# Clean Regulator/Fluororesin Type

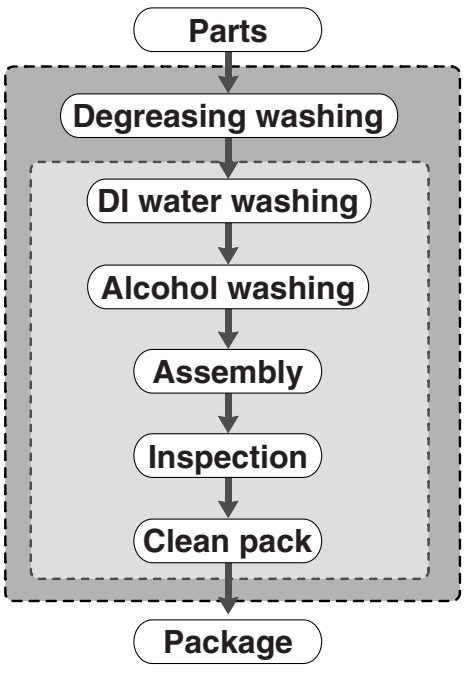
## Series SRF

Clean Wet Series

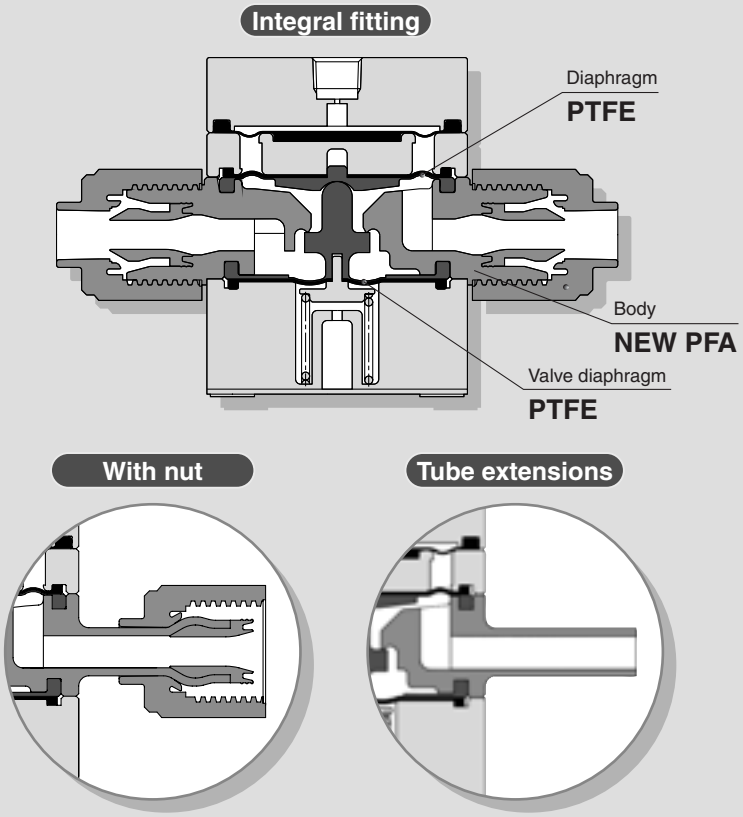



## Washing/Assembly Procedure

**Washing parts: Body, Valve diaphragm and Diaphragm**




## Construction



# Clean Regulator/Fluororesin Type

# *Series SRF*

RoHS

## How to Order

### Integral fittings

**SRF 1 0 – S 07 □ – □**

**Body size**

| |
|---|
| 1 |
| 3 |
| 5 |

**Integral fittings (LQ2)**

**Made to Order**
(Refer to page 619 for details.)

| | |
|---|---|
| Nil | Standard |
| X401 | Rotating the mounting hole 90° |

**Pilot port thread type**

| | |
|---|---|
| Nil | Rc 1/8 |
| N | NPT 1/8 |

**Applicable tubing size (O.D. x I.D.)**

**Metric size**

| Symbol | Applicable tubing size | Applicable model | | |
|---|---|---|---|---|
| | | SRF10 | SRF30 | SRF50 |
| 04 | 4 x 3 | ● | | |
| 06 | 6 x 4 | ○ | ● | |
| 08 | 8 x 6 | | ● | |
| 10 | 10 x 8 | | ○ | |
| 12 | 12 x 10 | | | ● |
| 19 | 19 x 16 | | | ○ |

○: Basic size ●: With reducer

**Inch size**

| Symbol | Applicable tubing size | Applicable model | | |
|---|---|---|---|---|
| | | SRF10 | SRF30 | SRF50 |
| 03 | 1/8" x 0.086" | ● | | |
| 05 | 3/16" x 1/8" | ● | | |
| 07 | 1/4" x 5/32" | ○ | ● | |
| 11 | 3/8" x 1/4" | | ○ | |
| 13 | 1/2" x 3/8" | | | ● |
| 19 | 3/4" x 5/8" | | | ○ |

○: Basic size ●: With reducer

Note) Tubing size is interchangeable by replacing the reducer insert bushing nut.

### With nut

**SRF 1 0 S – 1 S 07 11 □ – □**

**Body size**

| |
|---|
| 1 |
| 3 |
| 5 |

**Fitting type**

| Symbol | Applicable fittings |
|---|---|
| 1 | LQ1 |
| 2 | LQ2 |

**Pilot port thread type**

| | |
|---|---|
| Nil | Rc 1/8 |
| N | NPT 1/8 |

**Made to Order**
(Refer to page 619 for details.)

| | |
|---|---|
| Nil | Standard |
| X401 | Rotating the mounting hole 90° |

**Fitting size (IN side)**

| Symbol | Fitting size Note 2) | Fitting type | Applicable model | | |
|---|---|---|---|---|---|
| | | | SRF10 | SRF30 | SRF50 |
| 07 | 2 | LQ1, 2 | ○ | | |
| 11 | 3 | | ● | ○ | |
| 13 | 4 | | | ● | |
| 19 | 5 | | | | ○ |
| 25 Note 1) | 6 | LQ1 | | | ● |

○: Basic size ●: With plug-in reducer

**Fitting size (OUT side)**

| Symbol | Applicable fitting size Note 2) | Fitting type | Applicable model | | |
|---|---|---|---|---|---|
| | | | SRF10 | SRF30 | SRF50 |
| Nil | Same as IN side | — | — | — | — |
| 07 | 2 | LQ1, 2 | ○ | | |
| 11 | 3 | | ● | ○ | |
| 13 | 4 | | | ● | |
| 19 | 5 | | | | ○ |
| 25 Note 1) | 6 | LQ1 | | | ● |

○: Basic size ●: With reducer

Note 1) Fitting type: LQ1 only
Note 2) Refer to How to Order (**LQ□□-S**) on page 611 for applicable fittings without nut (LQ type).
Select fittings of the same type and size as the one fitted to the regulator side.

### Tube extensions

**SRF 1 0 – T 07 □ – □**

**Body size**

| |
|---|
| 1 |
| 3 |
| 5 |

**Tubing size (O.D.)**

| Symbol | Tubing size | Applicable model |
|---|---|---|
| 07 | 1/4" | SRF10 |
| 11 | 3/8" | SRF30 |
| 19 | 3/4" | SRF50 |

**Made to Order**
(Refer to page 619 for details.)

| | |
|---|---|
| Nil | Standard |
| X401 | Rotating the mounting hole 90° |

**Pilot port thread type**

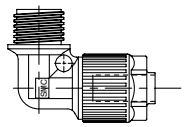
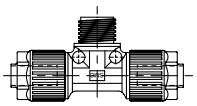
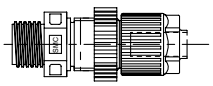
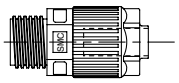
| | |
|---|---|
| Nil | Rc 1/8 |
| N | NPT 1/8 |

## How to Order Fittings for Model with Nut

How to order fittings for model such as Clean Regulator/Series **SRF□0S**, when one nut (including insert bushing) of the nuts is not attached.

