

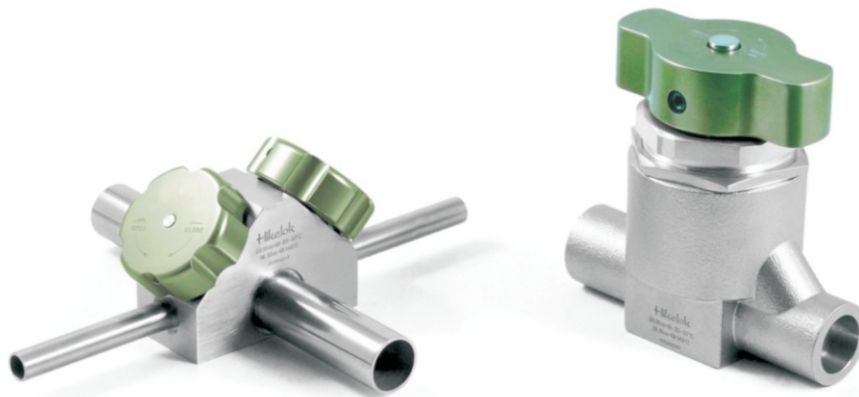
Diaphragm Valves

DV1-DV5 Series



Diaphragm Valves

DV1, DV2 and DV3 Serie



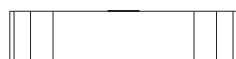
- ❖ Maximum working pressure: 300 psig (20.7 bar)
- ❖ Working temperature: -20°F to 300°F (-28°C to 148°C)
- ❖ Variety of end connections
- ❖ Body material: Cast, forged and bar stock stainless steel

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, elctropolished 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

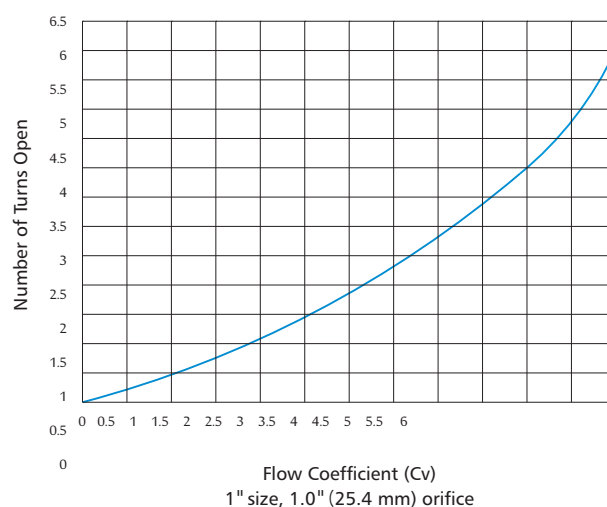
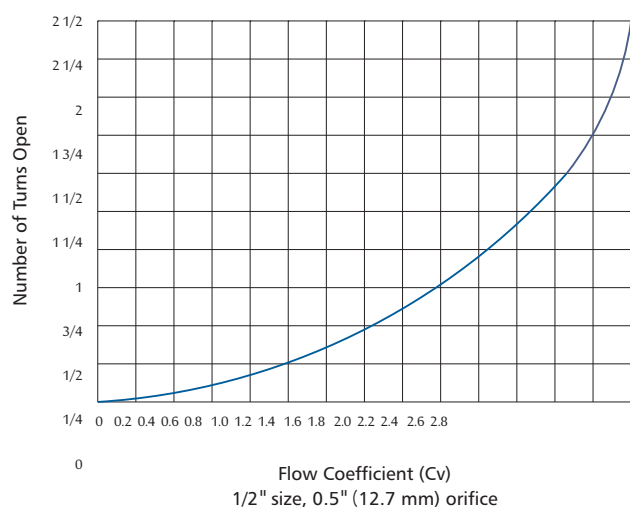


Close-upper stem flush with top of handle

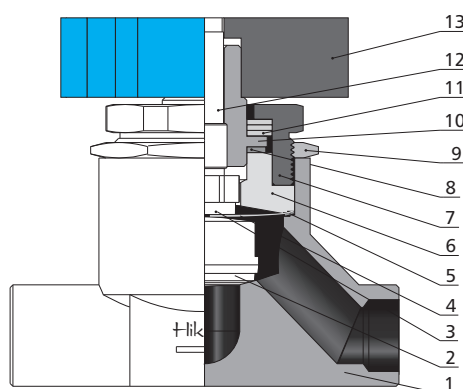
Pressure-Temperature Ratings

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



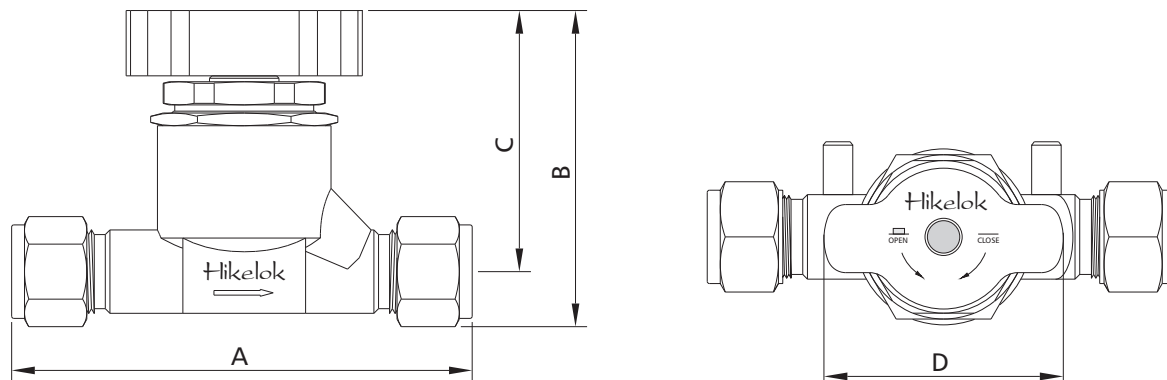
Standard Materials of Construction



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 powdered metal		
12	Bonnet Nut	Silver-plated 316 S.S./A479		
13	Handle	Polyester with 316 S.S. insert		

Dimensions

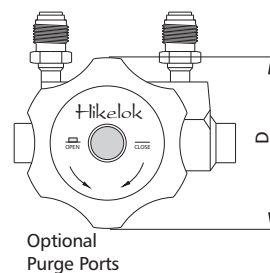
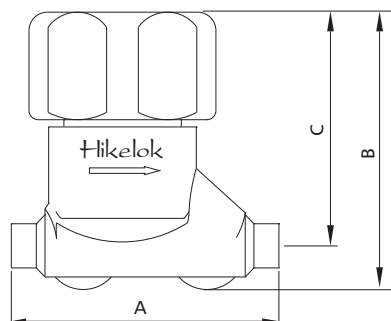
DV1 Series Cast-body



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimension, in. (mm)			
				A	B	C	D
DV1-F8-13-	1/2" Hikelok	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" Hikelok	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" Hikelok	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 Hikelok	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 Hikelok	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



