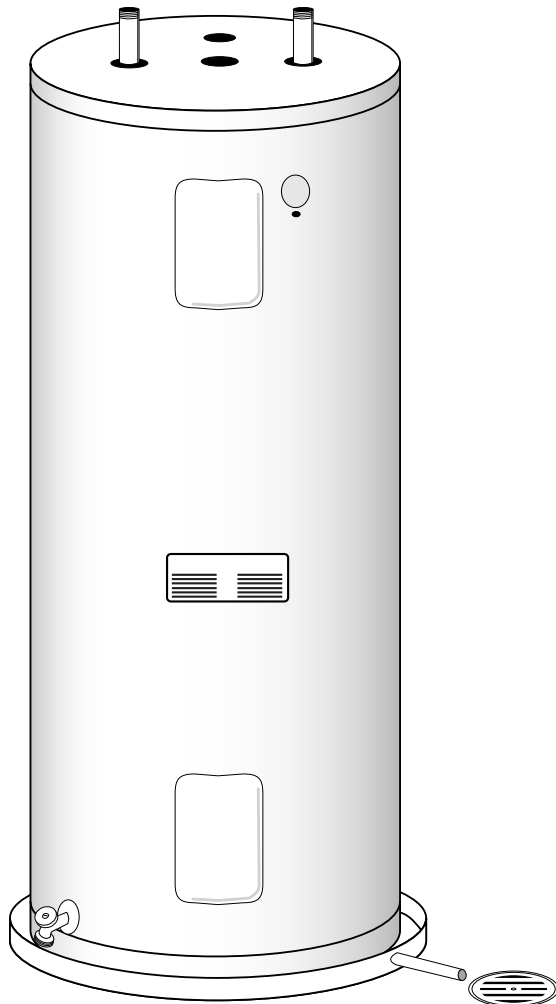


# STORAGE TANKS

## OWNER'S MANUAL

### INSTALLATION AND OPERATING INSTRUCTIONS



### WARNING

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE SERIOUS PERSONAL INJURY AND/OR PROPERTY DAMAGE. REFER TO THIS MANUAL FOR ASSISTANCE OR FOR ADDITIONAL INFORMATION, PLEASE CONSULT A QUALIFIED INSTALLER, SERVICE AGENCY OR ENERGY SUPPLIER OR CALL THE MANUFACTURER OF THIS STORAGE TANK AS LISTED ON THE WARRANTY CARD.

### FOR YOUR SAFETY

- DO NOT REMOVE THE ACCESS PANEL BEFORE THE POWER TO THE STORAGE TANK IS TURNED OFF.
- DO NOT ATTEMPT ANY REPAIRS WITHOUT VERIFYING THAT THERE IS NO VOLTAGE AT THE STORAGE TANK.
- DO NOT USE THE STORAGE TANK ON A VOLTAGE OTHER THAN THAT SPECIFIED ON THE RATING PLATE.
- DO NOT CONNECT THE POWER SUPPLY TO ANYWHERE OTHER THAN THE MAIN SUPPLY CONNECTION ON THE STORAGE TANK
- DO NOT TURN ON THE POWER TO THE STORAGE TANK UNLESS IT IS FULL OF WATER.
- DO NOT DRAIN THE STORAGE TANK UNLESS POWER TO THE STORAGE TANK HAS BEEN TURNED OFF.
- DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE, OR CORROSIVE LIQUIDS OR VAPORS IN THE VICINITY OF THIS STORAGE TANK.

### WHAT TO DO IF YOU SMELL SMOKE

- IMMEDIATELY TURN OFF THE POWER TO THE STORAGE TANK.
- IF AFTER TURNING OFF THE POWER THE SMOKE CONTINUES, CALL YOUR LOCAL FIRE DEPARTMENT.
- WHEN THE SMOKE HAS STOPPED, CALL A QUALIFIED SERVICE TECHNICIAN FOR IDENTIFICATION OF THE PROBLEM AND REPAIR.

### IMPORTANT

Read these instructions carefully before beginning the installation. Proper installation will provide safe & efficient service, and avoid needless expense not covered by the warranty. Should you have any questions please contact your local dealer or call the customer service department of the manufacturer as listed on the warranty card.



**SAVE THIS MANUAL FOR FUTURE REFERENCE AND PLEASE READ THE MANUFACTURER'S PRODUCT WARRANTY CONTAINED IN THIS MANUAL.**

Customer service department : 1-800-363-9354

## WARNING

These instructions have been written as a guide for the proper installation and operation of your booster tank, and the manufacturer of this booster tank will not accept any liability when these instructions have not been followed. However, for your safety and to avoid damage caused by improper installation, this booster tank should be installed by a Certified Licensed Professional, and meet all applicable building codes.

