

Model TM-550 Multi-Turn Anti-Siphon Frost-Free Sillcock Installation Instructions

BEFORE YOU BEGIN:

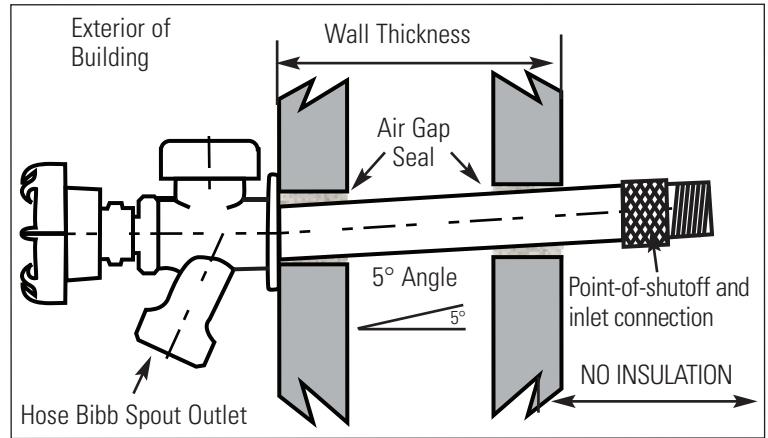
Read this entire set of instructions and prepare for each step. If you are not able to perform all of the steps, Legend Valve recommends that you contact a professional, qualified plumbing contractor to perform the installation. Failure to follow all of the steps may result in damage to the TM-550 and extensive property damage, which may not be covered by any warranty, expressed or implied.

How to Install-

1. Select the correct-length** TM-550, confirming that at least two inches of the inlet connection is exposed in the heated space, regardless of sill width. **See Caution A.** For tool accessibility, the knurled segment should extend well beyond the inner wall face. DO NOT insulate over the inlet connection! Doing so will insulate it from the surrounding heat. SEE INSTALLATION DIAGRAM. Confirm that the TM-550's inlet connection type is compatible with the building's pipe or tubing water supply system.

****NOTE:** Installation of the 4" nominal-length TM-550 is not recommended in geographic regions subject to freezing temperatures.

2. If you are replacing an existing sillcock, remove it by detaching it from the exterior of the building and disconnecting it from the supply line. If this is a new installation, proceed to step three.
3. Bore a 1" diameter hole through the foundation wall or the floor joist band pitched upward at a **5° angle**. **See Caution B.** Protect the inlet of the TM-550, from debris entry, by placing a piece of tape over the inlet port. Insert the TM-550, from the outside of the building.
4. From the inside of the building, position the TM-550, so the outlet hose bibb spout is pointed down. Note that the inlet connection is marked with the words "TOP" and "DOWN" indicating spout position. From the inlet side, make sure the "DOWN" mark faces downward, toward the floor or ground.
5. **IMPORTANT! See Caution D.** Seal all air gaps between the back of the mounting flange, the exterior wall and drilled hole. The TM-550's mounting flange **must** fit flush against the exterior wall. If necessary, place the plastic sill wedge behind the mounting flange, notch-side-down, with the words "REMOVE HOSE IN FREEZING WEATHER" facing upward, before securing the mounting flange to the wall. The mounting flange and sill wedge are angled, to assure complete drainage. A flush fit is critical to correct frost-resistant performance; poor drainage could result in trapped water and subsequent freezing damage. **See Caution B.**
6. Secure the mounting flange to the exterior wall with two exterior grade wood screws of appropriate length. Use the correct type of masonry hardware when attaching to brick or cement. After fastening, check for excess movement of the valve body, by grasping the handle and attempting to move. There shouldn't be any movement at all.
7. Connect the TM-550's inlet to the water supply system. The TM-550 is available with 1/2" male or female pipe thread, 3/4" male pipe thread or 1/2" copper tubing sweat inlet connection types. Verify which type of water distribution system is present before beginning, as it may be necessary to obtain additional fittings.
 - A. Remove the previously-applied tape from the TM-550's inlet connection.
 - B. When soldering, make sure the TM-550 is in the full-open position by turning the handwheel counter-clockwise. Direct the flame away from the knurled area of the inlet connection. DO NOT OVERHEAT! **See Caution E**
 - C. For pipe threaded connections, use Teflon* tape or thread paste. For stability, attach the wrench to the knurled portion of the inlet connection before tightening the fitting or nipple.
8. If the TM-550 was soldered onto copper tubing, allow the connection to cool for a few minutes. Then, close the valve by turning the handle clockwise. Restore water flow to the TM-550 and check for leaks at the connection. Open the valve by turning the handle counter-clockwise and observe the water flow, which will flush out excess flux or solder. Close the valve. Installation is complete.



