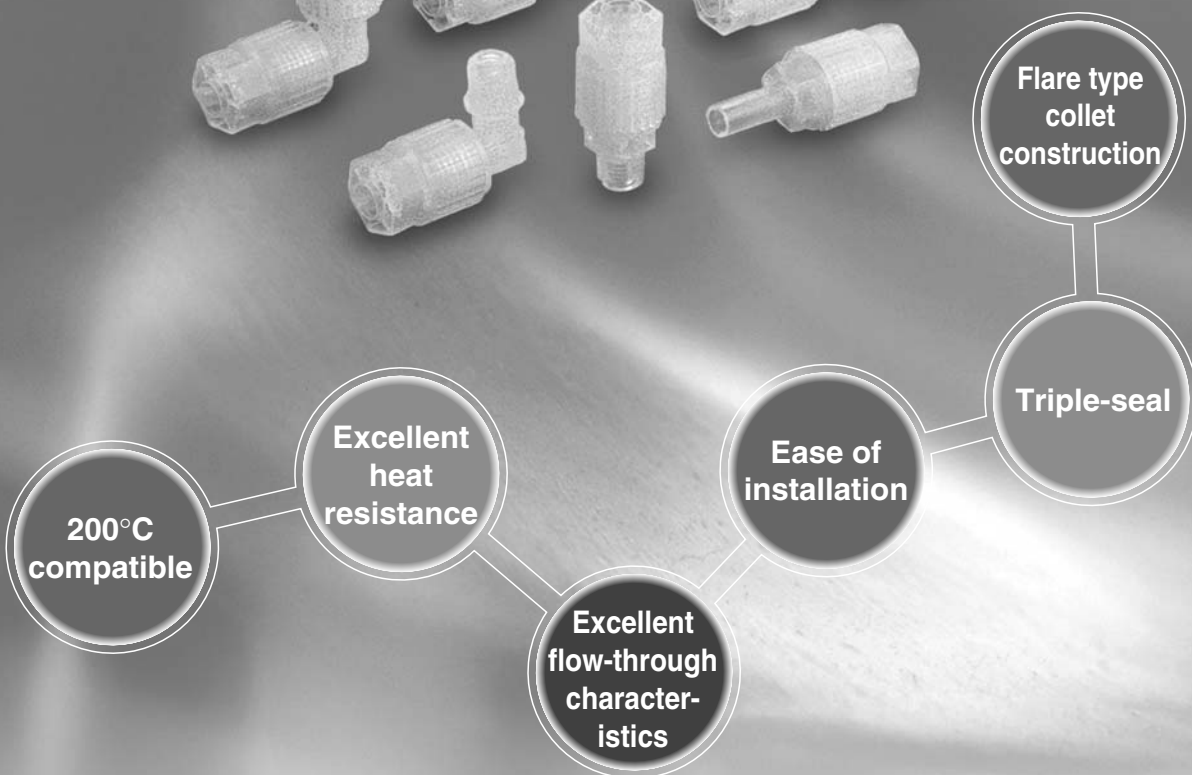
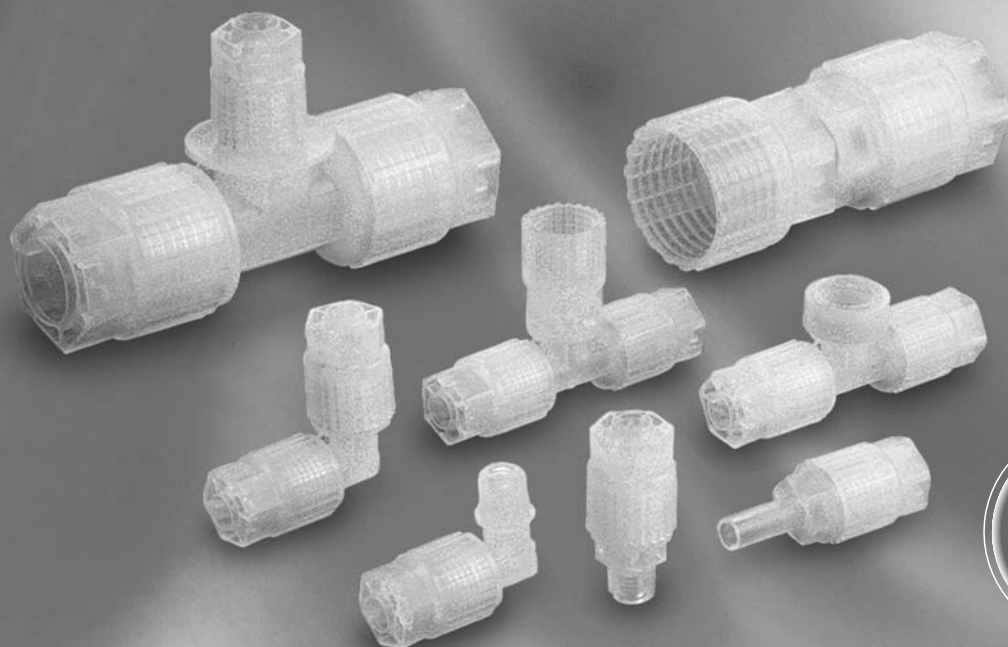


# Fluoropolymer Fittings Hyper Fitting / Flare Type

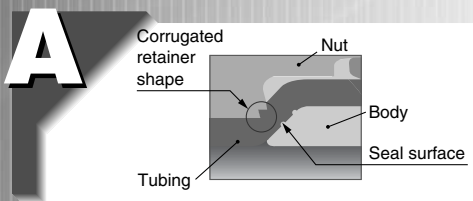
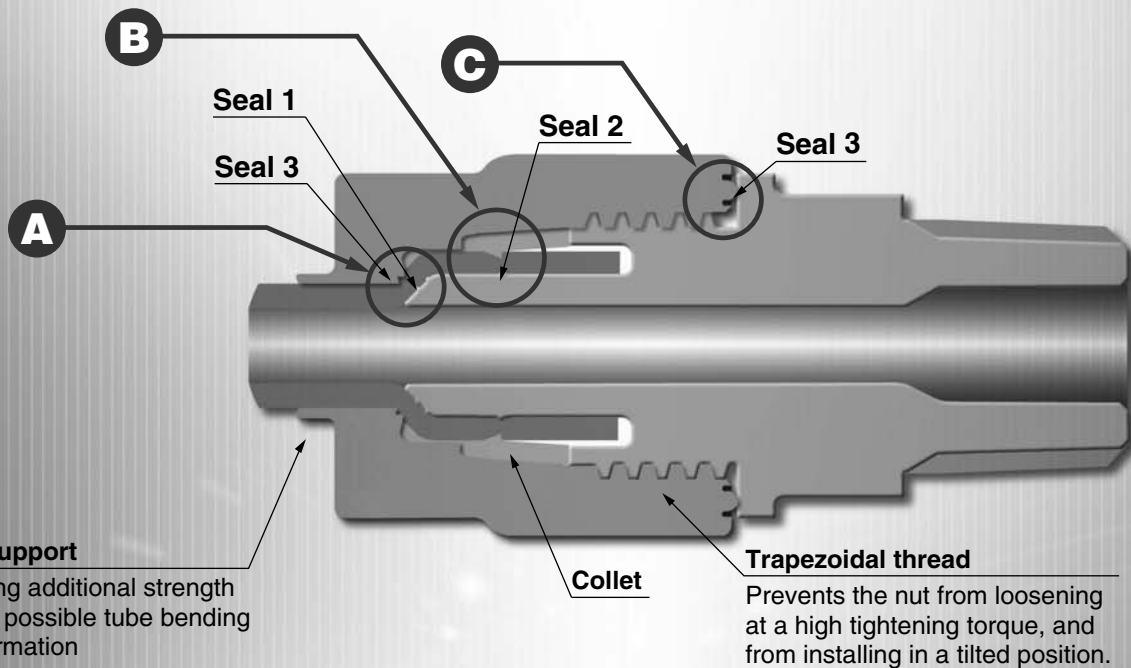
## Series LQ3



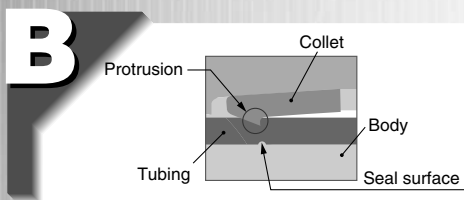
- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

Model		LQ3□10	LQ3□20	LQ3□30	LQ3□40	LQ3□50	LQ3□60	LQ3□70
Feature								
Material		New PFA						
Maximum operating pressure (at 20°C)		1.0 MPa						
Operating temperature	Nut material PVDF	0 to 150°C						
	Nut material PFA	0 to 200°C						
Applicable tubing size	Metric	ø3 to ø25						
	Inch	1/8" to 1 1/4"						

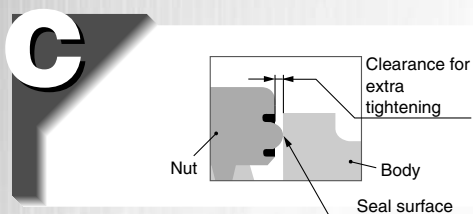
# Triple-Seal Construction



- Tube 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.


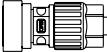
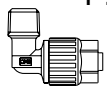
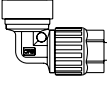
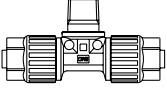
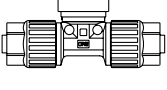

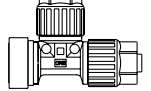
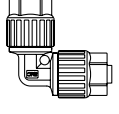
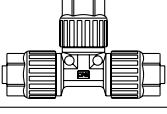


- Strengthening the prevention of the tube release by means of the collet structure.
- Sealing performance is highly maintained in a circumferential seal surface having a unique shape even under thermal stress conditions.



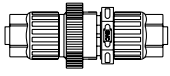

- To establish the tightening position, a gauge control is not required as the nut is designed to be tightened until the end surface of the fitting's main body.

