

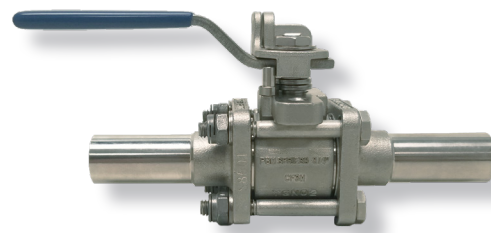
# IMI PBM IGENIX® TWO-WAY BALL VALVES

## SI Cast Series 9/Forged Series 8, DIN 11850, DN8 - DN65



### DESIGN FEATURES:

- Unique Adjust-O-Seal® feature allows in-line valve adjustment to compensate for normal wear on valve seats
- **SI Series valves DO NOT have o-rings**
- Valves are 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
- Forged and cast valves are low-controlled ferrite.
- True-Bore® (valve bore same as connecting tubing) – no puddling (Except DN8 & DN10)
- ASME BPE compliant
- USP Class VI elastomers and FDA compliant materials
- Valves are rated to full vacuum
- Material Test Report (MTRs) provided for wetted components
- Surface finishes are achieved without the use of ADIs (Animal Derived Ingredients)



| SPECIFICATIONS           | 2-Way Valves                                                                                                                                                                                                                                                       |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sizes                    | DN8 - DN150 Series 9, DN15 - DN100 Series 8 (DN8 & DN10 in Series 8 is Ext. tube only)                                                                                                                                                                             |
| Material                 | Low ferrite cast and forged 316L material. Castings (Series 9) comply with A351, Alloy CF3M and/or A479, Alloy S31603. Forgings (Series 8) comply with A182, Alloy F316L/1.4404 and/or A479, Alloy S31603. Also available are Hastelloy™, AL6XN™, others available |
| End Connections          | Extended tube, hygienic clamp, please refer to PB-CE89 for compression ends, others available                                                                                                                                                                      |
| Seats & Seals            | White V-TEF™ standard, others available                                                                                                                                                                                                                            |
| Stem Packing Material    | V-TEF™ and S-TEF®, others available                                                                                                                                                                                                                                |
| Body Bolts & Nuts        | 18-8 Stainless Steel standard, special bolting optional                                                                                                                                                                                                            |
| Maximum Working Pressure | See table below                                                                                                                                                                                                                                                    |
| Temperatures             | Up to 232°C depending on seat and seal material                                                                                                                                                                                                                    |
| Finish                   | Standard internal finish of 0.5µ-m Ra ID Series 8, 0.75µ-m Ra ID Series 9, other finishes available                                                                                                                                                                |

| CV Values (liters/minute), Series 8/Series 9 |                 |
|----------------------------------------------|-----------------|
| Size                                         | End Connections |
|                                              | F-              |
| DN 8                                         | 18              |
| DN 10                                        | 32              |
| DN 15                                        | 90              |
| DN 20                                        | 170             |
| DN 25                                        | 338             |
| DN 32                                        | 512             |
| DN 40                                        | 722             |
| DN 50                                        | 1,532           |
| DN 65                                        | 3,184           |

| Polish Options - Standard 0.75µ-m Ra ID, Series 9, 0.5 µ-m Ra ID, Series 8 |                          |
|----------------------------------------------------------------------------|--------------------------|
| A* (Cast only)                                                             | 0.5 µ-m Ra ID            |
| D                                                                          | 0.375 µ-m Ra ID          |
| E                                                                          | 0.25 µ-m Ra ID           |
| F                                                                          | 0.50 µ-m Ra ID after EP  |
| G                                                                          | 0.375 µ-m Ra ID after EP |
| H                                                                          | 0.25 µ-m Ra ID after EP  |
| M                                                                          | Electropolish            |

| 316L S/S Pressure Ratings at Ambient (BARG) |          |          |
|---------------------------------------------|----------|----------|
| SIZE                                        | SERIES 8 | SERIES 9 |
| DN 8                                        | 41.37    | 62.05    |
| DN 10                                       | 41.37    | 62.05    |
| DN 15                                       | 41.37    | 62.05    |
| DN 20                                       | 41.37    | 62.05    |
| DN 25                                       | 41.37    | 62.05    |
| DN 40                                       | 41.37    | 49.64    |
| DN 50                                       | 41.37    | 49.64    |
| DN 65                                       | 41.37    | 49.64    |

