



PBM VALVE SOLUTIONS

INSTRUMENT VALVES

- INSTRUMENT AND TRANSMITTER ISOLATION
- DOUBLE BLOCK AND BLEED
- TRIPLE REDUNDANT SENSING MANIFOLD
- SAMPLING
- FLUSH AND BLEED RINGS





PBM Isolation Valves

PBM's instrument valve is used for isolation of pressure gauges, orifice plates, flush rings and various measurement instruments. The instrument valve normally "lives" in the open position and is closed only to isolate the instrument for service or replacement. Valves are designed to ASME B16.34.

SIZES

- 1/4" - 10" Full Port
- 1/4" - 12" Standard Port

PRESSURE CLASS

- 1/4" - 3/4" Up To ANSI Class 2500
- 1" ANSI Class 1500
- 1-1/2", 2" ANSI Class 900
- 3", 4" ANSI Class 600
- 6", 8", 10", 12" ANSI Class 300

MATERIALS

- Stainless Steel
- Monel
- Hastelloys®
- Carbon Steels
- Others Available

END CONNECTIONS

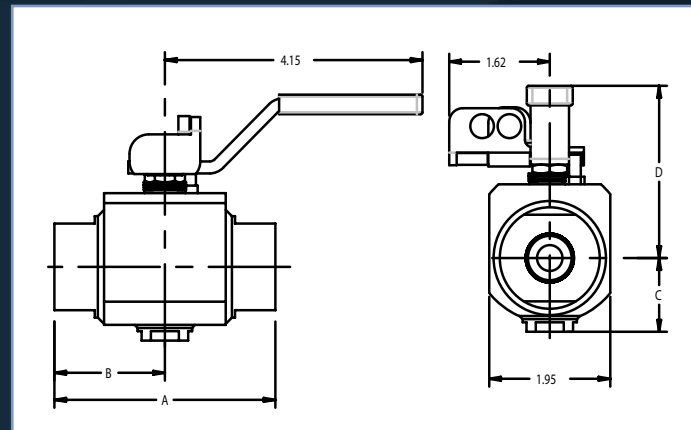
- Thread Pipe, male or female
- Flanged
- Butt weld (tube or pipe)
- Socket Weld (male or female)
- Compression
- Instrument Adapter Flange
- Others Available

FEATURES

- Full or Standard Port
- Quarter Turn Operation
- Optional Extended Handle with lock out
- API 607 Fire Rated Available
- Bleed or Gauge Ports Available (up to 3/4" size)
- Locking Handle Standard
- Welded or Bolted Body
- Roddable in 1/4" - 3/4"

Notes:

PBM can comply with API-6D if specified.



2-WAY VALVE End Fitting

	A"	B"	C"	C" (High Temp)	D"	D" (High Temp)	Port
Female NPT	3.56	1.78	0.92	1.17	2.33	2.73	.41
Male NPT	4.00	2.22	0.92	1.17	2.33	2.73	.41
150# RF Flange	4.50	2.72	0.92	1.17	2.33	2.73	.41
Male Socket Weld	5.00	3.22	0.92	1.17	2.33	2.73	.41
Female Socket Weld	3.56	1.78	0.92	1.17	2.33	2.73	.41
Compression	4.00	2.22	0.92	1.17	2.33	2.73	.41
BW / BW for Tube	5.00	3.22	0.92	1.17	2.33	2.73	.41

Notes:

All dimensions based on Female NPT outlet

1/4" - 1/2" valves only

"High Temp" indicates dimensions for high temperature / high cycle valve.

This design is not 2-1/8" rotatable.

Reduced handle length is available upon request.

SEATING

- TFM™
- S-TEF®
- PEEK®
- Stellite®
- Carbon Graphite
- Celazole®
- 440C Stainless Steel
- Tungsten Carbide Coated S/S

