



Operation and Installation Manual



Vaughn Unlined Boiler Buffer

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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 tank 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 tank is placed in operation.
3. The unit is designed to operate at pressure not more than 150 psi.
4. **KEEP AWAY FROM LIVE ELECTRICAL CIRCUITS.** Do not perform any maintenance, make any adjustments, or replace any components inside the control panel with the high voltage power supply turned on. Under certain circumstances, dangerous potential may exist even when the power supply is off. To avoid casualties, always turn the power supply safety switch off, turn the charge or ground the circuit before performing any maintenance or adjustment procedure.
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 tank. If questions regarding installation arise, check with 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 tank. Do not power up the tank 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 tank. If such flammable materials must be used near the unit, open nearby doors and windows to allow for ventilation.
8. California law requires, and other states may require, that all new and replacement tanks, and all existing tank, must be braced, anchored, or strapped to resist falling or horizontal displacement due to earthquake motion. At a minimum, any tank shall be secured in accordance with the California Plumbing Code.

GENERAL INFORMATION

**PLEASE READ INSTRUCTIONS COMPLETELY
BEFORE INSTALLING TANK**

IMPORTANT OWNER'S RESPONSIBILITY

Vaughn Thermal Corporation (herein called the Company) specifically does not expressly or impliedly warrant the merchantability or the fitness for any particular purpose or the performance of the tank within that system, nor does it assume liability for any consequential damage to general property or other components of the system.

The Buffer Storage Tank is Not Hydrastone-lined and must be used in a closed loop system. This is not to be used for potable water. Potable water use will cause rapid corrosion and will void the warranty.

The design anticipates the proper installation and care in use of the product. There is 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 tank.

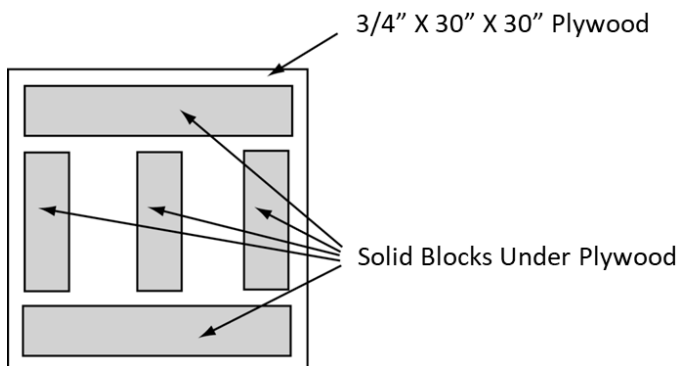
An installation checklist has been provided to help the customer ensure that all procedures for a safe installation have been followed.

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. LOCATION

- ❑ **CAUTION: The tank's outer jacket is plastic and can melt.**
- ❑ Place the tank on a solid foundation in a clean dry location nearest the boiler.
- ❑ Do not place the tank where there is a risk of property damage in the event of a leak.
- ❑ The tank should be protected from freezing, and water lines should be insulated to reduce energy and water waste.
- ❑ Do not install in an area where flammable liquids or combustible vapors are present.
- ❑ Do not install in close proximity to wood burning stove or other high temperature systems.
- ❑ **NOTE: If the tank is placed on blocks to raise it from the floor, be sure to support the entire bottom with at least $\frac{3}{4}$ " plywood on the top of the blocks.**



B. PROTECTION FROM WATER DAMAGE

- ❑ **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 failure to follow these instructions.

C. FILLING THE TANK

- ❑ Completely close the drain valve.
- ❑ Open the highest opening to allow all air to escape from piping.

- ☐ Open the valve to the cold-water and allow the tank and piping system to completely fill, as indicated by a steady flow of water from the outlet.
- ☐ Recommended to use a 1/2" Air Eliminator (Not Supplied).

D. STATE OF CALIFORNIA

- ☐ The tank must be braced, anchored, or strapped to avoid moving during an earthquake.
- ☐ Contact local utilities for code requirements in your area, visit <http://www.dsa.dgs.ca.gov>, or call 1-916-445-8100 and request instructions.

INSTALLATION CHECKLIST

1. LOCATION

- ☐ Solid foundation and dry location.
- ☐ Protect the tank water lines from freezing.
- ☐ Area free of flammable vapors.
- ☐ Sufficient room to service the tank.
- ☐ Not in close proximity to high temperature systems.
- ☐ A leak will not damage property.

2. 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 any connected fittings.

