



**OIL FURNACES**  
**SLO183UFV**  
DAVE LENNOX SIGNATURE® COLLECTION  
Upflow - Variable Speed Blower

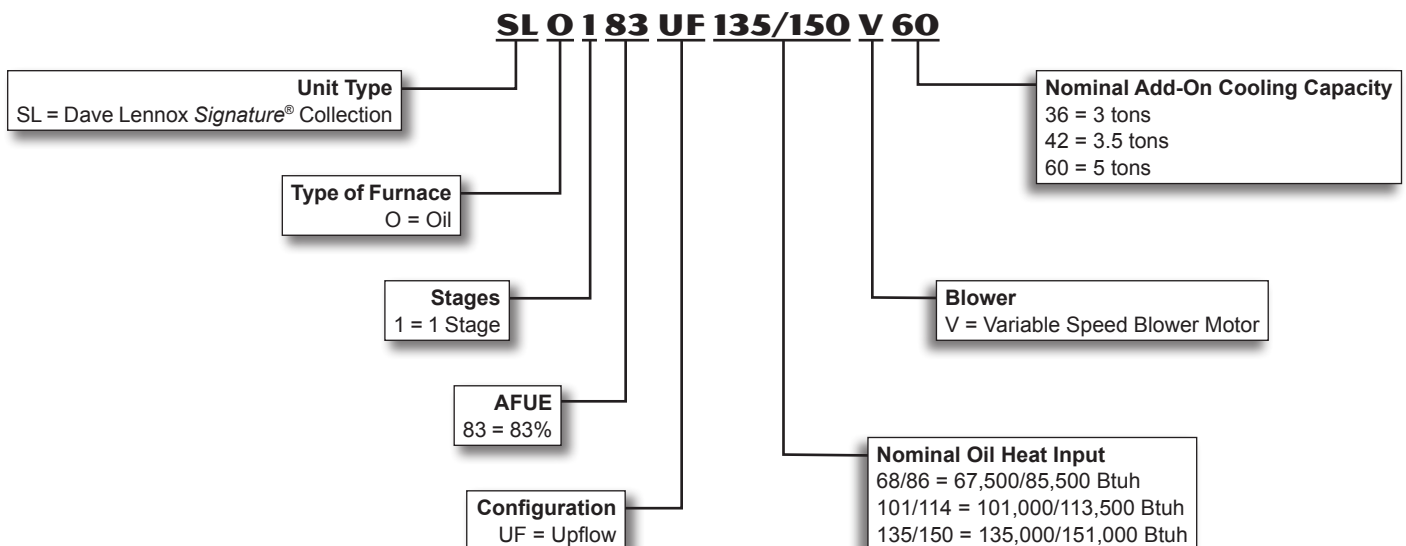
**PRODUCT SPECIFICATIONS**

Bulletin No. 210626  
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Supersedes September 2014



**AFUE - 83%**  
**Heating Input - 67,500 to 151,000 Btuh**  
**Nominal Add-on Cooling - 1.5 to 5 Ton**

**MODEL NUMBER IDENTIFICATION**



## FEATURES

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### EQUIPMENT WARRANTY

**Heat Exchanger** - Limited lifetime warranty in residential applications, ten years in non-residential applications.

**Oil Burners and all other covered components** - Ten year limited warranty in residential applications, one year in non-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.

Features side or bottom return air entry.

Allows installation in a basement, closet, recreation or utility room.

Approved for reduced clearances to combustibles.

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

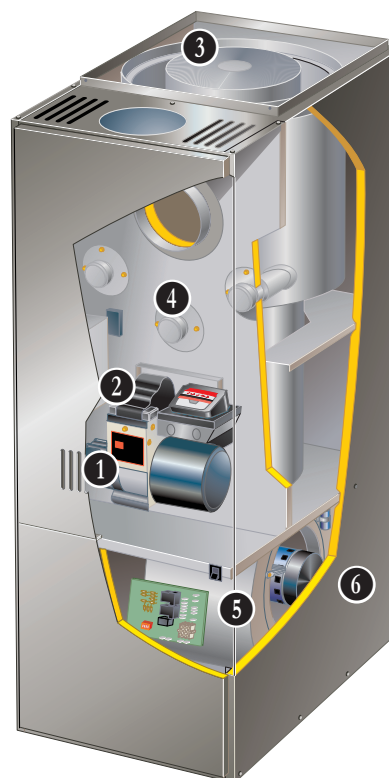
Quiet operating blowers have sufficient capacity to handle add-on cooling air volume requirements.

