

Mist Separator

Series AFM20/30/40

How to Order

AFM 30 F 03 BD 2R

Mist separator

Body size

20 30 40

Thread type

Nil	Rc
N ⁽¹⁾	NPT
F ⁽²⁾	G

Note 1) Drain guide is NPT 1/4 (applicable to AFM30 and 40), and the exhaust port for auto-drain comes with ø3/8" One-touch fitting (applicable to AFM30 and 40).

Note 2) Drain guide is G 1/4 (applicable to AFM30 and 40).

Port size

Symbol	Port size	Body size	20	30	40
01	1/8	●	—	—	—
02	1/4	●	●	●	●
03	3/8	—	●	●	—
04	1/2	—	—	●	—
06	3/4	—	—	—	●

Note 3) Bracket is not assembled and is supplied loose at the time of shipment.

Accessory

Symbol	Description	Applicable model
Nil	—	—
B ⁽³⁾	With bracket	AFM20 to 40
C	Float type ⁽⁴⁾ auto-drain (N.C.)	AFM20 to 40
D	Float type ⁽⁴⁾ auto-drain (N.O.)	AFM30/40

Note 4) Applicable tubing O.D. for auto-drain connection should be ø3/8" in case NPT thread port is chosen.

Option

Symbol	Description	Applicable model
2	Metal bowl	AFM20 to 40
6	Nylon bowl	AFM20 to 40
8	Metal bowl with level gauge	AFM30/40
C	With bowl guard	AFM20
J ⁽⁵⁾	Drain guide 1/4	AFM30/40
R	Flow direction: Right → Left	AFM20 to 40
W	Drain cock with barb fitting: ø6 x ø4 nylon tubing	AFM30/40
Z ⁽⁶⁾	Name plate and caution plate for bowl in imperial units (PSI, °F)	AFM20 to 40

* When more than one specification is required, indicate in ascending alphanumeric order.

Note 5) Without a valve function.

Note 6) For NPT thread type. This product is for overseas use only according to the new Measurement Law. (The SI unit type is provided for use in Japan.)

Accessory/Optional Specifications Combinations

◎ : Combination available

○ : Varies depending on the model

◻ : Combination not available

△ : Available only with NPT thread

Combination		Symbol	Accessory			Optional specifications								Applicable mist separator	
			B	C	D	2	6	8	C	J	R	W	Z	AFM20	AFM30 to 40
Accessory	With bracket	B	◻	◎	○	◎	◎	○	○	○	◎	○	△	◎	◎
	Float type auto-drain (N.C.)	C	◎	◻	◻	◎	◎	○	○	◻	◎	◻	△	◎	◎
	Float type auto-drain (N.O.)	D	◎	◻	◻	◎	◎	◎	◻	◻	◎	◻	△	◻	◎
Optional specifications	Metal bowl	-2	◎	◎	○	◻	◻	◻	◻	○	◎	◻	△	◎	◎
	Nylon bowl	-6	◎	◎	○	◻	◻	◻	○	○	◎	○	△	◎	◎
	Metal bowl with level gauge	-8	◎	◎	◎	◻	◻	◻	◻	◎	◎	◻	△	◻	◎
	With bowl guard	-C	◎	◎	◻	◻	◻	◻	◻	◻	◎	◻	△	◎	◻
	Drain guide 1/4	-J	◎	◻	◻	◎	◎	◎	◻	◻	◎	◻	△	◻	◎
	Flow direction: Right → Left	-R	◎	◎	○	◎	◎	○	○	○	◻	○	△	◎	◎
	Drain cock with barb fitting: ø6 x ø4 nylon tubing	-W	◎	◻	◻	◻	◎	◻	◻	◻	◎	◻	△	◻	◎
	Name plate and caution plate for bowl in imperial units (PSI, °F)	-Z	△	△	△	△	△	△	△	△	△	△	△	△	△

Standard Specifications

Model	AFM20	AFM30	AFM40	AFM40-06
Port size	1/8 1/4	1/4 3/8	1/4 3/8 1/2	3/4
Fluid	Air			
Proof pressure	1.5 MPa			
Maximum operating pressure	1.0 MPa			
Minimum operating pressure	0.05 MPa			
Ambient and fluid temperature	-5 to 60°C (With no freezing)			
Rated flow (l/min (ANR)) ⁽¹⁾	200	450	1100	1100
Nominal filtration rating	0.3 µm (95% filtered particle size)			
Outlet side oil mist concentration	Maximum 1.0 mg/m ³ (ANR) (approx. 0.8 ppm) ⁽²⁾			
Bowl material	Polycarbonate			
Bowl guard	Option	Standard		
Drain capacity (cm ³)	8	25	45	45
Weight (kg)	0.18	0.22	0.44	0.49

Note 1) When the inlet pressure is 0.7 MPa. Flow rate varies depending on the inlet pressure.

Note 2) When the compressor oil mist discharge concentration is 30 mgf/m³ (ANR).

Accessory Part No.

Applicable model	AFM20	AFM30	AFM40	AFM40-06
Accessory				
Bracket assembly ⁽¹⁾	AF20P-050AS	AF30P-050AS	AF40P-050AS	AF40P-070AS
Float type auto-drain ⁽²⁾	N.O.	AD38	AD48	AD48
	N.C.	AD27	AD37	AD47

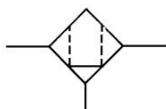
Note 1) Assembly includes a bracket and 2 mounting screws.

Note 2) Minimum operating pressure: N.O. type—0.1 MPa; N.C. type—0.1 MPa (AD17/27) and 0.15 MPa (AD37/47).

Note 3) When "N" is specified in the end of part number of auto-drain, applicable tubing O.D. should be ø3/8".



