HUBBELL
a **nudyne** company

R TANKLESS SERIES

Point-of-use Tankless Electric Water Heater

Available 3–27 kW in single phase voltages

Instantaneous design reduces stand by heat loss and significantly lowers operating costs

Constructed with high grade materials to ensure long operating life

Simple to install and operate

- Compact space saving design
- Engineered to ensure reliable operation
- Wide selection of sizes

Applications

Point-of-use, single or multiple lav sinks, condos and apartments, whole house.

Over 100 years of water heating expertise
Hubbell water heaters are the right choice for your commercial and industrial applications. We have water heating solutions for most energy sources with storage capacities from 1–10,000 gallons — all designed, engineered, and manufactured for reliability and longevity coupled with unparalleled support and service.

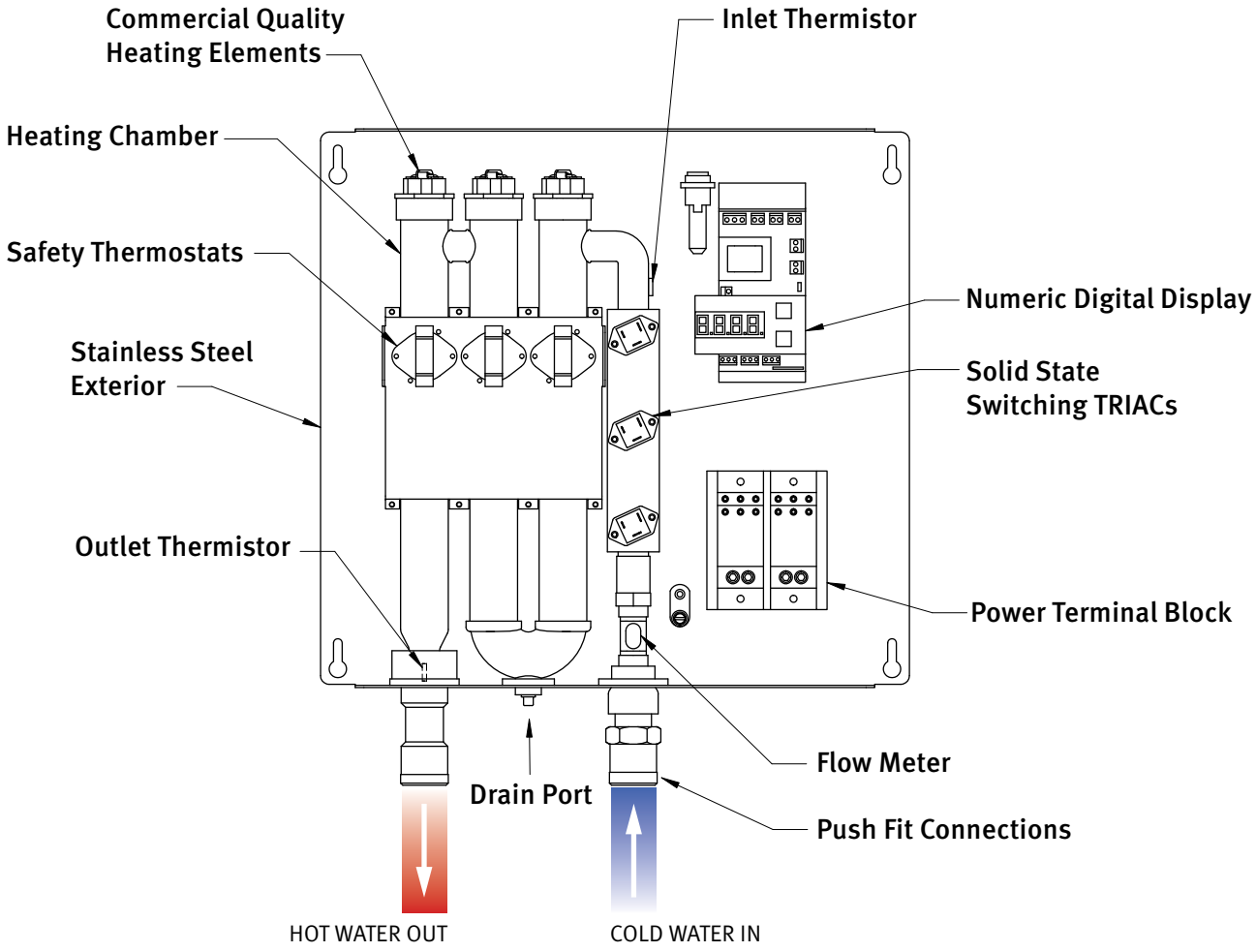
Tankless water heater for residential and commercial use
The Hubbell Tankless R electric water heater is a highly reliable and easily maintained heater designed for point-of-use or whole house operation. The R is compact, extremely efficient, takes up minimal space and reduces operating costs. Hubbell's vast experience, meticulous engineering and advanced technology ensure that you can rely on the Hubbell Tankless R or your water heating needs in even the most demanding applications. The Hubbell Tankless is the right choice for your water heating needs and provides you with an energy efficient, trouble-free and long-lasting heater.