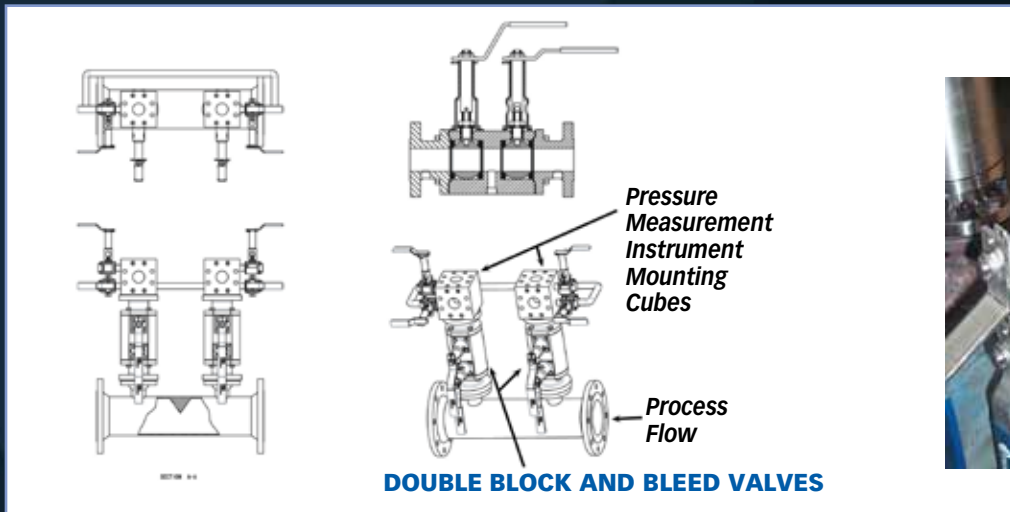
PACKING

- Die Molded Graphite (High Temperature)
- TFM™ or S-TEF®
- PTFE and Thermiculite (2-1/8" Rotatable Designs Only)

TESTING AND DOCUMENTATION

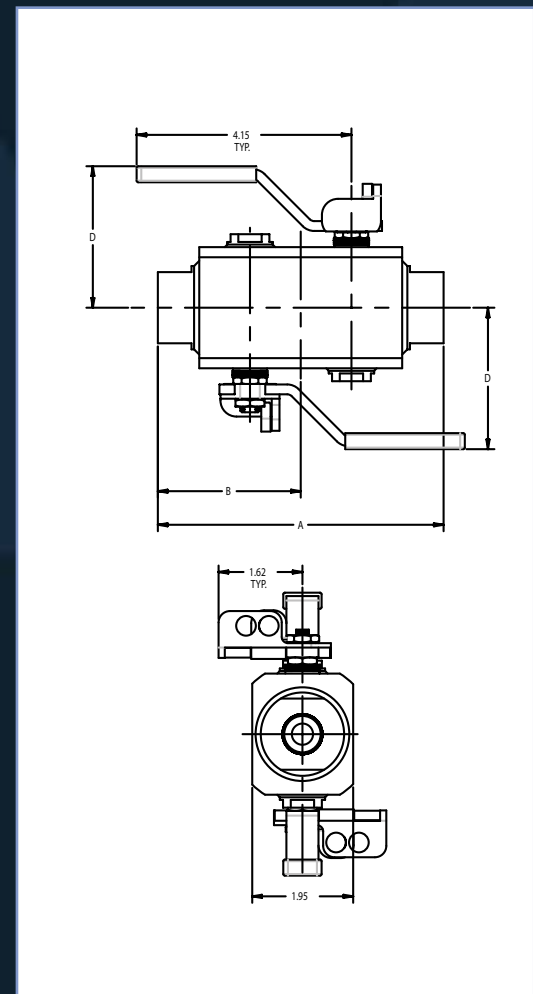
- MTR (Material Test Reports)
- PMI (Positive Material Identification)
- LP (Liquid penetrant)
- Radiographic examination
- Pressure testing per API 598
- Magnetic particle examination
- Ultrasonic examination

Double Block & Bleed Valves



1/2" CLASS 1500 DOUBLE BLOCK AND BLEED VALVE

*with compression
ends and
locking lever
handles*



DBB VALVE End Fitting	A"	B"	D"	D" High Temp)	Port
Female NPT	5.52	2.76	2.33	2.73	.41
Male NPT	5.96	3.20	2.33	2.73	.41
150# RF Flange	6.46	3.70	2.33	2.73	.41
Male Socket Weld	6.96	4.20	2.33	2.73	.41
Female Socket Weld	5.52	2.76	2.33	2.73	.41
Compression	5.96	3.20	2.33	2.73	.41
BW / BW for Tube	6.96	4.20	2.33	2.73	.41

Notes:
All dimensions based on Female NPT outlet
1/4" - 1/2" valves only



PBM Double Block & Bleed

Solutions for all your valve applications: Double Block and 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. All PBM double block and bleed valves are made in the USA and have full supporting material and testing documentation available. PBM valves are trusted by major oil refineries where safety and reliability are critical. Valves are designed to ASME B16.34.

