

Type 14/15/72 Diaphragm Valves



SIZES: Type 14: 1/2" to 4"
Type 15: 5" to 6"
Type 72: 8" to 10"

ENDS: Flanged: 1/2" to 10"¹
True Union Socket, Threaded or Butt²: 1/2" to 2"
ChemFlare™³: 1/2" to 1"

DIAPHRAGMS: EPDM or PTFE



Chemline diaphragm valves have service histories dating back to 1970 operating in tough chemical plant applications. They have proven internal and external corrosion resistance.

This is an excellent throttling valve, and is suited for slurries or viscous liquids. Because of the self-draining design with no dead volume, it is good for sanitary and high purity applications.

Features

Excellent Chemical Resistance

- Large choice of materials including PVDF bodies and PTFE diaphragms for aggressive services

Externally Corrosion Resistant

- Any exposed metal parts are 304 SS

High Pressure Resistance

- Designed with a high safety factor against leakage
- Tight closing with low hand wheel torque
- Highest pressure vs. temperature ratings of all plastic valve types

Designed for Long Diaphragm Life

- Standard Travel Stop prevents over-tightening and excessive stress on diaphragm

¹ Up to 4" only in CPVC

² Butt fusion ends are for connection to Chemline PP and PVDF metric piping systems

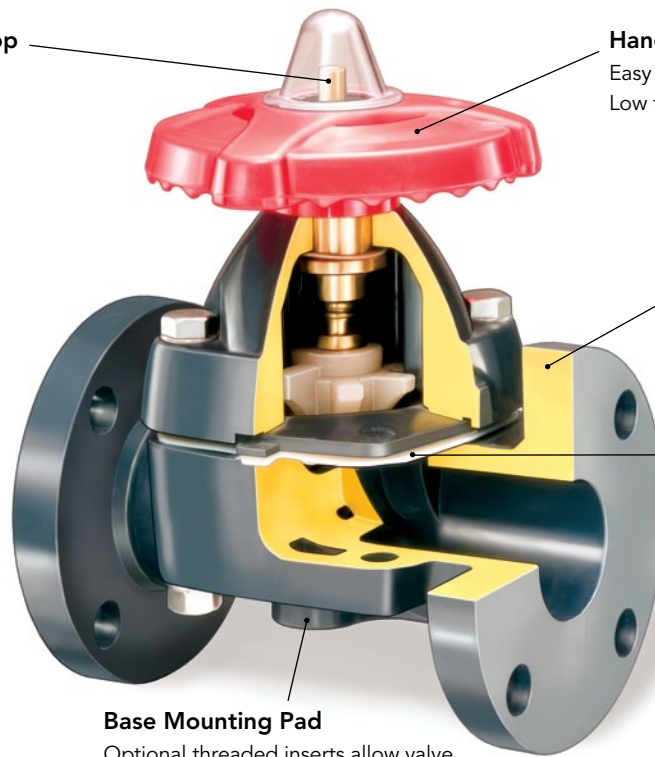
³ For ChemFlare™ end connectors, consult Chemline

Type 14 Diaphragm Valves



Position Indicator/Travel Stop
With sealed plastic cover

Hand Wheel
Easy to operate
Low torques are required to open and close



One Piece Flanged Body
Strong monobloc construction
Suitable for installation in metal piping systems

PTFE Diaphragm
Heavy duty three layer design: EPDM, PVDF, PTFE

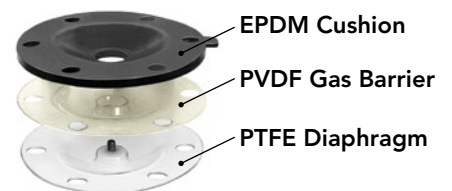
Base Mounting Pad
Optional threaded inserts allow valve to be fixed to structures



True Union Bodies
Available 1/2" to 2" with a choice of end connections – Socket, Threaded or Butt



Pneumatically Actuated
Diaphragm type actuators made of PPG are available normally closed, normally open or double acting. 1/2" to 2"

