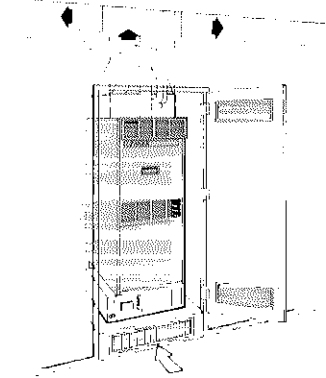




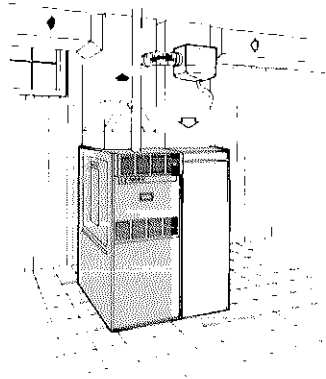
**G16 AND G16X SERIES
CONSERVATOR® III
UP-FLO GAS FURNACES**
50,000 to 125,000 Btuh Input

Add-On Cooling — 1 thru 5 Nominal Tons

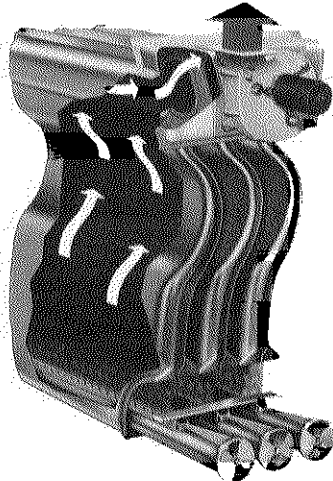
Typical Applications



Closest Installation
with cooling coil and
electronic air cleaner.



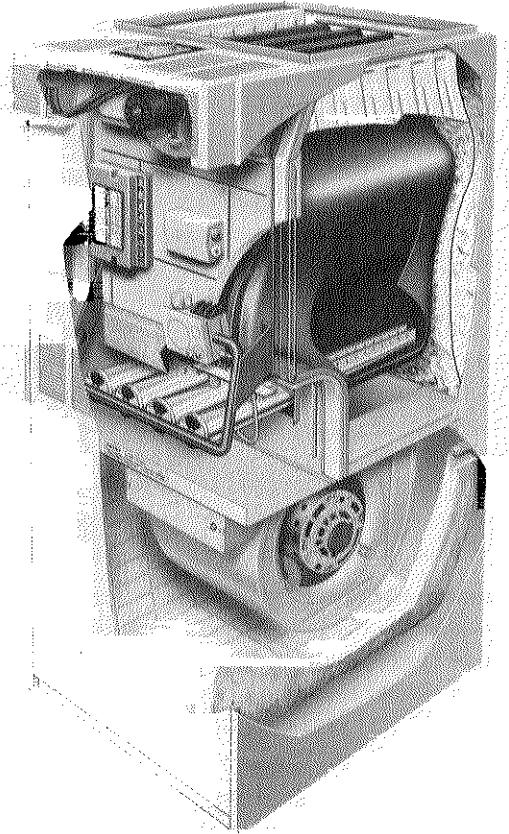
Basement Installation
with cooling coil, return air
cabinet and power humidifier.



Lennox DURACURVE®
Aluminized Steel
Heat Exchanger



Aluminized Steel Burners



Lennox G16 and G16X Series Up-Flo Gas Furnaces Feature High Efficiency Operation and Installation Versatility

The G16 and G16X series line of gas fired furnaces include seven models (natural gas or LPG) with Btuh input capacities of 50,000, 75,000, 100,000, 125,000 and energy efficiencies (AFUE) of 78.4% or above. Compact, rugged cabinet with either side or bottom return air entry, will allow installation in a basement, closet, recreation or utility room. Optional return air cabinets are available to simplify return air duct connection to the furnace. The matching return air cabinet may be installed on either side of the furnace. Lennox add-on evaporator coils, electronic air cleaners and power humidifiers can easily be added to the furnace for a complete all season installation.

Units are equipped with the gas saving automatic electronic pilot ignition system. Pilot flame is on only during main burners operating cycles. No need to shut off pilot during air conditioning season. Flue draft will be created by a induced draft blower mounted

on the flue collector box on the outlet of the heat exchanger. The furnaces can be vented vertically as a common vent with another appliance.

