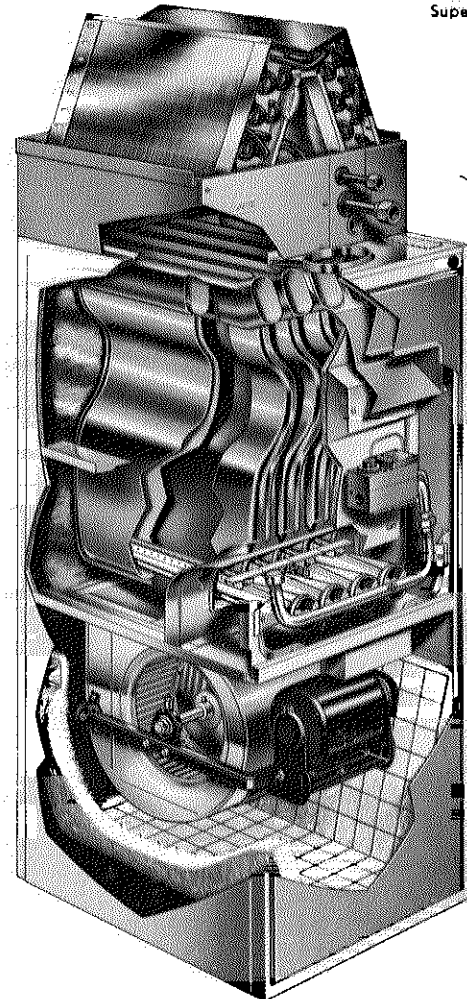


# LENNOX<sup>®</sup> FORCED AIR GAS FURNACES—UP-FLO G8 SERIES—82,000 to 165,000 Btuh INPUT ADD-ON COOLING—1½ THRU 5 NOMINAL TONS

- DURACURVE<sup>®</sup> Heat Exchanger
- Sulky Blower
- Sized For Air Conditioning
- Hammock Filter
- Continuous Port Steel Burners
- Many Sizes Available
- Low Height Compact Units
- Crisp New Cabinet Lines
- Return Air Choice
- Complete Service Access



G8-110 cutaway view with cooling coil

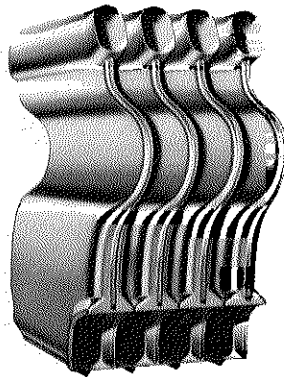
## LENNOX DURACURVE HEAT EXCHANGER

**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 cleanliness problems inherent in clam type furnaces. Its name is LENNOX DURACURVE and it's available in cold rolled steel or LENNOX DURAGLASS coated.

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.



**LENNOX DURAGLASS** The industry's first heat exchanger coating **designed specifically** for direct-fired furnaces. Unlike common types of thin, porous combination vitreous metallic finishes which are classified under Bureau of Standard No. A-19, LENNOX DURAGLASS is a relatively thick (.0045"), highly flexible, non-porous glass coating fused to the entire heat exchanger—inside and out—at 1600F. LENNOX DURAGLASS—product of **seven years** of **research and development**—has exactly the same coefficient of expansion as the steel it protects—will never chip, crumble or crack. Gives **lifetime protection** against the wet acids formed by gas flames fed combustion air contaminated by small quantities of hydro- or fluorocarbons. Vastly superior to porous A-19 vitreous coatings, aluminized or stainless steel.

**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.

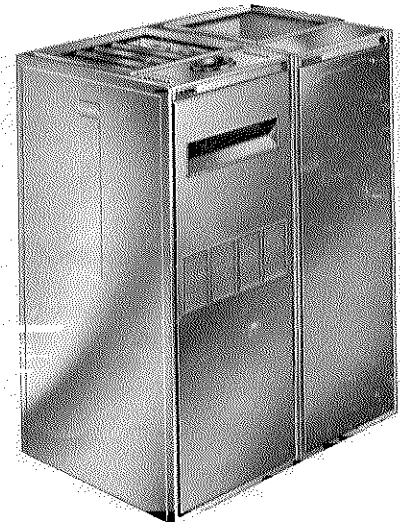
**No cleaning problem** exists since this type exchanger has no ribs, dimples or internal baffling to interfere with a flexible cleaning tool.

