



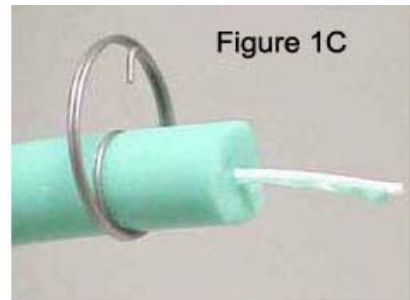
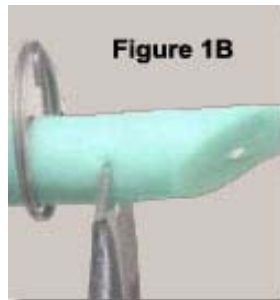
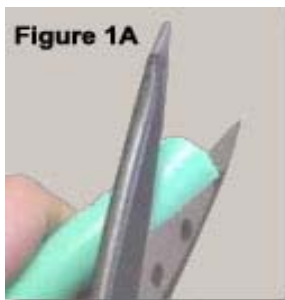
HOW-TO

How to install ICE-LOC:

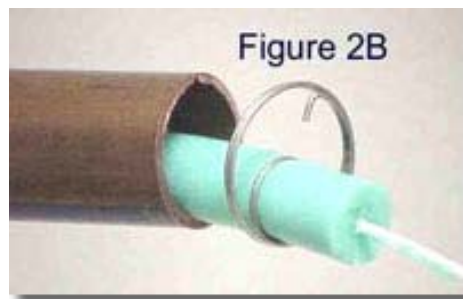
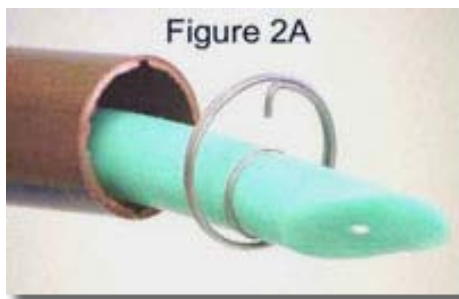
Do not be alarmed by the size of the Ice-loc core compared to the size of the pipe. Core gets smaller inside the pipe, when there is water pressure compressing the core.

NOTE: New clip design requires snap ring pliers to open tangs for insertion into pipe. (One source is Harbor Freight for about \$4.00).

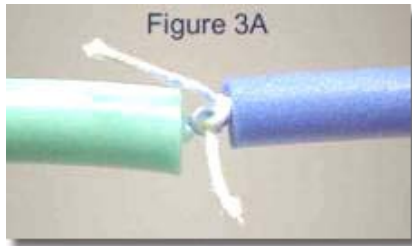
1. To begin installation process, snip the end of the silicone sponge at a sharp angle. Please see Figure 1A. The free floating end that goes inside the pipe should also be snipped at a sharp angle prior to insertion.
2. Next, place stainless steel clip on sponge.
3. After clip is attached, snip the sponge straight about a centimeter back from initial cutting. Do not cut straight through, but around internal twine, so twine is not cut. The goal is to expose the twine inside the sponge. Please see Figure 1B and 1C. Only one spring clip can be applied at the opening of the pipe at the valve.



4. After the silicone sponge is prepared, the next step is to insert the sponge into your potable water pipes. Insert sponge into pipe and secure to inside of pipe with clip. Silicone sponge will protrude from pipe. Please see Figure 2A and 2B.



5. If you need to extend sponge for longer pipe, tie the twine from each core to one another with a good knot as you pull both cores together. See Figure 3A.



6. ICE-LOC can be inserted on both ends of a pipe in the event that pipe is exposed to cold temperatures on both ends.

Determine ICE-LOC Sizing Needs

Prior to installing ICE-LOC, determine what size of silicone sponge will be needed for your project

- 5/8 in. core (Lt. Green) - for 1 in. pipe
- 1/2 in. core (Blue) - for 3/4 in. pipe
- 5/16 in. core (Pink) - for 1/2 in. Pipe
- Larger Sizes: A Good Alternative for a larger pipe is to use two blue cores for 1.5 inch pipe and two green cores for 2 inch pipes. Just pull those cores one at a time or pull the cores together in the larger pipe. No clips are available for larger pipes. Expose the twine at the end of the cores and tie the two exposed twines together.

Stainless steel spring clips complement pipe sizes for 1 in. pipe, 1/2 in. pipe and 3/4 in pipe.

Note: New clip design requires the use of snap ring pliers for insertion into pipe. At Harbor Freight, price approx. \$ 4.00

Pipe Usage

ICE-LOC® should be used in pipes made of PVC Schedule 40 or better, Type L copper, steel or galvanized pipes. Type M copper can also benefit from ICE-LOC® during freezing conditions, but keep in mind that Type M copper typically has a very thin wall and may not survive many freeze cycles. If Type M is in place, using ICE-LOC® can prolong the pipe's lifespan.

Copper Specifications:

- 3/4 in. Type M rated 420-psi -- vs. -- 3/4 in. Type L rated 590-psi.
- 1 in. Type M rated 320-psi -- vs. -- 1 in. Type L rated 510-psi.

General Application Questions

1. Can I solder with ICE-LOC?

The ICE-LOC silicone sponge can withstand solder temperatures in copper pipes, but only the use of low temperature solder joints. As long as the copper piping isn't exposed to continued heating, ICE-LOC will hold up just fine. The silicone sponge cannot however withstand applications that require the use of high temperature solders, such as silver solder (not to be confused with low temperature silver solder used to replace leaded solder). These high temperature joints apply to industrial applications. The ICE-LOC silicone sponge can then be fished through the pipe after the high temperature joints have been made and allowed to cool down. It is a good idea in all situations to tin all pipe pieces first, to avoid unnecessary exposure of core to continued heating.

Remember ICE-LOC® will not protect a copper pipe that had a freeze split and was repaired by soldering. Split can still open where it was repaired. The damaged section must be removed and replaced with new couplings and a new piece of added pipe. This is a repair that must be done by a certified plumber.



2. What if I use a ball valve fitting?

A fitting that retains water, such as a ball valve, when closed, traps a small volume of water and is subjected to high pressures when frozen. ICE-LOC® can't be placed in the valve ball, but the valve can be protected by drilling a small hole (3/16-1/4 in.) through one side only of the inner ball before using the valve. This allows ice to expand out of one side of the ball and into the pipe with ICE-LOC®. Pumps and other types of water retaining reservoirs must be drained or prevented from freezing. ICE-LOC cannot be placed inside a pump.

3. What are additional techniques to install ICE-LOC?

ICE-LOC® can be applied to a piping system by using a fish tape – commonly used by electricians -to pull electrical wire through a conduit. The tape is first inserted through the pipe and the ICE-LOC® sponge is attached to the end of the steel tape by the center twine. The silicone sponge can then be pulled through the pipe.

Another method that can be used is attaching a piece of wadded up plastic bag material to carpenter's twine and then blowing through with a compressor.

Using a shop vacuum on one end to suck the twine through the pipe is an additional technique.