### DESIGN DETAILS

#### General Information

<table>
<thead>
<tr>
<th>Type of Boiler</th>
<th>Watertube</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Series</td>
<td>5907</td>
</tr>
<tr>
<td>Rated Capacity</td>
<td>450 BHP</td>
</tr>
<tr>
<td>Equivalent Evaporation</td>
<td>15,525 lb/hr from and at 212°F</td>
</tr>
<tr>
<td>Thermal Output</td>
<td>15,075,000 Btu/hr</td>
</tr>
<tr>
<td>Construction Codes</td>
<td>ASME, Hartford,</td>
</tr>
<tr>
<td></td>
<td>National Board</td>
</tr>
<tr>
<td>Boiler Shell Insulation</td>
<td>Mineral Wool Insulation</td>
</tr>
<tr>
<td>Approx. Shipping Weight</td>
<td>17,500 lbs</td>
</tr>
</tbody>
</table>

#### Power Requirements

- **Main Power:** 230/460/575 VAC, 3 Ph, 60 Hz
- **Control Power:** 120 VAC, 1 Ph, 60Hz
- **HP required by circulating pump:** 20 HP
- **HP required by blower:** 20 HP

#### Overall Dimensions

- L x W x H: 155" x 92" x 116" *
- Width does not include blower extension beyond body of Circulatic

#### Performance Data

- **Fuel Consumption @ Rated Output**
  - **Gas:** 18,844 scfh
  - **Oil (No. 2):** 132 gal/hr

- **Turndown Ratios:**
  - **Oil & Gas:** 8 to 1

- **Combustion and Ventilating Air Required:**
  - **Oil & Gas:** 4,510 scfm

#### Customer Connections

- **Stack Outlet:** 28" O.D.
- **Steam Outlet**
  - 15 psi: 12" ASA
  - 150, 250, 530 psi: 6" ASA
- **Main Gas Supply:** 3" NPT
- **Pilot Gas Supply:** 1/2" NPT
- **Oil Supply:** 1" NPT
- **Oil Return:** 3/4" NPT
- **Atomizing Air:** 1/2" NPT
- **Feedwater Inlet:** 1 1/2" NPT
- **Blowdown Outlet:** 1" NPT
- **Surface Blowdown Outlet:** 3/8" NPT
- **Safety Valve Outlet (2):** 2 1/2" NPT

- **Note:** varies based on set pressure

#### Controls

Steam Pressure, Low Water Cutoff, Flame Failure Protection, Coil Temperature Limit.

#### Burner

- **Manufacturer:** Vapor Power
- **Fuel:** Natural Gas, No. 2 Fuel Oil, or Combination
- **Type (gas):** Multiple Orifice Nozzle
- **Type (oil):** Air Atomized

#### Fuel Specifications:

- **Oil (No. 2):** 141,000 Btu/U.S. gal
- **Gas:** 1000 Btu/cu ft
- **Main Burner:** 2 psig
- **Pilot Burner:** 6" W.C.

#### Atomizing Air Requirements:

- **Oil (No. 2):** 20 scfm @ 30 psig
- **Gas:** None required

**Ignition Type:**

- **Oil & Gas:** Electric spark - interrupted gas pilot