



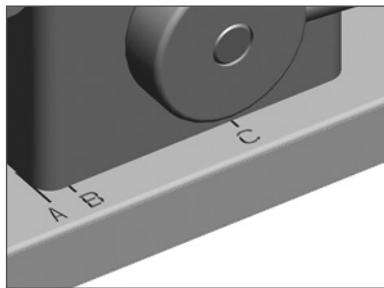
PRIMELOCK® MINIMUM TUBE UNIONS

Insert installation instructions for 1/4", 3/8", 1/2", 3/4", 1" sizes

INSTRUCTIONS FOR

PrimeLock® Fitting

1. The bench top tool has three separate installation marks engraved into the base. Loosen the black knobs and move to position "A". Retighten the knobs.



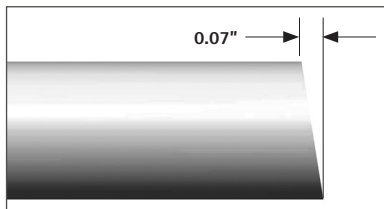
- A. The nut resides on the outside of the clamp.
- B. The nut resides between the clamp and the mandrel.
- C. Minimum tube unions used to install insert in second side

2. Cut the tube to the minimum tube length.

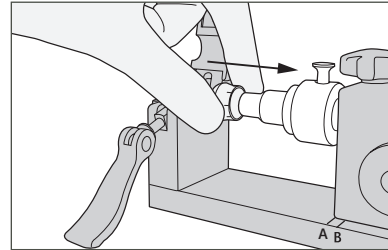
MINIMUM TUBE UNION LENGTH

Nut Size	Tube Length Prior to Installation
1"	3.13" (3 1/8")
3/4"	2.94" (2 15/16")
1/2"	2.56" (2 9/16")
3/8"	2.50" (2 1/2")
1/4"	1.90" (9/10")

3. Ensure the tube end is square within the proper tolerance.

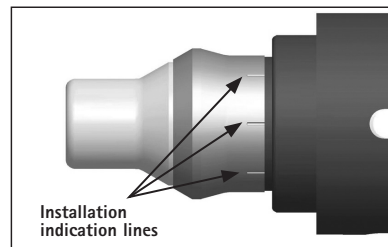


4. Slide the insert onto the mandrel as shown.

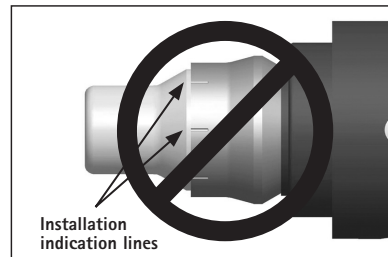


5. Verify the insert has been properly placed onto the mandrel. The installation indication lines on the insert are closest to the shoulder of the mandrel.

For 1/4" insert installation, the insert does not have installation indication lines and can be installed in either direction.

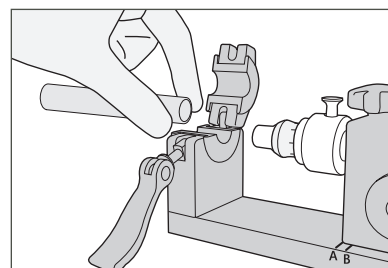


Correct installation of insert

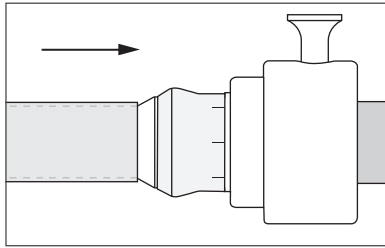


Incorrect installation of insert

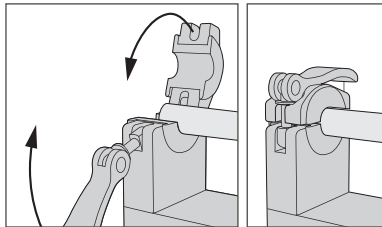
6. Insert the tubing into the clamp.



