

Air Suction Filter

Series ZF

Prevent from occurring vacuum equipment trouble due to dust from vacuum pad

Series	Features	Port size		Air flow ($\ell/\text{min(ANR)}$)	Filtration (μm)	Page
		Screw-in	Applicable tubing O.D. for one-touch fittings			
ZFA 	- Long maintenance cycle type (Large filter surface) - Adaptable for a manifold application - Metal body	1/8, 1/4	—	1/8: 50 1/4: 200	30	P.1105
ZFB Universal joint type 	- Unrestricted 360° piping tube mounting - With one-touch fitting - Light and compact molded resin parts	—	$\phi 4, \phi 6$ $\phi 8, \phi 10$ $\phi 3/16", \phi 1/4"$ $\phi 3/8", \phi 1/2"$	$\phi 4$: 10 $\phi 6$: 30 $\phi 8$: 50 $\phi 10$: 75	30	P.1108
ZFC In-line type 	- IN/OUT straight piping - With one-touch fitting - Light and compact molded resin parts	—	$\phi 2, \phi 3.2$ $\phi 4, \phi 6, \phi 8$ $\phi 1/8", \phi 5/16"$ $\phi 5/32", \phi 1/4"$ $\phi 5/16"$	$\phi 2$: 2 $\phi 3.2$: 7 $\phi 4$: 10 $\phi 6$: 30 $\phi 8$: 50	10	P.1111

ZA
 ZX
 ZR
 ZM
 ZMA
 ZQ
 ZH
 ZU
 ZL
 ZY□
ZF□
 ZP□
 SP
 ZCUK
 AMJ
 AMV
 AEP
 HEP
 Related Equipment

Air Suction Filter Series ZFA

RoHS

Prevents vacuum equipment trouble due to airborne contaminants.

The collected dust does not remain in the case.

Compact and lightweight

Max. 10 station manifold is possible.

Large filter element surface

Possible to replace element without tools

Mountable in any direction

Model

Model	Port size	Recommended air flow (ℓ/min (ANR))	Mass (kg)	Internal capacity (cm ³)
ZFA100	1/8	50	0.14	30
ZFA200	1/4	200	0.19	49

Specifications

Fluid	Air, Nitrogen
Operating pressure range ^{Note)}	-100 to 0 kPa
Proof pressure ^{Note)}	0.5 MPa
Operating temperature range	5 to 60°C
Nominal filtration	30 μm
Element differential pressure resistance	0.15 MPa



Note) Do not use it in a line that is kept pressurized because it could cause the body to break.

Accessory/Option

Model	ZFA100	ZFA200	Note
Bracket assembly	BP-1H-1A	BP-1H-2A	With Bolt, Nut, Washer
Bracket for manifold (1 to 10 stations)	ZZFA1- Stations	ZZFA2- Stations	With Bracket, Connection bolt, Nut, Washer, each 2 pcs.

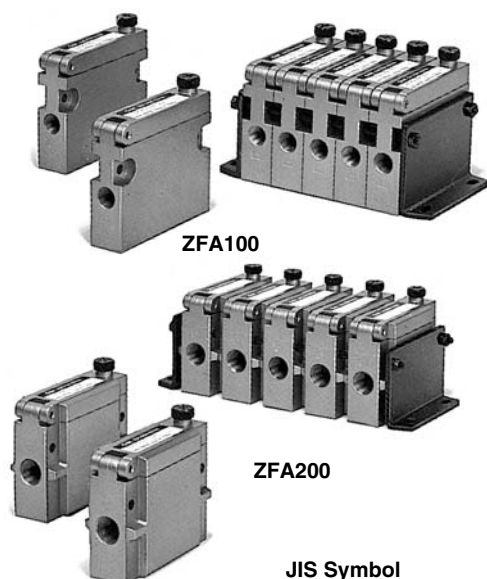
Principal Parts Material

Description	Material
Cover	Zinc die-casted
Case	Aluminum die-casted
Gasket/Seal	NBR
Element	Polyester, ABS

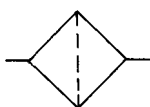
Element Part No.

Part no.	Applicable filter model	Element size (mm)
EJ001H-030N	ZFA100	43 x 42 x 12
EJ101H-030N	ZFA200	43 x 40 x 22

How to Order



JIS Symbol



ZFA 100 - 01

Air suction filter

Type
(Recommended flow rate)

100	50 ℓ/min (ANR)
200	200 ℓ/min (ANR)

Thread type

Nil	Rc
T	NPTF
F	G

Bracket

Nil	None
L	With bracket (1 pc. on the left)
R	With bracket (1 pc. on the right)

* L or R shows the left or right of the filter IN when viewed from front.

Port size

01	1/8 ^B (ZFA100)
02	1/4 ^B (ZFA200)

How to Order Manifold

Indicate both the symbols for air suction filter and bracket for manifold.

Example: In case of 6 stations of air suction filter ZFA100-01

ZZFA1-06 1 pc.

ZFA100-01 6 pcs.

Both left and right brackets.

