

PBM IGENIX® DIVERTER STEAM VALVES

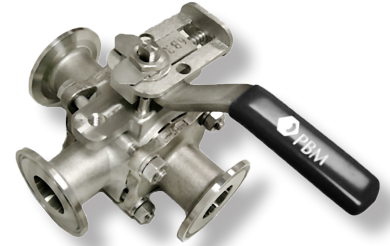


VALVE SOLUTIONS
www.PBMValve.com

3-Way Cast Series 9 or Forged Series 8, 1/2" - 6"

DESIGN FEATURES:

- Unique Adjust-O-Seal® feature allows in-line valve adjustment to compensate for normal wear on valve seats. Note: Diverter steam valves have o-rings!
- Integral side-entry or bottom entry common port. Seats shall provide both upstream and downstream bubble-tight seal and be adjustable for inline wear.
- A single Diverter valve can replace two or three 2-Way valves to reduce cost and space.
- Full-port diameters minimize pressure drops (1/2 - 6")
- True-Bore® (tube) for sanitary valves
- Stem assembly accommodates PBM Direct Mount Actuation for accurate alignment and increased cycling life.
- A Diverter Port ball valve can be an economical alternative to a 3-Way Multi-port valve depending on the sealing requirements.
- Full port design
- Valves are full vacuum
- Specify PBM flow pattern
- Certified Material Test Report (CMTRS) provided for wetted components
- Surface finishes are achieved without the use of ADIs (Animal Derived Ingredients)



SPECIFICATIONS	SANITARY DIVERTER VALVES
Sizes	1/2" - 6"
Material	316L Stainless Steel with low controlled ferrite, Hastelloy® C276 or C22®, others
Temperatures	Ambient for TFM™ to 450° F depending on seat and seal material
End Connections	Extended tube, hygienic clamp, or others
Seats, Seals and Stem Packings	TFM™ or S-TEF® material
O-rings	EPR O-ring energizer (Viton V1274-75/80, EPR E3608-70, others available)
Body Bolts & Nuts	18-8 Stainless Steel
Maximum Working Pressure	up to 900 psig CWP depending on valve size and temperature
Polish	Standard internal polish of 20 Ra ID Series 8, 30 Ra ID Series 9

CV Values (gpm)			
Size	L-Port	T-Port	
		Straight	Branch
1/2"	4.0	4.7	3.0
3/4"	12	15	9.0
1"	25	29	18
1-1/2"	68	81	49
2"	133	160	92
3"	324	390	233
4"	590	715	430
6"	1,450	1,750	1,040

ID Surface Finish, Ra Readings for Valves per ASME BPE			
Surface Finish	PBM Polish Code	μ-in.	μ-m.
Mechanical Polish			
SF 1	A	20 Ra max	0.51
SF 2	A	25 Ra max	0.64
SF 3	-	30 Ra max	0.76
Mechanical Polish and Electropolish			
SF 4	G	15 Ra max	0.38
SF 5	F	20 Ra max	0.51
SF 6	F	25 Ra max	0.64

How To Order:

