

# Industrial Excess Flow Valves

SEFV Series

## Introduction

- Excess Flow Valves are designed to limit flow of fluid to a predetermined rate.
- When flow reaches the 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
- Automatic reset
  - The bleed vent allows the valve to automatically reset
- Variety of end connections
  - Can be assembled in any system or application
- Stainless steel construction



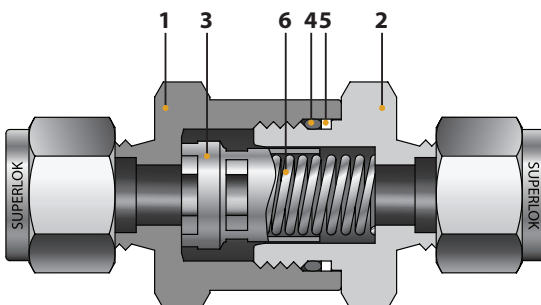
## Specifications

<b>Pressure rating</b>	6000psig (413bar) @100°F(38°C)
<b>Temperature rating</b>	-10 to 400°F (-23 to 204 °C)
<b>Body material</b>	316 stainless steel
<b>End connections</b>	1/8" to 1/2" and 6mm to 12mm

## Testing

- Every Valve is factory tested for proper functionality.

## Materials of Construction

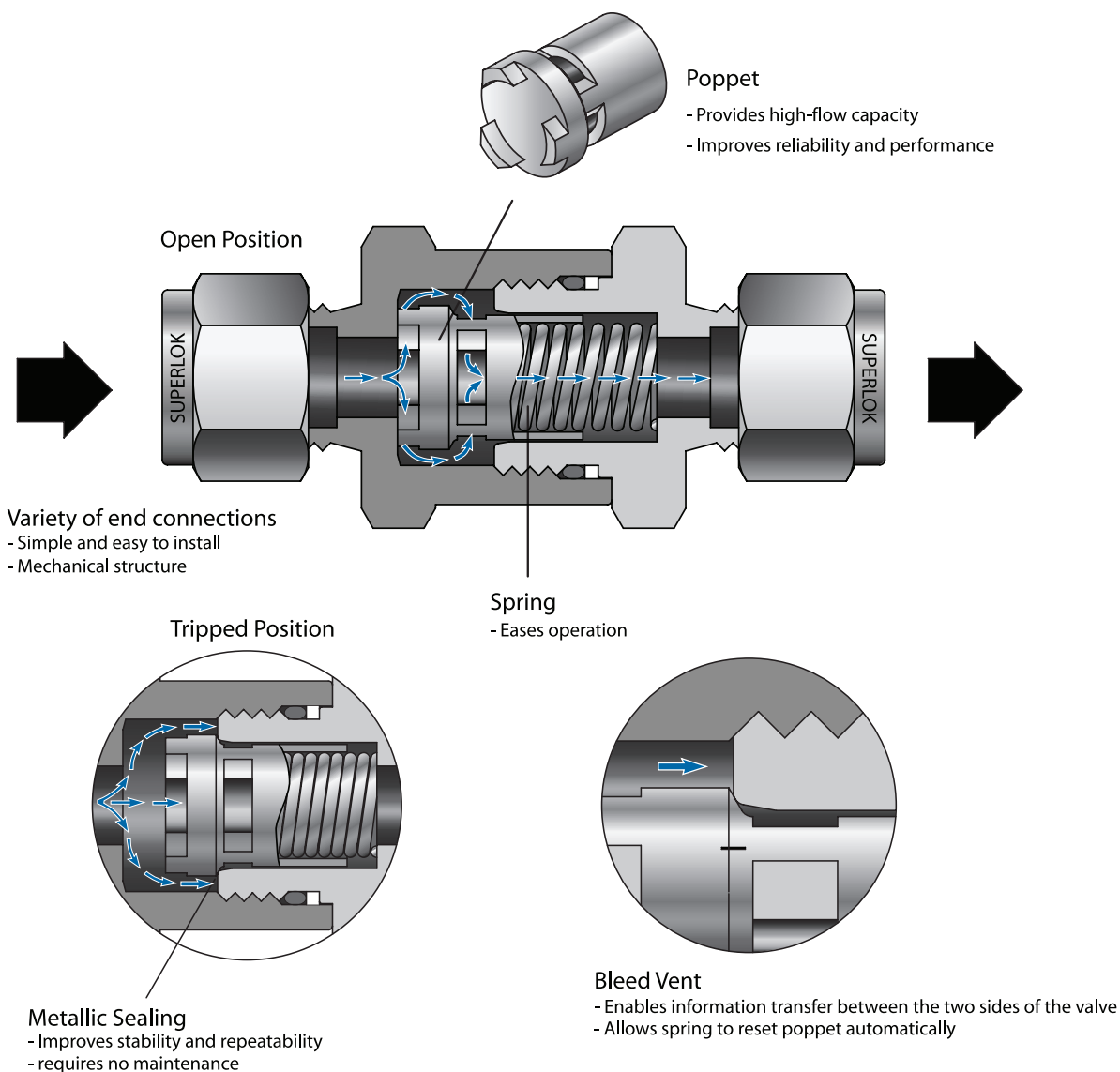


No.	Component	Material Grade / ASTM Specification
		Stainless Steel
