

# High Purity Fluoropolymer Fittings

## Hyper Fitting / Flare Type

### LQ3 Series Fitting Procedure

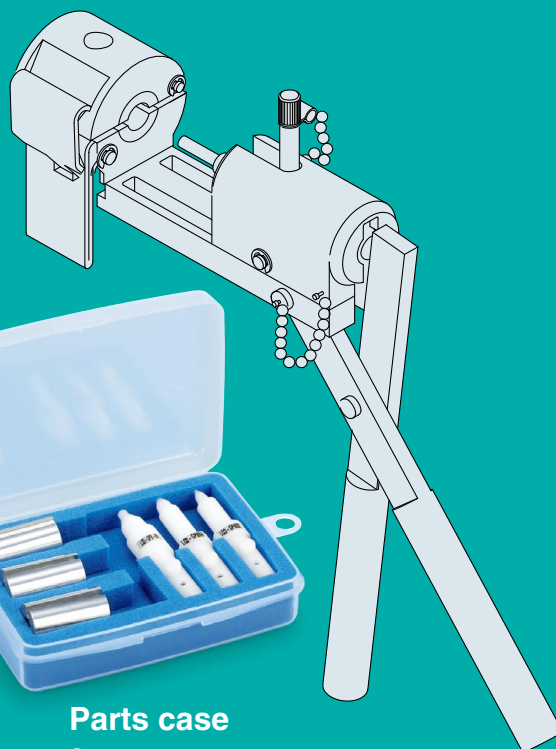
#### ■ Insertion Tool ■

Fitting size For 2 to 6 (P.1 to P.3)



**Parts case**  
Contents:  
Insert pins  
Insert pin holder

Fitting size For 1, 2 (P.4, P.5)

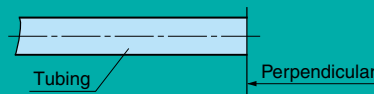


**Parts case**  
Contents:  
Insert pins  
Holders

#### Preparation

##### ⚠ Caution: Tubing

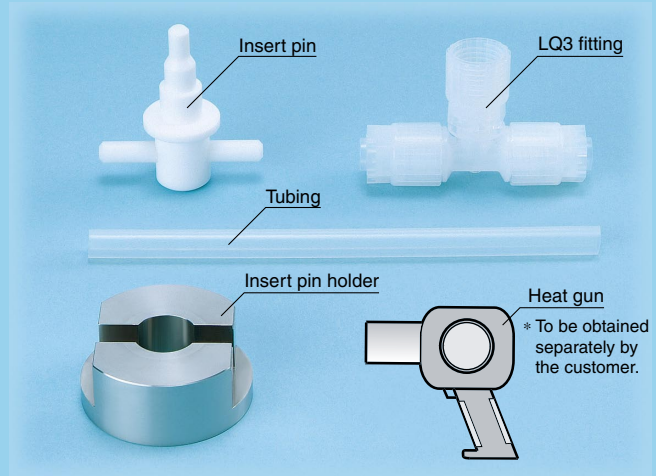
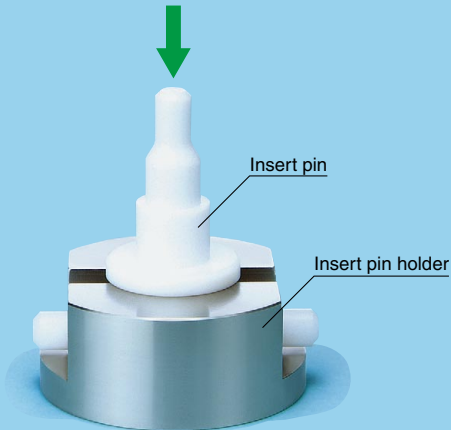
1. Wipe the tubing with alcohol to prevent slippage.
2. Cut the tubing perpendicularly with a commercially available dedicated tool.



Note) An obliquely cut surface may cause insert bushing breakage, etc.

