

# Fluoropolymer Piping Equipment

RoHS

## ***LVN/LQ1/LQ3/LQHB Series***

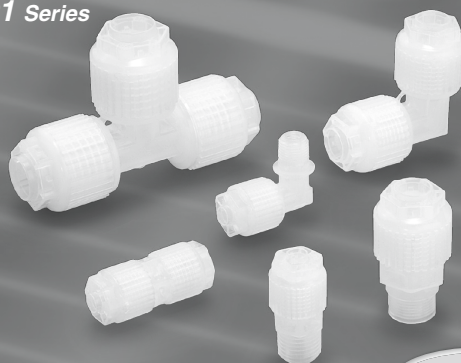
*Clean Wet Series*

**Needle Valve**  
*LVN Series*



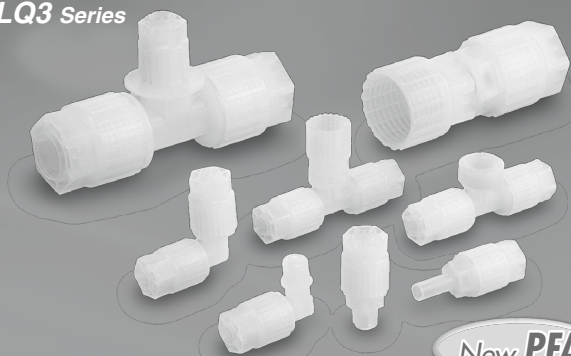
New **PFA**

**Fluoropolymer Fittings Hyper Fittings**  
*LQ1 Series*



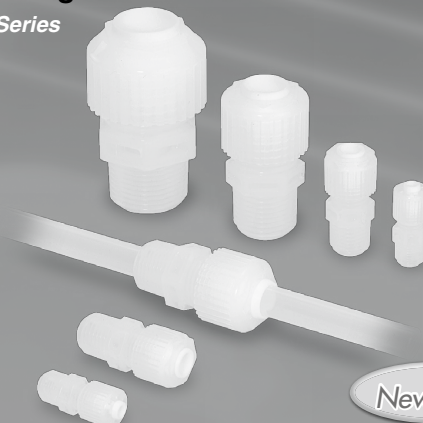
New **PFA**

**Fluoropolymer Fittings Hyper Fittings/  
Flare Type**  
*LQ3 Series*



New **PFA**

**Bore Through Connector**  
*LQHB Series*



New **PFA**

# Fluoropolymer Fittings Hyper Fittings

## ● Quadruple sealing construction

The quadruple sealing construction (PAT.) based on SMC's original idea results in highly reliable sealing characteristics with outstanding leakage prevention effect.

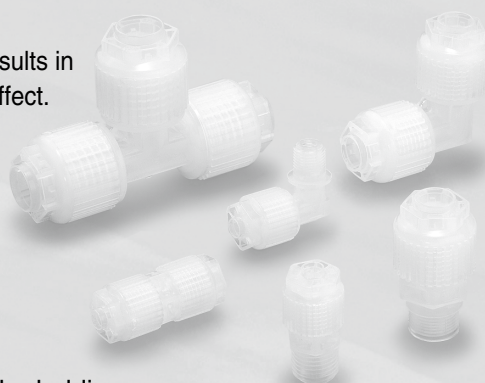
## ● Flow-through characteristics

Excellent flow-through characteristics are achieved by minimizing liquid deposit.

● **200°C compatible**

## ● Locking

- Locking mechanism utilizes sealing lock by the nut.
- Trapezoidal thread allows application of high torque.
- 2 stage pressing by the tubing holder of the nut ensures secure tube holding.



### Basic

2 stage pressing construction ensures sealing and tubing locking to absorb differences in the tube outside diameter.

#### D side sealing

A seal is formed when the tubing is inserted, with its insert bushing, and its compression against the internal nut.

Main sealing

Sealing lock

Area of application

Area of application

Tubing support

Trapezoidal thread

#### B side sealing

By tapering the face of the body, perfect sealing is achieved by the pressure of the bushing against the body wall (the protrusion of the insert bushing ensures that a secure high pressure seal is achieved).

#### A side sealing

The fluid pressure pushes the seal face to get effective sealing.

Tapered face  
Fluid pressure  
Main sealing

Body class 1 and 2

#### C side sealing

Sealed by the pressure exerted on the tubing by the internal nut.

## ● Strong resistance to tube bending and deformation.

Able to withstand lateral loads with the tubing support.

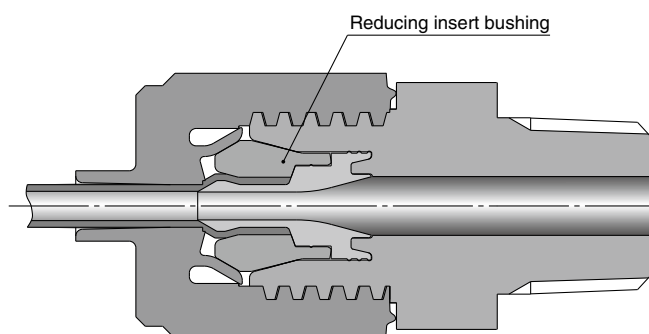
## ● Easy tightening of nuts.

- No positioning guide is required, simply tighten up the tubing to the end of the fitting body.
- The trapezoidal thread prevents oblique nut insertion.

## ● Tubing sizes are interchangeable.

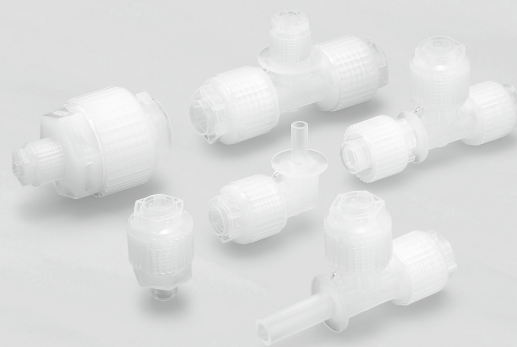
- The reducer method allows tubing size changes without replacing the body.
- Helps standardize fitting items resulting in less stock requirements.

### Reducing type

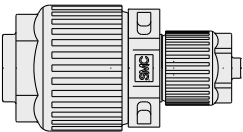
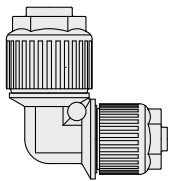
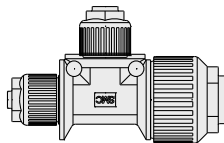
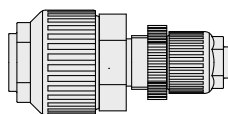
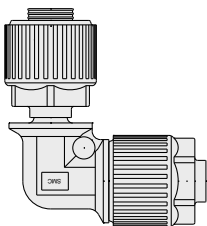
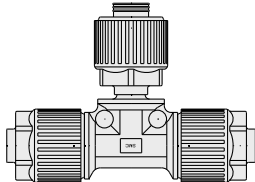
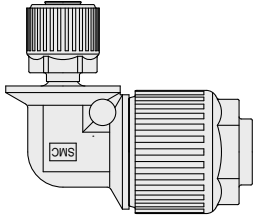
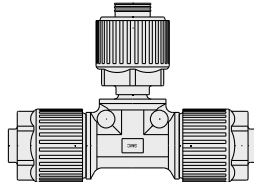
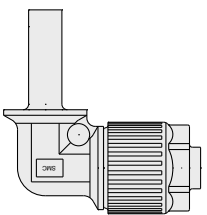
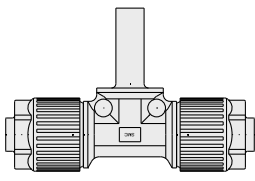
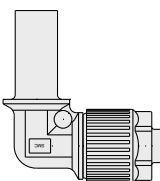
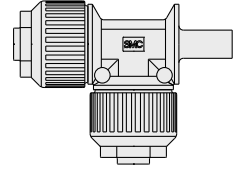




## ● LQ1 Series Addition of variations



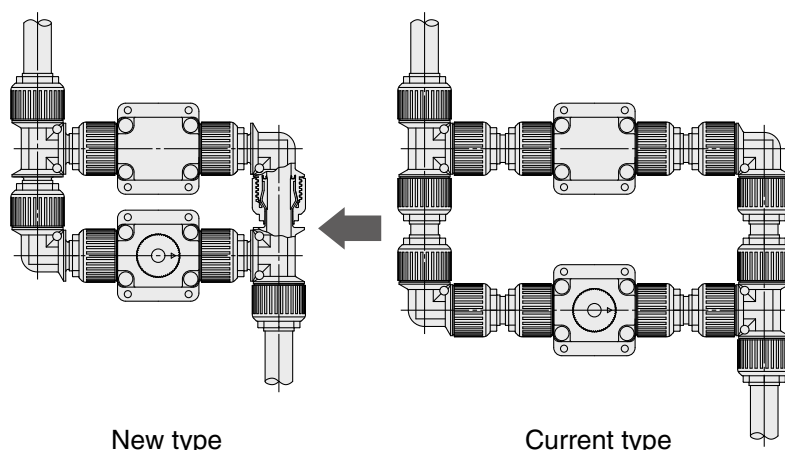
### ● Newly introduced shape

|                                                                                                                            |                                                                                                                          |                                                                                                                                      |                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Union reducing</b><br>                 | <b>Union elbow reducing</b><br>         | <b>Union tee reducing</b><br>                      | <b>Panel mount union reducing</b><br>            |
| <b>Space saving union elbow</b><br>      | <b>Space saving union tee</b><br>     | <b>Space saving union elbow reducing</b><br>     | <b>Space saving union tee reducing</b><br>     |
| <b>Tubing extension union elbow</b><br> | <b>Tubing extension union tee</b><br> | <b>Tubing extension union elbow reducing</b><br> | <b>Tubing extension union tee reducing</b><br> |

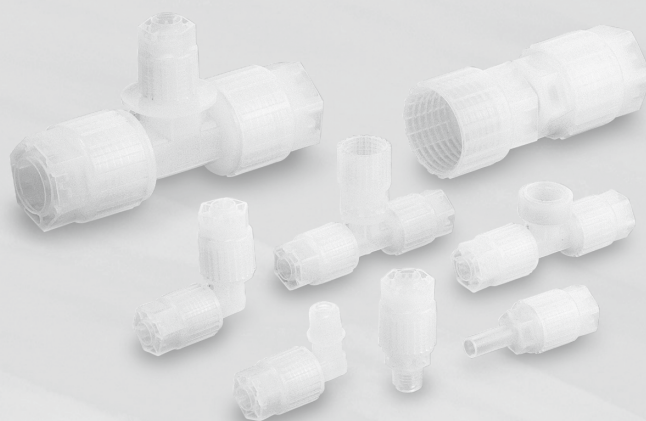
### ● Space-saving, piping work-saving

- Cut down on the fittings use by a variation upgrade on the different diameter connection(s).

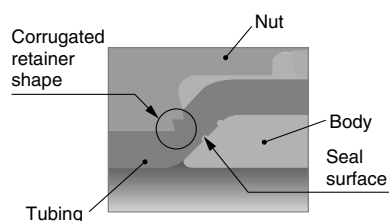
Cut down on longitudinal dimension



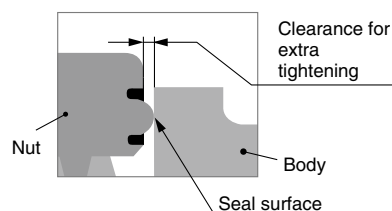
- Flare type collet construction
- Triple-seal construction
- Ease of installation
- Excellent flow-through characteristics
- Excellent heat resistance
- 200°C compatible



- Tubing retainer of the nut is made from a two-stage structure, enabling it to hold the tubing firmly.
- Fitting's seal surface to the tubing adopts a unique design to the area's pressure, resulting in improved sealing performance.

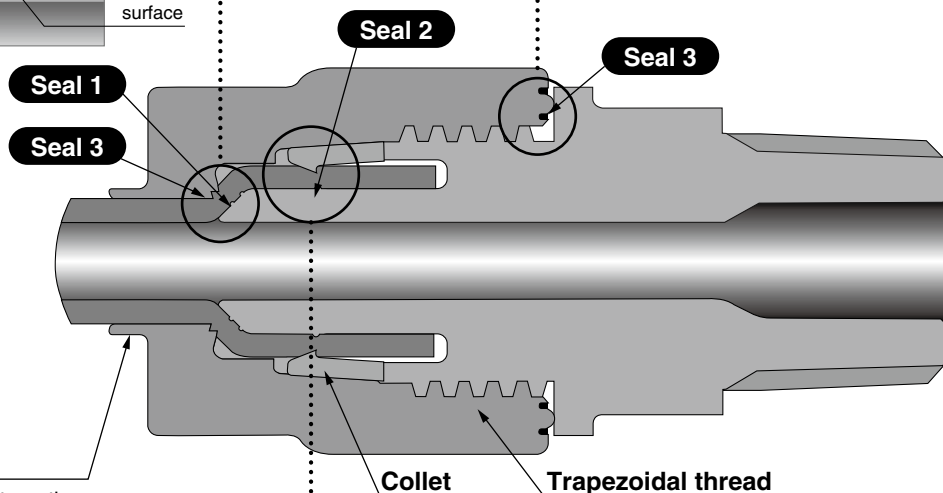


- To establish the tightening position, a gauge control is not required as the nut is designed to be tightened until the end surface of the fitting's main body.



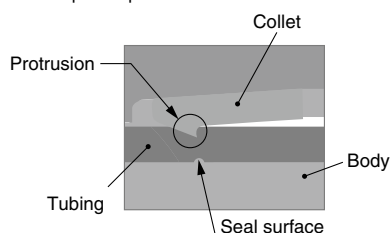
### Tubing support

Providing additional strength against possible tube bending or deformation.



**Trapezoidal thread**  
Prevents the nut from loosening at a high tightening torque, and from installing in a tilted position.  
Heat resistant.

- Strengthening the prevention of the tubing release by means of the collet structure.
- Sealing performance is highly maintained in a circumferential seal surface having a unique shape even under thermal stress conditions.





# Fluoropolymer Needle Valve *LVN Series*

P.238

## Integrated fitting construction

(Hyper fitting, LQ2 series is used.)

- Quadruple sealing method
- Nut locking mechanism
- High flexural strength
- Different tubing sizes can be selected.

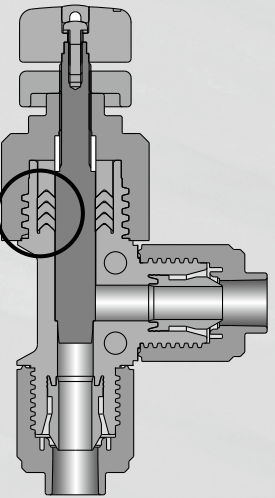


- Fluid adjustment range 0 to 12 L/min

- Integrated fitting construction  
Hyper fitting, LQ2 series is used.

- Triple seal construction

Triple seal construction



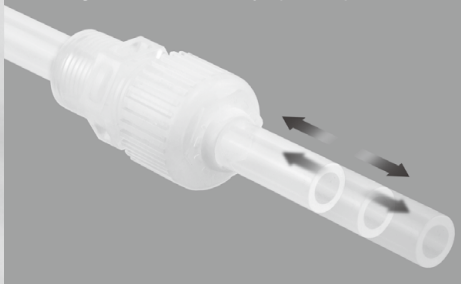
# Fluoropolymer Bore Through Connector *LQHB Series*

P.305

## ● Freely choose tube positioning

Can be used in pressure feed of chemical liquids, etc., during the production process of semiconductors. Applicable to chemical liquids such as acid, alkali and deionized water.

As the tube runs through the fitting itself, a setting is available for any optional position.



### Easy tightening of nuts

The trapezoidal thread prevents oblique nut insertion.

### Nut

Material: New PFA  
Maximum operating temperature  
**200°C**

### Taper thread

Thread type: R, NPT

### Body

Material: New PFA

### Locking

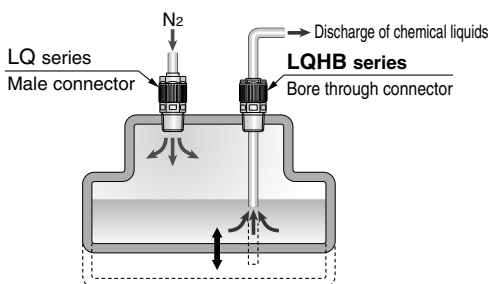
Trapezoidal thread allows application of high torque.

### Collet

The tube is held securely in place by the tightening nut and collet.  
Material: PTFE

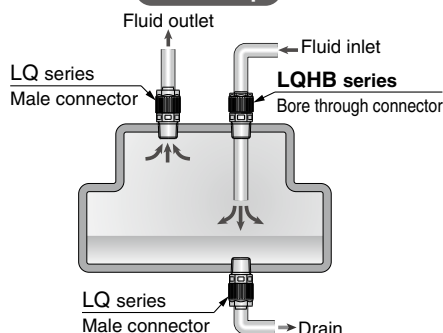
## Applications

### Pressure feed of chemical liquids



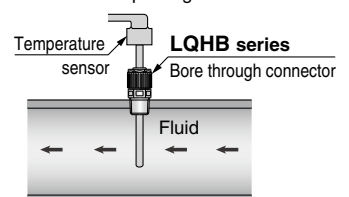
A changing of the tube position is available in accordance with the depth of the container.

### Water trap



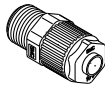
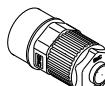
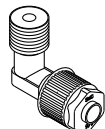
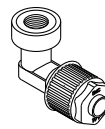
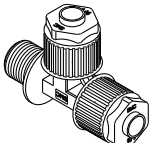
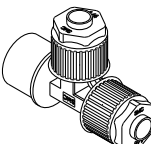
### Fluid temperature control

Mounting to the piping and/or fluid passage



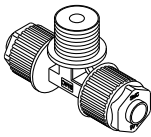
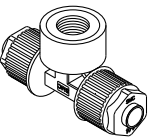
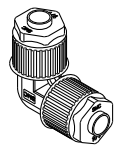
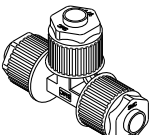
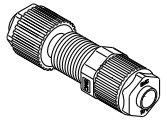
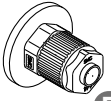
# LQ1 Series

## LQ1 Series P.241

| Series            | Appearance | Class                                                                                        | Port size |      |      |      |      |      |    |    | Tubing O.D. |    |    |     |     |     |     |      |           |      |      |      |      |    |   |  |
|-------------------|------------|----------------------------------------------------------------------------------------------|-----------|------|------|------|------|------|----|----|-------------|----|----|-----|-----|-----|-----|------|-----------|------|------|------|------|----|---|--|
|                   |            |                                                                                              |           |      |      |      |      |      |    |    | Metric size |    |    |     |     |     |     |      | Inch size |      |      |      |      |    |   |  |
|                   |            |                                                                                              | None      | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | ø3 | ø4          | ø6 | ø8 | ø10 | ø12 | ø19 | ø25 | 1/8" | 3/16"     | 1/4" | 3/8" | 1/2" | 3/4" | 1" |   |  |
| Connector<br>LQ1H | Male       | <br>P.244   | 1         | -    | ○    | -    | -    | -    | -  | -  | ○           | ○  | -  | -   | -   | -   | -   | -    | ○         | -    | -    | -    | -    | -  |   |  |
|                   |            |                                                                                              | 2         | -    | ○    | ○    | -    | -    | -  | -  | ●           | ●  | ○  | -   | -   | -   | -   | -    | ●         | ●    | ○    | -    | -    | -  |   |  |
|                   |            |                                                                                              | 3         | -    | ○    | ○    | ○    | -    | -  | -  | ●           | ●  | ●  | ●   | ○   | -   | -   | -    | ●         | -    | ●    | ○    | -    | -  | - |  |
|                   |            |                                                                                              | 4         | -    | -    | ○    | ○    | ○    | -  | -  | ●           | -  | ●  | ●   | ●   | ○   | -   | -    | ●         | -    | ●    | ●    | ○    | -  | - |  |
|                   |            |                                                                                              | 5         | -    | -    | ○    | ○    | ○    | ○  | -  | -           | -  | ●  | -   | ○   | ●   | ○   | -    | -         | -    | ●    | ○    | ●    | ○  | - |  |
|                   |            |                                                                                              | 6         | -    | -    | -    | -    | ○    | ○  | ○  | -           | -  | -  | -   | -   | ●   | ●   | ○    | -         | -    | -    | -    | ●    | ●  | ○ |  |
|                   | Female     | <br>P.245   | 1         | -    | ○    | -    | -    | -    | -  | -  | ○           | ○  | -  | -   | -   | -   | -   | -    | ○         | -    | -    | -    | -    | -  |   |  |
|                   |            |                                                                                              | 2         | -    | ○    | ○    | -    | -    | -  | -  | ●           | ●  | ○  | -   | -   | -   | -   | -    | ●         | ●    | ○    | -    | -    | -  |   |  |
|                   |            |                                                                                              | 3         | -    | ○    | ○    | ○    | -    | -  | -  | -           | -  | ●  | ●   | ○   | -   | -   | -    | -         | -    | ●    | ○    | -    | -  | - |  |
|                   |            |                                                                                              | 4         | -    | ○    | ○    | ○    | ○    | -  | -  | -           | -  | ●  | ●   | ●   | ○   | -   | -    | -         | -    | ○    | ●    | ○    | -  | - |  |
|                   |            |                                                                                              | 5         | -    | -    | ○    | ○    | ○    | ○  | -  | -           | -  | -  | -   | -   | ●   | ○   | -    | -         | -    | -    | ●    | ○    | -  |   |  |
|                   |            |                                                                                              | 6         | -    | -    | -    | -    | -    | ○  | ○  | -           | -  | -  | -   | -   | -   | ●   | ○    | -         | -    | -    | -    | -    | ●  | ○ |  |
| Elbow<br>LQ1L     | Male       | <br>P.246  | 1         | -    | ○    | -    | -    | -    | -  | -  | ○           | ○  | -  | -   | -   | -   | -   | -    | ○         | -    | -    | -    | -    | -  |   |  |
|                   |            |                                                                                              | 2         | -    | ○    | ○    | -    | -    | -  | -  | ●           | ●  | ○  | -   | -   | -   | -   | -    | ●         | ●    | ○    | -    | -    | -  |   |  |
|                   |            |                                                                                              | 3         | -    | ○    | ○    | ○    | -    | -  | -  | ●           | ●  | ●  | ●   | ○   | -   | -   | -    | ●         | -    | ●    | ○    | -    | -  | - |  |
|                   |            |                                                                                              | 4         | -    | -    | ○    | ○    | ○    | -  | -  | ●           | ●  | ●  | ●   | ●   | ○   | -   | -    | ●         | -    | ●    | ●    | ○    | -  | - |  |
|                   |            |                                                                                              | 5         | -    | -    | -    | ○    | ○    | ○  | -  | -           | -  | ●  | ●   | ○   | ●   | ○   | -    | -         | -    | ●    | ○    | ●    | ○  | - |  |
|                   |            |                                                                                              | 6         | -    | -    | -    | ○    | -    | ○  | ○  | -           | -  | -  | -   | -   | ●   | ●   | ○    | -         | -    | -    | -    | ●    | ●  | ○ |  |
|                   | Female     | <br>P.247 | 1         | -    | ○    | -    | -    | -    | -  | -  | ○           | ○  | -  | -   | -   | -   | -   | -    | ○         | -    | -    | -    | -    | -  |   |  |
|                   |            |                                                                                              | 2         | -    | ○    | ○    | -    | -    | -  | -  | ●           | ●  | ○  | -   | -   | -   | -   | -    | ●         | ●    | ○    | -    | -    | -  |   |  |
|                   |            |                                                                                              | 3         | -    | ○    | ○    | ○    | -    | -  | -  | ●           | -  | ●  | ●   | ○   | -   | -   | -    | ●         | -    | ●    | ○    | -    | -  | - |  |
|                   |            |                                                                                              | 4         | -    | ○    | ○    | ○    | ○    | -  | -  | -           | -  | -  | -   | ●   | ○   | -   | -    | -         | -    | ●    | ○    | -    | -  | - |  |
|                   |            |                                                                                              | 5         | -    | -    | -    | ○    | ○    | ○  | -  | -           | -  | -  | -   | -   | ●   | ○   | -    | -         | -    | -    | ●    | ○    | -  |   |  |
|                   |            |                                                                                              | 6         | -    | -    | -    | -    | -    | ○  | ○  | -           | -  | -  | -   | -   | -   | ●   | ○    | -         | -    | -    | -    | -    | ●  | ○ |  |
| Run tee<br>LQ1R   | Male       | <br>P.248 | 1         | -    | ○    | -    | -    | -    | -  | -  | ○           | ○  | -  | -   | -   | -   | -   | -    | ○         | -    | -    | -    | -    | -  |   |  |
|                   |            |                                                                                              | 2         | -    | ○    | ○    | -    | -    | -  | -  | ●           | ●  | ○  | -   | -   | -   | -   | -    | ●         | ●    | ○    | -    | -    | -  |   |  |
|                   |            |                                                                                              | 3         | -    | ○    | ○    | ○    | -    | -  | -  | -           | -  | ●  | ●   | ○   | -   | -   | -    | -         | -    | ●    | ○    | -    | -  | - |  |
|                   |            |                                                                                              | 4         | -    | -    | ○    | ○    | ○    | -  | -  | -           | -  | -  | -   | ●   | ○   | -   | -    | -         | -    | ●    | ○    | -    | -  | - |  |
|                   |            |                                                                                              | 5         | -    | -    | ○    | ○    | ○    | ○  | -  | -           | -  | -  | -   | -   | ●   | ○   | -    | -         | -    | -    | ●    | ○    | -  |   |  |
|                   |            |                                                                                              | 6         | -    | -    | -    | -    | -    | ○  | ○  | -           | -  | -  | -   | -   | -   | ●   | ○    | -         | -    | -    | -    | -    | ●  | ○ |  |
|                   | Female     | <br>P.249 | 1         | -    | ○    | -    | -    | -    | -  | -  | ○           | ○  | -  | -   | -   | -   | -   | -    | ○         | -    | -    | -    | -    | -  |   |  |
|                   |            |                                                                                              | 2         | -    | ○    | ○    | -    | -    | -  | -  | ●           | ●  | ○  | -   | -   | -   | -   | -    | ●         | ●    | ○    | -    | -    | -  |   |  |
|                   |            |                                                                                              | 3         | -    | ○    | ○    | ○    | -    | -  | -  | -           | -  | ●  | ●   | ○   | -   | -   | -    | -         | -    | ●    | ○    | -    | -  | - |  |
|                   |            |                                                                                              | 4         | -    | -    | ○    | ○    | ○    | -  | -  | -           | -  | -  | -   | ●   | ○   | -   | -    | -         | -    | ●    | ○    | -    | -  | - |  |
|                   |            |                                                                                              | 5         | -    | -    | -    | ○    | ○    | ○  | -  | -           | -  | -  | -   | -   | ●   | ○   | -    | -         | -    | -    | ●    | ○    | -  |   |  |
|                   |            |                                                                                              | 6         | -    | -    | -    | -    | ○    | ○  | ○  | -           | -  | -  | -   | -   | -   | ●   | ○    | -         | -    | -    | -    | -    | ●  | ○ |  |

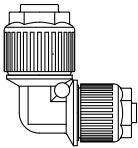
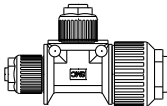
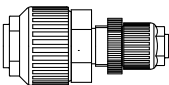
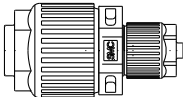
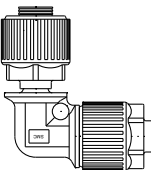
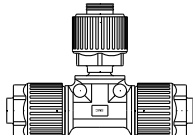
Note) ○Basic size ●With reducer



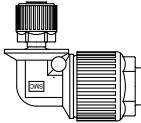
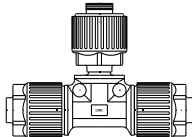
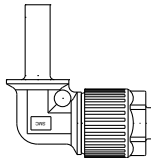
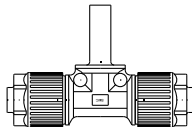
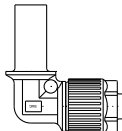
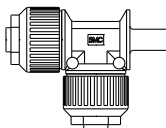
| Series                           | Appearance                                                                                   | Class                                                                                      | Port size |      |      |      |      |      |    |    | Tubing O.D. |    |    |     |     |     |     |      |           |      |      |      |      |    |
|----------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------|------|------|------|------|------|----|----|-------------|----|----|-----|-----|-----|-----|------|-----------|------|------|------|------|----|
|                                  |                                                                                              |                                                                                            |           |      |      |      |      |      |    |    | Metric size |    |    |     |     |     |     |      | Inch size |      |      |      |      |    |
|                                  |                                                                                              |                                                                                            | None      | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | ø3 | ø4          | ø6 | ø8 | ø10 | ø12 | ø19 | ø25 | 1/8" | 3/16"     | 1/4" | 3/8" | 1/2" | 3/4" | 1" |
| Branch tee<br><b>LQ1B</b>        | Male                                                                                         | <br>P.250 | 1         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              |                                                                                            | 2         | ○    | ○    | ○    | ○    | ○    | ○  | ●  | ●           | ○  | ○  | ○   | ○   | ○   | ○   | ●    | ●         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              |                                                                                            | 3         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              |                                                                                            | 4         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              |                                                                                            | 5         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              |                                                                                            | 6         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  | Female                                                                                       | <br>P.251 | 1         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              |                                                                                            | 2         | ○    | ○    | ○    | ○    | ○    | ○  | ●  | ●           | ○  | ○  | ○   | ○   | ○   | ○   | ●    | ●         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              |                                                                                            | 3         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              |                                                                                            | 4         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              |                                                                                            | 5         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              |                                                                                            | 6         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
| Union elbow<br><b>LQ1E</b>       | <br>P.252  | 1                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 2                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ●  | ●           | ○  | ○  | ○   | ○   | ○   | ○   | ●    | ●         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 3                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 4                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 5                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 6                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
| Union tee<br><b>LQ1T</b>         | <br>P.253 | 1                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 2                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ●  | ●           | ○  | ○  | ○   | ○   | ○   | ○   | ●    | ●         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 3                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 4                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 5                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 6                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
| Panel mount union<br><b>LQ1P</b> | <br>P.254 | 1                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 2                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ●  | ●           | ○  | ○  | ○   | ○   | ○   | ○   | ●    | ●         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 3                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 4                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 5                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 6                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
| Union<br><b>LQ1U</b>             | <br>P.255 | 1                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 2                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ●  | ●           | ○  | ○  | ○   | ○   | ○   | ○   | ●    | ●         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 3                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 4                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 5                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 6                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
| Union flange<br><b>LQ1F</b>      | <br>P.255 | 4                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 5                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |
|                                  |                                                                                              | 6                                                                                          | ○         | ○    | ○    | ○    | ○    | ○    | ○  | ○  | ○           | ○  | ○  | ○   | ○   | ○   | ○   | ○    | ○         | ○    | ○    | ○    | ○    | ○  |

Note) ○Basic size ●With reducer

# LQ1 Series

| Series                                         | Appearance                                                                                          | Class | Tubing O.D. |    |    |    |     |     |     |     |           |       |      |      |      |      |    |   | Can be connected<br>body class |   |   |   |  |  |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------|-------------|----|----|----|-----|-----|-----|-----|-----------|-------|------|------|------|------|----|---|--------------------------------|---|---|---|--|--|
|                                                |                                                                                                     |       | Metric size |    |    |    |     |     |     |     | Inch size |       |      |      |      |      |    |   |                                |   |   |   |  |  |
|                                                |                                                                                                     |       | ø3          | ø4 | ø6 | ø8 | ø10 | ø12 | ø19 | ø25 | 1/8"      | 3/16" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 2 | 3                              | 4 | 5 | 6 |  |  |
| Union elbow<br>reducing<br><b>LQ1E-R</b>       | <br><b>P.256</b>   | 3     | -           | -  | -  | -  | -   | -   | -   | ●   | -         | -     | ○    | -    | -    | -    | -  | - | -                              | - | - |   |  |  |
|                                                |                                                                                                     | 4     | -           | ●  | ●  | ●  | -   | ○   | -   | -   | ●         | ●     | ●    | -    | ○    | -    | -  | - | -                              | - | - |   |  |  |
|                                                |                                                                                                     | 5     | -           | ●  | ●  | ●  | ●   | -   | ○   | -   | -         | ●     | ●    | ●    | -    | ○    | -  | - | -                              | - | - |   |  |  |
|                                                |                                                                                                     | 6     | -           | -  | ●  | ●  | ●   | ●   | -   | ○   | -         | ●     | ●    | ●    | ●    | -    | ○  | - | -                              | - | - |   |  |  |
| Union tee<br>reducing<br><b>LQ1T-R</b>         | <br><b>P.258</b>   | 3     | ●           | -  | ●  | ●  | ○   | -   | -   | -   | -         | ●     | ○    | -    | -    | -    | -  | - | -                              | - |   |   |  |  |
|                                                |                                                                                                     | 4     | ●           | -  | ●  | ●  | ●   | ○   | -   | -   | ●         | -     | ●    | ●    | ○    | -    | -  | - | -                              | - |   |   |  |  |
|                                                |                                                                                                     | 5     | ●           | ●  | ●  | ●  | ●   | ●   | ○   | -   | ●         | -     | ●    | ●    | ●    | ○    | -  | - | -                              | - |   |   |  |  |
|                                                |                                                                                                     | 6     | -           | -  | ●  | ●  | ●   | ●   | ●   | ○   | -         | -     | ●    | ●    | ●    | ●    | ○  | - | -                              | - |   |   |  |  |
| Panel mount<br>union reducing<br><b>LQ1P-R</b> | <br><b>P.263</b>   | 4     | -           | -  | ●  | -  | -   | ○   | -   | -   | -         | ●     | -    | ○    | -    | -    | -  | - | -                              |   |   |   |  |  |
|                                                |                                                                                                     | 5     | -           | -  | -  | -  | ●   | -   | ○   | -   | -         | -     | ●    | -    | ○    | -    | -  | - | -                              |   |   |   |  |  |
| Union<br>reducing<br><b>LQ1U-R</b>             | <br><b>P.264</b>   | 3     | ●           | ●  | -  | -  | ○   | -   | -   | -   | -         | -     | -    | -    | -    | -    | -  | - | -                              |   |   |   |  |  |
|                                                |                                                                                                     | 4     | ●           | ●  | ●  | ●  | -   | ○   | -   | -   | ●         | ●     | ●    | -    | ○    | -    | -  | - | -                              |   |   |   |  |  |
|                                                |                                                                                                     | 5     | ●           | ●  | ●  | ●  | ●   | -   | ○   | -   | ●         | ●     | ●    | ●    | -    | ○    | -  | - | -                              |   |   |   |  |  |
|                                                |                                                                                                     | 6     | -           | -  | ●  | -  | ●   | ●   | -   | ○   | -         | -     | ●    | ●    | ●    | -    | ○  | - | -                              |   |   |   |  |  |
| Space saving<br>union elbow<br><b>LQ1E-SS</b>  | <br><b>P.265</b> | 2     | -           | -  | ○  | -  | -   | -   | -   | -   | -         | ○     | -    | -    | -    | -    | ○  | - | -                              | - |   |   |  |  |
|                                                |                                                                                                     | 3     | -           | -  | -  | ●  | ○   | -   | -   | -   | -         | -     | ○    | -    | -    | -    | -  | ○ | -                              | - |   |   |  |  |
|                                                |                                                                                                     | 4     | -           | -  | -  | -  | -   | ○   | -   | -   | -         | -     | -    | ○    | -    | -    | -  | - | ○                              | - |   |   |  |  |
|                                                |                                                                                                     | 5     | -           | -  | -  | -  | -   | -   | ○   | -   | -         | -     | -    | -    | ○    | -    | -  | - | -                              | ○ |   |   |  |  |
|                                                |                                                                                                     | 6     | -           | -  | -  | -  | -   | -   | -   | ○   | -         | -     | -    | -    | -    | -    | ○  | - | -                              | - |   |   |  |  |
| Space saving<br>union tee<br><b>LQ1T-S</b>     | <br><b>P.267</b> | 2     | -           | -  | ○  | -  | -   | -   | -   | -   | -         | ○     | -    | -    | -    | -    | ○  | - | -                              | - |   |   |  |  |
|                                                |                                                                                                     | 3     | -           | -  | -  | ●  | ○   | -   | -   | -   | -         | -     | ○    | -    | -    | -    | -  | ○ | -                              | - |   |   |  |  |
|                                                |                                                                                                     | 4     | -           | -  | -  | -  | -   | ○   | -   | -   | -         | -     | -    | ○    | -    | -    | -  | - | ○                              | - |   |   |  |  |
|                                                |                                                                                                     | 5     | -           | -  | -  | -  | -   | -   | ○   | -   | -         | -     | -    | -    | ○    | -    | -  | - | -                              | ○ |   |   |  |  |
|                                                |                                                                                                     | 6     | -           | -  | -  | -  | -   | -   | -   | ○   | -         | -     | -    | -    | -    | ○    | -  | - | -                              | - |   |   |  |  |

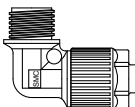
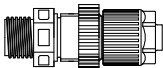
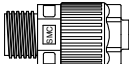
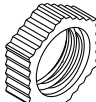
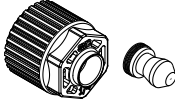
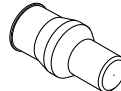
Note) ○Basic size ●With reducer

| Series                                                   | Appearance                                                                                          | Class | Tubing O.D. |    |    |    |     |     |     |     |           |       |      |      |      |      |    |   | Can be connected body class |   |   |   |   |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------|-------------|----|----|----|-----|-----|-----|-----|-----------|-------|------|------|------|------|----|---|-----------------------------|---|---|---|---|
|                                                          |                                                                                                     |       | Metric size |    |    |    |     |     |     |     | Inch size |       |      |      |      |      |    |   |                             |   |   |   |   |
|                                                          |                                                                                                     |       | ø3          | ø4 | ø6 | ø8 | ø10 | ø12 | ø19 | ø25 | 1/8"      | 3/16" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 2 | 3                           | 4 | 5 | 6 |   |
| Space saving union elbow reducing<br><b>LQ1E-SS-R</b>    | <br><b>P.266</b>   | 2     | -           | -  | ○  | -  | -   | -   | -   | -   | -         | ○     | -    | -    | -    | -    | -  | ○ | ○                           | - | - | - | - |
|                                                          |                                                                                                     | 3     | -           | -  | -  | ○  | ○   | -   | -   | -   | -         | -     | ○    | -    | -    | -    | -  | ○ | ○                           | ○ | - | - | - |
|                                                          |                                                                                                     | 4     | -           | -  | -  | -  | -   | ○   | -   | -   | -         | -     | -    | ○    | -    | -    | -  | ○ | ○                           | - | ○ | - | - |
|                                                          |                                                                                                     | 5     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -     | -    | -    | -    | -    | -  | - | -                           | - | - | - | - |
|                                                          |                                                                                                     | 6     | -           | -  | -  | -  | -   | -   | -   | ○   | -         | -     | -    | -    | -    | -    | ○  | - | -                           | - | ○ | - | - |
| Space saving union tee reducing<br><b>LQ1T-S-R</b>       | <br><b>P.268</b>   | 2     | -           | -  | ○  | -  | -   | -   | -   | -   | -         | -     | -    | -    | -    | -    | -  | ○ | -                           | - | - | - |   |
|                                                          |                                                                                                     | 3     | -           | -  | -  | ●  | -   | -   | -   | -   | -         | ●     | ○    | -    | -    | -    | -  | ○ | -                           | - | - | - |   |
|                                                          |                                                                                                     | 4     | -           | -  | -  | -  | -   | ○   | -   | -   | -         | -     | ●    | ○    | -    | -    | -  | ○ | -                           | ○ | - | - |   |
|                                                          |                                                                                                     | 5     | -           | -  | ○  | -  | -   | ●   | ○   | -   | -         | ●     | -    | ●    | ○    | -    | -  | ○ | ○                           | ○ | ○ | ○ |   |
|                                                          |                                                                                                     | 6     | -           | -  | -  | -  | -   | -   | ●   | ○   | -         | -     | -    | -    | -    | ●    | ○  | - | ○                           | ○ | ○ | ○ |   |
| Tubing extension union elbow<br><b>LQ1E-T</b>            | <br><b>P.270</b>   | 2     | -           | -  | ○  | -  | -   | -   | -   | -   | -         | ○     | -    | -    | -    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 3     | -           | -  | -  | ●  | ○   | -   | -   | -   | -         | -     | ○    | -    | -    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 4     | -           | -  | -  | -  | -   | ○   | -   | -   | -         | -     | -    | ○    | -    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 5     | -           | -  | -  | -  | -   | -   | ○   | -   | -         | -     | -    | -    | ○    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 6     | -           | -  | -  | -  | -   | -   | -   | ○   | -         | -     | -    | -    | -    | -    | ○  | - | -                           | - | - |   |   |
| Tubing extension union tee<br><b>LQ1T-T</b>              | <br><b>P.271</b> | 2     | -           | -  | ○  | -  | -   | -   | -   | -   | -         | ○     | -    | -    | -    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 3     | -           | -  | -  | ●  | ○   | -   | -   | -   | -         | -     | ○    | -    | -    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 4     | -           | -  | -  | -  | -   | ○   | -   | -   | -         | -     | -    | ○    | -    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 5     | -           | -  | -  | -  | -   | -   | ○   | -   | -         | -     | -    | -    | ○    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 6     | -           | -  | -  | -  | -   | -   | -   | ○   | -         | -     | -    | -    | -    | -    | ○  | - | -                           | - | - |   |   |
| Tubing extension union elbow reducing<br><b>LQ1E-T-R</b> | <br><b>P.272</b> | 2     | -           | ●  | ○  | -  | -   | -   | -   | -   | -         | ○     | -    | -    | -    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 3     | -           | -  | -  | ●  | ○   | -   | -   | -   | -         | -     | ○    | -    | -    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 4     | -           | -  | -  | -  | -   | ○   | -   | -   | -         | -     | -    | ○    | -    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 5     | -           | -  | -  | -  | -   | -   | ○   | -   | -         | -     | -    | -    | ○    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 6     | -           | -  | -  | -  | -   | -   | -   | ○   | -         | -     | -    | -    | -    | -    | ○  | - | -                           | - | - |   |   |
| Tubing extension union tee reducing<br><b>LQ1T-T-R</b>   | <br><b>P.273</b> | 2     | -           | -  | ○  | -  | -   | -   | -   | -   | -         | -     | -    | -    | -    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 3     | -           | -  | -  | ●  | -   | -   | -   | -   | -         | ●     | -    | -    | -    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 4     | -           | -  | -  | -  | -   | ○   | -   | -   | -         | -     | ●    | ○    | -    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 5     | -           | -  | ●  | -  | -   | ●   | ○   | -   | -         | ●     | -    | ●    | ○    | -    | -  | - | -                           | - | - |   |   |
|                                                          |                                                                                                     | 6     | -           | -  | -  | -  | -   | -   | ●   | ○   | -         | -     | -    | -    | -    | ●    | ○  | - | -                           | - | - |   |   |

\* Refer to the details page of each product for the tubing extension size.

Note) ○Basic size ●With reducer



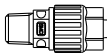
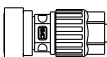
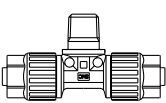
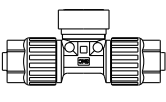
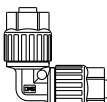
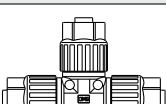
| Series                                                   | Appearance                                                                                   | Class | Tubing O.D. |    |    |    |     |     |     |     |           |       |      |      |      |      |    |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------|-------|-------------|----|----|----|-----|-----|-----|-----|-----------|-------|------|------|------|------|----|
|                                                          |                                                                                              |       | Metric size |    |    |    |     |     |     |     | Inch size |       |      |      |      |      |    |
|                                                          |                                                                                              |       | ø3          | ø4 | ø6 | ø8 | ø10 | ø12 | ø19 | ø25 | 1/8"      | 3/16" | 1/4" | 3/8" | 1/2" | 3/4" | 1" |
| Space saving type<br>union elbow<br><b>LQ1E-SN</b>       | <br>P.275   | 1     | ○           | ○  | -  | -  | -   | -   | -   | -   | ○         | -     | -    | -    | -    | -    | -  |
|                                                          |                                                                                              | 2     | -           | ●  | ○  | -  | -   | -   | -   | -   | ●         | ●     | ○    | -    | -    | -    | -  |
|                                                          |                                                                                              | 3     | -           | -  | ●  | ●  | ○   | -   | -   | -   | -         | -     | ●    | ○    | -    | -    | -  |
|                                                          |                                                                                              | 4     | -           | -  | -  | -  | ●   | ○   | -   | -   | -         | -     | -    | ●    | ○    | -    | -  |
|                                                          |                                                                                              | 5     | -           | -  | -  | -  | -   | ●   | ○   | -   | -         | -     | -    | -    | ●    | ○    | -  |
|                                                          |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | ●   | ○   | -         | -     | -    | -    | -    | ●    | ○  |
| Space saving type<br>union tee<br><b>LQ1T-SN</b>         | <br>P.275   | 1     | ○           | ○  | -  | -  | -   | -   | -   | -   | ○         | -     | -    | -    | -    | -    | -  |
|                                                          |                                                                                              | 2     | -           | ●  | ○  | -  | -   | -   | -   | -   | ●         | ●     | ○    | -    | -    | -    | -  |
|                                                          |                                                                                              | 3     | -           | -  | ●  | ●  | ○   | -   | -   | -   | -         | -     | ●    | ○    | -    | -    | -  |
|                                                          |                                                                                              | 4     | -           | -  | -  | -  | ●   | ○   | -   | -   | -         | -     | -    | ●    | ○    | -    | -  |
|                                                          |                                                                                              | 5     | -           | -  | -  | -  | -   | ●   | ○   | -   | -         | -     | -    | -    | ●    | ○    | -  |
|                                                          |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | ●   | ○   | -         | -     | -    | -    | -    | ●    | ○  |
| Space saving type<br>panel mount union<br><b>LQ1P-SN</b> | <br>P.275   | 1     | ○           | ○  | -  | -  | -   | -   | -   | -   | ○         | -     | -    | -    | -    | -    | -  |
|                                                          |                                                                                              | 2     | -           | ●  | ○  | -  | -   | -   | -   | -   | ●         | ●     | ○    | -    | -    | -    | -  |
|                                                          |                                                                                              | 3     | -           | -  | ●  | ●  | ○   | -   | -   | -   | -         | -     | ●    | ○    | -    | -    | -  |
|                                                          |                                                                                              | 4     | -           | -  | -  | -  | ●   | ○   | -   | -   | -         | -     | -    | ●    | ○    | -    | -  |
|                                                          |                                                                                              | 5     | -           | -  | -  | -  | -   | ●   | ○   | -   | -         | -     | -    | -    | ●    | ○    | -  |
|                                                          |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | ●   | ○   | -         | -     | -    | -    | -    | ●    | ○  |
| Space saving type<br>union<br><b>LQ1U-SN</b>             | <br>P.275   | 1     | ○           | ○  | -  | -  | -   | -   | -   | -   | ○         | -     | -    | -    | -    | -    | -  |
|                                                          |                                                                                              | 2     | -           | ●  | ○  | -  | -   | -   | -   | -   | ●         | ●     | ○    | -    | -    | -    | -  |
|                                                          |                                                                                              | 3     | -           | -  | ●  | ●  | ○   | -   | -   | -   | -         | -     | ●    | ○    | -    | -    | -  |
|                                                          |                                                                                              | 4     | -           | -  | -  | -  | ●   | ○   | -   | -   | -         | -     | -    | ●    | ○    | -    | -  |
|                                                          |                                                                                              | 5     | -           | -  | -  | -  | -   | ●   | ○   | -   | -         | -     | -    | -    | ●    | ○    | -  |
|                                                          |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | ●   | ○   | -         | -     | -    | -    | -    | ●    | ○  |
| Panel mounting<br>nut<br><b>LQNP</b>                     | <br>P.275 | 1     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -     | -    | -    | -    | -    | -  |
|                                                          |                                                                                              | 2     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -     | -    | -    | -    | -    | -  |
|                                                          |                                                                                              | 3     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -     | -    | -    | -    | -    | -  |
|                                                          |                                                                                              | 4     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -     | -    | -    | -    | -    | -  |
|                                                          |                                                                                              | 5     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -     | -    | -    | -    | -    | -  |
|                                                          |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -     | -    | -    | -    | -    | -  |
| Nut insert bush<br><b>LQ1-U<br/>B<br/>N</b>              | <br>P.276 | 1     | ○           | ○  | -  | -  | -   | -   | -   | -   | ○         | -     | -    | -    | -    | -    | -  |
|                                                          |                                                                                              | 2     | ○           | ○  | ○  | -  | -   | -   | -   | -   | ○         | ○     | ○    | -    | -    | -    | -  |
|                                                          |                                                                                              | 3     | -           | -  | ○  | ○  | ○   | -   | -   | -   | -         | -     | ○    | ○    | -    | -    | -  |
|                                                          |                                                                                              | 4     | -           | -  | -  | -  | ○   | ○   | -   | -   | -         | -     | -    | ○    | ○    | -    | -  |
|                                                          |                                                                                              | 5     | -           | -  | -  | -  | -   | ○   | ○   | -   | -         | -     | -    | -    | ○    | ○    | -  |
|                                                          |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | ○   | ○   | -         | -     | -    | -    | -    | ○    | ○  |
| Blanking plug<br><b>LQ-P</b>                             | <br>P.276 | 1     | ○           | ○  | -  | -  | -   | -   | -   | -   | ○         | -     | -    | -    | -    | -    | -  |
|                                                          |                                                                                              | 2     | ●           | ●  | ○  | -  | -   | -   | -   | -   | ●         | ●     | ○    | -    | -    | -    | -  |
|                                                          |                                                                                              | 3     | -           | ●  | ●  | ●  | ○   | -   | -   | -   | -         | -     | ●    | ○    | -    | -    | -  |
|                                                          |                                                                                              | 4     | -           | -  | -  | -  | ●   | ○   | -   | -   | -         | -     | -    | ●    | ○    | -    | -  |
|                                                          |                                                                                              | 5     | -           | -  | -  | -  | -   | ●   | ○   | -   | -         | -     | -    | -    | ●    | ○    | -  |
|                                                          |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | ●   | ○   | -         | -     | -    | -    | -    | ●    | ○  |
| Tubing plug<br><b>LQ1-CP</b>                             | <br>P.276 | 1     | ○           | ○  | -  | -  | -   | -   | -   | -   | ○         | -     | -    | -    | -    | -    | -  |
|                                                          |                                                                                              | 2     | -           | -  | ○  | -  | -   | -   | -   | -   | -         | -     | ○    | -    | -    | -    | -  |
|                                                          |                                                                                              | 3     | -           | -  | -  | ○  | ○   | -   | -   | -   | -         | -     | -    | ○    | -    | -    | -  |
|                                                          |                                                                                              | 4     | -           | -  | -  | -  | -   | ○   | -   | -   | -         | -     | -    | -    | ○    | -    | -  |
|                                                          |                                                                                              | 5     | -           | -  | -  | -  | -   | -   | ○   | -   | -         | -     | -    | -    | -    | ○    | -  |
|                                                          |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | -   | ○   | -         | -     | -    | -    | -    | -    | ○  |

Note) ○Basic size ●With reducer

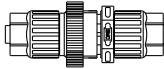
# LQ3 Series

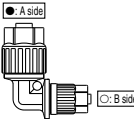
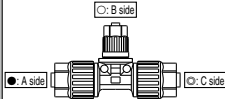
Fluoropolymer Fittings Hyper Fittings / Flare Type

## LQ3 Series P.279

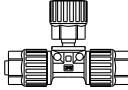
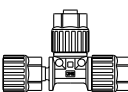
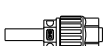
| Series              | Appearance                                                                                   | Class                                                                                        | Port size |      |      |      |      |      |    |        |    |    |    | Tubing O.D. |     |     |     |     |      |      |      |           |      |    |        |  |  |
|---------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------|------|------|------|------|------|----|--------|----|----|----|-------------|-----|-----|-----|-----|------|------|------|-----------|------|----|--------|--|--|
|                     |                                                                                              |                                                                                              |           |      |      |      |      |      |    |        |    |    |    | Metric size |     |     |     |     |      |      |      | Inch size |      |    |        |  |  |
|                     |                                                                                              |                                                                                              | None      | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" | ø3 | ø4 | ø6 | ø8          | ø10 | ø12 | ø19 | ø25 | 1/8" | 1/4" | 3/8" | 1/2"      | 3/4" | 1" | 1 1/4" |  |  |
| Connector<br>LQ3H   | Male                                                                                         | <br>P.282   | 1         | -    | ●    | -    | -    | -    | -  | -      | -  | ●  | ●  | -           | -   | -   | -   | -   | ●    | -    | -    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 2         | -    | ●    | ●    | -    | -    | -  | -      | -  | -  | ●  | -           | -   | -   | -   | -   | -    | ●    | -    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 3         | -    | ●    | ●    | ●    | ●    | -  | -      | -  | -  | -  | ●           | ●   | -   | -   | -   | -    | -    | ●    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 4         | -    | -    | ●    | ●    | ●    | ●  | -      | -  | -  | -  | -           | -   | ●   | -   | -   | -    | -    | ●    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 5         | -    | -    | -    | ●    | ●    | ●  | -      | -  | -  | -  | -           | -   | -   | ●   | -   | -    | -    | -    | ●         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 6         | -    | -    | -    | -    | ●    | ●  | ●      | -  | -  | -  | -           | -   | -   | -   | ●   | -    | -    | -    | -         | ●    | -  | -      |  |  |
|                     | 7                                                                                            | -                                                                                            | -         | -    | -    | -    | ●    | ●    | ●  | -      | -  | -  | -  | -           | -   | -   | -   | -   | -    | -    | -    | ●         | -    |    |        |  |  |
| Female              | <br>P.283   | 1                                                                                            | -         | ●    | -    | -    | -    | -    | -  | ●      | ●  | -  | -  | -           | -   | -   | -   | ●   | -    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 2                                                                                            | -         | ●    | ●    | -    | -    | -    | -  | -      | -  | ●  | -  | -           | -   | -   | -   | -   | ●    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 3                                                                                            | -         | ●    | ●    | ●    | ●    | -    | -  | -      | -  | -  | ●  | ●           | -   | -   | -   | -   | -    | ●    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 4                                                                                            | -         | -    | ●    | ●    | ●    | -    | -  | -      | -  | -  | -  | -           | ●   | -   | -   | -   | -    | ●    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 5                                                                                            | -         | -    | -    | ●    | ●    | ●    | -  | -      | -  | -  | -  | -           | -   | ●   | -   | -   | -    | -    | ●    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 6                                                                                            | -         | -    | -    | -    | ●    | ●    | ●  | -      | -  | -  | -  | -           | -   | -   | ●   | -   | -    | -    | -    | -         | ●    | -  |        |  |  |
| Elbow<br>LQ3L       | Male                                                                                         | <br>P.284   | 1         | -    | ●    | -    | -    | -    | -  | -      | -  | ●  | ●  | -           | -   | -   | -   | -   | ●    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              |                                                                                              | 2         | -    | ●    | ●    | -    | -    | -  | -      | -  | -  | ●  | -           | -   | -   | -   | -   | -    | ●    | -    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 3         | -    | ●    | ●    | ●    | ●    | -  | -      | -  | -  | -  | ●           | ●   | -   | -   | -   | -    | -    | ●    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 4         | -    | -    | ●    | ●    | ●    | -  | -      | -  | -  | -  | -           | ●   | -   | -   | -   | -    | -    | ●    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 5         | -    | -    | -    | ●    | ●    | ●  | -      | -  | -  | -  | -           | -   | ●   | -   | -   | -    | -    | -    | ●         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 6         | -    | -    | -    | -    | ●    | ●  | ●      | -  | -  | -  | -           | -   | -   | ●   | -   | -    | -    | -    | -         | ●    | -  | -      |  |  |
|                     | 7                                                                                            | -                                                                                            | -         | -    | -    | -    | -    | -    | -  | -      | -  | -  | -  | -           | -   | -   | -   | -   | -    | -    | -    | ●         | -    |    |        |  |  |
| Female              | <br>P.285   | 1                                                                                            | -         | ●    | -    | -    | -    | -    | -  | -      | ●  | ●  | -  | -           | -   | -   | -   | ●   | -    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 2                                                                                            | -         | ●    | ●    | -    | -    | -    | -  | -      | -  | -  | ●  | -           | -   | -   | -   | -   | ●    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 3                                                                                            | -         | ●    | ●    | ●    | ●    | -    | -  | -      | -  | -  | ●  | ●           | -   | -   | -   | -   | -    | ●    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 4                                                                                            | -         | -    | ●    | ●    | ●    | -    | -  | -      | -  | -  | -  | -           | ●   | -   | -   | -   | -    | ●    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 5                                                                                            | -         | -    | -    | ●    | ●    | ●    | -  | -      | -  | -  | -  | -           | -   | ●   | -   | -   | -    | -    | ●    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 6                                                                                            | -         | -    | -    | -    | ●    | ●    | ●  | -      | -  | -  | -  | -           | -   | -   | ●   | -   | -    | -    | -    | -         | ●    | -  |        |  |  |
| Branch tee<br>LQ3B  | Male                                                                                         | <br>P.286 | 1         | -    | ●    | -    | -    | -    | -  | -      | -  | ●  | ●  | -           | -   | -   | -   | -   | ●    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              |                                                                                              | 2         | -    | ●    | ●    | -    | -    | -  | -      | -  | -  | ●  | -           | -   | -   | -   | -   | -    | ●    | -    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 3         | -    | ●    | ●    | ●    | -    | -  | -      | -  | -  | -  | ●           | ●   | -   | -   | -   | -    | -    | ●    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 4         | -    | -    | ●    | ●    | ●    | -  | -      | -  | -  | -  | -           | ●   | -   | -   | -   | -    | -    | ●    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 5         | -    | -    | -    | ●    | ●    | ●  | -      | -  | -  | -  | -           | -   | ●   | -   | -   | -    | -    | -    | ●         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 6         | -    | -    | -    | -    | ●    | ●  | ●      | -  | -  | -  | -           | -   | -   | ●   | -   | -    | -    | -    | -         | ●    | -  | -      |  |  |
|                     | 7                                                                                            | -                                                                                            | -         | -    | -    | -    | -    | -    | -  | -      | -  | -  | -  | -           | -   | -   | -   | -   | -    | -    | -    | ●         | -    |    |        |  |  |
| Female              | <br>P.287 | 1                                                                                            | -         | ●    | -    | -    | -    | -    | -  | -      | ●  | ●  | -  | -           | -   | -   | -   | ●   | -    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 2                                                                                            | -         | ●    | ●    | -    | -    | -    | -  | -      | -  | -  | ●  | -           | -   | -   | -   | -   | ●    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 3                                                                                            | -         | ●    | ●    | ●    | -    | -    | -  | -      | -  | -  | ●  | ●           | -   | -   | -   | -   | -    | ●    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 4                                                                                            | -         | -    | ●    | ●    | ●    | -    | -  | -      | -  | -  | -  | -           | ●   | -   | -   | -   | -    | ●    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 5                                                                                            | -         | -    | -    | ●    | ●    | ●    | -  | -      | -  | -  | -  | -           | -   | ●   | -   | -   | -    | -    | ●    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 6                                                                                            | -         | -    | -    | -    | ●    | ●    | ●  | -      | -  | -  | -  | -           | -   | -   | ●   | -   | -    | -    | -    | -         | ●    | -  |        |  |  |
| Run tee<br>LQ3R     | Male                                                                                         | <br>P.288 | 1         | -    | ●    | -    | -    | -    | -  | -      | -  | ●  | ●  | -           | -   | -   | -   | -   | ●    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              |                                                                                              | 2         | -    | ●    | ●    | -    | -    | -  | -      | -  | -  | -  | ●           | -   | -   | -   | -   | -    | ●    | -    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 3         | -    | ●    | ●    | ●    | -    | -  | -      | -  | -  | -  | -           | ●   | ●   | -   | -   | -    | -    | ●    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 4         | -    | -    | ●    | ●    | ●    | -  | -      | -  | -  | -  | -           | -   | ●   | -   | -   | -    | -    | ●    | -         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 5         | -    | -    | -    | ●    | ●    | ●  | -      | -  | -  | -  | -           | -   | -   | ●   | -   | -    | -    | -    | ●         | -    | -  | -      |  |  |
|                     |                                                                                              |                                                                                              | 6         | -    | -    | -    | -    | ●    | ●  | ●      | -  | -  | -  | -           | -   | -   | -   | ●   | -    | -    | -    | -         | -    | ●  | -      |  |  |
|                     | 7                                                                                            | -                                                                                            | -         | -    | -    | -    | -    | -    | -  | -      | -  | -  | -  | -           | -   | -   | -   | -   | -    | -    | -    | ●         | -    |    |        |  |  |
| Female              | <br>P.289 | 1                                                                                            | -         | ●    | -    | -    | -    | -    | -  | -      | ●  | ●  | -  | -           | -   | -   | -   | ●   | -    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 2                                                                                            | -         | ●    | ●    | -    | -    | -    | -  | -      | -  | -  | ●  | -           | -   | -   | -   | -   | ●    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 3                                                                                            | -         | ●    | ●    | ●    | -    | -    | -  | -      | -  | -  | -  | ●           | ●   | -   | -   | -   | -    | ●    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 4                                                                                            | -         | -    | ●    | ●    | ●    | -    | -  | -      | -  | -  | -  | -           | ●   | -   | -   | -   | -    | ●    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 5                                                                                            | -         | -    | -    | ●    | ●    | ●    | -  | -      | -  | -  | -  | -           | -   | ●   | -   | -   | -    | -    | ●    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 6                                                                                            | -         | -    | -    | -    | ●    | ●    | ●  | -      | -  | -  | -  | -           | -   | -   | ●   | -   | -    | -    | -    | -         | ●    | -  |        |  |  |
| Union elbow<br>LQ3E | <br>P.290 | 1                                                                                            | ●         | -    | -    | -    | -    | -    | -  | -      | ●  | ●  | -  | -           | -   | -   | -   | ●   | -    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 2                                                                                            | ●         | -    | -    | -    | -    | -    | -  | -      | -  | -  | ●  | -           | -   | -   | -   | -   | ●    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 3                                                                                            | ●         | -    | -    | -    | -    | -    | -  | -      | -  | -  | -  | ●           | ●   | -   | -   | -   | -    | ●    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 4                                                                                            | ●         | -    | -    | -    | -    | -    | -  | -      | -  | -  | -  | -           | ●   | -   | -   | -   | -    | ●    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 5                                                                                            | ●         | -    | -    | -    | -    | -    | -  | -      | -  | -  | -  | -           | -   | ●   | -   | -   | -    | -    | ●    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 6                                                                                            | ●         | -    | -    | -    | -    | -    | -  | -      | -  | -  | -  | -           | -   | -   | ●   | -   | -    | -    | -    | -         | ●    | -  |        |  |  |
|                     |                                                                                              | 7                                                                                            | -         | -    | -    | -    | -    | -    | -  | -      | -  | -  | -  | -           | -   | -   | -   | -   | -    | -    | -    | -         | -    | ●  |        |  |  |
| Union tee<br>LQ3T   | <br>P.290 | 1                                                                                            | ●         | -    | -    | -    | -    | -    | -  | -      | ●  | ●  | -  | -           | -   | -   | -   | ●   | -    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 2                                                                                            | ●         | -    | -    | -    | -    | -    | -  | -      | -  | -  | ●  | -           | -   | -   | -   | -   | ●    | -    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 3                                                                                            | ●         | -    | -    | -    | -    | -    | -  | -      | -  | -  | -  | ●           | ●   | -   | -   | -   | -    | ●    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 4                                                                                            | ●         | -    | -    | -    | -    | -    | -  | -      | -  | -  | -  | -           | ●   | -   | -   | -   | -    | ●    | -    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 5                                                                                            | ●         | -    | -    | -    | -    | -    | -  | -      | -  | -  | -  | -           | -   | ●   | -   | -   | -    | -    | ●    | -         | -    | -  |        |  |  |
|                     |                                                                                              | 6                                                                                            | ●         | -    | -    | -    | -    | -    | -  | -      | -  | -  | -  | -           | -   | -   | ●   | -   | -    | -    | -    | -         | ●    | -  |        |  |  |

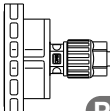
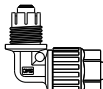
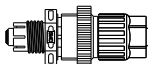
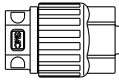
# LQ3 Series

| Series                           | Appearance                                                                                        | Class    | Port size |      |      |      |      |      |    |        | Tubing O.D. |    |    |    |     |     |     |     |           |      |      |      |      |    |        |
|----------------------------------|---------------------------------------------------------------------------------------------------|----------|-----------|------|------|------|------|------|----|--------|-------------|----|----|----|-----|-----|-----|-----|-----------|------|------|------|------|----|--------|
|                                  |                                                                                                   |          |           |      |      |      |      |      |    |        | Metric size |    |    |    |     |     |     |     | Inch size |      |      |      |      |    |        |
|                                  |                                                                                                   |          | None      | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" | ø3          | ø4 | ø6 | ø8 | ø10 | ø12 | ø19 | ø25 | 1/8"      | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" |
| Panel mount union<br><b>LQ3P</b> | <br><b>P.291</b> | <b>1</b> | ●         | —    | —    | —    | —    | —    | —  | —      | ●           | ●  | —  | —  | —   | —   | —   | —   | ●         | —    | —    | —    | —    | —  |        |
|                                  |                                                                                                   | <b>2</b> | ●         | —    | —    | —    | —    | —    | —  | —      | —           | —  | ●  | —  | —   | —   | —   | —   | —         | ●    | —    | —    | —    | —  |        |
|                                  |                                                                                                   | <b>3</b> | ●         | —    | —    | —    | —    | —    | —  | —      | —           | —  | —  | ●  | ●   | —   | —   | —   | —         | —    | ●    | —    | —    | —  |        |
|                                  |                                                                                                   | <b>4</b> | ●         | —    | —    | —    | —    | —    | —  | —      | —           | —  | —  | —  | —   | ●   | —   | —   | —         | —    | —    | ●    | —    | —  |        |
|                                  |                                                                                                   | <b>5</b> | ●         | —    | —    | —    | —    | —    | —  | —      | —           | —  | —  | —  | —   | —   | ●   | —   | —         | —    | —    | —    | ●    | —  |        |
|                                  |                                                                                                   | <b>6</b> | ●         | —    | —    | —    | —    | —    | —  | —      | —           | —  | —  | —  | —   | —   | —   | —   | ●         | —    | —    | —    | —    | ●  | —      |
| Union<br><b>LQ3U</b>             | <br><b>P.291</b> | <b>1</b> | ●         | —    | —    | —    | —    | —    | —  | —      | ●           | ●  | —  | —  | —   | —   | —   | —   | ●         | —    | —    | —    | —    | —  |        |
|                                  |                                                                                                   | <b>2</b> | ●         | —    | —    | —    | —    | —    | —  | —      | —           | —  | ●  | —  | —   | —   | —   | —   | —         | ●    | —    | —    | —    | —  |        |
|                                  |                                                                                                   | <b>3</b> | ●         | —    | —    | —    | —    | —    | —  | —      | —           | —  | —  | ●  | ●   | —   | —   | —   | —         | —    | ●    | —    | —    | —  |        |
|                                  |                                                                                                   | <b>4</b> | ●         | —    | —    | —    | —    | —    | —  | —      | —           | —  | —  | —  | —   | ●   | —   | —   | —         | —    | —    | ●    | —    | —  |        |
|                                  |                                                                                                   | <b>5</b> | ●         | —    | —    | —    | —    | —    | —  | —      | —           | —  | —  | —  | —   | —   | ●   | —   | —         | —    | —    | —    | ●    | —  |        |
|                                  |                                                                                                   | <b>6</b> | ●         | —    | —    | —    | —    | —    | —  | —      | —           | —  | —  | —  | —   | —   | —   | —   | ●         | —    | —    | —    | —    | ●  | —      |
|                                  |                                                                                                   | <b>7</b> | —         | —    | —    | —    | —    | —    | —  | —      | —           | —  | —  | —  | —   | —   | —   | —   | —         | —    | —    | —    | —    | ●  |        |

| Series                         | Appearance                                                                                          | Class | Tubing O.D. |       |       |       |       |       |       |       |           |       |       |       |       |       |        |
|--------------------------------|-----------------------------------------------------------------------------------------------------|-------|-------------|-------|-------|-------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|--------|
|                                |                                                                                                     |       | Metric size |       |       |       |       |       |       |       | Inch size |       |       |       |       |       |        |
|                                |                                                                                                     |       | ø3          | ø4    | ø6    | ø8    | ø10   | ø12   | ø19   | ø25   | 1/8"      | 1/4"  | 3/8"  | 1/2"  | 3/4"  | 1"    | 1 1/4" |
| Union reducing<br>LQ3U-R       | <br><b>P.292</b>   | 1     | ○           | ●     | -     | -     | -     | -     | -     | -     | -         | -     | -     | -     | -     | -     | -      |
|                                |                                                                                                     | 2     | ○           | ○     | ●     | -     | -     | -     | -     | -     | ○         | ●     | -     | -     | -     | -     | -      |
|                                |                                                                                                     | 3     | -           | ○     | ○     | ●/○   | ●     | -     | -     | -     | ○         | ○     | ●     | -     | -     | -     | -      |
|                                |                                                                                                     | 4     | -           | -     | -     | ○     | ○     | ●     | -     | -     | -         | ○     | ○     | ●     | -     | -     | -      |
|                                |                                                                                                     | 5     | -           | -     | -     | -     | -     | ○     | ●     | -     | -         | ○     | ○     | ○     | ●     | -     | -      |
|                                |                                                                                                     | 6     | -           | -     | -     | -     | -     | ●     | ○     | ●     | -         | -     | -     | ○     | ○     | ●     | -      |
|                                |                                                                                                     | 7     | -           | -     | -     | -     | -     | -     | -     | -     | -         | -     | -     | -     | -     | ○     | ●      |
| Union elbow reducing<br>LQ3E-R | <br><b>P.293</b> | 1     | ○           | ●     | -     | -     | -     | -     | -     | -     | -         | -     | -     | -     | -     | -     | -      |
|                                |                                                                                                     | 2     | ○           | ○     | ●     | -     | -     | -     | -     | -     | ○         | ●     | -     | -     | -     | -     | -      |
|                                |                                                                                                     | 3     | -           | ○     | ○     | ●/○   | ●     | -     | -     | -     | ○         | ○     | ●     | -     | -     | -     | -      |
|                                |                                                                                                     | 4     | -           | -     | -     | ○     | ○     | ●     | -     | -     | -         | ○     | ○     | ●     | -     | -     | -      |
|                                |                                                                                                     | 5     | -           | -     | -     | -     | -     | ○     | ●     | -     | -         | ○     | ○     | ○     | ●     | -     | -      |
|                                |                                                                                                     | 6     | -           | -     | -     | -     | -     | ●     | ○     | ●     | -         | -     | -     | ○     | ○     | ●     | -      |
| Union tee reducing<br>LQ3T-R   | <br><b>P.294</b> | 1     | ○/○         | ●/○/○ | -     | -     | -     | -     | -     | -     | -         | -     | -     | -     | -     | -     | -      |
|                                |                                                                                                     | 2     | ○/○         | ○/○   | ●/○/○ | -     | -     | -     | -     | -     | ○/○       | ●/○/○ | -     | -     | -     | -     | -      |
|                                |                                                                                                     | 3     | -           | -     | ○/○   | ●/○/○ | ●/○/○ | -     | -     | -     | ○         | ●/○/○ | ●/○/○ | -     | -     | -     | -      |
|                                |                                                                                                     | 4     | -           | -     | -     | -     | ○/○   | ●/○/○ | -     | -     | -         | ○/○   | ●/○/○ | ●/○/○ | -     | -     | -      |
|                                |                                                                                                     | 5     | -           | -     | -     | -     | -     | ○/○   | ●/○/○ | -     | -         | ○/○   | ●/○/○ | ●/○/○ | ●/○/○ | -     | -      |
|                                |                                                                                                     | 6     | -           | -     | -     | -     | -     | -     | ○/○   | ●/○/○ | -         | ○/○   | ○/○   | ●/○/○ | ●/○/○ | ●/○/○ | -      |

