

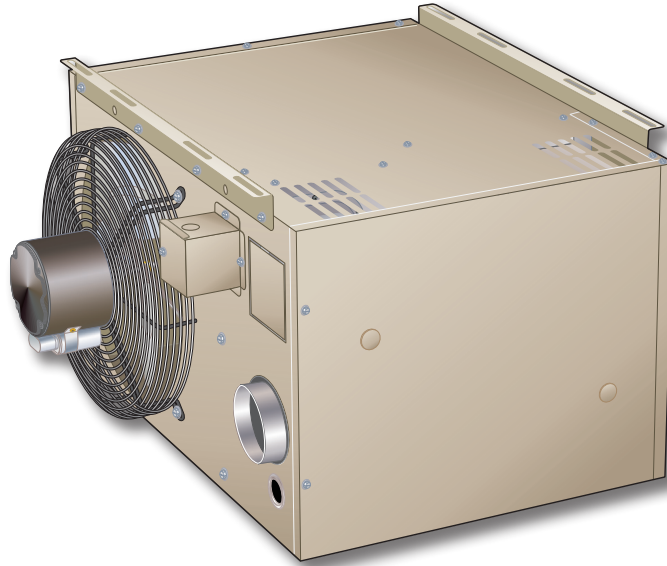


LF25-030-105

COMPACT UNIT HEATERS
Low Profile - Horizontal - 60 Hz

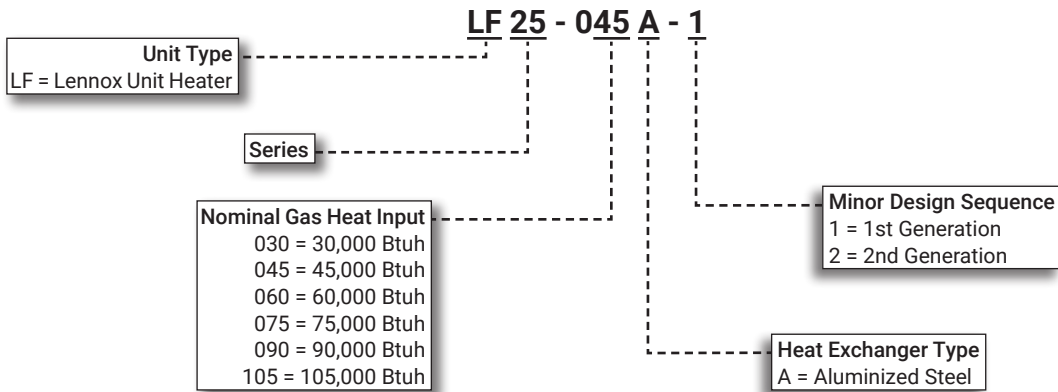
RESIDENTIAL / COMMERCIAL
PRODUCT SPECIFICATIONS

Bulletin No. 210892
 September 2019
 Supersedes August 2019



Steady-State Efficiency - up to 83.8%
Input - 30,000 to 105,000 Btuh

MODEL NUMBER IDENTIFICATION



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WARRANTY AND APPROVALS

WARRANTY

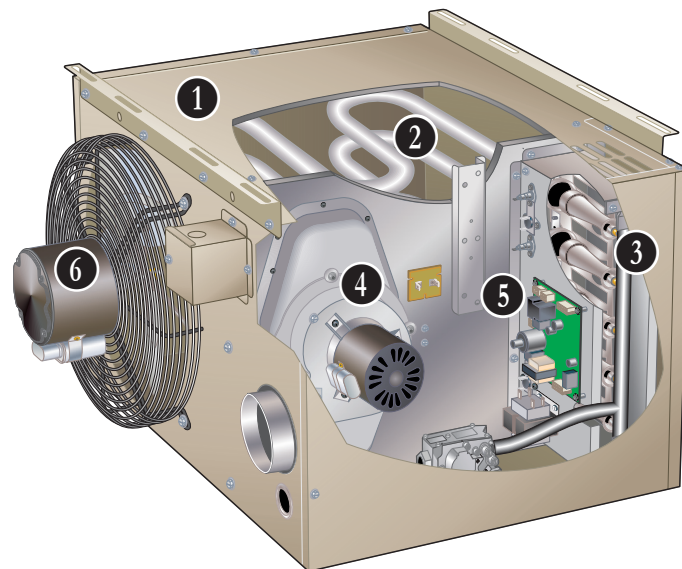
- Heat Exchanger - Aluminized steel - ten year limited
- All other covered components:
 - Five year limited - Residential installations
 - One year limited - Non-residential installations
- Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details

