



# SharkBite®

## Installation Guide



# The Total Plumbing Solution



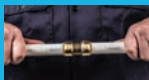
## Cut:

Cut the pipe square removing rough edges and debris. Mark the pipe to the correct insertion depth.



## Push:

Push pipe and fitting together up to the depth mark.



## Done.



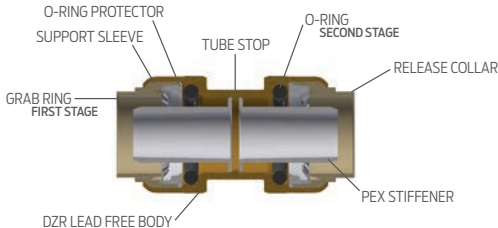
\*Using the disconnect clip, fittings can be easily changed, removed and reused.

## Pipe Insertion Depth

| SharkBite Fitting Size | Nominal Pipe Size | Pipe OD   | Pipe Insertion Depth Fraction In. | Pipe Insertion Depth MM |
|------------------------|-------------------|-----------|-----------------------------------|-------------------------|
| 1/4 in.                | 1/4 in. CTS       | 3/8 in.   | 7/8                               | 20.73                   |
| 3/8 in.                | 3/8 in. CTS       | 1/2 in.   | 1                                 | 23.97                   |
| 1/2 in.                | 1/2 in. CTS       | 5/8 in.   | 1                                 | 24.25                   |
| 5/8 in.                | 5/8 in. CTS       | 3/4 in.   | 11/8                              | 28.82                   |
| 3/4 in.                | 3/4 in. CTS       | 7/8 in.   | 11/8                              | 28.40                   |
| 1 in.                  | 1 in. CTS         | 1-1/8 in. | 11/4                              | 32.20                   |
| 1-1/4 in.              | 1-1/4 in. CTS     | 1-3/8 in. | 17/8                              | 47.80                   |
| 1-1/2 in.              | 1-1/2 in. CTS     | 1-5/8 in. | 2                                 | 52.00                   |
| 2 in.                  | 2 in. CTS         | 2-1/8 in. | 2 1/4                             | 55.70                   |

# The SharkBite® Connection System

The SharkBite® connection system is certified for potable water and hydronic applications. SharkBite uses an advanced push-to-connect design that works in two stages. When the pipe 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 pipe. At the second stage the pipe is pushed through an o-ring protector which aligns the pipe. A specially formulated o-ring is then compressed between the wall of the fitting and the pipe before the end of the pipe reaches the tube stop.



Only when the pipe 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)

**PE-RT** (ASTM F 2769)

**HDPE** (SDR-9 ASTM D2737)

The SharkBite fittings have an integral PEX Stiffener that is effective in supporting PEX, PE-RT, and HDPE tubing to ensure the o-ring seals correctly on the outside of the pipe. The PEX Stiffener is not required for use with CPVC and copper tubing, however these two types of tubing fit over the PEX Stiffener easily and hold it against the tube stop.

# Connecting a SharkBite Joint

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

## Preparation

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

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



1. Insert the pipe through the release collar to rest against the grab ring.
2. Push the pipe firmly with a slight twisting action until it reaches the tube stop.
3. To ensure that the pipe 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 SharkBite 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 pipe, allowing it to be removed from the fitting.



1. Place the SharkBite disconnect clip around the pipe 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 pipe and the other end around the neck of the fitting.
2. Push the clip against the release collar and pull the pipe with a twisting action to release the pipe. If using the SharkBite disconnect tongs, squeeze the tool with one hand and pull the pipe with a twisting action to release the pipe.
3. Check the fitting and pipe end for damage. The fitting and pipe should be free of damage, foreign objects and marks on the outside diameter. If the pipe is damaged or marked, then cut and use a new section of pipe.

# Installation Requirements

## SharkBite® Burial

SharkBite Universal fittings are suitable for burial in most applications; however care is required when using fittings in applications that require burial to ensure the correct installation practices are used and due care is given to any environmental factors that may have a detrimental effect on the life expectancy of the fittings and pipe.

The installation of SharkBite Universal fittings in applications that will require the burial of the fitting must comply with all local plumbing code requirements.

SharkBite Universal fittings and SharkBite PEX are not suitable for use in areas where the soil is or may become contaminated\* including the soil used for back filling. All SharkBite Universal fittings with brass bodies must have an impervious barrier between the fitting and the surrounding soil. Self-fusing, formaldehyde and chloride-free, fully cured silicone tape with a minimum thickness of 0.020" should be used for this purpose.

The soil used for back filling must be free of rocks, debris or any sharp objects that may cause damage to the fitting or pipe through impact or abrasion.

\* Examples of contamination include, but are not limited to, petrochemicals (reclaimed service station sites), high levels of nitrogen compounds (this could be caused by animal waste or fertilizer that may be found in some agricultural applications), low pH levels (below pH 6), high pH levels (above pH 8), run off from land fill, formaldehyde compounds, and solvents. It should be noted that such contaminants have been known to migrate through plastic piping systems and contaminate the Potable water supplied through these pipes.

## SharkBite Silicone Burial Wrap

Make a SharkBite Universal connection ensuring pipe is inserted to proper depth. While leaving the protective film in place, measure the amount of tape needed to completely wrap the fitting. To ensure a proper seal, overlap tape by 1" past the end of the fitting on every end and 1/4" – 1/2" between/across the fitting. Wrap the fitting by pulling the tape tight and removing the protective film. Completely cover the fitting. The tape will bond to itself within minutes and will cement to itself within a few hours forming an air and water tight seal.

## SharkBite fittings in concrete

Do not allow joints within the slab. Use a continuous length of SharkBite PEX Pipe within the slab and be sure to check for leaks before pouring concrete.

## SharkBite Distance Between Fittings

Allow at least 1" of spacing between SharkBite Universal fittings for removal purposes

## SharkBite Grounding on Copper Pipe

When connecting a SharkBite Universal fitting to a copper piping system, install a copper jumper cable to ensure proper grounding. SharkBite Universal fittings are not an electrically continuous fitting.

## Threaded Connectors

Teflon tape should be used with threaded SharkBite connectors to make a proper seal.

## Galvanized Tubing

SharkBite Universal fittings should not be installed (threaded or push-to-connect) on galvanized tubing.

## SharkBite Soldering

When soldering is required near a SharkBite Universal connection, make all solder joints first and then make the SharkBite connections. Flame can cause the pipe to reach high temperatures and should not be used close to a SharkBite Universal fitting.

## Sharkbite Fitting Reuse

SharkBite Universal fittings are intended to be a permanent connection and are not designed for repeated connection and disconnection. If the need arises to change a fitting after initial installation this can be done given that proper care is taken when removing and reinstalling SharkBite Universal fittings.

SharkBite disconnect tongs or SharkBite disconnect clips must be used when removing the fittings.

The initial pipe and the new pipe must be clean and free from scratches and burrs.

Mark the correct insertion depth, insert the fitting to the mark, turn the water back on and check for leaks.

## Working Pressure and Temperature

SharkBite Universal fittings have a maximum temperature of 200°F maximum pressure 200 psi when used on copper pipe. When used on PVC, CPVC, PEX, PE-RT or HDPE refer to the maximum pressure temperature rating of the pipe.

## PEX Stiffeners

SharkBite Universal fittings (3/8" to 1") come with an Integral PEX Stiffener. 1/4" (3/8" OD) fittings do not require PEX stiffeners. PEX Stiffener are required for PEX, PE-RT and HDPE pipe. 2XL PEX Stiffeners sold separately.



For more information, visit  
**sharkbite.com**

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