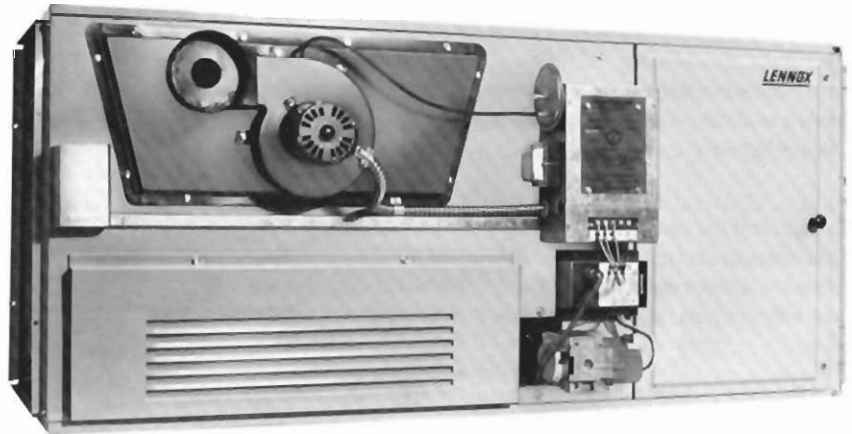




**GS12Q SERIES — HORIZONTAL
CONSERVATOR® GAS FURNACES**
60,000 to 110,000 Btuh Input
Add-On Cooling 1-1/2 thru 5 Nominal Tons

ENGINEERING DATA
HEATING UNITS
GAS
Page 40
April 1984

- Factory Assembled and Tested
- Several Sizes Available
- Low Cost Installation
- Sized For Air Conditioning
- Durable Heat Exchanger
- Efficient Steel Burners
- Electronic POWERLITE™ Pilot Ignition
- Compact Cabinet Design
- Powerful Direct Drive Blower
- Right or Left-Hand Air Discharge

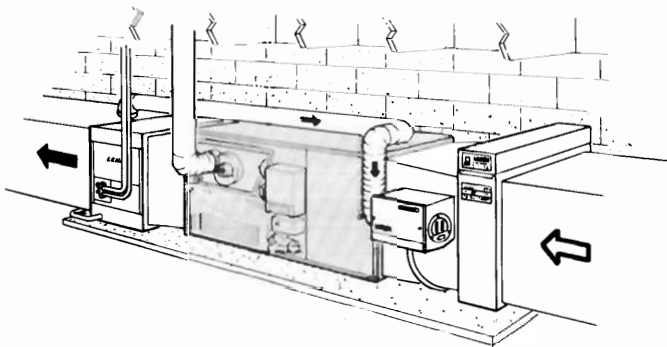


Horizontal CONSERVATOR Gas Furnaces Provide Efficient and Space-Saving Installations

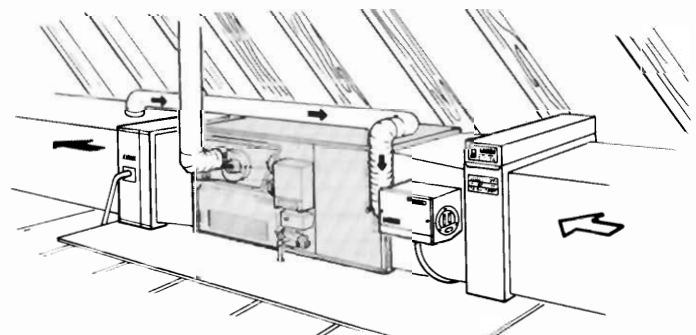
The Lennox GS12Q series horizontal stowaway gas furnaces are designed for installations that will save valuable floor space for other purposes. These versatile units can be installed on combustible flooring in an attic space, on a slab in a crawl space, hanging from joists in a basement or crawl space. Lennox direct expansion evaporator cooling unit, electronic air cleaner and automatic humidifier can easily be added to the horizontal gas furnace for a complete all season Total Comfort system. Units are equipped with energy and cost saving automatic POWERLITE pilot ignition system. Pilot flame is on only during furnace operating cycle. No need to shut off pilot during air conditioning season. Heavy gauge steel cabinet has deluxe baked-on enamel finish. Heating section is insulated to cut heat loss. Cabinet has provisions for suspending. Induced

draft blower safely vents combustion products. Furnaces are approved for use with a dedicated vertical vent only. A choice of flue connection, burner controls location and blower service access is provided at the front or rear of the unit. Units are shipped assembled for left-hand air discharge. Rugged heat exchanger is designed for maximum heat transfer and minimum air resistance. Quiet operating blower has sufficient capacity to handle add-on air conditioning air volume requirements. Air filter(s) and filter adapter are available as optional equipment and must be ordered extra. Horizontal furnaces are A.G.A. Certified. Additionally, units have been rated and tested according to Department of Energy (DOE) test procedures and Federal Trade Commission (FTC) labeling regulations. Units are factory assembled and test operated.

