

**REZNOR**

ANSI Z83.8a



CGA 2.6a

## MODEL RG

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

#### STANDARD FEATURES

- 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 (see page 18)
- High limit safety cutout
- Left side access for burners and controls (slide out burner drawer)
- Vent cap
- 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
- Intermittent spark pilot with timed lockout (see page 19)
- Voltage - 208/230/460
- Fan control
- Right side controls (facing airstream)
- Terminal block wiring
- Manifold arrangement to comply with Illinois School Code requirements
- High and low pressure gas switches
- Vent extension, 4 ft.

#### OPTIONAL FEATURES -FIELD INSTALLED

- 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 RG Series Rooftop Duct Furnaces are designed to be used as the heating component in a heating, heating/cooling, or makeup air system. The RG Series furnaces are certified to provide 78% thermal efficiency for use with either natural or propane gas, as specified, in sizes from 75,000 through 400,000 BTUH input. The furnace is gravity vented with a weatherized, steel cabinet 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 and is wired for field connection to a remote 24-volt thermostat.

For approved temperature rise ranges, see page 13.

#### 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. Allow 6" minimum clearance between furnaces. 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 RG

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

### Technical Data

Size		75	100	125	150	175	200	225	250	300	350	400
Input Heating Capacity	BTUH	75,000	100,000	125,000	150,000	175,000	200,000	225,000	250,000	300,000	350,000	400,000
	kW	22.0	29.3	36.6	44.0	51.3	58.6	65.9	73.3	87.9	102.6	117.2
Output Heating Capacity (78%) <sup>A</sup>	BTUH	58,500	78,000	97,500	117,000	136,500	156,000	175,500	195,000	234,000	273,000	312,000
	kW	17.1	22.9	28.6	34.3	40.0	45.7	51.4	57.2	68.6	80.0	91.4
Full Load Amps (120V)		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Unit Control Amps (24V)		0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
RG Air Volume	cfm	595-1,075	795-1,435	995-1,795	1,195-2,155	1,395-2,515	1,595-2,875	1,795-3,235	1,995-3,590	2,395-4,310	2,795-5,030	3,195-5,750
Range (A.G.A./C.G.A.)	m <sup>3</sup> /hr	1,011-1,826	1,351-2,438	1,690-3,050	2,030-3,661	2,370-4,273	2,710-4,884	3,050-5,496	3,389-6,099	4,069-7,322	4,749-8,546	5,428-9,769
HRG Air Volume	cfm	715-2,695	955-3,590	1,195-4,490	1,435-5,390	1,675-6,290	1,915-7,185	2,155-8,085	2,395-8,985	2,875-10,780	3,355-12,580	3,830-14,375
Range (A.G.A.) <sup>B</sup>	m <sup>3</sup> /hr	1,215-4,579	1,622-6,099	2,030-7,628	2,438-9,157	2,846-10,686	3,253-12,207	3,661-13,736	4,069-15,265	4,884-18,315	5,700-21,373	6,507-24,422
HRG Air Volume	cfm	1,075-2,695	1,435-3,590	1,795-4,490	2,155-5,390	2,515-6,290	2,875-7,185	3,235-8,085	3,590-8,985	4,310-10,780	5,030-12,580	5,750-14,375
Range (C.G.A.) <sup>B</sup>	m <sup>3</sup> /hr	1,826-4,579	2,438-6,099	3,050-7,628	3,661-9,157	4,273-10,686	4,884-12,207	5,496-13,736	6,099-15,265	7,322-18,315	8,546-21,373	9,769-24,422
Net Weight	lbs	160	160	196	212	212	242	242	290	290	327	354
	kg	73	73	89	96	96	110	110	132	132	148	161
Ship Weight	lbs	170	170	227	259	259	278	278	328	328	366	396
	kg	77	77	103	117	117	126	126	149	149	166	180
Gas Connection (in.) Natural <sup>C</sup>		1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"

<sup>A</sup> 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.

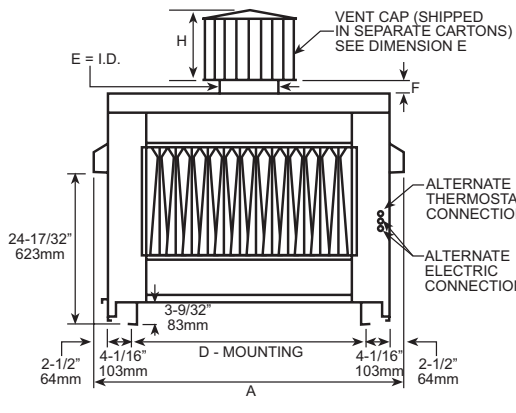
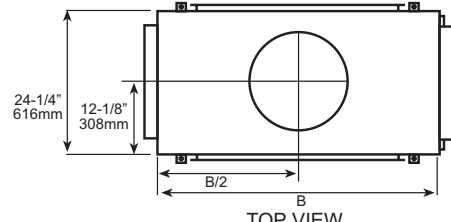
In Canada ratings are for altitudes to 2,000 feet. For high altitude units (2,001-4,500 ft.) derate by 10% of maximum input.