**LQ1 E 21 – S**

**Fitting type**

| E | T |
|---|---|
| Union elbow | Union tee |
|  |  |
| **P** | **U** |
| Panel mount union | Union |
|  |  |

**One nut (including insert bushing) of the nuts is not attached. Please refer to below Ordering example.**

**Applicable tubing size**

| Class | No. | Applicable tubing size (mm) | Reducing |
|---|---|---|---|
| 2 | 1 | 6 x 4 | ○ |
| 2 | 2 | 4 x 3 | ● |
| 3 | 1 | 10 x 8 | ○ |
| 3 | 2 | 8 x 6 | ● |
| 3 | 3 | 6 x 4 | ● |
| 4 | 1 | 12 x 10 | ○ |
| 4 | 2 | 10 x 8 | ● |
| 5 | 1 | 19 x 16 | ○ |
| 5 | 2 | 12 x 10 | ● |
| 6 | 1 | 25 x 22 | ○ |
| 6 | 2 | 19 x 16 | ● |

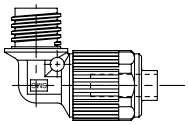
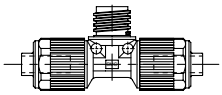
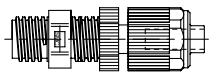
| Class | No. | Applicable tubing size (inch) | Reducing |
|---|---|---|---|
| 2 | A | 1/4" x 5/32" | ○ |
| 2 | B | 3/16" x 1/8" | ● |
| 2 | C | 1/8" x 0.086" | ● |
| 3 | A | 3/8" x 1/4" | ○ |
| 3 | B | 1/4" x 5/32" | ● |
| 4 | A | 1/2" x 3/8" | ○ |
| 4 | B | 3/8" x 1/4" | ● |
| 5 | A | 3/4" x 5/8" | ○ |
| 5 | B | 1/2" x 3/8" | ● |
| 6 | A | 1" x 7/8" | ○ |
| 6 | B | 3/4" x 5/8" | ● |

○: Basic size ●: With reducer

Note 1) Select fittings of the same size as the one fitted to the regulator side.

**LQ2 E 21 – S**

**Fitting type**

| E | T |
|---|---|
| Union elbow | Union tee |
|  |  |
| **P** | **U** |
| Panel mount union | Union |
|  |  |

**One nut (including insert bushing) of the nuts is not attached. Please refer to below Ordering example.**

**Applicable tubing size**

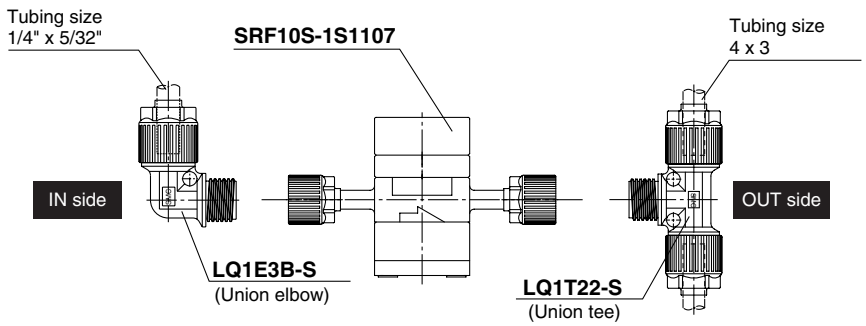
| Class | No. | Applicable tubing size (mm) | Reducing |
|---|---|---|---|
| 2 | 1 | 6 x 4 | ○ |
| 2 | 2 | 4 x 3 | ● |
| 3 | 1 | 10 x 8 | ○ |
| 3 | 2 | 8 x 6 | ● |
| 3 | 3 | 6 x 4 | ● |
| 4 | 1 | 12 x 10 | ○ |
| 4 | 2 | 10 x 8 | ● |
| 5 | 1 | 19 x 16 | ○ |
| 5 | 2 | 12 x 10 | ● |

| Class | No. | Applicable tubing size (inch) | Reducing |
|---|---|---|---|
| 2 | A | 1/4" x 5/32" | ○ |
| 2 | B | 3/16" x 1/8" | ● |
| 2 | C | 1/8" x 0.086" | ● |
| 3 | A | 3/8" x 1/4" | ○ |
| 3 | B | 1/4" x 5/32" | ● |
| 4 | A | 1/2" x 3/8" | ○ |
| 4 | B | 3/8" x 1/4" | ● |
| 5 | A | 3/4" x 5/8" | ○ |
| 5 | B | 1/2" x 3/8" | ● |

○: Basic size ●: With reducer

Note 1) Select fittings of the same size as the one fitted to the regulator side.

### Ordering example



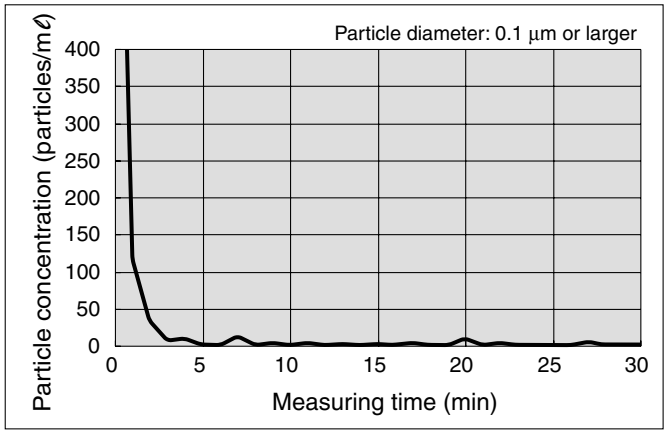

**SRF10S-1S1107** 1
**LQ1E3B-S** (Union elbow) 1
**LQ1T22-S** (Union tee) 1

Note) For shipment, the regulator and fittings are individually packaged and dispatched together in 1 box.

## Specifications

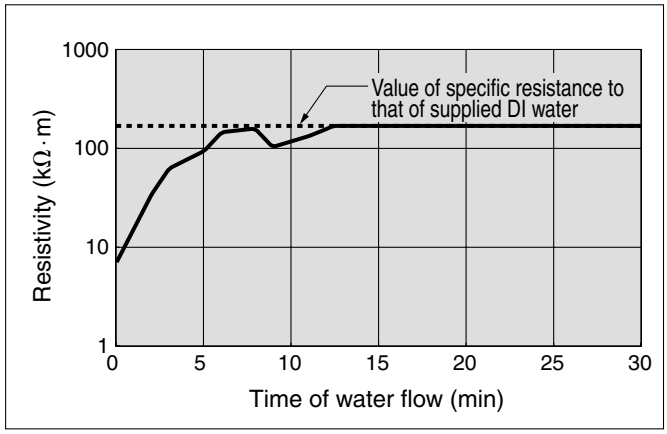
| Model | | SRF10 | SRF30 | SRF50 |
|---|---|---|---|---|
| Proof pressure | | 1.0 MPa | | |
| Maximum operating pressure | | 0.5 MPa | | |
| Set pressure range | | 0.02 to 0.4 MPa | | |
| Maximum operating pressure (pilot pressure) | | 0.5 MPa | | |
| Fluid | | Pure water, $N_2$ | | |
| Ambient and fluid temperature | | 5 to 60°C | | |
| Valve leakage | | 10 $cm^3$/min or less (fluid: water) | | |
| Mass (kg) | Tubing | 0.08 | 0.24 | 1.2 |
| | Integral fittings | 0.10 | 0.28 | 1.3 |
| | With nut | | | |

