

# PBM Igenix® Radial Diaphragm Tank Outlet Valves

clean. reliable. simple. versatile.



## PBM Igenix® Radial Diaphragm Tank Outlet Valve

As an ISO 9001 manufacturer, PBM produces standard and custom sanitary valve products for services required to minimize contamination, facilitate CIP/SIP and reduce downtime. PBM Radial Diaphragm Valves comply with ASME BPE guidelines and offer valve certifications. Our absolute mission is to provide time lasting designs which help our users produce high quality biologicals and pharmaceuticals.

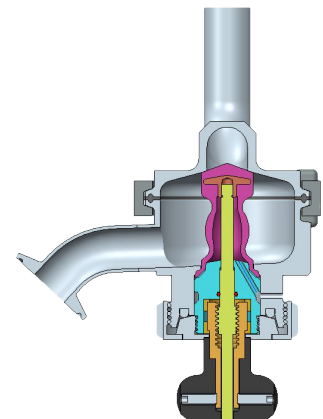
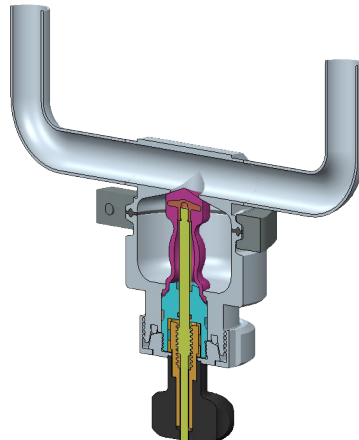
### Benefits:

- Smooth sloping design for complete drainage
- Weld pad easily detaches with a simple hygienic clamp
- 1/2" through 3", DIN 10 through DIN 80
- 45° and 2° sloped outlet
- Pressure rating 175 psi/12 bar
- Outlet can be oriented in any position
- Machined by PBM from wrought material
- Standard finish 15 Ra with EP (BPE SF4)
- 316L, Hastelloy™ C-276, C-22, AL6XN™, Duplex, others
- Silicone or TFM™ diaphragms, others available
- Full material traceability and documentation package
- Optional purge port and tank connections available
- Exceeds performance requirements of ASME-BPE testing
- Optional position switch options including AS-Interface, DeviceNet, Foundation Fieldbus and Modbus



## Point of Use Valve - Zero Dead Leg

PBM's Igenix® Radial diaphragm Zero static valves eliminate dead-leg on critical process systems including WFI, clean steam and process media. PBM's Radial diaphragm zero static valves have an advantage over traditional weir type diaphragm valves due to a detachable body connection using a standard hygienic clamp that can be capped during system passivation.



| Valve Size    | Header Size Selection |             |           |              |          |          |           |
|---------------|-----------------------|-------------|-----------|--------------|----------|----------|-----------|
|               | 1/2" DIN 15           | 3/4" DIN 20 | 1" DIN 25 | 1-1/2" DN 40 | 2" DN 50 | 3" DN 80 | 4" DN 100 |
| 1/2", DIN 15  | *                     | *           | *         | *            | *        | *        |           |
| 3/4", DIN 20  |                       | *           | *         | *            | *        | *        |           |
| 1", DIN 25    |                       |             | *         | *            | *        | *        |           |
| 1-1/2", DN 40 |                       |             |           | *            | *        | *        |           |
| 2", DN 50     |                       |             |           |              | *        | *        | *         |
| 3", DN 80     |                       |             |           |              |          | *        | *         |

## Flush Mounted Radial Diaphragm Valves

Flush Mounted Dimensions, Cv

| Size            | Units  | A     | B     | C     | D     | E    | F     | Units       | CV     |
|-----------------|--------|-------|-------|-------|-------|------|-------|-------------|--------|
| 1/2"<br>DIN 15  | inches | 5.11  | 2.69  | 3.11  | 2.25  | 0.37 | 6.12  | gal./min.   | 3.30   |
|                 | mm     | 129.8 | 68.3  | 79.0  | 57.2  | 9.4  | 155.4 | liters/min. | 12.5   |
| 3/4"<br>DIN 20  | inches | 5.07  | 2.50  | 3.11  | 2.25  | 0.62 | 6.08  | gal./min.   | 10.30  |
|                 | mm     | 128.8 | 63.5  | 79.0  | 57.2  | 15.7 | 154.4 | liters/min. | 39.0   |
| 1"<br>DIN 25    | inches | 5.82  | 2.95  | 3.81  | 3.25  | 0.87 | 6.96  | gal./min.   | 14.60  |
|                 | mm     | 147.8 | 74.9  | 96.8  | 82.6  | 22.1 | 176.8 | liters/min. | 55.3   |
| 1-1/2"<br>DN 40 | inches | 6.36  | 3.44  | 4.32  | 3.25  | 1.37 | 8.24  | gal./min.   | 48.10  |
|                 | mm     | 161.5 | 87.4  | 109.7 | 82.6  | 34.8 | 209.3 | liters/min. | 182.1  |
| 2"<br>DN 50     | inches | 7.14  | 4.05  | 5.34  | 4.25  | 1.87 | 9.42  | gal./min.   | 72.20  |
|                 | mm     | 181.4 | 102.9 | 135.6 | 108.0 | 47.5 | 239.3 | liters/min. | 273.3  |
| 3"<br>DN 80     | inches | 9.26  | 5.72  | 7.34  | 6.25  | 2.87 | CF    | gal./min.   | 167.70 |
|                 | mm     | 235.2 | 145.3 | 186.4 | 158.8 | 72.9 | CF    | liters/min. | 634.8  |

