

IMI PBM BOLTED INSTRUMENT VALVES

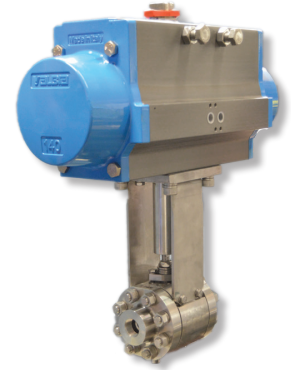
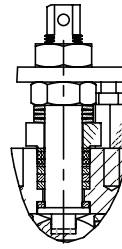
IB Series, Sizes 1/2" - 2"



DESIGN FEATURES:

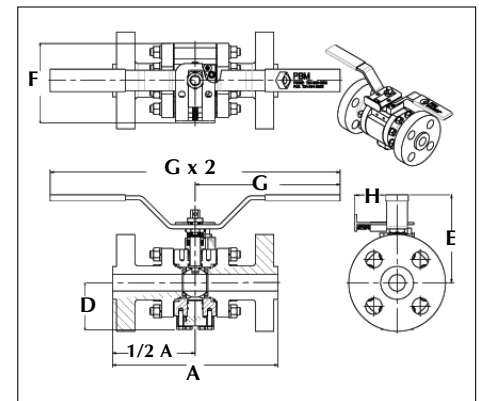
- End Connection design and fabrication flexibility
- **IB Series Instrument valves may have o-rings. Consult factory.**
- Full and reduced port designs
- Customizable end connections
- Quarter turn operation
- Bleed or gauge ports available
- Bolted Body
- Tested to API-607 Fire Rated
- Braided Graphite Packing
- API-641 Low-E, standard
- Gear operated recommended for 1-1/2" and above

The high temperature valve version consists of carbide coating on the ball and seats.



SPECIFICATIONS	Bolted (IB Series) Instrument Valves
Sizes	1/2" - 2"
Material	316 Stainless Steel, Hastelloys Duplex SS, Carbon Steels, Monel or others
Temperatures	Ambient to 800°F depending on material
End Connections	Thread Pipe, Butt weld, Socket Weld, Instrument Adapter Flange, Others
Seats & Seals	V-TEF™, C-TEF™, S-TEF® , PEEK®, Stellite, Tungsten or Chrome Carbide Coated S/S Balls & Seats
Stem Packing Material	Braided graphite, V-TEF™, C-TEF™ or S-TEF®, API-622 Low-E Stem Packing Standard
Maximum Working Pressure	Maximum CWP depends on class and valve material of construction per ASME B16.34

Size	Ends	Units Inches	A		D		E		F		G		H				
			Overall Length	CL to Bottom of Valve (2-Way)	Distance to Top of Valve	Body Width without Ends	Handle Radius	CL to Locking Mechanism									
			CL600	CL1500	CL600	CL1500	CL600	CL1500	CL600	CL1500	CL600	CL1500	CL600	CL1500			
1/2" DN 15	Female NPT	in (mm)	6.5 (165)	8.5 (216)	1.72 (44)	5.2 (132)	2.4 (61)	3.47 (88)	1.61 (41)								
	Others	in (mm)	4.75 (121)	8.5 (216)													
		in (mm)	7.5 (191)	9 (229)													
3/4" DN 20	Female NPT	in (mm)	5.5 (140)	9 (229)	2.33 (59)	3.96 (101)	3.75 (95)	5 (127)	2.08 (53)								
	Others	in (mm)	8.5 (216)	10 (254)													
		in (mm)	6 (152)	10 (254)													
1" DN 25	Female NPT	in (mm)	6 (152)	10 (254)	2.92 (74)	5.2 (132)	4.5 (114)	8.81 (224)	2.57 (65)								
	Others	in (mm)	9.5 (241)	12 (305)													
		in (mm)	6.5 (165)	7.5 (191)						2.82 (72)	4.17 (106)	5.76 (146)	7.18 (182)	5.38 (137)	7.5 (191)	11.8 (300)	12 (305)
1-1/2" DN 40	Female NPT	in (mm)	11.5 (292)	14.5 (368)	3.42 (87)	4.82 (122)	6.13 (156)	7.43 (189)	6.25 (159)	8 (203)	11.8 (300)	12 (305)	N/A				
	Others	in (mm)	8 (203)	10 (254)													
		in (mm)	14.5 (368)														
2" DN 50	Female NPT	in (mm)	11.5 (292)	14.5 (368)	3.42 (87)	4.82 (122)	6.13 (156)	7.43 (189)	6.25 (159)	8 (203)	11.8 (300)	12 (305)	N/A				
	Others	in (mm)	8 (203)	10 (254)													
		in (mm)	14.5 (368)														



