

# Compliance Without Complexity

**Eemax<sup>®</sup>**

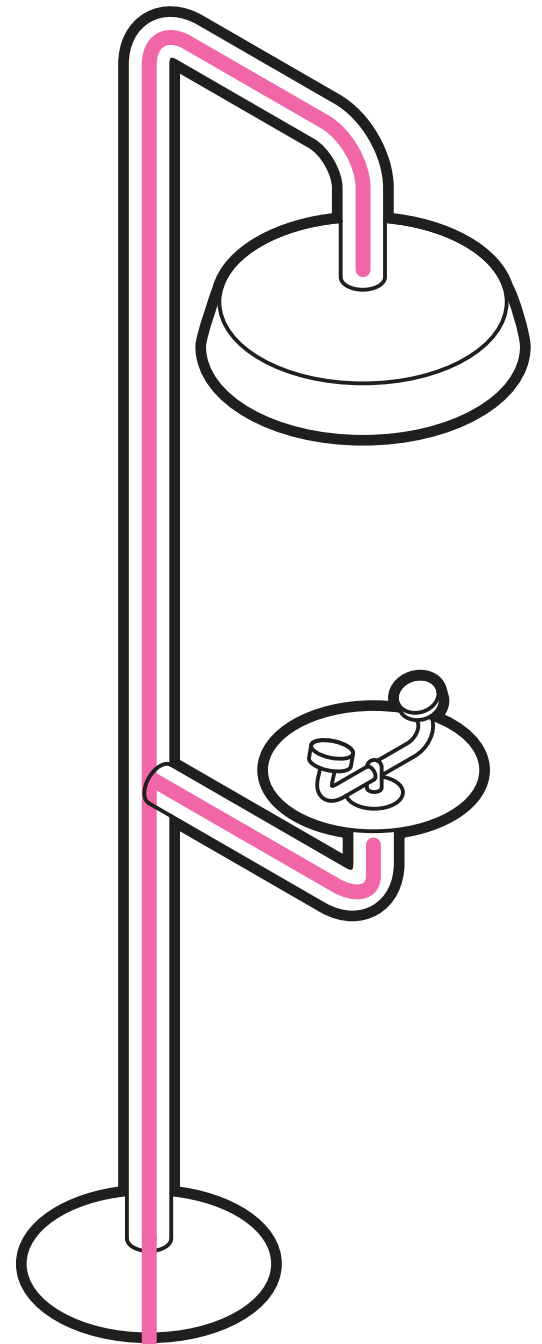
SafeAdvantage<sup>™</sup> &  
SpecAdvantage<sup>™</sup>

Tankless Electric  
Water Heaters



Certified by  
CSA to the  
**ASSE  
1085**  
Standard

**No  
Mixing  
Valve  
Required**



For Safety  
Wash Stations



**Commercial**

# Compliance Without Complexity

The 2018–2021 International Plumbing Code (IPC) development cycle marked a major step forward with the addition of ASSE 1085, opening the door for a new generation of safer, smarter, and less expensive tepid water solutions.

**Eemax®**

## First to Certification

Eemax® is proud to announce that **SafeAdvantage™** and **SpecAdvantage™** Tankless Electric Water Heaters are the first to be ASSE 1085 Certified to deliver consistent, safe temperatures with no mixing valve, no extra steps—just a streamlined for safety wash stations.



**No  
Mixing  
Valve  
Required**

Traditional safety wash station installations have relied on mixing valves for safe, tempered water, but that requirement has often brought more headaches than help. Each valve adds cost, complexity, and ongoing maintenance to the system. It also requires additional materials, longer installation times, and careful temperature balancing. Even then, performance can drift as inlet temperatures change or components begin to wear, leading to more service calls, more potential failure points, and more money spent just to keep the system operational.

# Save More. Using Less.



Certified by  
CSA to the  
**ASSE  
1085**  
Standard

**SafeAdvantage™** and **SpecAdvantage™** \* are the first products in the market with ASSE 1085 certification—delivering significant installation cost savings, simplified installation and reliable performance for commercial applications.

\* EE/EFD models only

## Component Savings

Eliminating the need for a large thermostatic mixing valve removes one of the highest cost components in a traditional installation with a tank-type water heater, directly lowering upfront material expenses.

## Labor Savings

Because ASSE 1085 removes the mixing valve and other associated components, installers complete the job faster with fewer steps. This reduces labor hours and minimizes onsite complexity.

