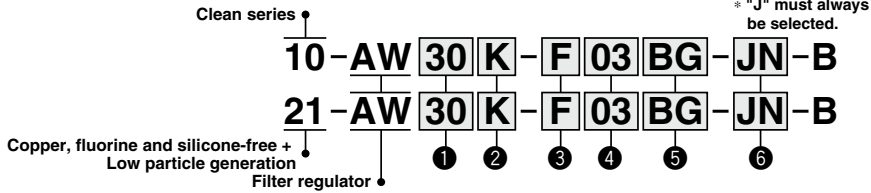


# Series 10-21-AW-B Filter Regulator

# Series 10-21-AW   K-B Filter Regulator with Backflow Function

## 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 | 60 |   |
| ② With backflow function | Nil   | Without backflow function         | ●                      | ●                       | ●  | ●  |   |
|                          | K <small>Note 1)</small>                            | With backflow function            | ●                      | ●                       | ●  | ●  |   |
| ③ Thread type            | +   | Rc                                | ●                      | ●                       | ●  | ●  |   |
|                          | N <small>Note 2)</small>                            | NPT                               | ●                      | ●                       | ●  | ●  |   |
|                          | F <small>Note 3)</small>                            | G                                 | ●                      | ●                       | ●  | ●  |   |
|                          | +   |                                   |                        |                         |    |    |   |
| ④ Port size              | 01  | 1/8                               | ●                      | —                       | —  | —  |   |
|                          | 02  | 1/4                               | ●                      | ●                       | ●  | —  |   |
|                          | 03  | 3/8                               | —                      | ●                       | ●  | —  |   |
|                          | 04  | 1/2                               | —                      | —                       | ●  | —  |   |
|                          | 06  | 3/4                               | —                      | —                       | ●  | ●  |   |
|                          | 10  | 1                                 | —                      | —                       | —  | ●  |   |
| ⑤ Option                 | +   |                                   |                        |                         |    |    |   |
|                          | a   | Mounting                          | Nil                    | Without mounting option | ●  | ●  | ● |
|                          | B <small>Note 5)</small>                            | With bracket                      | ●                      | ●                       | ●  | ●  |   |
|                          | H   | With set nut (for panel mounting) | ●                      | ●                       | ●  | —  |   |
|                          | +   |                                   |                        |                         |    |    |   |
| b                        | Pressure gauge                                      | Nil                               | Without pressure gauge | ●                       | ●  | ●  |   |
| G                        | Round type pressure gauge (without limit indicator) | ●                                 | ●                      | ●                       | ●  |    |   |

|                    | Symbol | Description       | ①                        |   |    |    |  |
|--------------------|--------|-------------------|--------------------------|---|----|----|--|
|                    |        |                   | Body size                |   |    |    |  |
|                    |        |                   | 20                       | 30  | 40 | 60 |  |
| 6<br>Semi-standard | c      | Set pressure      | Nil                      | 0.05 to 0.85 MPa setting  |    |    |  |
|                    |        |                   | 1 <small>Note 6)</small> | 0.02 to 0.2 MPa setting   |    |    |  |
|                    | d      | 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  |    |    |  |
|                    | e      | Exhaust mechanism | Nil                      | Relieving type  |    |    |  |
|                    |        |                   | N                        | Non-relieving type  |    |    |  |
|                    | f      | Flow direction    | Nil                      | Flow direction: Left to right   |    |    |  |
|                    |        |                   | R                        | Flow direction: Right to left   |    |    |  |
|                    | g      | Pressure unit     | Nil                      | Name plate, caution plate for bowl, and pressure gauge in imperial units: MPa       |    |    |  |
|                    |        |                   | Z <small>Note 6)</small> | Name plate: psi. Caution plate for bowl: psi, "F". Pressure gauge: Both MPa and psi |    |    |  |

