

Excess Flow Valves, Bleed Valves and Purge Valves

EV Series, RB Series, RP Series



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Valves and Fittings

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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
- ⦿ Maximum working pressure: 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

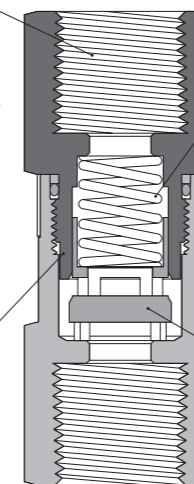


End Connection:
tube fitting, thread or face sealed

- ⦿ Easy installation
- ⦿ Improved system reliability

All Metal Seat

- ⦿ Enhanced durability
- ⦿ No maintenance needed

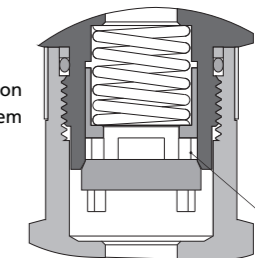


Spring Drive to Brake

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

Working Element

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



Bleed Vent

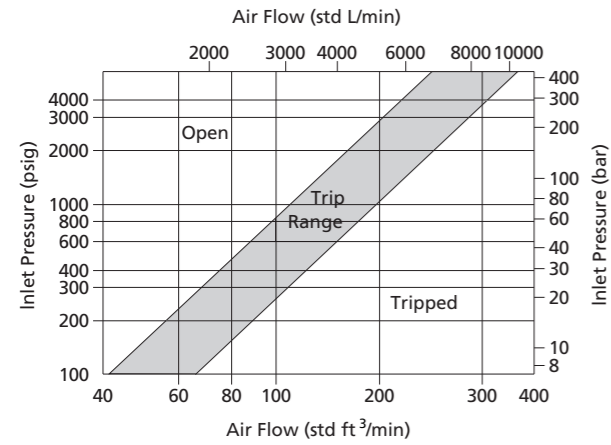
- ⦿ Eliminate complicated by-pass mechanism
- ⦿ Spring resets the element automatically

Temperature Ranges for Different Seal Materials

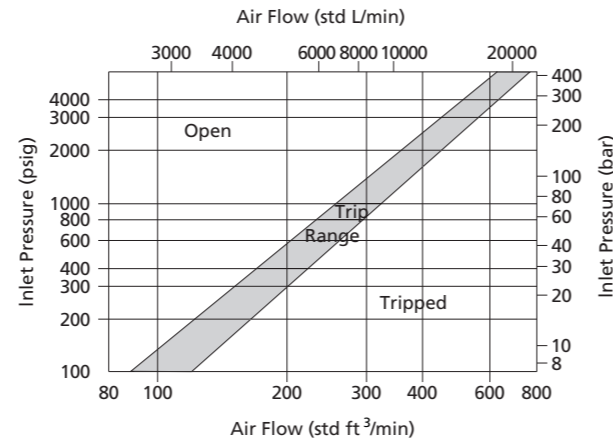
O-ring Material	Temperature Ranges °F (°C)
Buna N	-40 to 250 (-40 to 121)
Ethylene Propylene	-50 to 300 (-45 to 148)
Fluorocarbon FKM	-10 to 400 (-23 to 204)
Kalrez	-10 to 527 (-23 to 275)
Neoprene	-40 to 250 (-40 to 121)

Flow Data at 70°F (20°C)

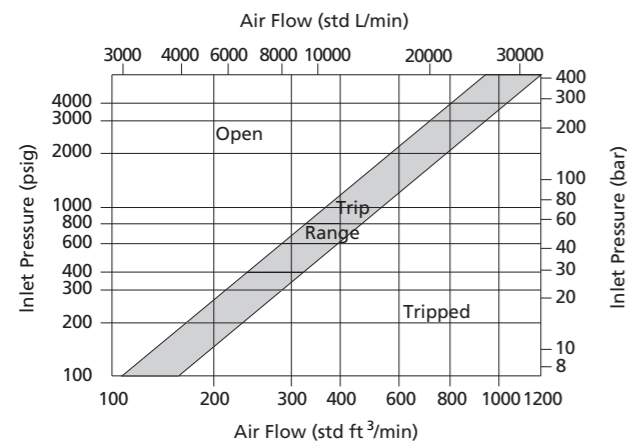
Orifice Size: 0.19 in. (4.8 mm)



