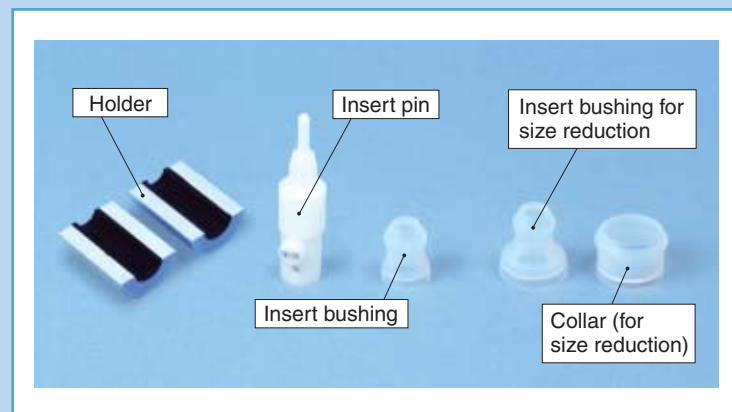
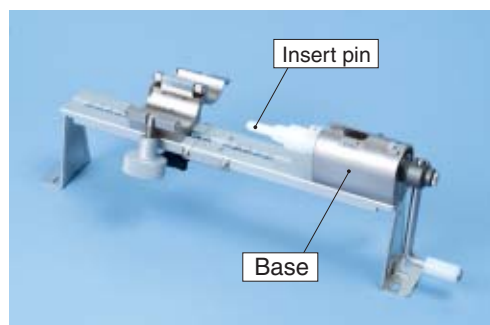
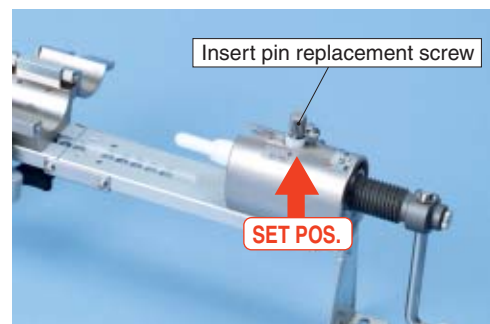




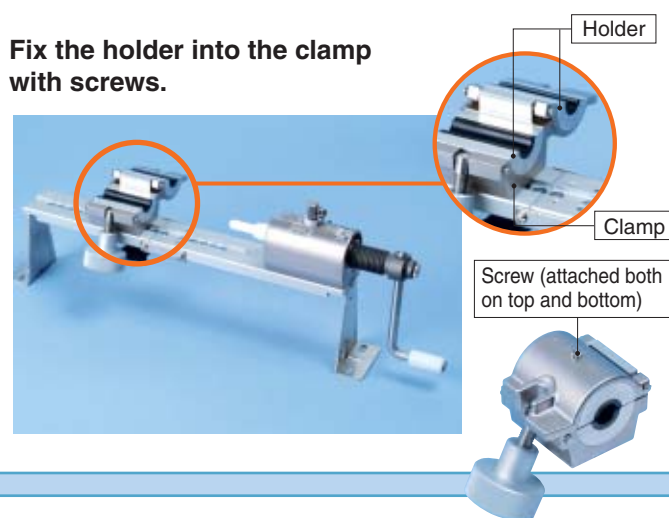
**1** Attach the insert pin to the base.



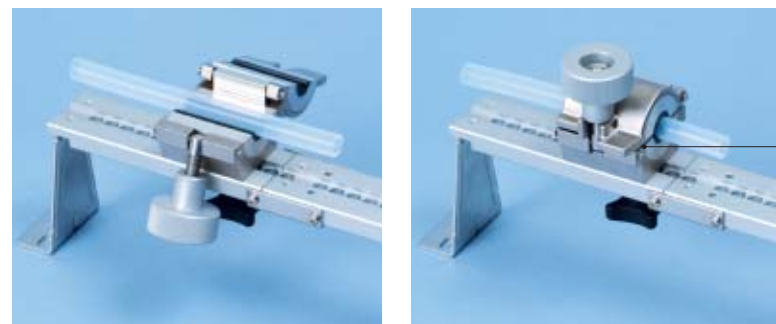
**2** Turn the lever to SET POS and fix it with the insert pin replacement screw.



