

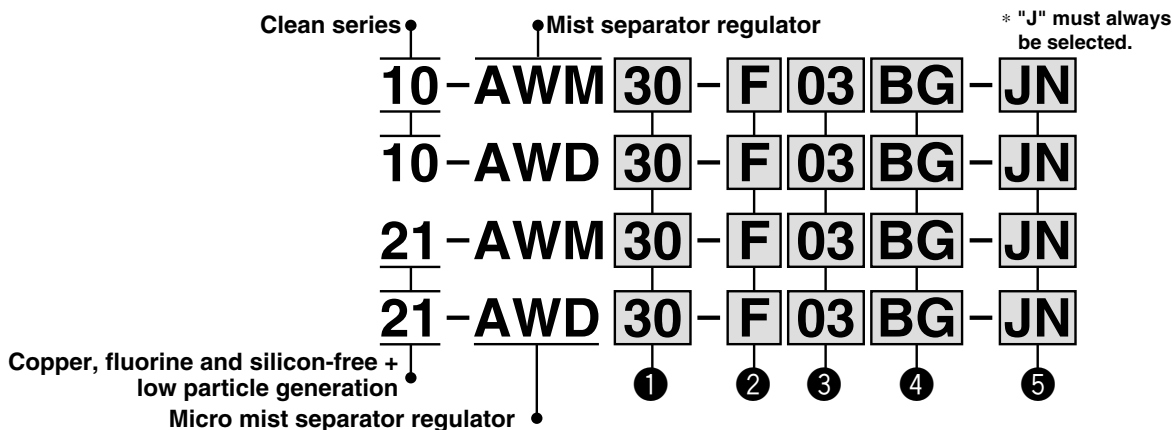
# Series 10-21-AWM

Mist Separator Regulator

# Series 10-21-AWD

Micro Mist Separator Regulator

## How to Order



- Option/Semi-standard: Select one each for a to g.
- Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.

|   | Symbol               | Description | ①         |    |    |
|---|----------------------|-------------|-----------|----|----|
|   |                      |             | Body size |    |    |
|   |                      |             | 20        | 30 | 40 |
| ② | Thread type          | Nil         |           |    |    |
|   |                      | N Note 1)   |           |    |    |
|   |                      | F Note 2)   |           |    |    |
| ③ | Port size            | +           |           |    |    |
|   |                      | 01          |           |    |    |
|   |                      | 02          |           |    |    |
|   |                      | 03          |           |    |    |
|   |                      | 04          |           |    |    |
| ④ | a Mounting           | Nil         |           |    |    |
|   |                      | B Note 4)   |           |    |    |
|   |                      | H           |           |    |    |
|   | b Pressure gauge     | +           |           |    |    |
|   |                      | Nil         |           |    |    |
|   |                      | G           |           |    |    |
| ⑤ | c Set pressure       | Nil         |           |    |    |
|   |                      | 1 Note 5)   |           |    |    |
|   | d Bowl               | +           |           |    |    |
|   |                      | Nil         |           |    |    |
|   |                      | 2           |           |    |    |
|   |                      | 6           |           |    |    |
|   |                      | 8           |           |    |    |
|   |                      | C           |           |    |    |
|   |                      | 6C          |           |    |    |
|   | e Drain port Note 6) | +           |           |    |    |
|   |                      | J           |           |    |    |

|  |  | Symbol | Description | ①         |    |    |
|--|--|--------|-------------|-----------|----|----|
|  |  |        |             | Body size |    |    |
|  |  |        |             | 20        | 30 | 40 |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |
|  |  |        |             |           |    |    |

Note 1) Drain guide is NPT1/8 (applicable to the 10-/21-AWM20, AWD20) and NPT1/4 (applicable to the 10-/21-AWM30, AWM40, AWD30, AWD40).

Note 2) Drain guide is G1/8 (applicable to the 10-/21-AWM20, AWD20) and G1/4 (applicable to the 10-/21-AWM30, AWM40, AWD30, AWD40).

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

Note 4) Assembly of a bracket and set nuts

Note 5) 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 6) Be sure to select "J" drain guide. Without a valve function

Note 7) 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 conversion function, setting to psi initially.

