VAUGHN
a nudyne company

Operation and Installation Manual

Hydrastone® Lined Side Mount Heat Exchanger

Indirect Fired Water Heater

INDEX

To fully understand the purchaser's responsibilities for installing the water heater, please read the warranty.

VAUGHN
a nudyne company

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SAFETY INFORMATION

WARNING / CAUTION

1. Tank is to be completely filled with water and all air is to be vented before energizing. Do not turn on the water heater if cold water supply shut off valve is closed.

2. Due to the rigors of transportation, all connections should be checked for tightness before the heater is placed in operation.

3. The safety temperature and pressure relief valve must be installed in tapping provided.

4. The unit is designed to operate at pressure not more than 150 psi.

5. Generalized instructions and procedures cannot anticipate all situations. For this reason, only qualified installers should perform the installations. A qualified installer is a person who has licensed training and a working knowledge of the applicable codes regulation, tools, equipment, and methods necessary for safe installation of an electric resistance water heater. If questions regarding installation arise, check your local plumbing and electrical inspectors for proper procedures and codes. If you cannot obtain the required information, contact the company.

6. In the event of overheating, fire, flood, or physical damage, turn off all power to your water heater. Do not power up the heater until it has been examined by a trained professional.

7. Do not store or use gasoline or other flammable vapors and liquids, such as adhesives or paint thinner, in the vicinity of this water heater. If such flammable materials must be used near the unit, open nearby doors and windows to allow for ventilation.

8. California law and other states may require all new and replacement water heaters, and all existing water heaters to be braced, anchored, or strapped to resist falling or horizontal displacement due to earthquake motion. At a minimum, any water heater shall be secured in accordance with the California Plumbing Code.

GENERAL INFORMATION

PLEASE READ INSTRUCTIONS CAREFULLY BEFORE INSTALLING WATER HEATER

Vaughn Thermal Corporation (herein called the Company) intends that this SIDE MOUNT HEAT EXCHANGER INDIRECT FIRED WATER HEATER be used as a separate zone to a heating system boiler.

The Company specifically does not expressly or impliedly warrant the merchantability or the fitness for any particular purpose or the performance of the heater within that system, nor does it assume liability for any consequential damage to general property or other components of the system.

This appliance is designed to heat water by circulating water from the boiler through the internal coil in the tank. We specifically do not warrant this tank for high temperature applications such as wood stoves or steam producing systems. Such use of this product will automatically void the warranty.

The design anticipates the proper installation and care in use of the product. There is a risk of property damage and personal injury inherent in the use of any hot water system. The Company cannot supervise the installation and therefore makes it a specific condition of the warranty that the customer will supervise the installation and use of this product to be sure they are performed in accordance with these instructions, as well as safe industry guidelines and proper local or national codes.

Generalized instructions and procedures cannot anticipate all situations. For this reason, only qualified installers should perform the installation. A qualified installer is a licensed person who has appropriate training and a working knowledge of the applicable codes, regulations, tools, equipment, and methods necessary for safe installation of a boiler system and an indirect water heater.

An installation checklist has been provided to help the customer ensure that all procedures for a safe installation have been followed.

If questions regarding installation arise, check with your local plumbing and electrical inspectors for proper procedures and codes. Local codes take precedence over instructions in this manual.

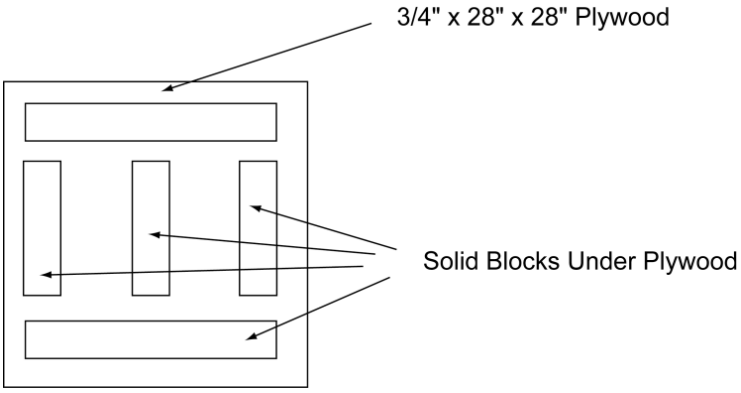
INSTALLATION GUIDELINES

A. INSPECTING AND PREPARING THE HEATER

- Remove the cardboard box, which comes packaged with the heater. It should contain the following: Coil (either 15ft. or 20 ft.), bolts, lock washers, nuts, thermostat, and temperature and pressure relief valve.

B. LOCATION

- **CAUTION: All tanks will eventually leak at some unpredictable time.**
- Do not place the heater where there is a risk of property damage in the event of a leak.
- Place the heater on a solid foundation in a clean, dry location nearest the boiler.
- The heater should be protected from freezing and water lines should be insulated to reduce energy and water waste.
- Leave sufficient headroom to service the heat exchanger and electrical controls.
- Do not install in an area where flammable liquids or combustible vapors are present.
- **CAUTION: The heater's outer jacket is plastic and can melt.**
- Do not install in close proximity to wood burning stove or other high temperature apparatus.
- **NOTE:** If the heater is placed on blocks to raise it from the floor, be sure to support the entire bottom with at least ¾ " plywood on the top of the blocks.



C. PROTECTION FROM WATER DAMAGE

- **CAUTION: All water heaters have a risk of leakage at some unpredictable time.**
- **IT IS THE CUSTOMER'S RESPONSIBILITY TO PROVIDE A CATCH PAN OR OTHER ADEQUATE MEANS, SO THAT THE RESULTANT FLOW OF WATER WILL NOT DAMAGE FURNISHINGS OR PROPERTY.**
- The warranty provided assures replacement within its terms, but specifically does not warrant against consequential damage caused by a leaking water heater.

