Check Valves

CV, CH, CO, CA, COA, CL and CW Series

Check Valves

CV, CH, CO, CA, COA, CL and CW Series

Features

CV Series

- Resilient O-ring seat design for leak free sealing
- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -10°F to 375°F (-23°C to 190°C)
- Cracking pressure: 1/3 to 25 psig (0.02 to 1.7 bar)
- Variety of end connections and materials available
- Fixed cracking pressure, mountable in any directions

CH Series

- Seat ring continuously cleaned by media, avoiding secondary pollution
- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -10°F to 400°F (-23°C to 204°C)
- Cracking pressure: 1/3 to 25 psig (0.02 to 1.7 bar)
- Variety of end connections and materials available
- Fixed cracking pressure, mountable in any directions
- ECE R110 type approved valves for use in CNG/NGV application available

CO Series

- Compact design, one-piece body
- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -10°F to 375°F (-23°C to 190°C)
- Cracking pressure: 1/3 to 25 psig (0.02 to 1.7 bar)
- Variety of end connections and materials available
- Fixed cracking pressure, mountable in any directions

CA Series

- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -10°F to 375°F (-23°C to 190°C)
- Cracking pressure: 3 to 600 psig (0.2 to 41.4 bar)
- Variety of end connections and materials available
- Various springs available
- Adjustable cracking pressure, mountable in any directions

COA Series

- Compact design, one-piece body
- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -10°F to 375°F (-23°C to 190°C)
- Cracking pressure: 3 to 600 psig (0.2 to 41.4 bar)
- Variety of end connections and materials available
- Various springs available
- Adjustable cracking pressure, mountable in any directions

CL Series

- Working pressure up to: 6000 psig (414 bar)
- Working temperature: -65°F to 900°F (-53°C to 482°C)
- Rugged, all-stainless steel construction
- Union bonnet design, horizontal installation with bonnet nut on top
- Reverse flow coefficient less than 0.1% of forward flow coefficient

CW Series

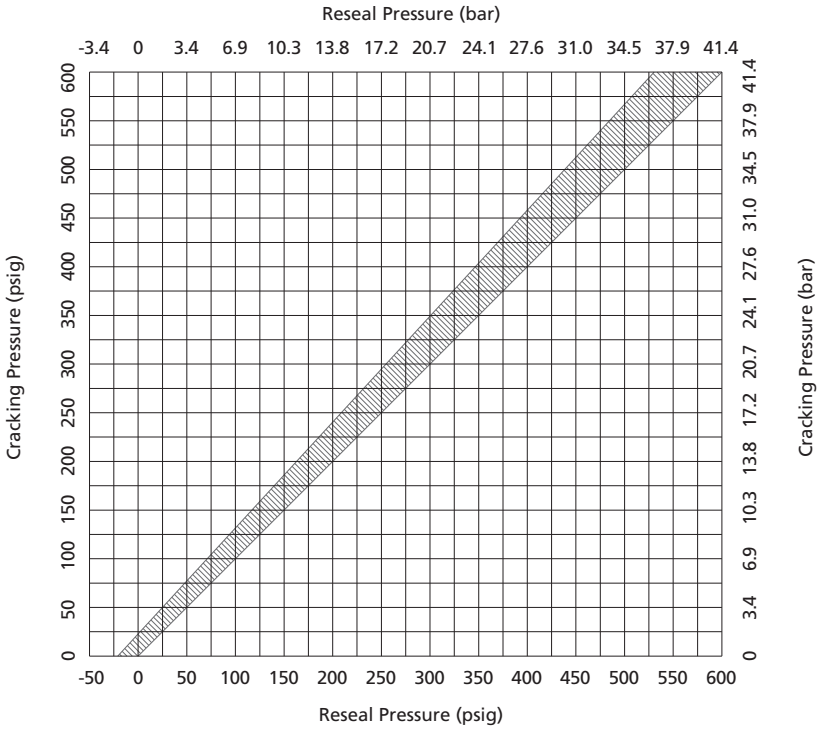
- Working pressure up to: 3000 psig (207 bar)
- Working temperature: -10°F to 400°F (-23°C to 204°C)
- Cracking pressure: less than 2 psig (0.14 bar)
- Variety of end connections and materials available
- All-welded design for safety
- Standard or fine polished wetted surfaces optional

1. Besides CL series, other check valves are all coated with lubricants like silicone base and molybdenum disulfide base.
2. Please contact FITOK Group or our authorized distributors for other materials.
3. PTFE-coated spring is an option for CV, CO, CA, and COA series check valves. For more details, please contact FITOK Group or our authorized distributors.
4. Every valve is tested with nitrogen for leak-tight performance at its maximum working pressure.

Cracking Pressure and Reseal Pressure

Cracking pressure - the upstream pressure at which the first indication of flow occurs.
Reseal pressure - the pressure at which there is no indication of flow.

