

# PBM IGENIX® DIVERTER BALL VALVES

## 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: valves DO NOT 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
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

Size	CV Values (gpm)		
	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)						
DI	HL	Cast (Ser. 9) 316L S / S	C	1/2"	8	X-	Hygienic Clamp	G	TFM Seats / Seals	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 Cavity Fillers	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	S-TEF® Seats / Seals	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	S-TEF® Seats / Seals VTFE Cavity Fillers	14	3-Way Btm. Entry L-Port Ball 360°			08	Gear Operator (Req'd for 6")	E	10 Ra ID				
			H	2"				K	UHMWPE Seats / Seals	15	3-Way BTM. Entry L-Port Ball 180°			18	3-Way Btm. Entry LL-Port Ball 90°	20	DA 80psig actuator	F	20 Ra ID after Electro Polish		
			K	3"												27	DA 60psig actuator				
			L	4"												34	SR 80psig actuator - Fail Position must be specified			G	15 Ra ID after Electro Polish
			M*	6"												41	SR 60psig actuator - Fail Position must be specified				

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

Other seat/seal options available - Other Flow Pattern Options available - Contact PBM

Other operator options available - Contact PBM

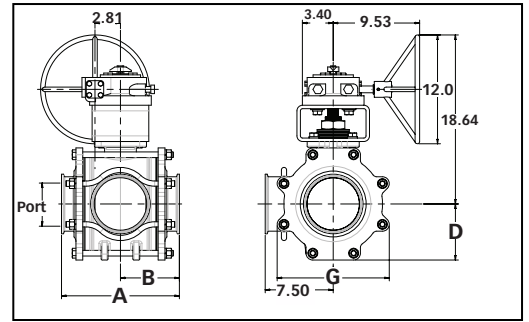
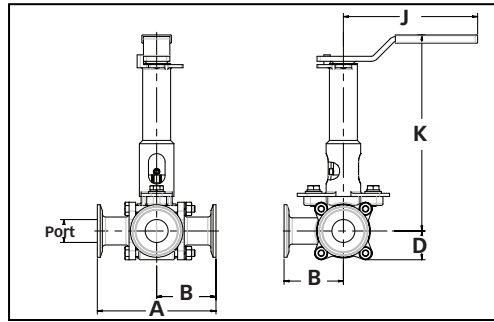
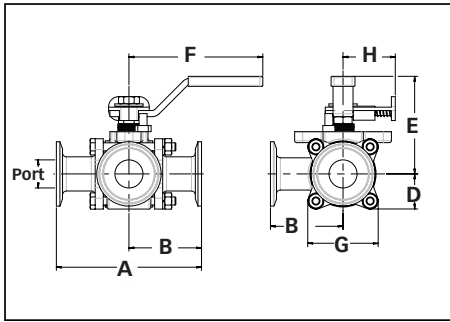
More polish available - Contact PBM

# Igenix® Cast Series 9 or Forged Series 8 Diverter Valves

Diverter Port with Locking Handle

Diverter Port with Butt Weld Ends

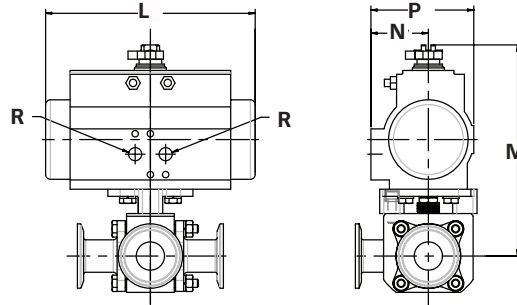
Diverter Port with Gear Operator (6" only)



3-Way Diverter Port Dimensioned valves in inches												Locking Handle		Ext. Locking Handle		
Valve Size	Size Code	I.D. Port	A		B		D	E	F	G	Approx. Wgt (lbs)	H	Hole Dia. for Lock	J	K	Hole Dia. for Lock
			F-	X-	F-	X-										
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.



80 PSI Spring Return						60 PSI Spring Return					60, 80 PSI Double Acting				
Size	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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