

Water Separator

Series AMG



The AMG series water separator is installed on the air pressure line to remove water drops in the compressed air. It is suitable for use in cases where "water must be removed, but the air does not have to be as dry as when an air dryer is used" or "an air dryer cannot be used because an electric power supply is not available".

Through the adoption of an element that is used exclusively for removing water drops and the provision of 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: 0.7MPa

Temperature: 25°C

Relative humidity: 100%

Liquid water content (Water droplet content): 1.5g/m³ (ANR)

Compressed air flow: Rated flow of each model

**Removed rate of water % =

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

Various equipment for drain discharge



Symbol



Model

| Model | AMG150 | AMG250 | AMG350 | AMG450 | AMG550 | AMG650 | AMG850 |
|--|---------------|---------------|---------------|-------------|--------|----------|----------|
| Flow rate (ℓ/min (ANR)) ⁽¹⁾ | 300 | 750 | 1500 | 2200 | 3500 | 6000 | 12000 |
| Port size (Nominal size B) | 1/8, 1/4, 3/8 | 1/4, 3/8, 1/2 | 3/8, 1/2, 3/4 | 1/2, 3/4, 1 | 3/4, 1 | 1, 1 1/2 | 1 1/2, 2 |
| Weight (kg) | 0.38 | 0.55 | 0.9 | 1.4 | 2.1 | 4.2 | 10.5 |



Note 1) Max. flow is at 0.7MPa.

Max. flow depends on operating pressure. Please refer to p.4.4-2 for flow rate and to p.4.4-3 for graph of max. flow.

Specifications

| Fluid | Compressed air |
|---------------------------|--|
| Max. operating pressure | 1.0MP |
| Min. operating pressure* | 0.05MPa |
| Proof pressure | 1.5MPa |
| Ambient/Fluid temperature | 5 to 60°C |
| Removal rate of water | 99% |
| Element life | 2 years or when pressure drop reaches 0.1MPa |

*With N.O. auto drain: 0.15MPa

Accessories (Options)

| Applicable model | AMG150 | AMG250 | AMG350 | AMG450 | AMG550 | AMG650 | AMG850 |
|---|--------|--------|--------|--------|--------|--------|--------|
| Bracket assembly (With cap bolt With spring washer) | BM51 | BM52 | BM53 | BM54 | BM55 | BM56 | BM57 |

How to Order

AMG 250 — 03 B — J

Body size

| | |
|-----|-------|
| 150 | 1/8 |
| 250 | 1/4 |
| 350 | 3/8 |
| 450 | 1/2 |
| 550 | 3/4 |
| 650 | 1 |
| 850 | 1 1/2 |

Thread

| | |
|---|---------|
| — | Rc (PT) |
| F | G(PF) |
| N | NPT |

Port size

| | | | |
|----|------------------|----|--------------------|
| 01 | 1/8 ^B | 06 | 3/4 ^B |
| 02 | 1/4 ^B | 10 | 1 ^B |
| 03 | 3/8 ^B | 14 | 1 1/2 ^B |
| 04 | 1/2 ^B | 20 | 2 ^B |

Options*

| | |
|---|--|
| J | Drain guide 1/4 ^B female thread |
| R | IN-OUT reverse direction |

Accessories (Options)*

| Symbol | Description |
|--------|-----------------|
| — | No accessories |
| B | Bracket |
| C | N.C. auto drain |
| D | N.O. auto drain |

*Please refer to the following table for combinations of accessories and options.



Note) Please refer to p.4.7-7 about "How to Order" case assembly.