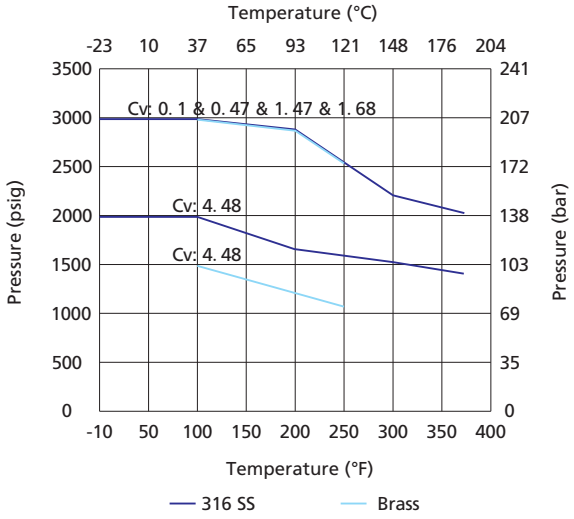
Series	Nominal Cracking Pressure psig (bar)	Cracking Pressure Range psig (bar)	Reseal Pressure Range psig (bar)
CV	1/3 (0.02) 1 (0.06) 3 (0.21) 10 (0.68) 25 (1.7)	0 to 3 (0 to 0.21) 0 to 4 (0 to 0.28) 1 to 5 (0.06 to 0.34) 7 to 15 (0.49 to 1.1) 20 to 30 (1.4 to 2.1)	Up to 6 (0.42) downstream pressure Up to 6 (0.42) downstream pressure Up to 6 (0.42) downstream pressure 3 (0.21) or higher upstream pressure 17 (1.2) or higher upstream pressure
CH	1/3 (0.02) 1 (0.06) 3 (0.21) 10 (0.68) 25 (1.7)	0 to 3 (0 to 0.21) 0 to 4 (0 to 0.28) 1 to 5 (0.06 to 0.34) 7 to 15 (0.49 to 1.1) 20 to 30 (1.4 to 2.1)	Up to 6 (0.42) downstream pressure Up to 5 (0.35) downstream pressure Up to 2 (0.14) downstream pressure 3 (0.21) or higher upstream pressure 17 (1.2) or higher upstream pressure
CO	1/3 (0.02) 1 (0.06) 3 (0.21) 10 (0.68) 25 (1.7)	0 to 3 (0 to 0.21) 0 to 4 (0 to 0.28) 1 to 5 (0.06 to 0.34) 7 to 15 (0.49 to 1.1) 20 to 30 (1.4 to 2.1)	6 to 20 (0.42 to 1.4) downstream pressure 5 to 20 (0.35 to 1.4) downstream pressure 3 to 20 (0.21 to 1.4) downstream pressure 3 to 10 (0.21 to 0.68) downstream pressure 5 (0.35) or higher upstream pressure
CA	3 to 50 (0.21 to 3.4) 50 to 150 (3.4 to 10.3) 150 to 350 (10.3 to 24.1) 350 to 600 (24.1 to 41.3)	———	Refer to the chart below
COA			
CW	1/3 (0.02)	0 to 2 (0 to 0.14)	Up to 2 (0.14) downstream pressure