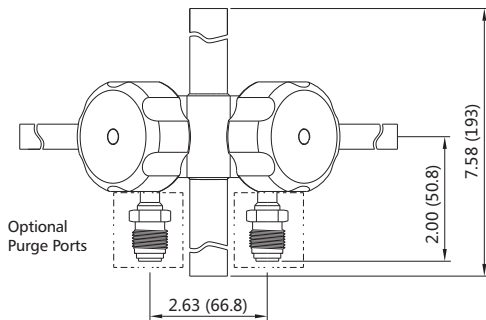
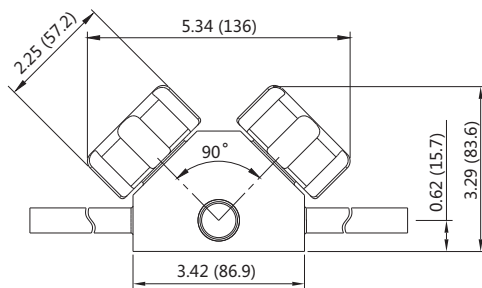
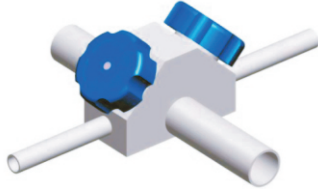
Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimension, in. (mm)			
				A	B	C	D
DV2-F8-13-	1/2" Hikelok	0.5 (12.7)	2.8	5.30 (135)	3.03 (77.0)	2.54 (64.5)	2.25 (57.2)
DV2-M12-13-	12 mm Hikelok			5.30 (135)			
DV2-FBW6-13-	3/8" FBW			2.88 (73.2)			
DV2-FBW8-13-	1/2" FBW			2.88 (73.2)			
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



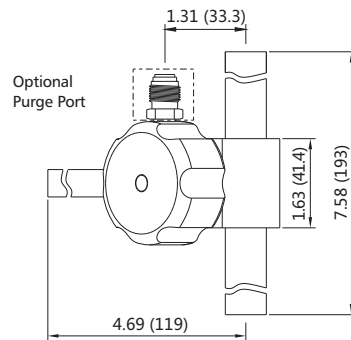
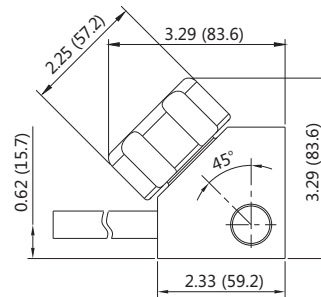
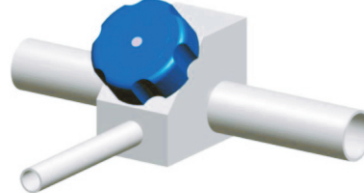
Double Horizontal Cross



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.)				U Upstream	C Red	316L 316L S.S.
	FBT Female BSPT	6 3/8 (in.) or 6 mm	If outlet and inlet are the same, eliminate the outlet designator		25 1 in. (25.4 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						B Black	
	FSW Fractional Tube Socket Weld	10 10 mm					P Purple	
	MSW Metric Tube Socket Weld	12 3/4 (in.) or Ø3/4" x 0.065" 12 mm or 12 x 1					O Orange	
	FBW Fractional Tube Butt Weld	14 14 mm					I Pink	
	MBW Metric Tube Butt Weld	16 1 (in.) or 16 mm					R Brown	
	F Fractional Tube Fitting	18 18 mm or Ø18 x 1.5					S Silver	
	M Metric Tube Fitting	20 1 1/4 (in.) or 20 mm or M20 x 1.5					W White	
	FGFS Female FR Fitting	22 22 mm					Y Yellow	
	GFS Male FR Fitting							
	RGFS Rotatable Male FR Fitting	25 25 mm						
	FTE 3" Fractional Tube Extension							
	MTE 3" Metric Tube Extension							

Diaphragm Valves

DV4 Serie



- ❖ All-metal containment, packless
- ❖ Maximum working pressure: 3500 psig (241 bar)
- ❖ Working temperature: -100°F to 250°F (-73°C to 121°C)
- ❖ Variety of end connections

Features

- ❖ Maximum working pressure: 3500 psig (241 bar)
- ❖ Working temperature: -100°F to 250°F (-73°C to 121°C)
- ❖ Repetitive shutoff with fully contained softseat stem tip
- ❖ Position indicator ring for lever handle
- ❖ Manual or pneumatic actuation
- ❖ Aluminum piston accelerated open/close speed
- ❖ Helium leak tested, maximum leak rate of 4^{-9} x10 std cm³/s
- ❖ Different handle types and colors are available
- ❖ Can be used in vacuum applications

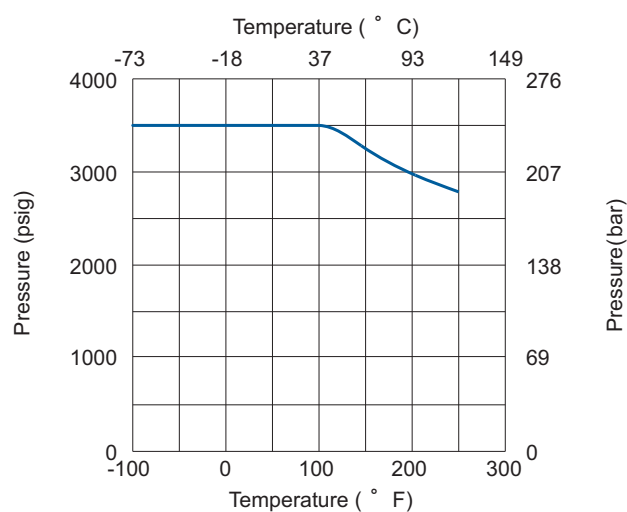
Technical Data

Sort	Max. Working Pressure psig (bar)	Working Temperature Range°C(°F)	Flow Coefficient (Cv)	Orifice in. (mm)	Operating/Operating Pressure psig (bar)
Lever handle	3500 (241)	-73 to 121 (-100 to 250)	0.14	0.156 (4.0)	Approximately one quarter turn to operate from fully open to closed
Round handle			0.30		Approximately one and one-half turns to operate from fully open to closed
Pneumatic actuator			0.20		70 to 120 (4.9 to 8.2)

