

Type 10
Side Ported

Type 11
Bottom Ported

Plug-in Connector Connecting Base

EX500 Gateway Decentralized System 2 (128 Points)

SY3000/5000/7000 Series



How to Order Manifolds

Refer to pages 569 (SY5000) and 570 (SY7000) for the dimensions of Type 11/Bottom-ported type.

SS5Y **3** - **10** S **A3N** - **05** **U** - **C6**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series

| | |
|---|--------|
| 3 | SY3000 |
| 5 | SY5000 |
| 7 | SY7000 |

* For mixed mounting, refer to page 574 and later.

② Type

| | |
|----|-----------------|
| 10 | Side ported |
| 11 | Bottom ported*1 |

- *1 The SY5000 manifold base is used for the bottom-ported SY3000. When ordering, refer to the "Plug-in Mixed Mounting Type Manifold" (from page 574).
- * When mixing top-ported configurations, select from those listed on page 499. In such cases, use caution as there is also output on the A and B ports on the base side. Specify on the manifold specification sheet if plugs are required for the A and B ports on the base side.

③ SI unit (Number of outputs, Output polarity, Max. number of valve stations)

| 0 | Without SI unit |
|-----|---|
| A3N | 32 outputs*1+4, 2 to 16 stations (24 stations*3), Negative common*2 |

- *1 16 outputs can be set by switching the built-in setting switch.
- *2 Ensure a match with the common specification of the valve.
- *3 (): Maximum number of stations for mixed single and double wiring
- *4 When using the SI unit with 32 outputs, use the GW unit compatible with the EX500 Gateway Decentralized System 2 (128 points).

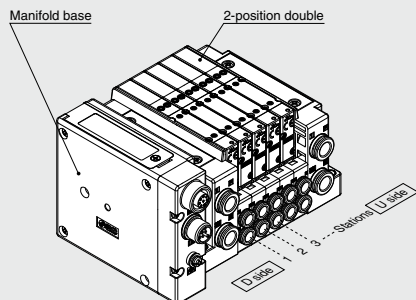
④ Valve stations

| Stations | Note |
|----------------|--|
| 02 2 stations | Double wiring*1 |
| 16 16 stations | |
| 02 2 stations | |
| 24 24 stations | Specified layout*2 (Up to 32 solenoids available) |

- *1 Double wiring: 2-position single, double, 3-position, and 4-position valves can be used on all manifold stations. Use of a 2-position single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.
- *2 Specified layout: Indicate the wiring specifications on the manifold specification sheet. (Note that 2-position double, 3-position, and 4-position valves cannot be used where single wiring has been specified.)
- * When the product without the SI unit (S0) is selected, note the maximum number of solenoids of the SI unit that will be mounted. If the layout is specified, indicate it on the manifold specification sheet.
- * This also includes the number of the blanking plate assembly.

How to Order Manifold Assembly

Example



SS5Y3-10SA3N-05D-C6--1 set (Manifold base part number)
 * SY3200-5U1 5 sets (2-position double part number)
 The asterisk denotes the symbol for the assembly.
 Prefix it to the part numbers of the valve, etc.

- For the valve arrangement, the valve closest to the D side is considered the 1st station.
- Under the manifold base part number, state the valves to be mounted in order starting with the 1st station as shown in the figure above. If the arrangement becomes too complicated, specify the details on a manifold specification sheet.

⑤ P, E port entry

| | |
|---|-------------------------------|
| U | U side (2 to 10 stations) |
| D | D side (2 to 10 stations) |
| B | Both sides (2 to 24 stations) |

⑥ SUP/EXH block assembly




| | |
|-----|---------------------------------------|
| Nil | Internal pilot |
| S | Internal pilot, Built-in silencer*1+2 |
| R | External pilot |

- *1 3/5(E) port is plugged for the built-in silencer type.
- *2 When built-in silencer type is used, keep the exhaust port from coming into direct contact with water or other liquids.

* A separate GW unit and communication cable are required.

For details on the EX500 Gateway Type Serial Transmission System, refer to the **Web Catalog** and the Operation Manual. For the part numbers of the SI units to be mounted, refer to page 597. Please download the Operation Manual via the SMC website, <https://www.smcworld.com>

7 A, B port size (Metric/One-touch fitting)

| | | A, B port | | Type 10/Side ported | | Type 11/Bottom ported | |
|-------------------------|----------|-------------|----|---------------------|--------|-----------------------|---|
| | | | | SY3000 | SY5000 | SY7000 | SY5000 |
| C2 | Straight | ø2 | ● | — | — | — |  |
| C3 | | ø3.2 | ● | — | — | — | |
| C4 | | ø4 | ● | ● | — | — | |
| C6 | | ø6 | ● | ● | ● | ● | |
| C8 | | ø8 | — | — | ● | ● | |
| C10 | | ø10 | — | — | ● | — | |
| C12 | | ø12 | — | — | — | ● | |
| CM ^{*1} | | Mixed sizes | ● | ● | ● | ● | |
| L4 | Upward | ø4 | ● | ● | — | — |  |
| L6 | | ø6 | ● | ● | ● | — | |
| L8 | | ø8 | — | ● | — | — | |
| L10 | | ø10 | — | — | ● | — | |
| L12 | | ø12 | — | — | ● | — | |
| B4 | Downward | ø4 | ● | ● | — | — |  |
| B6 | | ø6 | ● | ● | ● | — | |
| B8 | | ø8 | — | ● | — | — | |
| B10 | | ø10 | — | — | ● | — | |
| B12 | | ø12 | — | — | ● | — | |
| LM ^{*1} | | Mixed sizes | ● | ● | ● | — | |
| P, E port ^{*3} | | | ø8 | ø10 | ø12 | ø10 | ø12 |

*1 Indicate the sizes on the manifold specification sheet.

*2 To avoid interference with the body or piping, select a downward elbow port when mounting the optional spacer assembly (pages 617 to 619).

*3 The direction of P, E port fittings is the same as for the A, B port. If selecting "LM," indicate it on the manifold specification sheet for the P, E port fitting direction.

8 Mounting and Option

| | Mounting | Option | |
|------------------------|-------------------|------------|----------------|
| | | Name plate | Station number |
| Nii | Direct mounting | — | — |
| AA | | ● | ● |
| BA | | ● | — |
| D□^{*1} | DIN rail mounting | — | — |
| A□^{*1} | | ● | ● |
| B□^{*1} | | ● | — |

*1 Refer to "DIN Rail Option" below.

* Select the direct mounting type for Type 11 (Bottom ported).

DIN Rail Option

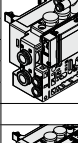
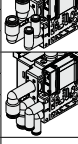

| | |
|------------------------|---|
| Nii | With DIN bracket, DIN rail with standard length |
| 0 | With DIN bracket, without DIN rail |
| 3^{*1} | With DIN bracket, DIN rail for 3 stations |
| ⋮ | ⋮ |
| 24^{*1} | With DIN bracket, DIN rail for 24 stations |

*1 Specify a longer rail than the length of valve stations.

* If the DIN rail must be mounted without an SI unit, select "D0" and order the DIN rail separately. Refer to L3 of the dimensions for the DIN rail length. Refer to page 616 for the DIN rail part number.

* Refer to page 708 for the fixation of DIN rail mounting type manifold.

A, B port size (Inch/One-touch fitting)

| | | A, B port | | Type 10/Side ported | | Type 11/Bottom ported | | | |
|------|----------|------------------------|-------------|---------------------|--------|-----------------------|--------|--|--------|
| | | | | SY3000 | SY5000 | SY7000 | SY5000 | | SY7000 |
| N1 | Straight | ø1/8" | ● | — | — | — | — |  | |
| N3 | | ø5/32" | ● | ● | — | ● | — | | |
| N7 | | ø1/4" | ● | ● | ● | ● | ● | | |
| N9 | | ø5/16" | — | — | ● | ● | ● | | |
| N11 | | ø3/8" | — | — | — | ● | ● | | |
| CM1 | | Mixed sizes | ● | ● | ● | ● | ● | | |
| LN3 | Upward | ø5/32" | ● | — | — | — | — |  | |
| LN7 | | ø1/4" | ● | ● | — | — | — | | |
| LN9 | | ø5/16" | — | ● | — | — | — | | |
| LN11 | | ø3/8" | — | — | ● | — | — | | |
| BN3 | | ø5/32" | ● | — | — | — | — | | |
| BN7 | Downward | ø1/4" | ● | ● | — | — | — |  | |
| BN9 | | ø5/16" | — | ● | — | — | — | | |
| BN11 | | ø3/8" | — | — | ● | — | — | | |
| LM1 | | | Mixed sizes | ● | ● | ● | — | | — |
| | | P, E port ³ | ø5/16" | ø3/8" | ø1/2" | ø3/8" | ø1/2" | | |

SY3000/5000/7000 Series

How to Order Valves (With mounting screw)

Refer to page 404 for valve specifications.

SY **3** **1** **0** **0** **0** **0** **0** **0** - **5** **0** **0** **1** - **0**

1 2 3 4 5 6 7 8 9 10 11

• Base mounted

1 Series

| | |
|---|--------|
| 3 | SY3000 |
| 5 | SY5000 |
| 7 | SY7000 |

2 Type of actuation

| | | |
|-----------------|-----------------|-----------------|
| 1 | 2-position | Single |
| 2 | | Double |
| 3 | 3-position | Closed center |
| 4 | | Exhaust center |
| 5 | | Pressure center |
| A ^{*1} | 4-position dual | N.C./N.C. |
| B ^{*1} | 3-port valve | N.O./N.O. |
| C ^{*1} | | N.C./N.O. |

*1 Select the rubber seal type for the 4-position dual 3-port valve.

3 Seal type

| | |
|---|-------------|
| 0 | Rubber seal |
| 1 | Metal seal |

4 Pilot type

| | |
|-----|----------------|
| Nil | Internal pilot |
| R | External pilot |

* When selecting the external pilot specification for the 4-position dual 3-port valve, pay attention to the pilot pressure. Refer to the valve specifications on page 404 for further details.

5 Back pressure check valve

| | |
|-----------------|----------|
| Nil | None |
| H ^{*1} | Built-in |

*1 Select the rubber seal type when the back pressure check valve is built-in. A manifold installed type is available if a back pressure check valve with a metal seal is required. Refer to page 625 for ordering examples. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

* Select "Nil" for the 3-position type or the SY7000.

6 Pilot valve option

| | |
|-----------------|-------------------------------|
| Nil | Standard (0.7 MPa) |
| B | Quick response type (0.7 MPa) |
| K ^{*1} | High pressure type (1.0 MPa) |

*1 Select the metal seal type for the high pressure type.

7 Coil type

| | |
|-----|--|
| Nil | Standard |
| T | With power saving circuit (Continuous duty type) ^{*1,2} |

*1 Be sure to select the power saving circuit type if the valve is to be continuously energized for long periods of time.

*2 Be careful of the energizing time when the power saving circuit is selected. For details, refer to page 705.

8 Rated voltage

| | |
|---|--------|
| 5 | 24 VDC |
|---|--------|

9 Light/surge voltage suppressor and common specification

| | With light | Surge voltage suppressor | Common specification |
|----|------------|--------------------------|----------------------|
| R | — | ● | Non-polar |
| U | ● | ● | Non-polar |
| NS | — | ● | Negative common |
| NZ | ● | ● | Negative common |

* Select "NZ" for models with a power saving circuit.

10 Manual override

| | |
|------------------------------|------------------------------|
| Nil | D |
| Non-locking push type | Push-turn locking lever type |
| E | F |
| Push-turn locking lever type | Slide locking type |

* Refer to page 423 for the safety slide locking manual override.

11 Type of mounting screw

| | |
|-----|--|
| Nil | Round head combination screw |
| B | Hexagon socket head cap screw |
| K | Round head combination screw (Drop prevention type) ^{*1} |
| H | Hexagon socket head cap screw (Drop prevention type) ^{*1} |

*1 For "K" and "H," the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance, etc.

* **When ordering a valve individually, the base gasket is not included.** Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance. Refer to page 611 for base gasket and mounting screw part numbers.

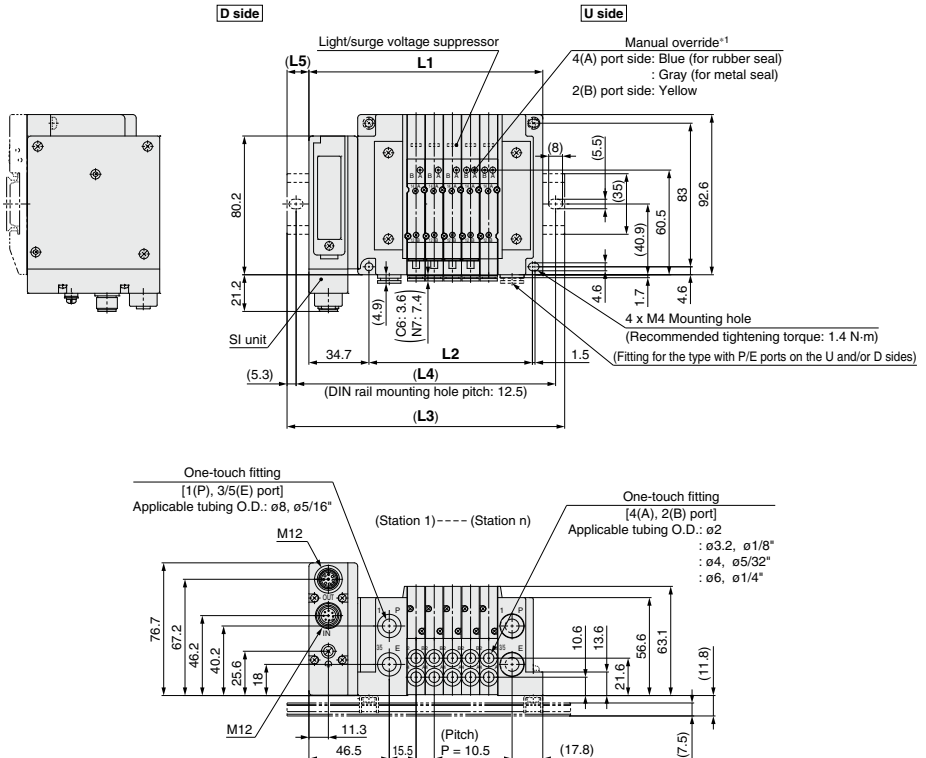
* Select "Nil" or "K" for the optional individual SUP/EXH spacer assembly, interface regulator, or double check spacer assembly with residual pressure release valve.

Dimensions: **SY3000 Series**

Plug-in
Connector Connecting Base

Type 10/Side Ported
EX500 (128 Points)

SS5Y3-10SA3N- Stations $\begin{matrix} \text{U} & \text{C2} \\ \text{D} & \text{C3, N1} \\ & \text{C4, N3} \\ & \text{C6, N7} \end{matrix}$ (D)



*1 Refer to page 566 for dimensions of the external pilot, silencer, elbow fittings, and slide locking manual override.

* These figures show the "SS5Y3-10SA3N-05D-C6."

