

## How to Order

**AC 30 A F 03 DE KV 12R**

F.R.L. unit

Body size

|    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|
| 10 | 20 | 25 | 30 | 40 | 50 | 55 | 60 |
|----|----|----|----|----|----|----|----|

Model combination

| Symbol | Combination |           |            |                  |                |
|--------|-------------|-----------|------------|------------------|----------------|
|        | Air filter  | Regulator | Lubricator | Filter regulator | Mist separator |
| Nil    | ①           | ②         | ③          | —                | —              |
| A      | —           | —         | ②          | ①                | —              |
| B      | ①           | ②         | —          | —                | —              |
| C      | ①           | ③         | —          | —                | ②              |
| D      | —           | —         | —          | ①                | ②              |

\* The number inside ○ indicates the combination order counted from the inlet side.

Thread type

|           |                           |
|-----------|---------------------------|
| Nil       | Metric system thread (M5) |
|           | Rc                        |
| N Note 1) | NPT                       |
| F Note 2) | G                         |

Note 1) Drain guide is NPT1/4 (applicable to AC25 to 60), and the exhaust port for auto drain comes with  $\phi 3/8"$  One-touch fitting (applicable to AC25 to 60).

Note 2) Drain guide is G1/4 (applicable to AC25 to 60).

Port size

| Symbol | Port size | Body size |    |    |    |    |    |    |    |
|--------|-----------|-----------|----|----|----|----|----|----|----|
|        |           | 10        | 20 | 25 | 30 | 40 | 50 | 55 | 60 |
| M5     | M5        | ●         | —  | —  | —  | —  | —  | —  | —  |
| 01     | 1/8       | —         | ●  | —  | —  | —  | —  | —  | —  |
| 02     | 1/4       | —         | ●  | ●  | ●  | —  | —  | —  | —  |
| 03     | 3/8       | —         | —  | ●  | ●  | ●  | —  | —  | —  |
| 04     | 1/2       | —         | —  | —  | —  | ●  | —  | —  | —  |
| 06     | 3/4       | —         | —  | —  | —  | ●  | ●  | —  | —  |
| 10     | 1         | —         | —  | —  | —  | —  | ●  | ●  | ●  |

Accessories

| Symbol               | Description                                                     | Applicable model |
|----------------------|-----------------------------------------------------------------|------------------|
| Nil                  | —                                                               | —                |
| C                    | Float type auto drain (N.C.) <sup>Note 1)</sup>                 | AC10□ to 60□     |
| D                    | Float type auto drain (N.O.) <sup>Note 1)</sup>                 | AC25□ to 60□     |
| E                    | With square embedded type pressure gauge (with limit indicator) | AC20□ to 60□     |
| G <sup>Note 2)</sup> | With round pressure gauge (without limit indicator)             | AC10□            |
|                      | With round pressure gauge (with limit indicator)                | AC20□ to 60□     |

Note 1) Applicable tube O.D for auto drain connection should be  $\phi 3/8"$  in case NPT thread port is chosen.

Note 2) Mounting thread for pressure gauge:

1/16 for AC10; 1/8 for AC20 to 30; 1/4 for AC40 to 60

Pressure gauge is not mounted and is supplied loose at the time of shipment.

Optional specifications

| Symbol               | Description                                                                        | Applicable model |
|----------------------|------------------------------------------------------------------------------------|------------------|
| 1 <sup>Note 1)</sup> | 0.02 to 0.2MPa setting                                                             | AC10□ to 60□     |
| 2                    | Metal bowl                                                                         | AC10□ to 60□     |
| 3                    | Lubricator with drain cock                                                         | AC10□ to 60□     |
| 6                    | Nylon bowl                                                                         | AC10□ to 60□     |
| 8                    | Metal bowl with level gauge                                                        | AC25□ to 60□     |
| C                    | With bowl guard                                                                    | AC25□ to 60□     |
| J <sup>Note 2)</sup> | Drain guide 1/4                                                                    | AC10□ to 60□     |
| N                    | Non-relieving type                                                                 | AC10□ to 60□     |
| R                    | Flow direction: Right to left                                                      | AC10□ to 60□     |
| W                    | Drain cock with barb fitting: $\phi 6 \times \phi 4$ nylon tube                    | AC25□ to 60□     |
| Z <sup>Note 3)</sup> | Name plate, caution plate for bowl, and pressure gauge in imperial units (PSI, °F) | AC10□ to 60□     |

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

Note 1) The only difference from the standard specifications is the adjusting spring for the regulator. It does not restrict the setting of 0.2MPa or more.

Note 2) Without a valve function.

Note 3) For thread types M5 and NPT.

This product is for overseas use only according to the new Measurement Law. (The SI unit type is provided for use in Japan.) Pressure switch comes with a dual unit scale in SI (MPa) and imperial (PSI) units.

Attachments

| Symbol | Description                                | Attachment mounting position | Applicable model | Port size for intermediate air release                                                                            |
|--------|--------------------------------------------|------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------|
| Nil    | None                                       | —                            | —                | —                                                                                                                 |
| K      | Check valve                                | AF + AR + [K] + AL           | AC20 to 40       | AC20□: 1/8<br>AC25□: 1/4<br>AC30□: 1/4<br>AC40□: 3/8                                                              |
|        |                                            | AW + [K] + AL                | AC20A to 40A     |                                                                                                                   |
| S      | Pressure switch                            | AF + AR + [S] + AL           | AC20 to 60       | —                                                                                                                 |
|        |                                            | AW + [S] + AL                | AC20A to 40A     |                                                                                                                   |
|        |                                            | AF + [S] + AR                | AC20B to 60B     |                                                                                                                   |
|        |                                            | AF + AFM + [S] + AR          | AC20C to 40C     |                                                                                                                   |
| T      | T-interface                                | AF + [T] + AR + AL           | AC10 to 60       | AC10□: M5 x 0.8<br>AC20□: 1/8<br>AC25□: 1/4<br>AC30□: 1/4<br>AC40□: 3/8<br>AC50□: 3/8<br>AC55□: 1/2<br>AC60□: 1/2 |
|        |                                            | AF + [T] + AR                | AC10B to 60B     |                                                                                                                   |
|        |                                            | AF + AFM + [T] + AR          | AC20C to 40C     |                                                                                                                   |
| V      | 3-port valve for residual pressure release | AF + AR + AL + [V]           | AC20 to 50       | —                                                                                                                 |
|        |                                            | AW + AL + [V]                | AC20A to 40A     |                                                                                                                   |
|        |                                            | AF + AR + [V]                | AC20B to 50B     |                                                                                                                   |
|        |                                            | AF + AFM + AR + [V]          | AC20C to 40C     |                                                                                                                   |
|        |                                            | AW + AFM + [V]               | AC20D to 40D     |                                                                                                                   |

\* When more than one attachment is required, order in alphabetical order.

\* Piping adapter, pressure switch with piping adapter, and cross interface need to be ordered separately.

\* Contact SMC when using a pressure switch and T-interface together for AC□B.

\* The bracket position varies depending on the T-interface or pressure switch mounting.

Refer to the table on page 19 for standard bracket position.



# Series AC

## Accessory/Optional Specifications Combination

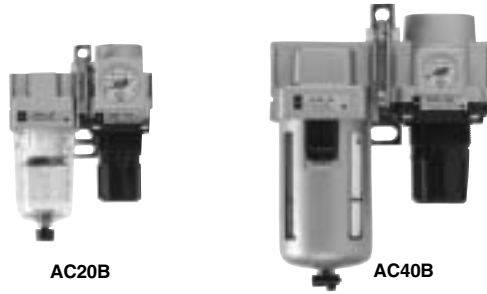
⊙: Combination available    ◻: Combination not available    ○: Varies depending on the model    △: Available only with NPT thread