Intertek
9001:2015
MADE in the USA
Buy American Act Compliant
Contains Imported Components

hubbellheaters.com sales@hubbellheaters.com 203.378.2650

Inside the Tankless R

The Hubbell Tankless R uses only the power needed to heat water on demand, while delivering an accurate and consistent water temperature. The controller continually processes the flow rate along with the inlet and outlet temperature to determine the amount of energy needed to achieve the desired water temperature. Fast-acting TRIACS modulate the heating elements to the precise level needed to meet the demand.



Technical Features

Temperature Controller
A sophisticated electronic temperature controller with LED digital display provides the user interface. The temperature controller processes all flow and temperature data and calculates the precise amount of power needed to meet demand.

Operator Control Capabilities	
Power Limiting	This feature allows the user to limit the kW rating of the unit by a specific percentage and effectively lower the total amp draw of the unit.
Diagnostics	Display inlet and outlet temperatures, flow rate and error codes to assist in troubleshooting.
Cost Calculator	Determine the exact cost of operating the heater. Input your cost per kW·Hr and the controller displays total kW·HRs consumed, total cost of operation, and total hot water usage (shown in gallons or liters).
Temperature Control	Set the digital display to the desired water temperature in °F or °C. Fully adjustable in 1° increments from 32–194°F (0–90°C). A user adjustable +/– 3° calibration feature provides additional control for superior accuracy.

Full Heater Modulation
Each heating element is switched on/off using a fast acting solid state TRIAC with zero cross over firing control. This switching action provides full modulation of each heating element, ensuring that the precise amount of heat is added to meet demand. To improve operating efficiency and component longevity, each triac is mounted to a heat sink located on the incoming supply piping so that heat generated by the TRIAC during the switching process is dissipated into the water.

Proper Power Integrity
All Hubbell Tankless water heaters, including all 3 phase models, are engineered to operate as a balanced load and operate at 0.999 Power Factor. All Hubbell 3 phase models are designed for 3 wire (3 live, 1 ground) and 4 wire power systems and draw equal current across all conductors to maintain the power integrity of the users electrical system. Hubbell does not recommend the use of heaters that operate as an unbalanced load. All load switching in Hubbell tankless models is performed as zero cross over, eliminating phase angle firing interference and associated EMI issues.

Full Resource Staging
The Hubbell Tankless control system ensures that usage is equalized across all heating circuits. To achieve this, once the controller has calculated the precise amount of kW required, all circuits are energized proportionally and independently energized and then time staggered between circuits. This full resource staging reduces EMI output, increases component longevity, and provides highly accurate and consistent hot water temperatures. For three phase models, all circuits are fully modulated and synchronized to operate as a balanced load.