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

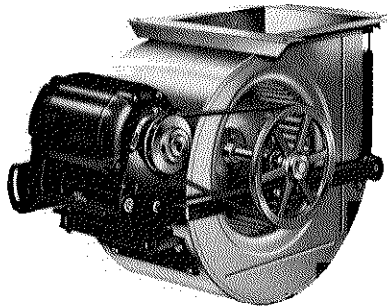
NOTE: Specifications, ratings and dimensions subject to change without notice.

## ATTRACTIVE LOBOY INSTALLATION AVAILABLE

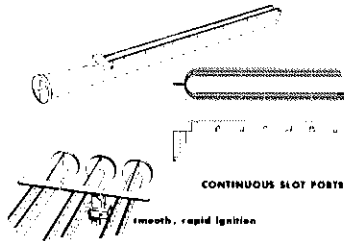
A perfect lobby installation in a recreation or basement family room is made possible with the addition of a deluxe return air cabinet to the hiboy furnace. The low height of the furnace, due to the expert design features of DURACURVE, will allow ample space for basement installations. The return air cabinet can also be installed on either side of the furnace a real plus feature in a lobby type installation. The ultra modern furnace and return air cabinets are attractive when viewed from any angle. They are trim and "sheer" looking with a furniture finish of baked enamel. Die formed panels and doors have a ruggedness and appearance unequalled by any other make of residential furnace. Complete service access, to the furnace cabinet, is accomplished by removing both front doors. The controls, burners, filter and blower motor are then accessible for quick and easy servicing. ¾ inch weld nuts are provided in the cabinet corners for leveling.



**Sulky Blower**—Exclusive Lennox designed belt drive blowers are the quietest in the industry. All moving parts are anchored on a rigid "U" frame which in turn is resiliently mounted to the blower housing. No vibration or noise can be transmitted to the blower housing, furnace cabinet or ductwork. Ingenious design of motor cradle allows quick and simple belt adjustment and pulley alignment.

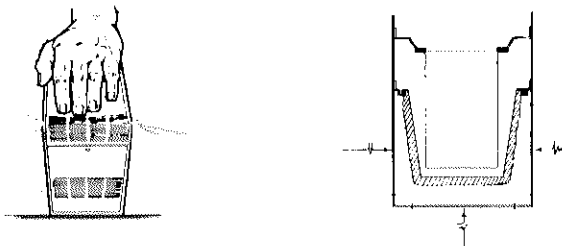


**Continuous Port Steel Burners**—Each burner has four rows of practically continuous ports which result in amazingly quiet and clean combustion. These continuous ports provide almost twice the "port area" as do conventional burners. This produces a clean, short, soft, quiet and efficient flame with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



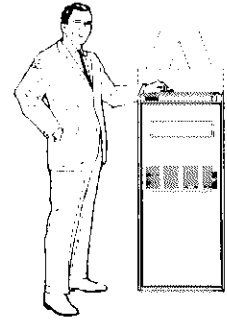
A new super quiet crossover igniter of actual burner ports, perpendicular to the main burner carries a positive flame from burner to burner to achieve the fastest, surest and quietest ignition of multiple burners known in the industry. No "flame roll" noise here, just the most quiet ignition possible.

**Low Height—Return Air Choice**—Exclusive Lennox DURACURVE design permits a much lower overall cabinet height than ordinary hiboy furnaces. Height of entire cabinet is only approximately 4 feet—including larger than usual blowers and room enough to allow return air entry at either side or bottom. Full sized return air knockouts are provided. Lower height is vitally important for additive cooling. Lennox DURACURVE leaves plenty of height for cooling coils and distributing ductwork connection. See application drawings. If a lobby type furnace is desired simply order a RA cabinet and you have a lobby furnace with return air on either side—another plus feature!!!