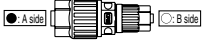
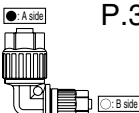
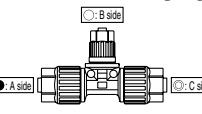
Fluoropolymer Fittings  
Hyper Fitting/Flare Type **Series LQ3**

Series	Appearance	Size	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 <b>LQ3H</b>	Male	P.326 	1	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-		
			2	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-	-	
			3	-	●	●	●	●	-	-	-	-	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-	-
			4	-	-	●	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	-	-
			5	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	-	●	-	-	-	-
			6	-	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	-	●	-	-	-
	Female	P.327 	1	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-		
			2	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-	-	
			3	-	●	●	●	●	-	-	-	-	-	-	-	●	●	-	-	-	-	●	-	-	-	-	-	
			4	-	-	●	●	●	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-	-	-	
			5	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	-	
			6	-	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	
Elbow <b>LQ3L</b>	Male	P.328 	1	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-		
			2	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-	
			3	-	●	●	●	●	-	-	-	-	-	-	-	●	●	-	-	-	-	●	-	-	-	-	-	
			4	-	-	●	●	●	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-	-	-	
			5	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	-	
			6	-	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	
	Female	P.329 	1	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-		
			2	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-	
			3	-	●	●	●	●	-	-	-	-	-	-	-	●	●	-	-	-	-	●	-	-	-	-	-	
			4	-	-	●	●	●	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-	-	-	
			5	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	-	
			6	-	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	
Branch tee <b>LQ3B</b>	Male	P.330 	1	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-		
			2	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-	
			3	-	●	●	●	●	-	-	-	-	-	-	-	●	●	-	-	-	-	●	-	-	-	-	-	
			4	-	-	●	●	●	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-	-	-	
			5	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	-	
			6	-	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	
	Female	P.331 	1	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-		
			2	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-	
			3	-	●	●	●	●	-	-	-	-	-	-	-	●	●	-	-	-	-	●	-	-	-	-	-	
			4	-	-	●	●	●	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-	-	-	
			5	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	-	
			6	-	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	
Run tee <b>LQ3R</b>	Male	P.332 	1	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-		
			2	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-	
			3	-	●	●	●	●	-	-	-	-	-	-	-	●	●	-	-	-	-	●	-	-	-	-	-	
			4	-	-	●	●	●	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-	-	-	
			5	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	-	
			6	-	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	
	Female	P.333 	1	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-		
			2	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-	
			3	-	●	●	●	●	-	-	-	-	-	-	-	●	●	-	-	-	-	●	-	-	-	-	-	
			4	-	-	●	●	●	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-	-	-	
			5	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	-	
			6	-	-	-	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-	
Union elbow <b>LQ3E</b>	P.334 	1	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-			
		2	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-		
		3	●	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	●	-	-	-	-	-		
		4	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	●	-	-	-	-	-		
		5	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-	-		
		6	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-	-		
		7	-	-	-	-	-	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-		
Union tee <b>LQ3T</b>	P.334 	1	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-			
		2	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-		
		3	●	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	●	-	-	-	-	-		
		4	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	●	-	-	-	-	-		
		5	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-	-		
		6	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-		


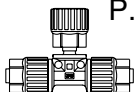
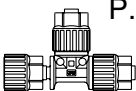
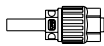
- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

# Series LQ3


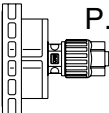
Series	Appearance	Size	Port size								Tubing O.D.													
											Metric size						Inch size							
			None	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	ø3	ø4	ø6	ø8	ø10	ø12	ø19	ø25	1/8"	1/4"	3/8"	1/2"	3/4"	1"
Panel mount union <b>LQ3P</b>		P.335	1	●	-	-	-	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-	-	-
		2	●	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-
		3	●	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-
		4	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-
		5	●	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-
		6	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
Union <b>LQ3U</b>		P.335	1	●	-	-	-	-	-	-	●	●	-	-	-	-	-	●	-	-	-	-	-	
		2	●	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	●	-	-	-	-	
		3	●	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-	●	-	-	-	
		4	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	
		5	●	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	
		6	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
		7	-	-	-	-	-	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●


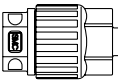

Series	Appearance	Size	Tubing O.D.																			
			Metric size							Inch size												
			ø3	ø4	ø6	ø8	ø10	ø12	ø19	ø25	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"					
Union reducing <b>LQ3U-R</b>		P.336	1	○	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	○	○	●	-	-	-	-	-	-	○	●	-	-	-	-	-	-	-	-	-
		3	-	○	○	●/○	●	-	-	-	-	○	○	●	-	-	-	-	-	-	-	-
		4	-	-	-	○	○	●	-	-	-	-	○	○	●	-	-	-	-	-	-	-
		5	-	-	-	-	-	○	●	-	-	-	○	○	○	●	-	-	-	-	-	-
		6	-	-	-	-	-	●	○	●	-	-	-	-	○	○	●	-	-	-	-	-
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	●	-	-	-
Union elbow reducing <b>LQ3E-R</b>		P.338	1	○	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2	○	○	●	-	-	-	-	-	-	○	●	-	-	-	-	-	-	-	-	
		3	-	○	○	●/○	●	-	-	-	-	○	○	●	-	-	-	-	-	-	-	
		4	-	-	-	○	○	●	-	-	-	-	○	○	○	●	-	-	-	-	-	
		5	-	-	-	-	-	○	●	-	-	-	○	○	○	○	●	-	-	-	-	
		6	-	-	-	-	-	●	○	●	-	-	-	-	○	○	○	○	●	-	-	
Union tee reducing <b>LQ3T-R</b>		P.340	1	○/○	●/○/○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2	○/○	○/○	●/○/○	-	-	-	-	-	-	○/○	●/○/○	-	-	-	-	-	-	-	-	
		3	-	-	○/○	●/○/○	●/○/○	-	-	-	-	○	●/○/○	●/○/○	-	-	-	-	-	-	-	
		4	-	-	-	○/○	○/○	●/○/○	-	-	-	-	○/○	●/○/○	●/○/○	●/○/○	-	-	-	-	-	
		5	-	-	-	-	-	○/○	●/○/○	-	-	-	○/○	●/○/○	●/○/○	●/○/○	●/○/○	-	-	-	-	
		6	-	-	-	-	-	-	○/○	●/○/○	-	-	○/○	●/○/○	●/○/○	●/○/○	●/○/○	●/○/○	-	-	-	

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

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"	1 1/4"						
Space saving union elbow <b>LQ3E-S</b>		P.342	2	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	
		3	-	-	-	●	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	
		4	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-	
		5	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-	
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
		Space saving branch tee <b>LQ3T-SB</b>		P.343	2	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-
3	-			-	-	●	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-		
4	-			-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-		
5	-			-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-	
6	-			-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	
7	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
Space saving run tee <b>LQ3T-SR</b>		P.344	2	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-		
		3	-	-	-	●	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-		
		4	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-		
		5	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-	
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
Tube extension straight connector <b>LQ3H-T</b>		P.345	2	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-		
		3	-	-	-	●	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-		
		4	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-		
		5	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-	
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	
		7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●

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

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"	1 1/4"
Straight adapter <b>LQ3A</b>		P.346	2	-	-	●	-	-	-	-	-	-	●	-	-	-	-
		3	-	-	-	●	●	-	-	-	-	-	-	●	-	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
		7	-	-	-	-	-	-	-	-	●	-	-	-	-	-	●
		Union flange <b>LQ3F</b>		P.348	2	-	-	●	-	-	-	-	-	●	-	-	-
3	-			-	-	-	-	-	-	-	-	-	-	-	-	-	
4	-			-	-	-	-	●	-	-	-	-	●	-	-	-	
5	-			-	-	-	-	-	●	-	-	-	-	●	-	-	
6	-			-	-	-	-	-	-	●	-	-	-	-	●	-	
7	-			-	-	-	-	-	-	-	●	-	-	-	-	●	

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"
Blanking plug <b>LQ3-P-1</b>		P.349	1	●	●	-	-	-	-	-	-	●	-	-	-	-
		2	-	-	●	-	-	-	-	-	-	-	●	-	-	-
		3	-	-	-	●	●	-	-	-	-	-	●	-	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	●	-	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	●	-
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	●
		7	-	-	-	-	-	-	-	-	●	-	-	-	-	-
Tubing plug <b>LQ3-P-2</b>		P.349	1	●	●	-	-	-	-	-	-	●	-	-	-	-
		2	-	-	●	-	-	-	-	-	-	-	●	-	-	-
		3	-	-	-	●	●	-	-	-	-	-	-	●	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	-	●	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	-	●
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	-
		7	-	-	-	-	-	-	-	-	●	-	-	-	-	-
Nut <b>LQ3-N</b>		P.349	1	●	●	-	-	-	-	-	-	●	-	-	-	-
		2	-	-	●	-	-	-	-	-	-	-	●	-	-	-
		3	-	-	-	●	●	-	-	-	-	-	-	●	-	-
		4	-	-	-	-	-	●	-	-	-	-	-	-	●	-
		5	-	-	-	-	-	-	●	-	-	-	-	-	-	●
		6	-	-	-	-	-	-	-	●	-	-	-	-	-	-
		7	-	-	-	-	-	-	-	-	●	-	-	-	-	-

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

# Fluoropolymer Fittings Hyper Fitting / Flare Type Series LQ3



## 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						

## ⚠ Precautions

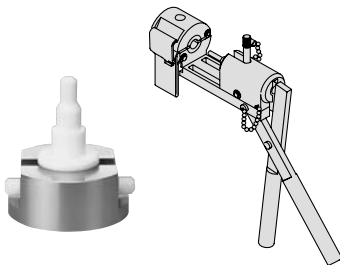
Be sure to read before handling. Refer to front matters 58 and 59 for Safety Instructions.

