

# Plug Valves

PV Series



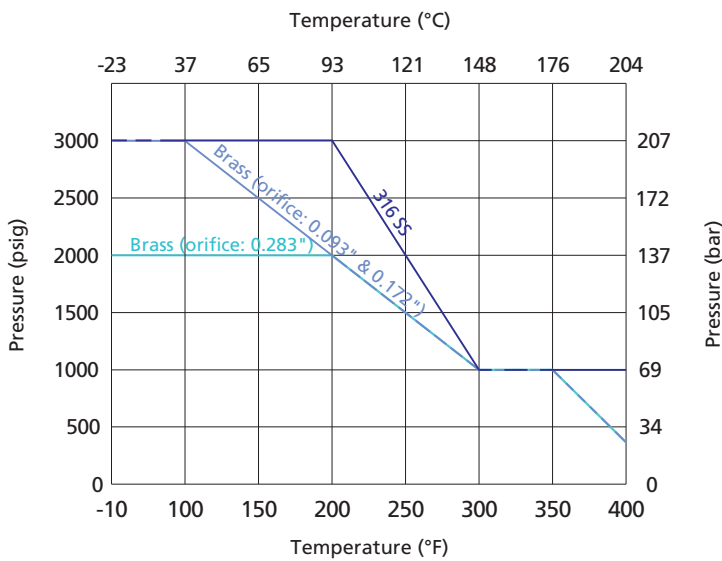
**FITOK**  
Valves and Fittings

# 1 Plug Valves

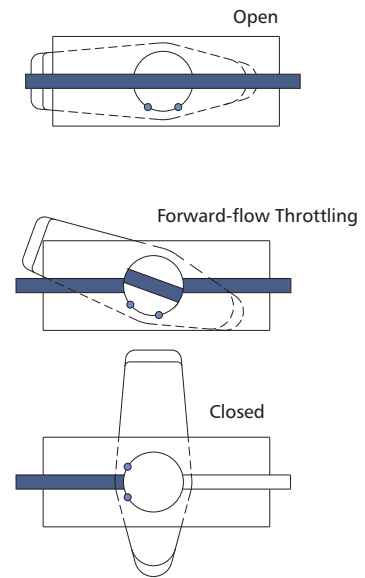
## Features

- ⦿ Working pressure up to 3000 psig (207 bar)
- ⦿ Working temperature: -10°F to 400°F (-23°C to 204°C)
- ⦿ Size from 1/8" to 3/4" and 6 to 12 mm
- ⦿ Easy to maintain and clean
- ⦿ Low operating torque
- ⦿ Replaceable plug assembly
- ⦿ Options for handle color
- ⦿ Handle as indicator of flow direction
- ⦿ Positive handle shutoff
- ⦿ Leak-tight performance testing for every valve with nitrogen at the maximum working pressure

## Pressure vs. Temperature



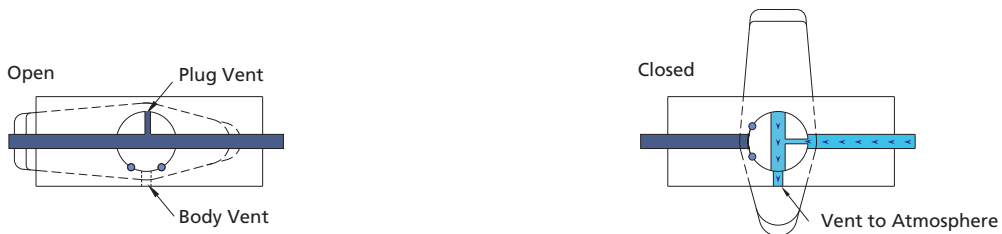
## Operation (2-Way)



1. Differential pressure is limited to 150 psig (10.3 bar) maximum if reverse flow occurs.
2. Reverse flow throttling may damage O-ring.

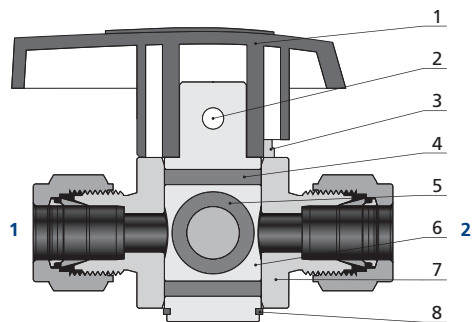
## Downstream Vents (2-Way)

Plug and valve body allow pressure to be released to atmosphere when closed. The maximum working pressure for this operation is 150 psig (10.3 bar).



