

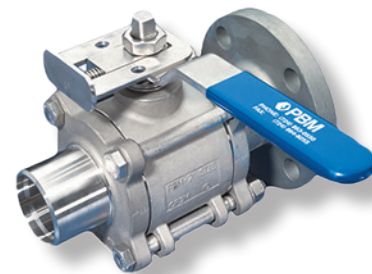
# IMI PBM INDUSTRIAL 2-WAY STEAM VALVE

## SD Series 5, 1/4" - 6"



### DESIGN FEATURES:

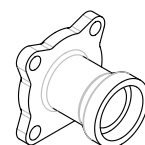
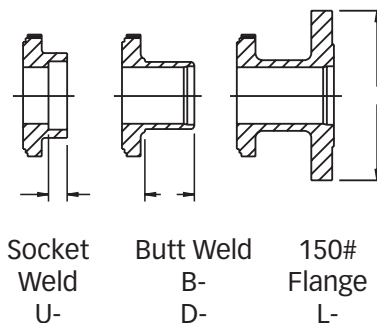
- Unique Adjust-O-Seal® feature allows in-line valve adjustment to compensate for normal wear on valve seats.
- **SD Series valves have o-rings.**
- Valve shall be a three-piece "swing-out" body design.
- Upstream and downstream bubble-tight sealing capability allows valve body cleaning, purging, and draining.
- Stem assembly accommodates IMI PBM Direct Mount Actuation for accurate alignment and increased cycling life.
- Full port design
- Valves are rated to full vacuum.
- Valves shall be a non-firesafe design unless otherwise specified.
- Solder Joint and Sil-brazed ends are bronze only.
- Socket weld ends for bronze valves must be 90/10 CuNi or 70/30 CuNi.



| SPECIFICATIONS              | 2-Way Industrial Steam Valves   |
|-----------------------------|---|
| Sizes                       | 1/4" - 6" Series 5  |
| Material                    | 316/316L, Hastelloy™ C-276, Carbon Steel, Bronze Alloy 922, 89833 Bronze or other         |
| Temperatures                | Ambient for V-TEF™ to 400° F, S-TEF® to 450°F, PEEK to 500°F                              |
| End Connections             | Flange, NPT, Buttweld and Sil-braze for pipe, Socket weld for pipe, Solder Joint for tube |
| O-rings                     | EPR O-ring energizer (Viton V1274-75/80, EPR E3608-70, others available)                  |
| Seat, Seals & Stem Packings | V-TEF™ and S-TEF®   |
| Body Bolts & Nuts           | 18-8 Stainless Steel  |
| Maximum Working Pressure    | up to 900 psig CWP depending on valve series, size and temperature                        |

| CV Values (gpm) |          |
|-----------------|----------|
| Size            | Series 5 |
| 1/4"            | 5*       |
| 3/8"            | 10*      |
| 1/2"            | 12       |
| 3/4"            | 42*      |
| 1"              | 73       |
| 1-1/2"          | 170      |
| 2"              | 360      |
| 2-1/2"          | 650      |
| 3"              | 935      |
| 4"              | 1,900    |
| 6"              | 4,800    |

| End Fitting Length or Diameter |        |      |       |
|--------------------------------|--------|------|-------|
| Size                           | J-, U- | B-D- | L-    |
| 1/4", 3/8"                     | 0.41   | 1.50 | —     |
| 1/2"                           | 0.41   | 1.50 | 3.50  |
| 3/4"                           | 0.53   | 1.50 | 3.88  |
| 1"                             | 0.53   | 1.50 | 4.25  |
| 1-1/2"                         | 0.53   | 1.50 | 5.00  |
| 2"                             | 0.66   | 1.75 | 6.00  |
| 2-1/2"                         | 0.69   | 2.31 | 7.00  |
| 3"                             | 0.69   | 2.31 | 7.50  |
| 4"                             | 0.81   | 2.31 | 9.00  |
| 6"                             | NA     | 3.75 | 11.00 |