## Particulate Generation Characteristics




○Test method and conditions
Particle counters were installed before and after the test sample.
The amount of particle generated from the sample is determined by the difference in output values from each counter.
Flow rate of supplied DI water: 100 mℓ/min
Model: SRF30

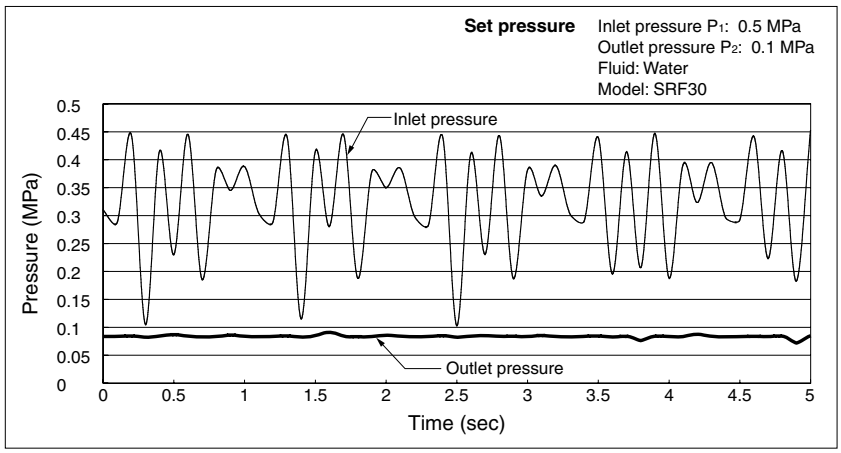
## Flow-through Characteristics



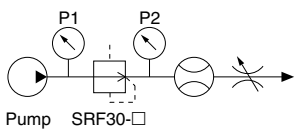

○Test method and conditions
The liquid contact portions were filled with sulphuric acid and left untouched for half an hour. After the sulphuric acid was drained, the wetted parts are filled with DI water. The specific resistance of the liquid discharged from the outlet side of the sample was measured and recorded.
Model: SRF30

∗Data provided in this section is just one example of the actually measured values. Application examples illustrated in this flyer do not guarantee the result of applicable use of this product.

## Pressure Fluctuation (Reference Value)




○ Test circuit/Conditions




## ⚠ Specific Product Precautions

**Be sure to read before handling. Refer to front matters 42 and 43 for Safety Precautions and pages 622 and 623 for Specific Product Precautions.**

### Piping

## ⚠ Caution

**1. Connecting tubes with special tools.**
Refer to the pamphlet: High-Purity Fluoropolymer Fittings HYPER FITTINGS®/Series LQ1,2 Work Procedure Instructions (M-E05-1) for tube connection and special tools.

**2. Tighten the nut until the body end.**
**Refer to the proper tightening torque below as a guideline.**

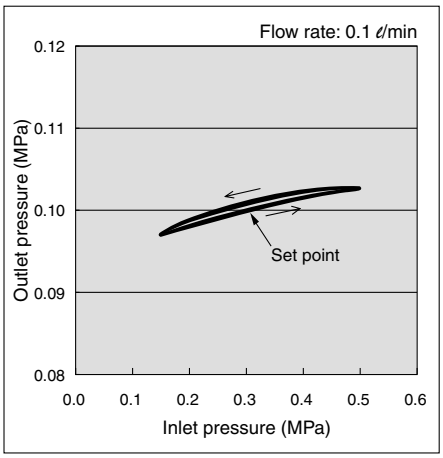
**Tightening Torque when Piping**

| Body class | Torque (N·m) | |
|---|---|---|
| | LQ1 | LQ2 |
| 2 | 0.3 to 0.4 | 1.5 to 2.0 |
| 3 | 0.8 to 1.0 | 3.0 to 3.5 |
| 4 | 1.0 to 1.2 | 7.5 to 9.0 |
| 5 | 2.5 to 3.0 | 11.0 to 13.0 |
| 6 | 5.5 to 6.0 | — |

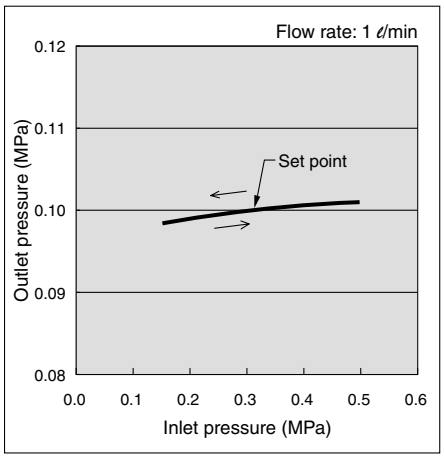
## Pressure Characteristics (Representative Value)

