

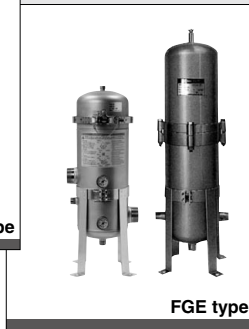
Industrial Filters

Series FGD/FGE/FGG/FGA/FGB/FGC

Vessel/Elements



FGD type

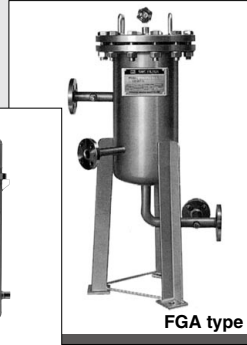


FGE type



FGG type

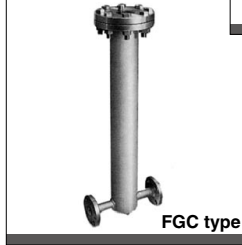
Vessel Series



FGA type

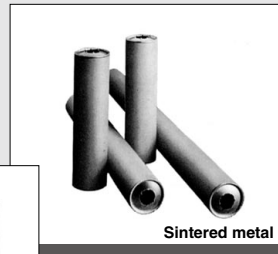


FGB type

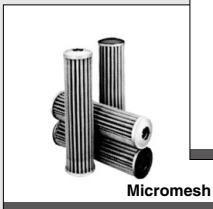


FGC type

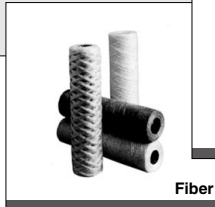
Elements



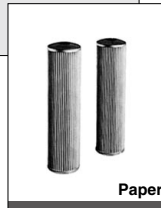
Sintered metal



Micromesh



Fiber



Paper

FGD

FGE

FGG

FGA

FGB

FGC

FGF

FGH

EJ

ED

FQ1

FN

EB

ES

SMC industrial filters are

SMC

Elements can be incorporated
Please use by setting an element



Industrial Filters (Series FG□)





Series	Application/Specifications	Page
<p>Series FGD</p> <ul style="list-style-type: none"> Suitable for low flow rate, low pressure "filtration". Can be used with a wide range of fluids. Antistatic specifications (FGDE, FGDF) 	<ul style="list-style-type: none"> Application: Low flow rate filtration (Max. 60 L/min) Specifications: Maximum operating pressure: 0.7, 1 MPa Port size: Rc3/8, 1/2, 3/4 Body materials: Cover: Aluminum, SCS14 Case: SPCD, Stainless steel 316 	P.1140
<p>Series FGE</p> <ul style="list-style-type: none"> Suitable for medium flow rate, low pressure "filtration". Element replacement is easy with the V-band type. (with cover anti-scattering mechanism) Can be used with a wide range of fluids. 	<ul style="list-style-type: none"> Application: Medium flow rate filtration (Max. 230 L/min) Specifications: Maximum operating pressure: 0.7 MPa Port size: R1, 2 Body material: Stainless steel 304 	P.1143
<p>Series FGG</p> <ul style="list-style-type: none"> Suitable for high flow rate, low pressure "filtration". Element replacement is easy with the V-band type. (with cover anti-scattering mechanism) 	<ul style="list-style-type: none"> Application: High flow rate filtration (Max. 350L/min) Specifications: Maximum operating pressure: 0.7 MPa Port size: Rc2 (female) Body material: Stainless steel 304 	P.1146
<p>Series FGA (Made to Order)</p> <ul style="list-style-type: none"> Various types of elements can be selected according to the "filtration conditions", and the unit can be used for a wide range of applications. This type has a vertical structure, so there is little loss of "filtrate". Maintenance and inspection—element replacement in particular is easy. When using with a class 2 pressure vessel, this will be handled as a special order product. 	<ul style="list-style-type: none"> Application: High flow rate filtration (Max. 3200 L/min) Specifications: Maximum operating pressure: 1 MPa Port size: Flange JIS 10KFF 25 to 150 (1^B to 6^B) Body materials: SS400, Stainless steel 304 (wetted parts) 	P.1149
<p>Series FGB (Made to Order)</p> <ul style="list-style-type: none"> Various types of elements can be selected according to the "filtration conditions." The element is of the hanging type, so the structure is suitable for filtration of gases having a large difference in specific gravity from particles, for "filtration" of severely fouled fluids, and for backwash type elements (sintered metal, micromesh). During maintenance, the partition plate can be removed together with the element, so internal cleaning and inspection are easy. When using with a class 2 pressure vessel, this will be handled as a special order product. 	<ul style="list-style-type: none"> Application: High flow rate filtration (Max.3800 L/min) Filtration of severely fouled fluid Specifications: Maximum operating pressure: 1 MPa Port size: Flange JIS 10KFF 25 to 150 (1^B to 6^B) Body materials: SS400, Stainless steel 304 (wetted parts) 	P.1152
<p>Series FGC (Made to Order)</p> <ul style="list-style-type: none"> Various types of elements can be selected according to the "filtration conditions", and the unit can be used for a wide range of applications. This type has a vertical structure, so there is little loss of "filtrate". Maintenance and inspection—element replacement in particular is easy. 	<ul style="list-style-type: none"> Application: Low flow rate filtration (Max. 80 L/min) Filtration of high-pressure fluid Specifications: Maximum operating pressure: 1, 2, 4 MPa Port size: Flange JIS 10KFF (FGC1) 15 to 25 (1/2^B to 1^B) JPI300^{LB}RF (FGC2) JPI600^{LB}RF (FGC4) Body materials: SS400, Stainless steel 304 (wetted parts) 	P.1155

active in all fields of industry.

Filters

into any type of vessel for SMC filters.
suited to the application in the vessel.

Elements

Element	Series	Material	Nominal filtration accuracy (µm)	Main applications	Page
Sintered metal 	EB	Bronze	1, 2, 5, 10 20, 40, 70 100, 120	All types of gases/liquids, General solvents, High-temperature fluids	P.1158
	ES	Stainless steel 316	1, 2, 5, 10 20, 40, 70 100, 120		
Fiber (Honeycomb) 	EH	Cotton	0.5, 1, 5, 10 20, 50, 75, 100	General solvents, General neutral fluids	P.1158
	EHM	Polypropylene	0.5, 1, 5, 10 20, 50, 75, 100	Plating fluids, General acids, Alkali fluids, Industrial water, Cooling water	
	EHK	Glass fiber	1, 5, 10, 20	Acidic fluids, High-temperature fluids	
Paper 	EP	Cotton, Phenol impregnated, Epoxy adhesion	5, 10, 20	Hydraulic oil, Lubricating oil, Fuel oil	P.1159
Micromesh 	EM100	Stainless steel 304 (Epoxy adhesion)	5, 10, 20, 40 74, 105	All types of gases/liquids, High-temperature fluids	P.1159
	EM500	Stainless steel 316	5, 10, 20, 40 74, 105		

FGD

FGE

FGG

FGA

FGB

FGC

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FQ1

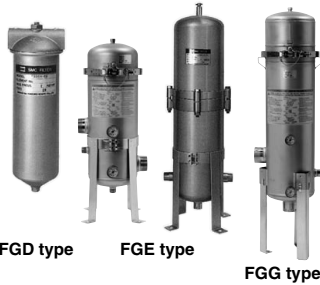
FN

EB

ES

Filter Selection by Main Application

FGD/FGE/FGG type



●: Recommended ○: Can be used ×: Cannot be used

Fluid name	Applicable element type, material	Nominal filtration accuracy (μm)	Applicable filter model								
			F G D C	F G D E	F G D T	F G D F	F G E S	F G E L	F G E T	F G G S	F G G L
Industrial water	Fiber element Polypropylene	10	×	×	●	○	●	○	○	●	○
Water for cleaning	Fiber element Polypropylene	20	×	×	●	○	●	○	○	●	○
Water	Fiber element Polypropylene	20	×	×	●	○	●	○	○	●	○
Fragrances	Fiber element Cotton	10	×	×	●	○	●	○	○	●	○
Hot water	Micromesh element Stainless steel 316	10	×	×	●	○	●	○	○	●	○
General solvents	Micromesh element Stainless steel 316	40	×	×	○	●	×	×	●	×	×
Grinding fluid (Grinding machines)	Fiber element Polypropylene	10	○	●	○	●	●	○	○	●	○
Grinding fluid (Oilstone)	Fiber element Polypropylene	10	○	●	○	●	●	○	○	●	○
Lubricating oil	Fiber element Polypropylene	10	○	●	○	●	●	○	○	●	○
Cooling water	Fiber element Polypropylene	50	×	×	●	○	●	○	○	●	○
Cleaning water	Fiber element Polypropylene	10	×	×	●	○	●	○	○	●	○
Developing fluid	Fiber element Polypropylene	10	×	×	●	○	●	○	○	●	○
Lacquer	Fiber element Cotton	50	×	×	○	●	×	×	●	×	×
Nitrogen gas	Fiber element Cotton	10	●	○	●	○	×	×	●	×	×
Carbon dioxide	Fiber element Cotton	10	●	○	●	○	×	×	●	×	×
Air (Dry)	Fiber element Cotton	0.5 to 10	●	○	●	○	×	×	●	×	×

Note) Please refer to "How to Order" for each series when a filter vessel is combined with an element.