## Heat gun procedure

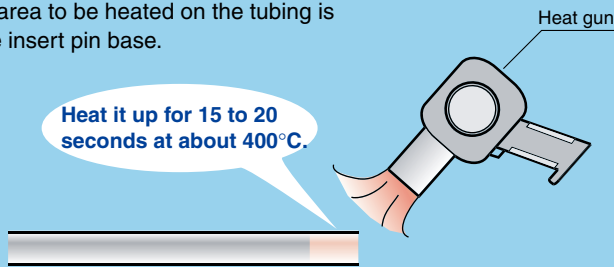
**1** Position an insert pin in the insert pin holder.



Be sure to work at a table when using the insert pin holder. This will stabilize the insert pin and make work easier.

**2** Heat up the end of the tubing with a commercially available tool such as a heat gun.

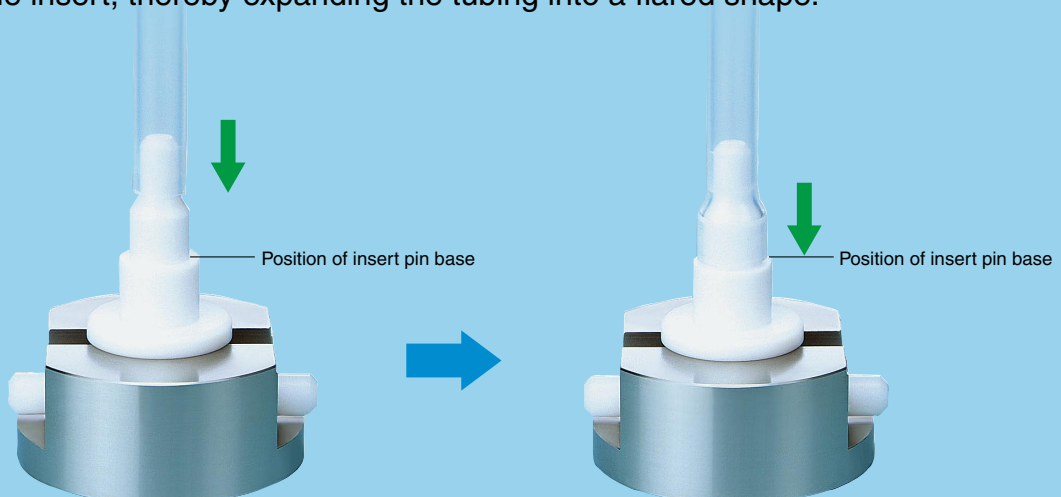
\* As a guide, the area to be heated on the tubing is the length to the insert pin base.



**⚠ Be careful not to burn yourself!**

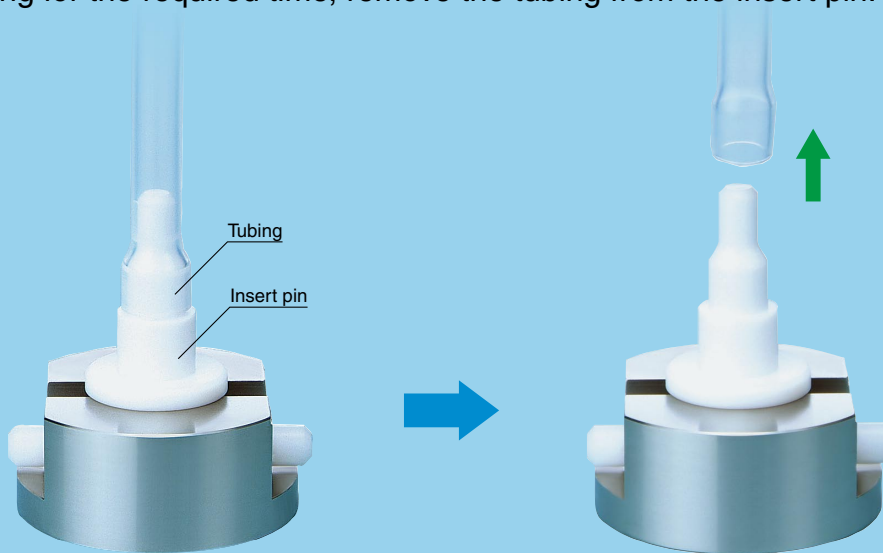
Do not touch heated areas (tubing, heat gun). Also, be careful not to touch the other side of the heated area since the temperature also increases there due to hot air.

