

Instruction Manual for Chemifit™ C1S 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.
- ⚠ Caution: Over-tightening of M thread could break the thread or deform the gasket, causing leakage. Be sure to tighten it to the recommended torque.

[Table 2] Recommended tightening torque for Chemifit C1S series

| Thread size (JIS B 0205 : 2001) (JIS B 0203 : 1999) | Recommended tightening torque (N · m) |
|---|---------------------------------------|
| M5 | 1.2 |
| 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 Connect tubing and finishing work


Insert the tubing steadily straight into the fitting until the tubing reaches the end. After inserting the tubing, try to pull it out gently and check that it will not pop out.



(Note)

 The millimeter and the inch size types of the Chemifit C1S series are distinguished by a punch mark of tubing size on the release sleeve. The insertion length of the tubing is summarized in [Table 3]. See the table for reference.

 Caution: An improperly inserted tubing may cause disconnection or leakage.

 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.


[Table 3] Insertion length of Chemifit C1S series tubing


| Series name | Applicable tubing outer diameter(mm) | Insertion length of tubing (mm) |
|---------------------|--------------------------------------|---------------------------------|
| Chemifit C1S series | 3 | 11 |
| | 4 | 14 |
| | 6 | 15 |
| | 8 | 16 |
| | 10 | 19 |
| | 12 | 20 |
| | 3.18(1/8inch) | 11 |
| | 6.35(1/4inch) | 16 |
| | 9.53(3/8inch) | 20 |
| 12.70(1/2inch) | 23 | |

6 Disconnect tubing

Re-insert the tubing into the fitting body until the tubing reaches the end, and pull it out straight from the fitting while pushing the release sleeve evenly with two fingers. Do not twist the tubing when pulling it out.




 Caution: If you try to pull out or twist a tubing without re-inserting it until it reaches the end and without sufficiently pressing the release sleeve, the tubing will not come out.

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

7 Re-connect tubing

Repeat the steps from "Cut the tubing". If you re-connect a disconnected tubing, cut off the tip where a claw pattern is left. Also, confirm that there is no dirt, dents, damage, or deformations on the tubing.

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