Pressure vs. Temperature

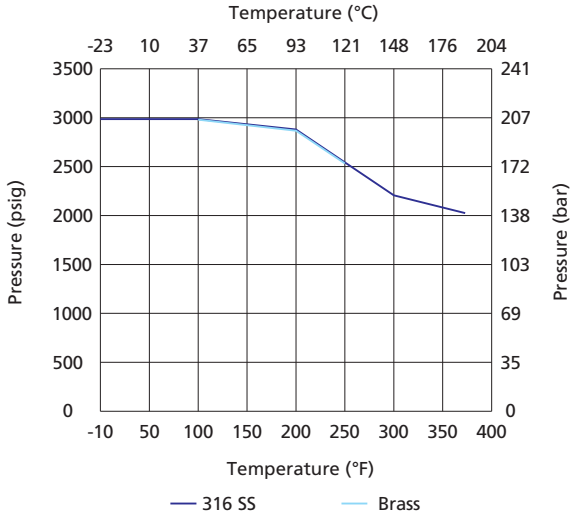
CV Series

FKM O-ring in 316 SS Body and Buna N in Brass Body

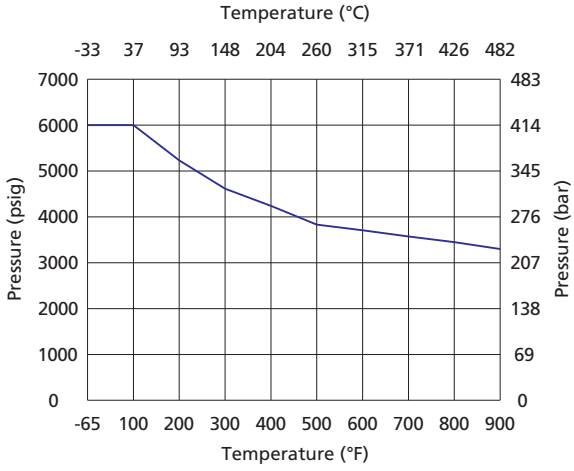


CO, CA and COA Series

FKM O-ring in 316 SS Body and Buna N in Brass Body

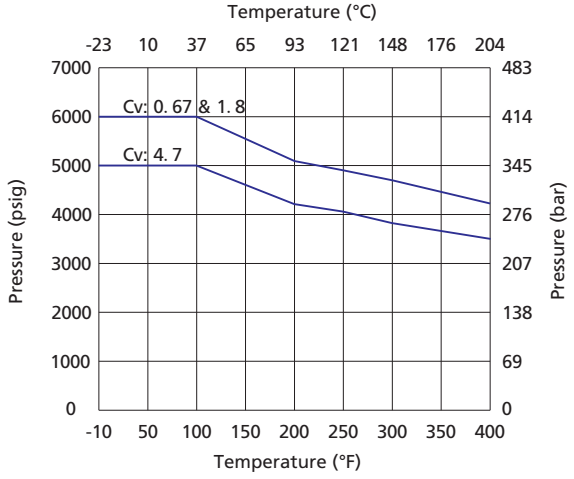


CL Series



CH Series

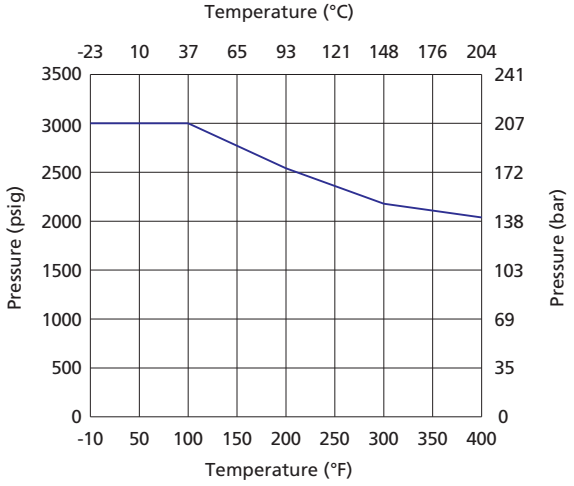
FKM O-ring in 316 SS Body



The pressure rating of CH Series check valve is restricted by the connection types. For details please refer to B-148.

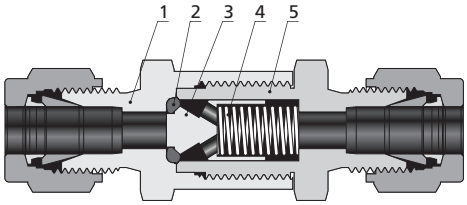
CW Series

FKM O-ring in 316 SS Body



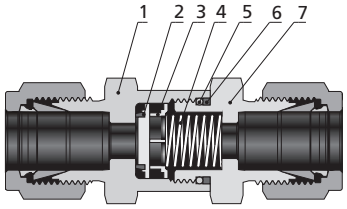
Standard Materials of Construction

CV Series



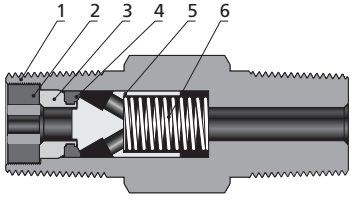
Component		Material Grade/ASTM Specification	
		316 SS	Brass
1	Inlet Body	316 SS/A479	Brass C36000/B16
2	O-ring	Fluorocarbon FKM	Buna N
3	Poppet	316 SS/A479	Brass C36000/B16
4	Spring	302 SS/A313	302 SS/A313
5	Outlet Body	316 SS/A479	Brass C36000/B16

CH Series



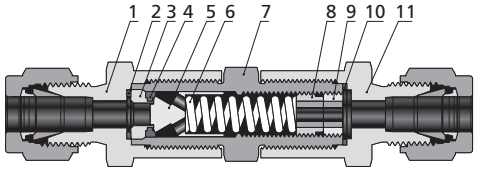
Component		Material Grade/ASTM Specification
1	Inlet Body	316 SS/A479
2	Poppet	Fluorocarbon-FKM-bonded 316 SS/A479
3	Poppet Stop	316 SS/A240
4	Spring	302 SS/A313
5	O-ring	Fluorocarbon FKM
6	Backup Ring	PTFE/D1710
7	Outlet Body	316 SS/A479

CO Series



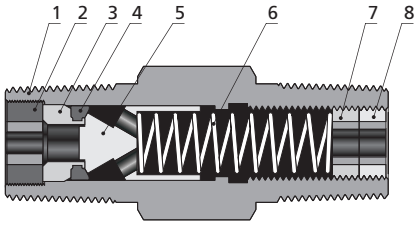
Component		Material Grade/ASTM Specification	
		316 SS	Brass
1	Body	316 SS/A479	Brass C36000/B16
2	Insert Locking Screw	316 SS/A276 or A479	Brass C36000/B16
3	Insert	316 SS/A479	Brass C36000/B16
4	O-ring	Fluorocarbon FKM	Buna N
5	Poppet	316 SS/A479	Brass C36000/B16
6	Spring	302 SS/A313	302 SS/A313

CA Series



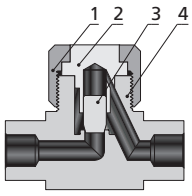
Component		Material Grade/ASTM Specification	
		316 SS	Brass
1	Inlet Body	316 SS/A479	Brass C36000/B16
2	Inlet Gasket	PTFE-coated 316 SS/A240	PTFE-coated 316 SS/A240
3	Insert	316 SS/A479	Brass C36000/B16
4	O-ring	Fluorocarbon FKM	Buna N
5	Poppet	316 SS/A479	Brass C36000/B16
6	Spring	302 SS/A313	302 SS/A313
7	Center Body	316 SS/A479	Brass C36000/B16
8	Adjusting Screw	316 SS/A276	316 SS/A276
9	Locking Screw	316 SS/A276	316 SS/A276
10	Outlet Gasket	PTFE-coated 316 SS/A276	PTFE-coated 316 SS/A276
11	Outlet Body	316 SS/A479	Brass C36000/B16

