Quick Change Filter
FQ1 Series

RoHS

How to Order

FQ1 0 1 0 N – 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 pcs.)

Housing O-ring material

Symbol	Material
N	NBR
V	FKM

Port size

Symbol	Port size	Applicable model		
		FQ1010	FQ1011	FQ1012
04	Rc 1/2	●	●	
06	Rc 3/4	●	●	●
10	Rc 1		●	●

Element type
Select from tables below.

Options

Nil	N/A
–B	Bracket

Made to order specifications

Nil	Note
X19	Without V-band Supprt
X61	Cover with Bracket Seat
X68	Chemical Resistant Type

∗ Refer to page 83 for the details of Made to Order specifications.

FQ1010□ FQ1011□ FQ1012□

Element and Seal Part Numbers

1. Fiber element (P.P.)

Dimensions	Element symbol	Nominal filtration accuracy (μm)	Part number
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 number
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 number
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	EM200-005□X4
	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) Specity 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 number
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	EM600-005□X4
	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) Specity seal material in place of "□" (N for NBR or V for FKM).

Made to Order

Made to order specifications

Elements other than 1 to 4 listed above are also available.
Refer to "Made to Order" elements on pages 84 and 85 for details.

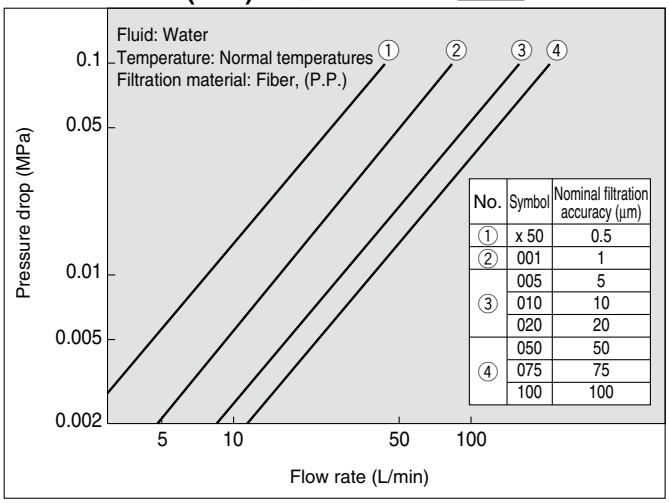
Specifications

Model		FQ1010	FQ1011	FQ1012
No.of built-in elements (L: Element length in mm)		1 (L125)	1 (L250)	2 (L250 x 2)
Operating pressure		Maximum 1 MPa		
Operating temperature		Maximum 80°C (Not exceeding boiling point)		
Applicable fluids		Industrial water, weak alkali cleaning fluids etc., ∗ Can not be used for gases.		
Port size (Rc)		1/2, 3/4	1/2, 3/4, 1	3/4, 1
Material	Housing	Stainless steel 304		
	Seal	NBR or FKM		
Weight (kg)		Approx. 1.5	Approx. 1.9	Approx. 2.7
Internal capacity (L)		Approx. 1	Approx. 1.7	Approx. 3.1

Note) For FQ1010, only micromesh elements and PP depth elements are used.
For details, refer to the pages on element series.

