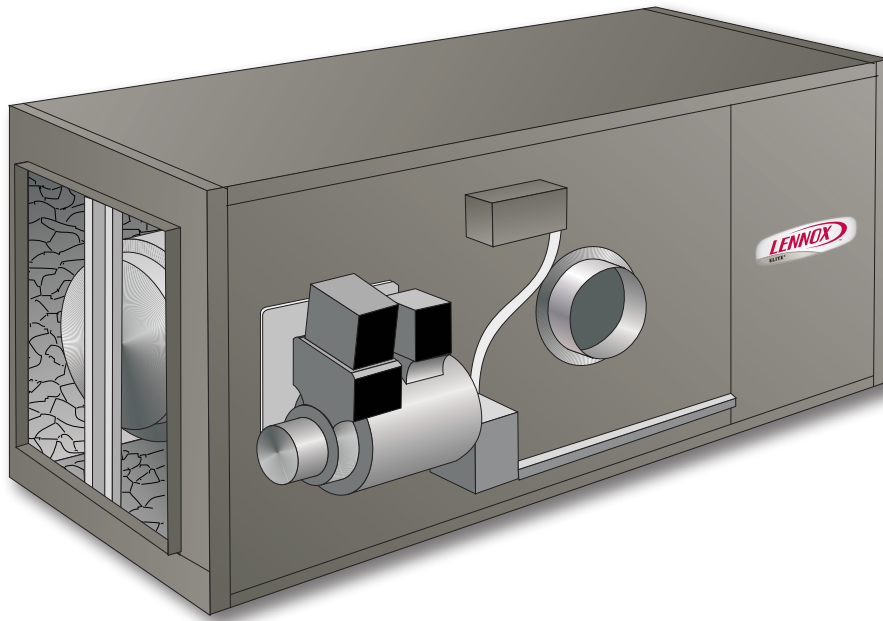




**OIL FURNACES**  
**ELO183DH**  
**ELITE® SERIES**  
**Horizontal/Downflow**

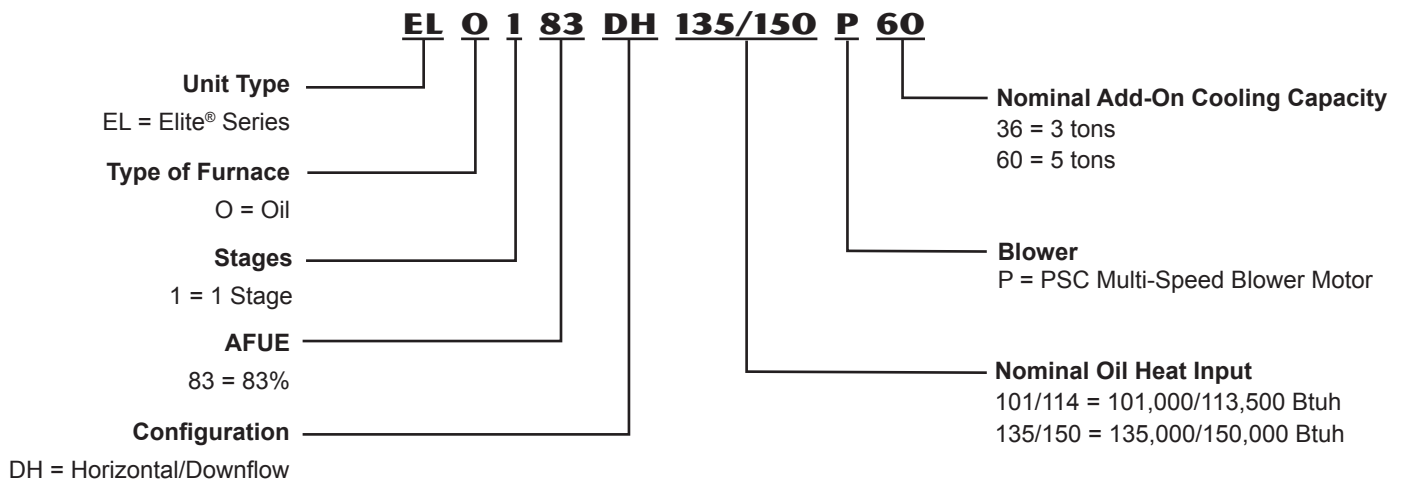
**PRODUCT SPECIFICATIONS**

Bulletin No. 210630  
July 2012



**AFUE - 83%**  
**Heating Input - 101,000 to 150,000 Btuh**  
**Nominal Add-on Cooling - 3 to 5 Ton**

**MODEL NUMBER IDENTIFICATION**



## FEATURES

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### EQUIPMENT 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

Designed to be installed in either the horizontal or downflow position.