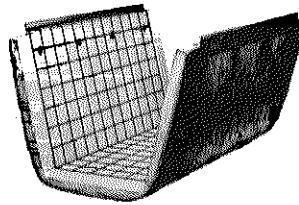


**Standard Controls**—Accurately positioned fan and limit controls are buried between the heating sections. They are nestled in the offset cavity created by the Lennox DURACURVE heating sections, where they are not effected by the blower velocity. Thus they sense heating temperatures more accurately. Silent operating gas controls provide 100% safety shutoff for all gases. The 24 volt control transformer has enough capacity to handle the blower relay when cooling is added. Heating thermostat is furnished as standard. When cooling drives are ordered thermostat is not furnished.

**Sized For Air Conditioning**—The Lennox DURACURVE gas furnace line has been developed with strict attention paid to the design details required for air conditioning. The smooth lines of the DURACURVE heat exchanger give minimum resistance to air travel. Extra large blowers deliver cooling air requirements whisper quiet. New shorter height cabinet makes additive cooling installation much easier than on conventional hi-boy furnaces. Supply air plenum opening exactly matches the supply air openings in Lennox direct expansion evaporator coil cabinets.



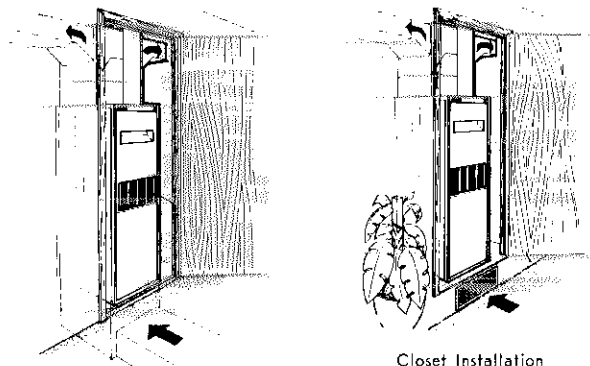
**Hammock Filter**—Another exclusive Lennox feature. Permits two to three times as much filter area compared to conventional furnaces. The tremendous surface area permits use of the most efficient throw-away type filter media available for superfine filtering and long life.



### LENNOX TOTAL COMFORT SYSTEM

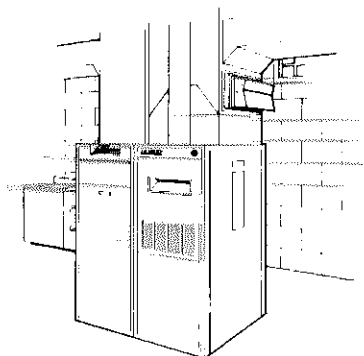
Consists of central furnace with the air mover, central air conditioning system, air filter and humidifier. Air is circulated through these units (Also outdoor fresh air, if desired) where it is heated or cooled, cleaned by the air filter and humidity added (in summer humidity is removed). The air mover (blower) operates constantly, gently and quietly 24 hours a day. This constant air circulation keeps even room temperature and lowers operating costs by continually mixing and recirculating the air.

### TYPICAL APPLICATIONS



Closet Installation With Cooling Coil Return Air Under Floor.

Closet Installation With Cooling Coil Furnace Setting on Platform.



Basement Installation With Cooling Coil, Humidifier, Return Air Cabinet and Electronic Air Cleaner.

