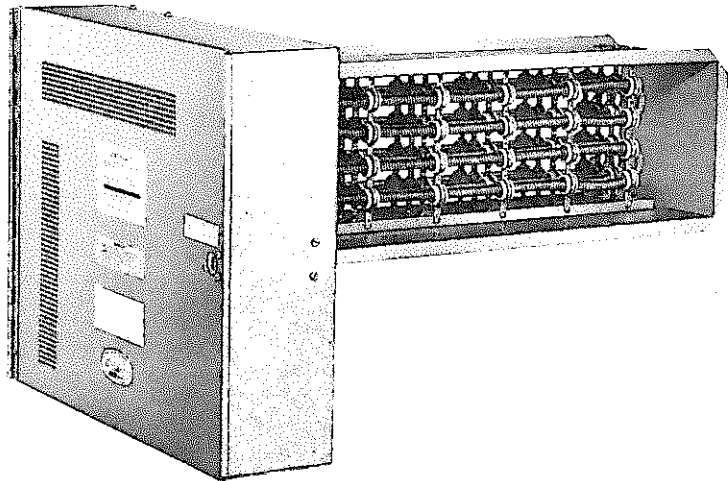




ED7 SERIES ELECTRIC DUCT HEATERS 6,800 to 65,400 Btuh Output

ENGINEERING DATA
HEATING UNITS
ELECTRIC
Page 1a
November 1, 1972

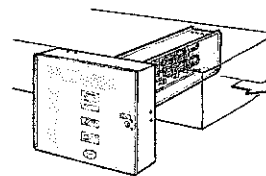
- Easy To Install
- Several Sizes Available
- Completely Versatile
- Minimum Air Resistance
- Power Supply Choice
- Safety Controls Furnished
- Complete Service Access
- U. L. Listed



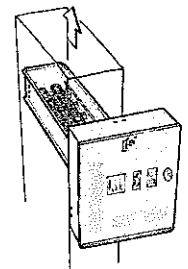
Typical Applications

Efficient Duct Heaters Feature Application Flexibility

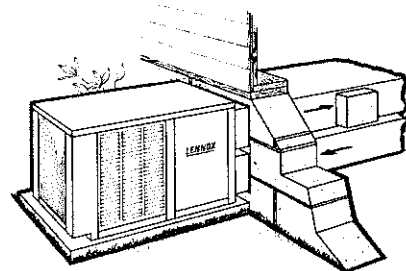
Lennox ED7 series electric duct heaters are constructed of heavy gauge galvanized steel and designed to fit standard duct sizes. All Lennox duct heaters carry U. L. Listing for zero installation clearances. They can be installed in horizontal or vertical duct to supplement any forced air system. Air flow in either direction is accomplished by mounting duct heater on opposite side of duct or revolving the heater 180 degrees. Ideal for zone control or installation downstream from an evaporator coil to provide reheat for humidity control applications. Several kw sizes are available with a choice of power supply voltages in single and three phase. The nichrome heating elements are exposed directly in the air stream resulting in instant heat transfer and long life of the elements. Element support frame is constructed of heavy gauge steel. Porcelain insulators are located and spaced for proper element support and best heater operation. Thermal time delay relay brings the heating elements on and off the line in sequence and equal increments, with a time delay between each element. Blower interlock control activates blower upon energization of first heating element and terminates blower operation when last heating element shuts off. A 24 volt transformer is factory installed and wired. Safety controls furnished include automatic reset limit control and a supplemental manual reset limit control. Outdoor thermostat connection is provided in all duct heaters adaptable. Each duct heater is test operated and shipped factory assembled. Installer has only to mount heater in duct and make power supply connections. Heating thermostat must be ordered extra for straight electric heating applications. The thermostat furnished with the heat pump or air conditioner can control the duct heaters in heat pump or all season installations.



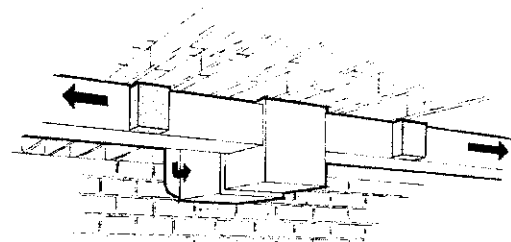
Horizontal Duct Installation



Vertical Duct Installation



Installed With Lennox CHP Single Package Heat Pump or Lennox CHA Single Package Air Conditioner.



