

**REZNOR**

# MODEL SCB

## GAS-FIRED, SEPARATED-COMBUSTION BLOWER-TYPE UNIT HEATER



ANSI Z83.8



CAN/CGA 2.6



### DESCRIPTION

The Model SCB Series gas-fired, blower-type, separated-combustion, power-vented unit heaters are available in sizes ranging from 125,000 to 400,000 BTUH gas input for use with either natural or propane gas, as specified. Model SCB heaters are designed to separate their combustion air from the air in the heated space. These units are designed and manufactured in accordance with the ANSI definition of "separated combustion". While discharging exhaust air, the power venter draws in combustion air from the outside atmosphere. Exclusive outside combustion air prevents dirt, lint, dust or other contaminants in the heated space from entering the combustion zone of the heater. This separated combustion heater is designed for use in building areas with negative pressure and/or extremely dirty or mildly corrosive atmospheres. A specially designed combustion air inlet/vent terminal assembly supplied with the Model SCB heater allows for a single building penetration for both exhaust and combustion air.

Standard features include a patented Thermocore heat exchanger with a venturi design tube and die-formed burners of aluminized steel with flared ports and a stainless steel burner insert. Standard controls include a single-stage 24-volt gas valve, an intermittent safety pilot with electronic flame supervision, a blower motor with adjustable belt drive, a power venter motor and wheel assembly, a combustion air pressure switch, and a safety limit switch. The blower is capable of handling up to .25" w.c. of external static pressure. Each unit is arranged for field connection to a remote 24-volt thermostat for automatic operation. The heater cabinet is designed for suspension from two 1" couplings.

The Model SCB line of heaters is approved for installation in The United States and Canada by the Canadian Standards Association (CSA). Model SCB Series 6 heaters are 80% thermal efficient.

**WARNING: Gas-fired appliances are not designed for use in hazardous atmospheres containing flammable vapors or combustible dust, or atmospheres containing chlorinated or halogenated hydrocarbons.**

**Installations in public garages or airplane hangars are permitted when in accordance with ANSI Z223.1 and NFPA 54 Codes or CAN1-B149 Codes and enforcing authorities.**

**NOTE:** Regulated combination redundant gas valve consists of combination pilot solenoid valve, electric gas valve, pilot filter, pressure regulator, pilot shutoff, and manual shutoff, all in one body. Gas supply pressure must not exceed 0.5 psi (8 oz or 14" w.c.). Minimum inlet pressure for natural gas is 5" w.c.; minimum inlet pressure for propane gas is 11" w.c.

### STANDARD FEATURES

- Orifices for natural gas
- Aluminized steel heat exchanger
- Aluminized steel burner with stainless steel insert
- Spark-ignited intermittent safety pilot with electronic flame supervision
- Single-stage combination gas valve
- 115/1/60 supply voltage
- 115/1/60 blower motor with internal thermal overloads
- 115/1/60 venter motor with stainless steel shaft
- Motor contactor (Size 400)
- Fan and limit safety controls
- Pressure switch to verify vent flow
- 24-volt control voltage transformer
- Individually adjustable horizontal louvers
- Adjustable belt drive blower
- Terminal block wiring
- Burner rack side access (pullout drawer; left side facing airstream)
- 2-point suspension (1" couplings)

### OPTIONAL FEATURES - Factory Installed

- Equipped for propane gas
- Equipped for high altitude
- E-3 (409) stainless steel heat exchanger
- 321 Stainless steel heat exchanger
- E-3 (409) stainless steel burners
- Stainless steel bottom pan
- Spark-ignited intermittent safety pilot with electronic flame supervision and timed lockout (required for propane gas)
- 208/230/1/60; 208/230/460/575/3/60 supply voltage
- 1/3-5HP Open and 1/4-3HP Totally Enclosed blower motors (See RPM/BHP Table on pages 28-29)
- Motor starter
- Two-stage gas valve (50%/100%)
- Burner air shutters (required with propane gas)
- Manual summer/winter switch
- Electronic modulation
- Air recirculation kits - See page 35 for descriptions
- Relay for summer fan operation
- Vertical louvers
- OSHA-type belt guard and blower inlet guard
- BX cable - 1/2" O.D. (standard is 3/8" O.D.)
- Right side controls (facing airstream)

### ACCESSORIES - Field Installed

- Horizontal inlet air/vent terminal kit\* - See page 33
- Vertical inlet air/vent terminal kit\* - See page 34
- Thermostats (single stage and two stage)
- Downturn nozzles, 25-65° or 50-90° variable air deflection range
- Thermostat guard with locking cover
- Manual shutoff valve and union

\* Selection of either a horizontal or vertical inlet air/vent terminal kit is required.