How To Order:

PRODUCT (1-2) MATERIAL (3-4)	SIZE (5) VALVE TYPE SERIES (6)	1ST END CONN. TYPE (7) (HP UPSTREAM)	2ND END CONN. TYPE (8) (LP DOWNSTREAM)	SEAT/ STEM PACKINGS/ O-RINGS (9)	1ST END CONN. SIZE (10)	2ND END CONN. SIZE (11)	BLEED/ GAUGE PORT (12)	OPERATOR OPTIONS
IB = 316 S/S Body & End Conn.	C = 600# Class	6	B = Ext. Butt weld Sch. 40	B = Ext. Butt weld Sch. 40	G = V-TEF™ / Graphite / FKM	1 = 1/2 inch, Full Port	1 = 1/2 inch, Full Port	-- = Manual Lever Handle
HH = 316H (High Temp) S/S Body & End Conn.	D = 900# Class		D = Ext. Butt weld Sch. 10	D = Ext. Butt weld Sch. 10	H = S-TEF® / Graphite / FKM	E = 3/4 inch, Full Port	E = 3/4 inch, Full Port	B2 = W/O Handle, Stem Prep for Automation
E7 = A-105 Carbon Steel Body & End Connections	E = 1500# Class		L = RF Flange	L = RF Flange	N = PEEK / Graphite / Kalrez	4 = 1 inch, Full Port	4 = 1 inch, Full Port	B3 = With Handle, Stem Prep for Automation
C = Hastelloy C-276 Body & End Connections	Consult Factory for DBB Valves.		N = Extended Male NPT	N = Extended Male NPT	Q = Carbon Graphite / Graphite - 750° F.	G = 1-1/2 inch, Full Port	G = 1-1/2 inch, Full Port	B4 = Manual Locking Lever Handle
C1 = Hastelloy B-2 Body & End Connections			P = Male NPT	P = Male NPT	S = Stellite Ball & Seats / Graphite Seals - 800° F. Max.	H = 2 inch, Full Port	H = 2 inch, Full Port	B5 = Manual Oval Hand Wheel
Y = Hastelloy C-22 Body & End Connections			Q = Female NPT	Q = Female NPT	T = Tungsten Carb. Old Ball & Seats/ Graphite Seals - 800° F. Max			B6 = Gear operator
M = Monel Body & End Connections			R = Extended Female NPT	R = Extended Female NPT	U = Chrome Carb. Old Ball & Seats/ Graphite Seals - 800° F. Max			B7 = Extended Lockable Lever Handle
P = AL6XN Body & End Connections			S = Female Comp. Thread *	S = Female Comp. Thread *	V = Chrome Carb. Old Ball & Seats/ Graphite Seals - 800° F. Max			B8 = Extended Lockable Oval Handle
22 = Duplex 2205 Body & End Connections			J = Ext. Female Socket Weld	J = Ext. Female Socket Weld	Y = C-TEF™ / Graphite / FKM			B9 = 80 PSIG Double Acting Actuator
25 = 254 SMO 6 Moly Body & End Connections			V = Ext. Male Socket Weld	V = Ext. Male Socket Weld				B10 = 60 PSIG Double Acting Actuator
F9 = A182 Gr. F9 Carbon Steel Body & End Conn.			W = RTJ Flange	W = RTJ Flange				B11 = 60 PSIG Spring Return Actuator

Note: Other materials of construction available.

