

Air Preparation Equipment Industrial Filters

Air Preparation Equipment

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Industrial Filters

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Air Preparation Equipment

1 Indication of Replacement of Elements, Inspection Items

The following describes the general contents of the element replacement and regular check.

Main line filter/mist separator/micro mist separator replacement standards and inspection items

■ Replacement standards

<Element replacement timing>

a. For AFF2C to 22C, 37B, 75B, AM□150C to 550C, 650, and 850

The pressure drop reaches 0.1 MPa or two years have elapsed after operation start, whichever comes earlier. [The pressure drop can be checked using the equipment with the element service indicator (-T) or differential pressure gauge (made to order specifications).]

b. For AFF75A to 220A, AMD8□□ to AMD10□□ (Free standing type)

The pressure drop reaches 0.1 MPa or one year has elapsed after operation start, whichever comes earlier. Check the pressure drop using the pressure gauge. (Equipment with pressure gauge: -G)

c. For AME

If red spots appear on the element surface before the standards (a) shown above are satisfied, replace the element.

d. For AMF

If oil odor is found at the outlet before the standards (a) or (b) shown above are satisfied, replace the element.

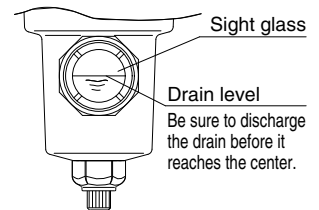
- When replacing the element, replace also the O-ring and gasket with new ones. For details about how to replace the O-ring and gasket, Refer to relevant pages that describe the replacement parts in detail.

■ Inspection items

① If the element reaches the replacement timing, immediately replace the element with a new one. If the element is used continuously without replacement, the element may be damaged.

② Be sure to discharge the drain accumulated in the filter container.

If the drain is not discharged, the accumulated drain flows to the outlet. When using the AFF2C to 22C, 37B, 75B, AM□150C to 550C, 650, or 850 with the drain cock, drain guide, or ball valve, discharge the drain before the drain level reaches the center of the sight glass. If the drain is not discharged, the drain flows to the outlet. Be sure to discharge the drain and check the discharge status while referring to the figure on the right.

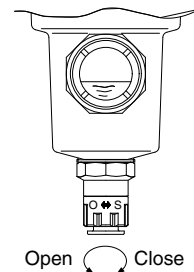


③ With auto drain

- This auto drain functions to discharge the drain when the drain level reaches the upper portion of the sight glass.
- For the AFF2C to 22C, 37B, AM□150C to 550C, and 650 with the auto drain, the drain is automatically discharged with the knob tightened to the "S" side during normal operation. Additionally, the drain can also be discharged manually.

<Manual operation procedure>

A manual knob is provided at the end of the auto drain. This knob is tightened to the "S" side during normal operation. When the knob is loosened to the "O" side, the drain can be discharged. (Note that the drain gushes from the drain port if the pressure remains inside the filter.)



■ Probable troubles (Reference)

Refer to the "Troubleshooting." (p. 334)

2 Troubleshooting

The following describes the general contents of the troubleshooting.

Trouble (Symptom)	Cause	Corrective action
The pressure drop is large.	The flow rate is excessive.	Use the equipment at a flow rate that is lower than the max. flow rate diagram stated on the catalog or review the filter size.
	The element is used continuously even after its service life has expired.	Replace the element.
Oily contents or solid foreign matter come to the secondary side.	The flow rate is excessive.	Use the equipment at a flow rate that is lower than the max. flow rate diagram stated on the catalog or review the filter size.
	The element is used continuously even after its service life has expired.	Replace the element.
	The drain discharge is faulty.	[Manual drain] Discharge the drain before it reaches the center of the sight glass. [Auto drain] Clean the inside or replace the auto drain.
	Oily content, such as grease flows out from the equipment installed on the secondary side of the filter.	Install the AM series at the end of the pipe.
	Ambient air is entangled. (When used for the air blow.)	Perform the air blow in a clean environment. The nozzle becomes negative pressure and the ambient air is entangled. This may cause oily content or solid foreign object to enter the blow air.
	The cleaning of the pipe on the secondary side is insufficient.	Clean the inside of the pipe on the secondary side.
The drain leaks outside.	The seat is faulty.	① Check the O-ring for foreign matter sticking ② Check the O-ring for kink, flaw, crack, or deterioration.
The drain leaks from the float type auto drain.	The seat is faulty (foreign matter is sticking).	Clean the inside or replace the auto drain.
	The operation is faulty.	Clean the inside or replace the auto drain.
	The supply pressure is insufficient.	Check the air supply capability. N.O. type 0.1 MPa N.C. type 0.15 MPa

Actuators

Rotary Actuators
Air Grippers

Modular F.R.L.
Pressure Control Equipment

Air Preparation
Equipment

Industrial Filters

Replacement
Procedure

Actuators

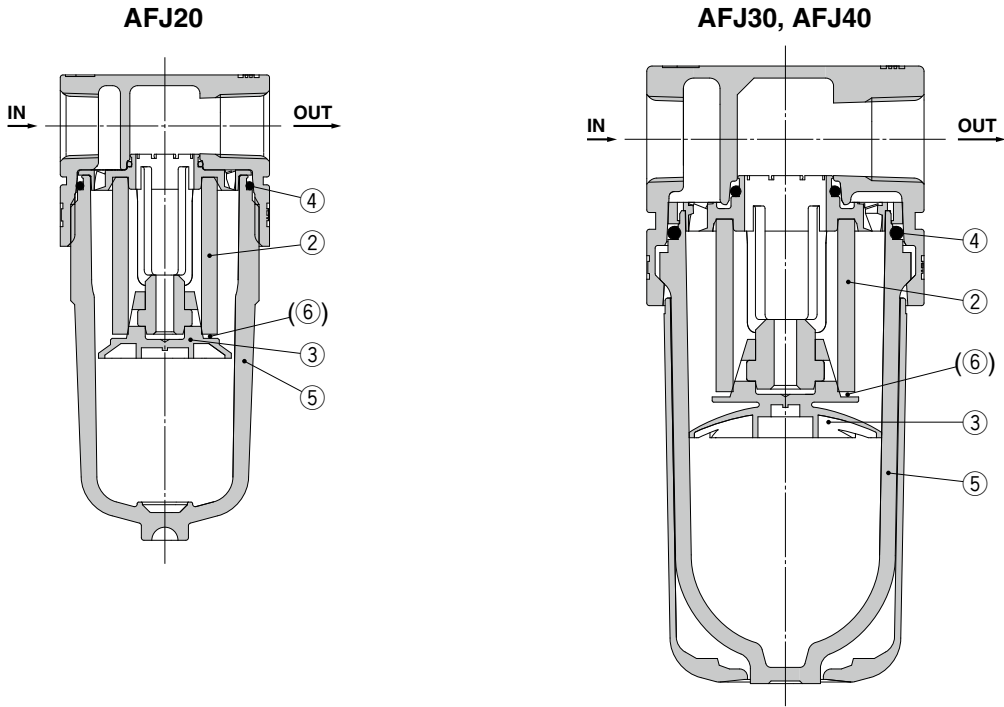
Rotary Actuators
Air Grippers

Modular F.R.L.
Pressure Control Equipment

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Industrial Filters

AFJ20 to AFJ40 Series

Construction



* The numbers correspond with those in the "Construction" of the AFJ series in the **Web Catalog**.

Replacement Parts/Part Nos.

No.	Description	Material	Model		
			AFJ20	AFJ30	AFJ40
2	Filter element	5 μm	AF20P-060S	AF30P-060S	AF40P-060S
		40 μm	AF22P-820S	AF32P-820S	AF42P-820S
		80 μm	AF22P-830S	AF32P-830S	AF42P-830S
3	Baffle	PBT	AF22P-040S	AF32P-040S	AF42P-040S
4	Bowl O-ring	NBR	C2SFP-260S	C32FP-260S	C42FP-260S
5	Bowl assembly ^{Note 1)}	Polycarbonate	C2SJ	C3SJ	C4SJ
6	Seal ^{Note 2)}	NBR	AW22P-070S	AW32P-070S	AW42P-070S

Note 1) The bowl assembly includes the bowl O-ring.

The bowl assembly for the AFJ30 and AFJ40 models comes with a bowl guard (Material: Polycarbonate).

Note 2) The seal is for 40 μm and 80 μm elements.

Option/Part Nos.

Model	AFJ20	AFJ30	AFJ40
Bracket assembly ^{Note)}	AF22P-050AS	AF32P-050AS	AF42P-050AS

Note) The assembly of a bracket and 2 mounting screws

Bowl Assembly/Part Nos.

Bowl material	Model		
	AFJ20	AFJ30	AFJ40
Polycarbonate	C2SJ	C3SJ	C4SJ
Nylon	C2SJ-6	C3SJ-6	C4SJ-6

Note) The bowl assembly includes the bowl O-ring.

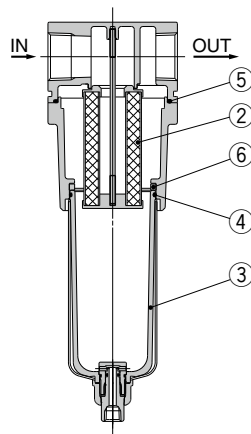
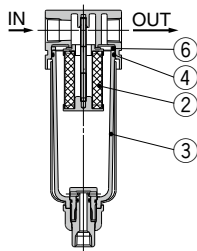
Drain Separator for Vacuum

AMJ Series

Construction

AMJ3000, 4000

AMJ5000



* The numbers correspond with those in the "Construction" of the AMJ series in the **Web Catalog**.

Replacement Parts/Part Nos.

No.	Description	Material	Model			Note
			AMJ3000	AMJ4000	AMJ5000	
2	Element assembly	—	AMJ-EL3000	AMJ-EL4000	AMJ-EL5000	
3	Bowl assembly ^{Note)}	—	AMJ-CA30-□	AMJ-CA40-□	AMJ-CA40-□	
4	O-ring	NBR	C3SFP-260S	C4SFP-260S	C4SFP-260S	
5	O-ring	NBR	—	—	111710	
6	Spacer	NBR	AMJ-SA001	AMJ-SA002	AMJ-SA003	

Note) The spacer ⑥ is not included in the bowl assembly.

Maintenance

⚠ Caution

1. Replace the element when one of followings occurs.

- Pressure drop reaches 0.02 MPa.
- Element operates for 2 years.

Element part number: AMJ-EL****

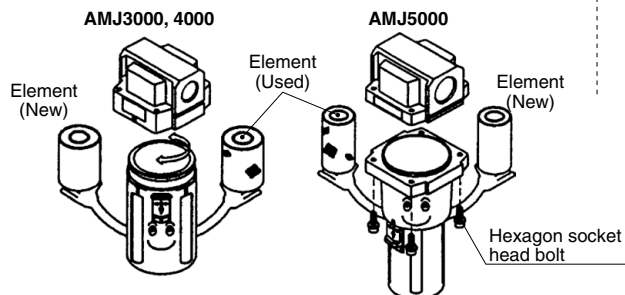
* **** is AMJ size symbol. (ex: AMJ-EL3000)

2. How to replace the element assembly

First, discharge the pressure in the bowl. (Make pressure 0 MPa.)

- Remove the bowl (housing).
- Replace the element.
- Assemble the bowl (housing).

* () for AMJ5000

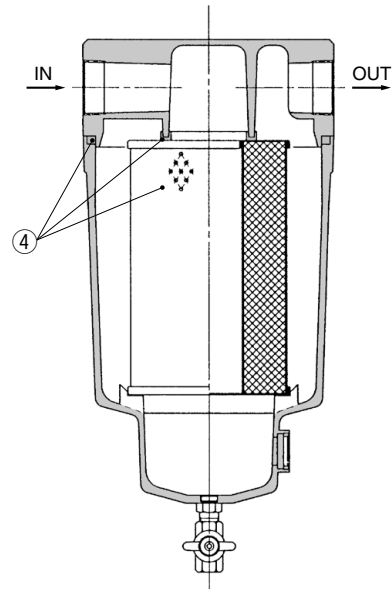
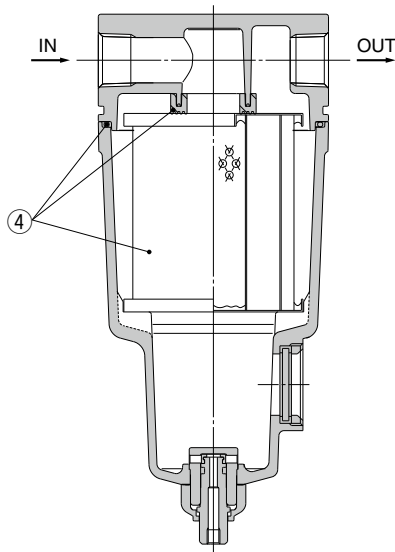


Water Separator AMG Series

Construction

AMG150C to AMG550C, AMG650

AMG850



* The numbers correspond with those in the "Construction" of the AMG series in the **Web Catalog**.

Replacement Parts/Part Nos.