ZA

ZX

ZR

ZM

ZMA

ZQ

ZH

ZU

ZL

ZY□

ZF□

ZP□

SP

ZCUK

AMJ

AMV

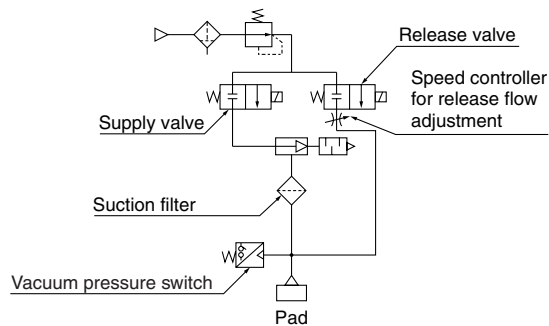
AEP

HEP

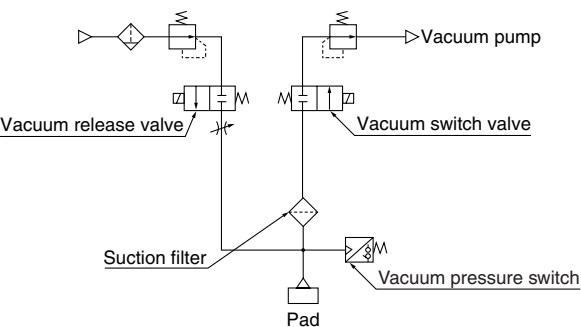
Related Equipment

Application Example

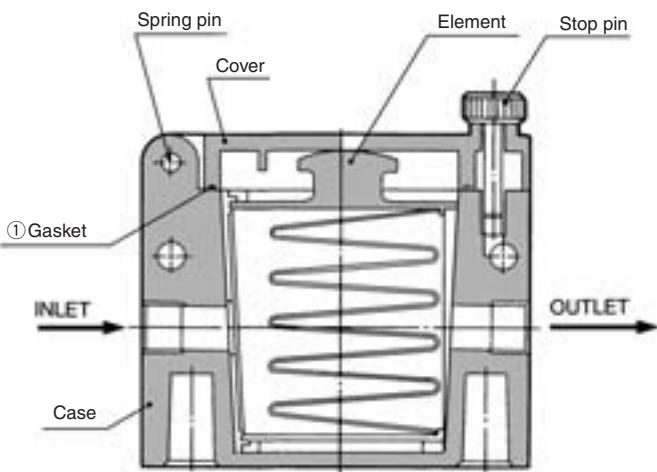
Application to ejector system



Application to vacuum pump system



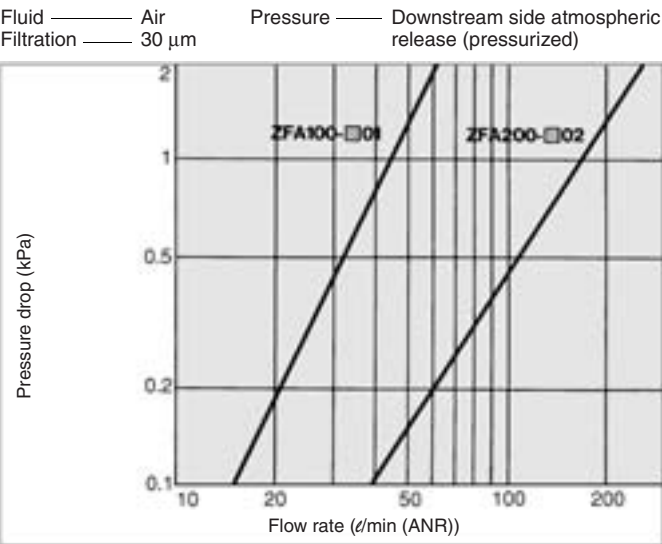
Construction



Replacement Parts

No.	Description	Part no.	
		ZFA100	ZFA200
1	Gasket for cover case	AL-204H	AL-205H

Flow Characteristics



⚠ Precautions

- Be sure to read before handling.
- Refer to front matters 38 and 39 for Safety Instructions and pages 844 to 846 for Vacuum Equipment Precautions.

Mounting

⚠ Warning

- Be extremely careful with the piping connection screw seal to prevent leakage. Failure to observe this precaution could cause a picking malfunction.

⚠ Caution

- Verify the “▷” marks for IN and OUT that are indicated on the body to ensure a proper connection. It is not possible to ensure the sealing performance of the filter element if connections are reversed.

Maintenance

⚠ Warning

- If the filter element becomes clogged, stop operation. After the internal pressure in the filter has reached atmospheric pressure, replace the filter element.

⚠ Caution

- Replace the filter element when the pressure drops approximately 0.02 MPa.
- During disassembly or reassembly, make sure the gaskets and the seals are not cut or damaged.
- To install the filter element in the case, verify the IN and OUT flow direction that are indicated on the filter element. If the direction is reversed, the filter element will not be properly installed on the cover.
- For maintenance purposes, provide ample space on the side of the cover so that the filter element can be removed.

Selection

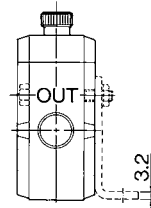
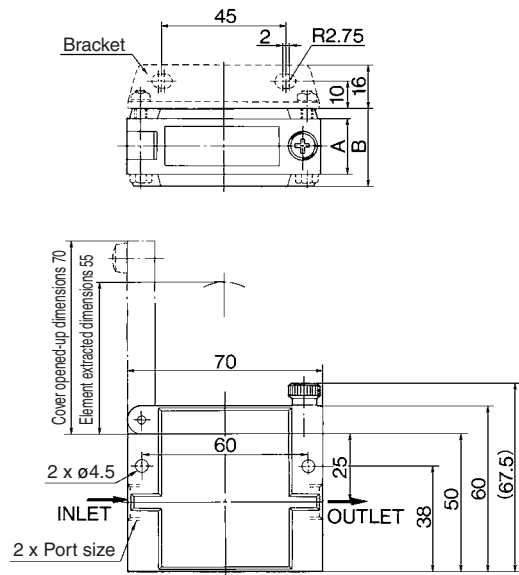
⚠ Warning

- Do not use it in a line that is kept pressurized because it could cause the body to break.



Dimensions: ZFA ¹⁰⁰/₂₀₀ - □ □ □

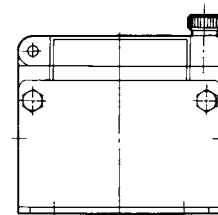
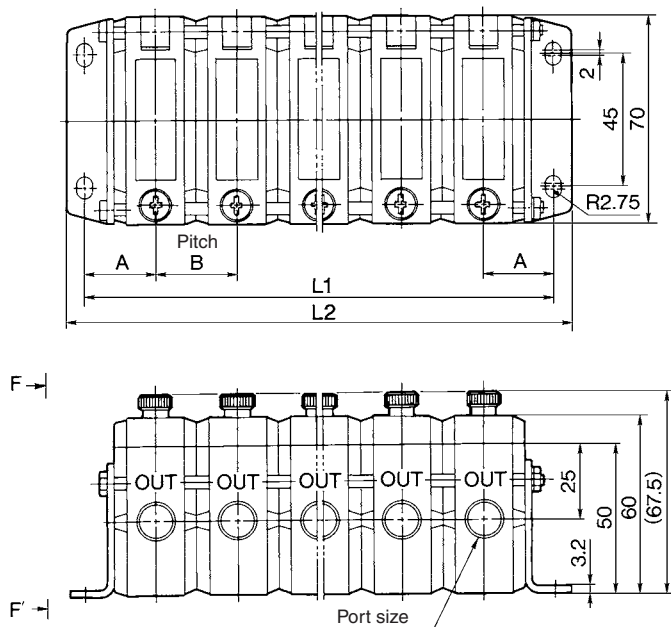
Single unit



Note) The above diagram is for ZFA200.
The bracket location shows L side.

