



Breakthrough
engineering for
a better world

Process Automation

IMI PBM

CS Cast Series 9 CS Forged Series 8 Size 1/4" to 6"

Igenix® Clean Steam Ball Valves

Design Features

- Unique Adjust-O-Seal® feature allows in-line valve adjustment to compensate for normal wear
- CS Series Clean Steam Valves have O-Rings
- Valves are three-piece "swing out" body design with different sanitary end connections available
- Upstream/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
- Forged and Cast Valves are low controlled ferrite
- True Bore® (valve bore same as connecting tubing) (except 1/4" & 3/8" sizes)
 - no puddling (except 1/4" to 3/8")
- ASME BPE compliant (except when supplied with cavity fillers)
- Valves are rated for full vacuum
- Valves have blowout proof stem
- Standard Live Loaded Stem
- Optional purge port, milled ball flats or drain holes in ball allow inline CIP to prevent clogging and plug formation
- Self-Flushing Ball and V-Ball options available
- Valves are designed, assembled and tested at our factory in the U.S.
- V-TEF™ and S-TEF® seats and dseals are FDA Compliant and USP Class VI
- Material Test Report (MTRs) provided for wetted components
- Surface finishes are achieved without the use of Animal Derived Ingredients (ADI) - ADI free

CV Values (gpm), Series 8/Series 9		
Size	End Connections	
	F-	X-
1/4"	1.5	1.9
3/8"	4.4	5.4
1/2"	6.5	8
3/4"	23	28
1"	55	65
1 1/2"	160	193
2"	365	420
2 1/2"	700	800
3"	900	1,040
4"	1,800	2,080
*6"	4,200	5,000
*6" is Series 9 Only		

316L S/S Pressure Ratings at Ambient (PSIG)		
Size	Series 8	Series 9
1/4"	600	900
3/8"	600	900
1/2"	600	900
3/4"	600	900
1"	600	900
1 1/2"	600	900
2"	600	720
2 1/2"	600	720
3"	600	720
4"	600	720
*6"	N/A	250

ID Surface Finish Ra Readings for Valves per ASME BPE		
Surface Finish	IMI PBM Polish Code	μ-in.
Mechanical Polish		
SF 1	A	20
SF 2	A	25
SF 3	-	30
Mechanical Polish & Electropolish		
SF 4	G	15
SF 5	F	20
SF 6	F	25

SPECIFICATIONS

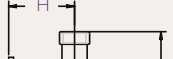
Igenix® CS Series 8 & 9 Sanitary 2-Way Ball Valves

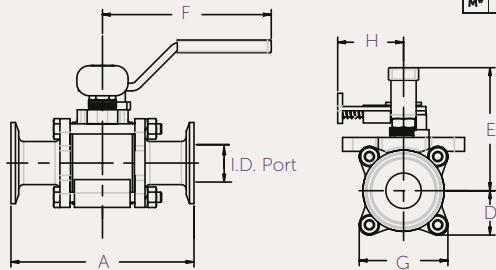
Sizes	1/4" to 6" Series 9 - 1/4" to 4" Series 8
Material	Low ferrite cast and forged 316L material. Castings (Series 9) comply with A351, Alloy CF3M and/or A479, Alloy S31603. Forgings (Series 8) comply with A182, Alloy F316L/1.4404 and/or A479, Alloy S31603, others available
End Connections	Extended BW tube, hygienic clamp, (Compression Ends Product Bulletin), others available
Seats, Seals & Stem Packings	V-TEF™ and S-TEF® - others available
O-Rings	O-Ring Seal (FKM V1274-75/80, EPDM E3609-70, others available)
Body Bolts & Nuts	18-8 Stainless Steel standard, special bolting optional
Maximum Working Pressure	See table above
Temperatures	-20°F to 450°F depending on seat and seal material
Finish	Standard internal finish of 20 Ra ID Series 8 (SF1), 30 Ra ID Series 9 (SF3), other finishes available