* Ferrules Not Included

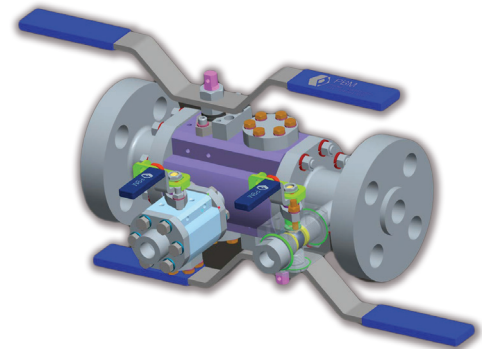
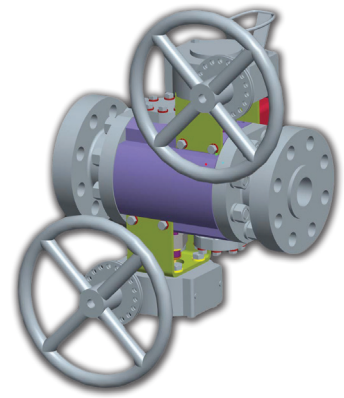
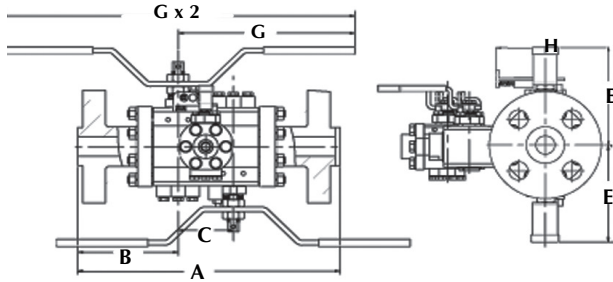
Note: Other end connection types available.

Valves seal HP to LP.

Consult PBM for other configurations.

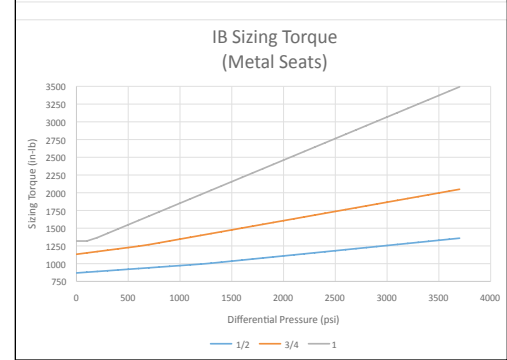
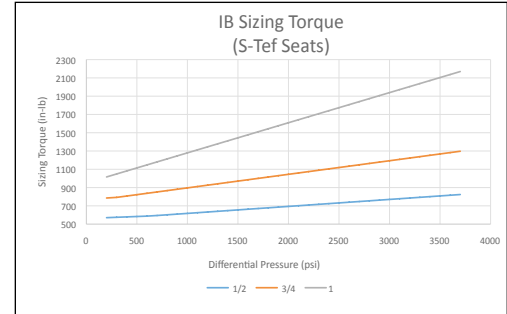
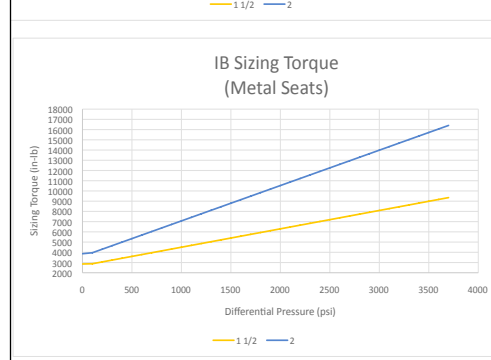
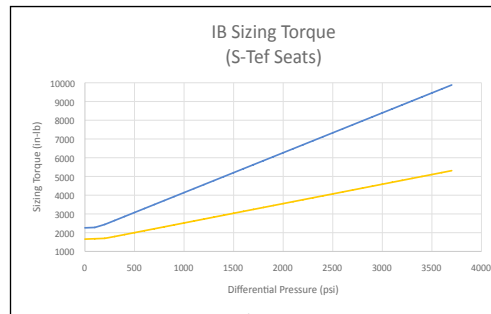
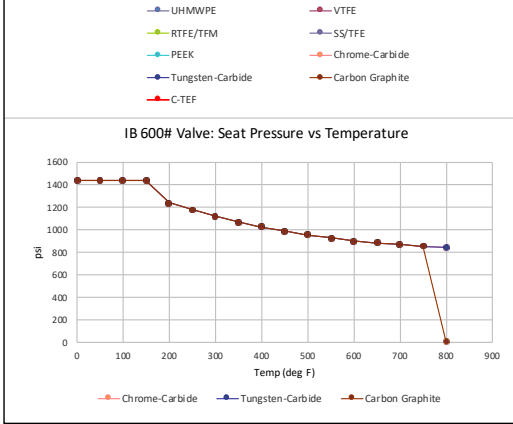
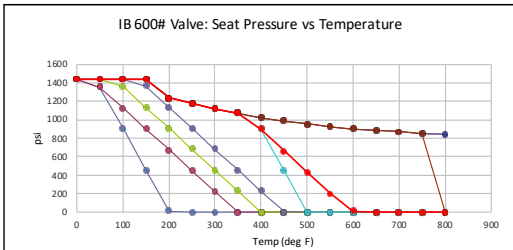
Note: Additional operator options available.