Typical Applications



Crawl Space Installation
With cooling coil, electronic air cleaner and automatic humidifier



Attic Installation
With cooling coil, electronic air cleaner and automatic humidifier

FEATURES

Rugged Cabinet — Constructed of heavy gauge cold rolled steel with a durable baked-on enamel finish. Heating section of cabinet is completely lined with foil faced fiberglass insulation resulting in low cabinet surface temperatures and quiet operation. Flanges on supply and return air openings permit ease of duct connection. Knockouts are furnished in the top and bottom panels for hanger rods. Vent connection can be made at front or rear of unit. Large removable doors, front and rear, provide complete service access to blower compartment. Doors are equipped with knobs for easy removal. Units are shipped for left-hand supply air discharge. For applications requiring a change in supply air direction simply relocate the induced draft blower assembly, controls, wiring channel enclosure, gas valve and the main burner with pilot to the opposite side of the unit.

Efficient Direct Drive Blower — Units are equipped with quiet, variable speed direct drive blowers. Each blower 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 a simple change in wiring.

Durable Heat Exchanger — Clamshell type heat exchanger is constructed of heavy gauge cold rolled steel and is designed for normal expansion and contraction without metal fatigue. Design provides long service life, maximum efficiency and minimum resistance to air flow.

Steel Burners — Each burner has two rows of practically continuous steel ports which result in quiet and clean combustion. Burner and port surfaces are smooth with no ledges or ridges to accumulate lint and dirt. A crossover igniter, perpendicular to the main burner, carries a positive flame from burner to burner to achieve fast, sure and safe ignition. Individually removable burners and pilot burner are mounted in a slide-out tray for ease of service. A primary air shutter assembly is furnished on all units. The air shutters are linked to each adjacent burner so adjustment of the outboard burner adjusts all the other burners at the same time.

Fan and Limit Controls — Factory installed, wired and accurately located. Fan control assures proper blower operation and has adjustable blower off temperature setting. Continuous blower operation may be accomplished by adjusting the fan control to the minimum temperature setting. Dual limit controls, one located at each end of the heating section, provide protection from abnormal operating conditions.

Wiring Junction Box — Power supply and thermostat wiring connections are made at junction box. Conveniently located on front of the unit for easy access. Junction box lid has a screw terminal board for ease of thermostat wiring connections.

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

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

Induced Draft Blower — Factory installed induced draft blower prepurges heat exchanger and safely vents combustion products. Centrifugal switch proves blower operation before allowing main gas valve to open. Operates only during heat demand cycle.

Automatic Gas Controls & POWERLITE Pilot Ignition — 24 volt redundant combination gas control valve combines automatic safety pilot, pilot and bleed gas filtration, automatic electric valve (dual) and gas pressure regulation into a compact combination control. Additionally, manual main shut-off valve is included. Dual valve design provides double assurance of close off of gas to the pilot and main burners on each heating 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 when the pilot burner is proven to be lit. Should a loss of flame occur the main valve closes and the pilot spark recurs immediately. Pilot ignition is a fully automatic operation on demand for heat. For LPG specified models a field conversion kit is required and must be ordered extra. See Specification table.

Thermostat (Not Furnished) — Heating thermostat is optional equipment and must be ordered extra. For all season applications a heating-cooling thermostat is available with the condensing unit.

Air Filters (Optional) — One inch thick frame filters are available and must be ordered extra. Filter media is washable or vacuum cleanable polyurethane coated with oil for increased efficiency. Use RP products filter coating no. 418 (30165) when reoilng. See specification table for filter size.

Filter Adapter (Optional) — Field installs to the return air inlet of the unit and extends into the return air plenum or duct exterior to the blower section. Filter(s) are accessible for removal and replacement through front and rear blower section access doors. Filters are not included with adapter and must be ordered extra.

