SHARKBITE®

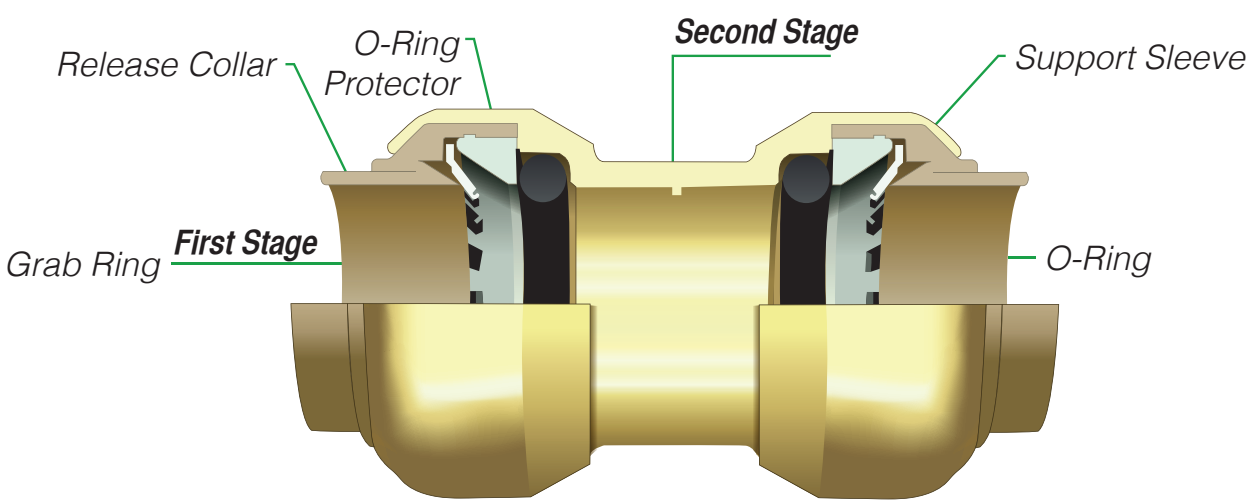
INSTALLATION INSTRUCTIONS



INSTALLATION INSTRUCTIONS | SharkBite® Connection System

The SharkBite® System

The SharkBite® connection system uses an advanced push-fit design that works in two stages. When the tube is inserted into the fitting it passes the first stage through a release collar and then through a stainless steel grab ring. The grab ring has teeth that open out and grip onto the tube. At the second stage the tube is pushed through an o-ring protector which aligns the tube. A specially formulated o-ring is then compressed between the wall of the fitting and the tube before the end of the tube reaches the tube stop.



Only when the tube has passed through the o-ring and reaches the tube stop, is a secure joint created. The SharkBite® fittings can only be used with pipe/tubing certified to the following specifications:

- **PEX** (ASTM F876, CSA B137.5)
- **Copper** (ASTM B 88)
- **CPVC** (ASTM D 2846, CSA B137.6)

The SharkBite® fittings have an integral Tube Support Liner that is effective in supporting PEX tubing to ensure the o-ring seals correctly on the outside of the PEX tubing. The Tube Support Liner is not required for use with CPVC and copper tubing; however these two types of tubing fit over the Tube Support Liner easily and hold it against the tube stop. But the tube liner may be easily removed based on preference or local codes – see page 5 for details.

Connecting a SharkBite® Joint

The following instructions must be followed to assemble the SharkBite® Connection System.

