

Ball Check & Foot Valves

The economical and versatile Chemline Ball Check Valve is the most popular type of non-return valves for pipe sizes under 6". A wide selection of body and seat materials, and end connections are available for many different applications. It has good flow capacity and will handle many slurry and suspended solid services. This valve works in both horizontal and vertical lines. The Foot Valve is for end of line services such as sumps.

True Union to 2"

NSF 61 Certified³

Full Port to 4" Size

Features

- **Built-in Union Design** – For easy installation and maintenance
- **Free Floating Ball** – The only moving part
- **Uniseat/Seal** – Easily removable
- **May be used either horizontally or vertically**
- **Excellent flow characteristics**
- **Low seating and opening pressures**



Foot Valve has large capacity strainer basket with 1/8" perforations



True Union Check
1/2" to 2" in all materials



Single Union Check
1/2" to 4" in PVC
2-1/2" to 4" in CPVC, PP and PVDF



CHEMLINE Plastics Limited

Your Pipeline To Quality

PVC, CPVC, PP, PVDF

SERIES: BT – True Union Check
 BC – Single Union Check
 FV – Single Union Foot Valve
 FT – True Union Foot Valve

SIZES: 1/2" – 4"

ENDS: Threaded, Socket, Flanged, Butt¹ or ChemFlare^{™2}

SEAT/SEALS: EPDM, FKM (Viton[®]), Teflon[®] coated FKM (Viton[®])

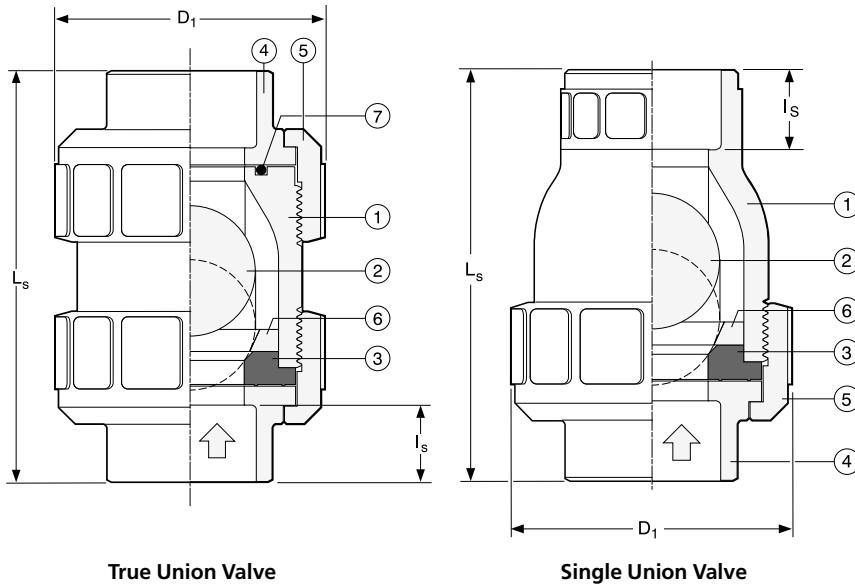


¹ PP and PVDF Butt fusion ends (available 1/2" to 2") connect to Chemline PP and PVDF piping systems.

² For ChemFlare[™] end connectors, consult Chemline.

³ PVC valves with EPDM or FKM (Viton[®]) seals are certified under NSF/ANSI Standard 61 for contact with drinking water.

