

PVC and CPVC True Union Ball Check, Foot, and Vent Valves

Chemtrol Figure Numbers									
Type Valve	End Conn	Elastomeric Trim	Materials						
			PVC	CPVC					
	Soc.	FKM EPDM	U45BC-V ¹ U45BC-E ¹	U51BC-V ¹ U51BC-E ¹					
Ball Check Valve	Thd.	FKM EPDM	U45BC-V ¹ U45BC-E ¹	U51BC-V ¹ U51BC-E ¹					
	Flgd.	FKM EPDM	F45BC-V F45BC-E	F51BC-V F51BC-E					

^{1 1/2&}quot;-2" PVC and CPVC TU ball check figures are supplied with universal connection components (i.e., a set of both socket and threaded end connectors). For 3" and 4" sizes of PVC and CPVC BC valves, replace U in the figure no. with S or T for socket or threaded units respectively.

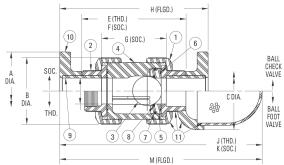
Construction Materials								
Compone	ents ¹	PVC	CPVC					
1. Union N	ut	PVC	CPVC					
2. End Con	nector	PVC CPV						
3.Ball	 Standard for Check or Foot Valve 	PVC CPVC						
	 Floater Ball for Vent Valve² 	Ive ² Natural PP Floater Bal						
4. Body ¹		PVC	CPVC					
5. C.V. Sea	t-Carrier	PVC CPVC						
6. O-ring ³	Body & Carrier; End Seal	FKM or EPDM						
7. 0-ring ³	Seat-Carrier, OD Seal	FKM or EPDM						
8. 0-ring ³	Seat Seal	FKM or EPDM						
9. Plain En	d Pipe Nipple for Flanged Valve	PVC CPVC						
10. Flange	-Socket for Flanged Valve	PVC CPVC						
11. Foot Va	alve Screen Housing Assembly ⁴	PVC	CPVC					

- 1 All components except valve bodies are available as replacement parts.
- 2 Gravity ball check valves are converted to vent valves by replacing the standard ball with a floater ball and inverting the valve at installation—with seat up.
- 3 Each replacement 0-ring kit contains all the 0-rings required to refurbish any True Union Check or Ball Valve (regardless of model or style), or a minimum of two pipe unions.
- 4 Gravity ball check valves are converted to foot valves by replacing the union nut and end connector on the receiving end seat end of the body with an F.V. screen housing assembly.

Features

- Rated at 150 psi with non-shock service at 73°F.
- Gravity ball check may be converted for air or gas venting by replacement of standard ball with natural polypropylene floater ball. Then install valve upside down for fluid to lift ball into seat.
- For foot valve, replace inlet end connection with a foot valve screen housing assembly.
- Free oscillation of ball in guide ribs facilitates full port flow with minimum turbulence and chatter.
- Equally effective in checking back flows from head pressure on the discharge or suction sides of pump.





Maximum Operating Pressure (psi) vs. Temperature									
"Operating Temperature (F)"	PVC	CPVC							
100	150	150							
110	135	140							
120	110	130							
130	75	120							
140	50	110							
150	N.R.	100							
160	N.R.	90							
170	N.R.	80							
180	N.R.	70							
190	N.R.	60							
200	N.R.	50							
250	N.R.	N.R.							
280	N.R.	N.R.							

N.R. - Not recommended

Dimensions ¹ –Weights ³ –Fluid Flow Coefficients																
	Ball Check/Foot			Ball Check Valve			Ball Foot Valve				Seating Head Ft – H ₂ 0		Fluid Flow Coefficient			
Valve			0	_	E	F	G	H	Approx. ²	J	K	_ M	Approx.3			
Size	A	В	С	D	Thd.	Soc.	Soc.	Flgd.	Wt. Lbs.	Thd.	Soc.	Flgd.	Wt. Lbs	Vert.	Horiz.	C _v 3
1/2	3.50	1.98	2.63	0.50	3.94	4.13	2.36	6.27	0.42	6.13	6.19	7.25	0.23	6	7	5
3/4	3.88	2.44	2.63	0.75	4.65	5.02	3.00	7.38	0.72	6.88	7.13	8.25	0.29	6	7	10
1	4.26	2.83	3.63	1.00	5.08	5.40	3.12	7.99	1.05	8.13	8.25	9.63	0.37	4	5	19
1 1/4	4.62	4.08	5.50	1.25	6.38	6.75	4.22	9.65	2.46	11.13	11.25	12.75	1.34	4	5	37
1 1/2	5.00	4.08	5.50	1.50	6.38	6.99	4.21	10.18	2.62	11.13	11.50	13.13	1.34	4	5	56
2	6.00	5.23	5.50	2.00	7.36	8.02	4.99	11.45	4.76	11.75	12.13	13.75	1.88	4	5	101
3	7.50	7.17	5.50	3.00	9.98	9.98	6.17	14.22	9.21	13.38	13.38	15.63	3.00	3	4	251
44	9.00	7.17	5.50	3.00	20.76	20.76	16.20	16.14	14.18	18.50	18.50	16.25	3.00	3	4	251

¹ Foot valve screen housing assemblies are available for the field conversion of PVC and CPVC TU ball check valves in sizes 1/2" - 4".

² Weights shown for ball valve figures are PVC threaded models. For an approximation of CPVC check valve weights, the PVC weight may be multiplied by factor of 1.123. Weights shown for foot valves are actually those for PVC F.V. screen housing assemblies. So, the weight for a CPVC F.V. screen housing assy. may be found by multiplying the PVC weight by the 1.123 factor. These must be added to check valve weight for full foot valve weight.

³ C_v values are based on the basic valve laying length (G).

⁴ The 4" PVC and CPVC check valves are fabricated by solvent cementing either reducing flanges or reducing couplings onto the ends of a 3" valve with plain-end nipples.