# Air Preparation Equipment Industrial Filters

# **Air Preparation Equipment**

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# **Industrial Filters**

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# **Air Preparation Equipment**

# 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, AMD800 to AMD1000, AMD801, and 901

The pressure drop reaches 0.1 MPa or two years have 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.

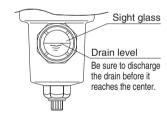
d. For AMF

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.243)

Actuators

# 2 Troubleshooting

The following describes the general contents of the troubleshooting.

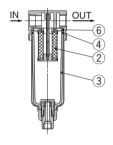
Trouble (Symptom)	Cause	Corrective action		
The pressure drop is large.	The flow rate is excessive.	Use the equipment at a flow rate that is lower than the maximum flow rate diagram stated on the catalog or review the filter size.		
	The element is used continuously even after its service life has expired.	Replace the element.		
Oily content or solid foreign object comes to the secondary side.	The flow rate is excessive.	Use the equipment at a flow rate that is lower than the maximum 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.	Check the O-ring for foreign object sticking     Check the O-ring for kink, flaw, crack, or deterioration.		
The drain leaks from	The seat is faulty (foreign object is sticking).	Clean the inside or replace the auto drain.		
the float type 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		

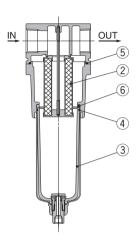
# Series AMJ

# Construction

AMJ3000, 4000

**AMJ5000** 





\* The numbers are the same as the "Construction" of the Best Pneumatics No.4 Series AMJ.

## **Replacement Parts**

No.	Description	Material		Part no.	Note	
INO.	Description	Ivialeriai	AMJ3000	AMJ4000	AMJ5000	Note
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	

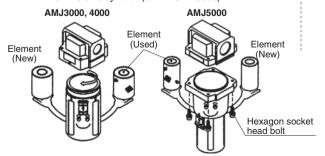
Note) The spacer 6 is not included in the bowl assembly.

# Maintenance

# **⚠** Caution

# 1.Replace the element when one of followings occurs.

- Pressure drop reaches 0.02 Mpa.
- Element operates for 2 years.
- Element model number: AMJ-EL\*\*\*\*
- \* \*\*\*\* is AMJ size symbol. (ex: AMJ-EL3000)



# 2. How to replace element assembly.

First, discharge the pressure in the case. (Make pressure 0 MPa)  $\,$ 

- Remove case (housing).
- Replace element.
- Assemble case (housing).
- \* ( ) for AMJ5000.

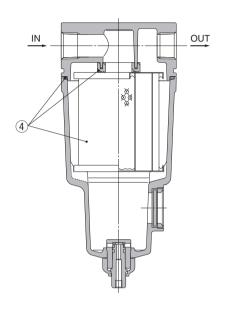


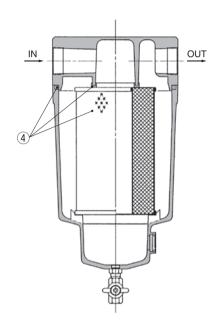
# Series AMG

# Construction

# AMG150C to AMG550C, AMG650

#### AMG850





\* The numbers are the same as the "Construction" of the Best Pneumatics No.5 Series AMG.

# **Replacement Parts**

	J.400									
No	Description*1	Motorial	Applicable				Model			
INO.		Wateriai	model*2	AMG150C	AMG250C	AMG350C	AMG450C	AMG550C	AMG650	AMG850
	Element	Resin,	Except option F	AMG-EL150	AMG-EL250	AMG-EL350	AMG-EL450	AMG-EL550	AMG-EL650	AMG-EL850
4	assembly	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 pressure drop reach 0.1MPa or replace element with new one when element has been used for 2 years.)

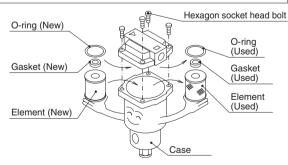
Element (gasket, O-ring accessory) model number:

\* \*\*\* is AMG size symbol. (Ex: AMG-EL150)

# 2. How to replace element assembly

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

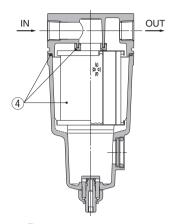
- Remove four hexagon socket head bolt.
- Replace element, gasket, O-ring.
- Tighten hexagon socket head bolt.



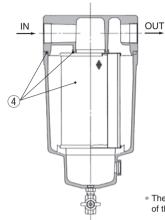
# Series AFF

# Construction

# AFF2C to AFF22C, AFF37B



#### AFF75B



\* The numbers are the same as the "Construction" of the Best Pneumatics No.5 Series AFF.

**Replacement Parts** 

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

<sup>\*1)</sup> Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

# Maintenance

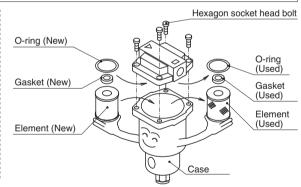
# 1.Replace the element when one of followings occurs.

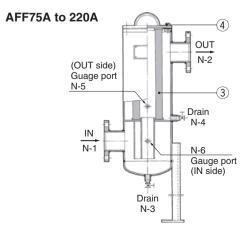
- Pressure drop reaches 0.1 MPa.
- Element operates for 2 years.
   Element assembly (gasket, O-ring accessory) model number:
   AFF-FI \*\*\*
- \* \*\*\* is AFF size symbol. (ex.: AFF-EL2B)

## 2. How to replace element assembly

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

- Remove four hexagon socket head bolt.
- Replace element, gasket, O-ring.
- Tighten hexagon socket head bolt.





**Replacement Parts** 

ı	No	Description	Motorial	Otr			del	
IVO.	Description	Ivialeriai	Qty.	AFF75A	AFF125A	AFF150A	AFF220A	
	3	Element		1	EC700	-003N	EC800-003N	EC900-003N
	4	Seal	NBR	1	AL-	33S	AL-34S	AL-35S



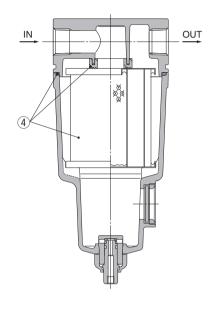
<sup>\*2)</sup> F option, the rubber material: In the case of fluororubber

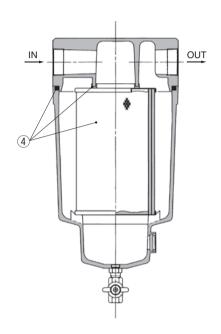
# Series AM

# Construction

AM150C to AM550C, AM650

## AM850





\* The numbers are the same as the "Construction" of the Best Pneumatics No.5 Series AM.

#### **Replacement Parts**

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

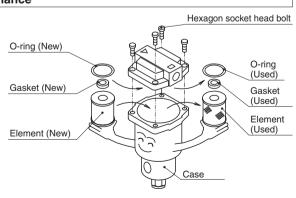
# 1.Replace the element when one of followings occurs.