*1	INLET BODY	SS316 / A479
*2	OUTLET BODY	SS316 / A479
*3	POPPET	SS316 / A479
*4	O-RING	VITON
5	BACK-UP RING	PTFE
*6	SPRING	SS304 / A313

•Wetted components are marked "\*"

## 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 moves to the tripped position.
- The poppet will remain in the tripped position until the 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 will automatically reset the poppet to the open position.



## Technical Data

### Pressure - Temperature Ratings

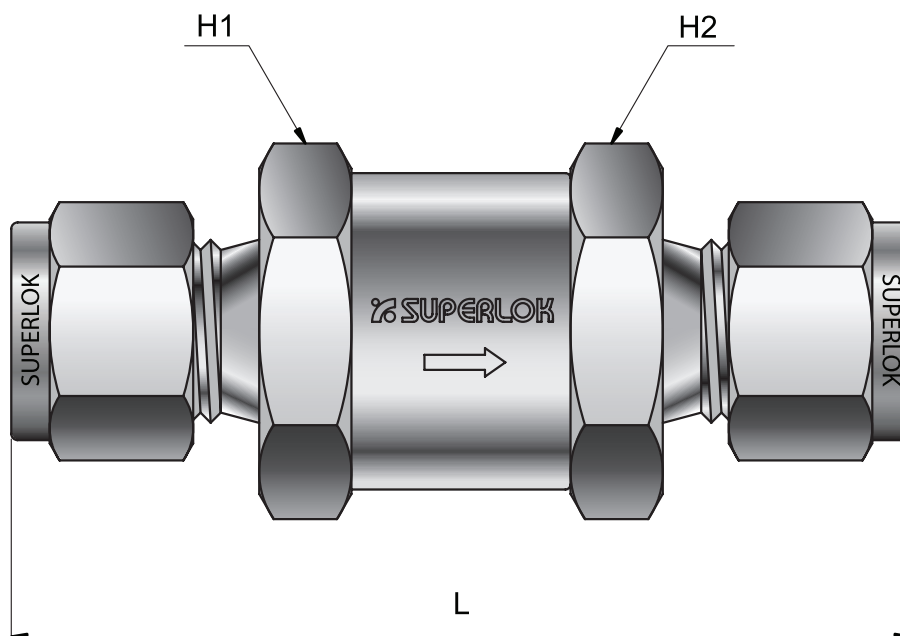
- Ratings based on Viton O-rings.
- 5000 psig (344 bar) for the SEFV series valves with end connections 3/8" female NPT.
- 4600 psig (316 bar) for the SEFV series valves with end connections 1/2" female NPT.

Body Material	316 Stainless Steel
Temperature Rating °F (°C)	Working Pressure, psig (bar)
-10 to 100 (-23 to 37)	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

