

Gas Filters



FC Series

- Coalescing or particle filtration
- Designed for on-line process analyzers
- Easy element replacement
- 1/8 in., 1/4 in., and 6 mm end connections

GAS
FILTERS

Features

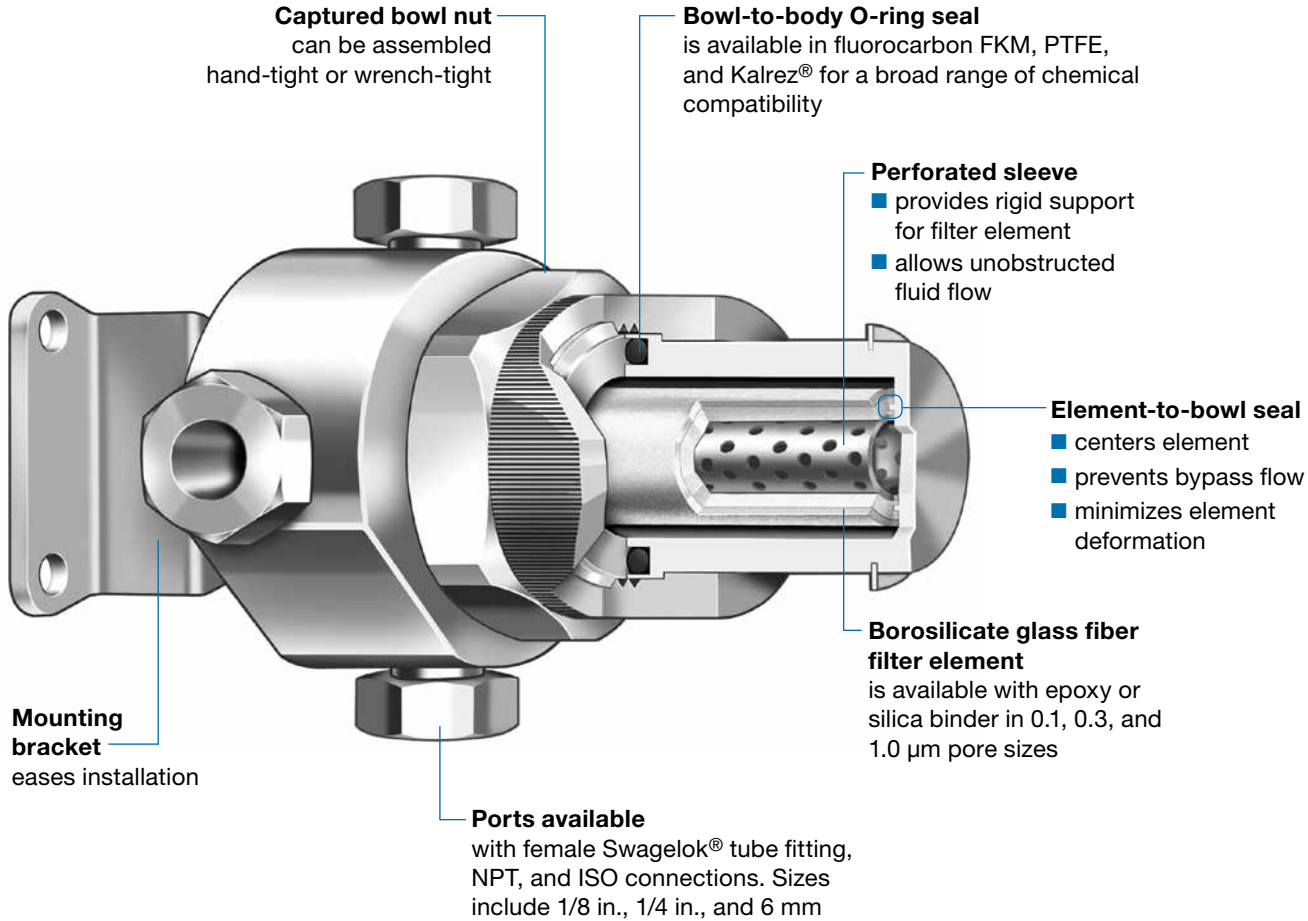
- Horizontal mounting reduces panel space requirements.
- Drain connection port located on body eliminates need to disconnect line when changing elements.
- Stainless steel construction enhances system cleanliness.