Zone Installation With Centrally Located Blower Filter Unit.

ELECTRICAL DATA

Electric Unit Model No.	No. of Steps	Number of Elements		Volts Input	Kw Input	Btuh Output	*Minimum Circuit Ampacity	
		1 ph	3 ph				1 ph	3 ph
ED7-816-2	1	1	---	208	1.5	5,100	10.4	---
				220	1.7	5,700		
				230	1.8	6,300		
				240	2.0	6,800		
ED7-816-4.8	1	1	---	208	3.6	12,300	25.0	---
				220	4.0	13,800		
				230	4.4	15,100		
				240	4.8	16,400		
**ED7-816-9.6	2	2	---	208	7.2	24,600	50.0	28.9
220				8.1	27,500			
ED7-816-9.6-3	1	---	3	230	8.8	30,100		
				240	9.6	32,700		
ED7-816-9.6-3-480	1	---	3	440	8.1	27,500	---	14.4
				480	9.6	32,700		
**ED7-820-14	3	3	---	208	10.5	35,700	73.0	42.0
				220	11.7	39,900		
				230	12.8	44,100		
				240	14.0	47,700		
ED7-820-14.3	1	---	3	440	11.7	39,900	---	21.0
				480	14.0	47,700		
**ED7-820-19.2	4	4	---	208	14.4	49,200	100.0	57.9
220				16.2	55,000			
**ED7-820-19.2-3	2	---	6	230	17.6	60,200		
				240	19.2	65,400		
ED7-820-19.2-3-480	1	---	6	440	16.2	55,000	---	28.9
				480	19.2	65,400		

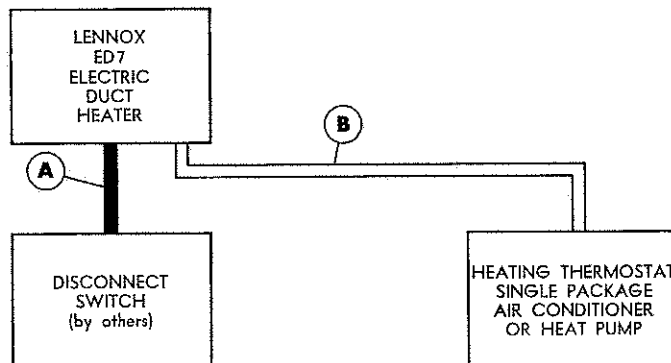
* Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 90c (194F).