No.	Description*1	Material	Applicable model*2	Model						
				AMG150C	AMG250C	AMG350C	AMG450C	AMG550C	AMG650	AMG850
4	Element assembly	Resin,	Except option F	AMG-EL150	AMG-EL250	AMG-EL350	AMG-EL450	AMG-EL550	AMG-EL650	AMG-EL850
		others	For option F	AMG-EL150-F	AMG-EL250-F	AMG-EL350-F	AMG-EL450-F	AMG-EL550-F	—	—

*1) Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

*2) F option, the rubber material: In the case of fluororubber

Maintenance

1. Element replacement

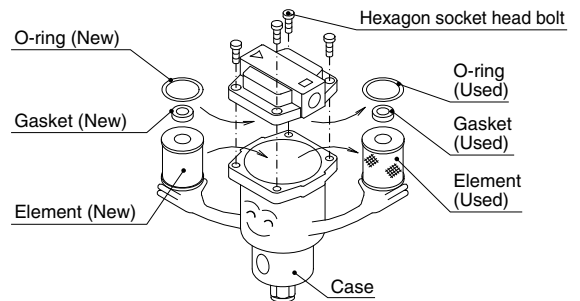
Extremely dirty air might cause clogging due to deteriorated oil or rust. Replacement is necessary regularly. (When a pressure drop reached 0.1 MPa or replace element with new one when the element has been used for 2 years.)

Element (gasket, O-ring accessory) part number: AMG-EL***
 * *** is AMG size symbol. (Ex: AMG-EL150)

2. How to replace the element assembly

First, discharge the pressure in the body. (Make pressure 0 MPa.)

- Remove the 4 hexagon socket head bolts.
- Replace the element, gasket, O-ring.
- Tighten the hexagon socket head bolts.



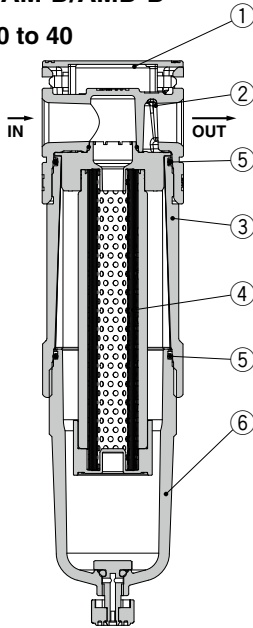
AFF-D/AM-D/AMD-D Series

The Replacement Procedure is on p. 719

Construction

AFF-D/AM-D/AMD-D

Sizes 20 to 40



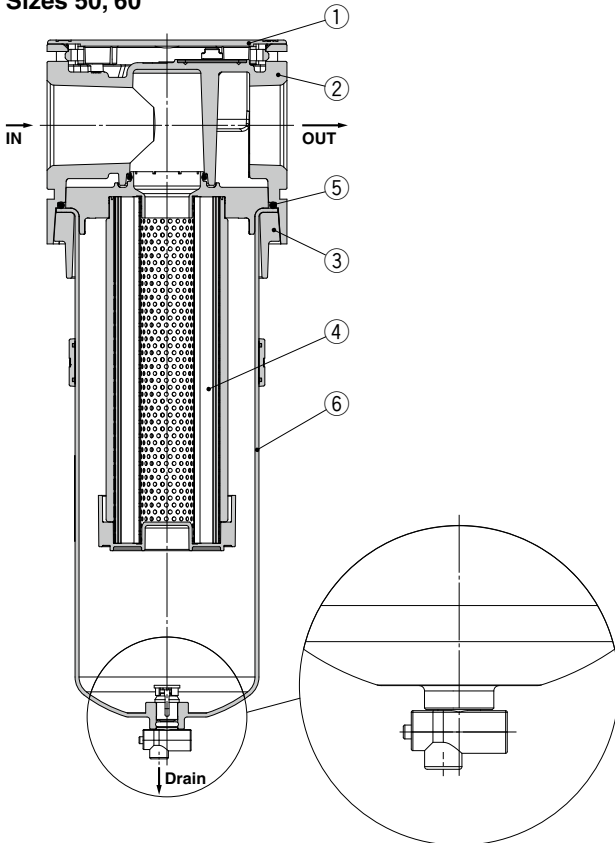
Component Parts

No.	Description	Material
1	Body cover	Resin
2	Body	Aluminum die-cast
3	Joint	Aluminum die-cast

Replacement Parts/Part Nos.

No.	Description	Size			
		20	30	40	
4	Element	AFF	AFF24P-060AS	AFF34P-060AS	AFF44P-060AS
		AM	AM24P-060AS	AM34P-060AS	AM44P-060AS
		AMD	AMD24P-060AS	AMD34P-060AS	AMD44P-060AS
		AMK	AMK24P-060AS	AMK34P-060AS	AMK44P-060AS
5	Bowl seal	C2SFP-260S C32FP-260S C42FP-260S			
6	Bowl assembly	Refer to the next page.			

Sizes 50, 60



Component Parts

No.	Description	Material
1	Body cover	Resin
2	Body	Aluminum die-cast
3	Flange	Aluminum die-cast

Replacement Parts/Part Nos.

No.	Description	Size		
		50	60	
4	Element	AFF	AFF54P-060AS	AFF64P-060AS
		AM	AM54P-060AS	AM64P-060AS
		AMD	AMD54P-060AS	AMD64P-060AS
5	Bowl seal	AM54P-160S		
6	Bowl assembly	Refer to "Bowl Assembly/Part Nos."		

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Construction

AFF-D/AM-D/AMD-D

Bowl Assembly/Part Nos.

Bowl material	Drain discharge mechanism	Drain port	Other	Size				
				20	30	40	50	60
Polycarbonate, Stainless steel	Manual	With drain cock	—	C2SF-D	—	—	AM54P-120AS	AM64P-120AS
			With bowl guard	C2SF-C-D	C3SF-D	C4SF-D	—	—
		Drain cock with barb fitting	With bowl guard	—	C3SF-W-D	C4SF-W-D	AM54P-120AS-W	AM64P-120AS-W
			—	C2SF-J-D	—	—	AM54P-□120AS-J	AM64P-□120AS-J
	Automatic (Auto drain)	With drain guide (without valve function)	With bowl guard	C2SF□-CJ-D	C3SF□-J-D	C4SF□-J-D	—	—
			—	AD27-D	—	—	AM54P-□120AS-C	AM64P-□120AS-C
		Normally closed (N.C.)	With bowl guard	AD27-C-D	AD37□-D	AD47□-D	—	—
			—	—	—	—	AM54P-□120AS-D	AM64P-□120AS-D
		Normally open (N.O.)	With bowl guard	—	AD38□-D	AD48□-D	—	—
			—	—	—	—	—	—
Nylon	Manual	With drain cock	—	C2SF-6-A	—	—	—	—
			With bowl guard	C2SF-6C-A	C3SF-6-D	C4SF-6-D	—	—
		Drain cock with barb fitting	With bowl guard	—	C3SF-6W-D	C4SF-6W-D	—	—
			—	C2SF□-6J-A	—	—	—	—
	Automatic (Auto drain)	With drain guide (without valve function)	With bowl guard	C2SF□-6CJ-A	C3SF□-6J-D	C4SF□-6J-D	—	—
			—	AD27-6-A	—	—	—	—
		Normally closed (N.C.)	With bowl guard	AD27-6C-A	AD37□-6-D	AD47□-6-D	—	—
			—	—	—	—	—	—
		Normally open (N.O.)	With bowl guard	—	AD38□-6-D	AD48□-6-D	—	—
			—	—	—	—	—	—
Metal	Manual	With drain cock	—	C2SF-2-A	C3SF-2-A	C4SF-2-A	—	—
			With level gauge	—	C3LF-8-A	C4LF-8-A	—	—
		With drain guide (without valve function)	With level gauge	C2SF□-2J-A	C3SF□-2J-A	C4SF□-2J-A	—	—
			—	—	C3LF□-8J-A	C4LF□-8J-A	—	—
	Automatic (Auto drain)	Normally closed (N.C.)	With level gauge	AD27-2-A	AD37□-2-A	AD47□-2-A	—	—
			—	—	AD37□-8-A	AD47□-8-A	—	—
		Normally open (N.O.)	With level gauge	—	AD38□-2-A	AD48□-2-A	—	—
			—	—	AD38□-8-A	AD48□-8-A	—	—

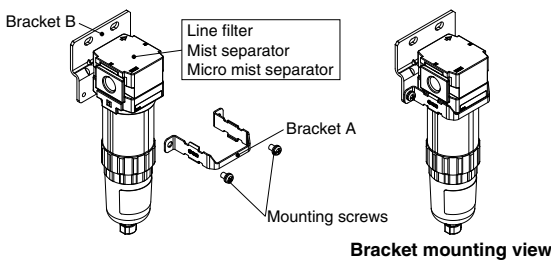
* The bowl assembly for sizes 20 to 40 comes with a bowl seal. The bowl assembly for sizes 50 and 60 comes with a flange and a bowl seal.

* The □ in the bowl assembly part numbers is for indicating the pipe thread type (applicable tubing for the auto drain). No indication is necessary for an Rc thread; however, indicate "N" for an NPT thread, and "F" for a G thread. (For auto drain, Nil: ø10, N: ø3/8") Please contact SMC separately for psi and 'F unit display specifications.

Options/Part Nos.

Description	Size			
	20	30	40	50, 60
Bracket assembly	AF24P-070AS	AF34P-070AS	AF44P-070AS	AF54P-070AS
Auto drain	Refer to "Bowl Assembly/Part Nos."			

* The assembly consists of an A and B bracket and 2 mounting screws.



Maintenance

⚠ Warning

1. The recommended replacement timing for the element is within 2 years from the start of use or prior to a product pressure drop of 0.1 MPa, whichever comes first.

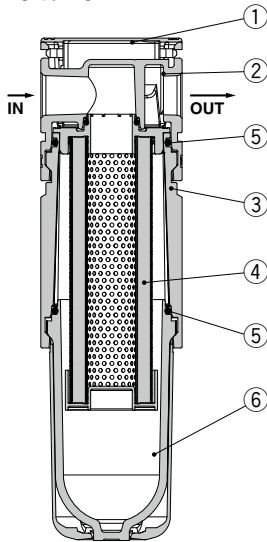
Failure to replace the element in a timely manner may result in element breakage.

AMK-D Series

The Replacement Procedure is on p. 730

Construction

Sizes 20 to 40



Component Parts

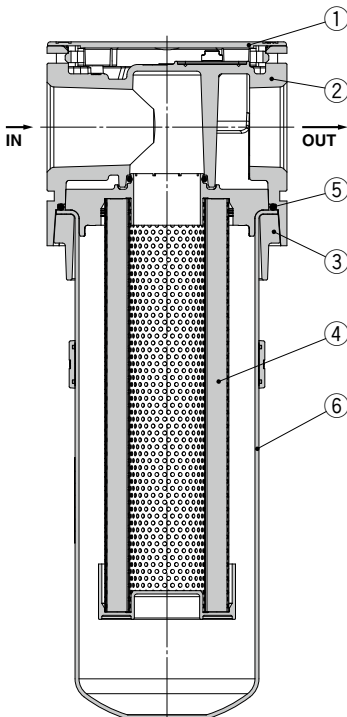
No.	Description	Material
1	Body cover	Resin
2	Body	Aluminum die-cast
3	Joint	Aluminum die-cast

Replacement Parts/Part Nos.

No.	Description	Model		
		AMK20	AMK30	AMK40
4	Element	AMK24P-060AS	AMK34P-060AS	AMK44P-060AS
5	Bowl seal	C2SFP-260S	C32FP-260S	C42FP-260S
6	Bowl assembly	Refer to the next page.		

* When it is time to replace the element, refer to the maintenance instructions in the specific product precautions (page 341).

Sizes 50, 60



Component Parts

No.	Description	Material
1	Body cover	Resin
2	Body	Aluminum die-cast
3	Flange	Aluminum die-cast

Replacement Parts/Part Nos.

No.	Description	Size	
		50	60
4	Element	AMK54P-060AS	AMK64P-060AS
5	Bowl seal	AM54P-160S	
6	Bowl assembly	Refer to "Bowl Assembly/Part Nos."	

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Industrial Filters

Activated Carbon Filter

AMK-D Series



Construction

Bowl Assembly/Part Nos.

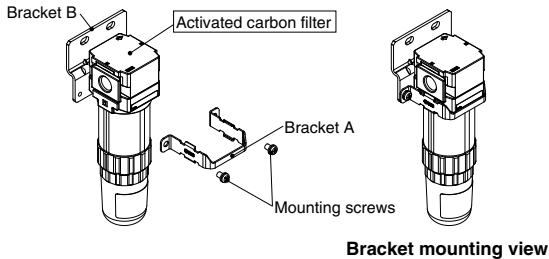
Bowl material	Other	Model				
		AMK20	AMK30	AMK40	AMK50	AMK60
Polycarbonate, Stainless steel	—	C2SF-D-X401	C3SK-D	C4SK-D	AMK54P-120AS	AMK64P-120AS
	With bowl guard	C2SK-C-D	—	—	—	—
Nylon	—	C2SF-6-A-X401	C3SK-6-D	C4SK-6-D	—	—
	With bowl guard	C2SK-6C-D	—	—	—	—
Metal	—	C2SF-2-A-X401	C3SF-2-A-X401	C4SF-2-A-X401	—	—

* The bowl assembly for sizes 20 to 40 comes with a bowl seal. The bowl assembly for sizes 50 and 60 comes with a flange and a bowl seal. Please contact SMC separately for psi and °F unit display specifications.

