

Main Line Filter AF6000P/S/M/X Series



Supporting clean air

Providing total clean air specifications from refrigeration dryer to filter

Large

Differential pressure gauge included (S, M types)
Differential pressure check.

Stainless steel vessel incorporated
Clean air is supplied without rust forming.

Various elements are available
Best suited as a pre-filter and for the elimination of oil and odors. Select an element type that suits your usage.

Housing anti-drop mechanism
The anti-drop mechanism prevents the housing from falling when replacing the element. Change the element by yourself.

Medium *New*

Aluminum housing

AF6000 Series

Solid particle removal

For air dryer pre-filter

* Removes particles 5 μ m or larger



P Type

Oil mist removal Solid particle removal

Protect your expensive air compressor

* Removes particles 1 μ m or larger



S Type

High-performance oil mist and solids removal

Suitable for pneumatic pressure circuits which are susceptible to oil

* Removes particles 0.01 μ m or larger
* Secondary side oil concentration
Removes oil up to 0.01mg/m³ (at 20°C)



M Type

Oil vapor removal Odor removal

Suitable for pneumatic pressure circuits which are susceptible to odors

* Absorption with active carbon fibers
* Secondary side oil concentration
Removes vaporous oil mist and odors up to 0.003mg/m³ (at 20°C)



X Type

AF6000 Series

Specifications

●Medium

Model No.	AF6004□-25	AF6007□-40	AF6010□-40	AF6013□-50	AF6020□-50	
Air processing capacity	m ³ /min ^{(*)2}	3.9	6.6	10.6	13.8	20.0
Working fluid	Compressed air					
Working pressure	MPa	0.05 to 1.0		0.1 to 1.0		
Ambient temperature	°C	5 to 60				
Inlet air temperature	°C	5 to 60				
Proof pressure	MPa	1.5				
Inlet air temperature	Rc	1	1 ¹ / ₂	1 ¹ / ₂	2	2
Weight	kg	2.6	5	6	6.5	9
Differential pressure gauge	Standard (S and M type)					
Drain discharger	Integrated (Excluding X type)			DT3000-15-W (Excluding X type)		

Series name is indicated in □.

●Large

Model No.	AF6027□-65	AF6033□-80	AF6039□-80	AF6050□-100	AF6057□-100	AF6075□-100	
Air processing capacity	m ³ /min ^{(*)2}	29.0	35.0	41.0	53.0	61.0	80.0
Working fluid	Compressed air						
Working pressure	MPa	0.07 to 1.0					
Ambient temperature	°C	5 to 60					
Inlet air temperature	°C	5 to 60					
Proof pressure	MPa	1.47					
Weight	Kg	26 (AF6027X:24)	28 (AF6033X:26)	28 (AF6039X:26)	48 (AF6050X:46)	48 (AF6057X:46)	95 (AF6075X:93)

Series name is indicated in □.

Item		P type	S type	M type	X type		
Performance	Inlet air pressure	MPa	0.7				
	Inlet air dew point	°C	—	—	Pressure dew point 10	Pressure dew point 10	
	Inlet air dew point ^{(*)6}	°C	—	—	With no water in filtration	Pressure dew point 10	
	Inlet oil concentration	mg/m ³	—	3	3	0.01	
	Inlet oil concentration ^{(*)6}	mg/m ³	—	—	3	0.01	
	Filtration rating	μm	5	1	0.01	Absorbed with active carbon filters	
	Secondary side oil concentration	mg/m ³	—	—	0.01	0.003	
	Pressure drop	Initial ^{(*)8}	MPa	0.006	0.006	0.01	0.015 (0.01)
	Element replacement time	Pressure drop	MPa	0.02	0.035	0.035	—
		Service life	One year				

*1: Air processing capacity is the atmospheric pressure conversion value where inlet pressure is 0.7 MPa.

*2: Value at 32°C, atmospheric pressure and relative humidity of 75%

*3: The secondary side oil concentration is the value when the inlet air temperature is 20°C.

*4: The P/S/M type element must be replaced when the pressure drops or the service life is reached, whichever comes first.

*5: Replace the X type when the service life is reached or when the deodorizing effect is lost.

*6: The conditions for AF6027 to AF6075 are shown.

*7: The pressure drop is 0.008 MPa for AF6013P/S, 0.016 MPa for AF6020P/S, and 0.02 MPa for AF6020M/X.

*8: The value in () indicates the pressure drop of AF6027 to AF6075.

How to order

AF6 **027** **P** - **65**

A Flow rate

B Element type

C Port size

Code	Descriptions
A Flow rate	
004	3.9 m ³ /min
007	6.6 m ³ /min
010	10.6 m ³ /min
013	13.8 m ³ /min
020	20 m ³ /min
027	29 m ³ /min
033	35 m ³ /min
039	41 m ³ /min
050	53 m ³ /min
057	61 m ³ /min
075	80 m ³ /min
B Element type	
P	P type (solid, water removing filter)
S	S type (solid removing filter)
M	M type (oil mist removing filter)
X	X type (deodorizing filter)
C Port size	
25	Rc1
40	Rc1 ¹ / ₂
50	Rc2
65	Flange 2 ¹ / ₂ B
80	Flange 3B
100	Flange 4B

Precautions for selection

The required performance may not be attained if using at less than the compatible pressure. Always select the model with the applicable working pressure.

