

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

One-touch fittings for easy installation and removal

Piping tubes can be attached or detached with one touch

Applicable tubing sizes

Metric sizes (release bushing: light gray)

ø4, ø6, ø8

Inch sizes (release bushing: orange)

ø5/32", ø1/4", ø5/16"

Light weight 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

Air Suction Filter

In-line Type with One-touch Fittings

Series ZFC



Models

Model		Port size (applicable tube O.D.)		Recommended flow rate /min (ANR) ^{Note 1)}	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	

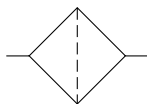
Note 1) Flow rate when initial pressure drop is 0.003MPa or less.

Specifications

Fluid	Air, Nitrogen
Operating pressure	-100 to 0kPa
Withstand pressure	0.5MPa
Operating and ambient temperature range	0 to 60°C (with no freezing)
Filtration degree	10µm
Element differential pressure resistance	0.15MPa
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.

Symbol



How to Order

ZFC 100 - 04 B

• Air suction filter
• In-line type with One-touch fitting

• With bracket (standard)
• IN/OUT applicable tube O.D.

• Type (recommended flow rate)

Tubing size	Symbol	Flow rate /min (ANR)
Metric size (release bushing: light gray)	100	Max. 20
	200	Max. 50
Inch size (release bushing: orange)	101	Max. 20
	201	Max. 50

Metric size

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

Inch size

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

Element Part Numbers

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

Note) When ordering spare elements, enter "-A" at the end of the part number.
Spare elements and O-rings for the cover are sold in sets of 10 pieces each.
Example) I-62S-A

Principal Materials

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

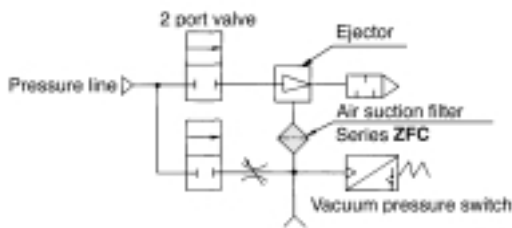
Application Examples

Fields: Semiconductors, electronics, automotive assembly, food processing and medical equipment, all types of manufacturing assembly equipment

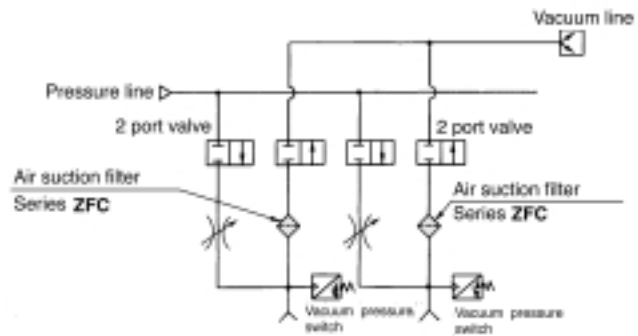
Machinery: Robotic hand/material handling, automotive assembling machines, automatic transfer equipment, pick and place, printing machinery

Applications: Vacuum adsorption transfer, vacuum adsorption retention, vacuum generated air flow

