

Large main line filter

AF3000 (popular type)

■ Components for air preparation and pressure adjustment / main line unit / air filter

Overview

Simple system configuration is realized due to unified design of filter vessel to achieve easy layout design.

Features

- (1) Incorporated element saving
Low pressure loss element is used to contribute to energy saving. Pressure loss is reduced by approx. 1/2 of conventional products.
- (2) Differential pressure gauge provided as standard
This enables easy service life management for element.
- (3) Stand provided as standard
Easy pipe design and plumbing.
- (4) Easy maintenance
Easy replacement of element by removing top of flange and rotating.
- (5) Wide variation
Max 16 to 256m³/min. Wide application with 4 types and 40 models.



C O N T E N T S

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● Oil removing filter (AF3000S)	190
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Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Main line filter

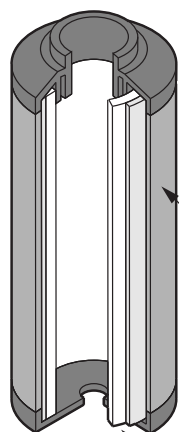
Energy saving and long life

40 models in 4 series are available to cover all applications from 16 to 256m³/min. (ANR).

P SERIES

Pre-filter

Removes sizes 3μm or larger
Water drip separate ratio 95%



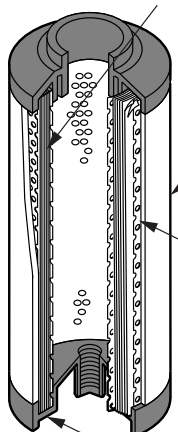
Entry of water into the secondary side is prevented by efficiently collecting water in the foam layer.

Long life and low pressure loss realized with the permanent element.

S SERIES

Oil removing filter

Removes sizes 0.3μm or larger
Secondary side oil concentration 0.5mg/m³ (21°C)



The life of the element is extended by removing solid particles at the pre-filter support layer.

Entry of oil into the secondary side is prevented by efficiently collecting oil in the foam layer.

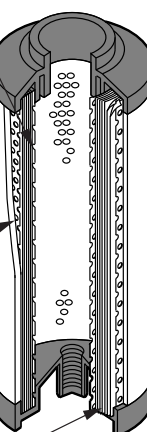
Stainless steel support cylinder provides strength against shock and high pressure differences.

Polysilicate micro fibers quickly separate oil and limit pressure loss.

M SERIES

High performance oil removing filter

Removes sizes 0.01μm or larger
Secondary side oil concentration 0.01mg/m³ (21°C)



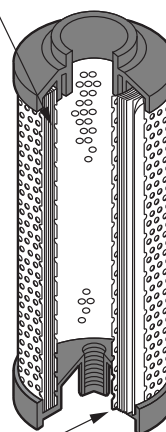
Cylindrically wound particle-activated carbon absorbs oil vapor molecules and odor molecules with a low pressure loss.

High density activated carbon extends element life.

X SERIES

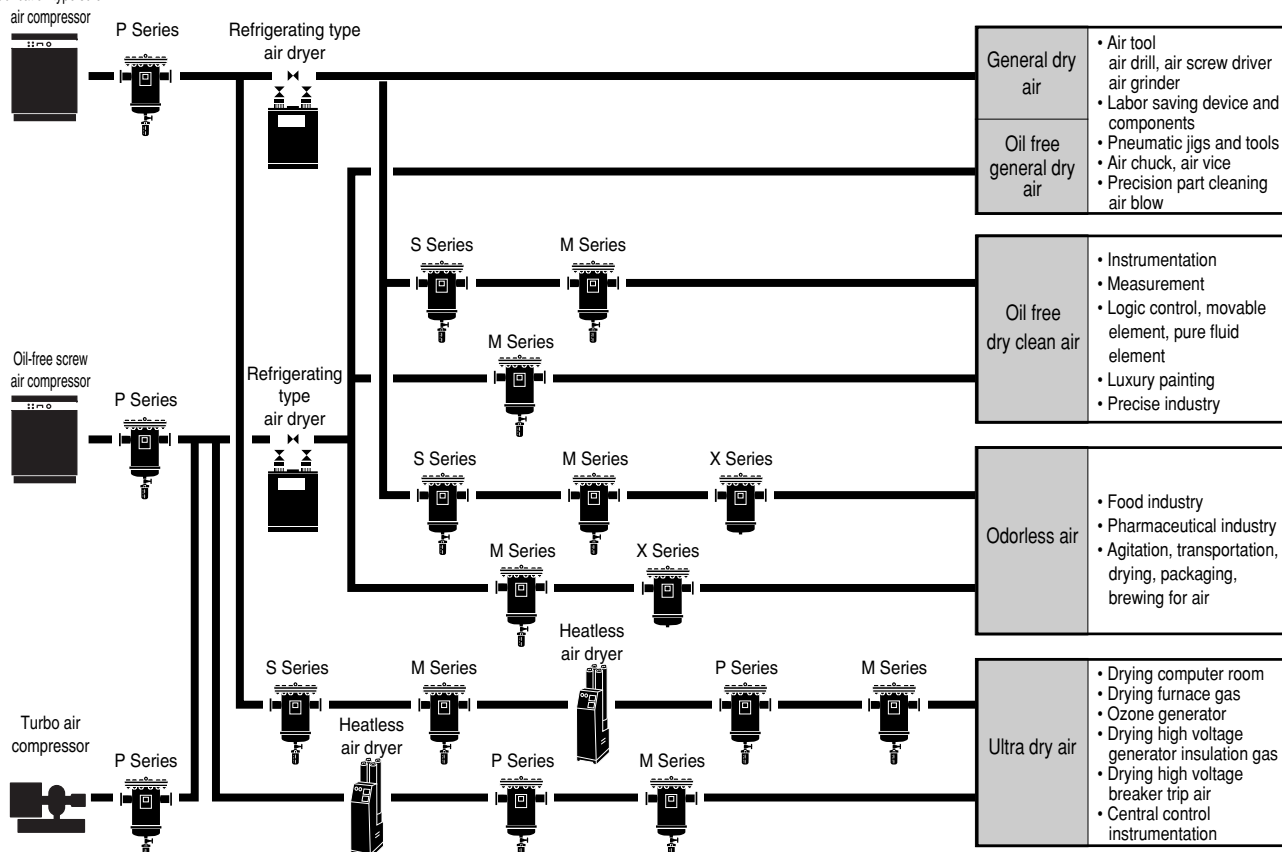
Activated charcoal filter

Absorb particles with activated carbon
Secondary side oil concentration 0.003mg/m³ (21°C)

