

## Electric Tankless Tepid Water Heater for Safety System

**Provides tepid water for emergency fixtures available up to 54 kW in single and three phase voltages**

**Compact wall mounted electric tankless water heater that is 98% + efficient and easy to install and operate**

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

**Engineered for your specific application to ensure reliable operation**

- NEMA 4 construction standard
- Heavy duty construction with high grade materials to ensure long operating life
- Factory packaged heater provides trouble-free installation and operation
- Wide selection of sizes to meet the needs of even the most demanding application

### Applications

Designed specifically for tepid water delivery to an emergency drench system, typically used in industrial facilities such as oil refineries, nuclear power plants, chemical/petrochemical facilities, fertilizer plants, manufacturing and wherever safety washing is required.



TANKLESS SERIES

ETX

### Tankless water heater for tepid water delivery

The Hubbell Tankless ETX electric water heater is designed to meet the requirements of ANSI/ISEA Z358.1-2014 for tepid water delivery to an emergency drench system in a commercial or industrial application. The Hubbell ETX is extremely efficient, takes up minimal space, and reduces operating costs in even the most demanding and critical applications. The digital controller allows the user to keep a set point temperature of 85° and safeguards against the water temperature going above 90°.

### 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.

**NOTE:** Manufactured in an ISO 9001:2015 facility.  
BABA & BAA compliance is available upon request.



Meets the requirements of the ASME  
Boiler and Pressure Vessel Code



## Safety Standards

### OSHA 29 CFR 1910.151<sup>®</sup> Requirements

When the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

### ANSI/ISEA Z358.1-2014 Standard

This standard establishes universal minimum performance and use requirements for eyewash and drench shower equipment used for the treatment of the eyes, face, and body of a person who has been exposed to hazardous materials and chemicals. Delivered flushing fluid temperature in an emergency system should be tepid. The standard defines a tepid water range of 60°–100°F. This standard also establishes minimum flow requirements at 30–90 PSI and use requirements for eyewash and shower equipment for the emergency treatment of the eyes or body of a person who has been exposed to injurious materials.

- The shower must have a minimum of 20 GPM at 30 psi for 15 minutes of controlled flow
- The eyewash must have a minimum of 0.4 GPM at 30 psi for 15 minutes of controlled flow
- The eye/face wash must have a minimum of 3.0 GPM at 30 psi for 15 minutes of controlled flow
- Units must meet all individual performance requirements when all components are operated simultaneously



## Standard Specifications

Orientation	Wall Mounted
Voltages	208–600 Volt, 50/60 Hz
Phases	1Φ or 3Φ
kW Range	8kW–54kW
Power Factor	0.999
Thermal Efficiency	98% +
Inlet / Outlet Size	2 & 3 element 8–27 kW, 3/4" sweat 6 element 24–54 kW, 1" sweat
Min/Max Flow	
2 & 3 element	0.2 GPM Min, 8.0 GPM Max
6 element	0.5 GPM Min, 40 GPM Max
Design WP	150 psi
Design TP	300 psi
Elements	Incoloy 800
Standby Power	< 3 Watts
Heating Chamber Warranty	5 Year
Electrical Warranty	1 Year
Enclosure	NEMA 4 enclosure suitable for wet applications
Approvals	For ASME, see model ETXA

## Recovery Rate Formulas

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

### kW Requirement:

$$\text{GPH} \times \text{ } ^\circ\text{F}\Delta\text{T} \times 0.00244 = \text{kW}$$