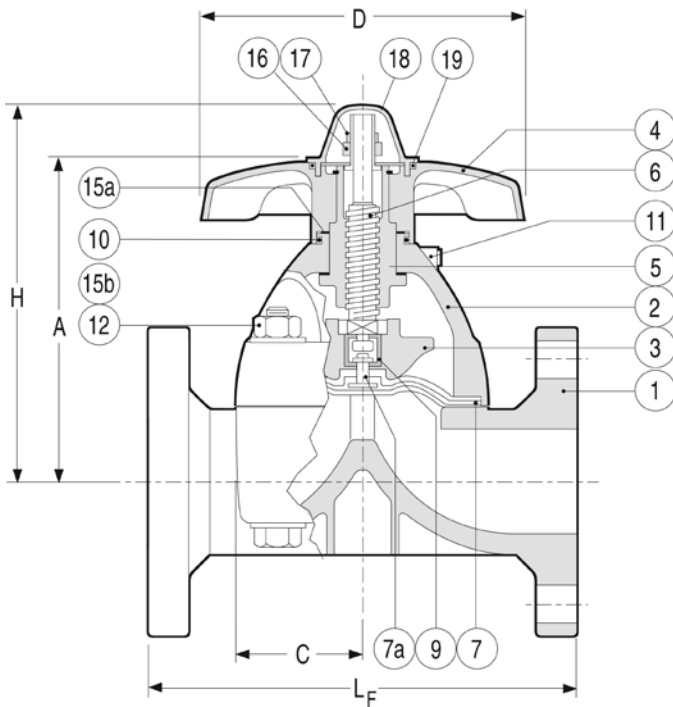


PVDF Gas Barrier
Supplied with all PTFE diaphragms
Protects EPDM cushion from gas permeation in chlorine or concentrated acid services

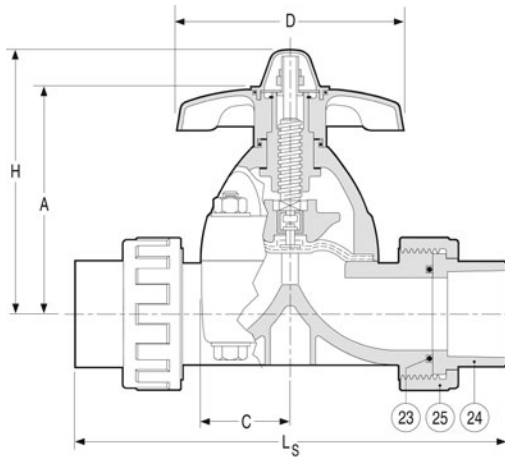


Hand Wheel Lock-out

Type 14 Diaphragm Valves



Solid Flanged Body



True Union Body – Socket = S, Threaded = T, Flanged = F

PARTS

▲ Recommended Spare Parts

No.	Part	Pcs.	Materials	
			Body	Bonnet
1	Body	1		
2	Bonnet	1	PVC PP CPVC PVDF	PVC PP PP, PPG
3	Compressor	1	PVDF	
4	Handwheel	1	Polypropylene	
5	Sleeve	1	Bronze BC 6	
6	Stem	1	Copper Alloy BSM C3604	
7▲	Diaphragm	1	EPDM, PTFE with EPDM cushion and PVDF gas barrier	
7a	Diaphragm Insert	1	304 SS	
9	Diaphragm Insert Connection	1	304 SS	
10	Bonnet O-Ring	1	EPDM	
11	Grease Nipple 2-1/2" to 4" only	1	Brass	
12	Stud Bolt, Bolt, Nut & Washer	Set	304 SS	
13	Insert Nut 2-1/2" to 4" only ¹	4	Brass, 304 SS for PVDF only	
15a	Thrust Rings 1/2" to 4" only	1	PE	
15b	Thrust Rings 1/2" to 4" only	1	PE	
16	Stopper	1	Bronze BC6	
17	Lock Nut	1	304 SS	
18▲	Indicator Cover	1	Polycarbonate	
19	Cover O-Ring	1	EPDM	
23	Face O-Ring	2	EPDM ² , FKM (Viton®)	
24	End Connector	2	PVC, CPVC, PP, PVDF	
25	Union Nut	2	PVC, CPVC, PP, PVDF	

¹ Part No.13, Insert Nut, is not shown

² EPDM for valves with EPDM diaphragm, FKM (Viton®) for valves with PTFE diaphragm

DIMENSIONS INCHES

WEIGHTS LB.

