

# Large Main Line Filter AF5000 (oil-free)

## ■ Main Line Components / Main Line Filter



### CONTENTS

Large Main Line Filter Unit - Recommended system configuration	240
Product introduction	266
● Pre-filter (AF5000P)	268
● Oil removing filter (AF5000S)	272
● High-performance oil removing filter (AF5000M)	276
● Activated carbon filter (AF5000X)	280
▲ Safety precautions	284

Providing total oil-free specifications from refrigeration air dryer to filter by incorporating a stainless steel vessel.

Main Line Components

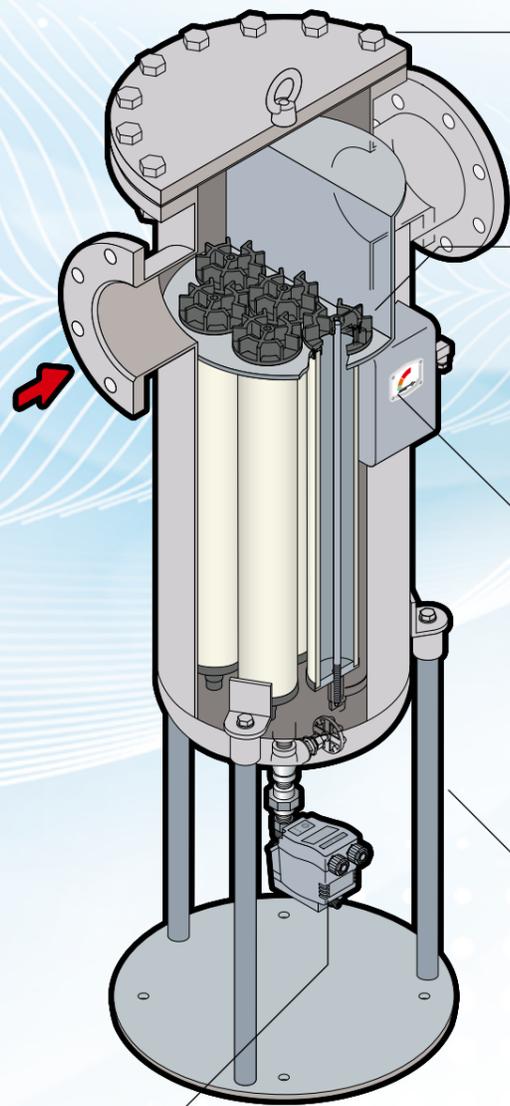
Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

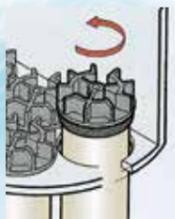


### Stainless steel vessel incorporated for all models (SUS304)

Truly clean air is supplied without rust forming.

### Easy element replacement.

A screw method is used for element installation, so the element is replaced by removing the upper flange. Stainless steel is also used for the screws, with no concern for stiffness due to rust.



### Remote control possible

An indicator with a differential pressure switch is standard, installed on the front. The element replacement interval is confirmed beforehand. An alarm signal is output from the differential pressure switch, providing an accurate reading and enabling remote control.

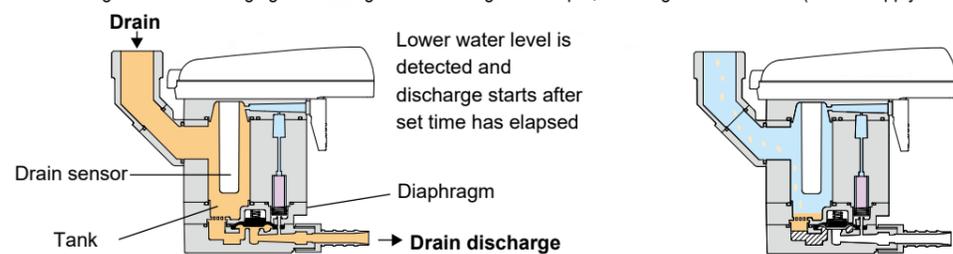


### Easy installation.

Mounting feet are included as standard. Piping work is easier. (Excluding AF5016) The legs are removed when not required.

### Drain discharger with no air loss sensor prevents wasted air consumption (Provided as standard on P- and S-types)

The highly reliable drain lower end sensor and solenoid valve have been integrated in this new energy-saving drain discharger. While air is discharged with the drainage when using the float or disc drain discharger, this product detects lower water levels during drainage discharge, so air is not wasted and discharged when discharging the drainage. An alarm signal is output, enabling remote control. (Power supply 95 VAC to 240 VAC required)



### Diverse lineup

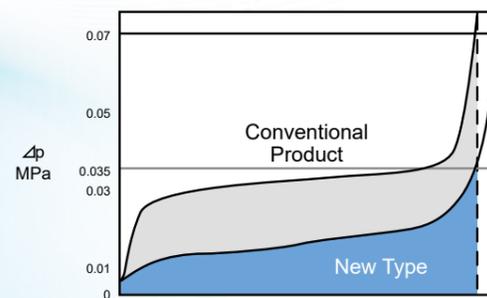
40 models are available in four types, each with 10 flow rate options. The ideal model can be selected based on the flow rate and quality of air.

Processing air flow rate m <sup>3</sup> /min (ANR)	16	32	48	64	80	96	128	160	192	256																						
Element	P	S	M	X	P	S	M	X	P	S	M	X	P	S	M	X	P	S	M	X	P	S	M	X								
Port size (flange)																																
2B	●	●	●	●																												
3B					●	●	●	●																								
4B									●	●	●	●	●	●	●	●																
6B																	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
8B																																

\*Processing air flow rate is the atmospheric pressure conversion value when the inlet pressure is 0.7 MPa, the initial pressure drop is P-type 0.005 MPa, the S-/X-type is 0.007 MPa, and the M-type is 0.01 MPa.

