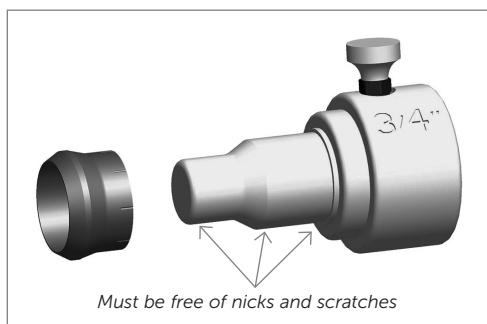


PrimeLock[®] Fitting Handheld Insertion Tool

*Insert installation instructions for 1/4",
3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", and 40 mm sizes*

⚠ CAUTION: Dirty and scratched mandrels can damage and contaminate the fitting. Likewise, contamination on the clamp surface may cause tube slippage during installation. Clean mandrels and clamps frequently to prevent damage and assure proper installation.

- Clean rubber-lined clamps with IPA wipe.
- Soak metal clamps in IPA for a minimum of 12 hours, and scrub clean with a stiff, nylon brush.
- Clean mandrels with IPA wipe and inspect regularly for nicks and scratches; replace if nicked or scratched.



INSTRUCTIONS

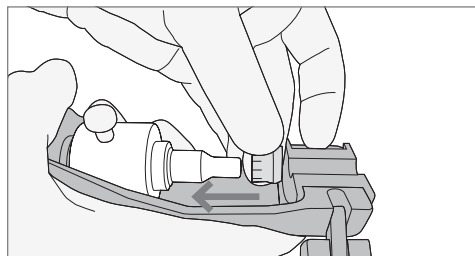
For 3/8" to 1 1/2" PrimeLock[®] Fittings

NOTE: Verify the mandrel is fully retracted by rotating the handle counterclockwise until it stops.

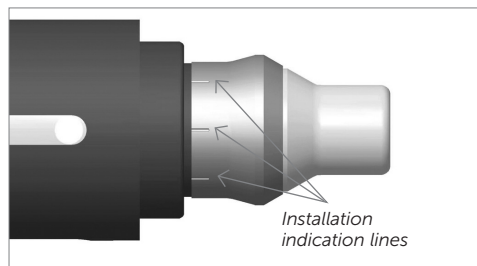
Verify the correct size mandrel and clamp inserts are installed for the desired tube size. Refer to PrimeLock Accessories on www.entegris.com.

NOTE: The mandrel is removed by pulling the retaining pin and sliding it off the tool.

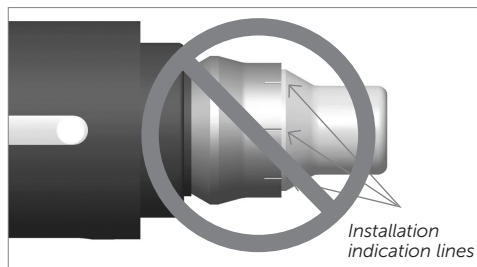
1. Slide the insert onto the mandrel as shown.



2. Verify the insert has been properly placed onto the mandrel. The installation indication lines on the insert are closest to the shoulder of the mandrel.

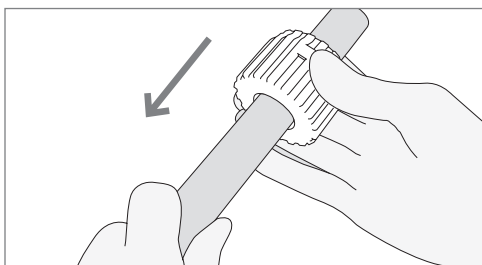


Correct installation of insert.

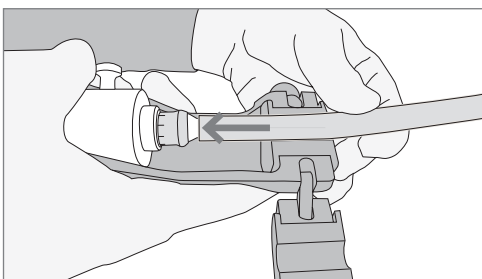


Incorrect installation of insert.

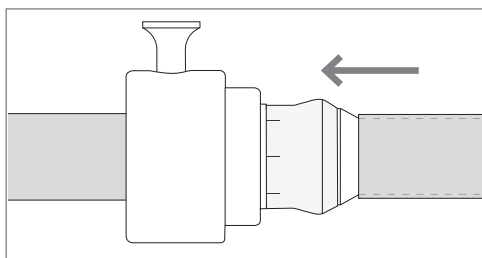
3. Insert the cut end of the tubing through the PrimeLock nut.



