

Compressed Air Cleaning Filter Series

For Water, Solid/Oil Separation and Deodorization

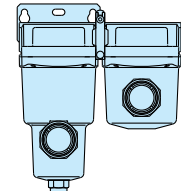
Modular connection, Space-saving design, Labor-saving in piping! (AMG□□, AFF□□, AM□□, AMD□□, AMH□□, AME□□, AMF□□)

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.

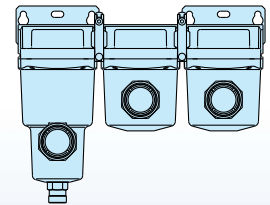
Modular connection example



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
- Fluororubber specifications
- With differential pressure switch (125 VAC, 30 VDC)
- 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

Odor Removal Filter/**AMF**

Series **AM□/AFF**



CAT.ES30-11A

Water droplet removal

Water Separator

Water droplet separation rate: 99%



AMG150C to 550C AMG650/850

Large dust particle filtration, Oil droplet separation

Main Line Filter

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



AFF2C to 22C AFF37B/75B AFF75A to 220A

Dust filtration, Oil mist separation

Mist Separator

Nominal filtration rating: 0.3 μm
[Filtration efficiency: 99.9%]
Oil mist density at outlet:
Max. 1.0 mg/m³ (ANR)
[≈0.8 ppm]



AM150C to 550C AM650/850

Dust filtration, Oil mist separation

Micro Mist Separator

Nominal filtration rating: 0.01 μm
[Filtration efficiency: 99.9%]
Oil mist density at outlet:
Max. 0.1 mg/m³ (ANR)
[≈0.08 ppm]



AMD150C to 550C AMD650 to 1000

Model		Flow capacity ℓ/min (ANR) Max. flow capacity at 0.7 MPa inlet pressure	Port size	Note
AMG	150C	300	1/8, 1/4	Piping support type
	250C	750	1/4, 3/8	
	350C	1,500	3/8, 1/2	
	450C	2,200	1/2, 3/4	
	550C	3,700	3/4, 1	
	650	6,000	1, 1 1/2	
	850	12,000	1 1/2, 2	
AFF	2C	300	1/8, 1/4	Piping support type
	4C	750	1/4, 3/8	
	8C	1,500	3/8, 1/2	
	11C	2,200	1/2, 3/4	
	22C	3,700	3/4, 1	
	37B	6,000	1, 1 1/2	
	75B	12,000	1 1/2, 2	
	75A		50(2B) flange	Free standing type
	125A	22,000	80(3B) flange	
	150A	28,000	100(4B) flange	
220A	42,000			
AM	150C	300	1/8, 1/4	Piping support type
	250C	750	1/4, 3/8	
	350C	1,500	3/8, 1/2	
	450C	2,200	1/2, 3/4	
	550C	3,700	3/4, 1	
	650	6,000	1, 1 1/2	
	850	12,000	1 1/2, 2	
AMD	150C	200	1/8, 1/4	Piping support type
	250C	500	1/4, 3/8	
	350C	1,000	3/8, 1/2	
	450C	2,000	1/2, 3/4	
	550C	3,700	3/4, 1	
	650	6,000	1, 1 1/2	
	850	12,000	1 1/2, 2	
	801	8,000	50(2B) flange	
	901	24,000	50(2B), 80(3B), 100(4B) flange	Free standing type
	800	8,000	50(2B) flange	
	900	24,000	50(2B), 80(3B), 100(4B) flange	
	1000	40,000	100(4B), 150(6B) flange	

Dust filtration, Oil mist separation

Micro Mist Separator with Pre-filter

Built-in 0.3 μm pre-filter
 The AM + AMD element have been integrated to achieve a space-saving design.
 Nominal filtration rating: 0.01 μm
 [Filtration efficiency: 99.9%]
 Oil mist density at outlet:
 Max. 0.1 mg/m³ (ANR)
 [≈0.08 ppm]



AMH150C to 550C AMH650/850

Dust filtration, Oil mist adsorption

Super Mist Separator

Color change indicates when element is saturated.
 Nominal filtration rating: 0.01 μm
 [Filtration efficiency: 99.9%]
 Oil mist density at outlet:
 Max. 0.01 mg/m³ (ANR)
 [≈0.008 ppm]
 Cleanliness at outlet:
 Not more than 35 particles of size 0.3 μm or larger/10 ℓ (100 particles or less/ft³)