D. TEMPERATURE AND PRESSURE RELIEF VALVE

- **WARNING: A POTENTIAL HAZARD TO LIFE AND PROPERTY MAY EXIST IN ANY WATER HEATER IF AN APPROVED TEMPERATURE-AND-PRESSURE RELIEF VALVE IS NOT PROPERLY INSTALLED.**
- For protection against excessive pressures and temperatures in this water heater, install temperature-and-pressure protective equipment by local codes, but not less than a combination temperature-and-pressure relief valve certified by a nationally recognized testing laboratory that maintains periodic inspection of production of listed equipment of materials. This must meet the requirements for Relief Valves and Automatic Gas Shutoff for Hot Water Supply Systems, ANSI Z21.22-1971. This valve must be marked with maximum set pressure not to exceed the marked maximum allowable working pressure of the water heater (150psi). Install the valve into an opening provided and marked for this purpose in the water heater and orient it or provide the tubing so that any discharge from the valve will exit only within 6 inches above, or at any distance below the structural floor and cannot contact any live electrical parts. The discharge opening must not be blocked or reduced in size under any circumstances.
- **CAUTION: A temperature and pressure relief valve is designed to discharge excessively hot water. THE CUSTOMER IS RESPONSIBLE TO PROTECT PROPERTY AND PERSONNEL FROM HARM WHEN THE VALVE FUNCTIONS.**
- Install the temperature and pressure relief valve on the provided ¾" NPT brass connection located at the top of the tank. See INSTALLATION DIAGRAM 1 on page 21 and INSTALLATION DIAGRAM 2 on page and 22.
- Care must be taken to be sure that the stem of the temperature and pressure relief valve is immersed in the water within the top 6 inches of the tank.

- ❑ The drain line from the temperature and pressure relief valve must not be concealed or blocked and must be protected from freezing.
- ❑ **WARNING: IF THE WATER SUPPLY IS FROM A WELL, OR KNOWN TO HAVE HARD WATER, IT IS RECOMMENDED TO USE A PRESSURE RELIEF VALVE IN THE COLD-WATER LINE AS WELL AS A TEMPERATURE AND PRESSURE RELIEF VALVE IN THE HOT WATER LINE.**

E. INSTALLING THE REMOVABLE HEAT EXCHANGER

- ❑ Remove the access panel. See FIGURE 2 on page 20.
- ❑ Apply the included O-ring lubricant to both O-rings.
- ❑ Insert O-rings into O-ring slots.
- ❑ Insert coil into the tank with fittings at 12 o'clock and 6 o'clock. Use provided alignment rods if applicable (provided with 6" coils only).
- ❑ Install bolts at 12 o'clock and 6 o'clock and tighten with lock washers and nuts. See FIGURE 2 on page 20.
- ❑ **WARNING: Plastic O-ring housing must be properly installed. See FIGURE 1 on page 20. Failure to do this will void the warranty. Must use new O-ring if replaced or removed.**
- ❑ Insert and secure the bolts to the nuts one at a time in the following manner:
- ❑ Place the nut beneath the flange opening.
  - o Hold the nut in place with one hand – insert the bolt with the other.
  - o Thread the bolt into the nut and tighten in proper order. See FIGURE 3 on page 21.
- ❑ NOTE: Be sure to place bolts in all the openings.
- ❑ Tighten bolts to 100 inch-pounds according to the pattern in FIGURE 3 on page 21.

F. BOILER SUPPLY CONNECTIONS

- ❑ **WARNING: HEAT EXCHANGER FLUID MUST BE NON-TOXIC.**
- ❑ **WARNING: Boiler temperature must be controlled by the boiler hi limit not to exceed 200°F. Failure to do so will create a hazardous installation and void the warranty.**
- ❑ Connect the supply line (from the solar heating system) to the "HX In" fitting of the heat exchanger. It is recommended to use a union.
- ❑ Connect the return line (back to the solar heating system) to the "HX Out" fitting on the heat exchanger. It is recommended to use a union.
- ❑ Heat exchanger connections are ¾" male threaded fittings.
- ❑ Do not apply heat directly to the "HX IN" or "HX Out" as it includes O-rings which can melt.
- ❑ For closed-loop systems that do not use water as the heat-transfer fluid, the total volume of the heat-transfer fluid in the closed loop shall be less than 10% of storage tank volume.

$$Max\ Loop\ Length\ in\ Feet = \frac{(\frac{Tank\ Capacity * 231}{10})}{(\pi * Pipe\ Radius * Pipe\ Radius) * 12}$$

G. WATER CONNECTIONS

- **WARNING: Some local codes mandate the use of a backflow preventer or check valve or pressure-reducing valve. An adequate expansion tank (or other adequate means) must be installed to prevent pressure build up or damage from thermal expansion when a check valve or backflow preventer or pressure-reducing valve is used. Failure to do so could result in tank leakage and therefore void the warranty.**
- All fittings on this heater are brass – do not strip or cross threads.
- Water inlet connections are ¾" NPT female threaded fittings on S models. This connection serves as an inlet and drain combination. See INSTALLATION DIAGRAM 1 and INSTALLATION DIAGRAM 2 on pages 21 and 22.
- Water inlet connection is a 1.5" NPT male threaded fitting on D models. This connection is separate from the drain valve.
- Provide a shut off valve on the cold-water line. Mark for future emergency use.
- **Do not apply heat directly to the cold-water inlet or the hot water outlet.**
- Water outlet connections are ¾" NPT male threaded fittings on S models. See INSTALLATION DIAGRAM 1 and INSTALLATION DIAGRAM 2 on pages 21 and 22.
- Water outlet connection is a 1.5" NPT male threaded fitting on D models.

H. FILLING THE WATER HEATER

- Check that the temperature and pressure relief valve has been properly installed (mandatory requirement).
- Completely close the drain valve.
- Open the highest hot water faucet to allow air to escape from piping.
- Open the valve to the cold-water inlet and allow the heater and piping system to completely fill.

I. THERMOSTAT INSTALLATION

- To attach the thermostat to the tank, place the hole in the back of thermostat cover over the immersion well. It should fit flush against the tank. Use the provided self-tapping screw to attach the back of case directly to the tank. See THERMOSTAT DIAGRAM 3 on page 16.

- If the thermostat cannot fit without the immersion well protruding beyond the top of the case, it can be mounted directly onto the immersion well itself by placing the square nut in the retaining well on the thermostat box and using the proper machine screw provided to tighten against the immersion well.
- Slide temperature sensor all the way into the immersion well (if equipped) – until it contacts the end. See THERMOSTAT DIAGRAM 3 on page 16.
- Connect temperature sensor wires to press release connector or screw terminal. See THERMOSTAT DIAGRAM 6 on page 19.
- Run all 24VAC wiring through the square notch on bottom of thermostat case. See THERMOSTAT DIAGRAM 4 on page 17 and THERMOSTAT DIAGRAM 5 on page 18.
- **(Note: Sensor does NOT need to make intimate contact with entire well surface to work properly)**
- The tank may operate as a separate heating zone using either the heating system circulator and an appropriate zone valve, or a separate circulator dedicated for water heating. See INSTALLATION DIAGRAM 1 on page 21 and INSTALLATION DIAGRAM 2 on page and 22.
- In both systems, the tank is controlled through the thermostat on the heater. See INSTALLATION DIAGRAM 1 on page 21 and INSTALLATION DIAGRAM 2 on page and 22.
- Be certain to install thermostat front cover using the black screw provided.

