



Breakthrough  
engineering for  
a better world

# Process Automation

IMI PBM

## VC & HC Series Size 1/2" to 4"



# Sanitary Check Valves

### Design Features

- Check Valves use no internal springs nor guides
- Vertical and Horizontal Valves are split body design using sanitary clamp and USP Class VI gasket
- All materials are FDA compliant
- Elastomers are USP Class VI compliant
- Extended Butt weld in 316L material has 0.005 to 0.017% sulfur control
- Valve body includes marking designating direction of flow
- Applications are liquid, low pressure steam
- Report (MTRS) provided for wetted components
- Surface finishes are achieved without the use of Animal Derived Ingredients (ADI)

CV Values (gpm)		
Size	Vertical/Horizontal	
1/2"	DN 15	2.3
3/4"	DN 20	6.2
1"	DN 25	13
1 1/2"	DN 40	2
2"	DN 50	51
2 1/2"	DN 65	72
3"	DN 80	5
4"	DN 100	170

Component	Material	Specification
Body / End	316L Stainless Steel	Bar Stock: A479, S31603
	Hastelloy® C276	Bar Stock: B574, N10276
	AL6XN®	Bar Stock: B691, N08367
	Hastelloy® C22	Bar Stock: B574, N06022
Poppet	PTFE	Virgin PTFE, USP Class VI
Body Clamp Gasket	Viton, PTFE, EPDM	USP Class VI
Body Clamp	304 Stainless Steel	CF8 or F304

TESTING MAXIMUM ALLOWABLE LEAKAGE RATES			
Size		PTFE Poppet	
1/2", 3/4", 1"	DN 15, 20, 25	5 drops/min @3 psi (.2 bar)	
1-1/2"	DN 40	8 drops/min @3 psi (.2 bar)	
2"	DN 50	10 drops/min @3 psi (.2 bar)	
2-1/2" - 3"	DN 65, 80	15 drops/min @3 psi (.2 bar)	
4"	DN 100	20 drops/min @3 psi (.2 bar)	
Component	ID Finish	OD Finish	Type
Body, End*	20 Ra max	63 Ra max	Standard finish, Mechanical
PTFE poppet	-	-	Standard finish, Mechanical

\*Optional finer finishes and electropolish available

### SPECIFICATIONS

Sizes  
Material  
Temperatures  
End Connections  
Cold Working Pressure  
Maximum Working Pressure  
Crack Pressure  
Polish

### VC & HC CHECK VALVES

1/2" to 4"  
316L, Hastelloy™ C276/22, AL6XN™ and others  
-10°F to 300°F  
Sanitary Clamp or Extended Butt weld for U.S. gauge tubing  
Up to 2" (full vacuum to 235 psig), 2 1/2" to 3" (full vacuum to 150 psig), 4" (full vacuum to 100 psig)  
Rated up to 300°F saturated steam at 55 psig  
0.1 psig, 1/2" to 2", 0.24 psig, 2 1/2" to 4"  
Standard internal polish of 20 Ra or better

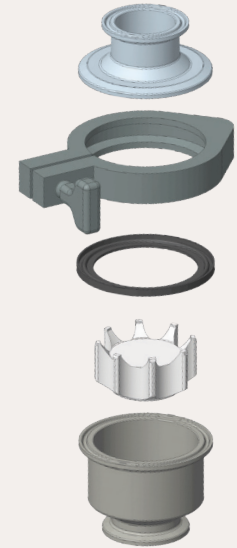
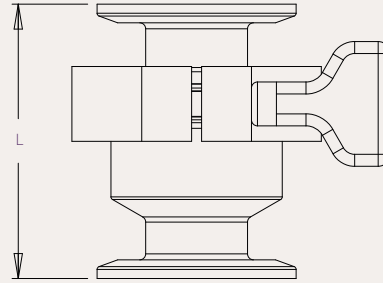


