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.
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 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 (e.g., 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 combo or home.

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

![Diagram of eco ULTRA system](image)

**eco ULTRA 4.5 KW TO 29 KW**

- Heating stops when outside temperature falls warmer
- "Snow" 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 slimline 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 Element
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 (1/2" Sweat M)
12. Domestic Hot Water Output (3/4" Sweat M)

**ecowater® Heat Pump Application**

(Abbreviated 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
- Air-to-water units
- Geothermal applications
- Air-water heat pumps
- Solar energy systems
**eco ULTRA**

### Available in 2 sizes

<table>
<thead>
<tr>
<th>MODEL</th>
<th>eco ULTRA 50</th>
<th>eco ULTRA 70</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOLUME</td>
<td>48 US gallons</td>
<td>71 US gallons</td>
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<tr>
<td>WEIGHT</td>
<td>280 lbs.</td>
<td>389 lbs.</td>
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<tr>
<td>MAXIMUM OPERATING PRESSURE</td>
<td>59 PSI</td>
<td>30 PSI</td>
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<tr>
<td>CONNECTIONS</td>
<td>1&quot; male NPT</td>
<td>1 1/4&quot; male NPT</td>
</tr>
<tr>
<td>DIAMETER</td>
<td>22&quot;</td>
<td>24&quot;</td>
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<tr>
<td>HEIGHT</td>
<td>56 7/16&quot;</td>
<td>66 5/16&quot;</td>
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### eco ULTRA

#### 240 VAC / 60 Hz / 1 phase

<table>
<thead>
<tr>
<th>kW</th>
<th>BTU/h</th>
<th>Amps²</th>
<th>Elements</th>
<th>Stages</th>
<th>Cu Wire</th>
<th>Al Wire</th>
<th>Breaker</th>
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<tbody>
<tr>
<td>4.5</td>
<td>15354</td>
<td>19</td>
<td>1 x 4.5 kW</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>30</td>
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<tr>
<td>7.5</td>
<td>25590</td>
<td>31</td>
<td>1 x 3 kW + 1 x 4.5 kW</td>
<td>2</td>
<td>8</td>
<td>6</td>
<td>40</td>
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<tr>
<td>9</td>
<td>30708</td>
<td>38</td>
<td>2 x 4.5 kW</td>
<td>2</td>
<td>8</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>12</td>
<td>40444</td>
<td>50</td>
<td>2 x 6 kW</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>70</td>
</tr>
<tr>
<td>15</td>
<td>51190</td>
<td>63</td>
<td>2 x 3 kW + 2 x 4.5 kW</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>80</td>
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<tr>
<td>18</td>
<td>61416</td>
<td>75</td>
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<td>4</td>
<td>4</td>
<td>2</td>
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<tr>
<td>20</td>
<td>68240</td>
<td>83</td>
<td>4 x 5 kW</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>110</td>
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<td>24</td>
<td>81888</td>
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<td>4 x 6 kW</td>
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<td>0</td>
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<td>115</td>
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<td>1</td>
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<td>150</td>
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<td>30²</td>
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<td>120</td>
<td>4 x 5 kW + 2 x 4.5 kW</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>175</td>
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</tbody>
</table>

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1 Electrical supply: 120/240V or 120/208V single-phase L1 – N – L2 with three 90ºC conductors, or two conductors L1 – L2 if the boiler does not require more than a 120VAC pump or accessories.
2 Multiply by .75 for a 308 VAC power supply.
3 Multiply by .85 for a 208 VAC power supply.
4. The wire gauge 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.*

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### MULTI-POSITION INSTALLATION

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### 15-YEAR WARRANTY

**ON THE TANK AND THE COILS**

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### 2-YEAR WARRANTY

**ON ELECTRICAL AND MECHANICAL COMPONENTS**

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Thermo 2000 manufactures high-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.