### Temperature Rise:

$$\text{kW} \times 410 \div \text{ } ^\circ\text{F}\Delta\text{T} = \text{GPH}$$

### Flow Rate:

$$\text{kW} \times 410 \div \text{GPH} = \text{ } ^\circ\text{F}\Delta\text{T}$$

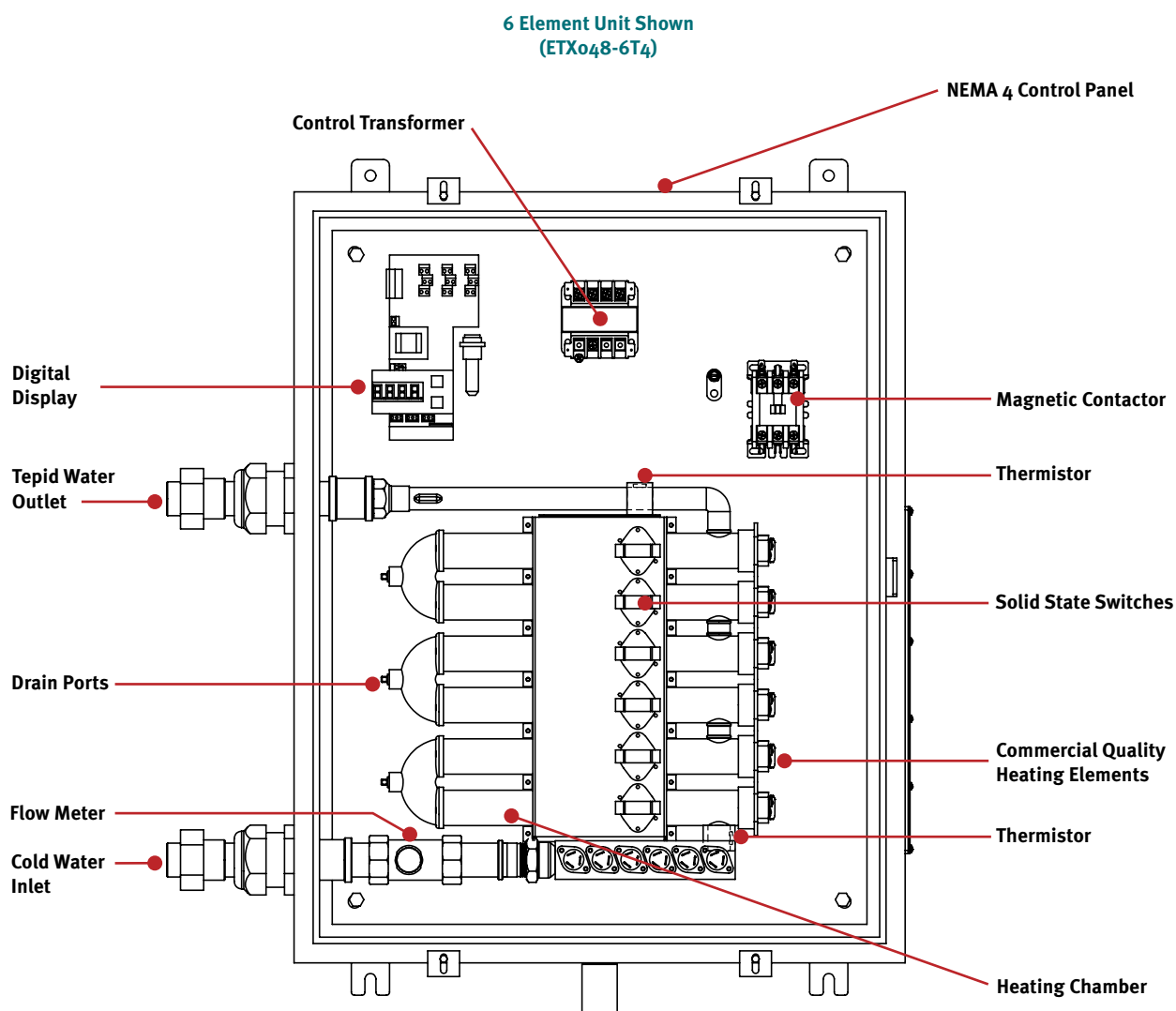
**Step 2:** Choose the Tankless model with the kW rating which meets the peak demand (GPM) and required temperature rise ( $^\circ\text{F}\Delta\text{T}$ ) for your application.

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

## Inside the Tankless ETX

The Hubbell Tankless ETX electric water heater contains high powered heating elements that heat water only when there is demand for hot it. This data is continuously transmitted so the electronic temperature controller can constantly calculate the precise amount of power (kW) needed to achieve the desired temperature. A zero cross

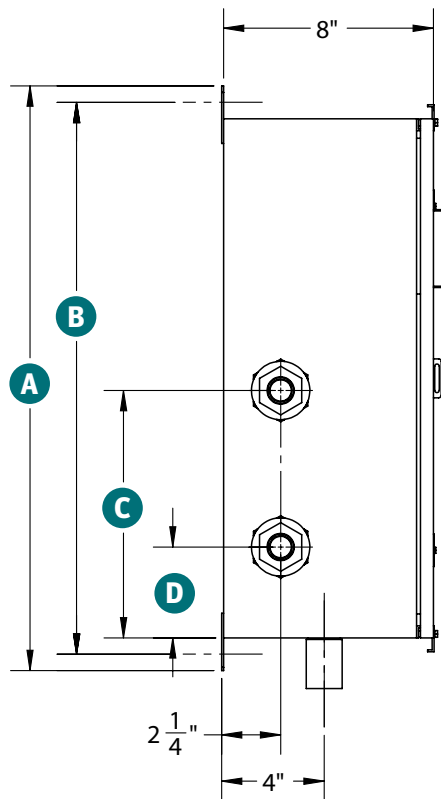
over firing signal is sent to the fast acting TRIACs in order to modulate the heating elements to the precise level needed to meet demand. The Hubbell Tankless water heater uses only as much power as is needed, while delivering accurate and consistent hot water temperature.



