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**Project:** Ritz Theater – Phase 3

**Supplier:** Sanders Supply

**Submittal:** Plumbing Equipment

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**Drawing # and Installation:** Plumbing Drawings

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**23-1004**

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# **Ritz Theater Phase 3**

**Malvern, AR**

**Comfort Systems USA**

**North Little Rock, AR**

**Operation & Maintenance**

***Sanders Supply* 8**

**Hot Springs, AR**

**August 7, 2023**

**P-5**

# Commercial Point-of-Use Electric Water Heater **USE & CARE MANUAL**

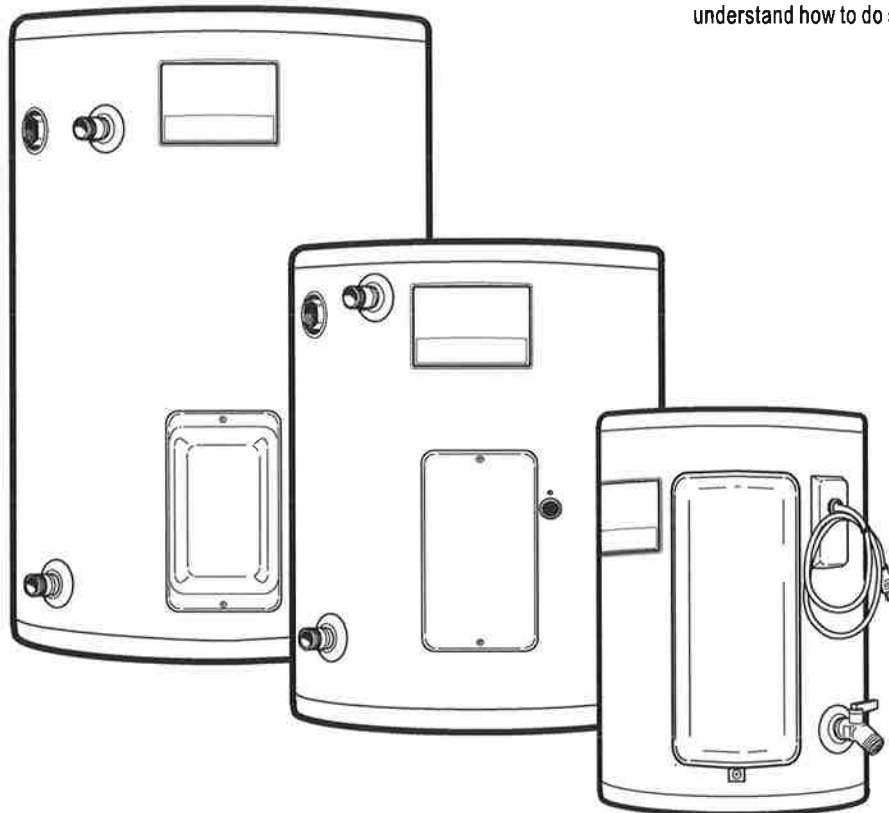


LISTED  
786H

WITH INSTALLATION INSTRUCTIONS FOR THE CONTRACTOR

The purpose of this manual is twofold: one, for the installing contractor, to provide requirements and recommendations for the proper installation and adjustment of the water heater; and two, for the owner-operator, to explain the features, operation, safety precautions, maintenance and trouble shooting of the water heater. This manual also includes replacement parts information.

It is imperative that all persons who are expected to install, operate or adjust this water heater read the instructions carefully so that they may understand how to do so.



**Do Not Destroy this Manual. Please read carefully and keep in a safe place for Future Reference.**



**Recognize this symbol as an Indication of Important Safety Information!**



**NOTICE: This water heater is designed for use in a commercial application and the installation and maintenance of it should be performed by qualified, licensed service personnel. If the foregoing assumption is not appropriate, then we recommend that you obtain and retain our Residential Use & Care Manual.**



**CALIFORNIA PROPOSITION 65 WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.**

## ⚠️ General Safety Precautions

Be sure to read and understand the entire Use & Care Manual before attempting to install or operate this water heater. It may save you time and cost. Pay particular attention to the General Safety Precautions. Failure to follow these warnings could result in serious bodily injury or death. Should you have problems understanding the instructions in this manual, or have any questions, STOP, and get help from a qualified installer, service technician, or the local electric utility.

To meet commercial water use needs, the thermostat on this water heater is adjustable to deliver water up to 170°F. However, water temperatures over 125°F. can cause severe burns instantly or death from scalds. This is the preferred starting point for setting the control for supplying general purpose hot water.

shut off the elements. To find the hot water temperature being delivered, turn on a hot water faucet and place a thermometer in the hot water stream and read the thermometer.

The following chart details the relationship of water temperature and time with regard to scald injury and may be used as a guide in determining the safest water temperature for your applications.


**TIME / TEMPERATURE RELATIONSHIPS IN SCALDS**

Temperature	Time to Produce Serious Burn
120° F	More than 5 minutes
125° F	1½ to 2 minutes
130° F	About 30 seconds
135° F	About 10 seconds
140° F	Less than 5 seconds
145° F	Less than 3 seconds
150° F	About 1½ seconds
155° F	About 1 second

Table courtesy of Shriners Burn Institute

The temperature of the water in the heater can be regulated by adjusting the thermostat. To comply with safety regulations the thermostat was set at the factory to a setting corresponding to 120°F.

⚠️ DANGER



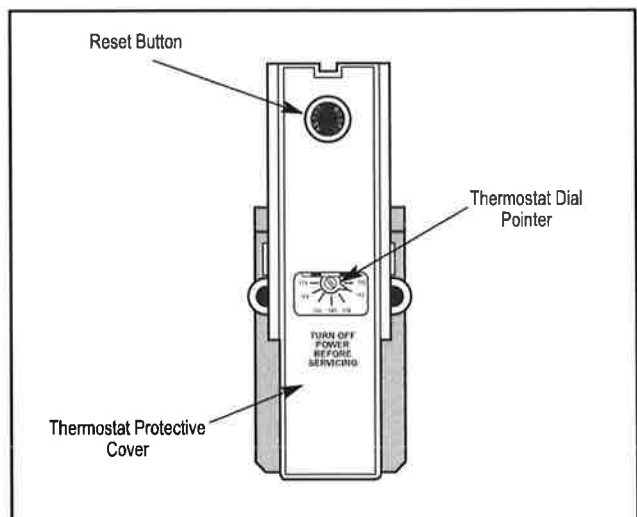
**Water temperature over 125°F can cause severe burns instantly or death from scalds.**

**Children, disabled and elderly are at highest risk of being scalded.**

**See instruction manual before setting temperature at water heater.**

**Feel water before bathing or showering.**

**Temperature limiting valves are available, see manual.**



The illustration above shows the temperature adjustment dial used for setting the water temperature. Refer to Operation section of this manual for detailed instructions in how to adjust the thermostat(s).

### ⚠️ DANGER

There is a Hot Water SCALD Potential if the thermostat is set too high.

**NOTE:** When this water heater is supplying general purpose hot water requirements for use by individuals, a thermostatically controlled mixing valve for reducing point of use water temperature is recommended to reduce the risk of scald injury. Contact a licensed plumber or the local plumbing authority for further information.

Safety and energy conservation are factors to be considered when setting the water temperature on the thermostat. The most energy efficient operation will result when the temperature setting is the lowest that satisfies the needs consistent with the application. Maximum water temperatures occur just after the thermostat has

## Introduction

The location chosen for the water heater must take into consideration the following:

### LOCAL INSTALLATION REGULATIONS

This water heater must be installed in accordance with these instructions, local codes, utility company requirements or, in the absence of local codes, the latest edition of the National Electrical Code. It is available from some local libraries or can be purchased from the National Fire Prevention Association, Batterymarch Park, Quincy, MA 02269 as booklet ANSI/NFPA 70.

### LOCATION

This water heater is designed to meet a wide range of applications. It fulfills a demand for a small water heater that can be installed in a limited space such as under counter tops, in cabinets or in a closet. Locate the water heater in a clean dry area as near as practical to hot water fixtures, or close to the hot water faucet most frequently used. Place the water heater in such a manner that the thermostat and element access panels can be removed to permit inspection and servicing such as removal of elements or checking controls. The water heater and water lines should be protected from freezing temperatures. Do not install the water heater in outdoor, unprotected areas.

### CAUTION

The water heater should not be located in an area where leakage of the tank or connections will result in damage to the area adjacent to it or to

lower floors of the structure. Where such areas cannot be avoided, it is recommended that a suitable catch pan, adequately drained, be installed under the water heater.

**NOTE: Auxiliary catch pan installation MUST conform to local codes.**

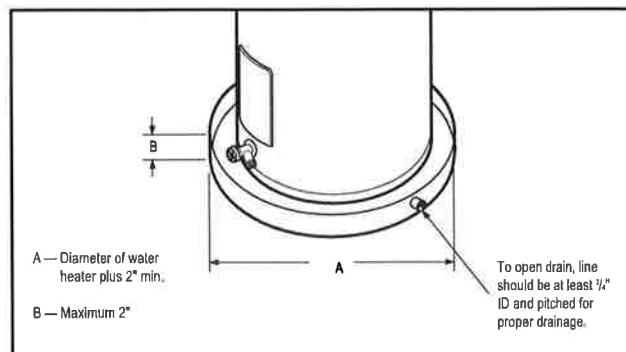


Figure 1. — Auxiliary Catch Pan

Catch Pan Kits are available from the distributor or store where the water heater was purchased

## Installation

- 1. INSPECT SHIPMENT** — Inspect the water heater for possible damage. Check the markings on the rating plate of the water heater to be certain the power supply corresponds to that for which the water heater is equipped.
- 2. THERMAL EXPANSION** — Determine if a check valve exists in the inlet water line. It may have been installed in the cold water line as a separate back flow preventer, or it may be part of a pressure reducing valve, water meter or water softener. A check valve located in the cold water inlet line can cause what is referred to as a "closed water system". A cold water inlet line with no check valve or back flow prevention device is referred to as an "open" water system.