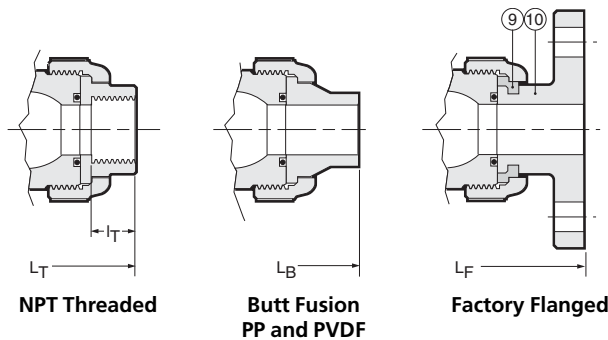
Ball Check Valves



True Union Valve

Single Union Valve

UNION END CONNECTIONS



NPT Threaded

Butt Fusion
PP and PVDF

Factory Flanged

PARTS

▲ Recommended Spare Parts

| No. | Part | Pcs. | T/U/S/U | Materials |
|-----|------------------|------|---------|--|
| 1 | Body | 1 | 1 | PVC, CPVC, PP, PVDF |
| 2 | Ball | 1 | 1 | PVC, CPVC, PP, PVDF |
| 3▲ | Uniseat/Seal* | 1 | 1 | EPDM, FKM(Viton®), Teflon® coated FKM (Viton®) |
| 4 | End Connector | 2 | 1 | PVC, CPVC, PP, PVDF |
| 5 | Union Nut | 2 | 1 | PVC, CPVC, PP, PVDF |
| 6 | Stop Ring | 1 | 1 | PVC, CPVC, PP, PVDF |
| 7 | Face O-Ring | 1 | 1 | EPDM, FKM(Viton®) |
| 9 | Flange Retainer† | 2 | 1 | PVDF |
| 10 | Factory Flange** | 2 | 1 | PVC, CPVC, PP, PVDF |

* Standard seals are EPDM in PVC, CPVC and PP valves, Teflon® coated FKM (Viton®) in PVDF valves. Coating is .002" thick.

† True Union: 2 pcs 1/2" to 2", 6 pcs 1-1/2" to 4"
Single Union: 1 pcs 1/2" to 2", 3 pcs 2-1/2" to 4".

** True Union flanged valves have two factory flanges. Single Union valves have one factory flange and one fabricated flange. Consult Chemline for details on fabricated type.

DIMENSIONS INCHES

WEIGHTS LB.

| Size | D ₁ | I _s | I _T | True Union | | | Single Union | | | True Union Socket or Butt | | | | Single Union | | | |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------|----------------|----------------|------|--------------|-----|------|-----|
| | | | | PVC & CPVC | | PP & PVDF | PVC | | | PVC | CPVC | PP | PVDF | PVC | | | |
| | | | | L _T | L _S | L _F | L _T | L _B | L _F | L _T | L _S | L _F | PVC | CPVC | PP | PVDF | PVC |
| 1/2" | 1.9 | 0.69 | 0.59 | 3.4 | 3.4 | 5.1 | 3.4 | 4.0 | 5.1 | 3.2 | 3.4 | 5.6 | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 |
| 3/4" | 2.4 | 0.72 | 0.67 | 4.1 | 3.9 | 6.1 | 4.1 | 4.4 | 6.1 | 3.8 | 3.7 | 6.6 | 0.5 | 0.5 | 0.3 | 0.6 | 0.4 |
| 1" | 2.8 | 0.88 | 0.79 | 4.5 | 4.4 | 6.5 | 4.5 | 4.8 | 6.5 | 4.2 | 4.3 | 7.3 | 0.7 | 0.8 | 0.4 | 0.9 | 0.6 |
| 1-1/4" | 3.1 | 0.94 | 0.87 | 5.0 | 4.9 | 6.6 | 5.0 | 5.9 | 6.6 | 6.2 | 6.3 | 12.3 | 1.1 | 1.2 | 0.7 | 1.5 | 1.5 |
| 1-1/2" | 3.7 | 1.09 | 0.98 | 5.9 | 5.9 | 7.6 | 5.9 | 5.8 | 7.6 | 5.6 | 5.7 | 9.1 | 1.6 | 1.7 | 1.0 | 2.0 | 1.3 |
| 2" | 4.2 | 1.16 | 1.10 | 7.0 | 6.8 | 8.4 | 7.0 | 6.5 | 8.4 | 6.5 | 6.5 | 10.5 | 2.2 | 2.4 | 1.4 | 2.7 | 1.8 |