Flow rate compensation coefficient

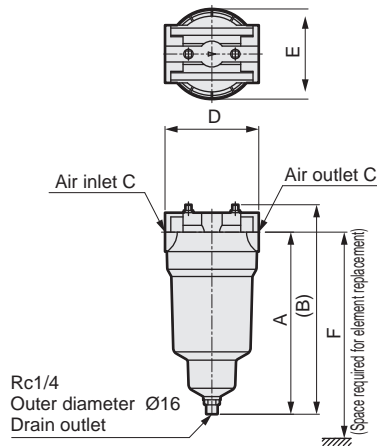
Pressure (MPa)	Auxiliary coefficient
0.05	0.19
0.07	0.22
0.10	0.25
0.20	0.38
0.30	0.49
0.40	0.62
0.50	0.75
0.60	0.87
0.70	1.00
0.80	1.06
0.90	1.12
1.00	1.17

If the inlet pressure is not 0.7 Mpa, multiply the applicable coefficient above with air processing low rate.

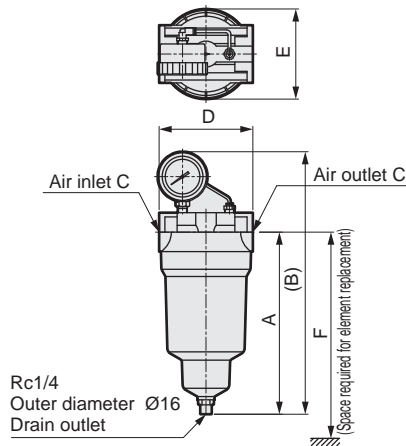
AF6000 Series

Dimensions

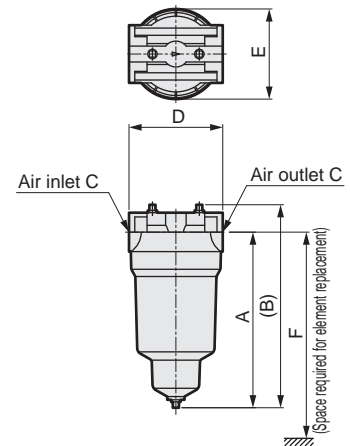
● AF6004P-25 to AF6010P-40



● AF6004S-25 to AF6010S-40
AF6004M-25 to AF6010M-40

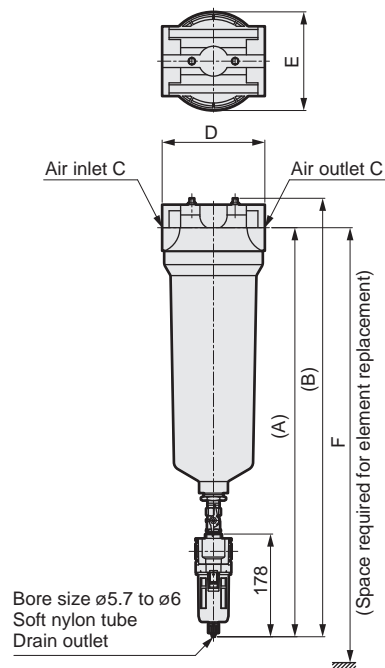


● AF6004X-25 to AF6010X-40

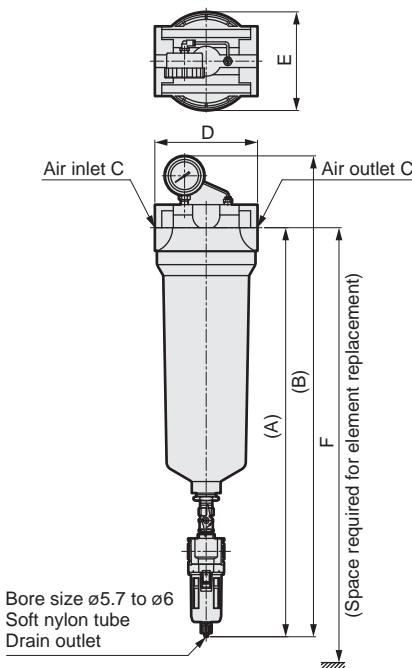


Model No.	A	B	C	D	E	F
AF6004P-25	252.5	290.5	Rc1	130	125	At least 400
AF6004S/M-25	252.5	364	Rc1	130	125	At least 400
AF6004X-25	243.5	281.5	Rc1	130	125	At least 400
AF6007P-40	320.5	371.5	Rc1½	178	171	At least 710
AF6007S/M-40	320.5	445	Rc1½	178	171	At least 710
AF6007X-40	311.5	362.5	Rc1½	178	171	At least 710
AF6010P-40	428.5	479.5	Rc1½	178	171	At least 920
AF6010S/M-40	428.5	553	Rc1½	178	171	At least 920
AF6010X-40	419.5	470.5	Rc1½	178	171	At least 920

