

Filters

FT, FB, FI, FW and FH Series



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Tee-Type Filters

FT Series



B-188

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Tee-Type Filters

FT Series

Introduction

Tee-Type Filters trap fine particle contaminants in pipelines. With easy-to-replace filter elements, these filters apply to gas and liquid services. Having been ECE R110 certified, they are also suitable for CNG/NGV applications.

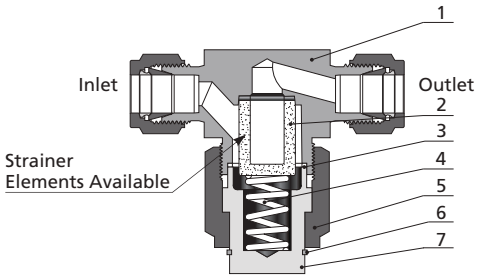
Features

- ⦿ Filtration area type: 4 and 8
- ⦿ Union bonnet design to prevent lock nut from falling off and offer added safety
- ⦿ Working pressure up to 6000 psig (414 bar)
- ⦿ Working temperature: -20°F to 900°F (-28°C to 482°C)
- ⦿ Variety of end connections available

Standard Materials of Construction

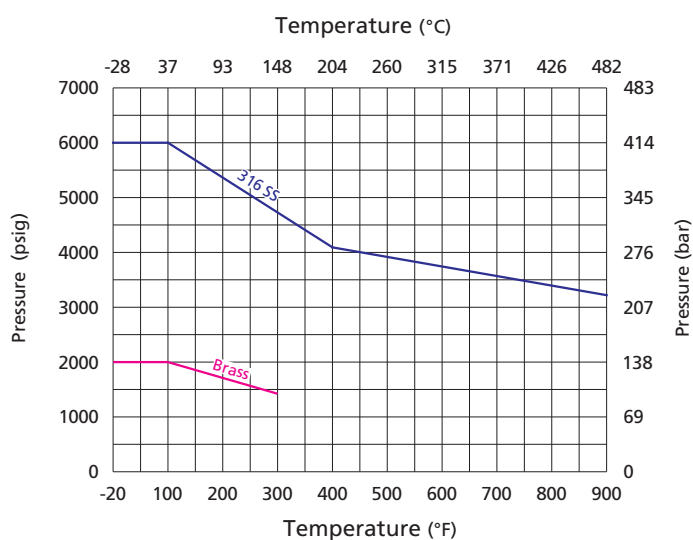
Item	Component	Body Material	
		316 SS	Brass
		Material Grade/ASTM Specification	
1	Body	F316 SS/A182	C37700/B283
		316 SS/A479	C36000/B16
2	Element	Sintered 316 SS or strainer 316 SS	
3	Gasket	Silver-plated 316 SS	Aluminum/B209
4	Spring	302 SS/A313	
5	Bonnet Nut	316 SS/A479	Brass C36000/B16
6	Backup Ring	Stainless steel	
7	Bonnet	316 SS/A479	Brass C36000/B16

Lubricants: molybdenum disulfide-based and silicone-based



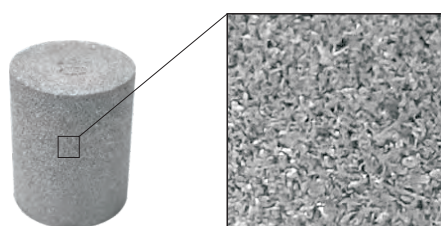
FT Series Sintered Filter Shown

Pressure vs. Temperature



Filter Elements

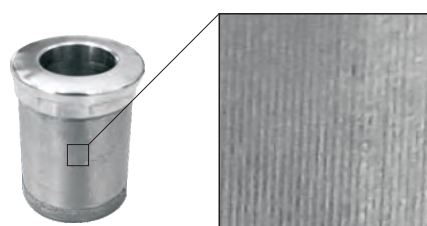
Sintered



Magnified 10x

- 316 SS powder metallurgy
- Irregular pores to trap impurity ions with smaller diameters

Strainer



Magnified 10x

- 316 SS wire mesh
- Uniform mesh pores to trap impurity ions with larger diameters

Nominal Pore Size of Filter Elements

	Nominal Pore Size	Pore Size Range	Element Designator
Sintered	0.5 μm	0.5 to 2 μm	05
	2 μm	1 to 4 μm	2
	7 μm	5 to 10 μm	7
	15 μm	11 to 25 μm	15
	40 μm	35 to 53 μm	40
	60 μm	50 to 75 μm	60
	80 μm	70 to 95 μm	80
Strainer	100 μm	140 mesh	100
	150 μm	100 mesh	150
	250 μm	60 mesh	250
	450 μm	40 mesh	450

Note: Filter elements remove 95% of particles larger than the nominal pore size.

Filtration Area

Filtration Area Type	Filtration Area, in. ² (mm ²)	
	Sintered	Strainer
4	1.30 (830)	1.00 (640)
8	2.00 (1280)	1.70 (1090)

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

Maximum Differential Pressure psig (bar)										
0.5 µm	2 µm	7 µm	15 µm	40 µm	60 µm	80 µm	100 µm	150 µm	250 µm	450 µm
1000 (69.0)										

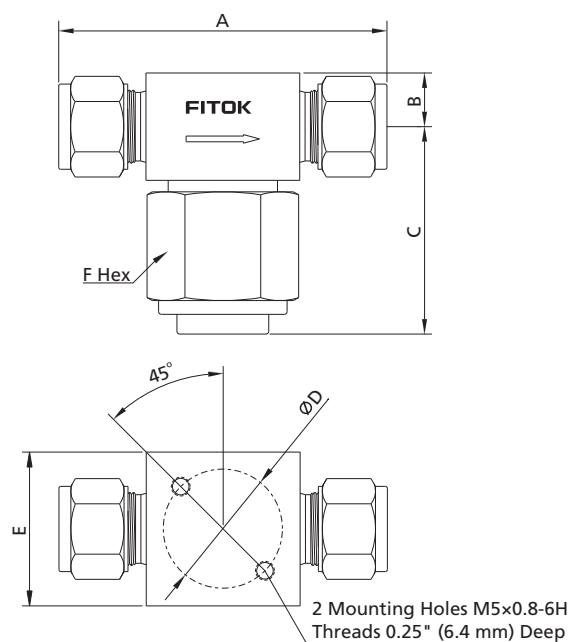
Flow Data

Filtration Area Type	Element Nominal Pore Size µm	Element Type	Inlet Pressure, psig (bar)			Pressure Drop, psig (bar)		
			5 (0.34)	10 (0.68)	15 (1.0)	10 (0.68)	50 (3.4)	100 (6.8)
			Air Flow, std ft ³ /min (L/min)			Water Flow, U.S. gal/min (L/min)		
4	0.5	Sintered	0.12 (3.4)	0.26 (7.3)	0.48 (13)	0.04 (0.15)	0.17 (0.64)	0.29 (1.0)
	2	Sintered	0.60 (17)	1.4 (39)	2.3 (65)	0.24 (0.90)	0.86 (3.2)	1.3 (4.9)
	7	Sintered	1.4 (39)	2.9 (82)	4.7 (130)	0.40 (1.5)	1.3 (4.9)	2.0 (7.5)
	15	Sintered	1.2 (34)	2.9 (82)	4.7 (130)	0.50 (1.8)	1.3 (4.9)	2.1 (7.9)
	60	Sintered	3.1 (87)	5.9 (160)	8.5 (240)	0.80 (3.0)	2.7 (10)	3.9 (14)
	80	Sintered	4.1 (110)	7.5 (210)	10 (280)	1.1 (4.1)	3.4 (12)	4.9 (18)
	40, 60, 80, 100, 150, 250, 450	Strainer	4.7 (130)	8.8 (250)	12 (340)	1.2 (4.5)	4.2 (15)	5.6 (21)
8	0.5	Sintered	0.36 (10)	0.86 (24)	1.6 (45)	0.09 (0.34)	0.40 (1.5)	0.76 (2.8)
	2	Sintered	1.4 (39)	2.8 (79)	4.0 (110)	0.26 (0.98)	1.1 (4.1)	1.6 (6.0)
	7	Sintered	1.8 (51)	4.2 (119)	6.8 (190)	0.64 (2.4)	2.2 (8.3)	3.5 (13)
	15	Sintered	1.8 (51)	4.9 (130)	7.9 (220)	0.84 (3.1)	2.6 (9.8)	4.1 (15)
	60	Sintered	5.1 (140)	10 (280)	15 (420)	1.5 (5.6)	4.8 (18)	6.7 (25)
	80	Sintered	6.1 (170)	11 (310)	16 (450)	1.7 (6.4)	5.5 (20)	7.6 (28)
	40, 60, 80, 100, 150, 250, 450	Strainer	7.2 (200)	14 (390)	20 (560)	2.4 (9.0)	7.2 (27)	10 (37)

Note: Outlet is discharged to the atmosphere.

