

# Compressed Air Cleaning Filter Series

## AM□/AFF Series

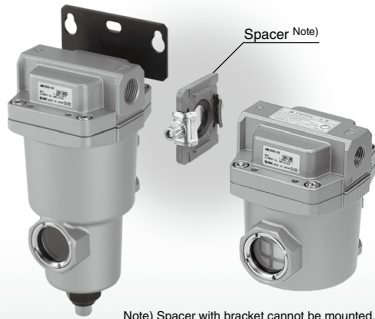
For Water Droplet, Solid/Oil Separation and Deodorization

### Modular connection, Space-saving design, Labor-saving in piping! (AMGE□, AFF□□, AM□□, AM□□□, AMH□□, AME□□, AMF□□)

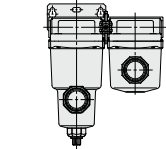
Uses the same spacer as the F.R.L. combination AC series.

Possible to make a modular connection with products such as AR series regulator.

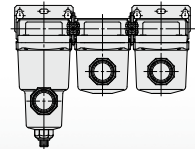
#### Modular connection example



Note) Spacer with bracket cannot be mounted.  
Use the attached bracket.



AMH + AME



AMH + AME + AMF

\* The C type is only suitable for modular connection.

### Options added (AMGE□, AFF□□, AM□□, AM□□□, AMH□□, AME□□, AMF□□)

Differential pressure switch

#### Addition: 5 types

1.6 MPa specifications

FKM specifications

With differential pressure switch (125 VAC, 30 VDC)

With differential pressure switch (30 VDC)

White vaseline specifications



### Compact, Lightweight (AME□□, AMF□□)

Height and weight reduced by up to 40%

New

Current



Water Droplet Separation

Water Separator/AMG

Solid/Oil Separation

Main Line Filter/AFF

Mist Separator/AM

Micro Mist Separator/AMD

Micro Mist Separator with Pre-filter/AMH

Super Mist Separator/AME

Deodorization

Odor Removal Filter/AMF

HAA  
HAW

AT

IDF  
IDU

IDF  
□FS

IDFA

IDFB

IDH

ID

IDG

IDK

AMG

AFF

AM

AMD

AMH

AME

AMF

ZFC

SF

SFD

LLB

AD□

GD

# AM□/AFF Series

## Water droplet separation

### Water Separator

Water droplet removal ratio: 99%



AMG150C to 550C

AMG650/850

## Large dust particle filtration, Oil droplet separation

### Main Line Filter

Nominal filtration rating: 3 μm  
[Filtration efficiency: 99%]



AFF2C to 22C

AFF37B/75B

AFF75A to 220A

## Dust filtration, Oil mist separation

### Mist Separator

Nominal filtration rating: 0.3 μm  
[Filtration efficiency: 99.9%]  
Oil mist density at outlet:  
Max. 1.0 mg/m<sup>3</sup> (ANR)  
[≈0.8 ppm]



AM150C to 550C AM650/850

## Dust filtration, Oil mist separation

### Micro Mist Separator

Nominal filtration rating: 0.01 μm  
[Filtration efficiency: 99.9%]  
Oil mist density at outlet:  
Max. 0.1 mg/m<sup>3</sup> (ANR)  
[≈0.08 ppm]



AM150C to 550C

AMD650, 850

Model		Rated flow L/min (ANR)	Port size	Note
AMG	150C	300	1/8, 1/4	Piping support type
	250C	750	1/4, 3/8	
	350C	1,500	3/8, 1/2	
	450C	2,200	1/2, 3/4	
	550C	3,700	3/4, 1	
	650	6,000	1, 1 1/2	
AFF	2C	300	1/8, 1/4	Piping support type
	4C	750	1/4, 3/8	
	8C	1,500	3/8, 1/2	
	11C	2,200	1/2, 3/4	
	22C	3,700	3/4, 1	
	37B	6,000	1, 1 1/2	Free standing type
	75B	12,000	1 1/2, 2	
	75A	12,400	50(2B) flange	
	125A	23,700	80(3B) flange	
	150A	30,000	100(4B) flange	
220A	45,000			
AM	150C	300	1/8, 1/4	Piping support type
	250C	750	1/4, 3/8	
	350C	1,500	3/8, 1/2	
	450C	2,200	1/2, 3/4	
	550C	3,700	3/4, 1	
	650	6,000	1, 1 1/2	
AMD	150C	200	1/8, 1/4	Piping support type
	250C	500	1/4, 3/8	
	350C	1,000	3/8, 1/2	
	450C	2,000	1/2, 3/4	
	550C	3,700	3/4, 1	
	650	6,000	1, 1 1/2	Free standing type
	850	12,000	1 1/2, 2	
	900	24,000	50(2B), 80(3B), 100(4B) flange	
	1000	40,000	100(4B), 150(6B) flange	

**Dust filtration, Oil mist separation**

**Micro Mist Separator with Pre-filter**

Built-in 0.3 μm pre-filter  
 The AM + AMD element have been integrated to achieve a space-saving design.  
 Nominal filtration rating: 0.01 μm  
 [Filtration efficiency: 99.9%]  
 Oil mist density at outlet:  
 Max. 0.1 mg/m<sup>3</sup> (ANR)  
 [=0.08 ppm]



AMH150C to 550C AMH650/850

**Dust filtration, Oil mist adsorption**

**Super Mist Separator**

Color change indicates when element is saturated.  
 Nominal filtration rating: 0.01 μm  
 [Filtration efficiency: 99.9%]  
 Oil mist density at outlet:  
 Max. 0.01 mg/m<sup>3</sup> (ANR)  
 [=0.008 ppm]  
 Cleanliness at outlet:  
 Not more than 100 particles of size 0.3 μm or larger/ft<sup>3</sup>  
 [35 particles or less/10 L (ANR)]



AME150C to 550C AME650/850

**Deodorization**

**Odor Removal Filter**

Nominal filtration rating: 0.01 μm  
 [Filtration efficiency: 99.9%]  
 Oil mist density at outlet:  
 Max. 0.004 mg/m<sup>3</sup> (ANR)  
 [=0.0032 ppm]



AMF150C to 550C

AMF650, 850

Model		Rated flow L/min (ANR)	Port size	Note
AMH	150C	200	1/8, 1/4	Piping support type
	250C	500	1/4, 3/8	
	350C	1,000	3/8, 1/2	
	450C	2,000	1/2, 3/4	
	550C	3,700	3/4, 1	
	650	6,000	1, 1 1/2	
	850	12,000	1 1/2, 2	
AME	150C	200	1/8, 1/4	Piping support type
	250C	500	1/4, 3/8	
	350C	1,000	3/8, 1/2	
	450C	2,000	1/2, 3/4	
	550C	3,700	3/4, 1	
	650	6,000	1, 1 1/2	
	850	12,000	1 1/2, 2	
AMF	150C	200	1/8, 1/4	Piping support type
	250C	500	1/4, 3/8	
	350C	1,000	3/8, 1/2	
	450C	2,000	1/2, 3/4	
	550C	3,700	3/4, 1	
	650	6,000	1, 1 1/2	
	850	12,000	1 1/2, 2	

- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- FS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG
- AFF
- AM
- AMD
- AMH
- AME
- AMF
- ZFC
- SF
- SFD
- LLB
- AD□
- GD

# Compressed Air Cleaning Filter Series

## AM□/AFF Series

	Series	Water removal rate	Nominal filtration rating	Oil mist density at outlet	Smell	Page
<b>Water Droplet Separation</b>	<b>AMG Series</b>	99%	—	—	—	P.207
<b>Solid/Oil Separation</b>	<b>AFF Series</b>	—	3 μm (Filtration efficiency: 99%)	—	—	P.215
	<b>AM Series</b>		0.3 μm (Filtration efficiency: 99.9%)	1 mg/m <sup>3</sup> (ANR) (=0.8 ppm) (after oil saturation)		P.223
	<b>AMD Series</b>		0.01 μm (Filtration efficiency: 99.9%)	0.1 mg/m <sup>3</sup> (ANR) (=0.08 ppm) (after oil saturation)		P.231
	<b>AMH Series</b>		0.01 μm (Filtration efficiency: 99.9%)			P.241
	<b>AME Series</b>		0.01 μm (Filtration efficiency: 99.9%)	0.01 mg/m <sup>3</sup> (ANR) (=0.008 ppm)		Reduces oil smell.
<b>Deodorization</b>	<b>AMF Series</b>	—	—	0.004 mg/m <sup>3</sup> (ANR) (=0.0032 ppm)	Deodorizes oil smell.	P.257
<b>Operating State and Proper Use of Auto Drain</b>						P.265
<b>Optional Accessories (Spacer for Modular Connection, Piping Adapter)</b>						P.266
<b>Bowl Assembly</b>						P.268
<b>Options</b>	<ul style="list-style-type: none"> <li>• Rubber material: FKM</li> <li>• For medium air pressure</li> <li>• With differential pressure switch (with indicator)* (125 VAC, 30 VDC)</li> <li>• IN-OUT reversal direction</li> <li>• Drain guide 1/4 female threaded</li> <li>• White vaseline*</li> <li>• With element service indicator</li> </ul>					Refer to "How to Order" of respective models.
<b>Made to Order</b>	<ul style="list-style-type: none"> <li>• With differential pressure gauge (X6) Manage the replacement period by monitoring the clogged element.</li> <li>• With differential pressure switch (with indicator)* (X37) The differential pressure used as the guide for the element replacement period, can be checked visually and with an electrical signal.</li> <li>• With IN-OUT flange (X15) Flange piping connection</li> <li>• With differential pressure gauge, IN-OUT flange (X17) The replacement period due to clogging of the element can be checked by the differential pressure gauge. Flange piping connection</li> <li>• Auto drain, drain piping threaded connection type (X26) Threaded connection for the piping of the auto drain exhaust port</li> <li>• White vaseline specifications* (X12) Using white vaseline for lubricant.</li> <li>• Main line filter for high flow rate with nominal filtration rating of 0.3 μm (X13) This filter is for high flows with a nominal filtration rating the same as the AM series mist separator.</li> <li>• With by-pass port (X360) Ports connected to the IN and OUT sides are provided in two locations. This specification can be used for applications which do not require flow rates, which leads to reduction in piping labor and saves space.</li> </ul>					P.272
* Applicable only to the AFF37B, 75B, AM□650 and 850 by Made to Order.						
<b>Specific Product Precautions</b>						P.277
<b>Auto Drain Valve, Motor Operated Auto Drain, Heavy Duty Auto Drain, Differential Pressure Gauge</b>						P.376

# Water Separator AMG Series

RoHS

Can remove water droplets in compressed air. Use this product in cases where "water must be avoided, but not so dry as when an air dryer is used".

Through the adoption of a dedicated element and the ample housing interior space, a 99%\* water removal rate\*\* has been achieved.

## Caution

Water separator can remove water droplets, but it cannot remove moisture.

- \* Condition of inlet air
  - Pressure: 0.7 MPa
  - Temperature: 25°C
  - Relative humidity: 100%
  - Liquid water content (Water droplet content): 15 g/m<sup>3</sup> (ANR)
  - Compressed air flow: Rated flow of each model

- \*\* Water removal rate (%) =  $\frac{\text{Removed water (Water droplet) (g)}}{\text{Inflowed water (Water droplet) (g)}} \times 100$

Modular connection is possible with AMG150C to 550C.  
(For details, refer to page 266.)



AMG150C to 550C

AMG650/850

Symbol



(Drain cock specifications) (Auto drain specifications)



Made to Order  
(For details, refer to page 272.)

## Model

Model	AMG150C	AMG250C	AMG350C	AMG450C	AMG550C	AMG650	AMG850
Rated flow (L/min (ANR))	300	750	1500	2200	3700	6000	12000
Port size	1/8, 1/4	1/4, 3/8	3/8, 1/2	1/2, 3/4	3/4, 1	1.1 1/2	1 1/2, 2
Weight (kg)	0.38	0.55	0.9	1.4	2.1	4.2	10.5

Note) Max. flow capacity at 0.7 MPa.

Max. flow capacity varies depending on the operating pressure. Refer to "Flow Rate Characteristics" (page 210) and "Maximum Flow Capacity Line" (page 211).

## Specifications

Fluid	Compressed air
Max. operating pressure	1.0 MPa
Min. operating pressure*	0.05 MPa
Proof pressure	1.5 MPa
Ambient and fluid temperature	5 to 60°C
Water removal rate	99%
Element replacement period	2 years or when pressure drop reached 0.1 MPa

\* With auto drain: 0.1 MPa (N.O. type) or 0.15 MPa (N.C. type)

## Accessory Part No.

Applicable model	AMG150C	AMG250C	AMG350C	AMG450C	AMG550C	AMG650	AMG850
Bracket assembly (with 2 mounting screws)	AM-BM101	AM-BM102	AM-BM103	AM-BM104	AM-BM105	BM56	BM57

## Caution

Be sure to read this before handling the products.  
Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.

HAA  
HAW

AT

IDF  
IDU

IDF  
FS

IDFA

IDFB

IDH

ID

IDG

IDK

AMG

AFF

AM

AMD

AMH

AME

AMF

ZFC

SF

SFD

LLB

AD

GD

## How to Order



### AMG150C to 550C

AMG **550** C- [ ] **10** [ ] [ ] - [ ] - [ ]

Size ↓

150
250
350
450
550

Thread type ↓

Symbol	Type
Nil	Rc
F	G
N	NPT

Port size ↓

Symbol	Port size	Applicable size				
		150	250	350	450	550
01	1/8	●				
02	1/4	●	●			
03	3/8		●	●		
04	1/2			●	●	
06	3/4				●	●
10	1					●

Accessory ↓

Symbol	Description
Nil	—
B	Bracket *1

\*1 Bracket is included, (but not assembled).

• **Made to Order**

Symbols are only added at the end for Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

• **Option** \*3

- Multiple options can be selected.
- Refer to the table below for the available combinations.
- Indicate symbols in alphabetical order.

Symbol	Description
Nil	—
F	Rubber material: FKM
H	For medium air pressure (1.6 MPa)
J	Drain guide 1/4 female threaded *5
R	IN-OUT reversal direction
V	White vaseline

\*5 Without a valve function

• **Auto drain** \*2 \*3

Symbol	Description
Nil	Without auto drain (With drain cock *4)
C	N.C. (Normally closed) Drain port is closed when pressure is not applied.
D	N.O. (Normally open) Drain port is open when pressure is not applied.

\*2 Refer to page 265 for proper use of the auto drain. (Only one auto drain specification can be selected.)

\*3 Refer to the following table for the available combinations of the auto drain specifications and options.

\*4 When the option J is selected, the auto drain and drain cock are not available.

### Auto Drain Specifications/Option Combinations

⊙: All types of auto drain specifications are available. (including drain guide, "J" specification)

△: N.C. auto drain ("C" specification) is not available.

▼: Both N.C. and N.O. auto drain ("C", "D" specification) are not available.

	F	H	R	V
Nil	⊙	△	⊙	⊙
F	⊙	▼	⊙	▼
H	▼	⊙	△	⊙
R	⊙	△	⊙	⊙
V	▼	▼	⊙	⊙

□: Not available

## Options

### Symbol F: Rubber material: FKM

FKM is used for the parts such as O-ring and gasket.

### Symbol H: For medium air pressure (1.6 MPa)

Can be used up to 1.6 MPa at maximum.

### Symbol J: Drain guide 1/4 female threaded



Pipe threaded connection for the drain exhaust port

1/4 female threaded

### Symbol R: IN-OUT reversal direction

Flow direction: Right to left  
(Flow direction of the standard: Left to right)

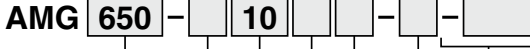
### Symbol V: White vaseline

The body/housing is degreased, and the grease used for the parts requiring lubrication has been changed to white vaseline.



## How to Order

### AMG650/850



**Size**

650
850

**Thread type**

Symbol	Type
<b>NII</b>	Rc
<b>F</b>	G
<b>N</b>	NPT

**Port size**

Symbol	Port size	Applicable size	
		650	850
<b>10</b>	1	●	—
<b>14</b>	1 1/2	●	●
<b>20</b>	2	—	●

**Accessory**

Symbol	Description
<b>NII</b>	—
<b>B</b>	Bracket *1

\*1 Bracket is included, (but not assembled).

**Made to Order**

Symbols are only added at the end of Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

**Option \*2**

- Multiple options can be selected.
- Refer to the table below for the available combinations.
- Indicate symbols in alphabetical order.

Symbol	Description
<b>NII</b>	—
<b>J</b>	Drain guide 1/4 female threaded *5
<b>R</b>	IN-OUT reversal direction

\*5 Without a valve function

**Auto drain \*2**

Symbol	Description
<b>NII</b>	Without auto drain (With drain cock *3 *4)
<b>D</b>	N.O. (Normally open) Drain port is open when pressure is not applied.

\*2 Refer to the following table for the available combinations of the auto drain specifications and options.

\*3 When the option J is selected, the auto drain and drain cock are not available.

\*4 Body size 850 is equipped with a ball valve (Rc 3/8). Mount a piping adapter IDF-AP609 (page 267) to the ball valve if NPT 3/8 female threaded is required.

### Auto Drain Specifications/Option Combinations

⊙ : Available □ : Not available

Auto drain specifications/Option			Auto drain specifications		Option		Applicable model	
			<b>D</b>	<b>J</b>	<b>R</b>	<b>AMG650</b>	<b>AMG850</b>	
Auto drain specifications	N.O. auto drain	<b>D</b>	□	⊙	⊙	⊙	⊙	
	Drain guide 1/4	<b>J</b>	□	□	⊙	□	□	
Option	IN-OUT reversal direction	<b>R</b>	⊙	⊙	□	⊙	⊙	

## Options

**Symbol J: Drain guide 1/4 female threaded**



Pipe threaded connection for the drain exhaust port

1/4 female threaded

**Symbol R: IN-OUT reversal direction**

Flow direction: Right to left  
(Flow direction of the standard: Left to right)

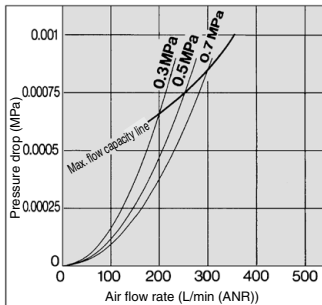
- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- FS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG**
- AFF
- AM
- AMD
- AMH
- AME
- AMF
- ZFC
- SF
- SFD
- LLB
- AD□
- GD

# AMG Series

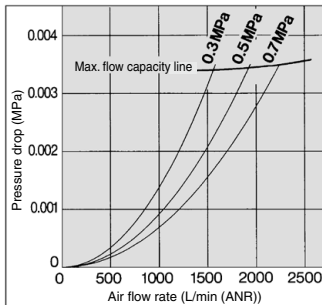
## Flow Rate Characteristics (Representative values) / Select the model under the max. flow capacity line.

Note) Compressed air over max. flow capacity line in the table below may not meet the specifications of the product.

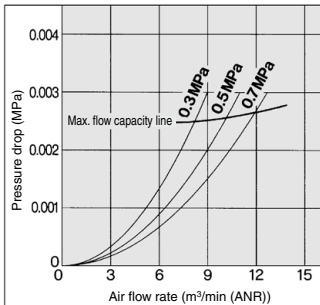
**AMG150C**



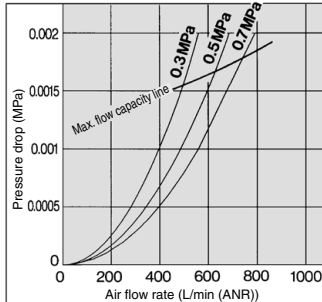
**AMG450C**



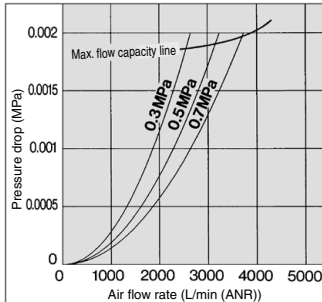
**AMG850**



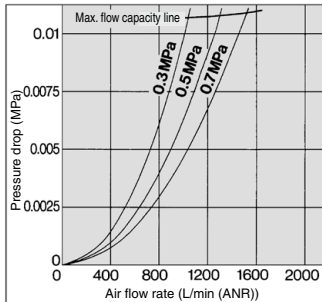
**AMG250C**



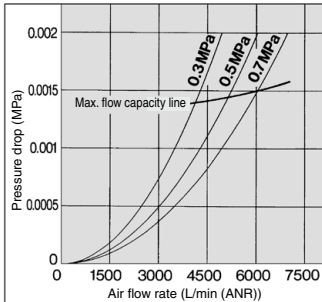
**AMG550C**



**AMG350C**



**AMG650**

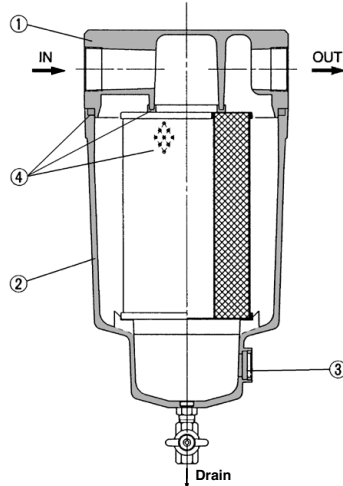
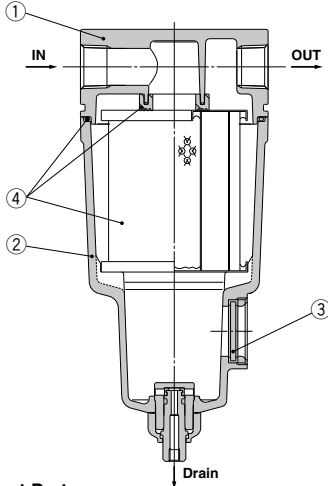




## Construction

AMG150C to 550C, AMG650

AMG850



### Component Parts

No.	Description	Material	Note
1	Body	Aluminum alloy	Inner/outer surface coating
2	Housing (Case)	Aluminum alloy	
3	Sight glass	Tempered glass	—

Note) The figure shows the drain cock specification.

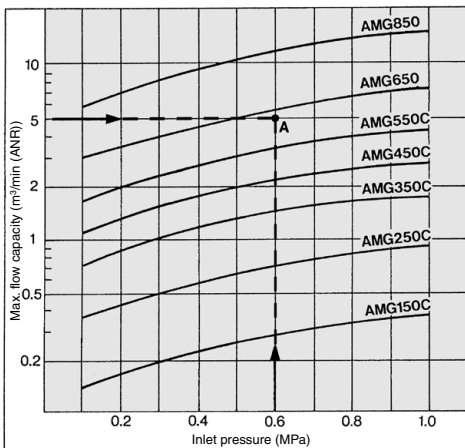
Note) Sight glass is indicated in the figure for easy understanding of component parts. However, it differs from the actual construction. Refer to dimensions on pages 212 to 214 for details.

### Replacement Parts

No.	Description	Material	Applicable model	Model						
				AMG150C	AMG250C	AMG350C	AMG450C	AMG550C	AMG650	AMG850
4	Element assembly	Resin:	Except option F	AMG-EL150	AMG-EL250	AMG-EL350	AMG-EL450	AMG-EL550	AMG-EL650	AMG-EL850
		others:	For option F	AMG-EL150-F	AMG-EL250-F	AMG-EL350-F	AMG-EL450-F	AMG-EL550-F	—	—

- Element assembly: With gasket (1 pc.) and O-ring (1 pc.)
- Refer to page 280 for replacement of auto drain.

## Maximum Flow Capacity Line



## Model Selection

Select a model in accordance with the following procedure taking the inlet pressure and the max. flow capacity into consideration.

(Example) Inlet pressure: 0.6 MPa

Max. flow capacity: 5 m<sup>3</sup>/min (ANR)

1. Obtain the intersecting point A of inlet pressure and max. flow capacity in the graph.
2. The AMG650 is obtained when the max. flow capacity line is above the intersecting point A in the graph.

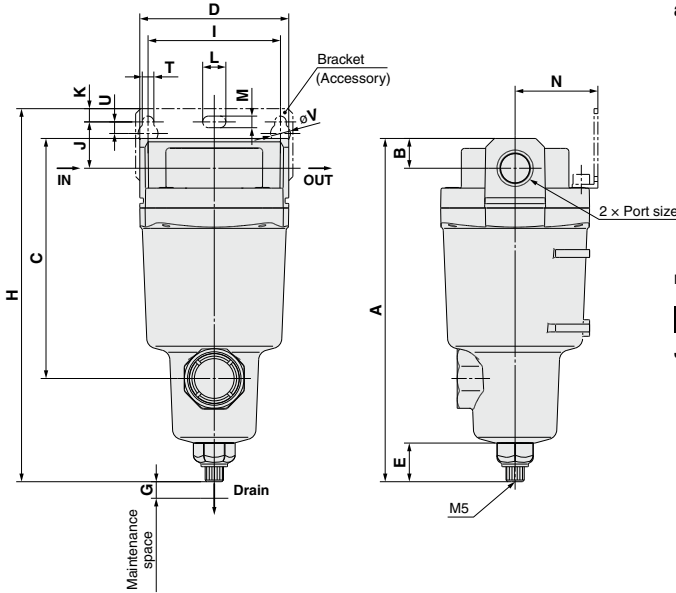
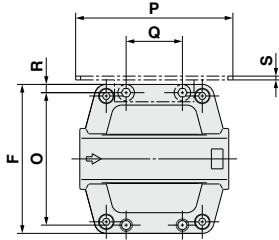
Note) Make sure to select a model that has the max. flow capacity line above the obtained intersecting point. With a model that has the max. flow capacity line below the obtained intersecting point, the flow rate will be exceeded, thus leading to a problem such as being unable to satisfy the specifications.

- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- FS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG**
- AFF
- AM
- AMD
- AMH
- AME
- AMF
- ZFC
- SF
- SFD
- LLB
- AD
- GD

# AMG Series

## Dimensions

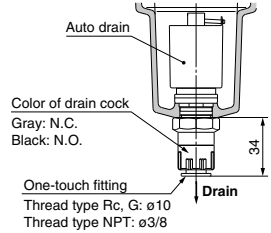
### AMG150C to 550C



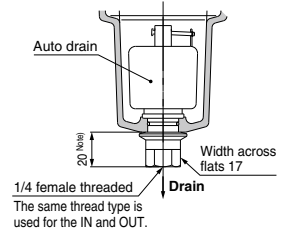
Note) The figure shows the drain cock specification.

### Auto drain

- C: With auto drain (N.C.)
- D: With auto drain (N.O.)



