

Unit Heaters and Duct Furnaces ♦ Up to 400,000 Btuh and 82% Thermal Efficiency



UNIT HEATERS/ DUCT FURNACES

TU, LF and LD Models

True performance and rugged durability.



LENNOX

Innovation never felt so good.™

DESIGNED TO LAST LONGER AND PERFORM BETTER

Separated Combustion Unit Heaters at a glance:

Ideal for hard-to-heat applications requiring fresh air for combustion due to excessive dust, dirt and humidity or negative pressure

Easy access to components through a hinged door

Heat capacity ranging from 45,000 – 300,000 Btuh

Unit Heaters at a glance:

Meets a wide range of residential and commercial heating applications

Heat capacity ranging from 30,000 – 400,000 Btuh

Duct Furnaces at a glance:

Specially designed for applications that require duct systems

Heat capacity ranging from 75,000 – 300,000 Btuh

Efficiency Rating

Unit heaters—
up to 82% thermal efficiency
Duct furnaces—
up to 80% thermal efficiency

Warranty

Unit Heaters
15-Year Limited Warranty
on stainless steel heat exchanger
10-Year Limited Warranty
on aluminized heat exchanger
1-Year Limited Warranty
on covered components

Duct Furnaces
5-Year Limited Warranty
on stainless steel heat exchanger
2-Year Limited Warranty
on aluminized heat exchanger
1-Year Limited Warranty
on covered components

See actual warranty certificate for details.

Improve comfort and efficiency with Lennox' heaters and furnaces

Lennox® heating products include durable unit heaters and duct furnaces designed to operate at peak performance year after year. This reliability is the result of advanced engineering and high-quality components.



One standard feature of all Lennox unit heaters and duct furnaces is the tubular heat exchanger, designed to enhance performance and reliability. The exchanger's curved design provides excellent heat transfer by completely exposing the heating surface to the air stream. Rounded surfaces minimize air resistance and even heating is allowed across all surfaces, reducing stress on the heat exchanger.

The many other advanced features include an in-shot burner assembly that's simple to clean and easily within reach, plus safety valves and switches and efficient direct-spark ignition. A self-diagnostic board with LED readout simplifies troubleshooting.

Easy to install

Each unit is shipped completely assembled with factory-wired controls and tested with complete cycles of start-up and shutdown, as well as acceptable gas and electrical operation verification for quick and easy unit start-up on the jobsite. The low cabinet profile of the LF24 and TU models allows installation even in tight spaces and helps where appearance is a concern. The simple-to-install units feature either mounting brackets or spotnuts and centrally located connections for gas, line voltage and thermostats.

Most Lennox units are stocked at a depot near you and available for quick delivery or pick-up.



More flexibility keeps everyone more comfortable

Lennox heating products are available in three unit designs to meet a wide range of commercial and residential applications, including unit heaters, separated combustion unit heaters for hard-to-heat areas and duct furnaces for projects that require duct systems. All models comply with ASHRAE 90.1-2001 efficiency requirements.

Several heating capacities are available, making it easy to keep both small and larger spaces comfortable. These reliable heaters and furnaces are available with your choice of natural gas or propane, and several wall venting options—horizontal, vertical and concentric (TU only)—allow the units to be placed in a number of locations.



TUA-100S

Separated Combustion Heater

- Ideal for hard-to-heat applications where excessive dust, dirt or humidity or negative pressure is a concern
- **The only units to offer tubular heat exchangers throughout the entire product line¹**
- Heating capacities from 45,000 – 300,000 Btuh
- Up to 82% thermal efficiency
- Compact cabinet design on 45,000 – 75,000 Btuh models
- Hinged door allows easy access to components
- Stainless steel heat exchanger is available for longer product life
- Sidewall venting eliminates roof penetrations
- Concentric venting allows single penetration for faster installation
- Self-diagnostic board with LED display improves troubleshooting efficiency and accuracy
- Compliant with ASHRAE 90.1-2001 efficiency requirements