Option combinations

◎ Available ◻ Not available

| Accessories/Optional specification | | Accessories | | | | Options | | | | | | | |
|------------------------------------|--------------------------|-------------|---|---|---|---------|--------|--------|--------|--------|--------|--------|---|
| | | C | D | J | R | AMG150 | AMG250 | AMG350 | AMG450 | AMG550 | AMG650 | AMG850 | |
| Accessories | N.C. auto drain | C | | | | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |
| | N.O. auto drain | D | | | | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |
| Options | Drain guide 1/4 B | —J | | | | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |
| | IN-OUT reverse direction | —R | ◎ | ◎ | ◎ | | | | | | | | |

Series AMG

Flow Rate

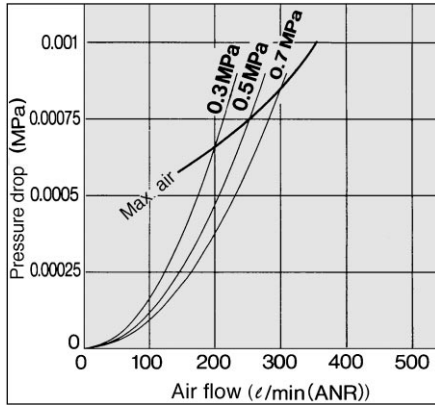
Initial condition of element



Note) If compressed air is above max. flow, water separator cannot operate well.

