

# Excess Flow Valves

EV Series



**FITOK**

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# Excess Flow Valves

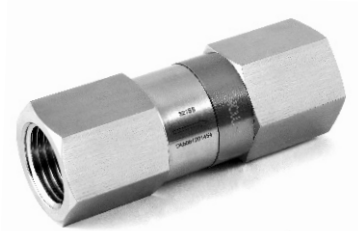
## EV Series

### Introduction

If downstream line ruptures, the excess flow valve can stop uncontrolled release of system media. When the system is functioning normally, the working element remains in the open position. If the excess flow occurs downstream, the working element quickly moves to the tripped position to stop bleeding. When system pressure reaches balance through the bleed vent, the spring resets the working element to the open position automatically. The flow which goes through the bleed vent should be lower than one percent of the flow rate in the trip range.

### Features

- ⦿ Compact design for convenient installation
- ⦿ Working pressure up to: 6000 psig (414 bar)
- ⦿ Working temperature: -10°F to 400°F (-23°C to 204°C)
- ⦿ Variety of end connections
- ⦿ Stainless steel construction
- ⦿ Leak-tight performance testing for every valve with nitrogen at the maximum working pressure



**End Connection:**  
tube fitting, thread or face sealed

- ⦿ Easy installation
- ⦿ Improved system reliability

**Spring Drive to Brake**

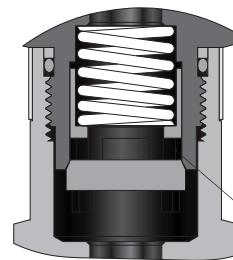
- ⦿ Easy operation
- ⦿ Enabled to work in any direction and improve the safety of system

**All Metal Seat**

- ⦿ Enhanced durability
- ⦿ No maintenance needed

**Working Element**

- ⦿ Improved capability and reliability
- ⦿ High flow capability
- ⦿ Nuisance tripping eliminated



**Bleed Vent**

- ⦿ Eliminate complicated by-pass mechanism
- ⦿ Spring resets the element automatically

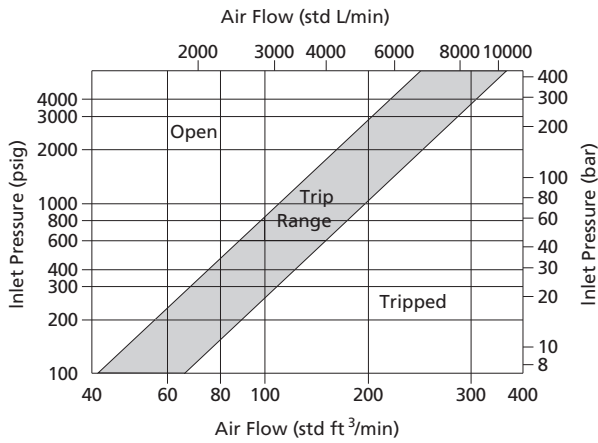
### Temperature Ranges for Different Seal Materials

| O-ring Material  | Temperature Ranges °F (°C) |
|------------------|----------------------------|
| Buna N           | -40 to 250 (-40 to 121)    |
| EPDM             | -50 to 300 (-45 to 148)    |
| Fluorocarbon FKM | -10 to 400 (-23 to 204)    |
| FFKM             | -10 to 527 (-23 to 275)    |
| Neoprene         | -40 to 250 (-40 to 121)    |

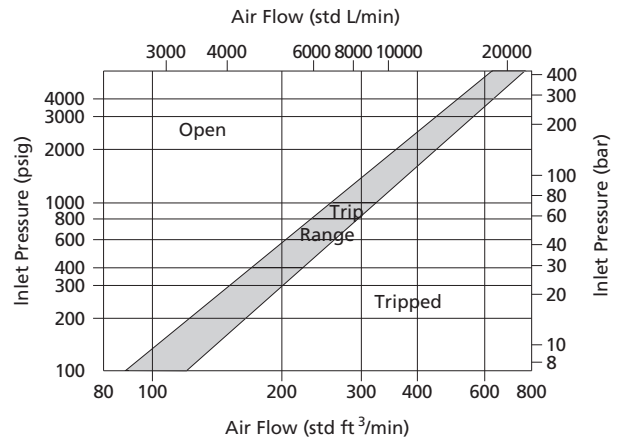
## Flow Data at 70°F (20°C)