Orifice Size: 0.33 in. (8.4mm)



Orifice Size: 0.39 in. (10 mm)

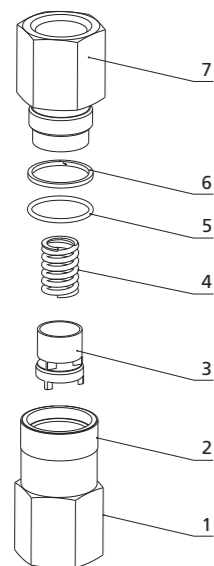


Water Flow

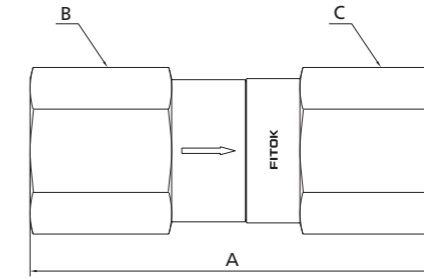
Orifice in. (mm)	Trip Range Std ft³ /min (L/min)
0.19 (4.8)	0.52 to 0.77 (14.7 to 21.9)
0.33 (8.4)	1.09 to 1.34 (31.0 to 37.8)
0.39 (10)	1.50 to 2.00 (42.3 to 56.3)

Standard Materials of Construction

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



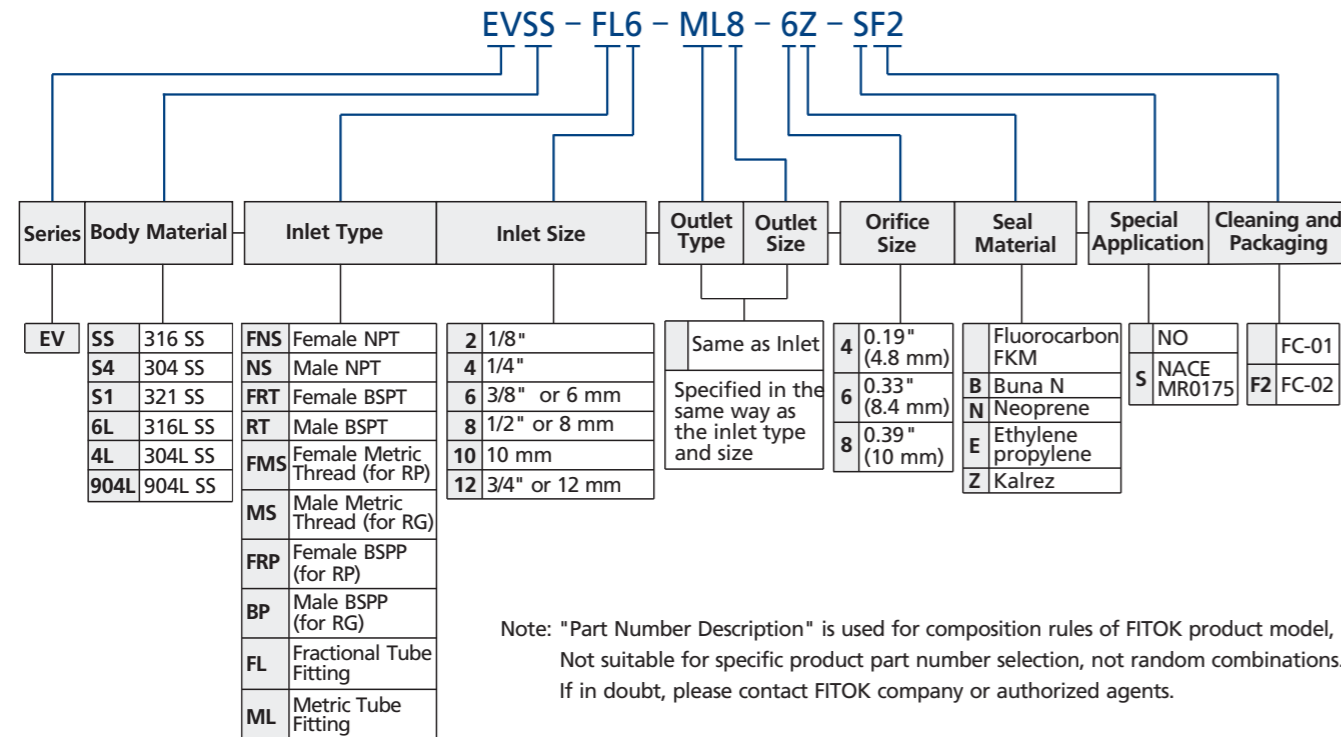
Dimensions



Basic Ordering Number	Connections Type and Size		Orifice in. (mm)	Dimension, in. (mm)		
	Inlet	Outlet		A	B	C
EV□□-FL4-4	1/4" FITOK	1/4" FITOK	0.19 (4.8)	2.43 (61.7)	11/16 (17.46)	11/16 (17.46)
EV□□-FL6-6	3/8" FITOK	3/8" FITOK	0.33 (8.4)	2.75 (69.9)	1 (25.4)	1 (25.4)
EV□□-FL8-8	1/2" FITOK	1/2" FITOK	0.39 (10)	2.64 (75.4)		
EV□□-ML6-4	6 mm FITOK	6 mm FITOK	0.19 (4.8)	2.43 (61.7)	11/16 (17.46)	11/16 (17.46)
EV□□-ML8-6	8 mm FITOK	8 mm FITOK	0.33 (8.4)	2.70 (68.6)	1 (25.4)	1 (25.4)
EV□□-ML10-6	10 mm FITOK	10 mm FITOK		2.80 (71.1)		
EV□□-ML12-8	12 mm FITOK	12 mm FITOK	0.39 (10)	2.96 (75.2)		
