



FORCED AIR GAS FURNACES—DOWN-FLO G9RD & G9RQ1 SERIES 55,000 to 137,000 Btuh INPUT

ENGINEERING DATA
HEATING UNITS

GAS

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Nov. 1, 1964

Supersedes 1-1-64

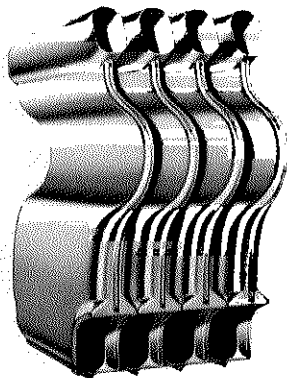
- DURACURVE^(®) Heat Exchanger
- Powerful Blower
- Extra Large Filter
- Continuous Port Steel Burners
- Many Sizes Available
- Low Height Compact Units
- Crisp New Cabinet Lines
- Complete Service Access

LENNOX DURACURVE HEAT EXCHANGER

A major engineering breakthrough—Lennox engineering and experience brings to the heating industry the first direct-fired heat exchanger which **eliminates** all the historic fatigue failure, ticking, resonance and cleanability problems inherent in clam type furnaces. Its name is LENNOX DURACURVE. Its secret—freedom.

Old style clam type heat exchangers were rigidly constrained, dimpled, ribbed and internally baffled to maintain proper and constant flue restriction required for complete combustion and maximum efficiency while maintaining proper venting. Metal so constrained and held—ticked, groaned and sometimes cracked as its desire to expand during heating was restricted.

Not so with LENNOX DURACURVE !!! In this unique design the sides of the clam-section form a flue restriction zone comprised of sections of two concentric cylinders. As the sides grow they expand and move—but in the same direction and at the same rate.

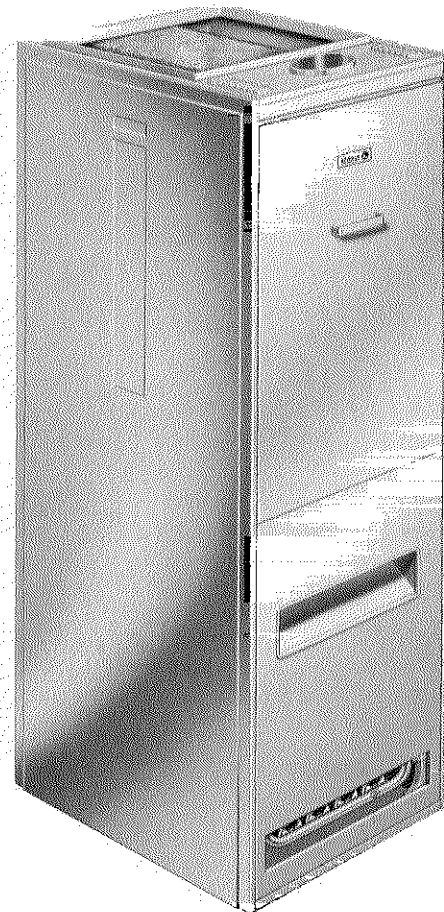


Result—perfect combustion, proper venting and absolute freedom of movement for the metal. No stress or strain—no ticking, groaning or popping noises caused by internal metal expansion forces—and complete elimination of clam-section failure due to fatigue cracking.

Resonance eliminated—The flat drum-like surface of old style heat exchangers could—and did—vibrate in harmony with the pulsations of the combustion process. The result was the irritating, noisy and elusive phenomenon known as resonance. Since all LENNOX DURACURVE surfaces are sections of concentric cylinders there are no drum-like surfaces and, hence no resonance.

No cleaning problem exists since this type exchanger has no ribs, dimples or internal baffling to interfere with a flexible cleaning tool.

The rugged heat exchanger is the quietest, most durable clam type ever developed—another Lennox Engineering breakthrough!!



G9RD-110

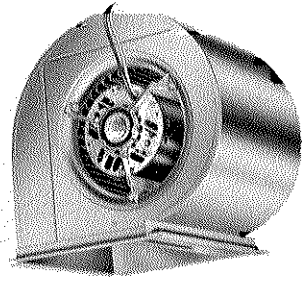
CRISP NEW CABINET LINES

Ultra modern cabinet is attractive when viewed at any angle. Trim "sheer" looking cabinet with "furniture" finish of baked enamel will enhance any environment. Good looking and quiet enough to be installed in a kitchen !!! Die formed panels and doors have a ruggedness and appearance unequalled by any other make of residential furnace.

Complete service access is accomplished by removing both front doors which expose the controls, burners, filters, and blower motor for quick and easy servicing. Four $\frac{3}{8}$ inch weld nuts are provided in cabinet base corners for leveling.

NOTE: Specifications, ratings and dimensions subject to change without notice.

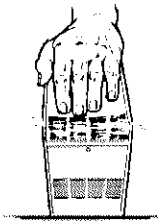
Powerful Blower—Lennox' vast experience in design of air movers is evident in these quiet, powerful direct drive blowers. The blower in each size furnace is specifically designed for that particular furnace. Therefore it delivers heating air requirements quieter and more smoothly than ordinary furnaces which use a standard stock direct drive blower. The blower deck is designed to receive the more powerful Lennox "sulky" belt drive blower, if desired.