COA Series



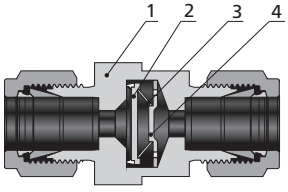
	Component	Material Grade/ASTM Specification	
		316 SS	Brass
1	Body	316 SS/A479	Brass C36000/B16
2	Insert Locking Screw	316 SS/A479	Brass C36000/B16
3	Insert	316 SS/A479	Brass C36000/B16
4	O-ring	Fluorocarbon FKM	Buna N
5	Poppet	316 SS/A479	Brass C36000/B16
6	Spring	302 SS/A313	302 SS/A313
7	Adjusting Screw	316 SS/A276	316 SS/A276
8	Locking Screw	316 SS/A276	316 SS/A276

CL Series



	Component	Material Grade/ASTM Specification
1	Bonnet Nut	316 SS/A479
2	Bonnet	316 SS/A479
3	Poppet	S17400/A564
4	Body	316 SS/A479

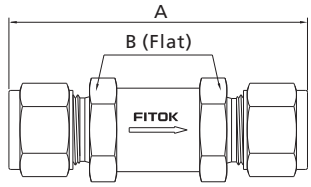
CW Series



	Component	Material Grade/ASTM Specification
1	Body	316L SS/A479
2	Poppet	Fluorocarbon FKM-bonded 316 SS/A479
3	Belleville Spring	Alloy X - 750/B637
4	Poppet Stop	316L SS/A240

Dimensions

CV Series



Basic Ordering Number	Connection Type and Size		Cv	Dimensions, in. (mm)	
	Inlet	Outlet		A	B
CV□□-FL2-	1/8" FITOK	1/8" FITOK	0.10	2.14 (54.3)	5/8 (15.9)
CV□□-FL4-	1/4" FITOK	1/4" FITOK	0.47	2.35 (59.7)	
CV□□-FL6-	3/8" FITOK	3/8" FITOK	1.47	3.17 (80.5)	7/8 (22.2)
CV□□-FL8-	1/2" FITOK	1/2" FITOK	1.68	3.42 (86.9)	
CV□□-FL12-	3/4" FITOK	3/4" FITOK	4.48	4.32 (110.0)	1 1/4 (31.8)
CV□□-FL16-	1" FITOK	1" FITOK		4.74 (120.0)	1 3/8 (34.9)
CV□□-ML6-	6 mm FITOK	6 mm FITOK	0.47	2.36 (59.9)	5/8 (15.9)
CV□□-ML10-	10 mm FITOK	10 mm FITOK	1.68	3.32 (84.3)	7/8 (22.2)
CV□□-ML12-	12 mm FITOK	12 mm FITOK		3.42 (86.9)	
CV□□-FNS2-	1/8 Female NPT	1/8 Female NPT	0.10	1.89 (48.0)	5/8 (15.9)
CV□□-FNS4-	1/4 Female NPT	1/4 Female NPT	0.47	2.15 (54.6)	3/4 (19.1)
CV□□-FNS6-	3/8 Female NPT	3/8 Female NPT	1.47	2.98 (75.7)	7/8 (22.2)
CV□□-FNS8-	1/2 Female NPT	1/2 Female NPT	1.68	3.58 (90.9)	1 1/16 (27.0)
CV□□-FNS12-	3/4 Female NPT	3/4 Female NPT	4.48	4.08 (104.0)	1 1/4 (31.8)
CV□□-FNS16-	1 Female NPT	1 Female NPT		4.84 (123.0)	1 5/8 (41.3)
CV□□-NS2-	1/8 Male NPT	1/8 Male NPT	0.10	1.71 (43.4)	5/8 (15.9)
CV□□-NS4-	1/4 Male NPT	1/4 Male NPT	0.47	2.09 (53.1)	
CV□□-NS6-	3/8 Male NPT	3/8 Male NPT	1.47	2.78 (70.6)	7/8 (22.2)
CV□□-NS8-	1/2 Male NPT	1/2 Male NPT	1.68	3.16 (80.3)	
CV□□-NS12-	3/4 Male NPT	3/4 Male NPT	4.48	4.08 (104.0)	1 1/4 (31.8)
CV□□-NS16-	1 Male NPT	1 Male NPT		4.52 (115.0)	1 5/8 (41.3)
CV□□-FR4-	1/4" Male FR	1/4" Male FR	0.47	2.21 (56.1)	5/8 (15.9)
CV□□-FR8-	1/2" Male FR	1/2" Male FR	1.68	3.56 (90.4)	15/16 (23.8)
CV□□-FR12-	3/4" Male FR	3/4" Male FR	4.48	4.64 (118.0)	1 5/8 (41.3)
CV□□-FR16-	1" Male FR	1" Male FR		4.76 (121.0)	

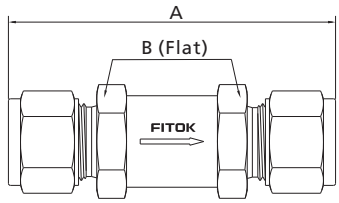
Ordering Number Description

CVSS – FL8 – ML10 – B – 2SF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seal Material	Cracking Pressure	Special Application	Cleaning and Packaging
CV	SS 316 SS 6L 316L SS B Brass M Alloy 400	FNS Female NPT NS Male NPT FRT Female BSPT RT Male BSPT FMS Female Metric Thread (for RG-M) MS Male Metric Thread (for RG-M) FRP Female BSPP (for RP) BP Male BSPP (for RG) FL Fractional Tube Fitting ML Metric Tube Fitting FO Male FO Fitting FR Male FR Fitting UMB Rotatable Metric Tube Butt Weld UFB Rotatable Fractional Tube Butt Weld	2 1/8" 4 1/4" 6 3/8" or 6 mm 8 1/2" or 8 mm 10 10 mm 12 3/4" or 12 mm 16 1"	Same as Inlet Specified in the same way as the inlet type and size	Same as Inlet Specified in the same way as the inlet type and size	Fluorocarbon FKM B Buna N E EPDM N Neoprene Z Kalrez	3 psig 1 1/3 psig 2 1 psig 3 10 psig 4 25 psig	NO S NACE MR0175	FC-01 F2 FC-02