J. ETC102 CONTROL

- **WARNING: Do not use ETC102 with 110V circuits to the TT terminals. For Switching 110V, use switch terminals. See THERMOSTAT DIAGRAM 7 on page 19.**
- **The ETC102 TR/TW/C terminals are rated 24VAC, 1 amp resistive.**
- **The ETC102 SWITCH terminals are rated 120VAC, 10 amp resistive.**
- For controlling zone valves, multi-zone controllers and switching relays, follow applicable wiring diagrams for typical low voltage thermostat circuits.
- Some newer switching relay models do not work properly with “Power Stealing” thermostats. The ETC102 can be a power stealing thermostat unless powered separately. Connect 24VAC power from the switching relay board or from a step-down transformer to 24V and 0V terminals. See THERMOSTAT DIAGRAM 4 on page 17 and THERMOSTAT DIAGRAM 7 on page 19.

K. TPI WIRING CONTROL

- **NOTE: THE TPI THERMOSTAT MUST BE POWERED WITH 24VAC.**
- **The TPI 24VAC only requires 20mA, or about 0.5 Watts.**
- 24VAC power must be connected to 24VAC connectors on the bottom right corner of TPI. See THERMOSTAT DIAGRAM 5 on page 18.
- Connect control wiring to PUMP/TT normally open relay connections (rated for both 24V and 110V wiring) on the bottom left corner of TPI. See THERMOSTAT DIAGRAM 5 on page 18.
- All and only 110VAC wiring must go through an appropriate chase nipple installed in the knockout at bottom of TPI case.
- TPI Wiring will vary depending on the type of boiler and valve controls in the system. See THERMOSTAT DIAGRAM 5 on page 18.
- **CAUTION: If Sensor is soldered directly to TPI, DO NOT BEND SHARPLY OR OVERWORK.**

L. INSULATION INSTALLATION

- Place included fiberglass insulation between and around the water supply and boiler supply connections.
- Attach the access panel cover using screws provided. Insulate hot water pipes with pipe insulation.

INSTALLATION CHECKLIST

1. INSPECTING AND PREPARING THE HEATER

- ❑ Remove the cardboard box, which comes packaged with the heater. It should contain the following: Coil (either 15ft. or 20 ft.), bolts, lock washers, nuts, thermostat, and temperature and pressure relief valve.

2. LOCATION

- ❑ Solid foundation and dry location.
- ❑ Protect heater water lines from freezing.
- ❑ Area free of flammable vapors.
- ❑ Sufficient room to service heater.
- ❑ Not in close proximity to wood burning stove.
- ❑ A leak will not damage property.

3. PROTECTION FROM WATER DAMAGE

- ❑ Be sure to make provisions to protect the area from water damage if a leak should occur in the tank or connected fittings.

4. TEMPERATURE AND PRESSURE RELIEF VALVE

- ❑ **WARNING: Improper installation will present a potential hazard to life and property.**
- ❑ Check to be sure that proper temperature and pressure relief valve requirements are met.
- ❑ Temperature and pressure relief valve installed within top 6” of tank.
- ❑ The 3/4" discharge pipe is properly protected from freezing and restrictions.
- ❑ No valve between tank and the temperature and pressure relief valve or in drain line.
- ❑ Provision for hot water discharge from the temperature and pressure relief valve.

5. BOILER SUPPLY CONNECTIONS

- ❑ See INSTALLATION DIAGRAM 1 on page 21 and INSTALLATION DIAGRAM 2 on page and 22.
- ❑ Return line (back to the boiler) connected to the “HX Out” fitting.
- ❑ Supply line (from the boiler) connected to the “HX In” fitting.
- ❑ Do not apply heat to brass fittings.

6. WATER SUPPLY CONNECTIONS

- ❑ See INSTALLATION DIAGRAM 1 on page 21 and INSTALLATION DIAGRAM 2 on page and 22.
- ❑ Do not over tighten brass threads.
- ❑ Do not apply heat to brass fittings.
- ❑ Mark the water shutoff for future reference.
- ❑ If there is a check valve (sometimes in water meter), backflow preventer or pressure-reducing valve, install an adequate size expansion tank.

7. FILLING THE WATER HEATER

- ❑ Completely fill the water heater before turning it on.
- ❑ Water connections completed and free of leaks.
- ❑ Check for proper installation of the temperature and pressure relief valve.
- ❑ Close drain valve.
- ❑ Open the highest hot water faucet.
- ❑ Open cold water inlet valve and fill system.

8. WIRING

- ❑ Check that water heats to desired temperature

9. INSTALLATION COMPLETED AND CHECKLIST FILLED OUT

BY: _____

DATE: _____

NOTES: _____

TEMPERATURE CONTROL

A. WATER TEMPERATURE REGULATION

- **WARNING: Exposure to water hotter than 125° F can cause scalding injuries. Appropriate caution must be taken when using hot water. Special supervision must be given to those who cannot quickly act such as children, disabled, or elderly persons.**
- The input of heat into the tank is controlled by an immersion thermostat. These automatic controls are set at the factory to maintain a water temperature of 125°F. Although these thermostats are designed to meet industry standards, they can fail to control temperature properly without any notice, and therefore should be tested periodically for your protection.
- **DANGER: IF YOU DISCOVER EXTREME HOT WATER COMING FROM THE FAUCET, IMMEDIATELY SHUT OFF THE MAIN SWITCH TO THE BOILER AND CALL COMPETENT SERVICE PERSONNEL. OVERHEATED WATER IS A POTENTIAL HAZARD TO LIFE AND PROPERTY. DO NOT OPERATE UNTIL THE SOURCE OF THE PROBLEM HAS BEEN DETERMINED AND ELIMINATED.**

- Water temperature over 125° F can cause severe burns instantly or death from scalds.
- Children, disabled, and elderly are at the highest risk of being scalded.
- See instruction manual before setting the temperature at the water heater.
- Feel water before bathing or showering.

B. WATER TEMPERATURE CONTROLS

- A periodic inspection of the operating controls and wiring should be made by qualified service personnel.
- The temperature of the water should be tested periodically at the faucet to be sure the thermostat is working properly.