Note 1) When using a non-relieving type with a backflow function, if the inlet pressure is increased slowly, the inlet pressure may continue to the outlet side.  
 Note 2) Drain guide is NPT 1/8 (applicable to the 10-21-AW20(K)-B) and NPT 1/4 (applicable to the 10-21-AW30(K)-B to AW60(K)-B).  
 Note 3) Drain guide is G 1/8 (applicable to the 10-21-AW20(K)-B) and G 1/4 (applicable to the 10-21-AW30(K)-B to AW60(K)-B).  
 Note 4) Option B, G, H are not assembled and supplied loose at the time of shipment.  
 Note 5) Assembly of a bracket and set nuts (10-21-AW20(K)-B to AW40(K)-B) including 2 mounting screws for the 10-21-AW60(K)-B.  
 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 0.4 MPa pressure gauge will be fitted.  
 Note 7) Be sure to select "J" drain guide. Without a valve function.  
 Note 8) 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.)  
 Note 9) ○: For thread type: NPT only

### Standard Specifications

| Model                             | 10-21-AW20(K)-B  | 10-21-AW30(K)-B | 10-21-AW40(K)-B | 10-21-AW40(K)-06-B | 10-21-AW60(K)-B |
|-----------------------------------|--|-----------------|-----------------|--------------------|-----------------|
| Port size                         | 1/8, 1/4   | 1/4, 3/8        | 1/4, 3/8, 1/2   | 3/4                | 3/4, 1          |
| Pressure gauge port size          | 1/8  |                 |                 |                    |                 |
| 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                                       |                 |                 |                    |                 |
| Nominal filtration rating         | 5 μm   |                 |                 |                    |                 |
| Drain capacity (cm <sup>3</sup> ) | 8  | 25              | 45              | 45                 | 45              |
| Drain guide port size             | 1/8  | 1/4             |                 |                    |                 |
| Construction                      | Relieving type   |                 |                 |                    |                 |
| Grease                            | 10-: Fluorine grease<br>21-: Lithium soap based grease |                 |                 |                    |                 |
| Cleanliness class (ISO class)     | 10-: Class 3<br>21-: Class 3                           |                 |                 |                    |                 |

### Options/Part No.

| Model   | 10-21-AW20(K)-B  | 10-21-AW30(K)-B | 10-21-AW40(K)-B | 10-21-AW40(K)-06-B | 10-21-AW60(K)-B          |
|---|--|-----------------|-----------------|--------------------|--------------------------|
| Option  |  |                 |                 |                    |                          |
| Bracket assembly <small>Note 1)</small>                                 | AW23P-270AS  | AR33P-270AS     | AR43P-270AS     |                    | AW62P-270AS              |
| Set nut   | AR23P-260S   | AR33P-260S      | AR43P-260S      |                    | — <small>Note 2)</small> |
| Pressure gauge <small>Note 4)</small> Round type <small>Note 3)</small> | Standard<br>0.02 to 0.2 MPa setting                                    |                 |                 |                    |                          |
|   | 10: G49-10□01, 21: G49-10□01-MS-X3<br>10: G49-4□01, 21: G49-4□01-MS-X3 |                 |                 |                    |                          |

Note 1) Assembly of a bracket and set nuts. Including 2 mounting screws for the AW60(K)-B  
 Note 2) Please consult with SMC regarding the set nuts for the AW60(K)-B.  
 Note 3) □ in part numbers for a round pressure gauge indicates a pipe thread type. No indication is necessary for R; however, indicate N for NPT. Please contact SMC regarding the pressure gauge supply for both MPa and psi unit specifications.  
 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.

Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

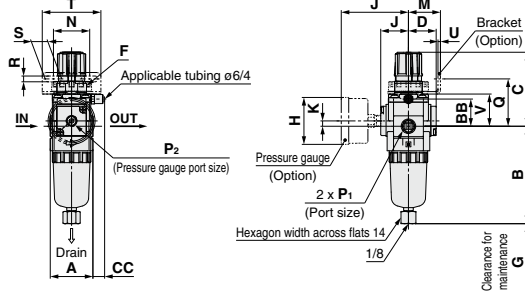
Fittings & Tubing

Flow Control Equipment

Pressure Switches/Pressure Sensors

**Dimensions**

**10-21-AW20-B**



**Panel fitting dimension**

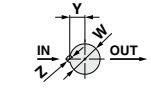
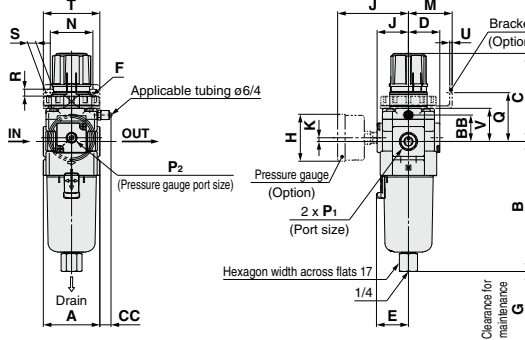


Plate thickness  
10-/21-AW20-B: Max. 3.5

**10-21-AW30-B to 40-06-B**



**Panel fitting dimension**

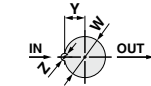
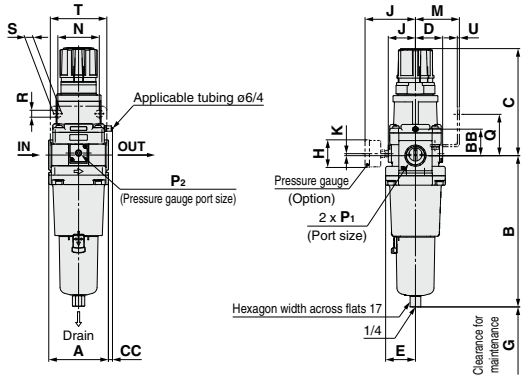


Plate thickness  
10-/21-AW30-B: Max. 3.5  
10-/21-AW40-B: Max. 5

**10-21-AW60-B**



| Applicable model             | 10-/21-AW20-B   |            | 10-/21-AW30-B to 60-B |                             |
|------------------------------|-----------------|------------|-----------------------|-----------------------------|
| Semi-standard specifications | With bowl guard | Metal bowl | Metal bowl            | Metal bowl with level gauge |
| Dimensions                   |                 |            |                       |                             |

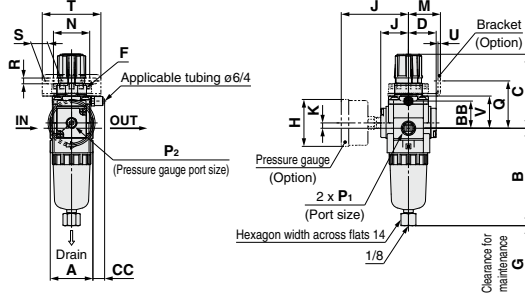
| Model            | Semi-standard specifications |            |                             |
|------------------|------------------------------|------------|-----------------------------|
|                  | With bowl guard              | Metal bowl | Metal bowl with level gauge |
|                  | B                            | B          | B                           |
| 10-/21-AW20-B    | 91.4                         | 93.9       | —                           |
| 10-/21-AW30-B    | —                            | 122.1      | 142.1                       |
| 10-/21-AW40-B    | —                            | 154.1      | 174.1                       |
| 10-/21-AW40-06-B | —                            | 156.1      | 176.1                       |
| 10-/21-AW60-B    | —                            | 241.1      | 261.1                       |