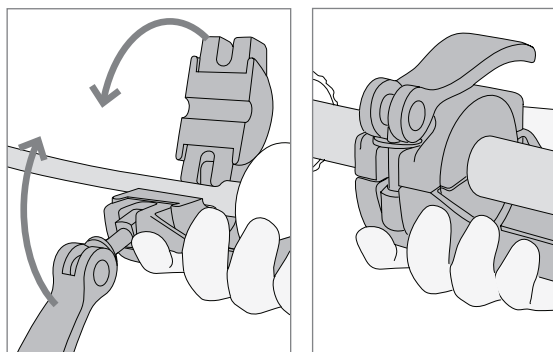
4. Place the tubing assembly into the clamp.



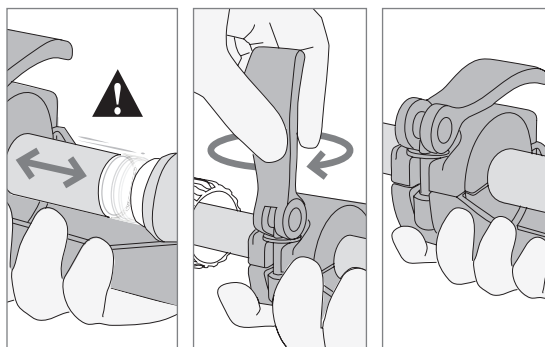
5. Slide the tube onto the mandrel until it stops.



6. Clamp the tube in place.

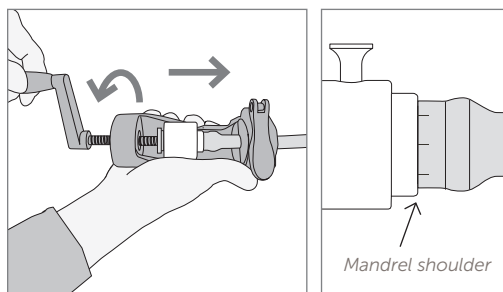


7. If the tubing is not held firmly, clean the tubing and clamp with an IPA wipe.



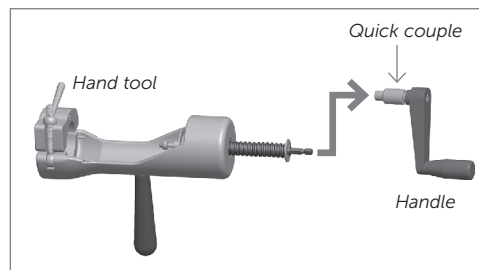
8. For 1¼" and 1½" sizes, there is a second, automated method for driving the insert into the tube. Refer to step 8b for the automated method.

- 8a. For ¾" to 1" sizes, rotate the handle clockwise, driving the insert into the tube until the tube contacts the mandrel shoulder.

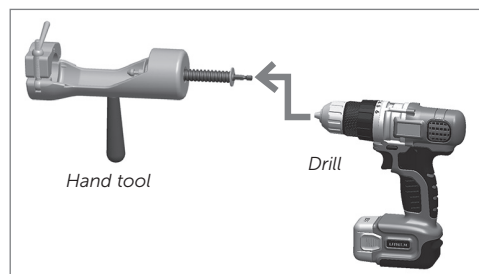


- 8b. Automated insert installation method for 1¼" or 1½" sizes.

- i. Slide quick couple back and remove handle from the hand tool.



- ii. Attach a variable speed drill with minimum torque level of 25 in•lb to the hand tool.

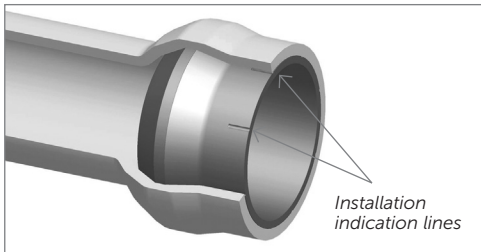


iii. Slowly depress the drill trigger clockwise, driving the insert into the tube until the tube contacts the mandrel shoulder.

