



**ELXP**

T-Series Commercial Split Systems

R-410A - 60 Hz

**COMMERCIAL  
PRODUCT SPECIFICATIONS**

Bulletin No. 311011  
March 2023  
Supersedes February 2023



**T-SERIES™**

**IEER up to 14.10**

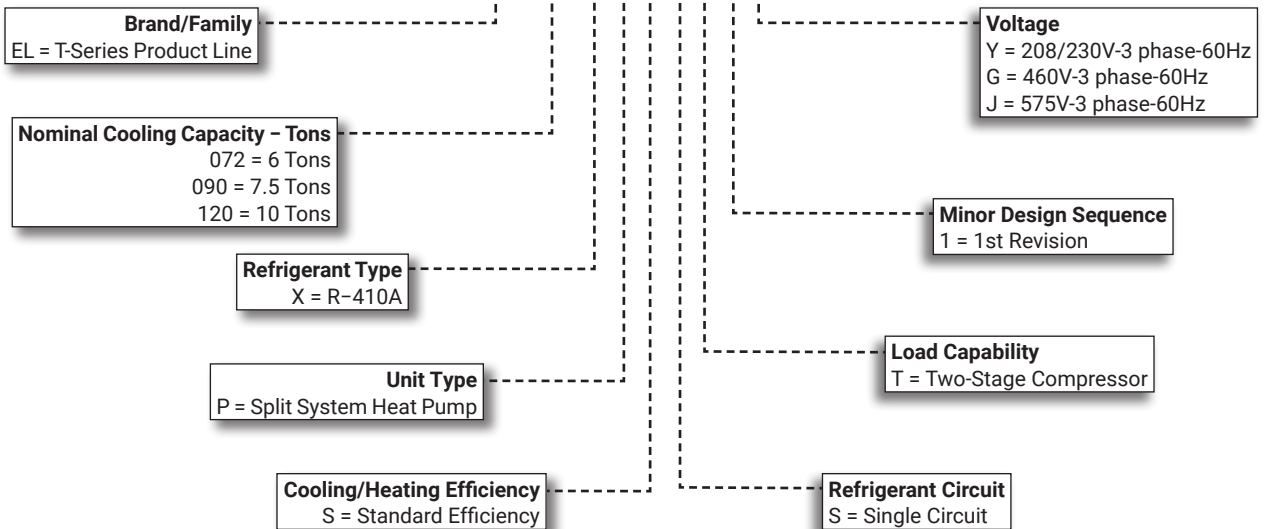
**6 to 10 Tons**

**Cooling Capacity - 69,000 to 178,000 Btuh**

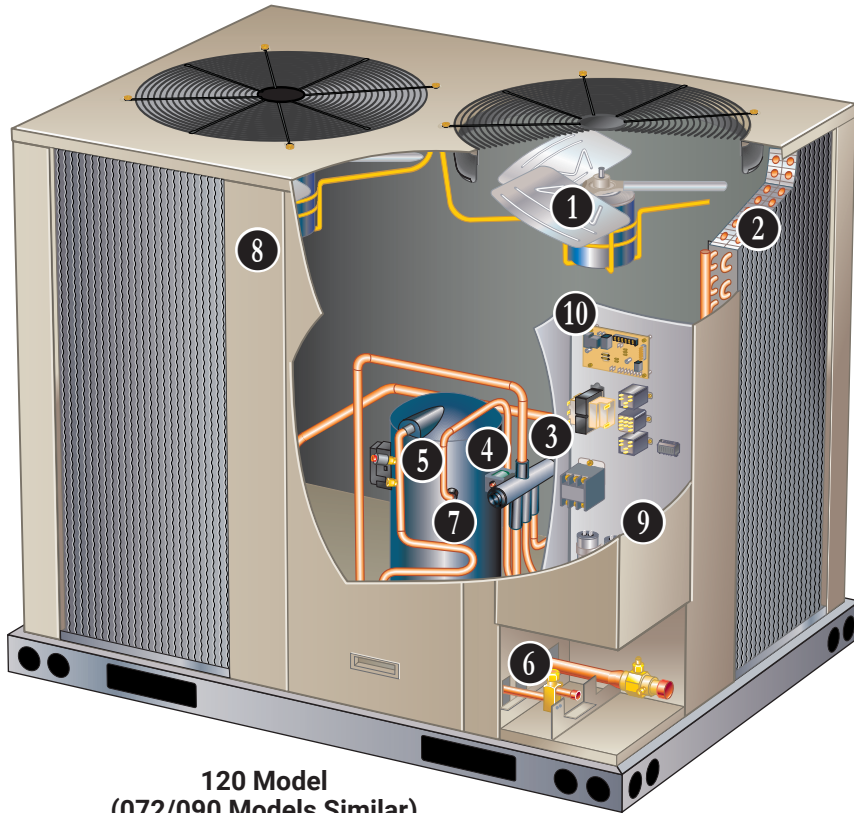
**Heating Capacity - 66,000 to 170,000 Btuh**

**MODEL NUMBER IDENTIFICATION**

**EL 120 X P S S T 1 Y**



## 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

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## 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
- All models meet DOE 2018 and 2023 energy efficiency standards
- 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