AME150C to 550C AME650/850

Deodorization

Odor Removal Filter

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



AMF150C to 550C AMF650 to 1000

Model		Flow capacity ℓ/min (ANR) Max. flow capacity at 0.7 MPa inlet pressure	Port size	Note
AMH	150C	200	1/8, 1/4	Piping support type
	250C	500	1/4, 3/8	
	350C	1,000	3/8, 1/2	
	450C	2,000	1/2, 3/4	
	550C	3,700	3/4, 1	
	650	6,000	1, 1 1/2	
	850	12,000	1 1/2, 2	
AME	150C	200	1/8, 1/4	Piping support type
	250C	500	1/4, 3/8	
	350C	1,000	3/8, 1/2	
	450C	2,000	1/2, 3/4	
	550C	3,700	3/4, 1	
	650	6,000	1, 1 1/2	
	850	12,000	1 1/2, 2	
AMF	150C	200	1/8, 1/4	Piping support type
	250C	500	1/4, 3/8	
	350C	1,000	3/8, 1/2	
	450C	2,000	1/2, 3/4	
	550C	3,700	3/4, 1	
	650	6,000	1, 1 1/2	
	850	12,000	1 1/2, 2	
	801	8,000	50(2B) flange	
	901	24,000	50(2B), 80(3B) 100(4B) flange	
	800	8,000	50(2B) flange	
	900	24,000	50(2B), 80(3B) 100(4B) flange	
	1000	40,000	100(4B), 150(6B) flange	Free standing type

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 μm (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.36
	<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.44
Deodorizer	<ul style="list-style-type: none"> Odor Removal Filter Eliminates odor 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.52
Modular Connection Examples						P.61	
How to Order Bowl Assembly						P.63	
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. With IN-OUT flange Flange piping connection is possible. White vaseline specifications* Using white vaseline for lubricant. With differential pressure gauge, IN-OUT flange Flange piping connection and clogged element confirmation are possible. With differential pressure switch (with indicator)* Allows visual confirmation of differential pressure which indicates the element life. The built-in contact enables remote control. 					P.67	
* 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 color CRT by copper ion or fluoric resin, etc.			P.67	
Related Products	Auto Drain Valve, Motor Operated Auto Drain, Heavy Duty Auto Drain, Differential Pressure Gauge					P.73	
Specific Product Precautions						Back page 3	
Discontinued Model and Equivalent Model						Back page 7	

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

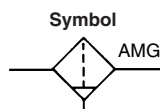
Modular connection is possible with AMG150C to 550C.
 (For details, refer to page 61.)



AMG150C to 550C



AMG650/850



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 pages 1 and 2 for Safety Instructions, “Precautions for Handling Pneumatic Devices” (M-03-E3A) for Common Precautions, and back pages 3 through to 7 for Specific Product Precautions.



Made to Order
 (For details, refer to page 67.)

How to Order



AMG150C to 550C

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

Body size

150C
250C
350C
450C
550C

Thread type

Symbol	Type
Nil	Rc
F	G*1
N	NPT

*1 Conforms to ISO1179-1.

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
Nil	—
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
Nil	—	—
X15	With IN-OUT flange	P.69
X26	N.C., N.O. auto drain, drain piping type	P.70

Option *3

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

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

Auto Drain Specifications/Option Combinations

○: Available □: Not available

△: Plural options cannot be selected.

(i.e. Combinations such as C-FV, D-FHV are not possible.)

Symbol	F	H	R	V
Auto drain specifications				
Nil	○	○	○	○
C	△	□	○	△
D	△	△	○	△
J	○	○	○	○

Options

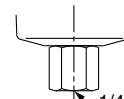
Symbol F: Rubber material: Fluororubber

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 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
Nil	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
Nil	—
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
Nil	—	—
X15	With IN-OUT flange	P.69
X26	N.C., N.O. auto drain, drain piping type	P.70
X12	White vaseline	P.70

Option *2

Symbol	Description
Nil	—
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
Nil	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 62) 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	○	□	○	○	

