

Instruction Manual for Chemifit™ CSE 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, attachment tools of an appropriate size 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.



- ⚠ Caution: When reattaching the fitting body, remove the old seal on the thread and bind with new sealing tape. The old sealing tape could contaminate the operating fluid and cause problems.

3 Mounting

Use appropriate-size attachment tools to attach a fitting. Tighten the fitting to the recommended tightening torque given in [Table 2].



- ⚠ Caution: Tighten slowly to prevent the thread from seizing.

[Table 2] Recommended tightening torque for Chemifit CSE series

Thread size (JIS B 0203 : 1999)	Recommended tightening torque (N · m)
R1/8	3.0-5.0
R1/4	7.0-9.0
R3/8	18.0-20.0
R1/2	20.0-22.0

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 the assembly nut

Insert tubing into the assembly nut in such a direction that the thread part faces the tubing end.



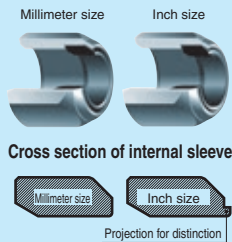
6 Insert tubing

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



(Note)

- ☞ The insertion length of the tubing is summarized in [Table 3]. See the table for reference.
- ☞ The millimeter and the inch size types of the Chemifit CSE series are distinguished by a boss at the internal sleeve as shown on the right.



⚠ 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 3] Insertion length of Chemifit CSE series tubing

Applicable tubing outer × inner diameters (mm)	Insertion length of tubing (mm)
4×2	5.5
6×4	7.0
8×5	7.5
8×6	7.5
10×6.5	8.5
10×8	8.5
12×9	10.0
12×10	10.0
19×16	12.5
6.35×4.57(1/4inch)*	7.0
9.53×6.99(3/8inch)*	8.5
12.70×9.56(1/2inch)*	10.5

*Tube outer diameter

7 Tightening nuts by hand

Tighten the assembly nut by hand.



8 Tightening nuts

Tighten the hand-tightened nut with a spanner or a crescent wrench until the nut reaches the fitting body.



9 Tightening completed

If the assembly nut touches the fitting body, the assembly work is completed.



10 Re-connect tubing

Cut off the tubing end and repeat the steps from "4. Cut the tubing". Confirm that there is no dirt, dents, damage, or deformations on the tubing surface.

(Note)

- ☞ If you reuse an assembly nut, check that the internal sleeve is not damaged. A damaged assembly nut could cause problems such as leakage.

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

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