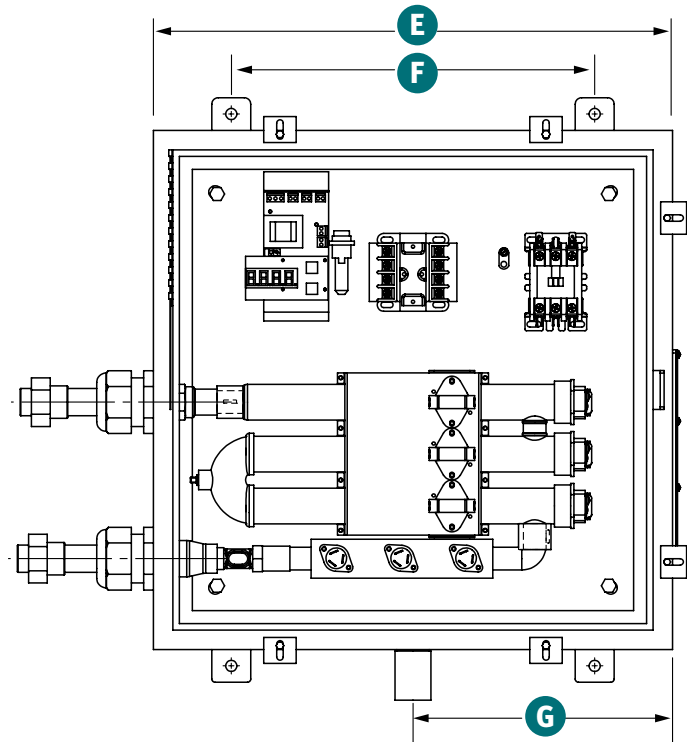
All information is subject to change without notice. Consult factory for submittal drawings.

## Dimensions

Sample dimensions are for an ETXo18-3T4



LEFT VIEW



FRONT VIEW  
(OPEN)

## 8 – 54 kW Models (2, 3 and 6 Element) Dimensional Data

	Dimensional Data (inches)						
	"A"	"B"	"C"	"D"	"E"	"F"	"G"
<b>2 Element</b>	22-1/2	14	9-1/2	3-1/2	20	14	10
<b>3 Element</b>	22-1/2	21-1/4	9-1/2	3-1/2	20	14	10
<b>6 Element</b>	33-1/4	21-1/4	14	4	24	18	12

	Pressure Drop	Dry Weight	Wet Weight	Shipping Weight
<b>3 Element</b>	14	45 lbs.	45.5 lbs.	145 lbs.
<b>6 Element</b>	16	73 lbs.	74 lbs.	175 lbs.

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## 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, independently, 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.

### Building Management Integration

**Remote Control:** Ability to remotely enable or inhibit the heating operation of the unit using one of the following two methods:

1. Customer supplied 24VDC signal is user configured for either Inhibit Mode or Normal Operation Mode.
2. Customer supplied volt free contact is user configured for either Inhibit Mode or Normal Operation Mode.

**Priority Control:** An integrated SPDT potential free dry contact (NO/NC 10A @ 240VAC) energizes when the unit is heating and de-energizes when not heating. This feature is useful when it is desirable to give the water heater priority over another electrical load to ensure that both are not operational at the same time.

## kW and Amperage Selection Charts

### 2 Element

(Amperage shown in chart below indicates available models)

kW Rating	2 Element	
	1 Phase Voltages	
	208	240
2	10	
7	34	29
8	38	33
11		46
12	58	
14	67	58
16		67
18		75

### 3 Element

(Amperage shown in chart below indicates available models)

kW Rating	3 Element					
	1 Phase Voltages		3 Phase Voltages			
	208	240	208	240	480	600
8					10	
11			31			
12		50	33		14	
14				34		
16	77		44	39		
18	87		50		22	
20	96		56			
21		88		51	25	20
24		100		58	29	23
27		113		65	33	26

### 6 Element

(Amperage shown in chart below indicates available models)

kW Rating	6 Element					
	1 Phase Voltages		3 Phase Voltages			
	208	240	208	240	480	600
24	115		67			
31	149		86			
33		138		79		
35						34
36	173		100	87	43	
40	192		111			39
42		175		101	51	40
48	231	200	133	116	58	46
50						48
54		225		130	65	52

**Note:** Alternate voltages including 277, 380, 415, 440 and 575 volt available. Please consult factory for exact kW availability in these voltages.