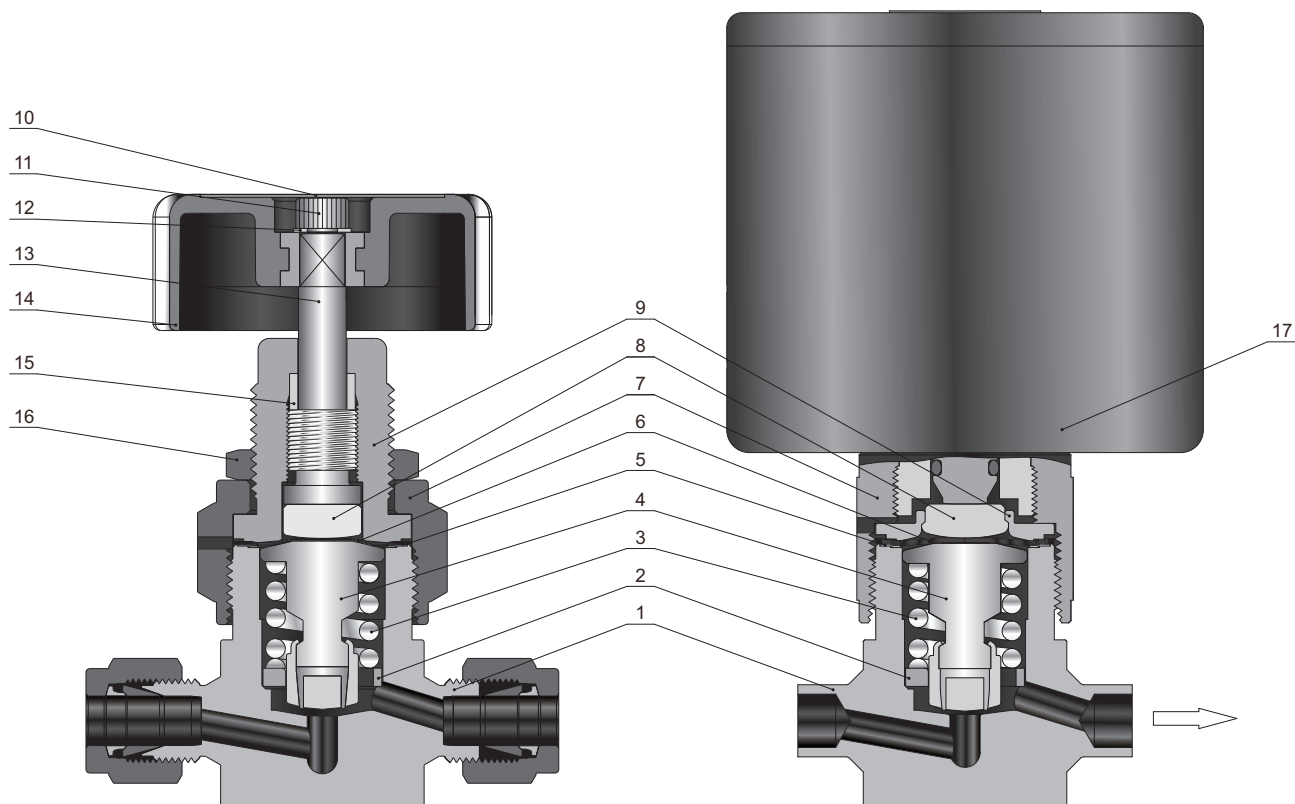
Flow Data

Pressure Drop to Atmosphere ΔP (bar)	Lever handle Cv=0.14		Round handle Cv=0.30		Pneumatic actuator Cv=0.20	
	Air std L/min	Water L/min	Air std L/min	Water L/min	Air std L/min	Water L/min
0.68	49	1.6	100	3.5	64	2.4
3.4	130	3.9	270	8.0	170	5.4
6.8	240	5.4	490	11.4	300	7.6

Pressure-Temperature Ratings



Materials of Construction



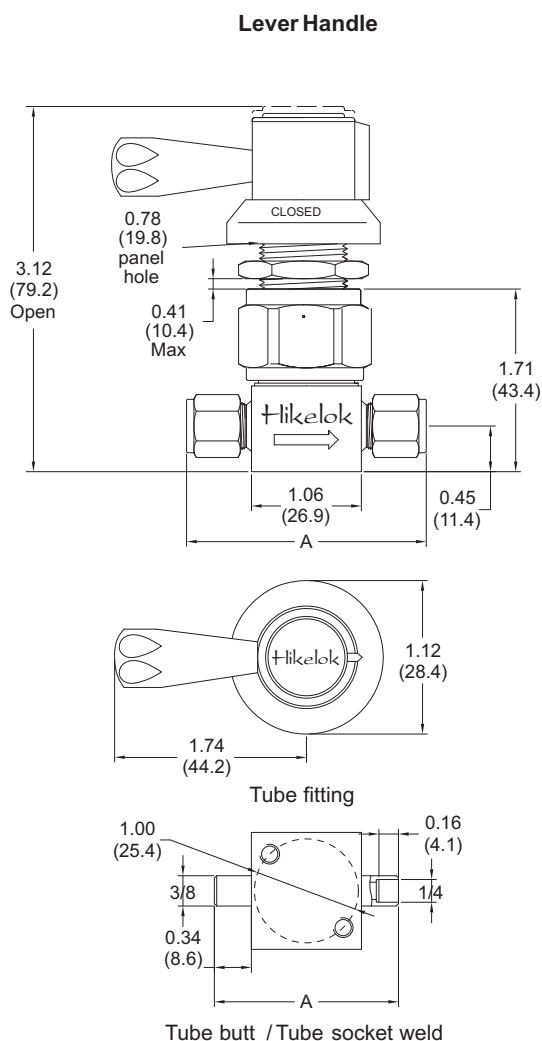
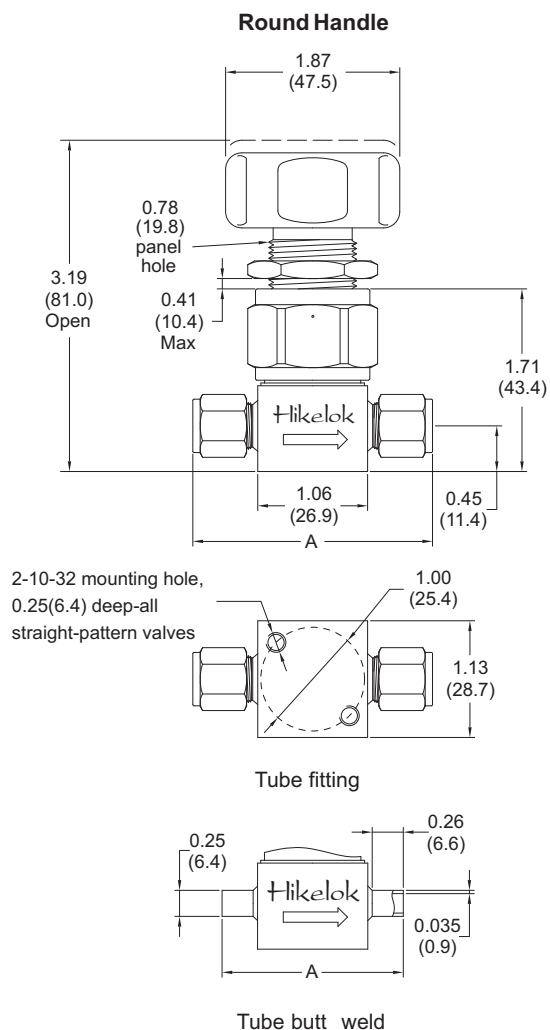
Item	Component		Material Grade/ASTM Specification	
			Manual	Pneumatic Actuation
1	Body		316 S.S./A479/316L SS/A479	
2	Guide		Electropolished 316 S.S./A479	
3	Spring		316 S.S./A313	
4	Stem assembly	Stem plug	316L S.S./A479	
		Stem insert	PCTFE/D1430	
		Stem container	316L S.S./A479	
		Stem	316L S.S./A479	
5	Gasket		PTFE-coated 316L S.S./A240	
6	Diaphragms		Elgiloy/AMS 5876	Elgiloy/AMS 5876 & C17200/B194
7	Bonnet nut		316 S.S./A479	
8	Actuator Button		C36000/B16	
9	Bonnet		316 S.S./A479	S17400/A564
10	Lable		PVC	—
11	Set Screw		304 S.S.	—
12	Gasket		65Mn	—
13	Actuator		416S.S./A582	—
14	Round Handle		ABS	—
15	Wipe Ring		PTFE	—
16	Panel mount nut		316 S.S./A479	—
17	Pneumatic Actuator		—	Aluminum 6061/B211

Product technology grade

Grade	General purpose	Special Cleaning and Packaging	Ultrahigh-purity
Material	316 SS or 316L SS		
Wetted Surface Roughness	Ra 25 µin. (0.64 µm)	Ra 10 µin. (0.25 µm)	
Process	Machine finished	Electropolished	
Process Specification	FC-01 Standard Cleaning and Packaging	FC-02 Special Cleaning and Packaging	FC-03 Ultrahigh-Purity Process Specification
Cleaning	Thrice degreasing and ultrasonic cleaning	Special cleaning with non-ozone-depleting chemicals	Ultrahigh-purity cleaning with a continuously monitored, deionized water, ultrasonic cleaning system
Assembly	At atmosphere	Performed in specially cleaned areas	Performed in ISO Class 4 work areas
Testing	Inboard helium leak tested to maximum leak rate of 4×10^{-9} std cm ³ /s		
Packing	Individually bagged	Individually bagged	Valves are double bagged and vacuum sealed in cleanroom bags

