

C-LOK

C-LOK Instrument Valve Co.,Ltd.

Plug Valves



Contents

01 Plug Valves
P1 Series

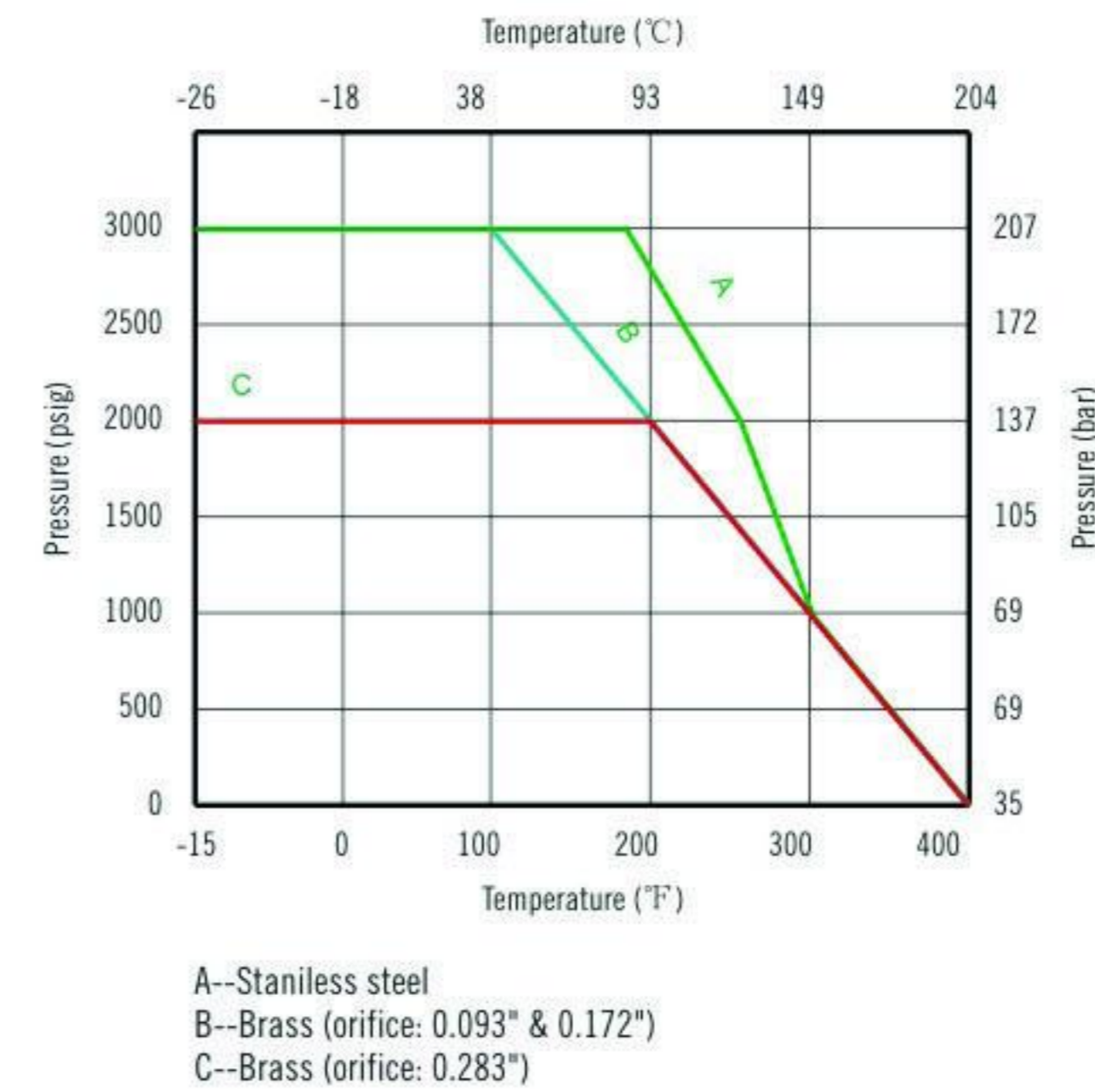


Features

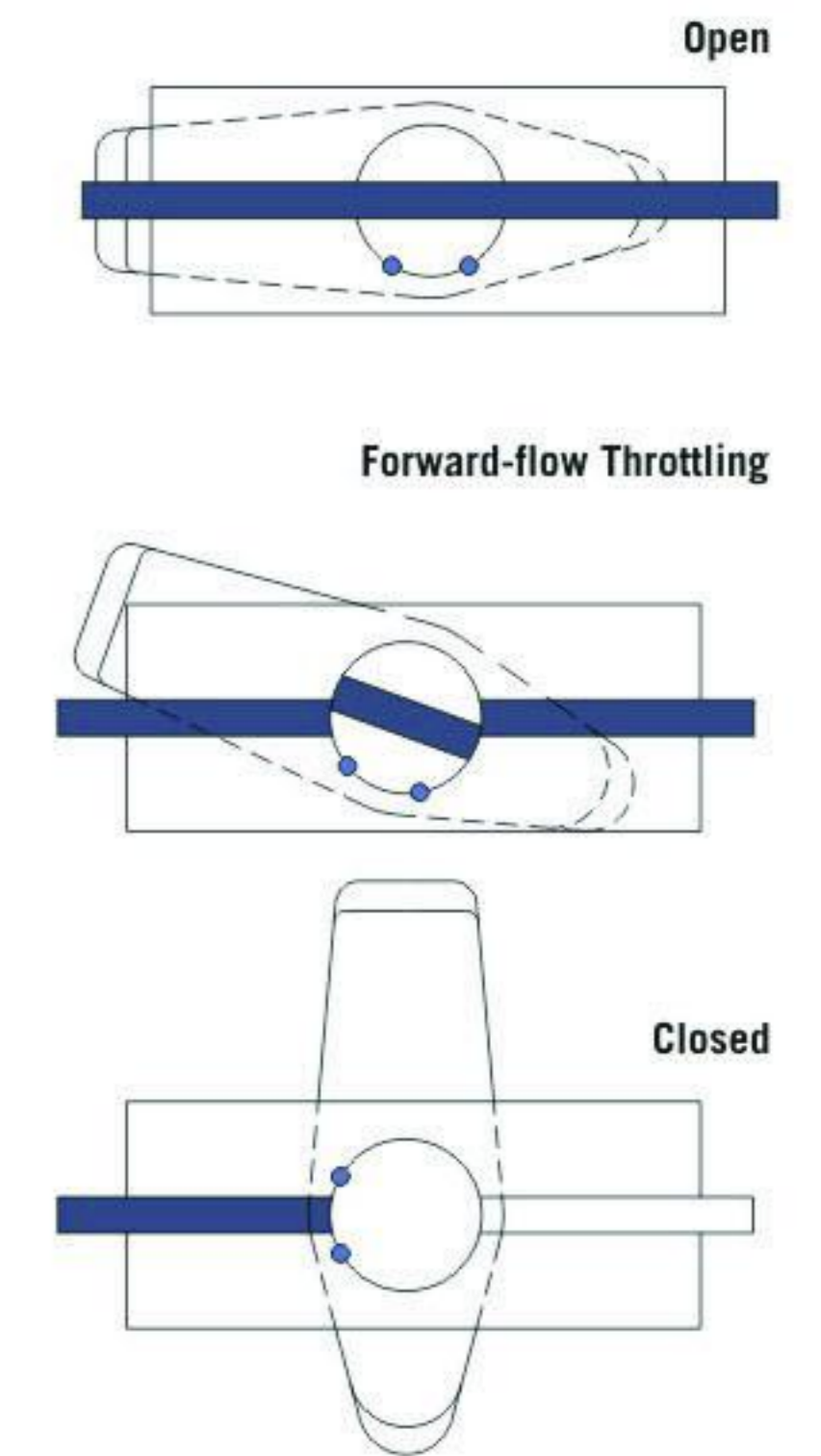
- Working pressure up to 3000 psig (207 bar) @ 70°F (21°C).
- Working temperature from -10°F to 400°F (-23°C to 204°C).
- Sizes from 1/8 in. to 1 in. or from 6 mm to 25 mm.
- C-LOK™ tube fitting or pipe thread end connections available.
- Easy to maintain and clean.
- Low operating torque.
- Replaceable plug assembly.
- Handle indicates flow direction.
- Options for handle color.
- Positive handle stop.
- Manual, electric or pneumatic actuation available.
- All designs are checked at 1.5 times work pressure with pure water to confirm the strength, every valve is factory tested with nitrogen at working pressure to detect the leakage.