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## Heating Capacity

kW Rating	Heating Capability in GPM at F° Temperature Rise (°FΔT)									
	20°F ΔT	30°F ΔT	40°F ΔT	60°F ΔT	70°F ΔT	80°F ΔT	100°F ΔT	110°F ΔT	120°F ΔT	140°F ΔT
8	2.73	1.82	1.36	0.91	0.78	0.68	0.55	0.50	0.45	0.39
11	3.75	2.50	1.88	1.25	1.07	0.94	0.75	0.68	0.63	0.54
12	4.09	2.73	2.05	1.36	1.17	1.02	0.82	0.74	0.68	0.58
14	4.78	3.18	2.39	1.59	1.36	1.19	0.96	0.87	0.80	0.68
16	5.46	3.64	2.73	1.82	1.56	1.36	1.09	0.99	0.91	0.78
18	6.14	4.09	3.07	2.05	1.75	1.54	1.23	1.12	1.02	0.88
20	6.82	4.55	3.41	2.27	1.95	1.71	1.36	1.24	1.14	0.97
21	7.17	4.78	3.58	2.39	2.05	1.79	1.43	1.30	1.19	1.02
24	8.19	5.46	4.09	2.73	2.34	2.05	1.64	1.49	1.36	1.17
27	9.21	6.14	4.61	3.07	2.63	2.30	1.84	1.67	1.54	1.32
31	10.58	7.05	5.29	3.53	3.02	2.64	2.12	1.92	1.76	1.51
33	11.26	7.51	5.63	3.75	3.22	2.81	2.25	2.05	1.88	1.61
36	12.28	8.19	6.14	4.09	3.51	3.07	2.46	2.23	2.05	1.75
40	13.65	9.10	6.82	4.55	3.90	3.41	2.73	2.48	2.27	1.95
42	14.33	9.55	7.17	4.78	4.09	3.58	2.87	2.61	2.39	2.05
48	16.38	10.92	8.19	5.46	4.68	4.09	3.28	2.98	2.73	2.34
54	18.42	12.28	9.21	6.14	5.26	4.61	3.68	3.35	3.07	2.63

**Notes:** Alternate voltages including 277, 380, 415, 440 and 575 volt available. Please consult factory for exact kW availability in these voltages.



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## Tankless ETX Model Number Designation

MODEL	See page 6 for available kW and heating element combinations.			OPTIONAL EQUIPMENT
	kW RATING	NUMBER OF HEATING ELEMENTS	VOLTAGE / PHASE	
<b>ETX</b>	8 – 54	2 3 6	<b>RS</b> = 208/1 <b>S</b> = 240/1 <b>R</b> = 208/3 <b>T</b> = 240/3 <b>T3</b> = 380/3 <b>T7</b> = 415/3 <b>T5</b> = 440/3 <b>T4</b> = 480/3 <b>T6</b> = 600/3	Write/type optional equipment code in the gray box below in alphabetical order. For multiple options separate codes with a dash (-).

ETX

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### Example: ETX024-3T4-G16

A Hubbell tankless electric water heater rated at 24 kW with 3 heating elements and powered with 480 volt, three phase, 60 Hz. With optional NEMA 4X rating.

**Note:** For kW rating of 72-162kW ask about the Tankless ETXA.

## Optional Equipment

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

Controller	General
<b>C35</b> BACnet communication module with T1000 digital controller	<b>G3</b> Enclosure heater (specify minimum temperature expected)
<b>C51</b> 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	<b>G9</b> Explosion resistant construction (specify class, division, group, and temperature class)
	<b>G16</b> NEMA 4X rating
	Vessel
	<b>V41</b> Alternate Threaded Inlet/Outlet Connections Size
	<b>NPT</b> NPT Fittings for Inlet/Outlet

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

## Available Accessories

**10-year Warranty:** 10-year non pro-rated tank warranty, specify part number "VESSEL WARRANTY"

Accessories Name

Part #