REZNOR®

MODEL SSCBL

EXTENDED CAPACITY, GAS-FIRED, SEPARATED-COMBUSTION, INDOOR, PACKAGED DUCT FURNACE(S)/BLOWER COMBINATION FOR COMMERCIAL/INDUSTRIAL USE

ANSI Z83.8
CGA 2.6
AGA14-94

DESCRIPTION

Reznor® Model SSCBL is a unified assembly of one, two, or three separated-combustion duct furnaces and a large-capacity Reznor blower cabinet. Sizes are available with heating capacities from 400,000 through 1,200,000 BTUH gas input. The standard packages are heating-only systems, but factory-installed gas and inlet-air control options are available to meet makeup air or combination heating/makeup air specifications. These systems are designed for indoor installation in areas with negative pressure and/or extremely dirty or mildly corrosive atmospheres.

Model SSCBL is available for use with either natural or propane gas, as specified. All units are equipped with required limit and safety controls.

Each of the duct furnaces in these packaged systems are designed to separate combustion air from the air in the heated space. The furnaces are engineered and manufactured in accordance with the ANSI definition of "separate 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 furnace. A specially designed combustion-air inlet/vent terminal assembly is required for each duct furnace in a Model SSCBL packaged system. Each furnace section must have a separate terminal assembly. The specially designed terminal assembly requires only one building penetration per furnace section.

Both the separated-combustion duct furnaces and the packaged system are design-certified by the Canadian Standards Association for installation in the U.S. and Canada.

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 burners with a stainless steel insert
- 120-volt power supply
- 24-volt control transformer
- Redundant single-stage combination gas valve
- Intermittent spark safety pilot with electronic flame supervision
- Differential air pressure switch to verify vent flow
- Fan and limit safety controls
- Pre-wired to terminal blocks
- Twin centrifugal blowers with adjustable belt drive
- Galvalume steel cabinet with interlocking joint construction (U.S. Patent No. 5,373,673)
- Horizontal discharge air opening with duct flanges
- Curb cap base with hangers for suspension
- Blower cabinet (less optional insulation, filter rack and filters) with horizontal inlet-air opening
- Left side controls (facing air stream)

OPTIONAL FEATURES - FACTORY INSTALLED

- Unit equipped for propane gas
- E-3 (409) stainless steel heat exchanger
- 321 stainless steel heat exchanger
- E-3 (409) stainless steel burners
- E-3 (409) stainless steel drip pan
- Intermittent spark safety pilot with timed lockout
- Two-stage gas control (unit-mounted or remote temperature selector)
- Three-stage gas controls (unit-mounted or remote temperature selector
- Electronic modulation 50%-100% turndown or 20%-100% turndown
- Mechanical modulation (sizes 400 - 800)
- Mechanical modulation with full bypass (sizes 400 - 800)
- Makeup air controls/dampers
- 208/1, 230/1, 208/3, 230/3, 460/3, 575/3 supply voltages
- 1 HP through 20 HP open drip-proof, totally enclosed, or energy efficient; 2-speed motors available in 1-10 HP
- Burner air shutters (required for units equipped for propane gas)
- Firestat(s)
- Freezestat(s)
- Convenience outlet
- 1/2" O.D. BX cable (Chicago code)
- Motor starter (optional with motors having internal overload protection)
- Downturn plenum (insulated)
- Discharge damper, 2 position, with downturn plenum
- Blower cabinet insulation
- Filter rack with 1" or 2" disposable, pleated or permanent filters
- Double wall cabinet construction
- Manifold arrangement to comply with Illinois school code
- IRI, FM manifold arrangements
- High ambient burner cutoff
- Gas pressure safety switches
- Air flow proving switch
- Right side controls (facing airstream)
- Cooling coil cabinet with DX or chilled water coil, requires special handling - see cooling coil cabinet section

ACCESSORIES - FIELD INSTALLED

- Horizontal or vertical combustion-air inlet/vent terminal assembly (one per furnace section; installation requirement)
- Remote control center
- Disconnect switch - UL Listed
- Single-stage thermostat
- Two-stage thermostat
- Electronic 7-day programmable thermostat
- Cooling coil cabinet with DX or chilled water coil (See RGBL in Packaged Heating Outdoor Catalog)
- Evaporative cooling module (see Evaporative Cooling Catalog)

