

LENNOX®

ENGINEERING DATA

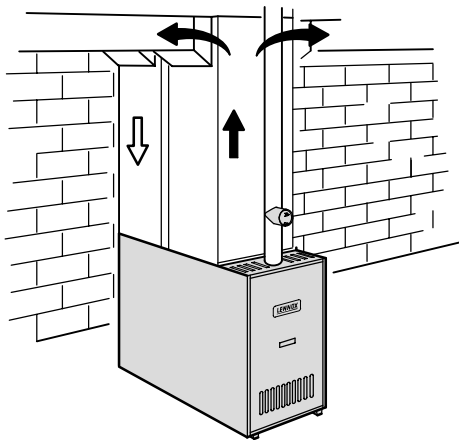
OIL FURNACES

OF24

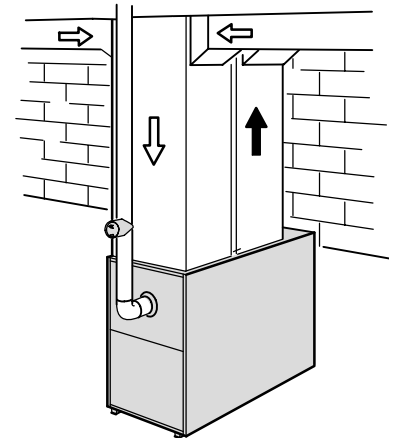
**ELITE® HEAT ONLY - LO-BOY
AFUE - 81%**

Input - 105,000 to 154,000 Btuh (30.8 to 45.1 kW)

Bulletin No. 210214
July 2002
Supersedes June 2002



Basement Installation
Flue at Front Model

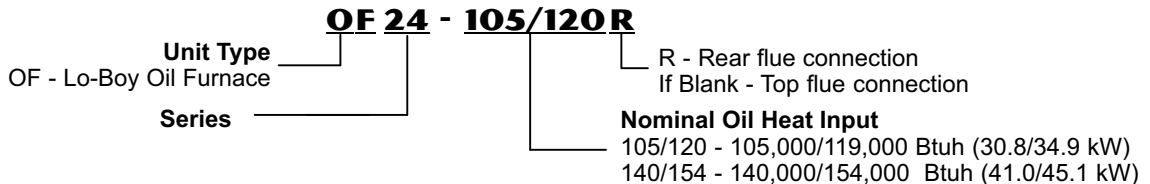


Basement Installation
Flue at Rear Model

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MODEL NUMBER IDENTIFICATION



FEATURES

Applications

- Lennox OF24 series lo-boy oil furnaces are applicable to residential or commercial applications.
- Lennox electronic air cleaners and power humidifiers can be added to the lo-boy units.
- Large front and rear doors provide complete service access.
- Rugged heat exchanger and high performance oil burner combine to provide maximum efficiency.
- Units are shipped completely assembled ready for installation.

Tested and Certified

- Units have been rated and tested according to U.S. Department of Energy (DOE) test procedures and Federal Trade Commission (FTC) labeling regulations.
- Ratings are certified by GAMA and units are ETL listed.
- Developed in accordance with ISO 9001 quality standards.

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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FEATURES

Equipment Warranty

- Heat exchangers have a limited lifetime warranty in residential applications.
- Oil burners and all other covered components have a limited warranty for five years in residential applications.
- Refer to the Lennox Equipment Limited Warranty certificate included with the equipment for details.

EZ Clean Heat Exchanger

- Streamlined drum type heat exchanger exposes maximum surface area to the air stream with minimum air resistance.
- Strategically placed ports allow easy cleaning.
- Constructed of heavy gauge steel for maximum service life.
- Heavy gauge mounting channels are provided in cabinet base for support of heat exchanger.

Combustion Chamber

- All models have a factory installed, specially designed alumina silica ceramic fiber combustion chamber.
- Combustion chamber can withstand temperatures of up to 2550°F (1400°C) resulting in more complete combustion and higher efficiencies.

Beckett Flame-Retention Oil Burner

- Smooth operating high pressure atomizing type burner blends oil and air to attain maximum efficiency.
- Heavy duty motor drives quiet operating blower wheel and fuel pump.
- Air turbo injector directs combustion air for smooth ignition.
- Flame retention head is designed to agitate and mix oil and air for complete combustion and highest efficiency.
- Burner design features 4 in. (102 mm) connection to air inlet for optional outdoor combustion air.
- Oil pump located on opposite side of air inlet to prevent any dirt accumulation from inlet air.
- Burner has 10,000 volt ignition transformer and ceramic glazed electrodes which provide a safe continuous flame.
- Equipped with a factory installed cadmium sulfide cell flame detector and primary safety control that provides complete shutdown in case of flame failure.
- All burner parts are easily removable for servicing.
- Burner is UL approved, CSA certified and certified according to ANSI Standard 296.6.
- Burner is factory installed in the unit, wired and fire tested insuring proper operation.
- Dual input/output models are shipped for lower heating capacity operation.
- Nozzle must be field provided for field conversion to higher heating capacity.