As water is heated, it expands in volume and creates an increase in the pressure within the water system. This action is referred to as "thermal expansion". In an "open" water system, expanding water which exceeds the capacity of the water heater flows back into the city main where the pressure is easily dissipated.

A "closed water system", however, prevents the expanding water from flowing back into the main supply line, and the result of "thermal expansion" can create a rapid, and dangerous pressure increase in the water heater and system piping. This rapid pressure increase can quickly reach the safety setting of the relief valve, causing it to operate during each heating cycle. Thermal expansion, and the resulting rapid, and repeated expansion and contraction of components in the water heater and piping system can cause premature failure of the relief valve, and possibly the heater itself. Replacing the relief valve **will not** correct the problem!

The suggested method of controlling thermal expansion is to install an expansion tank in the cold water line between the water heater and the check valve. The expansion tank is designed with an air cushion built in that compresses as the system pressure increases, thereby relieving the over pressure condition and eliminating the repeated operation of the relief valve. Other methods of controlling thermal expansion are also available. Contact your installing contractor, water supplier, or plumbing inspector for additional information regarding this subject.

**IMPORTANT!! Do not apply heat to the hot or cold water supply fitting. If sweat connections are used, sweat tubing to adapter before fitting adapter to cold water inlet of heater. Any heat applied to the hot or cold water supply fittings will permanently damage them.**

- 3. WATER SUPPLY CONNECTIONS** — Refer to Fig. 2 or 3 for suggested typical installation. The installation of unions or flexible copper connectors on the water connections is recommended so that the water heater may be easily disconnected for servicing if necessary. Connect cold water supply line to 3/4" pipe connection near the bottom of water heater. (Refer to Figure 2.) Install a shut-off valve and a drain valve (not supplied) in the cold water line near the water heater (Refer to Fig. 2.). Connect hot water line to 3/4" pipe connection marked HOT on the side near the top of the water heater. On the some models, the hot and cold water connections are 1/2" pipe connections and are located on top of the heater. (Refer to Figure 3.) A drain valve is supplied on these models. Local codes may require an Anti-Siphon device on the water inlet of a side connect water heater.

# Installation

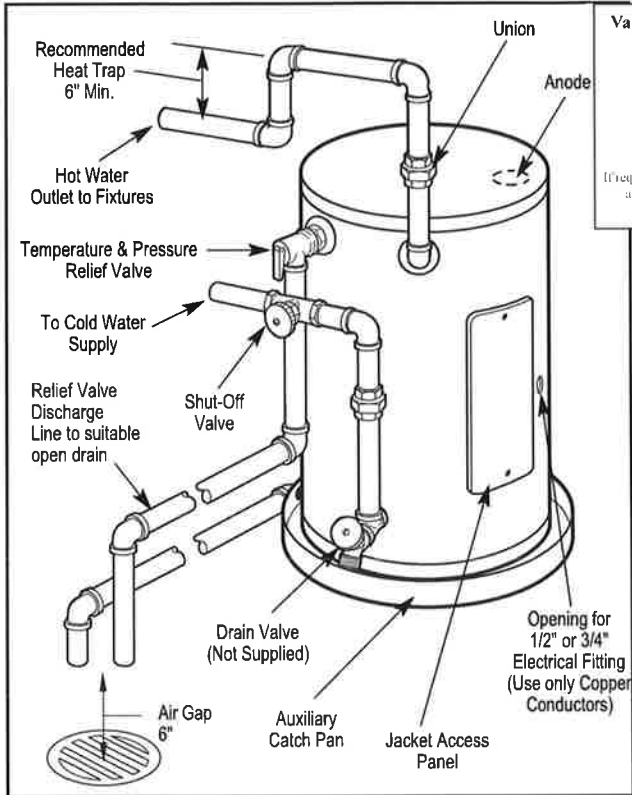


Figure 2. — Typical Side Connect Installation

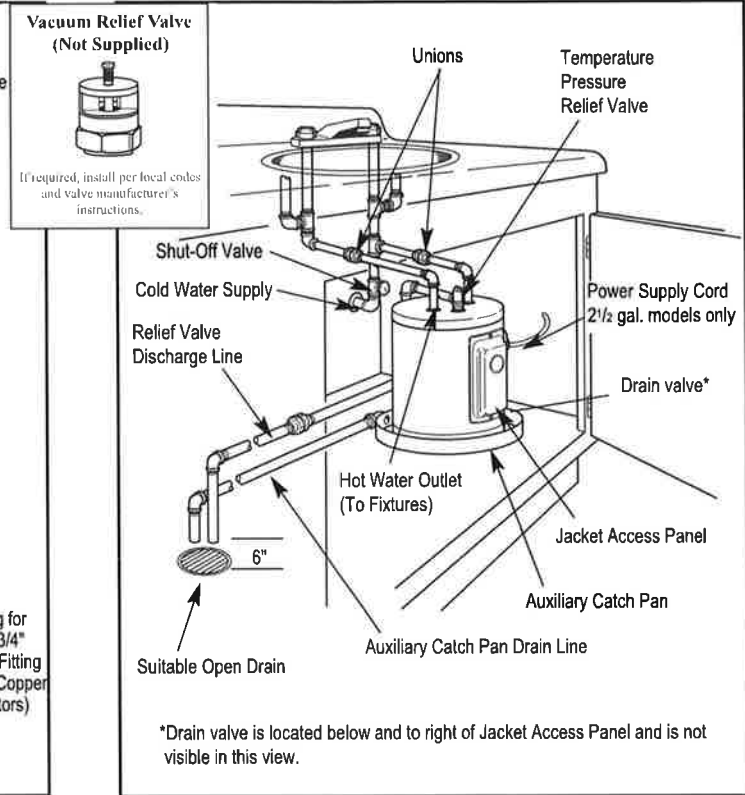


Figure 3. — Typical Under Counter Top Connect Installation

4. **RELIEF VALVE** — A new combination pressure and temperature relief valve, complying with the Standard for Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems, ANSI Z21.22, must be installed in the opening provided and marked for the purpose on the water heater. (Refer to Fig. 2 or 3.) No valve of any type should be installed between the relief valve and the tank. Local codes shall govern the installation of relief valves.

The pressure rating of the relief valve must not exceed 150 psi, the maximum working pressure of the water heater as marked on the rating plate. The BTUH Rating of the relief valve must not be less than the input rating of the water heater as indicated on the rating label located on the front of the heater (1 watt = 3.412 BTUH).

Connect the outlet of the relief valve to a suitable open drain so that the discharge water cannot contact live electrical parts and to eliminate potential water damage. Piping used should be of a type approved for hot water distribution. The discharge line must be no smaller than the outlet of the valve and must pitch downward from the valve to allow complete drainage (by gravity) of the relief valve and discharge line. The end of the discharge line should not be threaded or concealed and should be protected from freezing. No valve of any type, restriction or reducer coupling should be installed in the discharge line.

5. **TO FILL WATER HEATER** — Make certain drain valve is completely closed. Open shut-off valve in cold water supply line. Open each hot water faucet slowly to allow air to vent from the water heater and piping. A steady flow of water from the hot water faucet(s) indicates a full water heater.

## WARNING

Tank **MUST BE** full of water before power is turned on. Heating element(s) **WILL BE DAMAGED** if energized for even a short time while tank is dry. The water heater's warranty does not cover damage or failure resulting from operation with an empty or partially empty tank. (Reference is made to the limited warranty for complete terms and conditions.)

6. **ELECTRICAL CONNECTIONS** — The voltage requirements and wattage load for all heaters is specified on the rating plate. Table 1 recommends minimum branch circuit sizing based on the National Electrical Code. All wiring must conform to local codes or latest edition of National Electrical Code ANSI/NFPA 70.

Some models are supplied with a plug connected power supply cord for use only in 120 VAC applications. The cord must be connected to a properly

Total Water Heater Wattage	Recommended Over Current Protection (Fuse or Circuit Breaker) Amperage Rating					Copper Wire Size - AWG Based on N.E.C. Table 310-16 (75°C.)				
	120V	208V	240V	277V	480V	120V	208V	240V	277V	480V
1440	15	—	—	—	—	14	—	—	—	—
1500	20	15	15	15	15	12	14	14	14	14
2000	25	15	15	15	15	10	14	14	14	14
2500	30	15	15	15	15	10	14	14	14	14
3000	35	20	20	15	15	8	12	12	14	14
4500	—	30	25	25	15	—	10	10	10	14
6000	—	40	35	30	20	—	8	8	10	12

Table 1. — Branch Circuit Sizing and Wire Size Guide Based on N.E.C. ANSI / NFPA 70

# Installation

grounded receptacle on a branch circuit with copper conductors, an over current protection device and a suitable disconnect means. If desired, straight field wiring connections can be made to these models by removing the access cover on front of the heater and disconnecting the cord set from the thermostat and the grounding lug. Remove the cord set and strain relief bushing from the junction bracket. The hole in the junction bracket will accommodate 1/2" or 3/4" electrical fittings. Refer to wiring diagrams on back cover of this manual for wiring connections.