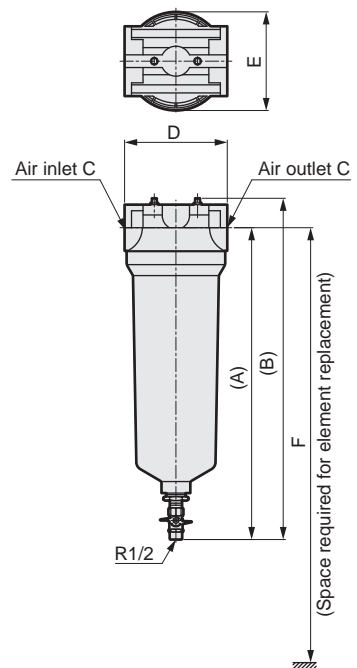
● AF6013P-50 to AF6020P-50



● AF6013S-50 to AF6020S-50
AF6013M-50 to AF6020M-50



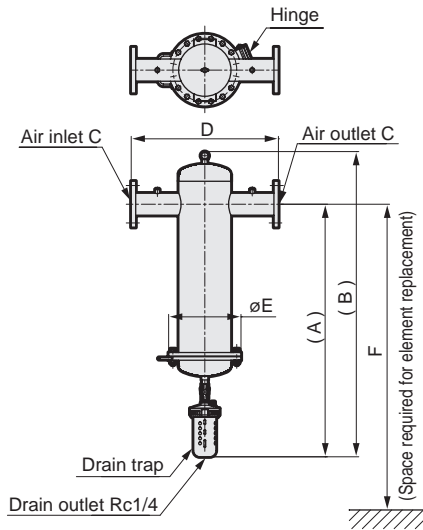
● AF6013X-50 to AF6020X-50



Model No.	A	B	C	D	E	F
AF6013P-50	709	760	Rc2	178	171	At least 1080
AF6013S/M-50	709	833	Rc2	178	171	At least 1080
AF6013X-50	540.5	591.5	Rc2	178	171	At least 1080
AF6020P-50	866	917	Rc2	178	171	At least 1400
AF6020S/M-50	866	990	Rc2	178	171	At least 1400
AF6020X-50	697.5	748.5	Rc2	178	171	At least 1400

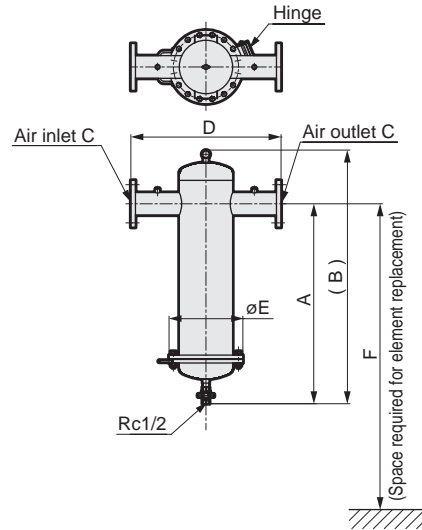
Dimensions

● AF6027P/S/M to AF6039P/S/M



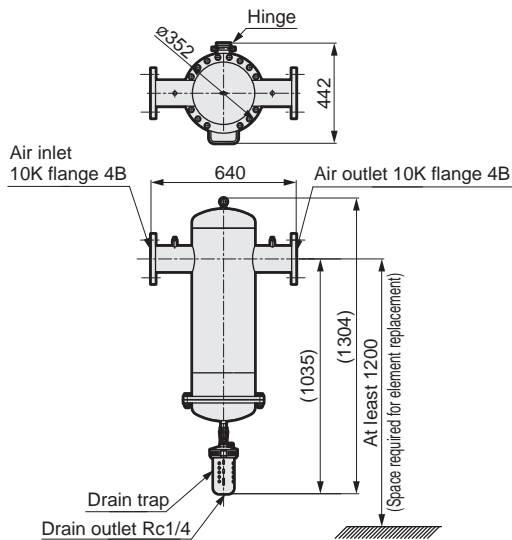
Model No.	A	B	C	D	E	F
AF6027P/S/M	855	1066	10K Flange 2½B	590	290	At least 1000
AF6033P/S/M AF6039P/S/M	1012	1223	10K Flange 3B	590	290	At least 1200