* Refer to page 571 for dimensions of A or B port top-ported type.

L: Dimensions

n: Stations

| L \ n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 103.7 | 114.2 | 124.7 | 135.2 | 145.7 | 156.2 | 166.7 | 177.2 | 187.7 | 198.2 | 208.7 | 219.2 | 229.7 | 240.2 | 250.7 |
| L2 | 63 | 73.5 | 84 | 94.5 | 105 | 115.5 | 126 | 136.5 | 147 | 157.5 | 168 | 178.5 | 189 | 199.5 | 210 |
| L3 | 135.5 | 148 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 | 223 | 223 | 235.5 | 248 | 260.5 | 273 | 285.5 |
| L4 | 125 | 137.5 | 137.5 | 150 | 162.5 | 175 | 187.5 | 200 | 212.5 | 212.5 | 225 | 237.5 | 250 | 262.5 | 275 |
| L5 | 16 | 17 | 11.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 |

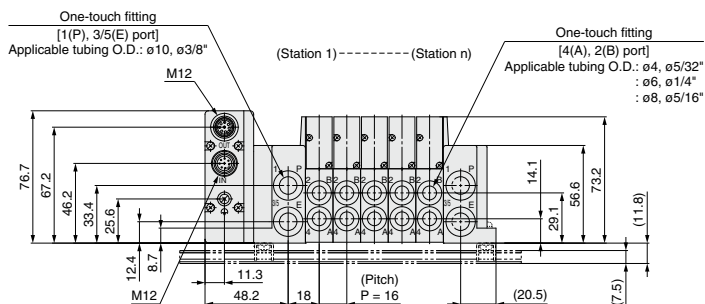
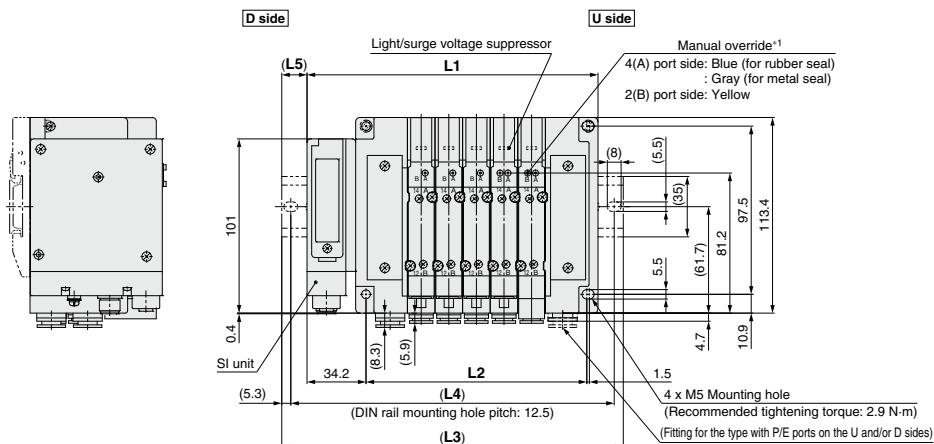
| L \ n | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 261.2 | 271.7 | 282.2 | 292.7 | 303.2 | 313.7 | 324.2 | 334.7 |
| L2 | 220.5 | 231 | 241.5 | 252 | 262.5 | 273 | 283.5 | 294 |
| L3 | 285.5 | 298 | 310.5 | 323 | 335.5 | 348 | 348 | 360.5 |
| L4 | 275 | 287.5 | 300 | 312.5 | 325 | 337.5 | 337.5 | 350 |
| L5 | 12 | 13 | 14 | 15 | 16 | 17 | 12 | 13 |

SY3000/5000/7000 Series

Dimensions: SY5000 Series

SS5Y5-10SA3N- **Stations** **U C4, N3**
D-C6, N7 (D)
B C8, N9

Plug-in Connector Connecting Base

Type 10/Side Ported
EX500 (128 Points)

*1 Refer to page 567 for dimensions of the external pilot, silencer, elbow fittings, and slide locking manual override.

* These figures show the "SS5Y5-10SA3N-05D-C8."

* Refer to page 572 for dimensions of A or B port top-ported type.

L: Dimensions

| L \ n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 120.7 | 136.7 | 152.7 | 168.7 | 184.7 | 200.7 | 216.7 | 232.7 | 248.7 | 264.7 | 280.7 | 296.7 | 312.7 | 328.7 | 344.7 |
| L2 | 80 | 96 | 112 | 128 | 144 | 160 | 176 | 192 | 208 | 224 | 240 | 256 | 272 | 288 | 304 |
| L3 | 148 | 160.5 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 273 | 298 | 310.5 | 323 | 348 | 360.5 | 373 |
| L4 | 137.5 | 150 | 175 | 187.5 | 200 | 225 | 237.5 | 250 | 262.5 | 287.5 | 300 | 312.5 | 337.5 | 350 | 362.5 |
| L5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 | 14 | 12 | 16.5 | 15 | 13 | 17.5 | 16 | 14 |

| | | | | | | | | | |
|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| L | n | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| L1 | | 360.7 | 376.7 | 392.7 | 408.7 | 424.7 | 440.7 | 456.7 | 472.7 |
| L2 | | 320 | 336 | 352 | 368 | 384 | 400 | 416 | 432 |
| L3 | | 385.5 | 410.5 | 423 | 435.5 | 448 | 473 | 485.5 | 498 |
| L4 | | 375 | 400 | 412.5 | 425 | 437.5 | 462.5 | 475 | 487.5 |
| L5 | | 12.5 | 17 | 15 | 13.5 | 11.5 | 16 | 14.5 | 12.5 |

Dimensions: SY7000 Series

Plug-in Connector Connecting Base

Type 10/Side Ported
EX500 (128 Points)

SS5Y7-10SA3N- **Stations**

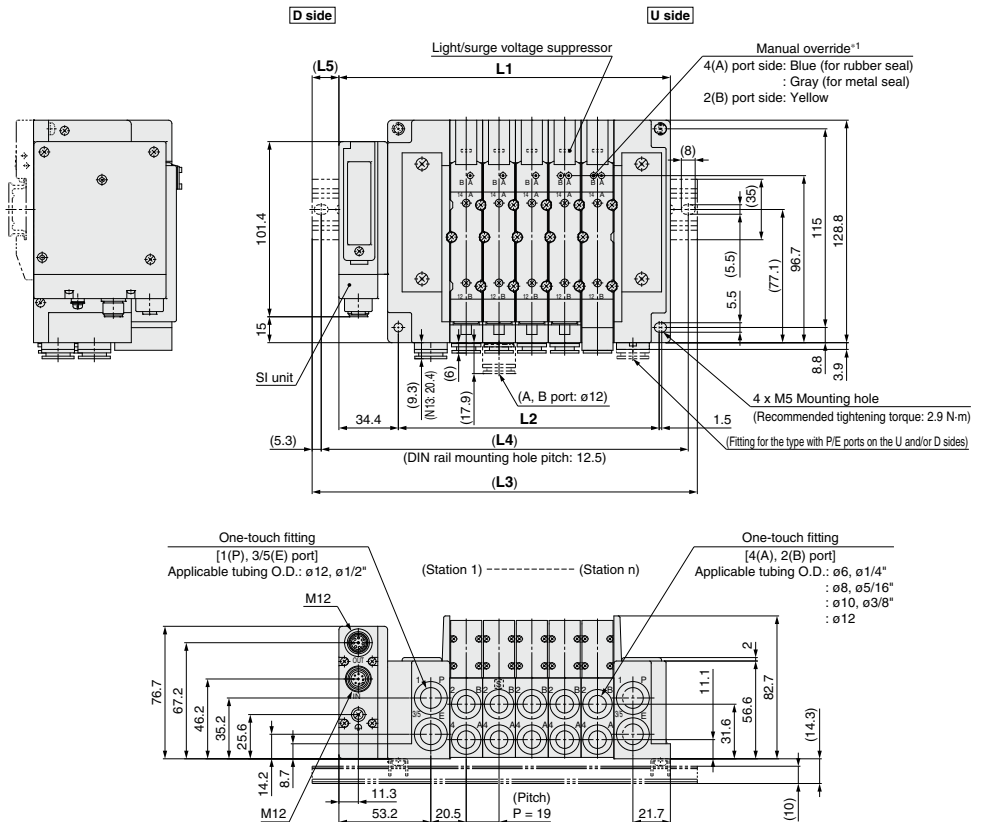
| |
|---|
| U |
| D |
| B |

C6, N7

C8, N9

C10, N11 (D)

C12



*1 Refer to page 568 for dimensions of the external pilot, silencer, elbow fittings, and slide locking manual override.

* These figures show the "SS5Y7-10SA3N-05D-C10."

* Refer to page 573 for dimensions of A or B port top-ported type.

L: Dimensions

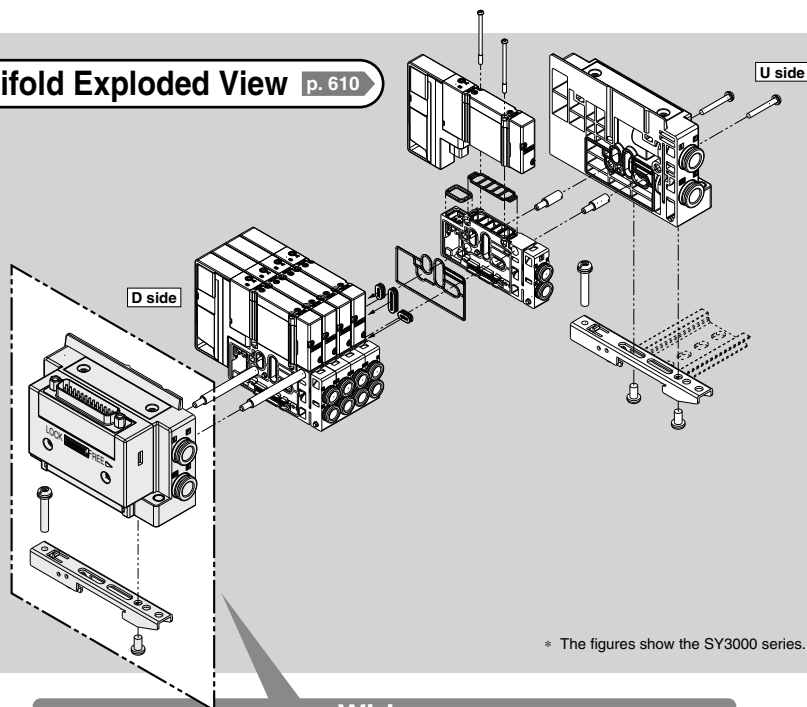
n: Stations

| L \ n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 134.9 | 153.9 | 172.9 | 191.9 | 210.9 | 229.9 | 248.9 | 267.9 | 286.9 | 305.9 | 324.9 | 343.9 | 362.9 | 381.9 | 400.9 |
| L2 | 94 | 113 | 132 | 151 | 170 | 189 | 208 | 227 | 246 | 265 | 284 | 303 | 322 | 341 | 360 |
| L3 | 160.5 | 185.5 | 198 | 223 | 235.5 | 260.5 | 273 | 298 | 310.5 | 335.5 | 348 | 373 | 398 | 410.5 | 435.5 |
| L4 | 150 | 175 | 187.5 | 212.5 | 225 | 250 | 262.5 | 287.5 | 300 | 325 | 337.5 | 362.5 | 387.5 | 400 | 425 |
| L5 | 13 | 16 | 12.5 | 15.5 | 12.5 | 15.5 | 12 | 15 | 12 | 15 | 11.5 | 14.5 | 17.5 | 14.5 | 17.5 |

| L \ n | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 419.9 | 438.9 | 457.9 | 476.9 | 495.9 | 514.9 | 533.9 | 552.9 |
| L2 | 379 | 398 | 417 | 436 | 455 | 474 | 493 | 512 |
| L3 | 448 | 473 | 485.5 | 510.5 | 523 | 548 | 560.5 | 585.5 |
| L4 | 437.5 | 462.5 | 475 | 500 | 512.5 | 537.5 | 550 | 575 |
| L5 | 14 | 17 | 14 | 17 | 13.5 | 16.5 | 13.5 | 16.5 |















SY3000/5000/7000 Series Type 10, 11, 12 Connector Connecting Base Manifold Exploded View

Manifold Exploded View [p. 610](#)

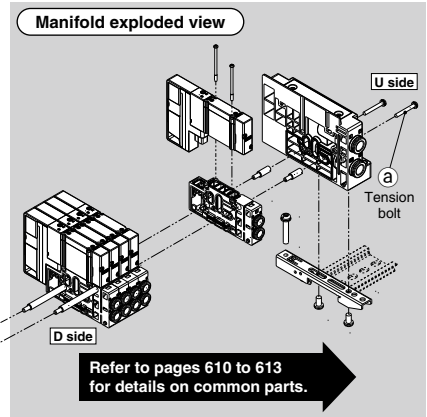
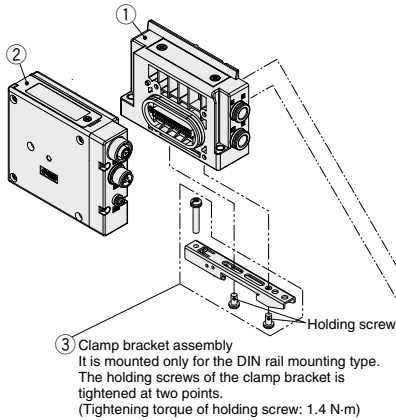


* The figures show the SY3000 series.

Wiring

| | | | | |
|--|---|---|---|--|
| D-sub Connector <IP40>/Flat Ribbon Cable p. 591  | D-sub Connector <IP67> p. 592  | Terminal Block Box (Spring Type) p. 593  | Terminal Block Box p. 594  | Lead Wire p. 595  |
| Circular Connector p. 596  | EX500 Gateway Decentralized System 2 (128 Points) p. 597  | EX600 p. 599  | EX245 p. 602  | EX250 p. 604  |
| EX260 p. 605  | EX126 p. 606  | EX120 p. 607  | EX180 p. 608  | |

Wiring

EX500 Gateway Decentralized System 2 (128 Points)**Manifold Parts Nos.**

① SUP/EXH block assembly

SY 3 0M-1-1A - **C8** - **Mounting**

● Series

| | |
|---|--------|
| 3 | SY3000 |
| 5 | SY5000 |
| 7 | SY7000 |

| | |
|-----|--------------------------------------|
| Nil | Direct mounting |
| D0 | DIN rail mounting (Without DIN rail) |

* For the bottom-ported type, the symbol is nil.

● Pilot, Silencer/Piping type

| Symbol | Pilot type Internal External | Built-in silencer | Piping direction |
|--------|---------------------------------|----------------------|---------------------|
| Nil | ● | — | — |
| S | ● | — | Side |
| R | — | ● | — |
| V | ● | — | — |
| RV | — | ● | Top |
| VP | ● | — | — |
| B | — | — | Bottom |
| BS | ● | — | — |
| BR | — | ● | — |

*1 For silencer (supply side)
E port is plugged.* "B" for the bottom-ported type can be
selected for the SY5000/7000 series.