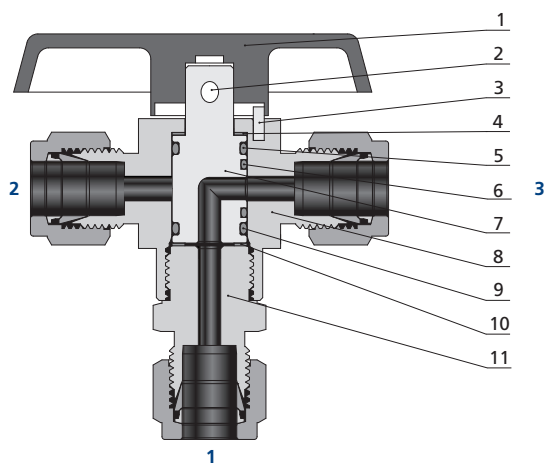
## Standard Materials of Construction

### 2-way



Item	Component	Valve Body Material	
		316 SS	Brass
		Material Grade/ASTM Specification	
1	Handle	Nylon or Aluminium	
2	Handle Pin	Stainless steel	
3	Body Pin	Stainless steel	
4	O-ring	Fluorocarbon FKM or Neoprene or Ethylene Propylene or Buna N or Kalrez	
5	O-ring	Fluorocarbon FKM or Neoprene or Ethylene Propylene or Buna N or Kalrez	
6	Plug	PTFE-coated 316 SS/A479	PTFE-coated brass/B453
7	Body	316 SS/A479	Brass/B453
8	Retaining Ring	Stainless steel	
Lubricant		Silicone-based	

### 3-way



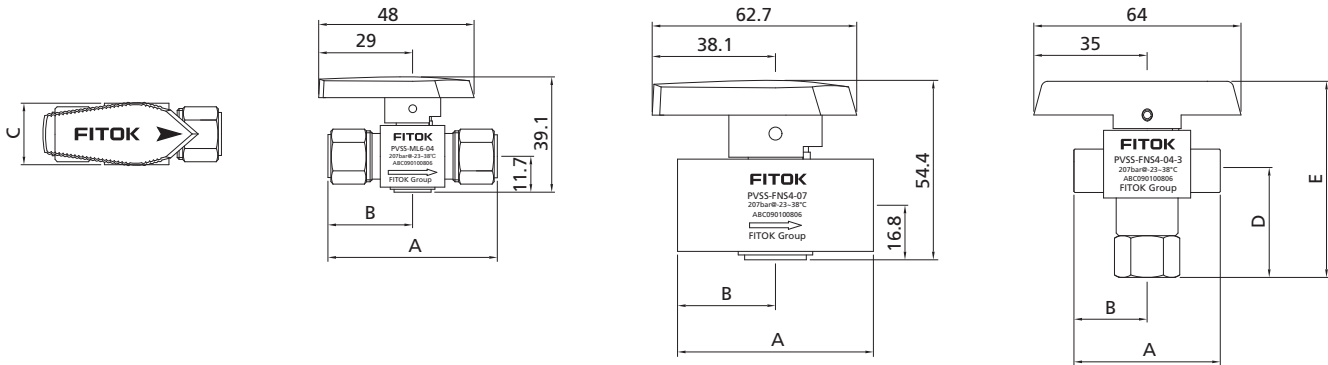
Item	Component	Valve Body Material	
		316 SS	Brass
		Material Grade/ASTM Specifications	
1	Handle	Aluminium	
2	Handle Pin	Stainless steel	
3	Body Pin	Stainless steel	
4	Gasket	PTFE	
5	O-ring	Fluorocarbon FKM or Neoprene or Ethylene Propylene or Buna N or Kalrez	
6	O-ring	Fluorocarbon FKM or Neoprene or Ethylene Propylene or Buna N or Kalrez	
7	Plug	PTFE-coated 316 SS/A479	PTFE-coated brass/B453
8	Body	316 SS/A479	Brass/B453
9	O-ring	Fluorocarbon FKM or Neoprene or Ethylene Propylene or Buna N or Kalrez	
10	Gasket	PTFE	
11	Fitting	316 SS/A479	Brass/B453
Lubricant		Silicone-based	

