

Compressed Air Cleaning Filter Series

For Water, Solid/Oil Separation and Deodorization

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

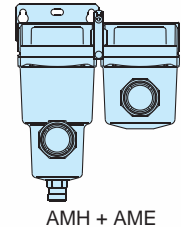
Uses the same spacer as the F.R.L. combination AC series.

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

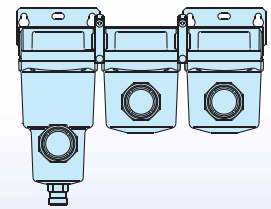
Modular connection example



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 (AMG□□, AFF□□, AM□□, AMD□□)
(AMH□□, AME□□, AMF□□)

Addition: **5** types

Differential pressure switch

1.6 MPa specifications

FKM specifications

With differential pressure switch (30 VDC)

Degreasing wash, white vaseline specifications



Compact, Lightweight (AME□□, AMF□□)

Height and mass reduced by up to **40%**

New

Conventional



Water 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

Odour Removal Filter/**AMF**

Series **AM□/AFF**



CAT.EUS30-11Aa-UK

Water droplet removal

Water Separator

Water droplet separation rate: 99%



AMG150C to 550C

AMG650/850

Model	Flow capacity /min (ANR) Max. flow capacity at 0.7 MPa inlet pressure	Port size	
AMG	150C	300	1/8, 1/4
	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
	850	12,000	1 1/2, 2

Large dust particle filtration, Oil droplet separation

Main Line Filter

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



AFF2C to 22C

AFF37B/75B

AFF	2C	300	1/8, 1/4
	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
	75B	12,000	1 1/2, 2

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^3 (ANR)
[≈ 0.8 ppm]



AM150C to 550C

AM650/850

AM	150C	300	1/8, 1/4
	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
	850	12,000	1 1/2, 2

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^3 (ANR)
[≈ 0.08 ppm]



AMD150C to 550C

AMD650 to 850

AMD	150C	200	1/8, 1/4
	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

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/m³ (ANR)
 [≈0.08 ppm]



AMH150C to 550C AMH650/850

Model	Flow capacity /min (ANR) Max. flow capacity at 0.7 MPa inlet pressure	Port size	
AMH	150C	200	1/8, 1/4
	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

Dust filtration, Oil mist adsorption

Super Mist Separator

Colour 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/m³ (ANR)
 [≈0.008 ppm]
 Cleanliness at outlet:
 Not more than 35 particles of size 0.3 μm or larger/10 / (100 particles or less/ft³)



AME150C to 550C AME650/850

AME	150C	200	1/8, 1/4
	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

Deodorization

Odour Removal Filter

Nominal filtration rating: 0.01 μm
 [Filtration efficiency: 99.9%]
 Oil mist density at outlet:
 Max. 0.004 mg/m³ (ANR)
 [≈0.0032 ppm]



AMF150C to 550C AMF650 to 850

AMF	150C	200	1/8, 1/4
	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

Compressed Air Cleaning Filter Series

Series AM□/AFF

	Series	Water removal rate	Nominal filtration rating	Oil mist density at outlet	Smell	Page	
Water Separator	<ul style="list-style-type: none"> Water Separator Eliminates water droplets in the compressed air. 	Series AMG	99%	—	—	—	P.2
Solid/Oil Separator	<ul style="list-style-type: none"> Main Line Filter Eliminates impurities such as oil and foreign matter, etc. in compressed air. 	Series AFF	—	3 m (Filtration efficiency: 99%)	—	—	P.10
	<ul style="list-style-type: none"> Mist Separator Eliminates oil mist in compressed air or rust sized 0.3 μm or more, and foreign matter such as carbon. 	Series AM	—	0.3 μm (Filtration efficiency: 99.9%)	1 mg/m ³ (ANR) (0.8 ppm) (after oil saturation)	—	P.18
	<ul style="list-style-type: none"> Micro Mist Separator Eliminates foreign matter sized 0.01 μm or more, or oil particles in an aerosol state. 	Series AMD	—	0.01 μm (Filtration efficiency: 99.9%)	0.1 mg/m ³ (ANR) (0.08 ppm) (after oil saturation)	—	P.26
	<ul style="list-style-type: none"> Micro Mist Separator with Pre-filter Oil separator, which incorporates pre-filter (equivalent to the AM series) into micro mist separator. 	Series AMH	—	0.3 + 0.01 μm (Filtration efficiency: 99.9%)	—	—	P.34
	<ul style="list-style-type: none"> Super Mist Separator Captures foreign matter sized 0.01 μm or more and adsorbs oil particles in an aerosol state. 	Series AME	—	0.01 μm (Filtration efficiency: 99.9%)	0.01 mg/m ³ (ANR) (0.008 ppm)	Reduces oil smell.	P.42
Deodorizer	<ul style="list-style-type: none"> Odour Removal Filter Eliminates odour from compressed air. 	Series AMF	—	0.01 μm (Filtration efficiency: 99.9%)	0.004 mg/m ³ (ANR) (0.0032 ppm)	Deodorizes oil smell.	P.50
Modular Connection Examples						P.58	
How to Order Bowl Assembly						P.59	
Options	<ul style="list-style-type: none"> Seal material: Fluororubber IN-OUT reversal direction Degreasing wash, white vaseline For medium air pressure Drain guide 1/4 female threaded With element service indicator With differential pressure switch (with indicator) (125 VAC, 30 VDC) With differential pressure switch (with indicator) (30 VDC) 					Refer to "How to Order" of respective models.	
Made to Order	<ul style="list-style-type: none"> With differential pressure gauge Possible to control product's service life by monitoring the clogged element. Auto drain type, drain guide specifications Drain piping is possible by auto drain type. White vaseline specifications* Using white vaseline for lubricant. 					P.63	
* Applicable only to the AFF37B, 75B, AM□650 and 850.							
Special Specifications	Clean Series Usable inside a clean room.		Copper-free, Fluorine-free Eliminates the effects on a colour CRT by copper ion or fluoric resin, etc.				P.63
Related Products	Auto Drain Valve, Motor Operated Auto Drain, Heavy Duty Auto Drain, Differential Pressure Gauge					P.67	
Specific Product Precautions						P.73	

Water Separator Series AMG

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 an element that is exclusively used for removing water droplets 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/m³ (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 58.)



AMG150C to 550C



AMG650/850



(For drain cock)



(For auto drain)



Made to Order
(For details, refer to page 63.)

Model

Model	AMG150C	AMG250C	AMG350C	AMG450C	AMG550C	AMG650	AMG850
Rated flow (l/min (ANR)) <small>Note)</small>	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
Mass (kg)	0.38	0.55	0.9	1.4	2.1	4.2	10.5



Note) Max. flow at 0.7 MPa.

Max. flow varies depending on the operating pressure. Refer to “Flow Characteristics” (page 5) and “Maximum Air flow” (page 6).

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 life	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

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.
 Refer to back page for Safety Instructions, “Precautions for Handling Pneumatic Devices” (M-03-E3A) for Common Precautions, and pages 73 to 77 for Specific Product Precautions.

How to Order



AMG150C to 550C

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

Body size

150C
250C
350C
450C
550C

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Port size

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

Accessory

Symbol	Description
—	—
B	Bracket *2

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

Made to Order

("How to Order" and the applicable models are different from those

Symbol	Description	Page for details
—	—	—
X26	N.C., N.O. auto drain, drain piping type	P.65

Option *3

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

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

*5 Only body/housing is degreasing washed.

Auto drain *3

Symbol	Description
—	Drain cock (Without auto drain)
C	N.C. auto drain
D	N.O. auto drain

*3 Refer to the table below for the combination between the draining specification and option. (Only one draining specification is selectable).

Auto Drain Specifications/Option Combinations

◎ : All draining specifications are available (including drain guide, J type).

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

▼ : N.C. auto drain (C type) and N.O. auto drain (D type) are not available.

	F	H	R	V
—	◎	△	◎	◎
F		▼	◎	▼
H			△	▼
R				◎
V				

■ : Not available

Options

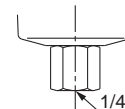
Symbol F: Rubber material: Fluororubber

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



Can be piped to the drain exhaust port.

1/4 female threaded

Symbol R: IN-OUT reversal direction

Air flow in the separator is changed to right to left.

(Air flow direction of the standard: Left)

Symbol V: Degreasing wash, white vaseline

Body/housing is degreasing washed. The lubrication grease for O-ring and gasket is changed to white vaseline.



How to Order

AMG650/850

AMG **650** - [] **10** [] [] - [] - []

Body size

650
850

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Port size

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

Accessory

Symbol	Description
—	—
B	Bracket *1

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

Made to Order

("How to Order" and the applicable models are different from those shown on this page. Be sure to refer to "Made to Order".)

Symbol	Description	Page for details
—	—	—
X26	N.C., N.O. auto drain, drain piping type	P.65
X12	White vaseline	P.65

Option *2

Symbol	Description
—	—
J	Drain guide 1/4 female threaded *4
R	IN-OUT reversal direction

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

Note) Element service indicator (symbol: T) is not available as an option because water deposits inside the indicator could lead to malfunctions.

Auto drain *2

Symbol	Description
—	Drain cock (Without auto drain) *3
D	N.O. auto drain

*2 Refer to "Auto Drain Specifications/Option Combinations".

*3 Body size 850 is equipped with a ball valve (Rc3/8 female threaded). Mount a piping adapter IDF-AP609 (page 58) to the ball valve if NPT3/8 female threaded is required.



Note) Refer to "How to Order Bowl Assembly" on page 63.

Auto Drain Specifications/Option Combinations

○ : Available □ : Not available

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

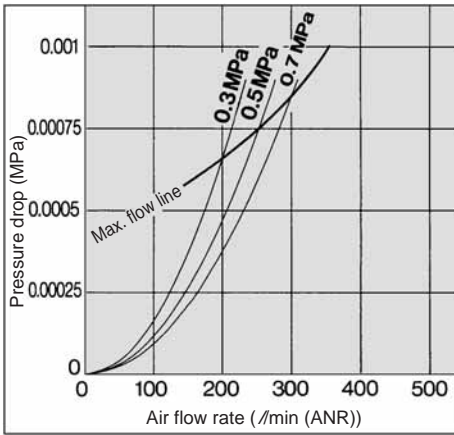
Series AMG

Flow Characteristics

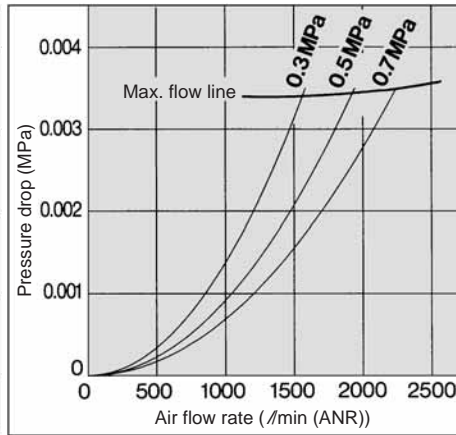


Note) Compressed air over max. flow line in the table below may not meet the specifications of the product. It may cause damage to the element.

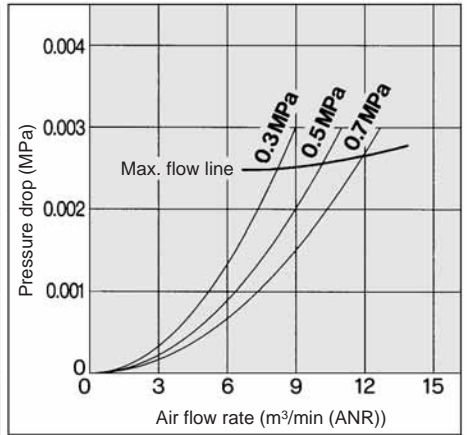
AMG150C



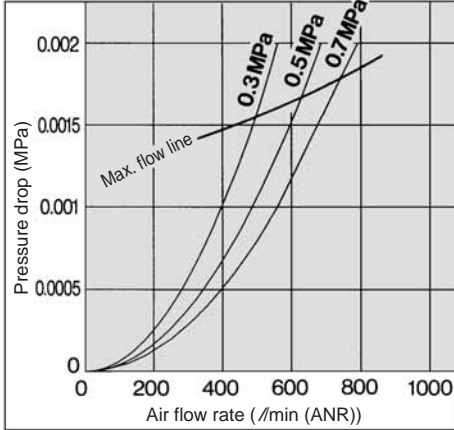
AMG450C



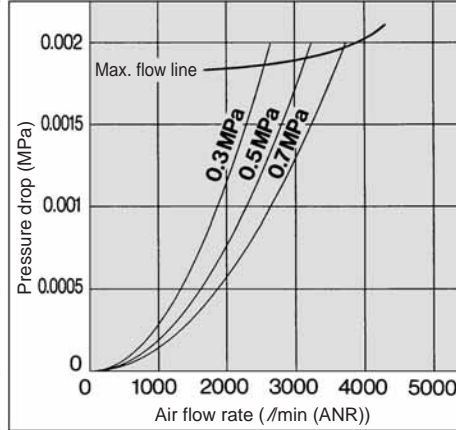
AMG850



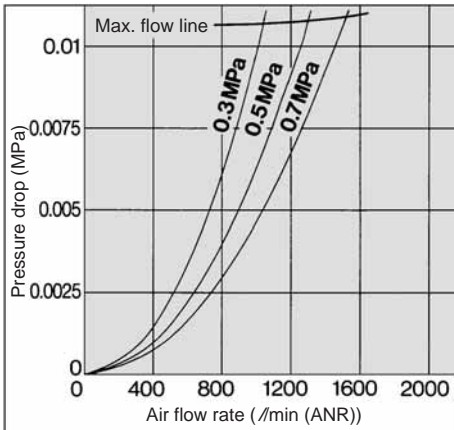
AMG250C



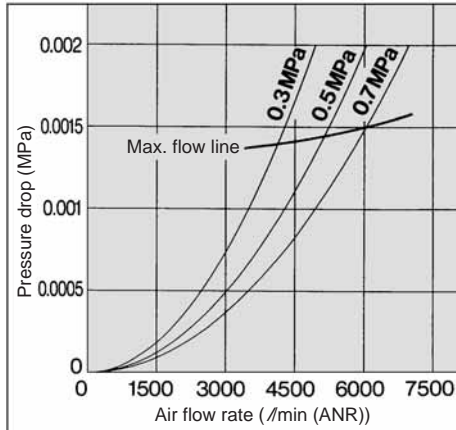
AMG550C



AMG350C

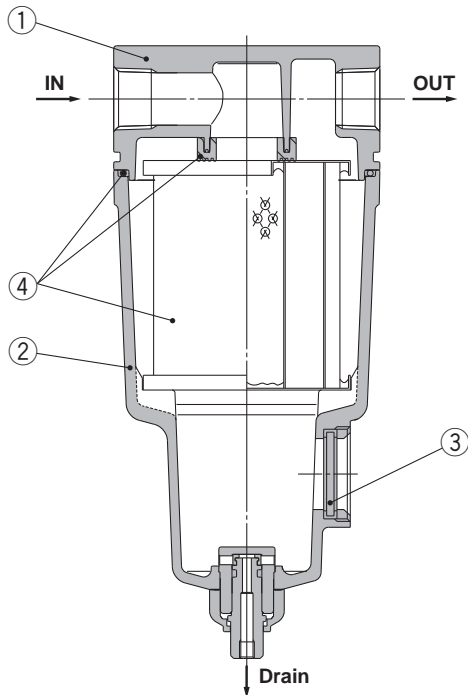


AMG650

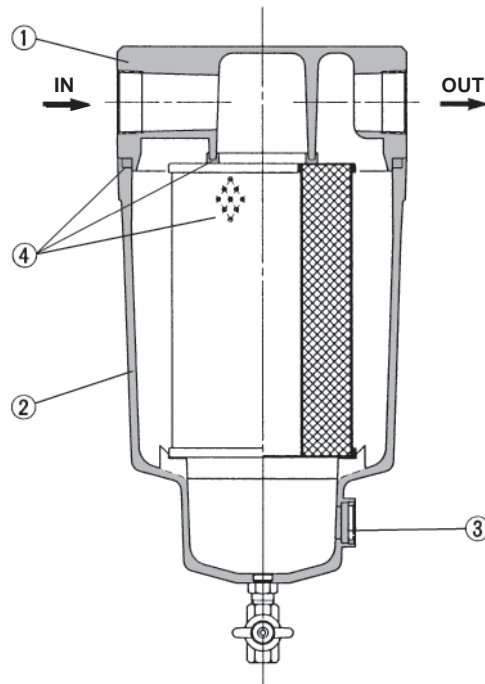


Construction

AMG150C to 550C, AMG650



AMG850



Component Parts

No.	Description	Material	Note
1	Body	Aluminum die-casted	Chrome treated Epoxy coating on inner surface
2	Housing	Aluminum die-casted*	
3	Sight glass	Tempered glass	—

* The AMG850 is aluminum casted.



Note) Refer to "How to Order Bowl Assembly" on page 59.



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 7 through to 9 for details.

Replacement Parts

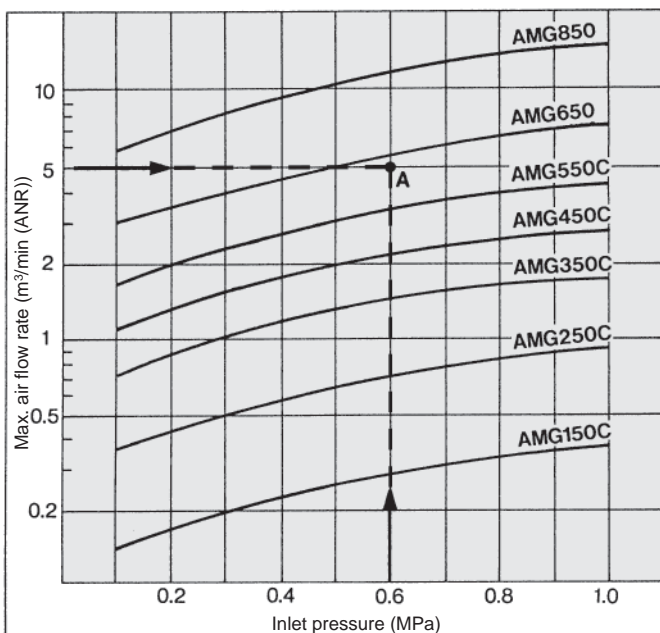
No.	Description	Material	Applicable model	Model						
				AMG150C	AMG250C	AMG350C	AMG450C	AMG550C	AMG650	AMG850
4	Element assembly	Resin, others	Except option F For option F	AMG-EL150 AMG-EL150-F	AMG-EL250 AMG-EL250-F	AMG-EL350 AMG-EL350-F	AMG-EL450 AMG-EL450-F	AMG-EL550 AMG-EL550-F	AMG-EL650 —	AMG-EL850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

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

* Refer to back page 6 for replacement of auto drain.

* Element assemblies for Made to Order (X12, X20, X26) are same as those for standard (see the above table).

Maximum Air Flow



Model Selection

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

(Example) Inlet pressure: 0.6 MPa

Max. air flow rate: 5 m³/min (ANR)

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

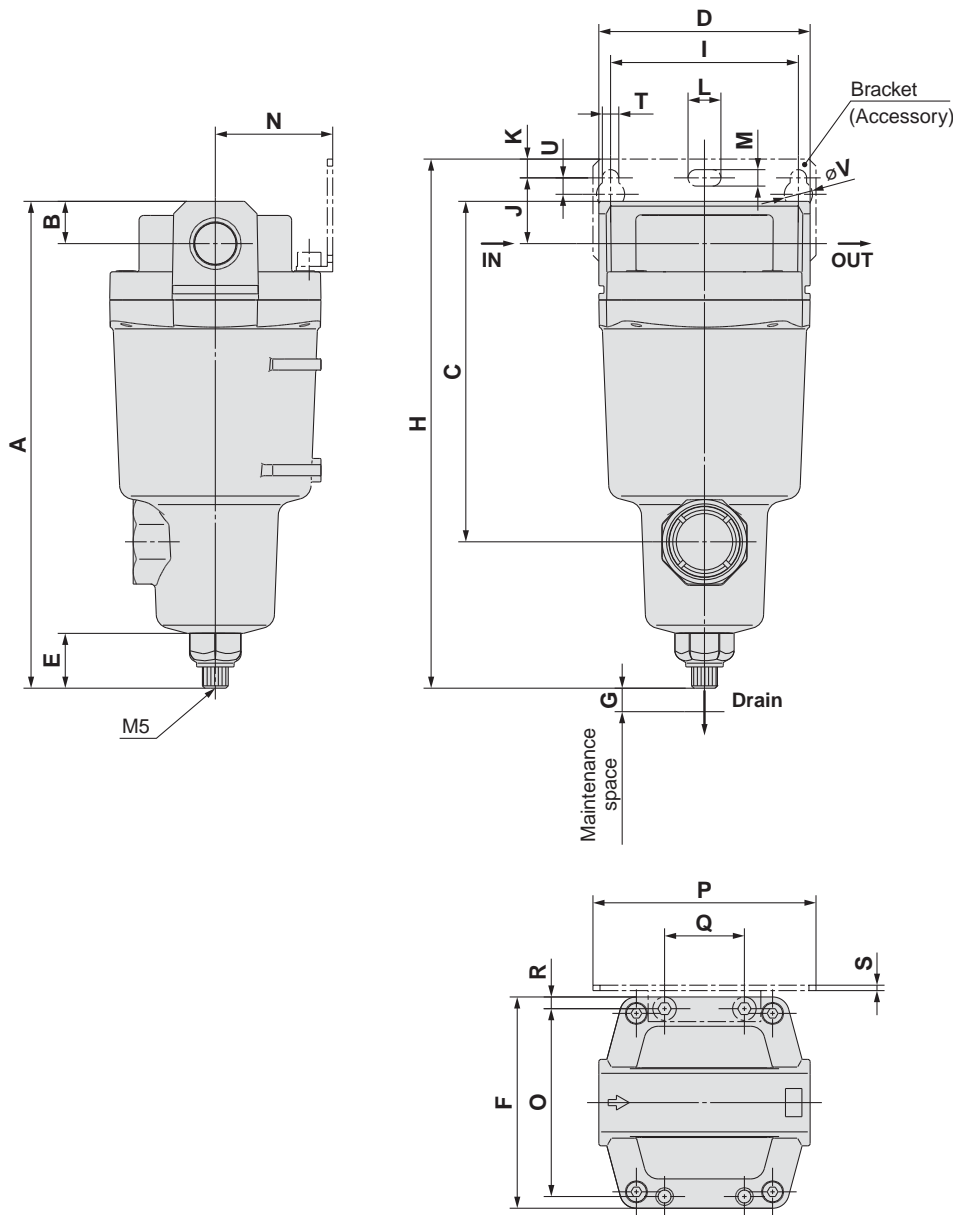


Note) Make sure to select a model that has the max. flow line above the obtained intersecting point. With a model that has the max. flow line below the obtained intersecting point, the flow rate will be exceeded, thus leading to a problem such as being unable to satisfy the specifications.

Series AMG

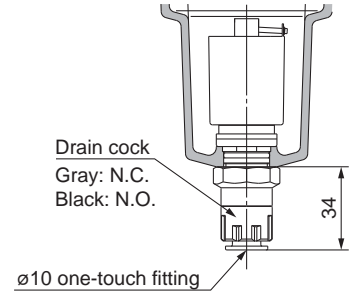
Dimensions

AMG150C to 550C

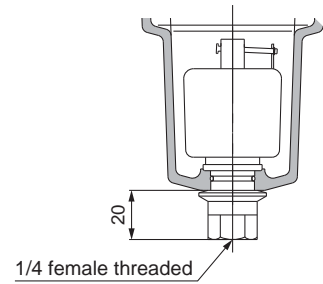


Auto drain

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

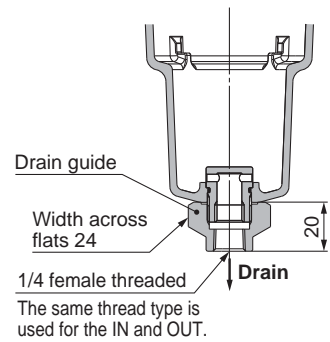


Combination of D: With auto drain (N.O.)
and H: For medium air pressure



Option

J: Drain guide 1/4 female threaded

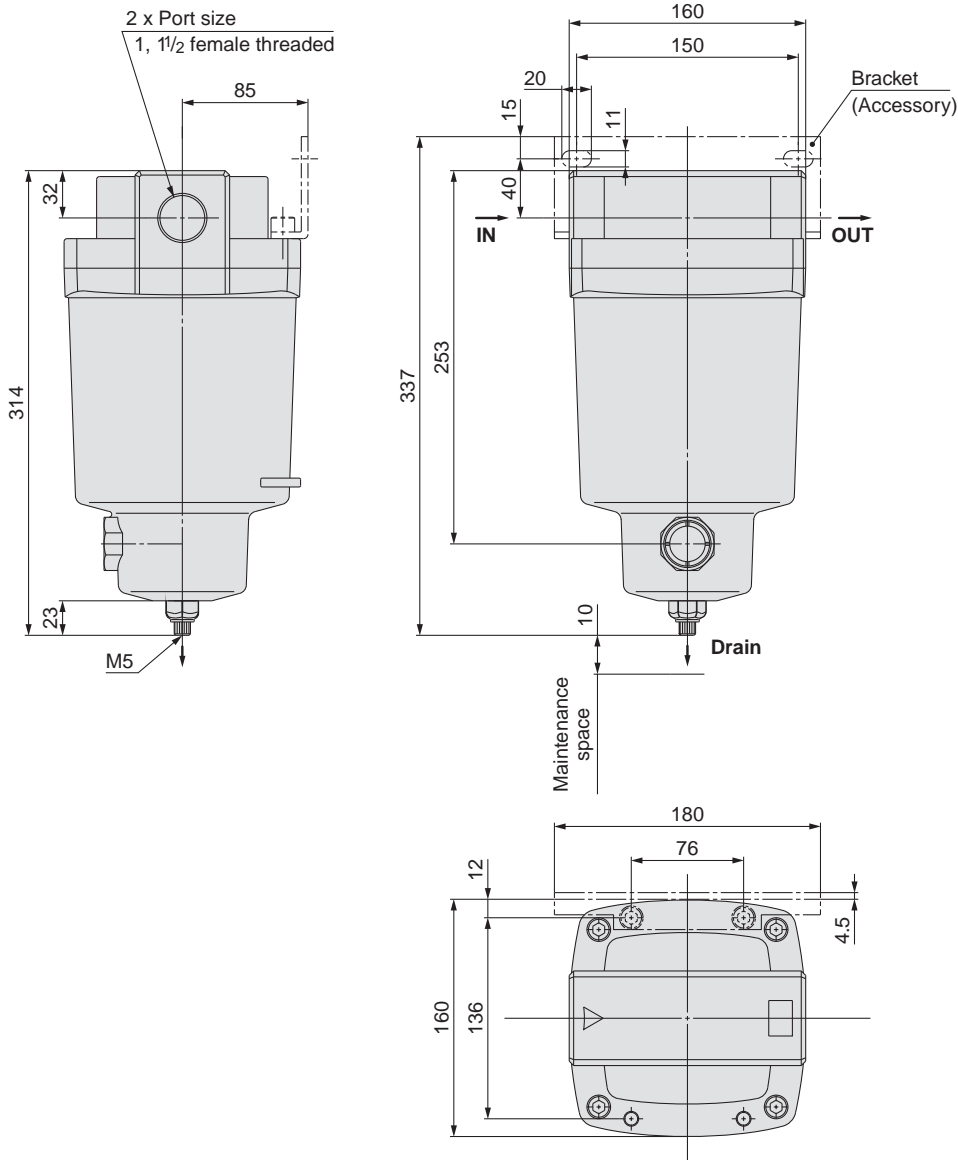


Model	Port size	A	B	C	D	E	F	G	Bracket related dimensions														
									H	I	J	K	T	U	L	M	V	N	O	P	Q	R	S
AMG150C	1/8, 1/4	161	10	99	63	23	63	10	176	56	20	5	6	6	12	6	10	35	54	70	26	4.5	1.6
AMG250C	1/4, 3/8	175	14	113	76	23	76	10	193	66	24	8	6	6	12	6	10	40	66	80	28	5	2
AMG350C	3/8, 1/2	207	18	145	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

(mm)

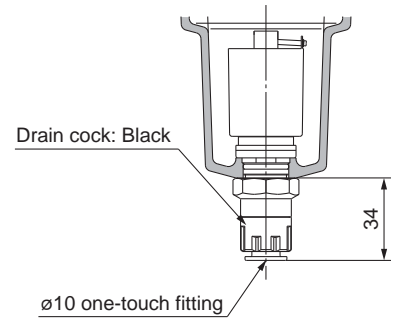
Dimensions

AMG650



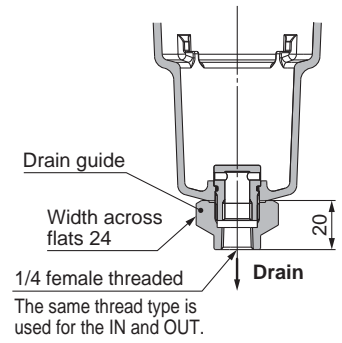
Auto drain

D: With auto drain (N.O.)