● P, E port size (One-touch fittings)

| Symbol | P, E port | SY3000 | SY5000 | SY7000 | Note |
|--------|-----------|--------|--------|--------|---|
| C8 | ø8 | ● | — | — | Side/Bottom/ Top ported |
| C10 | ø10 | — | ● | — | Top ported |
| C12 | ø12 | — | — | ● | Metric size |
| N9 | ø5/16" | — | — | — | Side/Bottom/ Top ported |
| N11 | ø3/8" | — | ● | — | Inch size |
| N13 | ø1/2" | — | — | ● | — |
| L8 | ø8 | ● | — | — | Side ported |
| L10 | ø10 | — | ● | — | Top ported |
| L12 | ø12 | — | — | ● | Metric size |
| LN9 | ø5/16" | ● | — | — | Side ported |
| LN11 | ø3/8" | — | ● | — | Inch size |
| LN13 | ø1/2" | — | — | ● | — |
| B8 | ø8 | ● | — | — | Side ported |
| B10 | ø10 | — | ● | — | Metric size |
| B12 | ø12 | — | — | ● | — |
| BN9 | ø5/16" | ● | — | — | Side ported |
| BN11 | ø3/8" | — | ● | — | Inch size |
| BN13 | ø1/2" | — | — | ● | Side or Top ported |
| 00*1 | Plug | ● | ● | ● | P/E port entry on one side or Top ported |

*1 It can be selected only if no symbol or "S" or "V" or "B" is
selected for the pilot and the piping.

SUP/EXH block assembly (D side)

accessories and the number of accessories

| Accessories | SY3000 | SY5000 SY7000 |
|-----------------|--------|------------------|
| a. Tension bolt | None*1 | 3 pcs. |

*1 Since the nuts are embedded in the SUP/EXH block

② EX500 SI unit

EX500-S103

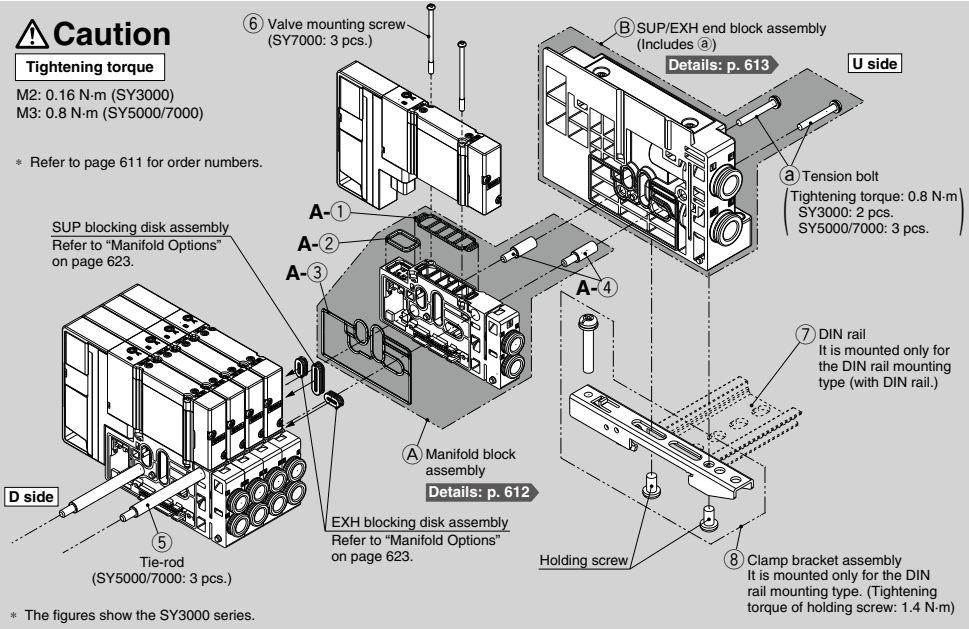
③ Clamp bracket assembly

| Series | Part no. |
|-------------|-------------|
| SY3000 | SY30M-15-1A |
| SY5000/7000 | SY50M-15-1A |

* Part number is for one assembly.

SY3000/5000/7000 Series

Manifold Exploded View (Common Parts)



Type 10, 11, 12: How to Increase Connector Type Manifolds

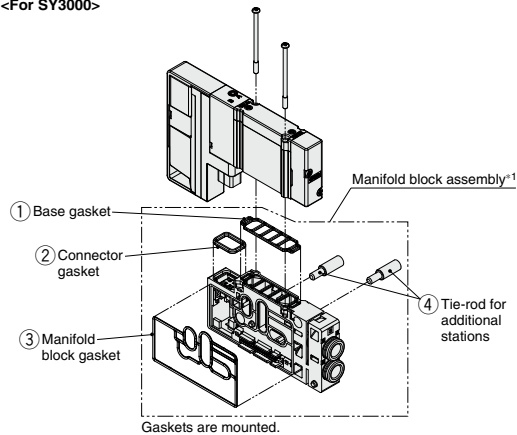
- 1 Loosen the U-side tension bolt a, and remove the B SUP/EXH end block assembly.
- 2 Screw in 4 tie-rods for additional stations to the 5 tie-rod of the manifold.
(Screw them in until there is no gap between the tie-rods.)
- 3 Connect the A manifold block assembly and B SUP/EXH end block assembly to be added, and tighten the tension bolt a.

Tightening torque for tension bolt a (M3): 0.8 N·m

Caution

1. Be sure to shut off the power and air supplies before disassembly.
Furthermore, since air may remain inside the actuator, piping and manifold, confirm that the air is completely exhausted before performing any work.
2. When disassembly and assembly are performed, air leakage may result if the tightening of the tension bolt is inadequate.

<For SY3000>



*1 Manifold block assembly

| No. | Description | Quantity | Note |
|-------|---------------------------------|--|---|
| 1 2 3 | Gasket | 3 | For base, connector, and manifold block |
| 4 | Tie-rod for additional stations | SY3000: 2 pcs. SY5000: 3 pcs. SY7000: 3 pcs. | |

Refer to page 611 for ordering single unit.

For SS5Y3-10/11/12, SS5Y5-(M)10/11/12, SS5Y7-(M)10/11/12

| No. | Description | | SY3000 | SY5000 | SY7000 | Note | |
|-----|--|---|---|----------------------------------|---|---|--|
| A-① | Manifold block assembly Tie-rod for additional stations | Base gasket (for connector connecting base) | SY30M-9-1A | SY50M-9-1A | SY70M-9-1A | Part numbers shown on the left are for 10 valves. (10 pcs.) | |
| A-② | | Connector gasket | SX3000-146-2 | | | Supplied individually | |
| A-③ | | Manifold block gasket | SY30M-9-2 | SY50M-9-2 | SY70M-9-2 | Supplied individually | |
| A-④ | | SY3000/5000/7000 | SY30M-49-2-A (10.5 mm pitch) | SV2000-55-2A-A (16 mm pitch) | SY70M-49-2-A ^{*2} (19 mm pitch) | 2 pcs. supplied (SY3000), 3 pcs. supplied (SY5000/7000) | |
| | | For mixed mounting of SY3000/5000: SY3000 A, B port size ø8, ø5/16" | SV2000-55-2A-A (16 mm pitch) | | | — | 3 pcs. supplied |
| | | For mixed mounting of SY3000/5000: SY3000 except A, B port size ø8, ø5/16" ^{*4} | SY50M-49-2 (12.5 mm pitch) | | | — | 3 pcs. supplied |
| ⑤ | Tie-rod | SY3000/5000/7000 | VVQC1000-TR-□ (10.5 mm pitch) | SV2000-55-1-□-A (16 mm pitch) | SY70M-49-1-□-A (19 mm pitch) | □: Manifold stations (2 to 24 stations) 2 pcs. supplied (SY3000), 3 pcs. supplied (SY5000/7000) | |
| | | | SY50M-49-1-□-A ^{*3+4} (12.5 mm pitch) | | — | | |
| | | Mixed mounting type manifold | SV2000-55-1-□-A ^{*5} (16 mm pitch) | | — | | □: Manifold stations (2 to 24 stations) 3 pcs. supplied |
| | | | SS5Y7-M ^{*6} | —SY70M-49-1-□-A (19 mm pitch) | | | |
| ⑥ | Valve mounting screw | Round head combination screw | SY3000-23-24A (M2 x 32) | SY5000-221-1A (M3 x 32.5) | SY7000-221-1A (M3 x 36.5) | Part numbers shown on the left are as follows. SY3000/5000: for 10 valves (20 pcs. included) SY7000: for 10 valves (30 pcs. included) | |
| | | Hexagon socket head cap screw | SY3000-222-1A (M2 x 32) | SY5000-222-1A (M3 x 32.5) | SY7000-222-1A (M3 x 36.5) | | |
| ⑦ | DIN rail | | VZ1000-11-1-□ | | VZ1000-11-4-□ | Refer to page 616. | |
| ⑧ | Clamp bracket assembly (for connector connecting base) | | SY30M-15-1A | SY50M-15-1A | | Supplied individually | |
| ⑨ | Tension bolt (for connector connecting base) ^{*6} | | AC00530 | SX3000-145-21 | | Supplied individually | |

*1 The manifold of the SY3000 (SS5Y3-10/11/12) can be assembled by connecting the tie-rods for additional stations for the number of manifold stations. However, the manifold of the SY5000 or SY7000 (SS5Y5/7-10/11/12 including mixed mounting) cannot be assembled by connecting the tie-rods for additional stations for the number of manifold stations.

*2 Includes the case when mounting with the SY5000

*3 When mounting only the SY3000 (12.5 mm pitch except A, B port size ø8, ø5/16")

*4 The port sizes except A, B port size ø8, ø5/16" are the following: ø2, ø3.2, ø4, ø6, ø1/8", ø5/32", ø1/4".

*5 When mounting only the SY3000 (16 mm pitch A, B port size ø8, ø5/16")

*6 For the SY3000 SUP/EXH end block (there are no tension bolts for the SY3000 SUP/EXH block) or the SY5000 and SY7000 SUP/EXH (end) block

SY3000/5000/7000 Series

Manifold Parts Nos.

① Manifold block assembly

SY 3 0M-2-1 D A-C6

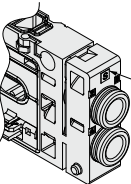
Series

| | |
|---|--------|
| 3 | SY3000 |
| 5 | SY5000 |
| 7 | SY7000 |

Piping direction

| | |
|---|-----------------|
| 1 | Side/Top ported |
| 2 | Bottom ported |

* "2" (bottom ported) can be selected for the SY5000/7000 series.



Single wiring
Marked with S

Wiring type

| | |
|---|---------------|
| S | Single wiring |
| D | Double wiring |

● A, B port size (One-touch fittings)

| Symbol | A, B port | SY3000 | SY5000 | SY7000 | Note |
|--------|-----------|--------|--------|--------|--------------------------------|
| C2 | ø2 | ● | — | — | Side/Bottom ported Metric size |
| C3 | ø3.2 | ● | — | — | |
| C4 | ø4 | ● | ● | — | |
| C6 | ø6 | ● | ● | ● | |
| C8 | ø8 | —*1 | ● | ● | Side/Bottom ported Metric size |
| C10 | ø10 | — | — | ● | |
| C12 | ø12 | — | — | ● | |
| N1 | ø1/8" | ● | — | — | |
| N3 | ø5/32" | ● | ● | — | Side/Bottom ported Inch size |
| N7 | ø1/4" | ● | ● | ● | |
| N9 | ø5/16" | —*1 | ● | ● | |
| N11 | ø3/8" | — | — | ● | |

*1 Refer to mixed mounting type for ø8, ø5/16".

| Symbol | A, B port | SY3000 | SY5000 | SY7000 | Note |
|--------|-----------|--------|--------|--------|-------------------------|
| L4 | ø4 | ● | ● | — | Side ported Metric size |
| L6 | ø6 | ● | ● | ● | |
| L8 | ø8 | —*1 | — | ● | |
| L10 | ø10 | — | — | ● | |
| L12 | ø12 | — | — | ● | Side ported Inch size |
| LN3 | ø5/32" | ● | — | — | |
| LN7 | ø1/4" | ● | ● | — | |
| LN9 | ø5/16" | —*1 | — | — | |
| LN11 | ø3/8" | — | — | ● | Side ported Metric size |
| B4 | ø4 | ● | ● | — | |
| B6 | ø6 | ● | ● | ● | |
| B8 | ø8 | —*1 | — | ● | |
| B10 | ø10 | — | — | ● | Side ported Inch size |
| B12 | ø12 | — | — | ● | |
| BN3 | ø5/32" | ● | — | — | |
| BN7 | ø1/4" | ● | ● | — | |
| BN9 | ø5/16" | —*1 | — | — | Top ported |
| BN11 | ø3/8" | — | — | ● | |
| 00 | Plug | ● | ● | ● | |

② Mixed mounting of the SY3000/5000
Manifold block assembly for mounting the SY3000

SY50M-2-3 D A-C6

Piping direction

| | |
|---|-----------------|
| 3 | Side/Top ported |
| 4 | Bottom ported |

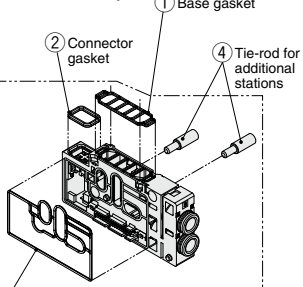
Wiring type

| | |
|---|---------------|
| S | Single wiring |
| D | Double wiring |

● A, B port size (One-touch fittings)

| Symbol | A, B port | Note | Symbol | A, B port | Note |
|--------|-----------|--------------------------------|--------|-----------|-------------------------|
| C2 | ø2 | Side/Bottom ported Metric size | L4 | ø4 | Side ported Metric size |
| C3 | ø3.2 | | L6 | ø6 | Side ported Metric size |
| C4 | ø4 | | LN3 | ø5/32" | Side ported Inch size |
| C6 | ø6 | | LN7 | ø1/4" | Side ported Inch size |
| N1 | ø1/8" | Side/Bottom ported Inch size | B4 | ø4 | Side ported Metric size |
| N3 | ø5/32" | | B6 | ø6 | Side ported Metric size |
| N7 | ø1/4" | | BN3 | ø5/32" | Side ported Inch size |
| | | | BN7 | ø1/4" | Side ported Inch size |
| | | | 00 | Plug | Top ported |

③ Manifold (All parts inside — are included.)
block assembly



④ Mixed mounting of the SY3000/5000
Manifold block assembly for mounting the SY3000 for ø8, ø5/16"

(A manifold block assembly for mounting the SY3000 valves on the SY5000 manifolds at A, B port size: ø8, ø5/16")

SY50M-2-5 D A-C8

Piping direction

| | |
|---|---------------|
| 5 | Side ported |
| 6 | Bottom ported |

Wiring type

| | |
|---|---------------|
| S | Single wiring |
| D | Double wiring |

● A, B port size (One-touch fittings)

| Symbol | A, B port | Note |
|--------|-----------|--------------------------------|
| C8 | ø8 | Side/Bottom ported Metric size |
| N9 | ø5/16" | Side/Bottom ported Inch size |
| L8 | ø8 | Side ported Metric size |
| LN9 | ø5/16" | Side ported Inch size |
| B8 | ø8 | Side ported Metric size |
| BN9 | ø5/16" | Side ported Inch size |