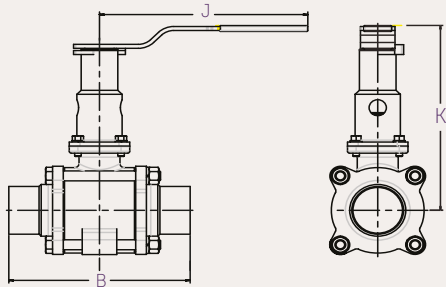
How To Order:
pbmvalve.com/build-a-part-number

PRODUCT (1-2) MATERIAL (3-4)		SIZE (5) SERIES (6)		END CONNECTION (7-8)		SEAT/SEAL/CAVITY FILLER (9)		PURGE PORT BALL OPTIONS (10-11)		BALL / STEM OPTIONS (12)		OPERATOR (13-14)		POLISH OPTIONS (15)		MISC OPTIONS (16)	
CS	HF	F316L Forged Low Ferrite F316L / DIN 1.4404 (Series 8)		A	1/4"	8	F - Ext. Butt weld for Tube	G	V-TEF™ Seats / Seals FKM O-Rings	- -	No Purge Port or Ball Option	-	W/ Standard Lever Handle	-	30 Ra ID (Std. Series 9)	-	No Options Selected
	HL	316L Cast CF3M Low Ferrite (Series 9)		B	3/8"	9	FX Ext. Butt weld for Tube by Hygienic Clamp	J	V-TEF™ Seats / Seals / VTFE Cav Fill / FKM O-Rings	- 8	Self Flushing Ball	02	W/O Handle W/ Stem Actuator Prep	A	20 Ra ID (Std. Series 8)	L	Cleaned for O2 Service
	C-	Hastelloy C-276		C	1/2"		X- Hygienic Clamp	Z	V-TEF™ Seats / Seals EPDM O-Rings	- V	Slotted V-Ball	03	W/ Handle & Stem Actuator Prep	D	15 Ra ID		A193/A194 Body Bolting & Clean for O2 Service
	Y-	Hastelloy C-22		D	3/4"		G- Female Cherry Burrell			- W	30° V-Ball	04	Locking Lever Handle	E	10 Ra ID	M	
	P-	AL6XN		E	1"		H- Male Cherry Burrell	2	V-TEF™ Seats / Seals / VTFE Cav Fill / EPDM O-Rings	- X	45° V-Ball	G	17-4PH Stem	08	Gear Operator (Req'd for 6")	F	20 Ra ID after Electro Polish
Other material options available - Contact IMI PBM Note: HF Forged Material is Series 8 Only				G	1-1/2"					- Y	60° V-Ball		10	Manual Spring Return Handle			
				H	2"			H	S-TEF® Seats / Seals FKM O-Rings	- K	Vent Hole Downstream		16	Extended Stem w/Lockable Lever Handle - Standard	G	15 Ra ID after Electro Polish	Note: A193/A194 Body Bolting must be selected for CRN Compliance.
				J	2-1/2"					- 9	Vent Hole Upstream		18	Extended Stem w/Lockable Lever Handle - Long	H	10 Ra ID after Electro Polish	
				K	3"			0	S-TEF® Seats / Seals EPDM O-Rings				20	DA 80psig actuator			More polish options available - Contact IMI PBM
				L	4"			9	V-TEF™ Seats / Seals FEP Encapsulated FKM O-Rings	Other Purge Port & Ball Options - Contact IMI PBM			27	DA 60psig actuator			
				M*	6"					Other seat/seal options available - Contact IMI PBM			34	SR 80psig actuator			
													41	SR 60psig actuator			
																	Other operator options available such as electric actuators - Contact IMI PBM