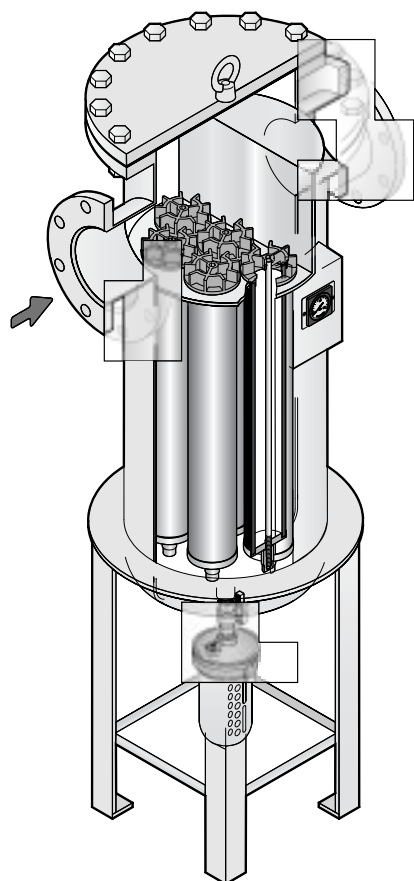


Main types of circuits using main line filter

Lubrication type screw



· The life of the M series is extended by installing the S Series.



1. Lower operating costs.

CKD's original chemical fiber structure permanent element has been adopted for the 3 μ m element. This structure does not clog easily and the element replacement interval is reduced. (P Series)

2. Contribute to energy saving.

The pressure loss has been reduced with the permanent element. (P Series)

3. Easily replace element.

A screw method is adopted for element installation, so the element can now be replaced easily. Stainless steel is used for the threads, it does not stick with rust.

4. Easily inspect every day.

Differential pressure gauge is mounted on the front, and make daily inspection is easier. This differential pressure gauge is used as a reference for the element replacement interval.

5. Easy design of equipment.

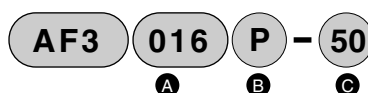
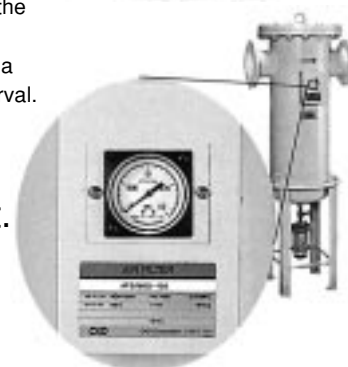
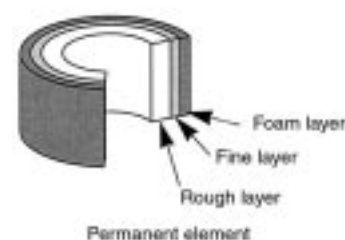
The dimensions and bore sizes are the same within the same series, so if the flow rate is the same, the system is easily designed and installed.

6. Easy installation.

Installation legs is prepared as a standard, eliminating the need for extra materials when installing. (Excluding AF3016)
The legs are removed if not required.

7. Wide variation.

40 types in four series have been prepared.
The optimum model is selected according to the quality of the air being passed.



A Flow rate code		B Element type		C Bore size	
016	16m ³ /min. (ANR)	P	P Series	50	Flange 2B
032	32m ³ /min. (ANR)	S	S Series	80	Flange 3B
048	48m ³ /min. (ANR)	M	M Series	100	Flange 4B
064	64m ³ /min. (ANR)	X	X Series	150	Flange 6B
080	80m ³ /min. (ANR)			200	Flange 8B
096	96m ³ /min. (ANR)				
128	128m ³ /min. (ANR)				
160	160m ³ /min. (ANR)				
192	192m ³ /min. (ANR)				
256	256m ³ /min. (ANR)				

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Large main line filter
Main line unit



Pneumatic components (main line filter)

Safety precautions

Always read this section before starting use.
Refer to Intro 67 for general precautions.

Large main line filter AF3000 Series

Design & Selection

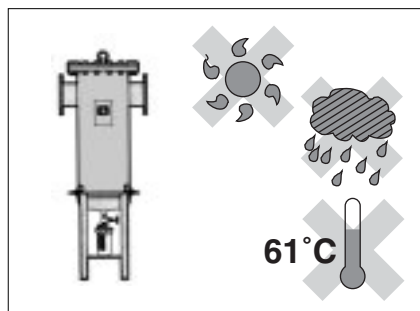
CAUTION

Working environment

- Avoid direct sunlight.
- The bowl is made of polycarbonate, so avoid using this product with following chemicals or in an atmosphere containing them.
- The window on the differential pressure gauge scale plate is made of nylon, so avoid using this product with following chemicals or in an atmosphere containing them.

Selection

- The inside of the AF3000 Series is coated to prevent rust. However, when using this series for applications susceptible to rust, the stainless steel housing "AF5000 Series (page 197)" should be used.



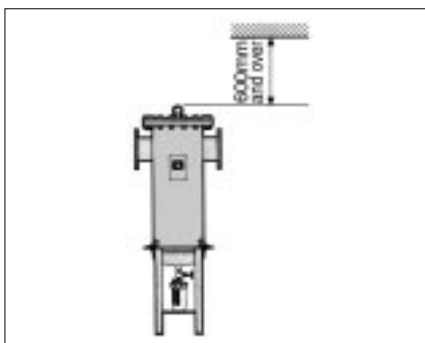
Types of chemicals	Category of chemicals	Main products of chemicals	General usage examples	Polycarbonate	Nylon
Inorganic compound	Acid	Hydrochloric acid, sulfuric acid, fluorine, phosphoric acid, chromic acid, etc.	Acid washing of metals, acidic degreasing solution, film treatment liquid	×	×
	Alkaline	Caustic soda, caustic potash, calcium hydroxide, aqueous ammonia, sodium carbonate, etc.	Alkaline degreasing of metals	×	○
	Inorganic salt	Sodium sulfide, nitric acid potash, potassium bichromate, sodium sulfide, etc.		×	○
Organic compound	Aromatic hydrocarbon	Benzene, toluene, xylene, ethyl benzen, styrene, etc.	Contained in paint thinner (benzene, toluene, xylene)	×	×
	Chlorinated aliphatic hydrocarbons	Methyl chloride, ethylene chloride, methylene chloride, acethylene chloride, chloroform, trichlene, perchlene, carbon tetrachloride	Organic solvent-based washing solution for metals (trichlene, perchlene, carbon tetrachloride, etc.)	×	○
	Chlorinated aromatic hydrocarbons	Chlorobenzene, dichlorobenzene, benzene hexachloride (B/H/C), etc.	Agricultural chemicals	×	○
	Petroleum components	Solvent, naphtha, gasoline		×	○
	Alcohol	Methyl alcohol, ethyl alcohol, cyclohexanol, benzyl alcohol	Anti-freeze	×	×
	Phenol	Carbolic acid, cresol, naphthol, etc.	Liquid disinfectant	×	×
	Ether	Methyl ether, methyl ethyl ether, ethyl ether	Brake fluid additive	×	○
	Ketone	Acetone, methyl ethyl keton, cyclohexanone, acetophenone, etc.		×	×
	Carboxylic acid	Formic acid, acetic acid, butyl acid, acrylic acid, oxalic acid, phthalic acid, etc.	Dyes; oxalic acid for aluminum processing, phthalic acid for paint base	×	×
	Phosphate ester	Dimethyl phthalate (DMP), diethyl phthalate (DEP), dibutyl phthalate (DBP), dioctyl phthalate (DOP)	Lubricant, synthetic hydraulic fluid, rust-preventing agent additive plasticizer for synthetic resin	×	○
	Oxyacid	Glycocholic acid, lactic acid, malic acid, citric acid, tartrate		×	×
	Nitro compound	Nitro methane, nitro ethane, nitro ethylene, nitro benzene, etc.		×	○
	Amine	Methylamine, diethylamine, ethylamine, aniline, acetoanilide, etc.	Brake fluid additive	×	×
	Nitrile	Acetonitrile, achrylonitrile, benznitrile, acetoilydyne nitrile, etc.	Raw material for nitril rubber	×	○