● AF6027X to AF6039X

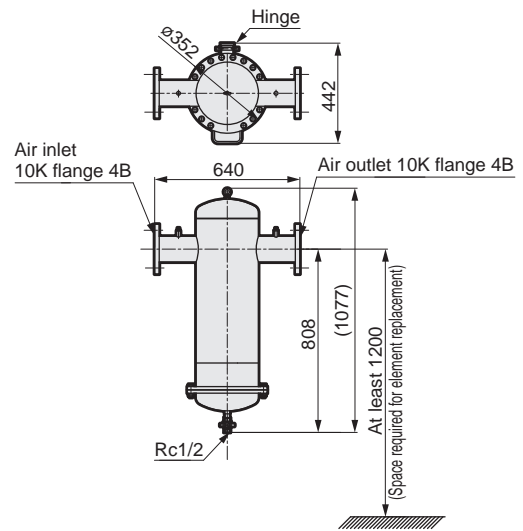


Model No.	A	B	C	D	E	F
AF6027X	628	839	10K Flange 2½B	590	290	At least 1000
AF6033X AF6039X	785	996	10K Flange 3B	590	290	At least 1200

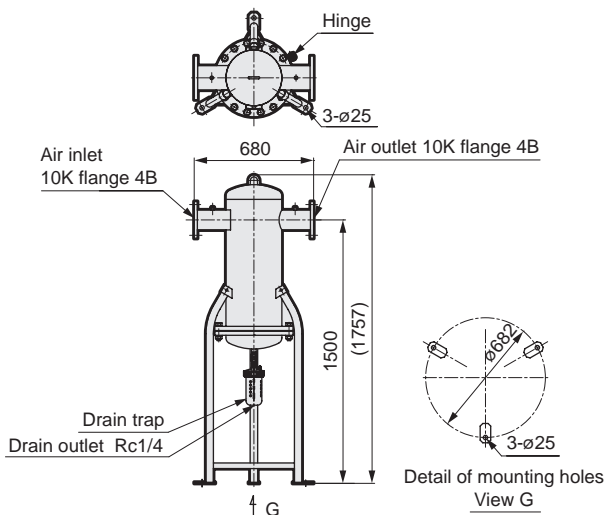
● AF6050P/S/M, AF6057P/S/M



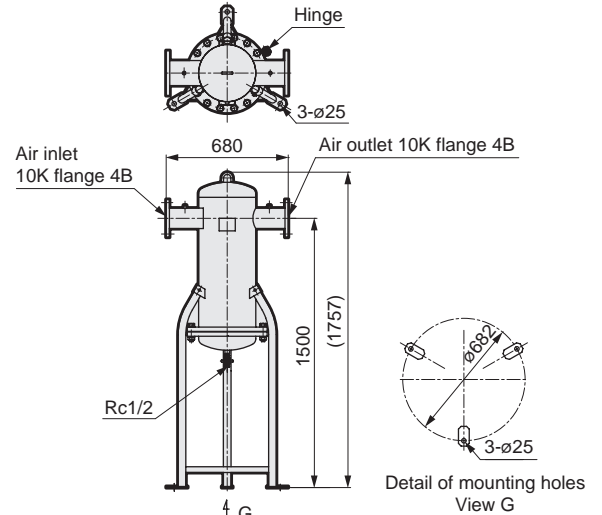
● AF6050X, AF6057X



● AF6075P/S/M



● AF6075X

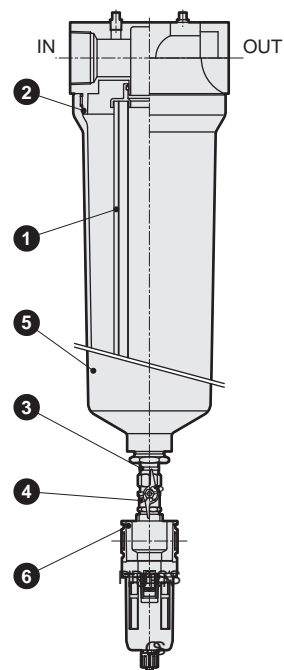
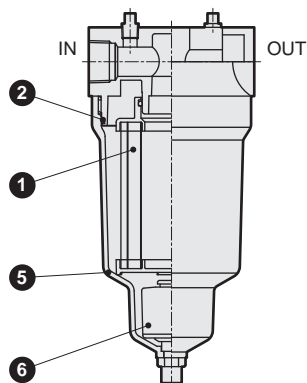


AF6000 Series

Internal structure and parts list

● AF6004P/S/M-25 to AF6010P/S/M-40

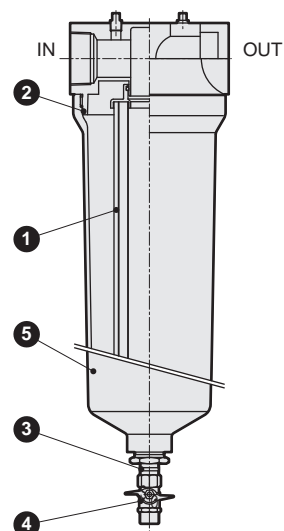
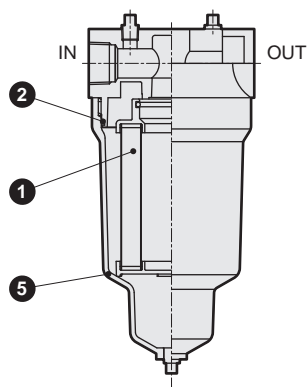
● AF6013P/S/M-50 to AF6020P/S/M-50