Dimensions

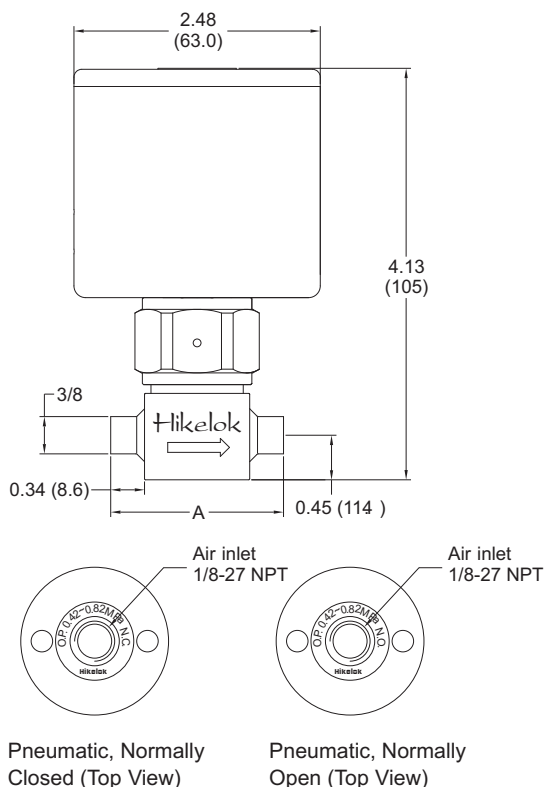
Straight Patterns



Basic Ordering Number	Connection Type and Size	Dimension, in. (mm)	Orifice in. (mm)
		A	
DV4-F4-	1/4" Hikelok	2.46 (62.5)	
DV4-F6-	3/8" Hikelok	2.58 (65.5)	
DV4-M6-	6 mm Hikelok	2.46 (62.5)	
DV4-M8-	8 mm Hikelok	2.53 (64.3)	
DV4-FBW4-	1/4" Tube butt weld	1.74 (44.2)	
DV4-FBW6-	3/8" Tube butt weld	1.74 (44.2)	
DV4-FBW6-FSW4-	3/8" Tube butt weld to 1/4" tube socket weld	1.75 (44.4)	0.156(4.0)
DV4-FBW8-FSW6-	1/2" Tube butt weld to 3/8" tube socket weld	1.81 (46.0)	
DV4-NPT4-	1/4" Male NPT	2.46 (62.5)	
DV4-FNPT4-	1/4" Female NPT	2.46 (62.5)	
DV4-GFS4-	1/4" Male GFS	2.30 (58.4)	
DV4-FGFS4-	1/4" Female GFS	2.76 (70.1)	
DV4-FGFS4-GFS4-	1/4" Female GFS to 1/4" Male GFS	2.54 (64.5)	
DV4-GFS4-FGFS4-	1/4" Male GFS to 1/4" Female GFS	2.54 (64.5)	

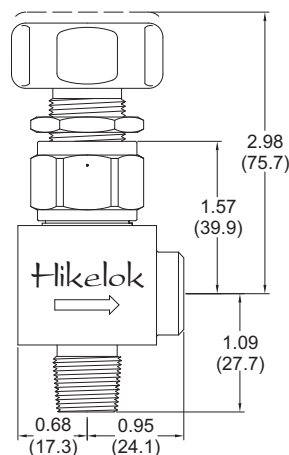
Straight Patterns

Pneumatic Actuator

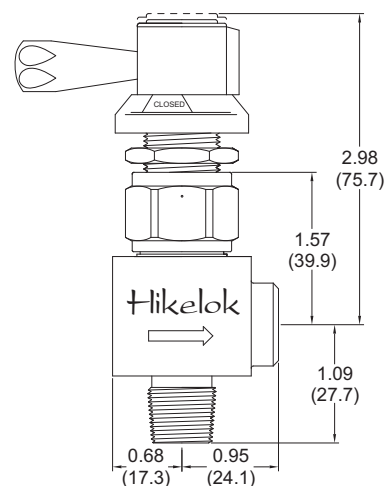


Angle Patterns

Round Handle



Lever Handle



Basic Ordering Number	Connection Type and Size	
	Inlet	Outlet
DV4-NPT4-FNPT4-	1/4 NPT Male NPT	1/4 NPT Female NPT

How to Order

DV4 — **FGFS4** — **GFS4** — **T** — **EA** — **NC** — **316L**

Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Stem Tip Material	Handle Color	Flow Pattern	Actuator	Body Material
DV4	F Fractional Tube Fitting	2 1/8"	Same as inlet type and inlet size		PCTFE	Blue	Straight	Round Handle	316 316 S.S.
		4 1/4"			T PTFE	C Red	A Angle		316L 316L S.S.
	M Metric Tube Fitting	6 6 mm	If outlet and inlet are the same, eliminate the outlet designator		V Polyimide	G Gold		NC Pneumatic, Normally Closed	
	FBW Fractional Tube Butt Weld	8 1/2 "				E Green			
	MBW Metric Tube Butt Weld					B Black		NO Pneumatic, Normally Open	
	GFS Male GFS Fitting					P Purple			
	FGFS Female GFS Fitting					O Orange			
	NPT Male NPT					I Pink			
	FNPT Female NPT					R Brown			
						S Silver			
						W White			
						Y Yellow			

Diaphragm Valves

DV5 Series



- ❖ Suitable for ultrahigh-purity applications
- ❖ 316L VIM-VAR stainless steel body
- ❖ Low-pressure and high-pressure models
- ❖ Variety of end connections
- ❖ Manual or pneumatic actuation

Features

- ❖ 316L VIM-VAR stainless steel body is available
- ❖ Suitable for ultrahigh-purity applications
- ❖ Elgiloy material for strength and corrosion resistance for long cycle life
- ❖ Fully contained PCTFE seat design provides excellent resistance to swelling and contamination
- ❖ Wetted Surface Electropolished, Roughness Ra finished to an average of Ra5 µin.(0.13 µm)
- ❖ Helium leak tested, maximum leak rate of 1x10⁻⁹ std cm³/s
- ❖ Low-pressure and high-pressure models
- ❖ Manual or pneumatic actuation
- ❖ Aluminum piston accelerated open/close speed
- ❖ Different handle types are available
- ❖ Can be used in vacuum applications