SIZES

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

PRESSURE CLASS

- 1/4" - 3/4" Up To ANSI Class 2500
- 1" ANSI Class 1500
- 1-1/2", 2" ANSI Class 900
- 3", 4" ANSI Class 600
- 6", 8", 10", 12" ANSI Class 300

MATERIALS

- Stainless Steel
- Duplex Stainless Steel
- Monel®
- Hastelloys®
- Others Available

END CONNECTORS

- Thread pipe, male or female
- Flanged
- Butt weld
- Socket Weld
- Bleed or Gauge Ports available
- Others Available

SEALING

- TFM™
- S-TEF®
- PEEK®
- Stellite®
- Carbon Graphite
- Celazole®
- 440C Stainless Steel
- Tungsten Carbide Coated S/S

TESTING AND DOCUMENTATION

- MTR (Material Test Reports)
- PMI (Positive Material Identification)
- LP (Liquid penetrant)
- Radiographic examination
- Pressure testing per API 598
- Magnetic particle examination
- Ultrasonic examination

PACKING

- Die Molded Graphite (High Temperature)
- TFM™ or S-TEF®
- PTFE and Thermiculite (2-1/8" Rotatable Designs Only)

FEATURES

- Full or reduced port
- Quarter turn operation
- Optional extended handle with lock out
- API 607 Fire rated available
- Locking Handles Standard
- Welded or bolted body
- Custom configurations – consult PBM

Notes:

PBM can comply with API-6D if specified.

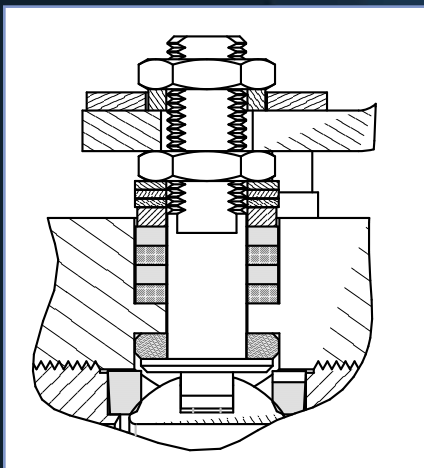


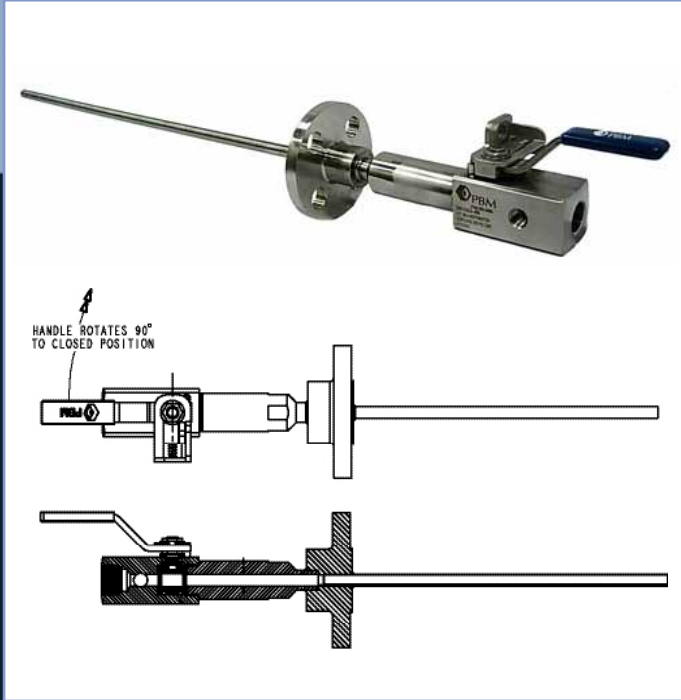
1-1/2 inch Class 1500 (Standard Port) double block and bleed valve with manual locking lever handles

eed Valves

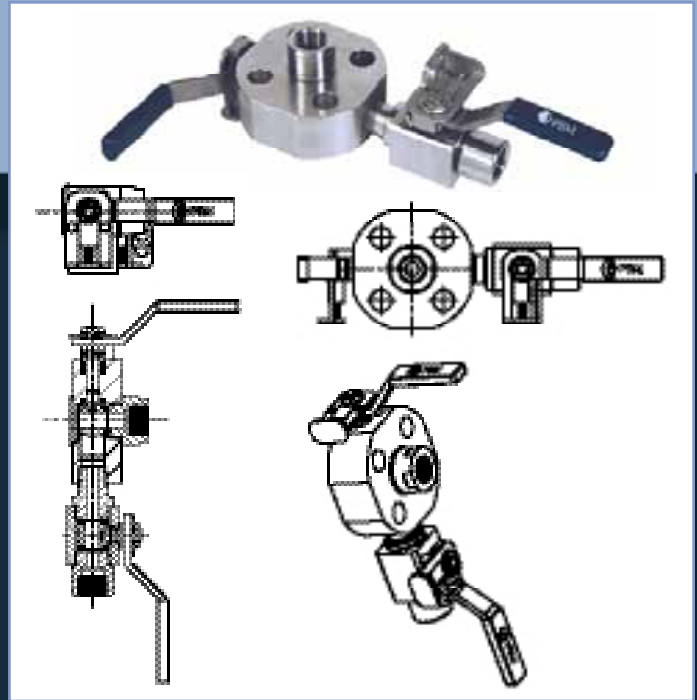


The high temperature valve version consists of Stellite®, Celazole®, PEEK®, Carbon Graphite, 440C Stainless Steel or Tungsten Carbide coated s/s seats and ball material with multiple graphite packing in the stem area.

