HESco™
INDUSTRIES, INCORPORATED

Model TX Tankless

Tankless Electric Water Heater

Available up to 54 KW in Single or Three Phase Voltages

Features

- **Heavy Duty Construction**
  - √ Constructed with high grade materials to ensure long operating life
  - √ Simple to specify and easy to install and operate
  - √ Factory packaged heater provides trouble-free installation and operation
- **Reliability**
  - √ Engineered for your specific application to ensure reliable operation
  - √ Wide selection of sizes to meet the needs of even the most demanding application
- **High Efficiency**
  - √ On demand heating eliminates costly and cumbersome storage tanks
  - √ Instantaneous design reduces stand-by heat loss and significantly lowers operating costs compared to traditional storage systems

Applications

- Process Systems
- Wash Downs
- Heat Pump Back-Up
- Boiler Systems
- Emergency Safety Wash Systems
- Freeze Protection
- Heat Transfer Systems
- Supplemental Heat
- Point-of-Use Hot Water

TANKLESS WATER HEATER COMMERCIAL

The TX Model Tankless is a compact wall mounted electric tankless water heater that is 98% efficient and easily installed and compact

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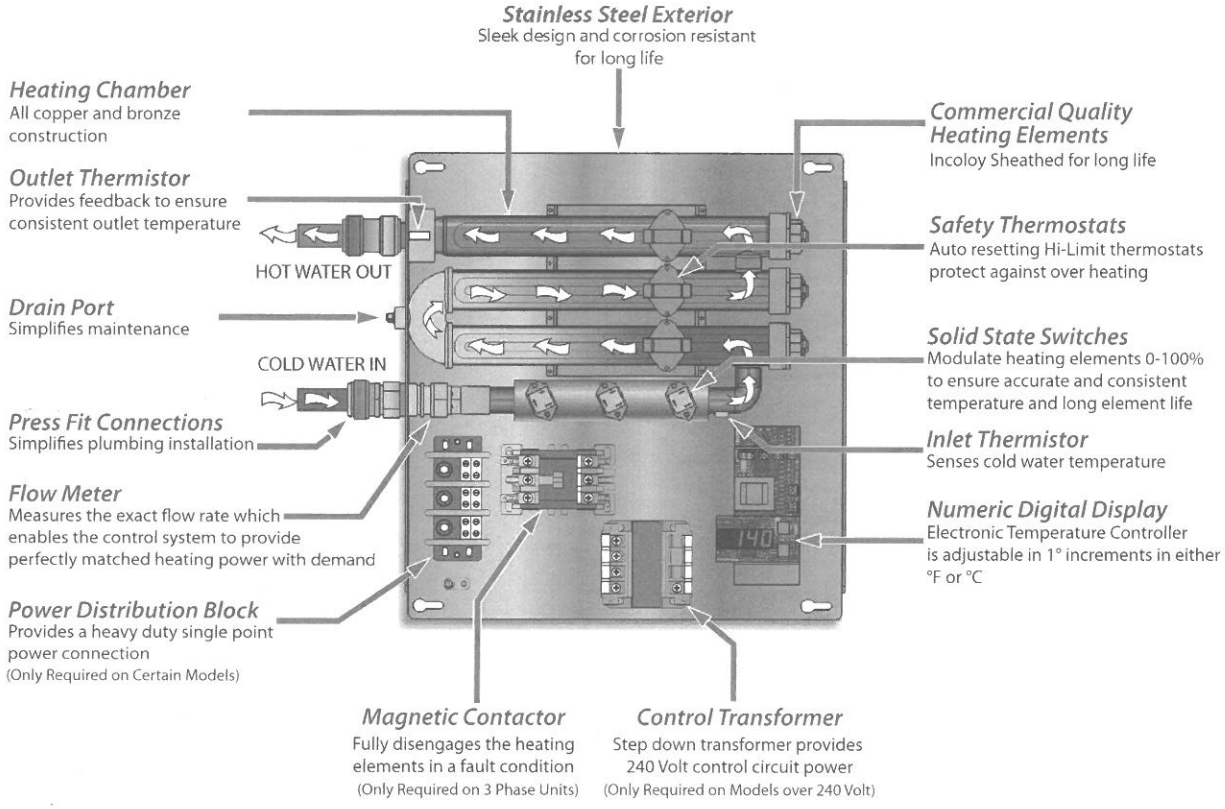
Hesco Tankless Features

How It Works

The Hesco Model TX electric tankless water heater contains high powered heating elements that heat water only when there is demand for hot water. When hot water is needed, a built in flow sensor measures the exact flow rate, and that data combined with temperature readings at the heater's inlet and outlet are processed by the electronic temperature controller. This data is continuously transmitted to the temperature controller, which constantly calculates 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 Hesco tankless heater uses only as much power as is needed, while delivering accurate and consistent hot water temperature.