- Pressure drop reaches 0.1 MPa.
- Element operates for 2 years.
   Element assembly (gasket, O-ring accessory) model number:
   AM-EL\*\*\*
- \* \*\*\* is AM size symbol. (ex.: AM-EL150)

# 2. How to replace element assembly

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

- Remove four hexagon socket head bolt.
- Replace element, gasket, O-ring.
- Tighten hexagon socket head bolt.

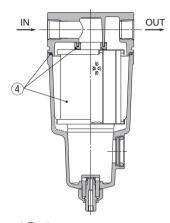


Actuators

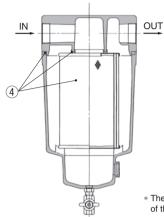
# Series AMD

# Construction

# AMD150C to AMD550C, AMD650



## **AMD850**



 The numbers are the same as the "Construction" of the Best Pneumatics No.5 Series AMD.

# **Replacement Parts**

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

<sup>\*1)</sup> Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

# Maintenance

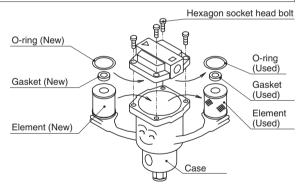
# 1.Replace the element when one of followings occurs.

- Pressure drop reaches 0.1 MPa.
- Element operates for 2 years.
   Element assembly (gasket, O-ring accessory) model number:
   AMD-FI \*\*\*
- \* \*\*\* is AMD size symbol. (ex.: AMD-EL150)

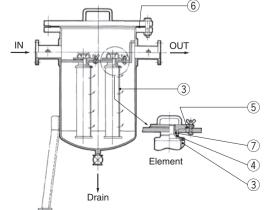
## 2. How to replace element assembly

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

- Remove four hexagon socket head bolt.
- Replace element, gasket, O-ring.
- Tighten hexagon socket head bolt.



# AMD80□, 81□, 9□0, 9□1, 10□0



## **Replacement Parts**

Model applicable	3 Element		Seal (Material: NBR)		Seal (Material: N	BR)	Gaske (Material: V#68	-	O-ring (Material: NBR)		
filter	Kit no.	Qty.	Kit no.	Qty.	Kit no.	Qty.	Kit no.	Qty.	Kit no. (Nominal)	Qty.	
AMD800 AMD810		1	63148	1	OD112XID90XT3	1	AL-61S	1		1	
AMD801 AMD811		1			1	_	_	AL-60S	1		1
AMD900 AMD910	63174	3		3	OD112XID90XT3	3	AL-63S	1	(1A-G35)	3	
AMD901 AMD9111		3		3	_	_	AL-62S	1		3	
AMD1000 AMD1010		5		5	OD112XID90XT3	5	AL-31S	1		5	



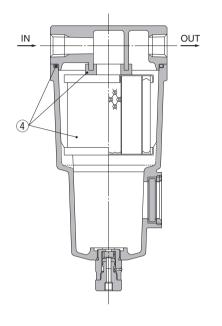
<sup>\*2)</sup> F option, the rubber material: In the case of fluororubber

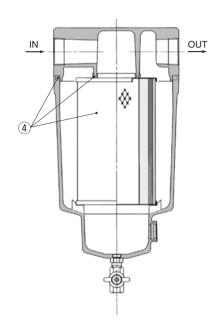
# Series AMH

# Construction

AMH150C to AMH550C, AMH650

## **AMH850**





\* The numbers are the same as the "Construction" of the Best Pneumatics No.5 Series AMH.

# **Replacement Parts**

No	Description*1	Material	Applicable				Model			
INO.		ivialeriai	model*2	AMH150C	AMH250C	AMH350C	AMH450C	AMH550C	AMH650	AMH850
4	Element	Glass fiber,	Except option F	AMH-EL150	AMH-EL250	AMH-EL350	AMH-EL450	AMH-EL550	AMH-EL650	AMH-EL850
4	assembly	others	For option F	AMH-EL150-F	AMH-EL250-F	AMH-EL350-F	AMH-EL450-F	AMH-EL550-F	_	_
4		,								)50

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

# Maintenance

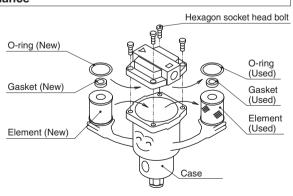
# Replace the element when one of followings occurs.

- Pressure drop reaches 0.1 MPa.
- Element operates for 2 years.
   Element assembly (gasket, O-ring accessory) model number:
   AMH-EL\*\*\*
- \* \*\*\* is AMH size symbol. (ex.: AMH-EL150)

# 2. How to replace element assembly

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

- Remove four hexagon socket head bolt.
- Replace element, gasket, O-ring.
- Tighten hexagon socket head bolt.



Actuators

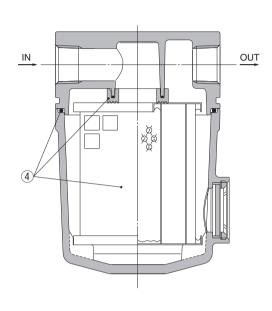
<sup>\*2)</sup> F option, the rubber material: In the case of fluororubber

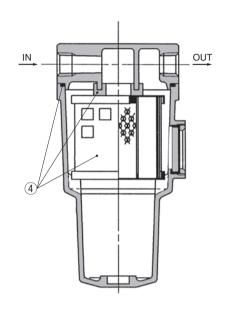
# Series AME

# Construction

## AME150C to AME550C

## AME650, AME850





\* The numbers are the same as the "Construction" of the Best Pneumatics No.5 Series AME.

**Replacement Parts** 

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

<sup>\*1)</sup> Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

## **Maintenance**

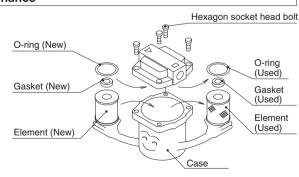
# Replace the element when one of followings occurs.

- Red spots appear on the element surface.
- Operated for 2 years, or pressure drop reaches 0.1 MPa.
   Element assembly (gasket, O-ring accessory) model number:
   AME-EL\*\*\*
- \* \*\*\* is AME size symbol. (ex.: AME-EL150)

# 2. How to replace element assembly

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

- Remove four hexagon socket head bolt.
- Replace element, gasket, O-ring.
- Tighten hexagon socket head bolt.



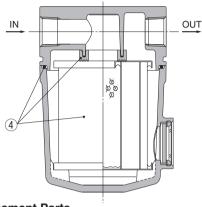
<sup>\*2)</sup> F option, the rubber material: In the case of fluororubber

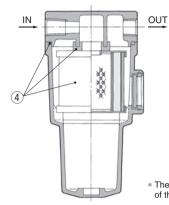
# Series AMF

# Construction

## AMF150C to AMF550C

# AMF650, AMF850





\* The numbers are the same as the "Construction" of the Best Pneumatics No.5 Series AMF.