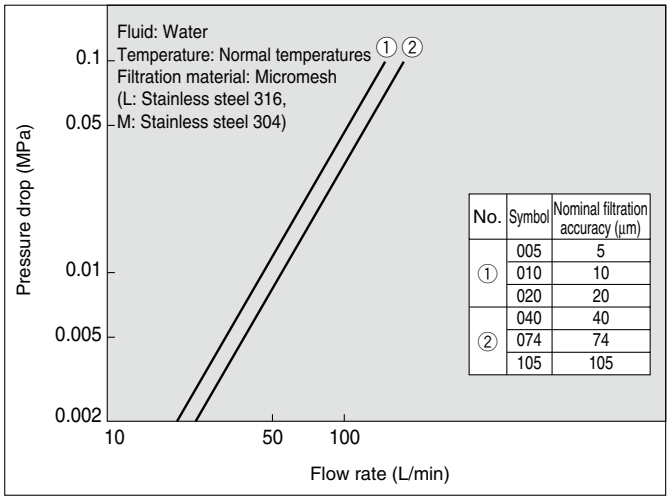
Flow Rate Characteristics

Fiber element (P.P.): FQ1011N-06-T Symbol



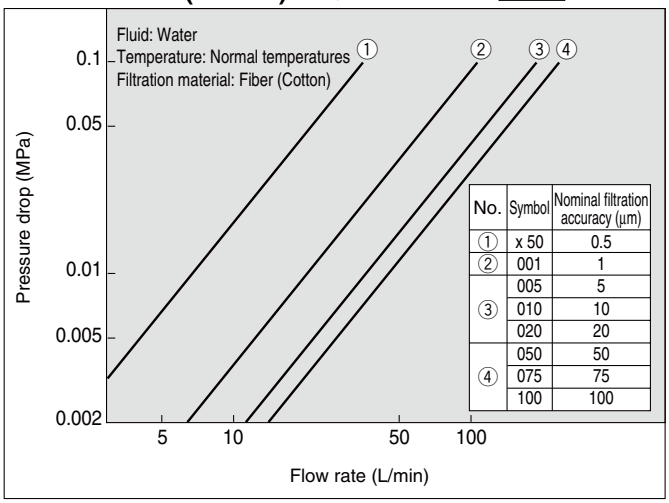
No.	Symbol	Nominal filtration accuracy (µm)
①	x 50	0.5
②	001	1
③	005	5
	010	10
	020	20
④	050	50
	075	75
	100	100

Micromesh element: FQ1011N-06-L/M Symbol



No.	Symbol	Nominal filtration accuracy (µm)
①	005	5
	010	10
	020	20
②	040	40
	074	74
	105	105

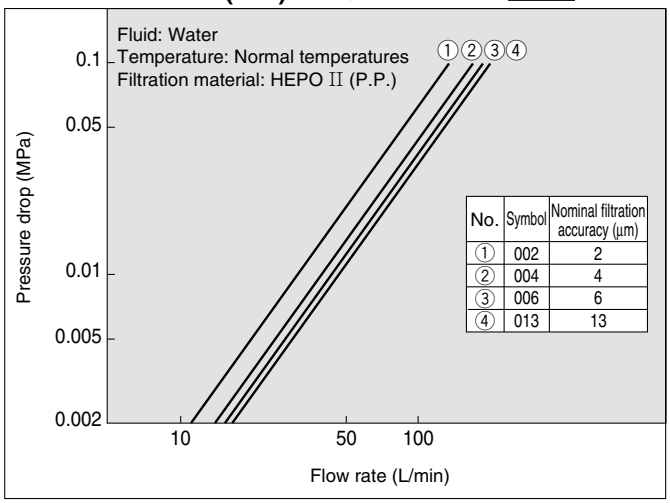
Fiber element (Cotton): FQ1011N-06-H Symbol



No.	Symbol	Nominal filtration accuracy (µm)
①	x 50	0.5
②	001	1
③	005	5
	010	10
	020	20
④	050	50
	075	75
	100	100

Note) The recommended flow rate is the rate for an initial pressure drop of 0.01 to 0.02 MPa.