Each Lennox direct drive blower is statically and dynamically balanced as an assembly before it is installed in the furnace. This special attention to design details and assembly balancing adds up to the quietest and most efficient direct drive blower in the industry.

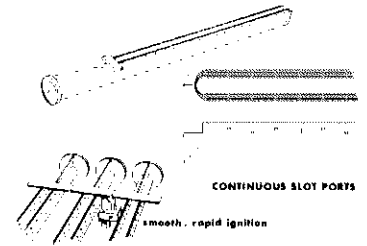
Filters—Frame (slab) type filters are furnished as standard with these units. These filters are the throw-away type and are easily accessible for changing. They contain one inch thick oil impregnated fiberglass and have large dirt holding capacity. Standard size available at most any hardware store. Provisions have been made in the cabinet for installation of filters for either side or bottom return air.

Low Height Compact Units—Exclusive Lennox DURACURVE design permits a much lower overall cabinet height than ordinary reverse floor furnaces. Height of entire cabinet is only approximately 4½ feet including larger than usual blowers. Compact size requires very little floor space. See dimensions and applications drawings.



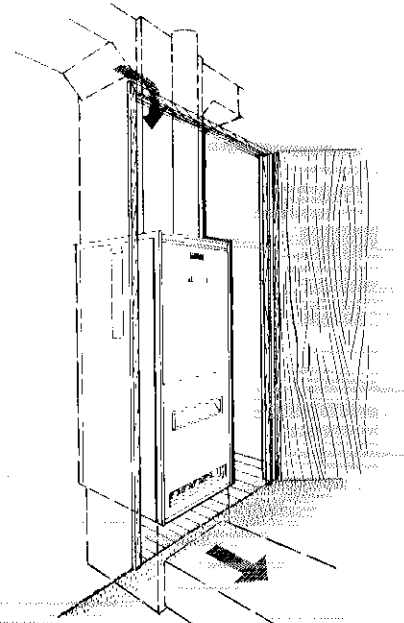
Standard Controls—Accurately positioned fan and limit controls are buried between the heating sections. They are nestled in the offset cavity created by the Lennox DURACURVE heating sections, where they are not effected by the blower velocity. Thus they sense heating temperatures more accurately resulting in consistent control operation. Silent operating gas controls provide 100% safety shutoff for all gases.

Continuous Port Steel Burners—Each burner has four rows of practically continuous ports which result in amazingly quiet and clean combustion. These continuous ports provide almost twice the "port area" as do conventional burners. This produces a clean, short, soft, quiet and efficient flame with all types of gases except mfd.

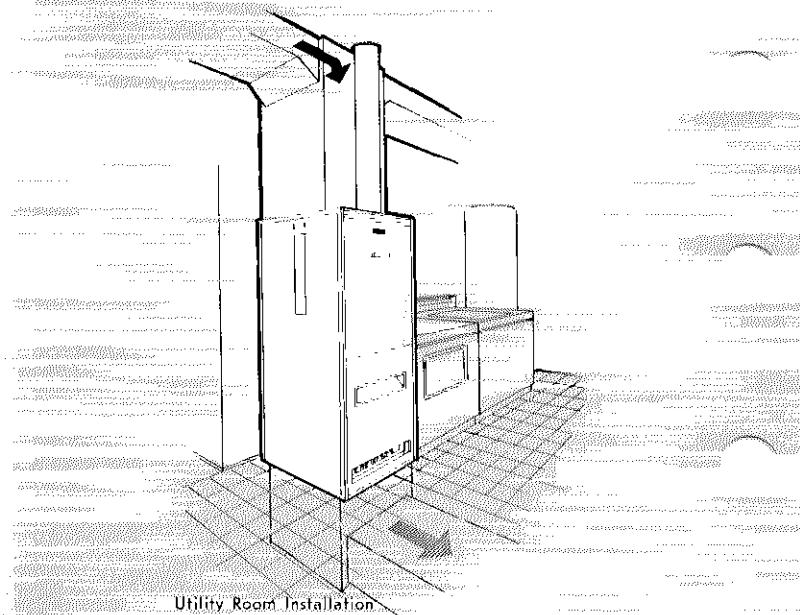


A new super quiet crossover igniter of actual burner ports, perpendicular to the main burner carries a positive flame from burner to burner to achieve the fastest, surest and quietest ignition of multiple burners known in the industry. No "flame roll" noise here, just the most quiet ignition possible.