Manifold block assembly accessories and the number of accessories

| Accessories | SY3000 | SY5000 SY7000* |
|--|--------|----------------|
| ① Base gasket | 1 pc. | |
| ② Connector gasket | 1 pc. | |
| ③ Manifold block gasket | 1 pc. | |
| ④ Tie-rod assembly for additional stations | 2 pcs. | 3 pcs. |

*1 Including mixed mounting type

⑤ Mixed mounting of the SY5000/7000
Manifold block assembly for mounting the SY5000

SY70M-2-3 D A-C10

Piping direction

| | |
|---|-----------------|
| 3 | Side/Top ported |
| 4 | Bottom ported |

Wiring type

| | |
|---|---------------|
| S | Single wiring |
| D | Double wiring |

● A, B port size (One-touch fittings)

| Symbol | A, B port | Note | Symbol | A, B port | Note | Symbol | A, B port | Note |
|--------|-----------|-----------------------------------|--------|-----------|----------------------------|--------|-----------|----------------------------|
| C6 | ø6 | Side/Bottom ported Metric size | L6 | ø6 | Side ported Metric size | B6 | ø6 | Side ported Metric size |
| C8 | ø8 | | L8 | ø8 | | B8 | ø8 | |
| C10 | ø10 | | L10 | ø10 | | B10 | ø10 | |
| C12 | ø12 | | L12 | ø12 | | B12 | ø12 | |
| N7 | ø1/4" | Side/Bottom ported Inch size | LN11 | ø3/8" | Side ported Inch size | BN11 | ø3/8" | Side ported Inch size |
| N9 | ø5/16" | | | | | | | |
| N11 | ø3/8" | | | | | | | |
| | | | | | | | | |
| | | | | | | 00 | Plug | Top ported |

Manifold Parts Nos.**⑧ SUP/EXH end block assembly****SY 3 0M-3- 1A** **C8**● **Series**

| | |
|---|--------|
| 3 | SY3000 |
| 5 | SY5000 |
| 7 | SY7000 |

● **Mounting**

| | |
|-----|--------------------------------------|
| Nil | Direct mounting |
| D0 | DIN rail mounting (Without DIN rail) |

* For the bottom-ported type, the symbol is nil.

● **Pilot, Silencer/Piping type**

| Symbol | Pilot type | | Built-in silencer | Piping direction |
|--------|------------|----------|-------------------|------------------|
| | Internal | External | | |
| Nil | ● | — | — | Side |
| S | ● | — | — | |
| R | — | ● | — | |
| V | ● | — | — | Top |
| RV | — | ● | — | |
| VP | ● | — | ● ^{*1} | |
| B | ● | — | — | Bottom |
| BS | ● | — | ● | |
| BR | — | ● | — | |

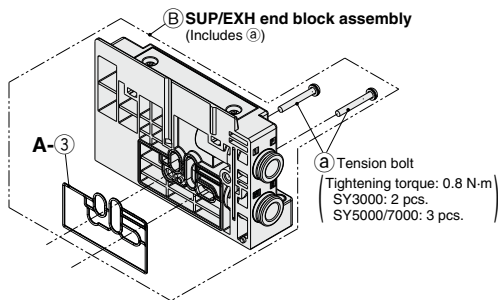
*1 For silencer (supply side)
E port is plugged.

* "B" for the bottom-ported type can be selected for the SY5000/7000 series.

● **P, E port size (One-touch fittings)**

| Symbol | P, E port | SY3000 | SY5000 | SY7000 | Note |
|------------------|-----------|--------|--------|--------|--|
| C8 | ø8 | ● | — | — | Side/Bottom/Top ported Metric size |
| C10 | ø10 | — | ● | — | |
| C12 | ø12 | — | — | ● | |
| N9 | ø5/16" | ● | — | — | Side/Bottom/Top ported Inch size |
| N11 | ø3/8" | — | ● | — | |
| N13 | ø1/2" | — | — | ● | |
| L8 | ø8 | ● | — | — | Side ported Metric size |
| L10 | ø10 | — | ● | — | |
| L12 | ø12 | — | — | ● | |
| LN9 | ø5/16" | ● | — | — | Side ported Inch size |
| LN11 | ø3/8" | — | ● | — | |
| LN13 | ø1/2" | — | — | ● | |
| B8 | ø8 | ● | — | — | Side ported Metric size |
| B10 | ø10 | — | ● | — | |
| B12 | ø12 | — | — | ● | |
| BN9 | ø5/16" | ● | — | — | Side ported Inch size |
| BN11 | ø3/8" | — | ● | — | |
| BN13 | ø1/2" | — | — | ● | |
| 00 ^{*1} | Plug | ● | ● | ● | P/E port entry on one side or Top ported |

*1 It can be selected only if no symbol or "S" or "V" or "B" is selected for the pilot and the piping.

**SUP/EXH end block assembly accessories and the number of accessories**

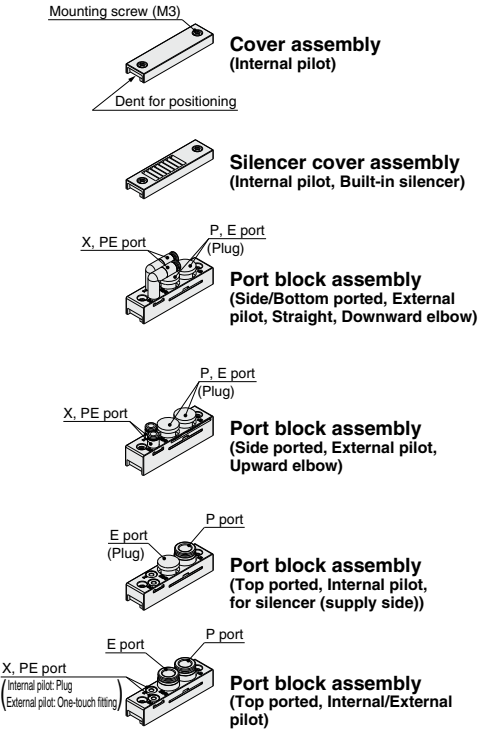
| Accessories | SY3000 | SY5000/7000 |
|---------------------------|--------|-------------|
| ③ Tension bolt | 2 pcs. | 3 pcs. |
| A-③ Manifold block gasket | 1 pc. | |

Gasket is mounted.

SY3000/5000/7000 Series

Manifold Parts Nos.

■ Cover assembly/Silencer cover assembly/Port block assembly for SUP/EXH (end) block assembly



* Cover assembly, silencer cover assembly, and port block assembly are included in the SUP/EXH (end) block assembly, but they need to be ordered for piping direction change.

Tightening torque for mounting screw
SY3000/5000 (M3): 0.8 N·m
SY7000 (M4): 1.4 N·m

⚠ Caution

1. Be sure to shut off the power and air supplies before disassembly.
Furthermore, since air may remain inside the actuator, piping, and manifold, confirm that the air is completely exhausted before performing any work.
2. When disassembly and assembly are performed, air leakage may result if the tightening of the cover and port block assemblies are inadequate.

SY 3 0M-4- 1A

SY 3 0M-5- 1A

SY 3 0M-6- 1AR - 00

A, B port
One-touch fittings
piping direction

| | |
|-----|--|
| Nil | Straight, Downward elbow (Side ported) |
| V | Upward elbow (Side ported) |

X, PE port One-touch fitting type

| Symbol | X, PE port | SY3000 | SY5000 | SY7000 |
|--------|-------------|--------|--------|--------|
| Nil | Metric size | ø4 | ● | ● |
| | | ø6 | — | ● |
| U | Inch size | ø5/32" | ● | — |
| | | ø1/4" | — | ● |

SY 3 0M-6- 3AV - C8

SY 3 0M-6- 1A V - C8

Series

| | |
|---|--------|
| 3 | SY3000 |
| 5 | SY5000 |
| 7 | SY7000 |

Pilot type

| | |
|-----|----------------|
| Nil | Internal pilot |
| R | External pilot |

P, E port size (One-touch fittings)

| Symbol | P, E port | SY3000 | SY5000 | SY7000 |
|--------|-----------|--------|--------|--------|
| C8 | ø8 | ● | — | — |
| C10 | ø10 | — | ● | — |
| C12 | ø12 | — | — | ● |
| N9 | ø5/16" | ● | — | — |
| N11 | ø3/8" | — | ● | — |
| N13 | ø1/2" | — | — | ● |

SY3000/5000/7000 Series One-touch Fitting, Plug Assembly Part Nos.

Refer to "How to Replace One-touch Fittings" on page 709 for the replacement method.

■ One-touch fittings

| Port size | | | SY3000 | SY5000 | SY7000 |
|------------------------|-------------|--------|-----------------|------------------|------------------|
| A, B port ¹ | Metric size | ø2 | VVQ1000-50A-C2 | — | — |
| | | ø3.2 | VVQ1000-50A-C3 | — | — |
| | | ø4 | VVQ1000-50A-C4 | VVQ1000-51A-C4 | — |
| | | ø6 | VVQ1000-50A-C6 | VVQ1000-51A-C6 | VVQ2000-51A-C6 |
| | | ø8 | — | VVQ1000-51A-C8 | VVQ2000-51A-C8 |
| | | ø10 | — | — | VVQ2000-51A-C10 |
| | | ø12 | — | — | KQ2H12-17-X224 |
| | | ø4 | SZ3000-73-1A-L4 | SZ3000-74-1A-L4 | — |
| | | ø6 | SZ3000-73-1A-L6 | SZ3000-74-1A-L6 | SZ3000-83-1A-L6 |
| | | ø8 | — | SZ3000-74-1A-L8 | SZ3000-83-1A-L8 |
| | | ø10 | — | — | SZ3000-83-1A-L10 |
| | | ø12 | — | — | KQ2L12-17N-X224 |
| | Inch size | ø4 | SZ3000-73-2A-L4 | SZ3000-74-2A-L4 | — |
| | | ø6 | SZ3000-73-2A-L6 | SZ3000-74-2A-L6 | SZ3000-83-2A-L6 |
| | | ø8 | — | SZ3000-74-2A-L8 | SZ3000-83-2A-L8 |
| | | ø10 | — | — | SZ3000-83-2A-L10 |
| | | ø12 | — | — | KQ2W12-17N-X224 |
| | | ø1/8" | VVQ1000-50A-N1 | — | — |
| | | ø5/32" | VVQ1000-50A-N3 | VVQ1000-51A-N3 | — |
| | | ø1/4" | VVQ1000-50A-N7 | VVQ1000-51A-N7 | VVQ2000-51A-N7 |
| | | ø5/16" | — | VVQ1000-51A-N9 | VVQ2000-51A-N9 |
| | | ø3/8" | — | — | VVQ2000-51A-N11 |
| | | ø5/32" | KJL03-95-X224 | — | — |
| | | ø1/4" | KJL07-95-X224 | KQ2L07-14-X224 | — |
| | | ø5/16" | — | KQ2L09-14-X224 | — |
| | | ø3/8" | — | — | KQ2L11-14-X224 |
| | | ø5/32" | KJL03-95-X225 | — | — |
| | | ø1/4" | KJL07-95-X225 | KQ2L07-14-X225 | — |
| | | ø5/16" | — | KQ2L09-14-X225 | — |
| | | ø3/8" | — | — | KQ2L11-14-X225 |
| P, E port | Metric size | ø8 | VVQ1000-51A-C8 | — | — |
| | | ø10 | — | VVQ2000-51A-C10 | — |
| | | ø12 | — | — | VVQ4000-50B-C12 |
| | | ø8 | SZ3000-74-1A-L8 | — | — |
| | | ø10 | — | SZ3000-83-1A-L10 | — |
| | | ø12 | — | — | KQ2L12-19N-X224 |
| | | ø8 | SZ3000-74-2A-L8 | — | — |
| | | ø10 | — | SZ3000-83-2A-L10 | — |
| | Inch size | ø12 | — | — | KQ2W12-19N-X224 |
| | | ø5/16" | VVQ1000-51A-N9 | — | — |
| | | ø3/8" | — | VVQ2000-51A-N11 | — |
| | | ø1/2" | — | — | VVQ4000-50B-N13 |
| | | ø5/16" | KQ2L09-14-X224 | — | — |
| | | ø3/8" | — | KQ2L11-14-X224 | — |
| | | ø1/2" | — | — | KQ2L13-19N-X224 |
| | | ø5/16" | KQ2L09-14-X225 | — | — |
| | | ø3/8" | — | KQ2L11-14-X225 | — |
| | | ø1/2" | — | — | KQ2W13-19N-X224 |

*1 A and B ports (ø8 and ø5/16") of the SY3000 and 5000 mixed mounting type are the same as those of the SY5000.

* Purchasing order is available in units of 10 pieces. Additionally, when performing the piping in the same orientation using the elbow type, please order "elbow type" or "long elbow type" appropriately.

* Select the same port size for both the A and B ports.

■ Plug assembly

| | SY3000 | SY5000 | SY7000 |
|-----------|-------------|-------------|--------------|
| A, B port | VVQ0000-58A | VVQ1000-58A | VVQ2000-58A |
| P, E port | VVQ1000-58A | VVQ2000-58A | SY9000-62-1A |

* Purchasing order is available in units of 10 pieces.

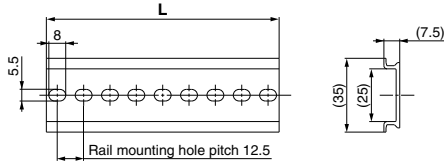


SY3000/5000/7000 Series Manifold Options

■ DIN rail dimensions/weight for the SY3000/5000 **Plug-in** connector connecting base

VZ1000-11-1-□

* After confirming the L3 dimension in the dimensions table of each series, refer to the DIN rail dimensions table below and specify the number in the box □.