INSTALLATION DIAGRAM

CAUTION!

"Frost-free" sillcocks can only resist freezing and subsequent freezing damage, when properly installed. **No exterior water valve subject to freezing temperatures is "freeze-proof."**

The TM-550's frost-free feature works by shutting off the water in the **heated** interior of the building and by draining the water downstream of the shutoff, where no heat is present. In order for the TM-550 to function correctly, certain installation and operation requirements must be met:

- A. The inlet connection MUST be located in a space where above-freezing temperatures are present at all times.** Seasonally-heated or non-heated installations (e.g. vacation homes, garage, crawlspace or wing-wall cavity) require the addition of an accessible stop-and-waste valve, to allow line drainage maintenance, eliminating the presence of water both upstream and downstream of the TM-550's shutoff.
- B. The outlet hose connection MUST be allowed to drain completely.** A 5-degree downward pitch from inlet to outlet, must be achieved during installation and the garden hose must be removed prior to exposure to freezing temperatures.
- C. Sprinkler timers, hose splitters, hose manifolds or hose threaded external shutoff valves must NEVER be used.** These outlet-mounted devices create sudden, excess back-pressure, which could damage the TM-550's internal components. When mistakenly installed, they're often overlooked in preparation for freezing temperatures, and when left in place, prevent the TM-550 from draining completely, thus allowing the trapped water to freeze and damage the TM-550.
- D. During installation, all air gaps between the exterior exposure and interior connection MUST be sealed. Insulation must NEVER be placed around the inlet connection of the installed TM-550.** A poor seal where the TM-550's body passes through the sill, will allow unwanted cold air to reach the inlet connection. Insulation wrapped around or placed around the inlet connection is not necessary, and will actually insulate it from the room's heat.
- E. Prior to installation onto copper tubing, the TM-550's handle MUST be rotated counter-clockwise to the full-open position.** Careful handling of the propane torch is critical; Do NOT overheat the inlet connection by placing the flame onto one spot. Move the flame around the connection, to heat the solder cup evenly. Overheating will result in damage to the internal components.

*Teflon is a registered trademark of the Dupont company.

MAINTENANCE:

- Always remove hose in freezing temperatures to ensure complete drainage.
- The TM-550's freeze-resistant design permits water shutoff inside of a heated building. However, as specified in the Residential Plumbing Code Section P2903.10, an additional waste-equipped valve may be required:

IRC P2903.10 Hose Bibb. *Hose bibbs subject to freezing, including "frost-proof" type, shall be equipped with an accessible stop-and-waste-type valve inside the building so that they may be controlled and/or drained during cold periods.*

Legend recommends the addition of a stop-and-waste-type valve (stop-type or ball-type) upstream of the TM-550 in seasonally-heated or non-heated installations such as vacation homes, commercial buildings, garage, crawlspace or wing-wall cavities. The valve should be installed in an accessible location, where the drained water won't damage the surrounding area.

- Avoid painting over the handle, body or vacuum breaker assembly.
- Do not remove the top-mounted vacuum breaker cap. The cap diverts water downward as the vacuum breaker's internal piston operates. **It is a normal function of the vacuum breaker to allow some water to escape before the piston closes completely!** However, a continuous stream of water flowing from the bottom of the cap indicates a fouled or failed vacuum breaker assembly.
- Avoid imparting body stresses by not hanging a coiled hose or not stepping onto the installed TM-550.
- Avoid the use of hose bibb accessories such as hose manifolds, hose Y-splitters or sprinkler timers, which may cause the TM-550 to malfunction. The TM-550 is designed and certified in accordance with ASSE Standard 1019 Section 1.2.1, for non-continuous pressure service: **Not more than twelve hours of continuous water pressure.** Outlet-mounted devices may cause sudden or continuous, damaging

back-pressures.

- While the TM-550's body and handle are resistant to most household chemicals, avoid exposure to harsh chemicals, such as acids, paint thinners or bleach. Cover or wrap the TM-550 when using a pressure washer, chemical siding wash or brick cleaning formulas.
- Do not force the handle open or closed. The handle will operate in a smooth, multi-turn operation. If it doesn't, check for obstructions (debris, rocks, etc.) behind the handle. If after checking, the handle still does not operate smoothly, contact a licensed contractor.
- Annually, check the screws that attach the sill flange to the sill. Make sure they hold the TM-550 firmly, without allowing movement.
- Do not attempt to disassemble or service the TM-550. A qualified, licensed contractor should be contacted in the event of a malfunction or failure.