Some models are completely wired to the junction bracket inside the jacket at the front of the water heater. An opening for 1/2" or 3/4" electrical fitting is provided for field wiring connections. A separate branch circuit with copper conductors, overcurrent protective device and suitable disconnecting means must be provided by a qualified electrician. Refer to wiring diagrams on back cover of this manual for wiring connections.

## CAUTION

The presence of water in the piping and water heater does not provide sufficient conduction for a ground. Non-metallic piping, dielectric unions, flexible connectors etc. can cause the water heater to be electrically isolated.

The branch circuit wiring should include either:

- A. Metallic conduit or metallic sheathed cable approved for use as a grounding conductor and installed with fittings approved for the purpose.
- B. Non-metallic sheathed cable or metallic conduit or metallic sheathed cable not approved for use as a ground conductor shall include a

separate conductor for grounding. It should be attached to the ground terminals of the water heater and the electrical distribution box.

## WARNING

The manufacturer's warranty does not cover any damage or defect caused by installation, attachment or use of any type of energy saving or other unapproved devices (other than those authorized by the manufacturer) into, onto or in conjunction with the water heater. The use of unauthorized energy saving devices may shorten the life of the water heater and may endanger life and property. The manufacturer disclaims any responsibility for such loss or injury resulting from the use of such unauthorized devices.

If local codes require external application of insulation blanket kits the manufacturer's instructions included with the kit must be carefully followed.

## CAUTION

Application of any external insulation to this water heater will require careful attention to the following:

- Do not cover the temperature and pressure relief valve.
- Do not cover jacket access panels to thermostats and heating elements.
- Do not cover electrical junction box of water heater.
- Do not cover operating or warning labels attached to the water heater nor attempt to relocate them on exterior of insulation blanket.

# Installation Check List

## A. Water Heater Location

- Close to area of heated water demand.
- Indoors and protected from freezing temperatures.
- Area free of flammable vapors.
- Provisions made to protect area from water damage.
- Sufficient room to service water heater.

## B. Water Supply

- Water heater completely filled with water.
- Water heater and piping air vented.

- Water connections tight and free of leaks

## C. Relief Valve

- Temperature and Pressure Relief Valve properly installed and discharge line run to open drain
- Discharge line protected from freezing.

## D. Wiring

- Power supply voltage agrees with water heater rating plate.
- Branch circuit wire and fusing or circuit breaker of proper size.
- Electrical connections tight and unit properly grounded.

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_ Date of Installation \_\_\_\_\_ Installed By: \_\_\_\_\_



# Operation

## SAFETY PRECAUTIONS

- A. **Do** turn off power to water heater if it has been subjected to over heating, fire, flood or physical damage.
- B. **Do Not** turn on water heater unless it is filled with water.
- C. **Do Not** turn on water heater if cold water supply shut-off valve is closed.
- D. If there is any difficulty in understanding or following the OPERATION or MAINTENANCE instructions, it is recommended that a qualified person or serviceman perform the work.

### CAUTION

Hydrogen gas can be produced in a hot water system served by this water heater that has not been used for a long period of time (generally two weeks or more). **HYDROGEN GAS IS EXTREMELY FLAMMABLE!!** To dissipate such gas and to reduce risk of injury, it is recommended that the hot water faucet be opened for several minutes at the kitchen sink before using any electrical appliance connected to the hot water system. If hydrogen is present, there will probably be an unusual sound such as air escaping through the pipe as the water begins to flow. **Do not** smoke or use an open flame near the faucet at the time it is open.

1. **WATER TEMPERATURE SETTING** — The temperature of the water in the water heater can be regulated by setting the temperature dial of the adjustable surface mounted thermostat located behind the jacket access panel. To comply with safety regulations the thermostat is factory set at 120° F or less where local codes require.

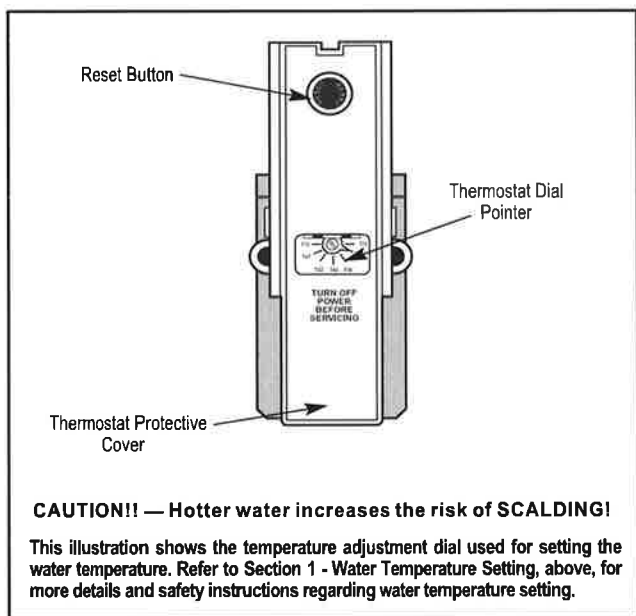


Figure 4. — Thermostat and Protective Cover.

Safety and energy conservation are factors to be considered when selecting the water temperature setting of the water heater's thermostat. The lower the temperature setting the greater the savings in energy and operating costs.

### CAUTION

There is a Hot Water SCALD Potential if the thermostat is set too high.

**NOTE:** When this water heater is supplying general purpose hot water requirements for use by individuals, a thermostatically controlled mixing valve for reducing point of use water temperature is recommended to reduce the risk of scald injury. Contact a licensed plumber or the local plumbing authority for further information.

## TIME / TEMPERATURE RELATIONSHIPS IN SCALDS

Temperature	Time to Produce Serious Burn
120° F	More than 5 minutes
125° F	1 1/2 to 2 minutes
130° F	About 30 seconds
135° F	About 10 seconds
140° F	Less than 5 seconds
145° F	Less than 3 seconds
150° F	About 1 1/2 seconds
155° F	About 1 second

Table courtesy of Shriners Burn Institute

### CAUTION

**Make certain power to water heater is OFF before removing jacket access panel FOR ANY REASON.**

If adjustment is necessary, **turn off** power to water heater, remove jacket access panel and insulation exposing thermostat. The thermostat protective cover **should not be removed**. Set thermostat dial pointer, with a small screwdriver, to desired temperature. (Refer to Fig. 4.) Replace insulation and jacket access panel. Turn on power to water heater.

2. **SAFETY CONTROLS** — The water heater is equipped with a combination Thermostat and Temperature Limiting Control (ECO) that is located above the heating element in contact with the tank surface. If for any reason the water temperature becomes excessively high, the Temperature Limiting Control (ECO) breaks the power circuit to the heating element. Once the control opens, it must be reset manually.

### CAUTION

The cause of the High Temperature Condition must be investigated by qualified service personnel and corrective action taken before placing the water heater in service again.

To reset Temperature Limiting Control, **turn off** power to water heater, remove jacket access panel and insulation. **The thermostat protective**

## Operation

**cover SHOULD NOT be removed.** (Refer to Fig. 4.) Press red "RESET" button. Replace insulation and jacket access panel before turning on power to water heater.

### 3. EMERGENCY INSTRUCTIONS —

#### WARNING

If water heater has been subjected to flood, fire, or physical damage, turn off power and water to water heater. Do not operate the water heater again until it has been thoroughly checked by qualified service personnel.

4. **LONG TIME SHUT-DOWN** — If the water heater is to remain idle for an extended period of time, the power and water to the water heater should be turned off to conserve energy. The water heater and piping should be drained if they might be subjected to freezing temperatures.

**NOTE:** Refer to "Hydrogen Gas Caution" in Safety Precautions Section on page 6.

After a very long shut-down period, the water heater's operation and controls should be checked by qualified service personnel. Make certain the water heater is completely filled before again placing it in operation.

### 5. DRAINING HEATER —

#### CAUTION

Shut off power to water heater before draining water.

In order to drain water heater, turn off cold water supply, then it is necessary to open a hot water faucet or lift the handle on the relief valve to admit air to the tank. Attach a garden hose to the drain valve on the water heater and direct the stream of water to a drain where it will do no damage.

#### DANGER

The water drained from the tank may be hot enough to present a **SCALD HAZARD** and should be directed to a suitable drain to prevent injury or damage.

6. **ANODE** — This water heater is equipped with an anode rod designed to prolong the life of the glass lined tank. The anode is slowly consumed cathodically, thereby eliminating or minimizing corrosion of the glass lined tank.

Water sometimes contains a high sulfate and/or mineral content and together with the cathodic protection process can produce a hydrogen sulfide or rotten egg odor in the heated water. Chlorination of the water supply should minimize the problem.

**NOTE:** Do not remove the anode rod from the water heater's tank, except for inspection and/or replacement, as operation with the anode rod removed will shorten the life of the glass lined tank and will exclude warranty coverage.

## Maintenance

Properly maintained, your water heater will provide years of dependable trouble-free service. It is suggested that a routine preventive maintenance program be established and followed by the user. It is further recommended that a periodic inspection of the operating controls, heating element and wiring should be made by service personnel qualified in electric appliance repair.