LF24-115

Unit Heaters

- Ideal for a wide range of residential and commercial applications
- Heating capacities from 30,000 – 400,000 Btuh
- Up to 81% thermal efficiency
- Compact cabinet design 30,000 – 75,000 Btuh models only
- Stainless steel heat exchanger (for 100,000 Btuh and greater models) is available for longer product life
- Sidewall venting eliminates roof penetrations
- Self-diagnostic board with LED display improves troubleshooting efficiency and accuracy
- Compliant with ASHRAE 90.1-2001 efficiency requirements



LD24-200

Duct Furnaces

- Specially designed for applications requiring duct systems
- Heating capacities from 75,000 – 300,000 Btuh
- Up to 80% thermal efficiency
- Compact, lightweight cabinet with suspension points for easy overhead installation
- Stainless steel heat exchanger is available for longer product life
- Sidewall venting eliminates roof penetrations
- Self-diagnostic board with LED display improves troubleshooting efficiency and accuracy
- Compliant with ASHRAE 90.1-2001 efficiency requirements

¹Pertains to competitive separated combustion unit heaters from Modine®, Reznor® and Sterling®, 45,000 – 300,000 Btuh. Established through competitive literature review on April 21, 2004. Claim pertains to TUA045S – TUA300S units.

LF24 UNIT HEATER PERFORMANCE SPECIFICATIONS

Model*	GAS HEATING PERFORMANCE				CONNECTIONS			FAN DATA						PHYSICAL DATA		
	Heating Capacity Input Btuh [kW]	Heating Output Btuh [kW]	Steady State Efficiency	Temp. Rise °F (°C)	Vert. Flue Size Round Inches [mm]	Horiz. Flue Size Round Inches [mm]	Gas Piping Size Inches [NPT]	Number of Fans	Diameter Inches [mm]	Number of Blades	Motor Output hp [W]	Motor Full Load Amps	Motor RPMs	Air Vol. CFM [L/s]	Dimensions H x W x L [inches]	Ship Wt. [lbs.]
LF24-30A	30,000 (8.8)	24,300 (7.1)	81.0%	42 (23)	3 ¹ (76)	4 ³ (102)	1/2	1	10 (254)	4	1/20 (37)	1.7	1650	535 (250)	13 x 25 x 24	60
LF24-45A	45,000 (13.2)	36,500 (10.7)	81.0%	45 (25)	3 ¹ (76)	4 ³ (102)	1/2	1	10 (254)	4	1/20 (37)	1.7	1650	750 (355)	13 x 25 x 24	63
LF24-60A	60,000 (17.6)	48,000 (14.1)	80.0%	55 (31)	4 ² (102)	5 ⁴ (127)	1/2	1	14 (356)	3	1/10 (75)	4.1	1050	830 (390)	18 x 25 x 25	87
LF24-75A	75,000 (22.0)	60,000 (17.6)	80.0%	60 (33)	4 ² (102)	5 ⁴ (127)	1/2	1	14 (356)	3	1/10 (75)	4.1	1050	950 (450)	18 x 25 x 25	91

*A-Denotes aluminized steel heat exchanger. All models are 115 volts- 60 hertz-1 phase.

¹2-1/8 x 3 in. (54 x 76 mm) diameter adaptor is furnished with unit for flue connection.

²2 x 4 in. (51 x 102 mm) diameter adaptor is furnished with unit for flue connection.

³3 x 4 in. (76 x 102 mm) vent adaptor required (not furnished) for horizontal venting in residential applications.

⁴4 x 5 in. (102 x 127 mm) vent adaptor required (not furnished) for horizontal venting in residential applications.

Note: Due to Lennox' ongoing commitment to quality, all specifications, ratings and dimensions are subject to change.