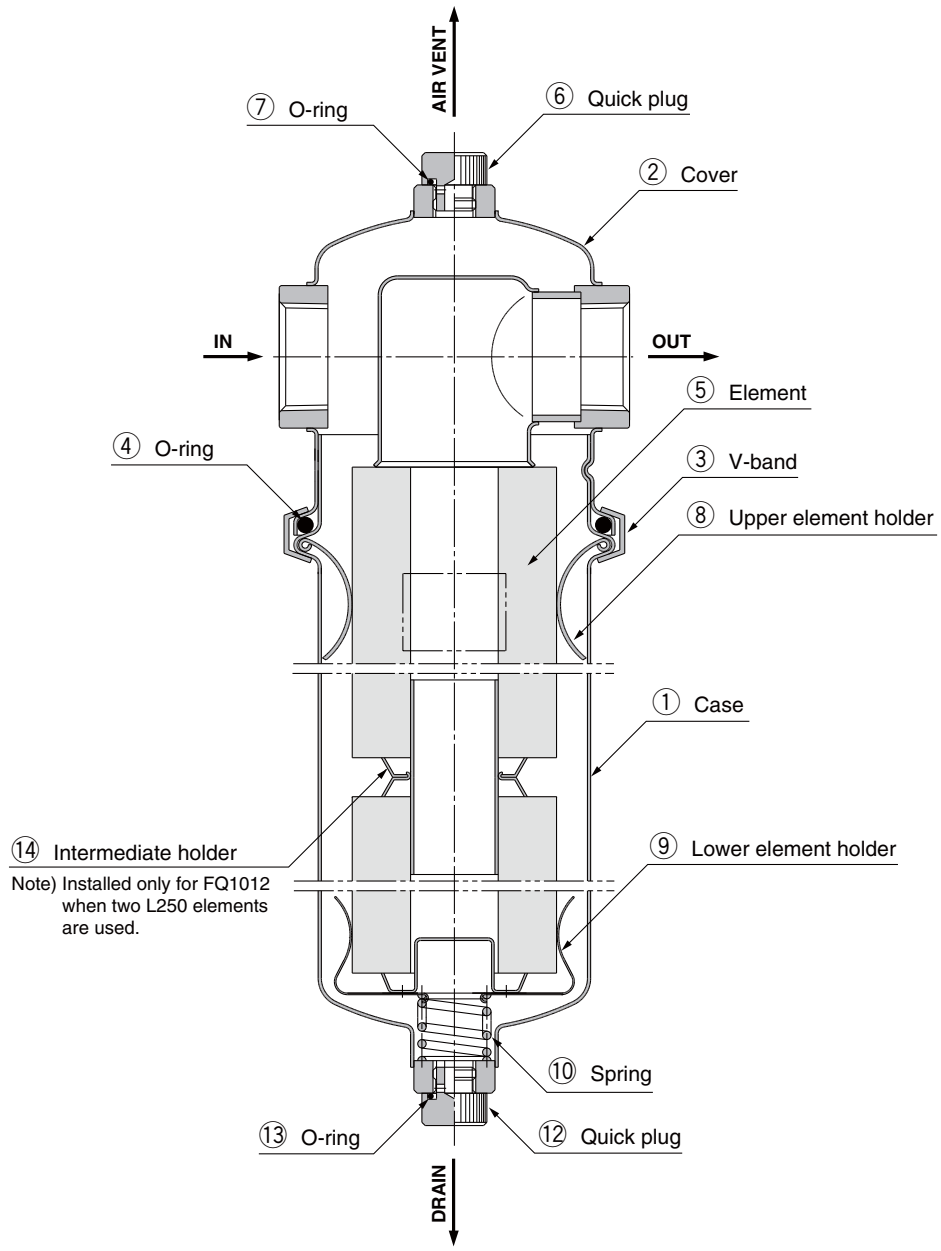
HEPO II element (P.P.)∗: FQ1011N-06-R Symbol



No.	Symbol	Nominal filtration accuracy (µm)
①	002	2
②	004	4
③	006	6
④	013	13

∗ Made to order

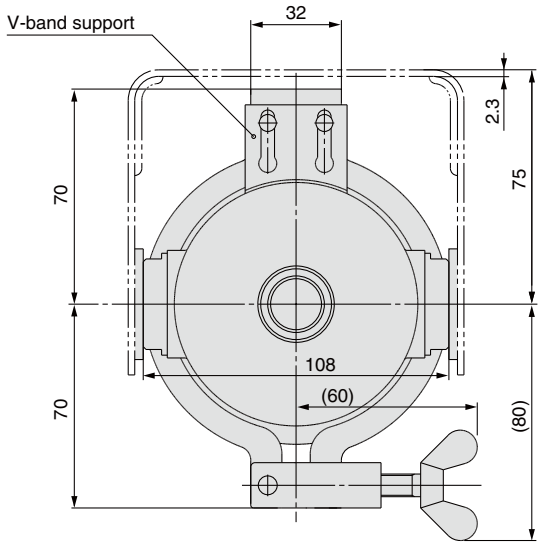
Construction



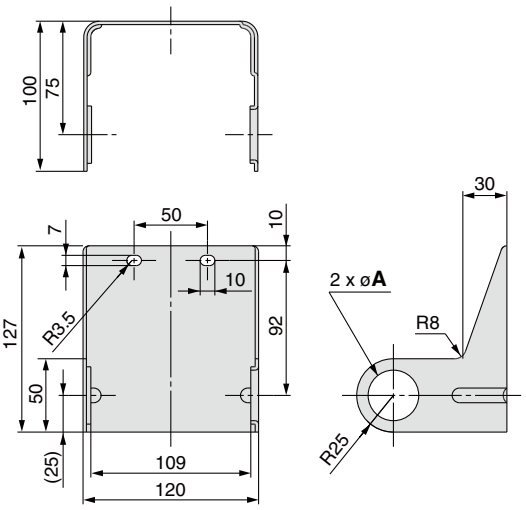
Replacement Parts

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 304	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

