



PRODUCT SPECIFICATIONS

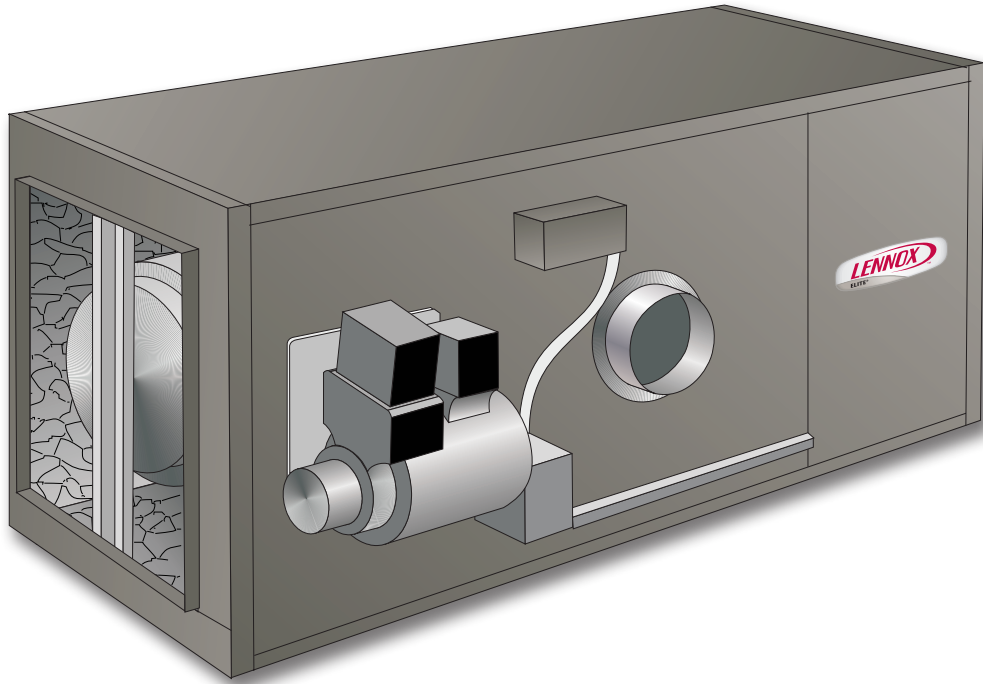
OIL FURNACES

OHR23

ELITE® SERIES

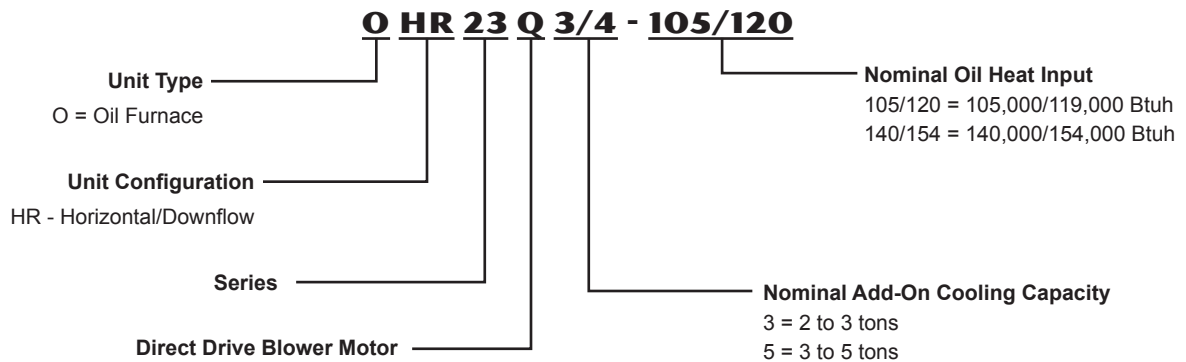
Horizontal/Downflow

Bulletin No. 210097
February 2011
Supersedes October 2010



AFUE - Up to 83.5%
Input - 105,000 to 154,000 Btuh
Nominal Add-on Cooling - 2 to 5 Tons

