



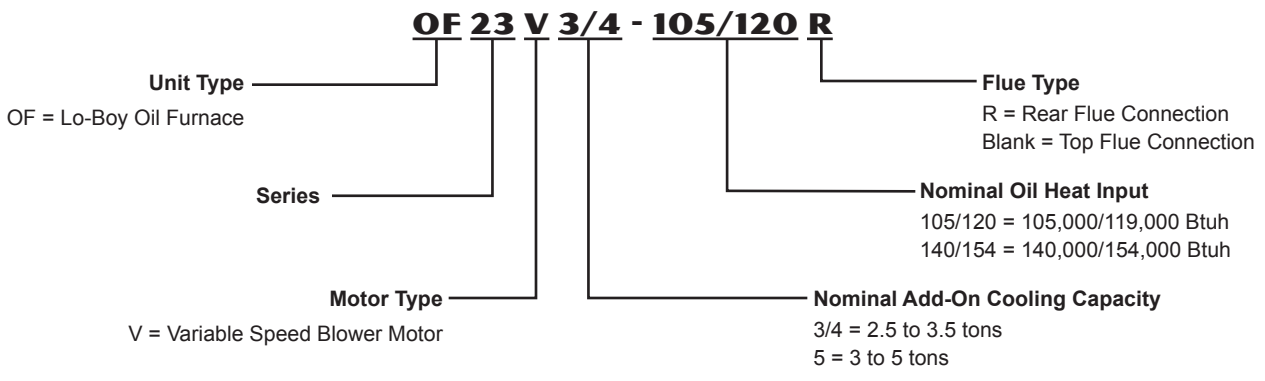
PRODUCT SPECIFICATIONS

Bulletin No. 210607
April 2011



AFUE - 81%
Heating Input - 105,000 to 154,000 Btuh
Nominal Add-on Cooling - 2.5 to 5 Tons

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 - Ten 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

Lennox OF23V series lo-boy oil furnaces are applicable to residential or commercial applications.

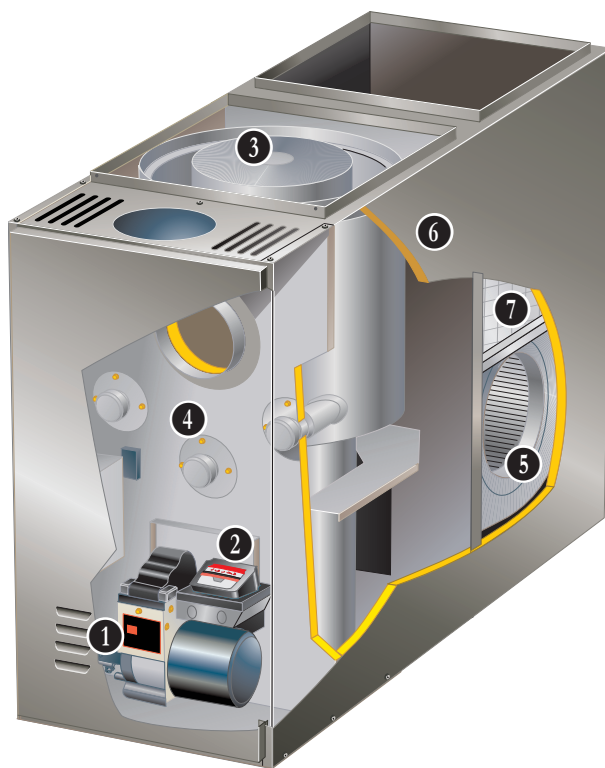
Lennox indoor units matched with high-efficiency air conditioners, air cleaners and humidifiers can be added to the lo-boy units.

Large front and rear doors provide complete service access.

Blowers have sufficient capacity to handle cooling air volume requirements.

Heat exchanger and high-performance oil burner combine to provide maximum efficiency.

Units are shipped completely assembled ready for installation.



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.

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.

OPTIONS

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.

BLOWER

5 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.

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.

OPTIONS

ComfortSense® 7000 Touchscreen Thermostat

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

4 Heat/2 Cool.

Auto-changeover.

Controls humidity during cooling 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.

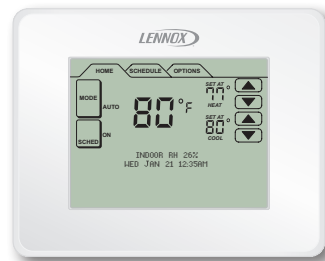
Remote outdoor temperature sensor (optional) allows the thermostat to display outdoor temperature. Required in dual-fuel and Humiditrol® applications.