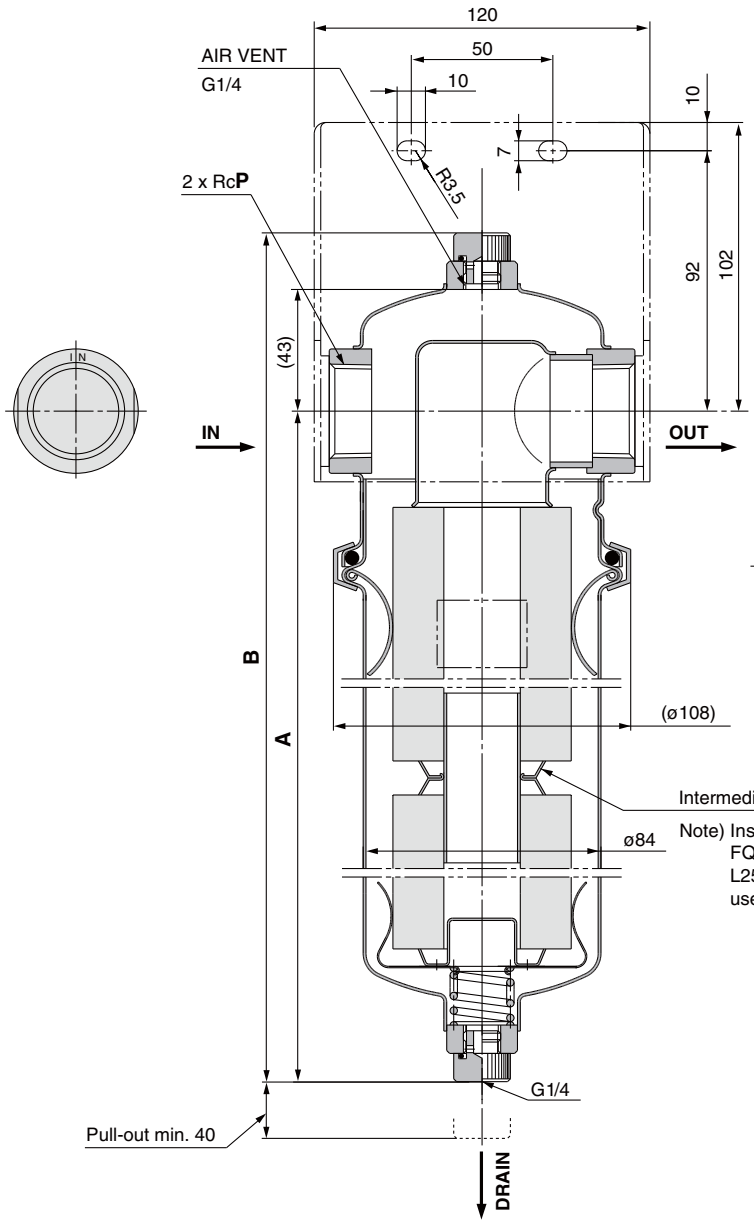
Dimensions



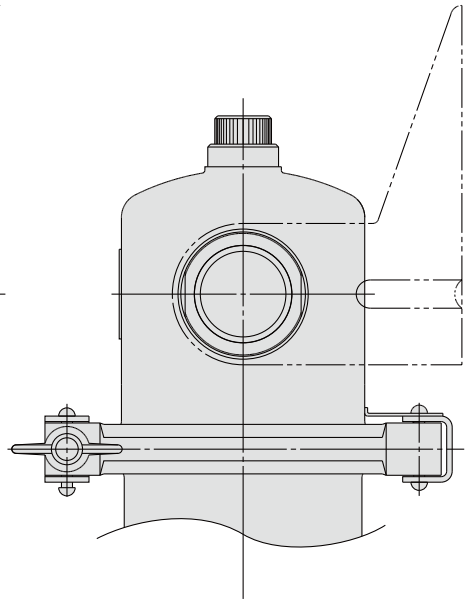
Bracket



Part number	A	Applicable port size
BP-13S	34.5	Rc 1
BP-14S	27.5	Rc 3/4
BP-15S	22	Rc 1/2



Note) Installed only for FQ1012 when two L250 elements are used.