IMI PBM Bolted Instrument Valves



Size	Ends	Units	A		B		C		E		G		H				
			Overall Length		Q to End		Ball Separation		Distance to Top of Valve		Body Width without Ends		Handle Radius		Q to Locking Mechanism		
			CL600	CL1500	CL600	CL1500	CL600	CL1500	CL600	CL1500	CL600	CL1500	CL600	CL1500	CL600	CL1500	
1/2" DN 15	Flanged	in (mm)	8.25 (210)	10.25 (260)	3.25 (83)	4.25 (108)	1.75 (44)	5.2 (132)	2.4 (61)	3.47 (88)	1.61 (41)						
	Female NPT	in (mm)	6.5 (165)		2.375 (60)												
	Others	in (mm)	10.25 (260)		4.25 (108)												
3/4" DN 20	Flanged	in (mm)	9.75 (248)	11.25 (286)	3.75 (95)	4.5 (114)	2.25 (57)	3.96 (101)	3.75 (95)	5 (127)	2.08 (53)						
	Female NPT	in (mm)	7.75 (197)		2.75 (70)												
	Others	in (mm)	11.25 (286)		4.5 (114)												
1" DN 25	Flanged	in (mm)	11.25 (286)	12.75 (324)	4.25 (108)	5 (127)	2.75 (70)	5.2 (132)	4.5 (114)	8.81 (224)	2.57 (65)						
	Female NPT	in (mm)	8.75 (222)		3 (76)												
	Others	in (mm)	12.75 (324)		5 (127)												
1-1/2" DN 40	Flanged	in (mm)	13.25 (337)	15.75 (400)	4.75 (121)	6 (152)	3.75 (95)	5.76 (146)	7.18 (182)	6 (152)	7.5 (191)	12 (305)	N/A				
	Female NPT	in (mm)	10.25 (260)	11.25 (286)	3.25 (83)	3.75 (95)											
	Others	in (mm)	15.75 (400)		6 (152)												
2" DN 50	Flanged	in (mm)	15.25 (387)	18.5 (470)	5.75 (146)	7.25 (184)	3.75 (95)	4 (102)	6.13 (156)	7.43 (189)	6.75 (171)	8 (203)	12 (305)	N/A			
	Female NPT	in (mm)	11.75 (298)	14 (356)	4 (102)	5 (127)											
	Others	in (mm)	18.5 (470)		7.25 (184)												

BOLTED INSTRUMENT VALVES PRESSURE/TEMPERATURE AND TORQUE CHARTS



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IMI PBM INSTRUMENT VALVES

IM Series, Sizes 1/2" - 2"



DESIGN FEATURES:

- Used for process isolation of isolation of pressure gauges, orifice plates, flush rings and various measurement instruments
- **IM Series Instrument valves DO NOT have o-rings.**
- Designed to ASME B16.34
- Tested to API-607 Fire Rated
- Higher performance solution to needle valves
- Can comply with API-6D if specified
- Testing and Documentation - Material test reports, PMI, LP, radiographic examination, pressure testing per API598, Magnetic particle examination, ultrasonic examination
- Certified SIL-3 capable per IEC 61503
- Certified to API-622/API-641



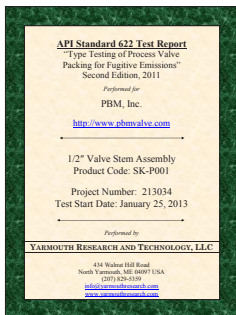
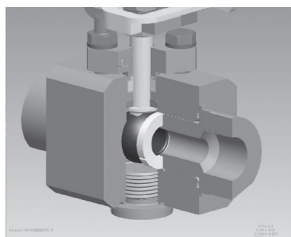
SPECIFICATIONS	Instrument Isolation Valves
Sizes	1/2" and 3/4" Up to ANSI Class 2500 (CL 1500 standard)
Material	316 Stainless Steel, Hastelloys Duplex SS, Carbon Steels, Monel or others
Temperatures	From 350°F to 800°F depending on material
End Connections	Thread Pipe, Buttweld, Socket Weld, Compression, Instrument Adapter Flange, Others
Seats & Seals	C-TEF™, V-TEF™, S-TEF™, PEEK®, Stellite, Tungsten or Chrome Carbide, Coated S/S Ball/Seats
Stem Packing Material	Die molded graphite V-TEF™, C-TEF™ or S-TEF™, API-622 Low-E Stem Packing Standard in 1/2" and 3/4" sizes with .41 bore. It is optional in larger sizes.
Maximum Working Pressure	Maximum CWP depending on seating and valve material of construction

IMI PBM's New Style Instrument Valves are tested and proven to the API 622 Standard

What makes IMI PBM valves Fugitive Emission compliant?

