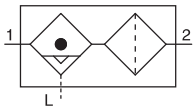
Compressed Air Preparation Filter

RoHS

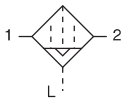
AFF/AM/AMD Series

Symbol

Line Filter



Mist Separator
Micro Mist Separator



AFF AM AMD

How to Order

AFF 30 – ❸ 03 BD – ❻ – D

❶ ❷ ❸ ❹ ❺ ❻

· Option/Semi-standard: Select one each for **a** to **f**.
· Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.
Example) AM30-N03BD-6RZ-D

				Symbol	Description	❷ Body size 20	30	40
❶	Filter type			AFF	Nominal filtration rating: 1 μm Water droplet removal ratio: 99 %	●	●	●
				AM	Nominal filtration rating: 0.1 μm Oil mist concentration on the outlet side: 1 mg/m³	●	●	●
				AMD	Nominal filtration rating: 0.01 μm Oil mist concentration on the outlet side: 0.1 mg/m³	●	●	●
				+				
❸	Thread type			—	Rc	●	●	●
				N*1	NPT	●	●	●
				F*2	G	●	●	●
				+				
❹	Port size			01	1/8	●	—	—
				02	1/4	●	●	●
				03	3/8	—	●	●
				04	1/2	—	—	●
				+				
❺	Option	a	Mounting	—	Without mounting option	●	●	●
				B*3	With bracket	●	●	●
				+				
		b	Float type auto drain	—	Without auto drain	●	●	●
				C*4	N.C. (Normally closed)	●	●	●
				D*5	N.O. (Normally open)	—	●	●
				+				
❻	Semi-standard	c	Bowl*6	—	Polycarbonate bowl	●	●	●
				2	Metal bowl	●	●	●
				6	Nylon bowl	●	●	●
				8	Metal bowl with level gauge	—	●	●
				C	With bowl guard	●	—*7	—*7
				6C	With bowl guard/Nylon bowl	●	—*8	—*8
				+				
		d	Drain port*9	—	With drain cock	●	●	●
				J*10	Drain guide 1/8	●	—	—
					Drain guide 1/4	—	●	●
				W*11	Drain cock, Barb fitting (Ø 6)	—	●	●
				+				
		e	Flow direction	—	Flow direction: Left to right	●	●	●
				R	Flow direction: Right to left	●	●	●
				+				
		f	Unit	—	Name plate and caution plate for bowl in SI unit: MPa	●	●	●
				Z*12	Name plate and caution plate for bowl in imperial units: psi, °F	○*13	○*13	○*13

*1 Drain guide is NPT1/8 (applicable to the AFF20, AM20, and AMD20) and NPT1/4 (applicable to the AFF30, AFF40, AM30, AM40, AMD30, and AMD40). The auto drain port comes with a Ø 3/8" One-touch fitting (applicable to the AFF30, AFF40, AM30, AM40, AMD30, and AMD40).

*2 Drain guide is G1/8 (applicable to the AFF20, AM20, and AMD20) and G1/4 (applicable to the AFF30, AFF40, AM30, AM40, AMD30, and AMD40).

*3 A bracket is not assembled and supplied loose at the time of shipment. Including 2 mounting screws

*4 When pressure is not applied, condensate which does not start the auto drain mechanism will be left in the bowl. Releasing the residual condensate before ending operations for the day is recommended.

*5 If the compressor is small (0.75 kW, discharge flow is less than 100 l/min (ANR)), air leakage from the drain cock may occur during the start of operations. N.C. type is recommended.

*6 Refer to the chemical data on page 19 for chemical resistance of the bowl.

*7 A bowl guard is provided as standard equipment (polycarbonate).

*8 A bowl guard is provided as standard equipment (nylon).

*9 The combination of float type auto drain C and D is not available.

*10 Without a valve function
The mounting screws are the same as the thread of ❸.

*11 The combination of metal bowl 2 and 8 is not available.

*12 For pipe thread type: NPT
This product is for overseas use only according to the new Measurement Act. (The SI unit type is provided for use in Japan.)

