

Fluoropolymer Piping Equipment

RoHS

LVN/LQ1/LQ3/LQHB Series

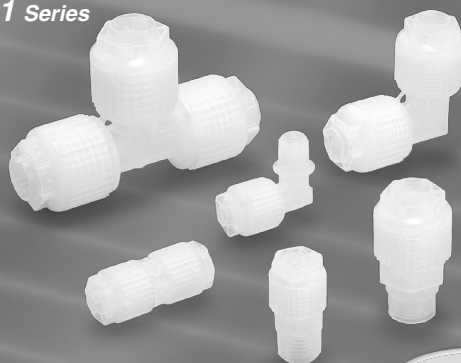
Clean Wet Series

Needle Valve
LVN Series



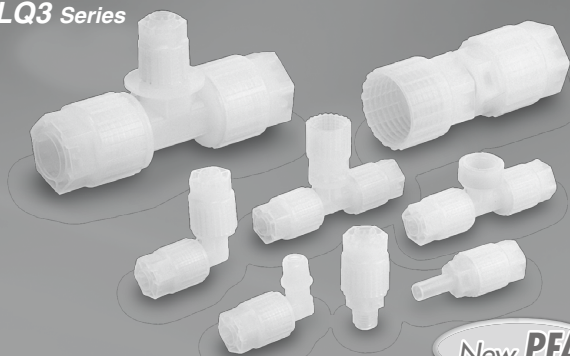
New **PFA**

Fluoropolymer Fittings Hyper Fittings
LQ1 Series



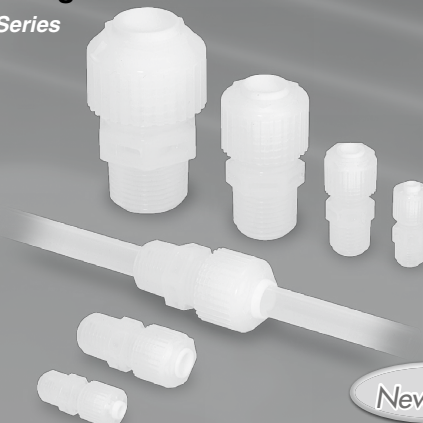
New **PFA**

**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.

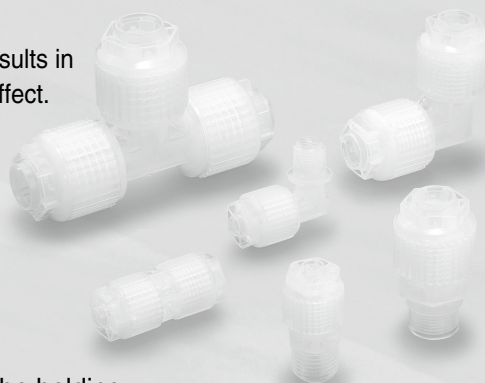
● Flow-through characteristics

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.

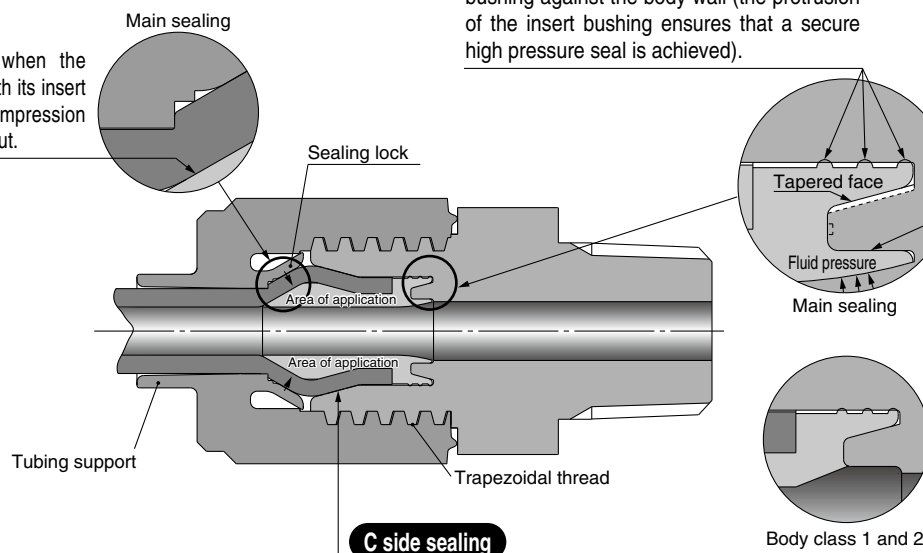
Main sealing

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.



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.

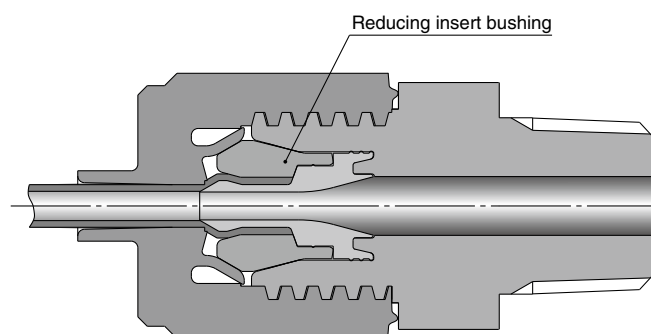
● Easy tightening of nuts.

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

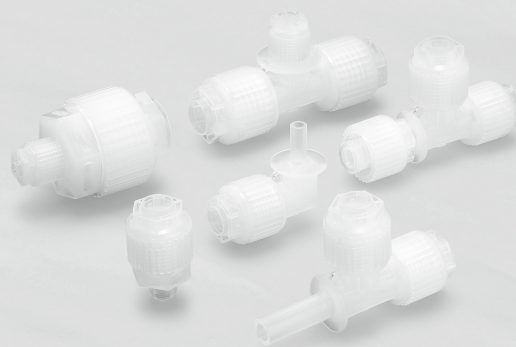
● Tubing sizes are interchangeable.

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

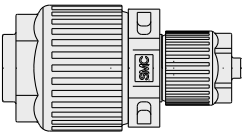
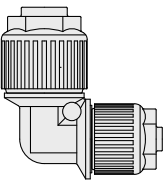
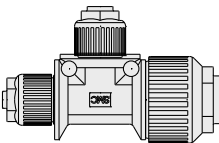
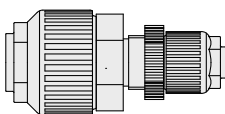
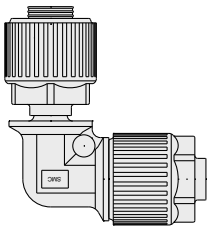
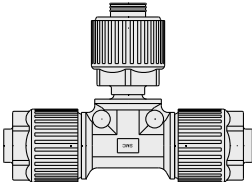
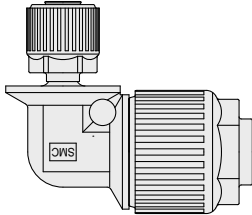
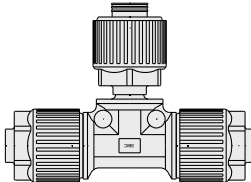
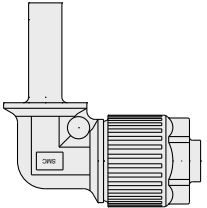
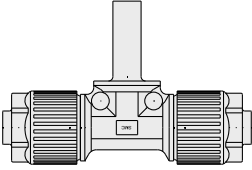
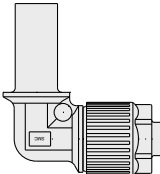
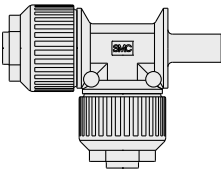
Reducing type



● LQ1 Series Addition of variations



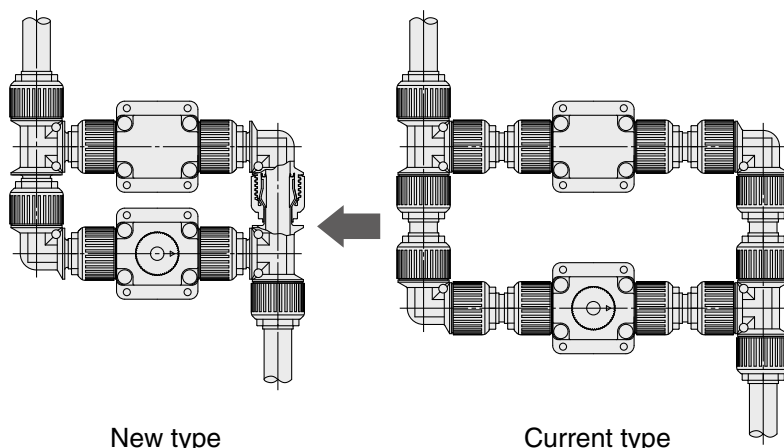
● Newly introduced shape

Union reducing 	Union elbow reducing 	Union tee reducing 	Panel mount union reducing 
Space saving union elbow 	Space saving union tee 	Space saving union elbow reducing 	Space saving union tee reducing 
Tubing extension union elbow 	Tubing extension union tee 	Tubing extension union elbow reducing 	Tubing extension union tee reducing 

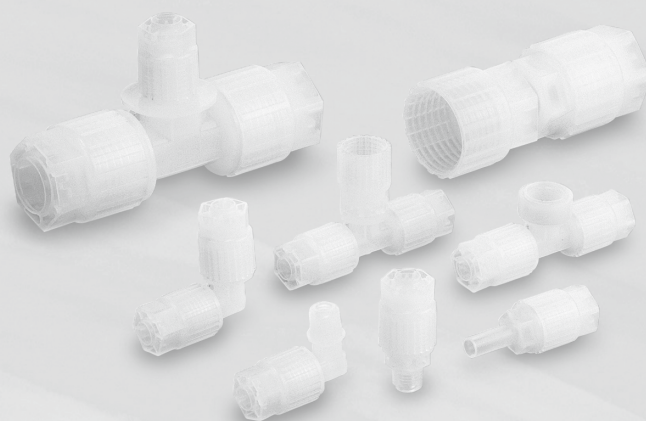
● Space-saving, piping work-saving

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

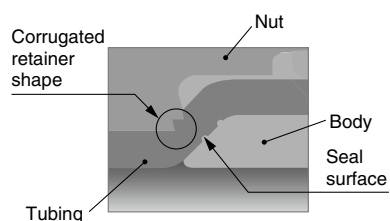
Cut down on longitudinal dimension



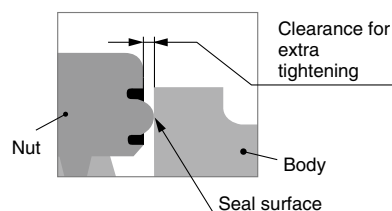
- Flare type collet construction
- Triple-seal construction
- Ease of installation
- Excellent flow-through characteristics
- Excellent heat resistance
- 200°C compatible



- 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.

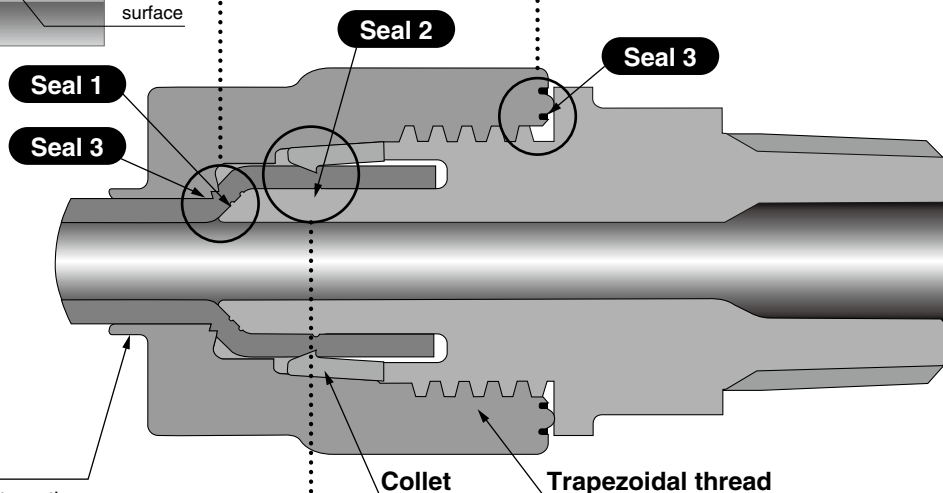


- To establish the tightening position, a gauge control is not required as the nut is designed to be tightened until the end surface of the fitting's main body.



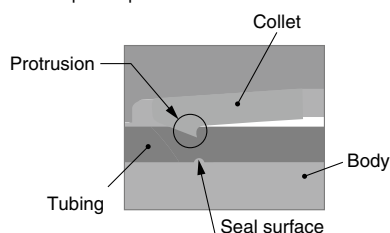
Tubing support

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.

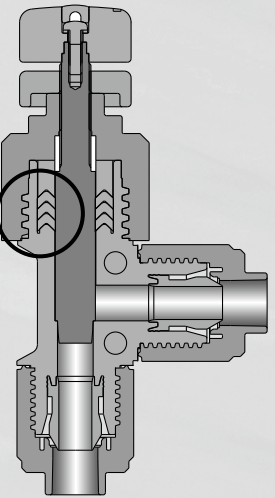


● Fluid adjustment range 0 to 12 L/min

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

● Triple seal construction

Triple seal construction



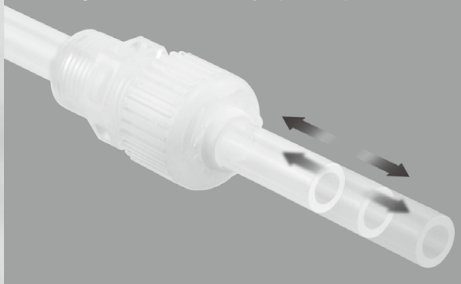
Fluoropolymer Bore Through Connector *LQHB Series*

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

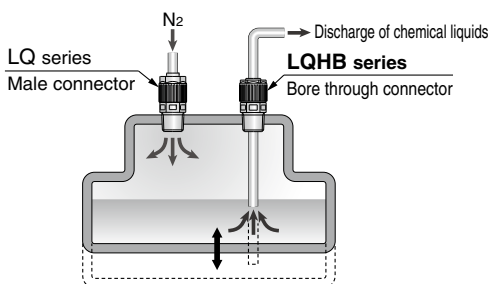
Trapezoidal thread allows application of high torque.

Collet

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

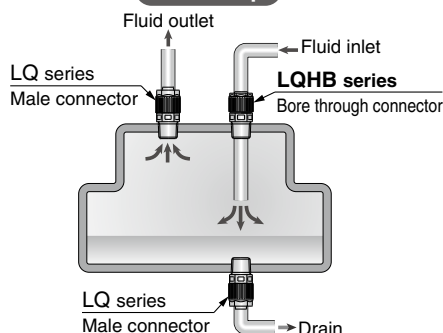
Applications

Pressure feed of chemical liquids

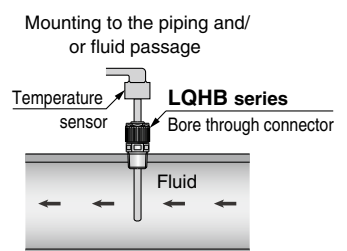


A changing of the tube position is available in accordance with the depth of the container.

Water trap

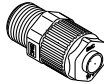
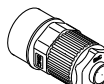
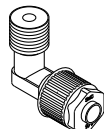
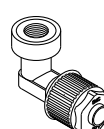
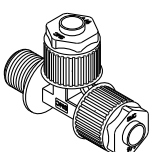
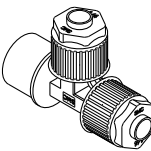


Fluid temperature control

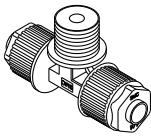
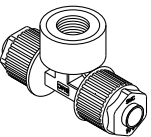
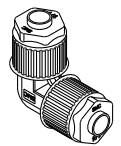
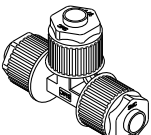
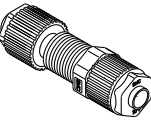
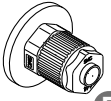


LQ1 Series

LQ1 Series P.241

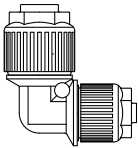
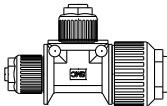
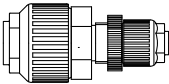
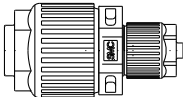
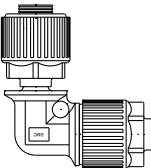
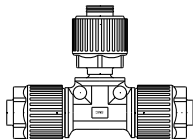
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											Metric size								Inch size							
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Connector LQ1H	Male	 P.244	1	-	○	-	-	-	-	-	○	○	-	-	-	-	-	-	○	-	-	-	-	-		
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Elbow LQ1L	Male	 P.246	1	-	○	-	-	-	-	-	○	○	-	-	-	-	-	-	○	-	-	-	-	-		
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Run tee LQ1R	Male	 P.248	1	-	○	-	-	-	-	-	○	○	-	-	-	-	-	-	○	-	-	-	-	-		
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Note) ○Basic size ●With reducer

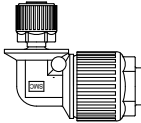
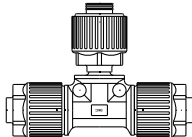
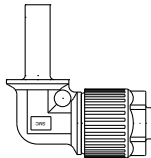
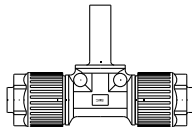
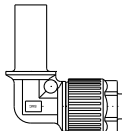
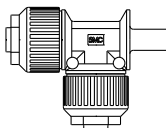
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Branch tee LQ1B	Male	 P.250	1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
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			3	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Female	 P.251	1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			2	○	○	○	○	○	○	●	●	○	○	○	○	○	○	●	●	○	○	○	○	○
			3	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Union elbow LQ1E	 P.252	1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		2	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	●	●	○	○	○	○	○
		3	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Union tee LQ1T	 P.253	1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		2	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	●	●	○	○	○	○	○
		3	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Panel mount union LQ1P	 P.254	1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		2	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	●	●	○	○	○	○	○
		3	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Union LQ1U	 P.255	1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		2	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	●	●	○	○	○	○	○
		3	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Union flange LQ1F	 P.255	4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Note) ○Basic size ●With reducer