○: Available ×: Not available

Installation & Adjustment

⚠ CAUTION

- "Class 2 pressure vessel" according to "safety regulation of boiler and pressure vessel" in Occupational Safety Sanitation Laws is applied in model no. AF3032 to 3256.
- Model AF3032 to 3256 have a Class 2 pressure vessel withstand pressure proof certificate. This certificate must be kept in safe-keeping while using this product. (Applications to the Labor Standards Supervision Office are no longer required in Japan.)
- This product may be used only in Japan. (Consult with CKD for use overseas.)
- Install this product on a stable, flat surface not subject to vibration.
- Do not step onto this product.
- When piping, remove cutting oil and rust proof oil, etc.
- Secure enough space for maintenance and inspection.

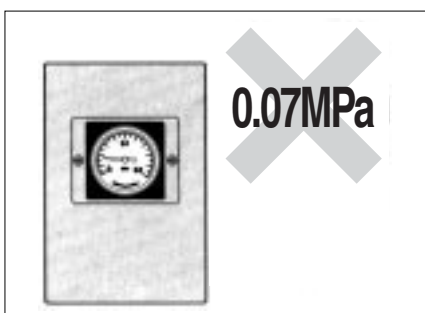


- The element and differential pressure indicator could be damaged if air is passed suddenly. When installing valves, etc., before and after this product, do not operate the valves suddenly. Do not install this filter in a system where a reverse flow could occur or where impact could be applied easily.
- Flash the drain piping before installing to remove any foreign matter from inside.
- Connect a tube pipe, etc., to the drain port.
- Drainage is discharged with pressure, so securely fix the piping at the drain port so that drainage does not splatter.
- If the drain port piping slopes upward, the minimum working pressure will increase by 0.01MPa per 1m." Make sure that the upward sloping piping does not exceed 5m.

During Use & Maintenance

⚠ CAUTION

- A differential pressure gauge is provided as a standard to judge the element life.
- Do not reverse flow the air. Do not pressurize suddenly. The differential pressure gauge or element could be damaged.
- The air filter life is spent when the pressure drops to 0.07MPa or after one year of use, whichever is



sooner.

Change the all elements when the life span is reached.

(X Series can not control service life with the differential pressure. Replace the filter after 1000 hours of use or when the deodorizing effect is lost.)

- Release the air in the bowl before inspecting the automatic drain for improper discharge, etc. Wash the drain unit with water, and then remove all moisture with an air gun.
- Use a household neutral detergent to wash the bowl, and then rinse with water.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
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Precise regulator
F.R.L. (Related products)
Clean F.R.
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Mechanical pressure SW
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Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Large main line filter
Main line unit



Main line filter

AF3000P Series

Appropriate for large pre-filter
Treating air flow rate: 16 to 256m³/min. (ANR)
JIS symbol

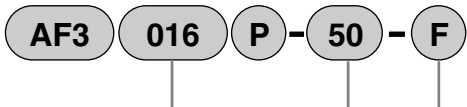


Specifications

Descriptions	AF3016 P-50	AF3032 P-80	AF3048 P-100	AF3064 P-100	AF3080 P-150	AF3096 P-150	AF3128 P-150	AF3160 P-200	AF3192 P-200	AF3256 P-200
Treating air flow rate m ³ /min. (ANR)	16	32	48	64	80	96	128	160	192	256
Working fluid	Compressed air									
Working pressure MPa	0.07 to 1.0									
Withstanding pressure MPa	1.5									
Ambient temperature range °C	5 to 60									
Filtration rating μm	3									
Pressure drop	Initial MPa	Within 0.005								
	Regular MPa	0.005 to 0.02								
	Element change MPa	0.07								
Element quantity	1	2	3	4	5	6	8	10	12	16
Port size (Note 1) flange	2B	3B	4B	4B	6B	6B	6B	8B	8B	8B
Product weight kg	45	95	98	130	160	190	250	260	300	350
Differential pressure gauge	Provided as standard (model no.: GA5102)									
Automatic drain	Provided as standard (model no.: 5100-4C)									

Note 1. Flange is 10K flange.
Note 2. Treating air flow rate is the atmospheric pressure conversion value where inlet pressure is 0.7MPa and initial pressure drop is 0.005MPa.
Note 3. ANR shows conditions where 20°C atmospheric pressure and relative humidity 65%.

How to order



A Flow rate code

Symbol	Descriptions
A Flow rate code	
016	16m ³ /min. (ANR)
032	32m ³ /min. (ANR)
048	48m ³ /min. (ANR)
064	64m ³ /min. (ANR)
080	80m ³ /min. (ANR)
096	96m ³ /min. (ANR)
128	128m ³ /min. (ANR)
160	160m ³ /min. (ANR)
192	192m ³ /min. (ANR)
256	256m ³ /min. (ANR)

B Port size

Refer to the left port size and flow code table.