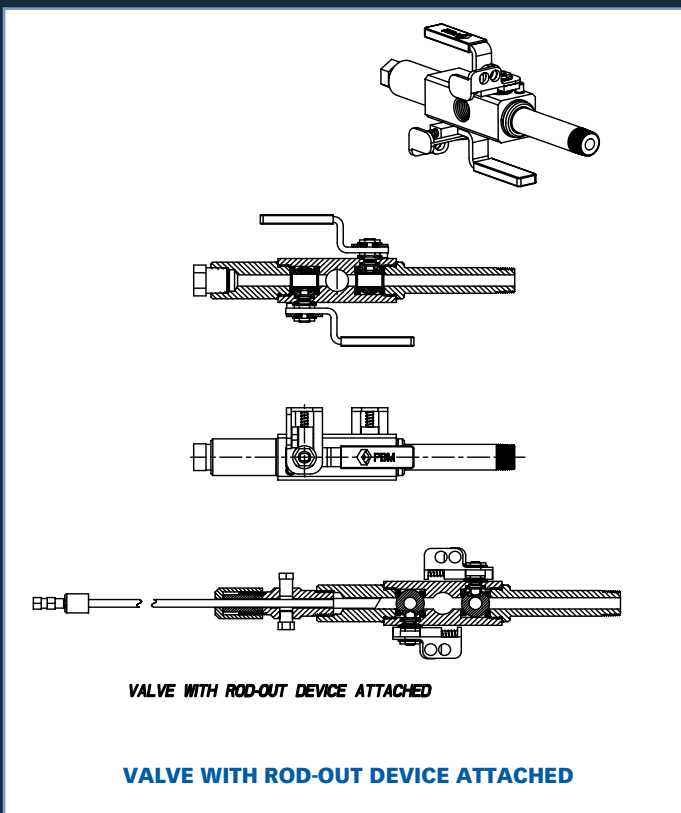




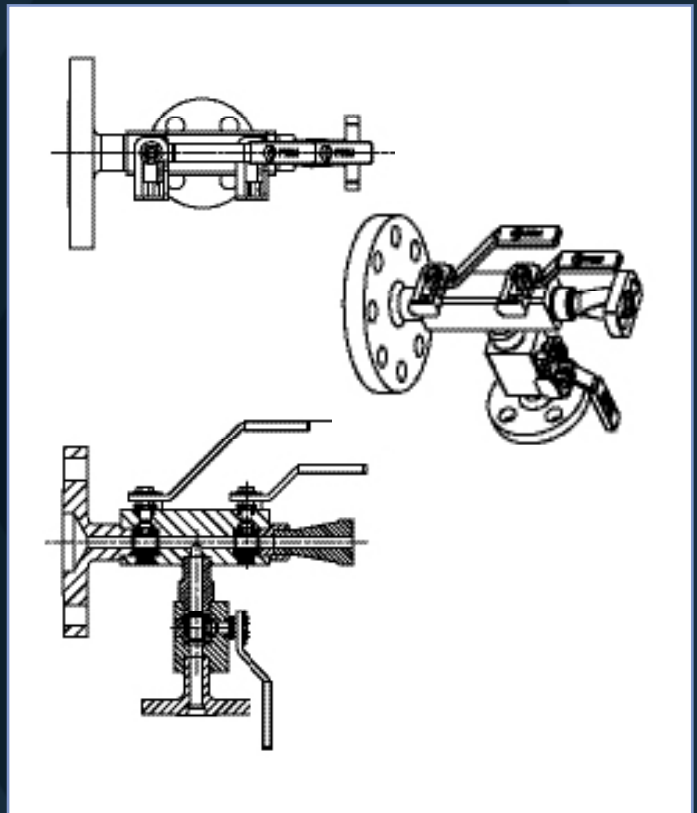
Sampling valve removes sample directly from the process stream at system pressure. Available in single and double block configurations.



PBM's Monoflange ball valves provide compact instrument single and double block and bleed configurations.