*13 ○: For pipe thread type: NPT only

SMC

Line Filter AFF Series

Standard Specifications

Model			AFF20	AFF30	AFF40
Fluid			Compressed air		
Ambient and fluid temperatures		°C	–5 to 60 (No freezing)		
Proof pressure		MPa	1.5		
Max. operating pressure		MPa	1.0		
Min. operating pressure		MPa	0.05		
Auto drain minimum operating pressure	(N.C.)	MPa	0.1	0.15	
	(N.O.)	MPa	—	0.1	
Nominal filtration rating[*1]		μm	1 (99 % filtered particle size)		
Water droplet removal ratio[*2, *3]		%	99		
Compressed air purity class[*4]		—	ISO 8573-1:2010 [4 : 7 : 4][*5]		
Max. flow capacity[*6]		l/min (ANR)	300	750	1500
Port size		—	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2
Weight		kg	0.19	0.39	0.79
Bowl material			Polycarbonate		
Bowl guard			Semi-standard (Steel)	Standard (Polycarbonate)	
Drain capacity		cm^3	8	25	45

*1 For the following conditions in accordance with [Test condition: ISO 8573-4:2001, Test method ISO 12500-3:2009 compliant] in addition to the conditions above
- When the air flow capacity, inlet pressure, and the amount of solid bodies on the filter inlet side are stable
- When a new element is used

*2 For the following conditions in accordance with [Test condition: ISO 12500-4:2009 compliant] in addition to the conditions above
- Water droplet on the filter inlet side = 33 g/m^3
  (Water droplet indicates condensed moisture. Water vapour which is not condensed is not included.)
- Inlet temperature = 25 °C
- When the air flow capacity, inlet pressure, and the amount of water droplets on the filter inlet side are stable
- When a new element is used

*3 The bowl seal and other O-rings are slightly lubricated.

*4 The compressed air purity class is indicated based on ISO 8573-1:2010 Compressed air – Part 1: Contaminants and purity classes.
For details on this standard, refer to page 18.

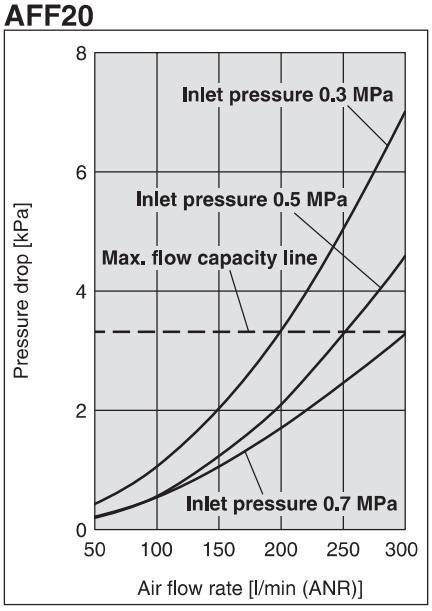
*5 The compressed air quality class on the inlet side is [6 : 8 : 4].

*6 Inlet pressure: 0.7 MPa
Flow at 20 °C, atmospheric pressure, and 65 % of the relative humidity

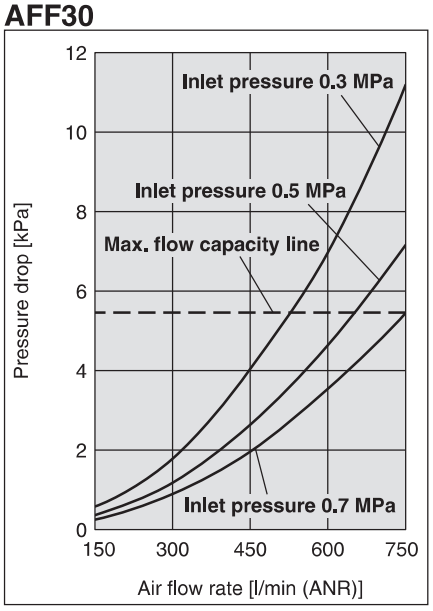
Flow Rate Characteristics (Representative values)