### Long-life, low-pressure-loss element

Element Service Life Curve



Element Replacement One year under normal operating conditions.



#### A New Filter

The borosilicate glass microfiber filtration layer strongly repels water and oil, minimizing pressure drop and running costs.

#### B Conventional Filter

Conventional glass microfiber filters absorb water and oil, increasing pressure drop, reducing filtration performance, and raising running costs.

The element's high porosity (96%) contributes to low pressure loss and long life.

- Pressure loss is reduced by half compared to conventional products.
- The element is replaced when the pressure drops to 0.035 MPa.
- Element lifespan is one year under normal operating conditions.

### AF5000Series variation

#### Removes water drops and solid particles

Ideal for use as a pre-filter for air dryers.



- Removal of particles 3 μm and larger
- 95% Water Separation Efficiency

#### Removes oil mist and solid particles

Protects expensive pneumatic components



- Removal of particles 0.3 μm and over
- Removes oil up to secondary oil concentration of 0.5 mg/m<sup>3</sup> (21°C)

#### High-performance removal of oil mist and solids

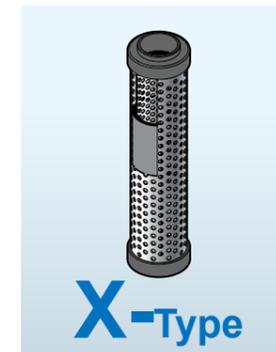
For Pneumatic Circuits Which Prohibit Passage of Oil.



- Removes particles 0.01 μm and larger
- Removes oil up to secondary oil concentration of 0.01 mg/m<sup>3</sup> (21°C)

#### Oil vapor removal and deodorizing

For pneumatic circuits which prohibit passage of odors



- Suction by activated carbon
- Removes oil and odors in steam up to secondary concentration of 0.003 mg/m<sup>3</sup> (21°C)

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

Ending



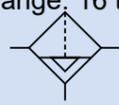
Main Line Filters

# AF5000P Series

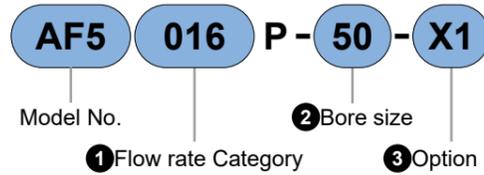
Ideal for use as a pre-filter for air dryers.

●Flow rate range: 16 to 256 m<sup>3</sup>/min (ANR)

Circuit diagram symbol



## Model No. Notation



Note: If the pressure is less than the selected pressure, the unit's performance may not be demonstrated. Always select the Model No. for the working pressure.

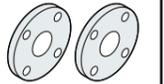
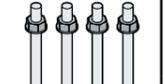
### 1 Flow rate Category

Code	Description
016	16 m <sup>3</sup> /min (ANR)
032	32 m <sup>3</sup> /min (ANR)
048	48 m <sup>3</sup> /min (ANR)
064	64 m <sup>3</sup> /min (ANR)
080	80 m <sup>3</sup> /min (ANR)
096	96 m <sup>3</sup> /min (ANR)
128	128 m <sup>3</sup> /min (ANR)
160	160 m <sup>3</sup> /min (ANR)
192	192 m <sup>3</sup> /min (ANR)
256	256 m <sup>3</sup> /min (ANR)

### 2 Bore size

Code	Description	1 Flow Rate Category													
		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									●	●	●			

### 3 Option

Code	Description
Blank	Standard product
D	Drain discharger 5100-4C 
E	Without drain discharger
K	Companion flange included 
H	English Language Specifications
H2	Stainless steel nameplate
L	Foundation bolt/nut attached (SS400) 
L1	Foundation bolt/nut included (SUS304) 
X1	IN-OUT Reverse Direction
Y2	Product photo

\*1: When ordering several options, indicate the required options in alphabetical order.

\*2: "D" drain discharger 5100-4C is recommended for working environments where electric wiring is not possible.

\*3: "L" and "L1" are applicable to AF5032P to AF5256P.

\*4: Viewed from the front, the Standard Product has an air inlet on the left port, while an air outlet on the right port. For "X1", an air inlet is provided on the right port, while an air outlet is provided on the left port.

## Specifications

Model No.	AF5016P-50	AF5032P-80	AF5048P-100	AF5064P-100	AF5080P-150	AF5096P-150	AF5128P-150	AF5160P-200	AF5192P-200	AF5256P-200
Processing air flow rate (*1,*2) m <sup>3</sup> /min (ANR)	16	32	48	64	80	96	128	160	192	256
Working fluid	Compressed air									
Working pressure	MPa 0.08 to 1.0									
Proof pressure	MPa 1.5									
Ambient temperature	°C 5 to 60									
Filtration rating μm	3									
Pressure drop	Initial	MPa Within 0.005								
	Regular	MPa 0.01								
	Element Replacement	MPa 0.035								
Element quantity	1	2	3	4	5	6	8	10	12	16
Port size (*3) flange	2B	3B	4B	4B	6B	6B	6B	8B	8B	8B
Weight	kg 38	76	78	107	140	167	223	232	269	330
Differential pressure switch										
Operating pressure differential	MPa 0.04±0.01									
Contact	1-pole "a" contact									
Max. contact current	A 0.5									
Max. contact voltage	VDC 200									
Max. contact capacitance	W 10									
Max. contact resistance (including reed switch) mΩ	150									
Drain discharger (model No.: DBV1003D)										
Drain outlet port size	G1/4 or ø8-10 mm hose fitting (*4)									
Power Supply	Single-phase 95 VAC to 240 VAC 50/60Hz									

\*1: ANR indicates conditions of 20°C atmospheric pressure and relative humidity 65%.