Cabinet

- Constructed of heavy gauge steel with a pre-painted, textured finish.
- Entire heating section is lined with foil faced fiberglass insulation keeping cabinet surface temperatures low.
- Removal of louvered heating section front door allows access to oil burner, inspection door and control compartment.
- Control compartment is totally enclosed to provide a safe, compact and clean area.
- Large blower access door at rear of cabinet gives complete service access to blower and air filters.
- Blower compartment is fully insulated.
- Oil line and electrical inlet openings are provided in sides of cabinet. See dimension drawing for details.

Flame Inspection Tube

- Conveniently located at the front of the unit.
- Opening is large enough for normal inspection mirror.

Barometric Draft Control

- Furnished as standard equipment and field installed in flue pipe.

Blower

- Units are equipped with split phase permanently lubricated motor, adjustable pulley and sheave.

Fan and Limit Control

- Factory installed.
- Fan control is temperature actuated to control blower operation, 125°F (52 °C) on/100°F (38 °C) off temperature settings.
- Limit protects unit from abnormal operating conditions and has a fixed temperature setting.

Air Filters

- Units are equipped with large cleanable frame type filters. Easily removed when servicing is required.

OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA

Oil Filter

- Recommended for proper oil filtration. See Specifications table for order number.

Thermostat

- See Thermostats bulletin in Thermostats and Controls section and Lennox Price Book.

Two Stage Oil Pump

- Two stage oil pump is available. See Specifications table for order number.

SPECIFICATIONS

Oil Heating Performance	Model Number	OF24-105/120 OF24-105/120R	OF24-140/154 OF24-140/154R
	Input - Btuh (kW) - Low	105,000 (30.8)	140,000 (41.0)
	②High	119,000 (34.8)	154,000 (45.1)
	Output - Btuh (kW) - Low	85,000 (24.9)	113,000 (33.1)
	②High	96,000 (28.1)	125,000 (36.6)
	①A.F.U.E.	81%	81%
	Flue Connection Round - in. (mm)	6 (152)	6 (152)
	Temperature rise range °F (°C) - Low	45 - 75 (25 - 42) Top flue 50 - 80 (28 - 44) Rear flue	50 - 80 (28 - 44) Top flue 55 - 85 (31 - 47) Rear flue
	②High	55 - 85 (31 - 47)	55 - 85 (31 - 47) Top flue 60 - 90 (33 - 50) Rear flue
Oil Burner	Nozzle rating - gph (L/hr) - Low	.65 (2.5)	.85 (3.2)
	②High	.75 (2.8)	1.00 (3.8)
	Nozzle spray angle	80° solid	80° solid
	Oil Burner Pump	1 Stage	1 Stage
	Oil Burner Pump Pressure - psig (Pa)	140 (965)	140 (965)
Indoor Blower	Motor hp (W)	1/4 (187)	3/4 (560)
	Motor pulley - in. (mm)	4 (102)	4 (102)
	Blower wheel nominal diameter x width - in.	10 x 8	12 x 9
	mm	254 x 203	305 x 229
	Blower pulley - in. (mm)	7 (178)	7 (178)
	Belt size - in. (mm)	41 (1041)	42 (1067)
	Air flow at .20 in. wg. (50 Pa) external static pressure	Front Flue 1300 cfm (615 L/s) Rear Flue 1220 cfm (575 L/s)	Front Flue 1750 cfm (825 L/s) Rear Flue 1700 cfm (800 L/s)
Filters	Number of filters	1	1
	Size of filters - in.	18 x 19 x 1	19 x 21 x 1
	mm	457 x 483 x 25	483 x 533 x 25
Shipping weight - lbs. (kg) 1 package		260 (118)	295 (134)
Electrical	Characteristics	115V-60hz-1ph	115V-60hz-1ph
	Maximum time delay breaker or fuse size	15 Amp	20 Amp

OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA

Oil Filters	10 micron without mounting bracket	81P89
	10 micron with mounting bracket	53P92
	Replacement cartridge - 10 micron, 45 gph	53P93
	Filter restriction indicator gauge	53P90
Two Stage Oil Pump		65A44

①Annual Fuel Utilization Efficiency based on U.S. DOE test procedures and FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.