Model	Symbol	Port size	A	B
ZFA100		1/8	—	18
ZFA200		1/4	20	28

Manifold



(Section F-F')

(The above diagram is for ZFA200)

Model	Symbol	Port size	A	B
ZFA100		1/8	19	18
ZFA200		1/4	24	28

Model	Symbol	Number of manifold stations									
		1	2	3	4	5	6	7	8	9	10
ZFA100	L1	38	56	74	92	110	128	148	164	182	200
	L2	50	68	86	104	122	140	158	176	194	212
ZFA200	L1	48	76	104	132	160	188	216	244	272	300
	L2	60	88	116	144	172	200	228	256	284	312

Air Suction Filter With One-touch Fittings Series ZFB

RoHS

Prevents vacuum equipment trouble due to airborne contaminants.

Unrestricted 360° piping tube mounting.

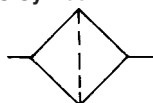
Easily replaced filter element

Piping tube can be connected or disconnected with one touch.

Compact and lightweight



JIS Symbol



Model

Tubing size	Model	Port size (Applicable tubing O.D.)	Recommended air flow (ℓ/min (ANR)) ⁽¹⁾	Mass (g)	Internal capacity (cm^3)
		IN side, OUT side			
Metric size	ZFB100-04	$\phi 4$	10	22	7
	ZFB100-06	$\phi 6$	20	22	7
	ZFB200-06	$\phi 6$	30	30	12
	ZFB200-08	$\phi 8$	50	30	12
	ZFB300-08	$\phi 8$	75	39	16
	ZFB300-10	$\phi 10$	75	39	16
Inch size ⁽²⁾	ZFB101-05	$\phi 3/16"$	20	22	7
	ZFB101-07	$\phi 1/4"$	20	22	7
	ZFB201-07	$\phi 1/4"$	30	30	12
	ZFB301-11	$\phi 3/8"$	75	40	16
	ZFB401-13	$\phi 1/2"$	100	62	19



Note 1) Flow rate is less than 0.003 MPa of the initial pressure drop.

Note 2) Will be manufactured upon receipt of order.

Note 3) Avoid use under pressurization.

Specifications

Fluid ^{Note 1)}	Air, Nitrogen
Operating pressure ^{Note 2)}	-100 to 0 kPa
Withstand pressure ^{Note 2)}	0.5 MPa
Operating and ambient temperature range	0 to 60°C (No freezing)
Nominal filtration	30 μm
Element differential pressure resistance	0.15 MPa
Applicable tubing material ^{Note 3)}	Nylon/Soft Nylon/Polyurethane



Note 1) Do not use the product in an atmosphere and place where there is direct contact with chemicals. It may cause damage to the body. (Alcohol, acetone, etc. also cause damage, so be sure for the product not to be close to them.)

Note 2) Do not use it in a line that is kept pressurized because it could cause the body to break.

Note 3) Refer to page 1110 for applicable tubing model.

How to Order

ZFB 100 - 04

**Air suction filter
with One-touch fittings**

Basic type

Tubing size	Symbol	Flow (ℓ/min (ANR))
Metric size	100	20
(Release button: Blue)	200	50
	300	75
Inch size	101	20
(Release button: Red)	201	30
	301	60
	401	100

IN/OUT applicable tubing O.D.

Size	Symbol	Tubing size	Applicable model
Metric size	04	$\phi 4$	ZFB100
	06	$\phi 6$	ZFB100 ZFB200
	08	$\phi 8$	ZFB200 ZFB300
	10	$\phi 10$	ZFB300
Inch size	05	$\phi 3/16"$	ZFB101
	07	$\phi 1/4"$	ZFB101 ZFB201
	11	$\phi 3/8"$	ZFB301
	13	$\phi 1/2"$	ZFB401

Principal Parts Material

Description	Material
Body	Polyester
Clear cover	Special transparent nylon*
Universal joint	Polyester
Plug	Brass (Electroless nickel plated)
Element	PVF
O-ring, Seal	NBR

* Wiping with alcohol, etc., may cause damage.

Element Part No.

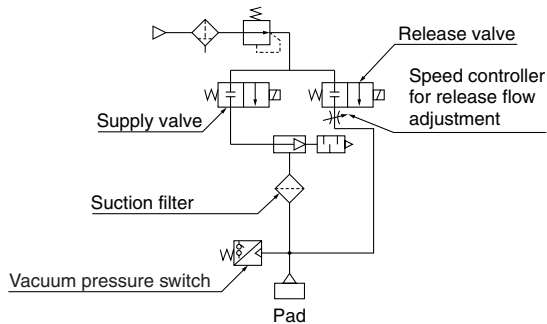
Part no.	Applicable filter model	Element size (mm)	Kit components Spare element	O-ring for cover
I-34S-A	ZFB100 ZFB101	$\phi 10 \times \phi 6 \times \text{L}33$	10 pcs.	10 pcs.
I-35S-A	ZFB200 ZFB201	$\phi 12 \times \phi 8 \times \text{L}42$	10 pcs.	10 pcs.
I-36S-A	ZFB300 ZFB301	$\phi 14 \times \phi 10 \times \text{L}45$	10 pcs.	10 pcs.
I-39S-A	ZFB401	$\phi 16 \times \phi 14 \times \text{L}60$	10 pcs.	10 pcs.



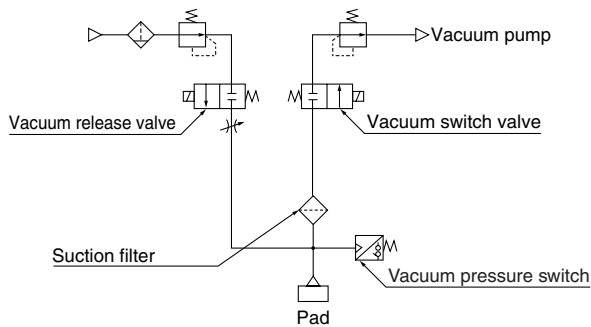
Note) Spare elements and O-rings for the cover are sold in sets of 10 pieces each.

