Low Pressure Medium Flow Check Valves

CHP Series

Introduction

CHP Series Low Pressure Medium Flow Check Valves are designed with a low cracking pressure, ensuring high sensitivity in controlling the media flow direction. These valves are ideal for high purity and ultra high purity applications.

Features

◎ Metal-to-metal seal between valve body and gasket provides ensured sealing performance
◎ Cone face seal between seal ring and valve body offers excellent reverse sealing performance
◎ Low cracking pressure for high sensitivity

Technical Data

Port Size			1/2" or 1/4"
Flow Coefficient (Cv)			2.5 or 1.2
Orifice Size			10.3 mm
Max. Working Pressure			145 psig (10 bar)
Working Temperature			14 ~ 176 °F (-10 ~ 80 °C)
Nominal Cracking Pressure			1/3 psig (0.02 bar)
Cracking Pressure①			≤0.33 psig (0.023 bar)
Reseal Pressure			≤9.95 psig (0.686 bar)
Leak Rate (Helium)	**External**	**Inboard**	≤1×10^{-9} std·cm^3/s

Note: 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)

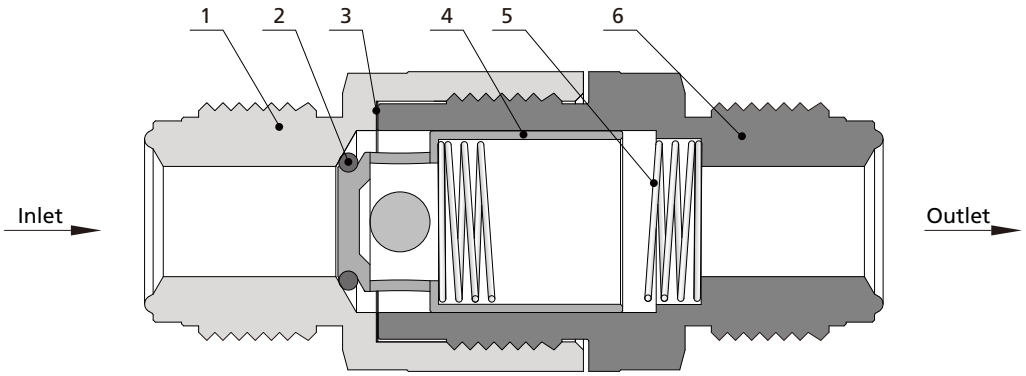
Cv	Orifice in. (mm)	Pressure Drop to Atmosphere psig (bar)	Air (l/min)
2.5	0.41 (10.3)	10 (0.68)	800
		50 (3.4)	2130
		145 (10)	5300
1.2	0.25 (6.4)	10 (0.68)	380
		50 (3.4)	1020
		145 (10)	2510

Process Specification

Item \ Process Specification	Special Cleaning and Packaging Process (FC-02)	Ultra High Purity Process (FC-03)
Mterial	316L SS, 316L SS VAR	
Wetted Surface Roughness	Ra 0.25 µm (10 µin.)	Ra 0.13 µm (5 µin.)
Polishing Process	Machine finished	Electropolished
Assembly Environment	In specially cleaned areas	ISO Class 4 (FS 209E Class 10 equivalent) cleanroom
Packaging	Double bagged	Double bagged, inner bag packing in the cleanroom

Note: Refer to page P-01 for a detailed description of Process Specification.

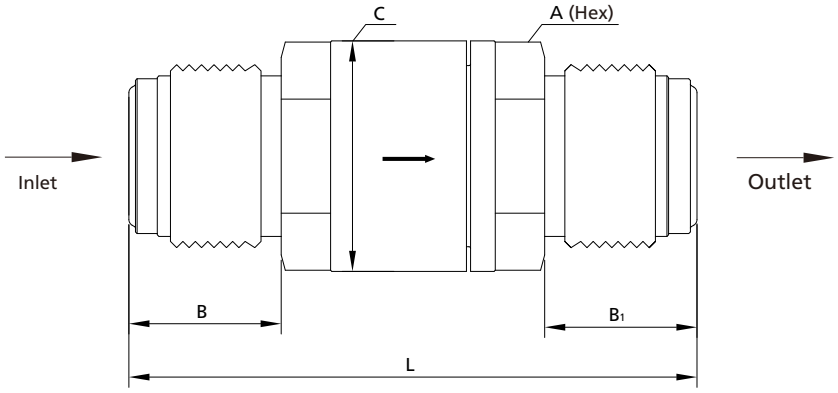
Major Materials of Construction



Item	Component	Material/Specification
1	Inlet Body	316L SS, 316L SS VAR
2	Seal	Fluorocarbon FKM or FFKM
3	Gasket	PTFE-coated 316L SS/A240
4	Sliding Sleeve	316L SS, 316L SS VAR
5	Spring	316 SS/ASTM A313
6	Outlet Body	316L SS, 316L SS VAR

Dimensions and Ordering Information

Dimensions, in inches (millimeters), are for reference only.



Basic Ordering Number	Connection Type and Size		Cv	Dimension, in. (mm)				
	Inlet	Outlet		A	B	B_1	C	L
CHP□□-FR8-	1/2" Integral Male FR Fitting		2.5	0.94 (24)	0.73 (18.5)	0.73 (18.5)	∅1.1 (28)	2.72 (69)
CHP□□-FR4-	1/4" Integral Male FR Fitting		1.2	0.94 (24)	0.62 (15.8)	0.62 (15.8)	∅1.1 (28)	2.72 (69)

Ordering Number Description

CHP6L - FR8 - FFR8 - 1ZF3

Series	Body Material		Inlet Type		Inlet Size		Outlet Type	Outlet Size	Seal Material		Process Specification	
CHP	6L	316L SS	FR	Integral Male FR Fitting	8	1/2"	Same as Inlet			Fluorocarbon FKM	F2	FC-02
	6LV	316L SS VAR	FFR	Rotatable Female FR Fitting	4	1/4"	Specified in the same way as Inlet		Z	FFKM	F3	FC-03
			RFR	Rotatable Male FR Fitting								

Nominal Cracking Pressure	
1	1/3 psig

Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available. For any questions, Please contact FITOK or our authorized distributors.