

HEAT PUMP OUTDOOR UNITS

ELKP

T-SERIES™

Split Systems | **R-454B** | 60Hz

COMMERCIAL

PRODUCT SPECIFICATIONS (EHB)

ALLIED™

Commercial

IEER up to 14.10

6 to 10 Tons

Cooling Capacity - 69,000 to 178,000 Btuh

Heating Capacity - 66,000 to 170,000 Btuh



T-SERIES™



MODEL NUMBER IDENTIFICATION

EL 120 K P S S T 1 Y

Product Tier
EL = T-Series™

Nominal Cooling Capacity - Tons
072 = 6 Tons
090 = 7.5 Tons
120 = 10 Tons

Refrigerant Type
K = R-454B

Unit Type
P = Split System Heat Pump

Cooling/Heating Efficiency
S = Standard Efficiency

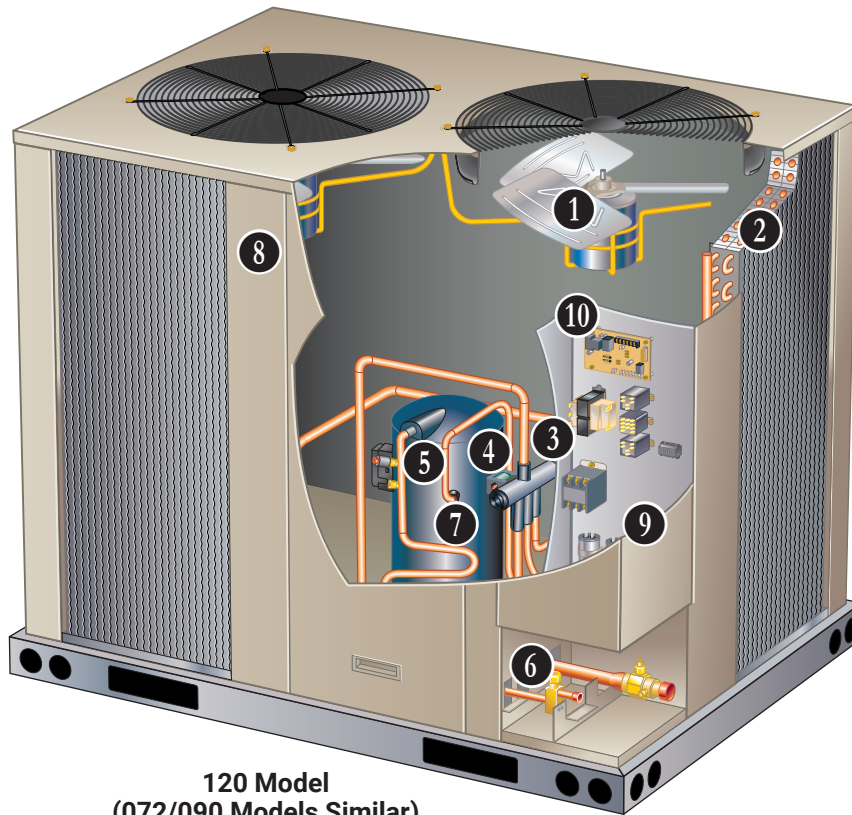
Voltage
Y = 208/230V-3 phase-60Hz
G = 460V-3 phase-60Hz
J = 575V-3 phase-60Hz

Minor Design Sequence
1 = 1st Revision

Load Capability
T = Two-Stage Compressor

Refrigerant Circuit
S = Single Circuit

FEATURE HIGHLIGHTS



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

AHRI System Matches	11
Approvals And Warranty	3
Dimensions - Unit	12
Electrical Data	9
Features	3
Model Number Identification.	1
Optional Conventional Temperature Control Systems	7
Options / Accessories	10
Ratings	13
Sequence Of Operation.	6
Sound Data	9
Specifications	9
Weight Data	11

APPROVALS AND WARRANTY

APPROVALS

- AHRI Standard 340/360-2023 certified
- ETL certified
- All units meet two-stage requirements of ASHRAE 90.1, IECC 2015, and California Code of Regulations, Title 24
- Tested in a ETL certified environmental testing facility
- Sound tested in accordance with test conditions included in AHRI Standard 270 or 370
- Units and components UL, NEC, and CEC bonded for grounding to meet safety standards for servicing
- All models are ASHRAE 90.1 energy efficiency compliant and meet or exceed requirements of Section 6.8
- All models meet DOE 2023 energy efficiency standards
- ISO 9001 Registered Manufacturing Quality System

WARRANTY

- Compressors - Limited five years in non-residential applications
- All other covered components - Limited one year

FEATURES

APPLICATIONS

- 6 to 10 tons
- 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-454B Refrigerant

- Low GWP (Global Warming Potential)
- Zero ODP (Ozone Depletion Potential)
- Low Toxicity/Lower Flammability - A2L

NOTE - Refrigerant is not furnished and must be field supplied.

NOTE - Total system refrigerant charge is dependent 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.