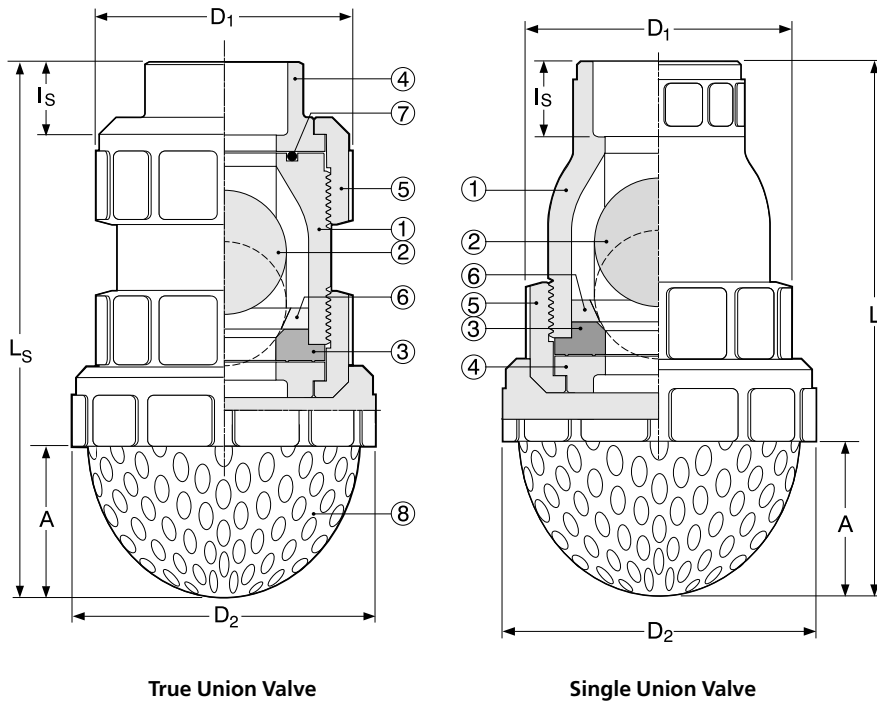
DIMENSIONS INCHES

WEIGHTS LB.

| Size | D ₁ | I _s * | I _T | Single Union | | | Single Union | | | | | | |
|--------|----------------|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------|------|-----|------|
| | | | | PVC & CPVC | | PP & PVDF | Single Union | | | | | | |
| | | | | L _T | L _S | L _F | L _T | L _B | L _F | PVC | CPVC | PP | PVDF |
| 2-1/2" | 6.0 | 2.10 | 2.17 | 10.0 | 10.4 | 14.3 | 8.7 | * | * | 5.7 | 6.2 | * | * |
| 3" | 6.0 | 1.88 | 1.38 | 8.7 | 9.6 | 12.2 | 8.7 | * | * | 5.1 | 5.5 | 3.3 | 6.3 |
| 4" | 8.3 | 2.00 | 1.77 | 12.1 | 12.2 | 15.0 | 12.1 | * | * | 12.7 | 13.9 | 8.1 | 15.7 |

* Consult Chemline.

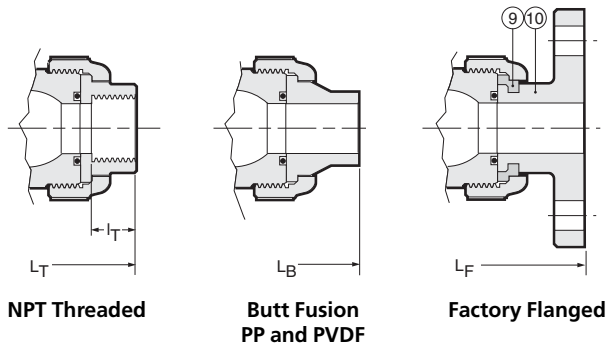
Ball Foot Valves



True Union Valve

Single Union Valve

END CONNECTIONS FOR TRUE UNION VALVE



NPT Threaded

Butt Fusion
PP and PVDF

Factory Flanged

PARTS

▲ Recommended Spare Parts

| No. | Part | Pcs. | T/U | S/U | Materials |
|-----|-------------------|------|-----|-----|--|
| 1 | Body | 1 | 1 | | PVC, CPVC, PP, PVDF |
| 2 | Ball | 1 | 1 | | PVC, CPVC, PP, PVDF |
| 3▲ | Uniseat/Seal* | 1 | 1 | | EPDM, FKM(Viton®), Teflon® coated FKM (Viton®) |
| 4 | End Connector | 2 | 1 | | PVC, CPVC, PP, PVDF |
| 5 | Union Nut | 2 | 1 | | PVC, CPVC, PP, PVDF |
| 6 | Stop Ring | 1 | 1 | | PVC, CPVC, PP, PVDF |
| 7 | Face O-Ring | 1 | 1 | | EPDM, FKM(Viton®) |
| 8 | Foot Valve Basket | 1 | 1 | | PVC, CPVC, PP, PVDF |
| 9 | Flange Retainer† | 3 | 0 | | PVDF |
| 10 | Factory Flange** | 1 | 0 | | PVC, CPVC, PP, PVDF |

* Standard seals are EPDM in PVC, CPVC and PP valves, Teflon® coated FKM (Viton®) in PVDF valves. Coating is .002" thick.

