

# Plug Valves

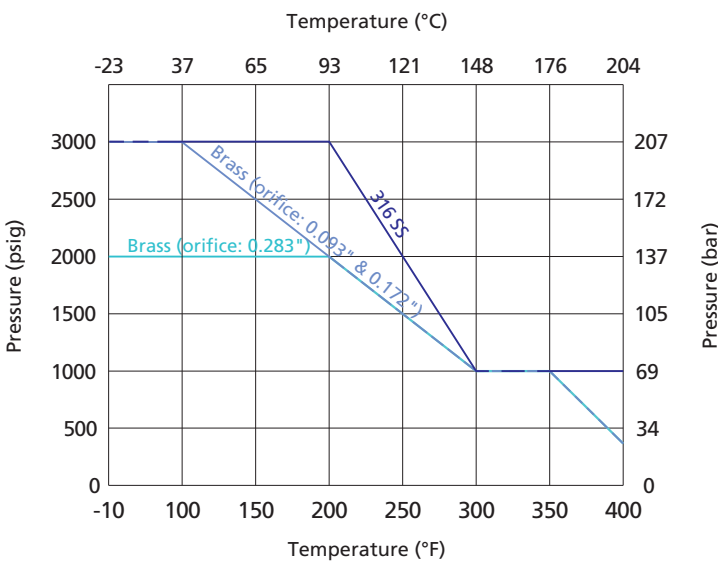
PV Series



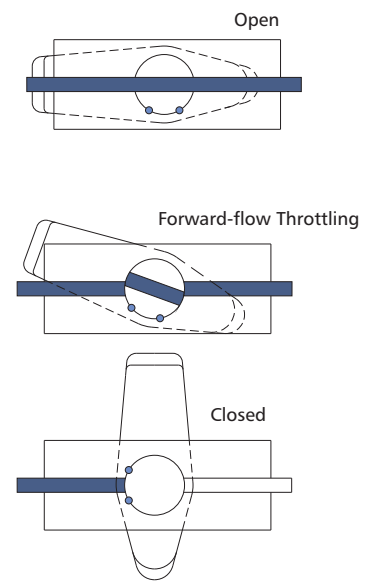
## Features

- ⦿ Working pressure up to: 3000 psig (207 bar)
- ⦿ Working temperature: -10°F to 400°F (-23°C to 204°C)
- ⦿ Sizes from 1/8" to 3/4" and 6 to 12 mm
- ⦿ Easy to maintain and clean
- ⦿ Low operating torque
- ⦿ Replaceable plug assembly
- ⦿ Handle as indicator of flow direction
- ⦿ Options for handle color
- ⦿ Positive handle shutoff
- ⦿ Bottom end connections as the only inlet port for 3-way valves
- ⦿ Leak-tight performance testing with nitrogen or compressed air for every valve at the maximum working pressure to meet the requirement of no visible leak

## 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.

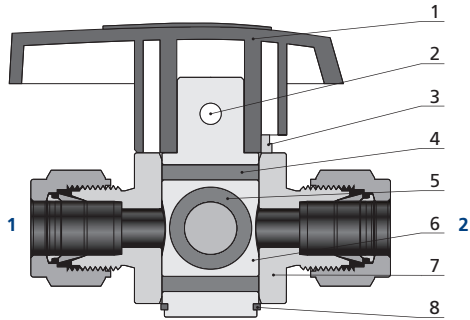
## Downstream Vents (2-way)

Plug and valve body allow pressure to be released to atmosphere when closed. Maximum working pressure: 150 psig (10.3 bar).



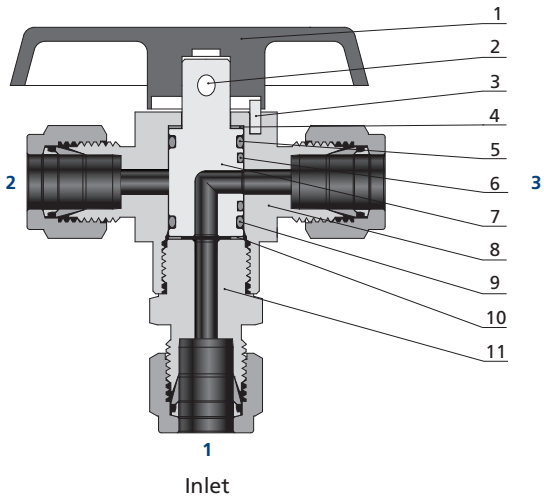
## Standard Materials of Construction

### 2-way



Item	Component	Material Grade/ASTM Specification	
		Valve Body Material	
		316 SS	Brass
1	Handle	Nylon or Aluminium	
2	Handle Pin	Stainless steel	
3	Body Pin	Stainless steel	
4	O-ring	Fluorocarbon FKM or Neoprene or EPDM or Buna N or Kalrez	
5	O-ring	Fluorocarbon FKM or Neoprene or EPDM 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	