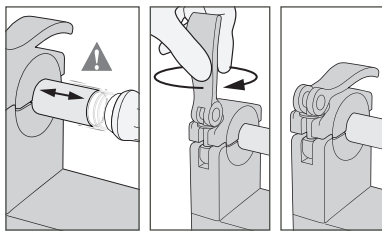
7. Slide the tube onto the mandrel until it stops.



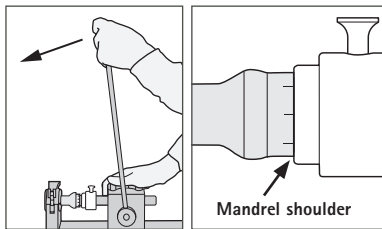
8. Clamp the tube in place.



9. If the tubing is not held firmly, readjust the clamping mechanisms to increase the tube clamping force.



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



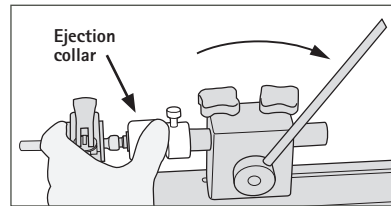
11. For 3/8" to 1" sizes, retract the handle when the insert is installed into the tube. Unclamp the tube.

FOR 1/4" INSTALLATION ONLY:

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

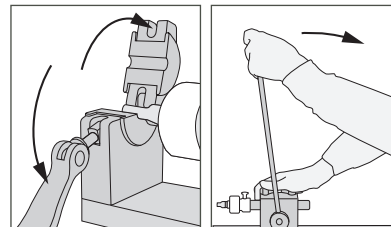
12. For 1/4" insert installation, there are two methods to properly eject the mandrel from the tube assembly. See steps 12a or 12b and 12c.

12a. Hold the ejection collar as you retract the handle until the mandrel is free from the tube assembly.

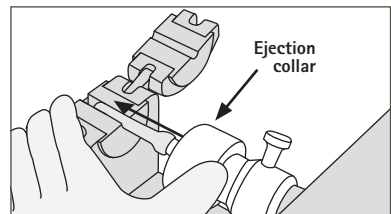


OR

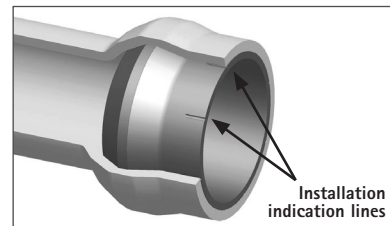
12b. Unclamp the tube; then retract the handle.



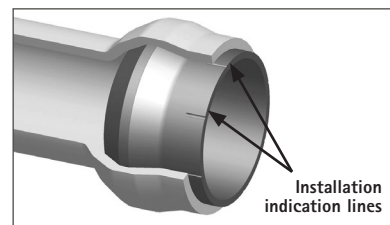
12c. Push the ejection collar forward until the tube assembly is ejected from the mandrel.



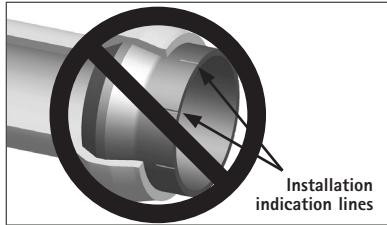
13. Verify that the insert has been properly installed into the end of the tube. The insert has molded indication lines for gauging proper installation in the tube. For correct installation, the tubing will cover all or at least a portion of the indication lines. The insert does not need to be pushed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