\*2: Processing air flow rate is the atmospheric pressure conversion value where the inlet pressure is 0.7 MPa and initial pressure drop is 0.005 MPa.

\*3: Flange is a 10K flange.

\*4: G1/4 can be connected to R1/4.

## Flow rate compensation coefficient

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

Pressure (MPa)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Compensation coefficient	0.38	0.53	0.65	0.76	0.85	0.93	1.0	1.07	1.13	1.2

## Specifications for Rechargeable Batteries

(Catalog No.CC-1226AA)

●Design compatible with rechargeable battery manufacturing process



\*Contact CKD for details.

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

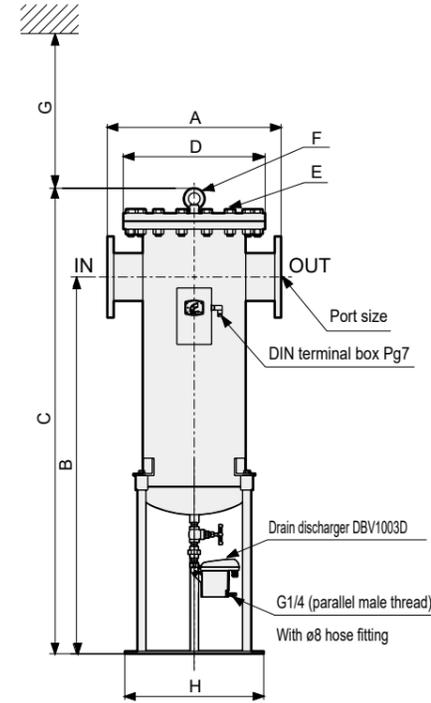
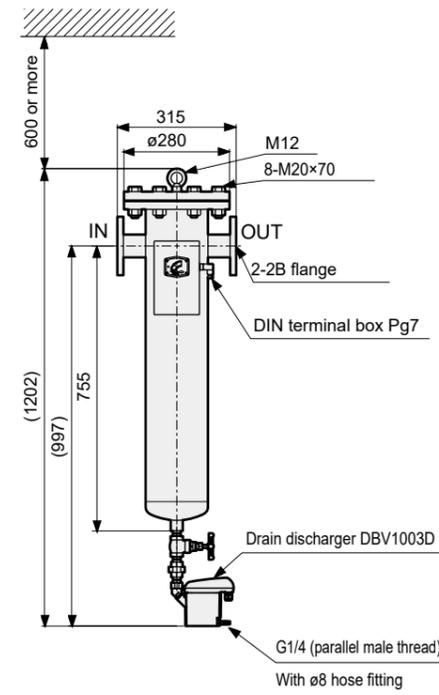
Ending

Ending

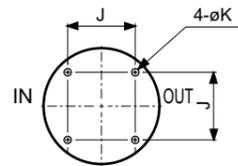
## Dimensions

●AF5016P

●AF5032P to AF5256P



●Foundation bolt hole dimension



Model No.	Port size	A	B	C	D	E	F	G	H	J	K
AF5032P-80	Flange 3B	500	1255	1495	ø400	12-M22×80	M12	600	ø380	210	ø15
AF5048P-100	Flange 4B	500	1255	1495	ø400	12-M22×80	M12	600	ø380	210	ø15
AF5064P-100	Flange 4B	550	1270	1522	ø445	16-M22×80	M16	600	ø440	250	ø15
AF5080P-150	Flange 6B	600	1300	1606	ø490	16-M22×80	M20	600	ø480	280	ø15
AF5096P-150	Flange 6B	650	1320	1630	ø560	16-M24×90	M20	600	ø540	320	ø15
AF5128P-150	Flange 6B	700	1350	1693	ø620	20-M24×90	M20	600	ø610	350	ø15
AF5160P-200	Flange 8B	700	1350	1693	ø620	20-M24×90	M20	600	ø610	350	ø15
AF5192P-200	Flange 8B	750	1360	1709	ø675	20-M24×100	M20	600	ø670	400	ø15
AF5256P-200	Flange 8B	850	1400	1786	ø745	20-M30×110	M24	600	ø730	450	ø15

For maintenance parts, refer to the CKD Components Product site.  
Refer to (<https://www.ckd.co.jp/kiki/en/>) → "Model No." → Maintenance Parts

MEMO

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

Ending

271

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

Ending

270



Micro-mist separator

# AF5000S Series

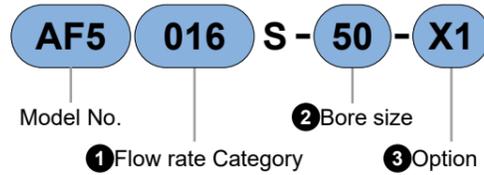
Protects expensive pneumatic components

● Flow rate range: 16 to 256 m<sup>3</sup>/min (ANR)

Circuit diagram symbol



### Model No. Notation



Note: If the pressure is less than the selected pressure, the unit's performance may not be demonstrated. Always select the Model No. for the working pressure.

