



LF20 SERIES GAS FIRED UNIT HEATERS HORIZONTAL 110,000 to 330,000 Btuh Input

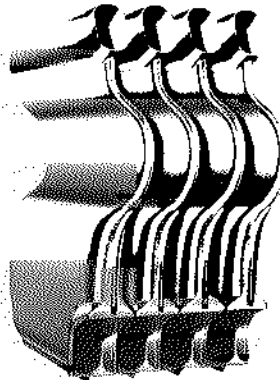
ENGINEERING DATA
HEATING UNITS
GAS
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Lennox gas fired horizontal unit heaters are designed for installation overhead, out of the way, thus saving valuable floor space. Compact construction and ease of installation make these overhead heaters a natural for economical, space saving heat systems. Several sizes of units, with a wide and varied range of heating capacities are available. Units are shipped completely assembled with controls factory installed and wired. In addition, each unit is test operated at the factory to ensure proper operation and dependability. Installer has only to locate unit, make unit, gas supply, electrical connections and mount thermostat to complete a low cost installation.

Lennox DURACURVE® Cold Rolled or Aluminized Steel Heat Exchanger

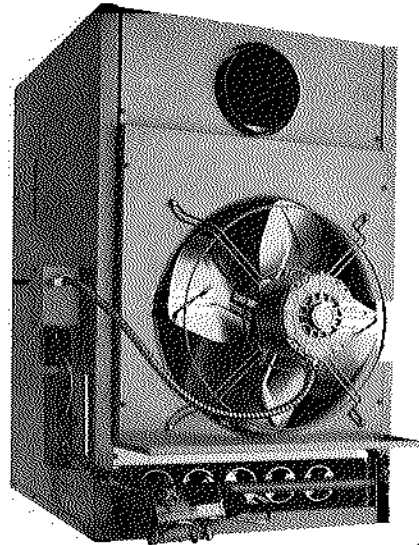
— A choice of cold rolled or aluminized steel heat exchanger is available on all models. Lennox engineered direct fired heat exchanger eliminates fatigue failure, ticking resonance and cleanability problems. With this unique heat exchanger design the sides of each section form a flue restriction zone comprised of sections of two concentric cylinders. Sides expand in the same direction and at the same rate, eliminating metal fatigue and ticking. Laboratory life cycle testing proves long life of the heat exchanger.



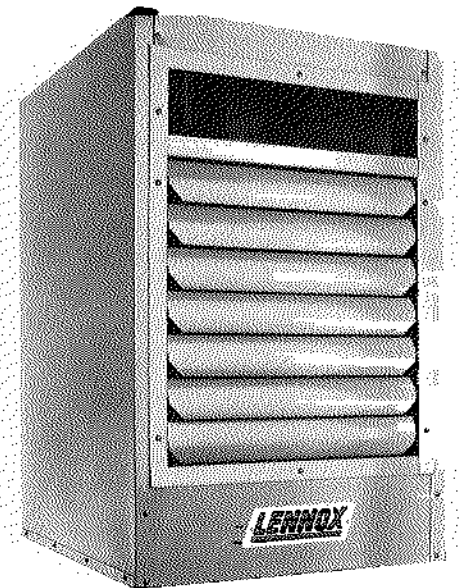
Aluminized Steel Burners — Each burner has four rows of practically continuous ports which result in quiet and clean combustion. A crossover igniter of actual burner ports, perpendicular to the main burner, carries a positive flame from burner to burner to achieve fast, quiet ignition of burners. Burners are readily accessible.

Standing Pilot Models (Natural Gas Only) — Available on LF20-110, 137, 165 and 220 models only. Models are equipped with manual lighted standing pilot burner with continuous flame.

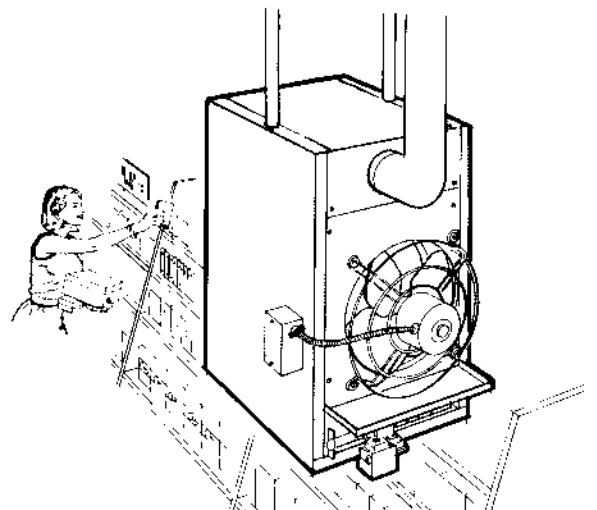
"E" Models with Electronic Pilot (Natural Gas Only) — Equipped with a solid-state electronic direct spark igniter that provides positive ignition of pilot burner on each operating cycle. Pilot gas is ignited and burns during each running cycle (intermittent pilot) of the furnace. Main burners and pilot gas are extinguished during the off cycle. This system permits main gas valve to open only when the main pilot burner is proven to be lit. Should a loss of flame occur the main valve closes and the pilot spark recurs immediately. Pilot ignition is a fully automatic operation on demand for heat.



