

# Large Main Line Filter AF3000 (regular)

## ■ Main Line Components / Main Line Filters

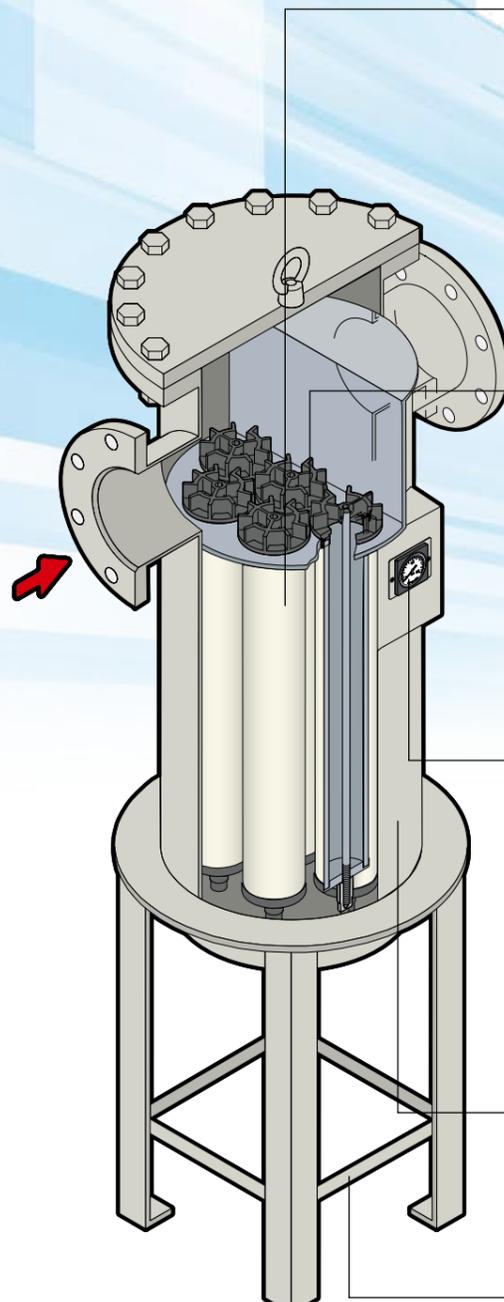


### C O N T E N T S

Large Main Line Filter Unit - Recommended system configuration	240
Product Introduction	244
● Pre-filter (AF3000P)	246
● Oil removing filter (AF3000S)	250
● High-performance oil removing filter (AF3000M)	254
● Activated carbon filter (AF3000X)	258
⚠ Safety Precautions	262

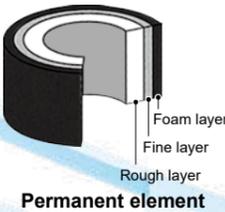
## Energy Savings and Long Life

40 models in 4 series are available to select from 16 to 256 m<sup>3</sup>/min (ANR).



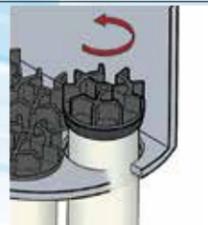
### Contributes to energy savings

The 3 μm element employs CKD's unique chemical fiber permanent element structure. This structure minimizes clogging and reduces pressure loss.



### Easy element replacement

The screw-in element design simplifies element replacement. The stainless steel screws eliminate seizing due to rust.



### Easy daily checks

Equipped with a front-facing differential pressure gauge. Easy-to-read during daily checks. This differential pressure gauge can be used to determine when to replace the element.



### Simplified equipment design

All series share the same dimensions and port sizes for the same flow rate, simplifying design and installation.

### Easy installation

Mounting feet are included as standard. No special equipment is needed for installation. (Excluding AF3016). Mounting feet can be removed if not needed.

## Diverse lineup

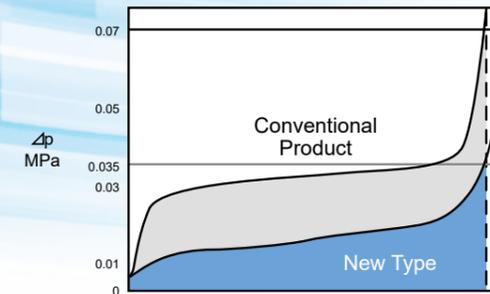
40 models are available in four types, each with 10 flow rate options. The ideal model can be selected based on the flow rate and quality of air.

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	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, and the S/M/X type is 0.01 MPa.

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

Element Service Life Curve



Element Replacement  
One year under normal operating conditions.

- 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.

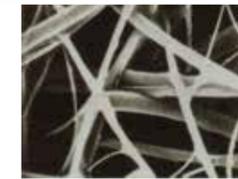


### A New Filter

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.

