



# CHEMLINE BALL CHECK & FOOT VALVE



SERIES: BT: True Union Check  
BC: Single Union Check  
FT: True Union Check  
FV: Single Union Check

SIZES: 1/2" – 4"

ENDS: Threaded, Socket, Flanged, Butt<sup>1</sup> or ChemFlare™<sup>2</sup>

SEAT/SEALS: EPDM, FKM (Viton®), PTFE coated FKM (Viton®)

CRN  
Registered  
Consult Chemline



## features

- True Union to 2"
- Full Port to 4"
- NSF Certified<sup>3</sup>
- May be used either horizontally or vertically
- Excellent flow characteristics
- 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

### CRN Registration numbers by province

- Ontario: OC11045.5
- Newfoundland: OC11045.50
- Saskatchewan/Manitoba/Quebec: OC11045.56
- New Brunswick: OC11045.57
- Nova Scotia: OC11045.58
- P.E.I.: OC11045.59
- British Columbia: not required
- Alberta: not required<sup>4</sup>



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



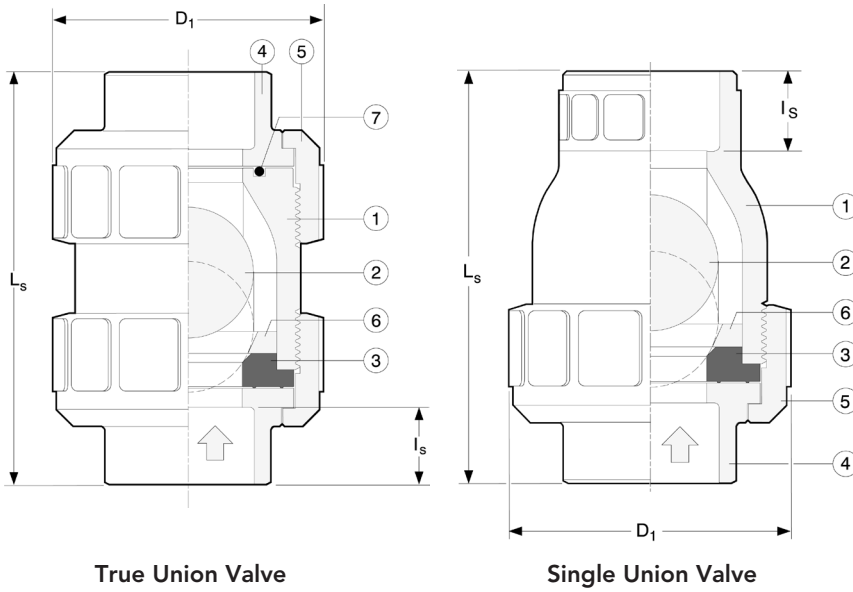
**Single Union Check**  
1/2" to 4" in PVC  
2-1/2" to 4" in CPVC, PP and PVDF



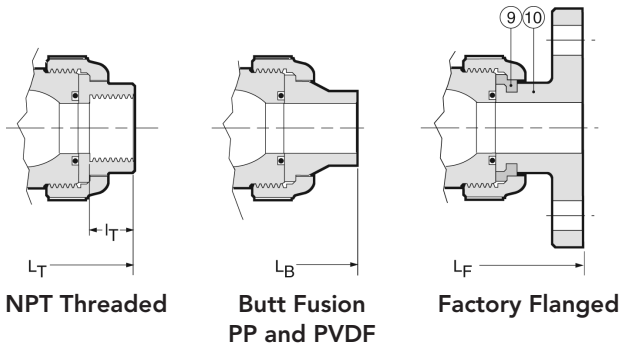
**Foot Valve** is light weight  
and has a low profile basket

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

<sup>2</sup> For ChemFlare™ end connectors, consult Chemline



**UNION END CONNECTIONS**



**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 <sup>1</sup>	1	1		EPDM, FKM(Viton®), PTFE 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 <sup>2</sup>	2	1		PVDF
10	Factory Flange <sup>3</sup>	2	1		PVC, CPVC, PP, PVDF

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

<sup>2</sup> 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".

<sup>3</sup> 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.

