



**OIL FURNACES**

**ELO183B**

**ELITE® SERIES**

**Lo-Boy**

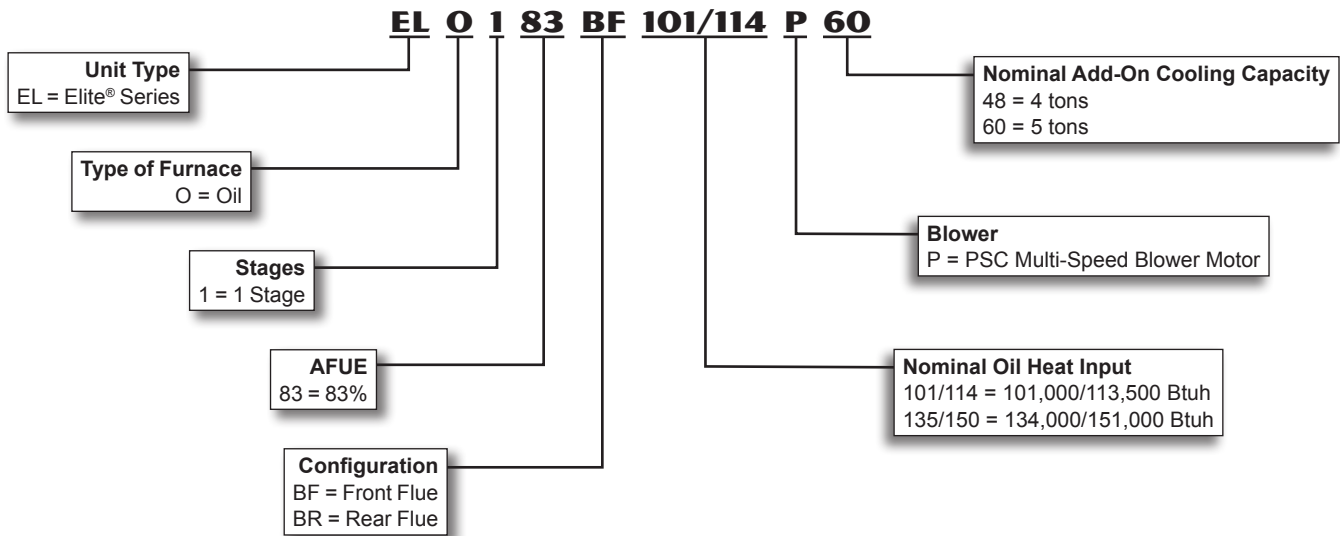
**PRODUCT SPECIFICATIONS**

Bulletin No. 210629  
February 2019  
Supersedes July 2012



**AFUE - 83%**  
**Heating Input - 101,000 to 151,000 Btuh**  
**Nominal Add-on Cooling - 2.5 to 5 Ton**

**MODEL NUMBER IDENTIFICATION**



## FEATURES

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### WARRANTY

**Heat Exchanger** - Limited lifetime warranty in residential applications.

**Oil Burners and all other covered components** - Five year limited warranty in residential applications. Refer to the Lennox Equipment Limited Warranty certificate included with the equipment for details.

### APPROVALS

Units have been rated and tested according to U.S. Department of Energy (DOE) test procedures and are labeled according Federal Trade Commission (FTC) labeling requirements.

Units are certified by AHRI.

Units are ETL-Intertek listed.

### APPLICATIONS

Suitable for installation in a residence, small business or commercial establishment.

Compact, rugged cabinet.

Approved for reduced clearances to combustibles.

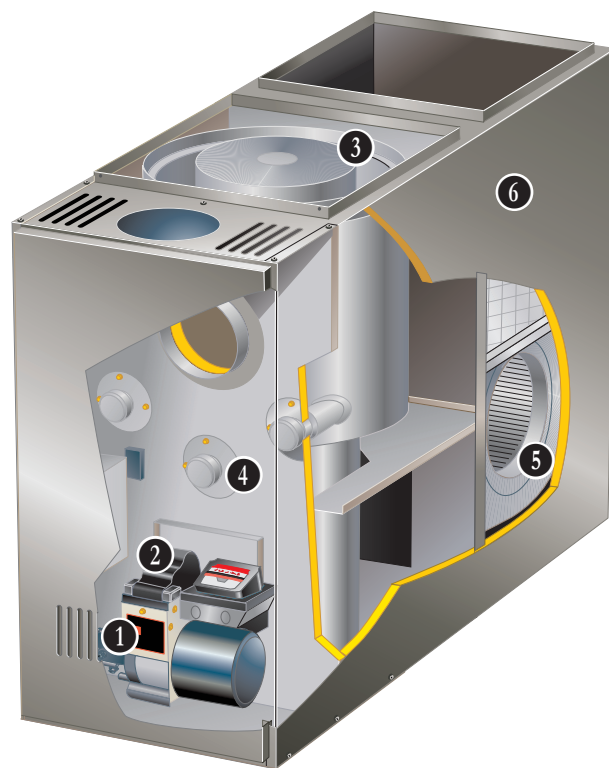
Lennox add-on indoor coils, powered air cleaners and humidifiers can be added to the furnace.