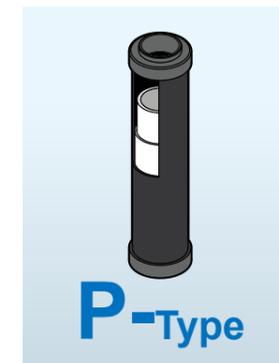


The element's high porosity (96%) contributes to low pressure loss and long life.

## AF3000 Series Variations

### Removing water drops Solid Particle Removal

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



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

### Oil Mist Removal Solid Particle Removal

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, 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 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 Filters

# AF3000P Series

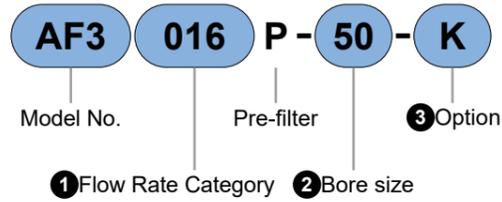
Suitable for large pre-filters.

● Processing air flow rate: 16 to 256 m<sup>3</sup>/min (ANR)

Circuit Diagram Symbol



## Model No. Notation



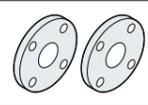
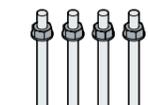
### ① Flow Rate Category

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	None
H	English Language Specifications
K	Companion flange included 
L	Foundation bolts and nuts included 
L1	Stainless steel foundation bolts and nuts included 
O	Outdoor specifications
X1	IN-OUT Reverse Direction
Y2	Product Photo

\*1: When ordering several options, indicate the required options in alphabetical order.  
 \*2: AF3032P to AF3256P are supported.  
 \*3: Viewed from the front, standard products have an air inlet on the left port, and 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-1226A)

● Design compatible with rechargeable battery manufacturing processes



\*Contact CKD for details.

## Specifications

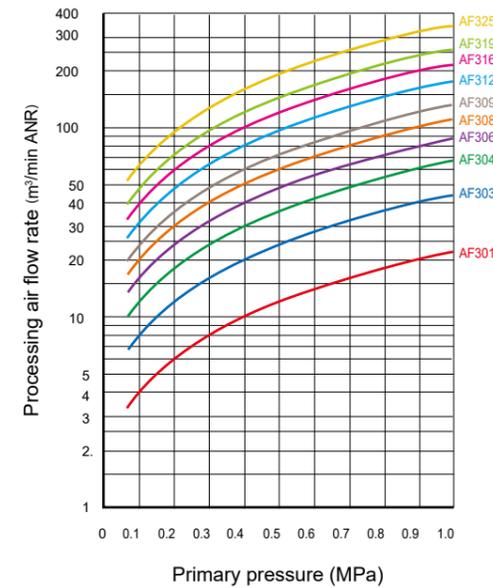
Item	AF3016 P-50	AF3032 P-80	AF3048 P-100	AF3064 P-100	AF3080 P-150	AF3096 P-150	AF3128 P-150	AF3160 P-200	AF3192 P-200	AF3256 P-200	
Processing air flow rate m <sup>3</sup> /min (ANR)	16	32	48	64	80	96	128	160	192	256	
Working fluid	Compressed air										
Working pressure MPa	0.07 to 1.0										
Proof pressure MPa	1.5										
Ambient temperature °C	5 to 60										
Degree of Filtration μm	3										
Pressure drop	Initial MPa	Within 0.005									
	Regular MPa	0.005 to 0.02									
	Element Replacement MPa	0.07									
Element quantity	1	2	3	4	5	6	8	10	12	16	
Port size (*1) Flange	2B	3B	4B	4B	6B	6B	6B	8B	8B	8B	
Weight kg	45	95	98	130	160	190	250	260	300	350	
Differential pressure gauge	Standard (model No.: GA5102)										
Condensate Drains	Standard (model No.: 5100-4C)										

\*1: Flange is 10K flange.

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

## Flow Characteristics



### Note on selection

- Never use model numbers found to be below the point of intersection of the selection conditions.
- When the point of intersection found according to selecting conditions and flow characteristics curve are on the same line, the time to reach the service life will be shorter, so please select a one rank higher model No.
- 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.

