

All-Welded Check Valves

CW Series

Features

- Internally threadless and all-welded design
- Forward flow starts at less than 2 psig (0.14 bar) pressure differential
- Valve closes with less than 2 psig (0.14 bar) back pressure
- Standard surface roughness finished to an average of Ra 20 $\mu\text{in.}$ (0.51 μm) or electropolished to Ra 10 $\mu\text{in.}$ (0.25 μm) optional
- Variety of end connections available



Technical Data

Ports Size	1/4" to 1/2" or 6 mm to 12 mm
Flow Coefficient (Cv)	0.55 or 0.70
Cracking Pressure ^①	Less than 2 psig (0.14 bar)
Max. Working Pressure	3000 psig (206 bar)
Max. Pressure Drop	145 psig (10 bar)
Working Temperature	-10~400°F (-23~204°C)

① For valves not actuated for a period of time, initial cracking pressure may be higher than the set cracking pressure.

Flow Data

Air @ 70°F (21°C)

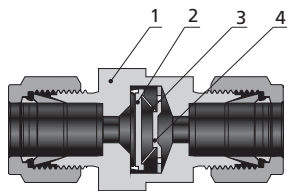
Pressure Drop to Atmosphere psi (bar)	Cv 0.55 (l/min)	Cv 0.70 (l/min)
10 (0.68)	170	220
50 (3.4)	450	590
100 (6.8)	820	1040

Product Technology Grade

Product Grade Technology	General Purpose	Special Cleaning and Packaging (F2)	Ultra High Purity (F3)
Material/Specification	316L SS/ASTM A479		316L SS/ASTM A479 316L VAR/SEMI F20
Wetted Surface Roughness	Ra 20 $\mu\text{in.}$ (0.51 μm)		Ra 10 $\mu\text{in.}$ (0.25 μm)
Polishing Process	Machine finished		Electropolished
Process Specification	FC-01 Standard Cleaning and Packaging	FC-02 Special Cleaning and Packaging	FC-03 Ultra High Purity Process Specification
Cleaning	Thrice degreasing ultrasonic cleaning	Special cleaning with non-ozone-depleting chemicals	Ultra high purity cleaning in continuously monitored ultrasonic cleaning system with deionized water
Assembly Environment	At atmosphere	In specially cleaned areas	In ISO Class 5/Federal Class 100 cleanroom
Packaging	Individually bagged	Double bagged	Double bagged and vacuum sealed in cleanroom

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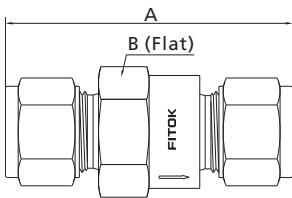
Major Materials of Construction



Component		Material Grade/ASTM Specification
1	Body	316L SS/A479
2	Poppet	Fluorocarbon FKM-bonded 316 SS/A479
3	Bellville Spring	Hastelloy
4	Poppet Stop	316L SS/A240

Note: Check valves are designed for directional flow control only and should never be used as code safety relief devices.

Dimensions



Basic Ordering Number	Connection Type and Size		Cv	Dimensions, in. (mm)	
	Inlet	Outlet		A	B
CW□□-TB4	1/4" TB	1/4" TB	0.55	1.24 (31.5)	7/8 (22.22)
CW□□-TB6	3/8" TB	3/8" TB	0.70		
CW□□-TB8	1/2" TB	1/2" TB	0.55		
CW□□-MTB6	6 mm MTB	6 mm MTB	0.70	1.80 (45.7)	1 (25.4)
CW□□-FR4	1/4" Male FR	1/4" Male FR	0.55	2.06 (52.3)	
CW□□-FR8	1/2" Male FR	1/2" Male FR	0.70	1.96 (49.8)	7/8 (22.22)
CW□□-FL4	1/4" FITOK	1/4" FITOK	0.55		
CW□□-ML6	6 mm FITOK	6 mm FITOK			

Ordering Number Description

CW6L - FL8 - ML10 - B - F2							
Series	Body Material	Inlet Type		Inlet Size		Outlet Type	Outlet Size
CW	6L 316L SS	FL	Fractional Tube Fitting	4	1/4"	Same as Inlet	Specified in the same way as the inlet type and size
	6LV 316L VAR SS	ML	Metric Tube Fitting	6	3/8" or 6 mm		
		FFR	Female FR Fitting	8	1/2" or 8 mm		
		FR	Male FR Fitting	10	10 mm		
		RFR	Rotatable Male FR Fitting	12	12 mm		
		TB	Fractional Tube Butt Weld				
		MTB	Metric Tube Butt Weld				
		Seal Material		Technology Grade			
		Fluorocarbon FKM		General Purpose			
		B Buna N		F2 Special Cleaning and Packaging			
		E EPDM		F3 Ultra High Purity			