Pressure vs. Temperature

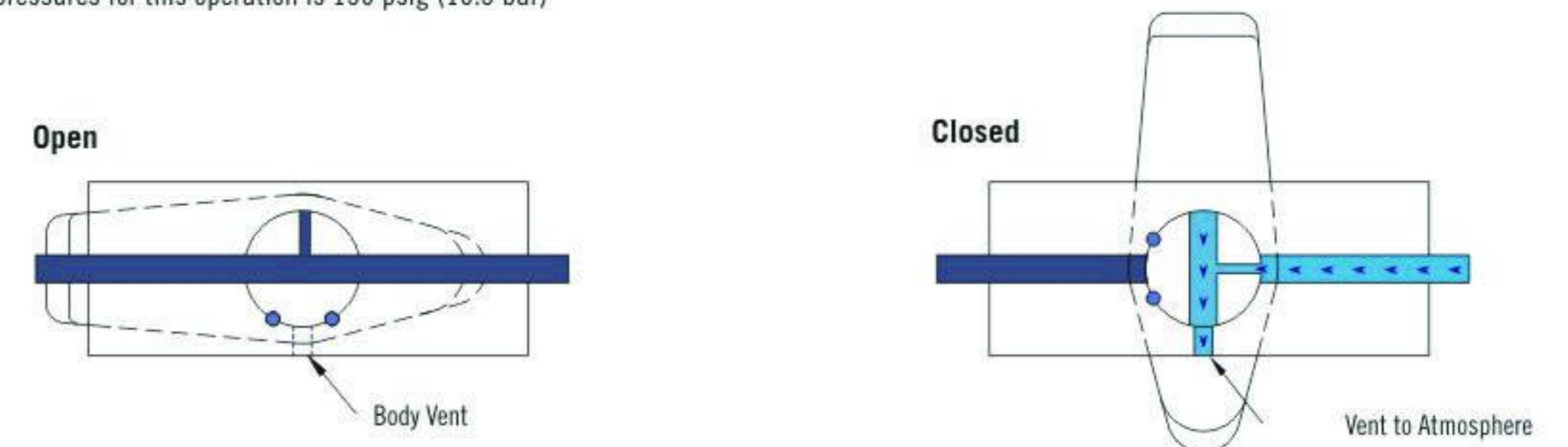


Plug Valve Operation



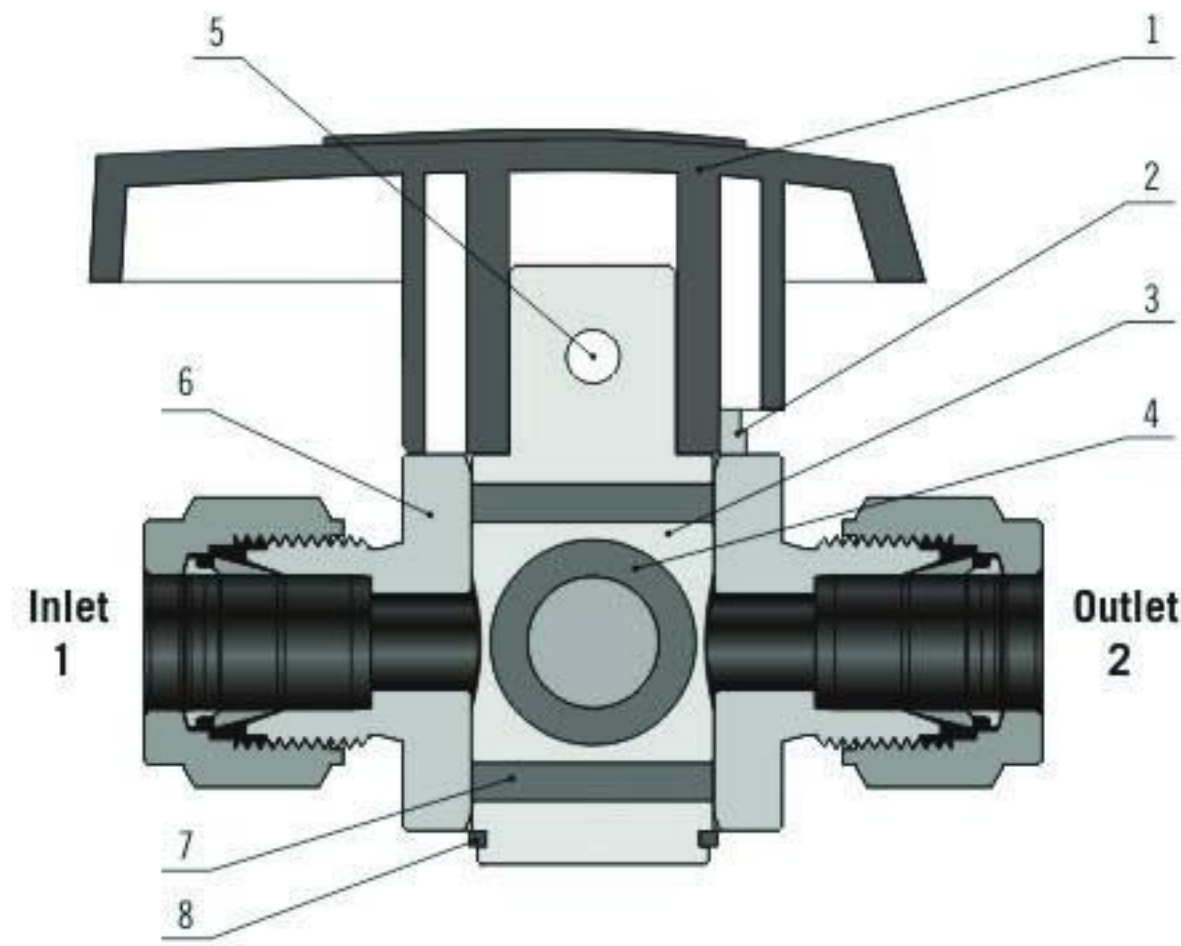
Downstream Vent Option

A downstream vent option is available and will allow a pressure release to atmosphere when the valve is closing. The maximum working pressures for this operation is 150 psig (10.3 bar)