1. 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 omitted in the ordering number, others should be specified.
2. For oxygen-enriched environment or hazardous media service, please contact FITOK Group or our authorized distributors.
3. 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.
4. The materials, connection types and sizes listed in the "Ordering Number Description" are standard. For other materials and end connections, please contact FITOK Group or our authorized distributors.
5. PTFE-coated gasket can be chosen to reduce the possibility of O-ring's moving in system caused by the pressure fluctuations, vibration or pulsating. For more details, please contact FITOK Group or our authorized distributors.
6. Check valve is designed with unidirectional flow path, it can't be used as safety relief valve.
7. If the check valve is not opened for a period of time, its initial cracking pressure may be higher than set cracking pressure.

CH Series



Basic Ordering Number	Connection Type and Size		Pressure Rating at 100° F (37° C) bar (psig)	Cv	Dimensions, in. (mm)	
	Inlet	Outlet			A	B
CH□□-FL2-	1/8" FITOK	1/8" FITOK	414 (6000)	0.67	2.27 (57.7)	11/16 (17.5)
CH□□-FL4-	1/4" FITOK	1/4" FITOK			2.43 (61.7)	
CH□□-FL6-	3/8" FITOK	3/8" FITOK		1.8	2.75 (69.9)	1 (25.4)
CH□□-FL8-	1/2" FITOK	1/2" FITOK			2.96 (75.2)	
CH□□-FL12-	3/4" FITOK	3/4" FITOK	344 (5000)	4.7	3.52 (89.4)	1 5/8 (41.3)
CH□□-FL16-	1" FITOK	1" FITOK	323 (4700)		3.88 (98.6)	
CH□□-ML6-	6 mm FITOK	6 mm FITOK	414 (6000)	0.67	2.43 (61.7)	11/16 (17.5)
CH□□-ML8-	8 mm FITOK	8 mm FITOK		1.8	2.70 (68.6)	
CH□□-ML10-	10 mm FITOK	10 mm FITOK			2.80 (71.1)	1 (25.4)
CH□□-ML12-	12 mm FITOK	12 mm FITOK			2.96 (75.2)	
CH□□-ML22-	22 mm FITOK	22 mm FITOK	337 (4900)	4.7	3.48 (88.4)	1 5/8 (41.3)
CH□□-ML25-	25 mm FITOK	25 mm FITOK	316 (4600)		3.88 (98.6)	
CH□□-FNS4-	1/4 Female NPT	1/4 Female NPT	414 (6000)	0.67	2.13 (54.1)	11/16 (17.5)
CH□□-FNS6-	3/8 Female NPT	3/8 Female NPT	365 (5300)	1.8	2.55 (64.8)	1(25.4)
CH□□-FNS8-	1/2 Female NPT	1/2 Female NPT	337 (4900)		3.03 (77.0)	1 1/16 (27.0)
CH□□-FNS12-	3/4 Female NPT	3/4 Female NPT	316 (4600)	4.7	3.23 (82.0)	1 5/8 (41.3)
CH□□-FNS16-	1 Female NPT	1 Female NPT	303 (4400)		3.83 (97.3)	
CH□□-NS2-	1/8 Male NPT	1/8 Male NPT	414 (6000)	0.67	1.79 (45.4)	11/16 (17.5)
CH□□-NS4-	1/4 Male NPT	1/4 Male NPT			2.17 (55.1)	
CH□□-NS6-	3/8 Male NPT	3/8 Male NPT		1.8	2.36 (59.9)	1 (25.4)
CH□□-NS8-	1/2 Male NPT	1/2 Male NPT			2.73 (69.3)	
CH□□-NS12-	3/4 Male NPT	3/4 Male NPT	344 (5000)	4.7	3.29 (83.6)	1 5/8 (41.3)
CH□□-NS16-	1 Male NPT	1 Male NPT			3.67 (93.2)	
CH□□-FRT4-	1/4 Female BSPT	1/4 Female BSPT	414 (6000)	0.67	2.28 (57.9)	11/16 (17.5)
CH□□-FRT8-	1/2 Female BSPT	1/2 Female BSPT	351 (5100)	1.8	3.29 (83.6)	1 1/16 (27.0)
CH□□-FRT12-	3/4 Female BSPT	3/4 Female BSPT	330 (4800)	4.7	3.55 (90.2)	1 5/8 (41.3)
CH□□-FRT16-	1 Female BSPT	1 Female BSPT	303 (4400)		3.83 (97.3)	
CH□□-RT4-	1/4 Male BSPT	1/4 Male BSPT	414 (6000)	0.67	2.17 (55.1)	11/16 (17.5)
CH□□-RT8-	1/2 Male BSPT	1/2 Male BSPT		1.8	2.73 (69.3)	1 (25.4)
CH□□-RT12-	3/4 Male BSPT	3/4 Male BSPT	344 (5000)	4.7	3.35 (85.1)	1 5/8 (41.3)
CH□□-RT16-	1 Male BSPT	1 Male BSPT			3.67 (93.2)	
CH□□-FR4-	1/4" Male FR	1/4" Male FR	414 (6000)	0.67	2.28 (57.9)	11/16 (17.5)
CH□□-FR8-	1/2" Male FR	1/2" Male FR	296 (4300)	1.8	2.73 (69.3)	1 (25.4)
CH□□-FR12-	3/4" Male FR	3/4" Male FR	254 (3700)	4.7	3.78 (96.0)	1 5/8 (41.3)
CH□□-FO4-	1/4" Male FO	1/4" Male FO	414 (6000)	0.67	1.98 (50.3)	11/16 (17.5)
CH□□-FO8-	1/2" Male FO	1/2" Male FO		1.8	2.35 (59.7)	1 (25.4)
CH□□-FO12-	3/4" Male FO	3/4" Male FO	344 (5000)	4.7	2.90 (73.7)	1 5/8 (41.3)
CH□□-FO16-	1" Male FO	1" Male FO				

