



PBM VALVE SOLUTIONS

Pharmaceutical
Cosmetic
Nuclear
Food & Beverage
Chemical
Paint
Marine
Mining
Pulp & Paper
Oil & Gas
Cryogenic



INDUSTRIAL VALVES

WHETHER THE APPLICATION IS IN A CHEMICAL PLANT, PAPER MILL, FOOD PLANT, MANUFACTURING ENVIRONMENT, OR OTHER INDUSTRIAL SETTING, PBM'S LINE OF INDUSTRIAL VALVES CAN HANDLE ALL TYPES OF RIGOROUS AND GENERAL PURPOSE APPLICATIONS.

PBM HAS SOLUTIONS FOR YOUR VALVE APPLICATION.

A MANUFACTURER OF BALL VALVES AND SPECIALTY VALVES, PBM RECOGNIZES THAT MANY APPLICATIONS ARE UNIQUE AND MAY HAVE SPECIAL PROBLEMS. THE IDEAL SOLUTION COMBINES SPECIFIC APPLICATION REQUIREMENTS WITH PBM'S CREATIVE ENGINEERING AND QUALITY MANUFACTURING PRACTICES.

PBM VALVES OFFER THE CONVENIENCE OF STANDARD FEATURES WITH THE OPTION OF CUSTOMIZING FOR A SPECIFIC PROCESS. MOST PBM VALVES INCORPORATE PBM'S ADJUSTABLE SEAT DESIGN AND MANY INCLUDE THE TRUE-BORE® PORT DESIGN. ONLY 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.



TWO-WAY BALL VALVE

Two-Way valves for general purpose, non-sanitary process applications. Swing Out/Lift Out style. Adjustable Seats, Full Port, and Interchangeable Seats standard. Variety of end connections.

Sizes:

- 1/4" - 6"

Materials:

- 316/316L S/S
- Carbon Steel
- 922 Bronze
- Hastelloys
- AL6XN®
- Others

Options:

- Actuation
- Fire-Rated
- CIP/SIP
- Cavity Fillers
- Locking Handle
- Steam Seats
- Self-Flushing
- Polishing & Electropolishing



ANSI BALL VALVE

ASME B16.10, Full Port, 150# or 300# Flange valve for heavy duty industrial applications. 2-Way, 2-piece design. Adjustable seats standard.

Sizes:

- 1/2" - 8"

Materials:

- 316/316L S/S
- Carbon Steel
- Bronze
- Hastelloys
- Others

Options:

- Actuation
- Fire-Rated
- CIP/SIP
- Cavity Fillers
- Locking Handle
- Polishing & Electropolishing
- USCG Category A
- ABS Type Approval
- Steam Seats



ANGLE STEM FLUSH TANK BALL VALVE

Angle Stem Flush Tank ball valve provides actuator clearance on jacketed or insulated vessels. Adjustable Seats standard. Variety of end connections.

Sizes:

- 1" - 6"

Materials:

- 316 S/S with 316L pad
- Carbon Steel w/ C/S pad
- Others

Options:

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

**PBM HAS SOLUTIONS TO YOUR APPLICATION NEEDS.
IN MANY CASES, PBM MAY ALREADY HAVE THE
SOLUTION FOR YOU.**

FLUSH TANK BALL VALVE



Two-Way Tank valve for general purpose tank, vessel, and reactor applications. Swing Out/Lift Out style. Adjustable Seats, Full Port, and Interchangeable Seats standard. Variety of end connections.

- | | | |
|-------------------|--|---|
| Sizes: | <ul style="list-style-type: none"> • 1/2" - 6" | <ul style="list-style-type: none"> • Actuation • Fire-Rated • CIP/SIP • Cavity Fillers • Locking Handle • Steam Seats • Special Pads • Polishing & Electropolishing |
| Materials: | <ul style="list-style-type: none"> • 316/316L S/S • Carbon Steel • Hastelloys • Titanium • Others | |

DIVERTER PORT BALL VALVE



3-Way valve with common port on the side or bottom. Positive shut-off on one port, with two ports open to flow. Swing Out/Lift Out style. Adjustable Seats, Full Port, and Interchangeable Seats standard. Variety of end connections.

- | | | |
|-------------------|--|---|
| Sizes: | <ul style="list-style-type: none"> • 1/2" - 6" | <ul style="list-style-type: none"> • Actuation • CIP/SIP • Cavity Fillers • Steam Seats • Multiple Flow Patterns • Polishing & Electropolishing |
| Materials: | <ul style="list-style-type: none"> • 316/316L S/S • Bronze • Others | |

PROCESS BREAK BALL VALVE



PBM's Adjustable Seat design combined with this material transition could be the answer to failing dielectric unions in your header systems. PBM's design provides an ideal spec transition and "leak resistant" dielectric union.