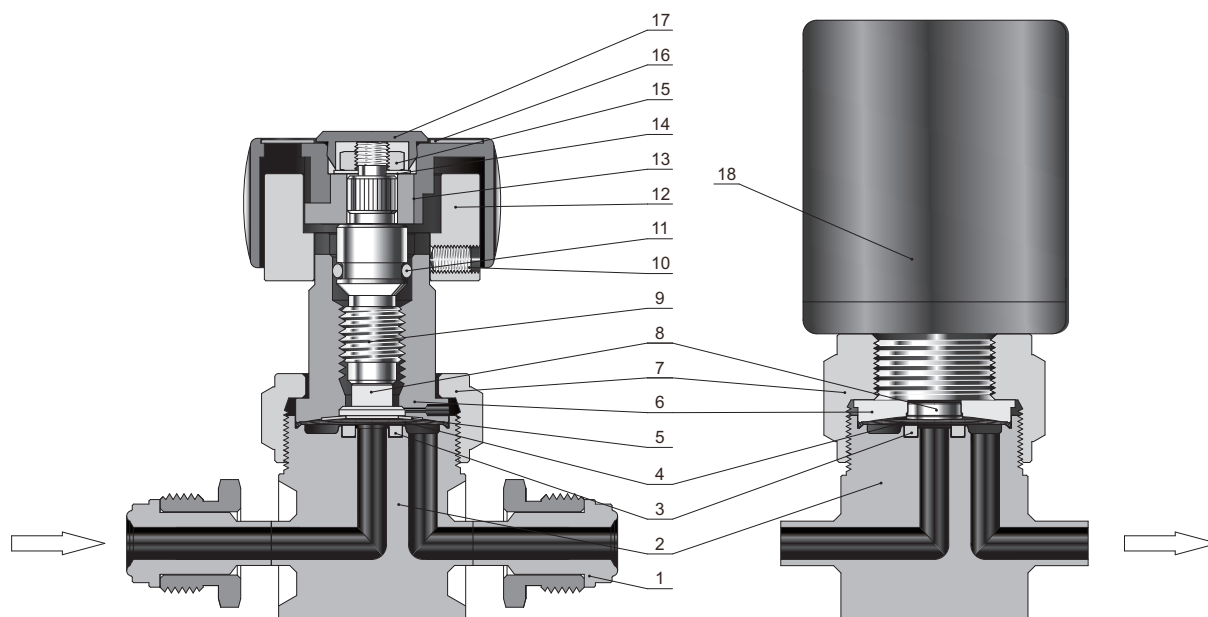
Technical Data

Sort	Max. Working Pressure psig (bar)	Working Temperature Range °F (°C)	Flow Coefficient (Cv)	Orifice in.(mm)	Pneumatic Actuator Operating Pressure psig (bar)
Low-pressure	250 (17.2)	-10 to 150 (-23 to 65)	0.27	0.16 (4.1)	60 to 120 (4.2 to 8.2)
High-pressure	3000 (207)		0.20		70 to 120 (4.9 to 8.2)

Flow Data

Pressure Drop to Atmosphere bar	Low-Pressure Models Cv=0.27		High-Pressure Models Cv=0.20	
	Air std L/min	Water L/min	Air std L/min	Water L/min
0.68	86	3.2	64	2.4
3.4	230	7.2	170	5.4
6.8	410	10.2	300	7.6

Materials of Construction



Item	Component	Material Grade/ASTM Specification	
		Low-Pressure	High-Pressure
1	Welded end connections	316 S.S./A479 or 316L S.S./A479 or 316L VIM-VAR S.S./SEMI F20	
2	Body	316 S.S./A479 or 316L S.S./A479 or 316L VIM-VAR S.S./SEMI F20	
3	Seat	PCTFE/D1430	
4	Diaphragm (2)	Elgiloy /AMS 5876	
5	Washer	—	S17700/A693
6	Bonnet	S17400/A564	
7	Bonnet nut	316 S.S./A479	
8	Button	316 S.S./A479	
9	Stem	316 S.S./A479	
10	Hexagon socket set	304 S.S.	
11	O-rings	NBR	
12	Actuator	316 SS/A276	
13	Manual Actuator	Round handle	ABS with stainless steel insert
		Directional handle	Nylon with stainless steel insert
		Integral lockout handle	Aluminum with anodic oxidation of surface
		Toggle handle	316 S.S. with epoxy coating
14	Gasket	65 Mn	
15	Nut	304 S.S.	
16	Lable	PVC	
17	Cap	ABS	
18	Pneumatic Actuator	Aluminum	

Product technology grade

Grade	General purpose	Special Cleaning and Packaging	Ultrahigh-purity
Material	316 S.S. or 316L S.S. or 316L VIM-VAR S.S./SEMI F 20		
Wetted Surface Roughness	Ra 10 µin. (0.25 µm)	Ra 5 µin. (0.13 µm)	
Process	Machine finished	Electropolished	
Process Specification	FC-01 Standard Cleaning and Packaging	FC-02 Special Cleaning and Packaging	FC-03 Ultrahigh-Purity Process Specification
Cleaning	Thrice degreasinga ultrasonic cleaning	Special cleaning with non-ozone-depleting chemicals	Ultrahigh-purity cleaning with a continuously monitored, deionized water, ultrasonic cleaning system
Assembly	At atmosphere	Performed in specially cleaned areas	Performed in ISO Class 4 work areas
Testing	Inboard helium leak tested to maximum leak rate of 1×10^{-9} std cm ³ /s		
Packing	Individually bagged	Individually bagged	Valves are double bagged and vacuum sealed in cleanroom bags

Manual Actuators

Round

- ❖ Quick, quarter-turn actuation
- ❖ Handle with window provides visual indication of open and closed positions

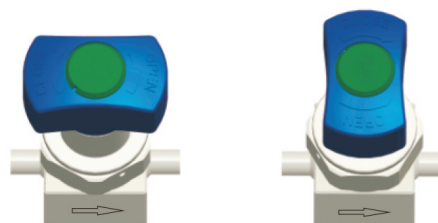


OPEN

CLOSED

Directional

- ❖ Quick, quarter-turn actuation
- ❖ Handle shape provides visual indication of open and closed position



OPEN

CLOSED

Integral Lockout

- ❖ Quick, quarter-turn actuation
- ❖ Lockable in the CLOSED position for safety
- ❖ Handle shape and window indicator provides visual indication of OPEN and CLOSED position

Toggle

- ❖ Spring-loaded toggle design quick actuation
- ❖ Lockable in the CLOSED position for safety
- ❖ Handle position provides visual indication of OPEN and CLOSED positions
- ❖ Narrow handle profile allows close parallel mounting of valves
- ❖ Only for low-pressure models

Pneumatic Actuators

High-Pressure Pneumatic Actuator

- ❖ Normally open, " N.O." marked on the top of the cylinder
- ❖ Normally close, " N.C." marked on the top of the cylinder



Low-Pressure Pneumatic Actuator

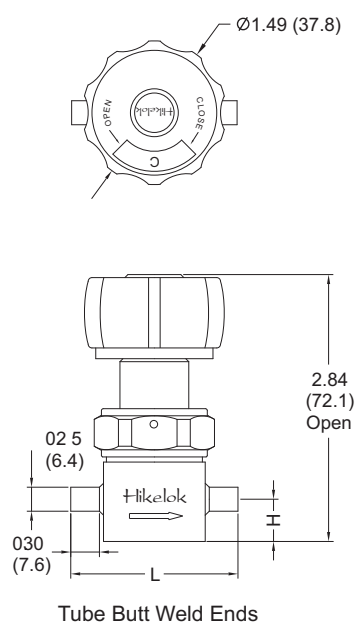
- ❖ Normally open, " N.O." marked on the top of the cylinder
- ❖ Normally close, " N.C." marked on the top of the cylinder