### Piping

## ⚠ Caution

### 1. Connect tubing with special tools

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

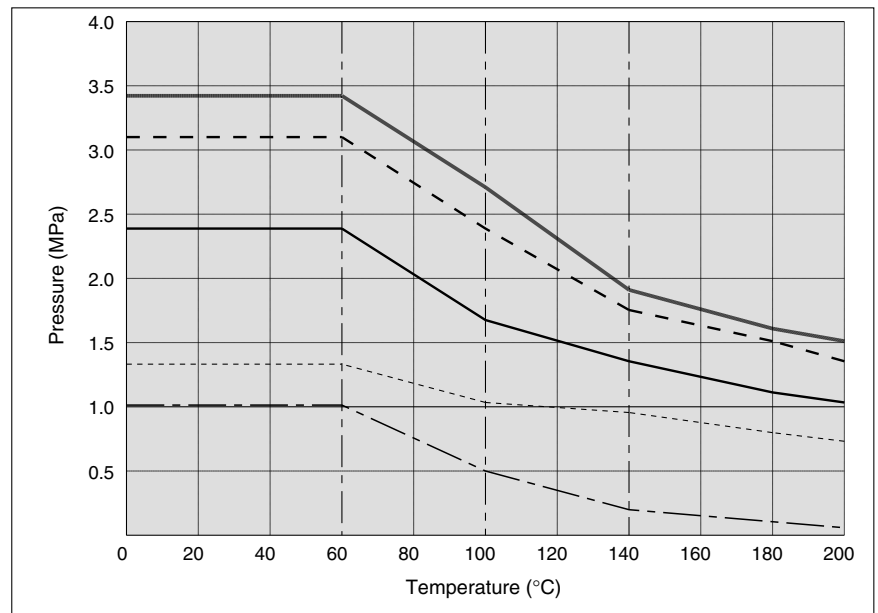


2. Tighten the nut to the end surface of the body. As a guide, refer to the proper tightening torque shown below.

### 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

## Withstand Pressure and Heat Resistance Performance



— 1/8", ø3, 1/4", ø4, ø6 tubings      - - - 3/8", ø8, ø10 tubings  
 — 1/2", ø12 tubings                      ····· 3/4", ø19, 1", ø25 tubings  
 - - - 1 1/4" tubing

K

M

H

KK

D

MS

LQ

MQR

T

## How to Order

**Threaded connection**

**LQ3 H 11 - M** -

• **Fitting type**

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

• **Nut material, packaging**

Symbol	Nut material	Packaging
<b>Nil</b>	PFA	Clean packaging equivalent to Class M3.5
<b>1</b>	PFA	Standard packaging equivalent to Class M5.5
<b>2</b>	PVDF	Clean packaging equivalent to Class M3.5
<b>3</b>	PVDF	Standard packaging equivalent to Class M5.5

• **Thread type**

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

• **Piping type**

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

• **Size combination**

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

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

\* H: Connector only

**How to Order**

**Tubing connection**

**LQ3 E 11 -**  

**Fitting type**

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

**Nut material, packaging**

Symbol	Nut material	Packaging
<b>Nil</b>	PFA	Clean packaging equivalent to Class M3.5
<b>1</b>	PFA	Standard packaging equivalent to Class M5.5
<b>2</b>	PVDF	Clean packaging equivalent to Class M3.5
<b>3</b>	PVDF	Standard packaging equivalent to Class M5.5

**Size combination**

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

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

\* E: Union Elbow and U: Union only

**K**

**M**

**H**

**KK**

**D**

**MS**

**LQ**

**MQR**

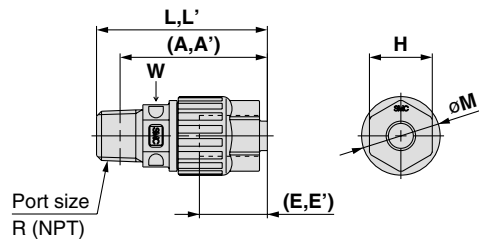
**T**



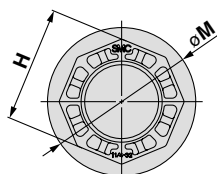
# Series LQ3

## 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

### Metric Size

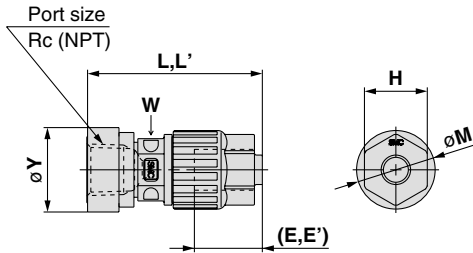
Model	Applicable tubing O.D.	Connection threads R/NPT	A	A'	E	E'	H	L	L'	M	W
LQ3H11-M□	ø4	1/8"	29.5	28.5	10	9	11	33.5	32.5	14	10
LQ3H12-M□	ø3										
LQ3H21-M□	ø6	1/8"	39.5	38.5	17	16	16	43.5	42.5	20	14
LQ3H22-M□		1/4"	37.5	36.5							
LQ3H31-M□	ø10	1/8"	51	48	22.5	19.5	21	55	52	25	18
LQ3H32-M□	ø8		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

### Inch Size

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

## 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	W	Y
LQ3H11-F□	ø4	1/8"	10	9	11	35	34	14	10	18.5
LQ3H12-F□	ø3									
LQ3H21-F□	ø6	1/8"	17	16	16	40	39	20	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	18	18.5
LQ3H32-F□	ø8									
LQ3H33-F□	ø10	1/4"	22.5	19.5	21	55	52	25	18	21.5
LQ3H34-F□	ø8									
LQ3H35-F□	ø10	3/8"	24	22	24	55.5	52.5	29	22	25
LQ3H36-F□	ø8									
LQ3H41-F□	ø12	1/4"	24	22	24	55.5	53	29	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	30	25
LQ3H52-F□		1/2"				72	69.5			29.5
LQ3H53-F□		3/4"				73.5	71			36
LQ3H61-F□	ø25	1/2"	30	26	41	81.5	77.5	49	36	29.5
LQ3H62-F□		3/4"				83	79			36
LQ3H63-F□		1"				90.5	86.5			44.5

### Inch Size

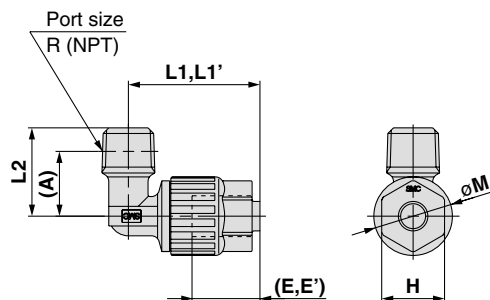
Model	Applicable tubing O.D.	Connection threads Rc/NPT	E	E'	H	L	L'	M	W	Y
LQ3H1A-F□	1/8"	1/8"	10	9	11	35	34	14	10	18.5
LQ3H2A-F□	1/4"	1/8"	17	16	16	40	39	20	14	18.5
LQ3H2B-F□		1/4"				45	44			21.5
LQ3H3A-F□	3/8"	1/8"	22.5	19.5	21	50.5	47.5	25	18	18.5
LQ3H3B-F□		1/4"				55	52			21.5
LQ3H3C-F□		3/8"			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

K□  
M□  
H□  
KK  
D□  
MS  
LQ  
MQR  
T□

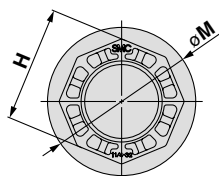
# Series LQ3

## 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

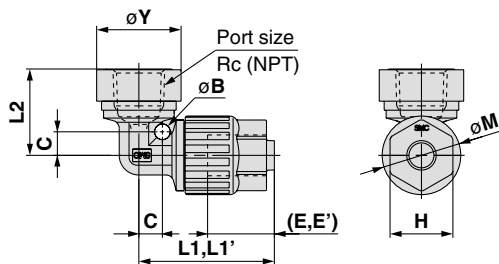
Model	Applicable tubing O.D.	Connection threads R/NPT	A	E	E'	H	L1	L1'	L2	M
LQ3L11-M□	ø4	1/8"	12.5	10	9	11	26	25	16.5	14
LQ3L12-M□	ø3		18.5	17	16	16	33.5	32.5	22.5	20
LQ3L21-M□	ø6	1/8"	18.5	17	16	16	33.5	32.5	22.5	20
LQ3L22-M□		1/4"	16.5							
LQ3L31-M□	ø10	1/8"	24	22.5	19.5	21	46	43	28	25
LQ3L32-M□	ø8		22							
LQ3L33-M□	ø10	1/4"	22	24	22	24	54.5	52.5	33	29
LQ3L34-M□	ø8	21.5								
LQ3L35-M□	ø10	3/8"	21.5							
LQ3L36-M□	ø8	1/2"	24.5	26.5	24	32	64	61.5	40	37
LQ3L38-M□										
LQ3L41-M□	ø12	1/4"	27	24	22	24	54.5	52.5	33	29
LQ3L42-M□		3/8"	26.5							
LQ3L43-M□		1/2"	25							
LQ3L51-M□	ø19	3/8"	33.5	26.5	24	32	64	61.5	40	37
LQ3L52-M□		1/2"	32							
LQ3L53-M□		3/4"	30.5							
LQ3L61-M□	ø25	1/2"	38	30	26	41	77	73	46	49
LQ3L62-M□		3/4"	36.5							
LQ3L63-M□		1"	35.5							

### Inch Size

Model	Applicable tubing O.D.	Connection threads R/NPT	A	E	E'	H	L1	L1'	L2	M
LQ3L1A-M□	1/8"	1/8"	12.5	10	9	11	26	25	16.5	14
LQ3L2A-M□	1/4"	1/8"	18.5	17	16	16	33.5	32.5	22.5	20
LQ3L2B-M□		1/4"	16.5							
LQ3L3A-M□	3/8"	1/8"	24	22.5	19.5	21	46	43	28	25
LQ3L3B-M□		1/4"	22							
LQ3L3C-M□		3/8"	21.5							
LQ3L3D-M□		1/2"	24.5							
LQ3L4A-M□	1/2"	1/4"	27	24.5	22.5	24	54.5	52.5	33	29
LQ3L4B-M□		3/8"	26.5							
LQ3L4C-M□		1/2"	25							
LQ3L5A-M□	3/4"	3/8"	33.5	26.5	24	32	64	61.5	40	37
LQ3L5B-M□		1/2"	32							
LQ3L5C-M□		3/4"	30.5							
LQ3L6A-M□	1"	1/2"	38	30	26	41	77	73	46	49
LQ3L6B-M□		3/4"	36.5							
LQ3L6C-M□		1"	35.5							