C Option

Blank	None
F	Optional color
H	English documentation
H1	Export packing
K	Coupling flange attached
L	Anchor bolt, nut attached (Note 2)
L1	Stainless steel anchor bolt, nut attached (Note 2)
O	Outdoors specifications
X1	IN-OUT reverse direction (Note 1)
Y2	Product photo

Port size and flow code table

Flow rate code	016	032	048	064	080	096	128	160	192	256
50 Flange 2B	●									
80 Flange 3B		●								
100 Flange 4B			●	●						
150 Flange 6B					●	●	●			
200 Flange 8B								●	●	●

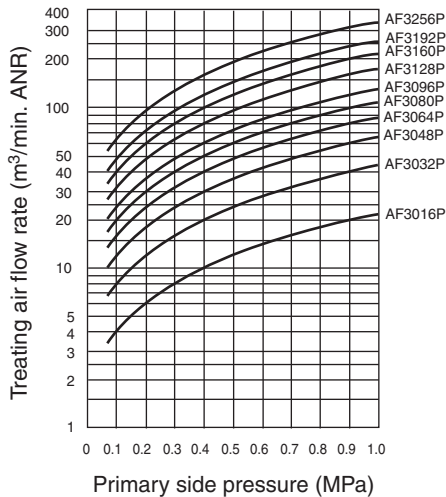
B Port size

C Option
Note 3

Note on model no. selection

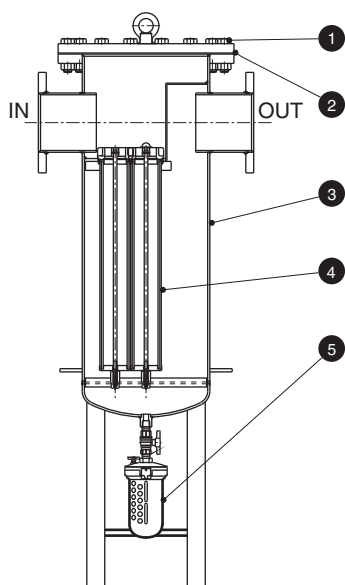
Note 1: Viewed from the front, a standard product has air inlet on the left port, while air outlet on the right port. For "X1", air inlet is provided on the right port, while air outlet is provided on the left port.
Note 2: Available for AF3032P to AF3256P.
Note 3: When ordering several options, indicate the required options in alphabetical order.

Flow characteristics



- Note on selection**
- Do not use some model no. found according to selecting conditions but placed lower than the point of intersection.
 - When the point of intersection found according to selecting conditions and flow characteristics curves are on the same line, the service life may be shortened, so select one size larger model no.
 - The unit's performance may not be attained if used at less than the selected pressure. Always select the model with the working pressure.

Internal structure and parts list



Parts list

*Repair parts

No.	Part name	Material
1	Upper flange	SS400
2	*Gasket	NBR
3	Body	SS400
4	*Element kit	PP, NBR, etc.
5	*Automatic drain	ZDC, PC, etc.

Automatic drain/stop valve are attached.

Repair parts model no.

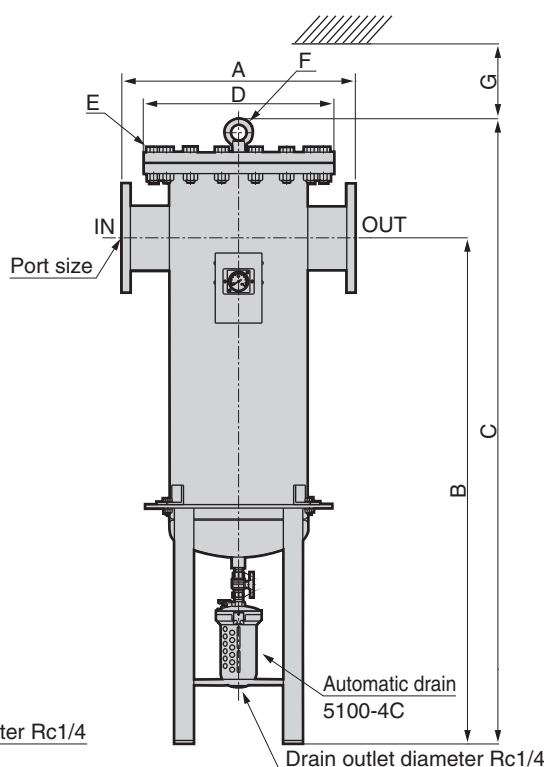
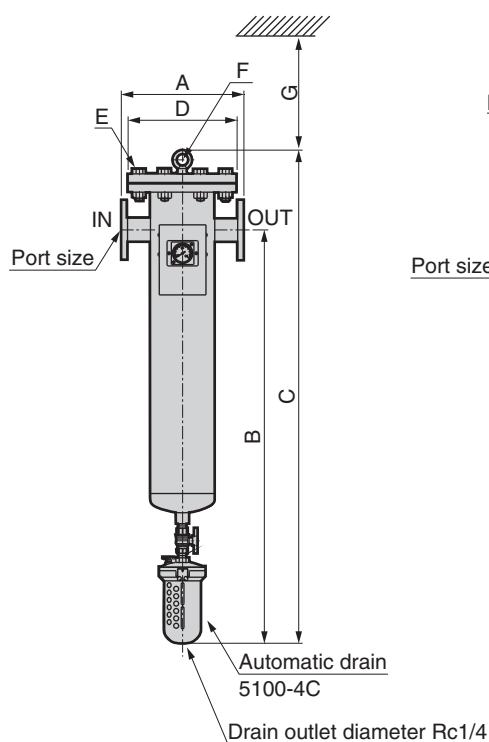
Flow rate code m ³ /min. (ANR)	② Gasket	④ Element kit	⑥ Automatic drain
16	AF3016P-GASKET	AF3016P-ELEMENT-KIT	5100-4C
32	AF3032P-GASKET	AF3032P-ELEMENT-KIT	
48	AF3048P-GASKET	AF3048P-ELEMENT-KIT	
64	AF3064P-GASKET	AF3064P-ELEMENT-KIT	
80	AF3080P-GASKET	AF3080P-ELEMENT-KIT	
96	AF3096P-GASKET	AF3096P-ELEMENT-KIT	
128	AF3128P-GASKET	AF3128P-ELEMENT-KIT	
160	AF3160P-GASKET	AF3160P-ELEMENT-KIT	
192	AF3192P-GASKET	AF3192P-ELEMENT-KIT	
256	AF3256P-GASKET	AF3256P-ELEMENT-KIT	

Dimensions

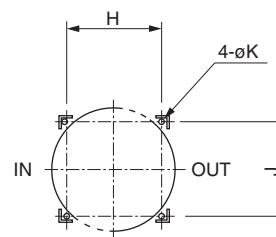


● AF3016P

● AF3032P to 3256P



● Stand anchor bolt hole dimension



Model no.	Port size	A	B	C	D	E	F	G
AF3016P-50	Flange 2B	315	1045	1250	280	8-M20 x 70	M12	600
AF3032P-80	Flange 3B	500	1255	1495	400	12-M22 x 80	M12	600
AF3048P-100	Flange 4B	500	1255	1495	400	12-M22 x 80	M12	600
AF3064P-100	Flange 4B	550	1270	1522	445	16-M22 x 80	M16	600
AF3080P-150	Flange 6B	600	1300	1606	490	16-M22 x 80	M20	600
AF3096P-150	Flange 6B	650	1320	1630	560	16-M24 x 90	M20	600
AF3128P-150	Flange 6B	700	1350	1693	620	20-M24 x 90	M20	600
AF3160P-200	Flange 8B	700	1350	1693	620	20-M24 x 90	M20	600
AF3192P-200	Flange 8B	750	1360	1709	675	20-M24 x 100	M20	600
AF3256P-200	Flange 8B	850	1400	1786	745	20-M30 x 110	M24	600

