

Air Suction Filter In-line Type with One-touch Fittings Series ZFC

An in-line type air suction filter that prevents trouble in vacuum equipment due to contaminants in the air.

IN/OUT straight piping

Saves space with space efficient straight piping

Applicable tubing sizes

Metric sizes (Release bushing: light gray)
ø4, ø6, ø8

Inch sizes (Release bushing: orange)
ø5/32", ø1/4", ø5/16"

One-touch fittings for easy installation and removal

Piping tube can be connected or disconnected with one touch.

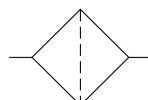
Lightweight molded resin parts

Cartridge type allows element replacement

The cover can be opened with one touch to allow quick replacement without tools while still connected to piping.



JIS Symbol



Model

Model		Port size (Applicable tubing O.D.)	Recommended flow rate (μ /min (ANR)) <small>Note)</small>	Weight (g)
		IN side, OUT side		
Metric size	ZFC100-04	ø4	10	11.5
	ZFC100-06	ø6	20	
	ZFC200-06	ø6	30	21.5
	ZFC200-08	ø8	50	
Inch size	ZFC101-03	ø5/32"	10	11.5
	ZFC101-07	ø1/4"	20	
	ZFC201-07	ø1/4"	30	21.5
	ZFC201-09	ø5/16"	50	

Note) Flow rate when initial pressure drop is 3 kPa or less.

Specifications

Fluid	Air, Nitrogen
Operating pressure	-100 to 0 kPa
Burst pressure	0.5 MPa
Operating and ambient temperature range	0 to 60°C (No freezing)
Filtration degree	10 μ m
Element differential pressure resistance	0.15 MPa
Applicable tubing material	Nylon, Soft nylon, Polyurethane, Soft polyurethane

Note) Do not use in a line where a pressurized condition is maintained since the body may be damaged.

How to Order

ZFC 100 — 04 B

Air suction filter in-line type with One-touch fittings

• Type (Recommended flow rate)

• With bracket (Standard)

• IN/OUT applicable tubing O.D.

Tubing size	Symbol	Flow rate (μ /min (ANR))
Metric size	100	Max. 20
(Release bushing: Light gray)	200	Max. 50
Inch size	101	Max. 20
(Release bushing: Light gray)	201	Max. 50

Symbol	Tubing size	Applicable model
04	ø4	ZFC100
06	ø6	ZFC100
		ZFC200
08	ø8	ZFC200

Symbol	Tubing size	Applicable model
03	ø5/32"	ZFC101
07	ø1/4"	ZFC101
		ZFC201
09	ø5/16"	ZFC201

Element Part No.

Part no.	Applicable filter model	Element size (mm)
I-62S-A	ZFC100	ø12 x ø8 x L20
	ZFC101	
I-63S-A	ZFC200	ø16 x ø12 x L25
	ZFC201	

Note) Spare elements and O-rings for the cover are sold in sets of 10 pieces each.

Principal Parts Material

Description	Material
Case	Special clear nylon
Cover	PBT
Element	PVF
O-ring, Seal	NBR

ZX

ZR

ZM

ZH

ZU

ZL

ZY

ZQ

ZF

ZP

ZCU

AMJ

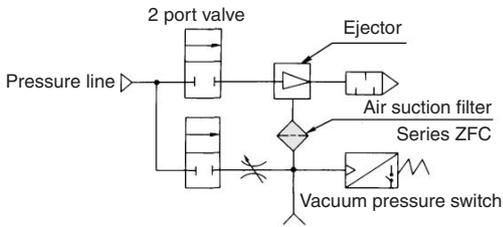
Misc.

Series ZFC

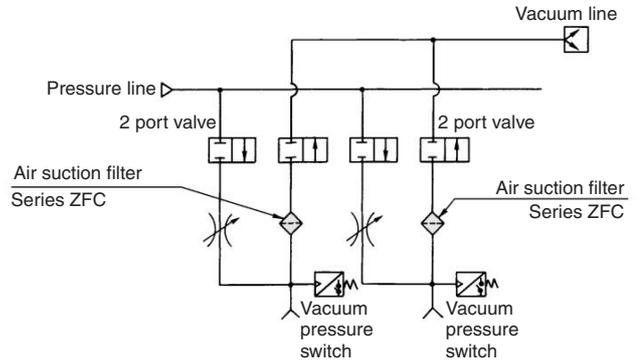
Application Example

Fields: Semiconductor, electronics, automotive assembly, food processing and medical equipment, all types of manufacturing assembly equipment
 Machinery: Robotic hand/material handling, automotive assembling machines, automatic transfer equipment, pick and place, printing machinery
 Application: Vacuum adsorption transfer, vacuum adsorption retention, vacuum generated air flow