PRODUCT (1-2) MATERIAL (3-4)		SIZE (5) SERIES (6)			END CONN. (7-8)		SEAT & SEAL (9)		FLOW PATTERNS (10-11)		BALL & STEM (12)		OPERATOR (13-14)		POLISH (15-16)		
DC	HL	Cast (Ser. 9) 316L S / S	C	1/2"	8	X-	Hygienic Clamp	G	TFM Seats / Seals Viton O-Rings	10	3-Way Side Entry L-Port Ball 90°	-	Standard Ball and Stem	--	W/ Standard Lever Handle (1/2" thru 4")	-	30 Ra ID (Std. Series 9)
	HF	Forged 316L S / S	D	3/4"	9	F-	Ext. Butt weld for Tube	J	TFM Seats / Seals / VTFE Cav Fill / Viton O-Rings	03	3-Way Side Entry T-Port Ball 90°	F	Internal / External Grounding	02	W/O Handle W/ Stem Actuator Prep	A	20 Ra ID (Std. Series 8)
		Other material options available - Contact PBM.		E	1"			H	TFM Seats / Seals EPR O-Rings	04	3-Way Side Entry T-Port Ball 90°	G	17-4PH Stem	04	Locking Lever Handle (1/2" thru 4")	D	15 Ra ID
				G	1-1/2"			I	TFM Seats / Seals / VTFE Cav Fill / EPR O-Rings	14	3-Way Btm. Entry L-Port Ball 360°			08	Gear Operator (Req'd for 6")	E	10 Ra ID
				H	2"			K	S-TEF® Seats / Seals Viton O-Rings	15	3-Way Btm. Entry L-Port Ball 180°			20	DA 80psig actuator	F	20 Ra ID after Electro Polish
				K	3"			L	S-TEF® Seats / Seals EPR O-Rings	18	3-Way Btm. Entry LL-Port Ball 90°			27	DA 60psig actuator	F	20 Ra ID after Electro Polish
				L	4"									34	SR 80psig actuator - Fail Position must be specified	G	15 Ra ID after Electro Polish
				M*	6"	* Not available in forged.								41	SR 60psig actuator - Fail Position must be specified	H	10 Ra ID after Electro Polish

<http://pbmvalve.com/build-a-part-number>

Other seat/seal options available -
Contact PBM

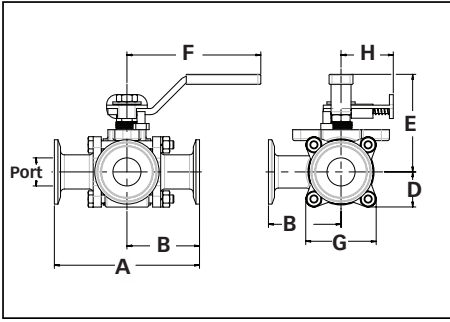
Other Flow Pattern Options
available - Contact PBM

Other operator options available -
Contact PBM

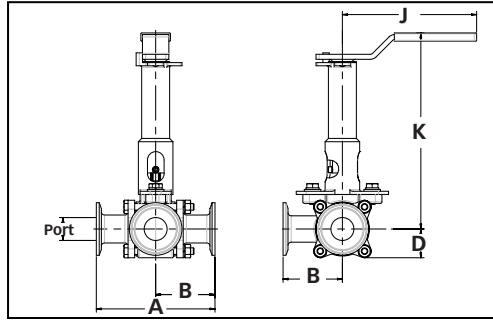
More polish available -
Contact PBM

Igenix® Diverter Steam Valves

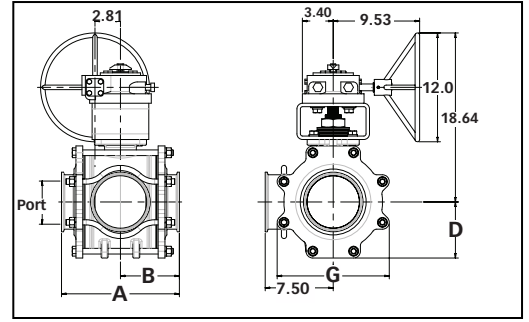
Diverter Port with Locking Handle



Diverter Port with Butt-weld Ends



Diverter Port with Gear Operator (6" only)



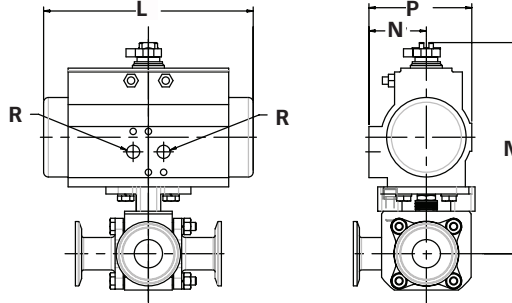
3-Way Diverter Steam valves dimensioned in inches

