Hikelok®
Solution Provider For Fluid Systems

Filters

F1-F4 Series

Hikelok®
Solution Provider For Fluid Systems

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

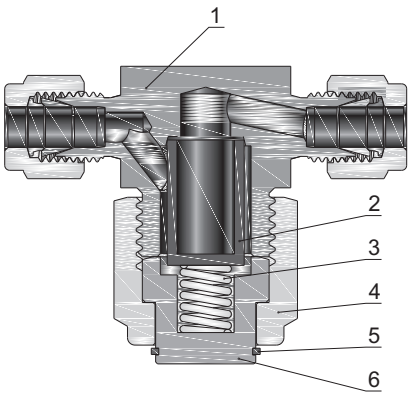
- ❖ Filter element replaceable without removing body filter from installation
- ❖ Optional bypass enables a continuous self cleaning flow around the element
- ❖ Nominal pore sizes for sintered element: 0.5, 2, 7, 15, 40, 60 and 90 µm
- ❖ Nominal pore sizes for strainer element: 100, 150, 250 and 450 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



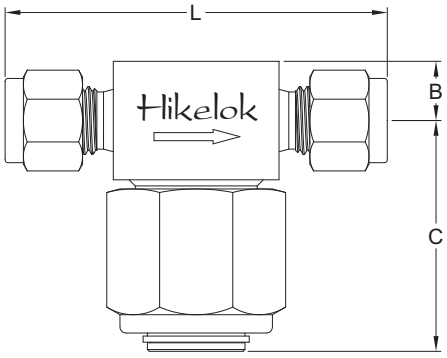
Maximum Differential Pressure of Clean Filter at 70°F (20°C)

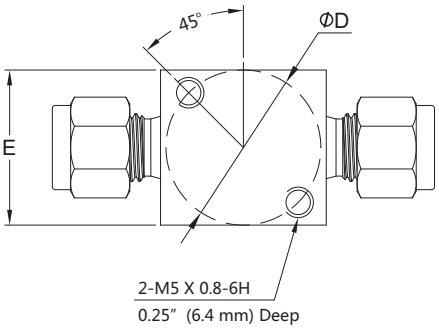
Maximum Differential Pressure psig (bar)										
0.5 micron	2 micron	7 micron	15 micron	40 micron	60 micron	90 micron	100 micron	150 micron	250 micron	450 micron
2250 (155.2)	2250 (155.2)	1950 (134.5)	1750 (120.3)	1150 (79.3)	1150 (79.3)	1000 (68.9)	1000 (68.9)	1000 (68.9)	1000 (68.9)	1000 (68.9)

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	ØD	W	F
F1-F2-	1/8" Hikelok	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" Hikelok	0.174 (4.41)	4	2.47 (62.7)					
F1-F6-	3/8" Hikelok	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" Hikelok	0.250 (6.35)	8	3.04 (77.2)	0.53 (13.5)	1.81 (46.0)			
F1-M6-	6 mm Hikelok	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 Hikelok	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 Hikelok	0.250 (6.35)	8	2.86 (72.6)					
F1-M12-	12 mm Hikelok	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 Port for F1	Body Material
F1	**FNPT** Female NPT **NPT** Male NPT **FBT** Female BSPT **MBT** Male BSPT **FMS** Female ISO 261 **MS** Male ISO 261 **FBP** Female BSPP **MBP** Male BSPP **F** Fractional Tube Fitting **M** Metric Tube Fitting **FSW** Fractional Tube Socket Weld **FBW** Fractional Tube Butt Weld **GFS** Male GFS Fitting	**2** 1/8 in. **4** 1/4 in. **6** 3/8 in. or 6 mm **8** 1/2 in. or 8 mm **10** 10 mm **12** 3/4 in. or 12 mm **14** 14 mm or M14 x 1.5 **16** 1 in. or 16 mm **18** 18 mm **20** 1 1/4 in. or 20 mm **22** 22 mm or M22 x1.5 **25** 25 mm	Same as inlet type and inlet size If outlet and inlet are the same, eliminate the outlet designator	**S** Sintered **T** Strainer	Sintered **05** 0.5µm **2** 2µm **7** 7µm **15** 15µm **40** 40µm **60** 60µm **90** 90µm Strainer **100** 100µm **150** 150µm **250** 250µm **450** 450µm	None **B2** FNPT2 **B4** FNPT4 **B8** FNPT8 **F2** F2 **F4** F4 **F6** F6 **F8** F8	**316** 316 S.S. **316L** 316L S.S **304** 304 S.S. **304L** 304L S.S. **BR** Brass