### 1. ROUTINE PREVENTATIVE MAINTENANCE

- A. Most electrical appliances make some sound when in operation, even when new. If the hissing or singing sound level increases excessively, the electric heating element may require cleaning. Contact your installer or plumbing contractor to inspect.
- B. The area near the water heater must be kept free of flammable liquids such as gasoline or paint thinners, adhesives or other combustible materials.
- C. At least once a year, lift and release the lever handle on the temperature pressure relief valve, located near the top of the water heater, to make certain the valve operates freely and allow several gallons to flush through discharge line. Make certain the discharged water is directed to an open drain.

#### DANGER

Before manually operating the relief valve, make certain no one will be exposed to the danger of coming in contact with the hot water released by this valve. The water may be hot enough to create a **SCALD** hazard. The water released should be directed to a suitable drain to prevent injury or damage.

**NOTE:** If the temperature and pressure relief valve on the water heater discharges periodically, this may be due to thermal expansion in a "Closed" water system. Contact the water supplier or your plumbing contractor on how to correct this. **DO NOT** plug the relief valve outlet.

- D. A water heater's tank can act as a settling basin for solids suspended in the water. It is, therefore, not uncommon for hard water deposits to accumulate in the bottom of the tank. It is suggested that a few quarts of water be drained from the water heater's tank through the drain valve every month to clean the tank of these deposits.
- E. Rapid closing of faucets or solenoid valves in automatic water using appliances can cause a pounding "water hammer" sound. "Water hammer" can be described as a banging noise heard in a water pipe following an abrupt alteration of the flow with resulting pressure surges. Strategically located risers in the water pipe system can be used to minimize the problem. Also water hammer arresting devices are usually available from your plumber or local plumbing supply store.
2. **ANODE ROD INSPECTION** — The anode rod should be removed from the water heater's tank annually for inspection and replaced when more than 6" of core wire is exposed at either end of the rod. Refer to Fig. 2 for anode rod location. Make certain cold water supply is turned off before removing anode rod.

# Replacement Parts List

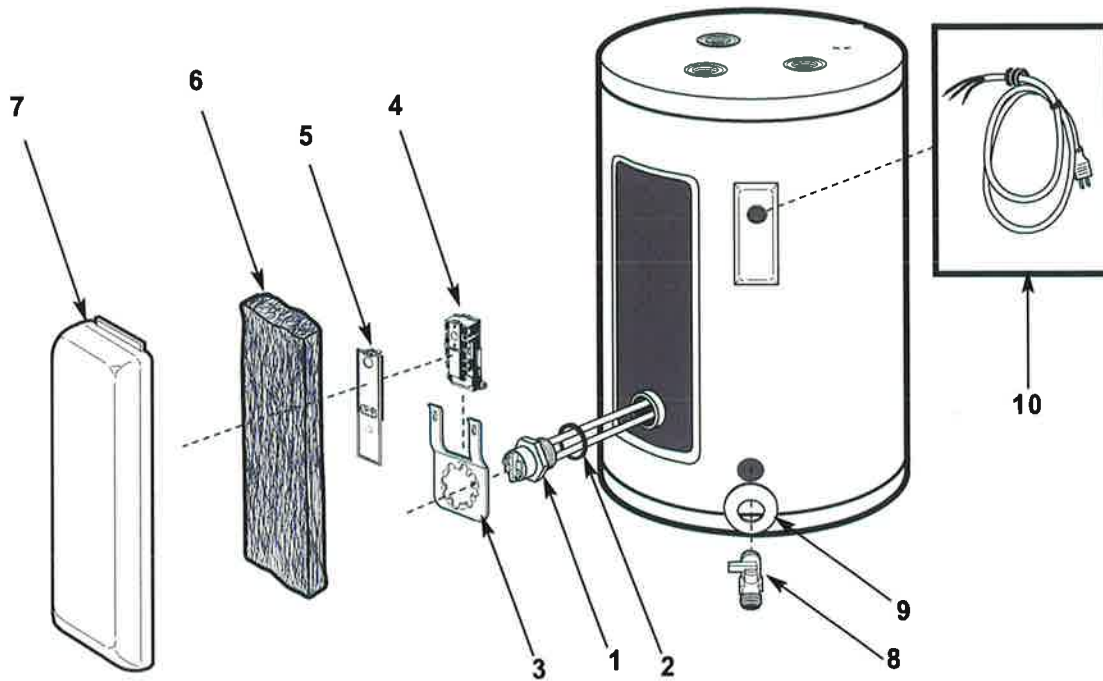
## Top Connect Models 120 or 240 Volt Operation

### Instructions for placing a Parts Order:

Address parts orders to the distributor or store from where the heater was purchased.

All parts orders should include:

1. Model number and Serial number of heater (from rating plate).
2. Specify voltage and wattage as marked on rating plate.
3. Part Description (as noted below) and number of parts desired.



Ref. No.	Part Description	Qty. Req'd
1.	Heating Element	1
2.	Heating Element Gasket	1
3.	Thermostat Bracket	1
4.	Thermostat	1
5.	Thermostat Protective Cover	1
6.	Cavity Insulation	1
7.	Jacket Access Panel	1
8.	Drain Valve	1
9.	Drain Valve Shroud	1
10.	Electrical Cord Set (120 VAC models ONLY)	1

**⚠ CAUTION**

For your safety, DO NOT attempt repair of electrical wiring, thermostats, heating elements or other operating controls. Refer repairs to qualified service personnel.

## Replacement Parts List

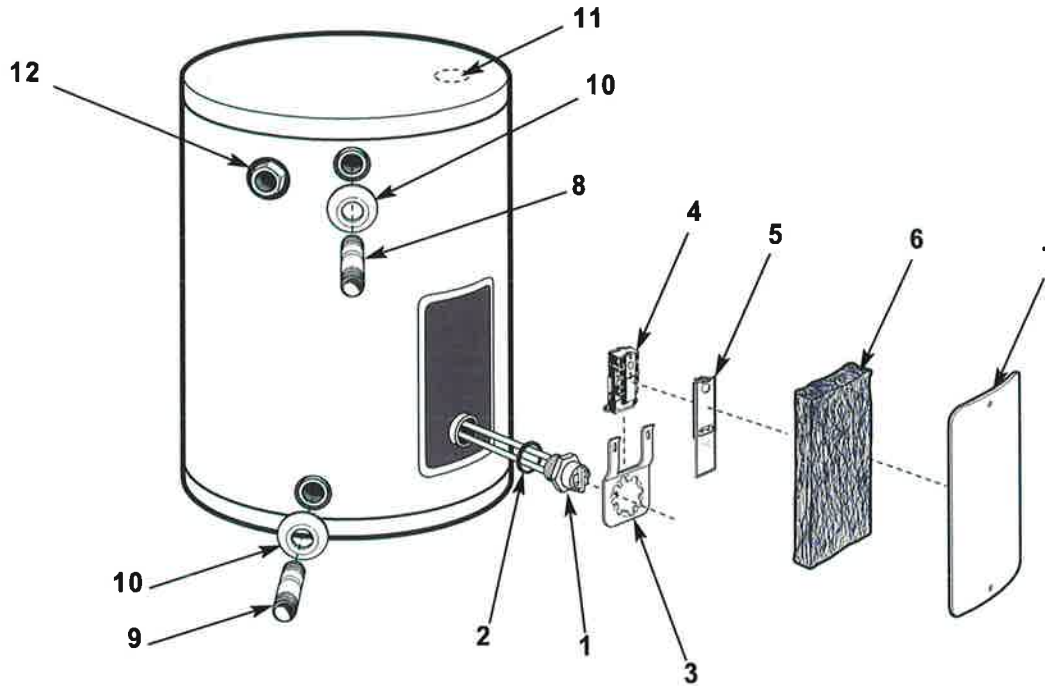
### Side Connect Models 120, 208, 240, 277 or 480 Volt Operation

#### Instructions for placing a Parts Order:

Address parts orders to the distributor or store from where the heater was purchased.

All parts orders should include:

1. Model number and Serial number of heater (from rating plate).
2. Specify voltage and wattage as marked on rating plate.
3. Part Description (as noted below) and number of parts desired.



Ref. No.	Part Description	Qty. Req'd
1.	Heating Element	1
2.	Heating Element Gasket	1
3.	Thermostat Bracket	1
4.	Thermostat	1
5.	Thermostat Protective Cover	1
6.	Cavity Insulation	1
7.	Jacket Access Panel	1
8.	Nipple, Hot Outlet/J-Tube (Not Shown)	1
9.	Nipple, Cold Inlet	1
10.	Shroud	As Req'd
11.	Anode Rod	1
12.	Snap Bushing	1

**CAUTION**

For your safety, DO NOT attempt repair of electrical wiring, thermostats, heating elements or other operating controls. Refer repairs to qualified service personnel.

## Trouble Shooting Guide

NATURE OF TROUBLE	POSSIBLE CAUSE	SERVICE
No Hot Water	1. Manual switch turned off 2. Improper Wiring 3. No Power — blown fuse or circuit breaker tripped a. Shorted wiring b. Circuit overloaded c. Improper wiring d. Grounded element or thermostat 4. Manual Reset Limit (ECO) open a. Thermostat(s) defective b. Thermostat out of calibration c. Heat build-up due to loose wires d. Defective Limit (ECO)	Turn to ON ** Rewire per Wiring Diagram  ** Replace or repair ** Provide adequate circuit or reduce load ** Rewire per diagram ** Replace Refer to "Operation Section" ** Replace ** Lower setting or replace ** Tighten wire connections ** Replace
Not enough Hot Water	1. Heater undersized 2. Defective Element(s) 3. Miswired or defective thermostat causing only one element to work	Reduce rate of hot water use ** Check amperage, replace element if low ** Check wiring or replace
Water too hot or not hot enough	1. Thermostat setting too high or low 2. Thermostat out of calibration	Change setting as required ** Replace
Noisy heating element(s)	1. Scale build-up on elements	** Remove and clean

**⚠ CAUTION**

\*\* For your safety, DO NOT attempt repair of Electrical Wiring, Thermostat(s), Heating Elements or other Operating Controls. Refer repairs to qualified service personnel.