**3** Fix the holder into the clamp with screws.

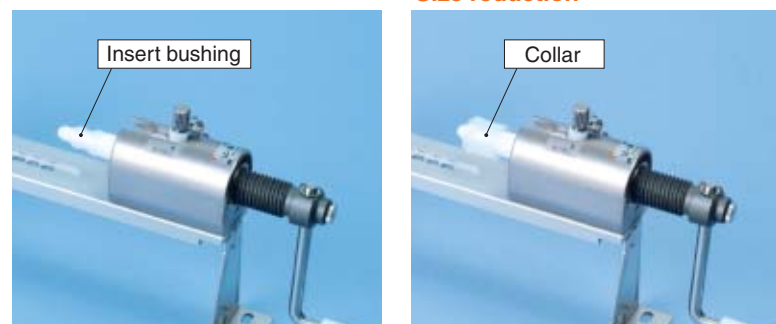


**4** Place the tubing on the holder and fix it.



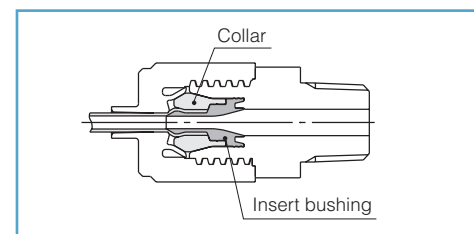
**Caution**  
Clamp so that the gap is equal on both sides.

**5** Attach the insert bushing to the insert pin.

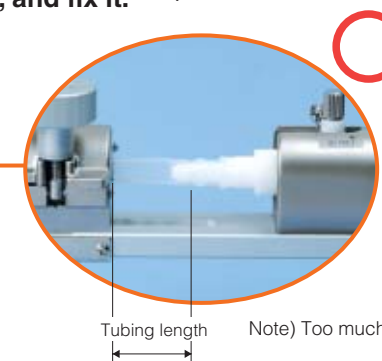
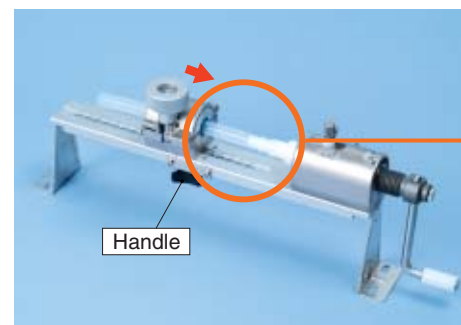


Size reduction

Attach the collar to the insert bushing for size reduction.  
Note) A collar cannot be attached after installation has been completed.



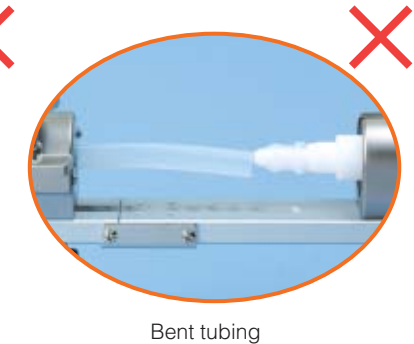
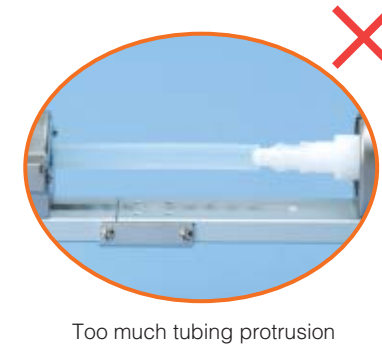
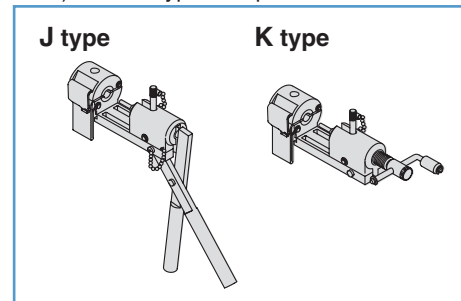
**6** Dismantle the handle, slide the clamp until the tubing end touches the insert bushing, and fix it. Note)