Preparation

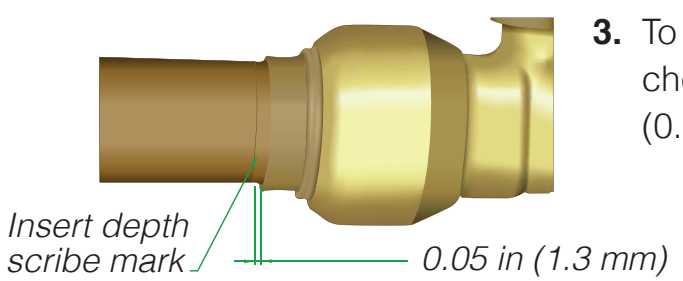
Select the correct size fitting and tubing for the job. Check that fittings and tubing are clean, in good condition and are free from damage and foreign objects. Cut the tube so that the ends are square. Ensure that there are no burrs or damage to the cut end. Wherever possible proper tube cutting tools such as rotary tube cutters (copper tubing) or tube shears (for plastic tubing) should be used.

Once the tubing end is cut square and clean, use the SharkBite® Depth Deburr Gage (sold separately) and a permanent marker to mark the insert depth on the outside of the tubing. This mark is used to ensure that the joint is assembled correctly. To assemble correctly, the tubing needs to be pushed into the fitting until it meets the tube stop. Follow these three steps to insert the tubing into the fitting.



1. Insert the tube through the release collar to rest against the grab ring.

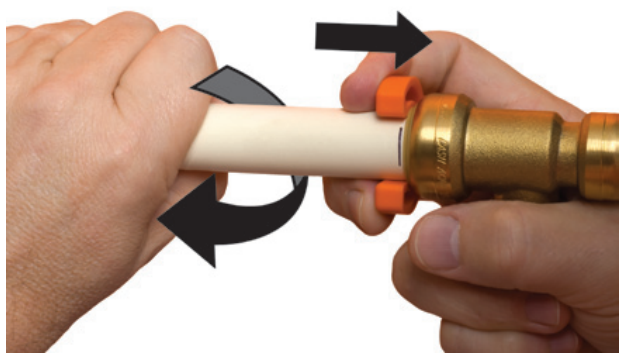
2. Push the tube firmly with a slight twisting action until it reaches the tube stop.



3. To ensure that the tube is correctly inserted, check that the depth mark is within 0.005 in (0.13 mm) of the end of the release collar.

Disconnecting a Joint

Disconnection of the joint can only occur by using either the SharkBite® disconnect clip or the SharkBite® disconnect tongs. By applying pressure to the release collar with the clip or the disconnect tongs, the grab ring teeth are splayed. This action releases the tube, allowing it to be removed from the fitting.



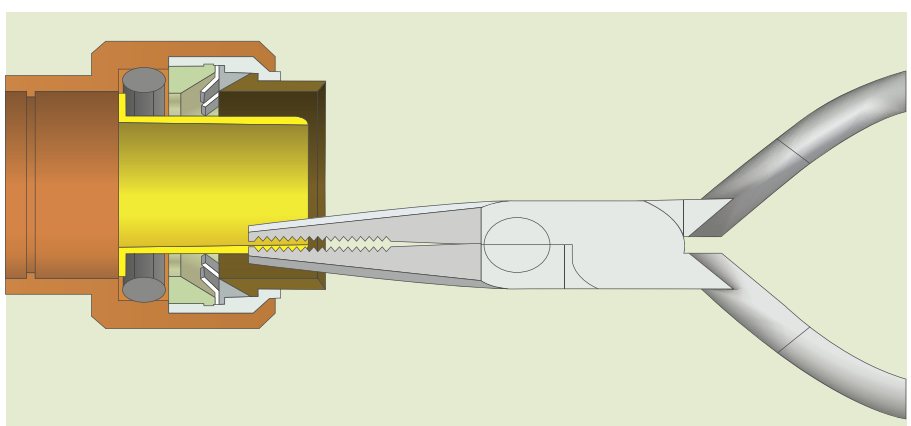
1. Place the SharkBite® disconnect clip around the tube with the non-branded face against the release collar. If using the SharkBite® disconnect tongs, place the teeth around the fitting assembly. The fork end with the SharkBite® brand logo should be positioned around the tube and the other end around the neck of the fitting.