This series of storage tanks are available in 40, 50 or 80 gallon sizes. They have been designed to supply hot water for domestic use when combined with a tankless coil boiler or other water heating source. Each storage tank comes with a factory installed thermostat. The thermostat is pre-wired for connection to a circulator pump which does not come with the unit. Use only a bronze body model pump rated for 110 or 120 volts. The pump must be installed in accordance with the pump manufacturers instructions.

### LOCATION

Location should be as close as possible to a power supply and to the main use of hot water. This location must not be subject to freezing temperatures, and must be close to a suitable free flowing floor drain. The storage tank should be positioned, so that there is easy access to the controls and drain valve. Where a floor drain is not adjacent to the storage tank, a suitable drain pan must be installed under the storage tank. This drain pan should be at least 4 inches larger than the diameter of the storage tank, and at least 1 inch deep providing access to the drain valve. This pan must be piped to a suitable drain to prevent damage to property in the event of a water leak from the piping, the relief valve, or storage tank. Sooner or later, all storage tanks leak. The manufacturer has given the necessary advice to prevent damage to the building. Under no circumstances is the manufacturer to be held liable for any water damage in connection with this storage tank.

### WATER PIPING

Refer to figure 1 for a typical single storage tank piping layout and figure 2 for a typical multiple storage tank piping layout. Use of these layouts should provide a trouble free installation for the life of the storage tank. Before the piping connections are made, ensure that the dip tube is in the cold water inlet. Have the installer show you where the storage tank shut off valve is located, so that

you know how to shut off the water. When assembling the hot and cold piping, it is imperative that open flame is not applied to the inlet and outlet fittings as heat will damage or destroy the plastic lined fittings supplied by the manufacturer. THIS WILL RESULT IN PREMATURE FAILURE OF THE NIPPLES WHICH IS NOT COVERED BY THE WARRANTY. When making these connections, use a good food grade of pipe joint compound, and make sure that all fittings are tight.

### TEMPERATURE and PRESSURE RELIEF VALVE

To protect from excessive pressure and/or temperature, a temperature and pressure relief valve must be installed by the installer when it has not been factory installed. The relief valve piping must terminate not less than 6 inches and not more than 12 inches above a floor drain.

DO NOT THREAD, CAP, OR IN ANYWAY RESTRICT THE END OF THIS OUTLET. DO NOT connect this outlet directly to a drain. In the event of excessive temperature or pressure, this valve will discharge very hot water at a high pressure. DO NOT RESTRICT.

#### The Discharge Line:

1. Must not be smaller than the outlet pipe size of the relief valve.
2. Must not be restricted in any way.
3. Must be of a material capable of withstanding 210°F without distortion and must be AGA approved.
4. Must be installed to allow complete drainage.
5. Must terminate at an adequate free flowing drain.

### Pressure Build-up in a Water System

When the storage tank operates, the heated water expands creating a pressure build-up. This is a natural function and is one of the reasons for installing a temperature and pressure relief valve. If the cold water supply line

has a built in water meter, check valve or pressure reducing valve, a suitable device to prevent pressure build-up or water hammer effect must be installed otherwise the warranty is void (see fig. 1).

Ex: THERMXtrol. An indication of pressure build-up is frequent discharges of water from the relief valve.

