HEAT PUMP OUTDOOR UNITS

ELP

ELITE® COMMERCIAL SPLIT SYSTEMS

R-410A - 60 Hz

COMMERCIAL
PRODUCT SPECIFICATIONS

Bulletin No. 210805
November 2019
Supersedes August 2018

ELITE® SERIES

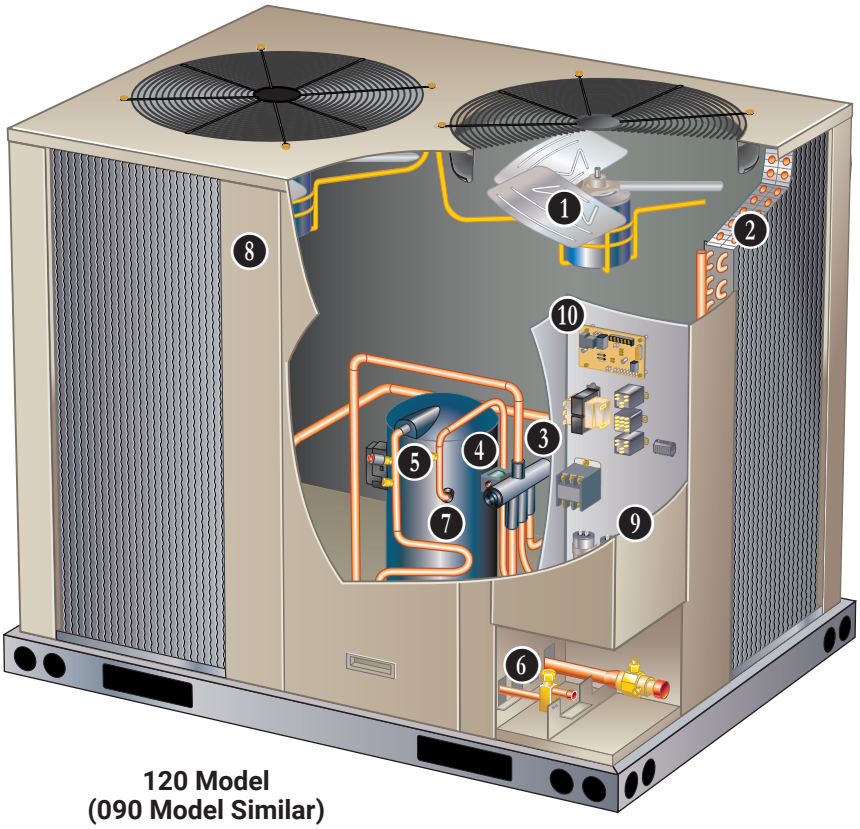
EER up to 11.0
7.5 to 10 Tons
Cooling Capacity - 89,000 to 115,000 Btuh
Heating Capacity - 88,000 to 114,000 Btuh

MODEL NUMBER IDENTIFICATION

EL P 120 S 4 S T 1 Y

- **Brand/Family**
  EL = Elite® Product Line
- **Unit Type**
  P = Split System Heat Pump
- **Nominal Cooling Capacity – Tons**
  090 = 7.5 Tons
  120 = 10 Tons
- **Cooling Efficiency**
  S = Standard Efficiency
- **Refrigerant Type**
  4 = R–410A
- **Refrigerant Circuits**
  S = Single Circuit
- **Part Load Capability**
  T = Two Stage Compressor
- **Minor Design Sequence**
  1 = 1st Revision
  2 = 2nd Revision
  3 = 3rd Revision
- **Voltage**
  Y = 208/230V-3 phase-60hz
  G = 460V-3 phase-60hz
  J = 575V-3 phase-60hz

FEATURE HIGHLIGHTS



120 Model
(090 Model Similar)

1. Outdoor Coil Fan(s)
2. Copper Tube / Enhanced Fin Coil(s)
3. Four-Way Reversing Valve
4. High Pressure Transducer
5. Loss of Charge Switch
6. Refrigerant Lines and Service Valve
7. Compressor
8. Cabinet
9. Control Box
10. Defrost Control

CONTENTS

APPROVALS AND WARRANTY

APPROVALS

- Tested in the Lennox Research Laboratory environmental test room
- AHRI Certified to AHRI Standard 340/360
- Sound rated to AHRI Standard 270 or 370 test conditions
- Units and components UL, NEC, and CEC bonded for grounding to meet safety standards for servicing
- ETL certified
- ISO 9001 Registered Manufacturing Quality System
- All units meet two-stage requirements of ASHRAE 90.1, IECC 2015, and California Code of Regulations, Title 24

WARRANTY

- Compressor:
  - Limited five years in non-residential installations
- All other covered components:
  - Limited one year in non-residential installations

NOTE - Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

FEATURES

APPLICATIONS

- 7.5 and 10 ton
- Matching air handlers provide a wide range of cooling capacities and applications
- See AHRI Ratings tables
- Shipped completely factory assembled, piped, and wired
- Factory tested operated

NOTE - Installer must set heat pump, connect refrigerant lines, add refrigerant charge and make electrical connections to complete job.

REFRIGERATION SYSTEM

R-410A Refrigerant

- Non-chlorine, ozone friendly
- Unit is factory pre-charged

NOTE - Total system refrigerant charge is dependant on outdoor unit size, indoor unit size and refrigerant line length.

NOTE - Refer to the unit-mounted charging sticker to determine correct amount of charge required.

