



# PBM 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**







**PBM HAS SOLUTIONS  
TO YOUR VALVE  
APPLICATION NEEDS.**

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 PBM MOVED TO ITS PRESENT SITE IN IRWIN, 20 MILES SOUTHEAST OF PITTSBURGH, PA. PBM VALVES COMBINE SPECIFIC APPLICATION REQUIREMENTS WITH 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 ADJUST-O-SEAL® DESIGN AND MANY INCLUDE THE TRUE-BORE® DESIGN. 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
- ANGLE STEM FLUSH TANK
- FLUSH TANK BALL VALVE
- DIVERTER PORT BALL VALVE
- MULTI-PORT BALL VALVES
- CONTROL VALVES

**SANITARY VALVES**

- **BPE COMPLIANT**
- CLEAN STEAM VALVES
- CONTROL VALVES
- 2-WAY BALL VALVES
- ANGLE STEM FLUSH TANK
- 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**
- RISING STEM SAMPLING
- SANITARY BLOCK/BLEED

**AUTOMATION**

- ELECTRIC & PNEUMATIC
- DIRECT MOUNT
- TORQUE OUTPUTS OF 25,000 IN-LBS.
- BI-DIRECTIONAL TRAVEL ADJUSTMENTS
- PNEUMATIC AND ELECTRO-PNEUMATIC POSITIONERS
- POSITION MONITORS WITH MECHANICAL OR PROXIMITY SWITCHES



ISO 9001:2008



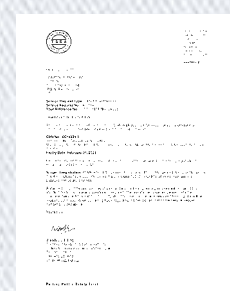
SIL 3 CAPABLE



API 622  
LOW E TESTING



ABS APPROVAL



CRN REGISTRATIONS

**DESIGN FEATURES**

**Features**

1. Metal Encapsulated Ring →
2. O-ring primary seal →
3. Metal encapsulated TFM →
4. Belleville Washers →

**Benefits**

- Minimize effects of thermal cycling
- Provides spring effect to combat teflon's lack of memory property
- Body gasket and seat are two body seal separate items that lets the seat move independent of gasket.
- 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**

**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**

**Ball**

**Cylindrical Radius Pad**





## 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.

**MATERIALS:**

- 316/316L S/S
- CARBON STEEL
- BRONZE
- HASTELLOY®
- AL6XN®
- 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

**END CONNECTIONS:**

- THREADED
- EXTENDED BUTT WELD
- SOCKET WELD
- FLANGED
- COMPRESSION
- OTHERS

**2-Way ball valves**

SIZES:  
• 1/4" - 12"

**Diverter Port ball valves**

SIZES:  
• 1/2" - 6"

**Angle Stem Flush Tank ball valves**

SIZES:  
• 1/2" - 6"

**Flush Tank ball valves**

SIZES:  
• 1/2" - 6"

V-BALLS FOR CONTROL VALVES IN THROTTLING OR SHEARING APPLICATIONS ACCURATELY CONTROL THE FLOW OF LIQUIDS OR THICK MEDIA. THESE VALVES FEATURE CHARACTERIZED BALLS WITH VARIOUS PORT SHAPES, INCLUDING "V".

**Control valves**

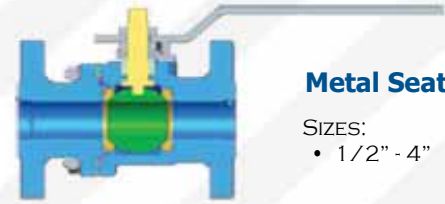
**ANSI BALL VALVE, ASME B16.10 FULL PORT, 150# FLANGED VALVES IS USED FOR HEAVY DUTY INDUSTRIAL APPLICATIONS. ADJUSTABLE SEALING STANDARD.**

SIZES:

- 1/2" - 12"
- CLASS 150 & 300



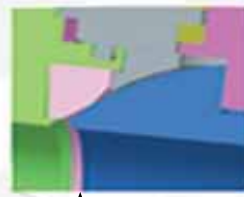
**ANSI ball valves**



**Metal Seats**

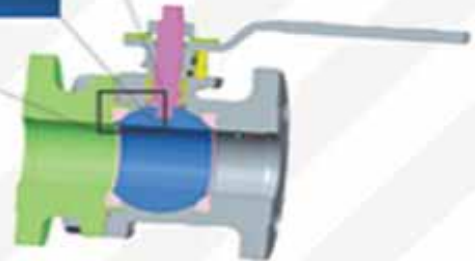
- SIZES:
- 1/2" - 4"

ANSI CLASS 150/300 FLANGED, 3-PIECE FLUSH TANK AND DIVERTER PORT. TEMPERATURES UP TO 1000°F.