Note) ● : A side tubing O.D. ○ : B side tubing O.D. ◎ : C side tubing O.D.

| Series                                               | Appearance                                                                          | Class | Tubing O.D. |    |    |    |     |     |     |     |           |      |      |      |      |    |
|------------------------------------------------------|-------------------------------------------------------------------------------------|-------|-------------|----|----|----|-----|-----|-----|-----|-----------|------|------|------|------|----|
|                                                      |                                                                                     |       | Metric size |    |    |    |     |     |     |     | Inch size |      |      |      |      |    |
|                                                      |                                                                                     |       | ø3          | ø4 | ø6 | ø8 | ø10 | ø12 | ø19 | ø25 | 1/8"      | 1/4" | 3/8" | 1/2" | 3/4" | 1" |
| Space saving union elbow<br><b>LQ3E-S</b>            |  | P.296 | 2           | -  | -  | ●  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  |
|                                                      |                                                                                     |       | 3           | -  | -  | -  | ●   | ●   | -   | -   | -         | -    | ●    | -    | -    | -  |
|                                                      |                                                                                     |       | 4           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  |
|                                                      |                                                                                     |       | 5           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  |
|                                                      |                                                                                     |       | 6           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  |
|                                                      |                                                                                     |       | 7           | -  | -  | -  | -   | -   | -   | -   | -         | -    | -    | -    | -    | ●  |
|                                                      |                                                                                     |       | 2           | -  | -  | ●  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  |
| Space saving branch tee<br><b>LQ3T-SB</b>            |  | P.297 | 3           | -  | -  | -  | ●   | ●   | -   | -   | -         | -    | ●    | -    | -    | -  |
|                                                      |                                                                                     |       | 4           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  |
|                                                      |                                                                                     |       | 5           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  |
|                                                      |                                                                                     |       | 6           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  |
|                                                      |                                                                                     |       | 2           | -  | -  | ●  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  |
|                                                      |                                                                                     |       | 3           | -  | -  | -  | ●   | ●   | -   | -   | -         | -    | ●    | -    | -    | -  |
| Space saving run tee<br><b>LQ3T-SR</b>               |  | P.298 | 4           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  |
|                                                      |                                                                                     |       | 5           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  |
|                                                      |                                                                                     |       | 6           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  |
|                                                      |                                                                                     |       | 2           | -  | -  | ●  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  |
| Tubing extension straight connector<br><b>LQ3H-T</b> |  | P.299 | 3           | -  | -  | -  | ●   | ●   | -   | -   | -         | -    | ●    | -    | -    | -  |
|                                                      |                                                                                     |       | 4           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  |
|                                                      |                                                                                     |       | 5           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  |
|                                                      |                                                                                     |       | 6           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  |
|                                                      |                                                                                     |       | 7           | -  | -  | -  | -   | -   | -   | -   | -         | -    | -    | -    | -    | ●  |

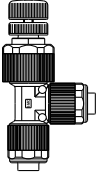
| Series                                            | Appearance                                                                                   | Class | Tubing O.D. |    |    |    |     |     |     |     |           |      |      |      |      |    |        |
|---------------------------------------------------|----------------------------------------------------------------------------------------------|-------|-------------|----|----|----|-----|-----|-----|-----|-----------|------|------|------|------|----|--------|
|                                                   |                                                                                              |       | Metric size |    |    |    |     |     |     |     | Inch size |      |      |      |      |    |        |
|                                                   |                                                                                              |       | ø3          | ø4 | ø6 | ø8 | ø10 | ø12 | ø19 | ø25 | 1/8"      | 1/4" | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" |
| Straight adapter<br>LQ3A                          | <br>P.300   | 2     | -           | -  | ●  | -  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 3     | -           | -  | -  | ●  | ●   | -   | -   | -   | -         | -    | ●    | -    | -    | -  | -      |
|                                                   |                                                                                              | 4     | -           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  | -      |
|                                                   |                                                                                              | 5     | -           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  | -      |
|                                                   |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  | -      |
|                                                   |                                                                                              | 7     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -    | -    | -    | -    | -  | ●      |
| Union flange<br>LQ3F                              | <br>P.302   | 2     | -           | -  | ●  | -  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 3     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 4     | -           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  | -      |
|                                                   |                                                                                              | 5     | -           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  | -      |
|                                                   |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  | -      |
|                                                   |                                                                                              | 7     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -    | -    | -    | -    | -  | ●      |
| Space saving type<br>union elbow<br>LQ3E-SN       | <br>P.303   | 2     | -           | -  | ●  | -  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 3     | -           | -  | -  | ●  | ●   | -   | -   | -   | -         | -    | ●    | -    | -    | -  | -      |
|                                                   |                                                                                              | 4     | -           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  | -      |
|                                                   |                                                                                              | 5     | -           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  | -      |
|                                                   |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  | -      |
|                                                   |                                                                                              | 7     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -    | -    | -    | -    | -  | ●      |
| Space saving type<br>union tee<br>LQ3T-SN         | <br>P.303   | 2     | -           | -  | ●  | -  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 3     | -           | -  | -  | ●  | ●   | -   | -   | -   | -         | -    | ●    | -    | -    | -  | -      |
|                                                   |                                                                                              | 4     | -           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  | -      |
|                                                   |                                                                                              | 5     | -           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  | -      |
|                                                   |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  | -      |
|                                                   |                                                                                              | 7     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -    | -    | -    | -    | -  | ●      |
| Space saving type<br>panel mount union<br>LQ3P-SN | <br>P.303   | 2     | -           | -  | ●  | -  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 3     | -           | -  | -  | ●  | ●   | -   | -   | -   | -         | -    | ●    | -    | -    | -  | -      |
|                                                   |                                                                                              | 4     | -           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  | -      |
|                                                   |                                                                                              | 5     | -           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  | -      |
|                                                   |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  | -      |
|                                                   |                                                                                              | 7     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -    | -    | -    | -    | -  | ●      |
| Space saving type<br>union<br>LQ3U-SN             | <br>P.303 | 2     | -           | -  | ●  | -  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 3     | -           | -  | -  | ●  | ●   | -   | -   | -   | -         | -    | ●    | -    | -    | -  | -      |
|                                                   |                                                                                              | 4     | -           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  | -      |
|                                                   |                                                                                              | 5     | -           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  | -      |
|                                                   |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  | -      |
|                                                   |                                                                                              | 7     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -    | -    | -    | -    | -  | ●      |
| Blanking plug<br>LQ3-P-1                          | <br>P.304 | 1     | ●           | ●  | -  | -  | -   | -   | -   | -   | ●         | -    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 2     | -           | -  | ●  | -  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 3     | -           | -  | -  | ●  | ●   | -   | -   | -   | -         | -    | ●    | -    | -    | -  | -      |
|                                                   |                                                                                              | 4     | -           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  | -      |
|                                                   |                                                                                              | 5     | -           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  | -      |
|                                                   |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  | -      |
|                                                   |                                                                                              | 7     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -    | -    | -    | -    | -  | ●      |
| Tubing plug<br>LQ3-P-2                            | <br>P.304 | 1     | ●           | ●  | -  | -  | -   | -   | -   | -   | ●         | -    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 2     | -           | -  | ●  | -  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 3     | -           | -  | -  | ●  | ●   | -   | -   | -   | -         | -    | ●    | -    | -    | -  | -      |
|                                                   |                                                                                              | 4     | -           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  | -      |
|                                                   |                                                                                              | 5     | -           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  | -      |
|                                                   |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  | -      |
|                                                   |                                                                                              | 7     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -    | -    | -    | -    | -  | ●      |
| Nut<br>LQ3-N                                      | <br>P.304 | 1     | ●           | ●  | -  | -  | -   | -   | -   | -   | ●         | -    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 2     | -           | -  | ●  | -  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  | -      |
|                                                   |                                                                                              | 3     | -           | -  | -  | ●  | ●   | -   | -   | -   | -         | -    | ●    | -    | -    | -  | -      |
|                                                   |                                                                                              | 4     | -           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  | -      |
|                                                   |                                                                                              | 5     | -           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  | -      |
|                                                   |                                                                                              | 6     | -           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | ●  | -      |
|                                                   |                                                                                              | 7     | -           | -  | -  | -  | -   | -   | -   | -   | -         | -    | -    | -    | -    | -  | ●      |



# LVN/LQHB Series

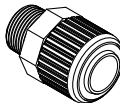
Needle Valve/  
Bore Through Connector

## Needle Valve **P.238**

| Series                     | Appearance                                                                        | Size | Tubing O.D. |    |    |     |     |           |       |      |      |      |
|----------------------------|-----------------------------------------------------------------------------------|------|-------------|----|----|-----|-----|-----------|-------|------|------|------|
|                            |                                                                                   |      | Metric Size |    |    |     |     | Inch Size |       |      |      |      |
|                            |                                                                                   |      | ø4          | ø6 | ø8 | ø10 | ø12 | 1/8"      | 3/16" | 1/4" | 3/8" | 1/2" |
| Needle valve<br><b>LVN</b> |  | 2    | ●           | ○  | -  | -   | -   | ●         | ●     | ○    | -    | -    |
|                            |                                                                                   | 3    | -           | ●  | ●  | ○   | -   | -         | -     | ●    | ○    | -    |
|                            |                                                                                   | 4    | -           | -  | -  | ●   | ○   | -         | -     | -    | ●    | ○    |

Note) ○Basic size ●With reducer

## Bore Through Connector **P.305**

| Series                                | Appearance                                                                        | Size | Tubing O.D. |    |    |    |     |     |     |     |           |      |      |      |      |    |
|---------------------------------------|-----------------------------------------------------------------------------------|------|-------------|----|----|----|-----|-----|-----|-----|-----------|------|------|------|------|----|
|                                       |                                                                                   |      | Metric Size |    |    |    |     |     |     |     | Inch Size |      |      |      |      |    |
|                                       |                                                                                   |      | ø3          | ø4 | ø6 | ø8 | ø10 | ø12 | ø19 | ø25 | 1/8"      | 1/4" | 3/8" | 1/2" | 3/4" | 1" |
| Bore through connector<br><b>LQHB</b> |  | 1    | ●           | ●  | -  | -  | -   | -   | -   | -   | ●         | -    | -    | -    | -    | -  |
|                                       |                                                                                   | 2    | -           | -  | ●  | -  | -   | -   | -   | -   | -         | ●    | -    | -    | -    | -  |
|                                       |                                                                                   | 3    | -           | -  | -  | ●  | ●   | -   | -   | -   | -         | -    | ●    | -    | -    | -  |
|                                       |                                                                                   | 4    | -           | -  | -  | -  | -   | ●   | -   | -   | -         | -    | -    | ●    | -    | -  |
|                                       |                                                                                   | 5    | -           | -  | -  | -  | -   | -   | ●   | -   | -         | -    | -    | -    | ●    | -  |
|                                       |                                                                                   | 6    | -           | -  | -  | -  | -   | -   | -   | ●   | -         | -    | -    | -    | -    | -  |

# High Purity Fluoropolymer Needle Valve

# LVN Series

RoHS

## How to Order

LVN **2** 0 - S **07**

### Body class

| Symbol   | Body class | Orifice dia. |
|----------|------------|--------------|
| <b>2</b> | 2          | ø4.4         |
| <b>3</b> | 3          | ø8           |
| <b>4</b> | 4          | ø10          |

### Port B (OUT) different dia. size

| Symbol                                            | Application                                                           |
|---------------------------------------------------|-----------------------------------------------------------------------|
| <b>Nil</b>                                        | Port A & B same size                                                  |
| Refer to the applicable tubing table to the left. | Different diameter tubing can be selected within the same body class. |

### LQ2 fittings

### A port (IN) Applicable tubing size

| Symbol       | Connecting tubing<br>O.D. | Body class |   |   |
|--------------|---------------------------|------------|---|---|
|              |                           | 2          | 3 | 4 |
| Metric sizes |                           |            |   |   |
| 04           | 4 x 3                     | ●          |   |   |
| 06           | 6 x 4                     | ○          | ● |   |
| 08           | 8 x 6                     |            | ● |   |
| 10           | 10 x 8                    |            | ○ | ● |
| 12           | 12 x 10                   |            |   | ○ |
| Inch sizes   |                           |            |   |   |
| 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"               |            |   | ○ |

○ Basic size ● With reducer

Note 1) Applicable fittings: LQ2

Note 2) For details of the applicable tubing sizes, refer to page 309.



## Different diameter tubing order example

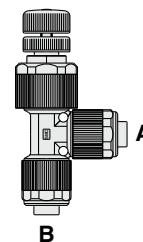
Different diameter tubing (with plug-in reducer) can be selected within the same body class.

(Example) Body class 3

A side: ø10 x ø8

B side: ø8 x ø6

Order as shown below.



LVN30-S **10** **08**

● Different dia. tubing size (B side)

● Applicable tubing size (A side)



## ⚠ Specific Product Precautions

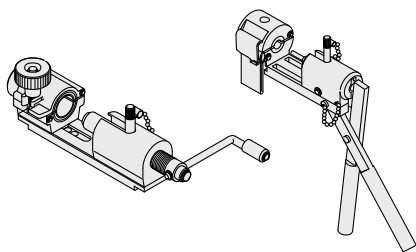
Be sure to read this before handling the products. Refer to page 501 for Safety Instructions.

### Piping

## ⚠ Caution

### 1. Connect tubing with special tools.

Refer to the pamphlet "High-Purity Fluoropolymer Fittings Hyper Fitting/LQ1, 2 Series Work Procedure Instructions" (M-E05-1) for connecting tubing and special tools. (Downloadable from our web site.)



2. Tighten the nut until it touches the end surface of the body, and then tighten it an additional 1/8 turn. If the nut won't turn any further, then it means a sufficient tightening has occurred. Refer to the proper tightening torques shown below.

#### Tightening torque for piping

| Body class | Torque (N·m) |
|------------|--------------|
| 2          | 1.5 to 2.0   |
| 3          | 3.0 to 3.5   |
| 4          | 7.5 to 9.0   |

## Standard Specifications

| Model                     | LVN20       | LVN30             | LVN40      |
|---------------------------|-------------|-------------------|------------|
| Tubing O.D. (Note)        | Metric size | 4, 6              | 6, 8, 10   |
|                           | Inch size   | 1/8", 3/16", 1/4" | 1/4", 3/8" |
| Orifice diameter          | ø4.4        | ø8                | ø10        |
| Flow rate characteristics | Kv          | 0.4               | 1.2        |
|                           | Cv          | 0.5               | 1.4        |
| Withstand pressure (MPa)  | 1           |                   |            |
| Operating pressure (MPa)  | 0 to 0.5    |                   |            |
| Fluid temperature (°C)    | 5 to 90     |                   |            |
| Ambient temperature (°C)  | 0 to 60     |                   |            |
| Weight (kg)               | 0.055       | 0.115             | 0.185      |

Note) For details of the applicable tubing sizes, refer to page 309.

## Different Diameter Tubing Applicable with Reducer

Different diameter tubing can be selected (within a body class) by using a nut and insert bushing (reducer). Applicable fitting: LQ2

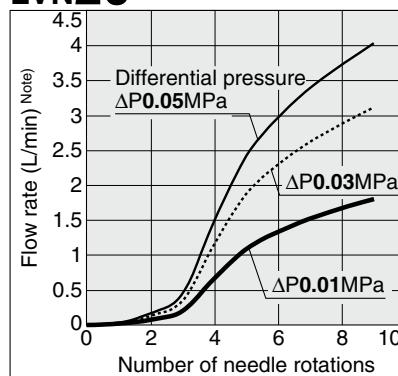
| Body class | Tubing O.D.  |   |   |    |    |            |       |      |      |      |
|------------|--------------|---|---|----|----|------------|-------|------|------|------|
|            | Metric sizes |   |   |    |    | Inch sizes |       |      |      |      |
|            | 4            | 6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

Note) Refer to page 277 for information on changing tubing sizes.

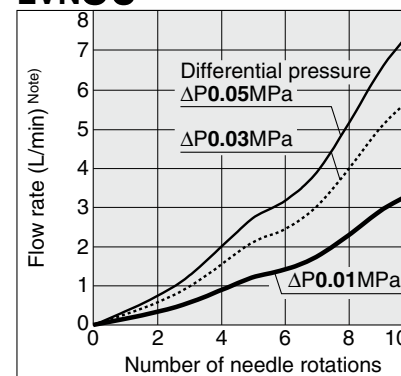
○ Basic size ● With reducer

## Flow Rate Characteristics (Fluid: Water)

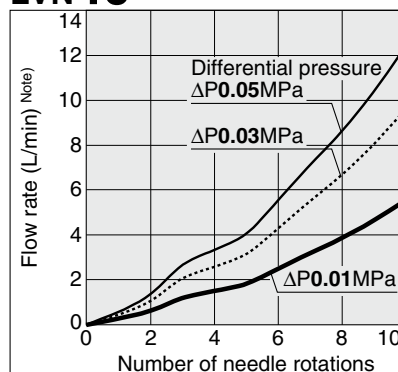
### LVN20



### LVN30

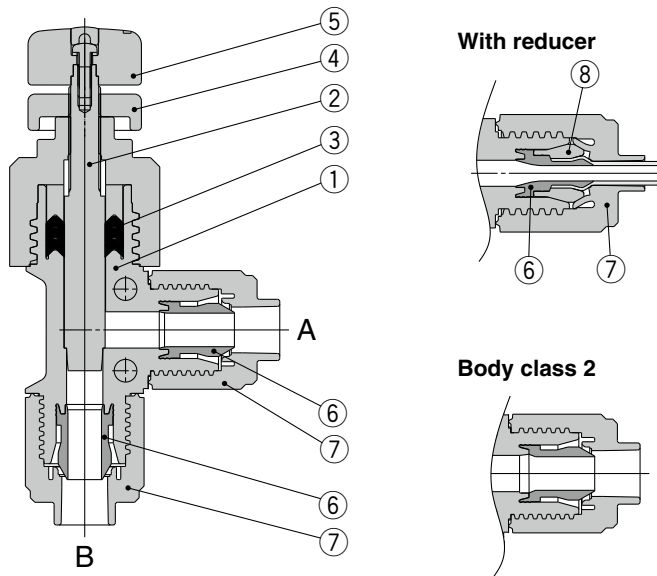


### LVN40



Note) As the LVN series cannot be used as a stop valve, it is not possible to set the flow rate to 0 when the number of needle rotations is set to 0. For further details, refer to the "Operating Precautions."

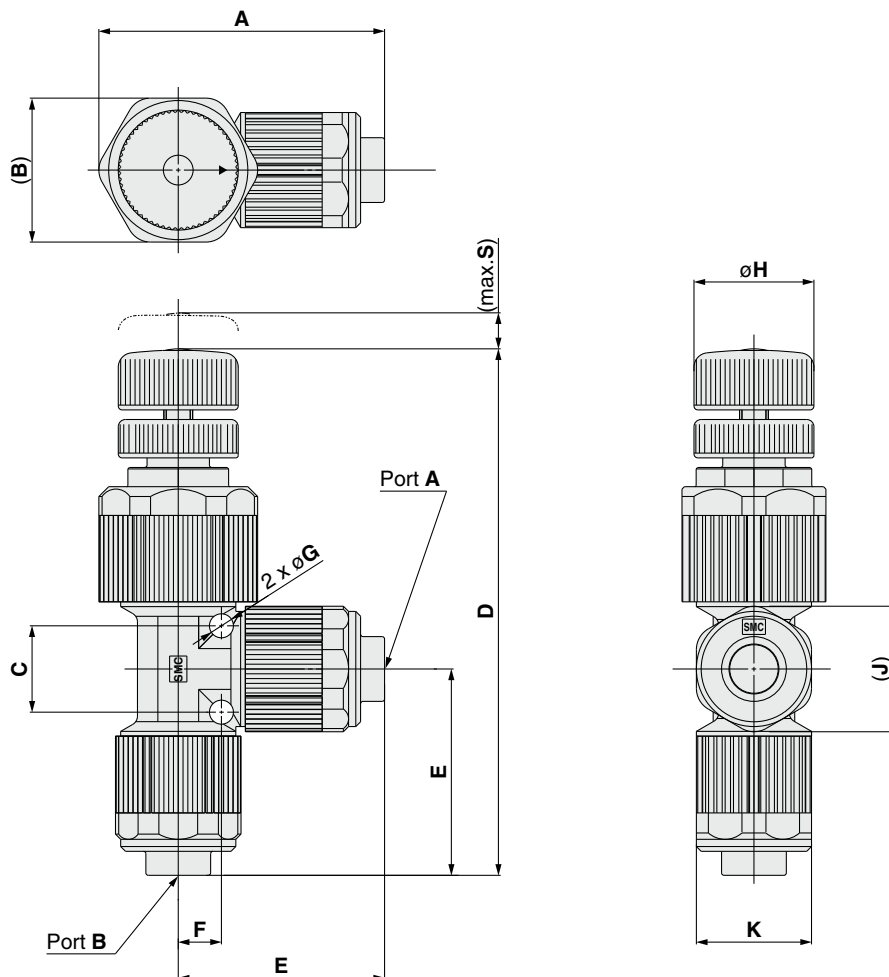
## Construction



### Part lists

| No. | Description       | Material |
|-----|-------------------|----------|
| 1   | Body              | PFA      |
| 2   | Needle            | PCTFE    |
| 3   | V seal            | PTFE     |
| 4   | Lock nut          | PVDF     |
| 5   | Adjustment handle | PVDF     |
| 6   | Insert bushing    | PFA      |
| 7   | Nut               | PFA      |
| 8   | Collar            | PFA      |

## Dimensions



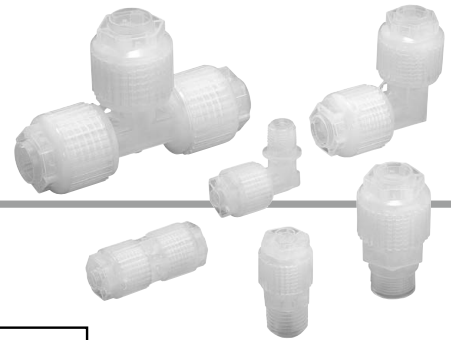
| Model | A  | B  | C  | D   | E    | F  | G | H  | J  | K  | S   |
|-------|----|----|----|-----|------|----|---|----|----|----|-----|
| LVN20 | 48 | 24 | 12 | 88  | 34.5 | 6  | 4 | 14 | 20 | 18 | 2.4 |
| LVN30 | 60 | 30 | 18 | 110 | 43   | 9  | 5 | 25 | 26 | 24 | 7.5 |
| LVN40 | 72 | 36 | 22 | 124 | 52   | 11 | 6 | 25 | 33 | 30 | 8   |

# Fluoropolymer Fittings Hyper Fittings

## LQ1 Series

RoHS

### How to Order



#### Threaded connection

LQ1 **H** **11** **-M** **-**

#### Fitting type

| Symbol   | Type       |
|----------|------------|
| <b>H</b> | Connector  |
| <b>L</b> | Elbow      |
| <b>R</b> | Run tee    |
| <b>B</b> | Branch tee |

#### Thread type

| Symbol     | Type  |
|------------|-------|
| <b>Nil</b> | R, Rc |
| <b>N</b>   | NPT   |

#### Piping type

| Symbol   | Type   |
|----------|--------|
| <b>M</b> | Male   |
| <b>F</b> | Female |

#### Packaging

| Symbol     | Packaging                                    |
|------------|----------------------------------------------|
| <b>Nil</b> | Clean packaging equivalent to ISO Class 5    |
| <b>1</b>   | Standard packaging equivalent to ISO Class 7 |

#### Size combination

| Symbol   | Class     | No.       | Applicable tubing size (mm) | Port size |
|----------|-----------|-----------|-----------------------------|-----------|
| <b>1</b> | <b>1</b>  | <b>1</b>  | 4 x 3                       | 1/8"      |
| <b>1</b> | <b>2</b>  | <b>2</b>  | 3 x 2                       | 1/8"      |
| <b>2</b> | <b>1</b>  | <b>1</b>  | 6 x 4                       | 1/8"      |
| <b>2</b> | <b>2</b>  | <b>2</b>  | 4 x 3                       | 1/8"      |
| <b>2</b> | <b>3</b>  | <b>3</b>  | 3 x 2                       | 1/8"      |
| <b>2</b> | <b>3</b>  | <b>3</b>  | 6 x 4                       | 1/8"      |
| <b>2</b> | <b>4</b>  | <b>4</b>  | 4 x 3                       | 1/4"      |
| <b>2</b> | <b>F</b>  | <b>3</b>  | 3 x 2                       | 1/4"      |
| <b>3</b> | <b>1</b>  | <b>1</b>  | 10 x 8                      | 1/4"      |
| <b>3</b> | <b>2</b>  | <b>2</b>  | 8 x 6                       | 1/4"      |
| <b>3</b> | <b>3</b>  | <b>3</b>  | 6 x 4                       | 1/4"      |
| <b>3</b> | <b>4</b>  | <b>4</b>  | 10 x 8                      | 1/4"      |
| <b>3</b> | <b>5</b>  | <b>5</b>  | 8 x 6                       | 3/8"      |
| <b>3</b> | <b>6</b>  | <b>6</b>  | 6 x 4                       | 3/8"      |
| <b>3</b> | <b>7</b>  | <b>7</b>  | 4 x 3                       | 3/8"      |
| <b>3</b> | <b>E</b>  | <b>3</b>  | 3 x 2                       | 3/8"      |
| <b>3</b> | <b>9</b>  | <b>9</b>  | 10 x 8                      | 1/8"      |
| <b>3</b> | <b>10</b> | <b>10</b> | 8 x 6                       | 1/8"      |
| <b>4</b> | <b>1</b>  | <b>1</b>  | 12 x 10                     | 3/8"      |
| <b>4</b> | <b>2</b>  | <b>2</b>  | 10 x 8                      | 3/8"      |
| <b>4</b> | <b>3</b>  | <b>3</b>  | 12 x 10                     | 3/8"      |
| <b>4</b> | <b>4</b>  | <b>4</b>  | 10 x 8                      | 1/2"      |
| <b>4</b> | <b>5</b>  | <b>5</b>  | 8 x 6                       | 1/2"      |
| <b>4</b> | <b>6</b>  | <b>6</b>  | 6 x 4                       | 1/2"      |
| <b>4</b> | <b>F</b>  | <b>3</b>  | 3 x 2                       | 1/2"      |
| <b>4</b> | <b>9</b>  | <b>9</b>  | 12 x 10                     | 1/4"      |
| <b>5</b> | <b>1</b>  | <b>1</b>  | 19 x 16                     | 1/2"      |
| <b>5</b> | <b>2</b>  | <b>2</b>  | 12 x 10                     | 1/2"      |
| <b>5</b> | <b>3</b>  | <b>3</b>  | 19 x 16                     | 3/4"      |
| <b>5</b> | <b>4</b>  | <b>4</b>  | 12 x 10                     | 3/4"      |
| <b>5</b> | <b>5</b>  | <b>5</b>  | 10 x 8                      | 3/4"      |
| <b>5</b> | <b>7</b>  | <b>7</b>  | 6 x 4                       | 3/4"      |
| <b>5</b> | <b>8</b>  | <b>8</b>  | 19 x 16                     | 1/4"      |
| <b>5</b> | <b>9</b>  | <b>9</b>  | 19 x 16                     | 3/8"      |
| <b>6</b> | <b>1</b>  | <b>1</b>  | 25 x 22                     | 3/4"      |
| <b>6</b> | <b>2</b>  | <b>2</b>  | 19 x 16                     | 3/4"      |
| <b>6</b> | <b>3</b>  | <b>3</b>  | 25 x 22                     | 1"        |
| <b>6</b> | <b>4</b>  | <b>4</b>  | 19 x 16                     | 1"        |
| <b>6</b> | <b>5</b>  | <b>5</b>  | 12 x 10                     | 1/2"      |
| <b>6</b> | <b>6</b>  | <b>6</b>  | 25 x 22                     | 1/2"      |

| Symbol   | Class    | No.      | Applicable tubing size (inch) | Port size |
|----------|----------|----------|-------------------------------|-----------|
| <b>1</b> | <b>A</b> | <b>1</b> | 1/8" x 0.086"                 | 1/8"      |
| <b>2</b> | <b>A</b> | <b>2</b> | 1/4" x 5/32"                  | 1/8"      |
| <b>2</b> | <b>B</b> | <b>2</b> | 3/16" x 1/8"                  | 1/8"      |
| <b>2</b> | <b>C</b> | <b>2</b> | 1/8" x 0.086"                 | 1/8"      |
| <b>2</b> | <b>D</b> | <b>2</b> | 1/4" x 5/32"                  | 1/4"      |
| <b>2</b> | <b>E</b> | <b>2</b> | 3/16" x 1/8"                  | 1/4"      |
| <b>2</b> | <b>F</b> | <b>2</b> | 1/8" x 0.086"                 | 1/4"      |
| <b>3</b> | <b>A</b> | <b>3</b> | 3/8" x 1/4"                   | 1/4"      |
| <b>3</b> | <b>B</b> | <b>3</b> | 1/4" x 5/32"                  | 1/4"      |
| <b>3</b> | <b>C</b> | <b>3</b> | 3/8" x 1/4"                   | 3/8"      |
| <b>3</b> | <b>D</b> | <b>3</b> | 1/4" x 5/32"                  | 3/8"      |
| <b>3</b> | <b>E</b> | <b>3</b> | 1/8" x 0.086"                 | 3/8"      |
| <b>3</b> | <b>F</b> | <b>3</b> | 3/8" x 1/4"                   | 1/8"      |
| <b>4</b> | <b>A</b> | <b>4</b> | 1/2" x 3/8"                   | 3/8"      |
| <b>4</b> | <b>B</b> | <b>4</b> | 3/8" x 1/4"                   | 3/8"      |
| <b>4</b> | <b>C</b> | <b>4</b> | 1/2" x 3/8"                   | 1/2"      |
| <b>4</b> | <b>D</b> | <b>4</b> | 3/8" x 1/4"                   | 1/2"      |
| <b>4</b> | <b>E</b> | <b>4</b> | 1/4" x 5/32"                  | 1/2"      |
| <b>4</b> | <b>F</b> | <b>4</b> | 1/8" x 0.086"                 | 1/2"      |
| <b>5</b> | <b>A</b> | <b>5</b> | 3/4" x 5/8"                   | 1/2"      |
| <b>5</b> | <b>B</b> | <b>5</b> | 1/2" x 3/8"                   | 1/2"      |
| <b>5</b> | <b>C</b> | <b>5</b> | 3/4" x 5/8"                   | 3/4"      |
| <b>5</b> | <b>D</b> | <b>5</b> | 1/2" x 3/8"                   | 3/4"      |
| <b>5</b> | <b>E</b> | <b>5</b> | 3/8" x 1/4"                   | 3/4"      |
| <b>5</b> | <b>F</b> | <b>5</b> | 1/4" x 5/32"                  | 1/4"      |
| <b>5</b> | <b>G</b> | <b>5</b> | 3/4" x 5/8"                   | 3/8"      |
| <b>6</b> | <b>A</b> | <b>6</b> | 1" x 7/8"                     | 3/4"      |
| <b>6</b> | <b>B</b> | <b>6</b> | 3/4" x 5/8"                   | 3/4"      |
| <b>6</b> | <b>C</b> | <b>6</b> | 1" x 7/8"                     | 1"        |
| <b>6</b> | <b>D</b> | <b>6</b> | 3/4" x 5/8"                   | 1"        |
| <b>6</b> | <b>E</b> | <b>6</b> | 1/2" x 3/8"                   | 1/2"      |
| <b>6</b> | <b>F</b> | <b>6</b> | 1" x 7/8"                     | 1/2"      |

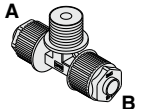
#### For different diameter (on B side)

| Symbol                                | Application                                                           |
|---------------------------------------|-----------------------------------------------------------------------|
| <b>Nil</b>                            | Same tubing size                                                      |
| Refer to the applicable tubing table. | Different diameter tubing can be selected within the same body class. |
| LQ1B                                  |                                                                       |
| Branch tee male                       | Branch tee female                                                     |
| <b>A</b>                              | <b>A</b>                                                              |
| <b>B</b>                              | <b>B</b>                                                              |
| LQ1R                                  |                                                                       |
| Run tee male                          | Run tee female                                                        |
| <b>A</b>                              | <b>A</b>                                                              |
| <b>B</b>                              | <b>B</b>                                                              |

The table of combination is the same as that for A side.  
Note 1) Only branch tees and run tees can take different diameters.  
Note 2) Use of different diameters is not available with size 1.

#### Different diameter tubing order example

Different diameter tubing (with plug-in reducer) can be selected within the same body class.  
(Example) Branch tee male  
Body class 3  
A side:  $\phi 10 \times \phi 8$  B side:  $\phi 8 \times \phi 6$   
Order as shown below.



Only select combinations from the same body class.

LQ1 **B** **31** **32** - M

• Different dia. tubing size (B side)  
• Applicable tubing size (A side)  
• Branch tee male

Tubing in inches can be combined with that in mm in the same body size. Example) LQ1B313A-M

#### Branch tee male/Female (LQ1B) How to Order

As this product is bilaterally symmetric (A side and B side), depending on the combination, 2 identical part numbers may be listed in series. Be sure to list symbols in ascending alphanumerical order.

LQ1B **31** **32** - M

Listed in ascending numerical order

Example 1) Ascending numerical order

Example 2) Ascending alphanumerical order

Correct) LQ1B **31** **32** -M

Correct) LQ1B **37** **3E** -M

Incorrect) LQ1B **32** **31** -M

Incorrect) LQ1B **3E** **37** -M

Note 1) Tubing of different sizes can only be used in combination if within the same body class. However, for class 1, tubing of different sizes cannot be used in combination.

Note 2) Combinations will differ depending on the type of each fitting. For the availability of combinations, refer to pages 244 to 251. These are produced upon receipt of order by part number.

Note 3) For details of the applicable tubing sizes, refer to page 309.

Note 4) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.



## How to Order

### Tubing connection

**LQ1 E 11** —

#### Fitting type

| Symbol   | Type              |
|----------|-------------------|
| <b>E</b> | Union elbow       |
| <b>T</b> | Union tee         |
| <b>P</b> | Panel mount union |
| <b>U</b> | Union             |
| <b>F</b> | Union flange      |

#### Packaging

| Symbol     | Packaging                                    |
|------------|----------------------------------------------|
| <b>Nil</b> | Clean packaging equivalent to ISO Class 5    |
| <b>1</b>   | Standard packaging equivalent to ISO Class 7 |

#### Combination of different diameter (on B side)

| Symbol   | Class    | No.      | Applicable tubing size (mm) |
|----------|----------|----------|-----------------------------|
| <b>1</b> | <b>1</b> | <b>1</b> | 4 x 3                       |
| <b>1</b> | <b>2</b> | <b>2</b> | 3 x 2                       |
| <b>2</b> | <b>1</b> | <b>1</b> | 6 x 4                       |
| <b>2</b> | <b>2</b> | <b>2</b> | 4 x 3                       |
| <b>2</b> | <b>C</b> | <b>C</b> | 3 x 2                       |
| <b>3</b> | <b>1</b> | <b>1</b> | 10 x 8                      |
| <b>3</b> | <b>2</b> | <b>2</b> | 8 x 6                       |
| <b>3</b> | <b>3</b> | <b>3</b> | 6 x 4                       |
| <b>4</b> | <b>1</b> | <b>1</b> | 12 x 10                     |
| <b>4</b> | <b>2</b> | <b>2</b> | 10 x 8                      |
| <b>5</b> | <b>1</b> | <b>1</b> | 19 x 16                     |
| <b>5</b> | <b>2</b> | <b>2</b> | 12 x 10                     |
| <b>6</b> | <b>1</b> | <b>1</b> | 25 x 22                     |
| <b>6</b> | <b>2</b> | <b>2</b> | 19 x 16                     |

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

Note 1) Tubing of different sizes can only be used in combination if within the same body class. However, use of different diameters is not available with size 1.

Note 2) For details of the applicable tubing sizes, refer to page 309.

#### Size combination

| Symbol   | Class    | No.      | Applicable tubing size (mm) |
|----------|----------|----------|-----------------------------|
| <b>1</b> | <b>1</b> | <b>1</b> | 4 x 3                       |
| <b>1</b> | <b>2</b> | <b>2</b> | 3 x 2                       |
| <b>2</b> | <b>1</b> | <b>1</b> | 6 x 4                       |
| <b>2</b> | <b>2</b> | <b>2</b> | 4 x 3                       |
| <b>2</b> | <b>C</b> | <b>C</b> | 3 x 2                       |
| <b>3</b> | <b>1</b> | <b>1</b> | 10 x 8                      |
| <b>3</b> | <b>2</b> | <b>2</b> | 8 x 6                       |
| <b>3</b> | <b>3</b> | <b>3</b> | 6 x 4                       |
| <b>4</b> | <b>1</b> | <b>1</b> | 12 x 10                     |
| <b>4</b> | <b>2</b> | <b>2</b> | 10 x 8                      |
| <b>5</b> | <b>1</b> | <b>1</b> | 19 x 16                     |
| <b>5</b> | <b>2</b> | <b>2</b> | 12 x 10                     |
| <b>6</b> | <b>1</b> | <b>1</b> | 25 x 22                     |
| <b>6</b> | <b>2</b> | <b>2</b> | 19 x 16                     |

| Symbol   | Class    | No.      | Applicable tubing size (inch) | Applicable flange |
|----------|----------|----------|-------------------------------|-------------------|
| <b>1</b> | <b>A</b> | <b>A</b> | 1/8" x 0.086"                 | —                 |
| <b>2</b> | <b>A</b> | <b>A</b> | 1/4" x 5/32"                  | —                 |
| <b>2</b> | <b>B</b> | <b>B</b> | 3/16" x 1/8"                  | —                 |
| <b>2</b> | <b>C</b> | <b>C</b> | 1/8" x 0.086"                 | —                 |
| <b>3</b> | <b>A</b> | <b>A</b> | 3/8" x 1/4"                   | —                 |
| <b>3</b> | <b>B</b> | <b>B</b> | 1/4" x 5/32"                  | —                 |
| <b>4</b> | <b>A</b> | <b>A</b> | 1/2" x 3/8"                   | 15A               |
| <b>4</b> | <b>B</b> | <b>B</b> | 3/8" x 1/4"                   | —                 |
| <b>5</b> | <b>A</b> | <b>A</b> | 3/4" x 5/8"                   | 20A               |
| <b>5</b> | <b>B</b> | <b>B</b> | 1/2" x 3/8"                   | —                 |
| <b>6</b> | <b>A</b> | <b>A</b> | 1" x 7/8"                     | 25A               |
| <b>6</b> | <b>B</b> | <b>B</b> | 3/4" x 5/8"                   | —                 |

| Symbol                                | Application                                                           |
|---------------------------------------|-----------------------------------------------------------------------|
| <b>Nil</b>                            | Same tubing size                                                      |
| Refer to the applicable tubing table. | Different diameter tubing can be selected within the same body class. |
| Union elbow<br><b>LQ1E</b>            | Union tee<br><b>LQ1T</b>                                              |
| Panel mount union<br><b>LQ1P</b>      | Union<br><b>LQ1U</b>                                                  |

Note 1) Tubing of different sizes can only be used in combination if within the same body class. However, for class 1, tubing of different sizes cannot be used in combination.

Note 2) Sizes 1 to 3 are not available for the union flange.

Note 3) For Union flange, nut sizes 4 and 5 are as shown below.

LQ1F4□: LQ-4N□□

LQ1F5□: LQ-5N□□

Note 4) Combinations will differ depending on the type of each fitting. For the availability of combinations, refer to pages 252 to 255.

Note 5) For details of the applicable tubing sizes, refer to page 309.

Note 6) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

### Different diameter tubing order example

Different diameter tubing (with plug-in reducer) can be selected within the same body class.

(Example) Union elbow

Body class 3

A side:  $\phi 10 \times \phi 8$  B side:  $\phi 8 \times \phi 6$

Order as shown below.

**LQ1 E 31 32**

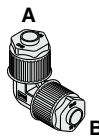
Only select combinations from the same body class.

• Different dia. tubing size (B side)

• Applicable tubing size (A side)

• Union elbow

Tubing in inches can be combined with that in mm in the same body size. Example) LQ1E313A



### Union elbow (LQ1E)/Union (LQ1U) How to Order

As this product is bilaterally symmetric (A side and B side), depending on the combination, 2 identical part numbers may be listed in series. Be sure to list symbols in ascending alphanumerical order.

**LQ1E 31 32**

Listed in ascending numerical order

Example 1) Ascending numerical order

Correct) LQ1E 31 32

Incorrect) LQ1E 32 31

Example 2) Ascending alphanumerical order

Correct) LQ1E 31 3A

Incorrect) LQ1E 3A 31

# LQ1 Series

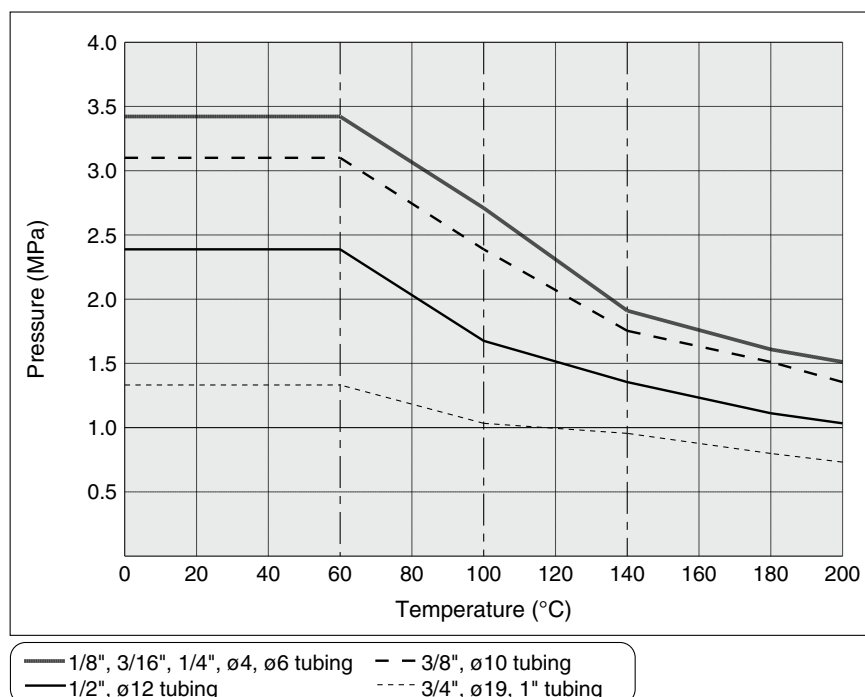


## Specifications

| Feature \ Model                             | LQ1□10                                                                  | LQ1□20 | LQ1□30 | LQ1□40 | LQ1□50 | LQ1□60 |
|---------------------------------------------|-------------------------------------------------------------------------|--------|--------|--------|--------|--------|
| <b>Material</b>                             | NEW PFA <sup>Note)</sup>                                                |        |        |        |        |        |
| <b>Maximum operating pressure (at 20°C)</b> | 1.0 MPa                                                                 |        |        |        |        |        |
| <b>Proof pressure</b>                       | Refer to the withstand pressure and heat resistance performance curves. |        |        |        |        |        |
| <b>Operating temperature</b>                | 0 to 200°C                                                              |        |        |        |        |        |

Note) For products produced upon receipt of order, the fitting body is made of PTFE.

## Withstand Pressure and Heat Resistance Performance

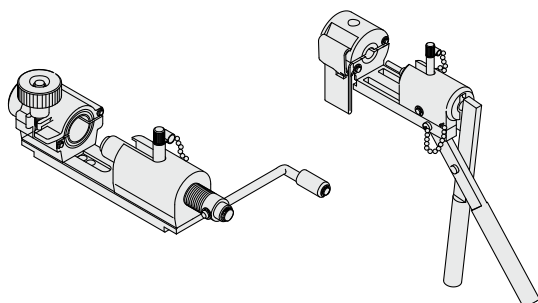


## Piping

### Caution

#### 1. Connect tubing with special tools

Refer to the pamphlet "High-Purity Fluoropolymer Fittings Hyper Fitting/LQ1, 2 Series Work Procedure Instructions" (M-E05-1) for connecting tubing and special tools. (Downloadable from our web site.)



2. Tighten the nut until it touches the end surface of the body, and then tighten it an additional 1/8 turn. If the nut won't turn any further, then it means a sufficient tightening has occurred. Refer to the proper tightening torques shown below.

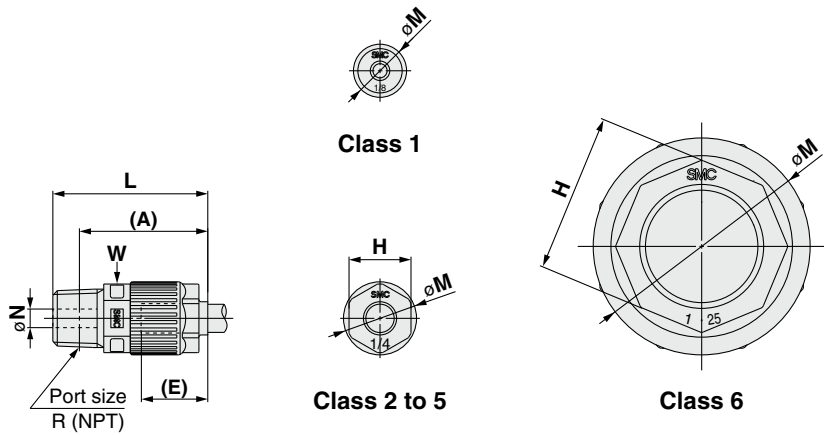
#### Tightening torque for piping

| Body class | Torque (N·m) |
|------------|--------------|
| 2          | 0.3 to 0.4   |
| 3          | 0.8 to 1.0   |
| 4          | 1.0 to 1.2   |
| 5          | 2.5 to 3.0   |
| 6          | 5.5 to 6.0   |

Note) In the case of body class 1, the nut should be tightened manually.

## Dimensions

### Male Connector: LQ1H-M



(A) shows the reference dimension after connection.  
(E) shows the approximate dimension of the inserted tubing from the end of the nut.  
"W" is width across flats dimension.

### Metric sizes

| Model      | Applicable tubing O.D. | Connection threads R/NPT | A    | E    | H  | L    | M    | N    | Min. port size | W  |
|------------|------------------------|--------------------------|------|------|----|------|------|------|----------------|----|
| LQ1H11-M□  | ø4                     | 1/8"                     | 21   | 11   | —  | 25   | 11.5 | 4    | 2.6            | 10 |
| LQ1H12-M□  | ø3                     | 1/8"                     | 21   | 11   | —  | 25   | 11.5 | 4    | 1.8            | 10 |
| LQ1H21-M□  | ø6                     | 1/8"                     | 31.5 | 18   | —  | 35   | 16.5 | 4.4  | 3.6            | 14 |
| LQ1H22-M□  | ø4                     | 1/8"                     | 31.5 | 12.5 | 14 | 35   | 16.5 | 4.4  | 2.6            | 14 |
| LQ1H2C-M□  | ø3                     | 1/8"                     | 31.5 | 13.5 | 14 | 35   | 16.5 | 4.4  | 1.8            | 14 |
| LQ1H23-M□  | ø6                     | 1/4"                     | 29   | 18   | —  | 35   | 16.5 | 6    | 3.6            | 14 |
| LQ1H24-M□  | ø4                     | 1/4"                     | 29   | 12.5 | 14 | 35   | 16.5 | 6    | 2.6            | 14 |
| LQ1H2F-M□  | ø3                     | 1/4"                     | 29   | 13.5 | 14 | 35   | 16.5 | 6    | 1.8            | 14 |
| LQ1H31-M□  | ø10                    | 1/4"                     | 36.5 | 22.5 | 17 | 42.5 | 23   | 6    | 6              | 19 |
| LQ1H32-M□  | ø8                     | 1/4"                     | 36.5 | 21   | 17 | 42.5 | 23   | 6    | 5.5            | 19 |
| LQ1H33-M□  | ø6                     | 1/4"                     | 36.5 | 21   | 17 | 42.5 | 23   | 6    | 3.6            | 19 |
| LQ1H34-M□  | ø10                    | 3/8"                     | 36   | 22.5 | 17 | 42.5 | 23   | 10   | 7.4            | 19 |
| LQ1H35-M□  | ø8                     | 3/8"                     | 36   | 21   | 17 | 42.5 | 23   | 10   | 5.5            | 19 |
| LQ1H36-M□  | ø6                     | 3/8"                     | 36   | 21   | 17 | 42.5 | 23   | 10   | 3.6            | 19 |
| LQ1H37-M□  | ø4                     | 3/8"                     | 31.5 | 12.5 | 14 | 37.6 | 16.5 | 10   | 2.6            | 19 |
| LQ1H3E-M□  | ø3                     | 3/8"                     | 31.5 | 13.5 | 14 | 37.6 | 16.5 | 10   | 1.8            | 19 |
| LQ1H39-M□  | ø10                    | 1/8"                     | 34.5 | 22.5 | 17 | 38   | 23   | 4.4  | 4.4            | 23 |
| LQ1H310-M□ | ø8                     | 1/8"                     | 34.5 | 21   | 17 | 38   | 23   | 4.4  | 4.4            | 23 |
| LQ1H41-M□  | ø12                    | 3/8"                     | 46   | 27   | 21 | 52   | 28   | 8    | 8              | 23 |
| LQ1H42-M□  | ø10                    | 3/8"                     | 46   | 24   | 21 | 52   | 28   | 8    | 7.4            | 23 |
| LQ1H43-M□  | ø12                    | 3/8"                     | 44   | 27   | 21 | 52   | 28   | 10   | 9.4            | 23 |
| LQ1H44-M□  | ø10                    | 3/8"                     | 44   | 24   | 21 | 52   | 28   | 10   | 7.4            | 23 |
| LQ1H45-M□  | ø8                     | 1/2"                     | 39.5 | 21   | 17 | 47.5 | 23   | 10   | 5.5            | 23 |
| LQ1H46-M□  | ø6                     | 1/2"                     | 39.5 | 21   | 17 | 47.5 | 23   | 10   | 3.6            | 23 |
| LQ1H4F-M□  | ø3                     | 1/2"                     | 34   | 13.5 | 14 | 42   | 16.5 | 10   | 1.8            | 23 |
| LQ1H49-M□  | ø12                    | 1/4"                     | 42   | 27   | 21 | 48   | 28   | 6    | 6              | 23 |
| LQ1H51-M□  | ø19                    | 1/2"                     | 55   | 31.5 | 26 | 62.5 | 39   | 10   | 10             | 32 |
| LQ1H52-M□  | ø12                    | 1/2"                     | 55   | 29   | 26 | 62.5 | 39   | 10   | 9.4            | 32 |
| LQ1H53-M□  | ø19                    | 3/4"                     | 53.5 | 31.5 | 26 | 62.5 | 39   | 16   | 15             | 32 |
| LQ1H54-M□  | ø12                    | 3/4"                     | 53.5 | 29   | 26 | 62.5 | 39   | 16   | 9.4            | 32 |
| LQ1H55-M□  | ø10                    | 3/4"                     | 43.5 | 22.5 | 17 | 52.5 | 23   | 16   | 7.4            | 32 |
| LQ1H57-M□  | ø6                     | 3/4"                     | 43.5 | 21   | 17 | 52.5 | 23   | 16   | 3.6            | 32 |
| LQ1H58-M□  | ø19                    | 1/4"                     | 52   | 31.5 | 26 | 58   | 39   | 6    | 6              | 46 |
| LQ1H59-M□  | ø19                    | 3/8"                     | 52   | 31.5 | 26 | 58   | 39   | 8    | 8              | 46 |
| LQ1H61-M□  | ø25                    | 3/4"                     | 72   | 43   | 36 | 81   | 49   | 16   | 16             | 46 |
| LQ1H62-M□  | ø19                    | 3/4"                     | 72   | 35   | 36 | 81   | 49   | 16   | 15             | 46 |
| LQ1H63-M□  | ø25                    | 1"                       | 71   | 43   | 36 | 81   | 49   | 22.5 | 21.2           | 46 |
| LQ1H64-M□  | ø19                    | 1"                       | 71   | 35   | 36 | 81   | 49   | 22.5 | 15             | 46 |
| LQ1H65-M□  | ø12                    | 1"                       | 61   | 29   | 26 | 71   | 39   | 10   | 9.4            | 46 |
| LQ1H66-M□  | ø25                    | 1/2"                     | 69.5 | 43   | 36 | 77.5 | 49   | 10   | 10             | 46 |

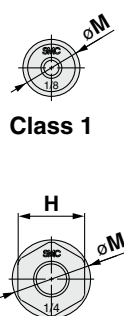
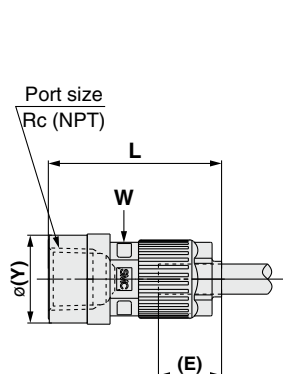
### Inch sizes

| Model     | Applicable tubing O.D. | Connection threads R/NPT | A    | E    | H  | L    | M    | N    | Min. port size | W  |
|-----------|------------------------|--------------------------|------|------|----|------|------|------|----------------|----|
| LQ1H1A-M□ | 1/8"                   | 1/8"                     | 21   | 11   | —  | 25   | 11.5 | 4    | 1.8            | 10 |
| LQ1H2A-M□ | 1/4"                   | 1/8"                     | 31.5 | 17   | —  | 35   | 16.5 | 4.4  | 3.6            | 14 |
| LQ1H2B-M□ | 3/16"                  | 1/8"                     | 31.5 | 14.5 | 14 | 35   | 16.5 | 4.4  | 2.9            | 14 |
| LQ1H2C-M□ | 1/8"                   | 1/8"                     | 31.5 | 13.5 | 14 | 35   | 16.5 | 4.4  | 1.8            | 14 |
| LQ1H2D-M□ | 1/4"                   | 1/4"                     | 29   | 17   | 14 | 35   | 16.5 | 6    | 3.6            | 14 |
| LQ1H2E-M□ | 3/16"                  | 1/4"                     | 29   | 14.5 | 14 | 35   | 16.5 | 6    | 2.9            | 14 |
| LQ1H2F-M□ | 1/8"                   | 1/4"                     | 29   | 13.5 | 14 | 35   | 16.5 | 6    | 1.8            | 14 |
| LQ1H3A-M□ | 3/8"                   | 1/4"                     | 36.5 | 22.5 | 17 | 42.5 | 23   | 6    | 5.8            | 19 |
| LQ1H3B-M□ | 1/4"                   | 1/4"                     | 36.5 | 20   | 17 | 42.5 | 23   | 6    | 3.6            | 19 |
| LQ1H3C-M□ | 3/8"                   | 3/8"                     | 36   | 22.5 | 17 | 42.5 | 23   | 10   | 5.8            | 19 |
| LQ1H3D-M□ | 1/4"                   | 3/8"                     | 36   | 20   | 17 | 42.5 | 23   | 10   | 3.6            | 19 |
| LQ1H3E-M□ | 1/8"                   | 1/8"                     | 31.5 | 13.5 | 14 | 37.6 | 16.5 | 10   | 1.8            | 19 |
| LQ1H3F-M□ | 3/8"                   | 1/8"                     | 34.5 | 22.5 | 17 | 38   | 23   | 4.4  | 4.4            | 19 |
| LQ1H4A-M□ | 1/2"                   | 3/8"                     | 46   | 27   | 21 | 52   | 28   | 8    | 8              | 23 |
| LQ1H4B-M□ | 3/8"                   | 3/8"                     | 46   | 24   | 21 | 52   | 28   | 8    | 5.8            | 23 |
| LQ1H4C-M□ | 1/2"                   | 1/2"                     | 44   | 27   | 21 | 52   | 28   | 10   | 9              | 23 |
| LQ1H4D-M□ | 3/8"                   | 1/2"                     | 44   | 24   | 21 | 52   | 28   | 10   | 5.8            | 23 |
| LQ1H4E-M□ | 1/4"                   | 1/2"                     | 39.5 | 20   | 17 | 47.5 | 23   | 10   | 3.6            | 23 |
| LQ1H4F-M□ | 1/8"                   | 1/2"                     | 34   | 13.5 | 14 | 42   | 16.5 | 10   | 1.8            | 23 |
| LQ1H4G-M□ | 1/2"                   | 1/4"                     | 42   | 27   | 21 | 48   | 28   | 6    | 6              | 23 |
| LQ1H5A-M□ | 3/4"                   | 1/2"                     | 55   | 31.5 | 26 | 62.5 | 39   | 10   | 10             | 32 |
| LQ1H5B-M□ | 1/2"                   | 1/2"                     | 55   | 29   | 26 | 62.5 | 39   | 10   | 9              | 32 |
| LQ1H5C-M□ | 3/4"                   | 3/4"                     | 53.5 | 31.5 | 26 | 62.5 | 39   | 16   | 15             | 32 |
| LQ1H5D-M□ | 1/2"                   | 3/4"                     | 53.5 | 29   | 26 | 62.5 | 39   | 16   | 9              | 32 |
| LQ1H5E-M□ | 3/8"                   | 3/4"                     | 43.5 | 22.5 | 17 | 52.5 | 23   | 16   | 5.8            | 32 |
| LQ1H5F-M□ | 1/4"                   | 3/4"                     | 43.5 | 20   | 17 | 52.5 | 23   | 16   | 3.6            | 32 |
| LQ1H5G-M□ | 3/4"                   | 1/4"                     | 52   | 31.5 | 26 | 58   | 39   | 6    | 6              | 32 |
| LQ1H5H-M□ | 3/8"                   | 3/8"                     | 52   | 29   | 26 | 58   | 39   | 8    | 8              | 32 |
| LQ1H6A-M□ | 1"                     | 3/4"                     | 72   | 43   | 36 | 81   | 49   | 16   | 16             | 46 |
| LQ1H6B-M□ | 3/4"                   | 3/4"                     | 72   | 35   | 36 | 81   | 49   | 16   | 15             | 46 |
| LQ1H6C-M□ | 1"                     | 1"                       | 71   | 43   | 36 | 81   | 49   | 22.5 | 21.2           | 46 |
| LQ1H6D-M□ | 3/4"                   | 1"                       | 71   | 35   | 36 | 81   | 49   | 22.5 | 15             | 46 |
| LQ1H6E-M□ | 1/2"                   | 1"                       | 61   | 29   | 26 | 71   | 39   | 10   | 9              | 46 |
| LQ1H6F-M□ | 1"                     | 1/2"                     | 69.5 | 43   | 36 | 77.5 | 49   | 10   | 10             | 46 |

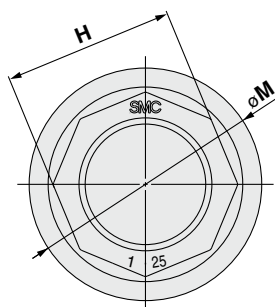
# LQ1 Series

## Dimensions

### Female Connector: LQ1H-F



Class 2 to 5



Class 6

(E) shows the reference of the inserted tubing from the end of the nut.  
"W" is width across flats dimension.

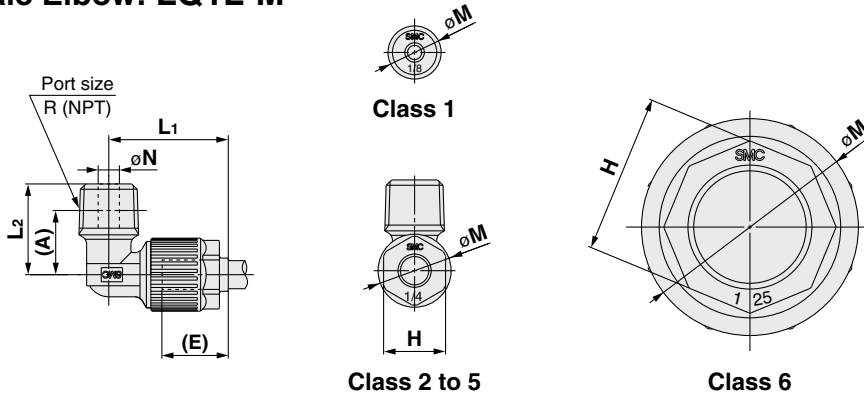
### Metric sizes

| Model      | Applicable tubing O.D. | Connection threads Rc/NPT | E    | H  | L    | M    | Min. port size | W  | Y    |
|------------|------------------------|---------------------------|------|----|------|------|----------------|----|------|
| LQ1H11-F□  | ø4                     | 1/8"                      | 11   | —  | 26.5 | 11.5 | 2.6            | 10 | 18.5 |
| LQ1H12-F□  | ø3                     |                           |      |    |      |      | 1.8            |    |      |
| LQ1H21-F□  | ø6                     |                           | 18   |    |      |      | 3.6            |    |      |
| LQ1H22-F□  | ø4                     | 1/8"                      | 12.5 |    | 35   |      | 2.6            |    | 18.5 |
| LQ1H2C-F□  | ø3                     |                           | 13.5 |    |      |      | 1.8            |    |      |
| LQ1H23-F□  | ø6                     |                           | 18   | 14 |      | 16.5 | 3.6            | 14 |      |
| LQ1H24-F□  | ø4                     | 1/4"                      | 12.5 |    | 36.5 |      | 2.6            |    | 21.5 |
| LQ1H2F-F□  | ø3                     |                           | 13.5 |    |      |      | 1.8            |    |      |
| LQ1H31-F□  | ø10                    |                           | 22.5 |    |      |      | 7.4            |    |      |
| LQ1H32-F□  | ø8                     | 1/4"                      | 21   |    |      |      | 5.5            |    | 21.5 |
| LQ1H33-F□  | ø6                     |                           |      |    |      |      | 3.6            |    |      |
| LQ1H34-F□  | ø10                    |                           | 22.5 |    |      |      | 7.4            |    |      |
| LQ1H35-F□  | ø8                     | 3/8"                      | 21   | 17 | 42.5 | 23   | 5.5            | 19 | 25   |
| LQ1H36-F□  | ø6                     |                           |      |    |      |      | 3.6            |    |      |
| LQ1H39-F□  | ø10                    |                           | 22.5 |    |      |      | 7.4            |    |      |
| LQ1H310-F□ | ø8                     | 1/8"                      | 21   |    |      |      | 5.5            |    | 18.5 |
| LQ1H41-F□  | ø12                    |                           | 27   |    |      |      | 9.4            |    |      |
| LQ1H42-F□  | ø10                    | 3/8"                      | 24   |    | 47.5 |      | 7.4            |    | 25   |
| LQ1H43-F□  | ø12                    |                           | 27   | 21 |      | 28   | 9.4            |    |      |
| LQ1H44-F□  | ø10                    |                           | 24   |    | 50   |      | 7.4            | 23 |      |
| LQ1H45-F□  | ø8                     | 1/2"                      | 21   |    |      |      | 5.5            |    | 29.5 |
| LQ1H46-F□  | ø6                     |                           |      | 17 | 45.5 | 23   | 3.6            |    |      |
| LQ1H49-F□  | ø12                    | 1/4"                      | 29   | 26 | 56.5 | 39   | 9.4            | 32 | 21.5 |
| LQ1H410-F□ | ø12                    | 1/8"                      | 27   | 21 | 46.5 | 28   | 8.2            | 23 | 18.5 |
| LQ1H51-F□  | ø19                    |                           | 31.5 |    |      |      | 15             |    |      |
| LQ1H52-F□  | ø12                    | 1/2"                      | 29   |    | 58.5 |      | 9.4            |    | 29.5 |
| LQ1H53-F□  | ø19                    |                           | 31.5 |    |      |      | 15             |    |      |
| LQ1H54-F□  | ø12                    | 3/4"                      | 29   | 26 | 60   | 39   | 9.4            | 32 | 36   |
| LQ1H58-F□  | ø19                    | 1/4"                      |      |    | 56.5 |      | 10.7           |    | 21.5 |
| LQ1H59-F□  | ø19                    | 3/8"                      | 31.5 |    | 56   |      | 14             |    | 25   |
| LQ1H61-F□  | ø25                    |                           | 43   |    |      |      | 21.2           |    |      |
| LQ1H62-F□  | ø19                    | 3/4"                      | 35   |    | 75   | 49   | 15             |    | 36   |
| LQ1H63-F□  | ø25                    |                           | 43   |    |      |      | 21.2           |    |      |
| LQ1H64-F□  | ø19                    | 1"                        | 35   | 36 | 78.5 |      | 15             | 46 | 44.5 |

### Inch sizes

| Model     | Applicable tubing O.D. | Connection threads Rc/NPT | E    | H  | L    | M    | Min. port size | W  | Y    |
|-----------|------------------------|---------------------------|------|----|------|------|----------------|----|------|
| LQ1H1A-F□ | 1/8"                   | 1/8"                      | 11   | —  | 26.5 | 11.5 | 1.8            | 10 | 18.5 |
| LQ1H2A-F□ | 1/4"                   |                           | 17   |    |      |      | 3.6            |    |      |
| LQ1H2B-F□ | 3/16"                  | 1/8"                      | 14.5 |    | 35   |      | 2.9            |    | 18.5 |
| LQ1H2C-F□ | 1/8"                   |                           | 13.5 |    |      |      | 1.8            |    |      |
| LQ1H2D-F□ | 1/4"                   |                           | 17   | 14 |      | 16.5 | 3.6            | 14 |      |
| LQ1H2E-F□ | 3/16"                  | 1/4"                      | 14.5 |    | 36.5 |      | 2.9            |    | 21.5 |
| LQ1H2F-F□ | 1/8"                   |                           | 13.5 |    |      |      | 1.8            |    |      |
| LQ1H3A-F□ | 3/8"                   |                           | 22.5 |    |      |      | 5.8            |    |      |
| LQ1H3B-F□ | 1/4"                   | 1/4"                      | 20   |    |      |      | 3.6            |    | 21.5 |
| LQ1H3C-F□ | 3/8"                   | 3/8"                      | 22.5 | 17 | 42.5 | 23   | 5.8            | 19 | 25   |
| LQ1H3D-F□ | 1/4"                   |                           | 20   |    |      |      | 3.6            |    |      |
| LQ1H3F-F□ | 3/8"                   | 1/8"                      | 22.5 |    |      |      | 5.8            |    | 18.5 |
| LQ1H4A-F□ | 1/2"                   |                           | 27   |    |      |      | 9              |    |      |
| LQ1H4B-F□ | 3/8"                   | 3/8"                      | 24   |    | 47.5 |      | 5.8            |    | 25   |
| LQ1H4C-F□ | 1/2"                   |                           | 27   | 21 |      | 28   | 9              | 23 |      |
| LQ1H4D-F□ | 3/8"                   | 1/2"                      | 24   |    | 50   |      | 5.8            |    | 29.5 |
| LQ1H4E-F□ | 1/4"                   | 1/2"                      | 20   | 17 | 45.5 | 23   | 3.6            |    |      |
| LQ1H4G-F□ | 1/2"                   | 1/4"                      | 29   | 26 | 56.5 | 39   | 9              | 32 | 21.5 |
| LQ1H4H-F□ | 1/2"                   | 1/8"                      | 27   | 21 | 46.5 | 28   | 8.2            | 23 | 18.5 |
| LQ1H5A-F□ | 3/4"                   |                           | 31.5 |    |      |      | 15             |    |      |
| LQ1H5B-F□ | 1/2"                   | 1/2"                      | 29   |    | 58.5 |      | 9              |    | 29.5 |
| LQ1H5C-F□ | 3/4"                   |                           | 31.5 |    |      |      | 15             |    |      |
| LQ1H5D-F□ | 1/2"                   | 3/4"                      | 29   | 26 | 60   | 39   | 9              | 32 | 36   |
| LQ1H5G-F□ | 3/4"                   | 1/4"                      | 31.5 |    | 56.5 |      | 10.7           |    | 21.5 |
| LQ1H5H-F□ | 3/4"                   | 3/8"                      |      |    | 56   |      | 14             |    | 25   |
| LQ1H6A-F□ | 1"                     |                           | 43   |    |      |      | 21.2           |    |      |
| LQ1H6B-F□ | 3/4"                   | 3/4"                      | 35   |    | 75   | 49   | 15             |    | 36   |
| LQ1H6C-F□ | 1"                     |                           | 43   |    |      |      | 21.2           |    |      |
| LQ1H6D-F□ | 3/4"                   | 1"                        | 35   | 36 | 78.5 |      | 15             | 46 | 44.5 |

## Male Elbow: LQ1L-M



(A) shows the reference dimension after connection.  
(E) shows the approximate dimension of the inserted tubing from the end of the nut.