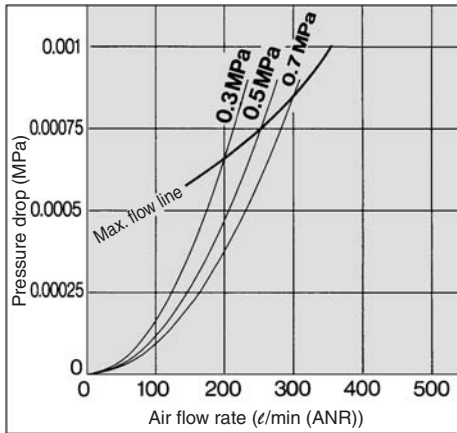
Series AMG

Flow Characteristics

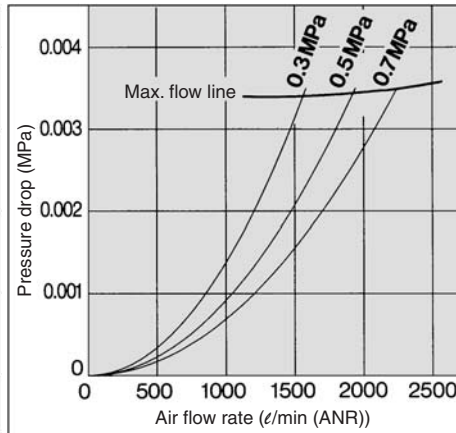


Note) Compressed air over max. flow line in the table below may not meet the specifications of the product. It may cause damage to the element.