### NOTE: Not certified for residential use.

**TECHNICAL DATA - Model SCB (Refer to Blower Chart, pages 28-29)**

Size	125	150	175	200	225	250	300	350	400
BTUH Input	125,000	150,000	175,000	200,000	225,000	250,000	300,000	350,000	400,000
BTUH Thermal Output *	97,500	120,000	136,500	160,000	175,500	200,000	234,000	273,000	312,000
CFM @ .25" ESP (70°F Std Air)	1235	1481	1728	1975	2222	2469	2963	3457	3951
CFM @ 0" ESP (70°F Std Air)	1543	1852	2160	2469	2778	3086	3704	4321	4938
Throw at 8' Mounting Ht	65	68	75	83	93	100	105	115	120
Control Amps (24-volt)	.95	.95	.95	.95	.95	.95	.95	.95	.95
Full-Load Amps (115 volt)	7.3	7.3	7.7	7.7	11.0	11.0	12.9	12.9	14.9
Motor HP	1/4	1/4	1/3	1/3	1/2	1/2	3/4	3/4	1
Blower Wheel Diameter (inches)	11	13	13	13	13	(2) 11	(2) 11	(2) 13	(2) 13
Blower RPM									
Minimum	408	467	467	408	458	516	589	516	516
Maximum	623	713	713	623	649	731	834	731	731
Temperature Rise (°F)	30-85	30-85	30-85	30-85	30-85	30-85	30-85	30-85	30-85
Maximum Vent 6" pipe	50	50	50	50	50	50	50	30	30
Length (feet)** 7" pipe	--	--	--	70	70	70	70	70	70
Gas Connection (inches)	1/2	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4
- Natural Gas***									
Approximate Net Wt (lbs)	281	323	323	347	347	414	414	458	515
Approximate Shipping Wt	337	388	388	414	414	497	497	573	640

\*A.G.A. ratings for altitudes to 2000 ft. Above 2000 ft, de-rate by orifice change, 4% for each 1000 ft above sea level.

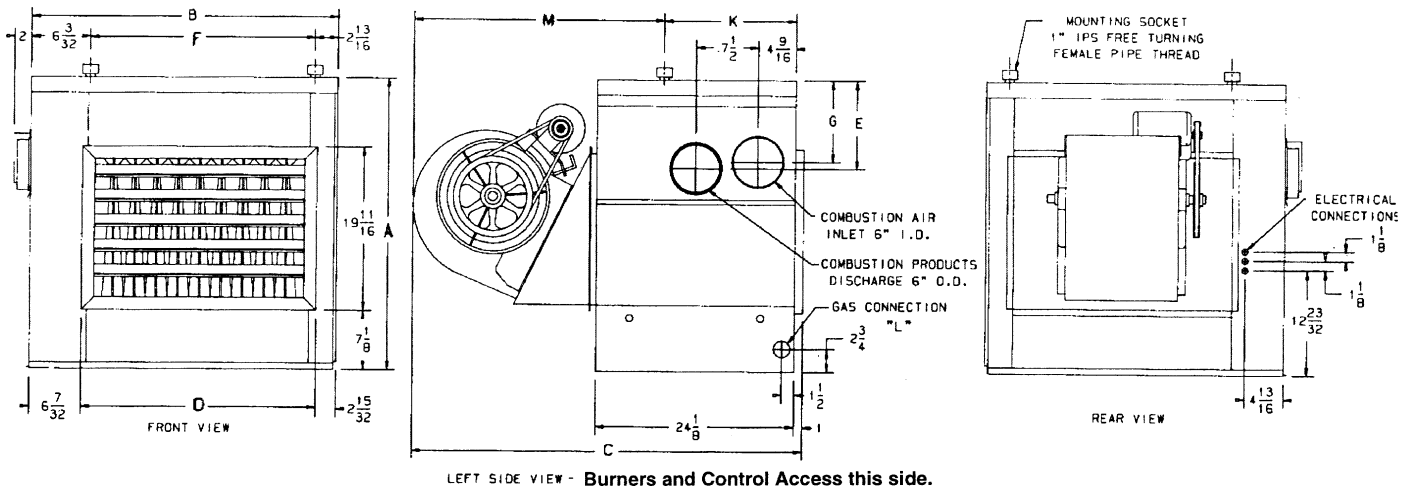
\*C.G.A. ratings for altitudes to 2000 ft. High altitude units (2001-4500 ft) are de-rated by 10% of maximum input.

\*\*Minimum vent length is 5 feet. 7" pipe requires four field-supplied tapered reducers. Refer to pages 33-34 for wall or roof penetration details.

\*\*\*Gas connection for propane is 1/2" for all sizes. Sizes shown are for gas connection to a single-stage or two-stage gas valve; NOT gas supply line size.

For venting arrangements, see pages 31-32.

**DIMENSIONS (inches + or - 1/8")**



Size	A	B	C	D	E	F	G	K	M
125	32-1/4	25-1/4	44-5/8	17	8-1/8	16-1/4	7	17	26-1/2
150,175	32-1/4	30-3/4	48-1/4	22-1/2	8-1/8	21-3/4	7	18-3/8	28-7/8
200,225	35-1/4	36-1/4	48-1/4	28	10-3/4	27-1/4	10	17	30-1/4
250,300	35-1/4	44-1/4	44-5/8	36-1/4	10-3/4	35-1/2	10	17	26-1/2
350	35-1/4	50	48-1/4	41-3/4	10-3/4	41	10	18-3/8	28-7/8
400	35-1/4	55-1/2	48-1/4	47-1/4	10-3/4	46-1/2	10	17	30-1/4

**Required Clearances**

Sizes	125-400
Top	6"
Flue Connector	6"
Control Side	Width of Unit + 6"
Non-Control Side	6"
Bottom	6"