### Metric sizes

| Model             | Applicable tubing O.D. | Connection threads R/NPT | A    | E    | H  | L <sub>1</sub> | L <sub>2</sub> | M    | N    | Min. port size |
|-------------------|------------------------|--------------------------|------|------|----|----------------|----------------|------|------|----------------|
| LQ1L11-M□         | ø4                     |                          | 11.5 | 11   | —  | 18             | 15             | 11.5 | 4    | 2.6            |
| LQ1L12-M□         | ø3                     | 1/8"                     |      |      |    |                |                |      |      | 1.8            |
| LQ1L21-M□         | ø6                     |                          |      | 18   |    |                |                |      |      | 3.6            |
| LQ1L22-M□         | ø4                     | 1/8"                     |      | 12.5 |    |                |                |      | 4.4  | 2.6            |
| LQ1L2C-M□         | ø3                     |                          |      | 13.5 |    |                |                |      |      | 1.8            |
| LQ1L23-M□         | ø6                     |                          | 14.5 | 18   | 14 | 27             | 20.5           | 16.5 |      | 3.6            |
| LQ1L24-M□         | ø4                     | 1/4"                     |      | 12.5 |    |                |                |      | 6    | 2.6            |
| LQ1L2F-M□         | ø3                     |                          |      | 13.5 |    |                |                |      |      | 1.8            |
| LQ1L31-M□         | ø10                    |                          |      | 22.5 |    |                |                |      |      | 6              |
| LQ1L32-M□         | ø8                     | 1/4"                     |      | 21   |    |                |                |      | 6    | 5.5            |
| LQ1L33-M□         | ø6                     |                          | 20   | 22.5 | 17 | 35             | 26.5           | 23   |      | 3.6            |
| LQ1L34-M□         | ø10                    |                          |      | 21   |    |                |                |      |      | 7.4            |
| LQ1L35-M□         | ø8                     |                          |      | 21   |    |                |                |      |      | 5.5            |
| LQ1L36-M□         | ø6                     | 3/8"                     |      | 21.1 |    |                |                |      | 8    | 3.6            |
| LQ1L37-M□         | ø4                     |                          |      | 12.5 | 14 | 31.6           | 27.1           | 16.5 |      | 2.6            |
| LQ1L3E-M□         | ø3                     |                          |      | 13.5 |    |                |                |      |      | 1.8            |
| Note 2) LQ1L39-M  | ø10                    | 1/8"                     | 20.6 | 22.5 | 17 | 36.6           | 24.1           | 23   | 4    | 4              |
| Note 2) LQ1L310-M | ø8                     |                          |      | 21   |    |                |                |      |      | 4              |
| LQ1L41-M□         | ø12                    | 3/8"                     |      | 27   |    |                |                |      | 8    | 8              |
| LQ1L42-M□         | ø10                    |                          | 25   | 24   | 21 | 45             | 33             | 28   |      | 7.4            |
| LQ1L43-M□         | ø12                    |                          |      | 27   |    |                |                |      |      | 9.4            |
| LQ1L44-M□         | ø10                    |                          |      | 24   |    |                |                |      |      | 7.4            |
| LQ1L45-M□         | ø8                     | 1/2"                     |      | 24.1 | 17 | 38.5           | 32.1           | 23   | 10   | 5.5            |
| LQ1L46-M□         | ø6                     |                          |      | 21   |    |                |                |      |      | 3.6            |
| * LQ1L47-M□       | ø4                     |                          |      | 12.5 | 14 | 30             | 25.5           | 16.5 |      | 2.6            |
| * LQ1L4F-M□       | ø3                     |                          |      | 13.5 |    |                |                |      |      | 1.8            |
| LQ1L49-M□         | ø12                    | 1/4"                     | 22.6 | 27   | 21 | 43             | 28.6           | 28   | 6    | 6              |
| LQ1L51-M□         | ø19                    |                          |      | 31.5 |    |                |                |      |      | 10             |
| LQ1L52-M□         | ø12                    | 1/2"                     |      | 29   | 26 | 54             | 40             | 39   | 10   | 9.4            |
| LQ1L53-M□         | ø19                    |                          |      | 31.5 |    |                |                |      |      | 15             |
| LQ1L54-M□         | ø12                    |                          | 30.5 | 29   |    |                |                |      |      | 9.4            |
| LQ1L55-M□         | ø10                    | 3/4"                     |      | 22.5 |    |                |                |      | 16   | 7.4            |
| LQ1L56-M□         | ø8                     |                          |      | 21   | 17 | 44             | 39.5           | 23   |      | 5.5            |
| LQ1L57-M□         | ø6                     |                          |      |      |    |                |                |      |      | 3.6            |
| * LQ1L59-M□       | ø19                    | 3/8"                     | 34   | 35   | 36 | 53             | 40             | 49   | 8    | 8              |
| LQ1L61-M□         | ø25                    |                          |      | 43   |    |                |                |      |      | 16             |
| LQ1L62-M□         | ø19                    | 3/4"                     |      | 35   | 36 | 68.5           | 46             | 49   | 16   | 15             |
| LQ1L63-M□         | ø25                    |                          | 35   | 43   |    |                |                |      |      | 21.2           |
| LQ1L64-M□         | ø19                    | 1"                       |      | 35   |    |                |                |      | 22.5 | 15             |
| LQ1L65-M□         | ø12                    |                          |      | 37   | 29 | 26             | 60             | 47   | 39   | 9.4            |
| * LQ1L67-M□       | ø25                    | 3/8"                     | 34   | 43   | 36 | 53             | 40             | 49   | 8    | 8              |

Note 1) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

Note 2) NPT is not available for the thread type.

### Inch sizes

| Model            | Applicable tubing O.D. | Connection threads R/NPT | A    | E    | H  | L <sub>1</sub> | L <sub>2</sub> | M    | N    | Min. port size |
|------------------|------------------------|--------------------------|------|------|----|----------------|----------------|------|------|----------------|
| LQ1L1A-M□        | 1/8"                   | 1/8"                     | 11.5 | 11   | —  | 18             | 15             | 11.5 | 4    | 1.8            |
| LQ1L2A-M□        | 1/4"                   |                          |      | 17   |    |                |                |      |      | 3.6            |
| LQ1L2B-M□        | 3/16"                  | 1/8"                     |      | 14.5 |    |                |                |      | 4.4  | 2.9            |
| LQ1L2C-M□        | 1/8"                   |                          |      | 13.5 |    |                |                |      |      | 1.8            |
| LQ1L2D-M□        | 1/4"                   |                          | 14.5 | 17   | 14 | 27             | 20.5           | 16.5 |      | 3.6            |
| LQ1L2E-M□        | 3/16"                  | 1/4"                     |      | 14.5 |    |                |                |      | 6    | 2.9            |
| LQ1L2F-M□        | 1/8"                   |                          |      | 13.5 |    |                |                |      |      | 1.8            |
| LQ1L3A-M□        | 3/8"                   | 1/4"                     |      | 22.5 |    |                |                |      | 6    | 5.8            |
| LQ1L3B-M□        | 1/4"                   |                          | 20   | 20   | 17 | 35             | 26.5           | 23   |      | 3.6            |
| LQ1L3C-M□        | 3/8"                   |                          |      | 22.5 |    |                |                |      |      | 5.8            |
| LQ1L3D-M□        | 1/4"                   | 3/8"                     |      | 20   |    |                |                |      | 8    | 3.6            |
| LQ1L3E-M□        | 1/8"                   |                          | 21.1 | 13.5 | 14 | 31.6           | 27.1           | 16.5 |      | 1.8            |
| Note 2) LQ1L3F-M | 3/8"                   | 1/8"                     | 20.6 | 22.5 | 17 | 36.6           | 24.1           | 23   | 4    | 4              |
| LQ1L4A-M□        | 1/2"                   | 3/8"                     |      | 27   |    |                |                |      | 8    | 8              |
| LQ1L4B-M□        | 3/8"                   |                          | 25   | 24   | 21 | 45             | 33             | 28   |      | 5.8            |
| LQ1L4C-M□        | 1/2"                   |                          |      | 27   |    |                |                |      |      | 9              |
| LQ1L4D-M□        | 3/8"                   | 1/2"                     |      | 24   |    |                |                |      | 10   | 5.8            |
| LQ1L4E-M□        | 1/4"                   |                          | 24.1 | 20   | 17 | 38.5           | 32.1           | 23   |      | 3.6            |
| * LQ1L4F-M□      | 1/8"                   |                          | 17.5 | 13.5 | 14 | 30             | 25.5           | 16.5 |      | 1.8            |
| LQ1L4G-M□        | 1/2"                   | 1/4"                     | 22.6 | 27   | 21 | 43             | 28.6           | 28   | 6    | 9              |
| LQ1L5A-M□        | 3/4"                   | 1/2"                     |      | 31.5 |    |                |                |      | 10   | 10             |
| LQ1L5B-M□        | 1/2"                   |                          |      | 29   |    |                |                |      |      | 9              |
| LQ1L5C-M□        | 3/4"                   |                          | 30.5 | 31.5 | 26 | 54             | 40             | 39   |      | 15             |
| LQ1L5D-M□        | 1/2"                   | 3/4"                     |      | 29   |    |                |                |      | 16   | 9              |
| LQ1L5E-M□        | 3/8"                   |                          |      | 22.5 | 17 | 44             | 39.5           | 23   |      | 5.8            |
| LQ1L5F-M□        | 1/4"                   |                          |      | 20   |    |                |                |      |      | 3.6            |
| * LQ1L5H-M□      | 3/4"                   | 3/8"                     | 34   | 35   | 36 | 53             | 40             | 49   | 8    | 8              |
| LQ1L6A-M□        | 1"                     | 3/4"                     |      | 43   |    |                |                |      | 16   | 16             |
| LQ1L6B-M□        | 3/4"                   |                          | 35   | 35   | 36 | 68.5           | 46             | 49   |      | 15             |
| LQ1L6C-M□        | 1"                     |                          |      | 43   |    |                |                |      |      | 21.2           |
| LQ1L6D-M□        | 3/4"                   | 1"                       |      | 35   |    |                |                |      | 22.5 | 15             |
| LQ1L6E-M□        | 1/2"                   |                          | 37   | 29   | 26 | 60             | 47             | 39   |      | 9              |
| * LQ1L6G-M□      | 1"                     | 3/8"                     | 34   | 43   | 36 | 53             | 40             | 49   | 8    | 8              |

Note 1) Products marked "\*" are produced upon receipt of order.

(The body of the fitting is PTFE machined.)

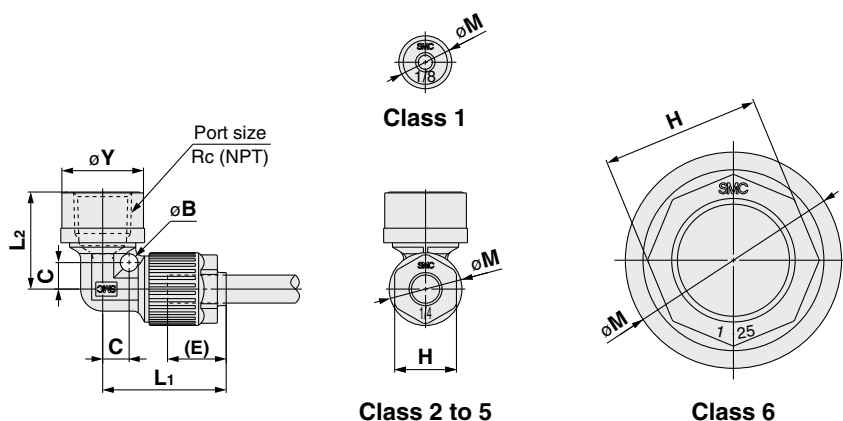
Note 2) NPT is not available for the thread type.



# LQ1 Series

## Dimensions

### Female Elbow: LQ1L-F



(E) shows the reference dimension of the inserted tubing from the end of the nut.

### Metric sizes

| Model           | Applicable tubing O.D. | Connection threads Rc/NPT | B | C  | E    | H  | L <sub>1</sub> | L <sub>2</sub> | M    | Min. port size | Y    |
|-----------------|------------------------|---------------------------|---|----|------|----|----------------|----------------|------|----------------|------|
| LQ1L11-F        | $\phi 4$               | 1/8"                      | 2 | 4  | 11   | —  | 18.5           | 16             | 11.5 | 2.6            | 18.5 |
| LQ1L12-F        | $\phi 3$               | 1/8"                      | 2 | 4  | 11   | —  | 18.5           | 16             | 11.5 | 1.8            | 18.5 |
| LQ1L21-F        | $\phi 6$               | 1/8"                      | 4 | 6  | 18   | 14 | 28             | 19.5           | 16.5 | 3.6            | 18.5 |
| LQ1L22-F        | $\phi 4$               | 1/8"                      | 4 | 6  | 12.5 | 14 | 28             | 19.5           | 16.5 | 2.6            | 18.5 |
| LQ1L2C-F        | $\phi 3$               | 1/8"                      | 4 | 6  | 13.5 | 14 | 28             | 19.5           | 16.5 | 1.8            | 18.5 |
| LQ1L23-F        | $\phi 6$               | 1/4"                      | 4 | 6  | 18   | 14 | 28             | 19.5           | 16.5 | 3.6            | 21.5 |
| LQ1L24-F        | $\phi 4$               | 1/4"                      | 4 | 6  | 12.5 | 14 | 28             | 19.5           | 16.5 | 2.6            | 21.5 |
| LQ1L2F-F        | $\phi 3$               | 1/4"                      | 4 | 6  | 13.5 | 14 | 28             | 19.5           | 16.5 | 1.8            | 21.5 |
| LQ1L31-F        | $\phi 10$              | 1/4"                      | 5 | 9  | 22.5 | 17 | 36.5           | 22             | 23   | 7.4            | 21.5 |
| LQ1L32-F        | $\phi 8$               | 1/4"                      | 5 | 9  | 21   | 17 | 36.5           | 22             | 23   | 5.5            | 21.5 |
| LQ1L33-F        | $\phi 6$               | 1/4"                      | 5 | 9  | 21   | 17 | 36.5           | 22             | 23   | 3.6            | 21.5 |
| LQ1L34-F        | $\phi 10$              | 3/8"                      | 5 | 9  | 22.5 | 17 | 36.5           | 22             | 23   | 7.4            | 25   |
| LQ1L35-F        | $\phi 8$               | 3/8"                      | 5 | 9  | 21   | 17 | 36.5           | 22             | 23   | 5.5            | 25   |
| LQ1L36-F        | $\phi 6$               | 3/8"                      | 5 | 9  | 21   | 17 | 36.5           | 22             | 23   | 3.6            | 25   |
| LQ1L3E-F        | $\phi 3$               | 3/8"                      | 5 | 9  | 11   | 14 | 31.6           | 24.5           | 16.5 | 1.8            | 25   |
| Note) LQ1L39-F  | $\phi 10$              | 1/8"                      | 5 | 9  | 22.5 | 17 | 36.6           | 21.8           | 23   | 7.4            | 18.5 |
| Note) LQ1L310-F | $\phi 8$               | 1/8"                      | 5 | 9  | 21   | 17 | 36.6           | 21.8           | 23   | 5.5            | 18.5 |
| LQ1L41-F        | $\phi 12$              | 3/8"                      | 6 | 9  | 27   | 21 | 43             | 25.5           | 28   | 9.4            | 25   |
| LQ1L42-F        | $\phi 10$              | 3/8"                      | 6 | 9  | 24   | 21 | 43             | 25.5           | 28   | 7.4            | 25   |
| LQ1L43-F        | $\phi 12$              | 1/2"                      | 6 | 9  | 27   | 21 | 43             | 25.5           | 28   | 9.4            | 29.5 |
| LQ1L44-F        | $\phi 10$              | 1/2"                      | 6 | 9  | 24   | 21 | 43             | 25.5           | 28   | 7.4            | 29.5 |
| LQ1L49-F        | $\phi 12$              | 1/4"                      | 6 | 9  | 27   | 21 | 43             | 25.5           | 28   | 9.4            | 21.5 |
| LQ1L410-F       | $\phi 12$              | 1/8"                      | 6 | 9  | 27   | 21 | 43             | 25.5           | 28   | 8              | 18.5 |
| LQ1L51-F        | $\phi 19$              | 1/2"                      | 7 | 14 | 31.5 | 26 | 54             | 35.5           | 39   | 15             | 29.5 |
| LQ1L52-F        | $\phi 12$              | 1/2"                      | 7 | 14 | 29   | 26 | 54             | 35.5           | 39   | 9.4            | 29.5 |
| LQ1L53-F        | $\phi 19$              | 3/4"                      | 7 | 14 | 31.5 | 26 | 54             | 35.5           | 39   | 15             | 36   |
| LQ1L54-F        | $\phi 12$              | 3/4"                      | 7 | 14 | 29   | 26 | 54             | 35.5           | 39   | 9.4            | 36   |
| LQ1L59-F        | $\phi 19$              | 3/8"                      | 7 | 14 | 31.5 | 26 | 54             | 35.5           | 39   | 14             | 25   |
| LQ1L61-F        | $\phi 25$              | 3/4"                      | 8 | 18 | 43   | 36 | 69.5           | 42.5           | 49   | 21.2           | 36   |
| LQ1L62-F        | $\phi 19$              | 3/4"                      | 8 | 18 | 35   | 36 | 69.5           | 42.5           | 49   | 15             | 36   |
| LQ1L63-F        | $\phi 25$              | 1"                        | 8 | 18 | 43   | 36 | 69.5           | 42.5           | 49   | 21.2           | 44.5 |
| LQ1L64-F        | $\phi 19$              | 1"                        | 8 | 18 | 35   | 36 | 69.5           | 42.5           | 49   | 15             | 44.5 |

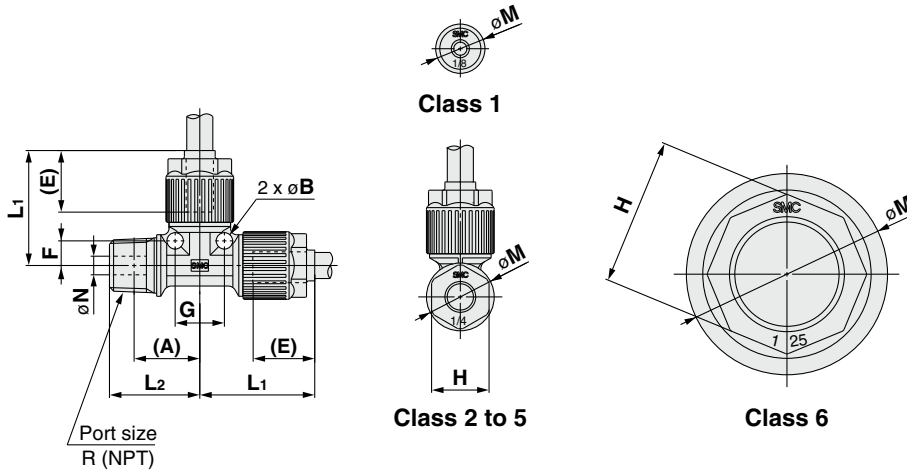
Note) NPT is not available for the thread type.

### Inch sizes

| Model          | Applicable tubing O.D. | Connection threads Rc/NPT | B | C  | E    | H  | L <sub>1</sub> | L <sub>2</sub> | M    | Min. port size | Y    |
|----------------|------------------------|---------------------------|---|----|------|----|----------------|----------------|------|----------------|------|
| LQ1L1A-F       | 1/8"                   | 1/8"                      | 2 | 4  | 11   | —  | 18.5           | 16             | 11.5 | 1.8            | 18.5 |
| LQ1L2A-F       | 1/4"                   | 1/8"                      | 4 | 6  | 17   | 14 | 28             | 19.5           | 16.5 | 3.6            | 18.5 |
| LQ1L2B-F       | 3/16"                  | 1/8"                      | 4 | 6  | 14.5 | 14 | 28             | 19.5           | 16.5 | 2.9            | 18.5 |
| LQ1L2C-F       | 1/8"                   | 1/8"                      | 4 | 6  | 13.5 | 14 | 28             | 19.5           | 16.5 | 1.8            | 18.5 |
| LQ1L2D-F       | 1/4"                   | 1/8"                      | 4 | 6  | 17   | 14 | 28             | 19.5           | 16.5 | 3.6            | 18.5 |
| LQ1L2E-F       | 3/16"                  | 1/4"                      | 4 | 6  | 14.5 | 14 | 28             | 19.5           | 16.5 | 2.9            | 21.5 |
| LQ1L2F-F       | 1/8"                   | 1/4"                      | 4 | 6  | 13.5 | 14 | 28             | 19.5           | 16.5 | 1.8            | 21.5 |
| LQ1L3A-F       | 3/8"                   | 1/4"                      | 5 | 9  | 22.5 | 17 | 36.5           | 22             | 23   | 5.8            | 21.5 |
| LQ1L3B-F       | 1/4"                   | 1/4"                      | 5 | 9  | 20   | 17 | 36.5           | 22             | 23   | 3.6            | 21.5 |
| LQ1L3C-F       | 3/8"                   | 3/8"                      | 5 | 9  | 22.5 | 17 | 36.5           | 22             | 23   | 5.8            | 25   |
| LQ1L3D-F       | 1/4"                   | 3/8"                      | 5 | 9  | 20   | 17 | 36.5           | 22             | 23   | 3.6            | 25   |
| LQ1L3E-F       | 1/8"                   | 3/8"                      | 5 | 9  | 13.5 | 14 | 31.6           | 16.5           | 16.5 | 1.8            | 25   |
| Note) LQ1L3F-F | 3/8"                   | 1/8"                      | 5 | 9  | 22.5 | 17 | 36.6           | 21.8           | 23   | 5.8            | 18.5 |
| LQ1L4A-F       | 1/2"                   | 3/8"                      | 6 | 9  | 27   | 21 | 43             | 25.5           | 28   | 9              | 25   |
| LQ1L4B-F       | 3/8"                   | 3/8"                      | 6 | 9  | 24   | 21 | 43             | 25.5           | 28   | 5.8            | 25   |
| LQ1L4C-F       | 1/2"                   | 1/2"                      | 6 | 9  | 27   | 21 | 43             | 25.5           | 28   | 9              | 29.5 |
| LQ1L4D-F       | 3/8"                   | 1/2"                      | 6 | 9  | 24   | 21 | 43             | 25.5           | 28   | 5.8            | 29.5 |
| LQ1L4G-F       | 1/2"                   | 1/4"                      | 6 | 9  | 27   | 21 | 43             | 25.5           | 28   | 9              | 21.5 |
| LQ1L4H-F       | 1/2"                   | 1/8"                      | 6 | 9  | 27   | 21 | 43             | 25.5           | 28   | 8              | 18.5 |
| LQ1L5A-F       | 3/4"                   | 1/2"                      | 7 | 14 | 31.5 | 26 | 54             | 35.5           | 39   | 15             | 29.5 |
| LQ1L5B-F       | 1/2"                   | 1/2"                      | 7 | 14 | 29   | 26 | 54             | 35.5           | 39   | 9              | 29.5 |
| LQ1L5C-F       | 3/4"                   | 3/4"                      | 7 | 14 | 31.5 | 26 | 54             | 35.5           | 39   | 15             | 36   |
| LQ1L5D-F       | 1/2"                   | 3/4"                      | 7 | 14 | 29   | 26 | 54             | 35.5           | 39   | 9              | 36   |
| LQ1L5H-F       | 3/4"                   | 3/8"                      | 7 | 14 | 31.5 | 26 | 54             | 35.5           | 39   | 14             | 25   |
| LQ1L6A-F       | 1"                     | 3/4"                      | 8 | 18 | 43   | 36 | 69.5           | 42.5           | 49   | 21.2           | 36   |
| LQ1L6B-F       | 3/4"                   | 3/4"                      | 8 | 18 | 35   | 36 | 69.5           | 42.5           | 49   | 15             | 36   |
| LQ1L6C-F       | 1"                     | 1"                        | 8 | 18 | 43   | 36 | 69.5           | 42.5           | 49   | 21.2           | 44.5 |
| LQ1L6D-F       | 3/4"                   | 1"                        | 8 | 18 | 35   | 36 | 69.5           | 42.5           | 49   | 15             | 44.5 |

Note) NPT is not available for the thread type.

## Male Run Tee: LQ1R-M



(A) shows the reference dimension after connection.  
(E) shows the approximate dimension of the inserted tubing from the end of the nut.

### Metric sizes

| Model      | Applicable tubing O.D. | Connection threads R/NPT | A  | B | E  | F | G | H | L <sub>1</sub> | L <sub>2</sub> | M    | N | Min. port size |
|------------|------------------------|--------------------------|----|---|----|---|---|---|----------------|----------------|------|---|----------------|
| LQ1R11-M   | ø4                     | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R12-M   | ø3                     | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R21-M   | ø6                     | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R22-M   | ø4                     | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R2C-M   | ø3                     | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R23-M   | ø6                     | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R24-M   | ø4                     | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R2F-M   | ø3                     | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R31-M   | ø10                    | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R32-M   | ø8                     | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R33-M   | ø6                     | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R34-M   | ø10                    | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R35-M   | ø8                     | 3/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R36-M   | ø6                     | 3/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| *LQ1R39-M  | ø10                    | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| *LQ1R310-M | ø8                     | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R41-M   | ø12                    | 3/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R42-M   | ø10                    | 3/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R43-M   | ø12                    | 1/2"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R44-M   | ø10                    | 1/2"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R49-M   | ø12                    | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R51-M   | ø19                    | 1/2"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R52-M   | ø12                    | 1/2"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R53-M   | ø19                    | 3/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R54-M   | ø12                    | 3/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R58-M   | ø19                    | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R59-M   | ø19                    | 3/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R61-M   | ø25                    | 3/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R62-M   | ø19                    | 3/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R63-M   | ø25                    | 1"                       | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 3 | 2.6            |
| LQ1R64-M   | ø19                    | 1"                       | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

### Inch sizes

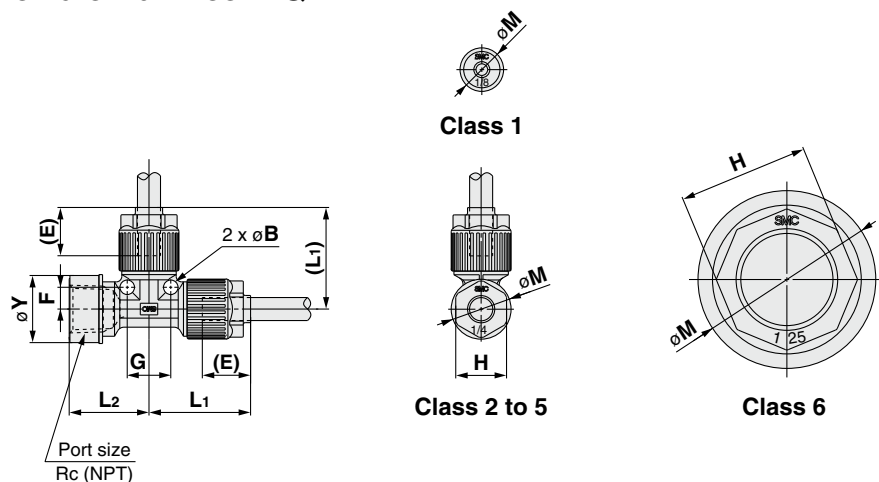
| Model     | Applicable tubing O.D. | Connection threads R/NPT | A  | B | E  | F | G | H | L <sub>1</sub> | L <sub>2</sub> | M    | N | Min. port size |
|-----------|------------------------|--------------------------|----|---|----|---|---|---|----------------|----------------|------|---|----------------|
| LQ1R1A-M  | 1/8"                   | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R2A-M  | 1/4"                   | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R2B-M  | 3/16"                  | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R2C-M  | 1/8"                   | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R2D-M  | 1/4"                   | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R2E-M  | 3/16"                  | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R2F-M  | 1/8"                   | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R3A-M  | 3/8"                   | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R3B-M  | 1/4"                   | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R3C-M  | 3/8"                   | 3/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R3D-M  | 1/4"                   | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| *LQ1R3F-M | 3/8"                   | 1/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R4A-M  | 1/2"                   | 3/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R4B-M  | 3/8"                   | 3/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R4C-M  | 1/2"                   | 1/2"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R4D-M  | 3/8"                   | 1/2"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R4G-M  | 1/2"                   | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R5A-M  | 3/4"                   | 1/2"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R5B-M  | 1/2"                   | 1/2"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R5C-M  | 3/4"                   | 3/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R5D-M  | 1/2"                   | 3/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R5G-M  | 3/4"                   | 1/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R5H-M  | 3/4"                   | 3/8"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R6A-M  | 1"                     | 3/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R6B-M  | 3/4"                   | 3/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R6C-M  | 1"                     | 1"                       | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |
| LQ1R6D-M  | 3/4"                   | 3/4"                     | 12 | 2 | 11 | 4 | 8 | — | 18.5           | 15.5           | 11.5 | 2 | 1.8            |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

# LQ1 Series

## Dimensions

### Female Run Tee: LQ1R-F



(E) shows the approximate dimension of the inserted tubing from the end of the nut.

### Metric sizes

| Model       | Applicable tubing O.D. | Connection threads Rc/NPT | B | E    | F  | G  | H  | L <sub>1</sub> | L <sub>2</sub> | M    | Min. port size | Y    |
|-------------|------------------------|---------------------------|---|------|----|----|----|----------------|----------------|------|----------------|------|
| LQ1R11-F□   | ø4                     | 1/8"                      | 2 | 11   | 4  | 8  | —  | 18.5           | 16             | 11.5 | 2.6            | 18.5 |
| LQ1R12-F□   | ø3                     | 1/8"                      | 2 | 11   | 4  | 8  | —  | 18.5           | 16             | 11.5 | 1.8            | 18.5 |
| LQ1R21-F□   | ø6                     | 1/8"                      | 4 | 18   | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 3.6            | 18.5 |
| LQ1R22-F□   | ø4                     | 1/8"                      | 4 | 12.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 2.6            | 18.5 |
| LQ1R2C-F□   | ø3                     | 1/8"                      | 4 | 13.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 1.8            | 18.5 |
| LQ1R23-F□   | ø6                     | 1/4"                      | 4 | 18   | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 3.6            | 21.5 |
| LQ1R24-F□   | ø4                     | 1/4"                      | 4 | 12.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 2.6            | 21.5 |
| LQ1R2F-F□   | ø3                     | 1/4"                      | 4 | 13.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 1.8            | 21.5 |
| LQ1R31-F□   | ø10                    | 1/4"                      | 5 | 22.5 | 9  | 18 | 21 | 36.5           | 24             | 23   | 7.4            | 21.5 |
| LQ1R32-F□   | ø8                     | 1/4"                      | 5 | 21   | 9  | 18 | 21 | 36.5           | 24             | 23   | 5.5            | 21.5 |
| LQ1R33-F□   | ø6                     | 1/4"                      | 5 | 22.5 | 9  | 18 | 21 | 36.5           | 24             | 23   | 3.6            | 21.5 |
| LQ1R34-F□   | ø10                    | 3/8"                      | 5 | 22.5 | 9  | 18 | 21 | 36.5           | 24             | 23   | 7.4            | 25   |
| LQ1R35-F□   | ø8                     | 3/8"                      | 5 | 21   | 9  | 18 | 21 | 36.5           | 24             | 23   | 5.5            | 25   |
| LQ1R36-F□   | ø6                     | 3/8"                      | 5 | 22.5 | 9  | 18 | 21 | 36.5           | 24             | 23   | 3.6            | 25   |
| *LQ1R39-F□  | ø10                    | 1/8"                      | — | 22.5 | —  | —  | —  | 34.5           | 19.7           | —    | 7.4            | 18.5 |
| *LQ1R310-F□ | ø8                     | 1/8"                      | — | 21   | —  | —  | —  | 34.5           | 19.7           | —    | 5.5            | 18.5 |
| LQ1R41-F□   | ø12                    | 3/8"                      | 6 | 27   | 9  | 18 | 21 | 43             | 25             | 28   | 9.4            | 25   |
| LQ1R42-F□   | ø10                    | 3/8"                      | 6 | 24   | 9  | 18 | 21 | 43             | 25             | 28   | 7.4            | 25   |
| LQ1R43-F□   | ø12                    | 1/2"                      | 6 | 27   | 9  | 18 | 21 | 43             | 25             | 28   | 9.4            | 29.5 |
| LQ1R44-F□   | ø10                    | 1/2"                      | 6 | 24   | 9  | 18 | 21 | 43             | 25             | 28   | 7.4            | 29.5 |
| *LQ1R49-F□  | ø12                    | 1/4"                      | — | 27   | —  | —  | —  | 41.5           | 21.2           | —    | 9.4            | 21.5 |
| LQ1R51-F□   | ø19                    | 1/2"                      | 7 | 31.5 | 14 | 28 | 26 | 54             | 35.5           | 39   | 15             | 29.5 |
| LQ1R52-F□   | ø12                    | 1/2"                      | 7 | 29   | 14 | 28 | 26 | 54             | 35.5           | 39   | 9.4            | 29.5 |
| LQ1R53-F□   | ø19                    | 3/4"                      | 7 | 31.5 | 14 | 28 | 26 | 54             | 35.5           | 39   | 15             | 36   |
| LQ1R54-F□   | ø12                    | 3/4"                      | 7 | 29   | 14 | 28 | 26 | 54             | 35.5           | 39   | 9.4            | 36   |
| LQ1R59-F□   | ø19                    | 3/8"                      | 7 | 31.5 | 14 | 28 | 26 | 54             | 35.5           | 39   | 15             | 25   |
| LQ1R61-F□   | ø25                    | 3/4"                      | 8 | 43   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 21.2           | 36   |
| LQ1R62-F□   | ø19                    | 3/4"                      | 8 | 35   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 15             | 36   |
| LQ1R63-F□   | ø25                    | 1"                        | 8 | 43   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 21.2           | 44.5 |
| LQ1R64-F□   | ø19                    | 1"                        | 8 | 35   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 15             | 44.5 |
| LQ1R66-F□   | ø25                    | 1/2"                      | 8 | 43   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 17.8           | 29.5 |

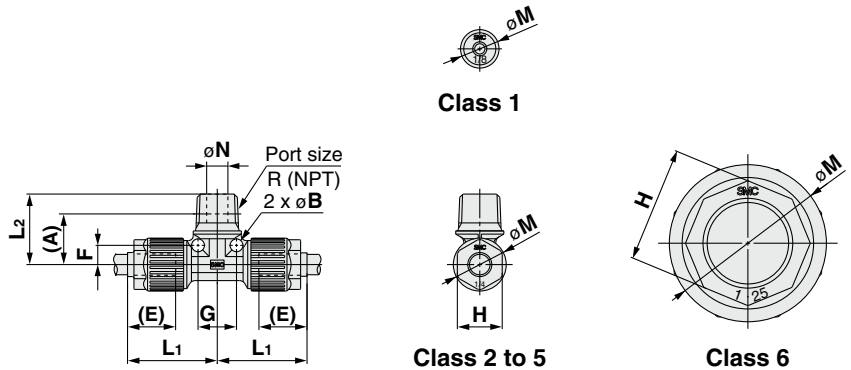
Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

### Inch sizes

| Model      | Applicable tubing O.D. | Connection threads Rc/NPT | B | E    | F  | G  | H  | L <sub>1</sub> | L <sub>2</sub> | M    | Min. port size | Y    |
|------------|------------------------|---------------------------|---|------|----|----|----|----------------|----------------|------|----------------|------|
| LQ1R1A-F□  | 1/8"                   | 1/8"                      | 2 | 11   | 4  | 8  | —  | 18.5           | 16             | 11.5 | 1.8            | 18.5 |
| LQ1R2A-F□  | 1/4"                   | 1/8"                      | 4 | 17   | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 3.6            | 18.5 |
| LQ1R2B-F□  | 3/16"                  | 1/8"                      | 4 | 14.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 2.9            | 18.5 |
| LQ1R2C-F□  | 1/8"                   | 1/8"                      | 4 | 13.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 1.8            | 18.5 |
| LQ1R2D-F□  | 1/4"                   | 1/4"                      | 4 | 17   | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 3.6            | 21.5 |
| LQ1R2E-F□  | 3/16"                  | 1/4"                      | 4 | 14.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 2.9            | 21.5 |
| LQ1R2F-F□  | 1/8"                   | 1/4"                      | 4 | 13.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 1.8            | 21.5 |
| LQ1R3A-F□  | 3/8"                   | 1/4"                      | 5 | 22.5 | 9  | 18 | 17 | 36.5           | 24             | 23   | 5.8            | 21.5 |
| LQ1R3B-F□  | 1/4"                   | 1/4"                      | 5 | 20   | 9  | 18 | 17 | 36.5           | 24             | 23   | 3.6            | 21.5 |
| LQ1R3C-F□  | 3/8"                   | 3/8"                      | 5 | 22.5 | 9  | 18 | 17 | 36.5           | 24             | 23   | 5.8            | 25   |
| LQ1R3D-F□  | 1/4"                   | 3/8"                      | 5 | 20   | 9  | 18 | 17 | 36.5           | 24             | 23   | 3.6            | 25   |
| *LQ1R3F-F□ | 3/8"                   | 1/8"                      | — | 22.5 | —  | —  | —  | 34.5           | 19.7           | —    | 5.8            | 18.5 |
| LQ1R4A-F□  | 1/2"                   | 3/8"                      | 6 | 27   | 9  | 18 | 21 | 43             | 25             | 28   | 9              | 25   |
| LQ1R4B-F□  | 3/8"                   | 3/8"                      | 6 | 24   | 9  | 18 | 21 | 43             | 25             | 28   | 5.8            | 25   |
| LQ1R4C-F□  | 1/2"                   | 1/2"                      | 6 | 27   | 9  | 18 | 21 | 43             | 25             | 28   | 9              | 29.5 |
| LQ1R4D-F□  | 3/8"                   | 1/2"                      | 6 | 24   | 9  | 18 | 21 | 43             | 25             | 28   | 5.8            | 29.5 |
| *LQ1R4G-F□ | 1/2"                   | 1/4"                      | — | 27   | —  | —  | —  | 41.5           | 21.2           | —    | 9              | 21.5 |
| LQ1R5A-F□  | 3/4"                   | 1/2"                      | 7 | 31.5 | 14 | 28 | 26 | 54             | 35.5           | 39   | 15             | 29.5 |
| LQ1R5B-F□  | 1/2"                   | 1/2"                      | 7 | 29   | 14 | 28 | 26 | 54             | 35.5           | 39   | 9              | 29.5 |
| LQ1R5C-F□  | 3/4"                   | 3/4"                      | 7 | 31.5 | 14 | 28 | 26 | 54             | 35.5           | 39   | 15             | 36   |
| LQ1R5D-F□  | 1/2"                   | 3/4"                      | 7 | 29   | 14 | 28 | 26 | 54             | 35.5           | 39   | 9              | 36   |
| LQ1R5H-F□  | 3/4"                   | 3/8"                      | 7 | 31.5 | 14 | 28 | 26 | 54             | 35.5           | 39   | 15             | 25   |
| LQ1R6A-F□  | 1"                     | 3/4"                      | 8 | 43   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 21.2           | 36   |
| LQ1R6B-F□  | 3/4"                   | 3/4"                      | 8 | 35   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 15             | 36   |
| LQ1R6C-F□  | 1"                     | 1"                        | 8 | 43   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 21.2           | 44.5 |
| LQ1R6D-F□  | 3/4"                   | 1"                        | 8 | 35   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 15             | 44.5 |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

## Male Branch Tee: LQ1B-M



### Metric sizes

| Model        | Applicable tubing O.D. | Connection threads R/NPT | A    | B | E    | F  | G  | H  | L <sub>1</sub> | L <sub>2</sub> | M    | N    | Min. port size |
|--------------|------------------------|--------------------------|------|---|------|----|----|----|----------------|----------------|------|------|----------------|
| LQ1B11-M□    | ø4                     | 1/8"                     | 12   | 2 | 11   | 4  | 8  | —  | 18.5           | 15.5           | 11.5 | 3    | 2.6            |
| LQ1B12-M□    | ø3                     | 1/8"                     | 12   | 2 | 11   | 4  | 8  | —  | 18.5           | 15.5           | 11.5 | 2    | 1.8            |
| LQ1B21-M□    | ø6                     | 1/8"                     | 16   | 4 | 18   | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 4.4  | 3.6            |
| LQ1B22-M□    | ø4                     | 1/8"                     | 16   | 4 | 12.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 4.4  | 2.6            |
| LQ1B2C-M□    | ø3                     | 1/8"                     | 16   | 4 | 13.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 4.4  | 1.8            |
| LQ1B23-M□    | ø6                     | 1/4"                     | 16   | 4 | 18   | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 4.4  | 3.6            |
| LQ1B24-M□    | ø4                     | 1/4"                     | 16   | 4 | 12.5 | 6  | 12 | 14 | 28             | 22             | 16.5 | 4.4  | 2.6            |
| LQ1B2F-M□    | ø3                     | 1/4"                     | 16   | 4 | 13.5 | 6  | 12 | 14 | 28             | 22             | 16.5 | 4.4  | 1.8            |
| LQ1B31-M□    | ø10                    | 1/4"                     | 19   | 5 | 22.5 | 9  | 18 | 17 | 36.5           | 25             | 23   | 8    | 7.4            |
| LQ1B32-M□    | ø8                     | 1/4"                     | 19   | 5 | 21   | 9  | 18 | 17 | 36.5           | 25             | 23   | 8    | 5.5            |
| LQ1B33-M□    | ø6                     | 1/4"                     | 19   | 5 | 22.5 | 9  | 18 | 17 | 36.5           | 25             | 23   | 8    | 3.6            |
| LQ1B34-M□    | ø10                    | 3/8"                     | 21   | 5 | 22.5 | 9  | 18 | 17 | 36.5           | 25             | 23   | 8    | 7.4            |
| LQ1B35-M□    | ø8                     | 3/8"                     | 21   | 5 | 21   | 9  | 18 | 17 | 36.5           | 25             | 23   | 8    | 5.5            |
| LQ1B36-M□    | ø6                     | 3/8"                     | 21   | 5 | 21   | 9  | 18 | 17 | 36.5           | 25             | 23   | 8    | 3.6            |
| * LQ1B39-M□  | ø10                    | 1/8"                     | 18.4 | — | 22.5 | —  | —  | —  | 29             | 21.9           | —    | 4.4  | 4.4            |
| * LQ1B310-M□ | ø8                     | 1/8"                     | 18.4 | — | 21   | —  | —  | —  | 29             | 21.9           | —    | 4.4  | 4.4            |
| LQ1B41-M□    | ø12                    | 3/8"                     | 23   | 6 | 27   | 9  | 18 | 21 | 43             | 29             | 28   | 10   | 9.4            |
| LQ1B42-M□    | ø10                    | 3/8"                     | 23   | 6 | 24   | 9  | 18 | 21 | 43             | 29             | 28   | 10   | 7.4            |
| LQ1B43-M□    | ø12                    | 1/2"                     | 24.5 | 6 | 27   | 9  | 18 | 21 | 43             | 32             | 28   | 10   | 9.4            |
| LQ1B44-M□    | ø10                    | 1/2"                     | 24.5 | 6 | 24   | 9  | 18 | 21 | 43             | 32             | 28   | 10   | 7.4            |
| * LQ1B45-M□  | ø8                     | 1/2"                     | 21.5 | — | 21   | —  | —  | 17 | 34             | 29.5           | 23   | 8    | 5.5            |
| LQ1B49-M□    | ø12                    | 1/4"                     | 27.5 | 7 | 29   | 14 | 28 | 26 | 54             | 33.5           | 39   | 6    | 6              |
| LQ1B51-M□    | ø19                    | 1/2"                     | 30.5 | 7 | 31.5 | 14 | 28 | 26 | 54             | 38             | 39   | 10   | 10             |
| LQ1B52-M□    | ø12                    | 1/2"                     | 30.5 | 7 | 29   | 14 | 28 | 26 | 54             | 38             | 39   | 10   | 9.4            |
| LQ1B53-M□    | ø19                    | 3/4"                     | 30   | 7 | 31.5 | 14 | 28 | 26 | 54             | 39             | 39   | 16   | 15             |
| LQ1B54-M□    | ø12                    | 3/4"                     | 30   | 7 | 29   | 14 | 28 | 26 | 54             | 39             | 39   | 16   | 9.4            |
| LQ1B58-M□    | ø19                    | 1/4"                     | 27.5 | 7 | 31.5 | 14 | 28 | 26 | 54             | 33.5           | 39   | 6    | 6              |
| LQ1B59-M□    | ø19                    | 3/8"                     | 29   | 7 | 31.5 | 14 | 28 | 26 | 54             | 35             | 39   | 10   | 10             |
| LQ1B61-M□    | ø25                    | 3/4"                     | 36   | 8 | 43   | 18 | 36 | 36 | 69.5           | 45             | 49   | 16   | 16             |
| LQ1B62-M□    | ø19                    | 3/4"                     | 36   | 8 | 35   | 18 | 36 | 36 | 69.5           | 45             | 49   | 16   | 15             |
| LQ1B63-M□    | ø25                    | 1"                       | 35   | 8 | 43   | 18 | 36 | 36 | 69.5           | 45             | 49   | 22.5 | 21.2           |
| LQ1B64-M□    | ø19                    | 1"                       | 35   | 8 | 35   | 18 | 36 | 36 | 69.5           | 45             | 49   | 22.5 | 15             |
| LQ1B66-M□    | ø25                    | 1/2"                     | 37   | 8 | 43   | 18 | 36 | 36 | 69.5           | 45             | 49   | 10   | 10             |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

### Inch sizes

| Model       | Applicable tubing O.D. | Connection threads R/NPT | A    | B | E    | F  | G  | H  | L <sub>1</sub> | L <sub>2</sub> | M    | N    | Min. port size |
|-------------|------------------------|--------------------------|------|---|------|----|----|----|----------------|----------------|------|------|----------------|
| LQ1B1A-M□   | 1/8"                   | 1/8"                     | 12   | 2 | 11   | 4  | 8  | —  | 18.5           | 15.5           | 11.5 | 2    | 1.8            |
| LQ1B2A-M□   | 1/4"                   | 1/8"                     | 16   | 4 | 17   | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 4.4  | 3.6            |
| LQ1B2B-M□   | 3/16"                  | 1/8"                     | 16   | 4 | 14.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 4.4  | 2.9            |
| LQ1B2C-M□   | 1/8"                   | 1/8"                     | 16   | 4 | 13.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 4.4  | 1.8            |
| LQ1B2D-M□   | 1/4"                   | 1/4"                     | 16   | 4 | 17   | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 4.4  | 3.6            |
| LQ1B2E-M□   | 3/16"                  | 1/4"                     | 16   | 4 | 14.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 4.4  | 2.9            |
| LQ1B2F-M□   | 1/8"                   | 1/4"                     | 16   | 4 | 13.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 4.4  | 1.8            |
| LQ1B3A-M□   | 3/8"                   | 1/4"                     | 19   | 5 | 22.5 | 9  | 18 | 17 | 36.5           | 25             | 23   | 8    | 5.8            |
| LQ1B3B-M□   | 1/4"                   | 1/4"                     | 19   | 5 | 20   | 9  | 18 | 17 | 36.5           | 25             | 23   | 8    | 3.6            |
| LQ1B3C-M□   | 3/8"                   | 3/8"                     | 21   | 5 | 22.5 | 9  | 18 | 17 | 36.5           | 25             | 23   | 8    | 5.8            |
| LQ1B3D-M□   | 1/4"                   | 3/8"                     | 21   | 5 | 20   | 9  | 18 | 17 | 36.5           | 25             | 23   | 8    | 3.6            |
| * LQ1B3F-M□ | 3/8"                   | 1/8"                     | 18.4 | — | 22.5 | —  | —  | —  | 29             | 21.9           | —    | 4.4  | 4.4            |
| LQ1B4A-M□   | 1/2"                   | 3/8"                     | 23   | 6 | 27   | 9  | 18 | 21 | 43             | 29             | 28   | 10   | 9              |
| LQ1B4B-M□   | 3/8"                   | 3/8"                     | 23   | 6 | 24   | 9  | 18 | 21 | 43             | 29             | 28   | 10   | 5.8            |
| LQ1B4C-M□   | 1/2"                   | 1/2"                     | 24.5 | 6 | 27   | 9  | 18 | 21 | 43             | 32             | 28   | 10   | 9              |
| LQ1B4D-M□   | 3/8"                   | 1/2"                     | 24.5 | 6 | 24   | 9  | 18 | 21 | 43             | 32             | 28   | 10   | 5.8            |
| LQ1B4G-M□   | 1/2"                   | 1/4"                     | 27.5 | 7 | 27   | 14 | 28 | 26 | 54             | 33.5           | 39   | 6    | 6              |
| LQ1B5A-M□   | 3/4"                   | 1/2"                     | 30.5 | 7 | 31.5 | 14 | 28 | 26 | 54             | 38             | 39   | 10   | 10             |
| LQ1B5B-M□   | 1/2"                   | 1/2"                     | 30.5 | 7 | 29   | 14 | 28 | 26 | 54             | 38             | 39   | 10   | 9              |
| LQ1B5C-M□   | 3/4"                   | 3/4"                     | 30   | 7 | 31.5 | 14 | 28 | 26 | 54             | 39             | 39   | 16   | 15             |
| LQ1B5D-M□   | 1/2"                   | 3/4"                     | 30   | 7 | 29   | 14 | 28 | 26 | 54             | 39             | 39   | 16   | 9              |
| LQ1B5G-M□   | 3/4"                   | 1/4"                     | 27.5 | 7 | 31.5 | 14 | 28 | 26 | 54             | 33.5           | 39   | 6    | 6              |
| LQ1B5H-M□   | 3/4"                   | 3/8"                     | 29   | 7 | 31.5 | 14 | 28 | 26 | 54             | 35             | 39   | 10   | 10             |
| LQ1B6A-M□   | 1"                     | 3/4"                     | 36   | 8 | 43   | 18 | 36 | 36 | 69.5           | 45             | 49   | 16   | 16             |
| LQ1B6B-M□   | 3/4"                   | 3/4"                     | 36   | 8 | 35   | 18 | 36 | 36 | 69.5           | 45             | 49   | 16   | 15             |
| LQ1B6C-M□   | 1"                     | 1"                       | 35   | 8 | 43   | 18 | 36 | 36 | 69.5           | 45             | 49   | 22.5 | 21.2           |
| LQ1B6D-M□   | 3/4"                   | 3/4"                     | 35   | 8 | 35   | 18 | 36 | 36 | 69.5           | 45             | 49   | 22.5 | 15             |
| LQ1B6F-M□   | 1"                     | 1/2"                     | 37   | 8 | 43   | 18 | 36 | 36 | 69.5           | 45             | 49   | 10   | 10             |

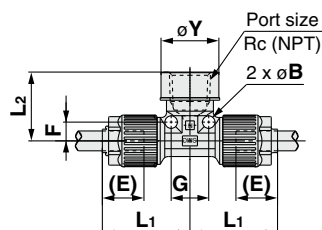
Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

## Dimensions

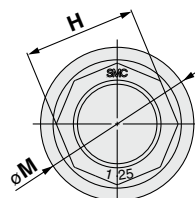
### Female Branch Tee: LQ1B-F



Class 1



Class 2 to 5



Class 6

(E) shows the approximate dimension of the inserted tubing from the end of the nut.

### Metric sizes

| Model       | Applicable tubing O.D. | Connection threads Rc/NPT | B | E    | F  | G  | H  | L <sub>1</sub> | L <sub>2</sub> | M    | Min. port size | Y    |
|-------------|------------------------|---------------------------|---|------|----|----|----|----------------|----------------|------|----------------|------|
| LQ1B11-F    | ø4                     | 1/8"                      | 2 | 11   | 4  | 8  | —  | 18.5           | 16             | 11.5 | 2.6            | 18.5 |
| LQ1B12-F    | ø3                     | 1/8"                      | 2 | 11   | 4  | 8  | —  | 18.5           | 16             | 11.5 | 1.8            | 18.5 |
| LQ1B21-F    | ø6                     | 1/8"                      | 4 | 18   | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 3.6            | 18.5 |
| LQ1B22-F    | ø4                     | 1/8"                      | 4 | 12.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 2.6            | 18.5 |
| LQ1B2C-F    | ø3                     | 1/8"                      | 4 | 13.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 1.8            | 18.5 |
| LQ1B23-F    | ø6                     | 1/4"                      | 4 | 18   | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 3.6            | 21.5 |
| LQ1B24-F    | ø4                     | 1/4"                      | 4 | 12.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 2.6            | 21.5 |
| LQ1B2F-F    | ø3                     | 1/4"                      | 4 | 13.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 1.8            | 21.5 |
| LQ1B31-F    | ø10                    | 1/4"                      | 5 | 22.5 | 9  | 18 | 21 | 36.5           | 23.7           | 23   | 7.4            | 21.5 |
| LQ1B32-F    | ø8                     | 1/4"                      | 5 | 21   | 9  | 18 | 21 | 36.5           | 23.7           | 23   | 5.5            | 21.5 |
| LQ1B33-F    | ø6                     | 1/4"                      | 5 | 22.5 | 9  | 18 | 21 | 36.5           | 23.7           | 23   | 3.6            | 21.5 |
| LQ1B34-F    | ø10                    | 3/8"                      | 5 | 22.5 | 9  | 18 | 21 | 36.5           | 23.7           | 23   | 7.4            | 25   |
| LQ1B35-F    | ø8                     | 3/8"                      | 5 | 21   | 9  | 18 | 21 | 36.5           | 23.7           | 23   | 5.5            | 25   |
| LQ1B36-F    | ø6                     | 3/8"                      | 5 | 22.5 | 9  | 18 | 21 | 36.5           | 23.7           | 23   | 3.6            | 25   |
| * LQ1B39-F  | ø10                    | 1/8"                      | — | 22.5 | —  | —  | —  | 32.3           | 18.7           | —    | 7.4            | 18.5 |
| * LQ1B310-F | ø8                     | 1/8"                      | — | 21   | —  | —  | —  | 32.3           | 18.7           | —    | 5.5            | 18.5 |
| LQ1B41-F    | ø12                    | 3/8"                      | 6 | 27   | 9  | 18 | 21 | 43             | 25             | 28   | 9.4            | 25   |
| LQ1B42-F    | ø10                    | 3/8"                      | 6 | 24   | 9  | 18 | 21 | 43             | 25             | 28   | 7.4            | 25   |
| LQ1B43-F    | ø12                    | 1/2"                      | 6 | 27   | 9  | 18 | 21 | 43             | 25             | 28   | 9.4            | 29.5 |
| LQ1B44-F    | ø10                    | 1/2"                      | 6 | 24   | 9  | 18 | 21 | 43             | 25             | 28   | 7.4            | 29.5 |
| * LQ1B49-F  | ø12                    | 1/4"                      | — | 29   | —  | —  | 26 | 44.3           | 27.5           | 39   | 9.4            | 21.5 |
| LQ1B51-F    | ø19                    | 1/2"                      | 7 | 31.5 | 14 | 28 | 26 | 54             | 35.5           | 39   | 10             | 29.5 |
| LQ1B52-F    | ø12                    | 1/2"                      | 7 | 29   | 14 | 28 | 26 | 54             | 35.5           | 39   | 9.4            | 29.5 |
| LQ1B53-F    | ø19                    | 3/4"                      | 7 | 31.5 | 14 | 28 | 26 | 54             | 35.5           | 39   | 15             | 36   |
| LQ1B54-F    | ø12                    | 3/4"                      | 7 | 29   | 14 | 28 | 26 | 54             | 35.5           | 39   | 9.4            | 36   |
| * LQ1B58-F  | ø19                    | 1/4"                      | — | 31.5 | —  | —  | —  | 44.3           | 27.5           | —    | 10.9           | 21.5 |
| * LQ1B59-F  | ø19                    | 3/8"                      | — | 31.5 | —  | —  | —  | 46             | 29.5           | —    | 14.3           | 25   |
| LQ1B61-F    | ø25                    | 3/4"                      | 8 | 43   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 16             | 36   |
| LQ1B62-F    | ø19                    | 3/4"                      | 8 | 35   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 15             | 36   |
| LQ1B63-F    | ø25                    | 1"                        | 8 | 43   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 21.2           | 44.5 |
| LQ1B64-F    | ø19                    | 1"                        | 8 | 35   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 15             | 44.5 |
| LQ1B66-F    | ø25                    | 1/2"                      | 8 | 43   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 10             | 29.5 |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

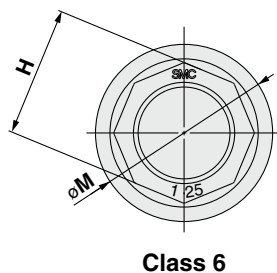
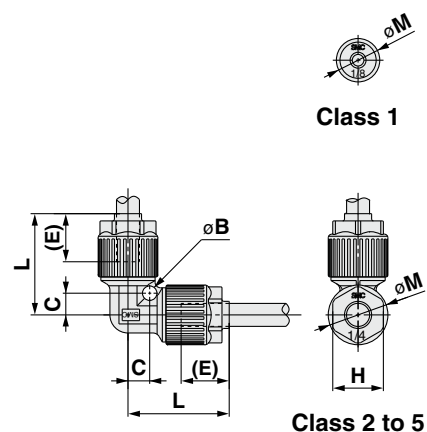
### Inch sizes

| Model      | Applicable tubing O.D. | Connection threads Rc/NPT | B | E    | F  | G  | H  | L <sub>1</sub> | L <sub>2</sub> | M    | Min. port size | Y    |
|------------|------------------------|---------------------------|---|------|----|----|----|----------------|----------------|------|----------------|------|
| LQ1B1A-F   | 1/8"                   | 1/8"                      | 2 | 11   | 4  | 8  | —  | 18.5           | 16             | 11.5 | 1.8            | 18.5 |
| LQ1B2A-F   | 1/4"                   | 1/8"                      | 4 | 17   | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 3.6            | 18.5 |
| LQ1B2B-F   | 3/16"                  | 1/8"                      | 4 | 14.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 2.9            | 18.5 |
| LQ1B2C-F   | 1/8"                   | 1/8"                      | 4 | 13.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 1.8            | 18.5 |
| LQ1B2D-F   | 1/4"                   | 1/4"                      | 4 | 17   | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 3.6            | 21.5 |
| LQ1B2E-F   | 3/16"                  | 1/4"                      | 4 | 14.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 2.9            | 21.5 |
| LQ1B2F-F   | 1/8"                   | 1/4"                      | 4 | 13.5 | 6  | 12 | 14 | 28             | 19.5           | 16.5 | 1.8            | 21.5 |
| LQ1B3A-F   | 3/8"                   | 1/4"                      | 5 | 22.5 | 9  | 18 | 17 | 36.5           | 23.7           | 23   | 5.8            | 21.5 |
| LQ1B3B-F   | 1/4"                   | 1/4"                      | 5 | 20   | 9  | 18 | 17 | 36.5           | 23.7           | 23   | 3.6            | 21.5 |
| LQ1B3C-F   | 3/8"                   | 3/8"                      | 5 | 22.5 | 9  | 18 | 17 | 36.5           | 23.7           | 23   | 5.8            | 25   |
| LQ1B3D-F   | 1/4"                   | 3/8"                      | 5 | 20   | 9  | 18 | 17 | 36.5           | 23.7           | 23   | 3.6            | 25   |
| * LQ1B3F-F | 3/8"                   | 1/8"                      | — | 22.5 | —  | —  | —  | 32.3           | 18.7           | —    | 5.8            | 18.5 |
| LQ1B4A-F   | 1/2"                   | 3/8"                      | 6 | 27   | 9  | 18 | 21 | 43             | 25             | 28   | 9              | 25   |
| LQ1B4B-F   | 3/8"                   | 3/8"                      | 6 | 24   | 9  | 18 | 21 | 43             | 25             | 28   | 5.8            | 25   |
| LQ1B4C-F   | 1/2"                   | 1/2"                      | 6 | 27   | 9  | 18 | 21 | 43             | 25             | 28   | 9              | 29.5 |
| LQ1B4D-F   | 3/8"                   | 1/2"                      | 6 | 24   | 9  | 18 | 21 | 43             | 25             | 28   | 5.8            | 29.5 |
| * LQ1B4G-F | 1/2"                   | 1/4"                      | — | 27   | —  | —  | 26 | 44.3           | 27.5           | 39   | 9              | 21.5 |
| LQ1B5A-F   | 3/4"                   | 1/2"                      | 7 | 31.5 | 14 | 28 | 26 | 54             | 35.5           | 39   | 10             | 29.5 |
| LQ1B5B-F   | 1/2"                   | 1/2"                      | 7 | 29   | 14 | 28 | 26 | 54             | 35.5           | 39   | 9              | 29.5 |
| LQ1B5C-F   | 3/4"                   | 3/4"                      | 7 | 31.5 | 14 | 28 | 26 | 54             | 35.5           | 39   | 15             | 36   |
| LQ1B5D-F   | 1/2"                   | 3/4"                      | 7 | 29   | 14 | 28 | 26 | 54             | 35.5           | 39   | 9              | 36   |
| * LQ1B5G-F | 3/4"                   | 1/4"                      | — | 31.5 | —  | —  | —  | 44.3           | 27.5           | —    | 10.9           | 21.5 |
| * LQ1B5H-F | 3/4"                   | 3/8"                      | — | 31.5 | —  | —  | —  | 46             | 29.5           | —    | 14.3           | 25   |
| LQ1B6A-F   | 1"                     | 3/4"                      | 8 | 43   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 16             | 36   |
| LQ1B6B-F   | 3/4"                   | 3/4"                      | 8 | 35   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 15             | 36   |
| LQ1B6C-F   | 1"                     | 1"                        | 8 | 43   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 21.2           | 44.5 |
| LQ1B6D-F   | 3/4"                   | 1"                        | 8 | 35   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 15             | 44.5 |
| LQ1B6F-F   | 1"                     | 1/2"                      | 8 | 43   | 18 | 36 | 36 | 69.5           | 42.5           | 49   | 10             | 29.5 |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)



## Union Elbow: LQ1E



(E) shows the approximate dimension of the inserted tubing from the end of the nut.

### Metric sizes

| Model    | Applicable tubing O.D. | B | C  | E    | H  | L    | M    | Min. port size |
|----------|------------------------|---|----|------|----|------|------|----------------|
| LQ1E11   | ø4                     | 2 | 4  | 11   | —  | 18.5 | 11.5 | 2.6            |
| LQ1E12   | ø3                     |   |    |      |    |      |      | 1.8            |
| LQ1E21□□ | ø6                     | 4 | 6  | 18   | 14 | 28   | 16.5 | 3.6            |
| LQ1E22□□ | ø4                     |   |    | 12.5 |    |      |      | 2.6            |
| LQ1E2C□□ | ø3                     |   |    | 13.5 |    |      |      | 1.8            |
| LQ1E31□□ | ø10                    | 5 | 9  | 22.5 | 17 | 36.5 | 23   | 7.4            |
| LQ1E32□□ | ø8                     |   |    | 21   |    |      |      | 5.5            |
| LQ1E33□□ | ø6                     |   |    |      |    |      |      | 3.6            |
| LQ1E41□□ | ø12                    | 6 | 9  | 27   | 21 | 43   | 28   | 9.4            |
| LQ1E42□□ | ø10                    |   |    | 24   |    |      |      | 7.4            |
| LQ1E51□□ | ø19                    | 7 | 14 | 31.5 | 26 | 54   | 39   | 15             |
| LQ1E52□□ | ø12                    |   |    | 29   |    |      |      | 9.4            |
| LQ1E61□□ | ø25                    | 8 | 18 | 43   | 36 | 69.5 | 49   | 21.2           |
| LQ1E62□□ | ø19                    |   |    | 35   |    |      |      | 15             |

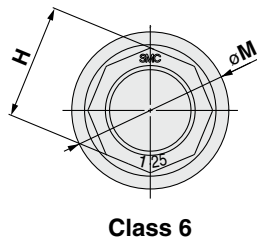
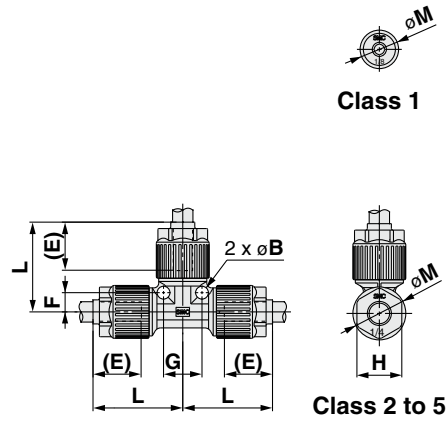
### Inch sizes

| Model    | Applicable tubing O.D. | B | C  | E    | H  | L    | M    | Min. port size |
|----------|------------------------|---|----|------|----|------|------|----------------|
| LQ1E1A   | 1/8"                   | 2 | 4  | 11   | —  | 18.5 | 11.5 | 1.8            |
| LQ1E2A□□ | 1/4"                   |   |    | 17   |    |      |      | 3.6            |
| LQ1E2B□□ | 3/16"                  | 4 | 6  | 14.5 | 14 | 28   | 16.5 | 2.9            |
| LQ1E2C□□ | 1/8"                   |   |    | 13.5 |    |      |      | 1.8            |
| LQ1E3A□□ | 3/8"                   | 5 | 9  | 22.5 | 17 | 36.5 | 23   | 5.8            |
| LQ1E3B□□ | 1/4"                   |   |    | 20   |    |      |      | 3.6            |
| LQ1E4A□□ | 1/2"                   | 6 | 9  | 27   | 21 | 43   | 28   | 9              |
| LQ1E4B□□ | 3/8"                   |   |    | 24   |    |      |      | 5.8            |
| LQ1E5A□□ | 3/4"                   | 7 | 14 | 31.5 | 26 | 54   | 39   | 15             |
| LQ1E5B□□ | 1/2"                   |   |    | 29   |    |      |      | 9              |
| LQ1E6A□□ | 1"                     | 8 | 18 | 43   | 36 | 69.5 | 49   | 21.2           |
| LQ1E6B□□ | 3/4"                   |   |    | 35   |    |      |      | 15             |

# LQ1 Series

## Dimensions

### Union Tee: LQ1T



(E) shows the approximate dimension of the inserted tubing from the end of the nut.

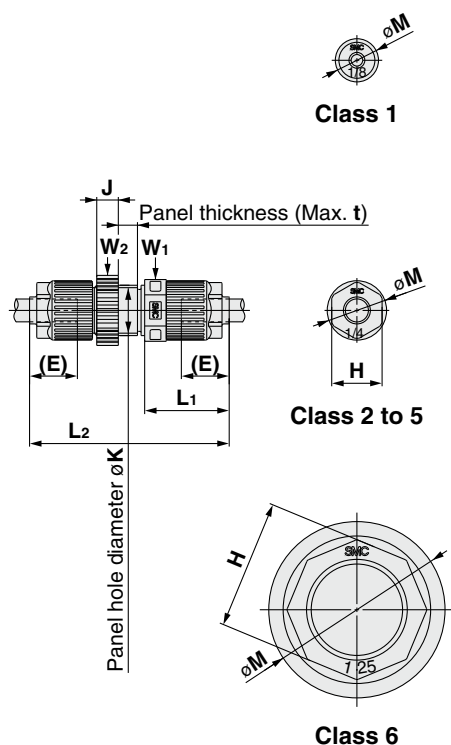
### Metric sizes

| Model    | Applicable tubing O.D. | B | E    | F  | G  | H  | L    | M    | Min. port size |
|----------|------------------------|---|------|----|----|----|------|------|----------------|
| LQ1T11   | ø4                     | 2 | 11   | 4  | 8  | —  | 18.5 | 11.5 | 2.6            |
| LQ1T12   | ø3                     |   |      |    |    |    |      |      | 1.8            |
| LQ1T21□□ | ø6                     | 4 | 18   | 6  | 12 | 14 | 28   | 16.5 | 3.6            |
| LQ1T22□□ | ø4                     |   | 12.5 |    |    |    |      |      | 2.6            |
| LQ1T2C□□ | ø3                     |   | 13.5 |    |    |    |      |      | 1.8            |
| LQ1T31□□ | ø10                    | 5 | 22.5 | 9  | 18 | 17 | 36.5 | 23   | 7.4            |
| LQ1T32□□ | ø8                     |   | 21   |    |    |    |      |      | 5.5            |
| LQ1T33□□ | ø6                     |   |      |    |    |    |      |      | 3.6            |
| LQ1T41□□ | ø12                    | 6 | 27   | 9  | 18 | 21 | 43   | 28   | 9.4            |
| LQ1T42□□ | ø10                    |   | 24   |    |    |    |      |      | 7.4            |
| LQ1T51□□ | ø19                    | 7 | 31.5 | 14 | 28 | 26 | 54   | 39   | 15             |
| LQ1T52□□ | ø12                    |   | 29   |    |    |    |      |      | 9.4            |
| LQ1T61□□ | ø25                    | 8 | 43   | 18 | 36 | 36 | 69.5 | 49   | 21.2           |
| LQ1T62□□ | ø19                    |   | 35   |    |    |    |      |      | 15             |

### Inch sizes

| Model    | Applicable tubing O.D. | B | E    | F  | G  | H  | L    | M    | Min. port size |
|----------|------------------------|---|------|----|----|----|------|------|----------------|
| LQ1T1A   | 1/8"                   | 2 | 11   | 4  | 8  | —  | 18.5 | 11.5 | 1.8            |
| LQ1T2A□□ | 1/4"                   |   | 17   |    |    |    |      |      | 3.6            |
| LQ1T2B□□ | 3/16"                  | 4 | 14.5 | 6  | 12 | 14 | 28   | 16.5 | 2.9            |
| LQ1T2C□□ | 1/8"                   |   | 13.5 |    |    |    |      |      | 1.8            |
| LQ1T3A□□ | 3/8"                   | 5 | 22.5 | 9  | 18 | 17 | 36.5 | 23   | 5.8            |
| LQ1T3B□□ | 1/4"                   |   | 20   |    |    |    |      |      | 3.6            |
| LQ1T4A□□ | 1/2"                   | 6 | 27   | 9  | 18 | 21 | 43   | 28   | 9              |
| LQ1T4B□□ | 3/8"                   |   | 24   |    |    |    |      |      | 5.8            |
| LQ1T5A□□ | 3/4"                   | 7 | 31.5 | 14 | 28 | 26 | 54   | 39   | 15             |
| LQ1T5B□□ | 1/2"                   |   | 29   |    |    |    |      |      | 9              |
| LQ1T6A□□ | 1"                     | 8 | 43   | 18 | 36 | 36 | 69.5 | 49   | 21.2           |
| LQ1T6B□□ | 3/4"                   |   | 35   |    |    |    |      |      | 15             |

## Panel Mount Union: LQ1P



(E) shows the approximate dimension of the inserted tubing from the end of the nut.  
 "W" is width across flats dimension.

