

# GUIDE FOR BOLTING JOINTS FOR MOLD COOLING

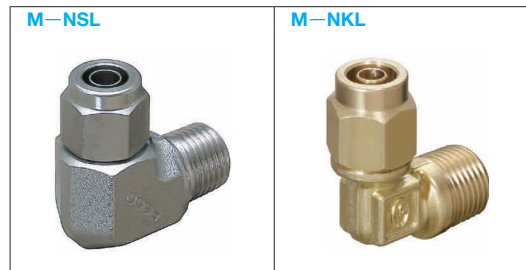
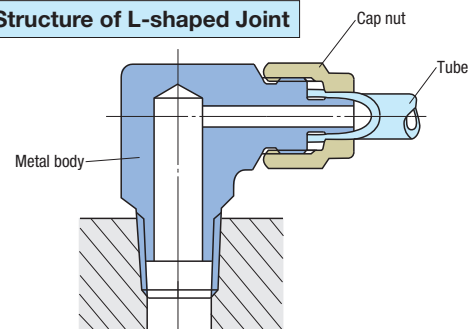
# BOLTING JOINTS FOR MOLD COOLING

—FOR HIGH TEMPERATURE TYPE (HEAT RESISTANT 120°C SERIES)—

☞ Non JIS material definition is listed on P.1351 - 1352  
☞ Use hot water tube (M—SFT ☞ P.1101)

## Bolting Joints High temperature type (Heat resistant 120°C series)

### Structure of L-shaped Joint



### Features

- A structure in which tube insert can be tightened with a cap nut, where no torque control is required.

### Specifications

|                                 |  |
|---------------------------------|--|
| <b>Usable fluid</b>             | Water (fresh water), Air               |
| <b>Usable Pressure Range</b>    | Pressure Range of the tube applicable. |
| <b>Usable Temperature Range</b> | Depends on Tube Specifications Range   |

☞ Please refer to P.1101 for specifications of tube.

### Tube Installation/Removal

#### ① Attaching tube

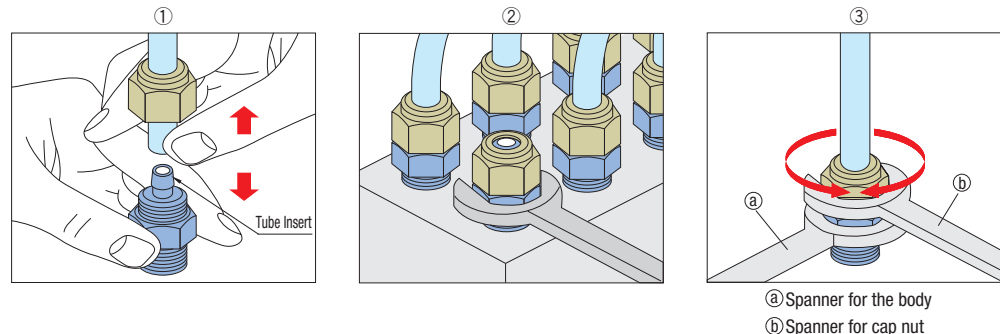
- Check if the tube end is squarely cut (in the right angle), and it is not damaged or deformed.
  - Insert the tube fitted with a cap nut to the root of the tube insert.
  - Tighten the hexagonal part of the cap nut, to fit to the mold body with a spanner.
  - Lightly pull the tube to make sure that it will not come out.
  - When fitting the tube to bolting joints again, fit it after cutting the part fitted before.
- Usage without cutting could cause the tube to fall off unexpectedly or result in water leakage.

#### ② Tightening the screw

- Tighten the hexagonal part or body rectangular part with a spanner.
- Since sealing materials are not put on the tapered thread for tubing, use sealing tapes or sealing materials if necessary. (When using/applying sealing tapes or sealing materials, leave 1.5- to 2.0- thread from the end of the screw.)

#### ③ Detaching the tube

- Detach the tube after holding the hexagonal part with a spanner and detaching the cap nut with another spanner.
- Be sure to stop the fluid such as water and air before detaching the tube.



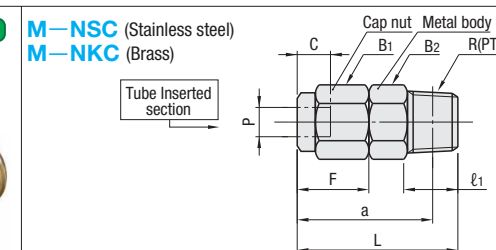
### Notes

- Before removing the joint, make sure to check that the pressure from inside the tube has come down to zero and the temperature of the fluid (water) to below 30°C for avoiding any accidents that may result from splashed hot fluid.
- Keep the joint body free of load (such as tension, torsion or bending to protect it from damage)
- Do not apply percussion flow (water hammer) to the joint.

