



Fluid Power Specialist



Ferrule Bite Type vs O-Ring Seal Fitting Installation Instructions

- 1) **Cut the tube square**
(Angle of cut makes no difference with the Lenz fitting)
- 2) **Must be free of burrs**
(Therefore chamfering of the tube for Lenz fitting is not an extra operation)
- 3) **Be sure ferrule cutting edge is towards end of tube.**
*It is possible to install ferrule backwards.
(If Lenz collet is put on backwards, nut will not engage thread in body of fitting)*
- 4) **Must hold the tube end tight against the body shoulder; that is, tubing has to bottom.**
(The collet on Lenz fitting will hold tubing in place while tightening)
- 5) **Bring nut and ferrule forward to body and turn till hand tight, continuing to hold tube firmly against body shoulder.**
- 6) **Tighten until ferrule bites well into tube. If in doubt about the extent of bite, disassemble and examine. If bite is not sufficient, reassemble and tighten further.**
- 7) **In cases where exact tube length is known it may not be desirable to preset the ferrule onto the tube.**

The following are 4 causes of leaks encountered with the ferrule bite in type fitting which are not present with the Lenz fitting.

- Insufficient bite
- No bite
- Tube not seated against shoulder of fitting
- Sleeve can be put on backwards

In other words, you are not sure of a good connection until you turn the power on.

To reassemble a ferrule bite-in fitting joint that has been disassembled, turn the nut with wrench until a sharp increase in torque is noted. From this point turn from 1/4 to 1/2 turn. This is also required after a presetting operation.

LENZ Advantage

In performance, especially under vibration and shock, the Lenz fitting with its O-ring seal, is superior to the metal-to-metal seal of the ferrule bite in type fitting, which must crush into the tube to make a seal. You will find cases where the ferrule bite-in type fitting will broach right off the tube from vibration and shock and whip out like a garden hose. Also, a wrench happy plumber will often crush the ferrule right through the tubing, especially on thin-walled tubing. This ferrule which bites a ring around the tube sets up a weak point quite similar to the cutting of a piece of plate glass—you put a scratch across the plate where you want to break it off, and then give it a snap. If you use hard tubing other than dead soft, failure, of course, will be much more noticeable.

This would not make a difference with the Lenz fitting as no weak points are set up on the tubing.