| Model            | Standard specifications |                |    |       |          |      |      |           |      |     |      |      |     | Optional specifications |    |    |      |     |      |    |     |      |      |    |   |
|------------------|-------------------------|----------------|----|-------|----------|------|------|-----------|------|-----|------|------|-----|-------------------------|----|----|------|-----|------|----|-----|------|------|----|---|
|                  | P <sub>1</sub>          | P <sub>2</sub> | A  | B     | C (Note) | D    | E    | F         | J    | K   | BB   | CC   | H   | J                       | M  | N  | Q    | R   | S    | T  | U   | V    | W    | Y  | Z |
| 10-/21-AW20-B    | 1/8, 1/4                | 1/8            | 40 | 91.4  | 72.4     | 26   | —    | M28 x 1   | 26   | 5   | 25.5 | 11   | ø44 | 63                      | 30 | 34 | 43.9 | 5.4 | 15.4 | 55 | 2.3 | 30.2 | 28.5 | 14 | 6 |
| 10-/21-AW30-B    | 1/4, 3/8                | 1/8            | 53 | 121.9 | 85.6     | 29.4 | 30   | M38 x 1.5 | 29.4 | 3.5 | 24.8 | 10.5 | ø44 | 66.4                    | 41 | 40 | 45.8 | 6.5 | 8    | 53 | 2.3 | 31.1 | 38.5 | 19 | 7 |
| 10-/21-AW40-B    | 1/4, 3/8, 1/2           | 1/8            | 70 | 153.9 | 91.7     | 37.3 | 38.4 | M42 x 1.5 | 37.3 | 1.5 | 28.9 | 10.5 | ø44 | 74.3                    | 50 | 54 | 54   | 8.5 | 10.5 | 70 | 2.3 | 35.5 | 42.5 | 21 | 7 |
| 10-/21-AW40-06-B | 3/4                     | 1/8            | 75 | 155.9 | 93.2     | 37.3 | 38.4 | M42 x 1.5 | 37.3 | 1.2 | 30.4 | 8    | ø44 | 74.3                    | 50 | 54 | 55.5 | 8.5 | 10.5 | 70 | 2.3 | 37   | 42.5 | 21 | 7 |
| 10-/21-AW60-B    | 3/4, 1                  | 1/8            | 95 | 242.6 | 175.5    | 43.3 | 47.5 | —         | 43.3 | 3.2 | 42.2 | 6.5  | ø44 | 80.3                    | 70 | 66 | 65.8 | 11  | 13   | 90 | 3.2 | —    | —    | —  | — |

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

**Dimensions**

**10-21-AW20K-B**



**Panel fitting dimension**

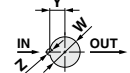
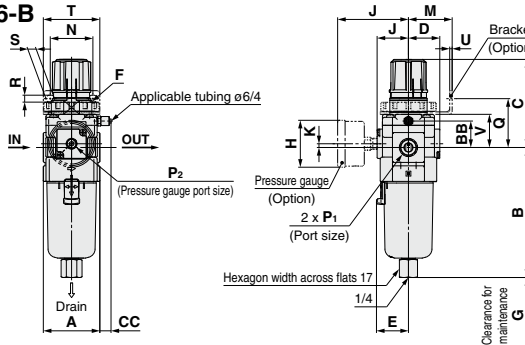


Plate thickness  
10-21-AW20K-B: Max. 3.5

**10-21-AW30K-B to 40K-06-B**



**Panel fitting dimension**

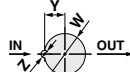
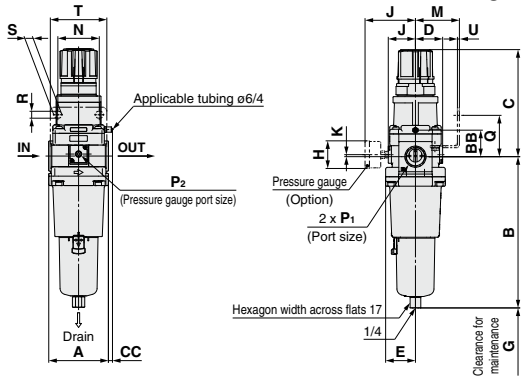


