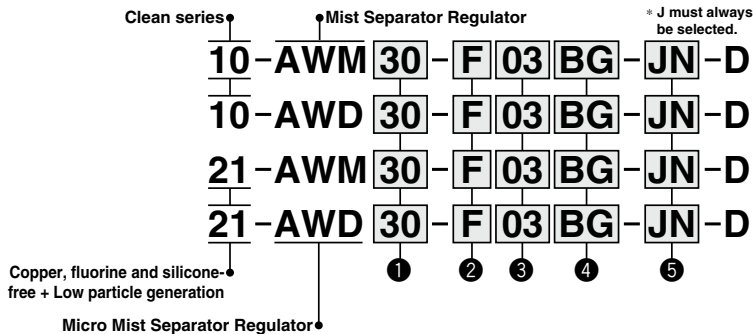


# 10-21-AWM-D series Mist Separator Regulator

# 10-21-AWD-D series Micro Mist Separator Regulator

## How to Order



Option/Semi-standard: Select one each for a to g.  
 Option symbol: When more than one specification is required, indicate in alphabetical order.  
 Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.  
 Example) 10-AWM30-F03BG-2JNR-D

|   | Symbol                            | Description | 1   |                                |    |            |            |
|---|-----------------------------------|-------------|---|--------------------------------|----|------------|------------|
|   |                                   |             | Body size   |                                |    |            |            |
|   |                                   |             | 20  | 30                             | 40 |            |            |
| 2 | Pipe thread type                  | Nil         | Rc  | ●                              | ●  | ●          |            |
|   |                                   | N           | NPT   | ●                              | ●  | ●          |            |
|   |                                   | F           | G   | ●                              | ●  | ●          |            |
| 3 | Port size                         | +           |   |                                |    |            |            |
|   |                                   | 01          | 1/8   | ●                              | —  | —          |            |
|   |                                   | 02          | 1/4   | ●                              | ●  | ●          |            |
|   |                                   | 03          | 3/8   | —                              | ●  | ●          |            |
|   |                                   | 04          | 1/2   | —                              | —  | ●          |            |
| 4 | a                                 | Mounting    | Nil   | Without mounting option        | ●  | ●          | ●          |
|   |                                   |             | B <sup>Note 2)</sup>                                | With bracket                   | ●  | ●          | ●          |
|   |                                   |             | H   | With set nut (for panel mount) | ●  | ●          | ●          |
| b | Pressure gauge <sup>Note 3)</sup> | Nil         | Without pressure gauge                              | ●                              | ●  | ●          |            |
|   |                                   | G           | Round type pressure gauge (without limit indicator) | ●                              | ●  | ●          |            |
| c | Set pressure <sup>Note 4)</sup>   | Nil         | 0.05 to 0.85 MPa setting                            | ●                              | ●  | ●          |            |
|   |                                   | 1           | 0.02 to 0.2 MPa setting                             | ●                              | ●  | ●          |            |
| 5 | d                                 | Bowl        | Nil   | Polycarbonate bowl             | ●  | ●          | ●          |
|   |                                   |             | 2   | Metal bowl                     | ●  | ●          | ●          |
|   |                                   |             | 6   | Nylon bowl                     | ●  | ●          | ●          |
|   |                                   |             | 8   | Metal bowl with level gauge    | —  | —          | —          |
|   |                                   |             | C   | With bowl guard                | ●  | ___Note 5) | ___Note 5) |
|   |                                   |             | 6C  | With bowl guard (Nylon bowl)   | ●  | ___Note 6) | ___Note 6) |
| e | Drain port <sup>Note 7)</sup>     | J           | Drain guide 1/8                                     | ●                              | —  | —          |            |
|   |                                   |             | Drain guide 1/4                                     | —                              | ●  | ●          |            |