SPECIFICATIONS

Model Number		GS12Q3-60	GS12Q3-80	GS12Q4-95	GS12Q5-110
Input Btuh		60,000	80,000	95,000	110,000
Output Btuh	Unconditioned Space	46,446	61,256	73,368	86,229
	Conditioned Space	49,020	64,160	76,190	88,770
†A.F.U.E.	Unconditioned Space	76.5%	75.3%	74.7%	75.7%
	Conditioned Space	80.1%	78.0%	77.0%	78.2%
Flue size (in.) — diameter		4	4	4	4
Temperature rise range (°F)		40—70	40—70	40—70	40—70
No. of burners		3	4	5	6
A.G.A. certified high statics (in. wg.)		.50	.50	.50	.50
Gas piping size (in.) Natural & *LPG		1/2	1/2	1/2	1/2
Blower wheel nominal diameter x width (in.)		10 x 6	10 x 6	10 x 8	10 x 10
Blower motor horsepower		1/3	1/3	1/3	1/2
Tons of additive cooling		1-1/2, 2 or 2-1/2	2-1/2 or 3	3, 3-1/2 or 4	3, 3-1/2, 4 or 5
Shipping weight (lbs.) (1 package)		195	220	251	265
Electrical characteristics		120 volts — 60 hertz — 1 phase (all units) (less than 12 amps)			
Optional Filter Adapter	Model No.	FC3-60	FC3-80	FC3-100	FC3-120
	Shipping weight (lbs.)	5	6	7	5
**Optional Filters, no. & size (in.)		(1) 15 x 20 x 1	(1) 16 x 20 x 1	(1) 20 x 20 x 1	(2) 15 x 20 x 1
*Optional LPG Kit		87F67	87F67	87F67	87F67

†Annual Fuel Utilization Efficiency based on DOE test procedures and FTC labeling regulations.

*For LPG units a field changeover kit is required and must be ordered extra.

**Filters must be ordered extra.

HIGH ALTITUDE DERATE

If the heating value of the gas does not exceed values listed in table, derating of unit is not required. Should the heating value of the gas exceed the table values, or if the elevation is greater than 6,000 feet above sea level it will be necessary to derate unit. Lennox requires that derate conditions be 4% per thousand feet above sea level. Thus at an altitude of 4000 feet, if the heating value of the gas exceeds 1000 Btu/ft³, the unit will require a 16% derate.

Elevation Above Sea Level (Feet)	Maximum Heating Value (Btu/ft ³)
5001 – 6000	900
4001 – 5000	950
3001 – 4000	1000
2001 – 3000	1050
Sea Level – 2000	1100

A.G.A. INSTALLATION CLEARANCES (inches)