Application Example

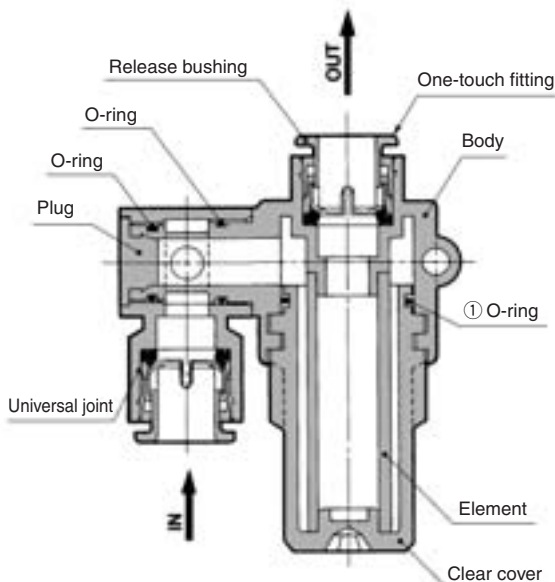
Application to ejector system



Application to vacuum pump system



Construction



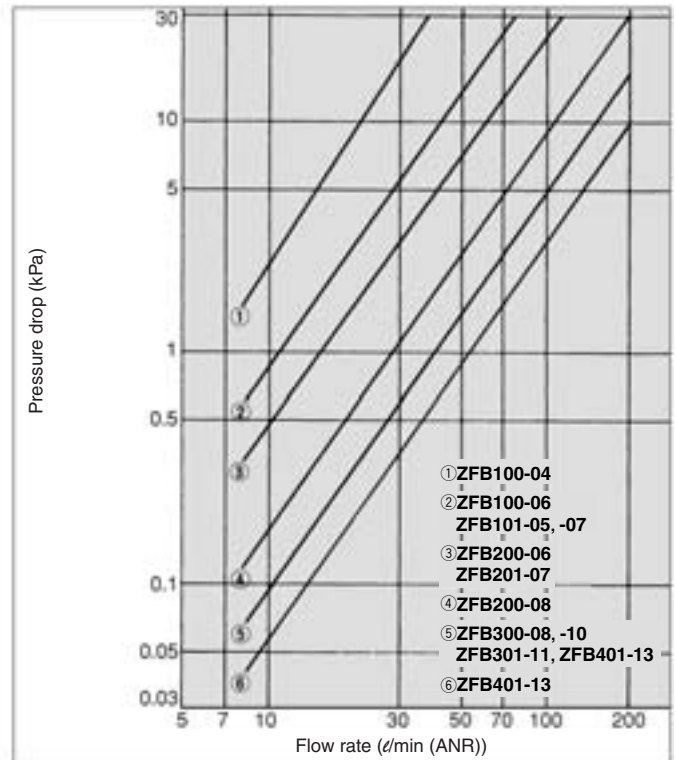
Replacement Parts

No.	Description	Part no.			
		ZFB100, 101	ZFB200, 201	ZFB300, 301	ZFB401
1	O-ring for clear cover	S11.2	S12.5	S16	S18

* O-ring is a set with spare element (I-□□S-A).

Flow Characteristics

Fluid ——— Air
Temperature ——— Room temperature
Pressure ——— Downstream side atmospheric release (pressurized)



⚠ Precautions

Be sure to read before handling.
Refer to front matters 38 and 39 for Safety Instructions and pages 844 to 846 for Vacuum Equipment Precautions.

Mounting

⚠ Warning

- To connect the tubing to the IN and OUT one-touch fitting, observe the precautions that are provided for using one-touch fittings.

⚠ Caution

- Verify the "▷" marks for IN and OUT that are indicated on the body to ensure a proper connection. It is not possible to ensure the sealing performance of the filter element if the connections are reversed.

Maintenance

⚠ Warning

- If the filter element becomes clogged, stop operation. After the internal pressure in the filter has reached atmospheric pressure, clean or replace the filter element.

⚠ Caution

- Replace the filter element when the pressure drops approximately 0.02 MPa.
- During disassembly or reassembly, make sure that the O-ring is not cut or damaged.

Selection

⚠ Warning

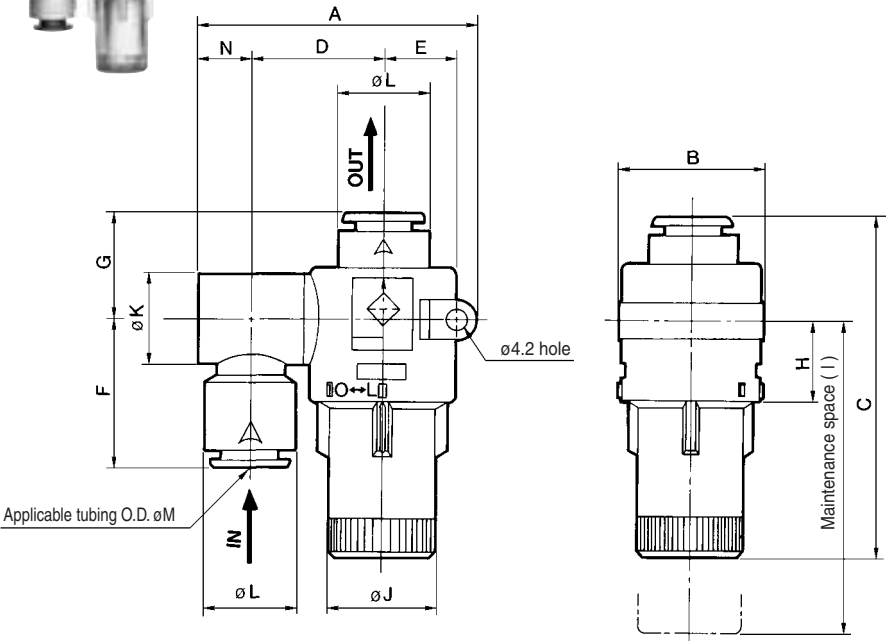
- Do not use it in a line that is kept pressurized because it could cause the body to break.