**3** After heating up the end of the tubing, immediately slide it over the insert pin up to the base of the insert, thereby expanding the tubing into a flared shape.

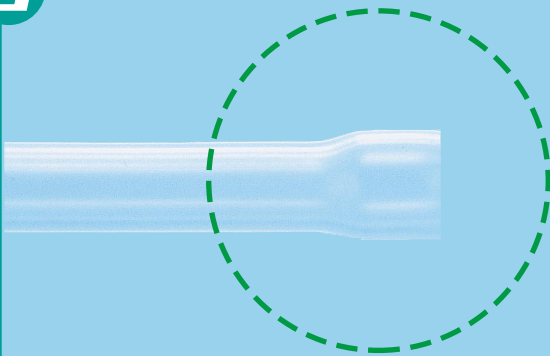


Note) Be sure to check the size of the insert pin.

- 4** The tubing must be held for about one minute while it sets in a flared shape. This time can be reduced by blowing cooling air onto the tube. After cooling for the required time, remove the tubing from the insert pin.



- 5** Check that the tubing has been expanded into a flared shape.



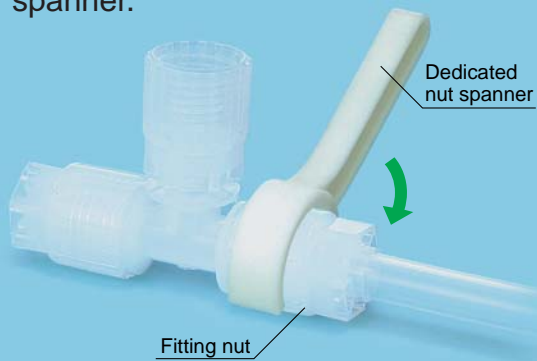
Note)  
Tubing cooling time can be reduced by removing the insert pin from the simple holder and immersing tubing and insert pin in deionized water or similar.

Heat gun procedure

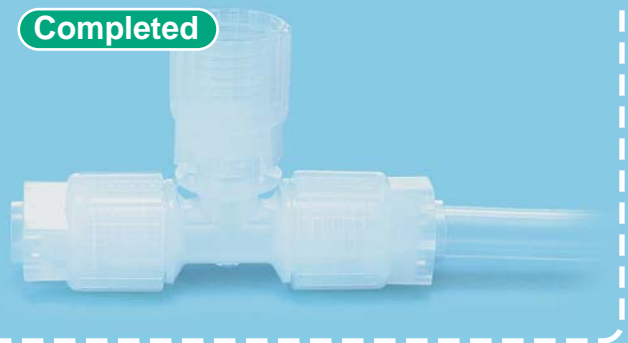
**6** After flaring is complete, promptly attach the LQ3 fitting to the tubing.