## **Replacement Parts**

NIo	Description*1	Motorial	Applicable		Model					
INO.	Description	Malenai	model*2	AMF150C	AMF250C	AMF350C	AMF450C	AMF550C	AMF650	AMF850
4	Element	Glass fiber,	Except option F	AMF-EL150	AMF-EL250	AMF-EL350	AMF-EL450	AMF-EL550	AMF-EL650	AMF-EL850
	assembly	others	For option F	AMF-EL150-F	AMF-EL250-F	AMF-EL350-F	AMF-EL450-F	AMF-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

Since element life depend on odour concentration of compressed air, it can not be specified. Confirm deodorizing capacity remaining period, and replace the element periodically afterwards. However, replace element with new one when element has beenused for 2 years, or when pressure drop reaches 0.1 MPa.

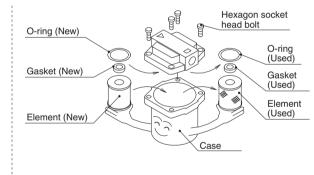
Element assembly (gasket, O-ring accessory) model number:

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

## 2. How to replace element assembly

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

- · Remove four hexagon socket head bolt.
- Replace element, gasket, O-ring.
- Tighten hexagon socket head bolt.



# AMF80□, 90□, 1000 N-4 Pressure outlet (IN side) IN N-1 Pressure outlet (OUT side) Out N-2 Element 4

**Replacement Parts** 

	Model applicable	Element		Seal (Material: NBR)		Seal (Material: NBR)		Gasket (Material: V#6500)		O-ring (Material: NBR)		
fil	filter	Kit no.	Qty.	Kit no.	Qty.	Kit no.	Qty.	Kit no.	Qty.	Kit no. (Nominal)	Qty.	
	AMF800		1		1	OD112XID90XT3	1	AL-61S	1		1	
	AMF801		63271 3 3 63148	1		1	_	_	AL-60S	1	KA00061	1
	AMF900	63271		63148	3	OD112XID90XT3	3	AL-63S	1	1A-G35	3	
	AMF901			3	_	_	AL-62S	1	1A-000	3		
	AMF1000		5		5	OD112XID90XT3	5	AL-31S	1		5	

# **Industrial Filters**

# 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. Additionally, even if any differential pressure does not occur, replace the element once every two years.

# ■ 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 bowl periodically.

# How to Select Element Order Number for Replacement



The element number for replacement is written on the nameplate.



Element number for replacement

Order the element no. 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

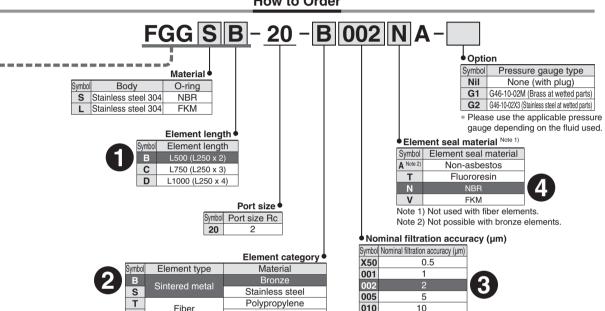


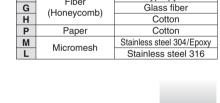
Check the product number of the industrial filter. Confirm the items written on the right.

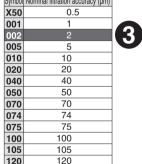
# **1**Element length

- \* The element length is the total length of combined short elements.
- 2Element category
- Nominal filtration accuracy
- **4** Element seal material

# **How to Order**







Note) For a comparison with the nominal filtration accuracy according to the element category, refer to pages 256 and 257.

# Select the Number and Size of Elements

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

FGGSB Note 1) FGGSC Note 1) FGGSD Note 1) FGGLB Note 1) FGGLC Note 1) FGGLD Note 1) Model 7 Note2) 7 Note2) 7 Note2) 7 Note2) 7 Note2) 7 Note2) Number of elements 14 21 28 14 21 28 ø65 x Element size L1000 1.500 1750 1250 1750 1 250 L1000 Cover Stainless steel 304 Case Main Stainless steel 304 materials NBR FKM O-ring SS400 (Chromatic plating)

Note 1) Cannot be used with gases.

**Specifications** 

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



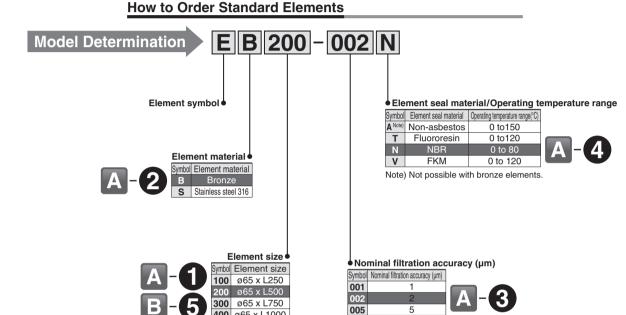
There are various types of elements for replacement. Select respective element type according to the type of industrial filter you are using.



# **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 6, "number of elements", in section B. The number of orders is 7 in this example.



010

020

040

070 100

120

10

20 40

70

100

120

**400** ø65 x L1000

# **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**

opcomoditions						
Material		Bronze	Stainless steel 316			
Operating temperature (	C°) Note 2)	0 to 150	0 to 150			
Nominal filtration accura	ıcy (µm)	1, 2, 5, 10, 20, 40, 70, 100, 120				
Max. differential pressure re	esistance	0.7 MPa				
Element replacement differentia	l pressure	0.1 MPa				
Chaminal resistance	Acid	Cannot be used.	Can be used. Note 1)			
Chemical resistance	Alkali	Can be used depending on conditions.	Can be used.			
Element category of How	to Order	В	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 Standard Elements**



## **\_**. . .

Element material					
Symbol	Element material				
В	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	
	Т	Fluororesin	0 to 120	
	N	NBR	0 to 80	
	٧	FKM	0 to 120	

Note) Not possible with bronze elements.

#### Replacement Seal

Symbol	part no.	Quantity
Α	AL-7S	
Т	AL-6S	2
N	AL-8S	2
٧	AL-9S	

#### **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		
Polypropylene	Polypropylene	0 to 60	0.5, 1, 5, 10, 20, 50, 75, 100	0.2 MPa	0.1 MPa
Glass fiber	Stainless steel 316	0 to 400	1, 5, 10, 20		

Note) Size for all is ø65 x L250.

# **How to Order Standard Elements**

Element material		Cotton	Polypropylene	Glass fiber	
Core	material	Stainless steel 304	Polypropylene	Stainless steel 316	
cy	0.5	EH10G	EHM10A	_	
accuracy	1	EH39R10GV	EHM39R10AY	EHK27R10S	
acc	5	EH23R10GV	EHM23R10AY	EHK19R10S	
tion n)	10	EH19R10GV	EHM19R10AY	EHK15R10S	
iltra (µ	20	EH15R10G	EHM15R10A	EHK10R10S	
ıal fi	50	EH11R10G	EHM11R10A	_	
Nominal filtration a (µm)	75	EH10R10G	EHM10R10A	_	
ž	100	EH8R10G	EHM8R10A	_	
Element category of How to Order		н	Т	G	

# **Paper Elements**

Cartridges are pleated for a large filtration area, and elements are economical due to their long service life.