|   | Symbol                | Description  | ①                             |                       |                       |   |
|---|-----------------------|--|-------------------------------|-----------------------|-----------------------|---|
|   |                       |  | Body size                     |                       |                       |   |
|   |                       |  | 20                            | 30                    | 40                    |   |
| 5 | e                     | +  |                               |                       |                       |   |
|   |                       | Exhaust mechanism  | Relieving type                | ●                     | ●                     | ● |
|   |                       | N  | Non-relieving type            | ●                     | ●                     | ● |
|   | f                     | +  |                               |                       |                       |   |
|   |                       | Flow direction   | Flow direction: Left to right | ●                     | ●                     | ● |
|   |                       | R  | Flow direction: Right to left | ●                     | ●                     | ● |
| g | +                     |  |                               |                       |                       |   |
|   | Pressure unit         | Unit on product label: MPa, °C, Pressure gauge in SI units: MPa    | ●                             | ●                     | ●                     |   |
|   | Z <sup>(Note 8)</sup> | Unit on product label: psi, °F, Pressure gauge: MPa/psi dual scale | ○ <sup>(Note 9)</sup>         | ○ <sup>(Note 9)</sup> | ○ <sup>(Note 9)</sup> |   |

Note 1) Options B, G, and H are not assembled and supplied loose at the time of shipment.  
 Note 2) The assembly consists of a bracket and set nuts.  
 Note 3) When the pressure gauge is attached, a 1.0 MPa pressure gauge will be fitted for standard (0.85 MPa) type, 0.4 MPa pressure gauge for 0.2 MPa type.  
 Note 4) Pressure can be set higher than the specification pressure in some cases, but use pressure within the specification range.

Note 5) A bowl guard is provided as standard equipment (polycarbonate).  
 Note 6) A bowl guard is provided as standard equipment (nylon).  
 Note 7) Be sure to select drain guide "J." Without a valve function. The mounting screws are the same as the thread of ②.  
 Note 8) For the 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.)  
 Note 9) ○: For the pipe thread type: NPT only

## Standard Specifications

| Model   | 10-21-AWM20-D<br>10-21-AWD20-D | 10-21-AWM30-D<br>10-21-AWD30-D         | 10-21-AWM40-D<br>10-21-AWD40-D |
|---|--------------------------------|--|--------------------------------|
| Port size   | 1/8, 1/4                       | 1/4, 3/8                               | 1/4, 3/8, 1/2                  |
| Pressure gauge port size  | 1/8                            |  |                                |
| Fluid   | Air                            |  |                                |
| Ambient and fluid temperatures                                  | -5 to 60°C (No freezing)       |  |                                |
| Proof pressure  | 1.5 MPa                        |  |                                |
| Max. operating pressure   | 1.0 MPa                        |  |                                |
| Set pressure range  | 0.05 to 0.85 MPa               |  |                                |
| Max. flow capacity <sup>(Note 1)</sup>                          | [AWM]                          | 150 L/min (ANR)                        | 820 L/min (ANR)                |
|   | [AWD]                          | 90 L/min (ANR)                         | 450 L/min (ANR)                |
| Nominal filtration rating <sup>(Note 2)</sup>                   | [AWM]                          | 0.3 μm (99.9% filtered particle size)  |                                |
|   | [AWD]                          | 0.01 μm (99.9% filtered particle size) |                                |
| Outlet side oil mist concentration <sup>(Note 3) (Note 4)</sup> | [AWM]                          | Max. 1.0 mg/m <sup>3</sup> (=0.8 ppm)  |                                |
| Compressed air purity class <sup>(Note 5) (Note 6)</sup>        | [AWM]                          | ISO8573-1:2010 [3 : 4 : 3]             |                                |
|   | [AWD]                          | ISO8573-1:2010 [1 : 4 : 2]             |                                |
| Drain capacity  | 8 cm <sup>3</sup>              | 25 cm <sup>3</sup>                     | 45 cm <sup>3</sup>             |
| Drain guide port size   | 1/8                            | 1/4                                    |                                |
| Construction  | Relieving type                 |  |                                |
| Grease  | 10-: Fluorine grease           |  |                                |
|   | 21-: Lithium soap based grease |  |                                |
| Cleanliness class (ISO class)                                   | 10-: Class 3                   |  |                                |
|   | 21-: Class 3                   |  |                                |