Particulate Efficiency

99.99 % (all elements)

Internal Volume

1.2 in.³ (19.7 cm³)



Materials of Construction

Component	Material Grade/ ASTM Specification
<i>Body, bowl</i>	316 SS/A479
Bowl nut	316 SS/A479
O-ring	Fluorocarbon FKM
<i>Filter element</i>	<i>Borosilicate glass fiber with epoxy or silica binder</i>
Sleeve	316 SS/A240
Retaining ring, mounting bracket	316 SS/A240
Mounting bracket bolt (2)	316 SS

Wetted components listed in *italics*.

Pressure-Temperature Ratings

Ratings are based on bowl nut tightened to 45 in.-lb (5 N·m). Ratings are limited to 250°F (121°C) with epoxy binder. Ratings extend to 400°F (204°C) with silica binder.

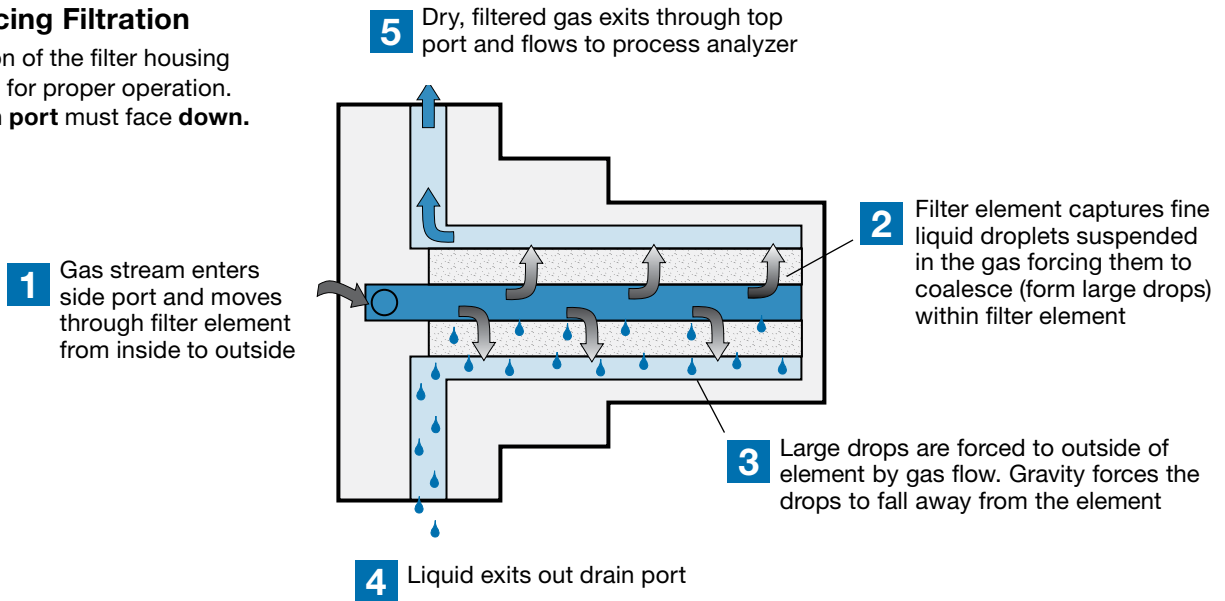
Fluorocarbon FKM O-rings are standard; for optional O-ring materials and ratings, see **Options**, page 961.