## Clamp Mounted Radial Diaphragm Valves

Clamp Mounted Dimensions, Cv

| Size            | Units  | G     | H     | I     | J    | K     | L    | Units       | CV     |
|-----------------|--------|-------|-------|-------|------|-------|------|-------------|--------|
| 1/2"<br>DIN 15  | inches | 5.7   | 3.28  | 3.11  | 0.37 | 6.71  | .83  | gal./min.   | 3.30   |
|                 | mm     | 144.8 | 83.3  | 79.0  | 9.4  | 170.4 | 21.1 | liters/min. | 12.5   |
| 3/4"<br>DIN 20  | inches | 5.82  | 3.25  | 3.11  | 0.62 | 6.83  | .83  | gal./min.   | 10.30  |
|                 | mm     | 147.8 | 82.6  | 79.0  | 15.7 | 173.5 | 21.1 | liters/min. | 39.0   |
| 1"<br>DIN 25    | inches | 6.37  | 3.51  | 3.81  | 0.87 | 7.51  | .83  | gal./min.   | 14.60  |
|                 | mm     | 161.8 | 89.2  | 96.8  | 22.1 | 190.8 | 21.1 | liters/min. | 55.3   |
| 1-1/2"<br>DN 40 | inches | 6.91  | 3.99  | 4.32  | 1.37 | 8.79  | .75  | gal./min.   | 48.10  |
|                 | mm     | 175.5 | 101.3 | 109.7 | 34.8 | 223.3 | 19.1 | liters/min. | 182.1  |
| 2"<br>DN 50     | inches | 7.69  | 4.6   | 5.34  | 1.87 | 9.97  | .65  | gal./min.   | 72.20  |
|                 | mm     | 195.3 | 116.8 | 135.6 | 47.5 | 253.2 | 16.5 | liters/min. | 273.3  |
| 3"<br>DN 80     | inches | 9.39  | 5.84  | 7.34  | 2.87 | CF    | .42  | gal./min.   | 167.70 |
|                 | mm     | 238.5 | 148.3 | 186.4 | 72.9 | CF    | 10.7 | liters/min. | 634.8  |



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

PBM, Inc. • 1070 Sandy Hill Road, Irwin, PA 15642  
 Phone: 800.967.4PBM • 724.863.0550 • Fax: 724.864.9255  
 E-mail: [info@pbmvalve.com](mailto:info@pbmvalve.com)

## Diaphragm Materials

| Material | Color                                       | Temperature Range | Data                                                                                                                           |
|----------|---------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Silicone | Medical Grade<br>Platinum Cured             | White             | -60° to 275°F<br>-50° to 135°C                                                                                                 |
| TFM™     | TFM™ 1600 PTFE<br>(Polytetrafluoroethylene) | White             | 32° to 400°F<br>0° to 204°C                                                                                                    |
|          |                                             |                   | Commonly used in Pharma applications<br>Ideal for most biological processes<br>Optional clear available<br>Optimal performance |
|          |                                             |                   | Excellent chemical resistance<br>Good high temperature and steam resistance<br>Higher cost than Silicone                       |



Custom fit Copper chill block fixtures are available to facilitate welding of PBM's Radial Diaphragm tank outlet valve weld pad.

## Weights

| Size   | Weld pad only |      | Valve + pad, manual |       | Valve + pad + actuator |     |
|--------|---------------|------|---------------------|-------|------------------------|-----|
|        | lb.           | kg   | lb.                 | kg    | lb.                    | kg  |
| 1/2"   | 0.56          | 0.25 | 4.27                | 1.6   | 5.42                   | 2   |
| 3/4"   | 0.46          | 0.21 | 4.18                | 1.6   | 5.28                   | 2   |
| 1"     | 1.18          | 0.54 | 7.09                | 2.6   | 9.49                   | 3.5 |
| 1-1/2" | 1.09          | 0.49 | 8.83                | 3.3   | 14.17                  | 5.3 |
| 2"     | 1.74          | 0.79 | 16.47               | 6.1   | 21.83                  | 8.1 |
| 3"     | 6.33          | 2.87 | 37.96               | 17.22 | N/A                    | N/A |