BACnet Module
The Hubbell BACnet interface unit implements BACnet MS/TP protocol. The device comes from the factory ready to be operated. The unit can be reconfigured easily with a USB cable and the BACnet Network Utility program located on the Hubbell website. The BACnet includes features such as set temperature, power limiting, power setting, temperature in and out, flow rate, flowmeter error and leak detections. Note that internet protocol is not supported.

Heater Specifications

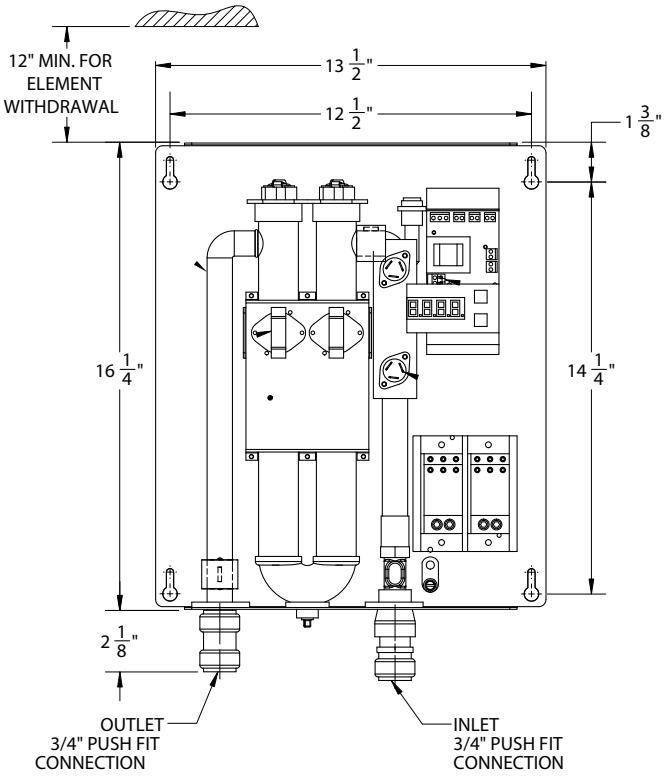
Heating Chamber	Copper and Bronze
Capacities	3 thru 27 kW
Orientation	Wall Mounted
Voltage	240 / 220 / 208 Volt
Phases	1Φ
Power Factor	0.999
Thermal Efficiency	98% +
Inlet / Outlet Size	3/4" Push Fit
Min/Max Flow	0.2 GPM Min / 8.0 GPM Max
Thermostat Range	32 -140°F / 0-60°C
Hi-Limit	150°F (Fixed temperature)
Design WP	150 psi
Design TP	300 psi
Elements	Incoloy 800
Standby Power	‹ 3 Watts
Heating Chamber Warranty	Residential: 5 Years Commercial: 5 Years
Electrical Warranty	Residential: 1 Year Commercial: 1 Year
Enclosure	Stainless Steel Brushed Finish
Max Inlet Temp	150°F

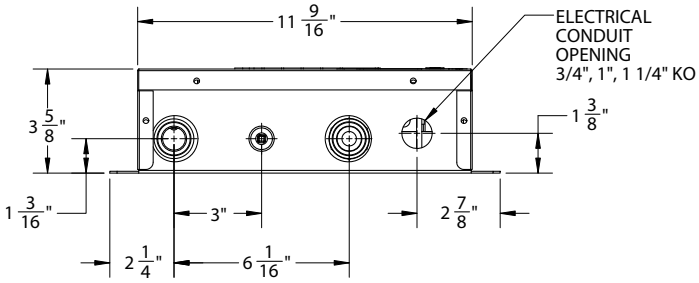
Standard Equipment

- 3/4" press fit inlet and outlet connections
- Warranty: five (5) year heating chamber and one (1) year parts
- Digital temperature controller
- Pressure drop: 3 psi @ 4 GPM

