

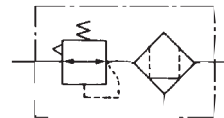
Mist Separator Regulator

AWM20 to AWM40

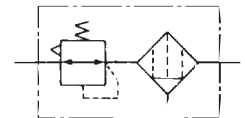
Micro Mist Separator Regulator

AWD20 to AWD40

Symbol
Mist Separator
Regulator

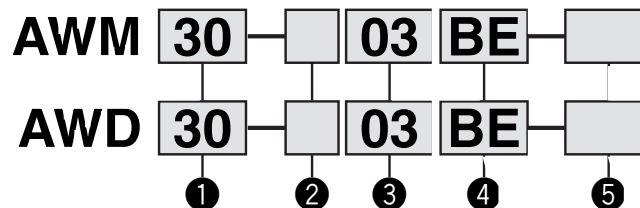


Symbol
Micro Mist Separator
Regulator



- The AWM series is made up of a regulator and a mist separator to provide optimum results in applications such as clean air blow operations. (Nominal filtration rating: 0.3 m)
- The AWD series is made up of a regulator and a micro mist separator to provide optimum results in applications such as ultraclean air blow operations. (Nominal filtration rating 0.01 m)

How to Order



- Option / Semi-standard: Select one each for a to i.
- Option / Semi-standard symbol: When more than one specification is required, indicate in ascending alphanumeric order.
Example) AWM30-03BE-1N

		Symbol	Description	①			
				Body size			
				20	30	40	
②	Thread type	Nil	Rc	●	●	●	
		N ^{Note 1)}	NPT	●	●	●	
		F ^{Note 2)}	G	●	●	●	
+							
③	Port size	01	1/8	●	—	—	
		02	1/4	●	●	●	
		03	3/8	—	●	●	
		04	1/2	—	—	●	
+							
④	a	Mounting	Nil	Without mounting option	●	●	●
			B ^{Note 4)}	With bracket	●	●	●
			H	With set nut	●	●	●
	+						
	b	Float type auto drain	Nil	Without auto drain	●	●	●
			C	Float type auto drain (N.C.)	●	●	●
			D	Float type auto drain (N.O.)	—	●	●
	+						
	c	Pressure gauge	Nil	Without pressure gauge	●	●	●
			E	Square embedded type pressure gauge	●	●	●
			G	Round type pressure switch	●	●	●
		Digital pressure switch	E1 ^{Note 5)}	NPN output / Wiring bottom entry	●	●	●
			E2 ^{Note 5)}	NPN output / Wiring top entry	●	●	●
			E3 ^{Note 5)}	PNP output / Wiring bottom entry	●	●	●
			E4 ^{Note 5)}	PNP output / Wiring top entry	●	●	●
+							
⑤	d	Set pressure	Nil	0.05 to 0.85 MPa set	●	●	●
			1 ^{Note 6)}	0.02 to 0.2 MPa set	●	●	●
	+						
	e	Bowl	Nil	Polycarbonate bowl	●	●	●
			2	Metal bowl	●	●	●
			6	Nylon bowl	●	●	●
			8	Metal bowl with level gauge	—	●	●
			C	With bowl guard	●	—	—
			6C	Nylon bowl with bowl guard	●	—	—
	+						
	f	Drain port ^{Note 7)}	Nil	With drain cock	●	●	●
			J ^{Note 8)}	Drain guide 1/8	●	—	—
				Drain guide 1/4	—	●	●
			W ^{Note 9)}	Drain cock with barb fitting: For ø6 x ø4 nylon tube	—	●	●