ZA
ZX
ZR
ZM
ZMA
ZQ
ZH
ZU
ZL
ZY□
ZF□
ZP□
SP
ZCUK
AMJ
AMV
AEP
HEP
Related Equipment

Series ZFB



Dimensions

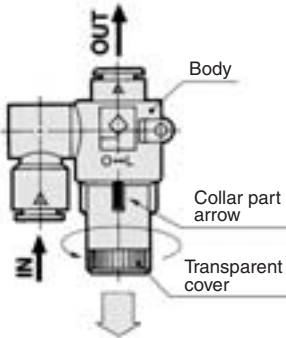


Size	Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Metric size	ZFB100-04	48	26	53	22.5	12.5	24	17.5	15	50	15.5	14.4	12.8	4	8.5
	ZFB100-06													6	
	ZFB200-06	52	28	65	24.5	13.5	27	19.5	16	61	17.5	16.6	15.2	6	9.5
	ZFB200-08													8	
	ZFB300-08	57	30	69.5	27	14.5	29.5	21	17	65	21.5	18	18.5	8	11
	ZFB300-10													10	
Inch size	ZFB101-05	48	26	53	22.5	12.5	24	17.5	15	50	15.5	14.4	12.8	3/16"	8.5
	ZFB101-07			54			24.2	17.7						1/4"	
	ZFB201-07	52	28	65	24.5	13.5	27.2	19.7	16	61	17.5	16.6	15.2	1/4"	9.5
	ZFB301-11	57	30	70	27	14.5	30.2	21.7	17	65	21.5	18	18.5	3/8"	11
	ZFB401-13	64.5	34	87.5	30.5	16.5	34	24	21.5	81	25.6	23	21.7	1/2"	13.5

Element Replacement

1. Stop the operation and reduce the internal pressure of the filter to atmospheric pressure.
2. Turn the transparent cover in counterclockwise direction and position the arrowhead of the collar in the "L" (LOCK) side to the protruding portion in the "O" (OPEN) side.
3. Pull the transparent cover downward to take out the element. Eliminate any dust in the transparent cover by blowing air. (Make sure there is no damage of the O-ring.)
4. Insert a new element into the body.
5. Set the arrowhead on the collar of the transparent cover to the protruding portion on the "O" side, push the transparent cover into the body and set the arrowhead from the protruding portion on the "O" side to the protruding portion on the "L" side to make the LOCK complete.
6. Restart operation.

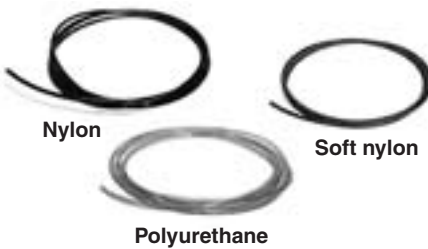
Element Replacement Procedure



Related Products/Tubing: Nylon, Soft Nylon, Polyurethane

Use the kind of tubing indicated at the right for suction filter with one-touch fitting (Series ZFB).

Refer to "Best Pneumatics No. 6" for details on valves.



How to Order Tubing

T

0604

B

-

20

Tubing material

Metric size	Symbol	Material
	T	Nylon
	TS	Soft nylon
	TU	Polyurethane

Inch size	Symbol	Material
	TI	Nylon
	TIS	Soft nylon
	TIU	Polyurethane

Length per roll (m)

Symbol	Length
20	20 m (Standard)

Tubing size

Metric size	Symbol	Size	O.D.	Bore size
	0425	ø4		ø2.5
	0604	ø6		ø4
	0805	ø8		ø5
	0806	ø8		ø6
	1065	ø10		ø6.5
	1075	ø10		ø7.5

Inch size	Symbol	Size	O.D.	Bore size
	A05	3/16"	4.76	3.48
	A07	1/4"	6.35	4.57
	A11	3/8"	9.53	6.99
	A13	1/2"	12.7	9.56
	B05	3/16"	4.76	3.18
	B07	1/4"	6.35	4.23
	B11	3/8"	9.53	6.35
	B13	1/2"	12.7	8.46

Color

Metric size	Symbol	Color
	B	Black
	W	White
	R	Red
	BU	Blue
	Y	Yellow
	G	Green
	C	Clear

Inch size	Symbol	Color
	B	Black
	BU	Blue
	W	White

Note) Polyurethane only.
For polyurethane tubes, 22 colors other than the above ones are available.

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

RoHS

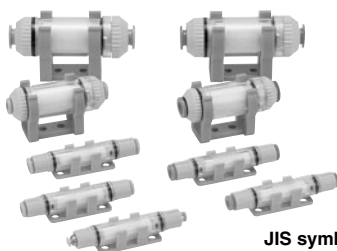
In-line type air suction filter is used to prevent vacuum equipment trouble from occurring due to dust in the air

IN/OUT straight piping

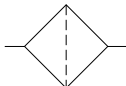
Easy installation and removal with one-touch fittings

Light and compact molded resin parts

Cartridge type allows element replacement



JIS symbol



Made to Order
(Refer to page 1115 for details.)

Model

Model	Port size (Applicable tubing O.D.)		Recommended flow rate ^{Note 1)} (ℓ/min (ANR))	Mass (g)	Internal capacity (cm^3)
	IN side	OUT side			
Metric size	ZFC050-02	$\phi 2$	2	4.9	1.7
	ZFC050-23	$\phi 3.2$	7	4.3	1.7
	ZFC050-04	$\phi 4$	10	11.5	4.5
	ZFC100-04	$\phi 4$	10	21.5	6
	ZFC100-06	$\phi 6$	20	4.3	1.7
	ZFC200-06	$\phi 6$	30	11.5	4.5
	ZFC200-08	$\phi 8$	50	21.5	6
Inch size	ZFC051-01	$\phi 1/8"$	7	4.3	1.7
	ZFC051-03	$\phi 5/32"$	10	11.5	4.5
	ZFC101-03	$\phi 5/32"$	10	21.5	6
	ZFC101-07	$\phi 1/4"$	20	4.3	1.7
	ZFC201-07	$\phi 1/4"$	30	11.5	4.5
	ZFC201-09	$\phi 5/16"$	50	21.5	6

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

Specifications

Fluid ^{Note 1)}	Air, Nitrogen
Operating pressure	-100 to 0 kPa
Vacuum release pressure ^{Note 2)}	Max. 0.5 MPa (Unable to hold when pressurized)
Operating and ambient temperature range	0 to 60°C (No freezing)
Filtration	10 μm (Filtration efficiency 95%)
Element differential pressure resistance	[ZFC10□, 20□] 0.15 MPa [ZFC05□] 0.10 MPa
Applicable tubing material ^{Note 3)}	Nylon, Soft nylon, Polyurethane, Soft polyurethane

Note 1) Do not use in atmospheres of chemicals, or where there is direct contact with it since the body may be damaged. (Alcohol, acetone, etc. may cause damage to the product.)

Note 2) Do not use in a line where a pressurized condition is maintained since the body may be damaged.

Note 3) Polyurethane is only applicable for the ZFC050-02.