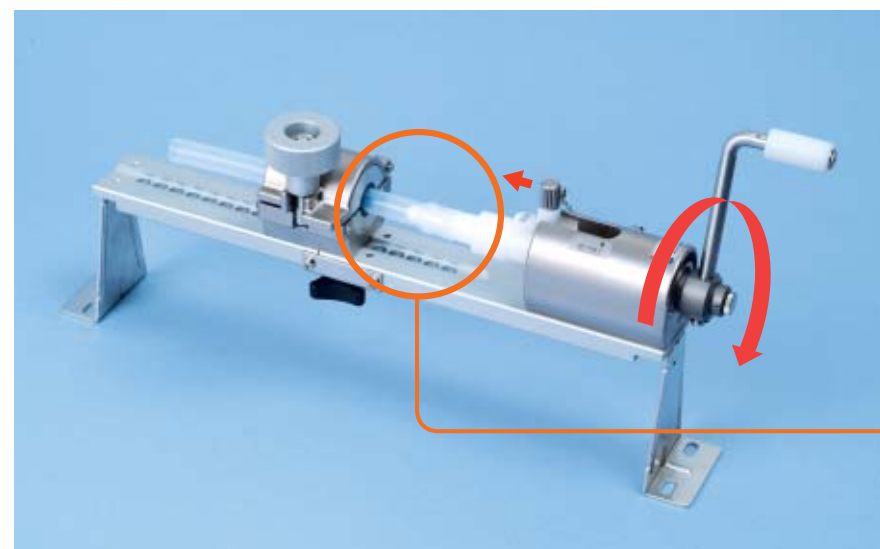
**Caution**

- Do not allow the tubing to protrude too much from the holder when fixing the tubing position.
- Check the tubing for bending.

Note) J and K type clamps do not move.

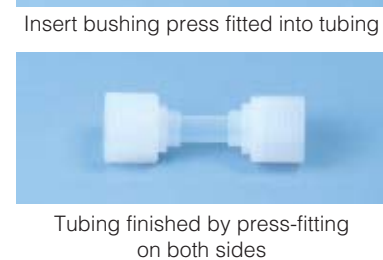
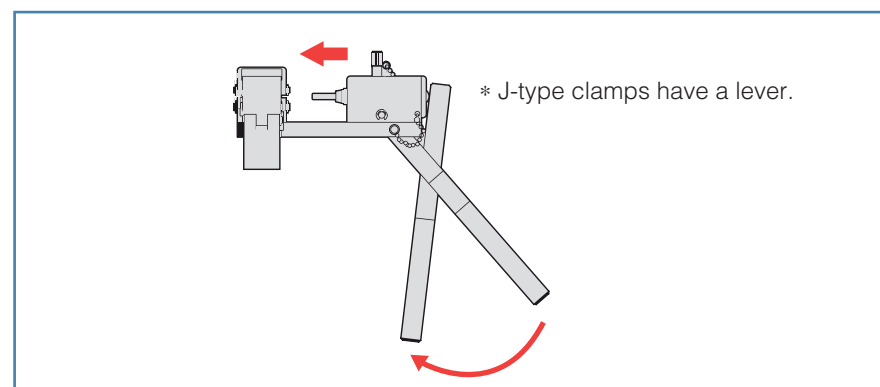
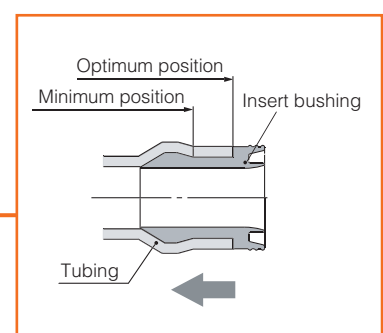