**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	L1	L1'	L2	M	Y
LQ3L11-F□	ø4	1/8"	3.5	4.8	10	9	11	28.5	27.5	19.5	14	18.5
LQ3L12-F□	ø3											
LQ3L21-F□	ø6	1/8"	4	6	17	16	16	34.5	33.5	20	20	18.5
LQ3L22-F□		1/4"								22		21.5
LQ3L31-F□	ø10	1/8"	5	9	22.5	19.5	21	47.5	44.5	23	25	18.5
LQ3L32-F□	ø8											
LQ3L33-F□	ø10	1/4"	5	9	22.5	19.5	21	47.5	44.5	24	25	21.5
LQ3L34-F□	ø8											
LQ3L35-F□	ø10	3/8"	5	9	22.5	19.5	21	47.5	44.5	24	25	21.5
LQ3L36-F□	ø8											
LQ3L41-F□	ø12	1/4"	6	10	24	22	24	52.5	50.5	23.5	29	21.5
LQ3L42-F□		3/8"								26		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	25
LQ3L52-F□		1/2"								35.5		29.5
LQ3L53-F□		3/4"								37		36
LQ3L61-F□	ø25	1/2"	8	18	30	26	41	78	74	41	49	29.5
LQ3L62-F□		3/4"								42.5		36
LQ3L63-F□		1"								46		44.5

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

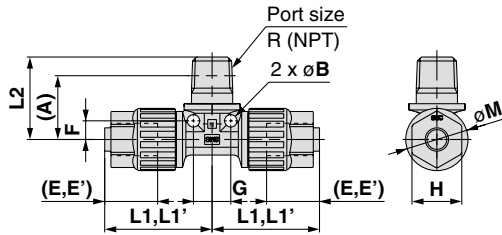
**Inch Size**

Model	Applicable tubing O.D.	Connection threads Rc/NPT	B	C	E	E'	H	L1	L1'	L2	M	Y
LQ3L1A-F□	1/8"	1/8"	3.5	4.8	10	9	11	28.5	27.5	19.5	14	18.5
LQ3L2A-F□	1/4"	1/8"	4	6	17	16	16	34.5	33.5	20	20	18.5
LQ3L2B-F□		1/4"								22		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		21.5
LQ3L3C-F□	3/8"	3/8"	5	9	22.5	19.5	21	47.5	44.5	25.5	25	25
LQ3L4A-F□	1/2"	1/4"	6	10	24.5	22.5	24	52.5	50.5	23.5	29	21.5
LQ3L4B-F□		3/8"								26		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	25
LQ3L5B-F□		1/2"								35.5		29.5
LQ3L5C-F□		3/4"								37		36
LQ3L6A-F□	1"	1/2"	8	18	30	26	41	78	74	41	49	29.5
LQ3L6B-F□		3/4"								42.5		36
LQ3L6C-F□		1"								46		44.5

# Series LQ3

## 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

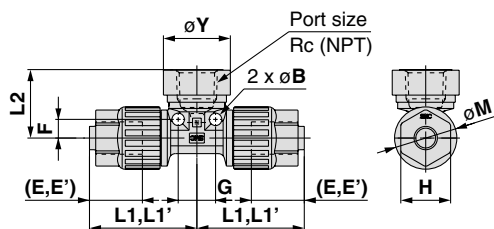
Model	Applicable tubing O.D.	Connection threads R/NPT	A	B	E	E'	F	G	H	L1	L1'	L2	M
LQ3B11-M□	ø4	1/8"	15	3.5	10	9	4.8	9.5	11	28.5	27.5	19	14
LQ3B12-M□	ø3												
LQ3B21-M□	ø6	1/8"	19.5	4	17	16	6	12	16	34.5	33.5	23.5	20
LQ3B22-M□		1/4"	20.5									26.5	
LQ3B31-M□	ø10	1/8"	22.5	5	22.5	19.5	9	18	21	47.5	44.5	26.5	25
LQ3B32-M□	ø8												
LQ3B33-M□	ø10	1/4"	23.5	5	22.5	19.5	9	18	21	47.5	44.5	29.5	25
LQ3B34-M□	ø8												
LQ3B35-M□	ø10	3/8"	24	5	22.5	19.5	9	18	21	47.5	44.5	30.5	25
LQ3B36-M□	ø8												
LQ3B41-M□	ø12	1/4"	27	6	24	22	10	20	24	52.5	50.5	33	29
LQ3B42-M□		3/8"	27.5									34	
LQ3B43-M□		1/2"	29									37	
LQ3B51-M□	ø19	3/8"	32.5	7	26.5	24	14	28	32	64	61.5	39	37
LQ3B52-M□		1/2"	34									42	
LQ3B53-M□		3/4"	34.5									44	
LQ3B61-M□	ø25	1/2"	42	8	30	26	18	36	41	78	74	50	49
LQ3B62-M□		3/4"	42.5									52	
LQ3B63-M□		1"										53	

#### Inch Size

Model	Applicable tubing O.D.	Connection threads R/NPT	A	B	E	E'	F	G	H	L1	L1'	L2	M
LQ3B1A-M□	1/8"	1/8"	15	3.5	10	9	4.8	9.5	11	28.5	27.5	19	14
LQ3B2A-M□	1/4"	1/8"	19.5	4	17	16	6	12	16	34.5	33.5	23.5	20
LQ3B2B-M□		1/4"	20.5									26.5	
LQ3B3A-M□	3/8"	1/8"	22.5	5	22.5	19.5	9	18	21	47.5	44.5	26.5	25
LQ3B3B-M□		1/4"	23.5									29.5	
LQ3B3C-M□	3/8"	3/8"	24									30.5	
LQ3B4A-M□	1/2"	1/4"	27	6	24.5	22.5	10	20	24	52.5	50.5	33	29
LQ3B4B-M□		3/8"	27.5									34	
LQ3B4C-M□		1/2"	29									37	
LQ3B5A-M□	3/4"	3/8"	32.5	7	26.5	24	14	28	32	64	61.5	39	37
LQ3B5B-M□		1/2"	34									42	
LQ3B5C-M□		3/4"	34.5									44	
LQ3B6A-M□	1"	1/2"	42	8	30	26	18	36	41	78	74	50	49
LQ3B6B-M□		3/4"	42.5									52	
LQ3B6C-M□		1"										53	

**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	L1	L1'	L2	M	Y
LQ3B11-F□	ø4	1/8"	3.5	10	9	4.8	9.5	11	28.5	27.5	19.5	14	18.5
LQ3B12-F□	ø3												
LQ3B21-F□	ø6	1/8"	4	17	16	6	12	16	34.5	33.5	20	20	18.5
LQ3B22-F□		1/4"									22		21.5
LQ3B31-F□	ø10	1/8"	5	22.5	19.5	9	18	21	47.5	44.5	23	25	18.5
LQ3B32-F□	ø8												
LQ3B33-F□	ø10	1/4"	5	22.5	19.5	9	18	21	47.5	44.5	24	25	21.5
LQ3B34-F□	ø8												
LQ3B35-F□	ø10	3/8"	5	22.5	19.5	9	18	21	47.5	44.5	24	25	21.5
LQ3B36-F□	ø8												
LQ3B41-F□	ø12	1/4"	6	24	22	10	20	24	52.5	50.5	23.5	29	21.5
LQ3B42-F□		3/8"									26		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	25
LQ3B52-F□		1/2"									35.5		29.5
LQ3B53-F□		3/4"									37		36
LQ3B61-F□	ø25	1/2"	8	30	26	18	36	41	78	74	41	49	29.5
LQ3B62-F□		3/4"									42.5		36
LQ3B63-F□		1"									46		44.5

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

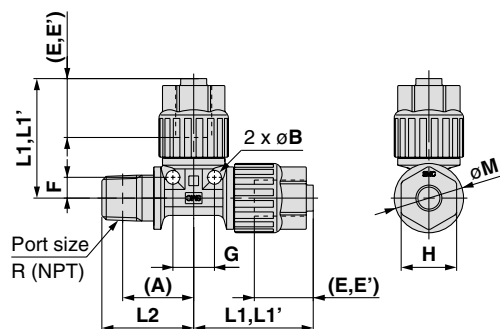
**Inch Size**

Model	Applicable tubing O.D.	Connection threads Rc/NPT	B	E	E'	F	G	H	L1	L1'	L2	M	Y
LQ3B1A-F□	1/8"	1/8"	3.5	10	9	4.8	9.5	11	28.5	27.5	19.5	14	18.5
LQ3B2A-F□	1/4"	1/8"	4	17	16	6	12	16	34.5	33.5	20	20	18.5
LQ3B2B-F□		1/4"									22		21.5
LQ3B3A-F□	3/8"	1/8"	5	22.5	19.5	9	18	21	47.5	44.5	23	25	18.5
LQ3B3B-F□		1/4"									24		21.5
LQ3B3C-F□	3/8"	3/8"	5	22.5	19.5	9	18	21	47.5	44.5	25.5	25	18.5
LQ3B4A-F□	1/2"	1/4"	6	24.5	22.5	10	20	24	52.5	50.5	23.5	29	21.5
LQ3B4B-F□		3/8"									26		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	25
LQ3B5B-F□		1/2"									35.5		29.5
LQ3B5C-F□		3/4"									37		36
LQ3B6A-F□	1"	1/2"	8	30	26	18	36	41	78	74	41	49	29.5
LQ3B6B-F□		3/4"									42.5		36
LQ3B6C-F□		1"									46		44.5