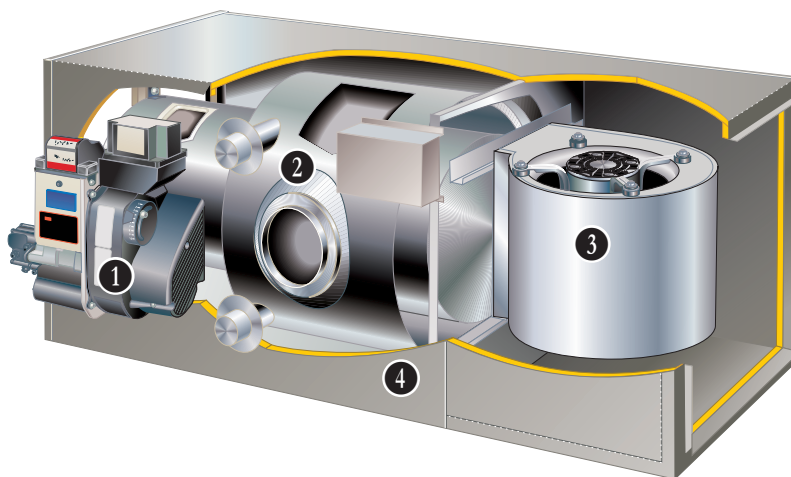
MODEL NUMBER IDENTIFICATION



FEATURES

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EQUIPMENT WARRANTY

Heat exchanger - limited lifetime warranty in residential applications, twenty years in non-residential applications.

Oil burner and all other covered components - limited five year 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 Federal Trade Commission (FTC) labeling regulations.

Units are certified by AHRI.

Units are ETL/Intertek listed.

Developed in accordance with ISO 9001 quality standards.

APPLICATIONS

Designed to be installed in either horizontal or downflow position.

Designed for reduced clearances to combustibles.

Optional additive floor base is available for installation in the downflow position on combustible floors.

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

Lennox add-on indoor coil, remote air conditioner, powered air cleaner and humidifier can easily be added to the furnace.

Each unit is completely factory assembled with all controls installed and wired.

HEATING SYSTEM

1 Beckett Flame-Retention 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 design features 4 in. connection to air inlet for optional outdoor combustion air.

Oil pump located on opposite side of air inlet to prevent any dirt accumulation from inlet air.

Burner has 14,000 volt ignition transformer 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.

2 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.

FEATURES

HEATING SYSTEM (CONTINUED)

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.

CONTROLS

Electronic Fan Timer Control

Furnished and factory installed in control box.

Board contains necessary controls to operate furnace.

Fan control consists of adjustable blower timed-off delay (60, 90, 120, 150 seconds) and fixed blower timed-on delay (30 seconds).

For air-conditioning applications, blower is automatically energized on thermostat demand for cooling.

Also included on board is a low voltage terminal strip for thermostat connections.

Terminal connections are available with additional power supply requirements for 120 volt (less than 4 amps) electronic air cleaners and humidifiers.

Continuous indoor air circulation terminal is also available as an option.

Limit Control

Factory installed in opening on front of furnace.

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

Barometric Draft Control

Furnished as standard equipment and field installed in flue pipe.

Transformer

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

OPTIONS

Thermostat

See Thermostat bulletins in Controls section and Lennox Price Book.

BLOWER

- ③ Units are equipped with quiet, direct drive blowers. All models have four-speed motors.

Blower slides out of unit for servicing.

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

A choice of blower speeds is available on each motor. See blower performance tables.

Blower speed adjustment is made with a simple change in wiring.

CABINET

- ④ Constructed of heavy gauge steel with a pre-painted, textured finish.

Entire heating section is lined with foil faced insulation, keeping cabinet surface temperatures low.

Large blower door allows complete service access to blower.

Blower compartment is fully 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.

OPTIONS

Downflow Combustible Flooring Base

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

Base must be ordered extra for field installation. See Specification table and dimension drawing.

FILTERS

Filters are not furnished and must be ordered extra.

Access is provided in blower compartment for filter removal and servicing on OHR23Q3-105/120 model.