How to Order

Metric size
(Release button: Light gray)

Metric size ZFC **05** **0** - **02** **B**

Inch size ZFC **05** **1** - **01** **B**

Body type

Symbol	Flow rate (ℓ/min (ANR))	Filtration area (mm^2)
05	10	470
10	20	750
20	50	1255

Inch size
(Release button: Orange)

Applicable tubing size

Metric size

Symbol	Bore size	Applicable model		
		ZFC05	ZFC10	ZFC20
02	$\phi 2$	●	—	—
23	$\phi 3.2$	●	—	—
04	$\phi 4$	●	●	—
06	$\phi 6$	—	●	●
08	$\phi 8$	—	—	●

Inch size

Symbol	Bore size	Applicable model		
		ZFC05	ZFC10	ZFC20
01	$\phi 1/8"$	●	—	—
03	$\phi 5/32"$	●	●	—
07	$\phi 1/4"$	—	●	●
09	$\phi 5/16"$	—	—	●

Made to Order
X17 Metal case
Refer to page 1115 for details.

Option (With/Without bracket)

Symbol	Option
Nil	None (Without bracket)
B	With bracket

Replacement Element Part No.

Part no.	Applicable filter model	Element size (mm)	Set description	
			Spare element	O-ring for cover
I-68S-A	ZFC05	$\phi 6 \times \phi 4 \times \text{L25}$	10 pcs.	—
I-62S-A	ZFC10	$\phi 12 \times \phi 8 \times \text{L20}$	10 pcs.	10 pcs.
I-63S-A	ZFC20	$\phi 16 \times \phi 12 \times \text{L25}$	10 pcs.	10 pcs.

Note) Spare elements and O-rings for the cover (Applicable filter: ZFC10, 20) are sold in sets of 10 pieces each.

Principal Parts Material

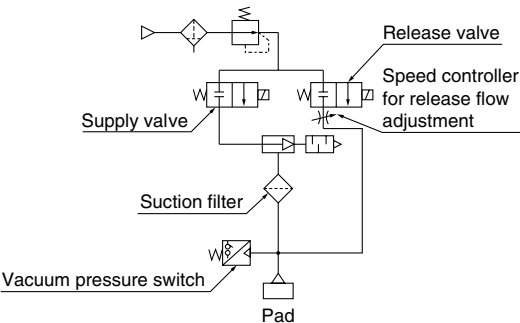
Description	Material
Case	Special clear nylon*
Cover	PBT
Element	PVF
O-ring, Seal	NBR

*Do not wipe with alcohol, etc.
It may cause damage to the parts.

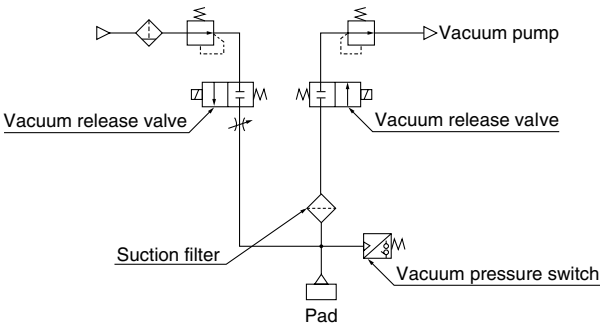
Application Example

Fields: Semiconductor and electrical, automobile assembly, food and medical equipment, and various types of manufacturing and assembly equipment
Machines: 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

Application to ejector system

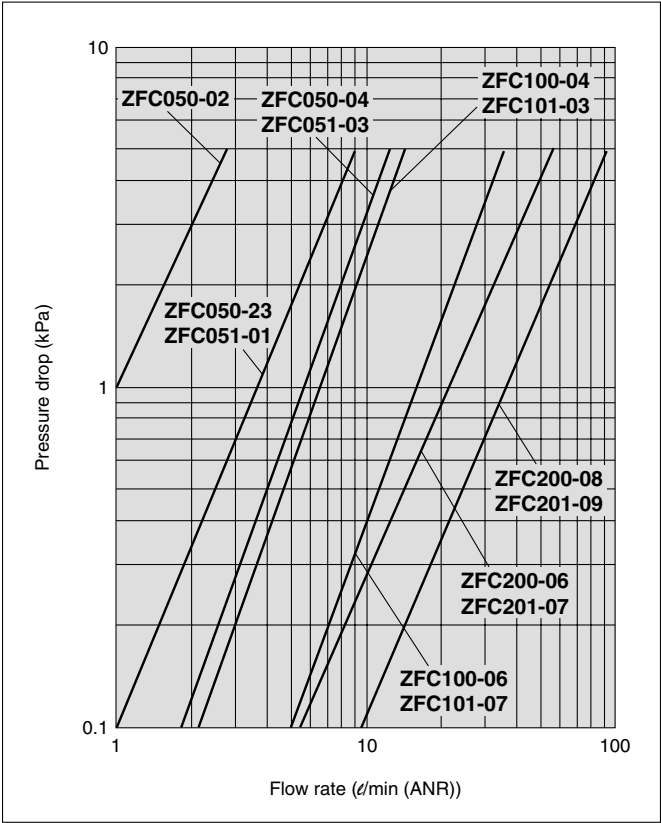


Application to vacuum pump system



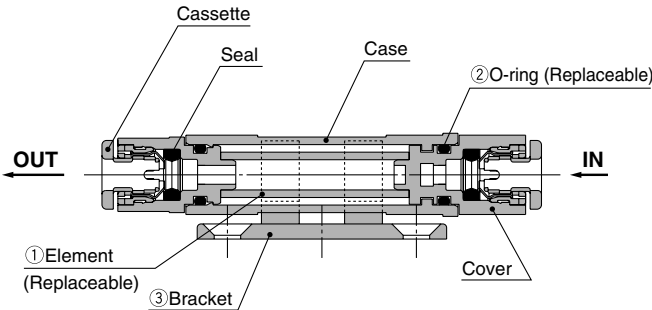
Flow Characteristics (Piping tube: Metric size, Inch size)

Fluid: Air
Temperature: Room temperature
Measured pressure: Downstream release to atmosphere (pressurized)