EV□□-FNS2-4	1/8 Female NPT	1/8 Female NPT	0.19 (4.8)	1.87 (47.5)	11/16 (17.46)	11/16 (17.46)
EV□□-FNS4-4	1/4 Female NPT	1/4 Female NPT		2.12 (53.8)		
EV□□-FNS6-6	3/8 Female NPT	3/8 Female NPT	0.33 (8.4)	2.55 (64.8)	1 (25.4)	1 (25.4)
EV□□-FNS8-8	1/2 Female NPT	1/2 Female NPT	0.39 (10)	3.03 (77.0)	1 1/16 (26.99)	1 1/16 (26.99)
EV□□-NS2-4	1/8 Male NPT	1/8 Male NPT	0.19 (4.8)	1.79 (45.5)	11/16 (17.46)	11/16 (17.46)
EV□□-NS4-4	1/4 Male NPT	1/4 Male NPT		2.17 (55.1)		
EV□□-NS6-6	3/8 Male NPT	3/8 Male NPT	0.33 (8.4)	2.36 (59.9)	1 (25.4)	1 (25.4)
EV□□-NS8-8	1/2 Male NPT	1/2 Male NPT	0.39 (10)	2.73 (69.3)		
EV□□-NS4-FL4-4	1/4 Male NPT	1/4" FITOK	0.19 (4.8)	2.30 (58.4)	11/16 (17.46)	11/16 (17.46)
EV□□-NS6-FL6-6	3/8 Male NPT	3/8" FITOK	0.33 (8.4)	2.56 (65.0)	1 (25.4)	1 (25.4)
EV□□-NS8-FL8-8	1/2 Male NPT	1/2" FITOK	0.39 (10)	2.85 (72.4)		
EV□□-NS4-FNS4-4	1/4 Male NPT	1/4 Female NPT	0.19 (4.8)	2.13 (54.1)	11/16 (17.46)	11/16 (17.46)
EV□□-NS6-FNS6-6	3/8 Male NPT	3/8 Female NPT	0.33 (8.4)	2.46 (62.5)	1 (25.4)	1 (25.4)
EV□□-NS8-FNS8-8	1/2 Male NPT	1/2 Female NPT	0.39 (10)	3.03 (77)	(27)	(27)