**7** Turn the handle slowly and press fit the insert bushing into the tubing.\*



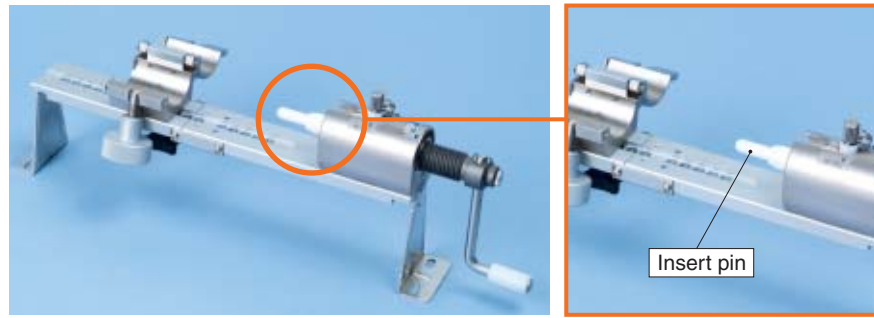
**Caution**

- Observe cautiously for tubing deflection and slippage.
- Press the insert bushing slowly into the appropriate position.

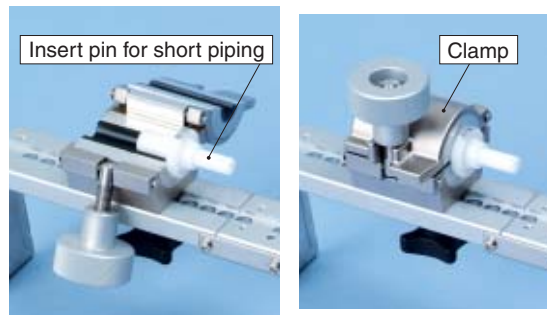


## Short piping (M type)

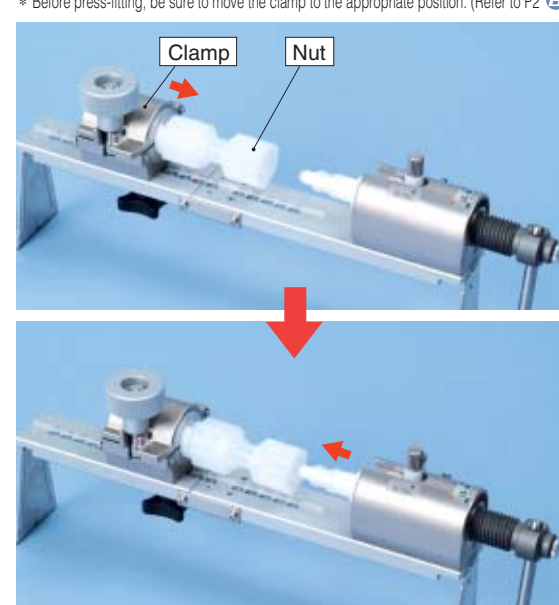
- 1** Attach the insert pin to the base and set the insert bushing. Please refer to ①, ②, ③ on page 1 for the procedure.



- 2** Fix the insert pin for short piping with the clamp.