Size ³	Flanged					True Union					WEIGHTS LB.				
	A	C	D	H	L _F	PVC/CPVC		PP/PVDF			PVC TU	PVC Flg	PP Flg	CPVC Flg	PVDF Flg
						L _S	L _T	L _S	L _T	L _B					
1/2"	3.39	2.13 x 2.60	3.46	4.09	4.25	5.47	5.04	5.47	5.04	5.90	1.1	1.5	1.3	1.5	1.8
3/4"	3.46	2.13 x 2.60	3.46	4.17	5.88	6.18	5.83	6.18	5.83	6.78	1.3	1.8	1.3	1.8	2.0
1"	3.66	2.64 x 3.15	3.46	4.37	5.88	7.32	6.77	7.32	6.77	7.67	2.0	2.4	1.8	2.4	2.6
1-1/4"	3.82	2.64 x 3.15	3.46	4.57	6.38	7.95	7.40	7.95	7.40	8.34	2.4	2.9	2.2	3.1	3.3
1-1/2"	5.67	4.24 x 4.25	6.14	6.97	6.94	10.47	9.65	10.47	9.65	10.87	5.7	4.8	4.8	5.9	6.4
2"	6.22	4.84 x 4.84	6.14	7.52	7.94	11.54	11.06	11.54	10.95	12.01	6.4	7.7	6.2	7.7	8.6
2-1/2"	7.40	6.73	8.66	10.47	9.84	-	-	-	-	-	-	12.3	9.2	11.7	13.0
3"	7.95	7.68	8.66	11.02	10.38	-	-	-	-	-	-	15.6	11.9	15.2	16.1
4"	9.49	9.25	10.12	12.95	12.94	-	-	-	-	-	-	23.1	19.1	19.6	22.7

³ Type 15/72 diaphragm valves for 5" to 10" sizes

Type 15/72 Diaphragm Valves



Position Indicator with Sealed Plastic Cover

Valve position clearly shown

Limit Closing Stop

Prevents excessive closing pressure.
Prolongs diaphragm life.

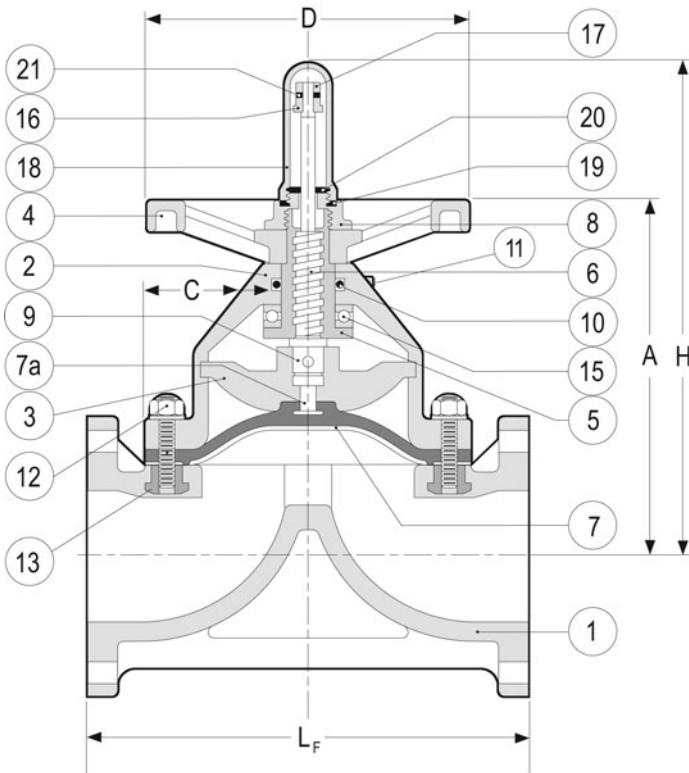
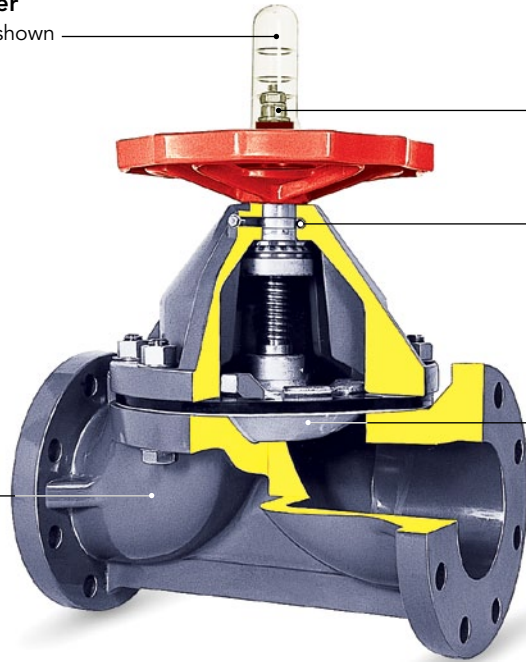
Bonnet O-Ring