| Accessory/<br>Optional specifications | Combination<br>Symbol                                                              | Accessories |       |       |       |       |       |      |       |       |      |       |       |       | Optional specifications |       |       |       |       |       |       |       |       |       |       |                    |       | F.R.L. unit applicable models |                      |       |                      |       |                      |       |       |   |   |  |  |
|---------------------------------------|------------------------------------------------------------------------------------|-------------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|-------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|-------|-------------------------------|----------------------|-------|----------------------|-------|----------------------|-------|-------|---|---|--|--|
|                                       |                                                                                    | C           | D     | E     | G     | 1     | 2     | 3    | 6     | 8     | C    | J     | N     | R     | W                       | Z     | AC10  | AC10B | AC20  | AC20B | AC20C | AC20D | AC25  | AC25B | AC25C | AC30<br>to<br>AC60 | AC30A | AC30A<br>to<br>AC40A          | AC30B<br>to<br>AC60B | AC30C | AC30C<br>to<br>AC40C | AC30D | AC30D<br>to<br>AC40D |       |       |   |   |  |  |
|                                       |                                                                                    | AC10A       | AC10B | AC20A | AC20B | AC20C | AC20D | AC25 | AC25B | AC25C | AC30 | AC30A | AC30A | AC30B | AC30C                   | AC30C | AC30D | AC30D | AC30D | AC30D | AC30D | AC30D | AC30D | AC30D | AC30D | AC30D              | AC30D | AC30D                         | AC30D                | AC30D | AC30D                | AC30D | AC30D                | AC30D | AC30D |   |   |  |  |
| Accessories                           | Float type auto drain (N.C.)                                                       | ⊙           | ◻     | ○     | ⊙     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙                  | ⊙     | ⊙                             | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙     |   |   |  |  |
|                                       | Float type auto drain (N.O.)                                                       | ⊙           | ◻     | ○     | ⊙     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻                  | ◻     | ◻                             | ◻                    | ◻     | ◻                    | ◻     | ◻                    | ◻     | ◻     | ◻ |   |  |  |
|                                       | Square embedded type pressure gauge                                                | ⊙           | ○     | ◻     | ◻     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻                  | ◻     | ◻                             | ◻                    | ◻     | ◻                    | ◻     | ◻                    | ◻     | ◻     | ◻ | ◻ |  |  |
|                                       | Round pressure gauge                                                               | ⊙           | ⊙     | ◻     | ◻     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙                  | ⊙     | ⊙                             | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙     | ⊙ |   |  |  |
| Optional specifications               | 0.02 to 0.2MPa setting                                                             | -1          | ⊙     | ⊙     | ○     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙                  | ⊙     | ⊙                             | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙     |   |   |  |  |
|                                       | Metal bowl                                                                         | -2          | ⊙     | ⊙     | ○     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙                  | ⊙     | ⊙                             | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙     |   |   |  |  |
|                                       | Lubricator with drain cock                                                         | -3          | ⊙     | ⊙     | ○     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ⊙     | ◻     | ⊙     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻                  | ◻     | ◻                             | ◻                    | ◻     | ◻                    | ◻     | ◻                    | ◻     | ◻     | ◻ |   |  |  |
|                                       | Nylon bowl                                                                         | -6          | ⊙     | ⊙     | ○     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙                  | ⊙     | ⊙                             | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙     |   |   |  |  |
|                                       | Metal bowl with level gauge                                                        | -8          | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻                  | ◻     | ◻                             | ◻                    | ◻     | ◻                    | ◻     | ◻                    | ◻     | ◻     | ◻ |   |  |  |
|                                       | With bowl guard                                                                    | -C          | ⊙     | ◻     | ⊙     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻                  | ◻     | ◻                             | ◻                    | ◻     | ◻                    | ◻     | ◻                    | ◻     | ◻     | ◻ |   |  |  |
|                                       | Drain guide 1/4                                                                    | -J          | ◻     | ◻     | ⊙     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻                  | ◻     | ◻                             | ◻                    | ◻     | ◻                    | ◻     | ◻                    | ◻     | ◻     | ◻ |   |  |  |
|                                       | Non-relieving type                                                                 | -N          | ⊙     | ⊙     | ○     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙                  | ⊙     | ⊙                             | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙     | ⊙ |   |  |  |
|                                       | Flow direction: Right to left                                                      | -R          | ⊙     | ⊙     | ○     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙     | ⊙                  | ⊙     | ⊙                             | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙                    | ⊙     | ⊙     | ⊙ |   |  |  |
|                                       | Drain cock with barb fitting:<br>ø6 x ø4 nylon tube                                | -W          | ◻     | ◻     | ⊙     | ⊙     | ⊙     | ⊙    | ⊙     | ○     | ○    | ○     | ○     | ○     | △                       | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻     | ◻                  | ◻     | ◻                             | ◻                    | ◻     | ◻                    | ◻     | ◻                    | ◻     | ◻     | ◻ | ◻ |  |  |
|                                       | Name plate, caution plate for bowl, and pressure gauge in imperial units (PSI, °F) | -Z          | △     | △     | △     | △     | △     | △    | △     | △     | △    | △     | △     | △     | △                       | △     | △     | △     | △     | △     | △     | △     | △     | △     | △     | △                  | △     | △                             | △                    | △     | △                    | △     | △                    | △     | △     | △ | △ |  |  |

## Attachments

|                                                                                                                                                                            | Port size                              | Function                                                                  |         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------|---------|
| <b>Piping adapter</b>                                                                                                                                                      | M5 x 0.8<br>1/8, 1/4, 3/8, 1/2, 3/4, 1 | Allows installation/removal of the component without removing the piping. | Page 13 |
| <b>T-interface</b>                                                                                                                                                         | M5 x 0.8<br>1/8, 1/4, 3/8, 1/2         | Redirects the air flow.                                                   | Page 13 |
| <b>Pressure switch with piping adapter</b>                                                                                                                                 | 1/8, 1/4, 3/8, 1/2, 3/4                | Compact switch and piping adapter integrated into one piece.              | Page 14 |
| <b>Check valve</b>                                                                                                                                                         | 1/8, 1/4, 3/8                          | Prevents back flow from lubricator.                                       | Page 15 |
| <b>Pressure switch</b>                                                                                                                                                     | —                                      | Compact switch                                                            | Page 16 |
| <b>Cross interface</b>                                                                                                                                                     | M5 x 0.8<br>1/8, 1/4, 3/8, 1/2         | Allows piping in all 4 directions.                                        | Page 17 |
| <b>3-port valve for residual pressure release</b>                                                                                                                          | 1/8, 1/4, 3/8, 1/2, 3/4, 1             | Releases residual pressure in lines.                                      | Page 17 |
|  <b>Attachment Accessories</b><br>Refer to pages 18 and 19 for interfaces and brackets. |                                        |                                                                           |         |
|  <b>Made to Order specifications</b><br>Refer to page 20 for details.                   |                                        |                                                                           |         |

# F.R.L. Unit Air Filter + Regulator AC10B to 60B



## Standard Specifications

| Model                                       | AC10B                                                                             | AC20B           | AC25B      | AC30B      | AC40B      | AC40B-06          | AC50B   | AC55B    | AC60B |      |
|---------------------------------------------|-----------------------------------------------------------------------------------|-----------------|------------|------------|------------|-------------------|---------|----------|-------|------|
| Component                                   | Air filter                                                                        | AF10            | AF20       | AF30       | AF30       | AF40              | AF40-06 | AF50     | AF60  | AF60 |
|                                             | Regulator                                                                         | AR10            | AR20       | AR25       | AR30       | AR40              | AR40-06 | AR50     | AR50  | AR60 |
| Port sizes                                  | M5 x 0.8                                                                          | 1/8<br>1/4      | 1/4<br>3/8 | 1/4<br>3/8 | 1/4<br>3/8 | 1/4<br>3/8<br>1/2 | 3/4     | 3/4<br>1 | 1     | 1    |
| Pressure gauge port size <sup>Note 1)</sup> | 1/16                                                                              | 1/8             | 1/8        | 1/8        | 1/8        | 1/4               | 1/4     | 1/4      | 1/4   | 1/4  |
| Fluid                                       | Air                                                                               |                 |            |            |            |                   |         |          |       |      |
| Proof pressure                              | 1.5MPa                                                                            |                 |            |            |            |                   |         |          |       |      |
| Max. operating pressure                     | 1.0MPa                                                                            |                 |            |            |            |                   |         |          |       |      |
| Set pressure range                          | 0.05 to 0.7MPa                                                                    | 0.05 to 0.85MPa |            |            |            |                   |         |          |       |      |
| Relief pressure                             | Set pressure + 0.05MPa <sup>Note 2)</sup> [at relief flow rate of 0.1L/min (ANR)] |                 |            |            |            |                   |         |          |       |      |
| Ambient and fluid temperature               | -5 to 60°C (with no freezing)                                                     |                 |            |            |            |                   |         |          |       |      |
| Nominal filtration rating                   | 5µm                                                                               |                 |            |            |            |                   |         |          |       |      |
| Bowl material                               | Polycarbonate                                                                     |                 |            |            |            |                   |         |          |       |      |
| Bowl guard                                  | —                                                                                 | Option          | Standard   |            |            |                   |         |          |       |      |
| Regulator construction                      | Relieving type                                                                    |                 |            |            |            |                   |         |          |       |      |
| Weight (kg)                                 | 0.16                                                                              | 0.51            | 0.55       | 0.63       | 1.12       | 1.16              | 2.44    | 2.45     | 2.54  |      |

Note 1) Pressure gauge connection threads are not required for F.R.L. unit with a square embedded type pressure gauge (AC20B to AC60B).  
Note 2) Not applicable to AC10B.