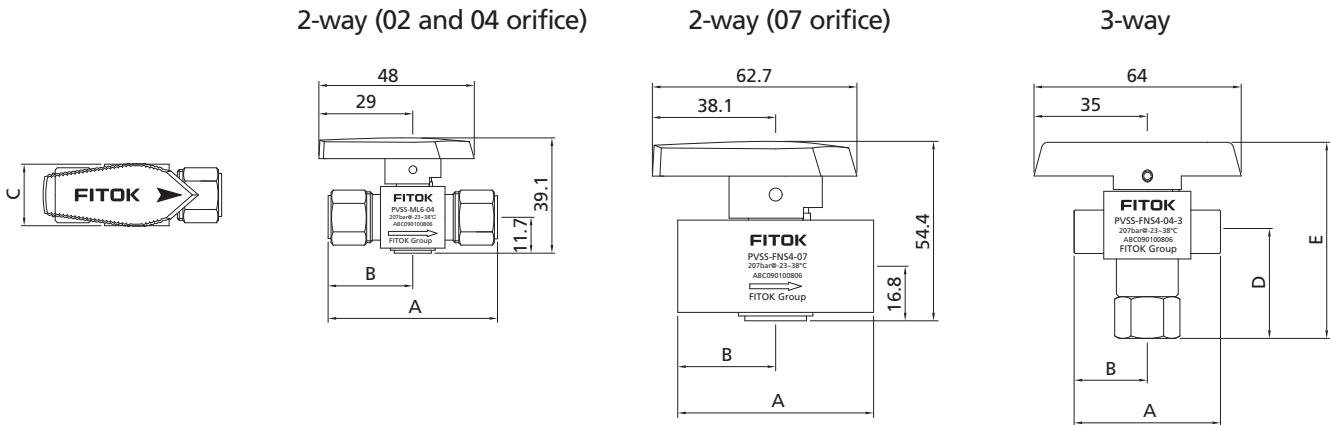
### 3-way



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

Note: The 3-way plug valve is in working state when the handle is in limit positions. There will be a short moment of interconnection for the three ports when rotating the handle.

## Dimensions



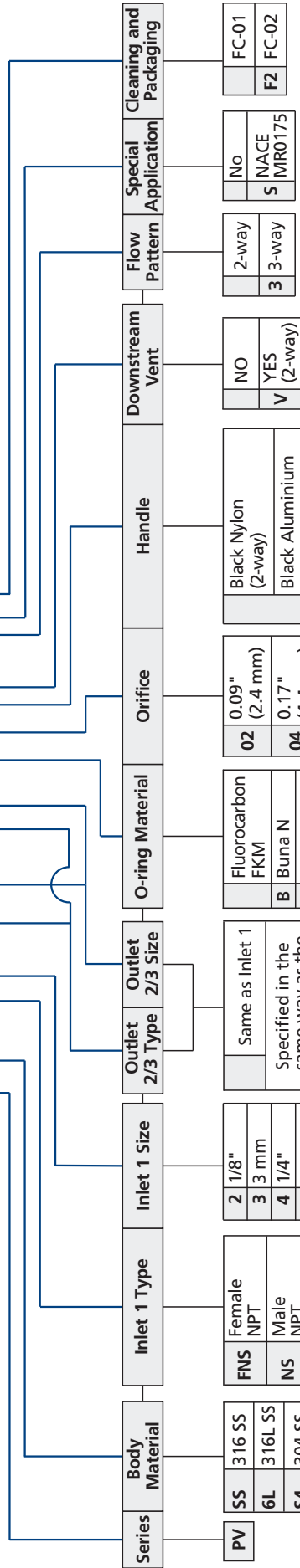
Ball Valves  
Plug Valves

Basic Ordering Number		Connection Type and Size		Orifice in. (mm)	Cv	Dimensions, 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		6.4	2.68 (68.1)	1.34 (34.0)		2.17 (55.1)	3.44 (87.5)
PV□□-ML12-07	PV□□-ML12-07-3	12 mm FITOK	12 mm FITOK	0.28 (7.2)	4.8	2.96 (75.2)	1.44 (36.6)	1.12 (28.5)	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)
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. For details, please refer to the ordering information.
3. Dimensions are shown with FITOK tube fitting nuts finger-tightened. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

# Ordering 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	FNS 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	Same as Inlet 1 Specified in the same way as the inlet 1 type and size	02 0.09" (2.4 mm) 04 0.17" (4.4 mm) 07 0.28" (7.2 mm)	Fluorocarbon FKM B Buna N E EPDM N Neoprene Z Kalrez	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 MR0175	FC-01 FC-02 F2	

- Standard thread pitch for metric threads are as follows:  
M10 and below: 1 mm  
M12 to M24: 1.5 mm  
Standard thread pitch should be omitted in the ordering number, others should be specified.
- For oxygen-enriched environment or hazardous media service, please contact FITOK Group or our authorized distributors.
- 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.

Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

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