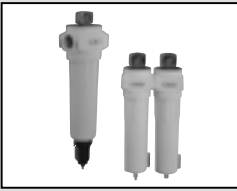


# Discontinue

Main line filter



## AF1000P / S / M / X Series

Appropriate for medium size pre-filter, oil removing, odor removing.  
Treating air flow rate: 3 to 17m<sup>3</sup>/min (ANR) (0.7MPa)

JIS symbol P



S,M



X



CAD DATA AVAILABLE.

### Specifications

Descriptions	AF1003 *-20	AF1004 *-25	AF1008 *-40	AF1012 *-40	AF1013 *-50	AF1017 *-50
Treating air flow rate m <sup>3</sup> /min(ANR)	3	4.5	8	12	13.2	17
Working fluid	Compressed air					
Working pressure range MPa	0.1 to 1.0					
Withstanding pressure MPa	1.5					
Port size G	3/4	1	1 1/2		2	
Product mass kg	2.4	2.9		9.1		12.9
Differential pressure indicator	Provided as standard (X series excluded)					
Drain separator	Integrated (X series excluded)					
Drain port diameter Rc	1/8 (X series excluded)					

Indicate series on \*.

Descriptions	P series	S series	M series	X series	
Ambient temperature range °C	5 to 60			5 to 30	
Filtration rating μm	3	0.3	0.01	Adsorption by activated charcoal	
Secondary side oil content density mg/m <sup>3</sup>	—	0.5	0.01	0.003	
Pressure drop	Initial MPa	0.005	0.007	0.01	0.007
	Regular MPa	0.01	0.014	0.02	—
	Element replacement MPa	0.035	0.035	0.035	—

Note 1. G is parallel female thread.

Note 2. Treating air flow rate is the atmospheric pressure conversion value where inlet pressure is 0.7MPa.

Note 3. ANR shows conditions where 20 °C atmospheric pressure and relative humidity 65%.

Note 4. Secondary side oil content density is the value where inlet air temperature is 21 °C.

### Specifications of indicator with differential pressure switch

Descriptions	M
Operating differential pressure	0.04 ±0.01MPa
Contact	1 pole a contact
Max. contact current	0.5A
Max. contact voltage	200VDC
Max. contact capacitance	10W
Max. contact resistance (including reed switch.)	300mΩ

### How to order



A Flow rate code

B Series

C Port size

D Option

Symbol	Descriptions
<b>A Flow rate code</b>	
003	3m <sup>3</sup> /min(ANR)
004	4.5m <sup>3</sup> /min(ANR)
008	8m <sup>3</sup> /min(ANR)
012	12m <sup>3</sup> /min(ANR)
013	13.2m <sup>3</sup> /min(ANR)
017	17m <sup>3</sup> /min(ANR)
<b>B Series</b>	
P	P series (pre-filter)
S	S series (oil removing filter)
M	M series (high performance oil removing filter)
X	X series (activated charcoal filter)
<b>C Port size</b>	
20	G3/4"
25	G1"
40	G1 1/2"
50	G2"
<b>D Option</b>	
M	Differential pressure switch

### Flow rate compensation coefficient

Pressure (MPa)	Compensation coefficient
0.1	0.38
0.2	0.53
0.3	0.65
0.4	0.76
0.5	0.85
0.6	0.93
0.7	1.0
0.8	1.07
0.9	1.13
1.0	1.18

If working pressure is other than 0.7MPa, multiply treated air flow rate by the above coefficient.

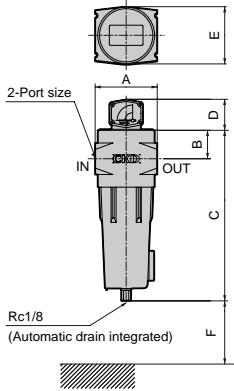
Not available for X series.