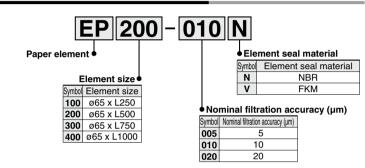
#### Main applications

Ideal for filtration of hydraulic oil. lubricating oil, fuel oil, oils for the liquid gas industry, dry inert gases, and dry air.



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	Р

# **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

**Specifications** 

Specifications					
Model		EM100	EM500		
Materials		Stainless steel 304	Stainless steel 316		
Jointing material		Epoxy resin	_		
Operating temperature (0	) Note 2)	-5 to 100	-180 to 300		
Nominal filtration accura	cy (µm)	5, 10, 20, 40, 74, 105			
Max. differential pressure re	sistance	0.7 MPa			
Element replacement differential	pressure	0.1	MPa		
Chemical resistance	Acid	Cannot be used.	Can be used. Note 1)		
Alkali		Can be used.	Can be used.		
Element category of How to Order		М	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 Standard Elements**

010

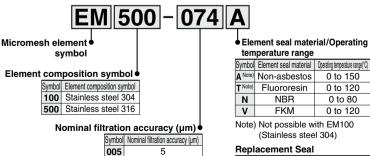
020

040

074

105

(Size ø65 x L250)



10

20

40

74

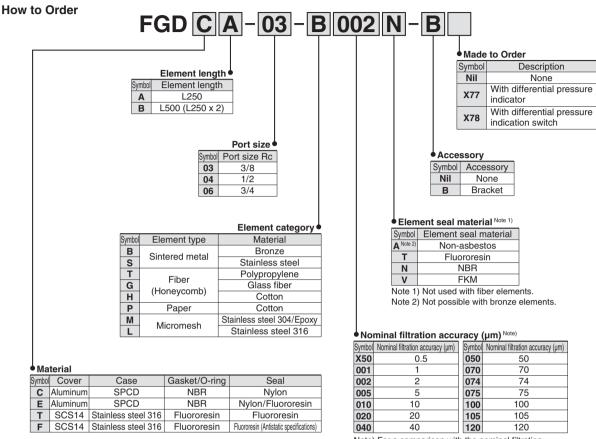
105

	nepi	acement Sear	
	Symbol	part no.	Quantity
	Α	AL-7S	
	T	AL-6S	2
	N	AL-8S	2
i	V	AL-9S	

# Series FGD 1



# **Replacement Parts and Seal List**



Note) For a comparison with the nominal filtration accuracy according to the element category, refer to Best Pneumatics No.7.

**Specifications** 

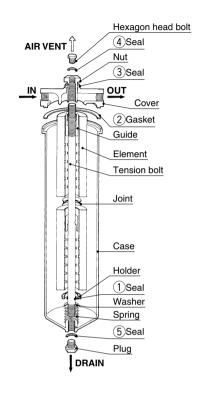
Specifications									
Model Number of elements Element size		FGDCA	FGDCB	FGDEA	FGDEB	FGDTA	FGDTB	FGDFA	FGDFB
		1	2 Note)	1	2 Note)	1	2 Note)	1	2 Note)
		ø65 x L250	ø65 x L500 (L250 x 2)	ø65 x L250	ø65 x L500 (L250 x 2)	ø65 x L250	ø65 x L500 (L250 x 2)	ø65 x L250	ø65 x L500 (L250 x 2)
	Cover	Aluminum		Aluminum		SC	S14	SCS14	
Main	Case	SP	CD	SPCD		Stainless steel 316		Stainless steel 316	
materials	Gasket/ O-ring	NI	BR	NBR		Fluor	oresin	Fluororesin	
	Seal	Ny	rlon	Nylon/Fl	Nylon/Fluororesin		oresin	Fluororesin	

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

# Series FGD 2



# **Replacement Parts and Seal List**



**Replacement Parts** 

Description	Material	Size	
NBR Seal JIS B 2401.P12		ø10 x t1	
	Fluororesin		
Cooket	NBR	ø101 x t2	
Gasket	Fluororesin		
	Nylon		
Seal Note 3)	eal Note 3) Fluororesin		
	Fluororesin (Antistatic specifications)		
Cool	Nylon	ø10 x t1	
Seai	Fluororesin	ØIUXII	
Cool	Nylon	ø20 x t1	
Seai	Fluororesin	020 X LI	
	Seal Gasket	NBR	

Note 1) The quantity used for 1 filter is 1 each for the following seals, gaskets and O-rings.

Note 2) Replacement seal kit part no.: KT-FGD□

For  $\square$ , fill in the material symbol in "How to Order" (Refer to page 258). A seal kit contains 1 each of seal/gasket No. 1 to 5.

Note 3) With antistatic specifications (FGDE, FGDF), this will be fluororesin (Antistatic specifications).

## **Seal Kit Number**

	Kit no.	Applicable model	Contents
	KT-FGDC	FGDC□	Ponlacement parts
	KT-FGDE	FGDE□	Replacement parts  A 1 kit for each of each one
_	KT-FGDT	FGDT□	of seals 1 to 5 and gasket.
_	KT-FGDF	FGDF□	or seals of to a and gasket.

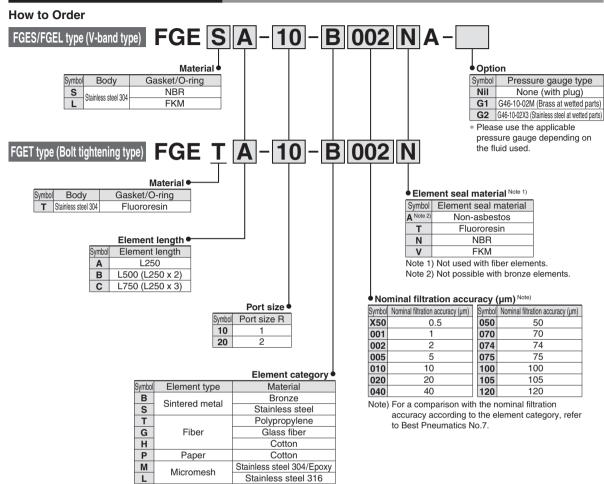
- Refer to pages 254 and 255 for selection.
- Refer to pages 256 and 257 for the replacement element type.
- \* Number is the same as the Replacement Seal List of the Best Pneumatics No.7 Series FGD.

Actuators

# Series FGE 1



# **Replacement Parts and Seal List**



## **Specifications**

Model FGESA Note		FGESA Note 1)	FGES	B Note 1)	FGES	C Note 1)	FGELA Note 1)	FGEL	3 Note 1)	FGEL	C Note 1)	FGETA	FGI	ΞΤВ	FGI	ETC
Number of elements		4	4 Note 2)	8	4 Note 2)	12	4	4 Note 2)	8	4 Note 2)	12	4	4 Note 2)	8	4 Note 2)	12
Element siz	е	ø65 to 70 x L250			ø65 to 70 x L750		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
	Cover		Stainless steel 304													
[ [	Case		Stainless steel 304													
Main materials	Gasket					-				-	Fluororesin	Fluor	oresin	Fluor	oresin	
materials	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.