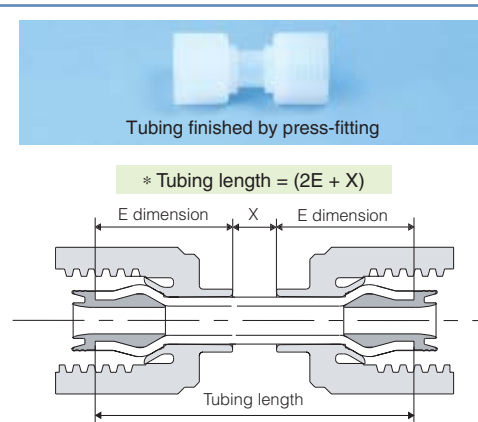


- 5** Attach the nut to the other side of the tubing and press fit the insert bushing slowly into the tubing.

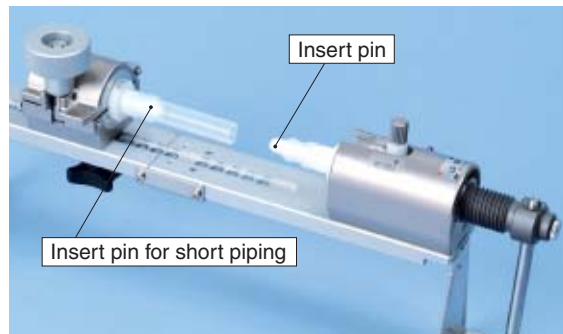


### Caution

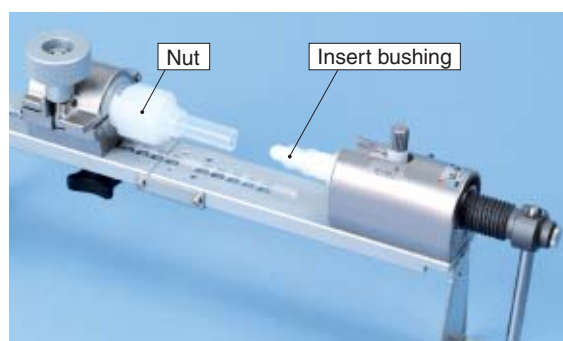
- When both ends of the piping are fixed, cut the tubing a little longer\* than the usual length.
- Insufficient tubing length or use of the tubing under tensile stress may cause leakage or breakage of the fitting.



- 3** Attach the tubing press fitted with an insert bushing to the insert pin for short piping.



- 4** Set the nut and the insert bushing.



## How to Order Insertion Tools

LQ-G J - - -

Insert pin material

Nil	Resin
S	Stainless steel (J/K type only)

Insert pin/Holder type

Nil	Metric size
N	Inch size

Note 1) Compatible pins and holders are included with all sizes (with a parts case)

Option (L/M type only)

Symbol	Option
Nil	None
B	With brackets

Type

Symbol	Body class	Accessories
J	1, 2	Parts case (3)
K		Parts case (3)
L	1, 2, 3, 4, 5, 6	Parts case (1)
M		Parts case (1) Parts case (2)

\* The parts case is shipped together with the fitting jig.

Option

Description	Part no.
Bracket assembly	LQ-GBL

Table 1 Tubing size symbols

Type	Body class	Tubing O.D.															
		Metric sizes								Inch sizes							
		ø3	ø4	ø6	ø8	ø10	ø12	ø19	ø25	1/8"	3/16"	1/4"	3/8"	1/2"	3/4"	1"	
J	1	03	04	—	—	—	—	—	—	03	—	—	—	—	—	—	
	2	—	04	06	—	—	—	—	—	03	05	07	—	—	—	—	
L	1	03	04	—	—	—	—	—	—	03	—	—	—	—	—	—	
	2	—	04	06	—	—	—	—	—	03	05	07	—	—	—	—	
	3	—	—	06	08	10	—	—	—	—	07	11	—	—	—	—	
	4	—	—	—	—	10	12	—	—	—	—	11	13	—	—	—	
	5	—	—	—	—	—	12	19	—	—	—	—	13	19	—		
	6	—	—	—	—	—	—	19	25	—	—	—	—	19	25		