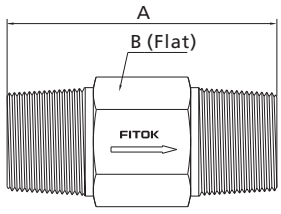
Ordering Number Description

CHSS – FL8 – ML10 – B – 2SF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seal Material	Cracking Pressure	Special Application	Cleaning and Packaging
CH	SS 316 SS 6L 316L SS M Alloy 400	FNS Female NPT NS Male NPT FRT Female BSPT RT Male BSPT FMS Female Metric Thread (for RG-M) MS Male Metric Thread (for RG-M) FRP Female BSPP (for RP) BP Male BSPP (for RG) FL Fractional Tube Fitting ML Metric Tube Fitting FO Male FO Fitting FR Male FR Fitting UMB Rotatable Metric Tube Butt Weld UFB Rotatable Fractional Tube Butt Weld	2 1/8" 4 1/4" 6 3/8" or 6 mm 8 1/2" or 8 mm 10 10 mm 12 3/4" or 12 mm 16 1" 22 22 mm or M22 x 1.5 25 25 mm	Same as Inlet Specified in the same way as the inlet type and size		Fluorocarbon FKM B Buna N E EPDM N Neoprene	3 psig 1 1/3 psig 2 1 psig 3 10 psig 4 25 psig	NO S NACE MR0175 R110 ECE R110	FC-01 F2 FC-02

1. 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 omitted in the ordering number, others should be specified.
2. For oxygen-enriched environment or hazardous media service, please contact FITOK Group or our authorized distributors.
3. 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.
4. The materials, connection types and sizes listed in the "Ordering Number Description" are standard. For other materials and end connections, please contact FITOK Group or our authorized distributors.
5. Check valve is designed with unidirectional flow path, it can't be used as safety relief valve.
6. If the check valve is not opened for a period of time, its initial cracking pressure may be higher than set cracking pressure.

CO Series



Basic Ordering Number	Connection Type and Size		Cv	Dimensions, in. (mm)	
	Inlet	Outlet		A	B
CO□□-FNS4-	1/4 Female NPT	1/4 Female NPT	0.35	2.41 (61.2)	3/4 (19.1)
CO□□-FNS8-	1/2 Female NPT	1/2 Female NPT	1.20	3.71 (94.2)	1 1/16 (27.0)
CO□□-NS4-	1/4 Male NPT	1/4 Male NPT	0.35	1.62 (41.1)	9/16 (14.3)
CO□□-NS8-	1/2 Male NPT	1/2 Male NPT	1.20	2.28 (57.9)	7/8 (22.2)
CO□□-FRT4-	1/4 Female BSPT	1/4 Female BSPT	0.35	2.54 (64.5)	3/4 (19.1)
CO□□-RT4-	1/4 Male BSPT	1/4 Male BSPT		1.62 (41.1)	9/16 (14.3)

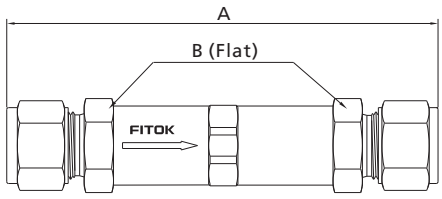
Ordering Number Description

COSS – FNS8 – NS8 – B – 2SF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seal Material	Cracking Pressure	Special Application	Cleaning and Packaging
CO	SS 316 SS 6L 316L SS B Brass M Alloy 400	FNS Female NPT NS Male NPT FRT Female BSPT RT Male BSPT	2 1/8" 4 1/4" 6 3/8" 8 1/2"	Same as Inlet Specified in the same way as the inlet type and size		Fluorocarbon FKM B Buna N N Neoprene E EPDM Z Kalrez	3 psig 1 1/3 psig 2 1 psig 3 10 psig 4 25 psig	NO S NACE MR0175	FC-01 F2 FC-02

1. For oxygen-enriched environment or hazardous media service, please contact FITOK Group or our authorized distributors.
2. 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.
3. The materials, connection types and sizes listed in the "Ordering Number Description" are standard. For other materials and end connections, please contact FITOK Group or our authorized distributors.
4. Check valve is designed with unidirectional flow path, it can't be used as safety relief valve.
5. If the check valve is not opened for a period of time, its initial cracking pressure may be higher than set cracking pressure.