Heater Overview - *3 Element Model Shown*

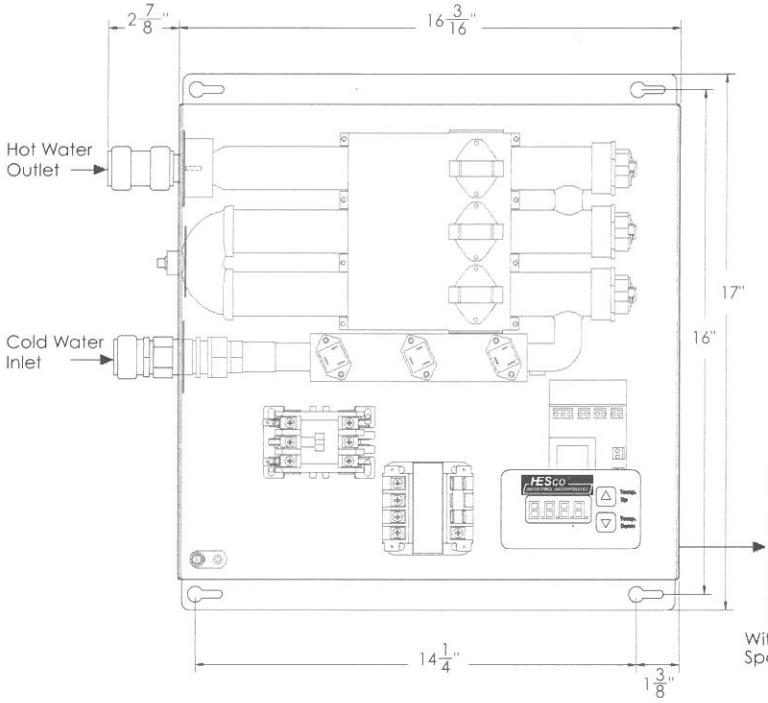


Tankless Model TX Standard Specifications

Heating Chamber:	Copper and Bronze	**Thermostat Range:**	32 -194°F / 0-90°C
Capacities:	8 thru 54 kW	**Hi-Limit:**	200°F (Fixed Temperature)
Orientation:	Wall Mounted	**Design WP:**	150 psi
Voltages:	208 thru 600 Volt 50/60 Hz	**Design TP:**	300 psi
Phase:	1 Φ and 3 Φ (balanced)	**Elements:**	Incoloy 800
Power Factor:	0.999	**Standby Power:**	< 3 Watts
Thermal Efficiency:	98% +	**Heating Chamber Warranty:**	5 Year
Inlet/Outlet Size:		**Electrical Warranty:**	1 Year
TX:	3/4" Press Fit		
HX:	1" Press Fit		
Min/Max Flow:		**Enclosure:**	304 Stainless Steel Brushed Finish
TX:	0.2 GPM Min, 8.0 GPM Max		
HX:	0.5 GPM Min, 40 GPM Max	**Approvals:**	cULus, UL EPH ANSI/NSF 5

Outline Dimensions and Model Selection

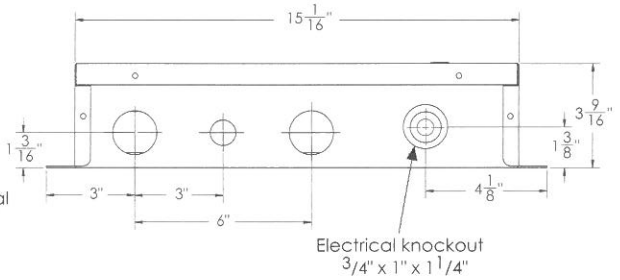
8-27 KW Models (2 and 3 Element)



KW Selection Chart						
KW	3 Phase Voltages				1 Phase Voltages	
	208V	240V	480V	600V	208V	240V
8					✓ (2)	
11	✓ (3)					✓ (2)
12	✓ (3)				✓ (2)	
14		✓ (3)			✓ (2)	✓ (2)
16	✓ (3)	✓ (3)			✓ (3)	✓ (2)
18	✓ (3)		✓ (3)		✓ (3)	✓ (2)
20	✓ (3)				✓ (3)	
21		✓ (3)	✓ (3)	✓ (3)		✓ (3)
24		✓ (3)	✓ (3)	✓ (3)		✓ (3)
27		✓ (3)	✓ (3)	✓ (3)		✓ (3)

