



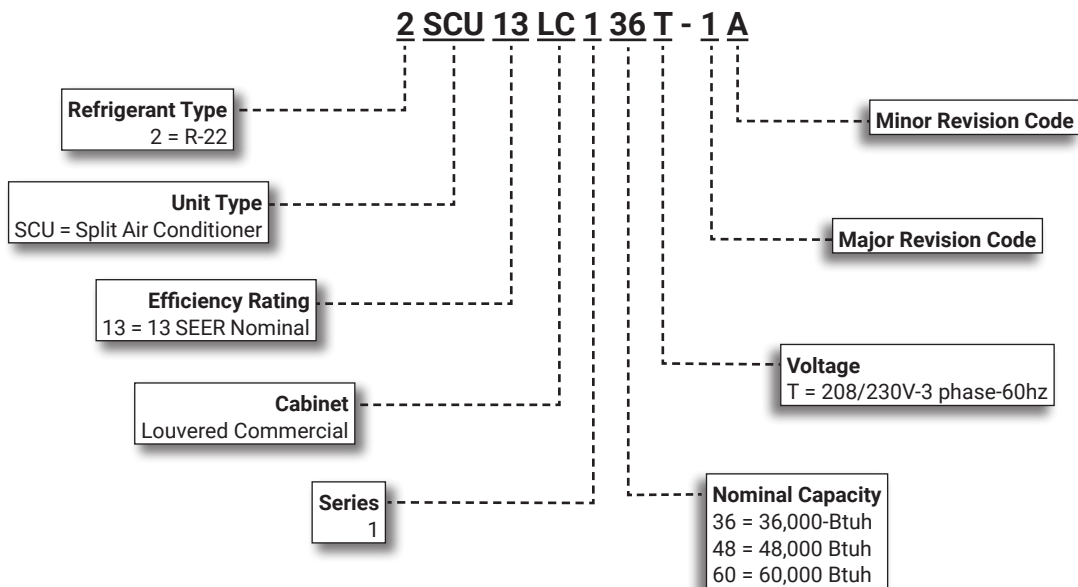
COMMERCIAL
PRODUCT SPECIFICATIONS

Bulletin No. 210644
May 2014
Supersedes September 2013



3 to 5 Tons

MODEL NUMBER IDENTIFICATION



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APPROVALS AND WARRANTY

APPROVALS

- Rated according to U.S. Department of Energy (DOE) test procedures
- Units and components within bonded for grounding to meet safety standards for servicing required by UL
- Units are UL listed

WARRANTY

- Compressor:
 - Limited five years in non-residential installations
- All other covered components:
 - Limited one year in non-residential installations

NOTE - Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

FEATURES

APPLICATIONS

- 3 to 5 ton nominal sizes
- Nitrogen-charged for replacement of R-22 components only
- Three-phase power supply
- Sound levels as low as 76 dB
- Designed for ambients up to 125°F
- Indoor coil orifice shipped with outdoor unit for optimum efficiency and capacity
- Installer must set outdoor unit, connect refrigerant lines and make electrical connections to complete job

- Flared shoulder tubing connections
- Silver soldering construction
- Entire coil is accessible for cleaning
- Factory tested under high pressure

Hi-Capacity Liquid Line Drier

- Furnished with unit for field installation
- Traps any moisture or dirt that could contaminate the refrigerant system

Optional Accessories

Expansion Valve Kits

- Must be ordered separately and field installed on certain indoor units
- Chatleff-style fittings

Freezestat

- Installs on or near the vapor line of the indoor coil or on the suction line
- Senses suction line temperature and cycles the compressor off when suction line temperature falls below it's setpoint
- Opens at 29°F and closes at 58°F

High Pressure Switch

- Protects the system from high pressure conditions
- Automatic reset

Loss of Charge Kit

- Helps protect the compressor from damage due low refrigerant charge conditions
- SPST, normally-closed switch, automatic reset switch mounted on suction line

REFRIGERATION SYSTEM

Outdoor Coil Fan

- Direct drive fan
- Vertical air discharge
- Sleeve bearings
- Inherently protected
- Totally enclosed fan motor
- Louvered steel top fan guard
- Fan service access accomplished by removal of top panel