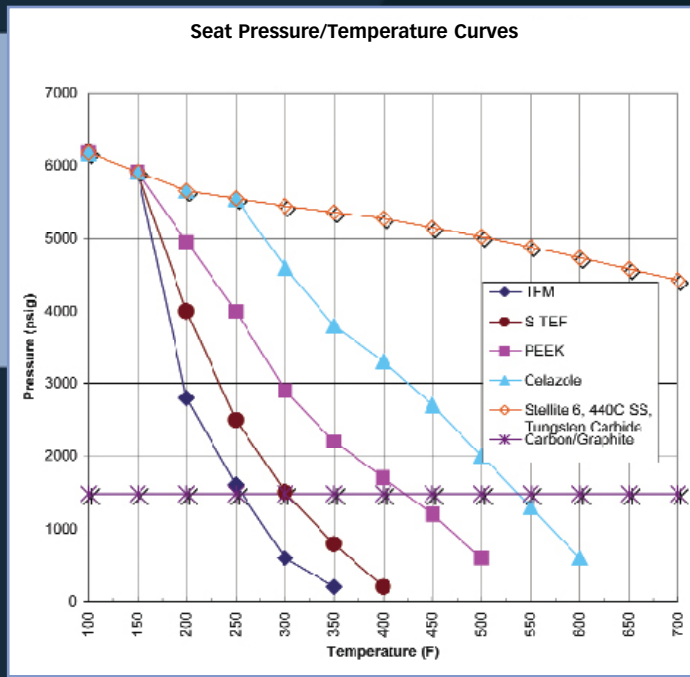
Double block and bleed ball valve with roddable hot tap



Double block and bleed valve available with FNPT, MNPT and flanged end connections in stainless, duplex and exotic materials.



Lockable Manual Handles
standard and automation available



How to Order

POS. 1 & 2	POS. 3 & 4	POS. 5	POS. 6	POS. 7	POS. 8	POS. 9
	MATERIAL	TYPE OF VALVE	SERIES	1ST END CONNECTION (UPSTREAM)	2ND END CONNECTION (DOWNSTREAM)	SEAT/STEM PACKING/O-RINGS
IM	H = 316 Stainless Steel HL = 316L Stainless Steel E = A-105 Carbon Steel C = Hastelloy® C-276 C1 = Hastelloy® B-2 Y = Hastelloy® C-22 M = Monel P = AL6XN 22 = Duplex 2205 25 = 254 SMO 6 Moly F9 = A182 Gr F9 Carbon Steel 5 = Inconel® 625	A = 2-way Standard Port for Sizes up to 3/4" (.41 Dia. Port) 2-way Standard Port for Sizes 1" and Higher B = 2-way Standard Port for Sizes up to 3/4" (.41 Dia. Port) - High Temp 2-way Standard Port for Sizes 1" and Higher - High Temp C = 2-way Full Port for Sizes 3/4" thru 10" D = 2-way Full Port for Sizes 3/4" thru 10" - High Temp O = Double Block Standard Port for Sizes up to 3/4" (.41 Dia. Port) Double Block Standard Port for Sizes 1" and Higher P = Double Block Standard Port for Sizes up to 3/4" (.41 Dia. Port)-High Temp Double Block Standard Port for Sizes 1" and Higher - High Temp Q = Double Block Full Port for Sizes 3/4" Thru 10" R = Double Block Full Port for Sizes 3/4" Thru 10" - High Temp	6	B = Buttweld Schedule 40 D = Buttweld Schedule 10 F = Buttweld for Tube G = Eye Flange H = 900# RF Flange J = 1500# RF Flange K = 2500# RF Flange L = 150# RF Flange M = 300# RF Flange N = 600# RF Flange P = Male NPT Q = Female NPT S = Male Compression Thread U = Female Socket Weld W = Male Socket Weld	- = Same as 1st End Connection B = Buttweld Schedule 40 D = Buttweld Schedule 10 F = Buttweld for Tube G = Eye Flange H = 900# RF Flange J = 1500# RF Flange K = 2500# RF Flange L = 150# RF Flange M = 300# RF Flange N = 600# RF Flange P = Male NPT Q = Female NPT S = Male Compression Thread U = Female Socket Weld W = Male Socket Weld	G = TFM™ Seats / PTFE & Thermiculite Stem Packing / Viton O-Ring - 350° F. H = S-TEF® Seats/PTFE & Thermiculite Stem Packing / Viton O-Ring - 400° F. N = PEEK® Seats/PTFE & Thermiculite Stem Packing / Kalrez® O-Ring - 500° F. P = PEEK® Seats / Carbon Graphite Stem Packing - 500° F. C = Celazole® Seats / Carbon Graphite Stem Packing -600° F. Q = Carbon Graphite Seats / Stem Packing -700° F. R = 440C S/S Ball & Seats / Carbon Graphite Stem Packing - 1000° F. S = Stellite® Ball & Seats / Carbon Graphite Stem Packing - 1000° F. T = Tungsten Carbide Coated S/S Ball & Seats / Carbon Graphite Stem Packing - 1000° F.