Option/Part Nos.

Description	Model			
	AMK20	AMK30	AMK40	AMK50, 60
Bracket assembly	AF24P-070AS	AF34P-070AS	AF44P-070AS	AF54P-070AS

* The assembly consists of an A and B bracket and 2 mounting screws.



Maintenance

⚠ Warning

1. AMK20 to 60-D

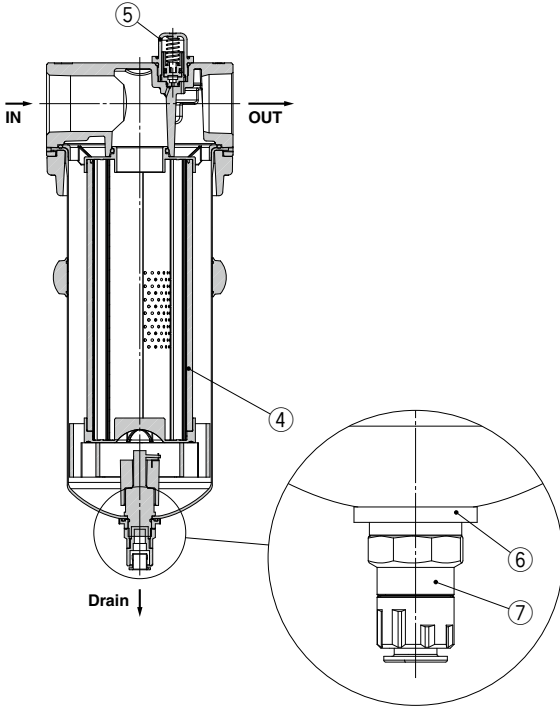
1 year from the start of use or before the service life reaches 2000 hours (The replacement timing of the element varies depending on the operating conditions. Even before the above replacement timing is reached, if an oil smell is emitted from the outlet, replace the element periodically thereafter.)

AFF□D/AM□D/AMD□D Series



Construction

AFF□D/AM□D/AMD□D



Replacement Parts/Part Nos.

No.	Description	Size		
		70D	80D	90D
4	Element			
	For AFF	AFF-EL70D	AFF-EL80D	AFF-EL90D
	For AM	AM-EL70D	AM-EL80D	AM-EL90D
	For AMD	AMD-EL70D	AMD-EL80D	AMD-EL90D
5	Element service indicator	AM-SA072		
6	Drain port spacer	AM-SA075		
7	Auto drain*1	For Rc, G thread	AD43PA-D	
		For NPT thread	NAD43PA-D	

*1 The -H and -J specifications cannot be replaced.

Maintenance

⚠ Caution

1. Replace the element according to the replacement timing explained below. Failure to do so may result in element breakage.

<Element replacement>

Replacement is recommended after the element service indicator begins to display red but before the level of red reaches the top or within 2 years from the start of use, whichever comes first.

2. When replacing the element, also replace the O-ring with a new one. Refer to the operation manual for replacement procedures.

3. To replace the element, make sure that the residual pressure in the filter container is zero. Replacement with residual pressure in the container may cause injury or damage of the filter.

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Modular F.R.L.
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Air Preparation Equipment
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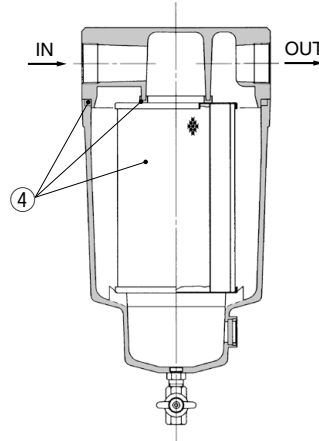
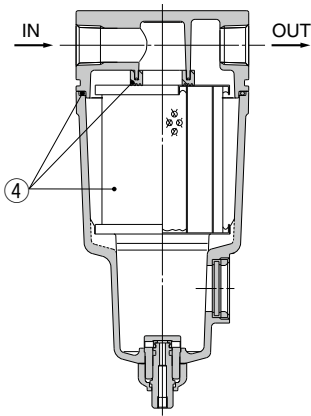
Main Line Filter

AFF Series

Construction

AFF2C to AFF22C, AFF37B

AFF75B



* The numbers correspond with those in the "Construction" of the AFF series in the Web Catalog.

Replacement Parts/Part Nos.

No.	Description*1	Material	Applicable model*2	Model						
				AFF2C	AFF4C	AFF8C	AFF11C	AFF22C	AFF37B	AFF75B
4	Element assembly	Cotton paper, others	Except option F	AFF-EL2B	AFF-EL4B	AFF-EL8B	AFF-EL11B	AFF-EL22B	AFF-EL37B	AFF-EL75B
			For option F	AFF-EL2B-F	AFF-EL4B-F	AFF-EL8B-F	AFF-EL11B-F	AFF-EL22B-F	—	—

*1) Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

*2) F option, the rubber material: In the case of fluororubber

Maintenance

1. Replace the element when one of followings occurs.

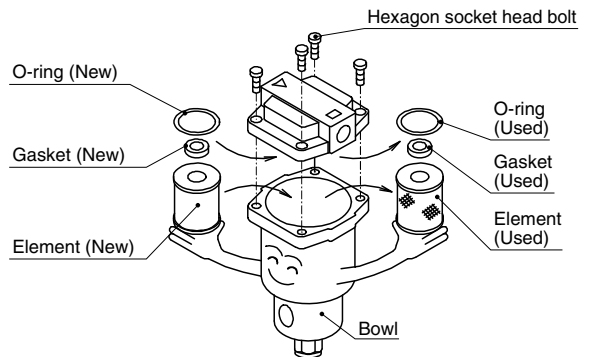
- Pressure drop reaches 0.1 MPa.
 - Element operates for 2 years.
- Element assembly (gasket, O-ring accessory) part number: AFF-EL***

* *** is AFF size symbol. (ex.: AFF-EL2B)

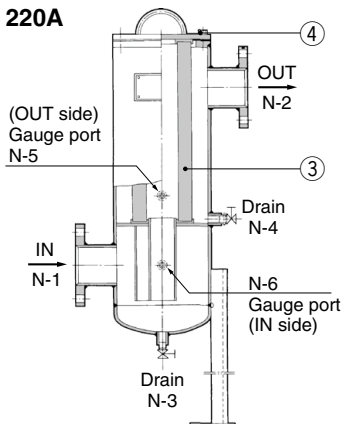
2. How to replace the element assembly

First, discharge the pressure in the body. (Make pressure 0 MPa.)

- Remove the 4 hexagon socket head bolts.
- Replace the element, gasket, O-ring.
- Tighten the hexagon socket head bolts.



AFF75A to 220A



Replacement Parts/Part Nos.

No.	Description	Material	Qty.	Model		
				AFF75A	AFF125A	AFF150A
3	Element	—	1	EC700-003N	EC800-003N	EC900-003N
4	Seal	NBR	1	AL-33S	AL-34S	AL-35S

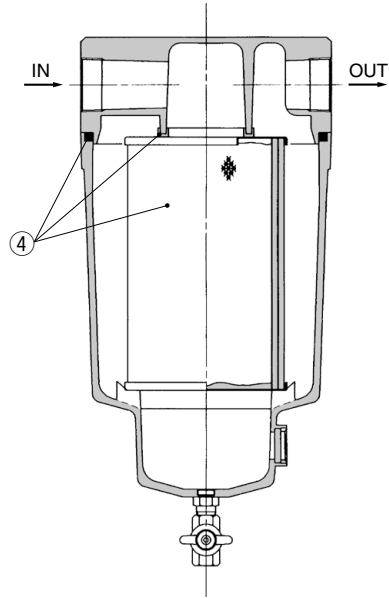
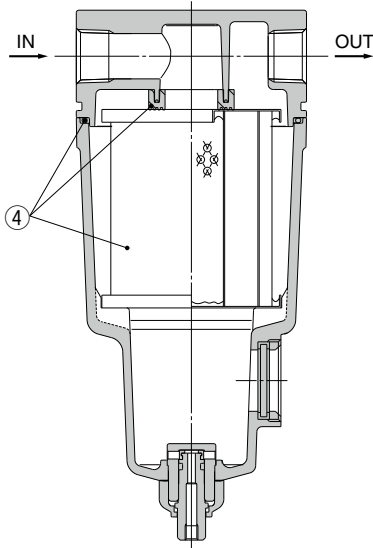
Mist Separator

AM Series

Construction

AM150C to AM550C, AM650

AM850



* The numbers correspond with those in the "Construction" of the AM series in the **Web Catalog**.

Replacement Parts/Part Nos.

No.	Description*1	Material	Applicable model*2	Model						
				AM150C	AM250C	AM350C	AM450C	AM550C	AM650	AM850
4	Element assembly	Glass fiber, others	Except option F For option F	AM-EL150	AM-EL250	AM-EL350	AM-EL450	AM-EL550	AM-EL650	AM-EL850
				AM-EL150-F	AM-EL250-F	AM-EL350-F	AM-EL450-F	AM-EL550-F	—	—

*1) Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

*2) F option, the rubber material: In the case of fluororubber

Maintenance

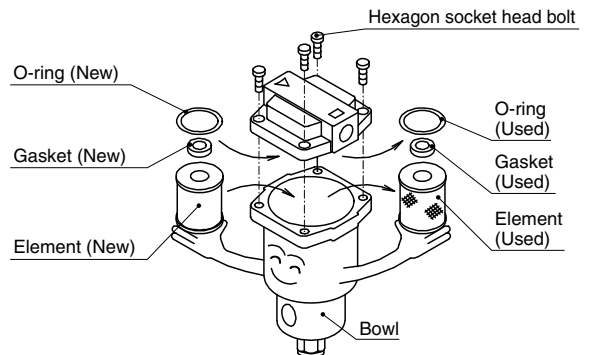
1. Replace the element when one of followings occurs.

- Pressure drop reaches 0.1 MPa.
 - Element operates for 2 years.
- Element assembly (gasket, O-ring accessory) part number: AM-EL***

* *** is AM size symbol. (ex.: AM-EL150)

2. How to replace the element assembly

- First, discharge the pressure in the body. (Make pressure 0 MPa.)
- Remove the 4 hexagon socket head bolts.
- Replace the element, gasket, O-ring.
- Tighten the hexagon socket head bolts.



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Air Grippers

Modular F.R.L.
Pressure Control Equipment

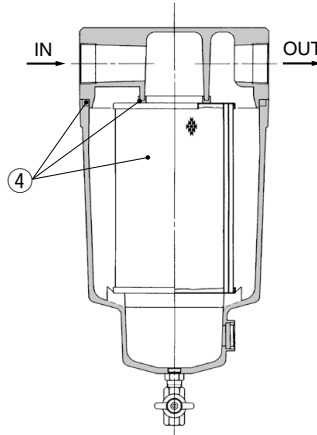
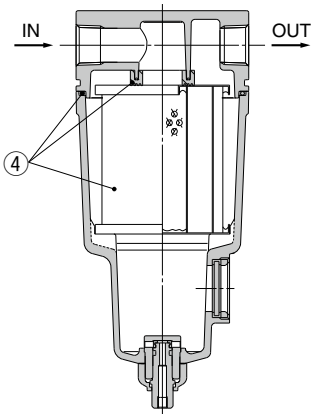
Air Preparation
Equipment
Industrial Filters

AMD Series

Construction

AMD150C to AMD550C, AMD650

AMD850



* The numbers correspond with those in the "Construction" of the AMD series in the Web Catalog.

Replacement Parts/Part Nos.

