



# VALVE SOLUTIONS

Chemical & Petrochemical

Food & Beverage

LNG & Cryogenic

Marine & Offshore

Mining

NQA-Qualified

Oil & Gas

Paint & Resins

Personal Care

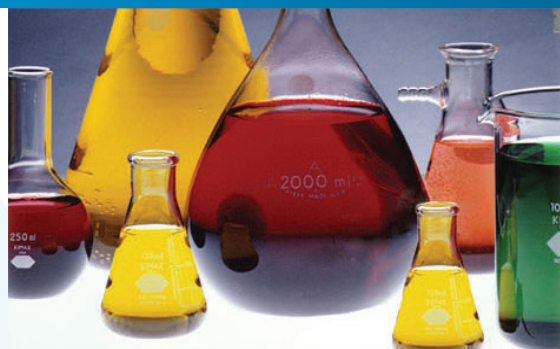
Pharmaceutical & Biotech

Power

Pulp & Paper

Refining

Steel



**IMI PBM has solutions to your valve application needs.**



IMI PBM (PITTSBURGH BRASS MANUFACTURING) is a company that began as a non-ferrous foundry in 1899 along the Monongahela River in Pittsburgh. The first ball valve was shipped in 1960. In 1968 IMI PBM moved to its present site in Irwin, 20 miles southeast of Pittsburgh, PA. IMI PBM Valves combine specific application requirements with creative engineering and quality manufacturing practices. IMI PBM valves offer the convenience of standard features with the option of customizing for a specific process. Most IMI PBM valves incorporate IMI PBM's Adjust-O-Seal<sup>®</sup> design and many include the True-Bore<sup>®</sup> design. IMI PBM has the ability to provide clean-in-place/steam-in-place capability without process interruption.

These are just a few of the innovations that help reduce processing costs and improve efficiency for our customers.

### INDUSTRIAL VALVES

- 2-Way Ball Valves
- ANSI Ball Valves
- Tank Bottom Valves
- Trunnion Mounted
- Diverter Port Ball Valve
- Multi-Port Ball Valves
- Control Valves

### SANITARY VALVES

- BPE COMPLIANT**
- Clean Steam Valves
  - Self Cleaning Ball Valves
  - 2-Way Ball Valves
  - Tank Bottom Valves
  - Diverter Port Ball Valve
  - Multi-Port Ball Valves
  - Pinch Valves
  - Spray Ball Valves

### SPECIALTY VALVES

- Marine valves
- Check Valves
- Cryogenic Valves
- Instrument Valves
- Manifold Assemblies
- NQA-1 COMPLIANT
- Radial Diaphragm
- Rising Stem Sampling

### AUTOMATION

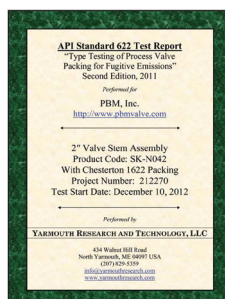
- Electric & Pneumatic
- Direct Mount Pneumatic
- Torque outputs accommodate full range of valve sizes
- Bi-Directional Travel Stop Adjustments
- Position monitors with Visual Indication
- Full range of solenoid valves direct mount, tube mount, or mounted in switchbox



**ISO 9001:2015**



**SIL 3 CAPABLE**



**API 622  
LOW E TESTING**



**ABS APPROVAL**



**CRN REGISTRATIONS**



**PED 2014/68/EU**



**DESIGN FEATURES**

**Clean Steam Ball Valves**

Features	Benefits
1. Metal Encapsulated Ring	→ Minimize effects of thermal cycling
2. O-ring primary seal	→ Provides spring effect to combat teflon's lack of memory property
3. Metal encapsulated V-TEF™	→ Body gasket and seat are two body seal separate items that lets the seat move independent of gasket.
4. Belleville Washers	→ Help maintain pre-load on body bolts during thermal cycling

**Adjustable Sealing**

**Clean-In-Place/Steam-In-Place**

Steam/  
Cleaning Fluid

Inlet Purge Port

Milled Flat

Adjustable Seats

**Cavity Fillers**

Cavity Fillers

**Locking Lever Handle**

**Direct Mount Actuation**

**True-Bore®**  
port diameter  
same as  
pipe or tube  
diameter

Pipe or Vessel

Minimal Dead Space

Custom Radius Pad

**Cylindrical Radius Pad**

Ball



## INDUSTRIAL VALVES

Whether the application is in a chemical plant, paper mill, food plant, manufacturing environment, or other industrial setting, IMI PBM'S line of Industrial valves can handle all types of rigorous and general purpose applications.