2. Push the clip against the release collar and pull the tube with a twisting action to release the tube. If using the SharkBite® disconnect tongs, squeeze the tool with one hand and pull the tube with a twisting action to release the tube.

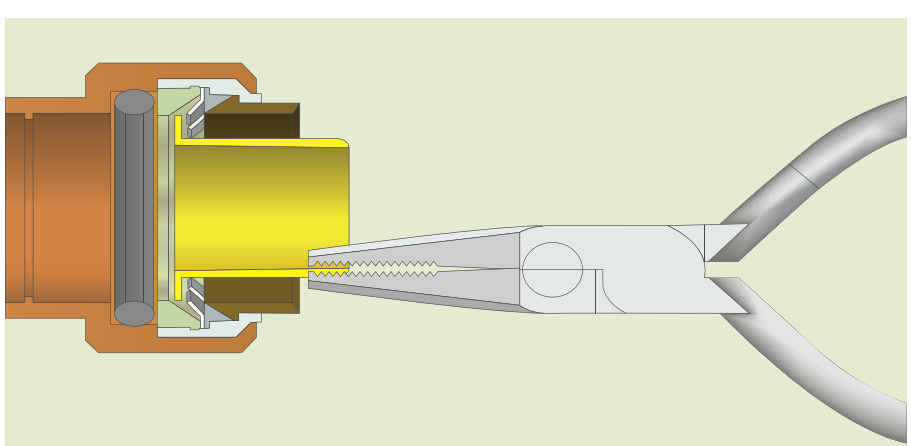
3. Check the fitting and tube end for damage. The fitting and tubing should be free of damage, foreign objects and marks on the outside diameter. If the tubing is damaged or marked, then cut and use a new section of tubing.

PEX Tube Support Liner Removal

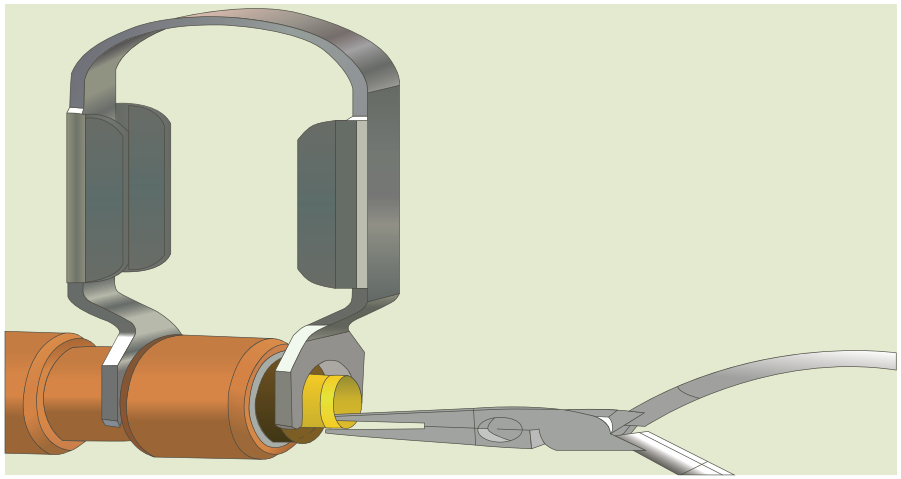
The tube liner is not necessary with CPVC or Copper tubing, and may be removed based on preference or local codes. The tube liner can be easily removed by pulling it past the o-ring, then with the aid of the SharkBite® disconnect clip or disconnect tongs (both sold separately), the Tube Support Liner can drop out of the fitting as it can move freely past the grab ring. Needle nosed pliers may be used to pull the Tube Support Liner out.



