Reznor RP Series Rooftop Duct Furnaces are designed to be used as the heating component in a heating, heating/cooling, or makeup air system. The RP Series furnaces are certified for 80% thermal efficiency for use with either natural or propane gas, as specified, in sizes from 125,000 through 400,000 BTUH input. The furnace includes an integral power vent system which provides metered combustion air, dilutes flue products, and eliminates the need for a vent cap. The weatherized, aluminized steel cabinet is designed for outdoor mounting. A separate blower system is required for air delivery.

The furnace has a Thermocore® aluminized steel heat exchanger with venturi-design tubes. The die-formed burners are of aluminized steel and include flared ports with a stainless steel insert.

The Model RP furnace is approved for a temperature rise of 50°F to 90°F and includes “finger-baffles” for proper air distribution at these lower air volumes. Removing the finger-baffles increases the air flow and decreases the temperature rise. For temperature rise ranges, please see the table on the next page.

Standard features include a spark-ignited intermittent pilot and a single-stage 24-volt gas valve. Each unit has all the required limit and safety controls including a venter pressure switch which verifies power vent flow prior to allowing operation of gas valve. For automatic operation, each unit is wired for field connection to a remote 24-volt thermostat.

- Orifices for natural gas
- Aluminized steel heat exchanger (When inlet air temperature is below 40°F or temperature rise is less than 40°F, optional stainless steel heat exchanger is recommended.)
- Aluminized steel burners with stainless steel insert
- 120-volt supply voltage
- 24-volt control voltage transformer
- Redundant, single-stage combination gas valve
- Spark-ignited, intermittent safety pilot with electronic flame supervision
- High limit safety cutout
- Power venter
- Differential air pressure switch to verify vent flow
- Terminal block wiring
- Left side access for burners and controls (slide out burner drawer)
- Fan control
- Weatherized steel cabinet with interlocking joints for outdoor mounting

NOTES:
1. Burner and control access shown left hand side (standard). Specify right hand side for opposite access and connections.
2. Standard air flow as shown. Direction of air flow may be reversed by field relocation of air flow baffles in the heat exchanger.
3. To install units side-by-side, specify one unit with standard left-hand controls and one unit with optional right-hand controls. Ductwork must attach only to separate duct flanges, never attach duct to heater cabinet.
4. All casing parts are suitable for outdoor installation. Heater mounting rails are 12 Ga. zinc grip steel.
5. One inch thick fiberglass insulation full length and width of top.
6. Approved for installation downstream of an air conditioning coil (optional drain flange, stainless steel heat exchanger, and stainless steel burners are recommended).
7. Not approved for residential use.
MODEL RP
ROOFTOP, GAS-FIRED, POWER-VENTED DUCT FURNACE FOR COMMERCIAL/INDUSTRIAL USE

OPTIONAL FEATURES - FACTORY INSTALLED
- Orifices for propane gas
- Elevations from 2,001 to 9,000 ft.
- 409 stainless steel heat exchanger
- 409 stainless steel burners
- 409 stainless steel bottom pan
- Burner Controls for Recirculated Heating
  - Two-stage gas valve
  - Electronic Modulation
- Gas Controls for Make up Air
  - Two-stage gas valve
  - Electronic modulation - 50%-100% firing rate with duct probe (55°-90°F)
  - Electronic modulation - 50%-100% firing rate with duct probe (55°-90°F) and remote adjustment
  - Electronic modulation - 20/28%-100% firing rate not available on size 350
- Intermittent spark pilot with timed lockout
- Voltage - 208/230/460
- Right side controls (facing airstream)
- High and low pressure gas switches

OPTIONAL FEATURES - FIELD INSTALLED
- Vertical vent terminal
- One-stage thermostat
- Two-stage thermostat
- Electronic modulating room override thermostat
- Thermostat guard with locking cover
- Manual gas shut-off valve and union
- Disconnect switch (UL Listed)