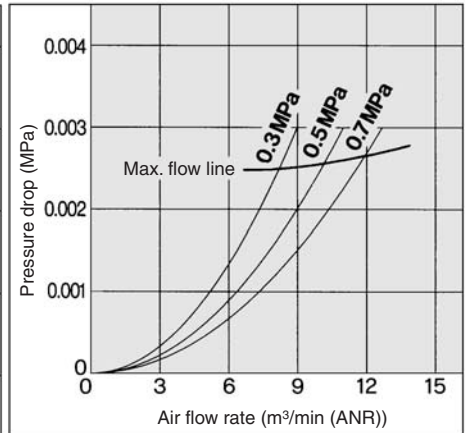
AMG150C



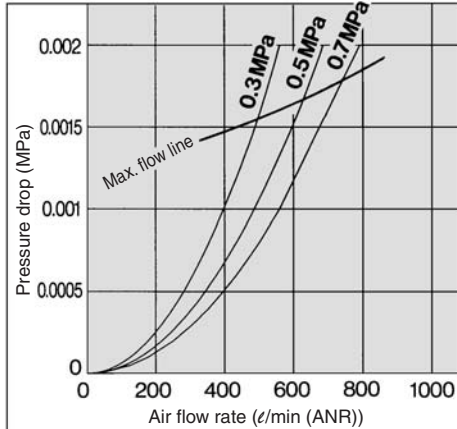
AMG450C



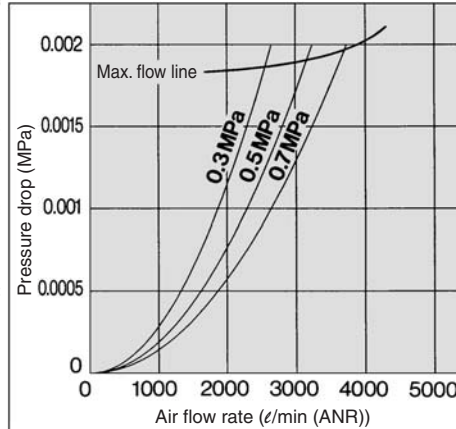
AMG850



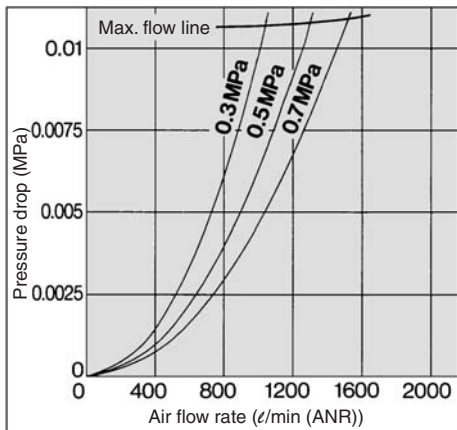
AMG250C



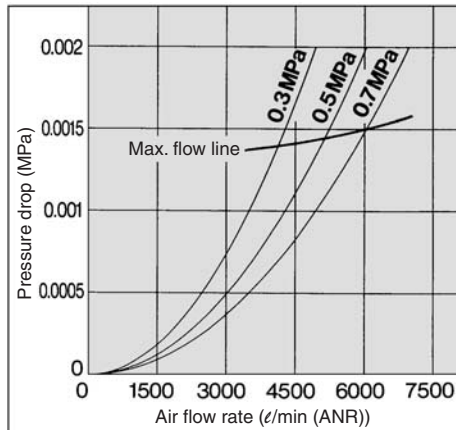
AMG550C



AMG350C

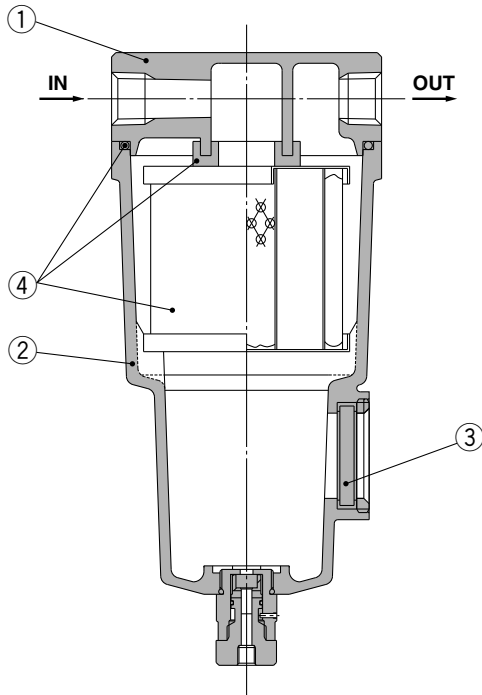


AMG650

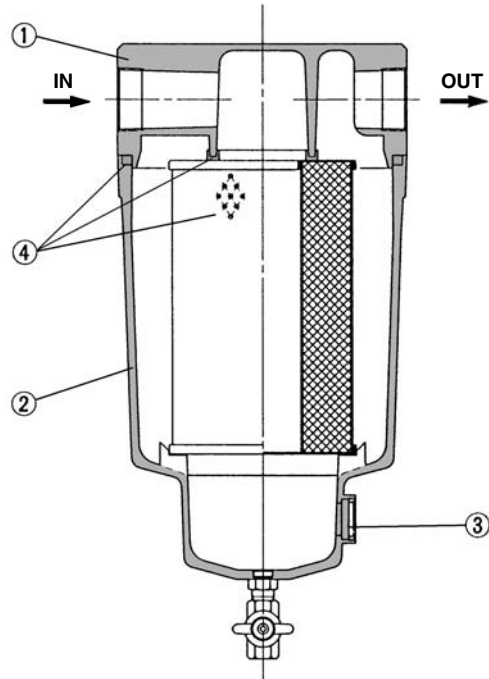


Construction

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 63.



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

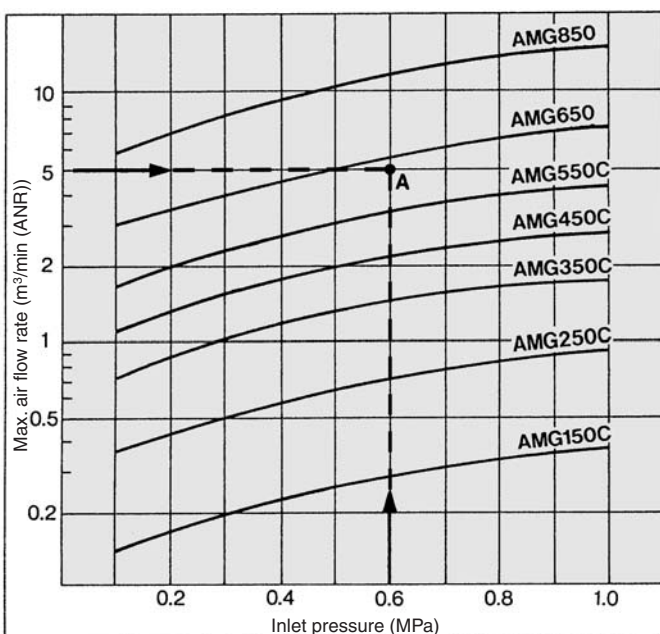
No.	Description	Material	Applicable model	Model						
				AMG150C	AMG250C	AMG350C	AMG450C	AMG550C	AMG650	AMG850
4	Element assembly	Resin, others	Except option F	AMG-EL150	AMG-EL250	AMG-EL350	AMG-EL450	AMG-EL550	AMG-EL650	AMG-EL850
			For option F	AMG-EL150-F	AMG-EL250-F	AMG-EL350-F	AMG-EL450-F	AMG-EL550-F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

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

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

* Element assemblies for Made to Order (X12, X15, 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 intersecting point A in the graph.

