

Industrial Excess Flow Valves



Industrial Excess Flow Valves

SEFV Series

Introduction

- Excess Flow Valves are designed to limit flow of fluid to a predetermined rate.
- When flow reaches a predetermined rate the poppet will trip, limiting or stopping flow.
- When pressure is equalized across the valve, the poppet will reset to open.

Features

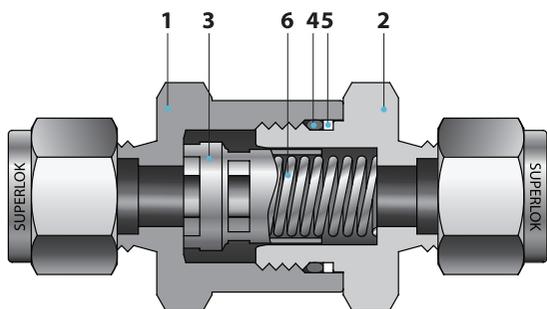
- 2-piece body
: Allows for simple spring and seal maintenance
- Spring-loaded actuation
: The bleed vent allows the valve to automatically reset
- Automatic reset
: Can be assembled in any system or application
- Variety of end connections
: Can be assembled in any system or application
- Stainless steel construction
- Every valve is factory tested for proper functionality.



Specifications

Pressure rating	6000psig (413bar) @100°F(38°C)
Temperature rating	-10 to 400°F (-23 to 204 °C)
Body material	316 Stainless Steel
End Connections	1/8 to 1/2 in. and 6 to 12mm

Materials of Construction



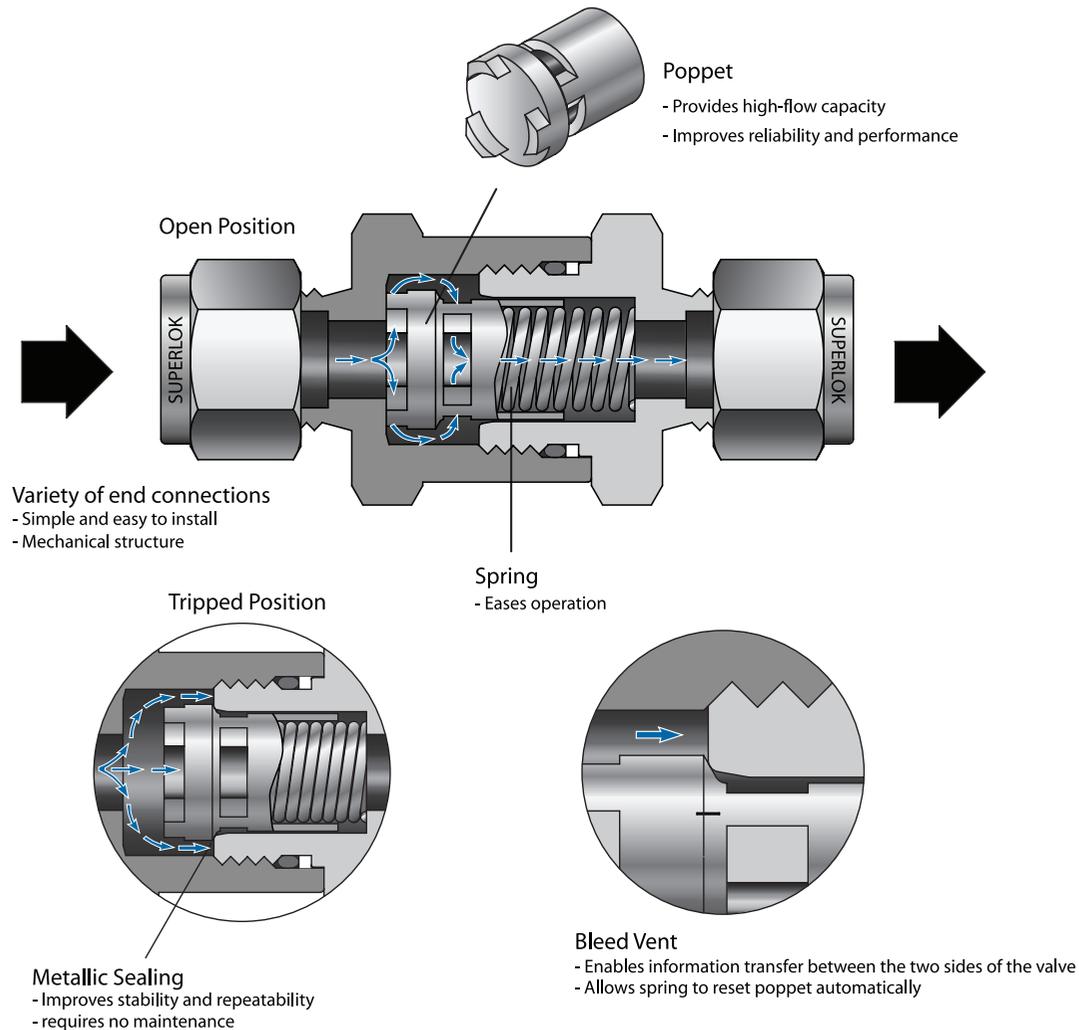
No.	Component	Material Grade / ASTM Specification
		Stainless Steel
*1	INLET BODY	A276-316
*2	OUTLET BODY	A276-316
*3	POPPET	A276-316
*4	O-RING	VITON
5	BACK-UP RING	PTFE
*6	SPRING	Stainless Steel 304

* Wetted components

- Components can limit the pressure and temperature ranges of the valve. Please consult BMT (SUPERLOK) sales representative for your specific application.