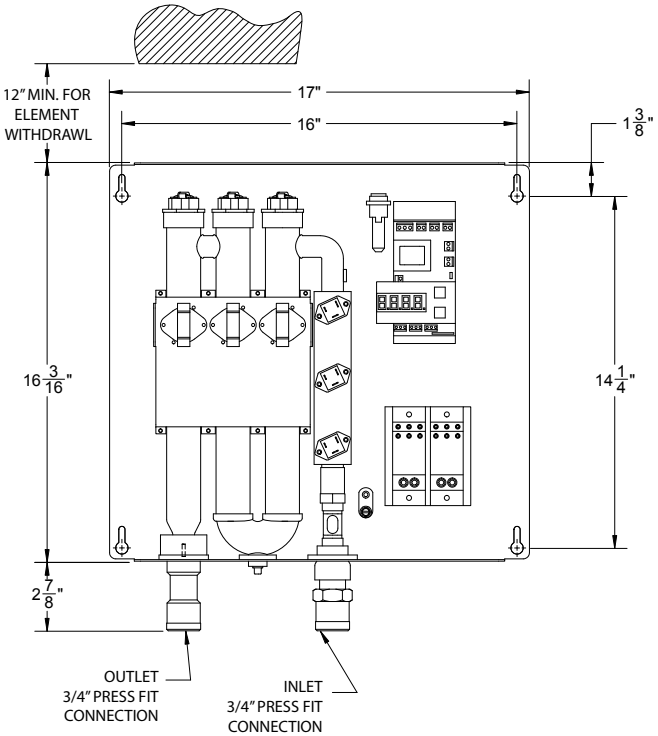
All information is subject to change without notice. Consult factory for submittal drawings.

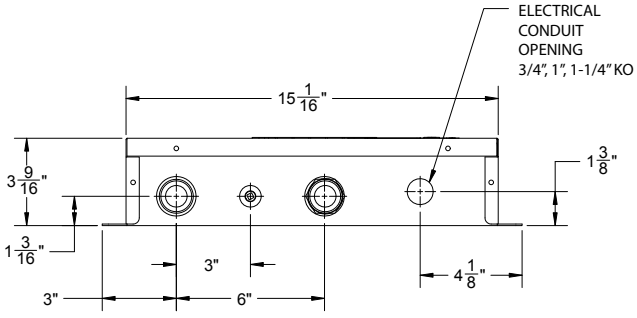
2 Element Dimensions





3 Element Dimensions





All information is subject to change without notice. Consult factory for submittal drawings.

2 Element Heating Capacity and Amperage Chart *(Amperage shown in chart below indicates available models)*

Base Model	kW Ratings at Various Voltages			Heating Capability in GPM at F° Temperature Rise (°FΔT)				Max Amps at 100% Output 1 Phase Voltages		
	240V	220V	208V	40°FΔT	60°FΔT	80°FΔT	100°F ΔT	240V	220V	208V
R003-2S	3			0.51	0.34	0.26	0.20	12.5		
		2.52		0.43	0.29	0.21	0.17		11.4	
			2.25	0.38	0.26	0.19	0.15			10.8
R005-2S	5			0.77	0.51	0.38	0.31	19		
		4		0.64	0.43	0.32	0.26		17.1	
			3.6	0.57	0.38	0.29	0.23			16.2
R007-2S	7			1.19	0.80	0.60	0.48	29		
		6		1.00	0.67	0.50	0.40		26.7	
			5.4	0.89	0.59	0.44	0.35			25
R009-2S	9			1.54	1.02	0.77	0.61	37.5		
		7.56		1.29	0.86	0.64	0.52		34.3	
			6.7	1.14	0.76	0.57	0.46			32.2
R011-2S	11			1.88	1.25	0.94	0.75	46		
		3.24		1.58	1.05	0.79	0.63		42	
			8.2	1.40	0.9	0.70	0.56			9.4
R014-2S	14			2.39	1.59	1.19	0.96	58		
		11.76		2.01	1.34	1.00	0.80		53.4	
			10.5	1.79	1.19	0.90	0.72			50.4
R016-2S	16			2.73	1.82	1.36	1.09	67		
		13.44		2.29	1.53	1.15	0.92		61	
			12	2.05	1.36	1.02	0.82			57.6
R018-2S	18			3.07	2.05	1.54	1.23	75		
		15.12		2.58	1.72	1.29	1.03		68.7	
			13.5	2.00	1.54	1.15	0.92			64.9