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

Designed for reduced clearances to combustibles.

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

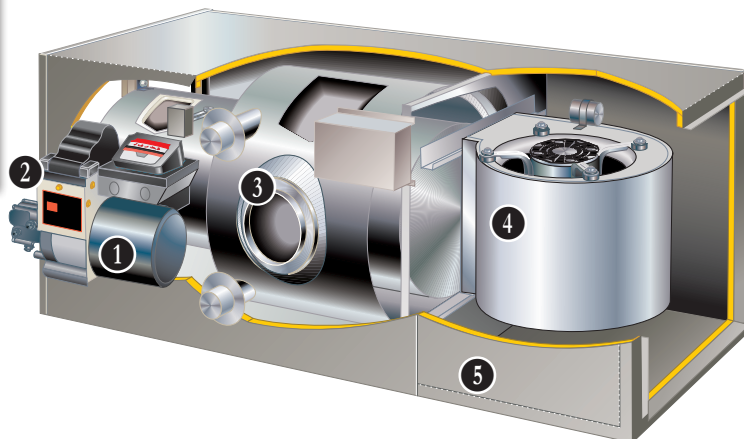
Quiet operating blowers have sufficient capacity to handle add-on cooling air volume requirements.

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

Factory test operated ensuring proper operation after shipment.

Can be installed on a slab or suspended in a crawl space, utility room or furnace room. Units are not approved for attic installations.

Optional Downflow Combustible Flooring Base is available for installation in the downflow position on combustible floors.



### 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.

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 must be field 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 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

#### 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.

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.

### OPTIONS

#### 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.

#### 4 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.

#### 5 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.

Units are shipped for horizontal installation with left hand air discharge. For field change to right hand air discharge, rotate unit 180° end for end, and reposition burner and flue connection.

For conversion to downflow position, turn unit on end and reposition burner.

All models have knockouts provided in cabinet for suspending in horizontal position. See dimension drawing.

#### Flue Outlet

The flue is located on the front of the unit.

### OPTIONS

#### Downflow Combustible Flooring Base

Additive base is required for heating only units installed in the downflow position on combustible floors. Not required in add-on cooling applications.

Base must be ordered separately for field installation. See Specification table and 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 in opening on front of cabinet. 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.

### **OPTIONS**

#### **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**

Filters are not furnished and must be ordered separately.

### **OPTIONS**

#### **Filter Kit**

Filter kit is available for field installation. See Specifications table for order number.

The kit for ELO183DH101/114P36 is mounted internally and contains filter rails, stiffening rods and washable polyurethane filters.

The kit for ELO183DH135/150P60 is mounted externally and contains filter cabinet, support rods and washable polyurethane filters.

## SPECIFICATIONS

Oil Heating Performance		Model Number	ELO183DH101/114P36	ELO183DH135/150P60
Oil Heating Performance	Input - Btuh	Low Fire	101,000	135,000
		<sup>1</sup> High Fire	113,500	150,000
	Output - Btuh	Low Fire	85,000	113,000
		<sup>1</sup> High Fire	95,000	126,000
		<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 - gph	Low Fire	.65	.85
		<sup>2</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
Indoor Blower	Blower Motor Output - hp		1/2	3/4
	Nominal add-on cooling - Tons		2 to 3	3 to 5
	Blower wheel nom. diameter x width - in.		10 x 10	12 x 9
Shipping weight - lbs. 1 package			250	270
Electrical	Characteristics		120V-60hz-1ph	120V-60hz-1ph
	Maximum Overcurrent Protection (amps)		15	15
<b>OPTIONAL ACCESSORIES - ORDER SEPARATELY</b>				
Downflow Combustible Flooring Base			<b>35K07</b>	<b>35K08</b>
Filter Kit			<b>35K05</b>	<b>35K06</b>
	Number & size of filters - in.		(2) 10-1/4 x 20-1/2 x 1	(2) 11-3/4 x 23-1/2 x 1
Oil Filters	10 micron without mounting bracket		<b>81P89</b>	<b>81P89</b>
	10 micron with mounting bracket		<b>53P92</b>	<b>53P92</b>
	Replacement cartridge - 10 micron, 45 gph		<b>53P93</b>	<b>53P93</b>
	Filter restriction indicator gauge		<b>53P90</b>	<b>53P90</b>
Two-Stage Oil Pump	without solenoid		<b>65A44</b>	<b>65A44</b>
	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.