Note 1) Inlet pressure: 0.7 MPa, Outlet pressure: 0.5 MPa. Flow at 20°C, atmospheric pressure, and 65% of the relative humidity. The max. flow capacity varies depending on the outlet pressure. Keep the air flow within the max. flow capacity to prevent an outflow of lubricant to the outlet side.  
 Note 2) 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  
 Conditions: When a new element is used, and the flow capacity, inlet pressure, and the amount of solid bodies on the filter inlet side are stable  
 Note 3) The outlet side oil mist concentration 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  
 Conditions: When a new element is used, the oil mist concentration on the filter inlet side is 10 mg/m<sup>3</sup>, and the flow capacity, inlet pressure, and the oil mist concentration on the filter inlet side are stable  
 Note 4) The bowl O-ring and other O-rings are slightly lubricated.  
 Note 5) 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 1068-22.  
 Note 6) The compressed air quality class on the inlet side is [7 : 4 : 4].

## Option/Part Nos.

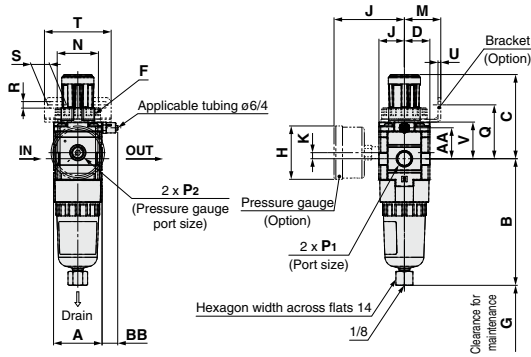
| Option  | Specifications | Part no.                       |                                |                                |
|---|----------------|--------------------------------|--------------------------------|--------------------------------|
|   |                | 10-21-AWM20-D<br>10-21-AWD20-D | 10-21-AWM30-D<br>10-21-AWD30-D | 10-21-AWM40-D<br>10-21-AWD40-D |
| Bracket assembly <sup>(Note 1)</sup>                    | 10-            | 10-AW23P-270AS                 | 10-AR33P-270AS                 | 10-AR43P-270AS                 |
|   | 21-            | AW23P-270AS                    | AR33P-270AS                    | AR43P-270AS                    |
| Set nut   | 10-            | 10-AR23P-260S                  | 10-AR33P-260S                  | 10-AR43P-260S                  |
|   | 21-            | AR23P-260S                     | AR33P-260S                     | AR43P-260S                     |
| Pressure gauge <sup>(Note 2)</sup><br>(Standard)        | 10-            | G49-10-□01                     |                                |                                |
|   | 21-            | G49-10-□01MS-X3                |                                |                                |
| Pressure gauge <sup>(Note 2)</sup><br>(0.2 MPa setting) | 10-            | G49-4-□01                      |                                |                                |
|   | 21-            | G49-4-□01MS-X3                 |                                |                                |

Note 1) The assembly consists of a bracket and set nuts.  
 Note 2) □ in part numbers for a pressure gauge indicates a pipe thread type. 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.

# Mist Separator Regulator 10-21-*AWM-D*

## Dimensions

### 10-21-*AWM20-D*



### Panel cutout dimensions

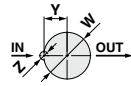
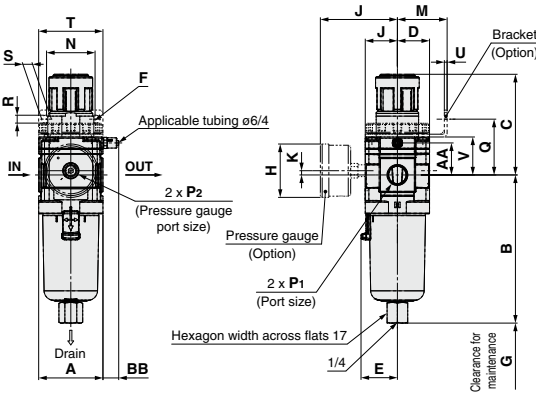