Hikelok®
Solution Provider For Fluid Systems

Filters

F2 Series

- Compact inline design
- Maximum working pressure up to 3000 psig (207 bar)
- Working temperature from -20°F to 900°F (-28°C to 482°C)
- 316 stainless steel and brass body material
- Variety of end connections

Features

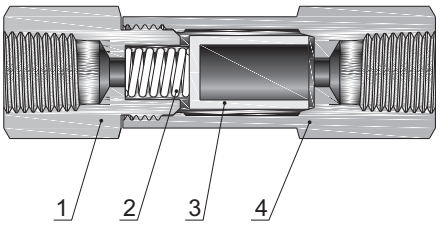
- Compact inline design
- Nominal pore sizes for sintered element: 0.5, 2, 7, 15, 40, 60 and 90 μm
- Nominal pore sizes for strainer element: 100, 150, 250 and 450 μm
- Maximum working pressure up to 3000 psig (207 bar)
- Working temperature from -20℉ to 900℉ (-28℃ to 482℃)
- Body materials: 316 S.S. 316L S.S. 304 S.S. 304L S.S. 321 S.S. and Brass
- Variety of end connections

Pressure vs. Temperature

Material	316 S.S.	Brass
Temperature, ℉(℃)	Working Pressure, psig (bar)	
-20 (-28) to 100 (37)	3000 (207)	1000 (68.9)
200 (93)	2580 (177)	780 (53.7)
300 (148)	2330 (160)	680 (46.8)
400 (204)	2140 (147)	—
500 (260)	1990 (137)	—
600 (315)	1880 (129)	—
650 (343)	1845 (127)	—
700 (371)	1800 (124)	—
750 (398)	1760 (121)	—
800 (426)	1725 (118)	—
850 (454)	1690 (116)	—
900 (482)	1640 (112)	—

Standard Materials of Construction

Component		Material Grade/ASTM Specification	
		316 S.S.	Brass
1	Inlet Body	316 S.S./A479	Brass C36000/B16
2	Spring	304 S.S./A313	
3	Element	Sintered 316 S.S. or strainer 316 S.S.	
4	Outlet Body	316 S.S./A479	Brass C36000/B16



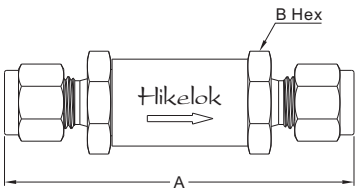
Maximum Differential Pressure of Clean Filter at 70°F (20°C)

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)	
				A	B
F2-F2-	1/8" Hikelok	0.094 (2.39)	2	2.35 (59.7)	9/16 (14.3)
F2-F4-	1/4" Hikelok	0.187 (4.75)	4	2.95 (74.9)	3/4 (19.0)
F2-F6-	3/8" Hikelok	0.281 (7.14)	8	3.21 (81.5)	1 (25.4)
F2-F8-	1/2" Hikelok	0.406 (10.3)	8	3.49 (88.6)	
F2-M3-	3 mm Hikelok	0.094 (2.39)	2	2.38 (60.5)	9/16 (14.3)
F2-M6-	6 mm Hikelok	0.187 (4.75)	4	2.96 (75.2)	3/4 (19.0)
F2-FNPT2-	1/8 Female NPT	0.094 (2.39)	2	2.16 (54.9)	9/16 (14.3)
F2-FNPT4-	1/4 Female NPT	0.187 (4.75)	4	2.87 (72.9)	3/4 (19.0)
F2-NPT2-	1/8 Male NPT	0.094 (2.39)	2	1.88 (47.7)	9/16 (14.3)
F2-NPT4-	1/4 Male NPT	0.187 (4.75)	4	2.69 (68.3)	3/4 (19.0)
F2-GFS2-	1/8 Male GFS	0.094 (2.39)	2	2.79 (70.8)	
F2-GFS4-	1/4 Male GFS	0.187 (4.75)	4		
F2-FBT2-	1/8 Female BSPT	0.094 (2.39)	2	2.16 (54.9)	9/16 (14.3)
F2-FBT4-	1/4 Female BSPT	0.187 (4.75)	4	2.87 (72.9)	3/4 (19.0)
F2-MBT2-	1/8 Male BSPT	0.094 (2.39)	2	1.88 (47.7)	9/16 (14.3)
F2-MBT4-	1/4 Male BSPT	0.187 (4.75)	4	2.69 (68.3)	3/4 (19.0)