## Operation Savings

Facilities can spend thousands of dollars annually to maintain and keep water in a traditional recirculation loop at operating temperature due to heat loss through piping, insulation, and the loop's nonstop circulation.

## Save Up to \$2,500 in Installation

By removing the mixing valve, customers can save up to \$2,500 in combined material and labor costs\*

\*Actual cost savings may vary based on installation type, regional labor rates, system configuration, and project conditions. The \$2,500 estimate reflects typical material and labor avoidance associated with removing a commercial grade mixing valve assembly. Mixing valve prices vary by size, materials, performance requirements, and manufacture.

## Save More Than \$3,900 in Annual Operating Costs

Facilities spend roughly \$3,900 per year just to maintain operating temperature through a traditional recirculation loop.

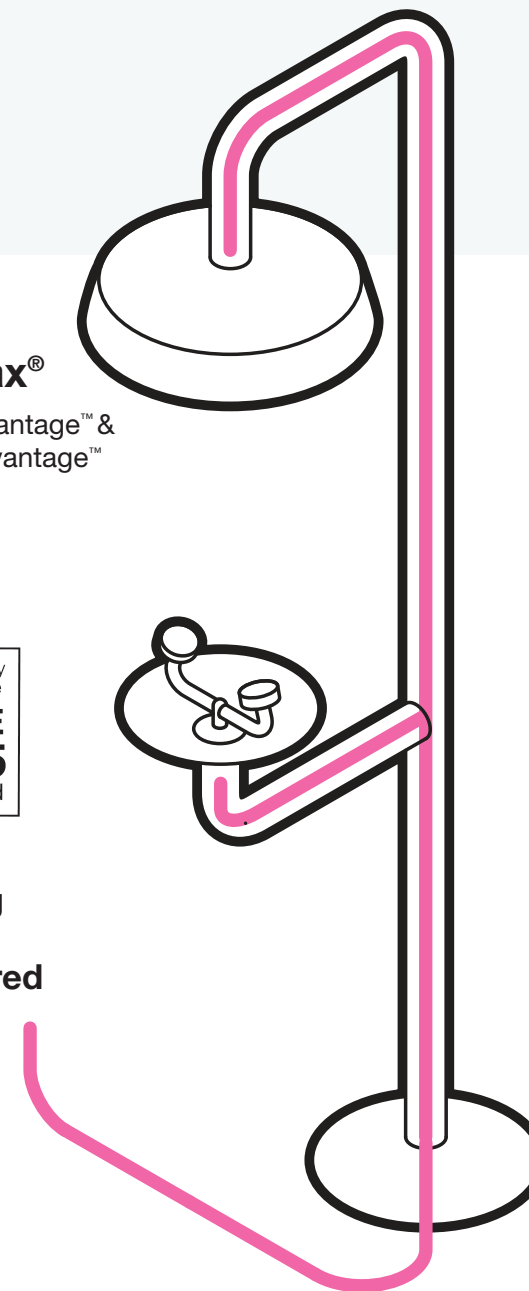
See Recirculation, Supply and Return Loop Costs Chart on page 6.

