



**RESIDENTIAL
PRODUCT SPECIFICATIONS**

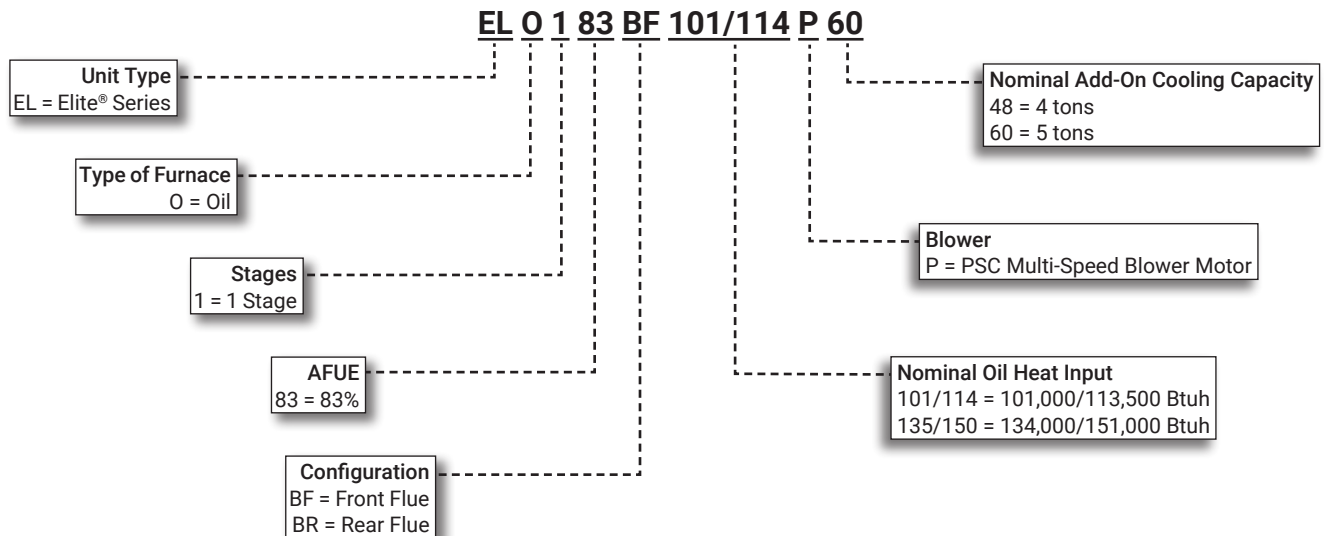
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ELITE®
SERIES



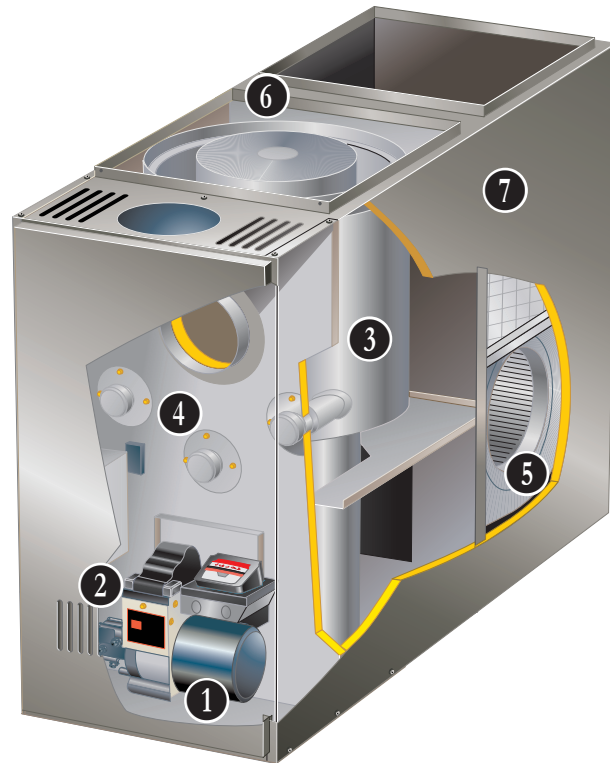
AFUE - 83%
Heating Input - 101,000 to 151,000 Btuh
Nominal Add-on Cooling - 2.5 to 5 Ton