LQ1 Series

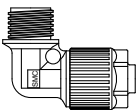
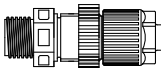
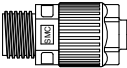
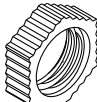
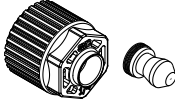
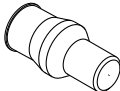
Series	Appearance	Class	Tubing O.D.																Can be connected body class					
			Metric size								Inch size													
			ø3	ø4	ø6	ø8	ø10	ø12	ø19	ø25	1/8"	3/16"	1/4"	3/8"	1/2"	3/4"	1"	2	3	4	5	6		
Union elbow reducing LQ1E-R	 P.256	3	-	-	-	-	-	-	-	●	-	-	○	-	-	-	-	-	-	-	-			
		4	-	●	●	●	-	○	-	-	●	●	●	-	○	-	-	-	-	-	-			
		5	-	●	●	●	●	-	○	-	-	●	●	●	-	○	-	-	-	-	-			
		6	-	-	●	●	●	●	-	○	-	●	●	●	●	-	○	-	-	-	-			
Union tee reducing LQ1T-R	 P.258	3	●	-	●	●	○	-	-	-	-	●	○	-	-	-	-	-	-	-				
		4	●	-	●	●	●	○	-	-	●	-	●	●	○	-	-	-	-	-				
		5	●	●	●	●	●	●	○	-	●	-	●	●	●	○	-	-	-	-				
		6	-	-	●	●	●	●	●	○	-	-	●	●	●	●	○	-	-	-				
Panel mount union reducing LQ1P-R	 P.263	4	-	-	●	-	-	○	-	-	-	●	-	○	-	-	-	-	-					
		5	-	-	-	-	●	-	○	-	-	-	●	-	○	-	-	-	-					
Union reducing LQ1U-R	 P.264	3	●	●	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-					
		4	●	●	●	●	-	○	-	-	●	●	●	-	○	-	-	-	-					
		5	●	●	●	●	●	-	○	-	●	●	●	●	-	○	-	-	-					
		6	-	-	●	-	●	●	-	○	-	-	●	●	●	-	○	-	-					
Space saving union elbow LQ1E-SS	 P.265	2	-	-	○	-	-	-	-	-	-	○	-	-	-	-	○	-	-					
		3	-	-	-	●	○	-	-	-	-	-	○	-	-	-	-	○	-					
		4	-	-	-	-	-	○	-	-	-	-	-	○	-	-	-	-	○					
		5	-	-	-	-	-	-	○	-	-	-	-	-	○	-	-	-	○					
		6	-	-	-	-	-	-	-	○	-	-	-	-	-	-	○	-	-					
Space saving union tee LQ1T-S	 P.267	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 LQ1E-SS-R	 P.266	2	-	-	○	-	-	-	-	-	-	○	-	-	-	-	-	○	○	-	-	-	-
		3	-	-	-	○	○	-	-	-	-	-	○	-	-	-	-	○	○	○	-	-	-
		4	-	-	-	-	-	○	-	-	-	-	-	○	-	-	-	○	○	-	○	-	-
		5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		6	-	-	-	-	-	-	-	○	-	-	-	-	-	-	○	-	-	-	○	-	-
Space saving union tee reducing LQ1T-S-R	 P.268	2	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	
		3	-	-	-	●	-	-	-	-	-	●	○	-	-	-	-	○	-	-	-	-	
		4	-	-	-	-	-	○	-	-	-	-	●	○	-	-	-	○	-	○	-	-	
		5	-	-	○	-	-	●	○	-	-	●	-	●	○	-	-	○	○	○	○	○	
		6	-	-	-	-	-	-	●	○	-	-	-	-	-	●	○	-	○	○	○	○	
Tubing extension union elbow LQ1E-T	 P.270	2	-	-	○	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-		
		3	-	-	-	●	○	-	-	-	-	-	○	-	-	-	-	-	-	-	-		
		4	-	-	-	-	-	○	-	-	-	-	-	○	-	-	-	-	-	-	-		
		5	-	-	-	-	-	-	○	-	-	-	-	-	○	-	-	-	-	-	-		
		6	-	-	-	-	-	-	-	○	-	-	-	-	-	○	-	-	-	-	-		
Tubing extension union tee LQ1T-T	 P.271	2	-	-	○	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-			
		3	-	-	-	●	○	-	-	-	-	-	○	-	-	-	-	-	-	-			
		4	-	-	-	-	-	○	-	-	-	-	-	○	-	-	-	-	-	-			
		5	-	-	-	-	-	-	○	-	-	-	-	-	○	-	-	-	-	-			
		6	-	-	-	-	-	-	-	○	-	-	-	-	-	○	-	-	-	-			
Tubing extension union elbow reducing LQ1E-T-R	 P.272	2	-	●	○	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-			
		3	-	-	-	●	○	-	-	-	-	-	○	-	-	-	-	-	-	-			
		4	-	-	-	-	-	○	-	-	-	-	-	○	-	-	-	-	-	-			
		5	-	-	-	-	-	-	○	-	-	-	-	-	○	-	-	-	-	-			
		6	-	-	-	-	-	-	-	○	-	-	-	-	-	○	-	-	-	-			
Tubing extension union tee reducing LQ1T-T-R	 P.273	2	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
		3	-	-	-	●	-	-	-	-	-	●	-	-	-	-	-	-	-	-			
		4	-	-	-	-	-	○	-	-	-	-	●	○	-	-	-	-	-	-			
		5	-	-	●	-	-	●	○	-	-	●	-	●	○	-	-	-	-	-			
		6	-	-	-	-	-	-	●	○	-	-	-	-	●	○	-	-	-	-			

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

Note) ○Basic size ●With reducer

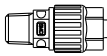
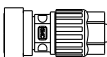
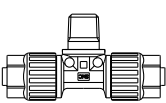
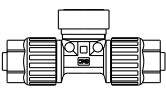
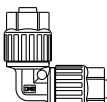
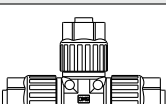
Series	Appearance	Class	Tubing O.D.														
			Metric size								Inch size						
			ø3	ø4	ø6	ø8	ø10	ø12	ø19	ø25	1/8"	3/16"	1/4"	3/8"	1/2"	3/4"	1"
Space saving type union elbow LQ1E-SN	 P.275	1	○	○	-	-	-	-	-	-	○	-	-	-	-	-	-
		2	-	●	○	-	-	-	-	-	●	●	○	-	-	-	-
		3	-	-	●	●	○	-	-	-	-	-	●	○	-	-	-
		4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

Note) ○Basic size ●With reducer

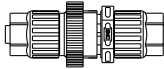
LQ3 Series

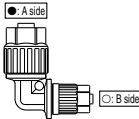
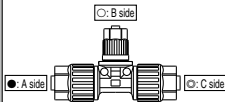
Fluoropolymer Fittings Hyper Fittings / Flare Type

LQ3 Series P.279

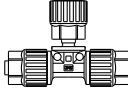
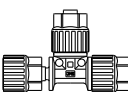
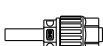
Series	Appearance	Class	Port size											Tubing O.D.													
														Metric size								Inch size					
			None	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	ø3	ø4	ø6	ø8	ø10	ø12	ø19	ø25	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"		
Connector LQ3H	Male	 P.282	1	-	●	-	-	-	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-	-	-		
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

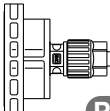
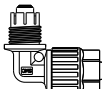
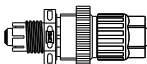
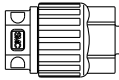
LQ3 Series

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 LQ3P	 P.291	1	●	—	—	—	—	—	—	—	●	●	—	—	—	—	—	—	●	—	—	—	—	—	
		2	●	—	—	—	—	—	—	—	—	—	●	—	—	—	—	—	—	●	—	—	—	—	
		3	●	—	—	—	—	—	—	—	—	—	—	●	●	—	—	—	—	—	●	—	—	—	
		4	●	—	—	—	—	—	—	—	—	—	—	—	—	●	—	—	—	—	—	●	—	—	
		5	●	—	—	—	—	—	—	—	—	—	—	—	—	—	●	—	—	—	—	—	●	—	
		6	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	●	—	—	—	—	●	—
Union LQ3U	 P.291	1	●	—	—	—	—	—	—	—	●	●	—	—	—	—	—	—	●	—	—	—	—	—	
		2	●	—	—	—	—	—	—	—	—	—	●	—	—	—	—	—	—	●	—	—	—	—	
		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"
Union reducing LQ3U-R	 P.292	1	○	●	-	-	-	-	-	-	-	-	-	-	-	-
		2	○	○	●	-	-	-	-	-	○	●	-	-	-	-
		3	-	○	○	●/○	●	-	-	-	○	○	●	-	-	-
		4	-	-	-	○	○	●	-	-	-	○	○	●	-	-
		5	-	-	-	-	-	○	●	-	-	○	○	○	●	-
		6	-	-	-	-	-	●	○	●	-	-	-	○	○	●
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	○
Union elbow reducing LQ3E-R	 P.293	1	○	●	-	-	-	-	-	-	-	-	-	-	-	-
		2	○	○	●	-	-	-	-	-	○	●	-	-	-	-
		3	-	○	○	●/○	●	-	-	-	○	○	●	-	-	-
		4	-	-	-	○	○	●	-	-	-	○	○	●	-	-
		5	-	-	-	-	-	○	●	-	-	○	○	○	●	-
		6	-	-	-	-	-	●	○	●	-	-	-	○	○	●
Union tee reducing LQ3T-R	 P.294	1	○/○	●/○/○	-	-	-	-	-	-	-	-	-	-	-	-
		2	○/○	○/○	●/○/○	-	-	-	-	-	○/○	●/○/○	-	-	-	-
		3	-	-	○/○	●/○/○	●/○/○	-	-	-	○	●/○/○	●/○/○	-	-	-
		4	-	-	-	-	○/○	●/○/○	-	-	-	○/○	●/○/○	●/○/○	-	-
		5	-	-	-	-	-	○/○	●/○/○	-	-	○/○	●/○/○	●/○/○	●/○/○	-
		6	-	-	-	-	-	-	○/○	●/○/○	-	○/○	○/○	●/○/○	●/○/○	●/○/○

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

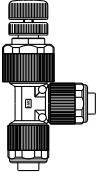
Series	Appearance	Class	Tubing O.D.													
			Metric size								Inch size					
			ø3	ø4	ø6	ø8	ø10	ø12	ø19	ø25	1/8"	1/4"	3/8"	1/2"	3/4"	1"
Space saving union elbow LQ3E-S		P.296	2	-	-	●	-	-	-	-	-	●	-	-	-	-
			3	-	-	-	●	●	-	-	-	-	●	-	-	-
			4	-	-	-	-	●	-	-	-	-	-	●	-	-
			5	-	-	-	-	-	●	-	-	-	-	-	●	-
			6	-	-	-	-	-	-	●	-	-	-	-	-	●
			7	-	-	-	-	-	-	-	-	-	-	-	-	●
			2	-	-	●	-	-	-	-	-	●	-	-	-	-
Space saving branch tee LQ3T-SB		P.297	3	-	-	-	●	●	-	-	-	-	●	-	-	-
			4	-	-	-	-	●	-	-	-	-	-	●	-	-
			5	-	-	-	-	-	●	-	-	-	-	-	●	-
			6	-	-	-	-	-	-	●	-	-	-	-	-	●
			2	-	-	●	-	-	-	-	-	●	-	-	-	-
			3	-	-	-	●	●	-	-	-	-	●	-	-	-
Space saving run tee LQ3T-SR		P.298	4	-	-	-	-	●	-	-	-	-	-	●	-	-
			5	-	-	-	-	-	●	-	-	-	-	-	●	-
			6	-	-	-	-	-	-	●	-	-	-	-	-	●
			2	-	-	●	-	-	-	-	-	●	-	-	-	-
Tubing extension straight connector LQ3H-T		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 LQ3A	 P.300	2	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-
		3	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
Union flange LQ3F	 P.302	2	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-
		3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
Space saving type union elbow LQ3E-SN	 P.303	2	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-
		3	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
Space saving type union tee LQ3T-SN	 P.303	2	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-
		3	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
Space saving type panel mount union LQ3P-SN	 P.303	2	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-
		3	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
Space saving type union LQ3U-SN	 P.303	2	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-
		3	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
Blanking plug LQ3-P-1	 P.304	1	●	●	-	-	-	-	-	-	●	-	-	-	-	-	-
		2	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-
		3	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
Tubing plug LQ3-P-2	 P.304	1	●	●	-	-	-	-	-	-	●	-	-	-	-	-	-
		2	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-
		3	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
Nut LQ3-N	 P.304	1	●	●	-	-	-	-	-	-	●	-	-	-	-	-	-
		2	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-
		3	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●

LVN/LQHB Series

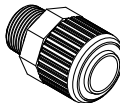
Needle Valve/
Bore Through Connector

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 LVN		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 LQHB		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.
2	2	ø4.4
3	3	ø8
4	4	ø10

Port B (OUT) different dia. size

Symbol	Application
Nil	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 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

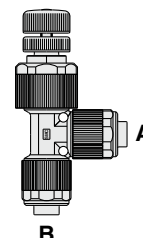
Different diameter tubing (with plug-in reducer) can be selected within the same body class.

(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)

LVN Series



⚠ Specific Product Precautions

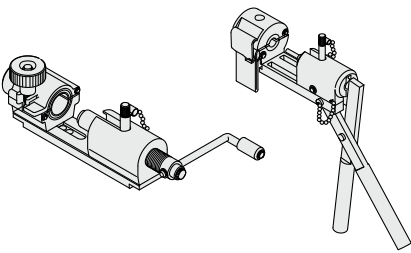
Be sure to read this before handling the products. Refer to page 501 for Safety Instructions.

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	10, 12
	Inch size	1/8", 3/16", 1/4"	1/4", 3/8"	3/8", 1/2"
Orifice diameter		ø4.4	ø8	ø10
Flow rate characteristics	Kv	0.4	1.2	1.8
	Cv	0.5	1.4	2.2
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

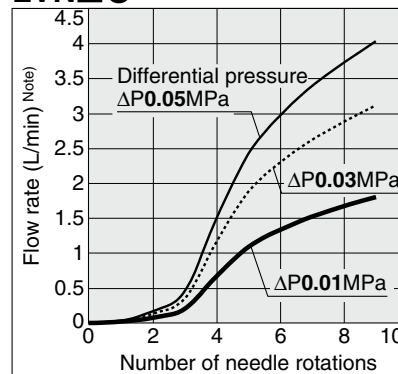
Body class	Tubing O.D.									
	Metric sizes					Inch sizes				
	4	6	8	10	12	1/8"	3/16"	1/4"	3/8"	1/2"
2	●	○				●	●	○		
3		●	●	○				●	○	
4				●	○				●	○

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

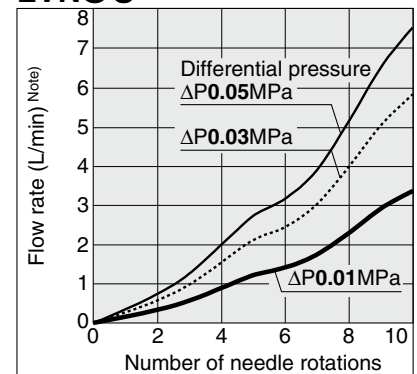
○ Basic size ● With reducer

Flow Rate Characteristics (Fluid: Water)

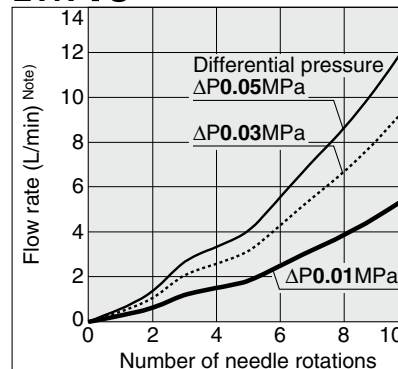
LVN20



LVN30

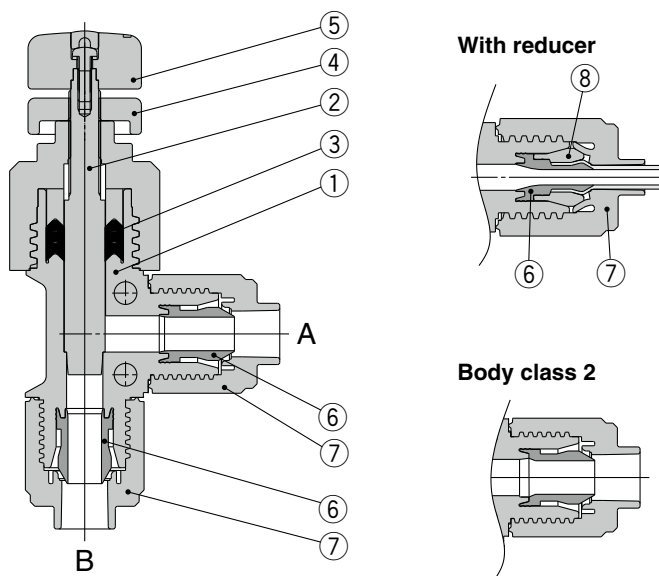


LVN40



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."

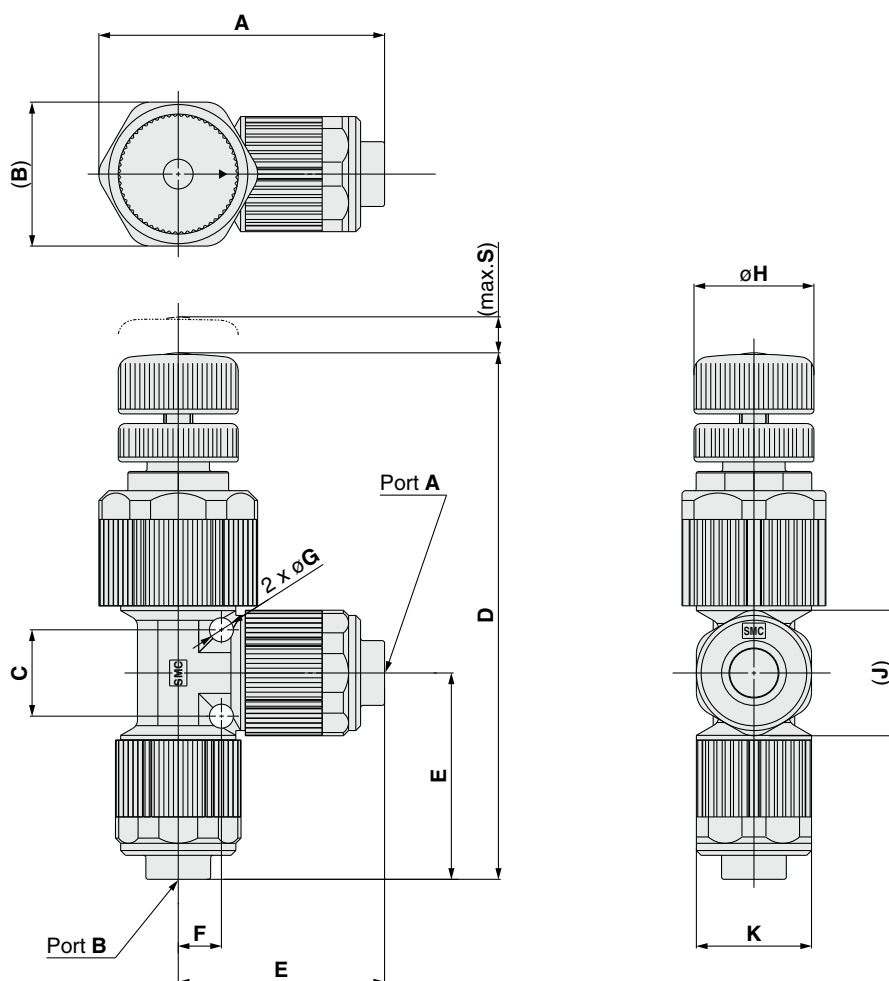
Construction



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



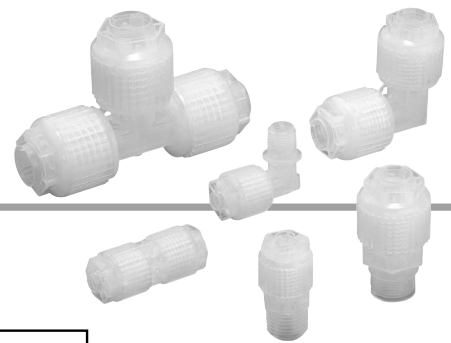
Model	A	B	C	D	E	F	G	H	J	K	S
LVN20	48	24	12	88	34.5	6	4	14	20	18	2.4
LVN30	60	30	18	110	43	9	5	25	26	24	7.5
LVN40	72	36	22	124	52	11	6	25	33	30	8