C. TEMPERATURE ADJUSTMENT

- The water heater is delivered with either a TPI thermostat or an ETC102 thermostat. Both have a factory set temperature setting of 125°F and differential setting of 10°F.
- Any temperature adjustment of the thermostat must be made by qualified service personnel, as shown below.

1. Shut off or disconnect all electrical supply to heater.
2. Remove cover to Thermostat.
3. Adjust right side lever to the desired temperature. Moving the lever down will decrease temperature. See THERMOSTAT DIAGRAM 1 on page 15 and THERMOSTAT DIAGRAM 2 on page 15.
   NOTE: Markings on slide are approximate. Check the temperature at faucet to ensure safe operating temperature.
4. Adjust the differential to the desired setting. On an ETC102, turn the dial on left side to the desired differential. On a TPI, adjust the slide on the left to the desired differential. See THERMOSTAT DIAGRAM 1 on page 15 and THERMOSTAT DIAGRAM 2 on page 15. The thermostat will call for heat when the tank temperature has fallen to the set differential degrees below the temperature set point.
5. Reattach cover.
6. Reconnect electrical supply.
7. Check faucet temperature to verify desired temperature is achieved.

- To set the temperature above 140°F (**NOT RECOMMENDED**) you must remove the SCALD DANGER label attached to the temperature slide.
- **Caution: Do not increase temperature above 140°F without a properly installed mixing valve in the system.**

D. INDICATOR LED OPERATION

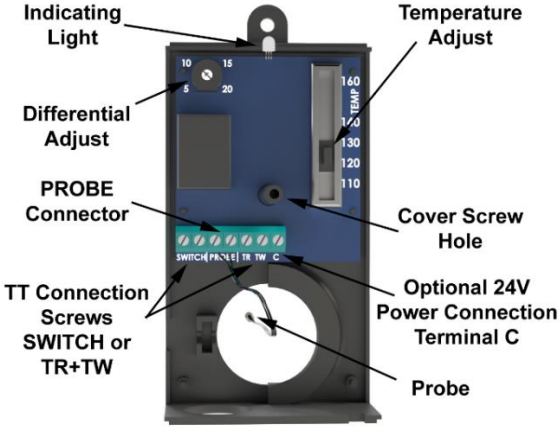
- The thermostat has an indicator LED at the top of the case. See THERMOSTAT DIAGRAM 1 on page 15 and THERMOSTAT DIAGRAM 2 on page 15 or inside cover of thermostat.
- When thermostat is calling for heat, the indicator LED will blink green.
- When the thermostat is satisfied, the indicator LED will be solid green.
- If the thermostat detects no probe, the indicator LED will flash red.

E. FIRST POWERUP OPERATION

- On the installation of a new thermostat, the controller will run a diagnostic calibration check where it will shut off for several minutes after heating to 98 degrees. After that period, it will function normally and continue heating to the setpoint.