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

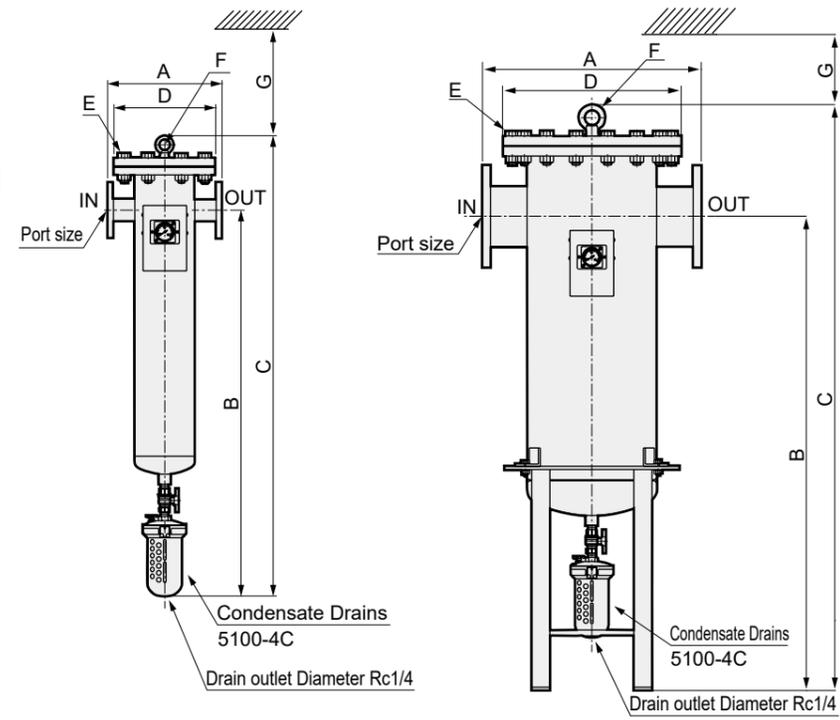
Drain discharger, etc.

Ending

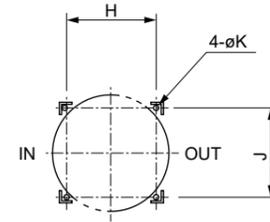
## Dimensions

●AF3016P

●AF3032P to 3256P



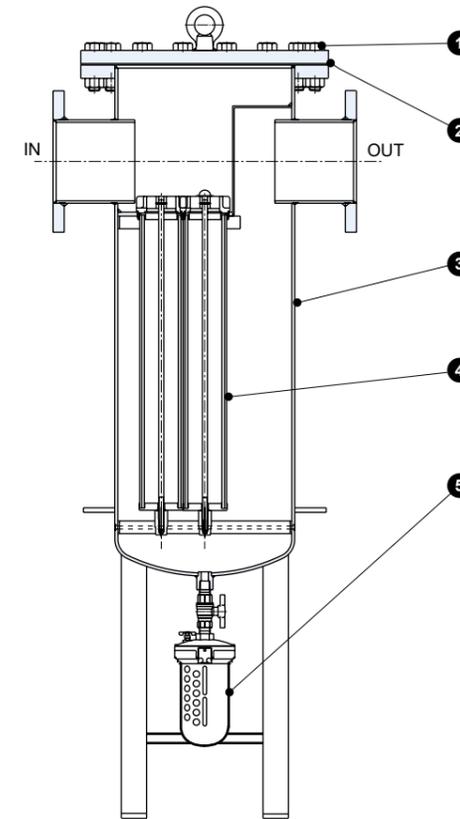
●Installation legs foundation bolt hole dimension



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

Model No.	H	J	K
AF3032P-80	210	210	ø15
AF3048P-100	210	210	ø15
AF3064P-100	250	250	ø15
AF3080P-150	280	280	ø15
AF3096P-150	320	320	ø15
AF3128P-150	350	350	ø15
AF3160P-200	350	350	ø15
AF3192P-200	400	400	ø15
AF3256P-200	450	450	ø15

## Internal Structure Diagram / Material



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

The drain discharger and stop valve are attached.

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

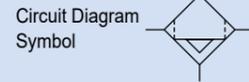


Micro-mist separator

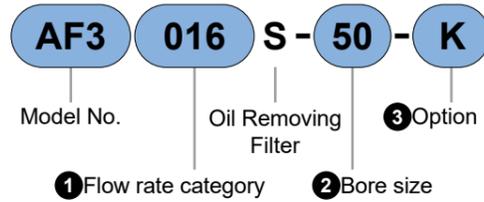
# AF3000S Series

Protects expensive pneumatic components

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



### Model No. Notation



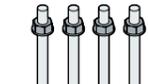
#### ① Flow rate Category

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

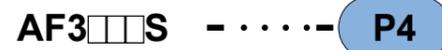
Code	Description
Blank	None
H	English Language Specifications
K	Companion flange included 
L	Foundation bolts and nuts included 
L1	Stainless steel foundation bolts and nuts included 
O	Outdoor specifications
X1	IN-OUT Reverse Direction
Y2	Product Photo

\*1: When ordering several options, indicate the required options in alphabetical order.  
 \*2: AF3032S to AF3256S are supported.  
 \*3: Viewed from the front, standard products have an air inlet on the left port, and 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