### Materials:

- 316/316L S/S
- Carbon Steel
- Bronze
- Hastelloy®
- AL6XN®
- Others

### End Connections:

- Threaded
- Extended Butt Weld
- Socket Weld
- Flanged
- Compression
- Others

### Options:

- Actuation
- Fire-Rated
- CIP/SIP
- Cavity Fillers
- Locking Handle
- Steam Seats
- Polishing & Electropolishing
- Special Pads (Flush Tank)
- Multiple Flow Patterns (Diverter & Multi-Port)
- V-ball for flow control
- Variety of Soft and Metal Seats

### 2-Way Ball Valve



#### Sizes:

- 1/4" - 10"
- DN8 - DN250

### Diverter Port Ball Valve



#### Sizes:

- 1/2" - 6"
- DN15 - DN150

### Angle Stem Flush Tank Ball Valve



#### Sizes:

- 1" - 6"
- DN25 - DN150

### Tank Bottom Ball Valves



#### Sizes:

- 1/2" - 6"
- DN15 - DN150

### Multi-Ported Ball Valve



#### Sizes:

- 1/2" - 6"
- DN15 - DN150

### Control Ball Valves



V-balls for Control Valves feature characterized balls with various port shapes.



ANSI ball valve, ASME B16.10 Full Port, 150# Flanged valves is used for heavy duty industrial applications. Adjustable sealing standard.

**Sizes:**

- 1/2" - 10" DN15 - DN250  
Class 150 & 300

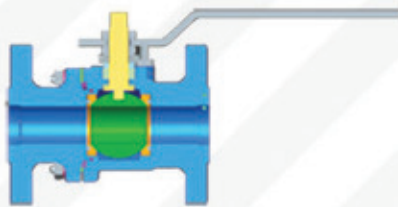


ANSI Ball Valves

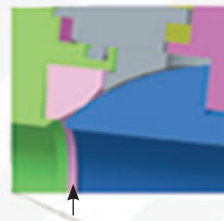


Sizes:  
1/2" - 4"

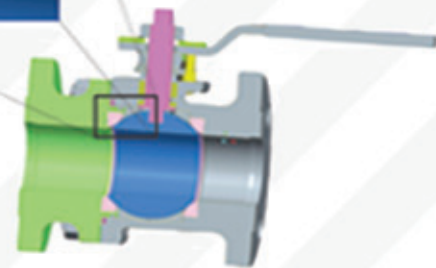
**NQA-1 RATED** Valves are manufactured, tested, and certified in strict accordance with ASME NQA-1. IMI PBM's quality assurance program is in accordance with 10 CFR 50 Appendix B, ASME NQA-1.0



Metal Seats



**Metal Encapsulated** Seat Rings facilitate performance in high velocity applications and contain seats in high temperature applications.



**Cryogenic Valves**

Cryogenic valves have a unique design that accommodate leak-free operation through cooling and heating cycles.

**Sizes:**

- 1/2" - 4"  
DN15 - DN100

**Materials:**

- 316/316L S/S
- Others

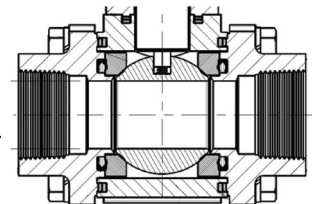
**Features:**

- Fire Safe to API 607
- Temperatures from 400°F, 205°C down to -320°F, -200°C
- ANSI 300# Class



**What Makes It Work**

An extended bonnet with an upper set of **live loaded** stem packings. As metal shrinks, it keeps pressure on seals as temperature goes through cooling and heating cycles. A vented ball allows explosive gas expansion to vent upstream.