#### Dimensions

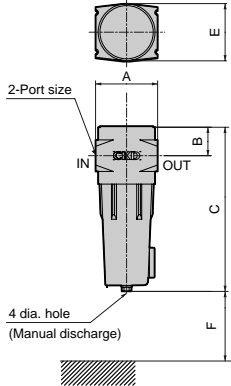


(File name: Page 174 or Ending 14)

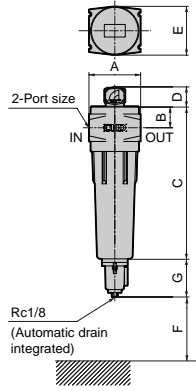
##### • AF1003 \* to AF1008 \*



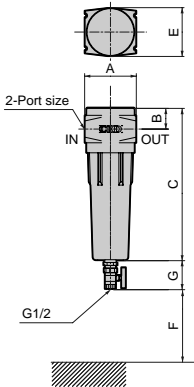
##### • AF1003X to AF1008X



##### • AF1012 \* to AF1017 \*



##### • AF1012X to AF1017X



Model no.	Port size	A	B	C	D	E	F	G
AF1003P/S/M-20	G3/4"	120	55	330	60	110	190	—
AF1003X-20	G3/4"	120	55	324	—	110	190	—
AF1004P/S/M-25	G1"	120	55	430	60	110	290	—
AF1004X-25	G1"	120	55	424	—	110	290	—
AF1008P/S/M-40	G1 1/2"	120	55	430	60	110	290	—
AF1008X-40	G1 1/2"	120	55	424	—	110	290	—
AF1012P/S/M-40	G1 1/2"	160	64	470	60	150	350	118
AF1012X-40	G1 1/2"	160	64	470	—	150	350	80
AF1013P/S/M-50	G2"	160	64	470	60	150	350	118
AF1013X-50	G2"	160	64	470	—	150	350	80
AF1017P/S/M-50	G2"	160	64	775	60	150	650	118
AF1017X-50	G2"	160	64	775	—	150	650	80

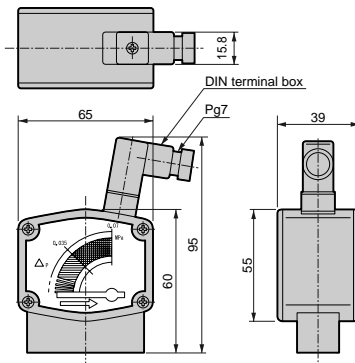
Differential pressure indicator is not attached to X series.  
F dimension shows maintenance space.

#### Dimensions: Indicator with differential pressure switch



(File name: Page 174 or Ending 14)

##### • Option: M



Refrigerating type dryer  
 Desiccant type dryer  
 High polymer membrane dryer  
 Air filter  
 Automatic drain other  
 F.R.L (Module)  
 F.R.L (Separate)  
 Small F.R.  
 Precise R.  
 Electro pneumatic R.  
 Auxiliary  
 Flow control valve  
 Silencer  
 Check valve / others  
 Joint / tube  
 Vacuum F.  
 Vacuum R.  
 Vacuum generator  
 Vacuum auxiliary / pad  
 Mechanical pressure SW  
 Electronic pressure SW  
 Electronic dif. pres. SW  
 Sealing / close contact conf. SW

Pressure SW for coolant  
 Flow sensor for air  
 Total air system

Water cooling refrigerator  
 Flow sensor for water

Main line unit  
 Medium size main line filter

## Configurations table (1)

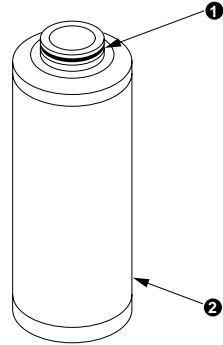
### Element kit

• Model no.