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

Factory test operated ensuring proper operation after shipment.

### Zoning Applications

Unit is not approved for zoning applications.



### 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 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.

#### 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

##### Variable Speed Direct Drive Blower

Each blower assembly statically and dynamically balanced.

Change in blower speed is easily accomplished by simple jumper change on blower control.

See Blower Performance tables.

Blower assembly easily removed for servicing.

#### 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.

Blower assembly slides completely out of unit for service.

Return air entry is possible on either side or bottom of cabinet.

#### Flue Outlet

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

#### Air Filter (Not Furnished)

Air filter and provisions for mounting are not furnished and must be field provided.

## FEATURES

### CONTROLS

#### Electronic Blower Control

HEAT and COOL settings (with four different air volume selections for cooling and two selection for heating) are made by jumper pins on board.

ADJUST jumper pin allows approximately 15% higher, normal or 15% lower motor speed selection within COOL speeds selected for fine tuning air volume. See Blower Data Tables.

**Single Stage Cooling Airflow Ramp Up** - At the beginning of a call for cooling, the variable speed blower will run at 82% of rated airflow for 7.5 minutes (passive dehumidification mode). After 7.5 minutes, the motor will increase to 100% of the rated airflow. When the call for cooling is satisfied, the blower ramps back down to 82% of the selected cooling airflow for 1 minute, then shuts off.

**Two-Stage Cooling Airflow Ramp Up** - At the beginning of a call for 1st stage cooling, the variable speed blower will run at 57% of rated airflow for 7.5 minutes of the 1st stage cooling demand (passive dehumidification mode). After 7.5 minutes, the motor will increase to 70% of the rated airflow until 1st stage cooling demand is satisfied. If 1st stage cooling is not satisfied a call for 2nd stage cooling is made. The blower motor runs for 100% of rated air volume until the demand is satisfied. When the call for cooling is satisfied, the blower ramps back down to 57% of the selected cooling airflow for 1 minute, then shuts off.

**Passive and Active Dehumidification** - For situations where humidity control is an issue, the variable speed motor can operate at 82% of the rated airflow for 7.5 minutes. After 7.5 minutes the blower operates at 100% of rated air volume.

For additional dehumidification the variable speed motor control provides for connection of a thermostat with humidity control or a humidistat on the HUM terminal. When connected, the dehumidify jumper on the control must be removed. The control should be wired to open during high humidity, which will reduce blower airflow.

#### Continuous Blower Operation

Continuous blower operation allows the blower to operate at 50% of rated cooling air volume without any cooling or heating demand (Fan "On" setting on thermostat).

#### Powered Air Cleaner Connections

Terminals are provided on the control for connection of a 120-volt powered air cleaner. The "EAC" terminal is energized whenever the thermostat calls for heat, cooling, or continuous blower.

#### Limit Control

Factory installed on vestibule panel.

Control has fixed temperature setting and protects unit from abnormal operating conditions.

#### Transformer

24 volt (40VA) control transformer with circuit breaker is furnished as standard and factory installed.

### Optional Accessories

#### ComfortSense® 7500 Touchscreen Thermostat

Electronic 7-day, universal, multi-stage, programmable, touchscreen thermostat.

4 Heat/2 Cool.

Dual-fuel control with optional outdoor sensor.

Controls dehumidification during cooling mode and humidification during heating mode.

Offers enhanced capabilities including humidification / dehumidification / dewpoint measurement and control, *Humiditrol*® control, and equipment maintenance reminders.

Easy-to-use, menu driven thermostat with a back-lit, LCD touchscreen.

See the ComfortSense 7500 Product Specifications bulletin in the Controls section for more information.



#### Remote Outdoor Temperature Sensor for ComfortSense® 7500 Thermostat

Allows the thermostat to display outdoor temperature. Required in dual-fuel and *Humiditrol*® applications.