OPTIONS

Filter Kit

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

Kit for OHR23Q3-105/120 is mounted internal to unit and contains filter rails, stiffening rods and washable polyurethane filters.

Kit for OHR23Q5-140/154 is mounted external to unit and contains filter cabinet, support rods and washable polyurethane filters.

SPECIFICATIONS

		Model Number	OHR23Q3-105/120	OHR23Q5-140/154
Oil Heating Performance	Input - Btuh - Low		105,000	140,000
		¹ High	120,000	154,000
	Output - Btuh - Low		85,000	113,000
		¹ High	97,000	125,000
	² AFUE - Low		81.8%	81.5%
		¹ High	81.3%	81.7%
Oil Burner	Nozzle Rating - US gph - Low		.65	.85
		¹ High	.75	1.00
	Nozzle Spray angle		80° solid	80° solid
	Flue Size Diameter - in.		6	6
	Oil Burner Pump		1 Stage	1 Stage
	Oil Burner Pump Pressure - psig		140	140
	Blower Data	Blower wheel nominal diameter x width - in.		10 x 10
Blower motor output - hp			1/2	3/4
Nominal cooling that can be added - Tons			2 to 3	3 to 5
Shipping weight - lbs. 1 package			225	265
Electrical characteristics		115V-60hz-1ph		

OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA

Downflow Combustible Flooring Base		35K07	35K08
Filter Kit	Catalog number	35K05	35K06
	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	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		65A44	65A44

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.

INSTALLATION CLEARANCES

HORIZONTAL

Top of Cabinet	3 in.
*Bottom & Rear of Cabinet	1 in.
Front of Cabinet	24 in.
Service Clearance (Front)	24 in.
End of Supply Plenum	0 in.
Supply Air Opening	0 in.
Return Air Opening	0 in.
Above Horiz. Warm Air Duct Within 3 ft. of Furnace	0 in.
Flue Pipe Horizontal	7 in.
Flue Pipe Vertical	7 in.

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. from the top and one 6 in. from the bottom. Each opening should be 7 x 14 in. for 105/120 models and 8 x 16 in. for 140/154 models

Bottom of Plenum & Duct work	1 in.
Plenum Sides	1 in.
Side of Cabinet	1 in.
Rear of Cabinet	1 in.
Front of Cabinet	16 in.
Service Clearance (Front)	24 in.
Flue Pipe Horizontal	1 in.
Flue Pipe Vertical	7 in.
Return Air Opening	0 in.
*Floor	*Combustible

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

*Clearance for installation on combustible floor if optional additive base is installed between the furnace and combustible floor. Not required in add-on cooling applications.

BLOWER DATA

OHR23Q3-105/120 BLOWER PERFORMANCE

External Static Pressure (in. w.g.)	Air Volume (cfm) at Various Blower Speeds			
	High	Medium-High	Medium	Low
.20	1485	1380	1230	1055
.30	1400	1305	1170	1020
.40	1305	1220	1110	970
.50	1210	1150	1000	910
.60	1105	1035	935	835
.70	995	930	845	755
.80	870	800	735	640
.90	740	670	595	505