# Series LQ3

## 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

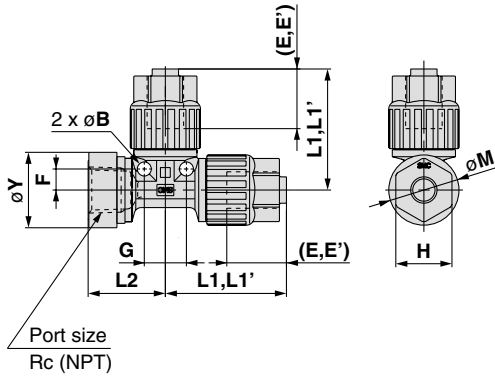
Model	Applicable tubing O.D.	Connection threads R/NPT	A	B	E	E'	F	G	H	L1	L1'	L2	M
LQ3R11-M□	ø4	1/8"	15	3.5	10	9	4.8	9.5	11	28.5	27.5	19	14
LQ3R12-M□	ø3												
LQ3R21-M□	ø6	1/8"	19.5	4	17	16	6	12	16	34.5	33.5	23.5	20
LQ3R22-M□		1/4"	20.5									26.5	
LQ3R31-M□	ø10	1/8"	22.5	5	22.5	19.5	9	18	21	47.5	44.5	26.5	25
LQ3R32-M□	ø8												
LQ3R33-M□	ø10	1/4"	23.5	5	22.5	19.5	9	18	21	47.5	44.5	29.5	25
LQ3R34-M□	ø8												
LQ3R35-M□	ø10	3/8"	24	5	22.5	19.5	9	18	21	47.5	44.5	30.5	25
LQ3R36-M□	ø8												
LQ3R41-M□	ø12	1/4"	27	6	24	22	10	20	24	52.5	50.5	33	29
LQ3R42-M□		3/8"	27.5									34	
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
LQ3R52-M□		1/2"	34									42	
LQ3R53-M□		3/4"	34.5									44	
LQ3R61-M□	ø25	1/2"	42	8	30	26	18	36	41	78	74	50	49
LQ3R62-M□		3/4"	42.5									52	
LQ3R63-M□		1"										53	

### Inch Size

Model	Applicable tubing O.D.	Connection threads R/NPT	A	B	E	E'	F	G	H	L1	L1'	L2	M
LQ3R1A-M□	1/8"	1/8"	15	3.5	10	9	4.8	9.5	11	28.5	27.5	19	14
LQ3R2A-M□	1/4"	1/8"	19.5	4	17	16	6	12	16	34.5	33.5	23.5	20
LQ3R2B-M□		1/4"	20.5									26.5	
LQ3R3A-M□	3/8"	1/8"	22.5	5	22.5	19.5	9	18	21	47.5	44.5	26.5	25
LQ3R3B-M□		1/4"	23.5									29.5	
LQ3R3C-M□		3/8"	24									30.5	
LQ3R4A-M□	1/2"	1/4"	27	6	24.5	22.5	10	20	24	52.5	50.5	33	29
LQ3R4B-M□		3/8"	27.5									34	
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
LQ3R5B-M□		1/2"	34									42	
LQ3R5C-M□		3/4"	34.5									44	
LQ3R6A-M□	1"	1/2"	42	8	30	26	18	36	41	78	74	50	49
LQ3R6B-M□		3/4"	42.5									52	
LQ3R6C-M□		1"										53	

**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	L1	L1'	L2	M	Y
LQ3R11-F□	ø4	1/8"	3.5	10	9	4.8	9.5	11	28.5	27.5	19.5	14	18.5
LQ3R12-F□	ø3												
LQ3R21-F□	ø6	1/8"	4	17	16	6	12	16	34.5	33.5	20	20	18.5
LQ3R22-F□		1/4"									22		21.5
LQ3R31-F□	ø10	1/8"	5	22.5	19.5	9	18	21	47.5	44.5	23	25	21.5
LQ3R32-F□	ø8												
LQ3R33-F□	ø10	1/4"	5	22.5	19.5	9	18	21	47.5	44.5	24	25	21.5
LQ3R34-F□	ø8												
LQ3R35-F□	ø10	3/8"	5	22.5	19.5	9	18	21	47.5	44.5	25.5	25	21.5
LQ3R36-F□	ø8												
LQ3R41-F□	ø12	1/4"	6	24	22	10	20	24	52.5	50.5	23.5	29	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	25
LQ3R52-F□		1/2"									35.5		29.5
LQ3R53-F□		3/4"									37		36
LQ3R61-F□	ø25	1/2"	8	30	26	18	36	41	78	74	41	49	29.5
LQ3R62-F□		3/4"									42.5		36
LQ3R63-F□		1"									46		44.5

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

**Inch Size**

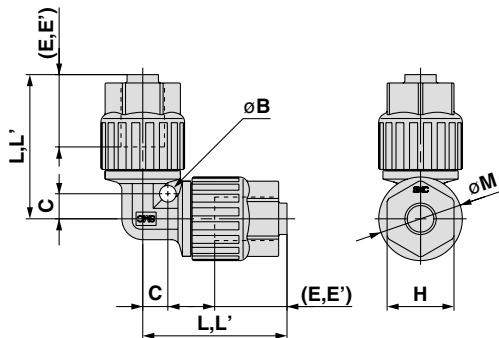
Model	Applicable tubing O.D.	Connection threads Rc/NPT	B	E	E'	F	G	H	L1	L1'	L2	M	Y
LQ3R1A-F□	1/8"	1/8"	3.5	10	9	4.8	9.5	11	28.5	27.5	19.5	14	18.5
LQ3R2A-F□	1/4"	1/8"	4	17	16	6	12	16	34.5	33.5	20	20	18.5
LQ3R2B-F□		1/4"									22		21.5
LQ3R3A-F□	3/8"	1/8"	5	22.5	19.5	9	18	21	47.5	44.5	23	25	18.5
LQ3R3B-F□		1/4"									24		21.5
LQ3R3C-F□	3/8"	3/8"	5	22.5	19.5	9	18	21	47.5	44.5	25.5	25	21.5
LQ3R4A-F□	1/2"	1/4"	6	24.5	22.5	10	20	24	52.5	50.5	23.5	29	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	25
LQ3R5B-F□		1/2"									35.5		29.5
LQ3R5C-F□		3/4"									37		36
LQ3R6A-F□	1"	1/2"	8	30	26	18	36	41	78	74	41	49	29.5
LQ3R6B-F□		3/4"									42.5		36
LQ3R6C-F□		1"									46		44.5



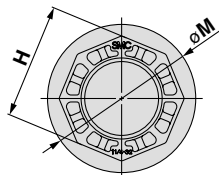
# Series LQ3

## 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

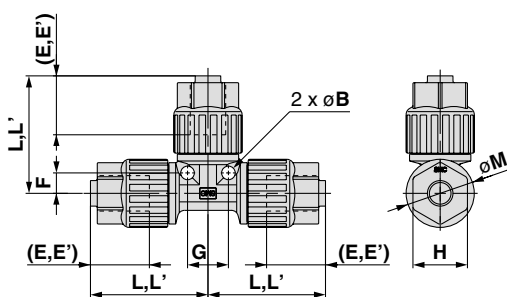
#### Metric Size

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

#### Inch Size

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

### 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

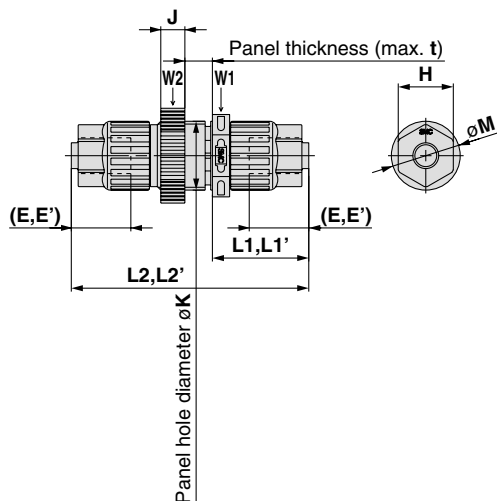
Model	Applicable tubing O.D.	B	E	E'	F	G	H	L	L'	M
LQ3T11	ø4	3.5	10	9	4.8	9.5	11	28.5	27.5	14
LQ3T12	ø3									
LQ3T21	ø6	4	17	16	6	12	16	34.5	33.5	20
LQ3T31	ø10	5	22.5	19.5	9	18	21	47.5	44.5	25
LQ3T32	ø8									
LQ3T41	ø12	6	24	22	10	20	24	52.5	50.5	29
LQ3T51	ø19	7	26.5	24	14	28	32	64	61.5	37
LQ3T61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

#### Inch Size

Model	Applicable tubing O.D.	B	E	E'	F	G	H	L	L'	M
LQ3T1A	1/8"	3.5	10	9	4.8	9.5	11	28.5	27.5	14
LQ3T2A	1/4"	4	17	16	6	12	16	34.5	33.5	20
LQ3T3A	3/8"	5	22.5	19.5	9	18	21	47.5	44.5	25
LQ3T4A	1/2"	6	24.5	22.5	10	20	24	52.5	50.5	29
LQ3T5A	3/4"	7	26.5	24	14	28	32	64	61.5	37
LQ3T6A	1"	8	30	26	18	36	41	78	74	49

## 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

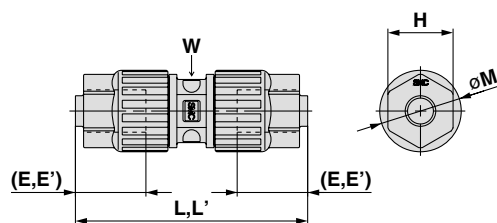
#### Metric Size

Model	Applicable tubing O.D.	E	E'	H	J	K	L1	L1'	L2	L2'	M	t	W1	W2
LQ3P11	ø4	10	9	11	6	14.5	23.5	22.5	58	56	14	8	16	17
LQ3P12	ø3													
LQ3P21	ø6	17	16	16	7	20.5	28	27	69	67	20	8	21	24
LQ3P31	ø10	22.5	19.5	21	7	24.5	39	36	89	83	25	8	26	28
LQ3P32	ø8													
LQ3P41	ø12	24	22	24	9	30.5	44.5	42.5	100	96	29	8	32	36
LQ3P51	ø19	26.5	24	32	9	36.5	50.5	48	117	112	37	13	41	43
LQ3P61	ø25	30	26	41	10	48.5	60	56	136	127.5	49	13	50	55

#### Inch Size

Model	Applicable tubing O.D.	E	E'	H	J	K	L1	L1'	L2	L2'	M	t	W1	W2
LQ3P1A	1/8"	10	9	11	6	14.5	23.5	22.5	58	56	14	8	16	17
LQ3P2A	1/4"	17	16	16	7	20.5	28	27	69	67	20	8	21	24
LQ3P3A	3/8"	22.5	19.5	21	7	24.5	39	36	89	83	25	8	26	28
LQ3P4A	1/2"	24.5	22.5	24	9	30.5	44.5	42.5	100	96	29	8	32	36
LQ3P5A	3/4"	26.5	24	32	9	36.5	50.5	48	117	112	37	13	41	43
LQ3P6A	1"	30	26	41	10	48.5	60	56	136	127.5	49	13	50	55

