



**GAS-FIRED UNIT HEATERS  
LBD2 SERIES—HORIZONTAL**  
110,000 to 330,000 Btuh INPUT

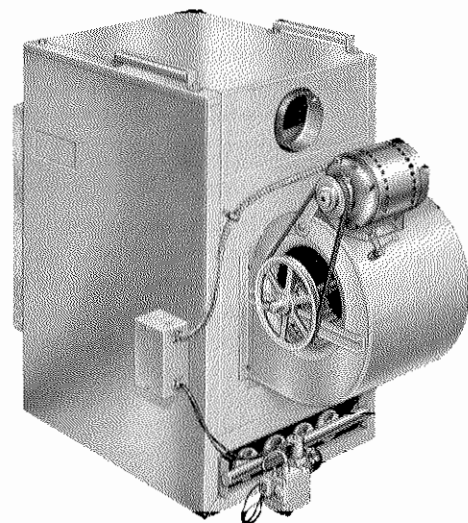
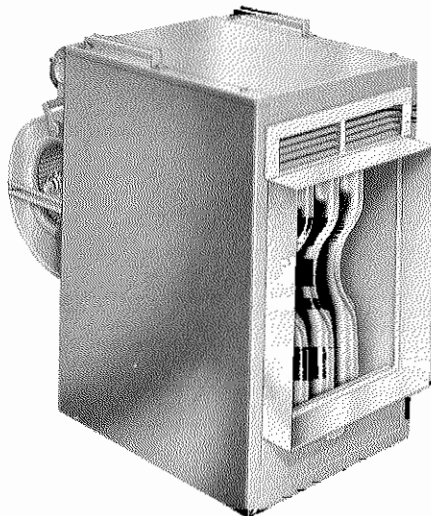
GAS

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May 15, 1970

Supersedes 7-15-69

- Choice of Aluminized or DURAGLASS™ Coated Heat Exchanger.
- Several Sizes Available
- DURACURVE® Heat Exchanger
- Aluminized Burners
- Easy Duct Connection
- Hangers For Suspending
- Built-in Draft Diverter
- A.G.A. Certified

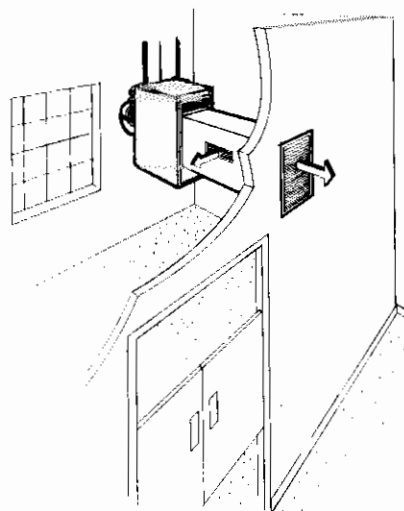
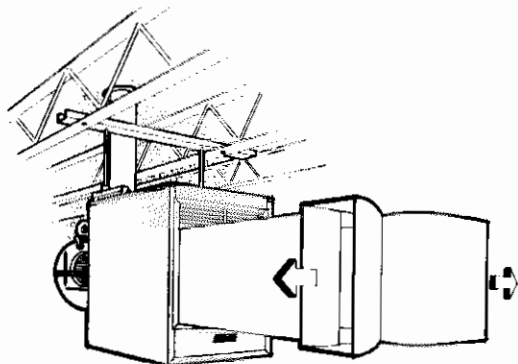


**Compact And Efficient Unit Heaters Are Available In Several Sizes**

Lennox LBD2 blower type unit heaters are designed for installations that require a short run of supply air duct. They are easily installed overhead, out of the way, thus saving valuable floor space. Several sizes of unit heaters, with a wide and varied range of heating capacities, are available. Two stage heating is also available, as an option, on all models. Lennox has incorporated the famous DURACURVE heat exchanger design into the unit heater line, assuring maximum heating efficiency and many years of service. Heavy gauge steel cabinet has a

baked-on enamel finish. Cabinet is equipped with hangers for suspending and flanges on supply air opening for easy connection of duct. Aluminized draft diverter is integral to cabinet. Lennox designed and built blowers provide quiet and low cost operation. Belt drives permit air volume adjustment. Unit heaters are shipped completely assembled with controls factory installed and wired. In addition each unit is fired tested at the factory, insuring proper operation. Installer has only to make duct, flue, gas supply and electrical connections.