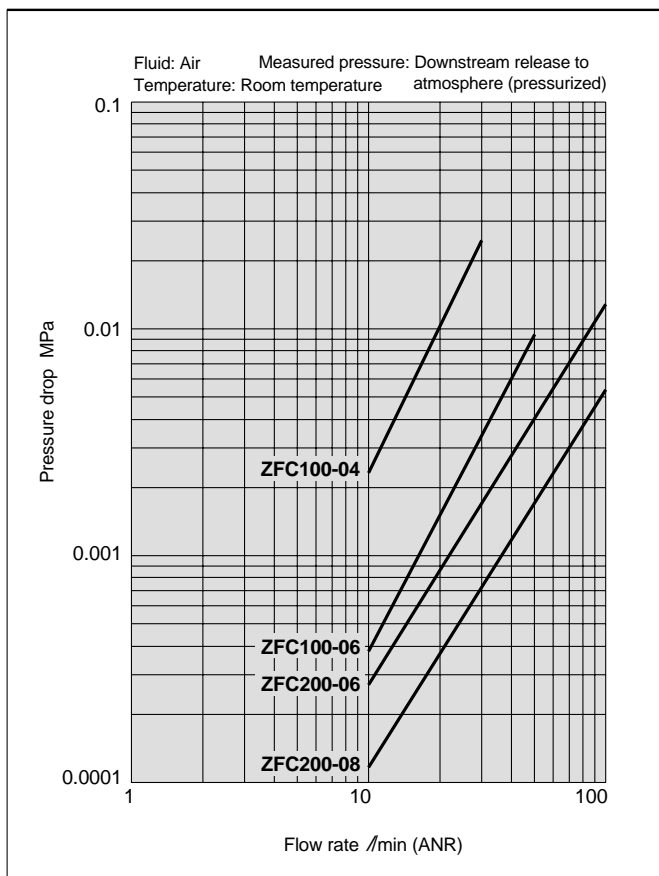
Ejector system application



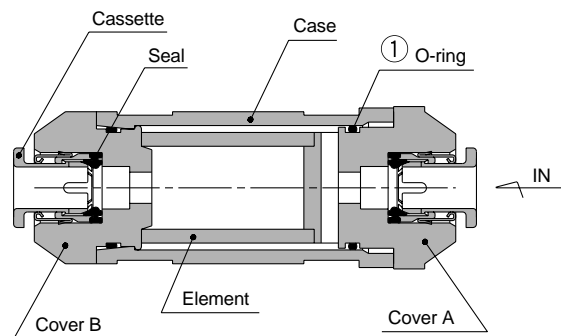
Vacuum pump system application



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



Construction



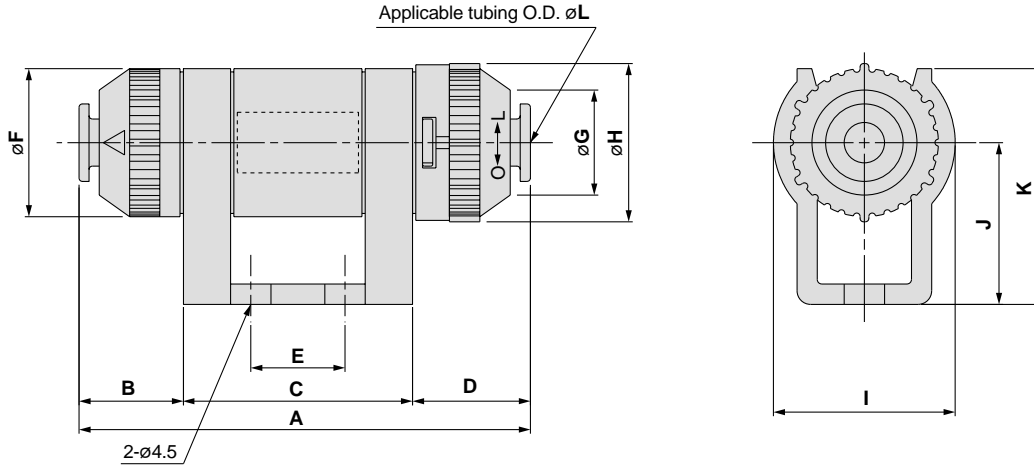
Replacement parts

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

* O-rings are already installed in spare elements.
A bracket is included with the product.

Series ZFC

Dimensions

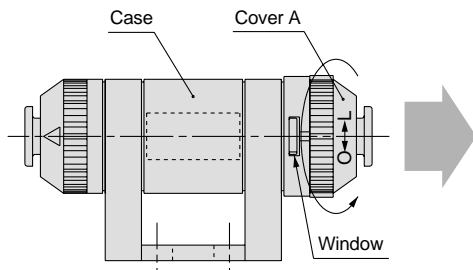


Model	A	B	C	D	E	F	G	H	I	J	K	L
ZFC100-04	53.2	9.1	30	14.1	10	18	11.6	19.5	23	20	29	4
ZFC100-06												6
ZFC101-03												5/32"
ZFC101-07												1/4"
ZFC200-06	67	15.5	34	17.5	14	22	15.6	23.1	27	24	35	6
ZFC200-08												8
ZFC201-07												1/4"
ZFC201-09												5/16"

Element Replacement

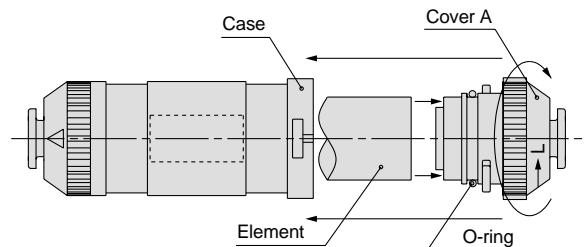
Element replacement procedure

- 1) Stop operation and reduce the filter's internal pressure to atmosphere.
- 2) Turn cover A counter clockwise until it stops (approx. 45°).