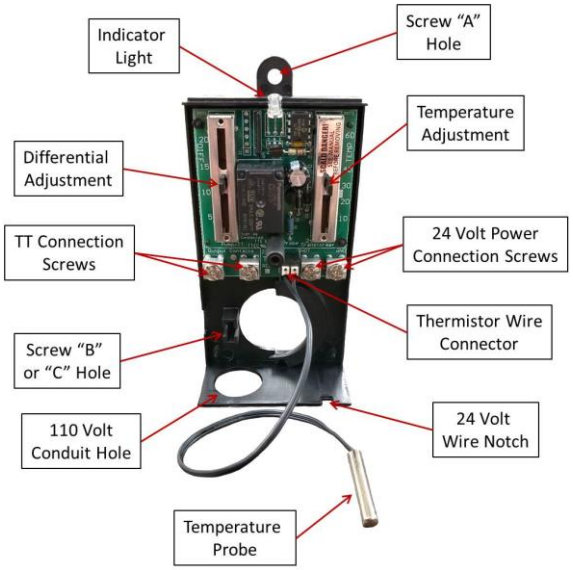
THERMOSTAT DIAGRAM 1

ETC102 LAYOUT



THERMOSTAT DIAGRAM 2

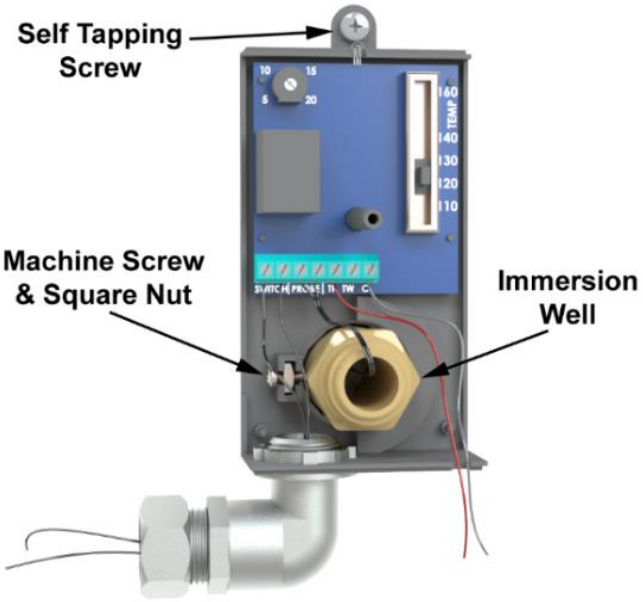
TPI LAYOUT

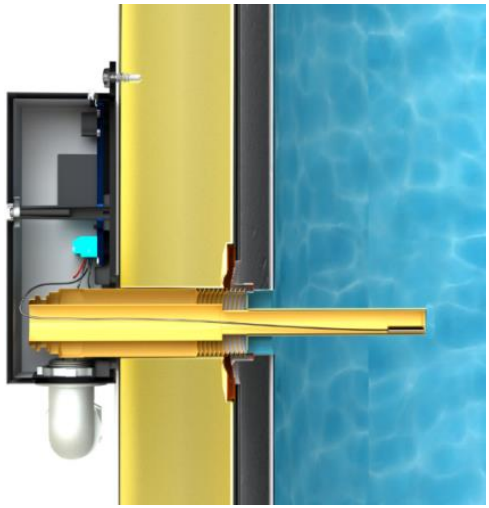


THERMOSTAT DIAGRAM 3

CONTROL INSTALLATION

ETC102 or TPI

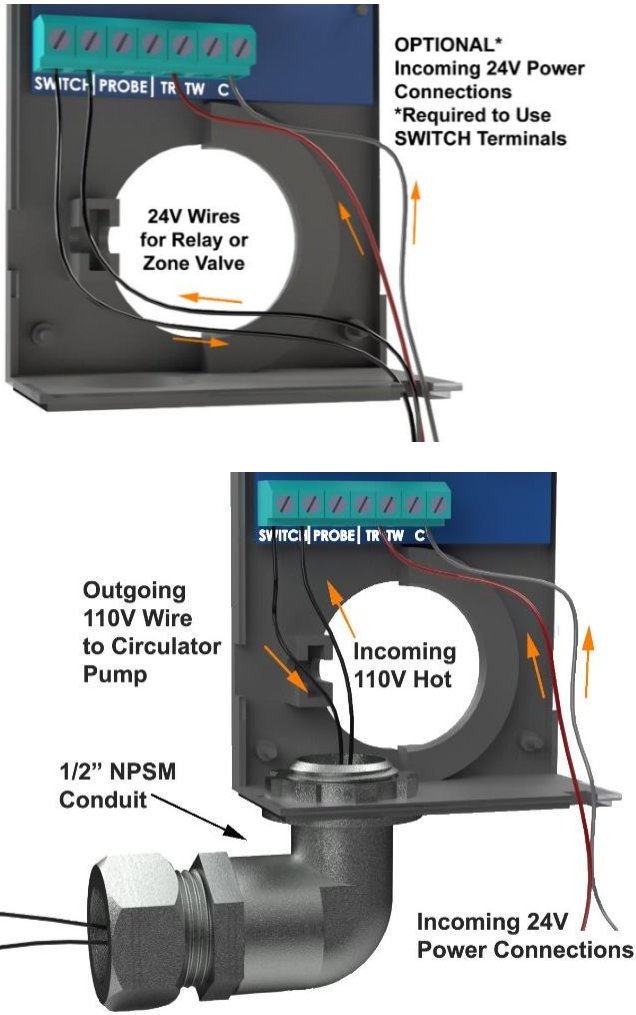




THERMOSTAT DIAGRAM 4

ETC102 Wiring

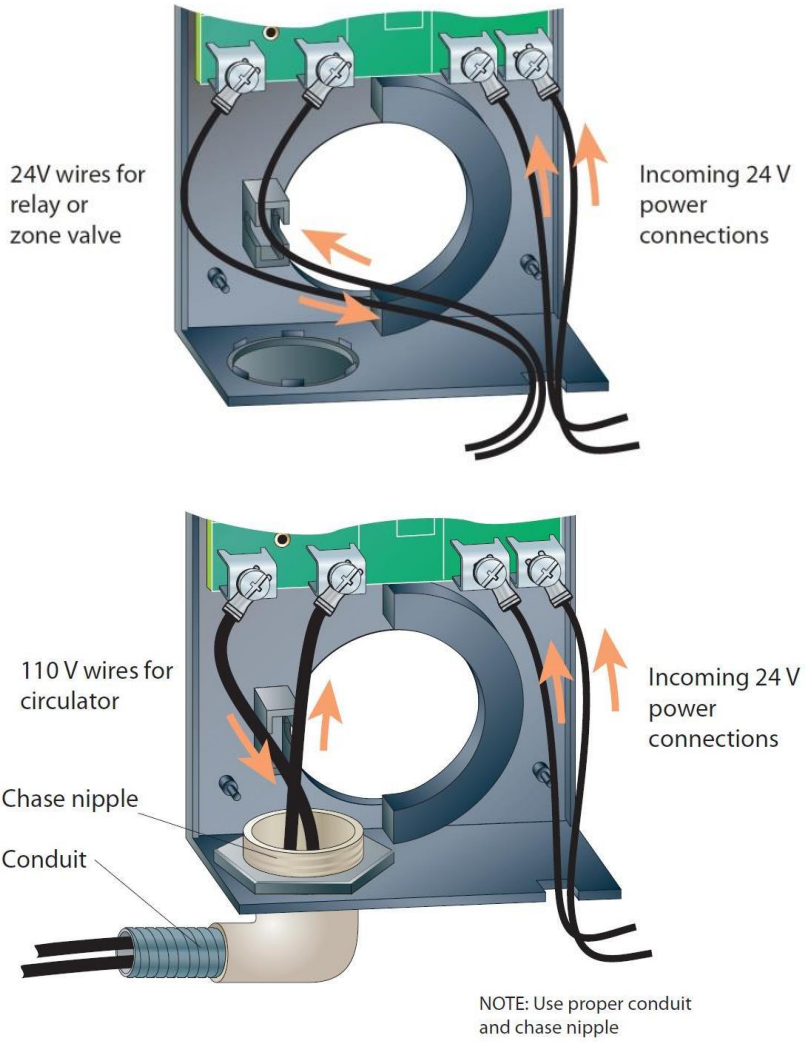
(Low Voltage Only)
(Blue Circuit Board)



THERMOSTAT DIAGRAM 5

TPI WIRING

(Green Circuit Board)
OUTPUT CONTACTS -24V IN



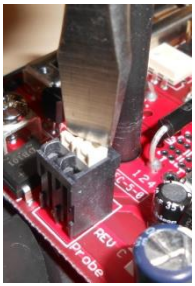
THERMOSTAT DIAGRAM 6

TPI PROBE WIRE INSTALLATION

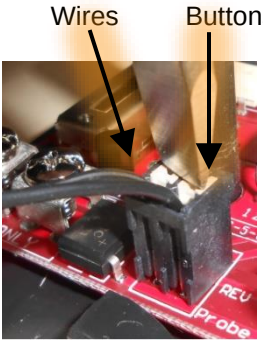
Inserting the probe wires into the press release connector

4.A – Position tool on top of white buttons
4.B – Push down on buttons and push wires down into holes in top of connector (This can also be done one side at a time)
4.C – Tug on each wire to make sure they are secure

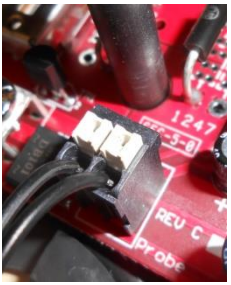
4.A. Buttons



4.B. Buttons down, Wires pushed down

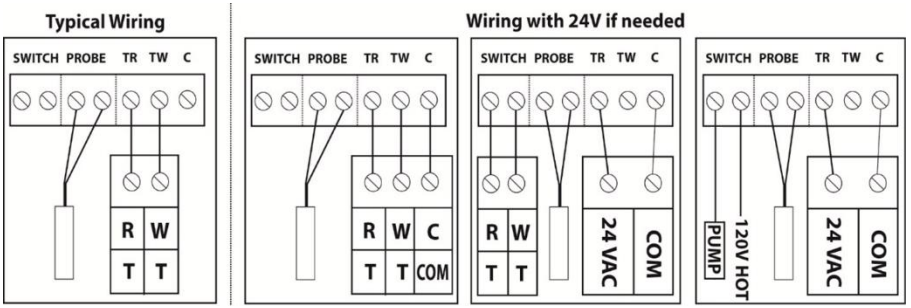


4.C. Buttons up, Wires tight



THERMOSTAT DIAGRAM 7

ETC102 WIRING



For TPI Thermostats, and switch contacts on ETC102, 24V Power is required.