#### Thermostat

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

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

## SPECIFICATIONS

		Model Number	SLO183UF68/86V36	SLO183UF101/114V42	SLO183UF135/150V60
<b>Oil Heating Performance</b>	Input - Btuh	Low Fire	67,500	101,000	135,000
		<sup>1</sup> High Fire	85,500	113,500	151,000
	Output - Btuh	Low Fire	57,000	84,000	113,500
		<sup>1</sup> High Fire	72,000	95,000	126,000
		<sup>2</sup> AFUE	83%	83%	83%
		Flue Size Diameter - in.	6	6	6
		Temperature rise range	50 - 80°F	50 - 80°F	55 - 85°F
<b>Oil Burner</b>	Nozzle rating - US gph	Low Fire	.50	.65	.85
		<sup>1</sup> High Fire	.65	.75	1.00
	Nozzle spray angle	Low Fire	80° hollow	80° solid	80° solid
		<sup>1</sup> High Fire	80° solid	80° solid	80° solid
		Oil Burner Pump	1 Stage	1 Stage	1 Stage
		Oil Burner Pump Pressure - psig	100	140	140
		Air Inlet Connection (diameter) - in.	4	4	4
<b>Indoor Blower</b>	Blower Motor Output - hp		1/2	1/2	3/4
	Nominal add-on cooling - Tons		1.5 thru 3	2.5 thru 3.5	3 thru 5
	Blower wheel nom. diameter x width - in.		10 x 8	10 x 10	12 x 11
<b>Shipping weight - lbs. 1 package</b>			230	250	270
<b>Electrical</b>	Characteristics		120V-60hz-1ph	120V-60hz-1ph	120V-60hz-1ph
	Maximum time delay breaker or fuse size		15 Amps	15 Amps	15 Amps
<b>OPTIONAL ACCESSORIES - ORDER SEPARATELY</b>					
<b>Combustion Air Boot (4 in. diameter)</b>			<b>83W32</b>	<b>83W32</b>	<b>83W32</b>
<b>ComfortSense® 7500 Thermostat</b>			<b>13H14</b>	<b>13H14</b>	<b>13H14</b>
<b>Remote Outdoor Temperature Sensor</b> (for dual fuel and Humiditrol® control)			<b>X2658</b>	<b>X2658</b>	<b>X2658</b>
<b>Oil Filters</b>	10 micron without mounting bracket		<b>81P89</b>	<b>81P89</b>	<b>81P89</b>
	10 micron with mounting bracket		<b>53P92</b>	<b>53P92</b>	<b>53P92</b>
	Replacement cartridge - 10 micron, 45 gph		<b>53P93</b>	<b>53P93</b>	<b>53P93</b>
	Filter restriction indicator gauge		<b>53P90</b>	<b>53P90</b>	<b>53P90</b>
<b>Two-Stage Oil Pump</b>			<b>65A44</b>	<b>65A44</b>	<b>65A44</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

### SLO183UF68/86V36 BLOWER PERFORMANCE 0 through 0.80 in. w.g. External Static Pressure Range

"ADJUST" Jumper Setting	Jumper Speed Positions					
	"HEAT" Speed		"COOL" Speed			
	C (86)	D (68)	A	B	C	D
	cfm	cfm	cfm	cfm	cfm	cfm
+	1000	750	1350	1200	1000	700
NORM	1000	750	1200	1000	800	600
-	1000	750	1050	850	700	540

NOTE - Continuous Fan air volume is 50% of COOL speed.

### SLO183UF101/114V42 BLOWER PERFORMANCE 0 through 0.80 in. w.g. External Static Pressure Range

"ADJUST" Jumper Setting	Jumper Speed Positions					
	"HEAT" Speed		"COOL" Speed			
	C (120)	D (105)	A	B	C	D
	cfm	cfm	cfm	cfm	cfm	cfm
+	1300	1200	1500	1400	1200	1000
NORM	1300	1200	1400	1200	1000	800
-	1300	1200	1200	1000	900	650

NOTE - Continuous Fan air volume is 50% of COOL speed.

### SLO183UF135/150V60 BLOWER PERFORMANCE 0 through 0.80 in. w.g. External Static Pressure Range

"ADJUST" Jumper Setting	Jumper Speed Positions					
	"HEAT" Speed		"COOL" Speed			
	B (150)	D (135)	A	B	C	D
	cfm	cfm	cfm	cfm	cfm	cfm
+	1730	1400	2000	2000	1800	1600
NORM	1730	1400	2000	1800	1600	1200
-	1730	1400	1700	1550	1400	1200