POS. 10	POS. 11	POS. 12	POS. 13-14
1ST END CONNECTION SIZE (UPSTREAM)	2ND END CONNECTION SIZE (DOWNSTREAM)	BLEED/GAUGE PORT OPTIONS	OPERATOR OPTIONS
A = 1/4 inch	- = Same Size as	- = No Bleed / Gauge Ports	00 = oval handwheel w/ locking device
B = 3/8 inch	1ST End Connection	A = (1) 1/4" FNPT Bleed / Gauge Port Opposite Stem	04 = lever handle w/ locking device - Right Hand Operation (CW)
C = 1/2 inch	A = 1/4 inch	B = (1) 1/4" FNPT Bleed / Gauge Port 90 Degrees from Stem	05 = lever handle w/ locking device - Left Hand Operation (CCW)
D = 3/4 inch	B = 3/8 inch	C = (2) 1/4" FNPT Bleed / Gauge Ports 90 Degrees from Stem	08 = gear operator (Sizes over 3")
E = 1 inch	C = 1/2 inch	D = (1) 3/8" FNPT Bleed / Gauge Port Opposite Stem	10 = Manual Spring Return Handle
G = 1-1/2 inch	D = 3/4 inch	E = (1) 3/8" FNPT Bleed / Gauge Port 90 Degrees from Stem	11 = Fusible Link Spring Return Handle
H = 2 inch	E = 1 inch	F = (2) 3/8" FNPT Bleed / Gauge Ports 90 Degrees from Stem	13 = Nema 4 Electric Actuator
J = 2-1/2 inch	G = 1-1/2 inch	G = (1) 1/2" FNPT Bleed / Gauge Port Opposite Stem	14 = Nema 7 Electric Actuator
K = 3 inch	H = 2 inch	H = (1) 1/2" FNPT Bleed / Gauge Port 90 Degrees from Stem	17 = 4" extended locking oval handwheel
L = 4 inch	J = 2-1/2 inch	J = (2) 1/2" FNPT Bleed / Gauge Ports 90 Degrees from Stem	18 = 4" extended locking lever handle - Right Hand Operation (CW)
M = 6 inch	K = 3 inch	K = (1) 3/4" FNPT Bleed / Gauge Port Opposite Stem (2" valve or larger)	19 = 4" extended locking lever handle - Left Hand Operation (CCW)
N = 8 inch	L = 4 inch	L = (1) 3/4" FNPT Bleed / Gauge Port 90 Degrees from Stem (2" valve or larger)	20 = 80 PSIG Double Acting Actuator
P = 10 inch	M = 6 inch	M = (2) 3/4" FNPT Bleed / Gauge Ports 90 Degrees from Stem (2" valve or larger)	27 = 60 PSIG Double Acting Actuator
Q = 12 inch	N = 8 inch	N = (1) 1" FNPT Bleed / Gauge Port Opposite Stem (4" valve or larger)	34 = 80 PSIG Spring Return Actuator
	P = 10 inch	O = (1) 1" FNPT Bleed / Gauge Port 90 Degrees from Stem (4" valve or larger)	41 = 60 PSIG Spring Return Actuator
	Q = 12 inch	P = (2) 1" FNPT Bleed / Gauge Ports 90 Degrees from Stem (4" valve or larger)	



Flush & Bleed Rings

Flush rings and Bleed rings to customer material and pressure class specifications designed to fit between standard flanges using conventional flange gaskets. Integral ball valve allows venting, purging, sampling and instrument isolation.

Flush Rings/Bleed Rings with Integral Valve

SIZES

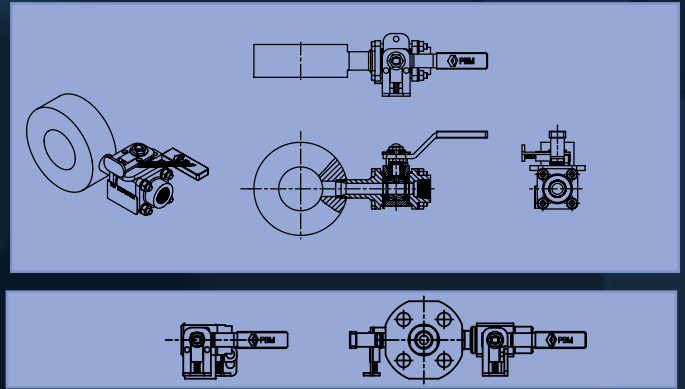
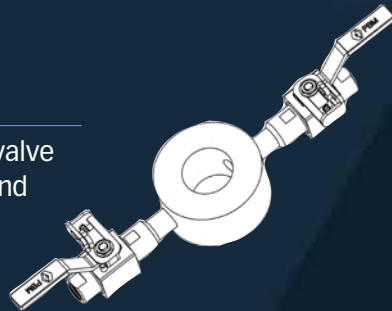
- 1/2 - 12"