Model*	GAS HEATING PERFORMANCE				CONNECTIONS		FAN DATA						PHYSICAL DATA				
	Heating Capacity Input Btuh [kW]	Output Natural Btuh [kW]	Output LPG/ Propane Btuh [kW]	Steady State Efficiency	Natural	LPG/ Propane	Flue Size Round Inches [mm]	Gas Piping Size Inches [NPT]	Number of Fans	Diameter Inches [mm]	Number of Blades	Number of Motors	Motor Output hp [W]	Motor Full Load Amps [total]	Air Vol. CFM [L/s]	Dimensions H x W x L [inches]	Ship Wt. [lbs.]
LF24-100S LF24-100A	100,000 (114.3)	80,500 (23.6)	82,000 (24.0)	80.5%	82.0%		4 ¹ (102)	1/2	1	16 (406)	4	1	1/8 (93)	2.1	1900 (895)	32-3/16 x 20-3/16 x 39-3/16	140
LF24-115S LF24-115A	115,000 (33.7)	92,000 (27.0)	92,000 (27.0)	80.0%	80.0%		4 ¹ (102)	1/2	1	16 (406)	4	1	1/8 (93)	2.1	1900 (895)	32-3/16 x 20-3/16 x 39-3/16	140
LF24-145S LF24-145A	143,750 (42.1)	115,000 (33.7)	115,000 (33.7)	80.0%	80.0%		4 ¹ (102)	1/2	1	16 (406)	5	1	1/8 (93)	2.1	1900 (895)	32-3/16 x 20-3/16 x 39-3/16	150
LF24-175S LF24-175A	172,500 (50.6)	138,000 (40.4)	138,000 (40.4)	80.0%	80.0%		5 ¹ (127)	1/2	1	16 (406)	5	1	1/8 (93)	2.1	2200 (1035)	32-3/16 x 23-1/8 x 39-3/16	165
LF24-200S LF24-200A	195,000 (56.9)	156,000 (45.6)	156,000 (45.6)	80.0%	80.0%		5 ² (127)	1/2	1	16 (406)	5	1	1/8 (93)	2.1	2200 (1035)	32-3/16 x 41-1/8 x 40	175
LF24-230S LF24-230A	230,000 (67.5)	184,000 (53.9)	184,000 (53.9)	80.0%	80.0%		5 ² (127)	3/4	2	16 (406)	5	2	1/8 (93)	4.2	4400 (2075)	32-3/16 x 41-1/8 x 40	260
LF24-250S LF24-250A	250,000 (73.3)	201,250 (59.0)	205,000 (60.1)	80.5%	82.0%		5 ² (127)	3/4	2	16 (406)	5	2	1/8 (93)	2.1 (4.2)	4400 (2075)	32-3/16 x 41-1/8 x 40	285
LF24-300S LF24-300A	300,000 (87.9)	241,500 (70.8)	246,000 (72.1)	80.5%	82.0%		5 ² (127)	3/4	2	16 (406)	5	2	1/8 (93)	2.1 (4.2)	4400 (2075)	32-3/16 x 41-1/8 x 40	305
LF24-345S LF24-345A	345,000 (101.1)	276,000 (80.9)	281,200 (82.4)	80.0%	81.5%		6 ¹ (152)	3/4	2	16 (406)	5	2	1/8 (93)	2.1 (4.2)	4400 (2075)	32-3/16 x 41-1/8 x 41-1/8	310
LF24-400S LF24-400A	390,000 (114.3)	312,000 (91.4)	312,000 (91.4)	80.0%	80.0%		6 ¹ (152)	3/4	2	16 (406)	5	2	1/8 (93)	2.1 (4.2)	4400 (2075)	32-3/16 x 41-1/8 x 41-1/8	315

*S-Denotes stainless steel heat exchanger. A-Denotes aluminized steel heat exchanger. All models are 115 volts- 60 hertz-1 phase.

¹2-1/8 x 4 in. (54 x 102 mm) diameter adaptor is furnished with unit for flue connection.