Material	316 SS
Temperature °F (°C)	Working Pressure psig (bar)
0 (-17) to 100 (37)	1000 (68.9)
150 (65)	955 (65.7)
200 (93)	915 (63.0)
250 (121)	870 (59.9)
300 (148)	825 (56.8)
350 (176)	795 (54.7)
400 (204)	760 (52.3)

Operation

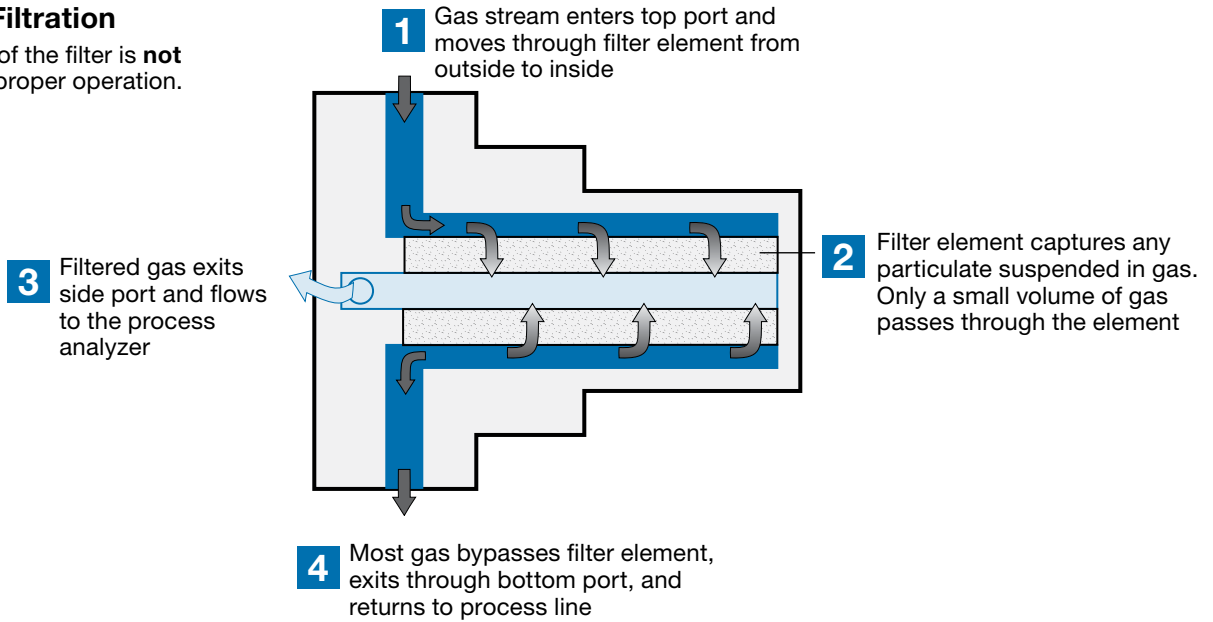
Coalescing Filtration

Orientation of the filter housing is **critical** for proper operation. The **drain port** must face **down**.



Particle Filtration

Orientation of the filter is **not critical** for proper operation.



Air Flow Data at 70°F (20°C)

2 psi (0.13 bar) pressure differential

Pore Size µm	Inlet Pressure, psig (bar)							
	5 (0.34)	10 (0.68)	20 (1.3)	40 (2.7)	100 (6.8)	250 (17.2)	500 (34.4)	1000 (68.9)
Air Flow, std ft ³ /min (std L/min)								
0.1, 0.3	1.7 (48)	1.9 (53)	2.5 (70)	3.4 (96)	6.0 (160)	10 (280)	15 (420)	25 (700)
1.0	2.8 (79)	3.2 (90)	3.8 (100)	4.8 (130)	7.3 (200)	—	—	—

Cleaning and Packaging

All FC series filters are cleaned in accordance with Swagelok *Standard Cleaning and Packaging (SC-10)*, (MS-06-62), page 1174.

Ordering Information and Dimensions

Select a filter ordering number and an element ordering number.

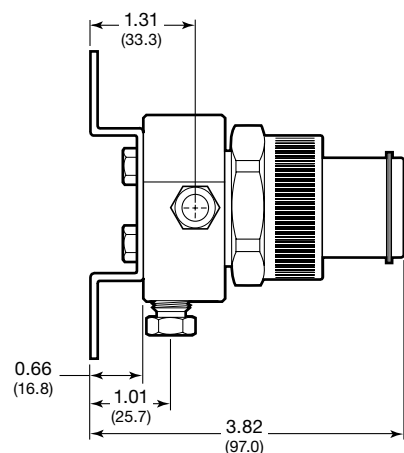
End Connections		Filter Ordering Number
Type	Size	
Female Swagelok tube fitting	1/4 in.	SS-FCB
	6 mm	SS-FCC
Female NPT	1/8 in.	SS-FCD
	1/4 in.	SS-FCE
Female ISO ^①	1/4 in.	SS-FCG

① See specifications ISO7/1, BS EN 10226-1, DIN 2999, JIS B0203.