Filter Selection by Main Application

●How to read the chart

Example)

- Application: Scale removal in water for cleaning in the brewing industry
- Treatment flow rate: 170 L/min
- Nominal filtration accuracy: Left up to the manufacturer
- Port size: 2

For the above specifications, first see "Food industry" for "Filter Selection by Main Application". The applicable element for water for cleaning is polypropylene, with a nominal filtration accuracy of 20 µm, and the applicable filter model are all models except FGDC and DGDE.

Next, see "Applicable Filter and Treatment Flow Rate". Follow the item where the fluid name is water for cleaning to the bottom, and at the point where the specifications are 170 L/min or more, see the left. The filter models FGESA, FGELA and FGETA are the applicable filter models.

Therefore, the selected filter model and element are:

Filter model = FGESA-20

Element = Polypropylene 20 µm
(EHM15R10A)

Applicable Filter and Treatment Flow Rate

*Indicates the flow rate (L/min) when the initial pressure drop (including vessel resistance) is 0.0015 MPa (for gas) or 0.015 MPa (for fluid).

Fluid name Applicable element Nominal filtration accuracy (µm)		Air (Dry)	Air (Dry)	Water	Cleaning water	Industrial water	Water for cleaning, Cooling water	Lubricating oil (20 mm ² /s)	Fragrances (1 mm ² /s)
		Cotton		Polypropylene				Paper	Micromesh
Applicable filter model		0.5 ^{Note 1)}	10 ^{Note 1)}	1	5	10	20	10	5
FGDCA	03	110	550	11	21	23	26	22	29
	04	110	750	12	27	30	36	28	42
FGDTA	06	110	1000	13	32	36	46	32	57
	06	110	1000	13	32	36	46	32	57
FGDCB	03	200	600	17	25	26	28	26	30
	04	200	840	21	35	37	41	38	44
FGDTB	06	210	1200	23	46	50	56	50	63
	06	210	1200	23	46	50	56	50	63
FGESA ^{Note 2)}	10	410	3000	45	90	120	140	100	160
FGELA ^{Note 2)}	20	410	3600	50	120	140	170	110	210
FGETA	20	410	3600	50	120	140	170	110	210
FGESB ^{Note 2)}	10	800	3300	70	140	150	160	120	170
FGELB ^{Note 2)}	20	800	4200	90	170	180	210	140	230
FGETB	20	800	4200	90	170	180	210	140	230
FGESC ^{Note 2)}	10	1100	3400	83	150	160	170	120	170
FGELC ^{Note 2)}	20	1200	4400	120	190	200	220	150	230
FGETC	20	1200	4400	120	190	200	220	150	230
FGGSB	—	—	—	160	270	300	320	290	360
FGGLB	—	—	—	160	270	300	320	290	360
FGGSC	—	—	—	200	300	320	340	320	370
FGGLC	—	—	—	200	300	320	340	320	370
FGGSD	—	—	—	230	320	330	350	330	370
FGGLD	—	—	—	230	320	330	350	330	370

Note 1) Indicates flow rate in L/min under atmospheric pressure (ANR) (at 0.5 MPa).

Note 2) Gases cannot be used.

Note 3) Please consult SMC for high flow rates other than the above.

FGD

FGE

FGG

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FQ1

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Industrial Filter Series FGD

How to Order

FGD C A - 03 - B 002 N - B

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

Element category

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

Made to Order

Symbol	Description
Nil	None
X77	With differential pressure indicator (For details, refer to page 1160)
X78	With differential pressure indication switch (For details, refer to page 1160)

Accessory

Symbol	Accessory
Nil	None
B	Bracket

Element seal material^{Note 1)}

Symbol	Element seal material
A ^{Note 2)}	Non-asbestos
T	Fluororesin
N	NBR
V	FKM

Note 1) Not used with fiber elements.

Note 2) Not possible with bronze elements.

Material

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

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

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to pages 1158 and 1159.



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

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

Note 2) To order only an element (replacement part), refer to "How to Order" on pages 1158 and 1159.

Note 3) 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 4) Please use industrial filters in combination with parts made by SMC (vessels, elements etc.)

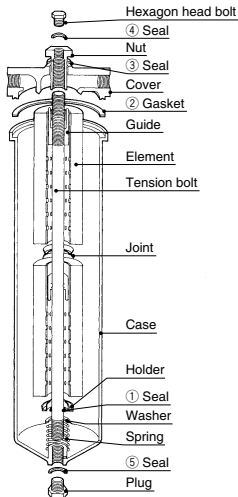
Specifications

Model	FGDCA	FGDCB	FGDEA	FGDEB	FGDTA	FGDTB	FGDFA	FGDFB
Port size (Rc)	3/8, 1/2, 3/4		3/8, 1/2, 3/4		3/8, 1/2, 3/4		3/8, 1/2, 3/4	
Max. operating pressure (MPa) <small>Note 1)</small>	0.7		0.7		1		1	
Max. operating temperature (°C)	80		80		80		80	
Number of elements	1	2 <small>Note 2)</small>	1	2 <small>Note 2)</small>	1	2 <small>Note 2)</small>	1	2 <small>Note 2)</small>
Element size	ø65 x L250	ø65 x L500 (L250 x 2)	ø65 x L250	ø65 x L500 (L250 x 2)	ø65 x L250	ø65 x L500 (L250 x 2)	ø65 x L250	ø65 x L500 (L250 x 2)
Main materials	Cover	Aluminum	Aluminum		SCS14		SCS14	
	Case	SPCD	SPCD		Stainless steel 316		Stainless steel 316	
	Gasket/O-ring	NBR	NBR		Fluororesin		Fluororesin	
	Seal	Nylon	Nylon/Fluororesin		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 (ø65 x L500) in the case of a sintered metal element or paper element.

Replacement Seal Set



Seal kit part no.			KT-FGDC	KT-FGDE	KT-FGDT	KT-FGDF
Applicable model			FGDC	FGDE	FGDT	FGDF
No.	Description	Qty.	Material			
1	Seal	1	NBR		Fluororesin	
2	Gasket	1	NBR			
3	Seal	1	Nylon	Fluororesin (Artistic specifications)	Fluororesin	Fluororesin (Artistic specifications)
4	Seal	1	Nylon		Fluororesin	
5	Seal	1	Nylon			

FGD

FGE

FGG

FGA

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FQ1

FN

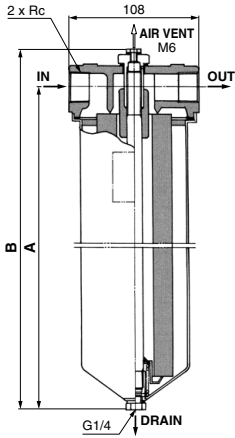
EB

ES

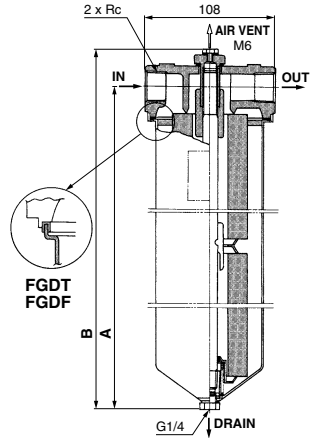
Series FGD

Dimensions

FGD□A (1 element)



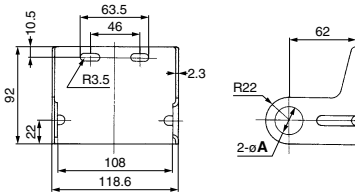
FGD□B (2 elements)



* 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.	øA	Port size Rc
BP-1S	17.5	3/8
BP-2S	22	1/2
BP-3S	27.5	3/4

Industrial Filter

Series FGE

How to Order

FGES/FGEL type (V-band type)

FGE S A - 10 - B 002 N A - G1

Material		
Symbol	Body	Gasket/O-ring
S	Stainless steel 304	NBR
L	Stainless steel 304	FKM

Option	
Symbol	Pressure gauge type
G1	G46-10-02M (Brass at wetted parts)
G2	G46-10-02X3 (Stainless steel at wetted parts)
Nil	None (with plug)

* Please use the applicable pressure gauge depending on the fluid used.
Control the differential pressure even when none pressure gauge is selected.

FGET type (Bolt tightening type)

FGE T A - 10 - B 002 N

Material		
Symbol	Body	Gasket/O-ring
T	Stainless steel 304	Fluororesin

Element length

Symbol	Element length
A	L250
B	L500 (L250 x 2)
C	L750 (L250 x 3)

Port size

Symbol	Port size R
10	1
20	2

Element seal material^{Note 1)}

Symbol	Element seal material
A ^{Note 2)}	Non-asbestos
T	Fluororesin
N	NBR
V	FKM

Note 1) Not used with fiber elements.