Operation

- The poppet is loaded by a spring in the open position during normal system operation.
- If the system becomes unbalanced and the downstream pressure drops, the poppet rapidly move to the tripped position.
- The poppet will remain in the tripped position until system pressure becomes equal across the bleed vent in the poppet.
- The bleed vent in the poppet will allow the pressure to slowly equalize across the valve if the downstream line is closed or repaired.
- When the system pressure becomes equal, the spring automatically reset the poppet to the open position.



Technical Data

Pressure - Temperature Ratings

- Ratings on 316 stainless steel body with Viton O-rings.
- 5000 psig (344 bar) for the SEFV series valves with end connections 3/8" female NPT.
- 4600 psig (316 bar) for the SEFV series valves with end connections 1/2" femaie NPT.

Temperature Rating °F (°C)	Working Pressure, psig (bar)
-10 to 100 (-23 to 27)	6000 (413)
200 (93)	5160 (355)
250 (121)	4910 (338)
300 (148)	4660 (321)
400 (204)	4280 (294)

O-ring Material	Temperature Rating °F (°C)
* VITON	-10 to 400 (-23 to 204)
Buna-N	-40 to 250 (-40 to 121)
Ethylene Propylene	-50 to 300 (-45 to 148)
Kalrez	-10 to 400 (-23 to 204)

* Viton O-ring is standard.