| DIN 11850 Tube Weld End Dimensions |                             |                             |
|------------------------------------|-----------------------------|-----------------------------|
| DN8 = 10mm OD x 1mm Wall           | DN10 = 13mm OD x 1.5mm Wall | DN15 = 19mm OD x 1.5mm Wall |
| DN20 = 23mm OD x 1.5mm Wall        | DN25 = 29mm OD x 1.5mm Wall | DN32 = 35mm OD x 1.5mm Wall |
| DN40 = 41mm OD x 1.5mm Wall        | DN50 = 53mm OD x 1.5mm Wall | DN65 = 70mm OD x 2mm Wall   |

### How To Order:

| PRODUCT (1-2)  |    | SIZE (5)                                      |   | END CONNECTIONS |   | SEAT & SEAL |                         | PURGES  |                                          | BALL & STEM |                                          | OPERATOR   |                                                    | POLISH  |                                  |                                 |                            |   |                                  |
|----------------|----|-----------------------------------------------|---|-----------------|---|-------------|-------------------------|---------|------------------------------------------|-------------|------------------------------------------|------------|----------------------------------------------------|---------|----------------------------------|---------------------------------|----------------------------|---|----------------------------------|
| MATERIAL (3-4) |    | SERIES (6)                                    |   | (7-8)           |   | (9)         |                         | (10-11) |                                          | (12)        |                                          | (13-14)    |                                                    | (15-16) |                                  |                                 |                            |   |                                  |
| SI             | HF | F316L Forged Low Ferrite F316L / DIN 1.4404   | 1 | 8               | 8 | F           | Ext. Butt-weld for Tube | G       | V-TEF™ Seats / Seals                     | --          | No Purge Port or Ball Option             | -          | Standard Ball and Stem                             | --      | W/ Standard Lever Handle         | -                               | 0.75 µm ID (Std. Series 9) |   |                                  |
|                |    |                                               | 2 | 10              | 9 |             |                         | J       | V-TEF™ Seats / Seals VTFE Cavity Fillers | -8          | Self Flushing Ball                       | F          | Internal / External Grounding                      | 02      | W/O Handle W/ Stem Actuator Prep | A                               | 0.50 µm ID (Std. Series 8) |   |                                  |
| 35             |    | 316L Cast Body, 1.4435 Weld Ends, Low Ferrite | 3 | 15              |   |             |                         | H       | S-TEF® Seats / Seals                     | -V          | Slotted V-Ball                           | G          | 17-4PH Stem                                        | 04      | Locking Lever Handle             | D                               | 0.375 µm ID                |   |                                  |
|                |    |                                               | 4 | 20              |   |             |                         |         |                                          | -W          | 30° V-Ball                               |            |                                                    | 08      | Gear Operator                    | E                               | 0.25 µm ID                 |   |                                  |
|                |    |                                               | 5 | 25              |   |             |                         |         |                                          | I           | S-TEF® Seats / Seals VTFE Cavity Fillers | -X         | 45° V-Ball                                         |         |                                  | 18                              | Extended Handle (DN65)     | F | 0.50 µm ID after Electro Polish  |
|                |    |                                               | 6 | 32              |   |             |                         |         |                                          |             | -Y                                       | 60° V-Ball |                                                    |         | 71                               | Extended Handle (DN8 thru DN50) |                            |   |                                  |
|                |    |                                               | 7 | 40              |   |             |                         |         |                                          | K           | UHMWPE Seats / Seals                     |            | Other Purge Port & Ball Options - Contact IMI PBM. |         |                                  | 20                              | DA 80psig actuator         | G | 0.375 µm ID after Electro Polish |
|                |    |                                               | 8 | 50              |   |             |                         |         |                                          | L           | UHMWPE Seats / Seals VTFE Cavity Fillers |            |                                                    |         |                                  | 27                              | DA 60psig actuator         |   |                                  |
|                |    |                                               | 9 | 65              |   |             |                         |         |                                          |             |                                          |            |                                                    |         |                                  | 34                              | SR 80psig actuator         | H | 0.25 µm ID after Electro Polish  |
|                |    |                                               |   |                 |   |             |                         |         |                                          |             |                                          |            |                                                    | 41      | SR 60psig actuator               |                                 |                            |   |                                  |

