

Product Catalog | 9/8/2020

Commercial & Industrial 3-Phase Water Heaters

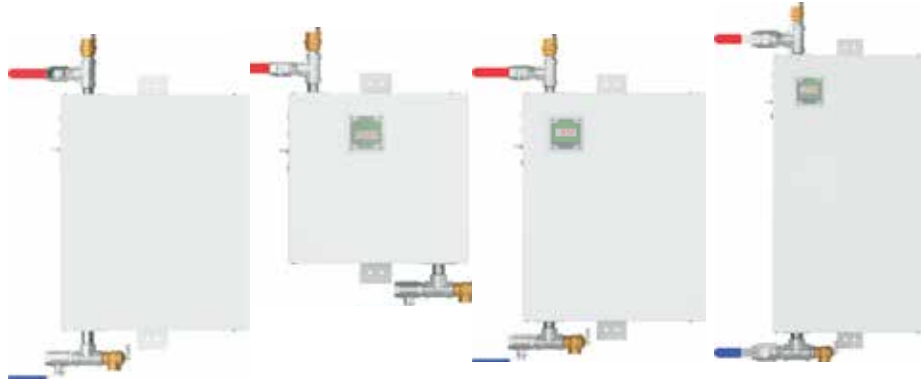
STIEBEL ELTRON

COMMERCIAL  INDUSTRIAL 3-PHASE WATER HEATING



Feature Comparison

A comparison of features in our model lines, and against the competition. Features for competing products are based on readily available public information.



	CF Series Mechanical	CE Series Electronic	CES Series Safety applications	CERO Series Caustic liquids	Competition	
					Keltech	Eemax
Recommended applications	Where ruggedness is required, but precise temperature is not	Where precise temp. and adjustability are required	Tepid water for emergency stations per OSHA	Caustic fluids including reverse osmosis water	Various	Various
Size Range kW	12-144 kW	12-144 kW	12-144 kW	12-144 kW	5-144 kW	3-200+ kW
Size Range Btu/hr	40-491 kBtu/hr	40-491 kBtu/hr	40-491 kBtu/hr	40-491 kBtu/hr	17-491 kBtu/hr	9-600 kBtu/hr
Voltages	3-phase: 208, 240, 400, 480 V Delta or Wye, 575 V Delta	3-phase: 208, 240, 400, 480 V Delta or Wye, 575 V Delta	3-phase: 208, 240, 400, 480 V Delta or Wye, 575 V Delta	3-phase: 208, 240, 400, 480 V Delta or Wye, 575 V Delta	208, 240, 480, 575, 600 V	208, 240, 480, 575, 600 V 1- & 3-phase
Heat exchanger	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel	Copper & Brass	Plastic
Element sheathing	840 Incoloy	840 Incoloy	840 Incoloy	Titanium	840 Incoloy	None
Elements individually fused	Yes	Yes	Yes	Yes	Yes	Yes
Temperature range	90-185 °F (32-85 °C)	60-185 °F (15.5-85 °C)	60-90 °F (15.5-32 °C)	60-185 °F (15.5-85 °C)	60-200 °F (15.5-93 °C)	60-180 °F (15.5-82 °C)
Temperature adjustability	Fixed	by 1 °F / 1 °C	by 1 °F / 1 °C	by 1 °F / 1 °C	Yes	Yes
Is output temperature measured and displayed?	No	Yes Actual and requested output temperatures shown if unit is over capacity	Yes Actual and requested output temperatures shown if unit is over capacity	Yes Actual and requested output temperatures shown if unit is over capacity	Yes	Yes NEMA 3 No NEMA 4
Over-temperature protections	1	4	4	4	4	Unknown
Activation flow rate	0 GPM (constant hot)	0.5, 2.0, 4.0 GPM	0.5, 2.0, 4.0 GPM	0.5, 2.0, 4.0 GPM	1.5 GPM	0.7, 1.0, 2.5 GPM
Flow rate (@ 40 PSI)	up to 40 GPM, dependent on pipe size	up to 40 GPM, dependent on pipe size	up to 40 GPM, dependent on pipe size	up to 40 GPM, dependent on pipe size	13-50 GPM	8-40 GPM, dependent on pipe size
Pipe size	¾-1 ¼"	¾-1 ¼"	¾-1 ¼"	¾-1 ¼"	¾-1 ¼"	½-1 ¼"
Freeze protection	Standard	Standard	Standard	Standard	Standard	Optional
Standard enclosure	NEMA 3	NEMA 3	NEMA 3	NEMA 3	NEMA 3	NEMA 3
Optional enclosures	NEMA 4, NEMA 4X	NEMA 4, NEMA 4X	NEMA 4, NEMA 4X	NEMA 4, NEMA 4X	NEMA 4 and 4X	NEMA 4 and 4X
Warranty	6-year heat exchanger 2-year electrical	6-year heat exchanger 2-year electrical	6-year heat exchanger 2-year electrical	6-year heat exchanger 2-year electrical	8-year heat exchanger 2-year electrical	5-year heat exchanger 1-year electrical

General Product Overview

- › 3-phase industrial and commercial water heaters
- › All machining, welding, assembly, and testing done in Sarasota, Fla.
- › 316L stainless steel heat exchangers and pipe connections
- › Lead-free brass pressure relief valve and air vent included
- › ¾", 1", & 1¼" female water connection sizes depending on heating capacity
- › CE, CES, CERO models are electronically flow activated. CF models are fixed thermostat temperature controlled.
- › Inlet and outlet ball valves included and pre-installed
- › Completely pre-wired. Only mains power connection needed
- › Field serviceable. Components are intuitively laid out and designed for serviceability and accessibility
- › Flows up to 40 gpm
- › Capacities up to 144 kW
- › 6-year warranty on leaks/heat exchanger workmanship
- › 2-year warranty on electrical components