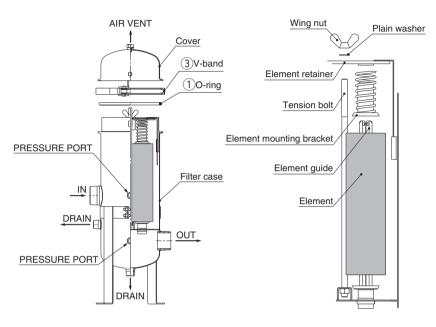
# Series FGE 2

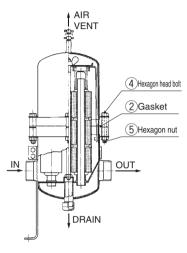


# **Replacement Parts and Seal List**

# FGES/FGEL type (V-band type)

# FGET type (Bolt tightening type)





**Replacement Part** 

Applicable filter	① <b>O-ring</b> Kit no. (Nominal)	② Gasket Kit no.	③ V-band Kit no. (Nominal)	4 Hexagon head bolt Kit no. (Nominal)	5 Hexagon nut Kit no. (Nominal)	
FGES	KA00822 (1A-P185)	_	FGE-BA001	_	_	
FGEL	KA00711 (4D-P185)	_	FGE-BA001	_	_	
FGET	_	AL-19S	1	CB00021 (M12 x 1.75 x L95)	DA00110 (M12 x 1.75)	

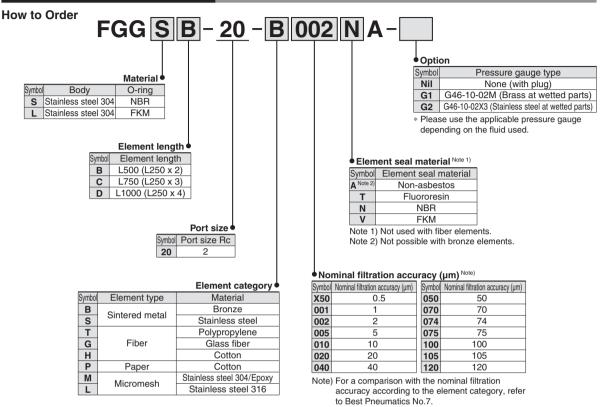
Note) The quantity used for 1 filter is 1 each of the above O-ring and gasket etc. Four hexagonal bolts are used for 1 filter.

- Refer to pages 254 and 255 for selection.
- Refer to pages 256 and 257 for the replacement element type.
- Number is the same as the Replacement Seal List of the Best Pneumatics No.7 Series FGE.

# Series FGG 1



# **Replacement Parts and Seal List**



Specifications

262

opeomodione													
Model		FGGSB Note 1)		FGGSC Note 1)		FGGS	FGGSD Note 1)		FGGLB Note 1)		FGGLC Note 1)		D Note 1)
Number of elements		7 Note2)	14	7 Note2)	21	7 Note2)	28	7 Note2)	14	7 Note2)	21	7 Note2)	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
	Cover		Stainless steel 304										
Main	Case	Stainless steel 304											
materials	O-ring			NE	3R					Fk	(M		
	Legs					SS	400 (Chro	matic plati	ng)				

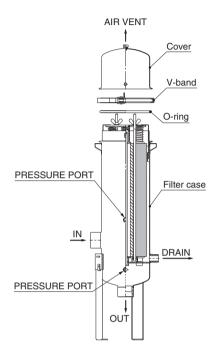
Note 1) Cannot be used with gases.

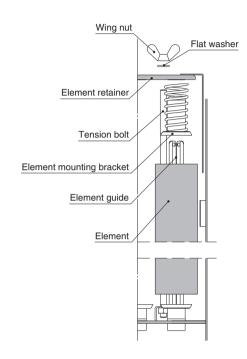
Note 2) In the case of a sintered metal element or paper element.

# Series FGG 2



# **Replacement Parts and Seal List**





Replacement Parts

	Jiaociiiciit i a	1.0					
No.	Description	Material					
INO.	Description	FGGS	FGGL				
1	O-ring	NBR (Part no.: AL-25S)	FKM (Part no.: AL-22S)				
_	Case fastening parts	V-band coupling (	Part no.: CY-27S)				

Note) The quantity used for 1 filter is 1 each of the above O-ring etc.

- Refer to pages 254 and 255 for selection.
- Refer to pages 256 and 257 for the replacement element type.
- Number is the same as the Replacement Seal List of the Best Pneumatics No.7 Series FGG.

# Series FGA



# **Replacement Parts and Seal List**

**How to Order** 

# FGA C 04 A - 10 - B 002 N

# Vessel material (wetted parts)

Symbol	Vessel material (wetted parts)
С	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

AIR VENT

# Element length

	Symbol	Element length	
A L250		L250	
	В	L500 (L250 x 2)	
	С	L750 (L250 x 3)	
<b>D</b> L1000 (L250 x		L1000 (L250 x 4 )	

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

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 Best Pneumatics No.7.

## Element category

Symbol	Element type	Material	
В	Sintered metal	Bronze	
S	Sintered metal	Stainless steel	
Т		Polypropylene	
G	Fiber	Glass fiber	
Н		Cotton	
Р	Paper	Cotton	
M	Micromesh	Stainless steel 304/Epoxy	
L	Micromesn	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 ø65 x L500	
Omerca metar	Stainless steel 316	70, 100, 120	ø65 x L750 ø65 x L1000	
Paper	Cotton (Phenol)	5, 10, 20	ø65 x L250 ø65 x L500 ø65 x L750 ø65 x L1000	
	Cotton	0.5, 1, 5, 10, 20		
Fiber	Polypropylene	50, 75, 100	ø65 x L250	
	Glass fiber	1, 5, 10, 20		
Micromesh	Stainless steel 304	5, 10, 20, 40	ø65 x L250	
moromosii	Stainless steel 316	74, 105	905 X L250	

 Refer to pages 256 and 257 for the replacement element type.

 Number is the same as the Replacement Seal List of the Best Pneumatics No.7 Series FGA.



BACKWASH.

Element mounting figure



DRAIN

# Series FGB



# **Replacement Parts and Seal List**



# Vessel material (wetted parts)

Symbol	Vessel 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

AIR VENT

BACK

# Element length

Symbol Element lengtl				
Α	L250			
В	L500 (L250 x 2)			
С	L750 (L250 x 3)			
D	L1000 (L250 x 4)			

Port size

Oyillbui	1 011 3120	
10	25 (1 <sup>B</sup> )	
14	40 (1 1/2 <sup>B</sup> )	
20	50 (2 <sup>B</sup> )	
24	65 (2 1/2 <sup>B</sup> )	
30	80 (3 <sup>B</sup> )	
40	100 (4 <sup>B</sup> )	
60	150 (6 <sup>B</sup> )	

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 Best Pneumatics No.7.