**Eemax®**  
SafeAdvantage™ &  
SpecAdvantage™

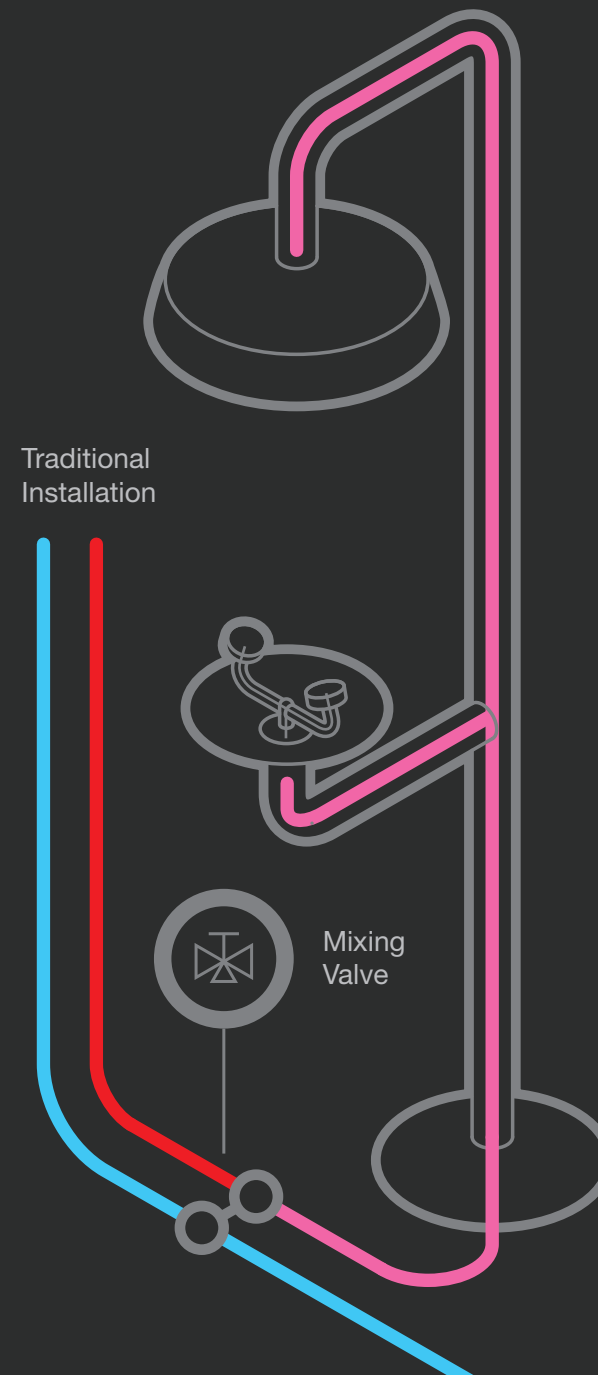


Certified by  
CSA to the  
**ASSE  
1085**  
Standard

**No  
Mixing  
Valve  
Required**



Traditional  
Installation



Model No.	kW	BTU/M	Amps Per Phase	Turn On (GPM)	Recommended Wire Size (75°C/CU)	3.0 (GPM)	4.0 (GPM)	5.0 (GPM)	6.0 (GPM)	20.0 (GPM)	23.0 (GPM)	26.0 (GPM)	30.0 (GPM)
<b>VOLTS 408 Three Phase Delta OR WYE</b>						<b>Temperature Rise °F</b>							
AP032208 EE N4X	32	109,189	89	1.0	3 AWG	73°	55°	44°	36°	11°	10°	8°	7°
AP032208 EE N4X	32	109,189	89	1.0	3 AWG	73°	55°	44°	36°	11°	10°	8°	7°
AP036208 EE N4	36	122,832	100	1.0	3 AWG	82°	61°	49°	41°	12°	11°	9°	8°
AP036208 EE N4X	36	122,832	100	1.0	3 AWG	82°	61°	49°	41°	12°	11°	9°	8°
AP041208 EFD N4	41	139,189	113	1.0	2 AWG	!	70°	56°	47°	14°	12°	11°	9°
AP041208 EFD N4X	41	139,189	113	1.0	2 AWG	!	70°	56°	47°	14°	12°	11°	9°
AP054028 EFD N4	54	184,256	150	1.5	1/0 AWG	!	!	74°	61°	18°	16°	14°	12°
AP054208 EFD N4X	54	184,256	150	1.5	1/0 AWG	!	!	74°	61°	18°	16°	14°	12°
AP064208 EFD N4	64	218,377	178	2.5	3/0 AWG	!	!	87°	73°	22°	19°	17°	15°
AP064208 EFD N4X	64	218,277	178	2.5	3/0 AWG	!	!	87°	73°	22°	19°	17°	15°
<b>VOLTS 408 Three Phase Delta OR WYE</b>						<b>Temperature Rise °F</b>							
AP036480 EE N4	36	122,837	43	1.0	8 AWG	82°	61°	49°	41°	12°	11°	9°	8°
AP036480 EE N4X	36	122,837	43	1.0	8 AWG	82°	61°	49°	41°	12°	11°	9°	8°
AP039480 EE N4	39	133,074	47	1.0	8 AWG	89°	67°	53°	44°	13°	12°	10°	9°
AP039480 EE N4X	39	133,074	47	1.0	8 AWG	89°	67°	53°	44°	13°	12°	10°	9°
AP048480 EFD N4	48	163,783	58	1.0	6 AWG	!	82°	66°	55°	16°	14°	13°	11°
AP048480 EFD N4X	48	163,783	58	1.0	6 AWG	!	82°	66°	55°	16°	14°	13°	11°