Plate thickness  
 10-/21-AWM20-D to AWM30-D: Max. 3.5  
 10-/21-AWM40-D: Max. 5

### 10-21-*AWM30-D to AWM40-D*



| Applicable model | 10-/21-AWM20-D  |            | 10-/21-AWM30-D to AWM40-D |                             |
|------------------|-----------------|------------|---------------------------|-----------------------------|
| Semi-standard    | With bowl guard | Metal bowl | Metal bowl                | Metal bowl with level gauge |
| Dimensions       |                 |            |                           |                             |

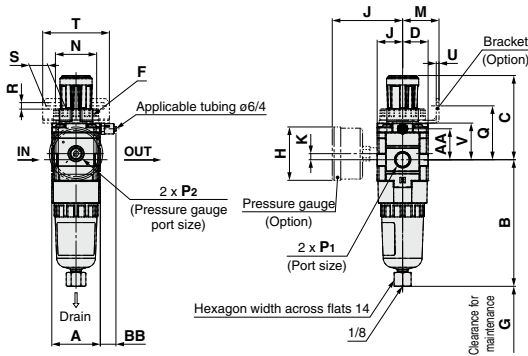
| Model          | Standard specifications |                |    |       |                      |      |      |           |    |      |     |      |    |
|----------------|-------------------------|----------------|----|-------|----------------------|------|------|-----------|----|------|-----|------|----|
|                | P <sub>1</sub>          | P <sub>2</sub> | A  | B     | C <sup>Note 1)</sup> | D    | E    | F         | G  | J    | K   | AA   | BB |
| 10-/21-AWM20-D | 1/8, 1/4                | 1/8            | 40 | 104.4 | 71.8                 | 21   | —    | M28 x 1   | 45 | 21   | 5   | 25.5 | 13 |
| 10-/21-AWM30-D | 1/4, 3/8                | 1/8            | 53 | 122.2 | 86.5                 | 26.5 | 30   | M38 x 1.5 | 50 | 26.5 | 3.5 | 26.4 | 13 |
| 10-/21-AWM40-D | 1/4, 3/8, 1/2           | 1/8            | 70 | 153.9 | 91.5                 | 35.5 | 38.4 | M42 x 1.5 | 75 | 35.5 | —   | 30.5 | 13 |

| Model          | Optional specifications   |      |     |      |               |    |      |     |      |    |             |      | Semi-standard specifications |            |                             |   |       |       |       |
|----------------|---------------------------|------|-----|------|---------------|----|------|-----|------|----|-------------|------|------------------------------|------------|-----------------------------|---|-------|-------|-------|
|                | Round type pressure gauge |      |     |      | Bracket mount |    |      |     |      |    | Panel mount |      | With bowl guard              | Metal bowl | Metal bowl with level gauge |   |       |       |       |
|                | 10-                       |      | 21- |      | H             | J  | M    | N   | Q    | R  | S           | T    | U                            | V          | W                           | Y | Z     | B     | B     |
| 10-/21-AWM20-D | ø44                       | 58   | ø44 | 61   | 30            | 34 | 44.4 | 5.4 | 15.4 | 55 | 2.3         | 30.2 | 28.5                         | 14         | 6                           | — | 104.4 | 106.9 | —     |
| 10-/21-AWM30-D | ø44                       | 63.5 | ø44 | 66.5 | 41            | 40 | 46   | 6.5 | 8    | 53 | 2.3         | 31.3 | 38.5                         | 19         | 7                           | — | —     | 122.3 | 142.3 |
| 10-/21-AWM40-D | ø44                       | 72.5 | ø44 | 75.5 | 50            | 54 | 54   | 8.5 | 10.5 | 70 | 2.3         | 35.5 | 42.5                         | 21         | 7                           | — | —     | 154.1 | 174.1 |

Note 1) The dimension of C is the length when the regulator knob is unlocked.