CA Series



Basic Ordering Number	Connection Type and Size		Cv	Dimensions, in. (mm)	
	Inlet	Outlet		A	B
CA□□-FL4-	1/4" FITOK	1/4" FITOK	0.37	3.23 (82.0)	5/8 (15.9)
CA□□-ML6-	6 mm FITOK	6 mm FITOK			
CA□□-ML8-	8 mm FITOK	8 mm FITOK		3.32 (84.3)	
CA□□-FR4-	1/4" Male FR	1/4" Male FR		3.09 (78.5)	

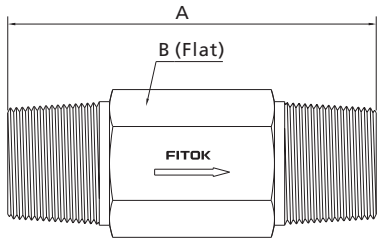
Ordering Number Description

CASS – FL8 – ML10 – B – 2SF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seal Material	Cracking Pressure	Special Application	Cleaning and Packaging
CA	SS 316 SS 6L 316L SS B Brass M Alloy 400	FL Fractional Tube Fitting ML Metric Tube Fitting FR Male FR Fitting	4 1/4" 6 6 mm 8 8 mm	Same as Inlet Specified in the same way as the inlet type and size		Fluorocarbon FKM B Buna N E EPDM N Neoprene Z Kalrez	3 to 50 psig 5 50 to 150 psig 6 150 to 350 psig 7 350 to 600 psig	NO S NACE MR0175	FC-01 F2 FC-02

1. For oxygen-enriched environment or hazardous media service, please contact FITOK Group or our authorized distributors.
2. 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.
3. The materials, connection types and sizes listed in the "Ordering Number Description" are standard. For other materials and end connections, please contact FITOK Group or our authorized distributors.
4. Check valve is designed with unidirectional flow path, it can't be used as safety relief valve.
5. If the check valve is not opened for a period of time, its initial cracking pressure may be higher than set cracking pressure.

COA Series



Basic Ordering Number	Connection Type and Size		Cv	Dimensions, in. (mm)	
	Inlet	Outlet		A	B
COA □□-FNS4-	1/4 Female NPT	1/4 Female NPT	0.35	2.98 (75.7)	3/4 (19.1)
COA □□-NS4-	1/4 Male NPT	1/4 Male NPT	0.35	1.62 (41.1)	9/16 (14.3)
COA □□-NS8-	1/2 Male NPT	1/2 Male NPT	1.20	2.56 (65.0)	7/8 (22.2)
COA □□-RT4-	1/4 Male BSPT	1/4 Male BSPT	0.35	1.62 (41.1)	9/16 (14.3)
COA □□-RT8-	1/2 Male BSPT	1/2 Male BSPT	1.20	2.56 (65.0)	7/8 (22.2)

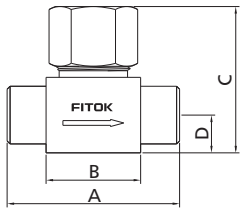
Ordering Number Description

COASS – FL8 – ML8 – B – 2SF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Seal Material	Cracking Pressure	Special Application	Cleaning and Packaging
COA	SS 316 SS 6L 316L SS B Brass M Alloy 400	FNS Female NPT NS Male NPT RT Male BSPT	4 1/4" 8 1/2"	Same as Inlet Specified in the same way as the inlet type and size		Fluorocarbon FKM B Buna N N Neoprene E EPDM Z Kalrez	3 to 50 psig 5 50 to 150 psig 6 150 to 350 psig 7 350 to 600 psig	NO S NACE MR0175	FC-01 F2 FC-02

1. For oxygen-enriched environment or hazardous media service, please contact FITOK Group or our authorized distributors.
2. 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.
3. The materials, connection types and sizes listed in the "Ordering Number Description" are standard. For other materials and end connections, please contact FITOK Group or our authorized distributors.
4. Check valve is designed with unidirectional flow path, it can't be used as safety relief valve.
5. If the check valve is not opened for a period of time, its initial cracking pressure may be higher than set cracking pressure.

CL Series



Basic Ordering Number	Connection Type and Size		Cv	Dimensions, in. (mm)			
	Inlet	Outlet		A	B	C	D
CL□□-FL4	1/4" FITOK	1/4" FITOK	0.30	2.40 (61.0)	1.01 (25.7)	1.47 (37.3)	0.39 (9.9)
CL□□-FL6	3/8" FITOK	3/8" FITOK	0.64	2.83 (71.9)	1.31 (33.3)	1.85 (47.0)	0.50 (12.7)
CL□□-FL8	1/2" FITOK	1/2" FITOK	2.20	3.92 (99.6)	2.19 (55.6)	2.44 (62.0)	0.62 (15.7)
CL□□-FL12	3/4" FITOK	3/4" FITOK					
CL□□-ML6	6 mm FITOK	6 mm FITOK	0.30	2.40 (61.0)	1.01 (25.7)	1.47 (37.3)	0.39 (9.9)
CL□□-FNS2	1/8 Female NPT	1/8 Female NPT		2.00 (50.8)	1.00 (25.4)	1.47 (37.3)	0.39 (9.9)
CL□□-FNS4	1/4 Female NPT	1/4 Female NPT	0.64	2.25 (57.2)	1.25 (31.8)	1.85 (47.0)	0.50 (12.7)
CL□□-FNS6	3/8 Female NPT	3/8 Female NPT	2.20	3.12 (79.2)	1.86 (47.2)	2.44 (62.0)	0.62 (15.7)
CL□□-FNS8	1/2 Female NPT	1/2 Female NPT					
CL□□-TS4	1/4" TS	1/4" TS	0.30	1.81 (46.0)	0.90 (22.9)	1.47 (37.3)	0.39 (9.9)
CL□□-TS6	3/8" TS	3/8" TS	0.64	2.25 (57.2)	1.25 (31.8)	1.85 (47.0)	0.50 (12.7)
CL□□-TS8	1/2" TS	1/2" TS	2.20	3.13 (79.5)	1.88 (47.8)	2.44 (47.0)	0.62 (15.7)
CL□□-PB4	1/4 PB	1/4 PB	0.30	1.81 (46.0)	0.90 (22.9)	1.47 (37.3)	0.39 (9.9)
CL□□-PB6	3/8 PB	3/8 PB	0.64	2.25 (57.2)	1.25 (31.8)	1.85 (47.0)	0.50 (12.7)
CL□□-PB8	1/2 PB	1/2 PB	2.20	3.13 (79.5)	1.88 (47.8)	2.44 (62.0)	0.62 (15.7)

