



QTITE Installation and Specifications Manual

QTITE fittings are a heat free method for joining Copper, CPVC, and PEX tube. QTITE provides a clean and easy joining method designed to save time and money on installations. Installing a joint with QTITE is simple, requiring no extra materials beyond the QTITE fitting for Copper and CPVC tubing installations, and a QTITE fitting plus a tube liner for PEX installations. The use of solder, flux, and heat, or special pressing tools is eliminated. This lowers costs, reduces labor time, and allows a clean and efficient installation process.

Warranty

QTITE fittings carry a 50-year warranty against manufacturing defects. Contact an EPC representative for details. All warranties are subject to following good installation practices as outlined in this installation manual.

Materials and Material Compatibility

QTITE fittings are designed and manufactured to strict specifications and quality systems. QTITE fittings are manufactured from Copper or Copper Alloys and utilize EPDM o-ring seals, a Nylon support ring, and a 316 Stainless Steel retaining ring. An ANSI/NSF 61 listed silicone grease is used to lubricate QTITE fittings.

QTITE fittings are designed for use with ASTM B88 hard drawn and annealed Copper tube, Type K, L, or M, in the ½" through 2" size range; CPVC water tube per ASTM D2846/2846M-99, and PEX water tube that meets the requirements of ASTM F876, F877 using a tube liner as designed by EPC.

All QTITE fittings are designed to operate at temperatures from 0° to 250° F at a maximum working pressure of 200 psi, for various liquids, and various gasses.

QTITE fittings must not come into contact with household cleaning products, paints, greases, flux, mineral oils, adhesives, ammonia, nitrates, or other solvent base materials that may be used during or after installation.

The exterior surface of QTITE fittings should not be painted.

The use of proprietary chemicals to flush pipes during plumbing system startup should be reviewed with an EPC representative.

Installation

The QTITE joining system is designed with easy installation in mind. Basic joining procedures are identical for every type and size of QTITE fitting with only minor variations due to the type of tube material being installed. The following instructions address the assembly procedures by tube material type.



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QTITE Fitting Assembly for Copper and CPVC Tube

Copper water tube per ASTM B88, Types K, L, & M, both hard drawn and annealed, may be used with QTITE fittings. In addition, CPVC water tube per ASTM D2846/2846M-99 may be used with QTITE fittings. The following graphic describes the installation procedure - see Figure A. Note – This is the instruction diagram printed on each bag in which QTITE products are shipped.

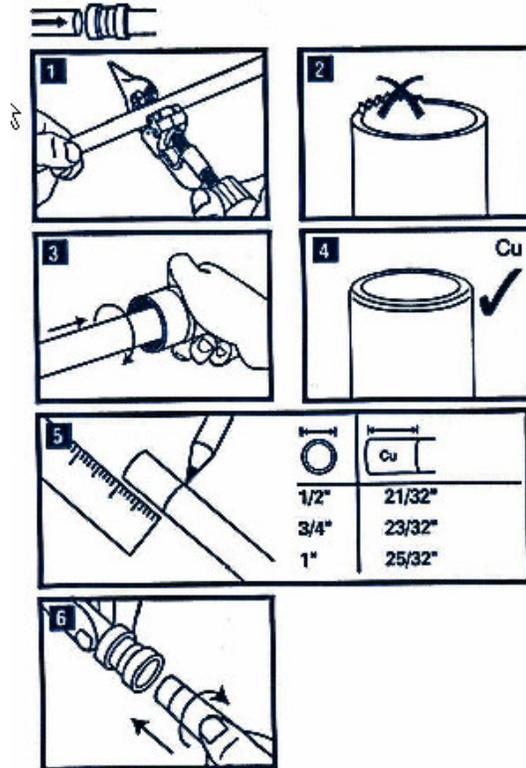


Figure A
QTITE Copper and CPVC Installation

Step 1 – Cut the tube with a tube cutter. The cut should be perpendicular to the centerline of the tube.

Step 2, 3, & 4 – Remove burrs by chamfering the tube at the inside and outside diameters. A properly chamfered tube is shown in A-4.

Step 5 – Mark the tube exterior at the depth shown. The tube insertion depth is the same whether the tube material is Copper, CPVC, or PEX.



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<u>Tube Size</u>	<u>Insertion Depth</u>
1/2	11/16"
3/4	3/4"
1	13/16"
1-1/4	TBD
1-1/2	TBD
2	TBD

Step 6 – Holding the fitting tightly, insert the tube straight into the fitting with a twisting motion, as shown, until the depth mark on the tube outside diameter is aligned with the end of the fitting. If the mark and the end of the fitting are not aligned, then continue to push the tube to the full insertion depth.

Note - Inserting a properly chamfered tube straight into the QTITE fitting cup will produce a leak free joint, reduces insertion force, prevents o-ring damage, and insures the tube is easily inserted to the correct insertion depth. Inserting the tube at an angle and pulling it into proper alignment is poor assembly practice and may result in a leaking joint.