**Leakage Rate Comparison**

Cryogenic Allowable Leakage Rate Comparison Allowable He scc/min			
NPS	DN	MSS-SP134-2010	BS 6364-1984
1/2	15	37.5	90
3/4	20	56.25	120
1	25	75	150
1-1/2	40	112.5	240
2	50	150	300
3	80	225	480
4	100	300	600



**Instrument Valves** are used for Isolation for pressure gauges, orifice plates, flush rings and various measurement instruments.

**Sizes:**

- 1/2" and 3/4" sizes with 0.41 bore

**Pressure Class:**

- 1/4" - 3/4" Up to ANSI Class 2500 (Class 1500 Standard)

**Features:**

- Quarter Turn Operation
- Optional Extended Handle
- Bleed or Gauge Ports
- Low-E Packing to API 622
- SIL-3 Capable per IEC 61508

**Materials:**

- 316 L S/S
- Hastelloy®
- Carbon Steels
- Duplex
- Inconel
- Others

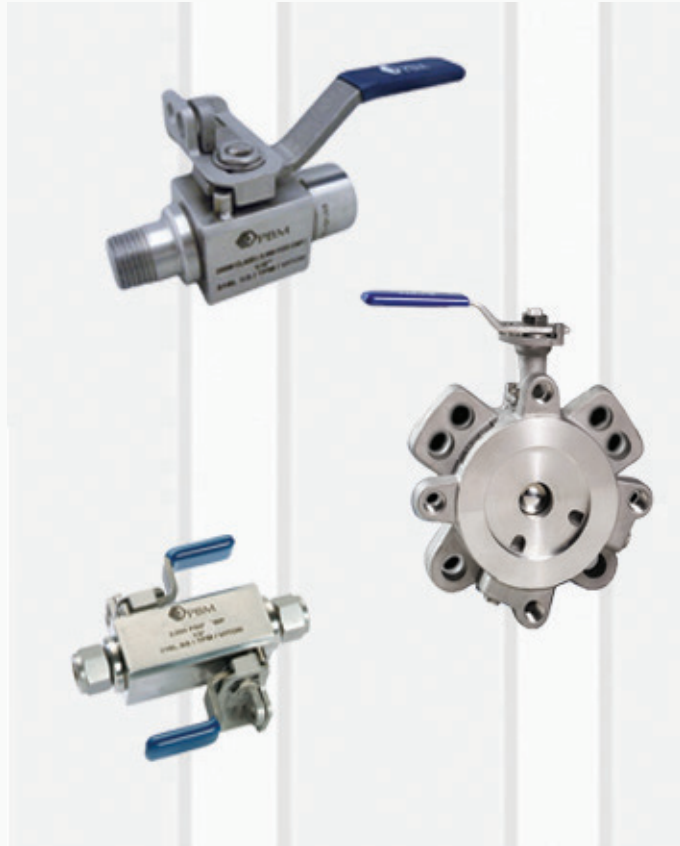
Obtain accurate transmitter readings and replace leaky knife gate valves with IMI PBM's **Transmitter Isolation Valve**. Ideal for Pulp & Paper and Chemical applications, these 2-Way ball valves feature minimal dead space and positive shut-off. Calibration Port, CIP Port, 150# Flange, and Locking Handle.

**Sizes:**

- 2" with 1" Port
- 3" with 2-1/2" Port
- 3" with 1" Port
- Others

**Materials:**

- 316 & 317L S/S
- Hastelloy®
- Titanium
- Others



### Double Block & Bleed Valves

IMI PBM double block and bleed valves are custom engineered from standard components in a variety of alloys and pressure classifications to meet customer specifications. IMI PBM valves are trusted by major oil refineries where safety and reliability are critical. Valves are designed to ASME B16.34. Optional Low E to Api 622.

**Sizes:**

- 1/4" - 10" DN8 - DN250



### Fabflex® Manifold Assemblies

Fabflex Manifolds are space-saving pipe and valve configurations designed to accommodate special applications. Can be shipped in lengths up to 18' with multiple manual and automated valves pre-installed. 100% tested before shipment ensures proper performance.