† True Union: 1 pc 1/2" to 2", 3 pcs 2-1/2" to 4".

** True Union valves have factory flanges. Single Union have fabricated flanges. Consult Chemline for details on fabricated type.

DIMENSIONS INCHES

WEIGHTS LB.

| Size | D ₁ | I _s Soc | I _T Thd | True Union CPVC | | | | | Single Union PVC | | | | | Single Union | |
|--------|----------------|-----------------------|-----------------------|-----------------|-----|----------------|----------------|----------------|------------------|-----|----------------|----------------|----------------|--------------|------|
| | | | | D ₂ | A | L _s | L _T | L _F | D ₂ | A | L _s | L _T | L _F | PVC Socket | |
| 1/2" | 1.9 | 0.69 | 0.59 | 2.4 | 1.0 | 4.0 | 3.9 | 4.8 | 2.4 | 1.2 | 4.8 | 4.5 | 5.8 | | 0.3 |
| 3/4" | 2.4 | 0.72 | 0.67 | 2.8 | 1.2 | 4.6 | 4.6 | 5.7 | 2.8 | 1.6 | 5.5 | 5.2 | 6.7 | | 0.4 |
| 1" | 2.8 | 0.88 | 0.79 | 3.7 | 1.4 | 5.2 | 5.2 | 6.3 | 3.7 | 1.9 | 6.3 | 5.6 | 7.6 | | 0.8 |
| 1-1/4" | 3.7 | 0.94 | 0.87 | 5.2 | * | * | * | * | 5.2 | 2.5 | 8.7 | 8.7 | 10.1 | | 1.8 |
| 1-1/2" | 3.7 | 1.09 | 0.98 | 5.2 | 1.8 | 6.8 | 6.8 | 7.7 | 5.2 | 2.5 | 8.4 | 8.3 | 9.9 | | 1.7 |
| 2" | 4.2 | 1.16 | 1.10 | 5.2 | 2.1 | 8.0 | 8.0 | 8.8 | 5.2 | 2.5 | 9.2 | 8.8 | 10.9 | | 2.1 |
| 2-1/2" | 6.0 | 2.10 | 2.17 | - | - | - | - | - | 8.3 | 4.6 | 14.8 | 15.0 | 18.8 | | 7.4 |
| 3" | 6.0 | 1.88 | 1.38 | - | - | - | - | - | 8.3 | 4.6 | 14.6 | 14.7 | 16.7 | | 7.1 |
| 4" | 8.3 | 2.00 | 1.77 | - | - | - | - | - | 10.1 | 5.4 | 18.1 | 18.1 | 20.5 | | 15.7 |

* Consult Chemline for dimensions.
For CPVC (2-1/2" to 4"), PP and PVDF Foot Valve lengths, consult Chemline.