Option

J: Drain guide 1/4 female threaded



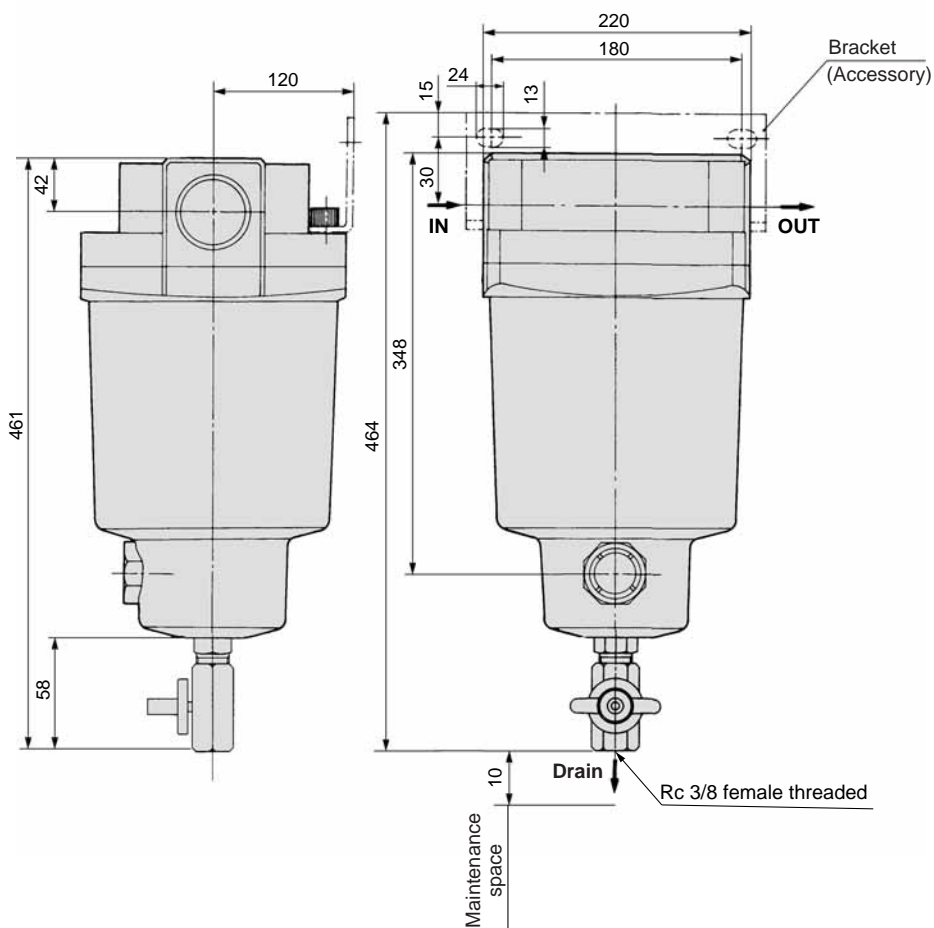
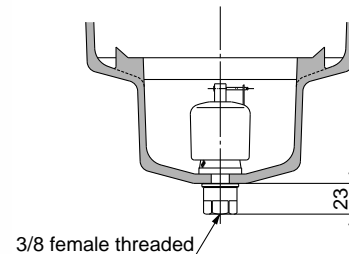
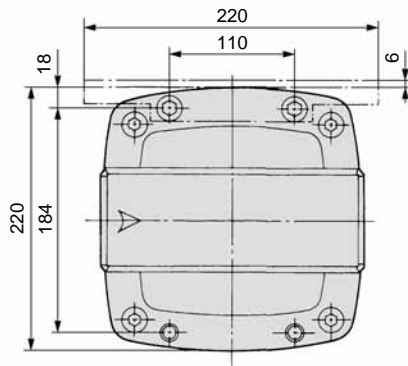
Series AMG

Dimensions

AMG850

Auto drain

D: With auto drain (N.O.)
for AMG850



Main Line Filter

Series *AFF*

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 life of precision filter, and prevent trouble with the equipment.

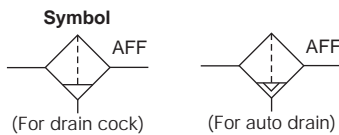
Modular connection is possible with AFF2C to 22C.
(For details, refer to page 58.)



AFF2C to 22C



AFF37B/75B



Made to Order
(For details, refer to page 63.)

Caution

Be sure to read this before handling.
Refer to back page for Safety Instructions, "Precautions for Handling Pneumatic Devices" (M-03-E3A) for Common Precautions, and back pages 73 to 77 for Specific Product Precautions.

Model

Model	AFF2C	AFF4C	AFF8C	AFF11C	AFF22C	AFF37B	AFF75B
Rated flow ^{Note)} (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 1/2	1 1/2, 2
Mass (kg)	0.38	0.55	0.9	1.4	2.1	4.2	10.5



Note) Max. flow at 0.7 MPa.

Max. flow varies depending on the operating pressure.

Refer to "Flow Characteristics" (page 13) and "Maximum Air Flow" below.

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	3 μm (Filtration efficiency: 99%)
Element life	2 years (1 year for A type) 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/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

Model Selection

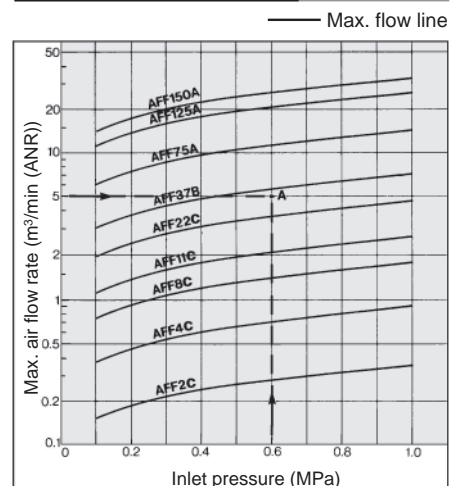
Select a model in accordance with the following procedure taking the inlet pressure and the max. air flow rate into consideration.
(Example) Inlet pressure: 0.6 MPa
Max. air flow rate: 5 m³/min (ANR)

1. Obtain the intersecting point A of inlet pressure and max. air flow rate in the graph.
2. The AFF37B is obtained when the max. flow line is above the intersecting point A in the graph.



Note) Make sure to select a model that has the max. flow line above the obtained intersecting point. With a model that has the max. flow 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 Air Flow



How to Order



AFF2C to 22C

AFF 22C - [] - **10** - [] - [] - [] - []

Body size

Symbol	Applicable compressor output (guide)
2C	2.2 kW
4C	3.7 kW
8C	7.5 kW
11C	11 kW
22C	22 kW

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Port size

Symbol	Size	Applicable body size				
		2C	4C	8C	11C	22C
01	1/8	●				
02	1/4	●	●			
03	3/8		●	●		
04	1/2			●	●	
06	3/4				●	●
10	1					●

Accessory

Symbol	Description
—	—
B	Bracket *2

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

Auto Drain Specifications/Option Combinations

⊙: All draining specifications are available (including drain guide, J type).
 △: N.C. auto drain (C type) is not available.
 ▼: N.C. auto drain (C type) and N.O. auto drain (D type) are not available.

	—	F	H	R	U	T	V
—	⊙	⊙	△	⊙	Note	Note	⊙
F	⊙	⊙	▼	⊙			▼
H	△	▼	△	△			▼
R	⊙	⊙	△		Note		⊙
U	Note			Note			
T	Note			Note			⊙
V	⊙	▼	▼	⊙		⊙	⊙

Note) one of them selectable □ : Not available

Made to Order

("How to Order" and the applicable models are different from those shown on this page. Be sure to refer to "Made to Order".)

Symbol	Description	Page for details
—	—	—
X6	With differential pressure gauge (GD40-2-01)	P.64
X26	N.C., N.O. auto drain, drain piping type	P.65

Option *3

Symbol	Description
—	—
F	Rubber material: Fluororubber
H	For medium air pressure (1.6 MPa)
J	Drain guide 1/4 female threaded *4
R	IN-OUT reversal direction
U	With differential pressure switch (30 V) *5
T	With element service indicator
V	Degreasing wash, *6 white vaseline

*4 Drain piping and piping for a stop valve such as ball valve are required.
 *5 Differential pressure gauge is included, (but not assembled).
 *6 Only body/housing is degreasing washed.

Auto drain *3

Symbol	Description
—	Drain cock (Without auto-drain)
C	N.C. auto drain
D	N.O. auto drain

*3 Refer to the table below for the combination between the draining specification and option. (Only one draining specification is selectable).

Options

Symbol F: Rubber material: Fluororubber

Fluororubber 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

Can be piped to the drain exhaust port.

Symbol R: IN-OUT reversal direction

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

Symbol U: With differential pressure switch (with indicator)

Saturation of the separator can be observed visually or by an electrical signal. (Element life check)

Symbol T: With element service indicator

Saturation of the separator can be observed visually. (Element life check)

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

Symbol V: Degreasing wash, white vaseline

Body/housing is degreasing washed. The lubrication grease for O-ring and gasket is changed to white vaseline.



How to Order

AFF37B/75B

AFF **37B** - [] **10** [] [] - [] - []

Body size

Symbol	Applicable compressor output (guide)
37B	37 kW
75B	75 kW

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Port size

Symbol	Size	Applicable body size	
		37B	75B
10	1	●	—
14	1 1/2	●	●
20	2	—	●

Accessory

Symbol	Description
—	—
B	Bracket *1

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

Made to Order

("How to Order" and the applicable models are different from those shown on this page. Be sure to refer to "Made to Order".)

Symbol	Description	Page for details
—	—	—
X6	With differential pressure gauge (GD40-2-01)	P.64
X26	N.C., N.O. auto drain, drain piping type	P.65
X12	White vaseline specifications	P.65

Option *2

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

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

Auto drain *2

Symbol	Description
—	Drain cock (Without auto drain) *3
D	N.O. auto drain

*2 Refer to "Auto Drain Specifications/Option Combinations".

*3 Body size 75B is equipped with a ball valve (Rc3/8 female threaded). Mount a piping adapter IDF-AP609 (page 58) to the ball valve if NPT3/8 female threaded is required.



Note) Refer to "How to Order Bowl Assembly" on page 59.

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	◎	◎	◎	◻	◎	◎	◎	

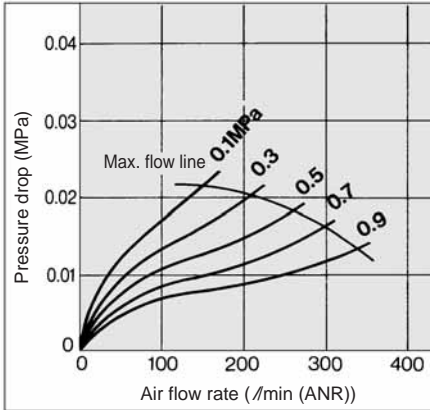
Series AFF

Flow Characteristics/Select the model taking the max. flow capacity into consideration. (Element oil saturation)

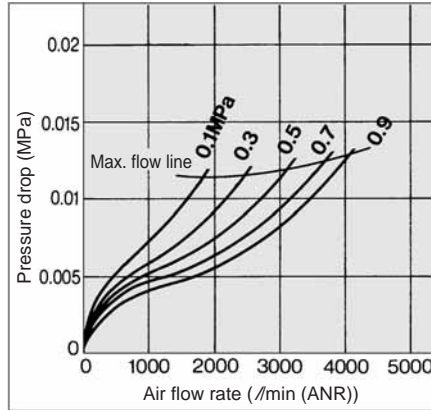


Note) Compressed air over max. flow line in the table below may not meet the specifications of the product. It may cause damage to the element.

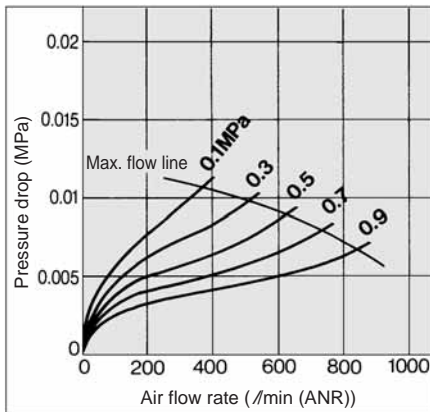
AFF2C



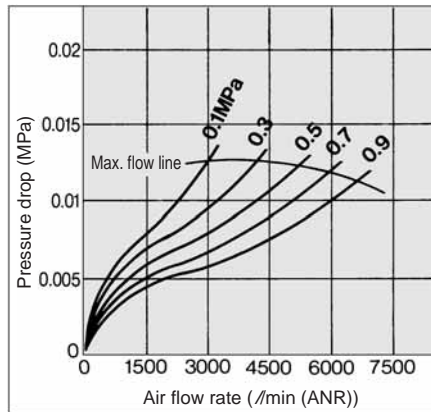
AFF22C



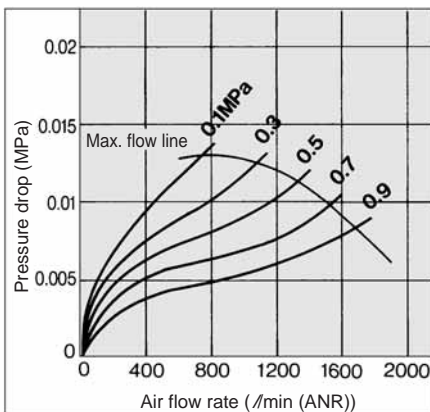
AFF4C



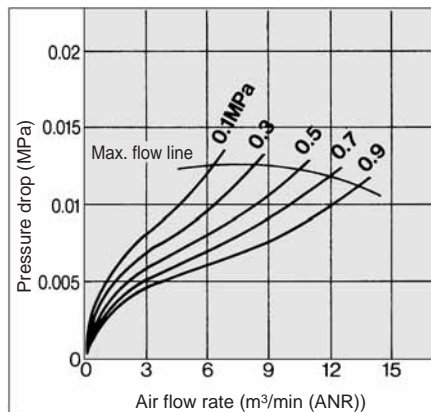
AFF37B



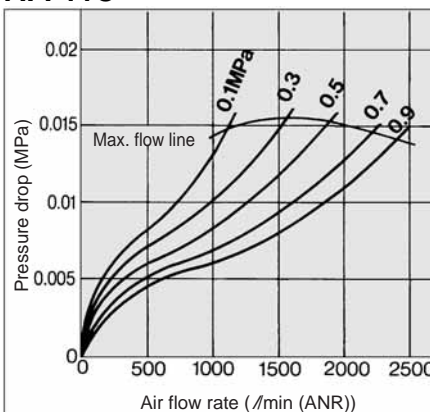
AFF8C



AFF75B

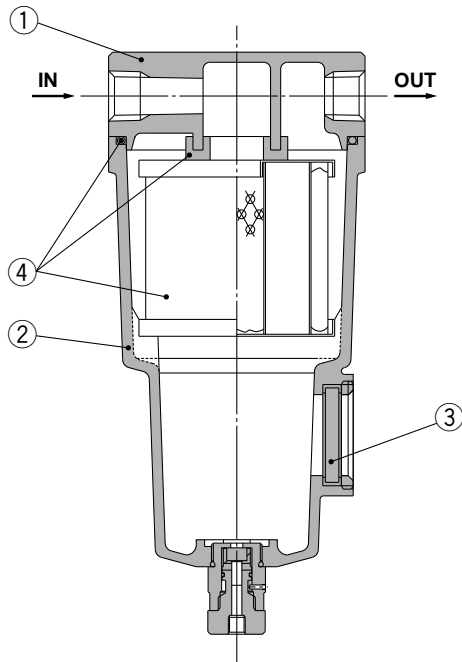


AFF11C

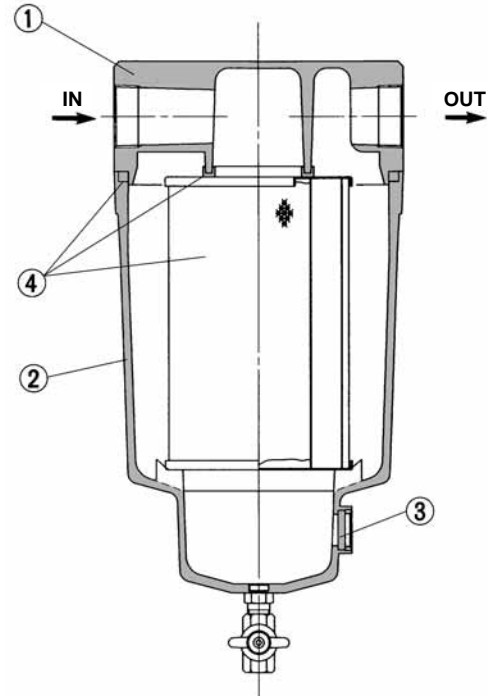


Construction

AFF2C to 22C, AFF37B



AFF75B



Component Parts

No.	Description	Material	Note
1	Body	Aluminum die-casted	Chrome treated
2	Housing	Aluminum die-casted*	Epoxy coating on inner surface
3	Sight glass	Tempered glass	—

* The AFF75B is aluminum casted.



Note) Refer to "How to Order Bowl Assembly" on page 59.



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 15 through to 17 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.)

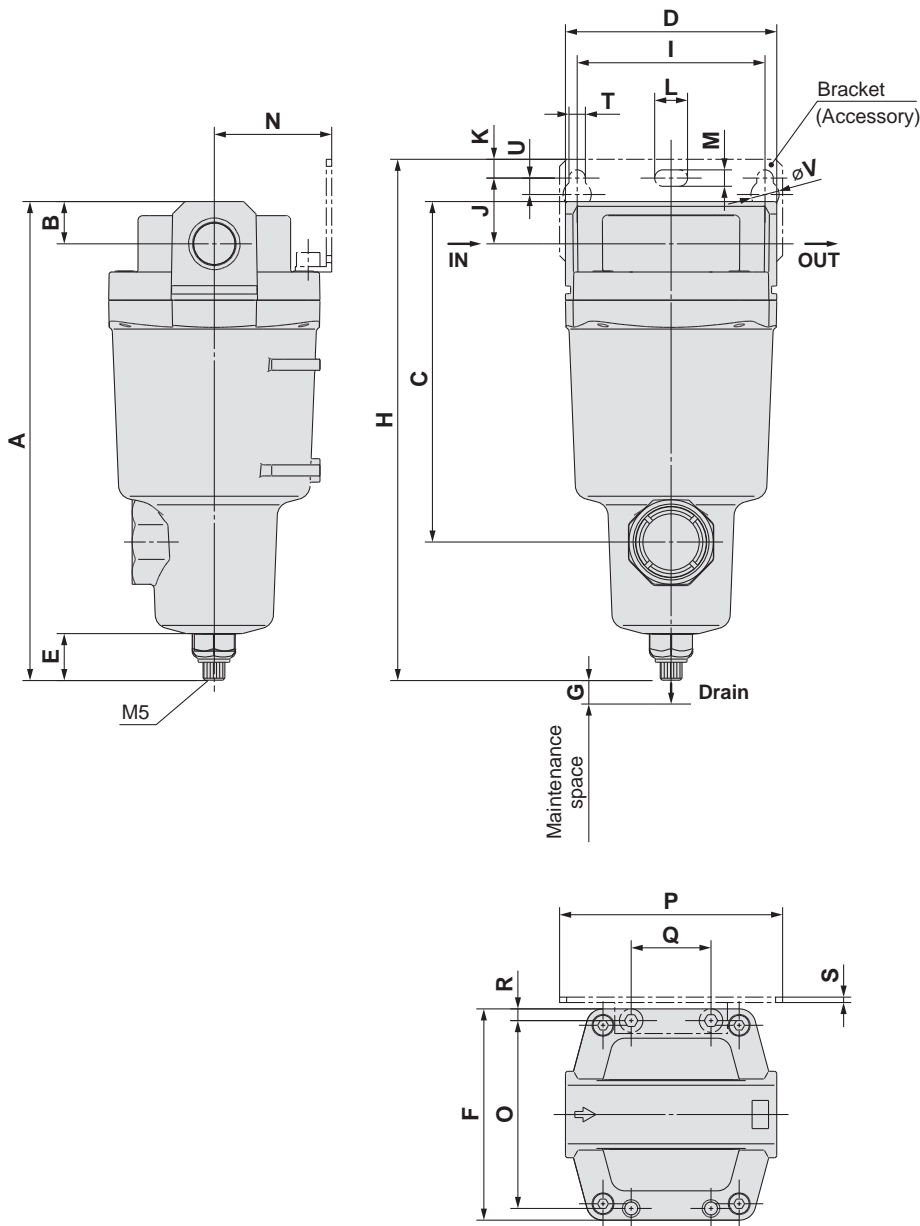
* Refer to back page 6 for replacement of auto drain.

* Element assemblies for Made to Order (X6, X12, X20, X26) are same as those for standard (see the above table).

Series AFF

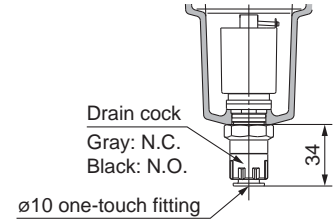
Dimensions

AFF2C to 22C

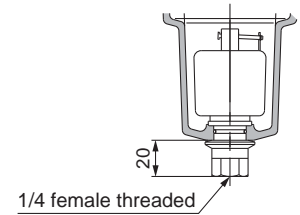


Auto drain

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

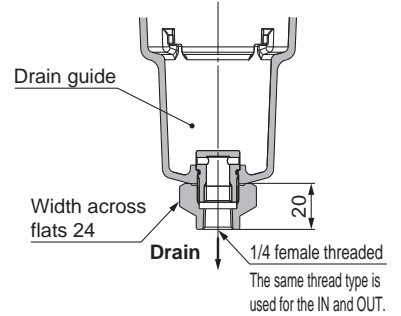


Combination of D: With auto drain (N.O.)
and H: For medium air pressure

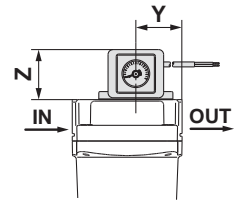


Option

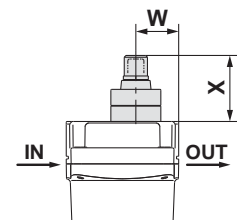
J: Drain guide 1/4 female threaded



U: With differential pressure switch (with indicator)



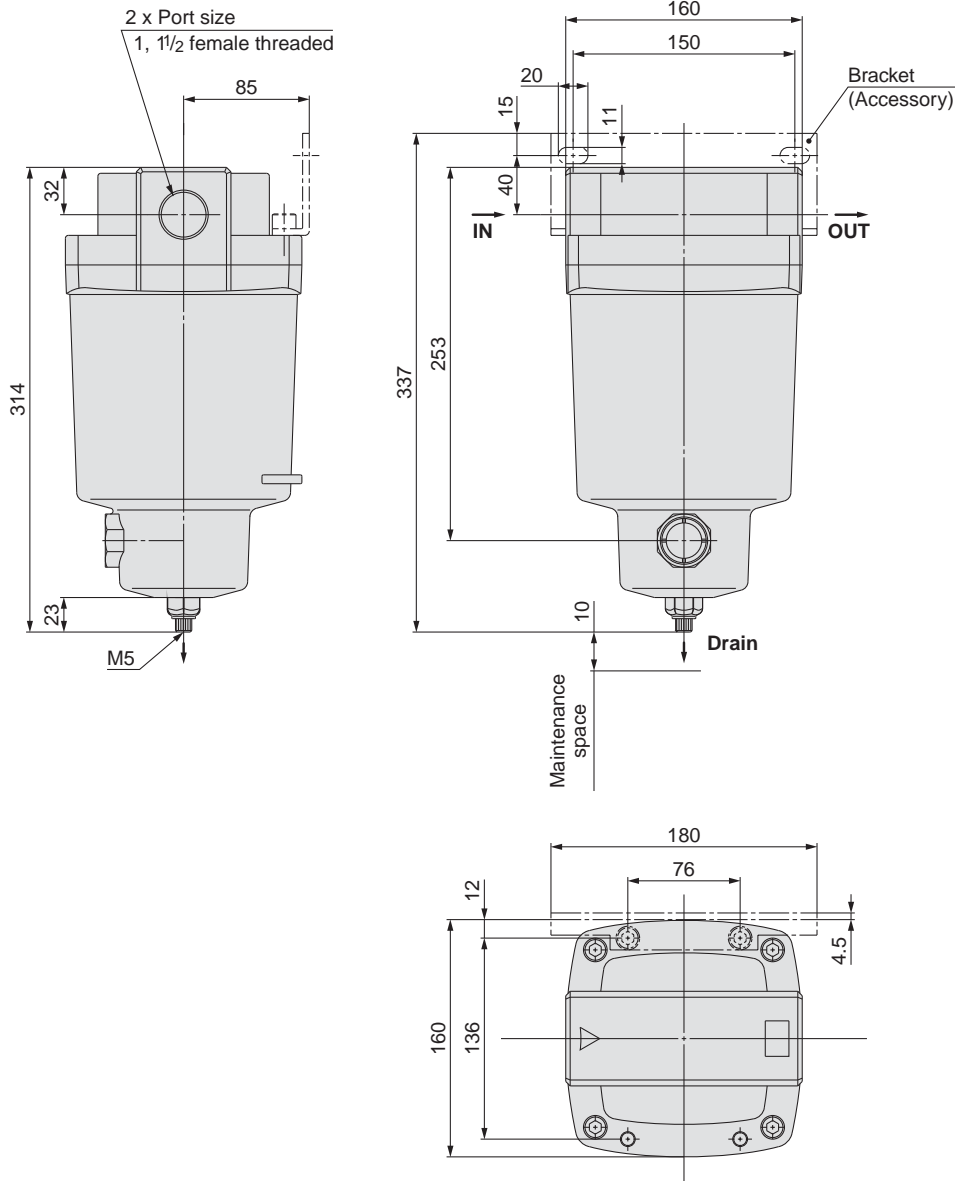
T: With element service indicator



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	Z
AFF2C	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	24	37	32	41
AFF4C	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	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

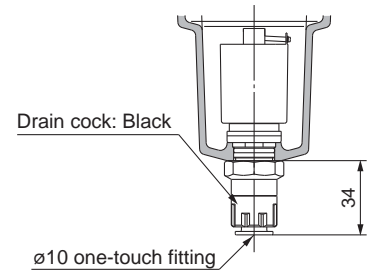
Dimensions

AMH650



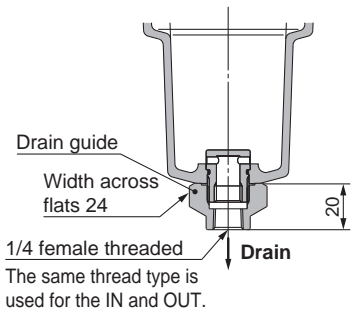
Auto drain

D: With auto drain (N.O.)

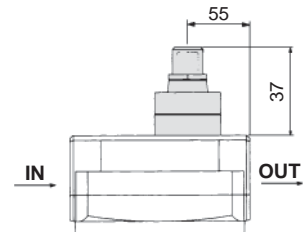


Option

J: Drain guide 1/4 female threaded



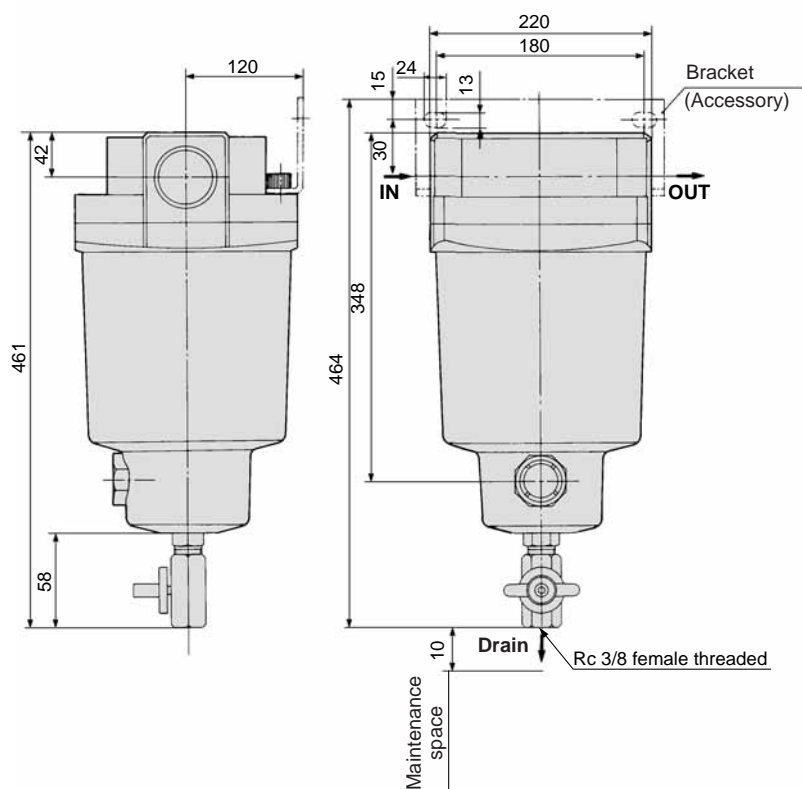
T: With element service indicator



Series AFF

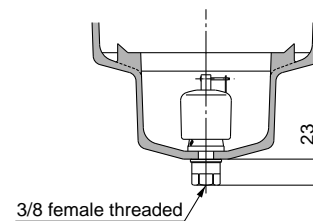
Dimensions

AFF75B



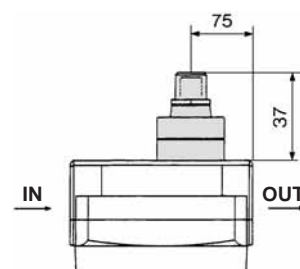
Auto drain

D: With auto drain (N.O.)
for AFF75B



Option

T: With element service indicator



Mist Separator

Series AM

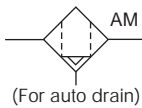
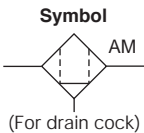
Can remove oil mist in compressed air and remove particles such as rust or carbon of more than 0.3 μm .

Modular connection is possible with AM150C to 550C.
(For details, refer to page 58.)



AM150C to 550C

AM650/850



Made to Order
(For details, refer to page 63.)

Model

Model	AM150C	AM250C	AM350C	AM450C	AM550C	AM650	AM850
Rated flow (l/min (ANR)) <small>Note)</small>	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
Mass (kg)	0.38	0.55	0.9	1.4	2.1	4.2	10.5



Note) Max. flow at 0.7 MPa.

Max. flow varies depending on the operating pressure.

Refer to "Flow Characteristics" (page 21) and "Maximum Air Flow" (page 22).



Note) Refer to "Made to Order" (page 63) for high flow type of AM850 or more.

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	0.3 μm (Filtration efficiency: 99.9%)
Oil mist density at outlet	Max. 1.0 mg/m ³ (ANR) (0.8 ppm)*
Element life	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)

* Oil mist density at 30 mg/m³ (ANR) blown out by compressor.

Accessory

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.

Refer to back page for Safety Instructions, "Precautions for Handling Pneumatic Devices" (M-03-E3A) for Common Precautions, and pages 73 to 77 for Specific Product Precautions.

How to Order



AM150C to 550C

AM 550C - [] 10 [] [] - [] - []

Body size

Symbol	Applicable compressor output (guide)
150C	2.2 kW
250C	3.7 kW
350C	7.5 kW
450C	11 kW
550C	22 kW

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Port size

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

Accessory

Symbol	Description
—	—
B	Bracket *2

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

Made to Order

("How to Order" and the applicable models are different from those shown on this page. Be sure to refer to "Made to Order".)

Symbol	Description	Page for details
—	—	—
X6	With differential pressure gauge (GD40-2-01)	P.64
X26	N.C., N.O. auto drain, drain piping type	P.65

Option *3

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

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

*5 Differential pressure gauge is included, (but not assembled).

*6 Only body/housing is degreasing washed.

Auto Drain Specifications/Option Combinations

○: All draining specifications are available (including drain guide, J type).

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

▼: N.C. auto drain (C type) and N.O. auto drain (D type) are not available.

	—	F	H	R	U	T	V
—	○	○	△	○		Note	○
F	○	○	▼	○			▼
H	△	○	△	△			▼
R	○	○	△		Note		○
U	Note			Note			
T	Note			Note			○
V	○	▼	▼	○		○	○

Note) one of them selectable □: Not available

Auto drain *3

Symbol	Description
—	Drain cock (Without auto drain) *4
C	N.C. auto drain
D	N.O. auto drain

*3 Refer to the table below for the combination between the draining specification and option. (Only one draining specification is selectable).