G16 series furnaces are design certified by A.G.A. Laboratories and ratings are certified by GAMA. Units have been rated and tested according to Department of Energy (DOE) test procedures and Federal Trade Commission (FTC) labeling regulations in the Lennox Research Laboratory. G16X (natural gas) models meet the California Nitrogen Oxides (NO_x) Standards and California Seasonal Efficiency requirements. Blower data is from unit tests conducted in the Lennox Laboratory air test chamber.

Units are shipped factory assembled with all controls installed. Each unit is factory test operated insuring proper operation. Installer has only to make flue vent, gas supply and electrical connections.

NOTE — Specifications, Ratings and Dimensions subject to change without notice.

FEATURES

Lennox DURACURVE® Aluminized Steel Heat Exchanger — Lennox developed and proven heat exchanger eliminates fatigue failure, ticking, resonance and cleanability problems. In the unique design of this heat exchanger the sides of the clam section form a flue restriction zone comprised of two concentric cylinders. As the sides grow they expand and move, but in the same direction and at the same rate. The result is perfect combustion, proper venting and absolute freedom of movement for the metal. Design also results in high input to heat surface ratio, low resistance to air travel reducing blower horsepower requirements and ease of cleaning. Heavy gauge aluminized steel construction provides long service life. Laboratory life cycle testing proves long life of heat exchanger.

Rugged Cabinet — Constructed of heavy gauge cold rolled steel. Cabinet is subject to a five station metal wash process resulting in a perfect bonding surface for a paint finish of baked-on enamel. The paint solution and metal are given opposite electrical charges resulting in positive adhesion and even coverage of the paint to the metal surfaces. Cabinet surface temperatures are low due to interior metal liners on each side of the cabinet and foil covered fiberglass insulation on vestibule panel and on back panel. Holes for leveling are provided in cabinet base, installer must furnish bolts and nuts. Complete service access is accomplished by removing furnace and blower compartment access panels. Blower assembly and filter may be completely removed from unit for service. Safety interlock switch located in wiring junction box automatically turns power off to unit when blower compartment access panel is removed. Gas piping and electrical inlets are provided in both sides of cabinet. Return air entry is possible on either side or bottom of cabinet. Matching add-on Lennox up-flo evaporator coils (1 thru 5 nominal tons) are available for all season applications.

Aluminized Steel Burners — Each burner has four rows of practically continuous ports which result in quiet and clean combustion. A crossover igniter of burner ports, perpendicular to the main burner, carries a positive flame from burner to burner to achieve quiet and sure ignition. 'X' models have stainless steel NO_x rods.

Induced Draft Blower — Factory installed induced draft blower prepurges heat exchanger and safely vents combustion products. Operates only during heat demand cycle. A pressure switch prevents unit operation in case of blockage of combustion air or flue outlet.

Flame Rollout Switch — Switch is furnished as standard and is factory installed on the vestibule panel above burner opening. Switch prevents unit operation in the event combustion products passage through the flueway is reduced or blocked.

Fan and Limit Controls — Factory installed and accurately located. Fan control has adjustable temperature setting. Limit control protects unit from abnormal operating conditions.

Wiring Junction Box — Power supply and thermostat wiring connections are made at the wiring junction box. Conveniently located in blower compartment for easy access. Low voltage terminal strip is furnished.

Transformer — 24 volt control transformer is furnished as standard equipment and is factory installed in wiring junction box.

Blower Cooling Relay — Furnished as standard equipment and factory installed in the wiring junction box. Relay activates blower operation during cooling cycle.

Powerful Blowers — 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.

Large Air Filter — Units are equipped with hammock type wrap-around filter. Media is one inch thick oil impregnated fiberglass. Filter mounting rack design provides quick and simple replacement of media for servicing.

Automatic Gas Controls & Electronic Pilot Ignition — Silent operating gas controls provide 100% safety shut off. 24 volt redundant combination gas control valve combines automatic safety pilot, manual shut off knob (On-Off), pilot filtrations, automatic electric valve (dual) and gas pressure regulation into a compact combination control. Dual valve design provides double assurance of 100% close off of gas to the pilot and main burners on each off cycle. Solid-state electronic direct spark igniter provides positive ignition of pilot burner on each operating cycle. Pilot gas is ignited and burns during each running cycle (intermittent pilot) of the furnace. Main burners and pilot gas are extinguished during the off cycle. This system permits main gas valve to open only when the pilot burner is proven to be lit. Should a loss of flame occur the main valve closes, shutting down the unit. Pilot ignition is a fully automatic operation on demand for heat.

