

BC Series Ball Check FV Series Foot Valves



SERIES: BT: True Union Check (1/2" to 2")
BC: Single Union Check (2-1/2" to 4")
FT: True Union Foot (1/2" to 2")
FV: Single Union Foot (2-1/2" to 4")

SIZES: 1/2" to 4"

ENDS: Threaded, Socket, Flanged, Butt¹ or ChemFlare™²

SEAT/SEALS: EPDM or FKM (Viton®)

Chemline BT/BC Series Ball Check Valves have a wide selection of body and seat materials. 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.

Features

- May be used either horizontally or vertically

- Low seating and opening pressures

Built-in Union Design

- For easy installation and maintenance

Free Floating Ball

- The only moving part

Uniseat/Seal

- Easily removable



BT Series True Union
1/2" to 2"



BC Series Single Union
2-1/2" to 4"

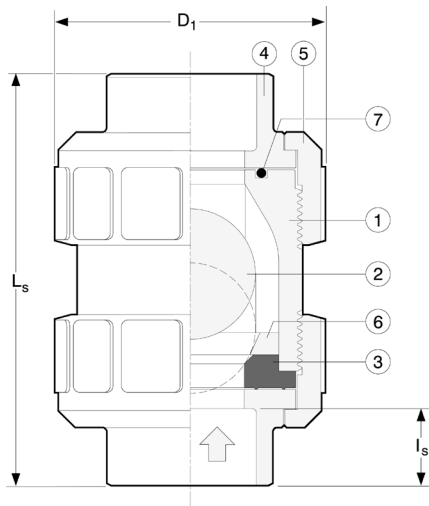


Foot Valve

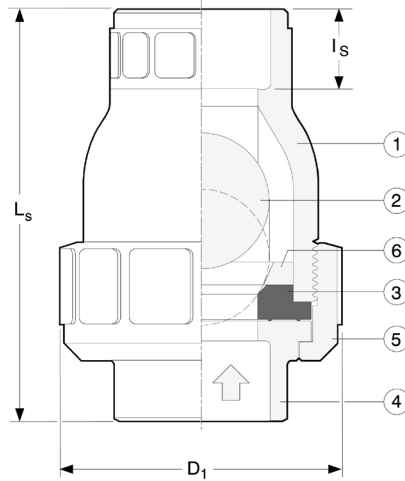
¹ PP and PVDF Butt fusion ends (available 1/2" to 2") connect to Chemline PP and PVDF piping systems

² For ChemFlare™ end connectors, consult Chemline

BT/BC Series Ball Check Valves



True Union
1/2" to 2"



Single Union
2-1/2" to 4"

PARTS

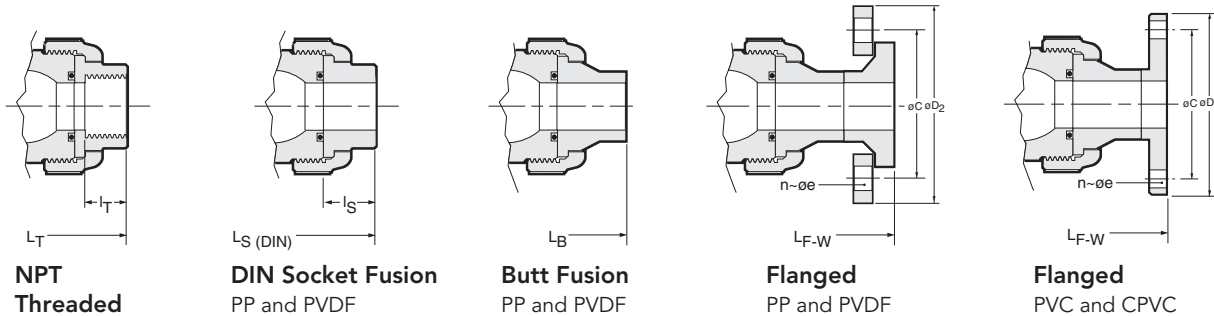
▲ Recommended Spare Parts

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	1	EPDM, FKM(Viton®), ETFE 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	2	1	PVDF
10	Factory Flange ³	2	1	PVC, CPVC, PP, PVDF

¹ Standard seals are EPDM in PVC, CPVC and PP valves, ETFE coated FKM (Viton®) in PVDF valves. Coating is .002" thick.

