



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

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

\*6" is Series 9 Only

### 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 / O-RING (9)		PURGE PORT BALL OPTIONS (10-11)		BALL / STEM OPTIONS (12)		OPERATOR (13- 14)		POLISH OPTIONS (15)			
CS	F316L Forged Low Ferrite F316L / DIN 1.4404 (Series 8)	C	1/2"	8	F-	Ext. Butt weld for Tube	G	V-TEF™ Seats / Seals FKM O-Rings	--	No Purge Port or Ball Option	-	Standard Ball and Stem	--	W/ Standard Lever Handle	-	0.75 Ra ID (Std. Series 9)		
		D	3/4"	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	F	Internal / External Grounding	02	W/O Handle W/ Stem Actuator Prep	A	0.50 Ra ID (Std. Series 8)		
HL	316L Cast CF3M Low Ferrite (Series 9)	E	1"	X-	Hygienic Clamp	Z	V-TEF™ Seats / Seals EPDM O-Rings	-V	Slotted V-Ball	G	17-4PH Stem	04	Locking Lever Handle	D	0.375 Ra ID			
		G	1-1/2"													08	Gear Operator (Req'd for 6")	E
		H	2"	16												Extended Stem w/Lockable Handle (1/4" - 4")	F	0.50 Ra ID after Electro Polish
		J	2-1/2"	20												DA 80psig actuator	G	0.375 Ra ID after Electro Polish
		K	3"	27												DA 60psig actuator		
		L	4"	34												SR 80psig actuator	H	0.25 Ra ID after Electro Polish
M	6"*	41	SR 60psig actuator															

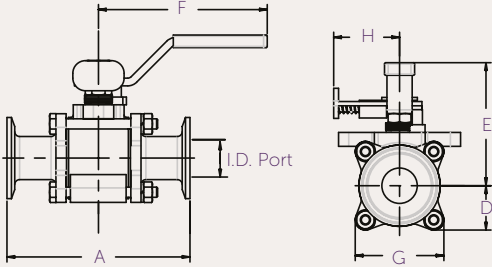
\*Not available in forged

Other Purge Port & Ball Options - Contact IMI PBM

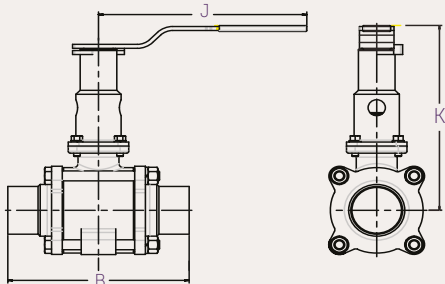
Other Seat/seal options available - Contact IMI PBM

Other operator options available - Contact IMI PBM

More polish available - Contact IMI PBM



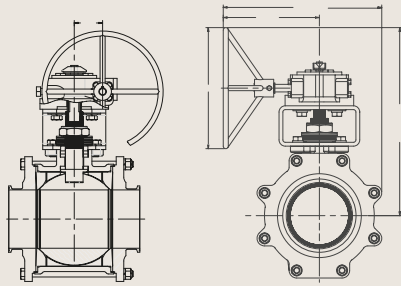
2-WAY VALVE W/LOCKING HANDLE



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

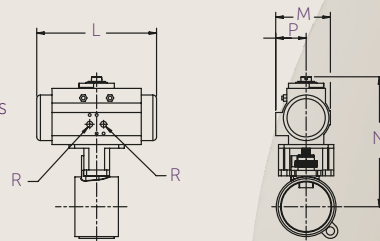
\*6" is Series 9 Only



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

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
1/4"	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

The information in this brochure is provided for informational/promotional purposes only and is "as is" and without warranties of any kind whether express or implied, including, but not limited to implied warranties of satisfactory quality, fitness for a particular purpose and/or correctness. Any specifications, features, pricing, or availability contained in this bulletin are subject to change without prior notice. IMI Critical ENGR PBM LLC does not represent or warrant that the information and/or specification in this bulletin are accurate, complete, or current and therefore make no warranties or representation regarding the use of the content. IMI plc or one of its subsidiaries own all images, logos, product brands and trademarks mentioned in this bulletin. Unauthorized use, reproductions or modification of this content is prohibited. © Copyright 2024, IMI Critical ENGR PBM LLC. PB-C589-RB. All Rights Reserved.