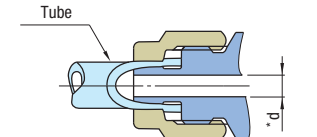
### ■ Straight joint

RoHS

M—NSC (Stainless steel)  
M—NKC (Brass)



### Sectional view of tube inserting hole



☞ Stainless steel (SUS316)  
☞ Brass (C3604)  
☞ Thread JIS B0203 tapered thread for tubing R(PT)

| Matching tubes<br>Outer×Inner dia. | Tube inserting hole<br>Hole dia. P | Depth C | *d  | L    | a    | Cap nut |                   | Metal body |                   |       | Part Number                |       | U/Price<br>1~19 |    |   |    |     |      |
|------------------------------------|------------------------------------|---------|-----|------|------|---------|-------------------|------------|-------------------|-------|----------------------------|-------|-----------------|----|---|----|-----|------|
|                                    |                                    |         |     |      |      | F       | B1 (side to side) | l1         | B2 (side to side) | R(PT) | Type                       | No.   |                 |    |   |    |     |      |
| 6×4                                | 6                                  | 6       | 3   | 25.5 | 21.5 | 11.5    | 12                | 8          | 12                | 1/8   | M—NSC<br>(Stainless steel) | 6—01  | Quotation       |    |   |    |     |      |
|                                    |                                    |         |     | 28.5 | 22.5 |         |                   | 11         | 14                | 1/4   |                            | 6—02  |                 |    |   |    |     |      |
|                                    |                                    |         |     | 29.5 | 23.2 |         |                   | 12         | 17                | 3/8   |                            | 6—03  |                 |    |   |    |     |      |
| 8×6                                | 8                                  | 7       | 5   | 27.5 | 23.5 | 13.5    | 14                | 8          | 14                | 1/8   |                            | 8—01  |                 |    |   |    |     |      |
|                                    |                                    |         |     | 30.5 | 24.5 |         |                   | 11         | 17                | 1/4   |                            | 8—02  |                 |    |   |    |     |      |
|                                    |                                    |         |     | 31.5 | 25.2 |         |                   | 12         | 17                | 3/8   |                            | 8—03  |                 |    |   |    |     |      |
| 10×7.5                             | 10                                 | 9       | 6   | 33.5 | 27.5 | 16.5    | 17                | 11         | 17                | 1/4   |                            | 10—02 |                 |    |   |    |     |      |
|                                    |                                    |         |     | 34.5 | 28.2 |         |                   | 12         | 17                | 3/8   |                            | 10—03 |                 |    |   |    |     |      |
|                                    |                                    |         |     | 33.5 | 27.5 |         |                   | 11         | 19                | 1/4   |                            | 12—02 |                 |    |   |    |     |      |
| 12×9                               | 12                                 | 9       | 7.5 | 34.5 | 28.2 | 16.5    | 19                | 12         | 19                | 3/8   | 12—03                      |       |                 |    |   |    |     |      |
|                                    |                                    |         |     | 6×4  | 6    |         |                   | 6          | 3                 | 22    | 18.0                       | 11    |                 | 10 | 8 | 10 | 1/8 | 6—01 |
|                                    |                                    |         |     |      |      |         |                   |            |                   | 24    | 20.0                       | 12    |                 | 12 | 8 | 12 | 1/8 | 8—01 |
| 27                                 | 21.0                               | 11      | 14  |      |      | 1/4     | 8—02              |            |                   |       |                            |       |                 |    |   |    |     |      |
| 8×6                                | 8                                  | 7       | 5   | 29.8 | 23.8 | 14.8    | 16                | 11         | 16                | 1/4   | 10—02                      |       |                 |    |   |    |     |      |
|                                    |                                    |         |     | 31.8 | 25.5 |         |                   | 12         | 17                | 3/8   | 10—03                      |       |                 |    |   |    |     |      |
|                                    |                                    |         |     | 30.4 | 24.4 |         |                   | 11         | 17                | 1/4   | 12—02                      |       |                 |    |   |    |     |      |
| 12×9                               | 12                                 | 9       | 7.5 | 32.4 | 26.1 | 15.4    | 17                | 12         | 17                | 3/8   | 12—03                      |       |                 |    |   |    |     |      |

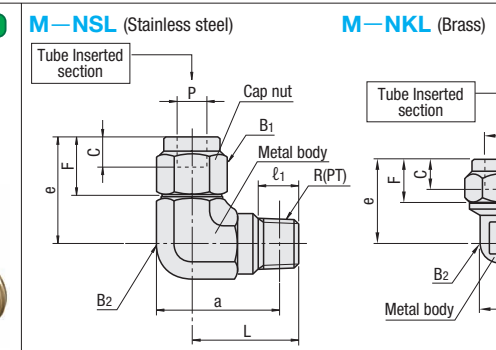
☞ Use hot water tube (M—SFT ☞ P.1101)