**Dimensions**

**10-21-AWD20-D**



**Panel cutout dimensions**

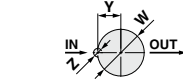
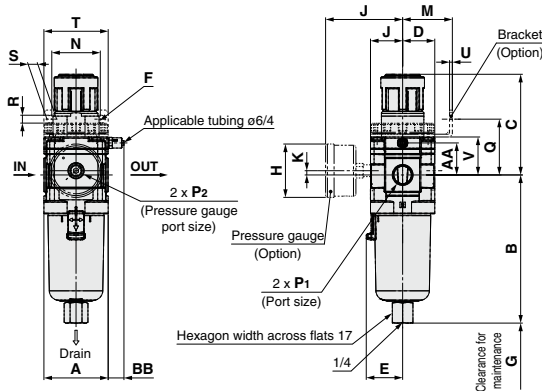


Plate thickness  
 10-/21-AWD20-D to AWD30-D: Max. 3.5  
 10-/21-AWD40-D: Max. 5

**10-21-AWD30-D to AWD40-D**



| Applicable model | 10-/21-AWD20-D  |            | 10-/21-AWD30-D to AWD40-D |                             |
|------------------|-----------------|------------|---------------------------|-----------------------------|
| Semi-standard    | With bowl guard | Metal bowl | Metal bowl                | Metal bowl with level gauge |
| Dimensions       |                 |            |                           |                             |

| Model          | Standard specifications |                |    |       |                       |      |      |           |    |      |     |      |    |
|----------------|-------------------------|----------------|----|-------|-----------------------|------|------|-----------|----|------|-----|------|----|
|                | P <sub>1</sub>          | P <sub>2</sub> | A  | B     | C <sup>(Note 1)</sup> | D    | E    | F         | G  | J    | K   | AA   | BB |
| 10-/21-AWD20-D | 1/8, 1/4                | 1/8            | 40 | 104.4 | 71.8                  | 21   | —    | M28 x 1   | 45 | 21   | 5   | 25.5 | 13 |
| 10-/21-AWD30-D | 1/4, 3/8                | 1/8            | 53 | 122.2 | 86.5                  | 26.5 | 30   | M38 x 1.5 | 50 | 26.5 | 3.5 | 26.4 | 13 |
| 10-/21-AWD40-D | 1/4, 3/8, 1/2           | 1/8            | 70 | 153.9 | 91.5                  | 35.5 | 38.4 | M42 x 1.5 | 75 | 35.5 | —   | 30.5 | 13 |

| Model          | Optional specifications   |      |     |      |               |    |      |     |      |    |             |      |      |    | Semi-standard specifications |            |                             |       |
|----------------|---------------------------|------|-----|------|---------------|----|------|-----|------|----|-------------|------|------|----|------------------------------|------------|-----------------------------|-------|
|                | Round type pressure gauge |      |     |      | Bracket mount |    |      |     |      |    | Panel mount |      |      |    | With bowl guard              | Metal bowl | Metal bowl with level gauge |       |
|                | H                         | J    | H   | J    | M             | N  | Q    | R   | S    | T  | U           | V    | W    | Y  | Z                            | B          | B                           | B     |
| 10-/21-AWD20-D | ø44                       | 58   | ø44 | 61   | 30            | 34 | 44.4 | 5.4 | 15.4 | 55 | 2.3         | 30.2 | 28.5 | 14 | 6                            | 104.4      | 106.9                       | —     |
| 10-/21-AWD30-D | ø44                       | 63.5 | ø44 | 66.5 | 41            | 40 | 46   | 6.5 | 8    | 53 | 2.3         | 31.3 | 38.5 | 19 | 7                            | —          | 122.3                       | 142.3 |
| 10-/21-AWD40-D | ø44                       | 72.5 | ø44 | 75.5 | 50            | 54 | 54   | 8.5 | 10.5 | 70 | 2.3         | 35.5 | 42.5 | 21 | 7                            | —          | 154.1                       | 174.1 |

Note 1) The dimension of C is the length when the regulator knob is unlocked.

- Directional Control Valves
- Air Cylinders
- Rotary Actuators
- Air Grippers
- Air Preparation Equipment
- Modular F. R.
- Pressure Control Equipment
- Fittings & Tubing
- Flow Control Equipment
- Pressure Switches/Pressure Sensors