### Union: LQ3U



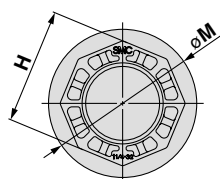
(E,E'): Reference dimension for the inserted tubing from the end surface of the nut  
(E'),L': Nut material PVDF dimensions  
W: Width across flats dimension

#### Metric Size

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

#### Inch Size

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



Class 7

# Series LQ3 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 Class M3.5
1	PFA	Standard packaging equivalent to Class M5.5
2	PVDF	Clean packaging equivalent to Class M3.5
3	PVDF	Standard packaging equivalent to Class M5.5

Type of piping (according to the combination table)

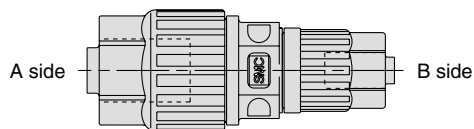
Symbol	Type
R□	Reducing

### Size combination (Metric)

Size	Model	A side	B side
		Applicable tubing size (mm)	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

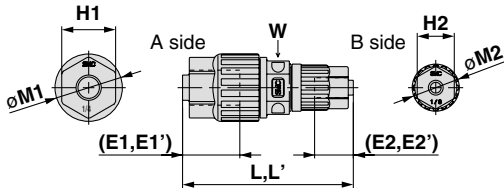
### Size combination (Inch)

Size	Model	A side	B side
		Applicable tubing size (inch)	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"
6	LQ3U6A-R1	1" x 7/8"	1/4" x 5/32"
	LQ3U6A-R2		3/4" x 5/8"
7	LQ3U7A-R1	1 1/4" x 1.1"	1" x 7/8"

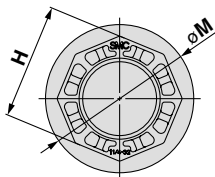


**Dimensions**

**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	B side	E1	E1'	E2	E2'	H1	H2	L	L'	M1	M2	W
	Applicable tubing O.D.	Applicable tubing O.D.											
LQ3U11-R1	ø4	ø3	10	9	10	9	11	11	46.5	44.5	14	14	10
LQ3U21-R1	ø6	ø4	17	16	10	9	16	11	51	48.5	20	14	14
LQ3U21-R2		ø3											
LQ3U31-R1	ø10	ø8	22.5	19.5	22.5	19.5	21	21	79	73	25	25	18
LQ3U31-R2		ø6											
LQ3U32-R1	ø8	ø6	22.5	19.5	17	16	21	16	66.5	62	25	20	18
LQ3U32-R2		ø4											
LQ3U41-R1	ø12	ø10	24	22	22.5	19.5	24	21	82.5	77	29	25	22
LQ3U41-R2		ø8											
LQ3U51-R1	ø19	ø12	26.5	24	24	22	32	24	95.5	91	37	29	30
LQ3U51-R2		ø10											
LQ3U61-R1	ø25	ø19	30	26	26.5	24	41	32	112.5	105.5	49	37	36
LQ3U61-R2		ø12											

**Inch Size**

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

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

# Series LQ3 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 Class M3.5
1	PFA	Standard packaging equivalent to Class M5.5
2	PVDF	Clean packaging equivalent to Class M3.5
3	PVDF	Standard packaging equivalent to Class M5.5

Type of piping (according to the combination table)

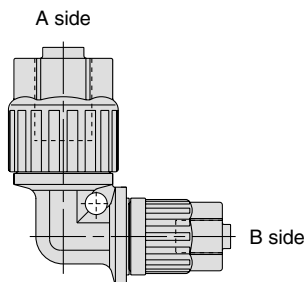
Symbol	Type
R□	Reducing

### Size combination (Metric)

Size	Model	A side	B side
		Applicable tubing size (mm)	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

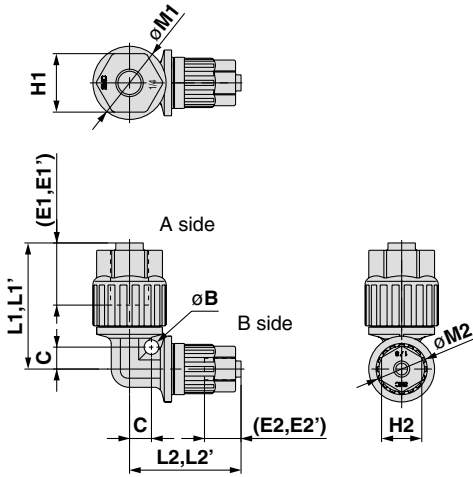
### Size combination (Inch)

Size	Model	A side	B side
		Applicable tubing size (inch)	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"
6	LQ3E6A-R1	1" x 7/8"	1/4" x 5/32"
	LQ3E6A-R2		3/4" x 5/8"



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

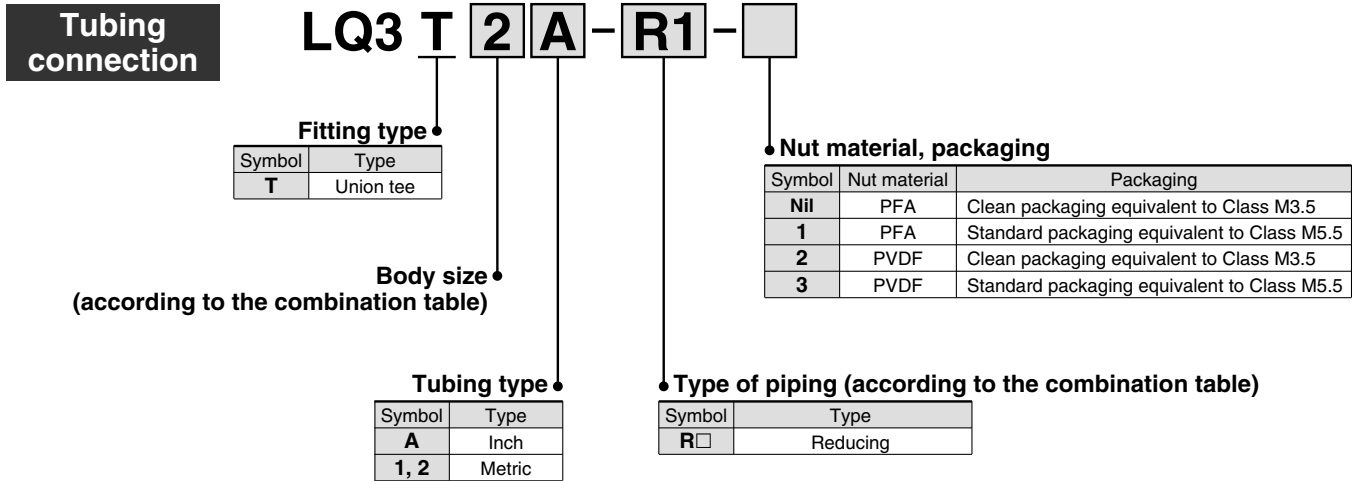
#### Inch Size

Model	A side	B side	B	C	E1	E1'	E2	E2'	H1	H2	L1	L1'	L2	L2'	M1	M2
	Applicable tubing O.D.	Applicable tubing O.D.														
LQ3E2A-R1	1/4"	1/8"	4	6	17	16	10	9	16	11	34.5	33.5	30.5	29.5	20	14
LQ3E3A-R1	3/8"	1/4"	5	9	22.5	19.5	17	16	21	16	47.5	44.5	38	37	25	20
LQ3E3A-R2		1/8"					10	9					11	33.5		
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
LQ3E4A-R2		1/4"					17	16					16	39		
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
LQ3E5A-R2		3/8"					22.5	19.5					21	61.5		
LQ3E5A-R3	1"	1/4"	8	18	30	26	17	16	41	32	78	74	43.5	42.5	49	37
LQ3E6A-R1		3/4"					26.5	24					24	70		
LQ3E6A-R2	1/2"	24.5	22.5	24	74	64.5	62.5									

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

# Series LQ3 Union Tee Reducing

## How to Order

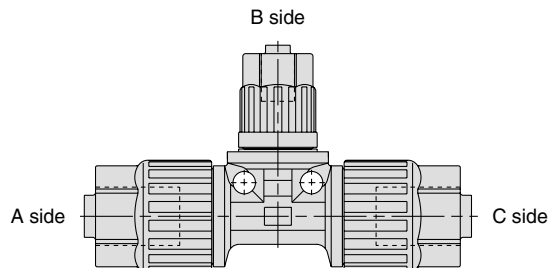


### Size combination (Metric)

Size	Model	A side (Left)	B side (Center)	C side (Right)
		Applicable tubing size (mm)	Applicable tubing size (mm)	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
3	LQ3T31-R1	10 x 8	8 x 6	10 x 8
	LQ3T31-R2		6 x 4	10 x 8
	LQ3T31-R5		10 x 8	8 x 6
	LQ3T31-R6	10 x 8	6 x 4	
	LQ3T32-R1	8 x 6	6 x 4	8 x 6
	LQ3T32-R5		8 x 6	6 x 4
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

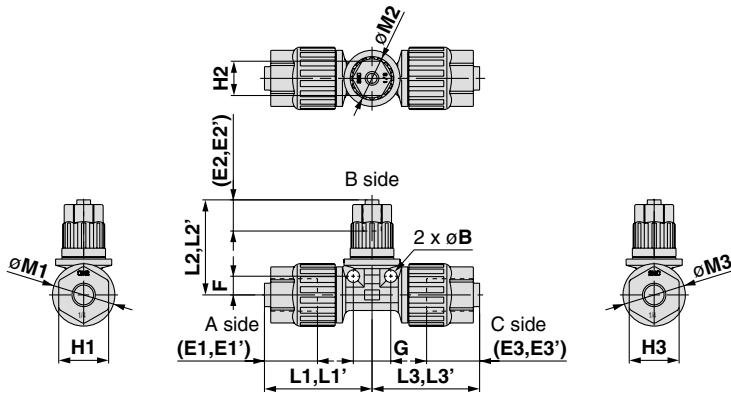
### Size combination (Inch)

