

Industrial Filter *FGD Series*

How to Order

FGD **C** **A** - **03** - **B** **002** **N**

Element length

Symbol	Element length
A	L250
B	L500 (L250 x 2)

Port size

Symbol	Port size Rc
03	3/8
04	1/2
06	3/4

Accessory

Symbol	Accessory
—	None
-B	Bracket

Element category

Symbol	Element type	Material
B	Sintered metal	Bronze
S		Stainless steel
T	Fibre (Honeycomb)	Polypropylene
G		Glass fiber
H		Cotton
P	Paper	Cotton
M	Micromesh	Stainless steel 304/Epoxy
L		Stainless steel 316
J	HEPO II	Polyester/Polypropylene

Element seal material (Note)

Symbol	Element seal material
A	Non-asbestos
T	Fluororesin
N	NBR
V	FKM

Note) Refer to the below table for the element seal material types by the element category.

Material

Symbol	Cover	Case	Gasket/O-ring	Seal
C	Aluminium	SPCD	NBR	Nylon
E	Aluminium	SPCD	NBR	Nylon/Fluororesin (Antistatic specifications)
T	SCS14	Stainless steel 316	Fluororesin	Fluororesin
F	SCS14	Stainless steel 316	Fluororesin	Fluororesin (Antistatic specifications)

Note) If there is a static charge, select a product with an antistatic specification.

Nominal filtration accuracy [μm] (Note)

Symbol	Nominal filtration accuracy [μm]
X50	0.5
001	1
002	2
005	5
010	10
020	20
040	40
050	50
070	70
074	74
075	75
100	100
105	105
120	120

Element/Element Seal Material Combinations

Element seal material Element material		— (Without seal)	Non-asbestos	PTFE	NBR	FKM
		A	T	N	V	
B	Bronze			○	○	○
S	Stainless steel		○	○	○	○
T	Polypropylene	○				
G	Glass fibre	○				
H	Cotton (Fibre)	○				
P	Cotton (Paper)				○	○
M	Stainless steel 304/Epoxy				○	○
L	Stainless steel 316		○	○	○	○
J	Polyester/PP			○	○	○

Note 1) The industrial filter described in this catalogue are products in which an element is incorporated into a vessel.

Note 2) When ordering only a vessel (replacement part), delete each symbol for "Element category", "Nominal filtration accuracy (μm)" and "Element seal material" from the above "How to Order."

Note 3) Please use industrial filters in combination with parts made by SMC (vessels, elements etc.)



- Suitable for low flow rate, low pressure "filtration."
- Can be used with a wide range of fluids.
- Antistatic specifications (FGDE, FGDF)



EMC-FGD-01A-UK

Specifications

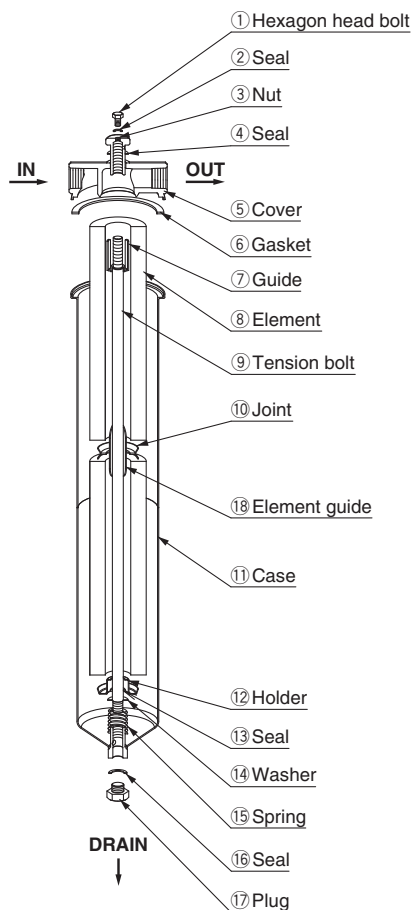
Model		FGDCA	FGDCB	FGDEA	FGDEB	FGDTA	FGDTB	FGDFA	FGDFB
Port size [Rc]		3/8, 1/2, 3/4							
Max. operating pressure [MPa] ^{Note 1)}		0.7				1			
Operating temperature [°C]		0 to 80							
Number of elements		1	2 ^{Note 2)}	1	2 ^{Note 2)}	1	2 ^{Note 2)}	1	2 ^{Note 2)}
Element size		Ø 65 to 70 x L250	Ø 65 to 70 x L500 (L250 x 2)	Ø 65 to 70 x L250	Ø 65 to 70 x L500 (L250 x 2)	Ø 65 to 70 x L250	Ø 65 to 70 x L500 (L250 x 2)	Ø 65 to 70 x L250	Ø 65 to 70 x L500 (L250 x 2)
<div><div>Note 3)</div><div>Main materials</div></div>	Cover	Aluminium				SCS14			
	Case	SPCE				Stainless steel 316			
	Gasket/O-ring	NBR				Fluororesin			
	Seal	Nylon		Nylon/Fluororesin		Fluororesin			
Weight [kg]		1.3	2.2	1.3	2.2	2.3	3.8	2.3	3.8
Internal capacity [L]		1.7	3.4	1.7	3.4	1.7	3.4	1.7	3.4