❶ Outdoor Coil Fans

- Dual direct drive fans
- Vertical air discharge
- Totally enclosed fan motor
- Overload protected
- Rain Shield

❷ Copper Tube/Enhanced Fin Coil(s)

- ELP090S has a single “U” shaped coil
- ELP120S has two “L” shaped coils
- Lennox designed and fabricated coil
- Ripple-edged aluminum fins
- Copper tube construction
- Lanced fins for maximum fin surface exposure
- Fin collars grip tubing for maximum contact area
- Flared shoulder tubing connections
- Silver soldering construction
- Factory tested under high pressure
- Entire coil accessible for cleaning

FEATURES

REFRIGERATION SYSTEM (continued)

3 Four-Way Reversing Valve
- Rapid changeover of refrigerant flow direction from cooling to heating and vice versa
- Operates on pressure differential between outdoor unit and indoor coil
- Factory installed

4 High Pressure Switch
- Protects the system from high pressure conditions
- Automatic reset

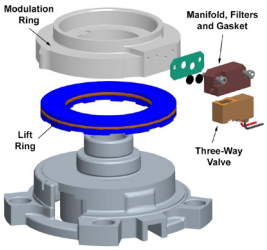
5 Loss of Charge Switch
- Provides loss of charge and freeze-up protection

High Capacity Liquid Line Drier
- Factory installed in the liquid line
- Drier traps moisture or dirt
- 100% molecular-sieve, bead type, bi-flow drier

6 Refrigerant Lines and Service Valves
- Refrigerant lines are shipped refrigeration clean
- Lines are cleaned, dried, pressurized and sealed at factory
- Suction line fully insulated
- Lines are stubbed at both ends

7 **Two-Stage Scroll Compressor**
- High volumetric efficiency
- Uniform suction flow
- Constant discharge flow
- Quiet operation

Compressor Operation
- Two involute spiral scrolls matched together generate a series of crescent shaped gas pockets between them
- During compression, one scroll remains stationary while the other scroll orbits around it
- Gas is drawn into the outer pocket, the pocket is sealed as the scroll rotates
- As the spiral movement continues, gas pockets are pushed to the center of the scrolls
- Volume between the pockets is simultaneously reduced
- When the pocket reaches the center, gas is now at high pressure and is forced out of a port located in the center of the fixed scrolls
- During compression, several pockets are compressed simultaneously resulting in a smooth continuous compression cycle
- Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency
- Compressor is tolerant to the effects of slugging and contaminants
- If this occurs, scrolls separate, allowing liquid or contaminants to be worked toward the center and discharged
- During the compression process, there are several pockets in the scroll that are compressing gas
- Modulation is achieved by venting a portion of the gas in the first suction pocket back to the low side of the compressor thereby reducing the effective displacement of the compressor
- A 24-volt DC solenoid valve inside the compressor controls staging



- When the 3-way solenoid is energized it moves the lift ring assembly to block the ports and the compressor operates at full-load or 100% capacity
- When the solenoid is de-energized the lift ring assembly moves to unblock the compressor ports and the compressor operates at part-load or approximately 67% of its full-load capacity
- The “loading” and “unloading” of the two stage scroll is done “on the fly” without shutting off the single-speed compressor motor between stages
- Low gas pulses during compression reduces operational sound levels
- Compressor motor is internally protected from excessive current and temperature
- Compressor is installed in the unit on specially formulated, resilient rubber mounts for better sound dampening and vibration free operation

Crankcase Heater (All Models)
- Crankcase heater prevents migration of liquid refrigerant into compressor and ensures proper compressor lubrication

FEATURES

❽ CABINET

- Heavy gauge steel construction
- Five station metal wash process
- Powder paint finish
- Louvered heavy gauge steel panels
- Corner patch plate allows compressor access
- Drainage holes provided in base section

❾ Control Box

- Lcated in separate compartment in unit cabinet
- All controls are pre-wired at the factory
- Field installed DDC or other field supplied control modules

Options/Accessories

Factory Installed

Corrosion Protection

- Completely flexible immersed coating
- Electrodeposited dry film process
- AST ElectroFin E-Coat
- Meets Mil Spec MIL-P-53084, ASTM B117 Standard Method Salt Spray Testing
- Outdoor Corrosion Protection:
- Coated coil
- Painted base pan

Field Installed

Combination Coil/Hail Guards

- Heavy gauge steel frame
- Painted to match cabinet
- Expanded metal mesh protects coil

ELECTRICAL

Field Installed

GFI Service Outlets (2)

- 115V ground fault circuit interrupter (GFCI) type
- Non-powered
- Field-wired

GFI Weatherproof Cover

- Single-gang cover
- Heavy-duty UV-resistant polycarbonate case construction
- Hinged base cover with gasket

CONTROLS

❿ Defrost Control

- Includes the combined functions of a time/temperature defrost control, defrost relay, time delay, two diagnostic LEDs (green/red) as an aid in troubleshooting, and a terminal strip for field wiring connections
- Provides a defrost cycle, if needed, every 30, 60 or 90 minutes (adjustable) of compressor "on" time at outdoor coil temperature below 42°F
- Defrost thermostat mounted on outdoor coil liquid line determines defrost cycle
- Built-in adjustable compressor delay can be set to allow compressor to cycle off for 30 seconds before and after a defrost cycle
- Five minute timed-off delay short-cycle protection

Options/Accessories

Field Installed

L Connection® Network

- Complete building automation control system for single or multi-zone applications
- Options include local interface, software for local or remote communication, and hardware for networking other control functions
- See L Connection Network Product Specifications Bulletin for details

Network Thermostat Controller (NTC)

- Required for use with the L Connection Network. Monitors and controls system operation

NOTE - NTC Enclosure Kit is required for installation with the indoor unit and must be ordered separately

NTC Enclosure Kit

- Required for mounting the Network Thermostat Controller external to the indoor unit
- Mounted on the supply air end of the ELA air handler cabinet
- Consists of a box and cover constructed of sheet metal (unpainted)
- Two openings for field wiring to the unit
- Dimensions (L x W x H): 10-1/2 x 8-1/8 x 3-7/8 in. (267 x 203 x 98 mm)