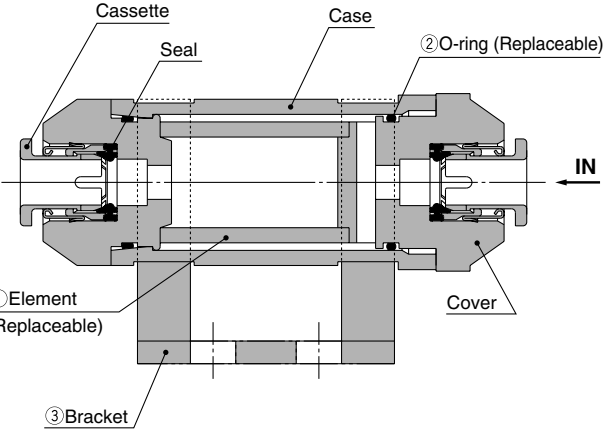


Construction

ZFC05



ZFC10, 20

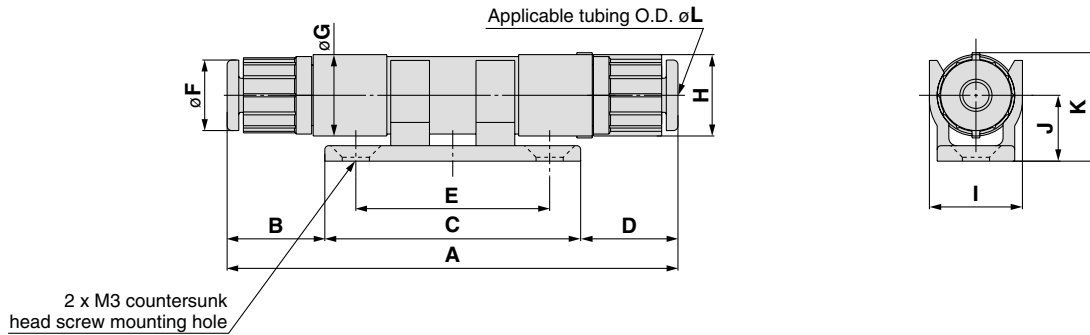


Replacement Parts

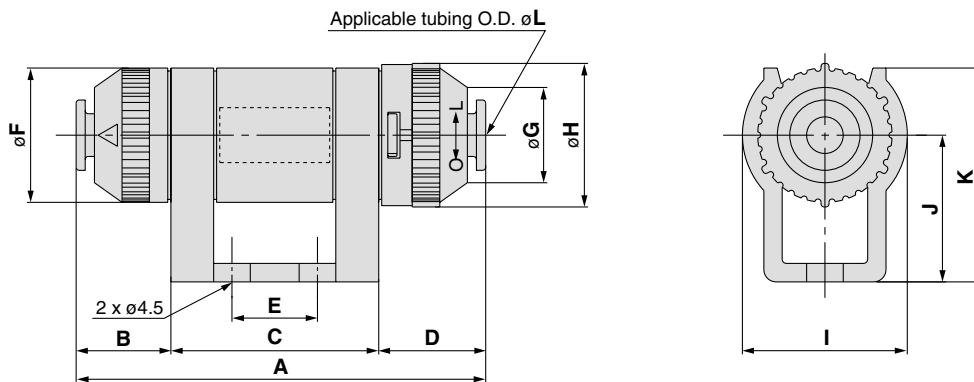
No.	Description	Part no.		
		ZFC05	ZFC10	ZFC20
1	Element	Refer to the replacement element part number on page 1111.		
2	O-ring			
3	Bracket	BP-25S	BP-16S	BP-17S

Dimensions

ZFC05



ZFC10, 20



Model	A	B	C	D	E	F	G	H	I	J	K	L
ZFC050-02	58.5	12.75		12.75								2
ZFC050-23												3.2
ZFC050-04	58	12.5	33	12.5	25	10	10.5	10.5	12	8.5	13.75	4
ZFC051-01												1/8"
ZFC051-03												5/32"
ZFC100-04												4
ZFC100-06	53.2	9.1	30	14.1	10	18	11.6	19.5	23	20	29	6
ZFC101-03												5/32"
ZFC101-07												1/4"
ZFC200-06												6
ZFC200-08	67	15.5	34	17.5	14	22	15.6	23.1	27	24	35	8
ZFC201-07												1/4"
ZFC201-09												5/16"

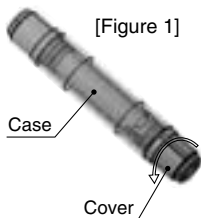
ZA
 ZX
 ZR
 ZM
 ZMA
 ZQ
 ZH
 ZU
 ZL
 ZY□
 ZF□
 ZP□
 SP
 ZCUK
 AMJ
 AMV
 AEP
 HEP

Related Equipment

Element Replacement

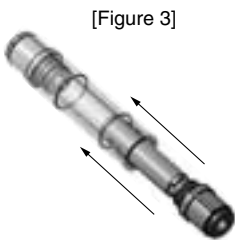
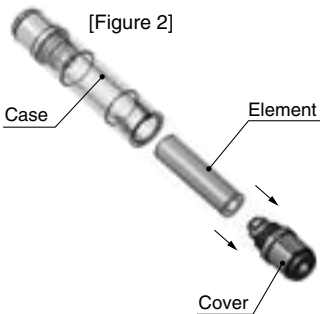
Element replacement procedure

- 1. Stop operation and reduce the filter's internal pressure to atmosphere.
- 2. Rotate the cover counterclockwise ("O" on the cover ⇔ L marking). Refer to Figure 1.



- 3. Pull the cover 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.)

- 4. Install a new element on cover and insert it into the case. Refer to Figure 2 and 3.

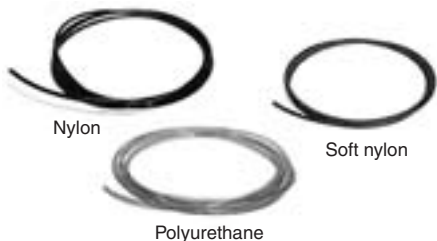


- 5. Adjust the protrusion on the cover and the slit on the case so that they match up, then push the cover into the end of the case. Next, confirm that the cover is locked by attempting to rotate it clockwise ("O" on the cover ⇔ L marking).
- 6. Restart operation.
[Figure: ZFC05□. The procedures for the ZFC10□, 20□ are alike.]

Related Products/Tubing: Nylon, Soft Nylon, Polyurethane

Use the kind of tubing indicated at the right for suction filter with one-touch fitting (Series ZFC).

Refer to "Best Pneumatics No. 6" for details on valves.



