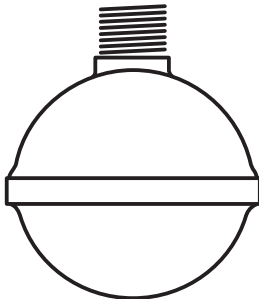




# THERMAL EXPANSION TANK

## FOR POTABLE WATER INSTALLATION & OPERATION INSTRUCTIONS

Model ST-1



**NOTE:** Inspect for shipping damage. Notify freight carrier or store where purchased immediately if damage is present. To avoid risk of personal injury and property damage, if the product appears to be malfunctioning or shows signs of corrosion, call a qualified professional immediately. Current copies of the product manual can be viewed at [www.amtrol.com](http://www.amtrol.com). Use proper safety equipment when installing.



**THIS IS THE SAFETY ALERT SYMBOL. IT IS USED TO ALERT YOU TO POTENTIAL PERSONAL INJURY AND OTHER HAZARDS. OBEY ALL SAFETY MESSAGES THAT FOLLOW THIS SYMBOL TO REDUCE THE RISK OF PERSONAL INJURY AS WELL AS PROPERTY DAMAGE.**

**WARNING** READ CAREFULLY THE PRODUCT INSTALLATION, OPERATING AND MAINTENANCE MANUAL. FAILURE TO FOLLOW THE INSTRUCTIONS AND WARNINGS IN THE MANUAL MAY RESULT IN SERIOUS OR FATAL INJURY AND/OR PROPERTY DAMAGE, AND WILL VOID THE PRODUCT WARRANTY. THIS PRODUCT MUST BE INSTALLED BY A QUALIFIED PROFESSIONAL. FOLLOW ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS, IN THE ABSENCE OF SUCH CODES, FOLLOW THE CURRENT EDITIONS OF THE NATIONAL PLUMBING CODE AND NATIONAL ELECTRIC CODE, AS APPLICABLE.

**WARNING** This Product, like most Products under pressure, may over time corrode, weaken and burst or explode, causing serious or fatal injury, leaking or flooding and/or property damage. To minimize risk, a licensed professional must install and periodically inspect and service the Product. A drip pan connected to an adequate drain must be installed if leaking or flooding could cause property damage. Do not locate in an area where leaking could cause property damage to the area adjacent to the appliance or to lower floors of the structure.

**WARNING** RUPTURE OR EXPLOSION HAZARD. Do not expose Product to freezing temperatures or water temperatures in excess of 140°F. Failure to properly size the Product or follow these instructions may result in excessive strain on the system and may lead to Product failure, serious or fatal personal injury, leakage and/or property damage. **USE ONLY WITH RESIDENTIAL POTABLE WATER SYSTEMS.**

**WARNING** A relief valve must be installed to prevent pressure in excess of local code requirement or maximum working pressure designated in the Product Manual, whichever is less. At least once every 3 years or if discharge is present, a licensed contractor should inspect the temperature and pressure relief valve and replace if corrosion is evident or the valve does not function. **FAILURE TO INSPECT THIS VALVE AS DIRECTED COULD RESULT IN UNSAFE TEMPERATURE OR PRESSURE BUILD-UP WHICH CAN RESULT IN PRODUCT FAILURE, SERIOUS INJURY OR DEATH AND/OR SEVERE PROPERTY DAMAGE AND VOID THE PRODUCT WARRANTY.**

**WARNING** The recurrence of pressure buildup may indicate that this unit is in need of replacement. Operating a plumbing system in this condition presents the risk of damage and leaks.

**WARNING** Chlorine & Aggressive Water: The water quality can significantly influence the life of this Product. You should test for corrosive elements, acidity, total solids and other relevant contaminants, including chlorine and treat your water appropriately to insure satisfactory performance and prevent premature failure.

**CALIFORNIA PROPOSITION 65 WARNING!** This product contains a chemical known by the State of California to cause cancer and to cause birth defects or other reproductive harm. (California Installer/Contractor - California law requires that this notice be given to consumer/end user of this product.) For more information: [www.amtrol.com/prop65.htm](http://www.amtrol.com/prop65.htm)

**PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY**  
**IMPORTANT GENERAL SAFETY INFORMATION -**  
**ADDITIONAL SPECIFIC SAFETY ALERTS APPEAR IN THE FOLLOWING INSTRUCTIONS.**

## Application

The Model ST-1 expansion tank is for use on tankless, residential on-demand water heaters with a total water content of 2 gallons or less and a maximum set point of 140°F. Do not use with larger storage-type water heaters, as these will exceed the capacity of the ST-1.

## Installation

1. Install the expansion tank on the cold water supply line to the water heater at a point between the water heater and backflow preventer or other one-way device (Figure 1).
2. Once the expansion tank is installed, check the cold water supply line for any leakage. Make repairs if necessary.
3. Before the initial firing of the water heater, open any hot water fixture and draw water until all air is removed from the system. Set the water heater temperature control to desired ending temperature (see water heater instructions). Do not set temperature higher than the expansion tank maximum.

4. To relieve initial thermal expansion, slightly open a hot water faucet. Continue until water heater temperature is satisfied. Once heater is at its operating range, no further bleeding of expanded water is required.
5. The water heater and expansion tank will now be operational. The expansion tank will control pressure increases caused by thermal expansion to a level below the water heater relief valve setting.

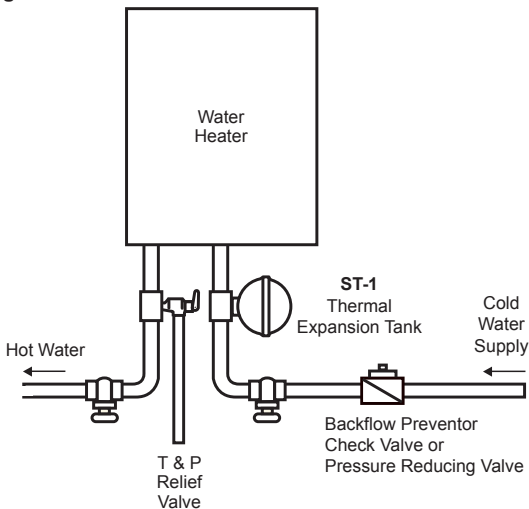
## Maintenance

A professional plumber should check the complete system, including the expansion tank, yearly and more frequently as the system ages.

## Warranty

ST-1 Model: Five (5) Year Limited Warranty  
Visit [www.amtrol.com](http://www.amtrol.com) for complete warranty details.

Figure 1.



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