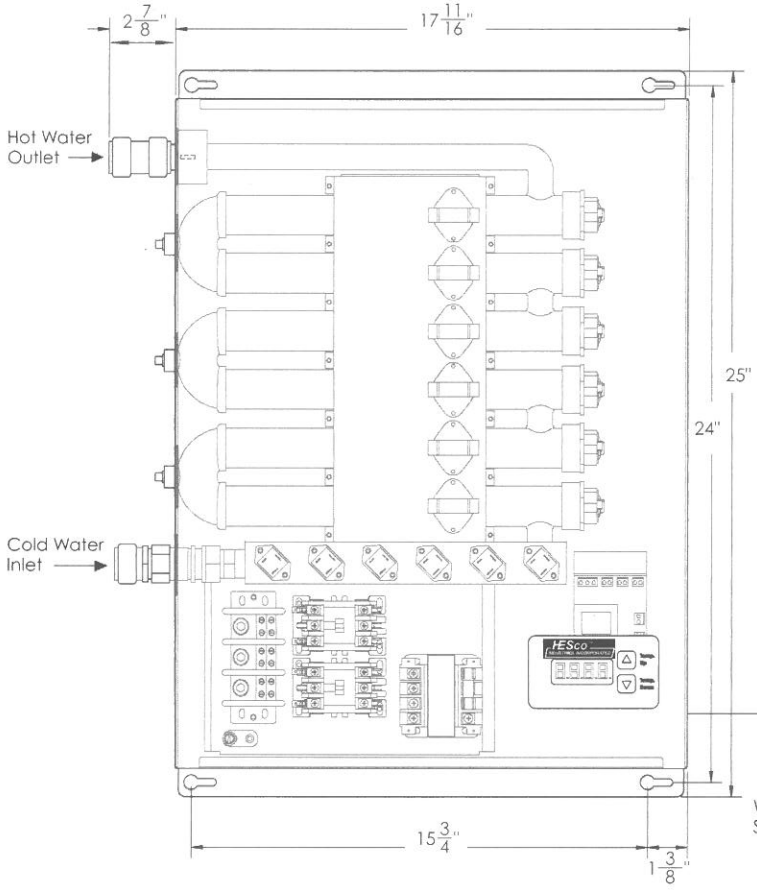
Note: Chart indicates three element (3) and two element (2) model types

Side View



Pressure Drop: 3 psi @ 8 GPM *Dry Weight: 21 Lbs* *Wet Weight: 21.5 Lbs* *Shipping Weight: 24 Lbs*

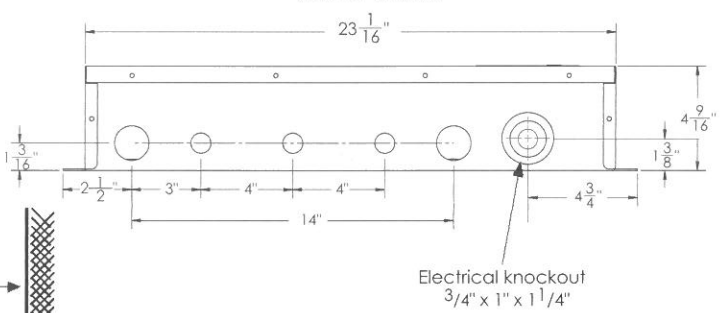
24-54 KW Models (6 Element)



KW Selection Chart						
KW	3 Phase Voltages				1 Phase Voltages	
	208V	240V	480V	600V	208V	240V
24	✓ (6)				✓ (6)	
31	✓ (6)				✓ (6)	
33		✓ (6)				✓ (6)
36	✓ (6)		✓ (6)		✓ (6)	
40	✓ (6)				✓ (6)	
42		✓ (6)	✓ (6)	✓ (6)		✓ (6)
48	✓ (6)	✓ (6)	✓ (6)	✓ (6)	✓ (6)	✓ (6)
54		✓ (6)	✓ (6)	✓ (6)		✓ (6)

Note: All models shown in this chart are six element (6) model types

Side View



Pressure Drop: 4 psi @ 8 GPM *Dry Weight: 38 Lbs* *Wet Weight: 39 Lbs* *Shipping Weight: 42 Lbs*