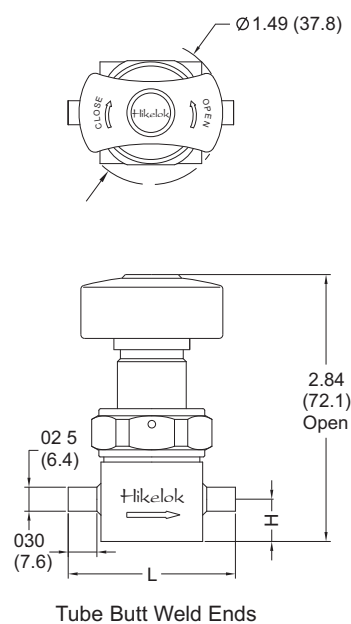
Dimension

Low-Pressure Valves

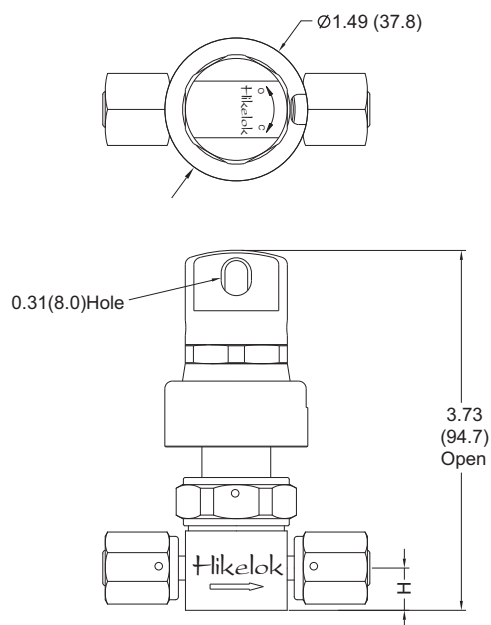
Round Handle



Directional Handle

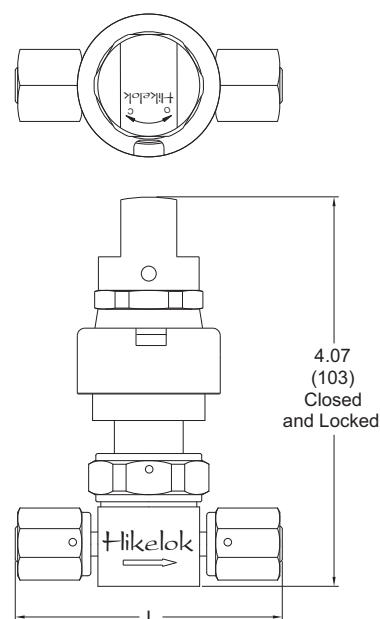


Integral Lockout



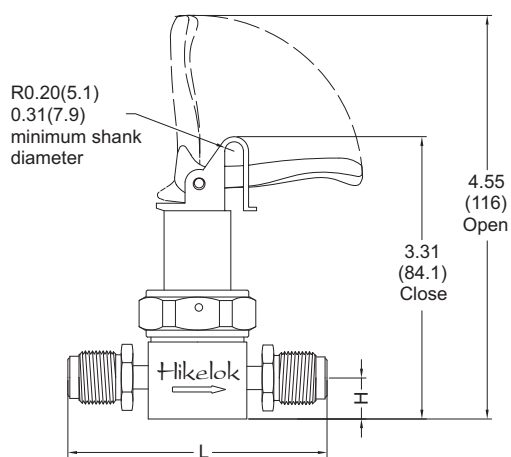
Female GFS Fittings

Handle



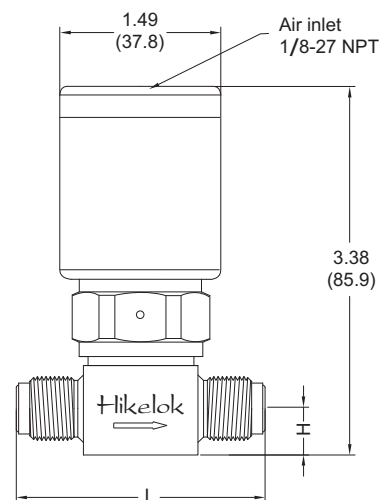
Female GFS Fittings

Toggle Handle



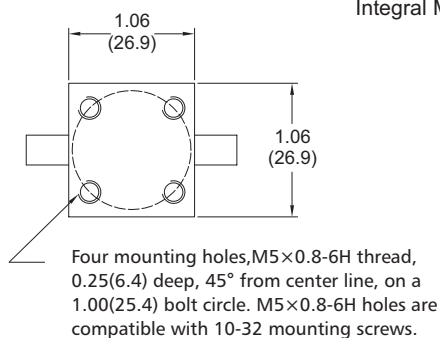
Rotatable Male GFS Fittings

Pneumatic Actuator



Integral Male GFS Fittings

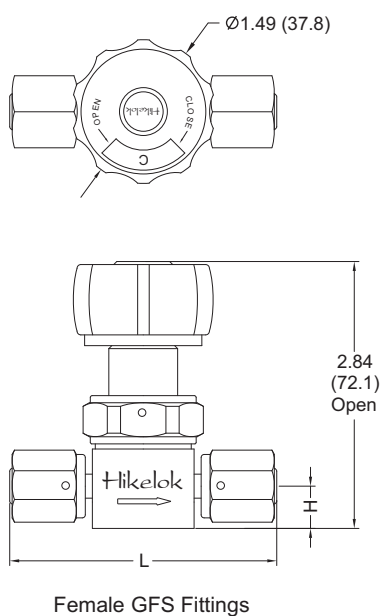
Bottom



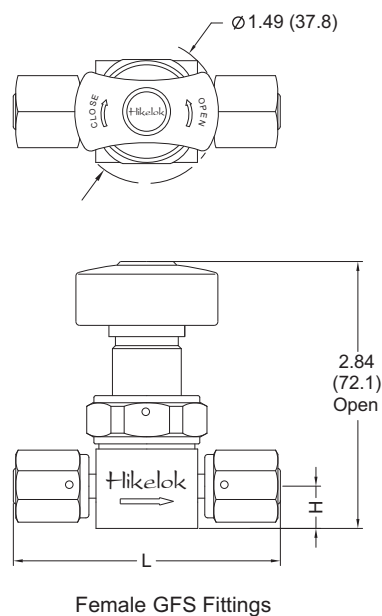
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	H
DV5-FBW4-L-	1/4" tube butt weld 0.30"(7.6 mm) tube stub, 0.035"(0.89 mm) wall	1.74 (44.2)	0.44(11.2)
DV5-FBW4S-L-	1/4" tube butt weld 0.26"(6.6 mm) tube stub, 0.035" (0.89 mm) wall	1.61 (40.9)	0.44 (11.2)
DV5-MBW6-L-	6 mm tube butt weld, 1 mm wall	1.74 (44.2)	0.44 (11.2)
DV5-FGFS4-L-	1/4" female GFS fitting	2.78 (70.6)	0.44 (11.2)
DV5-RGFS4-L-	1/4" rotatable male GFS fitting		
DV5-GFS4-L-	1/4" integral male GFS fitting	2.30 (58.4)	0.44 (11.2)
DV5-F4-L-	1/4" Hikelok tube fittings	2.46 (62.5)	0.44 (11.2)
DV5-M6-L-	6 mm Hikelok tube fittings	2.45 (62.2)	0.44 (11.2)