No.	Part name	Material
1	Element	—
2	O-ring	Nitrile rubber
3	Nipple	SUS304
4	Ball valve	C3771, PTFE, SUS, etc.
5	Housing	Aluminum
6	Drain discharger	—

● AF6004X-25 to AF6010X-40

● AF6013X-50 to AF6020X-50



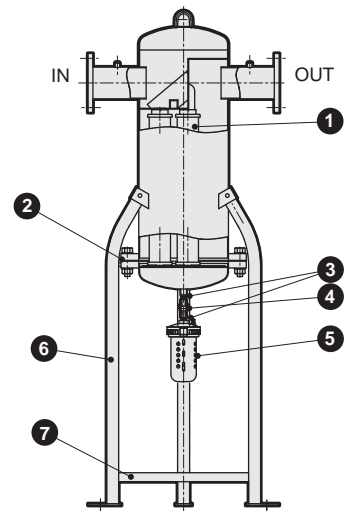
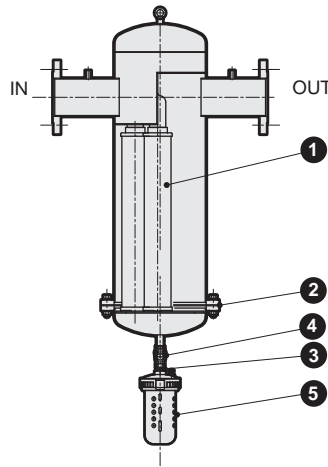
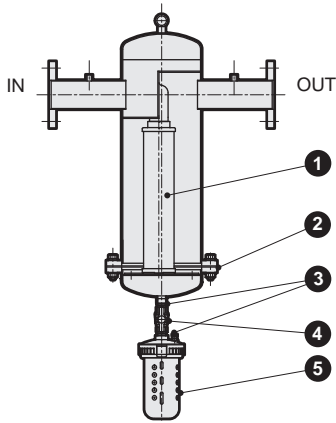
No.	Part name	Material
1	Element	—
2	O-ring	Nitrile rubber
3	Nipple	SUS304
4	Ball valve	C3771, PTFE, SUS, etc.
5	Housing	Aluminum

Internal structure and parts list

● AF6027P/S/M to AF6039P/S/M

● AF6050P/S/M, AF6057P/S/M

● AF6075P/S/M

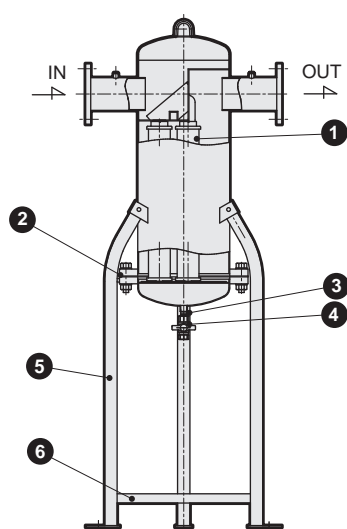
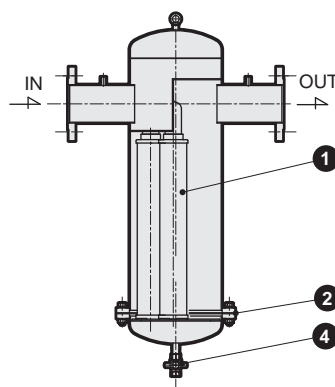
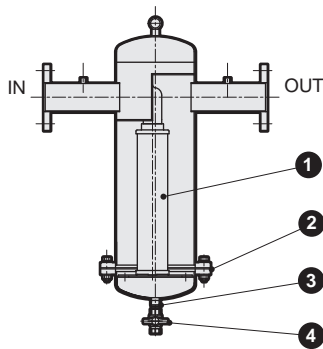


No.	Part name	Material
1	Element	—
2	Gasket	PTFE
3	Nipple	SUS304
4	Ball valve	C3771, etc.
5	Drain trap	5100-4C-FL445314
6	Leg	SGP
7	Leg support	SS400

● AF6027X to AF6039X

● AF6050X, AF6057X

● AF6075X



No.	Part name	Material
1	Element	—
2	Gasket	PTFE
3	Nipple	SUS304
4	Ball valve	C3771, etc.
5	Leg	SGP
6	Leg support	SS400



Pneumatic components (Main line unit)

Safety Precautions

Be sure to read this section before use.

Refer to the "Pneumatic, Vacuum and Auxiliary Components (CB-024SA)" catalog for general precautions.