## BLOWER DATA

### ELO183DH101/114P36 BLOWER PERFORMANCE

External Static Pressure (in. w.g.)	Air Volume at Various Blower Speeds - cfm			
	High	Medium-High	Medium	Low
.20	1410	1340	1235	1090
.30	1320	1280	1175	1035
.40	1280	1190	1090	975
.50	1195	1100	1015	900
.60	1090	1015	920	855
.70	1000	900	845	770
.80	850	801	730	665
.90	790	680	600	545

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

### ELO183DH135/150P60 BLOWER PERFORMANCE

External Static Pressure (in. w.g.)	Air Volume at Various Blower Speeds - cfm			
	High	Medium-High	Medium	Low
.20	2205	1770	1550	1295
.30	2120	1740	1530	1290
.40	2070	1745	1515	1280
.50	2005	1710	1485	1270
.60	1930	1640	1455	1255
.70	1850	1600	1405	1225
.80	1765	1515	1340	1170
.90	1675	1425	1300	1100

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

## INSTALLATION CLEARANCES

### HORIZONTAL

### DOWNFLOW

Approved for closet or alcove installation. When installing in a closet, two ventilation openings must be provided in the closet door; one 6 in. (152 mm) from the top and one 6 in. (152 mm) from the bottom. Each opening should be 7 x 14 in. (178 x 356 mm) for 101/114 models and 8 x 16 in. (203 x 406 mm) for 135/150 models

Top of Cabinet	3 in.	76 mm	Bottom of Plenum & Duct work	1 in.	25 mm
*Bottom & Rear of Cabinet	1 in.	25 mm	Plenum Sides	1 in.	25 mm
Front of Cabinet	24 in.	607 mm	Side of Cabinet	1 in.	25 mm
Service Clearance (Front)	24 in.	607 mm	Rear of Cabinet	1 in.	25 mm
End of Supply Plenum	0 in.	0 mm	Front of Cabinet	16 in.	406 mm
Supply Air Opening	0 in.	0 mm	Service Clearance (Front)	24 in.	610 mm
Return Air Opening	0 in.	0 mm	Flue Pipe Horizontal	1 in.	25 mm
Above Horiz. Warm Air Duct Within 3 ft. (1 m) of Furnace	0 in.	0 mm	Flue Pipe Vertical	7 in.	178 mm
Flue Pipe Horizontal	7 in.	178 mm	Return Air Opening	0 in.	0 mm
Flue Pipe Vertical	7 in.	178 mm	*Floor	*Combustible	*Combustible

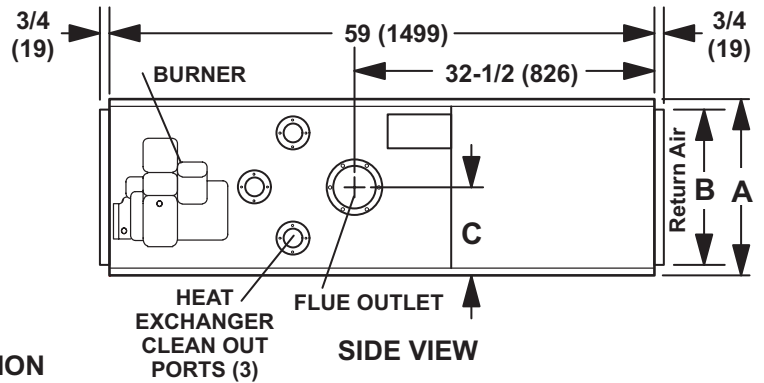
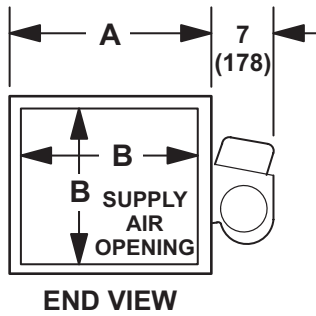
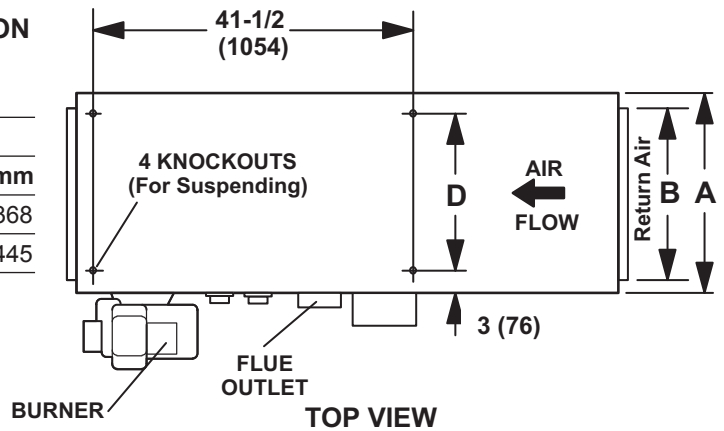
\*NOTE - When furnace is installed on combustible floor, 1 in. (25 mm) spacer legs must be installed to elevate unit off of mounting surface.