**Encapsulated Seats**

METAL ENCAPSULATED SEAT RINGS FACILITATE PERFORMANCE IN HIGH VELOCITY APPLICATIONS AND CONTAIN SEATS IN HIGH TEMPERATURE APPLICATIONS.



**Multi-ported ball valves**

SIZES:

- 1/2" - 8"



**Cryogenic valves**

CRYOGENIC VALVES HAVE A UNIQUE DESIGN THAT ACCOMMODATE LEAK-FREE OPERATION THROUGH COOLING AND HEATING CYCLES.

SIZES:

- 1/2" - 4"

MATERIALS:

- 316/316L S/S
- OTHERS

FEATURES:

- FIRE SAFE TO API 607 REV.6.
- TEMPERATURES FROM 400°F, 205°C DOWN TO -320°F, -200°C
- ANSI 300# CLASS



**Instrument valves** ARE USED FOR 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" ANSI CLASS 1500 STANDARD, OPTIONAL CLASS 2500
- 1" ANSI CLASS 1500
- 1-1/2" - 2" ANSI CLASS 900
- 3", 4" ANSI CLASS 600
- 6" - 12 ANSI CLASS 300

LOW E PACKING TO API 622

**MATERIALS:**

- 316 L S/S
- HASTELLOY®
- CARBON STEELS
- DUPLEX
- INCONNEL
- OTHERS

OBTAIN ACCURATE TRANSMITTER READINGS AND REPLACE LEAKY KNIFE GATE VALVES WITH **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 STANDARD.

**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

**PBM DOUBLE BLOCK AND BLEED VALVES** ARE CUSTOM ENGINEERED FROM STANDARD COMPONENTS IN A VARIETY OF ALLOYS AND PRESSURE CLASSIFICATIONS TO MEET CUSTOMER SPECIFICATIONS. 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"



## 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"

**MATERIALS:**

- 316/316L S/S
- CARBON STEEL
- HASTELLOY®
- OTHERS

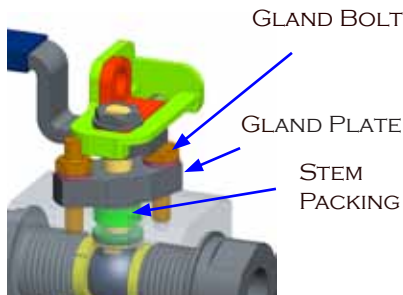




**PBM valves with Low E packing offer solutions to emission reduction.**

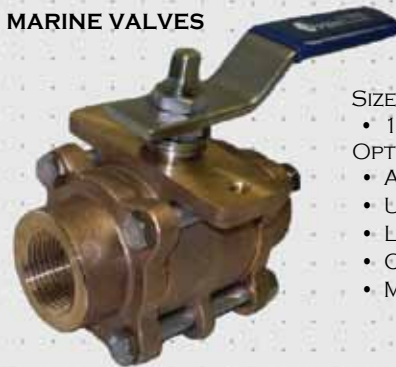
**Design features:**

- 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 REV. 4 FIRE TESTED
- ASME CLASS 1500 WELD DESIGN STANDARD



API 622  
LOW E TESTING

**MARINE VALVES**



**Bronze 2-Way valve**

- SIZES:  
• 1/2" - 12"
- OPTIONS:  
• ACTUATION  
• USCG CATEGORY A  
• LOCKING HANDLE  
• CAVITY FILLERS  
• MIL V 24509



**ANSI Trunnion ball valve**

**CUSTOM CONFIGURATIONS**



**3-Way 120° Piggig valve**



**Pig Launcher**

**NQA-1 RATED VALVES** ARE MANUFACTURED, TESTED, AND CERTIFIED IN STRICT ACCORDANCE WITH ASME NQA-1. PBM'S QUALITY ASSURANCE PROGRAM IS IN ACCORDANCE WITH 10 CFR 50 APPENDIX B, ASME NQA-1.0

**Relevant PBM products meet the code requirements of ANSI B16.34, NACE, and API 6D.**





## 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 EXHIBIT HIGH PERFORMANCE IN PHARMACEUTICAL, BIOTECHNOLOGICAL, FOOD, BEVERAGE, COSMETIC, AND OTHER SANITARY AND CLEAN STEAM APPLICATIONS AND VALIDATION SYSTEMS.