Fluoropolymer Fittings Hyper Fittings

LQ1 Series

RoHS

How to Order



Threaded connection

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

Fitting type

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

Thread type

Symbol	Type
Nil	R, Rc
N	NPT

Piping type

Symbol	Type
M	Male
F	Female

Packaging

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

Size combination

Symbol Class	No.	Applicable tubing size (mm)	Port size
1	1	4 x 3	1/8"
1	2	3 x 2	1/8"
2	1	6 x 4	1/8"
2	2	4 x 3	1/8"
2	3	3 x 2	1/8"
2	4	6 x 4	1/8"
2	5	4 x 3	1/4"
2	6	3 x 2	1/4"
3	1	10 x 8	1/4"
3	2	8 x 6	1/4"
3	3	6 x 4	1/4"
3	4	10 x 8	1/4"
3	5	8 x 6	3/8"
3	6	6 x 4	3/8"
3	7	4 x 3	3/8"
3	8	3 x 2	3/8"
3	9	10 x 8	1/8"
3	10	8 x 6	3/8"
4	1	12 x 10	3/8"
4	2	10 x 8	1/2"
4	3	12 x 10	1/2"
4	4	10 x 8	3/4"
4	5	8 x 6	3/4"
4	6	6 x 4	3/4"
4	7	3 x 2	3/4"
4	8	12 x 10	1/4"
4	9	19 x 16	1/2"
4	10	12 x 10	3/4"
4	11	19 x 16	1"
4	12	12 x 10	1"
4	13	25 x 22	1/2"
4	14	19 x 16	1/2"
4	15	25 x 22	1/2"
4	16	19 x 16	1/2"
4	17	25 x 22	1/2"
4	18	19 x 16	1/2"
4	19	25 x 22	1/2"
4	20	19 x 16	1/2"
4	21	25 x 22	1/2"
4	22	19 x 16	1/2"
4	23	25 x 22	1/2"
4	24	19 x 16	1/2"
4	25	25 x 22	1/2"
4	26	19 x 16	1/2"
4	27	25 x 22	1/2"
4	28	19 x 16	1/2"
4	29	25 x 22	1/2"
4	30	19 x 16	1/2"
4	31	25 x 22	1/2"
4	32	19 x 16	1/2"
4	33	25 x 22	1/2"
4	34	19 x 16	1/2"
4	35	25 x 22	1/2"
4	36	19 x 16	1/2"
4	37	25 x 22	1/2"
4	38	19 x 16	1/2"
4	39	25 x 22	1/2"
4	40	19 x 16	1/2"
4	41	25 x 22	1/2"
4	42	19 x 16	1/2"
4	43	25 x 22	1/2"
4	44	19 x 16	1/2"
4	45	25 x 22	1/2"
4	46	19 x 16	1/2"
4	47	25 x 22	1/2"
4	48	19 x 16	1/2"
4	49	25 x 22	1/2"
4	50	19 x 16	1/2"
4	51	25 x 22	1/2"
4	52	19 x 16	1/2"
4	53	25 x 22	1/2"
4	54	19 x 16	1/2"
4	55	25 x 22	1/2"
4	56	19 x 16	1/2"
4	57	25 x 22	1/2"
4	58	19 x 16	1/2"
4	59	25 x 22	1/2"
4	60	19 x 16	1/2"
4	61	25 x 22	1/2"
4	62	19 x 16	1/2"
4	63	25 x 22	1/2"
4	64	19 x 16	1/2"
4	65	25 x 22	1/2"
4	66	19 x 16	1/2"
4	67	25 x 22	1/2"
4	68	19 x 16	1/2"
4	69	25 x 22	1/2"
4	70	19 x 16	1/2"
4	71	25 x 22	1/2"
4	72	19 x 16	1/2"
4	73	25 x 22	1/2"
4	74	19 x 16	1/2"
4	75	25 x 22	1/2"
4	76	19 x 16	1/2"
4	77	25 x 22	1/2"
4	78	19 x 16	1/2"
4	79	25 x 22	1/2"
4	80	19 x 16	1/2"
4	81	25 x 22	1/2"
4	82	19 x 16	1/2"
4	83	25 x 22	1/2"
4	84	19 x 16	1/2"
4	85	25 x 22	1/2"
4	86	19 x 16	1/2"
4	87	25 x 22	1/2"
4	88	19 x 16	1/2"
4	89	25 x 22	1/2"
4	90	19 x 16	1/2"
4	91	25 x 22	1/2"
4	92	19 x 16	1/2"
4	93	25 x 22	1/2"
4	94	19 x 16	1/2"
4	95	25 x 22	1/2"
4	96	19 x 16	1/2"
4	97	25 x 22	1/2"
4	98	19 x 16	1/2"
4	99	25 x 22	1/2"
4	100	19 x 16	1/2"

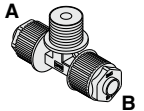
For different diameter (on B side)

Symbol	Application
Nil	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
A	B
B	A
LQ1R	
Run tee male	Run tee female
A	B
B	A

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 —

• Packaging

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

Fitting type •

Symbol	Type
E	Union elbow
T	Union tee
P	Panel mount union
U	Union
F	Union flange Note 3)

• Combination of different diameter (on B side)

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

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

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 the union flange, add the part number suffix "-X150."

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

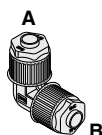
Different diameter tubing (with plug-in reducer) can be selected within the same body class.

(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

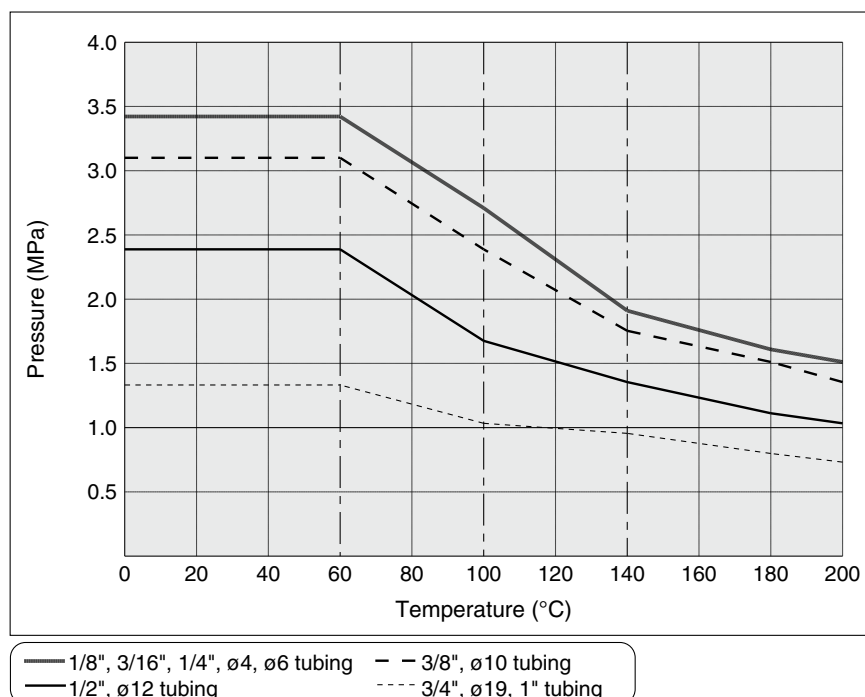


Specifications

Feature	Model	LQ1□10	LQ1□20	LQ1□30	LQ1□40	LQ1□50	LQ1□60
Material		NEW PFA ^{Note)}					
Maximum operating pressure (at 20°C)		1.0 MPa					
Proof pressure		Refer to the withstand pressure and heat resistance performance curves.					
Operating temperature		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

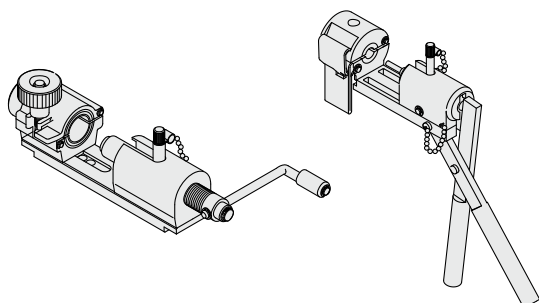


Piping

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.

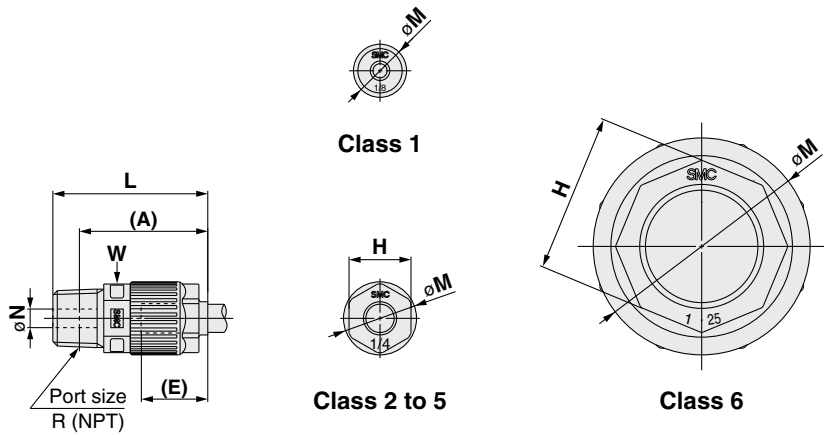
Tightening torque for piping

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



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

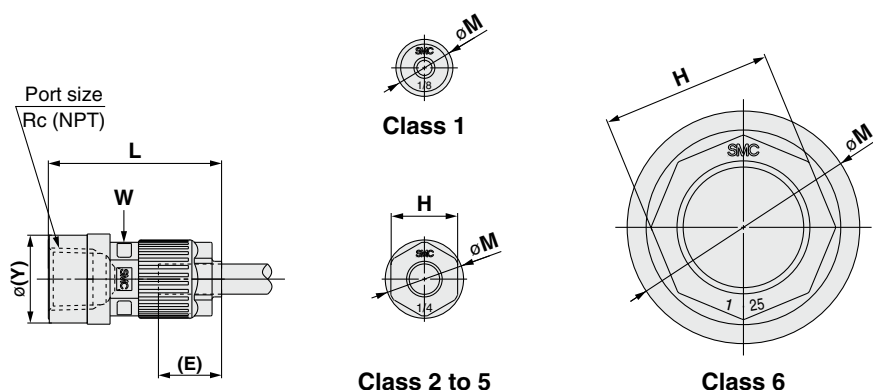
Inch sizes

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



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

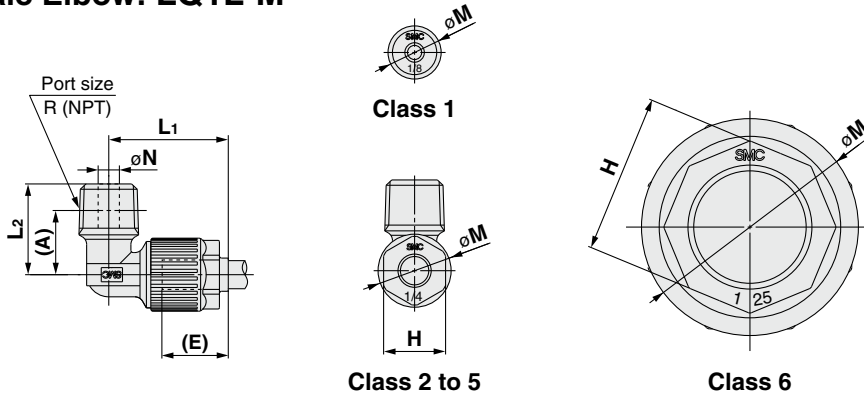
Metric sizes

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				3.6		
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				5.5		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				9.4		
LQ1H44-F□	ø10		24		50		7.4		
LQ1H45-F□	ø8	1/2"	21				5.5		29.5
LQ1H46-F□	ø6						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		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		78.5		15		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				3.6		
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				9		
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		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		78.5		15		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 ₁	L ₂	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 ₁	L ₂	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.

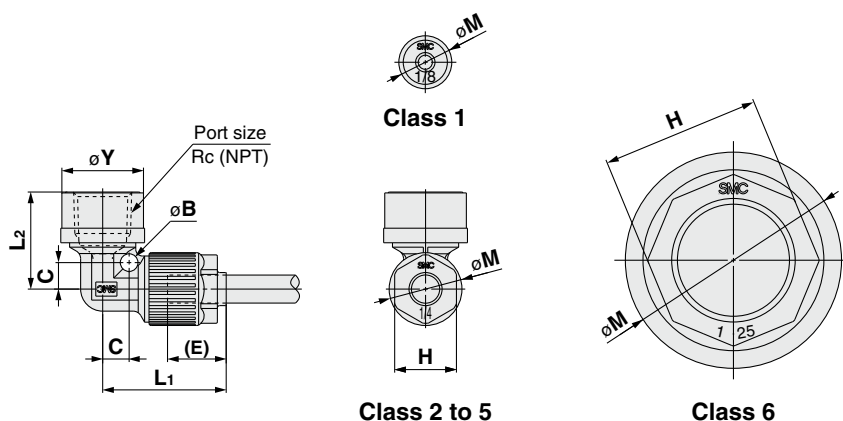
(The body of the fitting is PTFE machined.)

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 ₁	L ₂	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

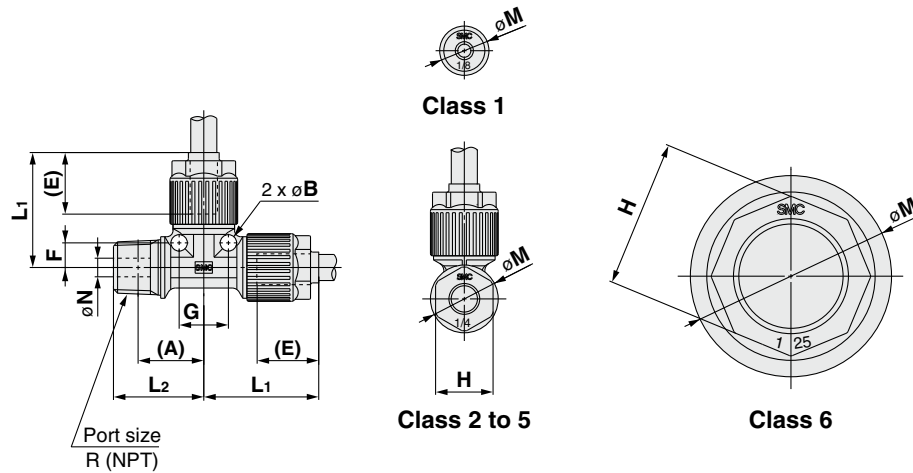
Note) NPT is not available for the thread type.

Inch sizes

Model	Applicable tubing O.D.	Connection threads Rc/NPT	B	C	E	H	L ₁	L ₂	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 ₁	L ₂	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

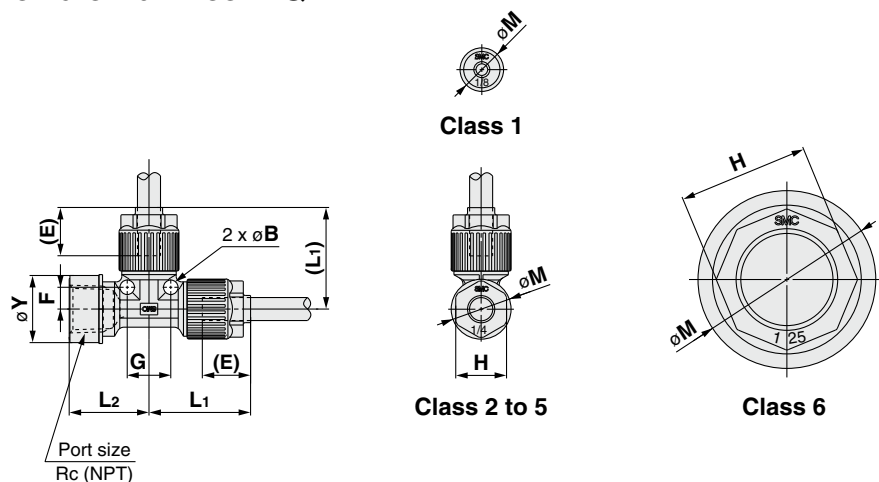
Model	Applicable tubing O.D.	Connection threads R/NPT	A	B	E	F	G	H	L ₁	L ₂	M	N	Min. port size
LQ1R1A-M□	1/8"	1/8"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1R2A-M□	1/4"	1/8"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1R2B-M□	3/16"	1/8"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1R2C-M□	1/8"	1/8"	12	2	11	4	8	—	18.5	15.5	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 ₁	L ₂	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	21	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	21	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	21.2	29.5

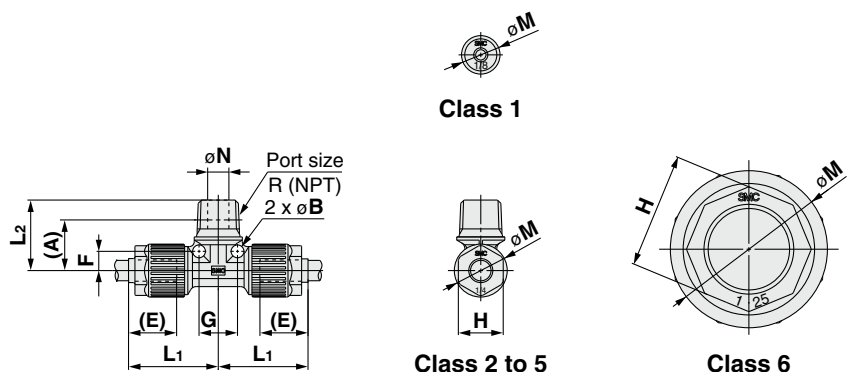
Note) Products marked "*" are produced upon receipt of order.
(The body of the fitting is PTFE machined.)

Inch sizes

Model	Applicable tubing O.D.	Connection threads Rc/NPT	B	E	F	G	H	L ₁	L ₂	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



(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	L1	L2	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"	12	2	11	4	8	—	18.5	15.5	11.5	3	2.6
LQ1B22-M□	ø4	1/8"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1B2C-M□	ø3	1/8"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1B23-M□	ø6	1/8"	12	2	11	4	8	—	18.5	15.5	11.5	3	2.6
LQ1B24-M□	ø4	1/4"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1B2F-M□	ø3	1/4"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1B31-M□	ø10	1/4"	19	5	21	9	18	17	36.5	27	23	8	7.4
LQ1B32-M□	ø8	1/4"	19	5	21	9	18	17	36.5	27	23	8	7.4
LQ1B33-M□	ø6	1/4"	19	5	21	9	18	17	36.5	27	23	8	7.4
LQ1B34-M□	ø10	1/4"	19	5	21	9	18	17	36.5	27	23	8	7.4
LQ1B35-M□	ø8	3/8"	21	5	21	9	18	17	36.5	27	23	8	7.4
LQ1B36-M□	ø6	3/8"	21	5	21	9	18	17	36.5	27	23	8	7.4
* LQ1B39-M□	ø10	1/8"	18.4	—	22.5	—	—	—	29	21.9	—	4.4	4.4
* LQ1B310-M□	ø8	1/8"	18.4	—	22.5	—	—	—	29	21.9	—	4.4	4.4
LQ1B41-M□	ø12	3/8"	23	6	24	9	18	21	43	32	28	10	9.4
LQ1B42-M□	ø10	3/8"	23	6	24	9	18	21	43	32	28	10	9.4
LQ1B43-M□	ø12	1/2"	24.5	6	24	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	9.4
* 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	33.5	39	6	6
LQ1B52-M□	ø12	1/2"	30.5	7	31.5	14	28	26	54	33.5	39	6	6
LQ1B53-M□	ø19	3/4"	30	7	31.5	14	28	26	54	33.5	39	6	6
LQ1B54-M□	ø12	3/4"	30	7	31.5	14	28	26	54	33.5	39	6	6
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	33.5	39	6	6
LQ1B61-M□	ø25	3/4"	36	8	43	18	36	36	69.5	45	49	10	10
LQ1B62-M□	ø19	3/4"	36	8	43	18	36	36	69.5	45	49	10	10
LQ1B63-M□	ø25	1"	35	8	43	18	36	36	69.5	45	49	10	10
LQ1B64-M□	ø19	1"	35	8	43	18	36	36	69.5	45	49	10	10
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	L1	L2	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"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1B2B-M□	3/16"	1/8"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1B2C-M□	1/8"	1/8"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1B2D-M□	1/4"	1/8"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1B2E-M□	3/16"	1/4"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1B2F-M□	1/8"	1/4"	12	2	11	4	8	—	18.5	15.5	11.5	2	1.8
LQ1B3A-M□	3/8"	1/4"	19	5	21	9	18	17	36.5	27	23	8	7.4
LQ1B3B-M□	1/4"	1/4"	19	5	21	9	18	17	36.5	27	23	8	7.4
LQ1B3C-M□	3/8"	3/8"	21	5	21	9	18	17	36.5	27	23	8	7.4
LQ1B3D-M□	1/4"	3/8"	21	5	21	9	18	17	36.5	27	23	8	7.4
* 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	24	9	18	21	43	32	28	10	9.4
LQ1B4B-M□	3/8"	3/8"	23	6	24	9	18	21	43	32	28	10	9.4
LQ1B4C-M□	1/2"	1/2"	24.5	6	24	9	18	21	43	32	28	10	9.4
LQ1B4D-M□	3/8"	1/2"	24.5	6	24	9	18	21	43	32	28	10	9.4
LQ1B4G-M□	1/2"	1/4"	27.5	7	29	14	28	26	54	33.5	39	6	6
LQ1B5A-M□	3/4"	1/2"	30.5	7	31.5	14	28	26	54	33.5	39	6	6
LQ1B5B-M□	1/2"	1/2"	30.5	7	31.5	14	28	26	54	33.5	39	6	6
LQ1B5C-M□	3/4"	3/4"	30	7	31.5	14	28	26	54	33.5	39	6	6
LQ1B5D-M□	1/2"	3/4"	30	7	31.5	14	28	26	54	33.5	39	6	6
LQ1B5G-M□	3/4"	1/4"	27.5	7	29	14	28	26	54	33.5	39	6	6
LQ1B5H-M□	3/4"	3/8"	29	7	31.5	14	28	26	54	33.5	39	6	6
LQ1B6A-M□	1"	3/4"	36	8	43	18	36	36	69.5	45	49	10	10
LQ1B6B-M□	3/4"	3/4"	36	8	43	18	36	36	69.5	45	49	10	10
LQ1B6C-M□	1"	1"	35	8	43	18	36	36	69.5	45	49	10	10
LQ1B6D-M□	3/4"	3/4"	35	8	43	18	36	36	69.5	45	49	10	10
LQ1B6F-M□	1"	1/2"	37	8	43	18	36	36	69.5	45	49	10	10

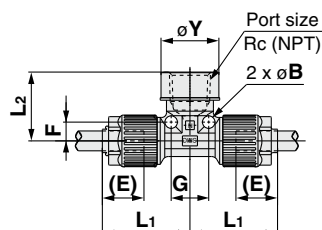
Note) Products marked "*" are produced upon receipt of order.
(The body of the fitting is PTFE machined.)

