

True Union Ball Check, Foot, and Vent Valves PVC/CPVC/Polypropylene (PP)/Kynar (PVDF)

150 psi at 73°F water—non-shock

Features

- True Union connections permit removal of valve with no disruption of connected piping. Union connections are also interchangeable with the family of TU ball valves and pipe unions.
- Gravity ball check may be converted for air or gas venting by replacement of standard ball with floater PP ball. Then install valve upside down for fluid to lift ball into seat.
- For foot valve, replace inlet end connection with an F. V. 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.



Valve Construction

Components ¹	Valve Types					
	TUBC PVC	TUBC CPVC	TUBC Black PP	TUBC Nat. PP	TUBC Red PVDF	TUBC Nat. PVDF
1. Union Nut	PVC	CPVC	Black PP	Nat. PP	Red PVDF	Nat. PVDF
2. End Connector – Socket (2 required) – or Thread (2 required)	PVC	CPVC	Black PP	Nat. PP	Red PVDF	Nat. PVDF
	PVC	CPVC	Black PP	Nat. PP	Red PVDF	Nat. PVDF
3. Ball – Standard for Check or Foot Valve – Floater Ball for Vent Valve ²	PVC	CPVC	Nat. GBPP ⁵		Nat. PVDF	
	Use Natural PP Floater Ball to Replace Standard Ball in Any Valve Type					
4. Body ¹	PVC	CPVC	Black PP	Nat. PP	Red PVDF	Nat. PVDF
5. C.V. Seat-Carrier	PVC	CPVC	Nat. PP		Nat. PVDF	
6. O-ring ³ Body & Carrier; End Seal (2 required)	FPM ⁶ or EPDM		FPM ⁶			
7. O-ring ³ Seat-Carrier, OD Seal	FPM ⁶ or EPDM		FPM ⁶			
8. O-ring ³ Seat Seal	FPM ⁶ or EPDM		FPM ⁶			
9. Plain End Pipe Nipple for Flanged Valve (2 required)	PVC	CPVC	Black PP	Nat. PP	Red PVDF	Nat. PVDF
10. Flange–Socket for Flanged Valve (2 required)	PVC	CPVC	Black PP	Nat. PP	Red PVDF	Nat. PVDF
11. Foot Valve Screen Housing Assembly ⁴	PVC	CPVC	NA			

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 O-ring kit contains all the O-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.

5 Polypropylene, filled with glass micro-beads, is known as GBPP.

6 FPM is also known as FKM. These seals are molded from Viton or Fluorel brands of rubber.

Dimensions¹—Weights³—Fluid Flow Coefficients

Valve Size	Ball Check/Foot				Ball Check Valve ²					Ball Foot Valve ²			Seating Head Ft – H ₂ O		Fluid Flow Coefficient	
	A	B	C	D	E Thd.	F Soc.	G Soc.	H Flgd.	Approx. ² Wt. Lbs.	J Thd.	K Soc.	M Flgd.	Approx. ³ Wt. Lbs.	Vert.	Horiz.	C _v ⁴
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 ⁵	6.75 ⁵	4.22 ⁵	9.65 ⁵	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
4 ⁶	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 Dimensions shown are for PVC and CPVC. Due to molding shrinkage the dimensions for PP and PVDF would be somewhat less, and the end-to-end length of threaded equals socket valves.

2 Foot valve screen housing assemblies are available for the field conversion of PVC and CPVC TU ball check valves in sizes 1/2" - 4". F.V. assemblies are not available for PP or PVDF valves in any size, and the PP and PVDF check valves are available in sizes 1/2" - 2" only.

3 Weights shown for ball valve figures are PVC threaded models. For an approximation of CPVC, PVDF, and PP check valve weights the PVC weight may be multiplied by factors of 1.123, 1.275, or 0.656 respectively. 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.

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

5 PVDF pipe, fittings, and valves are not available in the 1 1/4" size. The 1 1/4" PP threaded check valve is available, but the socket and flanged styles are not available in this size.

6 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.

Do not use or test the products in this catalog with compressed air or other gases. See Chemtrol Chem-Aire® literature for information about shatter-resistant thermoplastic piping systems specifically designed for compressed air and other gases.