How to Order

F2 — F6 — M10 — S90 — B4 — 316

Filter Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Element Type	Element Nominal Pore Size	Bypass Port for F1	Body Material
F2	**FNPT** Female NPT **NPT** Male NPT **FBT** Female BSPT **MBT** Male BSPT **FMS** Female ISO 261 **MS** Male ISO 261 **FBP** Female BSPP **MBP** Male BSPP **F** Fractional Tube Fitting **M** Metric Tube Fitting **FSW** Fractional Tube Socket Weld **FBW** Fractional Tube Butt Weld **GFS** Male GFS Fitting	**2** 1/8 in. **4** 1/4 in. **6** 3/8 in. or 6 mm **8** 1/2 in. or 8 mm **10** 10 mm **12** 3/4 in. or 12 mm **14** 14 mm or M14 x 1.5 **16** 1 in. or 16 mm **18** 18 mm **20** 1 1/4 in. or 20 mm **22** 22 mm or M22 x1.5 **25** 25 mm	Same as inlet type and inlet size If outlet and inlet are the same, eliminate the outlet designator			**S** Sintered **T** Strainer	Sintered **05** 0.5μm **2** 2μm **7** 7μm **15** 15μm **40** 40μm **60** 60μm **90** 90μm Strainer **100** 100μm **150** 150μm **250** 250μm **450** 450μm	None **B2** FNPT2 **B4** FNPT4 **B8** FNPT8 **F2** F2 **F4** F4 **F6** F6 **F8** F8	**316** 316 S.S. **316L** 316L S.S **304** 304 S.S. **304L** 304L S.S. **BR** Brass

Hikelok®
Solution Provider For Fluid Systems

Filters

F3 Series

- All-welded construction
- Maximum working pressure: 6000 psig (413 bar)
- Working temperature: -40 F to 900 F (-40 C to 482 C)
- 316 stainless steel
- Variety of end connections

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Features

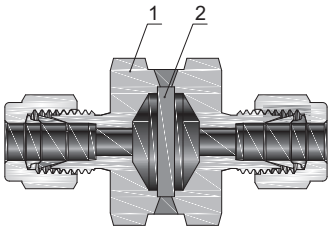
- All-welded construction prevents bypass flow
- Large filtration area
- Inline filters are for use where space is limited
- Filter is easily cleaned by backflushing
- Sintered element is available in 0.5, 2, 7, 15, 40, 60 and 90 μm
- Maximum working pressure: 6000 psig (413 bar)
- Working temperature from -40°F to 900°F (-40°C to 482°C)
- Body materials: 316 S.S. 316L S.S. 304 S.S. and 304L S.S.
- Variety of end connections available

Pressure vs. Temperature

Material	316 S.S.
Temperature, °F(°C)	Working Pressure, psig (bar)
-40 (-40) to 100 (37)	6000 (413)
200 (93)	5160 (355)
300 (148)	4660 (321)
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

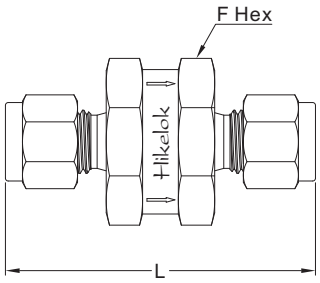
Component		Material Grade/ASTM Specification
		316 S.S.
1	Body	316 S.S./A479
2	Element	Sintered 316 S.S.