Series/Product-specific cautions: Main line filter AF6000 Series

Manufacturer's Exemption of Liability

⚠ WARNING

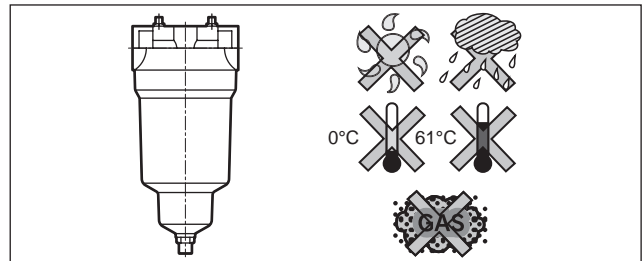
- The manufacturer cannot be held liable in the following cases:
 - In the case where there are serious errors in the operator's use.
 - Inappropriate modifications or repairs using nonstandard parts, made by the user.

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.
 - There is a risk of personal injury.
- Do not mount and use this device on transportation equipment such as vehicles or ships.
 - The internal devices could be damaged by vibration, etc.
- Avoid direct sunlight and rainwater. The resin parts, etc., could deteriorate and break.
- Do not use in locations with corrosive gases.
- Use this product within the operating ambient temperature.
- Do not use in locations at risk of freezing. The accumulated drainage could freeze and damage the product.
- Do not use in hazardous locations (possibly explosive atmospheres, etc.).
- We recommend keeping the inlet air temperature as low as possible. The oil removing rate will drop if the temperature is high.
- 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 this product in an environment in which the compressed air contains the following types of gases.
 - Sulfur dioxide/chlorine gas
 - Aromatic hydrocarbon compounds (For example, benzene, toluene, phenol, cyclohexane, etc.)
 - Chlorinated hydrocarbon compounds (For example, trichloroethylene, chloroform, etc.)
 - Ketones (for example, acetone, etc.)
 - Aldehydes (For example, formaldehyde or acetaldehyde, etc.)
 - Amines (For example, ethylamine, methylamine, etc.)
- Always set the air flow to within the working pressure range, and use treated air.
 - Failure to observe this may prevent proper removal of water, dust and oil.
- Install indoors.



Mounting, installation and adjustment

⚠ CAUTION

- Do not step onto the body.
- When piping, remove cutting oil and rust preventing agent, etc.
- Secure enough space for maintenance and inspection.
- Do not mount directly after a valve which opens/closes suddenly. Do not install this filter in a system where a reverse flow could occur or where impact could occur easily.
- Flush the drain piping with air blow before mounting to the main body to remove any foreign matter inside.
- Use a pipe with an inner diameter $\varnothing 5.7$ to 6.0 that is 5 m or less in length for the P, S or M types drain discharger piping. Do not use vertical piping. (in case of AF6013, AF6020).
No rising with an inner diameter of 10 mm or more and length of 2 m or less (in case of AF6004 to AF6010).

- As drainage is discharged with pressure, securely fix the piping at the drain port so that drainage does not splatter.
- When mounting a differential pressure gauge on the S or M types, check the high pressure side and low pressure side ports, and mount properly.
- Mount the bowl vertically facing downward. Failure to do so could cause drainage discharge faults. Lay the drain pipe so that it is not pressurized. Laying several pipes together or attaching a check valve will create a pressurized state. Do not lay the pipes in this state.
- Ensure that the product's weight can be sufficiently withstood when installing. Fix the inlet and outlet piping to the floor or ceiling with a holder or supporter, etc.
- When connecting pipes, make sure that the front and back pipes are straight.
- Do not apply excessive force on the connected pipes. Excessive force could deform or damage the connection port threads or the fitting.

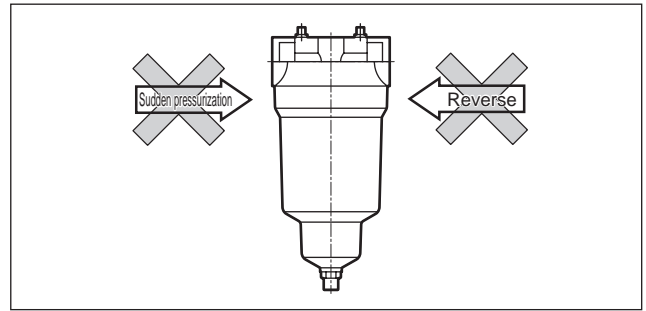
Use/maintenance

⚠ WARNING

- Before removing the bowl, stop the compressed air, completely discharge the pressure in the bowl and confirm that there is no residual pressure.

⚠ CAUTION

- Do not use reverse airflow. Do not pressurize suddenly. Otherwise, original performance may not be attained. There is a risk of damage.
- The drain discharger is an NO. The compatible compressor capacity is 0.75 kW or more (discharge flow rate 90 ℓ/min or more).
- The air filter service life is reached when the pressure drops, or one year of use.
Replace the element with a new one at the end of its life. (Replace the X type element when the service life is reached, or when the deodorizing effect is lost.)