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

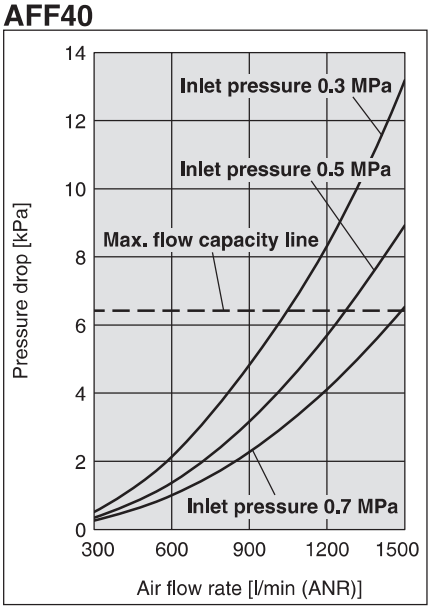
AFF20



AFF30



AFF40



Mist Separator AM Series

Standard Specifications

Model			AM20	AM30	AM40
Fluid			Compressed air		
Ambient and fluid temperatures		°C	–5 to 60 (No freezing)		
Proof pressure		MPa	1.5		
Max. operating pressure		MPa	1.0		
Min. operating pressure		MPa	0.05		
Auto drain minimum operating pressure	(N.C.)	MPa	0.1	0.15	
	(N.O.)	MPa	—	0.1	
Nominal filtration rating*1		μm	0.1 (99 % filtered particle size)		
Oil mist concentration on the outlet side*2, *3		mg/m^3	1 (≈ 0.8 ppm) or less		
Compressed air purity class*4		—	ISO 8573-1:2010 [2 : 7 : 3]*5		
Max. flow capacity*6		l/min (ANR)	300	750	1500
Port size		—	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2
Weight		kg	0.19	0.39	0.79
Bowl material			Polycarbonate		
Bowl guard			Semi-standard (Steel)	Standard (Polycarbonate)	
Drain capacity		cm^3	8	25	45

*1 For the following conditions in accordance with [Test condition: ISO 8573-4:2001, Test method ISO 12500-3:2009 compliant] in addition to the conditions above
· When the air flow capacity, inlet pressure, and the amount of solid bodies on the filter inlet side are stable
· When a new element is used

*2 For the following conditions in accordance with [Test condition: ISO 8573-2:2007, Test method ISO 12500-1:2007 compliant] in addition to the conditions above
· Oil mist concentration on the filter inlet side = 10 mg/m^3
· When the air flow capacity, inlet pressure, and the oil mist concentration on the filter inlet side are stable
· When a new element is used

*3 The bowl seal and other O-rings are slightly lubricated.

*4 The compressed air purity class is indicated based on ISO 8573-1:2010 Compressed air – Part 1: Contaminants and purity classes.
For details on this standard, refer to page 18.

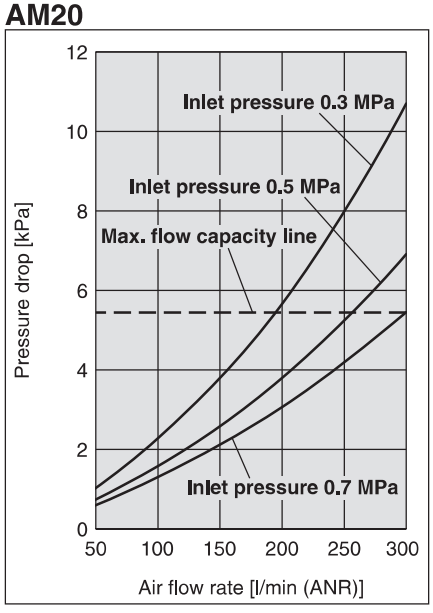
*5 The compressed air quality class on the inlet side is [4 : 7 : 4].

*6 Inlet pressure: 0.7 MPa
Flow at 20 °C, atmospheric pressure, and 65 % of the relative humidity

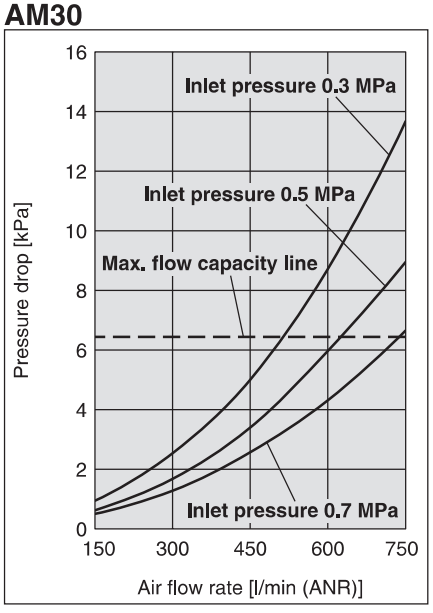
Flow Rate Characteristics (Representative values)

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

AM20



AM30



AM40