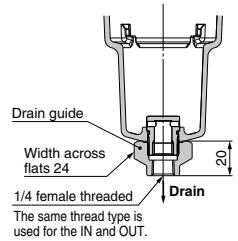
- Combination of D: With auto drain (N.O.)
- and H: For medium air pressure



Note) 23 for AMG250C

### Option

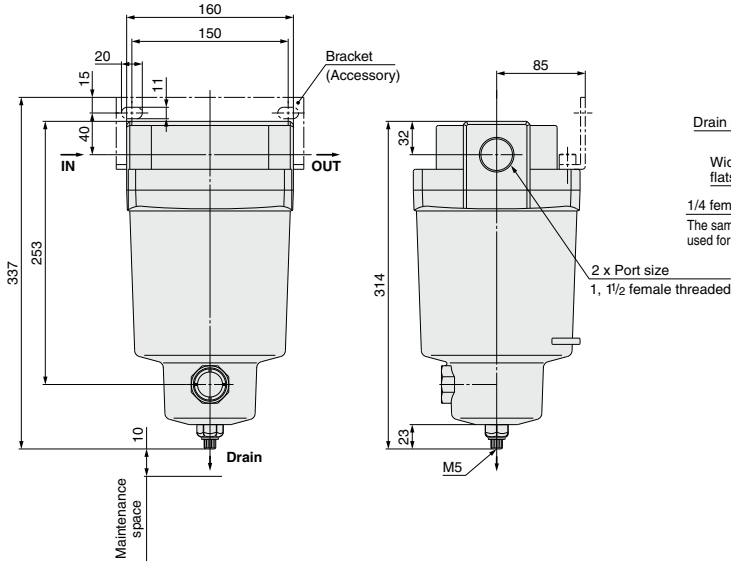
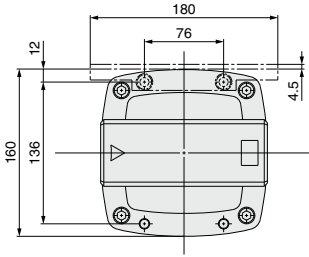
- J: Drain guide 1/4 female threaded



Model	Port size	A	B	C	D	E	F	G	Bracket related dimensions														
									H	I	J	K	T	U	L	M	V	N	O	P	Q	R	S
AMG150C	1/8, 1/4	161	10	99	63	23	63	10	176	56	20	5	6	6	12	6	10	35	54	70	26	4.5	1.6
AMG250C	1/4, 3/8	175	14	113	76	23	76	10	193	66	24	8	6	6	12	6	10	40	66	80	28	5	2
AMG350C	3/8, 1/2	207	18	145	90	23	90	10	225	80	28	8	7	7	14	7	12	50	80	95	34	5	2.3
AMG450C	1/2, 3/4	228	20	166	106	23	106	10	249	90	31	10	9	9	18	9	15	55	88	111	50	9	3.2
AMG550C	3/4, 1	262	24	200	122	23	122	15	281	100	33	10	9	9	18	9	15	65	102	126	60	10	3.2

**Dimensions**

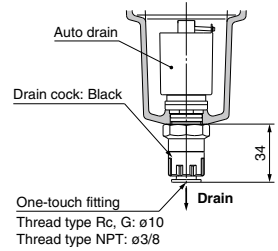
**AMG650**



Note) The figure shows the drain cock specification.

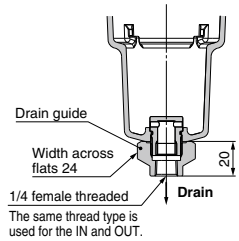
**Auto drain**

**D: With auto drain (N.O.)**



**Option**

**J: Drain guide 1/4 female threaded**

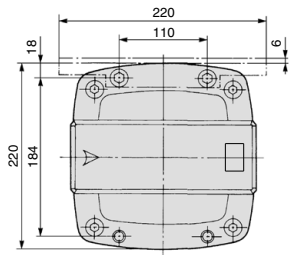


HAA
HAW
AT
IDF
IDU
IDF
FS
IDFA
IDFB
IDH
ID
IDG
IDK
<b>AMG</b>
AFF
AM
AMD
AMH
AME
AMF
ZFC
SF
SFD
LLB
AD
GD

# AMG Series

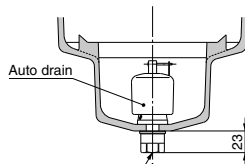
## Dimensions

### AMG850

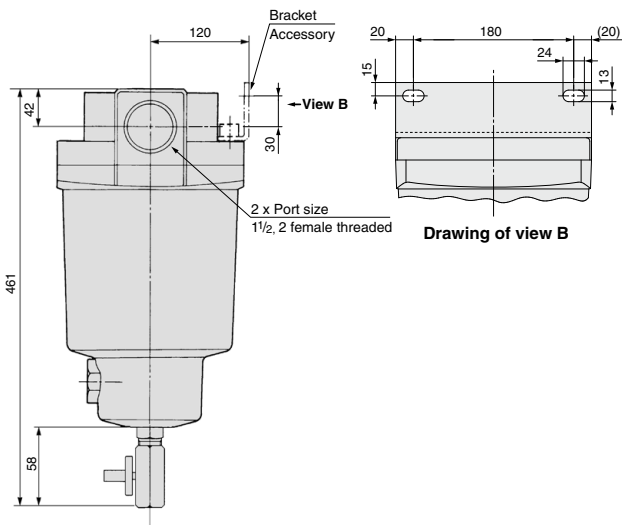
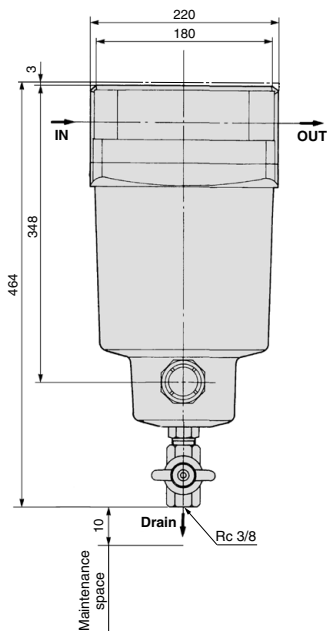


### Auto drain

D: With auto drain (N.O.)



3/8 female threaded  
The same thread type is used for the IN and OUT.



Note) The figure shows the drain cock specification.

# Main Line Filter

# AFF Series



Can remove impurities such as oil, water and foreign matter in compressed air and can improve the function of a dryer in the downstream, extend the replacement period of precision filter element, and prevent trouble with the equipment.

Modular connection is possible with AFF2C to 22C.

(For details, refer to page 266.)



AFF2C to 22C



AFF37B, 75B

Symbol



(Drain cock specifications)



(Auto drain specifications)



**Made to Order**  
(For details, refer to page 272.)

## Caution

Be sure to read this before handling the products.  
Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.

## Model

Model	AFF2C	AFF4C	AFF8C	AFF11C	AFF22C	AFF37B	AFF75B	AFF75A	AFF125A	AFF150A	AFF220A
Rated flow (Note) (L/min (ANR))	300	750	1500	2200	3700	6000	12000	12400	23700	30000	45000
Port size	1/8, 1/4	1/4, 3/8	3/8, 1/2	1/2, 3/4	3/4, 1	1 1/2	1 1/2, 2	50(2B)	80(3B)	100(4B)	100(4B)
Weight (kg)	0.38	0.55	0.9	1.4	2.1	4.2	10.5	50	52	72	87

Note) Max. flow capacity at 0.7 MPa.

Max. flow capacity varies depending on the operating pressure.

Refer to "Flow Rate Characteristics" (page 218) and "Maximum Flow Capacity Line" below.

## Specifications

Fluid	Compressed air
Max. operating pressure	1.0 MPa (Note 1)
Min. operating pressure (Note 2)	0.05 MPa
Proof pressure	1.5 MPa
Ambient and fluid temperature	5 to 60°C
Filtration rating	3 μm (Filtration efficiency: 99%)
Element replacement period	2 years (Note 1) or when pressure drop reached 0.1 MPa

Note 1) The maximum operating pressure of the AFF75A to AFF220A is 0.97 MPa, and the element replacement period is when the pressure drop reaches 0.1 MPa or after 1 year operation.

Note 2) With auto drain: 0.1 MPa (N.O. type) or 0.15 MPa (N.C. type)

## Accessory Part No./For AFF2C to 22C, AFF37B/75B

Applicable model	AFF2C	AFF4C	AFF8C	AFF11C	AFF22C	AFF37B	AFF75B
Bracket assembly (with 2 mounting screws)	AM-BM101	AM-BM102	AM-BM103	AM-BM104	AM-BM105	BM56	BM57

## Accessory Part No./For AFF75A to 220A

Applicable model	AFF75A	AFF125A	AFF150A	AFF220A
Auto drain with metal case (2 pcs. each)	AD402-03-2			
Auto drain with resin case (2 pcs. each)	AD402-03			
Pressure gauge (2 pcs. each)	G46-15-02			
Companion flange (2 pcs. each)	50(2B)JIS 10K FF flange	80(3B)JIS 10K FF flange	100(4B)JIS 10K FF flange	
Anchor bolt (3 pcs. each)	AI-2S			

## Model Selection

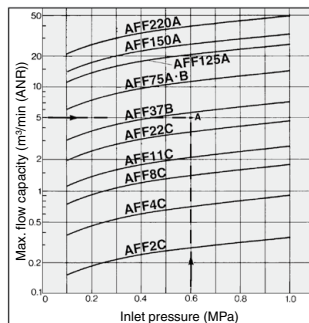
Select a model in accordance with the following procedure taking the inlet pressure and the max. flow capacity into consideration. (Example) Inlet pressure: 0.6 MPa

Max. flow capacity: 5 m<sup>3</sup>/min (ANR)

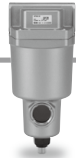
- Obtain the intersecting point A of inlet pressure and max. flow capacity in the graph.
- The AFF37B is obtained when the max. flow capacity line is above the intersecting point A in the graph.

Note) Make sure to select a model that has the max. flow capacity line above the obtained intersecting point. With a model that has the max. flow capacity line below the obtained intersecting point, the flow rate will be exceeded, thus leading to a problem such as being unable to satisfy the specifications.

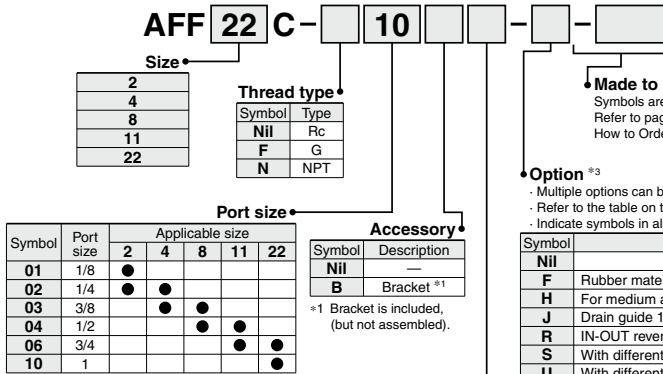
## Maximum Flow Capacity Line



## How to Order



### AFF2C to 22C



### Made to Order

Symbols are only added at the end for Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

### Option \*3

- Multiple options can be selected.
- Refer to the table on the lower left for the available combinations.
- Indicate symbols in alphabetical order.

Symbol	Description
Nil	—
F	Rubber material: FKM
H	For medium air pressure (1.6 MPa)
J	Drain guide 1/4 female threaded *5
R	IN-OUT reversal direction
S	With differential pressure switch (125 VAC, 30 VDC) *6, (Note)
U	With differential pressure switch (30 VDC) *6
T	With element service indicator
V	White vaseline

\*5 Without a valve function

\*6 Differential pressure switch is included, (but not assembled).

Note) Select "U" if conformity to the EU directive is required.

### Auto Drain Specifications/Option Combinations

○: All types of auto drain specifications are available. (including drain guide, "J" specification)

△: N.C. auto drain ("C" specification) is not available.

▽: Both N.C. and N.O. auto drain ("C", "D" specification) is not available.

	Nil	F	H	R	S	U	T	V
Nil	○	○	○	○		Note		○
F	○	○	○	○				○
H	○	▽	○	△				○
R	○	○	△			Note		○
S								
U	Note				Note			
T								○
V	○	▽	▽	○				○

Note: Only one drain exhaust method can be selected.

□: Not available

### Auto drain \*2 \*3

Symbol	Description
Nil	Without auto drain (With drain cock *4)
C	N.C. (Normally closed) Drain port is closed when pressure is not applied.
D	N.O. (Normally open) Drain port is open when pressure is not applied.

\*2 Refer to page 265 for proper use of the auto drain.

(Only one auto drain specification can be selected.)

\*3 Refer to the table on the left for the available combinations of the auto drain specifications and options.

\*4 When the option J is selected, the auto drain and drain cock are not available.

## Options

### Symbol F: Rubber material: FKM

FKM is used for the parts such as O-ring and gasket.

### Symbol H: For medium air pressure (1.6 MPa)

Can be used up to 1.6 MPa at maximum.

### Symbol J: Drain guide 1/4 female threaded

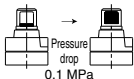
Pipe threaded connection for the drain exhaust port



### Symbol R: IN-OUT reversal direction

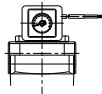
Flow direction: Right to left  
Air flow is changed to right to left. (Flow direction of the standard: Left to right)

### Symbol T: With element service indicator



Clogging of the element can be observed visually.

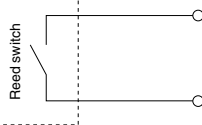
### Symbol S: With differential pressure switch (with indicator)



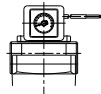
Clogging of the element can be observed visually or with an electrical signal.

\* The rated contact voltage is different from "U".

Max. contact capacity: 10 VA AC, 10 W DC  
Rated contact voltage (max. operating current): 125 V AC (0.08 A), 30 V DC (0.33 A)



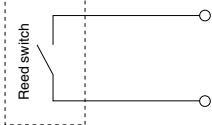
### Symbol U: With differential pressure switch (with indicator)



Clogging of the element can be observed visually or with an electrical signal.

\* The rated contact voltage is different from "S".

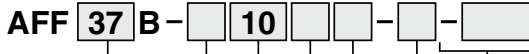
Max. contact capacity: 10 W DC  
Rated contact voltage (max. operating current): 30 V DC (0.33 A)





**How to Order**

**AFF37B, 75B**



Size

37
75

**Thread type**

Symbol	Type
Nil	Rc
F	G
N	NPT

**Port size**

Symbol	Port size	Applicable size	
		37	75
10	1	●	—
14	1 1/2	●	●
20	2	—	●

**Accessory**

Symbol	Description
Nil	—
B	Bracket *1

\*1 Bracket is included, (but not assembled).

**Made to Order**

Symbols are only added at the end for Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

**Option #2**

- Multiple options can be selected.
- Refer to the table below for the available combinations.
- Indicate symbols in alphabetical order.

Symbol	Description
Nil	—
J	Drain guide 1/4 female threaded *5
R	IN-OUT reversal direction
T	With element service indicator

\*5 Without a valve function

**Auto drain #2**

Symbol	Description
Nil	Without auto drain (With drain cock *3)
D	N.O. (Normally open) Drain port is open when pressure is not applied.

- \*2 Refer to the following table for the available combinations of the auto drain specifications and options.
- \*3 When the option J is selected, the auto drain and drain cock are not available.
- \*4 Body size 75B is equipped with a ball valve (Rc 3/8). Mount a piping adapter IDF-AP609 (page 267) to the ball valve if NPT 3/8 female threaded is required.

**Auto Drain Specifications/Option Combinations**

○ : Available □ : Not available

Auto drain specifications/Option			Auto drain specifications				Option				Applicable model	
			D	J	R	T	AFF37B		AFF75B			
Auto drain specifications	N.O. auto drain	D	○	□	○	○	○	○	○	○	○	
	Drain guide 1/4	J	□	○	○	○	□	□	□	□	□	
Option	IN-OUT reversal direction	R	○	○	○	○	○	○	○	○	○	
	With element service indicator	T	○	○	○	○	○	○	○	○	○	

**AFF75A to 220A**



Size

75
125
150
220

**Port size**

Symbol	Port size	Applicable size			
		75	125	150	220
20	50(2B) JIS 10K FF flange	●	—	—	—
30	80(3B) JIS 10K FF flange	—	●	—	—
40	100(4B) JIS 10K FF flange	—	—	●	—

**Auto drain (Accessory)**

Symbol	Description
Nil	Without auto drain
D	With metal case (2 pcs. each)
P	With resin case (2 pcs. each)

**Made to Order**

Symbols are only added at the end for Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

**Anchor bolt (Accessory)**

Symbol	Description
Nil	Without anchor bolt
L	Anchor bolt (3 pcs. each)

**Companion flange (Accessory)**

Symbol	Description
Nil	Without companion flange
F	Companion flange (2 pcs. each)

**Pressure gauge (Accessory)**

Symbol	Description
Nil	Without pressure gauge
G	Pressure gauge (2 pcs. each)

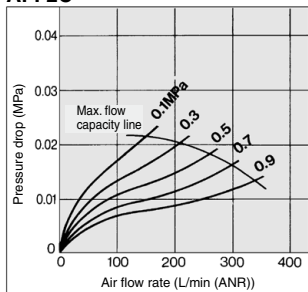
- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- IFS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG
- AFF
- AM
- AMD
- AMH
- AME
- AMF
- ZFC
- SF
- SFD
- LLB
- AD
- GD

# AFF Series

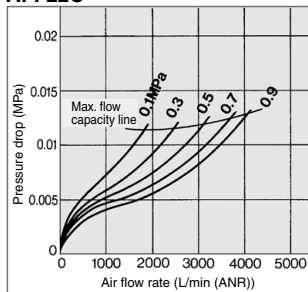
## Flow Rate Characteristics (Representative values) / Select the model under the max. flow capacity line. (Element oil saturation)

Note) Compressed air over max. flow capacity line in the table below may not meet the specifications of the product.

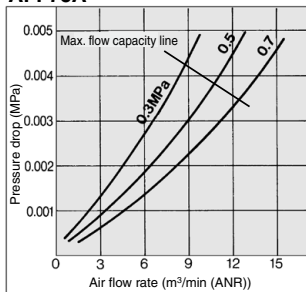
**AFF2C**



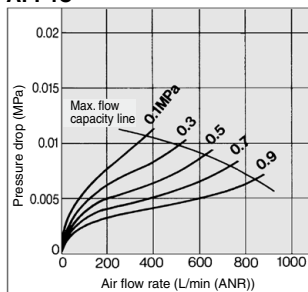
**AFF22C**



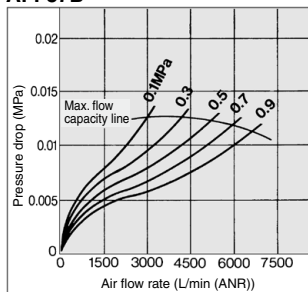
**AFF75A**



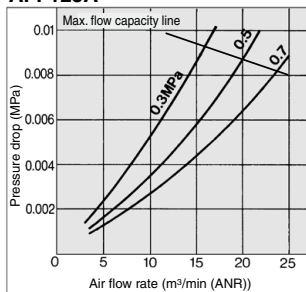
**AFF4C**



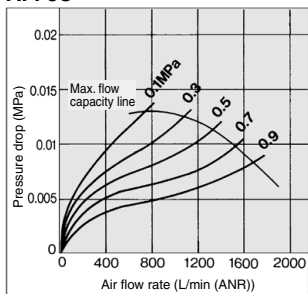
**AFF37B**



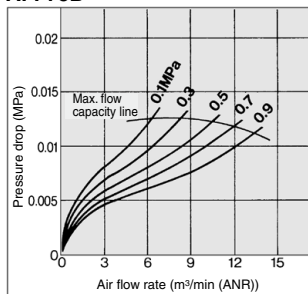
**AFF125A**



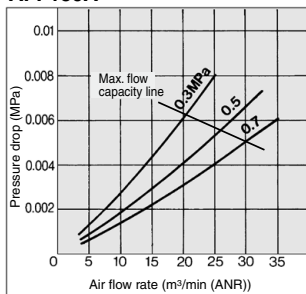
**AFF8C**



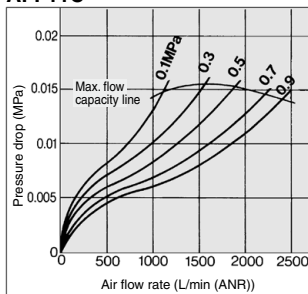
**AFF75B**



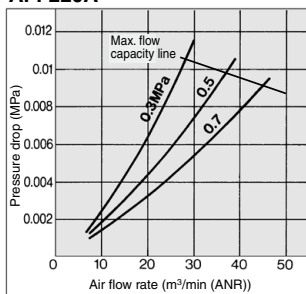
**AFF150A**



**AFF11C**



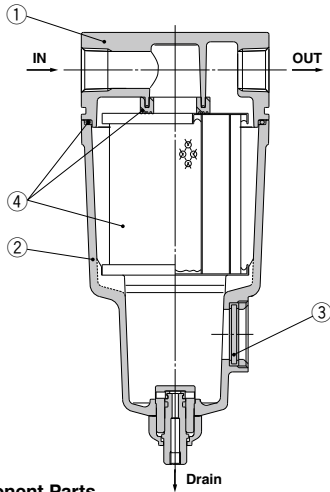
**AFF220A**



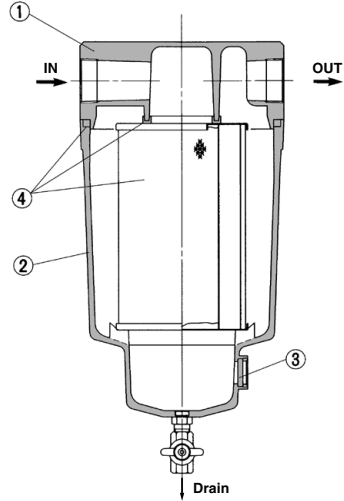


**Construction**

**AFF2C to 22C, AFF37B**



**AFF75B**



**Component Parts**

No.	Description	Material	Note
1	Body	Aluminum alloy	Inner/outer surface coating
2	Housing (Case)	Aluminum alloy	
3	Sight glass	Tempered glass	—

Note) The figure shows the drain cock specification.

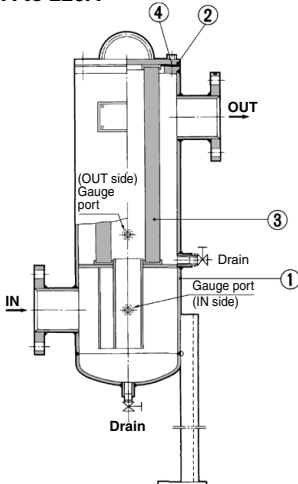
Note) Sight glass is indicated in the figure for easy understanding of component parts. However, it differs from the actual construction. Please refer to pages 220 through to 222 for details.

**Replacement Parts**

No.	Description	Material	Applicable model	Model						
				AFF2C	AFF4C	AFF8C	AFF11C	AFF22C	AFF37B	AFF75B
4	Element assembly	Cotton paper, others	Except option F For option F	AFF-EL2B AFF-EL2B-F	AFF-EL4B AFF-EL4B-F	AFF-EL8B AFF-EL8B-F	AFF-EL11B AFF-EL11B-F	AFF-EL22B AFF-EL22B-F	AFF-EL37B —	AFF-EL75B —

- Element assembly: With gasket (1 pc.) and O-ring (1 pc.)
- Refer to page 280 for replacement of auto drain.

**AFF75A to 220A**



**Component Parts**

No.	Description	Material	Note
1	Case	Carbon steel	
2	Cover	Carbon steel	

**Replacement Parts**

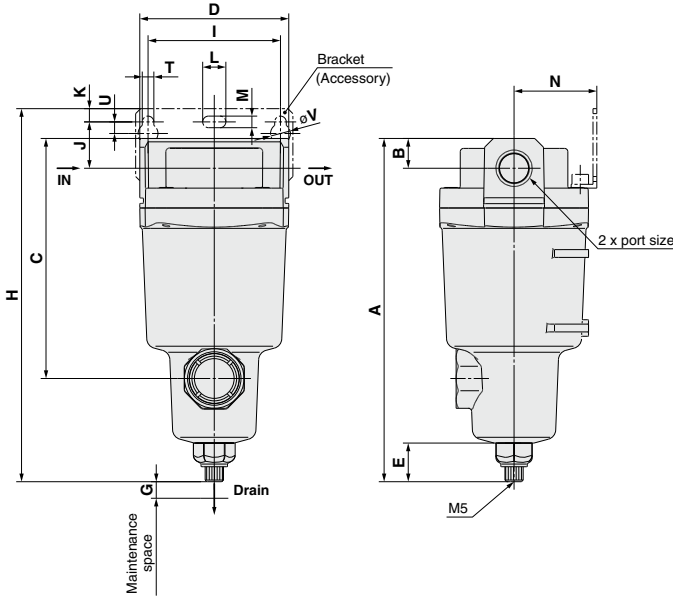
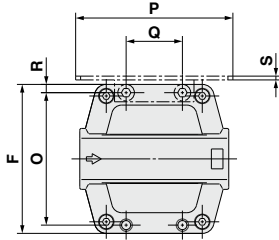
No.	Description	Material	Qty.	Model		
				AFF75A	AFF125A	AFF150A
3	Element	—	1	EC700-003N	EC800-003N	EC900-003N
4	Seal	NBR	1	AL-33S	AL-34S	AL-35S

HAA  
HAW  
AT  
IDF  
IDU  
IDF  
□FS  
IDFA  
IDFB  
IDH  
ID  
IDG  
IDK  
AMG  
AFF  
AM  
AMD  
AMH  
AME  
AMF  
ZFC  
SF  
SFD  
LLB  
AD□  
GD

# AFF Series

## Dimensions

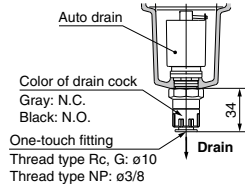
### AFF2C to 22C



Note) The figure shows the drain cock specification.

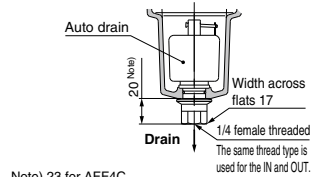
### Auto drain

- C: With auto drain (N.C.)
- D: With auto drain (N.O.)