## Metric sizes

| Model           | Applicable tubing O.D. | E    | H  | J  | K    | L <sub>1</sub> | L <sub>2</sub> | M    | Min. port size | t  | W <sub>1</sub> | W <sub>2</sub> |
|-----------------|------------------------|------|----|----|------|----------------|----------------|------|----------------|----|----------------|----------------|
| <b>LQ1P11</b>   | <b>ø4</b>              | 11   | —  | 6  | 10.5 | 17             | 44             | 11.5 | 2.6            | 8  | 11             | 13             |
| <b>LQ1P12</b>   | <b>ø3</b>              |      |    |    |      |                |                |      | 1.8            |    |                |                |
| <b>LQ1P21□□</b> | <b>ø6</b>              | 18   | 14 | 6  | 14.5 | 23.5           | 55.5           | 16.5 | 3.6            | 8  | 15             | 17             |
| <b>LQ1P22□□</b> | <b>ø4</b>              | 12.5 |    |    |      |                |                |      | 2.6            |    |                |                |
| <b>LQ1P2C□□</b> | <b>ø3</b>              | 13.5 |    |    |      |                |                |      | 1.8            |    |                |                |
| <b>LQ1P31□□</b> | <b>ø10</b>             | 22.5 |    |    |      |                |                |      | 7.4            |    |                |                |
| <b>LQ1P32□□</b> | <b>ø8</b>              | 21   | 17 | 7  | 20.5 | 30             | 69             | 23   | 5.5            | 8  | 21             | 24             |
| <b>LQ1P33□□</b> | <b>ø6</b>              |      |    |    |      |                |                |      | 3.6            |    |                |                |
| <b>LQ1P41□□</b> | <b>ø12</b>             | 27   | 21 | 7  | 24.5 | 35             | 78.5           | 28   | 9.4            | 8  | 26             | 28             |
| <b>LQ1P42□□</b> | <b>ø10</b>             | 24   |    |    |      |                |                |      | 7.4            |    |                |                |
| <b>LQ1P51□□</b> | <b>ø19</b>             | 31.5 | 26 | 9  | 36.5 | 43.5           | 100            | 39   | 15             | 9  | 39             | 43             |
| <b>LQ1P52□□</b> | <b>ø12</b>             | 29   |    |    |      |                |                |      | 9.4            |    |                |                |
| <b>LQ1P61□□</b> | <b>ø25</b>             | 43   | 36 | 10 | 48.5 | 58.5           | 133            | 49   | 21.2           | 10 | 51             | 55             |
| <b>LQ1P62□□</b> | <b>ø19</b>             | 35   |    |    |      |                |                |      | 15             |    |                |                |

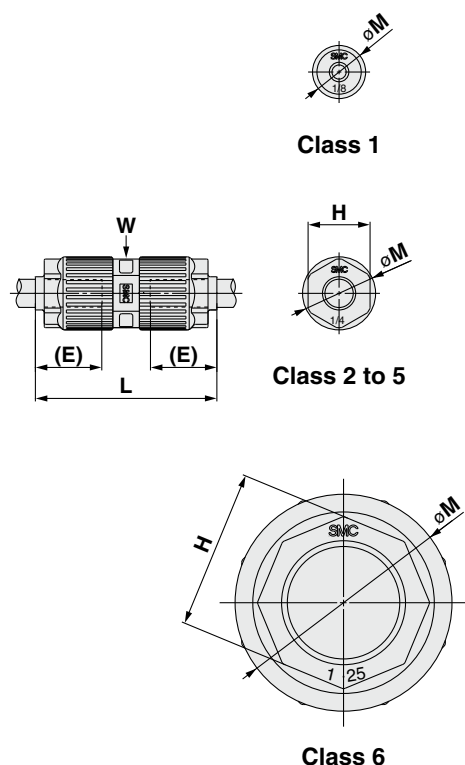
## Inch sizes

| Model            | Applicable tubing O.D. | E    | H  | J  | K    | L <sub>1</sub> | L <sub>2</sub> | M    | Min. port size | t  | W <sub>1</sub> | W <sub>2</sub> |
|------------------|------------------------|------|----|----|------|----------------|----------------|------|----------------|----|----------------|----------------|
| <b>LQ1P1A</b>    | 1/8"                   | 11   | —  | 6  | 10.5 | 17             | 44             | 11.5 | 1.8            | 8  | 11             | 13             |
| <b>LQ1P2A</b> □□ | 1/4"                   | 17   | 14 | 6  | 14.5 | 23.5           | 55.5           | 16.5 | 3.6            | 8  | 15             | 17             |
| <b>LQ1P2B</b> □□ | 3/16"                  | 14.5 |    |    |      |                |                |      | 2.9            |    |                |                |
| <b>LQ1P2C</b> □□ | 1/8"                   | 13.5 |    |    |      |                |                |      | 1.8            |    |                |                |
| <b>LQ1P3A</b> □□ | 3/8"                   | 22.5 | 17 | 7  | 20.5 | 30             | 69             | 23   | 5.8            | 8  | 21             | 24             |
| <b>LQ1P3B</b> □□ | 1/4"                   | 20   |    |    |      |                |                |      | 3.6            |    |                |                |
| <b>LQ1P4A</b> □□ | 1/2"                   | 27   | 21 | 7  | 24.5 | 35             | 78.5           | 28   | 9              | 8  | 26             | 28             |
| <b>LQ1P4B</b> □□ | 3/8"                   | 24   |    |    |      |                |                |      | 5.8            |    |                |                |
| <b>LQ1P5A</b> □□ | 3/4"                   | 31.5 | 26 | 9  | 36.5 | 43.5           | 100            | 39   | 15             | 9  | 39             | 43             |
| <b>LQ1P5B</b> □□ | 1/2"                   | 29   |    |    |      |                |                |      | 9              |    |                |                |
| <b>LQ1P6A</b> □□ | 1"                     | 43   | 36 | 10 | 48.5 | 58.5           | 133            | 49   | 21.2           | 10 | 51             | 55             |
| <b>LQ1P6B</b> □□ | 3/4"                   | 35   |    |    |      |                |                |      | 15             |    |                |                |

# LQ1 Series

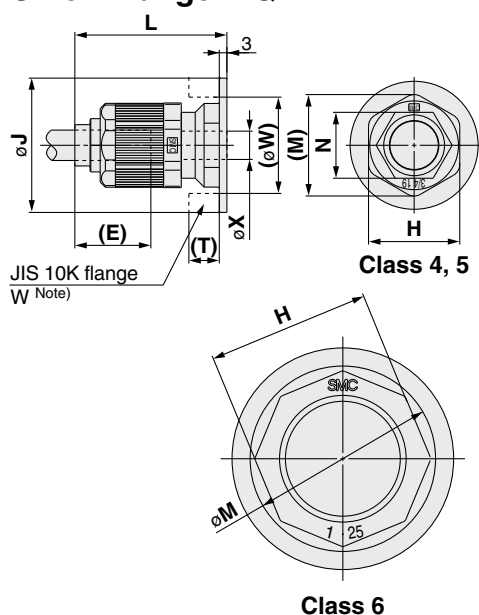
## Dimensions

### Union: LQ1U



(E) shows the approximate dimension of the inserted tubing from the end of the nut.  
“W” is width across flats dimension.

### Union Flange: LQ1F



(E) shows the approximate dimension of the inserted tubing from the end of the nut.  
(W) is the bore size of the JIS flange required for mounting. This flange is sold separately.  
When ordering nuts as spare parts, size 4 and 5 are as shown below.

LQ1F4□: LQ-4N□□  
LQ1F5□: LQ-5N□□

255

### Metric sizes

| Model    | Applicable tubing O.D. | E    | H  | L   | M    | Min. port size | W  |
|----------|------------------------|------|----|-----|------|----------------|----|
| LQ1U11   | ø4                     | 11   | —  | 29  | 11.5 | 2.6            | 10 |
| LQ1U12   | ø3                     |      |    |     |      | 1.8            |    |
| LQ1U21□□ | ø6                     | 18   | 14 | 41  | 16.5 | 3.6            | 14 |
| LQ1U22□□ | ø4                     | 12.5 |    |     |      | 2.6            |    |
| LQ1U2C□□ | ø3                     | 13.5 | 17 | 54  | 23   | 1.8            | 19 |
| LQ1U31□□ | ø10                    | 22.5 |    |     |      | 7.4            |    |
| LQ1U32□□ | ø8                     | 21   | 21 | 63  | 28   | 5.5            | 23 |
| LQ1U33□□ | ø6                     |      |    |     |      | 3.6            |    |
| LQ1U41□□ | ø12                    | 27   | 26 | 77  | 39   | 9.4            | 32 |
| LQ1U42□□ | ø10                    | 24   |    |     |      | 7.4            |    |
| LQ1U51□□ | ø19                    | 31.5 | 36 | 102 | 49   | 15             | 46 |
| LQ1U52□□ | ø12                    | 29   |    |     |      | 9.4            |    |
| LQ1U61□□ | ø25                    | 43   | 36 | 102 | 49   | 21.2           | 46 |
| LQ1U62□□ | ø19                    | 35   |    |     |      | 15             |    |

### Inch sizes

| Model    | Applicable tubing O.D. | E    | H  | L   | M    | Min. port size | W  |
|----------|------------------------|------|----|-----|------|----------------|----|
| LQ1U1A   | 1/8"                   | 11   | —  | 29  | 11.5 | 1.8            | 10 |
| LQ1U2A□□ | 1/4"                   | 17   | 14 | 41  | 16.5 | 3.6            | 14 |
| LQ1U2B□□ | 3/16"                  | 14.5 |    |     |      | 2.9            |    |
| LQ1U2C□□ | 1/8"                   | 13.5 | 17 | 54  | 23   | 1.8            | 19 |
| LQ1U3A□□ | 3/8"                   | 22.5 |    |     |      | 5.8            |    |
| LQ1U3B□□ | 1/4"                   | 20   | 21 | 63  | 28   | 3.6            | 23 |
| LQ1U4A□□ | 1/2"                   | 27   |    |     |      | 9              |    |
| LQ1U4B□□ | 3/8"                   | 24   | 26 | 77  | 39   | 5.8            | 32 |
| LQ1U5A□□ | 3/4"                   | 31.5 |    |     |      | 15             |    |
| LQ1U5B□□ | 1/2"                   | 29   | 36 | 102 | 49   | 9              | 46 |
| LQ1U6A□□ | 1"                     | 43   |    |     |      | 21.2           |    |
| LQ1U6B□□ | 3/4"                   | 35   | 36 | 102 | 49   | 15             | 46 |
|          |                        |      |    |     |      |                |    |

### Metric sizes

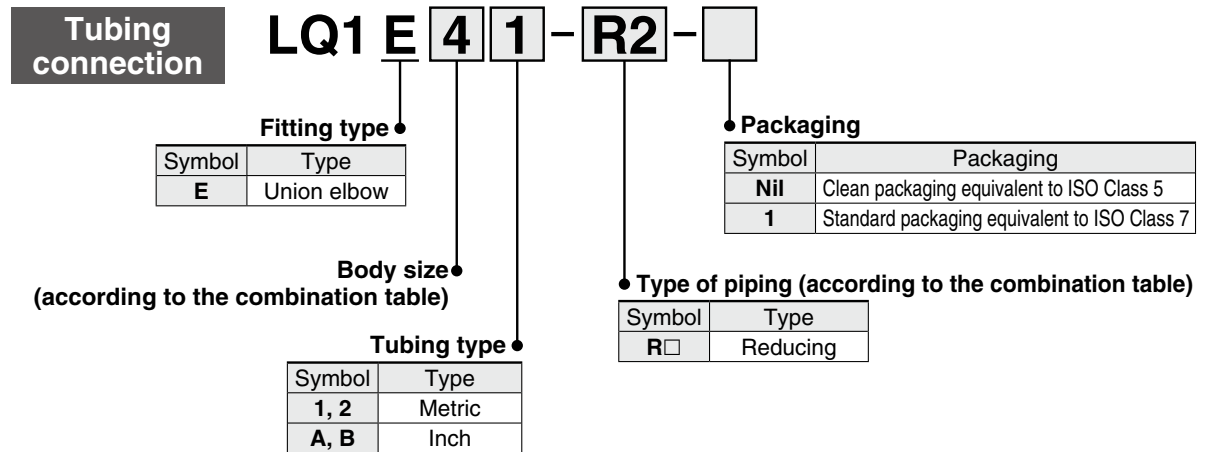
| Model  | Applicable tubing O.D. | E    | H  | J  | L    | N  | M    | W  | (T) | X    | Min. port size |
|--------|------------------------|------|----|----|------|----|------|----|-----|------|----------------|
| LQ1F41 | ø12                    | 30   | 30 | 53 | 60   | 21 | 33.1 | 34 | 12  | 10   | 9.4            |
| LQ1F42 | ø10                    | 25   |    |    | 58   |    |      |    |     |      | 7.4            |
| LQ1F51 | ø19                    | 33.5 | 36 | 58 | 65.2 | 26 | 40   | 41 | 14  | 16   | 15             |
| LQ1F52 | ø12                    | 29   |    |    | 63.2 |    |      |    |     |      | 9.4            |
| LQ1F61 | ø25                    | 43   | 36 | 69 | 81.5 | —  | 49   | 51 | 14  | 22.5 | 21.2           |
| LQ1F62 | ø19                    | 35   |    |    |      |    |      |    |     |      | 15             |

### Inch sizes

| Model  | Applicable tubing O.D. | E    | H  | J  | L    | N  | M    | W  | (T) | X    | Min. port size |
|--------|------------------------|------|----|----|------|----|------|----|-----|------|----------------|
| LQ1F4A | 1/2"                   | 30   | 30 | 53 | 60   | 21 | 33.1 | 34 | 12  | 10   | 9              |
| LQ1F4B | 3/8"                   | 25   |    |    | 58   |    |      |    |     |      | 5.8            |
| LQ1F5A | 3/4"                   | 33.5 | 36 | 58 | 65.2 | 26 | 40   | 41 | 14  | 16   | 15             |
| LQ1F5B | 1/2"                   | 29   |    |    | 63.2 |    |      |    |     |      | 9              |
| LQ1F6A | 1"                     | 43   | 36 | 69 | 81.5 | —  | 49   | 51 | 14  | 22.5 | 21.2           |
| LQ1F6B | 3/4"                   | 35   |    |    |      |    |      |    |     |      | 15             |

# Union Elbow Reducing

## How to Order



### Size combination (Metric)

| Class | Model       | A side                      | B side  |
|-------|-------------|-----------------------------|---------|
|       |             | Applicable tubing size (mm) |         |
| 4     | LQ1E41-R2   | 12 x 10                     | 8 x 6   |
|       | * LQ1E41-R3 |                             | 6 x 4   |
|       | * LQ1E41-R4 |                             | 4 x 3   |
| 5     | * LQ1E51-R2 | 19 x 16                     | 10 x 8  |
|       | * LQ1E51-R3 |                             | 8 x 6   |
|       | * LQ1E51-R4 |                             | 6 x 4   |
|       | * LQ1E51-R5 |                             | 4 x 3   |
| 6     | * LQ1E61-R2 | 25 x 22                     | 12 x 10 |
|       | * LQ1E61-R3 |                             | 10 x 8  |
|       | * LQ1E61-R4 |                             | 8 x 6   |
|       | * LQ1E61-R5 |                             | 6 x 4   |

Note 1) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

### Size combination (Inch)

| Class | Model       | A side                        | B side         |
|-------|-------------|-------------------------------|----------------|
|       |             | Applicable tubing size (inch) |                |
| 3     | * LQ1E3A-R3 | 3/8" x 1/4"                   | 1/8" x 0.086"  |
| 4     | LQ1E4A-R2   | 1/2" x 3/8"                   | 1/4" x 5/32"   |
|       | * LQ1E4A-R3 |                               | 3/16" x 0.127" |
|       | * LQ1E4A-R4 |                               | 1/8" x 0.086"  |
| 5     | * LQ1E5A-R2 | 3/4" x 5/8"                   | 3/8" x 1/4"    |
|       | * LQ1E5A-R3 |                               | 1/4" x 5/32"   |
|       | * LQ1E5A-R4 |                               | 3/16" x 0.127" |
|       | * LQ1E6A-R2 |                               | 1/2" x 3/8"    |
| 6     | * LQ1E6A-R3 | 1" x 7/8"                     | 3/8" x 1/4"    |
|       | * LQ1E6A-R4 |                               | 1/4" x 5/32"   |
|       | * LQ1E6A-R5 |                               | 3/16" x 0.127" |

Note 1) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

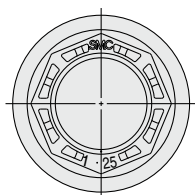
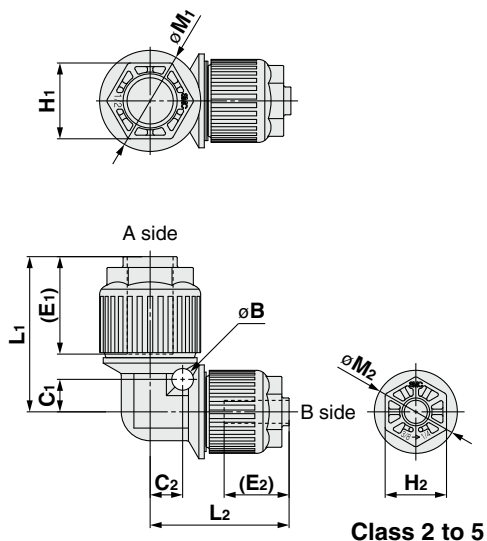
Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

# LQ1 Series

## Dimensions

### Union Elbow Reducing: LQ1E-R



### Metric Size

| Model       | A side<br>Applicable tubing O.D. | B side<br>Applicable tubing O.D. | B | C <sub>1</sub> | C <sub>2</sub> | E <sub>1</sub> | E <sub>2</sub> | H <sub>1</sub> | H <sub>2</sub> | L <sub>1</sub> | L <sub>2</sub> | M <sub>1</sub> | M <sub>2</sub> | Min.<br>port size |
|-------------|----------------------------------|----------------------------------|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|
| LQ1E41-R2   | ø12                              | ø8                               | 6 | 9              | 9              | 27             | 21             | 21             | 17             | 43             | 38.5           | 28             | 23             | 5.5               |
| * LQ1E41-R3 | ø12                              | ø6                               | — | —              | —              |                | 18             |                | 14             | 35.5           | 31.5           |                | 16.5           | 3.6               |
| * LQ1E41-R4 | ø12                              | ø4                               | — | —              | —              |                | 12.5           |                | —              | —              | —              |                | —              | 2.6               |
| * LQ1E51-R2 | ø19                              | ø10                              | — | —              | —              | 35             | 24             | 36             | 21             | 56.5           | 52.5           | 49             | 23             | 7.4               |
| * LQ1E51-R3 | ø19                              | ø8                               | — | —              | —              |                | 21             |                | 17             | 54             | 47.5           |                | —              | 5.5               |
| * LQ1E51-R4 | ø19                              | ø6                               | — | —              | —              |                | 18             |                | —              | —              | —              |                | —              | 3.6               |
| * LQ1E51-R5 | ø19                              | ø4                               | — | —              | —              | 43             | 12.5           | 36             | 14             | 51             | 42             | 39             | 16.5           | 2.6               |
| * LQ1E61-R2 | ø25                              | ø12                              | — | —              | —              |                | 27             |                | 21             | 56.5           | 52.5           |                | 28             | 9.4               |
| * LQ1E61-R3 | ø25                              | ø10                              | — | —              | —              |                | 22.5           |                | —              | —              | —              |                | —              | 7.4               |
| * LQ1E61-R4 | ø25                              | ø8                               | — | —              | —              | 43             | 21             | 36             | 17             | 54             | 47.5           | 49             | 23             | 5.5               |
| * LQ1E61-R5 | ø25                              | ø6                               | — | —              | —              |                | 18             |                | 14             | 51             | 42             |                | 16.5           | 3.6               |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

### Inch Size

| Model       | A side<br>Applicable tubing O.D. | B side<br>Applicable tubing O.D. | B | C <sub>1</sub> | C <sub>2</sub> | E <sub>1</sub> | E <sub>2</sub> | H <sub>1</sub> | H <sub>2</sub> | L <sub>1</sub> | L <sub>2</sub> | M <sub>1</sub> | M <sub>2</sub> | Min.<br>port size |
|-------------|----------------------------------|----------------------------------|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|
| * LQ1E3A-R3 | 3/8"                             | 1/8"                             | — | —              | —              | 24             | 21             | 21             | 14             | 35.5           | 31.5           | 28             | 16.5           | 1.8               |
| LQ1E4A-R2   | 1/2"                             | 1/4"                             | 6 | 9              | 9              | 27             | 18             | 21             | 17             | 43             | 38.5           | 28             | 23             | 3.6               |
| * LQ1E4A-R3 | 1/2"                             | 3/16"                            | — | —              | —              |                | 12.5           |                | 14             | 35.5           | 31.5           |                | 16.5           | 2.9               |
| * LQ1E4A-R4 | 1/2"                             | 1/8"                             | — | —              | —              |                | 22.5           |                | —              | —              | —              |                | —              | 1.8               |
| * LQ1E5A-R2 | 3/4"                             | 3/8"                             | — | —              | —              | 35             | 21             | 36             | 17             | 54             | 47.5           | 49             | 23             | 5.8               |
| * LQ1E5A-R3 | 3/4"                             | 1/4"                             | — | —              | —              |                | 18             |                | —              | —              | —              |                | —              | 3.6               |
| * LQ1E5A-R4 | 3/4"                             | 3/16"                            | — | —              | —              |                | 12.5           |                | 14             | 51             | 42             |                | 16.5           | 2.9               |
| * LQ1E6A-R2 | 1"                               | 1/2"                             | — | —              | —              | 43             | 27             | 36             | 21             | 56.5           | 52.5           | 49             | 28             | 9                 |
| * LQ1E6A-R3 | 1"                               | 3/8"                             | — | —              | —              |                | 22.5           |                | 17             | 54             | 47.5           |                | 23             | 5.8               |
| * LQ1E6A-R4 | 1"                               | 1/4"                             | — | —              | —              |                | 20             |                | —              | —              | —              |                | —              | 3.6               |
| * LQ1E6A-R5 | 1"                               | 3/16"                            | — | —              | —              | 43             | 14.5           | 36             | 14             | 51             | 42             | 39             | 16.5           | 2.9               |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)



# Union Tee Reducing

## How to Order

**Tubing connection**

**LQ1 T 4 1 - R2 -**

**Fitting type**

| Symbol | Type      |
|--------|-----------|
| T      | Union tee |

**Body size**  
(according to the combination table)

**Tubing type**

| Symbol | Type   |
|--------|--------|
| 1, 2   | Metric |
| A, B   | Inch   |

**Packaging**

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |

**Type of piping (according to the combination table)**

| Symbol | Type     |
|--------|----------|
| R□     | Reducing |

### Size combination (Metric)

| Class                       | Model        | A side (Left) | B side (Center) | C side (Right) |
|-----------------------------|--------------|---------------|-----------------|----------------|
| Applicable tubing size (mm) |              |               |                 |                |
| 3                           | LQ1T31-R4    | 10 x 8        | 3 x 2           | 10 x 8         |
|                             | LQ1T31-R7    | 8 x 6         | 8 x 6           | 10 x 8         |
|                             | LQ1T31-R8    |               | 6 x 4           | 10 x 8         |
|                             | LQ1T32-R5    | 6 x 4         | 8 x 6           | 8 x 6          |
|                             | LQ1T32-R6    |               | 10 x 8          | 10 x 8         |
|                             | LQ1T32-R7    |               | 6 x 4           | 8 x 6          |
| 4                           | LQ1T41-R2    | 12 x 10       | 8 x 6           | 12 x 10        |
|                             | LQ1T41-R3    |               | 6 x 4           | 12 x 10        |
|                             | LQ1T41-R5    |               | 12 x 10         | 12 x 10        |
|                             | LQ1T41-R7    | 10 x 8        | 10 x 8          | 12 x 10        |
|                             | LQ1T41-R11   |               | 10 x 8          | 12 x 10        |
|                             | LQ1T41-R12   | 6 x 4         | 12 x 10         | 12 x 10        |
|                             | LQ1T41-R22   | 10 x 8        | 6 x 4           | 12 x 10        |
|                             | LQ1T41-R23   | 6 x 4         | 6 x 4           | 12 x 10        |
|                             | LQ1T41-R26   | 12 x 10       | 3 x 2           | 12 x 10        |
|                             | LQ1T41-R32   | 6 x 4         | 12 x 10         | 6 x 4          |
|                             | LQ1T41-R34   | 3 x 2         | 12 x 10         | 3 x 2          |
|                             | LQ1T51-R2    | 19 x 16       | 10 x 8          | 19 x 16        |
|                             | LQ1T51-R3    |               | 8 x 6           | 19 x 16        |
|                             | LQ1T51-R4    |               | 6 x 4           | 19 x 16        |
| 5                           | LQ1T51-R5    |               | 19 x 16         | 19 x 16        |
|                             | LQ1T51-R6    | 10 x 8        | 19 x 16         | 19 x 16        |
|                             | * LQ1T51-R7  | 12 x 10       | 12 x 10         | 19 x 16        |
|                             | * LQ1T51-R8  | 10 x 8        | 10 x 8          | 19 x 16        |
|                             | LQ1T51-R10   | 10 x 8        | 19 x 16         | 10 x 8         |
|                             | LQ1T51-R12   | 8 x 6         | 19 x 16         | 19 x 16        |
|                             | LQ1T51-R13   | 6 x 4         | 19 x 16         | 19 x 16        |
|                             | * LQ1T51-R17 | 10 x 8        | 12 x 10         | 19 x 16        |
|                             | LQ1T51-R24   | 12 x 10       | 6 x 4           | 19 x 16        |
|                             | LQ1T51-R26   | 19 x 16       | 4 x 3           | 19 x 16        |
|                             | LQ1T51-R28   |               | 3 x 2           | 19 x 16        |
|                             | LQ1T51-R31   | 10 x 8        | 19 x 16         | 12 x 10        |
|                             | LQ1T61-R2    | 25 x 22       | 12 x 10         | 25 x 22        |
|                             | LQ1T61-R3    |               | 10 x 8          | 25 x 22        |
| 6                           | * LQ1T61-R4  |               | 8 x 6           | 25 x 22        |
|                             | LQ1T61-R5    | 19 x 16       | 25 x 22         | 25 x 22        |
|                             | LQ1T61-R6    | 12 x 10       | 25 x 22         | 25 x 22        |
|                             | LQ1T61-R7    | 19 x 16       | 19 x 16         | 25 x 22        |
|                             | * LQ1T61-R8  | 12 x 10       | 12 x 10         | 25 x 22        |
|                             | LQ1T61-R10   | 12 x 10       | 25 x 22         | 12 x 10        |
|                             | LQ1T61-R11   |               | 19 x 16         | 25 x 22        |
|                             | LQ1T61-R12   | 10 x 8        | 25 x 22         | 25 x 22        |
|                             | * LQ1T61-R13 | 8 x 6         | 25 x 22         | 25 x 22        |
|                             | LQ1T61-R15   | 6 x 4         | 25 x 22         | 25 x 22        |
|                             | LQ1T61-R18   | 10 x 8        | 19 x 16         | 25 x 22        |
|                             | LQ1T61-R19   | 6 x 4         | 19 x 16         | 25 x 22        |
|                             | LQ1T61-R20   | 19 x 16       | 12 x 10         | 25 x 22        |
|                             | * LQ1T61-R26 | 25 x 22       | 6 x 4           | 25 x 22        |
|                             | LQ1T61-R30   | 10 x 8        | 25 x 22         | 19 x 16        |
|                             | LQ1T61-R31   | 12 x 10       | 25 x 22         | 19 x 16        |
|                             | * LQ1T61-R34 | 6 x 4         | 25 x 22         | 6 x 4          |

Note 1) Products marked "\*" are produced upon receipt of order.

(The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

### Size combination (Inch)

| Class                         | Model        | A side (Left) | B side (Center) | C side (Right) |
|-------------------------------|--------------|---------------|-----------------|----------------|
| Applicable tubing size (inch) |              |               |                 |                |
| 3                             | LQ1T3A-R5    | 1/4" x 5/32"  | 3/8" x 1/4"     | 3/8" x 1/4"    |
|                               | LQ1T3A-R7    | 1/4" x 5/32"  | 1/4" x 5/32"    | 3/8" x 1/4"    |
|                               | LQ1T4A-R2    | 1/2" x 3/8"   | 1/4" x 5/32"    | 1/2" x 3/8"    |
|                               | LQ1T4A-R4    | 1/2" x 3/8"   | 1/8" x 0.086"   | 1/2" x 3/8"    |
|                               | LQ1T4A-R5    | 3/8" x 1/4"   | 1/2" x 3/8"     | 1/2" x 3/8"    |
|                               | LQ1T4A-R6    | 1/4" x 5/32"  |                 | 1/2" x 3/8"    |
| 4                             | LQ1T4A-R7    | 3/8" x 1/4"   | 3/8" x 1/4"     | 1/2" x 3/8"    |
|                               | LQ1T4A-R8    | 1/4" x 5/32"  | 1/4" x 5/32"    | 1/2" x 3/8"    |
|                               | LQ1T4A-R10   | 1/4" x 5/32"  | 1/2" x 3/8"     | 1/4" x 5/32"   |
|                               | LQ1T4A-R17   | 1/4" x 5/32"  | 3/8" x 1/4"     | 1/2" x 3/8"    |
|                               | LQ1T4A-R20   | 3/8" x 1/4"   | 1/4" x 5/32"    | 1/2" x 3/8"    |
|                               | LQ1T4A-R33   | 1/8" x 0.086" | 1/2" x 3/8"     | 1/8" x 0.086"  |
|                               | LQ1T5A-R2    | 3/4" x 5/8"   | 3/8" x 1/4"     | 3/4" x 5/8"    |
|                               | LQ1T5A-R5    | 1/2" x 3/8"   | 3/4" x 5/8"     | 3/4" x 5/8"    |
|                               | LQ1T5A-R6    | 3/8" x 1/4"   | 3/4" x 5/8"     | 3/4" x 5/8"    |
|                               | * LQ1T5A-R7  | 1/2" x 3/8"   | 1/2" x 3/8"     | 3/4" x 5/8"    |
|                               | LQ1T5A-R8    | 3/8" x 1/4"   | 3/8" x 1/4"     | 3/4" x 5/8"    |
|                               | * LQ1T5A-R10 | 3/8" x 1/4"   | 3/4" x 5/8"     | 3/8" x 1/4"    |
|                               | LQ1T5A-R12   | 1/4" x 5/32"  |                 | 3/4" x 5/8"    |
|                               | * LQ1T5A-R17 | 1/2" x 3/8"   | 3/8" x 1/4"     | 3/4" x 5/8"    |
| 5                             | LQ1T5A-R21   | 3/8" x 1/4"   | 1/4" x 5/32"    | 3/4" x 5/8"    |
|                               | LQ1T5A-R22   | 1/2" x 3/8"   | 1/4" x 5/32"    | 3/4" x 5/8"    |
|                               | LQ1T5A-R26   | 3/4" x 5/8"   | 1/8" x 0.086"   | 3/4" x 5/8"    |
|                               | LQ1T5A-R31   | 3/8" x 1/4"   | 3/4" x 5/8"     | 1/2" x 3/8"    |
|                               | * LQ1T5A-R32 | 1/4" x 5/32"  |                 | 1/4" x 5/32"   |
|                               | LQ1T6A-R2    | 1" x 7/8"     | 1/2" x 3/8"     | 1" x 7/8"      |
|                               | LQ1T6A-R3    | 1" x 7/8"     | 3/8" x 1/4"     | 1" x 7/8"      |
|                               | * LQ1T6A-R4  | 1" x 7/8"     | 1/4" x 5/32"    | 1" x 7/8"      |
|                               | LQ1T6A-R5    | 3/4" x 5/8"   | 1" x 7/8"       | 1" x 7/8"      |
|                               | LQ1T6A-R6    | 1/2" x 3/8"   |                 | 1" x 7/8"      |
|                               | LQ1T6A-R7    | 3/4" x 5/8"   | 3/4" x 5/8"     | 1" x 7/8"      |
|                               | * LQ1T6A-R8  | 1/2" x 3/8"   | 1/2" x 3/8"     | 1" x 7/8"      |
|                               | LQ1T6A-R10   | 1/2" x 3/8"   | 1" x 7/8"       | 1/2" x 3/8"    |
|                               | LQ1T6A-R11   | 3/8" x 1/4"   | 3/4" x 5/8"     | 1" x 7/8"      |
| 6                             | LQ1T6A-R12   | 3/8" x 1/4"   | 1" x 7/8"       | 1" x 7/8"      |
|                               | * LQ1T6A-R13 | 1/4" x 5/32"  |                 | 1" x 7/8"      |
|                               | LQ1T6A-R17   | 1/2" x 3/8"   | 3/4" x 5/8"     | 1" x 7/8"      |
|                               | * LQ1T6A-R18 | 1/4" x 5/32"  |                 | 1" x 7/8"      |
|                               | LQ1T6A-R20   | 3/4" x 5/8"   | 1/2" x 3/8"     | 1" x 7/8"      |
|                               | LQ1T6A-R30   | 3/8" x 1/4"   | 1" x 7/8"       | 3/4" x 5/8"    |
|                               | LQ1T6A-R31   | 1/2" x 3/8"   |                 | 3/4" x 5/8"    |
|                               | * LQ1T6A-R33 | 1/4" x 5/32"  | 1/4" x 5/32"    | 1/4" x 5/32"   |

Note 1) Products marked "\*" are produced upon receipt of order.

(The body of the fitting is PTFE machined.)

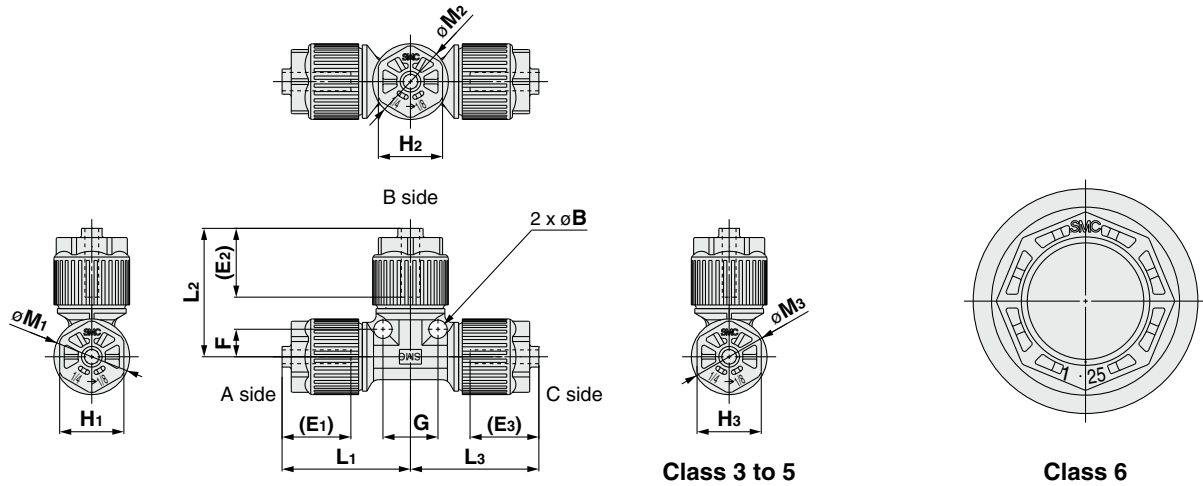
Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

# LQ1 Series

## Dimensions

### Union tee reducing: LQ1T-R



### Metric Size

| Model      | A side                 | B side | C side | B | E <sub>1</sub> | E <sub>2</sub> | E <sub>3</sub> | F  | G  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | M <sub>1</sub> | M <sub>2</sub> | M <sub>3</sub> | Min.<br>port size |      |     |
|------------|------------------------|--------|--------|---|----------------|----------------|----------------|----|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|------|-----|
|            | Applicable tubing O.D. |        |        |   |                |                |                |    |    |                |                |                |                |                |                |                |                |                |                   |      |     |
| LQ1T31-R4  | ø10                    | ø3     | ø10    | 6 | 24             | 12.5           | 24             | 9  | 18 | 21             | 14             | 21             | 43             | 33             | 43             | 28             | 16.5           | 28             | 1.8               |      |     |
| LQ1T31-R7  | ø8                     | ø8     | ø10    | 5 | 21             | 21             | 22.5           | 9  | 18 | 17             | 17             | 17             | 36.5           | 36.5           | 36.5           | 23             | 23             | 23             | 5.5               |      |     |
| LQ1T31-R8  | ø6                     | ø6     | ø10    |   |                |                |                |    |    |                |                |                |                |                |                |                |                |                | 3.6               |      |     |
| LQ1T32-R5  | ø6                     | ø8     | ø8     |   |                |                |                |    |    |                |                |                |                |                |                |                |                |                | 3.6               |      |     |
| LQ1T32-R6  | ø6                     | ø10    | ø10    |   |                | 3.6            |                |    |    |                |                |                |                |                |                |                |                |                |                   |      |     |
| LQ1T32-R7  | ø6                     | ø6     | ø8     |   |                | 3.6            |                |    |    |                |                |                |                |                |                |                |                |                |                   |      |     |
| LQ1T41-R2  | ø12                    | ø8     | ø12    | 6 | 27             | 21             | 27             | 9  | 18 | 21             | 17             | 21             | 43             | 38.5           | 43             | 28             | 23             | 28             | 5.5               |      |     |
| LQ1T41-R3  | ø12                    | ø6     | ø12    |   |                | 18             |                |    |    |                | 14             |                |                | 33             |                |                | 16.5           |                | 3.6               |      |     |
| LQ1T41-R5  | ø10                    | ø12    | ø12    |   |                | 23             |                |    |    |                | 27             |                |                | 43             |                |                | 7.4            |                |                   |      |     |
| LQ1T41-R7  | ø10                    | ø10    | ø12    |   |                | 24             |                |    |    |                | 24             |                |                | 28             |                |                | 7.4            |                |                   |      |     |
| LQ1T41-R11 | ø6                     | ø10    | ø12    | 7 | 21             | 22.5           | 29             | 14 | 28 | 17             | 17             | 26             | 44             | 44             | 54             | 23             | 23             | 39             | 3.6               |      |     |
| LQ1T41-R12 | ø6                     | ø12    | ø12    |   |                | 29             |                |    |    |                | 26             |                |                | 54             |                |                | 39             |                | 3.6               |      |     |
| LQ1T41-R22 | ø10                    | ø6     | ø12    | 6 | 24             | 21             | 27             | 9  | 18 | 21             | 17             | 21             | 43             | 38.5           | 43             | 28             | 23             | 28             | 3.6               |      |     |
| LQ1T41-R23 | ø6                     | ø6     | ø12    | 7 | 21             |                | 29             | 14 | 28 | 17             |                | 26             | 44             | 44             | 54             | 23             |                | 39             | 3.6               |      |     |
| LQ1T41-R26 | ø12                    | ø3     | ø12    | 6 | 27             | 27             | 18             | 9  | 18 | 21             | 14             | 21             | 43             | 33             | 43             | 28             | 16.5           | 28             | 16.5              | 1.8  |     |
| LQ1T41-R32 | ø6                     | ø12    | ø6     |   | 18             |                |                |    |    |                |                |                |                |                |                |                |                |                |                   | 18   | 3.6 |
| LQ1T41-R34 | ø3                     | ø12    | ø3     |   | 13.5           |                |                |    |    |                |                |                |                |                |                |                |                |                |                   | 13.5 | 1.8 |
| LQ1T51-R2  | ø19                    | ø10    | ø19    | 7 | 31.5           | 22.5           | 31.5           | 14 | 28 | 26             | 17             | 26             | 54             | 44             | 54             | 39             | 23             | 39             | 7.4               |      |     |
| LQ1T51-R3  | ø19                    | ø8     | ø19    |   |                | 21             |                |    |    |                |                |                |                |                |                |                |                |                | 21                | 5.5  |     |

## Metric Size

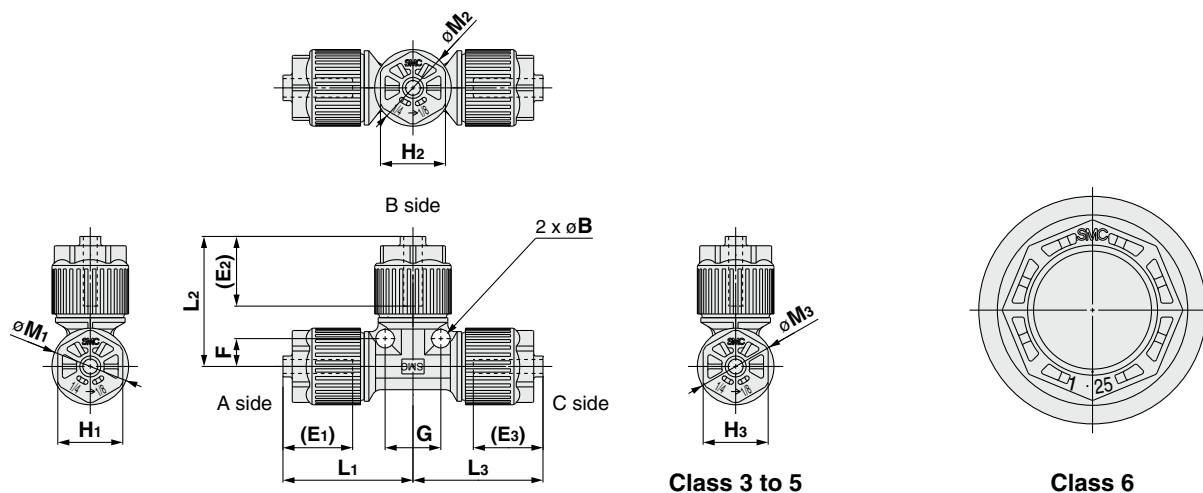
| Model        | A side<br>Applicable tubing O.D. | B side | C side | B | E <sub>1</sub> | E <sub>2</sub> | E <sub>3</sub> | F  | G  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | M <sub>1</sub> | M <sub>2</sub> | M <sub>3</sub> | Min.<br>port size |     |      |      |      |     |    |    |      |      |     |     |
|--------------|----------------------------------|--------|--------|---|----------------|----------------|----------------|----|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|-----|------|------|------|-----|----|----|------|------|-----|-----|
| LQ1T51-R4    | ø19                              | ø6     | ø19    | 7 | 31.5           | 18             | 31.5           | 14 | 28 | 26             | 14             | 26             | 54             | 38.5           | 54             | 39             | 16.5           | 39             | 3.6               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T51-R5    | ø12                              | ø19    | ø19    |   | 29             | 31.5           |                |    |    | 17             | 26             |                | 44             | 54             |                | 23             | 39             |                | 7.4               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T51-R6    | ø10                              | ø19    | ø19    |   | 22.5           |                |                |    |    |                |                |                |                |                |                |                |                |                |                   | 26  | 49   | 23   | 39   | 5.5 |    |    |      |      |     |     |
| * LQ1T51-R7  | ø12                              | ø12    | ø19    | — | 27             | 27             | 35             | —  | —  | 21             | 21             | 36             | 42             | 52.5           | 57.5           | 28             | 28             | 49             | 9.4               |     |      |      |      |     |    |    |      |      |     |     |
| * LQ1T51-R8  | ø10                              | ø10    | ø19    |   | 24             | 24             |                |    |    |                |                |                |                |                |                |                |                |                | 7.4               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T51-R10   | ø10                              | ø19    | ø10    | 7 | 22.5           | 31.5           | 24             | 14 | 28 | 17             | 26             | 21             | 44             | 54             | 49             | 23             | 39             | 28             |                   | 7.4 |      |      |      |     |    |    |      |      |     |     |
| LQ1T51-R12   | ø8                               | ø19    | ø19    |   | 21             |                |                |    |    | 17             | 26             | 26             |                |                | 44             |                |                |                | 54                | 23  | 39   | 5.5  |      |     |    |    |      |      |     |     |
| LQ1T51-R13   | ø6                               | ø19    | ø19    |   |                |                |                |    |    |                |                |                |                |                |                |                |                |                |                   |     |      |      |      |     |    |    |      |      |     | 3.6 |
| * LQ1T51-R17 | ø10                              | ø12    | ø19    | — | 24             | 27             | 35             | 18 | 36 | 21             | 21             | 36             | 42             | 52.5           | 57.5           | 28             | 28             | 49             | 7.4               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T51-R24   | ø12                              | ø6     | ø19    | 7 | 29             | 18             | 31.5           | 14 | 28 | 26             | 14             | 26             | 54             | 38.5           | 54             | 39             | 16.5           | 39             | 3.6               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T51-R26   | ø19                              | ø4     | ø19    |   | 31.5           | 12.5           |                |    |    |                |                |                |                |                |                |                |                |                | 2.6               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T51-R28   | ø19                              | ø3     | ø19    |   |                | 13.5           |                |    |    |                |                |                |                |                |                |                |                |                | 1.8               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T51-R31   | ø10                              | ø19    | ø12    |   | 22.5           | 31.5           |                |    |    |                |                |                |                |                |                |                |                |                | 27                | 17  | 26   | 21   | 44   | 54  | 49 | 23 | 39   | 28   | 7.4 |     |
| LQ1T61-R2    | ø25                              | ø12    | ø25    | 8 | 43             | 27             | 43             | 18 | 36 | 36             | 21             | 36             | 69.5           | 54.5           | 69.5           | 49             | 28             | 49             | 9.4               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T61-R3    | ø25                              | ø10    | ø25    |   |                | 24             |                |    |    |                |                |                |                |                |                |                |                |                | 7.4               |     |      |      |      |     |    |    |      |      |     |     |
| * LQ1T61-R4  | ø25                              | ø8     | ø25    | — |                | 21             | 43             | 18 | 36 | 36             | 17             | 36             | 55             | 47.5           | 55             | 49             | 23             | 49             | 5.5               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T61-R5    | ø19                              | ø25    | ø25    | 8 | 35             | 43             |                |    |    |                |                |                | 43             | 18             | 36             |                |                |                | 21                | 36  | 69.5 | 69.5 | 69.5 | 28  | 49 | 49 | 15   |      |     |     |
| LQ1T61-R6    | ø12                              | ø25    | ø25    |   | 27             |                |                |    |    |                | 21             |                |                |                |                |                | 36             |                |                   |     | 54.5 |      |      |     |    |    | 69.5 | 69.5 | 49  | 9.4 |
| LQ1T61-R7    | ø19                              | ø19    | ø25    |   | 35             |                |                |    |    |                | 35             |                |                |                |                |                | 36             |                |                   |     | 69.5 |      |      |     |    |    |      | 49   | 15  |     |
| * LQ1T61-R8  | ø12                              | ø12    | ø19    | — |                | 27             | 35             | —  | —  | 21             | 21             | 36             | 47             | 52.5           | 57.5           | 28             | 28             | 49             | 9.4               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T61-R10   | ø12                              | ø25    | ø12    | 8 | 27             | 43             | 27             | 18 | 36 | 21             | 36             |                | 21             | 54.5           | 69.5           | 54.5           | 28             |                | 49                | 28  | 9.4  |      |      |     |    |    |      |      |     |     |
| LQ1T61-R11   | ø12                              | ø19    | ø25    | 8 | 24             | 35             | 43             | 18 | 36 | 21             | 36             | 36             | 54.5           | 69.5           | 68.5           | 28             | 49             | 49             | 9.4               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T61-R12   | ø10                              | ø25    | ø25    |   |                |                |                |    |    |                |                |                | 46.5           | 68             | 68             | 23             |                |                | 5.5               |     |      |      |      |     |    |    |      |      |     |     |
| * LQ1T61-R13 | ø8                               | ø25    | ø25    | — | 21             | 43             | 43             | 18 | 36 | 17             | 36             | 36             | 44             | 69.5           | 69.5           | 16.5           | 49             | 49             | 3.6               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T61-R15   | ø6                               | ø25    | ø25    | 8 | 18             | 54.5           |                |    |    |                |                |                | 7.4            |                |                |                |                |                |                   |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T61-R18   | ø10                              | ø19    | ø25    |   | 24             | 35             |                |    |    |                |                |                | 44             |                |                | 3.6            |                |                |                   |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T61-R19   | ø6                               | ø19    | ø25    | 8 | 18             | 35             | 43             | 18 | 36 | 14             | 36             | 36             | 44             | 69.5           | 69.5           | 16.5           | 49             | 49             | 3.6               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T61-R20   | ø19                              | ø12    | ø25    |   | 35             | 27             |                |    |    | 69.5           | 54.5           |                | 49             | 28             |                | 9.4            |                |                |                   |     |      |      |      |     |    |    |      |      |     |     |
| * LQ1T61-R26 | ø25                              | ø6     | ø25    | — | 43             | 21             | 35             | 18 | 36 | 21             | 36             | 36             | 55             | 47.5           | 55             | 49             | 23             | 49             | 3.6               |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T61-R30   | ø10                              | ø25    | ø19    | 8 | 24             | 54.5           |                |    |    |                |                |                | 69.5           | 49.5           | 7.4            |                |                |                |                   |     |      |      |      |     |    |    |      |      |     |     |
| LQ1T61-R31   | ø12                              | ø25    | ø19    |   | 27             | 43             |                |    |    |                |                | 54.5           | 69.5           | 49.5           | 9.4            |                |                |                |                   |     |      |      |      |     |    |    |      |      |     |     |
| * LQ1T61-R34 | ø6                               | ø25    | ø6     | — | 21             |                | 21             | —  | —  | 17             |                | 17             | 46.5           | 55             | 46.5           | 23             |                | 23             | 3.6               |     |      |      |      |     |    |    |      |      |     |     |

Note) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

# LQ1 Series

## Dimensions

### Union tee reducing: LQ1T-R



### Inch Size

| Model       | A side                 | B side | C side | B | E <sub>1</sub> | E <sub>2</sub> | E <sub>3</sub> | F  | G  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | M <sub>1</sub> | M <sub>2</sub> | M <sub>3</sub> | Min. port size |    |    |
|-------------|------------------------|--------|--------|---|----------------|----------------|----------------|----|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----|
|             | Applicable tubing O.D. |        |        |   |                |                |                |    |    |                |                |                |                |                |                |                |                |                |                |    |    |
| LQ1T3A-R5   | 1/4"                   | 3/8"   | 3/8"   | 5 | 20             | 22.5           | 22.5           | 9  | 18 | 17             | 17             | 17             | 36.5           | 36.5           | 36.5           | 23             | 23             | 23             | 3.6            |    |    |
| LQ1T3A-R7   | 1/4"                   | 1/4"   | 3/8"   |   |                | 20             |                |    |    |                |                |                |                |                |                |                |                |                | 3.6            |    |    |
| LQ1T4A-R2   | 1/2"                   | 1/4"   | 1/2"   | 6 | 27             | 17             | 27             | 9  | 18 | 21             | 14             | 21             | 43             | 33             | 43             | 28             | 16.5           | 28             | 3.6            |    |    |
| LQ1T4A-R4   | 1/2"                   | 1/8"   | 1/2"   |   |                | 13.5           |                |    |    |                |                |                |                | 21             |                |                |                |                | 1.8            |    |    |
| LQ1T4A-R5   | 3/8"                   | 1/2"   | 1/2"   |   |                | 24             |                |    |    |                | 27             |                |                |                |                |                |                |                | 5.8            |    |    |
| LQ1T4A-R6   | 1/4"                   | 1/2"   | 1/2"   | 7 | 20             | 29             | 29             | 14 | 28 | 17             | 26             | 26             | 44             | 54             | 54             | 23             | 39             | 39             | 3.6            |    |    |
| LQ1T4A-R7   | 3/8"                   | 3/8"   | 1/2"   | 6 | 24             | 24             | 27             | 9  | 18 | 21             | 21             | 21             | 43             | 43             | 43             | 28             | 28             | 28             | 5.8            |    |    |
| LQ1T4A-R8   | 1/4"                   | 1/4"   | 1/2"   | 7 | 20             | 20             | 29             | 14 | 28 | 17             | 17             | 26             | 44             | 44             | 54             | 23             | 23             | 39             | 3.6            |    |    |
| LQ1T4A-R10  | 1/4"                   | 1/2"   | 1/4"   | 6 | 17             | 27             | 17             | 9  | 18 | 14             | 21             | 14             | 33             | 43             | 33             | 16.5           | 28             | 16.5           | 3.6            |    |    |
| LQ1T4A-R17  | 1/4"                   | 3/8"   | 1/2"   | 7 | 20             | 22.5           | 29             | 14 | 28 | 17             | 17             | 26             | 44             | 44             | 54             | 23             | 23             | 39             | 3.6            |    |    |
| LQ1T4A-R20  | 3/8"                   | 1/4"   | 1/2"   | 6 | 24             | 20             | 27             | 9  | 18 | 21             |                | 21             | 43             | 38.5           | 43             | 28             |                | 28             | 3.6            |    |    |
| LQ1T4A-R33  | 1/8"                   | 1/2"   | 1/8"   |   | 13.5           | 27             | 13.5           |    |    | 14             | 21             | 14             | 33             | 43             | 33             | 16.5           | 28             | 16.5           | 1.8            |    |    |
| LQ1T5A-R2   | 3/4"                   | 3/8"   | 3/4"   | 7 | 31.5           | 22.5           | 31.5           | 14 | 28 | 26             | 17             | 26             | 54             | 44             | 54             | 39             | 23             | 39             | 5.8            |    |    |
| LQ1T5A-R5   | 1/2"                   | 3/4"   | 3/4"   |   | 29             | 31.5           |                |    |    |                | 17             |                | 26             | 44             |                |                |                |                | 54             | 23 | 39 |
| LQ1T5A-R6   | 3/8"                   | 3/4"   | 3/4"   |   | 22.5           |                |                |    |    | 5.8            |                |                |                |                |                |                |                |                |                |    |    |
| * LQ1T5A-R7 | 1/2"                   | 1/2"   | 3/4"   | — | 27             | 27             | 35             | —  | —  | 21             | 21             | 36             | 42             | 52.5           | 57.5           | 28             | 28             | 49             | 9              |    |    |
| LQ1T5A-R8   | 3/8"                   | 3/8"   | 3/4"   | 7 | 22.5           | 22.5           | 31.5           | 14 | 28 | 17             | 17             | 26             | 44             | 44             | 54             | 23             | 23             | 39             | 5.8            |    |    |

Note) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

## Inch Size

| Model        | A side<br>Applicable tubing O.D. | B side | C side | B | E <sub>1</sub> | E <sub>2</sub> | E <sub>3</sub> | F  | G  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | M <sub>1</sub> | M <sub>2</sub> | M <sub>3</sub> | Min.<br>port size |     |    |     |
|--------------|----------------------------------|--------|--------|---|----------------|----------------|----------------|----|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|-----|----|-----|
| * LQ1T5A-R10 | 3/8"                             | 3/4"   | 3/8"   | — | 22.5           | 35             | 22.5           | —  | —  | 17             | 36             | 17             | 46.5           | 55             | 46.5           | 23             | 49             | 23             | 5.8               |     |    |     |
| LQ1T5A-R12   | 1/4"                             | 3/4"   | 3/4"   | 7 | 17             | 31.5           | 31.5           | 14 | 28 | 14             | 26             | 26             | 38.5           | 54             | 54             | 16.5           | 39             | 39             | 3.6               |     |    |     |
| * LQ1T5A-R17 | 1/2"                             | 3/8"   | 3/4"   | — | 27             | 24             | 35             | —  | —  | 21             | 21             | 36             | 42             | 52.5           | 57.5           | 28             | 28             | 49             | 5.8               |     |    |     |
| LQ1T5A-R21   | 3/8"                             | 1/4"   | 3/4"   | 7 | 22.5           | 20             | 31.5           | 14 | 28 | 17             | 17             | 26             | 44             | 44             | 54             | 23             | 23             | 39             | 3.6               |     |    |     |
| LQ1T5A-R22   | 1/2"                             | 1/4"   | 3/4"   |   | 29             | 17             |                |    |    | 26             | 14             |                | 54             | 38.5           |                | 39             | 16.5           |                | 3.6               |     |    |     |
| LQ1T5A-R26   | 3/4"                             | 1/8"   | 3/4"   |   | 31.5           | 13.5           |                |    |    | 26             | 14             |                | 54             | 38.5           |                | 39             | 16.5           |                | 1.8               |     |    |     |
| LQ1T5A-R31   | 3/8"                             | 3/4"   | 1/2"   |   | 22.5           | 31.5           |                |    |    | 27             | 17             |                | 26             | 21             |                | 44             | 54             |                | 49                | 23  | 39 | 28  |
| * LQ1T5A-R32 | 1/4"                             | 3/4"   | 1/4"   | — | 20             | 35             | 20             | —  | —  | 36             | 17             | 17             | 46.5           | 55             | 46.5           | 23             | 49             | 23             | 3.6               |     |    |     |
| LQ1T6A-R2    | 1"                               | 1/2"   | 1"     | 8 | 43             | 27             | 43             | 18 | 36 | 36             | 21             | 36             | 69.5           | 54.5           | 69.5           | 49             | 28             | 49             | 9                 |     |    |     |
| LQ1T6A-R3    | 1"                               | 3/8"   | 1"     |   |                | 24             |                | —  | —  |                | 17             |                | 55             | 47.5           | 55             |                | 23             |                | 5.8               |     |    |     |
| * LQ1T6A-R4  | 1"                               | 1/4"   | 1"     | — | 20             | 20             |                | —  | —  | 36             | 17             |                | 55             | 47.5           | 55             | 49             | 23             |                | 3.6               |     |    |     |
| LQ1T6A-R5    | 3/4"                             | 1"     | 1"     | 8 | 35             | 43             |                | 18 | 36 | 21             | 36             |                | 69.5           | 69.5           | 69.5           | 28             | 49             |                | 15                |     |    |     |
| LQ1T6A-R6    | 1/2"                             | 1"     | 1"     |   | 27             | 35             | 54.5           |    |    |                |                | 69.5           | 69.5           | 49             | 49             | 9              |                |                |                   |     |    |     |
| LQ1T6A-R7    | 3/4"                             | 3/4"   | 1"     |   | 35             | 35             | 69.5           |    |    |                |                | 69.5           | 49             | 49             | 15             |                |                |                |                   |     |    |     |
| * LQ1T6A-R8  | 1/2"                             | 1/2"   | 1"     | — | 27             | 27             | 27             | —  | —  | 21             | 21             | 21             | 42             | 52.5           | 57.5           | 28             | 28             | 28             | 9                 |     |    |     |
| LQ1T6A-R10   | 1/2"                             | 1"     | 1/2"   | 8 | 43             | 43             |                | 18 | 36 | 21             | 36             |                | 54.5           | 69.5           | 69.5           | 28             | 49             |                | 5.8               |     |    |     |
| LQ1T6A-R11   | 3/8"                             | 3/4"   | 1"     |   | 24             | 35             |                |    |    |                |                |                | 54.5           | 69.5           | 69.5           | 28             | 49             |                | 5.8               |     |    |     |
| LQ1T6A-R12   | 3/8"                             | 1"     | 1"     |   | 24             | 43             |                | 43 | —  | —              | 17             |                | 36             | 36             | 46.5           | 68             | 68             |                | 23                | 49  |    | 3.6 |
| * LQ1T6A-R13 | 1/4"                             | 1"     | 1"     | — | 20             | 20             | 18             |    | 36 | 21             | 54.5           | 69.5           |                |                | 69.5           | 28             | 9              |                |                   |     |    |     |
| LQ1T6A-R17   | 1/2"                             | 3/4"   | 1"     | 8 | 27             | 35             | 43             |    | —  | —              | 17             | 36             | 36             | 46.5           | 68             | 68             | 23             | 49             | 49                | 3.6 |    |     |
| * LQ1T6A-R18 | 1/4"                             | 3/4"   | 1"     | — | 20             | 35             |                | 43 | 18 | 36             | 36             | 21             |                | 36             |                | 54.5           | 69.5           | 69.5           |                   | 28  | 49 | 9   |
| LQ1T6A-R20   | 3/4"                             | 1/2"   | 1"     | 8 | 35             | 27             |                |    |    |                |                |                |                |                |                | 54.5           | 69.5           | 69.5           |                   | 28  | 49 | 5.8 |
| LQ1T6A-R30   | 3/8"                             | 1"     | 3/4"   |   | 24             | 43             |                | 35 |    |                |                |                |                | 36             | 54.5           | 69.5           | 69.5           | 28             |                   | 49  | 49 | 9   |
| LQ1T6A-R31   | 1/2"                             | 1"     | 3/4"   |   | 27             | 43             | 54.5           |    |    |                |                |                | 69.5           |                | 69.5           | 28             | 49             | 9              |                   |     |    |     |
| * LQ1T6A-R33 | 1/4"                             | 1"     | 1/4"   | — | 20             | 20             | 20             | —  | —  | 17             | 36             | 17             | 46.5           | 55             | 46.5           | 23             | 49             | 23             | 3.6               |     |    |     |

Note) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

# Panel Mount Union Reducing

## How to Order

### Tubing connection

**LQ1 P 4 1 - R3 -**

#### Fitting type

| Symbol | Type              |
|--------|-------------------|
| P      | Panel mount union |

#### Packaging

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |

Body size  
(according to the combination table)

#### Tubing type

| Symbol | Type   |
|--------|--------|
| 1, 2   | Metric |
| A, B   | Inch   |

Piping type  
(according to the combination table)

| Symbol | Type     |
|--------|----------|
| R□     | Reducing |

### Size combination (Metric)

| Class | Model       | A side                      | B side |
|-------|-------------|-----------------------------|--------|
|       |             | Applicable tubing size (mm) |        |
| 4     | * LQ1P41-R3 | 12 x 10                     | 6 x 4  |
| 5     | * LQ1P51-R2 | 19 x 16                     | 10 x 8 |

Note 1) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

### Size combination (Inch)

| Class | Model       | A side                        | B side       |
|-------|-------------|-------------------------------|--------------|
|       |             | Applicable tubing size (inch) |              |
| 4     | * LQ1P4A-R2 | 1/2" x 3/8"                   | 1/4" x 5/32" |
| 5     | * LQ1P5A-R2 | 3/4" x 5/8"                   | 3/8" x 1/4"  |

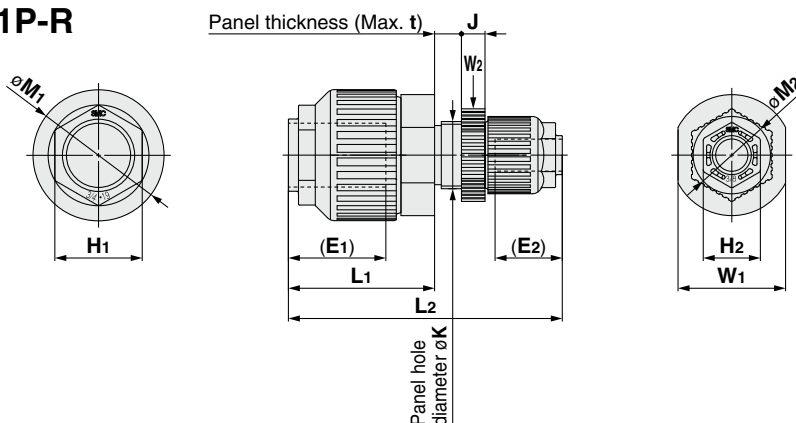
Note 1) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Dimensions

### Panel mount union reducing: LQ1P-R



### Metric Size

| Model       | A side                 | B side                 | E <sub>1</sub> | E <sub>2</sub> | H <sub>1</sub> | H <sub>2</sub> | J | K    | L <sub>1</sub> | L <sub>2</sub> | M <sub>1</sub> | M <sub>2</sub> | Min. port size | t | W <sub>1</sub> | W <sub>2</sub> |
|-------------|------------------------|------------------------|----------------|----------------|----------------|----------------|---|------|----------------|----------------|----------------|----------------|----------------|---|----------------|----------------|
|             | Applicable tubing O.D. | Applicable tubing O.D. |                |                |                |                |   |      |                |                |                |                |                |   |                |                |
| * LQ1P41-R3 | Ø12                    | Ø6                     | 29             | 21             | 26             | 17             | 7 | 20.5 | 43.5           | 81.5           | 39             | 23             | 3.6            | 8 | 32             | 24             |
| * LQ1P51-R2 | Ø19                    | Ø10                    | 31.5           | 22.5           | 26             | 17             | 7 | 20.5 | 43.5           | 81.5           | 39             | 23             | 7.4            | 8 | 32             | 24             |

### Inch Size

| Model       | A side                 | B side                 | E <sub>1</sub> | E <sub>2</sub> | H <sub>1</sub> | H <sub>2</sub> | J | K    | L <sub>1</sub> | L <sub>2</sub> | M <sub>1</sub> | M <sub>2</sub> | Min. port size | t | W <sub>1</sub> | W <sub>2</sub> |
|-------------|------------------------|------------------------|----------------|----------------|----------------|----------------|---|------|----------------|----------------|----------------|----------------|----------------|---|----------------|----------------|
|             | Applicable tubing O.D. | Applicable tubing O.D. |                |                |                |                |   |      |                |                |                |                |                |   |                |                |
| * LQ1P4A-R2 | 1/2"                   | 1/4"                   | 29             | 20             | 26             | 17             | 7 | 20.5 | 43.5           | 81.5           | 39             | 23             | 3.6            | 8 | 32             | 24             |
| * LQ1P5A-R2 | 3/4"                   | 3/8"                   | 31.5           | 22.5           | 26             | 17             | 7 | 20.5 | 43.5           | 81.5           | 39             | 23             | 5.8            | 8 | 32             | 24             |

Note) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)



# LQ1 Series Union Reducing

## How to Order

### Tubing connection

**LQ1 U 4 1 - R2 -**

#### Fitting type

| Symbol | Type  |
|--------|-------|
| U      | Union |

Body size  
(according to the combination table)

#### Tubing type

| Symbol | Type   |
|--------|--------|
| 1, 2   | Metric |
| A, B   | Inch   |

#### Packaging

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |

#### Piping type

(according to the combination table)

| Symbol | Type     |
|--------|----------|
| R□     | Reducing |

### Size combination (Metric)

| Class | Model       | A side<br>Applicable tubing size (mm) | B side<br>Applicable tubing size (mm) |
|-------|-------------|---------------------------------------|---------------------------------------|
| 3     | LQ1U31-R3   | 10 x 8                                | 4 x 3                                 |
|       | LQ1U31-R4   |                                       | 3 x 2                                 |
|       | LQ1U41-R2   |                                       | 8 x 6                                 |
| 4     | LQ1U41-R3   | 12 x 10                               | 6 x 4                                 |
|       | LQ1U41-R4   |                                       | 4 x 3                                 |
|       | LQ1U41-R5   |                                       | 3 x 2                                 |
| 5     | * LQ1U51-R2 | 19 x 16                               | 10 x 8                                |
|       | * LQ1U51-R3 |                                       | 8 x 6                                 |
|       | LQ1U51-R4   |                                       | 6 x 4                                 |
|       | LQ1U51-R5   |                                       | 4 x 3                                 |
|       | LQ1U51-R6   |                                       | 3 x 2                                 |
|       | LQ1U61-R2   |                                       | 12 x 10                               |
| 6     | LQ1U61-R3   | 25 x 22                               | 10 x 8                                |
|       | * LQ1U61-R5 |                                       | 6 x 4                                 |

Note 1) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

### Size combination (Inch)

| Class | Model       | A side<br>Applicable tubing size (inch) | B side<br>Applicable tubing size (inch) |
|-------|-------------|-----------------------------------------|-----------------------------------------|
| 4     | LQ1U4A-R2   | 1/2" x 3/8"                             | 1/4" x 5/32"                            |
|       | LQ1U4A-R3   |                                         | 3/16" x 0.127"                          |
|       | LQ1U4A-R4   |                                         | 1/8" x 0.086"                           |
| 5     | * LQ1U5A-R2 | 3/4" x 5/8"                             | 3/8" x 1/4"                             |
|       | LQ1U5A-R3   |                                         | 1/4" x 5/32"                            |
|       | LQ1U5A-R4   |                                         | 3/16" x 0.127"                          |
|       | LQ1U5A-R5   |                                         | 1/8" x 0.086"                           |
| 6     | LQ1U6A-R2   | 1" x 7/8"                               | 1/2" x 3/8"                             |
|       | LQ1U6A-R3   |                                         | 3/8" x 1/4"                             |
|       | * LQ1U6A-R4 |                                         | 1/4" x 5/32"                            |

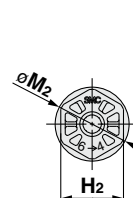
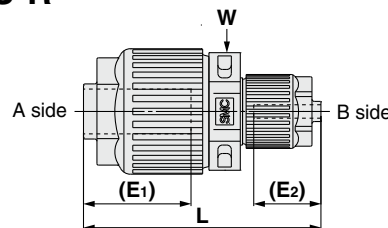
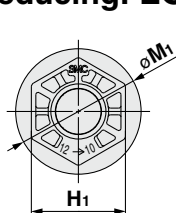
Note 1) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

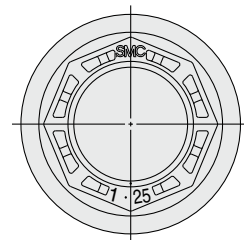
Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Dimensions

### Union reducing: LQ1U-R



Class 3 to 5



Class 6

### Metric Size

| Model       | A side<br>Applicable tubing<br>O.D. | B side<br>Applicable tubing<br>O.D. | E1   | E2   | H1 | H2   | L    | M1 | M2   | Min.<br>port<br>size | W  |
|-------------|-------------------------------------|-------------------------------------|------|------|----|------|------|----|------|----------------------|----|
| LQ1U31-R3   | ø10                                 | ø4                                  | 24   | 12.5 | 21 | 14   | 53   | 28 | 16.5 | 2.6                  | 23 |
| LQ1U31-R4   | ø10                                 | ø3                                  |      | 13.5 |    |      |      |    |      | 1.8                  |    |
| LQ1U41-R2   | ø12                                 | ø8                                  | 27   | 21   | 21 | 17   | 58.5 | 28 | 16.5 | 5.5                  | 23 |
| LQ1U41-R3   | ø12                                 | ø6                                  |      | 18   |    |      |      |    |      | 3.6                  |    |
| LQ1U41-R4   | ø12                                 | ø4                                  |      | 12.5 |    |      |      |    |      | 2.6                  |    |
| LQ1U41-R5   | ø12                                 | ø3                                  |      | 13.5 |    |      |      |    |      | 1.8                  |    |
| * LQ1U51-R2 | ø19                                 | ø10                                 | 31.5 | 22.5 | 17 | 66.5 | 39   | 23 | 16.5 | 7.4                  | 32 |
| * LQ1U51-R3 | ø19                                 | ø8                                  |      | 21   |    |      |      |    |      | 5.5                  |    |
| LQ1U51-R4   | ø19                                 | ø6                                  |      | 18   |    |      |      |    |      | 3.6                  |    |
| LQ1U51-R5   | ø19                                 | ø4                                  |      | 12.5 |    |      |      |    |      | 2.6                  |    |
| LQ1U51-R6   | ø19                                 | ø3                                  | 43   | 13.5 | 21 | 87   | 49   | 28 | 16.5 | 1.8                  | 46 |
| LQ1U61-R2   | ø25                                 | ø12                                 |      | 27   |    |      |      |    |      | 9.4                  |    |
| LQ1U61-R3   | ø25                                 | ø10                                 |      | 24   |    |      |      |    |      | 7.4                  |    |
| * LQ1U61-R5 | ø25                                 | ø6                                  |      | 21   |    |      |      |    |      | 3.6                  |    |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

### Inch Size

| Model       | A side<br>Applicable tubing<br>O.D. | B side<br>Applicable tubing<br>O.D. | E1   | E2   | H1 | H2   | L  | M1 | M2   | Min.<br>port<br>size | W  |
|-------------|-------------------------------------|-------------------------------------|------|------|----|------|----|----|------|----------------------|----|
| LQ1U4A-R2   | 1/2"                                | 1/4"                                | 27   | 17   | 21 | 14   | 53 | 28 | 16.5 | 3.6                  | 23 |
| LQ1U4A-R3   | 1/2"                                | 3/16"                               |      | 14.5 |    |      |    |    |      | 2.9                  |    |
| LQ1U4A-R4   | 1/2"                                | 1/8"                                |      | 13.5 |    |      |    |    |      | 1.8                  |    |
| * LQ1U5A-R2 | 3/4"                                | 3/8"                                | 31.5 | 22.5 | 17 | 66.5 | 39 | 23 | 16.5 | 5.8                  | 32 |
| LQ1U5A-R3   | 3/4"                                | 1/4"                                |      | 17   |    |      |    |    |      | 3.6                  |    |
| LQ1U5A-R4   | 3/4"                                | 3/16"                               |      | 14.5 |    |      |    |    |      | 2.9                  |    |
| LQ1U5A-R5   | 3/4"                                | 1/8"                                |      | 13.5 |    |      |    |    |      | 1.8                  |    |
| LQ1U6A-R2   | 1"                                  | 1/2"                                | 43   | 27   | 21 | 87   | 49 | 28 | 16.5 | 9.4                  | 46 |
| LQ1U6A-R3   | 1"                                  | 3/8"                                |      | 24   |    |      |    |    |      | 7.4                  |    |
| * LQ1U6A-R4 | 1"                                  | 1/4"                                |      | 20   |    |      |    |    |      | 3.6                  |    |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