1 Outdoor Coil Fans

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

2 Copper Tube/Enhanced Fin Coil(s)

- EL072KPS and EL090KPS have a single "U" shaped coil
- EL120KPS has two "L" shaped coils
- Ripple-edge aluminum fins
- Seamless copper tube construction
- Lanced fins for maximum fin surface exposure
- Fin collars grip tubing for maximum contact area
- Flared shoulder tubing connections
- Machine brazed silver soldering
- Factory tested under high pressure
- Completely 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

LOW GWP REFRIGERANT DETECTION SYSTEM (RDS)

- Complies with UL 60335-2-40 approved standard
- Required for all systems using R-454B refrigerant
- Factory installed on all indoor units
- Consists of a leak detection sensor(s) and a mitigation control
- Ensures safe operation for systems equipped with R-454B refrigerant
- Sensor(s) monitors indoor coil area for R-454B refrigerant
- If R-454B refrigerant is detected, the refrigerant detection system will stop compressor and/or heating operation and operate the blower to reduce concentrations in the conditioned space
- Once safe levels are reached the HVAC system will resume normal operation
- Refrigeration detection system energizes blower if R-454B refrigerant is detected to mitigate any concentrations of refrigerant from the unit and the system

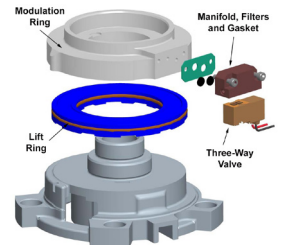
7 TWO-STAGE SCROLL COMPRESSOR

- 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

CABINET

- 8 • 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

9 Control Box

- Located 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

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

CONTROLS

10 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

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 (CO₂) Sensors

- Monitors CO₂ levels, reports which adjusts economizer dampers as needed

Thermostats

- Control system and thermostat options, see page 7

Aftermarket Unit Controller Options

- See Options/Accessories table for selection

SEQUENCE OF OPERATION

The outdoor unit and indoor unit cycle on demand from the room thermostat.

For details on the outdoor unit component operation based on thermostat demand, refer to the table below.

Thermostat Demand	² Input Signals at Terminal Strip	Compressor Output	Fan		Reversing Valve
(¹ Key Number)	(TB14)	(B1)	(B4)	(B5)	(L1)
STANDBY	24V	OFF	OFF	OFF	OFF
COOLING 1	C1	LOW	ON	ON	ON
COOLING 2	C1+C2	HIGH	ON	ON	ON
HEATING	H1	HIGH	ON	ON	OFF
AUXILIARY HEAT	H2	Output Signal from CMC1 to Indoor Unit			

¹ Refer to Component Label or Wiring Diagram for key numbers.

² 24V input signals measured between one TB14 connection listed and TB14-C connection.

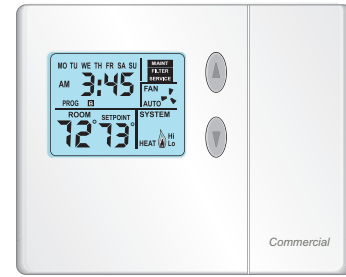
OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

CS7500 Commercial 7-Day Programmable Thermostat



- Four-Stage Heating / Three-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 Control for Split Systems and Rooftop Units
- Economizer Relay Control
- Backlit Display
- Wallplate Furnished
- FDD, ASHRAE and IECC Compliant

CS3000 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 Accessory

Cooling Stage-Up Timer Relay

- Allows the unit to attain an additional stage of cooling without the need for extra thermostat connections
- Adjustable - 1 to 1023 seconds
- Mounts internal to unit

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

BACnet Compatible Thermostat With Reheat



- 7-Day Programmable
- For units with or without dehumidification
- BTL listed MS/TP ensures compatibility with any BACnet system
- Built-in control programs for conventional and heat pump applications
- Conventional systems up to 3-stage heat and 3-stage cool
- Heat pumps with 1 or 2 compressors and up to 2-stage auxiliary heat
- On-board temperature and humidity sensor
- Multiple configurable inputs and outputs enable advanced control strategies
- Set-up Wizard enables rapid system configuration
- No special tools required for installation or commissioning
- Seven-day (2, 4 or 6 event) occupancy scheduling per day
- Backlit 5-inch LCD touchscreen

Description	Catalog No.
CS7500 Commercial 7-Day Programmable Thermostat	
CS7500 7-Day Thermostat	24K41
Sensors/Accessories	¹ Remote non-adjustable wall-mount 20k 47W36
	¹ Remote non-adjustable wall-mount 10k 47W37
	Remote non-adjustable discharge air (duct mount) 19L22
	Outdoor temperature sensor X2658
CS3000 5-2 Day Programmable Thermostat	
CS3000 5-2 Day Thermostat	11Y05
Sensor/Accessories	Remote non-adjustable wall mount 10k averaging 47W37
	Thermostat wall mounting plate X2659
Optional Accessory	
	Cooling Stage-Up Timer Relay 24G40
BACnet 7-Day Programmable Thermostat	
BACnet 7-Day Thermostat	24C57
Universal Thermostat Guard with Lock (clear)	
	Inside Dimensions (H x W x D) 5-7/8 x 8-3/8 x 3 in. 39P21