No.	Description*1	Material	Applicable model*2	Model						
				AMD150C	AMD250C	AMD350C	AMD450C	AMD550C	AMD650	AMD850
4	Element assembly	Glass fiber, others	Except option F	AMD-EL150	AMD-EL250	AMD-EL350	AMD-EL450	AMD-EL550	AMD-EL650	AMD-EL850
			For option F	AMD-EL150-F	AMD-EL250-F	AMD-EL350-F	AMD-EL450-F	AMD-EL550-F	—	—

*1) Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

*2) F option, the rubber material: In the case of fluororubber

Maintenance

1. Replace the element when one of followings occurs.

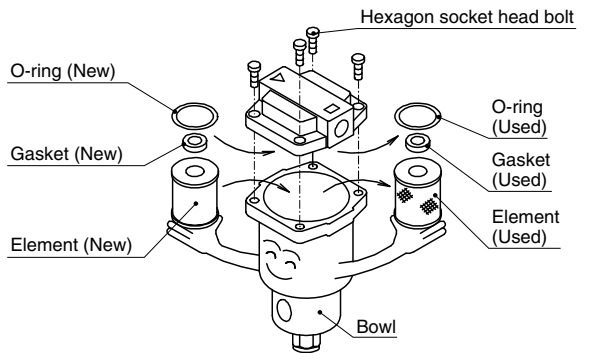
- Pressure drop reaches 0.1 MPa.
- Element operates for 2 years (1 year for free standing type).
Element assembly (gasket, O-ring accessory) part number: AMD-EL***

* *** is AMD size symbol. (ex.: AMD-EL150)

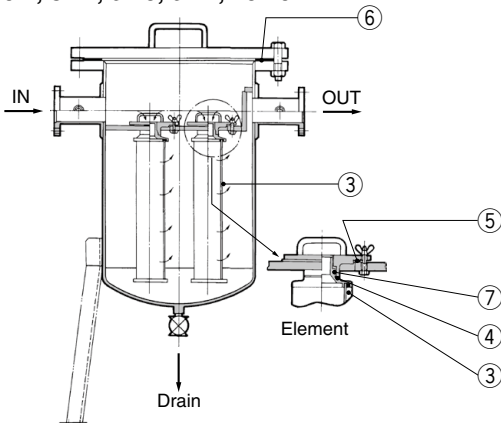
2. How to replace the element assembly

First, discharge the pressure in the body. (Make pressure 0 MPa.)

- Remove the 4 hexagon socket head bolts.
- Replace the element, gasket, O-ring.
- Tighten the hexagon socket head bolts.



AMD80□, 81□, 9□0, 9□1, 10□0



Replacement Parts

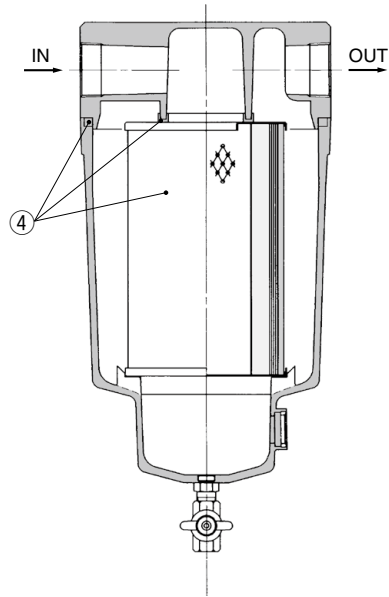
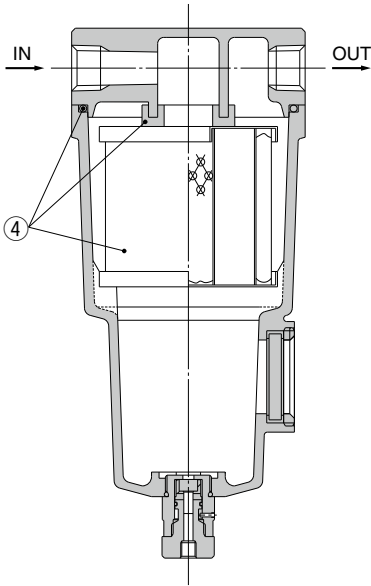
Model applicable filter	③ Element		④ Seal (Material: NBR)		⑤ Seal (Material: NBR)		⑥ Gasket (Material: V#6500)		⑦ O-ring (Material: NBR)				
	Part no.	Qty.	Part no.	Qty.	Part no.	Qty.	Part no.	Qty.	Part no. (Nominal)	Qty.			
AMD800	63174	1	63148	3	OD112XID90XT3	1	AL-61S	1	KA00061 (1A-G35)	3			
AMD810					—	—	—						
AMD801					1	—	—	AL-60S			1		
AMD811					—	—	—	—			—		
AMD900					3	—	—	AL-63S			1		
AMD910	3	3	3	—	—	AL-62S	1						
AMD911								3	5	OD112XID90XT3	5	AL-31S	1
AMD1000													
AMD1010	5	—	—	—	—	—	—	—	—				

AMH Series

Construction

AMH150C to AMH550C, AMH650

AMH850



* The numbers correspond with those in the "Construction" of the AMH series in the **Web Catalog**.

Replacement Parts/Part Nos.

No.	Description*1	Material	Applicable model*2	Model						
				AMH150C	AMH250C	AMH350C	AMH450C	AMH550C	AMH650	AMH850
4	Element assembly	Glass fiber, others	Except option F For option F	AMH-EL150	AMH-EL250	AMH-EL350	AMH-EL450	AMH-EL550	AMH-EL650	AMH-EL850
				AMH-EL150-F	AMH-EL250-F	AMH-EL350-F	AMH-EL450-F	AMH-EL550-F	—	—

*1) Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

*2) F option, the rubber material: In the case of fluororubber

Maintenance

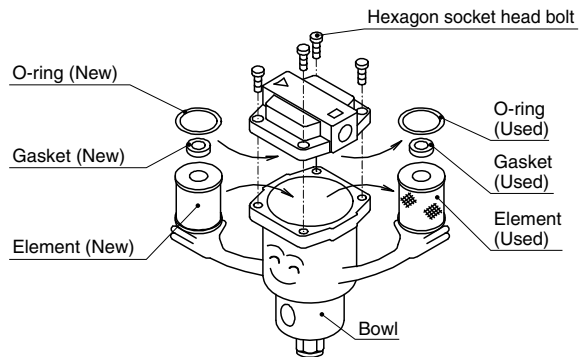
1. Replace the element when one of followings occurs.

- Pressure drop reaches 0.1 MPa.
 - Element operates for 2 years.
- Element assembly (gasket, O-ring accessory) part number: AMH-EL***

* *** is AMH size symbol. (ex.: AMH-EL150)

2. How to replace the element assembly

- First, discharge the pressure in the body. (Make pressure 0 MPa.)
- Remove the 4 hexagon socket head bolts.
- Replace the element, gasket, O-ring.
- Tighten the hexagon socket head bolts.



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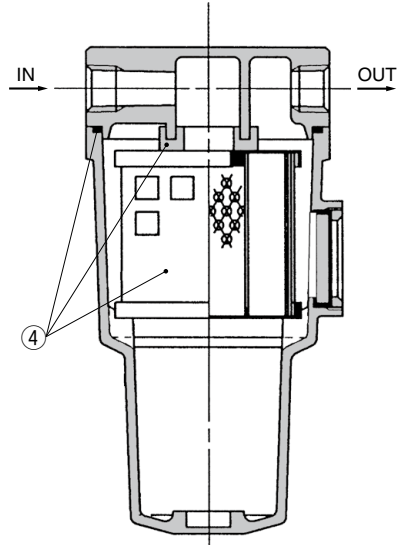
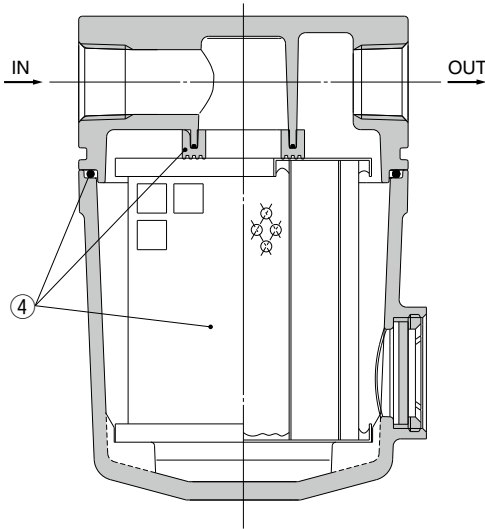
Super Mist Separator

AME Series

Construction

AME150C to AME550C

AME650, AME850



* The numbers correspond with those in the "Construction" of the AME series in the **Web Catalog**.

Replacement Parts/Part Nos.

No.	Description*1	Material	Applicable model*2	Model						
				AME150C	AME250C	AME350C	AME450C	AME550C	AME650	AME850
4	Element assembly	Glass fiber,	Except option F	AME-EL150	AME-EL250	AME-EL350	AME-EL450	AME-EL550	AME-EL650	AME-EL850
		others	For option F	AME-EL150-F	AME-EL250-F	AME-EL350-F	AME-EL450-F	AME-EL550-F	—	—

*1) Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

*2) F option, the rubber material: In the case of fluororubber

Maintenance

1. Replace the element when one of followings occurs.

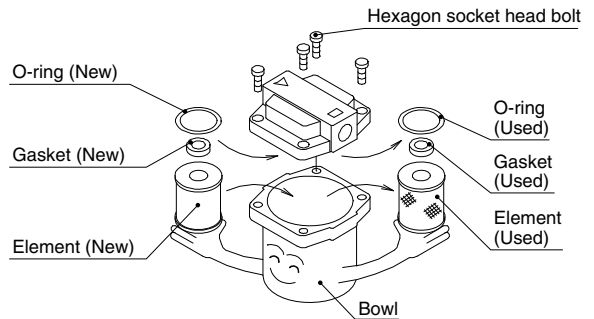
- Red spots appear on the element surface.
 - Operated for 2 years, or pressure drop reaches 0.1 MPa.
- Element assembly (gasket, O-ring accessory) part number: AME-EL***

* *** is AME size symbol. (ex.: AME-EL150)

2. How to replace the element assembly

First, discharge the pressure in the body. (Make pressure 0 MPa.)

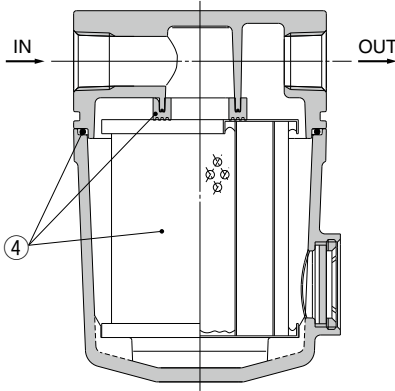
- Remove the 4 hexagon socket head bolts.
- Replace the element, gasket, O-ring.
- Tighten the hexagon socket head bolts.



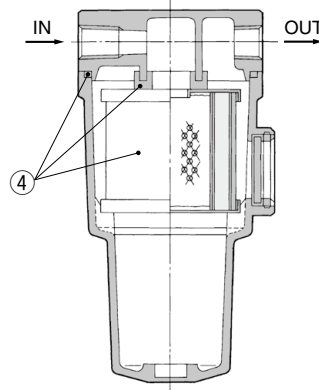
AMF Series

Construction

AMF150C to AMF550C



AMF650, AMF850



* The numbers correspond with those in the "Construction" of the AMF series in the Web Catalog.

Replacement Parts/Part Nos.

No.	Description*1	Material	Applicable model*2	Model						
				AMF150C	AMF250C	AMF350C	AMF450C	AMF550C	AMF650	AMF850
4	Element assembly	Glass fiber, others	Except option F For option F	AMF-EL150 AMF-EL150-F	AMF-EL250 AMF-EL250-F	AMF-EL350 AMF-EL350-F	AMF-EL450 AMF-EL450-F	AMF-EL550 AMF-EL550-F	AMF-EL650	AMF-EL850

*1) Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

*2) F option, the rubber material: In the case of fluororubber

Maintenance

1. Element replacement

Since the element life depend on odor concentration of compressed air, it cannot be specified. Confirm deodorizing capacity remaining period, and replace the element periodically afterwards.

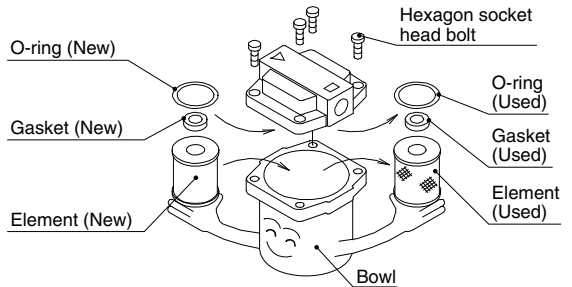
Replace the element when you smell oil on the outlet side. Replace the element with a new one when the element has been used for 2 years, or when pressure drop reaches 0.1 MPa. Element assembly (gasket, O-ring accessory) part number: AMF-EL***

*** is AMF size symbol. (ex.: AMF-EL150)

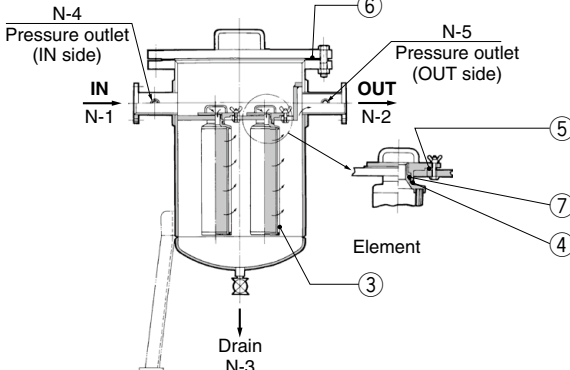
2. How to replace the element assembly

First, discharge the pressure in the body. (Make pressure 0 MPa.)

- Remove the 4 hexagon socket head bolts.
- Replace the element, gasket, O-ring.
- Tighten the hexagon socket head bolts.