**Set pressure** Inlet pressure 0.3 MPa
Outlet pressure 0.1 MPa Fluid: Water

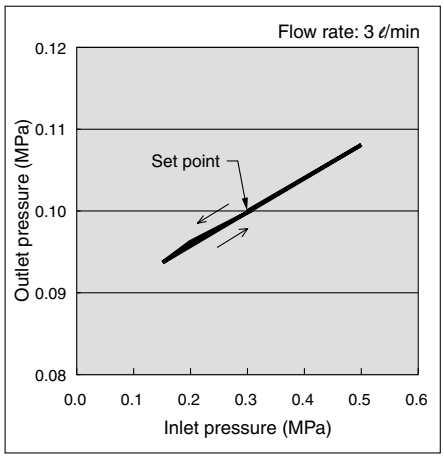
### SRF10




### SRF30



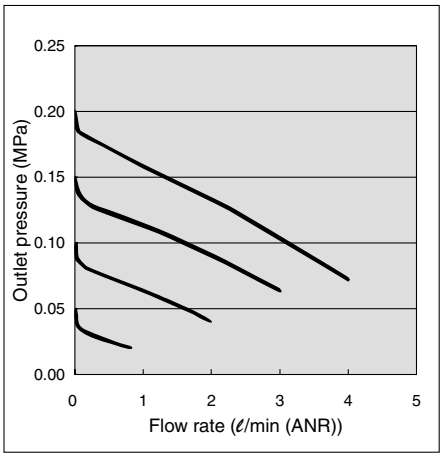

### SRF50



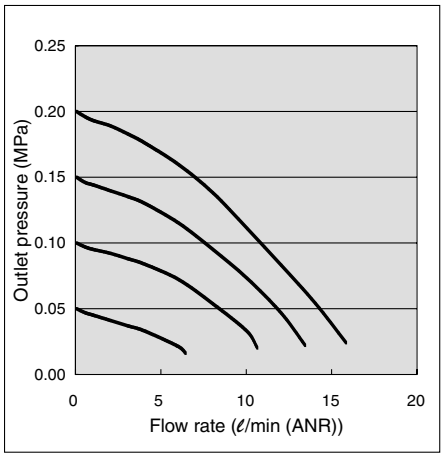

## Flow Characteristics (Representative Value)

Inlet pressure: 0.3 MPa Fluid: Water

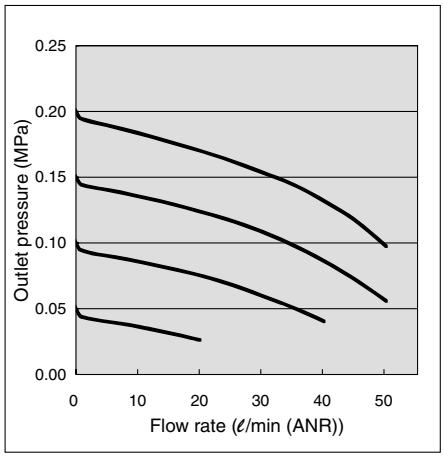
### SRF10




### SRF30



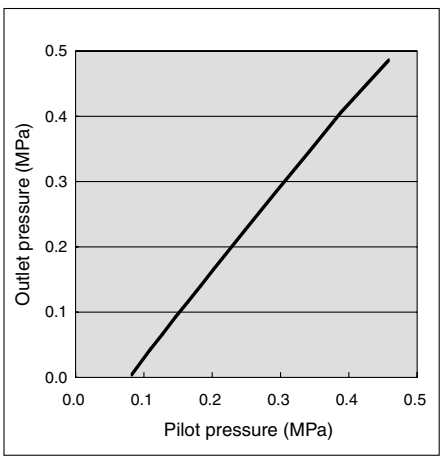

### SRF50



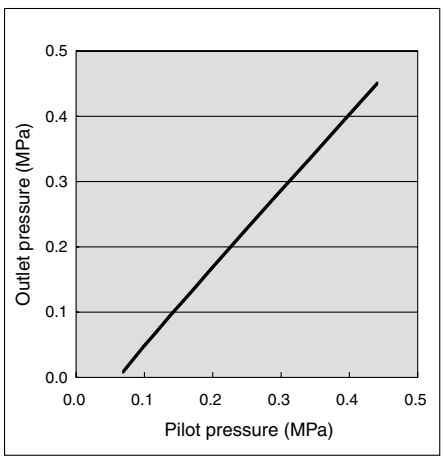

## Input/Output Characteristics (Representative Value)

Inlet pressure: 0.5 MPa Flow rate: 0 ℓ/min (ANR) Fluid: Air

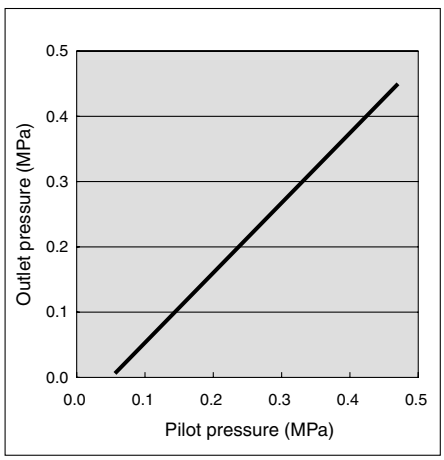
### SRF10




### SRF30

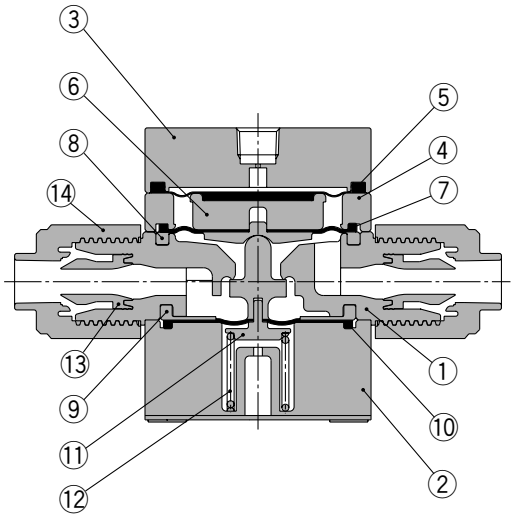


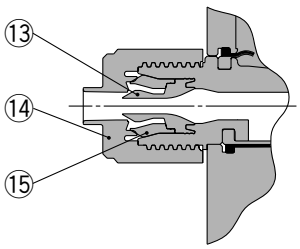

### SRF50



## Construction/SRF10, 30

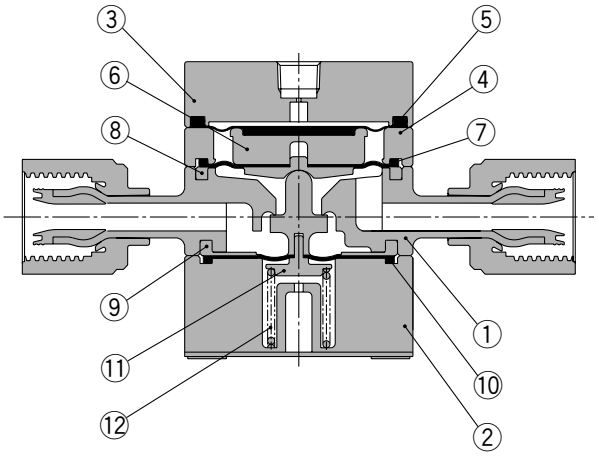
### Integral fittings



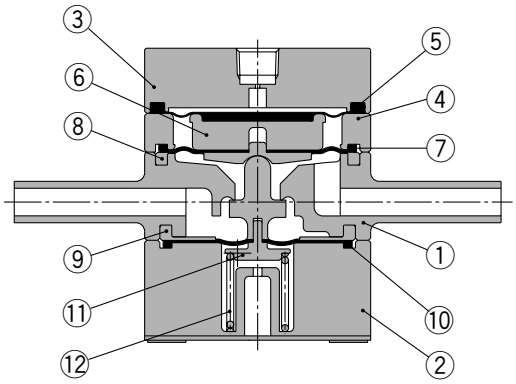




**With reducer**

### With nut




### Tube extensions




**Component parts**

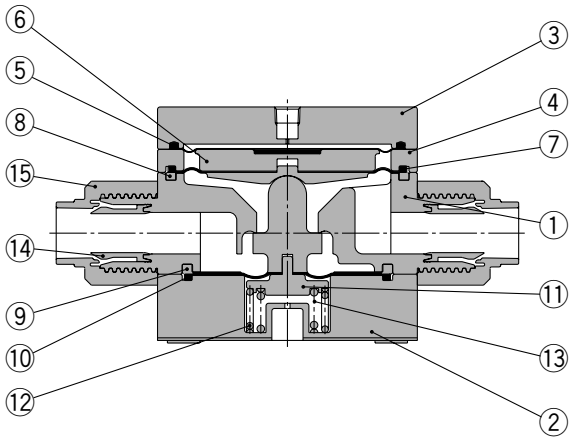
| No. | Description | Material | Note |
|---|---|---|---|
| 1 | **Body** | New PFA | |
| 2 | **Valve guide** | PVDF | |
| 3 | **Bonnet** | PPS | |
| 4 | **Spacer** | PVDF | |
| 5 | **Pilot diaphragm** | Fluororubber | |
| 6 | **Diaphragm support** | PP | |
| 7 | **Withstand pressure diaphragm B** | Fluororubber | |
| 8 | **Diaphragm** | PTFE | |
| 9 | **Valve diaphragm** | PTFE | |
| 10 | **Withstand pressure diaphragm A** | Fluororubber | |
| 11 | **Spring holder** | Stainless steel 304 | Fluorine coated |
| 12 | **Valve spring** | Stainless steel 304 | Fluorine coated |

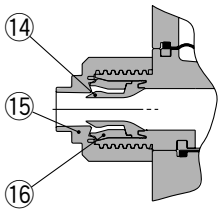
| No. | Description | Material | Note |
|---|---|---|---|
| 13 | **Insert bushing** | New PFA | |
| 14 | **Nut** | New PFA | |
| 15 | **Collar** | New PFA | |