- The drain discharger is air purged with the initially generated drainage until the pressure rises to 0.1 MPa.
- Close the stop valve and release the air in the drain discharger bowl before servicing the drain discharger for a drain fault, etc. Wash the drain unit with water, and then blow out all moisture with an air gun.
- Use a household neutral detergent to wash the bowl, and then rinse with water.
- The drain discharger bowl is made of polycarbonate. Avoid using the following chemicals or using the product in an atmosphere containing these chemicals.

● Chemical resistance of drain discharger plastic bowl

○: Available X: Not available

Types of chemicals	Categories of chemicals	Main products of chemicals	General applications	Polycarbonate	Nylon
Inorganic compound	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 compound	Aromatic hydrocarbons	Benzene, toluene, xylene, ethyl benzene, styrene, etc.	Contained in paint thinner (benzene, toluene, and xylene)	×	×
	Chlorinated aliphatic hydrocarbons	Methyl chloride, ethylene chloride, methylene chloride, acetylene 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		×	○
	Alcohols	Methyl alcohol, ethyl alcohol, cyclohexanol, benzyl alcohol	Used as antifreezing agent	×	×
	Phenol	Carbolic acid, cresol, naphthol, etc.	Disinfectant solution	×	×
	Ethers	Methyl ether, methyl ethyl ether, ethyl ether	Additive of brake oil	×	○
	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 coolant, rust preventing agent additive plasticizer for synthetic resin	×	○
	Oxyacids	Glycol acid, lactic acid, malic acid, citric acid, tartaric acid		×	×
	Nitro compounds	Nitromethane, nitroethane, nitroethylene, nitrobenzene, etc.		×	○
	Amines	Methylamine, dimethylamine, ethylamine, aniline, acetanilide, etc.	Additive of brake oil	×	×
	Nitriles	Acetonitrile, acrylonitrile, benzonitrile, acetoisonitrile, etc.	Raw material for nitrile rubber	×	○

Related products

Refrigeration dryer GTA Series

- High quality and reliability
Aluminum heat exchanger is designed to handle oil-free air
Higher temperatures are tolerated
- Energy saving
Power consumption is reduced by 50% with energy saving operation
- Secure control

Catalog No. CC-1199A



Super dryer SD/SU Series

- Freon-free dryer which does not cause environmental damage.
- No movable parts, so clean dry air can be supplied for long periods of time.
- Lighter, more compact, and easily built into installations.
- As it uses no electricity whatsoever, there is no noise or effects thereof.
- Ultra low dew point of max -60°C.
- Compatible with 75 kW grade large flow rate compressors.

Catalog No. CB-024SA





CKD Corporation

Website <https://www.ckd.co.jp/en/>

ASIA

喜開理(上海)機器有限公司

CKD(SHANGHAI)CORPORATION

●營業部/上海浦西事務所(SALES HEADQUARTERS / SHANGHAI PUXI OFFICE)
Room 601, 6th Floor, Yuanzhongkeyan Building, No. 1905
Hongmei Road, Xinhui District, Shanghai 200233, China
PHONE +86-21-61911888 FAX +86-21-60905356

- 上海浦東事務所(SHANGHAI PUDONG OFFICE)
- 寧波事務所(NINGBO OFFICE)
- 杭州事務所(HANGZHOU OFFICE)
- 無錫事務所(WUXI OFFICE)
- 昆山事務所(KUNSHAN OFFICE)
- 蘇州事務所(SUZHOU OFFICE)
- 南京事務所(NANJING OFFICE)
- 合肥事務所(HEFEI OFFICE)
- 成都事務所(CHENGDU OFFICE)
- 武漢事務所(WUHAN OFFICE)
- 鄭州事務所(ZHENGZHOU OFFICE)
- 長沙事務所(CHANGSHA OFFICE)
- 重慶事務所(CHONGQING OFFICE)
- 西安事務所(XIAN OFFICE)
- 廣州事務所(GUANGZHOU OFFICE)
- 中山事務所(ZHONGSHAN OFFICE)
- 深圳西事務所(WEST SHENZHEN OFFICE)
- 深圳東事務所(EAST SHENZHEN OFFICE)
- 東莞事務所(DONGGUAN OFFICE)
- 廈門事務所(XIAMEN OFFICE)
- 福州事務所(FUZHOU OFFICE)
- 瀋陽事務所(Shenyang OFFICE)
- 大連事務所(DALIAN OFFICE)
- 長春事務所(CHANGCHUN OFFICE)
- 北京事務所(BEIJING OFFICE)
- 天津事務所(TIANJIN OFFICE)
- 青島事務所(QINGDAO OFFICE)
- 濰坊事務所(WEIFANG OFFICE)
- 濟南事務所(JINAN OFFICE)
- 煙台事務所(YANTAI OFFICE)

CKD INDIA PRIVATE LTD.