AMF80□, 90□, 1000



Replacement Parts

Model applicable filter	③ Element		④ Seal (Material: NBR)		⑤ Seal (Material: NBR)		⑥ Gasket (Material: V#6500)		⑦ O-ring (Material: NBR)	
	Part no.	Qty.	Part no.	Qty.	Part no.	Qty.	Part no.	Qty.	Part no. (Nominal)	Qty.
AMF800		1		1	OD112XID90XT3	1	AL-61S	1		1
AMF801		1		1	—	—	AL-60S	1		1
AMF900	63271	3	63148	3	OD112XID90XT3	3	AL-63S	1	KA00061	3
AMF901		3		3	—	—	AL-62S	1	1A-G35	3
AMF1000		5		5	OD112XID90XT3	5	AL-31S	1		5

Industrial Filters

1 Indication of Replacement of Elements, Inspection Items

■ Replacement standards

<Element replacement>

The differential pressure (pressure drop) between the primary side and secondary side reaches 0.1 MPa.

■ Inspection items

Check each seal part for leak periodically.

Check the pressure/temperature periodically to make sure that the filter is within its operable range.

If the differential pressure reaches 0.1 MPa during operation, stop the operation and replace the element with a new one.

Remove the dust accumulated in the case periodically.

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Modular F.R.L.
Pressure Control Equipment

Air Preparation Equipment
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2 How to Select Element Order Number for Replacement



POINT

The element number for replacement is written on the nameplate.



Element number for replacement
Order the element number written in here.

* If the information written on the nameplate cannot be confirmed, please specify the element number as described below.

Order Example

* Element number for FGGSB-20-B002NA

A

Check the product number of the industrial filter. Confirm the items written on the right.

1 Element length

* The element length is the total length of combined short elements.

2 Element category

3 Nominal filtration accuracy

4 Element seal material

How to Order

FGG S B - 20 - B 002 N A -

Material	
Symbol	Body
S	Stainless steel 304
L	Stainless steel 304

1

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

2

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

Option

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

* Please use the applicable pressure gauge depending on the fluid used.

Element seal material ^{Note 1)}

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

4

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

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

3

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to pages 353 and 354.

B

Select the Number and Size of Elements

* Please select accordingly from the following two selection types of numbers and sizes.

Specifications

5

Model		FGGSB ^{Note 1)}		FGGSC ^{Note 1)}		FGGSD ^{Note 1)}		FGGLB ^{Note 1)}		FGGLC ^{Note 1)}		FGGLD ^{Note 1)}	
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)											

Note 1) Cannot be used with gases

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

There are various types of elements for replacement.
 Select respective element type according to the type of industrial filter you are using.

C Element Model Determination

Specify the element type by filling out the element number with the respective codes of the items selected in sections **A** and **B**.

* **As for the number of orders, specify it by item ⑤, “number of elements”, in section B.**
 The number of orders is 7 in this example.

How to Order Standard Elements

Model Determination → **E B 200 - 002 N**

Element symbol •

Element material •

Symbol	Element material
A - 2	Bronze
S	Stainless steel 316

Element size •

Symbol	Element size
A - 1	ø65 x L250
B - 5	ø65 x L500
	ø65 x L750
	ø65 x L1000

Element seal material/Operating temperature range •

Symbol	Element 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
A - 3	002
	005
	010
	020
	040
	070
	100
	120

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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

Bronze element, but may have been discolored by moisture in the atmosphere, the characteristics are not affected.

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) ^{Note 3)}	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	Cannot be used
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

Note 3) The name is for distinguishing the raw material, and is different from the actual filtration rating. (Refer to the **Web Catalog.**)

How to Order Standard 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

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

Element seal material/Operating temperature range

Symbol	Element 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.

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. Different lengths are available as a special order up to 750 mm, only for cotton and polypropylene.

How to Order Standard Elements

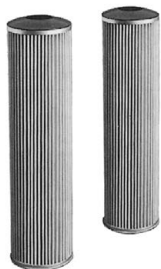
Element material	Cotton	Polypropylene	Glass fiber
Core material	Stainless steel 304	Polypropylene	Stainless steel 316
Nominal filtration accuracy (μm)	0.5	EH10G	EHM10A
	1	EH39R10GV	EHM39R10AY
	5	EH23R10GV	EHM23R10AY
	10	EH19R10GV	EHM19R10AY
	20	EH15R10G	EHM15R10A
	50	EH11R10G	EHM11R10A
	75	EH10R10G	EHM10R10A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

Note) Element seals are not used for fiber elements.

Standard Elements Paper/Micromesh

Paper Elements

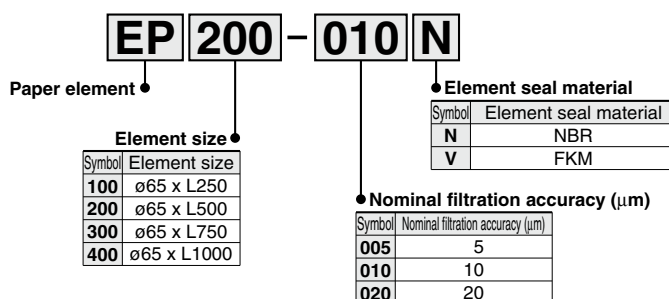
- Cartridges are pleated for a large filtration area, and elements are economical due to their long service life.
- Main applications
Ideal for filtration of hydraulic oil, lubricating oil, fuel oil, oils for the liquid gas industry, dry inert gases, and dry air



Specifications

Material	Filter paper (Cotton, Phenol resin impregnated paper)
Operating temperature (C°)	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

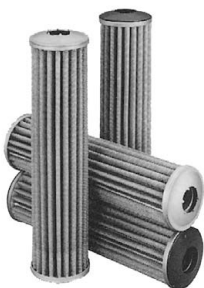
How to Order Standard Elements



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



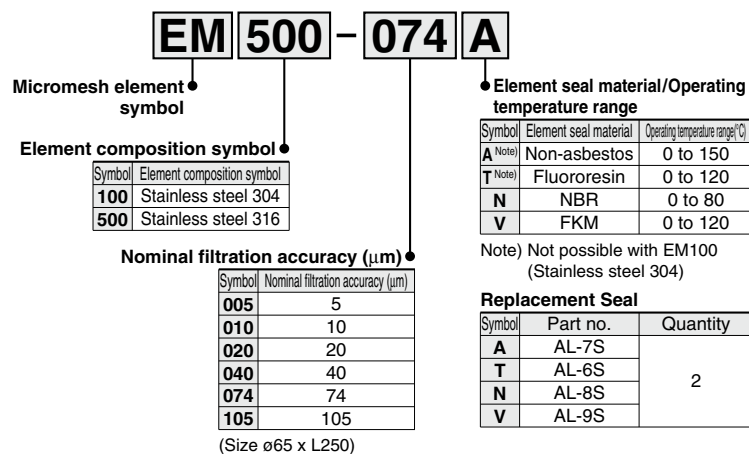
Specifications

Model	EM100	EM500
Materials	Stainless steel 304	Stainless steel 316
Jointing 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) The values depending on the seal material used

How to Order Standard Elements



FGD Series 1



Replacement Parts and Seal List

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
Nil	None
-B	Bracket

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
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 table below for the element seal material types by the element category.

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)

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

Nominal filtration accuracy (μm) ^(Note)

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

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to the **Web Catalog**.

Element/Element Seal Material Combinations

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

Specifications

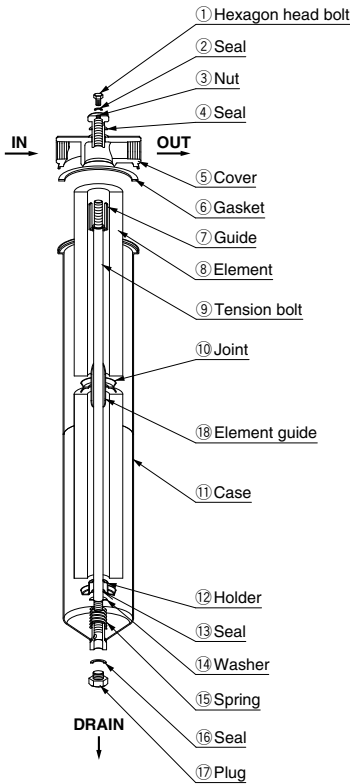
Model	FGDCA	FGDCB	FGDEA	FGDEB	FGDTA	FGDTB	FGDFA	FGDFB
Number of elements	1	2 ^(Note)	1	2 ^(Note)	1	2 ^(Note)	1	2 ^(Note)
Element size	ø65 to 70 x L250	ø65 to 70 x L500 (L250 x 2)	ø65 to 70 x L250	ø65 to 70 x L500 (L250 x 2)	ø65 to 70 x L250	ø65 to 70 x L500 (L250 x 2)	ø65 to 70 x L250	ø65 to 70 x L500 (L250 x 2)
Main materials	Cover	Aluminum			SCS14			
	Case	SPCE			Stainless steel 316			
	Gasket/O-ring	NBR			Fluororesin			
	Seal	Nylon		Nylon/Fluororesin		Fluororesin		

Note) 1 element (ø65 x L500) in the case of a sintered metal element or paper element

FGD Series ②

The Replacement Procedure is on p. 743

Replacement Parts and Seal List



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.

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 Aluminum	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	Stabilizes 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-CV005-03/06	FGDT/F	⑤
	FGD-CV006-03/06	FGDC/E	
Joint	FGD-OP001	FGD□	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)	

- Refer to pages 351 and 352 for selection.
- Refer to pages 353 and 354 for the replacement element type.

* The numbers correspond with those in the "Replacement Parts and Seal List" of the FGD series in the Web Catalog.

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Replacement Parts and Seal List

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		FKM

Option

Symbol	Pressure gauge type
G1	G46-10-02M (Brass at wetted parts)
G2	G46-10-02-SRB (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)

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

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

Element category

Symbol	Element type	Material
B	Sintered metal	Bronze
S		Stainless steel
T	Fiber	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/Element Seal Material Combinations

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

Nominal filtration accuracy (μm) ^(Note)

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

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to the **Web Catalog**.

Specifications

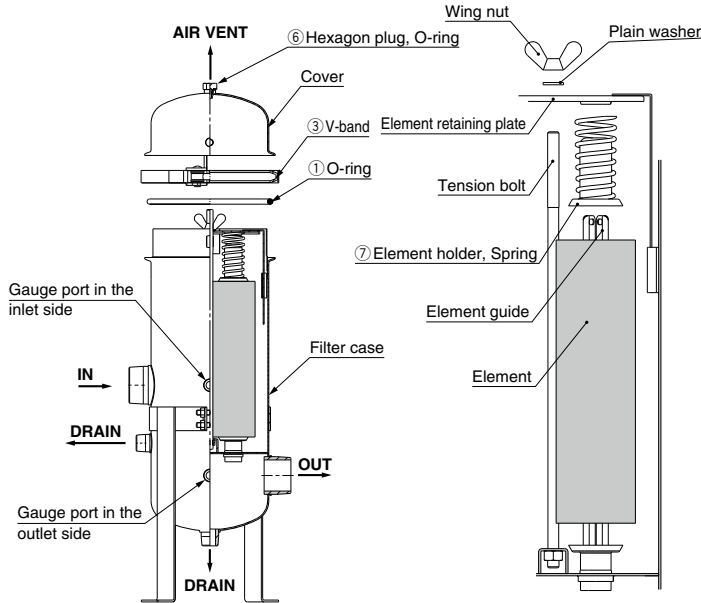
Model	FGESA ^(Note 1)	FGESB ^(Note 1)	FGESC ^(Note 1)	FGELA ^(Note 1)	FGELB ^(Note 1)	FGELC ^(Note 1)	FGETA	FGETB	FGETC					
Number of elements	4	4 ^(Note 2)	8	4 ^(Note 2)	12	4	4	4 ^(Note 2)	8	4 ^(Note 2)	12			
Element size	ø65 to 70 x L250	ø65 to 70 x L500	ø65 to 70 x L250	ø65 to 70 x L750	ø65 to 70 x L250	ø65 to 70 x L500	ø65 to 70 x L250	ø65 to 70 x L750	ø65 to 70 x L250	ø65 x L250	ø65 x L500	ø65 x L250	ø65 x L750	ø65 x L250
Main materials	Cover	Stainless steel 304												
	Case	Stainless steel 304												
	Gasket	—	—	—	—	—	—	Fluororesin	Fluororesin	Fluororesin				
	O-ring	NBR			FKM			—						
Legs	SS400 (Chromatic plating)													

Note 1) Cannot be used with gases

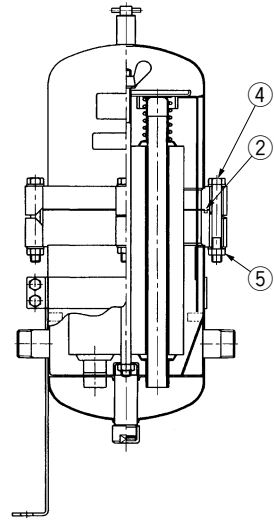
Note 2) In the case of a sintered metal element or paper element

Replacement Parts and Seal List

FGES/FGEL type (V-band type)



FGET type (Bolt tightening type)



Replacement Parts/Part Nos.