Mist Separator Regulator *Series AWM20 to AWM40*

Micro Mist Separator Regulator *Series AWD20 to AWD40*



AWM20, AWD20 AWM40, AWD40

		Symbol	Description	1			
				Body size			
				20	30	40	
5	g	Exhaust mechanism	Nil	Relieving type	●	●	●
			N	Non-relieving type	●	●	●
				+			
	h	Flow direction	Nil	Flow direction: Left to right	●	●	●
			R	Flow direction: Right to left	●	●	●
			+				
	i	Pressure unit	Nil	Name plate, caution plate for bowl, and pressure gauge in imperial units: MPa	●	●	●
			Z <small>Note 10)</small>	Name plate, caution plate for bowl, and pressure gauge in imperial units (PSI, F)	○ <small>Note 12)</small>	○ <small>Note 12)</small>	○ <small>Note 12)</small>
			ZA <small>Note 11)</small>	Digital pressure switch: With unit switching function	△ <small>Note 13)</small>	△ <small>Note 13)</small>	△ <small>Note 13)</small>

Note 1) Drain guide is NPT1/8 (applicable to the AWM20, AWD20) and NPT1/4 (applicable to the AWM30 to AWM40, AWD30 to AWD40). The exhaust port for auto drain comes with $\phi 3/8"$ One-touch fitting (applicable to the AWM30 to AWM40, AWD30 to AWD40).

Note 2) Drain guide is G1/8 (applicable to the AWM20 and AWD20) and G1/4 (applicable to the AWM30 to AWM40, AWD30 to AWD40).

Note 3) Option B, G, H are not assembled and are supplied loose at the time of shipment.

Note 4) Assembly of a bracket and set nuts

Note 5) When choosing with H (panel mount) the installation space for lead wires will not be secured. In this case, select "wiring down entry" for the lead wire entry.

Note 6) The only difference from the standard specifications is the adjusting spring for the regulator. It does not restrict the setting of 0.2 MPa or more. When the pressure gauge is attached, a 0.2 MPa pressure gauge will be fitted.

Note 7) Float type auto drain: The combination between C and D is not available.

Note 8) Without a valve function

Note 9) Metal bowl: The combination of 2 and E cannot be selected.

Note 10) For thread type: NPT. This product is for overseas use only according to the new Measurement Law. (The SI unit type is provided for use in Japan.) The digital pressure switch will be equipped with the unit switching function, setting to PSI initially.

Note 11) For options: E1, E2, E3, E4. This product is for overseas use only according to the new Measurement Law. (The SI unit is provided for use in Japan.)

Note 12) ○: For thread type: NPT only

Note 13) △: Combination available for options: E1, E2, E3, E4

Standard Specifications

Model		AWM20 AWD20	AWM30 AWD30	AWM40 AWD40
Port size		1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2
Fluid		Air		
Proof pressure		1.5 MPa		
Maximum operating pressure		1.0 MPa		
Set pressure range		0.05 to 0.85 MPa		
Pressure gauge port size ^{Note 1)}		1/8		1/4
Ambient and fluid temperature ^{Note 2)}		-5 to 60°C (with no freezing)		
Nominal filtration rating	AWM20 to AWM40	0.3 m (95% filtered particle size)		
	AWD20 to AWD40	0.01 m (95% filtered particle size)		
Outlet side oil mist concentratio	AWM20 to AWM40	Maximum 1.0 mg/m ³ (ANR) (0.8 ppm) ^{Note 3)} ^{Note 4)}		
	AWD20 to AWD40	Max. 0.1 mg/m ³ (ANR) (Before saturated with 0.001 mg/m ³ (ANR) or less 0.008 ppm) ^{Note 3)} ^{Note 4)}		
Rated flow (ℓ/min (ANR)) ^{Note 5)}	AWM20 to AWM40	150	330	820
	AWD20 to AWD40	90	180	450
Drain capacity (cm ³)		8	25	45
Bowl material		Polycarbonate		
Bowl guard		Semi-standard	Standard	
Regulator construction		Relieving type		
Weight (kg)		0.44	0.59	1.25

Note 1) Pressure gauge connection threads are not available for F.R.L. unit with a square embedded type pressure gauge.

Note 2) -5 to 50°C for the products with the digital pressure switch.

Note 3) When the compressor oil mist discharge concentration is 30 mg/m³ (ANR).

Note 4) Bowl O-ring and other C-rings are slightly lubricated.

Note 5) Conditions: Mist separator inlet pressure 0.7 MPa; The rated flow varies depending on the inlet pressure. Keep the air flow within the rated flow to prevent an outflow of lubricant to the outlet side.