## LQ1 Series

# Space Saving Union Elbow

### How to Order

**Tubing connection**

**LQ1 E 21 - SS -**

• **Fitting type**

| Symbol   | Type        |
|----------|-------------|
| <b>E</b> | Union elbow |

• **Packaging**

| Symbol     | Packaging                                    |
|------------|----------------------------------------------|
| <b>Nil</b> | Clean packaging equivalent to ISO Class 5    |
| <b>1</b>   | Standard packaging equivalent to ISO Class 7 |

• **Piping type**

| Symbol    | Type         |
|-----------|--------------|
| <b>SS</b> | Space saving |

• **Size combination**

| Symbol   |          | Model              | Applicable tubing size (mm) |
|----------|----------|--------------------|-----------------------------|
| Class    | No.      |                    |                             |
| <b>2</b> | <b>1</b> | <b>LQ1E21-SS</b>   | 6 x 4                       |
| <b>3</b> | <b>1</b> | <b>LQ1E31-SS</b>   | 10 x 8                      |
| <b>3</b> | <b>2</b> | <b>LQ1E32-SS</b>   | 8 x 6                       |
| <b>4</b> | <b>1</b> | <b>LQ1E41-SS</b>   | 12 x 10                     |
| <b>5</b> | <b>1</b> | <b>* LQ1E51-SS</b> | 19 x 16                     |
| <b>6</b> | <b>1</b> | <b>LQ1E61-SS</b>   | 25 x 22                     |

Note 1) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

| Symbol   |          | Model              | Applicable tubing size (inch) |
|----------|----------|--------------------|-------------------------------|
| Class    | No.      |                    |                               |
| <b>2</b> | <b>A</b> | <b>LQ1E2A-SS</b>   | 1/4" x 5/32"                  |
| <b>3</b> | <b>A</b> | <b>LQ1E3A-SS</b>   | 3/8" x 1/4"                   |
| <b>4</b> | <b>A</b> | <b>LQ1E4A-SS</b>   | 1/2" x 3/8"                   |
| <b>5</b> | <b>A</b> | <b>* LQ1E5A-SS</b> | 3/4" x 5/8"                   |
| <b>6</b> | <b>A</b> | <b>LQ1E6A-SS</b>   | 1" x 7/8"                     |

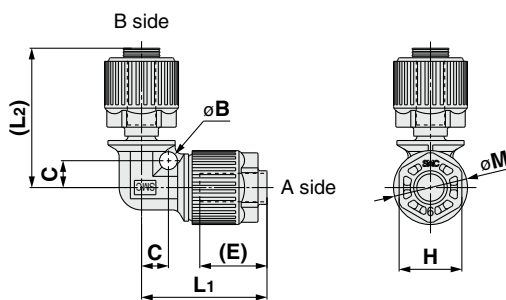
Note 1) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

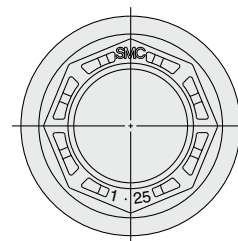
Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Dimensions

### Space saving union elbow: LQ1E-SS



**Class 2 to 5**



**Class 6**

### Metric Size

| Model              | A side                 | B side               | B | C  | E    | H  | L1   | L2 | M    | Min. port size |
|--------------------|------------------------|----------------------|---|----|------|----|------|----|------|----------------|
|                    | Applicable tubing O.D. | Applicable body size |   |    |      |    |      |    |      |                |
| <b>LQ1E21-SS</b>   | ø6                     | 2                    | 4 | 6  | 18   | 14 | 28   | 29 | 16.5 | 3.6            |
| <b>LQ1E31-SS</b>   | ø10                    | 3                    | 5 | 9  | 22.5 | 17 | 36.6 | 39 | 23   | 7.4            |
| <b>LQ1E32-SS</b>   | ø8                     | 3                    | 5 | 9  | 21   | 17 | 36.6 | 39 | 23   | 5.5            |
| <b>LQ1E41-SS</b>   | ø12                    | 4                    | 6 | 9  | 27   | 21 | 43   | 46 | 28   | 9.4            |
| <b>* LQ1E51-SS</b> | ø19                    | 5                    | — | —  | 31.5 | 26 | 45.5 | 60 | 39   | 15             |
| <b>LQ1E61-SS</b>   | ø25                    | 6                    | 8 | 18 | 43   | 36 | 69.5 | 74 | 49   | 21.2           |

Note) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

### Inch Size

| Model              | A side                 | B side               | B | C  | E    | H  | L1   | L2 | M    | Min. port size |
|--------------------|------------------------|----------------------|---|----|------|----|------|----|------|----------------|
|                    | Applicable tubing O.D. | Applicable body size |   |    |      |    |      |    |      |                |
| <b>LQ1E2A-SS</b>   | 1/4"                   | 2                    | 4 | 6  | 17   | 14 | 28   | 30 | 16.5 | 3.6            |
| <b>LQ1E3A-SS</b>   | 3/8"                   | 3                    | 5 | 9  | 22.5 | 17 | 36.6 | 39 | 23   | 5.8            |
| <b>LQ1E4A-SS</b>   | 1/2"                   | 4                    | 6 | 9  | 27   | 21 | 43   | 47 | 28   | 9              |
| <b>* LQ1E5A-SS</b> | 3/4"                   | 5                    | — | —  | 31.5 | 26 | 45.5 | 60 | 39   | 15             |
| <b>LQ1E6A-SS</b>   | 1"                     | 6                    | 8 | 18 | 43   | 36 | 69.5 | 74 | 49   | 21.2           |

Note) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

# LQ1 Series Space Saving Union Elbow Reducing

## How to Order

### Tubing connection

**LQ1 E 2 1 - SS - R9 -**

#### Fitting type

| Symbol | Type        |
|--------|-------------|
| E      | Union elbow |

#### Body size

(according to the combination table)

#### Tubing type

| Symbol | Type   |
|--------|--------|
| 1, 2   | Metric |
| A      | Inch   |

#### Packaging

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |

#### Piping type

| Symbol | Type     |
|--------|----------|
| R      | Reducing |

#### Piping type (according to the combination table)

| Symbol | Type         |
|--------|--------------|
| SS     | Space saving |

### Size combination (Metric)

| Class | Model           | A side<br>Applicable tubing<br>size (mm) | B side<br>Applicable<br>body size |
|-------|-----------------|------------------------------------------|-----------------------------------|
| 2     | * LQ1E21-SS-R9  | 6 x 4                                    | 3                                 |
|       | * LQ1E21-SS-R10 |                                          | 4                                 |
| 3     | * LQ1E31-SS-R2  | 10 x 8                                   | 2                                 |
|       | * LQ1E31-SS-R8  |                                          | 4                                 |
|       | * LQ1E32-SS-R1  | 8 x 6                                    | 2                                 |
|       | * LQ1E32-SS-R8  |                                          | 3                                 |
| 4     | * LQ1E41-SS-R1  | 12 x 10                                  | 3                                 |
|       | * LQ1E41-SS-R3  |                                          | 2                                 |
|       | * LQ1E41-SS-R8  |                                          | 5                                 |
| 6     | LQ1E61-SS-R1    | 25 x 22                                  | 5                                 |

Note 1) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

### Size combination (Inch)

| Class | Model          | A side<br>Applicable tubing<br>size (inch) | B side<br>Applicable<br>body size |
|-------|----------------|--------------------------------------------|-----------------------------------|
| 2     | * LQ1E2A-SS-R8 | 1/4" x 5/32"                               | 3                                 |
|       | * LQ1E2A-SS-R9 |                                            | 4                                 |
| 3     | * LQ1E3A-SS-R1 | 3/8" x 1/4"                                | 2                                 |
|       | * LQ1E3A-SS-R8 |                                            | 4                                 |
| 4     | * LQ1E4A-SS-R1 | 1/2" x 3/8"                                | 3                                 |
|       | * LQ1E4A-SS-R2 |                                            | 2                                 |
| 6     | * LQ1E4A-SS-R8 | 1" x 7/8"                                  | 5                                 |
|       | LQ1E6A-SS-R1   |                                            | 5                                 |

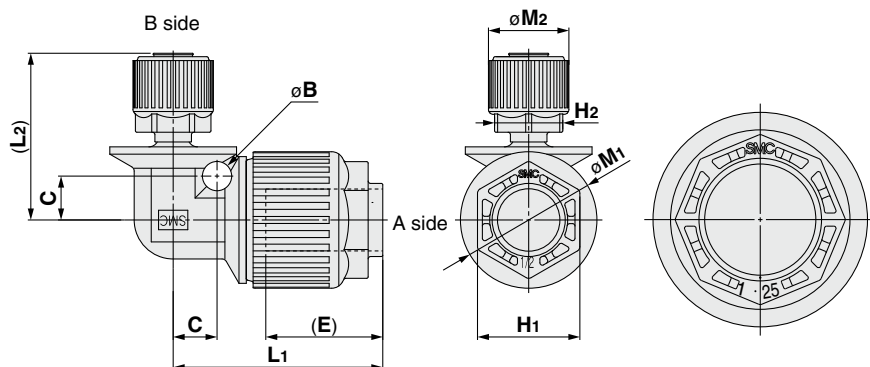
Note 1) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Dimensions

### Space saving union elbow reducing: LQ1E-SS-R



### Metric Size

| Model           | A side<br>Applicable<br>tubing<br>O.D. | B side<br>Applicable<br>body size | B | C  | E    | H <sub>1</sub> | H <sub>2</sub> | L <sub>1</sub> | L <sub>2</sub> | M <sub>1</sub> | M <sub>2</sub> | Min.<br>port<br>size |
|-----------------|----------------------------------------|-----------------------------------|---|----|------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| * LQ1E21-SS-R9  | ø6                                     | 3                                 | — | —  | 18   | 14             | 17             | 23.5           | 35.3           | 16.5           | 23             | 3.6                  |
| * LQ1E21-SS-R10 |                                        | 4                                 | — | —  | —    | —              | 21             | 25             | 40.3           | —              | 28             | —                    |
| * LQ1E31-SS-R2  | ø10                                    | 2                                 | — | —  | 22.5 | 17             | 14             | 27.2           | 31             | 23             | 16.5           | 3.6                  |
| * LQ1E31-SS-R8  |                                        | 4                                 | — | —  | —    | —              | 21             | 30.4           | 43.5           | —              | 28             | 7.4                  |
| * LQ1E32-SS-R1  | ø8                                     | 2                                 | — | —  | —    | —              | 14             | 27.2           | 31             | 23             | 16.5           | 3.6                  |
| * LQ1E32-SS-R8  |                                        | 3                                 | 5 | 9  | 21   | —              | 17             | 36.6           | 39             | —              | 23             | 5.5                  |
| * LQ1E41-SS-R1  | ø12                                    | 3                                 | — | —  | —    | —              | 17             | 34.8           | 41             | —              | 23             | 5.8                  |
| * LQ1E41-SS-R3  |                                        | 2                                 | 6 | 9  | 27   | 21             | 14             | 43             | 34.2           | 28             | 16.5           | 3.6                  |
| * LQ1E41-SS-R8  |                                        | 5                                 | — | —  | —    | —              | 26             | 39.6           | 53.5           | —              | 39             | 9.4                  |
| LQ1E61-SS-R1    |                                        | 5                                 | 8 | 18 | 43   | 36             | 26             | 69.5           | 66             | 49             | 39             | 15                   |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

### Inch Size

| Model          | A side<br>Applicable<br>tubing<br>O.D. | B side<br>Applicable<br>body size | B | C  | E    | H <sub>1</sub> | H <sub>2</sub> | L <sub>1</sub> | L <sub>2</sub> | M <sub>1</sub> | M <sub>2</sub> | Min.<br>port<br>size |
|----------------|----------------------------------------|-----------------------------------|---|----|------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| * LQ1E2A-SS-R8 | 1/4"                                   | 3                                 | — | —  | 17   | 14             | 17             | 23.5           | 35.3           | 16.5           | 23             | 3.6                  |
| * LQ1E2A-SS-R9 |                                        | 4                                 | — | —  | —    | —              | 21             | 25             | 40.3           | —              | 28             | —                    |
| * LQ1E3A-SS-R1 | 3/8"                                   | 2                                 | — | —  | 22.5 | 17             | 14             | 27.2           | 31             | 23             | 16.5           | 3.6                  |
| * LQ1E3A-SS-R8 |                                        | 4                                 | — | —  | —    | —              | 21             | 30.4           | 43.5           | —              | 28             | 5.8                  |
| * LQ1E4A-SS-R1 | 1/2"                                   | 3                                 | — | —  | —    | —              | 17             | 34.8           | 41             | —              | 23             | 5.8                  |
| * LQ1E4A-SS-R2 |                                        | 2                                 | 6 | 9  | 27   | 21             | 14             | 43             | 34.2           | 28             | 16.5           | 3.6                  |
| * LQ1E4A-SS-R8 | 1"                                     | 5                                 | — | —  | —    | —              | 26             | 39.6           | 53.5           | —              | 39             | 9                    |
| LQ1E6A-SS-R1   |                                        | 5                                 | 8 | 18 | 43   | 36             | 26             | 69.5           | 66             | 49             | 39             | 15                   |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

# Space Saving Union Tee

## How to Order

### Tubing connection

LQ1 T 21 - S T1 -

### Fitting type

| Symbol | Type      |
|--------|-----------|
| T      | Union tee |

### Size combination

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

| Symbol | Class | No. | Applicable tubing size (inch) |
|--------|-------|-----|-------------------------------|
| 2      | A     | 1   | 1/4" x 5/32"                  |
| 3      | A     | 1   | 3/8" x 1/4"                   |
| 4      | A     | 1   | 1/2" x 3/8"                   |
| 5      | A     | 1   | 3/4" x 5/8"                   |
| 6      | A     | 1   | 1" x 7/8"                     |

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

### Packaging

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |

### Fitting type

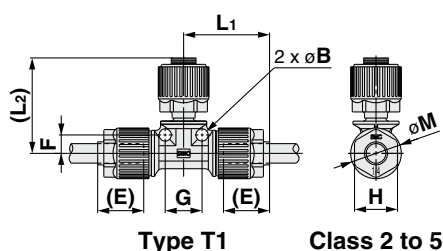
| Symbol | Type   |
|--------|--------|
| T1     | Type 1 |
| T2     | Type 2 |
| T3     | Type 3 |
| T4     | Type 4 |

### Piping type

| Symbol | Type         |
|--------|--------------|
| S      | Space saving |

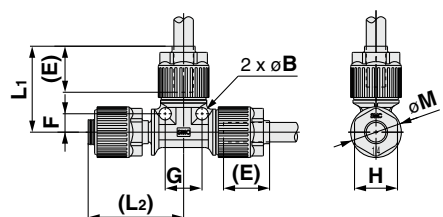
## Dimensions

### Space saving union tee: LQ1T-ST



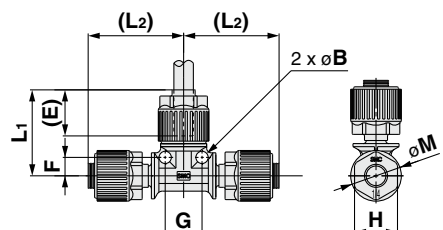
Type T1

Class 2 to 5



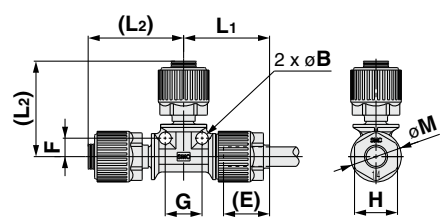
Type T2

Class 2 to 5



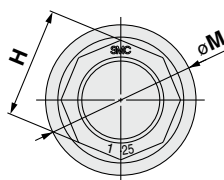
Type T3

Class 2 to 5



Type T4

Class 2 to 5



Class 6

### Metric Size

| Model      | Applicable tubing O.D. | B | E    | F  | G  | H  | L <sub>1</sub> | L <sub>2</sub> | M    | Min. port size |
|------------|------------------------|---|------|----|----|----|----------------|----------------|------|----------------|
| LQ1T21-ST1 | ø6                     | 4 | 18   | 6  | 12 | 14 | 28             | 32.5           | 16.5 | 3.6            |
| LQ1T21-ST2 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T21-ST3 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T21-ST4 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T31-ST1 | ø10                    | 5 | 22.5 | 9  | 18 | 17 | 36.5           | 42             | 23   | 5.8            |
| LQ1T31-ST2 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T31-ST3 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T31-ST4 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T32-ST1 | ø8                     | 5 | 21   | 9  | 18 | 17 | 36.5           | 42             | 23   | 5.5            |
| LQ1T32-ST2 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T32-ST3 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T32-ST4 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T41-ST1 | ø12                    | 6 | 27   | 9  | 18 | 21 | 43             | 48             | 28   | 9              |
| LQ1T41-ST2 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T41-ST3 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T41-ST4 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T51-ST1 | ø19                    | 7 | 31.5 | 14 | 28 | 26 | 54             | 60.5           | 39   | 15             |
| LQ1T51-ST2 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T51-ST3 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T51-ST4 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T61-ST1 | ø25                    | 8 | 43   | 18 | 36 | 36 | 69.5           | 74             | 49   | 21.2           |
| LQ1T61-ST2 |                        |   |      |    |    |    |                | 75.5           |      |                |
| LQ1T61-ST3 |                        |   |      |    |    |    |                | 74             |      |                |
| LQ1T61-ST4 |                        |   |      |    |    |    |                | 74             |      |                |

### Inch Size

| Model      | Applicable tubing O.D. | B | E    | F  | G  | H  | L <sub>1</sub> | L <sub>2</sub> | M    | Min. port size |
|------------|------------------------|---|------|----|----|----|----------------|----------------|------|----------------|
| LQ1T2A-ST1 | 1/4"                   | 4 | 17   | 6  | 12 | 14 | 28             | 32.5           | 16.5 | 3.6            |
| LQ1T2A-ST2 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T2A-ST3 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T2A-ST4 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T3A-ST1 | 3/8"                   | 5 | 22.5 | 9  | 18 | 17 | 36.5           | 42             | 23   | 5.8            |
| LQ1T3A-ST2 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T3A-ST3 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T3A-ST4 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T4A-ST1 | 1/2"                   | 6 | 27   | 9  | 18 | 21 | 43             | 48             | 28   | 9              |
| LQ1T4A-ST2 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T4A-ST3 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T4A-ST4 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T5A-ST1 | 3/4"                   | 7 | 31.5 | 14 | 28 | 26 | 54             | 60.5           | 39   | 15             |
| LQ1T5A-ST2 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T5A-ST3 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T5A-ST4 |                        |   |      |    |    |    |                |                |      |                |
| LQ1T6A-ST1 | 1"                     | 8 | 43   | 18 | 36 | 36 | 69.5           | 74             | 49   | 21.2           |
| LQ1T6A-ST2 |                        |   |      |    |    |    |                | 75.5           |      |                |
| LQ1T6A-ST3 |                        |   |      |    |    |    |                | 74             |      |                |
| LQ1T6A-ST4 |                        |   |      |    |    |    |                | 74             |      |                |

# LQ1 Series Space Saving Union Tee Reducing

## How to Order

**Tubing connection**

**LQ1 T 2 1 - S T1 - R39 -**

**Fitting type**

| Symbol | Type      |
|--------|-----------|
| T      | Union tee |

**Body size**  
(according to the combination table)

**Tubing type**

| Symbol | Type   |
|--------|--------|
| 1, 2   | Metric |
| A      | Inch   |

**Piping type**

| Symbol | Type         |
|--------|--------------|
| S      | Space saving |

**Packing**

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |

**Piping type**

| Symbol | Type     |
|--------|----------|
| R□     | Reducing |

**Fitting type**

| Symbol | Type   |
|--------|--------|
| T1     | Type 1 |
| T2     | Type 2 |
| T3     | Type 3 |
| T4     | Type 4 |

### Size combination (Metric)

| Class | Model |                | A side (Left)                                                  | B side (Center) | C side (Right) |
|-------|-------|----------------|----------------------------------------------------------------|-----------------|----------------|
|       |       |                | Applicable tubing size (O.D. x I.D.) /<br>Applicable body size |                 |                |
| 2     |       | LQ1T21-ST1-R39 | 6 x 4                                                          | Body size 3     | 6 x 4          |
|       |       | LQ1T21-ST2-R41 | Body size 3                                                    | 6 x 4           |                |
| 3     |       | LQ1T32-ST1-R37 | 8 x 6                                                          | Body size 3     | 8 x 6          |
|       |       | LQ1T32-ST2-R40 | Body size 3                                                    | 8 x 6           |                |
| 4     | *     | LQ1T41-ST1-R1  | 12 x 10                                                        | Body size 3     | 12 x 10        |
|       | *     | LQ1T41-ST1-R37 |                                                                | Body size 5     |                |
| 5     | *     | LQ1T51-ST1-R1  | 19 x 16                                                        | Body size 4     | 19 x 16        |
|       | *     | LQ1T51-ST1-R2  |                                                                | Body size 3     |                |
|       |       | LQ1T51-ST1-R5  | 12 x 10                                                        | Body size 5     |                |
|       | *     | LQ1T51-ST1-R13 | 6 x 4                                                          |                 |                |
|       | *     | LQ1T51-ST1-R36 | 12 x 10                                                        |                 |                |
|       | *     | LQ1T51-ST1-R37 | 19 x 16                                                        | Body size 6     | 12 x 10        |
|       |       | LQ1T51-ST2-R4  | Body size 5                                                    | 6 x 4           |                |
| 6     | *     | LQ1T61-ST1-R1  | 25 x 22                                                        | Body size 5     | 25 x 22        |
|       | *     | LQ1T61-ST1-R2  |                                                                | Body size 4     |                |
|       |       | LQ1T61-ST2-R1  | Body size 6                                                    | 19 x 16         |                |

Note 1) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

### Size combination (Inch)

| Class | Model |                | A side (Left)                                                  | B side (Center) | C side (Right) |
|-------|-------|----------------|----------------------------------------------------------------|-----------------|----------------|
|       |       |                | Applicable tubing size (O.D. x I.D.) /<br>Applicable body size |                 |                |
| 3     |       | LQ1T3A-ST2-R5  | Body size 3                                                    | 3/8" x 1/4"     | 1/4" x 5/32"   |
| 4     | *     | LQ1T4A-ST1-R1  | 1/2" x 3/8"                                                    | Body size 3     | 1/2" x 3/8"    |
|       | *     | LQ1T4A-ST1-R7  | 3/8" x 1/4"                                                    |                 |                |
|       | *     | LQ1T4A-ST1-R37 | 1/2" x 3/8"                                                    | Body size 5     |                |
| 5     | *     | LQ1T5A-ST1-R1  | 3/4" x 5/8"                                                    | Body size 4     | 3/4" x 5/8"    |
|       | *     | LQ1T5A-ST1-R2  |                                                                | Body size 3     |                |
|       |       | LQ1T5A-ST1-R5  | Body size 5                                                    |                 |                |
|       |       | LQ1T5A-ST1-R7  | Body size 4                                                    |                 |                |
|       | *     | LQ1T5A-ST1-R12 | 1/4" x 5/32"                                                   | Body size 5     |                |
|       | *     | LQ1T5A-ST2-R1  | Body size 4                                                    | 3/4" x 5/8"     |                |
|       |       | LQ1T5A-ST2-R3  | Body size 5                                                    | 1/4" x 5/32"    |                |
|       | *     | LQ1T5A-ST3-R5  | Body size 4                                                    | 3/4" x 5/8"     |                |
| 6     | *     | LQ1T6A-ST1-R1  | 1" x 7/8"                                                      | Body size 5     | 1" x 7/8"      |
|       | *     | LQ1T6A-ST1-R2  |                                                                | Body size 4     |                |
|       | *     | LQ1T6A-ST1-R3  |                                                                | Body size 3     |                |
|       |       | LQ1T6A-ST2-R1  | Body size 6                                                    | 3/4" x 5/8"     |                |
|       |       | LQ1T6A-ST2-R2  |                                                                | 3/4" x 5/8"     |                |

Note 1) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

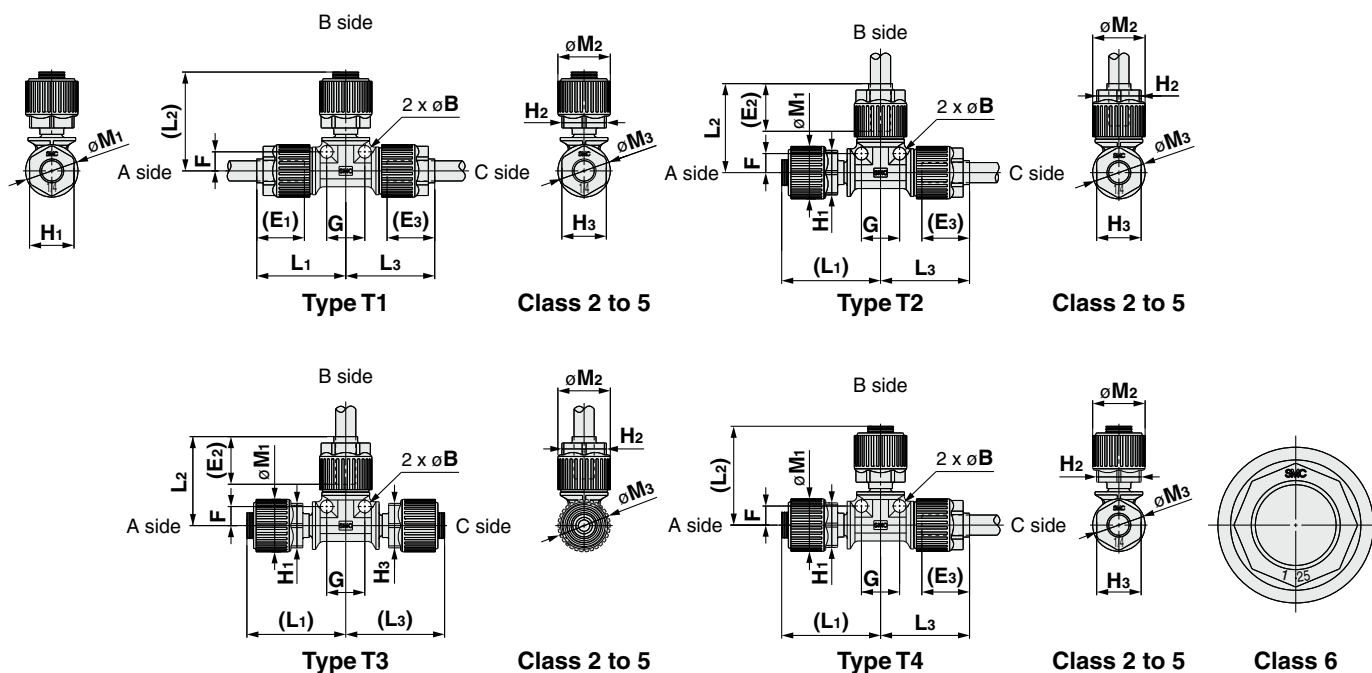
Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## LQ1 Series

## Dimensions

### Space saving union tee reducing: LQ1T-S-R



### Metric Size

| Model            | A side (Left)          | B side (Center) | C side (Right) | B | E <sub>1</sub> | E <sub>2</sub> | E <sub>3</sub> | F  | G  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | M <sub>1</sub> | M <sub>2</sub> | M <sub>3</sub> | Min. port size |      |      |     |      |    |     |
|------------------|------------------------|-----------------|----------------|---|----------------|----------------|----------------|----|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------|------|-----|------|----|-----|
|                  | Applicable tubing O.D. |                 |                |   |                |                |                |    |    |                |                |                |                |                |                |                |                |                |                |      |      |     |      |    |     |
| LQ1T21-ST1-R39   | ø6                     | Body size 3     | ø6             | 5 | 21             | —              | 21             | 9  | 18 | 17             | 17             | 17             | 36.5           | 42             | 36.5           | 23             | 23             | 23             | 3.6            |      |      |     |      |    |     |
| LQ1T21-ST2-R41   | Body size 3            | ø6              | ø6             |   | —              | 21             |                |    |    |                |                |                | 42             | 36.5           |                |                |                |                |                |      |      |     |      |    |     |
| LQ1T32-ST1-R37   | ø8                     | Body size 3     | ø8             |   | 21             | —              |                |    |    |                |                |                | 21             | 9              |                |                |                |                |                | 18   | 17   | 17  | 36.5 | 42 |     |
| LQ1T32-ST2-R40   | Body size 3            | ø8              | ø8             | — | 21             | 42             | 36.5           |    |    |                |                |                |                |                |                |                |                |                |                |      |      |     |      |    |     |
| * LQ1T41-ST1-R1  | ø12                    | Body size 3     | ø12            | — | 27             | —              | 27             | —  | —  | 21             | 17             | 21             | 34             | 41             | 34             | 28             | 23             | 28             | 5.8            |      |      |     |      |    |     |
| * LQ1T41-ST1-R37 | ø12                    | Body size 5     | ø12            | — |                |                |                | —  | —  |                |                |                | 21             | 26             | 21             | 39.5           | 53.5           | 39.5           | 28             | 39   | 28   | 9.4 |      |    |     |
| * LQ1T51-ST1-R1  | ø19                    | Body size 4     | ø19            | — | 31.5           | —              | 31.5           | —  | —  | 21             | 26             | 26             | 41.9           | 51.5           | 41.9           | 28             | 39             | 39             | 9              |      |      |     |      |    |     |
| * LQ1T51-ST1-R2  | ø19                    | Body size 3     | ø19            |   |                |                |                | —  | —  |                |                |                | —              | 21             | 26             |                |                |                | 26             | 41   | 47.5 | 41  | 39   | 23 | 5.8 |
| * LQ1T51-ST1-R5  | ø12                    | Body size 5     | ø19            |   |                |                |                | 7  | 29 |                |                |                | —              | 14             | 28             |                |                |                | 26             | 54   | 60.5 | 54  | 39   | 39 | 9.4 |
| * LQ1T51-ST1-R13 | ø6                     | Body size 5     | ø19            | — | 18             | —              | 35             | —  | —  | 14             | 26             | 26             | 29             | 59             | 45             | 16.5           | 39             | 39             | 3.6            |      |      |     |      |    |     |
| * LQ1T51-ST1-R36 | ø12                    | Body size 6     | ø19            | — | 27             |                |                | —  | —  |                |                |                | 21             | 36             | 36             | 42.7           | 72.5           | 58.2           | 49             | 49   | 49   | 9.4 |      |    |     |
| * LQ1T51-ST1-R37 | ø19                    | Body size 6     | ø12            | — | 35             |                |                | 27 | —  |                |                |                | —              | 36             | 36             | 21             | 58.2           | 72.5           | 42.7           | 16.5 | 49   |     | 39   |    |     |
| LQ1T51-ST2-R4    | Body size 5            | ø6              | ø19            | 7 | —              | 18             | 31.5           | 14 | 28 | 26             | 14             | 26             | 60.5           | 38.5           | 54             | 39             | 16.5           | 39             | 3.6            |      |      |     |      |    |     |
| * LQ1T61-ST1-R1  | ø25                    | Body size 5     | ø25            | — | 43             | —              | 43             | —  | —  | 36             | 21             | 36             | 55.1           | 64             | 55.1           | 49             | 39             | 49             | 15             |      |      |     |      |    |     |
| * LQ1T61-ST1-R2  | ø25                    | Body size 4     | ø25            | — |                |                |                | —  | —  |                |                |                | 36             | 21             | 36             |                | 53.5           |                | 56.5           | 53.5 | 28   | 9   |      |    |     |
| LQ1T61-ST2-R1    | Body size 6            | ø19             | ø25            | 8 | —              | 34             | —              | 18 | 36 | —              | 36             | —              | 74             | 69.5           | 69.5           | —              | 49             | —              | 15             |      |      |     |      |    |     |

### Inch Size

| Model            | A side (Left)          | B side (Center) | C side (Right) | B | E <sub>1</sub> | E <sub>2</sub> | E <sub>3</sub> | F  | G  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | M <sub>1</sub> | M <sub>2</sub> | M <sub>3</sub> | Min. port size |      |      |      |      |      |
|------------------|------------------------|-----------------|----------------|---|----------------|----------------|----------------|----|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------|------|------|------|------|
|                  | Applicable tubing O.D. |                 |                |   |                |                |                |    |    |                |                |                |                |                |                |                |                |                |                |      |      |      |      |      |
| LQ1T3A-ST2-R5    | Body size 3            | 3/8             | 1/4            | 5 | —              | 22.5           | 20             | 9  | 18 | 17             | 17             | 17             | 42             | 36.5           | 36.5           | 23             | 16.5           | 23             | 3.6            |      |      |      |      |      |
| * LQ1T4A-ST1-R1  | 1/2                    | Body size 3     | 1/2            | — | 27             | —              | 27             | —  | —  | 21             | 17             | 21             | 34             | 41             | 34             | 28             | 23             | 28             | 5.8            |      |      |      |      |      |
| * LQ1T4A-ST1-R7  | 3/8                    | Body size 3     | 1/2            | — | 24             |                |                |    |    | 21             | 34             |                | 41             | 34             | 28             |                |                |                |                |      |      |      |      |      |
| * LQ1T4A-ST1-R37 | 1/2                    | Body size 5     | 1/2            | — | 27             |                |                |    |    | 21             | 26             |                | 39.5           | 53.5           | 39.5           | 28             |                |                |                | 39   |      |      |      |      |
| * LQ1T5A-ST1-R1  | 3/4                    | Body size 4     | 3/4            | — | 31.5           | —              | 31.5           | —  | —  | 21             | 26             | 21             | 41.9           | 51.5           | 41.9           | 39             | 28             | 39             | 9              |      |      |      |      |      |
| * LQ1T5A-ST1-R2  | 3/4                    | Body size 3     | 3/4            | — | 29             |                |                |    |    | 14             |                |                | 28             | 41             | 47.5           |                | 41             |                |                | 16.5 | 39   | 23   | 5.8  |      |
| LQ1T5A-ST1-R5    | 1/2                    | Body size 5     | 3/4            | 7 | 27             |                |                |    |    | 21             |                |                | 21             | 54             | 60.5           |                | 54             |                |                | 28   | 28   | 39   |      | 9    |
| LQ1T5A-ST1-R7    | 1/2                    | Body size 4     | 3/4            | 7 | 27             | —              | 31.5           | 14 | 28 | 21             | 21             | 26             | 49             | 51.5           | 45             | 16.5           | 39             | 28             | 39             | 3.6  |      |      |      |      |
| * LQ1T5A-ST1-R12 | 1/4                    | Body size 5     | 3/4            | — | 17             |                |                |    |    |                |                |                | 29             | 59             | 59             | 51.5           | 52.5           |                |                |      | 28   | 39   | 16.5 | 9    |
| * LQ1T5A-ST2-R1  | Body size 4            | 3/4             | 3/4            | — | —              | 31.5           | —              | —  | —  | 21             | 26             | 21             | 50             | 51.5           | 52.5           | 28             | 39             | 16.5           | 28             | 3.6  |      |      |      |      |
| LQ1T5A-ST2-R3    | Body size 5            | 1/4             | 3/4            | 7 | —              | 17             |                |    |    | 14             |                |                | 28             | 26             | 14             | 60.5           |                |                |                |      | 38.5 | 54   | 39   | 16.5 |
| * LQ1T5A-ST3-R5  | Body size 4            | 3/4             | Body size 4    | — | —              | 31.5           |                |    |    | —              |                |                | —              | 21             | 26             | 21             |                |                |                |      | 50   | 44.5 | 50   | 28   |
| * LQ1T6A-ST1-R1  | 1                      | Body size 5     | 1              | — | 43             | —              | 43             | —  | —  | 36             | 17             | 36             | 26             | 55.1           | 64             | 55.1           | 49             | 39             | 49             | 15   |      |      |      |      |
| * LQ1T6A-ST1-R2  | 1                      | Body size 4     | 1              |   |                |                |                |    |    |                |                |                | 21             |                |                |                |                | 53.5           |                |      | 56.5 | 53.5 | 28   | 9    |
| * LQ1T6A-ST1-R3  | 1                      | Body size 3     | 1              |   |                |                |                |    |    |                |                |                | 17             |                |                |                |                | 53.5           |                |      | 51.5 | 53.5 | 23   | 5.8  |
| LQ1T6A-ST2-R1    | Body size 6            | 3/4             | 1              | 8 | —              | 35             | 35             | 18 | 36 | 36             | 74             | 69.5           | 69.5           | 49             | 49             | 15             |                |                |                |      |      |      |      |      |
| LQ1T6A-ST2-R2    | Body size 6            | 3/4             | 3/4            |   |                |                |                |    |    |                |                |                |                |                |                |                |                |                |                |      |      |      |      |      |

Note) Products marked “\*” are produced upon receipt of order. (The body of the fitting is PTFE machined.)



# Tubing Extension Union Elbow

## How to Order

**Tubing connection** LQ1 E 21 - T -

**Fitting type**

| Symbol | Type        |
|--------|-------------|
| E      | Union elbow |

**Packaging**

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |

**Piping type**

| Symbol | Type             |
|--------|------------------|
| T      | Tubing extension |

**Size combination**

| Symbol | Applicable tubing size (mm) |
|--------|-----------------------------|
| 2 1    | 6 x 4                       |
| 3 1    | 10 x 8                      |
| 3 2    | 8 x 6                       |
| 4 1    | 12 x 10                     |
| 5 1    | 19 x 16                     |
| 6 1    | 25 x 22                     |

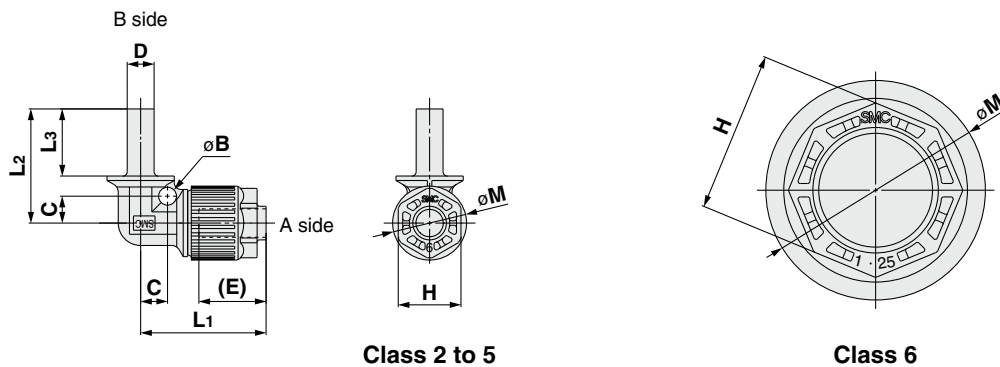
| Symbol | Applicable tubing size (inch) |
|--------|-------------------------------|
| 2 A    | 1/4" x 5/32"                  |
| 3 A    | 3/8" x 1/4"                   |
| 4 A    | 1/2" x 3/8"                   |
| 5 A    | 3/4" x 5/8"                   |
| 6 A    | 1" x 7/8"                     |

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Dimensions

### Tubing extension union elbow: LQ1E-T



### Metric Size

| Model      | A side<br>Applicable tubing O.D. | B side<br>Tubing size (D) | B | C  | E  | H  | L1   | L2   | L3 | M    | Min. port size |
|------------|----------------------------------|---------------------------|---|----|----|----|------|------|----|------|----------------|
| LQ1E21-T   | ø6                               | 6 x 4                     | 4 | 6  | 18 | 14 | 28   | 25.5 | 15 | 16.5 | 3.6            |
| LQ1E31-T   | ø10                              | 10 x 8                    | 5 | 9  | 23 | 17 | 36.6 | 33.6 | 20 | 23   | 7.4            |
| LQ1E32-T   | ø8                               | 8 x 6                     |   |    | 21 | 17 | 36.6 | 33.6 | 20 | 23   | 5.5            |
| LQ1E41-T   | ø12                              | 12 x 10                   | 6 | 9  | 27 | 21 | 43   | 39   | 24 | 28   | 9.4            |
| * LQ1E51-T | ø19                              | 19 x 16                   | — | —  | 32 | 26 | 45.5 | 55.5 | 35 | 39   | 15             |
| LQ1E61-T   | ø25                              | 25 x 22                   | 8 | 18 | 43 | 36 | 69.5 | 72   | 46 | 49   | 21.2           |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

### Inch Size

| Model      | A side<br>Applicable tubing O.D. | B side<br>Tubing size (D) | B | C  | E  | H  | L1   | L2   | L3 | M    | Min. port size |
|------------|----------------------------------|---------------------------|---|----|----|----|------|------|----|------|----------------|
| LQ1E2A-T   | 1/4"                             | 1/4" x 5/32"              | 4 | 6  | 17 | 14 | 28   | 25.5 | 15 | 16.5 | 3.6            |
| LQ1E3A-T   | 3/8"                             | 3/8" x 1/4"               | 5 | 9  | 23 | 17 | 36.6 | 33.6 | 20 | 23   | 5.8            |
| LQ1E4A-T   | 1/2"                             | 1/2" x 3/8"               | 6 | 9  | 27 | 21 | 43   | 40   | 25 | 28   | 9              |
| * LQ1E5A-T | 3/4"                             | 3/4" x 5/8"               | — | —  | 32 | 26 | 45.5 | 55.5 | 35 | 39   | 15             |
| LQ1E6A-T   | 1"                               | 1" x 7/8"                 | 8 | 18 | 43 | 36 | 69.5 | 72   | 46 | 49   | 21.2           |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

## How to Order

**Tubing connection**

**LQ1 T 21 - T T1 -**

**Fitting type**

| Symbol | Type      |
|--------|-----------|
| T      | Union tee |

**Size combination**

| Symbol | Class | No. | Applicable tubing size (inch) |
|--------|-------|-----|-------------------------------|
| 2      | A     |     | 1/4" x 5/32"                  |
| 3      | A     |     | 3/8" x 1/4"                   |
| 4      | A     |     | 1/2" x 3/8"                   |
| 5      | A     |     | 3/4" x 5/8"                   |
| 6      | A     |     | 1" x 7/8"                     |

**Packaging**

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |

**Fitting type**

| Symbol | Type   |
|--------|--------|
| T1     | Type 1 |
| T2     | Type 2 |
| T3     | Type 3 |
| T4     | Type 4 |

**Piping type**

| Symbol | Type             |
|--------|------------------|
| T      | Tubing extension |

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

Note 1) For details of the applicable tubing sizes, refer to page 309.

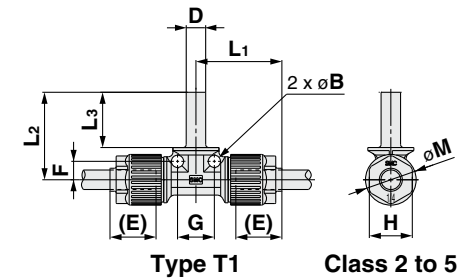
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

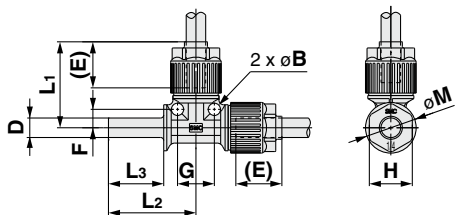
## Dimensions

### Tubing extension union tee: LQ1T-TT



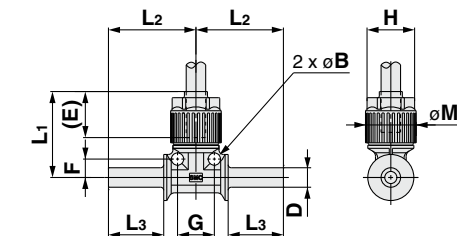
Type T1

Class 2 to 5



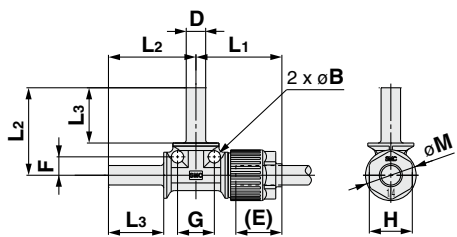
Type T2

Class 2 to 5



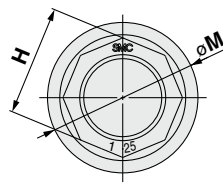
Type T3

Class 2 to 5



Type T4

Class 2 to 5



Class 6

### Metric Size

| Model        | Applicable tubing O.D. | B | D       | E    | F  | G  | H  | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | M    | Min. port size |
|--------------|------------------------|---|---------|------|----|----|----|----------------|----------------|----------------|------|----------------|
| * LQ1T21-TT1 | ø6                     | — | 6 x 4   | 18   | —  | —  | 14 | 21.5           | 26.5           | 18             | 16.5 | 3.6            |
| * LQ1T21-TT2 | ø6                     | — | 6 x 4   | 18   | —  | —  | 14 | 25.5           | 26.5           | 18             | 16.5 | 3.6            |
| * LQ1T31-TT1 | ø10                    | — | 10 x 8  | 22.5 | —  | —  | 17 | 30.6           | 35.5           | 24             | 23   | 7.4            |
| * LQ1T31-TT2 | ø10                    | — | 10 x 8  | 22.5 | —  | —  | 17 | 34.5           | 35.5           | 24             | 23   | 7.4            |
| * LQ1T32-TT1 | ø8                     | — | 8 x 6   | 21   | —  | —  | 17 | 29.6           | 34.5           | 24             | 23   | 5.5            |
| * LQ1T32-TT2 | ø8                     | — | 8 x 6   | 21   | —  | —  | 17 | 34.5           | 35.5           | 24             | 23   | 5.5            |
| * LQ1T32-TT3 | ø8                     | — | 8 x 6   | 21   | —  | —  | 17 | 29             | 34.5           | 24             | 23   | 5.5            |
| * LQ1T41-TT1 | ø12                    | — | 10 x 8  | 27   | —  | —  | 21 | 36             | 42             | 28             | 28   | 9.4            |
| * LQ1T41-TT2 | ø12                    | — | 10 x 8  | 27   | —  | —  | 21 | 41.5           | 42             | 28             | 28   | 9.4            |
| * LQ1T41-TT3 | ø12                    | — | 10 x 8  | 27   | —  | —  | 21 | 36             | 42             | 28             | 28   | 9.4            |
| LQ1T51-TT1   | ø19                    | 7 | 19 x 16 | 31.5 | 14 | 28 | 26 | 54             | 55.5           | 35             | 39   | 15             |
| LQ1T51-TT2   | ø19                    | 7 | 19 x 16 | 31.5 | 14 | 28 | 26 | 54             | 55.5           | 35             | 39   | 15             |
| LQ1T51-TT3   | ø19                    | 7 | 19 x 16 | 31.5 | 14 | 28 | 26 | 54             | 55.5           | 35             | 39   | 15             |
| LQ1T51-TT4   | ø19                    | 7 | 19 x 16 | 31.5 | 14 | 28 | 26 | 54             | 55.5           | 35             | 39   | 15             |
| LQ1T61-TT1   | ø25                    | 8 | 25 x 22 | 43   | 18 | 36 | 36 | 69.5           | 65.5           | 39.5           | 49   | 21.2           |
| LQ1T61-TT2   | ø25                    | 8 | 25 x 22 | 43   | 18 | 36 | 36 | 69.5           | 65.5           | 39.5           | 49   | 21.2           |
| LQ1T61-TT3   | ø25                    | 8 | 25 x 22 | 43   | 18 | 36 | 36 | 69.5           | 65.5           | 39.5           | 49   | 21.2           |
| LQ1T61-TT4   | ø25                    | 8 | 25 x 22 | 43   | 18 | 36 | 36 | 69.5           | 65.5           | 39.5           | 49   | 21.2           |

### Inch Size

| Model      | Applicable tubing O.D. | B | D            | E    | F  | G  | H  | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | M    | Min. port size |
|------------|------------------------|---|--------------|------|----|----|----|----------------|----------------|----------------|------|----------------|
| LQ1T2A-TT1 | 1/4"                   | 4 | 1/4" x 5/32" | 17   | 6  | 12 | 14 | 28             | 30.5           | 20             | 16.5 | 3.6            |
| LQ1T2A-TT2 | 1/4"                   | 4 | 1/4" x 5/32" | 17   | 6  | 12 | 14 | 28             | 30.5           | 20             | 16.5 | 3.6            |
| LQ1T2A-TT3 | 1/4"                   | 4 | 1/4" x 5/32" | 17   | 6  | 12 | 14 | 28             | 30.5           | 20             | 16.5 | 3.6            |
| LQ1T2A-TT4 | 1/4"                   | 4 | 1/4" x 5/32" | 17   | 6  | 12 | 14 | 28             | 30.5           | 20             | 16.5 | 3.6            |
| LQ1T3A-TT1 | 3/8"                   | 5 | 3/8" x 1/4"  | 22.5 | 9  | 18 | 17 | 36.5           | 39.6           | 26             | 23   | 5.8            |
| LQ1T3A-TT2 | 3/8"                   | 5 | 3/8" x 1/4"  | 22.5 | 9  | 18 | 17 | 36.5           | 39.6           | 26             | 23   | 5.8            |
| LQ1T3A-TT3 | 3/8"                   | 5 | 3/8" x 1/4"  | 22.5 | 9  | 18 | 17 | 36.5           | 39.6           | 26             | 23   | 5.8            |
| LQ1T3A-TT4 | 3/8"                   | 5 | 3/8" x 1/4"  | 22.5 | 9  | 18 | 17 | 36.5           | 39.6           | 26             | 23   | 5.8            |
| LQ1T4A-TT1 | 1/2"                   | 6 | 1/2" x 3/8"  | 27   | 9  | 18 | 21 | 43             | 44             | 29             | 28   | 9              |
| LQ1T4A-TT2 | 1/2"                   | 6 | 1/2" x 3/8"  | 27   | 9  | 18 | 21 | 43             | 44             | 29             | 28   | 9              |
| LQ1T4A-TT3 | 1/2"                   | 6 | 1/2" x 3/8"  | 27   | 9  | 18 | 21 | 43             | 44             | 29             | 28   | 9              |
| LQ1T4A-TT4 | 1/2"                   | 6 | 1/2" x 3/8"  | 27   | 9  | 18 | 21 | 43             | 44             | 29             | 28   | 9              |
| LQ1T5A-TT1 | 3/4"                   | 7 | 3/4" x 5/8"  | 31.5 | 14 | 28 | 26 | 54             | 56.5           | 36             | 39   | 15             |
| LQ1T5A-TT2 | 3/4"                   | 7 | 3/4" x 5/8"  | 31.5 | 14 | 28 | 26 | 54             | 56.5           | 36             | 39   | 15             |
| LQ1T5A-TT3 | 3/4"                   | 7 | 3/4" x 5/8"  | 31.5 | 14 | 28 | 26 | 54             | 56.5           | 36             | 39   | 15             |
| LQ1T5A-TT4 | 3/4"                   | 7 | 3/4" x 5/8"  | 31.5 | 14 | 28 | 26 | 54             | 56.5           | 36             | 39   | 15             |
| LQ1T6A-TT1 | 1"                     | 8 | 1" x 7/8"    | 43   | 18 | 36 | 36 | 69.5           | 65.5           | 39.5           | 49   | 21.2           |
| LQ1T6A-TT2 | 1"                     | 8 | 1" x 7/8"    | 43   | 18 | 36 | 36 | 69.5           | 65.5           | 39.5           | 49   | 21.2           |
| LQ1T6A-TT3 | 1"                     | 8 | 1" x 7/8"    | 43   | 18 | 36 | 36 | 69.5           | 65.5           | 39.5           | 49   | 21.2           |
| LQ1T6A-TT4 | 1"                     | 8 | 1" x 7/8"    | 43   | 18 | 36 | 36 | 69.5           | 65.5           | 39.5           | 49   | 21.2           |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

# Tubing Extension Union Elbow Reducing

## How to Order

**Size combination (Metric)**

| Class | Model          | A side<br>Applicable tubing size (mm) | B side<br>Tubing size (mm) |
|-------|----------------|---------------------------------------|----------------------------|
| 2     | LQ1E21-T-R8    | 6 x 4                                 | 8 x 6                      |
|       | LQ1E21-T-R9    |                                       | 10 x 8                     |
|       | LQ1E21-T-R10   |                                       | 12 x 10                    |
|       | LQ1E22-T-R8    | 4 x 3                                 | 6 x 4                      |
|       | LQ1E22-T-R9    |                                       | 8 x 6                      |
|       | LQ1E22-T-R10   |                                       | 10 x 8                     |
| 3     | LQ1E31-T-R1    | 10 x 8                                | 8 x 6                      |
|       | LQ1E31-T-R2    |                                       | 6 x 4                      |
|       | LQ1E31-T-R8    |                                       | 12 x 10                    |
|       | * LQ1E31-T-R9  | 8 x 6                                 | 19 x 16                    |
|       | LQ1E32-T-R1    |                                       | 6 x 4                      |
|       | * LQ1E32-T-R10 |                                       | 19 x 16                    |
| 4     | LQ1E41-T-R1    | 12 x 10                               | 10 x 8                     |
|       | LQ1E41-T-R2    |                                       | 8 x 6                      |
|       | LQ1E41-T-R3    |                                       | 6 x 4                      |
|       | * LQ1E41-T-R8  | 19 x 16                               | 25 x 22                    |
|       | * LQ1E41-T-R9  |                                       | 25 x 22                    |
|       | * LQ1E41-T-R10 |                                       | 25 x 22                    |
| 5     | LQ1E51-T-R8    | 19 x 16                               | 25 x 22                    |
| 6     | LQ1E61-T-R1    | 25 x 22                               | 19 x 16                    |

**Tubing connection**

**LQ1 E 2 1 - T - R8 -**

**Fitting type**

| Symbol | Type        |
|--------|-------------|
| E      | Union elbow |

**Body size**  
(according to the combination table)

**Tubing type**

| Symbol | Type   |
|--------|--------|
| 1, 2   | Metric |
| A      | Inch   |

**Piping type**

| Symbol | Type     |
|--------|----------|
| R      | Reducing |

**Piping type**

| Symbol | Type             |
|--------|------------------|
| T      | Tubing extension |

**Packaging**

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |

**Size combination (Inch)**

| Class | Model         | A side<br>Applicable tubing size (inch) | B side<br>Tubing size (inch) |
|-------|---------------|-----------------------------------------|------------------------------|
| 2     | * LQ1E2A-T-R8 | 1/4" x 5/32"                            | 3/8" x 1/4"                  |
|       | * LQ1E2A-T-R9 |                                         | 1/2" x 3/8"                  |
| 3     | * LQ1E3A-T-R1 | 3/8" x 1/4"                             | 1/4" x 5/32"                 |
|       | * LQ1E3A-T-R8 |                                         | 1/2" x 3/8"                  |
| 4     | * LQ1E4A-T-R1 | 1/2" x 3/8"                             | 3/4" x 5/8"                  |
|       | * LQ1E4A-T-R8 |                                         | 1" x 7/8"                    |
| 5     | LQ1E5A-T-R8   | 3/4" x 5/8"                             | 1" x 7/8"                    |
| 6     | LQ1E6A-T-R1   | 1" x 7/8"                               | 3/4" x 5/8"                  |

Note 1) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

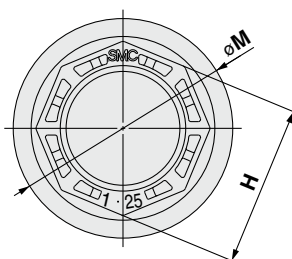
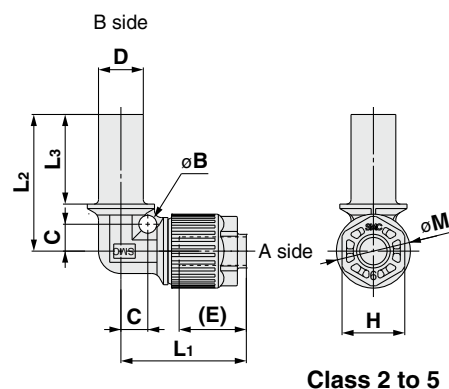
Note 1) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Dimensions

### Tubing extension union elbow reducing: LQ1E-T-R



### Metric Size

| Model          | A side<br>Applicable tubing O.D. | B side<br>Tubing size (D) | B | C  | D  | E    | H  | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | M    | Mn.<br>port size |
|----------------|----------------------------------|---------------------------|---|----|----|------|----|----------------|----------------|----------------|------|------------------|
| LQ1E21-T-R8    | ø6                               | 8 x 6                     | 4 | 6  | 8  | 18   | 14 | 28             | 30.5           | 20             | 16.5 | 3.6              |
| LQ1E21-T-R9    |                                  | 10 x 8                    |   |    | 24 |      |    |                |                |                |      |                  |
| LQ1E21-T-R10   |                                  | 12 x 10                   |   |    | 24 |      |    |                |                |                |      |                  |
| LQ1E22-T-R8    | ø4                               | 6 x 4                     | 5 | 9  | 6  | 12.5 | 17 | 33.5           | 25.5           | 15             | 23   | 2.6              |
| LQ1E22-T-R9    |                                  | 8 x 6                     |   |    | 15 |      |    |                |                |                |      |                  |
| LQ1E22-T-R10   |                                  | 10 x 8                    |   |    | 15 |      |    |                |                |                |      |                  |
| LQ1E22-T-R11   |                                  | 12 x 10                   |   |    | 12 |      |    |                | 34.5           | 24             |      |                  |
| LQ1E31-T-R1    | ø10                              | 8 x 6                     | 5 | 9  | 8  | 22.5 | 17 | 36.6           | 33.6           | 20             | 23   | 6                |
| LQ1E31-T-R2    |                                  | 6 x 4                     |   |    | 15 |      |    |                |                |                |      |                  |
| LQ1E31-T-R8    |                                  | 12 x 10                   |   |    | 24 |      |    |                |                |                |      |                  |
| * LQ1E31-T-R9  | ø8                               | 19 x 16                   | 5 | 9  | 19 | 21   | 17 | 36.6           | 33.5           | 35             | 23   | 7.4              |
| LQ1E32-T-R1    |                                  | 6 x 4                     |   |    | 15 |      |    |                |                |                |      |                  |
| LQ1E32-T-R8    |                                  | 10 x 8                    |   |    | 20 |      |    |                |                |                |      |                  |
| LQ1E32-T-R9    |                                  | 12 x 10                   |   |    | 12 |      |    |                | 37.6           | 24             |      |                  |
| * LQ1E32-T-R10 |                                  | 19 x 16                   | — | —  | 19 |      |    |                | 33.5           | 46.5           | 35   |                  |
| LQ1E41-T-R1    | ø12                              | 10 x 8                    | 6 | 9  | 10 | 27   | 21 | 43             | 35             | 20             | 28   | 8                |
| LQ1E41-T-R2    |                                  | 8 x 6                     |   |    | 20 |      |    |                |                |                |      |                  |
| LQ1E41-T-R3    |                                  | 6 x 4                     |   |    | 24 |      |    |                |                |                |      |                  |
| * LQ1E41-T-R8  | ø19                              | 19 x 16                   | — | —  | 19 | —    | —  | —              | 39.6           | 49             | —    | 9.4              |
| LQ1E41-T-R9    |                                  | 25 x 22                   |   |    | 46 |      |    |                |                |                |      |                  |
| * LQ1E51-T-R8  |                                  | 25 x 22                   |   |    | 46 |      |    |                |                |                |      |                  |
| LQ1E61-T-R1    | ø25                              | 19 x 16                   | 8 | 18 | 19 | 43   | 36 | 69.5           | 62             | 36             | 49   | 15.8             |

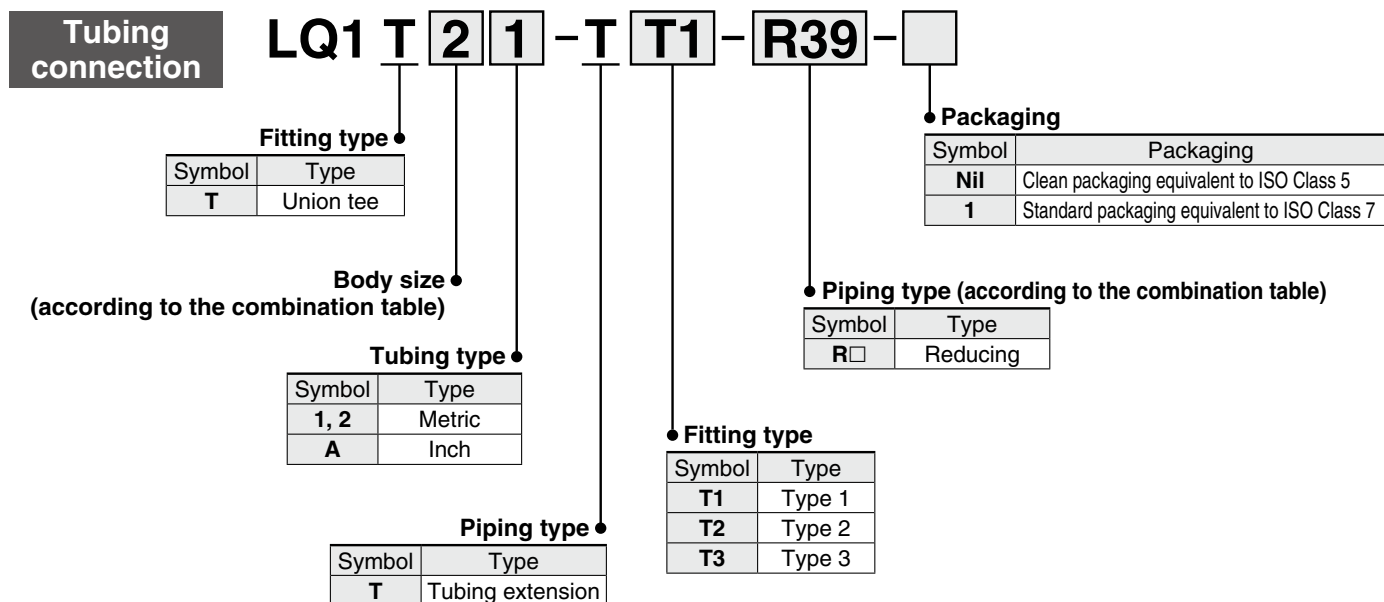
### Inch Size

| Model         | A side                 | B side          | B | C | D    | E    | H  | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | M    | Min. port size |
|---------------|------------------------|-----------------|---|---|------|------|----|----------------|----------------|----------------|------|----------------|
|               | Applicable tubing O.D. | Tubing size (D) |   |   |      |      |    |                |                |                |      |                |
| * LQ1E2A-T-R8 | 1/4"                   | 3/8" x 1/4"     | — | — | 3/8" | 17   | 14 | 23.5           | 32.3           | 24             | 16.5 | 3.6            |
| * LQ1E2A-T-R9 |                        | 1/2" x 3/8"     |   |   | 28   |      |    |                |                |                |      |                |
| * LQ1E3A-T-R1 | 3/8"                   | 1/4" x 5/32"    | — | — | 1/4" | 22.5 | 17 | 27.2           | 29.5           | 18             | 23   | 3.9            |
| * LQ1E3A-T-R8 |                        | 1/2" x 3/8"     |   |   | 28   |      |    |                |                |                |      |                |
| * LQ1E3A-T-R9 |                        | 3/4" x 5/8"     |   |   | 3/4" |      |    | 33.5           | 46.5           | 35             |      | 5.8            |
| * LQ1E4A-T-R1 | 1/2"                   | 3/8" x 1/4"     | — | — | 3/8" | 27   | 21 | 34.8           | 38             | 24             | 28   | 6.3            |
| * LQ1E4A-T-R8 |                        | 3/4" x 5/8"     |   |   | 35   |      |    |                |                |                |      |                |
| * LQ1E4A-T-R9 |                        | 1" x 7/8"       |   |   | 1"   |      |    | 41             | 60             | 46             |      | 9              |
| * LQ1E5A-T-R8 | 3/4"                   | 1" x 7/8"       | — | — | 1"   | 31.5 | 26 | 48.5           | 66.5           | 46             | 39   | 15             |
| * LQ1E6A-T-R1 |                        | 3/4" x 5/8"     |   |   | 43   |      |    | 62             | 36             | 49             |      |                |

Note) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

# LQ1 Series Tubing Extension Union Tee Reducing

## How to Order



### Size combination (Metric)

| Class | Model            | A side (Left)                                                          | B side (Center)  | C side (Right) |
|-------|------------------|------------------------------------------------------------------------|------------------|----------------|
|       |                  | Applicable tubing size (O.D. x I.D.) / Tubing extensions (O.D. x I.D.) |                  |                |
| 2     | * LQ1T21-TT1-R39 | 6 x 4                                                                  | Tube 10 x 8      | 6 x 4          |
|       | * LQ1T21-TT2-R41 | Tube 10 x 8                                                            | 6 x 4            |                |
| 3     | * LQ1T32-TT1-R37 | 8 x 6                                                                  | Tube 10 x 8      | 8 x 6          |
|       | * LQ1T32-TT2-R40 | Tube 10 x 8                                                            | 8 x 6            |                |
| 4     | * LQ1T41-TT1-R1  | 12 x 10                                                                | Tube 10 x 8      | 12 x 10        |
|       | * LQ1T41-TT1-R37 |                                                                        | Tube 19 x 16     |                |
| 5     | * LQ1T51-TT1-R1  | 19 x 16                                                                | Tube 12 x 10     | 19 x 16        |
|       | * LQ1T51-TT1-R2  |                                                                        | Tube 10 x 8      |                |
|       | * LQ1T51-TT1-R5  | 12 x 10                                                                |                  |                |
|       | * LQ1T51-TT1-R13 | 6 x 4                                                                  | Tube 19 x 16     |                |
|       | * LQ1T51-TT1-R37 | 19 x 16                                                                |                  |                |
|       | * LQ1T51-TT1-R38 | 6 x 4                                                                  | Tube 25 x 22     |                |
|       | * LQ1T51-TT2-R4  | Tube 19 x 16                                                           | 6 x 4            |                |
| 6     | * LQ1T61-TT1-R1  | 25 x 22                                                                | Tube 19 x 16     | 25 x 22        |
|       | * LQ1T61-TT1-R2  |                                                                        | Tube 1/2" x 3/8" |                |
|       | * LQ1T61-TT2-R1  | Tube 25 x 22                                                           | 19 x 16          |                |

Note 1) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

### Size combination (Inch)

| Class | Model            | A side (Left)                                                          | B side (Center)  | C side (Right)   |
|-------|------------------|------------------------------------------------------------------------|------------------|------------------|
|       |                  | Applicable tubing size (O.D. x I.D.) / Tubing extensions (O.D. x I.D.) |                  |                  |
| 3     | LQ1T3A-TT2-R5    | Tube 3/8" x 1/4"                                                       | 3/8" x 1/4"      | 1/4" x 5/32"     |
| 4     | * LQ1T4A-TT1-R1  | 1/2" x 3/8"                                                            | Tube 3/8" x 1/4" | 1/2" x 3/8"      |
|       | * LQ1T4A-TT1-R7  | 3/8" x 1/4"                                                            |                  |                  |
|       | * LQ1T4A-TT1-R37 | 1/2" x 3/8"                                                            |                  |                  |
| 5     | * LQ1T5A-TT1-R1  | 3/4" x 5/8"                                                            | Tube 1/2" x 3/8" | 3/4" x 5/8"      |
|       | * LQ1T5A-TT1-R2  |                                                                        | Tube 3/8" x 1/4" |                  |
|       | * LQ1T5A-TT1-R3  | 1/4" x 5/32"                                                           | Tube 3/4" x 5/8" |                  |
|       | * LQ1T5A-TT1-R5  | 1/2" x 3/8"                                                            | Tube 1/2" x 3/8" |                  |
|       | * LQ1T5A-TT1-R7  |                                                                        | Tube 1/2" x 3/8" |                  |
|       | * LQ1T5A-TT2-R4  | Tube 3/4" x 5/8"                                                       | 1/4" x 5/32"     |                  |
|       | * LQ1T5A-TT2-R40 | Tube 1" x 7/8"                                                         |                  |                  |
| 6     | * LQ1T5A-TT3-R5  | Tube 3/4" x 5/8"                                                       | 3/4" x 5/8"      | Tube 1/2" x 3/8" |
|       | * LQ1T5A-TT3-R7  | Tube 1/2" x 3/8"                                                       |                  |                  |
|       | * LQ1T6A-TT1-R1  |                                                                        | Tube 3/4" x 5/8" |                  |
|       | * LQ1T6A-TT1-R2  | 1" x 7/8"                                                              | Tube 1/2" x 3/8" |                  |
|       | * LQ1T6A-TT1-R3  |                                                                        | Tube 3/8" x 1/4" |                  |
|       | * LQ1T6A-TT2-R1  | Tube 3/4" x 5/8"                                                       | 3/4" x 5/8"      |                  |

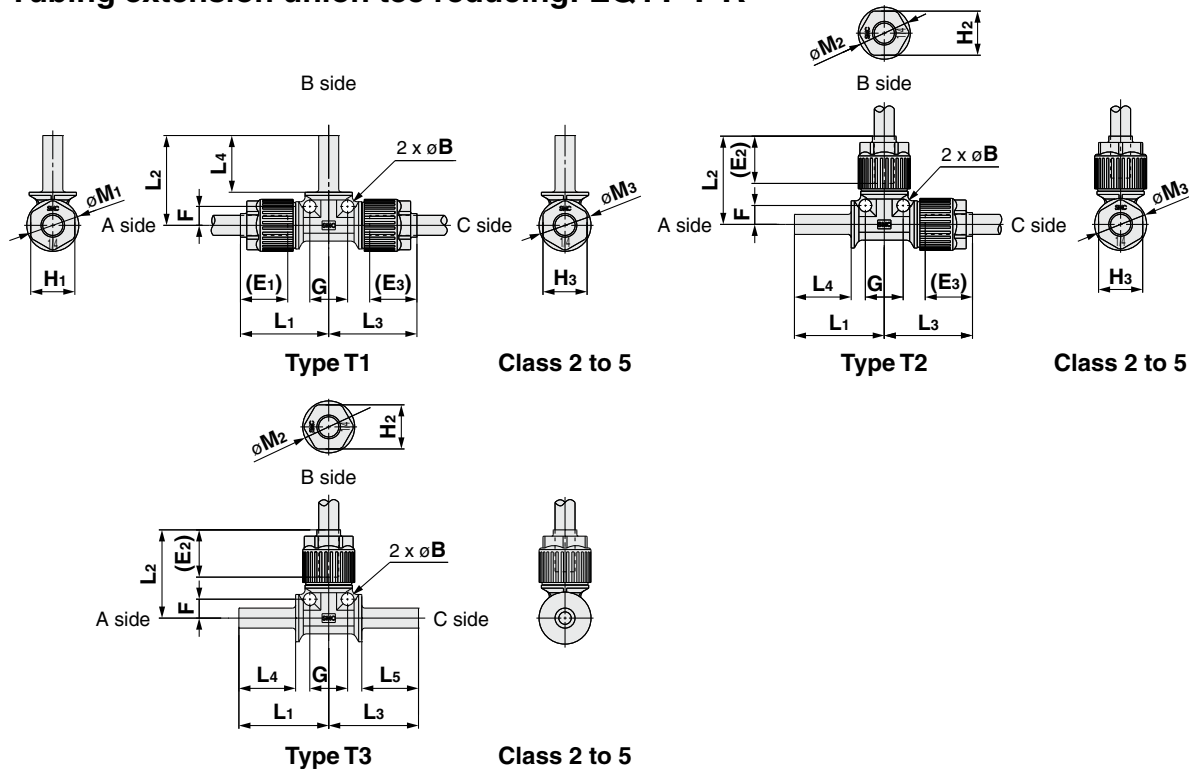
Note 1) Products marked "\*" are produced upon receipt of order.  
(The body of the fitting is PTFE machined.)

