

Breakthrough engineering for a better world

# MP Series 5 Size 1/2" to 4" CL 150#

# Process Automation

**IMI PBM** 



# Multi-Port Ball Valves

### **Design Features**

- Unique Adjust-O-Seal® feature allows in-line valve adjustment to compensate for normal wear on valve seats.
- MP Series Multi-Port Valves do not have O-rings.
- 4-Way and 5-Way Flow Patterns available offering for 90°, 180° and 360° operation
- Full Port diameters minimize pressure drops (1/2 to 4")
- Upstream and downstream bubble-tight sealing capability allows valve body cleaning, purging and draining
- Stem assembly accommodates IMI PBM Direct Mount Actuation for accurate alignment and increased cycling life.
- In some processes, a single Multi-Port Ball Valve can replace several 2-Way Valves in a piping system, reducing costs and simplifying flow control with actuation.
- Full Port design
- Valves are rated to full vacuum.
- Specifiy IMI PBM Flow Pattern for 3, 4, or 5-Way Valves
- Piggable "Y" Port Valves are also available

CV Values (gpm)											
Size	L-Port	T-F	LL-Port								
	L-POR	Straight	Branch	LL-POR							
1/2"	*6.6	*6.6	*5.4	*6.0							
3/4"	*16	*16	*12	*14							
1"	33	33	21	30							
1 1/2"	80	80	49	72							
2"	147	147	89	126							
3"	351	351	212	295							
4"	613	613	368	443							

### SPECIFICATIONS 3, 4 or 5-Way Multi-Port Ball Valves

Sizes 1/2" to 4" - Series 5
Material 316L Stainless Steel

Temperatures Ambient for V-TEF™ to 400°F, S-TEF® to 450°F
End Connections Butt Weld for pipe, flange, NPT, Socket Weld or other

Seats, Seals and Stem Packings V-TEFTM material standard, others available

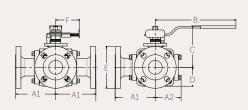
Body Bolts & Nuts 18-8 Stainless Steel



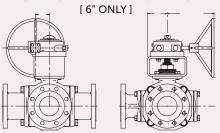
IMI	PRODUCT (1-2) MATERIAL (3-4)		SIZE (5) SERIES (6)		E	END CONNECTION (7-8)		SEAT / SEAL (9)		FLOW PATTERN OPTIONS (10-11)		L / STEM OPTIONS (12)	OPERATOR (13- 14)		POLISH OPTIONS (15)			
	MP	н-	Cast 316/ 316L S / S	С	1/2"	5	B-	Sch. 40 Butt Weld	G	V-TEF™ Seats / Seals	01	3-Way Side Entry T-Port Ball 90°	-	Standard Ball and Stem		W/ Standard Lever Handle (1/2" thru 3")	-	125 Ra ID Standard
		HL	Cast 316L S / S	D	3/4"		D-	Sch. 10 Butt Weld	J	V-TEF™ Seats / Seals VTFE Cavity Fillers	02	3-Way Side Entry T-Port Ball 90°	F	Internal / External Grounding	02	W/O Handle W/ Stem Actuator Prep	А	(15)  125 Ra ID Standard  20 Ra ID  20 Ra ID / 3: Ra OD  20 Ra ID after
How To Order:				Ε	1"	]	L-	150# Flange	L.	S-TEF® Seats / Seals	18	3-Way Btm. Entry	G	17-4PH Stem	04	Locking Lever Handle (1/2" thru 2")	_	20 Ra ID / 32
pbmvalve.com/build-a-part-numbe	er			G	1-1/2'	-	Q-	Female NPT	Ι"	3-TEF Seats / Seats	10	LL-Port Ball 90°			08	Gear Operator (Req'd for 4")	1	Ra OD
				Н	2"	1 !	U-	Socket Weld	Т.	S-TEF® Seats / Seals	26	4-Way Btm. Entry			20	DA 80psig actuator		20 Ra ID after
				К	3"	1			Ι'	VTFE Cavity Fillers	20	L-Port Ball 360°			27	DA 60psig actuator	1	Electro Polish
				L	4"				К	UHMWPE Seats / Seals	37	4-Way Side Entry LL-Port Ball 90°			34	SR 80psig actuator - Fail Position must be specified		
									L	UHMWPE Seats / Seals VTFE Cavity Fillers	44	5-Way Btm. Entry L-Port Ball 360°				SR 60psig actuator - Fail Position must be specified		