Heating Capacity and Amperage Chart

KW Rating	Heating Capability in GPM at °F Temperature Rise (°FΔT)										MAX Amps (at 100% heater output)					
	20° ΔT	30° ΔT	40° ΔT	60° ΔT	70° ΔT	80° ΔT	100° ΔT	110° ΔT	120° ΔT	140° ΔT	3 Phase Voltages				1 Phase Voltages	
											208V	240V	480V	600V	208V	240V
8	2.73	1.82	1.36	0.91	0.78	0.68	0.55	0.50	0.45	0.39	–	–	–	–	38	–
11	3.75	2.50	1.88	1.25	1.07	0.94	0.75	0.68	0.63	0.54	31	–	–	–	–	46
12	4.09	2.73	2.05	1.36	1.17	1.02	0.82	0.74	0.68	0.58	33	–	–	–	58	–
14	4.78	3.18	2.39	1.59	1.36	1.19	0.96	0.87	0.80	0.68	–	34	–	–	67	58
16	5.46	3.64	2.73	1.82	1.56	1.36	1.09	0.99	0.91	0.78	44	39	–	–	77	67
18	6.14	4.09	3.07	2.05	1.75	1.54	1.23	1.12	1.02	0.88	50	–	22	–	87	75
20	6.82	4.55	3.41	2.27	1.95	1.71	1.36	1.24	1.14	0.97	56	–	–	–	96	–
21	7.17	4.78	3.58	2.39	2.05	1.79	1.43	1.30	1.19	1.02	–	51	25	20	–	88
24	8.19	5.46	4.09	2.73	2.34	2.05	1.64	1.49	1.36	1.17	67	58	29	23	115	100
27	9.21	6.14	4.61	3.07	2.63	2.30	1.84	1.67	1.54	1.32	–	65	33	26	–	113
31	10.58	7.05	5.29	3.53	3.02	2.64	2.12	1.92	1.76	1.51	86	–	–	–	149	–
33	11.26	7.51	5.63	3.75	3.22	2.81	2.25	2.05	1.88	1.61	–	79	–	–	–	138
36	12.28	8.19	6.14	4.09	3.51	3.07	2.46	2.23	2.05	1.75	100	–	43	–	173	–
40	13.65	9.10	6.82	4.55	3.90	3.41	2.73	2.48	2.27	1.95	111	–	–	–	192	–
42	14.33	9.55	7.17	4.78	4.09	3.58	2.87	2.61	2.39	2.05	–	101	51	41	–	175
48	16.38	10.92	8.19	5.46	4.68	4.09	3.28	2.98	2.73	2.34	133	116	58	46	230	200
54	18.42	12.28	9.21	6.14	5.26	4.61	3.68	3.35	3.07	2.63	–	130	65	52	–	225

Note: *• Unshaded flows specify Base Model TX, shaded flows must specify Base Model HX due to high flow rate.*
• Alternate voltages including 277, 380, 415, 440 and 575 volt available. Please consult factory for exact KW availability in these voltages.

Sizing Formulas

Step 1 Solve for the unknown using formulas below.

Variables To Solve For:

KW Requirement:

_____ GPM x _____ °FΔT x 0.1465 = _____ KW

Temperature Rise:

_____ KW x 6.824 ÷ _____ GPM = _____ °FΔT

Flow Rate:

_____ KW x 6.824 ÷ _____ °FΔT = _____ GPM

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 voltage and phase power supply available. Note the total amperage draw of the unit and verify availability.

Voltage De-Rating Factors

Rated Voltage	Applied Voltage	De-Rating Factor
600 V	575 V	92%
600 V	550 V	84%
480 V	460 V	92%
480 V	440 V	84%
240 V	230 V	92%
240 V	220 V	84%
240 V	208 V	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.

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

Model Number Designation

TX [ ] – [ ] [ ]

Step 1 — Base Model No.
TX = 8 GPM Max
HX = 40 GPM Max

Step 2 — KW Rating:
8 thru 54KW
(008 - 054)

Step 3 — Number of Heating Elements:
2
3
6

Step 4 — Voltage / Phase / Hz:
RS = 208-1-60
R = 208-3-60
S = 240-1-60
T = 240-3-60
T3 = 380-3-50/60
T7 = 415-3-50/60
T5 = 440-3-60
T4 = 480-3-60
T6 = 600-3-60

Example: TX024-3T4

A Hesco tankless electric water heater rated at 24 KW with 3 heating elements and powered with 480 volt, three phase, 60 Hz.

Option Note

Any and all optional equipment for a tankless model heater must be called out in the written specifications. A model number in and of itself does not reflect any optional equipment selected.