Quiet operating blowers have sufficient capacity to handle add-on cooling air volume requirements.

Shipped factory assembled including the oil burner, with all controls installed and wired.

Factory test operated ensuring proper operation after shipment.

Features large front and rear doors providing complete service access.



### HEATING SYSTEM

- Beckett™ Flame-Retention AFG 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 has 120VAC primary safety control 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 U.L. approved, C.S.A. certified and certified according to ANSI Standard 296.6. Burner is factory installed in the unit, wired and fire tested. Units are shipped for lower heating capacity operation. Nozzle is provided for field conversion to higher heating capacity.

## FEATURES

### HEATING SYSTEM (continued)

#### 2 Advanced Burner Control



120 VAC primary safety control.

Controls the oil burner motor and igniter.

Control features:

- Welded Relay Protection
- Limited Reset and Limited Recycle
- Reset Button - Resets burner if a restricted lockout is present
- 3 Status Lights for System Monitoring and Diagnostics
  - Yellow - Pump Prime Mode
  - Green - Flame sensing (flashing = 60 second cycle)
  - Red - Restricted Lockout (flashing = Soft lockout) "Strike three" lockout protection to avoid nuisance calls
- Valve-On Delay / Motor-Off Delay
- 15 Second Lockout Time
- Interrupted or Intermittent Duty Ignition
- Technician Pump Priming Mode
- Disable Function

#### 3 EZ Clean Heat Exchanger

Streamlined drum type heat exchanger exposes maximum surface area to the air stream with minimum air resistance.

Constructed of heavy gauge steel for maximum service life.

#### 4 Strategically placed ports allow easy cleaning.

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 resulting in more complete combustion and higher efficiencies.

#### 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.

### Optional Accessories

#### Combustion Air Boot

Provides 4 in. air inlet connection to burner for outdoor combustion air.

Damper furnished for installation in air inlet pipe for adjustment.

#### Oil Filter

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

#### Two-Stage Oil Pump

Two-stage oil pump is available.

See Specifications table for order number.

#### 5 **BLOWER**

Units are equipped with quiet, four-speed, direct drive blowers.

PSC motor is statically and dynamically balanced, resiliently mounted and has integral overload protection.

Blower assembly easily removed for servicing.

A choice of blower speeds is available on each blower.

See blower data tables.

Change in blower speed is easily accomplished by simple wiring change.

#### 6 **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.

Large blower access door gives complete service access to blower.

Blower compartment is completely insulated.

Removal of louvered heating section door allows access to oil burner, inspection door and control compartment.

Door is equipped with handhold for ease of removal.

Control compartment is totally enclosed to provide a safe, compact and clean area.

Oil line and electrical inlet openings are provided in sides of cabinet, see dimension drawing.

Lo-Boy models have a lower profile than standard upflow oil furnaces. They are configured with both the supply and return air openings on the top of the unit.

#### Flue Outlet

Flue outlet is located on top of cabinet on front flue models and can be relocated to either side of cabinet. See dimension drawing.

Rear flue models allow the flue to be installed away from indoor coils and air cleaners. See dimension drawing.

## **FEATURES**

### **CONTROLS**

#### **Transformer and Terminal Strip**

24 volt (40VA) control transformer and terminal strip are furnished as standard and factory installed.

#### **Fan and Limit Control**

Factory installed on vestibule panel. Time-start fan control assures proper blower operation and has adjustable blower off temperature setting. Control turns blower on 60 to 90 seconds after thermostat demand. Limit control has fixed temperature setting and protects unit from abnormal operating conditions.

#### **Blower Cooling Relay**

Furnished with the unit and factory installed on the wiring junction box. Relay activates blower operation during cooling cycle.

### **Optional Accessories**

#### **Thermostat**

Thermostat (programmable/non-programmable) is not furnished with unit.