- HEADQUARTERS
Unit No. 607, 6th Floor, Welldone Tech Park, Sector 48,
Sohna Road, Gurgaon-122018, Haryana, India
PHONE +91-124-418-8212
- BANGALORE OFFICE
- PUNE OFFICE

- ◻ 2-250 Uji, Komaki City, Aichi 485-8551, Japan
- ◻ PHONE +81-568-74-1338 FAX +81-568-77-3461

PT CKD TRADING INDONESIA

- HEAD OFFICE
Menara Bidakara 2, 18th Floor, Jl. Jend. Gatot Subroto Kav.
71-73, Pancoran, Jakarta 12870, Indonesia
PHONE +62-21-2938-6601 FAX +62-21-2906-9470
- MEDAN OFFICE
- BEKASI OFFICE
- KARAWANG OFFICE
- SEMARANG OFFICE
- SURABAYA OFFICE

CKD KOREA CORPORATION

- HEADQUARTERS
(3rd Floor), 44, Sinsu-ro, Mapo-gu, Seoul 04088, Korea
PHONE +82-2-783-5201~5203 FAX +82-2-783-5204
- 水原營業所(SUWON OFFICE)
- 天安營業所(CHEONGAN OFFICE)
- 蔚山營業所(ULSAN OFFICE)

M-CKD PRECISION SDN.BHD.

- HEAD OFFICE
Lot No.6, Jalan Modal 23/2, Seksyen 23, Kawasan MIEL,
Fasa 8, 40300 Shah Alam, Selangor Darul Ehsan, Malaysia
PHONE +60-3-5541-1468 FAX +60-3-5541-1533
- JOHOR BAHRU BRANCH OFFICE
- PENANG BRANCH OFFICE

CKD SINGAPORE PTE. LTD.

- No.33 Tannery Lane #04-01 Hoesteel Industrial
Building, Singapore 347789, Singapore
PHONE +65-67442623 FAX +65-67442486

CKD CORPORATION BRANCH OFFICE

- No.33 Tannery Lane #04-01 Hoesteel Industrial
Building, Singapore 347789, Singapore
PHONE +65-67447260 FAX +65-68421022

CKD THAI CORPORATION LTD.

- HEADQUARTERS
19th Floor, Smooth Life Tower, 44 North Sathorn Road,
Silom, Bangkok, Bangkok 10500, Thailand
PHONE +66-2-267-6300 FAX +66-2-267-6304-5
- NAVANAKORN OFFICE
- EASTERN SEABOARD OFFICE
- LAMPHUN OFFICE
- KORAT OFFICE
- AMATANAKORN OFFICE
- PRACHINBURI OFFICE
- SARABURI OFFICE

台灣喜開理股份有限公司

TAIWAN CKD CORPORATION

- HEADQUARTERS
16F-3, No. 7, Sec. 3, New Taipei Blvd., Xinzhuang Dist.,
New Taipei City 242, Taiwan
PHONE +886-2-8522-8198 FAX +886-2-8522-8128
- 新竹營業所(HSINCHU OFFICE)
- 台中營業所(TAICHUNG OFFICE)
- 台南營業所(TAINAN OFFICE)
- 高雄營業所(KAOHSIUNG OFFICE)

CKD VIETNAM ENGINEERING CO.,LTD.

- HEADQUARTERS
18th Floor, CMC Tower, Duy Tan Street, Cau Giay
District, Hanoi, Vietnam
PHONE +84-24-3795-7631 FAX +84-24-3795-7637
- HO CHI MINH OFFICE

EUROPE

CKD EUROPE B.V.

- HEADQUARTERS
Beechavenue 125A, 1119 RB Schiphol-Rijk, the Netherlands
PHONE +31-23-554-1490
- CKD EUROPE GERMANY OFFICE
- CKD EUROPE UK
- CKD EUROPE CZECH O.Z.

CKD CORPORATION EUROPE BRANCH

- Beechavenue 125A, 1119 RB Schiphol-Rijk, the Netherlands
PHONE +31-23-554-1490

NORTH AMERICA & LATIN AMERICA

CKD MEXICO, S. DE R.L. DE C.V.

- Cerrada la Noria No. 200 Int. A-01, Querétaro Park II,
Parque Industrial Querétaro, Santa Rosa Jáuregui,
Querétaro, C.P. 76220, México
PHONE +52-442-161-0624

CKD USA CORPORATION

- HEADQUARTERS
1605 Penny Lane, Schaumburg, IL 60173, USA
PHONE +1-847-648-4400 FAX +1-847-565-4923
- LEXINGTON OFFICE
- SAN ANTONIO OFFICE
- SAN JOSE OFFICE/ TECHNICAL CENTER
- DETROIT OFFICE
- BOSTON OFFICE

If the goods and their replicas, or the technology and software in this catalog are to be exported, laws require the exporter. To make sure they will never be used for the development or the manufacture of weapons for mass destruction.