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.

Part Number Description



1. 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.

2. 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 as stated in ASTM G93 Level C.

Bleed Valves

RB Series

Introduction

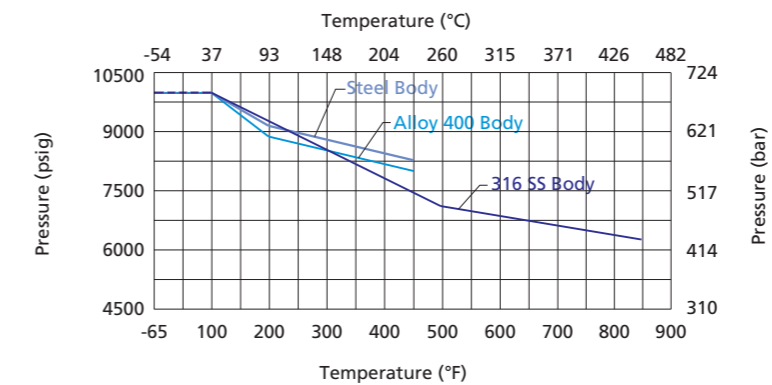
Bleed valves can be used on instrument devices such as multi-valve manifolds or gauge valves to vent signal line pressure to atmosphere before removal of an instrument or to assist in calibration.

Features

- Compact design for easy installation
- Chrome-plated stem and tip to extend cycle life
- Maximum working pressure: 10000 psig (689 bar)
- Working temperature: -65°F to 850°F (-54°C to 454°C)
- Variety of end connections
- Stainless steel, carbon steel and alloy 400 available
- Leak-tight performance testing for every valve with nitrogen at 6000 psig



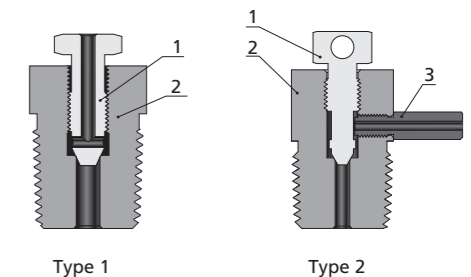
Pressure vs. Temperature



Contact the authorized representative or FITOK Group for curve graph of other materials.

Standard Materials of Construction

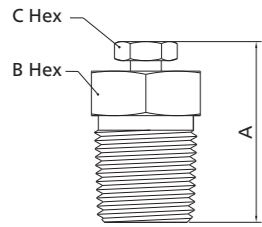
Component	Valve Body Material Grade/ASTM Specification		
	316 SS	Carbon Steel	Alloy 400
1 Stem	Chrome-plated 316 SS/A276	Chrome-plated 316 SS/A276	Alloy 400/B164
2 Body	316 SS/A479	1018/A108	Alloy 400/B164
3 Vent tube	316 SS/A276	316 SS/A276	Alloy 400/B164



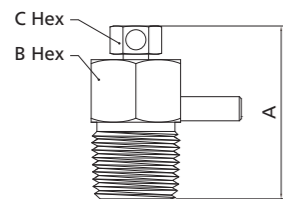
1. Lubricant is nickel antiseize, hydrocarbon carrier.