- | | | |
|-------------------|--|--|
| Sizes: | <ul style="list-style-type: none"> • 1/2" - 2" | <ul style="list-style-type: none"> • Interchangeable Seats • Stem Extension • Direct Mount Actuation • Locking Handle • Body Cavity Fillers |
| Materials: | <ul style="list-style-type: none"> • 316/316L S/S • 922 Bronze • Others | |

CRYOGENIC VALVE



PBM Cryogenic ball valves are specifically designed for cryogenic applications. These valves have a unique design that provides superior performance through cooling and heating cycles. The valves meet leakage criteria per MSS SP-134.

- | | | |
|-------------------|--|---|
| Sizes: | <ul style="list-style-type: none"> • 1/2" - 2" | <ul style="list-style-type: none"> • Actuation • Locking Handle • Temperatures from 400°F, 205°C down to -320°F, -200°C. |
| Materials: | <ul style="list-style-type: none"> • 316/316L S/S • Bronze • Others | |

NUCLEAR VALVE



PBM nuclear valves are manufactured, tested, and certified in strict accordance with ASME Section III, Class 2 or 3. PBM's quality assurance program is in accordance with 10 CFR 50 Appendix B, ASME NQA-1 and ASME Section III NCA-3800.

- | | | |
|-------------------|--|---|
| Sizes: | <ul style="list-style-type: none"> • 1/2" - 6" | <ul style="list-style-type: none"> • Actuation • Variety of End Connections • Instrument valves to Class #2500 |
| Materials: | <ul style="list-style-type: none"> • 316/316L S/S • Carbon Steel • Hastelloys • Titanium • Others | |

MULTI-PORT BALL VALVE



3-, 4-, or 5-Way valve. Adjustable Seats and Full Port standard. Variety of end connections. 52 flow patterns available.

- | | | |
|-------------------|--|--|
| Sizes: | <ul style="list-style-type: none"> • 1/2" - 6" | <ul style="list-style-type: none"> • Actuation • CIP/SIP • Locking Handle • Multiple Flow Patterns • Polishing & Electropolishing |
| Materials: | <ul style="list-style-type: none"> • 316/316L S/S • Carbon Steel • Bronze • Ductile Iron • Others | |

BRONZE INDUSTRIAL VALVES



ANSI & 2-Way valves for industrial and marine applications. Variety of end connections available on 2-Way, 150# & 300# only on ANSI.

- | | | |
|-------------------|---|---|
| Sizes: | <ul style="list-style-type: none"> • 1/2" - 10" | <ul style="list-style-type: none"> • Actuation • USCG Category A • Locking Handle • Cavity Fillers • MIL V 24509 |
| Materials: | <ul style="list-style-type: none"> • Bronze • Copper Nickel • Others | |

SANITARY VALVES

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

PBM HAS SOLUTIONS FOR YOUR SANITARY VALVE APPLICATION.



IGENIX® STEAM VALVES ACCOMMODATE
TEMPERATURES ABOVE 200°F AND THE
TEMPERATURE SWINGS OF STEAM AND OTHER
ELEVATED TEMPERATURE APPLICATIONS.

ALL IGENIX SANITARY VALVES ARE
ASSEMBLED LUBRICANT-FREE WITH TFM™
OR VTFE SOFT PARTS AND 316L WETTED
METAL PARTS. VALVES WITH O-RINGS ARE
ASSEMBLED USING HAYNES CIP-FILM UNLESS
OTHERWISE SPECIFIED.

WHEN EQUIPPED WITH BODY CAVITY FILLERS
AND I.D. POLISH, IGENIX VALVES ARE USDA
APPROVED FOR FEDERALLY INSPECTED MEAT
AND POULTRY PLANTS.

DOCUMENTATION AVAILABLE UPON REQUEST.

**ONLY PBM HAS THE ABILITY
TO PROVIDE CIP/SIP WITHOUT
PROCESS INTERRUPTION.**



TWO-WAY BALL VALVE

Two-Way valves for pure process and clean steam applications. Low Ferrite Cast or Forged. Swing Out/Lift Out style. Adjustable Seats, True-Bore®, and Interchangeable Seats standard. Variety of end connections.