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
6	Hexagon plug	1	FGE-OP007	FGE-OP008	—
	O-ring	1			
7	Spring	4	FGE-OP005	—	—
	Element holder	4			

• Refer to pages 351 and 352 for selection.
 • Refer to pages 353 and 354 for the replacement element type.

* The numbers correspond with those in the "Replacement Parts and Seal List" of the FGE series in the Web Catalog.

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Modular F.R.L.
Pressure Control Equipment

Air Preparation Equipment
Industrial Filters

FGG Series 1



Replacement Parts and Seal List

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		Cotton
P	Paper	Cotton
M	Micromesh	Stainless steel 304/Epoxy
L		Stainless steel 316

Nominal filtration accuracy (µm) ^{Note)}

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

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to the **Web Catalog**.

Option

Symbol	Pressure gauge type
G1	G46-10-02M (Brass at wetted parts)
G2	G46-10-02-SRB (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)}

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

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

Element/Element Seal Material Combinations

Element material	Element seal material	Nil	Non-	PTFE	NBR	FKM
		(Without seal)	asbestos	A	T	N
B	Bronze			○	○	○
S	Stainless steel		○	○	○	○
T	Polypropylene	○				
G	Glass fiber	○				
H	Cotton (Fiber)	○				
P	Cotton (Paper)				○	○
M	Stainless steel 304/Epoxy				○	○
L	Stainless steel 316		○	○	○	○

Specifications

Model	FGGSB ^{Note 1)}		FGGSC ^{Note 1)}		FGGSD ^{Note 1)}		FGGLB ^{Note 1)}		FGGLC ^{Note 1)}		FGGLD ^{Note 1)}		
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)											

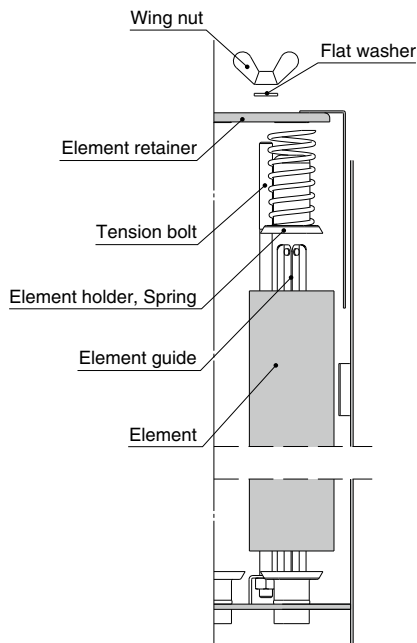
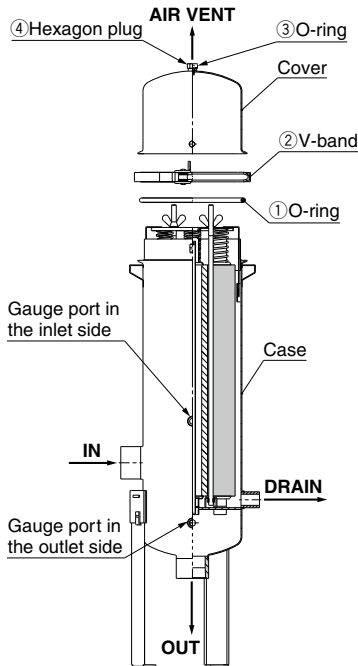
Note 1) Cannot be used with gases

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

FGG Series ②

The Replacement Procedure is on p. 749

Replacement Parts and Seal List



Replacement Parts/Part Nos.

No.	Description	Qty.	Applicable model	
			FGGS	FGGL
1	O-ring	1	FGF-KT01	FGF-KT02
2	V-band	1	CY-27S	
3	O-ring	1	FGE-OP007	FGE-OP008
4	Hexagon plug	1		

- Refer to pages 351 and 352 for selection.
- Refer to pages 353 and 354 for the replacement element type.

* The numbers correspond with those in the "Replacement Parts and Seal List" of the FGG series in the Web Catalog.

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FGA Series (Produced upon receipt of order)



Replacement Parts and Seal List

How to Order

FGA C 04 A - 10 - B 002 N

• **Case material (wetted parts)**

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

• **Number of arranged elements**

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

• **Element seal material** ^{Note)}

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

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

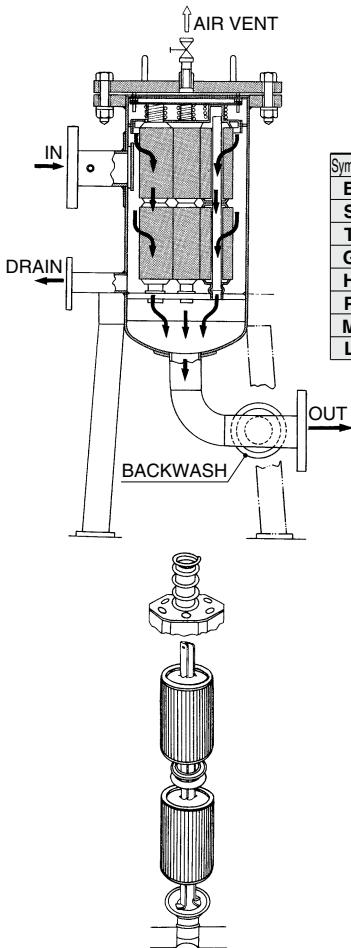
• **Nominal filtration accuracy (μm)** ^{Note)}

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

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to the **Web Catalog**.

Element/Element Seal Material Combinations

Element material	Element seal material	NII (Without seal)	Non-asbestos	PTFE			NBR			FKM		
				A	T	N	V	N	V	N	V	
B	Bronze					○	○	○				
S	Stainless steel		○	○	○	○	○	○				
T	Polypropylene	○										
G	Glass fiber	○										
H	Cotton (Fiber)	○										
P	Cotton (Paper)							○	○			
M	Stainless steel 304/Epoxy							○	○			
L	Stainless steel 316		○	○	○	○	○	○	○			



Element mounting figure

• **Element category**

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

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	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		

• **Refer to pages 353 and 354 for the replacement element type.**

* The numbers correspond with those in the "Replacement Parts and Seal List" of the FGA series in the **Web Catalog**.

FGB Series (Discontinued products)



Replacement Parts and Seal List

How to Order

FGB C 04 A - 10 - B 002 N

This series was discontinued in July 2014. (Lot number: SU)
Currently only the element can be replaced.

Case material (wetted parts)

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

Number of arranged elements

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

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

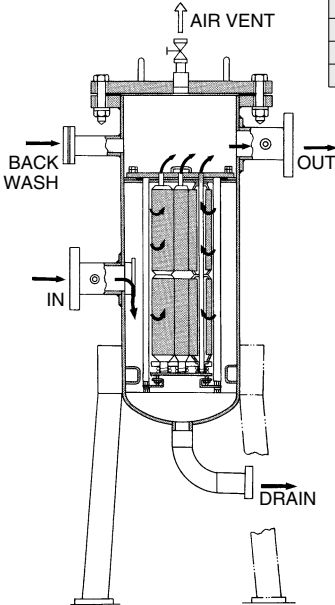
Nominal filtration accuracy (μm) ^{Note)}

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

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to the **Web Catalog**.

Element category

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



Element mounting figure

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	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		

• Refer to pages 353 and 354 for the replacement element type.

* The numbers correspond with those in the "Replacement Parts and Seal List" of the FGB series in the **Web Catalog**.

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FGC Series (Produced upon receipt of order)



Replacement Parts and Seal List

How to Order

FGC 1 C A - 04 - B 002 N

• **Max. operating pressure**

Symbol	Max. operating pressure
1	1 MPa
2	2 MPa
4	4 MPa

• **Case material (wetted parts)**

Symbol	Case 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: JPI300^{Lb}RF flange connection
 FGC4: JPI600^{Lb}RF flange connection

• **Element seal material** Note)

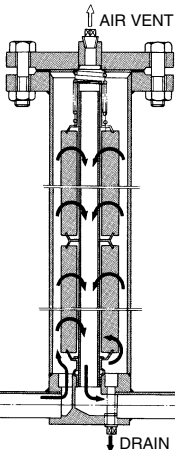
Symbol	Element seal material
A	Non-asbestos
T	Fluororesin
N	NBR
V	FKM

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

• **Nominal filtration accuracy (μm)** Note)

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

Note) For a comparison with the nominal filtration accuracy according to the element category, refer to the **Web Catalog**.

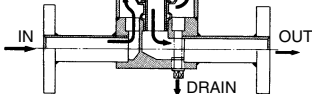


• **Element category**

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

Element/Element Seal Material Combinations

Element material	Element seal material (Without seal)	Non-asbestos			
		PTFE	NBR	FKM	
B	Bronze		○	○	
S	Stainless steel	○	○	○	
T	Polypropylene	○			
G	Glass fiber	○			
H	Cotton (Fiber)	○			
P	Cotton (Paper)		○	○	
M	Stainless steel 304/Epoxy		○	○	
L	Stainless steel 316	○	○	○	



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	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	



Element mounting figure

• **Refer to pages 353 and 354 for the replacement element type.**

* The numbers correspond with those in the "Replacement Parts and Seal List" of the FGC series in the **Web Catalog**.

Bag Filter

FGF Series

1

The Replacement Procedure is on p. 761

Replacement Parts and Seal List

How to Order

One element included FGF **S** 1 **A** - 20 - E 005 **B** - **G**

Three, five elements included (produced upon receipt of order) FGF **S** 3 **A** - 40 - E 005 **F**

Bag filter • **Material** • **Number of elements** • **Element size** • **Port size** • **Element material (Polyester)** • **Pressure gauge** • **Option** • **Nominal filtration accuracy** (Note)

Symbol	Case material	Seal material	Applicable model		
			FGF□1	FGF□3	FGF□5
S	Stainless steel	NBR	●	●	●
C	Carbon steel	—	—	—	—
L	Stainless steel	FKM	●	●	●
R	Carbon steel	—	—	●	●

Symbol	Number of elements
1	1 pc. included (FGF□1)
3	3 pcs. included (FGF□3)
5	5 pcs. included (FGF□5)

Symbol	Element size
A	ø190 x L440
B	ø190 x L770

Symbol	Port size	Applicable model
20	Rc2	FGF□1
40	100 (4 ^B) JIS10 ^K FF	FGF□3
60	150 (6 ^B) JIS10 ^K FF	FGF□5

Symbol	Option*	Applicable model		
		FGF□1	FGF□3	FGF□5
Nil	None	●	●	●
F	Companion flange	—	●	●
L	Foundation bolt (3 pcs.)	●	●	●

* In the case of multiple options, indicate symbols in alphabetical order.

Symbol	Nominal filtration accuracy (µm)
005	5
010	10
025	25
050	50
100	100

Note) The nominal filtration accuracy refers to the filtration accuracy according to SMC criteria, and serves as a guideline for the particulates that can be filtered out. It does not mean that 100% of the particulates of the diameter shown can be filtered out.

Part number of element for replacement



EJ 501S - 005

• **Element symbol**

• **Element size**

Symbol	Element size	Applicable model
501S	ø190 x L440	For FGF□□A
601S	ø190 x L770	For FGF□□B

Specifications

Model		FGF□1A-20	FGF□1B-20	FGF□3A-40 (Note 2)	FGF□3B-40 (Note 2)	FGF□5A-60 (Note 2)	FGF□5B-60 (Note 2)
Element	Material	Polyester					
	Nominal filtration accuracy	5, 10, 25, 50, 100 µm					
	Element replacement differential pressure	0.1 MPa (Note 1)					
	Number of elements	1 element included		3 elements included		5 elements included	
	Size	ø190 x L440	ø190 x L770	ø190 x L440	ø190 x L770	ø190 x L440	ø190 x L770
	Filtration area	1800 cm ²	3400 cm ²	5400 cm ²	10200 cm ²	9000 cm ²	17000 cm ²

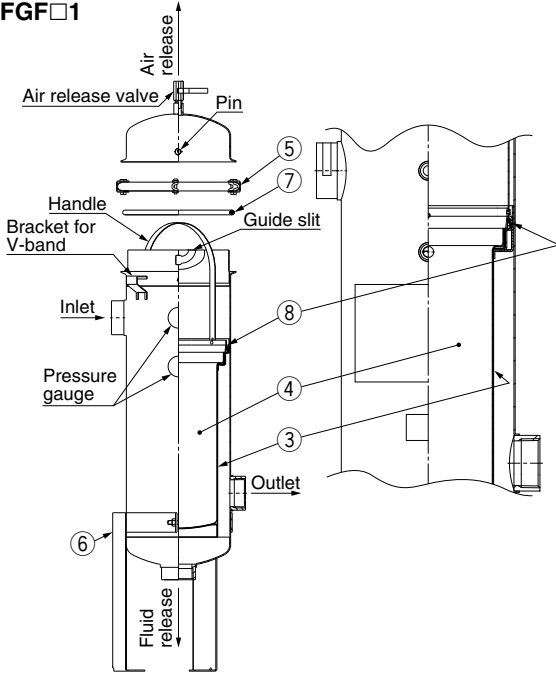
Note 1) Control the element replacement so that the differential pressure does not exceed 0.1 MPa.