Correct installation of insert

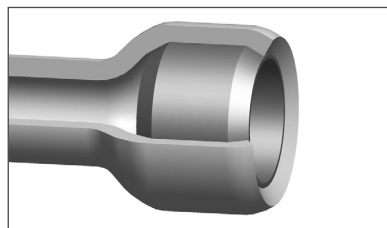


Correct installation of insert

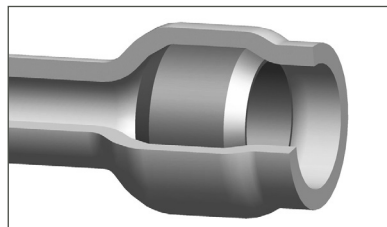


Incorrect installation of insert

For the 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

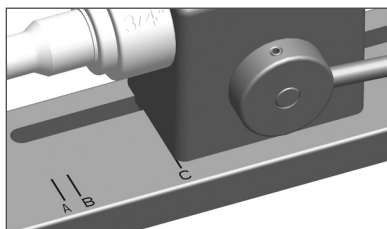


Correct installation of insert

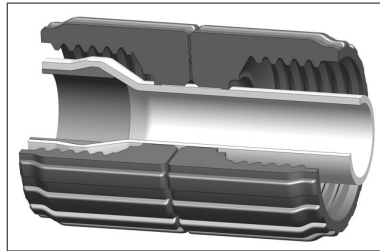


Incorrect installation of insert

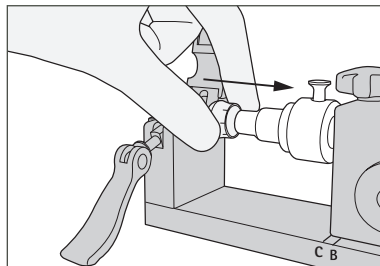
14. Loosen the black knobs and move to position "C" to install the insert into the other end. Retighten the knobs.



15. Insert the cut end of the tubing through the two PrimeLock nuts. Verify that the nuts are placed on the tube in the proper orientation.



16. Slide the insert onto the mandrel as shown.

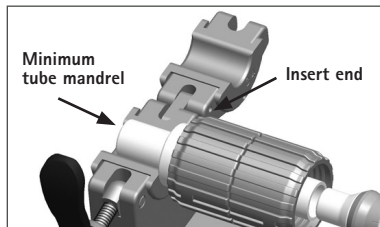


17. Verify that the insert has been properly placed onto the mandrel. See step 5 for proper insert orientation.

For 1/4" insert installation, the insert does not have installation indicator lines and can be installed in either direction.

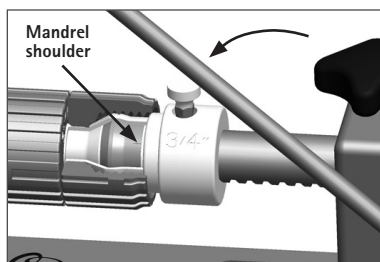
18. Insert the minimum tube mandrel into the end of the tube with the installed insert.

19. Place the minimum tube mandrel assembly into the clamp.

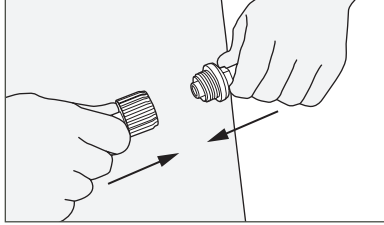


20. Clamp the minimum tube mandrel in place.

21. Rotate the handle to push the insert into the tube until the tube contacts the mandrel shoulder.

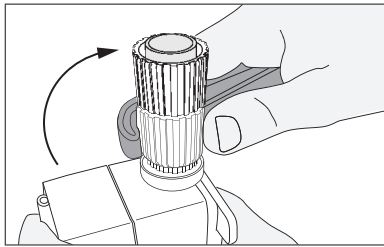


22. Verify that the insert has been properly installed. See step 13.
23. Slide the assembly onto the fitting and hand-tighten the nut.

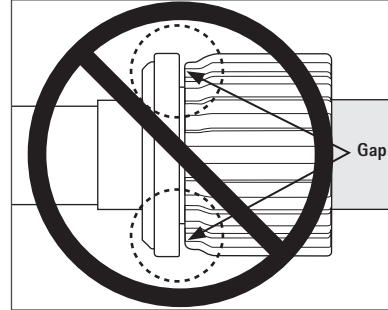


24. Place the PrimeLock wrench over the ribs of the fitting nut and rotate clockwise. Tighten the nut until the connection verification ring creates an audible click or the leading edge of the nut travels under the connection verification ring.