2. Contact the authorized representative or FITOK Group for other materials.

Dimensions



Type 1



Type 2

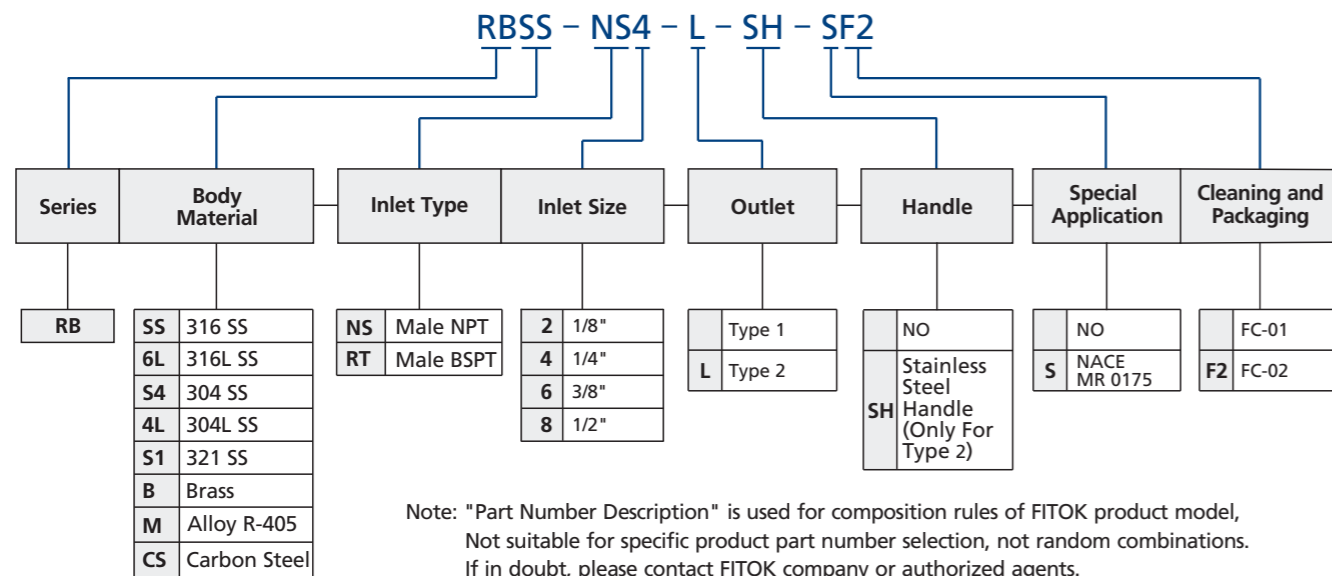
Type	Basic Ordering Number	Inlet Type and Size	Dimension, in. (mm)		
			A (Close)	B	C
Type 1	RB□□-NS4	1/4 Male NPT	1.31 (33.4)	5/8 (15.9)	7/16 (11.1)
	RB□□-NS6	3/8 Male NPT	1.46 (37.1)	7/8 (22.2)	
	RB□□-NS8	1/2 Male NPT			
	RB□□-RT4	1/4 Male BSPT	1.31 (33.4)	5/8 (15.9)	
	RB□□-RT6	3/8 Male BSPT	1.46 (37.1)	7/8 (22.2)	
	RB□□-RT8	1/2 Male BSPT			
Type 2	RB□□-NS4-L	1/4 Male NPT	1.57 (40)	5/8 (15.9)	
	RB□□-NS6-L	3/8 Male NPT	1.74 (44.2)	7/8 (22.2)	
	RB□□-NS8-L	1/2 Male NPT			
	RB□□-RT4-L	1/4 Male BSPT	1.57 (40)	5/8 (15.9)	
	RB□□-RT6-L	3/8 Male BSPT	1.74 (44.2)	7/8 (22.2)	
	RB□□-RT8-L	1/2 Male BSPT			

Caution

These bleed valves don't have a cap thread seal, so open the valve slowly and direct the vent hole away from the operator. These valves contain no packing, so some fluid leakage will occur when the valves are opened.