**Applications**



**Lennox DURACURVE Heat Exchanger**—Available in aluminized steel or DURAGLASS™ coated. Lennox engineered and constructed, direct fired heat exchanger eliminates fatigue failure, ticking, resonance and cleanliness problems. With this unique heat exchanger design the sides of each section form a flue restriction zone comprised of sections of two concentric cylinders. The sides expand in the same direction and at the same rate, eliminating metal fatigue and ticking. This rugged heat exchanger is the quietest and most reliable ever developed.

**Rugged Cabinet**—Constructed of heavy gauge cold rolled steel with a furniture finish of baked-on enamel. Aluminized steel inner panel liners keep outer cabinet surface temperature low. Wiring junction box is conveniently located on outside of cabinet. Threaded pipe connections are provided on cabinet for easy suspension of unit. Flanges on cabinet supply air opening assure positive and air tight duct connection. Fan and limit access cover in cabinet side panel provides complete service access to controls.

**Aluminized Steel Burners**—Each burner has four rows of practically continuous ports which result in quiet and clean combustion. A crossover igniter of actual burner ports, perpendicular to the main burner, carries a positive flame from burner to burner to achieve fast and quiet ignition of multiple burners. Burners are readily accessible for service, when required.

**Aluminized Draft Diverter**—Corrosion resistant. Factory installed within the unit heater cabinet.

**Approvals**—A. G. A. certified and C. S. A. approved for use with natural and LPG gases.

**Quiet Blower**—Lennox designed and built belt drive blowers are quiet operating and easily serviced. Motor mounting arrangement permits easy motor change over and simple belt adjustment. Motor is totally enclosed. Blower wheels are statically and dynamically balanced. Rubber enclosed, self-aligning, permanently lubricated ball bearings give a lifetime of trouble free operation. LBD2-110, 137 and 165 units are equipped with a single blower. Larger models have dual blowers.

**Controls**—The following controls are furnished as standard equipment: 24 volt main gas valve with 100% safety shutoff and pilot valve, gas pressure regulator valve (not available on LPG models), 115/24v transformer, fan control and limit control. Two limit controls are furnished with LBD2-220, 275 and 330 models. The following controls are available as optional equipment and must be ordered extra: Thermostat, two stage gas valve, summer fan switch and fan time delay relay.

**Power Venters (Optional)**—Power venters are available for field installation and must be ordered extra.

LBD2-110 thru LBD2-275 models.

PV3-115-24 (volt) order no. — (P-8-8519)

PV3-230-24 (volt) order no. — (P-8-8520)

(4" flue connection)

Optional PV3 flue adaptors (flue size and order no.):

5" to 4"—(P-8-8515) 7" to 4"—(P-8-8517)

6" to 4"—(P-8-8516) 8" to 4"—(P-8-8518)

LBD2-330 models.

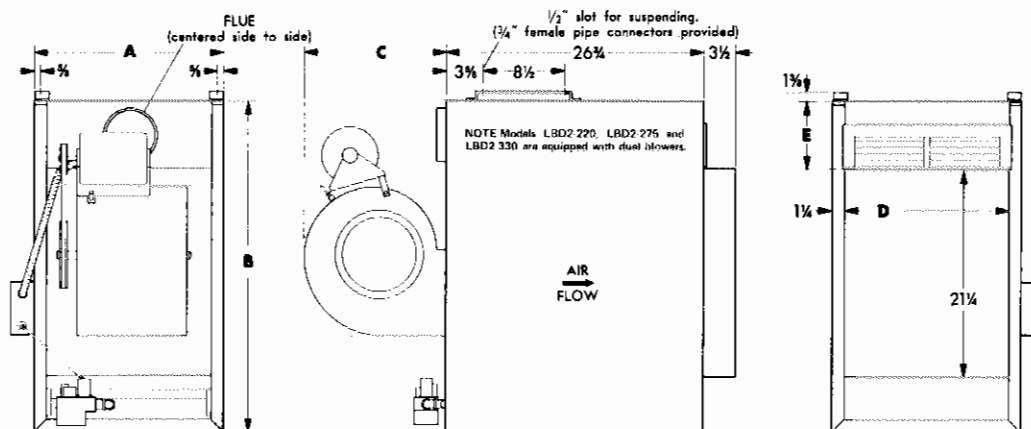
PV4-115-24 (volt) order no. — (P-8-8521)

PV4-230-24 (volt) order no. — (P-8-8522)

(6" flue connection)

Flue adaptor must be supplied by installer.