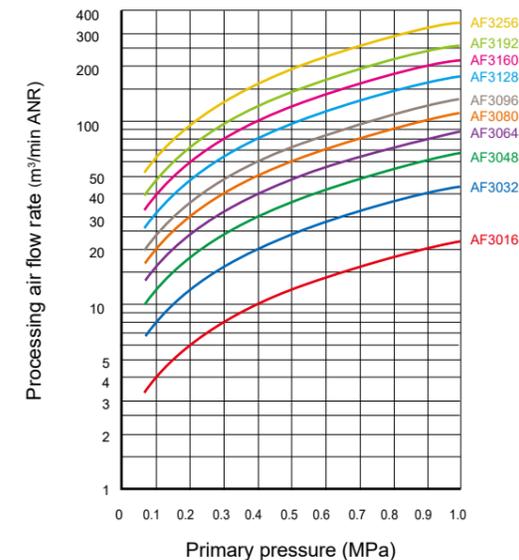
Item	AF3016 S-50	AF3032 S-80	AF3048 S-100	AF3064 S-100	AF3080 S-150	AF3096 S-150	AF3128 S-150	AF3160 S-200	AF3192 S-200	AF3256 S-200
Processing air flow rate m <sup>3</sup> /min (ANR)	16	32	48	64	80	96	128	160	192	256
Working fluid	Compressed air									
Working pressure MPa	0.07 to 1.0									
Proof 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	Within 0.01								
	Regular MPa	0.01 to 0.03								
	Element Replacement MPa	0.07								
Element quantity	1	2	3	4	5	6	8	10	12	16
Port size (*1) Flange	2B	3B	4B	4B	6B	6B	6B	8B	8B	8B
Weight kg	45	95	98	130	160	190	250	260	300	350
Differential pressure gauge	Standard (model No.: GA5102)									
Condensate Drains	Standard (model No.: 5100-4C)									

\*1: Flange is 10K flange.

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

### Flow Characteristics



#### Note on selection

- Never use model numbers found to be below the point of intersection of the selection conditions.
- When the point of intersection found according to selecting conditions and flow characteristics curve are on the same line, the time to reach the service life will be shorter, so please select a one rank higher model No.
- The oil removing ratio drops if the inlet air temperature is 30°C and over. Maintain the inlet air temperature at 30°C or less.
- 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.

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.