Dimensions and Ordering Information

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



Basic Ordering Number	Connection Type and Size		Filtration Area Type	Dimensions, in. (mm)					
	Inlet	Outlet		A	B	C	ØD	E	F
FT□□-FL2-	1/8" Tube Fitting	1/8" Tube Fitting	4	2.27 (57.7)	0.38 (9.7)	1.49 (37.8)	1.00 (25.4)	1.00 (25.4)	1 (25.4)
FT□□-FL4-	1/4" Tube Fitting	1/4" Tube Fitting	4	2.47 (62.7)					
FT□□-FL6-	3/8" Tube Fitting	3/8" Tube Fitting	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)
FT□□-FL8-	1/2" Tube Fitting	1/2" Tube Fitting	8	3.04 (77.2)					
FT□□-ML6-	6 mm Tube Fitting	6 mm Tube Fitting	4	2.46 (62.5)	0.38 (9.7)	1.49 (37.8)	1.00 (25.4)	1.00 (25.4)	1 (25.4)
FT□□-ML8-	8 mm Tube Fitting	8 mm Tube Fitting	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)
FT□□-ML10-	10 mm Tube Fitting	10 mm Tube Fitting	8	2.86 (72.6)					
FT□□-ML12-	12 mm Tube Fitting	12 mm Tube Fitting	8	3.04 (77.2)					
FT□□-TS4-	1/4" Tube Socket Weld	1/4" Tube Socket Weld	4	1.68 (42.7)	0.38 (9.7)	1.49 (37.8)	1.00 (25.4)	1.00 (25.4)	1 (25.4)
FT□□-TS6-	3/8" Tube Socket Weld	3/8" Tube Socket Weld	4						
FT□□-TB4-	1/4"x0.065" Tube Butt Weld	1/4"x0.065" Tube Butt Weld	4						
FT□□-TB6-	3/8"x0.095" Tube Butt Weld	3/8"x0.095" Tube Butt Weld	4						
FT□□-FNS2-	1/8 Female NPT	1/8 Female NPT	4	2.00 (50.8)	0.38 (9.7)	1.49 (37.8)	1.00 (25.4)	1.00 (25.4)	1 (25.4)
FT□□-FNS4-	1/4 Female NPT	1/4 Female NPT	4	2.13 (54.1)					
FT□□-NS4-	1/4 Male NPT	1/4 Male NPT	4						
FT□□-NS6-	3/8 Male NPT	3/8 Male NPT	8	2.38 (60.5)	0.46 (11.7)	1.74 (44.2)	1.13 (28.7)	1.13 (28.7)	1 1/8 (28.6)
FT□□-NS8-	1/2 Male NPT	1/2 Male NPT	8	2.75 (69.9)					
FT□□-FR4-	1/4 Male FR	1/4 Male FR	4	2.30 (58.4)	0.38 (9.7)	1.49 (37.8)	1.00 (25.4)	1.00 (25.4)	1 (25.4)
FT□□-FR8-	1/2 Male FR	1/2 Male FR	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)

1. Mounting holes not available with 1/4 female NPT end connections
2. FR means metal gasket seal fittings.
3. Sizes and types listed are standard. Other sizes and types are available upon request.
4. Dimensions are shown with FITOK nuts finger-tightened. All dimensions are for reference only and are subject to change.
For dimensions not shown above, please contact FITOK Group or our authorized distributors.

CNG/NGV Application

FT Series Filters with ECE R110 Type Approval (Class 0) are available.

Rated temperatures: -40°F to 248°F (-40°C to 120°C)

Rated pressure within the temperature range: 3370 psig (260 bar)

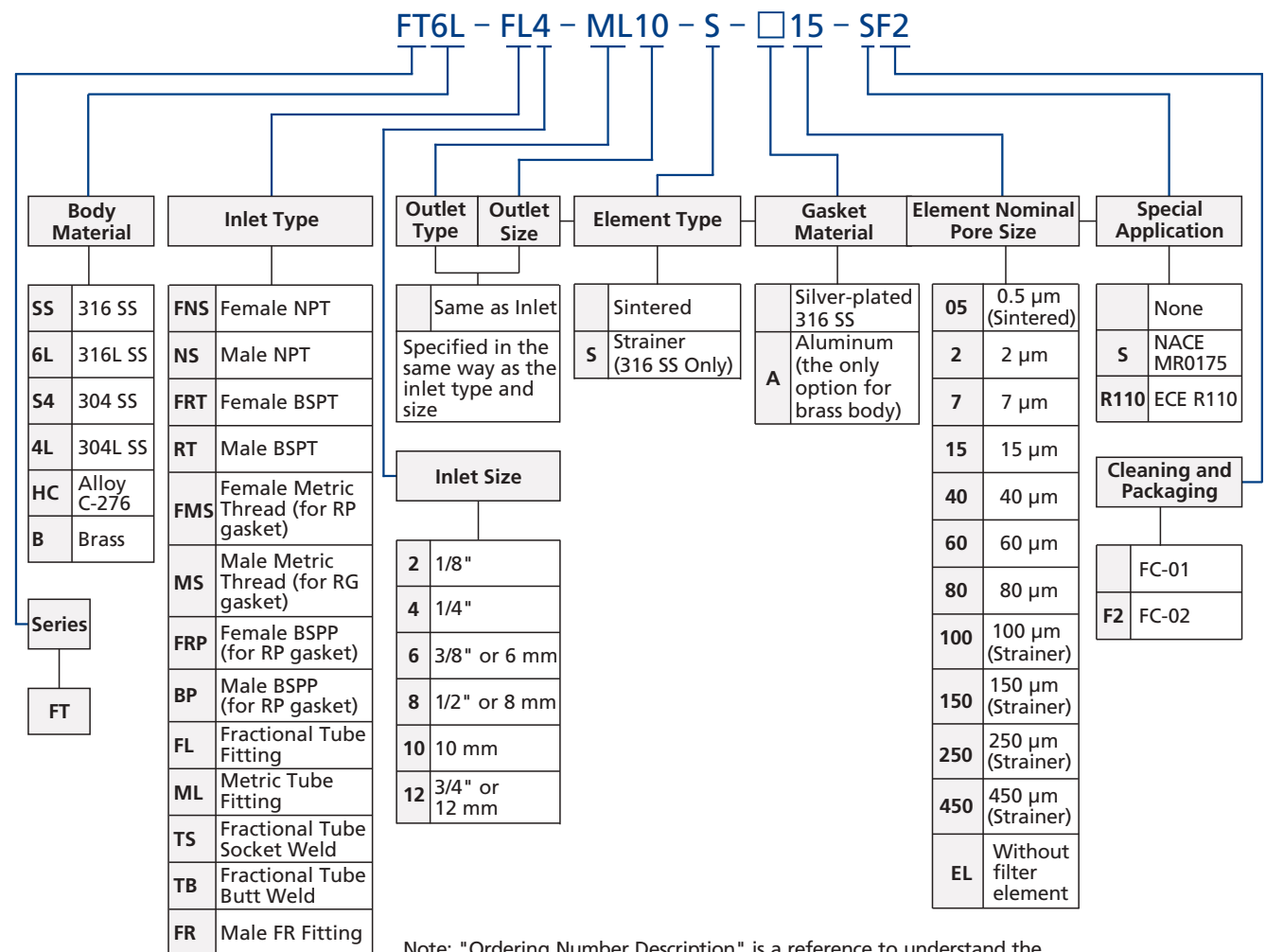
To order, add the suffix -R110 to the standard FT series filter ordering number.

Example: FTSS-FL4-15-R110

Special Alloys

Alloy filters are available, featuring sintered filter elements made from Alloy C-276. For details, please contact FITOK.

Filters Ordering Number Description



Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

1. Cleaning and Packaging:

FC-01: Standard cleaning and packaging for basic industrial procedures.

FC-02: Special cleaning and packaging for wetted system components to ensure compliance requirement as stated in ASTM G93 Level C.

2. Standard thread pitch for metric threads are as follows:

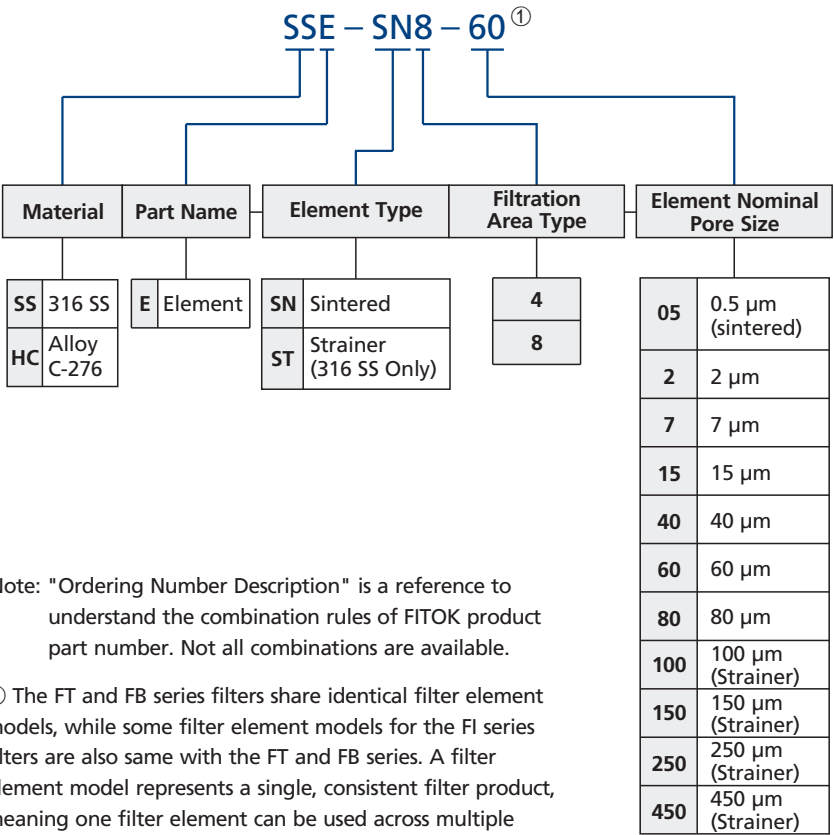
M10 and below: 1 mm

M12 to M24: 1.5 mm

M27 and above: 2 mm

Standard thread pitch should be ignored in the ordering number, others should be specified.

Elements Ordering Number Description



Bypass Filters

FB Series

Introduction

Bypass Filters can be used for medium sampling and element cleaning. Filter elements are available in multiple types of filtration accuracy and are easy to replace, making them suitable for use in gas and fluid service.