Sizes:	Options:
<ul style="list-style-type: none">• 1/4" - 6"	<ul style="list-style-type: none">• Actuation• Fire-Rated• Compression Ends• CIP/SIP• Steam Seats• Cavity Fillers• Locking Handle• Polishing & Electropolishing
Materials:	
<ul style="list-style-type: none">• 316L S/S• Cast <2% Ferrite• Forged <1% Ferrite• Hastelloys• AL6XN®• Others	



CLEAN STEAM VALVE

2-Way valve for temperature swing and clean steam applications. Low Ferrite Cast or Forged. Variety of end connections.

Sizes:	Options:
<ul style="list-style-type: none">• 1/4" - 6"	<ul style="list-style-type: none">• Actuation• Fire-Rated• CIP/SIP• Steam Seats• Cavity Fillers• Locking Handle• Polishing & Electropolishing
Materials:	
<ul style="list-style-type: none">• 316L S/S• Cast <2% Ferrite• Forged <1% Ferrite• Hastelloys• AL6XN®• Others	

*Forged is not available in 6"



FLUSH TANK BALL VALVE

Fluah Tank ball valve for sanitary tank, vessel, and reactor applications. Low Ferrite Cast or Forged. Swing Out/Lift Out style. Adjustable Seats, True-Bore®, and Interchangeable Seats standard. Variety of end connections.

Sizes:	Options:
<ul style="list-style-type: none">• 1/4" - 6"	<ul style="list-style-type: none">• Actuation• Fire-Rated• CIP/SIP• Cavity Fillers• Special Pads• Locking Handle• Steam Seats• Polishing & Electropolishing
Materials:	
<ul style="list-style-type: none">• 316L S/S• Cast <2% Ferrite• Forged <1% Ferrite• Hastelloys• AL6XN®• Others	

2-WAY WITH COMPRESSION TUBE END CONNECTIONS



2-Way ball valves for pure process and instrument air applications compatible with Compression fittings.

- Sizes:
- 1/2" - 1"
- Materials:
- 316L S/S
 - Cast <2% Ferrite
 - Forged <1% Ferrite
 - Others
- Options:
- Actuation
 - Cavity Fillers
 - Steam Seats
 - Polishing & Electropolishing

DIVERTER PORT BALL VALVE



3-Way sanitary valve with common port on the side or bottom. Positive shut-off on one ports, with two ports open to flow. Low Ferrite Cast or Forged. Swing Out/Lift Out style. Adjustable Seats, True-Bore®, and Interchangeable Seats standard. Variety of end fittings.

- Sizes:
- 1/2" - 6"
- Materials:
- 316L S/S
 - Cast <2% Ferrite
 - Forged <1% Ferrite
 - Others
- Options:
- Actuation
 - CIP/SIP
 - Cavity Fillers
 - Steam Seats
 - Multiple Flow Patterns
 - Polishing & Electropolishing

ANGLE STEM FLUSH TANK VALVE



Angle Stem Flush Tank ball valve provides actuator clearance on jacketed or insulated vessels. Adjustable Seats standard. Variety of end fittings available.

- Sizes:
- 1" - 6"
- Materials:
- 316 S/S w/ 316L pad
 - Carbon Steel w/ C/S pad
 - Others
- Options:
- Actuation
 - Fire-Rated
 - CIP/SIP
 - Cavity Fillers
 - Special Pads
 - Steam Seats
 - Polishing & Electropolishing

FABFLEX® VALVE & MANIFOLD ASSEMBLIES SELF-FLUSHING VALVE



Valves only, sizes through 3"

Fabflex Manifolds 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"
- Materials:
- 316/316L S/S
 - Carbon Steel
 - Hastelloys
- Options:
- Actuation
 - Fire-Rated
 - CIP/SIP
 - Cavity Fillers
 - Steam Seats
 - Polishing & Electropolishing



PBM's Self-Flushing ball valve design allows full CIP/SIP access to all valve internals in the full open position. This allows first the process and then the cleaning solution and rinse solution to flow freely throughout the body cavity when the valve is in the open position.

- Sizes:
- 1/2" - 6"
- Materials:
- 316L S/S
 - Cast <2% Ferrite
 - Forged <1% Ferrite
 - Others
- Options:
- Actuation
 - Fire-Rated
 - Cavity Fillers
 - Steam Seats
 - Polishing & Electropolishing

MULTI-PORT BALL VALVE



3-, 4-, or 5-Way Sanitary Multi-Port valve. Adjustable Seats and True-Bore® standard. Variety of end connections.