Note 2) Not possible with bronze elements.

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

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to pages 1158 and 1159.

Element category

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



FGES/FGEL type
(V-band type)

FGET type
(Bolt tightening type)

- Suitable for medium flow rate, low pressure "filtration."
- Element replacement is easy with the V-band type. (with cover anti-scattering mechanism)
- Can be used with a wide range of fluids

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

Note 2) To order only an element (replacement part), refer to "How to Order" on pages 1158 and 1159.

Note 3) When ordering only a vessel (replacement part), delete each symbol for "Element category", "Nominal filtration accuracy (μm)" and "Element seal material" from the above model indication method.

Note 4) Please use industrial filters in combination with parts made by SMC (vessels, elements etc.)

Note 5) Do not use the V-band type for gases.

Specifications

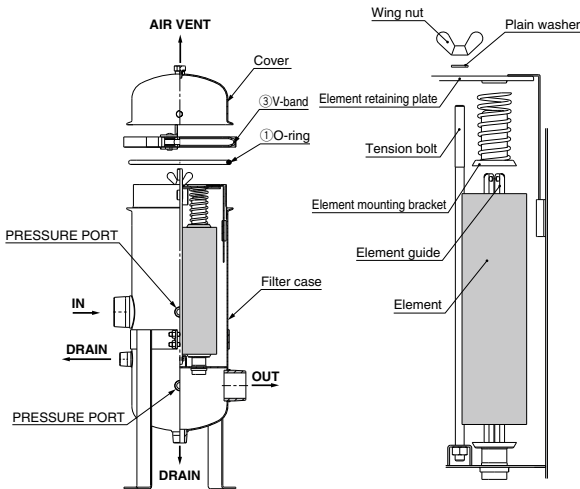
Model	FGESA ^{Note 1)}	FGESB ^{Note 1)}	FGESC ^{Note 1)}	FGELA ^{Note 1)}	FGELB ^{Note 1)}	FGELC ^{Note 1)}	FGETA	FGETB	FGETC	
Port size (R)	1, 2			1, 2			1, 2			
Max. operating pressure (MPa)	0.7			0.7			0.7			
Max. operating temperature (°C)	80			80			80			
Number of elements	4	4 ^{Note 2)}	8	4	4 ^{Note 2)}	8	4 ^{Note 2)}	8	4 ^{Note 2)}	
Element size	ø65 to 70 x L250	ø65 to 70 x L500	ø65 to 70 x L250	ø65 to 70 x L750	ø65 to 70 x L250	ø65 to 70 x L500	ø65 to 70 x L250	ø65 to 70 x L750	ø65 to 70 x L250	
Main materials	Cover	Stainless steel 304								
	Case	Stainless steel 304								
	Gasket	—	—	—	—	—	—	Fluororesin	Fluororesin	Fluororesin
	O-ring	NBR			FKM			—		
Legs	SS400 (Chromatic plating)									
Weight (kg)	10	13	18	10	13	18	12	15	20	
Internal capacity (L)	14	21	29	14	21	29	11.5	18.5	26	

Note 1) Cannot be used with gases.

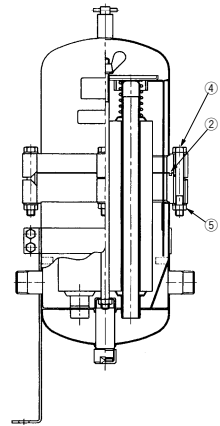
Note 2) In the case of a sintered metal element or paper element.

Replacement Parts and Seal List

FGES/FGEL type (V-band type)



FGET type (Bolt tightening type)

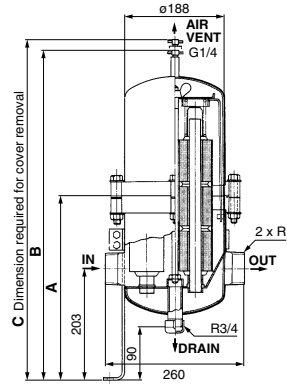
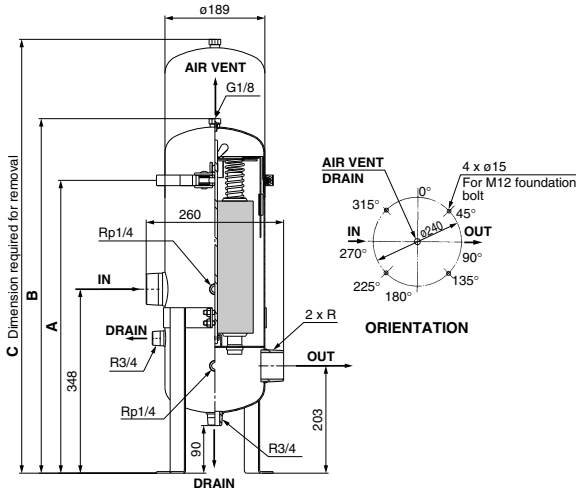


No.	Description	Qty.	Applicable model		
			FGES	FGEL	FGET
1	O-ring	1	FGE-KT001	FGE-KT002	—
2	Gasket	1	—	—	AL-19S
3	V-band	1	CY-24S		—
4	Hexagon head bolt	4	—	—	CB00021
5	Hexagon nut	4	—	—	DA00110

Dimensions

FGES/FGEL type (V-band type)

FGET type (Bolt tightening type)



FGES type (V-band type) (mm)

Model	A	B	C	Port size R
FGESA		671	850	1, 2
FGESB	554	931	1325	
FGESC		1191	1825	

FGEL type (V-band type) (mm)

Model	A	B	C	Port size R
FGELA		671	850	1, 2
FGELB	554	931	1325	
FGELC		1191	1825	

FGET type (Bolt tightening type) (mm)

Model	A	B	C	Port size R
FGETA	366	612	910	1, 2
FGETB	516	871	1225	
FGETC	647	1133	1620	

FGD

FGE

FGG

FGA

FGB

FGC

FGF

FGH

EJ

ED

FQ1

FN

EB

ES

Industrial Filter

Series *FGG*

How to Order

FGG S B - 20 - B 002 N A - G1

Material

Symbol	Body	O-ring
S	Stainless steel 304	NBR
L	Stainless steel 304	FKM

Element length

Symbol	Element length
B	L500 (L250 x 2)
C	L750 (L250 x 3)
D	L1000 (L250 x 4)

Port size

Symbol	Port size Rc
20	2

Element category

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

Option

Symbol	Pressure gauge type
G1	G46-10-02M (Brass at wetted parts)
G2	G46-10-02X3 (Stainless steel at wetted parts)
Nil	None (with plug)

* Please use the applicable pressure gauge depending on the fluid used.
Control the differential pressure even when none pressure gauge is selected.

Element seal material ^{Note 1)}

Symbol	Element seal material
A ^{Note 2)}	Non-asbestos
T	Fluororesin
N	NBR
V	FKM

Note 1) Not used with fiber elements.

Note 2) Not possible with bronze elements.

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

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to pages 1158 and 1159.



- Suitable for high flow rate, low pressure "filtration."
- Element replacement is easy with the V-band type. (with cover anti-scattering mechanism)

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

Note 2) To order only an element (replacement part), refer to "How to Order" on pages 1158 and 1159.

Note 3) 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 4) Please use industrial filters in combination with parts made by SMC (vessels, elements etc.)

Note 5) Do not use this filter for gases.

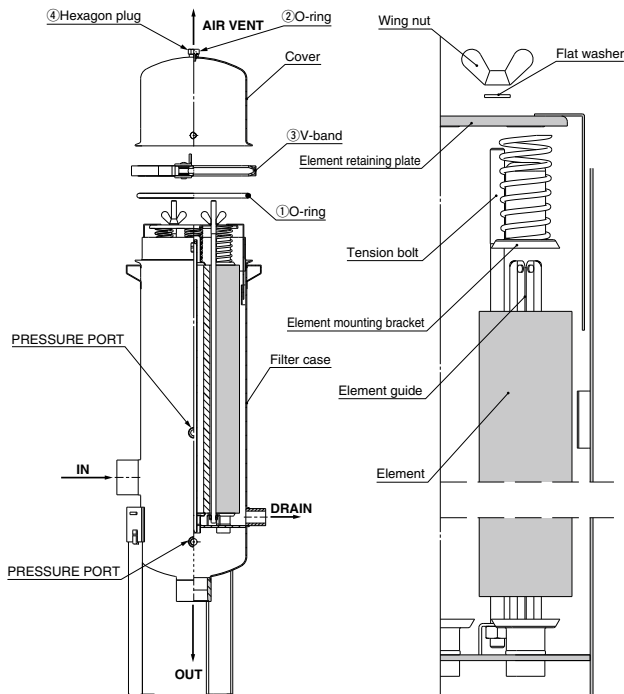
Specifications

Model	FGGSB ^{Note 1)}		FGGSC ^{Note 1)}		FGGSD ^{Note 1)}		FGGLB ^{Note 1)}		FGGLC ^{Note 1)}		FGGLD ^{Note 1)}		
Port size (Rc)	2						2						
Max. operating pressure (MPa)	0.7						0.7						
Max. operating temperature (°C)	80						80						
Number of elements	7 ^{Note 2)}	14	7 ^{Note 2)}	21	7 ^{Note 2)}	28	7 ^{Note 2)}	14	7 ^{Note 2)}	21	7 ^{Note 2)}	28	
Element size	ø65 x L500	ø65 x L250	ø65 x L750	ø65 x L250	ø65 x L1000	ø65 x L250	ø65 x L500	ø65 x L250	ø65 x L750	ø65 x L250	ø65 x L1000	ø65 x L250	
Main materials	Cover	Stainless steel 304											
	Case	Stainless steel 304											
	O-ring	NBR						FKM					
	Legs	SS400 (Chromatic plating)											
Weight (kg)	19.5		23		30		19.5		23		30		
Internal volume (L)	27		43		52		27		43		52		

Note 1) Cannot be used with gases.