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

Series	Maximum Differential Pressure psig (bar)						
	0.5 micron	2 micron	7 micron	15 micron	40 micron	60 micron	90 micron
FW	1000 (69)	1000 (69)	1000 (69)	1000 (69)	600 (41.4)	600 (41.4)	600 (41.4)

Dimensions



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Dimension, in. (mm)	
			L	F
F3-F4-	1/4'' Hikelok	0.187(4.75)	2.15(54.6)	1 (25.4)
F3-M6-	6 mm Hikelok			
F3-FNPT4-	1/4 Female NPT	0.453(11.5)	1.57(39.9)	
F3-NPT4-	1/4 Male NPT	0.281(7.14)	1.89(48.0)	
F3-GFS4-	1/4 Male GFS	0.187(4.75)	2.04(51.8)	
F3-F6-	3/8'' Hikelok	0.187(4.75)	2.35(59.7)	1 1/4 (31.75)
F3-M8-	8 mm Hikelok			
F3-FNPT6-	3/8 Female NPT	0.453(11.5)	2.15(54.6)	
F3-NPT6-	3/8 Male NPT	0.281(7.14)	2.09(53.1)	
F3-GFS6-	3/8 Male GFS	0.187(4.75)	2.21(56.1)	
F3-F8-	1/2'' Hikelok	0.187(4.75)	3.17(80.5)	1 3/8 (34.93)
F3-M10-	10 mm Hikelok			
F3-FNPT8-	1/2 Female NPT	0.453(11.5)	2.98(75.7)	
F3-NPT8-	1/2 Male NPT	0.281(7.14)	2.78(70.6)	
F3-GFS8-	1/2 Male GFS	0.187(4.75)	2.98(75.7)	
F3-F12-	3/4'' Hikelok	0.187(4.75)	3.42(86.9)	1 5/8 (41.28)
F3-M18-	18 mm Hikelok			
F3-FNPT12-	3/4 Female NPT	0.453(11.5)	3.58(90.9)	
F3-NPT12-	3/4 Male NPT	0.281(7.14)	3.16(80.3)	
F3-F16-	1'' Hikelok	0.453(11.5)	4.32(110)	1 7/8 (47.63)
F3-FNPT16-	1 Female NPT	0.281(7.14)	4.08(104)	
F3-NPT16-	1 Male NPT			

How to Order

F3 — F6 — M10 — S90 — 316

Filter Series	Inlet Type	Inlet Size	Outlet Type / Outlet Size	Element Type	Element Nominal Pore Size	Body Material
F3	**FNPT** Female NPT **NPT** Male NPT **FBT** Female BSPT **MBT** Male BSPT **FMS** Female ISO 261 **MS** Male ISO 261 **FBP** Female BSPP **MBP** Male BSPP **F** Fractional Tube Fitting **M** Metric Tube Fitting **FSW** Fractional Tube Socket Weld **FBW** Fractional Tube Butt Weld **GFS** Male GFS Fitting	**2** 1/8 in. **4** 1/4 in. **6** 3/8 in. or 6 mm **8** 1/2 in. or 8 mm **10** 10 mm **12** 3/4 in. or 12 mm **14** 14 mm or M14 x 1.5 **16** 1 in. or 16 mm **18** 18 mm **20** 1 1/4 in. or 20 mm **22** 22 mm or M22 x1.5 **25** 25 mm	Same as inlet type and inlet size If outlet and inlet are the same, eliminate the outlet designator	**S** Sintered	**05** 0.5μm **2** 2μm **7** 7μm **15** 15μm **40** 40μm **60** 60μm **90** 90μm	**316** 316 S.S. **316L** 316L S.S **304** 304 S.S. **304L** 304L S.S.