Features

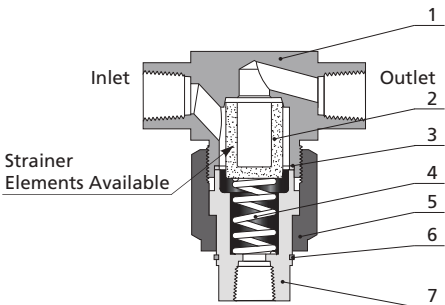
- ⦿ Filtration area type: 4 and 8
- ⦿ Union bonnet design to prevent lock nut from falling off and offer added safety
- ⦿ Working pressure up to 6000 psig (414 bar)
- ⦿ Working temperature: -20°F to 900°F (-28°C to 482°C)
- ⦿ Variety of end connections available



Standard Materials of Construction

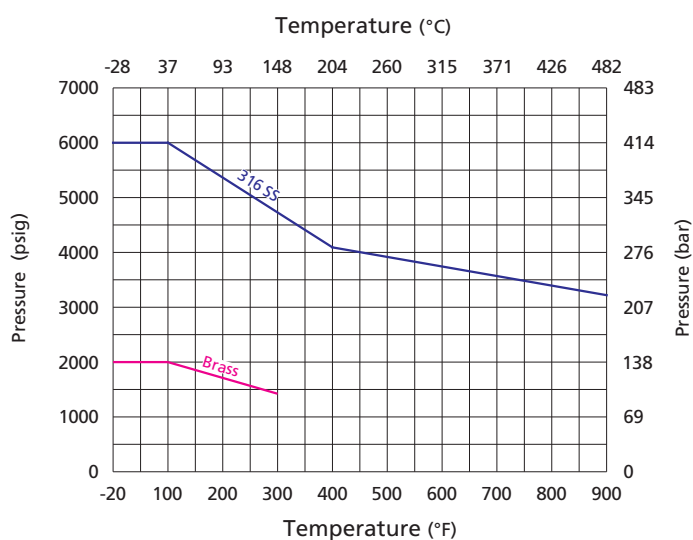
Item	Component	Body Material	
		316 SS	Brass
		Material Grade/ASTM Specification	
1	Body	F316 SS/A182	C37700/B283
		316 SS/A479	C36000/B16
2	Element	Sintered 316 SS or strainer 316 SS	
3	Gasket	Silver-plated 316 SS	Aluminum/B209
4	Spring	302 SS/A313	
5	Bonnet Nut	316 SS/A479	Brass C36000/B16
6	Backup Ring	Stainless steel	
7	Bonnet	316 SS/A479	Brass C36000/B16

Lubricants: molybdenum disulfide-based and silicone-based



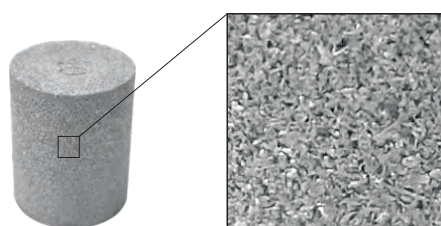
FB Series Sintered Filter Shown

Pressure vs. Temperature



Filter Elements

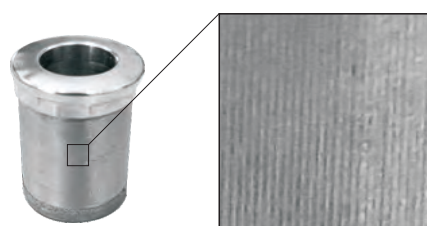
Sintered



Magnified 10x

- 316 SS powder metallurgy
- Irregular pores to trap impurity ions with smaller diameters

Strainer



Magnified 10x

- 316 SS wire mesh
- Uniform mesh pores to trap impurity ions with larger diameters

Nominal Pore Size of Filter Elements

	Nominal Pore Size	Pore Size Range	Element Designator
Sintered	0.5 μm	0.5 to 2 μm	05
	2 μm	1 to 4 μm	2
	7 μm	5 to 10 μm	7
	15 μm	11 to 25 μm	15
	40 μm	35 to 53 μm	40
	60 μm	50 to 75 μm	60
	80 μm	70 to 95 μm	80
Strainer	100 μm	140 mesh	100
	150 μm	100 mesh	150
	250 μm	60 mesh	250
	450 μm	40 mesh	450

Note: Filter elements remove 95% of particles larger than the nominal pore size.

Filtration Area

Filtration Area Type	Filtration Area, in. ² (mm ²)	
	Sintered	Strainer
4	1.30 (830)	1.00 (640)
8	2.00 (1280)	1.70 (1090)

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

Maximum Differential Pressure psig (bar)										
0.5 µm	2 µm	7 µm	15 µm	40 µm	60 µm	80 µm	100 µm	150 µm	250 µm	450 µm
1000 (69.0)										

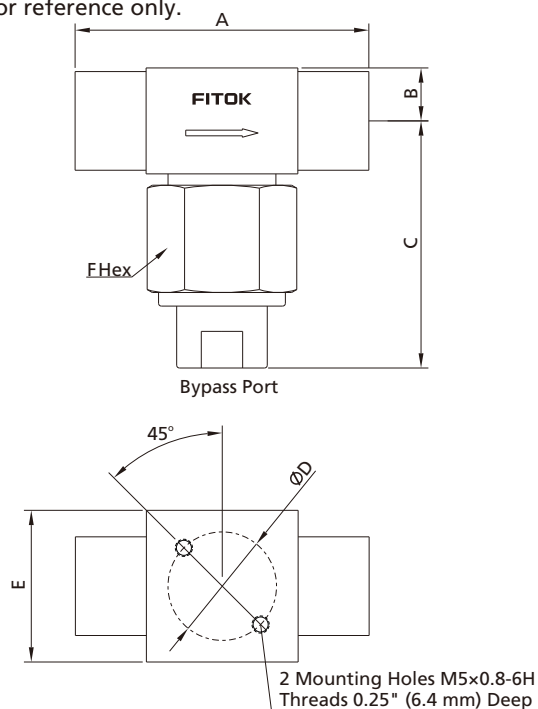
Flow Data

Filtration Area Type	Element Nominal Pore Size µm	Element Type	Inlet Pressure, psig (bar)			Pressure Drop, psig (bar)		
			5 (0.34)	10 (0.68)	15 (1.0)	10 (0.68)	50 (3.4)	100 (6.8)
			Air Flow, std ft ³ /min (L/min)			Water Flow, U.S. gal/min (L/min)		
4	0.5	Sintered	0.12 (3.4)	0.26 (7.3)	0.48 (13)	0.04 (0.15)	0.17 (0.64)	0.29 (1.0)
	2	Sintered	0.60 (17)	1.4 (39)	2.3 (65)	0.24 (0.90)	0.86 (3.2)	1.3 (4.9)
	7	Sintered	1.4 (39)	2.9 (82)	4.7 (130)	0.40 (1.5)	1.3 (4.9)	2.0 (7.5)
	15	Sintered	1.2 (34)	2.9 (82)	4.7 (130)	0.50 (1.8)	1.3 (4.9)	2.1 (7.9)
	60	Sintered	3.1 (87)	5.9 (160)	8.5 (240)	0.80 (3.0)	2.7 (10)	3.9 (14)
	80	Sintered	4.1 (110)	7.5 (210)	10 (280)	1.1 (4.1)	3.4 (12)	4.9 (18)
	40, 60, 80, 100, 150, 250, 450	Strainer	4.7 (130)	8.8 (250)	12 (340)	1.2 (4.5)	4.2 (15)	5.6 (21)
8	0.5	Sintered	0.36 (10)	0.86 (24)	1.6 (45)	0.09 (0.34)	0.40 (1.5)	0.76 (2.8)
	2	Sintered	1.4 (39)	2.8 (79)	4.0 (110)	0.26 (0.98)	1.1 (4.1)	1.6 (6.0)
	7	Sintered	1.8 (51)	4.2 (119)	6.8 (190)	0.64 (2.4)	2.2 (8.3)	3.5 (13)
	15	Sintered	1.8 (51)	4.9 (130)	7.9 (220)	0.84 (3.1)	2.6 (9.8)	4.1 (15)
	60	Sintered	5.1 (140)	10 (280)	15 (420)	1.5 (5.6)	4.8 (18)	6.7 (25)
	80	Sintered	6.1 (170)	11 (310)	16 (450)	1.7 (6.4)	5.5 (20)	7.6 (28)
	40, 60, 80, 100, 150, 250, 450	Strainer	7.2 (200)	14 (390)	20 (560)	2.4 (9.0)	7.2 (27)	10 (37)

Note: Outlet is discharged to the atmosphere.