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

Options

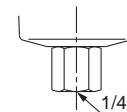
Symbol F: Rubber material: Fluororubber

Fluororubber 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

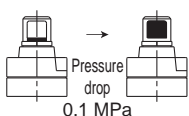


Can be piped to the drain exhaust port.

Symbol R: IN-OUT reversal direction

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

Symbol T: With element service indicator

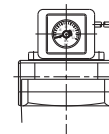


Saturation of the separator can be observed visually. (Element life check)

Symbol V: Degreasing wash, white vaseline

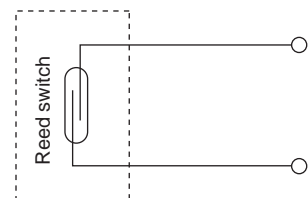
Body/housing is degreasing washed. The lubrication grease for O-ring and gasket is changed to white vaseline.

Symbol U: With differential pressure switch (with indicator)



Saturation of the separator can be observed visually or by an electrical signal. (Element life check)

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





How to Order

AM650/850

AM **650** - [] - [] - **10** [] [] - [] - []

Body size

Symbol	Applicable compressor output (guide)
650	37 kW
850	75 kW

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Port size

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

Accessory

Symbol	Description
—	—
B	Bracket *1

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

Made to Order

("How to Order" and the applicable models are different from those shown on this page. Be sure to refer to "Made to Order".)

Symbol	Description	Page for details
—	—	—
X6	With differential pressure gauge (GD40-2-01)	P.64
X26	N.C., N.O. auto drain, drain piping type	P.65
X12	White vaseline specifications	P.65

Option *2

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

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

Auto drain *2

Symbol	Description
—	Drain cock (Without auto drain) *3
D	N.O. auto drain

*2 Refer to "Auto Drain Specifications/Option Combinations".

*3 Body size 850 is equipped with a ball valve (Rc3/8 female threaded). Mount a piping adapter IDF-AP609 (page 58) to the ball valve if NPT3/8 female threaded is required.



Note) Refer to "How to Order Bowl Assembly" on page 59.

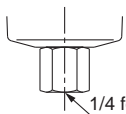
Auto Drain Specifications/Option Combinations

⊙ : Available ■ : Not available

Auto drain specifications/Option		Auto drain specifications	Option			Applicable model		
			D	J	R	T	AM650	AM850
Auto drain specifications	N.O. auto drain	D	■	■	⊙	⊙	⊙	⊙
	Drain guide 1/4	J	■	■	⊙	⊙	⊙	■
Option	IN-OUT reversal direction	R	⊙	⊙	■	⊙	⊙	⊙
	With element service indicator	T	⊙	⊙	⊙	■	⊙	⊙

Options

Symbol J: Drain guide 1/4 female threaded



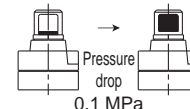
Can be piped to the drain exhaust port.

1/4 female threaded

Symbol R: IN-OUT reversal direction

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

Symbol T: With element service indicator



Saturation of the separator can be observed visually. (Element life check)

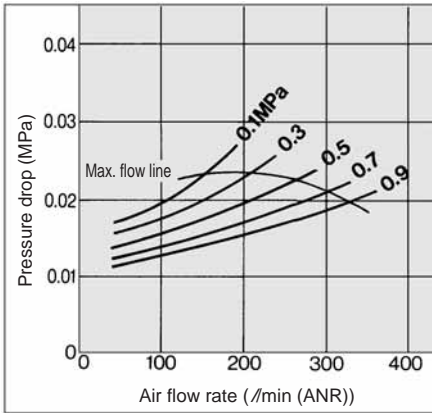
Series AM

Flow Characteristics (Element oil saturation)

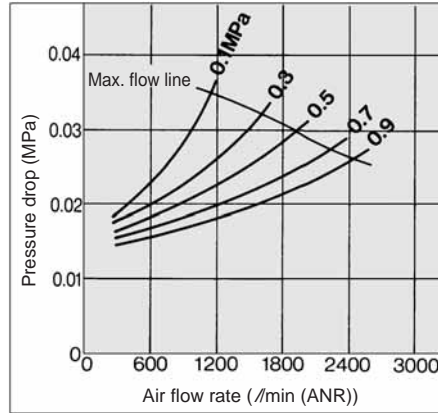


Note) Compressed air over max. flow line in the table below may not meet the specifications of the product. It may cause damage to the element.

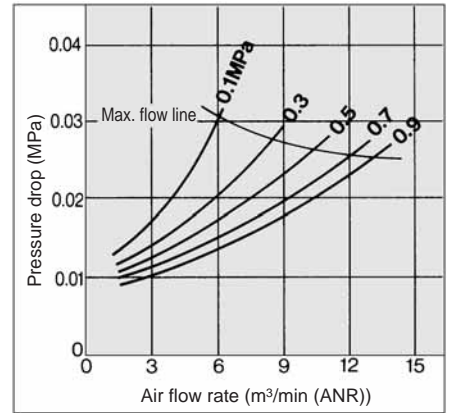
AM150C



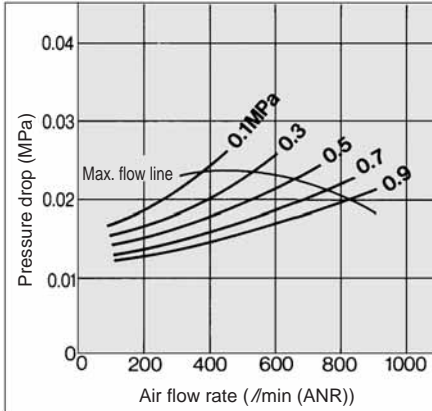
AM450C



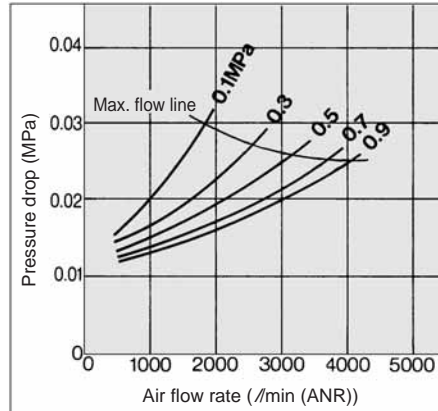
AM850



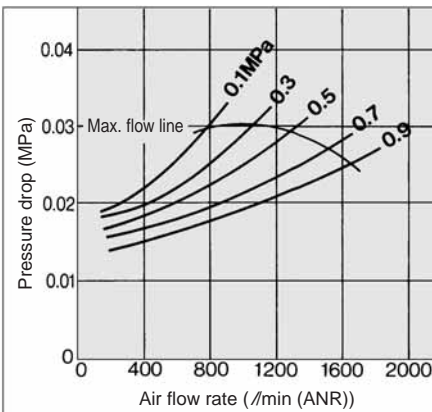
AM250C



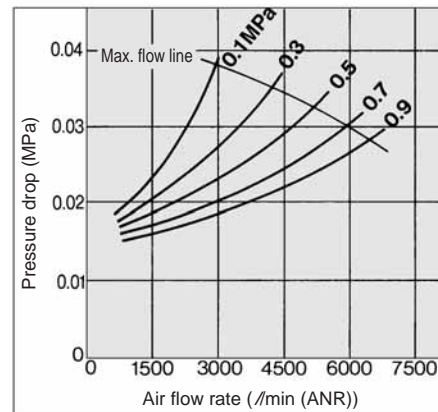
AM550C



AM350C

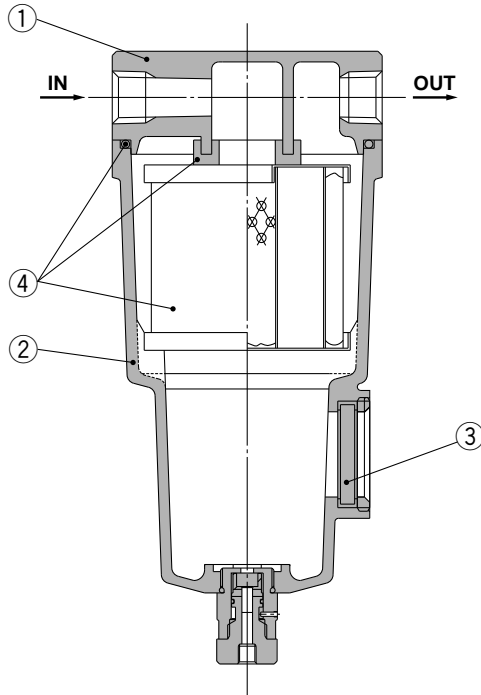


AM650

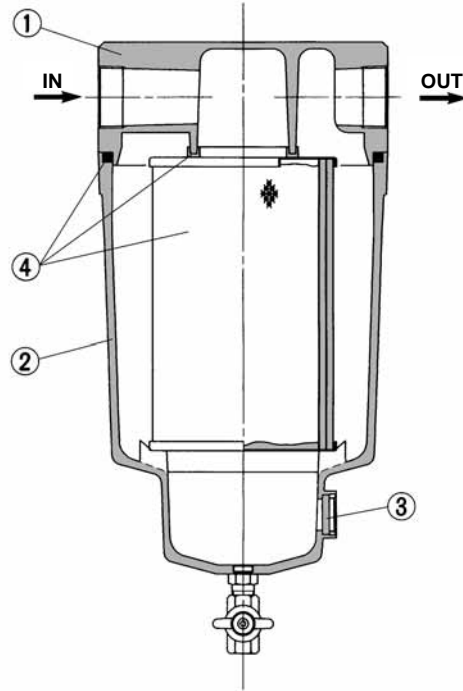


Construction

AM150C to 550C, AM650



AM850



Component Parts

No.	Description	Material	Note
1	Body	Aluminum die-casted	Chrome treated
2	Housing	Aluminum die-casted*	Epoxy coating on inner surface
3	Sight glass	Tempered glass	—

* The AM850 is aluminum casted.



Note) Refer to "How to Order Bowl Assembly" on page 59.



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 23 through to 25 for details.

Replacement Parts

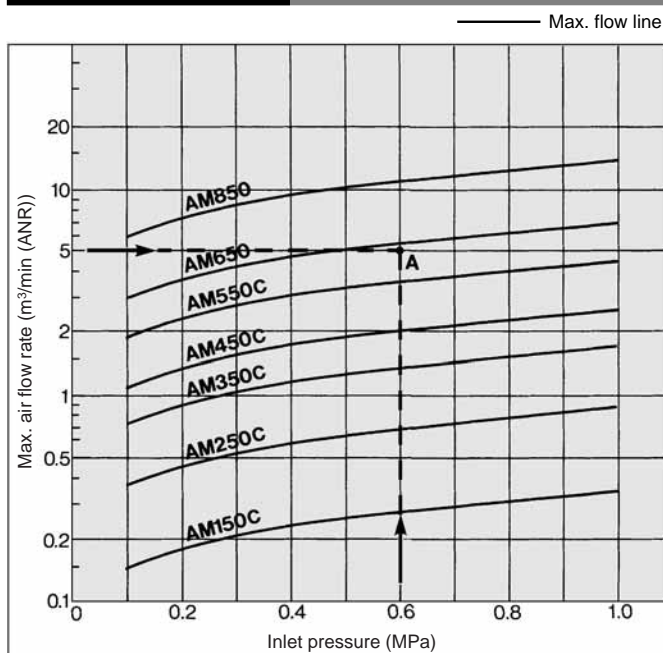
No.	Description	Material	Applicable model	Model						
				AM150C	AM250C	AM350C	AM450C	AM550C	AM650	AM850
4	Element assembly	Glass fiber, others	Except option F	AM-EL150	AM-EL250	AM-EL350	AM-EL450	AM-EL550	AM-EL650	AM-EL850
			For option F	AM-EL150-F	AM-EL250-F	AM-EL350-F	AM-EL450-F	AM-EL550-F	—	—

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

* Refer to back page 6 for replacement of auto drain.

* Element assemblies for Made to Order (X6, X12, X20, X26) are same as those for standard (see the above table).

Maximum Air Flow



Model Selection

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

(Example) Inlet pressure: 0.6 MPa

Max. air flow rate: 5 m³/min (ANR)

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

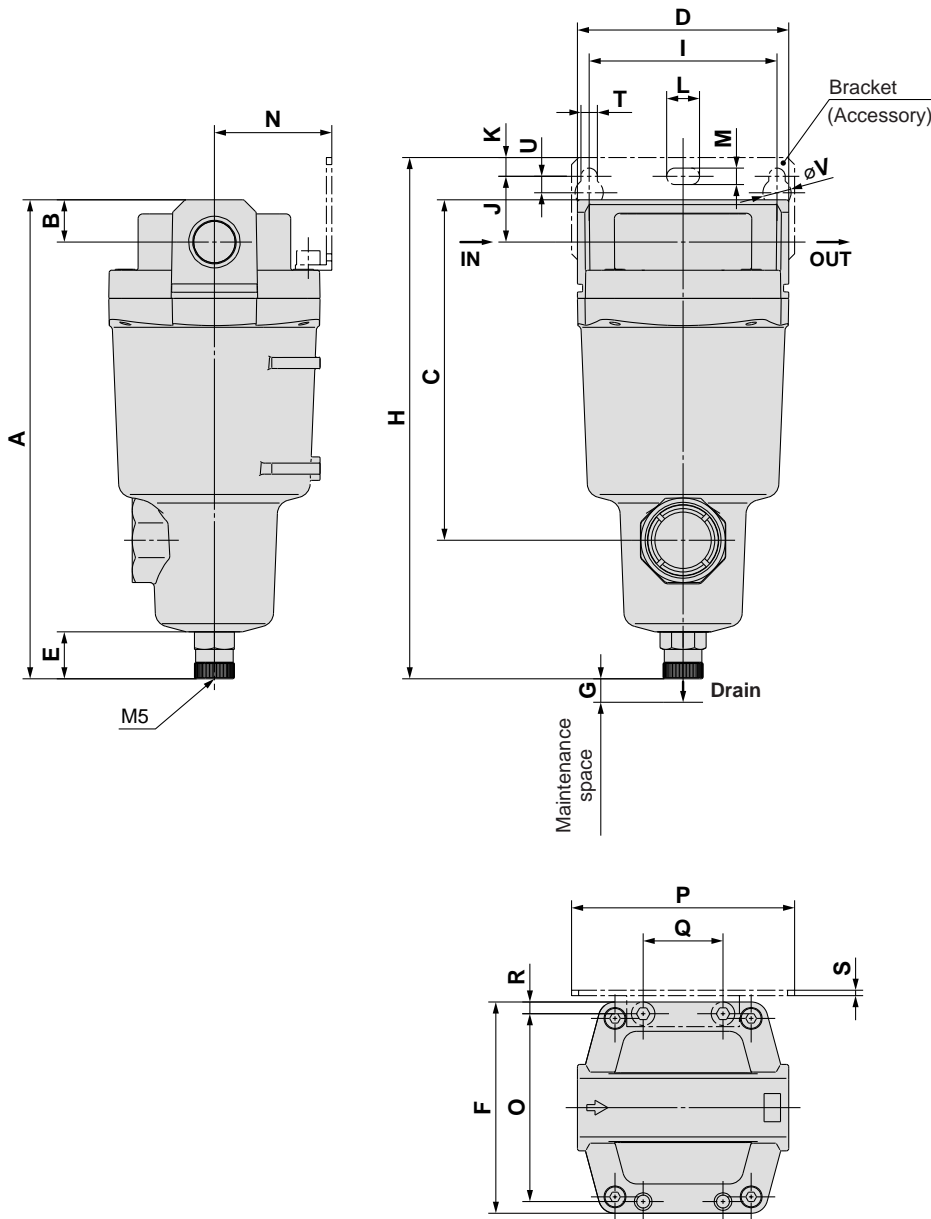


Note) Make sure to select a model that has the max. flow line above the obtained intersecting point. With a model that has the max. flow line below the obtained intersecting point, the flow rate will be exceeded, thus leading to a problem such as being unable to satisfy the specifications.

Series AM

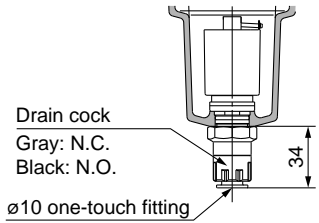
Dimensions

AM150C to 550C

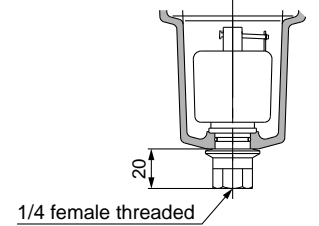


Auto drain

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

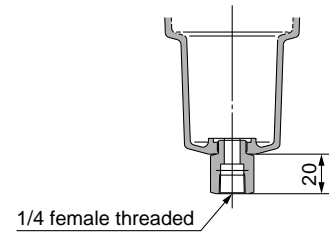


Combination of D: With auto drain (N.O.)
and H: For medium air pressure

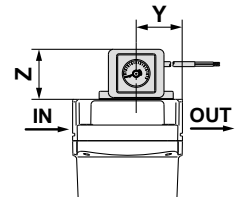


Option

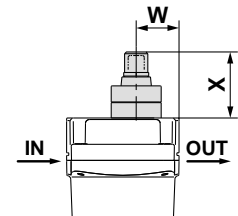
J: Drain guide 1/4 female threaded



U: With differential pressure switch (with indicator)



T: With element service indicator

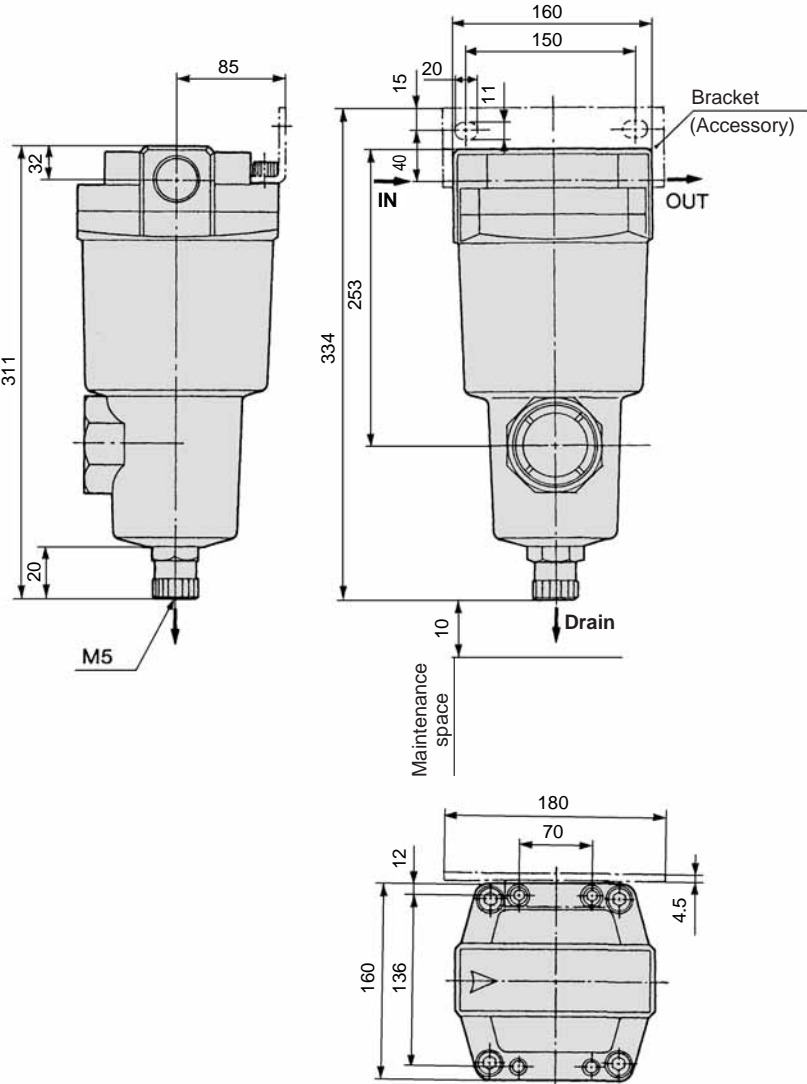


Model	Port size	A	B	C	D	E	F	G	Bracket related dimensions													Element service indicator related dimensions		Differential pressure switch related dimensions			
									H	I	J	K	T	U	L	M	V	N	O	P	Q	R	S	W	X	Y	Z
AM150C	1/8, 1/4	158	10	99	63	20	63	10	173	56	20	5	6	6	12	6	10	35	54	70	26	4.5	1.6	24	37	32	41
AM250C	1/4, 3/8	172	14	113	76	20	76	10	190	66	24	8	6	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	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	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	9	18	9	15	65	102	126	60	10	3.2	39	37	51	41

(mm)

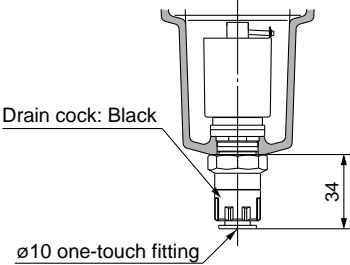
Dimensions

AM650



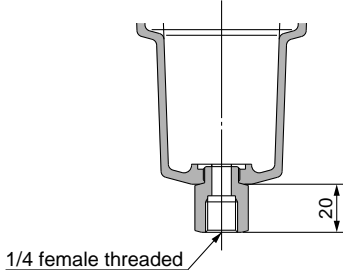
Auto drain

D: With auto drain (N.O.)

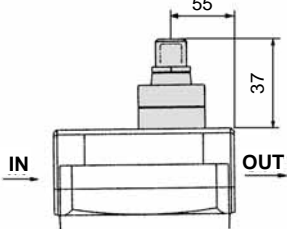


Option

J: Drain guide 1/4 female threaded



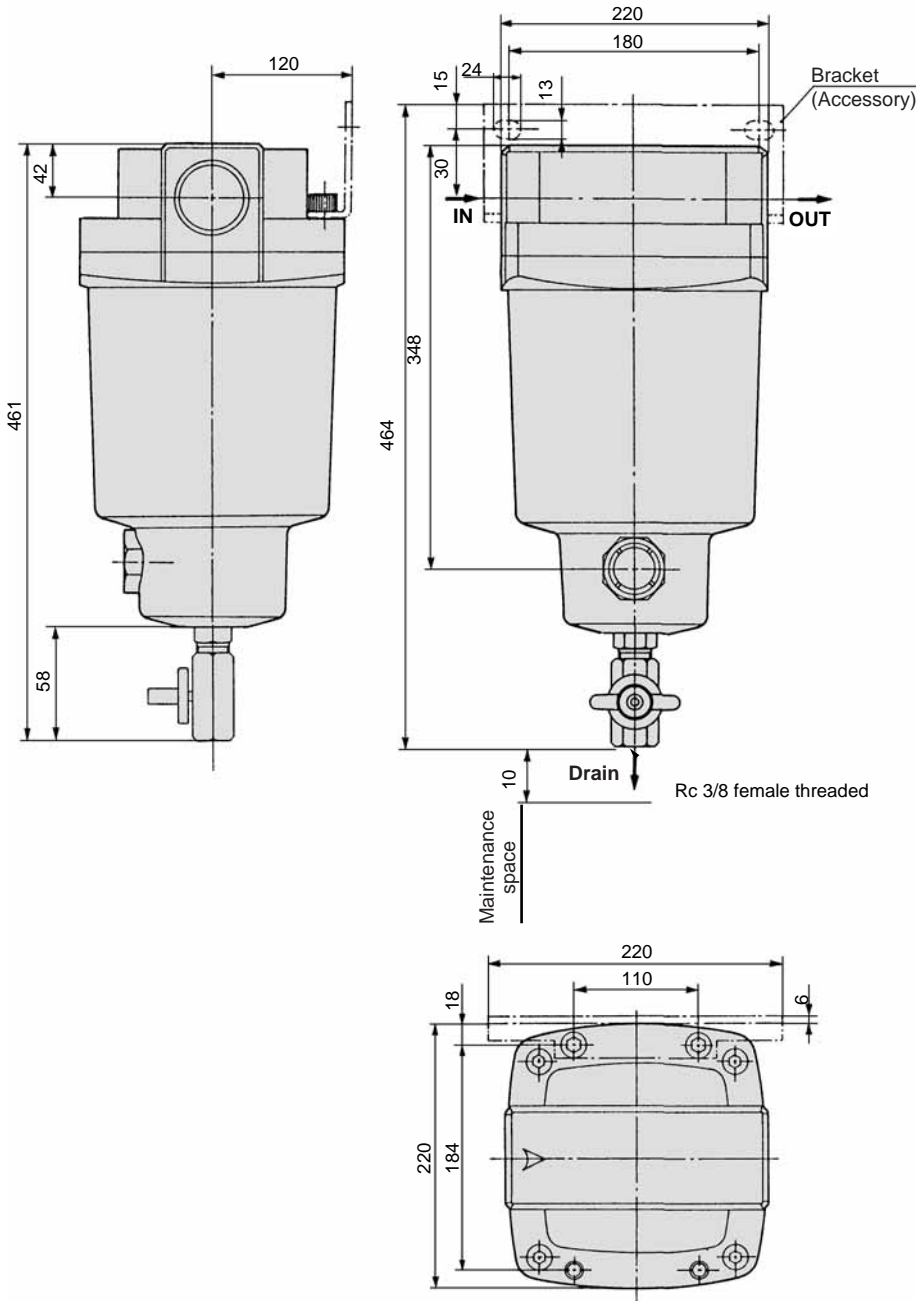
T: With element service indicator



Series AM

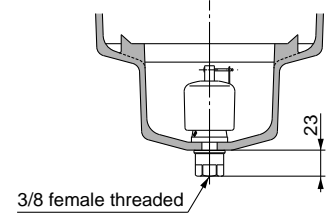
Dimensions

AM850



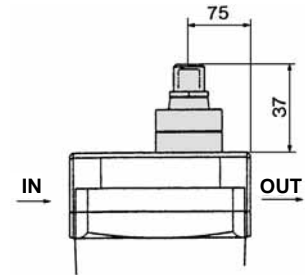
Auto drain

D: With auto drain (N.O.)
for AM850



Option

T: With element service indicator



Micro Mist Separator Series AMD

Can separate and remove aerosol state oil mist in compressed air and remove particles such as carbon or dust of more than 0.01 μm .

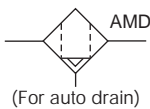
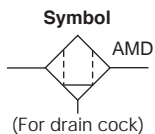
Use this product as a pre-filter for compressed air for precision instruments or clean room requiring higher clean air.

Modular connection is possible with AMD150C to 550C.
(For details, refer to page 58.)



AMD150C to 550C

AMD650/850



Model

Model	AMD150C	AMD250C	AMD350C	AMD450C	AMD550C	AMD650	AMD850
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
Mass (kg)	0.38	0.55	0.9	1.4	2.1	4.2	10.5



Note) Max. flow at 0.7 MPa.

Max. flow varies depending on the operating pressure.

Refer to "Flow Characteristics" (page 29) and "Maximum Air Flow" (page 28).

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%)
Oil mist density at outlet	Max. 0.1 mg/m ³ (ANR)* (Before saturated with oil, less than 0.01 mg/m ³ (ANR) 0.008 ppm)
Element life	2 years (1 year for flange type) or when pressure drop reached 0.1 MPa

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

* Oil mist density at 30 mg/m³ (ANR) blown out by compressor.

Accessory

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.
- Refer to back page for Safety Instructions, "Precautions for Handling Pneumatic Devices" (M-03-E3A) for Common Precautions, and page 73 to 77 for Specific Product Precautions.



Made to Order
(For details, refer to page 63.)

How to Order



AMD150C to 550C

AMD **550C** - [] **10** [] [] - [] - []

Body size

150C
250C
350C
450C
550C

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Port size

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

Accessory

Symbol	Description
—	—
B	Bracket *2

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

Made to Order

("How to Order" and the applicable models are different from those shown on this page. Be sure to refer to "Made to Order".)

Symbol	Description	Page for details
—	—	—
X6	With differential pressure gauge (GD40-2-01)	P.64
X26	N.C., N.O. auto drain, drain piping type	P.65

Option *3

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

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

*5 Differential pressure gauge is included, (but not assembled).

*6 Only body/housing is degreasing washed.

Auto Drain Specifications/Option Combinations

◎: All draining specifications are available (including drain guide, J type).

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

▼: N.C. auto drain (C type) and N.O. auto drain (D type) are not available.

	—	F	H	R	U	T	V
—	◎	◎	△	◎		Note	◎
F	◎	◎	▼	◎			▼
H	△	▼		△			▼
R	◎	◎	△			Note	◎
U	Note			Note			
T							◎
V	◎	▼	▼	◎			◎

Note) one of them selectable ◻ : Not available

Auto drain *3

Symbol	Description
—	Drain cock (Without auto drain)
C	N.C. auto drain
D	N.O. auto drain

*3 Refer to the table below for the combination between the draining specification and option. (Only one draining specification is selectable).

Options

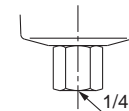
Symbol F: Rubber material: Fluororubber

Fluororubber 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



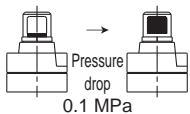
Can be piped to the drain exhaust port.

1/4 female threaded

Symbol R: IN-OUT reversal direction

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

Symbol T: With element service indicator

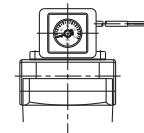


Saturation of the separator can be observed visually. (Element life check)

Symbol V: Degreasing wash, white vaseline

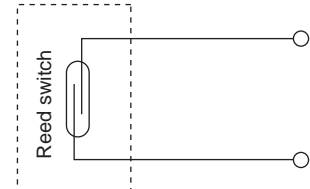
Body/housing is degreasing washed. The lubrication grease for O-ring and gasket is changed to white vaseline.

Symbol U: With differential pressure switch (with indicator)



Saturation of the separator can be observed visually or by an electrical signal. (Element life check)

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





How to Order

AMD650/850



Body size

650
850

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Port size

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

Accessory

Symbol	Description
—	—
B	Bracket *1

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

Auto drain *2

Symbol	Description
—	Drain cock (Without auto drain) *3
D	N.O. auto drain

*2 Refer to "Auto Drain Specifications/Option Combinations".

*3 Body size 850 is equipped with a ball valve (Rc3/8 female threaded). Mount a piping adapter IDF-AP609 (page 58) to the ball valve if NPT3/8 female threaded is required.

Option *2

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

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

Made to Order

("How to Order" and the applicable models are different from those shown on this page. Be sure to refer to "Made to Order".)