\*Clearance for installation on combustible floor if optional Downflow Combustible Flooring Base is installed between the furnace and combustible floor. Not required in add-on cooling applications.

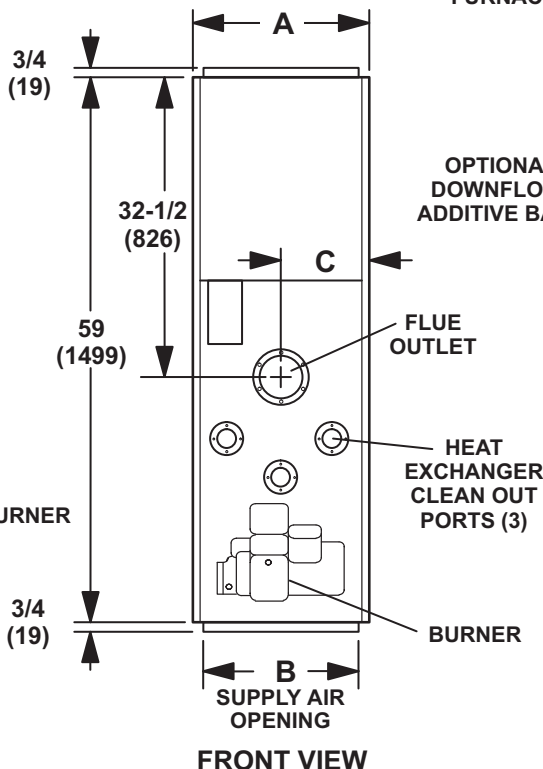
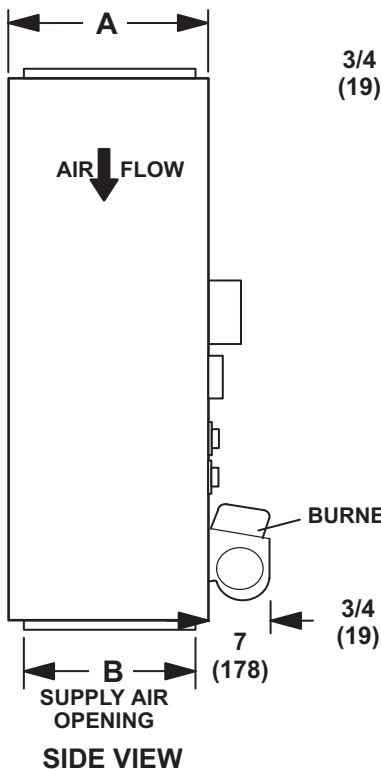
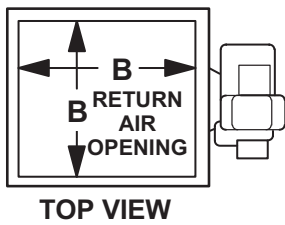
**DIMENSIONS - INCHES (MM)**

