EVO DUO™/EVO MICRO™
INNOVATIVE CONDENSING TECHNOLOGY

HAMILTON ENGINEERING, INC.
TOTAL WATER MANAGEMENT
HEATING • TREATMENT • CONSERVATION
Up to 99.8% efficient, stainless steel, condensing water heating and hydronic boiler systems

VENTING
• PVC or AL 29C stainless steel venting—it's your choice
• Common vent for multiple units made possible by an engineered venting system from Hamilton and built-in non-return valve
• Moisture separation system with drain for mandatory sealed inlet air connection

HEAT EXCHANGER(S)
• All 316L stainless steel materials
• All models are Industrial Grade and ASME stamped and certified.
• New DUO design is more compact and allows for condensing over a greater firing and water temperature range. It yields the highest efficiency on the market.

CONDENSATE DRAIN
• Pressure switch monitors the drain system and shuts the burner down in the event of a condensate back-up
• Easily accessible condensate drain and cleanout
• Larger diameter kink-proof drain hose for condensate removal

CONTROLS
• Flexible power supply requirements utilize 208-240 supply voltage in 50 or 60 Hz with no changes or adjustments required
• Optional multiple unit Cascade™ controller allows up to 8 units to operate as one with maximum efficiency and uniform usage on each unit
• Scale-monitoring—internal software constantly monitors heat exchanger performance to warn if scale formation is beginning.
• Freeze protection—controller starts the pump (and the burner, if necessary) to protect against heat exchanger freeze-ups in cold climates.

PUMP
• Internally controlled and pre-wired at the factory
• Runs only with demand for heat and cool-down period
• Most efficient wire to water design available, with maximum of 2.1 amps energy consumption

COMPARATIVE COST OF OPERATION
- Atmospheric:
  - $$$$$
- Pressurized:
  - $$$
- Sealed:
  - $$$$$$
- Condensing:
  - $$
**EVO DUO™/EVO MICRO™ INNOVATIVE CONDENSING TECHNOLOGY**

**MODEL SIZES**

<table>
<thead>
<tr>
<th>Model</th>
<th>Input BTU/hr</th>
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<tbody>
<tr>
<td>EVO MICRO</td>
<td>136,300</td>
</tr>
<tr>
<td>EVO DUO</td>
<td>199,999</td>
</tr>
<tr>
<td>EVO DUO</td>
<td>399,999</td>
</tr>
<tr>
<td>EVO DUO</td>
<td>630,000</td>
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</table>

**EVO MICRO**

- All of the same features of the EVO DUO described at left
- Small, lightweight, compact design

**EVO BACK PACK**

- Space-saving design mounts an EVO MICRO or EVO DUO unit directly to an 80, 120, or 200 gallon storage tank.
- The storage tank is glass-lined, insulated and jacketed to prevent heat loss and maintain efficiency.

**EVO RACK PACK**

- Hamilton's standard Rack Pack™ includes one or more units rack-mounted and pre-plumbed with the water piping.
- Factory-built rack can stand alone or be mounted on the wall, freeing up valuable floor space in the equipment room.
- The deluxe Rack Pack Six Pack™ package, pictured above, includes the rack and water piping, as well as the following:
  - Individually switched electrical power
  - Common venting
  - Gas manifold
  - Common condensate drain neutralizer
  - Cascade™ controller, which manages multiple units as one. Employing only one setting, the individual units receive rotated, even use.
EVO DUO™/EVO MICRO™ TECHNICAL INFORMATION

Standard Equipment
- 316L Stainless steel heat exchanger
- Modulating stainless steel burner
- Self diagnostic microprocessor controls
- Externally adjustable thermostat
- Sealed combustion, PVC or AL 29C stainless vent
- Stainless steel cover
- Water flow switch
- Pressure relief valve
- Dual high limit sensors
- All bronze circulating pump
- Blocked flue/block condensate drain pressure switch
- 24/7 customer service