## Attachment/Accessory Part No.

| Description                                                   | Model                             | Part no. |                             |                               |                               |                                    |                               |                               |                               |                               |                               |                               |            |
|---------------------------------------------------------------|-----------------------------------|----------|-----------------------------|-------------------------------|-------------------------------|------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|------------|
|                                                               |                                   | AC10B    | AC20B                       | AC25B                         | AC30B                         | AC40B                              | AC40B-06                      | AC50B                         | AC55B                         | AC60B                         |                               |                               |            |
| Accessories                                                   | Pressure gauge <sup>Note 1)</sup> | 1.0MPa   | Round <sup>Note 2)</sup>    | G27-10-R1                     | G36-10-□01                    | G36-10-□01                         | G36-10-□01                    | G46-10-□02                    | G46-10-□02                    | G46-10-□02                    | G46-10-□02                    | G46-10-□02                    | G46-10-□02 |
|                                                               |                                   |          | Square <sup>Note 2)</sup>   | —                             | GC3-10AS                      | GC3-10AS                           | GC3-10AS                      | GC3-10AS                      | GC3-10AS                      | GC3-10AS                      | GC3-10AS                      | GC3-10AS                      | GC3-10AS   |
|                                                               | Pressure gauge <sup>Note 1)</sup> | 0.2MPa   | Round <sup>Note 2)</sup>    | G27-10-R1 <sup>Note 3)</sup>  | G36-2-□01                     | G36-2-□01                          | G36-2-□01                     | G46-2-□02                     | G46-2-□02                     | G46-2-□02                     | G46-2-□02                     | G46-2-□02                     | G46-2-□02  |
|                                                               |                                   |          | Square <sup>Note 2)</sup>   | —                             | GC3-2AS                       | GC3-2AS                            | GC3-2AS                       | GC3-2AS                       | GC3-2AS                       | GC3-2AS                       | GC3-2AS                       | GC3-2AS                       |            |
| Float type auto drain <sup>Note 4)</sup>                      | N.O.                              | —        | —                           | AD38 AD38N <sup>Note 7)</sup> | AD38 AD38N <sup>Note 7)</sup> | AD48 AD48N <sup>Note 7)</sup>      | AD48 AD48N <sup>Note 7)</sup> | AD48 AD48N <sup>Note 7)</sup> | AD48 AD48N <sup>Note 7)</sup> | AD48 AD48N <sup>Note 7)</sup> | AD48 AD48N <sup>Note 7)</sup> | AD48 AD48N <sup>Note 7)</sup> |            |
|                                                               | N.C.                              | AD17     | AD27                        | AD37 AD37N <sup>Note 7)</sup> | AD37 AD37N <sup>Note 7)</sup> | AD47 AD47N <sup>Note 7)</sup>      | AD47 AD47N <sup>Note 7)</sup> | AD47 AD47N <sup>Note 7)</sup> | AD47 AD47N <sup>Note 7)</sup> | AD47 AD47N <sup>Note 7)</sup> | AD47 AD47N <sup>Note 7)</sup> |                               |            |
| Spacer                                                        |                                   | Y100     | Y200                        | Y300                          | Y300                          | Y400                               | Y500                          | Y600                          | Y600                          | Y600                          |                               |                               |            |
| Pressure switch <sup>Note 6)</sup>                            |                                   | —        | IS1000M-20                  | IS1000M-30                    | IS1000M-30                    | IS1000M-40                         | IS1000M-50                    | IS1000M-60                    | IS1000M-60                    | IS1000M-60                    |                               |                               |            |
| T-interface <sup>Note 5)</sup>                                |                                   | Y110-M5  | Y210-□01<br>□02             | Y310-□01<br>□02               | Y310-□01<br>□02               | Y410-□02<br>□03                    | Y510-□02<br>□03               | Y610-□03<br>□04               | Y610-□03<br>□04               | Y610-□03<br>□04               |                               |                               |            |
| 3-port valve for residual pressure release <sup>Note 6)</sup> |                                   | —        | VHS20-□01<br>□02            | VHS30-□02<br>□03              | VHS30-□02<br>□03              | VHS40-□02<br>□03<br>□04            | VHS40-□06                     | VHS50-□06<br>□10              | —                             | —                             |                               |                               |            |
| Piping adapter <sup>Note 6)</sup>                             |                                   | E100-M5  | E200-□01<br>□02<br>□03      | E300-□02<br>□03<br>□04        | E300-□02<br>□03<br>□04        | E400-□02<br>□03<br>□04<br>□06      | E500-□06                      | E600-□06<br>□10               | E600-□06<br>□10               | E600-□06<br>□10               |                               |                               |            |
| Pressure switch with piping adapter <sup>Note 6)</sup>        |                                   | —        | IS1000E-20□01<br>□02<br>□03 | IS1000E-30□02<br>□03<br>□04   | IS1000E-30□02<br>□03<br>□04   | IS1000E-40□02<br>□03<br>□04<br>□06 | —                             | —                             | —                             | —                             |                               |                               |            |
| Cross interface <sup>Note 6)</sup>                            |                                   | Y14-M5   | Y24-□01<br>□02              | Y34-□01<br>□02                | Y34-□01<br>□02                | Y44-□02<br>□03                     | Y54-□03<br>□04                | —                             | —                             | —                             |                               |                               |            |

Note 1) □ 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. Contact SMC regarding the connection thread NPT and pressure gauge supply for PSI unit specifications.

Note 2) Includes one O-ring and 2 mounting screws.

Note 3) For 1.0MPa.

Note 4) Minimum operating pressure: N.O. type-0.1MPa; N.C. type-0.1MPa (AD17/27), 0.15MPa (AD37/47).

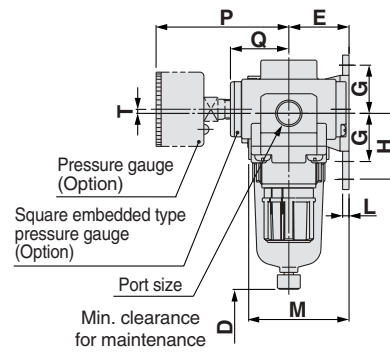
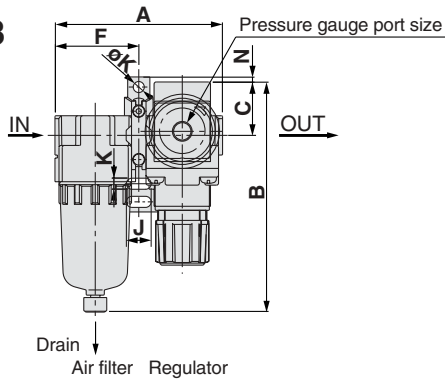
Note 5) For F.R.L. units, port sizes not in ( ) are for standard application.

Note 6) Separate interfaces are required for modular unit.

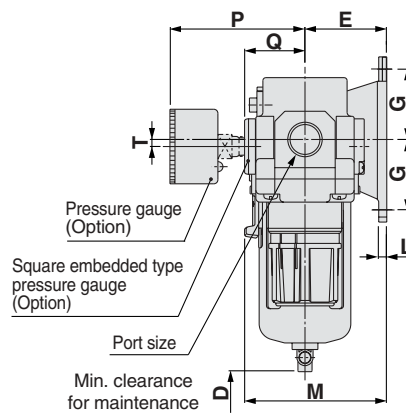
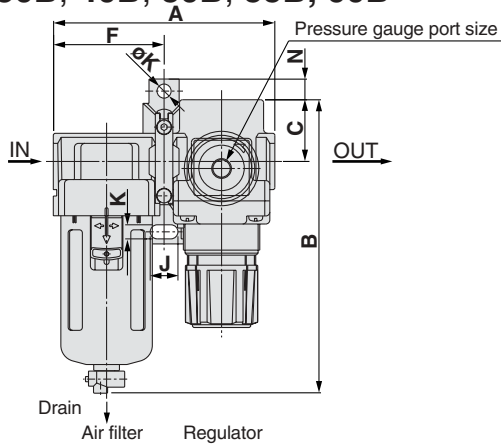
Note 7) When "N" is specified in the end of part number of auto drain, applicable tube O.D should be ø3/8".

## Dimensions

### AC10B, 20B



### AC25B, 30B, 40B, 50B, 55B, 60B



| Applicable model        | AC10B, AC20B           |            | AC25B, AC30B, AC40B, AC40B-06, AC50B, AC55B, AC60B     |            |                             |                           |                                              |
|-------------------------|------------------------|------------|--------------------------------------------------------|------------|-----------------------------|---------------------------|----------------------------------------------|
| Optional specifications | With auto drain (N.C.) | Metal bowl | With auto drain (N.O./N.C.)                            | Metal bowl | Metal bowl with level gauge | With drain guide          | Drain cock with barb fitting                 |
|                         |                        |            | <br>N.O.: Black<br>N.C.: Gray<br>ø10 One-touch fitting |            |                             | <br>Width across flats 17 | <br>Barb fitting<br>Applicable tubing: T0604 |

| Model    | Port size     | Standard specification |     |      |    |                       |      |    |    |    |     |     |     |                     | Accessory specification |                 |      |            |     |
|----------|---------------|------------------------|-----|------|----|-----------------------|------|----|----|----|-----|-----|-----|---------------------|-------------------------|-----------------|------|------------|-----|
|          |               | A                      | B   | C    | D  | Bracket mounting size |      |    |    |    |     |     |     | With pressure gauge |                         | With auto drain |      |            |     |
|          |               |                        |     |      |    | E                     | F    | G  | H  | J  | K   | ØK  | L   | M                   | N                       | P               | Q    | T          | B   |
| AC10B    | M5 x 0.8      | 56                     | 71  | 11   | 25 | 25                    | 28   | 20 | 27 | 7  | 4.5 | 4.5 | 2.8 | 40                  | 13.5                    | 26              | —    | 0          | 89  |
| AC20B    | 1/8, 1/4      | 83                     | 114 | 26.5 | 40 | 30                    | 41.5 | 24 | 33 | 12 | 5.5 | 5.5 | 3.2 | 50                  | 2.5                     | 65              | 29.5 | 2 (Note 1) | 132 |
| AC25B    | 1/4, 3/8      | 110                    | 143 | 28   | 50 | 41                    | 55   | 35 | —  | 14 | 7   | 7   | 4   | 71                  | 13                      | 64              | 28.5 | 0          | 184 |
| AC30B    | 1/4, 3/8      | 110                    | 146 | 31   | 50 | 41                    | 55   | 35 | —  | 14 | 7   | 7   | 4   | 71                  | 10                      | 66              | 30.5 | 3.5        | 187 |
| AC40B    | 1/4, 3/8, 1/2 | 145                    | 183 | 36   | 75 | 50                    | 72.5 | 40 | —  | 18 | 9   | 9   | 4   | 88                  | 12                      | 74              | 35   | 3.5        | 222 |
| AC40B-06 | 3/4           | 155                    | 185 | 36   | 75 | 50                    | 77.5 | 40 | —  | 18 | 9   | 9   | 4.6 | 88                  | 12                      | 74              | 35   | 3          | 224 |
| AC50B    | 3/4, 1        | 186                    | 264 | 43   | 20 | 70                    | 93   | 50 | —  | 20 | 11  | 11  | 6.4 | 115                 | 16                      | 84              | 44.5 | 3.3        | 303 |
| AC55B    | 1             | 191                    | 277 | 43   | 20 | 70                    | 98   | 50 | —  | 20 | 11  | 11  | 6.4 | 117.5               | 16                      | 84              | 44.5 | 3.3        | 316 |
| AC60B    | 1             | 196                    | 280 | 46   | 20 | 70                    | 98   | 50 | —  | 20 | 11  | 11  | 6.4 | 117.5               | 13                      | 84              | 44.5 | 3.3        | 319 |

| Model    | Optional specification <sup>Note 2)</sup> |                  |            |                             |
|----------|-------------------------------------------|------------------|------------|-----------------------------|
|          | With barb fitting                         | With drain guide | Metal bowl | Metal bowl with level gauge |
|          | B                                         | B                | B          | B                           |
| AC10B    | —                                         | —                | 70         | —                           |
| AC20B    | —                                         | —                | 114        | —                           |
| AC25B    | 151                                       | 150              | 156        | 176                         |
| AC30B    | 154                                       | 153              | 159        | 179                         |
| AC40B    | 191                                       | 190              | 196        | 216                         |
| AC40B-06 | 193                                       | 192              | 198        | 218                         |
| AC50B    | 272                                       | 271              | 277        | 297                         |
| AC55B    | 285                                       | 284              | 290        | 310                         |
| AC60B    | 288                                       | 287              | 293        | 313                         |



Note 1) For AC20 only, the position of the pressure gauge is above the center of the piping.