Model no.	H	J	K
AF3032P-80	210	210	φ15
AF3048P-100	210	210	φ15
AF3064P-100	250	250	φ15
AF3080P-150	280	280	φ15
AF3096P-150	320	320	φ15
AF3128P-150	350	350	φ15
AF3160P-200	350	350	φ15
AF3192P-200	400	400	φ15
AF3256P-200	450	450	φ15

Large main line filter
Main line unit



Micro alescerc

AF3000S Series

Protecting expensive pneumatic components

Flow rate range: 16 to 256m³/min. (ANR)

JIS symbol



Specifications

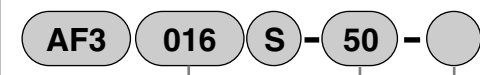
Descriptions	AF3016 S-50	AF3032 S-80	AF3048 S-100	AF3064 S-100	AF3080 S-150	AF3096 S-150	AF3128 S-150	AF3160 S-200	AF3192 S-200	AF3256 S-200
Treating air flow rate m ³ /min. (ANR)	16	32	48	64	80	96	128	160	192	256
Working fluid	Compressed air									
Working pressure MPa	0.07 to 1.0									
Withstanding pressure MPa	1.5									
Ambient temperature range °C	5 to 60									
Filtration rating μm	0.3									
Secondary side oil concentration mg/m ³	1.0 (inlet air 30°C)									
Pressure drop	Initial MPa	Within 0.01								
	Regular MPa	0.01 to 0.03								
	Element change MPa	0.07								
Element quantity	1	2	3	4	5	6	8	10	12	16
Port size (Note 1) flange	2B	3B	4B	4B	6B	6B	6B	8B	8B	8B
Product weight kg	45	95	98	130	160	190	250	260	300	350
Differential pressure gauge	Provided as standard (model no.: GA5102)									
Automatic drain	Provided as standard (model no.: 5100-4C)									

Note 1. Flange is 10K flange.

Note 2. Treating air flow rate is the atmospheric pressure conversion value where inlet pressure is 0.7MPa and initial pressure drop is 0.01MPa.

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

How to order



A Flow rate code

Symbol	Descriptions
A Flow rate code	
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160	160m ³ /min. (ANR)
192	192m ³ /min. (ANR)
256	256m ³ /min. (ANR)

B Port size

B Port size	
Refer to the left port size and flow code table.	

C Option

C Option	
Blank	None
F	Optional color
H	English documentation
H1	Export packing
K	Coupling flange attached
L	Anchor bolt, nut attached (Note 2)
L1	Stainless steel anchor bolt, nut attached (Note 2)
O	Outdoors specifications
X1	IN-OUT reverse direction (Note 1)
Y2	Product photo

Port size and flow code table

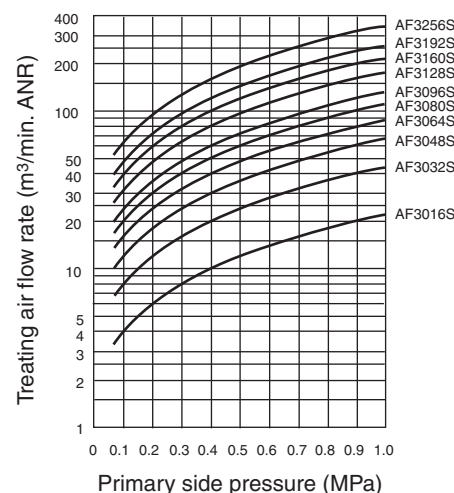
B Port size		016	032	048	064	080	096	128	160	192	256
50	Flange 2B	●									
80	Flange 3B		●								
100	Flange 4B			●	●						
150	Flange 6B					●	●	●			
200	Flange 8B								●	●	●

Note on model no. selection

Note 1: Viewed from the front, a standard product has air inlet on the left port, while air outlet on the right port. For "X1", air inlet is provided on the right port, while air outlet is provided on the left port.

Note 2: Available for AF3032S to AF3256S.

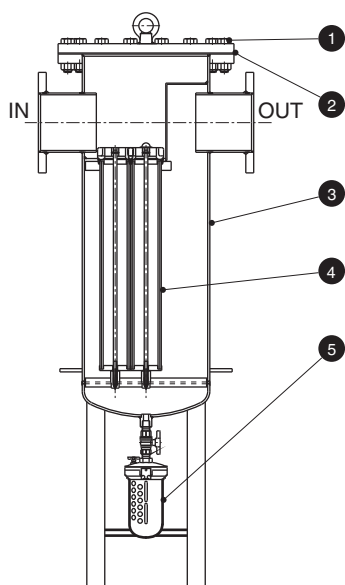
Flow characteristics



Note on selection

- Do not use some model no. found according to selecting conditions but placed lower than the point of intersection.
- When the point of intersection found according to selecting conditions and flow characteristics curves are on the same line, the service life may be shortened, so select one size larger model no.
- The oil removing ratio drops if the inlet air temperature is 30°C and over. Maintain the inlet air temperature 30°C or less.
- The unit's performance may not be attained if used at less than the selected pressure. Always select the model with the working pressure.

Internal structure and parts list



Parts list

*Repair parts

No.	Part name	Material
1	Upper flange	SS400
2	*Gasket	NBR
3	Body	SS400
4	*Element kit	Filter paper, NBR, etc.
5	*Automatic drain	ZDC, PC, etc.

Automatic drain/stop valve are attached.

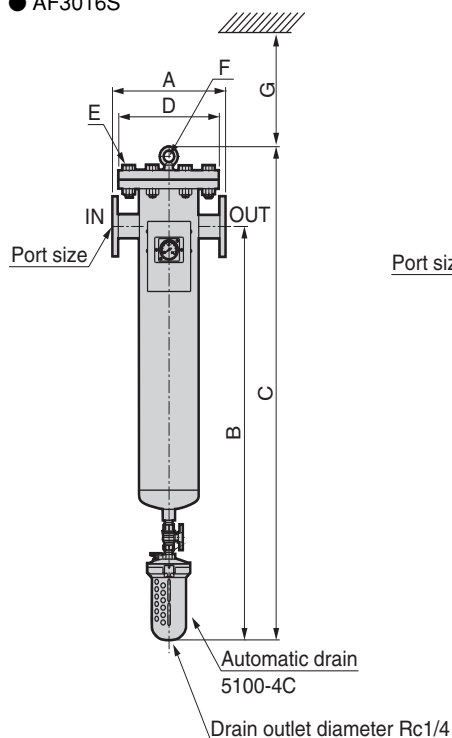
Repair parts model no.

