



Commercial

RHEEM® TANKLESS ELECTRIC WATER HEATERS FOR HANDWASHING SOLUTIONS

Thermostatic, Thermostatic with Integrated Mixing Valve & Non-Thermostatic



Rheem offers an extensive line of innovative tankless electric handwashing water heaters that have been designed and engineered in the U.S.A. Our handwashing portfolio consists of three distinct families: Thermostatic Tankless Electric Water Heater, Thermostatic Tankless Electric Water Heater with Integrated Mixing Valve and Non-Thermostatic Tankless Electric Water Heater. Each of these tankless electric water heaters can be installed in any orientation at the point-of-use with just a single cold water line and electrical circuit for savings in both labor and materials.

Our handwashing portfolio delivers safe and continuous hot water on demand. Temperature stability is ensured with our proprietary active energy management and power modulating controls*. Each tankless electric water heater is easy to install, dependable, and supported by a knowledgeable customer service team. The portfolio of handwashing solutions features...



**MOUNT IN ANY
ORIENTATION**



**SAFESTART™
TECHNOLOGY**



**SELF
DIAGNOSTICS**



**ENERGY
MANAGEMENT***



**FIELD
ADJUSTABLE***



**COMPACT
SIZE**

*Varies by family.

Rheem® Selection and Sizing Guide

The following pages will help you to select, size, and choose the appropriate tankless electric water heating model based on:

1. Your handwashing application
2. Amount of power required for optimal water heating performance
3. Voltage available on site

1 Select

Using the product descriptions and recommended applications table below, select the family best suited for your handwashing application.

Thermostatic Tankless Electric Water Heater

Thermostatic tankless electric water heater with silent operation[†] and an industry leading low flow activation at 0.2 GPM.



Thermostatic Tankless Electric Water Heater with Integrated Mixing Valve

Meets UPC 407.3 and IPC 416.5 for public handwashing with an integrated ASSE 1070 compliant mixing valve.



Non-Thermostatic Tankless Electric Water Heater

Ideal for a single sensor faucet or a single metering faucet for handwashing and other fixed-flow applications.

**Varies by family. [†]Applies to all models except RTEH012240T.*

Recommended Applications	Thermostatic Tankless Electric Water Heater	Thermostatic Tankless Electric Water Heater with Integrated Mixing Valve	Non-Thermostatic Tankless Electric Water Heater
Handwashing	✓		✓
Code Compliant Public Handwashing	✓ [†]	✓	
Kitchen, Bar, Utility Sinks	✓	✓	
Variable Flow	✓	✓	
Fixed-flow			✓
Multiple Sensor or Metering Faucets	✓	✓	
Single Sensor Faucet or Metering Faucet			✓

[†]Thermostatic Tankless Electric Water Heater can be made code compliant for public handwashing with the addition of a mixing valve by a licensed contractor or plumber. There is an overlap in applications, but the above chart shows the optimal solution for each application.

Rheem® Selection and Sizing Guide

2 Size

To determine how much power is required for optimal water heater performance, this information is needed:

- Desired outlet temperature
- Inlet water temperature
- Flow rate in gallons per minute (GPM)

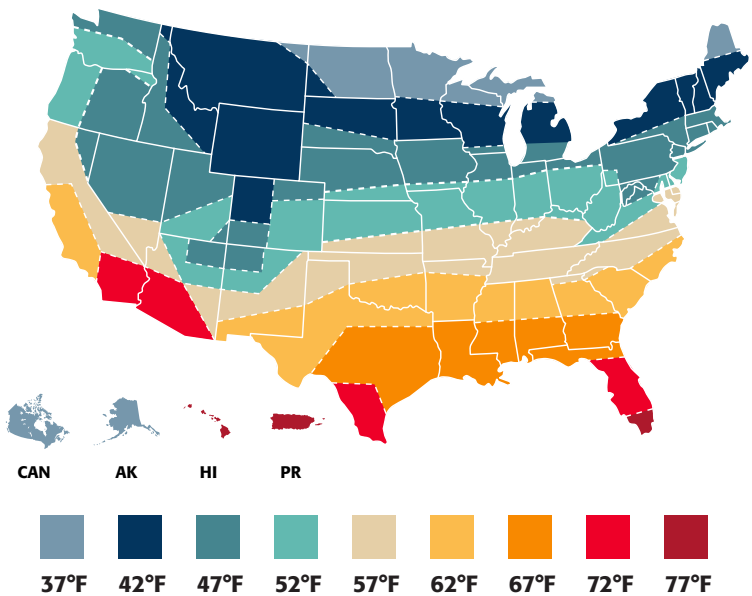
Calculate Rise in Temperature

Found by using the handwashing industry standard of 105° F and subtracting Inlet Ground Water Temperature (see map).

Identify Power (kW) Required

Using the Power Required Chart, find the intersection between Rise in Temperature and Gallons Per Minute to identify the kilowatts (kW) needed. Note: GPM can be found on the faucet aerator. If the Power Required Chart is not applicable, use the formulas below.