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



**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) Applicable tubing O.D.	B side (Center) Applicable tubing O.D.	C side (Right) Applicable tubing O.D.	B	E1	E1'	E2	E2'	E3	E3'	F	G	H1	H2	H3	L1	L1'	L2	L2'	L3	L3'	M1	M2	M3
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
LQ3T11-R5		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
LQ3T21-R2		ø3	ø6																					
LQ3T21-R5		ø6	ø4																					
LQ3T21-R6		ø6	ø3																					
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	20	25
LQ3T31-R2		ø6	ø10																					
LQ3T31-R5		ø10	ø8																					
LQ3T31-R6		ø10	ø6																					
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
LQ3T32-R5		ø8	ø6																					
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
LQ3T41-R5		ø12	ø10																					
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
LQ3T51-R5		ø19	ø12																					
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
LQ3T61-R5		ø25	ø19																					

**Inch Size**

Model	A side (Left) Applicable tubing O.D.	B side (Center) Applicable tubing O.D.	C side (Right) Applicable tubing O.D.	B	E1	E1'	E2	E2'	E3	E3'	F	G	H1	H2	H3	L1	L1'	L2	L2'	L3	L3'	M1	M2	M3	
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	
LQ3T2A-R5		1/4"	1/8"																						
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	14	25	
LQ3T3A-R2		1/8"	3/8"																						
LQ3T3A-R5		3/8"	1/4"																						
LQ3T3A-R7		1/4"	1/4"																						
LQ3T3A-R9	1/4"	3/8"	1/4"	6	24.5	22.5	22.5	19.5	24.5	22.5	10	20	24	24	24	52.5	50.5	48.5	45.5	48.5	45.5	29	25	29	
LQ3T4A-R1	3/8"	1/2"																							
LQ3T4A-R2	1/2"	1/4"	1/2"	6	24.5	22.5	17	16	24.5	22.5	10	20	24	24	24	52.5	50.5	39	38	52.5	50.5	29	29	25	
LQ3T4A-R5		1/2"	3/8"																						
LQ3T4A-R6		1/2"	1/4"																						
LQ3T4A-R7		3/8"	3/8"																						
LQ3T4A-R8	3/8"	1/4"	1/4"	7	26.5	24	17	16	26.5	24	14	28	32	24	32	64	61.5	58.5	56.5	64	61.5	37	29	37	
LQ3T4A-R9		1/2"	3/8"																						
LQ3T5A-R1	3/4"	1/2"	3/4"	7	26.5	24	24.5	22.5	24.5	22.5	14	28	32	16	24	64	61.5	58.5	56.5	54.5	51.5	64	61.5	37	29
LQ3T5A-R2		3/8"	3/4"																						
LQ3T5A-R3		1/4"	3/4"																						
LQ3T5A-R5		3/4"	1/2"																						
LQ3T5A-R6	1/2"	3/4"	3/8"	8	30	26	22.5	19.5	30	26	18	36	41	16	24	78	74	70	67.5	78	74	49	37	49	
LQ3T5A-R7		1/2"	1/2"																						
LQ3T5A-R9	1/2"	3/4"	1/2"	8	30	26	22.5	19.5	30	26	18	36	41	16	24	78	74	70	67.5	78	74	49	37	49	
LQ3T5A-R10	3/8"	3/4"	3/8"																						
LQ3T5A-R11	3/4"	1/2"	1/4"	8	30	26	22.5	19.5	30	26	18	36	41	16	24	78	74	70	67.5	78	74	49	37	49	
LQ3T5A-R12		3/4"	1/4"																						
LQ3T6A-R1	1"	3/4"	1"	8	30	26	26.5	24	30	26	18	36	41	16	24	78	74	70	67.5	78	74	49	37	49	
LQ3T6A-R2		1/2"	1"																						
LQ3T6A-R3		3/8"	1"																						
LQ3T6A-R4		1/4"	1"																						
LQ3T6A-R5	3/4"	1"	3/4"	8	30	26	22.5	19.5	30	26	18	36	41	16	24	78	74	70	67.5	78	74	49	37	49	
LQ3T6A-R6		1"	1/2"																						
LQ3T6A-R7	1/2"	3/4"	3/4"	8	30	26	22.5	19.5	30	26	18	36	41	16	24	78	74	70	67.5	78	74	49	37	49	
LQ3T6A-R9		1"	3/4"																						
LQ3T6A-R10	1/2"	1"	1/2"	8	30	26	22.5	19.5	30	26	18	36	41	16	24	78	74	70	67.5	78	74	49	37	49	
LQ3T6A-R12	1"	3/8"																							
LQ3T6A-R13	3/4"	1"	1/4"	8	30	26	22.5	19.5	30	26	18	36	41	16	24	78	74	70	67.5	78	74	49	37	49	
LQ3T6A-R14		1"	1/4"																						

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T



# Series LQ3 Space Saving Union Elbow

## 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 Class M3.5
1	PFA	Standard packaging equivalent to Class M5.5
2	PVDF	Clean packaging equivalent to Class M3.5
3	PVDF	Standard packaging equivalent to Class M5.5

### Thread type

Symbol	Type
S	Space saving

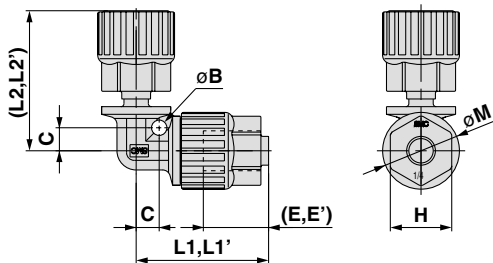
### Size combination

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

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"

## Dimensions

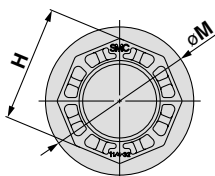
### Space saving union elbow: LQ3E-S



### Metric Size

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

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



Class 7

### Inch Size

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

# Series LQ3 Space Saving Branch Tee

## 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 Class M3.5
1	PFA	Standard packaging equivalent to Class M5.5
2	PVDF	Clean packaging equivalent to Class M3.5
3	PVDF	Standard packaging equivalent to Class M5.5

Thread type

Symbol	Type
B	Branch tee

Tubing type

Symbol	Type
S	Space saving

Size combination

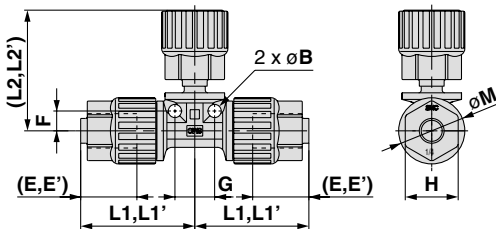
Size	No.	Applicable tubing size (mm)
2	1	6 x 4
3	1	10 x 8
3	2	8 x 6
4	1	12 x 10
5	1	19 x 16
6	1	25 x 22

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"

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

## Dimensions

### Space saving branch tee: LQ3T-SB



#### Metric Size

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

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

#### Inch Size

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

# Series LQ3 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 Class M3.5
1	PFA	Standard packaging equivalent to Class M5.5
2	PVDF	Clean packaging equivalent to Class M3.5
3	PVDF	Standard packaging equivalent to Class M5.5

Thread type

Symbol	Type
R	Run tee

Tubing type

Symbol	Type
S	Space saving

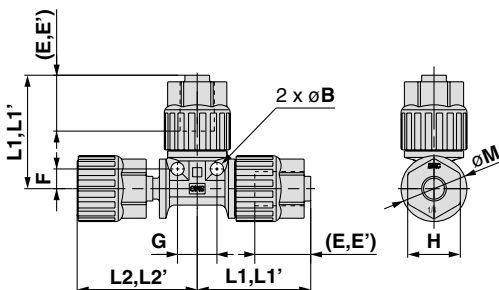
Size combination

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

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"

## Dimensions

### Space saving run tee: LQ3T-SR



#### Metric Size

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

#### Inch Size

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

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

(E'),L1',L2': Nut material PVDF dimensions

# Tube 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 Class M3.5
1	PFA	Standard packaging equivalent to Class M5.5
2	PVDF	Clean packaging equivalent to Class M3.5
3	PVDF	Standard packaging equivalent to Class M5.5

Thread type

Symbol	Type
T	Tube extension

Size combination

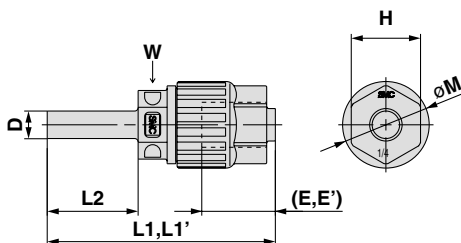
Size	No.	Applicable tubing size (mm)
2	1	6 x 4
3	1	10 x 8
3	2	8 x 6
4	1	12 x 10
5	1	19 x 16
6	1	25 x 22

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"

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

## Dimensions

### Tube extension straight connector: LQ3H-T



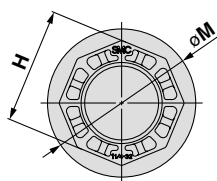
#### Metric Size

Model	Applicable tubing O.D.	D	E	E'	H	L1	L1'	L2	M	W
LQ3H21-T	ø6	ø6	17	16	16	53	51.5	18	20	14
LQ3H31-T	ø10	ø10	22.5	19.5	21	67.5	64.5	22.5	25	18
LQ3H32-T	ø8	ø8								
LQ3H41-T	ø12	ø12	24	22	24	74	72	24	29	22
LQ3H51-T	ø19	ø19	26.5	24	32	83.5	81	26.5	37	30
LQ3H61-T	ø25	ø25	30	26	41	97.5	93.5	31	49	36

(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

#### Inch Size

Model	Applicable tubing O.D.	D	E	E'	H	L1	L1'	L2	M	W
LQ3H2A-T	1/4"	1/4"	17	16	16	53	51.5	18	20	14
LQ3H3A-T	3/8"	3/8"	22.5	19.5	21	65.5	62.5	23.5	25	18
LQ3H4A-T	1/2"	1/2"	24.5	22.5	24	72	70	25	29	22
LQ3H5A-T	3/4"	3/4"	26.5	24	32	83.5	81	26.5	37	30
LQ3H6A-T	1"	1"	30	26	41	97.5	93.5	31	49	36
LQ3H7A-T	1 1/4"	1 1/4"	35	35	50	120.5	120.5	41.5	64	46