Dimensions

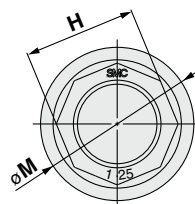
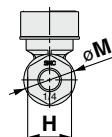
Female Branch Tee: LQ1B-F



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 ₁	L ₂	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

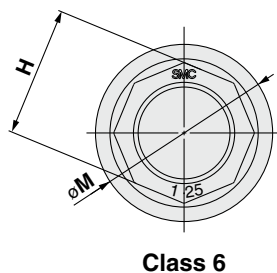
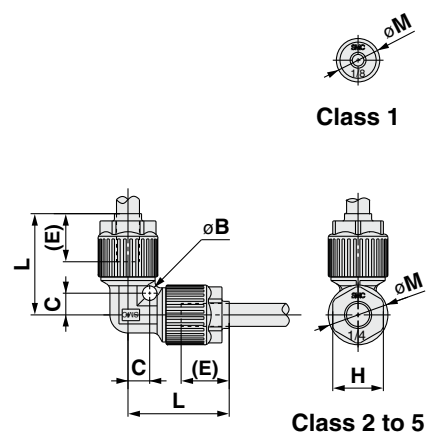
Note) Products marked "*" are produced upon receipt of order.
(The body of the fitting is PTFE machined.)

Inch sizes

Model	Applicable tubing O.D.	Connection threads Rc/NPT	B	E	F	G	H	L ₁	L ₂	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

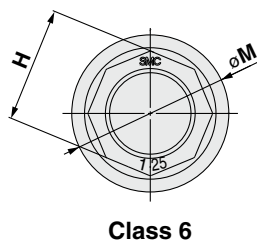
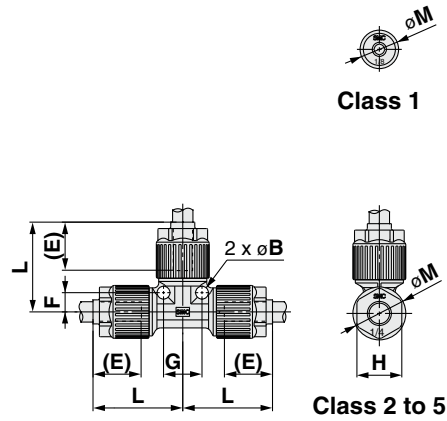
Inch sizes

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.

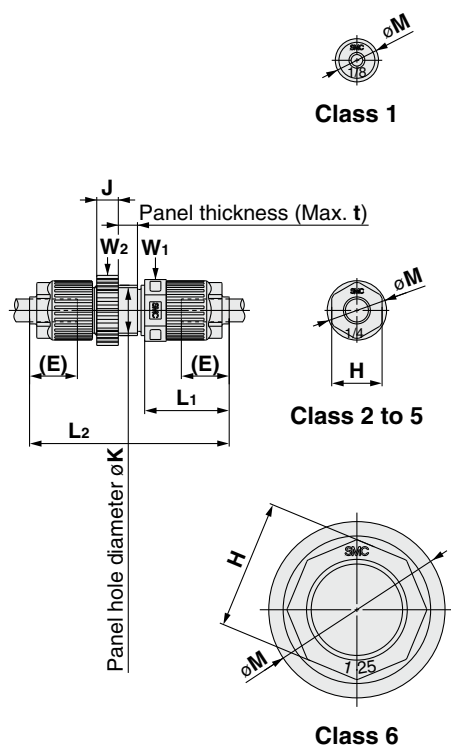
Metric sizes

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

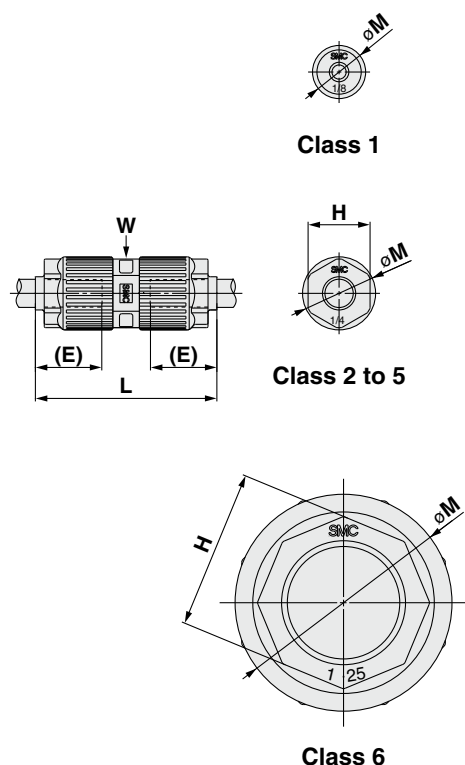
Inch sizes

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

LQ1 Series

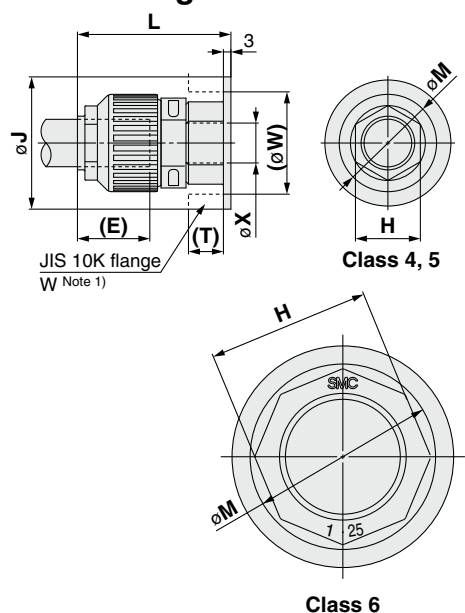
Dimensions

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□□-X150



(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.
 Note 1) Products indicated with an asterisk (*) are available as a special order.

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				1.8	
LQ1U31□□	ø10	22.5	17	54	23	7.4	19
LQ1U32□□	ø8	21				5.5	
LQ1U33□□	ø6					3.6	
LQ1U41□□	ø12	27	21	63	28	9.4	23
LQ1U42□□	ø10	24				7.4	
LQ1U51□□	ø19	31.5	26	77	39	15	32
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				3.6	
LQ1U2B□□	3/16"	14.5	14	41	16.5	2.9	14
LQ1U2C□□	1/8"	13.5				1.8	
LQ1U3A□□	3/8"	22.5	17	54	23	5.8	19
LQ1U3B□□	1/4"	20				3.6	
LQ1U4A□□	1/2"	27	21	63	28	9	23
LQ1U4B□□	3/8"	24				5.8	
LQ1U5A□□	3/4"	31.5	26	77	39	15	32
LQ1U5B□□	1/2"	29				9	
LQ1U6A□□	1"	43	36	102	49	21.2	46
LQ1U6B□□	3/4"	35				15	

Metric sizes

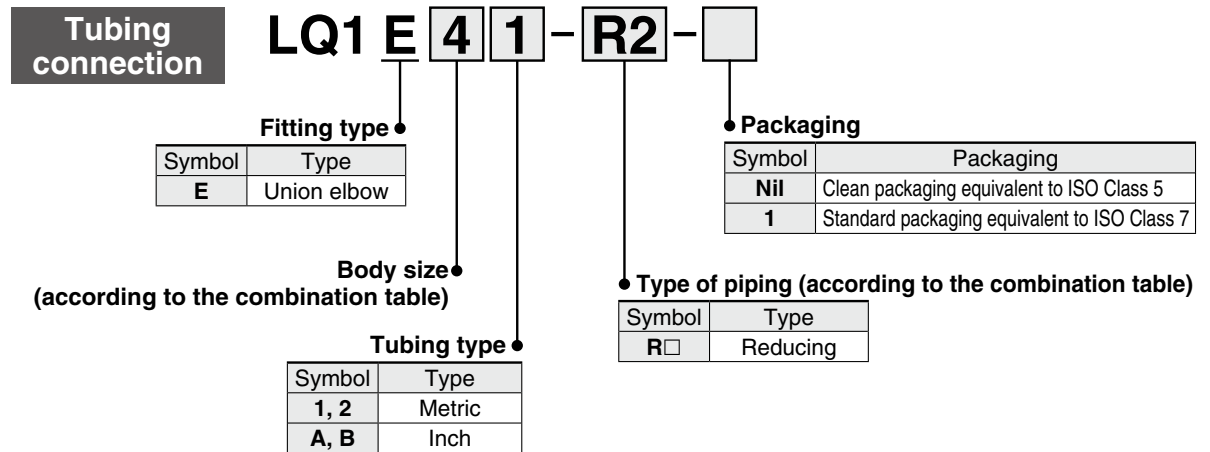
Model	Applicable tubing O.D.	E	H	J	L	M	W	(T)	X	Min. port size
* LQ1F41-X150	ø12	27	21	53	51	28	34	12	10	9.4
* LQ1F42-X150	ø10	24								7.4
* LQ1F51-X150	ø19	31.5	26	58	61.5	39	41	14	16	15
* LQ1F52-X150	ø12	29								9.4
* LQ1F61-X150	ø25	43	36	69	81.5	49	51	14	22.5	21.2
* LQ1F62-X150	ø19	35								15

Inch sizes

Model	Applicable tubing O.D.	E	H	J	L	M	W	(T)	X	Min. port size
* LQ1F4A-X150	1/2"	27	21	53	51	28	34	12	10	9
* LQ1F4B-X150	3/8"	24								5.8
* LQ1F5A-X150	3/4"	31.5	26	58	61.5	39	41	14	16	15
* LQ1F5B-X150	1/2"	29								9
* LQ1F6A-X150	1"	43	36	69	81.5	49	51	14	22.5	21.2
* LQ1F6B-X150	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.)

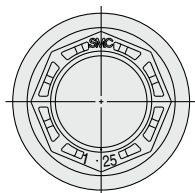
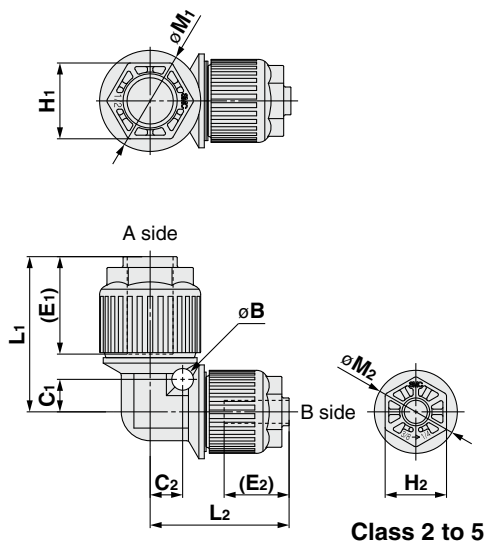
Note 2) For details of the applicable tubing sizes, refer to page 309.

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 Applicable tubing O.D.	B side Applicable tubing O.D.	B	C ₁	C ₂	E ₁	E ₂	H ₁	H ₂	L ₁	L ₂	M ₁	M ₂	Min. 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 Applicable tubing O.D.	B side Applicable tubing O.D.	B	C ₁	C ₂	E ₁	E ₂	H ₁	H ₂	L ₁	L ₂	M ₁	M ₂	Min. 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	10 x 8	12 x 10	12 x 10
	LQ1T41-R7		10 x 8	12 x 10
	LQ1T41-R11	6 x 4	10 x 8	12 x 10
	LQ1T41-R12		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	12 x 10	19 x 16	19 x 16
	LQ1T51-R6		10 x 8	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
6	LQ1T61-R2	25 x 22	12 x 10	25 x 22
	LQ1T61-R3		10 x 8	25 x 22
	* LQ1T61-R4		8 x 6	25 x 22
	LQ1T61-R5		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.)

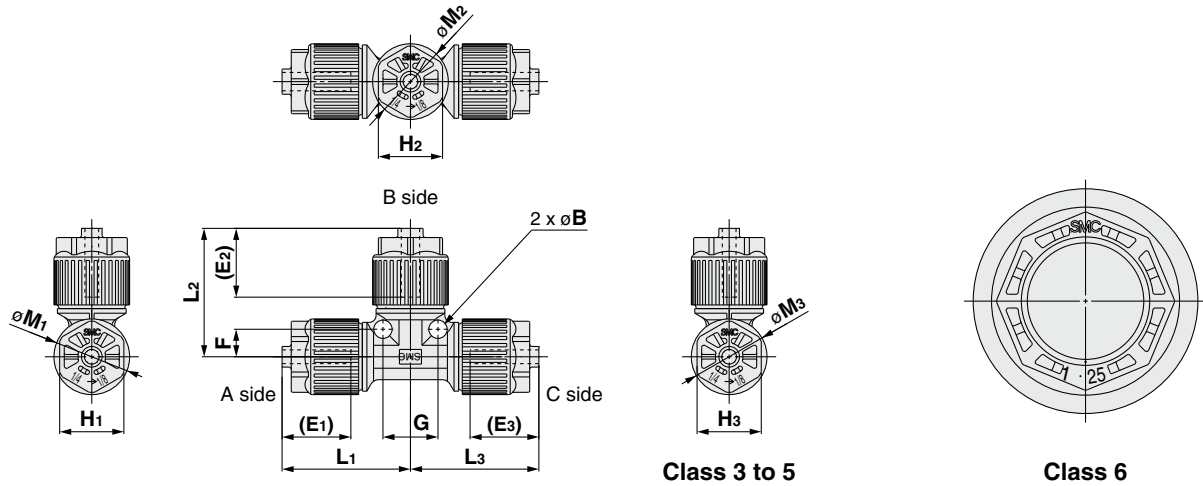
Note 2) For details of the applicable tubing sizes, refer to page 309.

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



Class 3 to 5

Class 6

Metric Size

Model	A side	B side	C side	B	E ₁	E ₂	E ₃	F	G	H ₁	H ₂	H ₃	L ₁	L ₂	L ₃	M ₁	M ₂	M ₃	Min. 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			28		7.4
LQ1T41-R7	ø10	ø10	ø12			24					24			28			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	1.8
LQ1T41-R32	ø6	ø12	ø6			18				18	21	43	33	43	28	16.5	16.5	3.6	
LQ1T41-R34	ø3	ø12	ø3			13.5				13.5	14	21	14	33	43	33	16.5	28	16.5
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

Metric Size

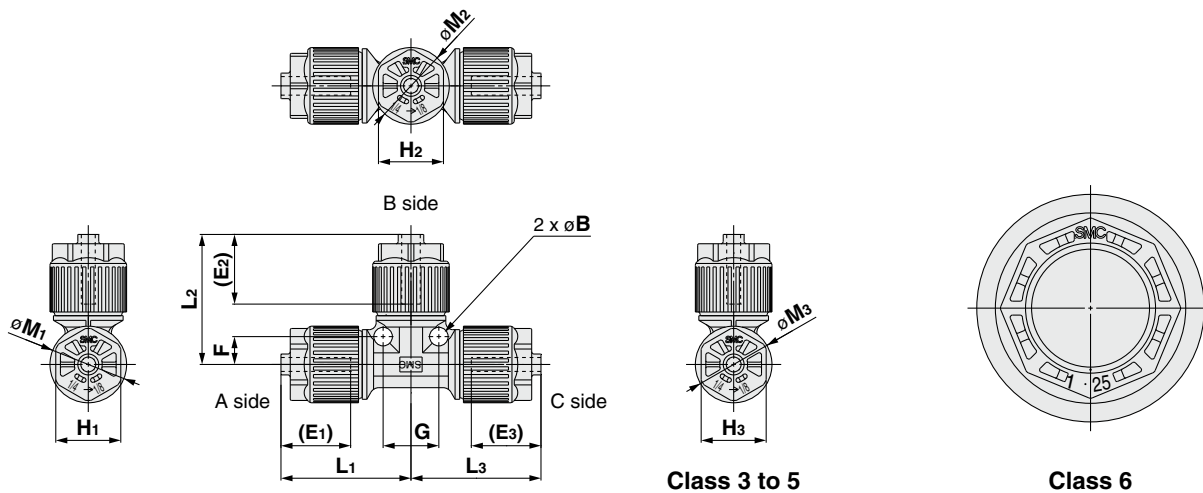
Model	A side Applicable tubing O.D.	B side	C side	B	E ₁	E ₂	E ₃	F	G	H ₁	H ₂	H ₃	L ₁	L ₂	L ₃	M ₁	M ₂	M ₃	Min. port size				
LQ1T51-R4	ø19	ø6	ø19	7	31.5	18	31.5	14	28	26	14	26	54	38.5	54	39	16.5	39	3.6				
LQ1T51-R5	ø12	ø19	ø19		29	31.5				14	28		17	26		44	54		54	23	39	9.4	
LQ1T51-R6	ø10	ø19	ø19		22.5								17	26		44	54		23	39	7.4		
* 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			54	23	39	5.5		
LQ1T51-R13	ø6	ø19	ø19																				
* 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
LQ1T61-R6	ø12	ø25	ø25		27	35				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																				
* LQ1T61-R13	ø8	ø25	ø25	—	21	43	43	—	—	17	36	36	46.5	68	68	23	49	49	5.5				
LQ1T61-R15	ø6	ø25	ø25	8	18	18													36	14	36	21	36
LQ1T61-R18	ø10	ø19	ø25		24			35	54.5	28	7.4												
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	—	—	36	17	36	55	47.5	55	49	23	49	3.6				
LQ1T61-R30	ø10	ø25	ø19	8	24	43		35	18	36	21		36	54.5	69.5				49.5	28	49	23	7.4
LQ1T61-R31	ø12	ø25	ø19		27																		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 ₁	E ₂	E ₃	F	G	H ₁	H ₂	H ₃	L ₁	L ₂	L ₃	M ₁	M ₂	M ₃	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													1.8
LQ1T4A-R5	3/8"	1/2"	1/2"		24	27				21	43		28	5.8					
LQ1T4A-R6	1/4"	1/2"	1/2"		7	20				29	29		14	28			17		26
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		54	23			9		
LQ1T5A-R6	3/8"	3/4"	3/4"		22.5	17				44	23		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 Applicable tubing O.D.	B side	C side	B	E ₁	E ₂	E ₃	F	G	H ₁	H ₂	H ₃	L ₁	L ₂	L ₃	M ₁	M ₂	M ₃	Min. 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	5.8										
* LQ1T5A-R32	1/4"	3/4"	1/4"	—	20	35	20	—	—		36	17	46.5	55	46.5		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		18	36	21	36		69.5	69.5	69.5	28	49		15											
LQ1T6A-R5	3/4"	1"	1"	8	35	43	36					21	36	54.5	69.5	69.5			49	9										
LQ1T6A-R6	1/2"	1"	1"		27	35	35					36	36	69.5	69.5	49			15											
LQ1T6A-R7	3/4"	3/4"	1"		35	35	—	—	21	21	42	52.5	57.5	28	28	9														
* LQ1T6A-R8	1/2"	1/2"	1"	—	27	27	27	18	36	21	36	21	54.5	69.5	69.5	28	49	28	9											
LQ1T6A-R10	1/2"	1"	1/2"	8	43	43													43	—	—	17	36	36	46.5	68	68	23	49	5.8
LQ1T6A-R11	3/8"	3/4"	1"		24	35																								43
LQ1T6A-R12	3/8"	1"	1"		24	43	—	—	17	36	46.5	68	68	23	3.6															
* LQ1T6A-R13	1/4"	1"	1"	—	20	20	43	—	—	17	36	36	54.5	69.5	69.5	28	49	49	9											
LQ1T6A-R17	1/2"	3/4"	1"	8	27	35		18	36	21	21		54.5	69.5	69.5	28			9											
* LQ1T6A-R18	1/4"	3/4"	1"	—	20	35		43	—	—	17		36	36	46.5	68			68	23	49	3.6								
LQ1T6A-R20	3/4"	1/2"	1"	8	35	27	18								36	21			36	36	69.5	54.5	69.5	49	28	9				
LQ1T6A-R30	3/8"	1"	3/4"		24	43						35					54.5	69.5			28	49		5.8						
LQ1T6A-R31	1/2"	1"	3/4"		27	43		20	—	—	17	17	46.5				55	46.5			23	23		3.6						
* LQ1T6A-R33	1/4"	1"	1/4"	—	20	20	20	—	—	17	17	17	46.5	55	46.5	23	23	23	3.6											