²2-1/4 x 2-3/4 in. (57 x 70 mm) rectangular to 5 in. (127 mm) round adaptor is furnished with unit for flue connection.

³2-1/4 x 2-3/4 in. (57 x 70 mm) rectangular to 6 in. (152 mm) round adaptor is furnished with unit for flue connection.

Note: Due to Lennox' ongoing commitment to quality, all specifications, ratings and dimensions are subject to change.

LD24 DUCT FURNACE PERFORMANCE SPECIFICATIONS

Model*	GAS HEATING PERFORMANCE				CONNECTIONS			FAN DATA		PHYSICAL DATA	
	Heating Capacity Input Btuh [kW]	Heating Output Btuh [kW]	Steady State Efficiency	Temp. Rise °F (°C)	Flue Size Round Inches [mm]	Gas Piping Size Inches [NPT]	Cond. Drain Size Inches [mm]	Air Vol. Throughout CFM [L/s]	Dimensions H x W x L [inches]	Ship Wt. [lbs.]	
LD24-75S LD24-75A	75,000 (22.0)	60,000 (17.6)	80.0%	21-71 (12-40)	4 ¹ (102)	1/2	1/4 (6)	780-2700 (370-1275)	28.3125 x 19.5 x 34.6875	95	
LD24-100S LD24-100A	100,000 (29.3)	80,000 (23.4)	80.0%	20-85 (11-47)	4 ¹ (102)	1/2	1/4 (6)	870-3700 (410-1745)	32.1875 x 20.1875 x 40	130	
LD24-125S LD24-125A	125,000 (36.6)	100,000 (29.3)	80.0%	20-91 (11-51)	4 ¹ (102)	1/2	1/4 (6)	1020-4700 (480-2220)	32.1875 x 20.1875 x 40	135	
LD24-150S LD24-150A	150,000 (44.0)	120,000 (35.1)	80.0%	20-84 (11-47)	4 ¹ (102)	1/2	1/4 (6)	1320-5600 (625-2645)	32.1875 x 23.125 x 40	150	
LD24-200S LD24-200A	200,000 (58.6)	160,000 (46.8)	80.0%	35-100 (19-57)	5 ² (127)	3/4	1/4 (6)	1480-4230 (700-1995)	32.1875 x 41.125 x 40	245	
LD24-250S LD24-250A	250,000 (73.3)	200,000 (58.6)	80.0%	35-100 (19-57)	5 ² (127)	3/4	1/4 (6)	1850-5290 (875-2495)	32.1875 x 41.125 x 40	260	
LD24-300S LD24-300A	300,000 (87.9)	240,000 (70.3)	80.0%	36-100 (20-57)	5 ² (127)	3/4	1/4 (6)	2220-6200 (1050-2925)	32.1875 x 41.125 x 40	275	

*S-Denotes stainless steel heat exchanger. A-Denotes aluminized steel heat exchanger. All models are 115 volts- 60 hertz-1 phase.