Dimensions and Ordering Information

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



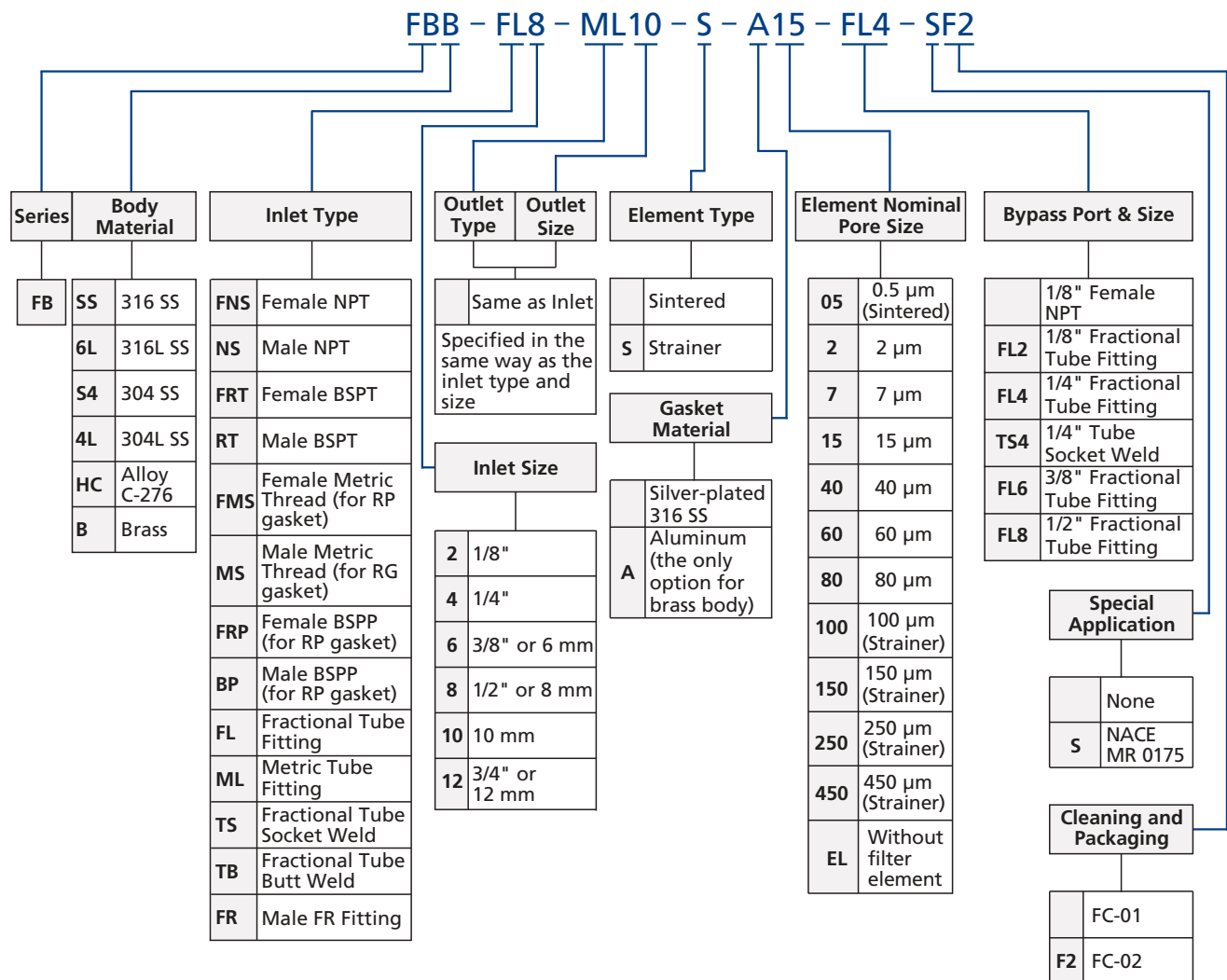
Basic Ordering Number	Connection Type and Size		Filtration Area Type	Dimensions, in. (mm)						
	Inlet	Outlet		A	B	C	ØD	E	F	Bypass Port
FB□□-FL2-	1/8" Tube Fitting	1/8" Tube Fitting	4	2.27 (57.7)	0.38 (9.7)	1.98 (50.2)	1.00 (25.4)	1.00 (25.4)	1 (25.4)	FL2
FB□□-FL4-	1/4" Tube Fitting	1/4" Tube Fitting	4	2.47 (62.7)		2.44 (61.9)				FL4
FB□□-FL6-	3/8" Tube Fitting	3/8" Tube Fitting	8	2.84 (72.1)	0.46 (11.7)	2.74 (69.1)	1.13 (28.7)	1.13 (28.7)	1 1/8 (28.6)	FL6
FB□□-FL8-	1/2" Tube Fitting	1/2" Tube Fitting	8	3.04 (77.2)		2.96 (74.2)				FL8
FB□□-ML6-	6 mm Tube Fitting	6 mm Tube Fitting	4	2.46 (62.5)	0.38 (9.7)	2.44 (61.9)	1.00 (25.4)	1.00 (25.4)	1 (25.4)	FL4
FB□□-ML8-	8 mm Tube Fitting	8 mm Tube Fitting	8	2.84 (72.1)	0.46 (11.7)	2.74 (69.1)	1.13 (28.7)	1.13 (28.7)	1 1/8 (28.6)	FL6
FB□□-ML10-	10 mm Tube Fitting	10 mm Tube Fitting	8	2.86 (72.6)		2.96 (74.2)				FL8
FB□□-ML12-	12 mm Tube Fitting	12 mm Tube Fitting	8	3.04 (77.2)						
FB□□-TS4-	1/4" Tube Socket Weld	1/4" Tube Socket Weld	4	1.68 (42.7)	0.38 (9.7)	1.83 (56.4)	1.00 (25.4)	1.00 (25.4)	1 (25.4)	TS4
FB□□-TS6-	3/8" Tube Socket Weld	3/8" Tube Socket Weld	4							
FB□□-TB4-	1/4" x 0.065" Tube Butt Weld	1/4" x 0.065" Tube Butt Weld	4							
FB□□-TB4-	3/8" x 0.095" Tube Butt Weld	3/8" x 0.095" Tube Butt Weld	4							
FB□□-FNS2-	1/8 Female NPT	1/8 Female NPT	4	2.00 (50.8)	0.38 (9.7)	1.71 (43.4)	1.00 (25.4)	1.00 (25.4)	1 (25.4)	FNS2
FB□□-NS4-	1/4 Male NPT	1/4 Male NPT	4	2.13 (54.1)						
FB□□-FNS4-	1/4 Female NPT	1/4 Female NPT	8	2.38 (60.5)	0.46 (11.7)	2.00 (50.8)	1.13 (28.7)	1.13 (28.7)	1 1/8 (28.6)	FNS2
FB□□-NS6-	3/8 Male NPT	3/8 Male NPT	8							
FB□□-NS8-	1/2 Male NPT	1/2 Male NPT	8							
FB□□-FR4-	1/4 Male FR	1/4 Male FR	4	2.38 (60.5)	0.38 (9.7)	2.44 (61.9)	1.00 (25.4)	1.00 (25.4)	1 (25.4)	FL4
FB□□-FR8-	1/2 Male FR	1/2 Male FR	8	2.75 (69.9)	0.46 (11.7)	2.96 (74.2)	1.13 (28.7)	1.13 (28.7)	1 1/8 (28.6)	FL8

1. Mounting holes not available with 1/4 female NPT end connections.
2. FR means metal gasket seal fittings.
3. Sizes and types listed are standard. Other sizes and types are available upon request.
4. Dimensions are shown with FITOK nuts finger-tightened. All dimensions are for reference only and are subject to change.
For dimensions not shown above, please contact FITOK Group or our authorized distributors.

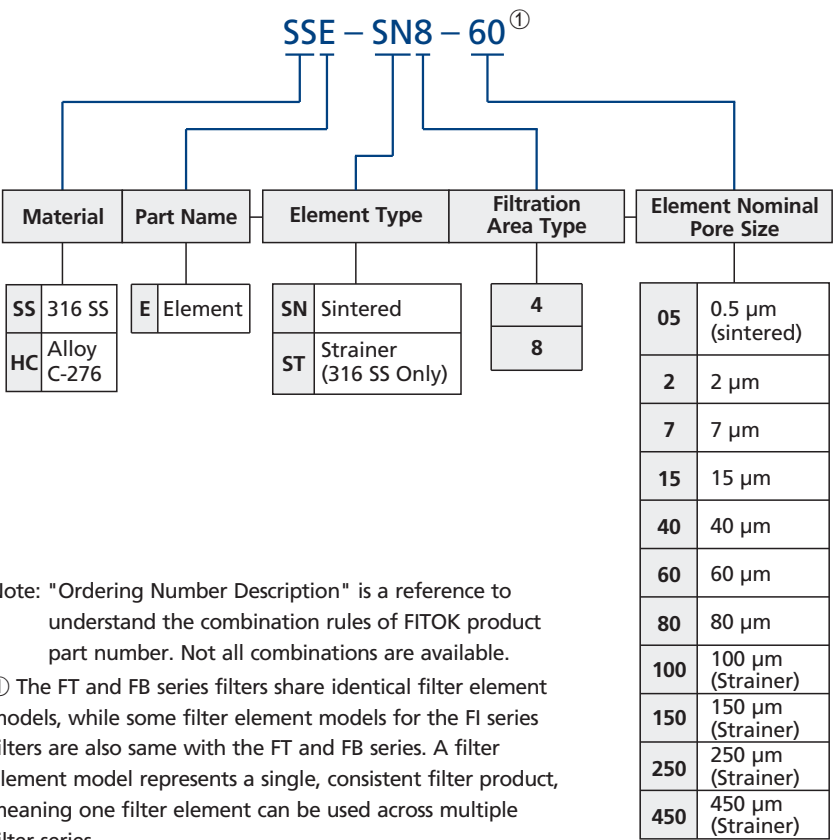
Special Alloys

Alloy filters are available, featuring sintered filter elements made from Alloy C-276. For details, please contact FITOK.

Filters Ordering Number Description



Elements Ordering Number Description



In-Line Filters

FI Series

Introduction

In-Line Filters are compact-designed to trap particle contaminants in gas or liquid service in limited space. Filter elements are available in multiple types of filtration accuracy to meet filtration needs of various pipelines.