Low Ambient Control

- Heat pumps will operate satisfactorily in cooling mode down to 45°F outdoor air temperature without any additional controls
- Low Ambient Control Kit can be field installed, allowing unit operation down to 0°F using pressure-regulated fan speed control

Indoor Air Quality (CO_2) Sensors

- Monitors CO_2 levels, reports which adjusts economizer dampers as needed

Thermostats

- Control system and thermostat options, see page 6

Aftermarket Unit Controller Options

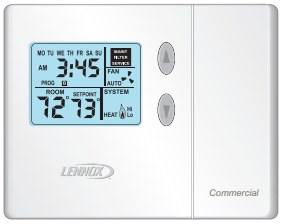
- See Options/Accessories table for selection

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

ComfortSense® 7500 Commercial 7-Day Programmable Thermostat

- Four-Stage Heating / Two-Stage Cooling
- Universal Multi-Stage
- Intuitive Touchscreen Interface
- Automatic Changeover between Heating and Cooling
- Full Seven-Day Programming
- Four Time Periods Per Day
- Temperature and Humidity Control
- One-Touch Away Mode
- Holiday Scheduling
- Smooth Setback Recovery (SSR)
- Performance Reports
- Notifications/Reminders
- Dehumidification/Humiditrol® Control for Split Systems and Rooftop Units
- Economizer Relay Control
- Backlit Display
- Wallplate Furnished
- FDD, ASHRAE and IECC Compliant

ComfortSense® 3000 Commercial 5-2 Day Programmable Thermostat



- Two-Stage Heating / Two-Stage Cooling
- Conventional Systems
- Intuitive Interface
- 5-2 Day Programming
- Program Hold
- Remote Indoor Temperature Sensing
- Smooth Setback Recovery (SSR)
- Economizer Relay Control
- Maintenance/Filter/Service Reminders
- Backlit Display
- Wallplate Furnished
- Simple Up and Down Temperature Control

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

Description		Model No.	Catalog No.
ComfortSense® 7500 Commercial 7-Day Programmable Thermostat			
		C0STAT06FF2L	**17G74**
Sensors/Accessories	[2] Remote non-adjustable wall-mount 20k	C0SNZN01AE2-	**47W36**
	[2] Remote non-adjustable wall-mount 10k	C0SNZN73AE1-	**47W37**
	Remote non-adjustable discharge air (duct mount)	C0SNDC00AE1-	**19L22**
	Outdoor temperature sensor	C0SNSR03AE1-	**X2658**
	Universal thermostat locking guard (clear)	C0MISC15AE1-	**39P21**
ComfortSense® 3000 Commercial 5-2 Day Programmable Thermostat			
		C0STAT05FF1L	**11Y05**
Sensors/Accessories	Remote non-adjustable wall mount 10k averaging	C0SNZN73AE1-	**47W37**
	Thermostat wall mounting plate	C0MISC17AE1-	**X2659**
ComfortSense® Non-Programmable Thermostat			
		C0STAT12AE1L	**51M32**

[2] Remote wall-mount sensors can be applied in any of the following combinations:
One Sensor - (1) 47W36
Two Sensors - (2) 47W37
Three Sensors - (2) 47W36 and (1) 47W37
Four Sensors - (4) 47W36
Five Sensors - (3) 47W36 and (2) 47W37

SPECIFICATIONS

General Data	**Model No.**	**ELP090S4S**	**ELP120S4S**
	Nominal Size - Tons	**7.5**	**10**
Connections (sweat)	Liquid line - in. (o.d)	5/8	5/8
	Vapor line - in. (o.d)	1-1/8	1-1/8
Refrigerant (R-410A)	Factory Charge	R-410A holding charge (2 lbs. per circuit)	
	No. of Circuits	1	1
	[1] Field charge (25 ft. line set)	23 lbs. 4 oz. (includes holding charge)	32 lbs. 8 oz. (includes holding charge)
Compressor		(1) Two Stage Scroll	(1) Two Stage Scroll
Outdoor Coil	Net face area - sq. ft. Outer coil	29.3	34.2
	Inner coil	28.4	33.3
	Tube diameter - in. & no. of rows	3/8 - 2	3/8 - 2
	Fins per inch	20	20
Outdoor Coil Fan(s)	Diameter - in. & no. of blades	(2) 24 - 3	(2) 24 - 4
	Motor hp	(2) 1/3	(2) 1/2
	Total air volume - cfm	8300	10,300
	Rpm	1075	1075
	Motor Input - Watts	830	1130

ELECTRICAL DATA

General Data	Line voltage data - 60 hz - 3 phase	**208/230V**	**460V**	**575V**	**208/230V**	**460V**	**575V**
	[2] Maximum Overcurrent Protection (amps)	60	25	20	80	35	25
	[3] Minimum circuit ampacity	37	17	13	50	21	16
Compressor (1)	Rated load amps	26.9	12	9	34.6	14.8	11.1
	Locked rotor amps	165	94	65	240	130	93.7
Outdoor Coil Fan Motor (2) (1 phase)	Full load amps (total)	1.7 (3.4)	0.8 (1.6)	1 (2)	3 (6)	1.5 (3)	1.2 (2.4)
	Locked rotor amps (total)	4.3 (8.6)	2.4 (4.8)	1.9 (3.8)	6 (12)	3 (6)	2.9 (5.8)

NOTE - Extremes of operating range are plus and minus 10% of line voltage.

NOTE - All units have a minimum Short Circuit Current Rating (SCCR) of 5000 amps.

[1] Refer to the Lennox Refrigerant Piping Manual to determine refrigerant charge required with longer length refrigerant lines.

[2] HACR type circuit breaker or fuse.