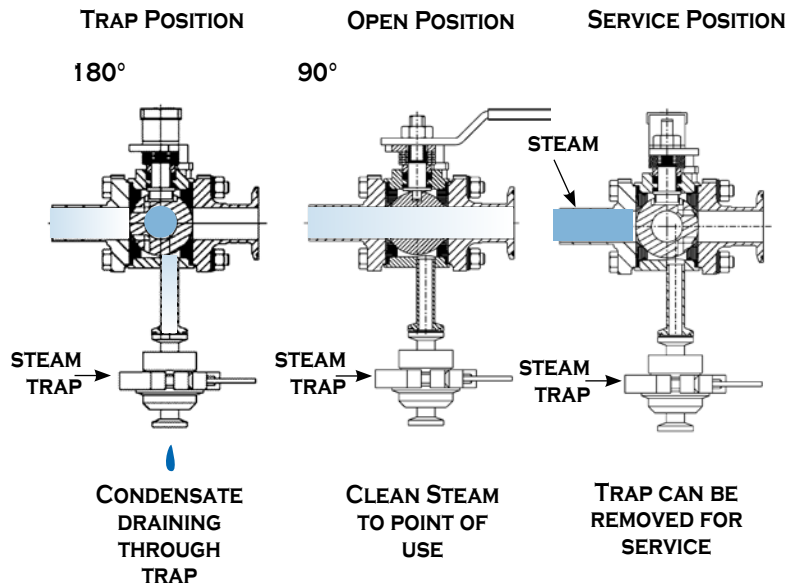
- |  |  |
|--|--|
| <b>SIZES:</b>  | <b>OPTIONS:</b>  |
| <ul style="list-style-type: none"> <li>• 1/4" - 6"</li> </ul>  | <ul style="list-style-type: none"> <li>• ACTUATION</li> <li>• FIRE-RATED</li> <li>• COMPRESSION ENDS</li> <li>• CIP/SIP</li> <li>• STEAM SEATS</li> <li>• CAVITY FILLERS</li> <li>• LOCKING HANDLE</li> <li>• POLISHING &amp; ELECTROPOLISHING</li> <li>• SPECIAL PADS (FLUSH TANK)</li> <li>• MULTIPLE FLOW PATTERNS (DIVERTER &amp; MULTI-PORT)</li> </ul> |
| <b>MATERIALS:</b>  |  |
| <ul style="list-style-type: none"> <li>• 316L S/S</li> <li>• CAST &lt;2% FERRITE</li> <li>• FORGED &lt;1% FERRITE</li> <li>• HASTELLOY®</li> <li>• AL6XN®</li> <li>• OTHERS</li> </ul> |  |
| <b>END CONNECTIONS:</b>  |  |
| <ul style="list-style-type: none"> <li>• HYGIENIC CLAMP</li> <li>• EXTENDED BUTT WELD TUBE</li> <li>• COMPRESSION</li> <li>• OTHERS</li> </ul>   |  |



### 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" - 4"





**Angle Stem  
Flush Tank  
ball valves**

SIZES:

- 1/2" - 6"



**Spray Ball valves**

SIZES:

- 1/2" - 6"



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.