Optional Equipment
- Rack Pack™ & Back Pack™ include rack and water piping
- Rack Pack Six Pack™ includes the above, plus:
  - Cascade Controls
  - Common Venting
  - Individually switched electrical power
  - Common condensate drain neutralizer

<table>
<thead>
<tr>
<th>Model</th>
<th>Width</th>
<th>Height</th>
<th>Depth</th>
<th>D</th>
<th>E</th>
<th>F (FPT)</th>
<th>G</th>
<th>H (MPT)</th>
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<tr>
<td>129</td>
<td>22&quot;</td>
<td>79&quot;</td>
<td>20&quot;</td>
<td>3&quot;</td>
<td>3&quot;</td>
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<td>0.75&quot;</td>
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<td>34.5&quot;</td>
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<td>5&quot;</td>
<td>2.0&quot;</td>
<td>1.0&quot;</td>
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Model | Input BTU/hr | Water Heater* Output BTU/hr | Boiler** Output BTU/hr | GPH Recovery @100°F ΔT | GPH Recovery @80°F ΔT | GPH Recovery @60°F ΔT | Shipping Weight |
<table>
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<tr>
<td>HW 129</td>
<td>136,300</td>
<td>up to 132,890</td>
<td>up to 130,150</td>
<td>160</td>
<td>199</td>
<td>265</td>
<td>77 lbs.</td>
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<td>199,999</td>
<td>up to 193,999</td>
<td>up to 189,999</td>
<td>233</td>
<td>291</td>
<td>388</td>
<td>112 lbs.</td>
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<td>HW 399</td>
<td>399,999</td>
<td>up to 387,999</td>
<td>up to 379,999</td>
<td>466</td>
<td>582</td>
<td>776</td>
<td>194 lbs.</td>
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<td>HW 599</td>
<td>630,000</td>
<td>up to 611,100</td>
<td>up to 598,500</td>
<td>734</td>
<td>917</td>
<td>1223</td>
<td>234 lbs.</td>
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</table>

*At 97% thermal efficiency with 86°F incoming water to heat exchanger
**At 95% thermal efficiency with 140°F incoming water to heat exchanger
- Dimensions are approximate. Please consult factory before installation.
- Maximum amperage draw at 230 volts and one phase is less than 3 amps.
## EVO DUO/EVO MICRO STANDARD PRE-PLUMBING CONFIGURATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>120 gallon tank (28&quot;)</th>
<th>175 &amp; 200 gallon tank (32&quot;)</th>
<th>220 &amp; 257 gallon tank (30&quot;)</th>
<th>275 &amp; 350 gallon tank (36&quot;)</th>
<th>432 &amp; 500 gallon tank (42&quot;)</th>
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<td>5' 1&quot; 2' 1&quot; 1' 0&quot;</td>
<td>5' 9&quot; 2' 5&quot; 1' 4&quot;</td>
<td>5' 3&quot; 2' 3&quot; 1' 0&quot;</td>
<td>5' 9&quot; 2' 9&quot; 1' 0&quot;</td>
<td>6' 3&quot; 3' 3&quot; 1' 0&quot;</td>
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<tr>
<td>(2) HW 129</td>
<td>6' 9&quot; 2' 1&quot; 1' 0&quot;</td>
<td>7' 5&quot; 2' 5&quot; 1' 4&quot;</td>
<td>6' 11&quot; 2' 3&quot; 1' 0&quot;</td>
<td>7' 5&quot; 2' 9&quot; 1' 0&quot;</td>
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<td>8' 5&quot; 2' 1&quot; 1' 0&quot;</td>
<td>9' 1&quot; 2' 5&quot; 1' 4&quot;</td>
<td>8' 7&quot; 2' 3&quot; 1' 0&quot;</td>
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<td>10' 2&quot; 2' 1&quot; 1' 0&quot;</td>
<td>10' 10&quot; 2' 5&quot; 1' 4&quot;</td>
<td>10' 4&quot; 2' 3&quot; 1' 0&quot;</td>
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<td>11' 4&quot; 3' 3&quot; 1' 0&quot;</td>
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