**7** Fasten the fitting nut to the body and tighten to the end surface using the dedicated nut spanner.



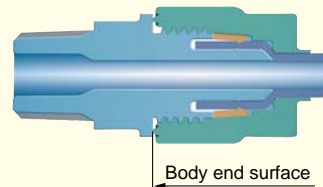
Completed



**⚠ Caution**

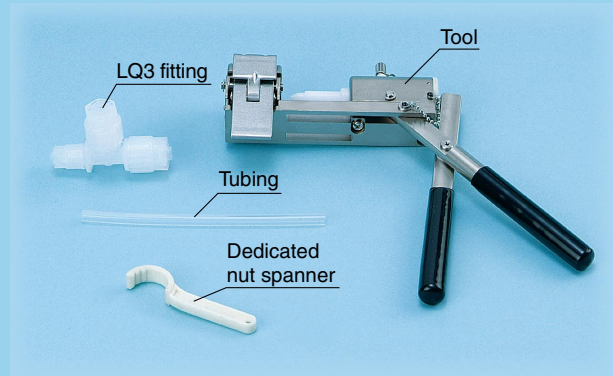
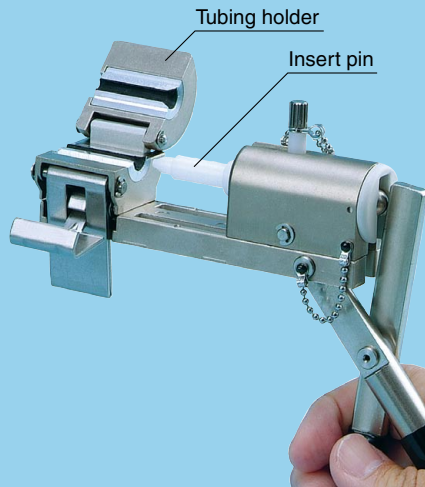
As a guide, tighten the nut by a further 1/8 turn in order to make sure that the nut is screwed on far enough to make contact with the body end surface. Refer to the proper tightening torque shown at right.

Body size	Torque (N•m)
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

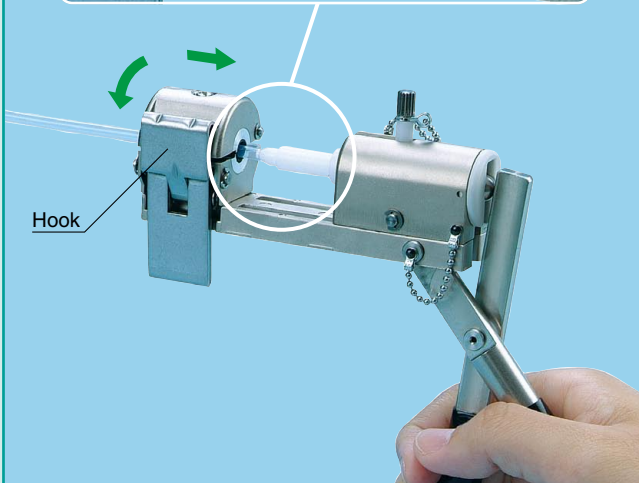
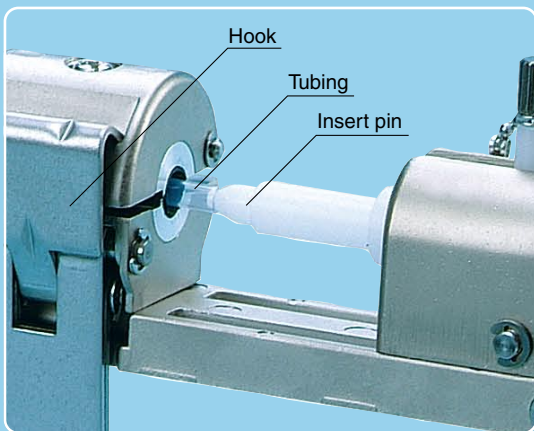


## Lever type tool procedure

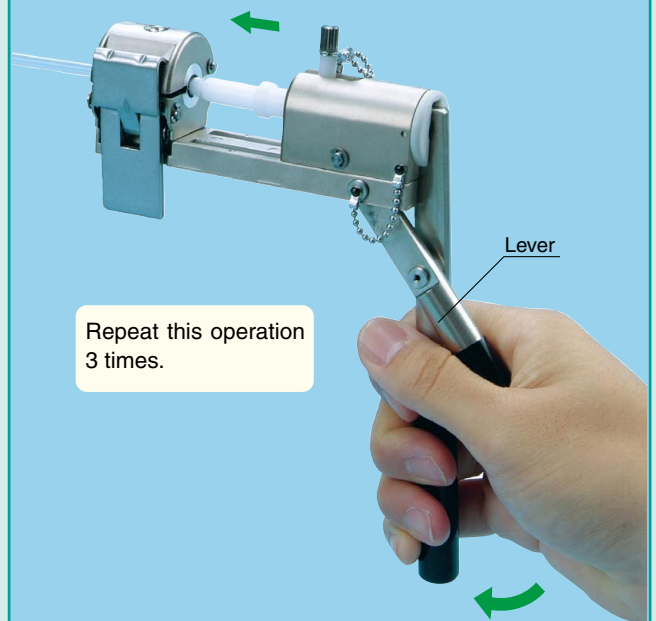
**1** Position an insert pin and tubing holder suitable for the tubing size.