Copper Tube/Enhanced Fin Coil

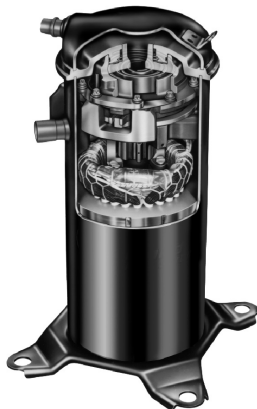
- Enhanced aluminum fins and copper tubing for high efficiency and capacity
- Raised coil prevents debris from collecting in bottom of coil
- Lanced fins for maximum fin surface exposure
- Fin collars grip tubing for maximum contact area

FEATURES

COMPRESSOR

Scroll Compressor

- High efficiency with uniform suction flow
- Constant discharge flow, high volumetric efficiency and quiet operation
- Low gas pulses during compression reduces operational sound levels
- Compressor motor is internally protected from excessive current and temperature
- Muffler in discharge line reduces operating sound levels
- Compressor is installed in the unit on resilient rubber mounts for vibration free operation



Scroll Compressor Operation

- Two involute spiral scrolls matched together generate a series of crescent-shaped gas pockets between them
- During compression, one scroll remains stationary while the other scroll orbits around it
- Gas is drawn into the outer pocket, the pocket is sealed as the scroll rotates
- As the spiral movement continues, gas pockets are pushed to the center of the scrolls. Volume between the pockets is simultaneously reduced
- When the pocket reaches the center, gas is now at high pressure and is forced out of a port located in the center of the fixed scrolls
- During compression, several pockets are compressed simultaneously resulting in a smooth continuous compression cycle
- Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency
- Compressor is tolerant to the effects of slugging and contaminants. If this occurs, scrolls separate, allowing liquid or contaminants to be worked toward the center and discharged

Optional Accessories

Compressor Crankcase Heater

- Protects against refrigerant migration that can occur during low ambient operation

Compressor Sound Cover

- A reinforced vinyl compressor cover containing a 1-1/2 inch thick batt of fiberglass insulation
- All open edges are sealed with a one-inch wide hook and loop fastening tape

CABINET

- Heavy gauge steel cabinet
- Five station wash process
- Baked polyester paint finish
- Full metal louvered panel coil guard protection
- Louvered panels can be quickly removed by loosening two screws per panel
- Controls located in corner post for installation and service accessibility
- Rounded corners for safety

Refrigerant Line Connections, Electrical Inlets, Service Valves

- Sweat connection suction and liquid lines are located on corner of unit cabinet
- Fully serviceable brass service valves prevent corrosion and provide access to refrigerant system
- Suction valve can be fully shut off, while liquid valve may be front seated to manage refrigerant charge while servicing system
- Refrigerant line connections and field wiring inlets are located in one central area of cabinet for easy access. See dimension drawing

PermaGuard™ Unit Base

- Durable zinc-coated base section resists rust and corrosion

CONTROLS

Optional Accessories

Compressor Low Ambient Cut-Off

- Non-adjustable switch (low ambient cut-out) prevents compressor operation when outdoor temperature is below 35°F

Compressor Time-Off Control

- Kit prevents compressor short-cycling and allows time for suction and discharge pressure to equalize
- Permits compressor start-up in an unloaded condition
- Automatic reset with 5 minute delay between compressor shut-off and start-up

Indoor Blower Off Delay Relay

- Delays the indoor blower-off time during the cooling cycle

Low Ambient Kit

- Air conditioners operate satisfactorily down to 45°F outdoor air temperature without any additional controls
- Low Ambient Control Kit allows unit operation down to 30°F

NOTE - Freezestat should be installed on compressors equipped with a low ambient kit.

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

Comfortsense® 7500 Commercial 7-Day Programmable Thermostat



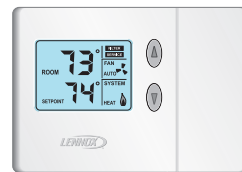
- Four-Stage Heating / Two-Stage Cooling
- Universal Multi-Stage
- Intuitive Touchscreen Interface
- Automatic Changeover between Heating and Cooling
- Full Seven-Day Programming
- Four Time Periods Per Day
- Temperature and Humidity Control
- One-Touch Away Mode
- Holiday Scheduling
- Smooth Setback Recovery (SSR)
- Performance Reports
- Notifications/Reminders
- Dehumidification/Humiditrol® Control for Split Systems and Rooftop Units
- Economizer Relay Control
- Backlit Display
- Wallplate Furnished
- FDD, ASHRAE and IECC Compliant