Extended Socket Weld J-

### How To Order:

| PRODUCT (1-2)  |    | SIZE (5)          |   | END CONN. |   | SEAT & SEAL |                      | PURGES  |   | BALL & STEM |  | OPERATOR |                               | POLISH  |                                     |   |                                      |
|----------------|----|-------------------|---|-----------|---|-------------|----------------------|---------|---|-------------|--|----------|-------------------------------|---------|-------------------------------------|---|--------------------------------------|
| MATERIAL (3-4) |    | SERIES (6)        |   | (7-8)     |   | (9)         |                      | (10-11) |   | (12)        |  | (13-14)  |                               | (15-16) |                                     |   |                                      |
| SD             | H- | Cast 316/316L S/S | C | 1/2"      | 5 | B-          | Sch. 40 Butt Weld    | G       | V-TEF™ Seats / Seals<br>FKM O-Rings                   | --          | No Purge Port or Ball Option                   | -        | Standard Ball and Stem        | --      | W/ Standard Lever Handle            | - | 125 Ra ID Standard                   |
|                | HL | Cast 316L S/S     | D | 3/4"      |   | D-          | Sch. 10 Butt Weld    | J       | V-TEF™ Seats / Seals / VTFE<br>Cav Fill / FKM O-Rings | -8          | Self Flushing Ball                             | F        | Internal / External Grounding | 02      | W/O Handle<br>W/ Stem Actuator Prep | A | 20 Ra ID                             |
|                | E- | Carbon Steel      | E | 1"        |   | J-          | Extended Socket Weld | Z       | V-TEF™ Seats / Seals<br>EPR O-Rings                   | -V          | Slotted V-Ball                                 | G        | 17-4PH Stem                   | 04      | Locking Lever Handle                | C | 20 Ra ID / 32 Ra OD                  |
|                | C- | Hastelloy C-276   | G | 1-1/2"    |   | L-          | 150# Flange*         |         |   | -W          | 30° V-Ball                                     |          |                               | 08      | Gear Operator (Req'd for 6")        | F | 20 Ra ID after Electro Polish        |
|                |    | Hastelloy C-22    | H | 2"        |   | M-          | 300# Flange*         | 2       | V-TEF™ Seats / Seals / VTFE<br>Cav Fill / EPR O-Rings | -X          | 45° V-Ball                                     |          |                               | 18      | Extended Handle (thru 4")           |   |                                      |
|                | Y- | Hastelloy C-22    | J | 2-1/2"    |   | P-          | Male NPT             |         |   | -Y          | 60° V-Ball                                     |          |                               | 20      | DA 80psig actuator                  |   |                                      |
|                | P- | AL6XN             | K | 3"        |   | Q-          | Female NPT           |         | S-TEF® Seats / Seals<br>FKM O-Rings                   |             | Other Purge Port & Ball Options - Contact PBM. |          |                               | 27      | DA 60psig actuator                  |   | More polish available - Contact PBM. |
|                | N- | 922 Bronze        | L | 4"        |   | S-          | Sil Braze 1 Groove   | H       |   |             |  |          |                               | 34      | SR 80psig actuator                  |   |                                      |
|                | G- | 89833 Bronze      | M | 6"        |   | T-          | Solder Joint         | 0       | S-TEF® Seats / Seals<br>EPR O-Rings                   |             |  |          |                               | 41      | SR 60psig actuator                  |   |                                      |
|                |    |                   |   |           |   | U-          | Socket Weld          | 9       | TFM® Seats / Seals<br>FEP Encaps. FKM O-Rings         |             |  |          |                               |         |                                     |   |                                      |

Other material options available - Contact PBM.

