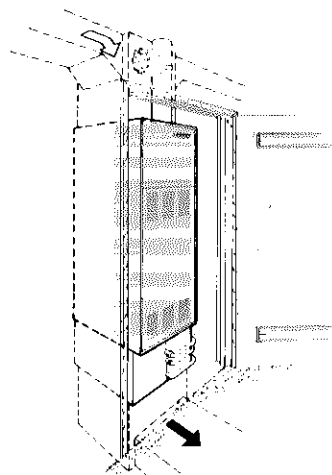


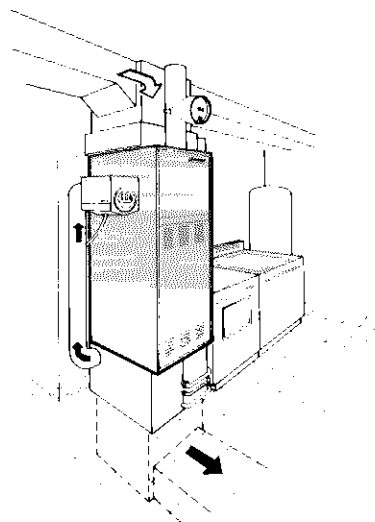


**O20R SERIES
DOWN-FLO OIL FURNACES**
105,000 to 154,000 Btuh Input
Add-On Cooling — 1-1/2 thru 4 Nominal Tons

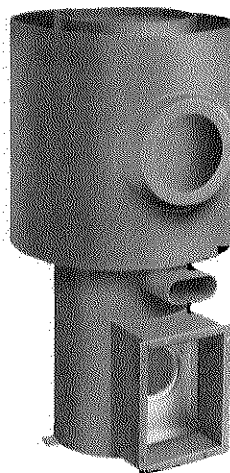
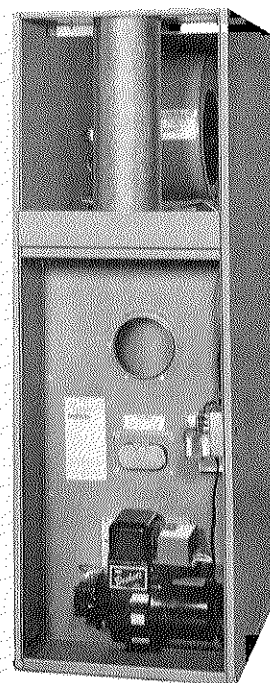
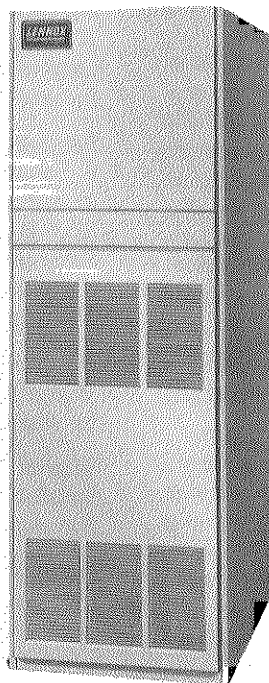
Typical Applications



Closest Installation
With Cooling Coil



Utility Room Installation with Electronic
Air Cleaner, Cooling Coil and Humidifier



Heat Exchanger

Applications — The Lennox O20R series of oil furnaces are designed for applications with air distribution under the floor, either in a crawl space or tunneled into a concrete slab. Furnaces are approved for reduced clearances to combustibles. Optional additive floor base is available for installation of units on combustible floors. Four models are available with a choice of heating capacities and air volumes. The quiet operating direct drive blowers have reserve capacity to handle the air volume requirements of add-on cooling. A Lennox direct expansion add-on evaporator coil and remote condensing unit, electronic air cleaner and humidifier can easily be added to the furnace. Each unit is factory test operated insuring proper operation after shipment. Units are shipped factory assembled, including the oil burner, with all controls installed and wired. Installer has only to install barometric draft control, mount the thermostat, make flue, duct, oil supply line and electrical connections to complete a low cost installation.

Tested and Certified — Units have been rated and tested according to Department of Energy (DOE) test procedures and Federal Trade Commission (FTC) labeling regulations. Units are also U.L. listed and ratings are certified by GAMA.

Equipment Warranty — Heat Exchangers have a limited warranty for a full twenty years. Oil burners have a limited warranty for a full three years. All other components have a limited warranty for one year. Refer to the Lennox Equipment Limited Warranty certificate included with the equipment for details.

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. Heavy gauge mounting channels are provided in cabinet base for support of heat exchanger.

(continued)

FEATURES

Combustion Chamber — All models have a factory installed, specially designed Alumina Silica combustion chamber. Combustion chamber can withstand temperatures of up to 2300°F resulting in more complete combustion and higher efficiencies.