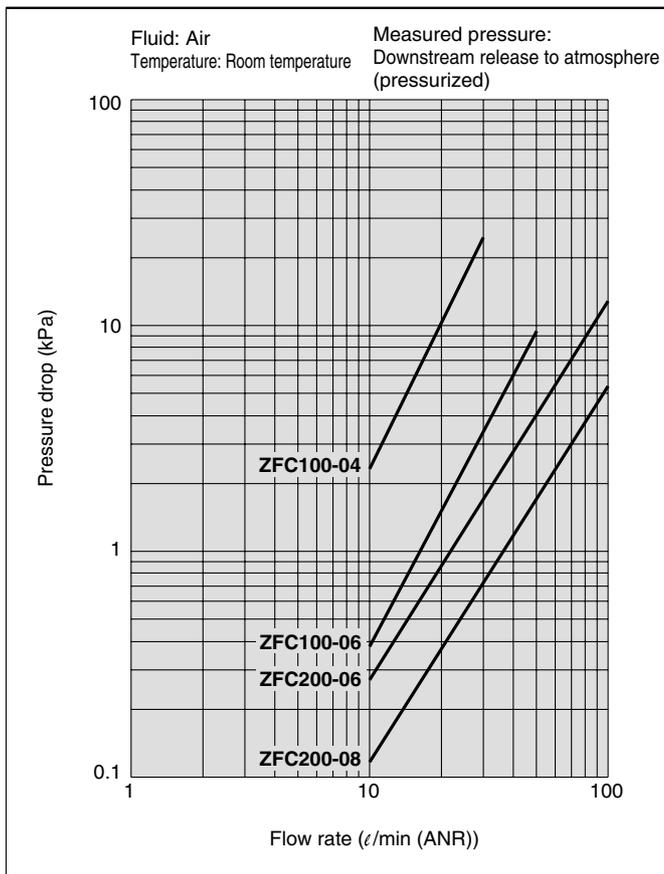
Application ejector system



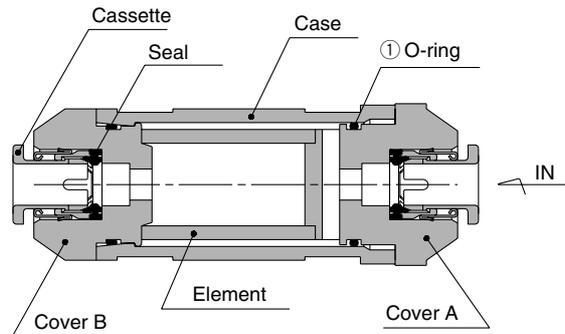
Application vacuum pump system



Flow Characteristics (Piping tube: Metric size, Inch size)



Construction

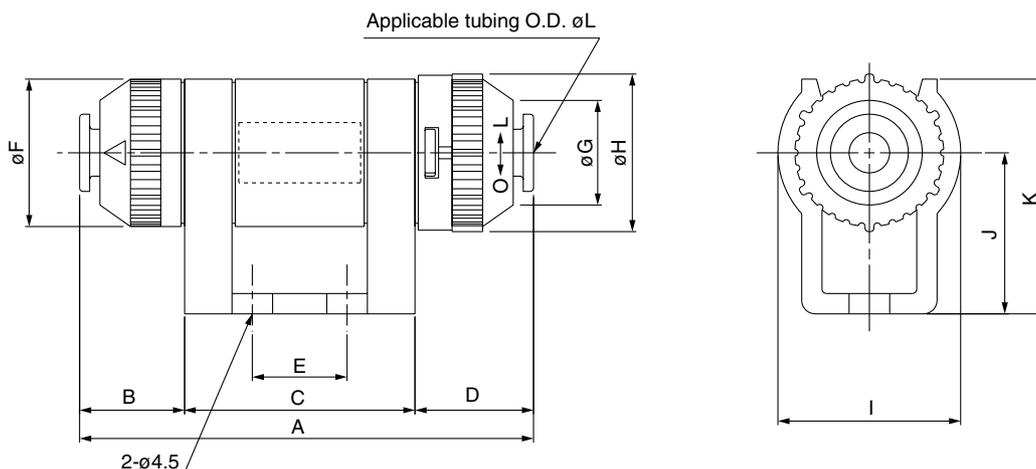


Replacement Parts

No.	Description	Part no.	
		ZFC100, 101	ZFC200, 201
①	O-ring	S10	S14
Accessory	Bracket	BP-16S	BP-17S

* O-ring is a set with spare element (I-**-S-A).
 A bracket is included with the product.