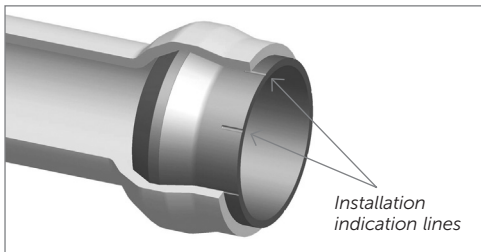
iv. Reverse the drill's direction and slowly depress the drill trigger counterclockwise until the mandrel is free from the tube assembly. Unclamp the tube.

9. For $\frac{3}{8}$ " to $1\frac{1}{2}$ " sizes, rotate the handle in a counterclockwise direction until the mandrel is free from the tube assembly. Unclamp the tube.

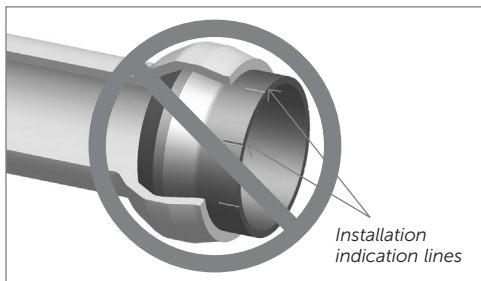
10. Verify the insert has been properly installed into the end of the tube. The insert has molded indication lines for gauging proper installation in the tube. For correct installation, the tubing will cover all or at least a portion of the indication lines. The insert does not need to be pushed fully into the tube.



Correct installation of insert.



Correct installation of insert.



Incorrect installation of insert.

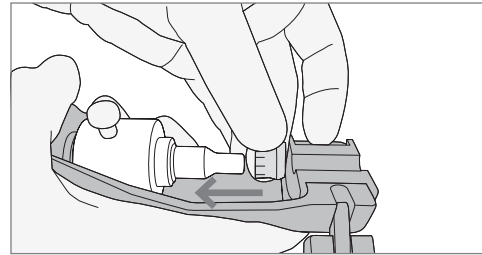
FOR $\frac{1}{4}$ " INSTALLATION ONLY

NOTE: Verify the mandrel is fully retracted by rotating the handle counterclockwise until it stops.

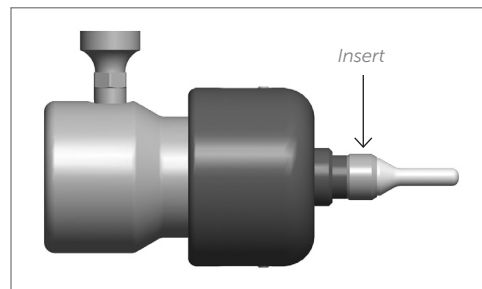
Verify the correct size mandrel and clamp inserts are installed for the desired tube size. Refer to PrimeLock Accessories on www.entegris.com.

NOTE: The mandrel is removed by pulling the retaining pin and sliding it off the tool.

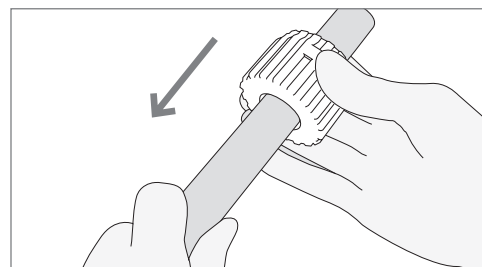
1. Slide the insert onto the mandrel as shown.



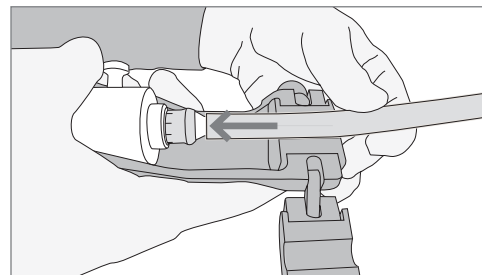
2. The $\frac{1}{4}$ " insert does not have installation indication lines and can be installed in either direction.



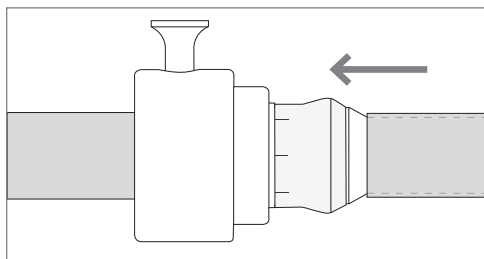
3. Insert the cut end of the tubing through the PrimeLock nut.