# Element category

Symbol	Element type	Material		
В	Sintered metal	Bronze		
S	Sintered metal	Stainless steel		
Т		Polypropylene		
G	Fiber	Glass fiber		
Н		Cotton		
Р	Paper	Cotton		
M	Micromesh	Stainless steel 304/Epoxy		
L	WIICIOITIESIT	Stainless steel 316		

Applicable Element Specifications

Applicable Liellient Specifications						
Description	Material	Nominal filtration accuracy (µm)	Size			
Sintered metal	Bronze	1, 2, 5, 10, 20, 40	ø65 x L250 ø65 x L500			
Sintered metal	Stainless steel 316	70, 100, 120	ø65 x L750 ø65 x L1000			
Paper Cotton (Phenol)		5, 10, 20	ø65 x L250 ø65 x L500 ø65 x L750 ø65 x L1000			
	Cotton	0.5, 1, 5, 10, 20	ø65 x L250			
Fiber	Polypropylene	50, 75, 100				
	Glass fiber	1, 5, 10, 20				
Micromesh	Stainless steel 304	5, 10, 20, 40	ø65 x L250			
wicromesn	Stainless steel 316	74, 105	000 X L250			

 Refer to pages 256 and 257 for the replacement element type.

 Number is the same as the Replacement Seal List of the Best Pneumatics No.7 Series FGB.





Element mounting figure



Actuators

Modular F.R.L. Pressure Control Equipment

Air Preparation Equipment

ndustrial Filters

Replacement Procedure

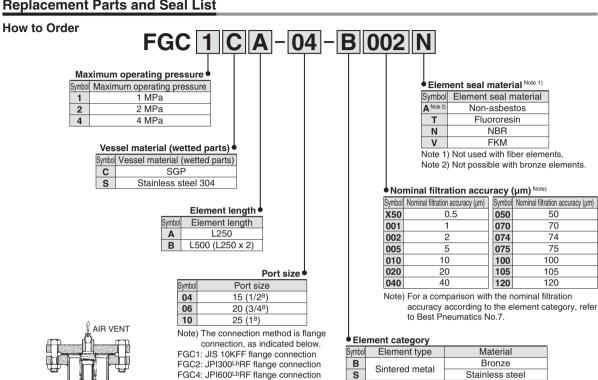
Actuators

Modular F.R.L. ressure Control Equipment

# Series FGC



# **Replacement Parts and Seal List**





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

Fiber

Paper

Micromesh

Т

G

Н

Р

M



OUT

Element mounting figure

Polypropylene

Glass fiber

Cotton

Cotton

Stainless steel 316/Epoxy

Stainless steel 316

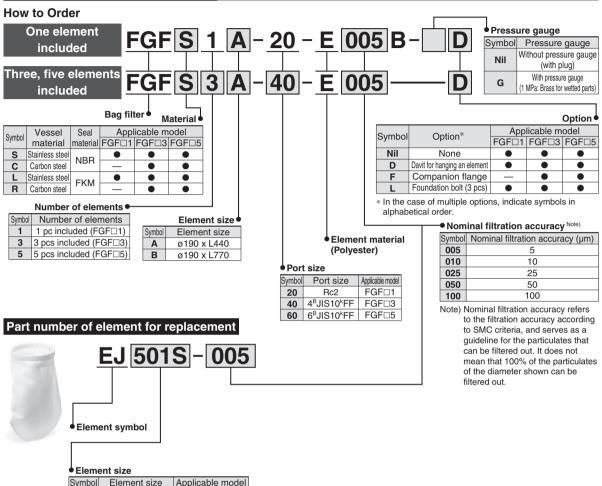
Refer to pages 256 and 257 for the replacement element type.

<sup>\*</sup> Number is the same as the Replacement Seal List of the Best Pneumatics No.7 Series FGC.

# Series FGF 1



Replacement Parts and Seal List



**Specifications** 

501S

601S

ø190 x L440

ø190 x L770

For FGF□□A

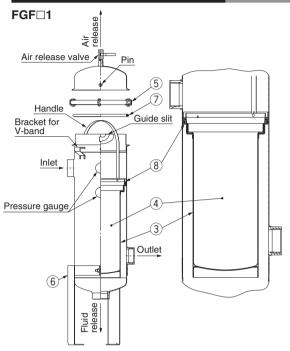
For FGF□□B

Model		FGF□1A-20	FGF□1B-20	FGF□3A-40	FGF□3B-40	FGF□5A-60	FGF□5B-60			
	Material		Polyester							
	Nominal filtration accuracy		5, 10, 25, 50, 100 μm							
Element	Element replacement differential pressure	Differential pressure 0.1 MPa								
Element	Number of elements	lements 1 element included 3 elements included				5 element	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 <sup>2</sup>	3400 cm <sup>2</sup>	5400 cm <sup>2</sup>	10200 cm <sup>2</sup>	9000 cm <sup>2</sup>	17000 cm <sup>2</sup>			

# Series FGF 2



# Replacement Parts and Seal List

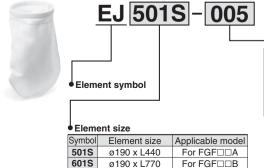


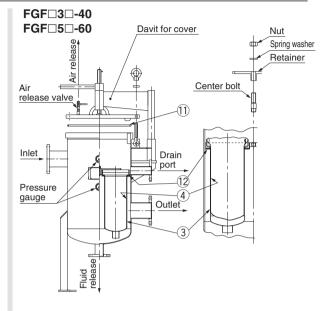
**Replacement Parts** 

neplacement i dits					
No.	Description	Part No.	Material	Qty.	Applicable model Note)
3	Darlos	FGF-BT01	Stainless steel 304	1	FGF□1A
3	Basket	FGF-BT02	Stalliless steel 304	1	FGF□1B
4	Element	EJ501S-□	Delvester	1	FGF□1A
4	Element	EJ601S-□	Polyester	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	0	FGF-KT01	NBR	1	FGFS1□
′	O-ring	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 267 for the  $\square$  part of the model number.

# Part number of element for replacement





No.	Description	Part No.	Material	Qtv	Applicable model No
			Stainless	3	FGF□3A-4
		BT-3S	steel 304	5	FGF□5A-6
3	Basket		Stainless	3	FGF□3B-4
		BT-4S	steel 304	5	FGF□5B-6
_		Refer to	5	3	FGF□3□-4
4	Element	"How to Order".	Polyester	5	FGF□5□-6
	O-ring	41.000		_	FGFS3□-4
		AL-26S	NBR	1	FGFC3□-4
		AL-27S		1	FGFS5□-6
					FGFC5□-6
11		AL-23S	FKM	1	FGFL3□-4
					FGFR3□-4
		AL-24S			FGFL5□-6
					FGFR5□-6
			NBR	3	FGFS3□-4
		AL-20S			FGFC3□-4
		AL-203		5	FGFS5□-6
12	Gasket				FGFC5□-6
12	Gasket			3	FGFL3□-4
		AL-21S	FKM	3	FGFR3□-4
				5	FGFL5□-6
				3	FGFR5□-6

Note) Refer to "How to Order" on page 267 for the □ part of the model number.

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

\* Number is the same as the Replacement Seal List of the Best Pneumatics No.7 Series FGF.