### How to Obtain Service Assistance

1. Should you have any questions about your new water heater, or if it requires adjustment, repair, or routine maintenance, it is suggested that you first contact your installer, plumbing contractor or previously agreed upon service agency. In the event that the firm has moved, or is unavailable, refer to the telephone directory commercial listings or local utility for qualified service assistance.
2. Should your problem not be solved to your complete satisfaction, you should then contact the Manufacturer's National Service Department at the following address:

2600 Gunter Park Drive  
 Montgomery, Alabama 36109-1413  
 Phone: 1-800-432-8373.

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

- a. Model and serial numbers of the water heater as shown on the rating plate attached to the jacket of the heater.
- b. Address where water heater is located and can be seen.
- c. Name and address of installer and any service agency who performed service on the water heater.
- d. Date of original installation and dates any service work was performed.
- e. Details of the problem as you can best describe them.
- f. List of people, with dates, who have been contacted regarding your problem.

## Wiring Diagrams Therm-O-Disc Thermostats (Type 59T)

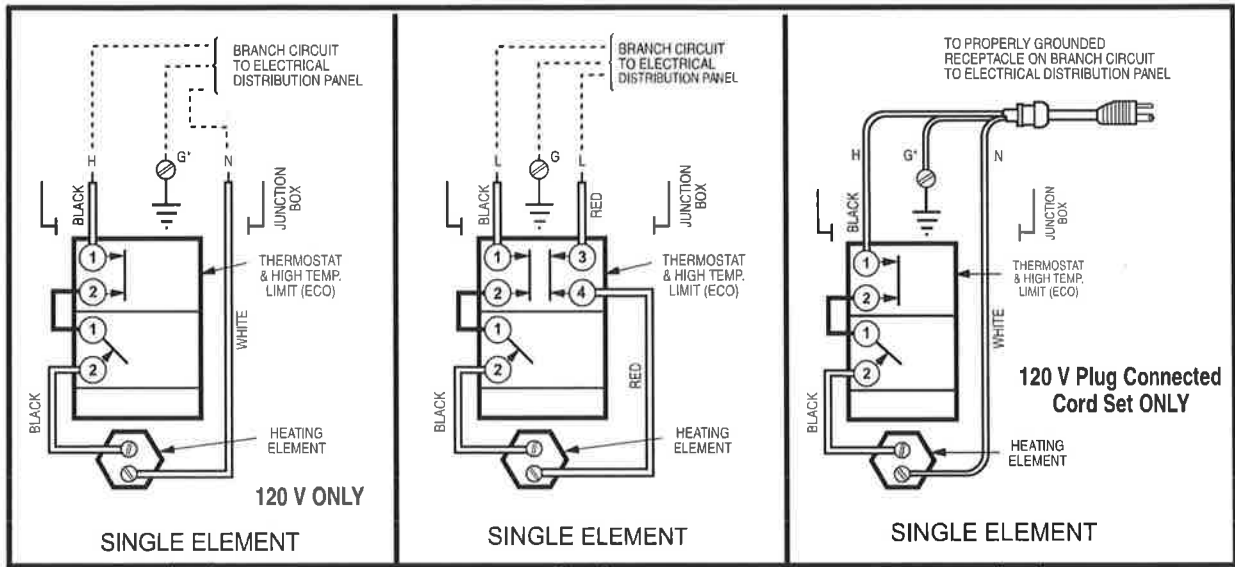


FIG. A

FIG. B

FIG. C

**THIS ELECTRIC WATER HEATER IS WIRED AS INDICATED ABOVE**

**EXCLUSIVE WARRANTY - LIMITATION OF LIABILITY**

This Limited Warranty is the only Warranty for this unit given by the Water Heater Division of Rheem Manufacturing Company. No one is authorized to make any other warranties on behalf of Rheem. **ANY IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE WARRANTY PERIODS SPECIFIED PREVIOUSLY. RHEEM'S 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.** Some states do not allow limitations on how long an implied warranty lasts, or for the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This Limited Warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

We suggest you immediately complete the information below and retain this Certificate of Limited Warranty in the event warranty service is needed. Reasonable proof of the date of installation of your commercial water heater may be required to establish its "in-warranty" status. Otherwise, the Effective Date of the Limited Warranty will be the date of manufacture of the commercial water heater plus ninety (90) days.

**DO NOT RETURN THIS DOCUMENT TO RHEEM.**

**KEEP IT WITH YOUR COMMERCIAL WATER HEATER OR BUSINESS RECORDS.**

Name of Owner/Business Location \_\_\_\_\_  
where this Commercial Water Heater is Installed: \_\_\_\_\_

Commercial Water Heater Installation Location Address: \_\_\_\_\_

Date Commercial Water Heater was Installed: \_\_\_\_\_

Name of Plumber/Mechanical Contractor - Installer: \_\_\_\_\_

Plumber/Mechanical Contractor - Installer's Address: \_\_\_\_\_

Telephone Number of Plumber/Mechanical Contractor - Installer: \_\_\_\_\_

Complete Model Number of Commercial Water Heater: \_\_\_\_\_

Complete Serial Number of Commercial Water Heater: \_\_\_\_\_

Rheem Water Heaters  
Claims Department  
2600 Gunter Park Drive East  
Montgomery, Alabama 36109

Important Telephone Numbers:  
Rheem Claims Department  
(800) 621-5622  
Rheem Technical Service Department  
(800) 432-8373

*Certificate of  
Limited  
Warranty*



**COMMERCIAL  
WATER HEATERS**

**COMMERCIAL GAS OR ELECTRIC  
WATER HEATERS  
WITH A 3 YEAR TANK AND 1 YEAR PARTS  
LIMITED WARRANTY**

**LIMITED WARRANTY**  
For the Rheem®-Ruud® Commercial Gas or Electric Storage Water Heater Models  
listed on the front of this document.

**GENERAL**

This Limited Warranty is only available to the original owner of this commercial water heater. It is not transferable.

Rheem Manufacturing Company (Rheem) warrants this Rheem®-Ruud® commercial water heater, and its component parts, to be free from defects in materials and workmanship, under normal use and service, for the Applicable Warranty Period. At its option, Rheem will repair or replace the defective commercial water heater, or defective component part(s), in accordance with the terms of this Limited Warranty, if it fails in normal use and service during the Applicable Warranty Period. The replacement commercial water heater must be manufactured by Rheem. The replacement component part(s) must be Rheem authorized component part(s). The replacement commercial unit will be warranted only for the unexpired portion of the original commercial unit's Applicable Warranty Period.

**EFFECTIVE DATE**

The Effective Date of warranty coverage (or the beginning of the Applicable Warranty Period) is the date of original installation of the commercial water heater, if properly documented. Otherwise, it is the date of manufacture of the commercial water heater plus ninety (90) days.

**APPLICABLE WARRANTY PERIODS**

The Applicable Warranty Period for the tank is three (3) years from the Effective Date. The Applicable Warranty Period for the component parts is one (1) year from the Effective Date (with the exception of LIFEGUARD™ elements for which the Applicable Warranty Period is three (3) years from the Effective Date).

**WARRANTY EXCLUSIONS**

This Limited Warranty will **not** cover:

- a) Service trips to teach you how to install, use, or maintain this commercial water heater or to bring the commercial water heater's installation into compliance with local building codes and regulations.
- b) Damages, malfunctions, or failures resulting from failure to install the commercial water heater in accordance with applicable building codes/ordinances or good plumbing and electrical trade practices.
- c) Damages, malfunctions, or failures resulting from improper installation or failure to operate and maintain the commercial water heater in accordance with the manufacturer's instructions provided.
- d) Performance problems caused by improper sizing of the commercial water heater or (pertaining to gas models) the gas supply line, the venting connection, or combustion air openings or (pertaining to electric models) electric service voltage, wiring, or fusing.
- e) Damages, malfunctions, or failures caused by improper conversion from natural gas to LP gas or LP gas to natural gas fuel source.
- f) Damages, malfunctions, or failures caused by operating the commercial water heater with the anode rod removed or with modified, altered, or unapproved parts installed.
- g) Damages, malfunctions, or failures caused by abuse, accident, fire, flood, freeze, lightning, acts of God, and the like.
- h) Tank failures (leaks) caused by operating the commercial water heater in a corrosive or contaminated atmosphere.
- i) Damages, malfunctions, or failures caused by operating the commercial water heater with an empty, or partially empty, tank (also known as "dry firing").
- j) Damages, malfunctions, or failures caused by operating the commercial unit at water temperatures exceeding the maximum setting of the operating, or high limit, control.
- k) Tank failures caused by operating the commercial water heater when it is not supplied with potable water, free to circulate at all times.
- l) Damages, malfunctions, or failures caused by subjecting the tank to pressures, or firing rates, greater than those shown on the rating label.
- m) Damages, malfunctions, or failures resulting from the use of any attachment, including any energy saving device, not authorized by Rheem.
- n) Commercial units installed outside the fifty states (and the District of Columbia) of the United States of America.
- o) Commercial units moved from the original installation location.
- p) Commercial units that have had their rating labels removed. A commercial water heater should not be operated if the rating label is removed.