[3] Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

SOUND DATA

[1] Unit Model No.	Octave Band Sound Power Levels dBA, re 10^{-12} Watts Center Frequency - HZ							[1] Sound Rating Number (dBA)
	125	**250**	**500**	**1000**	**2000**	**4000**	**8000**	
ELP090S4S	69	77	80	80	77	73	65	85
ELP120S4S	69	77	80	81	78	72	64	86

NOTE - the octave sound power data does not include tonal correction.

[1] Tested according to AHRI Standard 270 test conditions.

OPTIONS / ACCESSORIES

Item		Catalog No.	ELP090S4S	ELP120S4S
CABINET				
Combined Coil/Hail Guards	T2GARD51M11	**13T30**	X	
	T2GARD51M21	**13T32**		X
Corrosion Protection		Factory	O	O
CONTROLS				
BACnet® Module		**17A08**	X	X
BACnet® Sensor with Display	K0SNSR01FF1	**97W23**	X	X
BACnet® Sensor without Display	K0SNSR00FF1	**97W24**	X	X
Network Thermostat Control (NTC)	C0CTRL07AE1L	**17M10**	X	X
NTC Enclosure Kit (required with NTC Controller)	A0CTRL32LS1	**16H99**	X	X
L Connection® Building Automation System		**- - -**	X	X
Low Ambient Control (0°F)	A2CWKT04M-1-	**16F26**	X	X
ELECTRICAL				
GFI Service Outlets	15 amp non-powered, field-wired (208/230V, 460V only) LTAGFIK10/15/15	**74M70**	X	X
	20 amp non-powered, field-wired (575V only) C1GFCI20FF1	**67E01**	X	X
INDOOR AIR QUALITY				
Sensor - Wall-mount, off-white plastic cover with LCD display	C0SNSR50AE1L	**77N39**	X	X
Sensor - Wall-mount, off-white plastic cover, no display	C0SNSR52AE1L	**87N53**	X	X
Sensor - Black plastic case with LCD display, rated for plenum mounting	C0SNSR51AE1L	**87N52**	X	X
Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting	C0SNSR53AE1L	**87N54**	X	X
CO_2 Sensor Duct Mounting Kit	C0MISC19AE1-	**85L43**	X	X
Aspiration Box - for duct mounting non-plenum rated CO_2 sensor (77N39)	C0MISC16AE1-	**90N43**	X	X

NOTE - The catalog and model numbers that appear here are for ordering field installed accessories only.

O - Factory Installed with extended lead time.

X - Field Installed

AHRI SYSTEM MATCHES

Model	Cooling Btuh	EER	IEER	Heating Btuh		High Heat COP	Low Heat COP	Air Handler	AHRI Reference
				High	Low				
ELP090S4S	89,000	11.0	13.6	88,000	50,000	3.3	2.25	ELA090S4D	201753417
ELP120S4S	115,000	11.0	13.6	114,000	70,000	3.3	2.25	ELA120S4D	201753418
(2) ELP090S4S	178,000	11.0	13.6	170,000	98,000	3.2	2.05	(1) ELA240S4D	202324584

NOTES − Net capacity includes indoor blower motor heat deduction. Gross capacity does not include indoor blower motor heat deduction.
AHRI Certified to AHRI Standard 340/360:
Cooling Ratings − 95°F outdoor air temperature and 80°F db/67°F wb entering indoor coil air.
High Temperature Heating Ratings − 47°F db/43°F wb outdoor air temperature and 70°F db entering indoor coil air.
Low Temperature Heating Ratings − 17°F db/15°F wb outdoor air temperature and 70°F db entering indoor coil air.

WEIGHT DATA

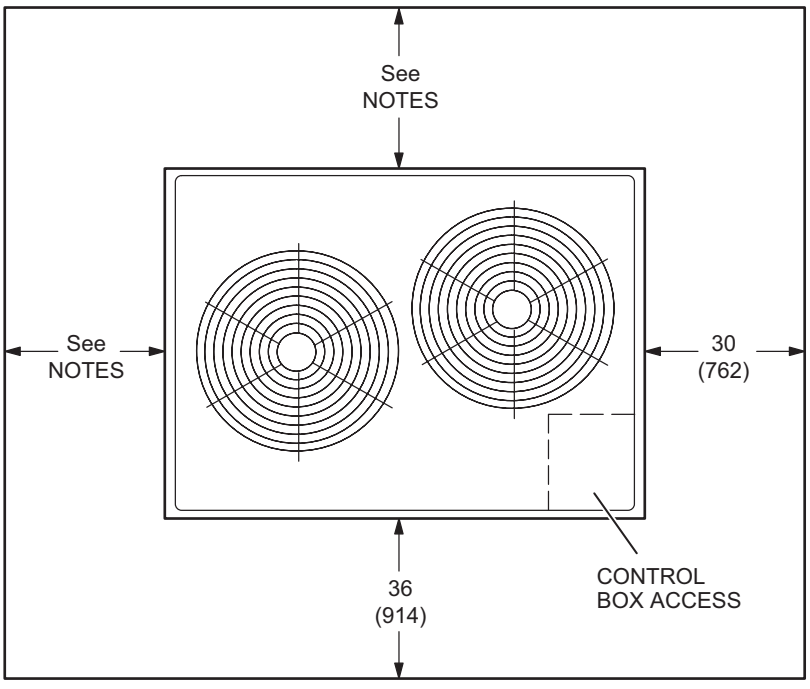
Model No.	Net		Shipping	
	lbs.	kg	lbs.	kg
090S4S	425	193	450	204
120S4S	502	228	527	239

OPTIONS / ACCESSORIES

COMBINED COIL/HAIL GUARDS

T2GARD20M-1-	40	18	45	20
T2GARD21M-1-	45	20	50	23

INSTALLATION CLEARANCES



NOTES:

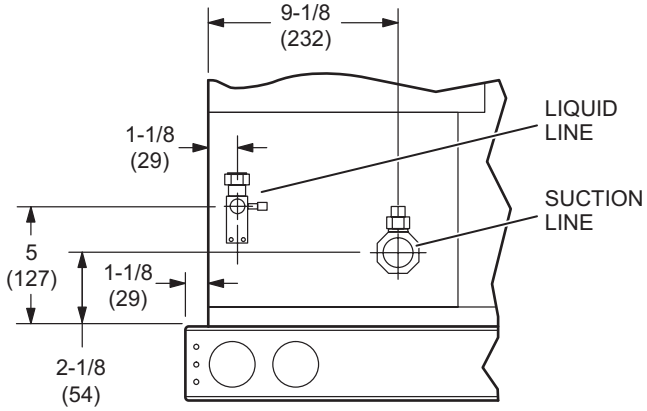
Clearance to one of the remaining two sides may be 12 in. (305 mm) and the final side may be 6 in. (152 mm).

A clearance of 24 in. (610 mm) must be maintained between two units.

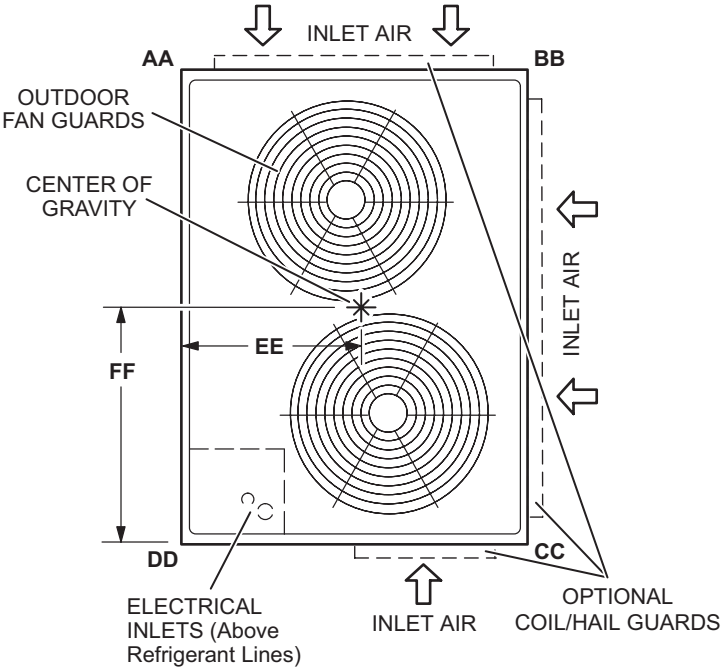
48 in. (1219 mm) clearance required on top of unit.

DIMENSIONS - UNIT

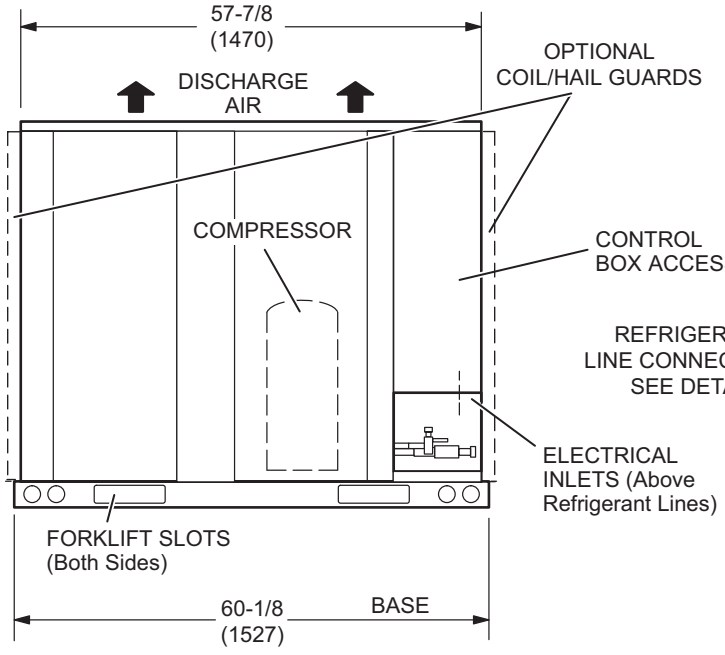
Model No.	CORNER WEIGHTS								CENTER OF GRAVITY			
	AA		BB		CC		DD		EE		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
ELP090S4S	108	49	108	49	114	52	114	52	21-3/4	552	29	737
ELP120S4S	120	54	114	52	139	63	149	68	20	508	25-1/4	641



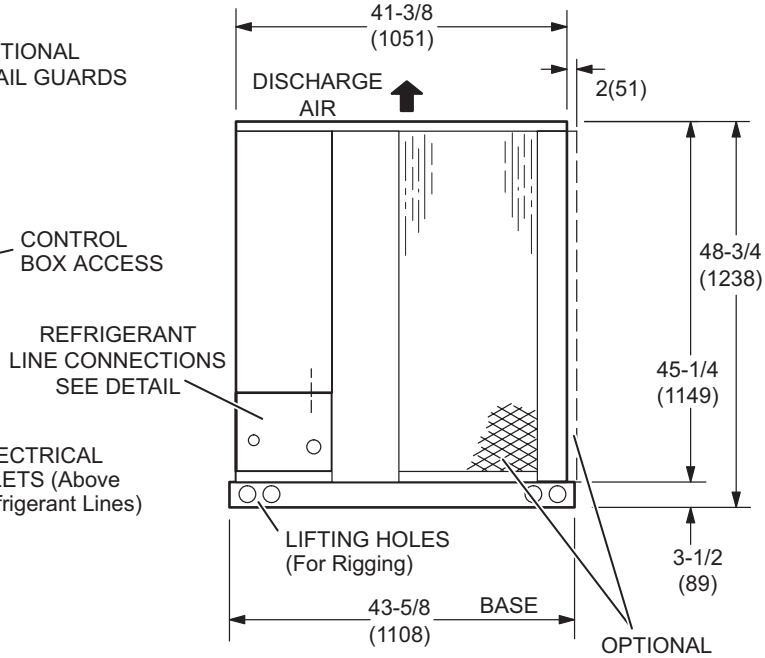
REFRIGERANT LINE CONNECTIONS DETAIL



TOP VIEW



FRONT VIEW



SIDE VIEW

RATINGS

NOTE - For Temperatures and Capacities not shown in tables, see bulletin - Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

