

# PVC, CPVC & PP DIAPHRAGM VALVES

DV-2-0305



## Low Profile Design

Minimizes space required to install and operate. Allows compact system planning and engineering in even the most demanding applications.

## Multiple End Connector Options

Spigot, flanged, or true union socket/threaded & SR threaded ends provides greater versatility for all applications. Popular true union style features strong buttress threaded union nuts with both socket and threaded end connectors included with each valve.

## Heavy Bodied Schedule 80 PVC, CPVC or PP Construction with Mountable Body

Schedule 80 smooth-wall construction provides extra strength and superior chemical and corrosion resistance while maximizing fluid flow. Body can be easily secured to support surface using built-in mounting holes with user supplied self-tapping screws.

## Choice of Chemical/Abrasion Resistant Elastomeric or PTFE Diaphragms

Choice of high grade, abrasion resistant EPDM, genuine Viton®, or elastomer backed PTFE diaphragm allows application-specific selection for optimum chemical resistance. Diaphragm tab marking provides quick elastomer type identification.

## Easy-Grip Handle with Clear-View Position Indicator

High Impact polypropylene handwheel style handle provides a firm grip for smooth, easy operation. Clear-View indicator with highly visible yellow marker shows valve position at a glance.

## Silicon-Free Assembly

## Precision Engineered

This full-featured valve is engineered to provide accurate throttling control and shutoff for industrial, chemical and water treatment applications. Weir type design eliminates entrapped fluids in valve and is excellent for handling liquids with suspended solids, viscous fluids and slurries. Available in PVC, CPVC and Glass Filled Polypropylene with a variety of Diaphragm material options. PVC & CPVC 1/2" - 2" valves with Flanged Body, Spigot Body or True Union style Socket & Thread ends or Optional Special Reinforced (SR) Threads, and sizes 2-1/2" - 8" with Flanged Body. Polypropylene 1/2" - 2" valves with True Union style Special Reinforced (SR) Thread ends and sizes 2-1/2" - 8" with Flanged Body.

## Sample Engineering Specification

All thermoplastic Diaphragm valves shall be Weir type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D1784 Cell Classification 23447, or Polypropylene, ASTM D 4101. All diaphragms shall be EPDM, genuine Viton® or PTFE with [EPDM or Viton®] bonded backing. All valves shall have built-in position indicator with polypropylene handwheel. All True Union style valve union nuts shall have Buttress threads. All PVC and CPVC 1/2" through 2" valves shall be pressure rated to 235 psi, all 2-1/2" through 4" and all flanged valves shall be pressure rated to 150 psi, all 6" valves shall be pressure rated to 100 psi, and all 8" valves shall be pressure rated to 75 psi for water at 73° F. All Polypropylene valves shall be pressure rated to 150 psi for water at 73° F, as manufactured by Spears® Manufacturing Company.

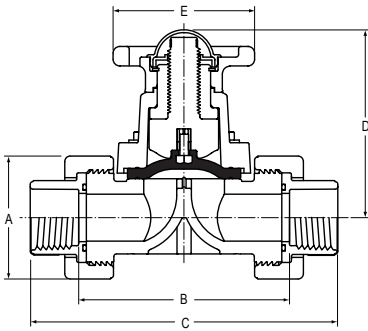
Viton® is a registered trademark of Dupont Dow Elastomers.



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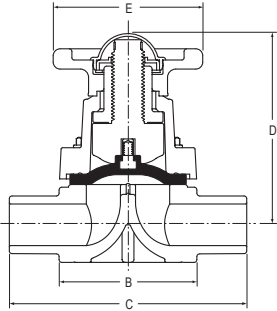
## Technical Information