**LABOR, SHIPPING, AND PROCESSING COSTS**

This Limited Warranty does not cover any labor expenses for service, repairs, reinstallation, permits, or removal and disposal of the failed commercial water heater, or defective component part(s). All such expenses are your responsibility.

Rheem will pay the transportation costs for an "in-warranty" replacement commercial water heater, or "in-warranty" replacement component part(s), to a convenient delivery point (selected by Rheem) near the place of the original commercial water heater, or original component part(s), is located, such as a local Rheem or Ruud water heater distributor. You must pay any local freight charges, including the cost of returning the failed commercial water heater, or defective component part(s), to a convenient shipping location (selected by Rheem), such as a local Rheem or Ruud water heater distributor.

Rheem does not authorize, recommend, or receive any benefit from any claims processing or similar fees charged by others to process warranty claims for any Rheem-Ruud commercial water heater, or component part(s). Rheem will not reimburse any party for these, or any other, fees not specifically covered in this Limited Warranty document.

**HOW TO OBTAIN WARRANTY CLAIM ASSISTANCE**

Any claim for warranty assistance must be made promptly. First, determine if your commercial water heater is "in-warranty" (that is, within the Applicable Warranty Period). You can determine your commercial unit's warranty status by obtaining the complete model number, the complete serial number, and the installation date of your commercial water heater and then accessing the "Warranty Verification" information on the Rheem Water Heater Division's internet website ([www.rheem.com](http://www.rheem.com)) or contacting Rheem Water Heaters' Claims Department (telephone number (800) 621-5622) during normal working hours to determine if the Applicable Warranty Period has expired.

If your commercial water heater is "in-warranty", contact the plumber, or mechanical contractor, that installed it for assistance with the warranty repairs, or replacement, required. You may also select a plumber, or mechanical contractor, from your local Yellow Pages to assist you. Rheem Water Heaters' Technical Service Department personnel are available to assist you - by telephone at (800) 432-8373 or via our internet website ([www.rheem.com](http://www.rheem.com)) - in obtaining "in-warranty" service or to answer your questions about the operation or repair of your commercial water heater during normal business hours. Be prepared to provide the plumber, mechanical contractor, or Rheem Technical Service person you call with the complete model number, the complete serial number, and the date of installation of your commercial water heater in addition to an explanation of your commercial water heater problem.

If an exact replacement is not available, Rheem will provide you with the current model of your commercial water heater, or component part(s), or a replacement unit with comparable operating features. If government regulations or industry certification or similar standards require the replacement commercial water heater, or the replacement component part(s), to have features not found in the defective commercial water heater, or the defective component part(s), you will be charged for the difference in price represented by those required features. If you pay the price difference for those required features and/or to upgrade the size and/or other features available on a replacement new commercial water heater, you will also receive a complete new Limited Warranty (with the full Applicable Warranty Period) for the replacement, new commercial water heater.

**DO NOT DESTROY, OR DISPOSE OF, ANY RHEEM-RUUD "IN-WARRANTY" FAILURE COMMERCIAL WATER HEATER, OR "IN-WARRANTY" DEFECTIVE COMPONENT PART(S), WITHOUT AUTHORIZATION FROM THE RHEEM TECHNICAL SERVICE DEPARTMENT.** Rheem reserves the right to inspect, or require the return of, the failed commercial water heater or the defective component part(s). Each "in-warranty" failure of a commercial water heater must be made available to Rheem (with the original rating label and all the component parts intact) in exchange for the replacement commercial water heater. Each defective "in-warranty" component part to be replaced must be returned to Rheem in exchange for the replacement component part. Warranty compensation is subject to validation of "in-warranty" coverage by Rheem Claims Department personnel.

To obtain warranty compensation for an "in-warranty" commercial water heater failure, you must provide Rheem with: (at Rheem's option) either the failed commercial water heater (with the rating label and all the component parts intact) or the complete original rating label (photocopies are not acceptable), removed from the failed commercial water heater; the complete model number and the complete serial number of the Rheem-Ruud commercial water heater that replaced the failed commercial unit; and, the date the original commercial water heater failed. You may also be required to provide documentary proof of the failed commercial water heater's date of installation to establish its "in-warranty" status.

To receive warranty compensation for an "in-warranty" defective component part you must provide Rheem with: the defective component part, the complete model number and the complete serial number of the Rheem-Ruud commercial water heater from which the defective component part was removed; and, the date the defective component part failed. You may also be required to provide documentary proof of the date of installation of the Rheem-Ruud commercial water heater from which the defective component part was removed - or the date of purchase of the component part (if it was purchased separately) - to establish the "in-warranty" status of the defective component part.

Warranty claim documentation should be mailed promptly to Rheem Water Heaters, Claims Department, 2600 Gunter Park Drive East, Montgomery, Alabama 36109.

(CONTINUED ON REVERSE)



# REVIEW OF PLUMBING SUBMITTALS

**Project:** Phase III Restoration of the Ritz Theater  
**Location:** Malvern, Arkansas **P&P Job No.** 22-024  
**Date of Receipt:** Monday, March 27, 2023  
**Date of Review:** Tuesday, March 28, 2023  
**Reviewed by:** Terry Jacks  
**Email:** [tjacks@pettitinc.com](mailto:tjacks@pettitinc.com)

Signed: 

Checking is for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site; for information that pertains solely to the fabrication processes or to techniques of construction; and for coordination of the work of all trades.

Item	Approval Status		Comments
Section 22 05 19 -Meters and Gauges	Approved as Corrected	○	-Provide hot water glass thermometers with range 30 degrees - 180 degrees F with 2 degree F scale divisions (0 degrees - 160 degrees Celsius) with 1 degree Celsius scale divisions. -Provide chilled water glass thermometers with range 30 degrees - 100 degrees F with 2 degrees F scale divisions (0 degrees-100 degrees Celsius) with 1 degree Celsius scale divisions. -Provide hot water dial type thermometers with range 0 degrees - 220 degrees F (-10 degrees - 110 degrees C).
Section 22 00 00 -Firestopping	Approved as Corrected	○	- Contractor to verify all sizes, quantities, and coordinate the use of firestopping materials in all fire rated separations. Coordinate fire barriers with architectural drawings. Coordinate the use of appropriate fire stopping materials for the applications and ensure that the UL listed materials are installed per manufacturer's specifications.
Section 22 05 53 -Plumbing Identification	Approved as Corrected	○	-Arrow banding tape shall overlap the pipe lable and fully lap the piping as shown on the product specification sheet.
Section 22 07 19 -Plumbing Piping insulation	Approved as Corrected	○	- Insulate fittings, joints, and valves with molded insulation of like material and thickness as adjacent pipe. High temp insulation inserts not approved.
Section 22 10 05 -Plumbing Piping	Approved	✓	-None
Section 22 10 06 -Plumbing Piping Specialties RPZ	Approved	✓	-None

Section 22 10 06 -Plumbing Piping Specialties PRV	Approved	✓	-None
Section 22 10 06 -Plumbing Piping Specialties FD-1	Approved as Corrected	○	-Provide floor drains with vandal proof installation.
Section 22 10 06 -Plumbing Piping Specialties FCO	Approved	✓	-None
Section 22 10 06 -Plumbing Piping Specialties WCO	Approved	✓	-None
Section 22 30 00 -Plumbing Equipment WH-1	Approved	✓	-None
Section 22 40 00 -Plumbing Fixtures WC-1	Approved As Corrected	○	- Trip lever to be installed on wide side of room per ADA requirements.
Section 22 40 00 -Plumbing Fixtures L-1	Approved	✓	-None
Section 22 40 00 -Plumbing Fixtures SS-1	Approved	✓	-None
Section 22 40 00 -Plumbing Fixtures EWC-1	Approved	✓	-None
Section 23 00 00 -Electric Unit Heater			-Refer to Mechanical HVAC Submittals for status.



Note:

# Submittal Review Comment Transmittal



Date: 3/10/2023

Project Name: Phase II Restoration of the Ritz Theater

Project No.: 19114.02

Owner: Arkansas State University Three Rivers

Contractor: Clark Contractors, LLC

Attn: Terry Jacks

## Submittal: 22 10 05 Plumbing Piping

- Accepted
- Accepted as Noted
- Revise and Resubmit
- Not Accepted

By: Ryan Biles, AIA

### Items Specified:

- A. 22 05 19 Meters & Gauges
- B. 22 00 00 Firestopping
- C. 22 05 53 Plumbing Identification
- D. 22 07 19 Plumbing Piping Insulation
- E. 22 10 05 Plumbing Piping
- F. 22 10 06 Plumbing Piping Specialties
- G. 22 40 00 Plumbing Fixtures
- H. 23 00 00 Electric Unit Heater

Acceptance is subject to the provisions of the General Conditions of the Contract for Construction AIA Document A201.