¹ 1 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

Model		EL072KPSST	EL090KPSST	EL120KPSST
Nominal Tonnage		6	7.5	10
Connections (sweat)	Liquid line (OD) - in.	5/8	5/8	5/8
	Suction line (OD) - in.	1-1/8	1-1/8	1-1/8
Refrigerant	Factory Charge	R-454B holding charge (2 lbs. per circuit)		
	Circuits	1	1	1
	¹ Field charge (25 ft. line set)	24 lbs. 4 oz. (includes holding charge)	23 lbs. 4 oz. (includes holding charge)	25 lbs. 8 oz. (includes holding charge)
Compressor Type (Number)		Two Stage Scroll (1)	Two Stage Scroll (1)	Two Stage Scroll (1)
Outdoor Coil	Net face area - ft. ² Outer coil	29.3	29.3	34.2
	Inner coil	28.4	28.4	33.3
	Tube diameter - in.	3/8	3/8	3/8
	Rows	2	2	2
	Fins - in.	20	20	20
Outdoor Coil Fans	Diameter - in. (Number)	24 (2)	24 (2)	24 (2)
	Blades	3	3	4
	Motor HP (Number)	1/3 (2)	1/3 (2)	1/2 (2)
	Total air volume - cfm	8300	8300	10,300
	Rpm	1075	1075	1075
	Watts	830	830	1130

ELECTRICAL DATA

Line voltage data - 60Hz - 3 phase		208/230V	460V	575V	208/230V	460V	575V	208/230V	460V	575V
² Maximum overcurrent protection (MOCP) amps		45	20	15	60	25	20	60	30	25
³ Minimum circuit ampacity (MCA)		29	14	10	39	17	14	38	21	17
Compressor (1)	Rated load amps	19.2	9.1	6.2	26.3	11	9.2	26.5	14.0	11.5
	Locked rotor amps	162.3	70.8	58.2	178.5	95.3	65	255	123	93.7
Outdoor Coil Fan Motor (2) (1 phase)	Full load amps (total)	2.4 (4.8)	1.3 (2.6)	1 (2)	2.4 (4.8)	1.3 (2.6)	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)	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 5kA.

¹ Approximate field provided charge with 25 ft. line set. Refer to unit installation instructions for detailed charging information.

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

Model	Octave Band Sound Power Levels dBA, re 10 ⁻¹² Watts Center Frequency - HZ							¹ Sound Rating Number (dBA)	² Estimated Sound Pressure Level at Distance From Unit (dBA at distance in ft.)				
	125	250	500	1000	2000	4000	8000		3	5	10	15	50
EL072KPSST	69	77	80	80	77	73	65	85	78	73	67	64	53
EL090KPSST	69	77	80	80	77	73	65	85	78	73	67	64	53
EL120KPSST	69	77	80	81	78	72	64	86	79	74	68	65	54

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

¹ Tested according to AHRI Standard 270-2008 test conditions. Sound rating Number is the overall A-Weighted Sound Power Level, (LWA), dB (100 Hz to 10,000 Hz).

² Estimated sound pressure level at distance based on AHRI Standard 275-2010 method for equipment located on the ground, roof, or on side of building wall with no adjacent reflective surface within 9.8 feet. Sound pressure levels will increase based on changes to assumptions. For other applications, refer to AHRI Standard 275.

OPTIONS / ACCESSORIES

Item	Order Number	EL072KPSST EL090KPSST	EL120KPSST
CABINET			
Combined Coil/Hail Guards	13T30	X	
	13T32		X
COOLING			
Low Ambient Control (0°F)	37P63	X	X
ELECTRICAL			
GFI 15 amp non-powered, field-wired (208/230V, 460V only)	74M70	X	X
Service Outlets ¹ 20 amp non-powered, field-wired (208/230V, 460V, 575V)	67E01	X	X
INDOOR AIR QUALITY			
Sensor - Wall-mount, off-white plastic cover with LCD display	77N39	X	X
Sensor - Wall-mount, off-white plastic cover, no display	23V86	X	X
Sensor - Black plastic case with LCD display, rated for plenum mounting	87N52	X	X
Sensor - Wall-mount, black plastic case, no display, rated for plenum mounting	23V87	X	X
CO ₂ Sensor Duct Mounting Kit	23Y47	X	X
Aspiration Box - for duct mounting non-plenum rated CO ₂ sensor (77N39)	90N43	X	X

¹ Canada requires a minimum 20 amp circuit. Select 20 amp, non-powered, field wired GFI.

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	IEER	EER	Heating Btuh		High Heat COP	Low Heat COP	Air Handler	AHRI Reference
				High	Low				
EL072KPSST	69,000	14.10	11.30	66,000	41,000	3.40	2.25	EL090KASD	217286357
EL090KPSST	88,000	14.10	11.00	87,000	50,000	3.40	2.25	EL090KASD	217286358
EL120KPSST	115,000	14.10	11.00	114,000	70,000	3.40	2.25	EL120KASD	217286359
(2) EL090KPSST	178,000	13.50	10.60	170,000	98,000	3.30	2.05	(1) EL240KASD	217286360