## Construction/SRF50

### SRF50

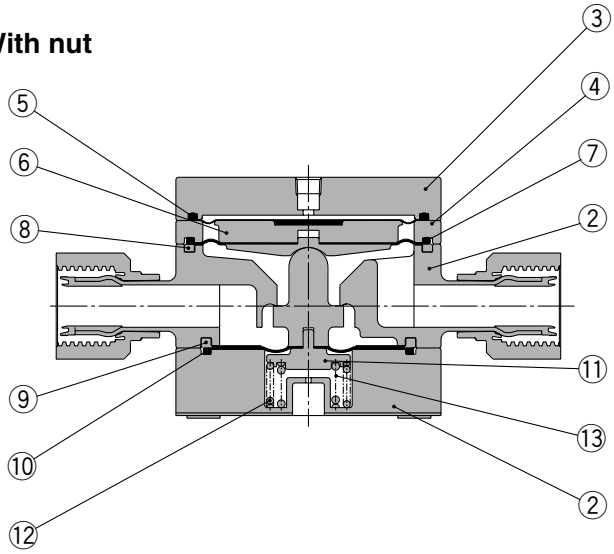
#### Integral fittings



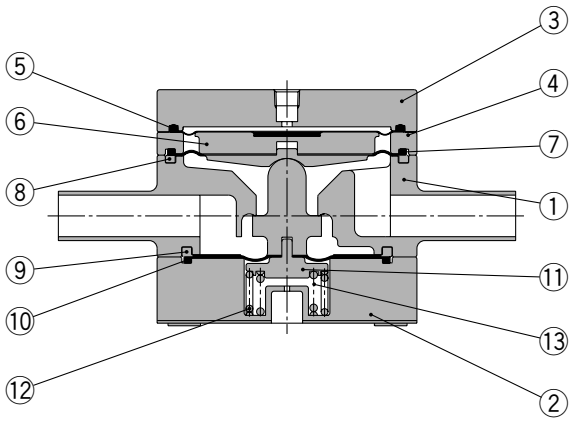




With reducer

#### With nut




#### Tube extensions



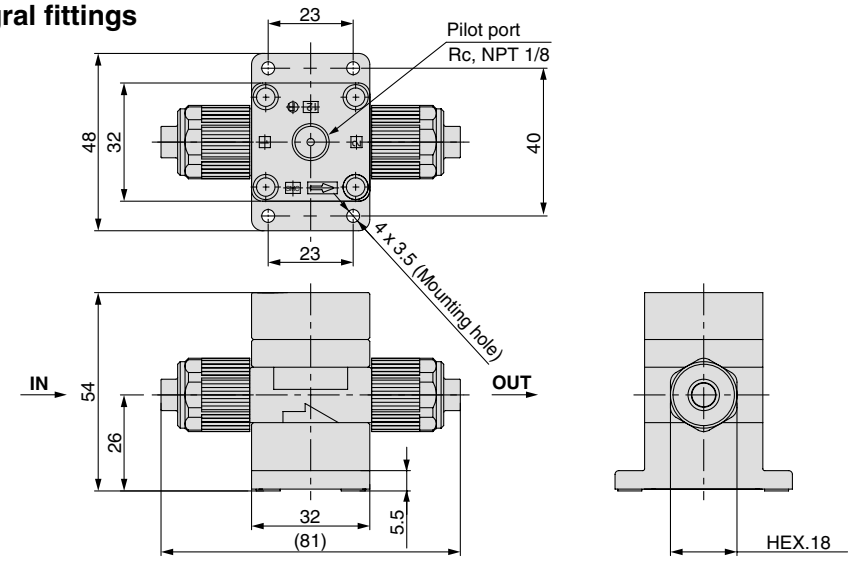

#### Component parts

| No. | Description | Material | Note |
|---|---|---|---|
| 1 | **Body** | New PFA | |
| 2 | **Valve guide** | PVDF | |
| 3 | **Bonnet** | PPS | |
| 4 | **Spacer** | PVDF | |
| 5 | **Pilot diaphragm** | Fluororubber | |
| 6 | **Diaphragm support** | PP | |
| 7 | **Withstand pressure diaphragm B** | Fluororubber | |
| 8 | **Diaphragm** | PTFE | |
| 9 | **Valve diaphragm** | PTFE | |
| 10 | **Withstand pressure diaphragm A** | Fluororubber | |
| 11 | **Spring holder** | Stainless steel 304 | Fluorine coated |
| 12 | **Valve spring 1** | Stainless steel 304 | Fluorine coated |
| 13 | **Valve spring 2** | Stainless steel 304 | Fluorine coated |

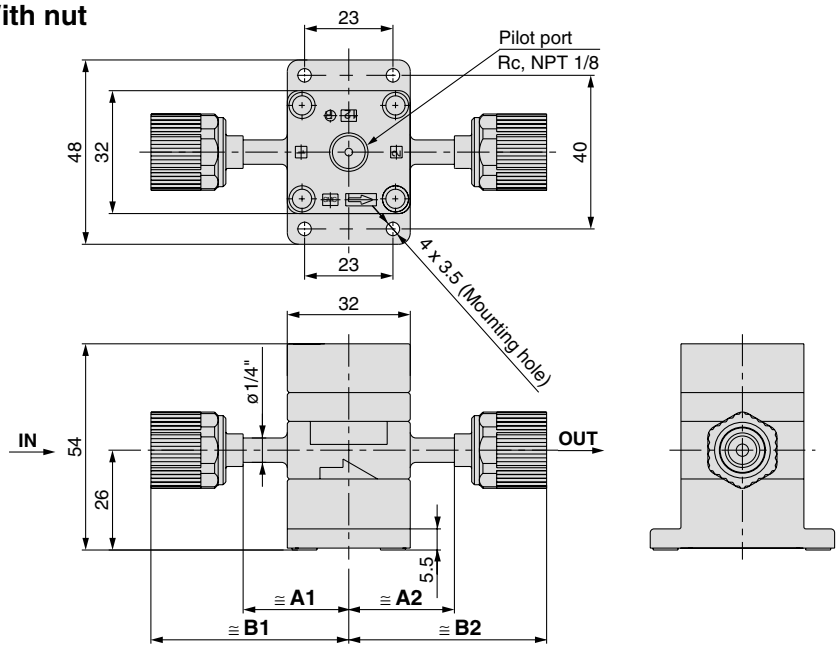
| No. | Description | Material | Note |
|---|---|---|---|
| 14 | **Insert bushing** | New PFA | |
| 15 | **Nut** | New PFA | |
| 16 | **Collar** | New PFA | |