Alternate voltages including 277, 380, 415, 440, 575 and 600 volts available. Please consult the factory for exact kW availability in these voltages.
• For 3 phase voltages please reference Hubbell model TX brochure.

All information is subject to change without notice. Consult factory for submittal drawings.

3 Element Heating Capacity and Amperage Chart *(Amperage shown in chart below indicates available models)*

Base Model	kW Ratings at Various Voltages				Heating Capability in GPM at F° Temperature Rise (°FΔT)				Max Amps at 100% Output 1 Phase Voltages			
	277V	240V	220V	208V	40°FΔT	60°FΔT	80°FΔT	100°FΔT	277V	240V	220V	208V
R005-2W	5.3				.90	.60	.45	.36	19.1			
R007-3W	7				1.29	.79	.59	.48	25.3			
R009-3W	9				1.54	1.03	.76	.61	32.5			
R011-3W	10.7				1.83	1.22	.91	.73	38.6			
R014-3W	14.3				2.45	1.63	1.22	.98	51.6			
R016-3W	15.4				2.63	1.75	1.31	1.05	55.6			
R018-3S		18			3.08	2.05	1.54	1.23		75		
			15.1		2.58	1.72	1.29	1.03			68.6	
				13.5	2.31	1.54	1.15	.92				64.9
R021-3S		21			3.58	2.39	1.79	1.43	87.5			
			17.64		3.01	2.01	1.50	1.20			80.1	
				15.75	2.69	1.79	1.34	1.07				75.7
R024-3S		24			4.09	2.73	2.05	1.64	100			
			20.16		3.44	2.29	1.72	1.38			91.6	
				18	3.07	2.05	1.54	1.23				86.5
R027-3S		27			4.61	3.07	2.30	1.84	112			
			22.68		3.87	2.58	1.93	1.55			103	
				20.25	3.45	2.30	1.73	1.38				97.3

- Alternate voltages including 277, 380, 415, 440, 575 and 600 volts available. Please consult the factory for exact kW availability in these voltages.
- For 3 phase voltages please reference Hubbell Tankless HX/TX brochure.

All information is subject to change without notice. Consult factory for submittal drawings.

Variables to Solve For

Step 1: Solve for the unknown using the formulas below.

kW Requirement:
_____GPM x _____°FΔT x 0.1465 = _____ kW

Temperature Rise:
_____kW x 6.824 ÷ _____GPM = _____°FΔT

Flow Rate:
kW x 6.824 ÷ _____°FΔT = _____ GPH

Step 2: Choose the Tankless model with the kW rating which meets the peak demand (GPM) and required temperature rise (°FΔT) for your application.

Step 3: Choose the supply voltage available. Note the total amperage draw of the unit and verify availability.