Symbol	Description	Page for details
—	—	—
X6	With differential pressure gauge (GD40-2-01)	P.64
X26	N.C., N.O. auto drain, drain piping type	P.65
X12	White vaseline specifications	P.65

Auto Drain Specifications/Option Combinations



Note) Refer to "How to Order Bowl Assembly" on page 59.

○: 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	□	□	□	○	○	○	
Option	Drain guide 1/4	J	□	○	○	○	○	○	
	IN-OUT reversal direction	R	○	○	□	○	○	○	
	With element service indicator	T	○	○	○	□	○	○	

Model Selection

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

(Example) Inlet pressure: 0.6 MPa

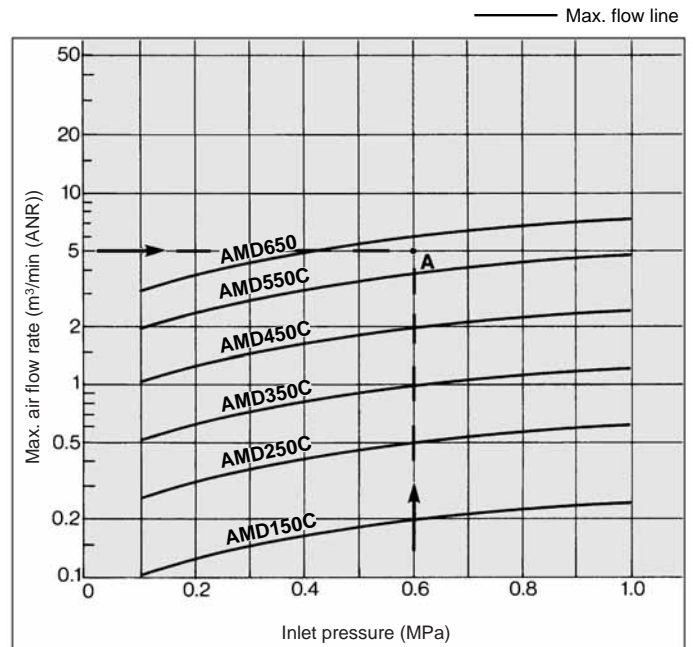
Max. air flow rate: 5 m³/min (ANR)

1. Obtain the intersecting point A of inlet pressure and max. air flow rate in the graph.
2. The AMD650 is obtained when the max. flow line is above the intersecting point A in the graph.



Note) Make sure to select a model that has the max. flow line above the obtained intersecting point. With a model that has the max. flow 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 Air Flow



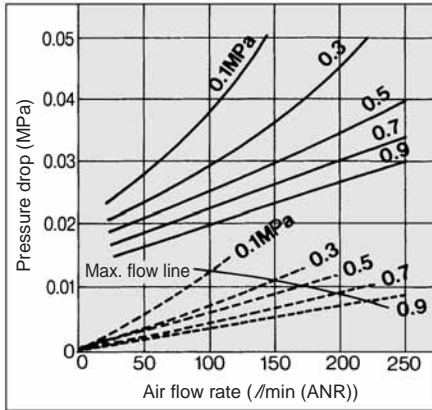
Series AMD

Flow Characteristics/Select the model taking the max. flow capacity into consideration. (—— Element oil saturation - - - - Initial condition)

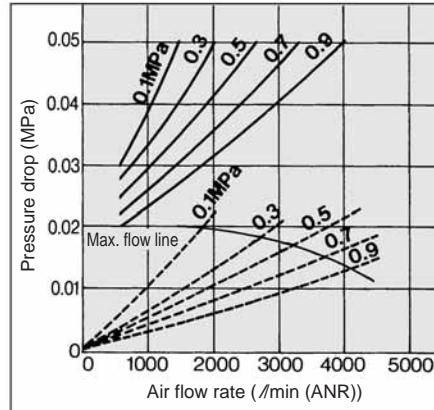


Note) Compressed air over max. flow line in the table below may not meet the specifications of the product. It may cause damage to the element.

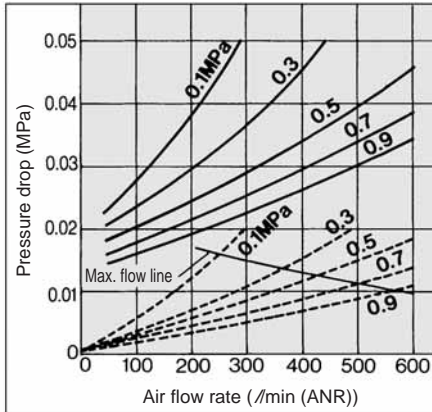
AMD150C



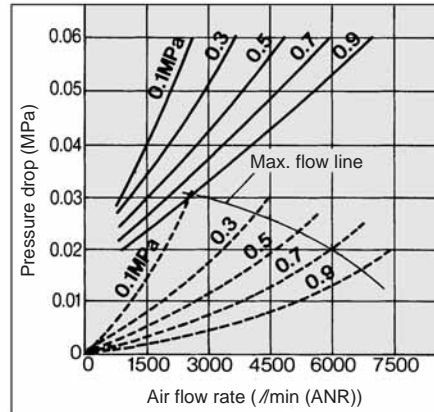
AMD550C



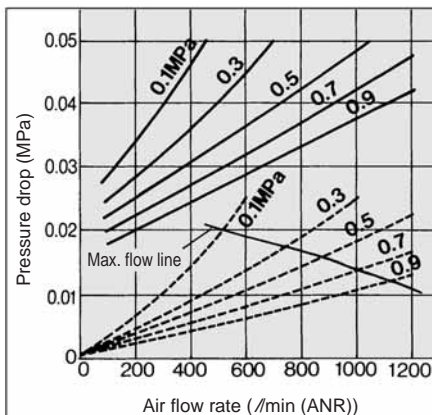
AMD250C



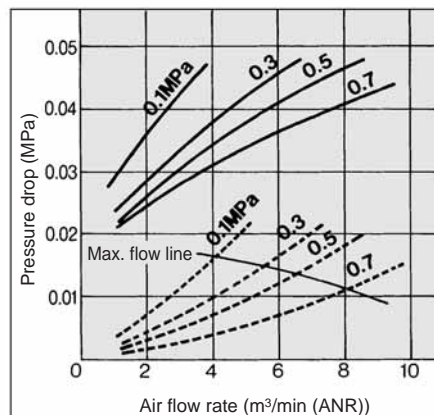
AMD650



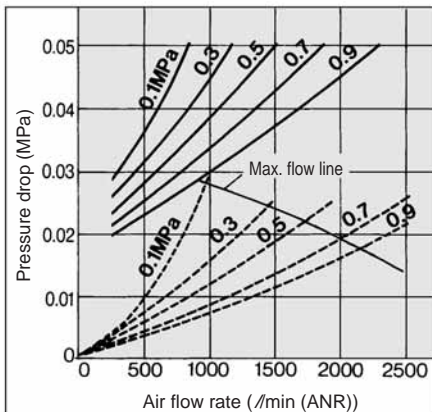
AMD350C



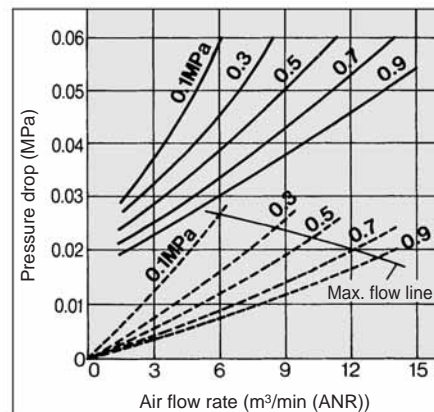
AMD80□/81□



AMD450C

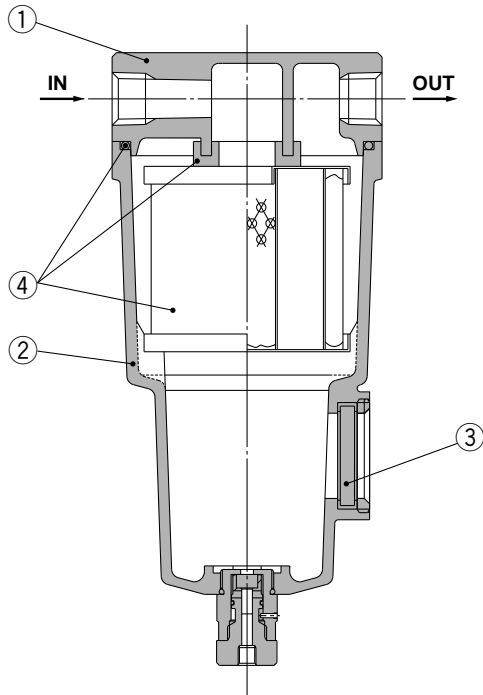


AMD850

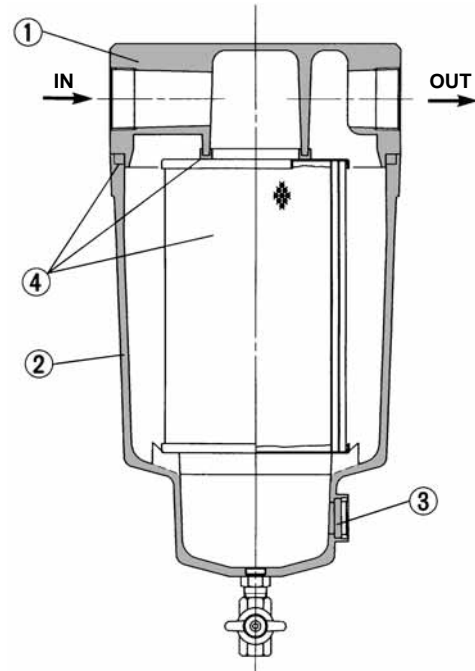


Construction

AMD150C to 550C, AMD650



AMD850



Component Parts

No.	Description	Material	Note
1	Body	Aluminum die-casted	Chrome treated
2	Housing	Aluminum die-casted*	Epoxy coating on inner surface
3	Sight glass	Tempered glass	—

* The AMD850 is aluminum casted.



Note) Refer to "How to Order Bowl Assembly" on page 59.



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 31 through to 33 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	AMD-EL150	AMD-EL250	AMD-EL350	AMD-EL450	AMD-EL550	AMD-EL650	AMD-EL850
			For option F	AMD-EL150-F	AMD-EL250-F	AMD-EL350-F	AMD-EL450-F	AMD-EL550-F	—	—

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

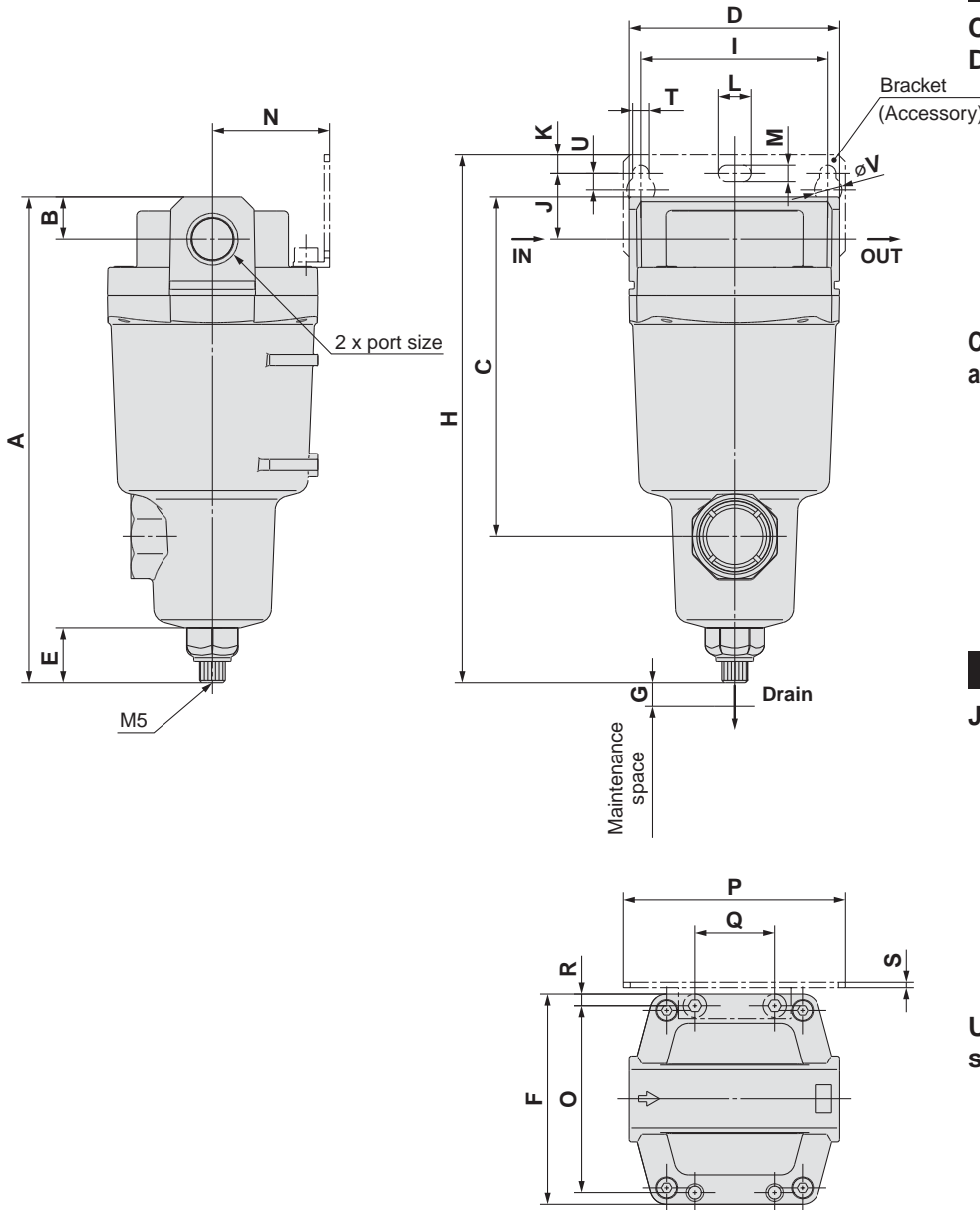
* Refer to back page 6 for replacement of auto drain.

* Element assemblies for Made to Order (X6, X12, X20, X26) are same as those for standard (see the above table).

Series AMD

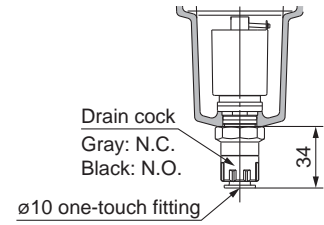
Dimensions

AMD150C to 550C

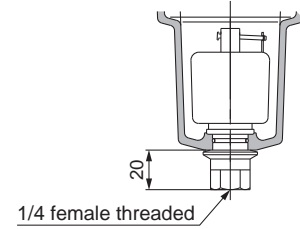


Auto drain

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

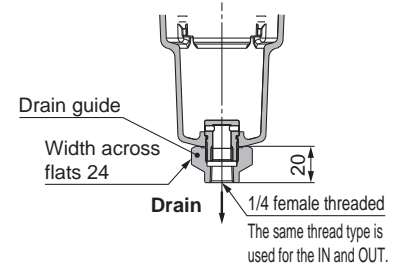


Combination of D: With auto drain (N.O.)
and H: For medium air pressure

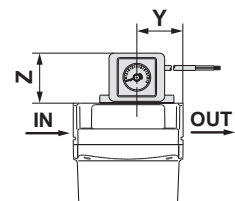


Option

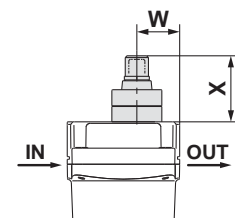
J: Drain guide 1/4 female threaded



U: With differential pressure switch (with indicator)



T: With element service indicator

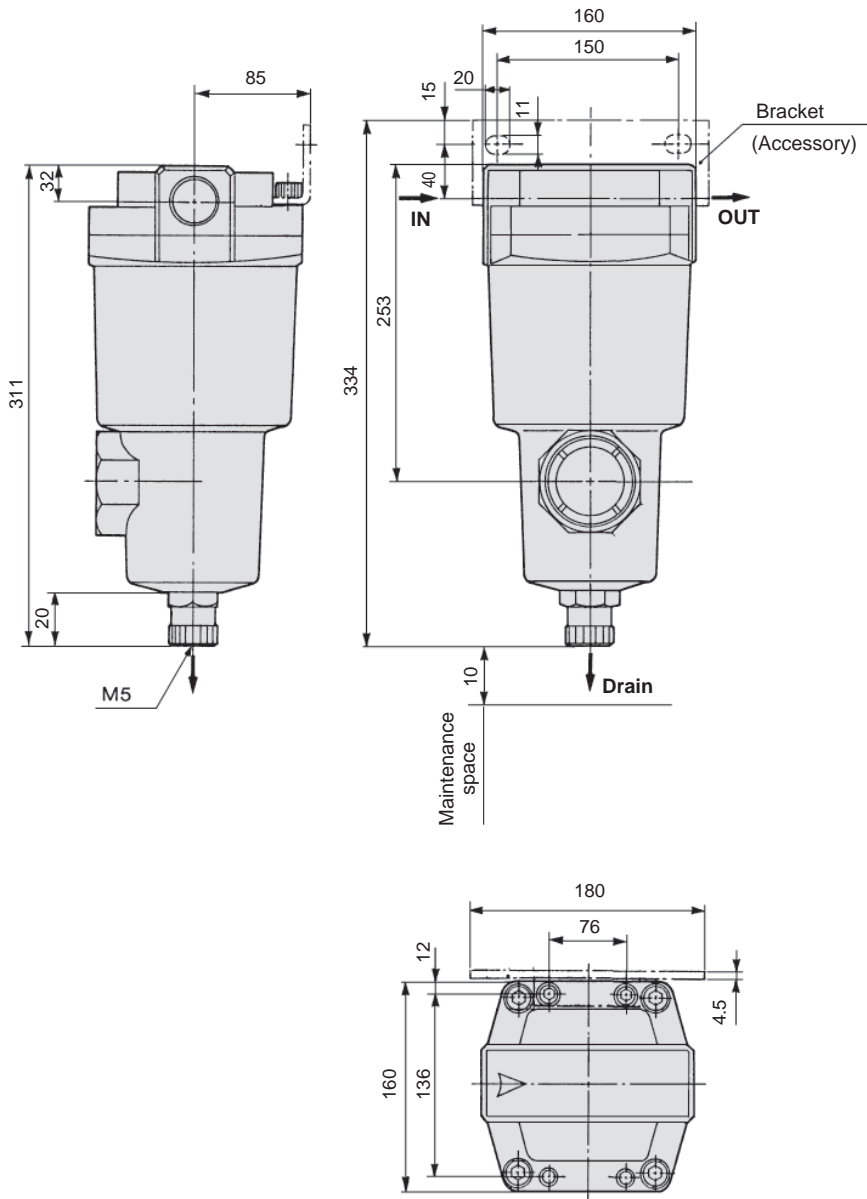


Model	Port size	A	B	C	D	E	F	G	Bracket related dimensions											Element service indicator related dimensions		Differential pressure switch related dimensions					
									H	I	J	K	T	U	L	M	V	N	O	P	Q	R	S	W	X	Y	Z
AMD150C	1/8, 1/4	161	10	99	63	23	63	10	176	56	20	5	6	6	12	6	10	35	54	70	26	4.5	1.6	24	37	32	41
AMD250C	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	27	37	36	41
AMD350C	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
AMD450C	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
AMD550C	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

(mm)

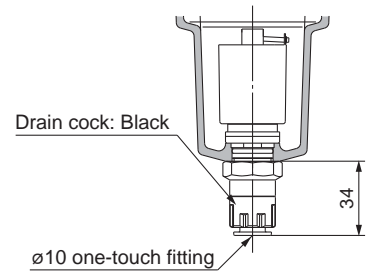
Dimensions

AMD650



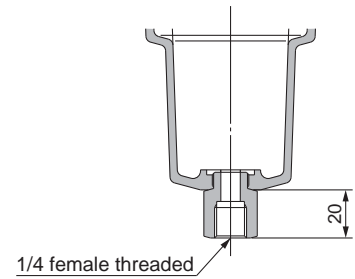
Auto drain

D: With auto drain (N.O.)

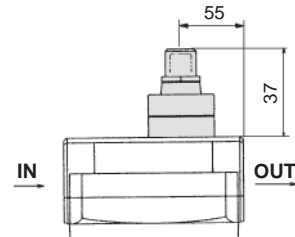


Option

J: Drain guide 1/4 female threaded



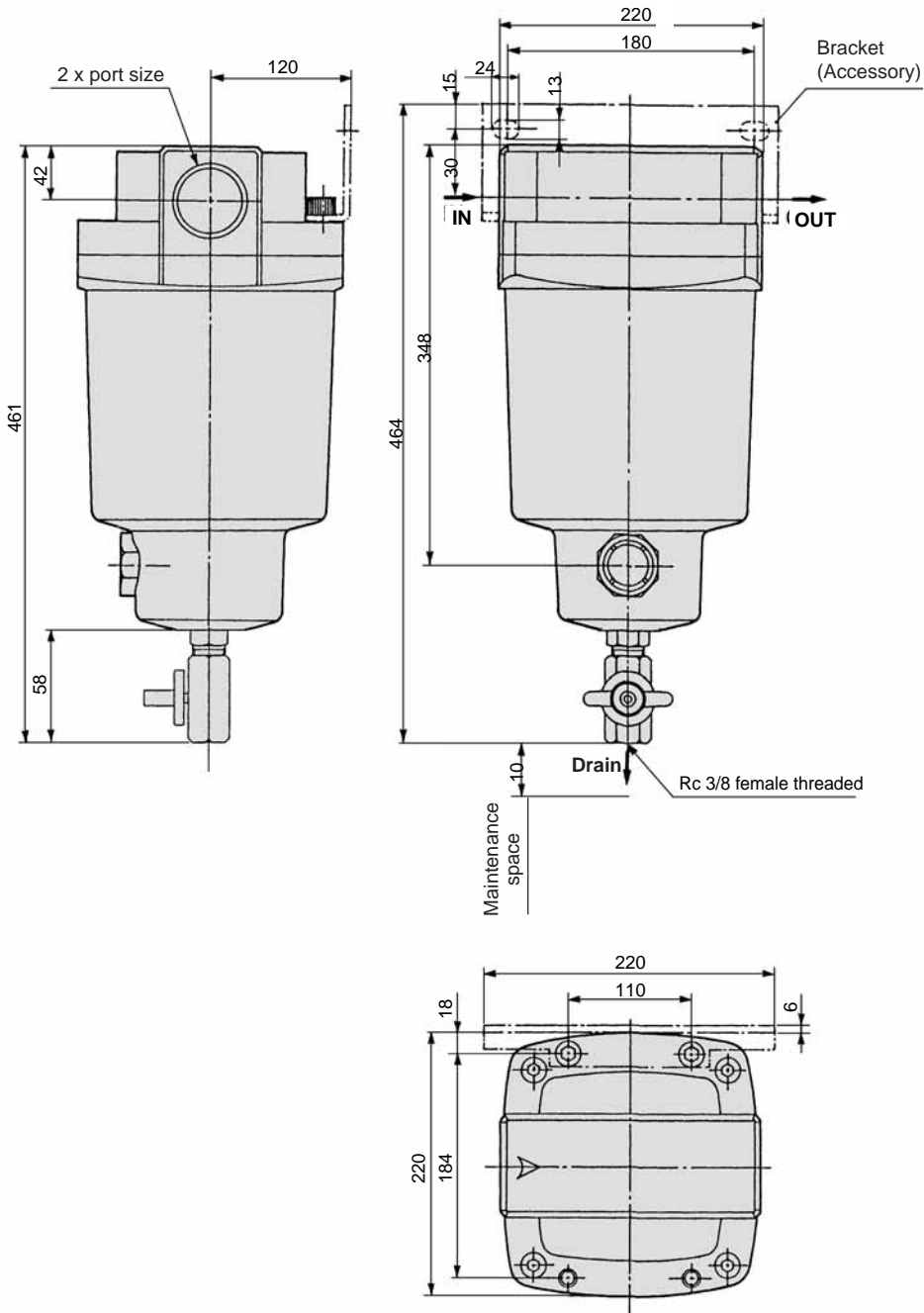
T: With element service indicator



Series AMD

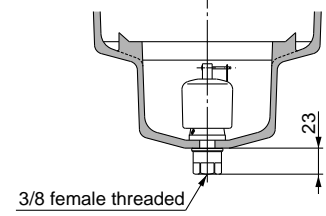
Dimensions

AMD850



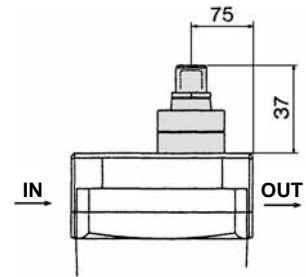
Auto drain

D: With auto drain (N.O.)
for AMD850



Option

T: With element service indicator



Micro Mist Separator with Pre-filter Series **AMH**

Can separate and remove aerosol state oil mist in compressed air and remove particles such as carbon or dust of more than 0.01 μm.

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

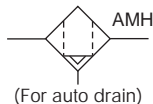
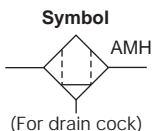
The conventional pneumatic pressure line, AM series + AMD series have been integrated to achieve a reduction in installation space and in piping labor.

Modular connection is possible with AMH150C to 550C. (For details, refer to page 58.)



AMH150C to 550C

AMH650/850



Made to Order
(For details, refer to page 63.)

Model

Model	AMH150C	AMH250C	AMH350C	AMH450C	AMH550C	AMH650	AMH850
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
Mass (kg)	0.38	0.55	0.9	1.4	2.1	4.2	10.5



Note) Max. flow at 0.7 MPa.

Max. flow varies depending on the operating pressure.

Refer to "Flow Characteristics" (page 37) and "Maximum Air Flow" below.

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 density	0.01 μm (Filtration efficiency: 99.9%)
Oil mist density at outlet	Max. 0.1 mg/m ³ (ANR)* (Before saturated with oil, less than 0.01 mg/m ³ (ANR) 0.008 ppm)
Element life	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)

* Oil mist density at 30 mg/m³ (ANR) blown out by compressor.

Accessory

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. air flow rate into consideration.

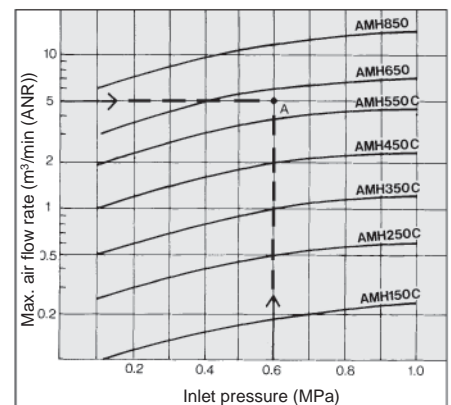
(Example) Inlet pressure: 0.6 MPa
Max. air flow rate: 5 m³/min (ANR)

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



Note) Make sure to select a model that has the max. flow line above the obtained intersecting point. With a model that has the max. flow 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 Air Flow



⚠ Caution

- Be sure to read this before handling.
- Refer to back page for Safety Instructions, "Precautions for Handling Pneumatic Devices" (M-03-E3A) for Common Precautions, and pages 73 to 77 for Specific Product Precautions.

How to Order



AMH150C to 550C

AMH **550C** - [] **10** [] [] - [] - []

Body size

150C
250C
350C
450C
550C

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Port size

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

Accessory

Symbol	Description
—	—
B	Bracket *2

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

Auto Drain Specifications/Option Combinations

○ : All draining specifications are available (including drain guide, J type).
 △ : N.C. auto drain (C type) is not available.
 ▼ : N.C. auto drain (C type) and N.O. auto drain (D type) are not available.

	—	F	H	R	U	T	V
—	○	○	△	○		Note	○
F	○	○	▼	○			▼
H	△	▼	○	△			▼
R	○	○	△		Note		○
U	Note			Note			
T							○
V	○	▼	▼	○		○	○

Note) one of them selectable ◻ : Not available

Made to Order

("How to Order" and the applicable models are different from those shown on this page. Be sure to refer to "Made to Order".)

Symbol	Description	Page for details
—	—	—
X6	With differential pressure gauge (GD40-2-01)	P.64
X26	N.C., N.O. auto drain, drain piping type	P.65

Option *3

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

*4 Drain piping and piping for a stop valve such as ball valve are required.
 *5 Differential pressure switch is included, (but not assembled).
 *6 Only body/housing is degreasing washed.

Auto drain *3

Symbol	Description
—	Drain cock (Without auto drain)
C	N.C. auto drain
D	N.O. auto drain

*3 Refer to the table below for the combination between the draining specification and option. (Only one draining specification is selectable).

Options

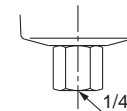
Symbol F: Rubber material: Fluororubber

Fluororubber 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



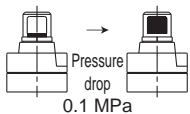
Can be piped to the drain exhaust port.

1/4 female threaded

Symbol R: IN-OUT reversal direction

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

Symbol T: With element service indicator

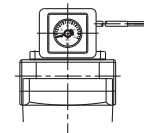


Saturation of the separator can be observed visually. (Element life check)

Symbol V: Degreasing wash, white vaseline

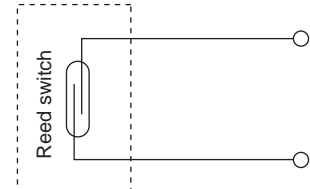
Body/housing is degreasing washed. The lubrication grease for O-ring and gasket is changed to white vaseline.

Symbol U: With differential pressure switch (with indicator)



Saturation of the separator can be observed visually or by an electrical signal. (Element life check)

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





How to Order

AMH650/850

AMH **650** - [] [] [] [] - [] - []

Body size

650
850

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Port size

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

Accessory

Symbol	Description
—	—
B	Bracket *2

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

Made to Order

("How to Order" and the applicable models are different from those shown on this page. Be sure to refer to "Made to Order".)

Symbol	Description	Page for details
—	—	—
X6	With differential pressure gauge (GD40-2-01)	P.64
X26	N.C., N.O. auto drain, drain piping type	P.65
X12	White vaseline specifications	P.65

Option *2

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

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

Auto drain *2

Symbol	Description
—	Drain cock (Without auto drain) *3
D	N.O. auto drain

*2 Refer to "Auto Drain Specifications/Option Combinations".

*3 Body size 850 is equipped with a ball valve (Rc3/8 female threaded). Mount a piping adapter IDF-AP609 (page 58) to the ball valve if NPT3/8 female threaded is required.



Note) Refer to "How to Order Bowl Assembly" on page 59.