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

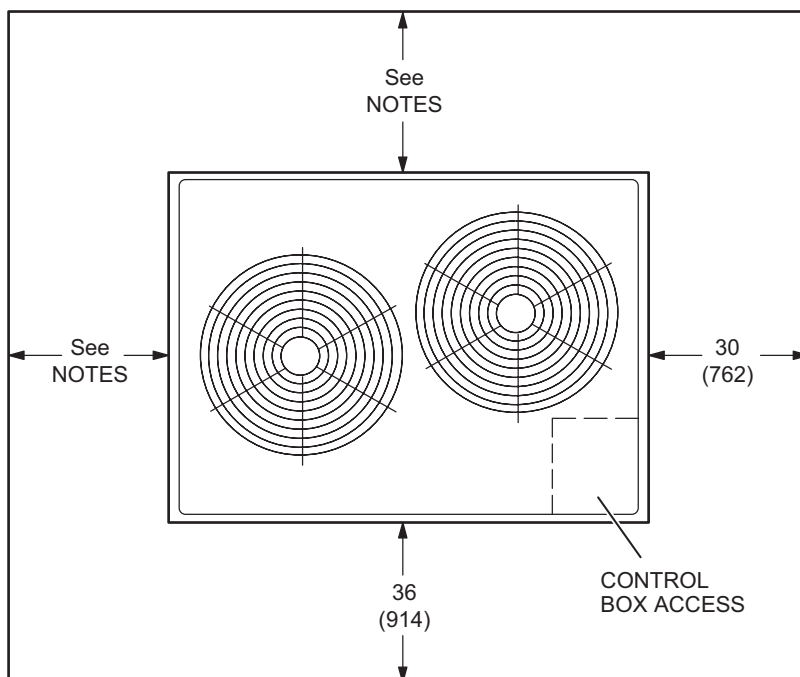
Model	Net		Shipping	
	lbs.	kg	lbs.	kg
EL072KPSST	425	193	450	204
EL090KPSST	425	193	450	204
EL120KPSST	502	228	527	239

OPTIONS / ACCESSORIES

COMBINED COIL/HAIL GUARDS

072/090	40	18	45	20
120	45	20	50	23

INSTALLATION CLEARANCES



NOTES:

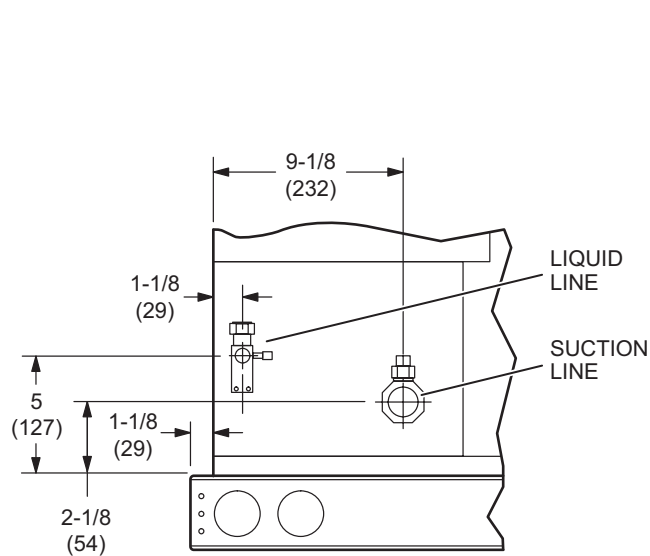
Clearance to one of the remaining two sides may be 12 in. (305 mm) and the final side may be 6 in. (152 mm).

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

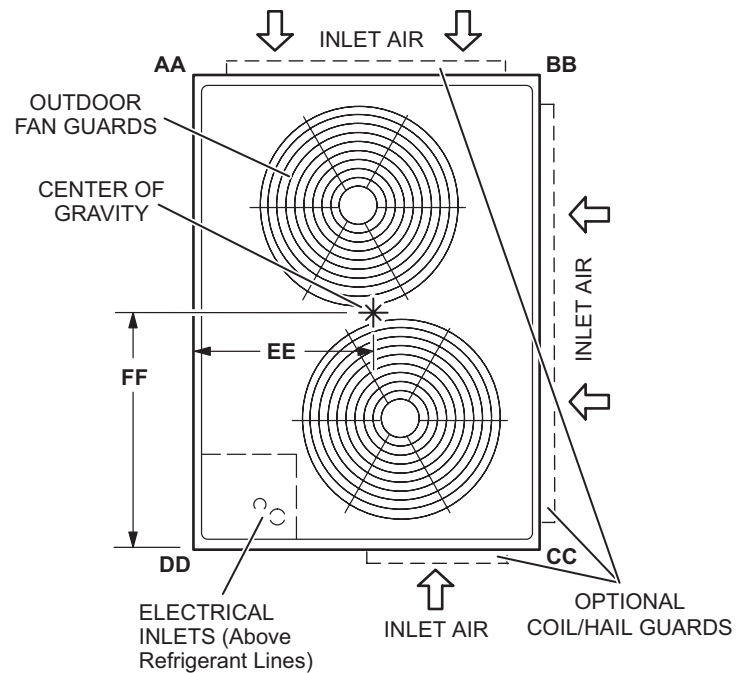
48 in. (1219 mm) clearance required on top of unit.