TECHNICAL DATA

<table>
<thead>
<tr>
<th>Model RP</th>
<th>Size</th>
<th>Input Heating Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>125</td>
<td>125,000 (36.6)</td>
</tr>
<tr>
<td></td>
<td>150</td>
<td>150,000 (44.0)</td>
</tr>
<tr>
<td></td>
<td>175</td>
<td>175,000 (51.3)</td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>200,000 (58.6)</td>
</tr>
<tr>
<td></td>
<td>225</td>
<td>225,000 (65.9)</td>
</tr>
<tr>
<td></td>
<td>250</td>
<td>250,000 (73.3)</td>
</tr>
<tr>
<td></td>
<td>300</td>
<td>300,000 (87.9)</td>
</tr>
<tr>
<td></td>
<td>350</td>
<td>350,000 (102.6)</td>
</tr>
<tr>
<td></td>
<td>400</td>
<td>400,000 (117.2)</td>
</tr>
</tbody>
</table>

| Output Heating Capacity (80%) | BTUH (kW) | 100,000 (29.3) | 120,000 (35.2) | 140,000 (40.1) | 160,000 (46.9) | 180,000 (52.8) | 200,000 (58.6) | 240,000 (70.3) | 280,000 (82.1) | 320,000 (93.8) |
| Full Load Amps (120V)          | 1.9      | 1.9            | 1.9            | 1.9            | 1.9            | 1.9            | 1.9            | 1.9            | 1.9            | 1.9            |
| Unit Control Amps (24V)        | 0.83     | 0.83           | 0.83           | 0.83           | 0.83           | 0.83           | 0.83           | 0.83           | 0.83           | 0.83           |
| Air Volume w/Finger-Baffles    | cfm (m³/hr) | 1,020-1,840 (1.733-3.126) | 1,225-2,210 (2.081-3.755) | 1,430-2,580 (2.429-4.383) | 1,635-3,945 (2.778-5.003) | 1,840-3,315 (3.126-5.322) | 2,045-3,685 (3.474-6.261) | 2,455-4,420 (4.171-7.509) | 2,865-5,160 (4.867-8.767) | 3,275-5,895 (5.584-10.015) |
| Air Volume w/o Finger-Baffles  | cfm (m³/hr) | 1,225-4,605 (1.720-6,450) | 1,965-7,370 (2.922-10.958) | 3,315-8,295 (3.338-12.521) | 4,240-7,370 (3.755-14.093) | 5,160-12,900 (4.417-15.647) | 6,085-12,900 (5.003-18.790) | 7,010-12,900 (5.844-21.916) | 8,035-12,900 (6.677-25.051) |
| Net Weight (lbs)               | 201      | 217            | 217            | 247            | 247            | 295            | 295            | 333            | 361            |
| Ship Weight (lbs)              | 232      | 264            | 264            | 283            | 283            | 333            | 333            | 372            | 403            |
| Gas Connection (in.) Natural   | 1/2"     | 1/2"           | 1/2"           | 1/2"           | 1/2"           | 1/2"           | 1/2"           | 3/4"           | 3/4"           |

TEMPERATURE RISE RANGE

<table>
<thead>
<tr>
<th>U.S.</th>
<th>Temperature Rise w/Air-Baffles</th>
<th>50°F - 90°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Temperature Rise w/Air-Baffles</td>
<td>20°F - 75°F</td>
</tr>
</tbody>
</table>

* In U.S. ratings are for altitudes to 2,000 feet. Above 2,000 feet derate by orifice change, 4% for each 1,000 feet above sea level.
* In Canada ratings are for altitudes to 2,000 feet. For high altitude units (2,001-4,500 ft.) derate by 10% of maximum input.
* For high air volume the finger-baffles in the heat exchanger section are removed during unit installation. See installation manual for instructions.
* Sizes shown are for natural gas connections and are applicable to single stage gas valves, NOT supply line size. Propane gas connection is 1/2" for all sizes.
CLEARANCE FROM COMBUSTIBLES

1. Top - 36" (914 mm)
2. Side opposite controls - 6" (152mm)
3. Control side - unit width plus 6" (152mm)
4. Bottom - 0" (Unit is certified for installation on a combustible surface when equipped with standard heater mounting rails.)