Color of drain cock  
 Gray: N.C.  
 Black: N.O.  
 One-touch fitting  
 Thread type Rc, G:  $\phi 10$   
 Thread type NP:  $\phi 3/8$

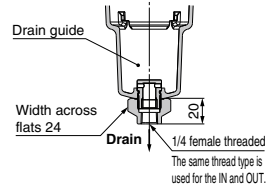
- Combination of D: With auto drain (N.O.) and H: For medium air pressure



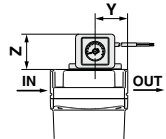
Note) 23 for AFF4C

### Option

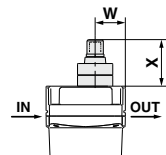
- J: Drain guide 1/4 female threaded



- S, U: With differential pressure switch (with indicator)



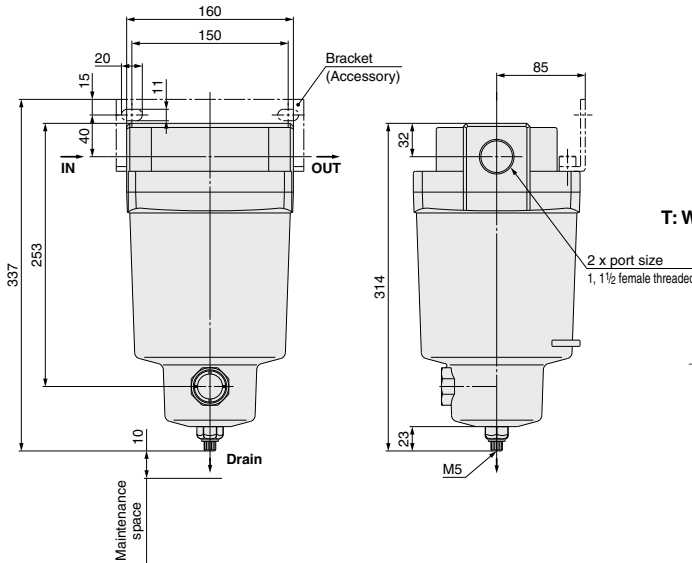
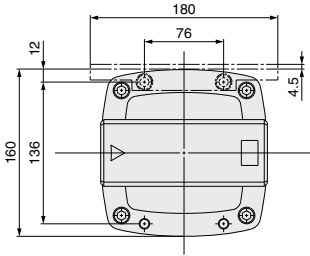
- T: With element service indicator



Model	Port size	A	B	C	D	E	F	G	Bracket related dimensions													Element service indicator related dimensions	Differential pressure switch related dimensions				
									H	I	J	K	T	U	L	M	V	N	O	P	Q			R	S	W	X
AFF2C	1/8, 1/4	161	10	99	63	23	63	10	176	56	20	5	6	12	6	10	35	54	70	26	4.5	1.6	24	37	32	41	
AFF4C	1/4, 3/8	175	14	113	76	23	76	10	193	66	24	8	6	12	6	10	40	66	80	28	5	2	27	37	36	41	
AFF8C	3/8, 1/2	207	18	145	90	23	90	10	225	80	28	8	7	7	14	7	12	50	80	95	34	5	2.3	32	37	42	41
AFF11C	1/2, 3/4	228	20	166	106	23	106	10	249	90	31	10	9	9	18	9	15	55	88	111	50	9	3.2	37	37	43	41
AFF22C	3/4, 1	262	24	200	122	23	122	15	281	100	33	10	9	9	18	9	15	65	102	126	60	10	3.2	39	37	51	41

**Dimensions**

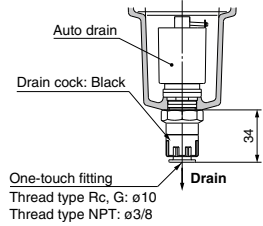
**AFF37B**



Note) The figure shows the drain cock specification.

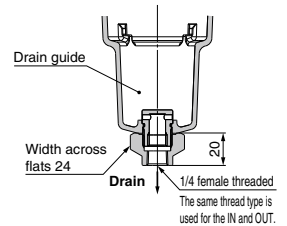
**Auto drain**

**D: With auto drain (N.O.)**

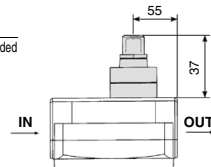


**Option**

**J: Drain guide 1/4 female threaded**



**T: With element service indicator**

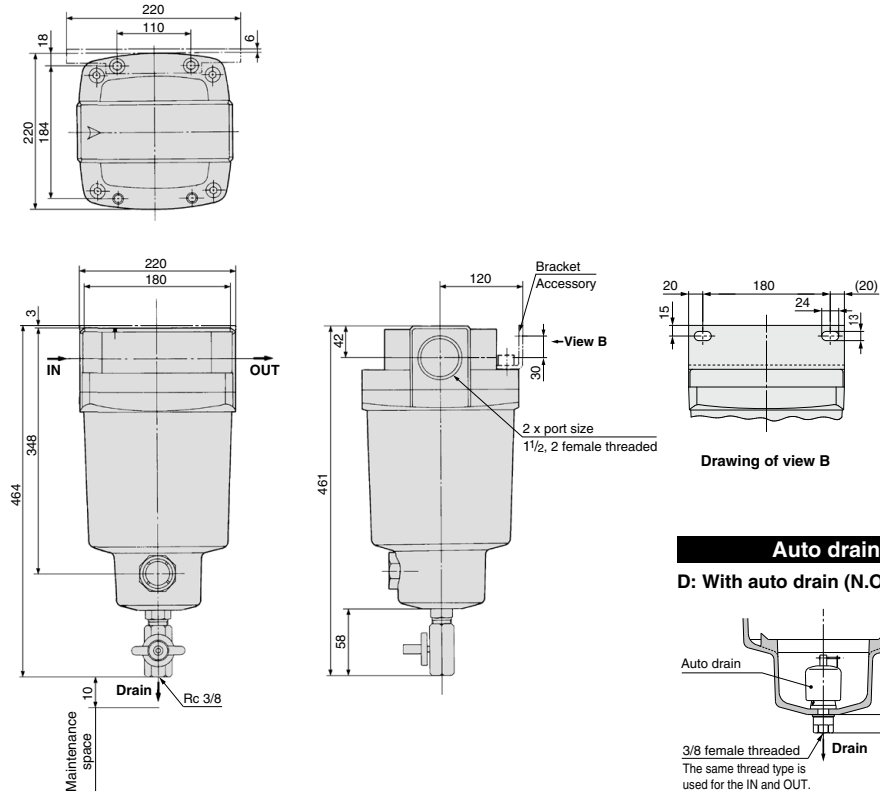


HAA
HAW
AT
IDF
IDU
IDF
<input type="checkbox"/> FS
IDFA
IDFB
IDH
ID
IDG
IDK
AMG
<b>AFF</b>
AM
AMD
AMH
AME
AMF
ZFC
SF
SFD
LLB
AD <input type="checkbox"/>
GD

# AFF Series

## Dimensions

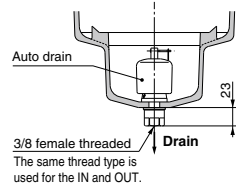
### AFF75B



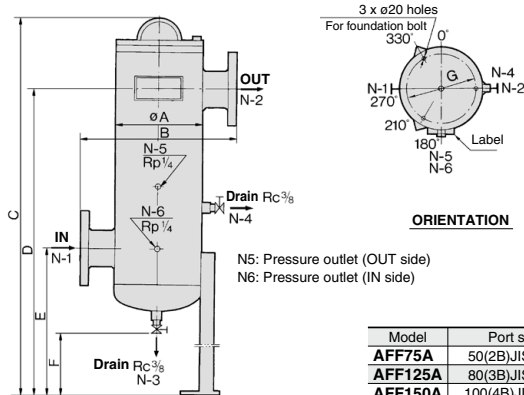
Note) The figure shows the drain cock specification.

### Auto drain

D: With auto drain (N.O.)

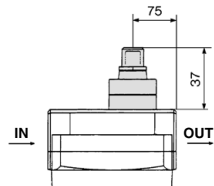


### AFF75A to 220A



### Option

T: With element service indicator



Model	Port size (Flange)	øA	B	C	D	E	F	G
AFF75A	50(2B)JIS10K FF flange	200 (8B)	380	1125	935	505	265	184
AFF125A	80(3B)JIS10K FF flange	200 (8B)	380	1125	935	505	265	184
AFF150A	100(4B)JIS10K FF flange	250 (10B)	450	1178	980	540	265	236
AFF220A	100(4B)JIS10K FF flange	300 (12B)	500	1291	1070	670	325	288

(mm)

# Mist Separator

# AM Series



Can remove oil mist in compressed air and separate and remove particles such as rust or carbon of more than 0.3 μm.

Modular connection is possible with AM150C to 550C.  
(For details, refer to page 266.)



AM150C to 550C

AM650/850

Symbol



(Drain cock specifications)



(Auto drain specifications)



**Made to Order**  
(For details, refer to page 272.)

## Model

Model	AM150C	AM250C	AM350C	AM450C	AM550C	AM650	AM850
Rated flow (L/min (ANR)) <sup>Note)</sup>	300	750	1500	2200	3700	6000	12000
Port size	1/8, 1/4	1/4, 3/8	3/8, 1/2	1/2, 3/4	3/4, 1	1, 1 1/2	1 1/2, 2
Weight (kg)	0.38	0.55	0.9	1.4	2.1	4.2	10.5

Note) Maximum flow capacity at 0.7 MPa.  
Maximum flow capacity varies depending on the operating pressure.  
Refer to "Flow Rate Characteristics" (page 226) and "Max. Flow Capacity Line" (page 227) below.  
Note) Refer to "Made to Order" (page 276) for high flow type of AM850 or more.

## Specifications

Fluid	Compressed air
Max. operating pressure	1.0 MPa
Min. operating pressure <sup>*1</sup>	0.05 MPa
Proof pressure	1.5 MPa
Ambient and fluid temperature	5 to 60°C
Nominal filtration rating	0.3 μm (Filtration efficiency: 99.9%)
Oil mist density at outlet	Max. 1 mg/m <sup>3</sup> (ANR) (=0.8 ppm) <sup>*2</sup>
Element replacement period	2 years or when pressure drop reached 0.1 MPa

\*1 With auto drain: 0.1 MPa (N.O. type) or 0.15 MPa (N.C. type)  
\*2 When the inlet oil mist density is 30 mg/m<sup>3</sup> (ANR).

## Accessory Part No.

Applicable model	AM150C	AM250C	AM350C	AM450C	AM550C	AM650	AM850
Bracket assembly (with 2 mounting screws)	AM-BM101	AM-BM102	AM-BM103	AM-BM104	AM-BM105	BM56	BM57

## Caution

Be sure to read this before handling the products.  
Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.

- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- IFS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG
- AFF
- AM
- AMD
- AMH
- AME
- AMF
- ZFC
- SF
- SFD
- LLB
- AD
- GD

## How to Order



### AM150C to 550C

AM **550** C - **10** - - - -

Size

150
250
350
450
550

Thread type

Symbol	Type
Nil	Rc
F	G
N	NPT

Port size

Symbol	Port size	Applicable size				
		150	250	350	450	550
01	1/8	●				
02	1/4		●			
03	3/8			●	●	
04	1/2				●	●
06	3/4				●	●
10	1					●

Accessory

Symbol	Description
Nil	—
B	Bracket *1

\*1 Bracket is included, (but not assembled).

Made to Order

Symbols are only added at the end for Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

Option \*3

- Multiple options can be selected.
- Refer to the table on the lower left for the available combinations.
- Indicate symbols in alphabetical order.

Symbol	Description
Nil	—
F	Rubber material: FKM
H	For medium air pressure (1.6 MPa)
J	Drain guide 1/4 female threaded *5
R	IN-OUT reversal direction
S	With differential pressure switch (125 VAC, 30 VDC) *6, (Note)
U	With differential pressure switch (30 VDC) *6
T	Element service indicator
V	White vaseline

\*5 Without a valve function

\*6 Differential pressure switch is included, (but not assembled).

Note) Select "U" if conformity to the EU directive is required.

### Auto Drain Specifications/Option Combinations

○: All types of auto drain specifications are available. (including drain guide, "J" specification)

△: N.C. auto drain ("C" specification) is not available.

▽: Both N.C. and N.O. auto drain ("C", "D" specification) are not available.

	Nil	F	H	R	S	U	T	V
Nil	○	○	○	○		Note		○
F	○	○	○	○				○
H	○	▽	△	△				○
R	△	○	△			Note		○
S								○
U	Note			Note				○
T								○
V	○	▽	▽	○				○

Note: Only one drain exhaust method can be selected.

□: Not available

Auto drain \*2 \*3

Symbol	Description
Nil	Without auto drain (With drain cock *4)
C	N.C. (Normally closed) Drain port is closed when pressure is not applied.
D	N.O. (Normally open) Drain port is open when pressure is not applied.

\*2 Refer to page 265 for proper use of the auto drain. (Only one auto drain specification can be selected.)

\*3 Refer to the table on the left for the available combinations of the auto drain specifications and options.

\*4 When the option J is selected, the auto drain and drain cock are not available.

## Options

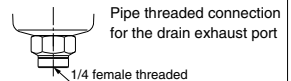
### Symbol F: Rubber material: FKM

FKM is used for the parts such as O-ring and gasket.

### Symbol H: For medium air pressure (1.6 MPa)

Can be used up to 1.6 MPa at maximum.

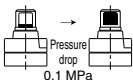
### Symbol J: Drain guide 1/4 female threaded



### Symbol R: IN-OUT reversal direction

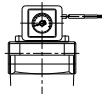
Flow direction: Right to left  
(Flow direction of the standard: Left to right)

### Symbol T: With element service indicator



Clogging of the element can be observed visually.

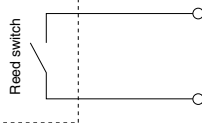
### Symbol S: With differential pressure switch (with indicator)



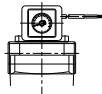
Clogging of the element can be observed visually or with an electrical signal.

\* The rated contact voltage is different from "U".

Max. contact capacity: 10 VA AC, 10 W DC  
Rated contact voltage (max. operating current): 125 VAC (0.08 A), 30 VDC (0.33 A)



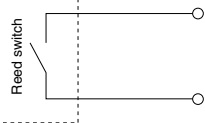
### Symbol U: With differential pressure switch (with indicator)



Clogging of the element can be observed visually or with an electrical signal.

\* The rated contact voltage is different from "S".

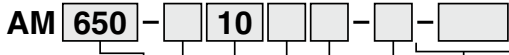
Max. contact capacity: 10 W DC  
Rated contact voltage (max. operating current): 30 VDC (0.33 A)





## How to Order

**AM650/850**



Size

650
850

Thread type

Symbol	Type
<b>N</b>	Rc
<b>F</b>	G
<b>N</b>	NPT

Port size

Symbol	Port size	Applicable size	
		650	850
<b>10</b>	1	●	—
<b>14</b>	1 1/2	●	●
<b>20</b>	2	—	●

Accessory

Symbol	Description
<b>N</b>	—
<b>B</b>	Bracket *1

\*1 Bracket is included, (but not assembled).

### Made to Order

Symbols are only added at the end for Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

### Option \*3

- Multiple options can be selected.
- Refer to the table below for the available combinations.
- Indicate symbols in alphabetical order.

Symbol	Description
<b>N</b>	—
<b>J</b>	Drain guide 1/4 female threaded *5
<b>R</b>	IN-OUT reversal direction
<b>T</b>	With element service indicator

\*5 Without a valve function

### Auto drain \*2

Symbol	Description
<b>N</b>	Without auto drain (With drain cock *3 *4)
<b>D</b>	N.O. (Normally open) Drain port is open when pressure is not applied.

\*2 Refer to the following table for the available combinations of the auto drain specifications and options.

\*3 Only when option J is selected, the auto drain and drain cock are not available.

\*4 Body size 850 is equipped with a ball valve (Rc 3/8). Mount a piping adapter IDF-AP609 (page 267) to the ball valve if NPT 3/8 female threaded is required.

## Auto Drain Specifications/Option Combinations

○ : Available □ : Not available

Auto drain specifications/Option		Auto drain specifications	Option			Applicable model	
			D	J	R	T	AM650
Auto drain specifications	N.O. auto drain	<b>D</b>	□	○	○	○	○
	Drain guide 1/4	<b>J</b>	□	□	○	○	○
	IN-OUT reversal direction	<b>R</b>	○	○	○	○	○
	With element service indicator	<b>T</b>	○	○	○	○	○

## Options

### Symbol J: Drain guide 1/4 female threaded



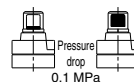
Pipe threaded connection for the drain exhaust port

1/4 female threaded

### Symbol R: IN-OUT reversal direction

Flow direction: Right to left  
(Flow direction of the standard: Left to right)

### Symbol T: With element service indicator



Clogging of the element can be observed visually.

Pressure drop  
0.1 MPa

HAA  
HAW

AT

IDF  
IDU

IDF  
IFS

IDFA

IDFB

IDH

ID

IDG

IDK

AMG

AFF

AM

AMD

AMH

AME

AMF

ZFC

SF

SFD

LLB

AD

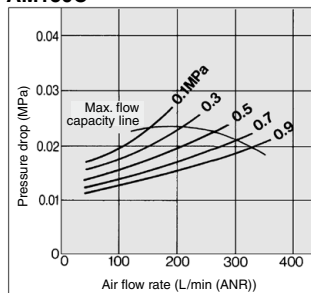
GD

# AM Series

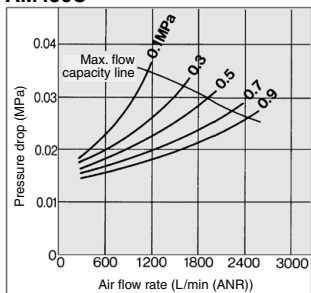
## Flow Rate Characteristics (Representative values) / Select the model under the max. flow capacity line. (Element oil saturation)

Note) Compressed air over max. flow capacity line in the table below may not meet the specifications of the product.

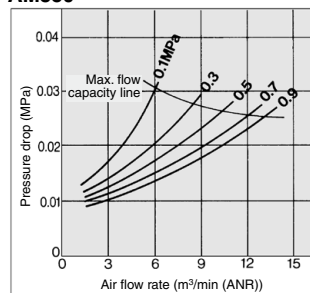
**AM150C**



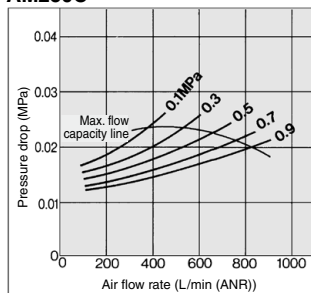
**AM450C**



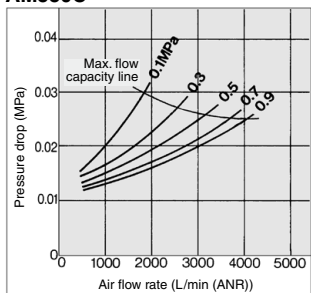
**AM850**



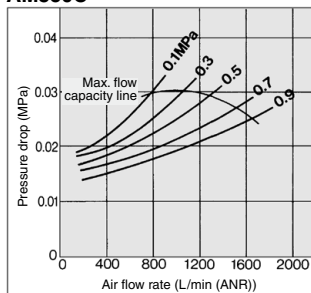
**AM250C**



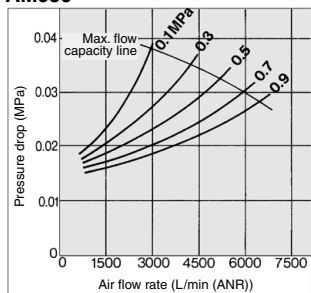
**AM550C**



**AM350C**



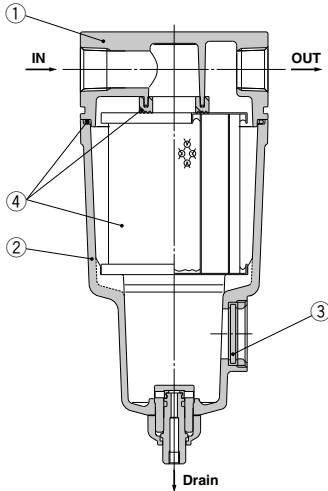
**AM650**



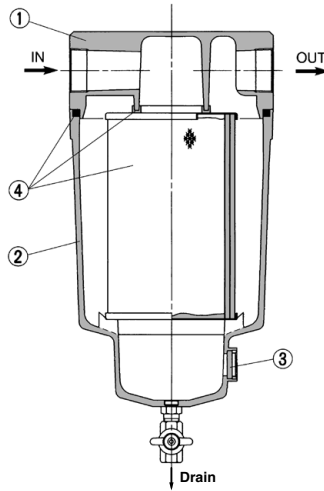


## Construction

### AM150C to 550C, AM650



### AM850



### Component Parts

No.	Description	Material	Note
1	Body	Aluminum alloy	Inner/outer surface coating
2	Housing (Case)	Aluminum alloy	
3	Sight glass	Tempered glass	—

Note) The figure shows the drain cock specification.

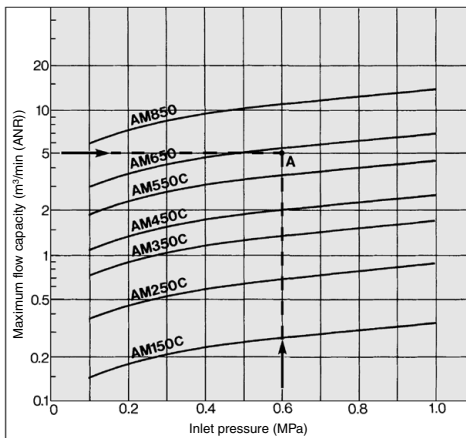
Note) Sight glass is indicated in the figure for easy understanding of component parts. However, it differs from the actual construction. Refer to dimensions on pages 228 through to 230 for details.

### Replacement Parts

No.	Description	Material	Applicable model	Model						
				AM150C	AM250C	AM350C	AM450C	AM550C	AM650	AM850
4	Element assembly	Glass fiber, others	Except option F For option F	AM-EL150 AM-EL150-F	AM-EL250 AM-EL250-F	AM-EL350 AM-EL350-F	AM-EL450 AM-EL450-F	AM-EL550 AM-EL550-F	AM-EL650	AM-EL850

- Element assembly: With gasket (1 pc.) and O-ring (1 pc.)
- Refer to page 280 for replacement of auto drain.

## Maximum Flow Capacity Line



## Model Selection

Select a model in accordance with the following procedure taking the inlet pressure and the maximum flow capacity into consideration.

(Example) Inlet pressure: 0.6 MPa

Maximum flow capacity: 5 m<sup>3</sup>/min (ANR)

1. Obtain the intersecting point A of inlet pressure and Maximum flow capacity in the graph.
2. The AM650 is obtained when the max. flow capacity line is above the intersecting point A in the graph.

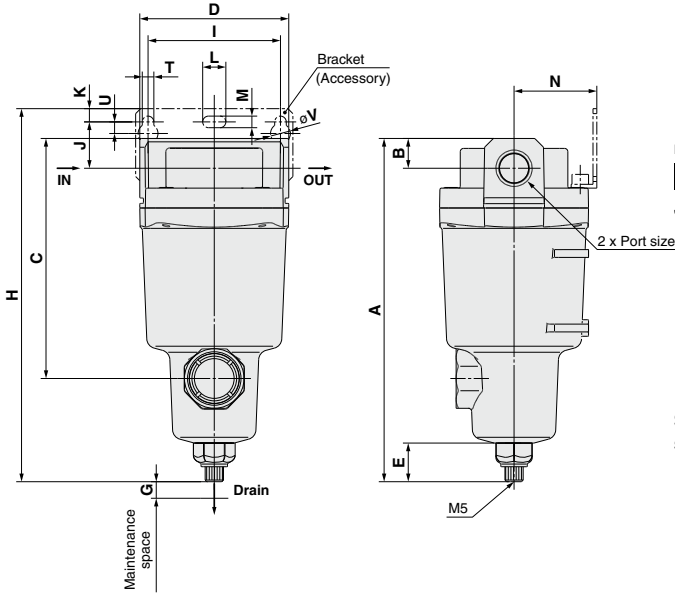
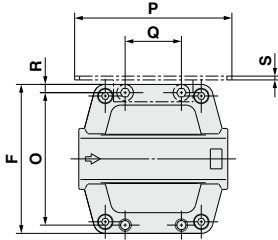
Note) Make sure to select a model that has the max. flow capacity line above the obtained intersecting point. With a model that has the max. flow capacity line below the obtained intersecting point, the flow rate will be exceeded, thus leading to a problem such as being unable to satisfy the specifications.

- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- FS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG
- AFF
- AM
- AMD
- AMH
- AME
- AMF
- ZFC
- SF
- SFD
- LLB
- AD
- GD

# AM Series

## Dimensions

### AM150C to 550C

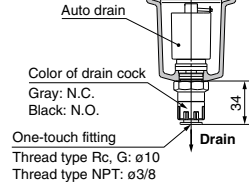


Note) The figure shows the drain cock specification.

### Auto drain

**C: With auto drain (N.C.)**

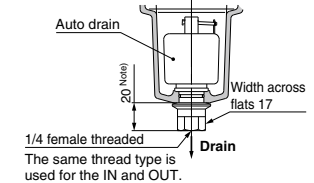
**D: With auto drain (N.O.)**



Color of drain cock  
Gray: N.C.  
Black: N.O.

One-touch fitting  
Thread type Flc, G:  $\phi 10$   
Thread type NPT:  $\phi 3/8$

**Combination of D: With auto drain (N.O.) and H: For medium air pressure**

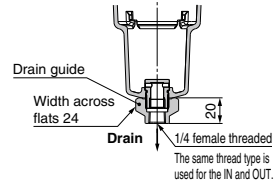


1/4 female threaded  
The same thread type is used for the IN and OUT.

Note) 23 for AM250C

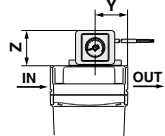
### Option

**J: Drain guide 1/4 female threaded**

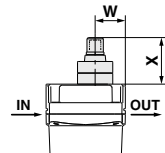


The same thread type is used for the IN and OUT.

**S, U: With differential pressure switch (with indicator)**



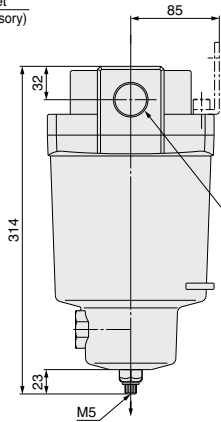
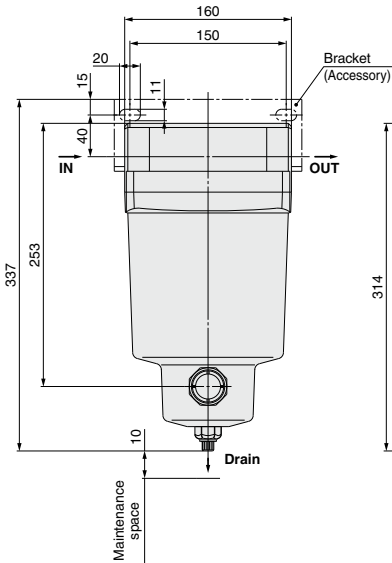
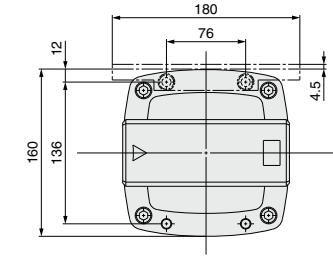
**T: With element service indicator**



Model	Port size	A	B	C	D	E	F	G	Bracket related dimensions													Element service indicator related dimensions	Differential pressure switch related dimensions			
									H	I	J	K	T	U	L	M	V	N	O	P	Q			R	S	W
AM150C	1/8, 1/4	158	10	99	63	20	63	10	173	56	20	5	6	12	6	10	35	54	70	26	4.5	1.6	24	37	32	41
AM250C	1/4, 3/8	172	14	113	76	20	76	10	190	66	24	8	6	12	6	10	40	66	80	28	5	2	27	37	36	41
AM350C	3/8, 1/2	204	18	145	90	20	90	10	222	80	28	8	7	14	7	12	50	80	95	34	5	2.3	32	37	42	41
AM450C	1/2, 3/4	225	20	166	106	20	106	10	246	90	31	10	9	18	9	15	55	88	111	50	9	3.2	37	37	43	41
AM550C	3/4, 1	259	24	200	122	20	122	15	278	100	33	10	9	18	9	15	65	102	126	60	10	3.2	39	37	51	41

## Dimensions

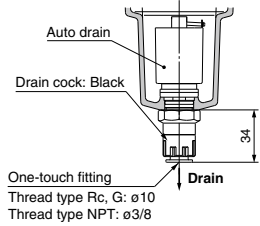
### AM650



Note) The figure shows the drain cock specification.