Note 2) In the case of a sintered metal element or paper element.

Replacement Parts and Seal List



No.	Description	Qty.	Applicable model	
			FGES	FGEL
1	O-ring	1	AL-25S	AL-22S
2	O-ring	1	KA00068	KA00622
3	V-band	1	CY-27S	
4	Hexagon plug	1	AG-10S	

FGD

FGE

FGG

FGA

FGB

FGC

FGF

FGH

EJ

ED

FQ1

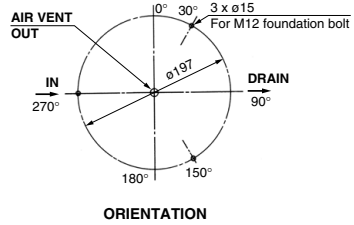
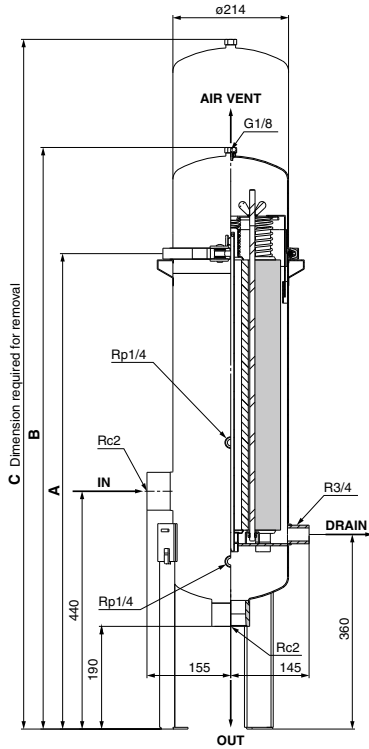
FN

EB

ES

Series FGG

Dimensions



Model	A	B	C*
FGGSB FGGLB	880	1077	1180 to 1415
FGGSC FGGLC	1147	1344	1440 to 1930
FGGSD FGGLD	1417	1614	1710 to 2450

* The "C" dimension varies depending on the length of the incorporated element.

Industrial Filter Series FGA

How to Order

FGA C 04 A - 10 - B 002 N

Vessel material (wetted parts)

Symbol	Vessel material (wetted parts)
C	SS400
S	Stainless steel 304

Number of arranged elements

Symbol	Number of arranged elements
04	4
07	7
09	9
18	18
22	22
29	29
34	34
37	37
53	53
83	83

Element length

Symbol	Element length
A	L250
B	L500 (L250 x 2)
C	L750 (L250 x 3)
D	L1000 (L250 x 4)

Port size

Symbol	Port size
10	25 (1 ^B)
14	40 (1 1/2 ^B)
20	50 (2 ^B)
24	65 (2 1/2 ^B)
30	80 (3 ^B)
40	100 (4 ^B)
60	150 (6 ^B)

Note) The connection method is JIS 10KFF flange connection.



- Various types of elements can be selected according to the “filtration conditions,” and the unit can be used for a wide range of applications.
- This type has a vertical structure, so there is little loss of “filtrate.”
- Maintenance — element replacement in particular is easy.
- When using with a class 2 pressure vessel, this will be handled as a special order product.

Element seal material ^{Note 1)}

Symbol	Element seal material ^{Note 1)}
A ^{Note 2)}	Non-asbestos
T	Fluororesin
N	NBR
V	FKM

Note 1) Not used with fiber elements.

Note 2) Not possible with bronze elements.

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

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to pages 1158 and 1159.

Element category

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

Note 1) (Necessary number of elements) = $\frac{\text{Number of arranged elements} \times (\text{Element length})}{(\text{Length per element})}$

Calculation example) If the number of arranged elements is 7, the element length is L500, and length per element is L250, then:
(Necessary number of elements) = $7 \times \frac{500}{250} = 14$

Note 2) The industrial filter/vessel series described in this catalog are products in which an element is incorporated into a vessel.

Note 3) To order only an element (replacement part), refer to “How to Order” on pages 1158 and 1159.

Note 4) 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 5) Please use industrial filters in combination with parts made by SMC (vessels, elements etc.)

Series FGA

Specifications

Standard Specifications

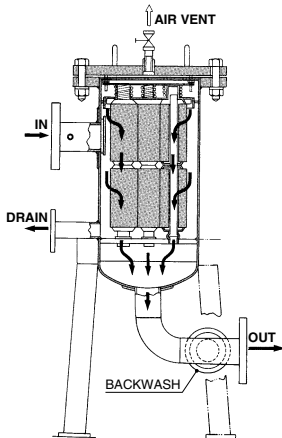
Model	FGA
Max. operating pressure (MPa)	1
Max. operating temperature (°C)	80
Port size	25 to 150 (1 ^{1/2} to 6 ^{3/4}) <small>Note)</small>
Vessel material (wetted parts)	SS400/Stainless steel 304
Gasket	Non-asbestos

Note) JIS 10KFF is used for this flange.

Applicable Element Specifications

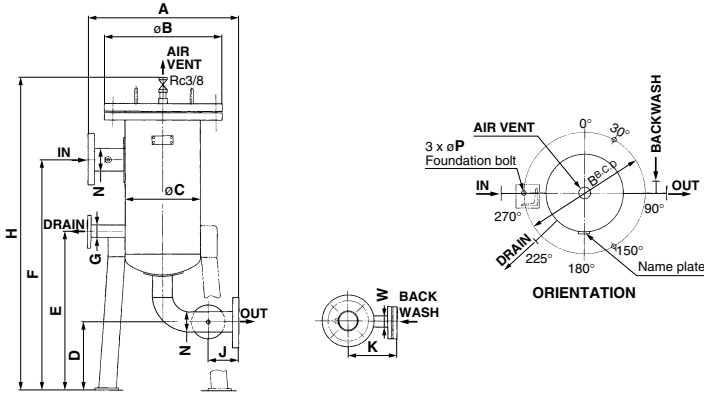
Description	Material	Nominal filtration accuracy (μm)	Size
Sintered metal	Bronze	1, 2, 5, 10, 20, 40 70, 100, 120	ø65 x L250 ø65 x L500 ø65 x L750 ø65 x L1000
	Stainless steel 316		
Paper	Cotton (Phenol)	5, 10, 20	ø65 x L250 ø65 x L500 ø65 x L750 ø65 x L1000
Fiber (Honeycomb)	Cotton	0.5, 1, 5, 10, 20 50, 75, 100	ø65 x L250
	Polypropylene		
	Glass fiber		
Micromesh	Stainless steel 304	5, 10, 20, 40 74, 105	ø65 x L250
	Stainless steel 316		