Models and 3-Phase Voltages Available

	12 kW	15 kW	18 kW	24 kW	27 kW	36 kW	48 kW	54 kW	60 kW	72 kW	81 kW	90 kW	108 kW	120 kW	144 kW	
CF Series																
208 volt	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪						
240 volt	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪						
400 volt	▪	▪	▪	▪	▪	▪	▪	▪	▪		▪	▪	▪	▪	▪	▪
480 volt	▪	▪	▪	▪	▪	▪	▪	▪	▪		▪	▪	▪	▪	▪	▪
575 volt				▪		▪	▪			▪			▪	▪		▪
Water connection	¾"						1"				1¼"					
CE & CES Series																
208 volt	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪						
240 volt	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪						
400 volt	▪	▪	▪	▪	▪	▪	▪	▪	▪		▪	▪	▪	▪	▪	▪
480 volt	▪	▪	▪	▪	▪	▪	▪	▪	▪		▪	▪	▪	▪	▪	▪
575 volt				▪		▪	▪			▪			▪	▪		▪
Water connection	¾"						1"				1¼"					
CERO Series																
208 volt	▪	▪	▪	▪	▪			▪								
240 volt	▪	▪	▪	▪	▪	▪	▪	▪		▪						
400 volt	▪	▪	▪	▪	▪	▪	▪				▪	▪	▪	▪	▪	▪
480 volt	▪	▪	▪	▪	▪	▪	▪				▪	▪	▪	▪	▪	▪
575 volt				▪		▪	▪			▪			▪	▪		▪
Water connection	¾"						1"				1¼"					

Heat Exchanger Design

- › 316L stainless steel welded-tube heat exchanger
- › CE, CES, and CERO models equipped with an extra tube without a heating element to cool triacs
- › Electric heating elements are removable and replaceable
- › Heat exchanger water flow generally trends upward

Inlet/outlet piping shown may not reflect delivered configurations.

CF Series

General Purpose Water Heaters

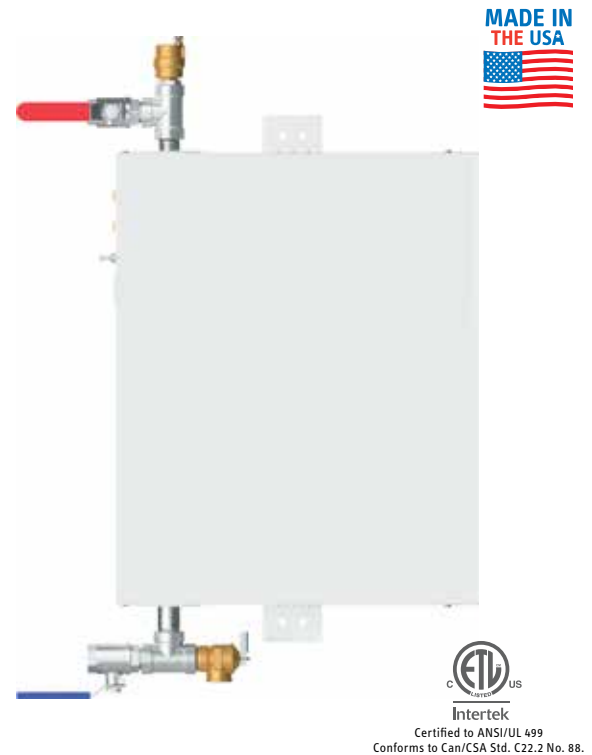
CF Series models are a lower technology, reliable way to heat water. They are electromechanical and heat water based on the temperature measured by a thermostat as the water passes the element. CF Series models are accurate to $\pm 7^{\circ}\text{F}$ at low flow rates. CF models can be used in safety shower applications, but a mixing valve may need to be installed.

Features

- › NEMA 3 enclosure standard (NEMA 4 and NEMA 4X available at additional cost)
- › 316L stainless steel heat exchangers
- › 840 Incoloy sheathing material for the elements
- › Activates on demand but stays hot without flow ensuring immediate hot water on demand
- › Output temperatures: 90, 110, 125, 145, 155, 185° Fahrenheit
- › Output temperature is fixed and depends on the thermostat installed
- › Individually fused elements
- › Unique water flow relieves air build-up resulting in increased longevity
- › Minimal pressure drop. See charts on website for details
- › Easily serviced on site
- › All machining, welding, assembly, and testing done in Sarasota, Fla.
- › Each unit is tested at full and partial load amperage draw to ensure measurement accuracy and proper operation

Options

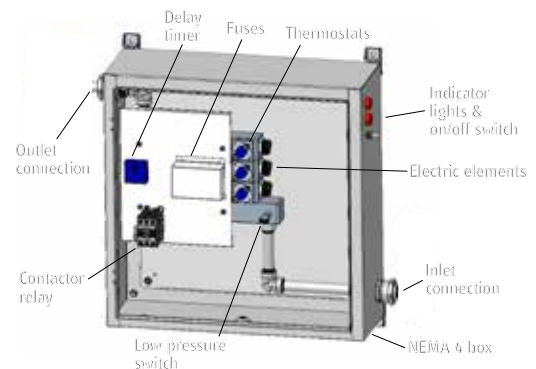
- › NEMA 4 and NEMA 4X enclosures are available



12-element CF



Anatomy of a CF



Control circuit remains simple regardless of model.

Inlet/outlet piping shown may not reflect delivered configurations.

Pros

- Low cost per Btu
- Fixed temperature setpoint prevents dangerous alterations to temperature by unauthorized personnel
- Simple control circuit leads to easy troubleshooting

Cons

- Simple operation with fixed thermostat temperature control
- Heat loss is greater than flow activated models
- No flow control to ensure water delivered at setpoint temperature