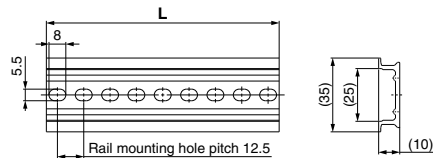


| No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L dimension | 98 | 110.5 | 123 | 135.5 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 | 223 | 235.5 | 248 | 260.5 | 273 | 285.5 | 298 | 310.5 | 323 |
| Weight [g] | 17.6 | 19.9 | 22.1 | 24.4 | 26.6 | 28.9 | 31.1 | 33.4 | 35.6 | 37.9 | 40.1 | 42.4 | 44.6 | 46.9 | 49.1 | 51.4 | 53.6 | 55.9 | 58.1 |
| No. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 |
| L dimension | 335.5 | 348 | 360.5 | 373 | 385.5 | 398 | 410.5 | 423 | 435.5 | 448 | 460.5 | 473 | 485.5 | 498 | 510.5 | 523 | 535.5 | 548 | 560.5 |
| Weight [g] | 60.4 | 62.5 | 64.9 | 67.1 | 69.4 | 71.6 | 73.9 | 76.1 | 78.4 | 80.6 | 82.9 | 85.1 | 87.4 | 89.6 | 91.9 | 94.1 | 96.4 | 98.6 | 100.9 |
| No. | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| L dimension | 573 | 585.5 | 598 | 610.5 | 623 | 635.5 | 648 | 660.5 | 673 | 685.5 | 698 | 710.5 | 723 | 735.5 | 748 | 760.5 | 773 | 785.5 | 798 |
| Weight [g] | 103.1 | 105.4 | 107.6 | 109.9 | 112.1 | 114.4 | 116.6 | 118.9 | 121.1 | 123.4 | 125.6 | 127.9 | 130.1 | 132.4 | 134.6 | 136.9 | 139.1 | 141.4 | 143.6 |
| No. | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | | | | |
| L dimension | 810.5 | 823 | 835.5 | 848 | 860.5 | 873 | 885.5 | 898 | 910.5 | 923 | 935.5 | 948 | 960.5 | 973 | 985.5 | | | | |
| Weight [g] | 145.9 | 148.1 | 150.4 | 152.6 | 154.9 | 157.1 | 159.4 | 161.6 | 163.9 | 166.1 | 168.4 | 170.6 | 172.9 | 175.1 | 177.4 | | | | |

■ DIN rail dimensions/weight for the SY7000 **Plug-in** connector connecting base

VZ1000-11-4-□

* After confirming the L3 dimension in the dimensions table of each series, refer to the DIN rail dimensions table below and specify the number in the box □.



| No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L dimension | 98 | 110.5 | 123 | 135.5 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 | 223 | 235.5 | 248 | 260.5 | 273 | 285.5 | 298 | 310.5 | 323 |
| Weight [g] | 24.8 | 28 | 31.1 | 34.3 | 37.4 | 40.6 | 43.8 | 46.9 | 50.1 | 53.3 | 56.4 | 59.6 | 62.7 | 65.9 | 69.1 | 72.2 | 75.4 | 78.6 | 81.7 |
| No. | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 |
| L dimension | 335.5 | 348 | 360.5 | 373 | 385.5 | 398 | 410.5 | 423 | 435.5 | 448 | 460.5 | 473 | 485.5 | 498 | 510.5 | 523 | 535.5 | 548 | 560.5 |
| Weight [g] | 84.9 | 88 | 91.2 | 94.4 | 97.5 | 100.7 | 103.9 | 107 | 110.2 | 113.3 | 116.5 | 119.7 | 122.8 | 126 | 129.2 | 132.3 | 135.5 | 138.6 | 141.8 |
| No. | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| L dimension | 573 | 585.5 | 598 | 610.5 | 623 | 635.5 | 648 | 660.5 | 673 | 685.5 | 698 | 710.5 | 723 | 735.5 | 748 | 760.5 | 773 | 785.5 | 798 |
| Weight [g] | 145 | 148.1 | 151.3 | 154.5 | 157.6 | 160.8 | 163.9 | 167.1 | 170.3 | 173.4 | 176.6 | 179.8 | 182.9 | 186.1 | 189.2 | 192.4 | 195.6 | 198.7 | 201.9 |
| No. | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | | | | |
| L dimension | 810.5 | 823 | 835.5 | 848 | 860.5 | 873 | 885.5 | 898 | 910.5 | 923 | 935.5 | 948 | 960.5 | 973 | 985.5 | | | | |
| Weight [g] | 205.1 | 208.2 | 211.4 | 214.5 | 217.7 | 220.9 | 224 | 227.2 | 230.4 | 233.5 | 236.7 | 239.8 | 243 | 246.2 | 249.3 | | | | |

⚠ Caution

| |
|--------------------------------------|
| Tightening torque for mounting screw |
| M2: 0.16 N·m (SY3000) |
| M3: 0.8 N·m (SY5000/7000) |

* Refer to pages 628 to 630 for dimensions.

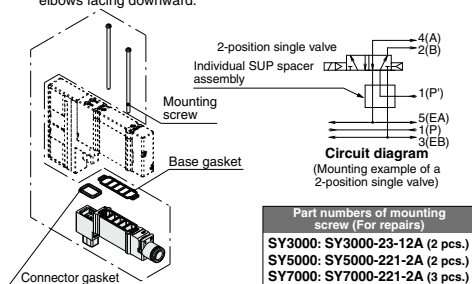
Manifold Options

■ Individual SUP spacer assembly

[With a connector gasket, a base gasket, and two mounting screws (3 pcs. for the SY7000)]

When the same manifold is used for different pressures, an individual SUP spacer assembly is used as a supply port for different pressures.

- * When selecting a One-touch fitting elbow type for a spacer assembly, use it faced upward, since it interferes with A and B port piping of Type 10 manifolds.
- * When the elbows are facing upward in A and B ports in Type 10 manifolds, they will interfere with the piping for the spacer assembly. Therefore, combine the A and B ports with straight types or elbows facing downward.

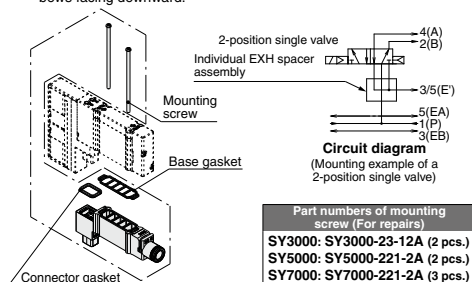


■ Individual EXH spacer assembly

[With a connector gasket, a base gasket, and two mounting screws (3 pcs. for the SY7000)]

When valve exhaust affects other stations due to the circuit configuration, this spacer assembly is used for individual valve exhaust.

- * When selecting a One-touch fitting elbow type for a spacer assembly, use it faced upward, since it interferes with A and B port piping of Type 10 manifolds.
- * When the elbows are facing upward in A and B ports in Type 10 manifolds, they will interfere with the piping for the spacer assembly. Therefore, combine the A and B ports with straight types or elbows facing downward.



How to Order Individual SUP/EXH Spacer Assembly

One-touch fitting Straight type **SY 3 OM - 38 - 1 A - C6**

One-touch fitting Elbow type **SY 3 OM - 38 - 2 A - L6**

| Series | |
|--------|--------|
| 3 | SY3000 |
| 5 | SY5000 |
| 7 | SY7000 |

Spacer type

| | |
|----|-----------------------|
| 38 | Individual SUP spacer |
| 39 | Individual EXH spacer |

Individual SUP/EXH spacer assembly

| | |
|---|------------------|
| 2 | Short elbow type |
| 3 | Long elbow type |

- * Select the long elbow type for a 3-position valve when using Type 11 and Type 12 downward. However, Type 11 of the SY3000 series for the mixed mounting of connector connecting bases cannot be used downward.

Port size (Metric/One-touch fittings)

| Symbol | P, E port | SY3000 | SY5000 | SY7000 |
|--------|-----------|--------|--------|--------|
| L4 | ø4 | ● | ● | — |
| L6 | ø6 | — | ● | ● |
| L8 | ø8 | — | — | ● |
| L10 | ø10 | — | — | ● |
| L12 | ø12 | — | — | ● |

Port size (Inch/One-touch fittings)

| Symbol | P, E port | SY3000 | SY5000 | SY7000 |
|--------|-----------|--------|--------|--------|
| LN3 | ø5/32" | ● | — | — |
| LN7 | ø1/4" | — | — | — |
| LN9 | ø5/16" | — | ● | — |
| LN11 | ø3/8" | — | — | ● |

Port size (Metric/One-touch fittings)

| Symbol | P, E port | SY3000 | SY5000 | SY7000 |
|--------|-----------|--------|--------|--------|
| C2 | ø2 | — | — | — |
| C3 | ø3.2 | ● | — | — |
| C4 | ø4 | — | ● | — |
| C6 | ø6 | — | ● | ● |
| C8 | ø8 | — | — | ● |
| C10 | ø10 | — | — | ● |
| C12 | ø12 | — | — | ● |

Port size (Inch/One-touch fittings)

| Symbol | P, E port | SY3000 | SY5000 | SY7000 |
|--------|-----------|--------|--------|--------|
| N1 | ø1/8" | — | — | — |
| N3 | ø5/32" | ● | — | — |
| N7 | ø1/4" | — | — | — |
| N9 | ø5/16" | — | ● | — |
| N11 | ø3/8" | — | — | ● |

- * When using in combination with the SY³30□□□-E (With residual pressure release valve), the length of the required mounting screws will differ. Please contact SMC for details.

| Model | Port size | | Flow rate characteristics | | | |
|-----------------|------------------|----------------|------------------------------|------|------------------------------|------|
| | 1, 3/5 (P, E) | 4, 2 (A, B) | 1 → 4/2 (P → A/B) | | 4/2 → 3/5 (A/B → E) | |
| | | | C [dm ³ /(s·bar)] | b | C [dm ³ /(s·bar)] | b |
| SY30M-38-1A-C6 | C8 | C6 | 1.2 | 0.32 | 1.4 | 0.24 |
| SY30M-39-1A-C6 | | | 1.2 | 0.27 | 1.1 | 0.27 |
| SY50M-38-1A-C8 | | | 2.7 | 0.36 | 3.3 | 0.22 |
| SY50M-39-1A-C8 | C10 | C8 | 2.2 | 0.37 | 2.2 | 0.36 |
| SY70M-38-1A-C12 | | | 4.8 | 0.26 | 4.7 | 0.25 |
| SY70M-39-1A-C12 | | | 4.9 | 0.28 | 4.7 | 0.23 |

* Calculation of effective area S and sonic conductance C: S = 5.0 × C

* The value is for manifold base with 5 stations, rubber seal, and individually operated 2-position type.

* For connector connecting base (type 10) manifolds

SY3000/5000/7000 Series

⚠ Caution

| |
|--------------------------------------|
| Tightening torque for mounting screw |
| M2: 0.16 N·m (SY3000) |
| M3: 0.8 N·m (SY5000/7000) |

Manifold Options

* Refer to pages 628 to 630 for dimensions.

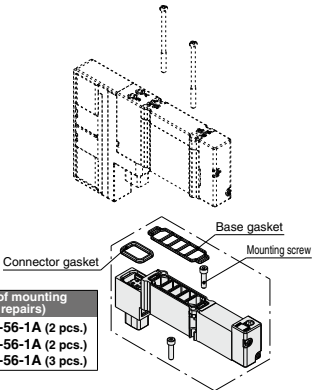
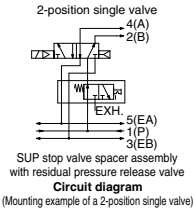
■ SUP stop valve spacer assembly with residual pressure release valve

[With a connector gasket, a base gasket, and two mounting screws
(3 pcs. for the SY7000)]

It is used to shut off the supply air to valves individually.

- * Cannot be selected when the elbows are facing upward in A and B ports in Type 10 manifolds, since they will interfere with the piping for the spacer assembly

| SY 3 OM - 50 - 1A E | |
|-----------------------------------|---|
| Series | Manual override |
| 3 SY3000 | Nil Push-turn locking slotted type |
| 5 SY5000 | |
| 7 SY7000 | E Push-turn locking lever type |

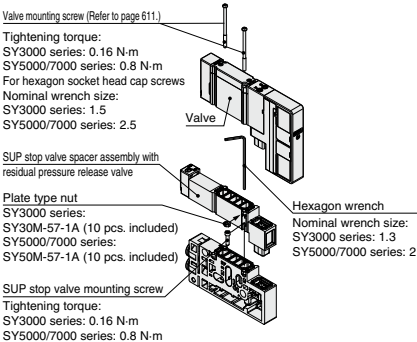


- * For lever type:
When locking the lever type manual override, push the lever down in the PUSH position with your fingers until it stops, then turn the lever 90° clockwise. (PUSH → LOCK)
Turning the lever without pushing it down until it stops can cause damage to the manual override and other problems such as air leakages.
To unlock the manual override, turn the lever counterclockwise. (LOCK → PUSH)

[How to mount SUP stop valve spacer assembly with residual pressure release valve]

Insert the SUP stop valve mounting screw from the side of the spacer assembly, and mount it to the manifold.
Tighten the SUP stop valve mounting screw to the specified tightening torque.
Mount the valve and tighten the valve mounting screws to the specified tightening torque after mounting the SUP stop valve spacer assembly with residual pressure release valve.

- * Install the plate type nut to the spacer assembly as shown in the figure if it comes off. The SUP stop valve mounting screws can be tightened with a hexagon wrench without removing the plate type nut.
- * When the elbows are facing upward in A and B ports in Type 10 manifolds, they will interfere with the piping for the spacer assembly. Therefore, combine the A and B ports with straight types or elbows facing downward.
- * This product is only for internal pilot specifications, as the external pilot air cannot be shut off.
- * If the product is equipped with a 3-position closed center, residual pressure cannot be released, so use in combination with a 3-port valve, which can be connected to the A, B piping port.



| Model | Port size | | Flow rate characteristics | | | |
|----------------|------------------|----------------|------------------------------|------|------------------------------|------|
| | 1, 3/5 (P, E) | 4, 2 (A, B) | 1 → 4/2 (P → A/B) | | 4/2 → 3/5 (A/B → E) | |
| | | | C [dm ³ /(s·bar)] | b | C [dm ³ /(s·bar)] | b |
| SY30M-50-1A(E) | C8 | C6 | 0.6 | 0.18 | 1.4 | 0.29 |
| SY50M-50-1A(E) | C10 | C8 | 1.6 | 0.20 | 3.1 | 0.23 |
| SY70M-50-1A(E) | C12 | C12 | 3.1 | 0.18 | 4.3 | 0.32 |

- * Calculation of effective area S and sonic conductance C: S = 5.0 x C
- * The value is for manifold base with 5 stations, rubber seal, and individually operated 2-position type.
- * For connector connecting base (type 10) manifolds

Manifold Options

* Refer to pages 628 to 630 for dimensions.

Double check spacer assembly with residual pressure release valve (Side/Bottom ported)

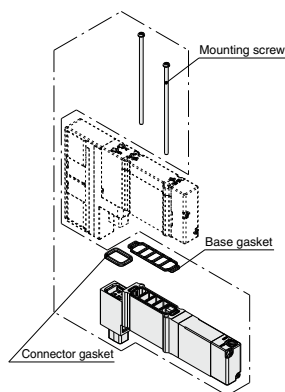
[With a connector gasket, a base gasket, and two mounting screws (3 pcs. for the SY7000)]

It is used to hold the intermediate position of the cylinder for a long period of time. Use a 3-position exhaust center valve when the double check spacer assembly with residual exhaust valve is used. It can also be used for drop prevention at the cylinder stroke end when supply residual pressure is released by using a 2-position single/double valve.