How To Order:  
pbmvalve.com/build-a-part-number

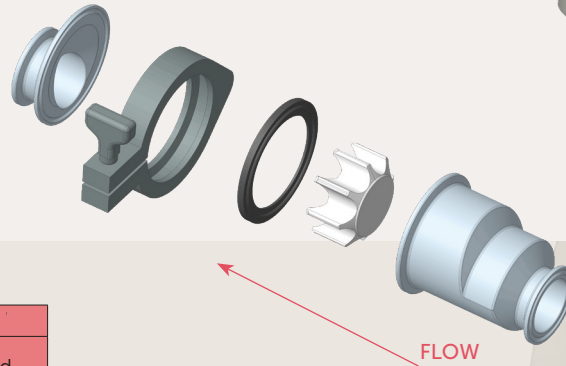
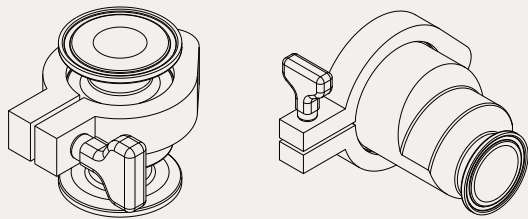
PRODUCT (1-2)	MATERIAL (3-4)	SIZE (5)	UPSTREAM END CONNECTION (6)	DOWNSTREAM END CONNECTION (7)	POPPET & GASKET (8)	POLISH (MECH. UNLESS NOTED) (9)	MISCELLANEOUS (10)	
HC	HORIZONTAL CHECK VALVE	HL 316L Stainless	C 1/2"	F Ext tube butt weld	- Same as Upstream	C PTFE / PTFE	A 20Ra ID (STD)	- No Options
		C Hastelloy C-276	D 3/4"	X clamp - tube	F Ext tube butt weld	S PTFE / FKM	B 32Ra OD	L LOX cleaning per PBM Procedure
VC	VERTICAL CHECK VALVE	Y- Hastelloy C-22	E 1"		X clamp - tube	T PTFE / EPDM	C 20Ra ID / 32Ra OD	
		P- AL6XN	G 1-1/2"				D 15Ra ID	
		*Other Materials available	H 2"				E 10Ra ID	
			J 2-1/2"				F 20Ra ID after EP	
			K 3"				G 15Ra ID after EP	
			L 4"				H 10Ra ID after EP	
							I 5Ra ID	
							K 5Ra ID / 32Ra OD	
							L 20Ra ID / 32Ra OD / EP	
							M EP ID & OD	
							N 10Ra ID / 32Ra OD	
							O 15Ra ID / 32Ra OD / EP	
							Q 15Ra ID / 32Ra OD	
							S 10Ra ID / 32Ra OD / EP	

### VERTICAL CHECK VALVES

Valve Size	ID		OD Butt weld Ends		L			
	IN	MM	IN	MM	X- Clamp		F- Weld	
					IN	MM	IN	MM
1/2" DN 15	0.37	9.4	0.50	12.7	2.25	57.2	5.25	133.4
3/4" DN 20	0.62	15.7	0.75	19.1	2.50	63.5	5.50	139.7
1" DN 25	0.87	22.1	1.00	25.4	2.75	69.9	5.75	146.1
1 1/2" DN 40	1.37	34.8	1.50	38.1	3.50	88.9	6.50	165.1
2" DN 50	1.87	47.5	2.00	50.8	4.00	101.6	7.00	177.8
2 1/2" DN 65	2.37	60.2	2.50	63.5	6.50	165.1	10.00	254
3" DN 80	2.87	72.9	3.00	76.2	6.50	165.1	10.00	254
4" DN 100	3.83	97.3	4.00	101.6	7.50	190.5	11.50	292.1



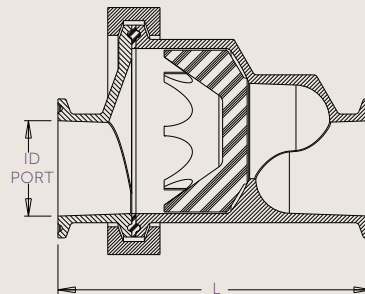
FLOW



FLOW

### HORIZONTAL CHECK VALVES

Valve Size	ID		OD Butt weld Ends		L			
	IN	MM	IN	MM	X- Clamp		F- Weld	
					IN	MM	IN	MM
1/2" DN 15	0.37	9.4	0.50	12.7	2.75	69.9	5.75	146.1
3/4" DN 20	0.62	15.7	0.75	19.1	3.50	88.9	6.50	165.1
1" DN 25	0.87	22.1	1.00	25.4	3.50	88.9	6.50	165.1
1 1/2" DN 40	1.37	34.8	1.50	38.1	4.50	114.3	7.50	190.5
2" DN 50	1.87	47.5	2.00	50.8	5.50	139.7	8.50	215.9
2 1/2" DN 65	2.37	60.2	2.50	63.5	9.50	241.3	13.00	330.2
3" DN 80	2.87	72.9	3.00	76.2	9.50	241.3	13.00	330.2
4" DN 100	3.83	97.3	4.00	101.6	11.00	279.4	15.00	381.0



Find out more  
pbmvalve.com