Note 2) For details of the applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Dimensions

### Tubing extension union tee reducing: LQ1T-T-R



#### Metric Size

| Model            | A side (Left)<br>Applicable tubing O.D. | B side (Center)<br>Applicable tubing O.D. | C side (Right)<br>Applicable tubing O.D. | B | E <sub>1</sub> | E <sub>2</sub> | E <sub>3</sub> | F  | G  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | M <sub>1</sub> | M <sub>2</sub> | M <sub>3</sub> | Min.<br>port size |
|------------------|-----------------------------------------|-------------------------------------------|------------------------------------------|---|----------------|----------------|----------------|----|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|
| * LQ1T21-TT1-R39 | ø6                                      | Tube ø10                                  | ø6                                       | — | 21             | —              | 21             | —  | —  | 17             | —              | 17             | 30.6           | 35.5           | 30.6           | 24             | 23             | —              | 23             | 3.6               |
| * LQ1T21-TT2-R41 | Tube ø10                                | ø6                                        | ø6                                       | — | —              | 21             | 21             | —  | —  | —              | 17             | 17             | 35.5           | 34.5           | 34.5           | 24             | 23             | 23             | —              | —                 |
| * LQ1T32-TT1-R37 | ø8                                      | Tube ø10                                  | ø8                                       | — | 21             | —              | 21             | —  | —  | 17             | —              | 17             | 30.6           | 35.5           | 30.6           | 24             | 23             | —              | 23             | 5.5               |
| * LQ1T32-TT2-R40 | Tube ø10                                | ø8                                        | ø8                                       | — | —              | 21             | 21             | —  | —  | —              | 17             | 17             | 35.5           | 34.5           | 34.5           | 24             | —              | 23             | —              | —                 |
| * LQ1T41-TT1-R1  | ø12                                     | Tube ø10                                  | ø12                                      | — | 27             | —              | 27             | —  | —  | 21             | —              | 21             | 35             | 38             | 35             | 24             | 28             | —              | 28             | 8                 |
| * LQ1T41-TT1-R37 | ø12                                     | Tube ø19                                  | ø12                                      | — | 27             | —              | 27             | —  | —  | 21             | —              | 21             | 39.5           | 49             | 39.5           | 35             | 28             | —              | 28             | 9.4               |
| * LQ1T51-TT1-R1  | ø19                                     | Tube ø12                                  | ø19                                      | — | 31.5           | —              | 31.5           | —  | —  | 26             | —              | 26             | 41.5           | 47.5           | 41.5           | 28             | 39             | —              | 39             | 10                |
| * LQ1T51-TT1-R2  | ø19                                     | Tube ø10                                  | ø19                                      | — | 31.5           | —              | 31.5           | —  | —  | 26             | —              | 26             | 41             | 44.5           | 41             | 25             | 39             | —              | 39             | 8                 |
| LQ1T51-TT1-R5    | ø12                                     | Tube ø19                                  | ø19                                      | 7 | 29             | —              | 31.5           | 14 | 28 | —              | —              | 26             | 54             | 56.5           | 54             | 36             | —              | —              | —              | 9.4               |
| * LQ1T51-TT1-R13 | ø6                                      | Tube ø19                                  | ø19                                      | — | 18             | —              | 31.5           | —  | —  | 14             | —              | 26             | 29             | 54.5           | 45             | 35             | 16.5           | —              | 39             | 3.6               |
| LQ1T51-TT1-R37   | ø19                                     | Tube ø25                                  | ø19                                      | 8 | 35             | —              | 31.5           | 18 | 36 | 36             | —              | 36             | 69.5           | 65.5           | 69.5           | 39.5           | 49             | —              | 49             | 15                |
| * LQ1T51-TT1-R38 | ø6                                      | Tube ø25                                  | ø19                                      | — | 18             | —              | 31.5           | —  | —  | 14             | —              | 26             | 32.2           | 64             | 48.2           | 46             | 16.5           | —              | —              | —                 |
| LQ1T51-TT2-R4    | Tube ø19                                | ø6                                        | ø19                                      | 7 | —              | 18             | 31.5           | 14 | 28 | —              | 14             | 26             | 56.5           | 38.5           | 54             | 36             | —              | 16.5           | —              | 3.6               |
| * LQ1T61-TT1-R1  | ø25                                     | Tube ø19                                  | ø25                                      | — | 43             | —              | 43             | —  | —  | 36             | —              | —              | 55.1           | 59.5           | 55.1           | 35             | 49             | —              | —              | 16                |
| * LQ1T61-TT1-R2  | ø25                                     | Tube 1/2                                  | ø25                                      | — | 43             | —              | 43             | —  | —  | 36             | —              | 36             | 53.5           | 52.5           | 53.5           | 28             | —              | —              | 49             | 9.5               |
| LQ1T61-TT2-R1    | Tube ø25                                | ø19                                       | ø25                                      | 8 | —              | 35             | 43             | 18 | 36 | —              | 36             | —              | 65.5           | 69.5           | 69.5           | 39.5           | —              | 49             | —              | 15                |

#### Inch Size

| Model            | A side (Left)          | B side (Center) | C side (Right) | B | E <sub>1</sub> | E <sub>2</sub> | E <sub>3</sub> | F  | G  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | L <sub>5</sub> | M <sub>1</sub> | M <sub>2</sub> | M <sub>3</sub> | Min. port size |     |     |
|------------------|------------------------|-----------------|----------------|---|----------------|----------------|----------------|----|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|-----|
|                  | Applicable tubing O.D. |                 |                |   |                |                |                |    |    |                |                |                |                |                |                |                |                |                |                |                |                |     |     |
| LQ1T3A-TT2-R5    | Tube 3/8               | 3/8             | 1/4            | 5 | —              | 22.5           | 17             | 9  | 18 | —              | 17             | 17             | 38.6           | 36.6           | 36.6           | 26             | —              | —              | 23             | 16.5           | 3.6            |     |     |
| * LQ1T4A-TT1-R1  | 1/2                    | Tube 3/8        | 1/2            | — | 27             | —              | 27             | —  | —  | 21             | —              | 21             | 34             | 38             | 34             | 24             | —              | 28             | —              | 28             | 6.3            |     |     |
| * LQ1T4A-TT1-R7  | 3/8                    | Tube 3/8        | 1/2            | — | 22.5           |                |                | —  | —  | 21             | —              | 21             | 34             | 38             | 34             | 24             | —              | 23             | —              | 28             | 5.8            |     |     |
| * LQ1T4A-TT1-R37 | 1/2                    | Tube 3/4        | 1/2            | — | 27             |                |                | —  | —  | 21             | —              | 21             | 39.5           | 49             | 39.5           | 35             | —              | 28             | —              | 28             | 9              |     |     |
| * LQ1T5A-TT1-R1  | 3/4                    | Tube 1/2        | 3/4            | — | 31.5           | —              | 31.5           | —  | —  | 26             | —              | 26             | 41.9           | 47.5           | 41.9           | 28             | —              | 39             | —              | 39             | 9.5            |     |     |
| * LQ1T5A-TT1-R2  | 3/4                    | Tube 3/8        | 3/4            | — |                |                |                | —  | —  | —              | 26             | —              | 26             | 41             | 44.5           | 41             | 24             | —              | 39             | —              | 39             | 6.3 |     |
| * LQ1T5A-TT1-R3  | 1/4                    | Tube 3/4        | 3/4            | — |                |                |                | 17 | —  | —              | 14             | —              | 26             | 29             | 54.5           | 45             | 35             | —              | 16.5           | —              | 39             | 3.6 |     |
| LQ1T5A-TT1-R5    | 1/2                    | Tube 3/4        | 3/4            | 7 | 29             | —              | 31.5           | 14 | 28 | 26             | —              | 26             | 54             | 56.5           | 54             | 36             | —              | 39             | —              | 39             | 9              |     |     |
| LQ1T5A-TT1-R7    | 1/2                    | Tube 1/2        | 3/4            | 7 |                |                |                | 14 | 28 | 21             | —              | 26             | 49             | 44.5           | 54             | 24             | —              | 39             | —              | 39             |                |     |     |
| LQ1T5A-TT2-R4    | Tube 3/4               | 1/4             | 3/4            | 7 |                |                |                | 14 | 28 | —              | 14             | 26             | 56.5           | 38.5           | 54             | 36             | —              | —              | 16.5           | 39             |                | 3.6 |     |
| * LQ1T5A-TT2-R40 | Tube 1                 | 3/4             | 3/4            | — | —              | 31.5           | —              | —  | —  | 26             | 26             | 64             | 54             | 51.5           | 46             | —              | —              | 39             | 39             | 15             |                |     |     |
| LQ1T5A-TT3-R5    | Tube 3/4               | 3/4             | Tube 1/2       | 7 |                |                |                | 14 | 28 | —              | 26             | —              | 49.5           | 54             | 56.5           | 36             | 29             | —              | 39             | —              | 49             | 49  | 6.3 |
| * LQ1T5A-TT3-R7  | Tube 1/2               | 3/4             | Tube 1/2       | — |                |                |                | —  | —  | 26             | —              | 46             | 44.5           | 46             | 28             | 28             | —              | 39             | —              |                |                |     |     |
| * LQ1T6A-TT1-R1  | ø25                    | Tube 3/4        | ø25            | — | 43             | —              | 43             | —  | —  | 36             | —              | 36             | 55.1           | 59.5           | 55.1           | 35             | —              | 49             | —              | 49             | 16             |     |     |
| * LQ1T6A-TT1-R2  | ø25                    | Tube 1/2        | ø25            |   |                |                |                |    |    |                |                |                | 53.5           | 52.5           | 53.5           | 28             | —              |                |                |                | 9.5            |     |     |
| * LQ1T6A-TT1-R3  | ø25                    | Tube 3/8        | ø25            |   |                |                |                |    |    |                |                |                | 48.5           | 24             | —              | 6.3            |                |                |                |                |                |     |     |
| LQ1T6A-TT2-R1    | Tube 1                 | ø19             | ø25            | 8 | —              | 35             | 43             | 18 | 36 | —              | 36             | —              | 65.5           | 69.5           | 69.5           | 39.5           | —              | 49             | —              | 15             |                |     |     |

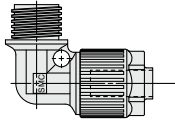
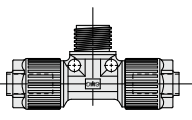
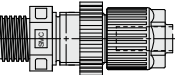
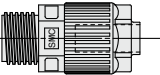
Note) Products marked "\*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

## How to Order Space Saving Type Fittings

This product, for use with products with one nut attached (insert bushing) has one nut removed.

**LQ1 E 21 - SN -**

### Fitting type

| E                                                                                 | T                                                                                 |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Union Elbow                                                                       | Union Tee                                                                         |
|  |  |
| P                                                                                 | U                                                                                 |
| Panel Mount Union                                                                 | Union                                                                             |
|  |  |

### Packaging

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |

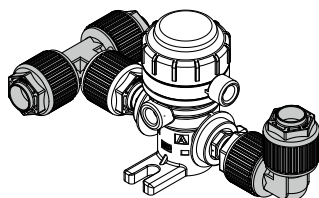
• Without a nut (including insert bushing) in one part

### Combination of different diameter (on B side)

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

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

### Connection example



Note 1) For each body class, the second and later numbers or symbols indicate reducing. However, use of different diameters is not available with size 1.

Note 2) Please choose the same size fitting as the fitting of the connecting product.

Note 3) For details of applicable tubing sizes, refer to page 309.

Note 4) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Options

### Panel mounting nut

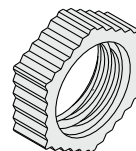
**LQN P 11 -**

### Applicable fitting

| Symbol | Size |
|--------|------|
| 11     | 1    |
| 12     | 2    |
| 13     | 3    |
| 14     | 4    |
| 15     | 5    |
| 16     | 6    |

### Packaging

| Symbol | Packaging                                   |
|--------|---------------------------------------------|
| Nil    | Clean packaging equivalent to Class M3.5    |
| 1      | Standard packaging equivalent to Class M5.5 |



It is used to mount panels with a panel mount union.



## Options

### Nut insert bush

**LQ 1-2 U 03-**

In cases where exchanging the tubing size, we recommend the U type.

**Applicable fitting**

| Symbol | Applicable fitting |
|--------|--------------------|
| 1      | LQ1                |

**Size**

| Symbol | Size |
|--------|------|
| 1      | 1    |
| 2      | 2    |
| 3      | 3    |
| 4      | 4    |
| 5      | 5    |
| 6      | 6    |

**Type of part**

| Symbol | Type of part    |
|--------|-----------------|
| U      | Nut insert bush |
| B      | Insert bush     |
| N      | Nut             |

**Packaging**

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |

**Applicable tubing size**

**Metric Size**

| Symbol | Applicable tubing size | Size |   |   |   |   |   |
|--------|------------------------|------|---|---|---|---|---|
|        |                        | 1    | 2 | 3 | 4 | 5 | 6 |
| 03     | ø3 x ø2                | ○    | ● |   |   |   |   |
| 04     | ø4 x ø3                | ○    | ● |   |   |   |   |
| 06     | ø6 x ø4                |      | ○ | ● |   |   |   |
| 08     | ø8 x ø6                |      |   | ● |   |   |   |
| 10     | ø10 x ø8               |      |   | ○ | ● |   |   |
| 12     | ø12 x ø10              |      |   |   | ○ | ● |   |
| 19     | ø19 x ø16              |      |   |   |   | ○ | ● |
| 25     | ø25 x ø22.5            |      |   |   |   |   | ○ |

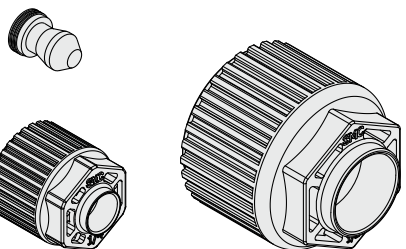
○ Basic size ● With reducer

**Inch Size**

| Symbol | Applicable tubing size | Size |   |   |   |   |   |
|--------|------------------------|------|---|---|---|---|---|
|        |                        | 1    | 2 | 3 | 4 | 5 | 6 |
| 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"            |      |   |   |   | ○ | ● |
| 25     | 1" x 7/8"              |      |   |   |   |   | ○ |

○ Basic size ● With reducer

Note 1) In the case of size 1, changing the tubing by reducing is not available.  
Note 2) For details of applicable tubing sizes, refer to page 309.



### Blanking plug

**LQ-11 P 04-**

**Applicable fitting**

| Symbol | Size |
|--------|------|
| 11     | 1    |
| 12     | 2    |
| 13     | 3    |
| 14     | 4    |
| 15     | 5    |
| 16     | 6    |

**Packaging**

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |

**Applicable tubing size**

**Metric Size**

| Symbol | Applicable tubing size | Size |   |   |   |   |   |
|--------|------------------------|------|---|---|---|---|---|
|        |                        | 1    | 2 | 3 | 4 | 5 | 6 |
| 03     | ø3 x ø2                | ○    | ● |   |   |   |   |
| 04     | ø4 x ø3                | ○    | ● |   |   |   |   |
| 06     | ø6 x ø4                |      | ○ | ● |   |   |   |
| 08     | ø8 x ø6                |      |   | ● |   |   |   |
| 10     | ø10 x ø8               |      |   | ○ | ● |   |   |
| 12     | ø12 x ø10              |      |   |   | ○ | ● |   |
| 19     | ø19 x ø16              |      |   |   |   | ○ | ● |
| 25     | ø25 x ø22.5            |      |   |   |   |   | ○ |

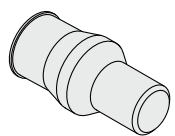
○ Basic size ● With reducer

**Inch Size**

| Symbol | Applicable tubing size | Size |   |   |   |   |   |
|--------|------------------------|------|---|---|---|---|---|
|        |                        | 1    | 2 | 3 | 4 | 5 | 6 |
| 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"            |      |   |   |   | ○ | ● |
| 25     | 1" x 7/8"              |      |   |   |   |   | ○ |

○ Basic size ● With reducer

Used to block fittings which are not being used.



### Tubing plug

**LQ1-2 CP**

Tubing plug will be a made-to-order product.

**Accessories/Packaging**

| Symbol | Accessories             | Packaging                                 |
|--------|-------------------------|-------------------------------------------|
| Nil    | Without nut insert bush | Clean packaging equivalent to ISO Class 5 |
| 1      | With nut insert bush    |                                           |

**Applicable tubing size**

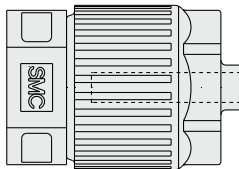
**Metric Size**

| Symbol | Applicable tubing size | Size |
|--------|------------------------|------|
| 03     | ø3 x ø2                | 1    |
| 04     | ø4 x ø3                |      |
| 06     | ø6 x ø4                | 2    |
| 08     | ø8 x ø6                | 3    |
| 10     | ø10 x ø8               | 3    |
| 12     | ø12 x ø10              | 4    |
| 19     | ø19 x ø16              | 5    |
| 25     | ø25 x ø22              | 6    |

**Inch Size**

| Symbol | Applicable tubing size | Size |
|--------|------------------------|------|
| 03     | 1/8" x 0.086"          | 1    |
| 07     | 1/4" x 5/32"           | 2    |
| 11     | 3/8" x 1/4"            | 3    |
| 13     | 1/2" x 3/8"            | 4    |
| 19     | 3/4" x 5/8"            | 5    |
| 25     | 1" x 7/8"              | 6    |

Used to block tubing which are not being used.



Note) For details of the applicable tubing sizes, refer to page 309.

# LQ1 Series Insertion Tool

## Fittings

### Changing tubing sizes

The tubing size can be changed within the same body class (body size) by replacing the nut and insert bushing. However, in case of class 1, the tubing cannot be changed by reducing.

| Body class | Tubing O.D.  |    |    |    |     |     |     |     |            |       |      |      |      |      |    |
|------------|--------------|----|----|----|-----|-----|-----|-----|------------|-------|------|------|------|------|----|
|            | Metric sizes |    |    |    |     |     |     |     | Inch sizes |       |      |      |      |      |    |
|            | ø3           | ø4 | ø6 | ø8 | ø10 | ø12 | ø19 | ø25 | 1/8"       | 3/16" | 1/4" | 3/8" | 1/2" | 3/4" | 1" |
| 1          | ○            | ○  | —  | —  | —   | —   | —   | —   | ○          | —     | —    | —    | —    | —    | —  |
| 2          | ●            | ●  | ○  | —  | —   | —   | —   | —   | ●          | ●     | ○    | —    | —    | —    | —  |
| 3          | —            | —  | ●  | ●  | ○   | —   | —   | —   | —          | —     | ●    | ○    | —    | —    | —  |
| 4          | —            | —  | —  | —  | ●   | ○   | —   | —   | —          | —     | —    | ●    | ○    | —    | —  |
| 5          | —            | —  | —  | —  | —   | ●   | ○   | —   | —          | —     | —    | —    | ●    | ○    | —  |
| 6          | —            | —  | —  | —  | —   | —   | ●   | ○   | —          | —     | —    | —    | —    | ●    | ○  |

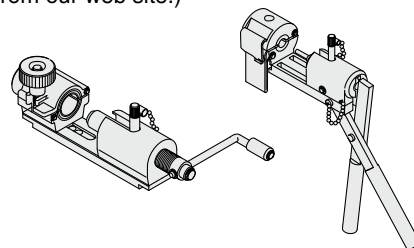
### Parts composition

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

## Caution

### 1. Connect tubing with special tools

Refer to the pamphlet "High-Purity Fluoropolymer Fittings Hyper Fitting/LQ1, 2 Series Work Procedure Instructions" (M-E05-1) for connecting tubing and special tools. (Downloadable from our web site.)

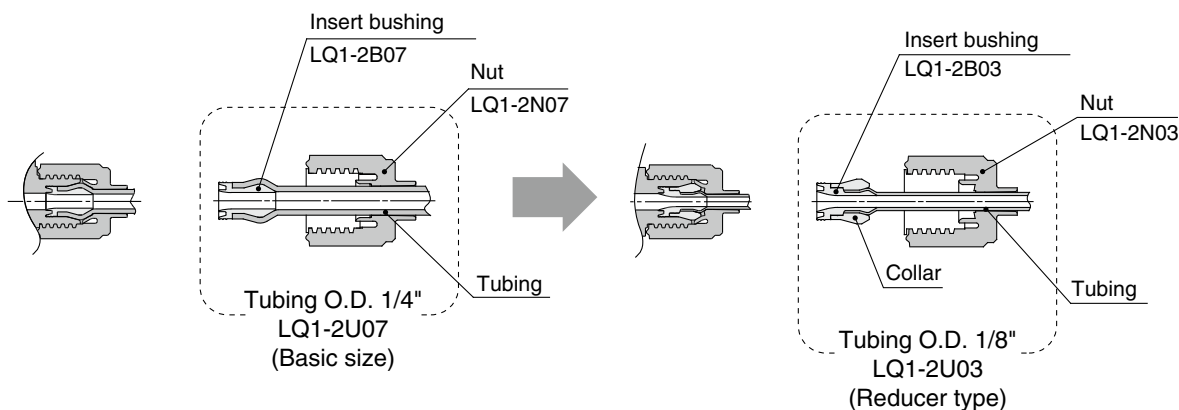


### Changing the tubing size

Example) Changing the tubing from an O.D. 1/4" to O.D. 1/8" in LQ1 body class 2.

Prepare an insert bushing and nut for 1/8" O.D. tubing (LQ1-2U03) and change the tubing size.  
(Refer to the section on how to order fitting parts.)

Note) Tubing is sold separately.





# Fluoropolymer Fittings

## Hyper Fittings / Flare Type

# LQ3 Series

RoHS

### How to Order

Threaded connection

LQ3 H 11 - M -

#### Fitting type

| Symbol | Type       |
|--------|------------|
| H      | Connector  |
| L      | Elbow      |
| B      | Branch tee |
| R      | Run tee    |

#### Nut material, packaging

| Symbol | Nut material | Packaging                                    |
|--------|--------------|----------------------------------------------|
| Nil    | PFA          | Clean packaging equivalent to ISO Class 5    |
| 1      | PFA          | Standard packaging equivalent to ISO Class 7 |
| 2      | PVDF         | Clean packaging equivalent to ISO Class 5    |
| 3      | PVDF         | Standard packaging equivalent to ISO Class 7 |

\* LQ3H8□: Nut material PVDF is not available.

#### Thread type

| Symbol | Type  |
|--------|-------|
| Nil    | R, Rc |
| N      | NPT   |

#### Piping type

| Symbol | Type   |
|--------|--------|
| M      | Male   |
| F      | Female |

#### Size combination

| Size | No. | Applicable tubing size (mm) | Port size |
|------|-----|-----------------------------|-----------|
| 1    | 1   | 4 x 3                       | 1/8"      |
| 1    | 2   | 3 x 2                       |           |
| 2    | 1   | 6 x 4                       | 1/8"      |
| 2    | 2   |                             | 1/4"      |
| 3    | 1   | 10 x 8                      | 1/8"      |
| 3    | 2   | 8 x 6                       |           |
| 3    | 3   | 10 x 8                      | 1/4"      |
| 3    | 4   | 8 x 6                       |           |
| 3    | 5   | 10 x 8                      | 3/8"      |
| 3    | 6   | 8 x 6                       |           |
| 3    | 8   |                             |           |
| 4    | 1   | 12 x 10                     | 1/4"      |
| 4    | 2   |                             | 3/8"      |
| 4    | 3   |                             | 1/2"      |
| 4    | 4   |                             | 3/4"      |
| 5    | 1   | 19 x 16                     | 3/8"      |
| 5    | 2   |                             | 1/2"      |
| 5    | 3   |                             | 3/4"      |
| 6    | 1   | 25 x 22                     | 1/2"      |
| 6    | 2   |                             | 3/4"      |
| 6    | 3   |                             | 1"        |

| Size | No. | Applicable tubing size (mm) | Port size |
|------|-----|-----------------------------|-----------|
| 1    | A   | 1/8" x 0.086"               | 1/8"      |
| 2    | A   | 1/4" x 5/32"                | 1/8"      |
| 2    | B   |                             | 1/4"      |
| 3    | A   | 3/8" x 1/4"                 | 1/8"      |
| 3    | B   |                             | 1/4"      |
| 3    | C   |                             | 3/8"      |
| 3    | D   |                             | 1/2"      |
| 4    | A   | 1/2" x 3/8"                 | 1/4"      |
| 4    | B   |                             | 3/8"      |
| 4    | C   |                             | 1/2"      |
| 4    | D   |                             | 3/4"      |
| 5    | A   | 3/4" x 5/8"                 | 3/8"      |
| 5    | B   |                             | 1/2"      |
| 5    | C   |                             | 3/4"      |
| 6    | A   | 1" x 7/8"                   | 1/2"      |
| 6    | B   |                             | 3/4"      |
| 6    | C   |                             | 1"        |
| 7*   | A*  | 1 1/4" x 1.1"               | 3/4"      |
| 7*   | B*  |                             | 1"        |
| 7*   | C*  |                             | 1 1/4"    |
| 8*   | C*  | 1 1/2" x 1.33"              | 1 1/2"    |

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

Note 1) \* Fitting type H, piping type M: Male connector only.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## How to Order

**Tubing connection**

**LQ3 E 11 -**

### Fitting type

| Symbol   | Type              |
|----------|-------------------|
| <b>E</b> | Union elbow       |
| <b>T</b> | Union tee         |
| <b>P</b> | Panel mount union |
| <b>U</b> | Union             |

### Nut material, packaging

| Symbol     | Nut material | Packaging                                    |
|------------|--------------|----------------------------------------------|
| <b>Nil</b> | PFA          | Clean packaging equivalent to ISO Class 5    |
| <b>1</b>   | PFA          | Standard packaging equivalent to ISO Class 7 |
| <b>2</b>   | PVDF         | Clean packaging equivalent to ISO Class 5    |
| <b>3</b>   | PVDF         | Standard packaging equivalent to ISO Class 7 |

\* LQ3□8A: Nut material PVDF is not available.

### Size combination

| Size     | No.      | Applicable tubing size (mm) |
|----------|----------|-----------------------------|
| <b>1</b> | <b>1</b> | 4 x 3                       |
| <b>1</b> | <b>2</b> | 3 x 2                       |
| <b>2</b> | <b>1</b> | 6 x 4                       |
| <b>3</b> | <b>1</b> | 10 x 8                      |
| <b>3</b> | <b>2</b> | 8 x 6                       |
| <b>4</b> | <b>1</b> | 12 x 10                     |
| <b>5</b> | <b>1</b> | 19 x 16                     |
| <b>6</b> | <b>1</b> | 25 x 22                     |

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

| Size      | Symbol    | Applicable tubing size (inch) |
|-----------|-----------|-------------------------------|
| <b>1</b>  | <b>A</b>  | 1/8" x 0.086"                 |
| <b>2</b>  | <b>A</b>  | 1/4" x 5/32"                  |
| <b>3</b>  | <b>A</b>  | 3/8" x 1/4"                   |
| <b>4</b>  | <b>A</b>  | 1/2" x 3/8"                   |
| <b>5</b>  | <b>A</b>  | 3/4" x 5/8"                   |
| <b>6</b>  | <b>A</b>  | 1" x 7/8"                     |
| <b>7*</b> | <b>A*</b> | 1 1/4" x 1.1"                 |
| <b>8*</b> | <b>A*</b> | 1 1/2" x 1.33"                |

Note 1) \* P: Without panel mounting

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

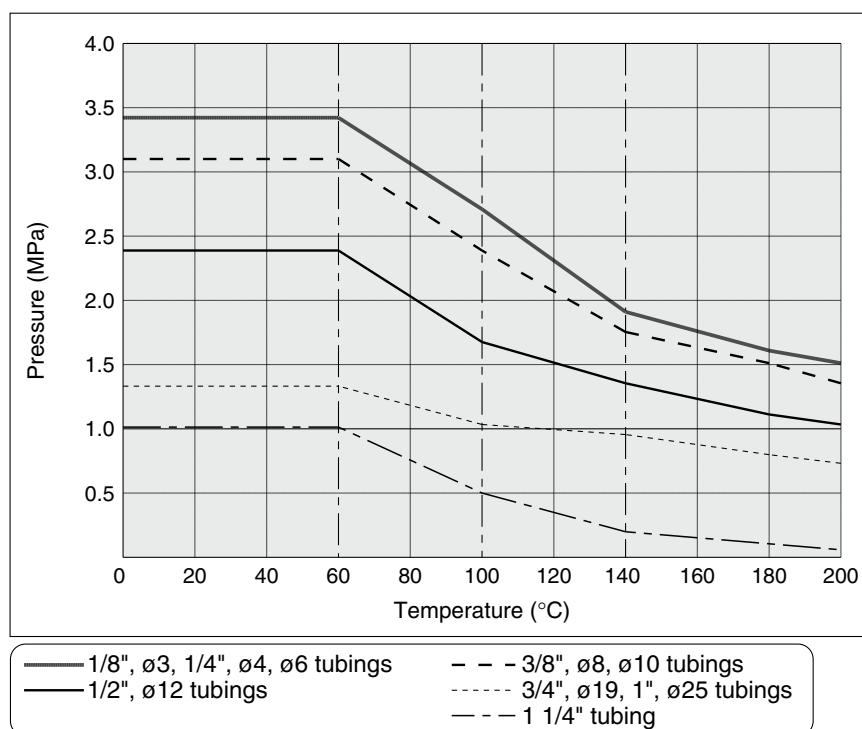
# LQ3 Series



## Specifications

| Feature \ Model                             | LQ3□10                                                                | LQ3□20     | LQ3□30 | LQ3□40 | LQ3□50 | LQ3□60 | LQ3□70 |
|---------------------------------------------|-----------------------------------------------------------------------|------------|--------|--------|--------|--------|--------|
| <b>Material</b>                             | New PFA                                                               |            |        |        |        |        |        |
| <b>Maximum operating pressure (at 20°C)</b> | 1.0 MPa                                                               |            |        |        |        |        |        |
| <b>Proof pressure</b>                       | Refer to the withstand pressure and heat resistance performance data. |            |        |        |        |        |        |
| <b>Operating temperature</b>                | Nut material PVDF                                                     | 0 to 150°C |        |        |        |        |        |
|                                             | Nut material PFA                                                      | 0 to 200°C |        |        |        |        |        |

## Withstand Pressure and Heat Resistance Performance



### ⚠ Specific Product Precautions

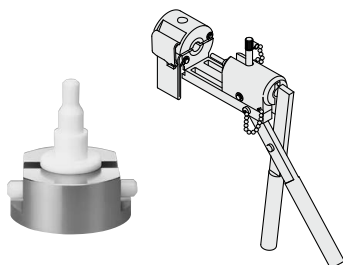
Be sure to read this before handling the products. Refer to page 501 for Safety Instructions.

#### Piping

### ⚠ Caution

#### 1. Connect tubing with special tools

Please refer to the LQ3 series mounting method in "High Purity Fluoropolymer Fittings: Hyper Fitting/Flare Type" (M-E06-4) for tubing connection and special tools. (Downloadable from our web site.)



2. Tighten the nut until it touches the end surface of the body, and then tighten it an additional 1/8 turn. If the nut won't turn any further, then it means a sufficient tightening has occurred. Refer to the proper tightening torques shown below.

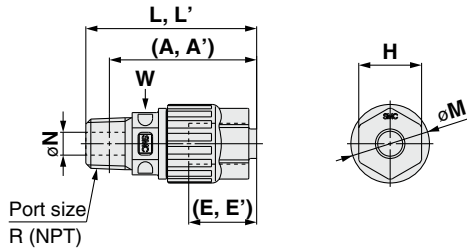
#### Tightening torque for piping

| Body class | Torque (N·m) |
|------------|--------------|
| 1          | 0.7 to 0.9   |
| 2          | 1.6 to 1.8   |
| 3          | 3.2 to 3.5   |
| 4          | 5.0 to 5.3   |
| 5          | 10.0 to 10.5 |
| 6          | 22.5 to 23.0 |
| 7          | 23.0 to 26.5 |

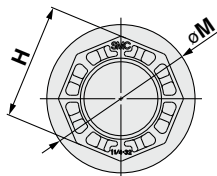


## Dimensions

### Male connector: LQ3H-M



(A,A'): Reference dimension after installation  
(E,E'): Reference dimension for the inserted tubing from the end surface of the nut  
(A'),L',E': Nut material PVDF dimensions  
W: Width across flats dimension



Class 7, 8

### Metric Size

| Model     | Applicable tubing O.D. | Connection threads R/NPT | A    | A'   | E    | E'   | H  | L    | L'   | M  | W  | N   | Min. port size |
|-----------|------------------------|--------------------------|------|------|------|------|----|------|------|----|----|-----|----------------|
| LQ3H11-M□ | ø4                     | 1/8"                     | 29.5 | 28.5 | 10   | 9    | 11 | 33.5 | 32.5 | 14 | 10 | 4   | 2.5            |
| LQ3H12-M□ | ø3                     |                          |      |      |      |      |    |      |      |    |    |     | 2              |
| LQ3H21-M□ | ø6                     | 1/8"                     | 39.5 | 38.5 | 17   | 16   | 16 | 43.5 | 42.5 | 20 | 14 | 4   | 4              |
| LQ3H22-M□ |                        | 1/4"                     | 37.5 | 36.5 |      |      |    |      |      |    |    | 6   |                |
| LQ3H31-M□ | ø10                    | 1/8"                     | 51   | 48   |      |      |    |      |      |    |    |     | 4.4            |
| LQ3H32-M□ | ø8                     |                          |      |      |      |      |    |      |      |    |    |     |                |
| LQ3H33-M□ | ø10                    | 1/4"                     | 49   | 46   | 22.5 | 19.5 | 21 | 55   | 52   | 25 | 18 | 6.4 | 6.4            |
| LQ3H34-M□ | ø8                     |                          |      |      |      |      |    |      |      |    |    | 10  | 7.5            |
| LQ3H35-M□ | ø10                    | 3/8"                     | 48.5 | 45.5 |      |      |    |      |      |    |    | 10  | 6.4            |
| LQ3H36-M□ | ø8                     | 1/2"                     | 54   | 51   |      |      |    | 62   | 59   |    |    |     |                |
| LQ3H38-M□ |                        |                          |      |      |      |      |    |      |      |    |    |     |                |
| LQ3H41-M□ | ø12                    | 1/4"                     | 58   | 56   | 24   | 22   | 24 | 64   | 62   | 29 | 22 | 6   | 6              |
| LQ3H42-M□ |                        | 3/8"                     | 57.5 | 55.5 |      |      |    |      |      |    |    | 8   | 8              |
| LQ3H43-M□ |                        | 1/2"                     | 56   | 54   |      |      |    |      |      |    |    | 9.5 | 9.5            |
| LQ3H44-M□ |                        | 3/4"                     | 59.8 | 57.6 |      |      |    | 69.3 | 67.1 |    |    | 16  |                |
| LQ3H51-M□ | ø19                    | 3/8"                     | 69.5 | 67   | 26.5 | 24   | 32 | 76   | 73.5 | 37 | 30 | 8   | 8              |
| LQ3H52-M□ |                        | 1/2"                     | 68   | 65.5 |      |      |    |      |      |    |    | 10  | 10             |
| LQ3H53-M□ |                        | 3/4"                     | 66.5 | 64   |      |      |    |      |      |    |    | 16  | 16             |
| LQ3H61-M□ | ø25                    | 1/2"                     | 80   | 76   | 30   | 26   | 41 | 88   | 84   | 49 | 36 | 10  | 10             |
| LQ3H62-M□ |                        | 3/4"                     | 78.5 | 74.5 |      |      |    |      |      |    |    | 16  | 16             |
| LQ3H63-M□ |                        | 1"                       | 77.5 | 73.5 |      |      |    |      |      |    |    | 22  | 22             |

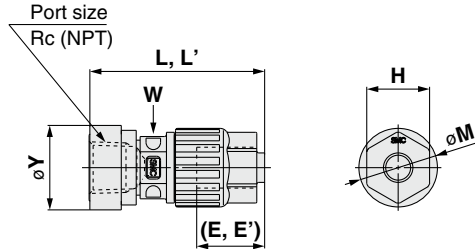
### Inch Size

| Model     | Applicable tubing O.D. | Connection threads R/NPT | A     | A'   | E    | E'   | H  | L    | L'   | M  | W  | N    | Min. port size |
|-----------|------------------------|--------------------------|-------|------|------|------|----|------|------|----|----|------|----------------|
| LQ3H1A-M□ | 1/8"                   | 1/8"                     | 29.5  | 28.5 | 10   | 9    | 11 | 33.5 | 32.5 | 14 | 10 | 4    | 2              |
| LQ3H2A-M□ | 1/4"                   | 1/8"                     | 39.5  | 38.5 | 17   | 16   | 16 | 43.5 | 42.5 | 20 | 14 | 4    |                |
| LQ3H2B-M□ |                        | 1/4"                     | 37.5  | 36.5 |      |      |    |      |      |    |    | 6    | 4              |
| LQ3H3A-M□ | 3/8"                   | 1/8"                     | 51    | 48   | 22.5 | 19.5 | 21 | 55   | 52   | 25 | 18 | 4.4  | 4.4            |
| LQ3H3B-M□ |                        | 1/4"                     | 49    | 46   |      |      |    |      |      |    |    | 6.4  |                |
| LQ3H3C-M□ |                        | 3/8"                     | 48.5  | 45.5 |      |      |    |      |      |    |    | 10   | 6.4            |
| LQ3H3D-M□ |                        | 1/2"                     | 54    | 51   |      |      |    | 62   | 59   |    |    |      |                |
| LQ3H4A-M□ | 1/2"                   | 1/4"                     | 58    | 56   | 24.5 | 22.5 | 24 | 64   | 62   | 29 | 22 | 6    | 6              |
| LQ3H4B-M□ |                        | 3/8"                     | 57.5  | 55.5 |      |      |    |      |      |    |    | 8    | 8              |
| LQ3H4C-M□ |                        | 1/2"                     | 56    | 54   |      |      |    |      |      |    |    | 9.5  | 9.5            |
| LQ3H4D-M□ |                        | 3/4"                     | 59.8  | 57.6 |      |      |    | 69.3 | 67.1 |    |    | 16   |                |
| LQ3H5A-M□ | 3/4"                   | 3/8"                     | 69.5  | 67   | 26.5 | 24   | 32 | 76   | 73.5 | 37 | 30 | 8    | 8              |
| LQ3H5B-M□ |                        | 1/2"                     | 68    | 65.5 |      |      |    |      |      |    |    | 10   | 10             |
| LQ3H5C-M□ |                        | 3/4"                     | 66.5  | 64   |      |      |    |      |      |    |    | 16   | 16             |
| LQ3H6A-M□ | 1"                     | 1/2"                     | 80    | 76   | 30   | 26   | 41 | 88   | 84   | 49 | 36 | 10   | 10             |
| LQ3H6B-M□ |                        | 3/4"                     | 78.5  | 74.5 |      |      |    |      |      |    |    | 16   | 16             |
| LQ3H6C-M□ |                        | 1"                       | 77.5  | 73.5 |      |      |    |      |      |    |    | 22   | 22             |
| LQ3H7A-M□ | 1 1/4"                 | 3/4"                     | 96.5  | 96.5 | 35   | 35   | 50 | 106  | 106  | 64 | 46 | 16   | 16             |
| LQ3H7B-M□ |                        | 1"                       | 95.5  | 95.5 |      |      |    |      |      |    |    | 22   | 22             |
| LQ3H7C-M□ |                        | 1 1/4"                   | 93.3  | 93.3 |      |      |    |      |      |    |    | 28.5 | 28.5           |
| LQ3H8C-M□ | 1 1/2"                 | 1 1/2"                   | 101.3 | —    | 39   | —    | 60 | 114  | —    | 77 | 55 | 36   | 36             |

# LQ3 Series

## Dimensions

### Female connector: LQ3H-F



(E,E'): Reference dimension for the inserted tubing from the end surface of the nut  
 (E'),L': Nut material PVDF dimensions  
 W: Width across flats dimension

### Metric Size

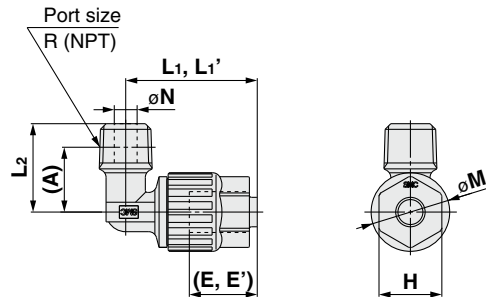
| Model     | Applicable tubing O.D. | Connection threads Rc/NPT | E    | E'   | H  | L    | L'   | M  | Min. port size | W  | Y    |
|-----------|------------------------|---------------------------|------|------|----|------|------|----|----------------|----|------|
| LQ3H11-F□ | ø4                     | 1/8"                      | 10   | 9    | 11 | 35   | 34   | 14 | 2.5            | 10 | 18.5 |
| LQ3H12-F□ | ø3                     |                           |      |      |    |      |      |    | 2              |    |      |
| LQ3H21-F□ | ø6                     | 1/8"                      | 17   | 16   | 16 | 40   | 39   | 20 | 4              | 14 | 18.5 |
| LQ3H22-F□ |                        | 1/4"                      |      |      |    | 45   | 44   |    |                |    | 21.5 |
| LQ3H31-F□ | ø10                    | 1/8"                      | 22.5 | 19.5 | 21 | 50.5 | 47.5 | 25 | 7.5            | 18 | 18.5 |
| LQ3H32-F□ | ø8                     |                           |      |      |    | 6.4  | 6.4  |    |                |    |      |
| LQ3H33-F□ | ø10                    | 1/4"                      |      |      |    | 55   | 52   |    | 7.5            |    | 21.5 |
| LQ3H34-F□ | ø8                     |                           |      |      |    | 6.4  | 6.4  |    |                |    |      |
| LQ3H35-F□ | ø10                    | 3/8"                      |      |      |    | 55.5 | 52.5 |    | 7.5            |    | 25   |
| LQ3H36-F□ | ø8                     |                           |      |      |    | 6.4  | 6.4  |    |                |    |      |
| LQ3H41-F□ | ø12                    | 1/4"                      | 24   | 22   | 24 | 55.5 | 53   | 29 | 9.5            | 22 | 21.5 |
| LQ3H42-F□ |                        | 3/8"                      |      |      |    | 58   | 56   |    |                |    | 25   |
| LQ3H43-F□ |                        | 1/2"                      |      |      |    | 66   | 64   |    |                |    | 29.5 |
| LQ3H51-F□ | ø19                    | 3/8"                      | 26.5 | 24   | 32 | 67   | 64.5 | 37 | 14             | 30 | 25   |
| LQ3H52-F□ |                        | 1/2"                      |      |      |    | 72   | 69.5 |    | 16             |    | 29.5 |
| LQ3H53-F□ |                        | 3/4"                      |      |      |    | 73.5 | 71   |    |                |    | 36   |
| LQ3H61-F□ | ø25                    | 1/2"                      | 30   | 26   | 41 | 81.5 | 77.5 | 49 | 17.5           | 36 | 29.5 |
| LQ3H62-F□ |                        | 3/4"                      |      |      |    | 83   | 79   |    | 22             |    | 36   |
| LQ3H63-F□ |                        | 1"                        |      |      |    | 90.5 | 86.5 |    |                |    | 44.5 |

### Inch Size

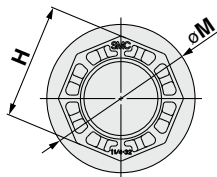
| Model     | Applicable tubing O.D. | Connection threads Rc/NPT | E    | E'   | H  | L    | L'   | M  | Min. port size | W  | Y    |
|-----------|------------------------|---------------------------|------|------|----|------|------|----|----------------|----|------|
| LQ3H1A-F□ | 1/8"                   | 1/8"                      | 10   | 9    | 11 | 35   | 34   | 14 | 2              | 10 | 18.5 |
| LQ3H2A-F□ | 1/4"                   | 1/8"                      | 17   | 16   | 16 | 40   | 39   | 20 | 4              | 14 | 18.5 |
| LQ3H2B-F□ |                        | 1/4"                      |      |      |    | 45   | 44   |    |                |    | 21.5 |
| LQ3H3A-F□ | 3/8"                   | 1/8"                      | 22.5 | 19.5 | 21 | 50.5 | 47.5 | 25 | 6.4            | 18 | 18.5 |
| LQ3H3B-F□ |                        | 1/4"                      |      |      |    | 55   | 52   |    |                |    | 21.5 |
| LQ3H3C-F□ |                        | 3/8"                      |      |      |    | 55.5 | 52.5 |    |                |    | 25   |
| LQ3H4A-F□ | 1/2"                   | 1/4"                      | 24.5 | 22.5 | 24 | 55.5 | 53   | 29 | 9.5            | 22 | 21.5 |
| LQ3H4B-F□ |                        | 3/8"                      |      |      |    | 58   | 56   |    |                |    | 25   |
| LQ3H4C-F□ |                        | 1/2"                      |      |      |    | 66   | 64   |    |                |    | 29.5 |
| LQ3H5A-F□ | 3/4"                   | 3/8"                      | 26.5 | 24   | 32 | 67   | 64.5 | 37 | 14             | 30 | 25   |
| LQ3H5B-F□ |                        | 1/2"                      |      |      |    | 72   | 69.5 |    | 16             |    | 29.5 |
| LQ3H5C-F□ |                        | 3/4"                      |      |      |    | 73.5 | 71   |    | 36             |    |      |
| LQ3H6A-F□ | 1"                     | 1/2"                      | 30   | 26   | 41 | 81.5 | 77.5 | 49 | 17.5           | 36 | 29.5 |
| LQ3H6B-F□ |                        | 3/4"                      |      |      |    | 83   | 79   |    | 22             |    | 36   |
| LQ3H6C-F□ |                        | 1"                        |      |      |    | 90.5 | 86.5 |    | 44.5           |    |      |

## Dimensions

### Male elbow: LQ3L-M



- (A): Reference dimension after installation  
(E, E'): Reference dimension for the inserted tubing from the end surface of the nut  
(E'), L<sub>1</sub>': Nut material PVDF dimensions



Class 7

### Metric Size

| Model     | Applicable tubing O.D. | Connection threads R/NPT | A    | E    | E'   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | N   | Min. port size |
|-----------|------------------------|--------------------------|------|------|------|----|----------------|------------------|----------------|----|-----|----------------|
| LQ3L11-M□ | ø4                     | 1/8"                     | 12.5 | 10   | 9    | 11 | 26             | 25               | 16.5           | 14 | 4   | 2.5            |
| LQ3L12-M□ | ø3                     | 1/8"                     | 12.5 | 10   | 9    | 11 | 26             | 25               | 16.5           | 14 | 4   | 2              |
| LQ3L21-M□ | ø6                     | 1/8"                     | 18.5 | 17   | 16   | 16 | 33.5           | 32.5             | 22.5           | 20 | 4   | 4              |
| LQ3L22-M□ | ø6                     | 1/4"                     | 16.5 | 17   | 16   | 16 | 33.5           | 32.5             | 22.5           | 20 | 6   | 4              |
| LQ3L31-M□ | ø10                    | 1/8"                     | 24   | 22.5 | 19.5 | 21 | 46             | 43               | 28             | 25 | 4.4 | 4.4            |
| LQ3L32-M□ | ø8                     | 1/4"                     | 22   | 22.5 | 19.5 | 21 | 46             | 43               | 28             | 25 | 6.4 | 6.4            |
| LQ3L33-M□ | ø10                    | 1/4"                     | 22   | 22.5 | 19.5 | 21 | 46             | 43               | 28             | 25 | 10  | 7.5            |
| LQ3L34-M□ | ø8                     | 3/8"                     | 21.5 | 22.5 | 19.5 | 21 | 46             | 43               | 28             | 25 | 9.5 | 6.4            |
| LQ3L35-M□ | ø10                    | 3/8"                     | 21.5 | 22.5 | 19.5 | 21 | 46             | 43               | 28             | 25 | 10  | 7.5            |
| LQ3L36-M□ | ø8                     | 1/2"                     | 24.5 | 24.5 | 22   | 24 | 47.5           | 44.5             | 32.5           | 29 | 9.5 | 6.4            |
| LQ3L38-M□ | ø8                     | 1/2"                     | 24.5 | 24.5 | 22   | 24 | 47.5           | 44.5             | 32.5           | 29 | 9.5 | 6.4            |
| LQ3L41-M□ | ø12                    | 1/4"                     | 27   | 24   | 22   | 24 | 54.5           | 52.5             | 33             | 29 | 6   | 6              |
| LQ3L42-M□ | ø12                    | 3/8"                     | 26.5 | 24   | 22   | 24 | 54.5           | 52.5             | 33             | 29 | 8   | 8              |
| LQ3L43-M□ | ø12                    | 1/2"                     | 25   | 24   | 22   | 24 | 54.5           | 52.5             | 33             | 29 | 9.5 | 9.5            |
| LQ3L51-M□ | ø19                    | 3/8"                     | 33.5 | 26.5 | 24   | 32 | 64             | 61.5             | 40             | 37 | 8   | 8              |
| LQ3L52-M□ | ø19                    | 1/2"                     | 32   | 26.5 | 24   | 32 | 64             | 61.5             | 40             | 37 | 10  | 10             |
| LQ3L53-M□ | ø19                    | 3/4"                     | 30.5 | 26.5 | 24   | 32 | 64             | 61.5             | 40             | 37 | 16  | 16             |
| LQ3L61-M□ | ø25                    | 1/2"                     | 38   | 30   | 26   | 41 | 77             | 73               | 46             | 49 | 10  | 10             |
| LQ3L62-M□ | ø25                    | 3/4"                     | 36.5 | 30   | 26   | 41 | 77             | 73               | 46             | 49 | 16  | 16             |
| LQ3L63-M□ | ø25                    | 1"                       | 35.5 | 30   | 26   | 41 | 77             | 73               | 46             | 49 | 22  | 22             |

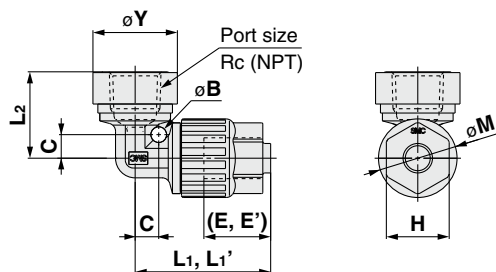
### Inch Size

| Model     | Applicable tubing O.D. | Connection threads R/NPT | A    | E    | E'   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | N   | Min. port size |
|-----------|------------------------|--------------------------|------|------|------|----|----------------|------------------|----------------|----|-----|----------------|
| LQ3L1A-M□ | 1/8"                   | 1/8"                     | 12.5 | 10   | 9    | 11 | 26             | 25               | 16.5           | 14 | 4   | 2              |
| LQ3L2A-M□ | 1/4"                   | 1/8"                     | 18.5 | 17   | 16   | 16 | 33.5           | 32.5             | 22.5           | 20 | 4   | 4              |
| LQ3L2B-M□ | 1/4"                   | 1/4"                     | 16.5 | 17   | 16   | 16 | 33.5           | 32.5             | 22.5           | 20 | 6   | 4              |
| LQ3L3A-M□ | 3/8"                   | 1/8"                     | 24   | 22.5 | 19.5 | 21 | 46             | 43               | 28             | 25 | 4.4 | 4.4            |
| LQ3L3B-M□ | 3/8"                   | 1/4"                     | 22   | 22.5 | 19.5 | 21 | 46             | 43               | 28             | 25 | 6.4 | 6.4            |
| LQ3L3C-M□ | 3/8"                   | 3/8"                     | 21.5 | 22.5 | 19.5 | 21 | 46             | 43               | 28             | 25 | 10  | 7.5            |
| LQ3L3D-M□ | 3/8"                   | 1/2"                     | 24.5 | 22.5 | 19.5 | 21 | 46             | 43               | 28             | 25 | 9.5 | 6.4            |
| LQ3L4A-M□ | 1/2"                   | 1/4"                     | 27   | 24.5 | 22   | 24 | 54.5           | 52.5             | 33             | 29 | 6   | 6              |
| LQ3L4B-M□ | 1/2"                   | 3/8"                     | 26.5 | 24.5 | 22   | 24 | 54.5           | 52.5             | 33             | 29 | 8   | 8              |
| LQ3L4C-M□ | 1/2"                   | 1/2"                     | 25   | 24.5 | 22   | 24 | 54.5           | 52.5             | 33             | 29 | 9.5 | 9.5            |
| LQ3L5A-M□ | 3/4"                   | 3/8"                     | 33.5 | 26.5 | 24   | 32 | 64             | 61.5             | 40             | 37 | 8   | 8              |
| LQ3L5B-M□ | 3/4"                   | 1/2"                     | 32   | 26.5 | 24   | 32 | 64             | 61.5             | 40             | 37 | 10  | 10             |
| LQ3L5C-M□ | 3/4"                   | 3/4"                     | 30.5 | 26.5 | 24   | 32 | 64             | 61.5             | 40             | 37 | 16  | 16             |
| LQ3L6A-M□ | 1"                     | 1/2"                     | 38   | 30   | 26   | 41 | 77             | 73               | 46             | 49 | 10  | 10             |
| LQ3L6B-M□ | 1"                     | 3/4"                     | 36.5 | 30   | 26   | 41 | 77             | 73               | 46             | 49 | 16  | 16             |
| LQ3L6C-M□ | 1"                     | 1"                       | 35.5 | 30   | 26   | 41 | 77             | 73               | 46             | 49 | 22  | 22             |

# LQ3 Series

## Dimensions

### Female elbow: LQ3L-F



(E,E'): Reference dimension for the inserted tubing from the end surface of the nut  
(E'),L<sub>1</sub>': Nut material PVDF dimensions

### Metric Size

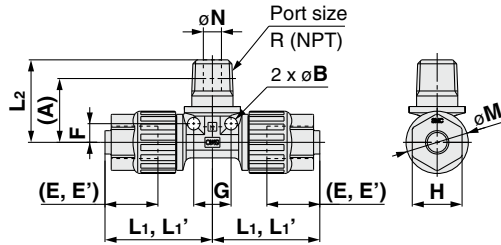
| Model     | Applicable tubing O.D. | Connection threads Rc/NPT | B   | C   | E    | E'   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | Min. port size | Y    |
|-----------|------------------------|---------------------------|-----|-----|------|------|----|----------------|------------------|----------------|----|----------------|------|
| LQ3L11-F□ | ø4                     | 1/8"                      | 3.5 | 4.8 | 10   | 9    | 11 | 28.5           | 27.5             | 19.5           | 14 | 2.5            | 18.5 |
| LQ3L12-F□ | ø3                     |                           |     |     |      |      |    |                |                  |                |    | 2              |      |
| LQ3L21-F□ | ø6                     | 1/8"                      | 4   | 6   | 17   | 16   | 16 | 34.5           | 33.5             | 20             | 20 | 4              | 18.5 |
| LQ3L22-F□ |                        | 1/4"                      |     |     |      |      |    |                |                  | 22             |    | 4              | 21.5 |
| LQ3L31-F□ | ø10                    | 1/8"                      |     |     |      |      |    |                |                  | 23             |    | 7.5            | 18.5 |
| LQ3L32-F□ | ø8                     |                           |     |     |      |      |    |                |                  |                |    | 6.4            |      |
| LQ3L33-F□ | ø10                    | 1/4"                      | 5   | 9   | 22.5 | 19.5 | 21 | 47.5           | 44.5             | 24             | 25 | 7.5            | 21.5 |
| LQ3L34-F□ | ø8                     |                           |     |     |      |      |    |                |                  |                |    | 6.4            |      |
| LQ3L35-F□ | ø10                    | 3/8"                      |     |     |      |      |    |                |                  | 25.5           |    | 7.5            | 25   |
| LQ3L36-F□ | ø8                     |                           |     |     |      |      |    |                |                  |                |    | 6.4            |      |
| LQ3L41-F□ | ø12                    | 1/4"                      | 6   | 10  | 24   | 22   | 24 | 52.5           | 50.5             | 23.5           | 29 | 9.5            | 21.5 |
| LQ3L42-F□ |                        | 3/8"                      |     |     |      |      |    |                |                  | 26             |    | 9.5            | 25   |
| LQ3L43-F□ |                        | 1/2"                      |     |     |      |      |    |                |                  | 30             |    |                | 29.5 |
| LQ3L51-F□ | ø19                    | 3/8"                      | 7   | 14  | 26.5 | 24   | 32 | 64             | 61.5             | 30.5           | 37 | 14             | 25   |
| LQ3L52-F□ |                        | 1/2"                      |     |     |      |      |    |                |                  | 35.5           |    | 16             | 29.5 |
| LQ3L53-F□ |                        | 3/4"                      |     |     |      |      |    |                |                  | 37             |    |                | 36   |
| LQ3L61-F□ | ø25                    | 1/2"                      | 8   | 18  | 30   | 26   | 41 | 78             | 74               | 41             | 49 | 17.5           | 29.5 |
| LQ3L62-F□ |                        | 3/4"                      |     |     |      |      |    |                |                  | 42.5           |    | 22             | 36   |
| LQ3L63-F□ |                        | 1"                        |     |     |      |      |    |                |                  | 46             |    |                | 44.5 |

### Inch Size

| Model     | Applicable tubing O.D. | Connection threads Rc/NPT | B   | C   | E    | E'   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | Min. port size | Y    |
|-----------|------------------------|---------------------------|-----|-----|------|------|----|----------------|------------------|----------------|----|----------------|------|
| LQ3L1A-F□ | 1/8"                   | 1/8"                      | 3.5 | 4.8 | 10   | 9    | 11 | 28.5           | 27.5             | 19.5           | 14 | 2              | 18.5 |
| LQ3L2A-F□ | 1/4"                   | 1/8"                      | 4   | 6   | 17   | 16   | 16 | 34.5           | 33.5             | 20             | 20 | 4              | 18.5 |
| LQ3L2B-F□ |                        | 1/4"                      |     |     |      |      |    |                |                  | 22             |    | 4              | 21.5 |
| LQ3L3A-F□ | 3/8"                   | 1/8"                      | 5   | 9   | 22.5 | 19.5 | 21 | 47.5           | 44.5             | 23             | 25 |                | 18.5 |
| LQ3L3B-F□ |                        | 1/4"                      |     |     |      |      |    |                |                  | 24             |    | 6.4            | 21.5 |
| LQ3L3C-F□ |                        | 3/8"                      |     |     |      |      |    |                |                  | 25.5           |    |                | 25   |
| LQ3L4A-F□ | 1/2"                   | 1/4"                      | 6   | 10  | 24.5 | 22.5 | 24 | 52.5           | 50.5             | 23.5           | 29 | 9.5            | 21.5 |
| LQ3L4B-F□ |                        | 3/8"                      |     |     |      |      |    |                |                  | 26             |    | 9.5            | 25   |
| LQ3L4C-F□ |                        | 1/2"                      |     |     |      |      |    |                |                  | 30             |    |                | 29.5 |
| LQ3L5A-F□ | 3/4"                   | 3/8"                      | 7   | 14  | 26.5 | 24   | 32 | 64             | 61.5             | 30.5           | 37 | 14             | 25   |
| LQ3L5B-F□ |                        | 1/2"                      |     |     |      |      |    |                |                  | 35.5           |    | 16             | 29.5 |
| LQ3L5C-F□ |                        | 3/4"                      |     |     |      |      |    |                |                  | 37             |    |                | 36   |
| LQ3L6A-F□ | 1"                     | 1/2"                      | 8   | 18  | 30   | 26   | 41 | 78             | 74               | 41             | 49 | 17.5           | 29.5 |
| LQ3L6B-F□ |                        | 3/4"                      |     |     |      |      |    |                |                  | 42.5           |    | 22             | 36   |
| LQ3L6C-F□ |                        | 1"                        |     |     |      |      |    |                |                  | 46             |    |                | 44.5 |

## Dimensions

### Male branch tee: LQ3B-M



(A): Reference dimension after installation  
(E, E'): Reference dimension for the inserted tubing from the end surface of the nut  
E', L1': Nut material PVDF dimensions

### Metric Size

| Model     | Applicable tubing O.D. | Connection threads R/NPT | A    | B   | E    | E'   | F   | G   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | N   | Min. port size |
|-----------|------------------------|--------------------------|------|-----|------|------|-----|-----|----|----------------|------------------|----------------|----|-----|----------------|
| LQ3B11-M□ | ø4                     | 1/8"                     | 15   | 3.5 | 10   | 9    | 4.8 | 9.5 | 11 | 28.5           | 27.5             | 19             | 14 | 4   | 2.5            |
| LQ3B12-M□ | ø3                     | 1/8"                     | 19.5 | 4   | 17   | 16   | 6   | 12  | 16 | 34.5           | 33.5             | 23.5           | 20 | 4   | 2              |
| LQ3B21-M□ | ø6                     | 1/8"                     | 20.5 | 4   | 17   | 16   | 6   | 12  | 16 | 34.5           | 33.5             | 26.5           | 20 | 4   | 4              |
| LQ3B22-M□ | ø6                     | 1/4"                     | 20.5 | 4   | 17   | 16   | 6   | 12  | 16 | 34.5           | 33.5             | 26.5           | 20 | 4   | 4              |
| LQ3B31-M□ | ø10                    | 1/8"                     | 22.5 | 5   | 22.5 | 19.5 | 9   | 18  | 21 | 47.5           | 44.5             | 29.5           | 25 | 6.4 | 6.4            |
| LQ3B32-M□ | ø8                     | 1/4"                     | 23.5 | 5   | 22.5 | 19.5 | 9   | 18  | 21 | 47.5           | 44.5             | 29.5           | 25 | 6.4 | 6.4            |
| LQ3B33-M□ | ø10                    | 1/4"                     | 23.5 | 5   | 22.5 | 19.5 | 9   | 18  | 21 | 47.5           | 44.5             | 29.5           | 25 | 6.4 | 6.4            |
| LQ3B34-M□ | ø8                     | 3/8"                     | 24   | 6   | 24   | 22   | 10  | 20  | 24 | 52.5           | 50.5             | 34             | 29 | 9.5 | 9.5            |
| LQ3B35-M□ | ø10                    | 3/8"                     | 24   | 6   | 24   | 22   | 10  | 20  | 24 | 52.5           | 50.5             | 34             | 29 | 9.5 | 9.5            |
| LQ3B36-M□ | ø8                     | 1/2"                     | 29   | 6   | 24.5 | 22.5 | 10  | 20  | 24 | 52.5           | 50.5             | 34             | 29 | 9.5 | 9.5            |
| LQ3B41-M□ | ø12                    | 1/4"                     | 27   | 6   | 24   | 22   | 10  | 20  | 24 | 52.5           | 50.5             | 34             | 29 | 9.5 | 9.5            |
| LQ3B42-M□ | ø12                    | 3/8"                     | 27.5 | 6   | 24   | 22   | 10  | 20  | 24 | 52.5           | 50.5             | 34             | 29 | 9.5 | 9.5            |
| LQ3B43-M□ | ø12                    | 1/2"                     | 29   | 6   | 24.5 | 22.5 | 10  | 20  | 24 | 52.5           | 50.5             | 34             | 29 | 9.5 | 9.5            |
| LQ3B51-M□ | ø19                    | 3/8"                     | 32.5 | 7   | 26.5 | 24   | 14  | 28  | 32 | 64             | 61.5             | 42             | 37 | 16  | 16             |
| LQ3B52-M□ | ø19                    | 1/2"                     | 34   | 7   | 26.5 | 24   | 14  | 28  | 32 | 64             | 61.5             | 42             | 37 | 16  | 16             |
| LQ3B53-M□ | ø19                    | 3/4"                     | 34.5 | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 52             | 49 | 22  | 22             |
| LQ3B61-M□ | ø25                    | 1/2"                     | 42   | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 52             | 49 | 22  | 22             |
| LQ3B62-M□ | ø25                    | 3/4"                     | 42.5 | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 52             | 49 | 22  | 22             |
| LQ3B63-M□ | ø25                    | 1"                       | 42.5 | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 52             | 49 | 22  | 22             |

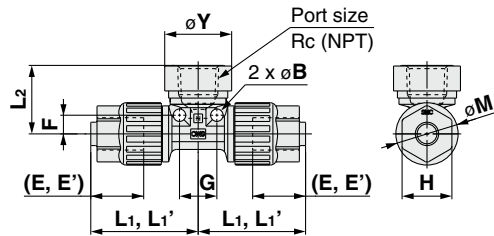
### Inch Size

| Model     | Applicable tubing O.D. | Connection threads R/NPT | A    | B   | E    | E'   | F   | G   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | N   | Min. port size |
|-----------|------------------------|--------------------------|------|-----|------|------|-----|-----|----|----------------|------------------|----------------|----|-----|----------------|
| LQ3B1A-M□ | 1/8"                   | 1/8"                     | 15   | 3.5 | 10   | 9    | 4.8 | 9.5 | 11 | 28.5           | 27.5             | 19             | 14 | 4   | 2              |
| LQ3B2A-M□ | 1/4"                   | 1/8"                     | 19.5 | 4   | 17   | 16   | 6   | 12  | 16 | 34.5           | 33.5             | 23.5           | 20 | 4   | 4              |
| LQ3B2B-M□ | 1/4"                   | 1/4"                     | 20.5 | 4   | 17   | 16   | 6   | 12  | 16 | 34.5           | 33.5             | 26.5           | 20 | 4   | 4              |
| LQ3B3A-M□ | 3/8"                   | 1/8"                     | 22.5 | 5   | 22.5 | 19.5 | 9   | 18  | 21 | 47.5           | 44.5             | 29.5           | 25 | 6.4 | 6.4            |
| LQ3B3B-M□ | 3/8"                   | 1/4"                     | 23.5 | 5   | 22.5 | 19.5 | 9   | 18  | 21 | 47.5           | 44.5             | 29.5           | 25 | 6.4 | 6.4            |
| LQ3B3C-M□ | 3/8"                   | 3/8"                     | 24   | 6   | 24   | 22   | 10  | 20  | 24 | 52.5           | 50.5             | 34             | 29 | 9.5 | 9.5            |
| LQ3B4A-M□ | 1/2"                   | 1/4"                     | 27   | 6   | 24   | 22   | 10  | 20  | 24 | 52.5           | 50.5             | 34             | 29 | 9.5 | 9.5            |
| LQ3B4B-M□ | 1/2"                   | 3/8"                     | 27.5 | 6   | 24.5 | 22.5 | 10  | 20  | 24 | 52.5           | 50.5             | 34             | 29 | 9.5 | 9.5            |
| LQ3B4C-M□ | 1/2"                   | 1/2"                     | 29   | 6   | 24.5 | 22.5 | 10  | 20  | 24 | 52.5           | 50.5             | 34             | 29 | 9.5 | 9.5            |
| LQ3B5A-M□ | 3/4"                   | 3/8"                     | 32.5 | 7   | 26.5 | 24   | 14  | 28  | 32 | 64             | 61.5             | 42             | 37 | 16  | 16             |
| LQ3B5B-M□ | 3/4"                   | 1/2"                     | 34   | 7   | 26.5 | 24   | 14  | 28  | 32 | 64             | 61.5             | 42             | 37 | 16  | 16             |
| LQ3B5C-M□ | 3/4"                   | 3/4"                     | 34.5 | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 52             | 49 | 22  | 22             |
| LQ3B6A-M□ | 1"                     | 1/2"                     | 42   | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 52             | 49 | 22  | 22             |
| LQ3B6B-M□ | 1"                     | 3/4"                     | 42.5 | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 52             | 49 | 22  | 22             |
| LQ3B6C-M□ | 1"                     | 1"                       | 42.5 | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 52             | 49 | 22  | 22             |

# LQ3 Series

## Dimensions

### Female branch tee: LQ3B-F



(E, E'): Reference dimension for the inserted tubing from the end surface of the nut  
(E'), L1': Nut material PVDF dimensions

### Metric Size

| Model     | Applicable tubing O.D. | Connection threads Rc/NPT | B   | E    | E'   | F   | G   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | Min. port size | Y    |
|-----------|------------------------|---------------------------|-----|------|------|-----|-----|----|----------------|------------------|----------------|----|----------------|------|
| LQ3B11-F□ | ø4                     | 1/8"                      | 3.5 | 10   | 9    | 4.8 | 9.5 | 11 | 28.5           | 27.5             | 19.5           | 14 | 2.5            | 18.5 |
| LQ3B12-F□ | ø3                     |                           |     |      |      |     |     |    |                |                  |                |    | 2              |      |
| LQ3B21-F□ | ø6                     | 1/8"                      | 4   | 17   | 16   | 6   | 12  | 16 | 34.5           | 33.5             | 20             | 20 | 4              | 18.5 |
| LQ3B22-F□ |                        | 1/4"                      |     |      |      |     |     |    |                |                  |                |    | 22             | 21.5 |
| LQ3B31-F□ | ø10                    | 1/8"                      |     |      |      |     |     |    |                |                  | 23             |    | 7.5            | 18.5 |
| LQ3B32-F□ | ø8                     |                           |     |      |      |     |     |    |                |                  |                |    | 6.4            |      |
| LQ3B33-F□ | ø10                    | 1/4"                      | 5   | 22.5 | 19.5 | 9   | 18  | 21 | 47.5           | 44.5             | 24             | 25 | 7.5            | 21.5 |
| LQ3B34-F□ | ø8                     |                           |     |      |      |     |     |    |                |                  |                |    | 6.4            |      |
| LQ3B35-F□ | ø10                    | 3/8"                      |     |      |      |     |     |    |                |                  | 25.5           |    | 7.5            | 25   |
| LQ3B36-F□ | ø8                     |                           |     |      |      |     |     |    |                |                  |                |    | 6.4            |      |
| LQ3B41-F□ | ø12                    | 1/4"                      | 6   | 24   | 22   | 10  | 20  | 24 | 52.5           | 50.5             | 26             | 29 | 9.5            | 21.5 |
| LQ3B42-F□ |                        | 3/8"                      |     |      |      |     |     |    |                |                  |                |    | 25             | 25   |
| LQ3B43-F□ |                        | 1/2"                      |     |      |      |     |     |    |                |                  |                |    | 30             | 29.5 |
| LQ3B51-F□ | ø19                    | 3/8"                      | 7   | 26.5 | 24   | 14  | 28  | 32 | 64             | 61.5             | 30.5           | 37 | 14             | 25   |
| LQ3B52-F□ |                        | 1/2"                      |     |      |      |     |     |    |                |                  |                |    | 16             | 29.5 |
| LQ3B53-F□ |                        | 3/4"                      |     |      |      |     |     |    |                |                  |                |    | 37             | 36   |
| LQ3B61-F□ | ø25                    | 1/2"                      | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 41             | 49 | 17.5           | 29.5 |
| LQ3B62-F□ |                        | 3/4"                      |     |      |      |     |     |    |                |                  |                |    | 22             | 36   |
| LQ3B63-F□ |                        | 1"                        |     |      |      |     |     |    |                |                  |                |    | 46             | 44.5 |

