SpecAdvantage with PhD

For Commercial and Industrial Applications

Specifications
Electric Tankless Hot Water Heater

Applications

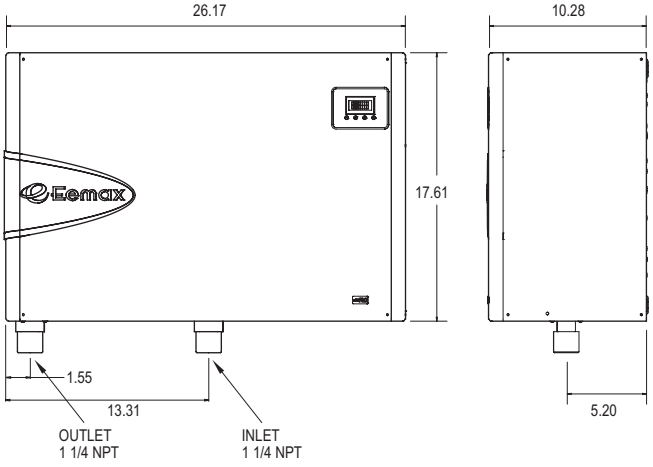
- Booster applications up to sanitation temperatures
- Commercial kitchen
- Process heating
- High volume domestic hot water
- Glycol heating
- Emergency eye wash and safety showers
- 40 gpm washdown

Performance Features

- Designed for commercial and industrial applications
- Capable of high volume and high temperature applications
- Fully modulating - Predictive control algorithm and diverse safety features ensures precise temperature control
- T&P not required per UL499 (check local codes)
- Thermo-Optical Sensor for infrared element monitoring
- Field programmable, updatable firmware, and adjustable turn-on
- Highly visible LCD display and control with built in diagnostics

Optional Features (NEMA cabinet required)

- N4, N4X (304SS) N4X6 (316SS) enclosures
- Free standing legs
- Freeze protection for harsh climate, up to -30°F
- Electrical disconnect
- GFCI
- Explosion proof – C1D2 Compliant, local certification required. Class Z purge and pressurization system provided with pressure switch for alarm controls. For classification other than C1D2 please contact the factory to discuss options.
- Siren and beacon - audible and visual alarm (C1D2 compliant when paired with explosion proof package)

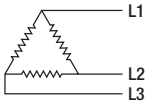


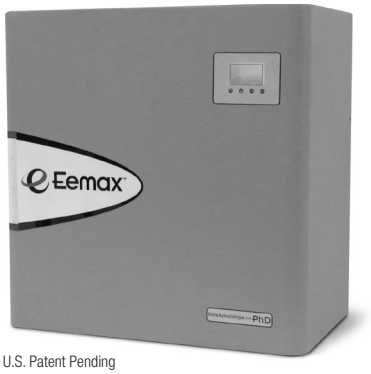
65 lbs. Designed for wall mounted installation.
Free standing legs and other options listed on page 8.

Electrical configuration and requirements

All Eemax three phase units are custom made to order and as such, are non-returnable and non-refundable. We urge you, therefore, to check your electrical supply, making sure all criteria for operating your Eemax water heater are met.

Eemax 600v, 480v and 208v
Three Phase Units
Delta Configuration
Requires: 3 Lives and 1 Ground (earth)





U.S. Patent Pending

Autodesk
3-D REVIT Product Specs Now Available

LISTED

Intertek

Buy American
Made in USA

NO LEAD*
The wetted surface of this product contacted by water contains less than 0.25% lead and meets ANSI/NSF 372

Suggested Specification

Tankless water heater shall be an Eemax SpecAdvantage model number AP_____.

Optional factory installation in a ____(N4/N4X/N4X6) enclosure.

Enclosure to be fitted with the following features:

_____ **FP** Freeze protection (-30°F)
_____ **EDS** Non-fused disconnect
_____ **FDS** Fused disconnect
_____ **EP** Explosion proof (C1D2 compliant)
_____ **GFCI** True RMS GFCI with digital display and reset
_____ **SK** 24” legs for free standing applications
_____ **RD** Remote display
_____ **SB** Siren and beacon
_____ **DC** Dry contact

Tankless water heater must have water connections on the bottom, and be constructed with NSF 61 listed materials. Direct heating element to be non-ferrous, cartridge style, designed for field replacement. Tankless water heater to utilize a dual PID algorithm, actively managing power application to real-time system demand. Integrated flow meter capable of volumes in excess of 40 GPM drives predictive control algorithm. Water heater must be protected by redundant safeties. Redundant safeties to include thermo mechanical safety switches, infrared element monitoring via thermo optical sensors, and dual temperature monitoring via master control board. Tankless water heater user interface must have the following capabilities:

- Selectable display including Celsius/Fahrenheit, inlet temperature, outlet temperature, flow rate, and set point temperature.
- Must be capable of displaying flow rate in gallons per minute or liters per minute.
- Diagnostic features to include error and fault code display.
- Control board must maintain error/fault history of 9 events.
- Capable of factory coded temperature setting (max. and min.)
- Capable of firmware upgrades via USB port
- Capable of BMS integration
- Available Data logger for monitoring of internal I/O values and 4 external inputs.
- Compliant with ANSI Z358.1 tepid water without additional mixing or purge features (inlet temperatures must not exceed 100°F when selecting an EE or EFD option)

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Suffix Definitions

S **Sanitation.** Shipped at 180°F with temp range of 100°F-190°F max.