** May be used with two stage control.

FIELD WIRING

ED7 Series

Single or Three Phase Models

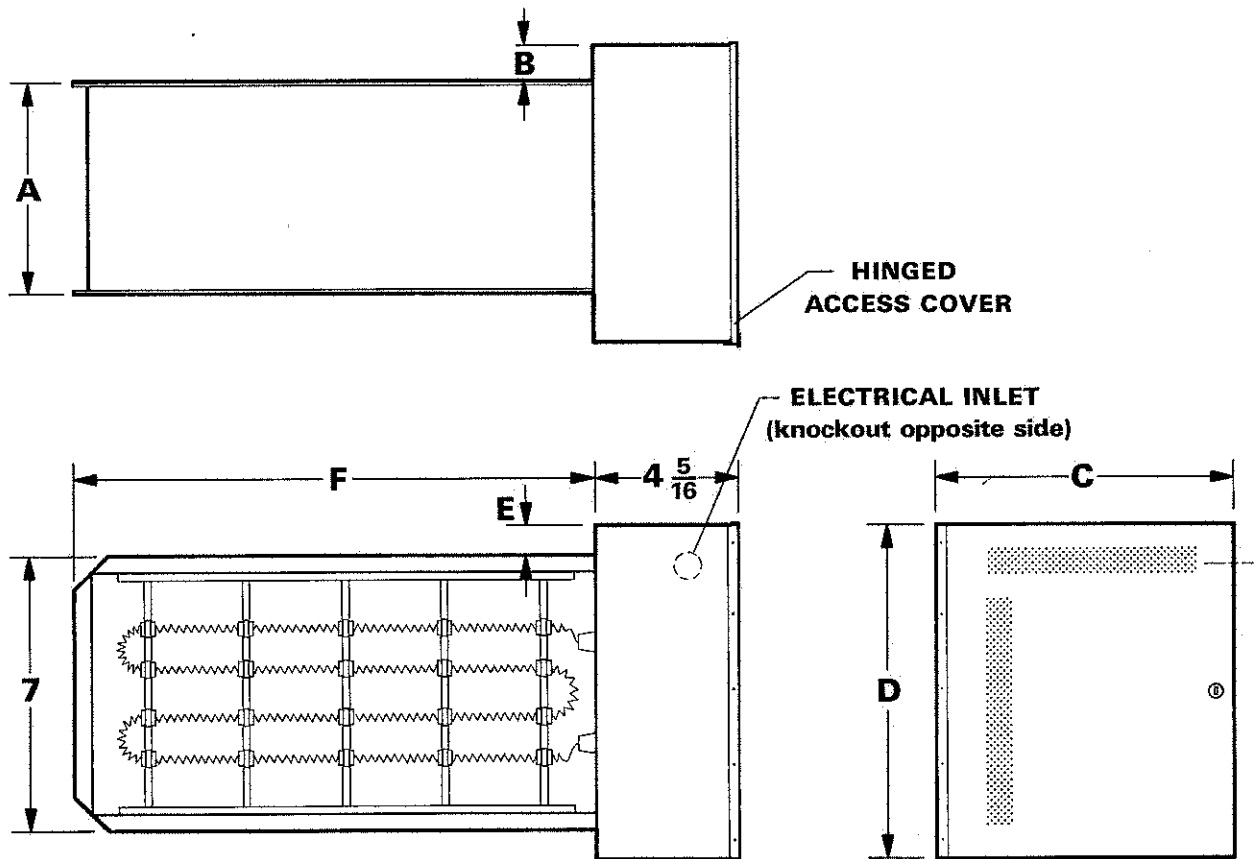


A—Two or three wire power (not furnished) see electrical data for sizes.

B—Two wire low voltage (not furnished) 18 ga. minimum.

NOTE—When an outdoor thermostat is used an additional two wire low voltage wiring harness is required.

DIMENSIONS (inches)



*Model Number	A	B	C	D	E	F	Duct Size	Duct Opening Required H X W (inches)	Net Weight (lbs.)
ED7-816-2 ED7-816-4.8 ED7-816-9.6	6-3/8	1-5/16	14-3/16	14-5/16	1-1/8	15-1/2	8 x 16	7-1/8 x 6-1/2	24
ED7-816-9.6 (440/480V)	6-3/8	1-5/16	11-3/16	10-3/16	1/2	15-1/2			
ED7-820-14 (230/240) ED7-820-19.2	6-3/8	4	17-3/16	14-5/16	1-1/8	19-3/4	8 x 20	7-1/8 x 6-1/2	29
ED7-820-14 (220/240)	6-3/8	1-5/16	14-3/16	14-5/16	1-1/8	19-3/4			
ED7-820-14 (440/480)	6-3/8	1-5/16	11-3/16	10-3/16	1/2	19-3/4			
ED7-820-19.2 (220/240)	8-3/8	1-5/16	16-3/16	14-5/16	1-1/8	19-3/4	8 x 20	7-1/8 x 8-1/2	
ED7-820-19.2 (440/480)	8-3/8	1-5/16	11-3/16	10-3/16	1/2	19-3/4			

*Add -3 when ordering 3 phase models (ED7-820-14-3). Add -3-480 when ordering 3 phase 440/480 volt models (ED7-820-14-3-480).

AIR RESISTANCE

ED7-816 and ED7-820

*Air Volume (cfm)	Pressure Drop (in. wg)				
	**Number of Elements				
	1	2	3	4	6
200	.005	.005	.010	.010	.010
400	.010	.010	.015	.015	.020
600	.015	.020	.025	.035	.040
800	.025	.030	.045	.055	.070
1000	.035	.050	.070	.080	.105
1200	.055	.070	.090	.110	.150
1400	.075	.095	.120	.150	.200
1600	.095	.120	.145	.180	.250

*Determine minimum air volume from chart on page 1d.

**Refer to ELECTRICAL DATA table to determine the number of elements in desired unit.

MINIMUM AIR VOLUME CHART