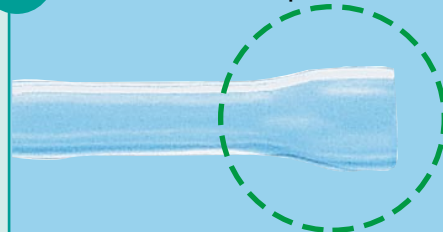
**2** Place the tubing in the tubing holder, inserting it to the position where it makes contact with the insert pin, and clamp the holder with the hook.



**3** Operate the lever, thereby expanding the tubing into a flared shape.

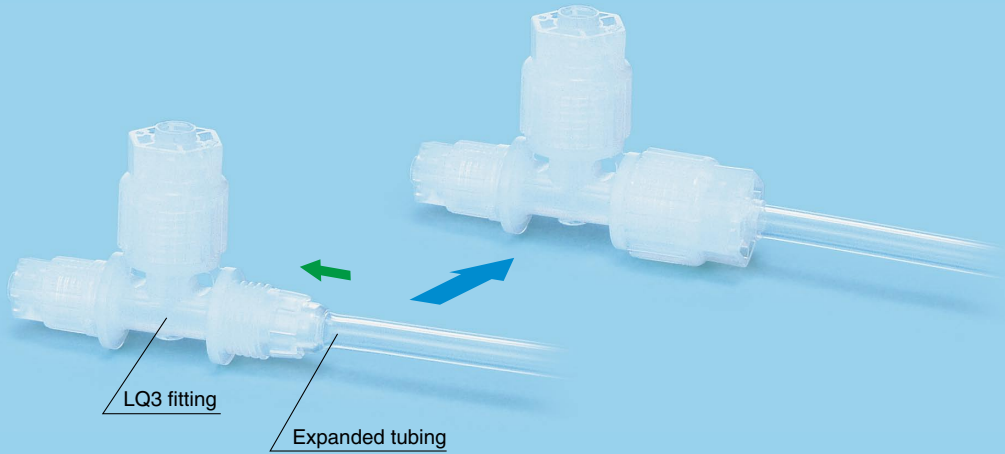


**4** Check that the tubing has been expanded into a flared shape.



## Lever type tool procedure

**5** After flaring is finished, promptly attach the LQ3 fitting to the tubing.



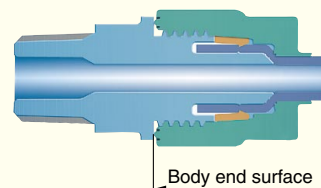
**6** Fasten the fitting nut to the body and tighten to the end surface using the dedicated nut spanner.



### ⚠ Caution

As a guide, tighten the nut by a further 1/8 turn in order to make sure that the nut is screwed on far enough to make contact with the body end surface. Refer to the proper tightening torque shown at right.