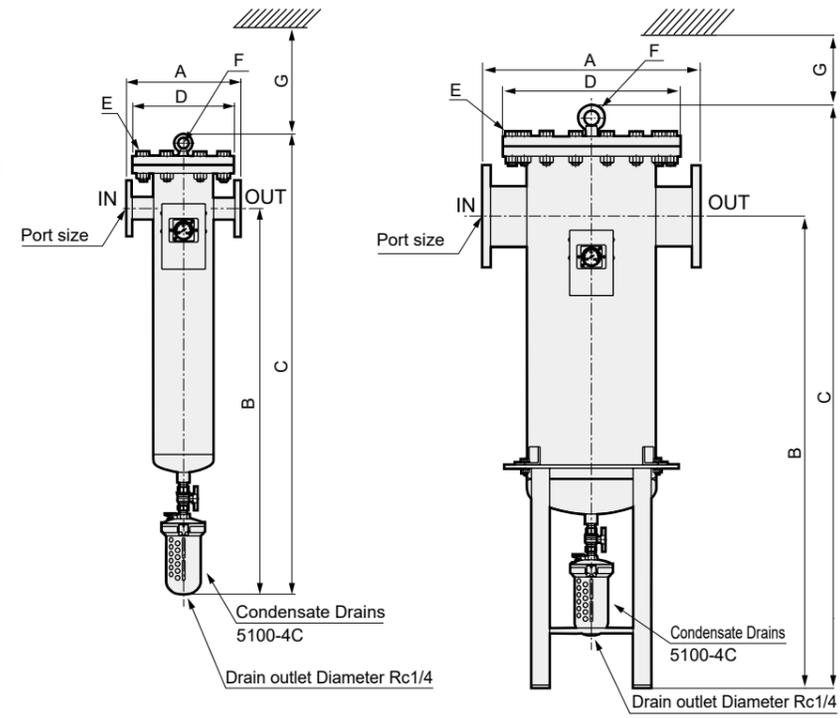
Ending

Ending

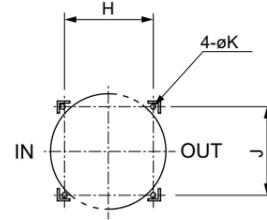
## Dimensions

●AF3016S

●AF3032S to 3256S



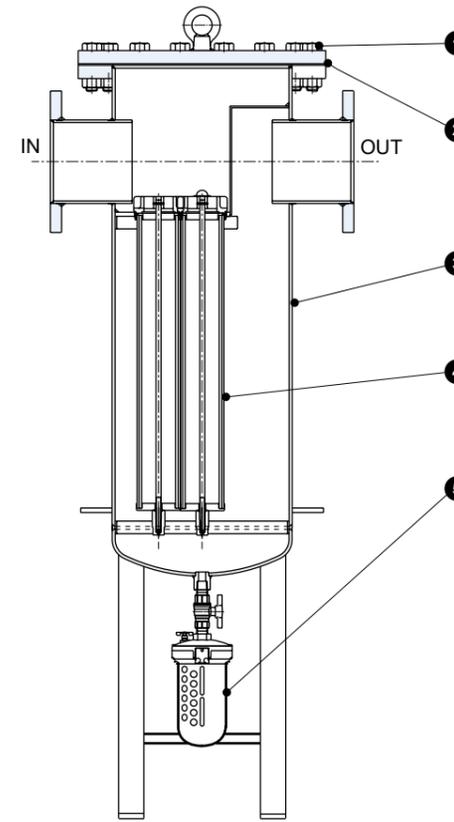
●Installation legs foundation bolt hole dimension



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

Model No.	H	J	K
AF3032S-80	210	210	ø15
AF3048S-100	210	210	ø15
AF3064S-100	250	250	ø15
AF3080S-150	280	280	ø15
AF3096S-150	320	320	ø15
AF3128S-150	350	350	ø15
AF3160S-200	350	350	ø15
AF3192S-200	400	400	ø15
AF3256S-200	450	450	ø15

## Internal Structure Diagram / Material



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

The drain discharger and stop valve are attached.

\*Consumable parts

Main Line Components

Refrigeration Dryers

Desiccant Dryers

High Polymer Membrane Dryers

Main Line Filters

Drain discharger, etc.

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.



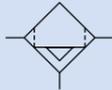
Micro-mist separator

# AF3000M Series

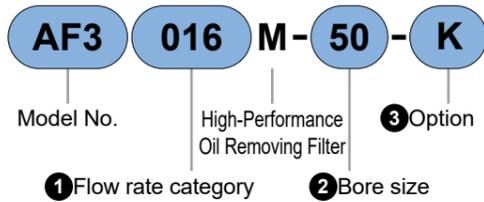
For Pneumatic Circuits Which Prohibit Passage of Oil.

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

Circuit  
Diagram  
Symbol



## Model No. Notation



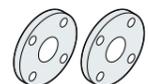
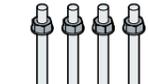
### 1 Flow rate Category

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	None
H	English Language Specifications
K	Companion flange included 
L	Foundation bolts and nuts included 
L1	Stainless steel foundation bolts and nuts included 
O	Outdoor specifications
X1	IN-OUT Reverse Direction
Y2	Product Photo

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

\*2: AF3032M to AF3256M are supported.

\*3: Viewed from the front, standard products have an air inlet on the left port, and 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

**AF3□□□M - . . . . . P4**

\*Contact CKD for details.

## Specifications

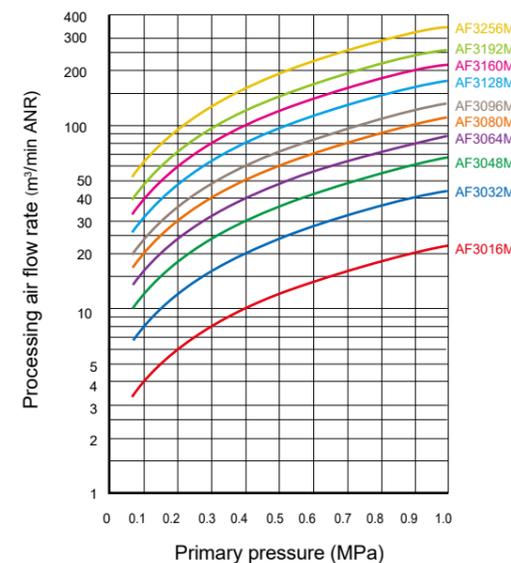
Item	AF3016 M-50	AF3032 M-80	AF3048 M-100	AF3064 M-100	AF3080 M-150	AF3096 M-150	AF3128 M-150	AF3160 M-200	AF3192 M-200	AF3256 M-200
Processing air flow rate m <sup>3</sup> /min (ANR)	16	32	48	64	80	96	128	160	192	256
Working fluid	Compressed air									
Working pressure MPa	0.07 to 1.0									
Proof 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									
	Regular MPa									
	Element Replacement MPa									
Element quantity	1	2	3	4	5	6	8	10	12	16
Port size (*1) Flange	2B	3B	4B	4B	6B	6B	6B	8B	8B	8B
Weight kg	45	95	98	130	160	190	250	260	300	350
Differential pressure gauge	Standard (model No.: GA5102)									
Condensate Drains	Standard (model No.: 5100-4C)									

\*1: Flange is 10K flange.