How to Order Tubing

T

0604

B

-

20

Tubing material

Metric size	Symbol	Material
	T	Nylon
	TS	Soft nylon
	TU	Polyurethane

Inch size	Symbol	Material
	TI	Nylon
	TIS	Soft nylon
	TIU	Polyurethane

Length per roll (m)

Symbol	Length
20	20 m (Standard)

Color

Symbol	Color
B	Black
W	White
R	Red
BU	Blue
Y	Yellow
G	Green
C (Note)	Clear

Inch size	Symbol	Color
	B	Black
	BU	Blue
	W	White

Tubing size

Metric size	Symbol	Size		
		O.D.	Bore size	
	0425	ø4	ø2.5	
	0604	ø6	ø4	
	0805	ø8	ø5	
	0806	ø8	ø6	
	1065	ø10	ø6.5	
	1075	ø10	ø7.5	

Inch size	Symbol	Size		
		Size	O.D.	Bore size
	A05	3/16"	4.76	3.48
	A07	1/4"	6.35	4.57
	A11	3/8"	9.53	6.99
	A13	1/2"	12.7	9.56
	B05	3/16"	4.76	3.18
	B07	1/4"	6.35	4.23
	B11	3/8"	9.53	6.35
	B13	1/2"	12.7	8.46

Note)

Polyurethane only.

For polyurethane tubes, 22 colors other than the ones above are available.

1 Air Suction Filter with Metal Case



Max. operating pressure 0.5 MPa

For the standard type, the max. operating pressure is up to 0 kPa.

Case is made of metal (aluminum)

The standard-type case is made of nylon.

How to Order

ZFC 100 - 04 X17

In-line type air suction filter
with one-touch fittings

Air suction filter
with metal case

Type (Recommended flow rate)

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

IN/OUT applicable tubing O.D.

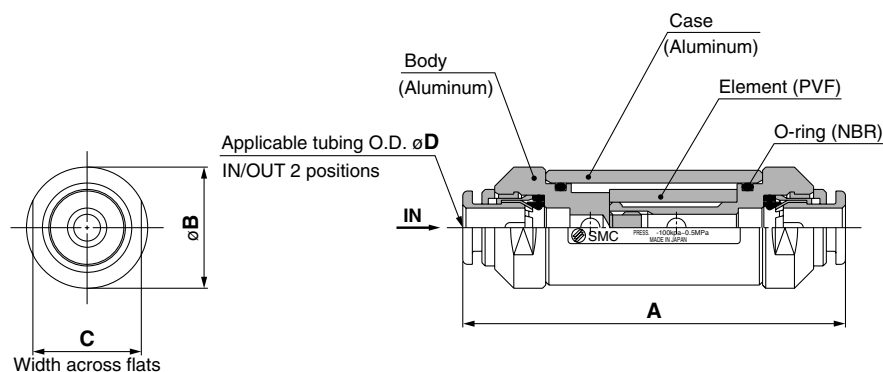
Symbol	Tubing size	Applicable model
04	$\phi 4$	ZFC100
06	$\phi 6$	ZFC100
		ZFC200
08	$\phi 8$	ZFC200

Specifications

Model	ZFC100-04X17	ZFC100-06X17	ZFC200-06X17	ZFC200-08X17
Connecting tube O.D. (IN/OUT sides)	$\phi 4$	$\phi 6$	$\phi 6$	$\phi 8$
Recommended flow rate ℓ/min (ANR) (Note)	10	20	30	50
Fluid	Air			
Operating pressure	-100 kPa to 0.5 MPa			
Withstand pressure	0.75 MPa			
Ambient operating fluid temperature	0 to 60°C (No freezing)			
Nominal filtration	10 μm			
Element differential pressure resistance	0.15 MPa			
Element replacement differential pressure	0.02 MPa			
Applicable tubing material	Nylon, Soft nylon, Polyurethane, Soft polyurethane			

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

Construction/Dimensions



Dimensions

Model	A	B	C	D
ZFC100-04	60	19	17	4
ZFC100-06	60	19	17	6
ZFC200-06	68	23.5	21	6
ZFC200-08	68	23.5	21	8



Series ZFC

Specific Product Precautions

Be sure to read before handling.

Refer to front matters 38 and 39 for Safety Instructions and pages 844 to 846 for Vacuum Equipment Precautions.

Selection

Warning

1. Do not use in a line where a pressurized condition is maintained since 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. Connect the piping in accordance with the flow direction marked on the case. 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 20 kPa.
2. During disassembly and assembly, confirm that there are no scratches or damage, etc., on the O-ring.
3. Before using, confirm there is no leakage after replacing elements.

Operating Environment

Warning

1. Do not use tubings in atmospheres of corrosive gases, chemicals, salt water, water steam, or where there is direct contact with any of these.
2. Do not wipe the product with alcohol, acetone, etc. or use it in an atmosphere and place where these elements are likely to adhere to the equipment.

Handling of One-touch Fittings

Caution

1. Tubing attachment/detachment for one-touch fittings

1) Installing of 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) The outside diameter of the polyurethane tubing swells when internal pressure is applied to it. Therefore, it may not be possible that the tubing can be re-inserted into the one-touch fitting. Confirm the tubing outside diameter, and when the accuracy of the outside diameter is +0.15 or larger, re-insert the tubing into the one-touch fitting without cutting it. When the tubing is re-inserted into the one-touch fitting, confirm that the tubing goes through the release button smoothly.

(3) Grasp the tubing and push it in slowly, inserting it securely all the way into the fitting.

(4) 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

(1) Push in the release button sufficiently. When doing this, push the collar evenly.

(2) Pull out the tubing while holding down the release button so that it does not come out. If the release button 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 it is, this can cause trouble such as air leakage or difficulty in removing the tubing.

2. Do not install the SMC's KQ one-touch fitting series with a metal rod into the ZFC05/10 series fittings. The metal rod will not be held and the fitting will shoot out.

Other Tube Brands

Caution

1. When tubing of brands other than SMC's are used, verify that the tubing O.D. satisfies the following accuracy;

1) Nylon tubing : Within ± 0.1 mm

2) Soft nylon tubing : Within ± 0.1 mm

3) Polyurethane tubing: Within +0.15 mm, within -0.2 mm

Do not use tubing which does not meet these outside diameter tolerances.

It may not be possible to connect them, or they may cause other trouble, such as air leakage or the tube pulling out after connection.

2. Tubing O.D: $\phi 2$

Other tube brands cannot be used. It may not be possible to connect them, or they may cause other trouble, such as air leakage or the tube pulling out after connection.