

Installation Manual - Copper Press Fittings

PREPARATION

1. Use a rotary tube cutter to cut the copper tube and achieve a squared end.
2. Remove burrs from the end of the tube with a file. Make sure that the tube end is smooth and clean to avoid damaging the o-ring component of the copper press fitting.
3. Alternately, an off the shelf commercial tube deburring tool may be available. Regardless of the method by which the tube end is deburred, the smooth clean tube end is critical to the proper use of copper press fittings.
4. Identify the depth, using the size “Chart A” below, of the press fitting cup. Measure the tube from the end, marking it clearly on the exterior of the tube. This ensures a proper seal of fitting and tube.

Chart A		Copper-Press Tubing Insertion Depth							
Nominal Tubing Size:	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
Insertion Depth: In.	3/4"	7/8"	7/8"	1"	1-7/16"	1-9/16"	1-3/4"	1-7/8"	2-1/8"

INSTALLATION INSTRUCTIONS

Small sizes: 1/2" thru 2" – Type K, L and M hard copper tubing

1. Check seal for correct fit. Do not use oils or lubricants. If needed, use water on a damp rag.
2. Mark proper insertion depth as indicated on the above Insertion Depth Chart.
Improper insertion depth may result in improper seal.
3. While turning the tube slightly, slide the press fitting onto the tubing to the marked depth.
Note: End of tubing must be in contact with the stop.
4. Open the jaw and place at a right angle to the fitting. Visually inspect insertion depth using the mark on the tubing.
5. After fully pressing the fitting onto the tubing, the jaw can be opened again.

Large sizes: 2-1/2" thru 4" – Type K, L and M hard copper tubing

1. Check seal for correct fit. Do not use oils or lubricants. If needed, use water on a damp rag.
2. Mark proper insertion depth as indicated on the above Insertion Depth Chart.
Improper insertion depth may result in improper seal.
3. While turning the tube slightly, slide the press fitting onto the tubing to the marked depth.
4. Open the press ring and place at right angles on the fitting. Ring must be engaged on the fitting bead.
Check insertion depth.
5. Open the pressing tongs and place them onto the press ring. Keep extremities and foreign objects away from the ring and pressing tongs during the pressing process to prevent injury or incomplete press.

- Press the joint. Hold the trigger until the pressing tongs have engaged the ring. The jaws must completely close to ensure a proper press. **

Warning: Read and understand all instructions before installing these Press Fittings. Failure to follow instructions may result in extensive property damage and serious injury.

***Where these instructions conflict or differ from the tool manufactures, follow the tool manufactures instructions.*

Leak testing

Unpressed connections are located by pressurizing the system with air or water. Fitting sizes 1/2” thru 2” have spiral wrapped o-rings to aid in this process.

When testing with water the proper pressure range is 15 psi to 85 psi maximum. Leak testing with air can be dangerous at high pressures. When testing with compressed air the proper pressure range is 1/2 psi to 45 psi maximum. *If an unpressed fitting is found, make sure that the tubing is fully inserted before the fitting is pressed.* Following a successful leak test, the system may be pressure tested up to 200 psi if required by local code requirements or by project specifications.

Minimum distance between fittings

To ensure a reliable press, a minimum distance between press fittings must be maintained. See the “Chart B” below for distances. Failure to provide the minimum distance may result in an improper seal. On press connections that have the minimum distance between fittings, it is imperative that the tube is fully inserted into each fitting. *It is required that the press tool is rotated at the same angle as the adjacent joint so that when the copper flats are formed by the second pressed fitting it does not create a leak path in the first fitting.*

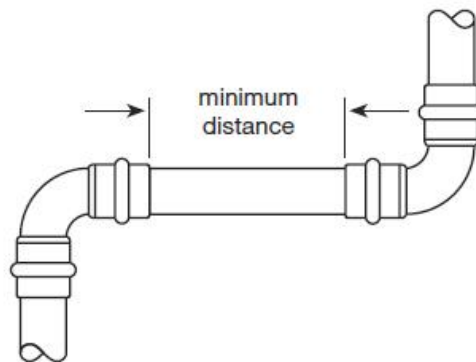


Chart B		Minimum Distance Between Press Fittings							
Nominal Tubing Size:	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
Minimum Distance: In.	1/2"	1/2"	1/2"	1/2"	5/8"	3/4"	3/4"	3/4"	3/4"

Minimum distance to an existing solder joint

To ensure a reliable press and provide protection to the existing soldered joint, a minimum distance to an existing solder joint must be maintained. See the “Chart C” below for distances. The exterior surface of the existing tubing must be free of residual solder and other defects on the tubing that will be inserted into the press fitting otherwise you may not get a completely sealed joint after it is pressed. If it is a newly soldered joint, make sure that the tubing has cooled before it is inserted into the press fitting.

Chart C		Minimum Distance to an Existing Solder Joint							
Nominal Tubing Size:	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
Minimum Distance: In.	1/2"	1/2"	7/8"	7/8"	1-1/4"	1-1/2"	1/2"	1/2"	1/2"

Soldering near an existing press fitting

It is highly recommended that a soldered joint be done before a pressed joint. If circumstances do not permit that the soldered joint be done first, it is the installer’s responsibility to protect the integrity of the o-ring in the press fitting. To ensure that the o-ring in a press fitting is not damaged, a minimum distance of at least 4 tube diameters must be maintained and the press fitting must be kept cool. See “Chart D” below for the minimum distances. To assist in keeping the press fitting cool, the installer should wrap the fitting with a cold wet rag or use a Cooling Gel Heat Barrier Spray. *If an o-ring is damaged by heat, it is not covered by any warranty.*

Chart D		Minimum Soldering Distance between an Existing Press Joint							
Nominal Tubing Size:	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
Minimum Distance: In.	2"	3"	4"	5"	6"	8"	10"	12"	16"