

ELECTRIC BOILER  
AND STORAGE TANK  
4.5 KW TO 29 KW

# eco ultra



## THE PERFECT COMPLEMENT TO RENEWABLE ENERGY

**Eco ULTRA** is the only electric high-volume boiler on the market, and it is the perfect complement to all sources of renewable energy heat. This combination boiler-storage tank is designed for residential use and is practically maintenance-free. It serves as a back-up energy source to the primary system in order to maximize output and generate significant energy savings.



Peak-performance  
heating systems

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The combination of an electric water heater and a high-volume storage tank provides you with multiple savings in terms of efficiency, space and installation costs. In order to further reduce energy consumption costs, **eco ULTRA** can optionally be offered with an extremely efficient copper coil heat exchanger for domestic hot water, which heats (or pre-heats) potable water to meet a family's needs.

## STORE ALL THE ENERGY PRODUCED, AND EVEN MORE

When the primary renewable energy heat source is in operation, **eco ULTRA** stores thermal energy in its high water volume, just like a battery. This is what is called a thermal mass. When there is a low demand for heat (ex.: when there is little difference between the outdoor and indoor temperature) or when the unit is combined with a low-capacity energy source, the energy required for heating will come first from the thermal mass accumulated in the tank.

With its **UltraSmart™** smart controller, **eco ULTRA** provides improved comfort through precise temperature control. In colder weather, the primary energy source is not always able to meet the heating demand at 100%. This is when the heating elements, controlled by the **UltraSmart™** controller, provide the additional heat required from the thermal energy accumulated in the **eco ULTRA** tank in order to properly heat a condo or home.

Without combustion or greenhouse gas emissions, **eco ULTRA** is an energy-efficient alternative as well as being durable and easy to maintain.



The intelligent **UltraSmart™** controller modulates the power level based on the system requirements and adjusts the water temperature based on outdoor temperature.

- Accurate and easily configurable **UltraSmart™** controller with backlight display
- Preset configurations based on heating distribution system
- Outdoor sensor that modulates boiler water temperature
- The **UltraSmart™** controller enables users to view the boiler's operation status at a glance

## eco ULTRA 4.5 KW TO 29 KW

- Heating stops when outside temperature gets warmer
- "Boost" mode that automatically increases the temperature when needed
- Works only when triggered by the thermostat
- Ability to purge the pump when system is not running
- Adjustable between 50 °F and 190 °F
- Safety control to limit excessively high temperatures
- Electrical supply and heat pump contact
- 24 V electrical supply for thermostat and other accessories

### STANDARD FEATURES

- 1- ULTRASMART™ CONTROLLER
- 2- BOILER PRESSURE RELIEF VALVE
- 3- DRAIN VALVE
- 4- HEATING WATER SUPPLY
- 5- HEATING WATER RETURN
- 6- ELECTRICAL PANEL
- 7- ELECTRIC ELEMENTS
- 8- TEMPERATURE AND PRESSURE INDICATOR
- 9- AUTOMATIC AIR VENT

### FEATURES WITH OPTIONAL COPPER COIL HEAT EXCHANGER

- 10- COPPER HEAT EXCHANGER
- 11- DOMESTIC COLD WATER SUPPLY (3/4" SWEAT M)
- 12- DOMESTIC HOT WATER OUTPUT (3/4" SWEAT M)



AIR-WATER HEAT PUMP APPLICATION  
Standard eco ULTRA is shown



The **eco ULTRA** thermal mass electric water heater is perfect for optimizing the performance of many types of heating systems:

- Biomass heating
- Wood boilers
- Geothermal applications
- Air-water heat pumps
- Solar energy systems

BIOMASS OR WOOD HEAT APPLICATIONS  
eco ULTRA with the optional copper coil heat exchanger is shown



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## eco ULTRA Available in 2 sizes

MODEL	eco ULTRA 50	eco ULTRA 70
VOLUME	48 US gallons	71 US gallons
WEIGHT	280 lbs.	380 lbs.
MAXIMUM OPERATING PRESSURE	30 PSI	30 PSI
CONNECTIONS	1" male NPT	1 1/4" male NPT
DIAMETER	22"	24"
HEIGHT	56 7/16"	66 5/16"

## eco ULTRA 240 VAC / 60 Hz / 1 phase<sup>1</sup>

Power <sup>2</sup>		Suggested electrical input <sup>4</sup>					
kW	BTU/h	Amps <sup>3</sup>	Elements	Stages	Cu Wire	Al Wire	Breaker
4,5	15354	19	1 x 4.5 kW	1	10	10	30
7,5	25590	31	1 x 3 kW + 1 x 4.5 kW	2	8	6	40
9	30708	38	2 X 4.5 kW	2	8	6	50
12	40944	50	2 X 6 kW	2	6	4	70
15	51180	63	2 x 3 kW + 2 x 4.5 kW	4	6	4	80
18	61416	75	4 x 4.5 kW	4	4	2	100
20	68240	83	4 x 5 kW	4	3	2	110
24	81888	100	4 x 6 kW	4	2	0	125
27*	92124	113	6 x 4.5 kW	6	1	00	150
29*	98948	120	4 x 5 kW + 2 x 4.5 kW	6	1	00	175

<sup>1</sup> Electrical supply: 120/240V or 120/208V single-phase (L1 – N – L2) with three 90°C conductors, or two conductors L1 – L2 if the boiler does not require power to a 120 VAC pump or accessories.

<sup>2</sup> Multiply by .75 for a 208 VAC power supply.

<sup>3</sup> Multiply by .867 for a 208 VAC power supply.

<sup>4</sup> The wire gauges and breaker capacity must be in conformity with the standards of the National Electrical Code (NEC), Canadian Electrical Code (CEC) and local codes (if applicable).

\* Not available with the eco ULTRA 50.

## MULTI-POSITION INSTALLATION



**15-YEAR WARRANTY**  
ON THE TANK AND THE COILS

**2-YEAR WARRANTY**  
ON ELECTRICAL AND MECHANICAL COMPONENTS



Thermo 2000 manufactures peak-performance heating systems for domestic hot water and hydronic heating systems. Since 1978, the company's innovations have provided sustainable solutions for residential, commercial and institutional applications.

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