3. FILLING THE TANK

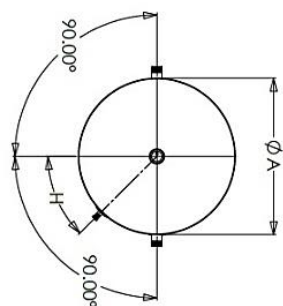
- ☐ Completely fill tank before turning on elements.
- ☐ Check for proper installation of fittings.
- ☐ Close drain valve.
- ☐ Open the highest outlet fitting.
- ☐ Open cold water inlet valve and fill system.
- ☐ Water connections free of leaks.

4. INSTALLATION COMPLETED AND CHECKLIST FILLED OUT

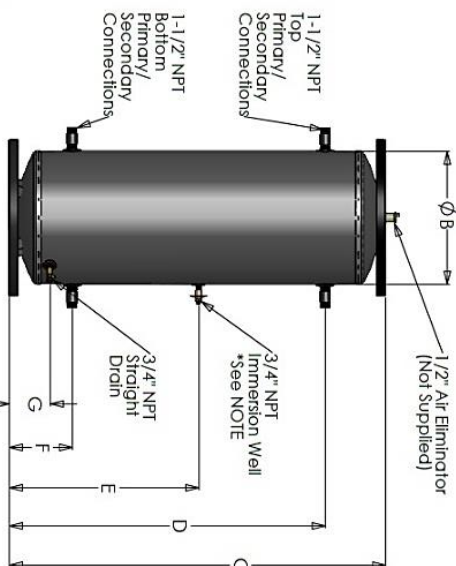
BY: _____

DATE: _____

FIGURE 1



* NOTE: Immersion well on 10 gallon will be centered on the front of the tank.



MODEL	A Jacket Diameter	B Tank Diameter	C Height to Pan	D Height to Top Connection	E Height to Immersion	F Height to Bottom Connection	G Height to Drain	H Angle of Drain
10D48	20	16	21.5	14.75	11.125	9	7.5	50
20D48	20	16	32.75	25.25	17.125	9	7.5	50
ME20D48	22.75	16	33.75	25.25	17.125	9	7.5	50
30D48	20	16	40.625	32.75	20.875	9	7.5	50
ME30D48	22.75	16	41.625	32.75	20.875	9	7.5	50
40D48	20	16	56.25	48.5	28.75	9	7.5	50
ME40D48	22.75	16	57.25	48.5	28.75	9	7.5	50
50D48	22.75	19	49.75	41.375	25.375	9.375	7.875	50
ME50D48	25	19	50.75	41.375	25.375	9.375	7.875	50
65D48	22	26	46.25	37.875	23.625	9.375	7.875	45
ME65D48	22	28	47.25	37.875	23.625	9.375	7.875	45
80D48	26	22	57.25	48.375	28.875	9.375	7.875	45
ME80D48	28	22	58.25	48.375	28.875	9.375	7.875	45
100D48	26	22	67.5	58.875	33.875	9.375	7.875	45
ME100D48	28	22	68.5	58.875	33.875	9.375	7.875	45
120D48	28	24	67.75	58.875	34.125	9.375	7.875	45
ME120D48	30	24	68.75	58.875	34.125	9.375	7.875	45

MAINTENANCE

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

A. ANNUAL INSPECTION

- ❑ Flush tank at 10 years (or earlier if needed).

B. DRAINING THE TANK

- ❑ To drain the tank, an opening must be opened to admit air to the tank.
- ❑ Close valve on the cold-water line to the tank.
- ❑ Attach a hose to the drain on the tank and direct to a drain.

C. LONG TERM SHUT DOWN

- ❑ The tank should be drained if it might be subjected to freezing temperatures.
- ❑ After a long shutdown period, qualified service personnel should check the tank's operations and controls.

D. EMERGENCY

- ❑ Should the tank be subject to flood, fire, or other damaging conditions, turn off the power and water to the tank.
- ❑ **DO NOT place the tank 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 tank in the field. A qualified installer or service technician must do all service work. Therefore, if you have any questions about your new tank concerning service adjustment, repair, routine maintenance, or replacement - **first contact your installer, plumbing contractor, or service agency.**

In the event that the contractor 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:

1. **The model and serial number of the tank as listed on the rating plate on the tank.**
2. **Address where tank is installed.**
3. **Name and address of dealer from whom the tank was purchased and installer's name and address.**
4. **Date of original installation and any service work performed since then.**
5. **Details of the problem as you can best describe.**
6. **List of people who have been contacted regarding the problem.**

WARRANTY

Three 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 (3) three years beginning with the date of original installation and installed in a single-family dwelling. 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, lightning, 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: _____



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