Materials of Construction

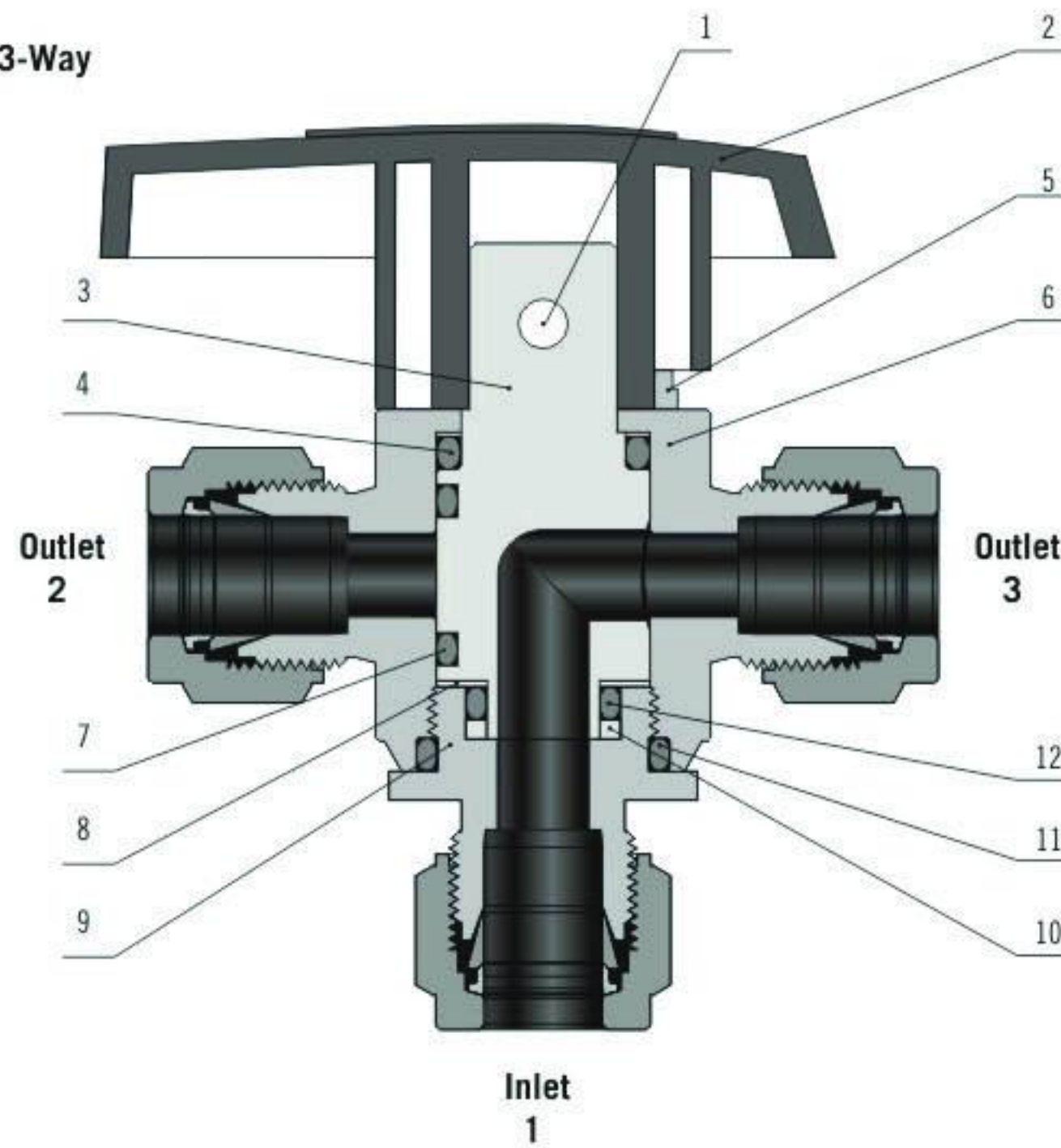
2-Way



Item	Component	Valve Body Materials		
		316 SS	304 SS	Brass
		Material Grade/ASTM Specifications		
1	Handle	Aluminium alloy		
2	Body Pin	Stainless steel		
3	Plug*	316 SS/A479	304 SS/A479	Brass/B453
4	O-Ring	Fluorocarbon FKM/Neoprene/ Ethylene Propylene/Buna N		
5	Handle Pin	Stainless steel		
6	Body*	316 SS	304 SS	Brass
7	O-Rings	Fluorocarbon FKM/Neoprene/ Ethylene Propylene/Buna N		
8	Retaining ring	Stainless steel		
	Lubricant	Silicone-based		

*Plug PTFE-coated outside, body PTFE-coated inside.

