EMP™ Efficient Multi-Pass

Oil Fired, Chimney or Direct Vented, Cast Iron Water Boiler

- 87% AFUE, ENERGY STAR® certified
  - Exceeds DOE-2021 requirements
- 3-pass cast iron sectional design
- Integral, pre-installed low water cut-off (LWCO)
- Beckett® and Carlin® burner options
- Designed for ease of service
  - Reversible swing-away burner door
  - No target wall
  - Removable rear plates access flue passages
- Lifetime limited warranty
- Five sizes available, 0.60-1.60 GPH

Intelligent Controls Simplify Installation and Operation

**Primary Ignition Controls**
- Advanced display and diagnostics
  - Honeywell® R7284 (for Beckett® burner builds)
  - Carlin® Pro-X™ 70200 (for Carlin burner builds)

**HydroStat® 3250 Three Function Hydronic Control**
- Easy temperature control
- Low water cut-off – selectable auto or manual reset
- Fuel savings with thermal targeting or traditional outdoor reset capability
- Thermal pre-purge circulation uses latent heat before starting new heat cycle
- Easy settings and monitoring
- Primary circulator control function
- LED active status indicators assist contractors and consumers
  - High temperature, LWCO, economy operation
- Dynamic digital display
  - Displays boiler supply temperature and outdoor temperature (if ODR installed)
  - Automatically displays set points during adjustments

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- Exceeds DOE-2021 requirements

3-pass cast iron sectional design

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- Reversible swing-away burner door
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Lifetime limited warranty

Five sizes available, 0.60-1.60 GPH

Return blending manifold accelerates water mixing and protects heat exchanger

ECM Circulator included (Taco or Grundfos)

$100+ value at no extra charge!

U.S. Boiler Company

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U.S. Boiler Company
EMP: Technical Information

Standard Equipment
- Precision cast and machined sections
- Return blending manifold
- Powder coated steel jacket
- Insulated jacket (3”)
- Reversible burner door
- Removable clean-out ports
- Mounted and wired controls
- 30 PSI relief valve
- Barometric draft regulator
- Boiler drain valve
- Circulator, ECM
  - Taco® or Grundfos®
- Primary ignition controls
  - Honeywell® R7284 (Beckett®)
  - Carlin® Pro-X™/70200 (Carlin)
- HydroStat® 3250 hydronic control
  - LWCO, auto or manual
  - Temp control, economy operation
  - Thermal targeting
  - Thermal pre-purge
  - Primary circulator control
  - LED status indicators, digital display

EMP Ratings & Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Burner Capacity</th>
<th>DOE Heating Cap. (MBH)²</th>
<th>Net AHRI Ratings Water (MBH)²</th>
<th>AFUE%</th>
<th>Round Dia (In.)</th>
<th>Rect. (In. x In.)</th>
<th>Height (Ft.)</th>
<th>Approx. Shipping Weight (lbs.)</th>
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<tbody>
<tr>
<td>EMP84E</td>
<td>0.60</td>
<td>84</td>
<td>74</td>
<td>64</td>
<td>8 x 8</td>
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<tr>
<td>EMP224E</td>
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<td>197</td>
<td>171</td>
<td>7 x 8</td>
<td>15</td>
<td>771</td>
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</tbody>
</table>

NOTE: Maximum working pressure: water: 30 PSI standard, 40 PSI optional
1. MBH refers to thousands of BTUs per hour
2. Based on standard test procedure prescribed by the U.S. DOE at combustion conditions of 13.0% CO₂
3. Net AHRI ratings are based on a piping and pickup allowance of 1.15

For direct vent applications, order boiler as “less burner", and add Beckett NX burner and DV kit from listings below

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>103896-03</td>
<td>Beckett NX for EMP140E</td>
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<tr>
<td>103897-04</td>
<td>Beckett NX for EMP182E</td>
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<td>103898-05</td>
<td>Beckett NX for EMP224E</td>
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<tr>
<td>102130-02</td>
<td>DV kit for EMP140E &amp; EMP182E, 5”</td>
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<tr>
<td>102130-03</td>
<td>DV kit for EMP224E, 6”</td>
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Dimensions (Inches)

<table>
<thead>
<tr>
<th>Model</th>
<th>‘A’</th>
<th>‘B’</th>
<th>‘C’</th>
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<tbody>
<tr>
<td>EMP84E</td>
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<tr>
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<td>EMP182E</td>
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<td>EMP224E</td>
<td>34-5/8</td>
<td>36</td>
<td>7</td>
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</tbody>
</table>

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