

## **Cautions in Application of Tube Joint**

**Before use, it should make clear following points:**

### **Danger**

Don't use products in this catalogue in machines that have the following purpose:

- 1.** Maintenance of human body and life
- 2.** Human transportation
- 3.** Instruments o critical safety

### **Warning**

Don't use these products in the conditions below:

- 1.** Except air and water (only special type and custom-design), never attempt to use the tube joint other fluids.
- 2.** The tube joint application is prohibited where spark and fire might be occurred.
- 3.** The tube joint application is prohibited if water temperature is above 60° because resin might be decomposed and damaged in water under a high temperature.
- 4.** The tube joint is not designed for application where there is static charge.
- 5.** Never apply tube joint with additional external load (bending, twist or pulling), otherwise damage or leakage will be occurred.
- 6.** Never touch the release sleeve of one-touch fittings when they are pressurized. (It may cause tube separation, resulting in potentially dangerous situations).

### **Caution**

- 1.** If you use other supplier tubing, the different tubing tolerance might cause leakage or incorrect connection and disassembly. It must check if tubing OD is in compliance with the specification as listed in following table.

<b>Size</b>	<b>Polyurethane Tube</b>	<b>Nylon Tube</b>
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Ø4mm	±0.10	±0.08
Ø6mm	±0.12	±0.10
Ø8mm	±0.12	±0.10
Ø10mm	±0.15	±0.12
Ø12mm	±0.15	±0.12

**2.** Always check the end of tubing for a right angle cutting and check the external surface of tubing for any damage or scratch. Please refer to following instruction in connection of tubing. When you insert the air tubing into the joint, you will have two-step feeling. Section One is locking claw while Section Two is sealing ring. You must insert the tube into Section Two. Sleeve is used in tubing connection and disconnection. The sleeve is designed as an oval shape, which is convenient in assembly and disassembly. However, round sleeve is available to meet any customer special demand if the customer product has limited space for oval sleeve. After connection of tube joint and tubing, always try to pull tubing and ensure its firm connection.

**The minimum insertion length of tubing is as listed, however, the tubing length tolerance as listed is necessary in practice.**

Tube Size		Ø4	Ø6	Ø8	Ø10	Ø12	Ø16
Sleeve Size	Metal	14.6	15.2	16.2	18.7	21.7	24.5
	Plastic	15.1	16	18.1	20.4	23.2	24.2

**3.** Cautions during disassembly of tubing. Before disconnection of tubing, always check tubing internal pressure for zero. For disconnection of tubing, always press sleeve heavily and then pull out tubing. If sleeve is net pressed with enough force, it is hard to pull out tubing and external surface scratch might be resulted by locking claw, which is the cause of air leakage. Don't swing or rotate tubing in disconnection otherwise groove might be resulted on the tubing surface by locking claw to prevent tubing from pulling.

**4.** Always use proper tool to tighten external hexagonal and internal hexagonal parts of the tube joint. Always apply recommended torque on screws otherwise extra torque might damage thread and cause air leakage while insufficient torque might cause loose screws and air leakage. After screws are tightened, you may adjust the direction of tubing with most of our tube joint. If it is hard in adjustment, you may apply recommended torque to turn screw to adjust direction of tubing.

**Recommended Torque for Different Thread Specifications:**

Thread Size	Thread Specification	Torque (kgf.cm)
<b>Metric Thread</b>	M3	7
	M5	15-19
	M6	20-27
<b>Pipe Taper Thread R/RC,PT,BSPT Thread</b>	R1/8	70-90
	R1/4	120-140
	R3/8	220-240
	R1/2	280-300
<b>Unified Thread(UNF)</b>	No.10-32 UNF	15

<b>NPT Thread</b>	NPT1/8	70-90
	NPT1/4	120-140
	NPT3/8	220-240
	NPT1/2	280-300

<b>G,BSPP Thread</b>	G1/8	70-90
	G1/4	120-140
	G3/8	220-240
	G1/2	280-300