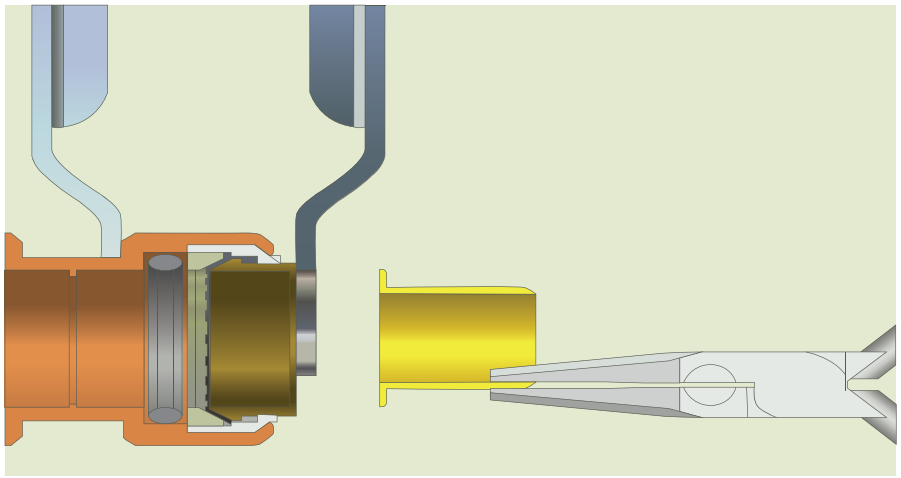
Gently work the Tube Support Liner past the o-ring



Stop once the Tube Support Liner has been pulled past the o-ring, the Tube Support Liner cannot be pulled out any further due to the grab ring.



Put the disconnect tongs (or clip) in place and squeeze them together. This will cause the grab ring teeth to spread.



Once the disconnect tongs are squeezed and the grab ring teeth are spread, the Tube Support Liner can be easily removed.

Proposition 65 Warning: This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm. Notice to Installer/Contractor: California law requires this notice be provided to the consumer/end user of this product.

Limited warranty - SharkBite® Connection system

A. Reliance Worldwide Corporation, the Company, warrants the following products - SharkBite® PEX Tubing, SharkBite® Push-Fit Fittings, SharkBite® Brass PEX Barbed Fittings, SharkBite® Copper PEX Manifolds and other SharkBite® Accessories - to be free of defects in material and workmanship for the time periods shown below and when used and installed in accordance with the requirements set forth below.

1. SharkBite® PEX Tubing cross-linked polyethylene (non-barrier & barrier PEX) pipe for a period of twenty-five (25) years from the date of manufacture.
2. SharkBite® Push-Fit Fittings brass push fit fitting for a period of twenty-five (25) years from the date of manufacture.
3. SharkBite® Brass PEX Barbed-Fittings and SharkBite® Copper PEX Manifolds for a period of sixty (60) months from the date of manufacture.
4. All other valves and accessories sold under Reliance Worldwide Corporation's brand names of the SharkBite® PEX and / or SharkBite® Connection System for a period of twenty-four (24) months from the date of manufacture.

SharkBite products shall be installed in accordance with all applicable plumbing, heating and mechanical codes and in accordance with any local, state or federal requirements.

Reliance Worldwide Corporation's obligation will be to repair or replace, at its discretion, any of the products covered under this limited warranty when the materials used to produce the product or the workmanship of the manufacturing process are proven to be defective.

B. In the event of a system malfunction or leak caused by defective warranted products (and not by improper installation or usage, incorrect handling procedures or by jobsite or installation damage), a reasonable pre-approved amount will be allowed for repair materials and repair labor. In the event of a leak occurring in the factory manifold, please contact Reliance Worldwide Corporation. Note that Reliance Worldwide Corporation limits its warranty to its tubing, valves and accessories, fittings and manifolds. Reliance Worldwide Corporation does not warrant the connection. The integrity of the connection is the sole responsibility of the installer.