	Item Number	Voltage 3-phase	KW	Full Load Amp Draw	3P Breaker Size (A)	No. of Elements	Pipe Size (inches)	Standard Enclosure Size Excluding fittings (W x H x D in inches)
CF 12 KW	CF-012-208D	208	11.27	31.27	35	3	3/4	16 ¹ / ₁₆ x 15 ¹ / ₈ x 9 ¹ / ₈
	CF-012-240D	240	12.50	30.07	35			
	CF-012-400Y	400 Wye	12.41	17.91	20			
	CF-012-480Y	480 Wye	13.50	16.24	20			
CF 15 KW	CF-015-208D	208	15.77	43.78	50	3	3/4	16 ¹ / ₁₆ x 15 ¹ / ₈ x 9 ¹ / ₈
	CF-015-240D	240	15.00	36.08	40			
	CF-015-400Y	400 Wye	13.78	19.88	25			
	CF-015-480Y	480 Wye	16.65	20.03	25			
CF 18 KW	CF-018-208D	208	18.00	49.96	60	3	3/4	16 ¹ / ₁₆ x 15 ¹ / ₈ x 9 ¹ / ₈
	CF-018-240D	240	18.00	43.30	50			
	CF-018-400Y	400 Wye	19.29	27.84	30			
	CF-018-480Y	480 Wye	18.00	21.65	25			
	CF-018-480D*	480	18.00	21.65	25	6		
CF 24 KW	CF-024-208D	208	22.53	62.55	70	6	3/4	18 ⁵ / ₈ x 21 ⁷ / ₈ x 9 ¹ / ₄
	CF-024-240D	240	25.00	60.14	70			
	CF-024-400D	400	25.00	36.08	40			
	CF-024-400Y	400 Wye	24.82	35.82	40			
	CF-024-480D	480	25.00	30.07	35			
	CF-024-480Y	480 Wye	22.20	26.70	30			
	CF-024-575D	575	24.00	24.10	30			
CF 27 KW	CF-027-208D	208	27.04	75.06	80	6	3/4	18 ⁵ / ₈ x 21 ⁷ / ₈ x 9 ¹ / ₄
	CF-027-240D	240	27.02	65.01	80			
	CF-027-400D	400	29.17	42.10	50			
	CF-027-400Y	400 Wye	27.55	39.77	45			
	CF-027-480D	480	27.02	32.51	40			
CF 36 KW	CF-036-208D	208	36.00	99.93	110	6	3/4	18 ⁵ / ₈ x 21 ⁷ / ₈ x 9 ¹ / ₄
	CF-036-240D	240	36.00	86.60	100			
	CF-036-400D	400	33.28	48.04	60			
	CF-036-400Y	400 Wye	33.06	47.72	60			
	CF-036-480D	480	36.00	43.30	50			
CF 48 KW	CF-048-208D	208	45.07	125.09	150	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CF-048-240D	240	50.00	120.28	150			
	CF-048-400D	400	48.61	70.16	80			
	CF-048-480D	480	50.00	60.14	70			
	CF-048-575D	575	47.99	48.19	60			
CF 54 KW	CF-054-208D	208	54.08	150.11	175	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CF-054-240D	240	54.05	130.02	150			
	CF-054-400D	400	58.33	84.20	100			
	CF-054-480D	480	54.05	65.01	80			
CF 60 KW	CF-060-208D	208	63.09	175.13	200	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CF-060-240D	240	60.00	144.34	175			
	CF-060-400D	400	66.57	96.08	110			
	CF-060-480D	480	60.00	72.17	80			
CF 72 KW	CF-072-208D	208	72.00	199.85	225	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CF-072-240D	240	72.00	173.21	200			
	CF-072-480D	480	72.00	86.60	100			
	CF-072-575D	575	72.00	72.29	80			
CF 81 KW	CF-081-400D	400	75.00	108.25	125	18	1	24 x 48 x 13 ⁵ / ₈
	CF-081-480D	480	81.07	97.52	110			
CF 90 KW	CF-090-400D	400	87.50	126.30	150	18	1	24 x 48 x 13 ⁵ / ₈
	CF-090-480D	480	90.00	108.25	125			
CF 108 KW	CF-108-400D	400	99.85	144.12	175	18	1	24 x 48 x 13 ⁵ / ₈
	CF-108-480D	480	108.00	129.90	150			
	CF-108-575D	575	108.00	108.44	125			
CF 120 KW	CF-120-400D	400	116.67	168.39	200	24	1 ¹ / ₄	24 x 48 x 13 ⁵ / ₈
	CF-120-480D	480	120.00	144.34	175			
CF 144 KW	CF-144-400D	400	133.14	192.17	225	24	1 ¹ / ₄	24 x 48 x 13 ⁵ / ₈
	CF-144-480D	480	144.00	173.21	200			
	CF-144-575D	575	144.00	144.59	175			

Fixed temperature thermostat
MUST BE
specified with order.

Available thermostats (°F)
for all CF models
90, 110, 125, 145, 155, 185

*CF-018 480 V Delta (6-element
heater) available at extra cost

CF Series

Products and Capabilities

General Purpose Electronically-Controlled Water Heaters

CE Series are electronically activated and temperature controlled water heaters. They calculate the amount of energy needed to meet hot water demand by measuring flow rate, then activating the minimum number of elements necessary to satisfy that demand. No energy is used when the unit is idle other than the indicator light. Larger CE Series models are used as boiler replacements or specific process manufacturing applications. Smaller CE Series models are used for hand washing or smaller process applications.

Features

- › NEMA 3 enclosure standard (NEMA 4 and NEMA 4X available at additional cost)
- › 316L stainless steel heat exchangers
- › 840 Incoloy sheathing material for the elements
- › 12–36 kW models activate on demand at 0.5 GPM
- › 48–144 kW models activate on demand at 2.0 GPM
- › User set output temperature 60–185° Fahrenheit
- › Actual and customer requested output temperatures viewable through window in the front panel
- › Rocker switch on outside of unit adjusts temperature in increments of 1° Fahrenheit
- › Individually fused elements
- › Four over-temperature protections
- › Unique water flow relieves air build-up for increased longevity
- › Freeze protection is a standard feature
- › Minimal pressure drop. See charts on website for details
- › Easily serviced on site
- › All machining, welding, assembly & testing done in Sarasota, Fla.
- › Each unit tested at full and partial load amperage draw to ensure measurement accuracy and proper operation

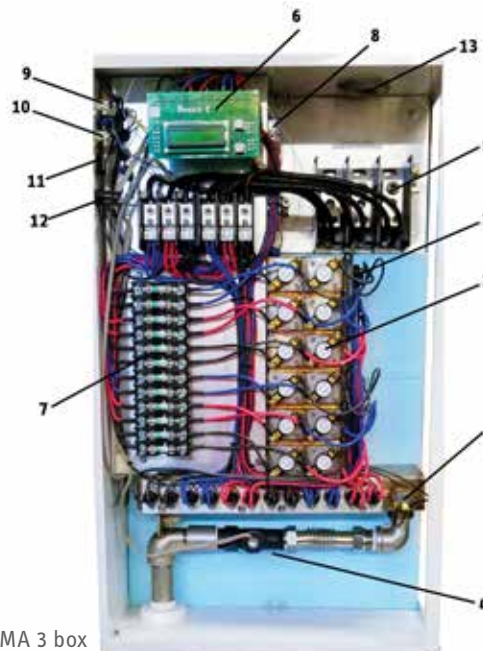
Options

- › NEMA 4 and NEMA 4X enclosures are available

Anatomy of a CE

- 1 Element
- 2 Individual element thermostat/ safety cut-off
- 3 Pressure sensor switch
- 4 Flow sensor
- 5 Terminal block
- 6 Electronic board PCB
- 7 Fuse box
- 8 Transformer
- 9 Power indicator light
- 10 On/off indicator light
- 11 On/off switch
- 12 Temperature set switch
- 13 Wire support

NEMA 3 box



Inlet/outlet piping shown may not reflect delivered configurations.