TYPICAL APPLICATIONS



Closet Installation



Utility Room Installation

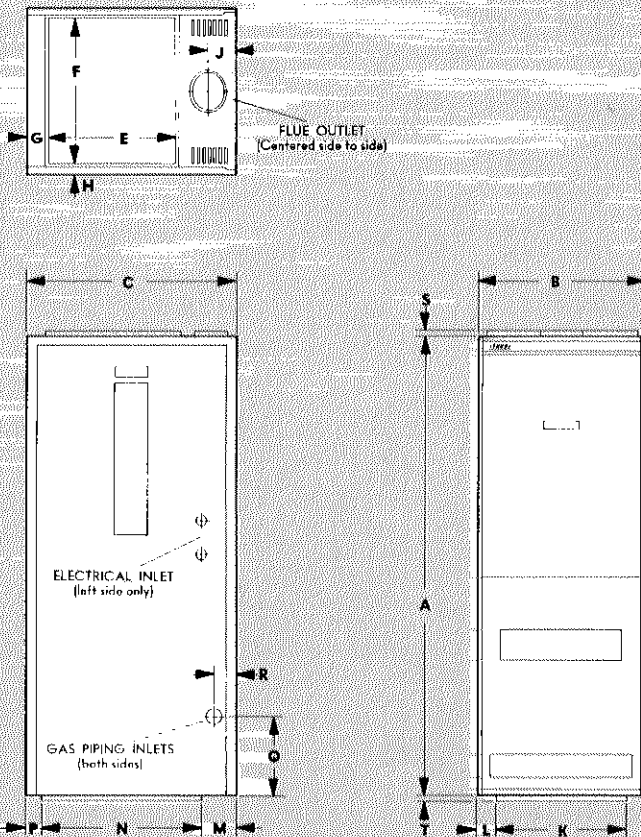
SPECIFICATIONS

Model Number	G9RD-55	G9RD-82	G9RD-110	G9RQ1-137
Btuh input	55,000	82,000	110,000	137,000
Btuh bonnet output	44,000	65,600	88,000	109,600
Flue size (in. round)	4	4	5 (Oval)	5 (Oval)
High static approved by A.G.A. (in. wg.)	.12	.15	.20	.20
Gas piping size (I.P.S. in.)	Natural or Mixed	1/2	1/2	1/2
	LP-Air	1/2	1/2	3/4
	Propane	1/2	1/2	1/2
Blower wheel nominal diam. x width (in.)	9 x 6	9 x 7	9 x 9	10 x 8
Blower motor horsepower	1/20	1/12	1/8	1/5
Filter size (in.)	(1) 20 x 14 x 1	(1) 20 x 16 x 1	(2) 20 x 12 x 1	(2) 20 x 14 x 1
Electrical characteristics	120v/60 cy/1φ	120v/60 cy/1φ	120v/60 cy/1φ	120v/60 cy/1φ
Approximate shipping weight (lbs)	165	205	265	400
Number of packages in shipment	1	1	1	1

NOTE—High altitude derate A.G.A. requires gas furnaces be derated 4% per thousand feet above sea level when the installation is at an altitude of 2000 feet or more. Thus an installation at 3000 feet altitude requires a derate of 12% while up to 2000 feet altitude the unit has a full rating.

Units are available for GUAG requirements.

DIMENSIONS (in.)



NOTE—When combustible floor additive base is used make opening in floor 2 3/8 inches larger (front to rear and side to side) than furnace supply air opening.

Model No.	G9RD-55	G9RD-82	G9RD-110	G9RQ1-137
A	53	58	58	64
B	14	16	21	26
C	26 1/8	26 1/8	26 1/8	26 1/8
E	16 3/4	16 3/4	16 3/4	16 3/4
F	12	14	19	24
G	23 1/16	23 1/16	23 1/16	23 1/16
H	1"	1"	1"	1"
J	3 3/8	3 1/8	3 3/16	3 3/8
K	10	12	17	22
L	2 1/8	2 1/8	2 1/8	2 1/8
M	4 1/8	4 1/8	4 1/8	4 1/8
N	20 1/4	20 1/4	20 1/4	20 1/4
P	1 3/4	1 3/4	1 3/4	1 3/4
* Q	9 3/4	9 3/4	9 3/4	9 3/4
R	2 9/16	2 9/16	2 9/16	2 9/16
S	1/2	1/2	1/2	1/2
T	1/2	1/2	1/2	1/2

*Left side piping inlet. Right side dimension is 6 1/2 inches on all models.

A.G.A. INSTALLATION CLEARANCES

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

*This clearance is to all flue pipes except type "B". Type "B" flue pipe clearance is listed by A.G.A. *** 0 inches for G9RD-55 models.

**Approved for installation on combustible floor if the special base furnished by Lennox is installed between the furnace and the combustible floor.

When the furnace is installed in a confined space, two openings must be provided into the confined area, one opening near the top of the enclosure and one near the bottom. Each opening must have one square inch of free area per 1000 Btuh input and must not be smaller than 100 square inches of free area.

BLOWER PERFORMANCE

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

External Static Pressure (in. w.g.)	Air Volume (cfm)			
	G9RD-55	G9RD-82	G9RD-110	G9RQ1-137
0	435	628	906	1112
.05	434	623	901	1107
.10	433	616	893	1099
.15	432	597	882	1090
.20	868	1081

NOTE—Air volume charts are based on 120 volts power input to blower motor. In areas where power input is greater than 120 volts consult your local Lennox Engineering department.

LENNOX Industries Inc.

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