## Dimensions

2-Way 02, 04 Orifice series

2-Way 07 Orifice series

3-Way



Basic Ordering Number		Connection Type and Size		Orifice in. (mm)	Cv	Dimension, in (mm)				
2-way	3-way	Inlet 1	Outlet 2/3			A	B	C	D	E
PV□□-FL2-02	PV□□-FL2-02-3	1/8" FITOK	1/8" FITOK	0.09 (2.4)	0.10	1.99 (50.5)	0.98 (24.9)	0.75 (19.0)	1.61 (40.8)	2.69 (68.4)
PV□□-FL4-04	PV□□-FL4-04-3	1/4" FITOK	1/4" FITOK	0.17 (4.4)	1.6	2.17 (55.1)	1.08 (27.4)		1.70 (43.3)	2.79 (70.9)
PV□□-FL6-04	PV□□-FL6-04-3	3/8" FITOK	3/8" FITOK		1.1	2.29 (58.2)	1.14 (29.0)		1.76 (44.8)	2.85 (72.4)
PV□□-FL6-07	PV□□-FL6-07-3	3/8" FITOK	3/8" FITOK	0.28 (7.2)	6.4	2.66 (67.6)	1.33 (33.8)	1.12 (28.5)	2.16 (54.8)	3.43 (87.2)
PV□□-FL8-07	PV□□-FL8-07-3	1/2" FITOK	1/2" FITOK		4.4	2.88 (73.2)	1.44 (36.6)		2.26 (57.3)	3.53 (89.7)
PV□□-ML3-02	PV□□-ML3-02-3	3 mm FITOK	3 mm FITOK	0.09 (2.4)	0.10	1.99 (50.5)	0.98 (24.9)	0.75 (19.0)	1.61 (40.8)	2.69 (68.4)
PV□□-ML6-04	PV□□-ML6-04-3	6 mm FITOK	6 mm FITOK	0.17 (4.4)	1.6	2.17 (55.1)	1.08 (27.4)		1.70 (43.3)	2.79 (70.9)
PV□□-ML10-07	PV□□-ML10-07-3	10 mm FITOK	10 mm FITOK		0.28 (7.2)	6.4	2.68 (68.1)		1.34 (34.0)	2.17 (55.1)
PV□□-ML12-07	PV□□-ML12-07-3	12 mm FITOK	12 mm FITOK	4.8		2.96 (75.2)	1.44 (36.6)	2.26 (57.5)	3.54 (89.9)	
PV□□-FNS2-04	PV□□-FNS2-04-3	1/8 Female NPT	1/8 Female NPT	0.17 (4.4)	1.2	1.78 (45.2)	0.89 (22.6)	0.75 (19.0)	1.31 (33.4)	2.40 (61.0)
PV□□-FNS4-04	PV□□-FNS4-04-3	1/4 Female NPT	1/4 Female NPT		0.9	2.10 (53.4)	1.05 (26.7)		1.50 (38.0)	2.58 (65.6)
PV□□-FNS4-07	PV□□-FNS4-07-3	1/4 Female NPT	1/4 Female NPT	0.28 (7.2)	4.3	2.38 (60.5)	1.19 (30.2)	1.12 (28.5)	1.89 (48.0)	3.17 (80.4)
PV□□-FNS8-07	PV□□-FNS8-07-3	1/2 Female NPT	1/2 Female NPT		2.7	2.88 (73.2)	1.44 (36.6)		2.08 (52.8)	3.35 (85.2)
PV□□-NS2-04	PV□□-NS2-04-3	1/8 Male NPT	1/8 Male NPT	0.17 (4.4)	1.0	1.53 (38.9)	0.76 (19.3)	0.75 (19.0)	1.37 (34.9)	2.46 (62.5)
PV□□-NS4-04	PV□□-NS4-04-3	1/4 Male NPT	1/4 Male NPT		1.0	1.90 (48.3)	0.95 (24.1)		1.55 (39.4)	2.64 (67.0)
PV□□-NS8-07	PV□□-NS8-07-3	1/2 Male NPT	1/2 Male NPT	0.28 (7.2)	2.4	2.64 (67.1)	1.32 (33.5)	1.12 (28.5)	2.15 (54.5)	3.42 (86.9)
PV□□-FRT2-04	PV□□-FRT2-04-3	1/8 Female BSPT	1/8 Female BSPT	0.17 (4.4)	1.2	1.78 (45.2)	0.89 (22.6)	0.75 (19.0)	1.31 (33.4)	2.40 (61.0)
PV□□-FRT4-04	PV□□-FRT4-04-3	1/4 Female BSPT	1/4 Female BSPT		0.9	2.09 (53.1)	1.11 (28.2)		1.50 (38.0)	2.58 (65.6)
PV□□-FRT4-07	PV□□-FRT4-07-3	1/4 Female BSPT	1/4 Female BSPT	0.28 (7.2)	4.3	2.38 (60.5)	1.19 (30.2)	1.12 (28.5)	1.99 (50.5)	3.26 (82.9)
PV□□-FRT8-07	PV□□-FRT8-07-3	1/2 Female BSPT	1/2 Female BSPT		2.7	2.88 (73.2)	1.57 (39.9)		2.18 (55.3)	3.45 (87.7)