Intertek
Certified to ANSI/UL-499
Conforms to Can/CSA Std. C22.2 No. 88.

Pros

Temperature adjustable
Less energy use than CF due to flow activation
More accurate temperature delivery using sensor feedback and modulation of power via triacs

Cons

More expensive than electromechanical CF model
More complicated control interface than CF model

	Item Number	Voltage 3-phase	KW	Full Load Amp Draw	3P Breaker Size (A)	No. of Elements	Pipe Size (inches)	Standard Enclosure Size Excluding fittings (W x H x D in inches)
CE 12 KW	CE-012-208D	208	11.27	31.27	35	3	3/4	16 ¹ / ₁₆ x 15 ¹ / ₈ x 9 ¹ / ₈
	CE-012-240D	240	12.50	30.07	35			
	CE-012-400Y	400 Wye	12.41	17.91	20			
	CE-012-480Y	480 Wye	13.50	16.24	20			
CE 15 KW	CE-015-208D	208	15.77	43.78	50	3	3/4	16 ¹ / ₁₆ x 15 ¹ / ₈ x 9 ¹ / ₈
	CE-015-240D	240	15.00	36.08	40			
	CE-015-400Y	400 Wye	13.78	19.88	25			
	CE-015-480Y	480 Wye	16.65	20.03	25			
CE 18 KW	CE-018-208D	208	18.00	49.96	60	3	3/4	16 ¹ / ₁₆ x 15 ¹ / ₈ x 9 ¹ / ₈
	CE-018-240D	240	18.00	43.30	50			
	CE-018-400Y	400 Wye	19.29	27.84	30			
	CE-018-480Y	480 Wye	18.00	21.65	25			
	CE-018-480D*	480	18.00	21.65	25	6		
CE 24 KW	CE-024-208D	208	22.53	62.55	70	6	3/4	18 ⁵ / ₈ x 21 ⁷ / ₈ x 9 ¹ / ₄
	CE-024-240D	240	25.00	60.14	70			
	CE-024-400D	400	25.00	36.08	40			
	CE-024-400Y	400 Wye	24.82	35.82	40			
	CE-024-480D	480	25.00	30.07	35			
	CE-024-480Y	480 Wye	22.20	26.70	30			
	CE-024-575D	575	24.00	24.10	30			
CE 27 KW	CE-027-208D	208	27.04	75.06	80	6	3/4	18 ⁵ / ₈ x 21 ⁷ / ₈ x 9 ¹ / ₄
	CE-027-240D	240	27.02	65.01	80			
	CE-027-400D	400	29.17	42.10	50			
	CE-027-400Y	400 Wye	27.55	39.77	45			
	CE-027-480D	480	27.02	32.51	40			
	CE-027-480Y	480 Wye	27.00	32.48	40			
CE 36 KW	CE-036-208D	208	36.00	99.93	110	6	3/4	18 ⁵ / ₈ x 21 ⁷ / ₈ x 9 ¹ / ₄
	CE-036-240D	240	36.00	86.60	100			
	CE-036-400D	400	33.28	48.04	60			
	CE-036-400Y	400 Wye	33.06	47.72	60			
	CE-036-480D	480	36.00	43.30	50			
	CE-036-575D	575	36.00	36.15	40			
CE 48 KW	CE-048-208D	208	45.07	125.09	150	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CE-048-240D	240	50.00	120.28	150			
	CE-048-400D	400	48.61	70.16	80			
	CE-048-480D	480	50.00	60.14	70			
	CE-048-575D	575	47.99	48.19	60			
CE 54 KW	CE-054-208D	208	54.08	150.11	175	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CE-054-240D	240	54.05	130.02	150			
	CE-054-400D	400	58.33	84.20	100			
	CE-054-480D	480	54.05	65.01	80			
CE 60 KW	CE-060-208D	208	63.09	175.13	200	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CE-060-240D	240	60.00	144.34	175			
	CE-060-400D	400	66.57	96.08	110			
	CE-060-480D	480	60.00	72.17	80			
CE 72 KW	CE-072-208D	208	72.00	199.85	225	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CE-072-240D	240	72.00	173.21	200			
	CE-072-480D	480	72.00	86.60	100			
	CE-072-575D	575	72.00	72.29	80			
CE 81 KW	CE-081-400D	400	75.00	108.25	125	18	1	24 x 48 x 13 ⁵ / ₈
	CE-081-480D	480	81.07	97.52	110			
CE 90 KW	CE-090-400D	400	87.50	126.30	150	18	1	24 x 48 x 13 ⁵ / ₈
	CE-090-480D	480	90.00	108.25	125			
CE 108 KW	CE-108-400D	400	99.85	144.12	175	18	1	24 x 48 x 13 ⁵ / ₈
	CE-108-480D	480	108.00	129.90	150			
	CE-108-575D	575	108.00	108.44	125			
CE 120 KW	CE-120-400D	400	116.67	168.39	200	24	1 ¹ / ₄	24 x 48 x 13 ⁵ / ₈
	CE-120-480D	480	120.00	144.34	175			
CE 144 KW	CE-144-400D	400	133.14	192.17	225	24	1 ¹ / ₄	24 x 48 x 13 ⁵ / ₈
	CE-144-480D	480	144.00	173.21	200			
	CE-144-575D	575	144.00	144.59	175			

*CE-018 480 V Delta (6-element heater) available at extra cost

CE Series

Products and Capabilities

Adjustable
Temperature Range
for all models
60-185 °F

Eyewash & Emergency Shower Water Heaters

The CES Series is designed to heat water for emergency eyewash stations and emergency drench showers to meet OSHA requirements. The CES Series has the same operation, capacity, and voltage ranges as the CE Series. It differs from the CE Series by limiting temperature control to 60–90 °F and using 90 °F thermostats in place of the 180 °F thermostats of the CE Series.