MODEL NUMBER IDENTIFICATION



FEATURE HIGHLIGHTS

1. Beckett™ Flame-Retention AFG Oil Burner
2. Advanced Burner Control
3. EZ Clean Heat Exchanger
4. Strategically Placed Cleaning Ports
5. Four-Speed Direct Drive Blower
6. Supply And Return Air Openings On Top Of Unit
7. Heavy Gauge Steel Cabinet



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APPROVALS AND WARRANTY

APPROVALS

- AHRI Certified
- ETL-Intertek listed
- Tested and rated according to US DOE test procedures and FTC labeling regulations
- Oil furnaces comply with US DOE Fan Efficiency Rating (FER) regulations

WARRANTY

- Heat Exchanger:
 - Limited lifetime (twenty year transferable) in residential applications
 - Limited ten years in non-residential applications
- Oil Burner and all other covered components:
 - Limited five years in residential installations
 - Limited one year in non-residential installations

NOTE - Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

FEATURES

APPLICATIONS

- Compact cabinet
- Approved for reduced clearances to combustibles.
- Lennox add-on indoor coils, high-efficiency air cleaners and humidifiers can easily be added to furnace
- Shipped factory assembled including the oil burner, with all controls installed and wired
- Factory test operated to ensure proper operation
- Features large front and rear doors providing complete service access

HEATING SYSTEM

1 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
- 120VAC primary safety control and cerac glazed electrodes which provide a safe continuous flame
- 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

NOTE - Units are shipped for lower heating capacity operation.
Nozzle must be field provided for field conversion to higher heating capacity.

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 recycle)
 - **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

FEATURES

HEATING SYSTEM (continued)

- 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

- 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
- 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

- See Specifications table for order number

BLOWER

- 5 • Quiet, four-speed, direct drive blower
- 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
- See blower data tables
- Change in blower speed with simple wiring change

CABINET

- Lo-Boy models have a lower profile than standard upflow oil furnaces
- 6 • Supply and return air openings are on the top of the unit
- Pre-painted, textured finish
- 7 • Heavy gauge steel
- 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

Flue Outlet

- **Front Flue Models** - Flue outlet is located on top of cabinet

NOTE - Flue can be relocated to either side of cabinet.

- **Rear Flue Models** - Flue is installed away from indoor coils and air cleaners
- See dimension drawings

Filter

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

CONTROLS

Transformer and Terminal Strip

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

Fan and Limit Control

- Factory installed on vestibule panel
- Time-start fan control assures proper blower operation
- Adjustable blower off temperature setting
- Control turns blower on 60 to 90 seconds after thermostat demand
- Limit control has fixed temperature setting
- 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

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
		¹ High Fire	113,500	151,000
	Output - Btuh	Low Fire	85,000	113,000
		¹ High Fire	95,000	127,000
		² 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	.85
		¹ 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	3/4
	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
³ 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)		83W32	83W32
Oil Filters	10 micron with mounting bracket	53P92	53P92
	Filter restriction indicator gauge	53P90	53P90
Two-Stage Oil Pump	with solenoid	71M18	71M18

¹ Nozzle must be field provided for field conversion to higher heating input.