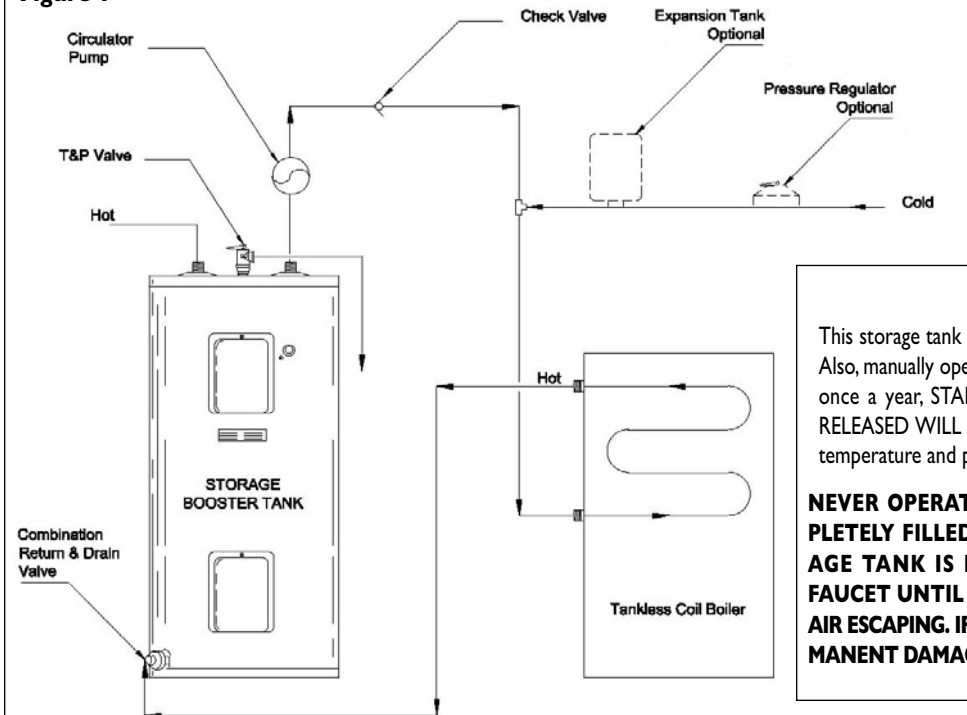
This is a safety feature, however if the valve relieves water on a continuous basis, it may indicate a malfunction of the valve and a qualified service technician must be called to have the system checked, and the problem corrected.

## WARNING

This storage tank must not be operated with the cold inlet valve closed. Also, manually operate the temperature and pressure relief valve at least once a year, STANDING CLEAR OF THE OUTLET AS THE WATER RELEASED WILL BE HOT. Lift and release the operating lever on the temperature and pressure valve to make the valve operate freely.

**NEVER OPERATE THE STORAGE TANK IF IT IS NOT COMPLETELY FILLED WITH WATER. TO MAKE SURE THE STORAGE TANK IS FILLED, OPEN AN UPSTAIRS HOT WATER FAUCET UNTIL THERE IS A FULL FLOW OF WATER, WITH NO AIR ESCAPING. IF THIS INSTRUCTION IS NOT FOLLOWED, PERMANENT DAMAGE WILL OCCUR TO THE CIRCULATOR PUMP.**

Figure 1



## Cathodic Protection (Anode)

This storage tank is equipped with an anode rod which is designed to prolong the life of the glass lined tank. The anode, through electrolytic action, is slowly consumed protecting the glass lined tank (cathode). The amount of protection given is dependent on local water conditions. If your water is very low in mineral content (soft), consumption of the anode is slow. If your local water is high in mineral content (hard), anode consumption is rapid. Where a water softener is introduced to fight hard water, the life expectancy of the storage tank is reduced as outlined on the warranty card. In hard waters, it is desirable to check the anode periodically and replace it when necessary to extend the life of storage tank. This replacement would normally be undertaken by a plumber, and, while it is not under warranty, replacement does extend tank life. In some waters, and generally in times of non usage, the anode and water combination can produce hydrogen sulfide. This water smells like rotten eggs and is prevalent in well systems. It can normally be cured by chlorinating the well and the water tank and in severe cases by changing the anode to a type more suitable for these conditions (aluminum anode). A sign of hydrogen sulfide production is spurting at the faucet when it is opened. This gas in itself is flammable, and must not be exposed to an open flame. Run the water until the gas is purged from the system. Under no circumstances should the anode be removed from the storage tank on a permanent basis, as this action will void the warranty. Call your plumber for advice on local water conditions. The sodium salts generated by a water softener makes this water extremely conductive therefore the anode becomes ineffective within one year. See warranty restriction to this effect.

## Filling the storage tank

- 1) Check that all the piping connections have been made.
- 2) Check that the drain valve is fully closed.
- 3) Open the shut-off valve in the cold water supply line, then open a hot water faucet.
- 4) When water runs from the hot water faucet, the tank is full. It is desirable to open all hot water faucets on the system (individually) to release any air trapped in the lines.
- 5) Once completed go to the wiring section.