See the ComfortSense® 7000 Product Specifications bulletin in the Controls section for more information.

Thermostat

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

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



CABINET

- 6 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 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 gives complete service access to blower.

Blower compartment is completely insulated.

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

INDOOR AIR QUALITY

- 7 Filter

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

SPECIFICATIONS

Oil Heating Performance	Model Number	Top Flue Rear Flue	OF23V3/4-105/120	OF23V5-140/154
			OF23V3/4-105/120R	OF23V5-140/154R
Input - Btuh	Low Fire	Low Fire	105,000	140,000
		² High Fire	120,000	154,000
Output - Btuh	Low Fire	Low Fire	85,000	113,000
		² High Fire	97,000	125,000
		¹ AFUE	81.0%	81.0%
		Flue Size Diameter - in.	6	6
		Temperature rise range	50 - 80°F	50 - 80°F Rear Flue 45 - 70°F Top Flue
Oil Burner	Nozzle rating - gph	Low Fire	.65	.85
		² High Fire	.75	1.00
	Nozzle spray angle		80°B solid	80°B solid
	Oil Burner Pump		1 Stage	1 Stage
	Oil Burner Pump Pressure - psig		140	140
Indoor Blower	Blower Motor Output - hp		1/2	1
	Nominal add-on cooling - Tons		2.5 thru 3.5	3 thru 5
	Blower wheel nom. diameter x width - in.		10 x 9	12 x 10
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			255	290
Electrical	Characteristics		120V-60hz-1ph	120V-60hz-1ph
	Maximum Overcurrent Protection (amps)		15	15

OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA

Combustion Air Boot (4 in. diameter)		83W32	83W32
ComfortSense® 7000 Thermostat		Y2081	Y2081
Remote Outdoor Temperature Sensor (for dual fuel and Humiditrol® control)		X2658	X2658
Oil Filters	10 micron without mounting bracket	81P89	81P89
	10 micron with mounting bracket	53P92	53P92
	Replacement cartridge - 10 micron, 45 gph	53P93	53P93
	Filter restriction indicator gauge	53P90	53P90
Two-Stage Oil Pump	without solenoid	65A44	65A44
	with solenoid	71M18	71M18

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

² Nozzle 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 space; one 6 in. from the top and one 6 in. from the bottom. Each opening should be 8 x 16 inches.

Sides of cabinet	6 in.
Rear of cabinet	24 in.
Front of cabinet	4 in.
Service Clearance (Front)	24 in.
Service Clearance (Rear)	24 in.
Floor	0 in.
Top of plenum	2 in.
Plenum sides	3 in.
Flue pipe horizontal	9 in.
Horizontal warm air duct within 3 feet of furnace	2 in.

BLOWER DATA

OF23V3/4-105/120(R) BLOWER PERFORMANCE 0 through 0.80 in. w.g. External Static Pressure Range

"ADJUST" Jumper Setting	Jumper Speed Positions					
	"HEAT" Speed		"COOL" Speed			
	B	D	A	B	C	D
	cfm	cfm	cfm	cfm	cfm	cfm
+	N/A	N/A	1500	1400	1200	950
NORM	1450	1200	1400	1200	1000	800
-	N/A	N/A	1200	1050	860	650