Note 1) For gases, 0.5 MPa.

Note 2) 1 element (Ø 65 x L500) in the case of a sintered metal element or paper element.

Note 3) The sealing performance of nylon and fluororesin seals may decrease over time. Periodically check the tightening torque specified in the operation manual.

Replacement Parts and Seal List



Parts Descriptions and Functions

No.	Description	Material	Function
1	Hexagon head bolt	Stainless steel or iron	Plug to release air in the housing
2	Seal	Resin	
3	Nut	Stainless steel or iron	Tightens the cover.
4	Seal	Resin	
5	Cover	Stainless steel or Aluminium	The lid of the filter body
6	Gasket	Resin or rubber	
7	Guide	Stainless steel	Seals the gap between the element and tension bolt.
8	Element	Depends on the element type.	The mounted element collects residue.
9	Tension bolt	Stainless steel or iron	Connects the case and cover.
10	Joint	Stainless steel	Seals the area between elements. (when two FGD□B elements are used)
11	Case	Stainless steel or iron	Filter body
12	Holder	Stainless steel	Seals the elements.
13	Seal	Resin or rubber	
14	Washer	Stainless steel	
15	Spring	Stainless steel	Stabilises the element.
16	Seal	Resin	
17	Plug	Stainless steel or iron	Drainage discharging plug
18	Element guide	Stainless steel or iron	

Replacement Parts

Description	Part no.	Applicable model	Part no. (Kit contents)
Nut kit	FGD-KT001	FGDC	①, ②, ③, ④: 1 pc. each
	FGD-KT002	FGDE	
	FGD-KT003	FGDT	
	FGD-KT004	FGDF	
Replacement cover	FGD-CV005- ⁰³ ₀₄ ₀₆	FGDT/F	⑤
	FGD-CV006- ⁰³ ₀₄ ₀₆	FGDC/E	
Joint	FGD-OP001	FGDI	⑩
Seal kit	KT-FGDC	FGDC	②, ④, ⑥, ⑬, ⑯: 1 pc. each
	KT-FGDE	FGDE	
	KT-FGDT	FGDT	
	KT-FGDF	FGDF	
Replacement case assembly	FGD-CA002	FGDT/F(L250)	⑦, ⑨, ⑪, ⑫, ⑬, ⑭, ⑮, ⑯, ⑰ : 1 pc. each Note) Only the FGD-CA003 and CA005 includes ⑱ element guide in the set.
	FGD-CA003	FGDT/F(L500)	
	FGD-CA004	FGDC/E(L250)	
	FGD-CA005	FGDC/E(L500)	

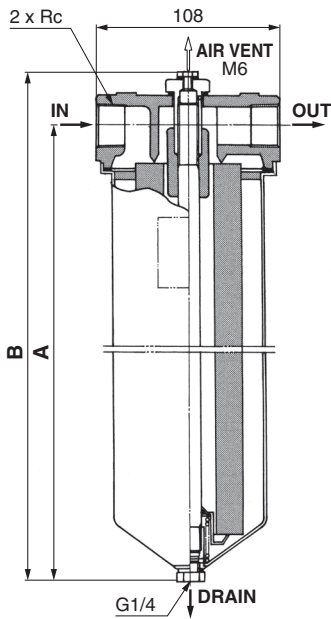
Parts descriptions and functions

(Figure shows the product with two FGD□B elements.)