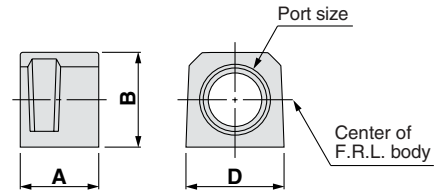
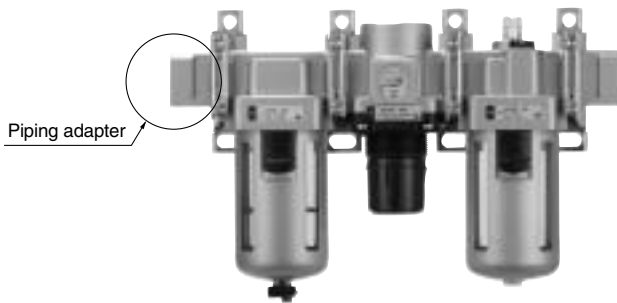
Note 2) For optional specifications (with barb fitting, with drain guide, with metal bowl, or with level gauge), the total length (dimension for B) will vary.

# F.R.L. Unit *Series AC* Attachment Specifications

## Piping Adapter (E)

**M5 x 0.8, 1/8, 1/4, 3/8, 1/2, 3/4, 1**

A piping adapter allows installation/removal of the component without removing the piping and thus makes maintenance easier.



| Model <sup>Note)</sup> | Port size | A  | B    | D  | Applicable model                                                                   |
|------------------------|-----------|----|------|----|------------------------------------------------------------------------------------|
| <b>E100-M5</b>         | M5 x 0.8  | 10 | 14   | 14 | <b>AC10□, AW10, AF10, AR10, AL10</b>                                               |
| <b>E200-□01</b>        | 1/8       | 30 | 23.5 | 28 | <b>AC20□</b>                                                                       |
| <b>E200-□02</b>        | 1/4       |    |      |    | <b>AF20, AR20□, AW20□</b>                                                          |
| <b>E200-□03</b>        | 3/8       |    |      |    | <b>AL20, AFM20, AFD20, AWM20, AWD20</b>                                            |
| <b>E300-□02</b>        | 1/4       | 32 | 30   | 30 | <b>AC25□, AC30□</b>                                                                |
| <b>E300-□03</b>        | 3/8       |    |      |    | <b>AF30, AR30□, AW30□</b>                                                          |
| <b>E300-□04</b>        | 1/2       |    |      |    | <b>AL30, AFM30, AFD30, AWM30, AWD30</b>                                            |
| <b>E400-□02</b>        | 1/4       | 32 | 36   | 36 | <b>AC40□</b>                                                                       |
| <b>E400-□03</b>        | 3/8       |    |      |    | <b>AF40, AR40□, AW40□</b>                                                          |
| <b>E400-□04</b>        | 1/2       |    |      |    | <b>AL40, AFM40, AFD40</b>                                                          |
| <b>E400-□06</b>        | 3/4       |    |      |    | <b>AWM40, AWD40</b>                                                                |
| <b>E500-□06</b>        | 3/4       | 32 | 40   | 44 | <b>AC40□-06, AF40-06, AR40□-06, AW40□-06</b><br><b>AL40-06, AFM40-06, AFD40-06</b> |
| <b>E600-□06</b>        | 3/4       | 35 | 48   | 53 | <b>AC50, AC55, AC60, AC50B, AC55B, AC60B</b>                                       |
| <b>E600-□10</b>        | 1         |    |      |    | <b>AF50, AR50□, AL50, AF60, AR60□, AL60</b>                                        |

Notes) • □ in model numbers indicates a thread type. No indication is necessary for Rc; however, indicate N for NPT, and F for G.

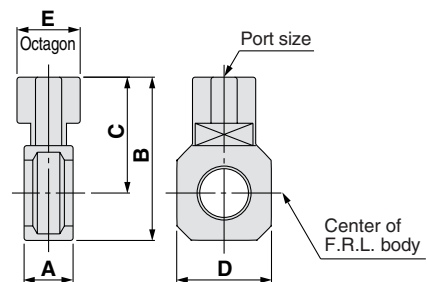
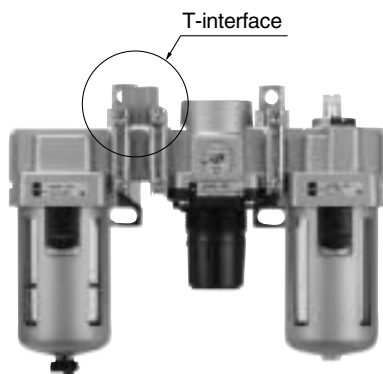
• Separate interfaces are required for modular unit.

\* Factory mounting of a piping adapter on the AC models is available as a special order.

## T-interface (T)

**M5 x 0.8, 1/8, 1/4, 3/8, 1/2**

Using a T-interface facilitates the redirection of air flow.



| Model           | Port size | A  | B  | C  | D  | E  | Applicable model         |
|-----------------|-----------|----|----|----|----|----|--------------------------|
| <b>Y110-M5</b>  | M5 x 0.8  | 11 | 19 | 12 | 14 | 8  | <b>AC10, AC10B</b>       |
| <b>Y210-□01</b> | 1/8       | 15 | 42 | 32 | 28 | 19 | <b>AC20, AC20B</b>       |
| <b>Y210-□02</b> | 1/4       |    |    |    |    |    | <b>AC20C</b>             |
| <b>Y310-□01</b> | 1/8       | 15 | 53 | 39 | 30 | 19 | <b>AC25, AC25B</b>       |
| <b>Y310-□02</b> | 1/4       |    |    |    |    |    | <b>AC25C, AC30</b>       |
| <b>Y410-□02</b> | 1/4       | 19 | 62 | 44 | 36 | 24 | <b>AC30B, AC30C</b>      |
| <b>Y410-□03</b> | 3/8       |    |    |    |    |    | <b>AC40, AC40B</b>       |
| <b>Y510-□02</b> | 1/4       | 19 | 66 | 46 | 44 | 24 | <b>AC40C</b>             |
| <b>Y510-□03</b> | 3/8       |    |    |    |    |    | <b>AC40-06, AC40B-06</b> |
| <b>Y610-□03</b> | 3/8       | 22 | 81 | 57 | 53 | 30 | <b>AC40C-06</b>          |
| <b>Y610-□04</b> | 1/2       |    |    |    |    |    | <b>AC50, AC55</b>        |
|                 |           |    |    |    |    |    | <b>AC60, AC50B</b>       |
|                 |           |    |    |    |    |    | <b>AC55B, AC60B</b>      |

Notes) • □ in model numbers indicates a thread type. No indication is necessary for Rc; however, indicate N for NPT, and F for G.

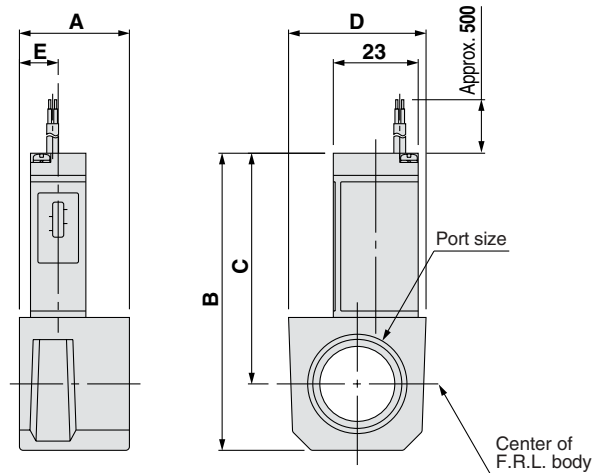
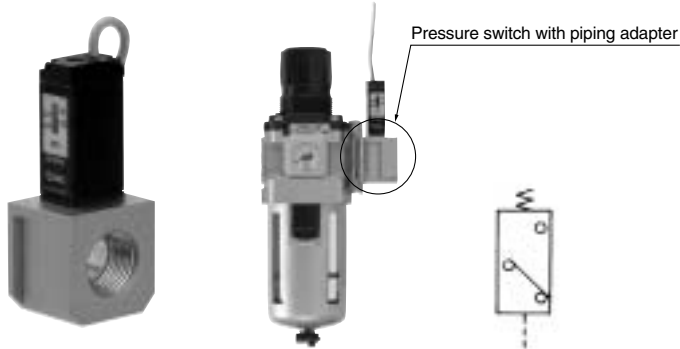
• Separate interfaces are required for modular unit.

