

SCE Series

Indoor, Separated Combustion, Gas-Fired, Factory-Connected Duct Furnace/Blower Unit for Commercial/Industrial Heating and Makeup Air



Reznor Model SCE is a factory-connected assembly of a separated-combustion duct furnace and blower cabinet. Sizes are available with heating capacities from 125,000 through 400,000 BTUH gas input. The standard package is a heating-only system, but factory-installed gas and inlet-air control options are available to meet makeup air or combination heating/makeup air specifications. This system is designed for use in building areas with negative pressure and/or extremely dirty or mildly corrosive atmospheres.

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

The duct furnace in this factory-connected system is designed to separate combustion air from the air in the heated space. The furnace is 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. This specially designed concentric terminal assembly requires only one building penetration.

Model SCE units are design-certified by the Canadian Standards Association for installation in the U.S. and Canada.

FEATURES and BENEFITS

- Orifices for natural gas
- Aluminized steel heat exchanger (see note 2)
- Aluminized steel burners with a stainless steel insert
- 115-volt power supply
- Open drip-proof blower motor with internal overloads
- Motor contactor
- 115-volt venter motor with stainless steel shaft
- 24-volt control transformer
- Redundant single-stage combination gas valve (see note 1)
- Intermittent spark safety pilot
- Fan and limit safety controls
- Differential air pressure switch to verify vent flow
- Adjustable belt drive
- Terminal block wiring
- Left side controls (left when facing air discharge)
- Horizontal discharge air opening with duct flanges
- Blower cabinet (less optional filter rack and filters) with horizontal inlet-air opening (without duct flange)
- Threaded suspension couplings (4 - 1" IPS)

OPTIONAL FEATURES

- 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 - must be used with units burning propane
- 1/4 HP through 5 HP open drip-proof motors
- 1/4 HP through 3 HP totally enclosed blower motor
- 208/1, 230/1, 208/3, 230/3, 460/3, 575/3 voltage alternates
- Motor starter
- Burner air shutters (required for units equipped for propane gas)
- Two-stage gas control (unit-mounted or remote temperature selector)
- Electronic modulation, 50%-100% turndown or 20%-100% turndown
- Makeup air controls/dampers
- 1/2" O.D. BX cable (Chicago code)
- Expanded metal safety screen for inlet air opening

NOTES:

1. 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. - 14" W.C.). Minimum inlet pressure for natural gas is 5" W.C. Minimum inlet pressure for propane gas is 11" W.C.
2. For air inlet temperatures below 40°F or temperature rise less than 40°F, optional stainless steel heat exchanger is recommended.
3. Not certified for residential use.