Plate thickness  
10-21-AW30K-B: Max. 3.5  
10-21-AW40K-B: Max. 5

**10-21-AW60K-B**



| Applicable model             | 10-21-AW20K-B   |            | 10-21-AW30K-B to 60K-B |                             |  |
|------------------------------|-----------------|------------|------------------------|-----------------------------|--|
| Semi-standard specifications | With bowl guard | Metal bowl | Metal bowl             | Metal bowl with level gauge |  |
| Dimensions                   |                 |            |                        |                             |  |

| Model            | Semi-standard specifications |      |       |            |       |       |                             |   |   |   |       |  |
|------------------|------------------------------|------|-------|------------|-------|-------|-----------------------------|---|---|---|-------|--|
|                  | With bowl guard              |      |       | Metal bowl |       |       | Metal bowl with level gauge |   |   | B |       |  |
|                  | B                            | B    | B     | B          | B     | B     | B                           | B | B | B | B     |  |
| 10-21-AW20K-B    | 91.4                         | 93.9 | —     | —          | —     | —     | —                           | — | — | — | —     |  |
| 10-21-AW30K-B    | —                            | —    | 122.1 | —          | —     | —     | —                           | — | — | — | 142.1 |  |
| 10-21-AW40K-B    | —                            | —    | —     | 154.1      | —     | —     | —                           | — | — | — | 174.1 |  |
| 10-21-AW40K-06-B | —                            | —    | —     | —          | 156.1 | —     | —                           | — | — | — | 176.1 |  |
| 10-21-AW60K-B    | —                            | —    | —     | —          | —     | 241.1 | —                           | — | — | — | 261.1 |  |

| Model            | Standard specifications |                |    |       |          |      |      |           |      |     |      |      | Optional specifications |      |    |    |      |     |             |    |     |      |      |    |   |
|------------------|-------------------------|----------------|----|-------|----------|------|------|-----------|------|-----|------|------|-------------------------|------|----|----|------|-----|-------------|----|-----|------|------|----|---|
|                  |                         |                |    |       |          |      |      |           |      |     |      |      | Bracket mounting size   |      |    |    |      |     | Panel mount |    |     |      |      |    |   |
|                  | P <sub>1</sub>          | P <sub>2</sub> | A  | B     | C (Note) | D    | E    | F         | J    | K   | BB   | CC   | H                       | J    | M  | N  | Q    | R   | S           | T  | U   | V    | W    | Y  | Z |
| 10-21-AW20K-B    | 1/8, 1/4                | 1/8            | 40 | 91.4  | 72.4     | 26   | —    | M28 x 1   | 26   | 5   | 25.5 | 11   | ø44                     | 63   | 30 | 34 | 43.9 | 5.4 | 15.4        | 55 | 2.3 | 30.2 | 28.5 | 14 | 6 |
| 10-21-AW30K-B    | 1/4, 3/8                | 1/8            | 53 | 121.9 | 85.6     | 29.4 | 30   | M38 x 1.5 | 29.4 | 3.5 | 24.8 | 10.5 | ø44                     | 66.4 | 41 | 40 | 45.8 | 6.5 | 8           | 53 | 2.3 | 31.1 | 38.5 | 19 | 7 |
| 10-21-AW40K-B    | 1/4, 3/8, 1/2           | 1/8            | 70 | 153.9 | 91.7     | 37.3 | 38.4 | M42 x 1.5 | 37.3 | 1.5 | 28.9 | 10.5 | ø44                     | 74.3 | 50 | 54 | 54   | 8.5 | 10.5        | 70 | 2.3 | 35.5 | 42.5 | 21 | 7 |
| 10-21-AW40K-06-B | 3/4                     | 1/8            | 75 | 155.9 | 93.2     | 37.3 | 38.4 | M42 x 1.5 | 37.3 | 1.2 | 30.4 | 8    | ø44                     | 74.3 | 50 | 54 | 55.5 | 8.5 | 10.5        | 70 | 2.3 | 37   | 42.5 | 21 | 7 |
| 10-21-AW60K-B    | 3/4, 1                  | 1/8            | 95 | 242.6 | 175.5    | 43.3 | 47.5 | —         | 43.3 | 3.2 | 42.2 | 6.5  | ø44                     | 80.3 | 70 | 66 | 65.8 | 11  | 13          | 90 | 3.2 | —    | —    | —  | — |

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

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Rotary Actuators  
Air Grippers  
Air Preparation Equipment  
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Pressure Control Equipment  
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