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

## Flow Characteristics



### Note on selection

- Never use model numbers found to be below the point of intersection of the selection conditions.
- When the point of intersection found according to selecting conditions and flow characteristics curve are on the same line, the time to reach the service life will be shorter, so please select a one rank higher model No.
- The oil removing ratio drops if the inlet air temperature is 30°C and over. Maintain the inlet air temperature at 30°C or less.
- 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.

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

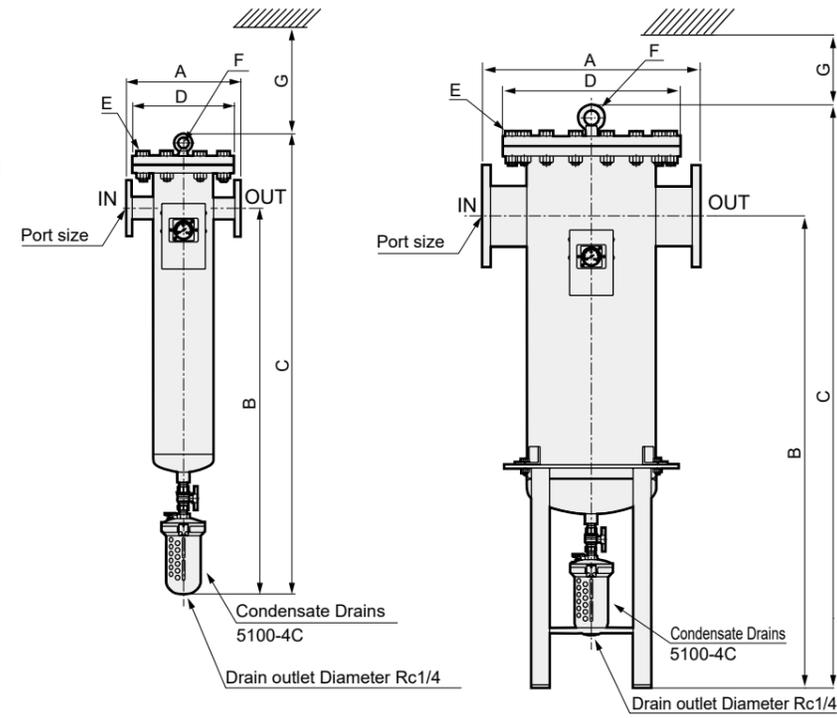
Ending

## Dimensions

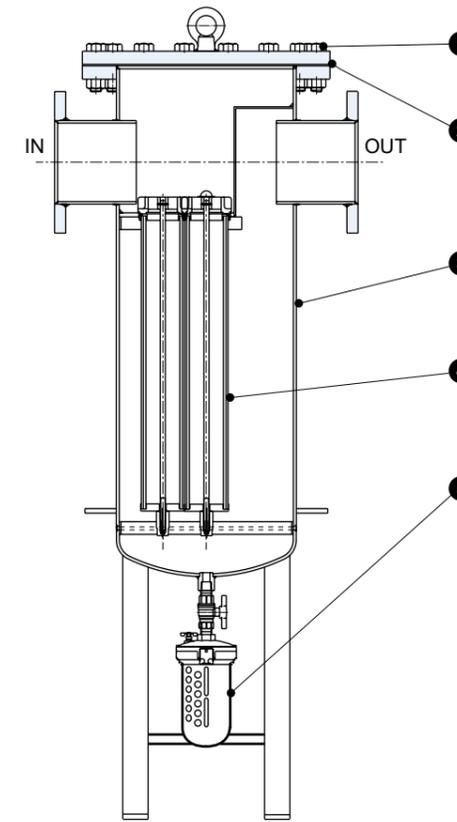
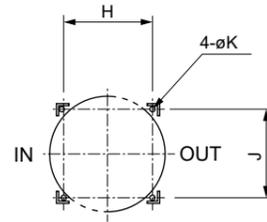
## Internal Structure Diagram / Material

●AF3016M

●AF3032M to 3256M



●Installation legs foundation bolt hole dimension



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

The drain discharger and stop valve are attached.

