

Instruction Manual for Chemifit™ CP Series

Tubing

Clean tubing

Processed tubing

PushOne fitting

QuickSeal fitting

Clean fitting/ Chemifit

Bamboo-shoot fitting

Control switch/ Detachable series

Jig/Tool/ Accessory

Technical information

Reference

1 Preparation before piping

Prepare a tube cutter, a crescent wrench and sealing tape.



(Note)

Select an appropriate tube cutter TC01, TC04 or HC03 for the tubing size. See [Table 1] for the applicable tubing size of each cutter.

- ⚠ Caution: Close the tube cutter blades when not using the cutter.
- ⚠ Caution: Check that the fitting and the tubing meet the specifications of the piping environment. Incorrect selection of products may cause an extremely serious accident.

[Table 1] Applicable tubing size of tube cutter

| Tube cutter product number | Applicable tubing outer diameter(mm) |
|----------------------------|--------------------------------------|
| TC01 | ~13(1/2inch) |
| TC04 | ~16(5/8inch) |
| HC03 | ~20(3/4inch) |

2 Winding of sealant tape

The sealing tape should be bound 2-2.5 times in the correct direction, leaving one or two ridges unsealed from the end.



3 Mounting

First, tighten a fitting by hand. Then tighten it about two turns with a crescent wrench.



- ⚠ Caution: Over-tightening could damage the resin fittings body and cause deformation and leakage.
- ⚠ Caution: Use a crescent wrench to tighten the hexagonal (HEX) part, which is made of resin. Using a spanner could cause damage to the HEX part.

4 Cut the tubing

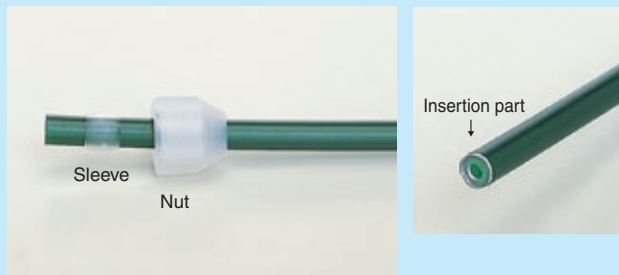
Cutting tubes at a right angle with a tube cutter. Clean the surfaces of tubes before cutting. Select undented, undamaged, well-shaped tubes.



- ⚠ Caution: Do not leave dirt, dents, damage, deformations, burrs, or fluff on the cut surface. Do not cut tubes at a tilted angle. The seal of the connection could be damaged, causing leakage.

5 Insert tubing into nut and sleeve (using insertion part)

Insert tubing first into nut, then into sleeve. Leave a space of more than 1cm long between the tubing end and the sleeve. (It is recommended to use an insertion part for flexible tubes such as polyolefin tubing.)



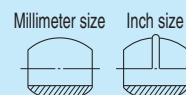
Insert tubing

Insert the tubing into the fitting body until the tubing reaches the end.



(Note)

The millimeter and the inch size types of the Chemifit CP series are distinguished by the shape of the sleeve. The insertion length of the tubing is summarized in [Table 2]. See the table for reference.



- ⚠ Caution: If you use other manufacturers' tubes to make the connection, use a tubing with a size tolerance within ± 0.1 mm. Otherwise, leakage may occur.
- ⚠ Caution: An improperly inserted tubing may cause disconnection or leakage.

[Table 2] Insertion length of Chemifit CP series tubing

| Applicable tubing outer diameter(mm) | Insertion length of tubing (mm) |
|--------------------------------------|---------------------------------|
| 4 | 16 |
| 6 | 18 |
| 8 | 20 |
| 10 | 25 |
| 12 | 29 |
| 6.35(1/4 inch) | 18 |
| 9.53(3/8 inch) | 25 |
| 12.70(1/2 inch) | 29 |

7 Tightening nuts by hand

Tighten the nut by hand with the tubing being inserted to the fitting body.



8 Tightening nuts

Tighten the hand-tightened nut 1.5-2 turns with a crescent wrench.



Caution: Use a crescent wrench to tighten the hexagonal (HEX) part, which is made of resin. Using a spanner could cause damage to the HEX part.

9 Tightening completed

If there is an appropriate space left between the nut and the fitting body as described in [Table 3], the assembly work is completed.



[Table 3] Space between the nut and the fitting body of the Chemifit CP series

| Applicable tubing outer diameter(mm) | Space between the nut and the fitting body(mm) | Remaining number of ridges |
|--------------------------------------|--|----------------------------|
| 4 | 0.5 | 1 |
| 6 | 1.0 | 1 |
| 8 | 2.5 | 1.5 |
| 10 | 3.5 | 2 |
| 12 | 3.5 | 2 |
| 6.35(1/4 inch) | 1.0 | 1 |
| 9.53(3/8 inch) | 1.0 | 1 |
| 12.70(1/2 inch) | 2.5 | 1.5 |

Caution: The Chemifit CP series has a resin thread, which allows stress relaxation relatively easily compared to metal thread. In some cases leakage occurs. In particular at a high temperature, tighten the fitting periodically. If the fitting cannot be tightened further, replace it with a new one.

10 Re-connect tubing

Cut off the tubing end and repeat the steps from “4. Cut the tubing” with a new sleeve (and insertion part). Confirm that there is no dirt, dents, damage, or deformations on the tubing surface.

Caution: Be sure to make the internal pressure zero before disconnecting a tubing.

Caution: The Chemifit CP series is made of resin, hence the nut and body could be deformed. Confirm that the nut and body are not damaged. A damaged nut and body would cause leakage.

Caution: In the event internal pressure or heat changes the inner and outer diameters of tubing, replace the tubing with a new one.