- Sizes:
- 1/2" - 6"
- Materials:
- 316L S/S
 - Others
- Options:
- Actuation
 - CIP/SIP
 - Cavity Fillers
 - Multiple Flow Patterns
 - Polishing & Electropolishing

STEAM TRAP VALVE



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" - 4"
- Materials:
- 316L S/S
 - Cast <2% Ferrite
 - Forged <1% Ferrite
 - Hastelloys
 - Others
- Options:
- Actuation
 - Polishing & Electropolishing

Z-BALL™ ZERO DEAD LEG DESIGN



This design offers PBM the ability to provide an ultra-sanitary process isolation valve which seals on both upstream and downstream seats.

- Sizes:
- 1/2" - 4"
- Materials:
- 316/316L S/S
 - Cast <2% Ferrite
 - Forged <1% Ferrite
 - Others
- Options:
- Actuation
 - Fire Rated
 - Cavity Fillers
 - Steam Seats
 - Polishing & Electropolishing

PBM OFFERS A FULL LINE OF AUTOMATION, SWITCHES, SOLENOIDS, AND OTHER ACCESSORIES.



INCREASE MEDIA YIELD, REDUCE EFFLUENT LOADING, AND MINIMIZE PRODUCT CONTAMINATION BETWEEN BATCHES OR RUNS WITH PBM'S 120° 3-WAY CAVITY FREE PIGGING VALVE.

SPECIAL APPLICATION VALVES

PBM's Special Application Valves solve unique or challenging processing problems in a variety of industries. Put our expertise to work for you. We may already have the solution!



TRANSMITTER ISOLATION VALVE

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

Sizes:

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

Materials:

- 316 & 317L S/S
- Hastelloys
- Titanium
- Others

Options:

- Milled Ball Flats



CONTROL VALVES

Use PBM's 2-Way Control Valves in industrial and sanitary throttling or shearing applications to accurately control the flow of liquids or thick media. These valves feature characterized balls with various port shapes, including "V". Manual valve standard.

Sizes:

- 1/2" - 6"

Materials:

- 316L S/S
- Hastelloys
- Others

Options:

- Actuation
- 30°, 45°, 60° V Angles
- Slotted
- Locking Handle
- Polishing & Electropolishing



SAMPLING VALVE

Sample process media quickly and easily with PBM's Sampling Valve. Special pad design minimizes dead space. Easy CIP with Purge Ports and Milled Ball Flats ensures reliable samples. Valve can be shipped pre-mounted to piping for easy installation. Ideal for heavy duty and sanitary applications. Manual valve standard.

Sizes:

- 1/2" - 2"

Materials:

- 316/316L S/S
- Hastelloys
- AL6XN®
- Others

Options:

- Actuation
- Steam Seats
- Polishing

CHECK VALVES



Sanitary check valves feature a spring-less design which eliminates the concern of media entrapment and particulate generation.

Valve Sizes:

- 1/2" - 4"

Materials:

- 316/316L S/S
- Hastelloys
- AL6XN®
- Others

Options:

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

RISING STEM SAMPLING VALVES



The Sanitary Rising Stem Sampling Valve is ideal for taking process samples. Turning the knob raises a stem with a TFM™ seat seal. The stem is sealed with an FDA compliant Viton or EPR O-ring.

Sizes:

- 1/4" bore diameter

Materials:

- 316L S/S
- Others

Options:

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

SPRAY BALL VALVE



Thoroughly clean the insides of tanks, mixers, and other vessels with PBM's Spray Ball valve. Design minimizes nozzle exposure and potential for clogging, and accommodates many standard spray nozzles. Valve mounts flush to vessel to minimize dead space, and can be located anywhere on vessel for effective cleaning. Angle Stem design provides actuator clearance on jacketed or insulated tanks.

Sizes:

- 1" - 6"

Materials:

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

Options:

- Actuation
- Polishing & Electropolishing

INSTRUMENT VALVES



Isolation for pressure gauges, orifice plates, flush rings and various measurement instruments.

Sizes:

- 1/4" - 10" Full Port,
- 1/4" - 12" Reduced Port

Pressure Class:

- 1/4" - 3/4" Up to ANSI Class 2500
- 1-1/2" - 2" ANSI Class 900
- 3", 4" ANSI Class 600
- 6" - 12" ANSI Class 300

Features:

- Full or Standard Port
- API-607 Fire Rated Available
- Quarter Turn Operation
- Locking handle standard
- Bleed or Gauge Ports available
- Welded or Bolted Body
- Roddable in 1/4" - 3/4"

Materials:

- 316 L S/S
- Hastelloys
- Carbon Steels
- Others

FEATURES

ADJUSTABLE SEATS

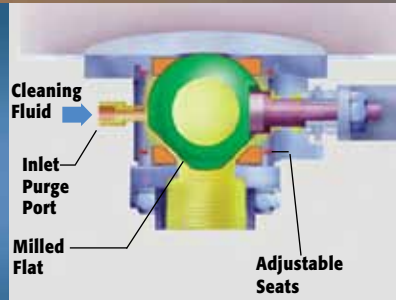


PBM's exclusive Adjustable Seat feature allows in-line adjustment to compensate for normal seat wear. This reduces maintenance and repair costs and minimizes system downtime by increasing the time between seat replacements.

