

INSTRUCTIONS FOR USE OF IMPERIAL® No. 93-FB DOUBLE-FLARING TOOL FOR THIN WALL TUBING

(Patent Nos. 2,370,089 - 2,553,813 Pat. Can. 1953. Other Patents Pending)

This tool offers an exceedingly quick and convenient method of making double-flares on thin-wall steel tubing right on the job. (It can be used with seamless, butt-welded or lap-seam-welded steel tubing having not over .035" wall thickness). Can also be used for either single or double-flaring soft copper, aluminum, magnesium or other *soft*, thin-wall metal tubing. Operation in double-flaring is as follows:

1. Loosen the two wing nuts on the flaring bar; this permits separation of the two halves of the tool.
2. Before inserting tubing in flaring bar, be sure end of tubing to be flared has been cut off squarely and burr removed from inside edge. Tubing also should chamfered on the outside edge. This chamfering is very important as it influences the results obtained in the first forming operation. Chamfering can be done very easily with an ordinary file.

3. Insert the tubing into the hole of proper size, with end of tubing protruding above top of flaring bar by a distance equal to the width of shoulder on adapter of corresponding size. See Fig. 1. On steel tubing that is harder than average, it may be necessary to reduce slightly the distance which tube protrudes. Experience in using the tool will indicate when this is necessary. (A set of 5 adapters, one each for $\frac{3}{8}$ ", $\frac{1}{4}$ ", $\frac{3}{16}$ ", $\frac{5}{16}$ ", $\frac{3}{8}$ " and $\frac{1}{2}$ " O.D. tubing, is a part of the tool.)

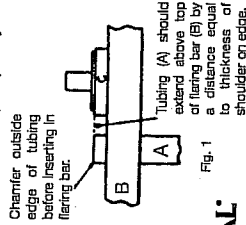


Fig. 1
Chamfer outside edge of tubing before inserting in flaring bar.
Tubing (A) should extend above top of flaring bar (B) by a distance equal to thickness of shoulder on edge.

4. Tighten wing nuts. It is a good practice to tighten the wing nut nearest to the tube first and then tighten the other one. The wings on nuts are of a special shape that permits using the rod of the yoke as a lever in tightening. Nuts must be securely tightened so there is no chance of tubing slipping.

Place yoke over bar of tool. Now place adapter of proper size on the protruding end of tubing, with pilot or stem of adapter inserted into tubing. It is advisable to put a little oil on the lower face and stem of adapter.

5. Move yoke into position so that flaring cone centers directly over the adapter, and screw cone down until cone and adapter engage. At this point make sure that the adapter is centered in the tubing, and then continue screwing cone down until shoulder of adapter rests on flaring bar. This performs a beelling operation on the tubing as shown in Fig. 2.

6. Now back off flaring cone slightly, remove adapter and then screw cone down again tightly, this time directly onto the tubing. This folds the tubing back on itself as shown in Fig. 3, forming an accurate 45° double-flare. Fig. 4 shows a view of tool in operation. **NOTE:** Occasionally oil yoke screw and oil swivel cone through hole in side.

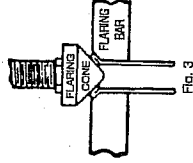


Fig. 3



Fig. 4

IMPERIAL®

6300 West Howard St. Niles, Illinois 60714 U.S.A.