

REZNOR®

ANSI Z83.8a



CGA 2.6a



MODEL RP

ROOFTOP, GAS-FIRED, POWER-VENTED DUCT FURNACE FOR COMMERCIAL/ INDUSTRIAL USE

- 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 (see page 18)
- 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)
- Weatherized steel cabinet with interlocking joints (U.S. Patent No. 5,373,673) for outdoor mounting

OPTIONAL FEATURES - FACTORY INSTALLED

- Orifices for propane gas
- Elevations from 2,001 to 9,000 ft.
- 409 or 321 stainless steel heat exchanger
- 409 stainless steel burners
- 409 stainless steel bottom pan
- Burner Controls for Recirculated Heating (see page 18)
 - Two-stage gas valve
 - Electronic Modulation
- Gas Controls for Make up Air (see page 19)
 - Two-stage gas valve with ductstat
 - Mechanical modulation (50°-100°F)
 - Mechanical modulation (50°-100°F) with bypass
 - Electronic modulation - 50%-100% firing rate with duct probe (55°-90°F)
 - Electronic modulation - 50%-100% firing rate with duct probe with remote adjustment
 - Electronic modulation - 20/28%-100% firing rate (see page 19) not available on size 350
- Intermittent spark pilot with timed lockout (see page 18)
- Voltage - 208/230/460
- Fan control
- Right side controls (facing airstream)
- Manifold arrangement to comply with Illinois School Code requirements
- 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)

DESCRIPTION

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 patented Reznor 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.

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.

For approved temperature rise ranges, see page 9.

STANDARD FEATURES

- Orifices for natural gas

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

Technical Data

SIZE		125	150	175	200	225	250	300	350	400
Input Heating Capacity	BTUH	125,000	150,000	175,000	200,000	225,000	250,000	300,000	350,000	400,000
	kW	36.6	44.0	51.3	58.6	65.9	73.3	87.9	102.6	117.2
Output Heating Capacity (80%) ^A	BTUH	100,000	120,000	140,000	160,000	180,000	200,000	240,000	280,000	320,000
	kW	29.3	35.2	41.0	46.9	52.8	58.6	70.3	82.1	93.8
Full Load Amps (120V)		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
RP Air Volume	cfm	1,020-1,840	1,225-2,210	1,430-2,580	1,635-2,945	1,840-3,315	2,045-3,685	2,455-4,420	2,865-5,160	3,275-5,895
Range (A.G.A./C.G.A.)	m ³ /hr	1,733-3,126	2,081-3,755	2,429-4,383	2,778-5,003	3,126-5,632	3,474-6,261	4,171-7,509	4,867-8,767	5,564-10,015
HRP Air Volume	cfm	1,225-4,605	1,475-5,530	1,720-6,450	1,965-7,370	2,210-8,295	2,455-9,210	2,945-11,060	3,440-12,900	3,930-14,745
Range (A.G.A.) ^B	m ³ /hr	2,081-7,824	2,506-9,395	2,922-10,958	3,338-12,521	3,755-14,093	4,171-15,647	5,003-18,790	5,844-21,916	6,677-25,051
HRP Air Volume	cfm	1,840-4,605	2,210-5,530	2,580-6,450	2,940-7,370	3,315-8,295	3,685-9,210	4,420-11,060	5,160-12,900	5,895-14,745
Range (C.G.A.) ^B	m ³ /hr	3,126-7,824	3,755-9,395	4,383-10,958	4,995-12,521	5,632-14,093	6,261-15,647	7,509-18,790	8,767-21,916	10,015-25,051
Net Weight	lbs	201	217	217	247	247	295	295	333	361
	kg	91	98	98	112	112	134	134	151	164
Ship Weight	lbs	232	264	264	283	283	333	333	372	403
	kg	105	120	120	128	128	151	151	169	183
Gas Connection (in.) Natural ^C		1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"

^A 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.

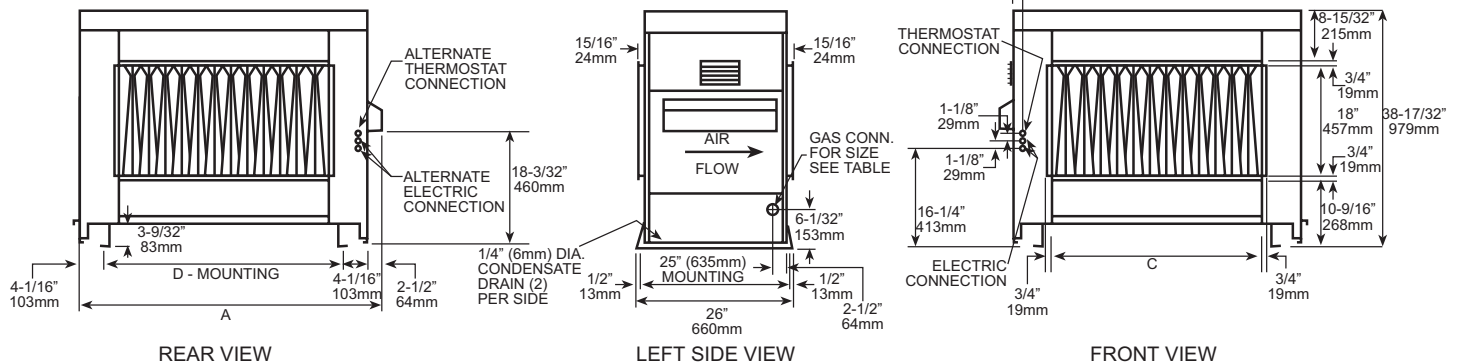
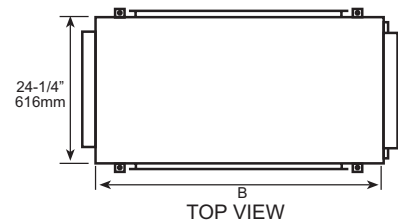
In Canada ratings are for altitudes to 2,000 feet. For high altitude units (2,001-4,500 ft.) derate by 10% of maximum input.

^B Prefix "H" indicates high CFM units without finger baffles.

^C 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.

TEMPERATURE RISE RANGE		
U.S.	RP	50°F - 90°F
	HRP	20°F - 75°F
Canada	RP	50°F - 90°F
	HRP	20°F - 50°F

Model RP includes finger baffles for proper air distribution at the lower air volumes.



Dimensions ±1/8" (3mm)

SIZE	A		B		C		D		GAS. CONN.	
	in.	mm	in.	mm	in.	mm	in.	mm	NAT.	PRO.
125	30 15/16	786	28 1/2	724	15 1/4	387	20 5/16	516	1/2	1/2
150	36 7/16	926	34	864	20 3/4	527	25 13/16	656	1/2	1/2
175	36 7/16	926	34	864	20 3/4	527	25 13/16	656	1/2	1/2
200	41 15/16	1065	39 1/2	1003	26 1/4	667	31 5/16	795	1/2	1/2
225	41 15/16	1065	39 1/2	1003	26 1/4	667	31 5/16	795	1/2	1/2
250	50 3/16	1275	47 3/4	1213	34 1/2	876	39 9/16	1005	1/2	1/2
300	50 3/16	1275	47 3/4	1213	34 1/2	876	39 9/16	1005	3/4	1/2
350	55 11/16	1414	53 1/4	1353	40	1016	45 1/16	1145	3/4	1/2
400	61 3/16	1554	58 3/4	1492	45 1/2	1156	50 9/16	1284	3/4	1/2

CLEARANCE FROM COMBUSTIBLES

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