## Dimensions/SRF10

### Integral fittings



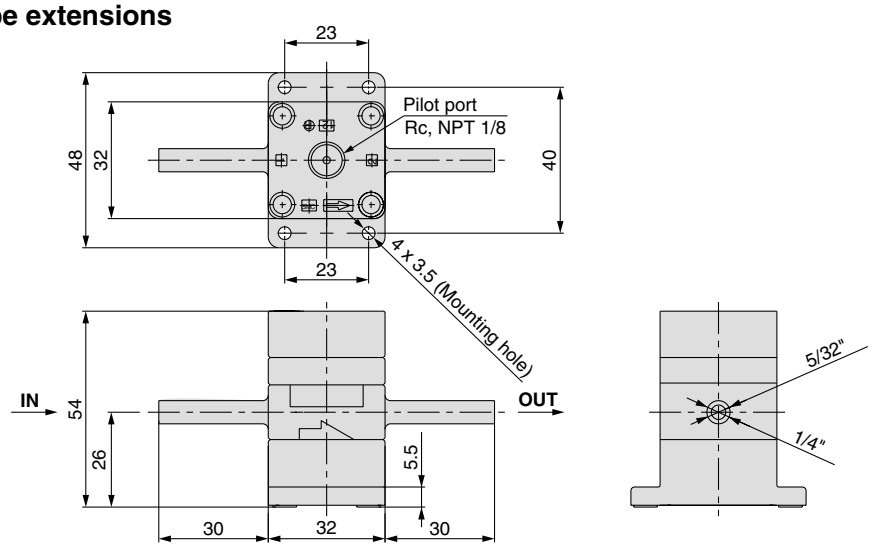

### With nut




**SRF10**

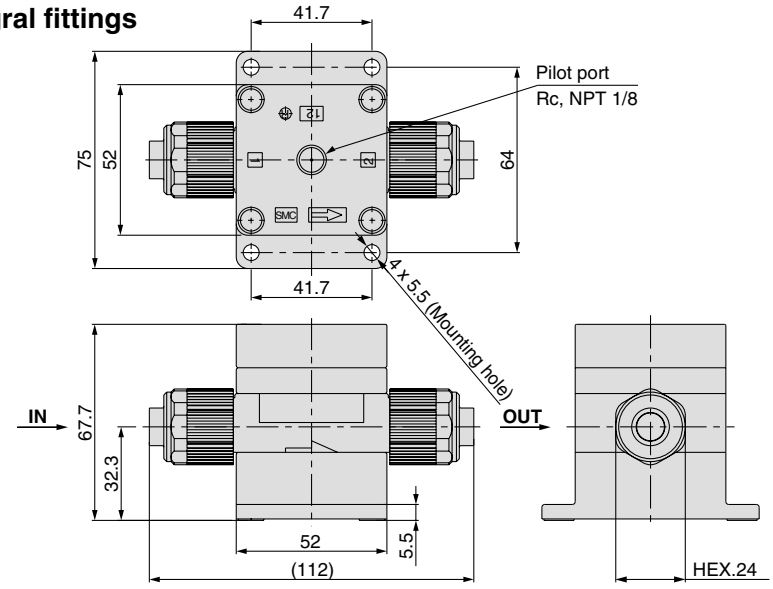
| Model | A1 | A2 | B1 | B2 |
|---|---|---|---|---|
| SRF10S-1S07 | 31 | 31 | 48 | 48 |
| SRF10S-1S0711 | | 28 | | 51 |
| SRF10S-1S11 | 28 | 28 | 51 | 51 |
| SRF10S-1S1107 | | 31 | | 48 |
| SRF10S-2S07 | 28 | 28 | 52 | 52 |
| SRF10S-2S0711 | | 27 | | 55 |
| SRF10S-2S11 | 27 | 27 | 55 | 55 |
| SRF10S-2S1107 | | 28 | | 52 |

### Tube extensions

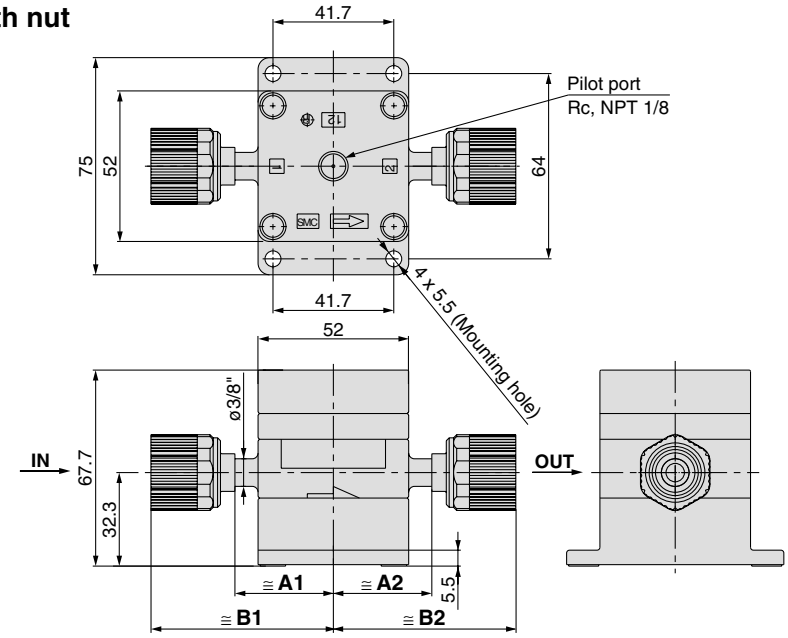


## Dimensions/SRF30

### Integral fittings



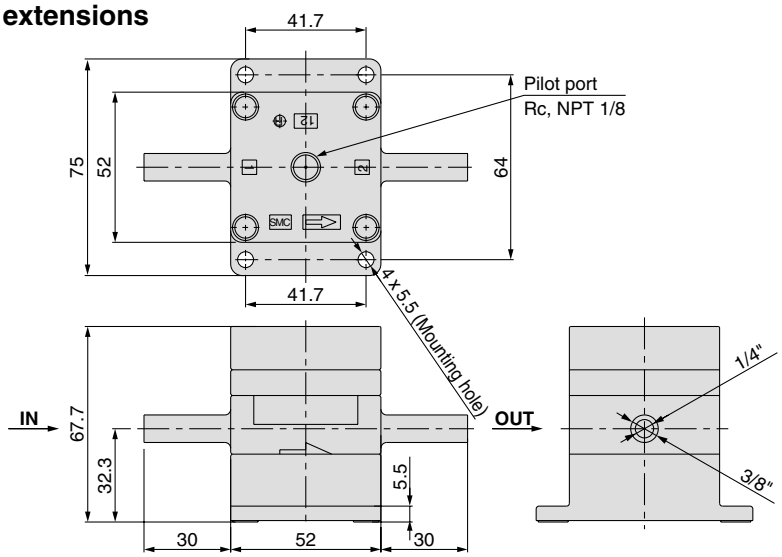

### With nut




**SRF30**

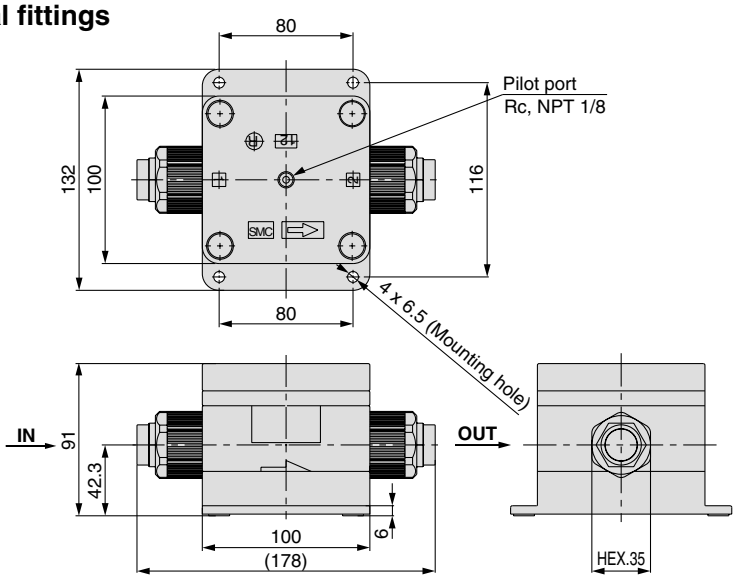
| Model | A1 | A2 | B1 | B2 |
|---|---|---|---|---|
| **SRF30S-1S11** | 35 | 35 | 58 | 58 |
| **SRF30S-1S1113** | | 34 | | 62 |
| **SRF30S-1S13** | 34 | 34 | 62 | 62 |
| **SRF30S-1S1311** | | 35 | | 58 |
| **SRF30S-2S11** | 34 | 34 | 63 | 63 |
| **SRF30S-2S1113** | | 32 | | 65 |
| **SRF30S-2S13** | 32 | 32 | 65 | 65 |
| **SRF30S-2S1311** | | 34 | | 63 |

