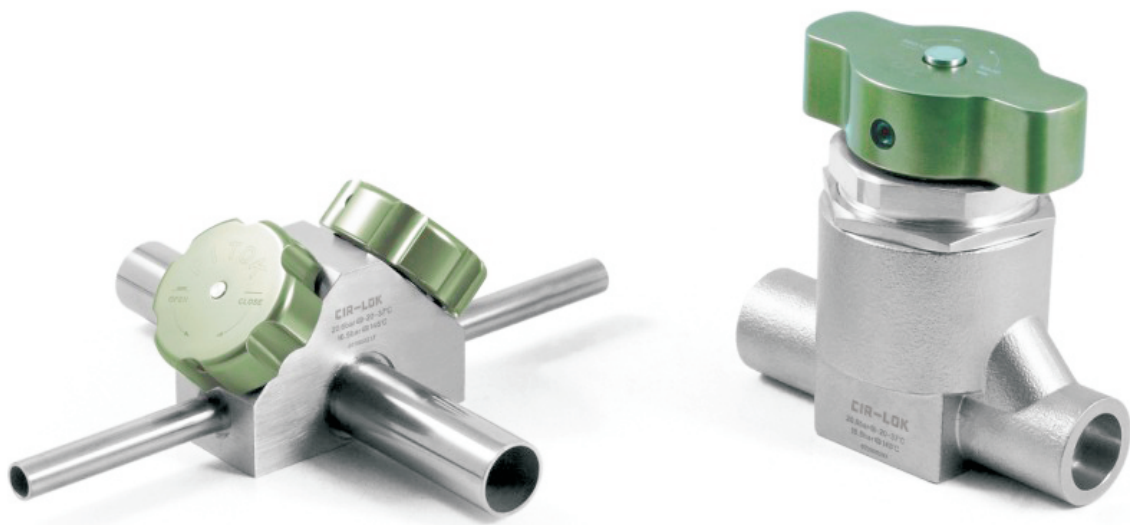


Diaphragm Valves

DV1, DV2 and DV3 Serie



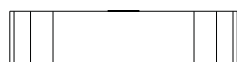
- ❖ Maximum working pressure: 300 psig (20.7 bar)
- ❖ Working temperature: -20°F to 300°F (-28°C to 148°C)
- ❖ Variety of end connections
- ❖ Body material: Cast, forged and bar stock stainless steel

Features

- ❖ Maximum working pressure: 300 psig (20.7 bar)
- ❖ Working temperature: -20°F to 300°F (-28°C to 148°C)
- ❖ Variety of end connections
- ❖ Body material: Cast, forged and bar stock stainless steel
- ❖ No spring or thread within wetted area for cleaner operation
- ❖ Wetted surface finish machined to an average of 0.51 μm Ra for cast body, electropolished to 0.25 μm Ra for forged and bar stock body
- ❖ PCTFE stem tip insert for leak-tight shutoff
- ❖ Unique bonnet design for safety
- ❖ Diaphragms welded to the stem for leak-tight performance
- ❖ Optimum combination of strength, flexibility and cycle life by three diaphragms
- ❖ The upper stem as a indicator of the valve position-open or closed