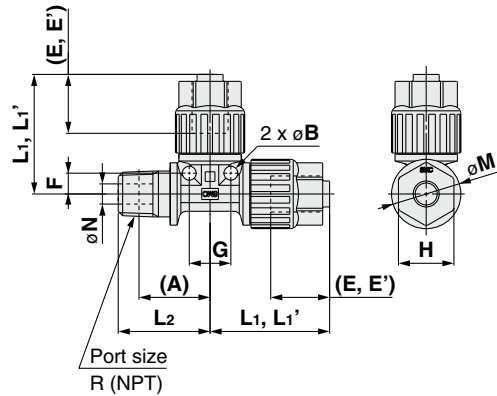
### Inch Size

| Model     | Applicable tubing O.D. | Connection threads Rc/NPT | B   | E    | E'   | F   | G   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | Min. port size | Y    |
|-----------|------------------------|---------------------------|-----|------|------|-----|-----|----|----------------|------------------|----------------|----|----------------|------|
| LQ3B1A-F□ | 1/8"                   | 1/8"                      | 3.5 | 10   | 9    | 4.8 | 9.5 | 11 | 28.5           | 27.5             | 19.5           | 14 | 2              | 18.5 |
| LQ3B2A-F□ | 1/4"                   | 1/8"                      | 4   | 17   | 16   | 6   | 12  | 16 | 34.5           | 33.5             | 20             | 20 | 4              | 18.5 |
| LQ3B2B-F□ |                        | 1/4"                      |     |      |      |     |     |    |                |                  |                |    | 4              | 21.5 |
| LQ3B3A-F□ | 3/8"                   | 1/8"                      | 5   | 22.5 | 19.5 | 9   | 18  | 21 | 47.5           | 44.5             | 23             | 25 | 6.4            | 18.5 |
| LQ3B3B-F□ |                        | 1/4"                      |     |      |      |     |     |    |                |                  |                |    | 6.4            | 21.5 |
| LQ3B3C-F□ |                        | 3/8"                      |     |      |      |     |     |    |                |                  |                |    | 25             | 25   |
| LQ3B4A-F□ | 1/2"                   | 1/4"                      | 6   | 24.5 | 22.5 | 10  | 20  | 24 | 52.5           | 50.5             | 23.5           | 29 | 9.5            | 21.5 |
| LQ3B4B-F□ |                        | 3/8"                      |     |      |      |     |     |    |                |                  |                |    | 25             | 25   |
| LQ3B4C-F□ |                        | 1/2"                      |     |      |      |     |     |    |                |                  |                |    | 30             | 29.5 |
| LQ3B5A-F□ | 3/4"                   | 3/8"                      | 7   | 26.5 | 24   | 14  | 28  | 32 | 64             | 61.5             | 30.5           | 37 | 14             | 25   |
| LQ3B5B-F□ |                        | 1/2"                      |     |      |      |     |     |    |                |                  |                |    | 16             | 29.5 |
| LQ3B5C-F□ |                        | 3/4"                      |     |      |      |     |     |    |                |                  |                |    | 37             | 36   |
| LQ3B6A-F□ | 1"                     | 1/2"                      | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 41             | 49 | 17.5           | 29.5 |
| LQ3B6B-F□ |                        | 3/4"                      |     |      |      |     |     |    |                |                  |                |    | 22             | 36   |
| LQ3B6C-F□ |                        | 1"                        |     |      |      |     |     |    |                |                  |                |    | 46             | 44.5 |



## Dimensions

### Male run tee: LQ3R-M



- (A): Reference dimension after installation  
(E,E'): Reference dimension for the inserted tubing from the end surface of the nut  
(E'),L': Nut material PVDF dimensions

### Metric Size

| Model     | Applicable tubing O.D. | Connection threads R/NPT | A    | B   | E    | E'   | F   | G   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | N   | Min. port size |     |  |  |  |  |      |    |            |
|-----------|------------------------|--------------------------|------|-----|------|------|-----|-----|----|----------------|------------------|----------------|----|-----|----------------|-----|--|--|--|--|------|----|------------|
| LQ3R11-M□ | ø4                     | 1/8"                     | 15   | 3.5 | 10   | 9    | 4.8 | 9.5 | 11 | 28.5           | 27.5             | 19             | 14 | 4   | 2.5<br>2       |     |  |  |  |  |      |    |            |
| LQ3R12-M□ | ø3                     |                          |      |     |      |      |     |     |    |                |                  |                |    |     |                |     |  |  |  |  |      |    |            |
| LQ3R21-M□ | ø6                     | 1/8"                     | 19.5 | 4   | 17   | 16   | 6   | 12  | 16 | 34.5           | 33.5             | 23.5           | 20 | 4   | 4              |     |  |  |  |  |      |    |            |
| LQ3R22-M□ |                        | 1/4"                     | 20.5 |     |      |      |     |     |    |                |                  | 26.5           |    | 6   |                |     |  |  |  |  |      |    |            |
| LQ3R31-M□ | ø10                    | 1/8"                     | 22.5 | 5   | 22.5 | 19.5 | 9   | 18  | 21 | 47.5           | 44.5             | 26.5           | 25 | 4   | 4              |     |  |  |  |  |      |    |            |
| LQ3R32-M□ | ø8                     |                          |      |     |      |      |     |     |    |                |                  |                |    |     |                |     |  |  |  |  |      |    |            |
| LQ3R33-M□ | ø10                    | 1/4"                     | 23.5 |     |      |      |     |     |    |                |                  | 29.5           |    | 25  | 6.4            | 6.4 |  |  |  |  |      |    |            |
| LQ3R34-M□ | ø8                     |                          |      |     |      |      |     |     |    |                |                  |                |    |     |                |     |  |  |  |  |      |    |            |
| LQ3R35-M□ | ø10                    | 3/8"                     | 24   |     |      |      |     |     |    |                |                  |                |    |     |                |     |  |  |  |  | 30.5 | 10 | 7.5<br>6.4 |
| LQ3R36-M□ | ø8                     |                          |      |     |      |      |     |     |    |                |                  |                |    |     |                |     |  |  |  |  |      |    |            |
| LQ3R41-M□ | ø12                    | 1/4"                     | 27   | 6   | 24   | 22   | 10  | 20  | 24 | 52.5           | 50.5             | 33             | 29 | 6   | 6              |     |  |  |  |  |      |    |            |
| LQ3R42-M□ |                        | 3/8"                     | 27.5 |     |      |      |     |     |    |                |                  | 34             |    | 9.5 | 9.5            |     |  |  |  |  |      |    |            |
| LQ3R43-M□ |                        | 1/2"                     | 29   |     |      |      |     |     |    |                |                  | 37             |    |     |                |     |  |  |  |  |      |    |            |
| LQ3R51-M□ | ø19                    | 3/8"                     | 32.5 | 7   | 26.5 | 24   | 14  | 28  | 32 | 64             | 61.5             | 39             | 37 | 10  | 10             |     |  |  |  |  |      |    |            |
| LQ3R52-M□ |                        | 1/2"                     | 34   |     |      |      |     |     |    |                |                  | 42             |    | 16  | 16             |     |  |  |  |  |      |    |            |
| LQ3R53-M□ |                        | 3/4"                     | 34.5 |     |      |      |     |     |    |                |                  | 44             |    |     |                |     |  |  |  |  |      |    |            |
| LQ3R61-M□ | ø25                    | 1/2"                     | 42   | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 50             | 49 | 10  | 10             |     |  |  |  |  |      |    |            |
| LQ3R62-M□ |                        | 3/4"                     | 42.5 |     |      |      |     |     |    |                |                  | 52             |    | 16  | 16             |     |  |  |  |  |      |    |            |
| LQ3R63-M□ |                        | 1"                       |      |     |      |      |     |     |    |                |                  |                |    |     |                |     |  |  |  |  | 53   | 22 | 22         |

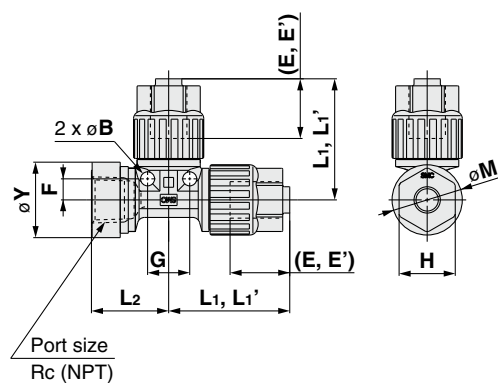
### Inch Size

| Model     | Applicable tubing O.D. | Connection threads R/NPT | A    | B   | E    | E'   | F   | G   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | N   | Min. port size |     |
|-----------|------------------------|--------------------------|------|-----|------|------|-----|-----|----|----------------|------------------|----------------|----|-----|----------------|-----|
| LQ3R1A-M□ | 1/8"                   | 1/8"                     | 15   | 3.5 | 10   | 9    | 4.8 | 9.5 | 11 | 28.5           | 27.5             | 19             | 14 | 4   | 2              |     |
| LQ3R2A-M□ | 1/4"                   | 1/8"                     | 19.5 | 4   | 17   | 16   | 6   | 12  | 16 | 34.5           | 33.5             | 23.5           | 20 | 4   | 4              |     |
| LQ3R2B-M□ |                        | 1/4"                     | 20.5 |     |      |      |     |     |    |                |                  | 26.5           |    | 6   |                |     |
| LQ3R3A-M□ | 3/8"                   | 1/8"                     | 22.5 | 5   | 22.5 | 19.5 | 9   | 18  | 21 | 47.5           | 44.5             | 26.5           | 25 | 4   | 4              |     |
| LQ3R3B-M□ |                        | 1/4"                     | 23.5 |     |      |      |     |     |    |                |                  | 29.5           |    | 6.4 |                |     |
| LQ3R3C-M□ |                        | 3/8"                     | 24   |     |      |      |     |     |    |                |                  | 30.5           |    | 10  |                | 6.4 |
| LQ3R4A-M□ | 1/2"                   | 1/4"                     | 27   | 6   | 24.5 | 22.5 | 10  | 20  | 24 | 52.5           | 50.5             | 33             | 29 | 6   | 6              |     |
| LQ3R4B-M□ |                        | 3/8"                     | 27.5 |     |      |      |     |     |    |                |                  | 34             |    | 9.5 |                | 9.5 |
| LQ3R4C-M□ |                        | 1/2"                     | 29   |     |      |      |     |     |    |                |                  | 37             |    |     |                |     |
| LQ3R5A-M□ | 3/4"                   | 3/8"                     | 32.5 | 7   | 26.5 | 24   | 14  | 28  | 32 | 64             | 61.5             | 39             | 37 | 10  | 10             |     |
| LQ3R5B-M□ |                        | 1/2"                     | 34   |     |      |      |     |     |    |                |                  | 42             |    | 16  |                | 16  |
| LQ3R5C-M□ |                        | 3/4"                     | 34.5 |     |      |      |     |     |    |                |                  | 44             |    |     |                |     |
| LQ3R6A-M□ | 1"                     | 1/2"                     | 42   | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 50             | 49 | 10  | 10             |     |
| LQ3R6B-M□ |                        | 3/4"                     | 42.5 |     |      |      |     |     |    |                |                  | 52             |    | 16  |                | 16  |
| LQ3R6C-M□ |                        | 1"                       |      |     |      |      |     |     |    |                |                  | 53             |    | 22  |                | 22  |

# LQ3 Series

## Dimensions

### Female run tee: LQ3R-F



(E,E'): Reference dimension for the inserted tubing from the end surface of the nut  
(E'),L1': Nut material PVDF dimensions

### Metric Size

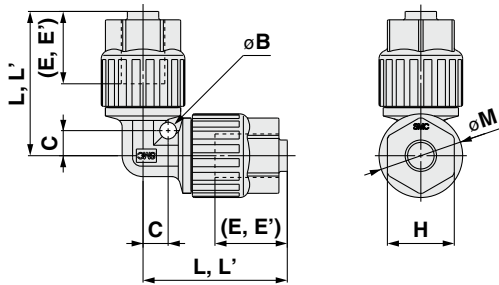
| Model     | Applicable tubing O.D. | Connection threads Rc/NPT | B   | E    | E'   | F   | G   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | Min. port size | Y    |
|-----------|------------------------|---------------------------|-----|------|------|-----|-----|----|----------------|------------------|----------------|----|----------------|------|
| LQ3R11-F□ | ø4                     | 1/8"                      | 3.5 | 10   | 9    | 4.8 | 9.5 | 11 | 28.5           | 27.5             | 19.5           | 14 | 2.5            | 18.5 |
| LQ3R12-F□ | ø3                     |                           |     |      |      |     |     |    |                |                  |                |    | 2              |      |
| LQ3R21-F□ | ø6                     | 1/8"                      | 4   | 17   | 16   | 6   | 12  | 16 | 34.5           | 33.5             | 20             | 20 | 4              | 18.5 |
| LQ3R22-F□ |                        | 1/4"                      |     |      |      |     |     |    |                |                  |                |    | 21.5           |      |
| LQ3R31-F□ | ø10                    | 1/8"                      |     |      |      |     |     |    |                |                  | 23             |    | 7.5            | 18.5 |
| LQ3R32-F□ | ø8                     |                           |     |      |      |     |     |    |                |                  |                |    | 6.4            |      |
| LQ3R33-F□ | ø10                    | 1/4"                      | 5   | 22.5 | 19.5 | 9   | 18  | 21 | 47.5           | 44.5             | 24             | 25 | 7.5            | 21.5 |
| LQ3R34-F□ | ø8                     |                           |     |      |      |     |     |    |                |                  |                |    | 6.4            |      |
| LQ3R35-F□ | ø10                    | 3/8"                      |     |      |      |     |     |    |                |                  | 25.5           |    | 7.5            | 25   |
| LQ3R36-F□ | ø8                     |                           |     |      |      |     |     |    |                |                  |                |    | 6.4            |      |
| LQ3R41-F□ | ø12                    | 1/4"                      | 6   | 24   | 22   | 10  | 20  | 24 | 52.5           | 50.5             | 26             | 29 | 9.5            | 21.5 |
| LQ3R42-F□ |                        | 3/8"                      |     |      |      |     |     |    |                |                  |                |    | 25             |      |
| LQ3R43-F□ |                        | 1/2"                      |     |      |      |     |     |    |                |                  |                |    | 29.5           |      |
| LQ3R51-F□ | ø19                    | 3/8"                      | 7   | 26.5 | 24   | 14  | 28  | 32 | 64             | 61.5             | 30.5           | 37 | 14             | 25   |
| LQ3R52-F□ |                        | 1/2"                      |     |      |      |     |     |    |                |                  |                |    | 16             | 29.5 |
| LQ3R53-F□ |                        | 3/4"                      |     |      |      |     |     |    |                |                  |                |    | 36             |      |
| LQ3R61-F□ | ø25                    | 1/2"                      | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 41             | 49 | 17.5           | 29.5 |
| LQ3R62-F□ |                        | 3/4"                      |     |      |      |     |     |    |                |                  |                |    | 22             | 36   |
| LQ3R63-F□ |                        | 1"                        |     |      |      |     |     |    |                |                  |                |    | 44.5           |      |

### Inch Size

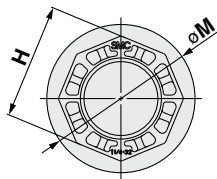
| Model     | Applicable tubing O.D. | Connection threads Rc/NPT | B   | E    | E'   | F   | G   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | Min. port size | Y    |
|-----------|------------------------|---------------------------|-----|------|------|-----|-----|----|----------------|------------------|----------------|----|----------------|------|
| LQ3R1A-F□ | 1/8"                   | 1/8"                      | 3.5 | 10   | 9    | 4.8 | 9.5 | 11 | 28.5           | 27.5             | 19.5           | 14 | 2              | 18.5 |
| LQ3R2A-F□ | 1/4"                   | 1/8"                      | 4   | 17   | 16   | 6   | 12  | 16 | 34.5           | 33.5             | 20             | 20 | 4              | 18.5 |
| LQ3R2B-F□ |                        | 1/4"                      |     |      |      |     |     |    |                |                  |                |    | 21.5           |      |
| LQ3R3A-F□ | 3/8"                   | 1/8"                      | 5   | 22.5 | 19.5 | 9   | 18  | 21 | 47.5           | 44.5             | 23             | 25 | 6.4            | 18.5 |
| LQ3R3B-F□ |                        | 1/4"                      |     |      |      |     |     |    |                |                  |                |    | 21.5           |      |
| LQ3R3C-F□ |                        | 3/8"                      |     |      |      |     |     |    |                |                  |                |    | 25             |      |
| LQ3R4A-F□ | 1/2"                   | 1/4"                      | 6   | 24.5 | 22.5 | 10  | 20  | 24 | 52.5           | 50.5             | 26             | 29 | 9.5            | 21.5 |
| LQ3R4B-F□ |                        | 3/8"                      |     |      |      |     |     |    |                |                  |                |    | 25             |      |
| LQ3R4C-F□ |                        | 1/2"                      |     |      |      |     |     |    |                |                  |                |    | 29.5           |      |
| LQ3R5A-F□ | 3/4"                   | 3/8"                      | 7   | 26.5 | 24   | 14  | 28  | 32 | 64             | 61.5             | 30.5           | 37 | 14             | 25   |
| LQ3R5B-F□ |                        | 1/2"                      |     |      |      |     |     |    |                |                  |                |    | 16             | 29.5 |
| LQ3R5C-F□ |                        | 3/4"                      |     |      |      |     |     |    |                |                  |                |    | 36             |      |
| LQ3R6A-F□ | 1"                     | 1/2"                      | 8   | 30   | 26   | 18  | 36  | 41 | 78             | 74               | 41             | 49 | 17.5           | 29.5 |
| LQ3R6B-F□ |                        | 3/4"                      |     |      |      |     |     |    |                |                  |                |    | 22             | 36   |
| LQ3R6C-F□ |                        | 1"                        |     |      |      |     |     |    |                |                  |                |    | 44.5           |      |

## Dimensions

### Union elbow: LQ3E



(E,E'): Reference dimension for the inserted tubing from the end surface of the nut  
(E'),L': Nut material PVDF dimensions



Class 7, 8

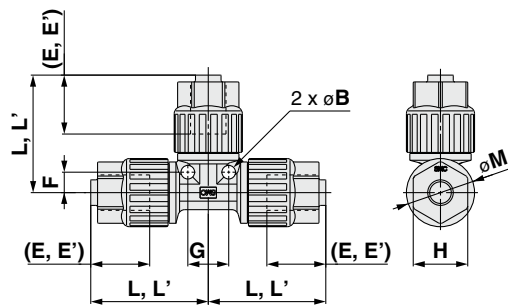
#### Metric Size

| Model  | Applicable tubing O.D. | B   | C   | E    | E'   | H  | L    | L'   | M  | Min. port size |
|--------|------------------------|-----|-----|------|------|----|------|------|----|----------------|
| LQ3E11 | ø4                     | 3.5 | 4.8 | 10   | 9    | 11 | 28.5 | 27.5 | 14 | 2.5            |
| LQ3E12 | ø3                     |     |     |      |      |    |      |      |    | 2              |
| LQ3E21 | ø6                     | 4   | 6   | 17   | 16   | 16 | 34.5 | 33.5 | 20 | 4              |
| LQ3E31 | ø10                    | 5   | 9   | 22.5 | 19.5 | 21 | 47.5 | 44.5 | 25 | 7.5            |
| LQ3E32 | ø8                     |     |     |      |      |    |      |      |    | 6.4            |
| LQ3E41 | ø12                    | 6   | 10  | 24   | 22   | 24 | 52.5 | 50.5 | 29 | 9.5            |
| LQ3E51 | ø19                    | 7   | 14  | 26.5 | 24   | 32 | 64   | 61.5 | 37 | 16             |
| LQ3E61 | ø25                    | 8   | 18  | 30   | 26   | 41 | 78   | 74   | 49 | 22             |

#### Inch Size

| Model  | Applicable tubing O.D. | B   | C    | E    | E'   | H  | L     | L'   | M  | Min. port size |
|--------|------------------------|-----|------|------|------|----|-------|------|----|----------------|
| LQ3E1A | 1/8"                   | 3.5 | 4.8  | 10   | 9    | 11 | 28.5  | 27.5 | 14 | 2              |
| LQ3E2A | 1/4"                   | 4   | 6    | 17   | 16   | 16 | 34.5  | 33.5 | 20 | 4              |
| LQ3E3A | 3/8"                   | 5   | 9    | 22.5 | 19.5 | 21 | 47.5  | 44.5 | 25 | 6.4            |
| LQ3E4A | 1/2"                   | 6   | 10   | 24.5 | 22.5 | 24 | 52.5  | 50.5 | 29 | 9.5            |
| LQ3E5A | 3/4"                   | 7   | 14   | 26.5 | 24   | 32 | 64    | 61.5 | 37 | 16             |
| LQ3E6A | 1"                     | 8   | 18   | 30   | 26   | 41 | 78    | 74   | 49 | 22             |
| LQ3E7A | 1 1/4"                 | 9   | 22   | 35   | 35   | 50 | 92.5  | 92.5 | 64 | 28             |
| LQ3E8A | 1 1/2"                 | 11  | 28.5 | 39   | —    | 60 | 100.5 | —    | 77 | 36             |

### Union tee: LQ3T



(E,E'): Reference dimension for the inserted tubing from the end surface of the nut  
(E'),L': Nut material PVDF dimensions

#### Metric Size

| Model  | Applicable tubing O.D. | B   | E    | E'   | F   | G   | H  | L    | L'   | M  | Min. port size |
|--------|------------------------|-----|------|------|-----|-----|----|------|------|----|----------------|
| LQ3T11 | ø4                     | 3.5 | 10   | 9    | 4.8 | 9.5 | 11 | 28.5 | 27.5 | 14 | 2.5            |
| LQ3T12 | ø3                     |     |      |      |     |     |    |      |      |    | 2              |
| LQ3T21 | ø6                     | 4   | 17   | 16   | 6   | 12  | 16 | 34.5 | 33.5 | 20 | 4              |
| LQ3T31 | ø10                    | 5   | 22.5 | 19.5 | 9   | 18  | 21 | 47.5 | 44.5 | 25 | 7.5            |
| LQ3T32 | ø8                     |     |      |      |     |     |    |      |      |    | 6.4            |
| LQ3T41 | ø12                    | 6   | 24   | 22   | 10  | 20  | 24 | 52.5 | 50.5 | 29 | 9.5            |
| LQ3T51 | ø19                    | 7   | 26.5 | 24   | 14  | 28  | 32 | 64   | 61.5 | 37 | 16             |
| LQ3T61 | ø25                    | 8   | 30   | 26   | 18  | 36  | 41 | 78   | 74   | 49 | 22             |

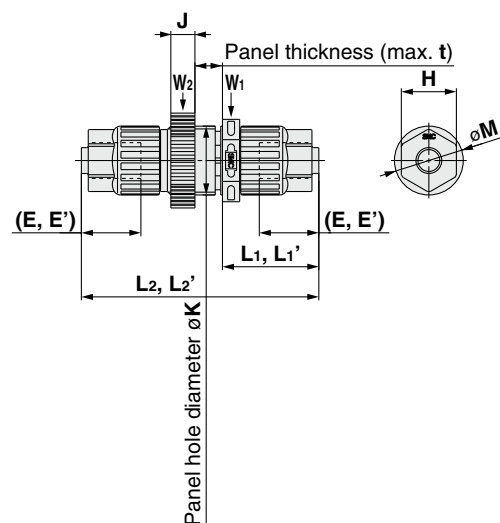
#### Inch Size

| Model  | Applicable tubing O.D. | B   | E    | E'   | F    | G   | H  | L     | L'   | M  | Min. port size |
|--------|------------------------|-----|------|------|------|-----|----|-------|------|----|----------------|
| LQ3T1A | 1/8"                   | 3.5 | 10   | 9    | 4.8  | 9.5 | 11 | 28.5  | 27.5 | 14 | 2              |
| LQ3T2A | 1/4"                   | 4   | 17   | 16   | 6    | 12  | 16 | 34.5  | 33.5 | 20 | 4              |
| LQ3T3A | 3/8"                   | 5   | 22.5 | 19.5 | 9    | 18  | 21 | 47.5  | 44.5 | 25 | 6.4            |
| LQ3T4A | 1/2"                   | 6   | 24.5 | 22.5 | 10   | 20  | 24 | 52.5  | 50.5 | 29 | 9.5            |
| LQ3T5A | 3/4"                   | 7   | 26.5 | 24   | 14   | 28  | 32 | 64    | 61.5 | 37 | 16             |
| LQ3T6A | 1"                     | 8   | 30   | 26   | 18   | 36  | 41 | 78    | 74   | 49 | 22             |
| LQ3T7A | 1 1/4"                 | 9   | 35   | 35   | 22   | 44  | 50 | 92.5  | 92.5 | 64 | 28             |
| LQ3T8A | 1 1/2"                 | 11  | 39   | —    | 28.5 | 57  | 60 | 100.5 | —    | 77 | 36             |

# LQ3 Series

## Dimensions

### Panel mount union: LQ3P



(E,E'): Reference dimension for the inserted tubing from the end surface of the nut  
 (E'),L<sub>1</sub>',L<sub>2</sub>': Nut material PVDF dimensions  
 W: Width across flats dimension

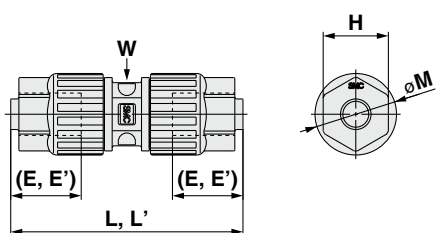
### Metric Size

| Model  | Applicable tubing O.D. | E    | E'   | H  | J  | K    | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | L <sub>2</sub> ' | M  | Min. port size | t  | W <sub>1</sub> | W <sub>2</sub> |
|--------|------------------------|------|------|----|----|------|----------------|------------------|----------------|------------------|----|----------------|----|----------------|----------------|
| LQ3P11 | ø4                     | 10   | 9    | 11 | 6  | 14.5 | 23.5           | 22.5             | 58             | 56               | 14 | 2.5            | 8  | 16             | 17             |
| LQ3P12 | ø3                     |      |      |    |    |      |                |                  |                |                  |    | 2              |    |                |                |
| LQ3P21 | ø6                     | 17   | 16   | 16 | 7  | 20.5 | 28             | 27               | 69             | 67               | 20 | 4              | 8  | 21             | 24             |
| LQ3P31 | ø10                    | 22.5 | 19.5 | 21 | 7  | 24.5 | 39             | 36               | 89             | 83               | 25 | 7.5            | 8  | 26             | 28             |
| LQ3P32 | ø8                     |      |      |    |    |      |                |                  |                |                  |    | 6.4            |    |                |                |
| LQ3P41 | ø12                    | 24   | 22   | 24 | 9  | 30.5 | 44.5           | 42.5             | 100            | 96               | 29 | 9.5            | 8  | 32             | 36             |
| LQ3P51 | ø19                    | 26.5 | 24   | 32 | 9  | 36.5 | 50.5           | 48               | 117            | 112              | 37 | 16             | 13 | 41             | 43             |
| LQ3P61 | ø25                    | 30   | 26   | 41 | 10 | 48.5 | 60             | 56               | 136            | 127.5            | 49 | 22             | 13 | 50             | 55             |

### Inch Size

| Model  | Applicable tubing O.D. | E    | E'   | H  | J  | K    | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | L <sub>2</sub> ' | M  | Min. port size | t  | W <sub>1</sub> | W <sub>2</sub> |
|--------|------------------------|------|------|----|----|------|----------------|------------------|----------------|------------------|----|----------------|----|----------------|----------------|
| LQ3P1A | 1/8"                   | 10   | 9    | 11 | 6  | 14.5 | 23.5           | 22.5             | 58             | 56               | 14 | 2              | 8  | 16             | 17             |
| LQ3P2A | 1/4"                   | 17   | 16   | 16 | 7  | 20.5 | 28             | 27               | 69             | 67               | 20 | 4              | 8  | 21             | 24             |
| LQ3P3A | 3/8"                   | 22.5 | 19.5 | 21 | 7  | 24.5 | 39             | 36               | 89             | 83               | 25 | 6.4            | 8  | 26             | 28             |
| LQ3P4A | 1/2"                   | 24.5 | 22.5 | 24 | 9  | 30.5 | 44.5           | 42.5             | 100            | 96               | 29 | 9.5            | 8  | 32             | 36             |
| LQ3P5A | 3/4"                   | 26.5 | 24   | 32 | 9  | 36.5 | 50.5           | 48               | 117            | 112              | 37 | 16             | 13 | 41             | 43             |
| LQ3P6A | 1"                     | 30   | 26   | 41 | 10 | 48.5 | 60             | 56               | 136            | 127.5            | 49 | 22             | 13 | 50             | 55             |

### Union: LQ3U



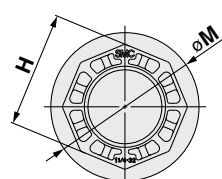
(E,E'): Reference dimension for the inserted tubing from the end surface of the nut  
 (E'),L: Nut material PVDF dimensions  
 W: Width across flats dimension

### Metric Size

| Model  | Applicable tubing O.D. | E    | E'   | H  | L    | L'    | M  | Min. port size | W  |
|--------|------------------------|------|------|----|------|-------|----|----------------|----|
| LQ3U11 | ø4                     | 10   | 9    | 11 | 46.5 | 44.5  | 14 | 2.5            | 10 |
| LQ3U12 | ø3                     |      |      |    |      |       |    | 2              |    |
| LQ3U21 | ø6                     | 17   | 16   | 16 | 57   | 55    | 20 | 4              | 14 |
| LQ3U31 | ø10                    | 22.5 | 19.5 | 21 | 79   | 73    | 25 | 7.5            | 18 |
| LQ3U32 | ø8                     |      |      |    |      |       |    | 6.4            |    |
| LQ3U41 | ø12                    | 24   | 22   | 24 | 88   | 84    | 29 | 9.5            | 22 |
| LQ3U51 | ø19                    | 26.5 | 24   | 32 | 103  | 98    | 37 | 16             | 30 |
| LQ3U61 | ø25                    | 30   | 26   | 41 | 122  | 113.5 | 49 | 22             | 36 |

### Inch Size

| Model  | Applicable tubing O.D. | E    | E'   | H  | L    | L'    | M  | Min. port size | W  |
|--------|------------------------|------|------|----|------|-------|----|----------------|----|
| LQ3U1A | 1/8"                   | 10   | 9    | 11 | 46.5 | 44.5  | 14 | 2              | 10 |
| LQ3U2A | 1/4"                   | 17   | 16   | 16 | 57   | 55    | 20 | 4              | 14 |
| LQ3U3A | 3/8"                   | 22.5 | 19.5 | 21 | 79   | 73    | 25 | 6.4            | 18 |
| LQ3U4A | 1/2"                   | 24.5 | 22.5 | 24 | 88   | 84    | 29 | 9.5            | 22 |
| LQ3U5A | 3/4"                   | 26.5 | 24   | 32 | 103  | 98    | 37 | 16             | 30 |
| LQ3U6A | 1"                     | 30   | 26   | 41 | 122  | 113.5 | 49 | 22             | 36 |
| LQ3U7A | 1 1/4"                 | 35   | 35   | 50 | 142  | 142   | 64 | 28.5           | 46 |
| LQ3U8A | 1 1/2"                 | 39   | —    | 60 | 152  | —     | 77 | 36             | 55 |



Class 7, 8

# LQ3 Series Union Reducing

## How to Order

**Tubing connection**

**LQ3 U 2 1 - R1 -**

**Fitting type**

| Symbol | Type  |
|--------|-------|
| U      | Union |

**Body size (according to the combination table)**

**Tubing type**

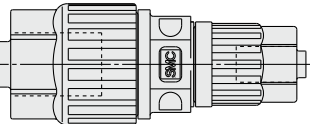
| Symbol | Type   |
|--------|--------|
| A      | Inch   |
| 1, 2   | Metric |

**Nut material, packaging**

| Symbol | Nut material | Packaging                                    |
|--------|--------------|----------------------------------------------|
| Nil    | PFA          | Clean packaging equivalent to ISO Class 5    |
| 1      | PFA          | Standard packaging equivalent to ISO Class 7 |
| 2      | PVDF         | Clean packaging equivalent to ISO Class 5    |
| 3      | PVDF         | Standard packaging equivalent to ISO Class 7 |

**Type of piping (according to the combination table)**

| Symbol | Type     |
|--------|----------|
| R□     | Reducing |



### Size combination (Metric)

| Size | Model     | A side<br>Applicable tubing size (mm) | B side<br>Applicable tubing size (mm) |
|------|-----------|---------------------------------------|---------------------------------------|
| 1    | LQ3U11-R1 | 4 x 3                                 | 3 x 2                                 |
| 2    | LQ3U21-R1 | 6 x 4                                 | 4 x 3                                 |
|      | LQ3U21-R2 |                                       | 3 x 2                                 |
| 3    | LQ3U31-R1 | 10 x 8                                | 8 x 6                                 |
|      | LQ3U31-R2 |                                       | 6 x 4                                 |
|      | LQ3U32-R1 | 8 x 6                                 | 6 x 4                                 |
|      | LQ3U32-R2 |                                       | 4 x 3                                 |
| 4    | LQ3U41-R1 | 12 x 10                               | 10 x 8                                |
|      | LQ3U41-R2 |                                       | 8 x 6                                 |
| 5    | LQ3U51-R1 | 19 x 16                               | 12 x 10                               |
|      | LQ3U51-R2 |                                       | 10 x 8                                |
| 6    | LQ3U61-R1 | 25 x 22                               | 19 x 16                               |
|      | LQ3U61-R2 |                                       | 12 x 10                               |

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

### Size combination (Inch)

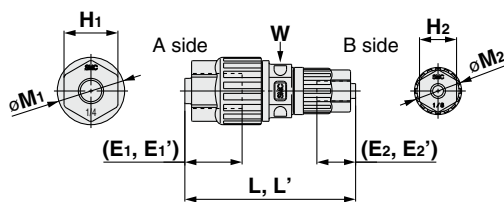
| Size | Model     | A side<br>Applicable tubing size (inch) | B side<br>Applicable tubing size (inch) |
|------|-----------|-----------------------------------------|-----------------------------------------|
| 2    | LQ3U2A-R1 | 1/4" x 5/32"                            | 1/8" x 0.086"                           |
| 3    | LQ3U3A-R1 | 3/8" x 1/4"                             | 1/4" x 5/32"                            |
|      | LQ3U3A-R2 |                                         | 1/8" x 0.086"                           |
| 4    | LQ3U4A-R1 | 1/2" x 3/8"                             | 3/8" x 1/4"                             |
|      | LQ3U4A-R2 |                                         | 1/4" x 5/32"                            |
| 5    | LQ3U5A-R1 | 3/4" x 5/8"                             | 1/2" x 3/8"                             |
|      | LQ3U5A-R2 |                                         | 3/8" x 1/4"                             |
|      | LQ3U5A-R3 |                                         | 1/4" x 5/32"                            |
| 6    | LQ3U6A-R1 | 1" x 7/8"                               | 3/4" x 5/8"                             |
|      | LQ3U6A-R2 |                                         | 1/2" x 3/8"                             |
| 7    | LQ3U7A-R1 | 1 1/4" x 1.1"                           | 1" x 7/8"                               |

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

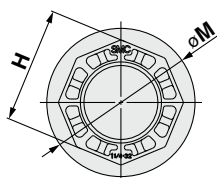
## Dimensions

### Union reducing: LQ3U-R



(E1, E1', E2, E2'): Reference dimension for the inserted tubing from the end surface of the nut

(E1', E2'), L': Nut material PVDF dimensions



Class 7

### Metric Size

| Model     | A side<br>Applicable tubing O.D. | B side<br>Applicable tubing O.D. | E1   | E1'  | E2   | E2'  | H1 | H2 | L     | L'    | M1 | M2 | Min. port size | W  |
|-----------|----------------------------------|----------------------------------|------|------|------|------|----|----|-------|-------|----|----|----------------|----|
| LQ3U11-R1 | ø4                               | ø3                               | 10   | 9    | 10   | 9    | 11 | 11 | 46.5  | 44.5  | 14 | 14 | 2              | 10 |
| LQ3U21-R1 | ø6                               | ø4                               | 17   | 16   | 10   | 9    | 16 | 11 | 51    | 48.5  | 20 | 14 | 2.5            | 14 |
| LQ3U21-R2 |                                  | ø3                               |      |      |      |      |    |    |       |       |    |    |                |    |
| LQ3U31-R1 | ø10                              | ø8                               | 22.5 | 19.5 | 22.5 | 19.5 | 21 | 21 | 79    | 73    | 25 | 25 | 6.4            | 18 |
| LQ3U31-R2 |                                  | ø6                               |      |      | 17   | 16   |    | 16 | 66.5  | 62    |    | 20 | 4              |    |
| LQ3U32-R1 | ø8                               | ø6                               | 22.5 | 19.5 | 17   | 16   | 21 | 16 | 66.5  | 62    | 25 | 20 | 2.5            | 18 |
| LQ3U32-R2 |                                  | ø4                               |      |      | 10   | 9    |    | 11 | 62    | 58    |    | 14 |                |    |
| LQ3U41-R1 | ø12                              | ø10                              | 24   | 22   | 22.5 | 19.5 | 24 | 21 | 82.5  | 77    | 29 | 25 | 7.5            | 22 |
| LQ3U41-R2 |                                  | ø8                               |      |      |      |      |    |    |       |       |    | 20 | 6.4            |    |
| LQ3U51-R1 | ø19                              | ø12                              | 26.5 | 24   | 24   | 22   | 32 | 24 | 95.5  | 91    | 37 | 29 | 9.5            | 30 |
| LQ3U51-R2 |                                  | ø10                              |      |      | 22.5 | 19.5 |    | 21 | 91    | 85.5  |    | 25 | 7.5            |    |
| LQ3U61-R1 | ø25                              | ø19                              | 30   | 26   | 26.5 | 24   | 41 | 32 | 112.5 | 105.5 | 49 | 37 | 16             | 36 |
| LQ3U61-R2 |                                  | ø12                              |      |      | 24   | 22   |    | 24 | 106.5 | 100   |    | 29 | 9.5            |    |

### Inch Size

| Model     | A side<br>Applicable tubing O.D. | B side<br>Applicable tubing O.D. | E1   | E1'  | E2   | E2'  | H1 | H2 | L     | L'    | M1 | M2 | Min. port size | W  |
|-----------|----------------------------------|----------------------------------|------|------|------|------|----|----|-------|-------|----|----|----------------|----|
| LQ3U2A-R1 | 1/4"                             | 1/8"                             | 17   | 16   | 10   | 9    | 16 | 11 | 51    | 48.5  | 20 | 14 | 2              | 14 |
| LQ3U3A-R1 | 3/8"                             | 1/4"                             | 22.5 | 19.5 | 17   | 16   | 21 | 16 | 66.5  | 62    | 25 | 20 | 4              | 18 |
| LQ3U3A-R2 |                                  | 1/8"                             |      |      | 10   | 9    |    | 11 | 62    | 58    |    | 14 | 2              |    |
| LQ3U4A-R1 | 1/2"                             | 3/8"                             | 24.5 | 22.5 | 22.5 | 19.5 | 24 | 21 | 82.5  | 77    | 29 | 25 | 6.4            | 22 |
| LQ3U4A-R2 |                                  | 1/4"                             |      |      | 17   | 16   |    | 16 | 72.5  | 69    |    | 20 | 4              |    |
| LQ3U5A-R1 | 3/4"                             | 1/2"                             | 26.5 | 24   | 24.5 | 22.5 | 32 | 24 | 95.5  | 91    | 37 | 29 | 9.5            | 30 |
| LQ3U5A-R2 |                                  | 3/8"                             |      |      | 22.5 | 19.5 |    | 21 | 91    | 85.5  |    | 25 | 6.4            |    |
| LQ3U5A-R3 | 1"                               | 1/4"                             | 30   | 26   | 17   | 16   | 41 | 16 | 81    | 77    | 49 | 20 | 4              | 36 |
| LQ3U6A-R1 |                                  | 3/4"                             |      |      | 26.5 | 24   |    | 32 | 112.5 | 105.5 |    | 37 | 16             |    |
| LQ3U6A-R2 | 1 1/4"                           | 1/2"                             | 35   | 35   | 24.5 | 22.5 | 50 | 24 | 106.5 | 100   | 64 | 29 | 9.5            | 46 |
| LQ3U7A-R1 |                                  | 1"                               |      |      | 30   | 26   |    | 41 | 132.5 | 128.2 |    | 49 | 22             |    |

## LQ3 Series

# Union Elbow Reducing

### How to Order

**Tubing connection**

**LQ3 E 2 1 - R1 -**

**Fitting type**

| Symbol | Type        |
|--------|-------------|
| E      | Union elbow |

**Body size (according to the combination table)**

**Tubing type**

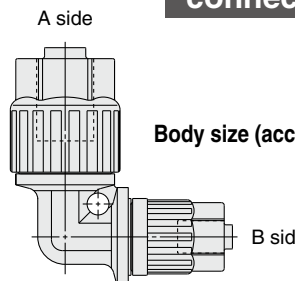
| Symbol | Type   |
|--------|--------|
| A      | Inch   |
| 1, 2   | Metric |

**Nut material, packaging**

| Symbol | Nut material | Packaging                                    |
|--------|--------------|----------------------------------------------|
| Nil    | PFA          | Clean packaging equivalent to ISO Class 5    |
| 1      | PFA          | Standard packaging equivalent to ISO Class 7 |
| 2      | PVDF         | Clean packaging equivalent to ISO Class 5    |
| 3      | PVDF         | Standard packaging equivalent to ISO Class 7 |

**Type of piping (according to the combination table)**

| Symbol | Type     |
|--------|----------|
| R□     | Reducing |



#### Size combination (Metric)

| Size | Model     | A side<br>Applicable tubing size (mm) | B side<br>Applicable tubing size (mm) |
|------|-----------|---------------------------------------|---------------------------------------|
| 1    | LQ3E11-R1 | 4 x 3                                 | 3 x 2                                 |
| 2    | LQ3E21-R1 | 6 x 4                                 | 4 x 3                                 |
|      | LQ3E21-R2 |                                       | 3 x 2                                 |
| 3    | LQ3E31-R1 | 10 x 8                                | 8 x 6                                 |
|      | LQ3E31-R2 |                                       | 6 x 4                                 |
|      | LQ3E32-R1 | 8 x 6                                 | 6 x 4                                 |
|      | LQ3E32-R2 |                                       | 4 x 3                                 |
| 4    | LQ3E41-R1 | 12 x 10                               | 10 x 8                                |
|      | LQ3E41-R2 |                                       | 8 x 6                                 |
| 5    | LQ3E51-R1 | 19 x 16                               | 12 x 10                               |
|      | LQ3E51-R2 |                                       | 10 x 8                                |
| 6    | LQ3E61-R1 | 25 x 22                               | 19 x 16                               |
|      | LQ3E61-R2 |                                       | 12 x 10                               |

#### Size combination (Inch)

| Size | Model     | A side<br>Applicable tubing size (inch) | B side<br>Applicable tubing size (inch) |
|------|-----------|-----------------------------------------|-----------------------------------------|
| 2    | LQ3E2A-R1 | 1/4" x 5/32"                            | 1/8" x 0.086"                           |
| 3    | LQ3E3A-R1 | 3/8" x 1/4"                             | 1/4" x 5/32"                            |
|      | LQ3E3A-R2 |                                         | 1/8" x 0.086"                           |
| 4    | LQ3E4A-R1 | 1/2" x 3/8"                             | 3/8" x 1/4"                             |
|      | LQ3E4A-R2 |                                         | 1/4" x 5/32"                            |
| 5    | LQ3E5A-R1 | 3/4" x 5/8"                             | 1/2" x 3/8"                             |
|      | LQ3E5A-R2 |                                         | 3/8" x 1/4"                             |
|      | LQ3E5A-R3 |                                         | 1/4" x 5/32"                            |
| 6    | LQ3E6A-R1 | 1" x 7/8"                               | 3/4" x 5/8"                             |
|      | LQ3E6A-R2 |                                         | 1/2" x 3/8"                             |

Note 1) For details of the applicable tubing sizes, refer to page 309.

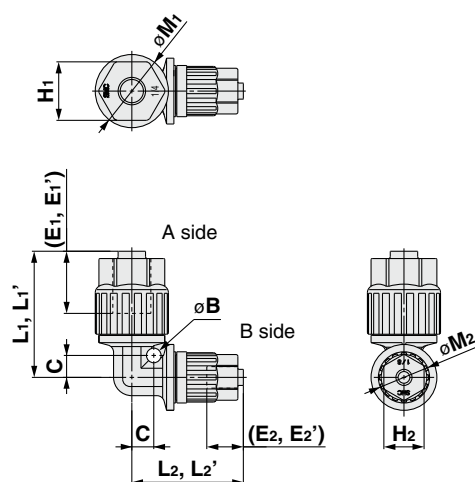
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

### Dimensions

#### Union elbow reducing: LQ3E-R



(E1, E1', E2, E2'): Reference dimension for the inserted tubing from the end surface of the nut  
(E1', E2'), L1', L2': Nut material PVDF dimensions

#### Metric Size

| Model     | A side<br>Applicable tubing O.D. | B side<br>Applicable tubing O.D. | B   | C   | E1   | E1'  | E2   | E2'  | H1 | H2 | L1   | L1'  | L2   | L2'  | M1 | M2 | Min.<br>port size |
|-----------|----------------------------------|----------------------------------|-----|-----|------|------|------|------|----|----|------|------|------|------|----|----|-------------------|
| LQ3E11-R1 | ø4                               | ø3                               | 3.5 | 4.8 | 10   | 9    | 10   | 9    | 11 | 11 | 28.5 | 27.5 | 28.5 | 27.5 | 14 | 14 | 2                 |
| LQ3E21-R1 | ø6                               | ø4                               | 4   | 6   | 17   | 16   | 10   | 9    | 16 | 11 | 34.5 | 33.5 | 30.5 | 29.5 | 20 | 14 | 2.5               |
| LQ3E21-R2 | ø6                               | ø3                               |     |     |      |      |      |      |    |    |      |      |      |      |    |    | 2                 |
| LQ3E31-R1 | ø10                              | ø8                               | 5   | 9   | 22.5 | 19.5 | 22.5 | 19.5 | 21 | 21 | 47.5 | 44.5 | 47.5 | 44.5 | 25 | 25 | 6.4               |
| LQ3E31-R2 | ø10                              | ø6                               |     |     |      |      | 17   | 16   |    | 16 | 47.5 | 44.5 | 38   | 37   | 20 | 20 | 4                 |
| LQ3E32-R1 | ø8                               | ø6                               | 5   | 9   | 22.5 | 19.5 | 17   | 16   | 21 | 16 | 47.5 | 44.5 | 38   | 37   | 25 | 20 | 2.5               |
| LQ3E32-R2 | ø8                               | ø4                               |     |     |      |      | 10   | 9    |    | 11 |      |      | 33.5 | 32.5 | 14 | 14 | 2.5               |
| LQ3E41-R1 | ø12                              | ø10                              | 6   | 10  | 24   | 22   | 22.5 | 19.5 | 24 | 21 | 52.5 | 50.5 | 48.5 | 45.5 | 29 | 25 | 7.5               |
| LQ3E41-R2 | ø12                              | ø8                               |     |     |      |      |      |      |    |    |      |      |      |      |    |    | 6.4               |
| LQ3E51-R1 | ø19                              | ø12                              | 7   | 14  | 26.5 | 24   | 24   | 22   | 32 | 24 | 64   | 61.5 | 58.5 | 56.5 | 37 | 29 | 9.5               |
| LQ3E51-R2 | ø19                              | ø10                              |     |     |      |      | 22.5 | 19.5 |    | 21 |      | 61.5 | 53.5 | 50.5 | 25 | 25 | 7.5               |
| LQ3E61-R1 | ø25                              | ø19                              | 8   | 18  | 30   | 26   | 26.5 | 24   | 41 | 32 | 78   | 74   | 70   | 67.5 | 49 | 37 | 16                |
| LQ3E61-R2 | ø25                              | ø12                              |     |     |      |      | 24   | 22   |    | 24 |      | 74   | 64.5 | 62.5 | 29 | 29 | 9.5               |

#### Inch Size

| Model     | A side<br>Applicable tubing O.D. | B side<br>Applicable tubing O.D. | B | C  | E1   | E1'  | E2   | E2'  | H1 | H2 | L1   | L1'  | L2   | L2'  | M1 | M2 | Min.<br>port size |
|-----------|----------------------------------|----------------------------------|---|----|------|------|------|------|----|----|------|------|------|------|----|----|-------------------|
| LQ3E2A-R1 | 1/4"                             | 1/8"                             | 4 | 6  | 17   | 16   | 10   | 9    | 16 | 11 | 34.5 | 33.5 | 30.5 | 29.5 | 20 | 14 | 2                 |
| LQ3E3A-R1 | 3/8"                             | 1/4"                             | 5 | 9  | 22.5 | 19.5 | 17   | 16   | 21 | 16 | 47.5 | 44.5 | 38   | 37   | 25 | 20 | 4                 |
| LQ3E3A-R2 | 3/8"                             | 1/8"                             |   |    |      |      | 10   | 9    |    | 11 |      |      | 33.5 | 32.5 | 14 | 14 | 2                 |
| LQ3E4A-R1 | 1/2"                             | 3/8"                             | 6 | 10 | 24.5 | 22.5 | 22.5 | 19.5 | 24 | 21 | 52.5 | 50.5 | 48.5 | 45.5 | 29 | 25 | 6.4               |
| LQ3E4A-R2 | 1/2"                             | 1/4"                             |   |    |      |      | 17   | 16   |    | 16 |      |      | 39   | 38   | 20 | 20 | 4                 |
| LQ3E5A-R1 | 3/4"                             | 1/2"                             | 7 | 14 | 26.5 | 24   | 24.5 | 22.5 | 32 | 24 | 64   | 61.5 | 58.5 | 56.5 | 37 | 29 | 9.5               |
| LQ3E5A-R2 | 3/4"                             | 3/8"                             |   |    |      |      | 22.5 | 19.5 |    | 21 |      | 61.5 | 53.5 | 50.5 | 25 | 25 | 6.4               |
| LQ3E5A-R3 | 3/4"                             | 1/4"                             |   |    |      |      | 17   | 16   |    | 16 |      |      | 43.5 | 42.5 | 20 | 20 | 4                 |
| LQ3E6A-R1 | 1"                               | 3/4"                             | 8 | 18 | 30   | 26   | 26.5 | 24   | 41 | 32 | 78   | 74   | 70   | 67.5 | 49 | 37 | 16                |
| LQ3E6A-R2 | 1"                               | 1/2"                             |   |    |      |      | 24.5 | 22.5 |    | 24 |      | 74   | 64.5 | 62.5 | 29 | 29 | 9.5               |



# LQ3 Series

## Union Tee Reducing

### How to Order

#### Tubing connection

**LQ3 T 2 A - R1 -**

#### Fitting type

| Symbol | Type      |
|--------|-----------|
| T      | Union tee |

#### Body size

(according to the combination table)

#### Tubing type

| Symbol | Type   |
|--------|--------|
| A      | Inch   |
| 1, 2   | Metric |

#### Nut material, packaging

| Symbol | Nut material | Packaging                                    |
|--------|--------------|----------------------------------------------|
| Nil    | PFA          | Clean packaging equivalent to ISO Class 5    |
| 1      | PFA          | Standard packaging equivalent to ISO Class 7 |
| 2      | PVDF         | Clean packaging equivalent to ISO Class 5    |
| 3      | PVDF         | Standard packaging equivalent to ISO Class 7 |

#### Type of piping (according to the combination table)

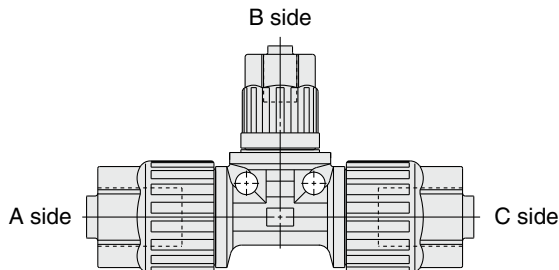
| Symbol | Type     |
|--------|----------|
| R□     | Reducing |

#### Size combination (Metric)

| Size                        | Model     | A side (Left) | B side (Center) | C side (Right) |
|-----------------------------|-----------|---------------|-----------------|----------------|
| Applicable tubing size (mm) |           |               |                 |                |
| 1                           | LQ3T11-R1 | 4 x 3         | 3 x 2           | 4 x 3          |
|                             | LQ3T11-R5 |               | 4 x 3           | 3 x 2          |
| 2                           | LQ3T21-R1 | 6 x 4         | 4 x 3           | 6 x 4          |
|                             | LQ3T21-R2 |               | 3 x 2           | 6 x 4          |
|                             | LQ3T21-R5 |               | 6 x 4           | 4 x 3          |
|                             | LQ3T21-R6 |               | 6 x 4           | 3 x 2          |
|                             | LQ3T21-R1 |               | 8 x 6           | 10 x 8         |
| 3                           | LQ3T31-R1 | 10 x 8        | 6 x 4           | 10 x 8         |
|                             | LQ3T31-R2 |               | 10 x 8          | 8 x 6          |
|                             | LQ3T31-R5 |               | 10 x 8          | 6 x 4          |
|                             | LQ3T31-R6 |               | 10 x 8          | 6 x 4          |
|                             | LQ3T32-R1 |               | 8 x 6           | 8 x 6          |
| 4                           | LQ3T41-R1 | 12 x 10       | 10 x 8          | 12 x 10        |
|                             | LQ3T41-R5 |               | 12 x 10         | 10 x 8         |
| 5                           | LQ3T51-R1 | 19 x 16       | 12 x 10         | 19 x 16        |
|                             | LQ3T51-R5 |               | 19 x 16         | 12 x 10        |
| 6                           | LQ3T61-R1 | 25 x 22       | 19 x 16         | 25 x 22        |
|                             | LQ3T61-R5 |               | 25 x 22         | 19 x 16        |

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.



#### Size combination (Inch)

| Size                          | Model      | A side (Left) | B side (Center) | C side (Right) |
|-------------------------------|------------|---------------|-----------------|----------------|
| Applicable tubing size (inch) |            |               |                 |                |
| 2                             | LQ3T2A-R1  | 1/4" x 5/32"  | 1/8" x 0.086"   | 1/4" x 5/32"   |
|                               | LQ3T2A-R5  |               | 1/4" x 5/32"    | 1/8" x 0.086"  |
| 3                             | LQ3T3A-R1  | 3/8" x 1/4"   | 1/4" x 5/32"    | 3/8" x 1/4"    |
|                               | LQ3T3A-R2  |               | 1/8" x 0.086"   | 3/8" x 1/4"    |
|                               | LQ3T3A-R5  |               | 3/8" x 1/4"     | 1/4" x 5/32"   |
|                               | LQ3T3A-R7  |               | 1/4" x 5/32"    | 1/4" x 5/32"   |
|                               | LQ3T3A-R9  |               | 3/8" x 1/4"     | 1/4" x 5/32"   |
| 4                             | LQ3T4A-R1  | 1/2" x 3/8"   | 3/8" x 1/4"     | 1/2" x 3/8"    |
|                               | LQ3T4A-R2  |               | 1/4" x 5/32"    | 1/2" x 3/8"    |
|                               | LQ3T4A-R5  |               | 1/2" x 3/8"     | 3/8" x 1/4"    |
|                               | LQ3T4A-R6  |               | 1/2" x 3/8"     | 1/4" x 5/32"   |
|                               | LQ3T4A-R7  |               | 3/8" x 1/4"     | 3/8" x 1/4"    |
|                               | LQ3T4A-R8  |               | 1/4" x 5/32"    | 1/4" x 5/32"   |
|                               | LQ3T4A-R9  |               | 3/8" x 1/4"     | 3/8" x 1/4"    |
| 5                             | LQ3T5A-R1  | 3/4" x 5/8"   | 1/2" x 3/8"     | 3/4" x 5/8"    |
|                               | LQ3T5A-R2  |               | 3/8" x 1/4"     | 3/4" x 5/8"    |
|                               | LQ3T5A-R3  |               | 1/4" x 5/32"    | 3/4" x 5/8"    |
|                               | LQ3T5A-R5  |               | 3/4" x 5/8"     | 1/2" x 3/8"    |
|                               | LQ3T5A-R6  |               | 3/4" x 5/8"     | 3/8" x 1/4"    |
|                               | LQ3T5A-R7  | 1/2" x 3/8"   | 1/2" x 3/8"     | 1/2" x 3/8"    |
|                               | LQ3T5A-R9  |               | 3/4" x 5/8"     | 1/2" x 3/8"    |
|                               | LQ3T5A-R10 |               | 3/8" x 1/4"     | 3/8" x 1/4"    |
|                               | LQ3T5A-R11 | 3/4" x 5/8"   | 1/2" x 3/8"     | 1/4" x 5/32"   |
|                               | LQ3T5A-R12 |               | 3/4" x 5/8"     | 1/4" x 5/32"   |
|                               | LQ3T6A-R1  |               | 3/4" x 5/8"     | 1" x 7/8"      |
|                               | LQ3T6A-R2  |               | 1/2" x 3/8"     | 1" x 7/8"      |
| 6                             | LQ3T6A-R3  | 1" x 7/8"     | 3/8" x 1/4"     | 1" x 7/8"      |
|                               | LQ3T6A-R4  |               | 1/4" x 5/32"    | 1" x 7/8"      |
|                               | LQ3T6A-R5  |               | 1" x 7/8"       | 3/4" x 5/8"    |
|                               | LQ3T6A-R6  |               | 1" x 7/8"       | 1/2" x 3/8"    |
|                               | LQ3T6A-R7  |               | 3/4" x 5/8"     | 3/4" x 5/8"    |
|                               | LQ3T6A-R9  | 3/4" x 5/8"   | 1" x 7/8"       | 3/4" x 5/8"    |
|                               | LQ3T6A-R10 | 1/2" x 3/8"   | 1" x 7/8"       | 1/2" x 3/8"    |
|                               | LQ3T6A-R12 | 1" x 7/8"     | 1" x 7/8"       | 3/8" x 1/4"    |
|                               | LQ3T6A-R13 |               | 1" x 7/8"       | 1/4" x 5/32"   |
|                               | LQ3T6A-R14 | 3/4" x 5/8"   | 1" x 7/8"       | 1/4" x 5/32"   |

Note 1) For details of the applicable tubing sizes, refer to page 309.

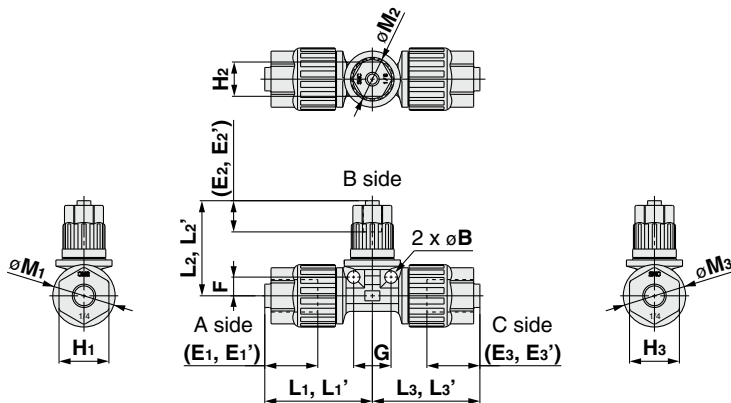
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.



# LQ3 Series

## Dimensions

### Union tee reducing: LQ3T-R



(E<sub>1</sub>, E<sub>1</sub>', E<sub>2</sub>, E<sub>2</sub>', E<sub>3</sub>, E<sub>3</sub>') : Reference dimension for the inserted tubing from the end surface of the nut  
(E<sub>1</sub>', E<sub>2</sub>', E<sub>3</sub>'), L<sub>1</sub>', L<sub>2</sub>', L<sub>3</sub>' : Nut material PVDF dimensions

### Metric Size

| Model     | A side (Left) | B side (Center) | C side (Right) | B   | E <sub>1</sub> | E <sub>1</sub> ' | E <sub>2</sub> | E <sub>2</sub> ' | E <sub>3</sub> | E <sub>3</sub> ' | F   | G   | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | L <sub>2</sub> ' | L <sub>3</sub> | L <sub>3</sub> ' | M <sub>1</sub> | M <sub>2</sub> | M <sub>3</sub> | Min. port size |
|-----------|---------------|-----------------|----------------|-----|----------------|------------------|----------------|------------------|----------------|------------------|-----|-----|----------------|----------------|----------------|----------------|------------------|----------------|------------------|----------------|------------------|----------------|----------------|----------------|----------------|
| LQ3T11-R1 | ø4            | ø3              | ø4             | 3.5 | 10             | 9                | 10             | 9                | 10             | 9                | 4.8 | 9.5 | 11             | 11             | 11             | 28.5           | 27.5             | 28.5           | 27.5             | 28.5           | 27.5             | 14             | 14             | 14             | 2              |
| LQ3T11-R5 | ø4            | ø4              | ø3             |     |                |                  |                |                  |                |                  |     |     |                |                |                |                |                  |                |                  |                |                  |                |                |                |                |
| LQ3T21-R1 | ø6            | ø4              | ø6             | 4   | 17             | 16               | 10             | 9                | 17             | 16               | 6   | 12  | 16             | 11             | 16             | 34.5           | 33.5             | 30.5           | 29.5             | 34.5           | 33.5             | 20             | 14             | 20             | 2.5            |
| LQ3T21-R2 | ø6            | ø3              | ø6             |     |                |                  |                |                  |                |                  |     |     |                |                |                |                |                  |                |                  |                |                  |                |                |                | 2              |
| LQ3T21-R5 | ø6            | ø6              | ø4             |     |                |                  |                |                  |                |                  |     |     |                |                |                |                |                  |                |                  |                |                  |                |                |                | 2.5            |
| LQ3T21-R6 | ø6            | ø6              | ø3             |     |                |                  | 17             | 16               | 10             | 9                |     |     |                | 16             | 11             |                |                  | 34.5           | 33.5             | 30.5           | 29.5             |                | 20             | 14             | 2              |
| LQ3T31-R1 | ø10           | ø8              | ø10            | 5   | 22.5           | 19.5             | 22.5           | 19.5             | 22.5           | 19.5             | 9   | 18  | 21             | 21             | 21             | 47.5           | 44.5             | 47.5           | 44.5             | 47.5           | 44.5             | 25             | 25             | 25             | 6.4            |
| LQ3T31-R2 | ø10           | ø6              | ø10            |     |                |                  | 17             | 16               |                |                  |     |     |                | 16             |                |                |                  | 38             | 37               |                |                  |                | 20             |                | 4              |
| LQ3T31-R5 | ø10           | ø10             | ø8             |     |                |                  | 22.5           | 19.5             |                |                  |     |     |                | 21             | 21             |                |                  | 47.5           | 44.5             |                |                  |                | 25             | 25             | 6.4            |
| LQ3T31-R6 | ø10           | ø10             | ø6             |     |                |                  | 22.5           | 19.5             | 17             | 16               |     |     |                | 21             | 16             |                |                  | 47.5           | 44.5             | 38             | 37               |                | 25             | 20             |                |
| LQ3T32-R1 | ø8            | ø6              | ø8             | 5   | 22.5           | 19.5             | 17             | 16               | 22.5           | 19.5             | 9   | 18  | 21             | 16             | 21             | 47.5           | 44.5             | 38             | 37               | 47.5           | 44.5             | 25             | 25             | 25             | 4              |
| LQ3T32-R5 | ø8            | ø8              | ø6             |     |                |                  | 22.5           | 19.5             | 17             | 16               |     |     |                | 21             | 16             |                |                  | 47.5           | 44.5             | 38             | 37               |                | 25             | 20             |                |
| LQ3T41-R1 | ø12           | ø10             | ø12            | 6   | 24             | 22               | 22.5           | 19.5             | 24             | 22               | 10  | 20  | 24             | 21             | 24             | 52.5           | 50.5             | 48.5           | 45.5             | 52.5           | 50.5             | 29             | 25             | 29             | 7.5            |
| LQ3T41-R5 | ø12           | ø12             | ø10            |     |                |                  | 24             | 22               | 22.5           | 19.5             |     |     |                | 24             | 21             |                |                  | 52.5           | 50.5             | 48.5           | 45.5             |                | 29             | 25             |                |
| LQ3T51-R1 | ø19           | ø12             | ø19            | 7   | 26.5           | 24               | 24             | 22               | 26.5           | 24               | 14  | 28  | 32             | 24             | 32             | 64             | 61.5             | 58.5           | 56.5             | 64             | 61.5             | 37             | 29             | 37             | 9.5            |
| LQ3T51-R5 | ø19           | ø19             | ø12            |     |                |                  | 26.5           | 24               | 24             | 22               |     |     |                | 32             | 24             |                |                  | 64             | 61.5             | 58.5           | 56.5             |                | 37             | 29             |                |
| LQ3T61-R1 | ø25           | ø19             | ø25            | 8   | 30             | 26               | 26.5           | 24               | 30             | 26               | 18  | 36  | 41             | 32             | 41             | 78             | 74               | 70             | 67.5             | 78             | 74               | 49             | 37             | 49             | 16             |
| LQ3T61-R5 | ø25           | ø25             | ø19            |     |                |                  | 30             | 26               | 26.5           | 24               |     |     |                | 41             | 32             |                |                  | 78             | 74               | 70             | 67.5             |                | 49             | 37             |                |

### Inch Size

| Model      | A side (Left) |      | B side (Center) |      | C side (Right) |      | Applicable tubing O.D. |      | B    | E <sub>1</sub> | E <sub>1</sub> ' | E <sub>2</sub> | E <sub>2</sub> ' | E <sub>3</sub> | E <sub>3</sub> ' | F    | G    | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | L <sub>2</sub> ' | L <sub>3</sub> | L <sub>3</sub> ' | M <sub>1</sub> | M <sub>2</sub> | M <sub>3</sub> | Min. port size |     |     |
|------------|---------------|------|-----------------|------|----------------|------|------------------------|------|------|----------------|------------------|----------------|------------------|----------------|------------------|------|------|----------------|----------------|----------------|----------------|------------------|----------------|------------------|----------------|------------------|----------------|----------------|----------------|----------------|-----|-----|
| LQ3T2A-R1  | 1/4"          | 1/8" | 1/4"            | 4    | 17             | 16   | 10                     | 9    | 17   | 16             | 6                | 12             | 16               | 11             | 16               | 34.5 | 33.5 | 30.5           | 29.5           | 34.5           | 33.5           | 20               | 14             | 20               | 2              |                  |                |                |                |                |     |     |
| LQ3T2A-R5  |               | 1/4" | 1/8"            |      |                |      | 17                     | 16   | 10   | 9              |                  |                |                  | 34.5           | 33.5             |      |      | 30.5           | 29.5           | 14             | 14             |                  |                |                  |                |                  |                |                |                |                |     |     |
| LQ3T3A-R1  |               | 1/4" | 3/8"            |      |                |      | 17                     | 16   | 22.5 | 19.5           |                  |                |                  | 38             | 37               |      |      | 47.5           | 44.5           | 20             | 25             |                  | 4              |                  |                |                  |                |                |                |                |     |     |
| LQ3T3A-R2  |               | 1/8" | 3/8"            |      |                |      | 10                     | 9    | 33.5 | 32.5           |                  |                |                  | 25             | 14               |      |      | 2              |                |                |                |                  |                |                  |                |                  |                |                |                |                |     |     |
| LQ3T3A-R5  | 3/8"          | 3/8" | 1/4"            | 5    | 22.5           | 19.5 | 22.5                   | 19.5 | 9    | 18             | 21               | 11             | 21               | 47.5           | 44.5             | 33.5 | 32.5 | 47.5           | 44.5           | 25             | 25             | 20               | 4              |                  |                |                  |                |                |                |                |     |     |
| LQ3T3A-R7  |               | 1/4" | 1/4"            |      |                |      | 17                     | 16   |      |                |                  | 17             | 16               |                |                  | 38   | 37   | 38             | 37             |                | 20             | 20               |                |                  |                |                  |                |                |                |                |     |     |
| LQ3T3A-R9  |               | 1/4" | 3/8"            |      |                |      | 1/4"                   | 17   |      |                |                  | 16             | 22.5             |                |                  | 19.5 | 16   | 21             | 38             |                | 37             | 47.5             |                | 44.5             | 20             | 25               |                |                |                |                |     |     |
| LQ3T4A-R1  |               | 3/8" | 1/2"            |      |                |      | 22.5                   | 19.5 |      |                |                  | 24.5           | 22.5             |                |                  | 10   | 20   | 24             | 21             |                | 24             | 52.5             |                | 50.5             | 48.5           | 45.5             | 52.5           | 50.5           | 29             | 25             | 29  | 6.4 |
| LQ3T4A-R2  | 1/4"          | 1/2" | 17              | 16   | 24.5           | 22.5 | 16                     | 24   | 39   | 38             | 52.5             | 50.5           | 48.5             | 45.5           | 25               |      |      |                | 29             | 4              |                |                  |                |                  |                |                  |                |                |                |                |     |     |
| LQ3T4A-R5  | 1/2"          | 3/8" | 24.5            | 22.5 | 22.5           | 19.5 | 21                     | 24   | 21   | 52.5           | 50.5             | 48.5           | 45.5             | 39             | 38               |      |      |                | 25             | 29             | 6.4            |                  |                |                  |                |                  |                |                |                |                |     |     |
| LQ3T4A-R6  | 1/2"          | 1/4" | 22.5            | 19.5 | 22.5           | 19.5 | 21                     | 21   | 48.5 | 45.5           | 48.5             | 45.5           | 39               | 38             | 25               |      |      |                | 25             | 6.4            |                |                  |                |                  |                |                  |                |                |                |                |     |     |
| LQ3T4A-R7  | 3/8"          | 3/8" | 3/8"            | 6    | 24.5           | 22.5 | 17                     | 16   | 17   | 16             | 10               | 20             | 24               | 16             | 16               | 48.5 | 45.5 | 39             | 38             | 39             | 38             | 25               | 20             | 20               | 4              |                  |                |                |                |                |     |     |
| LQ3T4A-R8  |               | 1/4" | 1/4"            |      |                |      | 17                     | 16   | 17   | 16             |                  |                |                  | 39             | 38               |      |      | 39             | 38             | 20             | 20             |                  |                |                  |                |                  |                |                |                |                |     |     |
| LQ3T4A-R9  |               | 1/2" | 3/8"            |      |                |      | 22.5                   | 19.5 | 24.5 | 22.5           |                  |                |                  | 22.5           | 19.5             |      |      | 21             | 24             | 21             | 48.5           |                  | 45.5           | 52.5             |                | 50.5             | 48.5           | 45.5           | 25             | 29             | 25  | 6.4 |
| LQ3T5A-R1  |               | 1/2" | 3/4"            |      |                |      | 24.5                   | 22.5 | 24.5 | 22.5           |                  |                |                  | 26.5           | 24               |      |      | 21             | 24             | 21             | 58.5           |                  | 56.5           | 64               |                | 61.5             | 58.5           | 56.5           | 64             | 61.5           | 37  | 29  |
| LQ3T5A-R2  | 3/4"          | 3/8" | 3/4"            | 7    | 26.5           | 24   | 24.5                   | 22.5 | 26.5 | 24             | 14               | 28             | 32               | 24             | 32               | 64   | 61.5 | 58.5           | 56.5           | 64             | 61.5           | 37               | 25             | 37               | 6.4            |                  |                |                |                |                |     |     |
| LQ3T5A-R3  |               | 1/4" | 3/4"            |      |                |      | 17                     | 16   | 44.5 | 43.5           |                  |                |                  | 54.5           | 51.5             |      |      | 64             | 61.5           | 54.5           | 51.5           |                  | 20             | 4                |                |                  |                |                |                |                |     |     |
| LQ3T5A-R5  |               | 3/4" | 1/2"            |      |                |      | 26.5                   | 24   | 22.5 | 19.5           |                  |                |                  | 32             | 24               |      |      | 21             | 64             | 61.5           | 58.5           |                  | 56.5           | 37               |                | 29               | 9.5            |                |                |                |     |     |
| LQ3T5A-R6  |               | 3/4" | 3/8"            |      |                |      | 24.5                   | 22.5 | 24.5 | 22.5           |                  |                |                  | 26.5           | 24               |      |      | 32             | 21             | 64             | 61.5           |                  | 54.5           | 51.5             |                | 37               | 25             | 6.4            |                |                |     |     |
| LQ3T5A-R7  | 1/2"          | 1/2" | 1/2"            | 8    | 24.5           | 22.5 | 24.5                   | 22.5 | 24.5 | 22.5           | 18               | 36             | 32               | 24             | 24               | 58.5 | 56.5 | 58.5           | 56.5           | 58.5           | 56.5           | 29               | 29             | 29               | 9.5            |                  |                |                |                |                |     |     |
| LQ3T5A-R9  |               | 3/4" | 1/2"            |      |                |      | 24.5                   | 22.5 | 26.5 | 24             |                  |                |                  | 21             | 32               |      |      | 21             | 58.5           | 56.5           | 64             |                  | 61.5           | 29               |                | 37               | 25             | 6.4            |                |                |     |     |
| LQ3T5A-R10 |               | 3/8" | 3/4"            |      |                |      | 22.5                   | 19.5 | 26.5 | 24             |                  |                |                  | 22.5           | 19.5             |      |      | 21             | 32             | 21             | 54.5           |                  | 51.5           | 64               |                | 61.5             | 54.5           | 51.5           | 25             | 37             | 25  | 6.4 |
| LQ3T5A-R11 |               | 1/2" | 1/4"            |      |                |      | 24.5                   | 22.5 | 24.5 | 22.5           |                  |                |                  | 17             | 16               |      |      | 32             | 24             | 32             | 16             |                  | 64             | 61.5             |                | 58.5             | 56.5           | 44.5           | 43.5           | 37             | 29  | 20  |
| LQ3T5A-R12 | 3/4"          | 3/4" | 1/4"            |      | 26.5           | 24   | 26.5                   | 24   |      |                |                  |                |                  |                |                  |      |      | 64             | 61.5           | 64             | 61.5           |                  | 37             | 37               | 20             | 4                |                |                |                |                |     |     |
| LQ3T6A-R1  | 1"            | 3/4" | 1"              | 8    | 30             | 26   | 26.5                   | 24   | 30   | 26             | 18               | 36             | 41               | 32             | 41               | 78   | 74   | 70             | 67.5           | 78             | 74             | 49               | 37             | 49               | 16             |                  |                |                |                |                |     |     |
| LQ3T6A-R2  |               | 1/2" | 1"              |      |                |      | 24.5                   | 22.5 | 30   | 26             |                  |                |                  | 24.5           | 22.5             |      |      | 24             | 32             | 41             | 78             |                  | 74             | 70               |                | 67.5             | 78             | 74             | 49             | 37             | 9.5 |     |
| LQ3T6A-R3  |               | 3/8" | 1"              |      |                |      | 22.5                   | 19.5 | 26.5 | 24             |                  |                |                  | 26.5           | 24               |      |      | 21             | 41             | 78             | 74             |                  | 60             | 57               |                | 78               | 74             | 60             | 57             | 25             | 49  | 6.4 |
| LQ3T6A-R4  |               | 1/4" | 1"              |      |                |      | 17                     | 16   | 30   | 26             |                  |                |                  | 26.5           | 24               |      |      | 16             | 32             | 41             | 78             |                  | 74             | 50               |                | 49               | 78             | 74             | 64.5           | 62.5           | 20  | 49  |
| LQ3T6A-R5  | 1"            | 1"   | 3/4"            | 8    | 30             | 26   | 30                     | 26   | 26.5 | 24             | 18               | 36             | 41               | 32             | 41               | 78   | 74   | 70             | 67.5           | 78             | 74             | 49               | 37             | 49               | 16             |                  |                |                |                |                |     |     |
| LQ3T6A-R6  |               | 1"   | 1/2"            |      |                |      | 30                     | 26   | 24.5 | 22.5           |                  |                |                  | 24             | 32               |      |      | 41             | 78             | 74             | 64.5           |                  | 62.5           | 29               |                | 49               | 9.5            |                |                |                |     |     |
| LQ3T6A-R7  |               | 3/4" | 3/4"            |      |                |      | 26.5                   | 24   | 26.5 | 24             |                  |                |                  | 32             | 41               |      |      | 78             | 74             | 60             | 57             |                  | 25             | 49               |                | 6.4              |                |                |                |                |     |     |
| LQ3T6A-R9  |               | 3/4" | 1"              |      |                |      | 26.5                   | 24   | 26.5 | 24             |                  |                |                  | 32             | 41               |      |      | 78             | 74             | 60             | 57             |                  | 25             | 49               |                | 6.4              |                |                |                |                |     |     |
| LQ3T6A-R10 | 1/2"          | 1"   | 1/2"            |      | 24.5           | 22.5 |                        |      | 24.5 | 22.5           |                  |                |                  | 24             |                  | 64.5 | 62.5 |                |                | 64.5           | 62.5           | 29               |                | 29               | 9.5            |                  |                |                |                |                |     |     |
| LQ3T6A-R12 | 1"            | 1"   | 3/8"            | 8    | 30             | 26   | 30                     | 26   | 22.5 | 19.5           | 18               | 36             | 41               | 41             | 21               | 78   | 74   | 78             | 74             | 60             | 57             | 49               | 49             | 25               | 6.4            |                  |                |                |                |                |     |     |
| LQ3T6A-R13 |               | 1"   | 1/4"            |      |                |      |                        |      | 17   | 16             |                  |                |                  |                |                  |      |      | 32             |                | 16             |                |                  | 50             |                  |                | 49               | 37             |                | 20             | 4              |     |     |
| LQ3T6A-R14 | 3/4"          | 1"   | 1/4"            |      | 26.5           | 24   |                        |      |      |                |                  |                |                  | 32             |                  | 70   | 67.5 |                |                | 50             | 49             | 37               |                | 20               | 4              |                  |                |                |                |                |     |     |

## How to Order

### Tubing connection

**LQ3 E 21 - S -**

#### Fitting type

| Symbol | Type        |
|--------|-------------|
| E      | Union elbow |

#### Nut material, packaging

| Symbol | Nut material | Packaging                                    |
|--------|--------------|----------------------------------------------|
| Nil    | PFA          | Clean packaging equivalent to ISO Class 5    |
| 1      | PFA          | Standard packaging equivalent to ISO Class 7 |
| 2      | PVDF         | Clean packaging equivalent to ISO Class 5    |
| 3      | PVDF         | Standard packaging equivalent to ISO Class 7 |

#### Thread type

| Symbol | Type         |
|--------|--------------|
| S      | Space saving |

#### Size combination

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

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

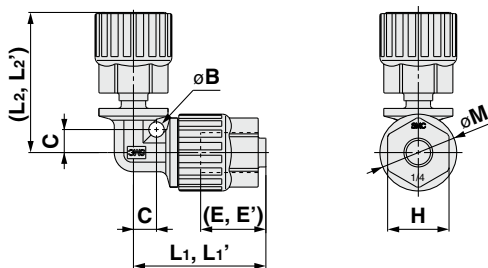
| Size | Symbol | Applicable tubing size (inch) |
|------|--------|-------------------------------|
| 2    | A      | 1/4" x 5/32"                  |
| 3    | A      | 3/8" x 1/4"                   |
| 4    | A      | 1/2" x 3/8"                   |
| 5    | A      | 3/4" x 5/8"                   |
| 6    | A      | 1" x 7/8"                     |
| 7    | A      | 1 1/4" x 1.1"                 |

Note 1) For details of the applicable tubing sizes, refer to page 309.

