CIR-LOK
FLUID SYSTEM SOLUTIONS

Filters

F1 Series

- Filter element can be replaced without removing body from system
- Maximum working pressure: 6000 psig (413 bar)
- Working temperature: -20°F to 900°F (-28°C to 482°C)
- 316 stainless steel body material
- Variety of end connections

Features

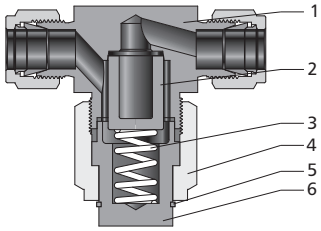
- ❖ Filter element replaceable without removing body filter from installation
- ❖ Optional bypass enables a continuous self cleaning flow around the element
- ❖ Nominal pore sizes for sintered element: 0.5, 2, 7, 15, 40, 60 and 90 µm
- ❖ Nominal pore sizes for strainer element: 100, 150, 250 and 450 µm
- ❖ Maximum working pressure up to 6000 psig (413 bar)
- ❖ Working temperature from -20°F to 900°F (-28°C to 482°C)
- ❖ Stainless steel and brass construction
- ❖ Variety of end connections

Pressure vs. Temperature

Material	316 S.S.	Brass
Temperature, °F(°C)	Working Pressure, psig (bar)	
-20 (-28) to 100 (37)	6000 (413)	2000 (137)
200 (93)	5160 (355)	1730 (119)
300 (148)	4660 (321)	1470 (101)
400 (204)	4280 (294)	—
500 (260)	3980 (274)	—
600 (315)	3760 (259)	—
650 (343)	3700 (254)	—
700 (371)	2600 (248)	—
750 (398)	3520 (242)	—
800 (426)	3460 (238)	—
850 (454)	3380 (232)	—
900 (482)	3280 (225)	—

Standard Materials of Construction

Component		Material Grade/ASTM Specification	
		316 S.S.	Brass
1	Body	316 S.S./A479	Brass C36000/B16
2	Element	Sintered 316 S.S. or strainer 316 S.S.	
3	Spring	304 S.S./A313	
4	Bonnet Nut	316 S.S./A479	C36000/B16
5	Retaining Ring	316 S.S./A276	
6	Bonnet	316 S.S./A479	C36000/B16



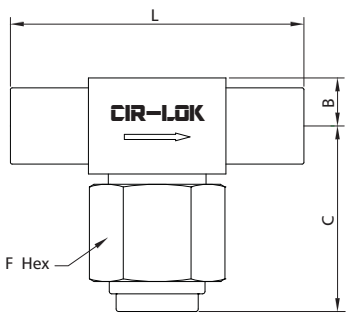
Maximum Differential Pressure of Clean Filter at 70°F (20°C)

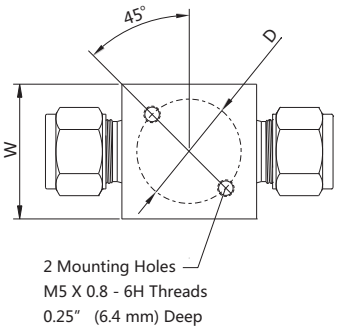
Maximum Differential Pressure psig (bar)										
0.5 micron	2 micron	7 micron	15 micron	40 micron	60 micron	90 micron	100 micron	150 micron	250 micron	450 micron
2250 (155.2)	2250 (155.2)	1950 (134.5)	1750 (120.3)	1150 (79.3)	1150 (79.3)	1000 (68.9)	1000 (68.9)	1000 (68.9)	1000 (68.9)	1000 (68.9)

Elements

Nominal Pore Size µm	Pore Size Range µm	Element Type
0.5	0.5 to 2	Sintered
2	1 to 4	
7	5 to 10	
15	11 to 25	
40	35 to 53	
60	50 to 75	
90	75 to 100	
100	—	Strainer
150	—	
250	—	
450	—	