## Wiring installation

- 1) Wire the power supply (110/120 volt 60 Hz) onto the power supply connection on the side of the storage tank.
  - 2) The thermostat is rated for a maximum inductive current of 7 FLA at 120VAC. Do not exceed this rating for the circuit.
  - 3) Connect the circulator pump in series with the thermostat as shown in figure 3
- A ground wire must be supplied from the ground connection at the service panel to the ground screw at the junction box.
- 4) Do not install or connect any electrical heating elements to this tank

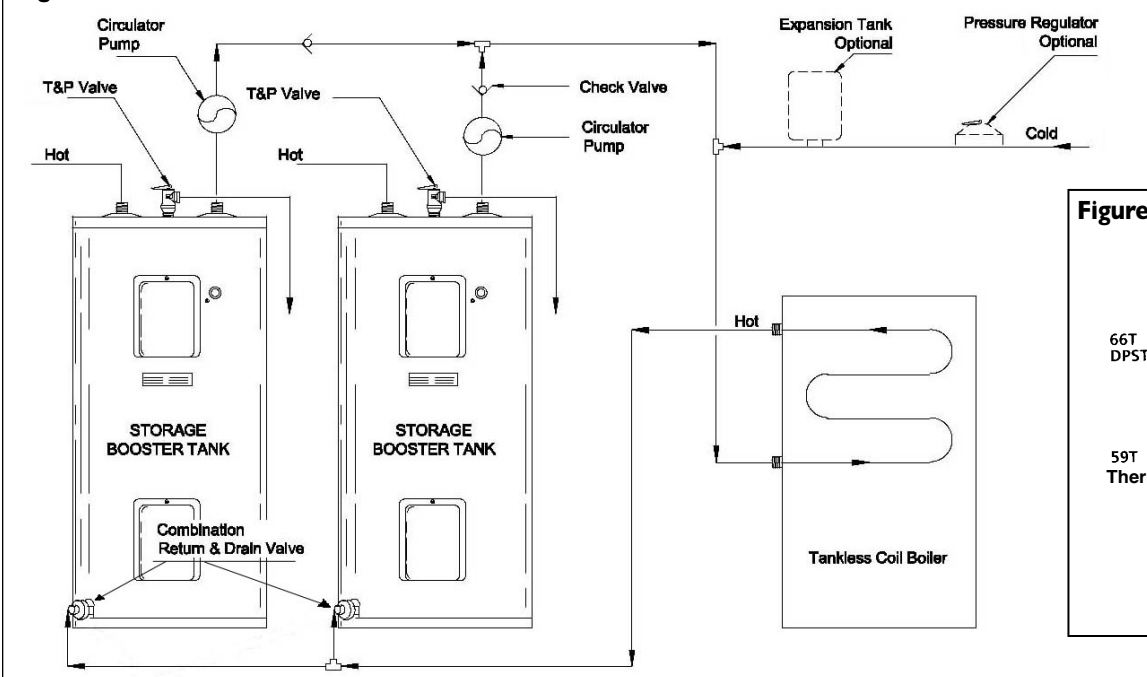
### WARNING

The higher the setting, the greater the risk of scalding. Hot water can cause third degree burns in 6 seconds at 140°F, and in 30 seconds at 130°F. In households where there are children, physically challenged individuals, or elderly persons, mixing valves at the point of use are recommended as a means to reduce the scalding potential of hot water. Use the vacation setting for prolonged absences.

## Start-up procedure

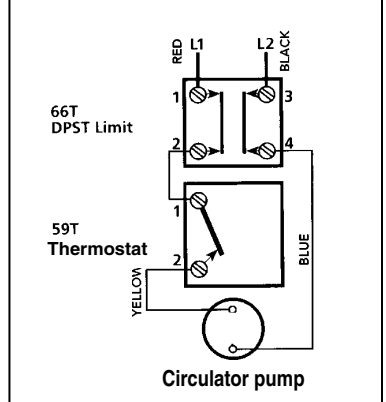
- 1) Have you filled out the installation checklist?
- 2) Are the thermostats adjusted to your desired temperature (factory set at 120°F)?
- 3) Turn on the breaker at the main service panel.
- 4) Make sure that the fuse box (if one exists) next to the water heater is pushed to "ON".
- 5) If you smell smoke, refer to above smoke warning.
- 6) Wait one (1) hour. At this time, hot water should be available at the faucet.
- 7) If after one (1) hour you do not have any hot water, check that all fuses and breakers are in working condition and the boiler is operational.
- 8) Wait for another hour. If at this time you still do not have any hot water, call a qualified service technician.

Figure 2



NOTE: If after one hour (1) you receive only a very small amount of hot water, check that the plumbing connections are not reversed.

Figure 3 Series 59T



## THERMOSTAT REPLACEMENT

### WARNING

Before attempting any electrical repairs or replacements, turn off the power to the water heater. Failure to do so could result in electrical shock and/or severe injury or death of the person doing the work.