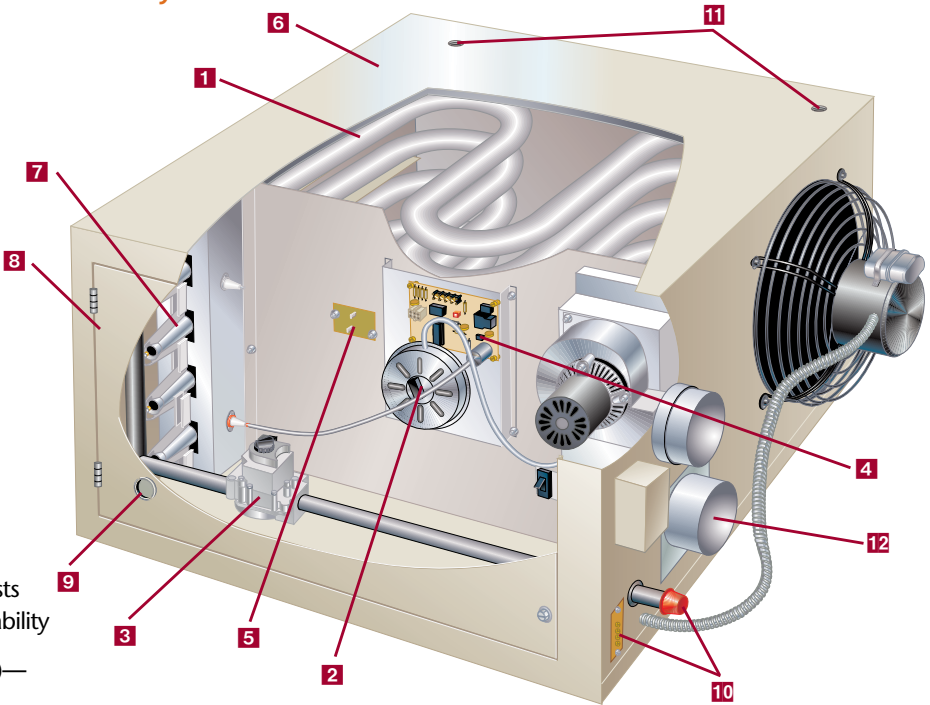
¹2-1/4 x 4 in. (57 x 102 mm) round flue adaptor is furnished with unit for flue connection.

²2-1/4 x 2-3/4 in. (57 x 70 mm) rectangular to 5 in. (127 mm) round adaptor is furnished with unit for flue connection.

Note: Due to Lennox' ongoing commitment to quality, all specifications, ratings and dimensions are subject to change.

True performance, reliability and durability

- 1 Tubular Heat Exchanger**—Increases efficiency and durability
- 2 Combustion Air Inducer Proving Switch**—Prevents unit operation if combustion air flue outlet is blocked
- 3 24V Combination Gas Control Valve with 100% Safety Shut-off**—Increases control and protects units
- 4 Integrated Control Board with Direct Spark Ignition**—Improves unit operation and efficiency
- 5 Limit Control**—Provides protection from overheat conditions
- 6 Heavy Gauge Steel Cabinet**—Resists corrosion and provides structural stability
- Flame Rollout Sensor (not shown)**—Improves safety



TUA-100S

Easy to install and maintain

- 7 Aluminized Steel Inshot Burners**—Are low maintenance and easy to clean
- 8 Hinged Door**—Provides easy access to components
- 9 Burner View Port**—For easy flame viewing
- 4 Integrated Control Board with Diagnostics**—Aids in troubleshooting
- 10 External Gas, Line Voltage and Thermostat Connections**—Speed installation

- 11 Mounting Spotnuts**—Allow for threaded rod installation (100,000 through 300,000 Btuh models)

Application solutions

- 12 Separated Combustion Air Inlet**—Provides fresh outdoor air for proper combustion