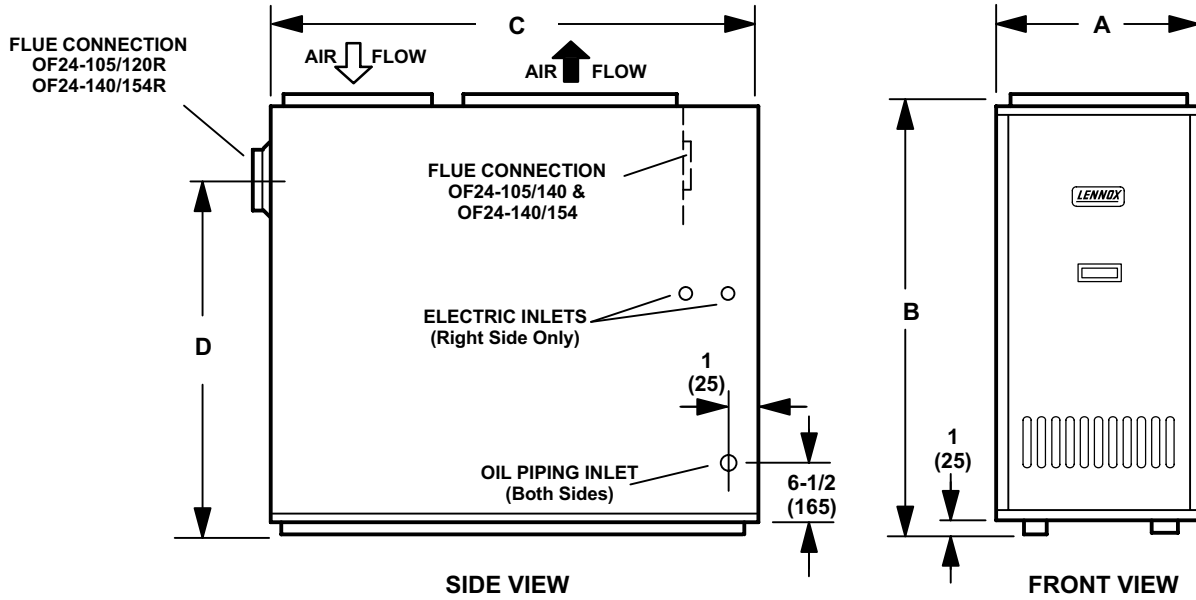
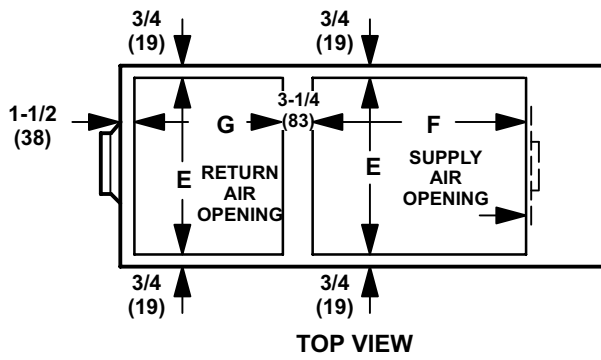
②Nozzle must be field provided for field conversion to higher heating input.

INSTALLATION CLEARANCES

Approved for closet or alcove installation. When installing in a confined space, two ventilation openings must be provided into the the space; one 6 in. (152 mm) from the top and one 6 in. (152 mm) from the bottom. Each opening should be 8 x 16 in. (203 x 406 mm).

Sides of cabinet	6 in.	152 mm
Rear of cabinet	24 in.	610 mm
Front of cabinet	4 in.	102 mm
Service Clearance (Front)	24 in.	610 mm
Service Clearance (Rear)	24 in.	610 mm
Floor	0 in.	0 mm
Top of plenum	2 in.	51 mm
Plenum sides	3 in.	76 mm
Flue pipe horizontal	9 in.	229 mm
Horizontal warm air duct within 3 feet (1 m) of furnace	2 in.	51 mm

DIMENSIONS - INCHES (MM)



Model No.	A		B		C		D		E x F (Supply)		E x G (Return)	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
OF24-105/120	19-1/2	495	37	940	52-1/8	1324	- - -	- - -	18 x 21	457 x 533	18 x 16	457 x 406
OF24-105/120R	19-1/2	495	37	940	52-1/8	1324	27	686	18 x 21	457 x 533	18 x 16	457 x 406
OF24-140/154	22-1/2	572	37	940	52-1/8	1324	- - -	- - -	21 x 21	533 x 533	21 x 16	533 x 406
OF24-140/154R	22-1/2	572	37	940	52-1/8	1324	27	686	21 x 21	533 x 533	21 x 16	533 x 406