LPG Conversion Kit (Optional) — For LPG models a conversion kit is required for field changeover from natural gas. Kit is not furnished and must be ordered extra. See specification table for order number.

Furnace Twinning Kit (Optional) — Field installed kit (LB-57803CA) is available to operate two identical up-flo gas furnaces simultaneously. Kit consists of heavy gauge steel control box and two auxiliary limit controls. Control box has electrical inlet knockouts and contains low voltage and high voltage terminal strips, blower control relay, heat relays, door interlock relay and 24 volt control transformer. All controls are factory installed and wired. Limit controls are field installed in each furnace. Holes for mounting control box are provided. Box may be installed in any convenient location adjacent to or on one end of the furnace.

Return Air Cabinets (Optional) — Constructed of heavy gauge cold rolled steel with a baked-on enamel paint finish. Simplifies return air duct connection to the furnace. Shipped knocked down and must be field assembled. May be installed on either side of furnace. Must be ordered extra. See specification table and dimension drawing.

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

Equipment Warranty — "DURACURVE" Aluminized Steel Heat Exchangers have a limited warranty for a full fifteen years. Solid-state ignition modules 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.

SPECIFICATIONS

Model No.	††G16Q2X-50	††G16Q3X-50	††G16Q3X-75	††G16Q4X-75	††G16Q3/4X-100	††G16Q5X-100	††G16Q4/5X-125
	†G16Q2-50	†G16Q3-50	†G16Q3-75	†G16Q4-75	†G16Q3/4-100	†G16Q5-100	†G16Q4/5-125
Input Btuh	50,000	50,000	75,000	75,000	100,000	100,000	125,000
Output Btuh — Non "X" Models	40,000	40,000	59,000	60,000	80,000	80,000	99,000
†A.F.U.E. — Non "X" Models	78.4%	79.1%	79.1%	78.5%	78.8%	78.8%	78.8%
†A.F.U.E. — "X" Models	78.4%	79.1%	79.1%	78.5%	78.8%	78.8%	78.8%
Output Btuh — "X" Models	40,000	40,000	59,000	60,000	80,000	80,000	99,000
CA Seasonal Efficiency — "X" Models	74.5%	74.0%	74.8%	74.1%	74.9%	74.1%	74.4%
Temperature rise range (°F)	35 — 65	20 — 50	35 — 65	25 — 55	35 — 65	25 — 55	35 — 65
High static certified by AGA (in. wg.)	.50	.75	.50	.75	.50	.75	.50
Flue size connection (in. diameter)	3	3	3	3	3	3	3
Gas piping size I.P.S. (in.) nat. or LPG	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Blower motor horsepower	1/4	1/3	1/3	1/2	1/2	3/4	3/4
Blower wheel nominal dia. x width (in.)	9 x 7	10 x 7	10 x 7	10 x 8	10 x 8	12 x 12	12 x 9
Net filter area (sq. ft.) & cut size (in.)	(5.8) 36x28x1	(5.8) 36x28x1	(5.8) 36x28x1	(6.6) 40x28x1	(6.6) 40x28x1	(8.9) 52x28x1	(8.9) 52x28x1
Tons of cooling that can be added	1, 1-1/2 or 2	2-1/2 or 3	2-1/2 or 3	3-1/2 or 4	3, 3-1/2 or 4	4 or 5	4 or 5
Shipping weight (lbs.) — 1 Package	160	165	170	195	205	260	270
Electrical characteristics							
120 volts — 60 hertz — 1 phase (less than 12 amps) — All Models							
Return Air	Model No.	RA10-16-49	RA10-16-49	RA10-16-49	RA10-16-49	RA10-16-49	RA10-16-53
Cabinet (Optional)	Shipping Wt. (lbs.)	54	54	54	54	54	56
*LPG Kit — Optional		LB-55207CA (All Models)					

† Annual Fuel Utilization Efficiency based on DOE test procedures and according to FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.
 * LPG Kit must be ordered extra for field changeover.
 †† Not available with LPG.