APPROVALS

- CSA International certified
- Certified for natural or LPG/Propane gas.
- Units are approved for vertical or horizontal venting

FEATURE HIGHLIGHTS

1. Heavy Gauge Steel Cabinet
2. Tubular Heat Exchanger
3. Inshot Burners
4. Combustion Air Inducer
5. Combination Ignition Control
6. Direct Drive fan



FEATURES AND BENEFITS

APPLICATIONS

- Horizontal unit heaters are low profile, compact in design and easy to install
- Steady State Efficiencies - Up to 83.8%
- Ideal for economical heating systems in garages and non-confined living spaces
- Shipped completely assembled with controls factory installed and wired
- Hanging brackets are shipped loose for field installation
- Test operated at the factory to ensure proper operation and dependability

NOTE - Installer must locate unit, make unit gas supply, flue, electrical connections and mount thermostat to complete job.

1 CABINET

- Constructed of pre-painted heavy gauge cold rolled steel
- Hinged, reversible door for easy access
- Adjustable louvers are furnished on cabinet for control of air flow direction
- Wiring junction box is conveniently located outside unit cabinet for easy field wiring connections
- Hanging brackets for suspending unit are furnished for field installation
- Unit may be rotated 180 degrees (top for bottom) for ease of installation of gas, electrical and flue locations

HEATING SYSTEM

2 Tubular Aluminized Steel Heat Exchanger

- Tubular heat exchanger is constructed of aluminized steel for superior resistance to corrosion and oxidation
- Curving design of heat exchanger allows complete exposure of heating surfaces to supply air stream
- Dimpled tubes with wrinkle bends allow for maximum heat transfer

3 Inshot Burner Assembly

- Aluminized steel inshot burners provide efficient trouble free operation
- Burner venturi mixes air and gas in correct proportion for proper combustion
- Burner assembly is removable from the unit as a single component for ease of service

Gas Control Valve

- 24 volt redundant combination gas control valve combines manual shut off switch (On-Off), automatic electric valve (dual) and gas pressure regulation into a compact combination control

4 Combustion Air Inducer

- Prepurges heat exchanger and safely vents combustion products
- Operates only during heating cycle
- Blower motor has ball bearings and is thermally protected

Pressure Switch

- Pressure switch prevents unit operation in case of blocked flue outlet

Limit Control(s)

- Factory installed and accurately located
- Limit control has fixed temperature setting and protects heating system from abnormal operating conditions

Flame Rollout Switch

- Automatic reset switch is factory installed on the top of the burner box

FEATURES AND BENEFITS

HEATING SYSTEM (continued)

Optional Accessories

High Altitude Orifice Kits

- Required on all units for proper unit operation at altitudes from 5001 to 10,000 ft. (US) and 7501 to 10,000 ft. (Canada)
- Kits are available for natural gas and LPG/propane

High Altitude Pressure Switch Kit

- Required for proper unit operation at various elevations

Natural Gas to LPG/Propane Conversion Kit

- Required for field changeover from natural gas to LPG/Propane

CONTROLS

5 **Combination Direct Spark Ignition/Fan Timer Control Ignition Control**

- Electronic direct spark ignition control provides positive and safe main burner ignition.
- Spark is intermittent and occurs only when required.
- Separate electronic flame sensor control assures safe and reliable operation.
- Should loss of flame occur, flame sensor controls will initiate 5 attempts at re-ignition before locking out unit operation.
- Control board contains all necessary controls and relays to operate unit.
- Includes: Fan timer control - fan on 30 seconds (fixed), fan off 150 seconds (fixed), terminal strip for thermostat connections, diagnostic LED for troubleshooting.
- Direct plug-in wiring harness.

Transformer

- 120V/24V transformer furnished as standard

Optional Accessories

Thermostats

- For thermostat options, see Optional Conventional Temperature Control Systems on Page 4

VENTING

- Units may be vented horizontally or vertically
 - **Residential Vertical Venting** - Units are approved for installation with single wall vent pipe or Type B double wall vent pipe
 - **Residential Horizontal Venting** - Units are approved for residential installation only with Lennox-approved stainless steel vent kits
 - **Commercial Vertical Venting** - Units are approved for installation with single wall vent pipe only
 - **Commercial Horizontal Venting** - Units are approved for single-wall vent pipe or optional Lennox-approved, UL listed, Cat III stainless steel vent kits

Optional Accessories

Horizontal Vent Kits

- UL listed, Cat III stainless steel vent kits are required for horizontal venting.
- Available for upward or downward slope
- Vent kits snap together
- Kits include unit transition, vent termination and wall thimble
- Upward slope vent kits have a drain connection
- Provisions for hanging must be field supplied
- Optional 45° or 90° elbow available for ease of vent connection
- Straight pipe sections in various lengths are available

NOTE - See Horizontal Vent Kits / Elbow table for Lennox-approved Horizontal Vent Kits and accessories on Page 6.