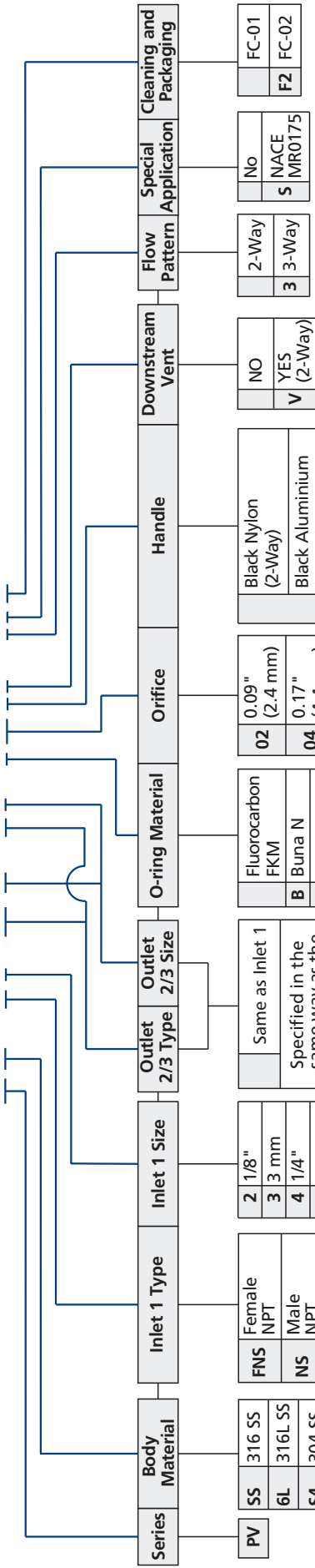
1. FITOK means FITOK double ferrule tube fittings.

2. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.

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

## PVSS – FL8 – ML12 – FL8 – B04GV – 3SF2



Series	Body Material	Inlet 1 Type	Inlet 1 Size	Outlet 2/3 Type	Outlet 2/3 Size	O-ring Material	Orifice	Handle	Downstream Vent	Flow Pattern	Special Application	Cleaning and Packaging
PV	SS 316 SS 6L 316L SS S4 304 SS B Brass 904L 904L SS	FMS Female NPT NS Male NPT FRT Female BSPT RT Male BSPT FMS Female Metric Thread (for RG) MS Male Metric Thread (for RG) FRP Female BSPP (for RP) BP Male BSPP (for RG) FL Fractional Tube Fitting ML Metric Tube Fitting	2 1/8" 3 3 mm 4 1/4" 6 3/8" or 6 mm 8 1/2" or 8 mm 10 10 mm 12 3/4" or 12 mm	02 04 07	Same as Inlet 1 Specified in the same way as the inlet 1 type and size	Fluorocarbon FKM B Buna N E Ethylene Propylene N Neoprene Z Kalrez	0.09" (2.4 mm) 0.17" (4.4 mm) 0.28" (7.2 mm)	Black Nylon (2-Way) Black Aluminium (3-Way) Red Nylon (2-Way) Red Aluminium (3-Way) Green Nylon (2-Way) Green Aluminium (3-Way) Yellow Nylon (2-Way) Yellow Aluminium (3-Way) Blue Nylon (2-Way) Blue Aluminium (3-Way) Black Aluminium (2-Way)	NO YES V (2-Way)	2-Way 3 3-Way	No NACE S IMR0175	FC-01 FC-02 F2

- 3/4 applies only to the 07 path.
- 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 as stated in ASTM G93 Level C.

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 group or authorized agent.

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