**Sizes:**

- 1/4" - 6" DN8 - DN150

**Materials:**

- 316/316L S/S
- Carbon Steel
- Hastelloy®
- Others

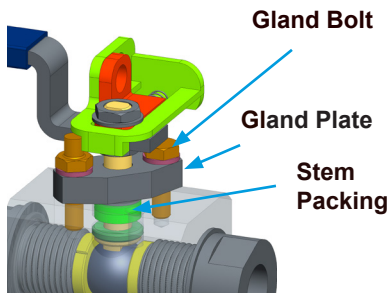




IMI PBM valves with Low-E Packing offer solutions to emission reduction.

**Design Features:**

- Average stem packing leakage  $\leq 10$  ppmv for the duration of the test (100 ppm allowable)
- Stem packing is suitable for service at temperatures of  $-400^{\circ}$  to  $850^{\circ}$ F ( $-240^{\circ}$  to  $450^{\circ}$ C)
- API 607 fire tested
- ASME Class 1500 Weld Design standard



**API 622  
Low E Testing**

IMI PBM's bolted Instrument Valve design allows end connection design and fabrication flexibility. It is available in a wide range of materials for a variety of temperature and pressure classes to meet your most stringent process applications.

**Sizes:**

- 1/2" - 2"
- DN15 - DN50
- Class 600#, 900# and 1500#

**Features:**

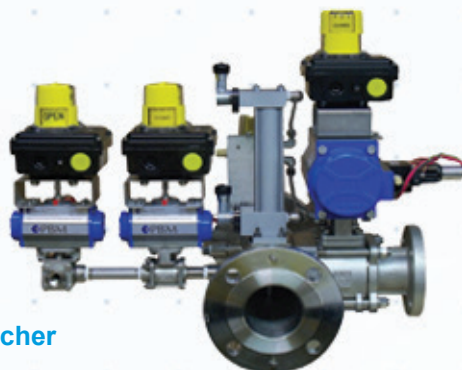
- Full & Reduced Port
- Braided Graphite Packing
- API-607 Fire Rated
- API-622 Low-E Stem
- Packing Standard
- Bleed or Gauge Ports Available
- Gear Operator recommended for 1-1/2" and above



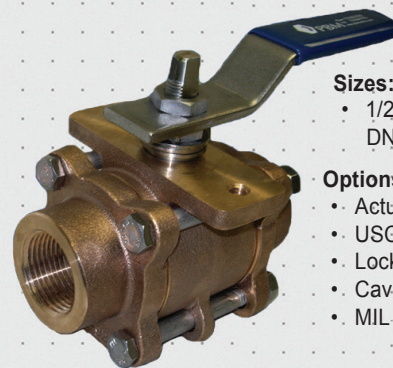
**Custom Configurations**



**3-Way 120°  
Pigging Valve**



**Pig Launcher**



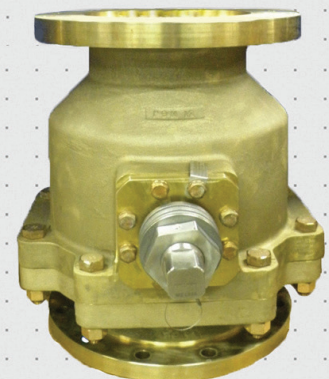
**Sizes:**

- 1/2" - 10"
- DN15 - DN250

**Options:**

- Actuation
- USCG Category-A
- Locking Handle
- Cavity Fillers
- MIL V 24509

**Bronze 2-Way  
Valves**



**ANSI Trunion  
Ball Valve**



## SANITARY VALVES

IMI PBM's Igenix® line of sanitary valves is ideally suited for pure process applications where dead space within the valve need to be minimized. IMI PBM valves exhibit high performance in pharmaceutical, biotechnological, food, beverage, cosmetic, and other sanitary and clean steam applications and validation systems.