NOTE - See drawings for additional information.

NOTE - See installation instructions for detailed venting requirements.

6 **DIRECT DRIVE FAN**

- Efficient and quiet operating direct drive propeller type fan
- Permanently lubricated fan motor

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-
		47W36
		47W37
		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-
Comfortsense® Non-Programmable Thermostat		C0STAT12AE1L
	Thermostat wall mounting plate	C0MISC17AE1-
Temperature Sensor	Outdoor temperature sensor	C0SNSR03AE1-
		51M32
		X2659
		X2658

SPECIFICATIONS

Gas Heating Performance		Model No.	LF25-030A	LF25-045A	LF25-060A	LF25-075A	LF25-090A	LF25-105A
Heating Capacity Input Btuh			30,000	45,000	60,000	75,000	90,000	105,000
Heating Capacity Output Btuh - Natural			25,020	37,665	50,220	62,550	75,420	87,675
Steady State Efficiency - Natural			83.4%	83.7%	83.7%	83.4%	83.8%	83.5%
Temperature rise - °F			37	52	47	65	43	59
Connections in.	Flue size (round)		4	4	4	4	4	4
	Gas Piping Size - in.		1/2	1/2	1/2	1/2	1/2	1/2
Fan Data	Number of fans		1	1	1	1	1	1
	Fan Diameter - in.		10	10	14	14	16	16
	Number of blades		4	4	4	4	4	4
	Motor Output - hp		1/25	1/25	1/15	1/15	1/10	1/10
	rpm		1550	1550	1075	1075	1075	1075
	Air Volume - cfm		625	665	1000	1200	1600	1500
Air throw at 8 ft. mounting height - ft.			27	29	34	41	46	43
Weight Data	Net Weight - lbs. (kg)		55 (25)	60 (27)	85 (39)	90 (41)	115 (52)	120 (54)
	Shipping Weight - lbs. (kg)		60 (27)	65 (29)	90 (41)	95 (43)	120 (54)	125 (57)

ELECTRICAL DATA

Voltage		115 volts - 60 hertz - 1 phase					
Fan motor full load amps		2.0	2.0	2.0	2.0	2.0	3.0
Maximum overcurrent protection		15	15	15	15	15	15

GAS HEAT ACCESSORIES

US

Natural Gas to LPG/Propane Kit	LPG/Propane High Altitude Orifice Kit		Natural Gas High Altitude Orifice Kit	
0 - 5000 ft.	5001 - 8000 ft.	8001 - 10,000 ft.	5001 - 7000 ft.	7001 - 10,000 ft.
18L11	19A10	19A11	19A17	19A18

Canada

Natural Gas to LPG/Propane Kit	LPG/Propane High Altitude Orifice Kit	Natural Gas High Altitude Orifice Kit
0 - 7500 ft.	7501 - 9500 ft.	7501 - 9500 ft.
18L11	19A12	19A17

GAS HEAT ACCESSORIES

HIGH ALTITUDE PRESSURE SWITCH KITS

Altitude - ft.	0-3000	3000-5000	5001-6000	6001-7000	7001-9000	9001-10,000
LF25-030A	Factory	Factory	Factory	18L35	18L35	18L35
LF25-045A	Factory	Factory	Factory	18L35	18L35	18L35
LF25-060A	Factory	Factory	18L19	18L19	18L19	18L50
LF25-075A	Factory	18L20	18L20	18L35	18L35	18L35
Altitude - ft.	0-2000	2001-4000	4001-6000	6001-7000	7001-9000	9001-10,000
LF25-090A	Factory	18L20	18L19	18L35	18L35	18L35
LF25-105A	Factory	Factory	18L47	18L47	18L35	18L35

HORIZONTAL VENT KITS AND ELBOW

REQUIRED FOR RESIDENTIAL HORIZONTAL VENTING APPLICATIONS

Unit Heater Model No.	Vent Diameter (in.)	Upslope Vent Kit	Catalog No.	Downslope Vent Kit	Catalog No.	45° Elbow	Catalog No.	90° Elbow	Catalog No.	¹ Minimum Vent Length (ft.)
LF25-030A LF25-045A LF25-060A LF25-075A LF25-090A LF25-105A	4	C5VENT4KU	75W63	C5VENT4KD	75W67	C5VENT4E45 (Optional)	87W80	C5VENT4E (Optional)	75W71	5

¹ Length does not include termination (or elbow if used).