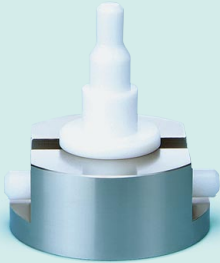
Body size	Torque (N·m)
1	0.7 to 0.9
2	1.6 to 1.8



# How to Order Insertion Tools

Fitting size For 2 to 6

**LQ3 – GPS –**  



**Parts case**  
Contents:  
Insert pins  
Insert pin holder



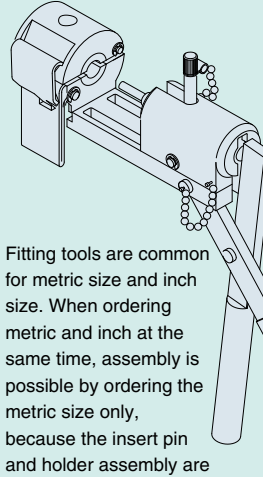
\* The parts case is included.

• Pin type

Nil	Metric
N	Inch

Fitting size For 1, 2

**LQ3 – GB –**  



Note) Fitting tools are common for metric size and inch size. When ordering metric and inch at the same time, assembly is possible by ordering the metric size only, because the insert pin and holder assembly are common except for ø4.

• Pin type

Nil	Metric
N	Inch



**Parts case**  
Contents:  
Insert pins  
Holders

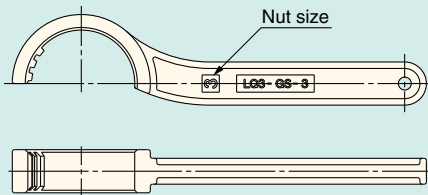
\* The parts case is included.

## Dedicated Nut Spanner

**LQ3 – GS –**  

• Nut size

Symbol	Size
Nil	(Set of 1 to 6)
1	1
2	2
3	3
4	4
5	5
6	6



## Replacement Parts

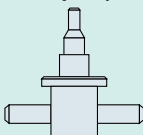
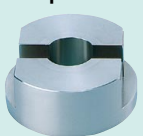
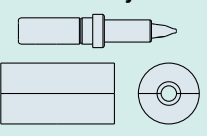

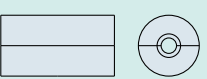
Description	Part no.				
<ul style="list-style-type: none"> <li>• GPS insert pin (single)</li> </ul> 	<b>LQ3 – GP –</b> <span style="border: 1px solid black; padding: 2px 10px;"> </span> • Tubing size symbol (Refer to Table 1.) <sup>Note 1)</sup>				
<ul style="list-style-type: none"> <li>• GPS insert pin holder (single)</li> </ul> 	<b>AXT1075-30-2</b>				
<ul style="list-style-type: none"> <li>• GB insert pin</li> <li>• Holder assembly</li> </ul> 	<b>LQ3 – GPB –</b> <span style="border: 1px solid black; padding: 2px 10px;"> </span> • Pin type <table border="1" style="margin-left: 20px;"> <tr> <td>Nil</td> <td>Metric size</td> </tr> <tr> <td>N</td> <td>Inch size</td> </tr> </table>	Nil	Metric size	N	Inch size
Nil	Metric size				
N	Inch size				
<ul style="list-style-type: none"> <li>• GB insert pin (single)</li> </ul> 	<b>LQ3 – GPB –</b> <span style="border: 1px solid black; padding: 2px 10px;"> </span> • Tubing size symbol (Refer to Table 1.) 03 (ø3, 1/8"), 04 (ø4), 06 (ø6), 07 (1/4") only				
<ul style="list-style-type: none"> <li>• GB holder (single)</li> </ul> 	<b>LQ3 – GHB –</b> <span style="border: 1px solid black; padding: 2px 10px;"> </span> • Tubing size symbol (Refer to Table 1.) 03 (ø3, 1/8"), 04 (ø4), 06 (ø6), 07 (1/4") only				

Table 1 Tubing Size Symbol

	Tubing O.D.													
	Metric size							Inch size						
Symbol <sup>Note 1)</sup>	ø3	ø4	ø6	ø8	ø10	ø12	ø19	ø25	1/8"	1/4"	3/8"	1/2"	3/4"	1"
	03	04	06	08	10	12	19	25	03	07	11	13	19	25
Fitting type	GB							GPS						
	—							—						

Note 1) Sizes with the same symbol number and 06 and 07 are common sizes.

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