IMI PBM's Instrument (IM) new style valves standardize on a product offering which certifies IMI PBM valves for low emission technology. The low emission valve packing features:

- Average stem packing leakage ≤ 10 ppmv for the duration of the test (100 ppm allowable)
- API-607 fire tested
- Packing successfully passed API-622 testing
- Valve passed API-641. Both test reports available upon request



2-WAY VALVE with .41 dia. port End Fitting	inch (mm)
Ext. Male NPT	6.50 (165)
Male NPT	4.75 (121)
Female NPT	4.00 (102)
Ext. Female Socket Weld	6.50 (165)
Buttweld for Sch. 40 Pipe	6.50 (165)
Buttweld for Tube	6.50 (165)

Note:
Design is rodable with rod out tool.

How To Order:

PRODUCT (1-2) MATERIAL (3-4)	TYPE (5) SERIES (6)	1 ST END CONN. (HP / UPSTREAM) (7) 2 ND END CONN. TYPE (LP / DOWNSTREAM) (8)	SEAT / STEM PACKINGS (GRAPHITE STEM PACKING FOR ALL) (9)	1 ST END CONN. PORT (HP / UPSTREAM) (10) 2 ND END CONN. PORT (LP / DOWN- STREAM) (11)	BLEED PORT OPTIONS "A" THRU "P" ONLY (12)	OPERATOR OPTIONS (13-14)	BLEED/ GAUGE VALVE OPTIONS (15)
H = 316 S/S Body & End Conn. 1H = 316H (High Temp) S/S Body & End Conn. E7 = A-105 Carbon Steel Body & End Connections C = Hastelloy C-276 Body & End Connections Y = Hastelloy C-22 Body & End Connections F9 = A182 Gr. F9 Carbon Steel Body & End Conn. P = AL6XN Body & End Connections 22 = Duplex 2205 Body & End Connections 25 = 254 SMO 6 Moly Body & End Connections Note: Other materials of construction avail.	C = 600# Class D = 900# Class E = 1500# Class F = 2500# Class VALVE TYPE DOUBLE BLOCK M = 600# Class N = 900# Class O = 1500# Class P = 2500# Class	B = Ext. Buttweld Sch. 40 D = Ext. Buttweld Sch. 10 L = RF Flange N = Extended Male NPT P = Male NPT Q = Female NPT R = Extended Female NPT S = Female Comp. Thread J = Ext. Female Socket Weld V = Ext. Male Socket Weld W = RTJ Flange * Ferrules Not Included Other end conn. types avail.	G = V-TEF™ / Graphite H = S-TEF™ / Graphite N = PEEK / Graphite Q = Carbon Graphite / Graphite - 750° F S = Stellite Ball & Seats / Graphite Seals - 800° F. Max. T = Tungsten Carb. Ctd Ball & Seats/ Graphite Seals - 800° F. Max U = Chrome Carb. Ctd Ball & Seats/ Graphite Seals - 800° F. Max Y = C-TEF™ / Graphite Valves seal HP to LP. Consult PBM for other configurations.	A = 1/4 inch, .41 Dia. Port B = 3/8 inch, .41 Dia. Port C = 1/2 inch, .41 Dia. Port D = 3/4 inch, .41 Dia. Port 2 = 1 inch, .41 Dia. Port	= No Bleed Port (2-Way Only) A = 1/4" FNPT Port 90° from Stem B = 1/4" FNPT Ports 180° from Stem C = 3/8" FNPT Port 90° from Stem D = 3/8" FNPT Ports 180° from Stem E = 1/2" FNPT Port 90° from Stem F = 1/2" FNPT Ports 180° from Stem J = 1/4" SW Port 90° from Stem K = 1/4" SW Port 180° from Stem L = 3/8" SW Port 90° from Stem M = 3/8" SW Port 180° from Stem N = 1/2" SW Port 90° from Stem P = 1/2" SW Port 180° from Stem Note: "A" option is standard	= Manual Lever Handle 02 = W/O Handle, Stem Prep for Auto. 03 = With Handle, Stem Prep for Auto. 04 = Manual Locking Lever Handle 05 = Manual Oval Hand Wheel 17 = Extended Lockable Lever Handle 18 = Extended Lockable Oval Handle 20 = 80 PSIG Double Acting Actuator 27 = 60 PSIG Double Acting Actuator 34 = 80 PSIG Spring Return Actuator 41 = 60 PSIG Spring Return Actuator Note: Additional options avail.	= No Bleed Gauge Valve A = 1/4" FNPT Ball Valve B = 3/8" FNPT Ball Valve C = 1/2" FNPT Ball Valve F = 1/4" FNPT Needle Valve G = 3/8" FNPT Needle Valve H = 1/2" FNPT Needle Valve