### Submittal Comments:

- **Please review for compliance with Div. 22 specifications and Plumbing Drawings and return to SCM via email**

### Attachments:

**23-0310 Division 22 submittals not yet reviewed by architect**

By: **Ryan Biles, AIA**

J:\2019\19114.02 Ritz Theater Phase III\1800 Submittals\DIV 22\TO MEP\23-0310\_RitzTheaterPh3\_SUBMITTAL\_Div 22\_TO PETTIT.docx

**WH-1**



The new degree of comfort®



Commercial Electric  
Point-of-Use

## Point-of-Use commercial electric line is designed to provide hot water at the consumption point, eliminating costly temperature loss in long piping runs

### Features & Benefits

Our family of point-of-use electric water heaters come in 2.5, 6, 10, 15, 19.9 and 30-gallon models. They are available in 1440 W through 6000 W and in 120, 208, 240, 277 and 480 voltages with a maximum temperature setting of 170°F for 6-30 gallon models and 150°F for the 2.5 gallon model. These units are suited for a wide variety of applications and small enough for installation in limited spaces where modest quantities of hot water are required.

### Long Life Tank Design

Proprietary steel formulation with a unique coat of high temperature porcelain enamel maximizes corrosion resistance of the tank. Our heavy duty anode rod provides advanced technology and equalizes aggressive water action. This prolongs the effective life of the anode rod and in turn, the life of the tank.

### Long Life Heating Elements

Our patented resistor elements are designed with a specially treated, double layer of magnesium oxide and copper to resist corrosion.

### Efficient Design

Rigid polyurethane foam insulation provides superior insulating qualities resulting in reduced operating costs.

### Optional Wall Mount Kit

The wall mounting kit provides an easy way to mount the unit off the floor, out of the way for more useable floor space in a small area. Each kit is designed to be used on walls with 16" stud centers. All necessary parts are included in this easy to install kit. (Note: The 2-1/2 gallon model comes standard with a wall mounting kit.)

### Automatic Temperature Control

A surface mounted thermostat automatically cycles on and off to maintain the water temperature at a desired preset level.

### Temperature Limiting Control

Automatically and safely cuts off the power in the unlikely event that the water temperature exceeds 190°F.

### Temperature and Pressure Relief Valve

CSA/ASME rated and factory installed.

### Warranty

3-Year limited tank warranty

See Commercial Warranty Certificate for complete information.

### NEW UL Approved Electric Conversion Kits\*

- Provides an easy way to convert standard models to different wattages, volt or phase depending on installation requirements
- Kits are designed for EGSP models in all gallon capacities
- All parts needed for the electric conversion are included with Rheem electric conversion kits
- Rheem electric conversion kits provide convenience for contractors, plumbers and installers which saves time and money

\* Not available in Canada.

**Safety and Construction** | These products are design certified by Underwriters Laboratories (UL) to meet UL standard 174 as electric storage tank water heaters. All models are North Carolina and Massachusetts Code compliant. **Certified for 150 PSI maximum working pressure.**



### Rheem Point-of-Use

2.5 to 30-Gallon Capacities  
1.5 kW through 6 kW  
120, 208, 240, 277 and  
480 Voltages  
Single Phase  
Electric



Continued next page



INTEGRATED AIR & WATER



The new degree of comfort™



Commercial Electric Point-of-Use

DIMENSIONAL INFORMATION (All dimensions shown in inches)									
MODEL	MIN WATTS	MAX WATTS	TANK GALLONS	A	B	C	D	E	SHIPPING WEIGHT (LBS.)
EGSP2	1,440	1,500	2-1/2	14	9-3/4	—	—	—	18
EGSP6	1,500	6,000	6	15-1/8	15-3/4	12-5/8	11-5/8	4-1/4	41
EGSP10	1,500	6,000	10	22-7/8	15-3/4	20-3/8	19-3/8	4-1/4	53
EGSP15	1,500	6,000	15	24-1/4	17-3/4	21-7/8	19-3/8	4-5/8	65
EGSP20	1,500	6,000	19.9	25-1/8	19-3/4	22-5/8	19-5/8	5-1/8	76
EGSP30	1,500	6,000	30	32	22-1/4	23	23	3	115
<b>Water Temp. Ratings:</b>		Thermostat Type: Surface Mounted		Min. Delivered Temperature: 110° F		Max. Delivered Temperature: 170°F (6-30 Gallon Models) 150°F (2.5 Gallon Model)			High Temperature Limit: 190° F

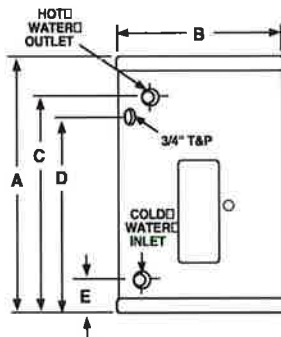
**NOTE:** Basic model numbers are listed. When ordering, specify electrical input and kW to determine specific model number.

Canadian models have different model numbers than the U.S. models. Add a "C" before the model number (e.g. CEGSP2) when ordering.

**Models:**

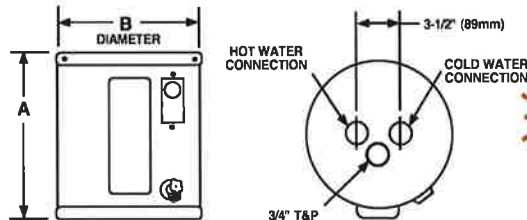
- EGSP6
- EGSP10
- EGSP15
- EGSP20
- EGSP30

Water Connections  
3/4" NPT



**Model:**  
EGSP2

Water Connections  
1/2" NPT



ELEMENT AVAILABILITY					
WATTAGE	120 V	208 V	240 V	277 V	480 V
1,440	**Y	N/A	N/A	N/A	N/A
1,500	Y	Y	**Y	N/A	N/A
2,000	Y	Y	Y	Y	Y
2,500	Y	Y	Y	N/A	N/A
3,000	Y	Y	Y	Y	Y
4,500	N/A	Y	**Y	**Y	**Y
6,000	N/A	Y	Y	Y	Y

\*Not available in EGSP6 & EGSP10

\*\*EGSP2 available only in these configurations.

ELECTRICAL CHARACTERISTICS					
ELEMENT WATTAGE	FULL LOAD CURRENT IN AMPERES				
	120 V	208 V	240 V	277 V	480 V
1,440	12.0	N/A	N/A	N/A	N/A
1,500	12.5	7.2	6.3	N/A	N/A
2,000	16.7	9.6	8.3	7.2	4.2
2,500	20.8	12.0	10.4	N/A	N/A
3,000	25.0	14.4	12.5	10.8	6.3
4,500	N/A	21.6	18.8	16.2	9.4
6,000	N/A	28.8	25.0	21.7	12.5

All models employ 1 heating element resulting in a 2-wire outlet (single phase) electrical configuration.

RECOVERY CAPACITIES						
ELEMENT WATTAGE	TEMPERATURE RISE - DEGREES F - GALLONS PER HOUR					
	40°F	60°F	80°F	100°F	120°F	140°F
1,440	15	10	7	6	5	4
1,500	15	10	8	6	5	4
2,000	20	14	10	8	7	6
2,500	25	17	13	10	8	—
3,000	30	20	15	12	10	9
4,500	46	30	23	18	15	13
6,000	61	41	30	24	20	17

**Recommended Specifications (for trade reference only)**

Water heater(s) shall be model \_\_\_\_\_, manufactured by Rheem, having electrical input of \_\_\_\_\_ kW and a recovery rate of \_\_\_\_\_ GPH at a 100°F temperature rise. Water heater(s) shall have a storage capacity of \_\_\_\_\_ gallons. Water heater(s) shall have the UL/CSA seal of certification and be factory equipped with an CSA/ASME rated temperature and pressure relief valve. Tank(s) interior shall be coated with a high temperature

porcelain enamel and furnished with a magnesium anode rod rigidly supported. Water heater(s) shall meet or exceed the energy factor requirements of ASHRAE. Tanks shall have a working pressure rating of 150 psi, and shall be completely assembled. Water heater(s) shall be equipped with a copper, resistored, "screw-in" type element. Tank shall be insulated with rigid polyurethane foam insulation. Water heater(s) shall be equipped with a surface mounted thermostat with an integral, manual reset, high limit control. Water heater(s) shall be covered by a three year limited warranty against tank leaks.

In keeping with its policy of continuous progress and product improvement, Rheem reserves the right to make changes without notice.

Rheem Water Heating • 1115 Northmeadow Parkway, Suite 100  
Roswell, Georgia 30076 • www.rheem.com

Rheem Canada Ltd./Ltée • 125 Edgeware Road, Unit 1  
Brampton, Ontario L6Y 0P5 • www.rheem.ca

## Engineering Specification

Job Name Ritz Theater  
 Job Location Malvern  
 Engineer Pettit and Pettit  
 Approval \_\_\_\_\_

Contractor Comfort Systems USA  
 Approval \_\_\_\_\_  
 Contractor's P.O. No. \_\_\_\_\_  
 Representative Sanders Supply

# LEAD FREE\*

## Series PLT Potable Water Expansion Tanks

Series PLT Potable Water Expansion Tanks are designed to absorb the increased volume of water created by thermal expansion and to maintain balanced pressure throughout the potable water supply system.

Heated water expands, and in a domestic hot water system, the system may be closed when the potable water system is isolated from the public water supply by a one-way valve such as pressure reducing valve, backflow preventer or check valve. Provisions must be made for this expansion.

Series PLT expansion tanks absorb the increased volume of water created when the hot water storage tank is heated and keeps the system pressure below the relief setting of the T&P relief valve.

It is a pre-pressurized steel tank with an expansion membrane that prevents contact of the water with the air in the tank. This prevents loss of air to the water and insures long and trouble-free life for the system. These tanks may be used with all types of Direct Fired Hot Water Heaters (gas, oil or electric) and hot water storage tanks.