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

OHR23Q3-100/154 BLOWER PERFORMANCE

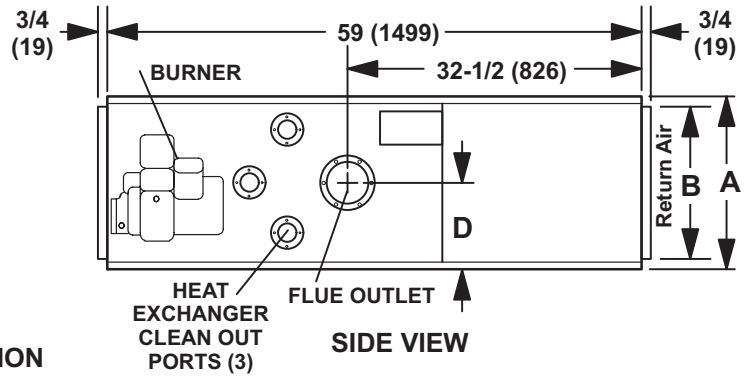
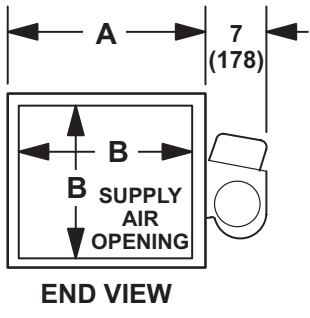
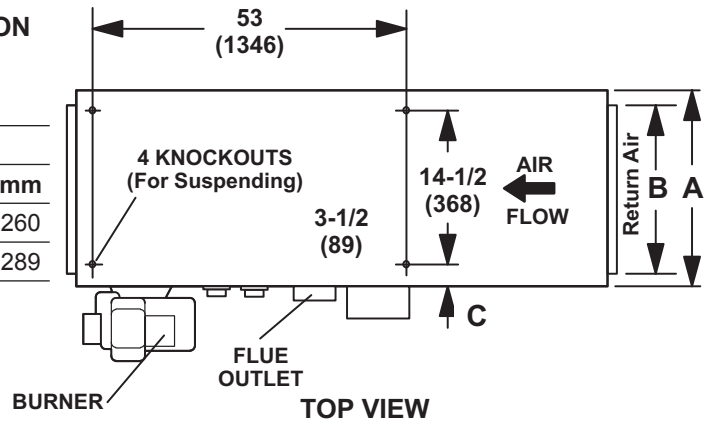
External Static Pressure (in. w.g.)	Air Volume (cfm) at Various Blower Speeds			
	High	Medium-High	Medium	Low
.20	2220	1780	1550	1355
.30	2140	1750	1505	1335
.40	2080	1705	1480	1300
.50	2000	1650	1440	1275
.60	1905	1580	1380	1225
.70	1795	1490	1320	1170
.80	1710	1410	1250	1075
.90	1590	1325	1175	1005

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

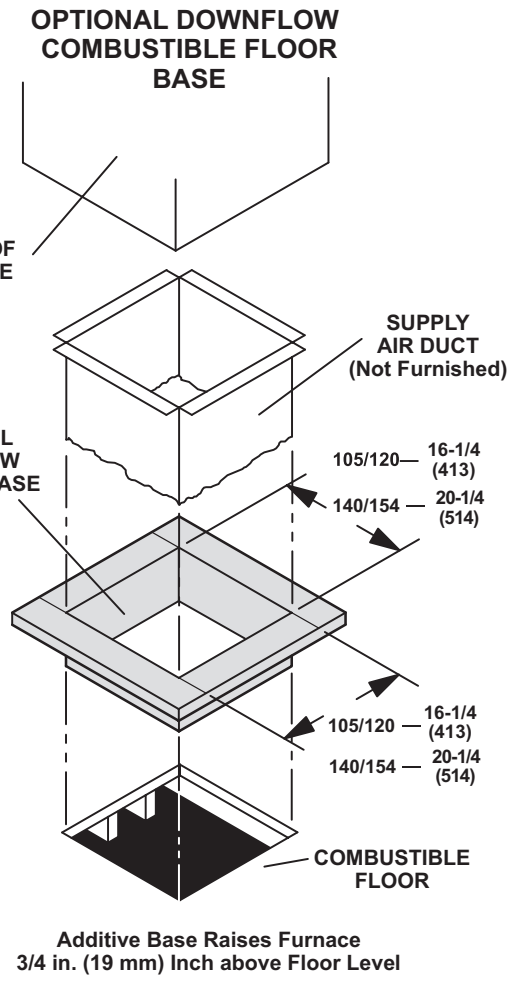
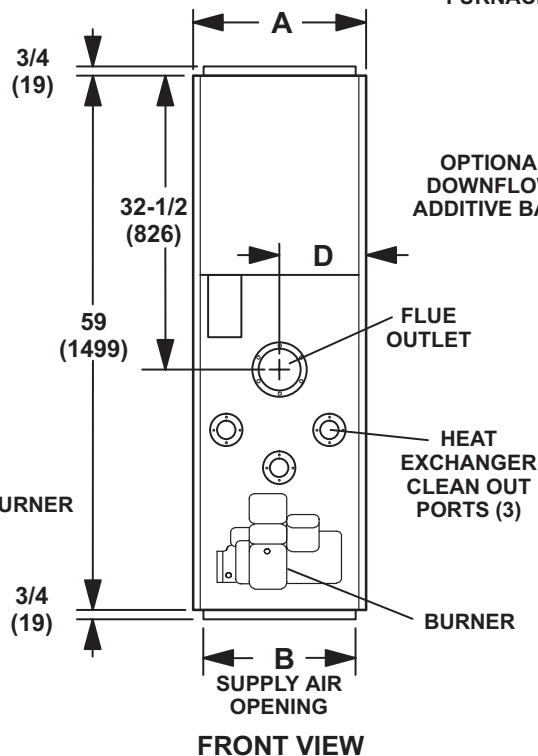
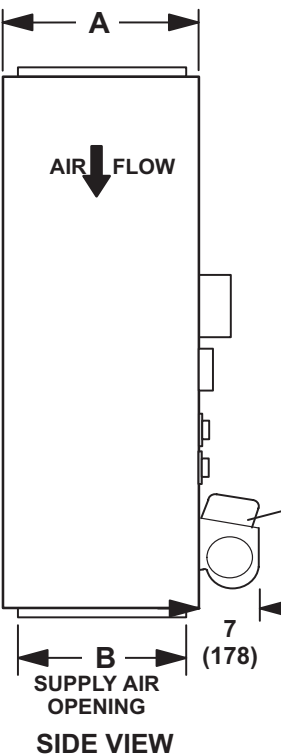
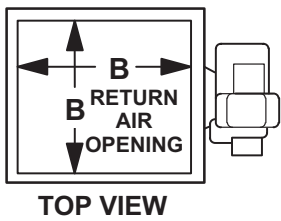
DIMENSIONS - INCHES (MM)