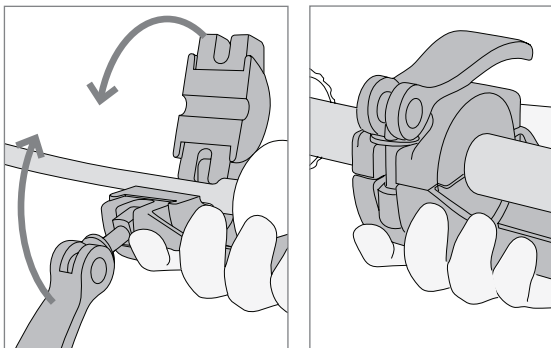
4. Place the tubing assembly into the clamp.



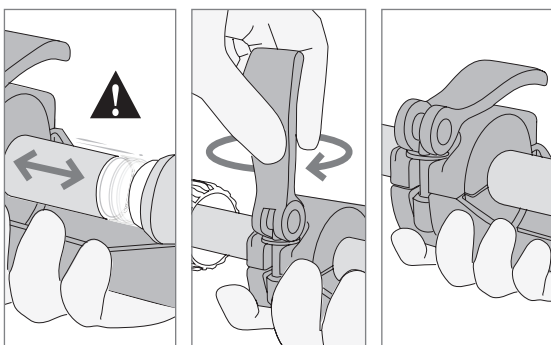
5. Slide the tube onto the mandrel until it stops.



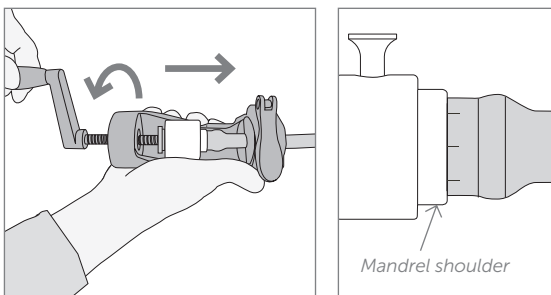
6. Clamp the tube in place.



7. If the tubing is not held firmly, clean the tubing and clamp with an IPA wipe.



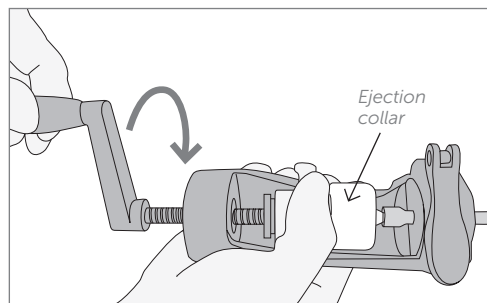
8. Rotate the handle clockwise, driving the insert into the tube until the tube contacts the mandrel shoulder.



⚠ CAUTION: Failure to follow 1/4" insert instructions may result in the insert remaining on the mandrel after installation.

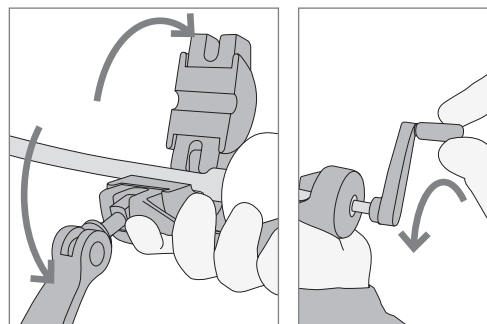
9. For 1/4" insert installation, there are two methods to properly eject the mandrel from the tube assembly. See steps 9a or 9b and 9c.

- 9a. Hold the ejection collar while rotating the handle in a counterclockwise direction until the mandrel is free from the tube assembly.

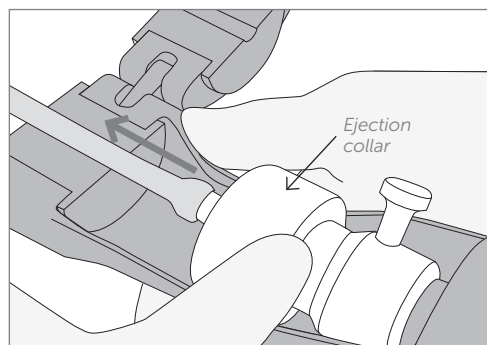


OR

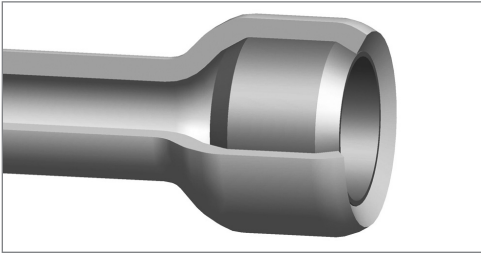
- 9b. Unclamp the tube, and then rotate the handle in a counterclockwise direction.



