

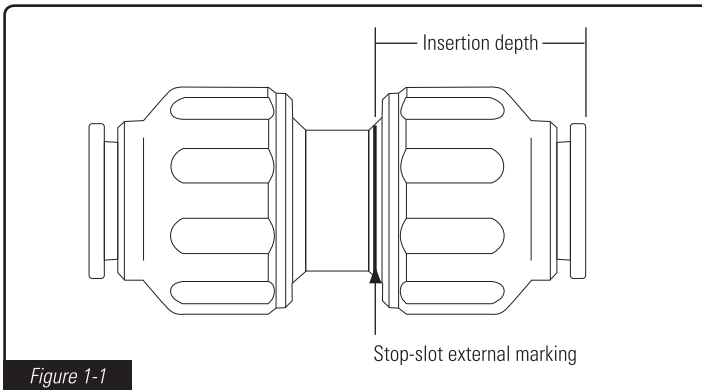
Application:

Legend Turn-N-Loc™ fittings are ideal for potable water plumbing distribution and hydronic heating systems. They allow quick and simple, yet durable, permanent connections of PEX, CPVC and copper tubing without the cumbersome labor associated with sweating or crimp-ring connections. Turn-N-Loc™ fittings should not be used in gas, petroleum or compressed-air installations. Not all medias are compatible with the materials used to construct the Turn-N-Loc™ fittings; please **contact Legend Technical at 1-800-752-2082** when medias other than water, are considered.

Note: They are not suitable for use on PEX tubing with an oxygen barrier on the outer layer, or composite PEX-AL-PEX tubing.

Installation Instructions:

1. Using the appropriate cutting tool for the type of tubing being used (wheel-type for copper or CPVC tubing, plastic-scissor-blade-type for PEX or CPVC tubing), cut the tubing to the correct length, accounting for the insertion depth of **1.3 inches (34 MM)** for **1/2" Nominal** connections, and **1.4 inches (36 MM)** for **3/4" Nominal** connections. If a measuring tool isn't available, an APPROXIMATE insertion depth can be determined by holding the fitting next to the tubing end, placing the tubing end even with the **stop-slot** marking, directly behind the locknut, on the fitting's body. **See figure 1-1.** The stop-slot is an **external** marking, referencing the **internal** tubing stop's position. The distance between the stop-slot and the grip collar (at full outward extension) is the approximate insertion depth. Mark the correct insertion depth with a permanent marker.



2. Ensure that the tubing end is round, the cut is square and that there are no imperfections within at least one inch from the square-cut end of the tubing. Damage, burrs, deep scratches, contamination or imperfections of any kind within this sealing area, may compromise the O-ring, resulting in leakage. Unacceptable ends must be cleaned or re-cut prior to insertion into the fitting
3. **If you are connecting PEX tubing, go to step FOUR.** If you are connecting copper (Drawn temper-hard only. Installation onto annealed soft copper tubing is not recommended) or CPVC tubing:
 - A. Using a pair of needle-nose pliers, remove the insert stiffener from the body of the fitting. **See figure 3-1.** Grip only the stiffener by inserting one of the pliers jaw tips into the inside diameter of the stiffener.
 - B. Holding the fitting in one hand, firmly pull the stiffener straight out of the locknut. Do not tilt the stiffener or pull at an angle. The grip collar may detach from the locknut as the stiffener comes out. If it does, separate it from the stiffener and replace

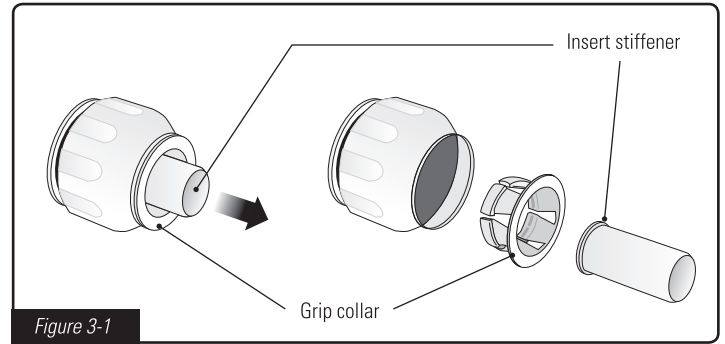


Figure 3-1

it, by squarely pushing it back into the front face of the locknut, grip-fingers first, until it snaps back into place. Discard the insert stiffener.

