



Fluid Power Specialist



Disadvantages of the Self-Flaring Type Fitting as Compared with the Lenz O-Ring Fitting

The main disadvantage with this type of fitting is that one requires a fitting with the proper size wedge insert to match the different thicknesses of the tubing. The tubing must butt tightly against the wedge insert. The ID of the tubing must always be greater than the ID of the wedge. Therefore, if a man is using only 2 different thicknesses of tubing, he actually must carry (and be able to identify) 2 sets of fittings—one to accommodate heavy walled tubing, and one for thin-walled tubing. If a plant were using a wide range of tubing, from low pressure to extremely high pressure, you can imagine the job a plumber would have matching up the difference by just looking at the fittings, and whether or not it could be done is doubtful. Could you tell the difference by just looking at the fittings? Neither can a man in the shop. On very heavy—walled tubing, it is doubtful if this type fitting can even be satisfactorily used. With the Lenz fitting, the ID need not be taken into consideration, and since the OD is standard and held to very close tolerance, there is no problem here.

Almost impossible to use on stainless steel tubing—unless you are a weight lifter with a 36" Stilson.

Excessive torque strength necessary on any tubing. The Lenz fitting takes only about a turn with a wrench.

Tubing must be cut exactly square. Tubing may be cut at any angle with the Lenz fitting,

Inside an outside of tubing need deburring. Of course, the Lenz fitting requires that the tube be deburred, too, but we mention this because a prospect will often think that is an additional operation with the Lenz fitting, whereas all fittings require the tube to be deburred.

On each reassembly, one must exert extra pressure on torque to seal. After fitting is disassembled a number of times, no extra torque can be exerted. The torque does the sealing here, whereas the O-ring does the sealing on the Lenz fitting.

Exact tube length most essential. No exact tube length necessary with the Lenz fitting.

Must hold tube with one hand against the wedge insert prior and while tightening the nut. This not necessary on the Lenz fitting as the collet holds the tubing in place while tightening the nut.

Tubing must be free from damage and perfectly round. This is pretty much the case with the Lenz fitting, also, but if the tubing is not perfectly round the collet on the Lenz fitting (with its wrap-around effect) will tend to bring tubing back into round.

These are just a few of the disadvantages of the self-flaring fitting installation wise. In performance after it is installed, it is about the same as the ferrule bite-in type fitting. For the advantages of the Lenz fitting over this type fitting performance-wise, see letter on the ferrule bite-in type fitting.