\* Refer to the attachment table on Front matter 2 for standard port sizes when using with AC.

### Caution in Mounting

- If a T-interface is used on the IN side of the lubricator, lubricant may be mixed. Use the series AKM check valve to avoid such possibility.

## Pressure Switch with Piping Adapter (P)



### Specifications

|                               |                               |
|-------------------------------|-------------------------------|
| Fluid                         | Air                           |
| Proof pressure                | 1.0MPa                        |
| Maximum operating pressure    | 0.7MPa                        |
| Set pressure range (when OFF) | 0.1 to 0.4MPa                 |
| Differential                  | 0.08MPa                       |
| Ambient and fluid temperature | -5 to 60°C (with no freezing) |

### Switch characteristics

|                                |                         |
|--------------------------------|-------------------------|
| Contact point configuration    | 1a                      |
| Maximum contact point capacity | 2VA(AC), 2W(DC)         |
| Operating voltage: AC, DC      | 100V or less            |
| Max. operating current         | 12V to 24V AC, DC: 50mA |
|                                | 48V AC, DC: 40mA        |
|                                | 100V AC, DC: 20mA       |

| Model <small>Note 1)</small> | Port size | A  | B    | C    | D  | E    | Applicable model             |
|------------------------------|-----------|----|------|------|----|------|------------------------------|
| IS1000E-20□01                | 1/8       | 30 | 68   | 57   | 28 | 16   | AC20□                        |
| IS1000E-20□02                | 1/4       |    |      |      |    |      | AR20□, AW20□                 |
| IS1000E-20□03                | 3/8       |    |      |      |    |      | AWM20, AWD20                 |
| IS1000E-30□02                | 1/4       | 32 | 74.5 | 60.5 | 30 | 13   | AC25□, AC30□                 |
| IS1000E-30□03                | 3/8       |    |      |      |    |      | AR25□, AR30□, AW30□          |
| IS1000E-30□04                | 1/2       |    |      |      |    |      | AWM30, AWD30                 |
| IS1000E-40□02                | 1/4       | 32 | 80.5 | 62.5 | 37 | 12.5 | AC40□ <small>Note 2)</small> |
| IS1000E-40□03                | 3/8       |    |      |      |    |      | AR40□, AW40□                 |
| IS1000E-40□04                | 1/2       |    |      |      |    |      | AWM40, AWD40                 |
| IS1000E-40□06                | 3/4       |    |      |      |    |      |                              |

Note 1) □ in the model numbers indicates a thread type. No indication is necessary for Rc; however, indicate N for NPT, and F for G.

Note 2) A pressure switch cannot be mounted on AC40□-06 and AW40□-06.

\* Separate interfaces are required for modular unit.

\*\* The pressure switch on AC40□-06 and above and AW40□-06 can be mounted by screwing IS1000-01 into the piping adapter E500-□06-X501 or E600-□06-X501 to E600-□06 to 10-X501 (with top-face thread Rc 1/8). Products with a premounted switch are available as a special order. Please contact SMC regarding their availability.

## How to Order

IS1000E-30□03□

Pressure switch with piping adapter

Body size

|    |                   |
|----|-------------------|
| 20 | For AC20          |
| 30 | For AC25, AC30    |
| 40 | For AC40-02 to 04 |

Thread type

|     |     |
|-----|-----|
| Nil | Rc  |
| N   | NPT |
| F   | G   |

### Option

|      |                                                                                                                  |
|------|------------------------------------------------------------------------------------------------------------------|
| X201 | Lead wire length: 3m                                                                                             |
| X202 | Regulating pressure range: 0.1 to 0.6MPa                                                                         |
| X207 | MPa/PSI Dual scale                                                                                               |
| X215 | Lead wire length: 3m; Regulating pressure range: 0.1 to 0.6MPa                                                   |
| X250 | Opposite-side mounting (Left-side mounting type)                                                                 |
| X251 | Lead wire length: 3m; Opposite-side mounting (Left-side mounting type)                                           |
| X252 | Set pressure range: 0.1 to 0.6MPa; Opposite-side mounting (Left-side mounting type)                              |
| X253 | Lead wire length: 3m; Regulating pressure range: 0.1 to 0.6MPa; Opposite-side mounting (Left-side mounting type) |

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

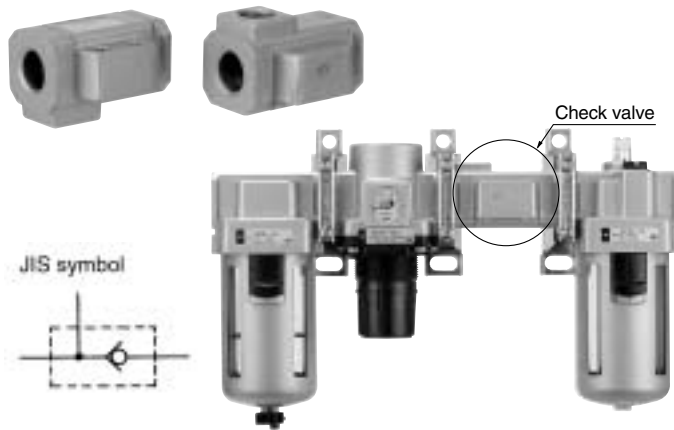
### Piping adapter port size

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

# Series AC

## Check Valve (K) Rc1/8, 1/4, 3/8

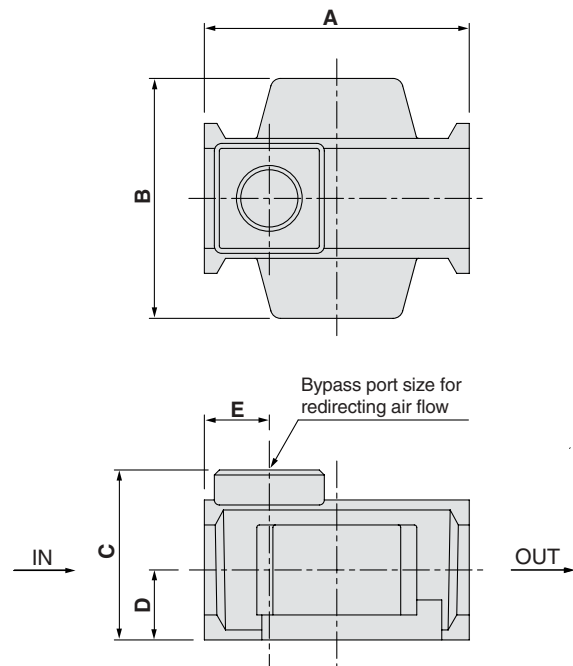
A check valve with intermediate air release port can be easily installed to prevent a back flow of lubricant when redirecting the air flow and releasing the air on the outlet side of the regulator.



### Specifications

| Model          | Effective area (mm <sup>2</sup> ) |
|----------------|-----------------------------------|
| <b>AKM2000</b> | 28                                |
| <b>AKM3000</b> | 55                                |
| <b>AKM4000</b> | 111                               |

Be sure to use above check valves when redirecting the air flow on the inlet side of the lubricator. Threads for IN and OUT ports are not machined.



| Model          | Bypass port sizes | A  | B  | C  | D  | E  | Applicable model                    |
|----------------|-------------------|----|----|----|----|----|-------------------------------------|
| <b>AKM2000</b> | 1/8, 1/4          | 40 | 40 | 28 | 11 | 11 | <b>AC20, AC20A</b>                  |
| <b>AKM3000</b> | 1/8, 1/4          | 53 | 48 | 34 | 14 | 13 | <b>AC25, AC25A<br/>AC30, AC30A</b>  |
| <b>AKM4000</b> | 1/4, 3/8          | 70 | 54 | 42 | 18 | 15 | <b>AC40, AC40A</b> <sup>Note)</sup> |

Note) Not applicable to AC40□-06.

\* Refer to the attachment table on page 1 or 5 for standard bypass port sizes applicable to AC.

### How to Order

**AKM 30 00 - 01**

Check valve  
Body size  
20 30 40

Bypass port size for redirecting air flow

| Symbol | Port size | Body size |    |    |
|--------|-----------|-----------|----|----|
|        |           | 20        | 30 | 40 |
| 01     | 1/8       | ●         | ●  | —  |
| 02     | 1/4       | ●         | ●  | ●  |
| 03     | 3/8       | —         | —  | ●  |

Thread type

|     |     |
|-----|-----|
| Nil | Rc  |
| N   | NPT |
| F   | G   |

## Pressure Switch (S)

A compact integrated pressure switch can be easily installed and facilitates the pressure detection of the line.