#### 1 Flow rate Category

Code	Description
016	16 m <sup>3</sup> /min (ANR)
032	32 m <sup>3</sup> /min (ANR)
048	48 m <sup>3</sup> /min (ANR)
064	64 m <sup>3</sup> /min (ANR)
080	80 m <sup>3</sup> /min (ANR)
096	96 m <sup>3</sup> /min (ANR)
128	128 m <sup>3</sup> /min (ANR)
160	160 m <sup>3</sup> /min (ANR)
192	192 m <sup>3</sup> /min (ANR)
256	256 m <sup>3</sup> /min (ANR)

#### 2 Bore size

Code	Description	1 Flow Rate Category												
		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									●	●	●		

#### 3 Option

Code	Description	
Blank	Standard product	
D	Drain discharger 5100-4C	
E	Without drain discharger	
K	Companion flange included	
H	English Language Specifications	
H2	Stainless steel nameplate	
L	Foundation bolt/nut attached (SS400)	
L1	Foundation bolt/nut included (SUS304)	
X1	IN-OUT Reverse Direction	
Y2	Product photo	

- \*1: When ordering several options, indicate the required options in alphabetical order.
- \*2: "D" drain discharger 5100-4C is recommended for working environments where electric wiring is not possible.
- \*3: "L" and "L1" are applicable to AF5032S to AF5256S.
- \*4: Viewed from the front, the Standard Product has an air inlet on the left port, while an air outlet on the right port. For "X1", an air inlet is provided on the right port, while an air outlet is provided on the left port.

#### Specifications for Rechargeable Batteries

(Catalog No. CC-1226AA)

● Design compatible with rechargeable battery manufacturing process



\*Contact CKD for details.

### Specifications

Model No.	AF5016S-50	AF5032S-80	AF5048S-100	AF5064S-100	AF5080S-150	AF5096S-150	AF5128S-150	AF5160S-200	AF5192S-200	AF5256S-200
Processing air flow rate (*1,*2) m <sup>3</sup> /min (ANR)	16	32	48	64	80	96	128	160	192	256
Working fluid	Compressed air									
Working pressure	MPa 0.08 to 1.0									
Proof pressure	MPa 1.5									
Ambient temperature	°C 5 to 60									
Filtration rating	μm 0.3									
Secondary side oil concentration	mg/m <sup>3</sup> 0.5 (inlet air 21°C)									
Pressure drop	Initial	MPa 0.007								
	Regular	MPa 0.014								
	Element Replacement	MPa 0.035								
Element quantity	1	2	3	4	5	6	8	10	12	16
Port size (*3) flange	2B	3B	4B	4B	6B	6B	6B	8B	8B	8B
Weight	kg 38	76	78	107	140	167	223	232	269	330
Differential pressure switch										
Operating pressure differential	MPa 0.04±0.01									
Contact	1-pole "a" contact									
Max. contact current	A 0.5									
Max. contact voltage	VDC 200									
Max. contact capacitance	W 10									
Max. contact resistance (including reed switch)	mΩ 150									
Drain discharger (model No.: DBV1003D)										
Drain outlet port size	G1/4 or ø8-10 mm hose fitting (*4)									
Power Supply	Single-phase 95 VAC to 240 VAC 50/60Hz									

\*1: ANR indicates conditions of 20°C atmospheric pressure and relative humidity 65%.

\*2: Processing air flow rate is the atmospheric pressure conversion value where the inlet pressure is 0.7 MPa and initial pressure drop is 0.007 MPa.

\*3: Flange is a 10K flange.

\*4: G1/4 can be connected to R1/4.

#### Flow rate compensation coefficient

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

Pressure (MPa)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Compensation coefficient	0.38	0.53	0.65	0.76	0.85	0.93	1.0	1.07	1.13	1.2

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

Ending

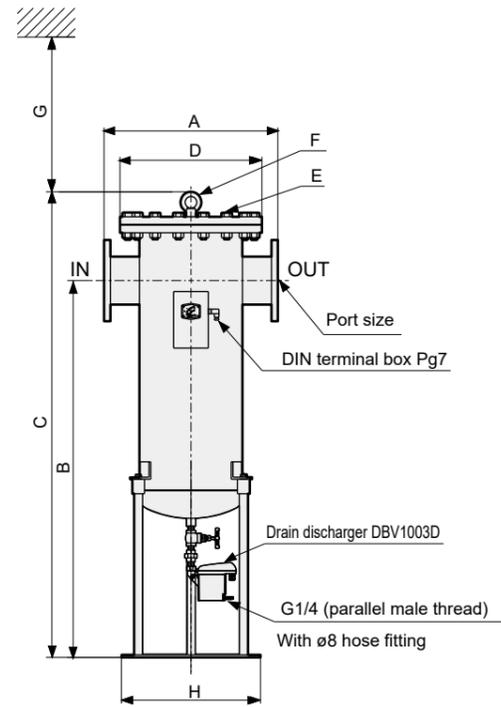
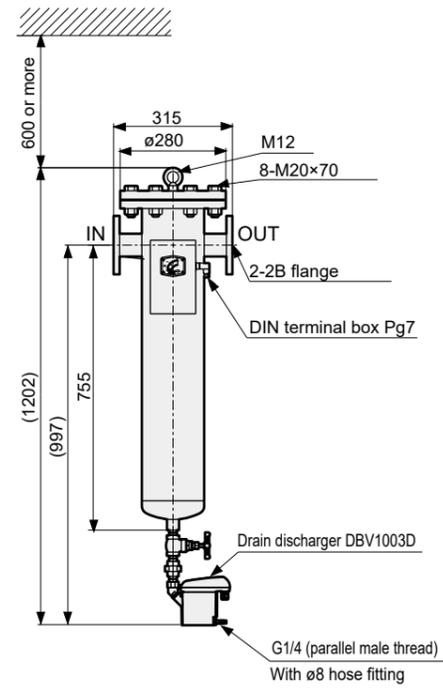
Ending