HORIZONTAL POSITION

Model No.	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
OHR23Q3-105/120	20-1/2	521	18	457	3	76	10-1/4	260
OHR23Q5-140/154	23-1/2	597	21	533	4-3/4	121	11-3/8	289

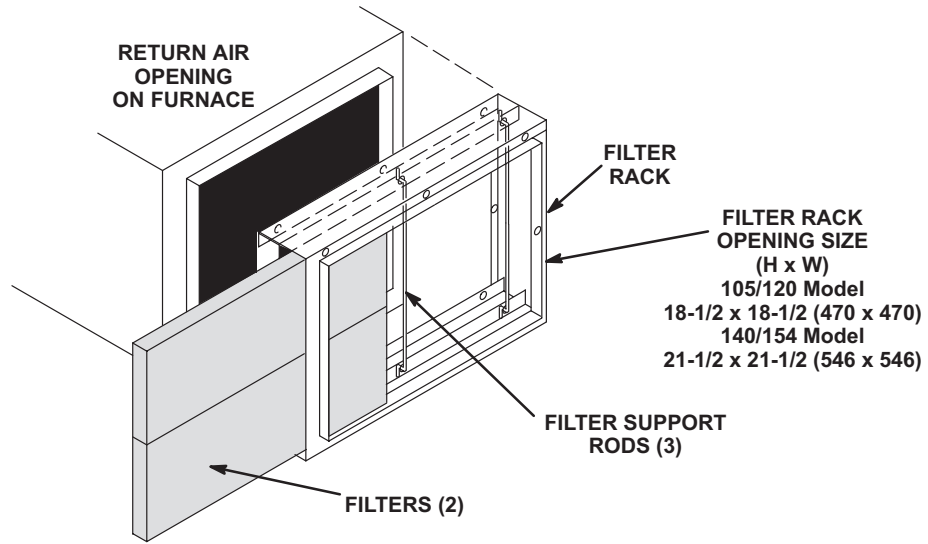


DOWNFLOW POSITION



ACCESSORY DIMENSIONS - INCHES (MM)

OPTIONAL FILTER KIT FOR OHR23Q3-120/105, OHR23Q5-140/154



REVISIONS

Sections	Description of Change
Optional Accessories	Removed Horizontal Venting Kit (obsolete).



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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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