JIS Symbol

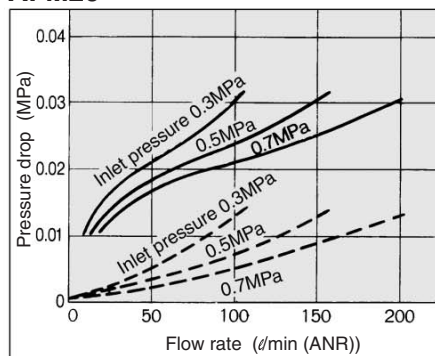


Mist Separator Series AFM20/30/40

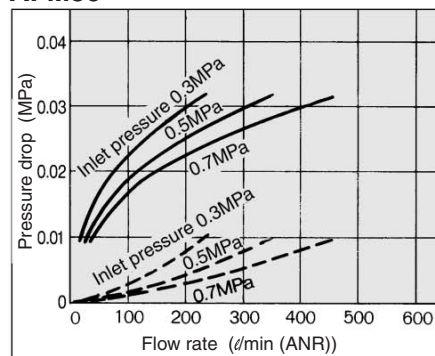
Flow Characteristics (Representative values)

— : When saturated with oil
- - - : Initial state

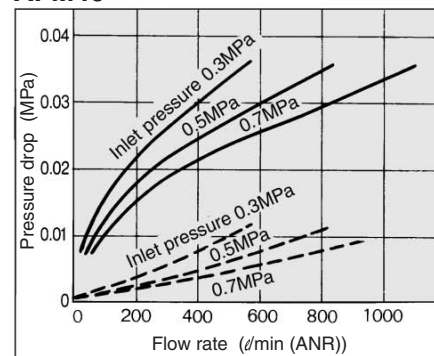
AFM20



AFM30

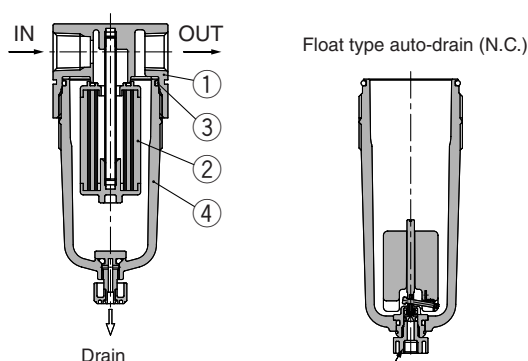


AFM40

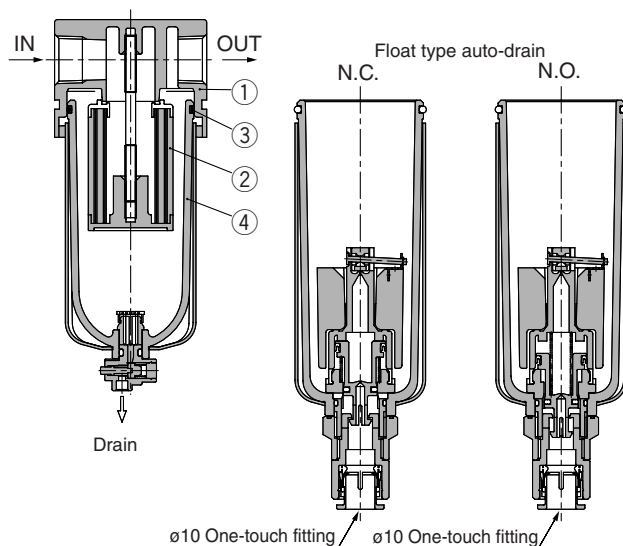


Construction

AFM20



AFM30/40



Component Parts

No.	Description	Material		Note
		AFM20	AFM30, AFM40, AFM40-06	
①	Body	Zinc die-casted	Aluminum die-casted	Platinum silver

Replacement Parts

No.	Description	Material	Part no.			
			AFM20	AFM30	AFM40	AFM40-06
②	Element assembly	—	AFM20P-060AS	AFM30P-060AS	AFM40P-060AS	AFM40P-060AS
③	Bowl O-ring	NBR	C2SFP-260S	C3SFP-260S	C4SFP-260S	C4SFP-260S
④	Bowl assembly (1)	PC	C2SF	C3SF (2)	C4SF (2)	C4SF (2)

Note 1) Including O-Ring. Please contact SMC regarding the bowl assembly supply for PSI and °F unit specifications.
Note 2) Bowl assembly for AFM30 to AFM40-06 includes a bowl guard (steel band material).

⚠ Precautions

Be sure to read before handling. Refer to pages 14-21-3 to 14-21-4 for Safety Instructions and Common Precautions.

Air Supply

⚠ Caution

1. Install an air filter (Series AF) as a preliminary filter on the inlet side of the mist separator to prevent premature clogging.
2. Do not install on the inlet side of the dryer as this can cause premature clogging of the element.

Maintenance

⚠ Warning

1. Replace the element every 2 years or when the pressure drop becomes 0.1 MPa, whichever comes first, to prevent damage to the element.

Design

⚠ Caution

1. Design the system so that the mist separator is installed in a pulsation-free location. The difference between internal and external pressure inside the element should be kept within 0.1 MPa, as exceeding this value could cause damage.

Selection

⚠ Caution

1. Do not allow air flow that exceeds the rated flow. If the air flow is allowed outside the range of the rated flow even momentarily, drainage and lubricant may splash at the outlet side or cause damage to the component.
2. Do not use in a low pressure application (such as a blower). F.R.L. unit has its own minimum operating pressure depending on the equipment and is designed specifically to function with compressed air. If used below the minimum operating pressure, a loss of performance and malfunction can occur. Please contact SMC if an application under such conditions cannot be avoided.