## Dimensions

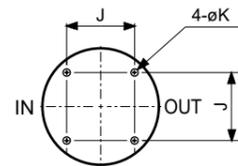
MEMO

●AF5016S

●AF5032S to AF5256S



●Foundation bolt hole dimension



Model No.	Port size	A	B	C	D	E	F	G	H	J	K
AF5032S-80	Flange 3B	500	1255	1495	φ400	12-M22×80	M12	600	φ380	210	φ15
AF5048S-100	Flange 4B	500	1255	1495	φ400	12-M22×80	M12	600	φ380	210	φ15
AF5064S-100	Flange 4B	550	1270	1522	φ445	16-M22×80	M16	600	φ440	250	φ15
AF5080S-150	Flange 6B	600	1300	1606	φ490	16-M22×80	M20	600	φ480	280	φ15
AF5096S-150	Flange 6B	650	1320	1630	φ560	16-M24×90	M20	600	φ540	320	φ15
AF5128S-150	Flange 6B	700	1350	1693	φ620	20-M24×90	M20	600	φ610	350	φ15
AF5160S-200	Flange 8B	700	1350	1693	φ620	20-M24×90	M20	600	φ610	350	φ15
AF5192S-200	Flange 8B	750	1360	1709	φ675	20-M24×100	M20	600	φ670	400	φ15
AF5256S-200	Flange 8B	850	1400	1786	φ745	20-M30×110	M24	600	φ730	450	φ15

For maintenance parts, refer to the CKD Components Product site.  
Refer to (<https://www.ckd.co.jp/kiki/en/>) → "Model No." → Maintenance Parts

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.



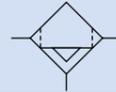
Micro-mist separator

# AF5000M Series

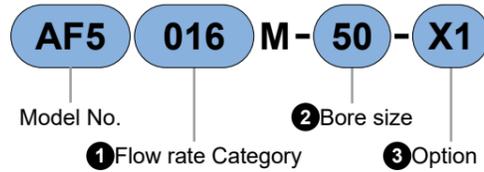
For Pneumatic Circuits Which Prohibit Passage of Oil.

●Flow rate range: 16 to 256 m<sup>3</sup>/min (ANR)

Circuit diagram symbol



### Model No. Notation



Note: If the pressure is less than the selected pressure, the unit's performance may not be demonstrated. Always select the Model No. for the working pressure.

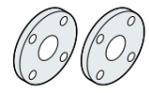
#### 1 Flow rate Category

Code	Description
016	16 m <sup>3</sup> /min (ANR)
032	32 m <sup>3</sup> /min (ANR)
048	48 m <sup>3</sup> /min (ANR)
064	64 m <sup>3</sup> /min (ANR)
080	80 m <sup>3</sup> /min (ANR)
096	96 m <sup>3</sup> /min (ANR)
128	128 m <sup>3</sup> /min (ANR)
160	160 m <sup>3</sup> /min (ANR)
192	192 m <sup>3</sup> /min (ANR)
256	256 m <sup>3</sup> /min (ANR)

#### 2 Bore size

Code	Description	1 Flow Rate Category													
		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										●	●	●		

#### 3 Option

Code	Description
Blank	Standard product
E	Without drain discharger
K	Companion flange included 
H	English Language Specifications
H2	Stainless steel nameplate
L	Foundation bolt/nut attached (SS400) 
L1	Foundation bolt/nut included (SUS304) 
X1	IN-OUT Reverse Direction
Y2	Product photo

\*1: When ordering several options, indicate the required options in alphabetical order.

\*2: "L" and "L1" are applicable to AF5032M to AF5256M.

\*3: Viewed from the front, the Standard Product has an air inlet on the left port, while an air outlet on the right port. For "X1", an air inlet is provided on the right port, while an air outlet is provided on the left port.

#### Specifications for Rechargeable Batteries

(Catalog No.CC-1226AA)

●Design compatible with rechargeable battery manufacturing processes



\*Contact CKD for details.

### Specifications

Model No.	AF5016M-50	AF5032M-80	AF5048M-100	AF5064M-100	AF5080M-150	AF5096M-150	AF5128M-150	AF5160M-200	AF5192M-200	AF5256M-200
Processing air flow rate (*1,*2) m <sup>3</sup> /min (ANR)	16	32	48	64	80	96	128	160	192	256
Working fluid	Compressed air									
Working pressure	MPa 0.08 to 1.0									
Proof pressure	MPa 1.5									
Ambient temperature	°C 5 to 60									
Filtration rating	μm 0.01									
Secondary side oil concentration	mg/m <sup>3</sup> 0.01 (inlet air 21°C)									
Pressure drop	Initial	MPa 0.01								
	Regular	MPa 0.02								
	Element Replacement	MPa 0.035								
Element quantity	1	2	3	4	5	6	8	10	12	16
Port size (*3) flange	2B	3B	4B	4B	6B	6B	6B	8B	8B	8B
Weight	kg 38	76	78	107	140	167	223	232	269	330
Differential pressure switch										
Operating pressure differential	MPa 0.04±0.01									
Contact	1-pole "a" contact									
Max. contact current	A 0.5									
Max. contact voltage	VDC 200									
Max. contact capacitance	W 10									
Max. contact resistance (including reed switch) mΩ	150									
Drain discharger (model No.: 5100-4C)										
Drain outlet port size	Rc1/4									

\*1: ANR indicates conditions of 20°C atmospheric pressure and relative humidity 65%.

\*2: Processing air flow rate is the atmospheric pressure conversion value where the inlet pressure is 0.7 MPa and initial pressure drop is 0.01 MPa.

\*3: Flange is a 10K flange.