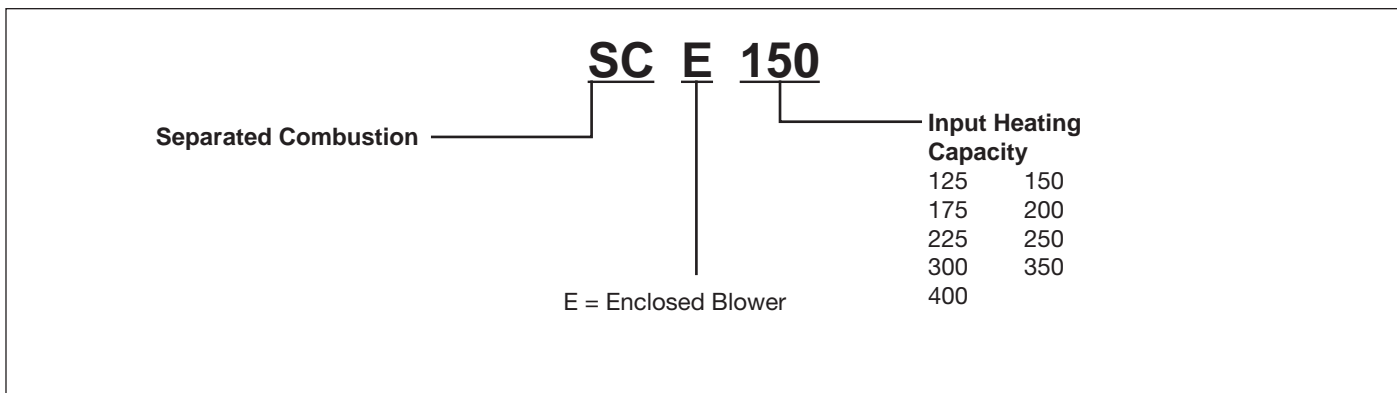
OPTIONAL FEATURES continued

- Firestat(s)
- Freezestat(s)
- Manual summer/winter switch
- Filter rack with disposable, pleated or permanent filters (1 or 2 inch)
- Louver frame with horizontal discharge louvers
- Louver frame with horizontal and vertical discharge louvers
- Summer/winter relay ([thermostat](#) with fan switch shipped separately)
- Insulated blower cabinet
- Bottom return air inlet
- Blower cabinet horizontal inlet w/duct flange
- Right side controls (facing airstream)

ACCESSORIES - FIELD INSTALLED

- Horizontal or vertical vent terminal/combustion air inlet assembly (installation requirement)
- Condensate drain flange kit
- Disconnect switch (fusible/non-fusible) - UL Listed
- Single-stage [thermostat](#)
- Two-stage [thermostat](#)
- Electronic 7-day programmable [thermostat](#)
- Remote control center
- Manual shutoff valve and union

MODEL IDENTIFICATION CODES



TECHNICAL DATA

SIZE		125	150	175	200	225	250	300	350	400
Heating Input	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
Thermal Output Capacity ^A	BTUH	97,500	120,000	136,500	160,000	175,500	200,000	234,000	273,000	312,000
	kW	28.6	35.2	40.0	46.9	51.4	58.6	68.6	80.0	91.4
Unit Amps – 115V (Less Motor)		1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Control Amps (24V)		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Air Volume	CFM	1,000-3,000	1,230-3,700	1,400-4,210	1,640-4,935	1,800-5,150	2,050-5,800	2,400-6,300	2,800-6,800	3,200-7,100
	m ³ /hr	1,699-5,097	2,090-6,286	2,379-7,153	2,786-8,384	3,058-8,750	3,483-9,854	4,077-10,703	4,757-11,553	5,437-12,063
Net Weight	lbs.	313	358	358	382	382	482	482	498	560
	kg	142	162	162	173	173	219	219	226	254
Ship Weight	lbs.	375	440	440	520	520	645	645	695	716
	kg	170	200	200	236	236	293	293	315	325
Gas Connection—Natural ^B		1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"
Maximum ^C Vent Length	6" Pipe	50'	50'	50'	50'	50'	50'	50'	30'	30'
	7" Pipe	N/A	N/A	N/A	70'	70'	70'	70'	70'	70'
Filter Size ^D (Filters Optional)		(2) 20 x 20	(2) 20 x 25	(2) 20 x 25	(2) 16 x 20 (2) 16 x 25	(2) 16 x 20 (2) 16 x 25	(2) 20 x 20 (2) 20 x 25	(2) 20 x 20 (2) 20 x 25	(1) 20 x 20 (3) 20 x 25	(3) 16 x 25 (2) 20 x 25