DIMENSIONS - UNIT

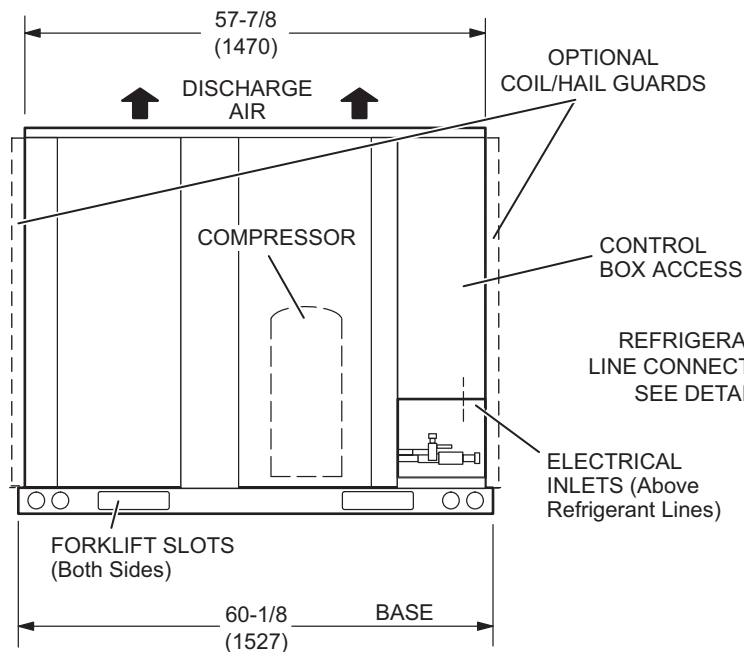
Model	CORNER WEIGHTS								CENTER OF GRAVITY			
	AA		BB		CC		DD		EE		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
EL072KPSST	103	47	103	47	116	53	118	54	21-1/2	546	27	686
EL090KPSST	108	49	108	49	114	52	114	52	21-3/4	552	29	737
EL120KPSST	120	54	114	52	139	63	149	68	20	508	25-1/4	641



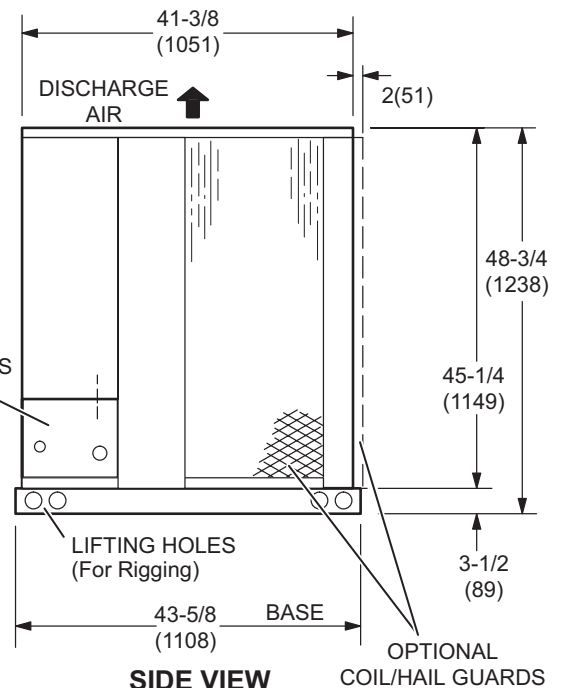
REFRIGERANT LINE CONNECTIONS DETAIL



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.

EL072KPSST + EL090KASD - COOLING CAPACITY - PART LOAD

Entering Wet Bulb Tem- perature	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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					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	1440	56.5	1.90	.71	.85	1.00	54.6	2.22	.73	.87	1.00	52.4	2.57	.74	.90	1.00	49.4	2.99	.76	.94	1.00
	1800	59.8	1.88	.76	.95	1.00	56.9	2.20	.79	1.00	1.00	54.7	2.56	.80	1.00	1.00	52.1	2.97	.83	1.00	1.00
	2160	61.9	1.87	.83	1.00	1.00	59.8	2.18	.86	1.00	1.00	57.5	2.53	.89	1.00	1.00	55.1	2.94	.93	1.00	1.00
67°F	1440	60.7	1.87	.58	.69	.80	58.3	2.19	.58	.70	.83	55.9	2.55	.59	.72	.85	53.2	2.96	.60	.73	.89
	1800	63.5	1.85	.61	.75	.91	61.1	2.17	.63	.76	.94	58.8	2.53	.63	.78	.98	55.7	2.94	.65	.80	1.00
	2160	66.0	1.83	.65	.80	1.00	63.5	2.15	.67	.83	1.00	60.7	2.51	.68	.86	1.00	57.7	2.92	.69	.90	1.00
71°F	1440	64.4	1.84	.46	.56	.67	62.2	2.16	.47	.57	.68	59.7	2.52	.46	.58	.69	57.0	2.92	.47	.59	.71
	1800	67.5	1.82	.48	.59	.73	65.4	2.13	.48	.62	.74	62.7	2.49	.49	.62	.77	59.7	2.90	.50	.64	.78
	2160	69.9	1.79	.50	.64	.78	67.2	2.11	.51	.64	.80	64.5	2.47	.51	.67	.83	61.8	2.88	.52	.70	.87

EL072KPSST + EL090KASD - 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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					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	2080	71.6	3.74	.74	.91	1.00	68.0	4.26	.75	.95	1.00	64.9	4.85	.77	.99	1.00	60.9	5.52	.80	1.00	1.00
	2600	74.7	3.75	.80	1.00	1.00	71.1	4.27	.83	1.00	1.00	67.8	4.86	.87	1.00	1.00	64.2	5.53	.93	1.00	1.00
	3120	78.1	3.77	.89	1.00	1.00	74.8	4.29	.93	1.00	1.00	71.3	4.87	.99	1.00	1.00	67.5	5.54	1.00	1.00	1.00
67°F	2080	76.3	3.76	.59	.71	.86	72.4	4.28	.60	.73	.90	68.4	4.86	.62	.75	.94	64.4	5.53	.63	.78	1.00
	2600	79.4	3.78	.64	.78	1.00	75.5	4.29	.65	.80	1.00	71.2	4.87	.66	.84	1.00	67.0	5.54	.69	.90	1.00
	3120	81.9	3.79	.68	.87	1.00	77.7	4.30	.70	.91	1.00	73.4	4.89	.72	.96	1.00	68.3	5.54	.73	1.00	1.00
71°F	2080	80.7	3.78	.47	.58	.70	77.0	4.30	.47	.59	.71	73.1	4.88	.46	.60	.74	68.4	5.54	.48	.63	.76
	2600	84.1	3.80	.49	.63	.76	79.6	4.31	.49	.65	.79	75.4	4.90	.51	.66	.82	71.0	5.56	.52	.68	.87
	3120	86.5	3.82	.51	.66	.84	81.7	4.33	.53	.70	.89	77.2	4.91	.54	.72	.94	72.3	5.56	.54	.73	1.00