Open-upper stem visible above handle

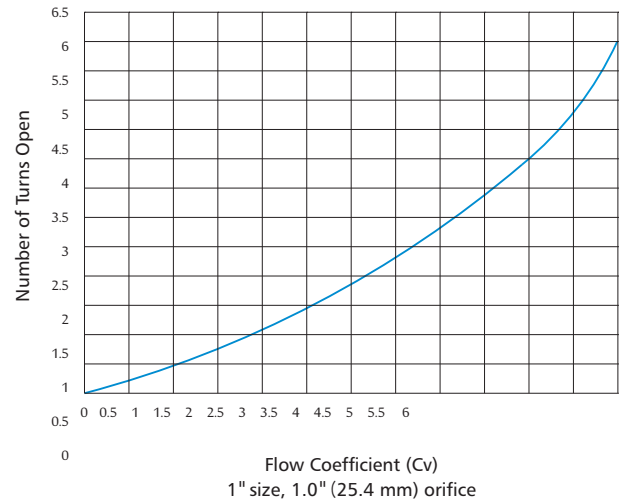
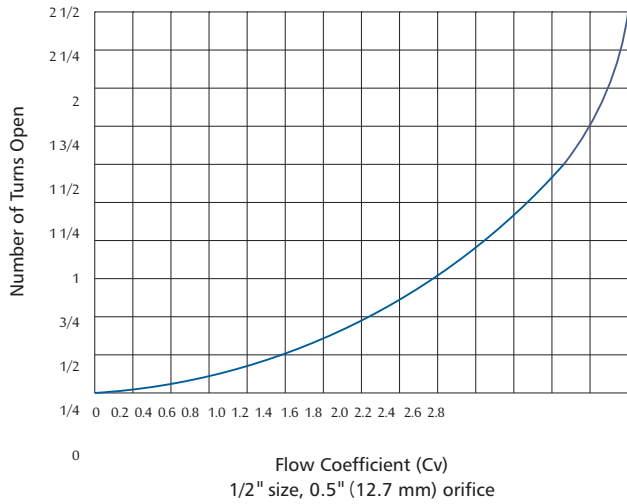


Close-upper stem flush with top of handle

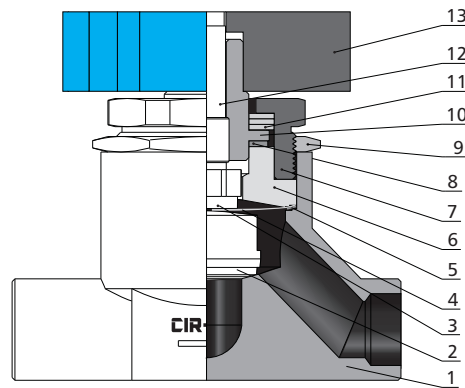
Pressure-Temperature Ratings

Body Material	Cast	Forged and Bar Stock
Temperature, °F (°C)	Working Pressure, psig (bar)	
-20 (-28) to 100 (37)	1000 (68.9)	1000 (68.9)
200 (93)	830 (57.1)	710 (48.9)
300 (148)	660 (45.4)	430 (29.6)