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

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



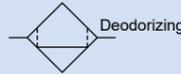
Micro-mist separator

# AF3000X Series

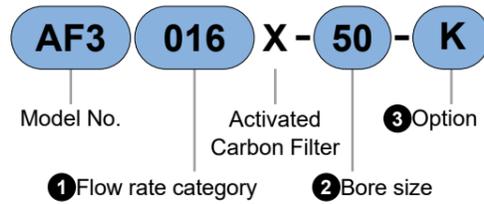
For pneumatic circuits which prohibit passage of odors

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

Circuit  
Diagram  
Symbol



## Model No. Notation



Note: Unit performance may not be attained if used at less than the selected pressure.  
Always select the model No. for the working pressure.

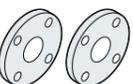
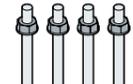
### 1 Flow rate Category

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	None
H	English Language Specifications
K	Companion flange included 
L	Foundation bolts and nuts included 
L1	Stainless steel foundation bolts and nuts included 
O	Outdoor specifications
X1	IN-OUT Reverse Direction
Y2	Product Photo

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

\*2: AF3032X to AF3256X are supported.

\*3: Viewed from the front, standard products have an air inlet on the left port, and 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

Item	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
Processing air flow rate m <sup>3</sup> /min (ANR)	16	32	48	64	80	96	128	160	192	256
Working fluid	Compressed air									
Working pressure MPa	0.07 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)									
Pressure drop MPa	Within 0.01									
Element quantity	1	2	3	4	5	6	8	10	12	16
Port size (*1) Flange	2B	3B	4B	4B	6B	6B	6B	8B	8B	8B
Weight kg	45	95	98	130	160	190	250	260	300	350
Differential pressure gauge	Standard (model No.: GA5102)									
Condensate Drains	None									

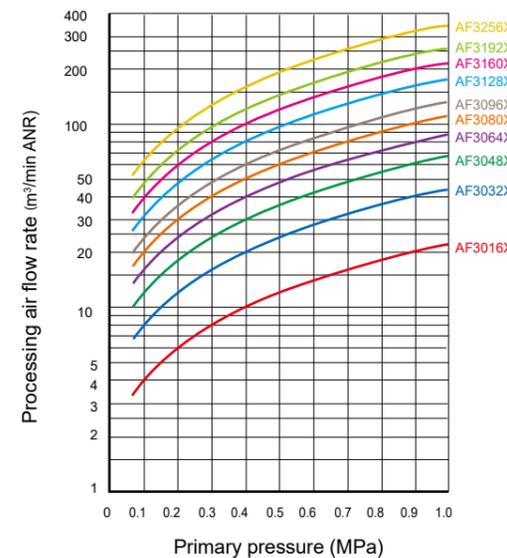
\*1: Flange is 10K flange.

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

## Flow Characteristics

Be sure to use the AF3000M type as a pre-filter.



### Note on selection

- Never use model numbers found to be below the point of intersection of the selection conditions.
- When the point of intersection found according to selecting conditions and flow characteristics curve are on the same line, the time to reach the service life will be shorter, so please select a one rank higher model No.
- The oil removing ratio drops if the inlet air temperature is 30°C and over. Maintain the inlet air temperature at 30°C or less.
- 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.