# SPECIFICATIONS

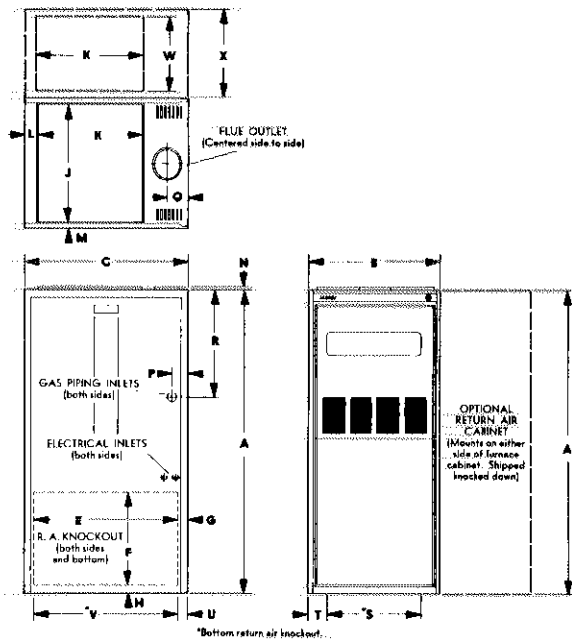
Model Number	*Cold Rolled *DURAGLASS	G8-82 G8-82-V	G8-110 G8-110-V	G8-137 G8-137-V	G8-165 G8-165-V
	Btuh input		82,000	110,000	137,000
Btuh bonnet output		65,600	88,000	109,600	132,000
Cfm for 100 F temperature rise		610	815	1015	1220
Flue size (in. round)		4	5	5	6
High static certified by A.G.A. (in. wg)		1.00	1.00	1.00	1.00
Gas piping size (I.P.S. in.)	Natural or Mixed	1/2	1/2	1/2	3/4
	LP-Air	1/2	3/4	3/4	1"
	Propane	1/2	1/2	1/2	1/2
Blower wheel nominal diam. x width (in.)		10 x 7	10 x 8	12 x 12	12 x 12
Blower motor horsepower		1/8	1/4	1/4	1/4
Blower pulley bore x diam. (in.)		3/4 x 7	3/4 x 6	1 x 10	1 x 8
Adj. motor pulley bore x diam. (in.)		1/2 x 3 1/8	1/2 x 2 7/8	1/2 x 3 1/8	1/2 x 3 1/8
Rpm range with drives furnished		540—740	575—805	350-520	475-645
Belt		3L380	3L370	3L450	3L410
Net filter area (sq ft) & cut size (in.)		4.88-32x28x1	6.34-42x28x1	7.80-52x28x1	8.50-56x28x1
Tons of cooling that can be added		1 1/2, 2 or 2 1/2	1 1/2, 2, 2 1/2 or 3	3, 4 or 5	3, 4 or 5
Electrical characteristics		120v/60cy/1φ	120v/60cy/1φ	120v/60cy/1φ	120v/60cy/1φ
Net weight (lbs) l (pkg.)		178	212	300	350

Units are available for GUAG requirements.

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.

\*Choice of cold rolled steel or DURAGLASS coated heat exchangers is offered. When ordering a furnace designate the complete model number. The G8-110, for example, has the cold rolled steel heat exchanger—the G8-110-V has the DURAGLASS.

# DIMENSIONS (in.)



Model No.	G8-82 G8-82-V	G8-110 G8-110-V	G8-137 G8-137-V	G8-165 G8-165-V
A	49	49	53	53
B	16	21	26	31
C	26 1/8	26 1/8	26 1/8	26 1/8
E	22 1/8	22 1/8	22 1/8	22 1/8
F	11	15	18	18
G	2	2	2	2
H	1 1/2	1 1/2	1 1/2	1 1/2
J	14	19	24	29
K	16 3/4	16 3/4	16 3/4	16 3/4
L	23 1/16	23 1/16	23 1/16	23 1/16
M	1"	1"	1"	1"
N	1/2	1/2	1/2	1/2
P	2 9/16	2 9/16	2 9/16	2 9/16
Q	3 1/8	3 3/16	3 3/8	3 3/8
R	17 13/16	17 13/16	17 13/16	17 13/16
S	11	15	22	22
T	2 5/8	3 1/8	2 1/8	4 9/16
U	2	2	2 1/8	2 1/8
V	22 1/8	22 1/8	21 3/4	21 3/4
W	12 1/8	12 1/8	14 1/8	14 1/8
X	14	14	16	16