#### Flow rate compensation coefficient

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

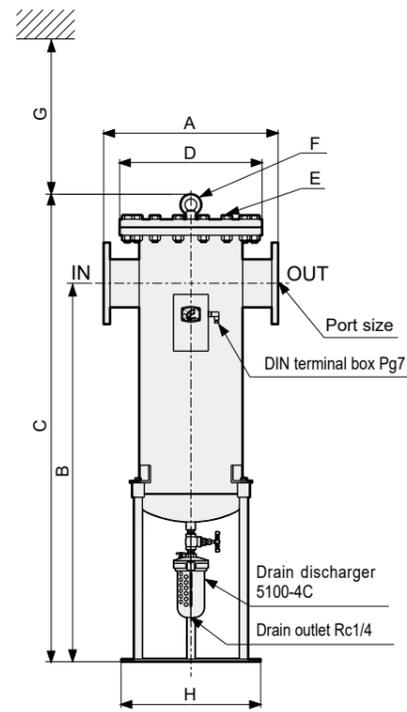
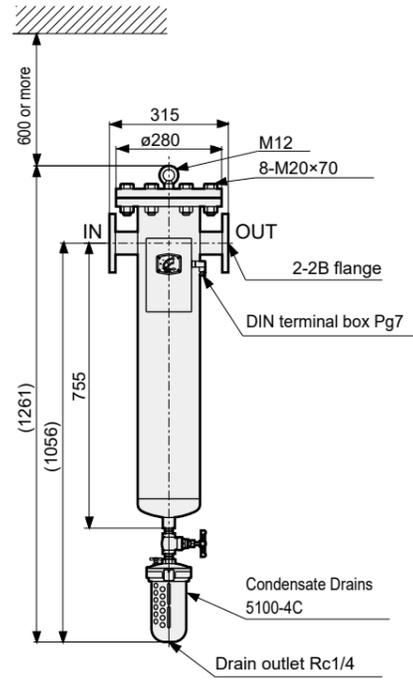
Pressure (MPa)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Compensation coefficient	0.38	0.53	0.65	0.76	0.85	0.93	1.0	1.07	1.13	1.2

## Dimensions

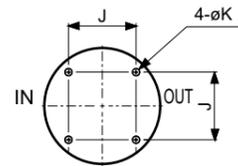
MEMO

●AF5016M

●AF5032M to AF5256M



●Foundation bolt hole dimension



Model No.	Port size	A	B	C	D	E	F	G	H	J	K
AF5032M-80	Flange 3B	500	1255	1495	φ400	12-M22×80	M12	600	φ380	210	φ15
AF5048M-100	Flange 4B	500	1255	1495	φ400	12-M22×80	M12	600	φ380	210	φ15
AF5064M-100	Flange 4B	550	1270	1522	φ445	16-M22×80	M16	600	φ440	250	φ15
AF5080M-150	Flange 6B	600	1300	1606	φ490	16-M22×80	M20	600	φ480	280	φ15
AF5096M-150	Flange 6B	650	1320	1630	φ560	16-M24×90	M20	600	φ540	320	φ15
AF5128M-150	Flange 6B	700	1350	1693	φ620	20-M24×90	M20	600	φ610	350	φ15
AF5160M-200	Flange 8B	700	1350	1693	φ620	20-M24×90	M20	600	φ610	350	φ15
AF5192M-200	Flange 8B	750	1360	1709	φ675	20-M24×100	M20	600	φ670	400	φ15
AF5256M-200	Flange 8B	850	1400	1786	φ745	20-M30×110	M24	600	φ730	450	φ15

For maintenance parts, refer to the CKD Components Product site.

Refer to (<https://www.ckd.co.jp/kiki/en/>) → "Model No." → Maintenance Parts

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.



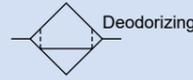
Micro-mist separator

# AF5000X Series

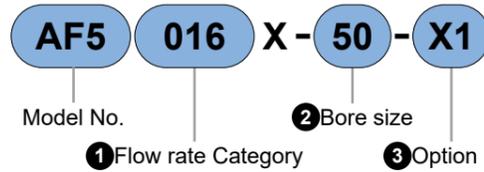
For pneumatic circuits which prohibit passage of odors

● Flow rate range: 16 to 256 m<sup>3</sup>/min (ANR)

Circuit diagram symbol



## Model No. Notation



Note: If the pressure is less than the selected pressure, the unit's performance may not be demonstrated. Always select the Model No. for the working pressure.

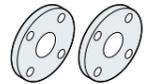
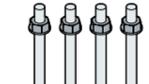
### 1 Flow rate Category

Code	Description
016	16 m <sup>3</sup> /min (ANR)
032	32 m <sup>3</sup> /min (ANR)
048	48 m <sup>3</sup> /min (ANR)
064	64 m <sup>3</sup> /min (ANR)
080	80 m <sup>3</sup> /min (ANR)
096	96 m <sup>3</sup> /min (ANR)
128	128 m <sup>3</sup> /min (ANR)
160	160 m <sup>3</sup> /min (ANR)
192	192 m <sup>3</sup> /min (ANR)
256	256 m <sup>3</sup> /min (ANR)

### 2 Bore size

Code	Description	Flow Rate Category												
		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									●	●	●		

### 3 Option

Code	Description
Blank	Standard product
K	Companion flange included 
H	English Language Specifications
H2	Stainless steel nameplate
L	Foundation bolt/nut attached (SS400) 
L1	Foundation bolt/nut included (SUS304) 
X1	IN-OUT Reverse Direction
Y2	Product photo

\*1: When ordering several options, indicate the required options in alphabetical order.

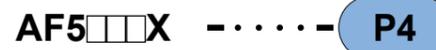
\*2: "L" and "L1" are applicable to AF5032X to AF5256X.