See Thermostat bulletins in Controls Section and Lennox Price Book for selection.

### **INDOOR AIR QUALITY**

#### **Filter**

Units are equipped with large, cleanable, frame-type filters. Can be easily removed when service is required.

## SPECIFICATIONS

Oil Heating Performance	Model Number	Front Flue Rear Flue	ELO183BF101/114P48	ELO183BF135/150P60
			ELO183BR101/114P48	ELO183BR135/150P60
	Input - Btuh	Low Fire	101,000	134,000
		<sup>1</sup> High Fire	113,500	151,000
	Output - Btuh	Low Fire	85,000	113,000
		<sup>1</sup> High Fire	95,000	127,000
		<sup>2</sup> AFUE	83%	83%
		Flue Size Diameter - in.	6	6
		Temperature rise range	45 - 75°F	45 - 75°F
	Oil Burner	Nozzle rating - US gph	Low Fire	.65
<sup>1</sup> High Fire			.75	1.00
		Nozzle spray angle	80° solid	80° solid
		Oil Burner Pump	1 Stage	1 Stage
		Oil Burner Pump Pressure - psig	140	140
		Air Inlet Connection (diameter) - in.	4	4
Indoor Blower		Blower Motor Output - hp		1/2
	Nominal add-on cooling - Tons		2.5 thru 4	3 to 5
	Blower wheel nom. diameter x width - in.		10 x 9	12 x 10
<sup>3</sup> Filter	Number of filters		1	1
	Size of filters - in.		18 x 19 x 1	19 x 21 x 1
Shipping weight - lbs. 1 package			225 Front Flue / 230 Rear Flue	270
Electrical	Characteristics		120V-60hz-1ph	120V-60hz-1ph
	Maximum Overcurrent Protection (amps)		15	15

## OPTIONAL ACCESSORIES - ORDER SEPARATELY

Combustion Air Boot (4 in. diameter)		<b>83W32</b>	<b>83W32</b>
Oil Filters	10 micron with mounting bracket	<b>53P92</b>	<b>53P92</b>
	Filter restriction indicator gauge	<b>53P90</b>	<b>53P90</b>
Two-Stage Oil Pump	with solenoid	<b>71M18</b>	<b>71M18</b>

<sup>1</sup> Nozzle must be field provided for field conversion to higher heating input.

<sup>2</sup> Annual Fuel Utilization Efficiency based on U.S. DOE test procedures and FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.

<sup>3</sup> Cleanable flame type filters furnished.

## INSTALLATION CLEARANCES

Approved for closet or alcove installation. When installing in a confined space, two ventilation openings must be provided into 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 inches (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	Combustible	Combustible
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

**BLOWER DATA****ELO183BF101/114P48 and ELO183BR101/114P48 BLOWER PERFORMANCE**

External Static Pressure in. w.g.	Air Volume at Various Blower Speeds - cfm			
	High	Medium - High	Medium	Low
.20	1760	1605	1375	1160
.30	1670	1415	1345	1150
.40	1600	1460	1300	1130
.50	1550	1395	1260	1105
.60	1410	1305	1190	1035
.70	1315	1190	1075	955
.80	1170	1080	975	855
.90	1000	935	830	650

