The AERCO B+II WaterWizard high-efficiency heater is designed to satisfy potable water heating needs in commercial and institutional environments. The packaged, steam fired system incorporates real-time, load tracking and responsive controls to maintain accurate hot water temperatures under diversified loads. And AERCO’s unique sub-cooling heat exchanger design increases operating efficiency to deliver more usable heat per pound of steam input than other heaters. As added benefits, the unique design simplifies maintenance and promotes long life.

Packaged with either electronic or pneumatic controls, the B+II heater maintains outstanding temperature control when operated under constant load conditions with variances held to ±4°F under normal load changes. An integrated load monitoring system and high turndown steam control valve deliver accurate temperature control without the need for storage tanks, blending valves or other temperature averaging components. When packaged with the electronic control system, the heater can be remotely monitored and/or fully integrated with BAS software.

A parallel stack of helically wound coils, including a dedicated sub-cooling coil, form a cross counter-flow heat exchanger, making it one of the most efficient designs available for domestic water heating. This design eliminates wasteful flash losses because all of the Heat of Condensation and much of the Heat of the Liquid is transferred from the steam. In most domestic applications, condensate outlet temperatures of ≤160°F can be expected. For design inlet water temperature of less than 110°F, a simple union orifice eliminates the need for a trap.

The baffle-free, flexible coils of the heat exchanger continuously expand and contract with changing water and steam temperatures. The self-descaling nature of this automatic action eliminates the need for periodic, acid cleaning or tube scraping. The free floating design eliminates stress so effectively where water conditions are especially harsh. The B+II can be quickly and easily “thermal shocked” as part of a routine maintenance plan. All water wetted parts are copper or copper alloy materials, which is the best choice of materials to further ensure longevity.

The unit’s semi-instantaneous design [steam in tubes and water in shell] is compatible with low or high steam pressures. And installation is easy because of its small footprint (4 ft²) and doorway size. Outstanding thermal efficiency, tight temperature control, low maintenance, longevity and overall reliability make the AERCO B+II WaterWizard the most logical choice for any commercial or institutional water heating installation.

Features

- Accurate temperature control ±4°F
- Choice of electronic or pneumatic controls
- Compact foot print <4ft²
- Automatic self-descaling
- Automatic condensate subcooling
- Fully modulating variable steam input
- No trap or storage tanks required
- Low surface temperature
- ASME- B&PV Code Sec. VIII, Div. I Stamped
- All copper, copper alloy or stainless steel wetted surfaces
- 10-year warranty on complete Hx
- 20-year warranty on pressure vessel and integral demand anticipator
- Supports a variety of applications
  - 5 to 150 PSIG steam supply
  - Intermittent water flow rates up to 250 GPM
  - Set point range 50°F to 205°F
  - 235 PSIG ASME working pressure certified
  - Single or multiple installation
  - Ideal for new or retrofit

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**Specifications**

<table>
<thead>
<tr>
<th></th>
<th>w/ Electronic Controls</th>
<th>w/ Pneumatic Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell Side Pressure Drop</td>
<td>4 PSIG @ max. rated flow</td>
<td>4 PSIG @ max. rated flow</td>
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<tr>
<td>Ambient Operating Temperature</td>
<td>0°F to 131°F</td>
<td>0°F to 131°F</td>
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<tr>
<td>Electrical Requirements</td>
<td>120/1/60 l Amp, 220/1/50 l Amp</td>
<td>120/1/60 l Amp</td>
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<tr>
<td>Standby Amperage Draw</td>
<td>1 Amp</td>
<td>0.1 Amp</td>
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<tr>
<td>High Limit “Tripped” Amperage Draw</td>
<td>1.5 Amp</td>
<td>0.5 Amp</td>
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<tr>
<td>Max. Continuous Water Flow Rate</td>
<td>125 GPM</td>
<td>125 GPM</td>
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<tr>
<td>Max. Intermittent Flow Rate</td>
<td>250 GPM</td>
<td>250 GPM</td>
</tr>
<tr>
<td>Max. Steam Supply Pressure</td>
<td>150 PSIG</td>
<td>150 PSIG</td>
</tr>
<tr>
<td>Max. Shell Side Operating Pressure</td>
<td>235 PSIG*</td>
<td>235 PSIG*</td>
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<tr>
<td>Adjustable Temperature Control</td>
<td>up to 205°F</td>
<td>up to 230°F</td>
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<tr>
<td>Adjustable High Limit Control</td>
<td>up to 205°F</td>
<td>up to 250°F</td>
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<tr>
<td>Water Connection Inlet/Outlet</td>
<td>3” FNPT</td>
<td>3” FNPT</td>
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<tr>
<td>Air Consumption</td>
<td>N/A</td>
<td>0.10 scfm @ 25 PSIG</td>
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<tr>
<td>Air Supply Min. Requirements</td>
<td>N/A</td>
<td>25 PSIG</td>
</tr>
<tr>
<td>Air Supply Max. Requirements</td>
<td>N/A</td>
<td>30 PSIG</td>
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</tbody>
</table>

*Standard 150 PSIG, 210°F P&T relief valve supplied; consult AERCO representative for higher settings.

**Available Options**

0.065” thick copper or copper-nickel tubing for increased corrosion resistance
Dry contacts for remote “High Limit Tripped Status” indication