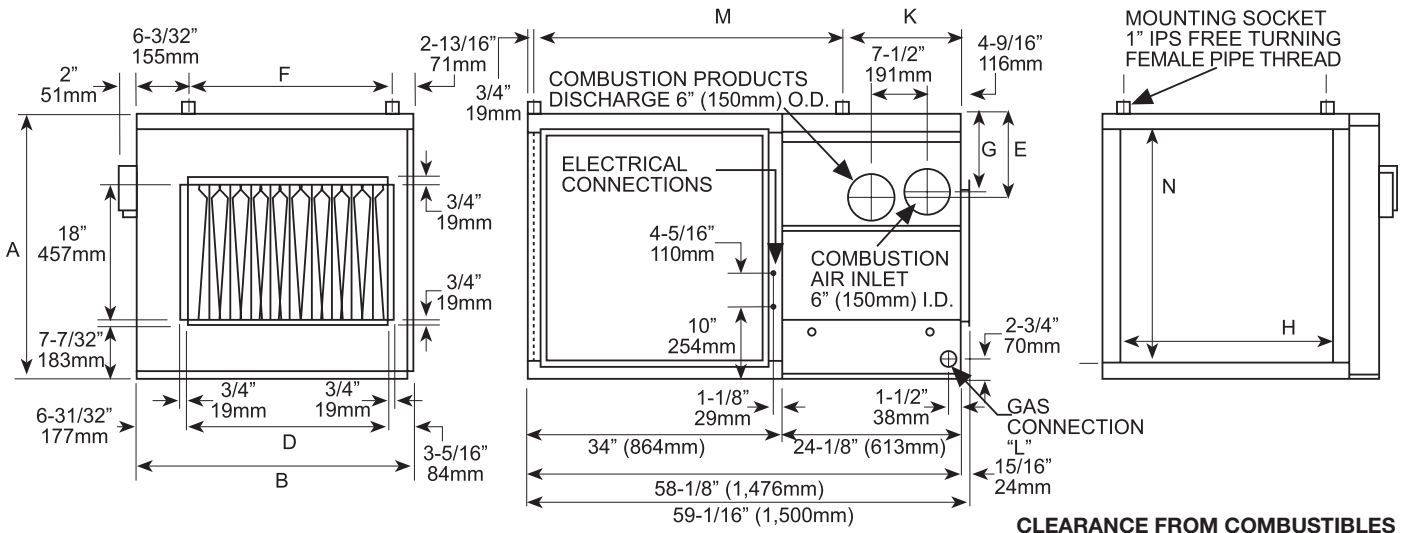
^A In U.S. ratings are for altitudes to 2,000 feet. Above 2,000 feet, derated by orifice change, 4% for each 1,000 feet above sea level. In Canada ratings are for altitudes to 2,000 feet. High altitude units (2,000 - 4,500 feet) derate by 10% of maximum input.

^B Sizes shown are for natural gas connections, NOT supply line size. Gas connection for propane is 1/2 inch for all sizes.

^C Minimum vent length is 5 feet. Seven inch pipe requires four field-supplied tapered reducers.

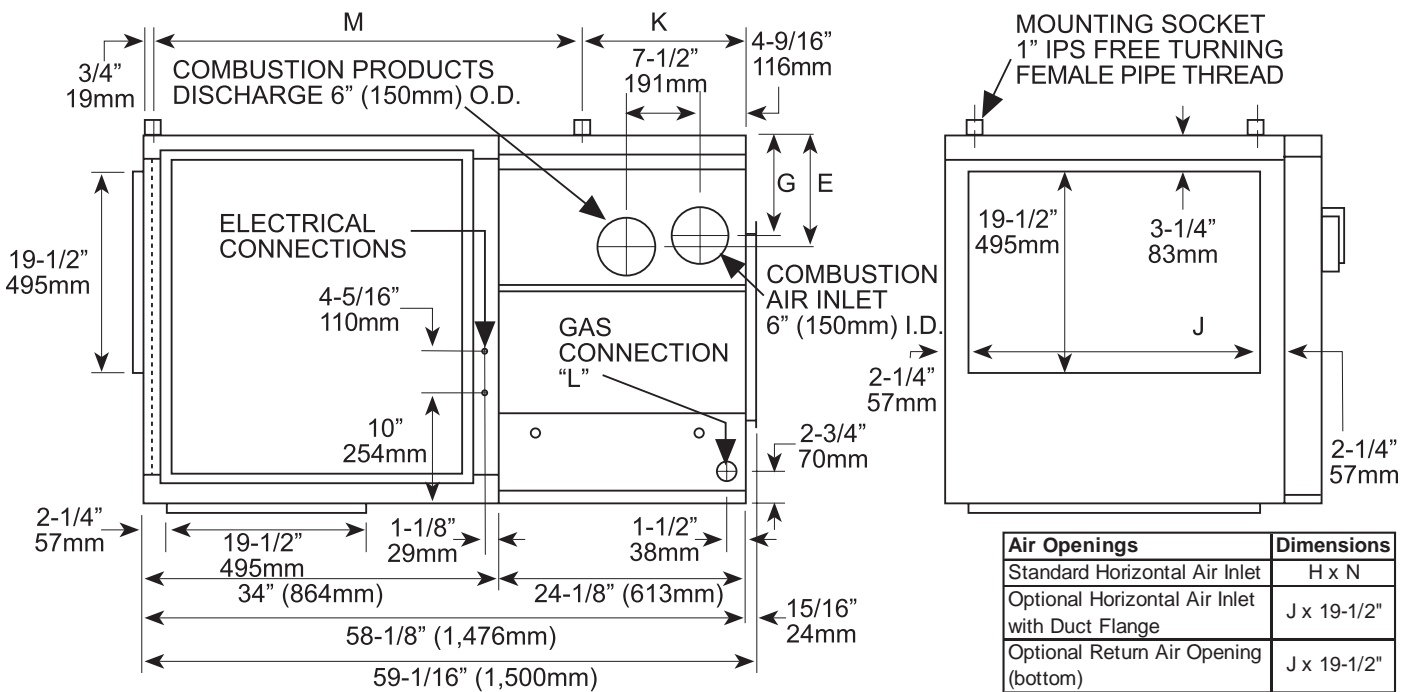
^D Optional filter rack will accommodate 1" or 2" filters.