### Specifications

|                               |                               |
|-------------------------------|-------------------------------|
| Fluid                         | Air                           |
| Proof pressure                | 1.0MPa                        |
| Maximum operating pressure    | 0.7MPa                        |
| Set pressure range (off)      | 0.1 to 0.4MPa                 |
| Differential                  | 0.08MPa                       |
| Ambient and fluid temperature | -5 to 60°C (with no freezing) |

### Switch characteristics

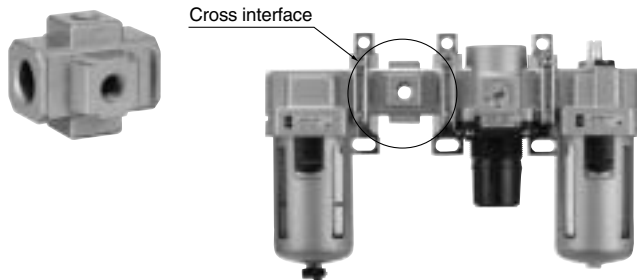
|                                |                                                               |
|--------------------------------|---------------------------------------------------------------|
| Contact point configuration    | 1a                                                            |
| Maximum contact point capacity | 2VA(AC), 2W(DC)                                               |
| Operating voltage: AC, DC      | 100V or less                                                  |
| Maximum operating current      | AC, DC12V to 24V: 50mA<br>AC, DC48V: 40mA<br>AC, DC100V: 20mA |

## Cross Interface (C)

M5 x 0.8, 1/8, 1/4, 3/8, 1/2

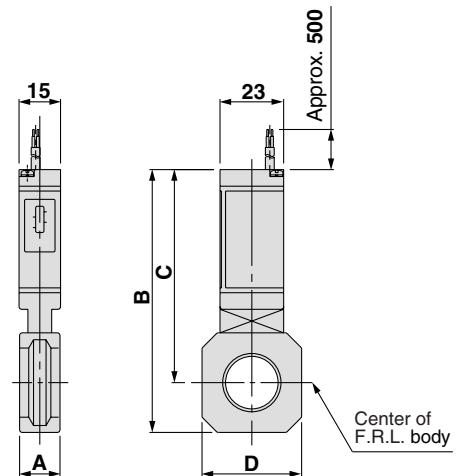
Pipings are possible in all 4 directions.

IN/OUT ports are not machined for threads. Contact SMC if threaded (machined) ports are required.



### Cautions in Mounting

- When mounting a cross interface directly on the IN side of the lubricator, be sure to use a series AKM check valve between the lubricator and cross interface.
- Factory mounting of a cross interface on the AC model is available as a special order.



| Model      | A  | B    | C    | D  | Applicable model    |
|------------|----|------|------|----|---------------------|
| IS1000M-20 | 11 | 76   | 66   | 28 | AC20□               |
| IS1000M-30 | 13 | 86   | 72   | 30 | AC25□, AC30□        |
| IS1000M-40 | 15 | 95   | 77   | 36 | AC40□               |
| IS1000M-50 | 17 | 99   | 79   | 44 | AC40□-06            |
| IS1000M-60 | 22 | 92.5 | 68.5 | 53 | AC50□, AC55□, AC60□ |

Note) Separate interfaces are required for modular unit.

### How to Order

IS1000M-30

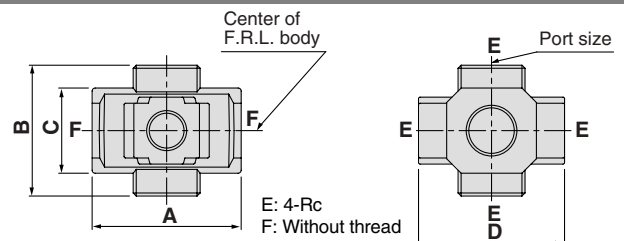
Pressure switch  
Body size

|    |                      |
|----|----------------------|
| 20 | For AC20             |
| 30 | For AC25, AC30       |
| 40 | For AC40-02 to 04    |
| 50 | For AC40-06          |
| 60 | For AC50, AC55, AC60 |

### Accessories

|      |                                                                   |
|------|-------------------------------------------------------------------|
| X201 | Lead wire length: 3m                                              |
| X202 | Regulating pressure range: 0.1 to 0.6MPa                          |
| X207 | MPa/PSI Dual scale                                                |
| X215 | Lead wire length: 3m;<br>Regulating pressure range: 0.1 to 0.6MPa |

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



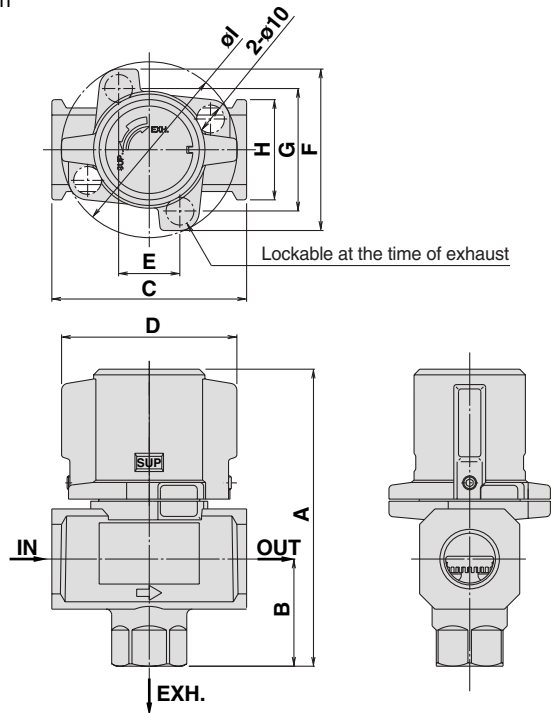
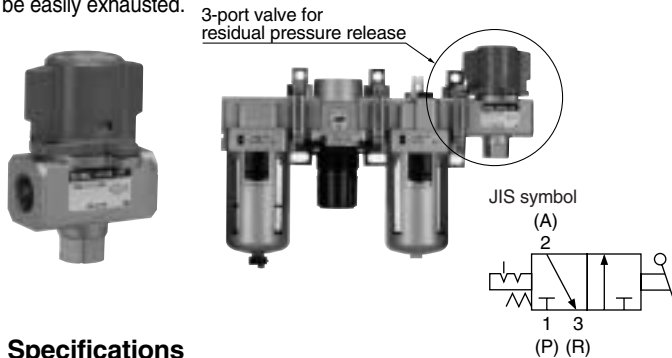
| Model   | Port size | A  | B  | C  | D  | Applicable model |
|---------|-----------|----|----|----|----|------------------|
| Y14-M5  | M5        | 23 | 16 | 14 | 25 | AC10□            |
| Y24-□01 | 1/8       | 40 | 40 | 22 | 40 | AC20□            |
| Y24-□02 | 1/4       |    |    |    |    |                  |
| Y34-□01 | 1/8       | 49 | 43 | 28 | 48 | AC25□, AC30□     |
| Y34-□02 | 1/4       |    |    |    |    |                  |
| Y44-□02 | 1/4       | 60 | 48 | 36 | 54 | AC40□            |
| Y44-□03 | 3/8       |    |    |    |    |                  |
| Y54-□03 | 3/8       | 72 | 62 | 40 | 62 | AC40□-06         |
| Y54-□04 | 1/2       |    |    |    |    |                  |

Notes) □ in the model numbers indicates a thread type. No indication is necessary for Rc; however, indicate N for NPT, and F for G.

• If threaded ports are required, they are available as a special order. Contact SMC.

## 3-Port Valve for Residual Pressure Release (V)

With the use of a 3-port valve for residual pressure release, pressure left in the line can be easily exhausted.



### Specifications

| Model    | Port size |      | Effective area (mm <sup>2</sup> ) ( ) Effective Area mm <sup>2</sup> (Cv) |             |
|----------|-----------|------|---------------------------------------------------------------------------|-------------|
|          | IN,OUT    | EXH. | IN to OUT                                                                 | OUT to EXH. |
| VHS20    | 1/8       | 1/8  | 10 (0.54)                                                                 | 11 (0.60)   |
|          | 1/4       |      | 14 (0.76)                                                                 | 16 (0.87)   |
| VHS30    | 1/4       | 1/4  | 16 (0.87)                                                                 | 14 (0.76)   |
|          | 3/8       |      | 31 (1.68)                                                                 | 29 (1.57)   |
| VHS40    | 1/4       | 3/8  | 27 (1.46)                                                                 | 36 (1.95)   |
|          | 3/8       |      | 38 (2.06)                                                                 | 40 (2.17)   |
|          | 1/2       |      | 55 (2.98)                                                                 | 42 (2.28)   |
| VHS40-06 | 3/4       | 1/2  | 77 (1.73)                                                                 | 49 (2.66)   |
| VHS50    | 3/4       | 1/2  | 82 (4.44)                                                                 | 50 (2.71)   |
|          | 1         |      | 125 (6.78)                                                                | 53 (2.87)   |

Note) Use an air filter on the IN side for operating protection.

### How to Order

**VHS 30-F 03-RZ**

3-port valve for residual pressure release

Body size

| Symbol | Applicable model            |
|--------|-----------------------------|
| 20     | AC20                        |
| 30     | AC25,30                     |
| 40     | AC40                        |
| 50     | AC50, AC60 <sup>Note)</sup> |

Note) When the valve is mounted on AC60, the flow rate may decrease depending upon the mounting position.