* When the elbows are facing upward in A and B ports in Type 10 manifolds, they will interfere with the piping for the spacer assembly. Therefore, combine the A and B ports with straight types or elbows facing downward.

| Series | Part no. |
|---------------|-------------|
| SY3000 | SY30M-60-1A |
| SY5000 | SY50M-60-1A |
| SY7000 | SY70M-60-1A |

| Applicable valve | Intermediate stop | Drop prevention |
|------------------|---|--|
| | SY $\frac{3}{2}$ 40 ⁰ ₁ | SY $\frac{3}{2}$ 2 0 ⁰ ₁ |



Part numbers of mounting screw (For repairs)

SY3000: SY3000-23-27A (2 pcs.)
SY5000: SY5000-221-4A (2 pcs.)
SY7000: SY7000-221-4A (3 pcs.)

Caution

- Air leakage from the pipe between the valve and cylinder or from the fittings will prevent the cylinder from stopping for a long period of time. Check the leakage using neutral household detergent, such as dish washing soap. Also, check the cylinder's tube gasket, piston seal, and rod seal for air leakage.
- Combining with 3-position closed center or pressure center valve will not work.
- If the exhaust of the double check spacer is restricted too much, the cylinder may not operate properly and may not stop intermediately.
- Set the cylinder load so that the cylinder pressure will be within two times that of the supply pressure.
- If using a double check spacer that is built in to the sub-plate, refer to page 696.

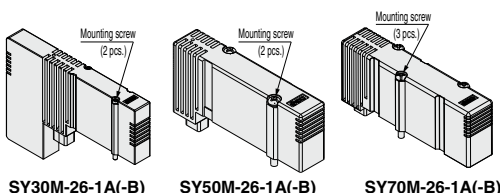
Specifications

| | |
|--------------------------------|--|
| Max. operating pressure | 1.0 MPa |
| Min. operating pressure | 0.1 MPa |
| Ambient and fluid temperatures | -10 to 50°C |
| Flow rate characteristics: C | SY3000 0.3 dm ³ /(s·bar) |
| | SY5000 0.7 dm ³ /(s·bar) |
| | SY7000 1.1 dm ³ /(s·bar) |
| Max. operating frequency | 3 Hz |

Blanking plate assembly

[With two mounting screws (3 pcs. for the SY7000)]

Used when valve additions are expected or for maintenance. A structure is in place on the blanking plate to prevent the mounting screws from sliding.



How to Order Blanking Plate Assembly

SY 3 0 M - 2 6 - 1 A -

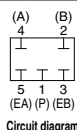
Series

| | |
|----------|--------|
| 3 | SY3000 |
| 5 | SY5000 |
| 7 | SY7000 |

Option for mounting

| | |
|------------|---|
| Nil | With mounting screw (Round head combination screw) |
| B | With mounting screw (Hexagon socket head cap screw) |

Part numbers of mounting screw (Hexagon bolt) (For repairs)
SY3000: SY3000-23-24A [SY3000-222-1A]
SY5000: SY5000-221-1A [SY5000-222-1A]
SY7000: SY7000-221-2A [SY7000-222-1A]



Caution

| |
|--------------------------------------|
| Tightening torque for mounting screw |
| M2: 0.16 N·m (SY3000) |
| M3: 0.8 N·m (SY5000/7000) |

* Refer to pages 628 to 630 for dimensions.

SY3000/5000/7000 Series

Caution

| |
|--------------------------------------|
| Tightening torque for mounting screw |
| M2: 0.16 N·m (SY3000) |
| M3: 0.8 N·m (SY5000/7000) |

Manifold Options

* Refer to pages 628 to 631 for dimensions.

Interface regulator

[With a connector gasket, a base gasket, and two mounting screws (3 pcs. for the SY7000)]

Used when the supply pressure for each valve on the same manifold must be individually set (reduced pressure).

How to Order

SY 3 0M - 05 - P - □

Series
3 SY3000

Pressure gauge option^{*1}

| | |
|----|---|
| M1 | Without pressure gauge |
| 05 | Pressure gauge with MPa display (For odd number station) |
| 06 | Pressure gauge with MPa display (For even number station) |
| N5 | Pressure gauge with psi display (For odd number station) ^{*2} |
| N6 | Pressure gauge with psi display (For even number station) ^{*2} |

Applicable valve^{*3}

| | |
|-----|------------------------------------|
| Nil | For single, double, and 4-position |
| 3 | For 3-position |

^{*1} In the case of the SY3000 series with a pressure gauge, when mounting on the manifold, use caution that the part numbers are different between the odd no. stations and the even no. stations to prevent the pressure gauges from interfering with each other.
If using a connector connecting base M10/11/12 (mixed mounting type) or laminating two or more types of spacer type manifold options for the neighboring stations, you can use only the model without a pressure gauge (M1).

^{*2} As per the new Measurement Law, gauges with a psi display will only be sold to overseas customers.

^{*3} In the case of the SY3000 series, use caution that the part numbers will differ depending on the one for single/double and 4- and 3-position due to the different length of solenoid valves. Also, if you have selected a model with a pressure gauge, and if at least the one for 3-position is included in the same manifold, use all the ones for 3-position to prevent the pressure gauges from interfering with each other.

SY 5 0M - 00 - P - □

Series
5 SY5000
7 SY7000

Pressure gauge option

| | |
|----|---|
| M1 | Without pressure gauge |
| 00 | Pressure gauge with MPa display |
| N0 | Pressure gauge with psi display ^{*2} |

Regulating port

| | |
|----|--|
| P | 1(P) port |
| A1 | 4(A) port (P controlled type, A port regulation) |
| B1 | 2(B) port (P controlled type, B port regulation) |

Part numbers of mounting screw (For repairs)

| | |
|---------|------------------------|
| SY3000: | SY3000-23-12A (2 pcs.) |
| SY5000: | SY5000-221-6A (2 pcs.) |
| SY7000: | SY7000-221-6A (3 pcs.) |

Mounting screw
Base gasket
Connector gasket

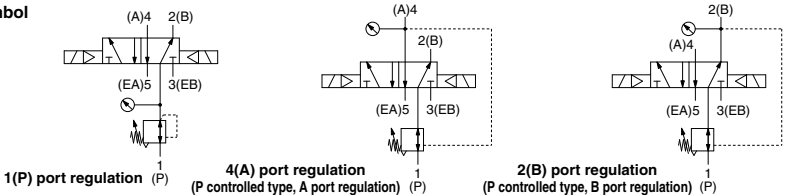
SY30M-05/N5-□ SY30M-06/N6-□ SY30M-M1-□ SY50M-00/N0-□ SY50M-M1-□ SY70M-00/N0-□ SY70M-M1-□
(With pressure gauge/ (With pressure gauge/ (Without pressure gauge) (With pressure gauge) (Without pressure gauge) (With pressure gauge) (Without pressure gauge)
For odd number station) For even number station)

Specifications

| | | | |
|--------------------------------------|---------------------------|-----------------------|-----------|
| Interface regulator model | SY30M-□-□-□ | SY50M-□-□ | SY70M-□-□ |
| Applicable valve model ^{*1} | SY3□□□(R) | SY5□□□(R) | SY7□□□(R) |
| Regulating port | 1(P), 4(A), 2(B) | | |
| Set pressure range | 0.1 to 0.7 MPa | | |
| Maximum operating pressure | 1.0 MPa | | |
| Fluid | Air | | |
| Ambient and fluid temperatures | -10 to 50°C (No freezing) | | |
| Weight [g] ^{*2} | With pressure gauge | 33 (35) ^{*3} | 75 |
| | Without pressure gauge | 27 (29) ^{*3} | 69 |

- ^{*1} 3-position closed center and pressure center, and 4-position dual 3-port valves are only available for 1(P) port pressure regulation.
- ^{*2} Gasket and mounting screws are included in the weight.
- ^{*3} (): Denotes the values of SY30M-□-□-3
- * Always apply pressure from 1(P) port in the base for interface regulator.
- * When using in combination with the SY⁵30□□□□1-E (With residual pressure release valve), the length of the required mounting screws will differ. Please contact SMC for details.

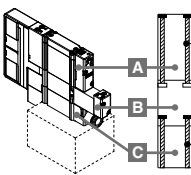
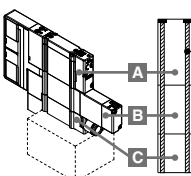
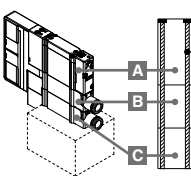
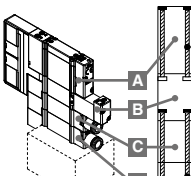
Symbol



⚠ Caution

| |
|--------------------------------------|
| Tightening torque for mounting screw |
| M2: 0.16 N·m (SY3000) |
| M3: 0.8 N·m (SY5000/7000) |

Manifold Options: Spacer Combinations and Screw List ①

| Combination | | | ① SY3000 (M2) | | ② SY5000 (M3) | | ③ SY7000 (M3) | |
|--|---|---|---|---|---|---|---|---|
| | | | Round head combination screw | Hexagon socket head cap screw | Round head combination screw | Hexagon socket head cap screw | Round head combination screw | Hexagon socket head cap screw |
|  | A | Valve | SY3000-23-24A [for 10 valves (20 pcs.)] | SY3000-222-1A [for 10 valves (20 pcs.)] | SY5000-221-1A [for 10 valves (20 pcs.)] | SY5000-222-1A [for 10 valves (20 pcs.)] | SY7000-221-1A [for 10 valves (30 pcs.)] | SY7000-222-1A [for 10 valves (30 pcs.)] |
| | B | SUP stop valve spacer assembly with residual pressure release valve | SY30M-56-2A (2 pcs.) | SY50M-56-2A (2 pcs.) | SY70M-56-2A (3 pcs.) | | | |
| | C | Individual SUP (EXH) spacer assembly | | | | | | |
| | | | | | | | | |
|  | A | Valve | SY3000-23-33A (2 pcs.) | — | SY5000-221-5A (2 pcs.) | — | SY7000-221-5A (3 pcs.) | — |
| | B | Double check spacer assembly with residual pressure release valve | | | | | | |
| | C | Individual SUP (EXH) spacer assembly | | | | | | |
| |  | A | Valve | SY3000-23-32A (2 pcs.) | — | SY5000-221-3A (2 pcs.) | — | SY7000-221-3A (3 pcs.) |
| B | | Individual SUP (EXH) spacer assembly | | | | | | |
| C | | Individual EXH (SUP) spacer assembly | | | | | | |
|  | | A | Valve | SY3000-23-24A [for 10 valves (20 pcs.)] | SY3000-222-1A [for 10 valves (20 pcs.)] | SY5000-221-1A [for 10 valves (20 pcs.)] | SY5000-222-1A [for 10 valves (20 pcs.)] | SY7000-221-1A [for 10 valves (30 pcs.)] |
| | B | SUP stop valve spacer assembly with residual pressure release valve | SY30M-56-4A (2 pcs.) | SY50M-56-4A (2 pcs.) | SY70M-56-4A (3 pcs.) | | | |
| | C | Individual SUP (EXH) spacer assembly | | | | | | |
| | D | Individual EXH (SUP) spacer assembly | | | | | | |
| | | | | | | | | |

* Mounting onto a manifold follows the order explained above.

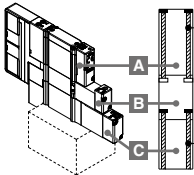
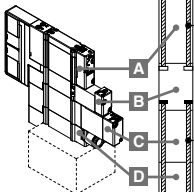
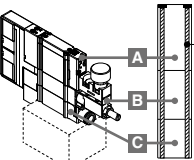
* The fitting for individual SUP/EXH spacers comes in a straight type only, since an elbow type would interfere with each spacer assembly when laminated.

SY3000/5000/7000 Series

⚠ Caution

| |
|--------------------------------------|
| Tightening torque for mounting screw |
| M2: 0.16 N·m (SY3000) |
| M3: 0.8 N·m (SY5000/7000) |

Manifold Options: Spacer Combinations and Screw List ②

| Combination | | ① SY3000 (M2) | | ② SY5000 (M3) | | ③ SY7000 (M3) | |
|---|---|---|---|---|---|---|---|
| | | Round head combination screw | Hexagon socket head cap screw | Round head combination screw | Hexagon socket head cap screw | Round head combination screw | Hexagon socket head cap screw |
|  <p><Round head combination screw> ①: SY3000-23-24A ②: SY5000-221-1A ③: SY7000-221-1A</p> <p><Hexagon socket head cap screw> ①: SY3000-222-1A ②: SY5000-222-1A ③: SY7000-222-1A</p> <p>①: SY30M-56-3A ②: SY50M-56-3A ③: SY70M-56-3A</p> | A Valve | SY3000-23-24A [for 10 valves (20 pcs.)] | SY3000-222-1A [for 10 valves (20 pcs.)] | SY5000-221-1A [for 10 valves (20 pcs.)] | SY5000-222-1A [for 10 valves (20 pcs.)] | SY7000-221-1A [for 10 valves (30 pcs.)] | SY7000-222-1A [for 10 valves (30 pcs.)] |
| | B SUP stop valve spacer assembly with residual pressure release valve | SY30M-56-3A (2 pcs.) | | SY50M-56-3A (2 pcs.) | | SY70M-56-3A (3 pcs.) | |
| | C Double check spacer assembly with residual pressure release valve | | | | | | |
|  <p><Round head combination screw> ①: SY3000-221-1A ②: SY5000-221-1A ③: SY7000-221-1A</p> <p><Hexagon socket head cap screw> ①: SY3000-222-1A ②: SY5000-222-1A ③: SY7000-222-1A</p> <p>①: SY30M-56-5A ②: SY50M-56-5A ③: SY70M-56-5A</p> | A Valve | SY3000-23-24A [for 10 valves (20 pcs.)] | SY3000-222-1A [for 10 valves (20 pcs.)] | SY5000-221-1A [for 10 valves (20 pcs.)] | SY5000-222-1A [for 10 valves (20 pcs.)] | SY7000-221-1A [for 10 valves (30 pcs.)] | SY7000-222-1A [for 10 valves (30 pcs.)] |
| | B SUP stop valve spacer assembly with residual pressure release valve | SY30M-56-5A (2 pcs.) | | SY50M-56-5A (2 pcs.) | | SY70M-56-5A (3 pcs.) | |
| | C Double check spacer assembly with residual pressure release valve | | | | | | |
| | D Individual EXH (SUP) spacer assembly | | | | | | |
|  <p><Round head combination screw> ①: SY3000-23-32A ②: SY5000-221-7A ③: SY7000-221-7A</p> | A Valve | SY3000-23-32A (2 pcs.) | — | SY5000-221-7A (2 pcs.) | — | SY7000-221-7A (3 pcs.) | — |
| | B Interface regulator | | | | | | |
| | C Individual SUP (EXH) spacer assembly | | | | | | |

* Mounting onto a manifold follows the order explained above.

* The fitting for individual SUP/EXH spacers comes in a straight type only, since an elbow type would interfere with each spacer assembly when laminated.

* When laminating an interface regulator with other options, only the combinations in the table above are possible.

⚠ Caution

| |
|--------------------------------------|
| Tightening torque for mounting screw |
| M2: 0.16 N·m (SY3000) |
| M3: 0.8 N·m (SY5000/7000) |

Manifold Options

* Refer to pages 628 to 631 for dimensions.