² 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"

UNION END CONNECTIONS



DIMENSIONS INCHES

Size	D ₁	I _s	I _T	True Union								True Union Socket or Butt			
				PVC & CPVC			PP & PVDF					PVC	CPVC	PP	PVDF
				L _T	L _S	L _F [*]	L _T	L _{S(DIN)}	L _B	PP L _{F3}	PVDF L _{F3}				
1/2"	1.9	0.69	0.59	3.4	3.4	5.52	3.4	3.19	4.0	7.78	7.63	0.3	0.3	0.2	0.3
3/4"	2.4	0.72	0.67	4.1	3.9	6.28	4.1	3.70	4.4	8.18	8.03	0.5	0.5	0.3	0.6
1"	2.8	0.88	0.79	4.5	4.4	7.03	4.5	4.13	4.8	8.43	8.43	0.7	0.8	0.4	0.9
1-1/4"	3.1	0.94	0.87	5.0	4.9	7.71	5.0	TBD	5.9	9.68	9.53	1.1	1.2	0.7	1.5
1-1/2"	3.7	1.09	0.98	5.9	5.9	9.21	5.9	5.62	5.8	9.66	9.43	1.6	1.7	1.0	2.0
2"	4.2	1.16	1.10	7.0	6.8	10.24	7.0	6.69	6.5	10.13	10.13	2.2	2.4	1.4	2.7

³ Flanged valves have cemented-on flanges. Dimension L_F is approximate. Before ordering, please specify a specific L_F if required.

WEIGHTS LB.

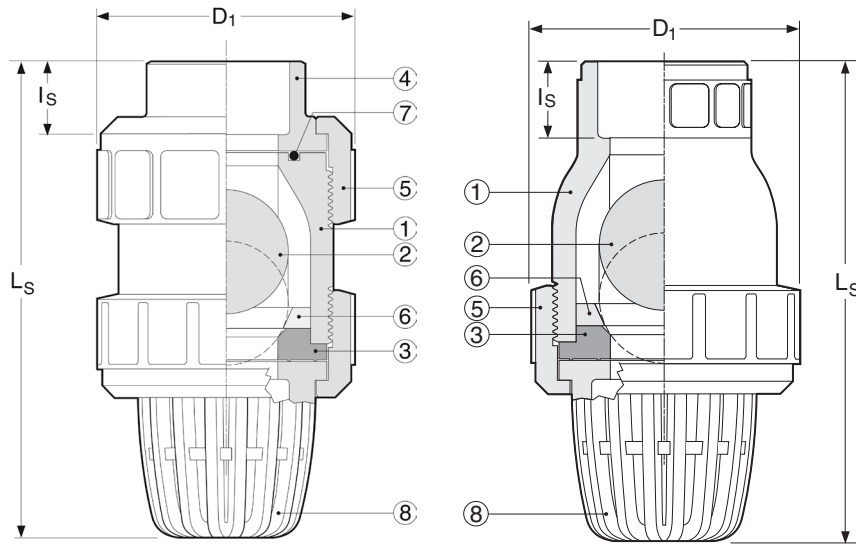
DIMENSIONS INCHES

Size	D ₁	I _s ⁴	I _T	Single Union									Single Union			
				PVC & CPVC			PP			PVDF			PVC	CPVC	PP	PVDF
				L _T	L _S	L _F	L _T	L _B	L _F	L _T	L _B	L _F				
2-1/2"	6.0	2.10	2.17	10.0	10.4	14.9	8.7	24.2	13.4	8.7	24.2	13.3	5.7	6.2	*	*
3"	6.0	1.88	1.38	8.7	9.6	14.2	8.7	11.7	17.8	8.7	11.7	17.6	5.1	5.5	3.3	6.3
4"	8.3	2.00	1.77	12.1	12.2	17.1	12.1	13.9	20.9	12.1	13.9	20.7	12.7	13.9	8.1	15.7

⁴ Consult Chemline.