Note 8) ○: For thread type: NPT only

## Standard Specifications

| Model                                                                            | 10-/21-AWM20<br>10-/21-AWD20                                                                                              | 10-/21-AWM30<br>10-/21-AWD30 | 10-/21-AWM40<br>10-/21-AWD40 |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------|
| Port size                                                                        | 1/8, 1/4                                                                                                                  | 1/4, 3/8                     | 1/4, 3/8, 1/2                |
| Pressure gauge port size                                                         | 1/8                                                                                                                       |                              | 1/4                          |
| Fluid                                                                            | Air                                                                                                                       |                              |                              |
| Ambient and fluid temperature                                                    | −5 to 60°C (with no freezing)                                                                                             |                              |                              |
| Proof pressure                                                                   | 1.5 MPa                                                                                                                   |                              |                              |
| Maximum operating pressure                                                       | 1.0 MPa                                                                                                                   |                              |                              |
| Set pressure range                                                               | 0.05 to 0.85 MPa                                                                                                          |                              |                              |
| Relief pressure                                                                  | Set pressure + 0.05 MPa [at relief flow rate of 0.1 L/min (ANR)]                                                          |                              |                              |
| Nominal filtration rating                                                        | 10-/21-AWM: 0.3 μm (99.9% filtered particle size)                                                                         |                              |                              |
|                                                                                  | 10-/21-AWD: 0.01 μm (99.9% filtered particle size)                                                                        |                              |                              |
| Outlet side oil mist concentration<br><small>Note 1)</small>                     | 10-/21-AWM: Max. 1.0 mg/m <sup>3</sup> (ANR) (≈ 0.8 ppm)                                                                  |                              |                              |
|                                                                                  | 10-/21-AWD: Max. 0.1 mg/m <sup>3</sup> (ANR) (Before saturated with oil 0.01 mg/m <sup>3</sup> (ANR) or less ≈ 0.008 ppm) |                              |                              |
| Rated flow (L/min (ANR))<br><small>Note 2)</small>                               | 10-/21-AWM: 150                                                                                                           | 10-/21-AWM: 330              | 10-/21-AWM: 820              |
|                                                                                  | 10-/21-AWD: 90                                                                                                            | 10-/21-AWD: 180              | 10-/21-AWD: 450              |
| Drain capacity (cm <sup>3</sup> )                                                | 8                                                                                                                         | 25                           | 45                           |
| Drain guide port size                                                            | 1/8                                                                                                                       | 1/4                          |                              |
| Construction                                                                     | Relieving type                                                                                                            |                              |                              |
| Grease                                                                           | 10-: Fluorine grease                                                                                                      |                              |                              |
|                                                                                  | 21-: Lithium soap based grease                                                                                            |                              |                              |
| Particle generation grade<br>(Refer to front matter pages 13 to 22 for details.) | 10-: Grade 1                                                                                                              |                              |                              |
|                                                                                  | 21-: Grade 1                                                                                                              |                              |                              |

Note 1) When the compressor oil mist discharge concentration is 30 mg/m<sup>3</sup> (ANR). Bowl O-ring and other O-rings are slightly lubricated.

Note 2) Conditions: Mist separator inlet pressure: 0.7 MPa; outlet pressure: 0.5 MPa. The rated flow varies depending on the outlet pressure. Keep the air flow within the rated flow to prevent an outflow of lubricant to the outlet side.

## Options/Part No.

| Model                     | 10-/21-AWM20<br>10-/21-AWD20 | 10-/21-AWM30<br>10-/21-AWD30 | 10-/21-AWM40<br>10-/21-AWD40 |
|---------------------------|------------------------------|------------------------------|------------------------------|
| Option                    |                              |                              |                              |
| Bracket assembly (Note 3) | AW20P-270AS                  | AR30P-270AS                  | AR40P-270AS                  |
| Set nut                   | AR20P-260S                   | AR30P-260S                   | AR40P-260S                   |
| Pressure gauge (Note 4)   | Standard                     | G49-10-□01                   | G49-10-□02                   |
|                           | 0.02 to 0.2 MPa setting      | G49-2-□01                    | G49-2-□02                    |

Note 3) Assembly of a bracket and set nuts

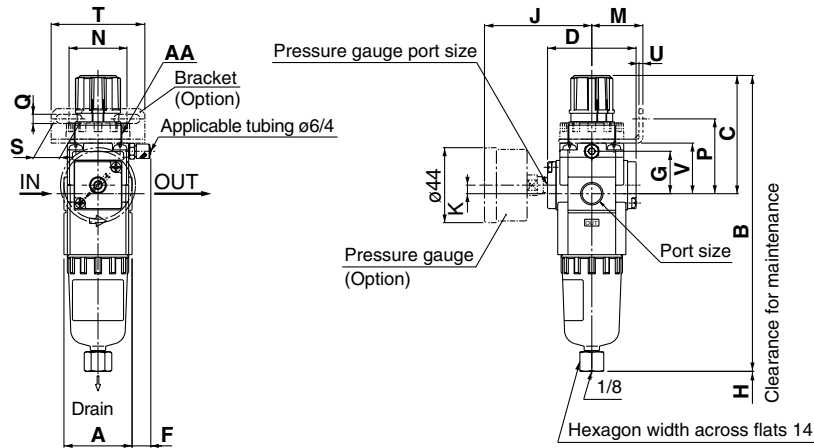
Note 4) □ in part numbers for a round pressure gauge indicates a type of connection thread. No indication is necessary for R; however, indicate N for NPT.