CES 12 kW through CES 36 kW units should be used solely for eyewash station applications. Depending on size, they will heat up to 7 gallons per minute by 35 °F (20 °C) and limit the output temperature to OSHA requirements. CES 60 kW through CES 144 kW units will meet OSHA requirements for many installations including emergency showers.

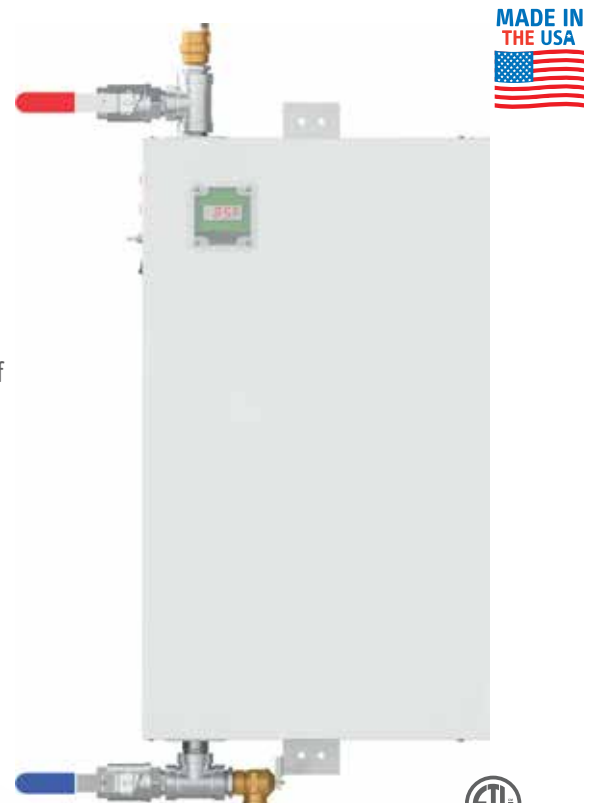
Incoming water temperature must be measured on a cold day to verify the kilowatt size needed to comply with emergency shower and eyewash requirements. Only the largest models will be sufficient for cold temperate climates. We recommend targeting 85 °F for best results. To meet regulations 60 °F must be attained. Regulations also require at least 20 GPM per minute per shower for 15 minutes to comply, plus eyewash station requirements.

Features

- › Meets all OSHA and ANSI Z 358.1 requirements
- › NEMA 3 enclosure standard (NEMA 4 and NEMA 4X available at additional cost)
- › 316L stainless steel heat exchangers
- › 840 Incoloy sheathing material for the elements
- › 12–36 kW models activate on demand at 0.5 GPM
- › 48–144 kW models activate on demand at 2.0 GPM
- › Output temperature range 60–90° Fahrenheit
- › Actual and customer requested output temperatures viewable through window in the front panel
- › Rocker switch on outside of unit adjusts temperature in increments of 1° Fahrenheit
- › Individually fused elements
- › Four over-temperature protections
- › Freeze protection is a standard feature
- › Minimal pressure drop. See charts on website for details
- › Easily serviced on site
- › All machining, welding, assembly, & testing done in Sarasota, Fla.
- › Each unit tested for 1 hour at full load amp draw

Options

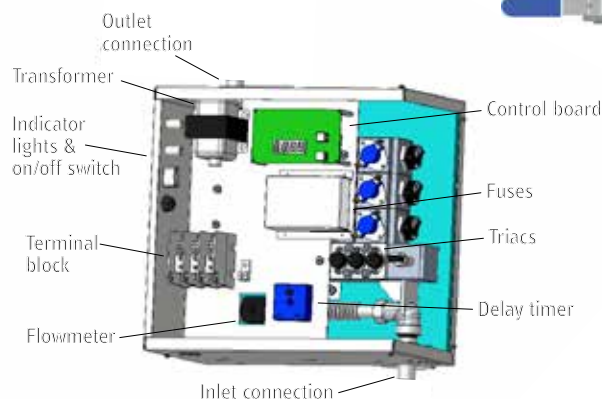
- › NEMA 4 and NEMA 4X enclosures are available



Anatomy of a CES

CES series has the same configuration as the CE Series (small NEMA 3 enclosure shown)

Inlet/outlet piping shown may not reflect delivered configurations.