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TECHNICAL DATA

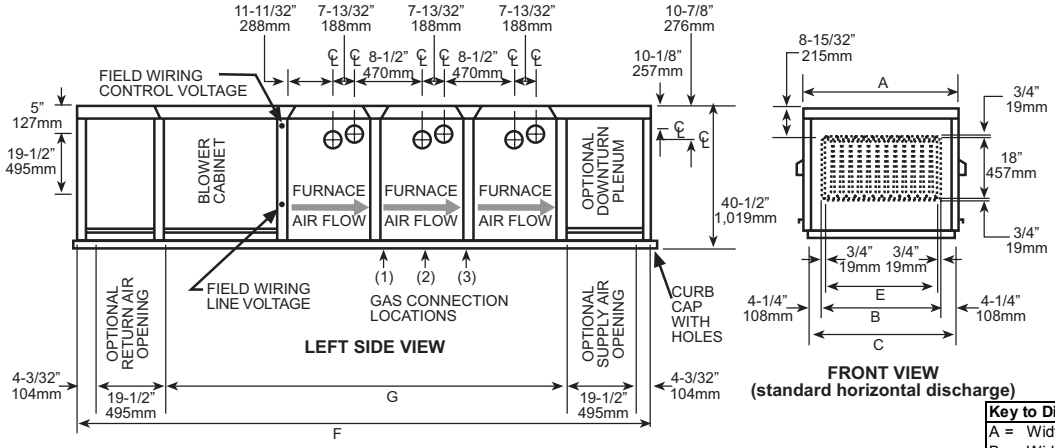
SIZE		400	500	600	700	800	1050	1200
Heating Input	BTUH	400,000	500,000	600,000	700,000	800,000	1,050,000	1,200,000
	kW	117.2	146.6	175.9	205.2	234.5	307.8	351.7
Thermal Output Capacity [A]	BTUH	320,000	400,000	480,000	560,000	640,000	840,000	960,000
	kW	93.8	117.2	140.7	164.1	187.6	246.2	281.4
Unit Amps (120V) Less Blower Motor		3.1	3.3	3.3	3.6	4.5	5.0	5.9
Standard Control Amps (24V)		1.67	1.67	1.67	1.67	1.67	1.67	1.67
Air Volume	CFM	3,300-14,000	3,700-12,000	4,450-12,500	5,200-13,500	5,900-13,500	6,500-13,500	7,400-13,500
	m^3/hr	5,607-23,785	6,286-20,387	7,560-21,237	8,835-22,936	10,024-22,936	11,043-22,936	12,572-22,936
Net Weight [B]	lbs.	849	1,104	1,104	1,184	1,245	1,476	1,565
	kg	385	501	501	537	565	670	710
Ship Weight [B]	lbs.	1,218	1,588	1,588	1,668	1,898	2,148	2,243
	kg	552	720	720	757	861	974	1,017
Gas Connection—Natural or Propane [C]		1"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"
Maximum Vent Length [D]	6" Pipe	30'	50'	50'	30'	30'	30'	30'
	7" Pipe	70'	70'	70'	70'	70'	70'	70'

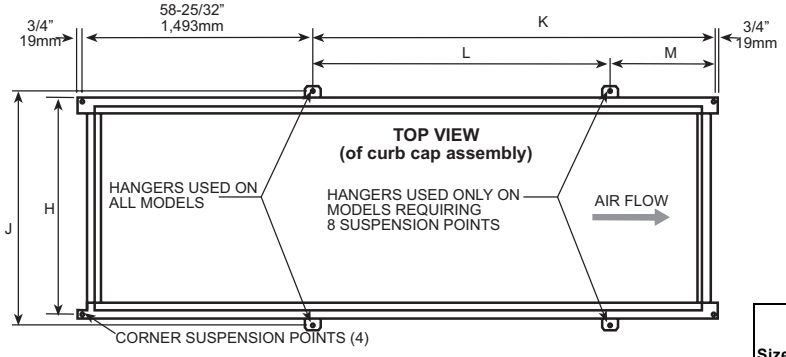
[A] In the U.S. ratings are for altitudes to 2,000 feet. Above 2,000 feet derate by orifice change, 4% for each 1,000 feet above sea level. In Canada ratings for altitudes to 2,000 feet. For high altitude units (2,001-4,500 ft.) derate by 10% of maximum input.

[B] Weights shown are for standard packaged furnace(s) and blower

[C] Sizes shown are for natural gas connections, NOT supply line size.