LF20-110



Typical Application



FEATURES

Controls — The following controls are furnished as standard equipment: 24 volt main gas valve with 100% safety shutoff and pilot valve, main shutoff valve, gas pressure regulation, 115/24v transformer, fan control and limit control. Two limits are furnished with the LF20-220, 275 and 330 models. Optional cord type fan switch (order no. 00416) is available for continuous fan operation and must be ordered extra.

Rugged Cabinet — Constructed of heavy gauge cold rolled steel with a durable finish of baked-on enamel. Steel inner panel liners keep outer cabinet surface temperature low. Wiring junction box is conveniently located on outside of cabinet. Fan and limit access cover in cabinet side panel provides complete service access to controls. Six spotnuts are provided on cabinet for suspension of unit. Built-in draft diverter constructed of aluminized steel.

Direct Drive Fan — All models are equipped with efficient and quiet operating direct drive fans. Motor and fan are resiliently mounted. Totally enclosed motor is standard equipment on all models. LF20-110, 137 and 165 units use a single fan. The larger models have dual fans.

Thermostat (Not Furnished) — Heating thermostat is optional equipment and must be ordered extra. See Accessories Section and Lennox Price Book.

Hanging Bracket Kit (Optional) — Field installed hanging bracket kit (LB-25981BA) is available for easy two point suspension of units. Kit includes (2) brackets equipped with 3/4" female pipe connection suspending points and necessary hardware for installing. Brackets mount to spot nuts provided on top of unit.

Power Venters (Optional) — Power venters are available for field installation and must be ordered extra.

LF20(E)-110(A) thru LF20(E)-275(A) models:

PV3 (115-24 volt) — (P-8-8519)

(4" flue connection)

Optional PV3 Flue Adaptors:

5" to 4" flue size — (P-8-8515)

6" to 4" flue size — (P-8-8516)

7" to 4" flue size — (P-8-8517)

8" to 4" flue size — (P-8-8518)

LF20E-330(A) model:

PV4 (115-24 volt) — (P-8-8521)

(6" flue connection)

Flue adaptors for PV4 models are not available and must be supplied by installer.

Equipment Warranty — "DURACURVE" Aluminized Steel Heat Exchangers have a limited warranty for a full ten years. Cold rolled steel heat exchangers have a limited warranty for a full five years. Solid-state ignition modules have a limited warranty for a full three years. All other components have a limited warranty for one year. Refer to the Lennox Equipment Limited Warranty certificate included with the equipment for details.

Approvals — A.G.A. certified for use with natural gas.

SPECIFICATIONS

Model No.	*LF20(E)-110(A)	*LF20(E)-137(A)	*LF20(E)-165(A)	*LF20(E)-220(A)	*LF20E-275(A)	*LF20E-330(A)
Heating Capacity Input (Btuh)	110,000	137,000	165,000	220,000	275,000	330,000
Heating Capacity Output (Btuh)	83,600	104,100	125,400	167,200	209,000	250,800
A.G.A. Thermal Efficiency	76.0%	76.0%	76.0%	76.0%	76.0%	76.0%
Flue size (inches) — round	5	6	7	8	8	9
Gas Piping Size (inches) Natural Gas only	1/2	1/2	1/2	3/4	3/4	3/4
Air volume (cfm)	1250	1635	2185	2400	3135	4415
Fan diameter (inches)	14	16	18	(2) 14	(2) 16	(2) 18
Fan motor (hp)	1/15	1/15	1/8	(2) 1/15	(2) 1/15	(2) 1/8
Electrical characteristics	115 volts — 60 hertz — 1 phase					
Number of packages	1	1	1	1	1	1
Shipping weight (lbs.)	200	230	265	340	390	460

***E" Suffix denotes models equipped with electronic ignition system.

"A" Suffix denotes models equipped with aluminized steel heat exchanger.

NOTE — Models in shaded area not available with standing pilot.

INSTALLATION CLEARANCES TO COMBUSTIBLES

Four Sides	18 inches
Top	6 inches
Floor	18 inches
Flue	6 inches

NOTE — Provide adequate clearance for servicing.

HIGH ALTITUDE DERATE

A.G.A. certified units must be derated when installed at an elevation of more than 2000 feet above sea level. If unit is installed at an altitude higher than 2000 feet, the unit must be derated 4% for every 1000 feet above 2000 feet. Thus, at an altitude of 4000 feet, the unit would require a derate of 8%.

NOTE — This is the only permissible derate for the units.

THROW DATA

Model No.	Air Volume (cfm)	*Effective Throw (ft.)
LF20(E)-110(A)	1250	47
LF20(E)-137(A)	1635	52
LF20(E)-165(A)	2185	62
LF20(E)-220(A)	2398	61
LF20E-275(A)	3135	68
LF20E-330(A)	4415	81

*Throw terminates where velocity reaches 50 ft. per minute.

NOTE — By adjusting the horizontal louvers, a variation in throw and spread can be obtained.

DIMENSIONS (inches)

Model No.	A	B	C
LF20(E)-110(A)	19-5/8	36-3/8	18-3/8
LF20(E)-137(A)	22-3/4	36-3/8	21-1/2
LF20(E)-165(A)	25-7/8	36-3/8	24-5/8
LF20(E)-220(A)	32-1/8	38-3/8	30-7/8
LF20E-275(A)	38-3/8	38-3/8	37-1/8
LF20E-330(A)	44-5/8	38-3/8	43-3/8