Note) 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.



# Series FGH 1



# **Replacement Parts and Seal List**

**How to Order** 

FGH 100 - 03 - J002T

High precision 

filter for liquids

Body size
olicable elemer
E 17040

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

\* The membrane element cannot be selected for FGH100.

PC	ort size
03	Rc3/8
04	Rc1/2
06	Rc3/4
10	Rc1

Built-in elements

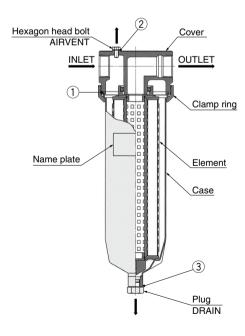
Syı	mbol	Filtration	accuracy	Element classification	Applicable body
J0	02T	2 µm	Filtration		FGH100
J0	04T		efficiency	HEPO II Series EJ	FGH200
J0	06T		99%		FGH300
	13T	13 µm			1 011500
DX	(20T	0.2 µm	Filtration	Membrane	FGH200
DX	(40T	0.4 µm	efficiency 99.9%	Series ED	FGH300

- \* Refer to Best Pneumatics No.7 for details about specifications, models, dimensions, etc. regarding the elements.
- \* When ordering only a vessel, it is not necessary to enter the symbol for built-in elements.

Since this product uses PTFE for gasket material, a large torque is required to tighten a clamp ring. The FKM specification with the clamp ring tightening torque reduced is also available. If the fluid conforms to FKM, use this specification.

**Specifications** 

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



**Replacement Parts** 

No.	Description	Part number FGH100 FGH200 FGH3			
	Description			FGH300	
1	Gasket	AL-58S#1			
2	Seal	AL-43S			
3	Seal	AL-53S			

- $\ast$  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 270 for the replacement element type.

 Number is the same as the Replacement Seal List of the Best Pneumatics No.7 Series FGH. Modular F.R.L. Pressure Control Equipment

Air Preparation Equipment

ement Industrial Filters

tors Re

# **High Precision Filter for Liquids**

# Series FGH 2



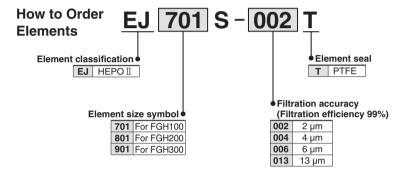
HEPO II Element for Series FGH Series **EJ** 



Model		EJ□S-002	EJ□S-004	EJ□S-006	EJ□S-013		
Filtration accuracy(F	iltration	efficiency 99%)	2	4	6	13	
	Ë	117 mm	1890	2310	2090	2490	
Filtration area (cm <sup>2</sup> )	ength	246 mm	4250	5200	4700	5600	
,	ت	496 mm	8500	10400	9400	11200	
Heat resistant to	empera	ature (°C)	80				
	Filter	media	Polyester				
Material	Reinford	cement material	Polypropylene				
	Othe	rs		Polypropylene			
Pressure resistance		0.5 MPa at 20°C, 0.125 MPa at 80°C			)°C		

Note) See "How to Order" below for items represented by  $\Box$ .





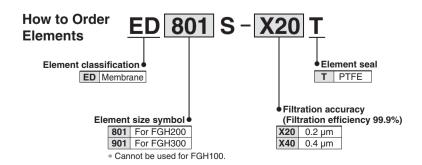
Membrane Element for Series FGH Series **ED** 

## **Specifications**

Opecinications				
Model			ED□S-X20	ED□S-X40
Filtration accuracy(Filtra	ation effici	ency 99.9%) Note 1)	0.2	0.4
Filtration area	Length	247 mm	4,000	6,200
(cm <sup>2</sup> )	Ē	495 mm	8,000	12,400
Heat resistant temperature (°C)		rature (°C)	80	
	Filter media		Polyether sulfone	Cellulose acetate & polyester
Material	Reinford	ement material	Polypropylene	Polyester
	Othe	rs	Polypropylene	Polypropylene
Pressure resistance			0.5 MPa at 20°C, (	0.125 MPa at 80°C
Resistivity recovery Note 2)		Note 2)	60 min at 10 L/m	_
Others			100 L/4000 cm <sup>2</sup> Pure water cleaning	_

Note 1) Filtration accuracy: tested with ultrapure water, flow rate at  $\Delta P$  = 0.01 MPa. Note 2) Resistivity recovery: time taken to recover to 18 M $\Omega\cdot$ cm with ultrapure water. Note 3) See "How to Order" below for items represented by  $\Box$ .





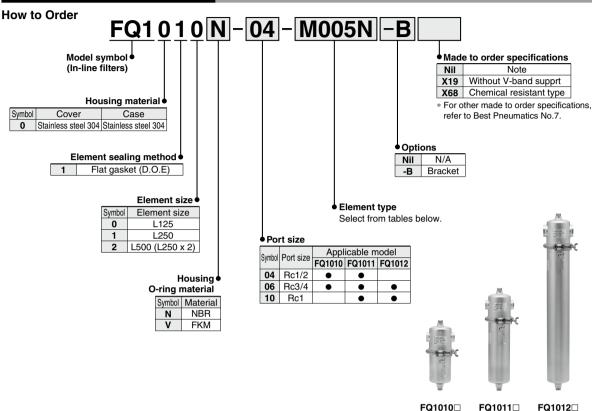


# Series FQ1 1

sintered elements (bronze). it is no longer compliant with RoHS.



# **Replacement Parts and Seal List**



**Specifications** 

Model	FQ1010	FQ1011	FQ1012
No.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 number	
	TX50	0.5	EHM10A	
	T001	1	EHM39R10AY	
	T005	5	EHM23R10AY	
ø65 x	T010	10	EHM19R10AY	
x L250	T020	20	EHM15R10A	
	T050	50	EHM11R10A	
	T075	75	EHM10R10A	
	T100	100	EHM8R10A	

# 2. Fiber element (Cotton)

Dimensions	Element symbol	Nominal filtration accuracy (µm)	Part number
	HX50	0.5	EH10G
	H001	1	EH39R10GV
ø65	H005	5	EH23R10GV
Ø65 Х	H010	10	EH19R10GV
L250	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 number	
		M005□	5	EM100-005	
	ø65	M010□	10	EM100-010	
	Øb5	M020□	20	EM100-020	
	L250	M040□	40	EM100-040	
	L250	M074□	74	EM100-074	
		M105□	105	EM100-105	
		M005□	5	EM200-005□X4	
	05	M010□	10	EM200-010□X4	
	ø65 x L125	M020□	20	EM200-020□X4	
		M040□	40	EM200-040□X4	
L120	L120	M074□	74	EM200-074□X4	
		M105□	105	EM200-105□X4	

Note) Specity seal material in place of "

"

"

"

(N for NBR or V for FKM).