FIGURE 1

Sealing Mechanism

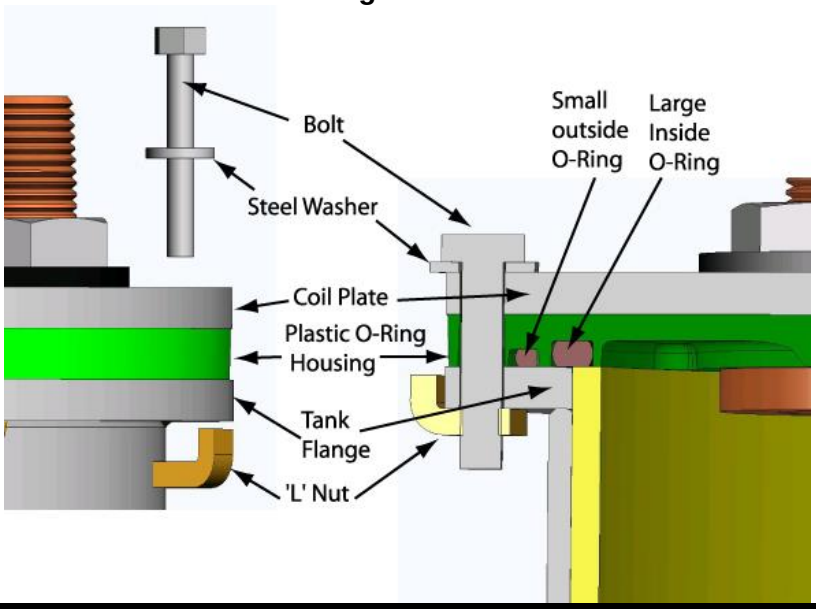


FIGURE 2

Coil Installation

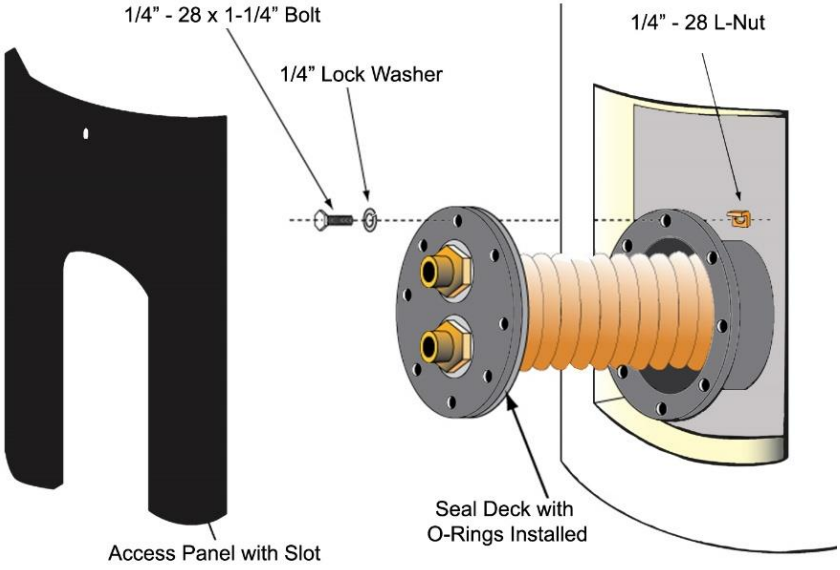
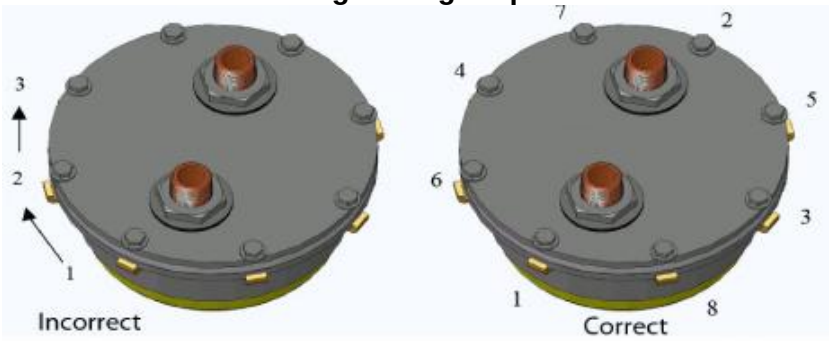


FIGURE 3

Tightening Sequence

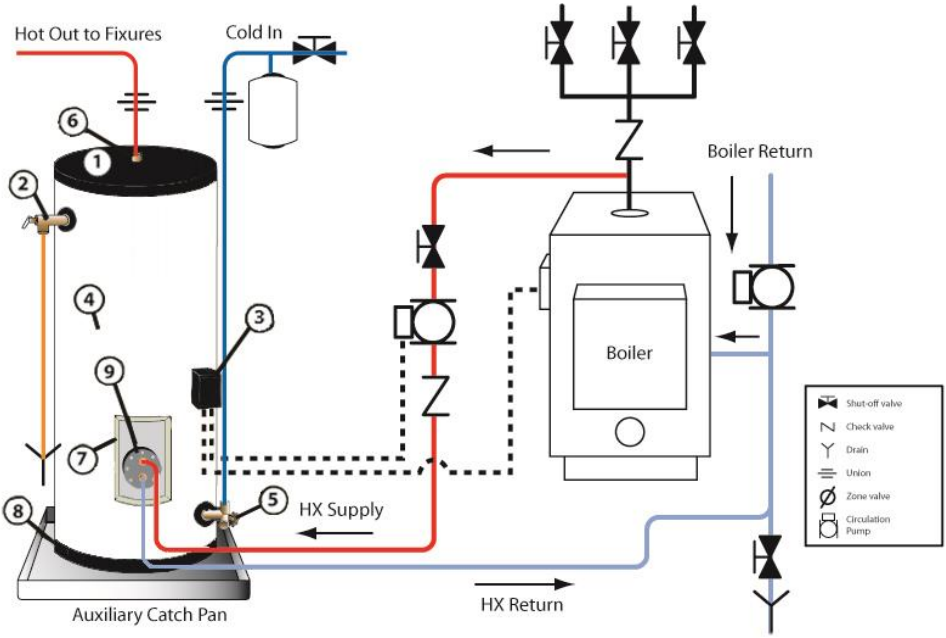


Note:- Same as car tire lugs

Caution: Does not require excessive force to seal properly.