Flow Coefficient vs. Turns Open



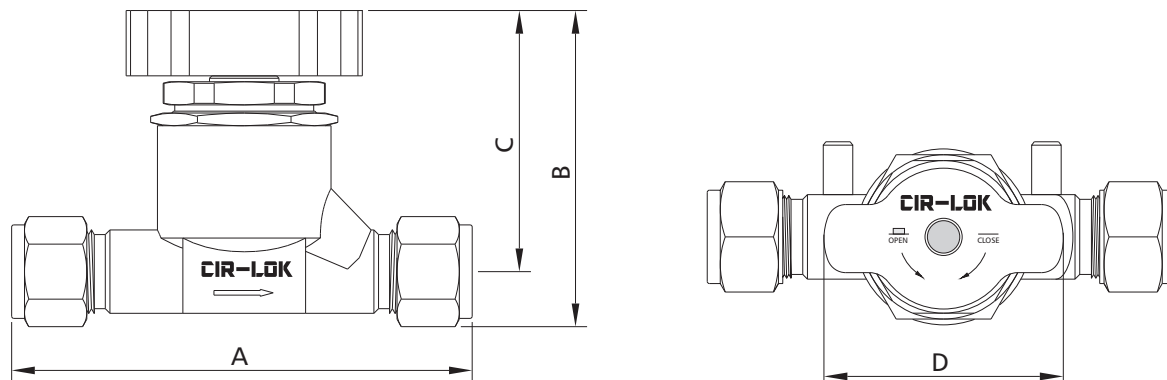
Standard Materials of Construction



Component	Valve Body Material Grade/ASTM Specification		
	DV1 Series	DV2 Series	DV3 Series
1 Body	CF3M/A351	316L S.S./A182	316L S.S./A479
2 Tip Subassembly	PTFE/AMS 3650 insert 316L S.S./A479		
3 Gasket	PTFE-coated 316L S.S./A240		
4 Diaphragm	316L S.S./A240		
5 Clamp Ring	Brass/B16		
6 Bonnet	316 S.S./A479		
7 Upper Stem	316 S.S./A479		
8 Spring Washer	Alloy steel		
9 Actuator	416 S.S./A582		
10 Bearing Subassembly	High-carbon chrome steel		
11 Lock Nut	17-4 PH powered metal		
12 Bonnet Nut	Silver-plated 316 S.S./A479		
13 Handle	Polyester with 316 S.S. insert		

Dimensions

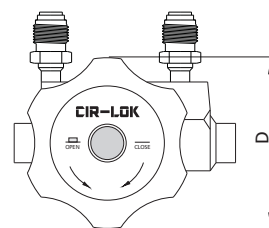
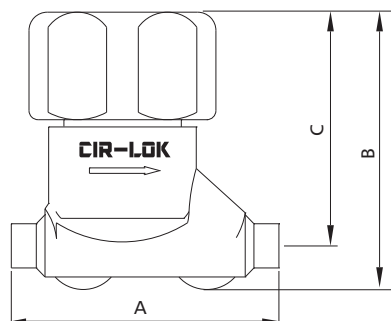
DV1 Series Cast-body



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimension, in. (mm)			
				A	B	C	D
DV1-F8-13-	1/2" CIR-LOK	0.5 (12.7)	2.8	5.30 (135)	2.95 (74.9)	2.41 (61.2)	2.25 (57.2)
DV1-F12-25-	3/4" CIR-LOK	1.0 (25.4)	12.0	8.28 (210)	5.12 (130.0)	4.35 (110.0)	4.0 (102.0)
DV1-F16-25-	1" CIR-LOK	1.0 (25.4)	12.0	8.46 (215)	5.12 (130.0)	4.35 (110.0)	4.0 (102.0)
DV1-M12-13-	12 mm CIR-LOK	0.5 (12.7)	2.8	5.30 (135)	2.95 (74.9)	2.41 (61.2)	2.25 (57.2)
DV1-M25-25-	25 mm CIR-LOK	1.0 (25.4)	12.0	8.63 (219)	5.12 (130.0)	4.35 (110.0)	4.0 (102.0)
DV1-FNPT8-13-	1/2 Female NPT	0.5 (12.7)	2.8	5.61 (142)	2.95 (74.9)	2.41 (61.2)	2.25 (57.2)
DV1-FNPT16-25-	1 Female NPT	1.0 (25.4)	12.0	8.46 (215)	5.12 (130.0)	4.35 (110.0)	4.0 (102.0)
DV1-MBW12-13-	12 mm MBW	0.5 (12.7)	2.8	5.30 (135)	2.95 (74.9)	2.41 (61.2)	2.25 (57.2)
DV1-MBW25-25-	25 mm MBW	1.0 (25.4)	12.0	8.63 (219)	5.12 (130.0)	4.35 (110.0)	4.0 (102.0)
DV1-FBT8-13-	1/2 Female BSPT	0.5 (12.7)	2.8	5.61 (142)	2.95 (74.9)	2.41 (61.2)	2.25 (57.2)
DV1-FBT16-25-	1 Female BSPT	1.0 (25.4)	12.0	8.46 (215)	5.12 (130.0)	4.35 (110.0)	4.0 (102.0)
DV1-GFS8-13-	1/2" Male GFS	0.5 (12.7)	2.8	4.58 (116)	2.95 (74.9)	2.41 (61.2)	2.25 (57.2)
DV1-FT8-13-	1/2" x 0.049 " Fractional Tube	0.5 (12.7)	2.8	8.82 (224)	2.95 (74.9)	2.41 (61.2)	2.25 (57.2)
DV1-FT12-13-	3/4" x 0.065" Fractional Tube	0.5 (12.7)	2.8	8.79 (223)	2.95 (74.9)	2.41 (61.2)	2.25 (57.2)
DV1-FT16-25-	1" x 0.065" Fractional Tube	1.0 (25.4)	12.0	10.87 (276)	5.12 (130.0)	4.35 (110.0)	4.0 (102.0)
DV1-MT12-13-	12 x 1 mm Metric Tube	0.5 (12.7)	2.8	8.82 (224)	2.95 (74.9)	2.41 (61.2)	2.25 (57.2)
DV1-MT18-13-	18 x 1.5 mm Metric Tube	0.5 (12.7)	2.8	8.79 (223)	2.95 (74.9)	2.41 (61.2)	2.25 (57.2)
DV1-MT22-25-	22 x 1.5 mm Metric Tube	1.0 (25.4)	12.0	10.87 (276)	5.12 (130.0)	4.35 (110.0)	4.0 (102.0)
DV1-MT25-25-	25 x 1.5 mm Metric Tube	1.0 (25.4)	12.0	10.87 (276)	5.12 (130.0)	4.35 (110.0)	4.0 (102.0)