Valve Size	Size Code	I.D. Port	A		B		D	E	F	G	Approx. Wgt (lbs)	Locking Handle		Ext. Locking Handle		
			F-	X-	F-	X-						H	Hole Dia. for Lock	J	K	Hole Dia. for Lock
1/2"	C	0.37	5.50	3.50	2.75	1.75	0.75	2.05	4.00	1.50	1.6	1.55	.28	5.09	4.00	0.31
3/4"	D	0.62	6.00	4.00	3.00	2.00	0.85	2.23	4.00	1.68	2.0	1.55	.28	5.09	4.14	0.31
1"	E	0.87	6.50	4.50	3.25	2.25	1.09	3.01	4.15	2.18	3.6	1.62	.25	5.09	5.44	0.31
1-1/2"	G	1.37	7.50	5.50	3.75	2.75	1.68	5.02	8.81	3.31	12.0	2.57	.38	8.00	7.46	0.38
2"	H	1.87	8.00	6.25	4.00	3.13	2.15	4.47	8.03	4.30	22.0	2.57	.38	8.00	7.74	0.38
3"	K	2.87	10.50	8.00	5.25	4.00	2.78	6.77	12.06	5.58	33.0	3.47	.38	12.06	11.61	0.44
4"	L	3.84	13.00	10.00	6.5	5.00	3.66	7.53	12.06	7.33	67.0	3.47	.38	12.06	12.38	0.44
6"*	M	5.78	17.00	13.00	8.5	6.5	6.18	NA	NA	12.37	177.0**	NA	NA	NA	NA	NA

* Series 9 Only

** Weight without handle

Unit of Measure = inches
Dimensions based on actuators used with TFM™ seats.



Size	80 PSI Spring Return					60 PSI Spring Return					60, 80 PSI Double Acting				
	L	M	N	P	R	L	M	N	P	R	L	M	N	P	R
1/2"	5.55	2.80	5.45	1.61	1/8 NPT	5.55	3.17	5.90	1.77	1/8 NPT	5.55	2.80	5.45	1.61	1/8 NPT
3/4"	5.55	2.80	5.59	1.61	1/8 NPT	6.46	3.17	6.04	1.77	1/8 NPT	5.55	2.80	5.59	1.61	1/8 NPT
1"	6.46	3.17	6.51	1.77	1/8 NPT	8.27	3.72	7.22	2.07	1/8 NPT	5.55	2.80	6.06	1.61	1/8 NPT
1-1/2"	9.47	4.17	9.65	2.30	1/8 NPT	10.83	4.84	9.65	2.68	1/4 NPT	8.27	3.72	9.10	2.07	1/8 NPT
2"	10.83	4.84	10.45	2.68	1/4 NPT	13.11	5.39	11.80	2.87	1/4 NPT	8.27	3.72	9.39	2.07	1/8 NPT
3"	14.65	5.83	14.21	3.15	1/4 NPT	17.13	6.46	15.10	3.44	1/4 NPT	13.11	5.39	13.73	2.87	1/4 NPT
4"	17.13	6.46	15.86	3.44	1/4 NPT	19.69	7.32	16.80	3.90	1/4 NPT	13.11	5.39	14.51	2.87	1/4 NPT
6"	22.78	8.54	23.02	4.29	1/4 NPT	22.64	11.42	27.78	5.71	1/4 NPT	22.78	8.54	23.02	4.29	1/4 NPT

Manual Valves with Tube Ends when used with insulation		
Tube OD	Insulation max with no extension	Insulation max with extension
0.50	0.76	2.68
0.75	0.79	2.72
1.00	1.45	3.88
1.50	3.10	5.57
2.00	2.31	5.60
3.00	4.08	8.88
4.00	4.35	9.12



<http://www.pbmvalve.com/valves/3-way-diverter-port-valve>

<http://pbmvalve.com/maintenance-instructions>



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PBM, Inc. • 1070 Sandy Hill Road, Irwin, PA 15642

Phone: 800.967.4PBM • 724.863.0550

E-mail: info@pbmvalve.com

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