	Item Number	Voltage 3-phase	KW	Full Load Amp Draw	3P Breaker Size (A)	No. of Elements	Pipe Size (inches)	Standard Enclosure Size Excluding fittings (W x H x D in inches)
CES 12 KW	CES-012-208D	208	11.27	31.27	35	3	3/4	16 ¹ / ₁₆ x 15 ¹ / ₈ x 9 ¹ / ₈
	CES-012-240D	240	12.50	30.07	35			
	CES-012-400Y	400 Wye	12.41	17.91	20			
	CES-012-480Y	480 Wye	13.50	16.24	20			
CES 15 KW	CES-015-208D	208	15.77	43.78	50	3	3/4	16 ¹ / ₁₆ x 15 ¹ / ₈ x 9 ¹ / ₈
	CES-015-240D	240	15.00	36.08	40			
	CES-015-400Y	400 Wye	13.78	19.88	25			
	CES-015-480Y	480 Wye	16.65	20.03	25			
CES 18 KW	CES-018-208D	208	18.00	49.96	60	3	3/4	16 ¹ / ₁₆ x 15 ¹ / ₈ x 9 ¹ / ₈
	CES-018-240D	240	18.00	43.30	50			
	CES-018-400Y	400 Wye	19.29	27.84	30			
	CES-018-480Y	480 Wye	18.00	21.65	25			
	CES-018-480D*	480	18.00	21.65	25	6		
CES 24 KW	CES-024-208D	208	22.53	62.55	70	6	3/4	18 ⁵ / ₈ x 21 ⁷ / ₈ x 9 ¹ / ₄
	CES-024-240D	240	25.00	60.14	70			
	CES-024-400D	400	25.00	36.08	40			
	CES-024-400Y	400 Wye	24.82	35.82	40			
	CES-024-480D	480	25.00	30.07	35			
	CES-024-480Y	480 Wye	22.20	26.70	30			
	CES-024-575D	575	24.00	24.10	30			
CES 27 KW	CES-027-208D	208	27.04	75.06	80	6	3/4	18 ⁵ / ₈ x 21 ⁷ / ₈ x 9 ¹ / ₄
	CES-027-240D	240	27.02	65.01	80			
	CES-027-400D	400	29.17	42.10	50			
	CES-027-400Y	400 Wye	27.55	39.77	45			
	CES-027-480D	480	27.02	32.51	40			
	CES-027-480Y	480 Wye	27.00	32.48	40			
CES 36 KW	CES-036-208D	208	36.00	99.93	110	6	3/4	18 ⁵ / ₈ x 21 ⁷ / ₈ x 9 ¹ / ₄
	CES-036-240D	240	36.00	86.60	100			
	CES-036-400D	400	33.28	48.04	60			
	CES-036-400Y	400 Wye	33.06	47.72	60			
	CES-036-480D	480	36.00	43.30	50			
	CES-036-575D	575	36.00	36.15	40			
CES 48 KW	CES-048-208D	208	45.07	125.09	150	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CES-048-240D	240	50.00	120.28	150			
	CES-048-400D	400	48.61	70.16	80			
	CES-048-480D	480	50.00	60.14	70			
	CES-048-575D	575	47.99	48.19	60			
CES 54 KW	CES-054-208D	208	54.08	150.11	175	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CES-054-240D	240	54.05	130.02	150			
	CES-054-400D	400	58.33	84.20	100			
	CES-054-480D	480	54.05	65.01	80			
CES 60 KW	CES-060-208D	208	63.09	175.13	200	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CES-060-240D	240	60.00	144.34	175			
	CES-060-400D	400	66.57	96.08	110			
	CES-060-480D	480	60.00	72.17	80			
CES 72 KW	CES-072-208D	208	72.00	199.85	225	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CES-072-240D	240	72.00	173.21	200			
	CES-072-480D	480	72.00	86.60	100			
	CES-072-575D	575	72.00	72.29	80			
CES 81 KW	CES-081-400D	400	75.00	108.25	125	18	1	24 x 48 x 13 ⁵ / ₈
	CES-081-480D	480	81.07	97.52	110			
CES 90 KW	CES-090-400D	400	87.50	126.30	150	18	1	24 x 48 x 13 ⁵ / ₈
	CES-090-480D	480	90.00	108.25	125			
CES 108 KW	CES-108-400D	400	99.85	144.12	175	18	1	24 x 48 x 13 ⁵ / ₈
	CES-108-480D	480	108.00	129.90	150			
	CES-108-575D	575	108.00	108.44	125			
CES 120 KW	CES-120-400D	400	116.67	168.39	200	24	1 ¹ / ₄	24 x 48 x 13 ⁵ / ₈
	CES-120-480D	480	120.00	144.34	175			
CES 144 KW	CES-144-400D	400	133.14	192.17	225	24	1 ¹ / ₄	24 x 48 x 13 ⁵ / ₈
	CES-144-480D	480	144.00	173.21	200			
	CES-144-575D	575	144.00	144.59	175			

*CES-018 480 V Delta (6-element heater) available at extra cost

CES Series

Products and Capabilities

Temperature
Range
for all models
60-90°F

Caustic Fluid Heaters

CERO Series models have corrosion-free titanium-sheathed elements that will last longer in a caustic environment than standard Incoloy-sheathed elements. The CERO Series has the same electronic operation as the CE Series, calculating the amount of energy needed to meet hot water demand, then activating the minimum number of elements necessary to satisfy that demand, depending on flow rate and temperature measurement. No energy is used when the unit is idle other than the indicator light. NEMA 3, NEMA 4, and NEMA 4X enclosures are all available, NEMA 4X is recommended in highly corrosive environments.

Features

- › NEMA 3 enclosure standard (NEMA 4 and NEMA 4X available at additional cost)
- › 316L stainless steel heat exchangers
- › Titanium sheathing for the elements
- › 12–36 kW models activate on demand at 0.5 GPM
- › 48–144 kW models activate on demand at 2.0 GPM
- › Output temperature range 60–185° Fahrenheit
- › Actual and customer requested output temperatures viewable through window in the front panel
- › Rocker switch on outside of unit adjusts temperature in increments of 1° Fahrenheit
- › Individually fused elements
- › Easily serviced on site
- › All machining, welding, assembly, and testing done in Sarasota, Fla.
- › Each unit tested at full and partial load amperage draw to ensure measurement accuracy and proper operation
- › All CERO units are mounted with wall brackets

Options

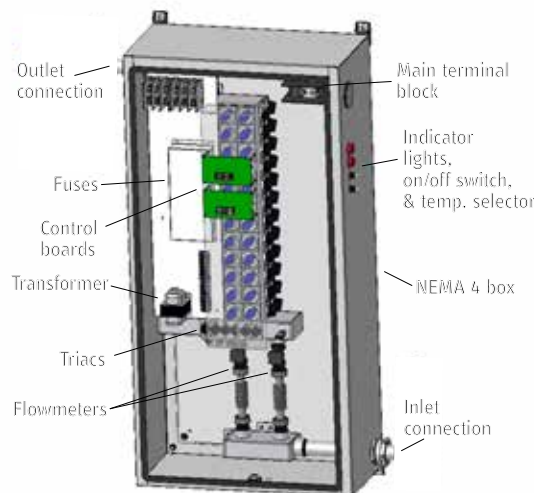
- › NEMA 4 and NEMA 4X enclosures are available



Anatomy of a CERO

CERO series has the same configuration as the CE Series (large NEMA 4/4X enclosure shown)

Inlet/outlet piping shown may not reflect delivered configurations.