Features

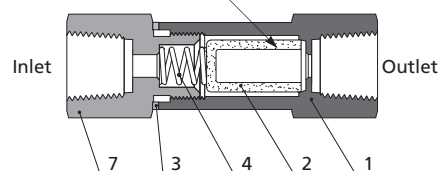
- ⦿ Filtration area type: 2, 4 and 8
- ⦿ Compact and space-saving design
- ⦿ Working pressure up to 3000 psig (207 bar)
- ⦿ Working temperature: -20°F to 900°F (-28°C to 482°C)
- ⦿ Variety of end connections available

Standard Materials of Construction

Item	Component	Body Material	
		316 SS	Brass
		Material Grade/ASTM Specification	
1	Body	316 SS/A479	C36000/B16
2	Element	Sintered 316 SS or strainer 316 SS	
3	Gasket	Silver-plated 316 SS	Aluminum/B209
4	Spring	302 SS/A313	
5	Bonnet Nut	316 SS/A479	Brass C36000/B16
6	Backup Ring	Stainless steel	
7	Bonnet	316 SS/A479	Brass C36000/B16

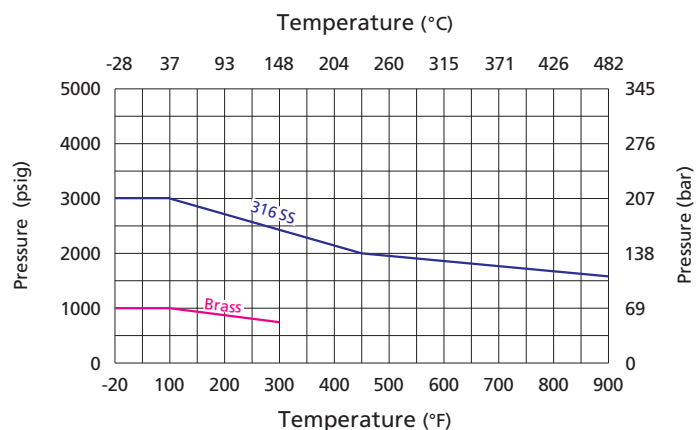
Lubricants: molybdenum disulfide-based and silicone-based

Strainer Elements Available



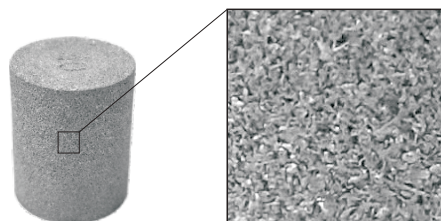
FI Series Sintered Filter Shown

Pressure vs. Temperature



Filter Elements

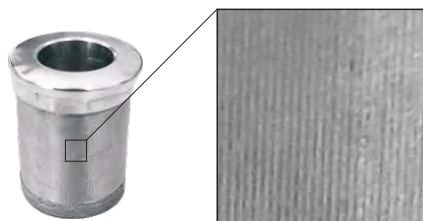
Sintered



Magnified 10×

- 316 SS powder metallurgy
- Irregular pores to trap impurity ions with smaller diameters

Strainer



Magnified 10×

- 316 SS wire mesh
- Uniform mesh pores to trap impurity ions with larger diameters

Nominal Pore Size of Filter Elements

	Nominal Pore Size	Pore Size Range	Element Designator
Sintered	0.5 μm	0.5 to 2 μm	05
	2 μm	1 to 4 μm	2
	7 μm	5 to 10 μm	7
	15 μm	11 to 25 μm	15
	40 μm	35 to 53 μm	40
	60 μm	50 to 75 μm	60
	80 μm	70 to 95 μm	80
Strainer	100 μm	140 mesh	100
	150 μm	100 mesh	150
	250 μm	60 mesh	250
	450 μm	40 mesh	450

Note: Filter elements remove 95% of particles larger than the nominal pore size.

Filtration Area

Filtration Area Type	Filtration Area, in. ² (mm ²)	
	Sintered	Strainer
2	0.55 (350)	—
4	1.30 (830)	1.00 (640)
8	2.00 (1280)	1.70 (1090)

Note: No strainer element option for FI series filtration area type.

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

Maximum Differential Pressure psig (bar)										
0.5 μm	2 μm	7 μm	15 μm	40 μm	60 μm	80 μm	100 μm	150 μm	250 μm	450 μm
1000 (69.0)										

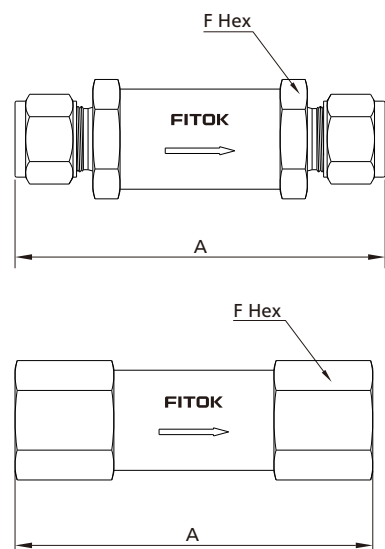
Flow Data

Filtration Area Type	Element Nominal Pore Size μm	Element Type	Inlet Pressure, psig (bar)			Pressure Drop, psig (bar)		
			5 (0.34)	10 (0.68)	15 (1.0)	10 (0.68)	50 (3.4)	100 (6.8)
			Air Flow, std ft ³ /min (L/min)			Water Flow, U.S. gal/min (L/min)		
2	0.5	Sintered	0.04 (1.1)	0.06 (1.7)	0.12 (3.4)	0.01 (0.03)	0.04 (0.15)	0.12 (0.45)
	2	Sintered	0.20 (5.6)	0.40 (11)	0.60 (17)	0.08 (0.30)	0.24 (0.91)	0.40 (1.5)
	7	Sintered	0.50 (14)	0.90 (25)	1.2 (34)	0.10 (0.37)	0.30 (1.1)	0.48 (1.8)
	15	Sintered	0.80 (22)	1.3 (36)	1.5 (42)	0.12 (0.45)	0.36 (1.3)	0.58 (2.1)
	60	Sintered	1.7 (48)	2.2 (62)	2.4 (68)	0.15 (0.56)	0.50 (1.8)	0.70 (2.6)
	80	Sintered	1.8 (51)	2.2 (62)	2.6 (73)	0.20 (0.75)	0.50 (1.8)	0.60 (2.2)
4	0.5	Sintered	0.12 (3.4)	0.26 (7.3)	0.48 (13)	0.04 (0.15)	0.17 (0.64)	0.29 (1.0)
	2	Sintered	0.60 (17)	1.4 (39)	2.3 (65)	0.24 (0.90)	0.86 (3.2)	1.3 (4.9)
	7	Sintered	1.4 (39)	2.9 (82)	4.7 (130)	0.40 (1.5)	1.3 (4.9)	2.0 (7.5)
	15	Sintered	1.2 (34)	2.9 (82)	4.7 (130)	0.50 (1.8)	1.3 (4.9)	2.1 (7.9)
	60	Sintered	3.1 (87)	5.9 (160)	8.5 (240)	0.90 (3.4)	3.3 (12)	4.6 (17)
	80	Sintered	4.1 (110)	7.5 (210)	10 (280)	1.2 (4.5)	4.2 (15)	6.1 (23)
	40, 60, 80, 100, 150, 250, 450	Strainer	4.7 (130)	8.8 (250)	12 (340)	1.7 (6.4)	5.6 (21)	7.8 (29)
8	0.5	Sintered	0.36 (10)	0.86 (24)	1.6 (45)	0.09 (0.34)	0.40 (1.5)	0.76 (2.8)
	2	Sintered	1.4 (39)	2.8 (79)	4.0 (110)	0.26 (0.98)	1.1 (4.1)	1.6 (6.0)
	7	Sintered	1.8 (51)	4.2 (119)	6.8 (190)	0.64 (2.4)	2.2 (8.3)	3.5 (13)
	15	Sintered	1.8 (51)	4.9 (130)	7.9 (220)	0.84 (3.1)	2.6 (9.8)	4.1 (15)
	60	Sintered	5.1 (140)	10 (280)	15 (420)	2.0 (7.5)	6.7 (25)	10 (37)
	80	Sintered	6.1 (170)	11 (310)	16 (450)	2.3 (8.7)	7.6 (28)	11 (41)
	40, 60, 80, 100, 150, 250, 450	Strainer	7.2 (200)	14 (390)	20 (560)	4.8 (18)	15 (56)	19 (71)

Note: Outlet is discharged to the atmosphere.