\*3: Viewed from the front, the Standard Product has an air inlet on the left port, while an air outlet on the right port. For "X1", an air inlet is provided on the right port, while an air outlet is provided on the left port.

## Specifications for Rechargeable Batteries

(Catalog No.CC-1226AA)

● Design compatible with rechargeable battery manufacturing processes



\*Contact CKD for details.

## Specifications

Model No.	AF5016X-50	AF5032X-80	AF5048X-100	AF5064X-100	AF5080X-150	AF5096X-150	AF5128X-150	AF5160X-200	AF5192X-200	AF5256X-200
Processing air flow rate (*1,*2) m <sup>3</sup> /min (ANR)	16	32	48	64	80	96	128	160	192	256
Working fluid	Compressed air									
Working pressure MPa	0.08 to 1.0									
Proof pressure MPa	1.5									
Ambient temperature °C	5 to 30									
Filtration method	Suction by activated carbon									
Secondary side oil concentration mg/m <sup>3</sup>	0.003 (inlet air 21°C)									
Initial pressure drop MPa	Within 0.007									
Element quantity	1	2	3	4	5	6	8	10	12	16
Port size (*3) flange	2B	3B	4B	4B	6B	6B	6B	8B	8B	8B
Weight kg	38	76	78	107	140	167	223	232	269	330

\*1: ANR indicates conditions of 20°C atmospheric pressure and relative humidity 65%.

\*2: Processing air flow rate is the atmospheric pressure conversion value where the inlet pressure is 0.7 MPa and initial pressure drop is 0.007 MPa.

\*3: Flange is a 10K flange.

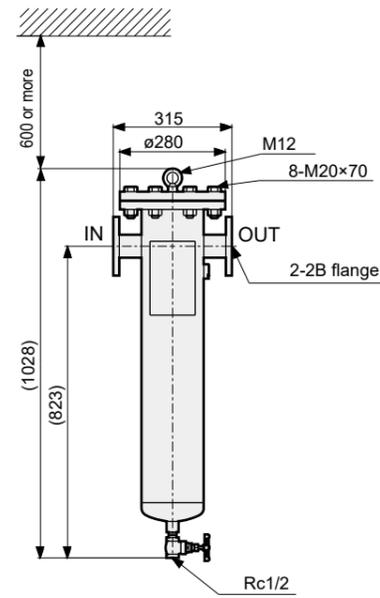
## Flow rate compensation coefficient

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

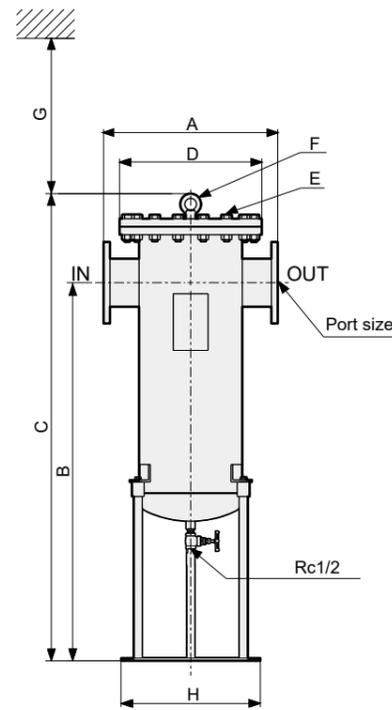
Pressure (MPa)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Compensation coefficient	0.38	0.53	0.65	0.76	0.85	0.93	1.0	1.07	1.13	1.2

## Dimensions

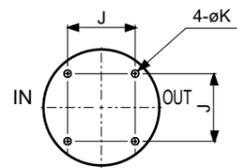
●AF5016X



●AF5032X to AF5256X



●Foundation bolt hole dimension



Model No.	Port size	A	B	C	D	E	F	G	H	J	K
AF5032X-80	Flange 3B	500	1255	1495	ø400	12-M22×80	M12	600	ø380	210	ø15
AF5048X-100	Flange 4B	500	1255	1495	ø400	12-M22×80	M12	600	ø380	210	ø15
AF5064X-100	Flange 4B	550	1270	1522	ø445	16-M22×80	M16	600	ø440	250	ø15
AF5080X-150	Flange 6B	600	1300	1606	ø490	16-M22×80	M20	600	ø480	280	ø15
AF5096X-150	Flange 6B	650	1320	1630	ø560	16-M24×90	M20	600	ø540	320	ø15
AF5128X-150	Flange 6B	700	1350	1693	ø620	20-M24×90	M20	600	ø610	350	ø15
AF5160X-200	Flange 8B	700	1350	1693	ø620	20-M24×90	M20	600	ø610	350	ø15
AF5192X-200	Flange 8B	750	1360	1709	ø675	20-M24×100	M20	600	ø670	400	ø15
AF5256X-200	Flange 8B	850	1400	1786	ø745	20-M30×110	M24	600	ø730	450	ø15

For maintenance parts, refer to the CKD Components Product site.  
Refer to (<https://www.ckd.co.jp/kiki/en/>) → "Model No." → Maintenance Parts

MEMO

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.



# Safety Precautions

Be sure to read this section before use.  
Refer to Intro 15 for General Precautions.

Large main line filter AF5000 Series

## Manufacturer's Disclaimer

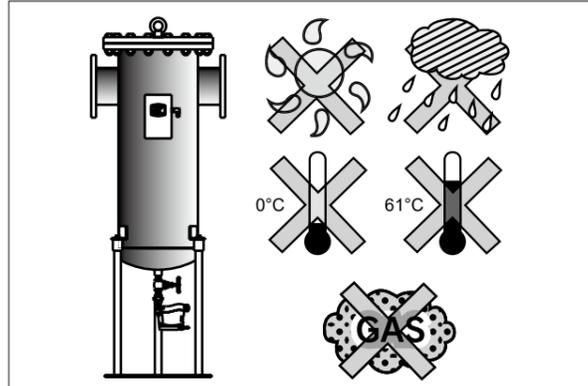
### WARNING

- The manufacturer cannot be held liable in the following cases:
  - In the case where there are serious errors in the operator's use.
  - Illegal modifications or repairs using non-standard parts by user.