Construction



Element mounting figure

Dimensions



Standard Models

Model	Number of arranged elements	Element length (L)	N (Port size)			G	W	A	øB	øC	D	E	F	H	J	K	øP	Weight (kg)	Internal volume (L)
			25 (1 ^ø)	40 (1 1/2 ^ø)	50 (2 ^ø)														
FGAC FGAS	4	250	25 (1 ^ø)	40 (1 1/2 ^ø)	50 (2 ^ø)	20 (3/4 ^ø)	20 (3/4 ^ø)	500	330	216.3	230	490	660	965	80	120	20	70	15
	4	500	25 (1 ^ø)	40 (1 1/2 ^ø)	50 (2 ^ø)	20 (3/4 ^ø)	20 (3/4 ^ø)	500	330	216.3	230	490	905	1220	80	120	20	80	24
	4	750	25 (1 ^ø)	40 (1 1/2 ^ø)	50 (2 ^ø)	20 (3/4 ^ø)	20 (3/4 ^ø)	500	330	216.3	230	490	1160	1485	80	120	20	90	32
	4	1000	25 (1 ^ø)	40 (1 1/2 ^ø)	50 (2 ^ø)	20 (3/4 ^ø)	20 (3/4 ^ø)	500	330	216.3	230	490	1415	1750	80	120	20	105	41
	7	500	25 (1 ^ø)	40 (1 1/2 ^ø)	50 (2 ^ø)	25 (1 ^ø)	20 (3/4 ^ø)	570	400	267.4	230	510	915	1250	100	150	20	115	37
	7	750	25 (1 ^ø)	40 (1 1/2 ^ø)	50 (2 ^ø)	25 (1 ^ø)	20 (3/4 ^ø)	570	400	267.4	230	510	1175	1510	100	150	20	130	50
	7	1000	25 (1 ^ø)	40 (1 1/2 ^ø)	50 (2 ^ø)	25 (1 ^ø)	20 (3/4 ^ø)	570	400	267.4	230	510	1440	1775	100	150	20	150	64
	9	500	40 (1 1/2 ^ø)	50 (2 ^ø)	65 (2 1/2 ^ø)	40 (1 1/2 ^ø)	25 (1 ^ø)	620	445	318.5	240	560	935	1290	100	150	20	150	54
	9	750	40 (1 1/2 ^ø)	50 (2 ^ø)	65 (2 1/2 ^ø)	40 (1 1/2 ^ø)	25 (1 ^ø)	620	445	318.5	240	560	1195	1550	100	150	20	175	73
	9	1000	40 (1 1/2 ^ø)	50 (2 ^ø)	65 (2 1/2 ^ø)	40 (1 1/2 ^ø)	25 (1 ^ø)	620	445	318.5	240	560	1460	1815	100	150	20	200	92
	18	500	65 (2 1/2 ^ø)	80 (3 ^ø)	100 (4 ^ø)	40 (1 1/2 ^ø)	40 (1 1/2 ^ø)	720	560	400	270	710	1045	1445	100	150	24	260	103
	18	750	65 (2 1/2 ^ø)	80 (3 ^ø)	100 (4 ^ø)	40 (1 1/2 ^ø)	40 (1 1/2 ^ø)	720	560	400	270	710	1305	1705	100	150	24	295	137
	18	1000	65 (2 1/2 ^ø)	80 (3 ^ø)	100 (4 ^ø)	40 (1 1/2 ^ø)	40 (1 1/2 ^ø)	720	560	400	270	710	1570	1970	100	150	24	340	171
	22	500	65 (2 1/2 ^ø)	80 (3 ^ø)	100 (4 ^ø)	40 (1 1/2 ^ø)	40 (1 1/2 ^ø)	760	620	450	270	720	1055	1455	100	150	24	330	131
	22	750	65 (2 1/2 ^ø)	80 (3 ^ø)	100 (4 ^ø)	40 (1 1/2 ^ø)	40 (1 1/2 ^ø)	760	620	450	270	720	1315	1715	100	150	24	380	173
	22	1000	65 (2 1/2 ^ø)	80 (3 ^ø)	100 (4 ^ø)	40 (1 1/2 ^ø)	40 (1 1/2 ^ø)	760	620	450	270	720	1580	1980	100	150	24	430	217
	29	500	80 (3 ^ø)	100 (4 ^ø)	150 (6 ^ø)	65 (2 1/2 ^ø)	65 (2 1/2 ^ø)	820	675	500	300	850	1120	1575	120	250	24	375	163
	29	750	80 (3 ^ø)	100 (4 ^ø)	150 (6 ^ø)	65 (2 1/2 ^ø)	65 (2 1/2 ^ø)	820	675	500	300	850	1380	1835	120	250	24	435	216
	29	1000	80 (3 ^ø)	100 (4 ^ø)	150 (6 ^ø)	65 (2 1/2 ^ø)	65 (2 1/2 ^ø)	820	675	500	300	850	1640	2095	120	250	24	495	269
	34	750	80 (3 ^ø)	100 (4 ^ø)	150 (6 ^ø)	65 (2 1/2 ^ø)	65 (2 1/2 ^ø)	870	745	550	300	860	1390	1945	120	250	24	560	262
34	1000	80 (3 ^ø)	100 (4 ^ø)	150 (6 ^ø)	65 (2 1/2 ^ø)	65 (2 1/2 ^ø)	870	745	550	300	860	1650	2105	120	250	24	635	326	
37	750	80 (3 ^ø)	100 (4 ^ø)	150 (6 ^ø)	65 (2 1/2 ^ø)	65 (2 1/2 ^ø)	920	795	600	300	880	1410	1865	120	250	24	630	317	
37	1000	80 (3 ^ø)	100 (4 ^ø)	150 (6 ^ø)	65 (2 1/2 ^ø)	65 (2 1/2 ^ø)	970	795	600	300	880	1670	2125	120	250	24	710	394	
53	750	80 (3 ^ø)	100 (4 ^ø)	150 (6 ^ø)	65 (2 1/2 ^ø)	65 (2 1/2 ^ø)	970	845	650	300	890	1420	1880	120	250	24	735	373	
53	1000	80 (3 ^ø)	100 (4 ^ø)	150 (6 ^ø)	65 (2 1/2 ^ø)	65 (2 1/2 ^ø)	970	845	650	300	890	1680	2140	120	250	24	830	462	
83	750	80 (3 ^ø)	100 (4 ^ø)	150 (6 ^ø)	65 (2 1/2 ^ø)	65 (2 1/2 ^ø)	1120	1020	800	300	950	1485	1950	120	250	24	1180	597	
83	1000	80 (3 ^ø)	100 (4 ^ø)	150 (6 ^ø)	65 (2 1/2 ^ø)	65 (2 1/2 ^ø)	1120	1020	800	300	950	1745	2210	120	250	24	1330	733	

Note) For the filter body diameter (øC), values of ø400 or higher indicate the inner diameter.

- FGD
- FGE
- FGG
- FGA**
- FGB
- FGC
- FGF
- FGH
- EJ
- ED
- FQ1
- FN
- EB
- ES

Industrial Filter Series *FGB*

How to Order

FGB C 04 A - 10 - B 002 N

Vessel material (wetted parts) ●

Symbol	Vessel material (wetted parts)
C	SS400
S	Stainless steel 304

Number of arranged elements ●

Symbol	Number of arranged elements
04	4
07	7
13	13
19	19
30	30
36	36
55	55
83	83

Element length ●

Symbol	Element length
A	L250
B	L500 (L250 x 2)
C	L750 (L250 x 3)
D	L1000 (L250 x 4)

Port size ●

Symbol	Port size
10	25 (1 ^B)
14	40 (1 1/2 ^B)
20	50 (2 ^B)
24	65 (2 1/2 ^B)
30	80 (3 ^B)
40	100 (4 ^B)
60	150 (6 ^B)

Note) The connection method is JIS 10KFF flange connection.



- Various types of elements can be selected according to the "filtration conditions."
- The element is of the hanging type, so the structure is suitable for filtration of gases having a large difference in specific gravity from particles, for "filtration" of severely fouled fluids, and for backwash type elements (sintered metal, micro-mesh).
- During maintenance, the partition plate can be removed together with the element, so internal cleaning and inspection are easy.
- When using with a class 2 pressure vessel, this will be handled as a special order product.

● Element seal material ^{Note 1)}

Symbol	Element seal material
A ^{Note 2)}	Non-asbestos
T	Fluororesin
N	NBR
V	FKM

Note 1) Not used with fiber elements.
Note 2) Not possible with bronze elements.

● 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

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to pages 1158 and 1159.

● Element category

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

Note 1) (Necessary number = (Number of arranged elements) × (Element length) / (Length per element))

Calculation example) If the number of arranged elements is 7, the element length is L500, and length per element is L250, then:

$$(\text{Necessary number of elements}) = 7 \times \frac{500}{250} = 14$$

Note 2) The industrial filter/vessel series described in this catalog are products in which an element is incorporated into a vessel.

Note 3) To order only an element (replacement part), refer to "How to Order" on pages 1158 and 1159.

Note 4) 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 5) Please use industrial filters in combination with parts made by SMC (vessels, elements etc.)

Specifications

Standard Specifications

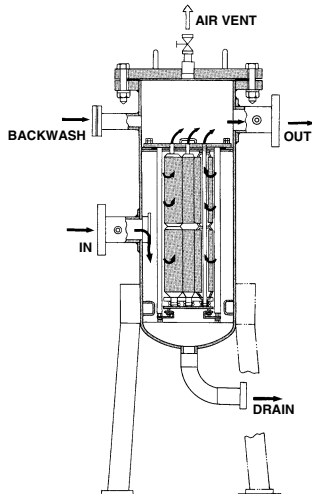
Model	FGB
Max. operating pressure (MPa)	1
Max. operating temperature (°C)	80
Port size	25 to 150 (1 ^B to 6 ^B) <small>Note)</small>
Vessel material (wetted parts)	SS400/Stainless steel 304
Gasket	Non-asbestos

Note) JIS 10KFF is used for this flange.