### ■ L-shaped joint

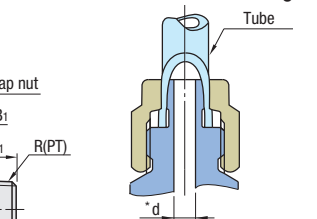
RoHS

M—NSL (Stainless steel)

M—NKL (Brass)



### Sectional view of tube inserting hole



☞ Stainless steel (SUS316)  
☞ Brass (C3604)  
☞ Thread JIS B0203 tapered thread for tubing R(PT)

| Matching tubes<br>Outer×Inner dia. | Tube inserting hole<br>Hole dia. P | Depth C | *d  | L    | a    | e    | Cap nut |                   | Metal body |                   |       | Part Number                |       | U/Price<br>1~19 |    |   |    |     |      |
|------------------------------------|------------------------------------|---------|-----|------|------|------|---------|-------------------|------------|-------------------|-------|----------------------------|-------|-----------------|----|---|----|-----|------|
|                                    |                                    |         |     |      |      |      | F       | B1 (side to side) | l1         | B2 (side to side) | R(PT) | Type                       | No.   |                 |    |   |    |     |      |
| 6×4                                | 6                                  | 6       | 3   | 21   | 23.9 | 21   | 11.5    | 12                | 8          | 12                | 1/8   | M—NSL<br>(Stainless steel) | 6—01  | Quotation       |    |   |    |     |      |
|                                    |                                    |         |     | 22   | 24.1 | 22   |         |                   | 11         | 14                | 1/4   |                            | 6—02  |                 |    |   |    |     |      |
|                                    |                                    |         |     | 29   | 33.6 | 29   |         |                   | 12         | 19                | 3/8   |                            | 6—03  |                 |    |   |    |     |      |
| 8×6                                | 8                                  | 7       | 5   | 25   | 30.8 | 25   | 13.5    | 14                | 8          | 17                | 1/8   |                            | 8—01  |                 |    |   |    |     |      |
|                                    |                                    |         |     | 28.8 | 28.8 | 11   |         |                   | 17         | 1/4               | 8—02  |                            |       |                 |    |   |    |     |      |
|                                    |                                    |         |     | 29   | 33.6 | 29   |         |                   | 12         | 19                | 3/8   |                            | 8—03  |                 |    |   |    |     |      |
| 10×7.5                             | 10                                 | 9       | 6   | 34   | 33.6 | 29   | 16.5    | 17                | 11         | 19                | 1/4   |                            | 10—02 |                 |    |   |    |     |      |
|                                    |                                    |         |     | 33.6 | 33.6 | 12   |         |                   | 19         | 3/8               | 10—03 |                            |       |                 |    |   |    |     |      |
|                                    |                                    |         |     | 34   | 33.6 | 29   |         |                   | 11         | 19                | 1/4   |                            | 12—02 |                 |    |   |    |     |      |
| 12×9                               | 12                                 | 9       | 7.5 | 29   | 33.6 | 29   | 16.5    | 19                | 12         | 19                | 3/8   | 12—03                      |       |                 |    |   |    |     |      |
|                                    |                                    |         |     | 6×4  | 6    | 6    |         |                   | 3          | 17                | 18.8  | 20                         | 11    |                 | 10 | 8 | 8  | 1/8 | 6—01 |
|                                    |                                    |         |     |      |      |      |         |                   |            | 19.5              | 22.5  | 23                         | 12    |                 | 12 | 8 | 10 | 1/8 | 8—01 |
| 21.5                               | 22.5                               | 23      | 11  |      |      |      | 14      | 1/4               |            | 8—02              |       |                            |       |                 |    |   |    |     |      |
| 8×6                                | 8                                  | 7       | 5   | 27.2 | 26.9 | 28   | 14.8    | 16                | 11         | 14                | 1/4   | 10—02                      |       |                 |    |   |    |     |      |
|                                    |                                    |         |     | 26.9 | 26.9 | 12   |         |                   | 14         | 3/8               | 10—03 |                            |       |                 |    |   |    |     |      |
|                                    |                                    |         |     | 27.8 | 27.8 | 11   |         |                   | 14         | 1/4               | 12—02 |                            |       |                 |    |   |    |     |      |
| 12×9                               | 12                                 | 9       | 7.5 | 24   | 27.5 | 28.5 | 15.4    | 17                | 12         | 14                | 3/8   | 12—03                      |       |                 |    |   |    |     |      |



Part Number  
M—NSC 8—02  
M—NSL10—03



Days to Ship  
Quotation



Price  
Quotation

Cooling Components  
Couplers  
Quick Fitting Joints