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	□	□	○	○	○	○	○
	Drain guide 1/4	J	□	□	○	○	○	○	○
Option	IN-OUT reversal direction	R	○	○	□	□	○	○	○
	With element service indicator	T	○	○	○	○	□	○	○

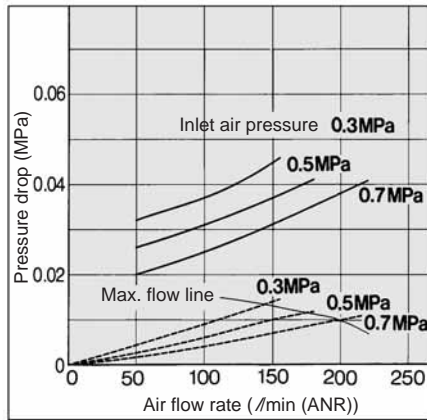
Series AMH

Flow Characteristics/Select the model taking the max. flow capacity into consideration. (—— Element oil saturation ---- Initial condition)

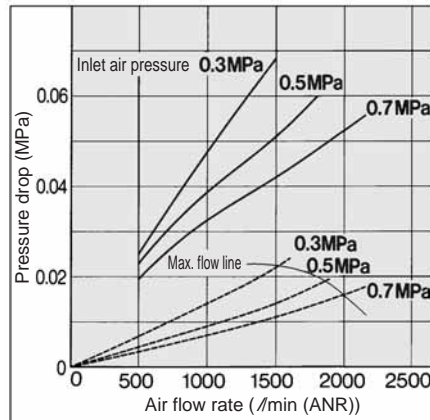


Note) Compressed air over max. flow line in the table below may not meet the specifications of the product. It may cause damage to the element.

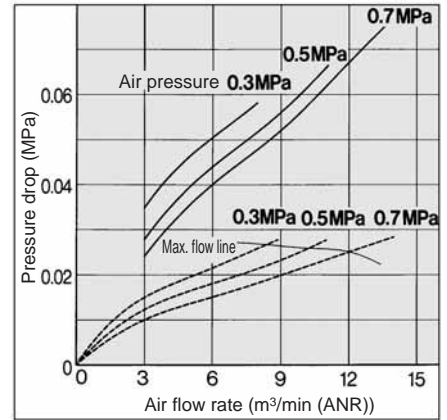
AMH150C



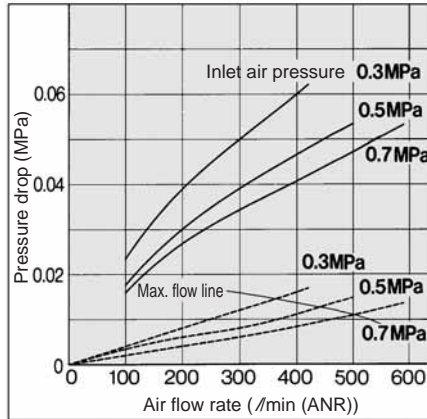
AMH450C



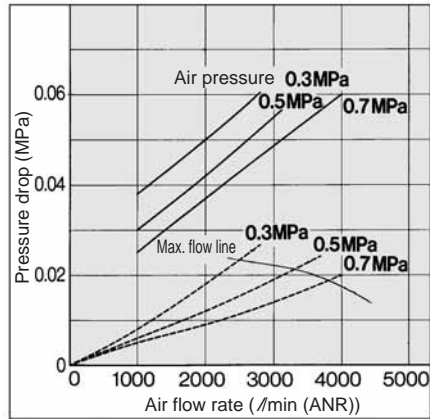
AMH850



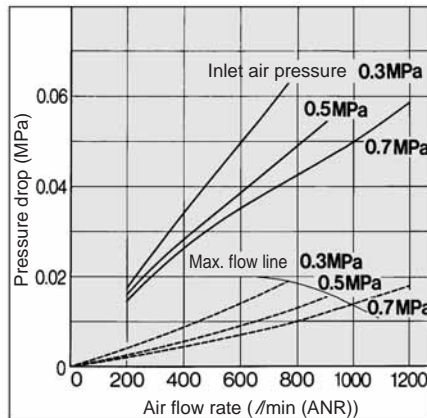
AMH250C



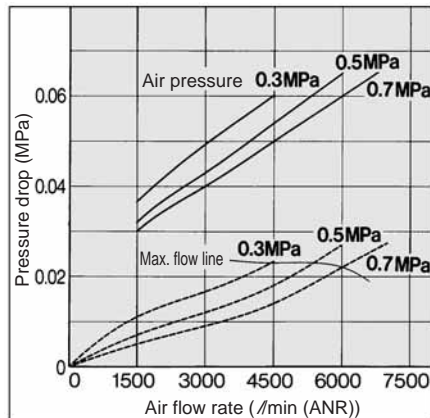
AMH550C



AMH350C

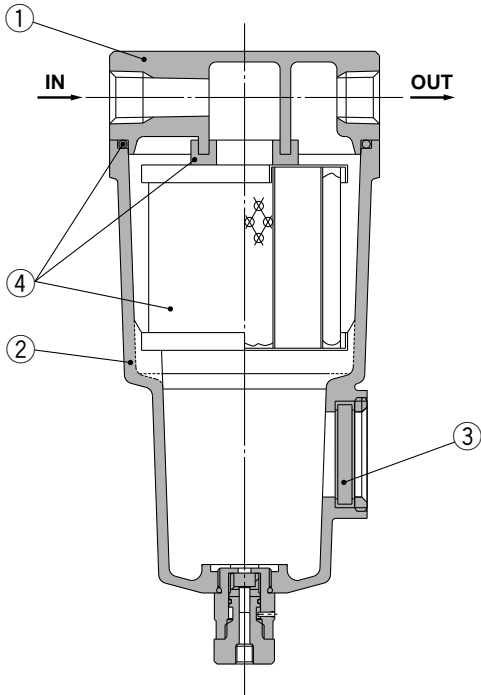


AMH650

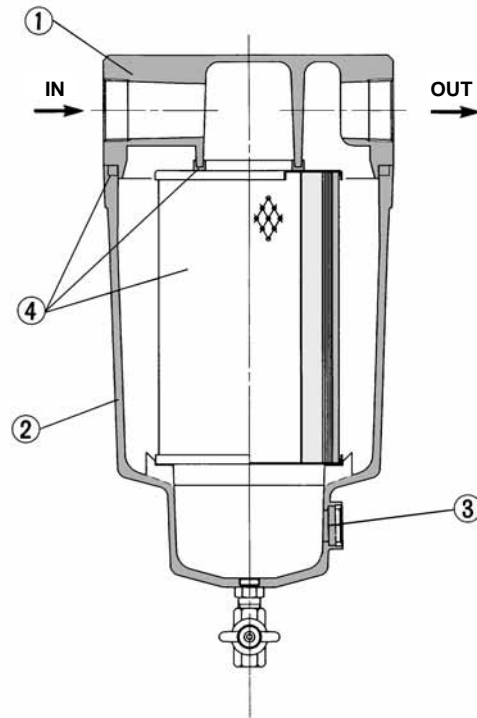


Construction

AMH150C to 550C, AMH650



AMH850



Component Parts

No.	Description	Material	Note
1	Body	Aluminum die-casted	Chrome treated
2	Housing	Aluminum die-casted*	Epoxy coating on inner surface
3	Sight glass	Tempered glass	—

* The AMH850 is aluminum casted.



Note) Refer to "How to Order Bowl Assembly" on page 59.



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 39 through to 41 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.)

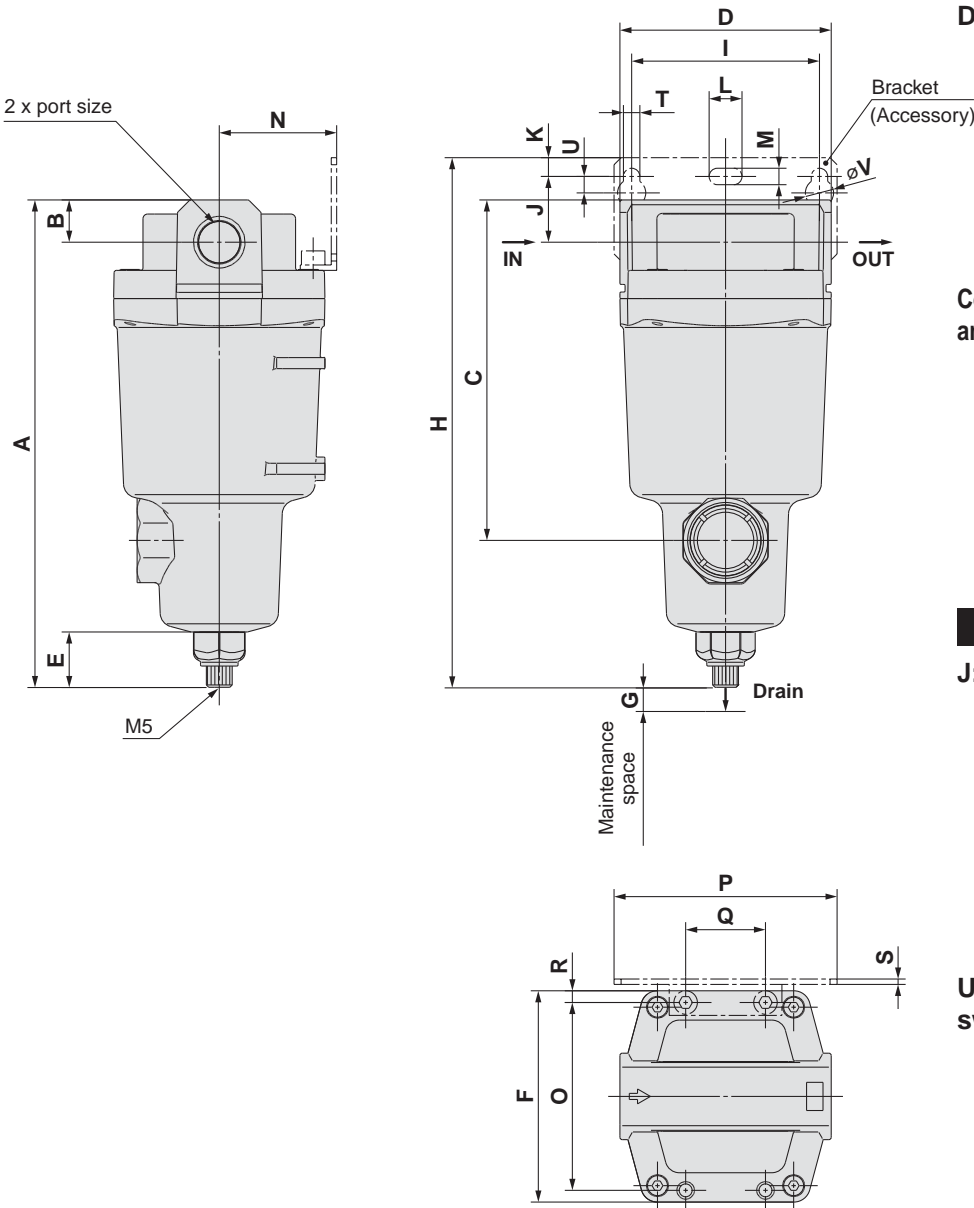
* Refer to back page 6 for replacement of auto drain.

* Element assemblies for Made to Order (X6, X12, X20, X26) are same as those for standard (see the above table).

Series AMH

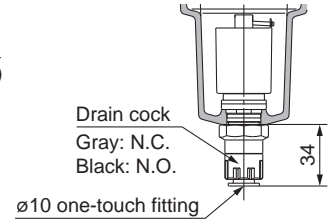
Dimensions

AMH150C to 550C

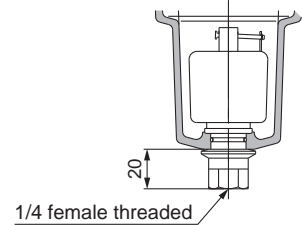


Auto drain

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

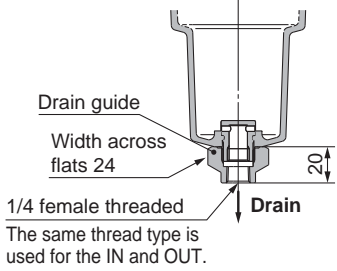


Combination of D: With auto drain (N.O.)
and H: For medium air pressure

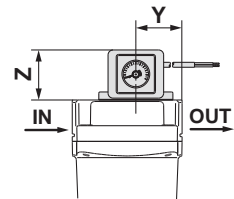


Option

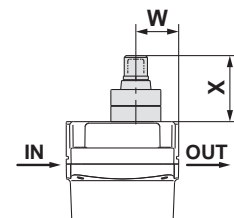
J: Drain guide 1/4 female threaded



U: With differential pressure switch (with indicator)



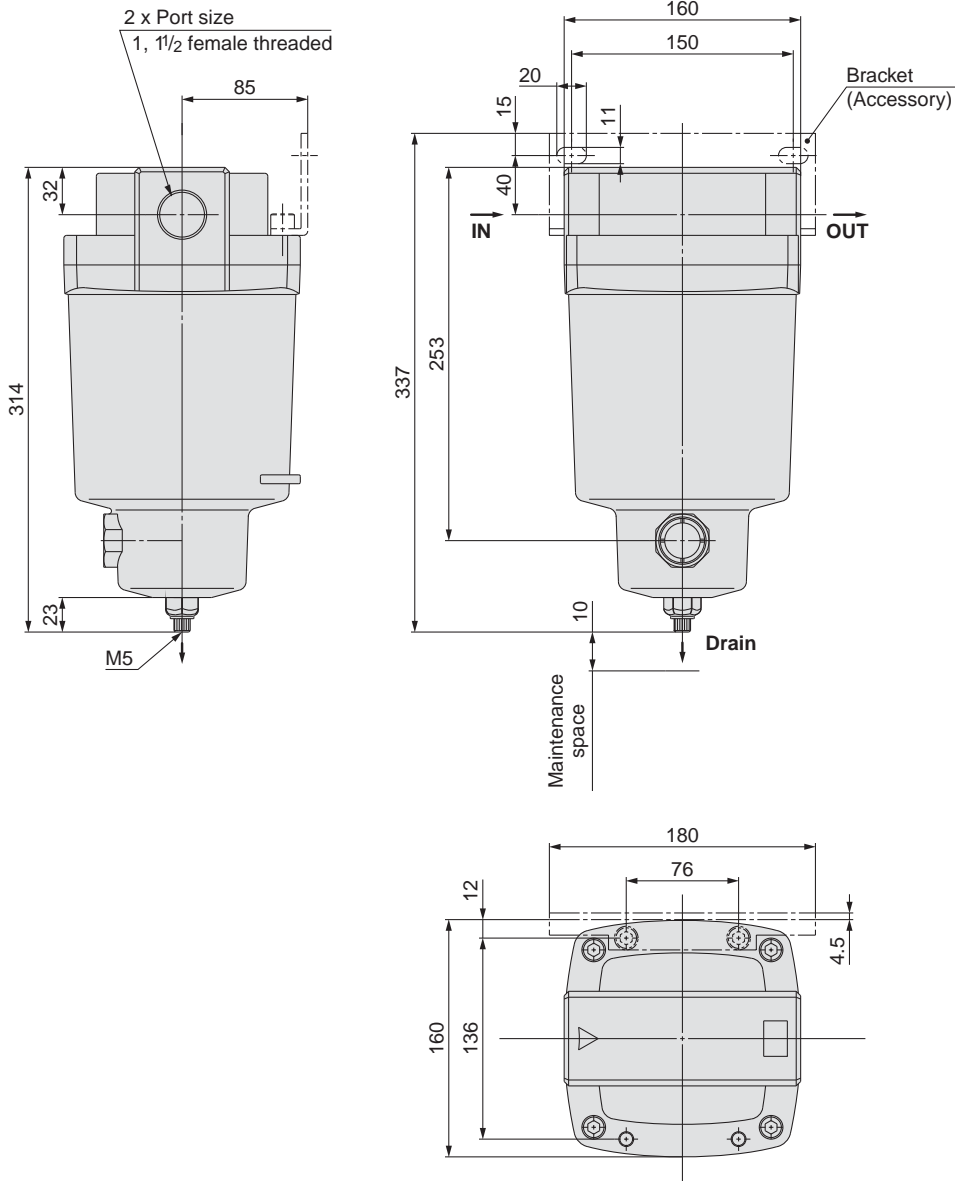
T: With element service indicator



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	Z
AMH150C	1/8, 1/4	158	10	99	63	23	63	10	173	56	20	5	6	6	12	6	10	35	54	70	26	4.5	1.6	24	37	32	41
AMH250C	1/4, 3/8	172	14	113	76	23	76	10	190	66	24	8	6	6	12	6	10	40	66	80	28	5	2	27	37	36	41
AMH350C	3/8, 1/2	204	18	145	90	23	90	10	222	80	28	8	7	7	14	7	12	50	80	95	34	5	2.3	32	37	42	41
AMH450C	1/2, 3/4	225	20	166	106	23	106	10	246	90	31	10	9	9	18	9	15	55	88	111	50	9	3.2	37	37	43	41
AMH550C	3/4, 1	259	24	200	122	23	122	15	278	100	33	10	9	9	18	9	15	65	102	126	60	10	3.2	39	37	51	41

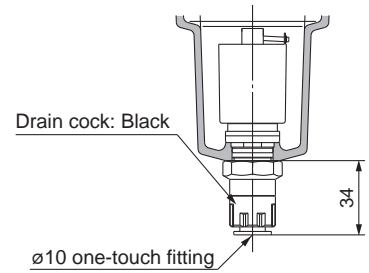
Dimensions

AMH650



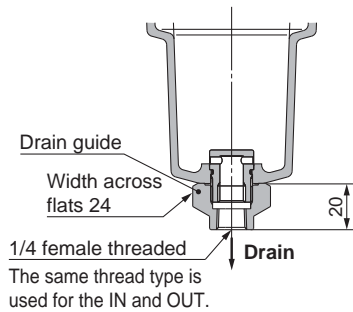
Auto drain

D: With auto drain (N.O.)

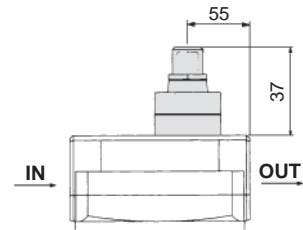


Option

J: Drain guide 1/4 female threaded



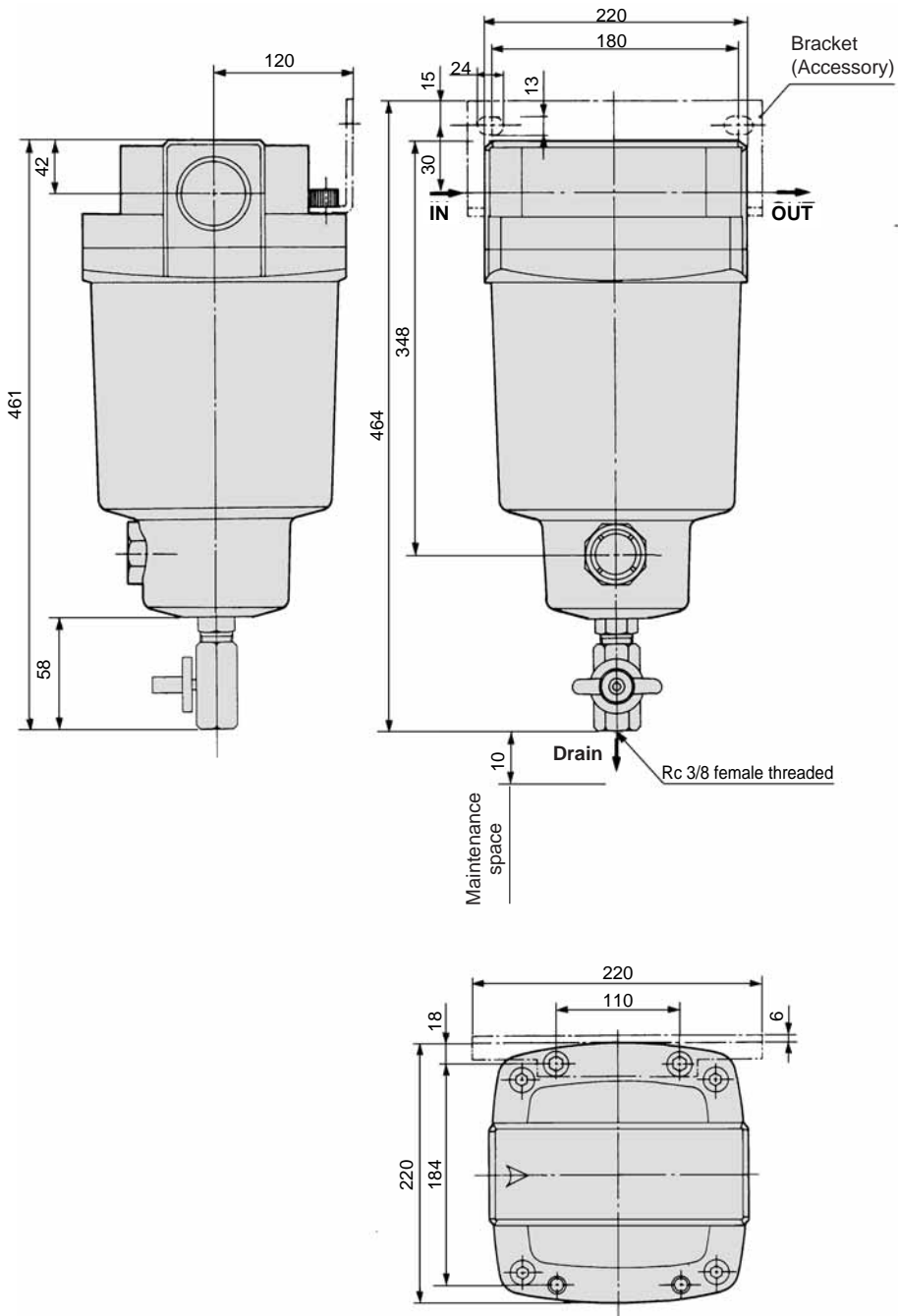
T: With element service indicator



Series AMH

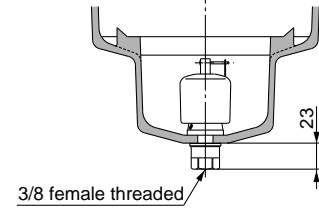
Dimensions

AMH850



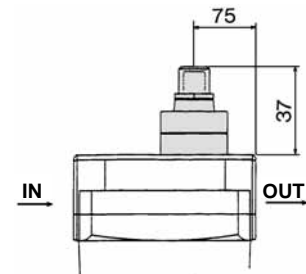
Auto drain

D: With auto drain (N.O.)
for AMH850



Option

T: With element service indicator



Super Mist Separator Series AME

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.

Indicates the filter element life by a colour change. Accordingly, the replacement time can be judged visually. (A red colour spot indicates the replacement time.)

⚠ Caution

By all means the "AM" series should be used as a pre-filter.

Modular connection is possible with AME150C to 550C. (For details, refer to page 58.)

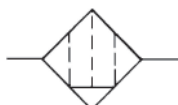


AME150C to 350C AME450C/550C



AME650/850

Symbol



Made to Order
(For details, refer to page 63.)

Model

Model	AME150C	AME250C	AME350C	AME450C	AME550C	AME650	AME850
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
Mass (kg)	0.3	0.48	0.8	1.3	2.0	4.2	10.5



Note) Max. flow at 0.7 MPa.

Max. flow varies depending on the operating pressure.

Refer to "Flow Characteristics" (page 45) and "Maximum Air Flow" (page 45).

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)]
Oil mist density at outlet	Max. 0.01 mg/m ³ (ANR) (0.008 ppm)
Life of element	1. Element color check window (If the element is found to have red spots, replace it immediately.) 2. Even if the element does not have red spots, when the pressure drop reaches 0.1MPa or 2 years has passed in operation, whichever comes the first, perform replacement.

Accessory

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.
Refer to back page for Safety Instructions, "Precautions for Handling Pneumatic Devices" (M-03-E3A) for Common Precautions, and page 73 to 77 for Specific Product Precautions.

How to Order



AME150C to 550C

AME **550C** - [] **10** [] - []

Body size

150C
250C
350C
450C
550C

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Option

Symbol	Description
—	—
F	Rubber material: Fluororubber
H	For medium air pressure (1.6 MPa)
R	IN-OUT reversal direction
V	Degreasing wash,* ³ white vaseline

*³ Only body/housing is degreasing washed.

Accessory

Symbol	Description
—	—
B	Bracket * ²

*² Bracket is included, (but not assembled).

Port size

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

Options

Symbol F: Rubber material: Fluororubber

Fluororubber 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

Air flow in the separator is changed to right to left.

(Air flow direction of the standard: Left)

Symbol V: Degreasing wash, white vaseline

Body/housing is degreasing washed. The lubrication grease for O-ring and gasket is changed to white vaseline.



How to Order

AME650/850

AME **650** - [] **10** [] - [] - []

Body size

650
850

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Port size

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

Made to Order

("How to Order" and the applicable models are different from those shown on this page. Be sure to refer to the page "Made to Order".)

Symbol	Description	Page for details
—	—	—
X12	White vaseline specifications	P.65

Option

Symbol	Description
—	—
R	IN-OUT reversal direction

Accessory

Symbol	Description
—	—
B	Bracket*

* Bracket is included, (but not assembled).



Note) Refer to "How to Order Bowl Assembly" on page 59.

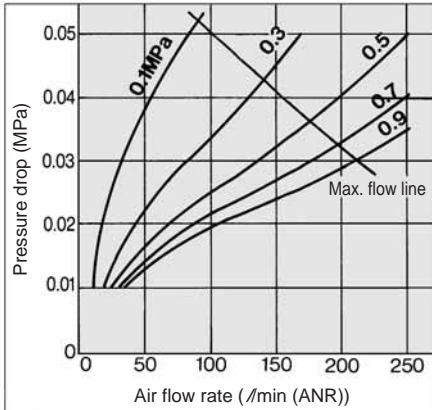
Series AME

Flow Characteristics (Element initial condition)

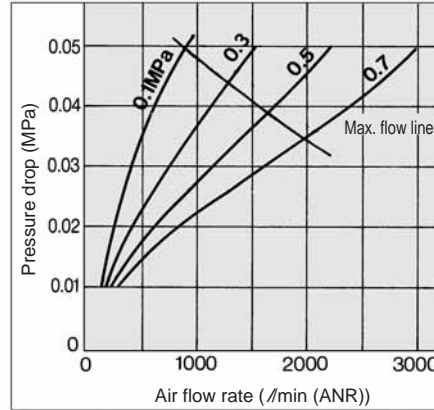


Note) Compressed air over max. flow line in the table below may not meet the specifications of the product. It may cause damage to the element.

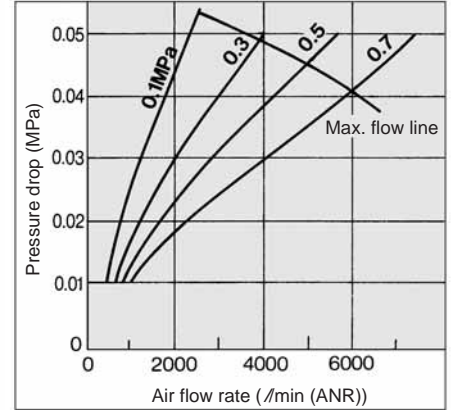
AME150C



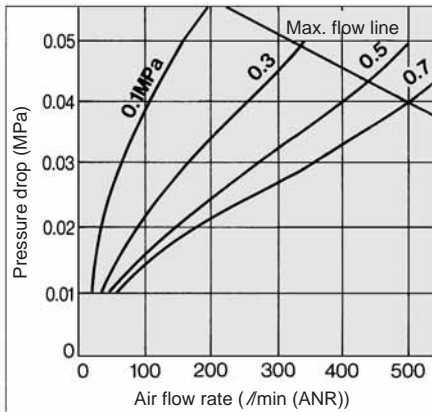
AME450C



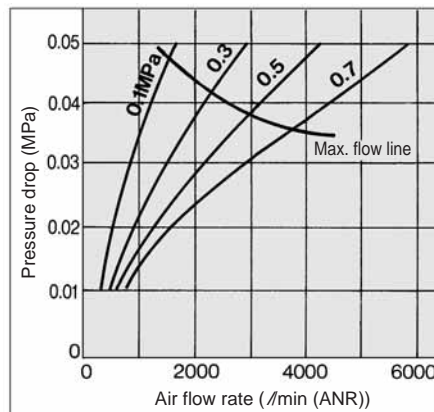
AME650



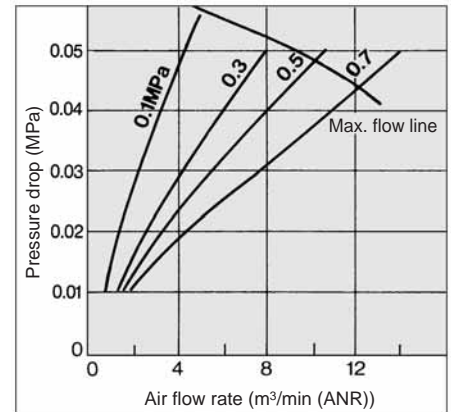
AME250C



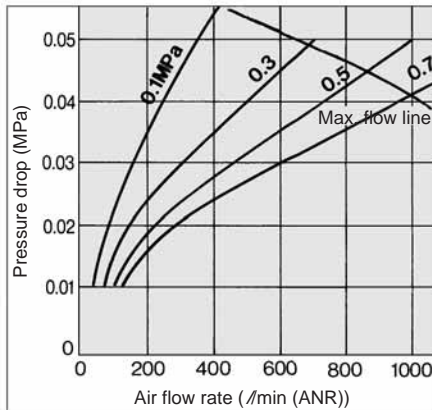
AME550C



AME850



AME350C



Model Selection

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

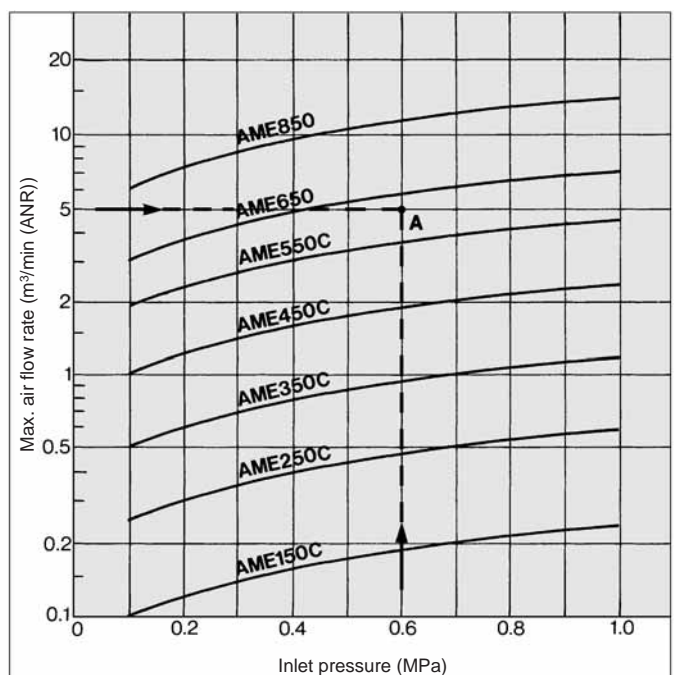
(Example) Inlet pressure: 0.6 MPa
Max. air flow rate: 5 m³/min (ANR)

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



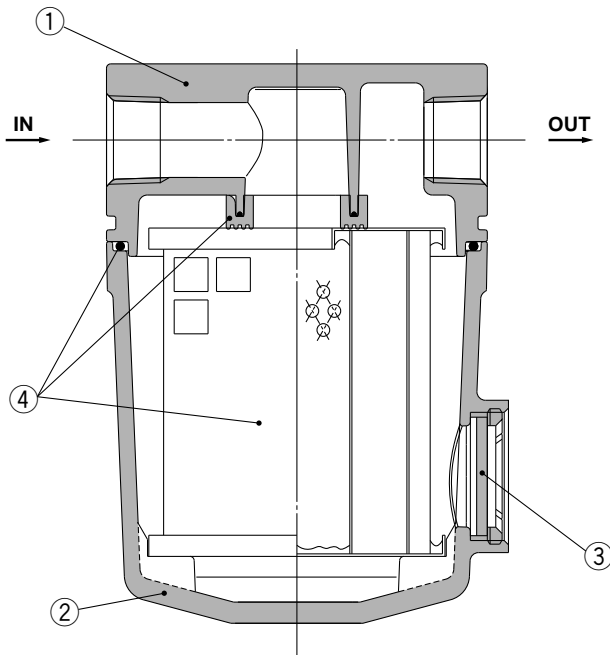
Note) Make sure to select a model that has the max. flow line above the obtained intersecting point. With a model that has the max. flow line below the obtained intersecting point, the flow rate will be exceeded, thus leading to a problem such as being unable to satisfy the specifications.