MATERIALS

- Stainless Steel
- Duplex
- Hastelloy®
- Others Available

FEATURES

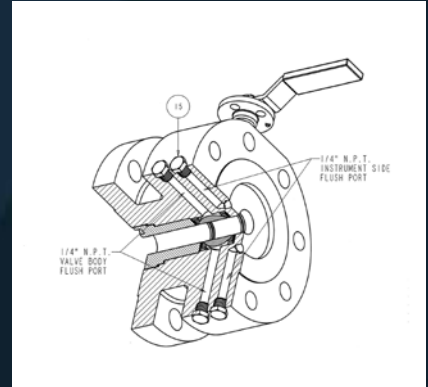
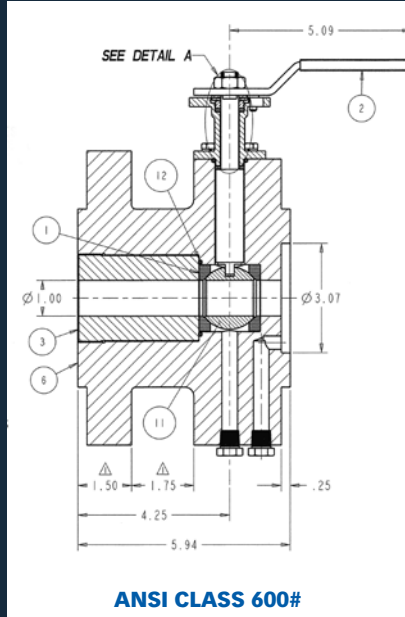
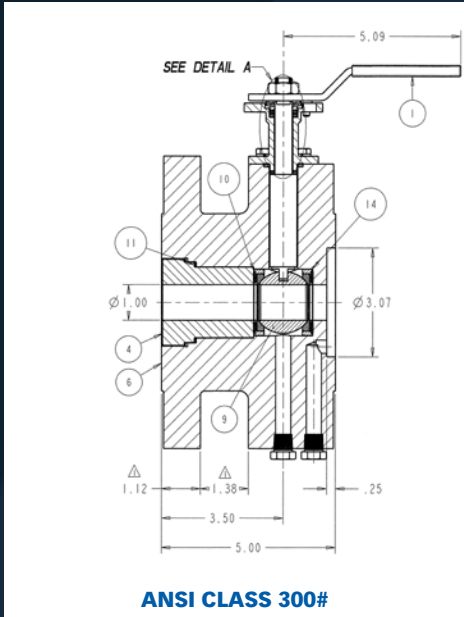
- Integral code-welded valve for flushing, purging and instrument isolation



POS. 1 & 2	POS. 3 & 4	POS. 5	POS. 6	POS. 7	POS. 8	POS. 9	POS. 10
	MATERIAL	FLUSH RING SIZE	SERIES	FLUSH RING CLASS	NUMBER AND LOCATION PURGE/BLEED PORTS	PURGE/BLEED PORT SIZE	PURGE/BLEED PORT SIZE
FR	H = 316 Stainless Steel	C = 1/2 inch	5	H = 900# Class	A = 1 Purge / Bleed Port	A = 1/4 inch	Q = FNPT
	HL = 316L Stainless Steel	D = 3/4 inch		J = 1500# Class	B = 2 Purge / Bleed Ports 90° Apart	C = 1/2 inch	U = Socket Weld
	E = A-105 Carbon Steel	E = 1 inch		K = 2500# Class	C = 2 Purge / Bleed Ports 180° Apart	D = 3/4 inch	
	C = Hastelloy® C-276	G = 1-1/2 inch		L = 150# Class		E = 1 inch	
	C1 = Hastelloy® B-2	H = 2 inch		M = 300# Class			
	Y = Hastelloy® C-22	J = 2-1/2 inch		N = 600# Class			
	P = AL6XN	K = 3 inch					
	HC = Alloy 20	L = 4 inch					
		M = 6 inch					
		N = 8 inch					
	P = 10 inch						
	Q = 12 inch						