C. To qualify for a warranty remedy under paragraph B, you must contact Reliance Worldwide Corporation in advance and receive written authorization for this remedy from an authorized Reliance Worldwide Corporation representative. Reliance Worldwide Corporation will not consider expenses for repair materials, labor and / or freight unless authorized in advance and in writing.

D. To qualify for the warranty described above, you must:

1. Use construction techniques in compliance with applicable plumbing, heating and mechanical codes to install our products, as specified in our current design and installation guidelines and technical notes. This shall include field pressure testing prior to concealing with concrete or by other means.
2. Install and use Reliance Worldwide Corporation's SharkBite® PEX Tubing and Reliance Worldwide Corporation's SharkBite® Connection System products according to all guidelines and manuals published by Reliance Worldwide Corporation. It is expressly understood that failure as a result of any freezing fluids within the pipes does not constitute a defect in material or workmanship and shall not be covered by this warranty.
3. Install and use Reliance Worldwide Corporation SharkBite® PEX Tubing and Reliance Worldwide Corporation SharkBite® Connection System products in a system that will not operate at temperatures or at pressures that exceed the printed rating on the tubing.
4. Install and use all warranted Reliance Worldwide Corporation SharkBite® product in compliance

with any applicable local building, plumbing and mechanical codes.

E. Evidence of tampering, mishandling, neglect, accidental damage, freeze damage or unauthorized repairs that cause damage to Reliance Worldwide Corporations SharkBite® warranted products void any warranty coverage of those particular products. The terms of this warranty specifically exclude all field connections. Reliance Worldwide Corporation, in its sole discretion, can decide whether the warranty will be honored or is void.

F. Although Reliance Worldwide Corporation provides a plumbing system to facilitate a complete installation; other manufacturer's tubing and/or fittings may be installed in any given installation provided manufacturing of the tubing and/or fittings demonstrates compliance with the applicable ASTM standards, and the product has been certified by a recognized third-party testing agency. The Reliance Worldwide Corporation product in the given installation will continue to be covered under this warranty. NOTE: Reliance Worldwide Corporation will be responsible only for proven defects in material or workmanship in Reliance Worldwide Corporation products. Problems in products manufactured by another company should be reported to that manufacturer.

G. Disclaimer of Warranty. THE EXPRESS WARRANTY SET FORTH HEREIN IS THE ONLY WARRANTY GIVEN BY Reliance Worldwide Corporation WITH RESPECT TO THE PRODUCTS LISTED IN PARAGRAPH A. Reliance Worldwide Corporation MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, AND HEREBY SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

H. Limitation of Remedy and Liability. The remedy described above shall constitute the sole and exclusive remedy for breach of warranty, and, apart from that remedy, Reliance Worldwide Corporation shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if these warranted products do not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, adverse chemical environments, or any other circumstances over which Reliance Worldwide Corporation has no control. This limitation applies even if Reliance Worldwide Corporation could have foreseen or has been advised of the possibility of these damages. This warranty shall be invalidated by any abuse, misuse, misapplication or improper installation of the product. Proof of purchase is required to validate the warranty period.

Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages. Therefore, the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from state to state. You should consult applicable state laws to determine your rights. SO FAR AS IS CONSISTENT WITH APPLICABLE STATE LAW, ANY IMPLIED WARRANTIES THAT MAY NOT BE DISCLAIMED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF ORIGINAL SHIPMENT BASED ON PROOF OF PURCHASE, OR, IF NOT AVAILABLE, FROM THE DATE OF MANUFACTURE.

I. RETURNED GOODS - CREDIT: No products shall be returned without authorization. Any credit issued will be at the price originally invoiced, less handling charges, based on the costs of reconditioning, boxing, etc. Obsolete or made to special order products are not returnable.

NOTE: Prices and terms are subject to change without notice and supersede all previous quotations. Reliance Worldwide Corporation reserves the right to change or modify product design or construction without prior notice and without incurring any obligation to make such changes and modifications on products previously sold.



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A Division of the Reliance Worldwide Corporation