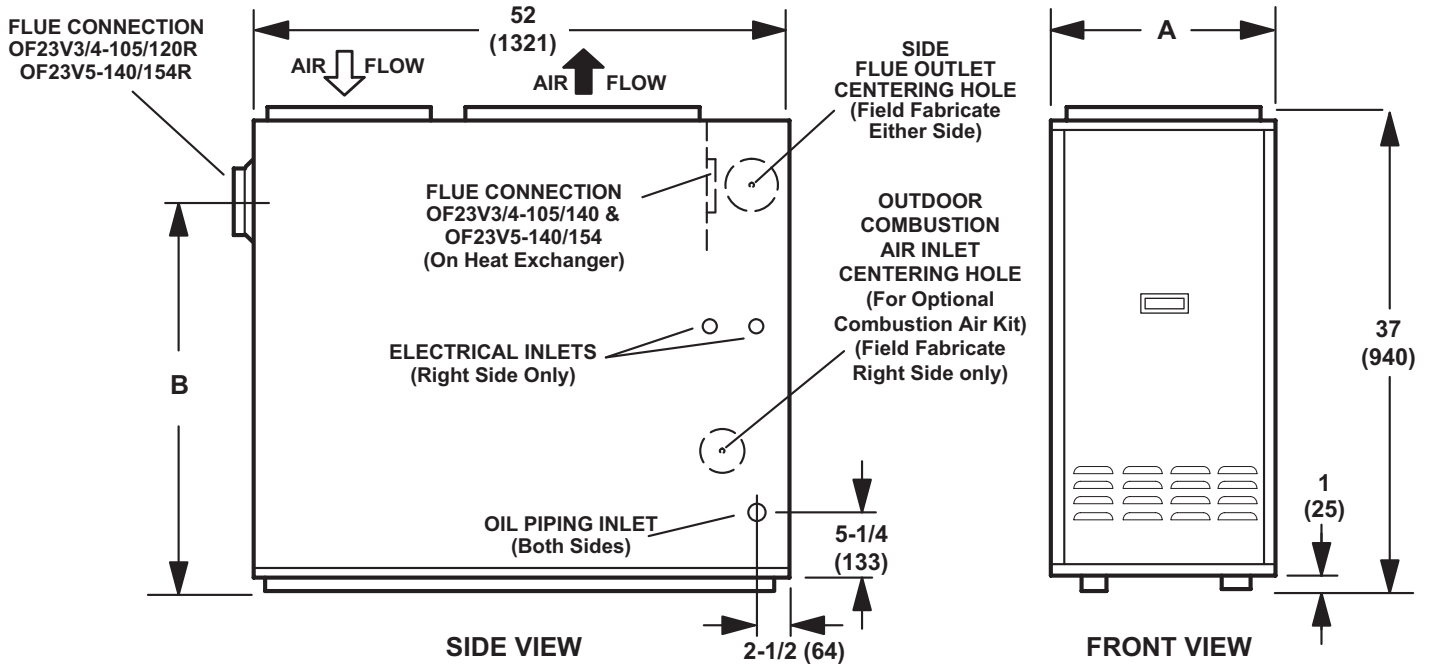
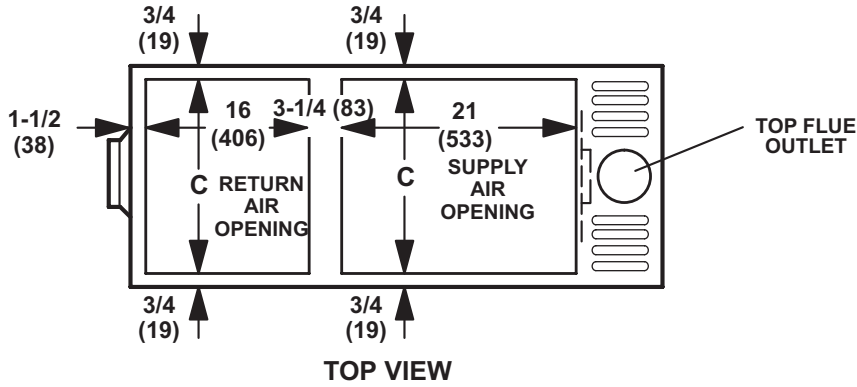
NOTE - Continuous Fan air volume is 50% of COOL speed.

OF23V5-140/154(R) BLOWER PERFORMANCE 0 through 0.80 in. w.g. External Static Pressure Range

"ADJUST" Jumper Setting	Jumper Speed Positions					
	"HEAT" Speed		"COOL" Speed			
	B	D	A	B	C	D
	cfm	cfm	cfm	cfm	cfm	cfm
+	N/A	N/A	2100	2000	1800	1350
NORM	1730	1450	2000	1800	1600	1200
-	N/A	N/A	1650	1500	1350	950

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

DIMENSIONS - INCHES (MM)



Model No.	A		B		C	
	in.	mm	in.	mm	in.	mm
OF23V3/4-105/120	19-1/2	495	---	---	18	457
OF23V3/4-105/120R	19-1/2	495	27-5/8	702	18	457
OF23V5-140/154	22-1/2	572	---	---	21	533
OF23V5-140/154R	22-1/2	572	27-5/8	702	21	533



Visit us at www.lennox.com

For the latest technical information, 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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