High-Pressure Valves

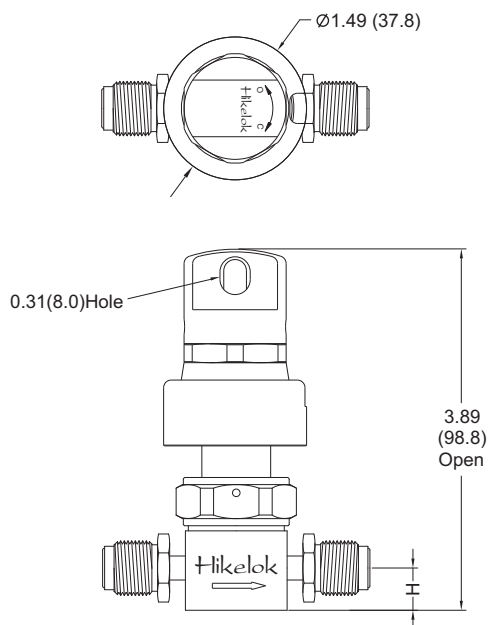
Round Handle



Directional Handle

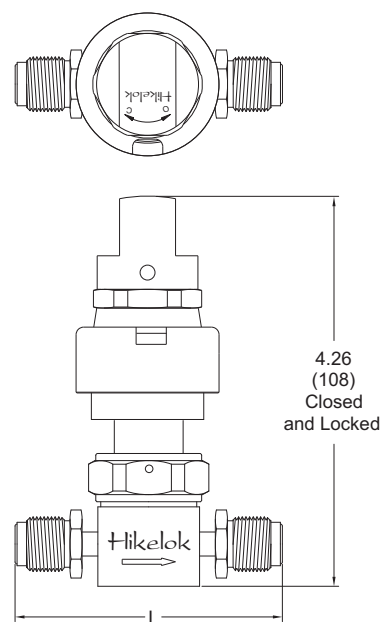


Integral Lockout



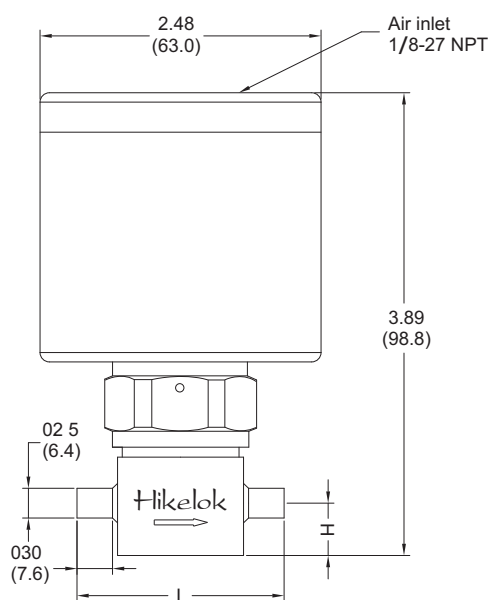
Rotatable Male GFS Fittings

Handle



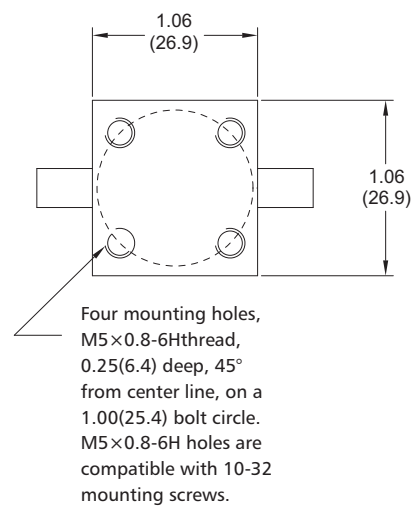
Rotatable Male GFS Fittings

Pneumatic Actuator



Tube Butt Weld Ends

Bottom



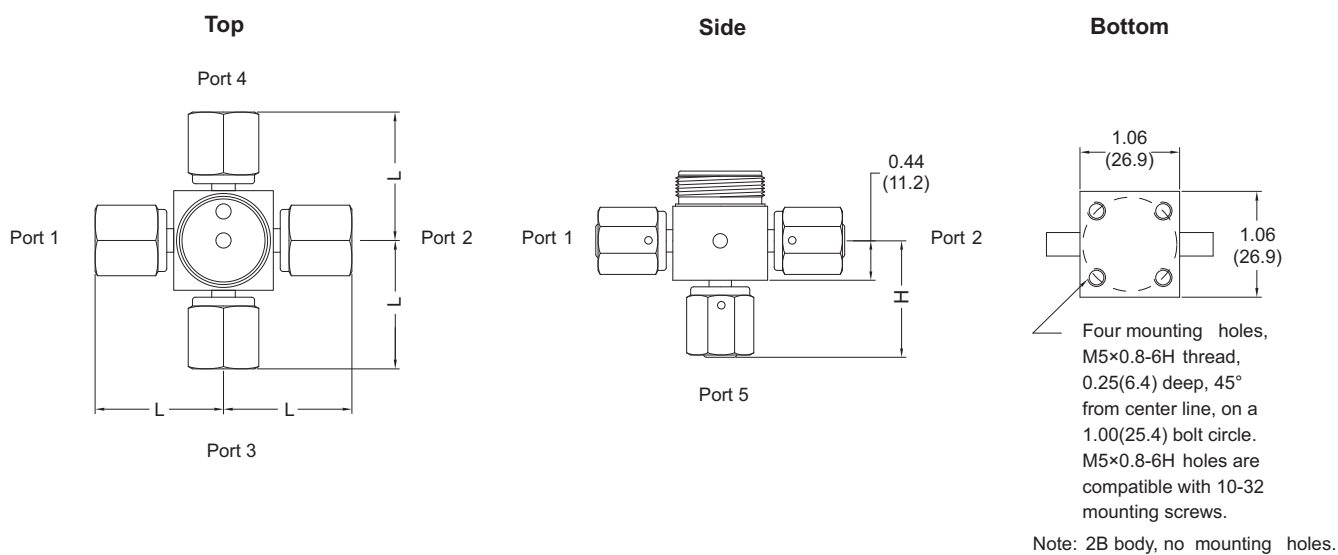
Basic Ordering Number	Connection Type and Size	Dimension, in. (mm)	
		L	H
DV5-FBW4-H-	1/4" tube butt weld 0.30"(7.6 mm) tube stub, 0.035" (0.89 mm) wall	1.74 (44.2)	0.44 (11.2)
DV5-FBW4S-H-	1/4" tube butt weld 0.26"(6.6 mm) tube stub, 0.035" (0.89 mm) wall	1.61 (40.9)	0.44 (11.2)
DV5-MBW6-H-	6 mm tube butt weld, 1 mm wall	1.74 (44.2)	0.44 (11.2)
DV5-FGFS4-H-	1/4" female GFS fitting	2.78 (70.6)	0.44 (11.2)
DV5-RGFS4-H-	1/4" rotatable holes are male GFS fitting		
DV5-GFS4-H-	1/4" integral male GFS fitting	2.30 (58.4)	0.44 (11.2)
DV5-F4-H-	1/4" Hikelok tube fittings	2.46 (62.5)	0.44 (11.2)
DV5-M6-H-	6 mm Hikelok tube fittings	2.45 (62.2)	0.44 (11.2)

Multiport and Elbow Valves

- ❖ Select a flow path as viewed from the top of the valve
- ❖ A a next to the port number indicates inlet of the valve
- ❖ A b next to the port number indicates outlet of the valve

Designator	Schematic	Flow Path		Designator	Schematic	Flow Path	
		Closed	Open			Closed	Open
2A				3D			
2B				3E			
2C				3F			
4M				3G			
4N				3K			