# 4. Micromesh element (Stainless steel 316) Bonding material: TIG welding

boliding material. The welding				
Dimensions	Element symbol	Nominal filtration accuracy (µm)	Part number	
	L005□	5	EM500-005□	
ø65	L010□	10	EM500-010□	
X	L020□	20	EM500-020□	
L250	L040□	40	EM500-040□	
	L074□	74	EM500-074□	
	L105□	105	EM500-105□	
	L005□	5	EM600-005□X4	
ø65	L010□	10	EM600-010□X4	
x L125	L020□	20	EM600-020□X4	
	L040□	40	EM600-040□X4	
	L074□	74	EM600-074□X4	
	L105□	105	EM600-105□X4	

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

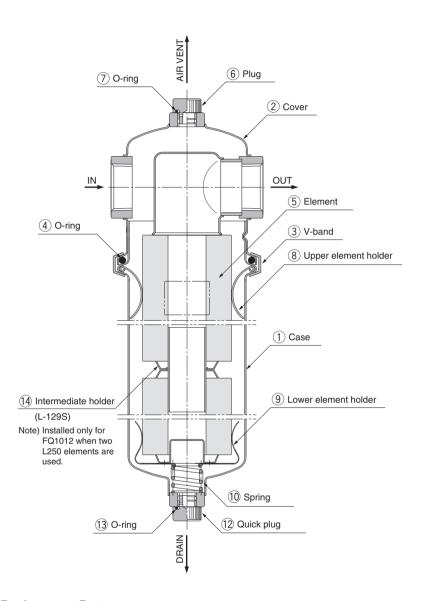
# Series FQ1 2



 When combined with sintered elements (bronze), it is no longer compliant with RoHS.



# **Replacement Parts and Seal List**



**Replacement Parts** 

nehi	neplacement Faits					
No.	Description	Part number	Material	Note		
3	V band for replacement	FQ-BA001	Stainless steel 304			
4	O-ring	KT-FQ1-N	NBR	JIS B2401-1A-P85		
7, 13	O-ring	KI-FQI-N		JIS B2401-1A-P11		
4	O-ring	KT-FQ1-V	FKM	JIS B2401-4D-P85		
7, 13	O-ring	KI-FQI-V		JIS B2401-4D-P11		
6, 12	Quick plug	AG-9S	Stainless steel 303			
8	Upper element holder	L-131S	Stainless steel 304			
9	Lower element holder	L-135S	Stainless steel 304			
14	Intermediate holder	FQ-OP001	Stainless steel 304			
		BP-13S		For port size Rc 1		
	Bracket	BP-14S	Stainless steel 304	For port size Rc 3/4		
		BP-15S		For port size Rc 1/2		



# Series FN1/FN4 1

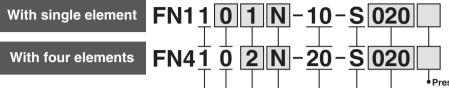


# **Replacement Parts and Seal List**



Symbol

0



# Housing material Symbol Housing material

	1	Stainless	steel 304	
		Ele	ment type	Note)
Element type			Applicable r	nodel
Cylindrica	l type (5 µ	um, 20 μm)	FN1, FI	٧4

1 Step type (5 µm) FN1

Note) Refer to Best Pneumatics No.7 for detailed element type.

Element length

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

Seal material		
Symbol Seal materia		
N	NBR	
V	FKM	

 ♦ Pressure gauge

 Symbol
 Pressure gauge

 Nil
 None (With plug)

 G Note 1)
 With pressure gauge Note 2 (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.

Mominal filtration rating

Mominal filtration rating

Symbol Nominal filtration rating

 Element material

 Symbol
 Element material

 S
 Stainless steel 304

 Symbol
 Nominal filtration rating

 005
 5 μm (Cylindrical type, Step type)

 020
 20 μm (Cylindrical type)

Port size

Symbol	Port size	Applicable mode
10	Rc1	FN1
20	Rc2	FN4

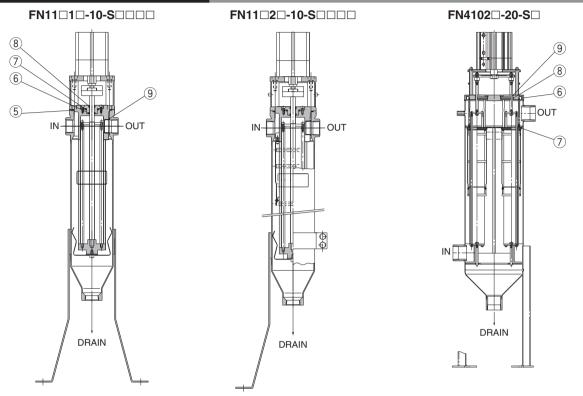
**Specifications** 

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

# Series FN1/FN4 2



# **Replacement Parts and Seal List**



\* Number is the same as the Replacement Seal List of the Best Pneumatics No.7 Series FN1/FN4.

# **Replacement Parts**

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

# Replacement Parts: Seal Kit

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

## **Replacement Element**

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

# **Replacement Parts**

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

# Replacement Parts: Seal Kit

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

# **Replacement Element**

Model	Order no.	Quantity	Note
FN4102□	END400-005	1	5 μm, Cylindrical type
F1441U2L	END400-020	1	20 µm, Cylindrical type



# Series FN1/FN4 3

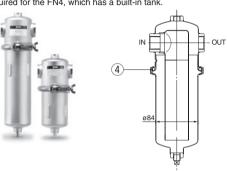


# **Options (Sold separately)**

# Reservoir tank: Series FNR

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

\* Not required for the FN4, which has a built-in tank.



Size

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

Port size
Symbol Port size
10 Rc1

Seal material

Symbol	Material
N	NBR
V	FKM

**Replacement Parts** 

No.	Description	Kit No.	Material	Quantity	Note
4	O-ring	KA00809	NBR	1	1A-P85
~	O-filing	KA00725	FKM	1	

<sup>\*</sup> O-ring standard: JIS B 2401

**Specifications** 

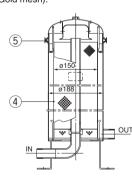
	Model	FNR100N-10	FNR100V-10	FNR101N-10	FNR101V-10	
Tank capacity		1.1	I L	1.8 L		
Port s	ize	Rc1				
Material	Bowl & Cover	Stainless steel 304				
Waterial	O-ring	NBR FKM		NBR	FKM	
Weight		1.5	1.5 kg 1.9 kg		kg	
Applicable filter		FN11□1□ (E	lement L 250)	FN11□2□ (E	lement L 500)	

# **Dust recovery filter (Produced upon receipt of order)**

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

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





**How to Order** 

FND100 N-10-M149 X0

Seal material Symbol Material

N NBR

FKM

Port size
Symbol Port size
10 R1

Ϋ		Nominal filtration rating				
	Symbol	Nominal filtration rating				
	149	149 µm				

Gold mesh

Symbol Type

## **Replacement Parts**

ĺ	No. Descript		Kit No.	Material	Quantity	Note
	4	Element	EZH710AS-149	Stainless steel 304	1	
	5	O-ring	KA00822	NBR	1	1A-P185
5	э		KA00711	FKM	1	4D-P185

<sup>\*</sup> O-ring standard: JIS B 2401

#### Specifications

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

Note) Produced upon receipt of order.