Dimensions

DV2 Series
Forged-body



Optional
Purge Ports

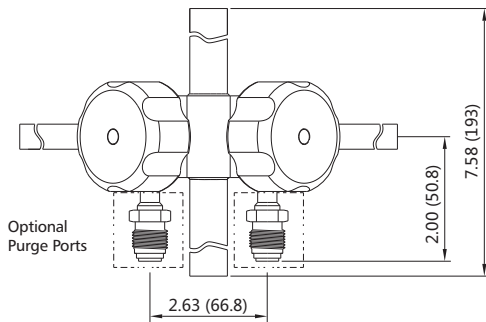
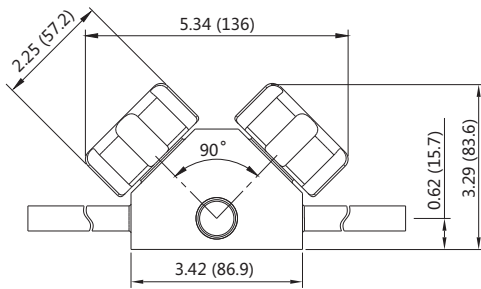
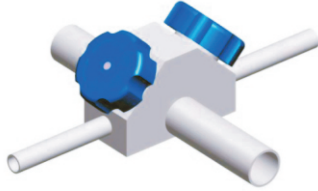
Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimension, in. (mm)			
				A	B	C	D
DV2-F8-13-	1/2" CIR-LOK	0.5 (12.7)	2.8	5.30 (135)	3.03 (77.0)	2.54 (64.5)	2.25 (57.2)
DV2-M12-13-	12 mm CIR-LOK			5.30 (135)			
DV2-FBW6-13-	3/8" FBW			2.88 (73.2)			
DV2-FBW8-13-	1/2" FBW			2.88 (73.2)			
DV2-FGFS8-13-	1/2" Female GFS Fitting			4.09 (104)			
DV2-RGFS8-13-	1/2" Rotatable Male GFS Fitting			5.43 (138)			
DV2-FT6-13-	3/8" x 0.049" Fractional Tube			8.86 (225)			
DV2-FT8-13-	1/2" x 0.049" Fractional Tube			8.86 (225)			