## How to Order

| PRODUCT (1-2)             | MATERIAL (3-4)     | SIZE (5) | SERIES (6) | OUTLET END CONNECTION (7) | OUTLET ORIENTATION CONNECTION (8)   | DIAPHRAGM / GASKET (9) | TANK PAD OPTIONS* (10-11) | PURGE PORTS/ SATELLITE VALVE (12)                          | OPERATOR (13-14)                | POLISH (MECH. UNLESS NOTED) (15)        | MISCELLANEOUS (16)               |
|---------------------------|--------------------|----------|------------|---------------------------|-------------------------------------|------------------------|---------------------------|------------------------------------------------------------|---------------------------------|-----------------------------------------|----------------------------------|
| RD Radial Diaphragm Valve | HL 316L Stainless  | C 1/2"   | 1 RD       | F Ext Butt Weld-Tube      | 1 2 Degree Slope W/ Straight Outlet | B Silicon              | -- Standard Weld Pad      | - No purge option(s) selected                              | -- w/Manual Knob                | G 15Ra ID / 63Ra OD after EP (Standard) | - No Options                     |
|                           | C Hastelloy® C-276 | D 3/4"   |            | X Hygienic Clamp-Tube     | 2 2 Degree Slope W/ 45° Outlet      | G TFM™                 | LP Less Weld Pad          | A (1) 1/2" clamp on center opposite outlet                 | 34 SR80 psig actr               | H 10Ra ID / 63Ra OD after EP            | L Oxygen Clean per PBM Procedure |
|                           | Y Hastelloy® C-22® | E 1"     |            |                           |                                     |                        | CX 1/2" Clamp Inlet       | B (1) 1/2" BWTE on center opposite outlet                  | 35 SR80 psig actr & GP LS       | O 15Ra ID / 32Ra OD / EP                |                                  |
|                           | P AL6XN            | G 1-1/2" |            |                           |                                     |                        | DX 3/4" Clamp Inlet       | R (1) 1/2" Satellite Valve Hygienic Clamp - Manual         | 38 SR80 psig actr & XP LS       | S 10Ra ID / 32Ra OD / EP                |                                  |
|                           | 22 Duplex 2205     | H 2"     |            |                           |                                     |                        | EX 1" Clamp Inlet         | S (1) 1/2" Satellite Valve Ext. Butt Weld - Tube           | 110 VAC Solenoid & Limit Switch |                                         |                                  |
|                           |                    | K 3"     |            |                           |                                     |                        | GX 1-1/2" Clamp Inlet     | T (1) 1/2" Satellite Valve Hygienic Clamp - Auto.**        | 36 SR80 psig actr & GP Sol      |                                         |                                  |
|                           |                    |          |            |                           |                                     |                        | HX 2" Clamp Inlet         | U (1) 1/2" Satellite Valve - Ext. Butt Weld - Tube - Auto. | 37 SR80 psig actr & GP LS & Sol |                                         |                                  |
|                           |                    |          |            |                           |                                     |                        | KX 3" Clamp Inlet         | **Automation matches main valve.                           | 39 SR80 psig actr & XP Sol      |                                         |                                  |
|                           |                    |          |            |                           |                                     |                        | LX 4" Clamp Inlet         |                                                            | 40 SR80 psig actr & XP LS & Sol |                                         |                                  |
|                           |                    |          |            |                           |                                     |                        | MX 6" Clamp Inlet         |                                                            | 24 VDC Solenoid & Limit Switch  |                                         |                                  |
|                           |                    |          |            |                           |                                     |                        | W4 1/2" Thick Weld Pad*   |                                                            | 63 SR80 psig actr & GP Sol      |                                         |                                  |
|                           |                    |          |            |                           |                                     |                        | W6 3/4" Thick Weld Pad*   |                                                            | 64 SR80 psig actr & GP LS & Sol |                                         |                                  |
|                           |                    |          |            |                           |                                     |                        |                           |                                                            | 65 SR80 psig actr & XP Sol      |                                         |                                  |
|                           |                    |          |            |                           |                                     |                        |                           |                                                            | 66 SR80 psig actr & XP LS & Sol |                                         |                                  |

\*Consult PBM for RDV Adapter Pads for Series 8/9 Flush Tank Weld

\*Polypropylene Pads Available.

\*1/2" - 2" only

## PBM Worldwide Representation

- United States • Argentina • Australia • Brazil • Canada • Chile • Mexico • UAE • United Kingdom
- Austria • Belgium • France • Germany • Ireland • Poland • Spain • Sweden • Switzerland • The Netherlands
- China • India • Malaysia • Saudi Arabia • Singapore • South Africa • South Korea • Taiwan • Thailand • Vietnam

To find your local PBM representative or for more information about PBM valves, visit [www.pbmvalve.com](http://www.pbmvalve.com) or call us at 1-800-967-4PBM.

Participating member of the ASME Bioprocessing Equipment (BPE) Standards Committee



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

PBM, Inc. • 1070 Sandy Hill Road, Irwin, PA 15642  
Phone: 800.967.4PBM • 724.863.0550 • Fax: 724.864.9255  
E-mail: [info@pbmvalve.com](mailto:info@pbmvalve.com)