Dimensions and Ordering Information

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



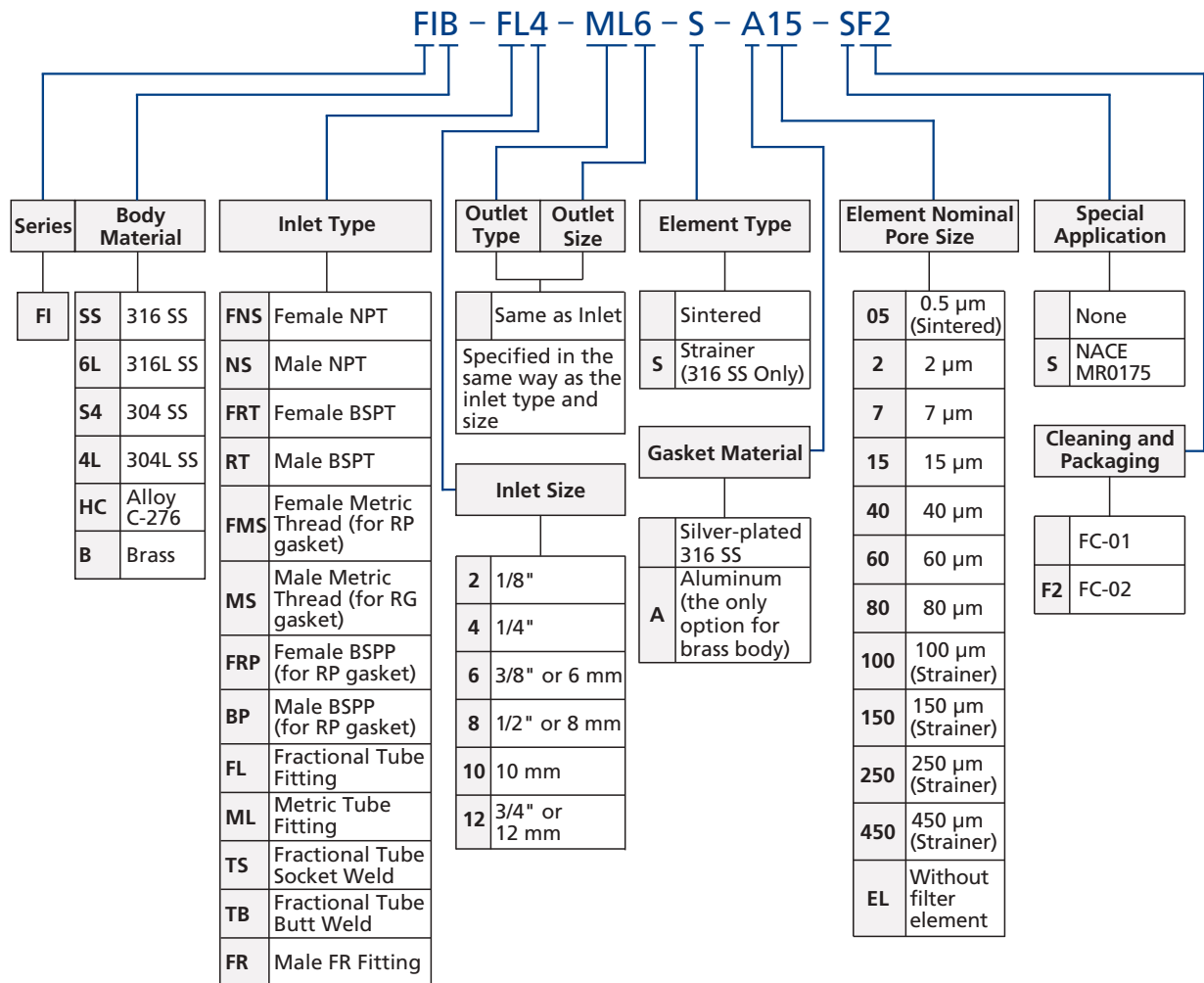
Basic Ordering Number	Connection Type and Size		Filtration Area Type	Dimensions in. (mm)	
	Inlet	Outlet		A	F
FI□□-FL2-	1/8" Tube Fitting	1/8" Tube Fitting	2	2.35 (59.7)	9/16 (14.3)
FI□□-FL4-	1/4" Tube Fitting	1/4" Tube Fitting	4	2.95 (74.9)	3/4 (19.1)
FI□□-FL6-	3/8" Tube Fitting	3/8" Tube Fitting	8	3.21 (81.5)	1 (25.4)
FI□□-FL8-	1/2" Tube Fitting	1/2" Tube Fitting	8	3.49 (88.6)	
FI□□-ML3-	3 mm Tube Fitting	3 mm Tube Fitting	2	2.38 (60.5)	9/16 (14.3)
FI□□-ML6-	6 mm Tube Fitting	6 mm Tube Fitting	4	2.96 (75.2)	3/4 (19.1)
FI□□-FNS2-	1/8 Female NPT	1/8 Female NPT	2	2.16 (54.9)	9/16 (14.3)
FI□□-FNS4-	1/4 Female NPT	1/4 Female NPT	4	2.87 (72.9)	3/4 (19.1)
FI□□-NS2-	1/8 Male NPT	1/8 Male NPT	2	1.88 (47.7)	9/16 (14.3)
FI□□-NS4-	1/4 Male NPT	1/4 Male NPT	4	2.69 (68.3)	3/4 (19.1)
FI□□-FR2-	1/8 Male FR	1/8 Male FR	2	2.03 (51.6)	9/16 (14.3)
FI□□-FR4-	1/4 Male FR	1/4 Male FR	4	2.79 (70.8)	3/4 (19.1)
FI□□-FRT2-	1/8 Female BSPT	1/8 Female BSPT	2	2.16 (54.9)	9/16 (14.3)
FI□□-FRT4-	1/4 Female BSPT	1/4 Female BSPT	4	2.87 (72.9)	3/4 (19.1)
FI□□-RT2-	1/8 Male BSPT	1/8 Male BSPT	2	1.88 (47.7)	9/16 (14.3)
FI□□-RT4-	1/4 Male BSPT	1/4 Male BSPT	4	2.69 (68.3)	3/4 (19.1)

1. FR means metal gasket seal fittings.
2. Sizes and types listed are standard. Other sizes and types are available upon request.
3. Dimensions are shown with FITOK nuts finger-tightened. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

Special Alloys

Alloy filters in some sizes are available, featuring sintered filter elements made from Alloy C-276. For details, please contact FITOK.

Filters Ordering Number Description



Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

1. Cleaning and Packaging:

FC-01: Standard cleaning and packaging for basic industrial procedures.

FC-02: Special cleaning and packaging for wetted system components to ensure compliance requirement as stated in ASTM G93 Level C.

2. Standard thread pitch for metric threads are as follows:

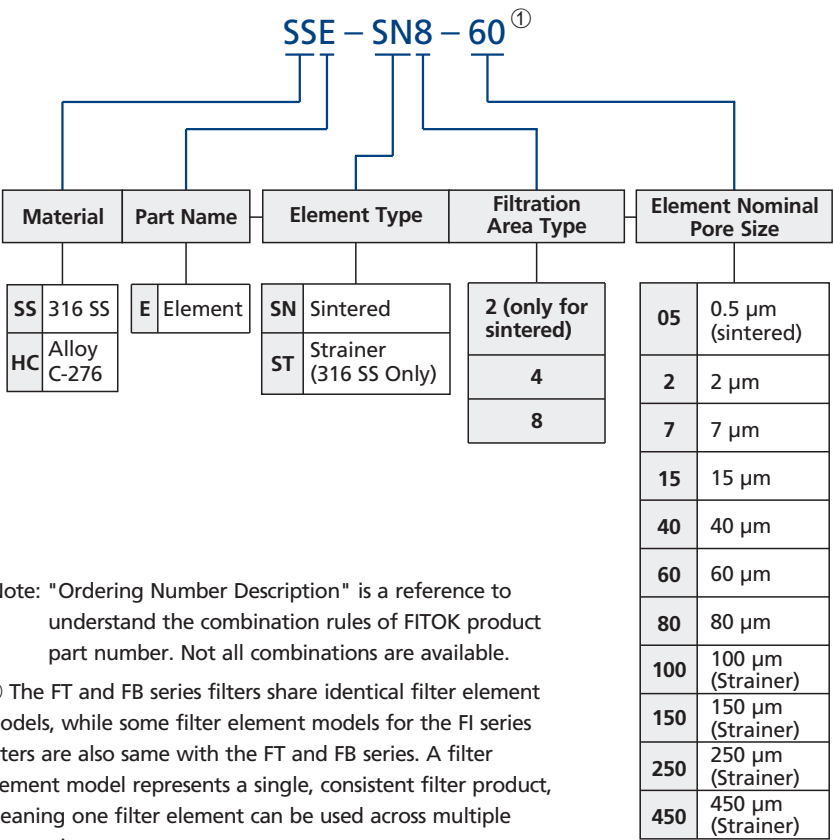
M10 and below: 1 mm

M12 to M24: 1.5 mm

M27 and above: 2 mm

Standard thread pitch should be ignored in the ordering number, others should be specified.

Elements Ordering Number Description



All-Welded In-Line Filters

FW Series

Introduction

All-Welded In-Line Filters are compact-designed to trap particle contaminants in limited space. Body-to-element weld prevents bypass flow. Filter elements can be easily cleaned by back-flushing.

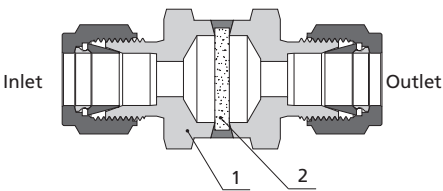


Features

- Full-penetration weld between body and filter element
- Working pressure up to 6000 psig (414 bar)
- Working temperature: -20°F to 900°F (-28°C to 482°C)
- Variety of end connections available

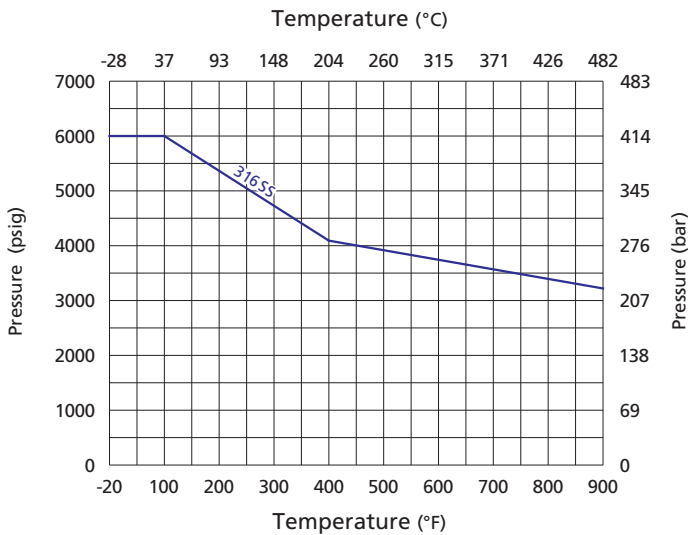
Standard Materials of Construction

Item	Component	Body Material
		316 SS
		Material Grade/ASTM Specification
1	Body	F316 SS/A182
		316 SS/A479
2	Element	Sintered 316 SS or strainer 316 SS



FW Series Sintered Filter Shown

Pressure vs. Temperature



Filter Elements

Sintered



- 316 SS powder metallurgy
- Sheet-shaped filter cake to trap particles as small as 0.5 μm in diameter

Strainer



Mesh Framework

Filter Element

Mesh Framework

- 316 SS wire mesh framework sandwiched filter design
- Uniform mesh pores to allow for stable flows

Combination Strainer (Optional)



- Multi-layer 316 SS wire meshes overlaid
- Uniform mesh pores with high strength to allow for stable flows

Nominal Pore Size of Filter Elements

	Nominal Pore Size	Pore Size Range	Element Designator
Sintered	0.5 μm	0.5 to 2 μm	05
Strainer	2 μm	6250 mesh	2
	7 μm	3500 mesh	7
	15 μm	800 mesh	15

Note: Filter elements remove 95% of particles larger than the nominal pore size.