**Sizes:**

- 1/4" - 6"
- DN8 - DN150

**Materials:**

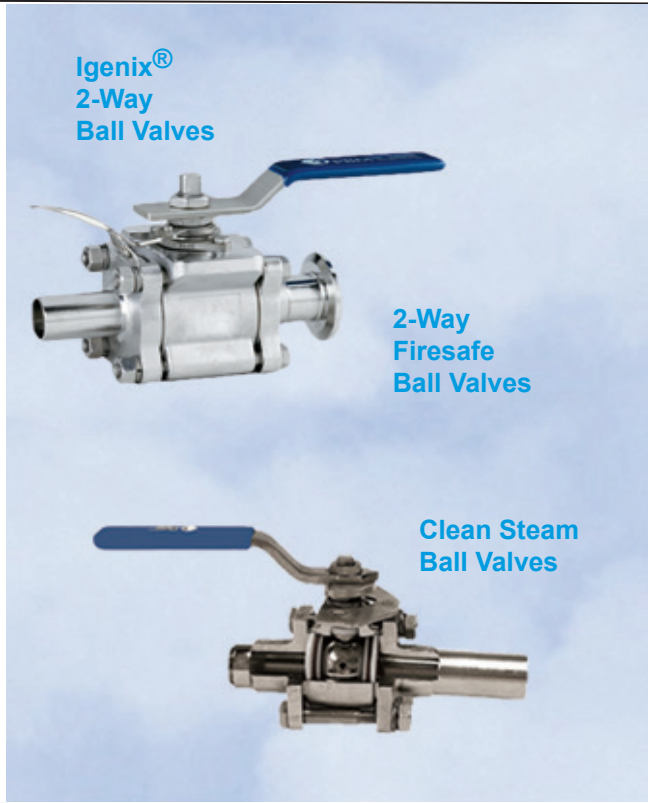
- 316L S/S
- Forged and Low Ferrite Castings
- Hastelloy®
- AL6XN®
- Others

**End Connections:**

- Hygienic Clamp
- Extended Butt Weld Tube
- Compression
- Others

**Options:**

- Actuation
- Fire-Rated
- Compression Ends
- CIP/SIP
- Steam Seats
- Cavity Fillers
- Locking Handle
- Polishing & Electropolishing
- Special Pads (Flush Tank)
- Multiple Flow Patterns (Diverter & Multi-Port)

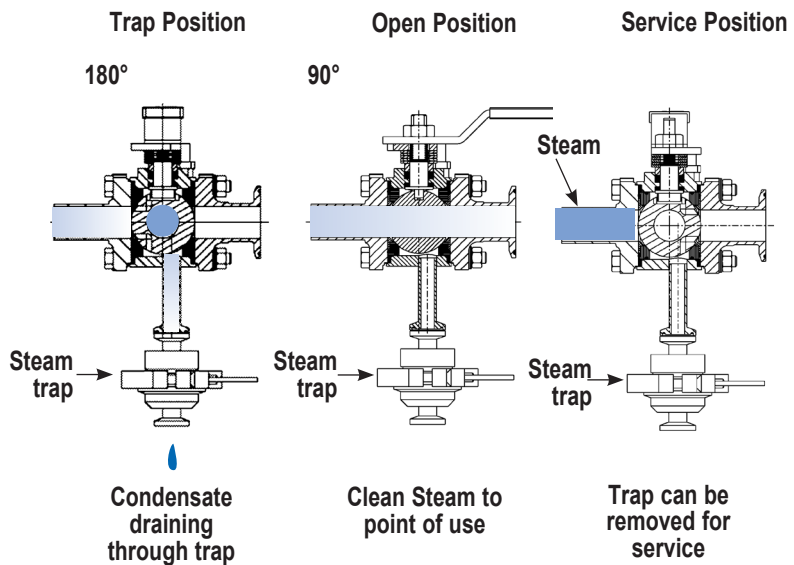


### 2-Way Clean Steam Trap Ball Valves

2-Way sanitary Steam Trap valve uses body purge port and ball purge holes to direct flow to the trap while shutting off flow downstream. Permits sampling of steam for purity and safely isolates trap for ease of maintenance. Low Ferrite Cast or Forged. True-Bore® standard. Vertical or horizontal installation available.