End Connections and Dimentions



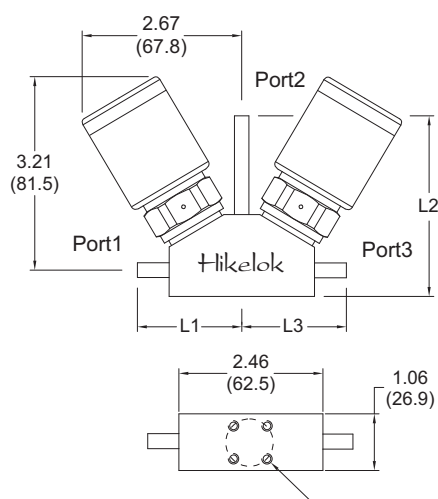
Designator	End Connection		Dimension, in. (mm)	
			L	H
FBW4	1/4" tube butt weld 0.30"(7.6 mm) tube stub, 0.035"(0.89 mm) wall		0.87 (22.1)	0.76 (19.3)
FBW4S	1/4" tube butt weld 0.26"(6.6 mm) tube stub, 0.035" (0.89 mm) wall		0.81 (20.6)	0.70 (17.8)
MBW6	6mm tube butt weld , 1 mm wall		0.87 (22.1)	0.76 (19.3)
FGFS4	1/4" female GFS fitting		1.39 (35.3)	1.28 (32.5)
RGFS4	1/4" rotatable male GFS fitting		1.39 (35.3)	1.63 (41.4)

Multivalve Manifolds

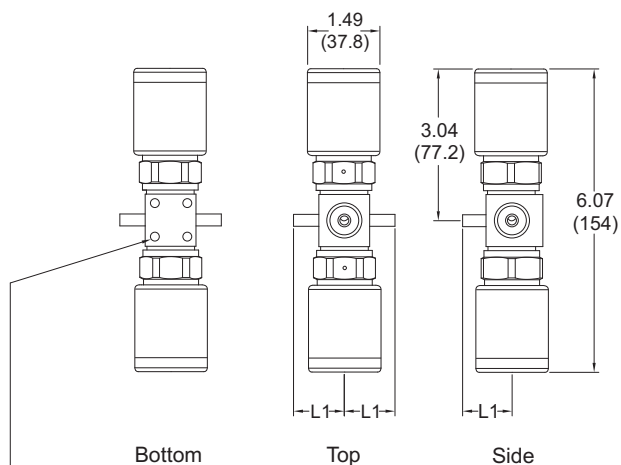
Designator	Schematic	Flow Path
V		
W		
D		

End Connections and Dimentions

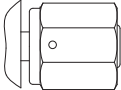
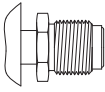
V and W Multivalve Manifolds



D Multivalve Manifold

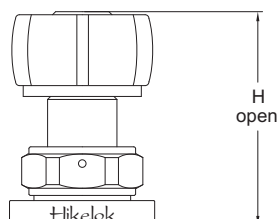


Four bottom mounting holes, M5 × 0.8-6H thread, 0.25 (6.4) deep, located 45° from center line, on a 1.00 (25.4) bolt circle. M5×0.8-6H holes are compatible with 10-32 mounting screws.

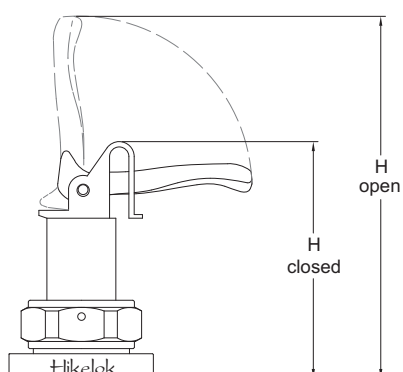
Designator	End Connection		Dimentions, in. (mm)				
			V and W Multivalve Manifolds				D Multivalve Manifold
			L1	L2		L3	L1
				Low-pressure	High-pressure		
FBW4	1/4" tube butt weld 0.30"(7.6 mm) tube stub, 0.035"(0.89 mm) wall		1.81 (46.0)	2.79 (70.9)	4.04 (103)	1.81 (46.0)	0.87 (22.1)
FGFS4	1/4" female GFS fitting		2.03 (51.6)	2.66 (67.6)	3.91 (99.3)	2.03 (51.6)	1.39 (35.3)
RGFS4	1/4" rotatable male GFS fitting		2.39 (60.7)	3.35 (85.1)	4.60 (117)	2.39 (60.7)	

IGS Modular Surface-Mount Valves

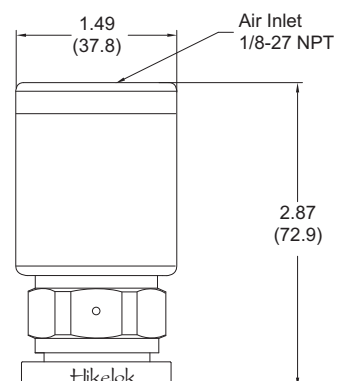
Directional and Roud Handles



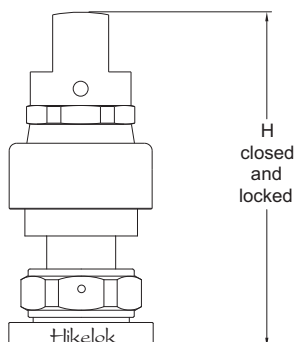
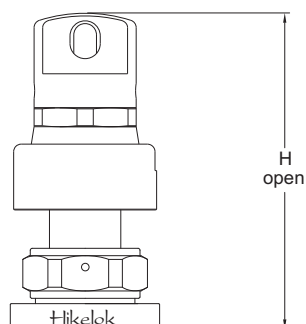
Toggle Handle



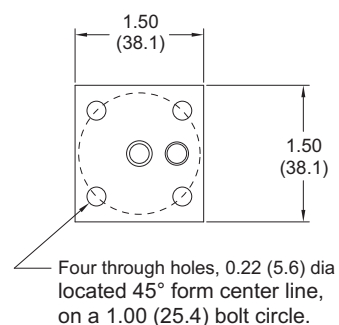
Pneumatic Actuator



Integral Lockout Handle



Bottom



Handle Type	Dimensions, in.(mm)			
	Low-Pressure		High-Pressure	
	H Open	H Closed	H Open	H Closed
Directional and Round	2.36(59.9)	2.34(59.4)	2.36(59.9)	2.34(59.4)
Integral Lockout	3.25(82.6)	3.59(91.2)	3.41(86.6)	3.78(96.0)
Toggle	2.83(71.9)	4.04(103)		

Notice: Toggle Handle and Pneumatic Actuator are not used for high pressure system.

How to Order

DV5 – FBW6 – FBW4 – H – R3A – NO – 316LVV

Series	Port 1 Type	Port 1 Size	Port 2/3/4/5 Type	Port 2/3/4/5 Size	Pressure Type	Colour	Flow Path	Actuator/Handle	Body Material	
DV5	F Fractional Tube Fitting	2 1/8"	Same as port 1	Port 2/3/4/5 Size	H High-Pressure Valves	Blue	Straight	Round Handle	316 316 S.S.	
	M Metric Tube Fitting	4 1/4"			L Low-Pressure Valves	B Black		DH Directional Handle	316L 316L S.S	
	FBW Fractional Tube Butt Weld	6 6 mm	Specify in the same way as port 1 type and port 1 size		W White	2N		IH Integral Lockout Handle	316LV 316 VAR S.S.	
	MBW Metric Tube Butt Weld				Y Yellow	2R		TH Toggle Handle	316LV VIM-VARS S	
	GFS Male GFS Fitting				G Green	3A				
	FGFS Female GFS Fitting				R Red	3B				
	RGFS Rotatable Male GFS Fitting					3C				
						3F				
						3G				
						4D				
				4E						
				M1V						
				M2V						
				M1D						