## Design / Selection

### WARNING

- Do not use for applications other than compressed air.
- Do not use for caisson shields or medical devices such as breathing devices, or for direct air blow onto foodstuffs. Doing so may result in serious injury.
- Do not mount and use this device on transportation equipment such as vehicles or ships. Vibration may cause internal damage.
- Avoid direct sunlight and rain water. Resin parts, etc., are likely to deteriorate and break.
- Do not use in locations with corrosive gases.
- Use this product within the range of the working temperature.



- Do not use the product where it could freeze. There is a risk that condensate accumulated inside the product may freeze and damage the product.
- Do not use in hazardous locations (e.g., potentially explosive atmospheres).
- The inlet air temperature should be kept as low as possible. The higher the temperature, the worse the oil removal rate.
- Do not use this product in an ozone generating environment.
- Avoid using this product where vibration and impact are present.
- Do not use this product in areas containing dust, etc.

- Do not use in environments where the following gaseous substances are contained in compressed air.

- Sulfur dioxide, Chlorine gas
- Aromatic hydrocarbon compounds (For example, benzene, toluene, phenol, cyclohexane, etc.)
- Chlorinated hydrocarbon compounds (For example, trichloroethylene, chloroform, etc.)
- Ketones (Example: Acetone, etc.)
- Aldehydes (For example, formaldehyde or acetaldehyde, etc.)
- Amines (Example: Ethylamine, Methylamine, etc.)

- Always set the air flow to within the working pressure range and the processing air rate. Otherwise, water, dust, and oil removal performance may be compromised.

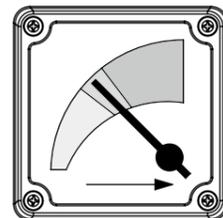
- Install indoors.

### CAUTION

- Class 2 pressure vessel according to "Safety regulation of boiler and pressure vessel" in Occupational Safety Sanitation Laws is applied in model No. AF5032 to AF5256.

- Model No. AF5032 to AF5256 have a Class 2 pressure vessel pressure proof certificate. This certificate must be kept in safe-keeping while using this product. (Labor Standards Supervision Applications to the police station are not required in Japan.)

- The air filter life is spent when the pressure drops to 0.035 MPa or after one year of use, whichever comes first. Change all elements when the service life is reached. X type cannot control service life due to the differential pressure. Therefore, replace the filter after 1000 hours of use or when the deodorizing effect is lost.



**0.035 MPa**

### ●Chemical resistance of drain discharger plastic bowl

Types of Chemicals	Categories of Chemicals	Main Products of Chemicals	General Applications	Polycarbonate	Nylon
Inorganic compounds	Acids	Hydrochloric acid, sulfuric acid, fluorine, phosphoric acid, chromic acid, etc.	Acid washing of metals, acidic degreasing solutions, coating treatment solutions	×	×
	Alkalines	Caustic soda, caustic potash, calcium hydroxide, aqueous ammonia, sodium carbonate, etc.	Alkaline degreasing solution for metals	×	○
	Inorganic salts	Sodium sulfide, potassium nitrate, potassium bichromate, sodium sulfate, etc.		×	○
Organic compounds	Aromatic hydrocarbons	Benzene, toluene, xylene, ethyl benzene, styrene, etc.	Contained in paint thinner (benzene, toluene, xylene)	×	×
	Chlorinated Aliphatic Hydrocarbons	Methyl chloride, ethylene chloride, methylene chloride, acetylene chloride, chloroform, trichloroethylene, perchlene, carbon tetrachloride	Organic Solvent-Based Washing Solution for Metals (Trichloroethylene, Tetrachloroethylene, Carbon Tetrachloride, etc.)	×	○
	Chlorinated Aromatic Hydrocarbons	Chlorobenzene, dichlorobenzene, benzene hexachloride (B/H/C), etc.	Agricultural chemicals	×	○
	Petroleum components	Solvent, naphtha, gasoline		×	○
	Alcohols	Methanol, ethanol, cyclohexanol, benzyl alcohol	Used as an antifreeze agent	×	×
	Phenol	Carbolic acid, cresol, naphthol, etc.	Disinfectant solution	×	×
	Ethers	Methyl ether, methyl ethyl ether, ethyl ether	Brake fluid additive	×	○
	Ketones	Acetone, methyl ethyl ketone, cyclohexanone, acetophenone, etc.		×	×
	Carboxylic acids	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 preventative additives used as plasticizers for synthetic resins	×	○
Oxyacids	Glycolic acid, lactic acid, malic acid, citric acid, tartaric acid		×	×	
Nitro compounds	Nitromethane, nitroethane, nitroethylene, nitrobenzene, etc.		×	○	
Amines	Methylamine, dimethylamine, ethylamine, aniline, acetanilide, etc.	Brake fluid additive	×	×	
Nitriles	Acetonitrile, acrylonitrile, benzonitrile, acetoneitrile, etc.	Raw material for nitrile rubber	×	○	

○symbol: Usable, × symbol: Not usable

For precautions during mounting, installation, adjustment, use and maintenance, refer to the CKD Components Product Site (<https://www.ckd.co.jp/kiki/en/>) → "Model No. → Instruction Manual"

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

Ending

Ending