### Socket/Threaded & SR Threaded End Connectors Dimensions & Weights



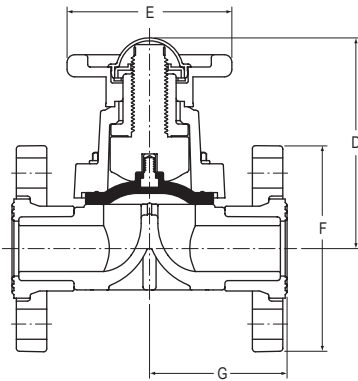
Nominal Size	Dimension Reference (inches, ±1/16)					Approx. Wt. (Lbs.)	
	A	B <sup>1</sup>	C	D	E	PVC	CPVC
1/2	1-15/16	3-7/8	5-17/32	3-1/16	2-7/8	1.12	1.14
3/4	2-1/2	4-1/2	6-1/2	3-15/32	3-1/8	1.37	1.36
1	2-9/16	4-15/16	7-1/4	3-15/16	3-3/8	2.35	2.43
1-1/4	3-5/16	5-1/2	8	4-1/8	3-7/8	3.91	4.03
1-1/2	3-17/32	6-5/16	9-1/16	4-15/16	4-5/8	4.08	4.21
2	4-7/32	7-1/2	10-1/2	5-15/16	5-7/8	7.06	7.25

1: Valve Lay Length



### Spigot Diaphragm Dimensions & Weights

Nominal Size	Dimension Reference (inches, ±1/16)				Approx. Wt. (Lbs.)	
	B	C	D	E	PVC	CPVC
1/2	2-5/8	4-3/8	3-11/32	2-7/8	.61	.63
3/4	2-3/4	4-3/4	3-3/4	3-1/4	.79	.82
1	3-1/8	5-3/8	4-7/16	3-5/16	1.32	1.36
1-1/4	3-3/4	6-1/4	5-5/8	4-19/32	2.41	2.50
1-1/2	3-3/4	6-1/2	5-5/8	4-9/32	2.43	2.52
2	4-3/4	7-3/4	7	5-7/8	4.15	4.43



### Flanged Diaphragm Dimensions & Weights

Nominal Size	Dimension Reference (inches, ±1/16)				Approx. Wt. (Lbs.)	
	D	E	F	G	PVC	CPVC
1/2	3-11/32	2-7/8	3-1/2	2-5/16	.98	1.02
3/4	3-3/4	3-1/4	3-7/8	2-1/2	1.31	1.37
1	4-7/16	3-5/16	4-1/4	2-13/16	2.00	2.08
1-1/4	5-5/8	4-19/32	4-5/8	3-1/4	3.71	3.76
1-1/2	5-5/8	4-19/32	5	3-3/8	3.88	4.04
2	7	5-7/8	6	4	5.59	5.71
2-1/2	10-1/4	8-7/8	7-1/2	5-19/32	15.75	16.43
3	10-1/4	8-7/8	7-1/2	5-19/32	15.75	16.45
4	12-1/4	10-1/2	9	6-5/8	24.44	25.37
6	16-3/4	18-13/32	11	9-3/8	53.90	58.43
8	21	21-19/32	13-1/2	11-5/32	96.28	100.05

### Cv Values

Valve Size	PERCENT OPEN			
	100%	75%	50%	25%
1/2	5.1	4.8	4.2	2.4
3/4	8.0	7.5	6.5	3.8
1	11.5	10.8	9.4	5.4
1-1/4	22.0	20.6	18.0	10.3
1-1/2	28.2	26.4	23.0	13.3
2	52.9	49.6	43.2	24.9
2-1/2	119.0	111.5	97.1	55.9
3	119.0	111.5	97.1	55.9
4	189.2	177.3	154.4	88.9
6	402.2	375.8	327.0	187.5
8	700.0	659.5	573.2	328.4

### NOT FOR USE WITH COMPRESSED AIR OR GASES

Spears<sup>®</sup> Manufacturing Company DOES NOT RECOMMEND the use of thermoplastic piping products for systems to transport or store compressed air or gases.

**WARNING: DO NOT USE COMPRESSED AIR OR GAS TO TEST ANY PVC OR CPVC THERMO-PLASTIC PIPING PRODUCT OR SYSTEM, AND DO NOT USE DEVICES PROPELLED BY COMPRESSED AIR OR GAS TO CLEAR SYSTEMS. THESE PRACTICES MAY RESULT IN EXPLOSIVE FRAGMENTATION OF SYSTEM PIPING COMPONENTS CAUSING SERIOUS OR FATAL BODILY INJURY.**