Hikelok®
Solution Provider For Fluid Systems

Ultrahigh-Purity Gas Filters

F4 Series

- 0.003 μm ceramic filtration
- Work pressure up to 3000 psi(206 bar)
- Maximum flow rates: 30, 225, 600, 900, and 2700 std L/min
- 1/4, 1/2, and 3/4 in. integral male GFS face seal fittings

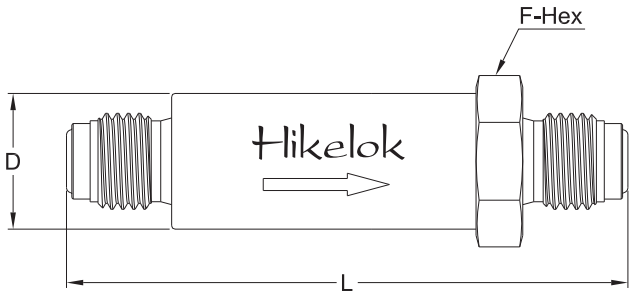
Features

- ❖ High particle removal efficiency and low particle shedding
- ❖ Outstanding chemical compatibility and low outgassing
- ❖ Inline, all-welded construction
- ❖ 0.003 µm ceramic filtration
- ❖ Work pressure up to 3000 psi(206 bar)
- ❖ Maximum flow rates: 30, 225, 600, 900, and 2700 std L/min
- ❖ Internal surface finished to a roughness average of 5 µin.(0.13 µm) Ra
- ❖ 1/4, 1/2, and 3/4 in. integral male GFS face seal fittings

Technical Data

Maximum Flow Rate at Removal Rating std L/min(std ft^3/min)	Filtration Area cm (in.)	Pressure Rating at 37°C (100°F) psig (bar)		Temperature Rating °C (°F)	Removal Rating
		Working	Differential		
30 (1.0)	10 (1.6)	3000 (206)	2500 (172)	200 (400)	> 99.9999999 % at 0.003 µm
225 (7.9)	20 (3.1)				
600 (21)	70 (11)				
900 (31)	150 (23)				
2700 (95)	450 (70)				

Technical Data and Dimensions



Basic Ordering Number	Connection Type and Size	Maximum Flow Rate std L/min	Dimension in. (mm)		
			L	D	F
F4-GFS4-30-	1/4" Male GFS	30		0.80 (20.3)	0.88 (22.4)
F4-GFS4-FGFS4-30-	1/4" Male to Female GFS				
F4-GFS4-225-	1/4" Male GFS	225	3.31 (84.1)	1.18 (30.0)	1.23 (31.2)
F4-GFS4-FGFS4-225-	1/4" Male to Female GFS				
F4-GFS8-225-	1/2" Male GFS				
F4-GFS4-600-	1/4" Male GFS	600		1.67 (42.4)	1.42 (36.1)
F4-GFS8-600-	1/2" Male GFS				
F4-GFS4-900-	1/4" Male GFS	900	5.00 (127)	1.67 (42.4)	0.93 (23.6)
F4-GFS8-900-	1/2" Male GFS				
F4-GFS8-2700-	1/2" Male GFS	2700	11.2 (284)	1.67 (42.4)	0.93 (23.6)
F4-GFS12-2700-	3/4" Male GFS				1.29 (32.8)

How to Order

F4 — GFS4 — FGFS4 — 30 — 316

Filter Series	Inlet Type	Inlet Size	Outlet Type / Outlet Size	Maximum Flow Rate std L/min	Body Material
F4	**F** Fractional Tube Fitting **M** Metric Tube Fitting **GFS** Male GFS Fitting **FGFS** Female GFS Fitting	**2** 1/8 in. **4** 1/4 in. **6** 3/8 in. or 6 mm **8** 1/2 in. or 8 mm **10** 10 mm **12** 3/4 in. or 12 mm	Same as inlet type and inlet size If outlet and inlet are the same, eliminate the outlet designator	**30** 30 std L/min **225** 225 std L/min **600** 600 std L/min **900** 900 std L/min **2700** 2700 std L/min	**316L** 316L S.S. **316LV** 316L VAR S.S.