DIMENSIONS STANDARD SCE SERIES 6



- CLEARANCE FROM COMBUSTIBLES**
1. Top, flue, side opposite controls - 6"
 2. Control side - width of unit plus 6"
 3. Bottom - 6"

DIMENSIONS - WITH OPTIONAL HORIZONTAL INLET WITH DUCT FLANGES AND RETURN AIR OPENING



Air Openings	Dimensions
Standard Horizontal Air Inlet	H x N
Optional Horizontal Air Inlet with Duct Flange	J x 19-1/2"
Optional Return Air Opening (bottom)	J x 19-1/2"
Standard Horizontal Discharge-Air Opening	D x 18"

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

SIZE	A		B		D		E		F		G		H		J		K		L		M		N	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
125	32 1/4	819	25 1/4	641	15 1/4	387	8 1/8	206	16 1/4	413	7 1/8	178	17 3/4	451	17 3/8	441	17	432	1/2	13	40 1/4	1022	27 3/4	705
150, 175	32 1/4	819	30 3/4	781	20 3/4	527	8 1/8	206	21 3/4	552	7 1/8	178	23 1/4	591	22 7/8	581	18 3/8	467	1/2	13	39	991	27 3/4	705
200, 225	35 1/4	895	36 1/4	921	26 1/4	667	10 3/4	273	27 1/4	692	10 25/4	28 3/4	730	28 3/8	721	17	432	1/2	13	40 1/4	1022	30 3/4	781	
250	35 1/4	895	43 1/2	1105	33 1/2	851	9 3/4	248	34 1/2	876	9	229	36	914	35 5/8	905	16	406	1/2	13	39 1/4	997	29 3/4	756
300	35 1/4	895	44 1/2	1130	34 1/2	876	10 3/4	273	35 1/2	902	10	254	37	940	36 5/8	930	17	432	3/4	19	40 1/4	1022	30 3/4	781
350	35 1/4	895	50	1270	40	1016	10 3/4	273	41	1041	10	254	42 1/2	1080	42 1/8	1070	18 3/8	467	3/4	19	39	991	30 3/4	781
400	35 1/4	895	55 1/2	1410	45 1/2	1156	10 3/4	273	46 1/2	1181	10	254	48	1219	47 5/8	1210								

NOTES:

1. Burner and control access shown left side (left when facing air discharge). Specify right side for opposite access and connections (Option AJ2).
2. See vent arrangement information.
3. Standard SCE Blower Cabinet will not accommodate dampers. For dampers, select from AR Options.

GENERAL INFORMATION

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 and enforcing authorities.

FOR YOUR SAFETY

What to do if you smell gas:

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, immediately call your fire department.

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operation, and maintenance instructions thoroughly before installing or servicing this equipment.

Requirements for installation vary depending on the model of heater and the type of installation. Follow the manufacturer's instructions and comply with all applicable codes.



For complete catalog information including submittals, energy calculations, dimension drawings, and more go to www.ReznorHVAC.com or call 800-695-1901.

Note: In keeping with our policy of continuous product improvement, we reserve the right to alter, at any time, the design, construction, dimensions, weights, etc., of equipment information shown here.