### Tube extensions

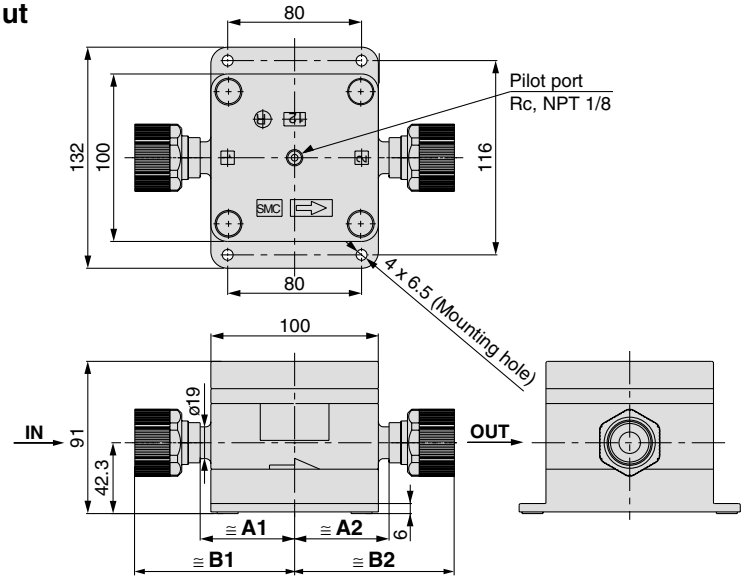


## Dimensions/SRF50

### Integral fittings



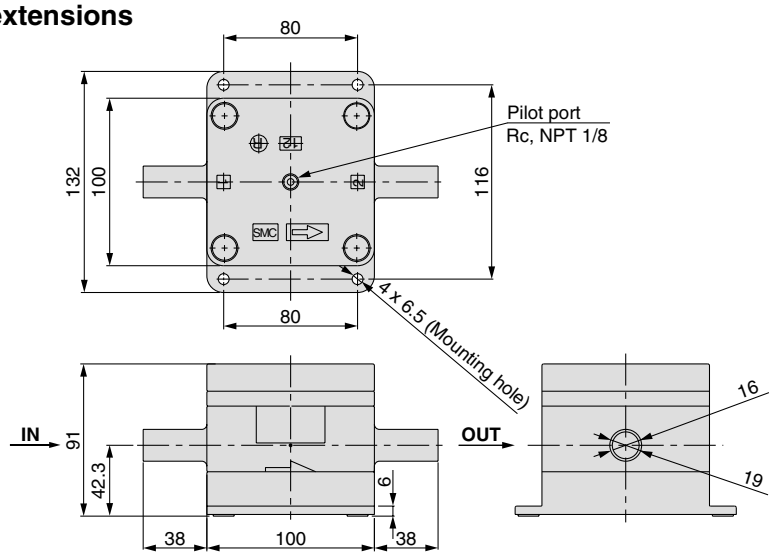

### With nut




**SRF50**

| Model | A1 | A2 | B1 | B2 |
|---|---|---|---|---|
| **SRF50S-1S19** | 58 | 58 | 91 | 91 |
| **SRF50S-1S1925** | | 55 | | 98 |
| **SRF50S-1S25** | 55 | 55 | 98 | 98 |
| **SRF50S-1S2519** | | 58 | | 91 |
| **SRF50S-2S19** | 56 | 56 | 95 | 95 |

### Tube extensions



# *Series SRF*
# Made to Order Specifications:

Contact SMC for detailed dimensions, specifications and delivery.

## Rotating the Mounting Hole 90° — X401

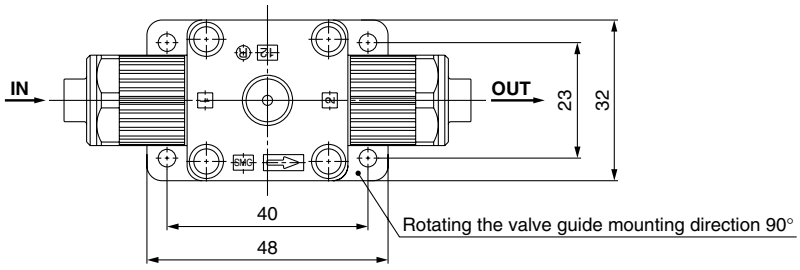
This is a product with a 90° rotated vale guide mounting hole.

**Standard model no.** − **X401**

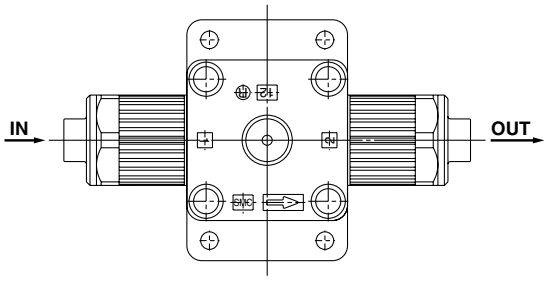
**Rotating the mounting hole 90°**

### Dimensions

Other dimensions are the same as the standard type. (Example SRF10)




**Rotating the mounting hole 90°**




**Standard type**

# Fittings and Special Tools

## Fittings

### Changing tubing sizes

The tubing size can be changed within the same body class (body size) by replacing the nut and insert bushing.

| Body class | Tubing O.D. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Metric sizes | | | | | | Inch sizes | | | | | |
| | 4 | 6 | 8 | 10 | 12 | 19 | 1/8" | 3/16" | 1/4" | 3/8" | 1/2" | 3/4" |
| **2** | ● | ○ | — | — | — | — | ● | ● | ○ | — | — | — |
| **3** | — | ● | ● | ○ | — | — | — | — | ● | ○ | — | — |
| **5** | — | — | — | — | ● | ○ | — | — | — | — | ● | ○ |

**Parts composition**

| | Component parts | | |
|---|---|---|---|
| | Nut | Insert | Collar (insert assembly) |
| ○ Basic size | Yes | Yes | No |
| ● Reducer type | Yes | Yes | Yes |

### ⚠ Caution

**1. Connecting tubes with special tools**

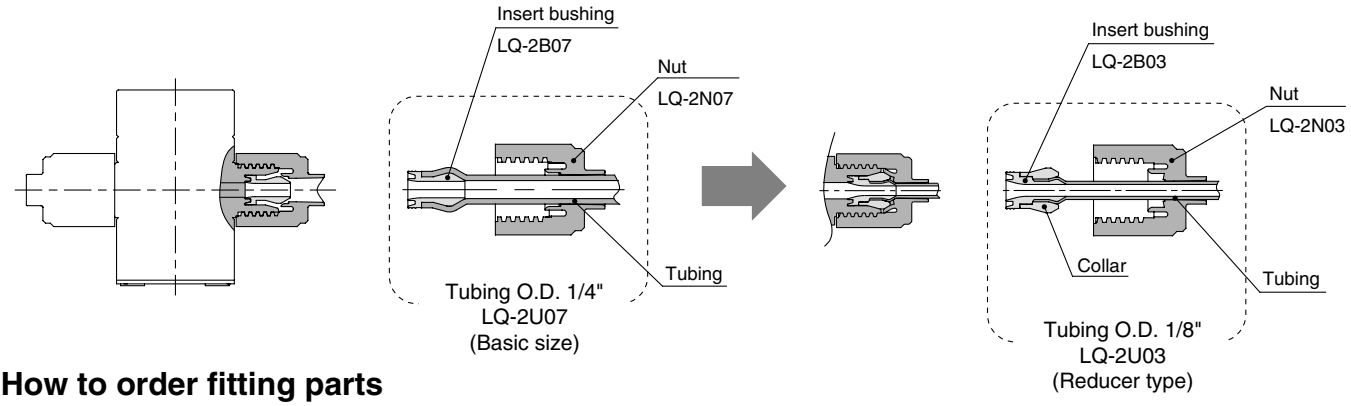
Refer to the pamphlet: High-Purity Fluoropolymer Fittings HYPER FITTINGS®/Series LQ1,2 Work Procedure Instructions (M-E05-1) for tube connection and special tools.