T-CLASS™ UNIT HEATER PERFORMANCE SPECIFICATIONS

Model*	GAS HEATING PERFORMANCE				CONNECTIONS			FAN DATA**						PHYSICAL DATA				
	Heating Capacity Input Btuh [kW]	Output Natural Btuh [kW]	Output LPG/Propane Btuh [kW]	Thermal Efficiency	LPG/Natural	Temp. Rise °F (°C)	Flue Size Round Inches [mm]	Combustion Air Size Round	Gas Piping Size Inches [mm]	Num. of Fans	Diameter Inches [mm]	Num. of Blades	Motor Output hp [W]	Motor Full Load Amps [total]	Motor RPMs	Air Vol. CFM [L/s]	Dim. H x W x L [inches]	Ship Wt. [lbs.]
TUA045S	45,000 (13.2)	36,200 (10.6)	36,200 (10.6)	81.0%	81.0%	45 (25)	3 (76)	3 (76)	1/2	1	10 (254)	5	1/20 (37)	1.7	1650	750 (355)	13 x 26 x 24	84
TUA060S	60,000 (17.6)	48,300 (14.2)	48,300 (14.2)	81.0%	81.0%	54 (30)	4 (102)	4 (102)	1/2	1	14 (356)	3	1/10 (75)	4.1	1050	830 (390)	18 x 26 x 25	100
TUA075S	75,000 (22.0)	59,200 (17.3)	59,200 (17.3)	80.0%	80.0%	60 (33)	4 (102)	4 (102)	1/2	1	14 (356)	3	1/10 (75)	4.1	1050	950 (450)	18 x 26 x 25	104
TUA100S	100,000 (29.3)	81,000 (23.7)	70,700 (20.7)	81.0%	81.0%	31 (17)	5 (127)	4 (102)	1/2	1	16 (406)	4	1/8 (93)	2.7	1075	2435 (1150)	21 x 36.5 x 39.625	188
TUA125S	125,000 (36.6)	101,500 (29.7)	101,500 (29.7)	81.0%	81.0%	39 (21)	5 (127)	4 (102)	1/2	1	16 (406)	4	1/8 (93)	2.7	1075	2435 (1150)	21 x 36.5 x 39.625	204
TUA150S	150,000 (43.9)	120,000 (35.1)	121,500 (35.6)	80.0%	81.0%	38 (21)	5 (127)	4 (102)	1/2	1	18 (457)	4	1/8 (93)	2.7	1075	2955 (1395)	27 x 36.5 x 39.625	261
TUA200S	200,000 (58.6)	164,000 (48.0)	160,000 (46.8)	82.0%	80.0%	51 (28)	5 (127)	4 (102)	1/2	1	18 (457)	4	1/8 (93)	2.7	1075	2955 (1395)	27 x 36.5 x 39.625	266
TUA250S	240,000 (70.3)	194,400 (56.9)	196,800 (57.6)	81.0%	82.0%	35 (19)	5 (127)	4 (102)	3/4	2	16 (406)	4	1/8 (93)	2.7 (5.4)	1075	5215 (2460)	39 x 36.5 x 39.625	307
TUA300S	300,000 (87.8)	240,000 (70.3)	243,000 (71.2)	80.0%	81.0%	43 (24)	6 (152)	4 (102)	3/4	2	16 (406)	4	1/8 (93)	2.7 (5.4)	1075	5215 (2460)	39 x 36.5 x 39.625	323

*S-Denotes a separated combustion unit heater. All models are 115 volts- 60 hertz-1 phase.

**Fan motor type: Models TUA045S, 060S & 075S—SP. Models TUA100S, 125S, 150S, 200S, 250S & 300S—PSC.

Stainless steel heat exchangers are available for heat sizes of 100,000 Btuh or greater models.

LPG is not a factory option for stainless steel heat exchangers, but can be field-installed.

Note: Due to Lennox' ongoing commitment to quality, all specifications, ratings and dimensions are subject to change.

SOLUTIONS FOR CUSTOMIZED COMFORT



Don't just choose a Lennox® product...choose a Lennox Commercial Comfort System. These complete packages of HVAC solutions provide tools to create a healthier and more comfortable environment.

Packaged Units

- S-Class™ Rooftop Units
- L Series® Rooftop Units
- T-Class™ Rooftop Units

Split Systems

- S-Class Air Conditioners/Heat Pumps
- T-Class Air Conditioners/Heat Pumps
- Air Conditioners/Heat Pumps
- Air Handlers
- Indoor Coils

Heating

- T-Class Unit Heaters
- Unit Heaters
- Duct Furnaces
- Furnaces

Indoor Air Quality

- Humiditrol® Dehumidification System
- Humidity Sensors
- Demand Control Ventilation
- Energy Recovery Ventilators/Systems
- Air Filters
- UVC Lamps

Commercial Controls

- L Connection® Network
- Sectra® Commercial Zoning System
- Systems Integration Solutions
- Commercial Thermostats



LENNOX

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