### Replacing a thermostat

- 1) Turn off the power to the storage tank.
- 2) Remove the element access cover(s).
- 3) Carefully turn back the insulation.
- 4) Disconnect the wire from the terminals.
- 5) Lift the securing prongs and slide the thermostat up to remove it.
- 6) Check the thermostat model number.
- 7) Replace the thermostat with a new one of the same manufacturer and type.
- 8) Check that the wiring corresponds to the wiring diagram in figure 3.
- 9) Set the thermostat at the desired temperature.
- 10) Replace the insulation and the element access cover.
- 11) Turn on the power to the storage tank.

## WARRANTY FOR STORAGE TANKS

### General:

The manufacturer will repair or supply an equivalent replacement storage tank in the event that the inner tank leaks, and will furnish a replacement component part for any component parts which are found to be defective, within the applicable periods specified below in accordance with the terms of this warranty. The manufacturer's replacement or repaired unit will be warranted for the balance of the original warranty.

### The inner tank: Storage tanks are warranted

against inner tank leakage as a result of perforation within a time frame of five (5) years from the date of original installation, provided that the warranty reply card was sent back to the manufacturer; if not, from the date indicated on the model rating plate affixed to this storage tank. If the storage tank is installed in any other dwelling than a single family dwelling, the warranty will be limited to three (3) year. Addition of a water softener in conjunction with removal of the anode from the storage tank will void the warranty.

### Any other parts:

If any other component parts on these models are found to be defective within a time frame of one (1) year from the date of original installation, provided that the warranty reply card was sent back to the manufacturer; if not, from the date indicated on the model rating plate affixed to this storage tank, the manufacturer will furnish a replacement part upon the receipt of the defective part.

### The warranty will not apply or will be voided if:

- The installation is not made in accordance with the printed instructions provided, or does not comply with national and/or local building codes.
- The operation and maintenance of the storage tank is not made in accordance with the printed instructions provided, national and/or local building codes.
- The anode has been removed.
- The storage tank experiences the effects of thermal expansion or failure, reverses the bottom, due to excessive pressure (exceeding 300kPa). This excessive pressure can come from the addition of a pressure reducing valve, a water meter or a simple check valve in the municipal water supply system in a single family dwelling.
- An approved "pressure temperature relief valve" is not installed.
- The inner tank or component parts fail due to the storage tank being operated at water temperatures exceeding the maximum setting of the operating and / or high limit control, or the storage tank is not supplied with potable water, free to circulate at all times.
- A component part becomes defective due to improper fuse size.
- The storage tank element fails due to sediment build up or if the element has heated without being totally submerged in water.
- If the model rating plate has been defaced or discarded and not available for warranty application purposes.

### Accidents/ Acts of God:

This warranty does not cover damage to the tank from accidents such as fire, flood, "acts of God" or any other contingency that is beyond our control.

### Hot water problem and claim procedure:

Before declaring your storage tank defective and returning it to its point of purchase, if you think that your storage tank is still under warranty, contact the manufacturer's customer service department in order to obtain the correct information. Only the manufacturer's customer service department is entitled to validate a in-warranty coverage by giving a "claim authorization number" for repair or supply of a replacement water heater or component part.

The customer service department will direct you to the right person who will help you solve the problem, either the contractor or dealer, as the case may be. Please do not dispose of the defective part or storage tank as the contractor or dealer will need it for credit purposes, if the tank or component part is still under warranty. The manufacturer always inspects defective units for product improvement purposes.

### Service labor and shipping cost responsibility:

This warranty does not cover any delivery or transportation expenses or any labor expense for service, removal or reinstallation of a replacement storage tank. All such expenses are your responsibility. If a storage tank is deemed to be replaced, the manufacturer will deliver a unit at a convenient authorized dealer. You must pay any local cartage, including the cost of returning the replaced item to our authorized dealer.

### Other general conditions of the warranty :

No one is authorized to make any other warranty on the manufacturer's behalf. Any other warranty offered by a third party other than the manufacturer will not be honored by the manufacturer. The maximum number of replacement storage tanks is limited to one (1) per original purchased. Proof of purchase must be supplied in the case of a dispute. A storage tank is not considered defective, and will not be replaced for reasons of odor, discoloration or rusty water. The manufacturer will not assume any liability of any form if the storage tank is not installed or utilized in accordance with this product instruction guide.

### Extended warranties:

Offers to extend the warranty may be made by the manufacturer. They serve to complement this warranty