**HORIZONTAL POSITION**

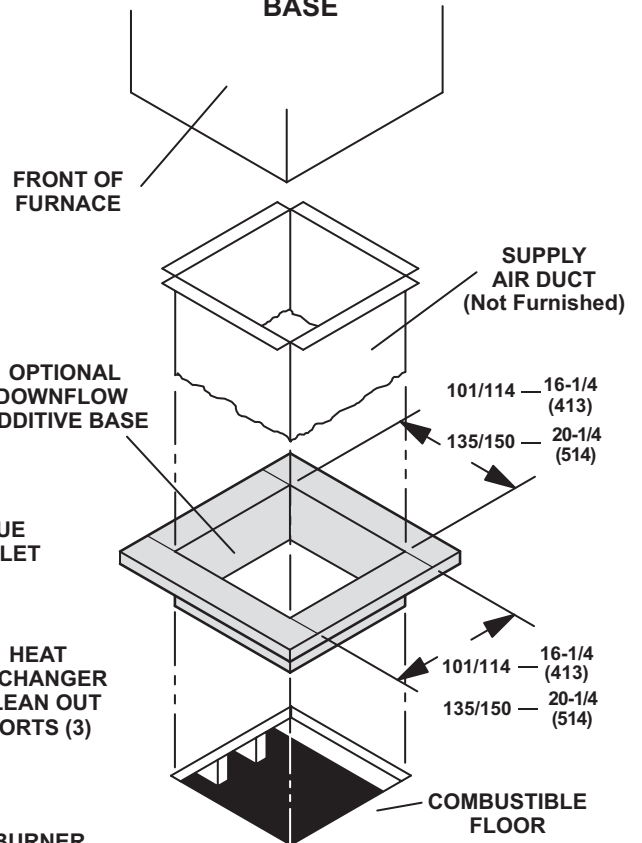
Model No.	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
ELO183DH101/114P36	20-1/2	521	18	457	10-1/4	260	14-1/2	368
ELO183DH135/150P60	23-1/2	597	21	533	11-3/8	289	17-1/2	445



**DOWNFLOW POSITION**



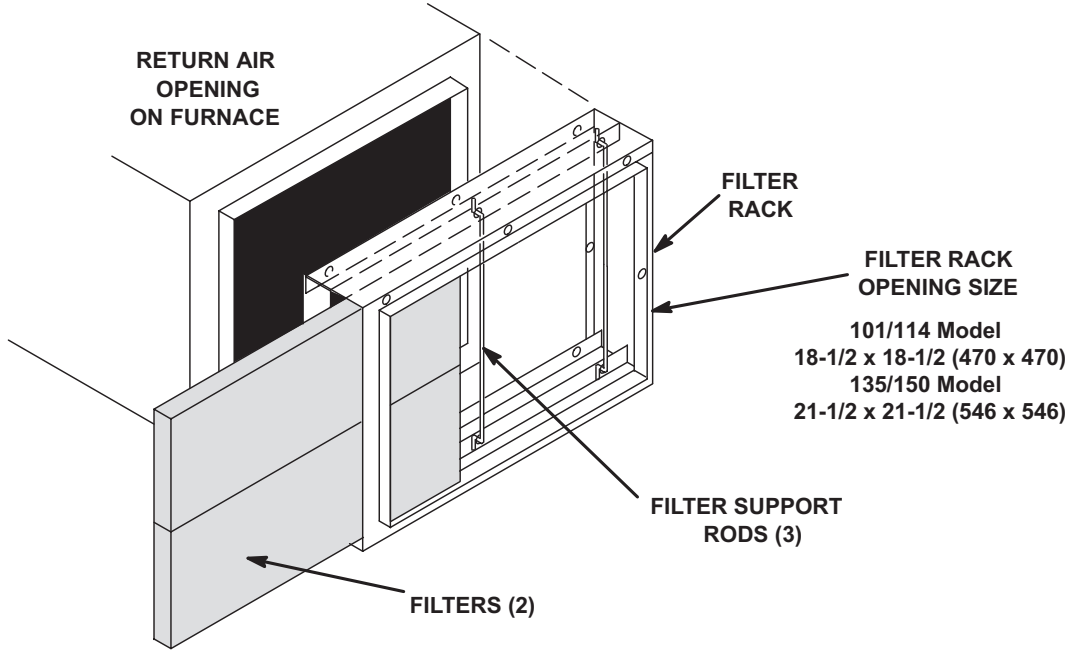
**OPTIONAL DOWNFLOW COMBUSTIBLE FLOOR BASE**



Additive Base Raises Furnace  
3/4 in. (19 mm) Inch above Floor Level

**ACCESSORY DIMENSIONS - INCHES (MM)**

**OPTIONAL FILTER KIT**



**Intertek**



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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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