EL072KPSST + EL090KASD - 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	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
2080	83.8	4.43	66.0	4.16	48.3	3.90	30.7	3.46	14.9	2.58
2600	85.8	4.18	68.0	3.91	50.3	3.65	32.7	3.21	16.8	2.34
3120	87.7	4.03	69.9	3.76	52.2	3.50	34.6	3.06	18.8	2.19

EL072KPSST + EL090KASD

HEATING PERFORMANCE at 2600 cfm Indoor Coil Air Volume

Temperature °F	Motor Input kW	Output kBtuh
65	4.18	85.8
60	4.11	81.3
55	4.04	76.9
50	3.98	72.4
47	3.93	69.7
45	3.91	68
40	3.86	63.7
35	3.81	59.4
30	3.73	54.8
25	3.65	50.3
20	3.57	45.7
17	3.53	42.9
15	3.50	41.1
10	3.43	36.7
5	3.21	32.7
0	2.99	28.8
-5	2.77	24.8
-10	2.55	20.8
-15	2.34	16.8
-20	2.12	12.9

RATINGS

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

EL090KPSST + EL090KASD - 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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					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	1440	67.2	2.72	.67	.79	.91	64.7	3.20	.69	.80	.94	61.8	3.75	.70	.82	.97	58.3	4.35	.71	.85	1.00
	1800	71.2	2.68	.72	.85	1.00	68.5	3.17	.73	.88	1.00	65.0	3.72	.75	.91	1.00	61.5	4.33	.77	.94	1.00
	2160	74.6	2.65	.76	.93	1.00	71.0	3.15	.78	.96	1.00	67.8	3.70	.80	.99	1.00	64.4	4.31	.83	1.00	1.00
67°F	1440	71.8	2.68	.55	.65	.75	68.8	3.17	.56	.67	.77	65.8	3.72	.57	.68	.78	62.4	4.33	.58	.69	.81
	1800	75.7	2.64	.59	.69	.82	72.6	3.14	.59	.71	.84	69.3	3.69	.60	.72	.87	65.8	4.30	.61	.74	.90
	2160	78.7	2.61	.60	.74	.89	75.9	3.11	.62	.76	.92	72.3	3.66	.63	.78	.95	68.2	4.28	.65	.81	.99
71°F	1440	75.9	2.64	.45	.54	.63	73.1	3.13	.45	.54	.64	70.2	3.68	.46	.55	.65	66.4	4.30	.46	.56	.67
	1800	80.2	2.59	.46	.57	.67	77.1	3.10	.47	.58	.68	73.8	3.65	.47	.59	.70	70.3	4.27	.48	.61	.72
	2160	83.4	2.56	.48	.60	.72	80.2	3.07	.48	.61	.73	76.6	3.63	.49	.62	.76	72.9	4.24	.50	.64	.79

EL090KPSST + EL090KASD - 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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)						
				Dry Bulb					Dry Bulb					Dry Bulb					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	91.2	5.80	.70	.83	.98	86.6	6.51	.72	.86	1.00	82.5	7.31	.73	.88	1.00	77.5	8.21	.75	.92	1.00				
	2800	95.7	5.85	.75	.92	1.00	90.8	6.55	.77	.95	1.00	85.7	7.35	.80	.99	1.00	80.5	8.24	.83	1.00	1.00				
	3360	98.8	5.89	.81	1.00	1.00	93.9	6.59	.85	1.00	1.00	89.0	7.39	.88	1.00	1.00	84.4	8.29	.92	1.00	1.00				
67°F	2240	96.4	5.86	.57	.68	.80	91.9	6.57	.58	.69	.82	87.3	7.37	.60	.71	.85	82.3	8.27	.61	.73	.88				
	2800	101.4	5.92	.61	.73	.89	96.7	6.62	.62	.74	.92	91.8	7.42	.63	.79	.95	85.7	8.31	.65	.81	1.00				
	3360	105.2	5.96	.64	.80	.97	99.7	6.66	.66	.82	1.00	94.0	7.45	.67	.86	1.00	87.6	8.33	.70	.90	1.00				
71°F	2240	102.7	5.93	.45	.56	.67	97.8	6.64	.45	.57	.67	92.4	7.43	.47	.58	.69	87.2	8.33	.47	.59	.71				
	2800	107.2	5.99	.48	.60	.70	102.2	6.69	.48	.60	.73	96.4	7.48	.48	.62	.75	91.2	8.37	.50	.65	.78				
	3360	111.2	6.03	.50	.64	.78	105.5	6.73	.50	.65	.80	99.9	7.52	.51	.66	.83	93.3	8.40	.53	.69	.88				