EE **Emergency Eyewash.** Shipped with max. temp of 90°F. Shipped with display "Locked."

EFD **Emergency Eye, Face & Drench.** Maximum outlet temperature 90°F. Conforms to ANSI Z3581.1 tepid water without additional mixing valve.

Note: Models without a suffix are set to a maximum temperature of 140° if the turn on is greater than 1.5 gpm. Models with a 1.0 or 1.5 gpm turn on will be set for 120° maximum temperature.

PHD Pressure Drop

Flow Rate (GPM)	Delta PSI
2	0
3	0
4	0
6	0
8	1
11	3
12	4
15	6
18	8
20	10
22	13
24	14
27	17
30	22
33	26
35	30
37	34
40	43

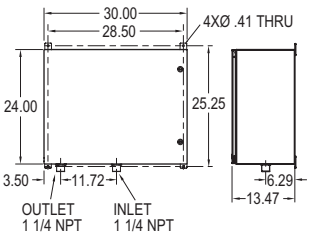
NEMA Cabinet Options

Dimensions: 24"H x 30"W x 13.5"D (Total weight est 130 lbs.)

N4 Waterproof powder coated steel

N4X Waterproof corrosion resistant 304 stainless steel

N4X6 Waterproof corrosion resistant 316 stainless steel



Special Design Service

Inquiries for units for unique applications are welcome. Call our Technical Service department at **1-800-543-6163**.