Filtration Area

Filtration Area Type	Filtration Area, in. ² (mm ²)	
	Sintered	Strainer
—	0.39 (254)	0.39 (254)

Note: For FW series, sintered element available only for 0.5 μm nominal pore size, and strainer element option for the other sizes.

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

Maximum Differential Pressure psig (bar)			
0.5 μm	2 μm	7 μm	15 μm
600 (41.4)		100 (6.9)	

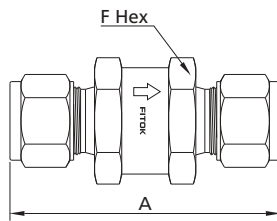
Flow Data

Filtration Area Type	Element Nominal Pore Size μm	Element Type	Inlet Pressure, psig (bar)			Pressure Drop, psig (bar)		
			5 (0.34)	10 (0.68)	15 (1.0)	10 (0.68)	50 (3.4)	100 (6.8)
			Air Flow, std ft ³ /min (L/min)			Water Flow, U.S. gal/min (L/min)		
-	0.5	Sintered	0.04 (1.1)	0.06 (1.7)	0.12 (3.4)	0.01 (0.03)	0.04 (0.15)	0.12 (0.45)
	2	Strainer/ Combination Strainer	5.6 (150)	10 (280)	14 (390)	1.7 (6.4)	5.5 (20)	8.3 (31)
	7	Strainer/ Combination Strainer				3.5 (13)	11 (41)	14 (52)
	15	Strainer/ Combination Strainer				4.5 (17)	14 (52)	18 (68)

Note: Outlet is discharged to the atmosphere.

Dimensions and Ordering Information

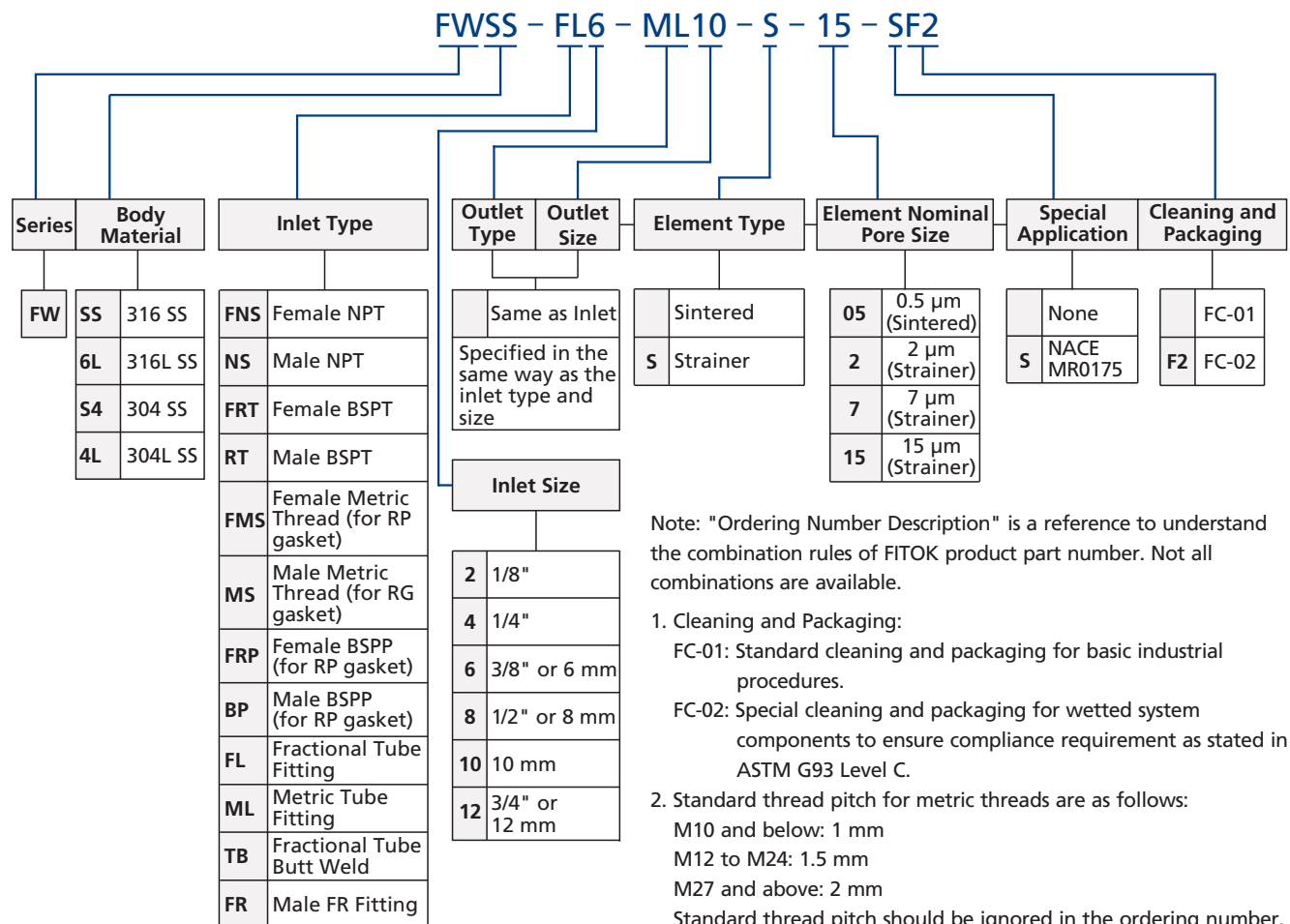
Dimensions, in inches (millimeters), are for reference only.



Basic Ordering Number	Connection Type and Size		Dimensions in. (mm)	
	Inlet	Outlet	A	F
FW□□-FL4-	1/4" Tube Fitting	1/4" Tube Fitting	2.15 (54.6)	1 (25.4)
FW□□-ML6-	6 mm Tube Fitting	6 mm Tube Fitting		
FW□□-FNS4-	1/4 Female NPT	1/4 Female NPT	1.57 (39.9)	
FW□□-NS4-	1/4 Male NPT	1/4 Male NPT	1.89 (48.0)	
FW□□-FR4-	1/4 Male FR	1/4 Male FR	2.04 (51.8)	

1. For FW series, sintered element available only for 0.5 µm nominal pore size, and strainer element option for the other nominal pore sizes.
2. FR means metal gasket seal fittings.
3. Sizes and types listed are standard. Other sizes and types are available upon request.
4. Dimensions are shown with FITOK nuts finger-tightened. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

Filters Ordering Number Description



High Flow, High Dirt-Holding Bypass Filters

FH Series

Introduction

FH Series High Flow, High Dirt-Holding Bypass Filters feature high flow capacity, superior dirt-holding capability, extended service life, high filtration efficiency, and broad media compatibility. They are ideal for a wide range of high-flow piping systems.

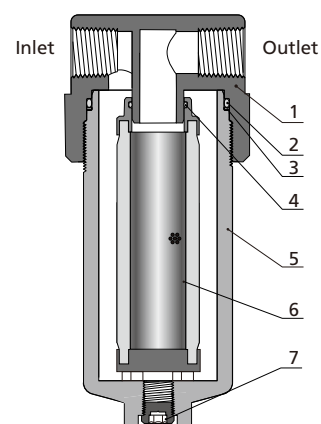
Features

- Filtration area type: 4H and 8H
- High flow capacity, high dirt-holding capacity, and long service life
- Bypass port at filter bottom optional for the ease of sampling or purging
- Integrated wire mesh filter element for easy disassembly, cleaning, and maintenance
- FKM O-ring by default
- Working pressure up to 5000 psig (345 bar)
- Variety of end connections optional



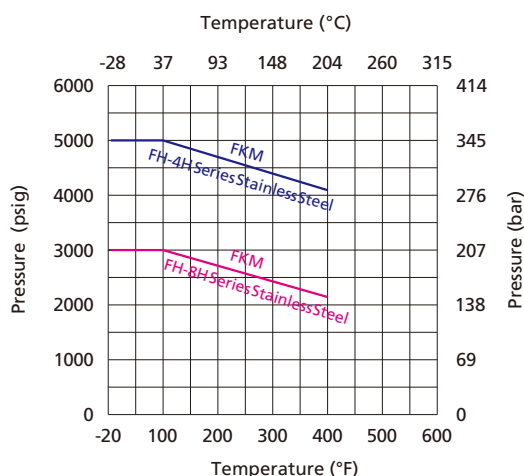
Standard Materials of Construction

Item	Component	Body Material
		316 SS
		Material Grade/ASTM Specification
1	Filter End Cap	F316 SS/A182
2	O-ring	FKM/NBR/EPDM/FFKM
3	Backup Ring	PTFE
4	O-ring	FKM/NBR/EPDM/FFKM
5	Filter Housing	316 SS/A479
6	Element	316 SS
7	Plug	316 SS



FH Series Wire Mesh Filter Shown

Pressure vs. Temperature



Note: For Pressure vs. Temperature curves for other seal materials listed above, please contact FITOK or our authorized distributors.