STRAIGHT VENT PIPE - FOR HORIZONTAL VENTING

Unit Heater	Model No.	Vent Diameter (in.)	Length (in.)	Catalog No.
LF25-030A	C5VENT4P6	4	6	75W77
LF25-045A	C5VENT4P12	4	12	75W78
LF25-060A LF25-075A LF25-090A LF25-105A	C5VENT4P36	4	36	75W79

INSTALLATION CLEARANCES

	in.	mm
Top	1	25
Side opposite control box/access panel	1	25
Control Box/Access Panel Side	24	610
Back	18	457
Bottom	1	1
¹ Flue	6	152

See Installation Instructions for further installation considerations.

¹ Single-Wall vent clearance. Type B Double-Wall vent clearance is in accordance with the manufacturer's listing.

MAXIMUM VENT CONNECTOR LENGTHS

No. of Elbows	Maximum Length (feet) of Straight Vent Pipe
1	25
2	20
3	15
4	10
5	5

NOTES - Minimum horizontal vent length is 5 ft.

Horizontal venting requires the use of a Lennox-approved Cat III Horizontal Vent Kit and Vent Pipe.

Horizontal venting must terminate in a tee.

Maximum total length of vent pipe must not exceed 30 ft.

One elbow is equivalent to 5 ft. of vent pipe.

Residential Vertical Venting - Units are approved for installation with single wall vent pipe or Type B double wall vent pipe.

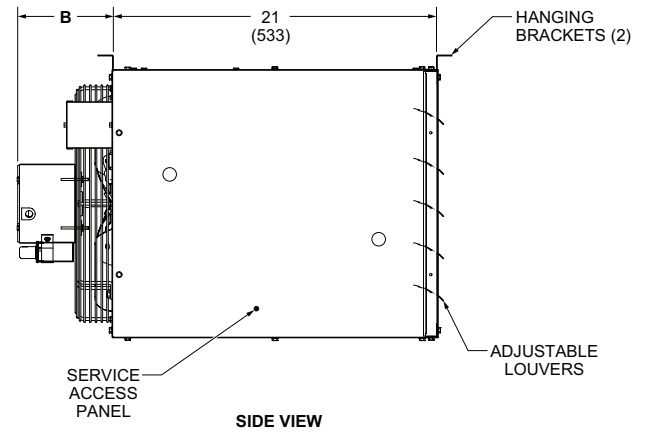
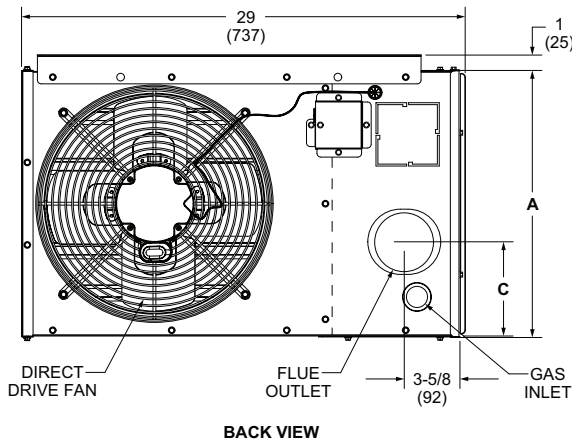
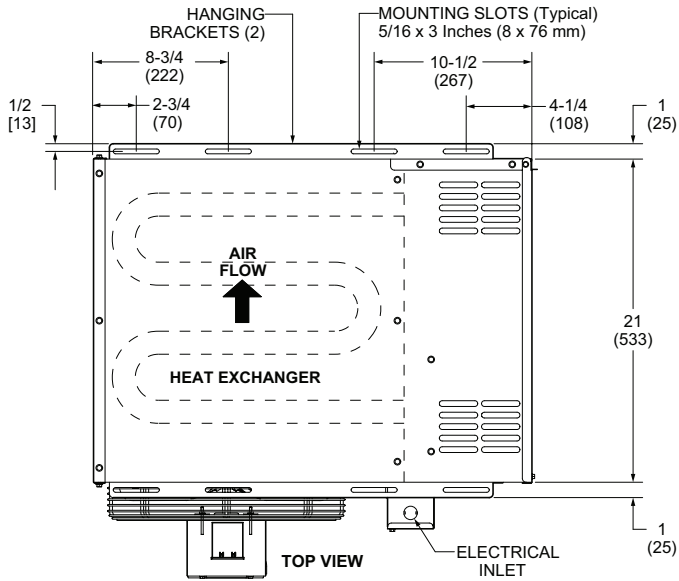
Residential Horizontal Venting - Units are approved for residential installation only with Lennox-approved stainless steel vent kits.