Flow rate code m ³ /min. (ANR)	② Gasket	④ Element kit	⑥ Automatic drain
16	AF3016P-GASKET	AF3016S-ELEMENT-KIT	5100-4C
32	AF3032P-GASKET	AF3032S-ELEMENT-KIT	
48	AF3048P-GASKET	AF3048S-ELEMENT-KIT	
64	AF3064P-GASKET	AF3064S-ELEMENT-KIT	
80	AF3080P-GASKET	AF3080S-ELEMENT-KIT	
96	AF3096P-GASKET	AF3096S-ELEMENT-KIT	
128	AF3128P-GASKET	AF3128S-ELEMENT-KIT	
160	AF3160P-GASKET	AF3160S-ELEMENT-KIT	
192	AF3192P-GASKET	AF3192S-ELEMENT-KIT	
256	AF3256P-GASKET	AF3256S-ELEMENT-KIT	

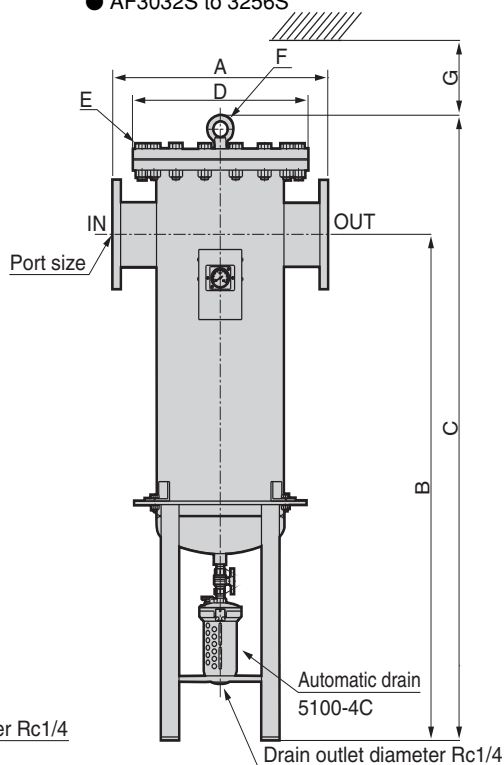
Dimensions



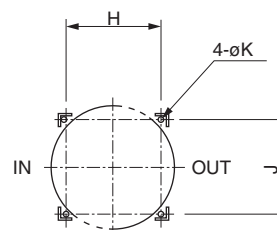
● AF3016S



● AF3032S to 3256S



● Stand anchor bolt hole dimension



Model no.	Port size	A	B	C	D	E	F	G
AF3016S-50	Flange 2B	315	1045	1250	280	8-M20 x 70	M12	600
AF3032S-80	Flange 3B	500	1255	1495	400	12-M22 x 80	M12	600
AF3048S-100	Flange 4B	500	1255	1495	400	12-M22 x 80	M12	600
AF3064S-100	Flange 4B	550	1270	1522	445	16-M22 x 80	M16	600
AF3080S-150	Flange 6B	600	1300	1606	490	16-M22 x 80	M20	600
AF3096S-150	Flange 6B	650	1320	1630	560	16-M24 x 90	M20	600
AF3128S-150	Flange 6B	700	1350	1693	620	20-M24 x 90	M20	600
AF3160S-200	Flange 8B	700	1350	1693	620	20-M24 x 90	M20	600
AF3192S-200	Flange 8B	750	1360	1709	675	20-M24 x 100	M20	600
AF3256S-200	Flange 8B	850	1400	1786	745	20-M30 x 110	M24	600

Model no.	H	J	K
AF3032S-80	210	210	φ15
AF3048S-100	210	210	φ15
AF3064S-100	250	250	φ15
AF3080S-150	280	280	φ15
AF3096S-150	320	320	φ15
AF3128S-150	350	350	φ15
AF3160S-200	350	350	φ15
AF3192S-200	400	400	φ15
AF3256S-200	450	450	φ15

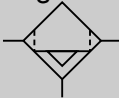
Large main line filter
Main line unit



Micro alescer

AF3000M Series

For oil inhibited pneumatic circuit
Flow rate range: 16 to 256m³/min. (ANR)
JIS symbol

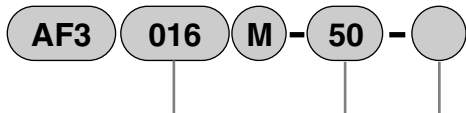


Specifications

Descriptions	AF3016 M-50	AF3032 M-80	AF3048 M-100	AF3064 M-100	AF3080 M-150	AF3096 M-150	AF3128 M-150	AF3160 M-200	AF3192 M-200	AF3256 M-200
Treating air flow rate m ³ /min. (ANR)	16	32	48	64	80	96	128	160	192	256
Working fluid	Compressed air									
Working pressure MPa	0.07 to 1.0									
Withstanding pressure MPa	1.5									
Ambient temperature range °C	5 to 60									
Filtration rating μm	0.01									
Secondary side oil concentration mg/m ³	0.1 (inlet air 30°C)									
Pressure drop	Initial MPa	Within 0.01								
	Regular MPa	0.02 to 0.04								
	Element change MPa	0.07								
Element quantity	1	2	3	4	5	6	8	10	12	16
Port size (Note 1) flange	2B	3B	4B	4B	6B	6B	6B	8B	8B	8B
Product weight kg	45	95	98	130	160	190	250	260	300	350
Differential pressure gauge	Provided as standard (model no.: GA5102)									
Automatic drain	Provided as standard (model no.: 5100-4C)									

Note 1. Flange is 10K flange.
Note 2. Treating air flow rate is the atmospheric pressure conversion value where inlet pressure is 0.7MPa and initial pressure drop is 0.01MPa.
Note 3. ANR shows conditions where 20°C atmospheric pressure and relative humidity 65%.

How to order



A Flow rate code

Symbol	Descriptions
A Flow rate code	
016	16m ³ /min. (ANR)
032	32m ³ /min. (ANR)
048	48m ³ /min. (ANR)
064	64m ³ /min. (ANR)
080	80m ³ /min. (ANR)
096	96m ³ /min. (ANR)
128	128m ³ /min. (ANR)
160	160m ³ /min. (ANR)
192	192m ³ /min. (ANR)
256	256m ³ /min. (ANR)

B Port size	
Refer to the left port size and flow code table.	