Transmitter Isolation Valves 300#, 600#



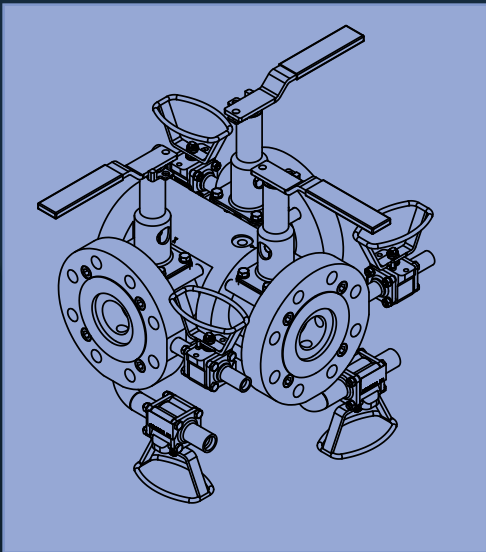
Isolation valve for differential pressure level transmitter.
600° F/343° C Service

Triple Redundant Sensing Manifold



Triple Redundant Sensing Manifold

A major international petrochemical company was looking for a triple-redundant method of isolating transmitters used to provide vital feedback on petrochemicals stored in tanks.



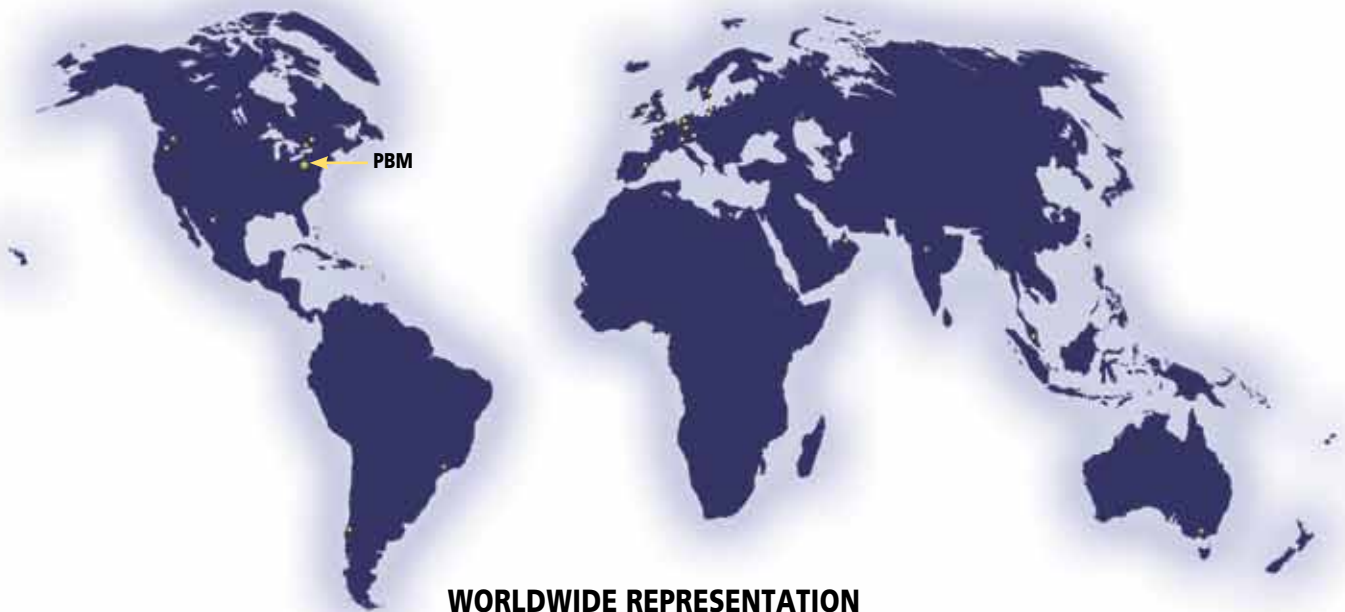
The valves required to insolate transmitters had to be fire-rated and capable of providing a tight shutoff against corrosive and high-temperature petrochemicals. Each assembly contained three transmitter isolation valves, each with two fire-rated valves on the purge connections to facilitate cleaning the valve bodies and calibrating the transmitters.

Instrument Valve Application



Fire Safe Instrument ball valves are used in pairs for flow meter installations.

- 1/4 turn
- Customer specified end fittings
- Easily mounted on 2-1/8" Centers



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
- South Africa • India • Taiwan • China • Thailand • Singapore • Saudi Arabia • Malaysia



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

www.PBMValve.com

Visit PBM Valve online to find the PBM domestic or international representative near you.