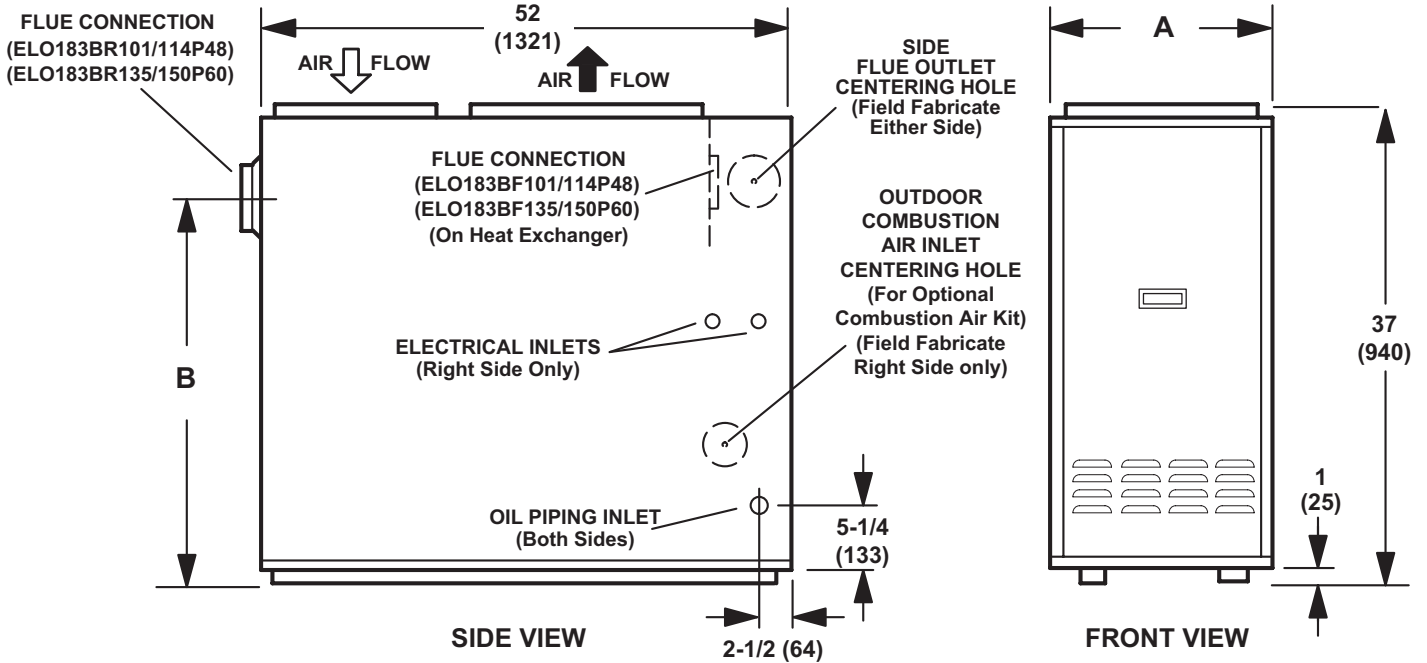
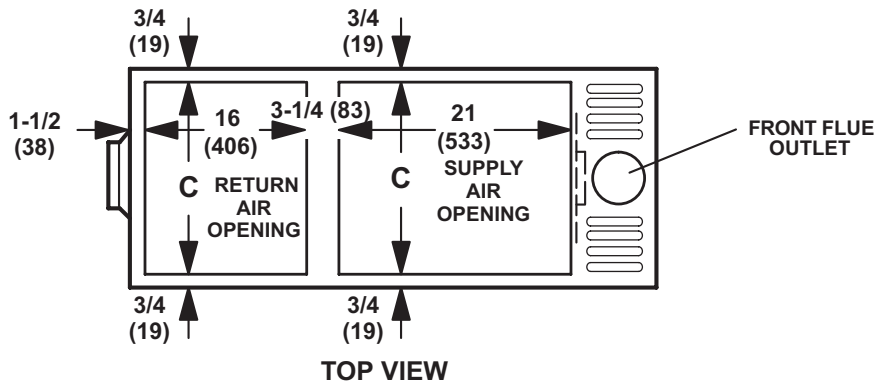
NOTE - All air data is measured external to the unit with the air filter in place.

**ELO183BF135/150P60 and ELO183BR135/150P60 BLOWER PERFORMANCE**

External Static Pressure in. w.g.	Air Volume at Various Blower Speeds - cfm			
	High	Medium - High	Medium	Low
.20	2360	2000	1730	1470
.30	2275	1975	1720	1465
.40	2190	1900	1695	1450
.50	2130	1835	1675	1440
.60	2025	1790	1605	1410
.70	1900	1715	1550	1370
.80	1815	1600	1475	1300
.90	1700	1525	1400	1225

NOTE - All air data is measured external to the unit with the air filter in place.

# DIMENSIONS



Model No.	A		B		C	
	in.	mm	in.	mm	in.	mm
ELO183BF101/114P48	19-1/2	495	---	---	18	457
ELO183BR101/114P48	19-1/2	495	27-5/8	702	18	457
ELO183BF135/150P60	22-1/2	572	---	---	21	533
ELO183BR135/150P60	22-1/2	572	27-5/8	702	21	533

## REVISIONS

Sections	Description of Change
Optional Accessories	Removed Oil Filter, 10 micron without mounting bracket ( <b>81P89</b> ). It is discontinued. Removed Replacement cartridge - 10 micron, 45 gph ( <b>53P93</b> ). It is discontinued. Removed Two-Stage Oil Pump without solenoid ( <b>65A44</b> ). It is discontinued.



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For the latest technical information, [www.lennoxravenet.com](http://www.lennoxravenet.com)

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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