Maximum Air Flow

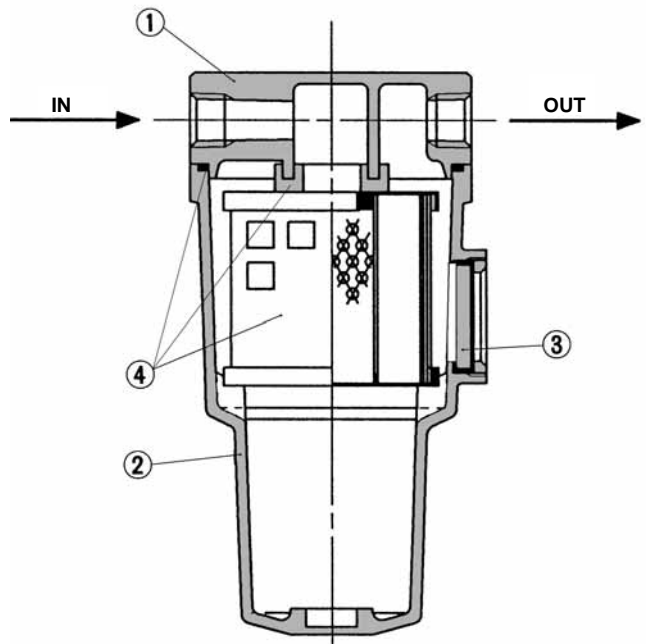


Construction

AME150C to 550C



AME650/850



Component Parts

No.	Description	Material	Note
1	Body	Aluminum die-casted	Chrome treated
2	Housing	Aluminum die-casted*	Epoxy coating on inner surface
3	Sight glass	Tempered glass	—

* The AME850 is aluminum casted.



Note) Refer to "How to Order Bowl Assembly" on page 59.



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 47 through to 49 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 For option F	AME-EL150	AME-EL250	AME-EL350	AME-EL450	AME-EL550	AME-EL650	AME-EL850
				AME-EL150-F	AME-EL250-F	AME-EL350-F	AME-EL450-F	AME-EL550-F	—	—

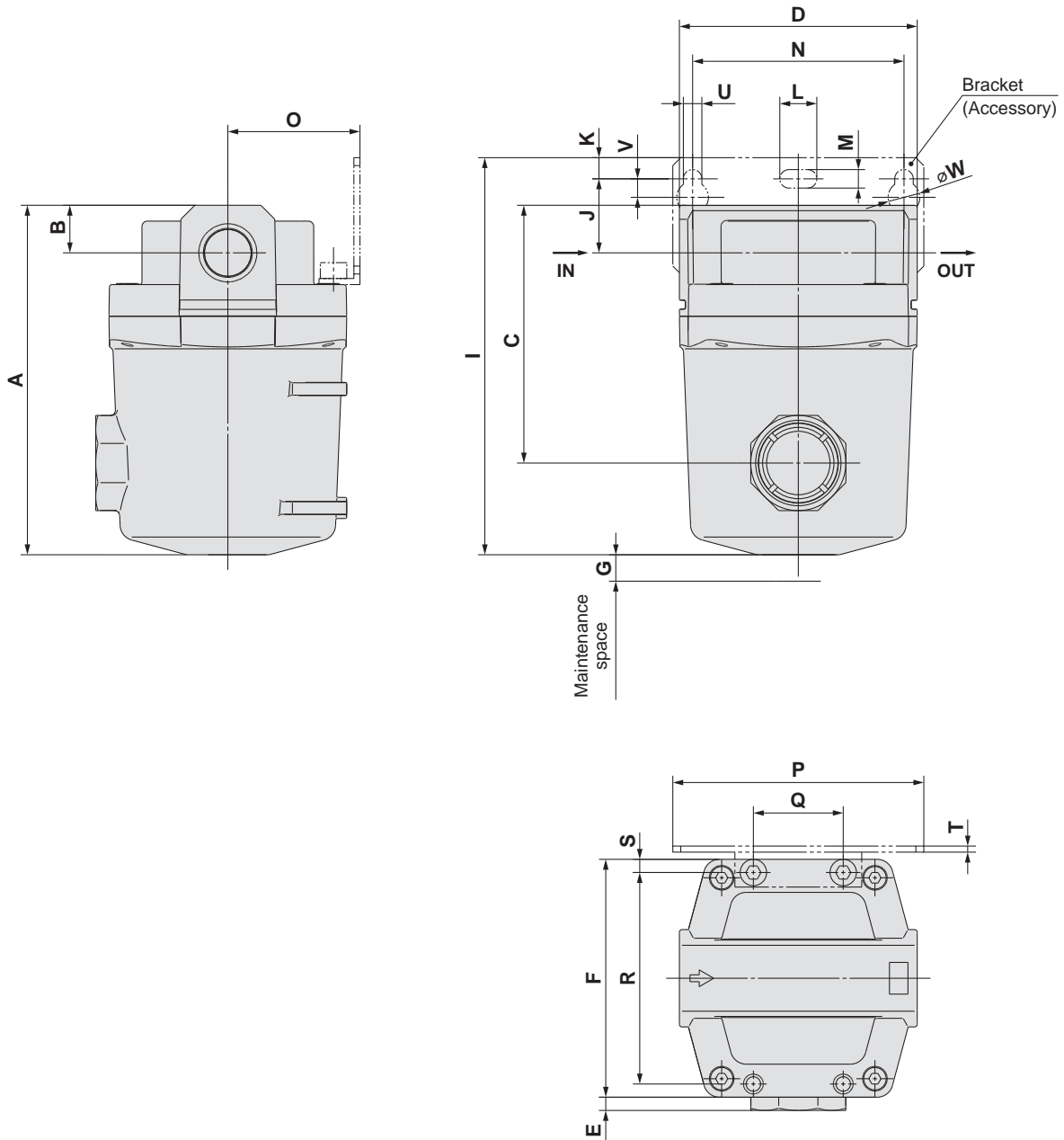
* Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

* Element assemblies for Made to Order (X12, X20) are same as those for standard (see the above table).

Series AME

Dimensions

AME150C to 350C

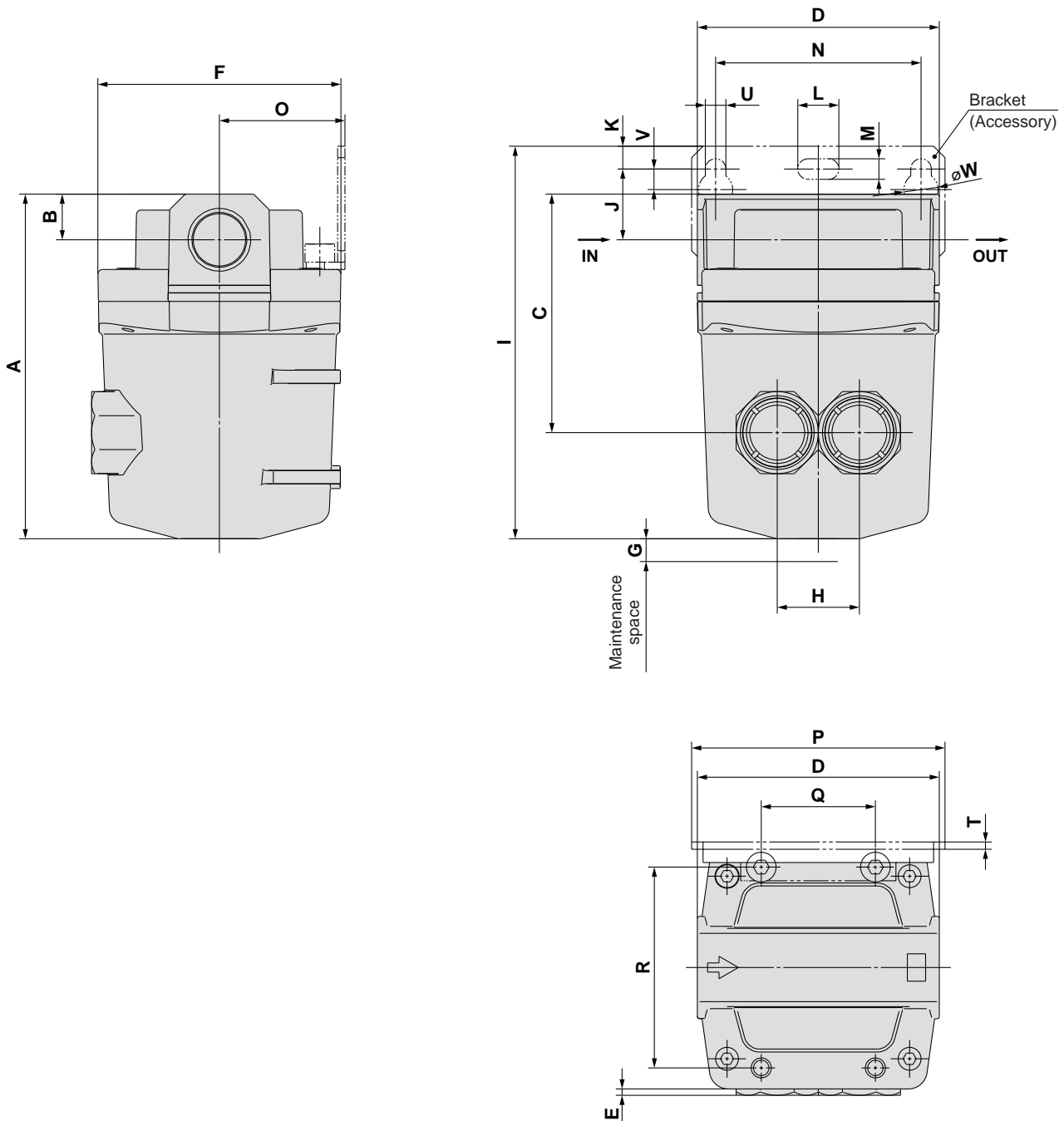


(mm)

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	98.5	56	20	5	5	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



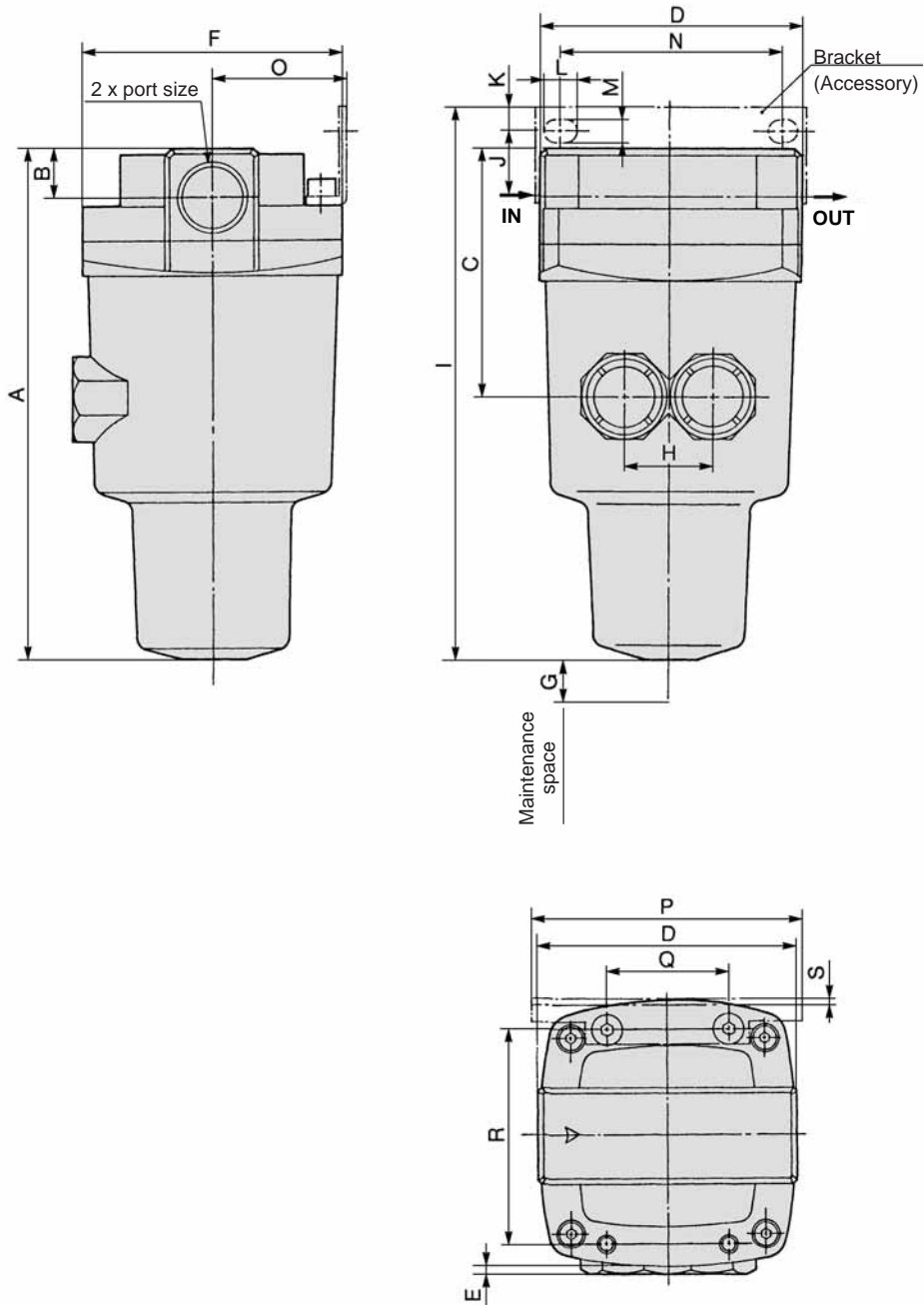
Model	Port size	A	B	C	D	E	F	G	H	Bracket related dimensions													
										I	N	J	K	U	V	L	M	W	O	P	Q	R	T
AME450C	1/2, 3/4	151	20	105	106	3	106	10	36	172	90	31	10	9	9	18	9	15	55	111	50	88	3.2
AME550C	3/4, 1	187	24	130	122	3	122	15	44	206	100	33	10	9	9	18	9	15	65	126	60	102	3.2

(mm)

Series AME

Dimensions

AME650/850



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
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

(mm)

Odour Removal Filter Series AMF

Efficiently can remove odour in compressed air with an activated carbon element. The unit is designed for use in the area such as a clean room where odours must be avoided.

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

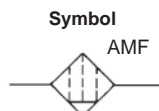
Modular connection is possible with AMF150C to 550C.
(For details, refer to page 58.)



AMF150C to 350C AMF450C/550C



AMF650/850



Made to Order
(For details, refer to page 63.)

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
Mass (kg)	0.3	0.48	0.8	1.3	2.0	4.2	10.5



Note) Max. flow at 0.7 MPa.

Max. flow varies depending on the operating pressure.

Refer to "Flow Characteristics" (page 53) and "Maximum Air Flow" (page 52).

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 ³ (ANR) (0.0032 ppm) (The "AME" series is required on the inlet side.)
Life of element	1. Replace when the secondary side smells of oil. 2. Even if there is no decrease in deodorization performance, when the pressure drop reaches 0.1MPa or 2 years has passed, whichever comes early, perform replacement.

Accessory (Option)

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.
- ▮ Refer to back page for Safety Instructions, "Precautions for Handling Pneumatic Devices" (M-03-E3A) for Common Precautions, and page 73 to 77 for Specific Product Precautions.

How to Order



AMF150C to 550C

AMF **550C** - [] **10** [] - []

Body size

150C
250C
350C
450C
550C

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Option

Symbol	Description
—	—
F	Rubber material: Fluororubber
H	For medium air pressure (1.6 MPa)
R	IN-OUT reversal direction
V	Degreasing wash,* ³ white vaseline

*³ Only body/housing is degreasing washed.

Accessory

Symbol	Description
—	—
B	Bracket * ²

*² Bracket is included, (but not assembled).

Port size

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

Options

Symbol F: Rubber material: Fluororubber

Fluororubber 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

Air flow in the separator is changed to right to left.

(Air flow direction of the standard: Left)

Symbol V: Degreasing wash, white vaseline

Body/housing is degreasing washed. The lubrication grease for O-ring and gasket is changed to white vaseline.



How to Order

AMF650/850

AMF **650** - [] **10** - [] - [] - []

Body size

650
850

Thread type

Symbol	Type
—	Rc
F	G
N	NPT

Port size

Symbol	Size	Applicable body size	
		650	850
10	1	●	—
14	1½	●	●
20	2	—	●

Made to Order
("How to Order" and the applicable models are different from those shown on this page. Be sure to refer to "Made to Order".)

Symbol	Description	Page for details
—	—	—
X12	White vaseline specifications	P.65

Option

Symbol	Description
—	—
R	IN-OUT reversal direction

Accessory

Symbol	Description
—	—
B	Bracket*

* Bracket is included, (but not assembled).



Note) Refer to "How to Order Bowl Assembly" on page 59.

Model Selection

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

(Example) Inlet pressure: 0.6 MPa

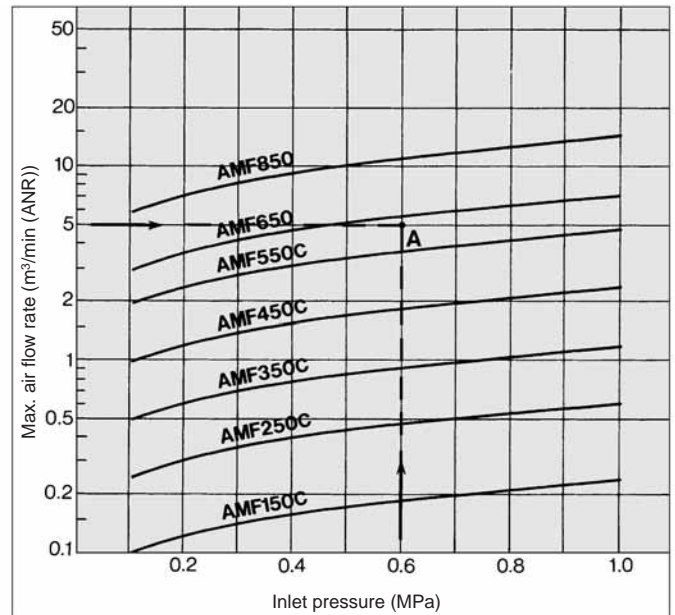
Max. air flow rate: 5 m³/min (ANR)

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



Note) Make sure to select a model that has the max. flow line above the obtained intersecting point. With a model that has the max. flow 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 Air Flow



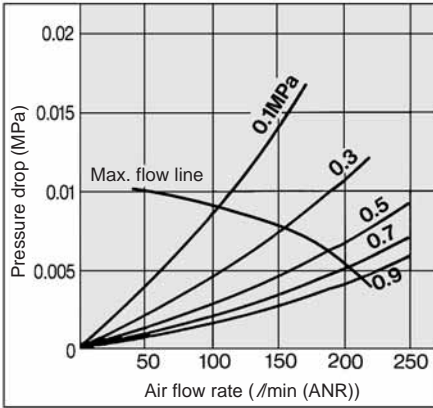
Series AMF

Flow Characteristics/Refer to "Model Selection" on page 54. (Element initial condition)

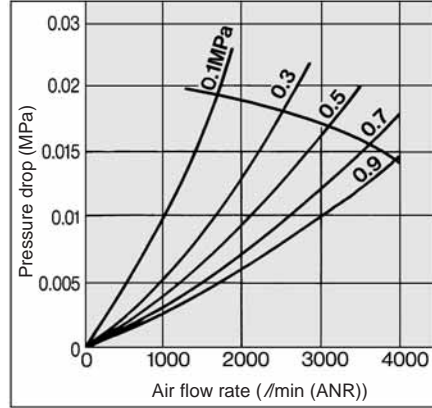


Note) Compressed air over max. flow line in the table below may not meet the specifications of the product. It may cause damage to the element.

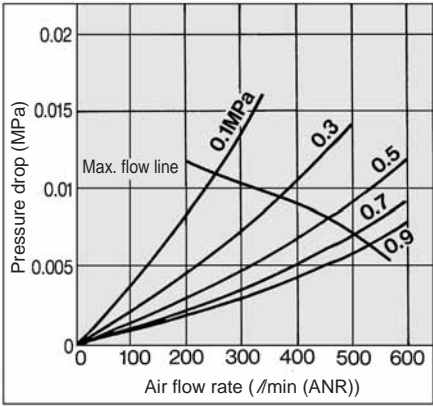
AMF150C



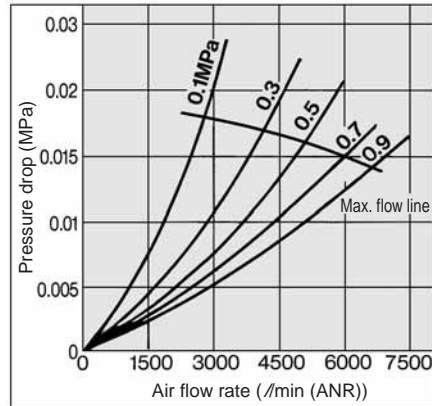
AMF550C



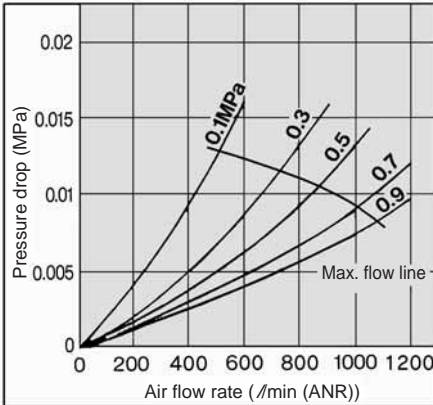
AMF250C



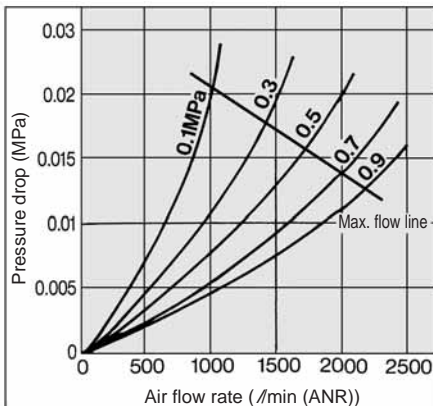
AMF650



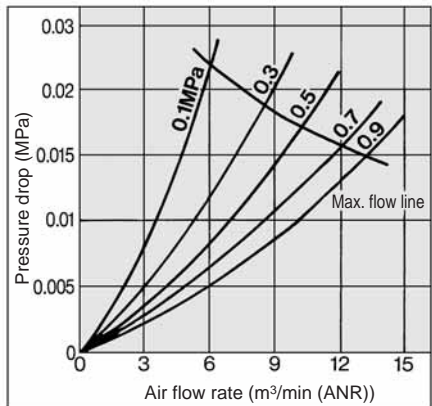
AMF350C



AMF450C

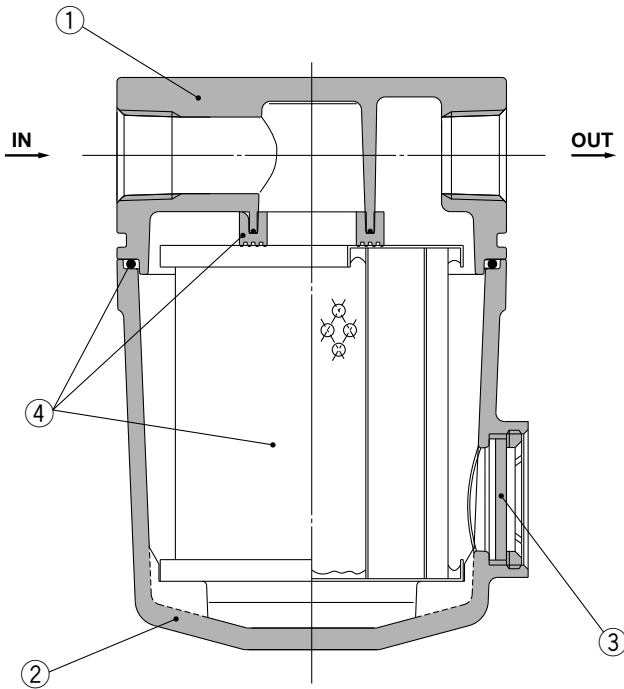


AMF850

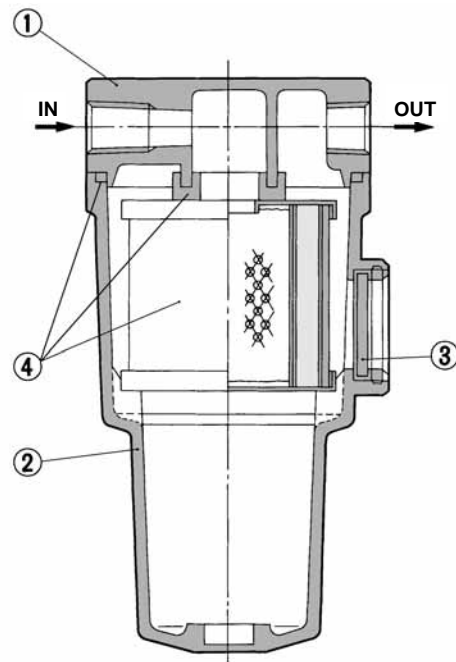


Construction

AMF150C to 550C



AMF650/850



Component Parts

No.	Description	Material	Note
1	Body	Aluminum die-casted	Chrome treated
2	Housing	Aluminum die-casted*	Epoxy coating on inner surface
3	Sight glass	Tempered glass	—

* The AMF850 is aluminum casted.



Note) Refer to "How to Order Bowl Assembly" on page 59.



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 55 through to 57 for details.

Replacement Parts

No.	Description	Material	Applicable model	Model						
				AMF150C	AMF250C	AMF350C	AMF450C	AMF550C	AMF650	AMF850
4	Element assembly	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	—	—

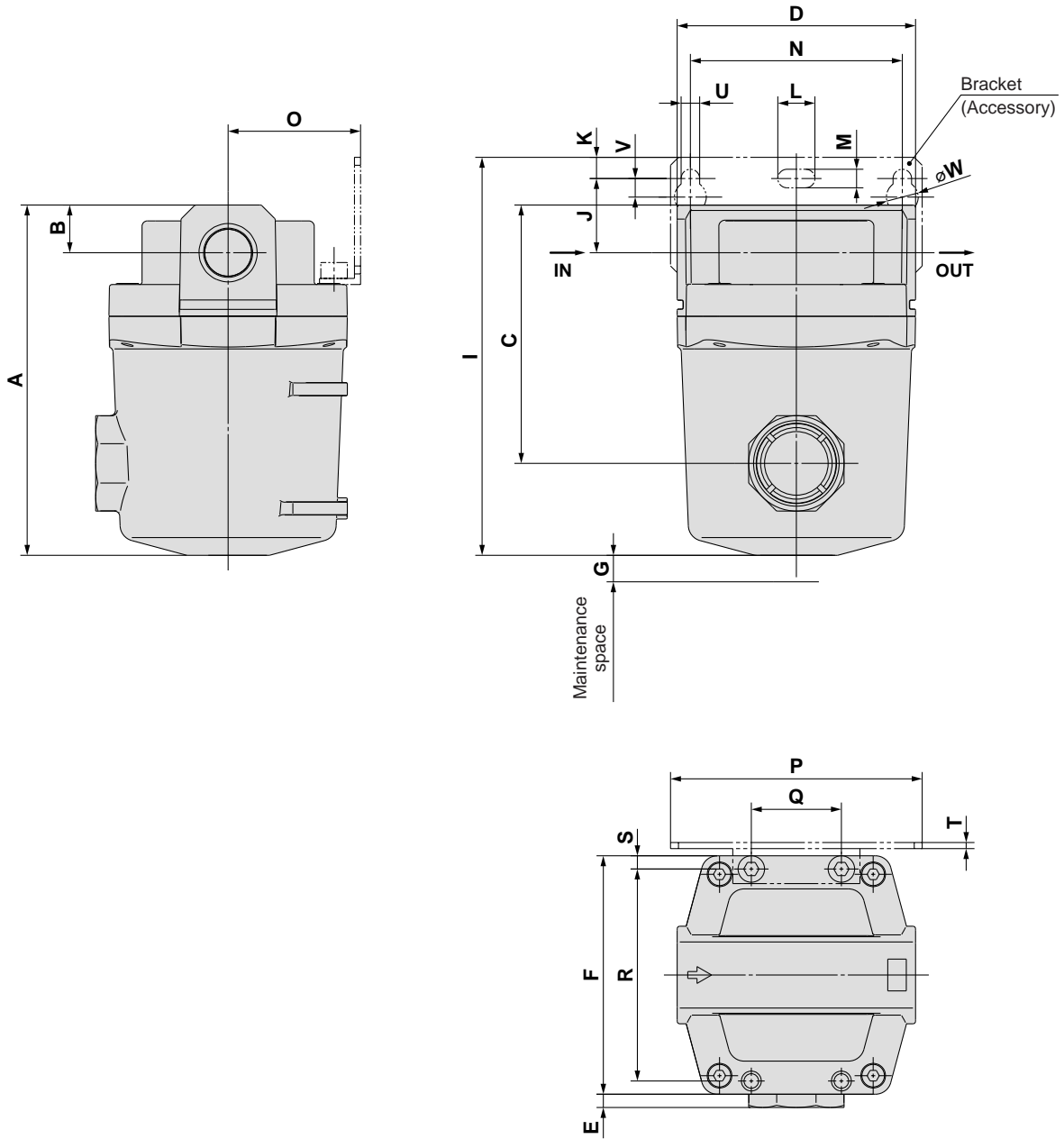
* Element assembly: With gasket (1 pc.) and O-ring (1 pc.)

