

INSTALLATION GUIDE

1/4-TURN CHROME-PLATED SUPPLY STOPS

WARNINGS

Read this Installation Manual BEFORE installing this product. Noncompliance with safety protocols and usage information may result in serious personal injury, property damage, and voiding of the product warranty. Keep this IOM for future reference.

APPLICATIONS

Legend's chrome-plated no lead brass stop valves can be used in both residential and commercial hot and cold water plumbing applications, including under sinks, behind toilets, and for other fixtures where shut-off valves are required. The quarter-turn ball and dual o-ring stem seals offer superior leak prevention and greater ease of use than traditional multi-turn stops.

PRODUCT SPECIFICATIONS

Legend's quarter-turn stop valves are certified and/or meet the following standards for performance, dimensional, and material requirements: NSF/ANSI/CAN 61 (drinking water system components health effects), and NSF/ANSI/CAN 372 (drinking water system components lead content).

Material Properties:

- No Lead Chrome-Plated Brass

Operating Specifications:

- Cold Working Pressure (CWP) 125 psi
- Maximum Service Temperature: 180°F (82°C)*

Refer to this product's submittal sheet for additional specification information.

**Temperatures above 120°F increase the risk of scaling. Consult local codes for temperature requirements.*

INSTALLATION INSTRUCTIONS

For installation instructions pertaining to specific end connections, please refer to the appropriate section of this document.

Inlet Connections:

LegendPress (Press-to-Connect) Inlet Connections:

1. Cut the tube to the desired length, ensuring the cut is square. Carefully deburr the inside and outside of the tube using the appropriate tools. Clean the tube end, removing all oils, dirt, and debris. Ensure the tube section is round, the cut is square, and the surface is smooth. No scratches, dents, or burrs should be present.
2. Measure and mark the insertion depth at 1-1/8" from the cut end; failing to do so may result in an improper seal.
3. Before assembling the connection, inspect the fitting's o-ring to ensure it's seated correctly and free from damage. Do not add or use any oils or lubricants.
4. Place the fitting onto the tube and slide it to the marked depth, gently rotating to avoid resistance. When the fitting reaches the marked depth, the tube should contact the fitting's internal stop. Rotate the outlet and handle into the desired position.
5. Open the press jaw and position it at a right angle to the fitting. Before pressing, visually confirm that the end of the fitting is still aligned with the marked depth. The tube must remain fully inserted during the pressing process.

6. Begin the pressing process, holding the trigger until the jaw fully engages. Continue holding until the tool's press cycle is complete.
7. Once complete, release the jaw and visually inspect the fitting and depth marks to ensure the installation was completed correctly. If properly installed, the valve should not be able to rotate.
8. After inspecting the joint and installing the outlet, pressure test the system following local codes.

Sweat (Solder) Inlet Connections:

1. Cut the tube to the desired length, ensuring the cut is square. Carefully deburr the inside and outside of the tube using the appropriate tools.
2. Clean the tube end and valve's solder cup using sand cloth, an abrasive pad, or a wire brush to remove all oils, dirt, and debris. Ensure the tube section is round, the cut is square, and the surface is smooth. No scratches, dents, or burrs should be present.
3. Brush flux onto the cleaned surfaces. Flux should be suitable for use in potable water systems. Install the valve onto the copper tube and confirm the valve's solder cup is completely seated. Rotate the outlet and handle into the desired position.
4. Ensure the valve is completely open before proceeding.
5. Using a torch, apply heat to the tubing first, then the valve's solder cup. **CAUTION!** Direct the flame away from the center portion of the valve's body and alternate between heating the tube and solder cup. Avoid overheating the tube and the solder cup.
6. Remove the heat and touch the solder to the joint. Capillary action will pull the molten solder into the joint. If the solder doesn't melt when in contact with the joint, continue heating. Enough solder has been applied when it can be seen around the entire joint.
7. Allow the joint to completely cool before closing the valve. After inspecting the joint and installing the outlet, pressure test the system following local codes.

Threaded (FNPT) Inlet Connections:

1. Apply pipe thread sealer (aka pipe dope) or Teflon tape to the threaded end of the supply-side pipe nipple.
2. Install the valve onto the pipe and hand-tighten (turning clockwise) between two and three complete turns.
3. Wrench-tighten an additional one-and-one-half turns. Avoid over-tightening the valve.
4. After inspecting the joint and installing the outlet, pressure test the system following local codes.

Compression (OD) Inlet Connections:

1. Cut the tube to the desired length, ensuring the cut is square and free from damage. If applicable, carefully deburr the inside and outside of the tube using the appropriate tools.
2. Install the compression nut and ferrule onto the tube (small diameter first, with the threads facing the end of the tube). Place the valve body onto the tube and rotate the outlet and handle into the desired position. Ensure that the tube is completely seated into the valve body.
3. Position the compression nut onto the threads of the valve body. Apply one drop of oil to the valve body's threads near the engagement. Do not use pipe thread sealer (pipe dope) or putty. Hold the valve body in the desired position and hand-tighten the compression nut.
4. Two wrenches are required for installation. The first should be positioned on the valve body to hold it in place, while the second should be used to tighten the compression nut. Avoid over-tightening the valve.
5. After inspecting the joint and installing the outlet, pressure test the system following local codes.