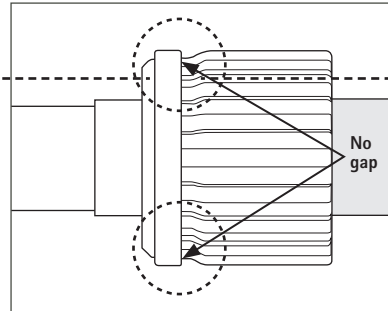
Note: Do not overtighten to the point where the nut bottoms out on the fitting body.



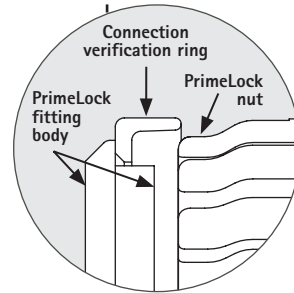
25. If there is excessive background noise, the connection can be verified by looking at the position of the connection verification ring relative to the nut.



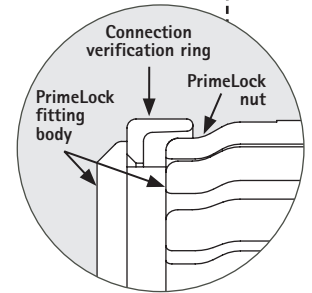
Incorrect tightening of the fitting – additional tightening required



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 beyond the initial tightening position.

PRIMELOCK INSERT INSTALLATION TOOLS

Part Number	Description	Tubing Size
PBNCH-TOOL	Bench top tool	1/4"– 1"
PMND-4	Mandrel	1/4"
PMND-6	Mandrel	3/8"
PMND-8	Mandrel	1/2"
PMND-12	Mandrel	3/4"
PMND-16	Mandrel	1"
PMND-KIT	Mandrel – set*	1/4"– 1"
PMND-6-B	Mandrel – directional sleeve**	3/8"
PMND-8-B	Mandrel – directional sleeve**	1/2"
PMND-12-B	Mandrel – directional sleeve**	3/4"
PMND-16-B	Mandrel – directional sleeve**	1"
PMND-KIT-B	Mandrel – directional sleeve** – set*	3/8"– 1"
PMTMND-4	Minimum tube union mandrel	1/4"
PMTMND-6	Minimum tube union mandrel	3/8"
PMTMND-8	Minimum tube union mandrel	1/2"
PMTMND-12	Minimum tube union mandrel	3/4"
PMTMND-16	Minimum tube union mandrel	1"
PMTMND-KIT	Minimum tube union mandrel kit*	1/4"– 1"

* Kit does not include 1/4" or 1/2" size, part number sold separately.

** Prevents backwards installation of insert.

*** Eliminates clamp marks on tubing.

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Part Number	Description	Tubing Size
PCLMP-4	Clamp insert	1/4"
PCLMP-6	Clamp insert	3/8"
PCLMP-8	Clamp insert	1/2"
PCLMP-12	Clamp insert	3/4"
PCLMP-16	Clamp insert	1"
PCLMP-KIT	Clamp insert – set*	1/4"– 1"
PCLMP-4-R	Clamp insert – EPDM-lined***	1/4"
PCLMP-6-R	Clamp insert – EPDM-lined***	3/8"
PCLMP-8-R	Clamp insert – EPDM-lined***	1/2"
PCLMP-12-R	Clamp insert – EPDM-lined***	3/4"
PCLMP-16-R	Clamp insert – EPDM-lined***	1"
PCLMP-R-KIT	Clamp insert – EPDM-lined*** – set*	1/4"– 1"
PWR-4	Wrench	1/4"
PWR-6	Wrench	3/8"
PWR-8	Wrench	1/2"
PWR-12	Wrench	3/4"
PWR-16	Wrench	1"
PWR-KIT	Wrench – set	1/4"– 1 1/2"

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