ELP090S4S + ELA090S4D - COOLING CAPACITY - PART LOAD

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F
63°F	1600	66.9	2.67	0.71	0.83	0.95	64.1	3.14	0.71	0.84	0.97	61.1	3.67	0.73	0.86	0.99	57.9	4.25	0.74	0.89	1
	2000	71	2.65	0.75	0.89	1	67.9	3.12	0.76	0.91	1	64.6	3.65	0.78	0.93	1	61.1	4.24	0.8	0.96	1
	2400	74	2.64	0.79	0.95	1	70.7	3.11	0.81	0.97	1	67.2	3.64	0.83	0.99	1	63.8	4.22	0.85	1	1
67°F	1600	71.5	2.65	0.56	0.68	0.79	68.7	3.12	0.57	0.69	0.81	65.6	3.65	0.58	0.7	0.82	62.1	4.23	0.58	0.72	0.85
	2000	75.7	2.63	0.59	0.73	0.85	72.5	3.1	0.59	0.73	0.87	69.2	3.63	0.61	0.75	0.9	65.5	4.22	0.62	0.77	0.92
	2400	78.9	2.62	0.62	0.77	0.91	75.3	3.09	0.63	0.78	0.93	71.5	3.62	0.63	0.8	0.96	67.6	4.21	0.65	0.83	0.98
71°F	1600	76.3	2.63	0.44	0.55	0.65	73.2	3.1	0.44	0.55	0.66	69.9	3.63	0.44	0.56	0.68	66.5	4.21	0.44	0.57	0.69
	2000	80.7	2.61	0.45	0.57	0.69	77.3	3.08	0.45	0.58	0.71	73.8	3.61	0.46	0.59	0.73	69.9	4.2	0.46	0.6	0.74
	2400	84	2.6	0.46	0.6	0.74	80.3	3.07	0.46	0.61	0.76	76.3	3.6	0.47	0.61	0.78	72.1	4.19	0.47	0.64	0.8

ELP090S4S + ELA090S4D - COOLING CAPACITY - FULL LOAD

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F
63°F	2400	87.7	5.85	0.72	0.86	0.98	83.3	6.47	0.74	0.88	1	78.8	7.16	0.75	0.9	1	74	7.93	0.78	0.93	1
	3000	92.1	5.94	0.78	0.93	1	87.8	6.57	0.79	0.95	1	82.7	7.26	0.82	0.98	1	77.8	8.03	0.84	1	1
	3600	95.7	6.01	0.82	0.98	1	91.1	6.64	0.85	1	1	86.5	7.35	0.87	1	1	81.9	8.13	0.9	1	1
67°F	2400	93.3	5.97	0.58	0.7	0.82	88.8	6.59	0.58	0.71	0.84	84.2	7.29	0.59	0.73	0.87	78.9	8.06	0.6	0.75	0.9
	3000	97.8	6.06	0.6	0.75	0.89	93	6.69	0.61	0.76	0.91	88.2	7.39	0.62	0.79	0.94	82.4	8.15	0.64	0.82	0.98
	3600	101.1	6.13	0.63	0.8	0.95	96.1	6.76	0.65	0.82	0.98	90.7	7.45	0.66	0.84	1	84.9	8.21	0.68	0.88	1
71°F	2400	99.2	6.09	0.44	0.56	0.68	94.5	6.72	0.44	0.57	0.69	89.5	7.42	0.45	0.57	0.7	84.2	8.19	0.45	0.59	0.73
	3000	103.7	6.18	0.45	0.59	0.72	98.8	6.82	0.46	0.6	0.74	93.4	7.51	0.46	0.61	0.76	87.7	8.28	0.46	0.63	0.79
	3600	107.1	6.25	0.46	0.62	0.77	101.9	6.88	0.47	0.64	0.8	96.4	7.58	0.48	0.65	0.82	90.1	8.34	0.49	0.67	0.85

ELP090S4S + ELA090S4D - HEATING CAPACITY

Indoor Coil Air Volume 70°F Dry Bulb cfm	Air Temperature Entering Outdoor Coil									
	65°F		45°F		25°F		5°F		-15°F	
	Total Heating Capacity	Comp. Motor Input Input	Total Heating Capacity	Comp. Motor Input Input	Total Heating Capacity	Comp. Motor Input Input	Total Heating Capacity	Comp. Motor Input Input	Total Heating Capacity	Comp. Motor Input Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
2400	110.2	6.88	84.8	6.34	59.3	5.8	35.7	5.07	17.8	3.81
3000	112.2	6.51	86.7	5.97	61.3	5.43	37.6	4.7	19.8	3.44
3600	113.5	6.28	88.1	5.73	62.6	5.19	39	4.46	21.1	3.2