■ Individual SUP block assembly

On the circuit of the plug-in connector connection base, an individual SUP block assembly can be used to supply air to a series of valves if a separate air supply is required, or if additional air is required for additional air flow. Individual SUP block assembly occupies 1 station.

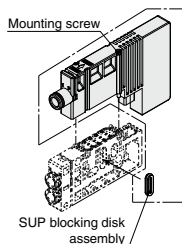
Blocking disks also supplied (2 pieces). Can be used to block both sides of the number of stations being isolated for individual air supply (as shown in example).

* Specify the mounting position of the block as well as the position where the SUP passage is to be blocked on the manifold specification sheet. Blocking is required for 1 or 2 positions for 1 set. (2 SUP blocking disks to block SUP is attached to individual SUP block.)

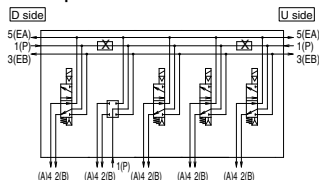
* Electrical wiring is connected to a number of stations in the individual SUP block manifold.

* When used in M10/11/12 (mixed mounting type), select the SY50M type for SS5Y5 and the SY70M type for SSSY7.

* A structure to prevent screws falling out is in place on the individual SUP block, making it much harder for the mounting screws to fall out.



<Example>



How to Order Individual SUP/EXH Block Assembly

One-touch fitting Straight type SY **3** OM-**78**-1 A-C**6**

One-touch fitting Elbow type SY **3** OM-**78**-**2** A-L**6**

| Series | |
|--------|--------|
| 3 | SY3000 |
| 5 | SY5000 |
| 7 | SY7000 |

Block type

| | |
|----|----------------------|
| 78 | Individual SUP block |
| 79 | Individual EXH block |

Individual SUP/EXH block assembly

| | |
|---|----------------------------|
| 2 | Short elbow type (Type 12) |
| 3 | Long elbow type (Type 11) |

* Long elbow type is for the SY5000/7000 only.

Port size (Metric/One-touch fittings)

| Symbol | P, E port | SY3000 | SY5000 | SY7000 |
|--------|-----------|--------|--------|--------|
| L4 | ø4 | ● | ● | — |
| L6 | ø6 | ● | ● | — |
| L8 | ø8 | — | — | ● |
| L10 | ø10 | — | — | ● |
| L12 | ø12 | — | — | ● |

Port size (Inch/One-touch fittings)

| Symbol | P, E port | SY3000 | SY5000 | SY7000 |
|--------|-----------|--------|--------|--------|
| LN3 | ø5/32" | ● | — | — |
| LN7 | ø1/4" | ● | ● | — |
| LN9 | ø5/16" | — | ● | — |
| LN11 | ø3/8" | — | — | ● |

Port size (Metric/One-touch fittings)

| Symbol | P, E port | SY3000 | SY5000 | SY7000 |
|--------|-----------|--------|--------|--------|
| C2 | ø2 | ● | — | — |
| C3 | ø3.2 | ● | — | — |
| C4 | ø4 | ● | ● | — |
| C6 | ø6 | ● | ● | ● |
| C8 | ø8 | — | ● | ● |
| C10 | ø10 | — | — | ● |
| C12 | ø12 | — | — | ● |

Port size (Inch/One-touch fittings)

| Symbol | P, E port | SY3000 | SY5000 | SY7000 |
|--------|-----------|--------|--------|--------|
| N1 | ø1/8" | ● | — | — |
| N3 | ø5/32" | ● | ● | — |
| N7 | ø1/4" | ● | ● | ● |
| N9 | ø5/16" | — | ● | ● |
| N11 | ø3/8" | — | — | ● |

■ Individual EXH block assembly

On the circuit of the plug-in connector connection base, individual EXH block assembly can be used to individually exhaust series of valves when the exhaust from the valves would affect a number of other stations.

Individual EXH block assembly occupies 1 station.

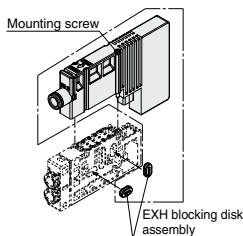
Blocking disks also supplied (4 pieces). Can be used to block both sides of the number of stations being isolated for individual exhaust. (as shown in example).

* Specify the mounting position of the block as well as the position where the EXH passage is to be blocked on the manifold specification sheet. Blocking is required for 1 or 2 positions for 1 set. (2 sets of EXH blocking disks (4 pcs.) to block EXH is attached to individual EXH block.)

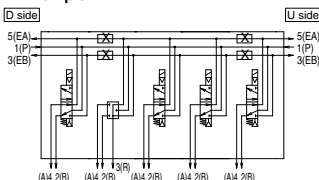
* Electrical wiring is connected to a number of stations in the individual EXH block manifold.

* When used in M10/11/12 (mixed mounting type), select the SY50M type for SS5Y5 and the SY70M type for SSSY7.

* A structure to prevent screws falling out is in place on the individual EXH block, making it much harder for the mounting screws to fall out.



<Example>



SY3000/5000/7000 Series

Manifold Options

■ Blanking Plate with Output [With two mounting screws]

The blanking plate extracts the individual signal of the manifold valve.

Specifications



| | |
|-------------------|---|
| Number of outputs | 2 outputs |
| Load voltage | 12 VDC, 24 VDC (Dependent on the rated voltage of the built-in manifold) |
| Load current | 42 mA/point (Max.) |
| Enclosure | Dust proof (M12 connector: IP67) |

- * For serial transmission-capable manifolds, only the 24 VDC is applicable.
- * When non-polar type valves are mounted on the same manifold (excludes SI unit manifolds), be careful of surge voltage intrusion. Refer to page 706 for details.

⚠ Caution

| |
|--------------------------------------|
| Tightening torque for mounting screw |
| M2: 0.16 N·m |

How to Order Blanking Plate with Output

SY 3 0M - 150 - 1A -  

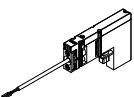
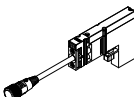
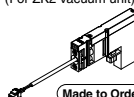
Series

| | |
|---|--------|
| 3 | SY3000 |
|---|--------|

Cable length

| | |
|-----|---------|
| Nil | 300 mm |
| 10 | 1000 mm |

• Connector type

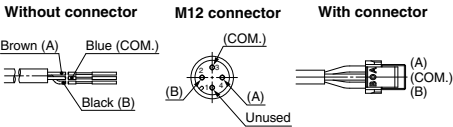
| Nil | 1 | 2 |
|---|---|--|
| Without connector  | With M12 connector  | With connector (For ZK2 vacuum unit)  Made to Order |

* Refer to the specifications for output polarity.

Output Polarity

| Manifold common specifications | A | B | COM. |
|--------------------------------|---|---|------|
| Positive common | - | - | + |
| Negative common | + | + | - |

* Specifications are the same as the manifold common specifications.



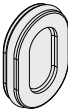
■ SUP/EXH blocking disk assembly (for connector type manifold, Type 10, 11, 12)

[SUP blocking disk]

By inserting the SUP blocking disk in the pressure supply passage of the manifold valve, can provide two different high and low pressure in one manifold.

[EXH blocking disk]

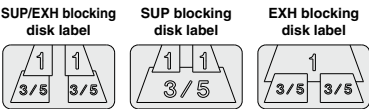
By inserting the EXH blocking disk in the exhaust passage of the manifold valve, can separate the exhaust from the valve so it does not affect the other valves. It can also be used for the manifold for the positive pressure and vacuum mixed manifold. (2 pcs. are required to block FA/EB both sides of the EXH.)



| Series | SUP blocking disk assembly | EXH blocking disk assembly |
|---------------|----------------------------|----------------------------|
| SY3000 | SY30M-40-1A | SY30M-40-2A |
| SY5000 | SY50M-40-1A | SY50M-40-1A |
| SY7000 | SY70M-40-1A | SY70M-40-1A |

■ Label for blocking disk

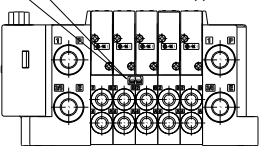
Label to indicate and confirm on the manifold where the SUP/EXH blocking disk assemblies were inserted. (3 sheets each)



| Series | Part no. |
|---------------|---------------|
| SY3000 | SJ3000-155-1A |
| SY5000 | |
| SY7000 | |



* If the blocking disk assembly is ordered using the manifold specification sheet and ordered at the same time as the manifold, the position where the blocking disk assembly is inserted will be labeled and shipped out.



Manifold Options

■ Back pressure check valve assembly (Retrofit or pre-installed type)

It prevents cylinder malfunction caused by other valve exhaust entry. Insert it into EA/EB port (valve mounting side) on the manifold side of a valve which is affected. It is effective when a single-acting cylinder is used.

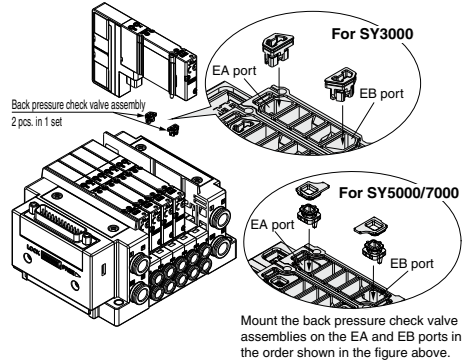
- * When ordering assemblies incorporated with a manifold, refer to the Ordering Example below (when installed in all stations.)
- * When a check valve for back pressure prevention is desired and is to be installed only in certain manifold stations, clearly indicate the part number and specify the mounting position on the manifold specification sheet.

<Precautions>

1. The manifold installed type back pressure check valve assembly is assembly parts with a check valve structure. However, since slight air leakage against the back pressure is allowed due to its structure, adverse effects of the back pressure due to increase in exhaust resistance cannot be prevented if the manifold exhaust port and other exhaust ports are put together for piping or if the piping diameter is narrowed. As a result, this may cause the actuator and air operated equipment to malfunction. So, be careful not to restrict the exhaust air. If the exhaust resistance becomes large, select a built-in valve type with rubber seal.
2. When the back pressure check valve assembly is mounted, please contact SMC for valve flow rate characteristics.

Ordering Example

SSSY3-10F1-05B-C6.....1 set (Type 10 5-station manifold base part no.)
 *SY3201-5U1.....5 sets (2-position double part no.)
 *SY30M-24-1A.....5 sets (Back pressure check valve assembly part no.)
 └ The asterisk denotes the symbol for the assembly.



| Series | Part no. |
|---------------|-------------|
| SY3000 | SY30M-24-1A |
| SY5000 | SY50M-24-1A |
| SY7000 | SY70M-24-1A |

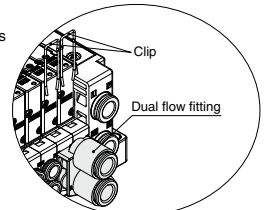
■ Dual flow fitting (for connector connecting base, Type 10, side ported)

This is a fitting for cylinder ports which enables simultaneous actuation and increase in flow rate of valves for 2 stations.

- * When ordering assemblies incorporated into a manifold, refer to the Ordering Example below and specify on the manifold specification sheet.

Ordering Example

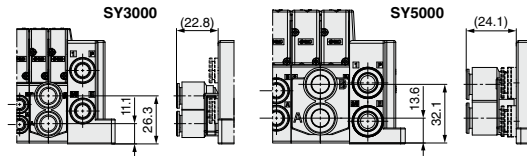
SSSY3-10F1-08B-CM
 *SY3100-5U1
 *SY30M-120-1A-C8
 └ The asterisk denotes the symbol for the assembly.



How to Order Dual Flow Fitting

SY 3 OM - 120 - 1A - C8

| Series | | A, B port size (One-touch fittings) | | | |
|----------|--------|-------------------------------------|-------------|--------|--------|
| | | Symbol | A, B port | SY3000 | SY5000 |
| 3 | SY3000 | C8 | Metric size | ø8 | — |
| 5 | SY5000 | C10 | | ø10 | — |
| | | N9 | Inch size | ø5/16" | — |
| | | N11 | | ø3/8" | — |



- * Specifically for side porting for a connector connecting base. Cannot be attached to bottom or top ported, or mixed mounting types that are metal or connector connecting bases.
- * When adding or changing clips, push them into the very end of the manifold for each station. Also, make sure to use the clip that was packed together, as the clip and the fitting for one station differ among products that can be used with the SY5000.
- * Not available for the SY7000 series
- * Refer to the table below to see which spacers are applicable.

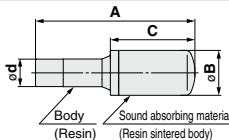
| Each type of spacer | Series | |
|---|--------|--------|
| | SY3000 | SY5000 |
| Individual SUP (EXH) spacer assembly | × | ○ |
| SUP stop valve spacer assembly with residual pressure release valve | × | ○ |
| Double check spacer assembly with residual pressure release valve | × | ○ |
| Interface regulator | × | × |

○: Can be built in ×: Cannot be built in

■ Silencer

(One-touch fitting connection type)

This silencer can be mounted to the 3/5 (E: EXH) port of the manifold in one step.

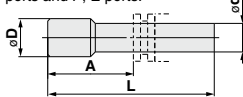


- * Shipped together with the product

| Series | Model | Effective area | A | B | C |
|------------------|-----------------|--------------------|------|------|------|
| For SY3000 (ø8) | AN15-C08 | 20 mm ² | 45 | 13 | 20 |
| For SY5000 (ø10) | AN20-C10 | 30 mm ² | 57.5 | 16.5 | 30.5 |
| For SY7000 (ø12) | AN30-C12 | 41 mm ² | 71.5 | 20 | 43.5 |

■ Plug

These are inserted in unused cylinder ports and P, E ports.



- * Shipped together with the product

Dimensions

| Applicable fitting size ød (Metric size) | Model | A | L | øD |
|---|----------------|------|------|----|
| 2 | KJP-02 | 8.2 | 17 | 3 |
| 3.2 | KQ2P-23 | 16 | 31.5 | 5 |
| 4 | KQ2P-04 | 16 | 32 | 6 |
| 6 | KQ2P-06 | 18 | 35 | 8 |
| 8 | KQ2P-08 | 20.5 | 39 | 10 |
| 10 | KQ2P-10 | 22 | 43 | 12 |
| 12 | KQ2P-12 | 24 | 45.5 | 14 |

| Applicable fitting size ød (Inch size) | Model | A | L | øD |
|---|----------------|------|------|------|
| 1/8" | KQ2P-01 | 16 | 31.5 | 5 |
| 5/32" | KQ2P-03 | 16 | 32 | 6 |
| 1/4" | KQ2P-07 | 18 | 35 | 8.5 |
| 5/16" | KQ2P-09 | 20.5 | 39 | 10 |
| 3/8" | KQ2P-11 | 22 | 43 | 11.5 |
| 1/2" | KQ2P-13 | 24 | 46 | 15 |

SY3000/5000/7000 Series

Manifold Options

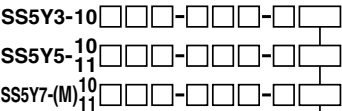
A transparent plastic plate to put a label with the name of the function of the solenoid valve

■ Name plate (For connector connecting base)

SY3000: For SS5Y3-10 (Side ported)
SY5000: For SS5Y5-10/11 (Side/Bottom ported)
SY7000: For SS5Y7-(M)10/11 (Side/Bottom ported)

Name plate bracket assembly and name plate mounting instructions
Insert it into the groove on the name plate bracket onto which a SUP/EXH (end) block is mounted, as shown in Figure 2.