EL090KPSST + EL090KASD - 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	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
2240	114.4	7.17	90.4	6.54	66.4	5.93	42.4	5.12	20.5	3.88
2800	117.0	6.73	92.9	6.11	69.0	5.49	44.9	4.69	23.1	3.44
3360	119.5	6.47	95.5	5.84	71.6	5.23	47.5	4.42	25.7	3.18

EL090KPSST + EL090KASD

HEATING PERFORMANCE at 2800 cfm Indoor Coil Air Volume

Temperature °F	Motor Input kW	Output kBtuh
65	6.73	117
60	6.57	110.9
55	6.42	104.9
50	6.26	98.8
47	6.16	95.2
45	6.11	92.9
40	5.97	87.3
35	5.84	81.7
30	5.67	75.3
25	5.49	69
20	5.32	62.7
17	5.22	58.9
15	5.15	56.5
10	5.00	50.4
5	4.69	44.9
0	4.38	39.5
-5	4.06	34
-10	3.75	28.6
-15	3.44	23.1
-20	3.13	17.7

RATINGS

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

EL120KPSST + EL120KASD - 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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					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	2120	80.8	3.23	.71	.85	1.00	77.7	3.79	.73	.86	1.00	73.7	4.43	.75	.90	1.00	69.8	5.14	.77	.93	1.00
	2650	84.6	3.22	.77	.94	1.00	81.3	3.77	.79	.97	1.00	76.6	4.40	.81	1.00	1.00	72.9	5.12	.84	1.00	1.00
	3180	87.8	3.21	.83	1.00	1.00	84.4	3.76	.85	1.00	1.00	80.9	4.39	.88	1.00	1.00	77.0	5.09	.92	1.00	1.00
67°F	2120	85.3	3.21	.58	.70	.81	82.5	3.77	.59	.71	.83	79.1	4.40	.60	.72	.86	74.6	5.11	.61	.75	.89
	2650	89.9	3.20	.62	.76	.90	87.1	3.75	.63	.77	.93	82.6	4.38	.64	.79	.96	78.1	5.09	.66	.81	1.00
	3180	93.0	3.19	.67	.81	1.00	89.8	3.73	.67	.83	1.00	85.6	4.36	.68	.86	1.00	80.9	5.07	.68	.89	1.00
71°F	2120	90.7	3.19	.47	.57	.68	87.7	3.74	.46	.58	.69	84.0	4.37	.47	.59	.70	79.7	5.08	.48	.60	.72
	2650	95.3	3.18	.49	.62	.74	92.1	3.73	.47	.62	.74	88.1	4.35	.48	.63	.78	83.1	5.06	.51	.65	.79
	3180	98.2	3.17	.51	.65	.79	95.0	3.72	.51	.67	.81	90.5	4.34	.52	.69	.84	85.8	5.04	.53	.71	.87

EL120KPSST + EL120KASD - 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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					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	113.8	7.03	.73	.89	1.00	107.8	7.81	.74	.92	1.00	102.9	8.74	.77	.95	1.00	96.1	9.76	.79	1.00	1.00
	4000	118.4	7.09	.79	1.00	1.00	112.6	7.88	.82	1.00	1.00	107.0	8.80	.85	1.00	1.00	101.8	9.84	.89	1.00	1.00
	4800	123.1	7.16	.87	1.00	1.00	118.1	7.96	.91	1.00	1.00	112.3	8.87	.94	1.00	1.00	106.8	9.91	1.00	1.00	1.00
67°F	3200	120.2	7.12	.59	.71	.85	115.0	7.92	.60	.73	.88	109.3	8.83	.61	.75	.92	103.2	9.86	.63	.78	.96
	4000	126.0	7.21	.64	.78	.96	119.7	7.98	.65	.80	1.00	113.3	8.88	.67	.83	1.00	106.4	9.90	.68	.87	1.00
	4800	129.4	7.26	.67	.85	1.00	123.4	8.03	.69	.88	1.00	116.1	8.92	.71	.93	1.00	109.9	9.94	.73	.97	1.00
71°F	3200	127.5	7.23	.47	.58	.70	122.3	8.02	.47	.59	.71	115.4	8.91	.48	.61	.73	109.2	9.94	.49	.62	.75
	4000	132.6	7.30	.49	.63	.76	127.0	8.08	.49	.64	.78	120.0	8.97	.51	.66	.81	113.4	9.99	.52	.68	.83
	4800	136.3	7.35	.51	.67	.83	130.1	8.12	.53	.67	.87	123.7	9.02	.54	.71	.91	115.5	10.01	.54	.74	.95

EL120KPSST + EL120KASD - 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	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
3200	142.3	7.93	113.5	7.30	84.9	6.66	55.6	5.84	26.7	4.40
4000	145.8	7.47	117.1	6.84	88.4	6.21	59.1	5.39	30.2	3.94
4800	149.9	7.20	121.2	6.57	92.5	5.93	63.2	5.11	34.3	3.67