A.G.A. INSTALLATION CLEARANCES

Sides	1 inch
Rear	1 inch
Top	1 inch
Front	6 inches
Floor	Combustible
*Flue	*4 inches

* This is clearance to all flue pipes except type "B". Type "B" vent clearance is as listed by U.L.
 NOTE — Flue sizing and air for combustion and ventilation must conform to the methods outlined in American National Standard (ANSI-Z223.1) National Fuel Gas Code.

HIGH ALTITUDE DERATE

Units must be derated when installed at an elevation of 2000 feet or more above sea level. Table shows the derate manifold pressure for high altitude operation with both natural gas and LPG. Operating the units at manifold pressure specified will insure proper unit heat input at high altitude.

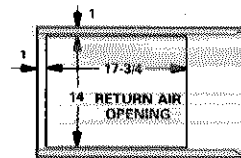
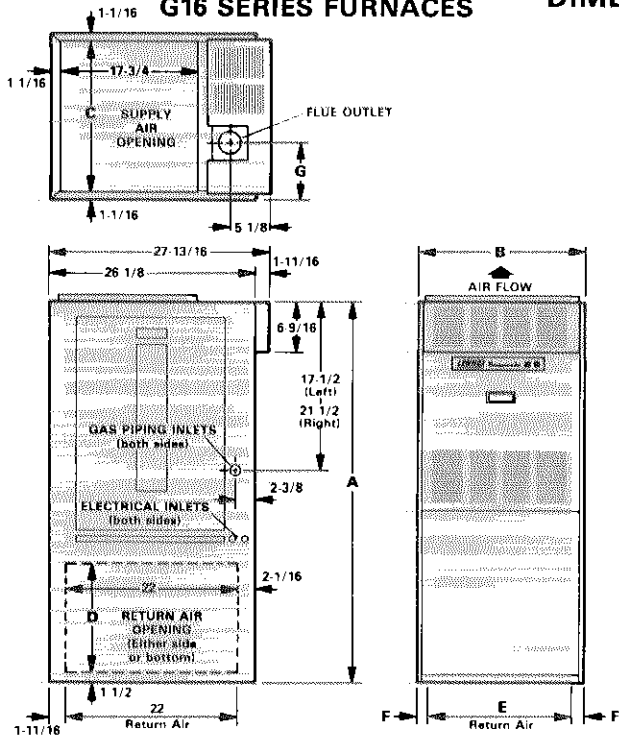
Elevation Above Sea Level (feet)	Manifold Pressure (in. wc)					
	†Heating Value (Btu/ft ³) Natural Gas					
	900	950	1000	1050	1100	LPG Only
Sea Level — 0	4.32	3.88	3.50	3.17	2.89	9.00
1000	4.32	3.88	3.50	3.17	2.89	9.00
2000	3.65	3.30	2.95	2.70	2.45	7.61
3000	3.35	3.00	2.70	2.45	2.25	6.97
4000	3.05	2.75	2.45	2.25	2.04	6.35
5000	2.77	2.48	2.25	2.05	1.85	5.76
6000	2.50	2.25	2.00	1.85	1.65	5.20

† Heating value is based on an atmospheric pressure of 30 inches mercury and temperature at 60°F. Consult your gas utility for the local natural gas heating value.
 NOTE — This is the only permissible field derate for the units.

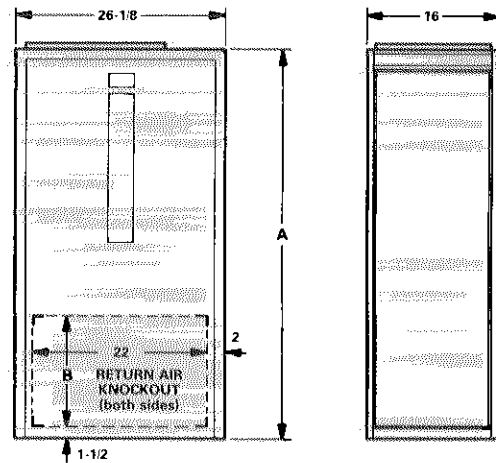
G16 SERIES FURNACES

DIMENSIONS (inches)

RETURN AIR CABINET



NOTE — Return Air Cabinet shipped knocked down and must be field assembled.