Dimensions

DV3D Series Bar Stock-body



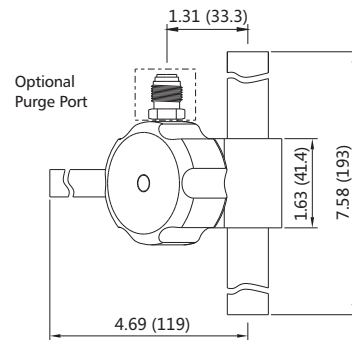
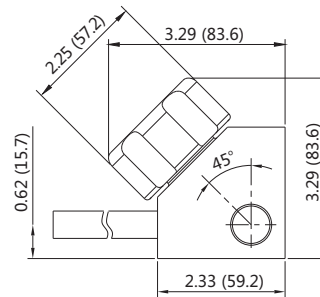
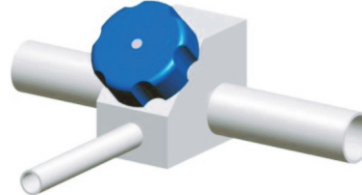
Double Horizontal Cross



DV3S Series Bar Stock-body



Single Horizontal Cross



Basic Ordering Number	Tube Size		Orifice in.(mm)	Cv
	Main	Branch		
DV3D-8-8-	1/2" x 0.049"	1/2" x 0.049"	0.5 (12.7)	2.8
DV3D-8-RGFS8-	1/2" x 0.049"	1/2" rotatable male GFS fitting		
DV3D-12-8-	3/4" x 0.065"	1/2" x 0.049"		
DV3D-12-RGFS8-	3/4" x 0.065"	1/2" rotatable male GFS fitting		
DV3D-16-8-	1" x 0.065"	1/2" x 0.049"		
DV3D-16-RGFS8-	1" x 0.065"	1/2" rotatable male GFS fitting		

Basic Ordering Number	Tube Size		Orifice in.(mm)	Cv
	Main	Branch		
DV3S-8-4-	1/2" x 0.049"	1/4" x 0.035"	0.5 (12.7)	2.8
DV3S-8-8-	1/2" x 0.049"	1/2" x 0.049"		
DV3S-8-RGFS4-	1/2" x 0.049"	1/4" rotatable male GFS fitting		
DV3S-8-RGFS8-	1/2" x 0.049"	1/2" rotatable male GFS fitting		
DV3S-12-8-	3/4" x 0.065"	1/2" x 0.049"		
DV3S-12-RGFS8-	3/4" x 0.065"	1/2" rotatable male GFS fitting		
DV3S-16-8-	1" x 0.065"	1/2" x 0.049"		
DV3S-16-RGFS8-	1" x 0.065"	1/2" rotatable male GFS fitting		

How to Order

DV1 — **FGFS8** — **FGFS4** — **13** — **D** — **E** — **316L**

Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Orifice Size	Purge Port	Handle Color	Body Material
DV1	FNPT Female NPT	2 1/8 (in.)	Same as inlet type and inlet size		13 0.5 in. (12.7 mm)	None	Blue	316 316 S.S.
DV2	NPT Male NPT	4 1/4 (in.)				If outlet and inlet are the same, eliminate the outlet designator		25 1 in. (25.4 mm)
	FBT Female BSPT	6 3/8 (in.) or 6 mm	D Downstream	G Gold				
	FBP Female BSPP	8 1/2 (in.) or Ø1/2 x 0.049" or 8 mm	UD Upstream and Downstream	E Green				
	MBP Male BSPP	10 10 mm	B Black					
	FSW Fractional Tube Socket Weld	12 3/4 (in.) or Ø3/4 x 0.065" 12 mm or 12 x 1	P Purple					
	MSW Metric Tube Socket Weld	14 14 mm	O Orange					
	FBW Fractional Tube Butt Weld	16 1 (in.) or 16 mm	I Pink					
	MBW Metric Tube Butt Weld	18 18 mm or Ø18 x 1.5	R Brown					
	F Fractional Tube Fitting	20 1 1/4 (in.) or 20 mm or M20 x 1.5	S Silver					
	M Metric Tube Fitting	22 22 mm	W White					
	FGFS Female FR Fitting	25 25 mm	Y Yellow					
	GFS Male FR Fitting							
	RGFS Rotatable Male FR Fitting							
	FTE 3" Fractional Tube Extension							
	MTE 3" Metric Tube Extension							