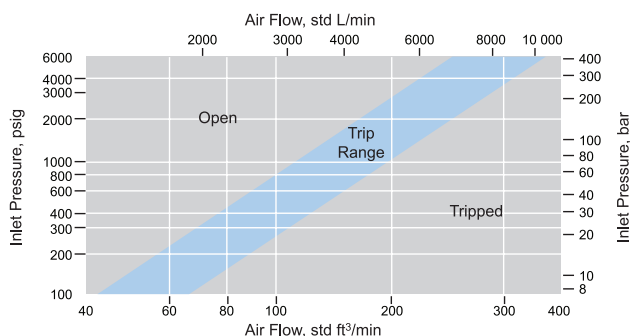
Order Number		End Connections		Dimensions, Inch (mm)		
Series	Part No.	INLET	OUTLET	L	H1	H2
SEFV1	S-4	1/4" SUPERLOK		2.43 (61.7)	11/16 (17.4)	
	S-6M	6mm SUPERLOK		2.43 (61.7)		
	F-2N	1/8" Female NPT		1.87 (47.5)		
	F-4N	1/4" Female NPT		2.12 (53.8)		
	M-2N	1/8" Male NPT		1.79 (45.5)		
	M-4N	1/4" Male NPT		2.17 (55.1)		
	MS-4N-S	1/4" Male NPT	1/4" SUPERLOK	2.30 (58.4)		
	MF-4N	1/4" Male NPT	1/4" Female NPT	2.13 (54.1)		
SEFV2	S-6	3/8" SUPERLOK		2.75 (69.9)	1 (25.4)	
	S-8	1/2" SUPERLOK		2.97 (75.4)		
	S-8M	8mm SUPERLOK		2.70 (68.6)		
	S-10M	10mm SUPERLOK		2.80 (71.1)		
	S-12M	12mm SUPERLOK		2.96 (75.2)		
	F-6N	3/8" Female NPT		2.55 (64.8)	1-1/16 (27.0)	
	F-8N	1/2" Female NPT		3.03 (77.0)		
	M-6N	3/8" Male NPT		2.36 (59.9)	1 (25.4)	
	M-8N	1/2" Male NPT		2.73 (69.3)		
	MS-6N-6	3/8" Male NPT	3/8" SUPERLOK	2.56 (65.0)		
	MS-8N-8	1/2" Male NPT	1/2" SUPERLOK	2.85 (72.4)		
	MF-6N	3/8" Male NPT	3/8" Female NPT	2.46 (62.5)		
	MF-8N	1/2" Male NPT	1/2" Female NPT	2.89 (73.4)	1 (25.4)	1-1/16 (27.0)

• Dimensions based on SUPERLOK nuts finger-tight. Dimensions are reference only, subject to change.

## Flow Data at 70°F(20°C)

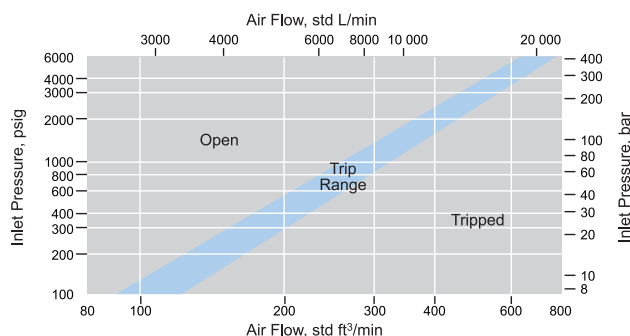
### Air Flow - SEFV1 Series

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



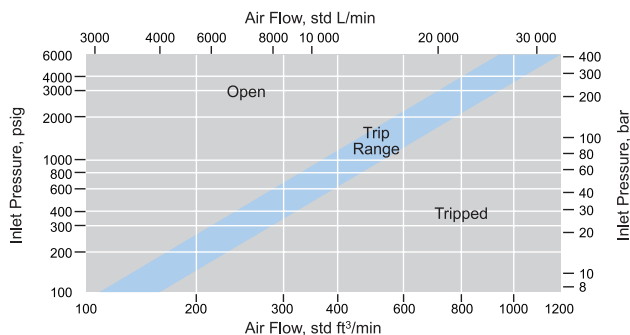
### Air Flow - SEFV2 Series

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



### Air Flow - SEFV2 Series

Connection Sizes : 1/2", 12mm



### Water Flow - SEFV1, SEFV2 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

**SEFV1 - MS - 4N- 4 - EP - SS**

**1**

**2**

**3**

**4**

**5**

### 1. Valve Series

- SEFV1
- SEFV2

### 2. Port Type (Inlet x Outlet)

- S : SUPERLOK Tube Fitting
- M : Male Pipe Thread
- F : Female Pipe Thread
- MS : Male Pipe Thread x SUPERLOK Tube Fitting
- MF : Male Pipe Thread x Female Pipe Thread

### 3. Port Size

- Pipe Thread Designation

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

- Tube O.D Designation

Tube O.D (inch)	1/4	3/8	1/2	-
Designation	4	6	8	-
Tube O.D (mm)	6	8	10	12
Designation	6M	8M	10M	12M

### 4. O-ring Material

- Nil : Viton (Standard)
- N : Buna N
- EP : Ethylene propylene (EPDM)
- KAL : Kalrez

### 5. Body Material

- SS : 316 Stainless Steel