QTITE Fitting Assembly for PEX Tube

QTITE fittings are designed to join PEX water tube that meets the requirements of ASTM F876, F877. In order to make an effective joint, a tube liner is required, see Figure B. Tube liners have been specifically designed by EPC for use with the QTITE fitting product line; do not substitute any other manufacturer's tube liner. Liners are available in 1/2", 3/4", and 1" sizes.

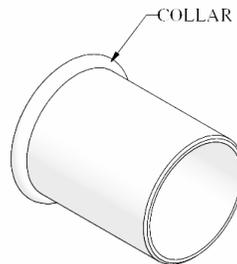


Figure B
Typical QTITE Tube Liner

Follow steps 1 through 5 as shown in Figure A and described in the written description for each step.



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Once the tube outside diameter is marked at the proper depth, the tube liner is then inserted into the end of the tube. The liner must be pushed into the tube until the liner collar is set firmly against the end of the PEX tube.

With the tube liner in place, complete step 6 above, insert the tube into the QTITE fitting. Verify that the depth mark on the outside of the PEX tube aligns with the end of the QTITE fitting. If the mark and the end of the fitting are not aligned, then insert the PEX tube to the full insertion depth.

Note - Inserting a properly chamfered tube straight into the QTITE fitting cup will produce a leak free joint, reduces insertion force, prevents o-ring damage, and insures the tube is easily inserted to the correct insertion depth. Inserting the tube at an angle and pulling it into proper alignment is poor assembly practice and may result in a leaking joint.

General Installation Guidelines

Health and Safety Warning!

Do not insert anything into the QTITE grab ring mechanism that must be removed, it will not release! This warning includes human body parts and is critical to your health and personal safety. Seek emergency medical service if you become entangled in the grab ring mechanism.

To ensure that the fittings stay clean, and the o-ring is protected from damage, never remove the fitting from its package until immediately prior installation.

Heat should not be applied to QTITE fittings directly or indirectly.

QTITE fittings should not be installed in soldered or brazed piping systems until after the components have been allowed to cool. The plumbing system should be cool to the touch at the time of installation. **CAUTION, BE PATIENT, BURN HAZARD!**

Soldering or brazing should not be done within 12" of a QTITE fitting.

The QTITE fitting product line includes 45° and 90° Street Elbows. These fittings are not intended to be soldered at the 'fit' (tube) end. QTITE Street Elbows may be joined to other QTITE fittings or to XPress (press-connect system) fittings.

DO NOT USE ANY ADDITIONAL LUBRICANTS, OR SEALING COMPOUNDS WITH QTITE FITTINGS. Clean water may be used as a lubricant, when permitted by local plumbing codes.

EPC recommends the use of a good quality tube cutter with a sharp wheel. This will create a tube end that is ideal for chamfering. A consistent chamfer width, free of burrs, is required to produce a proper QTITE fitting to tube joint. Failure to do so voids any and all warranties.



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EPC does not recommend the use of a saw to cut tube. If you do use a saw, select a fine toothed blade. Take care to ensure that the tube end is cut square, de-burred, and then carefully chamfered per installation instructions at the ID and OD of the tube.

Failure to chamfer the tube end at the inside diameter creates a situation that generates flow turbulence in plumbing systems. Turbulence, in turn, creates flow noise and the possibility for corrosion of the QTITE fitting, plumbing tube, or both. Failure to chamfer the tube end at the inside diameter voids any and all warranties.

Wipe the tube end to remove all dirt and debris. This prevents damage to the o-ring when inserting the tube.

QTITE fittings cannot be removed or re-used.

QTITE fittings may be closely spaced without affecting joint performance provided tube insertion depth requirements are met.

QTITE fittings are intended to be used with tube that is free of paint or other foreign matter, heavy scratches, or dents on the exterior surface. Joints made using tube exhibiting these problems voids any and all warranties. These conditions create leak paths.

Installation Do's and Don'ts Summary

Do's:

- Do use tube that has a clean and undamaged exterior surface.
- Do cut the tube square (perpendicular) to the tube centerline.
- Do chamfer the tube OD and ID so that a smooth surface and a consistent chamfer width are achieved.
- Do inspect for and repair any sharp edges on the tube end after chamfering.
- Do insert the tube straight into the fitting opening.
- Do rotate the tube during insertion.
- Do use a QTITE tube liner with PEX tube.
- Do support tube assemblies, QTITE fittings will rotate.

Don'ts:

- Don't make a crooked tube cut.
- Don't forget to chamfer tube ID and OD.
- Don't solder or braze within 12" of a QTITE fitting.
- Don't lubricate with anything but clean water (check local plumbing codes).
- Don't insert the tube at an angle (This is poor assembly practice and may dislodge, cut, or nip the o-ring).
- Don't solder QTITE Street Elbows, 45° or 90°. The 'fit' (tube) end is intended to be inserted into another QTITE or an XPress fitting.
- Don't try to repair or re-use a QTITE fitting.
- **Don't insert anything into the QTITE grab ring mechanism that must be removed, it will not release! This warning includes human body parts and is critical to your health and personal safety. Seek emergency medical service if you become entangled in the grab ring mechanism.**



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