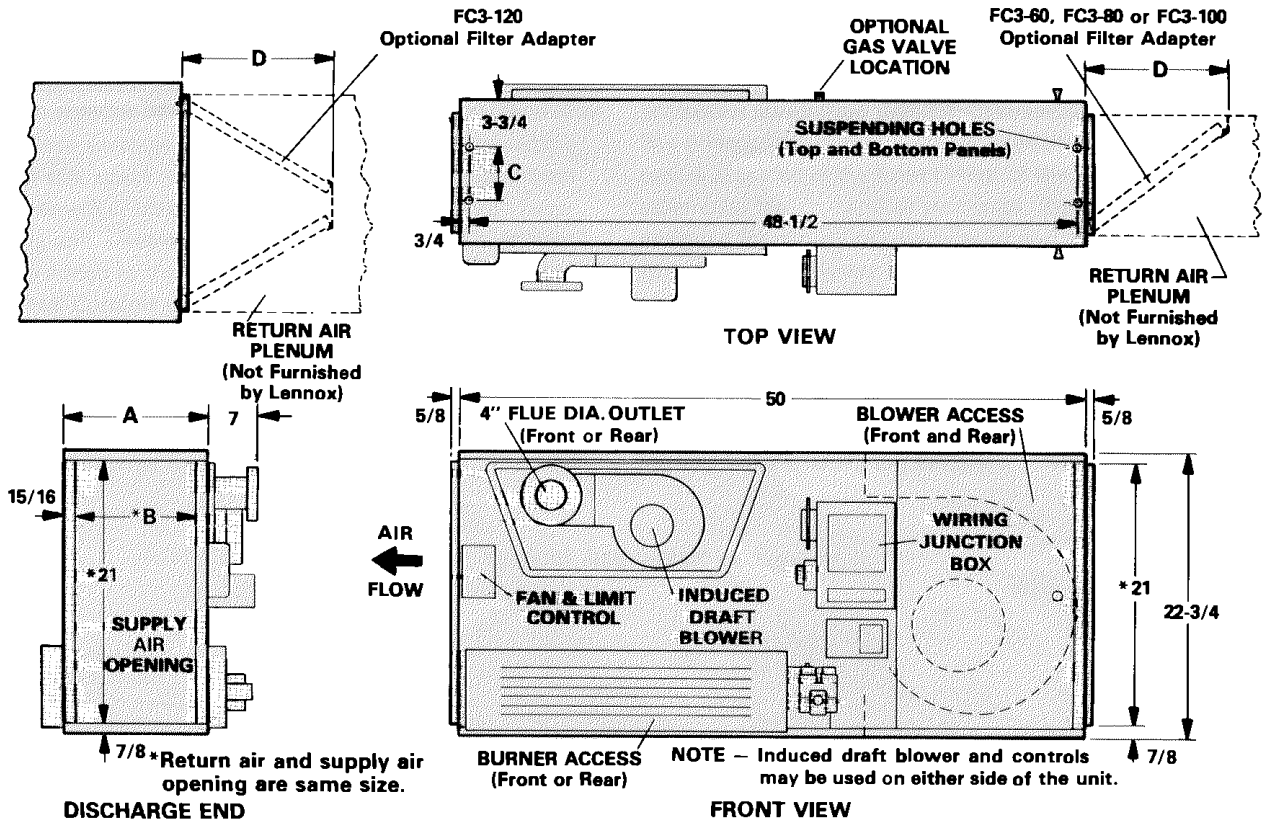
Rear & Sides	6
Top	8
Floor	Combustible
*Flue	6

*This clearance to all flue pipes except type "B." Type "B" flue clearance is listed by U.L.

NOTE — A clearance of at least 30 inches should be provided at the front of the unit for combustion air and servicing.

DIMENSIONS (inches)

NOTE — Provide adequate service clearance of at least 30 inches at front of unit.



Model Number	A	B	C	D
GS1203-60	11-5/8	9-3/4	4-1/8	11
GS1203-80	14-1/8	12-1/4	6-5/8	10-9/16
GS1203-95	16-5/8	14-3/4	9-1/8	13-3/8
GS1203-110	19-1/8	17-1/4	11-5/8	11-11/16

BLOWER DATA

GS12Q3-60 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds		
	High	Medium	Low
.15	1410	890	650
.20	1380	870	630
.25	1350	850	620
.30	1310	830	600
.35	1280	820	580
.40	1240	800	560
.45	1200	770	540
.50	1160	750	520

NOTE — All cfm is measured external to furnace. Filter resistance not included.

GS12Q3-80 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds		
	High	Medium	Low
.15	1510	1190	805
.20	1470	1175	805
.25	1440	1160	805
.30	1400	1140	800
.35	1370	1130	795
.40	1330	1115	790
.45	1295	1095	770
.50	1250	1060	750

NOTE — All cfm is measured external to furnace. Filter resistance not included.

GS12Q4-95 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds		
	High	Medium	Low
.15	1790	1340	1040
.20	1760	1340	1040
.25	1730	1340	1040
.30	1700	1340	1040
.35	1670	1330	1035
.40	1630	1320	1030
.45	1590	1300	1025
.50	1550	1270	1020
.55	1460	1250	1020
.60	1410	1200	990
.65	1360	1180	940
.70	1310	1140	930

NOTE — All cfm is measured external to furnace. Filter resistance not included.

GS12Q5-110 BLOWER PERFORMANCE

External Static Pressure (in. wg.)	Air Volume (cfm) @ Various Speeds		
	High	Medium	Low
.15	2270	1880	1290
.20	2220	1850	1280
.25	2160	1820	1270
.30	2100	1770	1250
.35	2040	1720	1230
.40	1970	1660	1200
.45	1900	1600	1180
.50	1840	1540	1140
.55	1670	1480	1090
.60	1600	1380	1020
.65	1520	1330	980
.70	1430	1250	910

NOTE — All cfm is measured external to furnace. Filter resistance not included.