Dimensions



Model	A	B	C	D	E	F	G	H	I	J	K	L
ZFC100-04	53.2	9.1	30	14.1	10	18	11.6	19.5	23	20	29	4
ZFC100-06												6
ZFC101-03												5/32"
ZFC101-07												1/4"
ZFC200-06	67	15.5	34	17.5	14	22	15.6	23.1	27	24	35	6
ZFC200-08												8
ZFC201-07												1/4"
ZFC201-09												5/16"

ZX

ZR

ZM

ZH

ZU

ZL

ZY

ZQ

ZF

ZP

ZCU

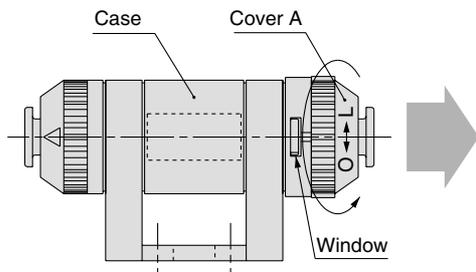
AMJ

Misc.

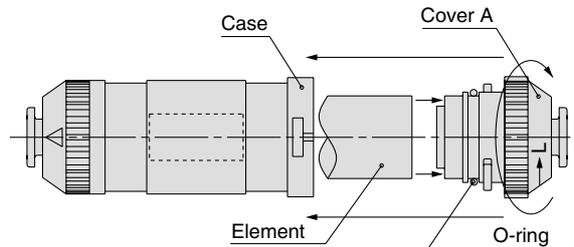
Element Replacement

Element replacement procedure

1. Stop operation and reduce the filter's internal pressure to atmosphere.
2. Turn cover A counterclockwise until it stops (approx. 45°).
4. Install a new element on cover A and insert it into the case.



3. Pull cover A out of the case to remove the element. Remove dust and other debris remaining inside the case by blowing it out with air, etc. (Also confirm that the O-ring is not damaged.)



5. After aligning the projections (2 places) on cover A with the grooves in the case, push cover A in and turn it clockwise until it stops (approx. 45°) (Confirm that the projections on cover A can be seen completely through the windows in the case.)
6. Restart operation.

⚠ Precautions

Be sure to read before handling. Refer to pages 13-15-3 to 13-15-4 for Safety Instructions and Common Precautions on the products mentioned in this catalog, and refer to page 13-1-5 for Precautions on every series.

Selection

⚠ Warning

1. Do not use in lines where a pressurized condition is maintained, as the body may be damaged.

Mounting

⚠ Warning

1. Connect tubing to the IN and OUT One-touch fittings in accordance with the precautions for One-touch fittings.

⚠ Caution

1. Make connections after confirming the “▷” marks for IN and OUT indicated on the body. Proper sealing of the element cannot be guaranteed if connections are reversed.

Maintenance

⚠ Warning

1. When the element becomes clogged, stop operation and adjust the internal pressure of the filter to atmospheric pressure before replacing the element.

⚠ Caution

1. As a rule, replace the element when the pressure drops by 0.02 MPa.
2. During disassembly and assembly, confirm that there are no scratches or damage, etc, on the O-ring.

Handling of One-touch Fittings

⚠ Caution

1. Tubing attachment/detachment for One-touch fittings
 - 1) Installing the tubing
 - (1) Use tubing with no flaws on its periphery and cut it off at a right angle. When cutting the tubing, use a tube cutter, TK-1, 2 or 3. Do not use pinchers, nippers or scissors, etc. If cutting is done with tools other than tube cutters, the tubing may be cut diagonally or become flattened, etc. This can make a secure installation impossible, and cause problems such as the tubing pulling out after installation or air leakage. Allow some extra length in the tubing.
 - (2) Grasp the tubing and push it in slowly, inserting it securely all the way into the fitting.
 - (3) After inserting the tubing, pull on it lightly to confirm that it will not come out. If it is not installed securely all the way into the fitting, this can cause problems such as air leakage or the tubing pulling out.
 - 2) Removal of tubing (ZFC200/201)
 - (1) Push in the release bushing sufficiently. When doing this, push the collar evenly.
 - (2) Pull out the tubing while holding down the release bushing so that it does not come out. If the release bushing is not pressed down sufficiently, there will be increased bite on the tubing and it will become more difficult to pull it out.
 - (3) When the removed tubing is to be used again, cut off the portion which has been chewed before reusing it. If the chewed portion of the tubing is used as is, this can cause trouble such as air leakage or difficulty in removing the tubing.
 - 3) Removal of tubing (ZFC100/101)
(Perform with one hand.)
 1. Hold the collar of the release bushing with the thumb and ↓ index finger.
 2. Firmly grasp the tubing with the remaining three fingers ↓ and the palm of the hand.
 3. From this condition, while pushing in the release bushing with thumb and index fingers, pull the tubing out with ↓ three fingers and a palm of your hand.
 4. To reuse the tubing which has been removed, first cut off the part which has been previously held.
 - 4) For SMC's One-touch fitting series KQ, do not install products with a metal rod into the pipe fittings of the series ZFC100/101. The metal rod will not be held and the fitting will shoot out.