C Option	
Blank	None
F	Optional color
H	English documentation
H1	Export packing
K	Coupling flange attached
L	Anchor bolt, nut attached (Note 2)
L1	Stainless steel anchor bolt, nut attached (Note 2)
O	Outdoors specifications
X1	IN-OUT reverse direction (Note 1)
Y2	Product photo

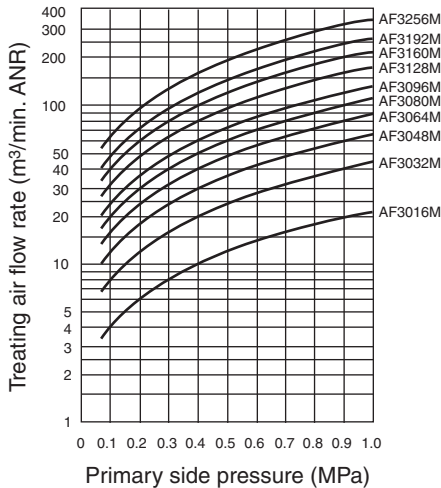
Port size and flow code table

B Port size		Flow rate code	016	032	048	064	080	096	128	160	192	256
50	Flange 2B		●									
80	Flange 3B		●									
100	Flange 4B			●	●							
150	Flange 6B					●	●	●				
200	Flange 8B								●	●	●	●

Note on model no. selection

Note 1: Viewed from the front, a standard product has air inlet on the left port, while air outlet on the right port. For "X1", air inlet is provided on the right port, while air outlet is provided on the left port.
Note 2: Available for AF3032M to AF3256M.
Note 3: When ordering several options, indicate the required options in alphabetical order.

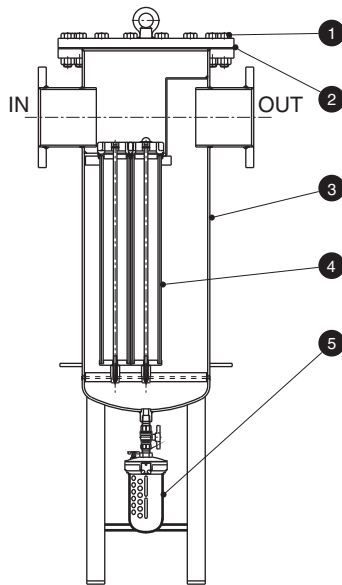
Flow characteristics



Note on selection

- Do not use some model no. found according to selecting conditions but placed lower than the point of intersection.
- When the point of intersection found according to selecting conditions and flow characteristics curves are on the same line, the service life may be shortened, so select one size larger model no.
- The oil removing ratio drops if the inlet air temperature is 30°C and over. Maintain the inlet air temperature 30°C or less.
- The unit's performance may not be attained if used at less than the selected pressure. Always select the model with the working pressure.

Internal structure and parts list



Parts list

*Repair parts

No.	Part name	Material
1	Upper flange	SS400
2	*Gasket	NBR
3	Body	SS400
4	*Element kit	Filter paper, NBR, etc.
5	*Automatic drain	ZDC, PC, etc.

Automatic drain/stop valve are attached.

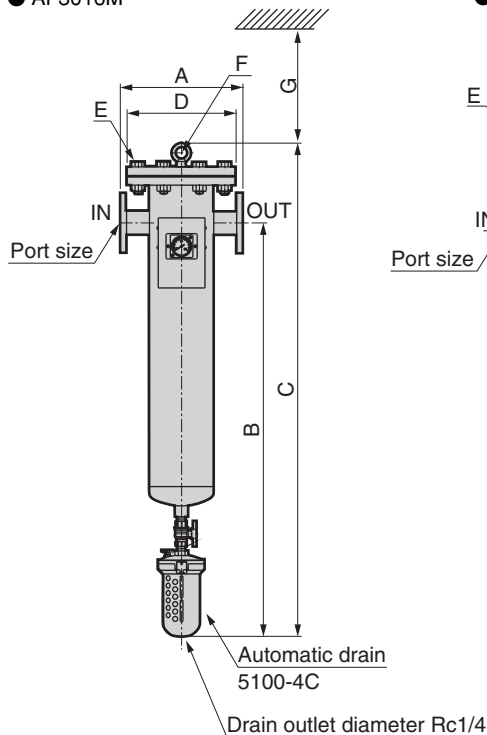
Repair parts model no.

Flow rate code m ³ /min. (ANR)	② Gasket	④ Element kit	⑥ Automatic drain
16	AF3016P-GASKET	AF3016M-ELEMENT-KIT	5100-4C
32	AF3032P-GASKET	AF3032M-ELEMENT-KIT	
48	AF3048P-GASKET	AF3048M-ELEMENT-KIT	
64	AF3064P-GASKET	AF3064M-ELEMENT-KIT	
80	AF3080P-GASKET	AF3080M-ELEMENT-KIT	
96	AF3096P-GASKET	AF3096M-ELEMENT-KIT	
128	AF3128P-GASKET	AF3128M-ELEMENT-KIT	
160	AF3160P-GASKET	AF3160M-ELEMENT-KIT	
192	AF3192P-GASKET	AF3192M-ELEMENT-KIT	
256	AF3256P-GASKET	AF3256M-ELEMENT-KIT	

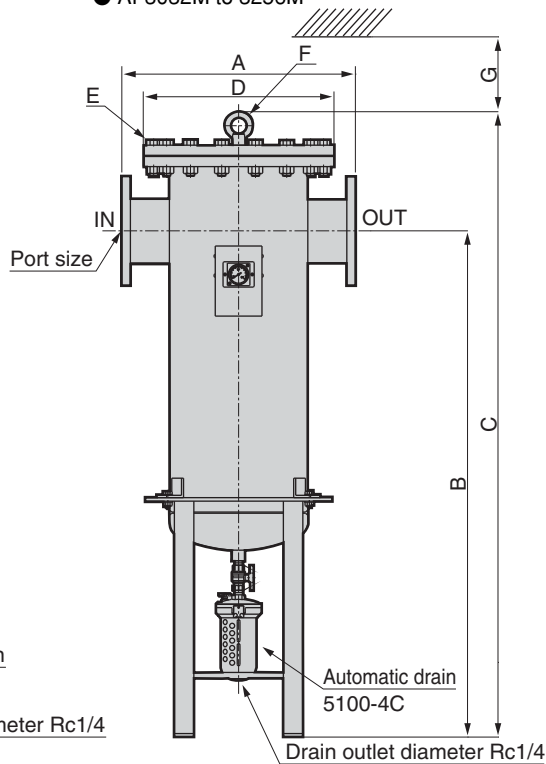
Dimensions



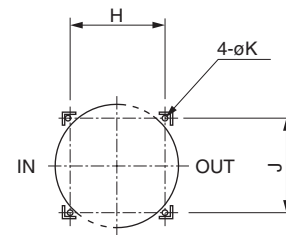
● AF3016M



● AF3032M to 3256M



● Stand anchor bolt hole dimension



Model no.	Port size	A	B	C	D	E	F	G
AF3016M-50	Flange 2B	315	1045	1250	280	8-M20 x 70	M12	600
AF3032M-80	Flange 3B	500	1255	1495	400	12-M22 x 80	M12	600
AF3048M-100	Flange 4B	500	1255	1495	400	12-M22 x 80	M12	600
AF3064M-100	Flange 4B	550	1270	1522	445	16-M22 x 80	M16	600
AF3080M-150	Flange 6B	600	1300	1606	490	16-M22 x 80	M20	600
AF3096M-150	Flange 6B	650	1320	1630	560	16-M24 x 90	M20	600
AF3128M-150	Flange 6B	700	1350	1693	620	20-M24 x 90	M20	600
AF3160M-200	Flange 8B	700	1350	1693	620	20-M24 x 90	M20	600
AF3192M-200	Flange 8B	750	1360	1709	675	20-M24 x 100	M20	600
AF3256M-200	Flange 8B	850	1400	1786	745	20-M30 x 110	M24	600