## A.G.A. INSTALLATION CLEARANCES

Furnace Model No.	Return Air Cabinet Model No.	R.A. Cabinet Width (in.)	R.A. Opening Size (in.)	R.A. Net Weight (lbs.)
G8-82 & G8-82-V	RA-82-110	14	16 3/4 x 12 1/8	60
G8-110 & G8-110-V	RA-82-110	14	16 3/4 x 12 1/8	60
G8-137 & G8-137-V	RA-137-165	16	16 3/4 x 14 1/8	85
G8-165 & G8-165-V	RA-137-165	16	16 3/4 x 14 1/8	85

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

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

When a 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 shall have at least one square inch of free area per 1000 Btuh of input and must not be smaller than 100 square inches of free area.

# BLOWER DATA

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

## G8-82 & G8-82-V BLOWER PERFORMANCE CHART

Air Volume (cfm)	STATIC PRESSURE EXTERNAL TO UNIT—Inches Water Gauge																					
	0		.10		.20		.30		.40		.50		.60		.70		.80		.90		1.00	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
500	370	.07	460	.08	560	.10	660	.11	725	.14	800	.15	870	.16	935	.19	1000	.20	1050	.23	1100	.25
600	423	.08	525	.10	610	.13	685	.14	765	.15	825	.17	883	.19	945	.21	1010	.24	1060	.26	1110	.29
700	495	.10	580	.13	685	.15	730	.17	795	.18	855	.20	910	.22	970	.25	1025	.27	1080	.30	1135	.34
800	568	.13	640	.16	715	.18	775	.20	840	.22	900	.24	955	.27	1005	.29	1055	.32	1105	.36	1155	.39
900	640	.17	705	.20	770	.22	830	.24	890	.27	940	.30	990	.32	1040	.36	1090	.38	1137	.41	1185	.45
1000	710	.22	770	.24	830	.27	890	.29	935	.32	985	.34	1030	.37	1078	.41	1125	.45	1175	.48	1215	.52
1200	850	.34	905	.37	955	.40	1000	.43	1045	.47	1095	.51	1135	.54	1180	.58	1225	.62	1265	.66	1305	.71
1400	990	.50	1040	.54	1085	.59	1135	.63	1173	.66	1215	.70	1250	.75	1385	.79	1325	.84	1360	.89	1400	.94

## G8-110 & G8-110-V BLOWER PERFORMANCE CHART

Air Volume (cfm)	STATIC PRESSURE EXTERNAL TO UNIT—Inches Water Gauge																					
	0		.10		.20		.30		.40		.50		.60		.70		.80		.90		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
700	405	.08	505	.09	595	.12	675	.15	753	.18	820	.20	880	.23	940	.26	995	.29	1050	.33	1105	.37
800	470	.10	553	.12	630	.15	710	.18	775	.21	835	.23	900	.27	958	.30	1010	.33	1060	.38	1115	.43
900	528	.13	604	.15	675	.17	745	.21	810	.24	870	.27	925	.31	980	.35	1030	.38	1080	.43	1130	.47
1000	585	.16	655	.19	720	.22	790	.25	845	.29	905	.32	955	.36	1010	.40	1060	.44	1107	.49	1150	.53
1200	705	.26	760	.29	815	.32	880	.36	925	.39	975	.44	1025	.48	1075	.53	1120	.58	1160	.65	1205	.69
1400	820	.38	870	.42	920	.46	973	.51	1018	.55	1060	.60	1107	.66	1146	.70	1190	.76	1233	.82	1283	.89
1600	940	.55	980	.59	1023	.64	1070	.70	1110	.76	1150	.81	1192	.87	1233	.93						