Applicable Element Specifications

Description	Material	Nominal filtration accuracy (µm)	Size
Sintered metal	Bronze	1, 2, 5, 10, 20, 40 70, 100, 120	ø65 x L250 ø65 x L500 ø65 x L750 ø65 x L1000
	Stainless steel 316		
Paper	Cotton (Phenol)	5, 10, 20	ø65 x L250 ø65 x L500 ø65 x L750 ø65 x L1000
Fiber (Honeycomb)	Cotton	0.5, 1, 5, 10, 20 50, 75, 100	ø65 x L250
	Polypropylene		
	Glass fiber		
Micromesh	Stainless steel 304	5, 10, 20, 40 74, 105	ø65 x L250
	Stainless steel 316		

Construction



Element mounting figure

FGD

FGE

FGG

FGA

FGB

FGC

FGF

FGH

EJ

ED

FQ1

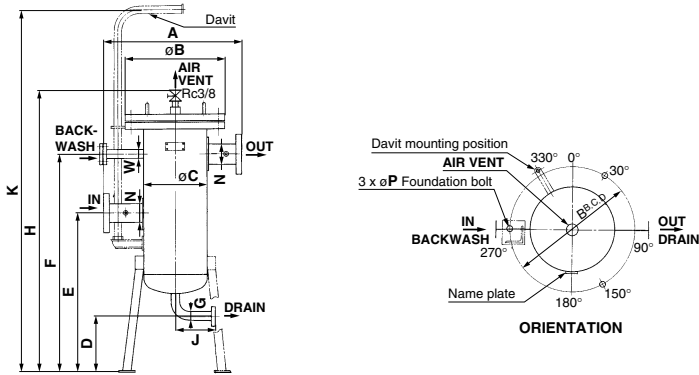
FN

EB

ES

Series FGB

Dimensions



Standard Models

Model	Number of arranged elements	Element length (L)	N (Port size)			G	W	A	øB	øC	D	E	F	H	J	K	øP	Weight (kg)	Internal volume (L)	
FGBC	4	250	25 (1 ^B)	40 (1 1/2 ^B)	50 (2 ^B)	40 (1 1/2 ^B)	25 (1 ^B)	620	445	318.5	200	730	910	1180	210	—	20	140	52	
	4	500	25 (1 ^B)	40 (1 1/2 ^B)	50 (2 ^B)	40 (1 1/2 ^B)	25 (1 ^B)	620	445	318.5	200	990	1170	1440	210	—	20	160	71	
	4	750	25 (1 ^B)	40 (1 1/2 ^B)	50 (2 ^B)	40 (1 1/2 ^B)	25 (1 ^B)	620	445	318.5	200	1250	1430	1700	210	3770	20	260	90	
	4	1000	25 (1 ^B)	40 (1 1/2 ^B)	50 (2 ^B)	40 (1 1/2 ^B)	25 (1 ^B)	620	445	318.5	200	1510	1690	1960	210	4030	20	290	109	
	7	500	25 (1 ^B)	40 (1 1/2 ^B)	50 (2 ^B)	40 (1 1/2 ^B)	40 (1 1/2 ^B)	660	490	ø350	200	1000	1180	1460	230	—	24	230	94	
	7	750	25 (1 ^B)	40 (1 1/2 ^B)	50 (2 ^B)	40 (1 1/2 ^B)	40 (1 1/2 ^B)	660	490	350	200	1260	1440	1720	230	3785	24	340	119	
	7	1000	25 (1 ^B)	40 (1 1/2 ^B)	50 (2 ^B)	40 (1 1/2 ^B)	40 (1 1/2 ^B)	660	490	350	200	1520	1700	1980	230	4045	24	370	144	
	13	500	65 (2 1/2 ^B)	—	—	40 (1 1/2 ^B)	40 (1 1/2 ^B)	770	620	450	200	960	1190	1505	—	290	3065	—	400	160
			—	80 (3 ^B)	100 (4 ^B)	—	—	—	—	—	—	—	940	1250	1615	—	290	3175	24	400
	13	750	65 (2 1/2 ^B)	—	—	40 (1 1/2 ^B)	40 (1 1/2 ^B)	770	620	450	200	1220	1450	1765	—	290	3825	—	450	201
			—	80 (3 ^B)	100 (4 ^B)	—	—	—	—	—	—	—	1200	1570	1875	—	290	3935	24	460
	13	1000	65 (2 1/2 ^B)	—	—	40 (1 1/2 ^B)	40 (1 1/2 ^B)	770	620	450	200	1480	1710	2025	—	290	4085	—	500	242
			—	80 (3 ^B)	100 (4 ^B)	—	—	—	—	—	—	—	1430	1740	2105	—	290	4165	24	510
	19	500	65 (2 1/2 ^B)	—	—	65 (2 1/2 ^B)	40 (1 1/2 ^B)	820	675	500	200	1010	1240	1555	—	320	3115	—	460	198
			—	80 (3 ^B)	100 (4 ^B)	—	—	—	—	—	—	—	980	1290	1665	—	320	3225	24	480
	19	750	65 (2 1/2 ^B)	—	—	65 (2 1/2 ^B)	40 (1 1/2 ^B)	820	675	500	200	1270	1500	1815	—	320	3875	—	520	249
			—	80 (3 ^B)	100 (4 ^B)	—	—	—	—	—	—	—	1240	1550	1925	—	320	3985	24	530
	19	1000	65 (2 1/2 ^B)	—	—	65 (2 1/2 ^B)	40 (1 1/2 ^B)	820	675	500	200	1530	1760	2075	—	320	4135	—	560	300
			—	80 (3 ^B)	100 (4 ^B)	—	—	—	—	—	—	—	1470	1780	2155	—	320	4215	24	580
	30	500	80 (3 ^B)	100 (4 ^B)	—	65 (2 1/2 ^B)	65 (2 1/2 ^B)	920	795	600	200	1000	1310	1685	—	360	3245	—	780	320
			—	—	150 (6 ^B)	—	—	—	—	—	—	—	940	1340	1765	—	360	3325	24	800
	30	750	80 (3 ^B)	100 (4 ^B)	—	65 (2 1/2 ^B)	65 (2 1/2 ^B)	920	795	600	200	1260	1570	1945	—	360	4005	—	890	394
			—	—	150 (6 ^B)	—	—	—	—	—	—	—	1200	1600	2025	—	360	4085	24	910
	30	1000	80 (3 ^B)	100 (4 ^B)	—	65 (2 1/2 ^B)	65 (2 1/2 ^B)	920	795	600	200	1490	1800	2175	—	360	4235	—	950	459
			—	—	150 (6 ^B)	—	—	—	—	—	—	—	1460	1860	2285	—	360	4345	24	980
	36	750	80 (3 ^B)	100 (4 ^B)	—	65 (2 1/2 ^B)	65 (2 1/2 ^B)	970	845	650	200	1280	1590	1970	—	390	4025	—	980	464
			—	—	150 (6 ^B)	—	—	—	—	—	—	—	1220	1620	2050	—	390	4105	24	1000
	36	1000	80 (3 ^B)	100 (4 ^B)	—	65 (2 1/2 ^B)	65 (2 1/2 ^B)	970	845	650	200	1510	1820	2200	—	390	4255	—	1060	540
			—	—	150 (6 ^B)	—	—	—	—	—	—	—	1480	1880	2310	—	390	4365	24	1090
	55	750	80 (3 ^B)	100 (4 ^B)	—	65 (2 1/2 ^B)	65 (2 1/2 ^B)	1080	970	750	200	1260	1590	1980	—	440	4030	—	1300	623
			—	—	150 (6 ^B)	—	—	—	—	—	—	—	1220	1620	2060	—	440	4110	24	1330
	55	1000	80 (3 ^B)	100 (4 ^B)	—	65 (2 1/2 ^B)	65 (2 1/2 ^B)	1080	970	750	200	1490	1820	2210	—	440	4260	—	1420	725
—			—	150 (6 ^B)	—	—	—	—	—	—	—	1480	1880	2320	—	440	4370	24	1450	773
83	750	80 (3 ^B)	100 (4 ^B)	—	80 (3 ^B)	80 (3 ^B)	1230	1120	900	200	1280	1630	2045	—	520	4140	—	1970	909	
		—	—	150 (6 ^B)	—	—	—	—	—	—	—	1230	1660	2125	—	520	4220	24	2010	960
83	1000	80 (3 ^B)	100 (4 ^B)	—	80 (3 ^B)	80 (3 ^B)	1230	1120	900	200	1510	1860	2275	—	520	4370	—	2130	1055	
		—	—	150 (6 ^B)	—	—	—	—	—	—	—	1490	1920	2385	—	520	4480	24	2180	1125

Note) For the filter body diameter (øC), values of ø350 or higher indicate the inner diameter.

Industrial Filter

Series FGC

How to Order

FGC 1 C A - 04 - B 002 N

Maximum operating pressure

Symbol	Maximum operating pressure
1	1 MPa
2	2 MPa
4	4 MPa

Vessel material (wetted parts)

Symbol	Vessel material (wetted parts)
C	SGP
S	Stainless steel 304

Element length

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

Port size

Symbol	Port size
04	15 (1/2 ^B)
06	20 (3/4 ^B)
10	25 (1 ^B)

Note) The connection method is flange connection, as indicated below.
 FGC1: JIS 10KFF flange connection
 FGC2: JPI300¹⁵RF flange connection
 FGC4: JPI600¹⁵RF flange connection

Element category

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



Element seal material ^{Note 1)}

Symbol	Element seal material
A ^{Note 2)}	Non-asbestos
T	Fluororesin
N	NBR
V	FKM

Note 1) Not used with fiber elements.
 Note 2) Not possible with bronze elements.