* Element assemblies for Made to Order (X12, X20) are same as those for standard (see the above table).

Series AMF

Dimensions

AMF150C to 350C

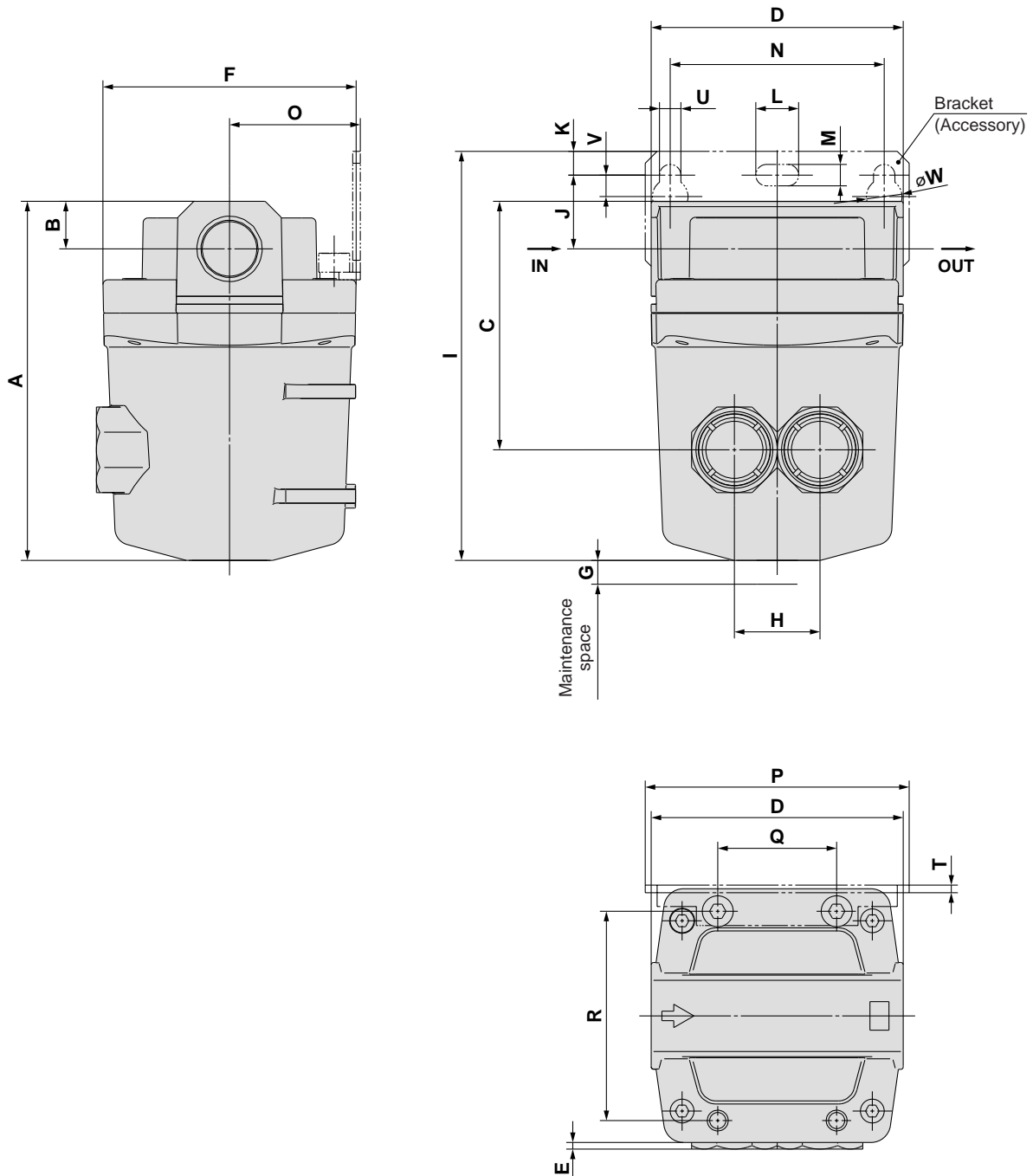


(mm)

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	98.5	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



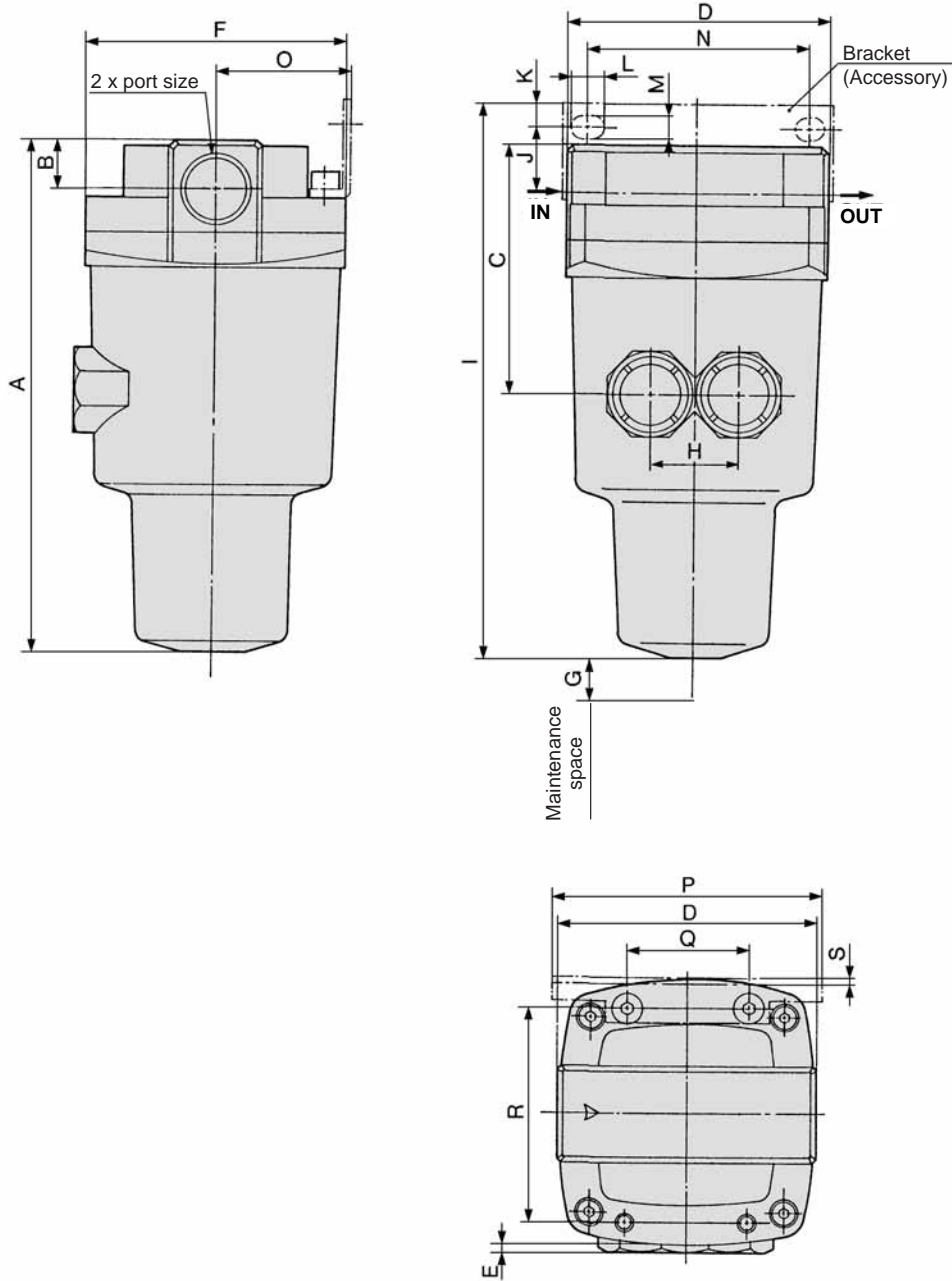
(mm)

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
AMF450C	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
AMF550C	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

Series AMF

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

Spacer for Modular Connection

Select a spacer from those listed below when combining 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.



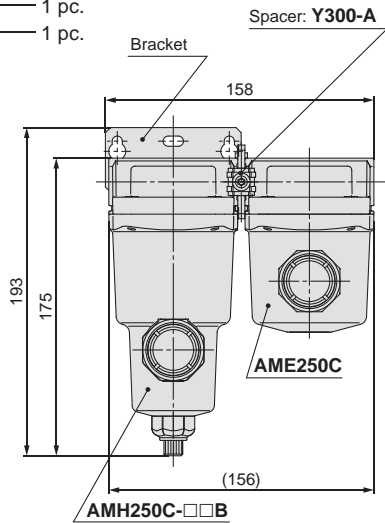
Combination examples of modular applicable products

Arrangement example

AMH250C-□□B — 1 pc.

AME250C — 1 pc.

Y300-A — 1 pc.



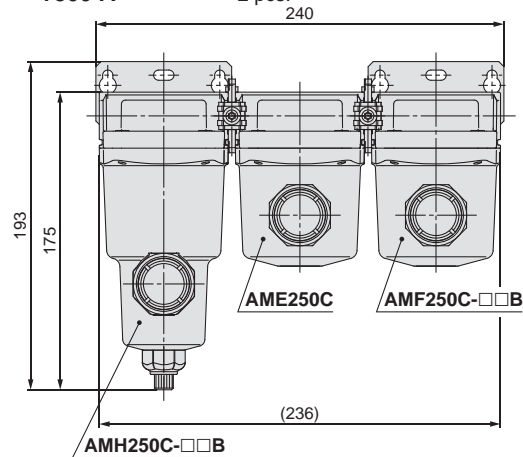
Arrangement example

AMH250C-□□B — 1 pc.

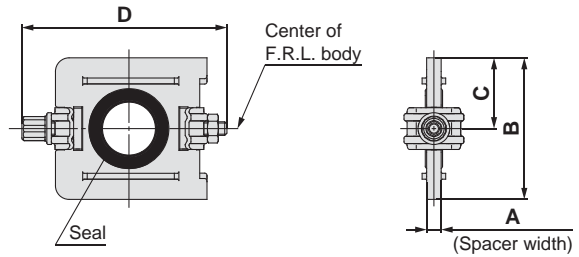
AME250C — 1 pc.

AMF250C-□□B — 1 pc.

Y300-A — 2 pcs.



Spacer



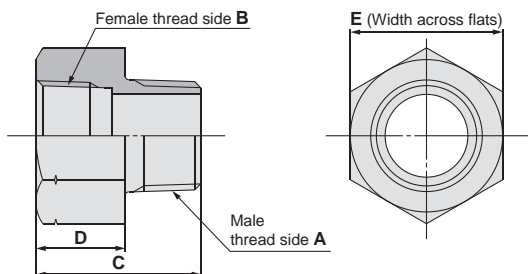
Model	A	B	C	D	Model
Y200-A	3.2	31.2	15.6	44.9	AFF2C, AM□150C
Y300-A	4.2	43.4	21.7	57.9	AFF4C, AM□250C
Y400-A	5.2	53	26.5	68.5	AFF8C, AM□350C
Y500-A	5.2	57	28.5	75.6	AFF11C, AM□450C
Y600-A	6.2	67.6	33.8	92.5	AFF22C, AM□550C

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

Note) Assembly of 2 O-rings

Piping Adapter



Dimensions

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

Bowl Assembly

AM-CA□/AME-CA□

RoHS

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	—	—	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	ø10 mm	V	White vaseline	Only one can be selected.	
			—	—		
			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.	
D	N.O. auto drain	ø10 mm	—	—		
			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.	
J	With drain guide	Rc1/4	—	—		Combinations of FH, FHV, FV and HV available
			F	Rubber material: FKM		
			H	For medium air pressure (1.6 MPa)		
JN	* Without a valve function	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.

How to Order Bowl Assembly

② For AFF37B, AM650, AMD650, AMH650, AMG650

AM-CA 650 - A

Size

Symbol	Applicable model
650	AFF37B, AM650, AMD650, AMH650, AMG650

Drain exhaust

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

③ For AFF75B, AM850, AMD850, AMH850, AMG850

AM-CA 850 - A

Size

Symbol	Applicable model
850	AFF75B, AM850, AMD850, AMH850, AMG850

Drain exhaust

Symbol	Description	Drain port
A	With drain guide * With Rc3/8 ball valve	Rc3/8
D	N.O. auto drain	Rc3/8
DF	* N.O. (Normally open)	G3/8
DN	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
150	AME150C, AMF150C
250	AME250C, AMF250C
350	AME350C, AMF350C
450	AME450C, AMF450C
550	AME550C, AMF550C

Option

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

* Combinations of FH, FHV and HV unavailable

⑤ For AME650, AME850, AMF650, AMF850

AME-CA 650 - A

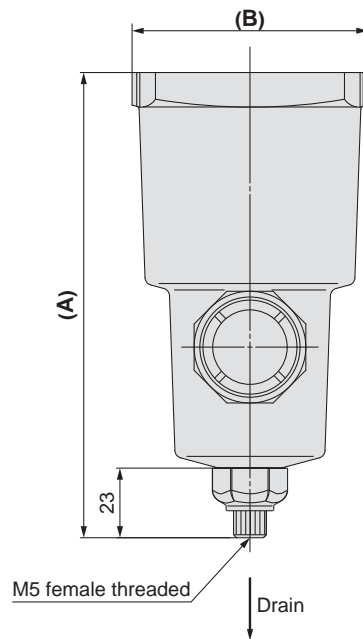
Size

Symbol	Applicable model
650	AME650, AMF650
850	AME850, AMF850

AM-CA□/AME-CA□

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

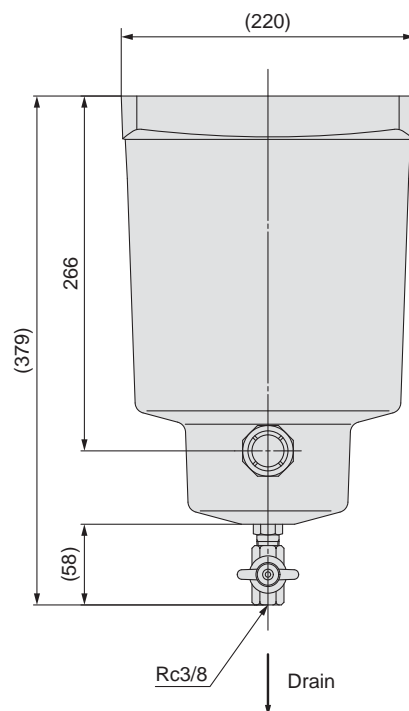
Applicable filter model: AFF2C to 22C, AFF37B, AM150C to 550C, AM650, AMD150C to 550C, AMD650, AMH150C to 550C, AMH650, AMG150C to 550C, AMG650



Note) The figure shows the drain cock specification.

		(mm)	
Series AFF	Series AM, AMD, AMG, AMH	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

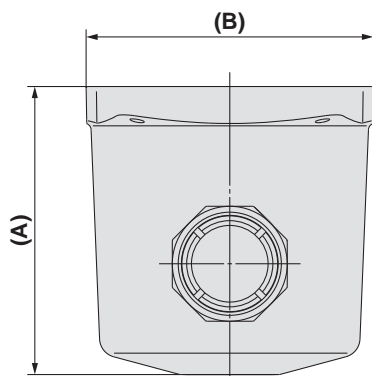
Size: AFF75B, AM850, AMD850, AMH850, AMG850



Note) The figure shows the drain cock specification.

Dimensions: Series AME, AMF

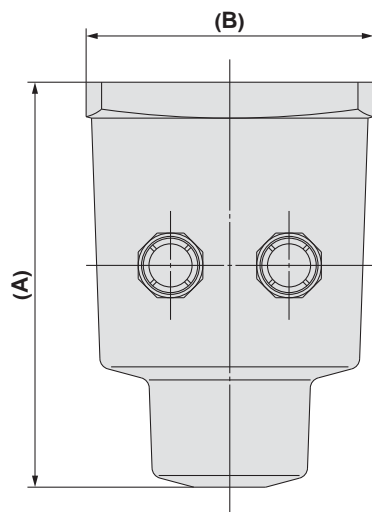
■ AME150C to 550C, AMF150C to 550C



(mm)

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

■ AME650, AME850, AMF650, AMF850



(mm)

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

Compressed Air Cleaning Filter Series

Made to Order/Special Specifications



Please consult with SMC for detailed specifications, size and delivery.

Made to Order

Contents	Symbol	Applicable model							Reference page
		AFF	AM	AMD	AME	AMF	AMG	AMH	
1. With Differential Pressure Gauge (GD40-2-01)	X6	●	●	●	—	—	—	●	P.64
2. N.C., N.O. Auto Drain, Drain Piping Type	X26	●	●	●	—	—	●	●	P.65
3. White Vaseline Specifications	X12	●	●	●	●	●	●	●	

Special Specifications

Contents	Applicable model							Reference page
	AFF	AM	AMD	AME	AMF	AMG	AMH	
Clean Series (10-Series)	●	●	●	●	●	—	●	P.66
Copper-free, Fluorine-free (20-Series)	●	●	—	—	—	●	—	

Compressed Air Cleaning Filter Series

Made to Order 1



Please consult with SMC for detailed specifications, size and delivery.

1. With Differential Pressure Gauge (GD40-2-01)

A differential pressure gauge that keeps track of the filter life is installed on the filter itself. This facilitates piping and achieves a compact design.

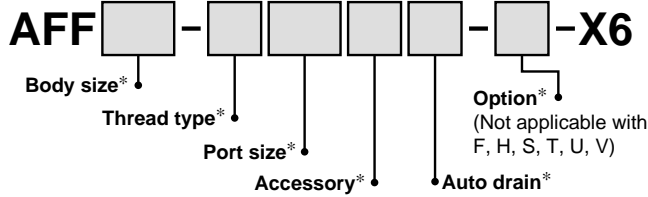
Specifications

Applicable model	AFF2C to 22C, 37B, 75B
------------------	-------------------------------

How to Order



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



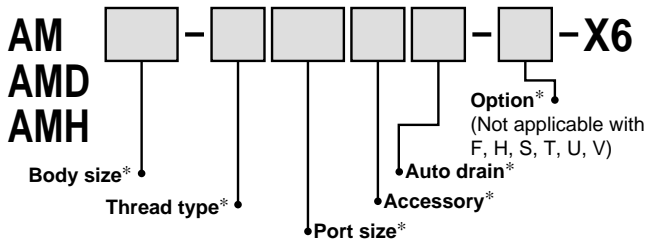
Specifications

Applicable model	AM150C to 550C, 650, 850, AMD150C to 550C, 650, 850, AMH150C to 550C, 650, 850
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How to Order

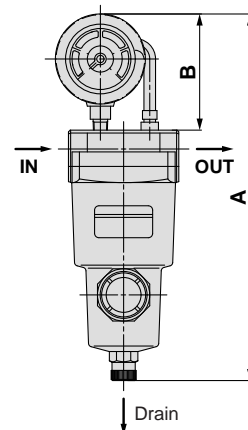


* Refer to "How to Order" for standard specifications.



- Note)
- The AMG series is not applicable since water drops could ingress inside its differential pressure gauge, resulting in malfunction or damage to the product.
 - Cannot be mounted to the AME and AMF series. (It affects the cleanliness at the outlet.)

Dimensions



(mm)

AFF series	AM, AMD, AMH series	Port size	A	B
Size	Size			
2C	150C	1/8, 1/4	239	80
4C	250C	1/4, 3/8	252	80
8C	350C	3/8, 1/2	284	80
11C	450C	1/2, 3/4	305	80
22C	550C	3/4, 1	339	80
37B	650	1, 1 1/2	391	80
75B	850	1 1/2, 2	541	80

Compressed Air Cleaning Filter Series

Made to Order 2



Please consult with SMC for detailed specifications, size and delivery.

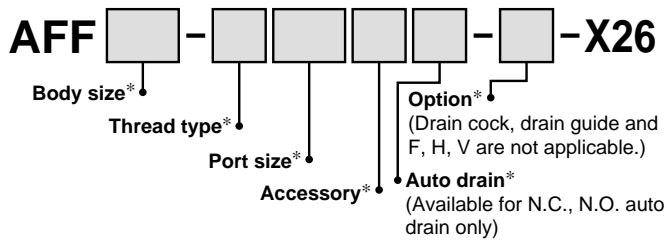
2. N.C., N.O. Auto Drain, Drain Piping Type

Drain piping type (drain guide specification) to the drain exhaust from N.C. auto drain and N.O. auto drain. N.C. type is not available for the AFF37B and AM□650.

Specifications

Applicable model	AFF2C to 22C, 37B
------------------	--------------------------

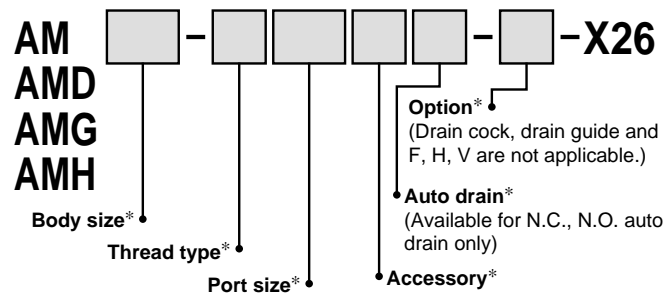
How to Order * Refer to "How to Order" for standard specifications.



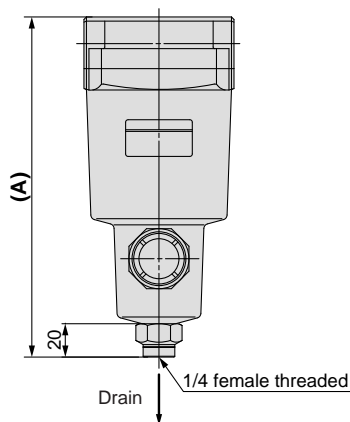
Specifications

Applicable model	AM□150 to 650
------------------	----------------------

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



Dimensions



(mm)

AFF series	AM, AMD, AMG, AMH series	Port size	A
Size	Size		
2C	150C	1/8, 1/4	159
4C	250C	1/4, 3/8	172
8C	350C	3/8, 1/2	204
11C	450C	1/2, 3/4	225
22C	550C	3/4, 1	259
37B	650	1, 1 1/2	311

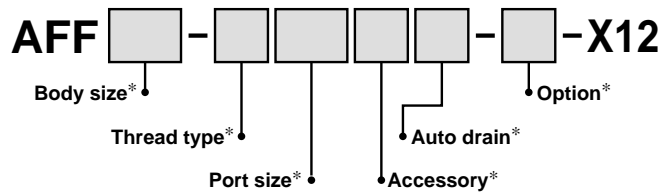
3. White Vaseline Specifications

Changed the grease for O-rings and gaskets as lubricant to white vaseline.

Specifications

Applicable model	AFF37B, 75B
------------------	--------------------

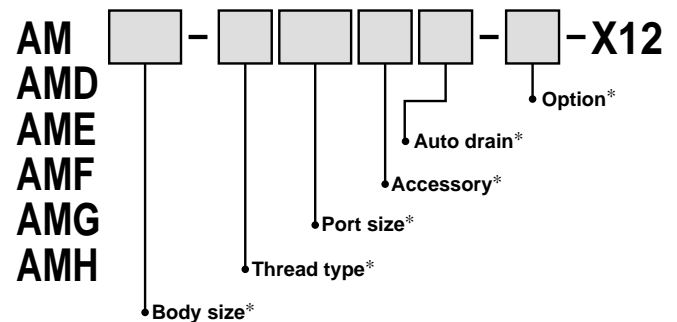
How to Order * Refer to "How to Order" for standard specifications.



Specifications

Applicable model	AM650, 850, AMD650, 850, AME650, 850, AMF650, 850, AMG650, 850, AMH650, 850
------------------	--

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



Compressed Air Cleaning Filter Series

Special Specifications

Please consult with SMC for detailed specifications, size and delivery.

Clean Series (10-Series)

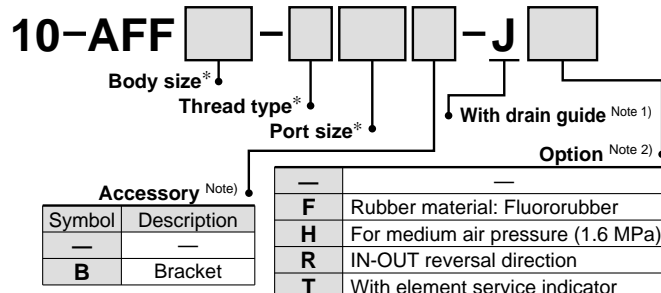
Clean Series products are used in cleaner environments such as in clean rooms as compared to a general factory environment. For further details, refer to the Clean Series catalogue.

Specifications

Applicable model	AFF2C to 22C, 37B, 75B
------------------	-------------------------------

How to Order

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

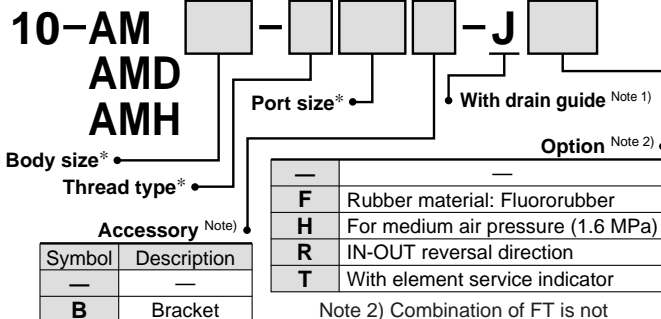


Note 1) "10-" is not applicable to standard product (with drain cock) and with auto drain.

Note 2) Combination of FT is not available. F and H are only applicable to the AFF2C to 22C.

Specifications

Applicable model	AM150C to 550C, 650, 850, AMD150C to 550C, 650, 850, AMH150C to 550C, 650, 850
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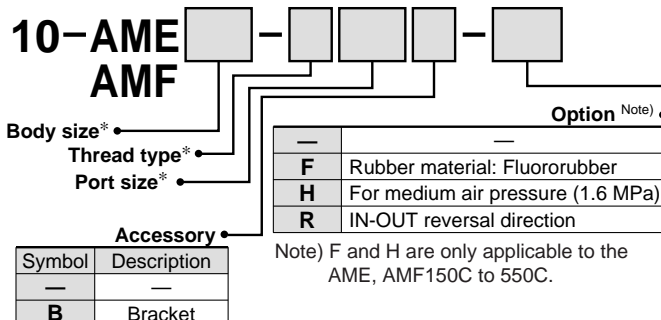


Note 1) "10-" is not applicable to standard product (with drain cock) and with auto drain.

Note 2) Combination of FT is not available. F and H are only applicable to the AM□150C to 550C.

Specifications

Applicable model	AME150C to 550C, 650, 850, AMF150C to 550C, 650, 850
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Note) F and H are only applicable to the AME, AMF150C to 550C.

Copper-free, Fluorine-free (20-Series)

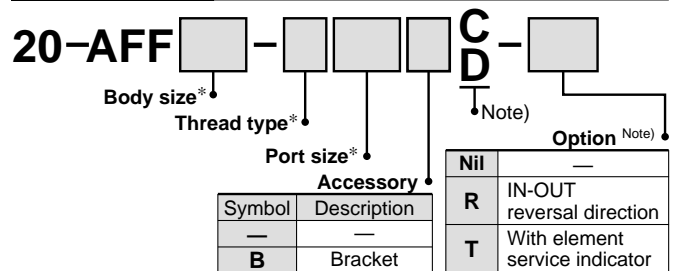
To eliminate effects on colour CRTs, etc. by copper ion or fluorine resin, copper materials are electroless-nickel plated or changed to copper-free materials to prevent the generation of copper ions. (It is not applicable to the AMD, AME, AMF and AMH series because those include fluorine resin in the filter material of the element.)

Specifications

Applicable model	AFF2C to 22C, 37B
------------------	--------------------------

How to Order

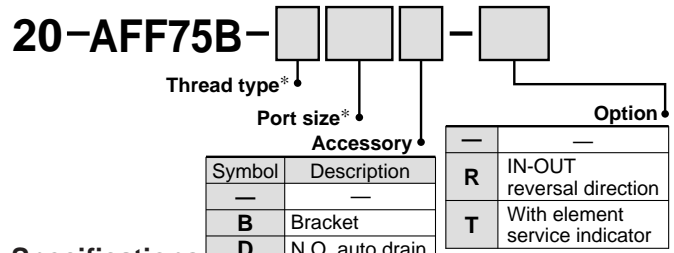
* Refer to "How to Order" for standard specifications.



Note) "20-" is only applicable with N.C. auto drain (C) or N.O. auto drain (D). Drain cock and drain guide are copper-free, fluorine-free as standard.

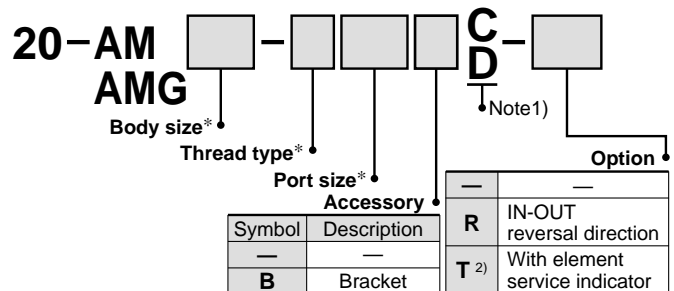
Specifications

Applicable model	AFF75B
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Specifications

Applicable model	AM150C to 550C, 650, AMG150C to 550C, 650
------------------	--

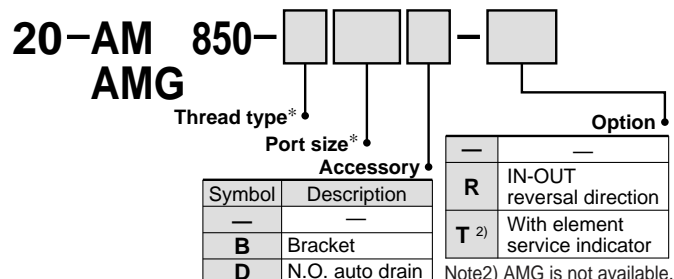


Note1) "20-" is only applicable with N.C. auto drain (C) or N.O. auto drain (D). Drain cock and drain guide are copper-free, fluorine-free as standard.