Temperature Range of Sealing Materials

O-ring Material	Temperature Range °F (°C)
FKM	-4 to 400 (-20 to 204)
NBR	-20 to 212 (-28 to 100)
EPDM	-50 to 250 (-45 to 121)
FFKM	30 to 600 (-1 to 315)

Filter Elements

Multi-Layer Sintered Wire Mesh

Manufactured from multiple layers of precision wire mesh that are integrally formed through a high-temperature vacuum sintering process, this filter element features a unique five-layer composite structure that delivers exceptional mechanical strength and rigidity while eliminating layer separation and wire migration. Its graded-depth filtration structure provides uniform, stable filtration accuracy. The filter withstands high temperatures, high pressures, and highly corrosive media, while supporting multiple cleaning and regeneration methods to maintain high filtration performance and significantly extend service life.

- ⦿ Structural Advantages: Five-layer integrally sintered construction provides exceptional rigidity and eliminates layer separation and wire migration
- ⦿ Material Advantages: Premium 316L stainless steel offers outstanding resistance to high temperatures, high pressures, and corrosive media
- ⦿ Performance Advantages: Uniform pore size, stable filtration accuracy, depth filtration, and regenerability via repeated cleaning
- ⦿ Application Advantages: Suitable for demanding working conditions, broad media compatibility, long service life

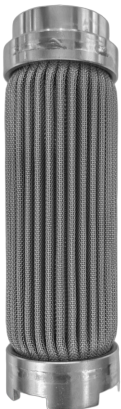


Applicable to FH-4H Series

Multi-Layer Pleated Wire Mesh

Constructed from precision wire mesh using a scientifically engineered pleating process, this filter features a geometric pleated design that significantly increases the effective filtration area, enabling substantially higher dirt-holding capacity within the same filter volume. Its metal construction provides excellent mechanical strength and differential pressure resistance. Combined with depth filtration, it effectively captures micron-sized particles, ensuring sustained high-flow performance and extended service life under demanding working conditions.

- ⦿ Structural Advantages: Pleated design increases filtration area severalfold, significantly improving dirt-holding capacity
- ⦿ Material Advantages: 316L stainless steel wire mesh provides excellent strength, durability, and pressure resistance
- ⦿ Performance Advantages: Depth filtration for long-lasting, low-maintenance operation
- ⦿ Application Advantages: Designed for demanding working conditions with broad media compatibility



Applicable to FH-8H Series

Nominal Pore Size of Filter Elements

	Nominal Pore Size	Pore Size Range	Element Designator
Strainer	5 μm	2500 mesh	5
	25 μm	500 mesh	25
	100 μm	140 mesh	100
	150 μm	100 mesh	150
	250 μm	60 mesh	250
	450 μm	40 mesh	450

Note: Filter elements remove 95% of particles larger than the nominal pore size.

Filtration Area

Filtration Area Type	Filtration Area, in. ² (mm ²)
	Strainer
4H	10.70 (6908)
8H	71.50 (46128)

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

Maximum Differential Pressure psig (bar)					
5 µm	25 µm	100 µm	150 µm	250 µm	450 µm
1000 (69.0)					

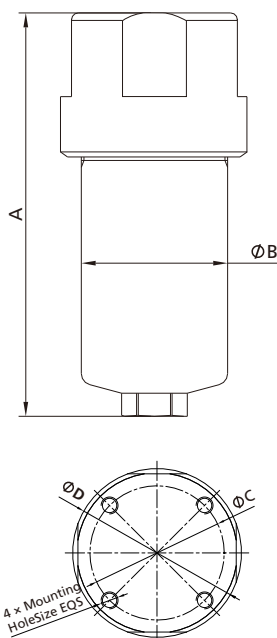
Flow Data

Filtration Area Type	Element Nominal Pore Size µm	Element Type	Inlet Pressure, psig (bar)		
			2 (0.14)	5 (0.34)	8 (0.55)
			Air Flow, std · m ³ /h		
4H	5, 25, 100, 150, 250	Strainer	20	33.2	41.6
8H	5, 25, 100, 150, 250, 450	Strainer	28.2	51	63.8

Note: Outlet is discharged to the atmosphere.

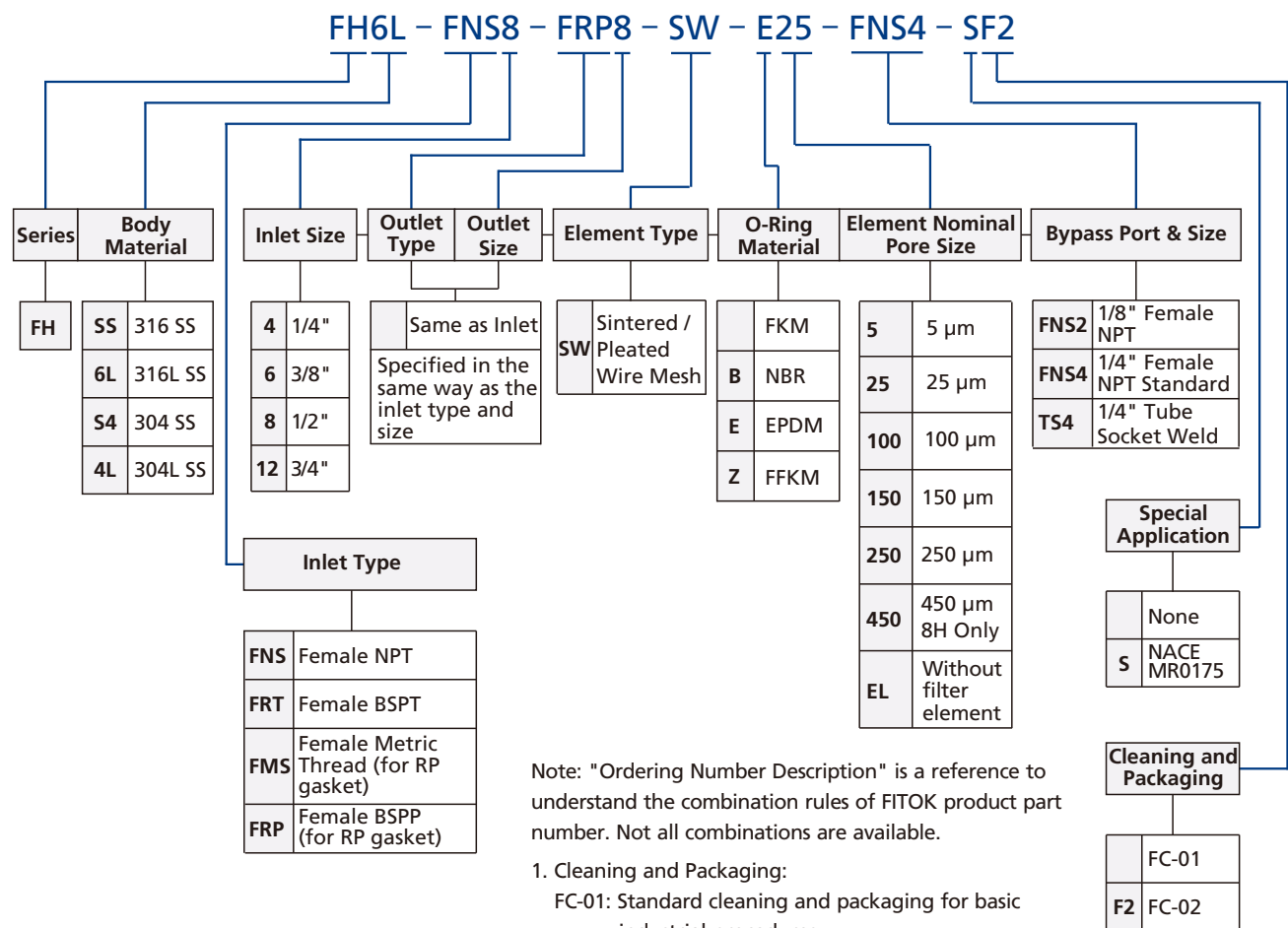
Dimensions and Ordering Information

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



Basic Ordering Number	Connection Type and Size		Filtration Area Type	Dimensions in. (mm)				
	Inlet	Outlet		A	ØB	ØC	ØD	Mounting Hole Size
FH□□-FNS4-SW-□□	1/4 Female NPT	1/4 Female NPT	4H	6.01 (152.7)	1.61 (41)	1.67 (42.4)	2.15 (54.5)	M6 - 6H threads 0.39" (10 mm) deep, pores 0.47" (12 mm) deep
FH□□-FRT4-SW-□□	1/4 Female BSPT	1/4 Female BSPT						
FH□□-FRP4-SW-□□	1/4 Female BSPP	1/4 Female BSPP						
FH□□-FNS6-SW-□□	3/8 Female NPT	3/8 Female NPT	8H	6.92 (176)	2.5 (63.5)	2.5 (63.5)	3.15 (80)	M8 - 6H threads 0.59" (15 mm) deep, pores 0.71" (18 mm) deep
FH□□-FRT6-SW-□□	3/8 Female BSPT	3/8 Female BSPT						
FH□□-FRP6-SW-□□	3/8 Female BSPP	3/8 Female BSPP						
FH□□-FNS8-SW-□□	1/2 Female NPT	1/2 Female NPT						
FH□□-FRT8-SW-□□	1/2 Female BSPT	1/2 Female BSPT						
FH□□-FRP8-SW-□□	1/2 Female BSPP	1/2 Female BSPP						
FH□□-FNS12-SW-□□	3/4 Female NPT	3/4 Female NPT		7.19 (182.5)	2.5 (63.5)	2.83 (71.8)	3.46 (88)	
FH□□-FRT12-SW-□□	3/4 Female BSPT	3/4 Female BSPT						
FH□□-FRP12-SW-□□	3/4 Female BSPP	3/4 Female BSPP						

Filters Ordering Number Description



Elements Ordering Number Description