Commercial Vertical Venting - Units are approved for installation with single wall vent pipe only.

Commercial Horizontal Venting - Units are approved for single-wall vent pipe or optional Lennox-approved, UL listed, Cat III stainless steel vent kits.

Minimum clearance to combustible material is 6 in. with single wall vent pipe.

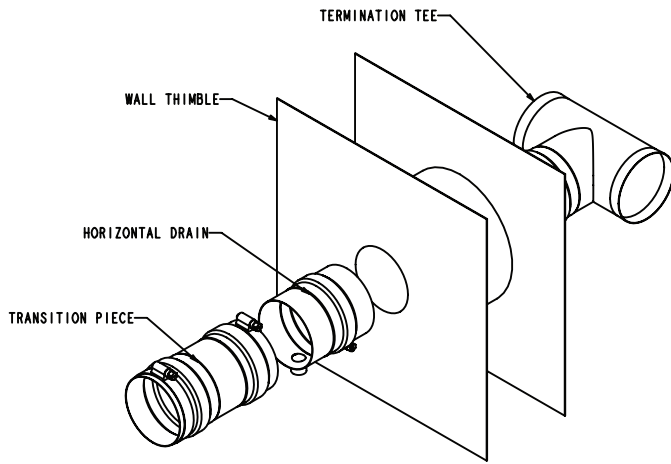
DIMENSIONS



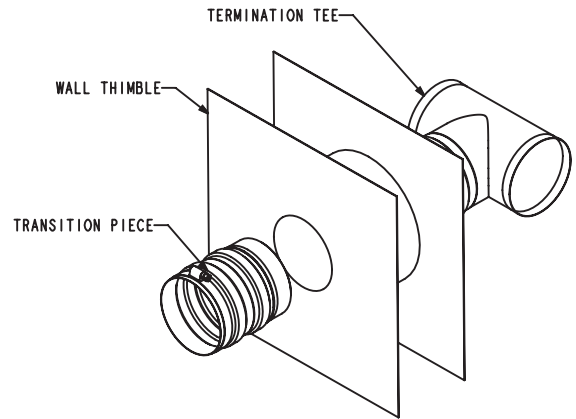
Model No.	A		B		C	
	in.	mm	in.	mm	in.	mm
LF25-030A LF25-045A	12-3/8	314	6-1/2	165	3-7/8	98
LF25-060A LF25-075A	17-1/2	445	6-1/4	159	6-1/8	156
LF25-090A LF25-105A	23	584	7-7/8	200	9-1/8	232

VENT KITS AND ACCESSORIES

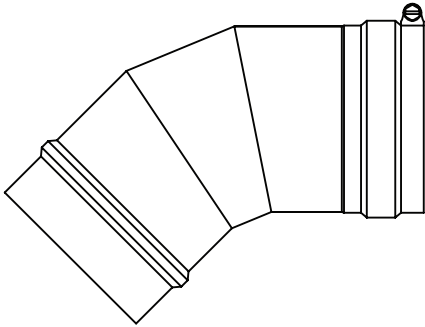
HORIZONTAL VENT KITS (UPSLOPE)



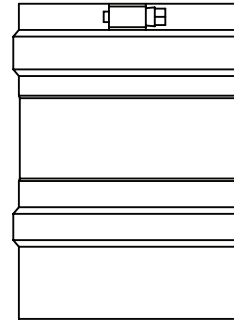
HORIZONTAL VENT KITS (DOWNSLOPE)



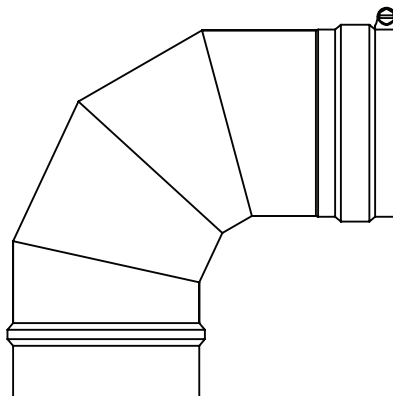
45° ELBOW (Typical)



STRAIGHT PIPE (Typical)



90° ELBOW (Typical)



REVISIONS

Sections	Description of Change
Specifications	Outputs and efficiencies updated.



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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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