WEIGHTS LB.

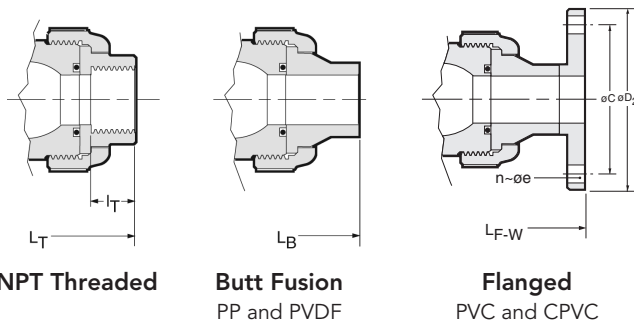
FT/FV Series Foot Valves



True Union
1/2" to 2"

Single Union
2-1/2" to 4"

END CONNECTIONS FOR TRUE UNION VALVE



NPT Threaded

Butt Fusion
PP and PVDF

Flanged
PVC and CPVC

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▲	Seat ¹	1	1	EPDM, FKM(Viton®), ETFE coated FKM (Viton®)
4	End Connector	1	0	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 ²	3	0	PVDF
10	Factory Flange ³	1	0	PVC, CPVC, PP, PVDF

¹ Standard seals are EPDM in PVC, CPVC and PP valves, ETFE coated FKM (Viton®) in PVDF valves. Coating is .002" thick.

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

³ 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	L _s	PVC & CPVC		PP & PVDF		Socket	Flanged
					L _T	L _F ⁴	L _T	L _F ⁴		
1/2"	1.9	0.69	0.59	3.74	3.74	4.61	3.62	4.53	0.22	0.66
3/4"	2.4	0.72	0.67	4.25	4.33	5.39	4.21	5.31	0.44	0.88
1"	2.8	0.88	0.79	4.80	4.84	5.87	4.72	5.79	0.66	1.32
1-1/4"	3.7	0.94	0.87	*	*	*	*	*	*	*
1-1/2"	3.7	1.09	0.98	7.17	7.17	7.99	7.05	7.91	1.54	3.31
2"	4.2	1.16	1.10	7.72	7.83	8.58	7.72	8.50	2.20	3.31
2-1/2"	6.0	2.10	2.17	*	*	*	*	*	*	*
3"	6.0	1.88	1.38	12.09	11.57	16.70	11.34	13.20	7.71	11.02
4"	8.3	2.00	1.77	14.96	14.72	20.40	14.41	16.30	15.43	23.14

⁴ Flanged valves have cemented-on flanges. Dimension L_F is approximate. Before ordering, please specify a specific L_F if required.

* Consult Chemline for dimensions and weights

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
- Maximum recommended velocity 5 m/s

INSTALLATION RECOMMENDATIONS

- at least 5 pipe diameters from fittings, valves, etc.
- at least 10 pipe diameters from pumps

ORDERING EXAMPLE

Chemline Ball Check/Foot Valves		BC	A	040	E	S
Valve Type	BT – True Union Ball Check BC – Single Union Ball Check FT – True Union Foot Valve FV – Single 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®) P – PTFE coated FKM (Viton®)					
Ends	S – Socket T – Threaded F – Flanged B – Butt ¹ CF – ChemFlare™					

Example: Chemline BC Series Ball Check Valve, PVC, 4", with EPDM seat, socket ends

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

BT/BC & FT/FV Series.DS.12.01.22