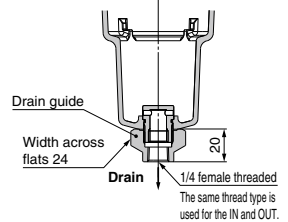
### Auto drain

#### D: With auto drain (N.O.)

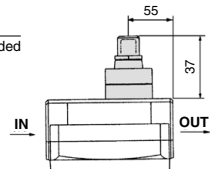


### Option

#### J: Drain guide 1/4 female threaded



#### T: With element service indicator

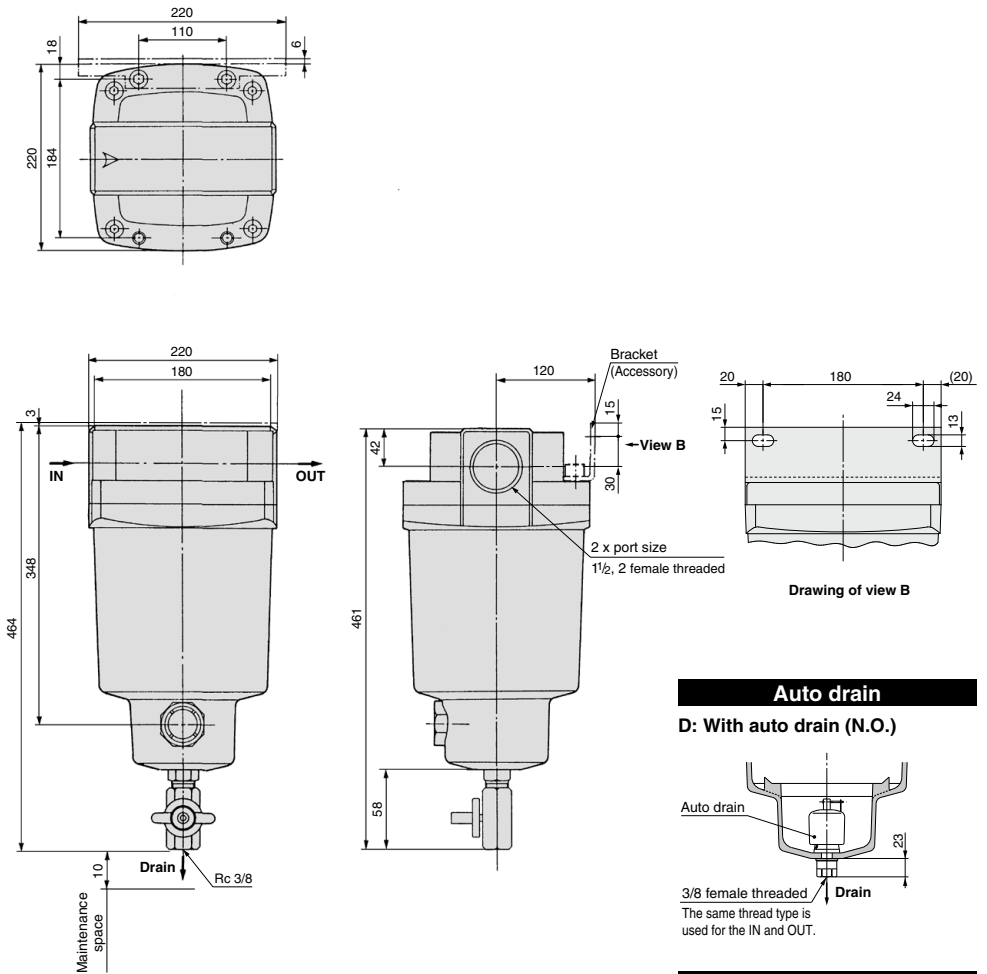


HAA
HAW
AT
IDF
IDU
IDF
<input type="checkbox"/> FS
IDFA
IDFB
IDH
ID
IDG
IDK
AMG
AFF
AM
AMD
AMH
AME
AMF
ZFC
SF
SFD
LLB
AD <input type="checkbox"/>
GD

# AM Series

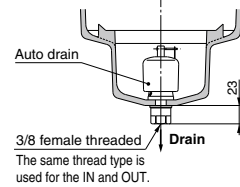
## Dimensions

### AM850



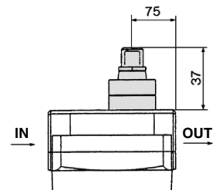
### Auto drain

D: With auto drain (N.O.)



### Option

T: With element service indicator



Note) The figure shows the drain cock specification.

# Micro Mist Separator

## AMD Series

RoHS

Can separate and remove aerosol state oil mist in compressed air and remove particles such as carbon or dust of more than 0.01  $\mu\text{m}$ .

Use this product as a pre-filter for compressed air for precision instruments or clean room requiring higher clean air.

Modular connection is possible with AMD150C to 550C. (For details, refer to page 266.)



AMD150C to 550C

AMD650/850

Symbol



(Drain cock specifications)



(Auto drain specifications)



Made to Order

(For details, refer to page 272.)

### Model

Model	AMD150C	AMD250C	AMD350C	AMD450C	AMD550C	AMD650	AMD850
Rated flow (L/min (ANR)) <sup>Note)</sup>	200	500	1000	2000	3700	6000	12000
Port size	1/8, 1/4	1/4, 3/8	3/8, 1/2	1/2, 3/4	3/4, 1	1, 1 1/2	1 1/2, 2
Weight (kg)	0.38	0.55	0.9	1.4	2.1	4.2	10.5

Note) Max. flow capacity at 0.7 MPa.

Max. flow capacity varies depending on the operating pressure.

Refer to "Flow Rate Characteristics" (page 234) and "Maximum Flow Capacity Line" (page 233).

### Model/Free Standing Type

Model	AMD900	AMD1000
Rated flow (L/min (ANR))	24000	40000
Port size	50(2B), 80(3B), 100(4B), JIS 10K FF flange	100(4B), 150(6B), JIS 10K FF flange
Weight (kg)	220	430

### Specifications

Fluid	Compressed air
Max. operating pressure	1.0 MPa <sup>Note 3)</sup>
Min. operating pressure <sup>Note 1)</sup>	0.05 MPa
Proof pressure	1.5 MPa
Ambient and fluid temperature	5 to 60°C
Filtration rating	0.01 $\mu\text{m}$ (Filtration efficiency: 99.9%)
Oil mist density at outlet	Max. 0.1 mg/m <sup>3</sup> (ANR) <sup>Note 2)</sup> (Before saturated with oil, less than 0.01 mg/m <sup>3</sup> (ANR) = 0.008 ppm)
Element replacement period	2 years (1 year for free standing type) or when pressure drop reached 0.1 MPa

Note 1) With auto drain: 0.1 MPa (N.O. type) or 0.15 MPa (N.C. type)

Note 2) When the inlet oil mist density is 30 mg/m<sup>3</sup> (ANR).

Note 3) 0.97 MPa for free standing type

### Accessory Part No.

Applicable model	AMD150C	AMD250C	AMD350C	AMD450C	AMD550C	AMD650	AMD850
Bracket assembly (with 2 mounting screws)	AM-BM101	AM-BM102	AM-BM103	AM-BM104	AM-BM105	BM56	BM57

### ⚠ Caution

Be sure to read this before handling the products.

Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.

HAA  
HAW

AT

IDF  
IDU

IDF  
FS

IDFA

IDFB

IDH

ID

IDG

IDK

AMG

AFF

AM

AMD

AMH

AME

AMF

ZFC

SF

SFD

LLB

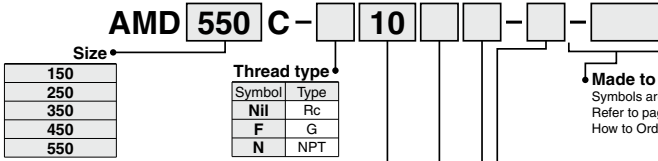
AD

GD

## How to Order



### AMD150C to 550C



150
250
350
450
550

Symbol	Type
Nil	Rc
F	G
N	NPT

Symbol	Port size	Applicable size				
		150	250	350	450	550
01	1/8	●				
02	1/4	●	●			
03	3/8		●			
04	1/2			●	●	
06	3/4				●	●
10	1					●

Symbol	Description
Nil	
B	Bracket *1

\*1 Bracket is included, (but not assembled).

#### Made to Order

Symbols are only added at the end of Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

#### Option \*3

- Multiple options can be selected.
- Refer to the table on the lower left for the available combinations.
- Indicate symbols in alphabetical order.

Symbol	Description
Nil	—
F	Rubber material: FKM
H	For medium air pressure (1.6 MPa)
J	Drain guide 1/4 female thread *5
R	IN-OUT reversal direction
S	With differential pressure switch (125 VAC, 30 VDC) *6, Note
U	With differential pressure switch (30 VDC) *6
T	With element service indicator
V	White vaseline

\*5 Without a valve function

\*6 Differential pressure switch is included, (but not assembled).

Note) Select "U" if conformity to the EU directive is required.

### Auto Drain Specifications/Option Combinations

○: All types of auto drain specifications are available. (including drain guide, "J" specification)

△: N.C. auto drain ("C" specification) is not available.

▽: Both N.C. and N.O. auto drain ("C", "D" specification) are not available.

	Nil	F	H	R	S	U	T	V
Nil	○	○	○	○		Note		○
F	○	○	○	○				▽
H	○	▽	○	○				▽
R	○	○	△	○				○
S							Note	
U	Note			Note				
T								○
V	○	▽	▽	○				○

Note: Only one drain exhaust method can be selected.

□: Not available

#### Auto drain \*2 \*3

Symbol	Description
Nil	Without auto drain (With drain cock *4)
C	N.C. (Normally closed) Drain port is closed when pressure is not applied.
D	N.O. (Normally open) Drain port is open when pressure is not applied.

\*2 Refer to page 265 for proper use of the auto drain. (Only one auto drain specification can be selected.)

\*3 Refer to the table on the left for the available combinations of the auto drain specifications and options.

\*4 When the option J is selected, the auto drain and drain cock are not available.

## Options

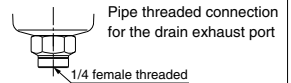
#### Symbol F: Rubber material: FKM

FKM is used for the parts such as O-ring and gasket.

#### Symbol H: For medium air pressure (1.6 MPa)

Can be used up to 1.6 MPa at maximum.

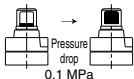
#### Symbol J: Drain guide 1/4 female threaded



#### Symbol R: IN-OUT reversal direction

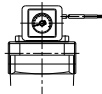
Flow direction: Right to left  
(Flow direction of the standard: Left to right)

#### Symbol T: With element service indicator



Clogging of the element can be observed visually.

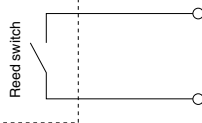
#### Symbol S: With differential pressure switch (with indicator)



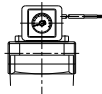
Clogging of the element can be observed visually or with an electrical signal.

\* The rated contact voltage is different from "U".

Max. contact capacity: 10 VA AC, 10 W DC  
Rated contact voltage (max. operating current): 125 V AC (0.08 A), 30 V DC (0.33 A)



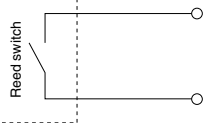
#### Symbol U: With differential pressure switch (with indicator)



Clogging of the element can be observed visually or with an electrical signal.

\* The rated contact voltage is different from "S".

Max. contact capacity: 10 W DC  
Rated contact voltage (max. operating current): 30 V DC (0.33 A)



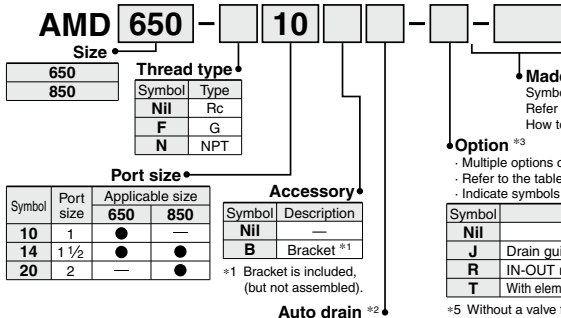
#### Symbol V: White vaseline

The body/housing is degreased, and the grease used for the parts requiring lubrication has been changed to white vaseline.



### How to Order

#### AMD650/850



**Made to Order**

Symbols are only added at the end for Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

**Option** \*3

- Multiple options can be selected.
- Refer to the table below for the available combinations.
- Indicate symbols in alphabetical order.

Symbol	Description
Nil	
J	Drain guide 1/4 female threaded *5
R	IN-OUT reversal direction
T	With element service indicator

\*5 Without a valve function

#### Auto Drain Specifications/ Option Combinations

⊙: Available □: Not available

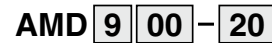
Auto drain specifications/Option	Auto drain specifications/Option				Applicable model	
	D	J	R	T	AMD650	AMD850
Auto drain specifications	N.O. auto drain	D	⊙	⊙	⊙	⊙
	Drain guide 1/4	J	⊙	⊙	⊙	⊙
Option	IN-OUT reversal direction	R	⊙	⊙	⊙	⊙
	With element service indicator	T	⊙	⊙	⊙	⊙

\*2 Refer to the table on the right for the available combinations of the auto drain specifications and options.

\*3 When the option J is selected, the auto drain and drain cock are not available.

\*4 Body size 850 is equipped with a ball valve (Rc 3/8). Mount a piping adapter IDF-AP609 (page 267) to the ball valve if NPT 3/8 female threaded is required.

#### Free standing type AMD9□, 10□



**Size**

9
10

**Auto drain**

Symbol	Description
00	With manual drain cock
10	With auto drain

\*6 Auto drain is N.O. (Normally open). Drain port is open when pressure is not applied.

**Port size**

Symbol	Port size	Applicable size	
		AMD9□0	AMD10□0
20	50(2B)JIS 10K FF flange	●	—
30	80(3B)JIS 10K FF flange	●	—
40	100(4B)JIS 10K FF flange	●	●
60	150(6B)JIS 10K FF flange	—	●

### Model Selection

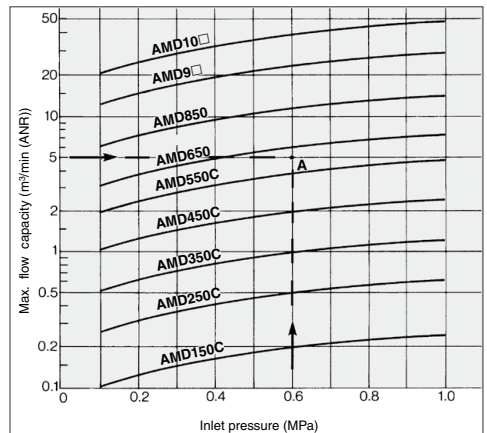
Select a model in accordance with the following procedure taking the inlet pressure and the max. flow capacity into consideration. (Example) Inlet pressure: 0.6 MPa

Max. flow capacity: 5 m<sup>3</sup>/min (ANR)

- Obtain the intersecting point A of inlet pressure and max. flow capacity in the graph.
- The AMD650 is obtained when the max. flow capacity line is above the intersecting point A in the graph.

Note) Make sure to select a model that has the max. flow capacity line above the obtained intersecting point. With a model that has the max. flow capacity line below the obtained intersecting point, the flow rate will be exceeded, thus leading to a problem such as being unable to satisfy the specifications.

### Maximum Flow Capacity Line



HAA  
HAW

AT

IDF  
IDU

IDF  
□FS

IDFA

IDFB

IDH

ID

IDG

IDK

AMG

AFF

AM

AMD

AMH

AME

AMF

ZFC

SF

SFD

LLB

AD□

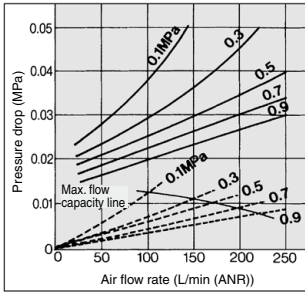
GD

# AMD Series

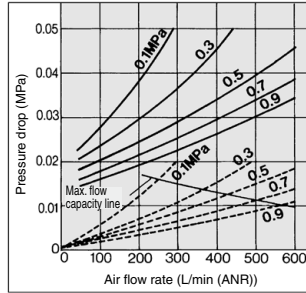
**Flow Rate Characteristics (Representative values)**/Select the model under the max. flow capacity line. ( — Element oil saturation --- Initial condition)

Note) Compressed air over max. flow line in the table below may not meet the specifications of the product.

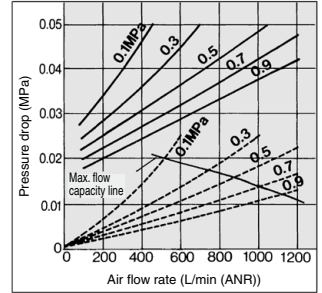
**AMD150C**



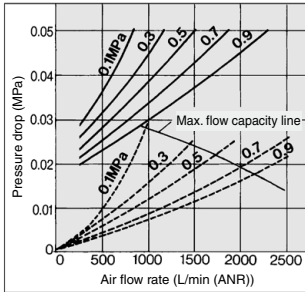
**AMD250C**



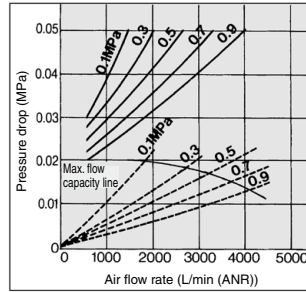
**AMD350C**



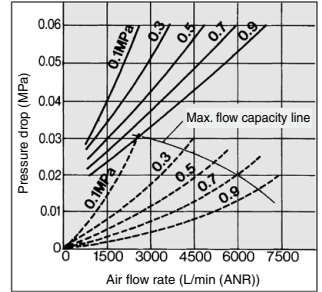
**AMD450C**



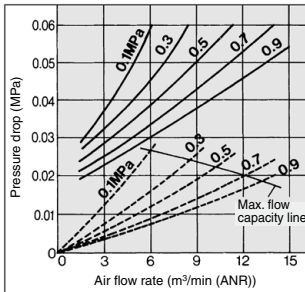
**AMD550C**



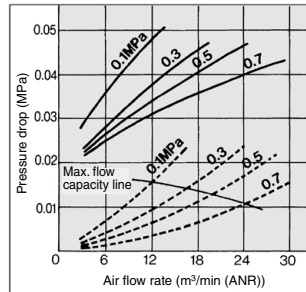
**AMD650**



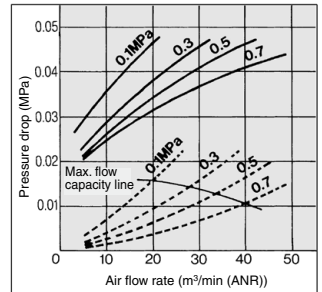
**AMD850**



**AMD9□**



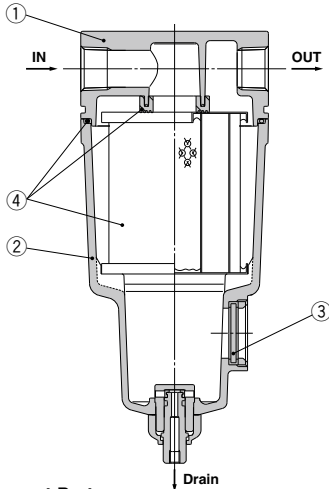
**AMD10□**



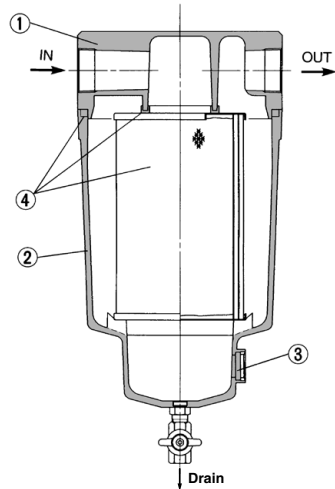


**Construction**

**AMD150C to 550C, AMD650**



**AMD850**



**Component Parts**

No.	Description	Material	Note
1	Body	Aluminum alloy	Inner/outer surface coating
2	Housing (Case)	Aluminum alloy	
3	Sight glass	Tempered glass	—

Note) The figure shows the drain cock specification.

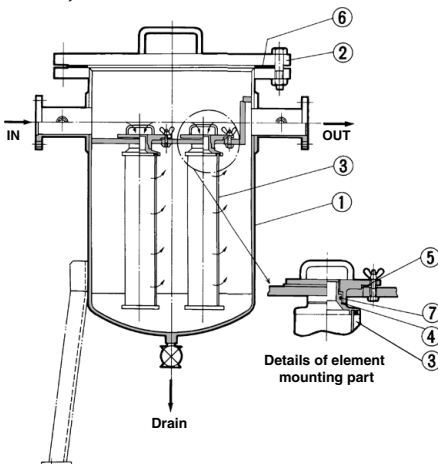
Note) Sight glass is indicated in the figure for easy understanding of component parts. However, it differs from the actual construction. Refer to dimensions on pages 236 through to 239 for details.

**Replacement Parts**

No.	Description	Material	Applicable model	Model						
				AMD150C	AMD250C	AMD350C	AMD450C	AMD550C	AMD650	AMD850
4	Element assembly	Glass fiber, others	Except option F For option F	AMD-EL150 AMD-EL150-F	AMD-EL250 AMD-EL250-F	AMD-EL350 AMD-EL350-F	AMD-EL450 AMD-EL450-F	AMD-EL550 AMD-EL550-F	AMD-EL650 —	AMD-EL850 —

- Element assembly: With gasket (1 pc.) and O-ring (1 pc.)
- Refer to page 280 for replacement of auto drain.

**AMD9□, 10□**



**Component Parts/Material**

No.	Description	Model	
		AMD9□, 10□	—
1	Case	Carbon steel	
2	Cover	Carbon steel	

**Replacement Parts**

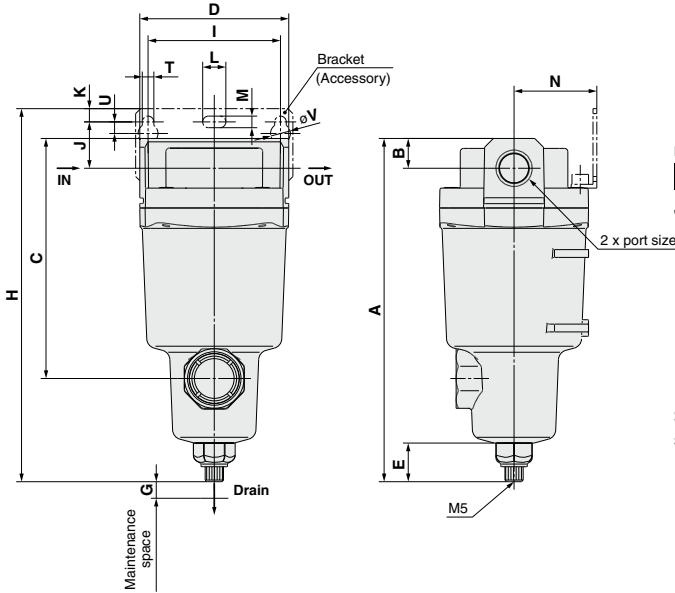
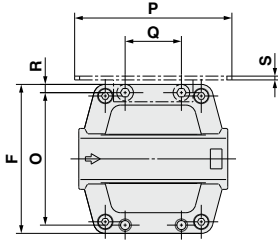
No.	Description	Material	Model	
			AMD9□	AMD10□
3	Element	—	63174 3 pcs.	63174 5 pcs.
4	Seal	NBR	63148 3 pcs.	63148 5 pcs.
5	Seal	NBR	O.D112 x I.D90 x T3 3 pcs.	O.D112 x I.D90 x T3 5 pcs.
6	Gasket	V#6500	AL-63S	AL-31S
7	O-ring	NBR	KA00061 3 pcs.	KA00061 5 pcs.

- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- FS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG
- AFF
- AM
- AMD
- AMH
- AME
- AMF
- ZFC
- SF
- SFD
- LLB
- AD□
- GD

# AMD Series

## Dimensions

### AMD150C to 550C

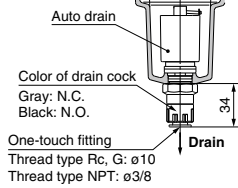


Note) The figure shows the drain cock specification.

### Auto drain

**C: With auto drain (N.C.)**

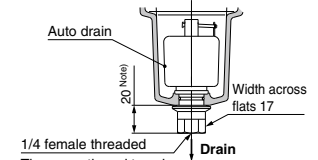
**D: With auto drain (N.O.)**



Color of drain cock  
Gray: N.C.  
Black: N.O.

One-touch fitting  
Thread type Rc, G:  $\phi 10$   
Thread type NPT:  $\phi 3/8$

**Combination of D: With auto drain (N.O.) and H: For medium air pressure**

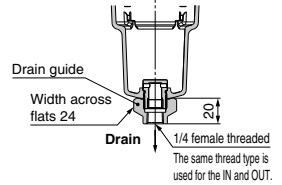


1/4 female threaded  
The same thread type is used for the IN and OUT.

Note) 23 for AMD250C

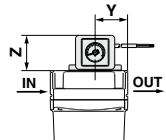
### Option

**J: Drain guide 1/4 female threaded**

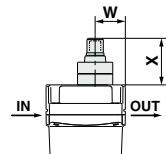


Drain guide  
Width across flats 24  
1/4 female threaded  
The same thread type is used for the IN and OUT.

**S, U: With differential pressure switch (with indicator)**



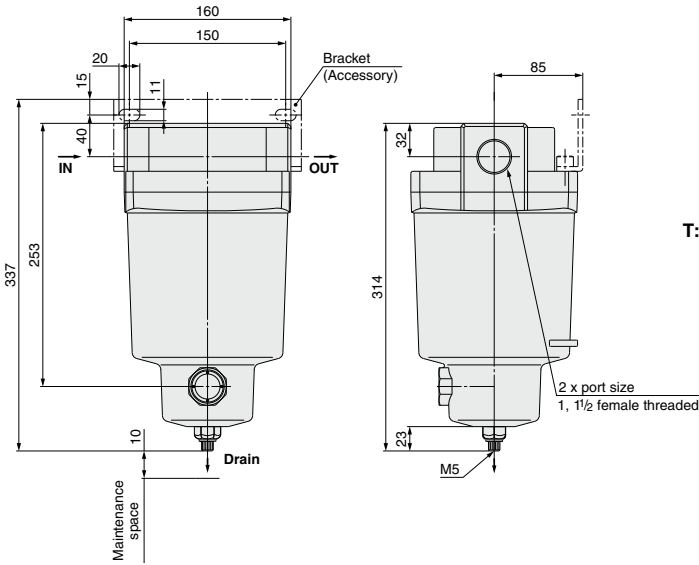
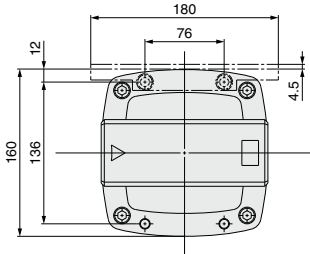
**T: With element service indicator**



Model	Port size	A	B	C	D	E	F	G	Bracket related dimensions													Element service indicator related dimensions	Differential pressure switch related dimensions			
									H	I	J	K	T	U	L	M	V	N	O	P	Q			R	S	W
AMD150C	1/8, 1/4	161	10	99	63	23	63	10	176	56	20	5	6	12	6	10	35	54	70	26	4.5	1.6	24	37	32	41
AMD250C	1/4, 3/8	175	14	113	76	23	76	10	193	66	24	8	6	12	6	10	40	66	80	28	5	2	27	37	36	41
AMD350C	3/8, 1/2	207	18	145	90	23	90	10	225	80	28	8	7	14	7	12	50	80	95	34	5	2.3	32	37	42	41
AMD450C	1/2, 3/4	228	20	166	106	23	106	10	249	90	31	10	9	18	9	15	55	88	111	50	9	3.2	37	37	43	41
AMD550C	3/4, 1	262	24	200	122	23	122	15	281	100	33	10	9	18	9	15	65	102	126	60	10	3.2	39	37	51	41

**Dimensions**

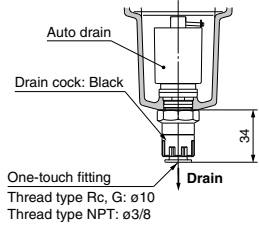
**AMD650**



Note) The figure shows the drain cock specification.