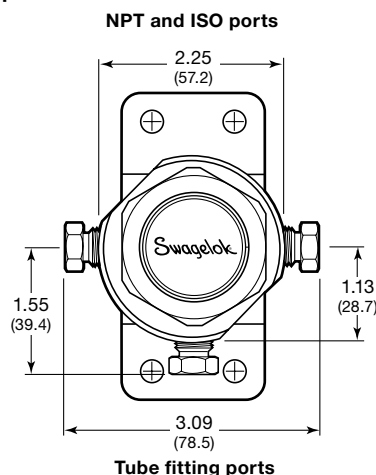
Nominal Pore Size μm	Filtration Service	Element Ordering Number
Epoxy Binder		
0.1	Particle	GE-15K-FC-01
0.3	Coalescing and particle	GE-15K-FC-03
1.0	Particle	GE-15K-FC-10
Silica Binder		
0.1	Particle	GS-15K-FC-01

Dimensions, in inches (millimeters), are for reference only and are subject to change.

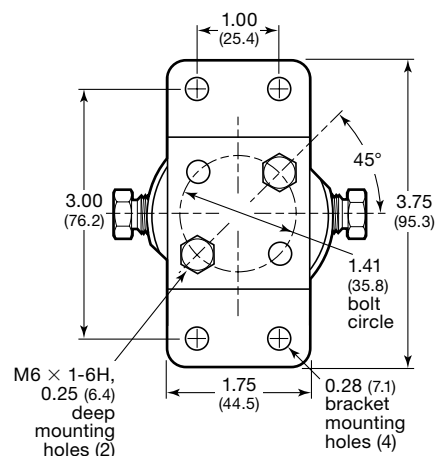
Side



Top



Bottom



Options

Special Cleaning and Packaging (SC-11)

To order FC series filters with optional cleaning and packaging in accordance with Swagelok *Special Cleaning and Packaging (SC-11)* (MS-06-63), page 1175, to ensure compliance with product cleanliness requirements stated in ASTM G93 Level C, add -SC11 to the filter ordering number.

Example: SS-FCB-SC11

Oxygen Service Hazards

For more information about hazards and risks of oxygen-enriched systems, see the Swagelok *Oxygen System Safety* technical report (MS-06-13), page 1184.

O-Ring Materials

Fluorocarbon FKM is standard. PTFE and Kalrez are available.

To order an FC series filter with an optional O-ring, add a designator to the ordering number.

Example: SS-FCB-KZ

O-Ring Kits

Select a kit ordering number.

O-Ring Material	Temperature Rating, °F (°C)	Designator	Kit Ordering Number
Fluorocarbon FKM	0 to 400 (-17 to 204)	—	VT-9K-FC
Kalrez	32 to 350 (0 to 176)	-KZ	KZ-9K-FC
PTFE	0 to 400 (-17 to 204)	-TR	T-9K-FC

Caution: Do not mix or interchange parts with those of other manufacturers.

About this document

Thank you for downloading this electronic catalog, which is part of General Product catalog Swagelok published in print. This type of electronic catalog is updated as new information arises or revisions, which may be more current than the printed version.

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Visit www.swagelok.com to locate your Swagelok representative and obtain any information on features, technical information and product references, or to learn about the variety of services available only through authorized sales centers and service Swagelok.

Safe Product Selection

When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

Warranty Information

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit your Swagelok Web site or contact your authorized Swagelok representative.

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AutoCAD—TM Autodesk, Inc.
CSA—TM Canadian Standards Association
DeviceNet—TM ODVA
Kalrez, Krytox—TM DuPont
Elgiloy—TM Elgiloy Specialty Metals
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Microsoft, Windows—TM Microsoft Corp.
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