Series AWM20 to AWM40

Series AWD20 to AWD40

Option / Part No.

		Model	AWM20 AWD20	AWM30 AWD30	AWM40 AWD40
Option					
Bracket assembly ^{Note 1)}			AW20P-270AS	AR30P-270AS	AR40P-270AS
Set nut			AR20P-260S	AR30P-260S	AR40P-260S
Pressure gauge	Round type ^{Note 2)}	Standard	G36-10-□01		G46-10-□02
		0.02 to 0.2 MPa set	G36-2-□01		G46-2-□02
	Square embedded type ^{Note 3)}	Standard	GC3-10AS [GC3P-010AS (Pressure gauge cover only)]		
		0.02 to 0.2 MPa set	GC3-2AS [GC3P-010AS (Pressure gauge cover only)]		
Digital pressure switch ^{Note 4)}		NPN output / Wiring bottom entry	ISE35-N-25-MLA [ISE35-N-25-M (Switch body only)]		
		NPN output / Wiring top entry	ISE35-R-25-MLA [ISE35-R-25-M (Switch body only)]		
		PNP output / Wiring bottom entry	ISE35-N-65-MLA [ISE35-N-65-M (Switch body only)]		
		NPN output / Wiring top entry	ISE35-R-65-MLA [ISE35-R-65-M (Switch body only)]		
Float type auto drain ^{Note 5)}		N.O.	—	AD38	AD48
		N.C.	AD37	AD37	AD47

Note 1) Assembly of a bracket and set nuts

Note 2) □ in part numbers for a round pressure gauge indicates a type of connection thread. No indication is necessary for R; however, indicate N for NPT. Please contact SMC regarding the connection thread NPT and pressure gauge supply for PSI unit specifications.

Note 3) Including O-ring and 2 mounting screws. []: Pressure gauge cover only

Note 4) Lead wire with connector (2 m), adaptor, lock pin, O-ring (1 pc.) , mounting screw (2 pcs.) are attached. []: Switch body only. Also, regarding how to order the digital pressure switch, please refer to page 73.

Note 5) Minimum operating pressure: N.O. type—0.1 MPa; N.C. type—0.1 MPa (AD27) and 0.15 MPa (AD37/47). Please contact SMC for PSI unit and F specifications.

⚠ Specific Product Precautions

Be sure to read this before handling. Refer to “Precautions for Handling Pneumatic Devices” (M-03-E3A) for Safety Instructions and F.R.L. Unit Precautions.

Selection

⚠ Warning

1. Residual pressure release (outlet pressure release) is not complete by releasing inlet pressure. Please contact SMC regarding residual pressure release.

Air Supply

⚠ Caution

1. Install an air filter (the AF series) as a preliminary filter on the inlet side of the mist separator regulator to prevent premature clogging.
2. Install an air filter (the AFM series) as a preliminary filter on the inlet side of the micro mist separator regulator to prevent premature clogging.

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.

Mounting and Adjustment

⚠ Caution

1. Set the regulator while verifying the displayed values of the inlet and outlet pressure gauges. Turning the regulator knob excessively can cause damage to the internal parts.
2. The pressure gauge included with regulators for 0.02 to 0.2 MPa setting is for up to 0.2 MPa use only (except for the AR10). Exceeding 0.2 MPa of pressure can damage the gauge.
3. Do not use tools on the pressure regulator knob as this may cause damage. It must be operated manually.

Mounting and Adjustment

⚠ Warning

1. Be sure to unlock the knob before adjusting the pressure and lock it after setting the pressure. Failure to follow this procedure can cause damage to the knob and the outlet pressure may fluctuate.
 - Pull the pressure regulator knob to unlock. (You can visually verify this with the "orange mark" that appears in the gap.)
 - Push the pressure regulator knob to lock. When the knob is not easily locked, turn it left and right a little and then push it (when the knob is locked, the "orange mark", i.e., the gap will disappear).
2. A knob cover is available to prevent careless operation of the knob. Refer to “Features 1” for details.