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

³ 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

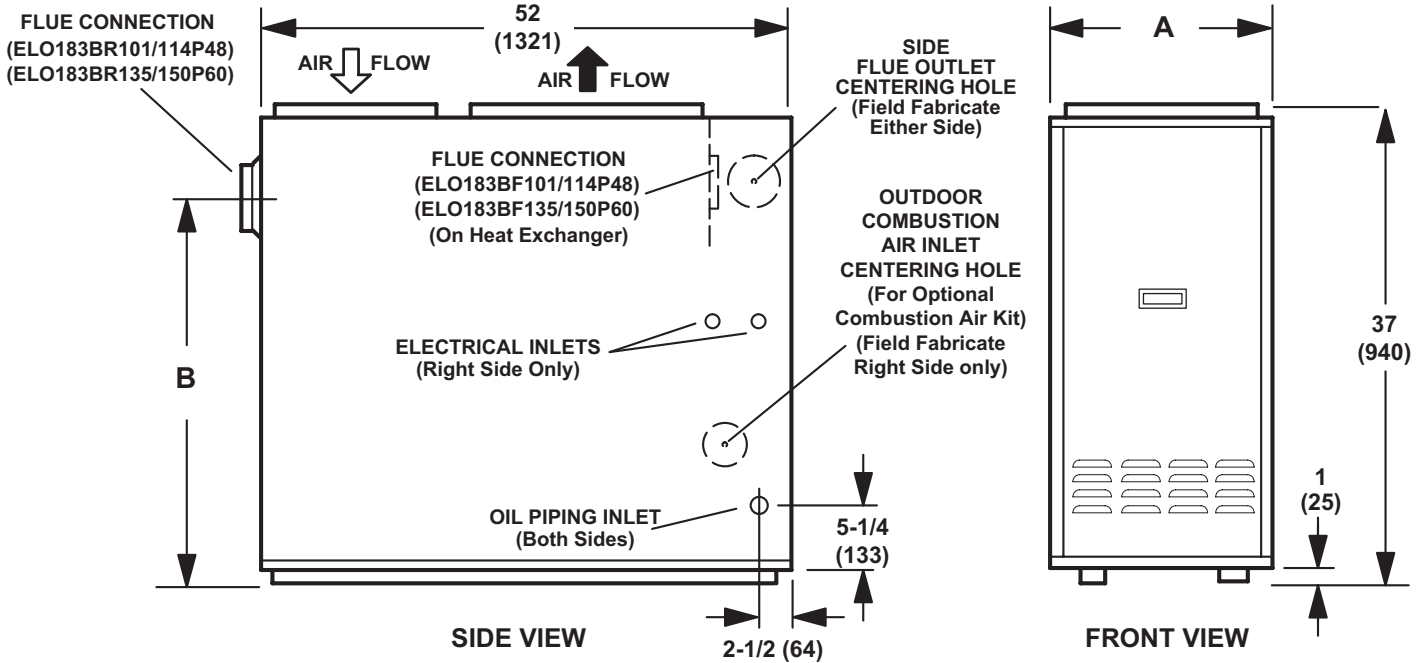
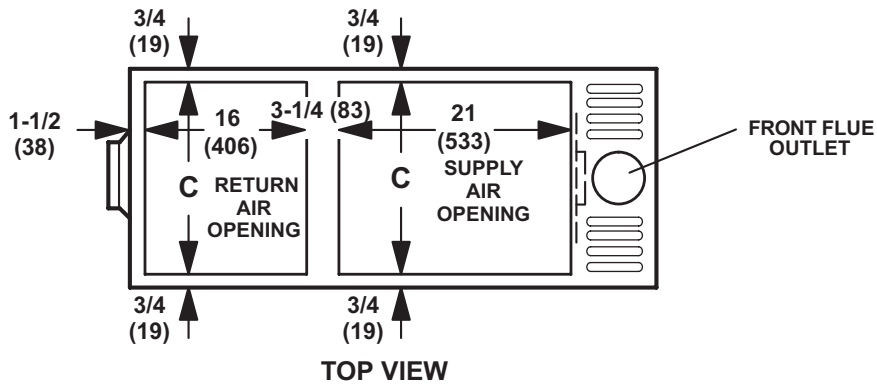
NOTE - All air data is measured external to the unit with the air filter in place.

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
Approvals	Added US DOE Fan Efficiency Rating (FER) regulations approval.



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For the latest technical information, www.LennoxPros.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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