**Spring-less Sanitary  
Check valves**

PATENTED



- HORIZONTAL OR VERTICAL INSTALLATION MODELS
- HYGIENIC CLAMP & EXT. BUTT WELD FOR TUBE
- POLISHING & ELECTROPOLISHING

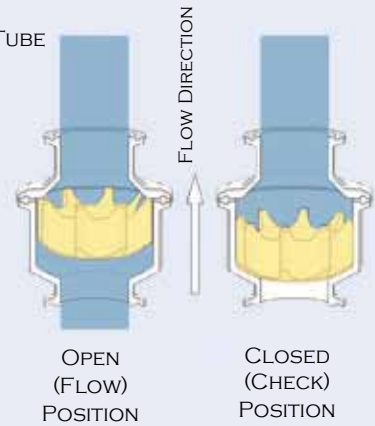
SIZES:

- 1/2" - 4"

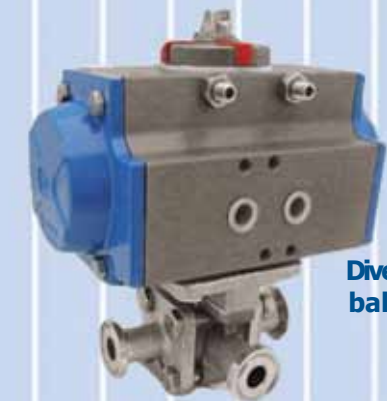
MATERIALS:

- 316L S/S
- HASTELLOY®
- OTHERS

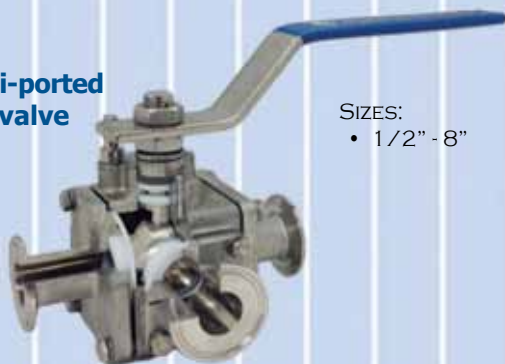
OPTIONAL DRAIN PORT OR DRAIN HOLES FOR VERTICAL INSTALLATIONS



**Multi-ported  
ball valve**



**Diverter Port  
ball valve**



SIZES:

- 1/2" - 8"

**FABFLEX® MANIFOLD ASSEMBLIES** ARE SPACE-SAVING PIPE AND VALVE CONFIGURATIONS DESIGNED 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
- HASTELLOY®

OPTIONS:

- ACTUATION
- FIRE-RATED
- CIP/SIP
- CAVITY FILLERS
- STEAM SEATS
- POLISHING & ELECTROPOLISHING



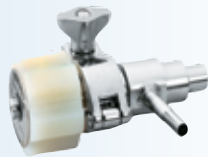


## Self-Cleaning ball valves



SIZES:  
• 1/2" - 6"

## 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

## Pinch valves

- TRUE "FAIL CLOSED"
- FITS OVER EXISTING SILICONE CLEAR & BRAIDED TUBING
- NO CONTACT WITH ANY PROCESS MEDIA
- ACTUATOR PRESSURE AS LOW AS 60 PSIG WITH A VARIETY OF LIMIT SWITCHES
- MODULAR SAFETY COVER
- OPTIONAL MANUAL OVERRIDE AND POSITION INDICATORS
- MANUAL OR AUTOMATED



PATENT PENDING

## Z-ball® Zero Dead Leg design

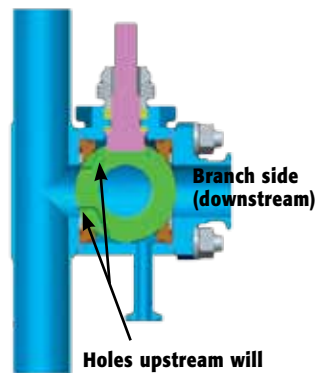


THIS DESIGN OFFERS PBM THE ABILITY TO PROVIDE AN ULTRA-SANITARY PROCESS ISOLATION VALVE WHICH SEALS ON BOTH UPSTREAM AND DOWNSTREAM SEATS.

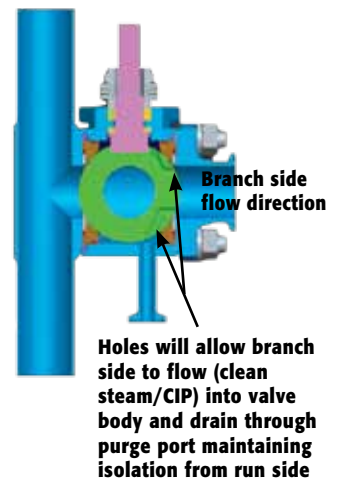
SIZES:

- 1/2" - 4"

Run side (upstream)