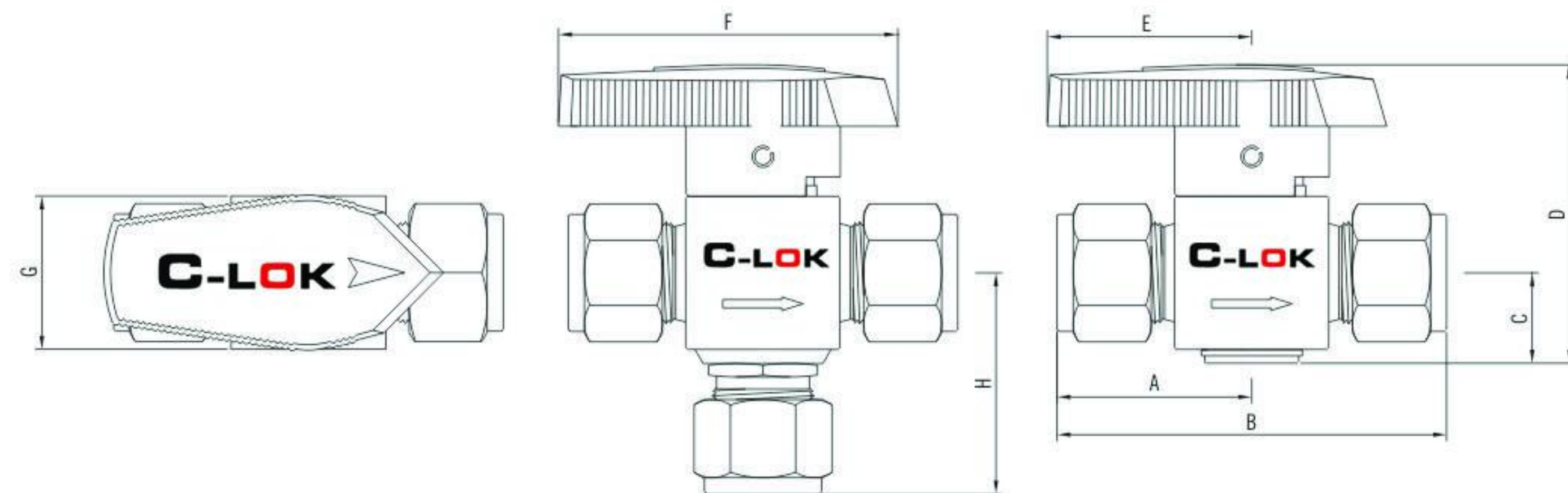
3-Way



Item	Component	Valve Body Materials		
		316 SS	304 SS	Brass
		Material Grade/ASTM Specifications		
1	Handle pin	Aluminium alloy		
2	Handle	Stainless steel		
3	Plug*	316 SS/A479	304 SS/A479	Brass/B453
4	O-Ring	Fluorocarbon FKM/Neoprene/ Ethylene Propylene/Buna N		
5	Body pin	Stainless steel		
6	Body*	316 SS/A479	304 SS/A479	Brass/B453
7	O-Ring	Fluorocarbon FKM/Neoprene/ Ethylene Propylene/Buna N		
8	Bearing	PEEK		
9	End screw	316 SS/A479	304 SS/A479	Brass/B453
10	Back-up ring	PTFE		
11	O-Ring	Fluorocarbon FKM/Neoprene/ Ethylene Propylene/Buna N		
12	O-Ring	Fluorocarbon FKM/Neoprene/ Ethylene Propylene/Buna N		
	Lubricant	Silicone-based		

*Plug PTFE-coated outside, body PTFE-coated inside.

