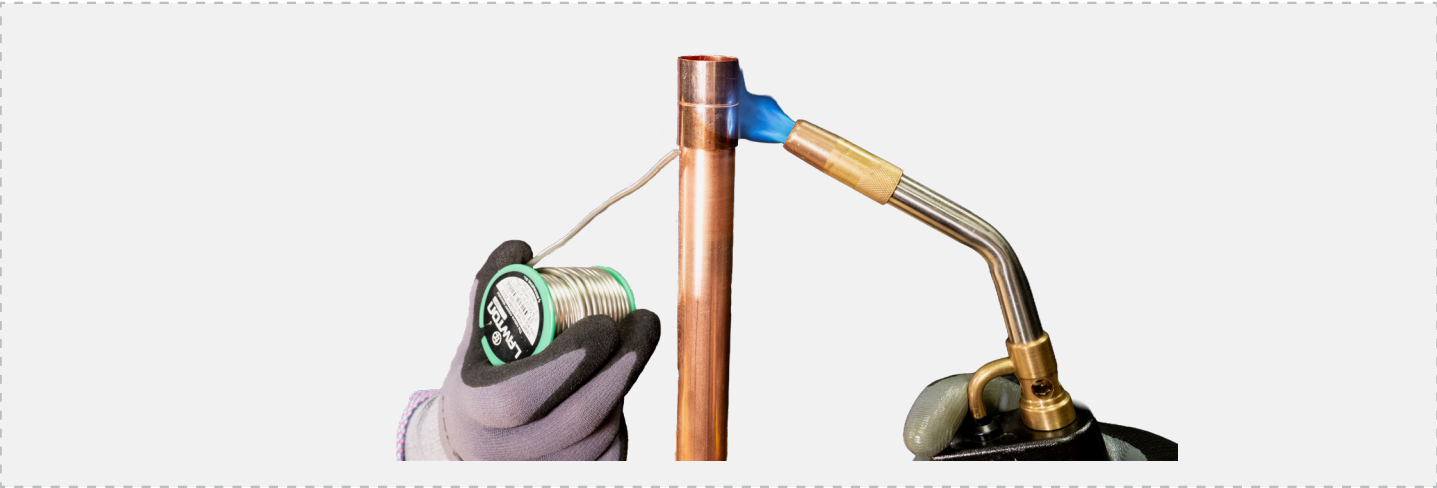


How to Solder Lawton Plumbing Capillary Fittings

Soldering copper tube to capillary fittings for plumbing and heating installations.



Lawton Plumbing Capillary Fittings	Joined by soft soldering, a lower temperature process than brazing. Conform to BS EN 1254.
Applications	Potable Water, Heating, Cooling
Not Covered	Medical gas, vacuum and refrigeration pipework. Those services shall be brazed and have their own guides.
Fitting Types	End feed: the socket is plain and solder is fed into the heated joint by hand. Solder ring: solder is pre-applied in an internal groove, with little or no extra solder fed by hand.
Solder and Flux	See the Lawton Jointing Solutions Data Sheet, including the correct choice for potable water.
Flux Residue	Removed after soldering. Potable water systems flushed before use.
Maximum Size, Soft Solder	Up to and including 66.7mm. Larger fittings shall be brazed.
Standard	EN 1254-1
Further Detail	Characteristics not covered here are given in the relevant datasheet. The standards and the project specification take precedence over this guide.

Safety

- Soldering shall be carried out in a well ventilated area. Flux and solder fume must not be breathed.
- Eye protection and suitable gloves must be worn.
- Hot work precautions shall be observed. Combustible materials must be cleared from the area, a fire extinguisher kept to hand and a fire watch maintained after the work. Particular care is needed when soldering near joists, floorboards and insulation.

These are general precautions. Site rules and any permit to work may differ and shall be followed.

Procedure



1. Cut the tube square with a tube cutter or fine hacksaw (a 32 tooth blade is recommended). Remove the burr.



2. Clean the outside end of the copper tube thoroughly with sand cloth or sandpaper, to a length equal to the depth of the fitting. No dark spots shall remain.



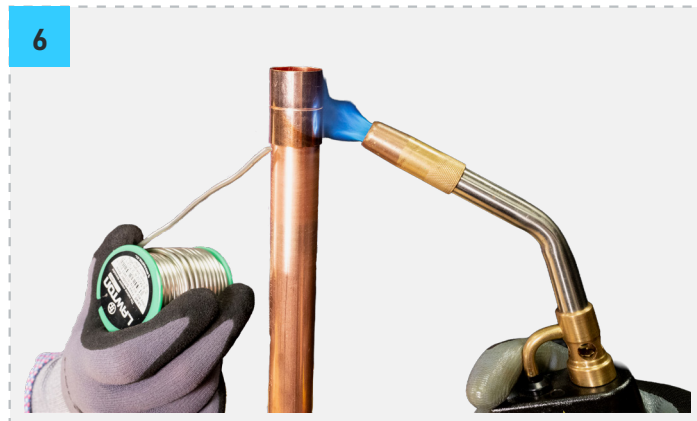
3. Clean the inside of the fitting to the tube stop with a wire brush. Sand cloth or sandpaper may also be used.



4. Apply a light, even coat of soldering flux to the outside of the tube and the inside of the fitting with a brush.



5. Slip the tube into the fitting up to the tube stop. Turn the tube back and forth once or twice to spread the flux evenly.



6. Apply heat uniformly around the fitting with the torch. When the solder melts on contact with the heated fitting, the soldering temperature has been reached. On an end-feed fitting, remove the flame and feed solder slightly off centre at the bottom of the joint, working around the fitting until a complete ring of solder shows at the mouth. On a solder ring fitting the solder is already in the groove; heat until a bright ring of solder shows all round the mouth. The joint must not be disturbed until it has set. Wipe off surplus solder.

CAUTION: the joint must not be overheated and the flame must not be directed into the face of the fitting cup. Overheating burns the flux, which destroys its effectiveness so that the solder will not enter the joint.

For more details, please refer to our website or contact us by e-mail at technical@lawtontubes.co.uk