AF1003 P-ELEMENT-KIT



Flow rate code	m <sup>3</sup> /min (ANR)	Element type	
003	3	P	P series
004	4.5	S	S series
008	8	M	M series
012	12	X	X series
013	13.2		
017	17		

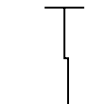


No.	Part name	Quantity
1	O ring	1
2	Element	1

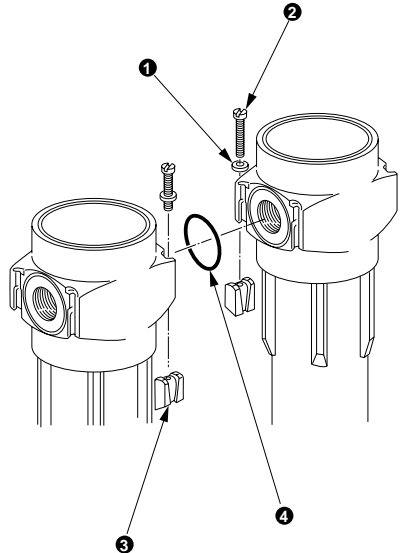
### Module kit

• Model no.

AF1003-MODULAR-KIT



Symbol	Applicable model
003	AF1003 to AF1008
012	AF1012 to AF1017

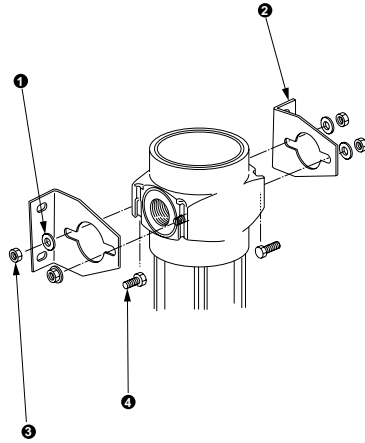


No.	Part name	Quantity
1	Washer	2
2	Bolt	2
3	Bracket	2
4	O ring	1

#### Bracket kit

• Model no.  
AF1003-BRACKET-KIT

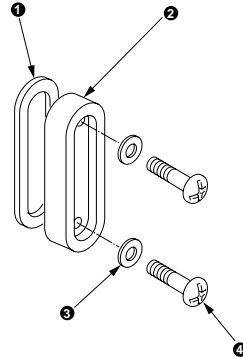
Symbol	Applicable model
003	AF1003 to AF1008
012	AF1012 to AF1017



No.	Part name	Quantity
1	Washer	4
2	Bracket	2
3	Nut	4
4	Bolt	4

#### Sight gauge kit

• Model no.  
AF1003-SIGHT-GAUGE-KIT



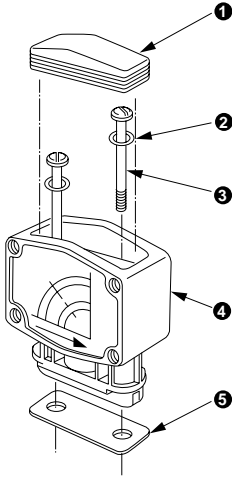
No.	Part name	Quantity
1	Packing seal	1
2	Gauging window	1
3	Washer	2
4	Bolt	2

Refrigerating type dryer  
 Desiccant type dryer  
 High polymer membrane dryer  
**Air filter**  
 Automatic drain other  
 F.R.L (Module)  
 F.R.L (Separate)  
 Small F.R.  
 Precise R.  
 Electro pneumatic R.  
 Auxiliary  
 Flow control valve  
 Silencer  
 Check valve / others  
 Joint / tube  
 Vacuum F.  
 Vacuum R.  
 Vacuum generator  
 Vacuum auxiliary / pad  
 Mechanical pressure SW  
 Electronic pressure SW  
 Electronic dif. pres. SW  
 Steering / close contact conf. SW  
 Pressure SW for coolant  
 Flow sensor for air  
 Total air system  
 Water cooling refrigerator  
 Flow sensor for water  
**Main line unit**  
 Medium size main line filter