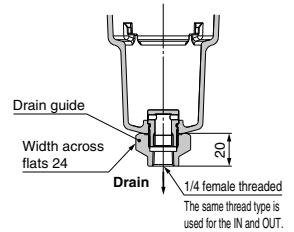
**Auto drain**

**D: With auto drain (N.O.)**

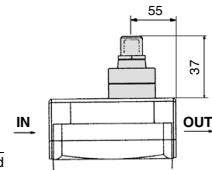


**Option**

**J: Drain guide 1/4 female threaded**



**T: With element service indicator**

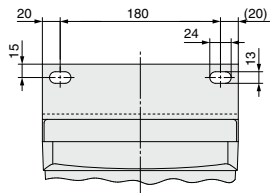
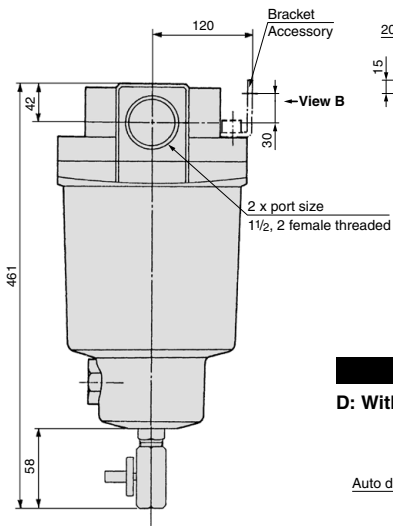
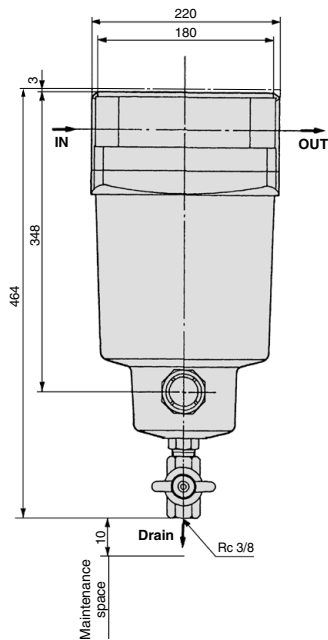
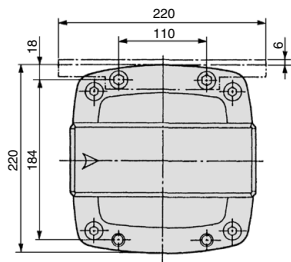


HAA
HAW
AT
IDF
IDU
IDF
<input type="checkbox"/> FS
IDFA
IDFB
IDH
ID
IDG
IDK
AMG
AFF
AM
<b>AMD</b>
AMH
AME
AMF
ZFC
SF
SFD
LLB
AD <input type="checkbox"/>
GD

# AMD Series

## Dimensions

### AMD850

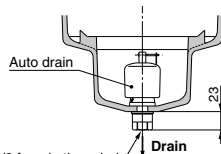


Drawing of view B

Note) The figure shows the drain cock specification.

### Auto drain

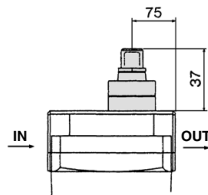
#### D: With auto drain (N.O.)



3/8 female threaded  
The same thread type is used for the IN and OUT.

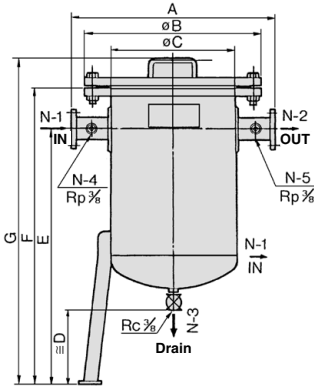
### Option

#### T: With element service indicator

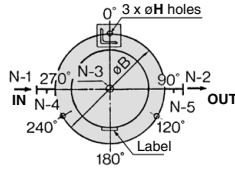


**Dimensions**

AMD9□, 10□



**ORIENTATION**



(mm)

Model	Port size (Flange)	A	øB	øC	D	E	F	G	H
AMD9□	50(2B), 80(3B), 100(4B)JIS 10K FF flange	720	560	400	300	1320	1480	1585	24
AMD10□	100(4B), 150(6B)JIS 10K FF flange	870	745	550	300	1380	1610	1740	24

- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- IFS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG
- AFF
- AM
- AMD**
- AMH
- AME
- AMF
- ZFC
- SF
- SFD
- LLB
- AD□
- GD



# Micro Mist Separator with Pre-filter

## AMH Series

RoHS

Can separate and remove aerosol state oil mist in compressed air and remove particles such as carbon or dust of more than 0.01  $\mu\text{m}$ .  
Use this product as a pre-filter for compressed air for precision instruments or clean room requiring higher clean air.

The AM series and AMD series have been integrated to achieve a reduction in installation space and in piping labor.

Modular connection is possible with AMH150C to 550C.  
(For details, refer to page 266.)



AMH150C to 550C

AMH650/850

Symbol



(Drain cock specifications)



(Auto drain specifications)



Made to Order

(For details, refer to page 272.)

### Model

Model	AMH150C	AMH250C	AMH350C	AMH450C	AMH550C	AMH650	AMH850
Rated flow (L/min (ANR)) <sup>Note</sup>	200	500	1000	2000	3700	6000	12000
Port size	1/8, 1/4	1/4, 3/8	3/8, 1/2	1/2, 3/4	3/4, 1	1, 1 1/2	1 1/2, 2
Weight (kg)	0.38	0.55	0.9	1.4	2.1	4.2	10.5

Note) Max. flow capacity at 0.7 MPa.

Max. flow capacity varies depending on the operating pressure.

Refer to "Flow Rate Characteristics" (page 244) and "Maximum Flow Capacity Line" below.

### Specifications

Fluid	Compressed air
Max. operating pressure	1.0 MPa
Min. operating pressure <sup>*1</sup>	0.05 MPa
Proof pressure	1.5 MPa
Ambient and fluid temperature	5 to 60°C
Nominal filtration density	0.01 $\mu\text{m}$ (Filtration efficiency: 99.9%)
Oil mist density at outlet	Max. 0.1 $\text{mg}/\text{m}^3$ (ANR) <sup>*2</sup> (Before saturated with oil, less than 0.01 $\text{mg}/\text{m}^3$ (ANR) = 0.008 ppm)
Element replacement period	2 years or when pressure drop reached 0.1 MPa

\*1 With auto drain: 0.1 MPa (N.O. type) or 0.15 MPa (N.C. type)

\*2 When the inlet oil mist density is 30  $\text{mg}/\text{m}^3$  (ANR).

### Accessory Part No.

Applicable model	AMH150C	AMH250C	AMH350C	AMH450C	AMH550C	AMH650	AMH850
Bracket assembly (with 2 mounting screws)	AM-BM101	AM-BM102	AM-BM103	AM-BM104	AM-BM105	BM56	BM57

### Model Selection

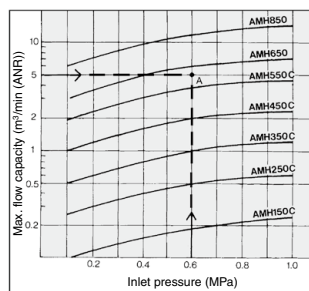
Select a model in accordance with the following procedure taking the inlet pressure and the max. flow capacity into consideration.

(Example) Inlet pressure: 0.6 MPa  
Max. flow capacity: 5  $\text{m}^3/\text{min}$  (ANR)

1. Obtain the intersecting point A of inlet pressure and max. flow capacity in the graph.
2. The AMH650 is obtained when the max. flow capacity line is above the intersecting point A in the graph.

Note) Make sure to select a model that has the max. flow capacity line above the obtained intersecting point. With a model that has the max. flow capacity line below the obtained intersecting point, the flow rate will be exceeded, thus leading to a problem such as being unable to satisfy the specifications.

### Maximum Flow Capacity Line



### Caution

Be sure to read this before handling the products.  
Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.

## How to Order



### AMH150C to 550C

AMH **550** C - **10** - - -

Size		Thread type	
Symbol	Type	Symbol	Type
150		Nll	Rc
250		F	G
350		N	NPT
450			
550			

Symbol	Port size	Applicable size				
		150	250	350	450	550
01	1/8	●				
02	1/4	●	●			
03	3/8		●	●		
04	1/2			●	●	
06	3/4				●	●
10	1					●

Symbol	Description
Nll	—
B	Bracket *1

\*1 Bracket is included, (but not assembled).

#### Made to Order

Symbols are only added at the end for Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

#### Option \*3

- Multiple options can be selected.
- Refer to the table on the lower left for the available combinations.
- Indicate symbols in alphabetical order.

Symbol	Description
Nll	—
F	Rubber material: FKM
H	For medium air pressure (1.6 MPa)
J	Drain guide 1/4 female threaded *5
R	IN-OUT reversal direction
S	With differential pressure switch (125 VAC, 30 VDC) *6, (Note)
U	With differential pressure switch (30 VDC) *6
T	With element service indicator
V	White vaseline

- \*5 Without a valve function
- \*6 Differential pressure switch is included, (but not assembled).
- Note) Select "U" if conformity to the EU directive is required.

#### Drain Exhaust Specifications/Option Combinations

- : All types of drain exhaust specifications are available. (including drain guide, "J" specification)
- △: N.C. auto drain ("C" specification) is not available.
- ▽: Both N.C. and N.O. auto drain ("C", "D" specification) are not available.

	Nll	F	H	R	S	U	T	V
Nll	○	○	○	○		Note		○
F	○	○	○	○				○
H	○	▽	△	△				○
R	○	○	△			Note		○
S								
U	Note			Note				
T								○
V	○	▽	▽	○				○

Note: Only one drain exhaust method can be selected.  
 □: Not available

#### Auto drain \*2 \*3

Symbol	Description
Nll	Without auto drain (With drain cock *4)
C	N.C. (Normally closed) Drain port is closed when pressure is not applied.
D	N.O. (Normally open) Drain port is open when pressure is not applied.

- \*2 Refer to page 265 for proper use of the auto drain. (Only one auto drain specification can be selected.)
- \*3 Refer to the table on the left for the available combinations of the auto drain specifications and options.
- \*4 When the option J is selected, the auto drain and drain cock are not available.

## Options

**Symbol F: Rubber material: FKM**

FKM is used for the parts such as O-ring and gasket.

**Symbol H: For medium air pressure (1.6 MPa)**

Can be used up to 1.6 MPa at maximum.

**Symbol J: Drain guide 1/4 female threaded**

Pipe threaded connection for the drain exhaust port

**Symbol R: IN-OUT reversal direction**

Flow direction: Right to left  
 (Flow direction of the standard: Left to right)

**Symbol S: With differential pressure switch (with indicator)**

Clogging of the element can be observed visually or with an electrical signal.

**Symbol U: With differential pressure switch (with indicator)**

Clogging of the element can be observed visually or with an electrical signal.

**Symbol T: With element service indicator**

Clogging of the element can be observed visually.

0.1 MPa

\* The rated contact voltage is different from "U".

Max. contact capacity: 10 VA AC, 10 W DC  
 Rated contact voltage (max. operating current): 125 V AC (0.08 A), 30 V DC (0.33 A)

\* The rated contact voltage is different from "S".

Max. contact capacity: 10 W DC  
 Rated contact voltage (max. operating current): 30 V DC (0.33 A)

**Symbol V: White vaseline**

The body/housing is degreased, and the grease used for the parts requiring lubrication has been changed to white vaseline.

Reed switch

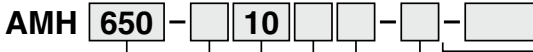
Reed switch





**How to Order**

**AMH650/850**



**Size**

650
850

**Thread type**

Symbol	Type
Nil	Rc
F	G
N	NPT

**Port size**

Symbol	Port size	Applicable size	
		650	850
10	1	●	—
14	1 1/2	●	●
20	2	—	●

**Accessory**

Symbol	Description
Nil	—
B	Bracket *1

\*1 Bracket is included, (but not assembled).

**Made to Order**

Symbols are only added at the end for Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

**Option** \*3

- Multiple options can be selected.
- Refer to the table below for the available combinations.
- Indicate symbols in alphabetical order.

Symbol	Description
Nil	—
J	Drain guide 1/4 female threaded *5
R	IN-OUT reversal direction
T	With element service indicator

\*5 Drain piping and piping for a stop valve such as ball valve are required.

**Auto drain** \*2

Symbol	Description
Nil	Without auto drain (With drain cock *3 *4)
D	N.O. (Normally open) Drain port is open when pressure is not applied.

\*2 Refer to the following table for the available combinations of the auto drain specifications and options.

\*3 When the option J is selected, the auto drain and drain cock are not available.

\*4 Body size 850 is equipped with a ball valve (Rc3/8). Mount a piping adapter IDF-AP609 (page 267) to the ball valve if NPT3/8 female threaded is required.

**Auto Drain Specifications/Option Combinations**

⊙: Available □: Not available

Auto drain specifications/Option			Auto drain specifications			Option			Applicable model	
			D	J	R	T	AMH650	AMH850		
Auto drain specifications	N.O. auto drain	D	⊙	⊙	⊙	⊙	⊙	⊙		
Option	Drain guide 1/4	J	⊙	⊙	⊙	⊙	⊙	⊙		
	IN-OUT reversal direction	R	⊙	⊙	⊙	⊙	⊙	⊙		
	With element service indicator	T	⊙	⊙	⊙	⊙	⊙	⊙		

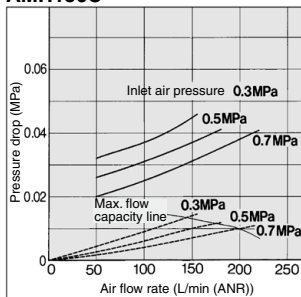
- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- FS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG
- AFF
- AM
- AMD
- AMH
- AME
- AMF
- ZFC
- SF
- SFD
- LLB
- AD□
- GD

# AMH Series

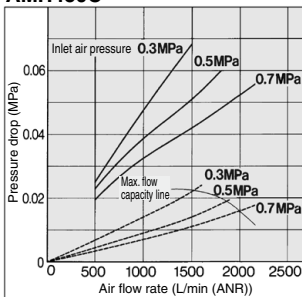
**Flow Rate Characteristics (Representative values)**/Select the model under the max. flow capacity line. ( — Element oil saturation - - - Initial condition)

Note) Compressed air over max. flow capacity line in the table below may not meet the specifications of the product.

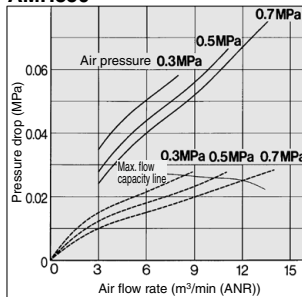
**AMH150C**



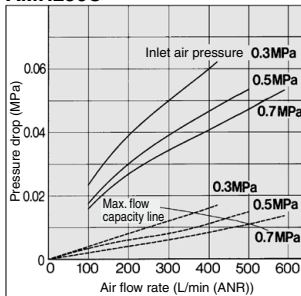
**AMH450C**



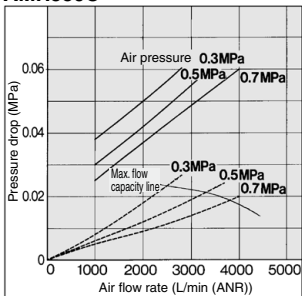
**AMH850**



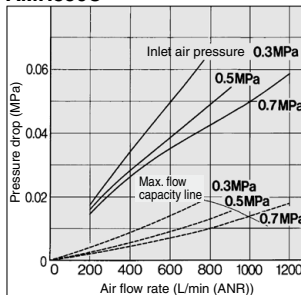
**AMH250C**



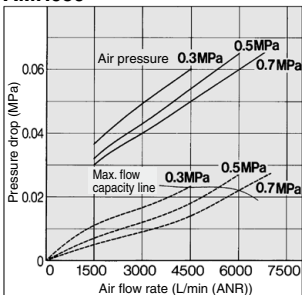
**AMH550C**



**AMH350C**

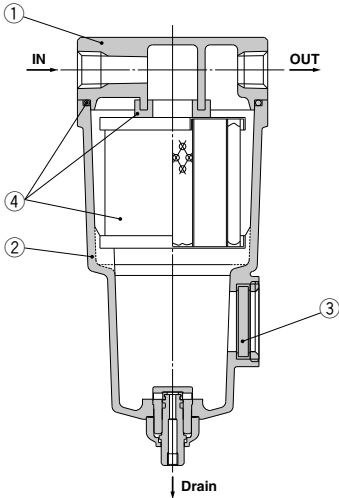


**AMH650**

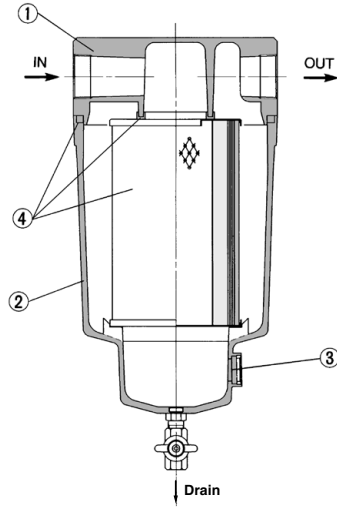


**Construction**

**AMH150C to 550C, AMH650**



**AMH850**



**Component Parts**

No.	Description	Material	Note
1	Body	Aluminum alloy	Inner/outer surface coating
2	Housing (Case)	Aluminum alloy	—
3	Sight glass	Tempered glass	—

Note) The figure shows the drain cock specification.

Note) Sight glass is indicated in the figure for easy understanding of component parts. However, it differs from the actual construction. Refer to dimensions on pages 246 through to 248 for details.

**Replacement Parts**

No.	Description	Material	Applicable model	Model						
				AMH150C	AMH250C	AMH350C	AMH450C	AMH550C	AMH650	AMH850
4	Element assembly	Glass fiber, others	Except option F	AMH-EL150	AMH-EL250	AMH-EL350	AMH-EL450	AMH-EL550	AMH-EL650	AMH-EL850
			For option F	AMH-EL150-F	AMH-EL250-F	AMH-EL350-F	AMH-EL450-F	AMH-EL550-F	—	—

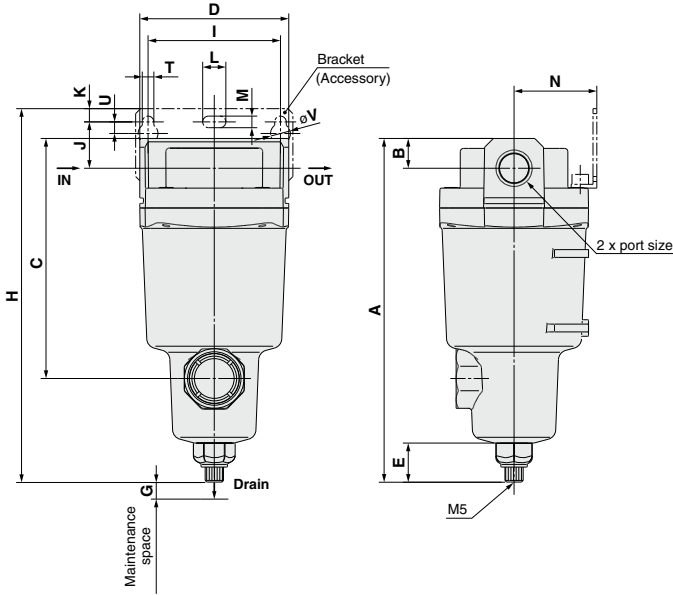
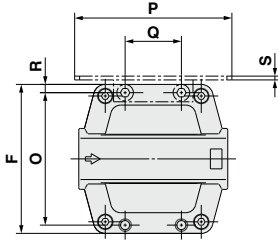
- Element assembly: With gasket (1 pc.) and O-ring (1 pc.)
- Refer to page 280 for replacement of auto drain.

HAA  
HAW  
AT  
IDF  
IDU  
IDF  
IFS  
IDFA  
IDFB  
IDH  
ID  
IDG  
IDK  
AMG  
AFF  
AM  
AMD  
AMH  
AME  
AMF  
ZFC  
SF  
SFD  
LLB  
AD  
GD

# AMH Series

## Dimensions

### AMH150C to 550C

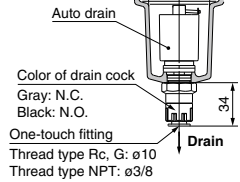


Note) The figure shows the drain cock specification.

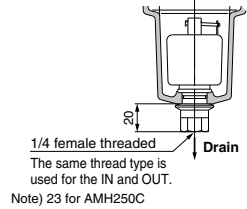
### Auto drain

**C: With auto drain (N.C.)**

**D: With auto drain (N.O.)**

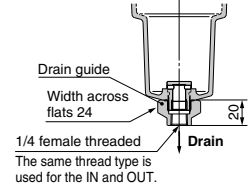


**Combination of D: With auto drain (N.O.) and H: For medium air pressure**

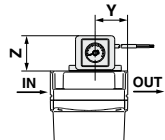


### Option

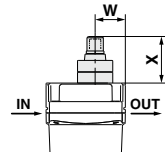
**J: Drain guide 1/4 female threaded**



**S, U: With differential pressure switch (with indicator)**



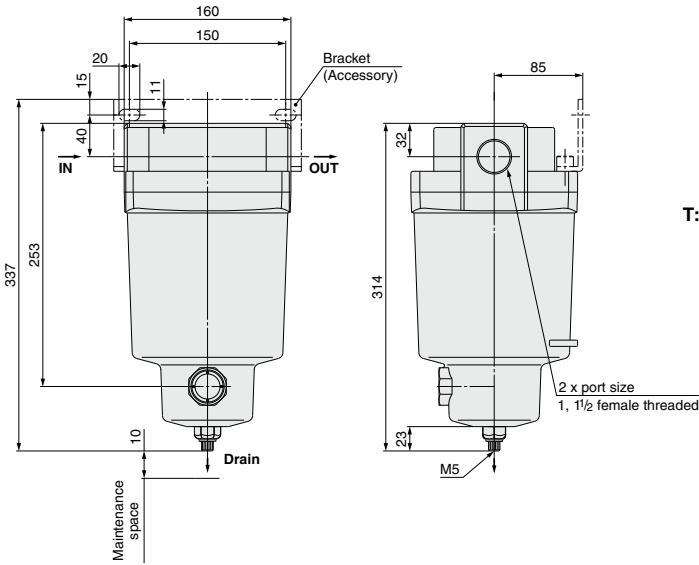
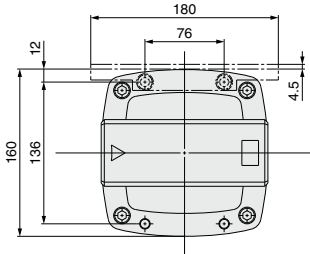
**T: With element service indicator**



Model	Port size	A	B	C	D	E	F	G	Bracket related dimensions											Element service indicator related dimensions		Differential pressure switch related dimensions				
									H	I	J	K	T	U	L	M	V	N	O	P	Q	R	S	W	X	Y
AMH150C	1/8, 1/4	161	10	99	63	23	63	10	176	56	20	5	6	12	6	10	35	54	70	26	4.5	1.6	24	37	32	41
AMH250C	1/4, 3/8	175	14	113	76	23	76	10	193	66	24	8	6	12	6	10	40	66	80	28	5	2	27	37	36	41
AMH350C	3/8, 1/2	207	18	145	90	23	90	10	225	80	28	8	7	14	7	12	50	80	95	34	5	2.3	32	37	42	41
AMH450C	1/2, 3/4	228	20	166	106	23	106	10	249	90	31	10	9	18	9	15	55	88	111	50	9	3.2	37	37	43	41
AMH550C	3/4, 1	262	24	200	122	23	122	15	281	100	33	10	9	18	9	15	65	102	126	60	10	3.2	39	37	51	41

**Dimensions**

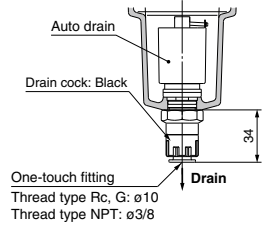
**AMH650**



Note) The figure shows the drain cock specification.

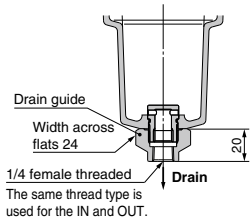
**Auto drain**

**D: With auto drain (N.O.)**

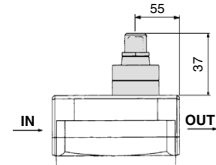


**Option**

**J: Drain guide 1/4 female threaded**



**T: With element service indicator**

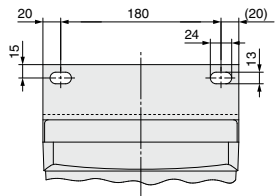
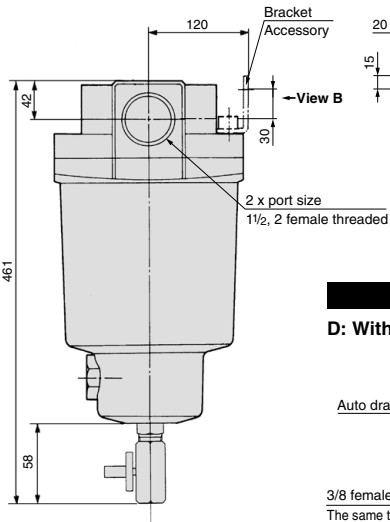
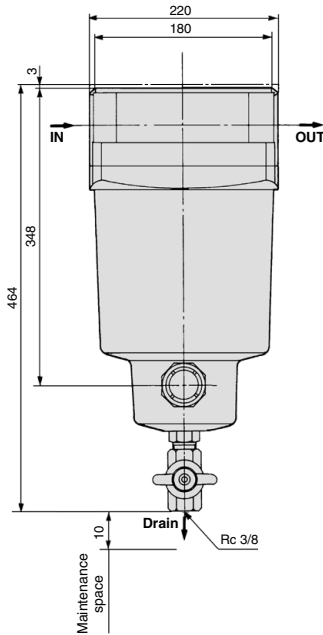
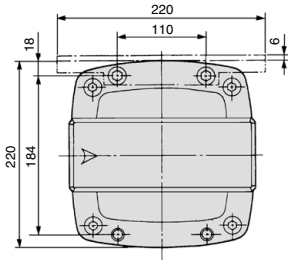


HAA
HAW
AT
IDF
IDU
IDF
<input type="checkbox"/> FS
IDFA
IDFB
IDH
ID
IDG
IDK
AMG
AFF
AM
AMD
<b>AMH</b>
AME
AMF
ZFC
SF
SFD
LLB
AD <input type="checkbox"/>
GD

# AMH Series

## Dimensions

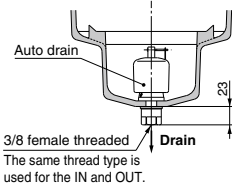
### AMH850



Drawing of view B

### Auto drain

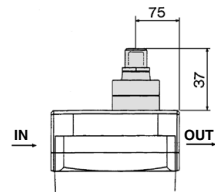
D: With auto drain (N.O.)



