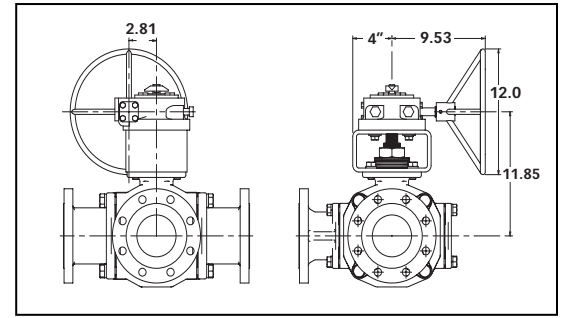
Multi-port with Locking Handle



Multi-port with flanged ends



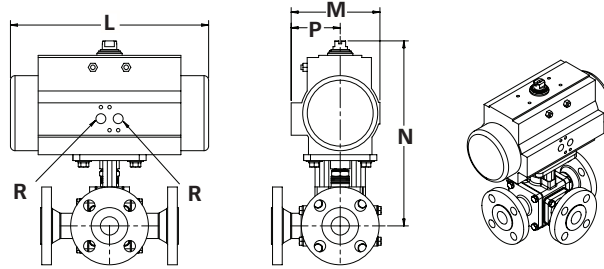
Multi-port with Gear Operator (6" only)



| Valve Size | Size Code | Port Dia. | A1 | | A2 | B | C | D | E | Locking Handle | | Socket Weld Dia. | Approx. Weight |
|------------|-----------|-----------|-----------|------|------------|----------------------|--------------------|------------------------|------------------|----------------|--------------------|------------------|----------------|
| | | | Q to Face | | Q to Blank | Handle Length from Q | Q to Top of Handle | Q to Bottom Side Entry | 150# Flange Dia. | F | Hole Dia. for Lock | | |
| | | | Q-U- | L- | Q-U-L- | | | | | | | | |
| 1/2" | C | 0.5 | 2.25 | NA | 2.00 | 5.09 | 3.1 | 1.44 | NA | 2.08 | .28 | 0.87 | 7 lbs. |
| 3/4" | D | 0.75 | 2.25 | NA | 2.00 | 5.09 | 3.1 | 1.44 | NA | 2.08 | .28 | 1.08 | 7 lbs. |
| 1" | E | 1 | 2.38 | 3.75 | 2.23 | 8.03 | 4 | 1.67 | 4.25 | 2.56 | .38 | 1.34 | 10.5 lbs. |
| 1-1/2" | G | 1.5 | 3.25 | 5 | 3.13 | 11.56 | 5.53 | 2.22 | 5 | 3.41 | .38 | 1.93 | 26.8 lbs. |
| 2" | H | 2 | 3.75 | 5.75 | 3.71 | 11.56 | 6 | 2.7 | 6 | 3.45 | .38 | 2.42 | 40.5 lbs. |
| 3" | K | 3 | 6 | 8.25 | 5.45 | NA | NA | 3.75 | 7.5 | NA | .44 | 3.55 | 100 lbs. |
| 4" | L | 4 | NA | 9.5 | 6.63 | NA | NA | 4.88 | 9 | NA | NA | NA | 214 lbs. |

* A gear operator is recommended for 4" valves.

Unit of Measure = inches
Dimensions based on actuators used with TFM™ seats.



| Size | 80 PSI Double Acting | | | | | 60 PSI Double Acting | | | | | 80 PSI Spring Return | | | | | 60 PSI Spring Return | | | | |
|--------|----------------------|------|-------|------|-----|----------------------|------|-------|------|-----|----------------------|------|-------|------|-----|----------------------|-------|-------|------|-----|
| | L | M | N | P | R | L | M | N | P | R | L | M | N | P | R | L | M | N | P | R |
| 1/2" | 4.45 | 2.8 | 6.88 | 1.61 | 1/8 | 4.45 | 2.8 | 6.88 | 1.61 | 1/8 | 8.27 | 3.72 | 7.59 | 2.07 | 1/8 | 9.47 | 4.17 | 8.14 | 2.3 | 1/8 |
| 3/4" | 4.45 | 2.8 | 6.88 | 1.61 | 1/8 | 4.45 | 2.8 | 6.88 | 1.61 | 1/8 | 8.27 | 3.72 | 7.59 | 2.07 | 1/8 | 9.47 | 4.17 | 8.14 | 2.3 | 1/8 |
| 1" | 8.27 | 3.72 | 9 | 2.07 | 1/8 | 8.27 | 3.72 | 9 | 2.07 | 1/8 | 10.83 | 4.84 | 10 | 2.68 | 1/4 | 13.11 | 5.39 | 11.4 | 2.87 | 1/4 |
| 1-1/2" | 13.11 | 5.39 | 13.58 | 2.87 | 1/4 | 13.11 | 5.39 | 13.58 | 2.87 | 1/4 | 14.65 | 5.83 | 14.06 | 3.15 | 1/4 | 17.13 | 6.46 | 14.95 | 3.44 | 1/4 |
| 2" | 13.11 | 5.39 | 14 | 2.87 | 1/4 | 13.11 | 5.39 | 14 | 2.87 | 1/4 | 14.65 | 5.83 | 14.5 | 3.15 | 1/4 | 17.13 | 6.46 | 15.38 | 3.44 | 1/4 |
| 3" | 13.11 | 5.39 | 15.67 | 2.87 | 1/4 | 14.65 | 5.83 | 14.5 | 3.15 | 1/4 | 19.69 | 7.36 | 18 | 3.9 | 1/4 | 22.78 | 8.58 | 20.25 | 4.29 | 1/4 |
| 4" | 22.78 | 8.58 | 22.25 | 4.29 | 1/4 | 22.78 | 8.58 | 22.25 | 4.29 | 1/4 | 22.78 | 8.58 | 22.25 | 4.29 | 1/4 | 26.46 | 11.42 | 27 | 5.71 | 1/4 |



<http://www.pbmvalve.com/valves/3-4-5-way-multi-port-valves-0>

<http://pbmvalve.com/maintenance-instructions>

www.PBMValve.com

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