SEFV Series

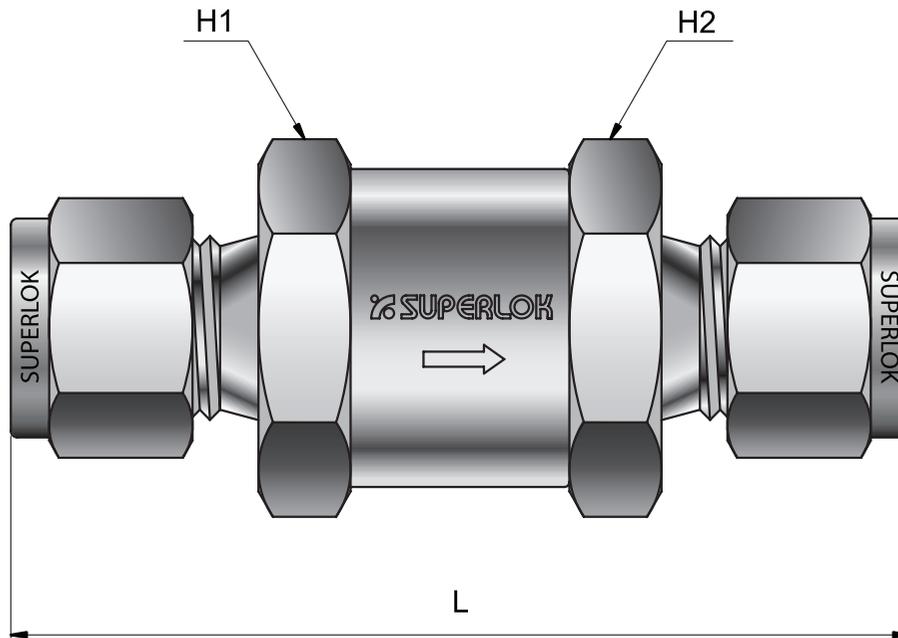


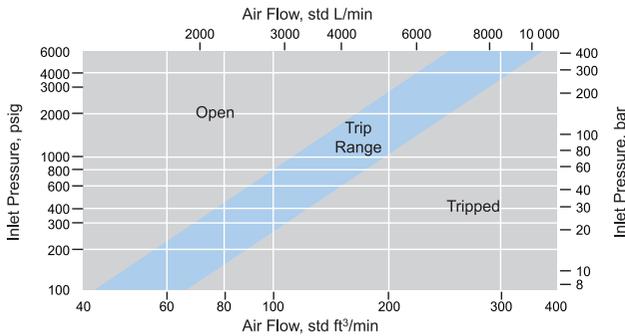
Table of Dimensions

Part No.	End Connections		Dimensions, Inch (mm)					
	INLET	OUTLET	L	H1	H2			
SEFV1	S4	1/4" SUPERLOK	2.43 (61.7)	11/16 (17.4)				
	S6M	6mm SUPERLOK	2.43 (61.7)					
	F2N	1/8" Female NPT	1.87 (47.5)					
	F4N	1/4" Female NPT	2.12 (53.8)					
	M2N	1/8" Male NPT	1.79 (45.5)					
	M4N	1/4" Male NPT	2.17 (55.1)					
	M4N-S4	1/4" Male NPT	1/4" SUPERLOK			2.30 (58.4)		
	M4N-F4N	1/4" Male NPT	1/4" Female NPT			2.13 (54.1)		
SEFV2	S6	3/8" SUPERLOK	2.75 (69.9)	1 (25.4)				
	S8	1/2" SUPERLOK	2.97 (75.4)					
	S8M	8mm SUPERLOK	2.70 (68.6)					
	S10M	10mm SUPERLOK	2.80 (71.1)					
	S12M	12mm SUPERLOK	2.96 (75.2)					
	F6N	3/8" Female NPT	2.55 (64.8)					
	F8N	1/2" Female NPT	3.03 (77.0)	1-1/16 (27.0)				
	M6N	3/8" Male NPT	2.36 (59.9)	1 (25.4)				
	M8N	1/2" Male NPT	2.73 (69.3)					
	M8N-S6	3/8" Male NPT	3/8" SUPERLOK			2.56 (65.0)		
	M8N-S8	1/2" Male NPT	1/2" SUPERLOK			2.85 (72.4)		
	M6N-F6N	3/8" Male NPT	3/8" Female NPT			2.46 (62.5)		
	M8N-F8N	1/2" Male NPT	1/2" Female NPT			2.89 (73.4)	1 (25.4)	1-1/16 (27.0)

Flow Data at 70°F (20°C)

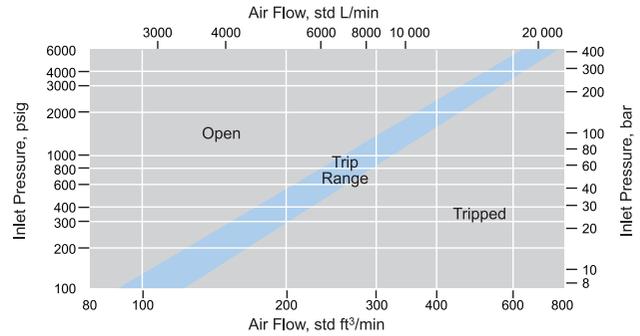
Air Flow - SEFV1 Series

Connection Sizes : 1/8", 1/4", 6mm



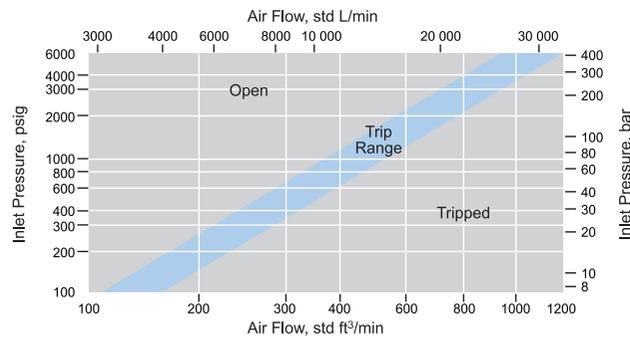
Air Flow - SEFV2 Series

Connection Sizes : 3/8", 8mm, 10mm



Air Flow - SEFV2 Series

Connection Sizes : 1/2", 12mm



Water Flow - SEFV1, SEF2 Series

Series	Connection Size	Cv	Trip Range U.S. gal/min (L/min)
SEFV1	1/8", 1/4", 6mm	0.5	3.9 to 5.8 (14.7 to 21.9)
SEFV2	3/8", 8mm, 10mm	1.1	8.2 to 10.0 (31.0 to 37.9)
	1/2", 12mm		11.2 to 14.9 (42.4 to 56.4)

Ordering Information

Example :

SEFV1	-	M4N	-	S4	-	EP
1		2 3		2 3		4

※ 316 stainless steel is Standard Body Material.

1. Valve Series

- SEFV1
- SEFV2

2. Port Type (Inlet x Outlet)

- S = SUPERLOK Tube Fitting
- M = Male Pipe Thread
- F = Female Pipe Thread

3. Port Size

Pipe Thread Designator

Size (inch)	1/8	1/4	3/8	1/2
Screwed BSPT	2R	4R	6R	8R
Screwed NPT	2N	4N	6N	8N

Tube O.D Designator

Tube OD (inch)	1/4	3/8	1/2	-
Designator	4	6	8	-
Tube OD (mm)	6	8	10	12
Designator	6M	8M	10M	12M

4. O-ring Material

- (Blank) = Viton (Standard)
- N = Buna N
- EP = Ethylene propylene (EPDM)
- KAL = Kalrez

※ For special sizes and configurations, please consult BMT (SUPERLOK) sales representative.



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