* When ordering assemblies incorporated with a manifold, refer to the Ordering Example below.



Mounting and Option

| Symbol | Mounting option | | | | |
|--------|-----------------|----|----------|---------|-----------------|
| | Printing | | DIN rail | | Direct mounting |
| | Yes | No | With | Without | |
| AA | ● | — | — | — | ● |
| A | ● | — | ● | — | — |
| A0 | ● | — | — | ● | — |
| A3 | ● | — | — | — | For 3 stations |
| ⋮ | ⋮ | ⋮ | ⋮ | ⋮ | ⋮ |
| A24 | ● | — | — | — | For 24 stations |
| BA | — | ● | — | — | ● |
| B | — | ● | ● | — | — |
| B0 | — | ● | — | ● | — |
| B3 | — | ● | — | — | For 3 stations |
| ⋮ | ⋮ | ⋮ | ⋮ | ⋮ | ⋮ |
| B24 | — | ● | — | — | For 24 stations |

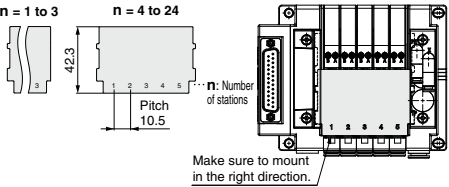
Ordering Example

SS5Y3-10F1-05UR-C6AA 1 set
*SY3200R-SU1 5 sets

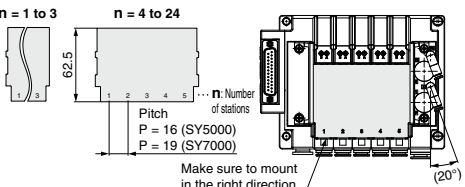
The asterisk denotes the symbol for the assembly.

* Name plates cannot be mounted onto Type 12 (Top ported) and Type 10 (Side ported) mixed mounting types with top ported valves, nor onto manifolds with optional laminated spacers.
* No name plate settings are available for the SY3000/SY5000 mixed mounting types. However, they are available for the SY5000/SY7000 mixed mounting types.

<SY3000>



<SY5000/7000>

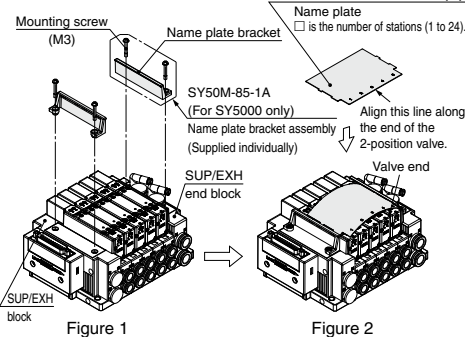
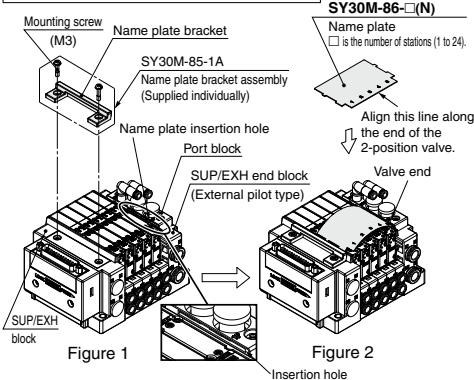


Tightening torque for mounting screw (M3): 0.8 N·m

Tightening torque for mounting screw (M3): 0.8 N·m

SY5000: SY50M-86-□(N)
SY7000: SY70M-86-□(N)

Name plate
□ is the number of stations (1 to 24).



Manifold Options

* A transparent plastic plate to put a label with the name of the function of the solenoid valve

■ If adding a name plate

If adding a name plate to a manifold in use, order a name plate bracket assembly, in addition to ordering a name plate.
Refer to the table below for the part number and the amount.

Name plate part number

| Model | | SS5Y3-10 | SS5Y5-10/11 | SS5Y7-(M)10/11 | Note |
|------------|-------------|-------------|-------------|----------------|-----------------------|
| Name plate | Printed | SY30M-86-□N | SY50M-86-□N | SY70M-86-□N | □: Number of stations |
| | No printing | SY30M-86-□ | SY50M-86-□ | SY70M-86-□ | (1 to 24) |

Name plate bracket assembly part number and number of items ordered

| Model | | SS5Y3-10 | SS5Y5-10/11 |
|---|------------------------------------|----------------|-------------|
| Name plate assembly part number | | SY30M-85-1A | SY50M-85-1A |
| Manifold SUP/EXH block assembly Pilot type and P, E port entry | Internal pilot U/D piping | 2 pcs. | 2 pcs. |
| | Internal pilot double sided piping | 2 pcs. | |
| | External pilot U/D piping | 1 pc.*1 | |
| | External pilot double sided piping | Not required*1 | |

*1 If the manifold is an external pilot, an insertion slot for name plates is on the port block of the SUP/EXH block assembly. Thus, a bracket assembly is no longer required on the port piping side.

* Name plate bracket assembly is not required for the SY7000.

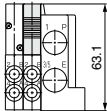
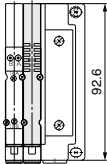
⚠ Caution

1. Be sure to shut off the power and air supplies before mounting the name plate bracket assembly. Furthermore, since air may remain inside the actuator, piping, and manifold, confirm that the air is completely exhausted before performing any work.
2. When disassembly and assembly are performed, air leakage may result if the tightening of the bracket mounting screws is inadequate.

SY3000/5000/7000 Series

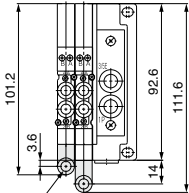
Dimensions: Manifold Options/SY3000 Series

Blanking plate assembly

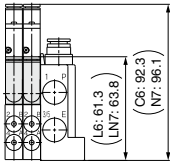


<Type 10, 12>

Individual SUP/EXH spacer assembly (Top ported)

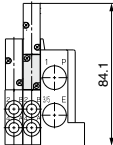
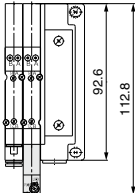


One-touch fitting
(SUP port, EXH port)
Applicable tubing O.D.: ø4, ø5/32"
: ø6, ø1/4"



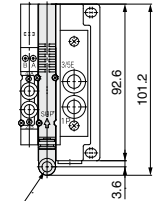
<Type 12>

Double check spacer assembly with residual pressure release valve

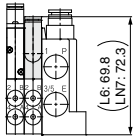


<Type 10>

Individual SUP/EXH block assembly (Top ported)

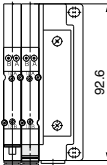


One-touch fitting
(SUP port, EXH port)
Applicable tubing O.D.: ø4, ø5/32"
: ø6, ø1/4"

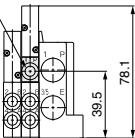


<Type 12>

Individual SUP/EXH spacer assembly (Side ported)

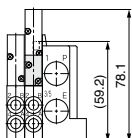
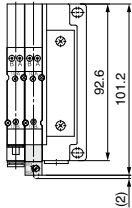


One-touch fitting
(SUP port, EXH port)
Applicable tubing O.D.: ø2
: ø3.2, ø1/8"
: ø4, ø5/32"
: ø6, ø1/4"



<Type 10>

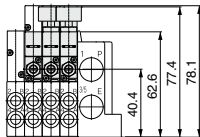
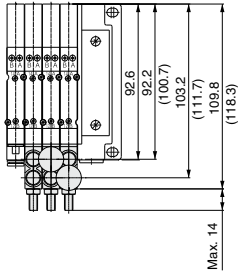
SUP stop valve spacer assembly with residual pressure release valve



<Type 10, 12>

* The dimensions within () apply to the SY30M-50-1AE.

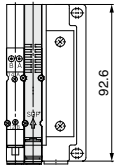
Interface regulator



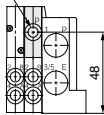
<Type 10, 12>

* The dimensions within () apply to the SY30M-□□-3.

Individual SUP/EXH block assembly (Side ported)



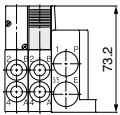
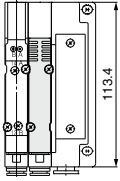
One-touch fitting
(SUP port, EXH port)
Applicable tubing O.D.: ø2
: ø3.2, ø1/8"
: ø4, ø5/32"
: ø6, ø1/4"



<Type 10>

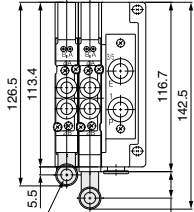
Dimensions: Manifold Options/SY5000 Series

■ Blanking plate assembly

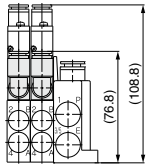


<Type 10, 11, 12>

■ Individual SUP/EXH spacer assembly (Top/Bottom ported)

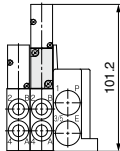
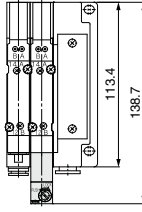


One-touch fitting
(SUP port, EXH port)
Applicable tubing O.D.: ø4,
: ø6, ø1/4"
: ø8, ø5/16"



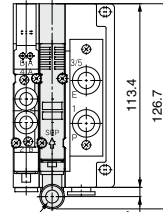
<Type 11, 12>

■ Double check spacer assembly with residual pressure release valve

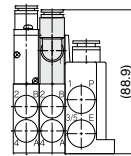


<Type 10, 11>

■ Individual SUP/EXH block assembly (Top ported)

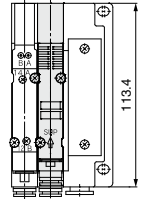


One-touch fitting
(SUP port, EXH port)
Applicable tubing O.D.: ø4,
: ø6, ø1/4"
: ø8, ø5/16"

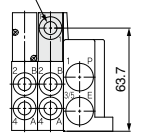


<Type 12>

■ Individual SUP/EXH block assembly (Side ported)

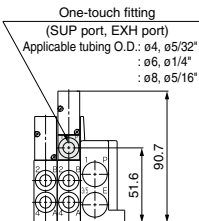
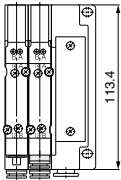


One-touch fitting
(SUP port, EXH port)
Applicable tubing O.D.: ø4, ø5/32"
: ø6, ø1/4"
: ø8, ø5/16"



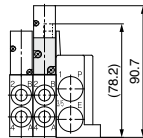
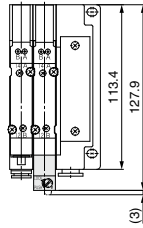
<Type 10>

■ Individual SUP/EXH spacer assembly (Side ported)



<Type 10>

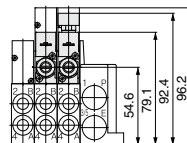
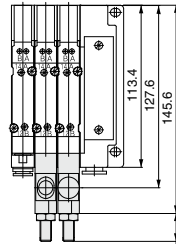
■ SUP stop valve spacer assembly with residual pressure release valve



<Type 10, 11, 12>

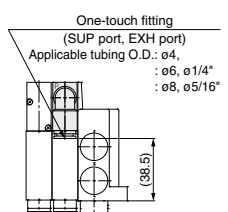
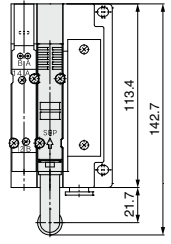
* The dimensions within () apply to the SY50M-50-1AE.

■ Interface regulator



<Type 10, 11, 12>

■ Individual SUP/EXH block assembly (Side ported)

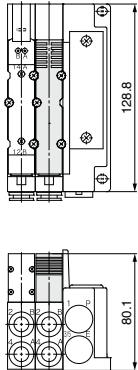


<Type 11>

SY3000/5000/7000 Series

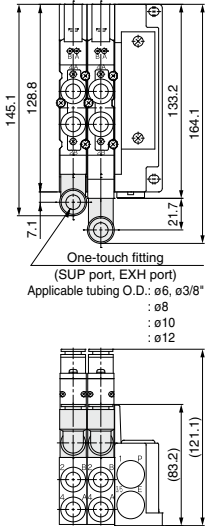
Dimensions: Manifold Options/SY7000 Series

Blanking plate assembly



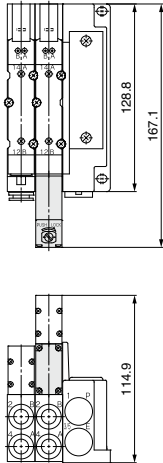
<Type 10, 11, 12>

Individual SUP/EXH spacer assembly (Top/Bottom ported)



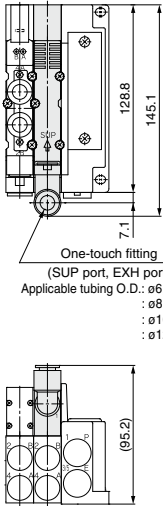
<Type 11, 12>

Double check spacer assembly with residual pressure release valve



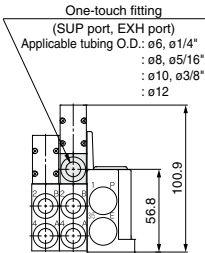
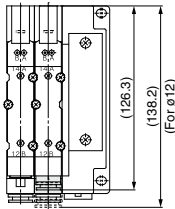
<Type 10, 11>

Individual SUP/EXH block assembly (Top ported)



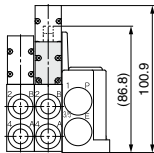
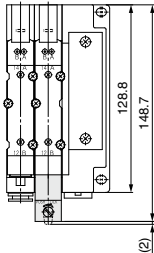
<Type 12>

Individual SUP/EXH spacer assembly (Side ported)



<Type 10>

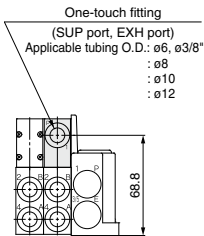
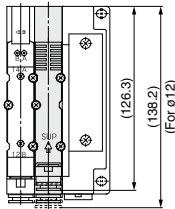
SUP stop valve spacer assembly with residual pressure release valve



<Type 10, 11, 12>

* The dimensions within () apply to the SY70M-50-1AE.

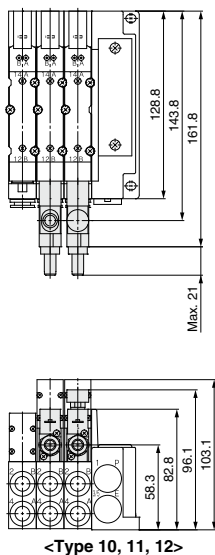
Individual SUP/EXH block assembly (Side ported)



<Type 10>

Dimensions: Manifold Options/SY7000 Series

■ Interface regulator



■ Individual SUP/EXH block assembly (Bottom ported)