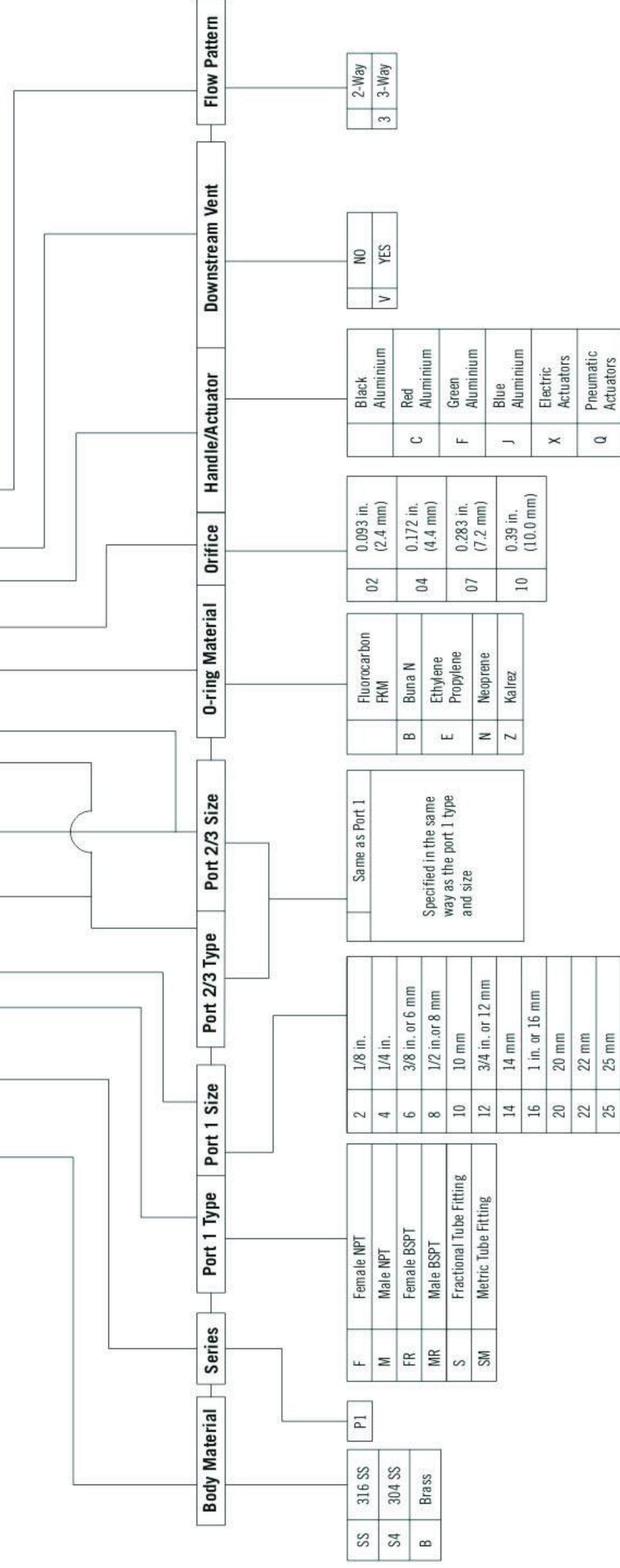
Dimensions



Features

Inlet/Outlet	Size	Ordering Numbers		Dimensions, in. (mm)																
		2-Way	3-Way	Orifice	A	B	C	D	E	F	G	H								
Fractional C-LOK tube fittings	1/8 in.	-P1-S2-02	-P1-S2-02-3	0.093 (2.4)	0.98 (24.9)	1.99 (50.5)	0.46 (11.7)	1.46 (37.0)	1.10 (28.0)	1.89 (48.0)	0.75 (19.0)	(1.22) 31.0								
	1/4 in.	-P1-S4-04	-P1-S4-04-3	0.172 (4.4)	1.08 (27.4)	2.17 (55.1)						(1.31) 33.4								
	3/8 in.	-P1-S6-04	-P1-S6-04-3	0.283 (7.2)	1.14 (29.0)	2.29 (58.2)						(1.38) 35.0								
		-P1-S6-07	-P1-S6-07-3		1.33 (33.8)	2.66 (67.6)	0.66 (16.8)	1.90 (48.2)	1.38 (35.0)	2.48 (63.0)	1.12 (28.5)	(1.65) 41.8								
		1/2 in.	-P1-S8-07	-P1-S8-07-3	0.39 (10.0)	1.44 (36.6)	2.88 (73.2)	0.91 (23.0)	2.66 (67.5)	2.76 (70.0)	3.94 (100.0)	1.50 (38.0)	(1.68) 42.6							
		3/4 in.	-P1-S12-10	-P1-S12-10-3		1.60 (40.8)	3.21 (81.6)						(2.00) 50.8							
		1 in.	-P1-S16-10	-P1-S16-10-3		1.79 (45.4)	3.57 (90.8)						(2.18) 55.4							
Metric C-LOK tube fittings	6 mm	-P1-SM6-04	-P1-SM6-04-3	0.172 (4.4)	1.08 (27.4)	2.17 (55.1)	0.46 (11.7)	1.46 (37.0)	1.10 (28.0)	1.89 (48.0)	0.75 (19.0)	(13.1) 33.4								
	8 mm	-P1-SM8-07	-P1-SM8-07-3	0.283 (7.2)	1.30 (33.0)	2.66 (67.6)						(1.30) 33.0								
	10 mm	-P1-SM10-07	-P1-SM10-07-3		1.34 (34.0)	2.68 (68.1)						0.66 (16.8)	1.90 (48.2)	1.38 (35.0)	2.48 (63.0)	1.12 (28.5)	(1.65) 42.0			