- C. Verify that the locknut is in the unlocked position; the locknut should be turned by hand, counter-clockwise (looking at the socket), until resistance increases, audible clicks are heard and the blue color band is completely visible. Do not turn the locknut more than 12 clicks, otherwise, the locknut may detach from the fitting's body.
- D. Squarely insert and push the marked tubing end into the Turn-N-Loc™ fitting until it stops, which should correspond to the mark on the tubing, verifying correct insertion depth. Some resistance is normal.
- E. Lock and seal the tubing into the Turn-N-Loc™ fitting by turning the locknut by hand, clockwise, until it stops, and the blue color band is no longer visible. **DO NOT USE WRENCHES TO TIGHTEN THE LOCKNUT!**
- F. Verify a positive connection by attempting to pull the tubing out of the Turn-N-Loc™ fitting's socket. No movement should occur! If there's movement, the tubing isn't inserted completely or the grip-collar isn't properly engaged. Repeat steps C, D, E, F and G.
- G. Verify a positive seal by pressure-testing the system, or the segments of tubing runs containing the fittings.

Turn-N-Loc™ fittings are pressure-temperature rated as follows:

Maximum pressure 250 p.s.i. @ 73° F.

Maximum 150 p.s.i. @ 140° F.

Maximum 100 p.s.i. @ 180° F. maximum temperature

Should a leak occur, remove the tubing by following the instructions in Step 7, below. Inspect the tubing end, as described in Step 2, above. Inspect the O-ring for debris contamination or damage. Replace the O-ring or any other suspect components, if necessary. Repeat steps C, D, E, F and G.

Installation onto copper or CPVC tubing is complete.

4. If you are connecting PEX tubing, **use tubing only compliant with ASTM F876 and/or F877:**

- A. Verify that the locknut is in the unlocked position and the insert stiffener is in place; the locknut should be turned counter-clockwise (looking at the socket) by hand, until resistance increases, audible clicks are heard, and the blue color band is completely visible. Do not turn the locknut more than 12 clicks, otherwise, the locknut may detach from the fitting's body.
- B. Align and engage the tubing end with the insert stiffener, verifying that the stiffener slides into the tubing's inside

diameter. Squarely insert and push the marked tubing end into the Turn-N-Loc™ fitting until it stops, which should correspond to the mark on the tubing, verifying correct insertion depth. Some resistance is normal.

- C. Lock and seal the tubing into the Turn-N-Loc™ fitting by turning the locknut clockwise by hand, until it stops, and the blue color band is no longer visible. **DO NOT USE WRENCHES TO TIGHTEN THE LOCKNUT!**
- D. Verify a positive connection by attempting to pull the tubing out of the Turn-N-Loc™ fitting's socket. No movement should occur! If there's movement, the tubing isn't inserted completely or the grip-collar isn't properly engaged. Repeat steps A, B, C and D.
- E. Verify a positive seal by pressure-testing the system, or the segments of tubing runs containing the fittings.

Turn-N-Loc™ fittings are pressure-temperature rated as follows:

Maximum pressure 250 p.s.i. @ 73° F.

Maximum 150 p.s.i. @ 140° F.

Maximum 100 p.s.i. @ 180° F. maximum temperature

Should a leak occur, remove the tubing by following the instructions in Step 7 below. Inspect the tubing end, as described in Step 2, above. Inspect the O-ring for debris contamination or damage. Replace the O-ring or any other suspect components, if necessary. Repeat all steps.

CAUTION! PEX tubing with an oxygen barrier on its outside diameter, is **not suitable** for installation into Turn-N-Loc™ fittings. The stainless steel teeth of the grip collar will penetrate this barrier, compromising the oxygen-blocking function. PEX-AL-PEX (Aluminum-center) tubing is also **not suitable** for installation into Turn-N-Loc™ fittings, as the stainless steel teeth of the grip collar may come into contact with the Aluminum layer, potentially creating excessive corrosion. PEX-AL-PEX also has a slightly larger, irregular O.D. when uncoiled, which may compromise the Turn-N-Loc™ fitting's ability to connect and seal properly.