Comfortsense® 3000 Commercial 5-2 Day Programmable Thermostat



- Two-Stage Heating / Two-Stage Cooling
- Conventional Systems
- Intuitive Interface
- 5-2 Day Programming
- Program Hold
- Remote Indoor Temperature Sensing
- Smooth Setback Recovery (SSR)
- Economizer Relay Control
- Maintenance/Filter/Service Reminders
- Backlit Display
- Wallplate Furnished
- Simple Up and Down Temperature Control

Comfortsense® Non-Programmable Thermostat



- One-Stage Heating / Cooling
- Conventional Systems
- Intuitive Interface
- Manual Changeover
- Backlit Display
- Simple Up and Down Temperature Control

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

Description	Model No.	Catalog No.
Comfortsense® 7500 Commercial 7-Day Programmable Thermostat	C0STAT06FF2L	17G74
Universal thermostat locking guard (clear)	C0MISC15AE1-	39P21
Temperature Sensors	¹ Remote non-adjustable wall-mount 20k	C0SNZN01AE2-
	¹ Remote non-adjustable wall-mount 10k	C0SNZN73AE1-
	Remote non-adjustable discharge air (duct mount)	C0SND00AE1-
	Outdoor temperature sensor	C0SNSR03AE1-
		19L22
		X2658

¹ Remote wall-mount sensors can be applied in any of the following combinations:

- One Sensor - (1) 47W36
- Two Sensors - (2) 47W37
- Three Sensors - (2) 47W36 and (1) 47W37
- Four Sensors - (4) 47W36
- Five Sensors - (3) 47W36 and (2) 47W37

Comfortsense® 3000 Commercial 5-2 Day Programmable Thermostat	C0STAT05FF1L	11Y05
Thermostat wall mounting plate	C0MISC17AE1-	X2659
Temperature Sensor	Remote non-adjustable wall mount 10k averaging	C0SNZN73AE1-
		47W37
Comfortsense® Non-Programmable Thermostat	C0STAT12AE1L	51M32

SPECIFICATIONS

General Data		Model No.	2SCU13LC136T	2SCU13LC148T	2SCU13LC160T
		Nominal Tonnage	3	4	5
Connections (sweat)	Liquid line o.d. - in.		3/8	3/8	3/8
	Suction line o.d. - in.		7/8	7/8	7/8
¹ Refrigerant charge field supplied (R-22)			5 lbs. 12 oz.	7 lbs. 8 oz.	10 lbs. 0 oz.
Outdoor Coil	Tube diameter - in.		5/16	5/16	5/16
	Number of rows		1	1	2
	Fins per inch		26	22	22
Outdoor Fan	Diameter - in.		18	22	22
	Number of blades		3	4	4
	Motor hp		1/5	1/4	1/4
	Rpm		1075	825	825
Shipping Data - lbs. 1 package			196	212	272
ELECTRICAL DATA					
Line voltage data - 60 hz - 3ph			208/230V	208/230V	208/230V
² Maximum overcurrent protection (amps)			25	30	35
³ Minimum circuit ampacity			14.5	17.7	20.8
Compressor	Rated load amps		10.8	12.8	15.3
	Locked rotor amps		73	93	104
Condenser Fan Motor	Full load amps		1.1	1.7	1.7
SOUND DATA					
Sound Rating Number (dBA)			76	78	78
OPTIONAL ACCESSORIES - ORDER SEPARATELY					
Compressor Low Ambient Cut-Off		45F08	•	•	•
Compressor Crankcase Heater		93M04	•		
		93M05		•	•
Compressor Sound Cover		69J03	•	•	•
Compressor Time-Off Control		47J27	•	•	•
Expansion Valve Kits		26K34	•		
		26K35		•	
		91M01			•
Freezestat	3/8 in. tubing	93G35	•	•	•
	5/8 in. tubing	50A93	•	•	•
High Pressure Switch Kit		94J46	•	•	•
Indoor Blower Off Delay Relay		58M81	•	•	•
Loss of Charge Kit		84M23	•	•	•
⁴ Low Ambient Kit (30°F)		24H77	•	•	•

NOTE - Extremes of operating range are plus 10% and minus 5% of line voltage.