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

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to pages 1158 and 1159.

- Various types of elements can be selected according to the “filtration conditions,” and the unit can be used for a wide range of applications.
- This type has a vertical structure, so there is little loss of “filtrate.”
- Maintenance — element replacement in particular is easy.
- This product is not certified by Japan’s High Pressure Gas Safety Act.

- Note 1) The industrial filter/vessel series described in this catalog are products in which an element is incorporated into a vessel.
- Note 2) To order only an element (replacement part), refer to “How to Order” on pages 1158 and 1159.
- Note 3) 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 4) Please use industrial filters in combination with parts made by SMC (vessels, elements etc.)

FGD
FGE
FGG
FGA
FGB
FGC
FGF
FGH
EJ
ED
FQ1
FN
EB <input type="checkbox"/>
ES <input type="checkbox"/>

Specifications

Standard Specifications

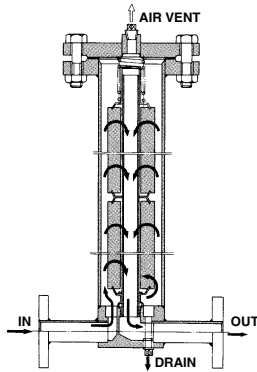
Model	FGC
Max. operating pressure (MPa)	1, 2, 4
Max. operating temperature (°C)	80
Port size	15 (1/2 ^B), 20 (3/4 ^B), 25 (1 ^B) ^{Note)}
Vessel material (wetted parts)	SGP/Stainless steel 304
Gasket	Non-asbestos

Note) JIS10KFF (FGC1), JPI300^{LR}RF (FGC2) and JPI600^{LR}RF (FGC4) are used for this flange.

Applicable Element Specifications

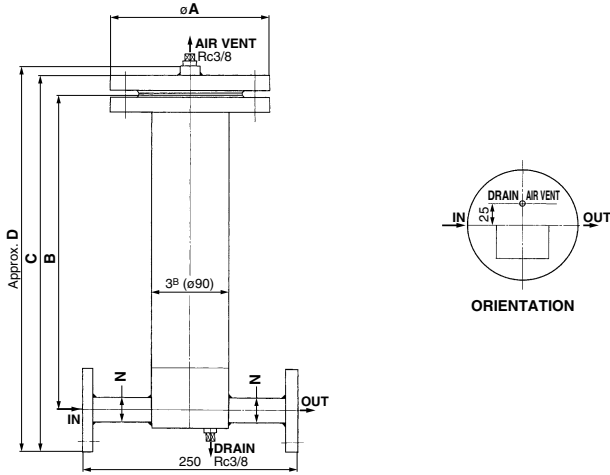
Description	Material	Nominal filtration accuracy (μm)	Size
Sintered metal	Bronze	1, 2, 5, 10, 20, 40	ø65 x L250
	Stainless steel 316	70, 100, 120	ø65 x L500
Paper	Cotton (Phenol)	5, 10, 20	ø65 x L250 ø65 x L500
Fiber (Honeycomb)	Cotton	0.5, 1, 5, 10, 20	ø65 x L250
	Polypropylene	50, 75, 100	
	Glass fiber	1, 5, 10, 20	
Micromesh	Stainless steel 304	5, 10, 20, 40	ø65 x L250
	Stainless steel 316	74, 105	

Construction



Element mounting figure

Dimensions



Standard Models

Model	Maximum operating pressure	Element length (L)	N (Port size)	ϕA	B	C	D	Flange standard <small>(Note)</small>	Weight (kg)	Internal volume (L)
FGC1	1 MPa	250	15 (1/2 ^B)	185	380	447	467	JIS 10KFF	15	2
			20 (3/4 ^B)	185	380	450	470		15	
			25 (1 ^B)	185	385	467	487		15	
		500	15 (1/2 ^B)	185	645	712	732	JIS 10KFF	19	3
			20 (3/4 ^B)	185	645	715	735		19	
			25 (1 ^B)	185	650	732	752		19	
FGC2	2 MPa	250	15 (1/2 ^B)	210	380	458	479	JPI 300 ^L RF	23	2
			20 (3/4 ^B)	210	380	474	490		23	
			25 (1 ^B)	210	385	477	499		23	
		500	15 (1/2 ^B)	210	645	723	744	JPI 300 ^L RF	27	3
			20 (3/4 ^B)	210	645	734	755		27	
			25 (1 ^B)	210	650	742	764		27	
FGC4	4 MPa	250	15 (1/2 ^B)	210	375	465	488	JPI 600 ^L RF	26	2
			20 (3/4 ^B)	210	375	476	499		26	
			25 (1 ^B)	210	380	485	507		26	
		500	15 (1/2 ^B)	210	640	730	753	JPI 600 ^L RF	30	3
			20 (3/4 ^B)	210	640	741	764		30	
			25 (1 ^B)	210	645	750	772		30	

Note) JIS10KFF (FGC1), JPI300^LRF (FGC2) and JPI600^LRF (FGC4) are used for this flange.

- FGD
- FGE
- FGG
- FGA
- FGB
- FGC**
- FGF
- FGH
- EJ
- ED
- FQ1
- FN

EB

ES

Elements

Sintered Metal/Fiber

Sintered Metal Filter Elements

- Outstanding mechanical strength, heat resistance and chemical resistance.
- Formed by sintering finely powdered metal, so a high filtration accuracy can be obtained.
- Even if clogging progresses, the element can be reused by cleaning.
- Main applications

Ideal as a check filter for keeping fluid clean. All types of gases, fluids, general solvents and high-temperature fluids



Caution

The bronze element may be discolored by the moisture included in the atmosphere, but this does not affect the characteristics.

Fiber Elements

- Four types of materials with different characteristics are available so the filters are applicable to any application.
- Elements are economical because particle capturing capacity is excellent, and element life is long.
- Elements are disposable so maintenance and replacement are easy.
- Main applications

Cotton	Cleaning water, General neutral fluids, General solvents, Dry air
Polypropylene	Plating fluids, General acids, Alkali fluids, Industrial water, Cooling water
Glass fiber	Acid fluids, High-temperature fluids



Specifications

Material	Bronze	Stainless steel 316
Operating temperature (C°) ^{Note 2)}	0 to 150	0 to 150
Nominal filtration accuracy (μm)	1, 2, 5, 10, 20, 40, 70, 100, 120	
Max. differential pressure resistance	0.7 MPa	
Element replacement differential pressure	0.1 MPa	
Chemical resistance	Acid	Cannot be used.
	Alkali	Can be used depending on conditions.
Element category of How to Order	B	S

Note 1) Cannot be used with hydrochloric acid, hydrofluoric acid or phosphoric acid.

Note 2) Varies depending on the seal material used.

How to Order Elements

E B 200 - 005 N

Element symbol

Symbol	Element material
B	Bronze
S	Stainless steel 316

Element size

Symbol	Element size
100	ø65 x L250
200	ø65 x L500
300	ø65 x L750
400	ø65 x L1000

Seal material/Operating temperature range

Symbol	Seal material	Operating temperature range (°C)
A ^{Note)}	Non-asbestos	0 to 150
T	Fluororesin	0 to 120
N	NBR	0 to 80
V	FKM	0 to 120

Note) Not possible with bronze elements.

Nominal filtration accuracy (μm)

Symbol	Nominal filtration accuracy (μm)
001	1
002	2
005	5
010	10
020	20
040	40
070	70
100	100
120	120

Specifications

Material	Core material	Operating temperature (°C)	Nominal filtration accuracy (μm)	Differential pressure resistance (Max.)	Element replacement differential pressure
Cotton	Stainless steel 304	-20 to 100	0.5, 1, 5, 10, 20, 50, 75, 100	0.2 MPa	0.1 MPa
Polypropylene	Polypropylene	0 to 60	0.5, 1, 5, 10, 20, 50, 75, 100		
Glass fiber	Stainless steel 316	0 to 400	1, 5, 10, 20		

Note) Size for all is ø65 x L250.

Elements Part No. List

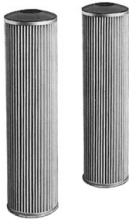
Element material	Cotton	Polypropylene	Glass fiber
Core material	Stainless steel 304	Polypropylene	Stainless steel 316
Nominal filtration accuracy (μm)	0.5	EH10G	EHM10A
	1	EH39R10GV	EHM39R10AY
	5	EH23R10GV	EHM23R10AY
	10	EH19R10GV	EHM19R10AY
	20	EH15R10G	EHM15R10A
	50	EH11R10G	EHM11R10A
	75	EH10R10G	EHM10R10A
	100	EH8R10G	EHM8R10A
Element category of How to Order	H	T	G

Standard Elements

Paper / Micromesh

Paper Elements

- Cartridges are pleated for a large filtration area, and elements are economical due to their long service life.
- Main applications
Ideal for filtration of hydraulic oil, lubricating oil, fuel oil, oils for the liquid gas industry, dry inert gases, and dry air.