Note 2) Please contact SMC for delivery time as the FGF3□ and FGF5□ are produced upon receipt of order.

Rotary Actuators
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Replacement Parts and Seal List

FGF□1



Replacement Parts

No.	Description	Part no.	Material	Qty.	Applicable model ^{Note)}
3	Basket	FGF-BT01	Stainless steel 304	1	FGF□1A
		FGF-BT02		1	FGF□1B
4	Element	EJ501S-□	Polyester	1	FGF□1A
		EJ601S-□		1	FGF□1B
5	V-band	FGF-BA01	Stainless steel	1	FGF□1□
6	Legs assembly (with bolt, nut, flat washer)	FGF-OP01 (Set)	Carbon steel	1	FGF□1□
7	O-ring	FGF-KT01	NBR	1	FGFS1□
		FGF-KT02	FKM	1	FGFL1□
8	Holder assembly (with O-ring)	FGF-KT03 (Set)	Polypropylene/NBR	1	FGFS1□
		FGF-KT04 (Set)	Polypropylene/FKM	1	FGFL1□

Note) Refer to "How to Order" on page 364 for the □ part of the model number.

Part number of element for replacement



EJ 501S - 005

● Element symbol

● Element size

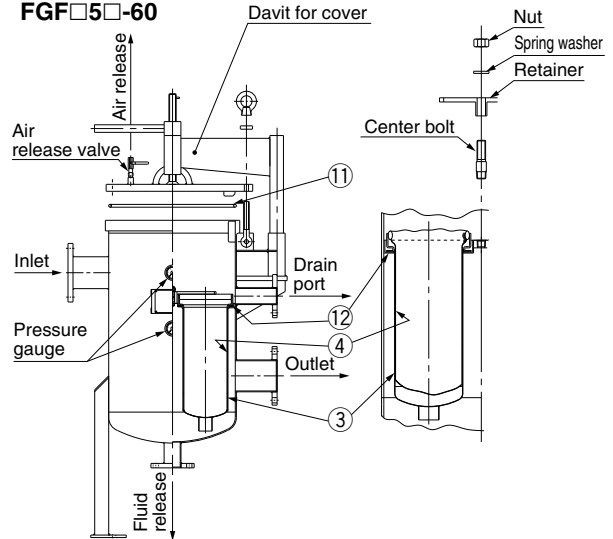
Symbol	Element size	Applicable model
501S	φ190 x L440	For FGF□□A
601S	φ190 x L770	For FGF□□B

● Nominal filtration accuracy^{Note)}

Symbol	Nominal filtration accuracy (μm)
005	5
010	10
025	25
050	50
100	100

Note) The nominal filtration accuracy refers to the filtration accuracy according to SMC criteria, and serves as a guideline for the particulates that can be filtered out. It does not mean that 100% of the particulates of the diameter shown can be filtered out.

FGF□3□-40 FGF□5□-60



Replacement Parts

No.	Description	Part no.	Material	Qty.	Applicable model ^{Note)}
3	Basket	BT-3S	Stainless steel 304	3	FGF□3A-40
				5	FGF□5A-60
		BT-4S	Stainless steel 304	3	FGF□3B-40
				5	FGF□5B-60
4	Element	Refer to "How to Order."	Polyester	3	FGF□3□-40
				5	FGF□5□-60
11	O-ring	AL-26S	NBR	1	FGFS3□-40
				1	FGFC3□-40
		AL-27S	FKM	1	FGFS5□-60
				1	FGFC5□-60
12	Gasket	AL-23S	FKM	1	FGFL3□-40
				1	FGFR3□-40
		AL-24S	FKM	1	FGFL5□-60
				1	FGFR5□-60
12	Gasket	AL-20S	NBR	3	FGFS3□-40
				5	FGFC3□-40
		AL-21S	FKM	3	FGFS5□-60
				5	FGFC5□-60

Note) Refer to "How to Order" on page 364 for the □ part of the model number.

* The numbers correspond with those in the "Replacement Parts and Seal List" of the FGF series in the Web Catalog.

FGH Series 1

The Replacement Procedure is on p. 763

Replacement Parts and Seal List

How to Order

FGH 100 - 03 - J 002 T

High precision filter for liquids

Element seal

Symbol	Material
T	PTFE

Body size

Symbol	Element length	Applicable element
100	L117	EJ701S
200	L246	EJ801S, ED801S
300	L496	EJ901S, ED901S

* The membrane element cannot be selected for FGH100.

Filtration accuracy

Symbol	Filtration accuracy	Applicable for:	Applicable body
002	2 μm	Filtration efficiency 99%	HEPO II FGH100 to 300
004	4 μm		
006	6 μm		
013	13 μm	Filtration efficiency 99.9%	Membrane FGH200 to 300
X20	0.2 μm		
X40	0.4 μm		

Port size

03	Rc3/8
04	Rc1/2
06	Rc3/4
10	Rc1

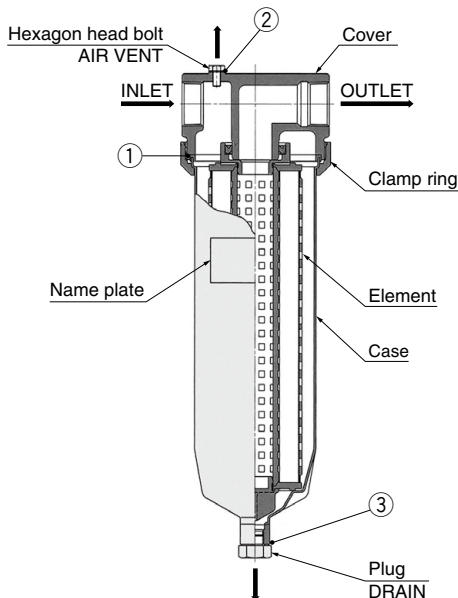
Element classification Note)

Symbol	Element
J	HEPO II
D	Membrane

Note) Refer to the **Web Catalog** for details about specifications, models, dimensions, etc. regarding the elements.

Specifications

Model	FGH100	FGH200	FGH300
Number of built-in elements (element length) (mm)	1 (125)	1 (250)	1 (500)



Replacement Parts/Part Nos.

No.	Description	Model		
		FGH100	FGH200	FGH300
1	Gasket	AL-58S#1		
2	Seal	AL-43S		
3	Seal	AL-53S		

* Use each one of the above parts for each filter unit.

* Use a commercially available belt wrench etc. for mounting and removing clamp rings.

• Refer to page 367 for the replacement element type.

* The numbers correspond with those in the "Replacement Parts and Seal List" of the FGH series in the **Web Catalog**.

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Air Preparation Equipment
Industrial Filters

High Precision Filter for Liquids

FGH Series ②

The Replacement Procedure is on p. 763

HEPO II Element for FGH Series EJ Series



Specifications

Model		EJ□S-002	EJ□S-004	EJ□S-006	EJ□S-013	
Filtration accuracy(Filtration efficiency 99%)		2	4	6	13	
Filtration area (cm ²)	Length	117 mm	1890	2310	2090	2490
		246 mm	4250	5200	4700	5600
		496 mm	8500	10400	9400	11200
Heat resistant temperature (°C)		80				
Material	Filter media	Polyester				
	Reinforcement material	Polypropylene				
	Others	Polypropylene				
Pressure resistance		0.5 MPa at 20°C, 0.125 MPa at 80°C				

Note) See "How to Order" below for items represented by □.

How to Order Elements

EJ **701** **S** - **002** **T**

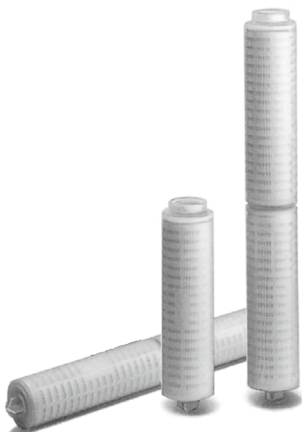
Element classification
EJ HEPO II

Element size symbol
701 For FGH100
801 For FGH200
901 For FGH300

Element seal
T PTFE

Filtration accuracy (Filtration efficiency 99%)
002 2 μm
004 4 μm
006 6 μm
013 13 μm

Membrane Element for FGH Series ED Series



Specifications

Model		ED□S-X20	ED□S-X40
Filtration accuracy(Filtration efficiency 99.9%) ^{Note 1)}		0.2	0.4
Filtration area (cm ²)	Length	247 mm	6,200
		495 mm	12,400
Heat resistant temperature (°C)		80	
Material	Filter media	Polyether sulfone	Cellulose acetate & polyester
	Reinforcement material	Polypropylene	Polyester
	Others	Polypropylene	Polypropylene
Pressure resistance		0.5 MPa at 20°C, 0.125 MPa at 80°C	
Resistivity recovery ^{Note 2)}		60 min at 10 L/m	—
Others		100 L/4000 cm ² Pure water cleaning	—

Note 1) Filtration accuracy: tested with ultrapure water, flow rate at ΔP = 0.01 MPa

Note 2) Resistivity recovery: time taken to recover to 18 MΩ·cm with ultrapure water

Note 3) See "How to Order" below for items represented by □.

How to Order Elements

ED **801** **S** - **X20** **T**

Element classification
ED Membrane

Element size symbol
801 For FGH200
901 For FGH300

Element seal
T PTFE

Filtration accuracy (Filtration efficiency 99.9%)
X20 0.2 μm
X40 0.4 μm

* Cannot be used for FGH100

FQ1 Series

1

RoHS

The Replacement Procedure is on p. 765

Replacement Parts and Seal List

How to Order

FQ1010N-04-M005N-B

Model symbol
(In-line filters)

Housing material

Symbol	Cover	Case
0	Stainless steel 304	Stainless steel 304

Element sealing method

1	Flat gasket (Double/Open/End)
---	----------------------------------

Element size

Symbol	Element size
0	L125
1	L250
2	L500 (L250 x 2)

Housing O-ring material

Symbol	Material
N	NBR
V	FKM

Made to order specifications

Nil	Note
X19	Without V-band support
X61	Cover with bracket seat
X68	Chemical resistant type

* For other made to order specifications, refer to the **Web Catalog**.

Options

Nil	N/A
-B	Bracket

Element type

Select from tables below.

Port size

Symbol	Port size	Applicable model		
		FQ1010	FQ1011	FQ1012
04	Rc1/2	●	●	
06	Rc3/4	●	●	●
10	Rc1		●	●



FQ1010 □ FQ1011 □ FQ1012 □

Specifications

Model	FQ1010	FQ1011	FQ1012
Number of built-in elements (L: Element length in mm)	1 (L 125)	1 (L 250)	2 (L 250 x 2)

Element

1. Fiber element (P.P.)

Dimensions	Element symbol	Nominal filtration accuracy (µm)	Part no.
ø65 x L250	TX50	0.5	EHM10A
	T001	1	EHM39R10AY
	T005	5	EHM23R10AY
	T010	10	EHM19R10AY
	T020	20	EHM15R10A
	T050	50	EHM11R10A
	T075	75	EHM10R10A
	T100	100	EHM8R10A

2. Fiber element (Cotton)

Dimensions	Element symbol	Nominal filtration accuracy (µm)	Part no.
ø65 x L250	HX50	0.5	EH10G
	H001	1	EH39R10GV
	H005	5	EH23R10GV
	H010	10	EH19R10GV
	H020	20	EH15R10G
	H050	50	EH11R10G
	H075	75	EH10R10G
	H100	100	EH8R10G

3. Micromesh element (Stainless steel 304) Bonding material: Epoxy resin

Dimensions	Element symbol	Nominal filtration accuracy (µm)	Part no.
ø65 x L250	M005 □	5	EM100-005 □
	M010 □	10	EM100-010 □
	M020 □	20	EM100-020 □
	M040 □	40	EM100-040 □
	M074 □	74	EM100-074 □
	M105 □	105	EM100-105 □
	ø65 x L125	M005 □	5
M010 □		10	EM200-010 □X4
M020 □		20	EM200-020 □X4
M040 □		40	EM200-040 □X4
M074 □		74	EM200-074 □X4
	M105 □	105	EM200-105 □X4

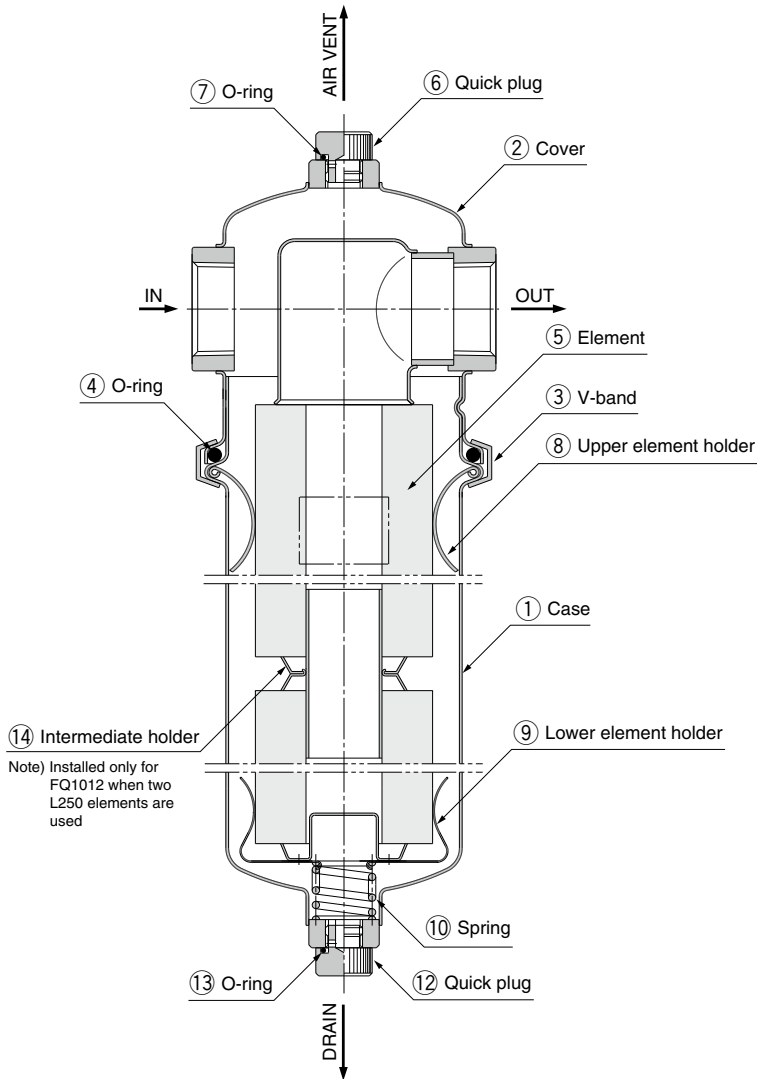
Note) Specify the seal material in place of "□" (N for NBR or V for FKM).