	Item Number	Voltage 3-phase	KW	Full Load Amp Draw	3P Breaker Size (A)	No. of Elements	Pipe Size (inches)	Standard Enclosure Size Excluding fittings (W x H x D in inches)
CERO 12 KW	CERO-012-208D	208	10.15	28.17	35	3	3/4	16 ¹ / ₁₆ x 15 ¹ / ₈ x 9 ¹ / ₈
	CERO-012-240D	240	12.50	30.07	35			
	CERO-012-400Y	400 Wye	11.48	16.57	20			
	CERO-012-480Y	480 Wye	11.10	13.35	15			
CERO 15 KW	CERO-015-208D	208	13.52	37.53	45	3	3/4	16 ¹ / ₁₆ x 15 ¹ / ₈ x 9 ¹ / ₈
	CERO-015-240D	240	13.51	32.51	40			
	CERO-015-400Y	400 Wye	12.41	17.91	20			
	CERO-015-480Y	480 Wye	16.65	20.03	25			
CERO 18 KW	CERO-018-208D	208	18.00	49.96	60	3	3/4	16 ¹ / ₁₆ x 15 ¹ / ₈ x 9 ¹ / ₈
	CERO-018-240D	240	18.00	43.30	50			
	CERO-018-400Y	400 Wye	16.53	23.86	30			
	CERO-018-480Y	480 Wye	18.00	21.65	25			
	CERO-018-480D*	480	16.66	20.04	25	6		
CERO 24 KW	CERO-024-208D	208	20.30	56.34	70	6	3/4	18 ⁵ / ₈ x 21 ⁷ / ₈ x 9 ¹ / ₄
	CERO-024-240D	240	25.00	60.14	70			
	CERO-024-400D	400	25.00	36.08	40			
	CERO-024-400Y	400 Wye	24.82	35.82	40			
	CERO-024-480D	480	25.00	30.07	35			
	CERO-024-480Y	480 Wye	22.20	26.70	30			
	CERO-024-575D	575	24.00	24.09	30			
CERO 27 KW	CERO-027-208D	208	27.04	75.06	80	6	3/4	18 ⁵ / ₈ x 21 ⁷ / ₈ x 9 ¹ / ₄
	CERO-027-240D	240	27.02	65.01	80			
	CERO-027-480D	480	27.02	32.50	40			
CERO 36 KW	CERO-036-240D	240	36.00	86.60	100	6	3/4	18 ⁵ / ₈ x 21 ⁷ / ₈ x 9 ¹ / ₄
	CERO-036-400D	400	33.28	48.04	60			
	CERO-036-400Y	400 Wye	33.06	47.72	60			
	CERO-036-480D	480	36.00	43.30	50			
	CERO-036-575D	575	36.00	36.15	40			
CERO 48 KW	CERO-048-240D	240	50.00	120.28	150	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CERO-048-400D	400	50.00	72.17	80			
	CERO-048-480D	480	50.00	60.14	70			
	CERO-048-575D	575	47.99	48.19	60			
CERO 54 KW	CERO-054-208D	208	54.08	150.11	175	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CERO-054-240D	240	54.05	130.02	150			
	CERO-054-480D	480	54.05	65.01	70			
CERO 72 KW	CERO-072-240D	240	72.00	173.21	200	12	1	18 ⁵ / ₈ x 30 ¹ / ₂ x 9 ¹ / ₄
	CERO-072-480D	480	72.00	86.60	100			
	CERO-072-575D	575	71.99	72.28	80			
CERO 81 KW	CERO-081-400D	400	75.00	108.25	125	18	1	24 x 48 x 13 ⁵ / ₈
	CERO-081-480D	480	81.07	97.52	110			
CERO 90 KW	CERO-090-480D	480	99.91	120.17	150	18	1	24 x 48 x 13 ⁵ / ₈
CERO 108 KW	CERO-108-400D	400	99.85	144.12	175	18	1	24 x 48 x 13 ⁵ / ₈
	CERO-108-480D	480	108.00	129.90	150			
	CERO-108-575D	575	108.00	108.44	125			
CERO 144 KW	CERO-144-400D	400	133.14	192.17	225	24	1 ¹ / ₄	24 x 48 x 13 ⁵ / ₈
	CERO-144-480D	480	144.00	173.21	200			
	CERO-144-575D	575	144.00	144.59	175			

