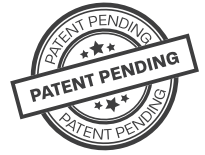


# INSTALLATION GUIDE

## CLEARLOC™ FITTINGS



### WARNING

Read this Installation Manual BEFORE installing this fitting. Noncompliance with safety and use information can result in serious personal injury, property damage, or damage to the device and may void the warranty. Keep this IOM for future reference.

Individuals performing removal and disassembly should be provided with suitable protection from possibly hazardous liquids.

### APPLICATION

ClearLOC fittings are constructed with PPSU (polyphenylsulfone) bodies and stainless-steel rings. This allows quick and easy yet strong and durable connections of PEX complying with ASTM F876 / F877 or CSA B137.5, PE-RT complying with ASTM 2769 (Potable) / 2623 (Heating) PE-RT or CSA B137.18, K, L & M copper tubing complying with ASTM B88, or CPVC tubing complying with ASTM D2846.

ClearLOC fittings are designed for use in domestic and commercial applications for hot & cold potable water distribution systems, and various other piping systems approved for installation: above and below ground and behind the wall without access panels. If directly buried in soil, the fitting should be wrapped in silicon tape.\*

ClearLOC fittings are approved for direct connection to electric water heaters and power-vented gas water heaters (where approved by local code). DO NOT install ClearLOC fittings within 6" of a single wall metal vent pipe or directly connect a ClearLOC fitting to any natural draft appliances.

ClearLOC fittings should not be exposed to petroleum-based or solvent-based products commonly found in paints, greases, and sealants. Avoid direct contact with spray foam insulation. If being used near spray foam, wrap the fitting with poly sheeting, foam pipe wrap, or silicon tape.\* ClearLOC fittings should not be exposed to organic chemicals, acids, base chemicals, or salt water.

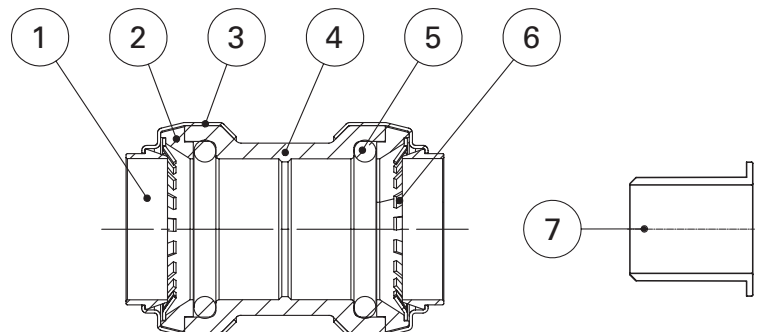
ClearLOC fittings can be used in compressed air distribution systems, with a maximum of 25 mg/m3 of oil concentration.

When installing ClearLOC x FNPT or MNPT threaded adapters, only use PTFE thread tape (max three wraps). If a sealant paste is being considered for use, consult the paste manufacturer for compatibility with polymer fittings. A maximum of 15 ft/lbs of torque should be applied to all threaded adapters.

ClearLOC fittings should be protected from UV exposure. If installed in an area that may be subject to UV exposure, protect the fitting with UV-blocking material, such as foam pipe wrap or silicon tape.\*

Please consult with the local plumbing code for final approval. Failure to comply with the above piping requirements or applications could result in failures.

MATERIAL SPECIFICATION			
	PART	MATERIAL	QTY.
1	Release Collar	POM	2
2	Protector Ring	POM	2
3	Body Collar	Stainless Steel	2
4	Body	PPSU	1
5	O-Ring	EPDM	2
6	Grip Ring	Stainless Steel	2
7	Insert Stiffener	POM	2



\*Available from Legend; p/n 830-820

# INSTALLATION

1. Cut tube to desired length, accounting for the insertion depth of **15/16"** for 1/2", **1"** for 3/4" and **1-1/8"** for 1" nominal tubing.
2. Ensure that the tube end is round, the cut is square, and that no scratches, dents, or burrs are present. Major imperfections in the tubing end may damage the o-ring or prevent a proper seal, resulting in a leak and voiding the warranty.
3. No additional lubricant is necessary, nor should it be applied to the sockets. However, the tube end may be rinsed with potable water before insertion into the socket.
4. **If you are connecting PEX or PE-RT tubing, go to step 5.** If you are connecting copper (drawn temper-hard or annealed-soft) or CPVC tubing, insert the tubing end into the ClearLOC fitting. Push the ClearLOC fitting onto the tubing until it stops. Some resistance is normal. Visually verify that the tube is all the way into the fitting, touching the stop. Pull on the fitting to ensure that it does not pull off or move away from the stop.
5. *Install the insert stiffener completely into the end of the PEX or PE-RT tubing.* Push the ClearLOC fitting onto the tubing until it stops. Some resistance is normal. Visually verify that the tube is all the way into the fitting, touching the stop. Pull on the fitting to ensure that it does not pull off or move away from the stop.
6. Once installed on tube, the ClearLOC fitting can be rotated to allow for proper alignment. A firm pull will indicate if the connection is satisfactory. Absolutely no lateral movement should occur. Any lateral movement indicates an improper insertion; repeat steps 4 or 5, depending on the type of tubing that you are connecting.
7. Support and secure the tube per local codes, and be sure to prevent any stress on the ClearLOC connections in all directions.  
**WARNING!** Place all tubing support types at least two inches from the ClearLOC connection. Thermal expansion and contraction of the tubing may cause movement, which could allow contact between the release collar and the support, resulting in unwanted tubing release and leakage.
8. After the system is complete, perform a pressure test and inspect all connections for leakage. **All ClearLOC connections have a maximum working pressure of 250 psi and a maximum working temperature of 200° Fahrenheit.** PEX, PE-RT, and CPVC have a lower temperature rating, and therefore, limit the maximum temperature of the system.



## OPERATION

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ClearLOC fittings are certified and/or meet the following standards for performance, dimensional, and material requirement: IAPMO / UPC, cUPC, ASSE 1061, NSF/ANSI 14, NSF/ANSI 61, NSF/ANSI 372.

## MAINTENANCE

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- ClearLOC 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 stress on the connections.
- No adjustments are necessary. After the tubing has been properly supported and secured and the system has been pressure tested, it is recommended that the valves or fittings NOT be rotated.

## REMOVAL

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1. **IMPORTANT!** Relieve system pressure prior to removal of any ClearLOC fitting.
2. Place the correct-size (1/2", 3/4", or 1") release tool over the tubing, with the tool's groove facing the ClearLOC socket connection.
3. Firmly push and hold the release tool against the fitting's release collar. The release collar will move inward, releasing the grip ring from the tubing (See numbers two and three in the exploded-view drawing).
4. Separate the ClearLOC fitting from the tube by pulling the tubing out of the socket. Remove the release tool from the tubing.
5. Prior to re-use, inspect the ClearLOC fitting and pipe for damage. If the ClearLOC fitting shows any signs of damage to the grip ring or o-ring, it should not be reused. If the insert stiffener came out of the tubing and is still inside the fitting, it should not be forcibly removed, as damage to the grip rings may occur. If the insert stiffener is still inside the fitting, the fitting should only be reused on PEX or PE-RT pipe.
6. Before reusing any tubing, inspect for damage or debris. If the tubing is damaged or marked in any way, the end should be cut off. As described in step two of the installation instructions, major imperfections of the tubing end are unacceptable. Only square-cut, clean, round, undamaged tubing ends are suitable for installation.
7. Legend does not recommend the repeated reuse of ClearLOC fittings in permanent applications.

Release tools are re-usable. Discard any damaged tools.