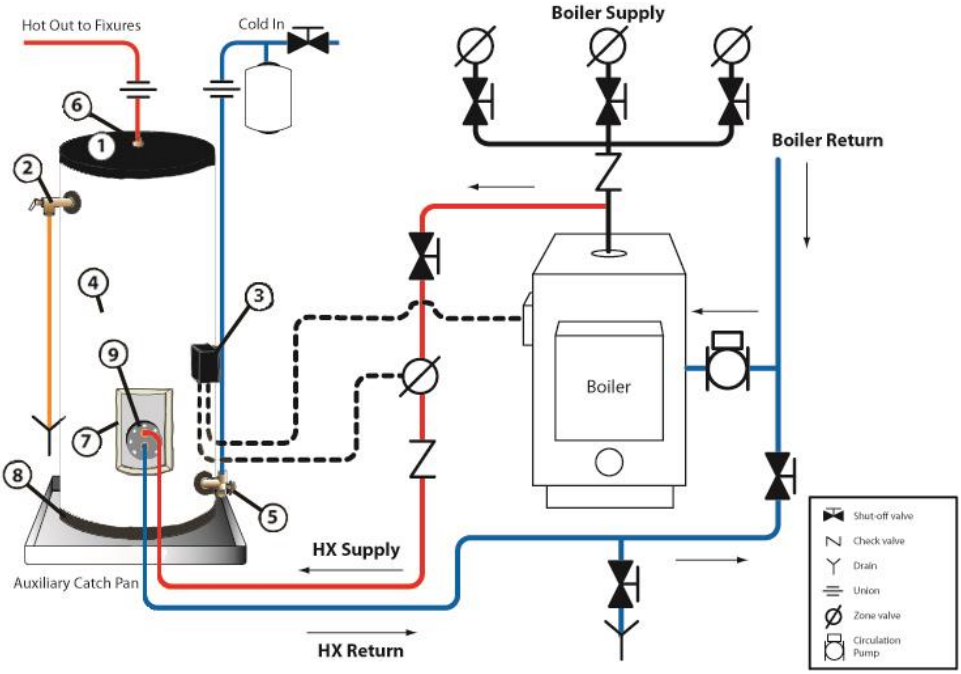
INSTALLATION DIAGRAM 1

Circulator Installation



INSTALLATION DIAGRAM 2

Zone Valve Installation



1. **Top Pan**
2. **Relief Valve** – Located at the top of the water heater, designed to automatically activate if tank reaches dangerous temperatures or pressures.
3. **Automatic Thermostat** – For constant temperature control, thermostats are specifically designed for Hydrastone® water heaters.
4. **Plastic Jacket** – Durable & easy-to-clean jacket is hi density plastic.
5. **Water Diffuser** – Introduces cold water at the bottom of the tank in a flat, gentle swirl, preventing turbulent mixing with heated water above. Tank drain is also a part of the cold-water diffuser on S models but is separate on D Models.
6. **Hot Water Outlet Nipple with Heat Trap** - Designed to keep hot water within the tank and reduce standby loss.
7. **High-Density Insulation** – Two or three inches of high-density foam blanket the storage tank.
8. **Bottom Pan**
9. **Heat Exchanger**– Side mount coil for external heating

SERVICE INFORMATION

Properly maintained, your water heater can provide years of dependable, trouble-free service. It is suggested that the purchaser follow the preventive maintenance program outlined below.

A. CONTROLS

- A periodic inspection of the operating controls and wiring should be made by qualified service personnel. The temperature of the water should be tested periodically at the faucet to be sure thermostats are working properly.

B. DRAINING THE HEATER

- **CAUTION: Shut off all power to the heater before draining water. To drain the tank, a hot water faucet must be opened to admit air to the tank.**
- Attach a hose to the drain valve on the heater.
- Close valve on the cold-water line to the heater.
- Open the drain valve and direct the water to a drain.
- Open a hot water faucet in the house higher than the heater.

C. CLEANING THE HEAT EXCHANGER

- Shut off the water supply to tank and boiler.
- Drain the heater as per section B.
- Remove the heat exchanger.
- Flush inside of heat exchanger with water and rinse the outside with water and scrub with soft bristled brush.
- Re-install heat exchanger.
- Turn on water and bleed air from the system.

D. ANNUAL INSPECTION

- Lift test lever on the temperature and pressure relief valve and let water run through valve for a period of approximately 10 seconds. This will help flush away any sediment that might build up in water passageways.
- Inspect tank fittings for leakage.
- Flush tank at 10 years (or earlier if needed).

E. LONG TERM SHUT DOWN

- If the water heater is to remain idle for an extended period of time, the power and water to the heater should be turned off to conserve energy.
- The water heater and piping should be drained if they might be subjected to freezing temperatures.
- After a long shutdown period, qualified service personnel should check the heater's operations and controls.
- Make certain the water is filled before placing it in operation.

F. EMERGENCY

- Should the heater be subject to flood, fire, or other damaging conditions, **DO NOT** place the water heater in operation again until it has been thoroughly checked by qualified service personnel.

HOW TO OBTAIN SERVICE ASSISTANCE

Vaughn Thermal Corporation does not have a service department or personnel to service your heater in the field. A qualified installer or service technician must do all service work. Therefore, if you have any questions about your new water heater concerning service adjustment, repair, routine maintenance, or replacement - **first contact your installer, plumbing contractor or service agency.**

In the event that the contractor, for whatever reason, is unable to help, refer to the telephone directory commercial listings for qualified service assistance.

If neither action has solved your problem, please have your plumbing contractor contact us for assistance.