The same thread type is used for the IN and OUT.

### Option

T: With element service indicator



# Super Mist Separator AME Series

RoHS

Can separate and adsorb aerosol state fine oil particles in compressed air and change the oil lubricating compressed air to oilless air or equivalent.

Use this product for filtration of compressed air requiring higher clean air for painting lines, compressed air for clean rooms and/or equipment where oils must be avoided.

The replacement time of the element is indicated by a color change. When the element becomes saturated with oil content, a red color spot will begin to appear on the front surface.

When the red color spot becomes visible, replace the element immediately.

## Caution

Be sure to use either the AM, AMD, or AMH series as a pre-filter.

Modular connection is possible with AME150C to 550C.

(For details, refer to page 266.)



AME150C to 350C AME450C/550C



AME650/850



Made to Order

(For details, refer to page 272.)

## Model

Model	AME150C	AME250C	AME350C	AME450C	AME550C	AME650	AME850
Rated flow (L/min (ANR)) <sup>Note)</sup>	200	500	1000	2000	3700	6000	12000
Port size	1/8, 1/4	1/4, 3/8	3/8, 1/2	1/2, 3/4	3/4, 1	1, 1 1/2	1 1/2, 2
Weight (kg)	0.3	0.48	0.8	1.3	2.0	4.2	10.5

Note) Max. flow capacity at 0.7 MPa.

Max. flow capacity varies depending on the operating pressure.

Refer to "Flow Rate Characteristics" and "Maximum Flow Capacity Line" (page 252).

## Specifications

Fluid	Compressed air
Max. operating pressure	1.0 MPa
Min. operating pressure	0.05 MPa
Proof pressure	1.5 MPa
Ambient and fluid temperature	5 to 60°C
Filtration rating	0.01 μm (Filtration efficiency: 99.9%)
Cleanliness at outlet <sup>Note 2)</sup>	Less than 100 particles of 0.3 μm or larger per cubic foot [Less than 35 particles per 10 liters (ANR)]
Oil mist density at outlet	Max. 0.01 mg/m <sup>3</sup> (ANR) (=0.008 ppm)
Element replacement period	1. Replace the element when a red color spot occurred on the surface. <sup>Note 1)</sup> 2. Even if a red color spot does not appear on the surface, the replacement interval for the element is when the pressure drop reaches 0.1 MPa or after two years of operation, whichever comes first.

Note 1) Failure to replace the element when the red color spot begins to appear will result in red-pigmented oil content leaking into the secondary side. If immediate element replacement is for some reason not an option, an AMF must be installed on the secondary side and the element should be replaced as soon as possible. In such cases, the AMF element should be replaced at the same time.

Note 2) Depending on the operating conditions, only a minuscule amount of red pigment, which will not affect filtration performance, may leak into the secondary side. Prolonged use under such conditions may result in minimal red-pigmented residue on the interior of the piping on the secondary side.

## Accessory Part No.

Applicable model	AME150C	AME250C	AME350C	AME450C	AME550C	AME650	AME850
Bracket assembly (with 2 mounting screws)	AM-BM101	AM-BM102	AM-BM103	AM-BM104	AM-BM105	BM56	BM57

## Caution

Be sure to read this before handling the products.  
Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.

HAA  
HAW

AT

IDF  
IDU

IDF  
IFS

IDFA

IDFB

IDH

ID

IDG

IDK

AMG

AFF

AM

AMD

AMH

AME

AMF

ZFC

SF

SFD

LLB

AD

GD

## How to Order



### AME150C to 550C

AME **550** C -  **10**  -

Size

150
250
350
450
550

Thread type

Symbol	Type
Nil	Rc
F	G
N	NPT

Option

- Multiple options can be selected.
- Indicate symbols in alphabetical order.

Symbol	Description
Nil	—
F	Rubber material: FKM
H	For medium air pressure (1.6 MPa)
R	IN-OUT reversal direction
V	White vaseline

Accessory

Symbol	Description
Nil	—
B	Bracket *

\* Bracket is included, (but not assembled).

Port size

Symbol	Port size	Applicable size				
		150	250	350	450	550
01	1/8	●				
02	1/4	●	●			
03	3/8		●	●		
04	1/2			●	●	
06	3/4				●	●
10	1					●

## Options

### Symbol F: Rubber material: FKM

FKM is used for the parts such as O-ring and gasket.

### Symbol H: For medium air pressure (1.6 MPa)

Can be used up to 1.6 MPa at maximum.

### Symbol R: IN-OUT reversal direction

Flow direction: Right to left  
(Flow direction of the standard: Left to right)

### Symbol V: White vaseline

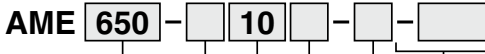
The body/housing is degreased, and the grease used for the parts requiring lubrication has been changed to white vaseline.





**How to Order**

**AME650/850**



Size

650
850

Thread type

Symbol	Type
Nil	Rc
F	G
N	NPT

Port size

Symbol	Port size	Applicable size	
		650	850
10	1	●	—
14	1 1/2	●	●
20	2	—	●

• **Made to Order**

Symbols are only added at the end for Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

• **Option**

Symbol	Description
Nil	—
R	IN-OUT reversal direction

• **Accessory**

Symbol	Description
Nil	—
B	Bracket*

\* Bracket is included, (but not assembled).

HAA  
HAW

AT

IDF  
IDU

IDF  
FS

IDFA

IDFB

IDH

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IDG

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AMG

AFF

AM

AMD

AMH

**AME**

AMF

ZFC

SF

SFD

LLB

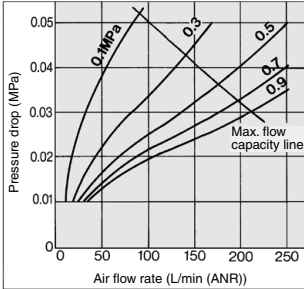
AD

GD

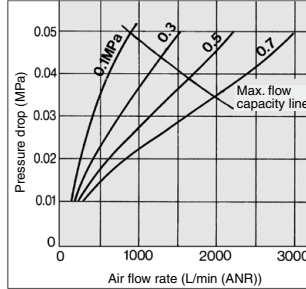
## Flow Rate Characteristics (Representative values) / Select the model under the max. flow capacity line. (Element initial condition)

Note) Compressed air over max. flow capacity line in the table below may not meet the specifications of the product.

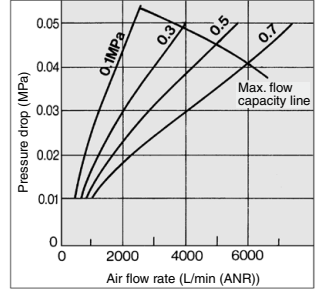
**AME150C**



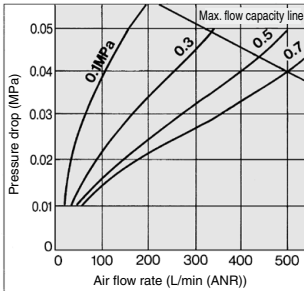
**AME450C**



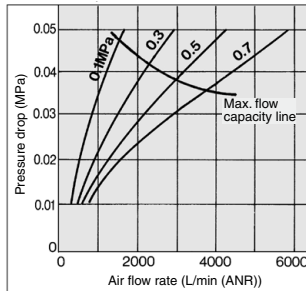
**AME650**



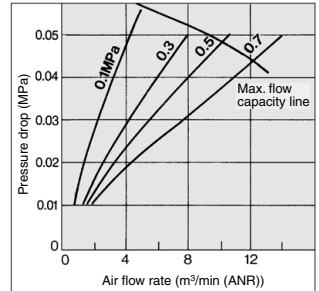
**AME250C**



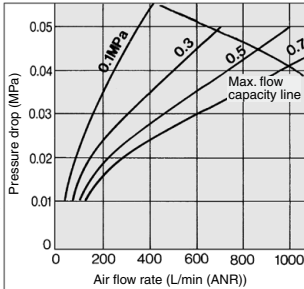
**AME550C**



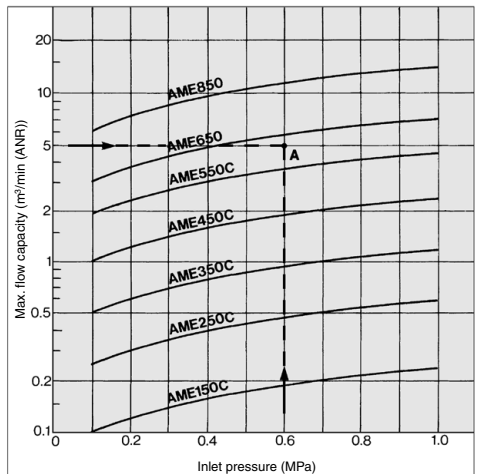
**AME850**



**AME350C**



## Maximum Flow Capacity Line



## Model Selection

Select a model in accordance with the following procedure taking the inlet pressure and the max. flow capacity into consideration.

(Example) Inlet pressure: 0.6 MPa

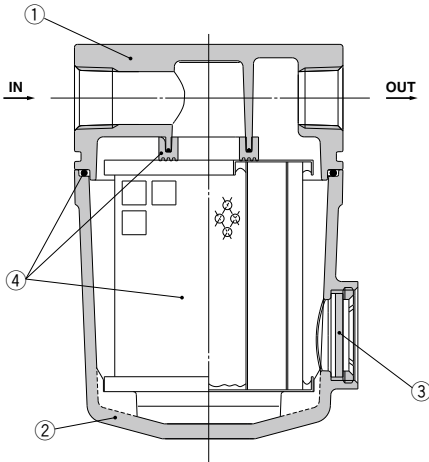
Max. flow capacity: 5 m<sup>3</sup>/min (ANR)

1. Obtain the intersecting point A of inlet pressure and max. flow capacity in the graph.
2. The AME650 is obtained when the max. flow capacity line is above the intersecting point A in the graph.

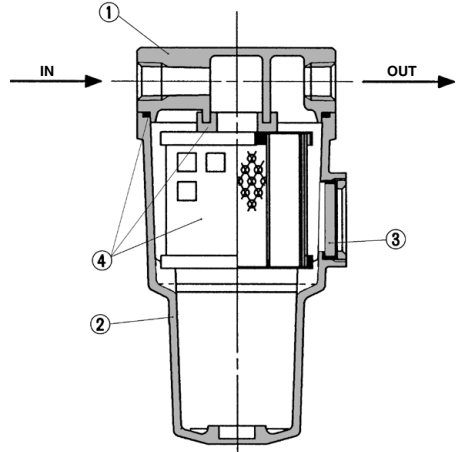
Note) Make sure to select a model that has the max. flow capacity line above the obtained intersecting point. With a model that has the max. flow capacity line below the obtained intersecting point, the flow rate will be exceeded, thus leading to a problem such as being unable to satisfy the specifications.

**Construction**

**AME150C to 550C**



**AME650/850**



**Component Parts**

No.	Description	Material	Note
1	Body	Aluminum alloy	Inner/outer surface coating
2	Housing (Case)	Aluminum alloy	
3	Sight glass	Tempered glass	—

Note) Sight glass is indicated in the figure for easy understanding of component parts. However, it differs from the actual construction. Refer to dimensions on pages 254 through to 256 for details.

**Replacement Parts**

No.	Description	Material	Applicable model	Model						
				AME150C	AME250C	AME350C	AME450C	AME550C	AME650	AME850
4	Element assembly	Glass fiber, others	Except option F	AME-EL150	AME-EL250	AME-EL350	AME-EL450	AME-EL550	AME-EL650	AME-EL850
			For option F	AME-EL150-F	AME-EL250-F	AME-EL350-F	AME-EL450-F	AME-EL550-F	—	—

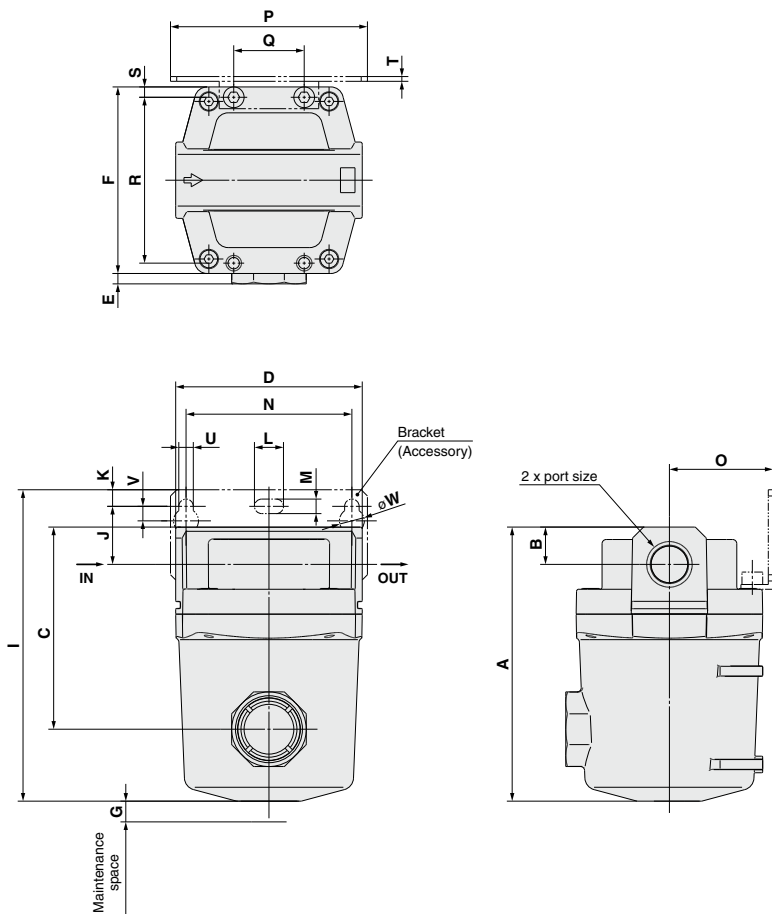
• Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

HAA  
HAW  
AT  
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IDF  
IFS  
IDFA  
IDFB  
IDH  
ID  
IDG  
IDK  
AMG  
AFF  
AM  
AMD  
AMH  
AME  
AMF  
ZFC  
SF  
SFD  
LLB  
AD  
GD

# AME Series

## Dimensions

### AME150C to 350C

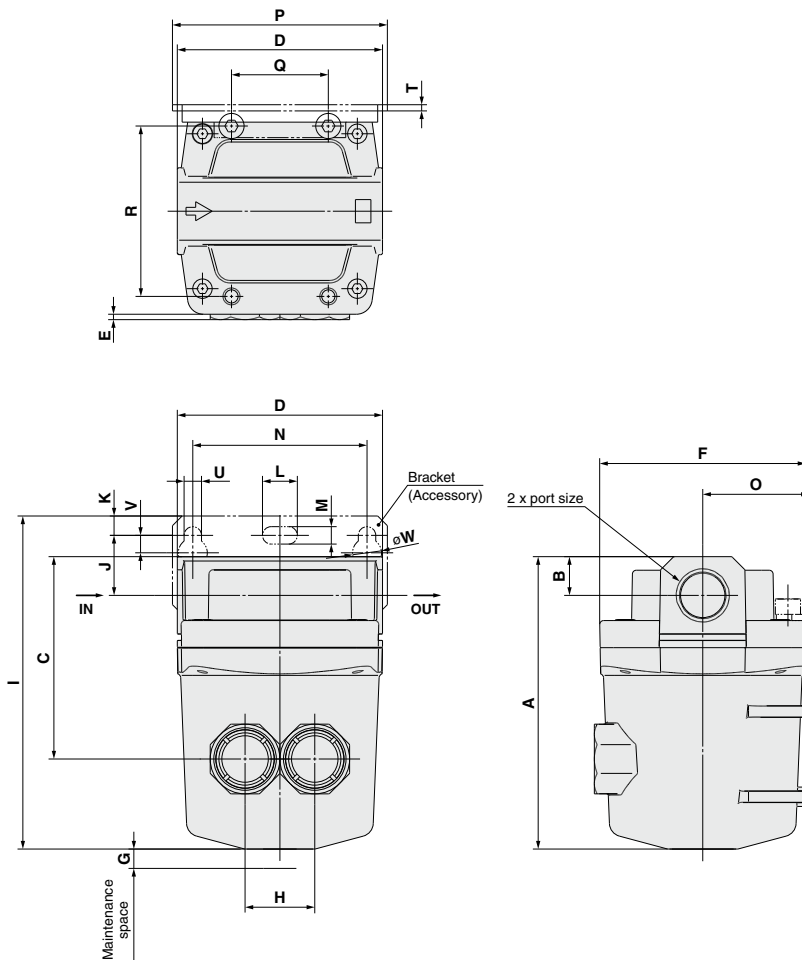


(mm)

Model	Port size	A	B	C	D	E	F	G	Bracket related dimensions														
									I	N	J	K	U	V	L	M	W	O	P	Q	R	S	T
AME150C	1/8, 1/4	83	10	54	63	7.5	63	10	99	56	20	5	6	6	12	6	10	35	70	26	54	4.5	1.6
AME250C	1/4, 3/8	103	14	73	76	5	76	10	121	66	24	8	6	6	12	6	10	40	80	28	66	5	2
AME350C	3/8, 1/2	132	18	98	90	5	90	10	150	80	28	8	7	7	14	7	12	50	95	34	80	5	2.3

**Dimensions**

**AME450C/550C**



HAA
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AT
IDF
IDU
IDF
<input type="checkbox"/> FS
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IDG
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<b>AME</b>
AMF
ZFC
SF
SFD
LLB
AD <input type="checkbox"/>
GD

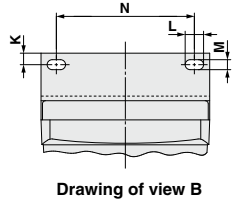
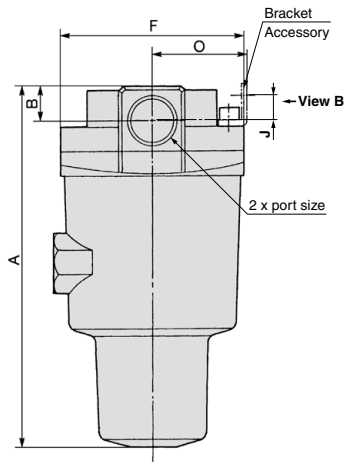
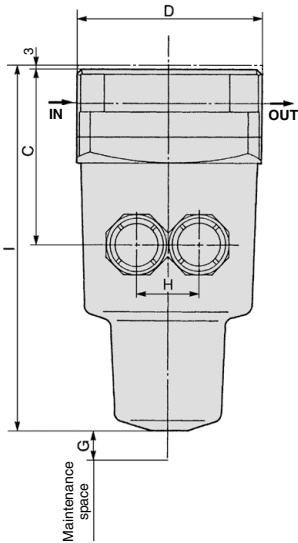
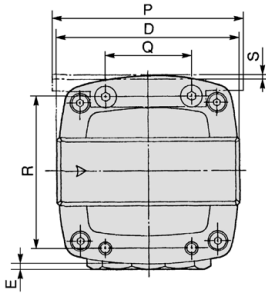
Model	Port size	A	B	C	D	E	F	G	H	Bracket related dimensions													
										I	N	J	K	U	V	L	M	W	O	P	Q	R	T
<b>AME450C</b>	1/2, 3/4	151	20	105	106	3	106	10	36	172	90	31	10	9	9	18	9	15	55	111	50	88	3.2
<b>AME550C</b>	3/4, 1	187	24	130	122	3	122	15	44	206	100	33	10	9	9	18	9	15	65	126	60	102	3.2

(mm)

# AME Series

## Dimensions

### AME650/850



(mm)

Model	Port size	A	B	C	D	E	F	G	H	Bracket related dimensions										
										I	J	K	L	M	N	O	P	Q	R	S
AME650	1, 1½	291	32	167	160	—	160	10	66	314	40	15	20	11	150	85	180	76	136	4.5
AME850	1½, 2	403	42	235	220	—	220	10	96	406	30	15	24	13	180	120	220	110	184	6

# Odor Removal Filter

## AMF Series



Efficiently can remove odor in compressed air with an activated carbon element. Use this unit for applications sensitive to odors, such as for clean rooms.

Can remove odor and gas ingredients in compressed air. Activated carbon element with large filtration area. Easy replacement of elements.

### Caution

Be sure to use the AME series as a pre-filter.

Modular connection is possible with AMF150C to 550C. (For details, refer to page 266.)



AMF150C to 350C AMF450C/550C



AMF650/850

Symbol



Made to Order  
(For details, refer to page 272.)

### Model

Model	AMF150C	AMF250C	AMF350C	AMF450C	AMF550C	AMF650	AMF850
Rated flow (L/min (ANR)) <small>Note</small>	200	500	1000	2000	3700	6000	12000
Port size	1/8, 1/4	1/4, 3/8	3/8, 1/2	1/2, 3/4	3/4, 1	1, 1 1/2	1 1/2, 2
Weight (kg)	0.3	0.48	0.8	1.3	2.0	4.2	10.5

Note) Max. flow capacity at 0.7 MPa.

Max. flow capacity varies depending on the operating pressure.

Refer to "Flow Rate Characteristics" (page 260) and "Maximum Flow Capacity Line" (page 259).

### Specifications

Fluid	Compressed air
Max. operating pressure	1.0 MPa
Min. operating pressure	0.05 MPa
Proof pressure	1.5 MPa
Ambient and fluid temperature	5 to 60°C
Nominal filtration rating	0.01 μm (Filtration efficiency: 99.9%)
Cleanliness at outlet	Less than 100 particles of 0.3 μm or larger per cubic foot [Less than 35 particles per 10 liters (ANR)] (The "AME" series is required on the inlet side.)
Oil mist density at outlet	Max. 0.004 mg/m <sup>3</sup> (ANR) (= 0.0032 ppm) (The "AME" series is required on the inlet side.)
Element replacement period	1. Replace the element when you notice an odor coming from the outlet side. 2. Even if the deodorization performance is normal, the replacement interval for the element is when the pressure drop reaches 0.1 MPa or after two years of operation, whichever comes first.

### Accessory Part No.

Applicable model	AMF150C	AMF250C	AMF350C	AMF450C	AMF550C	AMF650	AMF850
Bracket assembly (with 2 mounting screws)	AM-BM101	AM-BM102	AM-BM103	AM-BM104	AM-BM105	BM56	BM57

### Caution

Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.

HAA  
HAW

AT

IDF  
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IDF  
IFS

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IDG

IDK

AMG

AFF

AM

AMD

AMH

AME

AMF

ZFC

SF

SFD

LLB

AD

GD

## How to Order



### AMF150C to 550C

AMF **550** C - **10** -

Size

150
250
350
450
550

Thread type

Symbol	Type
Nil	Rc
F	G
N	NPT

Option

- Multiple options can be selected.
- Indicate symbols in alphabetical order.

Symbol	Description
Nil	—
F	Rubber material: FKM
H	For medium air pressure (1.6 MPa)
R	IN-OUT reversal direction
V	White vaseline

Accessory

Symbol	Description
Nil	—
B	Bracket *

\* Bracket is included, (but not assembled).

Port size

Symbol	Port size	Applicable size				
		150	250	350	450	550
01	1/8	●				
02	1/4	●	●			
03	3/8		●	●		
04	1/2			●	●	
06	3/4				●	●
10	1					●

## Options

### Symbol F: Rubber material: FKM

FKM is used for the parts such as O-ring and gasket.

### Symbol H: For medium air pressure (1.6 MPa)

Can be used up to 1.6 MPa at maximum.

### Symbol R: IN-OUT reversal direction

Flow direction: Right to left  
(Flow direction of the standard: Left to right.)

### Symbol V: White vaseline

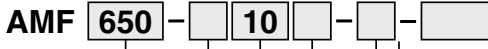
The body/housing is degreased, and the grease used for the parts requiring lubrication has been changed to white vaseline.





### How to Order

#### AMF650/850



**Size**

650
850

**Thread type**

Symbol	Type
Nil	Rc
F	G
N	NPT

**Port size**

Symbol	Port size	Applicable size	
		650	850
10	1	●	—
14	1 1/2	●	●
20	2	—	●

**Made to Order**

Symbols are only added at the end of Made to Order. Refer to page 272 and later for the contents of Made to Order, How to Order, and the applicable models.

**Option**

Symbol	Description
Nil	—
R	IN-OUT reversal direction

**Accessory**

Symbol	Description
Nil	—
B	Bracket*

\* Bracket is included, (but not assembled).

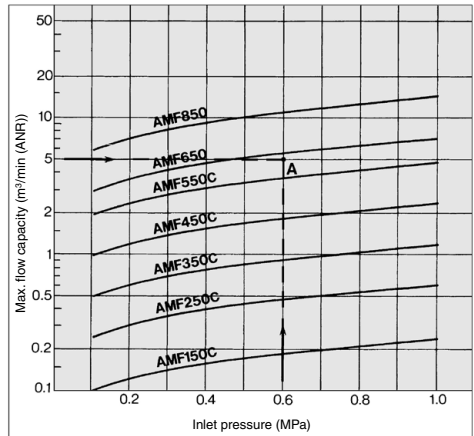
### Model Selection

Select a model in accordance with the following procedure taking the inlet pressure and the max. flow capacity into consideration.  
(Example) Inlet pressure: 0.6 MPa  
Max. flow capacity: 5 m<sup>3</sup>/min (ANR)

1. Obtain the intersecting point A of inlet pressure and max. flow capacity in the graph.
2. The AMF650 is obtained when the max. flow capacity line is above the intersecting point A in the graph.

Note) Make sure to select a model that has the max. flow capacity line above the obtained intersecting point. With a model that has the max. flow capacity line below the obtained intersecting point, the flow rate will be exceeded, thus leading to a problem such as being unable to satisfy the specifications.

### Maximum Flow Capacity Line



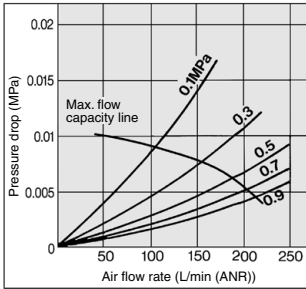
- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- FS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG
- AFF
- AM
- AMD
- AMH
- AME
- AMF**
- ZFC
- SF
- SFD
- LLB
- AD
- GD

# AMF Series

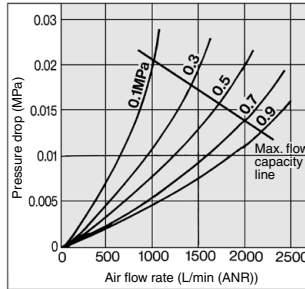
## Flow Rate Characteristics (Representative values) / Select the model under the max. flow capacity line. (Element initial condition)

Note) Compressed air over max. flow line in the table below may not meet the specifications of the product.