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

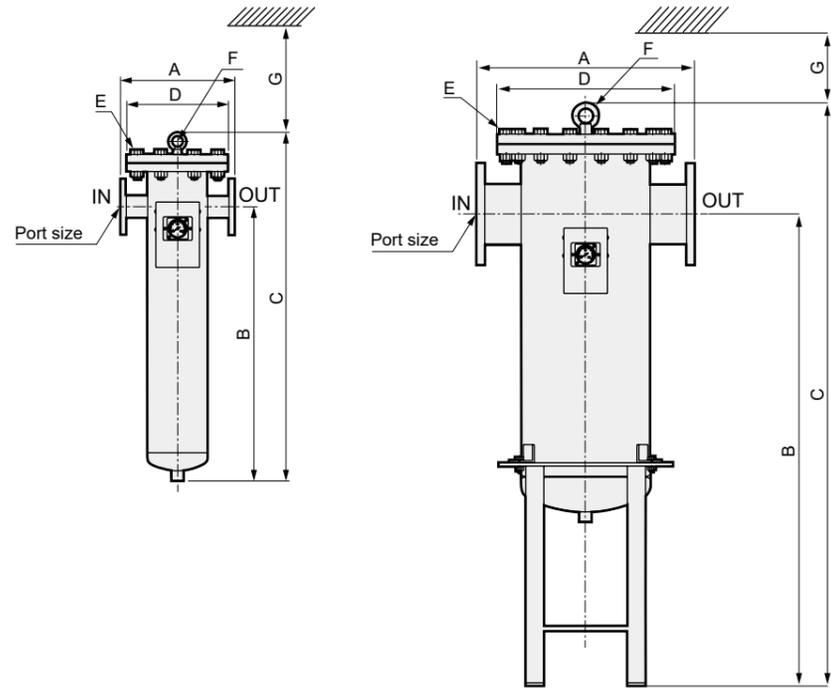
Ending

## Dimensions

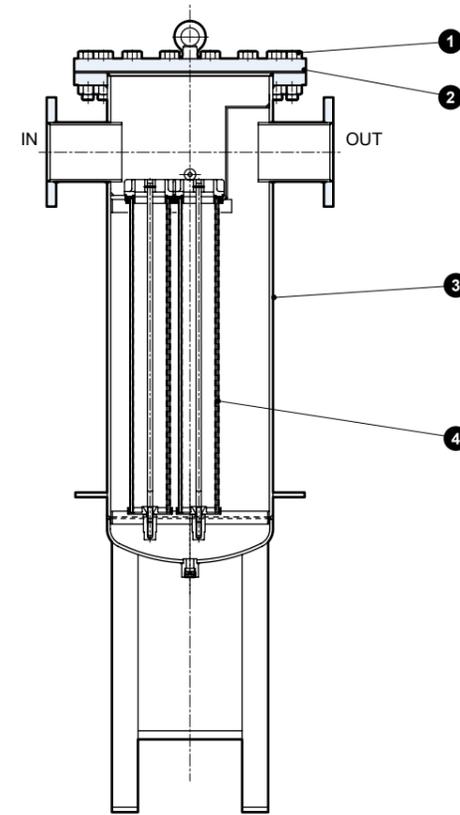
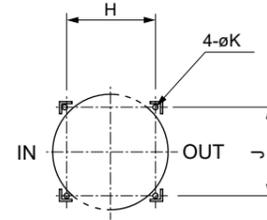
## Internal Structure Diagram / Material

●AF3016X

●AF3032X to 3256X



●Installation legs foundation bolt hole dimension



\*Consumable parts

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

Model No.	Port size	A	B	C	D	E	F	G
AF3016X-50	Flange 2B	315	755	960	280	8-M20×70	M12	600
AF3032X-80	Flange 3B	500	1255	1495	400	12-M22×80	M12	600
AF3048X-100	Flange 4B	500	1255	1495	400	12-M22×80	M12	600
AF3064X-100	Flange 4B	550	1270	1522	445	16-M22×80	M16	600
AF3080X-150	Flange 6B	600	1300	1606	490	16-M22×80	M20	600
AF3096X-150	Flange 6B	650	1320	1630	560	16-M24×90	M20	600
AF3128X-150	Flange 6B	700	1350	1693	620	20-M24×90	M20	600
AF3160X-200	Flange 8B	700	1350	1693	620	20-M24×90	M20	600
AF3192X-200	Flange 8B	750	1360	1709	675	20-M24×100	M20	600
AF3256X-200	Flange 8B	850	1400	1786	745	20-M30×110	M24	600

Model No.	H	J	K
AF3032X-80	210	210	φ15
AF3048X-100	210	210	φ15
AF3064X-100	250	250	φ15
AF3080X-150	280	280	φ15
AF3096X-150	320	320	φ15
AF3128X-150	350	350	φ15
AF3160X-200	350	350	φ15
AF3192X-200	400	400	φ15
AF3256X-200	450	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



# Safety Precautions

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

Large main line filter AF3000 Series

## Manufacturer's Disclaimer

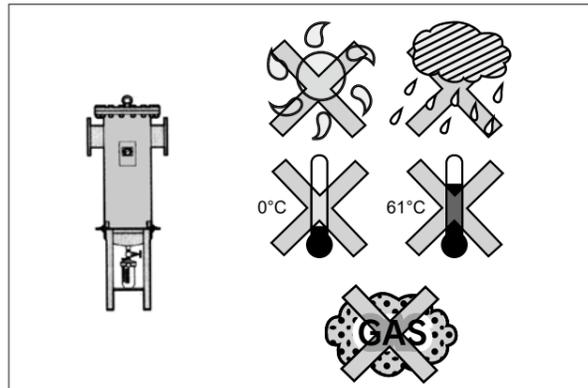
### WARNING

- 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 in locations where there is a risk of freezing. 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.
- 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 265)" is recommended.

### 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 No. AF3032 to 3256 have a Class 2 pressure vessel pressure proof certificate. This certificate must be kept in safe-keeping while using this product. (Labor Standards Supervision Officenotification to is not required.)

- The air filter life is spent when the pressure drops to 0.07 MPa or after one year of use, whichever comes first. Change all elements when the service life is reached.  
(X Series cannot control service life due to the differential pressure. Therefore, replace the filter after 1,000 hours of use or when the deodorizing effect is lost.)



0.07 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, trichlene, 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, acetoisonitrile, 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