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

LQ1 Series

Panel Mount Union Reducing

How to Order

Tubing connection

LQ1 P 4 1 - R3 -

Fitting type

Symbol	Type
P	Panel mount 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	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"

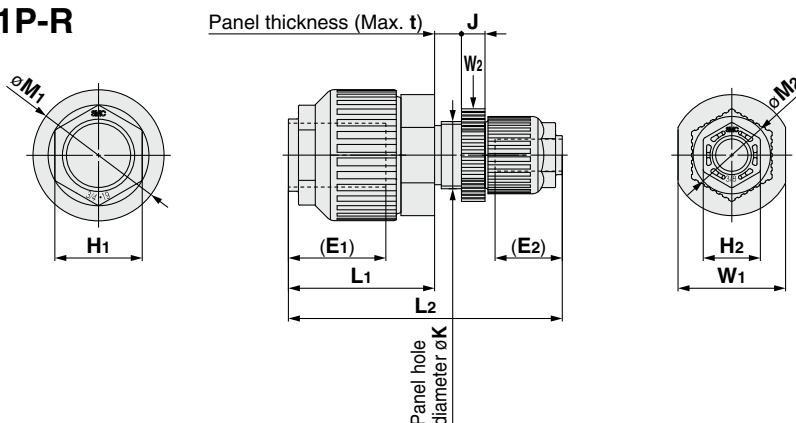
Note 1) Products marked "*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

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 ₁	E ₂	H ₁	H ₂	J	K	L ₁	L ₂	M ₁	M ₂	Min. port size	t	W ₁	W ₂
	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 ₁	E ₂	H ₁	H ₂	J	K	L ₁	L ₂	M ₁	M ₂	Min. port size	t	W ₁	W ₂
	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 Applicable tubing size (mm)	B side 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 Applicable tubing size (inch)	B side 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"

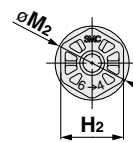
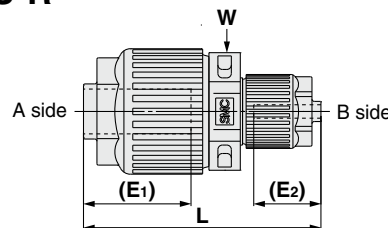
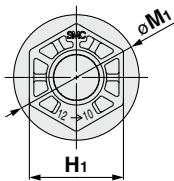
Note 1) Products marked "*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

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

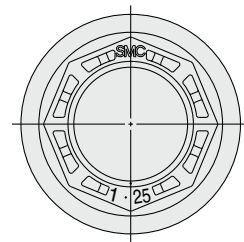
Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

Dimensions

Union reducing: LQ1U-R



Class 3 to 5



Class 6

Metric Size

Model	A side Applicable tubing O.D.	B side Applicable tubing O.D.	E1	E2	H1	H2	L	M1	M2	Min. port 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	23	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	23	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 Applicable tubing O.D.	B side Applicable tubing O.D.	E1	E2	H1	H2	L	M1	M2	Min. port 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	23	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
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
SS	Space saving

Size combination

Symbol		Model	Applicable tubing size (mm)
Class	No.		
2	1	LQ1E21-SS	6 x 4
3	1	LQ1E31-SS	10 x 8
3	2	LQ1E32-SS	8 x 6
4	1	LQ1E41-SS	12 x 10
5	1	* LQ1E51-SS	19 x 16
6	1	LQ1E61-SS	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.		
2	A	LQ1E2A-SS	1/4" x 5/32"
3	A	LQ1E3A-SS	3/8" x 1/4"
4	A	LQ1E4A-SS	1/2" x 3/8"
5	A	* LQ1E5A-SS	3/4" x 5/8"
6	A	LQ1E6A-SS	1" x 7/8"

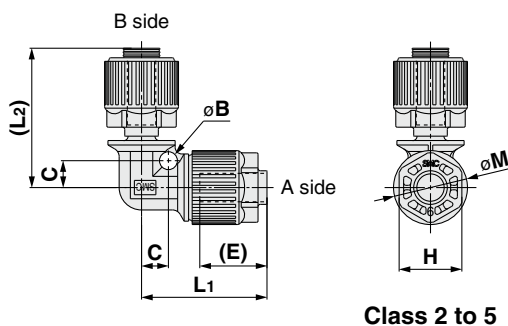
Note 1) Products marked "*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

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

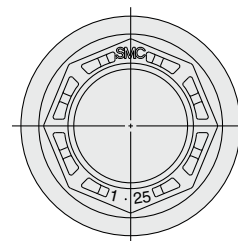
Note 3) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

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								
LQ1E21-SS	ø6	2	4	6	18	14	28	29	16.5	3.6
LQ1E31-SS	ø10	3	5	9	22.5	17	36.6	39	23	7.4
LQ1E32-SS	ø8	3	5	9	21	17	36.6	39	23	5.5
LQ1E41-SS	ø12	4	6	9	27	21	43	46	28	9.4
* LQ1E51-SS	ø19	5	—	—	31.5	26	45.5	60	39	15
LQ1E61-SS	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								
LQ1E2A-SS	1/4"	2	4	6	17	14	28	30	16.5	3.6
LQ1E3A-SS	3/8"	3	5	9	22.5	17	36.6	39	23	5.8
LQ1E4A-SS	1/2"	4	6	9	27	21	43	47	28	9
* LQ1E5A-SS	3/4"	5	—	—	31.5	26	45.5	60	39	15
LQ1E6A-SS	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 Applicable tubing size (mm)	B side Applicable 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 Applicable tubing size (inch)	B side Applicable 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

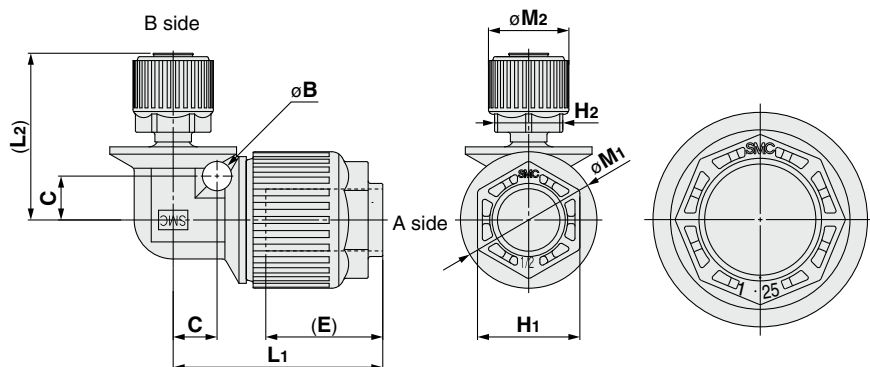
Note 1) Products marked "*" are produced upon receipt of order.
(The body of the fitting is PTFE machined.)

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 Applicable tubing O.D.	B side Applicable body size	B	C	E	H ₁	H ₂	L ₁	L ₂	M ₁	M ₂	Min. port 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 Applicable tubing O.D.	B side Applicable body size	B	C	E	H ₁	H ₂	L ₁	L ₂	M ₁	M ₂	Min. port 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"

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

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

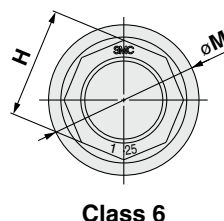
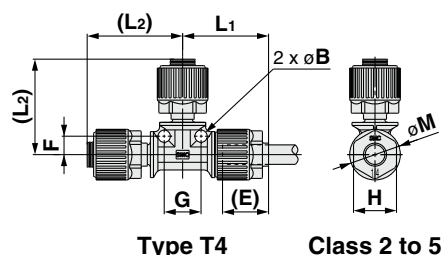
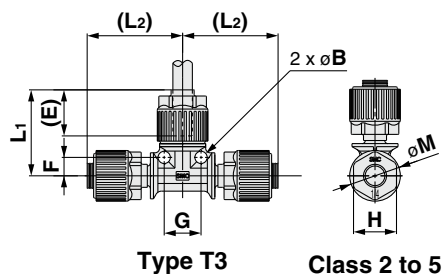
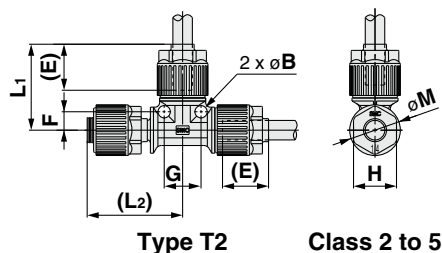
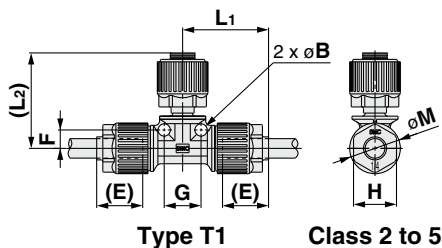
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

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 union tee: LQ1T-ST



Metric Size

Model	Applicable tubing O.D.	B	E	F	G	H	L ₁	L ₂	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 ₁	L ₂	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.) / 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	Body size 6	
	*	LQ1T51-ST1-R37	19 x 16		
		LQ1T51-ST2-R4	Body size 5	6 x 4	19 x 16
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.) / 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"	Body size 4
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.)

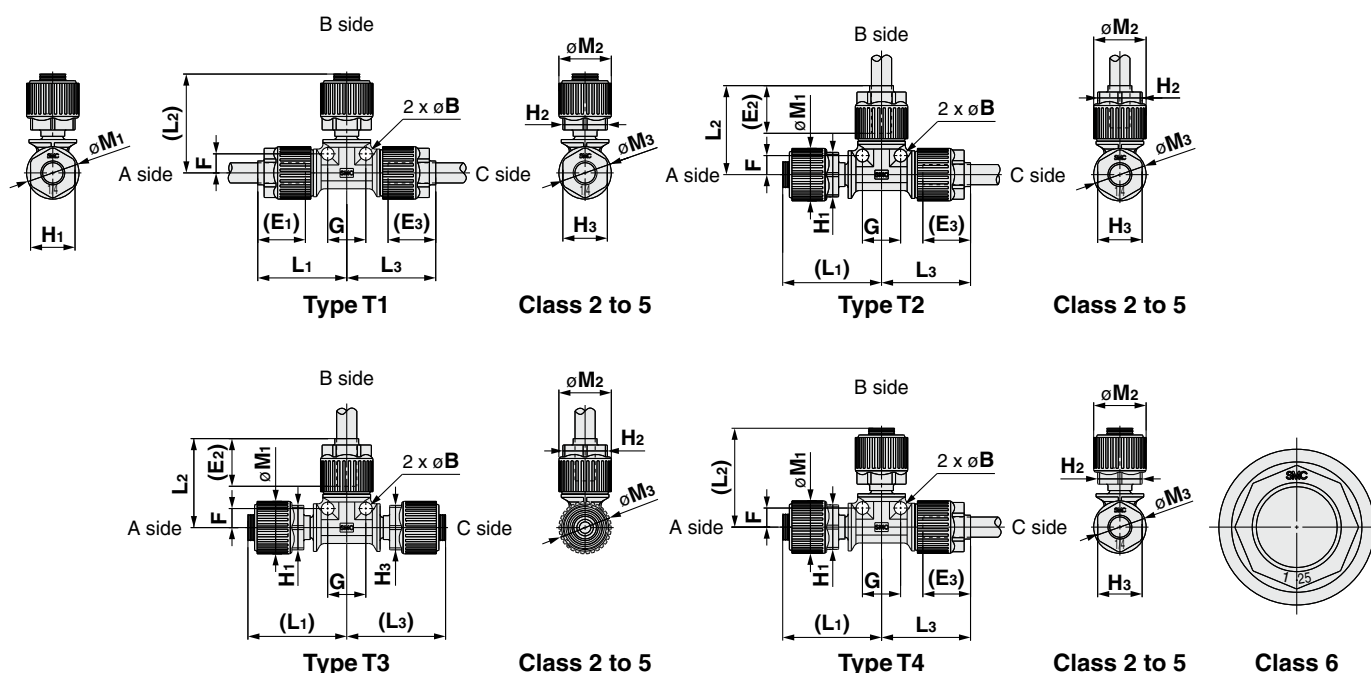
Note 2) For details of the applicable tubing sizes, refer to page 309.

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 ₁	E ₂	E ₃	F	G	H ₁	H ₂	H ₃	L ₁	L ₂	L ₃	M ₁	M ₂	M ₃	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	21	9	18	17	17	17	42	36.5	36.5	23	23	23	3.6
LQ1T32-ST1-R37	ø8	Body size 3	ø8	5	21	—	21	9	18	17	17	17	36.5	42	36.5	23	23	23	5.5
LQ1T32-ST2-R40	Body size 3	ø8	ø8	—	—	21	21	9	18	17	17	17	42	36.5	36.5	23	23	23	5.5
* 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	21	21	41.9	51.5	41.9	—	28	—	9
* LQ1T51-ST1-R2	ø19	Body size 3	ø19	—	—	—	—	—	—	26	17	26	41	47.5	41	39	23	39	5.8
LQ1T51-ST1-R5	ø12	Body size 5	ø19	7	29	—	31.5	14	28	—	26	—	54	60.5	54	—	39	—	9.4
* LQ1T51-ST1-R13	ø6	Body size 5	ø19	—	18	—	—	—	—	14	26	26	29	59	45	16.5	39	39	3.6
* LQ1T51-ST1-R36	ø12	Body size 6	ø19	—	27	—	35	—	—	21	36	36	42.7	72.5	58.2	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	9.4
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	26	—	55.1	64	55.1	—	39	—	15
* LQ1T61-ST1-R2	ø25	Body size 4	ø25	—	—	—	—	—	—	36	21	36	53.5	56.5	53.5	49	28	49	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 ₁	E ₂	E ₃	F	G	H ₁	H ₂	H ₃	L ₁	L ₂	L ₃	M ₁	M ₂	M ₃	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	—	—	—	—	21	17	21	34	41	34	28	23	28	5.8
* LQ1T4A-ST1-R7	3/8	Body size 3	1/2	—	24	—	27	—	—	21	17	21	34	41	34	28	23	28	5.8
* LQ1T4A-ST1-R37	1/2	Body size 5	1/2	—	27	—	—	—	—	21	26	21	39.5	53.5	39.5	28	39	—	9
* LQ1T5A-ST1-R1	3/4	Body size 4	3/4	—	31.5	—	—	—	—	21	17	21	41.9	51.5	41.9	39	28	—	9
* LQ1T5A-ST1-R2	3/4	Body size 3	3/4	—	—	—	—	—	—	26	17	26	41	47.5	41	39	23	—	5.8
LQ1T5A-ST1-R5	1/2	Body size 5	3/4	7	29	—	—	14	28	—	26	—	54	60.5	54	16.5	39	—	9
LQ1T5A-ST1-R7	1/2	Body size 4	3/4	—	27	—	31.5	—	—	21	21	26	49	51.5	41	28	28	39	9
* LQ1T5A-ST1-R12	1/4	Body size 5	3/4	—	17	—	—	—	—	14	21	26	29	59	45	16.5	39	—	3.6
* LQ1T5A-ST2-R1	Body size 4	3/4	3/4	—	—	31.5	—	—	—	21	26	—	50	51.5	52.5	28	39	—	9
LQ1T5A-ST2-R3	Body size 5	1/4	3/4	7	—	17	—	14	28	26	14	—	60.5	38.5	54	39	16.5	—	3.6
* LQ1T5A-ST3-R5	Body size 4	3/4	Body size 4	—	—	31.5	—	—	—	21	26	21	50	44.5	50	28	39	28	9
* LQ1T6A-ST1-R1	1	Body size 5	1	—	43	—	—	—	—	36	26	—	55.1	64	55.1	—	39	—	15
* LQ1T6A-ST1-R2	1	Body size 4	1	—	—	—	43	—	—	36	21	36	53.5	56.5	53.5	49	28	—	9
* LQ1T6A-ST1-R3	1	Body size 3	1	—	—	—	—	—	—	36	17	36	53.5	51.5	53.5	49	23	49	5.8
LQ1T6A-ST2-R1	Body size 6	3/4	1	8	—	35	—	18	36	—	36	—	74	69.5	69.5	—	49	—	15
LQ1T6A-ST2-R2	Body size 6	3/4	3/4	—	—	—	35	—	—	—	—	—	—	—	—	—	—	—	—

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

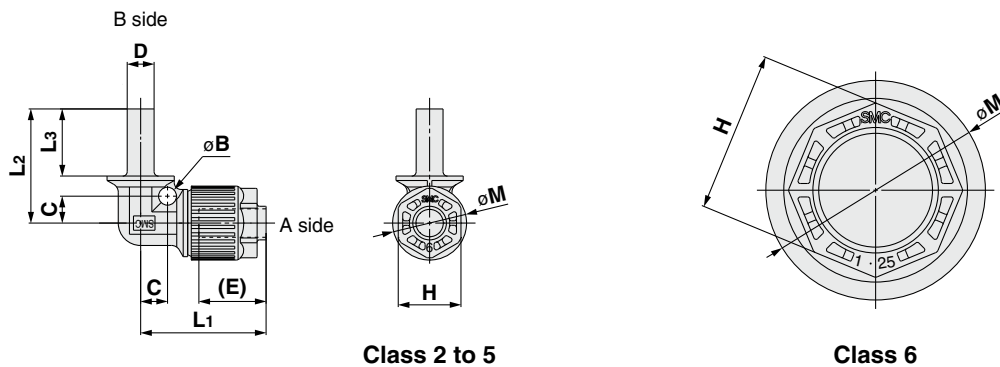
Symbol	Applicable tubing size (inch)
2 A	1/4" x 5/32"
3 A	3/8" x 1/4"
4 A	1/2" x 3/8"
5 A	3/4" x 5/8"
6 A	1" x 7/8"

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 Applicable tubing O.D.	B side 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 Applicable tubing O.D.	B side 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.

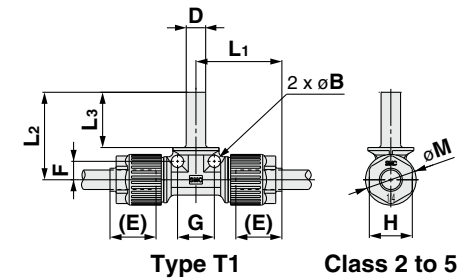
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

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.