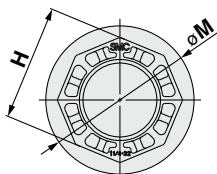
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Dimensions

### Space saving union elbow: LQ3E-S



(E, E'): Reference dimension for the inserted tubing from the end surface of the nut  
(E'), L1', L2': Nut material PVDF dimensions



Class 7

#### Metric Size

| Model    | Applicable tubing O.D. | B | C  | E    | E'   | H  | L1   | L1'  | L2   | L2'  | M  | Min. port size |
|----------|------------------------|---|----|------|------|----|------|------|------|------|----|----------------|
| LQ3E21-S | ø6                     | 4 | 6  | 17   | 16   | 16 | 34.5 | 33.5 | 39.5 | 38.5 | 20 | 3.9            |
| LQ3E31-S | ø10                    | 5 | 9  | 22.5 | 19.5 | 21 | 47.5 | 44.5 | 52.5 | 49.5 | 25 | 7.5            |
| LQ3E32-S | ø8                     |   |    |      |      |    |      |      | 49.5 | 46.5 |    | 6.3            |
| LQ3E41-S | ø12                    | 6 | 10 | 24   | 22   | 24 | 52.5 | 50.5 | 54.5 | 52.5 | 29 | 9.5            |
| LQ3E51-S | ø19                    | 7 | 14 | 26.5 | 24   | 32 | 64   | 61.5 | 66   | 63.5 | 37 | 15.8           |
| LQ3E61-S | ø25                    | 8 | 18 | 30   | 26   | 41 | 78   | 74   | 80   | 76   | 49 | 22             |

#### Inch Size

| Model    | Applicable tubing O.D. | B | C  | E    | E'   | H  | L1   | L1'  | L2   | L2'  | M  | Min. port size |
|----------|------------------------|---|----|------|------|----|------|------|------|------|----|----------------|
| LQ3E2A-S | 1/4"                   | 4 | 6  | 17   | 16   | 16 | 34.5 | 33.5 | 39.5 | 38.5 | 20 | 3.9            |
| LQ3E3A-S | 3/8"                   | 5 | 9  | 22.5 | 19.5 | 21 | 47.5 | 44.5 | 49.5 | 46.5 | 25 | 6.3            |
| LQ3E4A-S | 1/2"                   | 6 | 10 | 24.5 | 22.5 | 24 | 52.5 | 50.5 | 54.5 | 52.5 | 29 | 9.5            |
| LQ3E5A-S | 3/4"                   | 7 | 14 | 26.5 | 24   | 32 | 64   | 61.5 | 66   | 63.5 | 37 | 15.8           |
| LQ3E6A-S | 1"                     | 8 | 18 | 30   | 26   | 41 | 78   | 74   | 80   | 76   | 49 | 22             |
| LQ3E7A-S | 1 1/4"                 | 9 | 22 | 35   | 35   | 50 | 92.5 | 92.5 | 97.5 | 97.5 | 64 | 28             |

## How to Order

### Tubing connection

**LQ3 T 21 - S B -**

#### Fitting type

| Symbol | Type      |
|--------|-----------|
| T      | Union tee |

#### Nut material, packaging

| Symbol | Nut material | Packaging                                    |
|--------|--------------|----------------------------------------------|
| Nil    | PFA          | Clean packaging equivalent to ISO Class 5    |
| 1      | PFA          | Standard packaging equivalent to ISO Class 7 |
| 2      | PVDF         | Clean packaging equivalent to ISO Class 5    |
| 3      | PVDF         | Standard packaging equivalent to ISO Class 7 |

#### Thread type

| Symbol | Type       |
|--------|------------|
| B      | Branch tee |

#### Tubing type

| Symbol | Type         |
|--------|--------------|
| S      | Space saving |

#### Size combination

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

| Size | Symbol | Applicable tubing size (inch) |
|------|--------|-------------------------------|
| 2    | A      | 1/4" x 5/32"                  |
| 3    | A      | 3/8" x 1/4"                   |
| 4    | A      | 1/2" x 3/8"                   |
| 5    | A      | 3/4" x 5/8"                   |
| 6    | A      | 1" x 7/8"                     |

Note 1) For details of the applicable tubing sizes, refer to page 309.

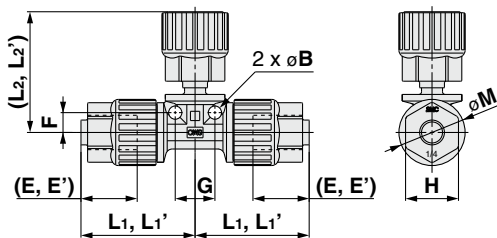
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Dimensions

### Space saving branch tee: LQ3T-SB



(E, E'): Reference dimension for the inserted tubing from the end surface of the nut  
(E'), L1', L2': Nut material PVDF dimensions

#### Metric Size

| Model     | Applicable tubing O.D. | B | E    | E'   | F  | G  | H  | L1   | L1'  | L2   | L2'  | M  | Min. port size |
|-----------|------------------------|---|------|------|----|----|----|------|------|------|------|----|----------------|
| LQ3T21-SB | ø6                     | 4 | 17   | 16   | 6  | 12 | 16 | 34.5 | 33.5 | 39.5 | 38.5 | 20 | 3.9            |
| LQ3T31-SB | ø10                    | 5 | 22.5 | 19.5 | 9  | 18 | 21 | 47.5 | 44.5 | 52.5 | 49.5 | 25 | 7.5            |
| LQ3T32-SB | ø8                     |   |      |      |    |    |    |      |      | 49.5 | 46.5 |    | 6.3            |
| LQ3T41-SB | ø12                    | 6 | 24   | 22   | 10 | 20 | 24 | 52.5 | 50.5 | 54.5 | 52.5 | 29 | 9.5            |
| LQ3T51-SB | ø19                    | 7 | 26.5 | 24   | 14 | 28 | 32 | 64   | 61.5 | 66   | 63.5 | 37 | 15.8           |
| LQ3T61-SB | ø25                    | 8 | 30   | 26   | 18 | 36 | 41 | 78   | 74   | 80   | 76   | 49 | 22             |

#### Inch Size

| Model     | Applicable tubing O.D. | B | E    | E'   | F  | G  | H  | L1   | L1'  | L2   | L2'  | M  | Min. port size |
|-----------|------------------------|---|------|------|----|----|----|------|------|------|------|----|----------------|
| LQ3T2A-SB | 1/4"                   | 4 | 17   | 16   | 6  | 12 | 16 | 34.5 | 33.5 | 39.5 | 38.5 | 20 | 3.9            |
| LQ3T3A-SB | 3/8"                   | 5 | 22.5 | 19.5 | 9  | 18 | 21 | 47.5 | 44.5 | 49.5 | 46.5 | 25 | 6.3            |
| LQ3T4A-SB | 1/2"                   | 6 | 24.5 | 22.5 | 10 | 20 | 24 | 52.5 | 50.5 | 54.5 | 52.5 | 29 | 9.5            |
| LQ3T5A-SB | 3/4"                   | 7 | 26.5 | 24   | 14 | 28 | 32 | 64   | 61.5 | 66   | 63.5 | 37 | 15.8           |
| LQ3T6A-SB | 1"                     | 8 | 30   | 26   | 18 | 36 | 41 | 78   | 74   | 80   | 76   | 49 | 22             |

# LQ3 Series Space Saving Run Tee

## How to Order

### Tubing connection

**LQ3 T 21 - S R -**

#### Fitting type

| Symbol | Type      |
|--------|-----------|
| T      | Union tee |

#### Nut material, packaging

| Symbol | Nut material | Packaging                                    |
|--------|--------------|----------------------------------------------|
| Nil    | PFA          | Clean packaging equivalent to ISO Class 5    |
| 1      | PFA          | Standard packaging equivalent to ISO Class 7 |
| 2      | PVDF         | Clean packaging equivalent to ISO Class 5    |
| 3      | PVDF         | Standard packaging equivalent to ISO Class 7 |

#### Thread type

| Symbol | Type    |
|--------|---------|
| R      | Run tee |

#### Tubing type

| Symbol | Type         |
|--------|--------------|
| S      | Space saving |

#### Size combination

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

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

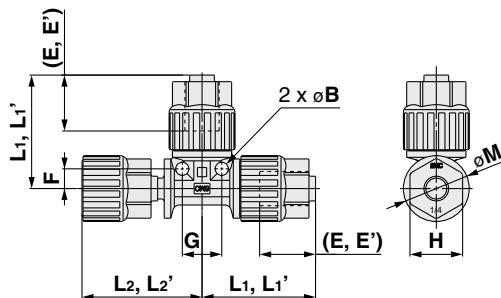
| Size | Symbol | Applicable tubing size (inch) |
|------|--------|-------------------------------|
| 2    | A      | 1/4" x 5/32"                  |
| 3    | A      | 3/8" x 1/4"                   |
| 4    | A      | 1/2" x 3/8"                   |
| 5    | A      | 3/4" x 5/8"                   |
| 6    | A      | 1" x 7/8"                     |

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Dimensions

### Space saving run tee: LQ3T-SR



(E, E'): Reference dimension for the inserted tubing from the end surface of the nut  
(E'), L1', L2': Nut material PVDF dimensions

#### Metric Size

| Model     | Applicable tubing O.D. | B | E    | E'   | F  | G  | H  | L1   | L1'  | L2   | L2'  | M  | Min. port size |
|-----------|------------------------|---|------|------|----|----|----|------|------|------|------|----|----------------|
| LQ3T21-SR | ø6                     | 4 | 17   | 16   | 6  | 12 | 16 | 34.5 | 33.5 | 39.5 | 38.5 | 20 | 3.9            |
| LQ3T31-SR | ø10                    | 5 | 22.5 | 19.5 | 9  | 18 | 21 | 47.5 | 44.5 | 52.5 | 49.5 | 25 | 7.5            |
| LQ3T32-SR | ø8                     |   |      |      |    |    |    |      |      | 49.5 | 46.5 |    | 6.3            |
| LQ3T41-SR | ø12                    | 6 | 24   | 22   | 10 | 20 | 24 | 52.5 | 50.5 | 54.5 | 52.5 | 29 | 9.5            |
| LQ3T51-SR | ø19                    | 7 | 26.5 | 24   | 14 | 28 | 32 | 64   | 61.5 | 66   | 63.5 | 37 | 15.8           |
| LQ3T61-SR | ø25                    | 8 | 30   | 26   | 18 | 36 | 41 | 78   | 74   | 80   | 76   | 49 | 22             |

#### Inch Size

| Model     | Applicable tubing O.D. | B | E    | E'   | F  | G  | H  | L1   | L1'  | L2   | L2'  | M  | Min. port size |
|-----------|------------------------|---|------|------|----|----|----|------|------|------|------|----|----------------|
| LQ3T2A-SR | 1/4"                   | 4 | 17   | 16   | 6  | 12 | 16 | 34.5 | 33.5 | 39.5 | 38.5 | 20 | 3.9            |
| LQ3T3A-SR | 3/8"                   | 5 | 22.5 | 19.5 | 9  | 18 | 21 | 47.5 | 44.5 | 49.5 | 46.5 | 25 | 6.3            |
| LQ3T4A-SR | 1/2"                   | 6 | 24.5 | 22.5 | 10 | 20 | 24 | 52.5 | 50.5 | 54.5 | 52.5 | 29 | 9.5            |
| LQ3T5A-SR | 3/4"                   | 7 | 26.5 | 24   | 14 | 28 | 32 | 64   | 61.5 | 66   | 63.5 | 37 | 15.8           |
| LQ3T6A-SR | 1"                     | 8 | 30   | 26   | 18 | 36 | 41 | 78   | 74   | 80   | 76   | 49 | 22             |

# LQ3 Series Tubing Extension Straight Connector

## How to Order

### Tubing connection

**LQ3 H 2A - T -**   

#### Fitting type

| Symbol | Type      |
|--------|-----------|
| H      | Connector |

#### Nut material, packaging

| Symbol | Nut material | Packaging                                    |
|--------|--------------|----------------------------------------------|
| Nil    | PFA          | Clean packaging equivalent to ISO Class 5    |
| 1      | PFA          | Standard packaging equivalent to ISO Class 7 |
| 2      | PVDF         | Clean packaging equivalent to ISO Class 5    |
| 3      | PVDF         | Standard packaging equivalent to ISO Class 7 |

#### Thread type

| Symbol | Type             |
|--------|------------------|
| T      | Tubing extension |

#### Size combination

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

| Size | Symbol | Applicable tubing size (inch) |
|------|--------|-------------------------------|
| 2    | A      | 1/4" x 5/32"                  |
| 3    | A      | 3/8" x 1/4"                   |
| 4    | A      | 1/2" x 3/8"                   |
| 5    | A      | 3/4" x 5/8"                   |
| 6    | A      | 1" x 7/8"                     |
| 7    | A      | 1 1/4" x 1.1"                 |

Note 1) For details of the applicable tubing sizes, refer to page 309.

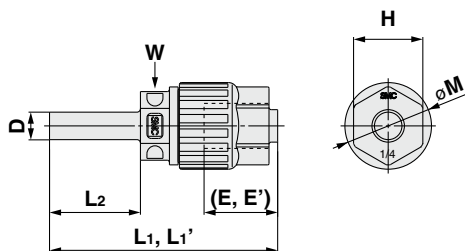
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

Note 1) For details of the applicable tubing sizes, refer to page 309.

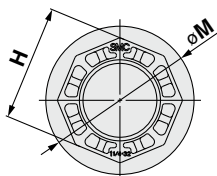
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Dimensions

### Tubing extension straight connector: LQ3H-T



(E,E'): Reference dimension for the inserted tubing from the end surface of the nut  
(E'),L': Nut material PVDF dimensions  
W: Width across flats dimension



Class 7

#### Metric Size

| Model    | Applicable tubing O.D. | D   | E    | E'   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | Min. port size | W  |
|----------|------------------------|-----|------|------|----|----------------|------------------|----------------|----|----------------|----|
| LQ3H21-T | ø6                     | ø6  | 17   | 16   | 16 | 53             | 51.5             | 18             | 20 | 3.9            | 14 |
| LQ3H31-T | ø10                    | ø10 | 22.5 | 19.5 | 21 | 67.5           | 64.5             | 22.5           | 25 | 7.5            | 18 |
| LQ3H32-T | ø8                     | ø8  |      |      |    |                |                  |                |    | 6              |    |
| LQ3H41-T | ø12                    | ø12 | 24   | 22   | 24 | 74             | 72               | 24             | 29 | 9.5            | 22 |
| LQ3H51-T | ø19                    | ø19 | 26.5 | 24   | 32 | 83.5           | 81               | 26.5           | 37 | 15.8           | 30 |
| LQ3H61-T | ø25                    | ø25 | 30   | 26   | 41 | 97.5           | 93.5             | 31             | 49 | 22             | 36 |

#### Inch Size

| Model    | Applicable tubing O.D. | D      | E    | E'   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | M  | Min. port size | W  |
|----------|------------------------|--------|------|------|----|----------------|------------------|----------------|----|----------------|----|
| LQ3H2A-T | 1/4"                   | 1/4"   | 17   | 16   | 16 | 53             | 51.5             | 18             | 20 | 3.9            | 14 |
| LQ3H3A-T | 3/8"                   | 3/8"   | 22.5 | 19.5 | 21 | 65.5           | 62.5             | 23.5           | 25 | 6.3            | 18 |
| LQ3H4A-T | 1/2"                   | 1/2"   | 24.5 | 22.5 | 24 | 72             | 70               | 25             | 29 | 9.5            | 22 |
| LQ3H5A-T | 3/4"                   | 3/4"   | 26.5 | 24   | 32 | 83.5           | 81               | 26.5           | 37 | 15.8           | 30 |
| LQ3H6A-T | 1"                     | 1"     | 30   | 26   | 41 | 97.5           | 93.5             | 31             | 49 | 22             | 36 |
| LQ3H7A-T | 1 1/4"                 | 1 1/4" | 35   | 35   | 50 | 120.5          | 120.5            | 41.5           | 64 | 28             | 46 |

# LQ3 Series Straight Adapter

## How to Order

Tubing  
connection

**LQ3 A 21** -   

Fitting type •

| Symbol   | Type             |
|----------|------------------|
| <b>A</b> | Straight adapter |

• Nut material, packaging

| Symbol     | Nut material | Packaging                                    |
|------------|--------------|----------------------------------------------|
| <b>Nil</b> | PFA          | Clean packaging equivalent to ISO Class 5    |
| <b>1</b>   | PFA          | Standard packaging equivalent to ISO Class 7 |
| <b>2</b>   | PVDF         | Clean packaging equivalent to ISO Class 5    |
| <b>3</b>   | PVDF         | Standard packaging equivalent to ISO Class 7 |

Size combination •

| Size | No. | Applicable tubing size (mm) | Applicable piping size |
|------|-----|-----------------------------|------------------------|
| 2    | 1   | 6 x 4                       | ø13.7 x ø9             |
| 2    | 2   |                             | ø21.3 x ø15.4          |
| 2    | 3   |                             | ø26.7 x ø20.5          |
| 2    | 4   |                             | ø33.4 x ø26.3          |
| 2    | 5   |                             | ø60.3 x ø52.5          |
| 3    | 2   | 8 x 6                       | ø13.7 x ø9             |
| 3    | 4   |                             | ø21.3 x ø15.4          |
| 3    | 6   |                             | ø26.7 x ø20.5          |
| 3    | 7   | 10 x 8                      | ø33.4 x ø26.3          |
| 4    | 1   | 12 x 10                     | ø21.3 x ø15.4          |
| 4    | 2   |                             | ø26.7 x ø20.5          |
| 4    | 3   |                             | ø33.4 x ø26.3          |
| 4    | 4   |                             | ø60.3 x ø52.5          |
| 5    | 1   | 19 x 16                     | ø21.3 x ø15.4          |
| 5    | 2   |                             | ø26.7 x ø20.5          |
| 5    | 3   |                             | ø33.4 x ø26.3          |
| 6    | 1   | 25 x 22                     | ø26.7 x ø20.5          |
| 6    | 2   |                             | ø33.4 x ø26.3          |
| 6    | 3   |                             | ø60.3 x ø52.5          |

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

| Size | Symbol   | Applicable tubing size (inch) | Applicable piping size |
|------|----------|-------------------------------|------------------------|
| 2    | <b>A</b> | 1/4" x 5/32"                  | ø13.7 x ø9             |
| 2    | <b>B</b> |                               | ø21.3 x ø15.4          |
| 2    | <b>C</b> |                               | ø26.7 x ø20.5          |
| 2    | <b>D</b> |                               | ø33.4 x ø26.3          |
| 2    | <b>E</b> |                               | ø60.3 x ø52.5          |
| 3    | <b>A</b> | 3/8" x 1/4"                   | ø13.7 x ø9             |
| 3    | <b>B</b> |                               | ø21.3 x ø15.4          |
| 3    | <b>C</b> |                               | ø26.7 x ø20.5          |
| 4    | <b>A</b> | 1/2" x 3/8"                   | ø21.3 x ø15.4          |
| 4    | <b>B</b> |                               | ø26.7 x ø20.5          |
| 4    | <b>C</b> |                               | ø33.4 x ø26.3          |
| 4    | <b>D</b> |                               | ø60.3 x ø52.5          |
| 5    | <b>A</b> | 3/4" x 5/8"                   | ø21.3 x ø15.4          |
| 5    | <b>B</b> |                               | ø26.7 x ø20.5          |
| 5    | <b>C</b> |                               | ø33.4 x ø26.3          |
| 6    | <b>A</b> | 1" x 3/4"                     | ø26.7 x ø20.5          |
| 6    | <b>B</b> |                               | ø33.4 x ø26.3          |
| 6    | <b>C</b> |                               | ø60.3 x ø52.5          |
| 7    | <b>A</b> | 1 1/4" x 1.1"                 | ø33.4 x ø26.3          |

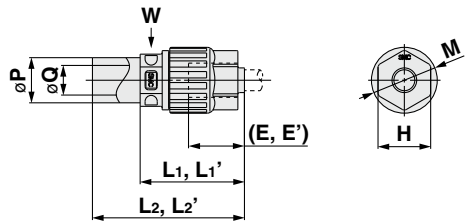
Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

# LQ3 Series

## Dimensions

### Straight Adapter: LQ3A



(E,E'): Reference dimension for the inserted tubing from the end surface of the nut  
 (E'),  $L_1, L_2'$ : Nut material PVDF dimensions  
 W: Width across flats dimension

### Metric Size

| Model  | Applicable tubing O.D. | E    | E'   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | L <sub>2</sub> ' | M  | Min. port size | P    | Q    | W  |  |  |
|--------|------------------------|------|------|----|----------------|------------------|----------------|------------------|----|----------------|------|------|----|--|--|
| LQ3A21 | ø6                     | 17   | 16   | 16 | 32             | 30.5             | 46             | 44.5             | 20 | 4              | 13.7 | 9    | 14 |  |  |
| LQ3A22 |                        |      |      |    |                |                  | 58             | 56.5             |    |                | 21.3 | 15.4 |    |  |  |
| LQ3A23 |                        |      |      |    | 32.5           | 31               | 70.5           | 69               |    |                | 26.7 | 20.5 |    |  |  |
| LQ3A24 |                        |      |      |    |                |                  | 74.5           | 73               |    |                | 33.4 | 26.3 |    |  |  |
| LQ3A25 |                        |      |      |    |                |                  |                |                  |    |                | 60.3 | 52.5 |    |  |  |
| LQ3A32 | ø8                     | 22.5 | 19.5 | 21 | 40             | 39               | 54             | 53               | 25 | 6.4            | 13.7 | 9    | 18 |  |  |
| LQ3A34 | ø10                    |      |      |    |                |                  | 66             | 65               |    |                | 21.3 | 15.4 |    |  |  |
| LQ3A36 |                        |      |      |    |                |                  | 66             |                  |    | 26.7           | 20.5 |      |    |  |  |
| LQ3A37 | ø8                     |      |      |    | 44             | 41               | 82             | 79               |    | 7.5            | 33.4 | 26.3 |    |  |  |
| LQ3A41 | ø12                    | 24   | 22   | 24 | 47             | 45               | 80             | 78               | 29 | 9.5            | 21.3 | 15.4 | 22 |  |  |
| LQ3A42 |                        |      |      |    |                |                  |                |                  |    |                | 26.7 | 20.5 |    |  |  |
| LQ3A43 |                        |      |      |    | 49             | 47               | 88             | 86               |    |                | 33.4 | 26.3 |    |  |  |
| LQ3A44 |                        |      |      |    |                |                  |                |                  |    |                | 60.3 | 52.5 |    |  |  |
| LQ3A51 | ø19                    | 26.5 | 24   | 32 | 57             | 54.5             | 95             | 92.5             | 37 | 15.4           | 21.3 | 15.4 | 30 |  |  |
| LQ3A52 |                        |      |      |    |                |                  |                |                  |    | 16             | 26.7 | 20.5 |    |  |  |
| LQ3A53 |                        |      |      |    |                |                  |                |                  |    |                | 33.4 | 26.3 |    |  |  |
| LQ3A61 | ø25                    | 30   | 26   | 41 | 66.5           | 62.5             | 104.5          | 100.5            | 49 | 20.5           | 26.7 | 20.5 | 36 |  |  |
| LQ3A62 |                        |      |      |    | 68.5           | 64.5             | 107.5          | 103.5            |    | 22             | 33.4 | 26.3 |    |  |  |
| LQ3A63 |                        |      |      |    |                |                  |                |                  |    |                | 60.3 | 52.5 |    |  |  |

### Inch Size

| Model  | Applicable<br>tubing<br>O.D. | E    | E'   | H  | L <sub>1</sub> | L <sub>1</sub> ' | L <sub>2</sub> | L <sub>2</sub> ' | M  | Min.<br>port size | P    | Q    | W  |
|--------|------------------------------|------|------|----|----------------|------------------|----------------|------------------|----|-------------------|------|------|----|
| LQ3A2A | 1/4"                         | 17   | 16   | 16 | 32             | 30.5             | 46             | 44.5             | 20 | 4                 | 13.7 | 9    | 14 |
| LQ3A2B |                              |      |      |    |                |                  | 58             | 56.5             |    |                   | 21.3 | 15.4 |    |
| LQ3A2C |                              |      |      |    | 32.5           | 31               | 70.5           | 69               |    |                   | 26.7 | 20.5 |    |
| LQ3A2D |                              |      |      |    |                |                  | 74.5           | 73               |    |                   | 33.4 | 26.3 |    |
| LQ3A2E |                              |      |      |    |                |                  |                |                  |    |                   | 60.3 | 52.5 |    |
| LQ3A3A | 3/8"                         | 22.5 | 19.5 | 21 | 40             | 39               | 56             | 53               | 25 | 6.4               | 13.7 | 9    | 18 |
| LQ3A3B |                              |      |      |    |                |                  | 66             | 65               |    |                   | 21.3 | 15.4 |    |
| LQ3A3C |                              |      |      |    |                |                  |                |                  |    |                   | 26.7 | 20.5 |    |
| LQ3A4A | 1/2"                         | 24.5 | 22.5 | 24 | 47             | 45               | 80             | 78               | 29 | 9.5               | 21.3 | 15.4 | 22 |
| LQ3A4B |                              |      |      |    |                |                  |                |                  |    |                   | 26.7 | 20.5 |    |
| LQ3A4C |                              |      |      |    | 49             | 47               | 88             | 86               |    |                   | 33.4 | 26.3 |    |
| LQ3A4D |                              |      |      |    |                |                  |                |                  |    |                   |      |      |    |
| LQ3A5A | 3/4"                         | 26.5 | 24   | 32 | 57             | 54.5             | 95             | 92.5             | 37 | 15.4              | 21.3 | 15.4 | 30 |
| LQ3A5B |                              |      |      |    |                |                  |                |                  |    | 16                | 26.7 | 20.5 |    |
| LQ3A5C |                              |      |      |    |                |                  |                |                  |    |                   | 33.4 | 26.3 |    |
| LQ3A6A | 1"                           | 30   | 26   | 41 | 66.5           | 62.5             | 104.5          | 100.5            | 49 | 20.5              | 26.7 | 20.5 | 36 |
| LQ3A6B |                              |      |      |    | 68.5           | 64.5             | 107.5          | 103.5            |    | 22                | 33.4 | 26.3 |    |
| LQ3A6C |                              |      |      |    |                |                  |                |                  |    |                   | 60.3 | 52.5 |    |
| LQ3A7A | 1 1/4"                       | 35   | 35   | 50 | 79             | 79               | 117            | 117              | 64 | 26.3              | 33.4 | 26.3 | 46 |



# LQ3 Series Union Flange

## How to Order

Tubing  
connection

**LQ3 F 22** -   

Fitting type

| Symbol   | Type         |
|----------|--------------|
| <b>F</b> | Union flange |

Nut material, packaging

| Symbol     | Nut material | Packaging                                    |
|------------|--------------|----------------------------------------------|
| <b>Nil</b> | PFA          | Clean packaging equivalent to ISO Class 5    |
| <b>1</b>   | PFA          | Standard packaging equivalent to ISO Class 7 |
| <b>2</b>   | PVDF         | Clean packaging equivalent to ISO Class 5    |
| <b>3</b>   | PVDF         | Standard packaging equivalent to ISO Class 7 |

Size combination

| Size     | No.      | Applicable tubing size (mm) | Applicable flange size |
|----------|----------|-----------------------------|------------------------|
| <b>2</b> | <b>2</b> | 6 x 4                       | 10K-20A                |
| <b>4</b> | <b>2</b> | 12 x 10                     | 10K-20A                |
| <b>4</b> | <b>3</b> |                             | 10K-25A                |
| <b>5</b> | <b>1</b> | 19 x 16                     | 10K-15A                |
| <b>5</b> | <b>2</b> |                             | 10K-20A                |
| <b>5</b> | <b>3</b> |                             | 10K-25A                |
| <b>6</b> | <b>2</b> | 25 x 22                     | 10K-20A                |
| <b>6</b> | <b>3</b> |                             | 10K-25A                |
| <b>6</b> | <b>4</b> |                             | 10K-40A                |

| Size     | Symbol   | Applicable tubing size (inch) | Applicable flange size |
|----------|----------|-------------------------------|------------------------|
| <b>2</b> | <b>B</b> | 1/4" x 5/32"                  | 10K-20A                |
| <b>4</b> | <b>B</b> | 1/2" x 3/8"                   | 10K-20A                |
| <b>4</b> | <b>C</b> |                               | 10K-25A                |
| <b>5</b> | <b>A</b> | 3/4" x 5/8"                   | 10K-15A                |
| <b>5</b> | <b>B</b> |                               | 10K-20A                |
| <b>5</b> | <b>C</b> |                               | 10K-25A                |
| <b>6</b> | <b>B</b> | 1" x 7/8"                     | 10K-20A                |
| <b>6</b> | <b>C</b> |                               | 10K-25A                |
| <b>6</b> | <b>D</b> |                               | 10K-40A                |

Note 1) For details of the applicable tubing sizes, refer to page 309.

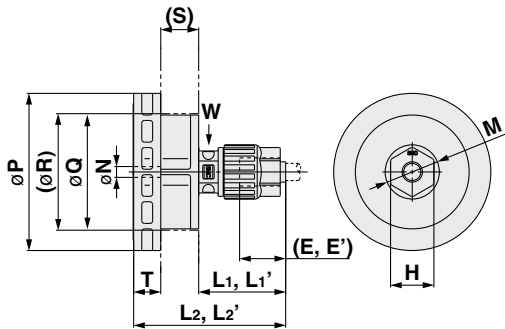
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

Note 1) For details of the applicable tubing sizes, refer to page 309.

Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Dimensions

### Union Flange: LQ3F



(E, E'): Reference dimension for the inserted tubing from the end surface of the nut  
 (E'), L1', L2': Nut material PVDF dimensions  
 W: Width across flats dimension  
 (R): I.D. of JIS flange necessary to mount this product. (Additional modification is needed.)  
 JIS flange is not included in the product.

### Metric Size

| Model         | Applicable tubing O.D. | E    | E' | H  | L1   | L1'  | L2   | L2'  | M  | P  | Q  | R  | S  | T  | W  | N   | Min. port size |
|---------------|------------------------|------|----|----|------|------|------|------|----|----|----|----|----|----|----|-----|----------------|
| <b>LQ3F22</b> | ø6                     | 17   | 16 | 16 | 32.1 | 30.9 | 56.1 | 54.9 | 20 | 58 | 42 | 43 | 14 | 10 | 14 | 4   | 4              |
| <b>LQ3F42</b> | ø12                    | 24   | 22 | 24 | 49   | 46.8 | 73   | 70.8 | 29 | 58 | 42 | 43 | 14 | 10 | 22 | 9.5 | 9.5            |
| <b>LQ3F43</b> |                        |      |    |    |      |      |      |      |    | 69 |    |    |    |    |    |     |                |
| <b>LQ3F51</b> | ø19                    | 26.5 | 24 | 32 | 58   | 55.3 | 80   | 77.3 | 37 | 53 |    |    | 12 |    |    |     |                |
| <b>LQ3F52</b> |                        |      |    |    |      |      | 82   | 79.3 |    | 58 | 42 | 43 |    | 10 | 30 | 16  | 16             |
| <b>LQ3F53</b> |                        |      |    |    |      |      |      |      |    | 69 |    |    | 14 |    |    |     |                |
| <b>LQ3F62</b> | ø25                    | 30   | 26 | 41 | 68.5 | 64.2 | 92.5 | 88.2 | 49 | 58 | 47 | 48 |    |    |    |     |                |
| <b>LQ3F63</b> |                        |      |    |    |      |      |      |      |    | 69 |    |    |    |    |    |     |                |
| <b>LQ3F64</b> |                        |      |    |    |      |      | 94.5 | 90.2 |    | 84 | 55 | 56 | 16 | 10 | 36 | 22  | 22             |

### Inch Size

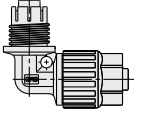
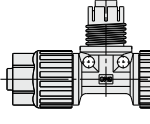
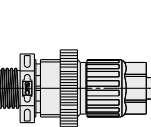
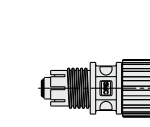
| Model         | Applicable tubing O.D. | E    | E'   | H  | L1   | L1'  | L2   | L2'  | M  | P  | Q  | R  | S  | T  | W  | N   | Min. port size |
|---------------|------------------------|------|------|----|------|------|------|------|----|----|----|----|----|----|----|-----|----------------|
| <b>LQ3F2B</b> | 1/4"                   | 17   | 16   | 16 | 32.1 | 30.9 | 56.1 | 54.9 | 20 | 58 | 42 | 43 | 14 | 10 | 14 | 4   | 4              |
| <b>LQ3F4B</b> | 1/2"                   | 24.5 | 22.5 | 24 | 49   | 46.8 | 73   | 70.8 | 29 | 58 | 42 | 43 | 14 | 10 | 22 | 9.5 | 9.5            |
| <b>LQ3F4C</b> |                        |      |      |    |      |      |      |      |    | 69 |    |    |    |    |    |     |                |
| <b>LQ3F5A</b> | 3/4"                   | 26.5 | 24   | 32 | 58   | 55.3 | 80   | 77.3 | 37 | 53 |    |    | 12 |    |    |     |                |
| <b>LQ3F5B</b> |                        |      |      |    |      |      | 82   | 79.3 |    | 58 | 42 | 43 |    | 10 | 30 | 16  | 16             |
| <b>LQ3F5C</b> |                        |      |      |    |      |      |      |      |    | 69 |    |    | 14 |    |    |     |                |
| <b>LQ3F6B</b> | 1"                     | 30   | 26   | 41 | 68.5 | 64.2 | 92.5 | 88.2 | 49 | 58 | 47 | 48 |    |    |    |     |                |
| <b>LQ3F6C</b> |                        |      |      |    |      |      |      |      |    | 69 |    |    |    |    |    |     |                |
| <b>LQ3F6D</b> |                        |      |      |    |      |      | 94.5 | 90.2 |    | 84 | 55 | 56 | 16 | 10 | 36 | 22  | 22             |

## How to Order Space Saving Type Fittings

This product, for use with products with one nut attached (insert bushing) has one nut removed.

**LQ3 E 6A - SN -**

**Fitting type** ●

| E                                                                                                                                             | T                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <p data-bbox="295 526 456 539"><b>Union Elbow</b></p>        | <p data-bbox="478 526 638 539"><b>Union Tee</b></p>  |
| <p data-bbox="295 685 456 698"><b>P</b></p>                                                                                                   | <p data-bbox="478 685 638 698"><b>U</b></p>                                                                                           |
| <p data-bbox="295 730 456 745"><b>Panel Mount Union</b></p>  | <p data-bbox="478 730 638 745"><b>Union</b></p>      |

- **Packaging**

| Symbol     | Packaging                                    |
|------------|----------------------------------------------|
| <b>Nil</b> | Clean packaging equivalent to ISO Class 5    |
| <b>1</b>   | Standard packaging equivalent to ISO Class 7 |

- **Without a nut (including insert bushing) in one part**

- **Applicable tubing size**

| Symbol   |          | Applicable tubing size<br>size (mm) |
|----------|----------|-------------------------------------|
| Size     | No.      |                                     |
| <b>2</b> | <b>1</b> | 6 x 4                               |
| <b>3</b> | <b>1</b> | 10 x 8                              |
| <b>3</b> | <b>2</b> | 8 x 6                               |
| <b>4</b> | <b>1</b> | 12 x 10                             |
| <b>5</b> | <b>1</b> | 19 x 16                             |
| <b>6</b> | <b>1</b> | 25 x 22                             |

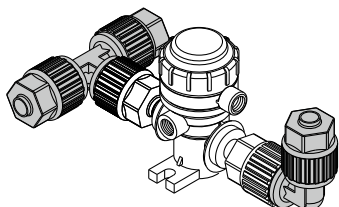
| Symbol   |          | Applicable tubing size (inch) |
|----------|----------|-------------------------------|
| Size     | No.      |                               |
| <b>2</b> | <b>A</b> | 1/4" x 5/32"                  |
| <b>3</b> | <b>A</b> | 3/8" x 1/4"                   |
| <b>4</b> | <b>A</b> | 1/2" x 3/8"                   |
| <b>5</b> | <b>A</b> | 3/4" x 5/8"                   |
| <b>6</b> | <b>A</b> | 1" x 7/8"                     |

Note 1) Please choose the same size fitting as the fitting of the connecting product.

Note 2) For details of applicable tubing sizes, refer to page 309.

Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

## Connection example



## Options

### Blanking plug

**LQ3-1 P 03-1-**

Size

| Symbol | Size |
|--------|------|
| 1      | 1    |
| 2      | 2    |
| 3      | 3    |
| 4      | 4    |
| 5      | 5    |
| 6      | 6    |
| 7      | 7    |

Fitting type

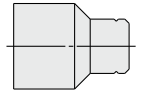
| Symbol | Type |
|--------|------|
| P      | Plug |

Thread type

| Symbol | Type |
|--------|------|
| 1      | Male |

#### Packaging

| Symbol | Packaging                                    |
|--------|----------------------------------------------|
| Nil    | Clean packaging equivalent to ISO Class 5    |
| 1      | Standard packaging equivalent to ISO Class 7 |



Used to block fittings which are not being used.

#### Applicable tubing size

##### Metric Size

| Symbol | Applicable tubing size | Size |
|--------|------------------------|------|
| 03     | ø3 x ø2                | 1    |
| 04     | ø4 x ø3                |      |
| 06     | ø6 x ø4                | 2    |
| 08     | ø8 x ø6                | 3    |
| 10     | ø10 x ø8               |      |
| 12     | ø12 x ø10              | 4    |
| 19     | ø19 x ø16              | 5    |
| 25     | ø25 x ø22              | 6    |

##### Inch Size

| Symbol | Applicable tubing size | Size |
|--------|------------------------|------|
| 03     | 1/8" x 0.086"          | 1    |
| 07     | 1/4" x 5/32"           | 2    |
| 11     | 3/8" x 1/4"            | 3    |
| 13     | 1/2" x 3/8"            | 4    |
| 19     | 3/4" x 5/8"            | 5    |
| 25     | 1" x 7/8"              | 6    |
| 32     | 1 1/4" x 1.1"          | 7    |

Note) For details of the applicable tubing sizes, refer to page 309.

### Tubing plug

**LQ3-1 P 03-2-**

Size

| Symbol | Size |
|--------|------|
| 1      | 1    |
| 2      | 2    |
| 3      | 3    |
| 4      | 4    |
| 5      | 5    |
| 6      | 6    |

Fitting type

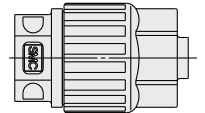
| Symbol | Type |
|--------|------|
| P      | Plug |

Type of piping

| Symbol | Type   |
|--------|--------|
| 2      | Tubing |

#### Nut material, packaging

| Symbol | Nut material | Packaging                                    |
|--------|--------------|----------------------------------------------|
| Nil    | PFA          | Clean packaging equivalent to ISO Class 5    |
| 1      | PFA          | Standard packaging equivalent to ISO Class 7 |
| 2      | PVDF         | Clean packaging equivalent to ISO Class 5    |
| 3      | PVDF         | Standard packaging equivalent to ISO Class 7 |



Used to block tubing which are not being used.

#### Applicable tubing size

##### Metric Size

| Symbol | Applicable tubing size | Size |
|--------|------------------------|------|
| 03     | ø3 x ø2                | 1    |
| 04     | ø4 x ø3                |      |
| 06     | ø6 x ø4                | 2    |
| 08     | ø8 x ø6                | 3    |
| 10     | ø10 x ø8               |      |
| 12     | ø12 x ø10              | 4    |
| 19     | ø19 x ø16              | 5    |
| 25     | ø25 x ø22              | 6    |

##### Inch Size

| Symbol | Applicable tubing size | Size |
|--------|------------------------|------|
| 03     | 1/8" x 0.086"          | 1    |
| 07     | 1/4" x 5/32"           | 2    |
| 11     | 3/8" x 1/4"            | 3    |
| 13     | 1/2" x 3/8"            | 4    |
| 19     | 3/4" x 5/8"            | 5    |
| 25     | 1" x 7/8"              | 6    |

Note) For details of the applicable tubing sizes, refer to page 309.

### Nut

**LQ3-1 N 03-**

Size

| Symbol | Size |
|--------|------|
| 1      | 1    |
| 2      | 2    |
| 3      | 3    |
| 4      | 4    |
| 5      | 5    |
| 6      | 6    |
| 7      | 7    |

Fitting type

| Symbol | Type |
|--------|------|
| N      | Nut  |

#### Nut material, packaging

| Symbol | Nut material | Packaging                                    |
|--------|--------------|----------------------------------------------|
| Nil    | PFA          | Clean packaging equivalent to ISO Class 5    |
| 1      | PFA          | Standard packaging equivalent to ISO Class 7 |
| 2      | PVDF         | Clean packaging equivalent to ISO Class 5    |
| 3      | PVDF         | Standard packaging equivalent to ISO Class 7 |

#### Applicable tubing size

##### Metric Size

| Symbol | Applicable tubing size | Size |
|--------|------------------------|------|
| 03     | ø3 x ø2                | 1    |
| 04     | ø4 x ø3                |      |
| 06     | ø6 x ø4                | 2    |
| 08     | ø8 x ø6                | 3    |
| 10     | ø10 x ø8               |      |
| 12     | ø12 x ø10              | 4    |
| 19     | ø19 x ø16              | 5    |
| 25     | ø25 x ø22              | 6    |

##### Inch Size

| Symbol | Applicable tubing size | Size |
|--------|------------------------|------|
| 03     | 1/8" x 0.086"          | 1    |
| 07     | 1/4" x 5/32"           | 2    |
| 11     | 3/8" x 1/4"            | 3    |
| 13     | 1/2" x 3/8"            | 4    |
| 19     | 3/4" x 5/8"            | 5    |
| 25     | 1" x 7/8"              | 6    |
| 32     | 1 1/4" x 1.1"          | 7    |

#### Quantity

| Symbol | Quantity per package | Applicable size |
|--------|----------------------|-----------------|
| Nil    | 1 pc.                | 1 to 4 5, 6 7   |
| 10     | 10 pcs.              | 1 to 4 5, 6 7   |
| 50     | 50 pcs.              | 1 to 4 5, 6 7   |
| 100    | 100 pcs.             | 1 to 4 5, 6 7   |

Note 1) For symbols "10," "50," and "100," the respective number of nuts are packaged as a set. For symbol "Nil," it is packaged individually.

Note 2) Pay attention to the quantity ordered. Ex.) When ordering 3 sets using the part number "LQ3-1N03-50" (50 pcs.), 150 pcs. will be ordered.

Note) For details of the applicable tubing sizes, refer to page 309.

# Fluoropolymer Bore Through Connector

## LQHB Series

RoHS

### How to Order

#### Tubing connection

LQHB 07 - -

#### Fitting type

| Symbol | Type                   |
|--------|------------------------|
| HB     | Bore through connector |

#### Nut material, packaging

| Symbol | Nut material | Packaging                                    |
|--------|--------------|----------------------------------------------|
| Nil    | PFA          | Clean packaging equivalent to ISO Class 5    |
| 1      | PFA          | Standard packaging equivalent to ISO Class 7 |

#### Thread type

| Symbol | Type |
|--------|------|
| Nil    | R    |
| N      | NPT  |

#### Size combination

| Symbol | Size | Applicable tubing size (mm) | Tubing O.D. |
|--------|------|-----------------------------|-------------|
| 03     | 1    | 3 x 2                       | 1/8"        |
| 04     |      | 4 x 3                       |             |
| 06     | 2    | 6 x 4                       | 1/4"        |
| 08     | 3    | 8 x 6                       | 3/8"        |
| 10     |      | 10 x 8                      |             |
| 12     | 4    | 12 x 10                     | 1/2"        |
| 19     | 5    | 19 x 16                     | 3/4"        |
| 25     | 6    | 25 x 22                     | 1"          |

| Symbol | Size | Applicable tubing size (inch) | Tubing O.D. |
|--------|------|-------------------------------|-------------|
| 03     | 1    | 1/8" x 0.086"                 | 1/8"        |
| 07     | 2    | 1/4" x 5/32"                  | 1/4"        |
| 11     | 3    | 3/8" x 1/4"                   | 3/8"        |
| 13     | 4    | 1/2" x 3/8"                   | 1/2"        |
| 19     | 5    | 3/4" x 5/8"                   | 3/4"        |
| 25     | 6    | 1" x 7/8"                     | 1"          |

Note) For details of the applicable tubing sizes, refer to page 309.

### Specifications

|                                      |                                        |
|--------------------------------------|----------------------------------------|
| Maximum operating pressure (at 20°C) | 1.0 MPa ( Refer to Note 1)             |
| Operating temperature                | 0 to 200°C (Refer to Note 1)           |
| Applicable tube diameter             | Please refer to the Combination Chart. |

### Precautions

1. The operating pressure or operating temperature range for each tubing size differs depending on the usage conditions. Keep the supplied fluid pressure and temperature within the range of each specification.
2. The piping should be arranged in such a way that no extraction force other than the fluid pressure should be added to the tubing.
3. Avoid using in instances where the nut is soaked in the fluid.
4. Screw in the R or NPT screw after inserting the tubing. (If the screw is screwed in first, the tubing may be hard to insert.)

### Piping

#### Caution

1. As with the nut tightening, refer to the tightening torques below as a guide.

#### Tightening torque for piping

| Body size | Torque (N·m) |
|-----------|--------------|
| 1         | 0.7 to 0.9   |
| 2         | 1.6 to 1.8   |
| 3         | 3.2 to 3.5   |
| 4         | 5.0 to 5.3   |
| 5         | 10.0 to 10.5 |
| 6         | 22.5 to 23.0 |

#### 2. Tightening

After tightening the nut by hand, use the nut tightening wrench dedicated to the LQ1 to tighten the nut securely. The tightening is enough when the clearance between the end face of the nut and the body is 2 mm or less (Refer to figure 1).

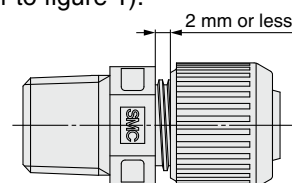
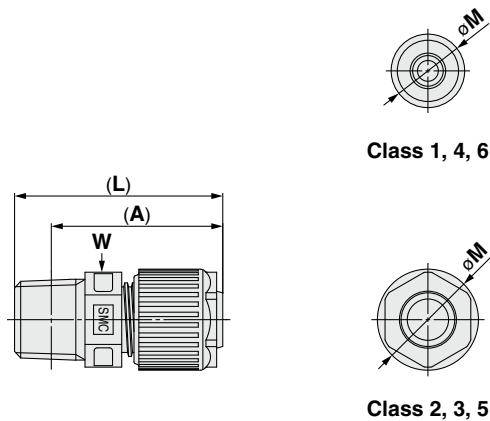


Fig. 1

## Dimensions



### Metric Size

| Model    | Size | A    | L    | M    | W  |
|----------|------|------|------|------|----|
| LQHB03-□ | 1    | 22.5 | 27   | 11.5 | 10 |
| LQHB04-□ |      |      |      |      |    |
| LQHB06-□ | 2    | 27.5 | 34   | 16.5 | 14 |
| LQHB08-□ | 3    | 34.5 | 42.1 | 23   | 19 |
| LQHB10-□ |      |      |      |      |    |
| LQHB12-□ | 4    | 40   | 49   | 28   | 23 |
| LQHB19-□ | 5    | 50   | 61.1 | 39   | 32 |
| LQHB25-□ | 6    | 66   | 77   | 49   | 46 |

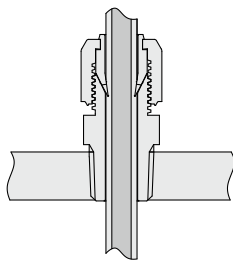
### Inch Size

| Model    | Size | A    | L    | M    | W  |
|----------|------|------|------|------|----|
| LQHB03-□ | 1    | 22.5 | 27   | 11.5 | 10 |
| LQHB07-□ | 2    | 27.5 | 34   | 16.5 | 14 |
| LQHB11-□ | 3    | 34.5 | 42.1 | 23   | 19 |
| LQHB13-□ | 4    | 40   | 49   | 28   | 23 |
| LQHB19-□ | 5    | 50   | 61.1 | 39   | 32 |
| LQHB25-□ | 6    | 66   | 77   | 49   | 46 |

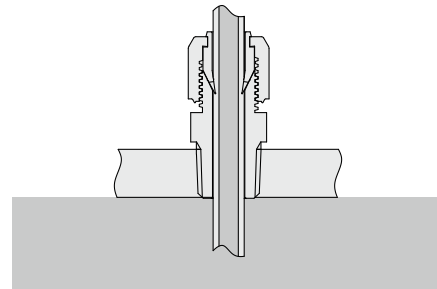
## Types of Use

There are presumably two different types of use for the bore through connector as indicated in conditions A and B, and the specifications will differ according to the type of use.

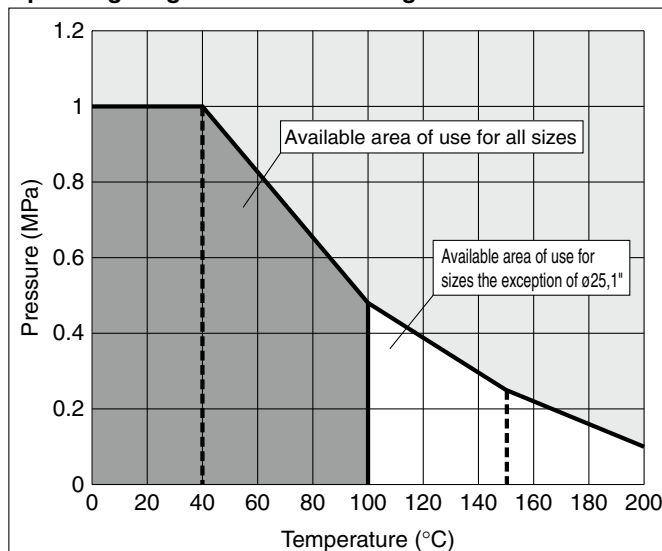
- Condition A**
- For applications including boring through panels or walls, etc.
  - Atmospheric release.



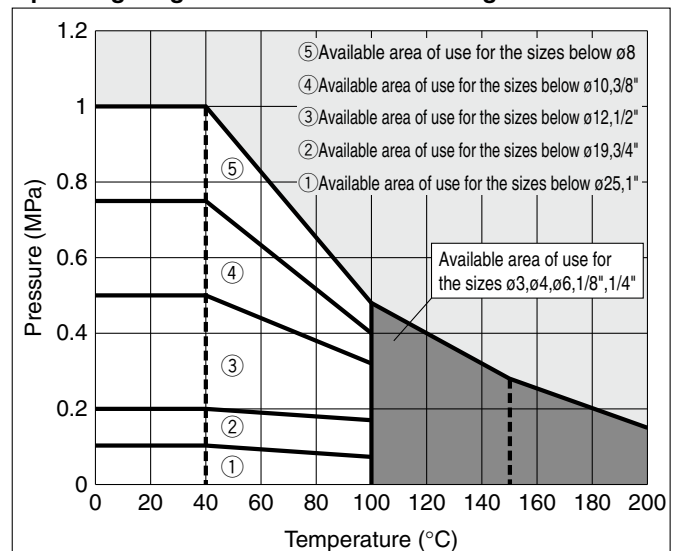
- Condition B**
- For applying sustained pressure to the female thread.
  - Using the same pressure and temperature as that of the inside of the tube.



### Operating range for the bore through connector



### Operating range of use for the bore through connector





# LVN/LQ1/LQ3/LQHB Series

## Applicable Fluids

### Material and fluid compatibility check list for high purity fluoropolymer fittings

| Chemical                        |      | Compatibility |
|---------------------------------|------|---------------|
| Acetic acid                     | 100% | ○             |
| Acetone                         | 100% | ○ Note 1,2)   |
| Ammonium fluoride               | 40%  | ○             |
| Ammonium hydroxide              | 30%  | ○             |
| Butyl acetate                   | 100% | ○             |
| Methylene chloride              | 100% | ○             |
| Hydrochloric acid               | 38%  | ○             |
| Hydrofluoric acid               | 50%  | ○             |
| Hydrogen peroxide               | 60%  | ○             |
| Methanol                        | 100% | ○             |
| Methyl ethyl Ketone             | —    | ○ Note 2)     |
| Nitric acid                     | 70%  | ○ Note 2)     |
| Phosphoric acid                 | 86%  | ○             |
| Caustic potash                  | 85%  | ○             |
| Sulfuric acid                   | 100% | ○ Note 2)     |
| Toluene                         | —    | ○ Note 1,2)   |
| Xylene                          | —    | ○ Note 2)     |
| Sodium hydroxide (caustic soda) | 100% | ○ Note 2)     |
| 1.1.1-Trichloroethane           | 100% | ○ Note 2)     |
| Phosphorus pentachloride        | —    | ○             |
| Isobutyl alcohol                | —    | ○ Note 1)     |
| Isopropyl alcohol               | —    | ○ Note 1)     |
| Ozone                           | —    | ○             |
| Ethyl acetate                   | —    | ○ Note 1,2)   |
| DI water (Pure water)           | —    | ○             |
| Nitrogen                        | —    | ○             |
| Ultrapure water                 | —    | ○             |
| Tmah                            | —    | ○ Note 2)     |

Table symbol ○ : can be used.

The material and fluid compatibility check list provides reference values as a guide only.

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

Note 2) In the case of nut with PVDF material, it cannot be used due to atmosphere or temperature. Use the nut with PFA material.

- Fluid temperature indicates compatibility below 200°C (below 150°C in the case of a nut with PVDF material).
- 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.



# LVN/LQ1/LQ3/LQHB Series Fluoropolymer Needle Valve/Fittings/ Bore Through Connector/ Precautions 1

Be sure to read this before handling the products.  
Refer to page 501 for Safety Instructions.

## 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. Fluid

Operate within the indicated fluid temperature range.

#### 3. Maintenance space

Ensure the necessary space for maintenance and inspections.

#### 4. Fluid pressure range

Keep the supplied fluid pressure within the operating pressure range shown in the catalog.

#### 5. Countermeasures for static electricity

Since static electricity may be generated depending on the fluid being used, implement suitable countermeasures.

## Mounting

### Warning

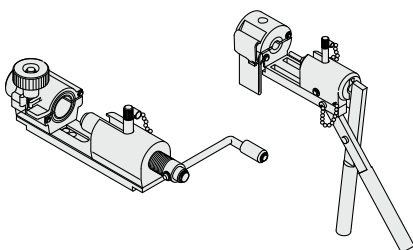
#### 1. After mounting, perform suitable function and leak tests to confirm that the mounting is correct.

## Piping

### Caution

#### 1. Connect tubing with special tools.

Refer to the pamphlet "High-Purity Fluoropolymer Fittings Hyper Fitting/LQ1, 2 Series Work Procedure Instructions" (M-E05-1) for connecting tubing and special tools. (Downloadable from our web site.)



## Piping

### Caution

#### 2. Tighten the nut until it touches the end surface of the body, and then tighten it an additional 1/8 turn. If the nut won't turn any further, then it means a sufficient tightening has occurred. Refer to the proper tightening torques shown below.

##### Nut tightening torque for piping

| Body class | Torque (N·m) |              |            |
|------------|--------------|--------------|------------|
|            | LQ1          | LQ3          | LVN        |
| 1          | — Note 1)    | 0.7 to 0.9   | —          |
| 2          | 0.3 to 0.4   | 1.6 to 1.8   | 1.5 to 2.0 |
| 3          | 0.8 to 1.0   | 3.2 to 3.5   | 3.0 to 3.5 |
| 4          | 1.0 to 1.2   | 5.0 to 5.3   | 7.5 to 9.0 |
| 5          | 2.5 to 3.0   | 10.0 to 10.5 | —          |
| 6          | 5.5 to 6.0   | 22.5 to 23.0 | —          |
| 7          | —            | 23.0 to 26.5 | —          |

Note 1) The LQ1 Body class 1 must be tightened manually.

Note 2) Refer to page 305 for the LQHB series.

#### 3. Use sealant tape for the piping of taper thread parts such as LQ□H and LQ□L.

Tape the ridges tightly with the sealant tape, starting one ridge width left from thread end side. 3 to 4 sealant tapes are required.

##### Taper thread mounting torque

| Bore size | Torque (N·m) |
|-----------|--------------|
| 1/8       | 0.6 to 0.9   |
| 1/4       | 0.8 to 1.2   |
| 3/8       | 1.0 to 1.6   |
| 1/2       | 1.5 to 2.0   |
| 3/4       | 2.0 to 2.7   |
| 1         | 2.5 to 3.6   |
| 1 1/4     | 5.5 to 7.5   |

#### 4. Nut tightening torque for the panel mount union.

##### Nut tightening torque for the panel mount union

| Body class | Torque (N·m) |
|------------|--------------|
| 1          | 0.5 to 0.6   |
| 2          | 0.6 to 0.7   |
| 3          | 1.2 to 1.3   |
| 4          | 4.5 to 4.6   |
| 5          | 6.8 to 6.9   |
| 6          | 12.4 to 12.5 |





# LVN/LQ1/LQ3/LQHB Series Fluoropolymer Needle Valve/Fittings/ Bore Through Connector/ Precautions 2

Be sure to read this before handling the products.  
Refer to page 501 for Safety Instructions.

## Operating Environment

### ⚠ Warning

1. Do not use in locations having an explosive atmosphere.
2. Do not operate in locations where vibration or impact occurs.
3. In locations near heat sources, block off radiated heat.

## Maintenance

### ⚠ Warning

1. When removing or reinstalling fittings, remove any remaining chemicals and carefully replace them with DI water (pure water) or air, etc., before beginning work activities.
2. Tightening of taper threads for piping  
Because the taper threads are made of resin, minute leakage may gradually occur due to stress relaxation. Perform periodic inspections, and if leakage is detected correct the problem by additional tightening. If additional tightening becomes ineffective, replace the fitting with a new product.
3. Check the following during regular maintenance, and replace components as necessary.
  - a) Scratches, gouges, abrasion, corrosion
  - b) Twisting, flattening or distortion of tubing
  - c) Hardening, deterioration or softening of tubing
4. Do not repair or patch the replaced tubing or fittings for reuse.

## Operating Precautions

### ⚠ Warning

1. Operate within the range of the maximum operating pressure.

### ⚠ Caution

1. After a long period of non-use, perform inspections before beginning operation.
2. Use sufficient care in the handling of the LQ series clean packaging types when their packaging is opened.
3. The LVN series cannot be used as a stop valve. Be careful not to apply any excessive force to the stroke end, which fully opens and closes, to avoid accidental damage or changes in flow rate characteristics.

## Installation of Tubing

### ⚠ Caution

1. Cut the end of the tubing at a right angle and pass it through the fitting nut. After placing the tubing in the holder, push it onto the insert bushing until it stops and clamp it with the knob.  
As a guide when tightening the tubing with the knob, maintain a uniform gap (approx. 2 mm) on both sides of the holder.
  - When the tubing is curved, straighten it out before using it.
  - The tubing may slip if there is oil or dust, etc., on the holder. Remove the contamination using alcohol or another suitable cleaner.

## Use of Tubing

### ⚠ Caution

1. Refer to the applicable tubing sizes shown below for tubing to be used.

#### Applicable tubing sizes

|              | Connection tubing size | O.D. (mm)     |              | Internal thickness (mm) |           |  |
|--------------|------------------------|---------------|--------------|-------------------------|-----------|--|
|              |                        | Standard size | Tolerance    | Standard size           | Tolerance |  |
| Metric sizes | ø3 x ø2                | 3.0           | +0.2<br>−0.1 | 0.5                     | ±0.06     |  |
|              | ø4 x ø3                | 4.0           |              | 1.0                     | ±0.1      |  |
|              | ø6 x ø4                | 6.0           |              |                         |           |  |
|              | ø8 x ø6                | 8.0           |              |                         |           |  |
|              | ø10 x ø8               | 10.0          |              |                         |           |  |
|              | ø12 x ø10              | 12.0          |              | 1.5                     | ±0.15     |  |
|              | ø19 x ø16              | 19.0          | +0.3<br>−0.1 |                         |           |  |
|              | ø25 x ø22              | 25.0          |              |                         |           |  |
| Inch sizes   | 1/8" x 0.086"          | 3.18          | +0.2<br>−0.1 | 0.5                     | ±0.1      |  |
|              | 3/16" x 1/8"           | 4.75          |              | 0.8                     |           |  |
|              | 1/4" x 5/32"           | 6.35          |              | 1.2                     | ±0.12     |  |
|              | 3/8" x 1/4"            | 9.53          |              | 1.6                     | ±0.15     |  |
|              | 1/2" x 3/8"            | 12.7          | +0.3<br>−0.1 |                         |           |  |
|              | 3/4" x 5/8"            | 19.0          |              |                         |           |  |
|              | 1" x 7/8"              | 25.4          |              |                         |           |  |
|              | 1 1/4" x 1.1"          | 31.75         | ±0.25        | 1.9                     | ±0.2      |  |
|              | 1 1/2" x 1.33"         | 38.1          | ±0.2         | 2.2                     | ±0.2      |  |

## Return of Product

### ⚠ Warning

If the product to be returned is contaminated or is possibly contaminated with substances that are harmful to humans, for safety reasons, please contact SMC beforehand and then employ a specialist cleaning company to decontaminate the product. After the decontamination prescribed above has been carried out, submit a Product Return Request Sheet or the Detoxification/Decontamination Certificate to SMC and await SMC's approval and further instructions before attempting to return the item.  
Please refer to the International Chemical Safety Cards (ICSC) for a list of harmful substances.