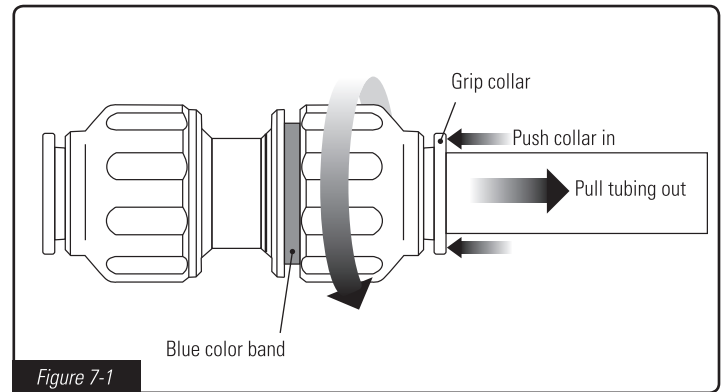
Installation onto PEX tubing is complete.

5. Support and secure the tubing per local code requirements, accounting for thermal contraction and expansion. Be sure to fashion supports in such a way, as to prevent any stress or accidental grip collar contact (and possible tubing release) on the Turn-N-Loc™ fitting connections in all directions.

Legend cannot be responsible for damages incurred due to incorrectly-installed or improperly-supported Turn-N-Loc™ fittings.

6. After the system is complete; perform a pressure test per local code requirements. **All Turn-N-Loc™ connections have a maximum working pressure of 250 psi and maximum working temperature of 180° Fahrenheit;** however PEX and CPVC tubing may have a lower temperature rating and therefore limit the maximum temperature of the system.
7. Legend Turn-N-Loc™ fittings are removable and re-usable:
 - A) Relieve system pressure.
 - B) Unlock and unseal the fitting by turning the locknut by hand, counter-clockwise (looking at the tubing end), until resistance increases, audible clicks are heard and the blue color band is completely visible. Do not turn the locknut more than 12 clicks, otherwise, the locknut may detach from the fitting's body.

- C) Grasp the fitting in one hand and the tubing in the other. With the thumb and index finger of the hand grasping the tubing, push and hold the grip collar against the locknut, while simultaneously pushing the tubing inward. Pushing the tubing slightly farther into the socket allows the grip collar's teeth to release from the surface of the tubing before extraction.
- D) With the index finger and middle finger of the hand grasping the fitting, hold the grip collar against the locknut and with the other hand still holding the tubing, simultaneously pull the tubing out of the socket. The tubing will exit the socket smoothly. **See figure 7-1.**



- E) If PEX tubing was installed, the insert stiffener will remain in the end of the tubing after the tubing has been disconnected from the fitting. The stiffener can be re-used. If re-connecting using the same tubing and Turn-N-Loc™ fitting, repeat steps 1 through 5, where applicable. It is good practice to inspect the used Turn-N-Loc™ fitting prior to re-use, to confirm that no damage or debris is present. **DO NOT RE-USE A DAMAGED OR CONTAMINATED Turn-N-Loc™ FITTING!**
- F) If the Turn-N-Loc™ fitting will be re-used later on another system, place the fitting into a plastic bag, to prevent component loss or debris contamination.

CAUTION! The spring-like grip collar contains sharp steel teeth and since the O-ring is located further inboard, the tubing end, upon removal, will be lightly scored or scratched. **Re-insertion of the scratched tubing is not recommended.** If tubing length permits, the scratched tubing end should be cut off, using the appropriate tubing cutter.

Operation, Maintenance and Adjustment:

- Turn-N-Loc™ fittings are maintenance-free and will provide years of trouble-free service. As a matter of good practice, inspect the entire system annually for signs of leakage.
- Do not hang items on the secured tubing runs, as this may cause excessive stresses on the connections.
- No adjustments are necessary. After the tubing has been properly supported and secured and the system has been pressurized, it is recommended that all locknuts on each Turn-N-Loc™ fitting be inspected, to verify that none have loosened.
- Lubrication of the tubing ends prior to insertion is not necessary. Lubrication of the o-ring is not recommended. Use care when handling the fittings. Do not drop them or place your fingers inside the ends as the grip collar's steel teeth are sharp and may cause injury.



ANSI / NSF 61-8 and 61-9
ANSI / NSF 14
ASSE 1061
Pipe threaded configurations comply
with ANSI / ASME B1.20.1



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