ELP090S4S + ELA090S4D
HEATING PERFORMANCE at 3000 cfm Indoor Coil Air Volume

Temperature °F	Motor Input kW	Output kBtuh
65	6.51	112.2
60	6.38	105.8
55	6.24	99.4
50	6.1	93.1
47	6.02	89.3
45	5.97	86.7
40	5.84	80.4
35	5.7	74.1
30	5.56	67.7
25	5.43	61.3
20	5.29	54.9
17	5.2	51
15	5.15	48.5
10	5.01	42.1
5	4.7	37.6
0	4.38	33.2
-5	4.07	28.7
-10	3.75	24.2
-15	3.44	19.8
-20	3.12	15.3

RATINGS

NOTE - For Temperatures and Capacities not shown in tables, see bulletin - Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

ELP120S4S + ELA120S4D - COOLING CAPACITY - PART LOAD

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F
63°F	2240	88.4	3.27	0.72	0.85	0.97	84.3	3.87	0.73	0.87	0.99	79.1	4.58	0.75	0.9	1	73.1	5.36	0.78	0.93	1
	2800	92.9	3.23	0.77	0.92	1	88.9	3.83	0.79	0.94	1	83.7	4.53	0.81	0.97	1	77.4	5.3	0.84	1	1
	3360	96.1	3.2	0.82	0.98	1	92.3	3.79	0.84	1	1	87.7	4.48	0.86	1	1	82.3	5.25	0.9	1	1
67°F	2240	93.9	3.21	0.57	0.69	0.82	90.4	3.82	0.58	0.71	0.83	85.2	4.51	0.59	0.72	0.86	79.1	5.29	0.6	0.75	0.89
	2800	98.6	3.18	0.6	0.74	0.89	94.9	3.77	0.61	0.76	0.9	89.7	4.46	0.62	0.78	0.93	83.3	5.25	0.64	0.81	0.97
	3360	101.5	3.15	0.63	0.8	0.95	98.3	3.75	0.64	0.81	0.97	92.8	4.43	0.65	0.83	0.99	86.3	5.22	0.67	0.87	1
71°F	2240	99.4	3.17	0.44	0.55	0.67	96.1	3.76	0.44	0.56	0.68	91.2	4.45	0.44	0.57	0.7	85.2	5.22	0.45	0.58	0.72
	2800	104	3.14	0.44	0.58	0.72	100.8	3.72	0.45	0.6	0.73	96.1	4.4	0.46	0.61	0.75	89.8	5.19	0.47	0.63	0.78
	3360	107.1	3.12	0.46	0.62	0.78	104.3	3.7	0.46	0.63	0.79	99.2	4.37	0.47	0.64	0.81	92.9	5.15	0.48	0.66	0.84

ELP120S4S + ELA120S4D - COOLING CAPACITY - FULL LOAD

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F
63°F	3200	112.4	7.1	0.74	0.89	1	106.4	7.92	0.76	0.91	1	99.5	8.87	0.78	0.94	1	91.9	9.93	0.81	0.98	1
	4000	117.8	7.15	0.8	0.96	1	111.8	7.98	0.82	0.98	1	104.7	8.92	0.85	1	1	98.1	10.01	0.89	1	1
	4800	122.7	7.2	0.85	1	1	117.2	8.03	0.88	1	1	110.7	9	0.91	1	1	103.4	10.06	0.95	1	1
67°F	3200	120.1	7.18	0.58	0.72	0.85	114	8	0.59	0.73	0.87	106.7	8.94	0.61	0.76	0.9	98.6	10.01	0.62	0.79	0.94
	4000	125.7	7.24	0.62	0.77	0.93	119.3	8.06	0.63	0.79	0.95	111.6	9	0.64	0.82	0.98	103	10.06	0.67	0.86	1
	4800	129.9	7.28	0.65	0.83	0.99	123.1	8.11	0.66	0.85	1	115.2	9.04	0.68	0.88	1	105.9	10.09	0.71	0.93	1
71°F	3200	127.7	7.25	0.44	0.57	0.69	121.4	8.08	0.44	0.58	0.71	114.1	9.03	0.45	0.59	0.73	105.7	10.09	0.46	0.61	0.76
	4000	133.9	7.33	0.45	0.6	0.75	127.1	8.15	0.46	0.61	0.77	119.3	9.09	0.47	0.63	0.79	110.4	10.15	0.47	0.65	0.83
	4800	138.2	7.37	0.47	0.64	0.8	131.3	8.2	0.47	0.65	0.83	122.8	9.13	0.48	0.67	0.86	113.7	10.2	0.49	0.7	0.9

ELP120S4S + ELA120S4D - HEATING CAPACITY

Indoor Coil Air Volume 70°F Dry Bulb cfm	Air Temperature Entering Outdoor Coil									
	65°F		45°F		25°F		5°F		-15°F	
	Total Heating Capacity	Comp. Motor Input Input	Total Heating Capacity	Comp. Motor Input Input	Total Heating Capacity	Comp. Motor Input Input	Total Heating Capacity	Comp. Motor Input Input	Total Heating Capacity	Comp. Motor Input Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
3200	138.4	8	109.1	7.35	79.9	6.71	51.3	5.87	25.1	4.41
4000	141.1	7.56	111.8	6.92	82.6	6.27	54	5.43	27.8	3.98
4800	142.9	7.28	113.6	6.64	84.3	6	55.8	5.16	29.6	3.7

ELP120S4S + ELA120S4D
HEATING PERFORMANCE at 4000 cfm Indoor Coil Air Volume

Temperature °F	Motor Input kW	Output kBtuh
65	7.56	141.1
60	7.4	133.8
55	7.24	126.5
50	7.08	119.1
47	6.98	114.8
45	6.92	111.8
40	6.75	104.5
35	6.59	97.2
30	6.43	89.9
25	6.27	82.6
20	6.11	75.2
17	6.02	70.8
15	5.96	67.9
10	5.8	60.5
5	5.43	54
0	5.07	47.4
-5	4.7	40.9
-10	4.34	34.3
-15	3.98	27.8
-20	3.61	21.2