### DIMENSIONS (in.)



Model No.	A	B	C	D	E
LBD2-110	19-5/8	34-3/8	14-1/4	17-1/8	6-7/8
LBD2-137	22-3/4	35-3/8	17	20-1/4	7-7/8
LBD2-165	25-7/8	36-3/8	21-3/16	23-3/8	8-7/8
LBD2-220	32-1/8	37-3/8	16-3/4	29-5/8	9-7/8
LBD2-275	38-3/8	37-3/8	18-7/16	35-7/8	9-7/8
LBD2-330	44-5/8	38-3/8	21-3/16	42-1/8	10-7/8

### INSTALLATION CLEARANCES TO COMBUSTIBLES

Four Sides	18"
Top	6"
Floor	18"
Flue	6"

Note—Provide adequate clearance for servicing.

## SPECIFICATIONS

*Model No.	Aluminized	LBD2-110	LBD2-137	LBD2-165	LBD2-220	LBD2-275	LBD2-330
	DURAGLASS	LBD2-110-V	LBD2-137-V	LBD2-165-V	LBD2-220-V	LBD2-275-V	LBD2-330-V
Heating Capacity Input (Btuh)		110,000	137,000	165,000	220,000	275,000	330,000
Heating Capacity Output (Btuh)		88,000	109,600	132,000	176,000	220,000	264,000
Flue size (in round)		5	6	7	8	8	9
Gas Piping Size (in.)	Natural	1/2	1/2	3/4	3/4	3/4	3/4
	LPG	1/2	1/2	3/4	3/4	3/4	3/4
High statics certified by A.G.A. (in wg)		.20	.20	.20	.20	.20	.20
Temperature Rise (Degrees F)	Minimum	60	60	60	50	50	50
	Maximum	100	100	100	100	100	100
Air Volume range (cfm)		900-1600	1000-2000	1200-2400	1600-3200	2000-4000	2400-4900
Blower wheel nominal diam. x width (in.)		9 x 9	10 x 10	12 x 12	(2) 10 x 7	(2) 10 x 10	(2) 12 x 12
Blower motor hp		1/3	1/2	1/2	3/4	3/4	3/4
Number of packages		1	1	1	1	1	1
Net weight (lbs.)		226	261	398	432	461	564

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 3,000 feet altitude requires a derate of 12% while up to 2,000 feet the unit has full rating.

\*Choice of two heat exchangers available: Aluminized steel or DURAGLASS coated. See model numbers in table for designation. Specify correct model number, for type heat exchanger desired, when ordering.

## AIR RESISTANCE

Model No.	Air Volume (cfm)	Static Pressure External To Unit (in. wg)					
		0		.10		.20	
		RPM	BHP	RPM	BHP	RPM	BHP
LBD2-110	900	505	.11	620	.14	720	.17
	1000	560	.13	665	.17	760	.21
	1200	670	.20	760	.25	843	.30
	1400	780	.31	862	.37	935	.46
	1600	895	.46	983	.53	1030	.58
LBD2-137	1000	355	.04	465	.08	552	.12
	1200	430	.08	525	.12	605	.17
	1400	497	.12	585	.17	655	.23
	1600	575	.21	645	.26	710	.31
	1800	640	.29	705	.36	765	.41
LBD2-165	2000	713	.41	770	.47	820	.51
	1200	240	.05	345	.10	420	.13
	1400	275	.08	370	.12	445	.16
	1600	315	.11	405	.16	470	.21
	1800	355	.15	435	.20	497	.25
LBD2-220	2000	390	.19	465	.26	525	.32
	2200	435	.25	500	.32	555	.41
	2400	470	.32	535	.41	585	.50
	1600	350	.10	465	.16	550	.19
	1800	410	.14	505	.20	580	.25
LBD2-275	2000	458	.20	543	.24	615	.32
	2200	505	.26	585	.32	645	.36
	2400	550	.31	620	.39	690	.44
	2600	595	.34	665	.46	720	.51
	2800	643	.47	705	.54	760	.60
LBD2-330	3000	680	.56	745	.62	800	.71
	3200	735	.66	790	.74	---	---
	2000	420	.15	520	.21	600	.27
	2500	522	.29	600	.34	675	.41
	3000	625	.43	695	.51	755	.59
LBD2-330	3500	730	.66	785	.75	843	.85
	4000	830	.98	885	1.09	---	---
	2000	265	.08	365	.15	440	.19
	2500	325	.19	417	.23	485	.29
	3000	385	.25	470	.34	530	.41
LBD2-330	3500	460	.39	525	.48	575	.56
	4000	525	.56	580	.68	635	.80
	4500	585	.78	640	.92	690	1.08
LBD2-330	4900	610	1.00	---	---	---	---

NOTE—Shaded area requires larger motor.