## Configurations table (2)

### Differential pressure indicator

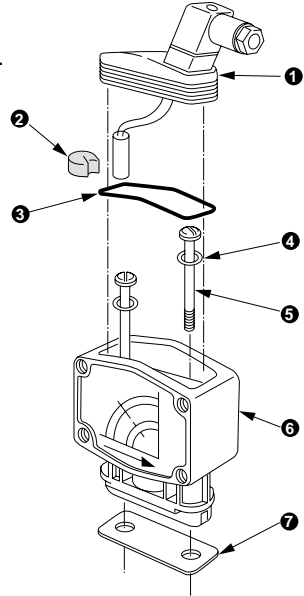
• Model no.  
GA6007



No.	Part name	Quantity
1	Cap	1
2	O ring	4
3	Bolt	2
4	Differential pressure indicator	1
5	Gasket	1

### Indicator with differential pressure switch

• Model no.  
GA6007S



No.	Part name	Quantity
1	Switch	1
2	Rubber bush	1
3	Packing seal	1
4	O ring	4
5	Bolt	2
6	Differential pressure indicator	1
7	Gasket	1

### Simple main line filter applicable circuit

Air compressor

P series

Refrigerating type air dryer

S series

**General dry air**

- Air tool
- Air drill / air screw driver
- Air grinder
- Labor saving device and components
- Pneumatic jigs and tools
- Air chuck / air vice
- Precision part cleaning air blow

JIS grade 2.5.3 and 2.6.3

Air compressor

P series

Refrigerating type air dryer

M series

**Oil free  
Dry clean air**

- Instrumentation
- Measurement
- Logic control
- Movable element / pure fluid element
- Luxury painting
- Precise industry

JIS grade 1.5.1 and 1.6.1

Air compressor

P series

Refrigerating type air dryer

M series

X series

**Odorless air**

- Food industry
- Pharmaceutical industry
- Stirring / transportation / dry / packing
- Air for brewing

JIS grade 1.5.1 and 1.6.1

Air compressor

P series

M series

Heatless Air dryer

S series

Final filter

**Ultra dry air**

- Drying computer room
- Drying furnace gas
- Ozone generator
- Drying high voltage generator insulation gas
- Drying high voltage breaker injection air
- Central control instrumentation

JIS grade 1.1.1 and 1.2.1

## P SERIES

Pre-filter

Removes sizes 3µm or larger

## S SERIES

Oil removing filter

Removes sizes 0.3µm or larger  
Secondary side oil concentration  
0.5 mg/m<sup>3</sup>

(at 21°C)

## M SERIES

High performance oil removing filter

Removes sizes 0.01µm or larger  
Secondary side oil concentration  
0.01 mg/m<sup>3</sup>

(at 21°C)

## X SERIES

Activated charcoal filter

Absorb particles with activated carbon  
Secondary side oil concentration  
0.003 mg/m<sup>3</sup>

(at 21°C)

### Compressed air quality grade JIS B 8392-1: 2000

Grade	Max. particle diameter (µm)	Min. pressure dew point (°C)	Max. oil content density (mg/m <sup>3</sup> )
1	0.1	-70	0.01
2	1	-40	0.1
3	5	-20	1.0
4	15	+3	5
5	40	+7	25
6	—	+10	—

For example, "Grade 1.2.1" shows  
 Solid particle      0.1µm  
 Pressure dew point   -40°C  
 Oil content density   0.01mg/m<sup>3</sup>

- Refrigerating type dryer
- Desiccant type dryer
- High polymer membrane dryer
- Air filter**
- Automatic drain other
- F.R.L (Module)
- F.R.L (Separate)
- Small F.R.
- Precise R.
- Electro pneumatic R.
- Auxiliary
- Flow control valve
- Silencer
- Check valve / others
- Joint / tube
- Vacuum F.
- Vacuum R.
- Vacuum generator
- Vacuum auxiliary / pad
- Mechanical pressure SW
- Electronic pressure SW
- Electronic dif. pres. SW
- Sealing / close contact conf. SW

- Pressure SW for coolant
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- Total air system

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- Flow sensor for water

Main line unit  
Medium size main line filter