Protects internal parts from corrosive atmosphere.

PTFE Diaphragm

Heavy duty three layer design:
EPDM, PVDF, PTFE

Strong One-Piece Flanged Body



PARTS

▲ Recommended Spare Parts

No.	Part	Pcs.	Materials	
1	Body	1	Body	Bonnet
2	Bonnet	1	PVC PP PVDF	PVC PP PPG
3	Compressor 5" & 6"	1	PVDF	
	Compressor 8" & 10"	1	Cast Iron	
4	Handwheel	1	Polypropylene	
5	Sleeve 5" & 6"	1	Bronze (BC 6)	
	Sleeve 8" & 10"	1	Carbon Steel	
6	Stem 5" & 6"	1	Copper Alloy (BSM C3604)	
	Stem 8" & 10"	1	Cast Iron	
7▲	Diaphragm	1	EPDM, PTFE with EPDM cushion and PVDF gas barrier	
7a	Diaphragm Insert	1	304 SS	
8▲	Cap Nut	1	Polypropylene	
9	Compressor Pin	1	304 SS	
10	Bonnet O-Ring	1	Nitrile	
11	Grease Nipple	1	Brass	
12	Stud Bolt, Bolt, Nut & Washer	Set	304 SS	
13	Insert Nut	4	Brass, 304 SS for PVDF only	
15	Thrust Bearings	1	High Carbon Chromium	
16	Stopper	1	Plated Steel	
17	Lock Nut	1	Plated Steel	
18▲	Indicator Cover	1	Polycarbonate	
19	Cover Gasket	1	EPDM	
20	Washer	1	Plated Steel	
21	Spring Washer	1	Spring Steel	

DIMENSIONS INCHES

WEIGHTS LB.

Size	Valve Type	A	C	D	H	Flg L _F	PVC Flg	PP Flg	PVDF Flg
5"	15	12.13	12.60	11.81	16.54	16.14	48.4	42.9	80.3
6"	15	13.15	15.16	16.14	18.74	18.90	76.3	67.1	89.1
8"	72	16.5	16.93	16.1	24.7	22.44	116.	99.	138.
10"	72	20.1	21.26	22.0	30.6	26.77	206.	171.	242.