**Changing the tubing size**

Example) Changing the tubing from an O.D. 1/4" to O.D. 1/8" in body class 2.

Prepare an insert bushing and nut for O.D. 1/8" tubing (LQ-2U03) and change the tubing size.
(Refer to the section on How to order fitting parts.)

Note) Tubing is sold separately.




### How to order fitting parts

**LQ − 2 U 03**

∗ Type U is recommended when changing the tubing size.

**Body class**

| Symbol | Body class | Applicable model | | |
|---|---|---|---|---|
| | | SRF10 | SRF30 | SRF50 |
| **2** | 2 | ● | | |
| **3** | 3 | | ● | |
| **5** | 5 | | | ● |

**Type of parts**

| Symbol | Parts |
|---|---|
| **U** | Nut + Insert bushing |
| **B** | Insert bushing |
| **N** | Nut |

**Tubing size**

| Symbol | Tubing O.D. | Body class | Applicable model | | |
|---|---|---|---|---|---|
| | | | SRF10 | SRF30 | SRF50 |
| **03** | 1/8" | 2 | ● | | |
| **04** | ø4 | | | | |
| **05** | 3/16" | | | | |
| **06** | ø6 | | | | |
| **07** | 1/4" | | | | |
| **06** | ø6 | 3 | | ● | |
| **08** | ø8 | | | | |
| **10** | ø10 | | | | |
| **07** | 1/4" | | | | |
| **11** | 3/8" | | | | |
| **12** | ø12 | 5 | | | ● |
| **13** | 1/2" | | | | |
| **19** | 3/4", ø19 | | | | |

# Applicable Fluids

## The wetted part material and fluid compatibility check list

| Fluid | Compatibility | |
|---|---|---|
| | PFA (Body) | PTFE (Diaphragm) |
| **Acetone** | ○ Note 1) | |
| **Ammonium hydroxide** | ○ | |
| **Isobutyl alcohol** | ○ Note 1) | |
| **Isopropyl alcohol** | ○ Note 1) | |
| **Hydrochloric acid** | ○ | |
| **Hydrogen peroxide** | ○ | |
| **Ethyl acetate** | ○ Note 1) | |
| **Butyl acetate** | ○ Note 1) | |
| **Nitric acid (Except fuming nitric acid)** | ○ | |
| **DI water** | ◎ | |
| **Sodium hydroxide** | ○ | |
| **Nitrogen gas** | ◎ | |
| **Toluene** | ○ Note 1) | |
| **Hydrofluoric acid** | ○ | |
| **Sulfuric acid (Except fuming sulfuric acid)** | ○ | |
| **Phosphoric acid** | ○ | |

Table symbols
◎ : The fluid is compatible with the material, and can be used with the products.
○ : In some cases even when the fluid is compatible with the material, it may still permeate from the components and effect other materials.

Note 1) Since static electricity may be generated, implement suitable countermeasures.

- The material and fluid compatibility check list provides reference values as a guide only, therefore we do not guarantee the application to our product.
- The data above is based on the information presented by the material manufacturers.
- SMC is not responsible for its accuracy and any damage happened because of this data.

# *Series SRF*
# Specific Product Precautions 1

**Be sure to read before handling.**
**Refer to front matters 42 and 43 for Safety Precautions.**

## Design and Selection

## ⚠ Warning

**1. Confirm the specifications.**

Give careful consideration to operating conditions such as the application, fluid and environment, and use within the operating ranges specified in this catalog.

**2. Fluids**

Operate after confirming the compatibility of the product's component materials with fluids, using the check list on page 621. Contact SMC regarding fluids other than those in the check list.

**3. Residual pressure relief is not possible when the inlet pressure is released.**

In the case of series SRF, when the inlet pressure is released with the condition that the pressure at outlet side is maintained, the residual pressure cannot be released. If it will be necessary to eliminate pressure from the outlet side, a circuit should be provided for residual pressure relief.

## ⚠ Caution

**1. Pressure increase in the closed circuit.**

Series SRF allows 10 $cm^3$/nm of valve leakage from inlet side to outlet side. The outlet pressure may increase when used in a closed circuit. When closing the outlet side, use a bypass circuit as an opening circuit.

**2. Depends on operating conditions, oscillation (buzz) may occur even when used within the specification range detailed in this catalog. Consult SMC for details.**

## Mounting

## ⚠ Caution

**1. Open the sealed package inside a clean room.**

This product is packed in sealed double packaging in a clean room. It is recommended that the inside packaging is opened in a clean room or in other clean environments.

**2. Ensure space for maintenance**

Ensure the necessary space for maintenance activities.

**3. Flush out the piping.**

Connect these products to piping only after it has been flushed and cleaned properly. If debris or scale etc. remains in the piping, this can cause faulty operation or failure.

**4. Confirm the mounted orientation of the product.**

If mounted backwards, the device will not operate properly.

**5. When piping fittings to the pilot port, use fittings with resin thread.**

Fittings with metal thread may damage the pilot port.

## Operating Air Supply

## ⚠ Warning

**1. Use clean air.**

Do not use compressed air which includes chemicals, synthetic oils containing organic solvents, salts or corrosive gases, etc., as this can cause damage or malfunction.

## ⚠ Caution

**1. When adjusting the pilot pressure, the SMC precision regulator Series IR/ARP, is recommended.**

# *Series SRF*
# Specific Product Precautions 2

**Be sure to read before handling.**
**Refer to front matters 42 and 43 for Safety Precautions.**

**Pressure Adjustment**

## ⚠ Warning

**1. Check the inlet, outlet, and pilot pressure indicators while undertaking pressure and flow settings.**

Pressures over the regulated range may cause damage to the internal parts.

## ⚠ Caution

**1. Without consumption of the outlet side flow, the outlet pressure will not decrease along with the pilot pressure decrease.**

As this product is not fitted with a relief mechanism, without consumption of the outlet side flow, the outlet pressure will not decrease along with the pilot pressure decrease.

**2. Confirm the inlet pressure.**

Set the outlet pressure to no more than 80% of the supply pressure.

**3. When the inlet pressure is fluctuating, take caution to the setting value of the outlet pressure.**

When the setting value of the outlet pressure is over the inlet pressure, the outlet pressure cannot be stabilized.

**4. When adjusting the flow, set a throttle on the outlet side of the product.**

Without a throttle, the stable adjustment of the flow cannot be achieved.

**5. Do not use fluid containing solid matter.**

This will cause faulty operation.

**Maintenance**

## ⚠ Warning

**1. Before removing equipment or compressed air supply/exhaust devices, shut off the air and power supplies, and exhaust compressed air from inside the system. Further, when restarting equipment after remounting or replacement, first confirm safety and then check the equipment for normal operation.**

**2. After using chemicals or solvent, remove any residual chemicals using de-ionized water and air before the next operation.**

**3. Do not disassemble the product. Products which have been disassembled cannot be guaranteed.**

If disassembly is necessary, consult SMC.