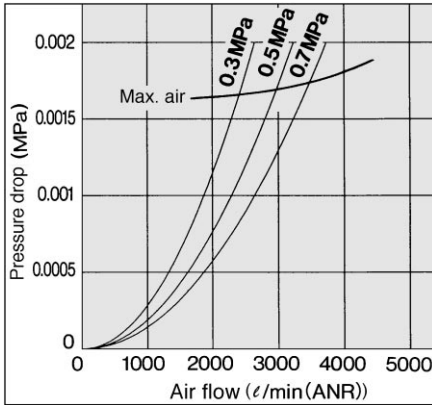
AMG150

1/8^B



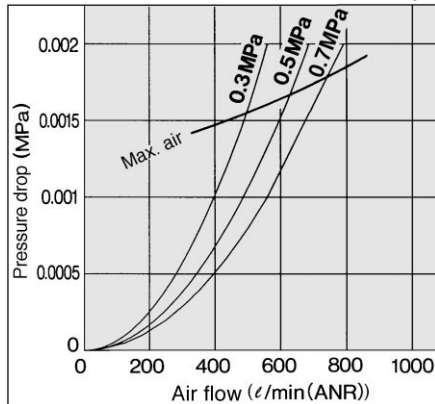
AMG550

3/4^B



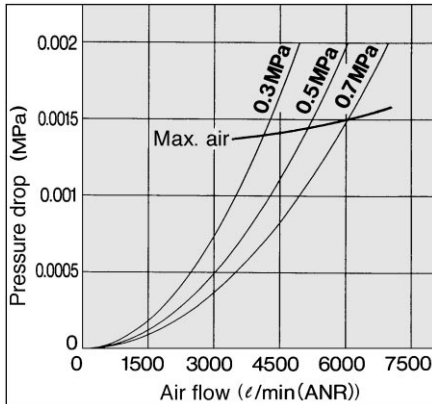
AMG250

1/4^B



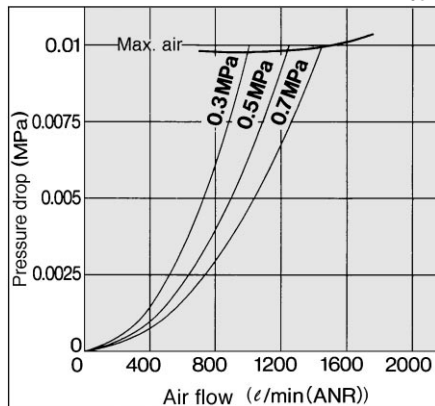
AMG650

1^B



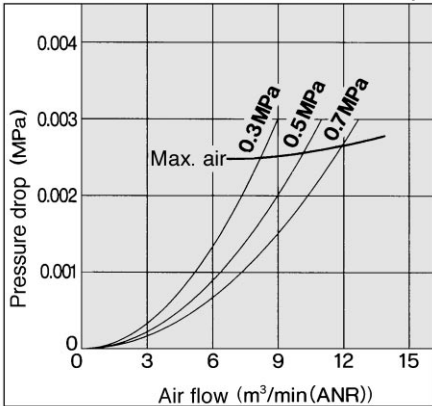
AMG350

3/8^B



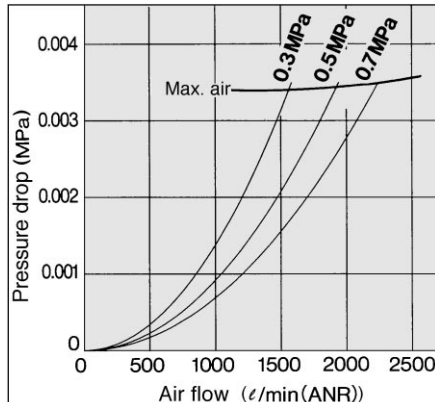
AMG850

1 1/2^B



AMG450

1/2^B



⚠️ Precautions

Be sure to read before handling. Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.4.0-5 to 4.0-7 for more detailed precautions of every series.

Design

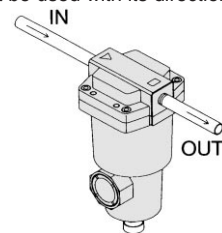
⚠️ Caution

- Place this product in a location that is not likely to create pulsations. If the internal/external pressure difference exceeds 0.1 MPa, the element could break.
- When using an auto drain, drain pipes must be connected within the following range:
 - Normally closed (N.C.) }
 - Normally open (N.O.) }
 Tube fittings are provided. Therefore, use a 10mm external tube, and keep the pipe length within 5m.
 - AMG850 type (N.O.) }
 Use a tube with a minimum bore of 9mm, and keep its length within 2.8m.
 When using a normally open (N.O.) auto drain, because the valve does not close until the air pressure becomes higher than 0.15MPa, the air could keep discharging from the drain discharge section of an air compressor with a small air discharge volume. Therefore, make sure to use a normally closed (N.C.) auto drain with a compressor under 3.7kW.
- The bracket that is provided with the product is for supporting the product itself. Separate supports must be provided for piping and other connection devices.

Installation

⚠️ Caution

- Verify the direction of the compressed air flow and the "▷" mark that indicates the inlet side of the product before connecting. It cannot be used with its direction reversed.



- Make sure to install this product horizontally. If it is installed diagonally, sideways, or upside down, the drainage that was separated by the element will splash to the secondary side.

Maintenance

⚠️ Caution

- The element replacement period is when the pressure drop has reached 0.1MPa or 2 years have elapsed after it has been put into use, whichever comes first.
- When it is time to replace the element, immediately replace it with a new element. Also replace the O ring and the gasket.
- When using a product equipped with a drain valve, drain guide, or a ball valve, discharge the drainage before the drain fluid surface reaches the center of the sight glass. If it is not discharged properly, the drainage will flow out to the secondary side.



Consult SMC for detailed specifications, size and delivery.

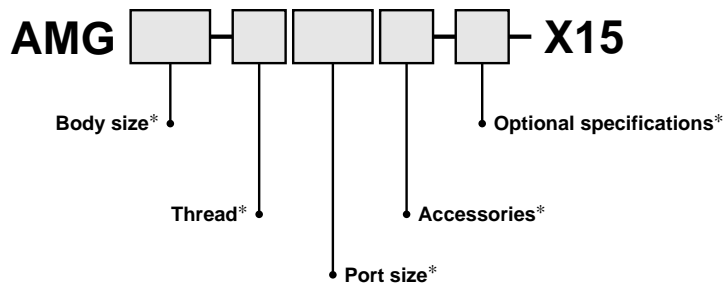
① With IN-OUT flange

Available for flange piping easily.

Specifications

| | |
|------------------|------------------|
| Applicable Model | AMG450 to AMG850 |
|------------------|------------------|

How to Order *: Refer to p.4.4-1 for "How to Order" standard specifications.



Dimensions