MULTI- PORT WITH LOCKABLE HANDLE

### MULTI-PORT WITH BUTTWELD ENDS



## MULTI-PORT WITH GEAR OPERATOR

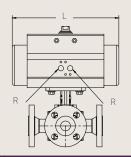


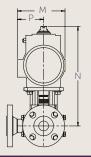
Valve Size			А	1	A2	В	С	D	Е	Locking	Handle			
	Size Code	Port Dia.	Q to Face		€to Blank	Handle Length	Q to Top	Q to Bottom	150# Flange	F	Hole Dia. for	Socket Weld	~Wt	
			Q- U-	L-	Q- U- L-	from Q	of Handle	Side Entry	Dia.		Lock	Dia.		
1/2"	С	0.5	2.25	N/A	2.00	5.09	3.1	1.44	N/A	2.08	.28	0.87	7 lbs	
3/4"	D	0.75	2.25	N/A	2.00	5.09	3.1	1.44	N/A	2.08	.28	1.08	7 lbs	
1"	Е	1	2.38	3.75	2.23 8.03		4	1.67	4.25	2.56	.38	1.34	10.5 lbs	
1 1/2"	G	1.5	3.25	5	3.13	11.56	5.53	2.22	5	3.41	.38	1.93	26.8 lbs	
2"	Н	2	3.75	5.75	3.71	11.56	6	2.7	6	3.45	.38	2.42	40.5 lbs	
3"	К	3	6	8.25	5.45	N/A	N/A	3.75	7.5	N/A	.44	3.55	100 lbs	
4"	L	4	N/A	9.5	6.63	N/A N/A		4.88	9	N/A	N/A	N/A	214 lbs	
					* Ge	ar Operato	r recomme	nded for 4"	Valves					

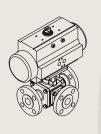
### **ACTUATED DIMENSIONS**

Unit of measure = inches

Dimensions based on actuators used with V-TEF® seats







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80 PSI Double Acting						60	) PSI I	Double	e Actin	g	8	0 PSI	Spring	Retur	'n	60 PSI Spring Return						
Size	L	М	N	Р	R	L	М	N	Р	R	L	М	N	Р	R	L	М	Ν	Р	R		
1/2"	4.45	2.8	6.88	1.61	1/8	4.45	2.8	6.88	1.61	1/8	8.27	3.72	7.59	2.07	1/8	9.47	4.17	8.14	2.3	1/8		
3/4"	4.45	2.8	6.88	1.61	1/8	4.45	2.8	6.88	1.61	1/8	8.27	3.72	7.59	2.07	1/8	9.47	4.17	8.14	2.3	1/8		
1"	8.27	3.72	9	2.07	1/8	8.27	3.72	9	2.07	1/8	10.83	4.84	10	2.68	1/4	13.11	5.39	11.4	2.87	1/4		
1 1/2"	13.11	5.39	13.58	2.87	1/4	13.11	5.39	13.58	2.87	1/4	14.65	5.83	13.06	3.15	1/4	17.13	6.46	14.95	3.44	1/4		
2"	13.11	5.39	14	2.87	1/4	13.11	5.39	14	2.87	1/4	14.65	5.83	13.48	3.15	1/4	17.13	6.46	15.38	3.44	1/4		
3"	13.11	5.39	15.67	2.87	1/4	14.65	5.83	14.5	3.15	1/4	19.69	7.36	18	3.9	1/4	22.78	8.58	20.25	4.29	1/4		
4"	22.78	8.58	22.25	4.29	1/4	22.78	8.58	22.25	4.29	1/4	22.78	8.58	22.25	4.29	1/4	26.46	11.42	27	5.71	1/4		