<sup>B</sup> Prefix "H" indicates high CFM units without finger baffles.

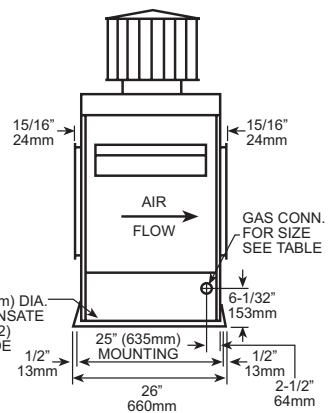
<sup>C</sup> Sizes shown are for natural gas connections and are applicable to single-stage gas valves, NOT supply line size. Propane gas connection is 1/2" for all sizes.

TEMPERATURE RISE RANGE	
U.S.	RG 50°F to 90°F
	HRG 20°F to 75°F
Canada	RG 50°F to 90°F
	HRG 20°F to 50°F

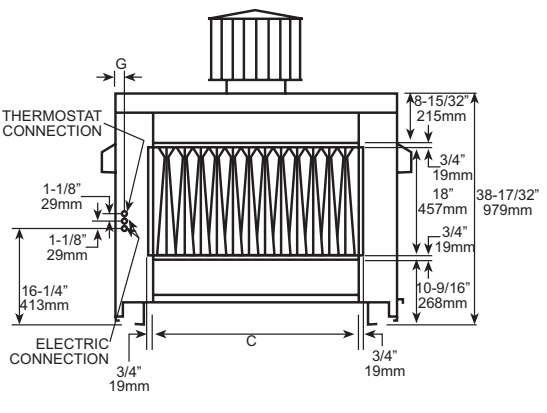
Model RG includes finger baffles for proper air distribution at lower air volumes.



REAR VIEW



LEFT SIDE VIEW



FRONT VIEW

### Dimensions ±1/8" (3mm)

SIZE	A		B		C		D		E (I.D.)		F		G		H		GAS CONN.	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	NAT.	PRO.
75	33 7/16	849	28 1/2	724	12 1/2	318	20 5/16	516	6	152	2	51	3 3/32	79	7	178	1/2	1/2
100	33 7/16	849	28 1/2	724	12 1/2	318	20 5/16	516	6	152	2	51	1 21/32	42	7	178	1/2	1/2
125	33 7/16	849	28 1/2	724	15 1/4	387	20 5/16	516	8	203	2	51	1 21/32	42	9 1/2	241	1/2	1/2
150, 175	38 15/16	989	34	864	20 3/4	527	25 13/16	656	8	203	2	51	1 21/32	42	9 1/2	241	1/2	1/2
200, 225	44 7/16	1,129	39 1/2	1,003	26 1/4	667	31 5/16	795	10	254	3	76	1 21/32	42	11 3/4	298	1/2	1/2
250	52 11/16	1,338	47 3/4	1,213	34 1/2	876	39 9/16	1,005	10	254	3	76	1 21/32	42	11 3/4	298	1/2	1/2
300	52 11/16	1,338	47 3/4	1,213	34 1/2	876	39 9/16	1,005	12	305	12	305	1 21/32	42	14 1/8	359	3/4	1/2
350	58 3/16	1,478	53 1/4	1,353	40	1,016	45 1/16	1,145	12	305	12	305	1 21/32	42	14 1/8	359	3/4	1/2
400	63 11/16	1,618	58 3/4	1,492	45 1/2	1,156	50 9/16	1,284	12	305	12	305	1 21/32	42	14 1/8	359	3/4	1/2

### CLEARANCE FROM COMBUSTIBLES

1. Top - 36"
2. Side opposite controls - 6"
3. Control side - unit width plus 6"
4. Radius from vent cap to obstructions - 10 feet
5. Bottom - 0" (Unit is certified for installation on a combustible surface when equipped with standard heater mounting rails.)

VENT CAP EXTENSION DATA (See Dimension "F")			
Type of Gas	Size Furnace	Height	Part No.
Natural	300, 350, 400	12"	20524
Propane	300, 350, 400	12"	20524