4. Micromesh element (Stainless steel 316)

Dimensions	Element symbol	Nominal filtration accuracy (µm)	Part no.
ø65 x L250	L005 □	5	EM500-005 □
	L010 □	10	EM500-010 □
	L020 □	20	EM500-020 □
	L040 □	40	EM500-040 □
	L074 □	74	EM500-074 □
	L105 □	105	EM500-105 □
	ø65 x L125	L005 □	5
L010 □		10	EM600-010 □X4
L020 □		20	EM600-020 □X4
L040 □		40	EM600-040 □X4
L074 □		74	EM600-074 □X4
	L105 □	105	EM600-105 □X4

Note) Specify the seal material in place of "□" (N for NBR or V for FKM).

Replacement Parts and Seal List



Replacement Parts

Description	Part number	Material	Applicable model	Part no. (Set contents)	Note	
Case assembly	FQ1-CA001N	Stainless steel 304 Note) O-ring material N: NBR V: FKM	FQ1010N	①, ⑧, ⑨, ⑩, ⑫, ⑬: 1 pc. each Note) Only the FQ1-CA003□ includes ⑭ intermediate holder in the set.	Element size: L125	
	FQ1-CA001V		FQ1010V			
	FQ1-CA002N		FQ1011N		Element size: L250	
	FQ1-CA002V		FQ1011V			
	FQ1-CA003N		FQ1012N			Element size: L500 (L250 x 2)
	FQ1-CA003V		FQ1012V			
V-band for replacement	FQ-BA001	Stainless steel 304	FQ1 series	③		
O-ring kit	FQ-KT005N	NBR	FQ101□N	④, ⑦, ⑬: 1 pc. each	④: OR NBR-70-1 P85 ⑦, ⑬: OR NBR-70-1 P11	
	FQ-KT005V	FKM	FQ101□V		④: OR FKM-70 P85 ⑦, ⑬: OR FKM-70 P11	
Quick plug	AG-9S	Stainless steel 303	FQ1 series	⑥, ⑫		
Upper element holder	L-131S	Stainless steel 304	FQ1 series	⑧		
Lower element holder	L-135S	Stainless steel 304	FQ1 series	⑨, ⑩		
Intermediate holder	FQ-OP001	Stainless steel 304	FQ1 series	⑭		
Bracket	BP-15S	SPC	FQ101□□-04		For port size Rc 1/2	
	BP-14S		FQ101□□-06		For port size Rc 3/4	
	BP-13S		FQ101□□-10		For port size Rc 1	

FN1/FN4 Series

1

The Replacement Procedure is on p. 766

Replacement Parts and Seal List

How to Order

With single element

FN1 1 0 1 N - 10 - S 020

With four elements

FN4 1 0 2 N - 20 - S 020

Housing material

Symbol	Housing material
1	Stainless steel 304

Element type (Note)

Symbol	Element type	Applicable model
0	Cylindrical type (5 μm, 20 μm)	FN1, FN4
1	Step type (5 μm)	FN1

Note) Refer to the **Web Catalog** for detailed element type.

Element length

Symbol	Element length	Applicable model
1	L250 mm	FN1
2	L500 mm	FN1, FN4

Seal material

Symbol	Seal material
N	NBR
V	FKM

Pressure gauge

Symbol	Pressure gauge
Nil	None (With plug)
G <small>Note 1)</small>	With pressure gauge <small>Note 2)</small> (Wetted part: Brass)

Note 1) Contact SMC for the pressure gauge specification for stainless steel wetted parts.

Note 2) The FN4 series is equipped with two pressure gauges.

Element material

Symbol	Element material
S	Stainless steel 304

Nominal filtration rating

Symbol	Nominal filtration rating
005	5 μm (Cylindrical type, Step type)
020	20 μm (Cylindrical type)

Port size

Symbol	Port size	Applicable model
10	Rc1	FN1
20	Rc2	FN4

Specifications

Model	FN1101	FN1111	FN1102	FN1112	FN4102
Element dimension	ø65 x 250L		ø65 x 500L		
Material	Stainless steel 304				
Construction	Cylindrical type	Step type	Cylindrical type	Step type	Cylindrical type
Nominal filtration rating	5 μm, 20 μm	5 μm	5 μm, 20 μm	5 μm	5 μm, 20 μm
Differential pressure proof	0.6 MPa				

Actuators
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Modular F.R.L.
Pressure Control Equipment
Air Preparation
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Replacement
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Actuators
Rotary Actuators
Air Grippers
Modular F.R.L.
Pressure Control Equipment
Air Preparation Equipment
Industrial Filters

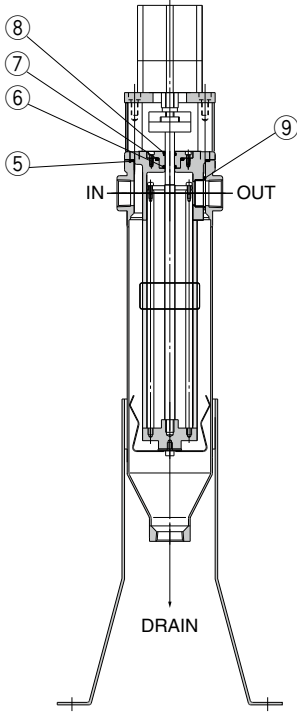
FN1/FN4 Series

2

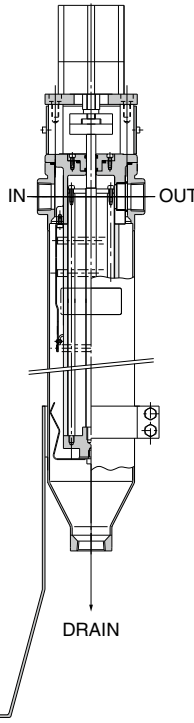
The Replacement Procedure is on p. 766

Replacement Parts and Seal List

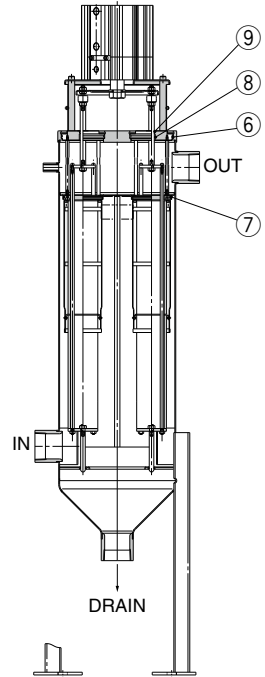
FN11□1□-10-S□□□□



FN11□2□-10-S□□□□



FN4102□-20-S□



* The numbers correspond with those in the "Replacement Parts and Seal List" of the FN1/FN4 series in the **Web Catalog**.

Replacement Parts

No.	Description	Qty.	Material
⑤	O-ring	1	NBR or FPM
⑥	Penta seal	1	
⑦	O-ring	1	
⑧	Scraper	1	
⑨	O-ring	1	

Replacement Parts: Seal Kit

Model	Part no.	Material	Note
FN11□□N	KT-FN11N	NBR	Items ⑤ through ⑨ from the above chart, 1 pc. each
FN11□□V	KT-FN11V	FPM	

Replacement Element

Model	Part no.	Qty.	Note
FN11□1□	END100-005	1	5 μm, Cylindrical type
	END100-020	1	20 μm, Cylindrical type
	END110-005	1	5 μm, Step type
FN11□2□	END200-005	1	5 μm, Cylindrical type
	END200-020	1	20 μm, Cylindrical type
	END210-005	1	5 μm, Step type

Replacement Parts

No.	Description	Qty.	Material
⑥	O-ring	1	NBR or FPM
⑦	O-ring	1	
⑧	Penta seal	1	
⑨	Scraper	1	

Replacement Parts: Seal Kit

Model	Part no.	Material	Note
FN4102N	KT-FN41N	NBR	Items ⑥ through ⑨ from the above chart, 1 pc. each
FN4102V	KT-FN41V	FPM	

Replacement Element

Model	Part no.	Qty.	Note
FN4102□	END400-005	1	5 μm, Cylindrical type
	END400-020	1	20 μm, Cylindrical type

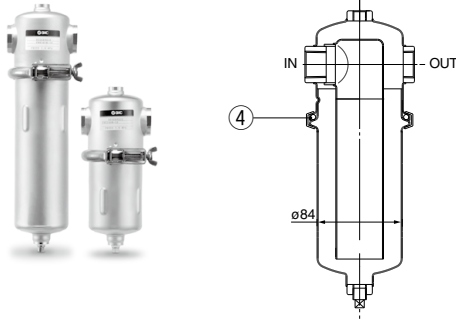
FN1/FN4 Series ③

Options (Sold separately)

Reservoir Tank: FNR Series

This tank is used to store a sufficient amount of fluid for back-flushing (For the FN1 series).

* It is not required for the FN4, which has a built-in tank.



How to Order FNR10 0 N - 10

Symbol	Capacity	Applicable model
0	1.1 L	FN11□1
1	1.8 L	FN11□2

Size		Port size	
Symbol	Material	Symbol	Port size
0	1.1 L	10	Rc1
Seal material			
Symbol	Material		
N	NBR		
V	FKM		

Replacement Parts

No.	Description	Material	Qty.	Note
4	O-ring	NBR	1	OR NBR-70-1 P85*
		FKM	1	OR FKM-70 P85*

* When ordering an O-ring, order the standard product shown in the note.

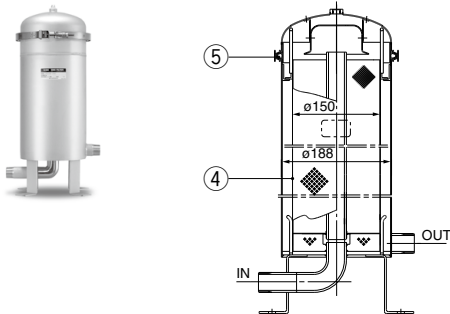
Specifications

Model	FNR100N-10	FNR100V-10	FNR101N-10	FNR101V-10
Tank capacity	1.1 L		1.8 L	
Port size	Rc1			
Material	Stainless steel 304			
Case & Cover				
O-ring	NBR	FKM	NBR	FKM
Weight	1.5 kg		1.9 kg	
Applicable filter	FN11□1□ (Element L 250)		FN11□2□ (Element L 500)	

Dust recovery filter (Produced upon receipt of order)

This filter is for recovering dust from fluid after element back-flushing.

It enables the re-use of the element (Gold mesh).



How to Order

FND100 N - 10 - M149 X0

Seal material		Nominal filtration rating	
Symbol	Material	Symbol	Nominal filtration rating
N	NBR	149	149 μm
V	FKM		
Port size		Element type	
Symbol	Port size	Symbol	Type
10	R1	M	Gold mesh

Replacement Parts

No.	Description	Part no.	Material	Qty.
4	Element	EZH710AS-149	Stainless steel 304	1
5	O-ring	FGE-KT001	NBR	1
		FGE-KT002	FKM	1

Specifications

Model	FND100N-10-M149X0	FND100V-10-M149X0
Port size	R1	
Material	Stainless steel 304	
Case & Cover		
O-ring	NBR	FKM
Element	Stainless steel 304	
Element nominal filtration rating	149 μm	
Weight	7.5 kg	

Note) Produced upon receipt of order

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