Model	A	B	P	No. of elements
FQ1010	204	267	1/2, 3/4	L125 x 1
FQ1011	332	395	1/2, 3/4, 1	L250 x 1
FQ1012	593	656	3/4, 1	L250 x 2

Made to Order Specifications:

Please contact SMC for detailed dimensions, specifications and lead times.

Made to Order

1 Without V-band Support

Symbol: **X19**

Useful for reverse IN-OUT installation, as the position of the V-band can be changed.

FQ101 □ □ – □ – □ □ **X19**

- Element size
- Housing O-ring material
- Port size
- Element type
- Option

Option	
Nil	None
–B	Bracket

2 Cover with Bracket Seat

Symbol: **X61**

Reliable securing is possible.

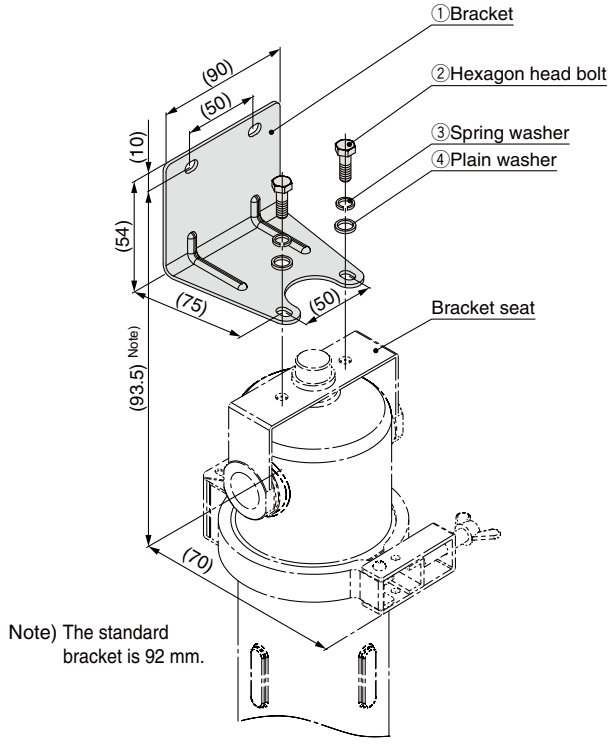
- Use the bracket assembly (Part no.: BP-12S-A). (The standard bracket cannot be used.)

FQ101 □ □ – □ – □ □ **X61**

- Element size
- Housing O-ring material
- Port size
- Element type
- Option

Option	
Nil	None
–B	Bracket

Dimensions



Note) The standard bracket is 92 mm.

Replacement Parts

Description	Part number	Applicable model	Part no. (Set contents)
Bracket assembly	**BP-12S-A**	Stainless steel 304	①: 1 pc. ②, ③, ④: 2 pcs. each 1 set

3 Chemical Resistant Type

Symbol: **X68**

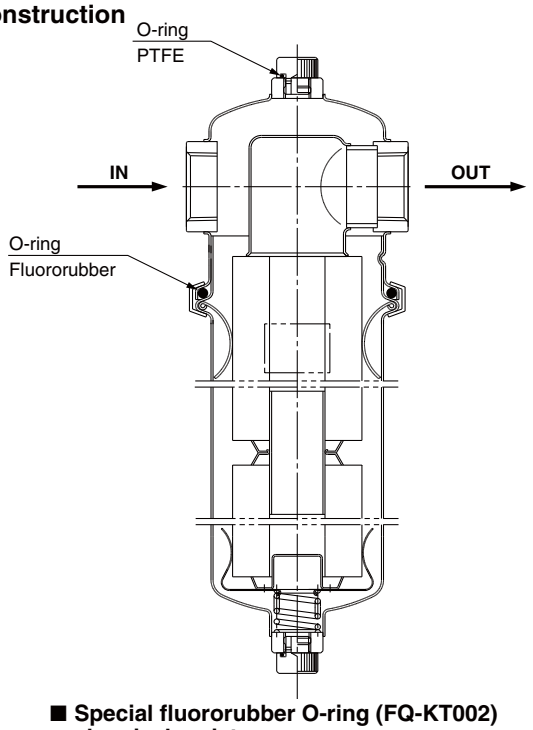
O-ring materials have been changed to special fluororubber and PTFE, improving chemical resistance.