Ordering Number Description

CLSS – FL8 – ML10 – SF2

Series	Body Material	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Special Application	Cleaning and Packaging

Series	
CL	

Body Material	
SS	316 SS

Inlet Type	
FNS	Female NPT
NS	Male NPT
FRT	Female BSPT
RT	Male BSPT
FMS	Female Metric Thread (for RG-M)
MS	Male Metric Thread (for RG-M)
FRP	Female BSPP (for RP)
BP	Male BSPP (for RG)
TS	Fractional Tube Socket Weld
MTS	Metric Tube Socket Weld
TB	Fractional Tube Butt Weld
MTB	Metric Tube Butt Weld
PS	Pipe Socket Weld
PB	Pipe Butt Weld
FL	Fractional Tube Fitting
ML	Metric Tube Fitting
UFB	Rotatable Fractional Tube Butt Weld
UMB	Rotatable Metric Tube Butt Weld
FO	Male FO Fitting
FR	Male FR Fitting

Inlet Size	
2	1/8"
4	1/4"
6	3/8" or 6 mm
8	1/2"
12	3/4"

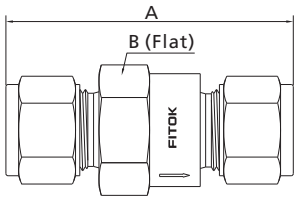
Outlet Type / Outlet Size	
	Same as Inlet
Specified in the same way as the inlet type and size	

Special Application	
	NO
S	NACE MR0175

Cleaning and Packaging	
	FC-01
F2	FC-02

1. 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 omitted in the ordering number, others should be specified.
2. For oxygen-enriched environment or hazardous media service, please contact FITOK Group or our authorized distributors.
3. 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.
4. The materials, connection types and sizes listed in the "Ordering Number Description" are standard. For other materials and end connections, please contact FITOK Group or our authorized distributors.

CW Series



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			
CW□□-MTB6	6 mm MTB	6 mm MTB	0.55		
CW□□-FR4	1/4" Male FR	1/4" Male FR	0.70	1.80 (45.7)	
CW□□-FR8	1/2" Male FR	1/2" Male FR		2.06 (52.3)	1 (25.4)
CW□□-FL4	1/4" FITOK	1/4" FITOK	0.55	1.96 (49.8)	7/8 (22.22)
CW□□-ML6	6 mm FITOK	6 mm FITOK			

Ordering Number Description

CW6L – FL8 – ML10 – B – SF2

Series	Body Material
CW	6L 316L SS

Inlet Type	
FL	Fractional Tube Fitting
ML	Metric Tube Fitting
FFR	Female FR Fitting
FR	Male FR Fitting
RFR	Rotatable Male FR Fitting
TB	Fractional Tube Butt Weld
MTB	Metric Tube Butt Weld

Inlet Size	
2	1/8"
4	1/4"
6	3/8" or 6 mm
8	1/2" or 8 mm

Outlet Type / Outlet Size	
	Same as Inlet
Specified in the same way as the inlet type and size	

Seal Material	
	Fluorocarbon FKM
B	Buna N
E	EPDM

Special Application	
	NO
S	NACE MR0175

Cleaning and Packaging	
	FC-01
F2	FC-02
F3	FC-03

1. For oxygen-enriched environment or hazardous media service, please contact FITOK Group or our authorized distributors.
2. Cleaning and Packaging:
   FC-01: Standard cleaning and packaging for general industrial procedures.
   FC-02: Special Cleaning and packaging is applied to wetted system assembly with its surface roughness finished to an average of Ra 0.5 μm after machine polishing to meet the requirement of ASTM G93 Level C.
   FC-03: Ultrahigh-purity Cleaning and Packaging is applied to wetted system assembly with its surface roughness finished to an average of Ra 0.2 μm after machine polishing and electropolishing.
3. The materials, connection types and sizes listed in the "Ordering Number Description" are standard. For other materials and end connections, please contact FITOK Group or our authorized distributors.
4. Check valve is designed with unidirectional flow path, it can't be used as safety relief valve.
5. If the check valve is not opened for a period of time, its initial cracking pressure may be higher than set cracking pressure.

info@fitokgroup.com
www.fitokgroup.com

FK-IC-GV-02-EN-210818