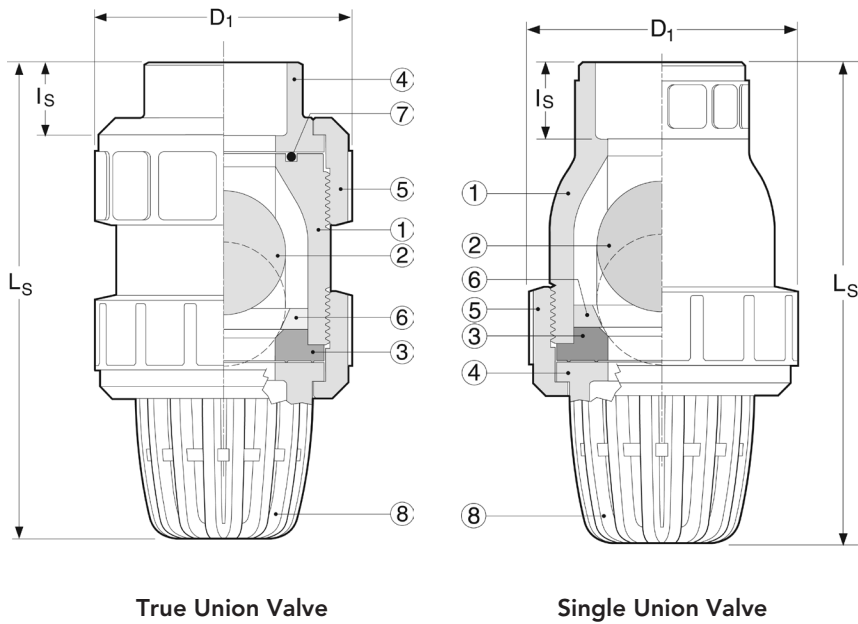
Size	D <sub>1</sub>	I <sub>s</sub>	I <sub>T</sub>	True Union			Single Union			True Union Socket or Butt				Single Union			
				PVC & CPVC			PP & PVDF			PVC			PVC	CPVC	PP	PVDF	PVC
				L <sub>T</sub>	L <sub>S</sub>	L <sub>F</sub>	L <sub>T</sub>	L <sub>B</sub>	L <sub>F</sub>	L <sub>T</sub>	L <sub>S</sub>	L <sub>F</sub>	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 <sub>1</sub>	I <sub>s</sub> <sup>4</sup>	I <sub>T</sub>	Single Union						Single Union			
				PVC & CPVC			PP & PVDF			Single Union			
				L <sub>T</sub>	L <sub>S</sub>	L <sub>F</sub>	L <sub>T</sub>	L <sub>B</sub>	L <sub>F</sub>	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

<sup>4</sup> Consult Chemline.



**PARTS**

▲ Recommended Spare Parts

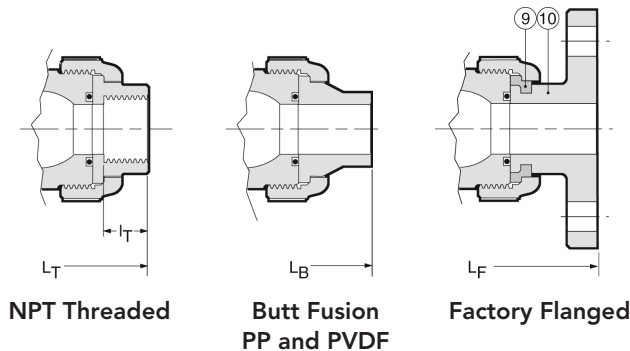
No.	Part	Pcs.		Materials
		T/U	S/U	
1	Body	1	1	PVC, CPVC, PP, PVDF
2	Ball	1	1	PVC, CPVC, PP, PVDF
3▲	Uniseat/Seal <sup>1</sup>	1	1	EPDM, FKM(Viton®), PTFE coated FKM (Viton®)
4	End Connector	2	1	PVC, CPVC, PP, PVDF
5	Union Nut	2	1	PVC, CPVC, PP, PVDF
6	Stop Ring	1	1	PVC, CPVC, PP, PVDF
7	Face O-Ring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

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

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

<sup>3</sup> True Union valves have factory flanges. Single Union have fabricated flanges. Consult Chemline for details on fabricated type.

**END CONNECTIONS FOR TRUE UNION VALVE**



**DIMENSIONS** INCHES

**WEIGHTS** LB.

Size	D <sub>1</sub>	I <sub>s</sub> Soc	I <sub>T</sub> Thd	True Union PVC & CPVC			Single Union PVC			Single Union
				L <sub>T</sub>	L <sub>s</sub>	L <sub>F</sub>	L <sub>T</sub>	L <sub>s</sub>	L <sub>F</sub>	PVC Socket
1/2"	1.9	0.69	0.59	2.8	2.9	3.7	3.5	3.7	4.8	0.3
3/4"	2.4	0.72	0.67	3.3	3.3	4.4	4.1	4.2	5.4	0.4
1"	2.8	0.88	0.79	3.7	3.7	4.8	4.5	4.8	6.1	0.8
1-1/4"	3.7	0.94	0.87	*	*	*	7.1	7.3	8.8	1.8
1-1/2"	3.7	1.09	0.98	5.4	5.4	6.3	6.8	7.0	8.6	1.7
2"	4.2	1.16	1.10	6.4	6.4	7.2	7.4	7.6	9.4	2.1
2-1/2"	6.0	2.10	2.17	-	-	-	11.9	12.5	14.4	7.4
3"	6.0	1.88	1.38	-	-	-	11.6	12.0	14.2	7.1
4"	8.3	2.00	1.77	-	-	-	14.7	15.0	17.4	15.7

\* Consult Chemline for dimensions.

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



## 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

### Cv VALVES

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.

### VACUUM RATING

- 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

## 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 PTFE 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

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

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

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

## OPTIONS & ACCESSORIES

- **PTFE coated Uniseat/Seal**
- **Spring Loaded Ball** – Assists ball to seat faster