Sizes and types listed are standard. Other sizes and types are available upon request. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact the authorized representative or FITOK Group.

Part Number Description



Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK company or authorized agents.

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 as stated in ASTM G93 Level C.

Purge Valves

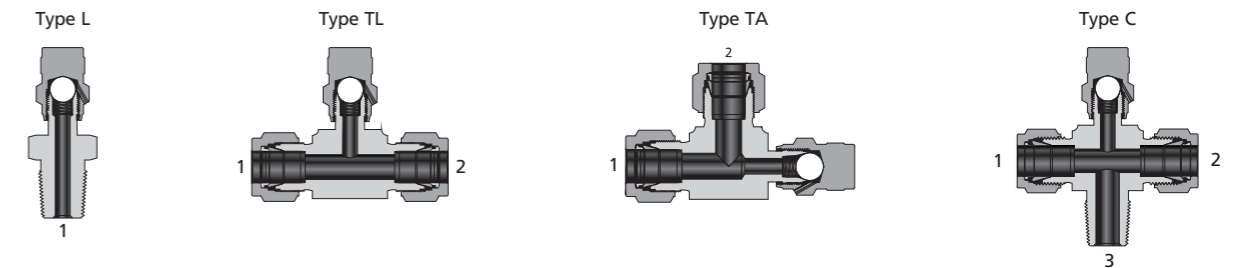
RP Series

Introduction

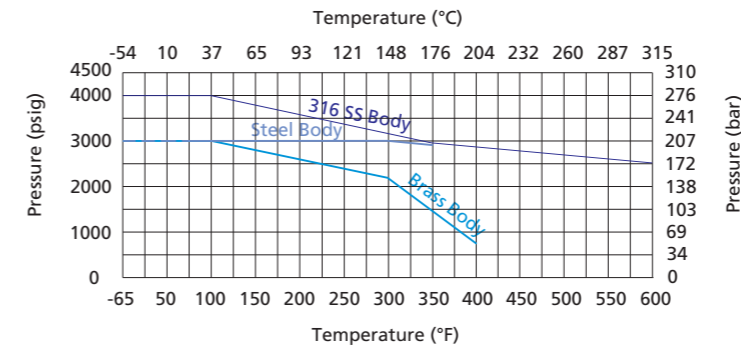
Purge valves are manual bleed, vent or drain valves. The cap is used to release system pressure. One-quarter turn with a wrench from finger-tight obtains leaktight closure during initial installation. Tightening with a wrench ensures closure to the rated pressure with subsequent installations.

Features

- Compact design for easy installation
- Bonnet crimped to valve body to prevent accidental disassembly
- Maximum working pressure: 4000 psig (276 bar)
- Working temperature: -65°F to 600°F (-54°C to 315°C)
- 316 stainless steel, brass and carbon steel materials available
- Leak-tight performance testing for every valve with nitrogen at the maximum working pressure



Pressure vs. Temperature



Contact the authorized representative or FITOK Group for curve graph of other materials.

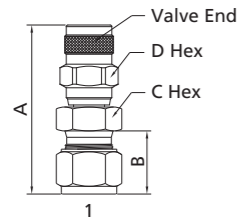
Standard Materials of Construction

	316 SS/A182	Brass C36000/B16	12L4/A108
Body	316 SS/A479	Brass C37700/B283	Chromium-plated
Cap	316 SS/A276	Brass C36000/B16	12L4/A108 Chromium-plated
Poppet (Ball)	316 SS/A276	316 SS/A276	316 SS/A276
Spring	302 SS/A313		

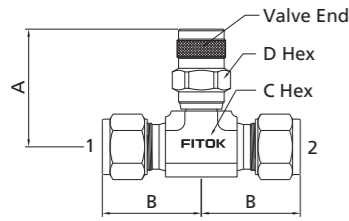
- Lubricant: molybdenum disulfide-based and silicone-based.
- Contact the authorized representative or FITOK Group for other materials.