	MODEL NUMBER	kW	BTU/H	AMPS PER PHASE	TURN ON (GPM)	RECOMMENDED WIRE SIZE (90° C/CU)	TEMPERATURE RISE °F 3.0 GPM	4.0 GPM	5.0 GPM	6.0 GPM	20.0 GPM	23.0 GPM	26.0 GPM	30.0 GPM	40.0 GPM
	VOLTS 208 3ΦD														
	AP032208	32	109,189	89	1.0*	1 AWG	73°	55°	44°	36°	11°	10°	8°	7°	5°
	AP032208 EE	32	109,189	89	1.0*	1 AWG	73°	55°	44°	36°	11°	10°	8°	7°	5°
	AP032208 S	32	109,189	89	2.5**	1 AWG	73°	55°	44°	36°	11°	10°	8°	7°	5°
	AP036208	36	122,837	100	1.0*	1 AWG	82°	61°	49°	41°	12°	11°	9°	8°	6°
	AP036208 EE	36	122,837	100	1.0*	1 AWG	82°	61°	49°	41°	12°	11°	9°	8°	6°
	AP036208 S	36	122,837	100	2.5**	1 AWG	82°	61°	49°	41°	12°	11°	9°	8°	6°
	AP041208	41	143,310	112	1.0*	1 AWG	93°	70°	56°	47°	14°	12°	11°	9°	7°
	AP041208 EFD	41	143,310	112	1.0*	1 AWG	93°	70°	56°	47°	14°	12°	11°	9°	7°
	AP041208 S	41	143,310	112	2.5**	1 AWG	93°	70°	56°	47°	14°	12°	11°	9°	7°
	AP054208	54	184,256	150	1.5*	2/0 AWG	123°	92°	74°	61°	18°	16°	14°	12°	9°
	AP054208 EFD	54	184,256	150	1.5*	2/0 AWG	123°	92°	74°	61°	18°	16°	14°	12°	9°
	AP054208 S	54	184,256	150	6.0**	2/0 AWG	123°	92°	74°	61°	18°	16°	14°	12°	9°
	AP064208	64	218,377	178	2.5	3/0 AWG	146°	109°	87°	73°	22°	19°	17°	15°	11°
	AP064208 EFD	64	218,377	178	2.5	3/0 AWG	146°	109°	87°	73°	22°	19°	17°	15°	11°
	AP064208 S	64	218,377	178	6.0**	3/0 AWG	146°	109°	87°	73°	22°	19°	17°	15°	11°
	VOLTS 480 3ΦD														
	AP036480	36	122,837	43	1.0*	8 AWG	82°	61°	49°	41°	12°	11°	9°	8°	6°
	AP036480 EE	36	122,837	43	1.0*	8 AWG	82°	61°	49°	41°	12°	11°	9°	8°	6°
	AP036480 S	36	122,837	43	2.5**	8 AWG	82°	61°	49°	41°	12°	11°	9°	8°	6°
	AP039480	39	133,074	47	1.0*	6 AWG	89°	67°	53°	44°	13°	12°	10°	9°	7°
	AP039480 EE	39	133,074	47	1.0*	6 AWG	89°	67°	53°	44°	13°	12°	10°	9°	7°
	AP039480 S	39	133,074	47	2.5**	6 AWG	89°	67°	53°	44°	13°	12°	10°	9°	7°
	AP048480	48	163,783	58	1.0*	6 AWG	109°	82°	66°	55°	16°	14°	13°	11°	8°
	AP048480 EFD	48	163,783	58	1.0*	6 AWG	109°	82°	66°	55°	16°	14°	13°	11°	8°
	AP048480 S	48	163,783	58	2.5**	6 AWG	109°	82°	66°	55°	16°	14°	13°	11°	8°
	AP054480	54	184,256	65	1.5*	4 AWG	123°	92°	74°	61°	18°	16°	14°	12°	9°
	AP054480 EFD	54	184,256	65	1.5*	4 AWG	123°	92°	74°	61°	18°	16°	14°	12°	9°
	AP054480 S	54	184,256	65	2.5**	4 AWG	123°	92°	74°	61°	18°	16°	14°	12°	9°
	AP063480	63	214,965	76	2.5	3 AWG	143°	108°	86°	72°	22°	19°	17°	14°	11°
	AP063480 EFD	63	214,956	76	2.5	3 AWG	143°	108°	86°	72°	22°	19°	17°	14°	11°
	AP063480 S	63	214,965	76	6.0**	3 AWG	143°	108°	86°	72°	22°	19°	17°	14°	11°
	AP072480	72	245,674	87	2.5	3 AWG	†	123°	98°	82°	25°	21°	19°	16°	12°
	AP072480 EFD	72	245,674	87	2.5	3 AWG	†	123°	98°	82°	25°	21°	19°	16°	12°
	AP072480 S	72	245,674	87	6.0**	3 AWG	†	123°	98°	82°	25°	21°	19°	16°	12°
	AP096480	96	327,566	116	2.5	1/0 AWG	†	†	131°	109°	33°	29°	25°	22°	16°
	AP096480 EFD	96	327,566	116	2.5	1/0 AWG	†	†	131°	109°	33°	29°	25°	22°	16°
	AP096480 S	96	327,566	116	6.0**	1/0 AWG	†	†	131°	109°	33°	29°	25°	22°	16°
	AP108480	108	368,511	130	2.5	1/0 AWG	†	†	†	123°	37°	32°	28°	25°	18°
	AP108480 EFD	108	368,511	130	2.5	1/0 AWG	†	†	†	123°	37°	32°	28°	25°	18°
	AP108480 S	108	368,511	130	6.0**	1/0 AWG	†	†	†	123°	37°	32°	28°	25°	18°
	AP126480	126	429,930	151	2.5	2/0 AWG	†	†	†	†	43°	37°	33°	29°	22°
	AP126480 EFD	126	429,930	151	2.5	2/0 AWG	†	†	†	†	43°	37°	33°	29°	22°
	AP126480 S	126	429,930	151	6.0**	2/0 AWG	†	†	†	†	43°	37°	33°	29°	22°
C	**AP144480**	144	491,348	173	2.5	3/0 AWG	†	†	†	†	49°	43°	38°	33°	25°
C	**AP144480 EFD**	144	491,348	173	2.5	3/0 AWG	†	†	†	†	49°	43°	38°	33°	25°
C	**AP144480 S**	144	491,348	173	**	3/0 AWG	†	†	†	†	49°	43°	38°	33°	25°
	VOLTS 600 3ΦD														
C	**AP061600 EFD**	61	208,141	59	2.5	6 AWG	139°	104°	83°	69°	21°	18°	16°	14°	10°
C	**AP071600 EFD**	71	242,262	68	2.5	4 AWG	†	121°	97°	81°	24°	21°	19°	16°	12°
C	**AP102600 EFD**	102	348,038	98	2.5	1 AWG	†	†	139°	116°	35°	30°	27°	23°	17°
C	**AP130600 EFD**	130	443,578	125	2.5	1 AWG	†	†	†	†	44°	39°	34°	30°	22°
C	**AP150600 EFD**	150	511,821	144	2.5	1/0 AWG	†	†	†	†	51°	45°	39°	34°	26°

* Units with a 1.0 or 1.5 GPM turn-on are limited to 120°F only. Contact Eemax support for applications above 120°F.

†Temperature electronically limited to factory preset not to exceed temperature.

"C" indicates evaluation and compliance to either Underwriters Laboratories (UL) or Intertek (ETL) under CAN/CSA-C22.2 No. 64/No. 88.

** Contact Eemax for applications requiring lower turn on.

NEMA Cabinet Option Accessories:

Dimensions: 36"H x 30"W x 17.3"D) (Total weight est. 225 lbs.)

FP Freeze protection (-30°F)

EDS Non-fused disconnect

FDS Fused disconnect

EP Explosion proof (C1D2 compliant)

GFCI True RMS GFCI with digital display and reset

SK 24" legs for free standing applications

RD Remote display

SB Siren and Beacon

DC Dry Contact