Note2) AMG is not available.

Specifications

Applicable model	AM850, AMG850
------------------	----------------------



Note2) AMG is not available.

Related Products: Auto Drain Valve

Series AD402/600

Drain is automatically discharged in a reliable manner, without requiring human operators.

Highly resistant to dust and corrosion, operates reliably, and a bowl guard is provided as standard equipment.



AD402



AD600

JIS Symbol



Model/Specifications

Model	AD402	AD600
Proof pressure	1.5 MPa	1.5 MPa
Max. operating pressure	1.0 MPa	1.0 MPa
Operating pressure range ^{Note)}	0.1 to 1.0 MPa	0.3 to 1.0 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)	-5 to 60°C (No freezing)
Port size	1/4, 3/8, 1/2	3/4, 1
Drain port size	3/8	3/4, 1
Mass (g)	620	2100

Note) 400 l/min (ANR) or more

Specific Product Precautions

Be sure to read this before handling.

Refer to back page for Safety Instructions, "Precautions for Handling Pneumatic Devices" (M-03-E3A) for Common Precautions.

Selection

Warning

Use the auto drain under the following operating conditions in order to prevent malfunction.

- 1) Operate the compressor above 3.7 kw {400 l/min (ANR)}.
- 2) Use the AD402 at an operating pressure above 0.1 MPa and AD600 above 0.3 MPa.

Piping

Warning

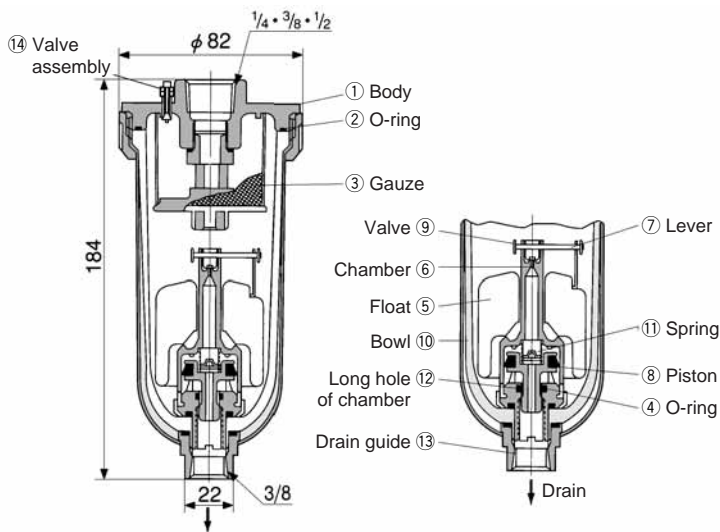
Piping should be done under the following conditions in order to prevent malfunction. For drain piping, use a pipe whose I.D. is not less than ø10 and length not more than 5 m. Avoid riser piping.

How to Order

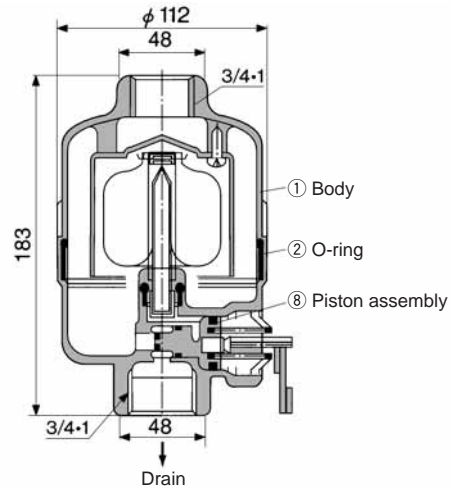
AD402 - [] - [] - []		AD600 - [] - [] - []			
Thread type		Option			
—	Rc	—	—		
N	NPT	2	Metal bowl		
F	G				
Port size		Port size			
Symbol	IN	OUT	Symbol	IN	OUT
02	1/4	3/8	06	3/4	3/4
03	3/8	3/8	10	1	1
04	1/2	3/8			

Construction/Dimensions

AD402



AD600



Working Principle (AD402)

- When no pressure is applied inside the bowl ⑩, float ⑤ descends of its own weight and valve ⑨ closes the chamber ⑥ hole. Piston ⑧ is pushed down by spring ⑪, and drain passes through the chamber's long hole ⑫ to enter the housing and is discharged.
- When pressure is applied inside the bowl:
When pressure is 0.1 MPa or more, it overcomes the force of spring ⑪, allowing the piston ⑧ to ascend, and comes in contact with O-ring ④. Thus, the inside of the bowl ⑩ is isolated from the outside.
- When drain has accumulated:
Float ⑤ ascends due to flotation and opens the chamber hole ⑥, allowing the pressure to enter the chamber ⑥. Piston ⑧ descends due to internal pressure and the force of spring ⑪, and the accumulated drain is discharged through drain guide ⑬.

Component Parts

No.	Description	Material
1	Body	Aluminum die-casted

Replacement Parts

No.	Description	Material	Model	
			AD402	AD600
2	O-ring	NBR	113136	JIS B2401G-100
3	Gauze	Stainless steel	20062	—
Note 1)	Internal assembly	—	AD34PA	—
8	Piston assembly	—	—	20025A

Note 1) Internal assembly: Assembly for parts ④ to ⑫ except ⑩.

Note 2) Part no. for bowl assembly: AD34

Note 3) Part no. for bowl ⑩: 201016

Related Products: Heavy Duty Auto Drain Series **ADH4000**

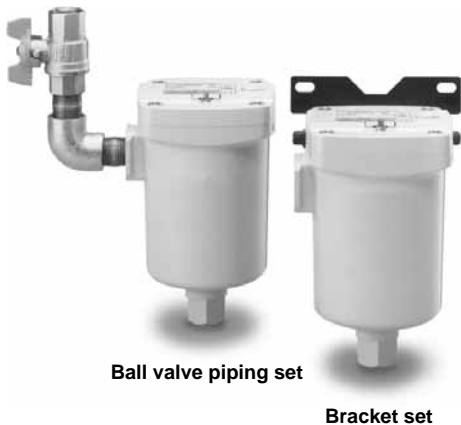
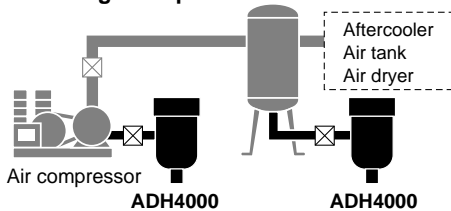
Easy maintenance

Can maintain without removing the existing piping.

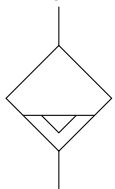
No need for electric power and no waste of air.

Float type auto drain allows automatic drain discharge without electric power.

Mounting example



JIS Symbol



Specifications

Auto drain type	Float type
Auto drain valve type	N.O. (Normally open: Open in the case of pressure loss)
Proof pressure	2.5 MPa
Max. operating pressure	1.6 MPa
Operating pressure range ^{Note)}	0.05 to 1.6 MPa
Fluid	Compressed air
Ambient and fluid temperature	5 to 60°C (With no condensation) <Corrosive gas, flammable gas and organic solvents are not allowed.>
Max. drain discharge	400 cc/min (Pressure 0.7 MPa, in the case of water)
Mass	1.2 kg (With bracket: 1.3 kg)
Paint colour	White



Note) Use for an air compressor with flow more than 50 /min (ANR).

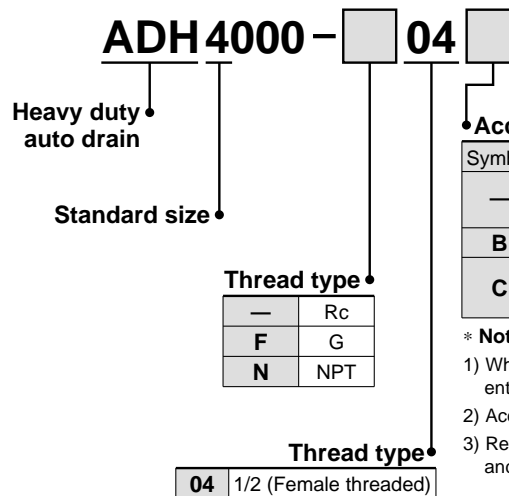
Accessory (Option)

Description	Part no.	Contents
Bracket set	BM58	Bracket 1 pc. M6 x 10 / (Hexagon socket head cap screw) ... 2 pcs.
Ball valve piping set	ADH-C400	Ball valve/Rc 1/2 1 pc. Barrel nipple/R 1/2 2 pcs. Elbow/Rc 1/2 1 pc.



Note) Accessory (Option) is included, but not assembled.

How to Order



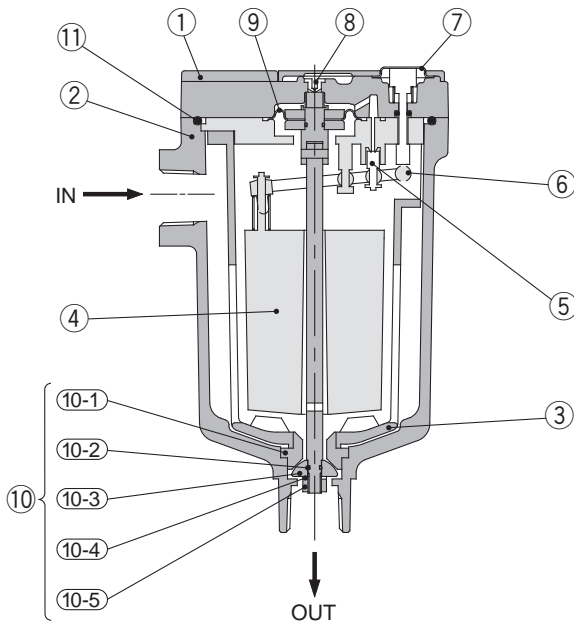
• Accessory (Option)*

Symbol	Contents	Note
—	None (Standard)	—
B	Bracket set	—
C	Ball valve piping set	Not available for G/NPT threads.

* Notes

- 1) When more than one option is desired, enter in alphabetical order.
- 2) Accessory is not assembled.
- 3) Refer to each drawing of dimensions and mounting methods for details.

Construction



Component Parts

No.	Description	Material	Note
1	Body	Aluminum alloy	Baking finish
2	Housing	Aluminum alloy	Baking finish
3	Drain guard	Aluminum alloy	Baking finish
4	Float	Foam rubber	
5	Pilot valve	Stainless steel + Rubber	
6	Lever	Resin	
7	Flushing button	Brass	
8	Orifice		
9	Diaphragm	Rubber	

Replacement Parts

No.	Description	Part no.	Note
10	Repair kit for main valve	ADH-D400	Kit includes parts from (10-1) to (10-5)
11	O-ring	G85(B)	Material: NBR

Note) When changing parts, follow the operating manual.
Do not disassemble other parts.

⚠ Specific Product Precautions

Be sure to read this before handling. Refer to back page for Safety Instructions, "Precautions for Handling Pneumatic Devices" (M-03-E3A) for Common Precautions.

Design

⚠ Caution

1. Use this product in an area where the air pressure does not exceed 1.6 MPa.
If exceeding 1.6 MPa, it could lead to an accident or malfunction.
2. An air pressure of 0.05 MPa and an air compressor's discharge flow rates higher than 50 l/min (ANR) are required.
Below these values, the air will be exhausted continuously from the drain exhaust port.
3. Keep the compressed air and the ambient temperature of the location where this product is installed within the range of 5 to 60°C. Exceeding this range could lead to a failure or malfunction.
4. Avoid using this product in an area where corrosive gases, flammable gases or organic solvents are contained in the compressed air or in the surrounding air.

Selection

⚠ Caution

1. The maximum dischargeable drainage rate is 400 cc/min.
If using this product in excess of this value, there could be causing the drain to flow over to the outlet side.

Piping

⚠ Caution

1. Use piping of 1/2" or larger for drain inlet and avoid riser piping.
2. For drain piping, use a pipe whose I.D. is not less than 8 mm and length not more than 10 m. Do not make any upward angles in drain line. Be sure to secure exhaust port piping since drain is under pressure.

Mounting

⚠ Caution

1. Install with "out port" down in a vertical position.
Inclination from the vertical line should be less than 5°.
2. Install with at least 200 mm of free space above the unit to allow for maintenance.
3. To place this product near the air compressor, install in such a way that the vibrations will not be transmitted.
4. Install a valve to drain inlet so that maintenance is possible.
Use a ball valve with a bore size of more than 15 mm. (Ball valve piping set is available as an accessory (option).)

Mounting

⚠ Caution

5. When not draining sufficiently, open the bleed valve so that drain could run through easily.

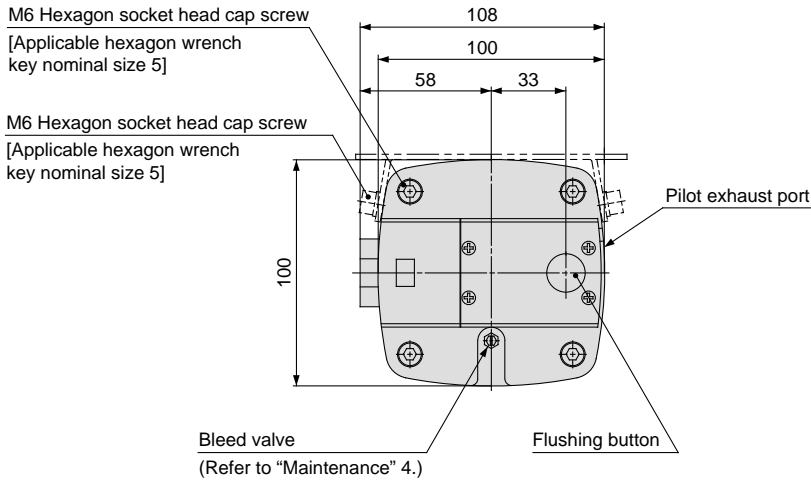
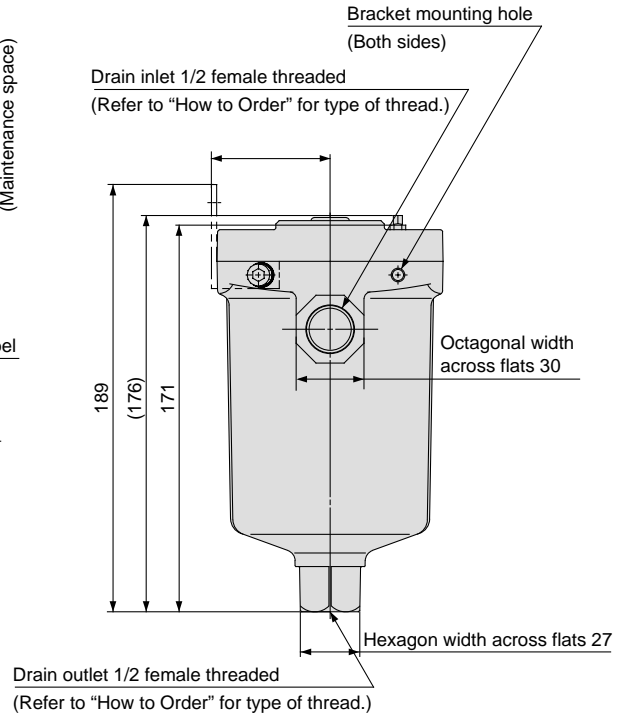
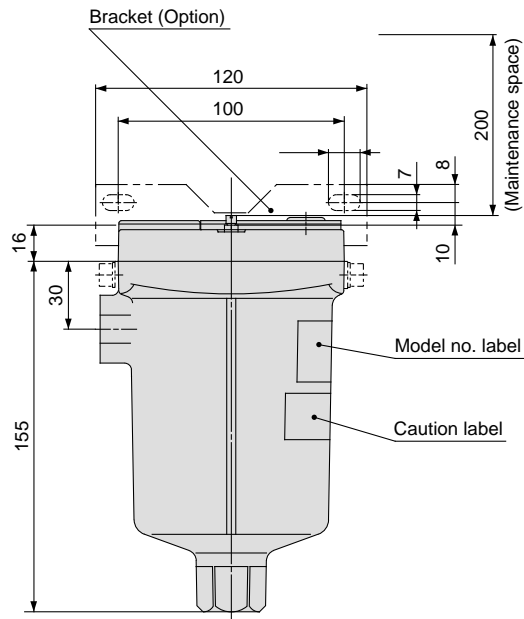
Maintenance

⚠ Caution

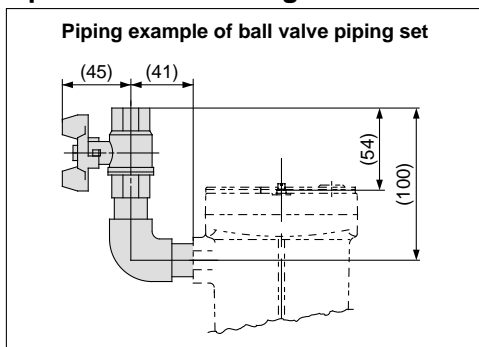
1. Check drain condition periodically (more than once a day).
Also, push the flushing button to open the exhaust valve.
2. Pilot air is exhausted from the exhaust port indicated in "Dimensions". Do not cover this exhaust port. Clean the exhaust port so that port is not blocked by dust, etc.
3. When solid foreign objects exceeding 1 mm come in, the main valve may become blocked. After recovering the internal pressure of this product to 0 MPa (atmospheric pressure), remove the hexagon socket head cap screw (M6) from the body part and wash inside with water to remove foreign solid objects blocking the main valve.
4. When using this product, drain may not easily enter the product. In such a case, adjust the open angle of its bleed valve to lower the pressure a bit inside the bowl so that drain could run through easily.

Series ADH4000

Dimensions



Option: Reference Figure of Assembly



Related Products: Differential Pressure Gauge Series *GD40-2-01*

The pressure differential at the inlet and the outlet of compressed air equipment can be viewed at a glance on the differential pressure gauge. It is ideal for the maintenance control of filters.

Compact and lightweight
Can be installed easily by merely providing a bypass circuit.
Provided with a protective cover to prevent hazards.



JIS Symbol



Model/Specifications

Model	GD40-2-01
Fluid	Compressed air
Max. operating pressure	1 MPa
Proof pressure	1.5 MPa
Ambient and fluid temperature	5 to 60°C
Port size Rc	1/8
Scale range	0 to 0.2 MPa
Accuracy	0.006 MPa
Dial size	ø40
Mass (g)	300

Main Parts Material

Case	Zinc die-casted
Internal part	Brass, Phosphor bronze
Window	Polyester
Scale plate	Stainless steel

Accessory

Nylon tube	T0425 (0.5 m)
Male connector	H04-01 (1 pc.)
Male elbow	DL04-01 (1 pc.)

⚠ Specific Product Precautions

Be sure to read this before handling.
Refer to back page for Safety Instructions, "Precautions for Handling Pneumatic Devices" (M-03-E3A) for Common Precautions.

Design

⚠ Caution

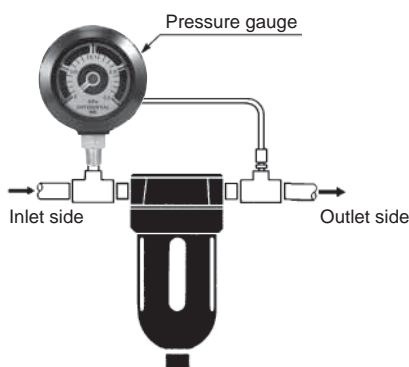
1. This product cannot be used in a location where pulsations could occur frequently.

Mounting

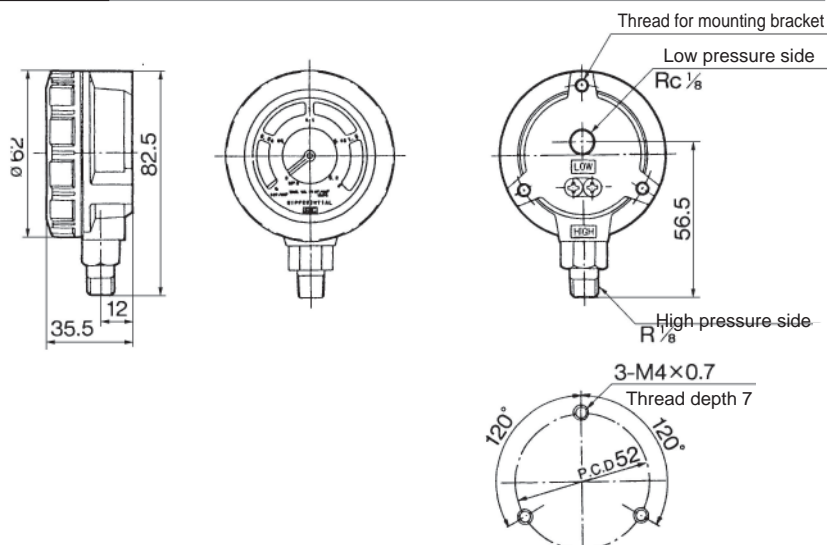
⚠ Caution

1. Mounting
 - 1) The HIGH and LOW marks on the back of the differential pressure gauge indicate the high pressure and low pressure sides respectively. Connect the HIGH side to the inlet side of the filter or other devices and the LOW side to their outlet side. Do not use a stop valve to prevent damage to the differential pressure gauge if the valve is inadvertently left open or closed.
 - 2) Install the differential pressure gauge vertically.
 - 3) The piping of the differential pressure gauge must be connected securely because it will break if it becomes detached.

Piping Example



Dimensions





Series AM□/AFF

Specific Product Precautions 1

Be sure to read this before handling. Refer to back page for Safety Instructions.

Design

⚠ Caution

1. Design the layout so that the mist separator should be installed in an area that is less susceptible to pulsations.

The element could be damaged if a difference between the inlet pressure and the outlet pressure exceeds 0.1 MPa.

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

When installing pneumatic equipment on the outlet side of the AM□ series, 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.

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

When using the AFF2C to 22C, 37B, 75B, AM□150C to 550C, 650, 850 with 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. Therefore, when using a compressor for 3.7 kW or less, make sure to use the normally closed (N.C.) auto drain. The minimum operating pressure is 0.15 MPa even with N.C. auto drain.

4. 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 tubing O.D. 10 mm and keep the whole length within 5 m.
Normally open (N.O.)	

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.

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

Back pressure or back flow may damage an element.

⚠ Warning

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

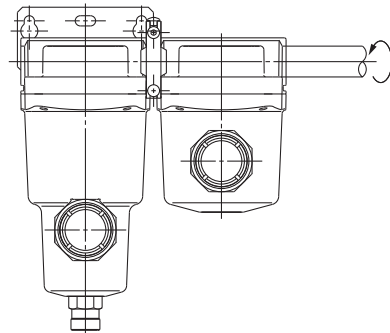
Insufficient tightening torque may cause loosening or defective sealing. Over-tightening torque may damage the thread etc. If it is tightened without holding the female thread side, excessive force will be directly applied to the piping bracket resulting in a product failure.

Recommended Torque

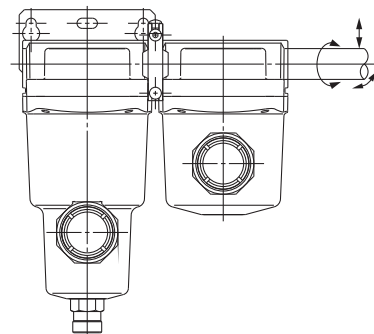
Unit: N·m

Connection thread	1/8	1/4	3/8	1/2	3/4	1	1 1/2	2
Torque	1.5 to 2	7 to 9	12 to 14	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.



Series AM□/AFF

Specific Product Precautions 2

Be sure to read this before handling. Refer to back page for Safety Instructions.

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" for the AM□ series (Best Pneumatics).

[Particulate contaminants in compressed air]

- Water (drainage)
- Dust sucked from ambient air
- Degenerated oil from compressor
- Solid foreign matter such as rust inside piping and oil

2. Select according to the maximum flow consumption.

When compressed air is used for air blow, etc., find the maximum air consumption before selecting the size of the AM□ series. (If compressed air exceeding the maximum flow rate is supplied, it can result in decline of the cleanliness of compressed air or 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.

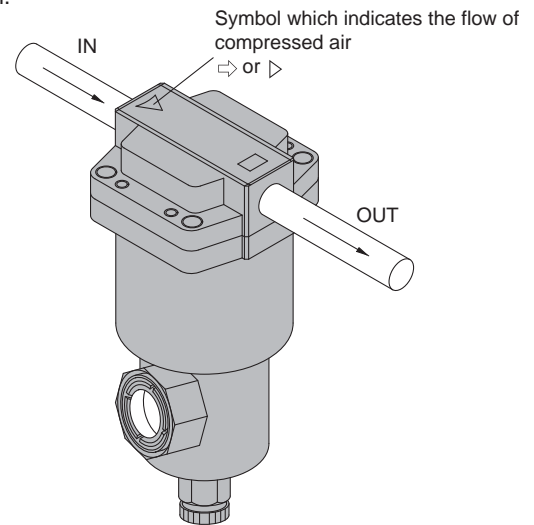
Piping

⚠ 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 "⇄" or "▷" mark that indicates the inlet of the product before connecting. It cannot be used if connected in the opposite direction.



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. Wrapping 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.



Series AM□/AFF

Specific Product Precautions 3

Be sure to read this before handling. Refer to back page for Safety Instructions.

Air Supply

⚠ Caution

1. The mist separator is not applicable to gases other than compressed air.

The mist separator 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 the mist separator is operated above the maximum operating pressure.

If the mist separator 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 the mist separator 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.

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 back page 6.)

<Element replacement timing>

a) AFF2C to 22C, 37B, 75B, AM□150C ~ 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) AME

If the element has red spots, perform replacement even before the situation has not come to (a).

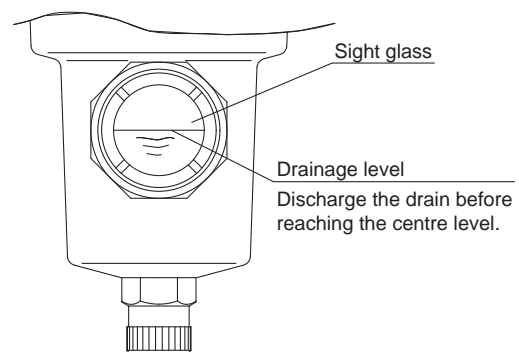
c) AMF

If the secondary side smells of oil, perform replacement even before the situation has not come to (a).

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 before the drainage level reaches the centre of the sight glass. If the drain is not discharged properly, it will flow over to the outlet side.





Series AM□/AFF

Specific Product Precautions 4

Be sure to read this before handling. Refer to back page for Safety Instructions.

Maintenance

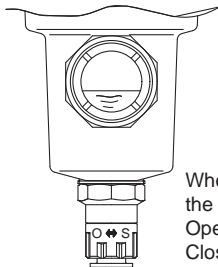
Caution

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.)



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

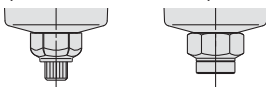


4. The drain exhaust parts replacement method and necessary parts are different depending on when it was manufactured.

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] ^{Note 2)}	
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		2C to 22C 150C to 550C
N.C. auto drain	Thread type Rc, G: AD53PA-D Thread type NPT: NAD53PA-D		
Ball valve set	AM-SA004		75B, 850
N.O. auto drain ^{Note 1)}	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.

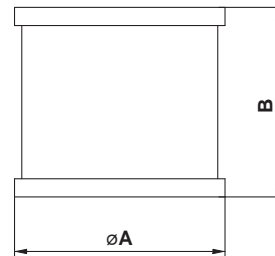
Applicable models: AFF2C to 22C, 37B, AM, AMD, AMH, AMG150C to 550C, 650

Drain exhaust specifications	Option	Thread type		
		Rc	G	NPT
Drain cock	Except F, V	AM-SA039		
	F	AM-SA039-1		
	V	AM-SA039-2		
	FV	AM-SA039-3		
Drain guide	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
	FV	AM-SA040-3	AM-SA040-F-3	AM-SA040-N-3
N.C. auto drain	Except F, V	AD53PA-D		NAD53PA-D
	F	AD53PA-D-X155		NAD53PA-D-X155
	V	AD53PA-D-X113		NAD53PA-D-X113
N.O. auto drain	Except F, H, V	AD43PA-D		NAD43PA-D
	F	AD43PA-D-X155		NAD43PA-D-X155
	V	AD43PA-D-X113		NAD43PA-D-X113
	H	AD33PA-D-X2004	EAD33PA-D-X2004	NAD33PA-D-X2004

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)	
	øA	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)



Series AM□/AFF

Specific Product Precautions 5

Be sure to read this before handling. Refer to back page for Safety Instructions.

Others

Caution

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 degreasing washed. Contact SMC after confirming the specifications. (available as Option or Made to Order)

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

The product can be used as a small capacity air tank by removing the element. 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 ³)
AFF2C, AFF2B, AM150C, AM150 AMD150C, AMD150, AMH150C, AMH150	250
AFF4C, AFF4B, AM250C, AM250 AMD250C, AMD250, AMH250C, AMH250	300
AFF8C, AFF8B, AM350C, AM350 AMD350C, AMD350, AMH350C, AMH350	600
AFF11C, AFF11B, AM450C, AM450 AMD450C, AMD450, AMH450C, AMH450	1000
AFF22C, AFF22B, AM550C, AM550 AMD550C, AMD550, AMH550C, AMH550	1500
AFF37B, AM650 AMD650, AMH650	3000
AFF75B, AM850 AMD850, AMH850	9000

Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of “Caution,” “Warning” or “Danger.” They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC) ¹⁾, and other safety regulations.

Caution:

Caution indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

Warning:

Warning indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

Danger:

Danger indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

- 1) ISO 4414: Pneumatic fluid power – General rules relating to systems.
ISO 4413: Hydraulic fluid power – General rules relating to systems.
IEC 60204-1: Safety of machinery – Electrical equipment of machines.
(Part 1: General requirements)
- ISO 10218-1: Manipulating industrial robots - Safety.
etc.

Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalogue information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.

The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.

1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalogue.
3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

Caution

1. The product is provided for use in manufacturing industries.

The product herein described is basically provided for peaceful use in manufacturing industries.

If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary. If anything is unclear, contact your nearest sales branch.

Limited warranty and Disclaimer/Compliance Requirements

The product used is subject to the following “Limited warranty and Disclaimer” and “Compliance Requirements”. Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first. ²⁾ Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided. This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalogue for the particular products.
- 2) Vacuum pads are excluded from this 1 year warranty. A vacuum pad is a consumable part, so it is warranted for a year after it is delivered. Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

Caution

SMC products are not intended for use as instruments for legal metrology.

Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country. Therefore, SMC products cannot be used for business or certification ordained by the metrology (measurement) laws of each country.

Safety Instructions

Be sure to read “Handling Precautions for SMC Products” (M-E03-3) before using.

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