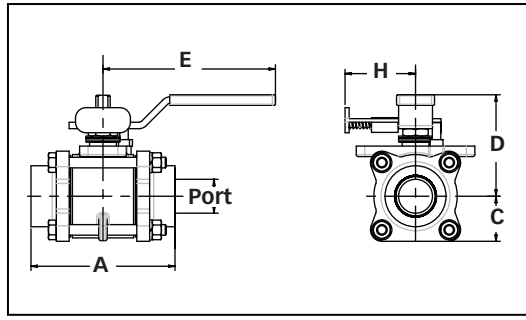
\* Flat faced for Bronze  
All others are raised face

Other Seat/seal options available-

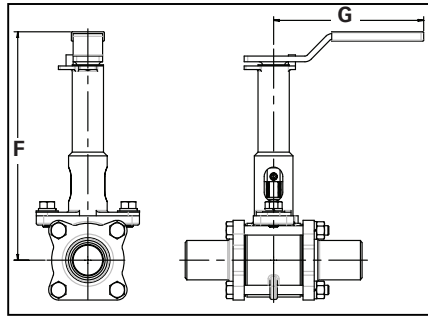
Other operator options available - Contact PBM.

# IMI PBM Industrial 2-Way Steam Valve, Manual

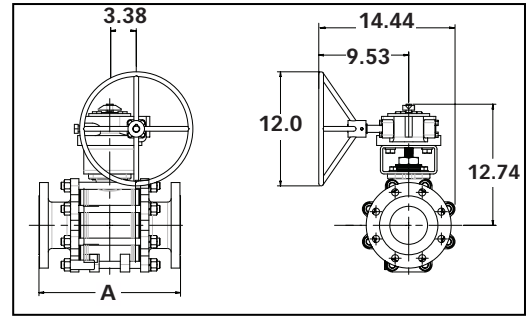
2-Way Valve with Locking Handle



2-Way Valve with Ext. Locking Handle



2-Way Valve with Gear Operator (6" only)

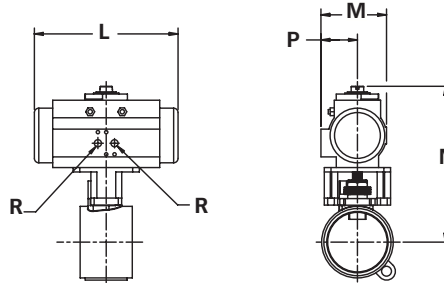


| Valve Size    | Size Code | Port Dia. | A                    |          |       |      | C<br>ϕ to Bottom<br>B- D- Q-<br>S- T- U | D<br>ϕ to Top<br>of<br>Handle | E<br>Handle<br>Length<br>from<br>ϕ | Ext. Locking Handle |       | Locking Handle |                          | Approx. Weights      |           |
|---------------|-----------|-----------|----------------------|----------|-------|------|---|-------------------------------|------------------------------------|---------------------|-------|----------------|--------------------------|----------------------|-----------|
|               |           |           | Face to Face         |          |       |      |   |                               |                                    | F                   | G     | H              | Hole<br>Dia. for<br>Lock | B-<br>D-<br>Q-<br>U- | L-        |
|               |           |           | Q-<br>U-<br>S-<br>T- | B-<br>D- | J-    | L-   |   |                               |                                    |                     |       |                |                          |                      |           |
| 1/4",<br>3/8" | A,B       | 0.5       | 3.12                 | 5.5      | NA    | NA   | 0.92                                    | 2.63                          | 4.15                               | 7.19                | 5.09  | 1.62           | .25                      | 1.7 lbs.             | 4.0 lbs.  |
| 1/2"          | C         | 0.5       | 3.12                 | 5.5      | 6.34  | 5.5  | 0.92                                    | 2.63                          | 4.15                               | 7.19                | 5.09  | 1.62           | .25                      | 1.7 lbs.             | 4.0 lbs.  |
| 3/4"          | D         | 0.75      | 3.44                 | 5.5      | 6.57  | 5.8  | 1                                       | 2.78                          | 4.15                               | 7.34                | 5.09  | 1.62           | .25                      | 2.0 lbs.             | 5.2 lbs.  |
| 1"            | E         | 1         | 4.25                 | 5.99     | 7.05  | 6.5  | 1.33                                    | 3.03                          | 5.09                               | 7.62                | 5.09  | 2.08           | .28                      | 4.5 lbs.             | 8.7 lbs.  |
| 1-1/2"        | G         | 1.5       | 5.5                  | 7.5      | 8.56  | 8    | 1.78                                    | 4.1                           | 8.68                               | 9.45                | 8.00  | 2.58           | .38                      | 10.2 lbs.            | 17.4 lbs. |
| 2"            | H         | 2         | 6                    | 8        | 9.26  | 9.8  | 2.15                                    | 4.41                          | 8.68                               | 9.76                | 8.00  | 2.58           | .38                      | 15.4 lbs.            | 26.5 lbs. |
| 2-1/2"        | J         | 2.5       | 8                    | 11.5     | CF    | 11.5 | 2.79                                    | 6.45                          | 12.44                              | 11.36               | 12.06 | 3.47           | .38                      | 36.0 lbs.            | 53.5 lbs. |
| 3"            | K         | 3         | 9                    | 13.5     | 14.88 | 12.8 | 3.14                                    | 6.78                          | 12.44                              | 11.69               | 12.06 | 3.47           | .38                      | 48 lbs.              | 68 lbs.   |
| 4"            | L         | 4         | 12                   | 16       | CF    | 15   | 4.91                                    | 7.34                          | 24.4                               | 13.97               | 24.06 | NA             | .44                      | 109 lbs.             | 157 lbs.  |
| 6"*           | M         | 6         | NA                   | 22       | CF    | 20   | 7.25                                    | NA                            | NA                                 | NA                  | NA    | NA             | NA                       | 320 lbs.*            | 357 lbs.* |