Class 7

# Series LQ3 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 Class M3.5
1	PFA	Standard packaging equivalent to Class M5.5
2	PVDF	Clean packaging equivalent to Class M3.5
3	PVDF	Standard packaging equivalent to Class M5.5

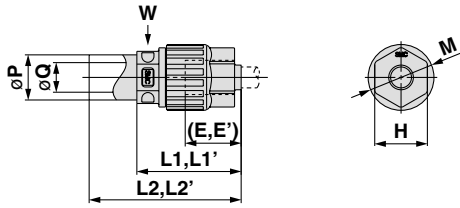
Size combination

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	1	10 x 8	ø13.7 x ø9
3	2	8 x 6	
3	3	10 x 8	ø21.3 x ø15.4
3	4	8 x 6	
3	5	10 x 8	ø26.7 x ø20.5
3	6	8 x 6	
3	7	10 x 8	ø33.4 x ø26.3
3	8	8 x 6	
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	No.	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

**Dimensions**

**Straight Adapter: LQ3A**



(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	E	E'	H	L1	L1'	L2	L2'	M	P	Q	W
LQ3A21	17	16	16	32	30.5	46	44.5	20	13.7	9	14
LQ3A22						58	56.5		21.3	15.4	
LQ3A23				26.7	20.5	33.4	26.3				
LQ3A24				33.4	26.3						
LQ3A25				60.3	52.5						
LQ3A31	22.5	19.5	21	42	39	56	53	25	13.7	9	18
LQ3A32				40		54	21.3		15.4		
LQ3A33				42		68	26.7		20.5		
LQ3A34				40		66					
LQ3A35				42		68					
LQ3A36				40	66	33.4	26.3				
LQ3A37				44	82						
LQ3A38				42	80	79					
LQ3A41	24	22	24	47	45	80	78	29	21.3	15.4	22
LQ3A42				26.7	20.5						
LQ3A43				33.4	26.3						
LQ3A44				60.3	52.5						
LQ3A51	26.5	24	32	57	54.5	95	92.5	37	21.3	15.4	30
LQ3A52				26.7	20.5						
LQ3A53				33.4	26.3						
LQ3A61	30	26	41	66.5	62.5	104.5	100.5	49	26.7	20.5	36
LQ3A62				33.4	26.3						
LQ3A63				60.3	52.5						

- K
- M
- H
- KK
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- MS
- LQ
- MQR
- T

**Inch Size**

Model	E	E'	H	L1	L1'	L2	L2'	M	P	Q	W
LQ3A2A	17	16	16	32	30.5	46	44.5	20	13.7	9	14
LQ3A2B						58	56.5		21.3	15.4	
LQ3A2C				26.7	20.5	33.4	26.3				
LQ3A2D				33.4	26.3						
LQ3A2E				60.3	52.5						
LQ3A3A	22.5	19.5	21	40	39	56	53	25	13.7	9	18
LQ3A3B						66	65		21.3	15.4	
LQ3A3C				26.7	20.5						
LQ3A4A	24.5	22.5	24	47	45	80	78	29	21.3	15.4	22
LQ3A4B				26.7	20.5						
LQ3A4C				33.4	26.3						
LQ3A4D				60.3	52.5						
LQ3A5A	26.5	24	32	57	54.5	95	92.5	37	21.3	15.4	30
LQ3A5B				26.7	20.5						
LQ3A5C				33.4	26.3						
LQ3A6A	30	26	41	66.5	62.5	104.5	100.5	49	26.7	20.5	36
LQ3A6B				33.4	26.3						
LQ3A6C				60.3	52.5						
LQ3A7A	35	35	50	79	79	117	117	64	33.4	26.3	46

# Series LQ3 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 Class M3.5
1	PFA	Standard packaging equivalent to Class M5.5
2	PVDF	Clean packaging equivalent to Class M3.5
3	PVDF	Standard packaging equivalent to Class M5.5

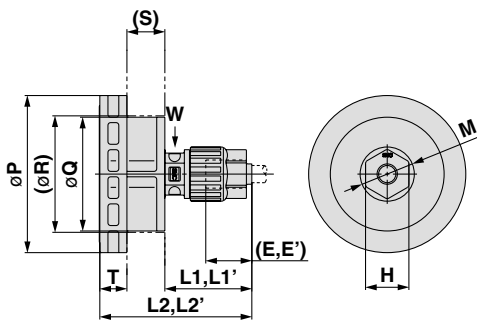
Size combination

Size	No.	Applicable tubing size (mm)	Applicable piping 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	No.	Applicable tubing size (inch)	Applicable piping 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

## Dimensions

### Union Flange: LQ3F



#### Metric Size

Model	E	E'	H	L1	L1'	L2	L2'	M	P	Q	R	S	T	W		
LQ3F22	17	16	16	32.1	30.9	56.1	54.9	20	58	42	43	14	10	14		
LQ3F42	24	22	24	49	46.8	73	70.8	29	58	42	43	14	10	22		
LQ3F43									69							
LQ3F51	26.5	24	32	58	55.3	80	77.3	37	53	42	43	12	10	30		
LQ3F52						82	79.3		58			14				
LQ3F53						69										
LQ3F62	30	26	41	68.5	64.2	92.5	88.2	49	58	47	48	16	10	36		
LQ3F63						94.5	90.2		69						55	56
LQ3F64						84										

- (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.

#### Inch Size

Model	E	E'	H	L1	L1'	L2	L2'	M	P	Q	R	S	T	W		
LQ3F2B	17	16	16	32.1	30.9	56.1	54.9	20	58	42	43	14	10	14		
LQ3F4B	24.5	22.5	24	49	46.8	73	70.8	29	58	42	43	14	10	22		
LQ3F4C									69							
LQ3F5A	26.5	24	32	58	55.3	80	77.3	37	53	42	43	12	10	30		
LQ3F5B						82	79.3		58			14				
LQ3F5C						69										
LQ3F6B	30	26	41	68.5	64.2	92.5	88.2	49	58	47	48	16	10	36		
LQ3F6C						94.5	90.2		69						55	56
LQ3F6D						84										

## 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

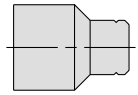
Symbol	Type
P	Plug

• Thread type

Symbol	Type
1	Male

• Packaging

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



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	
10	ø10 x ø8	3
12	ø12 x ø10	
19	ø19 x ø16	4
25	ø25 x ø22	

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

### Tubing plug

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

Size

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

Fitting type

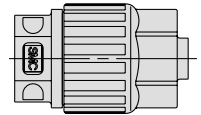
Symbol	Type
P	Plug

• Type of piping

Symbol	Type
2	Tubing

• Nut material, packaging

Symbol	Nut material	Packaging
Nil	PFA	Clean packaging equivalent to Class M3.5
1	PFA	Standard packaging equivalent to Class M5.5
2	PVDF	Clean packaging equivalent to Class M3.5
3	PVDF	Standard packaging equivalent to Class M5.5



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	
10	ø10 x ø8	3
12	ø12 x ø10	
19	ø19 x ø16	4
25	ø25 x ø22	

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

### 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 Class M3.5
1	PFA	Standard packaging equivalent to Class M5.5
2	PVDF	Clean packaging equivalent to Class M3.5
3	PVDF	Standard packaging equivalent to Class M5.5

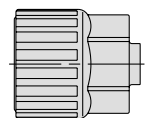
• Applicable tubing size

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	
10	ø10 x ø8	3
12	ø12 x ø10	
19	ø19 x ø16	4
25	ø25 x ø22	

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



- K
- M
- H
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- D
- MS
- LQ
- MQR
- T





# 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	100%	○ Note 2)
1.1.1-Trichloroethane	100%	○ Note 2)
Rhosphorus pentachloride	—	○
Isobutyl alcohol	—	○ Note 1)
Isopropyl alcohol	—	○ Note 1)
Ozone	—	○
Ethyl acetate	—	○ Note 1, 2)
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) Use the nut material made of PFA because the nut material, PVDF can be used depending on the environment or temperature.

- Compatibility is indicated for fluid temperatures of 200°C or less (In the case of the nut material made of PVDF: 150°C or less)
- The material and fluid compatibility check list provides reference values as a guide only, therefore we do not guarantee the application to our product.
- The data above is based on the information presented by the material manufacturers.
- SMC is not responsible for its accuracy and any damage happened because of this data.



# Series LQ3 Fluoropolymer Fittings Specific Product Precautions 1

Be sure to read before handling. Refer to front matters 58 and 59 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.

#### 2. Instruction manual

Mount and operate the product after reading the manual carefully and understanding its contents. Also keep the manual where it can be referred to as necessary.

## Piping

### Caution

#### 1. Connect tubing with special tools

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

#### 2. Tighten the nut until it touches the end surface of the body, and then tighten it an additional 1/8 turn. As a guide, refer to the proper tightening torques shown below.

Also, when the nut requires extra tightening, please conduct this job in accordance with the instruction manual.

#### Nut 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
7	23 to 26.5

#### 3. Use sealant tape for piping the taper thread parts such as the LQ3H and LQ3L.

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

Port 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 a panel mount union

#### Nut Tightening Torque for a Panel Mount Union

Body size	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

- K
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- KK
- D
- MS
- LQ
- MQR
- T



# Series LQ3 Fluoropolymer Fittings Specific Product Precautions 2

Be sure to read before handling. Refer to front matters 58 and 59 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. Perform maintenance in accordance with the procedures in the instruction manual.  
Improper handling can cause damage.
2. When removing or reinstalling fittings, remove any remaining chemicals and carefully replace them with deionized water or air, etc., before beginning work activities.
3. 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.

4. 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
5. 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 opening the package.

## Use of Tubing

### ⚠ Caution

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

#### Applicable Tubing Size

	Connection tubing size	O.D. (mm)		Internal thickness (mm)	
		Standard size	Tolerance	Standard size	Tolerance
Metric size	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	+0.3 -0.1	1.5	±0.15
	ø19 x ø16	19.0			
ø25 x ø22	25.0				
Inch size	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	+0.3 -0.1	1.6	±0.15
	1/2" x 3/8"	12.7			
	3/4" x 5/8"	19.0			
	1" x 7/8"	25.4			
	1 1/4" x 1.1"				