Voltage De-Rating Factors

Rated Voltage	Applied Voltage	De-Rating Factor
240V	230V	92%
240V	220V	84%
240V	208V	75%

When the actual supply voltage (applied voltage) is different than the design voltage (rated voltage) the resulting kW output will be affected. Please see the chart for typical voltage de-rating factors, or use the following formula.

$$\frac{\text{Applied Voltage}^2}{\text{Rated Voltage}^2} \times \text{Rated kW} = \text{kW output at applied voltage}$$

Metric Conversions

Liters × 0.2641 = Gallons
Gallons × 3.79 = Liters
Gallons × 0.003785 = m^3
m3 × 264.2 = Gallons
1°CΔT = 1.8°FΔT
°F = (°C × 1.8) + 32
°C = (°F - 32) × 0.556
psi × 0.06896 = Bar
Bar × 14.5 = psi
psi × 6.86 = kPa
kPa × 0.1456 = psi
Kg ÷ (cm^2 x 14.28) = psi
psi × 0.07 = Kg ÷ cm^2
Lbs × 0.4536 = Kg
Kg × 2.2 = Lbs

All information is subject to change without notice. Consult factory for submittal drawings.

2 Element Design

Base Model	kW Ratings	De-Rated kW			Shipping Weight
	277	240V	220V	208V	
R003-2S	—	3	2.5	2.2	17 lbs
R005-2S	—	5	3.7	3.3	17 lbs
R007-2S	—	7	5.8	5.2	17 lbs
R009-2S	—	9	7.5	6.7	17 lbs
R011-2S	—	11	9.2	8.2	17 lbs
R014-2S	—	14	11.7	10.5	17 lbs
R016-2S	—	16	13.4	12	17 lbs
R018-2S	—	18	15.1	13.5	17 lbs

Note: Models above are rated for 240 Volt, 1 phase. De-rated kW values for 220V and 208V are shown for reference only.

—

Optional Equipment Code.

Example: R011-3W-G16

A Hubbell Tankless R electric water heater rated at 11 kW with 3 heating elements and powered with 277 volt, single phase, 60 Hz, with optional NEMA 4X Rating.

3 Element Design

Base Model	kW Ratings	De-Rated kW			Shipping Weight
	277	240V	220V	208V	
R005-2W	5.3	—	—	—	21 lbs
R007-3W	7	—	—	—	21 lbs
R009-3W	9	—	—	—	21 lbs
R011-3W	11	—	—	—	21 lbs
R014-3W	14	—	—	—	21 lbs
R016-3W	16	—	—	—	21 lbs
R018-3W	18	—	—	—	21 lbs
R021-3S	—	21	17.6	15.7	21 lbs
R024-3S	—	24	20.1	18	21 lbs
R027-3S	—	27	22.6	20.2	21lbs

Note: Models above are rated for either 277V or 240Volt 1 phase, as per model number. De-rated kW values for 220V and 208V shown for reference only.

—

Optional Equipment Code.

Optional Equipment

Note: *Optional equipment must be called out in the written specifications, use the codes below.*

Controller

C35 BACnet communication module with T1000 digital controller

C51 Remote Control Display allows the heater to be installed in a remote location. The 3" x 5" NEMA 4 display enclosure can be located up to 25' from the heater

General

G3 Enclosure Heater (Specify minimum temperature expected)

G9 Explosion resistant construction (Specify Class, Division, Group, and Temperature Class)

G16 NEMA 4X rating

G17 NEMA 4 rating

Please note: Optional equipment may impact overall dimensions and weight. Please request submittal drawing from factory.

Available Accessories

Inlet and Outlet Valve Assembly: Simplifies installation and includes unions, shut offs, check valve, drain ports and pressure relief valve. Part #LFTWH-UT-HC-RV

Air Separator: to clear the incoming cold water of micro air bubbles, sand, dirt and rust. Recommended for use with well water systems. Part #AIR-SEPARATOR-3/4"

Descaler Kit: simplifies the process of cleaning the heater and removal of mineral deposits. Part #DESCALER-WHITLAM-FLOW

ASSE 1070 Code Compliant Thermostatic Mixing Valve: to increase the amount of hot water available. Valve is 1/2" (-UT) size and adjustable from 80-120°F. Typically used when supplying hot water to multiple lavs from a single water heater. Part #LFMMVM1-UT

Part #

Part #

Part #

Part #

All information is subject to change without notice. Consult factory for submittal drawings.

H1104-A-20250110