\*Weight with gear operator.

## ACTUATED DIMENSIONS

Unit of Measure = inches  
Dimensions based on actuators used with V-TEF™ 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"   | 5.55                 | 2.79 | 5.84  | 1.61 | 1/8 | 6.46                 | 3.17 | 6.29  | 1.77 | 1/8 | 5.55                 | 2.79 | 5.84  | 1.61 | 1/8 | 5.55                 | 2.79 | 5.84  | 1.61 | 1/8 |
| 3/4"   | 6.46                 | 3.17 | 6.44  | 1.77 | 1/8 | 6.46                 | 3.17 | 6.44  | 1.77 | 1/8 | 5.55                 | 2.79 | 5.99  | 1.61 | 1/8 | 5.55                 | 2.79 | 5.99  | 1.61 | 1/8 |
| 1"     | 8.27                 | 3.72 | 7.80  | 2.07 | 1/8 | 8.27                 | 3.72 | 7.80  | 2.07 | 1/8 | 5.55                 | 2.79 | 6.64  | 1.61 | 1/8 | 5.55                 | 2.79 | 6.64  | 1.61 | 1/8 |
| 1-1/2" | 10.83                | 4.85 | 10.16 | 2.68 | 1/4 | 10.83                | 4.85 | 10.16 | 2.68 | 1/4 | 6.46                 | 3.17 | 8.39  | 1.77 | 1/8 | 8.27                 | 3.72 | 9.10  | 2.07 | 1/8 |
| 2"     | 10.83                | 4.85 | 10.47 | 2.68 | 1/4 | 13.12                | 5.39 | 11.82 | 2.87 | 1/4 | 8.27                 | 3.72 | 9.42  | 2.07 | 1/8 | 8.27                 | 3.72 | 9.42  | 2.07 | 1/8 |
| 2-1/2" | 13.12                | 5.39 | 13.48 | 2.87 | 1/4 | 14.65                | 5.83 | 13.96 | 3.15 | 1/4 | 13.12                | 5.39 | 13.48 | 2.87 | 1/4 | 13.12                | 5.39 | 13.48 | 2.87 | 1/4 |
| 3"     | 14.65                | 5.83 | 14.29 | 3.15 | 1/4 | 17.13                | 6.46 | 15.16 | 3.44 | 1/4 | 13.12                | 5.39 | 13.81 | 2.87 | 1/4 | 13.12                | 5.39 | 13.81 | 2.87 | 1/4 |