### Air Flow

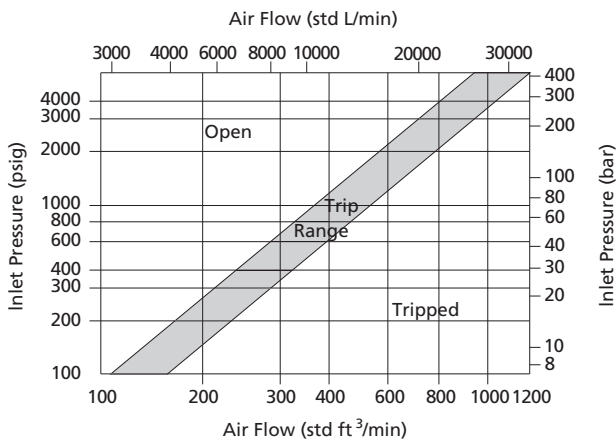
#### 4 Series



#### 6 Series

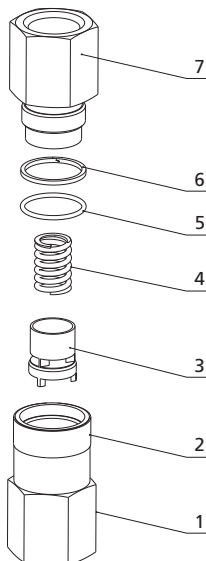


#### 8 Series



### Water Flow

| Series | Cv  | Trip Range gal/m in /min (L/min) |
|--------|-----|----------------------------------|
| 4      | 0.5 | 3.9 to 5.8 (14.7 to 21.9)        |
| 6      | 1.1 | 8.2 to 10.0 (31.0 to 37.8)       |
| 8      | 1.1 | 11.2 to 14.9 (42.3 to 56.3)      |

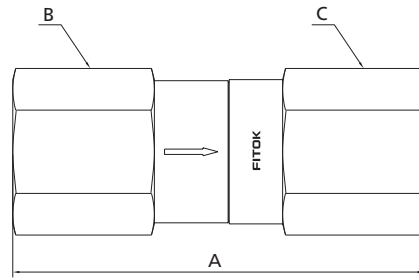


### Standard Materials of Construction

| Component | Material Grade/ASTM Specification |
|-----------|-----------------------------------|
| 1         | Inlet Body<br>316 SS/A479         |
| 2         | Mark Ring<br>6061 Al/B491         |
| 3         | Working Element<br>316 SS/A479    |
| 4         | Spring<br>302 SS/A313             |
| 5         | O-ring<br>Fluorocarbon FKM        |
| 6         | Seal Ring<br>PTFE/D1710           |
| 7         | Outlet Body<br>316 SS/A479        |

