

## **PRESS BALL VALVES**

Installation Instructions - VUS profile: sizes 1/2" - 1"

## APPLICATION

The Press ball valves are designed for installation onto pipe and/or ASTM B 88 types K, L and M seamless, hard-drawn, copper water tubing commonly used in residential, commercial and industrial potable, heated and chilled water applications.

Press ball valve connections require the use of common plumbing hand tools and commercially-available pressing tools with corresponding VUS and XL-C profile jaws.

**WARNING!** Read and understand the tool manufacturer's instructions prior to installation of the Press ball valves. In the event that these instructions conflict with the tool manufacturer's instructions, the tool manufacturer's instructions shall take precedence. Failure to follow the tool manufacturer's instructions may result in property damage, serious injury or death.

## The following instructions are applicable to all 1/2" through 1" Press ball valves.

For tubing connections, use only clean, undamaged ASTM B 88, rigid length Type K, L or M copper tubing with the Press ball valve connection. Coiled (soft annealed) copper is not recommended, as the coiling process may result in out-of-round tubing ends. If used, the tubing ends must be true and made round. Otherwise, damage to the O-Rings or an inferior joint may result.

- 1. Cut the tubing to the desired length using a wheel-type tubing cutter or fine-tooth saw. Make sure the cut is square.
- 2. Using the appropriate deburring tool, deburr the tubing I.D. and O.D., leaving no sharp edges or metal shavings.
- 3. Clean the tubing end, removing all oils, dirt and debris. Ensure that the tubing end is round, the cut is square and that no scratches, dents or burrs are present.
- 4. Inspect the valve's sockets to ensure that the EPDM O-Rings are present and seated correctly within the socket. All Press ball valves will have two EPDM O-Rings in each socket. Remove any debris, which may be present in the sockets, by carefully wiping them with a soft, damp cloth.

CAUTION! Take care not to dislodge or damage the EPDM O-Rings when wiping them. Under no circumstances should a petroleum-based lubricant be applied to the EPDM O-Rings! Lubricants of this type will damage the O-Rings, resulting in an improper seal, joint failure and leakage. Water (from the damp cloth) will act as a lubricant during installation.

5. Using a permanent marker, make a visual reference mark, by marking the tubing to the correct insertion depth, as shown on the chart below. Insert the tubing end into the socket. Firmly push the tubing into the socket until the tubing end contacts the stop. Verify that the tubing is at the correct depth by noting the location of the reference mark, which should now be very close to the socket's edge.

Press tubing insertion depth			
Nominal tubing size	1/2"	3/4"	1"
Insertion depth: In. mm	1-3/8" 35	1-9/16" 40	1-9/16" 40

**CAUTION!** Tubing ends that are not completely inserted into the Press sockets will result in a faulty joint and seal. If necessary, remove the tubing end after it has been marked, measure the insertion depth and verify, using the above chart.

- 6. Install the correct nominal tubing size pressing jaw into the pressing tool, following the tool manufacturer's recommendations.
- Open the pressing jaws by pinching the jaw arms together. Place the open jaw over the Press socket making sure the raised part of the socket fits into the grooved parts of the jaws. Release the jaw arms. The ends of the jaws will remain slightly apart.

CAUTION! Be sure that there is no copper build-up, debris or obstruction of any kind between the jaws and the exterior of the valve's socket, as the jaws are positioned over the press area.

- 8. Visually verify that the tubing has remained inserted to the correct depth by checking the mark.
- 9. Position the pressing tool and jaw perpendicular to the tubing, at a right angle. Depress and hold the tool's trigger.
- 10. Observe the jaw ends during the pressing action. The open ends of the jaw will make contact, and the tool will complete the pressing cycle. Release the trigger.
- 11. Open the pressing jaws by pinching the jaw arms together. Remove the jaw and tool from the valve's socket.
- 12. For Press x Press valves, repeat steps two through eleven on the valve's opposite socket. Installation is complete.

- 13. Inspect all connections for properly pressed joints. Pressure test all joints in accordance with local code requirements.
- 14. Support placement of the assembled pipe, tubing, fittings and valves shall be in accordance with local code requirements.





Step 1



Step 4







Step 9



Step 11



Step 5







Step 10