- 3) Pull cover A out of the case and 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.)

- 4) Install a new element on cover A and insert it into the case.



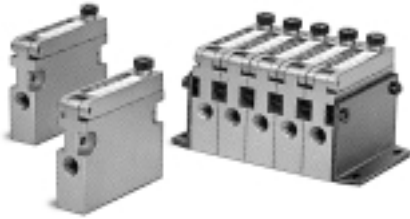
- 5) After aligning the projections (2 places) on cover A with the grooves in the case, push cover A in and turn it clockwise until it stops (approx. 45°). (Confirm that the projections on cover A can be seen completely through the windows in the case.)
- 6) Restart operation.

Related Products
Air Suction Filter
Series ZFA/ZFB



For details on the air suction filter series ZFA/ZFB, refer to catalogs E803-B "ZFA" and E809-A "ZFB".

Models



ZFA100

Model		Port size (applicable tube O.D.)	Recommended flow rate	Weight
			/min (ANR)	g
High flow rate square type	ZFA100	1/8	50	140
	ZFA200	1/4	200	190
Universal type	ZFB10□	ø4, ø6, ø3/16", ø1/4"	10 to 20	22
	ZFB20□	ø6, ø8, ø1/4"	30 to 50	30
	ZFB30□	ø10, ø3/8"	75	40
	ZFB401	ø1/2"	100	62

Specifications



ZFB


Fluid	Air, Nitrogen
Operating pressure	Negative pressure
Withstand pressure	0.5MPa
Operating and ambient temperature range	0 to 60°C (with no freezing)
Filtration degree	30µm
Element differential pressure resistance	0.15MPa
Applicable tubing material	Nylon, Soft nylon, Polyurethane, Soft polyurethane


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




Series ZFC Safety Instructions

These safety instructions are intended to prevent a hazardous situation and/or equipment damage. These instructions indicate the level of potential hazard by labels of "Caution", "Warning" or "Danger". To ensure safety, be sure to observe ISO 4414 ^{Note 1)}, JIS B 8370 ^{Note 2)} and other safety practices.

 **Caution** : Operator error could result in injury or equipment damage.

 **Warning** : Operator error could result in serious injury or loss of life.

 **Danger** : In extreme conditions, there is a possible result of serious injury or loss of life.

Note 1) ISO 4414 : Pneumatic fluid power – Recommendations for the application of equipment to transmission and control systems

Note 2) JIS B 8370 : General Rules for Pneumatic Systems

Warning

1. The compatibility of pneumatic equipment is the responsibility of the person who designs the pneumatic system or decides its specifications.

Since the products specified here are used in various operating conditions, their compatibility for the specific pneumatic system must be based on specifications or after analysis and/or tests to meet your specific requirements.

2. Only trained personnel should operate pneumatically operated machinery and equipment.

Compressed air can be dangerous if an operator is unfamiliar with it. Assembly, handling or repair of pneumatic systems should be performed by trained and experienced operators.

3. Do not service machinery/equipment or attempt to remove components until safety is confirmed.

1. Inspection and maintenance of machinery/equipment should only be performed after confirmation of safe locked-out control positions.
2. When equipment is to be removed, confirm the safety process as mentioned above. Cut the supply pressure for this equipment and exhaust all residual compressed air in the system.
3. Before machinery/equipment is restarted, take measures to prevent shooting-out of cylinder piston rod, etc. (Bleed air into the system gradually to create back pressure.)

4. Contact SMC if the product is to be used in any of the following conditions:

1. Conditions and environments beyond the given specifications, or if product is used outdoors.
2. Installation on equipment in conjunction with atomic energy, railway, air navigation, vehicles, medical equipment, food and beverages, recreation equipment, emergency stop circuits, press applications, or safety equipment.
3. An application which has the possibility of having negative effects on people, property, or animals, requiring special safety analysis.