AP054480 EFD N4	54	184,256	65	1.5	6 AWG	!	!	74°	61°	18°	16°	14°	12°
AP054480 EFD N4X	54	184,256	65	1.5	6 AWG	!	!	74°	61°	18°	16°	14°	12°
AP063480 EFD N4	63	214,965	76	2.5	4 AWG	!	!	86°	72°	22°	19°	17°	14°
AP063480 EFD N4X	63	214,965	76	2.5	4 AWG	!	!	86°	72°	22°	19°	17°	14°
AP072480 EFD N4	72	245,674	87	2.5	3 AWG	!	!	!	82°	25°	21°	19°	16°
AP072480 EFD N4X	72	245,674	87	2.5	3 AWG	!	!	!	82°	25°	21°	19°	16°
AP096480 EFD N4	96	327,552	116	2.5	1 AWG	!	!	!	!	33°	29°	25°	22°
AP096480 EFD N4X	96	327,552	116	2.5	1 AWG	!	!	!	!	33°	29°	25°	22°
AP108480 EFD N4	108	368,511	130	2.5	1 AWG	!	!	!	!	37°	32°	28°	25°
AP108480 EFD N4X	108	368,511	130	2.5	1 AWG	!	!	!	!	37°	32°	28°	25°
AP126480 EFD N4	126	429,930	151	2.5	2/0 AWG	!	!	!	!	43°	37°	33°	29°
AP126480 EFD N4X	126	429,930	151	2.5	2/0 AWG	!	!	!	!	43°	37°	33°	29°
C AP144480 EFD N4	144	491,348	173	2.5	2/0 AWG	!	!	!	!	49°	43°	38°	33°
C AP144480 EFD N4X	144	491,348	173	2.5	2/0 AWG	!	!	!	!	49°	43°	38°	33°
<b>VOLTS 600 Three Phase Delta OR WYE</b>						<b>Temperature Rise °F</b>							
C AP061600 EFD N4	61	208,141	59	2.5	6 AWG	!	!	83°	69°	21°	18°	16°	14°
C AP061600 EFD N4X	61	208,141	59	2.5	6 AWG	!	!	83°	69°	21°	18°	16°	14°
C AP071600 EFD N4	71	242,262	68	2.5	4 AWG	!	!	!	81°	24°	21°	19°	16°
C AP071600 EFD N4X	71	242,262	68	2.5	4 AWG	!	!	!	81°	24°	21°	19°	16°
C AP102600 EFD N4	102	348,038	98	2.5	3 AWG	!	!	!	!	35°	30°	27°	23°
C AP102600 EFD N4X	102	348,038	98	2.5	3 AWG	!	!	!	!	35°	30°	27°	23°
C AP130600 EFD N4	130	443,578	125	2.5	1 AWG	!	!	!	!	44°	39°	34°	34°
C AP130600 EFD N4X	130	443,578	125	2.5	1 AWG	!	!	!	!	44°	39°	34°	34°
C AP150600 EFD N4	150	511,821	144	2.5	1/0 AWG	!	!	!	!	51°	45°	39°	34°
C AP150600 EFD N4X	150	511,821	144	2.5	1/0 AWG	!	!	!	!	51°	45°	39°	34°