		12 mm	-P1-SM12-07	-P1-SM12-07-3	0.39 (10.0)	1.44 (36.6)	2.96 (75.2)	0.91 (23.0)	2.66 (67.5)	2.76 (70.0)	3.94 (100.0)	1.50 (38.0)	(1.76) 44.6							
		14 mm	-P1-SM14-07	-P1-SM14-07-3		1.44 (36.6)	2.96 (75.2)						(1.76) 44.6							
		16 mm	-P1-SM16-10	-P1-SM16-10-3		1.61 (41.0)	3.22 (82.0)						0.91 (23.0)	2.66 (67.5)	2.76 (70.0)	3.94 (100.0)	1.50 (38.0)	(2.00) 51.0		
		20 mm	-P1-SM20-10	-P1-SM20-10-3	1.94 (49.5)			3.88 (91.0)	2.19 55.5											
	22 mm	-P1-SM22-10	-P1-SM22-10-3	0.172 (4.4)		0.89 (22.6)	1.78 (45.2)			0.46 (11.7)	1.46 (37.0)	1.10 (28.0)	1.89 (48.0)	0.75 (19.0)	(0.89) 22.6					
	25 mm	-P1-SM25-10	-P1-SM25-10-3		0.283 (7.2)			1.05 (26.7)	2.09 (53.1)						0.66 (16.8)	1.90 (48.2)	1.38 (35.0)	2.48 (63.0)	1.12 (28.5)	(1.05) 26.7
	1/8 in.	-P1-F2-04	-P1-F2-04-3																	0.283 (7.2)
	1/4 in.	-P1-F4-04	-P1-F4-04-3	0.39 (10.0)	1.44 (36.6)	2.88 (73.2)	0.91 (23.0)	2.66 (67.5)	2.76 (70.0)	3.94 (100.0)	1.50 (38.0)	(1.44) 36.6								
	3/4 in.	-P1-F12-10	-P1-F12-10-3									1.60 (40.6)	3.20 (81.2)	0.91 (23.0)	2.66 (67.5)	2.76 (70.0)	3.94 (100.0)	1.50 (38.0)	1.76 44.6	
	1 in.	-P1-F16-10	-P1-F16-10-3	1.79 (45.4)	3.57 (90.8)	(1.94) 49.4														
Female NPT	1/8 in.	-P1-M2-04	-P1-M2-04-3	0.172 (4.4)	0.76 (19.3)	1.53 (38.9)	0.46 (11.7)	1.46 (37.0)	1.10 (28.0)	1.89 (48.0)	0.75 (19.0)	(1.01) 25.7								