CUSTOMER RELATIONS DEPARTMENT
General@vaughncorp.com
978-462-6683

VAUGHN THERMAL CORPORATION
26 OLD ELM STREET
P.O BOX 5431
SALISBURY, MA 01952

When contacting Vaughn, the following information should be made available:

A. Model and serial number of the water heater as listed on inside back cover of this manual or on the rating plate on the heater.

B. Address where water heater is installed.

C. Name and address of dealer from whom the heater was purchased and installer's name and address.

D. Date of original installation and any service work performed since then.

E. Details of the problem as you can best describe.

F. List of people who have been contacted regarding the problem.

WARRANTY

Seven Year Limited Tank Replacement Policy
One Year Limited Parts Warranty

Vaughn Thermal Corporation, (hereinafter called the Company) offers the following Limited Warranty and Tank Replacement Policy to the original purchaser/owner of this residential water heater.

This Limited Warranty and Tank Replacement Policy is not transferable beyond the original purchaser/owner and is not valid if the tank is removed from initial installation site. The Company reserves the right to require proof of purchase as a condition of this warranty. Excludes any implied warranty of merchantability or fitness for any particular purpose. This limited Warranty is the only Warranty for this unit given by the Company. No one is authorized to make any other warranties on behalf of the Company. ANY IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE WARRANTY PERIODS SPECIFIED PREVIOUSLY. THE Company SOLE LIABILITY, WITH RESPECT TO ANY DEFECT, SHALL BE AS SET FORTH IN THIS LIMITED WARRANTY, AND ANY CLAIMS FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGE FROM WATER LEAKAGE) ARE EXCLUDED.

LIMITED WARRANTY

DURATION: The warranty is effective for (1) one year beginning with the date of original installation and installed in a single-family dwelling. At the time the claim is filed, if the original purchaser cannot provide an original installation sales receipt, deed or equivalent document in the case of a new home purchase, this warranty shall begin from the date of manufacture as indicated by the serial number. If the heater is installed anywhere other than a single-family dwelling the warranty is (1) year beginning from the date of original purchase. At the time the claim is filed, If the original purchaser cannot provide an original sales receipt, deed, or equivalent document in the case of a new home purchase, this warranty shall begin from the date of manufacture as indicated by the serial number.
COVERAGE: The warranty covers any component part of the residential water heater proven to be defective in workmanship or material. Recovery under the terms of this agreement is subject to prior approval by the company.
COMPANY OBLIGATION: Repair or replacement is the option of the Company and constitutes the fulfillment of **ALL** obligations of the Company hereunder.
LIMITATION: All repairs or replacements will be made F.O.B. the Company. The purchaser must pay for transportation service, labor, installation, administrative fees, or other costs involving the repair or replacement of such component parts.
YOUR ACTION: When you discover a defect, immediately notify the dealer from whom the heater was purchased. If you cannot locate the dealer, contact the Company.

TANK REPLACEMENT POLICY

DURATION: The warranty is effective for (7) seven years beginning with the date of original installation and installed in a single-family dwelling. Exception: (5) five years for commercial use, see Limitations below. If the original purchaser cannot provide an original installation sales receipt, deed, or equivalent document in the case of a new home purchase, this warranty shall begin from the date of manufacture as indicated by the serial number.
COVERAGE: Replacement policy covers only the storage tank for leaks caused by the corrosive effects of the water under normal and proper use. Recovery under the terms of this agreement is subject to prior approval by the company. The tank replacement policy excludes any performance warranty implied or specific merchantability and fitness for its intended use.
COMPANY OBLIGATION: Repair of the original tank or replacement of the entire heater with a new comparable model is the option of the Company and constitutes the fulfillment of all the obligations

of the Company hereunder. In replacing or repairing the residential water heater, the Company reserves the right to make such changes in details of design, construction or material as shall in their judgment constitute an improvement of former practices.

REPLACEMENT: When a replacement is made under the terms of this policy, the replacement unit will have a policy of replacement only for the remaining time under the original policy. The Company reserves the right to require the return of the defective unit at the expense of the purchaser.

LIMITATION: The duration of the tank replacement policy on the tank assembly shall be reduced to a period of five years if (1) the purchaser is a business, partnership, or corporation, or if (2) the water heater is used for a commercial, institutional, industrial, non-residential, or multi-application. All repairs or replacements will be made F.O.B. the Company. The purchaser must pay for transportation, service, labor installation, administrative fees or other costs involving the repair or replacement of such part.

YOUR ACTION: When you discover a defect, immediately notify the dealer from whom the heater was purchased. If you cannot locate the dealer, contact the Company.

EXCLUSIONS AND LIMITATIONS

Limited Warranty and Tank Replacement Policy are valid only if you comply with the following conditions and limitations:

1. The water heater must be correctly installed according to the installation manual provided with the unit and all applicable local and national codes.
2. Proper safety practices such as but not limited to a properly sized drain pan.
3. The unit must be operated within the factory calibrated temperature limits and water pressure not exceeding 80 psi static pressure. Any failure or malfunction that results from improper or negligent operation, accident, abuse (including freezing), misuse, unauthorized alteration or improper maintenance is specifically excluded, fire, lightening, acts of God, and the like.
4. Any failure or malfunction that results from failure to keep the tank full of potable water, free to circulate at all times, and free of damaging water sediment or scale deposits, is specifically excluded. In areas where adverse water conditions are suspected (i.e., calcium and other minerals), it is essential that the water be tested, and appropriate action be taken to prevent damage to the water heater.
5. This Limited Warranty and Tank Replacement Policy specifically excludes any implied warranty of merchantability or of fitness for any particular purpose, as well as any performance warranty.
6. Installed in the United States, or Canada
7. Sized in accordance with proper sizing techniques for residential water heaters.
8. Connected to the proper voltage per rating plate.
9. Installed with no attempted, nor actual modification or alteration of the water heater's design in any way, including but not limited to, the attachment of non-company approved appliances or equipment, including any additional aftermarket equipment introduced into the sealed system.
10. Units with their rating plate removed.

IN NO EVENT SHALL THE COMPANY BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER.

Some states do not allow the exclusion or limitation of implied warranties or of liability for incidental or consequential damages, so the above limitation(s) or exclusion(s) may not apply to you.

The following information should be noted at time of installation and retained for future reference.

Model No: _____

Serial No: _____

Date Installed: _____

Dealer's Name: _____

Address: _____

City: _____

State: _____Zip: _____

VAUGHN
a nudyne company

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Salisbury, MA 01952-5431
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Revision 2.1