FQ101 □ **V** – □ – □ – □ **X68**

- Element size
- Port size
- Element type
- Option

Option	
Nil	None
B	Bracket

Construction



■ Special fluororubber O-ring (FQ-KT002) chemical resistance

Applicable solvents Note)	
Hydrocarbon	Fuel C
	Hexane
	Benzene
	Toluene
Hydrogen halide	Chloroform
Ketone	Acetone
	MEK
Ester	Ethyl acetate
Amide	Formaldehyde
	DMF
Alcohol	Methanol
	Ethylene glycol
Ether	1, 4-dioxane
	MTBE
	TAME
Amine	Pyridine
	Butyl amine
Gasohol	Fuel C: Methanol = 75/25
	Fuel C: Methanol = 50/50
	Fuel C: Methanol = 25/75

∗ Consult SMC for fluids other than those listed.

Note) When using with liquids that contain flammable ingredients, implement safety measures, such as fire prevention and leakage detection sensors, and measures against static.

Made to Order Specifications:

Made to Order

Please contact SMC for detailed dimensions, specifications and lead times.

∗ The standard element is shared with the element of the FG series. (For details, refer to the standard elements on page 41. Additionally, for element selection, refer to the selection on page 3.)

4 Nonstandard Elements for Precision Cleaning

FQ101 □ □ – □ – □ □ **X0**

- **Element size**
- **Housing O-ring material**
- **Port size**
- **Element type** Select from tables below.
- **Option**
- **Made to Order** Combined with non-standard elements.

Membrane P.P. element "ED102S Series"

RoHS

- Material: P.P.
- Optimal for high precision filtration (99% or more) of various cleaning fluids (mainly alkali-base)
- Dimensions: ø70 x L250

Recommended flow rate

Filtration accuracy (µm) Filtration efficiency 99%	Recommended flow rate (L/min)∗
0.2	5
0.4	

∗ Pressure loss: 0.01 to 0.02 MPa
- Operating temperature: 0 to 70°C
- Differential pressure resistance: 0.5 MPa/25°C

Element and seal part numbers

Dimensions	Element symbol	Filtration accuracy (µm) Filtration efficiency 99%	Element part number (single part)
ø70 x 250	**UX20□**	0.2	ED102S-X20□X0
	UX40□	0.4	ED102S-X40□X0

Note) Specity seal material in place of "□" (N for NBR, V for FKM or T for PTFE).
The suffix of the filter model part number is "X0".

Membrane CA element "ED111S Series"

RoHS

- Material: CA
- Optimal for high precision filtration (99% or more) of various kinds of water
- Dimensions: ø70 x L250

Recommended flow rate

Filtration accuracy (µm) Filtration efficiency 99%	Recommended flow rate (L/min)∗
0.2	5
0.4	

∗ Pressure loss: 0.01 to 0.02 MPa
- Operating temperature: 0 to 80°C
- Differential pressure resistance: 0.5 MPa/25°C

Element and seal part numbers

Dimensions	Element symbol	Filtration accuracy (µm) Filtration efficiency 99%	Element part number (single part)
ø70 x 250	**DX20□**	0.2	ED111S-X20□X0
	DX40□	0.4	ED111S-X40□X0

Note) Specity seal material in place of "□" (N for NBR, V for FPM, T for PTFE, E for EPRS, or S for Silicon).
The suffix of the filter model part number is "X0".