IMI PBM Double Block and Bleed Valves

The IMI PBM difference - True Double Positive Isolation

IMI PBM double block and bleed valves provide true double positive isolation:

- Two independent sealing members (two ball and seat combinations)
- Two separate actuating mechanisms (two stems and handles or actuators)

This configuration provides the best technology for the most severe isolation services where double block and bleed is required.

Double Positive Isolation when safety is critical.

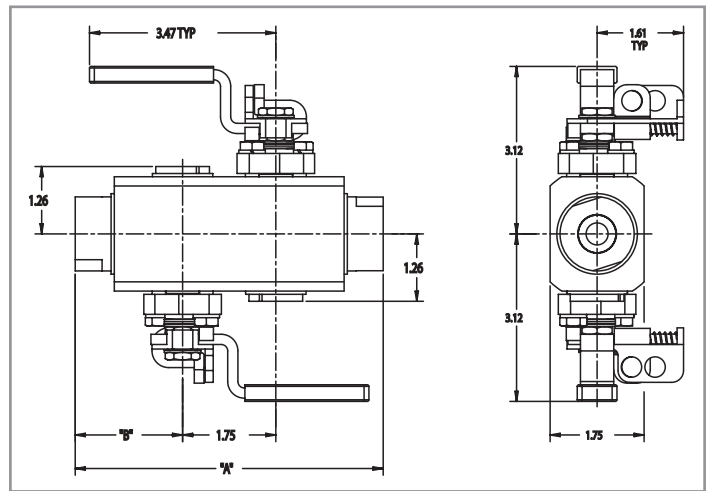
IMI PBM DBB/DPI IM (Instrument valve) with locking lever handles and ends and API 622 Low E-packing

Temp: <800°F
Pressure: CL 2500
Sizes: 1/2" - 1 inch
Ends: Any



IMI PBM Standard/DPI IM (Instrument valve) with locking lever handles

Temp: <800°F
Pressure: 2000 WOG
Sizes: 1/4" - 1 inch
Ends: Any



DBB VALVE .41 dia. port End Fitting	A inch (mm)	B inch (mm)
Extended Male NPT	8.25 (210)	4.13 (105)
Male NPT	6.50 (165)	3.25 (83)
Female NPT	5.75 (146)	2.88 (73)
Ext. Female Socket Weld	8.25 (210)	4.13 (105)
Buttweld for Sch. 40 Pipe	8.25 (210)	4.13 (105)
Buttweld for Tube	8.25 (210)	4.13 (105)

Notes:
Dimensions shown for 1/2" valves only.
Design is rodable with rod out tool.

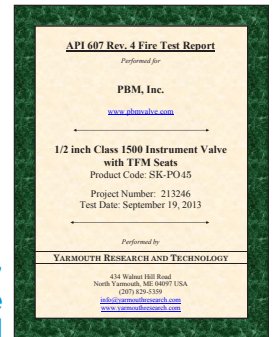
True DPI in 5 configurable body styles:

- Smaller than traditional 2 valve designs
- Lower potential emissions due to less flange connections
- 1/2 Inch through 12 inch
- Full or standard (reduced) port
- Fire rated to API 607
- API-622/641 low emissions standard
- Various bleed or purge options available
- Extended handles available
- 1/4 turn ball valve enables easy open/close and visual indication of valve position.



Certified SIL-3 Capable per IEC 61508

API-607 Fire Rated



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IMI Critical Engineering



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