Specifications

Material	Filter paper (Cotton, Phenol resin impregnated paper)
Operating temperature (C°) ^{Note 2)}	0 to 80
Nominal filtration accuracy (μm)	5, 10, 20
Max. differential pressure resistance	0.6 MPa
Adhesive used	Epoxy resin
Element replacement differential pressure	0.1 MPa
Element category of How to Order	P

How to Order Elements

EP 200 - 010 N

Paper element ●

Element size ●

Symbol	Element size
100	ø65 x L250
200	ø65 x L500
300	ø65 x L750
400	ø65 x L1000

Seal material ●

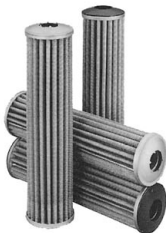
Symbol	Seal material
N	NBR
V	FKM

Nominal filtration accuracy (μm) ●

Symbol	Nominal filtration accuracy (μm)
005	5
010	10
020	20

Micromesh Elements

- Stainless steel metal mesh has high filtration accuracy.
- Outstanding heat and chemical resistance. Applicable to a wide range of applications.
- Pleated type has 3 times the filtration area of a cylinder.
- Filters are economical because they can be cleaned and repeatedly used.
- Main applications
Please use 40 microns or less as a high-precision filter, and 74 microns or higher as a high-grade strainer. All types of gases and fluids, high-temperature fluids.



Specifications

Model	EM100	EM500
Materials	Stainless steel 304	Stainless steel 316
Joining material	Epoxy resin	—
Operating temperature (C°) ^{Note 2)}	-5 to 100	-180 to 300
Nominal filtration accuracy (μm)	5, 10, 20, 40, 74, 105	
Max. differential pressure resistance	0.7 MPa	
Element replacement differential pressure	0.1 MPa	
Chemical resistance	Acid	Cannot be used.
	Alkali	Can be used.
Element category of How to Order	M	L

Note 1) Cannot be used with hydrochloric acid, hydrofluoric acid or phosphoric acid.
Note 2) Varies depending on the seal material used.

How to Order Elements

EM 500 - 074 A

Micromesh element ●

Group symbol ●

Symbol	Group symbol
100	Stainless steel 304
500	Stainless steel 316

Nominal filtration accuracy (μm) ●

Symbol	Nominal filtration accuracy (μm)
005	5
010	10
020	20
040	40
074	74
105	105

Seal material/Operating temperature range ●

Symbol	Seal material	Operating temperature range (°C)
A ^{Note)}	Non-asbestos	0 to 150
T ^{Note)}	Fluororesin	0 to 120
N	NBR	0 to 80
V	FKM	0 to 120

Note) Not possible with EM100 (Stainless steel 304)

(Size ø65 x L250)

Series FGD Made to Order

Consult with SMC for details.



1 With Differential Pressure Indicator (X77), With Differential Pressure Indication Switch (X78) -X77, -X78

There are two parts: the differential pressure indicator (X77) and differential pressure indication switch (X78). These can be mounted to all models of the FGD Series.

How to Order

Symbol

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

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

Element category

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

Material

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

Accessory

Symbol	Accessory
NII	None
B	Bracket

Made to Order

Symbol	Description
NII	None
X77	With differential pressure indicator
X78	With differential pressure indication switch

Nominal filtration accuracy (µm)

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 seal material

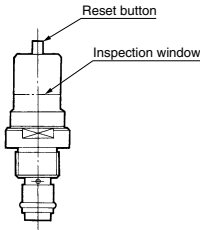
Symbol	Element seal material
A	Non-asbestos
T	Fluororesin
N	NBR
V	FKM

Note 1) Not used with fiber elements.
Note 2) Not possible with bronze elements.
Note 1) The industrial filter described in this catalog are products in which an element is incorporated into a vessel.
Note 2) To order only an element (replacement part), refer to "How to Order" on pages 1158 and 1159.
Note 3) 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 4) Please use industrial filters in combination with parts made by SMC (vessels, elements etc.)

Differential Pressure Indication

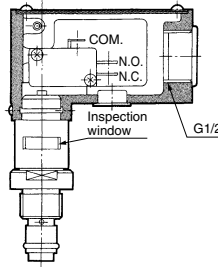
■ Differential pressure indicator

- Operation pressure—0.1 MPa
- Once a value is displayed, it will continue to be displayed until reset, even if the pump is stopped. (Reset type)
- Perform element replacement when the red ring floats up and covers the entire inspection window.



■ Differential pressure indication switch

- Operating pressure—0.1 MPa
- When a value has been displayed, it will be automatically reset when the pump is stopped. (Non-reset type)
- This is a visual dual-purpose. Perform element replacement when the switch has actuated (when the red ring floats up and covers the entire inspection window).
- N.C. and N.O. common



Microswitch Ratings

Rated voltage (V)	Noninductive load (A)		Inductive load (A)	
	Normally closed	Normally open	Normally closed	Normally open
AC125	5	1.5	0.7	4
AC250	5	1	0.5	4
DC8	5	3	5	4
DC14	5	3	4	3
DC30	5	3	4	3
DC125	0.4	0.1	0.4	0.1
DC250	0.3	0.05	0.3	0.05

Precautions

- The figures in the above table indicate stationary current.
- An inductive load has a power factor (AC) of 0.75 or more, and a time constant (DC) of 7 msec or less.
- A light load has an inrush current 10 times greater.
- Lead wires are connected using a screw tightening terminal.
- The electrical entry is equipped with a conduit (G1/2) and grommet.
- Please wire freely to the microswitch indication symbol 1(COM.), 2(N.C.) and 3(N.O.).
- If a holding mechanism is necessary for the non-reset type, provide it using electric circuits.

Differential Pressure Indicator/Switch Part No.

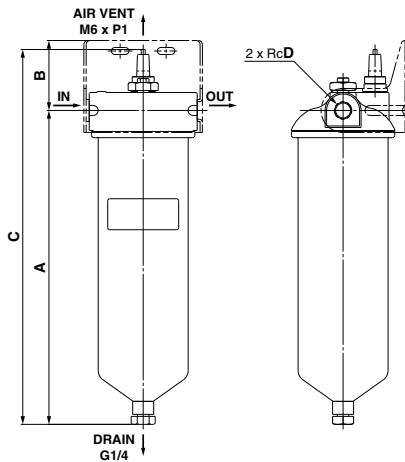
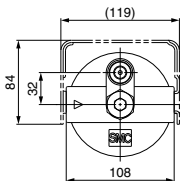
Applicable model	Part no.	
	Differential pressure indicator	Differential pressure indication switch
FGDC, E	CB-62H	CB-63H
FGDT, F	CB-60H	CB-61H

Specifications

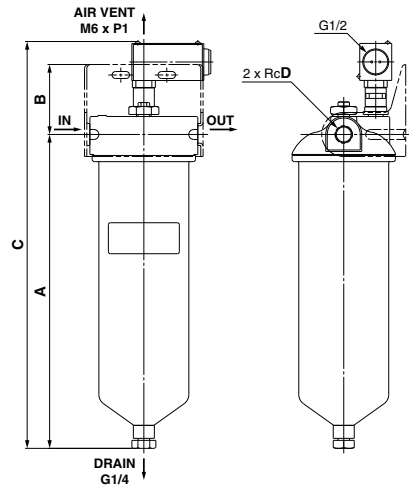
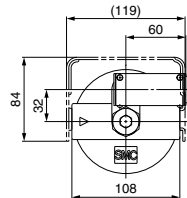
Model		FGDCA/FGDEA	FGDCB/FGDEB	FGDTA/FGDFA	FGDTB/FGDFB
Max. operating pressure (MPa)		0.7		1.0	
Max. operating temperature (°C)		80			
Differential pressure indicator operating pressure Differential pressure indication switch operating pressure (MPa)		0.1			
Port size		Rc3/8, 1/2, 3/4			
Material	Body	Aluminum, SPCD		SCS14, Stainless steel 316	
	Differential pressure indicator Differential pressure indication switch	Aluminum		Stainless steel 303	
	Seal	NBR, Nylon		PTFE	
Weight (kg)	X77	1.3	2.2	2.3	3.8
	X78	1.5	2.4	2.5	4.0
Internal volume (L)		1.7	3.4	1.7	3.4

Dimensions

With differential pressure indicator (X77)



With differential pressure indication switch (X78)



Model	Element length	A	B	C	D
FGDC	A (L250)	314	70	374	3/8, 1/2, 3/4
	B (L500)	574	70	634	
FGDT	A (L250)	315	70	375	
	B (L500)	574	70	636	

Model	Element length	A	B	C	D
FGDC	A (L250)	314	70	407	3/8, 1/2, 3/4
	B (L500)	574	70	665	
FGDT	A (L250)	315	70	408	
	B (L500)	574	70	665	