**Sizes:**

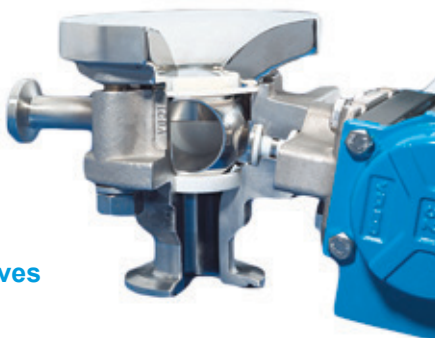
- 1/2" - 6" DN 15 - DN150





**Angle Stem  
Flush Tank  
Ball Valves**

**Sizes:**  
• 1/2" - 6" DN15- DN150



**Spray Ball Valves**

**Sizes:**  
• 1/2" - 6" DN15 - DN150



Thoroughly clean the insides of tanks, mixers, and other vessels with IMI PBM's Spray Ball Valve. Design minimizes nozzle exposure and potential for clogging, and accommodates many standard spray nozzles.

**Spring-less Sanitary  
Check Valves**

**Patented**

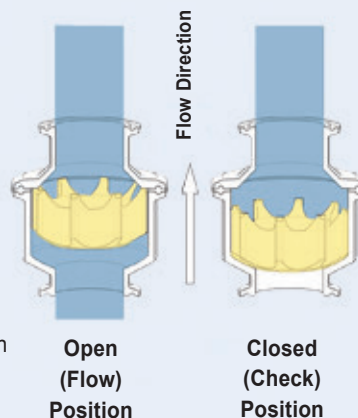


- Horizontal or Vertical Installation Models
- Hygienic Clamp & Ext. Butt Weld for Tube
- Polishing & Electropolishing

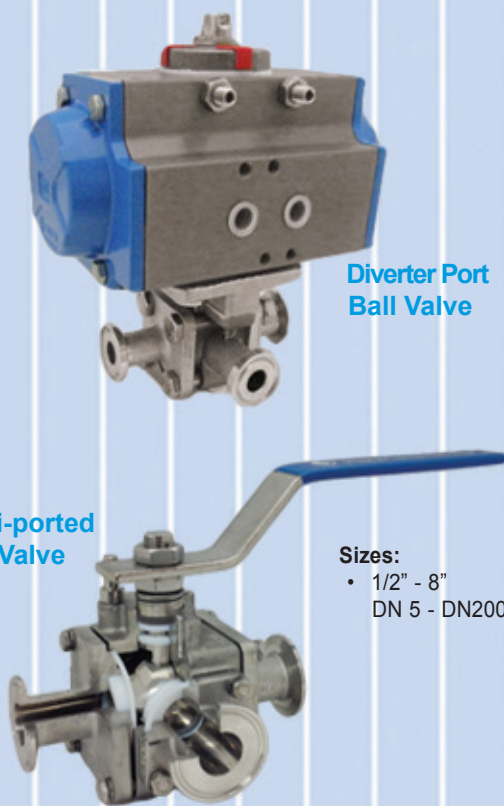
**Sizes:**  
• 1/2" - 4"  
DN15 - DN100

- Materials:**
- 316L S/S
  - Hastelloy®
  - Others

Optional drain port or drain holes for vertical installations



**Multi-ported  
Ball Valve**



**Diverter Port  
Ball Valve**

**Sizes:**  
• 1/2" - 8"  
DN 5 - DN200

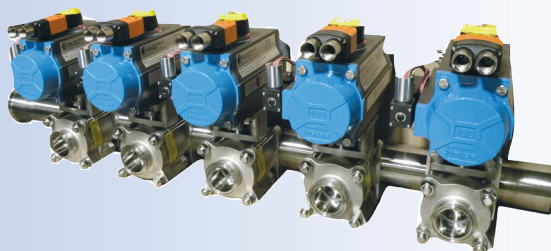
Fabflex® Manifold Assemblies are space-saving pipe and valve configurations designed to accommodate special industrial and sanitary applications. Can be shipped in lengths up to 18', with multiple manual and automated valves pre-installed. 100% tested before shipment ensures proper performance. Minimal dead space reduces areas where media could become trapped. Blank valve pads can be provided to accommodate future process expansion.