Model No.	RA10-16-49	RA10-16-53
A	49	53
B	14	18

Model No.	A	B	C	D	E	F	G
G16Q2(X)-50, G16Q3(X)-50, G16Q3(X)-75	49	16-1/4	14-1/8	14	11	2-5/8	5
G16Q4(X)-75, G16Q3/4(X)-100	49	21-1/4	19-1/8	14	14	3-5/8	7-1/2
G16Q5(X)-100, G16Q4/5(X)-125	53	26-1/4	24-1/8	18	21	2-5/8	10

BLOWER DATA

G16Q2(X)-50 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds		
	High	Medium	Low
0	1240	980	600
.05	1225	975	602
.10	1205	975	605
.15	1185	970	605
.20	1165	970	605
.25	1140	965	600
.30	1115	955	595
.40	1060	930	580
.50	990	875	550

NOTE — All cfm is measured external to the unit with the air filter in place.

G16Q3(X)-50 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds			
	High	Med-High	Med-Low	Low
0	1585	1320	1100	945
.05	1575	1310	1095	940
.10	1560	1300	1087	935
.15	1535	1285	1080	930
.20	1510	1265	1070	925
.25	1480	1245	1060	920
.30	1445	1225	1045	910
.40	1380	1175	1015	890
.50	1300	1125	980	855
.60	1205	1070	905	800
.70	1080	1025	780	700

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

G16Q3(X)-75 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds			
	High	Med-High	Med-Low	Low
0	1560	1265	1055	910
.05	1540	1250	1047	910
.10	1510	1240	1040	907
.15	1485	1225	1030	905
.20	1455	1215	1025	900
.25	1425	1200	1015	895
.30	1395	1185	1000	885
.40	1325	1145	970	860
.50	1245	1090	925	815
.60	1130	985	830	700

NOTE — All cfm is measured external to the unit with the air filter in place.

G16Q4(X)-75 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds		
	High	Medium	Low
0	1815	1420	1130
.05	1790	1415	1145
.10	1765	1410	1155
.15	1740	1405	1160
.20	1715	1402	1160
.25	1680	1395	1155
.30	1655	1390	1150
.40	1590	1365	1130
.50	1500	1325	1110
.60	1355	1230	1090
.70	1165	1100	1065

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

G16Q3/4(X)-100 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds			
	High	Med-High	Med-Low	Low
0	1980	1715	1460	1145
.05	1970	1695	1455	1145
.10	1960	1680	1445	1140
.15	1940	1660	1440	1140
.20	1910	1640	1435	1140
.25	1880	1615	1430	1135
.30	1850	1595	1420	1130
.40	1780	1545	1395	1125
.50	1710	1480	1330	1100
.60	1625	1410	1265	1030
.70	1520	1325	1190	940
.80	1410	1230	1100	835

NOTE — All cfm is measured external to the unit with the air filter in place.

G16Q5(X)-100 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds				
	High	Med-High	Medium	Med-Low	Low
0	2835	2550	2290	1945	1700
.05	2820	2535	2275	1930	1690
.10	2790	2515	2265	1910	1675
.15	2760	2495	2230	1895	1650
.20	2740	2475	2210	1875	1630
.25	2700	2450	2185	1860	1615
.30	2670	2435	2160	1840	1595
.40	2600	2390	2110	1800	1550
.50	2535	2340	2050	1750	1500
.60	2450	2280	1985	1700	1450
.70	2380	2210	1910	1645	1390
.80	2290	2130	1830	1580	1310

NOTE — All cfm is measured external to the unit with the air filter in place.

G16Q4/5(X)-125 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds				
	High	Med-High	Medium	Med-Low	Low
0	2535	2290	2040	1800	1590
.05	2510	2270	2025	1790	1575
.10	2490	2250	2010	1775	1560
.15	2465	2225	1990	1760	1540
.20	2435	2200	1970	1740	1525
.25	2405	2175	1940	1720	1500
.30	2370	2145	1915	1695	1480
.40	2305	2085	1860	1645	1440
.50	2235	2020	1800	1585	1390
.60	2160	1940	1725	1525	1340
.70	2070	1850	1640	1460	1220
.80	1980	1750	1550	1390	1215

NOTE — All cfm is measured external to the unit with the air filter in place.