## G8-137 & G8-137-V BLOWER PERFORMANCE CHART

Air Volume (cfm)	STATIC PRESSURE EXTERNAL TO UNIT—Inches Water Gauge																					
	0		.10		.20		.30		.40		.50		.60		.70		.80		.90		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	280	.12	385	.16	480	.20	535	.24	620	.28	675	.31	730	.35	780	.39	825	.44	870	.51	915	.58
1000	315	.13	415	.17	505	.22	573	.26	640	.31	692	.34	740	.37	795	.42	840	.48	885	.55	922	.62
1200	385	.16	483	.23	545	.27	615	.32	670	.36	727	.41	772	.45	819	.52	870	.60	910	.65	950	.73
1400	450	.24	520	.28	590	.33	650	.38	710	.43	760	.48	812	.54	855	.62	903	.71	940	.78	980	.86
1600	505	.31	572	.37	638	.42	697	.47	752	.53	805	.59	850	.68	895	.75	930	.83	972	.90	1010	1.00
1800	568	.40	622	.45	690	.52	745	.57	800	.64	855	.74	890	.82	930	.91	978	1.10				
2000	625	.52	680	.57	740	.63	795	.70	840	.80	880	.88	930	.98	970	1.08						
2200	690	.63	740	.70	795	.77	845	.86	888	.96	930	1.06										
2400	762	.82	805	.87	850	.96	895	1.05														
2600	830	1.00	860	1.07																		

## G8-165 & G8-165-V BLOWER PERFORMANCE CHART

Air Volume (cfm)	STATIC PRESSURE EXTERNAL TO UNIT—Inches Water Gauge																					
	0		.10		.20		.30		.40		.50		.60		.70		.80		.90		1.00	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1100	340	.10	440	.15	520	.20	595	.24	650	.28	710	.33	765	.39	815	.44	860	.50	900	.55	945	.61
1200	375	.13	465	.17	540	.22	610	.27	670	.32	725	.38	775	.42	830	.49	875	.54	915	.60	955	.67
1400	440	.19	510	.23	585	.29	650	.34	710	.40	760	.46	810	.52	860	.59	900	.65	940	.72	980	.78
1600	500	.26	560	.31	630	.37	695	.44	750	.50	800	.56	845	.63	890	.70	935	.77	975	.85	1015	.93
1800	560	.35	620	.41	680	.47	735	.54	790	.61	835	.68	885	.77	925	.84	970	.93	1010	1.01	1050	1.09
2000	615	.45	675	.51	730	.60	785	.67	830	.75	880	.83	925	.91	970	1.01	1010	1.10				
2200	685	.58	730	.65	790	.75	835	.83	885	.91	925	1.00	970	1.09								
2400	755	.75	800	.84	840	.91	890	1.00	930	1.08												
2600	825	.96	760	1.03	895	1.10																

## BLOWER DRIVES FOR ADDITIVE COOLING

Furnaces are shipped with drives that will handle cooling requirements not shown on table below. When a more powerful cooling drive is

required select it from table. Furnaces can be shipped with correct drive mounted. Specify tons of cooling when ordering.

Furnace and additive cooling	Blower Pulley	Motor Pulley	Belt	*Rpm Range	Motor hp
G8-82 G8-82-V (2 tons)	3/4 x 7	1/2 x 4 1/8	3L390	665-865	1/6
G8-82 G8-82-V (2 1/2 tons)	3/4 x 7	1/2 x 4 3/4	3L400	815-1010	1/4
G8-110 G8-110-V (2 1/2 tons)	3/4 x 6	1/2 x 4 1/8	3L380	775-1000	1/4
G8-110 G8-110-V (3 tons)	3/4 x 6	1/2 x 4 1/8	3L380	775-1000	1/3

Furnace and additive cooling	Blower Pulley	Motor Pulley	Belt	*Rpm Range	Motor hp
G8-137 G8-137-V (3 tons)	1 x 7	1/2 x 3 1/8	3L400	540-740	1/3
G8-137 G8-137-V (4 tons)	1 x 6	5/8 x 3 1/4	4L380	550-835	1/2
G8-137 G8-137-V (5 tons)	1 x 6	5/8 x 4 1/8	4L400	805-1090	3/4
G8-165 G8-165-V (4 tons)	1 x 6	5/8 x 3 1/4	4L380	550-835	1/2
G8-165 G8-165-V (5 tons)	1 x 6	5/8 x 4 1/8	4L400	805-1090	3/4

\*At 1725 rpm motor speed.

\*At 1725 rpm motor speed.