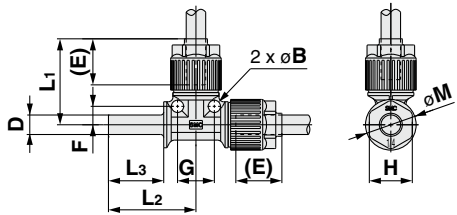
Dimensions

Tubing extension union tee: LQ1T-TT



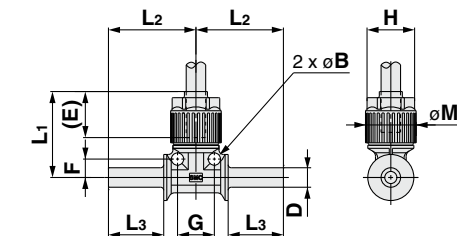
Type T1

Class 2 to 5



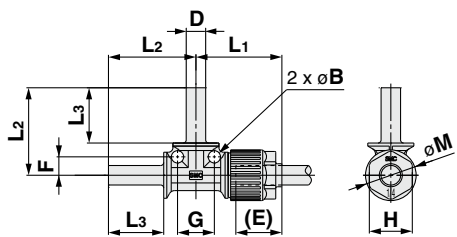
Type T2

Class 2 to 5



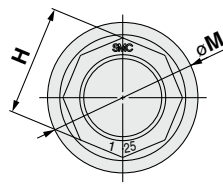
Type T3

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 ₁	L ₂	L ₃	M	Min. port size
* LQ1T21-TT1												
* LQ1T21-TT2	ø6	—	6 x 4	18	—	—	14	21.5	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								34.5				
* LQ1T32-TT1								29.6				
* LQ1T32-TT2	ø8	—	8 x 6	21	—	—	17	34.5	35.5	24	23	5.5
* LQ1T32-TT3								29				
* LQ1T41-TT1								36	42			
* LQ1T41-TT2	ø12	—	10 x 8	27	—	—	21	41.5	41	28	28	9.4
* LQ1T41-TT3								36	42			
LQ1T51-TT1												
LQ1T51-TT2	ø19	7	19 x 16	31.5	14	28	26	54	55.5	35	39	15
LQ1T51-TT3												
LQ1T51-TT4												
LQ1T61-TT1												
LQ1T61-TT2	ø25	8	25 x 22	43	18	36	36	69.5	65.5	39.5	49	21.2
LQ1T61-TT3												
LQ1T61-TT4												

Inch Size

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

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 Applicable tubing size (mm)	B side 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	LQ1E22-T-R11	12 x 10	12 x 10
	LQ1E31-T-R1	10 x 8	8 x 6
	LQ1E31-T-R2		6 x 4
	LQ1E31-T-R8		12 x 10
	* LQ1E31-T-R9	19 x 16	
	LQ1E32-T-R1	6 x 4	6 x 4
4	LQ1E32-T-R8	8 x 6	10 x 8
	LQ1E32-T-R9		12 x 10
	* LQ1E32-T-R10		19 x 16
	LQ1E41-T-R1	12 x 10	10 x 8
	LQ1E41-T-R2		8 x 6
	LQ1E41-T-R3		6 x 4
5	* LQ1E41-T-R8	19 x 16	19 x 16
	* LQ1E41-T-R9	25 x 22	25 x 22
	* 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 Applicable tubing size (inch)	B side 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	* LQ1E3A-T-R9	3/8" x 1/4"	3/4" x 5/8"
	* LQ1E4A-T-R1		3/8" x 1/2"
4	* LQ1E4A-T-R8	1/2" x 3/8"	3/4" x 5/8"
	* LQ1E4A-T-R9		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.

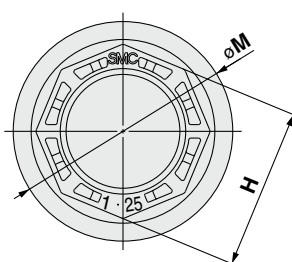
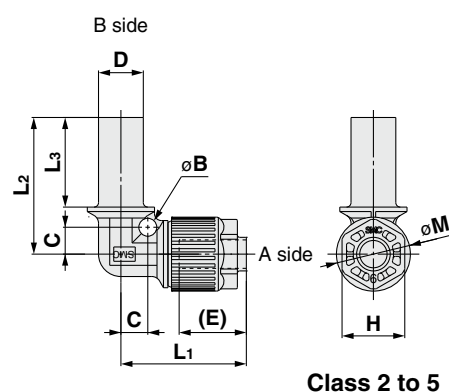
Note 1) Products marked "*" are produced upon receipt of order.
(The body of the fitting is PTFE machined.)

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	B side	B	C	D	E	H	L ₁	L ₂	L ₃	M	Min. port size
	Applicable tubing O.D.	Tubing size (D)										
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			34.5				24			
LQ1E21-T-R10		12 x 10			37.6				27			
LQ1E22-T-R8	ø4	6 x 4	5	9	8	12.5	17	33.5	25.5	15	23	2.6
LQ1E22-T-R9		8 x 6			28.6				15			
LQ1E22-T-R10		10 x 8			30.5				20			
LQ1E22-T-R11		12 x 10			12				34.5	24		
LQ1E31-T-R1	ø10	8 x 6	5	9	8	22.5	36.6	46.5	33.6	20	23	6
LQ1E31-T-R2		6 x 4			28.6				15			
LQ1E31-T-R8		12 x 10			37.6				24			
* LQ1E31-T-R9	ø8	19 x 16	—	—	19	21	36.6	47.6	33.5	35	23	7.4
LQ1E32-T-R1		6 x 4	—	—	6				28.6	15		
LQ1E32-T-R8		10 x 8	5	9	10				30.5	20		
LQ1E32-T-R9		12 x 10			12				37.6	24		5.5
* 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			39.6				35			
LQ1E41-T-R3		6 x 4			41				46			
* LQ1E41-T-R8		19 x 16	—	—	19				39.6	49	35	9.4
* LQ1E41-T-R9		25 x 22	—	—	25				41	60	46	
* LQ1E51-T-R8	ø19	25 x 22	—	—	25	31.5	26	48.5	66.5	46	39	15
LQ1E61-T-R1	ø25	19 x 16	8	18	19	43	36	69.5	62	36	49	15.8

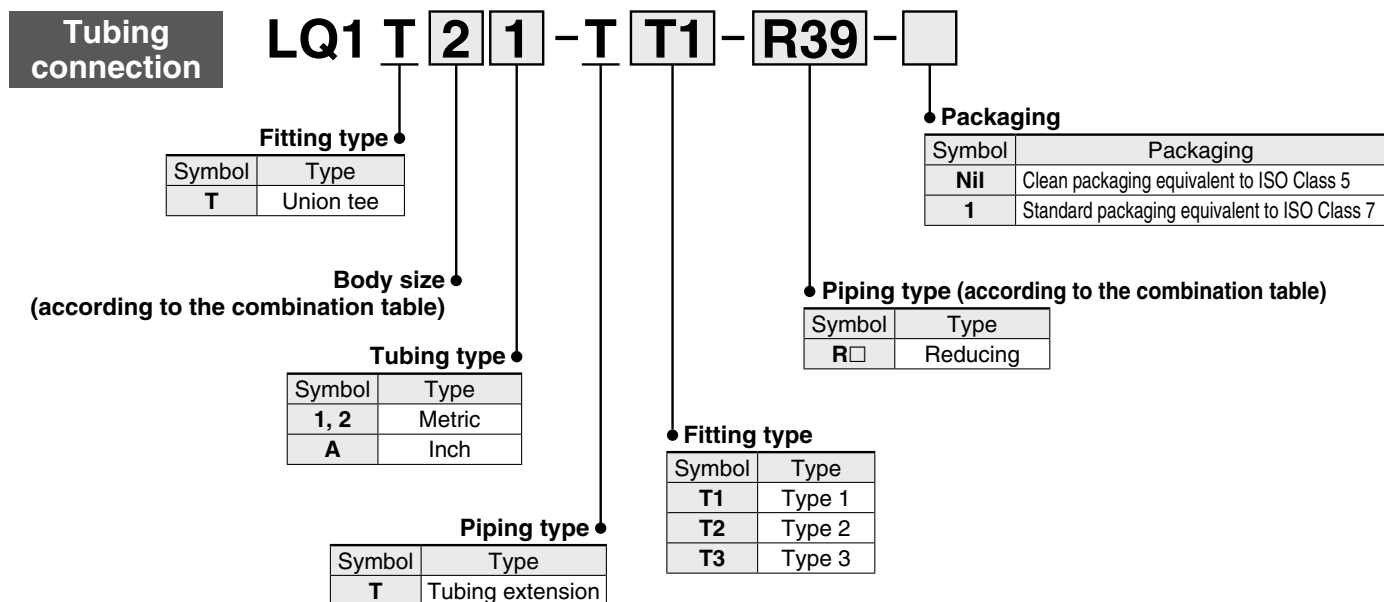
Inch Size

Model	A side	B side	B	C	D	E	H	L ₁	L ₂	L ₃	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"			25			36.3	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"			30.4			39.5	28			
* LQ1E3A-T-R9	1/2"	3/4" x 5/8"	—	—	3/4"	27	21	33.5	46.5	35	28	5.8
* LQ1E4A-T-R1		3/8" x 1/4"			34.8			38	24			
* LQ1E4A-T-R8	3/4"	3/4" x 5/8"	—	—	3/4"	27	21	39.6	49	35	28	9
* LQ1E4A-T-R9		1" x 7/8"			41			60	46			
* LQ1E5A-T-R8	1"	1" x 7/8"	—	—	1"	31.5	26	48.5	66.5	46	39	15
LQ1E6A-T-R1	1"	3/4" x 5/8"	8	18	3/4"	43	36	69.5	62	36	49	15.8

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	Tube 19 x 16	
	*	LQ1T51-TT1-R13	6 x 4		
		LQ1T51-TT1-R37	19 x 16		
	*	LQ1T51-TT1-R38	6 x 4		
		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"	Tube 3/4" x 5/8"	
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"		
		LQ1T5A-TT1-R7			
		LQ1T5A-TT2-R4	Tube 3/4" x 5/8"	1/4" x 5/32"	
	*	LQ1T5A-TT2-R40	Tube 1" x 7/8"		
		LQ1T5A-TT3-R5	Tube 3/4" x 5/8"	3/4" x 5/8"	
	LQ1T5A-TT3-R7	Tube 1/2" x 3/8"			
6	*	LQ1T6A-TT1-R1	1" x 7/8"	Tube 3/4" x 5/8"	1" x 7/8"
	*	LQ1T6A-TT1-R2		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"	

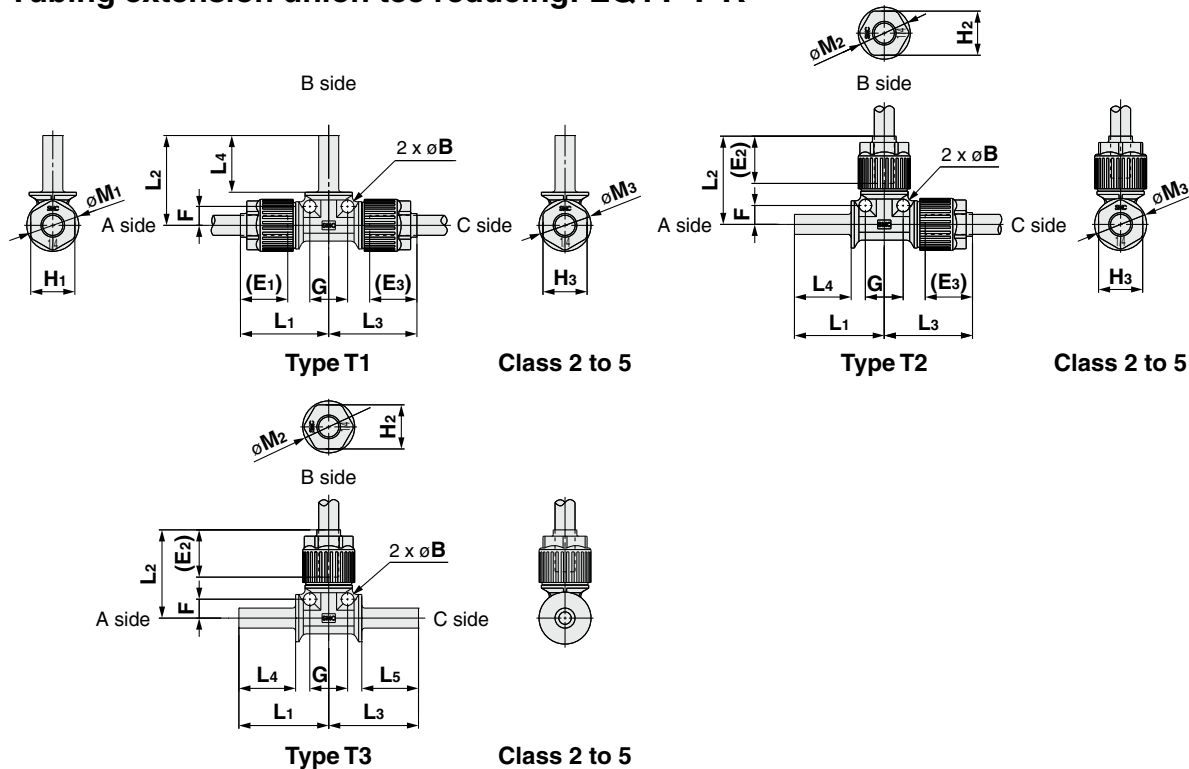
Note 1) Products marked "*" are produced upon receipt of order.
(The body of the fitting is PTFE machined.)

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) Applicable tubing O.D.	B side (Center) Applicable tubing O.D.	C side (Right) Applicable tubing O.D.	B	E ₁	E ₂	E ₃	F	G	H ₁	H ₂	H ₃	L ₁	L ₂	L ₃	L ₄	M ₁	M ₂	M ₃	Min. 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 ₁	E ₂	E ₃	F	G	H ₁	H ₂	H ₃	L ₁	L ₂	L ₃	L ₄	L ₅	M ₁	M ₂	M ₃	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	—	9.5	
* 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	48.5	53.5	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		

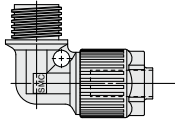
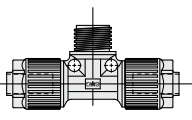
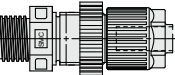
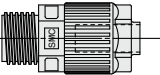
Note) Products marked "*" are produced upon receipt of order. (The body of the fitting is PTFE machined.)

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

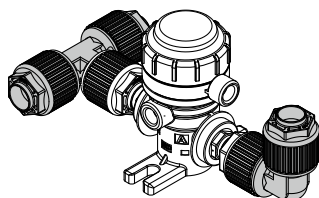
• Without a nut (including insert bushing) in one part

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

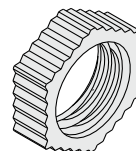
LQN P 11 -

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						○

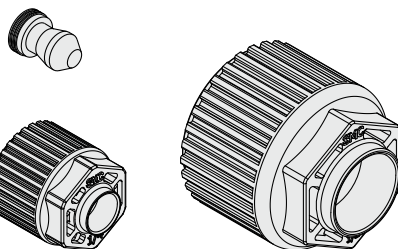
○ Basic size ● With reducer

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						○

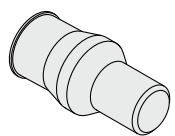
○ Basic size ● With reducer

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

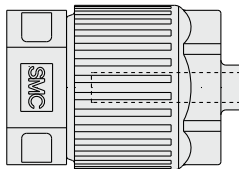
Metric Size

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	—	—	—	—	—	—	●	○	—	—	—	—	—	●	○

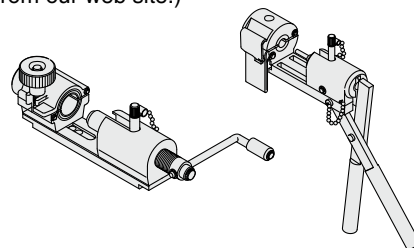
Parts composition

	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.)

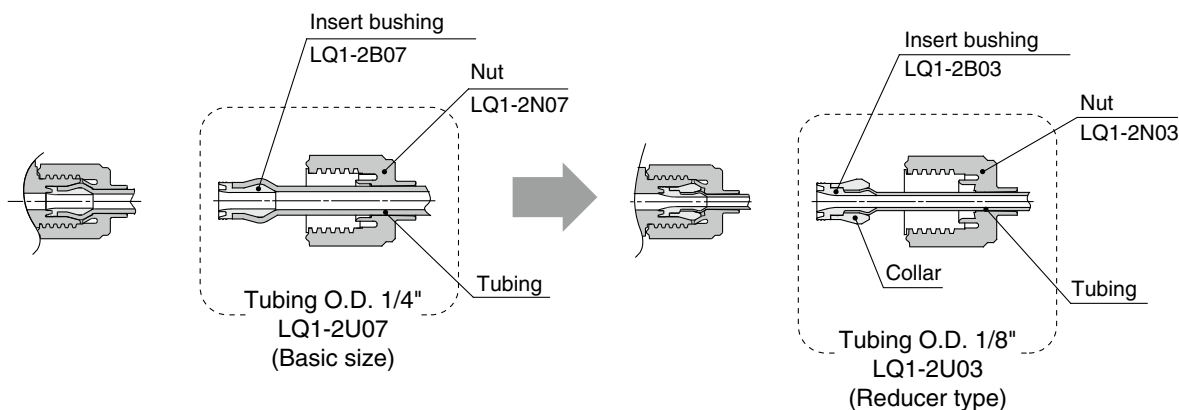


Changing the tubing size

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
E	Union elbow
T	Union tee
P	Panel mount union
U	Union

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

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

Size combination

Size	No.	Applicable tubing size (mm)
1	1	4 x 3
1	2	3 x 2
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)
1	A	1/8" x 0.086"
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"
8*	A*	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.

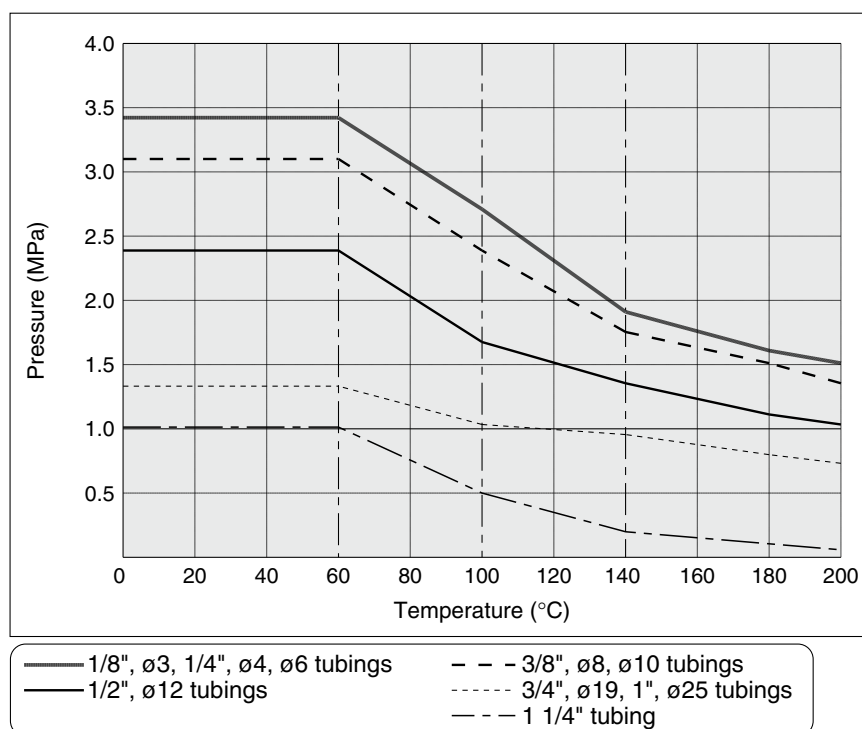
LQ3 Series



Specifications

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

Withstand Pressure and Heat Resistance Performance



⚠ Specific Product Precautions

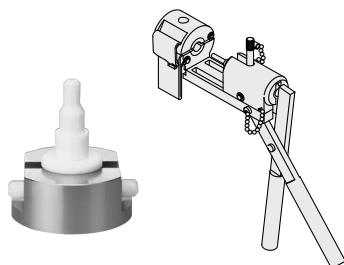
Be sure to read this before handling the products. Refer to page 501 for Safety Instructions.

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.)