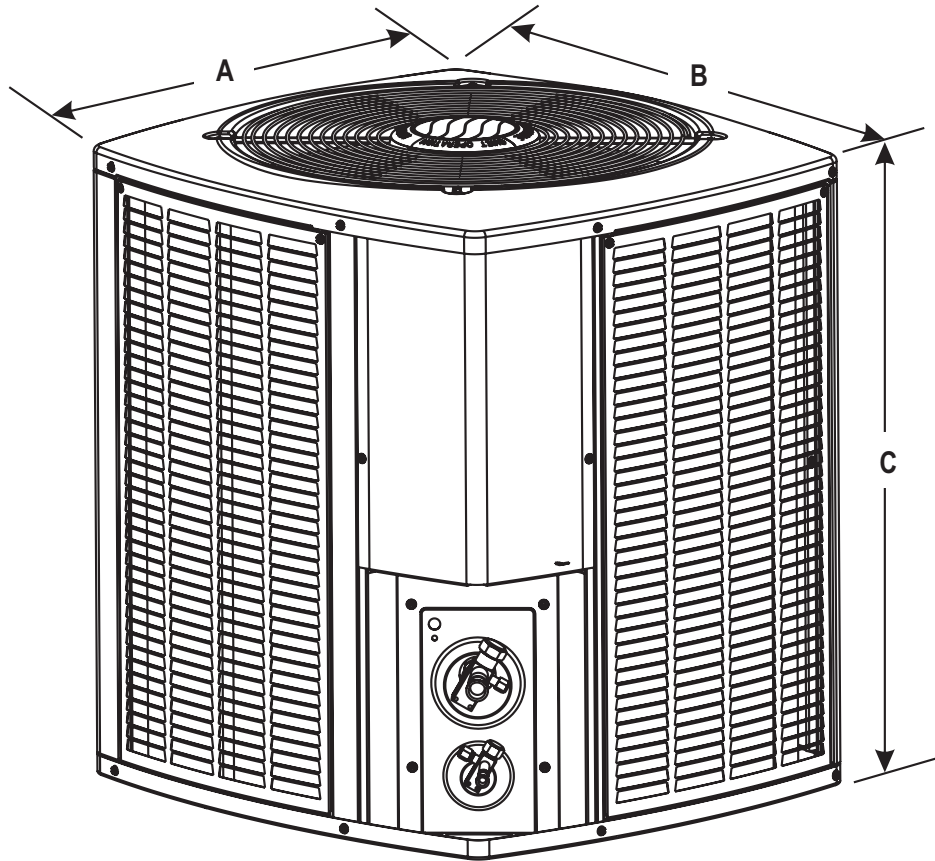
¹ Refrigerant charge sufficient for 15 ft. length of refrigerant lines.

² HACR type circuit breaker or fuse.

³ Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

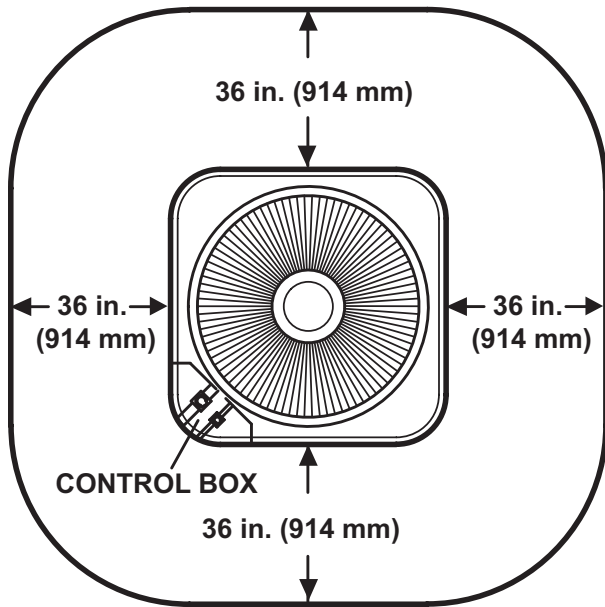
⁴ Freezestat is recommended with Low Ambient Control.

DIMENSIONS - UNIT



Model No.	A		B		C	
	inches	mm	inches	mm	inches	mm
2SCU13LC136T	24-3/4	629	26-3/4	680	33-3/4	857
2SCU13LC148T	29-3/8	746	31-1/4	794	37-3/4	959
2SCU13LC160T	29-3/8	746	31-1/4	794	33-3/4	857

INSTALLATION CLEARANCES



NOTES:

Service clearance of 30 in. (762 mm) must be maintained on one of the sides adjacent to the control box.

Clearance to one of the other three sides must be 36 in. (914 mm).

Clearance to one of the remaining two sides may be 12 in. (305 mm) and the final side may be 6 in. (152 mm).

A clearance of 24 in. must be maintained between two units. 48 in. (1219 mm) clearance required on top of unit.

REVISIONS

Sections	Description of Change
Refrigeration System	Filter/Drier now shipped with unit for field installation.



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Contact us at 1-800-4-LENNOX

NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

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