	1/4 in.	-P1-M4-04	-P1-M4-04-3									0.95 (24.1)	1.90 (48.3)	(1.19) 30.2						
	1/2 in.	-P1-M8-07	-P1-M8-07-3	0.283 (7.2)	1.32 (33.5)	2.64 (67.1)	0.66 (16.8)	1.90 (48.2)	1.38 (35.0)	2.48 (63.0)	1.12 (28.5)	(1.65) 42.0								
	3/4 in.	-P1-M12-10	-P1-M12-10-3	0.39 (10.0)	1.50 (38.1)	3.00 (76.2)						0.91 (23.0)	2.66 (67.5)	2.76 (70.0)	3.94 (100.0)	1.50 (38.0)	(1.89) 48.1			
	1 in.	-P1-M16-10	-P1-M16-10-3				1.69 (42.9)	3.38 (85.8)	(2.08) 52.9											
Female BSPT	1/8 in.	-P1-FR2-04	-P1-FR2-04-3	0.172 (4.4)	0.89 (22.6)	1.78 (45.2)	0.46 (11.7)	1.46 (37.0)	1.10 (28.0)	1.89 (48.0)	0.75 (19.0)	(0.89) 22.6								
	1/4 in.	-P1-FR4-04	-P1-FR4-04-3									0.283 (7.2)	1.05 (26.7)	2.09 (53.1)	0.66 (16.8)	1.90 (48.2)	1.38 (35.0)	2.48 (63.0)	1.12 (28.5)	(1.05) 26.7
	1/2 in.	-P1-FR8-07	-P1-FR8-07-3	0.39 (10.0)	1.19 (30.2)	2.38 (60.5)	0.66 (16.8)	1.90 (48.2)	1.38 (35.0)	2.48 (63.0)	1.12 (28.5)									(1.19) 30.2
	3/4 in.	-P1-FR12-10	-P1-FR12-10-3									1.44 (36.6)	2.88 (73.2)	0.98 (25.0)	2.76 (70.0)	2.76 (70.0)	3.94 (100.0)	1.69 (42.9)	1.76 44.6	
	1 in.	-P1-FR16-10	-P1-FR16-10-3	1.79 (45.4)	3.57 (90.8)	(2.09) 53.0														

SS - P1 - S8 - SM 12 - S8 - B 04 C V - 3



Remark:

*Standard thread pitch for metric threads are as follows:
M10 and below: 1 mm,
M12 ~ M24: 1.5 mm,
M27 and above: 2 mm,
Standard thread pitch should be ignored in the ordering number, others should be specified.