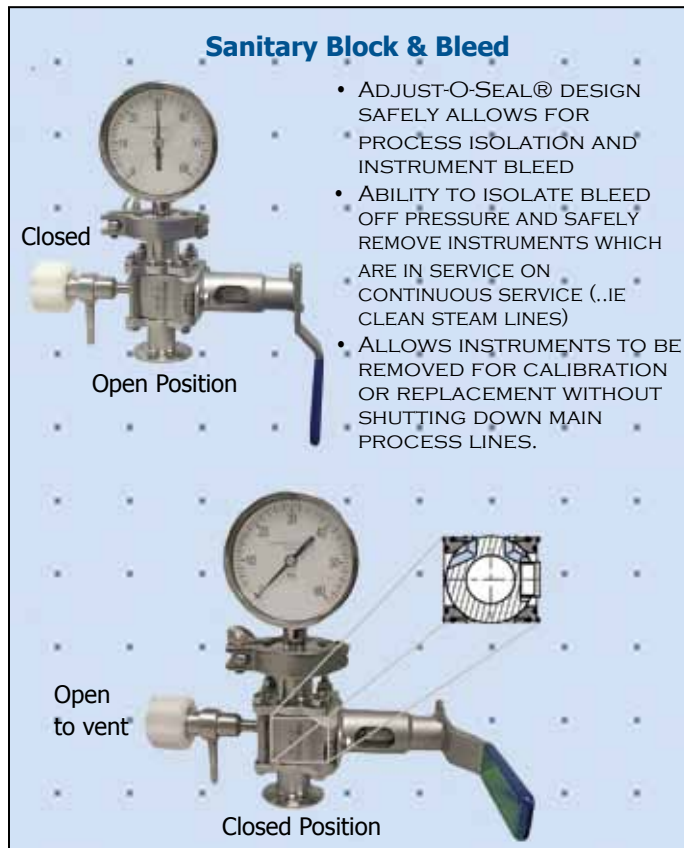


Run side






### 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.

### 2-Way valves with Compression Ends



SIZES:  
• 1/2" - 1"

### Process Break valve



SIZES:  
• 1/2" - 2"

## PBM AUTOMATION COMPLETES THE SOLUTION.

PBM OFFERS A SELECTION OF PNEUMATIC AND ELECTRIC ACTUATION PACKAGES. MOST PBM VALVES ARE DESIGNED TO ACCEPT DIRECT MOUNT ACTUATION THAT UTILIZES THE VALVE STEM AS AN INTEGRAL PART OF THE ACTUATOR DRIVE. THIS DESIGN PROVIDES IMPROVED CYCLING LIFE AND PERFORMANCE, WHILE REDUCING THE TOTAL PACKAGE PROFILE. DIRECT MOUNT ACTUATION ALSO ELIMINATES THE NEED FOR ADDITIONAL BRACKETS OR EXTENSIONS. PBM DIRECT MOUNT ACTUATION INCLUDES A STAINLESS STEEL BRACKET AND INSERT AS STANDARD. PBM CAN EASILY MOUNT A PBM VALVE TO ANY ACTUATOR WITH A FEMALE DRIVE AND AN ISO BOLT PATTERN.

- ELECTRIC AND PNEUMATIC
- DIRECT MOUNT
- TORQUE OUTPUTS OF 25,000 IN.-LB.
- BI-DIRECTIONAL TRAVEL ADJUSTMENTS
- ELECTRIC ACTUATORS CAN PERFORM AN ALMOST LIMITLESS RANGE OF FUNCTIONS WHEN EQUIPPED WITH OPTIONAL FEATURES AND RELATED CONTROL EQUIPMENT
- PNEUMATIC STYLES:
  - RACK & PINION DOUBLE ACTING
  - RACK & PINION SPRING RETURN
- SOLENOID VALVES (NEMA 4, EXPLOSION PROOF, IS)
- POSITION MONITORS WITH MECHANICAL OR PROXIMITY SWITCHES
- PNEUMATIC AND ELECTRO-PNEUMATIC POSITIONERS





### WORLDWIDE REPRESENTATION

- United States • Canada • Australia • Mexico • Brazil • Argentina • Chile • UAE • United Kingdom
- Central Europe • Germany • Sweden • Spain • Belgium • France • Ireland • Switzerland • Austria • The Netherlands
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