Diaphragm Valves



WORKING PRESSURES PSI

Body	Diaphragm	PVC				Polypropylene & CPVC						PVDF			
		EPDM		PTFE		EPDM		PTFE		EPDM		PTFE		PTFE	
Size	Valve Type	0-40°C 32-104°F	60°C 140°F	0-40°C 32-104°F	60°C 140°F	0-40°C 32-104°F	60°C 140°F	90°C 194°F	0-40°C 32-104°F	60°C 140°F	90°C 194°F	-40-60°C -40-140°F	80°C 176°F	100°C 212°F	120°C 248°F
1/2"	14	150	105	150	105	150	120	70/45*	150	120	70/45*	150	125	100	70
3/4"	14	150	105	150	105	150	120	70/45*	150	120	70/45*	150	125	100	70
1"	14	150	105	150	105	150	120	70/45*	150	120	70/45*	150	125	100	70
1-1/4"	14	150	105	150	105	150	120	70/45*	150	120	70/45*	150	125	100	70
1-1/2"	14	150	105	150	105	150	120	70/45*	150	120	70/45*	150	125	100	70
2"	14	150	105	150	105	150	120	70/45*	150	120	70/45*	150	125	100	70
2-1/2"	14	150	120	150	120	150	120	85	150	120	85	150	100	85	70
3"	14	150	120	150	120	150	120	85	150	120	85	150	100	85	70
4"	14	150	120	150	120	150	120	85	150	120	85	150	100	85	70
5"	15	100	85	70	60	70	60	50	60	45	45	60	45	45	40
6"	15	100	70	70	60	65	50	50	60	45	45	60	45	45	40
8"	72	70	60	60	45	70	60	50	60	45	45	60	45	45	40
10"	72	65	50	60	45	65	50	50	60	45	45	60	45	45	40

Temperature Ranges: PVC 0 to 60°C (32 to 140°F); PP -20 to 90°C (-4 to 194°F), CPVC 0 to 95°C (32 to 203°F);

PVDF -40 to 100°C (-40 to 212°F)

* 70 psi for PP valves / 45 psi for CPVC valves

Cv VALUES VS. OPENING

Size	VS. OPENING				No. Turns to Open	VACUUM RATING		BOLT TORQUES Maximum Flange Bolt Torque ft-lb
	25%	50%	75%	100%		Inches Mercury EPDM	PTFE	
1/2"	1.2	2.7	4.1	4.8	5.	29.9	29.9	13
3/4"	1.3	3.0	4.5	5.3	5.	29.9	29.9	13
1"	2.0	4.8	7.	8.5	6.	29.9	29.9	15
1-1/4"	3.	6.	9.	11.	6.	29.9	29.9	15
1-1/2"	6.	15.	22.	26.	5.	29.9	29.9	15
2"	10.	25.	37.	43.	6.	29.9	29.9	17
2-1/2"	40.	68.	80.	85.	9.	15.0	15.0	17
3"	54.	92.	108.	115.	11.	15.0	15.0	22
4"	87.	148.	174.	185.	10.	15.0	15.0	22
5"	141.	246.	285.	300.	9.75	14.2	2.8	29
6"	188.	328.	380.	400.	10.5	9.9	N.R.	33
8"	329.	574.	665.	700.	18.	4.0	N.R.	40
10"	470.	820.	950.	1,000.	20.	2.0	N.R.	40

ORDERING EXAMPLE

Chemline Type 14/15/72 Diaphragm Valves	14	A	020	P	F
Valve Body	A – PVC C – CPVC	B – PP K – PVDF			
Size	005 – 1/2" 015 – 1-1/2" 050 – 5"	007 – 3/4" 020 – 2" 060 – 6"	010 – 1" 025 – 2-1/2" 080 – 8"	012 – 1-1/4" 030 – 3" 100 – 10"	040 – 4"
Diaphragm	E – EPDM		P – PTFE		
Ends	F – Flanged B – Butt Union ¹	S – Socket Union	T – Threaded Union CF – ChemFlare™		

OPTIONS & ACCESSORIES

- Chain Wheel Operator
- Municipal Operating Nut
- Handwheel Extension
- Handwheel Lockout

Example: Chemline Type 14 Weir Type Diaphragm Valve, PVC, 2", PTFE diaphragm, flanged ends
1 PP and PVDF metric butt fusion ends (1/2" to 2") connect to Chemline PP and PVDF piping systems

Type 14/15/72.DS.09.14.22