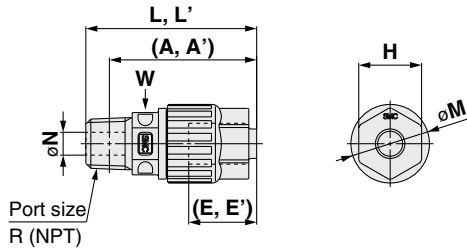
2. Tighten the nut until it touches the end surface of the body, and then tighten it an additional 1/8 turn. If the nut won't turn any further, then it means a sufficient tightening has occurred. Refer to the proper tightening torques shown below.

Tightening torque for piping

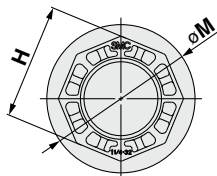
Body class	Torque (N·m)
1	0.7 to 0.9
2	1.6 to 1.8
3	3.2 to 3.5
4	5.0 to 5.3
5	10.0 to 10.5
6	22.5 to 23.0
7	23.0 to 26.5

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

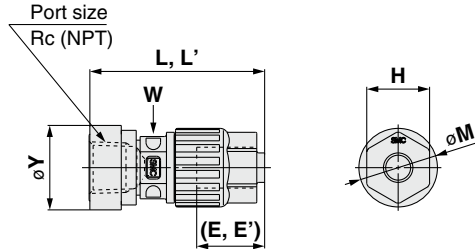
Inch Size

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

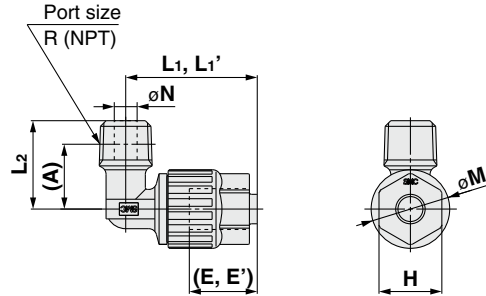
Model	Applicable tubing O.D.	Connection threads Rc/NPT	E	E'	H	L	L'	M	Min. port size	W	Y
LQ3H11-F□	ø4	1/8"	10	9	11	35	34	14	2.5	10	18.5
LQ3H12-F□	ø3								2		
LQ3H21-F□	ø6	1/8"	17	16	16	40	39	20	4	14	18.5
LQ3H22-F□		1/4"				45	44				21.5
LQ3H31-F□	ø10	1/8"	22.5	19.5	21	50.5	47.5	25	7.5	18	18.5
LQ3H32-F□	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

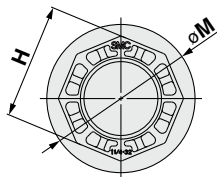
Model	Applicable tubing O.D.	Connection threads Rc/NPT	E	E'	H	L	L'	M	Min. port size	W	Y
LQ3H1A-F□	1/8"	1/8"	10	9	11	35	34	14	2	10	18.5
LQ3H2A-F□	1/4"	1/8"	17	16	16	40	39	20	4	14	18.5
LQ3H2B-F□		1/4"				45	44				21.5
LQ3H3A-F□	3/8"	1/8"	22.5	19.5	21	50.5	47.5	25	6.4	18	18.5
LQ3H3B-F□		1/4"				55	52				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'), L₁': Nut material PVDF dimensions



Class 7

Metric Size

Model	Applicable tubing O.D.	Connection threads R/NPT	A	E	E'	H	L ₁	L ₁ '	L ₂	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	1/8"	24								6.4	6.4
LQ3L33-M□	ø10	1/4"	22								10	7.5
LQ3L34-M□	ø8	1/4"	22								9.5	6.4
LQ3L35-M□	ø10	3/8"	21.5	24	22	24	54.5	52.5	33	29	6	6
LQ3L36-M□	ø8	1/2"	24.5								8	8
LQ3L38-M□	ø8	1/2"	24.5								9.5	9.5
LQ3L41-M□	ø12	1/4"	27								10	10
LQ3L42-M□	ø12	3/8"	26.5	26.5	24	32	64	61.5	40	37	8	8
LQ3L43-M□	ø12	1/2"	25								16	16
LQ3L51-M□	ø19	3/8"	33.5								10	10
LQ3L52-M□	ø19	1/2"	32								16	16
LQ3L53-M□	ø19	3/4"	30.5								10	10
LQ3L61-M□	ø25	1/2"	38	30	26	41	77	73	46	49	16	16
LQ3L62-M□	ø25	3/4"	36.5								22	22
LQ3L63-M□	ø25	1"	35.5								22	22

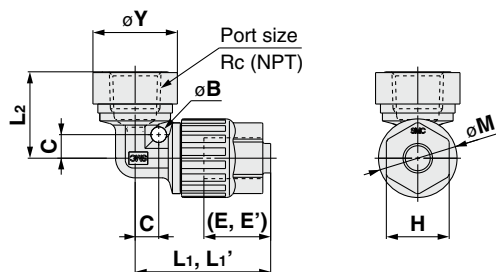
Inch Size

Model	Applicable tubing O.D.	Connection threads R/NPT	A	E	E'	H	L ₁	L ₁ '	L ₂	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								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								6.4	6.4
LQ3L3C-M□	3/8"	3/8"	21.5								10	7.5
LQ3L3D-M□	3/8"	1/2"	24.5								9.5	6.4
LQ3L4A-M□	1/2"	1/4"	27	24.5	22.5	24	54.5	52.5	33	29	6	6
LQ3L4B-M□	1/2"	3/8"	26.5								8	8
LQ3L4C-M□	1/2"	1/2"	25								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								10	10
LQ3L5C-M□	3/4"	3/4"	30.5								16	16
LQ3L6A-M□	1"	1/2"	38								10	10
LQ3L6B-M□	1"	3/4"	36.5	30	26	41	77	73	46	49	16	16
LQ3L6C-M□	1"	1"	35.5								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'),L₁': Nut material PVDF dimensions

Metric Size

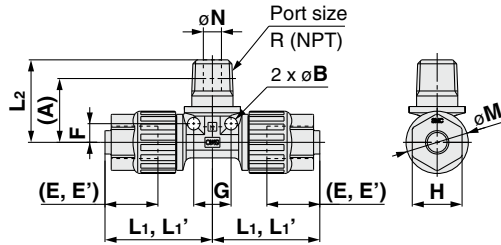
Model	Applicable tubing O.D.	Connection threads Rc/NPT	B	C	E	E'	H	L ₁	L ₁ '	L ₂	M	Min. port size	Y
LQ3L11-F□	ø4	1/8"	3.5	4.8	10	9	11	28.5	27.5	19.5	14	2.5	18.5
LQ3L12-F□	ø3											2	
LQ3L21-F□	ø6	1/8"	4	6	17	16	16	34.5	33.5	20	20	4	18.5
LQ3L22-F□		1/4"								22		4	21.5
LQ3L31-F□	ø10	1/8"								23		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 ₁	L ₁ '	L ₂	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 ₁	L ₁ '	L ₂	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	22	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	22	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	10	10
LQ3B52-M□	ø19	1/2"	34	7	26.5	24	14	28	32	64	61.5	42	37	10	10
LQ3B53-M□	ø19	3/4"	34.5	8	30	26	18	36	41	78	74	52	49	16	16
LQ3B61-M□	ø25	1/2"	42	8	30	26	18	36	41	78	74	52	49	16	16
LQ3B62-M□	ø25	3/4"	42.5	8	30	26	18	36	41	78	74	52	49	16	16
LQ3B63-M□	ø25	1"	42.5	8	30	26	18	36	41	78	74	53	49	22	22

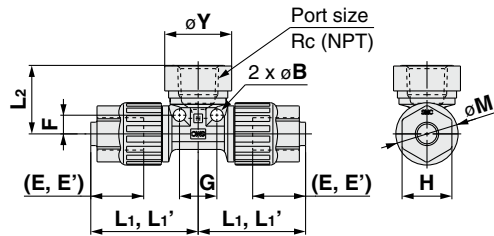
Inch Size

Model	Applicable tubing O.D.	Connection threads R/NPT	A	B	E	E'	F	G	H	L ₁	L ₁ '	L ₂	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	26.5	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	30.5	29	9.5	9.5
LQ3B4A-M□	1/2"	1/4"	27	6	24	22	10	20	24	52.5	50.5	33	29	9.5	9.5
LQ3B4B-M□	1/2"	3/8"	27.5	6	24	22	10	20	24	52.5	50.5	34	29	9.5	9.5
LQ3B4C-M□	1/2"	1/2"	29	6	24	22	10	20	24	52.5	50.5	37	29	9.5	9.5
LQ3B5A-M□	3/4"	3/8"	32.5	7	26.5	24	14	28	32	64	61.5	39	37	10	10
LQ3B5B-M□	3/4"	1/2"	34	7	26.5	24	14	28	32	64	61.5	42	37	10	10
LQ3B5C-M□	3/4"	3/4"	34.5	8	30	26	18	36	41	78	74	44	49	16	16
LQ3B6A-M□	1"	1/2"	42	8	30	26	18	36	41	78	74	50	49	16	16
LQ3B6B-M□	1"	3/4"	42.5	8	30	26	18	36	41	78	74	52	49	16	16
LQ3B6C-M□	1"	1"	42.5	8	30	26	18	36	41	78	74	53	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

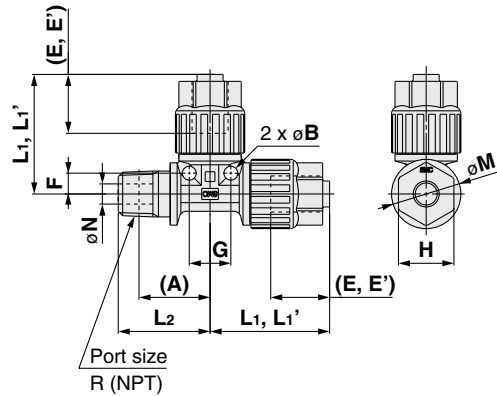
Model	Applicable tubing O.D.	Connection threads Rc/NPT	B	E	E'	F	G	H	L ₁	L ₁ '	L ₂	M	Min. port size	Y
LQ3B11-F□	ø4	1/8"	3.5	10	9	4.8	9.5	11	28.5	27.5	19.5	14	2.5	18.5
LQ3B12-F□	ø3												2	
LQ3B21-F□	ø6	1/8"	4	17	16	6	12	16	34.5	33.5	20	20	4	18.5
LQ3B22-F□		1/4"											22	21.5
LQ3B31-F□	ø10	1/8"									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 ₁	L ₁ '	L ₂	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 ₁	L ₁ '	L ₂	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 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 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

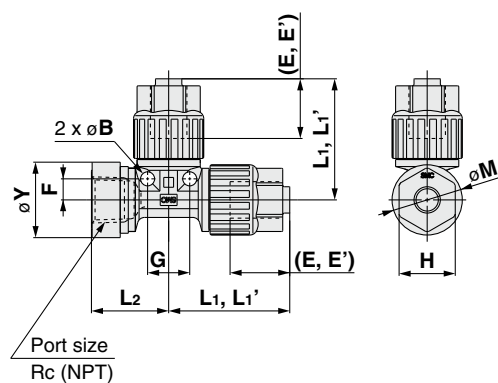
Inch Size

Model	Applicable tubing O.D.	Connection threads R/NPT	A	B	E	E'	F	G	H	L ₁	L ₁ '	L ₂	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

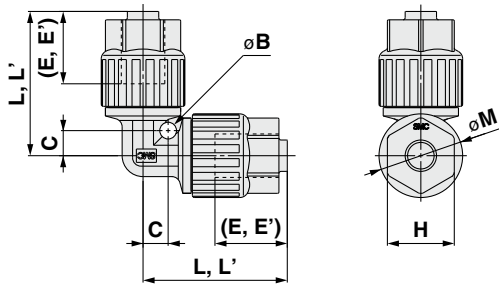
Model	Applicable tubing O.D.	Connection threads Rc/NPT	B	E	E'	F	G	H	L ₁	L ₁ '	L ₂	M	Min. port size	Y
LQ3R11-F□	ø4	1/8"	3.5	10	9	4.8	9.5	11	28.5	27.5	19.5	14	2.5	18.5
LQ3R12-F□	ø3												2	
LQ3R21-F□	ø6	1/8"	4	17	16	6	12	16	34.5	33.5	20	20	4	18.5
LQ3R22-F□		1/4"									22		21.5	
LQ3R31-F□	ø10	1/8"									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	23.5	29	9.5	21.5
LQ3R42-F□		3/8"									26			25
LQ3R43-F□		1/2"									30			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"									35.5		16	29.5
LQ3R53-F□		3/4"									37		36	
LQ3R61-F□	ø25	1/2"	8	30	26	18	36	41	78	74	41	49	17.5	29.5
LQ3R62-F□		3/4"									42.5		22	36
LQ3R63-F□		1"									46		44.5	

Inch Size

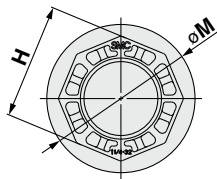
Model	Applicable tubing O.D.	Connection threads Rc/NPT	B	E	E'	F	G	H	L ₁	L ₁ '	L ₂	M	Min. port size	Y
LQ3R1A-F□	1/8"	1/8"	3.5	10	9	4.8	9.5	11	28.5	27.5	19.5	14	2	18.5
LQ3R2A-F□	1/4"	1/8"	4	17	16	6	12	16	34.5	33.5	20	20	4	18.5
LQ3R2B-F□		1/4"									22			21.5
LQ3R3A-F□	3/8"	1/8"	5	22.5	19.5	9	18	21	47.5	44.5	23	25	6.4	18.5
LQ3R3B-F□		1/4"									24			21.5
LQ3R3C-F□		3/8"									25.5			25
LQ3R4A-F□	1/2"	1/4"	6	24.5	22.5	10	20	24	52.5	50.5	23.5	29	9.5	21.5
LQ3R4B-F□		3/8"									26			25
LQ3R4C-F□		1/2"									30			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"									35.5			29.5
LQ3R5C-F□		3/4"									41			36
LQ3R6A-F□	1"	1/2"	8	30	26	18	36	41	78	74	41	49	17.5	29.5
LQ3R6B-F□		3/4"									42.5			36
LQ3R6C-F□		1"									46			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

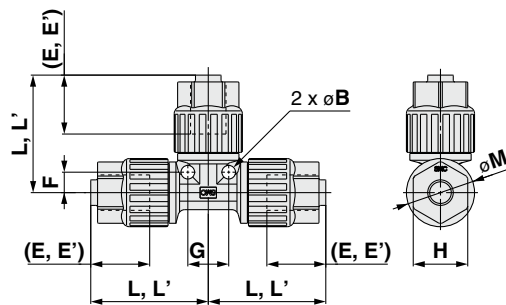
Metric Size

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

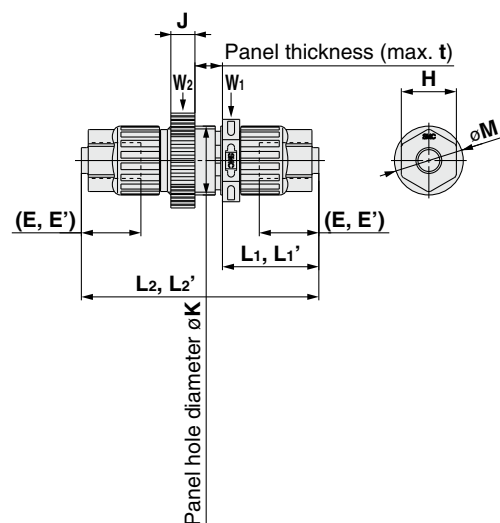
Inch Size

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'),L1',L2': Nut material PVDF dimensions
W: Width across flats dimension

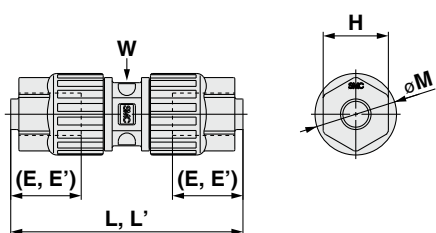
Metric Size

Model	Applicable tubing O.D.	E	E'	H	J	K	L ₁	L ₁ '	L ₂	L ₂ '	M	Min. port size	t	W ₁	W ₂
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 ₁	L ₁ '	L ₂	L ₂ '	M	Min. port size	t	W ₁	W ₂
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



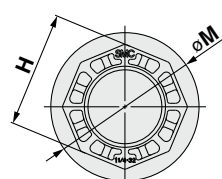
(E,E'): Reference dimension for the inserted tubing from the end surface of the nut
(E'),L': Nut material PVDF dimensions
W: Width across flats dimension

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

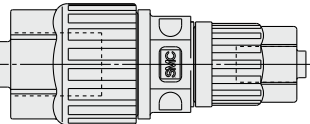
Symbol	Type
A	Inch
1, 2	Metric

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 Applicable tubing size (mm)	B side 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)

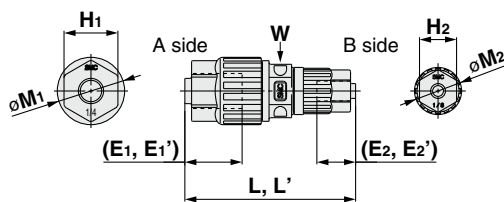
Size	Model	A side Applicable tubing size (inch)	B side Applicable tubing size (inch)
2	LQ3U2A-R1	1/4" x 5/32"	1/8" x 0.086"
3	LQ3U3A-R1	3/8" x 1/4"	1/4" x 5/32"
	LQ3U3A-R2		1/8" x 0.086"
4	LQ3U4A-R1	1/2" x 3/8"	3/8" x 1/4"
	LQ3U4A-R2		1/4" x 5/32"
5	LQ3U5A-R1	3/4" x 5/8"	1/2" x 3/8"
	LQ3U5A-R2		3/8" 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.

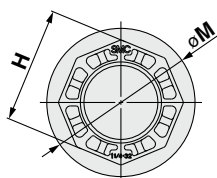
Dimensions

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 Applicable tubing O.D.	B side 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	ø6	ø3											2	
LQ3U31-R1	ø10	ø8	22.5	19.5	22.5	19.5	21	21	79	73	25	25	6.4	18
LQ3U31-R2	ø10	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		18
LQ3U32-R2	ø8	ø4			10	9		11	62	58		14	2.5	
LQ3U41-R1	ø12	ø10	24	22	22.5	19.5	24	21	82.5	77	29	25	7.5	22
LQ3U41-R2	ø12	ø8											6.4	
LQ3U51-R1	ø19	ø12	26.5	24	24	22	32	24	95.5	91	37	29	9.5	30
LQ3U51-R2	ø19	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	ø25	ø12			24	22		24	106.5	100		29	9.5	

Inch Size

Model	A side Applicable tubing O.D.	B side 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	3/8"	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	1/2"	1/4"			17	16		16	72.5	69		20	4	
LQ3U5A-R1	3/4"	1/2"			24.5	22.5		24	95.5	91		29	9.5	
LQ3U5A-R2	3/4"	3/8"	26.5	24	22.5	19.5	32	21	91	85.5	37	25	6.4	30
LQ3U5A-R3		1/4"			17	16		16	81	77		20	4	
LQ3U6A-R1	1"	3/4"	30	26	26.5	24	41	32	112.5	105.5	49	37	16	36
LQ3U6A-R2	1"	1/2"			24.5	22.5		24	106.5	100		29	9.5	
LQ3U7A-R1	1 1/4"	1"	35	35	30	26	50	41	132.5	128.2	64	49	22	46

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

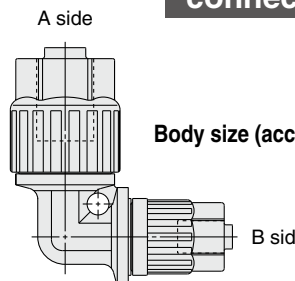
Symbol	Type
A	Inch
1, 2	Metric

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 Applicable tubing size (mm)	B side 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 Applicable tubing size (inch)	B side 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.