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. Flame retention head is designed to agitate and mix oil and air for complete combustion and highest efficiency. Burner has 10,000 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 and certified according to ANSI Standard 296.6. Burner is factory installed in the unit, wired and fire tested.

Transformer and Terminal Strip — 24 volt control transformer and low voltage terminal strip are furnished as standard and factory installed.

Rugged Cabinet — Constructed of heavy gauge steel with a baked-on enamel paint 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, clean and quiet control area. Large blower access door gives complete service access to blower and air filters. Blower assembly easily slides completely out of unit for service. Oil line and electrical inlet openings are provided in sides of cabinet, see dimension drawing.

Flame Inspection Door — Conveniently located at the front of the unit. Large enough opening for normal inspection mirror. Hinged door is spring loaded so it cannot be left open.

Barometric Draft Control — Furnished as standard equipment and field installed in flue pipe.

Powerful Blower — Units are equipped with quiet, variable speed direct drive blowers. Each blower assembly is statically and dynamically balanced. Multiple-speed motor is resiliently mounted. A choice of blower speeds is available on each blower. See blower performance charts. Change in blower speed is easily accomplished by simple wiring change.

Fan and Limit Controls — Factory installed on vestibule panel in control compartment. Time-start fan control assures proper blower operation and has adjustable blower off temperature setting. Control turns fan on 60 to 90 seconds after thermostat demand. Primary and secondary limit controls, one located at each end of the heating section, provide protection from abnormal operating conditions and have fixed temperature setting.

Air Filters — Large cleanable frame type filters are furnished as standard in the unit. Access is provided in blower compartment for filter removal and servicing.

Blower Cooling Relay — Furnished with the unit and factory installed on the wiring junction box. Relay activates blower operation during cooling cycle.

Down-Flo Additive Base (Optional) — Additive base is required for heating only models installed on combustible floors. Base is not furnished and must be ordered extra for field installation. See specification table and dimension drawing. Not required in add-on cooling coil applications.

Thermostat (Not Furnished) — Heating thermostat is not furnished and must be ordered extra. See Accessories Section, Page 13 and Lennox Price book. For all season applications heating-cooling thermostat is available with the condensing unit.

SPECIFICATIONS

Model Number	O20RQ3-105	O20RQ3-120	O20RQ4-140	O20RQ4-154
Input Btuh (maximum)	105,000	119,000	140,000	154,000
Output Btuh (maximum)	80,000	91,000	108,000	119,000
†A.F.U.E.	77.7%	74.5%	76.1%	75.4%
Nozzle rating (gph)	.75—80°	.85—80°	1.00—80°	1.10—80°
Flue size (inches) — Diameter	6	6	6	6
Oil burner pump	1 Stage	1 Stage	1 Stage	1 Stage
Optional 2 Stage Fuel Pump	34H74			
Blower wheel nominal diameter x width (in.)	10 x 8	10 x 8	10 x 9	10 x 9
Blower motor horsepower	1/3	1/3	1/2	1/2
Tons of cooling that can be added	1-1/2, 2, 2-1/2, 3	1-1/2, 2, 2-1/2, 3	3, 3-1/2, 4	3, 3-1/2, 4
Number and size of filters (in.)	*(2) 10 x 20 x 1	*(2) 10 x 20 x 1	*(2) 12 x 20 x 1	*(2) 12 x 20 x 1
Shipping weight (lbs.) 1 Package in shipment	235	235	280	285
Electrical characteristics	115 volts — 60 hertz — 1 phase			
Down-Flo Additive Base (Optional)	Model No. & Order No.	CFB20-105/120 (34H75)		CFB20-140/154 (34H76)
	Shipping wt. (lbs.)	9		11