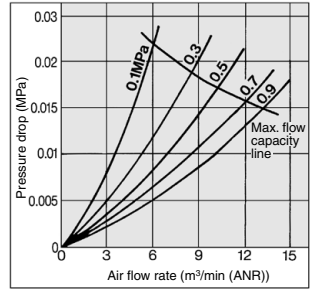
**AMF150C**



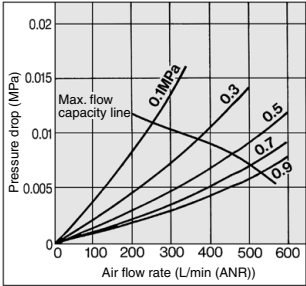
**AMF450C**



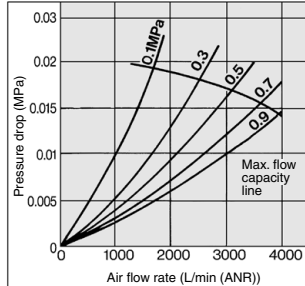
**AMF850**



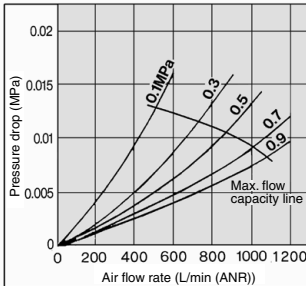
**AMF250C**



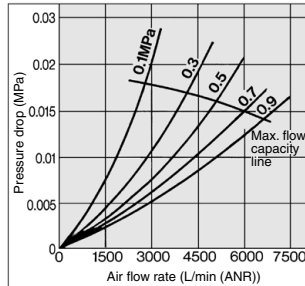
**AMF550C**



**AMF350C**

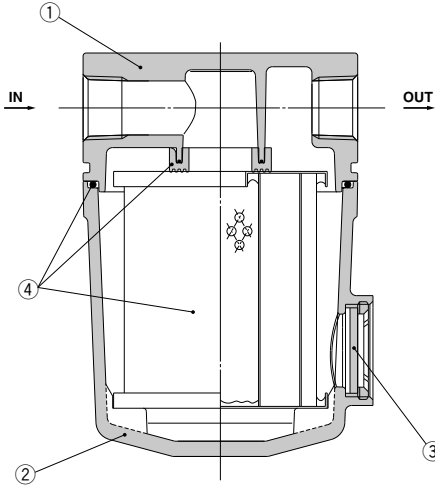


**AMF650**

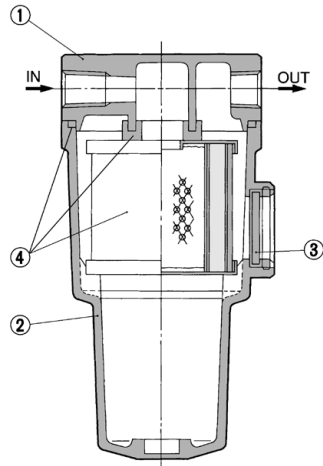


**Construction**

**AMF150C to 550C**



**AMF650/850**



**Component Parts**

No.	Description	Material	Note
1	<b>Body</b>	Aluminum alloy	Inner/outer surface coating
2	<b>Housing (Case)</b>	Aluminum alloy	
3	<b>Sight glass</b>	Tempered glass	—

Note) Sight glass is indicated in the figure for easy understanding of component parts. However, it differs from the actual construction. Refer to dimensions on pages 262 to 264 for details.

**Replacement Parts**

No.	Description	Material	Applicable model	Model						
				AMF150C	AMF250C	AMF350C	AMF450C	AMF550C	AMF650	AMF850
4	<b>Element assembly</b>	Glass fiber, others	Except option F	AMF-EL150	AMF-EL250	AMF-EL350	AMF-EL450	AMF-EL550	AMF-EL650	AMF-EL850
			For option F	AMF-EL150-F	AMF-EL250-F	AMF-EL350-F	AMF-EL450-F	AMF-EL550-F	—	—

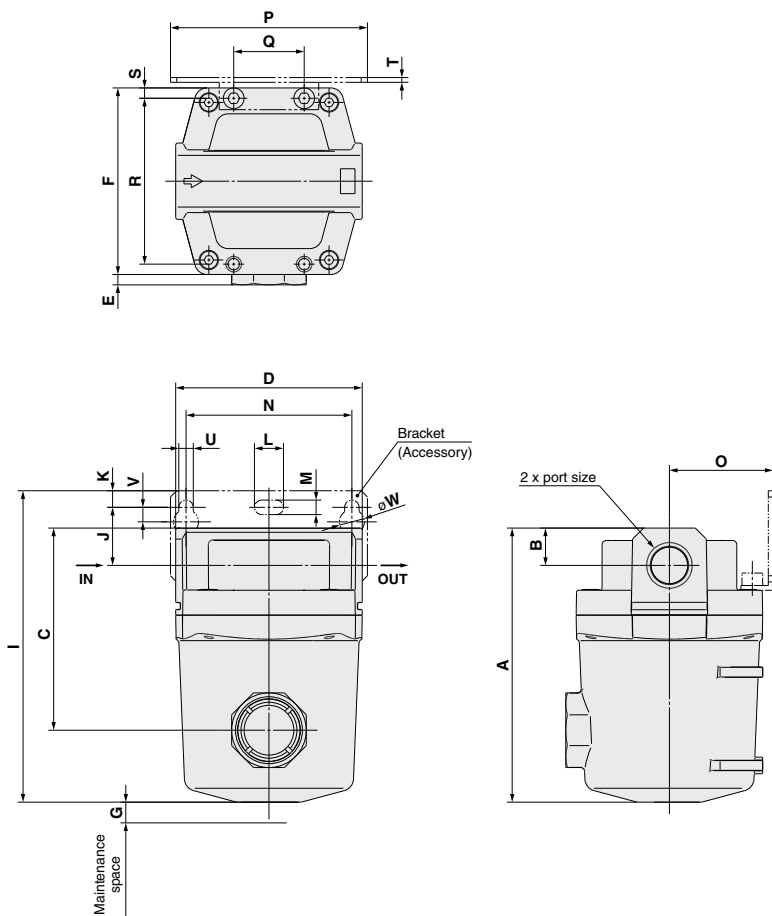
• Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- FS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG
- AFF
- AM
- AMD
- AMH
- AME
- AMF
- ZFC
- SF
- SFD
- LLB
- AD□
- GD

# AMF Series

## Dimensions

### AMF150C to 350C

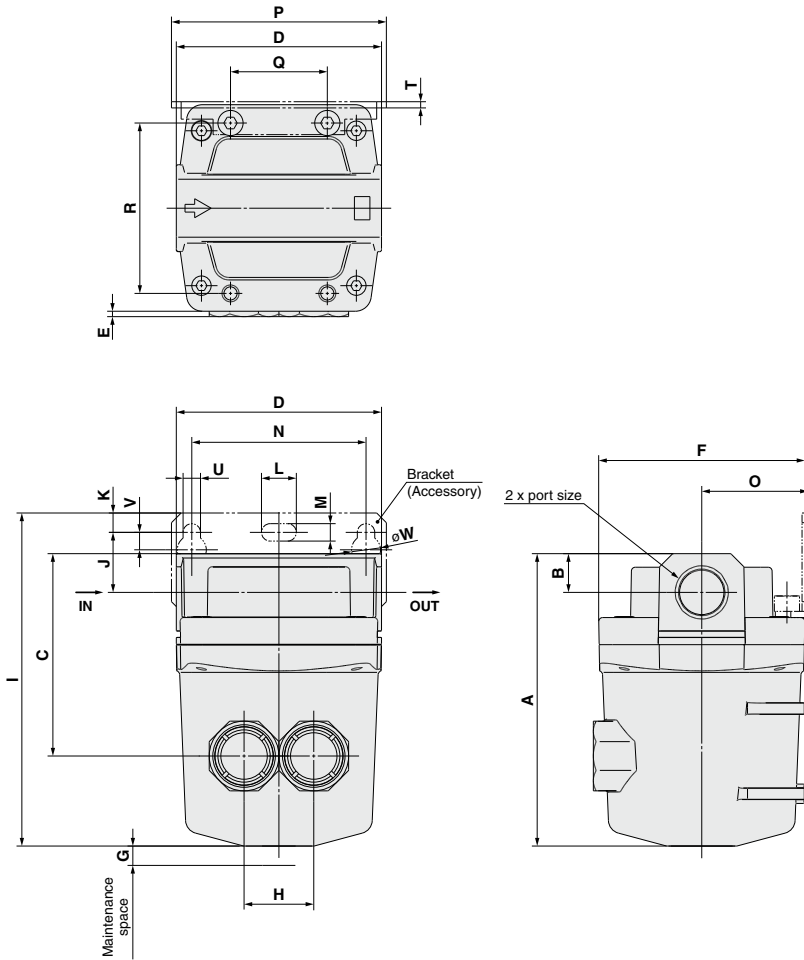


(mm)

Model	Port size	A	B	C	D	E	F	G	Bracket related dimensions														
									I	N	J	K	U	V	L	M	W	O	P	Q	R	S	T
AMF150C	1/8, 1/4	83	10	54	63	7.5	63	10	99	56	20	5	6	6	12	6	10	35	70	26	54	4.5	1.6
AMF250C	1/4, 3/8	103	14	73	76	5	76	10	121	66	24	8	6	6	12	6	10	40	80	28	66	5	2
AMF350C	3/8, 1/2	132	18	98	90	5	90	10	150	80	28	8	7	7	14	7	12	50	95	34	80	5	2.3

**Dimensions**

**AMF450C/550C**



- HAA
- HAW
- AT**
- IDF
- IDU
- IDF
- FS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG
- AFF
- AM
- AMD
- AMH
- AME
- AMF**
- ZFC
- SF
- SFD
- LLB
- AD
- GD

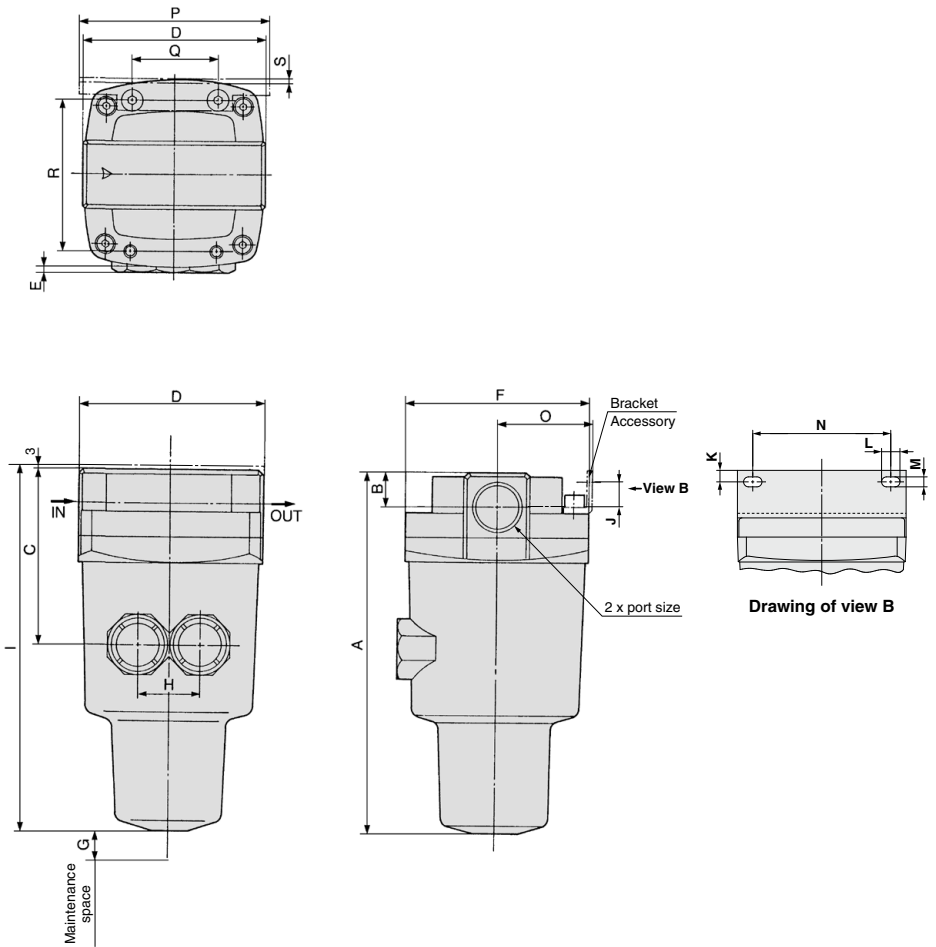
(mm)

Model	Port size	A	B	C	D	E	F	G	H	Bracket related dimensions													
										I	N	J	K	U	V	L	M	W	O	P	Q	R	T
<b>AMF450C</b>	1/2, 3/4	151	20	105	106	3	106	10	36	172	90	31	10	9	9	18	9	15	55	111	50	88	3.2
<b>AMF550C</b>	3/4, 1	187	24	130	122	3	122	15	44	206	100	33	10	9	9	18	9	15	65	126	60	102	3.2

# AMF Series

## Dimensions

### AMF650/850



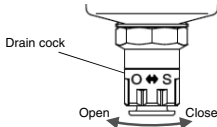
Model	Port size	A	B	C	D	E	F	G	H	Bracket related dimensions										
										I	J	K	L	M	N	O	P	Q	R	S
AMF650	1, 1 1/2	291	32	167	160	—	160	10	66	314	40	15	20	11	150	85	180	76	136	4.5
AMF850	1 1/2, 2	403	42	235	220	—	220	10	96	406	30	15	24	13	180	120	220	110	184	6

# Auto Drain

## Operating State and Proper Use of Float Type Auto Drain

Auto drain	When pressure is not applied (After exhausting residual pressure)	When pressure is applied		Minimum operating pressure (Outlet pressure)
		Before drain accumulates	When drain accumulates	
N.O. Normally open	<p>Drain discharged (Open)</p> <p>Labels: Float, Piston, Orifice</p>	<p>Drain not discharged (Close)</p>	<p>Drain discharged (Open)</p>	<b>0.1 MPa or more</b> AM□150 to 850 AFF2 to 75
N.C. Normally closed	<p>Drain not discharged (Close)</p> <p>Labels: Float, Piston, Orifice</p>			

◆ For both N.O. and N.C., the drain can be discharged manually by turning the drain cock to the "O" position.  
(Except for medium air pressure, AFF75B, AM□850, and free standing type)



Proper Use			Recommended auto drain
Compressor	When pressure is not applied (After exhausting residual pressure)	Cold climates	
<p><b>0.75 kW or more</b></p>	<p><b>Drain not accumulated</b></p> <p>Do not want to accumulate drain generated at the inlet side when pressure is not applied.</p>	<p><b>Want to prevent troubles caused by freezing.</b></p>	N.O. <sup>(Note)</sup> Normally open
<p><b>Less than 0.75 kW</b></p>	<p><b>Drain accumulated</b></p>	<p>—</p>	

(Note) For N.O. (Normally open) type, the drain discharge passage is open when pressure is not applied. For this reason, the drain exhaust port is not closed completely in a compressor with a small supply amount (less than 0.75 kW) and the air will ceaselessly blow out.

- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- FS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG
- AFF
- AM
- AMD
- AMH
- AME
- AMF
- ZFC
- SF
- SFD
- LLB
- AD□
- GD

# Optional Accessories

## Spacer for Modular Connection

Use a spacer listed below when connecting modular type AFF2C to 22C, AM□150C to 550C. The spacer must be ordered separately.

(Note: Spacer with bracket (Y200T-A to Y600T-A) cannot be used.)

### ⚠ Caution

- **Modular connection**
- Mount the attached bracket on one side when connecting 2 sets.
- Mount the attached brackets on both sides when connecting 3 sets or more.
- As a guideline for the number of brackets, one bracket should be mounted for every 2 products.



### Combination examples of modular type products

Arrangement example

AMH250C-□□B — 1 pc.

AME250C — 1 pc.

Y300-A — 1 pc.

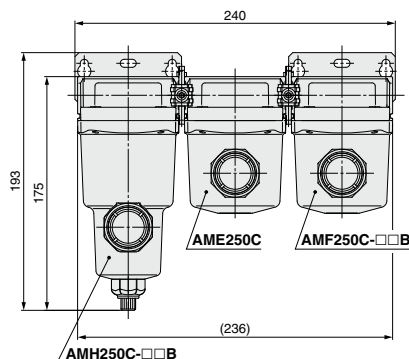
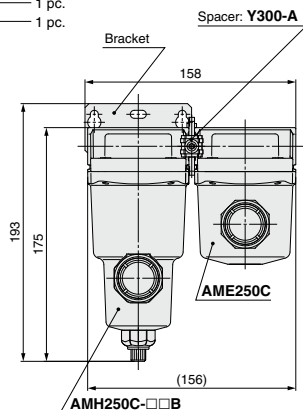
Arrangement example

AMH250C-□□B — 1 pc.

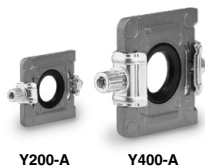
AME250C — 1 pc.

AMF250C-□□B — 1 pc.

Y300-A — 2 pcs.

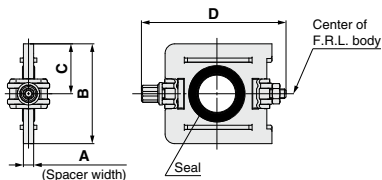


## Spacer



Y200-A

Y400-A



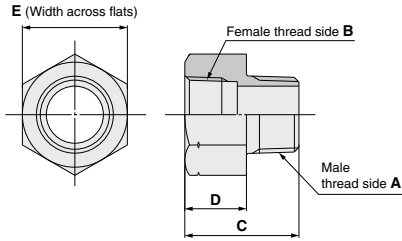
Model	A	B	C	D	Model
Y200-A	3.2	31.2	15.6	44.9	AFF2C, AM□150C
Y300-A	4.2	43.4	21.7	57.9	AFF4C, AM□250C
Y400-A	5.2	53	26.5	68.5	AFF8C, AM□350C
Y500-A	5.2	57	28.5	75.6	AFF11C, AM□450C
Y600-A	6.2	67.6	33.8	92.5	AFF22C, AM□550C

### Replacement Parts

Description	Material	Part no.				
		Y200-A	Y300-A	Y400-A	Y500-A	Y600-A
Seal	HNBR	Y220P-050S	Y320P-050S	Y420P-050S	Y520P-050S	Y620P-050S



## Piping Adapter



### Dimensions

(mm)

Part no.	Thread type and port size		C	D	E	Material
	Male thread side A	Female thread side B				
<b>IDF-AP609</b>	R 3/8	NPT 3/8	30	15	22	Brass

HAA  
HAW

AT

IDF  
IDU

IDF  
IFS

IDFA

IDFB

IDH

ID

IDG

IDK

AMG

AFF

AM

AMD

AMH

AME

AMF

ZFC

SF

SFD

LLB

AD

GD

# Bowl Assembly

# AM-CA□/AME-CA□



## Bowl Assembly

- Use only when replacing the bowl assembly, while the body is connected to the piping.
  - Example
    - Changing the drain exhaust specification from the drain cock type to the auto drain type.
    - The bowl has been damaged.
- (Note: When changing the model due to replacement, the customer is responsible for controlling the model.)

## How to Order Bowl Assembly

The “How to Order” the bowl assembly changes with the series and size.

### ■ For AFF, AM, AMD, AMH, AMG series

- AFF2C to 22C, AM150C to 550C, AMD150C to 550C, AMH150C to 550C, AMG150C to 550C } → Based on How to Order ①.
- AFF37B, AM650, AMD650, AMH650, AMG650 → Based on How to Order ②.
- AFF75B, AM850, AMD850, AMH850, AMG850 → Based on How to Order ③.

### ■ For AME, AMF series

- AME150C to 550C, AMF150C to 550C → Based on How to Order ④.
- AME650, AME850, AMF650, AMF850 → Based on How to Order ⑤.

① For AFF2C to 22C, AM150C to 550C, AMD150C to 550C, AMH150C to 550C, AMG150C to 550C

AM - CA 150 C - A -  

Size

Symbol	Applicable model
150	AFF2C, AM150C, AMD150C, AMH150C, AMG150C
250	AFF4C, AM250C, AMD250C, AMH250C, AMG250C
350	AFF8C, AM350C, AMD350C, AMH350C, AMG350C
450	AFF11C, AM450C, AMD450C, AMH450C, AMG450C
550	AFF22C, AM550C, AMD550C, AMH550C, AMG550C

### Drain exhaust

### Option Note 1)

Symbol	Description	Drain port	Symbol	Description	
A	With drain cock	M5	Nil	—	Combinations of FH, FHV, FV and HV available
			F	Rubber material: FKM	
			H	For medium air pressure (1.6 MPa)	
C	N.C. auto drain <small>Note 2)</small>	ø10 mm	V	White vaseline	Only one can be selected.
			Nil	—	
			F	Rubber material: FKM	
CN	* N.C. (Normally closed) Drain port is closed when pressure is not applied.	ø3/8 inch	V	White vaseline	Only one can be selected.
			Nil	—	
			F	Rubber material: FKM	
D	N.O. auto drain <small>Note 2)</small>	ø10 mm	Nil	—	Only one can be selected.
			F	Rubber material: FKM	
			H	For medium air pressure (1.6 MPa)	
DN	* N.O. (Normally open) Drain port is open when pressure is not applied.	ø3/8 inch	V	White vaseline	Only one can be selected.
			Nil	—	
			F	Rubber material: FKM	
J	With drain guide	Rc1/4	Nil	—	Combinations of FH, FHV, FV and HV available
			F	Rubber material: FKM	
			H	For medium air pressure (1.6 MPa)	
JF	* Without a valve function	G1/4	V	White vaseline	
JN		NPT1/4	V	White vaseline	

Note 1) The options which can be combined differ by each drain exhaust port specification.

Select from the options indicated on the right side of the drain exhaust port specifications.

Note 2) Refer to page 265 for proper use of the auto drain.

## How to Order Bowl Assembly

### ② For AFF37B, AM650, AMD650, AMH650, AMG650

**AM - CA** 650 - A

Size

Symbol	Applicable model
<b>650</b>	AFF37B, AM650, AMD650, AMH650, AMG650

Drain exhaust

Symbol	Description	Drain port
<b>A</b>	With drain cock	M5
<b>D</b>	N.O. auto drain	ø10 mm
<b>DN</b>	* N.O. (Normally open) Drain port is open when pressure is not applied.	ø3/8 inch
<b>J</b>	With drain guide	Rc1/4
<b>JF</b>		G1/4
<b>JN</b>	* Without a valve function	NPT1/4

### ③ For AFF75B, AM850, AMD850, AMH850, AMG850

**AM - CA** 850 - A

Size

Symbol	Applicable model
<b>850</b>	AFF75B, AM850, AMD850, AMH850, AMG850

Drain exhaust

Symbol	Description	Drain port
<b>A</b>	With drain guide * With Rc3/8 ball valve	Rc3/8
<b>D</b>	N.O. auto drain	Rc3/8
<b>DF</b>	* N.O. (Normally open)	G3/8
<b>DN</b>	Drain port is open when pressure is not applied.	NPT3/8

### ④ For AME150C to 550C, AMF150C-550C

**AME - CA** 150 **C - A** -   

Size

Symbol	Applicable model
<b>150</b>	AME150C, AMF150C
<b>250</b>	AME250C, AMF250C
<b>350</b>	AME350C, AMF350C
<b>450</b>	AME450C, AMF450C
<b>550</b>	AME550C, AMF550C

Option

Symbol	Description
<b>Nil</b>	—
<b>F</b>	Rubber material: FKM
<b>H</b>	For medium air pressure (1.6 MPa)
<b>V</b>	White vaseline

\* Combinations of FH, FHV and HV unavailable

### ⑤ For AME650, AME850, AMF650, AMF850

**AME - CA** 650 - **A**

Size

Symbol	Applicable model
<b>650</b>	AME650, AMF650
<b>850</b>	AME850, AMF850

HAA  
HAW

AT

IDF  
IDU

IDF  
□FS

IDFA

IDFB

IDH

ID

IDG

IDK

AMG

AFF

AM

AMD

AMH

AME

AMF

ZFC

SF

SFD

LLB

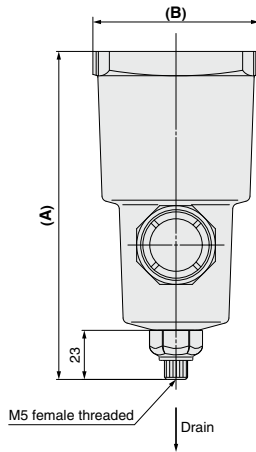
AD□

GD

# AM-CA□/AME-CA□

## Dimensions: AFF, AM, AMD, AMH, AMG Series

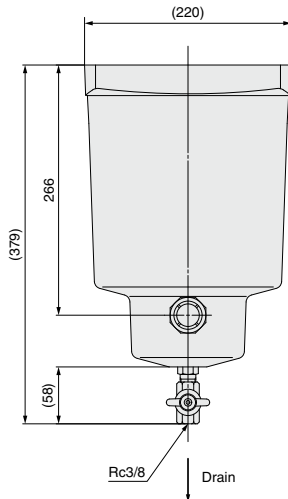
Applicable filter model: AFF2C to 22C, AFF37B, AM150C to 550C, AM650, AMD150C to 550C, AMD650, AMH150C to 550C, AMH650, AMG150C to 550C, AMG650



(Note) The figure shows the drain cock specification.

		(mm)	
AFF series	AM, AMD, AMG, AMH series	A	B
Size	Size		
2C	150C	137	63
4C	250C	142	76
8C	350C	165	90
11C	450C	181	106
22C	550C	205	122
37B	650	248	160

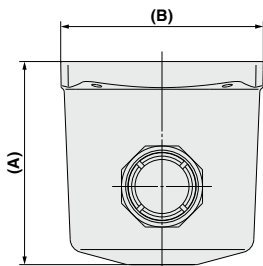
## Size: AFF75B, AM850, AMD850, AMH850, AMG850



(Note) The figure shows the drain cock specification.

**Dimensions: AME, AMF Series**

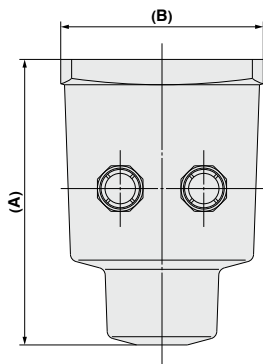
■ AME150C to 550C, AMF150C to 550C



(mm)

AME, AMF series Size	A	B
150	60	63
250	70	76
350	90	90
450	104	106
550	130	122

■ AME650, AME850, AMF650, AMF850



(mm)

AME, AMF series Size	A	B
650	225	160
850	319	220

HAA
HAW
AT
IDF
IDU
IDF
□FS
IDFA
IDFB
IDH
ID
IDG
IDK
AMG
AFF
AM
AMD
AMH
AME
AMF
ZFC
SF
SFD
LLB
AD□
GD

## Compressed Air Cleaning Filter Series

# Made to Order Specifications

Please contact SMC for detailed dimensions, specifications and lead times.