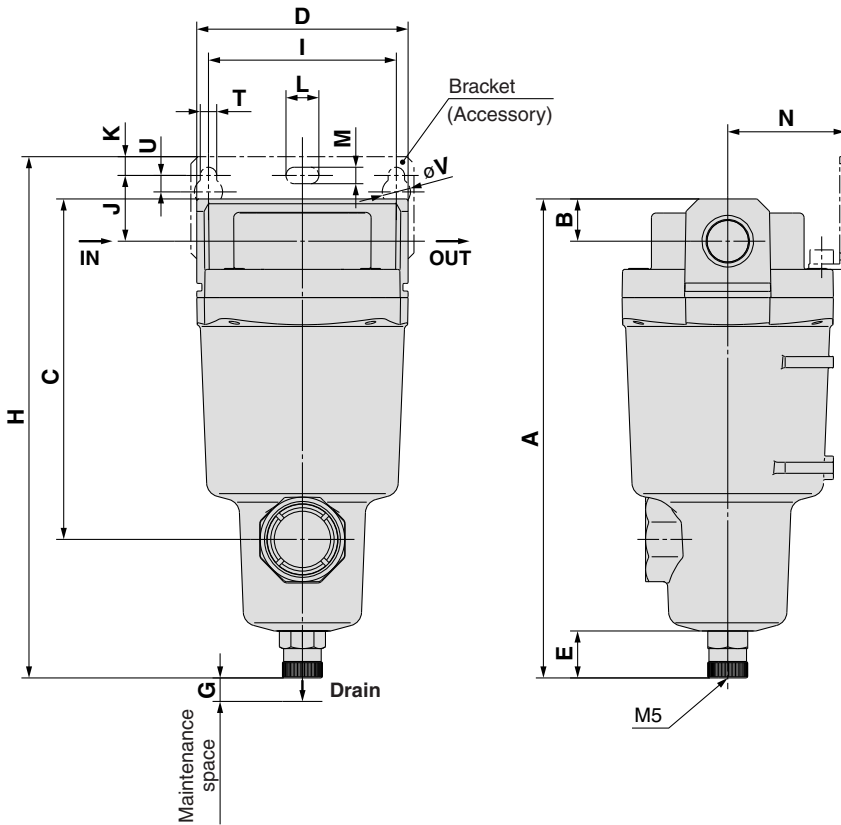
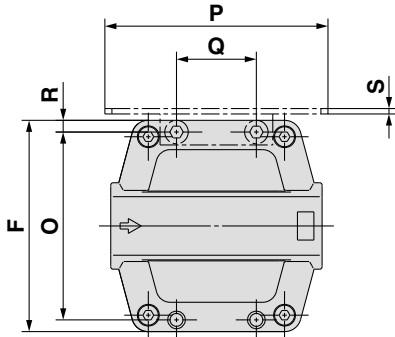


Note) Make sure to select a model that has the max. flow line above the obtained intersecting point. With a model that has the max. flow line below the obtained intersecting point, the flow rate will be exceeded, thus leading to a problem such as being unable to satisfy the specifications.