### Features

- Rugged flexible butyl diaphragm
- Field adjustable pre-charge
- In-line and free standing models
- Can be used with most standard hot water heaters and storage tanks

### Models

PLT-5-M1	¾" male connection, tank volume 2.1 gal.
PLT-12-M1	¾" male connection, tank volume 4.5 gal.
PLT-20-M1	¾" male connection, tank volume 8.5 gal.
PLT-35-M1	1" female connection, tank volume 14.00 gal.

### Specifications

The potable water expansion tank shall be of drawn steel construction. It shall have a Butyl diaphragm separating the air chamber from the water containing chamber. Inlet connector shall be Stainless Steel. Materials of manufacture for the diaphragm shall be FDA approved.

The potable water expansion tank shall be a Watts Model PLT.



### Standards

#### Models PLT-5, PLT-12 and PLT-20

are Listed by IAPMO.  
 Certified to ANSI/NSF 61

**Model PLT-35**  
 Certified to ANSI/NSF 61



**Note:** The potable water expansion tank shall be installed in the cold water service pipe line on the supply side of the water heater (or water storage tank). A pressure relief valve sized and installed in accordance with local codes must be incorporated in the system.

In those systems requiring a combined temperature and pressure safety relief valve, the temperature and pressure relief valve should be sized and installed in accordance with local codes. Adequate drainage provisions should be provided where water flow will cause damage.

**See chart on back**

#### NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

#### NOTICE

Inquire with governing authorities for local installation requirements

**\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.**

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

## Selection

This Quick Reference Selection Guide may be used as an alternative to using a formula to determine the correct expansion tank for the system. This table is based upon a relief valve setting of 150psi (10.3 bar), and a maximum of 50°F temperature rise.

To select the correct model PLT series tank, simply go the supply pressure equal to the system supply pressure (for pressures between those shown use next highest supply pressure shown), read across the chart to the correct tank as indicated by the water heater capacity (for capacities between those shown, use next highest capacity).

To accommodate the thermal expansion required for higher temperature and/or higher pressure systems, multiple tanks may be used. Please contact the factory for sizing information.

## Materials

Diaphragm: Butyl rubber  
Inlet Connection: Stainless Steel

## Technical Information

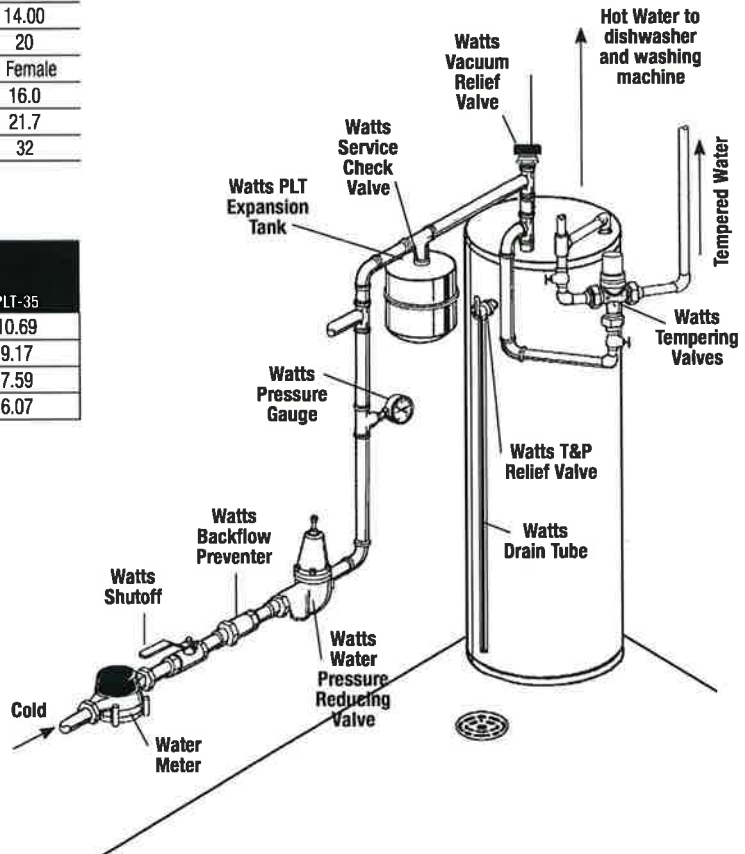
DESCRIPTION	PLT-5	PLT-12	PLT-20	PLT-35
Max. Pressure - PSI	150	150	150	150
Max. Temp. - °F	200	200	200	200
Tank Volume - Gal.	2.1	4.5	8.5	14.00
Air Pre-charge - PSI	20	20	20	20
Connections Size - Inches	¾ Male	¾ Male	¾ Male	1 Female
Diameter - Inches	8	10.5	12.5	16.0
Length - Inches	11	13.5	19.2	21.7
Weight - Lbs.	5.5	10	15	32

## Acceptance Volume

AIR SIDE PRE-PRESSURE (PSI)	WATER SIDE VOLUME AT 150PSI (GALLONS)			
	PLT-5	PLT-12	PLT-20	PLT-35
20	1.48	3.42	7.102	10.69
40	1.26	2.88	5.882	9.17
60	1.0	2.49	4.705	7.59
80	.8	1.85	4.009	6.07

SUPPLY PRESSURE (PSIG)	WATER HEATER (GALLONS)						
	20	30	40	50	80	100	120
40							
50							
55							
60							
70							
80							
90							
100							
110							
120							

PLT-5  
 PLT-12  
 PLT-20  
 PLT-35  
 Multiple tanks required - consult factory



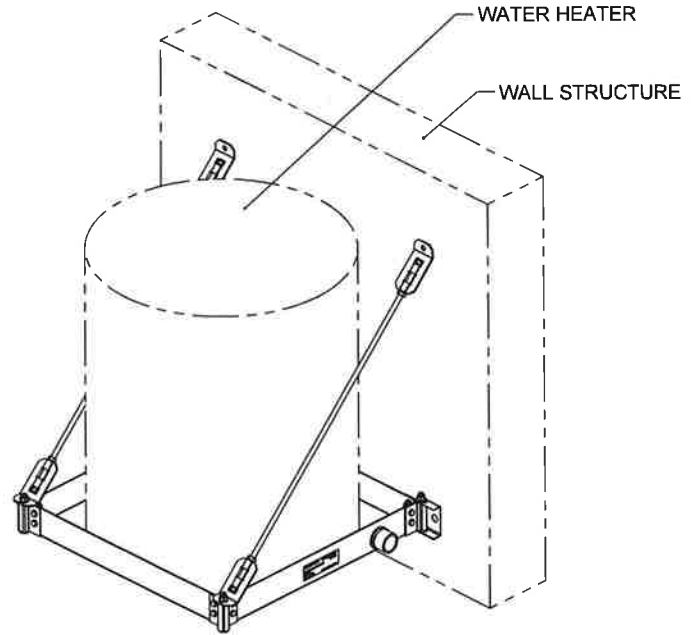
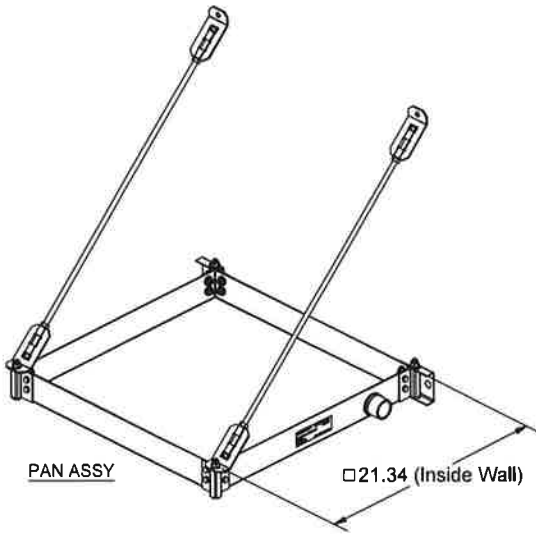
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# PRODUCT SPECIFICATION DRAWING

## QUICK STAND™ #40-SWHP-W

### Wall Mounted Equipment Platform

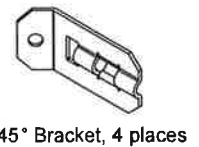
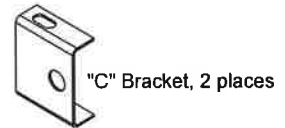


ALL DIMENSIONS IN INCHES

**The Wall Mounted Equipment Platform is engineered to support water heaters up to 20 U.S. gallons (or other equipment up to 375 pounds total weight) mounted to a wall. This item also serves as a drain pan.**

**Product Information:**

- **Material:**  
 Pan: 14 gage CRS, galvanized  
 Corner Brackets (4): 14 gage CRS, galvanized  
 C-Brackets (2): 16 gage CRS, galvanized  
 45° Brackets (4): 12 gage, CRS, galvanized  
 Threaded Rod (2): Low carbon steel, zinc plated, 3/8" x 29-3/4" long
- Wide platform allows water heaters up to 21-1/4" diameter
- Watertight corners and drain fittings eliminate need for additional drain pan
- Static load rating 375 pounds with 2X safety factor (depending on structural anchorage)
- Professional Engineer stamped documentation available
- Includes PVC drain body 1" MIPT x 1" FS
- Galvanized steel construction
- Suspends with user supplied 3/8" hardware to mount to wall, 4 places
- Installation instructions for mounting to concrete or framed wall structure available
- Patent Pending



Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

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