### 3 Excess Flow Valves

## Dimensions



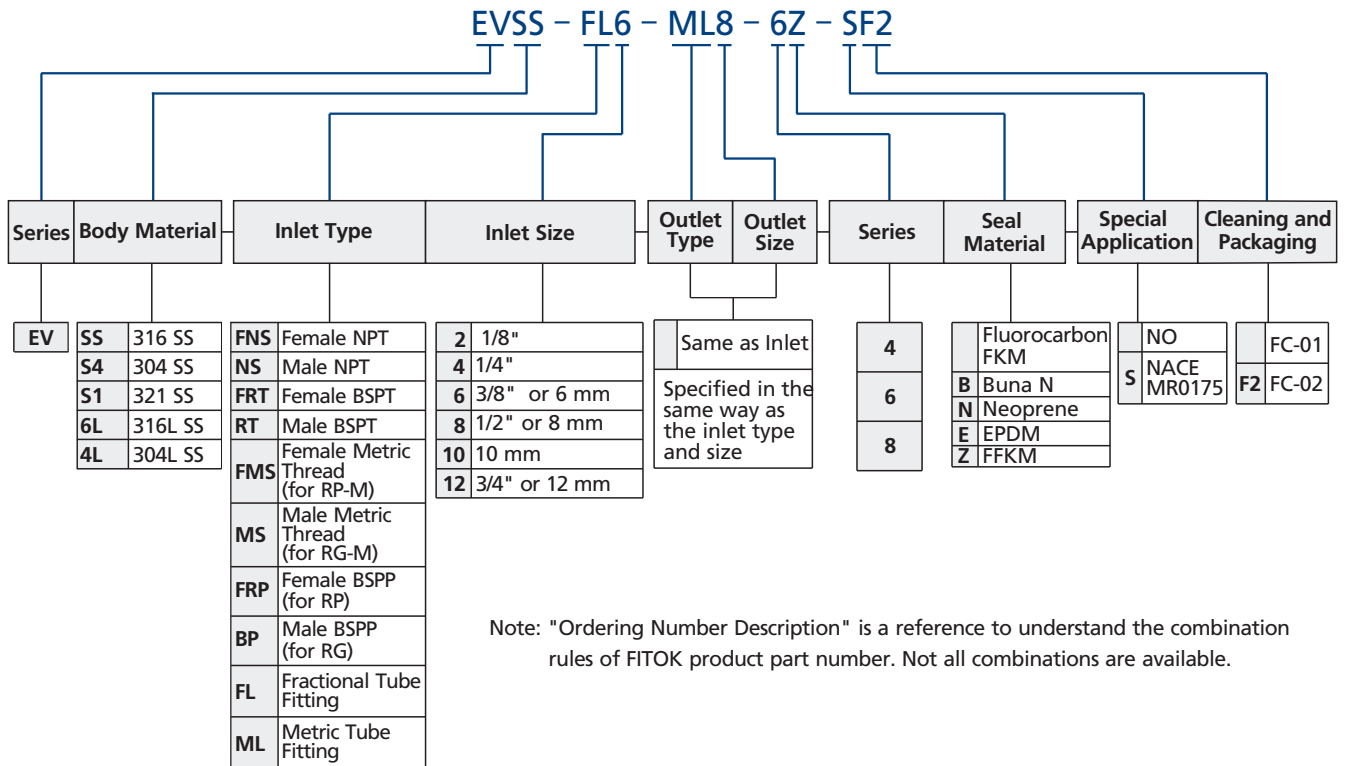
| Basic Ordering Number | Connections Type and Size |                | Pressure Rating at 37°C(100°F) psig(bar) | Series    | Dimension, in. (mm) |                   |                   |
|-----------------------|---------------------------|----------------|--|-----------|---------------------|-------------------|-------------------|
|                       | Inlet                     | Outlet         |  |           | A                   | B                 | C                 |
| EV□□-FL4-4-           | 1/4" FITOK                | 1/4" FITOK     | 6000(414)                                | 4         | 2.43<br>(61.7)      | 11/16<br>(17.46)  | 11/16<br>(17.46)  |
| EV□□-FL6-6-           | 3/8" FITOK                | 3/8" FITOK     |  | 6         | 2.75<br>(69.9)      | 1<br>(25.4)       | 1<br>(25.4)       |
| EV□□-FL8-8-           | 1/2" FITOK                | 1/2" FITOK     |  | 8         | 2.97<br>(75.4)      |                   |                   |
| EV□□-ML6-4-           | 6 mm FITOK                | 6 mm FITOK     | 6000(414)                                | 4         | 2.43<br>(61.7)      | 11/16<br>(17.46)  | 11/16<br>(17.46)  |
| EV□□-ML8-6-           | 8 mm FITOK                | 8 mm FITOK     |  | 6         | 2.70<br>(68.6)      | 1<br>(25.4)       | 1<br>(25.4)       |
| EV□□-ML10-6-          | 10 mm FITOK               | 10 mm FITOK    |  |           | 2.80<br>(71.1)      |                   |                   |
| EV□□-ML12-8-          | 12 mm FITOK               | 12 mm FITOK    |  | 8         | 2.96<br>(75.2)      |                   |                   |
| EV□□-FNS2-4-          | 1/8 Female NPT            | 1/8 Female NPT | 6000(414)                                | 4         | 1.87<br>(47.5)      | 11/16<br>(17.46)  | 11/16<br>(17.46)  |
| EV□□-FNS4-4-          | 1/4 Female NPT            | 1/4 Female NPT |  |           | 2.12<br>(53.8)      |                   |                   |
| EV□□-FNS6-6-          | 3/8 Female NPT            | 3/8 Female NPT | 5300(365)                                | 6         | 2.55<br>(64.8)      | 1<br>(25.4)       | 1<br>(25.4)       |
| EV□□-FNS8-8-          | 1/2 Female NPT            | 1/2 Female NPT | 4900(337)                                | 8         | 3.03<br>(77.0)      | 1 1/16<br>(26.99) | 1 1/16<br>(26.99) |