Series AMG

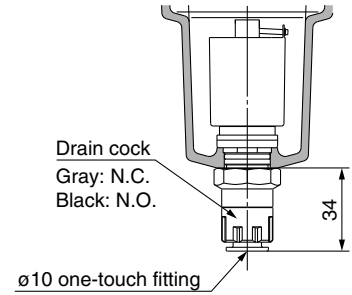
Dimensions

AMG150C to 550C

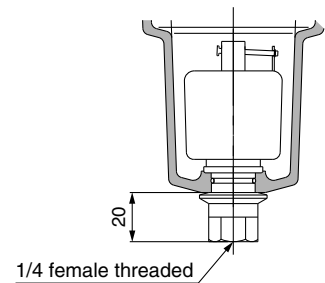


Auto drain

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

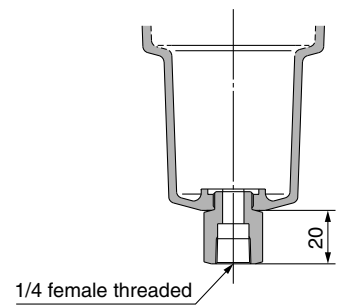


Combination of D: With auto drain (N.O.)
and H: For medium air pressure



Option

J: Drain guide 1/4 female threaded

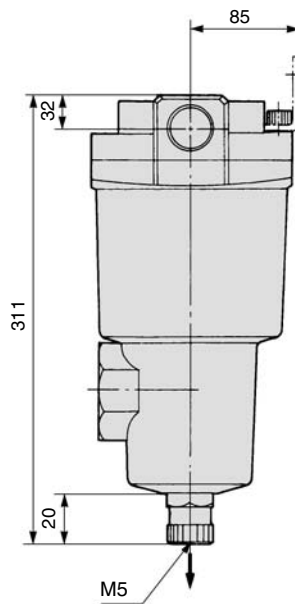
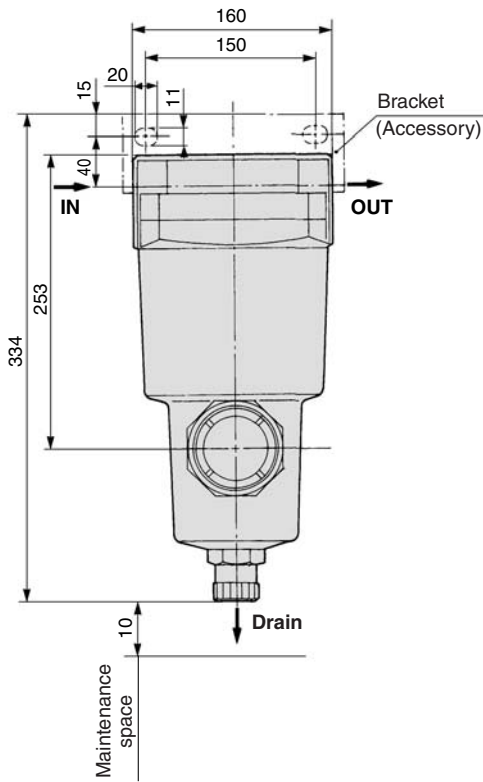
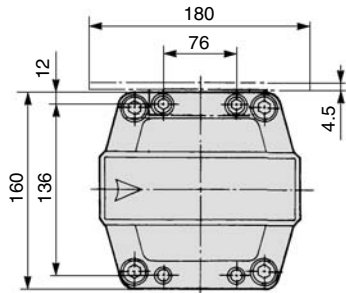


Model	Port size	A	B	C	D	E	F	G	Bracket related dimensions														
									H	I	J	K	T	U	L	M	V	N	O	P	Q	R	S
AMG150C	1/8, 1/4	158	10	99	63	20	63	10	173	56	20	5	6	6	12	6	10	35	54	70	26	4.5	1.6
AMG250C	1/4, 3/8	172	14	113	76	20	76	10	190	66	24	8	6	6	12	6	10	40	66	80	28	5	2
AMG350C	3/8, 1/2	204	18	145	90	20	90	10	222	80	28	8	7	7	14	7	12	50	80	95	34	5	2.3
AMG450C	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
AMG550C	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

(mm)

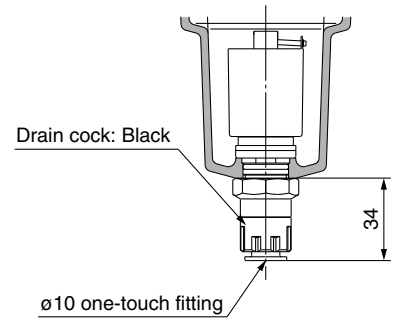
Dimensions

AMG650



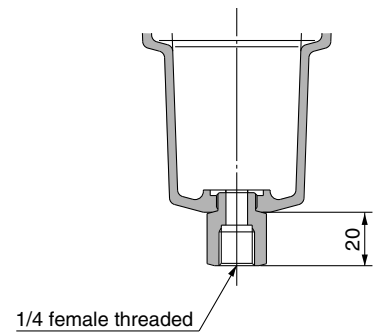
Auto drain

D: With auto drain (N.O.)



Option

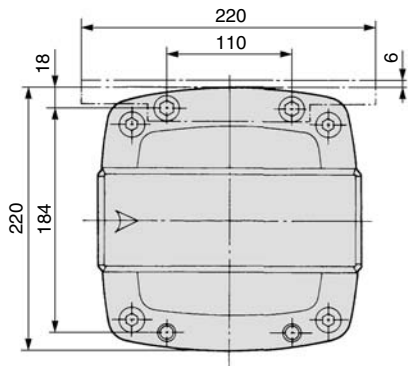
J: Drain guide 1/4 female threaded



Series AMG

Dimensions

AMG850



Auto drain

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