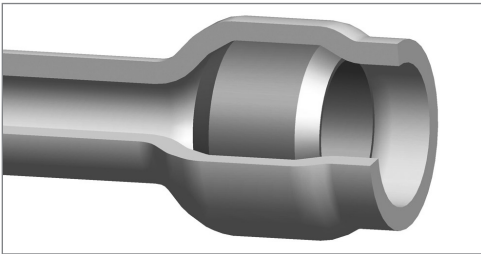
- 9c. Push the ejection collar forward until the tube assembly is ejected from the mandrel.



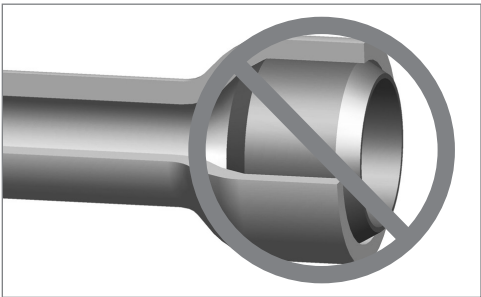
10. For 1/4" insert installation, the insert must be pressed entirely into the tube, at a minimum flush with the end of the tube or until the tube contacts the mandrel shoulder.



Correct installation of insert.



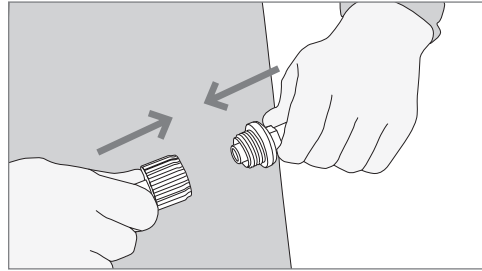
Correct installation of insert.



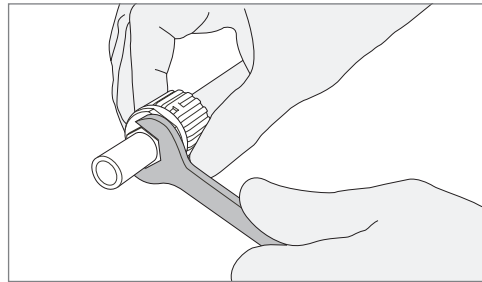
Incorrect installation of insert.

COMPLETING THE FITTING CONNECTION FOR ALL SIZES

1. Slide the tubing assembly onto the fitting.

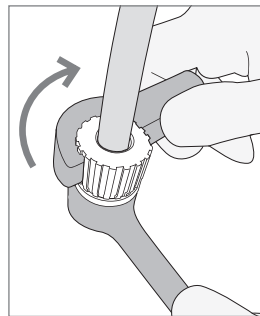


2. Start by hand-tightening the nut.

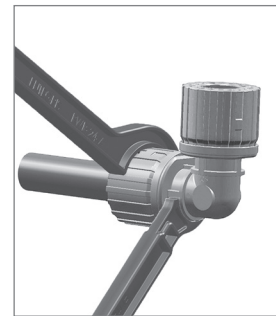


3. Place the PrimeLock wrench over the ribs of the fitting nut and rotate clockwise. Tighten the nut until the connection verification ring creates audible clicks and the leading edge of the nut travels under the connection verification ring.

NOTE: Do not overtighten to the point where the nut bottoms out on the fitting body.

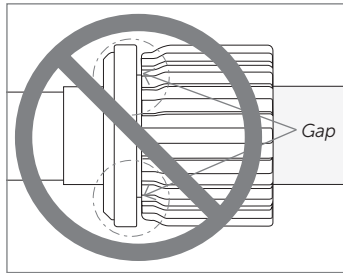


1"–1 1/4" sizes

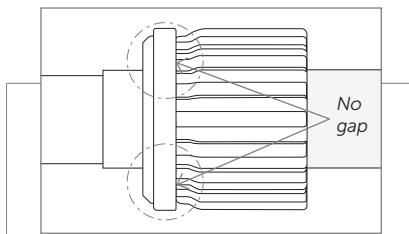


1 1/2" size

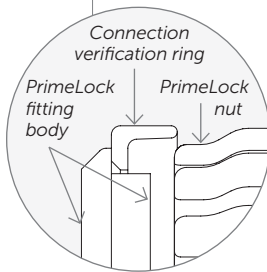
4. If there is excessive background noise, the connection can be verified by looking at the position of the connection verification ring relative to the nut.