[D] Minimum vent length is 5 feet. Seven inch pipe requires four field-supplied tapered reducers per furnace section.See Separated Combustion Arrangement Section.





Key to Dimensions:

A = Width of Cabinet
B = Width of Optional Downturn Plenum Discharge Air Opening
Width of Standard Horizontal Air-Inlet Opening
Width of Optional Return Air (Bottom) Opening
C = Width of Inside of Curb Cap Base
E = Width of Standard Horizontal Discharge Air Opening
F = Overall Length of Inside of Curb Cap (with and without downturn plenum)
G = Distance between Optional Return Air Cabinet Opening and Optional Downturn Plenum Discharge-Air Opening

Air Openings	Dimensions
Standard Horiztonal Air Inlet	B x 19-1/2"
Optional Return Air Opening (bottom)	B x 19-1/2"
Standard Horizontal Discharge-Air Opening	E x 18"
Optional Discharge-Air Opening (w/Downturn Plenum Cabinet)	B x 19-1/2"

DIMENSIONS (+ or - 1/8" or 3mm)

Size	No. of Furnace Sections	A in.	A mm	B in.	B mm	C in.	C mm	E in.	E mm
400	2	47 1/8	1,197	36 5/8	930	45 1/8	1,146	34 1/2	876
500, 600, 700, 800	2	53 3/8	1,356	42 1/8	1,070	50 5/8	1,286	40	1,016
1050, 1200	3	58 7/8	1,495	47 5/8	1,210	56 1/8	1,426	45 1/2	1,156

Size	Optional Downturn Cabinet	Suspension Dimensions F in.	F mm	G in.	G mm	H in.	H mm	J in.	J mm	K in.	K mm	L in.	L mm	M in.	M mm	No. of Hangers
400	No	83 1/2	2,121	--	--	54 3/8	1,381	59 1/2	1,511	27 1/8	689	--	--	--	--	6
	Yes	107 1/2	2,731	60 1/4	1,530	54 3/8	1,381	59 1/2	1,511	51 1/4	1,302	--	--	--	--	6
500, 600	No	109 1/2	2,781	--	--	43 3/8	1,102	48 1/2	1,232	53 1/8	1,349	--	--	--	--	6
	Yes	133 1/2	3,391	86 1/4	2,191	43 3/8	1,102	48 1/2	1,232	--	--	50 1/4	1,276	27	686	8
700	No	109 1/2	2,781	--	--	48 7/8	1,241	54	1,372	53 1/4	1,353	--	--	--	--	6
	Yes	133 1/2	3,391	86 1/4	2,191	48 7/8	1,241	54	1,372	--	--	50 1/4	1,276	27	686	8
800	No	109 1/2	2,781	--	--	54 3/8	1,381	59 1/2	1,511	53 1/4	1,353	--	--	--	--	6
	Yes	133 1/2	3,391	86 1/4	2,191	54 3/8	1,381	59 1/2	1,511	--	--	50 1/4	1,276	27	686	8
1050	No	135 1/2	3,442	--	--	48 7/8	1,241	54	1,372	79 1/4	2,013	--	--	--	--	6
	Yes	159 1/2	4,051	112 1/4	2,851	48 7/8	1,241	54	1,372	--	--	76 1/4	1,937	27 1/8	689	8
1200	No	135 1/2	3,442	--	--	54 3/8	1,381	59 1/2	1,511	79 1/4	2,013	--	--	--	--	6
	Yes	159 1/2	4,051	112 1/4	2,851	54 3/8	1,381	59 1/2	1,511	--	--	76 1/4	1,937	27 1/8	689	8

APPROXIMATE Gas Connection Locations

Size	Location Drawing	Approximate Distance from Inside Curb Cap to BLOWER END of System ft., in.	M	
400	(1)	7' 5-6"	2.26-2.29	This connection is at curb cap "height" on the control side of the system.
500, 600, 700, 800	(2)	8' 7-8"	2.62-2.64	
1050, 1200	(3)	9' 2-3"	2.79-2.82	

DOWNTURN NOTE: To provide complete information, these drawings and dimensions illustrate the Model SSCBL with and without an optional downturn plenum cabinet. Since Model SSCBL is an indoor unit only, installations requiring a vertical discharge will most often have a field-fabricated downturn nozzle instead of the factory-installed plenum cabinet.

CLEARANCE FROM COMBUSTIBLES

Furnace Bottom - 6"
Control Side - 56"
Top, flue connections, side opposite controls - 6"