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

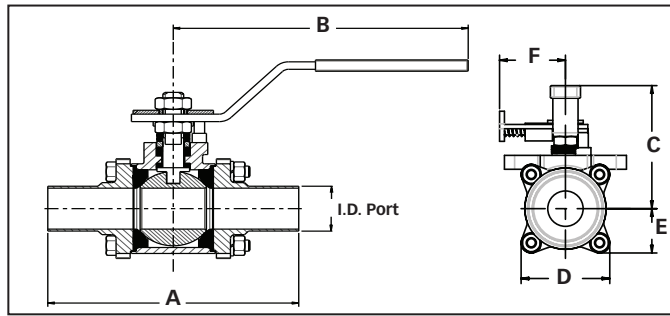
Other seat/seal options available - Contact IMI PBM.

Other operator options available - Contact IMI PBM.

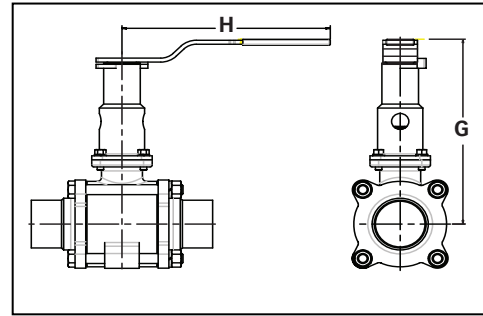
More polish available - Contact IMI PBM.

# IMI PBM Igenix® Cast Series 9/Forged Series 8 Manual

2-Way Valve with Locking Handle



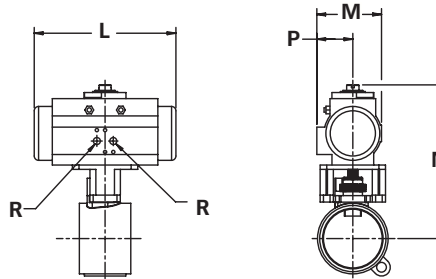
2-Way Valve with Extended Lockable Handle



| SI DIN Valve Dimensions (mm) |           |           |       |       |       |       |      |                  | Locking Handle |                    | Ext. Locking Handle |       |                    |
|------------------------------|-----------|-----------|-------|-------|-------|-------|------|------------------|----------------|--------------------|---------------------|-------|--------------------|
| Valve Size                   | Size Code | I.D. Port | A     | B     | C     | D     | E    | Approx. Wgt (kg) | F              | Hole Dia. for Lock | G                   | H     | Hole Dia. for Lock |
| DN 8                         | 1         | 8.0       | 139.7 | 101.6 | 52.1  | 38.1  | 19.1 | 0.5              | 39.4           | 7.1                | 101.6               | 129.3 | 7.9                |
| DN 10                        | 2         | 10.0      | 139.7 | 101.6 | 52.1  | 38.1  | 19.1 | 0.5              | 39.4           | 7.1                | 101.6               | 129.3 | 7.9                |
| DN 15                        | 3         | 16.0      | 152.4 | 101.6 | 56.4  | 42.9  | 21.6 | 0.6              | 39.4           | 7.1                | 105.7               | 129.3 | 7.9                |
| DN 20                        | 4         | 20.0      | 165.1 | 105.4 | 76.2  | 55.4  | 27.7 | 1.4              | 41.1           | 6.4                | 138.2               | 129.3 | 7.9                |
| DN 25                        | 5         | 26.0      | 190.5 | 223.8 | 124.7 | 84.2  | 42.1 | 4.0              | 65.3           | 9.7                | 189.5               | 203.2 | 9.7                |
| DN 32                        | 6         | 32.0      | 190.5 | 223.8 | 124.7 | 84.2  | 42.1 | 4.0              | 65.3           | 9.7                | 189.5               | 203.2 | 9.7                |
| DN 40                        | 7         | 38.0      | 190.5 | 223.8 | 124.7 | 84.2  | 42.1 | 4.0              | 65.3           | 9.7                | 189.5               | 203.2 | 9.7                |
| DN 50                        | 8         | 50.0      | 200.0 | 204.0 | 118.6 | 109.2 | 54.6 | 7.1              | 65.5           | 9.7                | 196.6               | 203.2 | 9.7                |
| DN 65                        | 9         | 66.0      | 292.1 | 306.3 | 165.5 | 141.7 | 70.9 | 16.5             | 88.1           | 9.7                | 288.5               | 306.3 | 9.7                |