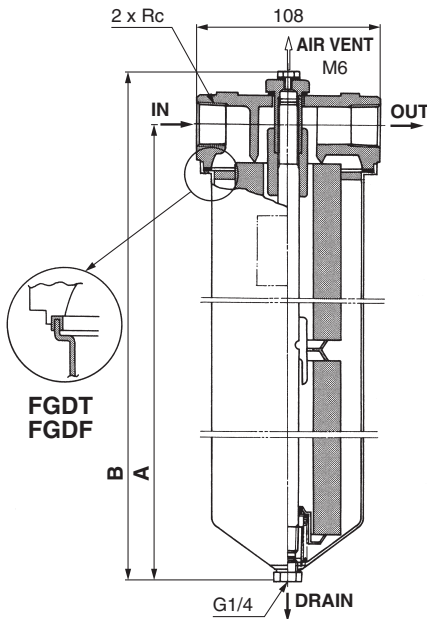
Note) There is no compatibility between the FGDT/F and FGDC/E as the seal structure on the gasket portion is different. Use the cover and case of the same model.

Dimensions

FGD□A (1 element)



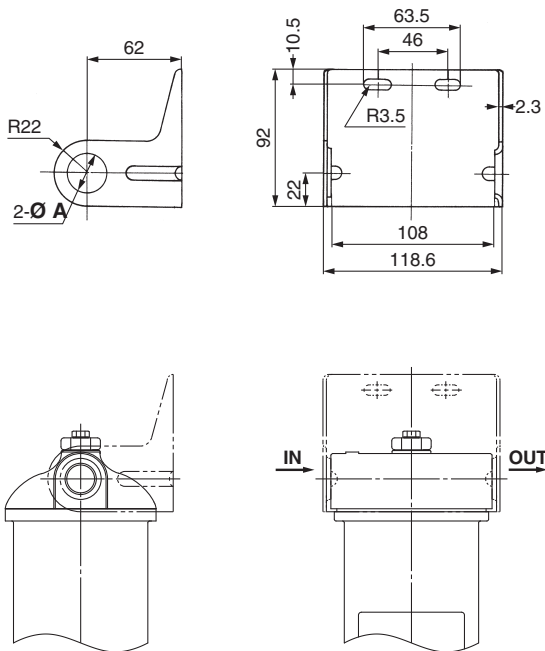
FGD□B (2 elements)



* Element removal dimension: 50 mm

[mm]				
Model	Element length	A	B	Port size Rc
FGDC	A (L250)	314	346	3/8, 1/2, 3/4
FGDE	B (L500)	574	606	
FGDT	A (L250)	314	349	
FGDF	B (L500)	574	608	

Accessory/Bracket






[mm]				
Part no.	Ø A	Port size Rc	Material	Surface treatment
BP-1S	17.5	3/8	SPCC	Zinc chromated
BP-2S	22	1/2		
BP-3S	27.5	3/4		

Note) Secure the filter with steel piping.
Use this bracket for piping support.
(Flexible piping cannot be used to secure the filter.)

Mounting position

Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of “Caution,” “Warning” or “Danger.” They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)¹⁾, and other safety regulations.

-  **Caution:** **Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
-  **Warning:** **Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
-  **Danger:** **Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

- 1) ISO 4414: Pneumatic fluid power – General rules relating to systems.
ISO 4413: Hydraulic fluid power – General rules relating to systems.
IEC 60204-1: Safety of machinery – Electrical equipment of machines.
(Part 1: General requirements)
ISO 10218-1: Manipulating industrial robots - Safety.
etc.

Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalogue information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.

The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.

1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalogue.
3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

Caution

1. The product is provided for use in manufacturing industries.

The product herein described is basically provided for peaceful use in manufacturing industries.
If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary.
If anything is unclear, contact your nearest sales branch.

Limited warranty and Disclaimer/Compliance Requirements

The product used is subject to the following “Limited warranty and Disclaimer” and “Compliance Requirements”. Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.²⁾ Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
 2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided. This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
 3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalogue for the particular products.
- 2) Vacuum pads are excluded from this 1 year warranty.
A vacuum pad is a consumable part, so it is warranted for a year after it is delivered. Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

Caution

SMC products are not intended for use as instruments for legal metrology.

Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country.
Therefore, SMC products cannot be used for business or certification ordained by the metrology (measurement) laws of each country.

Safety Instructions

Be sure to read “Handling Precautions for SMC Products” (M-E03-3) before using.

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