Thread type

|     |     |
|-----|-----|
| Nil | Rc  |
| N   | NPT |
| F   | G   |

Port size

| Symbol | Port size | Body size |    |    |    |
|--------|-----------|-----------|----|----|----|
|        |           | 20        | 30 | 40 | 50 |
| 01     | 1/8       | □         | —  | —  | —  |
| 02     | 1/4       | □         | □  | □  | —  |
| 03     | 3/8       | —         | □  | □  | —  |
| 04     | 1/2       | —         | —  | □  | —  |
| 06     | 3/4       | —         | —  | □  | □  |
| 10     | 1         | —         | —  | —  | □  |

Optional specifications

| Code                 | Description                            |
|----------------------|----------------------------------------|
| R                    | Flow direction: Right to left          |
| Z <sup>Note 1)</sup> | Name plate in imperial units (PSI, °F) |

Note 1) This product is for overseas use only according to the new Measurement Law. (The SI unit type is provided for use in Japan.)

| Model    | A   | B  | C  | D  | E  | F  | G  | H  | I  |
|----------|-----|----|----|----|----|----|----|----|----|
| VHS20    | 59  | 20 | 40 | 34 | —  | 45 | 33 | 28 | 45 |
| VHS30    | 78  | 29 | 53 | 46 | —  | 55 | 42 | 30 | 55 |
| VHS40    | 107 | 39 | 70 | 63 | 22 | 58 | 44 | 36 | 63 |
| VHS40-06 | 110 | 42 | 75 | 67 | 21 | 65 | 50 | 44 | 69 |
| VHS50    | 134 | 53 | 90 | 78 | 26 | 76 | 61 | 54 | 81 |

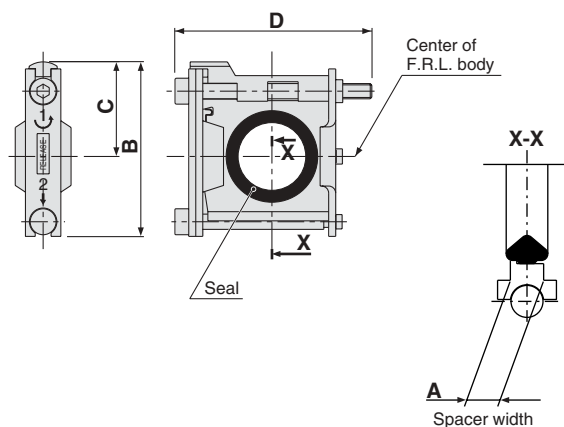
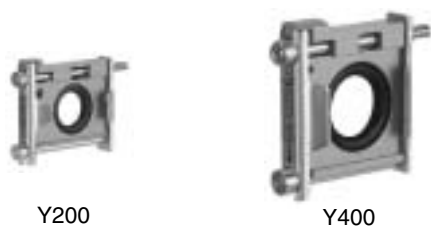
### Caution

1. Consult SMC when a pressure switch and T type spacer are installed on the outlet of pressure release valve
2. If a stop valve or a silencer is connected to the exhaust port of VHS20/30, the effective sectional area should be larger than the figure indicated in the following table, to prevent malfunction caused by back pressure. (This is not applicable to VHS40 and VHS50)

| Model | Effective area (mm <sup>2</sup> ) |
|-------|-----------------------------------|
| VHS20 | 5                                 |
| VHS30 | 5                                 |

# Series AC Spacers and Brackets Accessories

## Spacer (X)



| Model | A | B    | C    | D  | Applicable model                        |
|-------|---|------|------|----|-----------------------------------------|
| Y100  | 6 | 27   | 15   | 33 | AC10, AC10A, AC10B                      |
| Y200  | 3 | 35.5 | 18.5 | 48 | AC20□                                   |
| Y300  | 4 | 47   | 26   | 59 | AC25□, AC30□                            |
| Y400  | 5 | 57   | 31   | 65 | AC40□                                   |
| Y500  | 5 | 61   | 33   | 70 | AC40□-06                                |
| Y600  | 6 | 75.5 | 41   | 86 | AC50, AC55, AC60<br>AC50B, AC55B, AC60B |

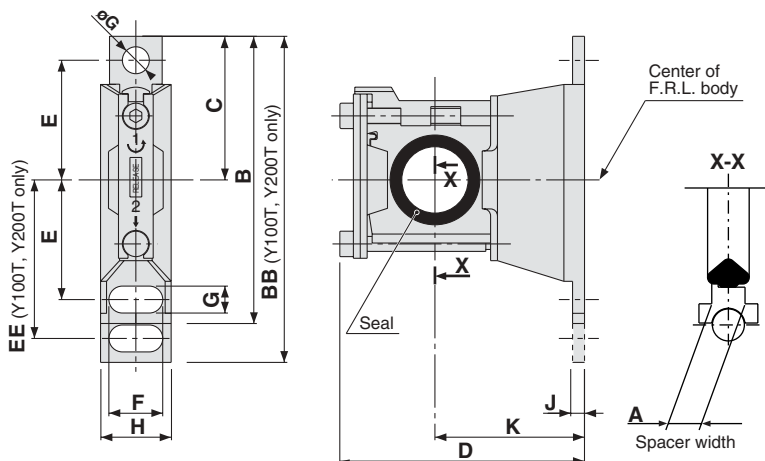
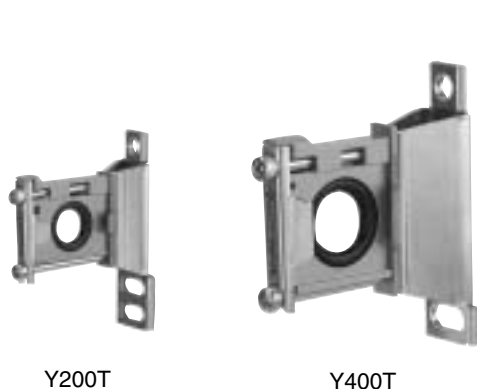
## Replacement parts

| Description | Material                | Part no.                       |            |            |            |            |            |
|-------------|-------------------------|--------------------------------|------------|------------|------------|------------|------------|
|             |                         | Y100                           | Y200       | Y300       | Y400       | Y500       | Y600       |
| Seal        | HNBR <sup>Note 2)</sup> | Y100P-060AS <sup>Note 1)</sup> | Y200P-060S | Y300P-060S | Y400P-060S | Y500P-060S | Y600P-060S |

Note 1) Y-100 comes with 2 O-rings.

Note 2) NBR seal is used for Y100 spacer because of no direct contact with fluid.

## Spacer with Bracket (Z)



| Model | A | B   | BB | C    | D    | E  | EE | F   | G   | øG  | H  | J   | K  | Applicable model                      |
|-------|---|-----|----|------|------|----|----|-----|-----|-----|----|-----|----|---------------------------------------|
| Y100T | 6 | —   | 56 | 24.5 | 40.5 | 20 | 27 | 6.8 | 4.5 | 4.5 | 14 | 2.8 | 25 | AC10□                                 |
| Y200T | 3 | —   | 67 | 29   | 53   | 24 | 33 | 12  | 5.5 | 5.5 | 19 | 3.2 | 30 | AC20□                                 |
| Y300T | 4 | 82  | —  | 41   | 68   | 35 | —  | 14  | 7   | 7   | 21 | 4   | 41 | AC25□, AC30□                          |
| Y400T | 5 | 96  | —  | 48   | 81.5 | 40 | —  | 18  | 9   | 9   | 26 | 4   | 50 | AC40□                                 |
| Y500T | 5 | 96  | —  | 48   | 86   | 40 | —  | 18  | 9   | 9   | 27 | 4.6 | 50 | AC40□-06                              |
| Y600T | 6 | 120 | —  | 60   | 112  | 50 | —  | 20  | 11  | 11  | 31 | 6.4 | 70 | AC50, AC55, AC60, AC50B, AC55B, AC60B |

## Replacement parts

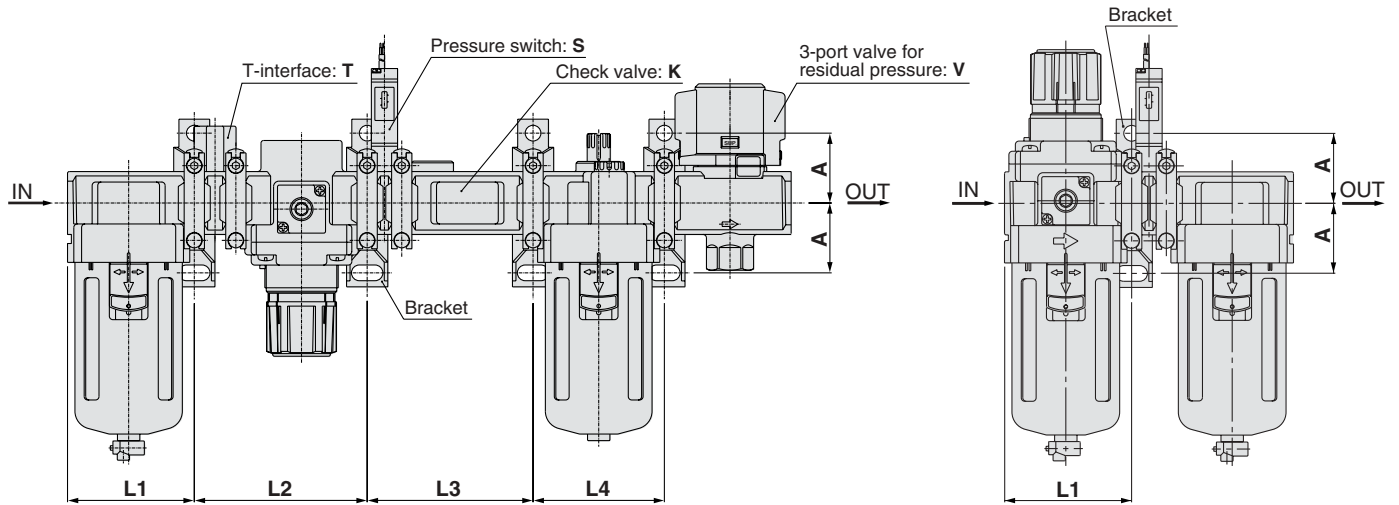
| Description | Material                | Part no.                       |            |            |            |            |            |
|-------------|-------------------------|--------------------------------|------------|------------|------------|------------|------------|
|             |                         | Y100T                          | Y200T      | Y300T      | Y400T      | Y500T      | Y600T      |
| Seal        | HNBR <sup>Note 2)</sup> | Y100P-060AS <sup>Note 1)</sup> | Y200P-060S | Y300P-060S | Y400P-060S | Y500P-060S | Y600P-060S |

Note 1) Y-100T comes with 2 O-rings.

Note 2) NBR seal is used for Y100T spacer because of no direct contact with fluid.