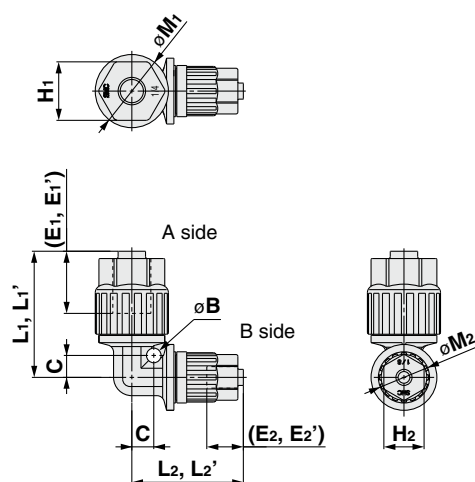
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

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 Applicable tubing O.D.	B side Applicable tubing O.D.	B	C	E1	E1'	E2	E2'	H1	H2	L1	L1'	L2	L2'	M1	M2	Min. 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			38	37			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	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	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			64.5	62.5		29	9.5

Inch Size

Model	A side Applicable tubing O.D.	B side Applicable tubing O.D.	B	C	E1	E1'	E2	E2'	H1	H2	L1	L1'	L2	L2'	M1	M2	Min. 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	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	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			53.5	50.5		25	6.4
LQ3E5A-R3	3/4"	1/4"					17	16		16			43.5	42.5		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			64.5	62.5		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)

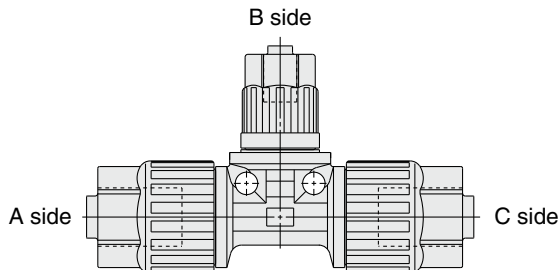
Symbol	Type
R□	Reducing

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"
5	LQ3T4A-R8	3/8" x 1/4"	1/4" x 5/32"	1/4" x 5/32"
	LQ3T4A-R9		1/2" x 3/8"	3/8" x 1/4"
	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"
	LQ3T5A-R9	1/2" x 3/8"	3/4" x 5/8"	1/2" x 3/8"
	LQ3T5A-R10	3/8" x 1/4"	3/4" x 5/8"	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"
6	LQ3T6A-R1	1" x 7/8"	3/4" x 5/8"	1" x 7/8"
	LQ3T6A-R2		1/2" x 3/8"	1" x 7/8"
	LQ3T6A-R3		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	3/4" x 5/8"	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"

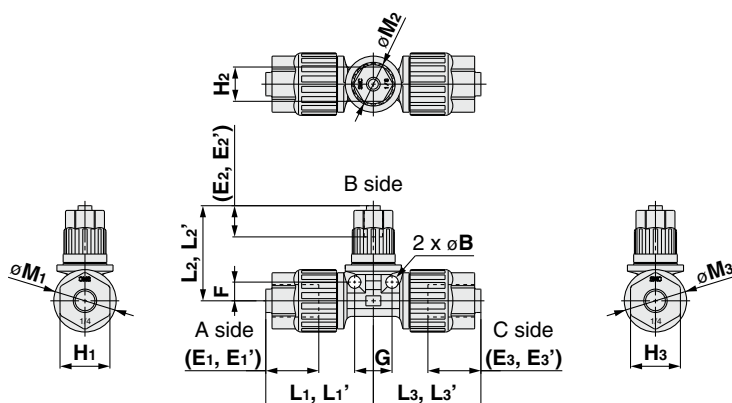
Note 1) For details of the applicable tubing sizes, refer to page 309.

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



(E₁, E₁', E₂, E₂', E₃, E₃') : Reference dimension for the inserted tubing from the end surface of the nut
(E₁', E₂', E₃'), L₁', L₂', L₃' : Nut material PVDF dimensions

Metric Size

Model	A side (Left)	B side (Center)	C side (Right)	B	E ₁	E ₁ '	E ₂	E ₂ '	E ₃	E ₃ '	F	G	H ₁	H ₂	H ₃	L ₁	L ₁ '	L ₂	L ₂ '	L ₃	L ₃ '	M ₁	M ₂	M ₃	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				17	16	10	9				16	11			34.5	33.5	30.5	29.5		20	14	2.5
LQ3T21-R6	ø6	ø6	ø3																						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	22.5	19.5				16	16			38	37	47.5	44.5		20	25	4
LQ3T31-R5	ø10	ø10	ø8				22.5	19.5	17	16				21	16			47.5	44.5	38	37		25	25	6.4
LQ3T31-R6	ø10	ø10	ø6						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	20	25	4
LQ3T32-R5	ø8	ø8	ø6				22.5	19.5	17	16				16	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)	B	E ₁	E ₁ '	E ₂	E ₂ '	E ₃	E ₃ '	F	G	H ₁	H ₂	H ₃	L ₁	L ₁ '	L ₂	L ₂ '	L ₃	L ₃ '	M ₁	M ₂	M ₃	Min. port size			
Applicable tubing O.D.																												
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				16	11			34.5	33.5	30.5	29.5		20	14				
LQ3T3A-R1	3/8"	1/4"	3/8"	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	20	25	4			
LQ3T3A-R2		1/8"	3/8"				10	9						11				33.5	32.5	47.5	44.5		14	2				
LQ3T3A-R5		3/8"	1/4"				22.5	19.5						21				47.5	44.5	25	20		4					
LQ3T3A-R7	1/4"	1/4"	1/4"	5	17	16	17	16	17	16	9	18	21	16	16	38	37	38	37	38	37	20	20	20	4			
LQ3T3A-R9		3/8"	1/4"				22.5	19.5						21	47.5			44.5	20	25								
LQ3T4A-R1	1/2"	3/8"	1/2"	6	24.5	22.5	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						16				39	38	52.5	50.5		20	4				
LQ3T4A-R5		1/2"	3/8"				24.5	22.5						22.5				19.5	21	16	52.5		50.5	25	6.4			
LQ3T4A-R6		1/2"	1/4"				22.5	19.5						17				16	21	16	48.5		45.5	25	6.4			
LQ3T4A-R7		3/8"	3/8"				22.5	19.5						17				16	16	16	39		38	20	4			
LQ3T4A-R8		1/4"	1/4"				17	16						17				16	39	38	39		38	20	4			
LQ3T4A-R9	3/8"	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	3/4"	1/2"	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	29	37	9.5			
LQ3T5A-R2		3/8"	3/4"				22.5	19.5						54.5				51.5	64				61.5	25	37	6.4		
LQ3T5A-R3		1/4"	3/4"				17	16						16				44.5	43.5				58.5	56.5	20	4		
LQ3T5A-R5		3/4"	1/2"				26.5	24						24.5				22.5	64				61.5	58.5	56.5	37	29	9.5
LQ3T5A-R6		3/4"	3/8"				22.5	19.5						54.5				51.5	54.5				51.5	25	37	6.4		
LQ3T5A-R7		1/2"	1/2"				24.5	22.5						24.5				22.5	58.5				56.5	58.5	56.5	29	29	9.5
LQ3T5A-R9	1/2"	3/4"	1/2"		24.5	22.5	26.5	24	24.5	19.5	10	20	24	32	24	58.5	56.5	64	61.5	54.5	51.5	25	37	25	6.4			
LQ3T5A-R10	3/8"	3/4"	3/8"	22.5	19.5	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	3/4"	1/2"	1/4"	7	26.5	24	24.5	22.5	17	16	14	28	32	24	32	64	61.5	58.5	56.5	64	61.5	44.5	43.5	37	29			
LQ3T5A-R12		3/4"	1/4"				26.5	24						26.5	24	17	16	32	32	16	64	61.5	64	61.5	44.5	43.5	37	37
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						24				64.5	62.5				78	74	29	9.5		
LQ3T6A-R3		3/8"	1"				22.5	19.5						21				60	57				70	67.5	25	6.4		
LQ3T6A-R4		1/4"	1"				17	16						16				50	49				64.5	62.5	20	4		
LQ3T6A-R5		1"	3/4"				30	26						26.5				24	78				74	70	67.5	49	37	16
LQ3T6A-R6		1"	1/2"				30	26						24.5				22.5	41				24	78	74	64.5	62.5	49
LQ3T6A-R7	3/4"	3/4"	3/4"	8	26.5	24	26.5	24	26.5	24	18	36	32	32	41	78	74	70	67.5	78	74	49	37	37	16			
LQ3T6A-R9		1"	3/4"				26.5	24						26.5				24	24				64.5	62.5	29	9.5		
LQ3T6A-R10	1/2"	1"	1/2"		24.5	22.5	24.5	22.5	24.5	19.5	10	20	41	21	78	74	78	74	60	57	49	49	29	25	6.4			
LQ3T6A-R12	1"	3/8"	30	26	22.5	19.5	17	16															32	16	70	67.5	50	49
LQ3T6A-R13	3/4"	1"	1/4"	8	26.5	24	26.5	24	17	16	18	36	32	16	70	67.5	78	74	60	57	49	49	29	25	6.4			
LQ3T6A-R14		1"	1/4"																							26.5	24	17

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.

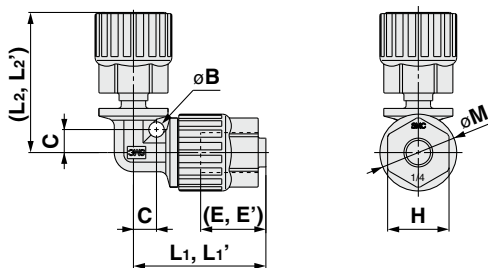
Size	Symbol	Applicable tubing size (inch)
2	A	1/4" x 5/32"
3	A	3/8" x 1/4"
4	A	1/2" x 3/8"
5	A	3/4" x 5/8"
6	A	1" x 7/8"
7	A	1 1/4" x 1.1"

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

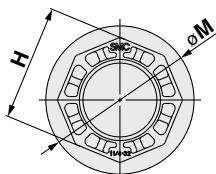
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

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.

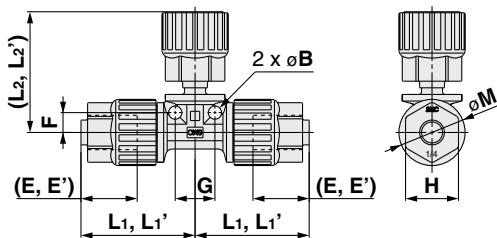
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

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.

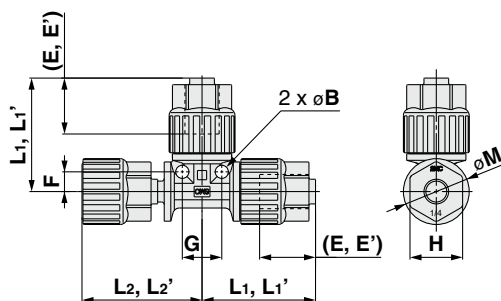
Size	Symbol	Applicable tubing size (inch)
2	A	1/4" x 5/32"
3	A	3/8" x 1/4"
4	A	1/2" x 3/8"
5	A	3/4" x 5/8"
6	A	1" x 7/8"

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.

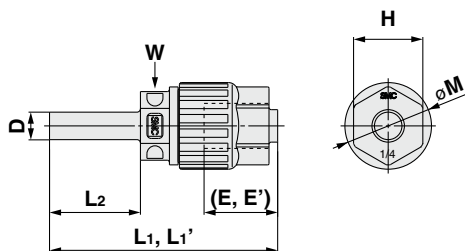
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

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

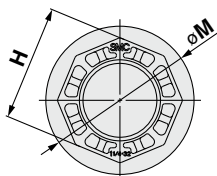
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

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 ₁	L ₁ '	L ₂	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 ₁	L ₁ '	L ₂	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
A	Straight adapter

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

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

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

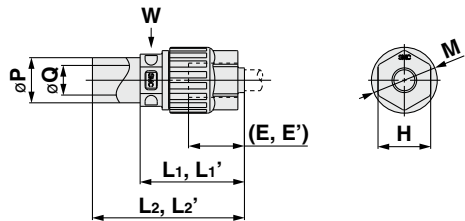
Note 1) For details of the applicable tubing sizes, refer to page 309.

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 ₁	L ₁ '	L ₂	L ₂ '	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	66						65	21.3			15.4			
LQ3A36	ø10				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 tubing O.D.	E	E'	H	L ₁	L ₁ '	L ₂	L ₂ '	M	Min. 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
F	Union flange

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

Size combination

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

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

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

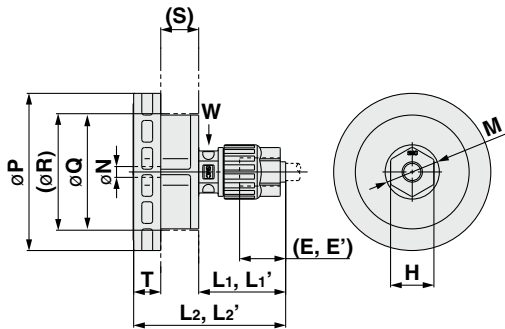
Note 2) Refer to the tables on the dimensions page for the applicable tubing and port size combinations for each model.

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
LQ3F22	ø6	17	16	16	32.1	30.9	56.1	54.9	20	58	42	43	14	10	14	4	4
LQ3F42	ø12	24	22	24	49	46.8	73	70.8	29	58	42	43	14	10	22	9.5	9.5
LQ3F43										69							
LQ3F51	ø19	26.5	24	32	58	55.3	80	77.3	37	53			12				
LQ3F52							82	79.3		58	42	43		10	30	16	16
LQ3F53										69			14				
LQ3F62	ø25	30	26	41	68.5	64.2	92.5	88.2	49	58	47	48					
LQ3F63										69							
LQ3F64							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
LQ3F2B	1/4"	17	16	16	32.1	30.9	56.1	54.9	20	58	42	43	14	10	14	4	4
LQ3F4B	1/2"	24.5	22.5	24	49	46.8	73	70.8	29	58	42	43	14	10	22	9.5	9.5
LQ3F4C										69							
LQ3F5A	3/4"	26.5	24	32	58	55.3	80	77.3	37	53			12				
LQ3F5B							82	79.3		58	42	43		10	30	16	16
LQ3F5C										69			14				
LQ3F6B	1"	30	26	41	68.5	64.2	92.5	88.2	49	58	47	48					
LQ3F6C										69							
LQ3F6D							94.5	90.2		84	55	56	16	10	36	22	22

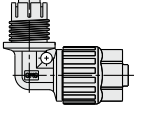
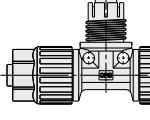
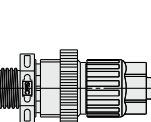
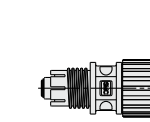
How to Order Space Saving Type Fittings

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

LQ3 E 6A - SN -

Fitting type ●

- **Packaging**

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

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**

- **Applicable tubing size**

Symbol		Applicable tubing size (mm)
Size	No.	
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

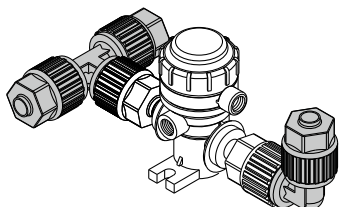
Symbol		Applicable tubing size (inch)
Size	No.	
2	A	1/4" x 5/32"
3	A	3/8" x 1/4"
4	A	1/2" x 3/8"
5	A	3/4" x 5/8"
6	A	1" x 7/8"

Note 1) 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

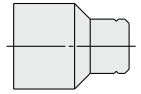
Symbol	Type
P	Plug

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

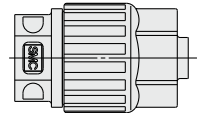
Symbol	Type
P	Plug

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).

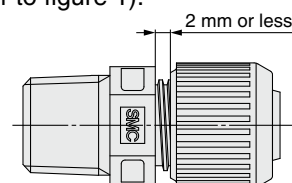
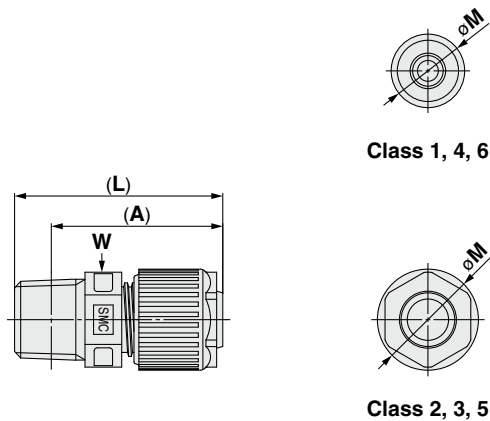


Fig. 1

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

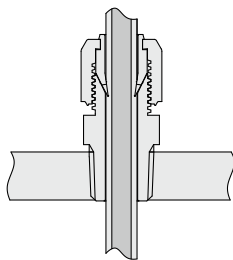
Inch Size

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

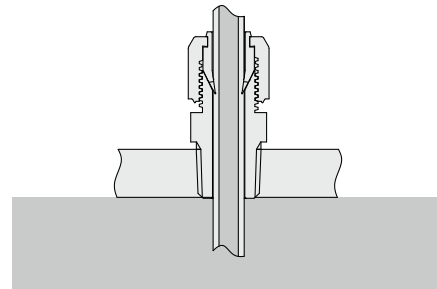
Types of Use

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.

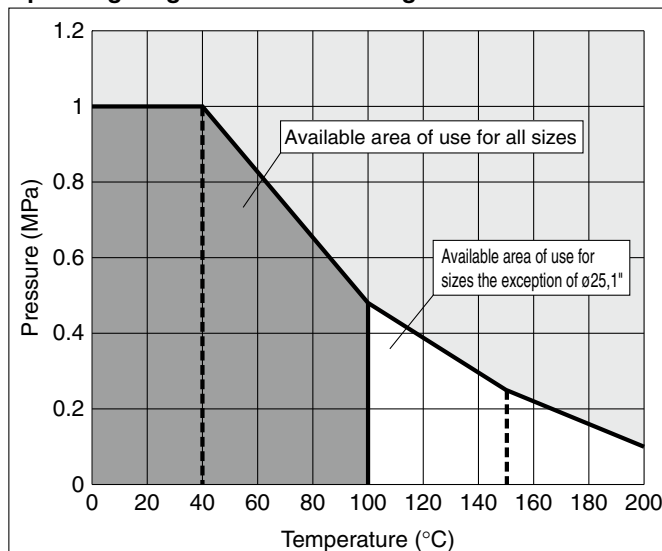
- Condition A**
- For applications including boring through panels or walls, etc.
 - Atmospheric release.



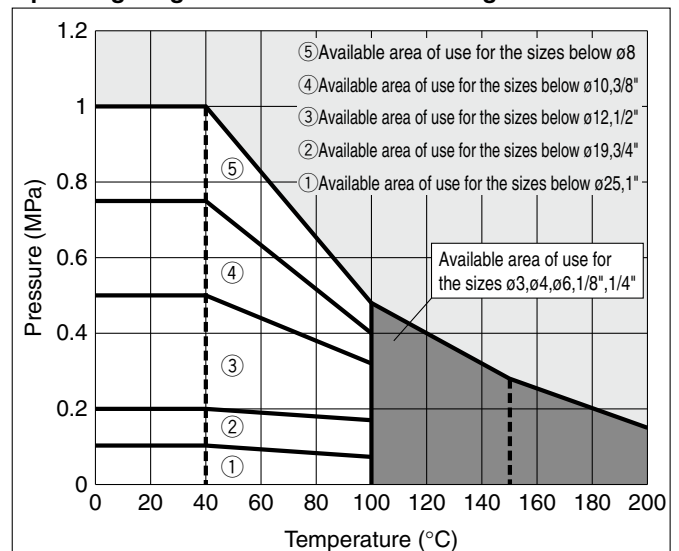
- Condition B**
- For applying sustained pressure to the female thread.
 - Using the same pressure and temperature as that of the inside of the tube.



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

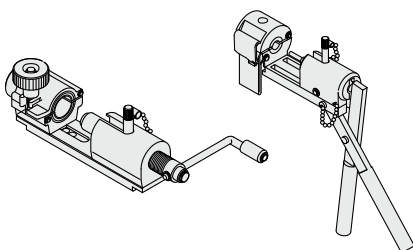
1. After mounting, perform suitable function and leak tests to confirm that the mounting is correct.

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 −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 −0.1			
	ø25 x ø22	25.0				
Inch sizes	1/8" x 0.086"	3.18	+0.2 −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 −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.