RATINGS

NOTE - For Temperatures and Capacities not shown in tables, see bulletin - Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

(2) ELP090S4S + (1) ELA240S4D - COOLING CAPACITY - PART LOAD

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		65°F					75°F					85°F					95°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F
63°F	3200	131.9	5.14	0.7	0.82	0.95	126.4	6.04	0.71	0.84	0.98	120.1	7.06	0.72	0.86	1	113.6	8.19	0.74	0.89	1
	4000	139.9	5.1	0.74	0.89	1	133.6	6.01	0.76	0.91	1	126.6	7.03	0.77	0.94	1	119.2	8.16	0.8	0.97	1
	4800	145.8	5.08	0.79	0.96	1	139.1	5.99	0.81	0.98	1	132	7	0.83	1	1	125.3	8.13	0.85	1	1
67°F	3200	141.6	5.09	0.56	0.67	0.79	135.6	6	0.56	0.68	0.8	129	7.02	0.57	0.69	0.82	122.1	8.15	0.58	0.71	0.85
	4000	150.1	5.06	0.58	0.71	0.85	143.3	5.97	0.59	0.73	0.87	135.8	6.99	0.6	0.74	0.9	128.4	8.12	0.61	0.77	0.93
	4800	156.2	5.04	0.61	0.76	0.91	149	5.95	0.62	0.78	0.94	141.1	6.96	0.63	0.8	0.97	133	8.1	0.64	0.83	1
71°F	3200	151.2	5.06	0.43	0.54	0.64	144.8	5.97	0.43	0.54	0.66	137.9	6.98	0.43	0.55	0.67	130.5	8.1	0.44	0.56	0.68
	4000	160.3	5.02	0.44	0.56	0.69	153.2	5.93	0.44	0.57	0.7	145.5	6.95	0.45	0.59	0.72	137.4	8.08	0.45	0.6	0.74
	4800	167.1	5	0.45	0.59	0.73	159.2	5.91	0.45	0.6	0.75	151.1	6.93	0.45	0.62	0.77	142.3	8.06	0.46	0.63	0.8

(2) ELP090S4S + (1) ELA240S4D - COOLING CAPACITY - FULL LOAD

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F
63°F	4800	173.4	11.4	0.73	0.87	1	164.2	12.62	0.74	0.89	1	154.2	13.94	0.76	0.92	1	143.7	15.4	0.79	0.96	1
	6000	181.7	11.58	0.78	0.94	1	171.7	12.78	0.8	0.97	1	161.7	14.12	0.82	1	1	151.9	15.62	0.86	1	1
	7200	188.3	11.72	0.83	1	1	179.7	12.97	0.86	1	1	169.9	14.33	0.89	1	1	159.9	15.84	0.93	1	1
67°F	4800	184.9	11.66	0.57	0.7	0.83	175.7	12.87	0.58	0.71	0.85	165	14.21	0.59	0.73	0.88	154.2	15.68	0.61	0.76	0.92
	6000	194	11.85	0.6	0.75	0.91	183.7	13.07	0.61	0.77	0.94	172.5	14.4	0.63	0.8	0.97	160.5	15.86	0.65	0.83	1
	7200	200.3	11.99	0.63	0.8	0.98	189.4	13.2	0.65	0.83	1	177.7	14.54	0.66	0.86	1	165.4	15.98	0.69	0.9	1
71°F	4800	197.1	11.92	0.43	0.55	0.67	187	13.15	0.43	0.56	0.69	176.3	14.49	0.44	0.57	0.71	164.8	15.97	0.44	0.59	0.73
	6000	206.5	12.12	0.44	0.58	0.72	195.8	13.36	0.44	0.6	0.75	184	14.69	0.45	0.61	0.77	171.8	16.15	0.46	0.63	0.8
	7200	213.2	12.27	0.45	0.62	0.78	201.7	13.49	0.45	0.63	0.8	189.7	14.84	0.46	0.65	0.83	176.5	16.3	0.48	0.68	0.87

(2) ELP090S4S + (1) ELA240S4D - HEATING CAPACITY

Indoor Coil Air Volume 70°F Dry Bulb cfm	Air Temperature Entering Outdoor Coil									
	65°F		45°F		25°F		5°F		-15°F	
	Total Heating Capacity	Comp. Motor Input Input	Total Heating Capacity	Comp. Motor Input Input	Total Heating Capacity	Comp. Motor Input Input	Total Heating Capacity	Comp. Motor Input Input	Total Heating Capacity	Comp. Motor Input Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
4800	203	13.41	155.5	12.42	108.1	11.39	64.6	10.17	32.7	7.61
6000	205.9	12.69	158.4	11.7	111	10.67	67.5	9.45	35.6	6.89
7200	207.6	12.19	160.2	11.19	112.7	10.16	69.2	8.94	37.3	6.39

(2) ELP090S4S + (1) ELA240S4D
HEATING PERFORMANCE at 3000 cfm Indoor Coil Air Volume

Temperature °F	Motor Input kW	Output kBtuh
65	12.69	205.9
60	12.46	194
55	12.22	182.2
50	11.98	170.3
47	11.84	163.2
45	11.7	158.4
40	11.34	146.5
35	10.98	134.6
30	10.82	122.8
25	10.67	111
20	10.51	99.1
17	10.42	92.1
15	10.33	87.3
10	10.09	75.5
5	9.45	67.5
0	8.81	59.5
-5	8.17	51.5
-10	7.53	43.6
-15	6.89	35.6
-20	6.25	27.6

REVISIONS

Sections	Description of Change
Dimensions - Unit	Updated combined coil/hail guards on unit dimension drawings.

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