# Series AC

## Mounting Position for Spacer with Bracket



| Attachment<br>Model | K    |    |    | S    |     | T    |     | V    |    |    | KS   |    |    | KT   |    |    | KV   |    |    |    | KST  |    |    |
|---------------------|------|----|----|------|-----|------|-----|------|----|----|------|----|----|------|----|----|------|----|----|----|------|----|----|
|                     | L1   | L2 | L3 | L1   | L2  | L1   | L2  | L1   | L2 | L3 | L1   | L2 | L3 | L1   | L2 | L3 | L1   | L2 | L3 | L4 | L1   | L2 | L3 |
| AC10                | —    | —  | —  | —    | —   | 28   | 48  | —    | —  | —  | —    | —  | —  | —    | —  | —  | —    | —  | —  | —  | —    | —  | —  |
| AC20                | 41.5 | 43 | 43 | 41.5 | 43  | 41.5 | 61  | 41.5 | 43 | 43 | 41.5 | 43 | 57 | 41.5 | 61 | 43 | 41.5 | 43 | 43 | 43 | 41.5 | 61 | 57 |
| AC25                | 55   | 57 | 57 | 55   | 57  | 55   | 76  | 55   | 57 | 57 | 55   | 57 | 74 | 55   | 76 | 57 | 55   | 57 | 57 | 57 | 55   | 76 | 74 |
| AC30                | 55   | 57 | 57 | 55   | 57  | 55   | 76  | 55   | 57 | 57 | 55   | 57 | 74 | 55   | 76 | 57 | 55   | 57 | 57 | 57 | 55   | 76 | 74 |
| AC40                | 72.5 | 75 | 75 | 72.5 | 75  | 72.5 | 99  | 72.5 | 75 | 75 | 72.5 | 75 | 95 | 72.5 | 99 | 75 | 72.5 | 75 | 75 | 75 | 72.5 | 99 | 95 |
| AC40-06             | —    | —  | —  | 77.5 | 80  | 77.5 | 104 | 77.5 | 80 | 80 | —    | —  | —  | —    | —  | —  | —    | —  | —  | —  | —    | —  | —  |
| AC50                | —    | —  | —  | 93   | 96  | 93   | 124 | 93   | 96 | 96 | —    | —  | —  | —    | —  | —  | —    | —  | —  | —  | —    | —  | —  |
| AC55                | —    | —  | —  | 98   | 96  | 98   | 124 | —    | —  | —  | —    | —  | —  | —    | —  | —  | —    | —  | —  | —  | —    | —  | —  |
| AC60                | —    | —  | —  | 98   | 101 | 98   | 129 | —    | —  | —  | —    | —  | —  | —    | —  | —  | —    | —  | —  | —  | —    | —  | —  |

| Attachment<br>Model | KSV  |    |    |    | KTV  |    |    |    | KSTV |    |    |    | ST   |      | SV   |      |    | STV  |      |     | TV   |      |     |
|---------------------|------|----|----|----|------|----|----|----|------|----|----|----|------|------|------|------|----|------|------|-----|------|------|-----|
|                     | L1   | L2 | L3 | L4 | L1   | L2 | L3 | L4 | L1   | L2 | L3 | L4 | L1   | L2   | L1   | L2   | L3 | L1   | L2   | L3  | L1   | L2   | L3  |
| AC10                | —    | —  | —  | —  | —    | —  | —  | —  | —    | —  | —  | —  | —    | —    | —    | —    | —  | —    | —    | —   | —    | —    | —   |
| AC20                | 41.5 | 43 | 57 | 43 | 41.5 | 61 | 43 | 43 | 41.5 | 61 | 57 | 43 | 41.5 | 61   | 41.5 | 43   | 57 | 41.5 | 61   | 57  | 41.5 | 61   | 43  |
| AC25                | 55   | 57 | 74 | 57 | 55   | 76 | 57 | 57 | 55   | 76 | 74 | 57 | 55   | 76   | 55   | 57   | 74 | 55   | 76   | 74  | 55   | 76   | 57  |
| AC30                | 55   | 57 | 74 | 57 | 55   | 76 | 57 | 57 | 55   | 76 | 74 | 57 | 55   | 76   | 55   | 57   | 74 | 55   | 76   | 74  | 55   | 76   | 57  |
| AC40                | 72.5 | 75 | 95 | 75 | 72.5 | 99 | 75 | 75 | 72.5 | 99 | 95 | 75 | 72.5 | 99   | 72.5 | 75   | 95 | 72.5 | 99   | 95  | 72.5 | 99   | 75  |
| AC40-06             | —    | —  | —  | —  | —    | —  | —  | —  | —    | —  | —  | —  | —    | 77.5 | 104  | 77.5 | 80 | 102  | 77.5 | 104 | 102  | 77.5 | 104 |
| AC50                | —    | —  | —  | —  | —    | —  | —  | —  | —    | —  | —  | —  | —    | 93   | 124  | 93   | 96 | 124  | 93   | 124 | 93   | 124  | 96  |
| AC55                | —    | —  | —  | —  | —    | —  | —  | —  | —    | —  | —  | —  | —    | 98   | 124  | —    | —  | —    | —    | —   | —    | —    | —   |
| AC60                | —    | —  | —  | —  | —    | —  | —  | —  | —    | —  | —  | —  | —    | 98   | 129  | —    | —  | —    | —    | —   | —    | —    | —   |

| Attachment<br>Model | K    |    | S    |      | V  |      | KS |      | KV |    |      | KSV |    |      | SV  |    |
|---------------------|------|----|------|------|----|------|----|------|----|----|------|-----|----|------|-----|----|
|                     | L1   | L2 | L1   | L2   | L1 | L2   | L1 | L2   | L1 | L2 | L3   | L1  | L2 | L3   | L1  | L2 |
| AC20A               | 41.5 | 43 | 41.5 | 41.5 | 43 | 41.5 | 57 | 41.5 | 43 | 43 | 41.5 | 57  | 43 | 41.5 | 57  |    |
| AC30A               | 55   | 57 | 55   | 55   | 57 | 55   | 74 | 55   | 57 | 57 | 55   | 74  | 57 | 55   | 74  |    |
| AC40A               | 72.5 | 75 | 72.5 | 72.5 | 75 | 72.5 | 95 | 72.5 | 75 | 75 | 72.5 | 95  | 75 | 72.5 | 95  |    |
| AC40A-06            | —    | —  | 77.5 | 77.5 | 80 | —    | —  | —    | —  | —  | —    | —   | —  | 77.5 | 102 |    |

| Attachment<br>Model | S    |      | T    |    | V    |     | SV   |     | TV |    |
|---------------------|------|------|------|----|------|-----|------|-----|----|----|
|                     | L1   | L1   | L1   | L2 | L1   | L2  | L1   | L2  | L1 | L2 |
| AC10B               | —    | 28   | —    | —  | —    | —   | —    | —   | —  | —  |
| AC20B               | 41.5 | 41.5 | 41.5 | 43 | 41.5 | 57  | 41.5 | 61  | —  | —  |
| AC25B               | 55   | 55   | 55   | 57 | 55   | 74  | 55   | 76  | —  | —  |
| AC30B               | 55   | 55   | 55   | 57 | 55   | 74  | 55   | 76  | —  | —  |
| AC40B               | 72.5 | 72.5 | 72.5 | 75 | 72.5 | 95  | 72.5 | 99  | —  | —  |
| AC40B-06            | 77.5 | 77.5 | 77.5 | 80 | 77.5 | 102 | 77.5 | 104 | —  | —  |
| AC50B               | 93   | 93   | 93   | 96 | 93   | 124 | 93   | 124 | —  | —  |
| AC55B               | 98   | 98   | —    | —  | —    | —   | —    | —   | —  | —  |
| AC60B               | 98   | 98   | —    | —  | —    | —   | —    | —   | —  | —  |

| Attachment<br>Model | S    |    | T    |    | V    |    |    | SV   |    |     | TV   |    |     |
|---------------------|------|----|------|----|------|----|----|------|----|-----|------|----|-----|
|                     | L1   | L2 | L1   | L2 | L1   | L2 | L3 | L1   | L2 | L3  | L1   | L2 | L3  |
| AC20C               | 41.5 | 43 | 41.5 | 43 | 41.5 | 43 | 43 | 41.5 | 43 | 57  | 41.5 | 43 | 61  |
| AC25C               | 55   | 57 | 55   | 57 | 55   | 57 | 57 | 55   | 57 | 74  | 55   | 57 | 76  |
| AC30C               | 55   | 57 | 55   | 57 | 55   | 57 | 57 | 55   | 57 | 74  | 55   | 57 | 76  |
| AC40C               | 72.5 | 75 | 72.5 | 75 | 72.5 | 75 | 75 | 72.5 | 75 | 95  | 72.5 | 75 | 99  |
| AC40C-06            | 77.5 | 80 | 77.5 | 80 | 77.5 | 80 | 80 | 77.5 | 80 | 102 | 77.5 | 80 | 104 |

| Attachment<br>Model | S    |      | V  |      | SV  |    |
|---------------------|------|------|----|------|-----|----|
|                     | L1   | L1   | L2 | L1   | L2  | L2 |
| AC20D               | 41.5 | 41.5 | 43 | 41.5 | 57  | —  |
| AC30D               | 55   | 55   | 57 | 55   | 74  | —  |
| AC40D               | 72.5 | 72.5 | 75 | 72.5 | 95  | —  |
| AC40D-06            | 77.5 | 77.5 | 80 | 77.5 | 102 | —  |

L1: Dimensions from the end of the IN side to the center of the mounting hole for the first bracket.  
 L2: Mounting hole pitch between the first and the second bracket.  
 L3: Mounting hole pitch between the second and the third bracket.  
 L4: Mounting hole pitch between the third and the fourth bracket.  
 Refer to dimensions pages for dimension A from the center of the piping and the mounting hole.