EL120KPSST + EL120KASD

HEATING PERFORMANCE at 4000 cfm Indoor Coil Air Volume

Temperature °F	Motor Input kW	Output kBtuh
65	7.47	145.8
60	7.31	138.6
55	7.16	131.3
50	7.00	124.1
47	6.91	119.8
45	6.84	117.1
40	6.67	110.2
35	6.51	103.4
30	6.36	95.9
25	6.21	88.4
20	6.06	81
17	5.97	76.5
15	5.90	73.6
10	5.75	66.4
5	5.39	59.1
0	5.02	51.9
-5	4.66	44.6
-10	4.30	37.4
-15	3.94	30.2
-20	3.58	22.9

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) EL090KPSST + (1) EL240KASD - 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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)							
				Dry Bulb					Dry Bulb					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	3360	137.3	5.20	.68	.80	1.00	131.6	6.16	.69	.82	1.00	125.6	7.22	.71	.87	1.00	119.0	8.40	.74	.92	1.00
	4200	144.0	5.14	.73	.93	1.00	138.1	6.10	.75	.98	1.00	131.6	7.17	.77	1.00	1.00	124.5	8.36	.80	1.00	1.00
	5040	149.5	5.09	.80	1.00	1.00	143.1	6.06	.84	1.00	1.00	137.2	7.13	.88	1.00	1.00	131.2	8.31	.94	1.00	1.00
67°F	3360	146.1	5.12	.56	.66	.76	140.5	6.08	.57	.67	.77	134.3	7.15	.58	.69	.82	127.6	8.34	.60	.71	.86
	4200	153.7	5.04	.59	.72	.88	147.3	6.02	.61	.73	.92	140.7	7.09	.63	.75	.98	133.4	8.29	.64	.77	1.00
	5040	158.7	4.99	.64	.77	1.00	152.6	5.97	.65	.82	1.00	145.2	7.06	.67	.85	1.00	137.5	8.26	.69	.90	1.00
71°F	3360	154.7	5.02	.46	.55	.64	148.9	6.00	.47	.56	.66	142.6	7.08	.48	.57	.67	135.7	8.27	.49	.59	.69
	4200	163.0	4.94	.48	.59	.70	156.6	5.93	.49	.60	.72	149.5	7.02	.50	.62	.74	142.0	8.22	.52	.64	.76
	5040	168.2	4.89	.53	.63	.76	161.7	5.88	.53	.65	.79	154.6	6.98	.58	.68	.83	145.6	8.19	.55	.69	.91

(2) EL090KPSST + (1) EL240KASD - 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)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					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	185.8	11.44	.70	.84	1.00	177.2	12.83	.71	.88	1.00	166.7	14.38	.73	.94	1.00	156.1	16.13	.76	1.00	1.00
	6000	194.7	11.54	.76	.99	1.00	184.9	12.92	.79	1.00	1.00	173.7	14.46	.83	1.00	1.00	163.4	16.21	.89	1.00	1.00
	7200	201.0	11.62	.85	1.00	1.00	191.1	13.00	.90	1.00	1.00	181.5	14.56	.96	1.00	1.00	171.5	16.31	1.00	1.00	1.00
67°F	4800	197.8	11.58	.58	.68	.80	187.8	12.95	.59	.70	.85	177.5	14.51	.60	.72	.89	166.5	16.25	.62	.74	.96
	6000	205.9	11.68	.62	.74	.95	195.6	13.06	.65	.76	1.00	184.8	14.60	.66	.81	1.00	173.2	16.33	.68	.87	1.00
	7200	212.4	11.75	.67	.84	1.00	201.6	13.12	.69	.88	1.00	190.1	14.67	.70	.94	1.00	178.4	16.39	.74	1.00	1.00
71°F	4800	208.2	11.71	.48	.57	.67	199.1	13.09	.48	.59	.68	188.1	14.64	.49	.60	.70	177.0	16.38	.50	.62	.73
	6000	217.8	11.83	.51	.62	.73	207.4	13.20	.52	.63	.75	196.5	14.75	.53	.66	.79	184.4	16.47	.55	.68	.85
	7200	224.1	11.91	.53	.67	.82	213.5	13.28	.54	.68	.87	201.9	14.82	.57	.71	.94	187.9	16.52	.58	.74	1.00

(2) EL090KPSST + (1) EL240KASD - 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	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
4800	219.1	11.09	173.3	10.47	127.7	9.85	81.7	8.80	37.9	6.49
6000	220.6	10.68	175.0	10.07	129.4	9.45	83.4	8.40	39.6	6.09
7200	221.9	10.42	176.1	9.80	130.5	9.19	84.5	8.13	40.7	5.83

(2) EL090KPSST + (1) EL240KASD

HEATING PERFORMANCE at 6000 cfm Indoor Coil Air Volume

Temperature °F	Motor Input kW	Output kBtuh
65	10.68	220.6
60	10.54	209.2
55	10.38	197.6
50	10.22	186.2
47	10.12	179.4
45	10.08	175.0
40	9.92	164.0
35	9.78	153.2
30	9.62	141.2
25	9.46	129.4
20	9.30	117.6
17	9.20	110.4
15	9.14	105.8
10	8.98	94.4
5	8.40	83.4
0	7.82	72.4
-5	7.26	61.4
-10	6.68	50.6
-15	6.10	39.6
-20	5.52	28.6

REVISIONS

Sections	Description of Change
Ratings	Updated.



Visit us at www.allied-commercial.com

For the latest technical information, visit us at www.allied-commercial.com

Contact us at 1-800-448-5872

NOTE - Due to Allied Commercial ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

©2024 Allied Air Enterprises LLC, a Lennox International Inc. Company