Models and Dimensions

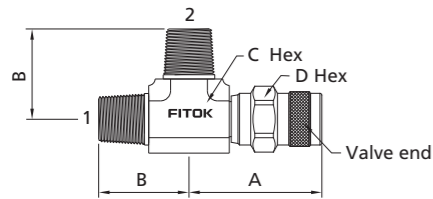
Type L



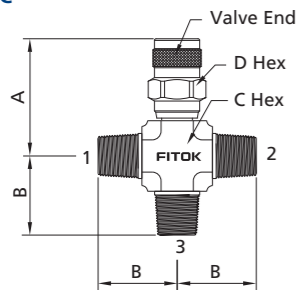
Type TL



Type TA



Type C



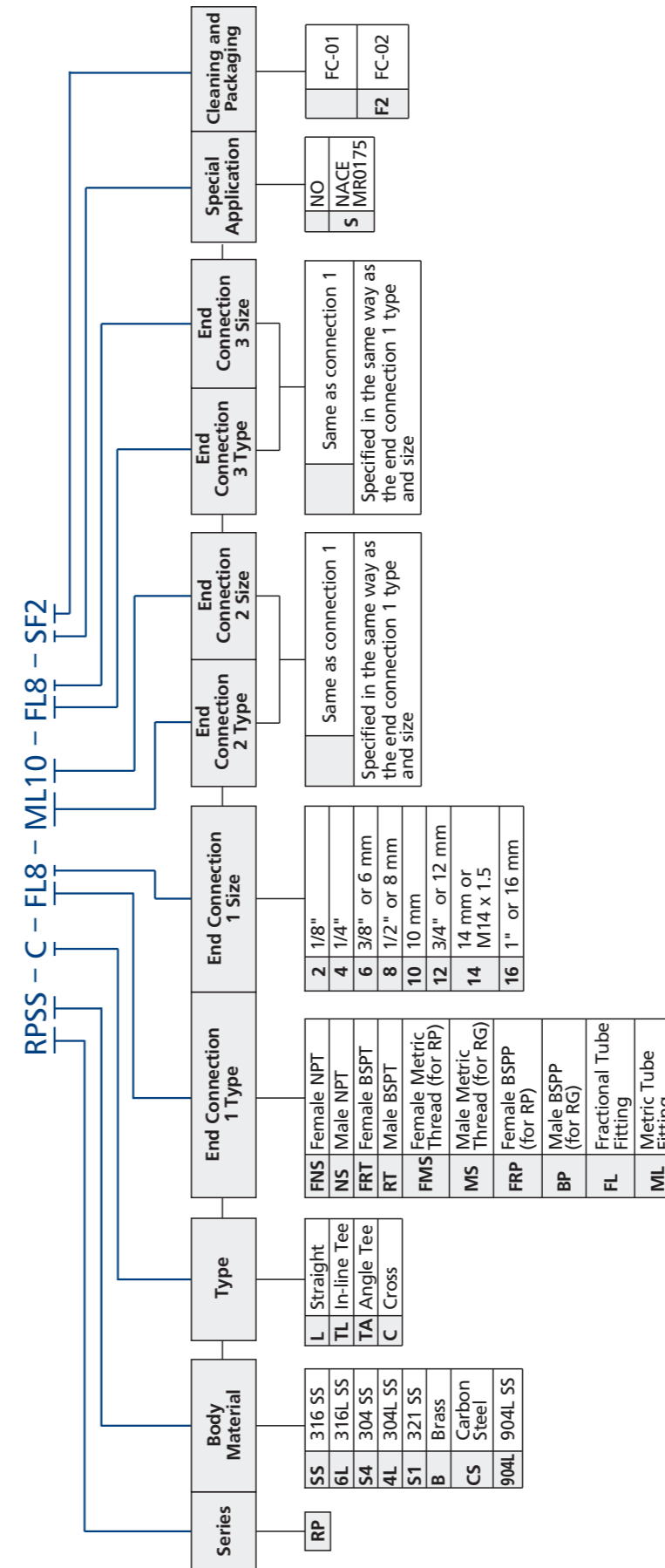
Caution:

These purge valves don't have a cap thread seal, so open the valve slowly and direct the vent hole away from the operator. These valves contain no packing, so some fluid leakage will occur when the valves are opened.

Basic Ordering Number	Connection Type and Size		Dimension, in. (mm)			
			Amax	B	C	D
RP□□-L	-FL4	1/4" FITOK	1.96 (49.8)	0.69 (17.5)	1/2 (12.7)	5/8 (15.9)
	-FL6	3/8" FITOK	2.05 (52.1)	0.75 (19.1)	5/8 (15.9)	
	-FL8	1/2" FITOK	2.2 (56)	0.88 (22.4)	13/16 (20.6)	
	-ML6	6 mm FITOK	1.96 (49.8)	0.69 (17.5)	14	
	-ML8	8 mm FITOK	2.02 (51.3)	0.73 (18.6)	15	
	-ML10	10 mm FITOK	2.1 (53.4)	0.77 (19.6)	18	
	-ML12	12 mm FITOK	2.2 (55.9)	0.87 (22)	22	
	-FNS4	1/4 Female NPT	1.76 (44.7)	0.72 (18.3)	3/4 (19.1)	
	-FNS6	3/8 Female NPT	1.83 (46.5)	0.78 (19.8)	7/8 (22.2)	
	-FNS8	1/2 Female NPT	2.02 (51.3)	0.97 (24.6)	1 1/16 (26.9)	
	-NS4	1/4 Male NPT	1.84 (46.8)	0.56 (14.2)	9/16 (14.3)	
	-NS6	3/8 Male NPT	1.89 (48)	0.56 (14.2)	11/16 (17.5)	
	-NS8	1/2 Male NPT	2.11 (53.6)	0.75 (19.1)	7/8 (22.2)	
	-FL4	1/4" FITOK	1.41 (35.8)	1.06 (26.9)	1/2 (12.7)	
	-FL6	3/8" FITOK	1.49 (37.8)	1.20 (30.5)	5/8 (15.9)	
	-FL8	1/2" FITOK	1.61 (40.9)	1.42 (36.1)	13/16 (20.6)	
RP□□-TL RP□□-TA RP□□-C	-ML6	6 mm FITOK	1.41 (35.8)	1.06 (27.0)	1/2 (12.7)	
	-ML8	8 mm FITOK	1.48 (37.7)	14.95 (29.9)	5/8 (15.9)	
	-ML10	10 mm FITOK	1.52 (38.6)	1.24 (31.6)	11/16 (17.5)	
	-ML12	12 mm FITOK	1.6 (40.6)	1.41 (36.0)	13/16 (20.6)	
	-FNS4	1/4 Female NPT	1.51 (38.6)	0.88 (22.4)	11/16 (17.5)	
	-FNS6	3/8 Female NPT	1.6 (40.7)	0.88 (22.4)	13/16 (20.6)	
	-FNS8	1/2 Female NPT	1.71 (43.5)	1.12 (28.4)	1 (25.4)	
	-NS4	1/4 Male NPT	1.4 (35.8)	0.92 (23.4)	1/2 (12.7)	
	-NS6	3/8 Male NPT	1.52 (38.6)	1.03 (26.2)	11/16 (17.5)	
	-NS8	1/2 Male NPT	1.6 (40.6)	1.3 (33)	13/16 (20.6)	

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1. Standard thread pitch for metric threads are as follows:
M10 and below: 1 mm
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