## ACTUATED DIMENSIONS

Unit of Measure = mm  
Dimensions based on actuators used with V-TEF™ seats.



| Size  | 80 PSI Spring Return |       |       |      |         | 60 PSI Spring Return |       |       |      |         | 60, 80 PSI Double Acting |       |       |      |         |
|-------|----------------------|-------|-------|------|---------|----------------------|-------|-------|------|---------|--------------------------|-------|-------|------|---------|
|       | L                    | M     | N     | P    | R       | L                    | M     | N     | P    | R       | L                        | M     | N     | P    | R       |
| DN 8  | 141.0                | 70.9  | 138.4 | 40.9 | 1/8 NPT | 164.1                | 80.5  | 149.9 | 45.0 | 1/8 NPT | 141.0                    | 70.9  | 138.4 | 40.9 | 1/8 NPT |
| DN 10 | 141.0                | 70.9  | 138.4 | 40.9 | 1/8 NPT | 164.1                | 80.5  | 149.9 | 45.0 | 1/8 NPT | 141.0                    | 70.9  | 138.4 | 40.9 | 1/8 NPT |
| DN 15 | 141.0                | 70.9  | 142.0 | 40.9 | 1/8 NPT | 164.1                | 80.5  | 153.2 | 45.0 | 1/8 NPT | 141.0                    | 70.9  | 142.0 | 40.9 | 1/8 NPT |
| DN 20 | 164.1                | 80.5  | 165.4 | 45.0 | 1/8 NPT | 210.1                | 94.5  | 183.4 | 52.6 | 1/8 NPT | 141.0                    | 70.9  | 153.9 | 40.9 | 1/8 NPT |
| DN 25 | 240.8                | 105.9 | 245.1 | 58.4 | 1/8 NPT | 275.1                | 122.9 | 257.9 | 68.1 | 1/4 NPT | 210.1                    | 94.5  | 231.1 | 52.6 | 1/8 NPT |
| DN 32 | 240.8                | 105.9 | 245.1 | 58.4 | 1/8 NPT | 275.1                | 122.9 | 257.9 | 68.1 | 1/4 NPT | 210.1                    | 94.5  | 231.1 | 52.6 | 1/8 NPT |
| DN 40 | 240.8                | 105.9 | 245.1 | 58.4 | 1/8 NPT | 275.1                | 122.9 | 257.9 | 68.1 | 1/4 NPT | 210.1                    | 94.5  | 231.1 | 52.6 | 1/8 NPT |
| DN 50 | 275.1                | 122.9 | 265.4 | 68.1 | 1/4 NPT | 333.0                | 136.9 | 299.7 | 72.9 | 1/4 NPT | 210.1                    | 94.5  | 238.5 | 52.6 | 1/8 NPT |
| DN 65 | 333.0                | 136.9 | 342.4 | 72.9 | 1/4 NPT | 372.1                | 148.1 | 354.6 | 80.0 | 1/4 NPT | 333.0                    | 136.9 | 342.4 | 72.9 | 1/4 NPT |

| Manual Valves with Tube Ends when used with insulation |                                  |                               |
|--------------------------------------------------------|----------------------------------|-------------------------------|
| Tube OD                                                | Insulation max with no extension | Insulation max with extension |
| 12.7                                                   | 19.3                             | 68.1                          |
| 19.1                                                   | 20.1                             | 69.1                          |
| 25.4                                                   | 36.8                             | 98.6                          |
| 38.1                                                   | 78.7                             | 141.5                         |
| 50.8                                                   | 58.7                             | 142.2                         |
| 63.5                                                   | 101.6                            | 225.6                         |
| 76.2                                                   | 103.6                            | 225.6                         |
| 101.6                                                  | 110.5                            | 231.6                         |

[www.PBMValve.com](http://www.PBMValve.com)

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