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

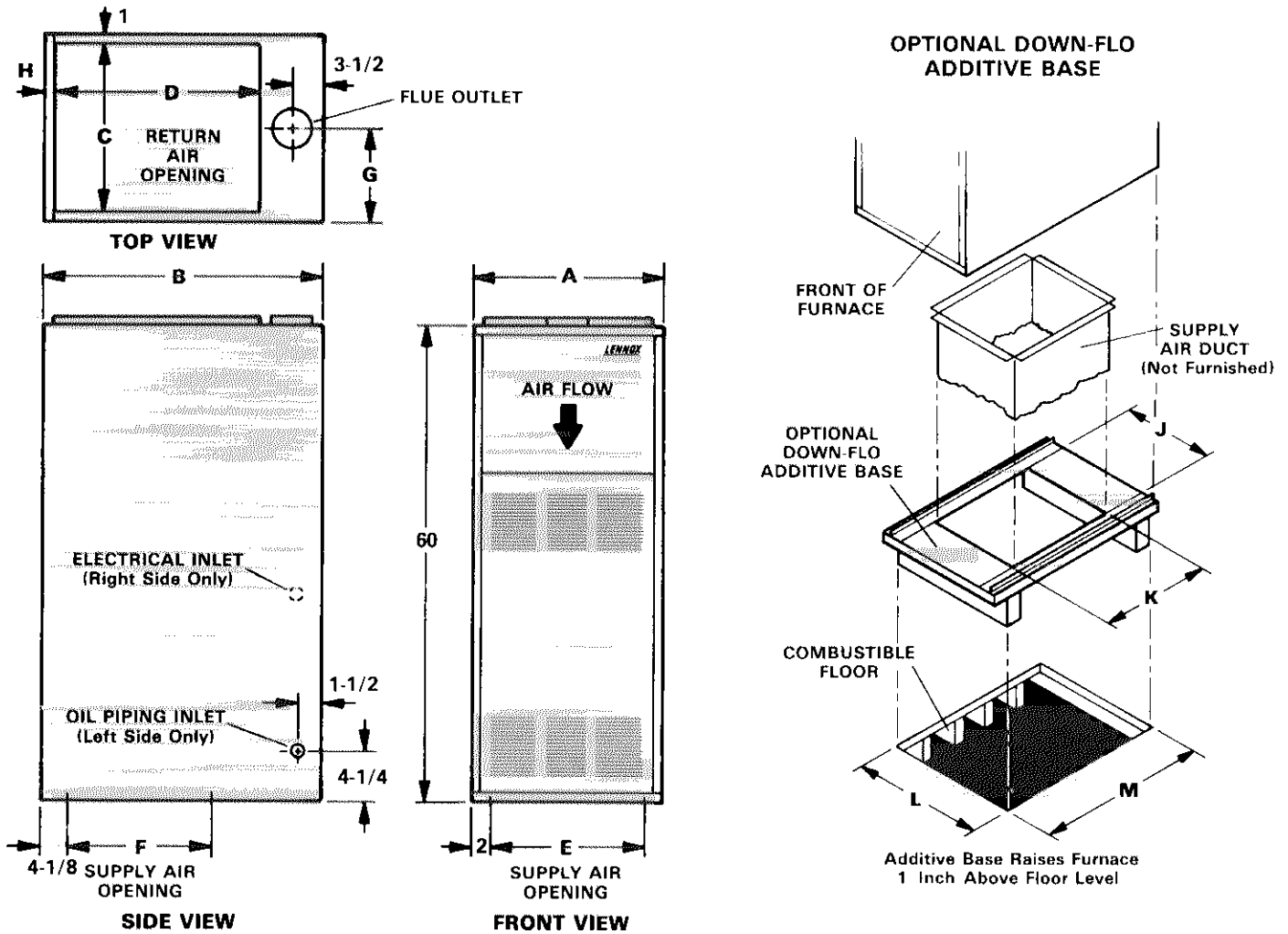
* Cleanable frame type filters.

U.L. INSTALLATION CLEARANCES (inches)

Model No.	O20RQ3-105	O20RQ4-140
	O20RQ3-120	O20RQ4-154
Top & rear of cabinet	2	2
Sides of cabinet	2	2
Front of cabinet	8	8
Top of plenum	1	1
Sides of plenum	1	1
Horizontal warm air duct within 6 ft. of furnace	6	6
Below or opposite flue pipe	9	9
Above flue pipe	9	11
Floor	*Non-combustible	*Non-combustible

Approved for closet or alcove installation. When installing in a closet, two ventilation openings must be provided in the closet door; one six inches from the top and one six inches from the bottom. Each opening should be 10" x 20" for the O20RQ3-105 & O20RQ3-120 models and 11" x 22" for O20RQ4-140 & O20RQ4-154 models.

DIMENSIONS (inches)



Model No.	A	B	C	D	E	F	G	H	J	K	L	M
O20RQ3-105 O20RQ3-120	20	31-5/8	18	18	16	16	10	1-5/8	16-1/4	16-1/4	20-1/4	20-1/4
O20RQ4-140 O20RQ4-154	24	35-5/8	22	19	20	20	12	4-1/4	20-1/4	20-1/4	24-1/4	24-1/4

NOTE - Additive base adds 1" to furnace height.

BLOWER DATA

O20RQ3-105 AND O20RQ3-120 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds		
	High	Medium	Low
.20	----	1060	825
.30	----	1000	825
.40	1340	----	----
.50	1270	----	----
.60	1200	----	----

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

O20RQ4-140 AND O20RQ4-154 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds		
	High	Medium	Low
.20	----	1680	1320
.30	----	1650	1315
.40	1830	1605	1300
.50	1740	1560	1270
.60	1665	1490	1210
.70	1575	----	----

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