P.P. depth element "EJ202S, 302S, 402S Series"

RoHS

- Material: Polypropylene and polyethylene
- No fiber separation due to thermal fusion of fibers
- A wide range of applications to various cleaning fluids
- Dimensions
  EJ202S: ø65 x L125
  EJ302S: ø65 x L250
  EJ402S: ø65 x L500

Recommended flow rate

Nominal filtration accuracy (µm)	Recommended flow rate (L/min)∗
1, 3, 5, 10 25, 50, 75	30

∗ Pressure loss: 0.01 to 0.02 MPa
- Operating temperature: 0 to 60°C
- Differential pressure resistance: 0.2 MPa

Element and seal part numbers

Dimensions	Element symbol	Nominal filtration accuracy (µm)	Element part number (single part)
ø65 x 125	**W001**	1	EJ202S-001X11
	W003	3	EJ202S-003X11
	W005	5	EJ202S-005X11
	W010	10	EJ202S-010X11
	W025	25	EJ202S-025X11
	W050	50	EJ202S-050X11
	W075	75	EJ202S-075X11
ø65 x 250	**W001**	1	EJ302S-001X11
	W003	3	EJ302S-003X11
	W005	5	EJ302S-005X11
	W010	10	EJ302S-010X11
	W025	25	EJ302S-025X11
	W050	50	EJ302S-050X11
	W075	75	EJ302S-075X11
ø65 x 500	**W001**	1	EJ402S-001X11
	W003	3	EJ402S-003X11
	W005	5	EJ402S-005X11
	W010	10	EJ402S-010X11
	W025	25	EJ402S-025X11
	W050	50	EJ402S-050X11
	W075	75	EJ402S-075X11

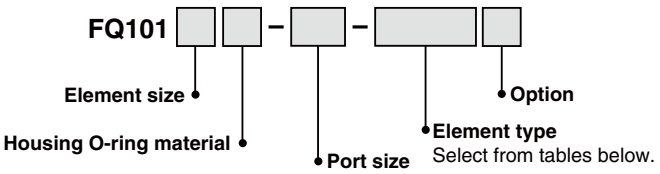
Note) Seals are not necessary. The suffix of the filter model part number is "X0".

Made to Order Specifications:

Please contact SMC for detailed dimensions, specifications and lead times.

Made to Order

5 Nonstandard Elements for Precision Cleaning



HEPO II element "EJ101S Series"

RoHS

- Material: PET
- Optimal for high precision filtration (99% or more) of a wide range of fluids
- Dimensions: ø70 x L250 (EJ101S)

Recommended flow rate

Absolute filtration accuracy (μm)	Recommended flow rate (L/min)*
2	20
4	
6	
13	

* Pressure loss: 0.01 to 0.02 MPa
- Operating temperature: 0 to 80°C
- Differential pressure resistance: 0.5 MPa/25°C

Element and seal part numbers

Dimensions	Element symbol	Nominal filtration accuracy (μm)	Element part number (single part)
ø70 x 250	**J002**□	2	EJ101S-002□
	J004□	4	EJ101S-004□
	J006□	6	EJ101S-006□
	J013□	13	EJ101S-013□

Note) Specity seal material in place of "□" (N for NBR, V for FKM, T for PTFE, C for CR (chloroprene rubber)).
The suffix of the filter model part number is not necessary.

HEPO II element "EJ102S Series"

RoHS

- All parts of this element are made of polypropylene, which is optimal for various cleaning fluids including alkali and organic solvents.
- Nearly fiber separation or release of chemicals, since fibers themselves are directly fused and no adhesives are used.
- Pressure loss is low and relatively long service life is provided due to a larger filtration area
- Dimensions: ø70 x L250

Recommended flow rate

Absolute filtration accuracy (μm)	Recommended flow rate (L/min)
2	20
4	
6	
13	

- Operating temperature: 0 to 80°C
- Differential pressure resistance: 0.5 MPa

Element and seal part numbers

Dimensions	Element symbol	Nominal filtration accuracy (μm)	Element part number (single part)
ø70 x 250	**R002**□	2	EJ102S-002□X0
	R004□	4	EJ102S-004□X0
	R006□	6	EJ102S-006□X0
	R013□	13	EJ102S-013□X0

Note) Specity seal material in place of "□" (N for NBR, V for FKM, T for PTFE, E for EPR, or S for Silicon).

Can be also combined with elements for industrial filter (FG Series).
For details, see the selection method on page 3.