*CERO-018 480 V Delta (6-element heater) available at extra cost

CERO Series

Products and Capabilities

Temperature
Range
for all models
60–185 °F

Flow Rate vs Temp. Rise

Power Output of Model ¹	Flow Rate Gallons/Min. Gallons/Hr.	Temperature Rise													
		20°F	30°F	40°F	50°F	60°F	70°F	80°F	90°F	100°F	110°F	120°F	130°F	140°F	
12 kW	GPM	4.1	2.7	2.1	1.6	1.4	1.2	1.0	0.9	0.8	0.7	0.7	0.6	0.6	
	GPH	246	164	123	98	82	70	61	55	49	45	41	38	35	
15 kW	GPM	5.1	3.4	2.6	2.1	1.7	1.5	1.3	1.1	1.0	0.9	0.9	0.8	0.7	
	GPH	307	205	154	123	102	88	77	68	61	56	51	47	44	
18 kW	GPM	6.1	4.1	3.1	2.5	2.1	1.8	1.5	1.4	1.2	1.1	1.0	1.0	0.9	
	GPH	369	246	184	147	123	105	92	82	74	67	61	57	53	
24 kW	GPM	8.2	5.5	4.1	3.3	2.7	2.3	2.1	1.8	1.6	1.5	1.4	1.3	1.2	
	GPH	492	328	246	197	164	140	123	109	98	89	82	76	70	
27 kW	GPM	9.2	6.1	4.6	3.7	3.1	2.6	2.3	2.1	1.8	1.7	1.5	1.4	1.3	
	GPH	553	369	277	221	184	158	138	123	111	101	92	85	79	
36 kW	GPM	12.3	8.2	6.1	4.9	4.1	3.5	3.1	2.7	2.5	2.2	2.1	1.9	1.8	
	GPH	737	492	369	295	246	211	184	164	147	134	123	113	105	
48 kW	GPM	16.4	10.9	8.2	6.6	5.5	4.7	4.1	3.6	3.3	3.0	2.7	2.5	2.3	
	GPH	983	655	492	393	328	281	246	218	197	179	164	151	140	
54 kW	GPM	18.4	12.3	9.2	7.4	6.2	5.3	4.6	4.1	3.7	3.4	3.1	2.8	2.6	
	GPH	1106	737	553	442	369	316	277	246	221	201	184	170	158	
60 kW	GPM	20.5	13.7	10.2	8.2	6.8	5.9	5.1	4.6	4.1	3.7	3.4	3.2	2.9	
	GPH	1229	819	614	492	410	351	307	273	246	223	205	189	176	
72 kW	GPM	24.6	16.4	12.3	9.8	8.2	7.0	6.1	5.5	4.9	4.5	4.1	3.8	3.5	
	GPH	1475	983	737	590	492	421	369	328	295	268	246	227	211	
81 kW	GPM	27.7	18.4	13.8	11.0	9.2	7.9	6.9	6.1	5.5	5.0	4.6	4.3	4.0	
	GPH	1659	1106	829	664	553	474	415	369	332	302	277	255	237	
90 kW	GPM	30.7	20.5	15.4	12.3	10.2	8.8	7.7	6.8	6.1	5.6	5.1	4.7	4.4	
	GPH	1843	1229	922	737	614	527	461	410	369	335	307	284	263	
108 kW	GPM	36.9 ²	24.6	18.4	14.7	12.3	10.5	9.2	8.2	7.4	6.7	6.1	5.7	5.3	
	GPH	2212 ²	1475	1106	885	737	632	553	492	442	402	369	340	316	
120 kW	GPM	40.0 ²	27.3	20.5	16.4	13.7	11.7	10.2	9.1	8.2	7.5	6.8	6.3	5.9	
	GPH	2400 ²	1638	1229	983	819	702	614	546	492	447	410	378	351	
144 kW	GPM	40.0 ²	32.8	24.6	19.7	16.4	14.0	12.3	10.9	9.8	8.9	8.2	7.6	7.0	
	GPH	2400 ²	1966	1475	1180	983	843	737	655	590	536	492	454	421	

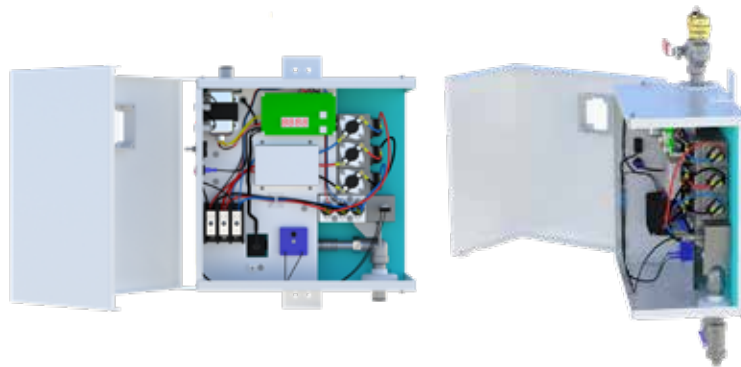
¹ Actual power output varies by model depending on voltage which will affect achievable temp. rise.

² Assumes 1¼" pipe size

	Description	Applicable Models
NEMA 4 Enclosure dust-tight and water-tight	Includes all drains and fittings surrounding the plumbing. Powder-coated white. Includes water-tight window to view the control boards in the electronic models.	All series and models
NEMA 4X Enclosure dust-tight and water-tight stainless steel	Including all drains and fittings surrounding the plumbing. Includes water-tight window to view the control boards in the electronic models.	All series and models
Thermostats	CF Series single-temperature thermostats to control the temperature when the unit heats plus provide over-temperature protection. Select an activation temperature of 90, 110, 125, 145, 155, or 185 °F.	CF all Temperature setting must be selected when ordering
External Kill Switch	Mounted to the outside door of a NEMA 4 or NEMA 4X enclosure and allows the customer to kill power inside the unit by depressing the red button.	Requires NEMA 4 or NEMA 4X enclosure
Mixing Valve	Available for varying output temperatures in 3/4-1 1/4" sizes	All series and models
Class 1 Division 2	NEMA 4 or NEMA 4X enclosure required	All series and models
Element Indication Lights		All series and models

NEMA 3 (standard)

- › Made in Florida specifically for Tankless, Inc.
- › Front cover and right side are one piece, hinged, and swing open to allow servicing and element replacement
- › Alpine white color
- › Not water resistant



NEMA 4 & NEMA 4X (optional, watertight)

- › NEMA 3 & NEMA 4 are white
- › NEMA 4X is stainless steel
- › NEMA 4 and NEMA 4X come with watertight fittings, lights, switches, etc., except for drain at bottom
- › Custom window for CE models

Quote/Order Check List

Date _____ Manufacturer's Rep. or Wholesaler _____

Company Name _____

Company Address _____
ADDRESS CITY STATE/PROVINCE ZIP/P.C.

Company Contact Person _____

Contact Phone _____ Email _____

Project Installation Address _____
CITY STATE/PROVINCE COUNTRY

Application / Intended Use _____

Fluid To Be Heated: CITY WATER WELL WATER CAUSTIC/ DE-IONIZED WATER RECIRCULATING WATER **Min. ambient temp. at heater location:** _____
FOR OUTDOOR INSTALLATION FROST PROTECTION (°F or °C?)

Winter Inlet Water Temperature at Installation Address _____ (°F or °C?) Required Outlet Water Temperature _____ (°F or °C?)

Minimum Water Flow Required _____ Maximum Water Flow Required _____
GALLONS PER MINUTE (GPM) GALLONS PER MINUTE (GPM)

Inlet Water Pipe Size _____ Outlet Water Pipe Size _____ Max. System Static Pressure _____

Specify the maximum amperage available for each 3-phase voltage available at the installation site:

3-Phase Voltage:	208 Volt	240 Volt	480 Volt Delta	480 Volt Wye	575 Volt
Amperage Available:	_____ Amps	_____ Amps	_____ Amps	_____ Amps	_____ Amps



STIEBEL ELTRON

COMMERCIAL  INDUSTRIAL 3-PHASE WATER HEATING

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tanklessinc@stiebel-eltron-usa.com

Due to our continuous process of engineering and technological advancement, specifications may change without notice.