Ball Check & Foot Valves



WORKING PRESSURES PSI

| Size | PVC | CPVC | | | | Polypropylene | | | PVDF | | | |
|--------|--------------------|--------------------|---------------|---------------|---------------|---------------------|---------------|---------------|----------------------|---------------|---------------|----------------|
| | 0-50°C 32-122°F | 0-50°C 32-122°F | 60°C 140°F | 80°C 176°F | 90°C 194°F | -20-30°C -4-90°F | 60°C 140°F | 80°C 176°F | -20-60°C -4-140°F | 80°C 176°F | 90°C 194°F | 100°C 212°F |
| 1/2" | 150 | 150 | 115 | 85 | 60 | 150 | 90 | 60 | 150 | 120 | 110 | 85 |
| 3/4" | 150 | 150 | 115 | 85 | 60 | 150 | 90 | 60 | 150 | 120 | 110 | 85 |
| 1" | 150 | 150 | 115 | 85 | 60 | 150 | 90 | 60 | 150 | 120 | 110 | 85 |
| 1-1/4" | 150 | 150 | 115 | 85 | 60 | 150 | 90 | 60 | 150 | 120 | 110 | 85 |
| 1-1/2" | 150 | 150 | 115 | 85 | 60 | 150 | 90 | 60 | 150 | 120 | 110 | 85 |
| 2" | 150 | 150 | 115 | 85 | 60 | 150 | 90 | 60 | 150 | 120 | 110 | 85 |
| 2-1/2" | 100 | 100 | 90 | 60 | 45 | 100 | 60 | 45 | 100 | 90 | 60 | 45 |
| 3" | 100 | 100 | 90 | 60 | 45 | 100 | 60 | 45 | 100 | 90 | 60 | 45 |
| 4" | 100 | 100 | 90 | 60 | 45 | 100 | 60 | 45 | 100 | 90 | 60 | 45 |

Maximum Temperatures: PVC 0 to 60°C (32 to 140°F), CPVC 0 to 95°C (32 to 203°F), PP -20 to 90°C (-4 to 194°F), PVDF -40 to 100°C (-40 to 212°F).

MINIMUM SEATING AND OPENING PRESSURE PSI

C_v VALVES

VACUUM RATING

| Size | Vertical Piping | | Horizontal Piping | | Check Valves |
|--------|-----------------|---------|-------------------|---------|--------------|
| | Open | Seating | Open | Seating | |
| 1/2" | 0.7 | 2.8 | 0.1 | 2.8 | 6.5 |
| 3/4" | 0.7 | 4.3 | 0.1 | 4.3 | 17. |
| 1" | 0.7 | 4.3 | 0.1 | 4.3 | 25. |
| 1-1/4" | 1.4 | 4.3 | 0.3 | 4.3 | 86. |
| 1-1/2" | 1.4 | 4.3 | 0.3 | 4.3 | 86. |
| 2" | 1.4 | 4.3 | 0.3 | 4.3 | 130. |
| 2-1/2" | 1.4 | 2.8 | 0.3 | 2.8 | 280. |
| 3" | 1.4 | 2.8 | 0.3 | 2.8 | 280. |
| 4" | 1.4 | 2.8 | 0.3 | 2.8 | 500. |

- 29.9 inches mercury

SAMPLE SPECIFICATION

– All Ball Check valves in PVC, CPVC, PP or PVDF shall be Chemline BT or BC Series or equal with EPDM [FKM (Viton®) or Teflon® coated FKM (Viton®)] seats and union ends. Sizes 1/2" to 2" shall be slip-out True Union style, sizes 2-1/2" to 4" shall be single union. The elastomer uniseat/seal shall function as both the ball seat and the union seal. Ball Check valves shall be rated 150 psi up to 2" and 100 psi for sizes 2-1/2" to 4".

ORDERING EXAMPLE

| | | | | | |
|---------------|--|---|-----|---|---|
| | BT | A | 020 | E | S |
| Valve Type | BT – True Union Ball Check BC – Single Union Ball Check FV – Single Union Foot Valve FT – True Union Foot Valve | | | | |
| Body Material | A – PVC C – CPVC B – PP K – PVDF | | | | |
| Size | 005 – 1/2" 007 – 3/4" 010 – 1" 012 – 1-1/4" 015 – 1-1/2" 020 – 2" 025 – 2-1/2" 030 – 3" 040 – 4" | | | | |
| Seals | E – EPDM V – FKM (Viton®) T – Teflon® coated FKM (Viton®) | | | | |
| Ends | S – Socket T – Threaded F – Flanged B – Butt ¹ CF – ChemFlare™ | | | | |

OPTIONS & ACCESSORIES

- Teflon® coated Uniseat/Seal
- Spring Loaded Ball – Assists ball to seat faster

Example: Ball Check Valve, PVC, 2", with EPDM seat, socket ends.

¹ PP and PVDF metric butt fusion ends (1/2" to 2") connect to Chemline PP and PVDF piping systems.



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Your Pipeline To Quality Valves, Piping, Flow Meters and Controls