The Adjustable Seat design allows the seats to maintain compression against the ball, keeping process media out of the valve body surrounding the ball. This seal also creates a "Dual Chamber™," which allows process flow to move through the ball while CIP/SIP media flows around the ball.

The Adjustable Seat feature is standard on most PBM ball valves.

CIP/SIP



PBM Sanitary ball valves provide Clean-in-Place/Steam-in-Place capability:

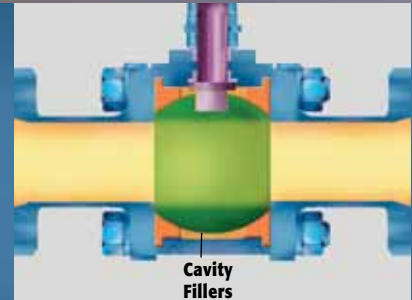
- In applications where media can become trapped in the valve body cavity
- Where it may be necessary to sanitize the valve with steam or a cleaning agent
- Where it may be necessary block bacteria from contaminating upstream or downstream piping

Due to the exclusive Adjustable Seat feature, only PBM has the ability to provide CIP/SIP without process interruption.

Valves equipped with the CIP/SIP feature use a combination of purge ports, milled ball flats, and ball purge holes to suit specific application needs.

CIP/SIP is an option on all PBM Igenix® sanitary ball valves.

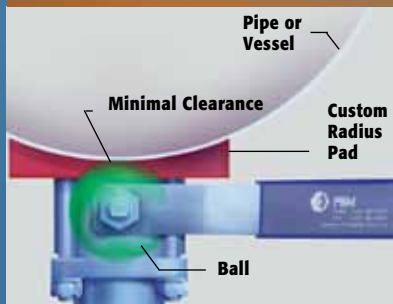
CAVITY FILLERS



Body cavity fillers are designed to fill the cavity of the valve between the body and the ball. Cavity fillers minimize problems with trapped fluid in the valve body that can contaminate the process or prevent smooth operation of the valve.

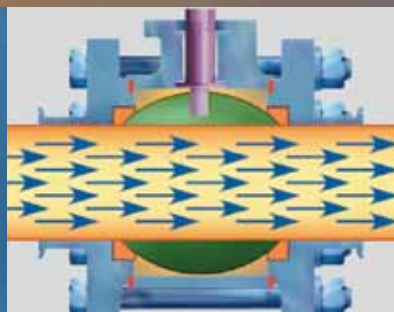
Body cavity fillers are an option on most valves.

CYLINDRICAL RADIUS PADS



Cylindrical radius pads are designed to conform to tubing, piping, or a specific tank radius. PBM's pads can be welded flush with the I.D. of a tube, pipe, or vessel to minimize dead space. For certain applications, PBM offers a special pad design that further minimizes dead space by positioning the ball closer to the I.D. of the attached tubing, piping, or vessel. In some applications, zero dead space can be achieved.

MULTIPLE PORT SIZES



PBM offers three different port sizes to accommodate process application requirements. These include:

- True-Bore® in which the ball hole is identical to the I.D. of the attached piping. Standard on all PBM Igenix® Sanitary and Steam valves.
- Full Port in which the ball port size equals the nominal size of the valve. Standard on all PBM industrial valves.
- Reduced Port, in which the bore through the ball is one size smaller than the end fitting of the valve. Ideal for applications requiring an economical alternative to a Full Port valve. Optional on most PBM Industrial and Sanitary valves.

DIRECT MOUNT ACTUATION



Direct Mount Actuation uses the valve stem as an integral part of the actuator drive. This design improves cycling life and performance, reduces the total actuator and valve package profile, and eliminates the need for mounting adapters and extensions. Stainless steel bracket and insert are standard.



PBM, Inc.
 1070 Sandy Hill Road • Irwin, PA 15642
 800-967-4PBM • 724-863-0550 • Fax: 724-864-9255
 www.pbmvalve.com • Email: info@pbmvalve.com