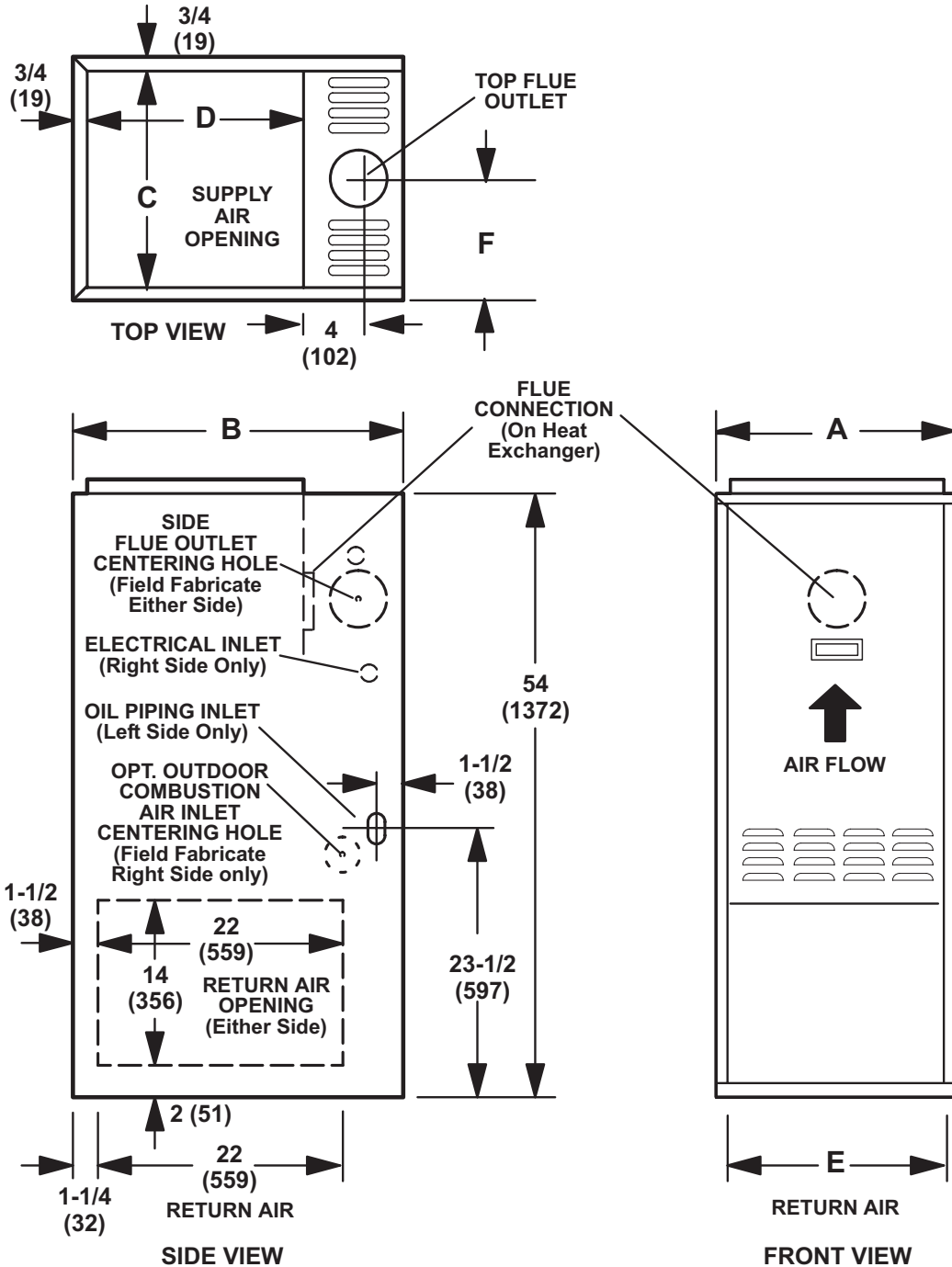
NOTE - Continuous Fan air volume is 50% of COOL speed.

## 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).

Top of Cabinet	2 in.	51 mm
Sides & Rear of Cabinet	0 in.	0 mm
Front of Cabinet	4 in.	102 mm
Service Clearance (Front)	24 in.	610 mm
Top of Plenum	2 in.	51 mm
Sides of Plenum	3 in.	76 mm
Horizontal Warm Air Duct within 3 feet (1 m) of furnace	2 in.	51 mm
Flue Pipe Vertical or Horizontal	6 in.	152 mm
Floor	Combustible	Combustible

# DIMENSIONS - INCHES (MM)



Model No.	A		B		C		D		E		F	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
SLO183UF68/86V36 SLO183UF101/114V42	19-1/2	495	30-5/8	778	18	457	19-5/8	498	16	406	9-3/4	248
SLO183UF135/150V60	22-1/2	572	33-1/8	841	21	533	22-1/8	562	18	457	11-1/4	286

## REVISIONS

Sections	Description of Change
Optional Accessories	Added new ComfortSense® 7500 thermostat.



Visit us at [www.lennox.com](http://www.lennox.com)

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