Average Inlet Ground Water Temperatures of the United States*



*Source: US Environmental Protection Agency

Power Required Chart

Gallons Per Minute (GPM)	2	6 kW	9 kW	12 kW	—	—	—
	1	3 kW	5 kW	6 kW	8 kW	9 kW	11 kW
	0.5	2 kW	3 kW	3 kW	4 kW	5 kW	6 kW
		20°F	30°F	40°F	50°F	60°F	70°F

Rise In Temperature °F

NOTE: For a simplified calculation, kW reference is based on 100% heater efficiency.

$\text{kW Required} = \text{GPM} \times (\text{temp rise} / 6.83)$

$\text{Temperature Rise} = \text{kW} \times (6.83 / \text{GPM})$

$\text{GPM Demand} = \text{kW} \times (6.83 / \text{temp rise})$



Rheem® Selection and Sizing Guide

3 Choose

Based on the voltage available at the installation site, choose the model number from the product family tables below that will supply the power (kW) required for the water heating application.

For Example: A public handwashing application requiring five fixed-flow lavatory sensor faucets, using 0.35 GPM aerators. Location is Los Angeles International Airport with 277 voltage available.

1. Select Thermostatic Tankless Electric Water Heater with Integrated Mixing Valve
2. Size (or power needed) for this application is 9 kW
3. Choose model number RTEH010277MV for optimal water heating performance

Thermostatic Tankless Electric Water Heater				
MODEL NUMBER	kW	AMPS	RECOM'D WIRE SIZE (75° C/CU)	TURN ON (GPM)
VOLTS 120				
RTEH1812T	1.8	15	14 AWG	0.2
RTEH2412T	2.4	20	14 AWG	0.2
RTEH3012T	3.0	25	12 AWG	0.2
RTEH3512T	3.5	29	10 AWG	0.2
VOLTS 208 Single Phase				
RTEH3208T	3.0	15	14 AWG	0.2
RTEH4208T	4.1	20	14 AWG	0.2
RTEH8208T	8.3	40	8 AWG	0.2
VOLTS 240*				
RTEH35T	3.5	15	14 AWG	0.2
RTEH48T	4.8	20	14 AWG	0.2
RTEH55T	5.5	23	12 AWG	0.2
RTEH65T	6.5	27	12 AWG	0.2
RTEH75T	7.5	32	10 AWG	0.2
RTEH95T	9.5	40	8 AWG	0.2
RTEH012240T	11.5	48	8 AWG	0.2
VOLTS 277 Single Phase				
RTEH3277T	3.0	11	14 AWG	0.2
RTEH4277T	4.1	15	14 AWG	0.2
RTEH60T	6.0	22	12 AWG	0.2
RTEH80T	8.0	29	10 AWG	0.2
RTEH90T	9.0	33	10 AWG	0.2
RTEH100T	10.0	36	8 AWG	0.2

Thermostatic Tankless Electric Water Heater with Integrated Mixing Valve				
MODEL NUMBER	kW	AMPS	RECOM'D WIRE SIZE (75° C/CU)	TURN ON (GPM)
VOLTS 120				
RTEH004120MV	3.5	29	10 AWG	0.3
VOLTS 240*				
RTEH005240MV	4.8	20	14 AWG	0.3
RTEH007240MV	6.5	27	10 AWG	0.3
RTEH010240MV	9.5	40	8 AWG	0.3
RTEH012240MV	11.5	48	8 AWG	0.3
VOLTS 277 Single Phase				
RTEH004277MV	4.1	15	14 AWG	0.3
RTEH008277MV	8.0	29	10 AWG	0.3
RTEH010277MV	10.0	36	8 AWG	0.3

Non-Thermostatic Tankless Electric Water Heater				
MODEL NUMBER	kW	AMPS	RECOM'D WIRE SIZE (75° C/CU)	TURN ON (GPM)
VOLTS 120				
RTEH1812	1.8	15	14 AWG	0.2
RTEH2412	2.4	20	14 AWG	0.25
RTEH3012	3.0	25	12 AWG	0.25
RTEH3512	3.5	29	10 AWG	0.3
VOLTS 208 Single Phase				
RTEH3208	3.0	15	14 AWG	0.25
RTEH4208	4.1	20	14 AWG	0.4
RTEH8208	8.3	40	8 AWG	0.7
VOLTS 240*				
RTEH35	3.5	15	14 AWG	0.3
RTEH48	4.8	20	14 AWG	0.4
RTEH55	5.5	23	12 AWG	0.5
RTEH65	6.5	27	10 AWG	0.7
RTEH75	7.5	32	10 AWG	0.7
RTEH95	9.5	40	8 AWG	0.8
VOLTS 277 Single Phase				
RTEH3277	3.0	11	14 AWG	0.25
RTEH4277	4.1	15	14 AWG	0.4
RTEH60	6.0	22	12 AWG	0.7
RTEH80	8.0	29	10 AWG	0.7
RTEH90	9.0	33	10 AWG	0.7
RTEH100	10.0	36	8 AWG	0.8



For Non-Thermostatic Canadian model number, add CA to the end of the model number. Ex: RTEH1812CA. Canadian models comply to either Underwriters Laboratories (UL) or Intertek (ETL) under CAN/CSA-C22.2 No. 64/No. 88.

*240V units can be used on 208V single phase with 25% reduced temperature output. Please note per UL standards the rating plate and installation instructions will all be according to a 240V applied voltage. Check with local officials prior to derating the electrical infrastructure.



Commercial