Solvent Weld (CPVC) Inlet Connections:

1. Cut the tube to the desired length, ensuring the cut is square and free from damage. If applicable, carefully deburr the inside and outside of the tube using the appropriate tools.

2. Carefully remove the compression nut assembly from the inlet side of the valve body. Disassemble the CPVC socket adapter from the compression nut, taking care not to lose or damage the tapered gasket affixed to the end of the adapter.
3. Install the compression nut (small diameter first, with the threads facing the end of the tube) onto the end of the CPVC tubing.
4. Using CPVC cement conforming to ASTM F493, prime and cement the tubing end and inside cup of the socket adapter. **CAUTION!** Do not allow cement to come into contact with the tapered gasket!
5. With a gentle twisting motion, install the socket adapter onto the end of the CPVC tube, holding it in place for a few seconds to allow the cement to solidify.
6. Place the valve body onto the tapered gasket and rotate the outlet and handle into the desired position. Ensure the valve is completely open before proceeding.
7. Hold the valve body in the desired position and hand-tighten the compression nut.
8. Two wrenches are required for installation. The first should be positioned on the valve body to hold it in place, while the second should be used to tighten the compression nut. Avoid over-tightening the valve.
9. After inspecting the joint and installing the outlet, pressure test the system following local codes.

Crimp/Cinch (F1807) PEX Inlet Connections:

1. Cut the PE-RT or PEX tube to the desired length, ensuring the cut is square and free from damage. If applicable, carefully deburr the inside and outside of the tube using the appropriate tools.
2. Before installation, verify that the tube is compatible with ASTM F1807 and complies with all appropriate standards (ASTM F2769 for PE-RT; ASTM F876 & F877 for PEX).
3. Slide the copper crimp ring or stainless steel cinch clamp onto the end of the tube.
4. Rotate the valve's outlet and handle into the desired position and fully insert the inlet into the tube. Ensure the fitting barbs are inside the tube and the tube reaches the valve's shoulder.
5. Refer to the tool manufacturer's directions for the proper technique for crimping the copper ring or cinching the clamp. Directions may vary by tool type.
6. After inspecting the joint and installing the outlet, pressure test the system following local codes.

Cold Expansion (F1960) PEX Inlet Connections:

1. Cut the PE-RT or PEX tube to the desired length, ensuring the cut is square and free from damage. If applicable, carefully deburr the inside and outside of the tube using the appropriate tools.
2. Before installation, verify that the tube is compatible with ASTM F1960 and complies with all appropriate standards (ASTM F2769 for PE-RT; ASTM F876 & F877 for PEX).
3. Slide the PEX expansion ring onto the end of the tube.
4. Refer to the tool manufacturer's directions for the proper expansion technique. Directions may vary by tool type.
5. Rotate the valve's outlet and handle into the desired position and fully insert the inlet into the tube. Ensure the fitting barbs are inside the tube and the tube reaches the valve's shoulder.
6. After inspecting the joint and installing the outlet, pressure test the system following local codes.

Push-to-Connect (ASSE 1061) Inlet Connections:

1. Cut the PE-RT, PEX, Copper, or CPVC tube to the desired length, ensuring the cut is square and free from damage. If applicable, carefully deburr the inside and outside of the tube using the appropriate tools.
2. Measure and mark the insertion depth from the cut end; failing to do so may result in an improper seal. The insertion depths for

push-to-connect ends are 15/16" (removable [InstaLoc II]) and 1" (permanent).

3. Before assembling the connection, inspect the fitting's o-ring and grip ring to ensure both are seated correctly and free from damage.
4. If you are installing a push-to-connect inlet on Copper or CPVC tube, skip to the next step. An insert stiffener must be used when installing a push-to connect inlet on PE-RT and PEX tube.
5. Rotate the outlet and handle into the desired position. Push the valve onto the tube until it stops (some resistance is normal). Use the insertion depth marker to verify that the tube has been fully inserted.
6. Gently pull on the fitting to confirm the connection. No lateral movement should occur. If the fitting slips off the tube or slides away from the depth mark, that indicates an improper insertion. Return to step 3 and repeat.
7. After inspecting the joint and installing the outlet, pressure test the system following local codes.
8. Removable (InstaLoc II) push-to-connect inlets can be detached using an appropriately sized release tool.

Outlet Connections:

Compression (OD) Outlet Connections on Copper Tube and Plastic Risers:

1. Install the compression nut and ferrule onto the tube (small diameter first, with the threads facing the end of the tube) and apply one drop of oil to the threads near the engagement. Do not use pipe thread sealer (pipe dope) or putty.
2. First, hand-tighten the compression nut, then use two wrenches to tighten it one additional turn. Avoid over-tightening the compression nut.
3. After inspecting the joint and verifying the connection of the inlet, pressure test the system following local codes.

Compression (OD) Outlet Connections on Braided Supply Lines:

For braided supply lines, please refer to the supply line manufacturer's instructions. However, some common considerations for braided supply lines include:

1. Install the compression nut onto the supply without using pipe dope or putty.
2. Hand-tighten the compression nut, then use a wrench to tighten it an additional 1/4 to 1/2 turns past hand-tight.
3. Avoid over-tightening the compression nut.