Dimensions





Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Filter Series	Dimension, in. (mm)					
				L	B	C	∅D	W	F
F1-F2-	1/8" CIR-LOK	0.094 (2.39)	4	2.27 (57.7)	0.38 (9.7)	1.49 (37.8)	1.00 (25.4)	1.00 (25.4)	1 (25.4)
F1-F4-	1/4" CIR-LOK	0.174 (4.41)	4	2.47 (62.7)					
F1-F6-	3/8" CIR-LOK	0.213 (5.41)	8	2.84 (72.1)	0.46 (11.7)	1.74 (44.2)	1.13 (28.7)	1.13 (28.7)	1 1/8 (28.6)
F1-F8-	1/2" CIR-LOK	0.250 (6.35)	8	3.04 (77.2)	0.53 (13.5)	1.81 (46.0)			
F1-M6-	6 mm CIR-LOK	0.174 (4.41)	4	2.46 (62.5)	0.38 (9.7)	1.49 (37.8)	1.00 (25.4)	1.00 (25.4)	1 (25.4)
F1-M8-	8 mm CIR-LOK	0.213 (5.41)	8	2.84 (72.1)	0.46 (11.7)	1.74 (44.2)	1.13 (28.7)	1.13 (28.7)	1 1/8 (28.6)
F1-M10-	10 mm CIR-LOK	0.250 (6.35)	8	2.86 (72.6)					
F1-M12-	12 mm CIR-LOK	0.250 (6.35)	8	3.04 (77.2)	0.53 (13.5)	1.81 (46.0)			
F1-FSW4-	1/4" FSW	0.174 (4.41)	4	1.68 (42.7)	0.38 (9.7)	1.49 (37.8)	1.00 (25.4)	1.00 (25.4)	1 (25.4)
F1-FSW6-	3/8" FSW	0.174 (4.41)	4						
F1-FBW4-	1/4" FBW	0.174 (4.41)	4						
F1-FBW6-	3/8" FBW	0.174 (4.41)	4						
F1-FNPT2-	1/8 Female NPT	0.094 (2.39)	4	2.00 (50.8)					
F1-FNPT4-	1/4 Female NPT	0.174 (4.41)	4	2.13 (54.1)					
F1-NPT4-	1/4 Male NPT	0.174 (4.41)	4		0.46 (11.7)	1.74 (44.2)			
F1-NPT6-	3/8 Male NPT	0.213 (5.41)	8	2.38 (60.5)	0.53 (13.5)	1.81 (46.0)	1.13 (28.7)	1.13 (28.7)	1 1/8 (28.6)
F1-NPT8-	1/2 Male NPT	0.250 (6.35)	8	2.75 (69.9)	0.63 (16.0)	1.91 (48.5)			
F1-GFS4-	1/4 Male GFS	0.174 (4.41)	4	2.30 (58.4)	0.38 (9.7)	1.49 (37.8)	1.00 (25.4)	1.00 (25.4)	1 (25.4)
F1-GFS8-	1/2 Male GFS	0.250 (6.35)	8	2.55 (64.8)	0.46 (11.7)	1.74 (44.2)	1.13 (28.7)	1.13 (28.7)	1 1/8 (28.6)

How to Order

F1 — F6 — M10 — S90 — B4 — 316

Filter Series	Inlet Type		Inlet Size		Outlet Type / Outlet Size	Element Type		Element Nominal Pore Size		Bypass		Body Material	
F1	FNPT	Female NPT	2	1/8 in.	Same as inlet type and inlet size If outlet and inlet are the same, eliminate the outlet designator	S	Sintered	05	0.5µm		None	316	316 S.S.
	NPT	Male NPT	4	1/4 in.		T	Strainer	2	2µm	B4	FNPT4	316L	316L S.S
	FBT	Female BSPT	6	3/8 in. or 6 mm				7	7µm	B8	FNPT8	304	304 S.S.
	MBT	Male BSPT	8	1/2 in. or 8 mm				15	15µm			304L	304L S.S.
	FMS	Female ISO 261	10	10 mm				40	40µm			BR	Brass
	MS	Male ISO 261	12	3/4 in. or 12 mm				60	60µm				
	FBP	Female BSPP	14	14 mm M14 x 1.5				90	90µm				
	MBP	Male BSPP	16	1 in. or 16 mm				100	100µm				
	F	Fractional Tube Fitting	18	18 mm				150	150µm				
	M	Metric Tube Fitting	20	1 1/4 in. or 20 mm				250	250µm				
	FSW	Fractional Tube Socket Weld	22	22 mm or M22 x1.5				450	450µm				
	FBW	Fractional Tube Butt Weld											
	GFS	Male GFS Fitting	25	25 mm									