### Made to Order

Description	Symbol	Applicable model							Page
		AMG	AFF	AM	AMD	AMH	AME	AMF	
① With Differential Pressure Gauge	X6	—	●	●	●	●	—	—	P.273
② With Differential Pressure Switch (With Indicator)	X37	—	●	●	●	●	—	—	
③ With IN-OUT Flange	X15	●	●	●	●	●	—	—	P.274
④ With Differential Pressure Gauge, IN-OUT Flange	X17	—	●	●	●	●	—	—	
⑤ Auto Drain, Drain Piping Threaded Connection Type	X26	●	●	●	●	●	—	—	P.275
⑥ White Vaseline Specifications	X12	●	●	●	●	●	●	●	
⑦ Main Line Filter for High Flow Rate with Nominal Filtration Rating of 0.3 μm	X13	—	●	—	—	—	—	—	P.276
⑧ With By-pass Port	X360	●	●	●	●	●	●	●	P.276

# Compressed Air Cleaning Filter Series

# Made to Order Specifications 1



Please contact SMC for detailed dimensions, specifications and lead times.

## ① With Differential Pressure Gauge

The replacement period due to clogging of the element can be checked by the differential pressure gauge. This is a compact unit because the differential pressure gauge is attached to the upper portion of the filter body. Differential pressure gauge (Part number: GD40-2-01) and fittings for connection are included, (but not assembled).

### Applicable Models

- AFF2C to 22C, 37B, 75B
- AM150C to 550C, 650, 850
- AMD150C to 550C, 650, 850
- AMH150C to 550C, 650, 850

Note) Not applicable to the AMG, AME and AMF series.

## ② With Differential Pressure Switch (With Indicator) (125 VAC, 30 VDC)

The replacement period due to clogging of the element can be checked visually, and a built-in contact enables the output of an electrical signal. Differential pressure switch is included, (but not assembled).

\* Please contact SMC if conformity to the EU directive is required.

### Applicable Models

- AFF37B, 75B
- AM650, 850
- AMD650, 850
- AMH650, 850

Note) Not applicable to the AMG, AME and AMF series.

### Specifications

Contacts	a contact (1 point)
Reed switch rating	Max. contact capacity 10 VA AC, 10 W DC

### How to Order

Standard model no.\* **-X6**

\* Refer to How to Order of the standard specifications for the applicable models.

Example) AFF22C-06-X6

Note) Not applicable to option symbols F, H, S, U, T and V.

### How to Order

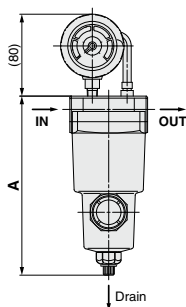
Standard model no.\* **-X37**

\* Refer to How to Order of the standard specifications for the applicable models.

Example) AFF37B-10B-X37

Note) Not applicable to option symbol T.

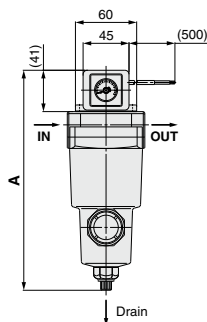
### Dimensions



Note) The figure shows the drain cock specification. (mm)

AFF series	AM, AMD, AMH series	A
Size	Size	
2C	150C	161
4C	250C	175
8C	350C	207
11C	450C	228
22C	550C	262
37B	650	314
75B	850	461

### Dimensions



Note) The figure shows the drain cock specification. (mm)

AFF series	AM, AMD, AMH series	A
Size	Size	
37B	650	355
75B	850	501

HAA  
HAW

AT

IDF  
IDU

IDF  
IFS

IDFA

IDFB

IDH

ID

IDG

IDK

AMG

AFF

AM

AMD

AMH

AME

AMF

ZFC

SF

SFD

LLB

AD

GD

# Compressed Air Cleaning Filter Series

# Made to Order Specifications 2



Please contact SMC for detailed dimensions, specifications and lead times.

### ③ With IN-OUT Flange

Makes flange piping easier when filter ports on IN and OUT are flange connection. (Flange material: Carbon steel)

### Applicable Models

- AFF11C, 22C, 37B, 75B
- AM450C, 550C, 650, 850
- AMD450C, 550C, 650, 850
- AMH450C, 550C, 650, 850
- AMG450C, 550C, 650, 850

Note) Not applicable to the AME and AMF series.

### How to Order

Standard model no.\* -X15

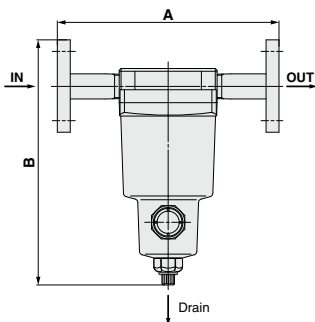
\* Refer to How to Order of the standard specifications for the applicable models.

Example) AMG550C-10D-X15

Note) The model with bracket (Accessory symbol B) is not available.

Not applicable to option symbols H and V.

### Dimensions



Note) The figure shows the drain cock specification.

AFF series	AM, AMD, AMG, AMH series	Port size symbol*	JIS 10K FF flange	(mm)	
Size	Size			A	B
11C	450C	04	15 (1/2B)	242±3	256
		06	20 (3/4B)	239±3	258
22C	550C	06	20 (3/4B)	255±3	288
		10	25 (1B)	259±4	301
37B	650	10	25 (1B)	297±4	345
		14	40 (1 1/2B)	298±4	352
75B	850	14	40 (1 1/2B)	384±4	489
		20	50 (2B)	378±4	497

### ④ With Pressure Differential Gauge, IN-OUT Flange

The replacement period due to clogging of the element can be checked by the differential pressure gauge. Ports on IN and OUT are flange connection. (Flange material: Carbon steel)

### Applicable Models

- AFF11C, 22C, 37B, 75B
- AM450C, 550C, 650, 850
- AMD450C, 550C, 650, 850
- AMH450C, 550C, 650, 850

Note) Not applicable to the AME and AMF series.

### How to Order

Standard model no.\* -X17

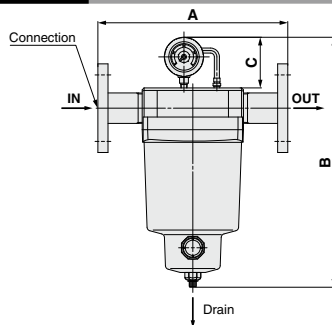
\* Refer to How to Order of the standard specifications for the applicable models.

Example) AM450C-06D-X17

Note) The model with bracket (Accessory symbol B) is not available.

Not applicable to option symbols F, H, S, U, T and V.

### Dimensions



Note) The figure shows the drain cock specification.

AFF series	AM, AMD, AMG, AMH series	Port size symbol*	JIS 10K FF flange	(mm)		
Size	Size			A	B	C
11C	450C	04	15 (1/2B)	242±3	308	
		06	20 (3/4B)	239±3		
22C	550C	06	20 (3/4B)	255±3	342	
		10	25 (1B)	259±4		
37B	650	10	25 (1B)	297±4	394	80
		14	40 (1 1/2B)	298±4		
75B	850	14	40 (1 1/2B)	384±4	541	
		20	50 (2B)	378±4		



# Compressed Air Cleaning Filter Series

# Made to Order Specifications 3



Please contact SMC for detailed dimensions, specifications and lead times.

## ⑤ Auto Drain, Drain Piping Threaded Connection Type

Threaded connection for the piping of the auto drain exhaust port is possible.

### Applicable Models

- AFF2C to 22C, 37B
- AM150C to 550C, 650
- AMD150C to 550C, 650
- AMG150C to 550C, 650
- AMH150C to 550C, 650

Note) Not applicable to the AME and AMF series.

### How to Order

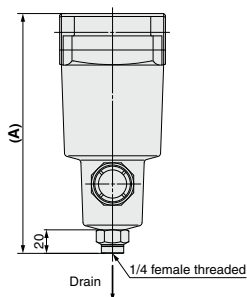
Standard model no.\* **-X26**

\* Refer to How to Order of the standard specifications for the applicable models.

Example) AFF22C-10D-T-X26

Note) Only available for the auto drain specification C (N.C.) and D (N.O.).  
N.C. auto drain is not available for the AFF37B, AM650, AMD650, AMG650 and AMH650.

### Dimensions



(mm)

AFF series	AM, AMD, AMG, AMH series	A
Size	Size	
2C	150C	159
4C	250C	172
8C	350C	204
11C	450C	225
22C	550C	259
37B	650	311

## ⑥ White Vaseline Specifications

The grease applied to the O-ring and gasket has been changed to white vaseline.

### Applicable Models

- AFF37B, 75B
- AM650, 850
- AMD650, 850
- AME650, 850
- AMF650, 850
- AMG650, 850
- AMH650, 850

### How to Order

Standard model no.\* **-X12**

\* Refer to How to Order of the standard specifications for the applicable models.

Example) AM650-10-X12

HAA  
HAW

AT

IDF  
IDU

IDF  
FS

IDFA

IDFB

IDH

ID

IDG

IDK

AMG

AFF

AM

AMD

AMH

AME

AMF

ZFC

SF

SFD

LLB

AD

GD

# Compressed Air Cleaning Filter Series

# Made to Order Specifications 4



Please contact SMC for detailed dimensions, specifications and lead times.

## ⑦ Main Line Filter for High Flow Rate with Nominal Filtration Rating of 0.3 μm

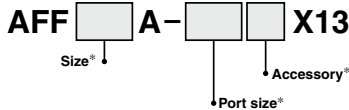
This filter is for high flows with a nominal filtration rating (0.3 μm) the same as the AM series mist separator. The specifications other than the nominal filtration rating are all equivalent to those of the AFF75A to 220A.

### Applicable Models

- AFF75A to 220A

### How to Order

\* Refer to "How to Order" for standard specifications.



## ⑧ With By-pass Port

Ports (Rc1/8) connected to the IN and OUT sides are provided in two locations. This specification can be used for applications which do not require flow rates compared to that of the main flow, which leads to reduction in piping labor and saves space.

### Applicable Models

- AMG150C to 550C, 650, 850
- AFF2C to 22C, 37B, 75B
- AM150C to 550C, 650, 850
- AMD150C to 550C, 650, 850
- AMH150C to 550C, 650, 850
- AME150C to 550C, 650, 850
- AMF150C to 550C, 650, 850

### How to Order

Standard model no.\*

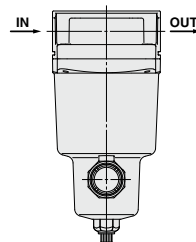
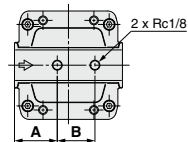
**-X360**

\* Refer to How to Order of the standard specifications for the applicable models. However, thread types F (G thread) and N (NPT) are not supported.

Example) AMD350C-03D-X360

Note) Not applicable to option symbols S, T and U.

### Dimensions



(mm)

AFF series	AM, AM <sup>®</sup> series	Port size	A	B
Size	Size			
2C	150C	1/8, 1/4	17	31
4C	250C	1/4, 3/8	22	34
8C	350C	3/8, 1/2	27	38
11C	450C	1/2, 3/4	42	37
22C	550C	3/4, 1	50	41
37B	650	1, 1 1/2	66	52
75B	850	1 1/2, 2	90	75



# AM□/AFF Series

## Specific Product Precautions 1

Be sure to read this before handling the products.

Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.

### Design

#### ⚠ Caution

1. Do not use under conditions where the difference between the inlet pressure and the outlet pressure exceeds 0.1 MPa.

Continuing to use the product under such conditions will not only cause a decline in cleanliness but may also lead to element damage.

2. Design the layout so that the product is installed in a location where it won't be subject to pulsations exceeding 0.1 MPa or changes in pressure.

3. Be careful of dust generation by the pneumatic equipment mounted on the outlet side.

When installing pneumatic equipment on the outlet side of the filter, dust particles may come off from outlet equipment, which will lower the cleanliness of compressed air. Consider this impact upon the cleanliness of compressed air when installing pneumatic equipment on the outlet side.

4. About when to use N.C. auto drain and N.O. auto drain.

When using the normally open (N.O.) auto drain, air may ceaselessly blow out of the drain discharge area when an air compressor with a small air discharge volume is used since the valve does not close unless the air pressure is 0.1 MPa or higher.

Refer to page 265 for proper use of the auto drain.

5. Use a tubing with proper size and length for drain piping of auto drain.

When using the AFF2C to 22C, 37B, AM□150C to 550C, 650 with auto drain:

Normally closed (N.C.) } Use the included One-touch fitting,  
Normally open (N.O.) } and keep the whole length within 5 m.

When using the AFF75B and AM□850 with auto drain:

Normally open (N.O.): Use tubing I.D. 9 mm or more and keep the whole length within 2.8 m.

6. Provide a design that prevents back pressure and back flow.

Back pressure or back flow may damage an element.

7. The following models are applicable to the Class-2 Pressure Vessel as stipulated in the order for enforcement of the Industrial Safety and Health Act.

Main Line Filter ..... AFF220A

Micro Mist Separator ..... AMD9□, AMD10□

- The individual inspection certificate (in Japanese) of the Class-2 Pressure Vessel will be sent 2 to 4 weeks after the product is delivered. Keep this certificate in a safe place, and be careful not to misplace it.
- The individual inspection certificate can only be reissued within one year. If one year or more has passed, the inspection must be performed again. Please contact SMC for reissuance and re-inspection.
- Please contact SMC regarding English certificates. In the case of exporting, this does not guarantee that the English certificate and the product itself will be accepted by the export destination country, and the English certificate may not be issued depending on the export destination country.
- When exporting this product, it is necessary for the customer to pre-confirm what standard the inspection is based on, and what certificate is required by the export destination country.

#### ⚠ Warning

1. Hold the female thread side and tighten to the recommended torque when screwing in the piping material.

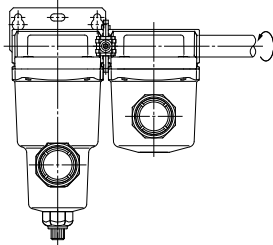
Insufficient tightening torque may cause loosening or defective sealing. Over-tightening torque may damage the thread etc. If it is tightened without holding the female thread side, excessive force will be directly applied to the piping bracket resulting in a product failure.

#### Recommended Torque

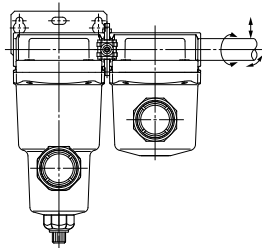
Unit: N·m

Connection thread	1/8	1/4	3/8	1/2	3/4	1	1 1/2	2
Torque	7 to 9	12 to 14	22 to 24	28 to 30	28 to 30	36 to 38	48 to 50	48 to 50

\* After tightening manually, tighten additionally by about 1/6 turn with a tightening tool.



2. Do not apply torsional moment or bending moment (except the product's own weight) to the bracket. It may damage the bracket. Support external piping separately.



3. Inflexible piping such as steel piping tends to be affected by spread of excessive moment load or vibration from the piping side. Lay flexible tubing between the steel pipe and the product to prevent such effects.

HAA  
HAW

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AMG

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AMD

AMH

AME

AMF

ZFC

SF

SFD

LLB

AD□

GD



## AM□/AFF Series

# Specific Product Precautions 2

Be sure to read this before handling the products.

Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.

### Selection

#### ⚠ Caution

##### 1. About the system composition of purifying compressed air

Compressed air generally contains particulate contaminants as listed below, though there are some variations due to the compressor type and specifications. Determine the system configuration according to the desired cleanliness of compressed air and application, while referring to the "Air Preparation Equipment Selection Guide" (pages 2 and 3).

##### [Particulate contaminants in compressed air]

- Water (Water droplets, water vapor)
- Dust, chemical substances, etc. sucked from ambient air
- Degraded oil content from compressor (Including degraded oil)
- Solid foreign matter such as rust inside piping and oil

##### 2. Select according to the maximum flow capacity.

When compressed air is used for air blow, etc., find the maximum air consumption before selecting the size. (If compressed air exceeding the maximum flow rate is supplied, it may cause deterioration of the cleanliness of the compressed air, the outflow of oil mist on the outlet side, and also cause element damage.)

### Mounting

#### ⚠ Caution

##### 1. About the mounting orientation of the products

Make sure to install this product on horizontal piping. If it is installed diagonally, laterally, or upside down, the drain separated by the element will splash to the outlet side.

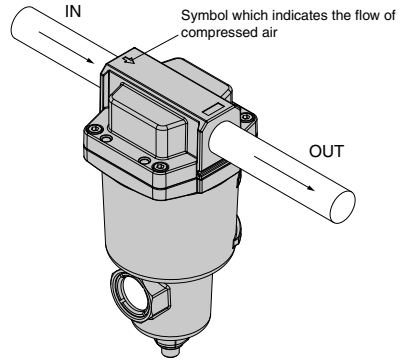
### Piping

#### ⚠ Caution

##### 1. Connect it with IN and OUT ports in proper location. It does not work with the connection reversed.

In the case of the AFF2C to 22C, 37B, 75B, AM□150C to 550C, 650, 850

Verify the direction of the flow of the compressed air and the mark that indicates the inlet of the product before connecting. It cannot be used if connected in the opposite direction.



In the case of free standing type

INLET and OUTLET of compressed air is labeled on the side of flange. Be sure to connect correctly.

##### 2. Use an air blower to flush the piping before connecting the piping.

Use an air blower to thoroughly flush the piping, or wash the piping to remove any cutting chips, cutting oil, or debris from inside the piping before connecting them.

##### 3. Winding of sealant tape

When screwing in the pipes or fittings, make sure to prevent cutting chips or the sealant material on the threaded portion of the pipe from entering the piping. If sealant tape is to be used, leave about 1.5 to 2 ridges of threads uncovered.

##### 4. Modular connection

Mount the attached bracket on one side when connecting 2 sets. Mount the attached brackets on both sides when connecting 3 sets or more. As a guideline for the number of brackets, one bracket should be mounted for every 2 products.



# AM□/AFF Series

## Specific Product Precautions 3

Be sure to read this before handling the products.

Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.

### Air Supply

#### ⚠ Caution

1. This product is not applicable to gases other than compressed air.

This product is not applicable to gases other than compressed air (example: oxygen, hydrogen, flammable gas, mixed gas).

2. Do not use compressed air that contains chemicals, organic solvents, salt, or corrosive gases.

Do not use compressed gas containing chemicals, organic solvents, salt or corrosive gas. This can cause rust, damage to rubber and resin parts, or malfunction.

3. Operate within the specified operating pressure range.

Damage, failure, or malfunction may occur if this product is operated above the maximum operating pressure. If this product is used below the minimum operating pressure, increase in the air-flow resistance due to clogging will have such influence that the desired flow rate cannot be obtained. If this product is used under a low pressure such as for a blower, conduct sufficient tests by users to confirm the specifications and performances.

### Operating Environment

#### ⚠ Caution

1. Do not use in the following environments, as this can cause failure.

- 1) In locations having corrosive gases, organic solvents, and chemical solutions, or in locations where these elements are likely to adhere to the equipment.
- 2) In locations where salt water, water, or water vapor could come in contact with the equipment.
- 3) In locations that is exposed to shocks and vibrations.

2. Be careful about the contamination of the workpieces due to entrainment of the ambient air.

If compressed air is used for air blow, compressed air blowing out from the blow nozzle may entrain foreign matter (solid particles and liquid particles) floating in the ambient air, blowing it against the workpieces and causing adhesion. Therefore, sufficient precautions must be taken about the ambient environment.

### Maintenance

#### ⚠ Caution

1. Replace the element immediately when the time for its replacement has arrived. If the element is used continuously without replacing, not only will foreign matter flow to the outlet side, but the element may also be damaged.

To replace the element, replace the O-ring and the gasket, too. For the replacement procedure, refer to the operating manual. (For element dimensions, refer to page 280.)

##### <Element replacement>

- a. In the case of the AFF2C to 22C, 37B, 75B, AM□150C to 550C, 650, 850

The replacement interval for the element is when the pressure drop reaches 0.1 MPa or after two years of operation, whichever comes first. A pressure drop can be verified with the element service indicator (-T) or with differential pressure gauge (Made to Order).

- b. In the case of free standing type

The replacement interval for the element is when the pressure drop reaches 0.1 MPa or after one year of operation, whichever comes first. Confirm the pressure drop with a pressure gauge. (With pressure gauge: -G)

- c. In the case of the AME

Regardless of the time for its replacement indicated in "a" above, replace the element when a red color spot occurred on the surface.

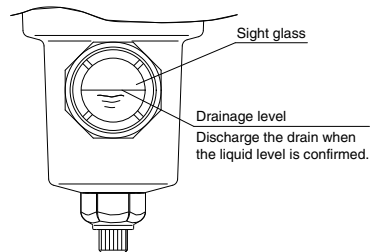
- d. In the case of the AMF

Regardless of the replacement time indicated in "a" or "b," replace the element when you notice an odor coming from the outlet side.

2. Be sure to exhaust the drain accumulated in the filter container.

Failure to discharge the drain will allow the accumulated drain to flow over to the outlet side.

When using the AFF2C to 22C, 37B, 75B, AM□150C to 550C, 650, 850 with drain cock, drain guide or ball valve, Discharge the drain when the liquid level of the drain is confirmed in the sight glass. If the drain is not discharged properly, it will flow over to the outlet side.



HAA
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AMF
ZFC
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LLB
AD□
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# AM□/AFF Series

## Specific Product Precautions 4

Be sure to read this before handling the products.

Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.

### Maintenance

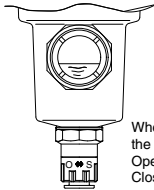
#### ⚠ Caution

##### 3. In the case of a type with auto drain

- The auto drain operates when the drain accumulates, and discharges the drain.
- When using the AFF2C to 22C, 37B, AM□150C to 550C, 650 with auto drain, the drain is automatically discharged with the knob tightened to the "S" side. Manual drain discharge, however, is also possible.

##### <Manual operation>

A manual knob attached to the auto drain end is tightened to the "S" side in normal operation. The drain can be discharged by loosening it to the "O" side. (Be careful, however, if pressure remains inside the filter when the drain is discharged, the drain will blow out from the drain port.)



Open Close

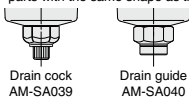
When viewed from the bottom side  
Open: Turn in CCW direction  
Close: Turn in CW direction

##### 4. The drain exhaust parts replacement method and necessary parts are different depending on when it was manufactured.

Description	Necessary parts		Applicable size
	Manufactured Jan. 2010 or before [Manufacturing lot No. up to oo]	Manufactured Feb. 2010 onwards [Manufacturing lot No. oP to onwards] <sup>Note 2)</sup>	
Drain cock	Non-replaceable	AM-SA039	2C to 22C 150C to 550C 650 37B
Drain guide	Non-replaceable	Thread type Rc: AM-SA040 Thread type G: AM-SA040-F Thread type NPT: AM-SA040-N	
N.O. auto drain	Thread type Rc, G: AD43PA-D Thread type NPT: NAD43PA-D		
N.C. auto drain	Thread type Rc, G: AD53PA-D Thread type NPT: NAD53PA-D		2C to 22C 150C to 550C
Ball valve set	AM-SA004		75B, 850
N.O. auto drain <sup>Note 1)</sup>	Thread type Rc: AD34PA-D Thread type G: EAD34PA-D Thread type NPT: NAD34PA-D		

Note 1) Jig (AM-SA005) for replacing auto drain is necessary for the 75B or 850.

Note 2) When replacing parts with a production lot no. oP or after, order the parts with the same shape as the following figures.



Drain cock  
AM-SA039

Drain guide  
AM-SA040

##### 5. The drain exhaust parts are different according to option or thread.

Applicable models: AFF2C to 22C, 37B, AM, AMD, AMH, AMG150C to 550C, 650

Drain exhaust specifications	Option	Thread type		
		Rc	G	NPT
Drain cock	Except F, V	AM-SA039		
	F	AM-SA039-1		
	V	AM-SA039-2		
Drain guide	FV	AM-SA039-3		
	Except F, V	AM-SA040	AM-SA040-F	AM-SA040-N
	F	AM-SA040-1	AM-SA040-F-1	AM-SA040-N-1
	V	AM-SA040-2	AM-SA040-F-2	AM-SA040-N-2
N.C. auto drain	FV	AM-SA040-3	AM-SA040-F-3	AM-SA040-N-3
	Except F, V	AD53PA-D	NAD53PA-D	
	F	AD53PA-D-X155	NAD53PA-D-X155	
N.O. auto drain	V	AD53PA-D-X113	NAD53PA-D-X113	
	Except F, H, V	AD43PA-D	NAD43PA-D	
	F	AD43PA-D-X155	NAD43PA-D-X155	
	V	AD43PA-D-X113	NAD43PA-D-X113	
	H (Note)	—	—	—

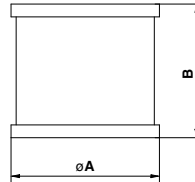
Note) For the option H, the auto drain cannot be replaced.

### Others

#### 1. Element interchange

Following is the element dimensions for the AFF and AM□ series:

Elements of the same body size have the same dimensions.



#### Element Dimensions

Model	Element dimensions (Reference value)	
	φA	B
AFF2C, AM□150C	49	42
AFF4C, AM□250C	58	52
AFF8C, AM□350C	70	78
AFF11C, AM□450C	82	88
AFF22C, AM□550C	96	118
AFF37B, AM□650	122	144
AFF75B, AM□850	142	223

#### 2. About oil-free products

The AFF and AM□ series includes parts (such as resin parts, rubber parts, and elements) that does not allow degreasing wash. Therefore, oil-free products with all parts degreasing washed is not available.

#### 3. Degreasing wash

Certain parts such as the body and housing can be degreased. Please contact SMC for further details after confirming the specifications.

(available as Option or Made to Order)



# AM□/AFF Series Specific Product Precautions 5

Be sure to read this before handling the products.

Refer to back page 50 for Safety Instructions and pages 6 to 8 for Air Preparation Equipment Precautions.

## Others

### Caution

#### 4. Change of oil

On the AFF and AM□ series, no oil such as grease is applied to parts exposed to compressed air. However, for certain specifications, there are some parts to which oil is applied. It is possible to change the type of applied oil (as Option or Made to Order).

#### 5. Internal volume of filter container

Following is the volume of filter containers of the AFF and AM□ series (when the element is removed).

#### Volume Inside Filter

Model	Volume inside filter (Reference value) (cm <sup>3</sup> )
AFF2C, AM150C, AMD150C AMG150C, AMH150C	250
AFF4C, AM□250C, AMD250C AMG250C, AMH250C	350
AFF8C, AM□350C, AMD350C AMG350C, AMH350C	600
AFF11C, AM□450C, AMD450C AMG450C, AMH450C	1000
AFF22C, AM□550C, AMD550C AMG550C, AMH550C	1500
AFF37B, AM□650, AMD650 AMG650, AMH650	3000
AFF75B, AM□850, AMD850 AMG850, AMH850	9000

HAA
HAW
AT
IDF
IDU
IDF
□FS
IDFA
IDFB
IDH
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IDK
AMG
AFF
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AMD
AMH
AME
AMF
ZFC
SF
SFD
LLB
AD□
GD