Model No.	kW	BTU/M	Amps Per Phase	Turn On (GPM)	Recommended Wire Size (75°C/CU)	3.0 (GPM)	4.0 (GPM)	5.0 (GPM)	6.0 (GPM)	20.0 (GPM)	23.0 (GPM)	26.0 (GPM)	30.0 (GPM)
<b>VOLTS 208 Three Phase Delta OR WYE</b>						<b>Temperature Rise °F</b>							
AP032208 EE	32	109189	89	1.0	3 AWG	!	55	44	36	11	10	8	7
AP036208 EE	36	122832	100	1.0	3 AWG	!	!	49	41	12	11	9	8
AP041208 EFD	41	143310	113	1.0	2 AWG	!	!	56	47	14	12	11	9
AP054208 EFD	54	184256	150	1.5	1/0 AWG	!	!	!	!	18	16	14	12
AP064208 EFD	64	218377	178	2.5	3/0 AWG	!	!	!	!	22	19	17	15
<b>VOLTS 480 Three Phase Delta OR WYE</b>						<b>Temperature Rise °F</b>							
AP036480 EE	36	122837	43	1.0	8 AWG	!	!	49	41	12	11	9	8
AP039480 EE	39	133074	47	1.0	8 AWG	!	!	53	44	13	12	10	9
AP048480 EFD	48	163783	58	1.0	6 AWG	!	!	!	55	16	14	13	11
AP054480 EFD	54	184256	65	1.5	6 AWG	!	!	!	!	18	16	14	12
AP063480 EFD	63	214965	76	2.5	4 AWG	!	!	!	!	22	19	17	14
AP072480 EFD	72	245674	87	2.5	3 AWG	!	!	!	!	25	21	19	16
AP096480 EFD	96	327552	116	2.5	1 AWG	!	!	!	!	33	29	25	22
AP108480 EFD	108	368511	130	2.5	1 AWG	!	!	!	!	37	32	28	25
AP126480 EFD	126	429930	151	2.5	2/0 AWG	!	!	!	!	43	37	33	29
C AP144480 EFD	144	491348	173	2.5	2/0 AWG	!	!	!	!	49	43	38	33
<b>VOLTS 600 Three Phase Delta OR WYE</b>						<b>Temperature Rise °F</b>							
C AP061600 EFD	61	208141	59	2.5	6 AWG	!	!	!	!	21	18	16	14
C AP071600 EFD	71	242262	68	2.5	4 AWG	!	!	!	!	24	21	19	16
C AP102600 EFD	102	348038	98	2.5	3 AWG	!	!	!	!	35	30	27	23
C AP130600 EFD	130	443578	125	2.5	1 AWG	!	!	!	!	44	39	34	30
C AP150600 EFD	150	511821	144	2.5	1/0 AWG	!	!	!	!	51	45	39	34

**Recirculation, Supply and Return Loop Costs**

	Year 1	Year 2	Year 3	Year 4	Year 5
Loop length (ft) - includes supply out and loop return	100	100	100	100	100
Pipe OD (in) - average supply and return pipe diameter	1.9	1.9	1.9	1.9	1.9
Pipe ID (in) - average supply and return pipe diameter	1.61	1.61	1.61	1.61	1.61
Insulation thickness (in)	1	1	1	1	1
Temp of hot water (°F)	165	165	165	165	165
Ambient air temp (°F)	70	70	70	70	70
Thermal conductivity of copper pipe (Btu-ft/hr*ft²*°F)	223	223	223	223	223
Thermal conductivity of Polyurethane insulation W/(m*)	0.03	0.03	0.03	0.03	0.03
Heat loss Q (kW)	2.41	2.41	2.41	2.41	2.41
Heat loss Q (Btu/hr)	8,220	8,220	8,220	8,220	8,220
Electricity cost kW-hr (\$)	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19
Time (hr/yr)	8,760	8,760	8,760	8,760	8,760
Cost to hold loop at temperature for 1-year	\$3,904	\$3,904	\$3,904	\$3,904	\$3,904
Cost to hold loop at temperature for 1-month	\$325.34	\$325.34	\$325.34	\$325.34	\$325.34

**5-Year Loop Heat Losses: \$19,520**

\*\*Costs based on tank-type heater supplying a recirculation loop to shower(s) at 50 feet distance. Note, figures will vary based on exact system conditions and therefore should not be used for design purposes.



\* 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 temperature.  
 "C" indicates evaluation and compliance to either Underwriters Laboratories (UL) or Intertek (ETL) under CAN/CSA-CC-2 No. 64/No. 88.  
 \*\* Contact Eemax for applications requiring lower turn on.  
 Suffix Definitions: EE | Emergency Eyewash. ASSE 1085 certification assures temperature output conformance to ANSI Z358.1 tepid water without additional mixing valve.  
 EFD | Emergency Eye, Face & Drench. ASSE 1095 certification assures temperature output conformance to ANSI Z358.1 tepid water without additional mixing valve.

Electrical configuration and requirements:  
 All Eemax three phase units are custom made to order and as such, are non-returnable and non refundable.  
 Check your electrical supply, making sure all criteria for operating your Eemax water heater are met.  
 SafeAdvantage is compatible with both Delta and Wye electrical configuration requirements. When installing SafeAdvantage to a Wye electrical configuration, the neutral leg is not used.  
 Note: Models with an EE or EFD suffix have a 90° F maximum temperature. Temperature rise data is provided for reference, but temperature is electronically limited to factory preset not to exceed temperature.



**Contact Us**

Customer Service  
Sizing & Selection Support

**800.621.5622**

Visit us online at [eemax.com](http://eemax.com) or see your local distributor.

**Eemax**<sup>®</sup>  
evolving hot water

Eemax Inc.  
800 Interstate Park Drive  
Montgomery, Alabama 36109