Please contact SMC regarding the connection thread NPT and pressure gauge supply for psi unit specifications.



## Dimensions

### 10-21-**AWD20**



Panel fitting dimension

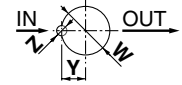
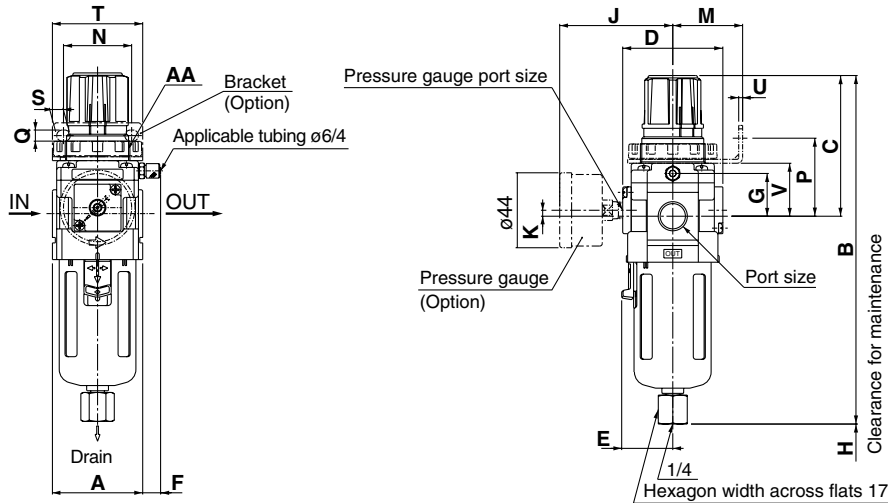


Plate thickness  
10-/21-AWD20: Max. 3.5

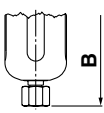
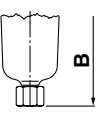
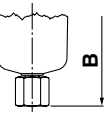
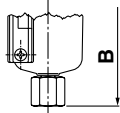
### 10-21-**AWD30/40**



Panel fitting dimension



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

| Applicable model        | 10-/21-AWD20                                                                        |                                                                                     |  | 10-/21-AWD30/40                                                                     |                                                                                       |
|-------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Optional specifications | With bowl guard                                                                     | Metal bowl                                                                          |  | Metal bowl                                                                          | Metal bowl with level gauge                                                           |
| Dimensions              |  |  |  |  |  |

| Model        | Port size     | Pressure gauge port size | Standard specifications |     |    |    |    |      |    |    |    | Accessory specifications |    |                       |    |     |      |    |     |      |             |    |   |           |
|--------------|---------------|--------------------------|-------------------------|-----|----|----|----|------|----|----|----|--------------------------|----|-----------------------|----|-----|------|----|-----|------|-------------|----|---|-----------|
|              |               |                          |                         |     |    |    |    |      |    |    |    | With pressure gauge      |    | Bracket mounting size |    |     |      |    |     |      | Panel mount |    |   |           |
|              |               |                          | A                       | B   | C  | D  | E  | F    | G  | H  | J  | K                        | M  | N                     | P  | Q   | S    | T  | U   | V    | W           | Y  | Z | AA        |
| 10-/21-AWD20 | 1/8, 1/4      | 1/8                      | 40                      | 177 | 73 | 52 | —  | 11   | 25 | 45 | 63 | 5                        | 30 | 34                    | 44 | 5.4 | 15.4 | 55 | 2.3 | 30   | 28.5        | 14 | 6 | M28 x 1   |
| 10-/21-AWD30 | 1/4, 3/8      | 1/8                      | 53                      | 208 | 86 | 59 | 30 | 10.5 | 25 | 50 | 67 | 3.5                      | 41 | 40                    | 46 | 6.5 | 8    | 53 | 2.3 | 31   | 38.5        | 19 | 7 | M38 x 1.5 |
| 10-/21-AWD40 | 1/4, 3/8, 1/2 | 1/4                      | 70                      | 246 | 92 | 75 | 38 | 10.5 | 29 | 70 | 75 | 1.5                      | 50 | 54                    | 54 | 8.5 | 10.5 | 70 | 2.3 | 35.5 | 42.5        | 21 | 7 | M42 x 1.5 |

| Model        | Optional specifications |            |                             |
|--------------|-------------------------|------------|-----------------------------|
|              | With bowl guard         | Metal bowl | Metal bowl with level gauge |
|              | B                       | B          | B                           |
| 10-/21-AWD20 | 177                     | 180        | —                           |
| 10-/21-AWD30 | —                       | 208        | 228                         |
| 10-/21-AWD40 | —                       | 246        | 266                         |