**Valve Sizes:**  
• 1/4" - 6"  
DN8 - DN150

- Materials:**
- 316/316L S/S
  - Carbon Steel
  - Hastelloy®

**Options:**

- Actuation
- Fire-Rated
- CIP/SIP
- Cavity Fillers
- Steam Seats
- Polishing & Electropolishing





## Igenix® Radial Diaphragm Tank Outlet Valves

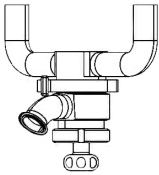
### Sizes:

- 1/2" - 4"  
DN15 - DN100

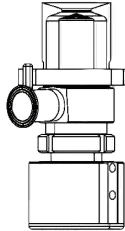


- Smooth sloping design for complete drainage
- 1/2" through 3", DN 15 through DN 80
- 45° and 2° sloped outlet
- Pressure rating 175 psi/12 bar
- Machined by PBM from wrought material
- Standard finish 15 Ra with EP (BPE SF4)
- Optional purge port and tank connections available
- Platinum cured Silicone or V-TEF™ diaphragms

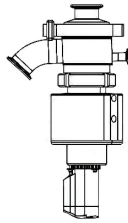
### RDV Configurations



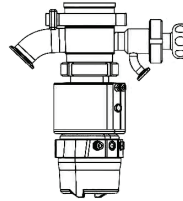
Point of use



Extended Weld Pad



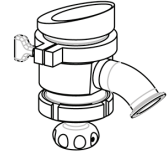
Clamp on with purge port



Standard Weld Pad with satellite valve



Tangential



IMI PBM's Igenix® Satellite Valve offers seating against the body of our Radial Diaphragm Valve eliminating dead leg and allowing the introduction of CIP / SIP into the valve.



Point of Use Valve Zero Dead Leg



## Pinch Valves

- True "Fail Closed"
- Modular Safety Cover
- Fits over existing silicone clear and braided tubing
- No contact with any process media
- Manual or Automated
- Optional manual override and position indicators
- Actuator pressure as low as 60 psig with a variety of limit switches



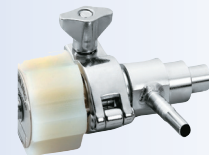
## Self-Cleaning Ball Valves



### Sizes:

- 1/2" - 6"  
DN15 - DN150

## Rising Stem Sampling Valves



### Sizes:

- 1/4" bore diameter

### Materials:

- 316L S/S
- Others

### Options:

- Actuation
- Polishing
- Butt Weld
- Swickle (1/4" only)
- Hose Barb
- Clamp Outlet



### Sanitary Block & Bleed

- Adjust-O-Seal® design safely allows for process isolation and instrument bleed
- Ability to isolate bleed off pressure and safely remove instruments which are in service on continuous service (...ie clean steam lines)
- Allows instruments to be removed for calibration or replacement without shutting down main process lines.

**Closed**

**Open Position**

**Open to vent**

**Closed Position**

### 2-Way Valves with Compression Ends

**Sizes:**

- 1/2" - 1"
- DN15 - DN25

### Process Break Valve

**Sizes:**

- 1/2" - 2"
- DN15 - DN50

### Z-ball® Zero Dead Leg Design

**Sizes:**

- 1/2" - 4"
- DN15 - DN100

**Run side (upstream)**

**Run side**

**Branch side (downstream)**

**Branch side flow direction**

Holes upstream will allow run side to drain

Holes will allow branch side to flow (clean steam/CIP) into valve body and drain through purge port maintaining isolation from run side

### IMI PBM Automation Completes the Solution

- Pneumatic and electric (multiple voltages and area classifications)
- Direct mount pneumatic actuator eliminates tube bracket and couplings
- Direct mount adapts to ISO bolt patterns
- Torque outputs to accommodate full range of valve sizes
- Bi-directional travel stop adjustments
- Full range of solenoid valves, direct mount, tube mount, or mounted in switchbox
- Position monitors with visual indication in multiple area classifications
- Pneumatic and electro-pneumatic positioners for flow control

**PBM**

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 PHONE: 724-643-9550 FAX: 724-644-9255  
 CAUTION: BEFORE DISASSEMBLY, REVIEW MAINTENANCE INSTRUCTIONS.  
 VISIT: www.pbmvalve.com



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

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