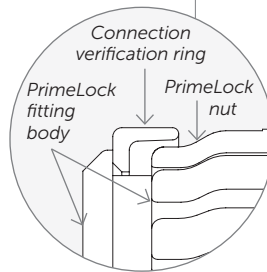
Incorrect tightening of the fitting – additional tightening required.



Correct tightening of the fitting.



Initial tightening of the fitting – nut travels underneath connection verification ring.



Maximum tightening limit – nut bottoms out on the fitting body.

⚠ CAUTION: Do not retighten the fitting while the fitting assembly is above 30°C (86°F) or in a pressurized condition.

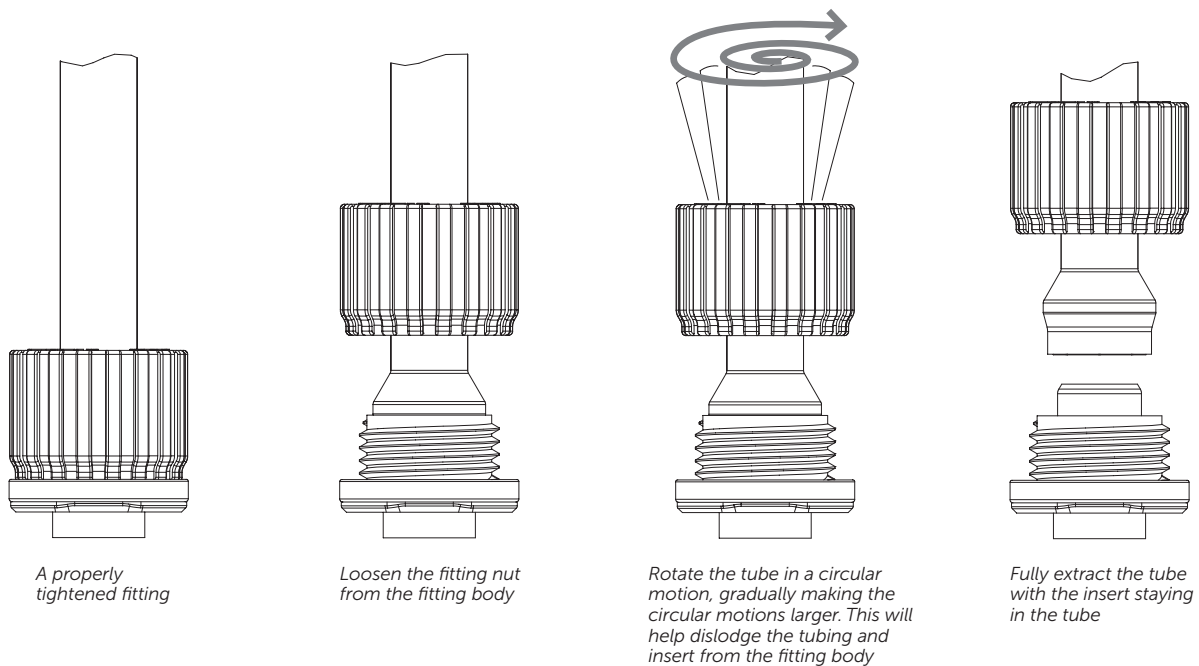
When reassembling the fitting, tighten the nut an additional $\frac{1}{4}$ - to $\frac{1}{3}$ -turn beyond the initial tightening position, or until a leak-free seal is made.

FITTING DISASSEMBLY

Care must be taken when disassembling PrimeLock fittings. Follow these instructions precisely to avoid fitting disassembly issues.

As shown in the example below, rotate the tube in a circular motion and slowly extract the tube with the insert from the nose of the PrimeLock fitting. If the tube is not rotated, the insert may disengage from the inside of the tubing and remain on the nose of the fitting.

Follow these steps to properly remove the tube from a fully installed PrimeLock fitting:



If the insert remains on the nose of the PrimeLock fitting, carefully remove the insert without damaging the fitting nose and discard. Install a new insert into the tube. Reusing a PrimeLock insert may cause sealing issues.

PRIMELOCK INSERT INSTALLATION TOOLS

A complete set of tools is available on our website. Please visit PrimeLock Accessories on www.entegris.com.

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