### Replacement parts

Description	Part No.
Insert pin holder assembly (with the parts case)	LQ-G P J - - Type: Insert pin/Holder type Insert pin material (J/K type only): Nil (Metric sizes), N (Inch sizes) Insert pin material (J/K type only): Nil (Resin), S (Stainless steel)
Insert pin (single)	LQ-GP 2 J - - Body class (Refer to Table 1): Type: Insert pin material (J/K type only): Nil (Resin), S (Stainless steel)
Holder (single)	LQ-GH J - 07 Type: Tubing size symbol (Refer to Table 1)

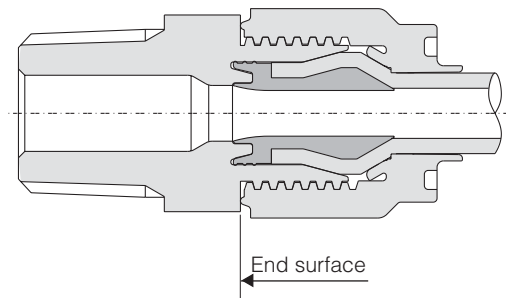
Note 1) Replacement part type J is the part for LQ-GJ and LQ-GK. Replacement part type L is the part for LQ-GL and LQ-GM.

## Nut tightening (LQ1 fitting only)

**Nut tightening tool (LQ1 only)** \* Use a commercially available tool to tighten the nut for an LQ2 fitting.



Nut tightening tool



### ⚠ Caution

Tighten the nut completely to the end surface.  
 \* Please note that it is occasionally difficult to tighten the nut to the end surface for large sizes (3/4•1 or larger).  
 As a guide, refer to the proper tightening torque shown below.

Body class	Torque (N•m)	
	LQ1	LQ2
2	0.3 to 0.4	0.3 to 0.4
3	0.8 to 1.0	0.8 to 1.0
4	1.5 to 1.7	1.5 to 1.7
5	2.5 to 3.0	2.5 to 3.0
6	6.0 to 7.0	—

\* For body class 1, the nut should be tightened manually.

## How to Order

LQ1-GS-3

• Applicable body size

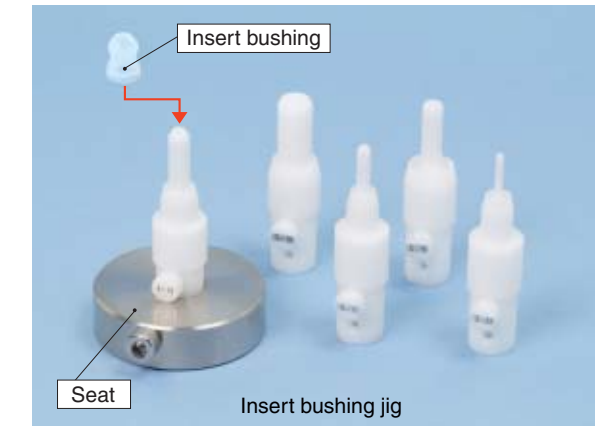
2
3
4
5
6

## Heating / Press-fitting

**1** Prepare a jig suitable to the tubing size and screw it into the seat.

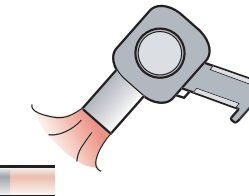


**2** Fix the insert bushing jig to the seat and attach the insert bushing to the jig.



**3** Heat the tubing with a commercially available heat gun.

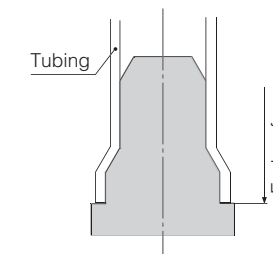
\* As a guide, the area to be heated on the tubing is the length of the insert bushing.



### ⚠ Be careful not to burn yourself!

Do not touch the 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.

**4** Press fit the heated tubing immediately to the end surface of the flared tubing jig and hold it for 10 seconds.



Note) Be sure to check the size of the flared tubing jig.