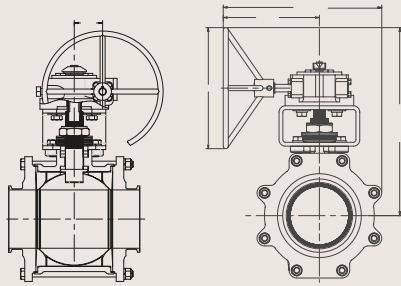
2-WAY VALVE W/LOCKING HANDLE



2-WAY VALVE W/EXT STEM
W/LOCKABLE HANDLE

2-Way Sanitary Dimensioned Valves in Inches										Locking Handle		Extended Lockable Handle		
Valve Size	Size Code	I.D. Port	A	B	D	E	F	G	~Wt (lbs)	H	Hole Dia. for Lock	J	K	Hole Dia. for Lock
1/4"	A	0.18	3.50	5.50	0.75	2.05	4.00	1.50	1.10	1.55	0.28	5.09	4.00	0.31
3/8"	B	0.31	3.50	5.50	0.75	2.05	4.00	1.50	1.10	1.55	0.28	5.09	4.00	0.31
1/2"	C	0.37	3.50	5.50	0.75	2.05	4.00	1.50	1.10	1.55	0.28	5.09	4.00	0.31
3/4"	D	0.62	4.00	6.00	0.85	2.23	4.00	1.68	1.40	1.55	0.28	5.09	4.14	0.31
1"	E	0.87	4.50	6.50	1.09	3.01	4.15	2.18	2.70	1.62	0.25	5.09	5.44	0.31
1 1/2"	G	1.37	5.50	7.50	1.68	5.02	8.81	3.31	8.90	2.57	0.38	8.00	7.46	0.31
2"	H	1.87	6.25	8.00	2.15	4.47	8.03	4.30	15.0	2.57	0.38	8.00	7.74	0.31
2 1/2"	J	2.37	8.00	11.50	2.79	6.51	12.06	5.58	36.0	3.47	0.38	12.06	9.36	0.31
3"	K	2.87	8.00	10.50	2.78	6.77	12.06	5.58	33.0	3.47	0.38	12.06	9.61	0.38
4"	L	3.83	10.00	13.00	3.66	7.53	12.06	7.33	67.0	3.47	0.38	12.06	10.38	0.38
*6"	M	5.78	13.00	17.00	6.18	N/A	N/A	12.37	164.0	N/A	N/A	N/A	N/A	N/A

*6" is Series 9 Only

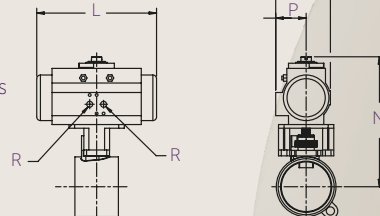


2-WAY VALVE W/GEAR OPERATOR
[6" ONLY]

ACTUATED DIMENSIONS

Unit of measure = inches

Dimensions based on actuators
used with V-TEF® seats



Find out more
pbmvalve.com

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
1/4"	5.55	2.80	5.45	1.61	1/8 NPT	6.46	3.17	5.90	1.77	1/8 NPT	5.55	2.80	5.45	1.61	1/8 NPT
3/8"	5.55	2.80	5.45	1.61	1/8 NPT	6.46	3.17	5.90	1.77	1/8 NPT	5.55	2.80	5.45	1.61	1/8 NPT
1/2"	5.55	2.80	5.45	1.61	1/8 NPT	6.46	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	4.85	10.16	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
2 1/2"	13.11	5.39	13.48	2.87	1/4 NPT	14.65	5.83	13.96	3.15	1/4 NPT	13.11	5.39	13.48	2.87	1/4 NPT
3"	14.65	5.83	14.21	3.15	1/4 NPT	16.85	6.46	15.10	3.44	1/4 NPT	13.11	5.39	13.73	2.87	1/4 NPT
4"	16.85	6.46	15.86	3.44	1/4 NPT	19.69	7.36	16.80	3.94	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	22.46	11.42	27.74	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
2.50	4.00	8.88
3.00	4.08	8.88
4.00	4.35	9.12