

SF Series

Springless Diaphragm Valves



FEATURES

Suitable for Ultra High-Purity Applications

316L Single Melt, Double Melt Stainless Steel Body

Metal Seal, Tube Butt Weld, Tube End Connections

Manual or Pneumatic Actuation



ORDERING INFORMATION

Number	Series	End Connection	Flow	Manual Handle	Handle	Pneumatic	Option	Grade
S : 316L Stainless steel D : 316L Stainless steel VAR		VF RM TW	1 2 3 4 5 6 7 8 9	L(Locking Handle) R(Round Handle)	BK - Black RD - Red BL - Blue SBL - Sky Blue WH - White GR - Green YW - Yellow OR - Orange	C - Normally Closed D - Normally Open	X**	BLANK - BA Grade P- EP Grade
	•8SF (Manual) •8PSF (Pneumatic)							
	8 : 1/2"			10 BLANK : Straight Type				

GRADE	BA	EP
Inner Surface Roughness	Ry ≤ 3.0µm 10µinch Ra (Avg.) Cut Off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7µm 5µinch Ra (Avg.) Cut Off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Electro Polishing Finish

EXAMPLE PART NUMBERS

Ordering	S8SF-VM-L-GR-P
Material	316L Stainless Steel
Series	Manual Diaphragm Valve
End Connection	1/2" Male Integral MFS Fitting
Flow	Straight Type
Manual Handle	Locking Handle
Handle Color	Green
Pneumatic	-
Grade	EP Grade

COLOR CODED HANDLES



* Eight handle colors are available
* Blue Handle as standard

ACTUATOR OPTIONS

PNEUMATIC ACTUATORS



LOW-PRESSURE MODELS

- Pressure rating : 150 psig (10bar)
- Temperature rating : -10 to 150°F (-23 to 65°C)

MANUAL ACTUATORS



ROUND

- Quick, quarter-turn actuation
- Handle with window provides Visual indication of OPEN and CLOSED position
- Pressure rating : 300 psig (20.8bar)

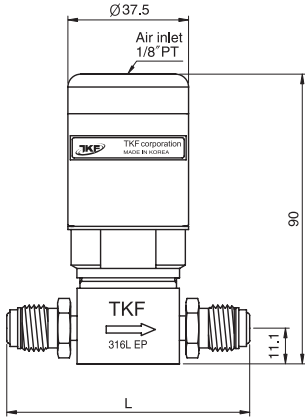


LOCKING

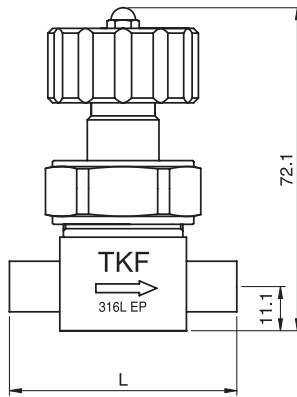
- Quick, quarter-turn actuation
- Lockable in the CLOSED position for safety
- Handle shape and window indicator provides visual indication of OPEN and CLOSED position
- Pressure rating : 300 psig (20.8bar)

DIMENSIONS

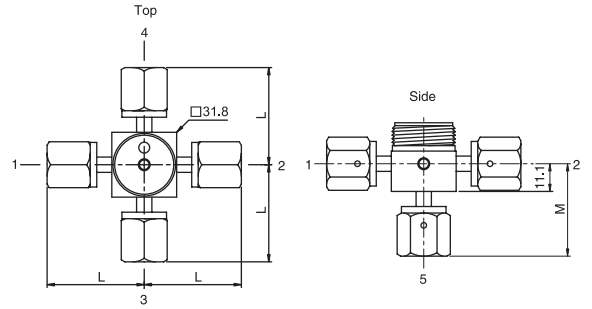
PNEUMATIC ACTUATOR Male Integral MFS Fittings



DIRECTIONAL AND ROUND HANDLE Tube Butt Weld Ends

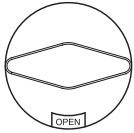


Side & Top

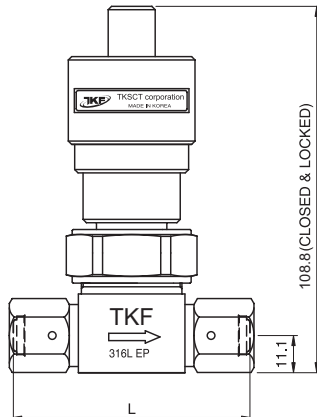
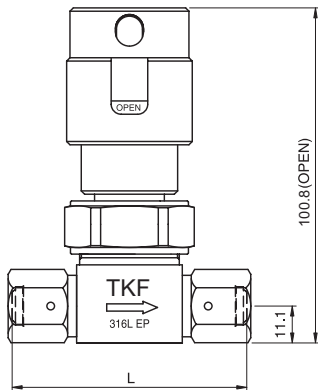
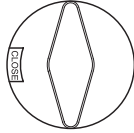


LOCKING HANDLE Female MFS Fittings

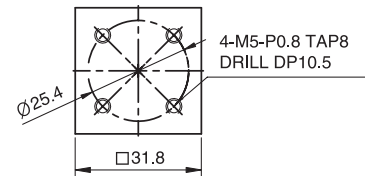
Open



Closed and Locked



Bottom



MATERIAL

Body	316L Stainless Steel 316L Stainless Steel VAR
Seat	PCTFE
Diaphragm	Ni-Co Alloy
O-Ring	FKM

MAJOR SPECIFICATIONS

	Manual Actuators	Pneumatic Actuators
Cv Valve	0.6	0.6
Orifice Size	5.8mm	5.8mm
Max. Working Pressure (G.)	Vacuum to 300 psig (20.8bar)	Vacuum to 150 psig (10bar)
Operating Pressure (G.)	-	60 ~ 100 psig (4.1 ~ 7bar)
Burst Pressure (G.)	3,200 psig (220bar)	
Max. Working Temp.	-10 ~ 150°F (-23 ~ 65°C)	
Internal Leakage Allowance (He) Test Pressure $\leq 1 \times 10^{-2}$ Torr	$\leq 1 \times 10^{-9}$ atm · cc/sec	
External Leakage Allowance (He) Test Pressure $\leq 1 \times 10^{-2}$ Torr	$\leq 1 \times 10^{-9}$ atm · cc/sec	
Particle Inspection (BA, EP) Pressure : 60 ~ 80psi N ₂ Gas Sample Volume : 1CFM 0.1µm and Larger	No count	

FLOW PATH

Ports	Schematic	Flow Path		Designator
		Closed	Open	
4 Port				4
				5
3 Port				1
				2
				3
				6
				7
2 Port				8
				9
				10

END CONNECTIONS

End Connection		Basic Ordering		L mm(inch)
Inlet/Outlet	Size	Number		
Female MFS Fittings	1/2"		S8SF-VF-	106 (4.16)
Male MFS Fittings	1/2"		S8SF-RM-	106 (4.16)
Tube Butt Weld	1/2"		S8SF-TW-	57.1 (2.25)