Model no.	H	J	K
AF3032M-80	210	210	ø15
AF3048M-100	210	210	ø15
AF3064M-100	250	250	ø15
AF3080M-150	280	280	ø15
AF3096M-150	320	320	ø15
AF3128M-150	350	350	ø15
AF3160M-200	350	350	ø15
AF3192M-200	400	400	ø15
AF3256M-200	450	450	ø15

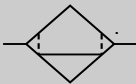
Large main line filter
Main line unit



Micro alescerc

AF3000X Series

For odor inhibited pneumatic circuit
Flow rate range: 16 to 256m³/min. (ANR)
JIS symbol

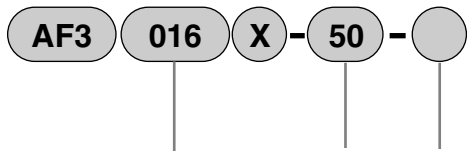


Specifications

Descriptions	AF3016 X-50	AF3032 X-80	AF3048 X-100	AF3064 X-100	AF3080 X-150	AF3096 X-150	AF3128 X-150	AF3160 X-200	AF3192 X-200	AF3256 X-200
Treating air flow rate m ³ /min. (ANR)	16	32	48	64	80	96	128	160	192	256
Working fluid	Compressed air									
Working pressure MPa	0.07 to 1.0									
Withstanding pressure MPa	1.5									
Ambient temperature range °C	5 to 30									
Filtration method	Absorption by activated charcoal									
Secondary side oil concentration mg/m ³	0.03 (inlet air 30°C)									
Pressure drop MPa	Within 0.01									
Element quantity	1	2	3	4	5	6	8	10	12	16
Port size (Note 1) flange	2B	3B	4B	4B	6B	6B	6B	8B	8B	8B
Product weight kg	45	95	98	130	160	190	250	260	300	350
Differential pressure gauge	Provided as standard (model no.: GA5102)									
Automatic drain	None									

Note 1. Flange is 10K flange.
Note 2. Treating air flow rate is the atmospheric pressure conversion value where inlet pressure is 0.7MPa and initial pressure drop is 0.01MPa.
Note 3. ANR shows conditions where 20°C atmospheric pressure and relative humidity 65%.

How to order



Port size and flow code table

Flow rate code	016	032	048	064	080	096	128	160	192	256
50 Flange 2B	●									
80 Flange 3B		●								
100 Flange 4B			●	●						
150 Flange 6B					●	●	●			
200 Flange 8B								●	●	●

Symbol	Descriptions
A Flow rate code	
016	16m ³ /min. (ANR)
032	32m ³ /min. (ANR)
048	48m ³ /min. (ANR)
064	64m ³ /min. (ANR)
080	80m ³ /min. (ANR)
096	96m ³ /min. (ANR)
128	128m ³ /min. (ANR)
160	160m ³ /min. (ANR)
192	192m ³ /min. (ANR)
256	256m ³ /min. (ANR)
B Port size	
Refer to the left port size and flow code table.	
C Option	
Blank	None
F	Optional color
H	English documentation
H1	Export packing
K	Coupling flange attached
L	Anchor bolt, nut attached (Note 2)
L1	Stainless steel anchor bolt, nut attached (Note 2)
O	Outdoors specifications
X1	IN-OUT reverse direction (Note 1)
Y2	Product photo

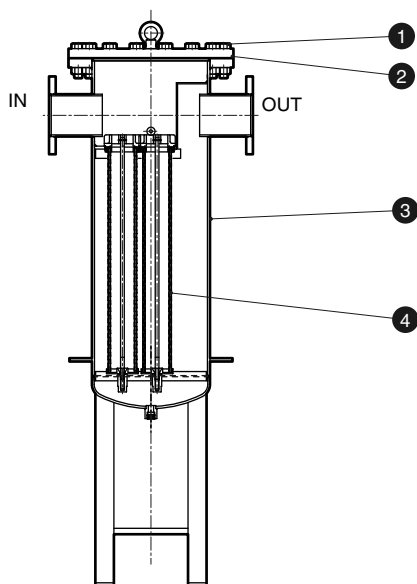
Flow characteristics

Flow characteristics are as same as AF3000M type on page 192.
Use AF3000M type as a pre-filter.

! Note on model no. selection

Note 1: Viewed from the front, a standard product has air inlet on the left port, while air outlet on the right port. For "X1", air inlet is provided on the right port, while air outlet is provided on the left port.
Note 2: Available for AF3032X to AF3256X.
Note 3: The unit's performance may not be attained if used at less than the selected pressure. Always select the model with the working pressure.

Internal structure and parts list



Parts list

*Repair parts

No.	Part name	Material
1	Upper flange	SS400
2	*Gasket	NBR
3	Body	SS400
4	*Element kit	Activated charcoal, NBR, etc.

Repair parts model no.

Flow rate code m ³ /min. (ANR)	② Gasket	④ Element kit
16	AF3016P-GASKET	AF3016X-ELEMENT-KIT
32	AF3032P-GASKET	AF3032X-ELEMENT-KIT
48	AF3048P-GASKET	AF3048X-ELEMENT-KIT
64	AF3064P-GASKET	AF3064X-ELEMENT-KIT
80	AF3080P-GASKET	AF3080X-ELEMENT-KIT
96	AF3096P-GASKET	AF3096X-ELEMENT-KIT
128	AF3128P-GASKET	AF3128X-ELEMENT-KIT
160	AF3160P-GASKET	AF3160X-ELEMENT-KIT
192	AF3192P-GASKET	AF3192X-ELEMENT-KIT
256	AF3256P-GASKET	AF3256X-ELEMENT-KIT

Dimensions

Dimensions are as same as AF3000M type on page 193. However, automatic drain and stop valve are not attached.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)

Ending
Large main line filter
Main line unit