• 94+% AFUE - ENERGY STAR® Certified

• Condensing Water Boiler

• Natural or LP Gas
  150 - 225 MBH (2 sizes)

• Cast Aluminum Heat Exchanger

• Direct Vent Sealed Combustion

• Fully Modulating Firing Rates
Burnham CHG™ Condensing Boilers

Burnham CHG condensing boilers achieve 94+% efficiency through the ruggedly designed heat exchanger. These sectional, cast aluminum designs use the heat in the exhaust gases from the boiler’s combustion process to preheat the water as it enters the boiler, thus capturing energy that otherwise would be lost. In addition, CHG boilers have fully modulating controls that allow the boiler to operate with up to a 5-to-1 turn down ratio. Thus a CHG boiler continuously adjusts its output to more efficiently and effectively provide the right amount of heat that helps conserve fuel and reduce heating costs.

CHG boilers come in two sizes and are available for either natural gas or propane installations. Each CHG boiler’s fully modulating control system has a variety of sensors including indoor/outdoor reset that are standard on each boiler and provide the input to the control system to maximize operating efficiencies.

Through its advanced design, packaging, and unique combustion process, a CHG boiler operates so quietly that it may not even be heard firing, but the sequence of operation is visible on the digital display mounted on top of the boiler.

CHG Boiler Operation

The CHG castings incorporate a multi-pass water flow with the return water entering the lower manifold and progressing upward to the supply manifold. This counterflow from bottom to top provides for maximum heat transfer while the serpentine pattern offers low pressure drop. Each section’s water flow is independent with no port connections between sections. The supply and return manifolds are designed to balance the flow across all sections.

Safety with Increased Efficiency

CHG boilers use a sealed combustion system that isolates the combustion process in the boiler from the air inside a home. This design helps save energy dollars by using outside air rather than room air in the home that has already been heated, and thus assures that exhaust gases are vented directly to the outside. For further safety, CHG boilers incorporate AL29-4C® stainless steel material for a proven and safe sealed venting system designed to work well in condensing applications. Also each CHG boiler includes a low water cutoff control with a dedicated transformer as additional protection for the boiler’s heat exchanger.

15-Year Limited Warranty

The aluminum heat exchanger in CHG boilers is covered by a 15-year limited factory warranty. The purchase of an optional Winter Warmth Assurance Plan from Burnham can extend the standard factory warranty protection to include parts and labor for the entire boiler for either 5 or 10 years.

What is a “Condensing” Boiler?

When a condensing boiler is working at its peak efficiency, the water vapor produced in the gas combustion process condenses back into water – hence the name “condensing” boiler. This condensation of exhaust gases releases the latent heat that is given off whenever the vaporization of water takes place. Together these two processes create the high efficiencies associated with Burnham condensing boilers.
For an abundant supply of domestic hot water, be sure to use a Burnham Alliance SL indirect-fired water heater with every boiler application.

The Alliance SL water heaters are designed with an effective hydrastone lining that offers superior corrosion resistance and outstanding performance in a wide variety of water conditions.

Water heaters are available in five sizes and come with a unique 10/2/1 warranty – 10 years on the tank and coil, 2 years labor and 1 year on parts. An optional lifetime warranty is also available.
### Ratings and Specifications

<table>
<thead>
<tr>
<th>Boiler Model</th>
<th>Maximum Input (MBH)</th>
<th>Minimum Input (MBH)</th>
<th>DOE Heating Capacity (MBH)</th>
<th>I=B=R Net Rating (MBH)</th>
<th>AFUE (%)</th>
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<tbody>
<tr>
<td>CHG150</td>
<td>150,000</td>
<td>30,000</td>
<td>135,000</td>
<td>117,000</td>
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### Specifications

<table>
<thead>
<tr>
<th>Boiler Model</th>
<th>Vent Diameter (inches)</th>
<th>Air Inlet Diameter (inches)</th>
<th>Horizontal Venting</th>
<th>Vertical Venting</th>
<th>Water Volume (gal.)</th>
<th>Approx. Shipping Weight (lbs.)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Maximum Vent Length (Equiv. Ft.)</td>
<td>Maximum Air Inlet Length (Equiv. Ft.)</td>
<td>Maximum Vent Length (Equiv. Ft.)</td>
<td>Maximum Air Inlet Length (Equiv. Ft.)</td>
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### Dimensions

<table>
<thead>
<tr>
<th>Boiler Model</th>
<th>'A'</th>
<th>'B'</th>
<th>'C'</th>
<th>'D'</th>
<th>'E'</th>
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<tr>
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<td>8-1/8</td>
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<td>3-1/2</td>
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<tr>
<td>CHG225</td>
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<td>22-3/8</td>
<td>8-1/4</td>
<td>7-1/8</td>
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</tbody>
</table>

*All dimensions in inches

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www.burnham.com

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