| EV□□-NS2-4-           | 1/8 Male NPT              | 1/8 Male NPT   | 6000(414)                                | 4         | 1.79<br>(45.5)      | 11/16<br>(17.46)  | 11/16<br>(17.46)  |
| EV□□-NS4-4-           | 1/4 Male NPT              | 1/4 Male NPT   |  |           | 2.17<br>(55.1)      |                   |                   |
| EV□□-NS6-6-           | 3/8 Male NPT              | 3/8 Male NPT   |  | 5300(365) | 6                   | 2.36<br>(59.9)    | 1<br>(25.4)       |
| EV□□-NS8-8-           | 1/2 Male NPT              | 1/2 Male NPT   | 8  |           | 2.73<br>(69.3)      |                   |                   |
| EV□□-NS4-FL4-4-       | 1/4 Male NPT              | 1/4" FITOK     | 6000(414)                                | 4         | 2.30<br>(58.4)      | 11/16<br>(17.46)  | 11/16<br>(17.46)  |
| EV□□-NS6-FL6-6-       | 3/8 Male NPT              | 3/8" FITOK     |  | 6         | 2.56<br>(65.0)      | 1<br>(25.4)       | 1<br>(25.4)       |
| EV□□-NS8-FL8-8-       | 1/2 Male NPT              | 1/2" FITOK     |  | 8         | 2.85<br>(72.4)      |                   |                   |
| EV□□-NS4-FNS4-4-      | 1/4 Male NPT              | 1/4 Female NPT | 6000(414)                                | 4         | 2.13<br>(54.1)      | 11/16<br>(17.46)  | 11/16<br>(17.46)  |
| EV□□-NS6-FNS6-6-      | 3/8 Male NPT              | 3/8 Female NPT | 5300(365)                                | 6         | 2.46<br>(62.5)      | 1<br>(25.4)       | 1<br>(25.4)       |
| EV□□-NS8-FNS8-8-      | 1/2 Male NPT              | 1/2 Female NPT | 4900(337)                                | 8         | 3.03<br>(77.0)      | 1 1/16<br>(26.99) | 1 1/16<br>(26.99) |

1. FITOK means FITOK double ferrule tube fittings.

2. Sizes and types listed are standard. Other sizes and types are available upon request.

3. Dimensions are shown with FITOK nuts finger-tightened. All dimensions are for reference only and are subject to change.  
For dimensions not shown above, please contact the authorized representative or FITOK Group.

## Ordering Number Description



- Standard thread pitch for metric threads are as follows:  
 M10 and below: 1 mm  
 M12 to M24: 1.5 mm  
 M27 and above: 2 mm  
 Standard thread pitch should be ignored in the ordering number, others should be specified.
- Cleaning and Packaging:  
 FC-01: Standard cleaning and packaging for general industrial procedures.  
 FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleanliness requirement of ASTM G93 Level C.

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