

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

### Chemtrol Figure Numbers

| Type Valve       | End Conn | Elastomeric Trim | Materials            |                      |
|------------------|----------|------------------|----------------------|----------------------|
| Ball Check Valve |          |                  | PVC                  | CPVC                 |
|                  | Soc.     | FKM<br>EPDM      | U45BC-V¹<br>U45BC-E¹ | U51BC-V¹<br>U51BC-E¹ |
|                  | Thd.     | FKM<br>EPDM      | U45BC-V¹<br>U45BC-E¹ | U51BC-V¹<br>U51BC-E¹ |
|                  | Flgd.    | FKM<br>EPDM      | F45BC-V<br>F45BC-E   | F51BC-V<br>F51BC-E   |

1 1/2"–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.

### 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.



### Construction Materials

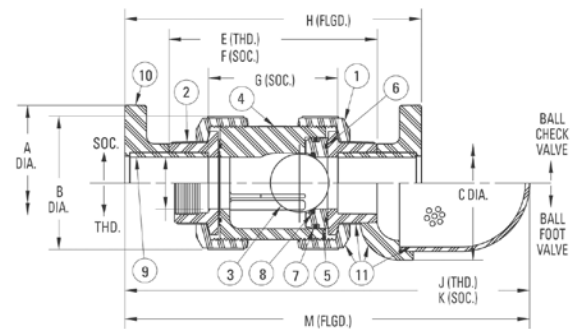
| Components¹                                | PVC                                | CPVC                    |
|--------------------------------------------|------------------------------------|-------------------------|
| 1. Union Nut                               | PVC                                | CPVC                    |
| 2. End Connector                           | PVC                                | CPVC                    |
| 3. Ball                                    | PVC                                | CPVC                    |
|                                            | – Standard for Check or Foot Valve | Natural PP Floater Ball |
| 4. Body¹                                   | PVC                                | CPVC                    |
|                                            | – Floater Ball for Vent Valve²     |                         |
| 5. C.V. Seat-Carrier                       | PVC                                | CPVC                    |
| 6. O-ring³ Body & Carrier; End Seal        | FKM or EPDM                        |                         |
| 7. O-ring³ Seat-Carrier, OD Seal           | FKM or EPDM                        |                         |
| 8. O-ring³ Seat Seal                       | FKM or EPDM                        |                         |
| 9. Plain End Pipe Nipple for Flanged Valve | PVC                                | CPVC                    |
| 10. Flange–Socket for Flanged Valve        | PVC                                | CPVC                    |
| 11. Foot Valve Screen Housing Assembly⁴    | 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 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.



### Dimensions¹–Weights³–Fluid Flow Coefficients

| Valve Size | Ball Check/Foot |      |      |      | Ball Check Valve |        |        |         |                   | Ball Foot Valve |        |         |                   | Seating Head Ft – H₂O |        | 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 <sub>v</sub> 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<sub>v</sub> 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.