- 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-410A Refrigerant

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

**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.

### **2** Copper Tube/Enhanced Fin Coil(s)

- EL072XPS and EL090XPS have a single "U" shaped coil
- EL120XPS 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

### **1** Outdoor Coil Fans

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

## 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

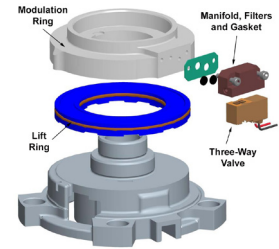
- Two involute spiral scrolls matched together generate a series of crescent shaped gas pockets between them
- During compression, one scroll remains stationary while the other scroll orbits around it
- Gas is drawn into the outer pocket, the pocket is sealed as the scroll rotates
- As the spiral movement 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

### **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

#### **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

### **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 (CO<sub>2</sub>) Sensors**

- Monitors CO<sub>2</sub> 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.

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

<sup>1</sup> Refer to Component Label or Wiring Diagram for key numbers.

<sup>2</sup> 24V input signals measured between one TB14 connection listed and TB14-C connection.

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## SPECIFICATIONS

General Data		Model No.	EL072XPSST	EL090XPSST	EL120XPSST
		Nominal Tonnage	6	7.5	10
Connections (sweat)	Liquid line - in. (o.d)		5/8	5/8	5/8
	Vapor line - in. (o.d)		1-1/8	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)		22 lbs. 7 oz. (includes holding charge)	23 lbs. 4 oz. (includes holding charge)	32 lbs. 8 oz. (includes holding charge)
Compressor			(1) Two Stage Scroll	(1) Two Stage Scroll	(1) Two Stage Scroll
Outdoor Coil	Net face area - sq. ft. Outer coil		29.3	29.3	34.2
	Inner coil		28.4	28.4	33.3
	Tube diameter - in. & no. of rows		3/8 - 2	3/8 - 2	3/8 - 2
	Fins per inch		20	20	20
Outdoor Coil Fan(s)	Diameter - in. & no. of blades		(2) 24 - 3	(2) 24 - 3	(2) 24 - 4
	Motor hp		(2) 1/3	(2) 1/3	(2) 1/2
	Total air volume - cfm		8300	8300	10,300
	Rpm		1075	1075	1075
	Motor Input - Watts		830	830	1130

## ELECTRICAL DATA

Line voltage data - 60 Hz - 3 phase		208/230V	460V	575V	208/230V	460V	575V	208/230V	460V	575V
<sup>2</sup> Maximum overcurrent protection (MOCP) amps		40	20	15	60	25	20	80	35	25
<sup>3</sup> Minimum circuit ampacity (MCA)		27	14	10	39	18	14	50	22	17
Compressor (1)	Rated load amps	17.6	8.5	6.3	26.9	12	9	34.6	14.8	11.1
	Locked rotor amps	136	66.1	55.3	165	94	65	240	130	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)	4.7 (9.4)	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 5000 amps.

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

<sup>2</sup> HACR type circuit breaker or fuse.

<sup>3</sup> Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

## SOUND DATA

<sup>1</sup> Unit Model	Octave Band Sound Power Levels dBA, re 10 <sup>-12</sup> Watts Center Frequency - HZ							<sup>1</sup> Sound Rating Number (dBA)	<sup>2</sup> 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
EL072XPSST	69	77	80	80	77	73	65	85	78	73	67	64	53
EL090XPSST	69	77	80	80	77	73	65	85	78	73	67	64	53
EL120XPSST	69	77	80	81	78	72	64	86	79	74	68	65	54

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

<sup>1</sup> 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).

<sup>2</sup> 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	Catalog No.	EL072XPSST EL090XPSST	EL120XPSST	
<b>CABINET</b>				
Combined Coil/Hail Guards	13T30	X		
	13T32		X	
Corrosion Protection	Factory	O	O	
<b>CONTROLS</b>				
BACnet® Module	17A08	X	X	
BACnet® Sensor with Display	97W23	X	X	
BACnet® Sensor without Display	97W24	X	X	
Low Ambient Control (0°F)	16F26	X	X	
<b>ELECTRICAL</b>				
GFI Service Outlets	15 amp non-powered, field-wired (208/230V, 460V only)	74M70	X	X
	<sup>1</sup> 20 amp non-powered, field-wired (208/230V, 460V, 575V)	67E01	X	X
<b>INDOOR AIR QUALITY</b>				
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	87N54	X	X	
CO <sub>2</sub> Sensor Duct Mounting Kit	85L43	X	X	
Aspiration Box - for duct mounting non-plenum rated CO <sub>2</sub> sensor (77N39)	90N43	X	X	

<sup>1</sup> 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				
EL072XPSST	69,000	14.10	11.00	66,000	41,000	3.40	2.25	EL090XASD	210666018
EL090XPSST	88,000	14.10	11.00	87,000	50,000	3.40	2.25	EL090XASD	210666019
EL120XPSST	115,000	14.10	11.00	114,000	70,000	3.40	2.25	EL120XASD	210666020
(2) EL090XPSST	178,000	13.50	10.60	170,000	98,000	3.30	2.05	(1) EL240XASD	210666047

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

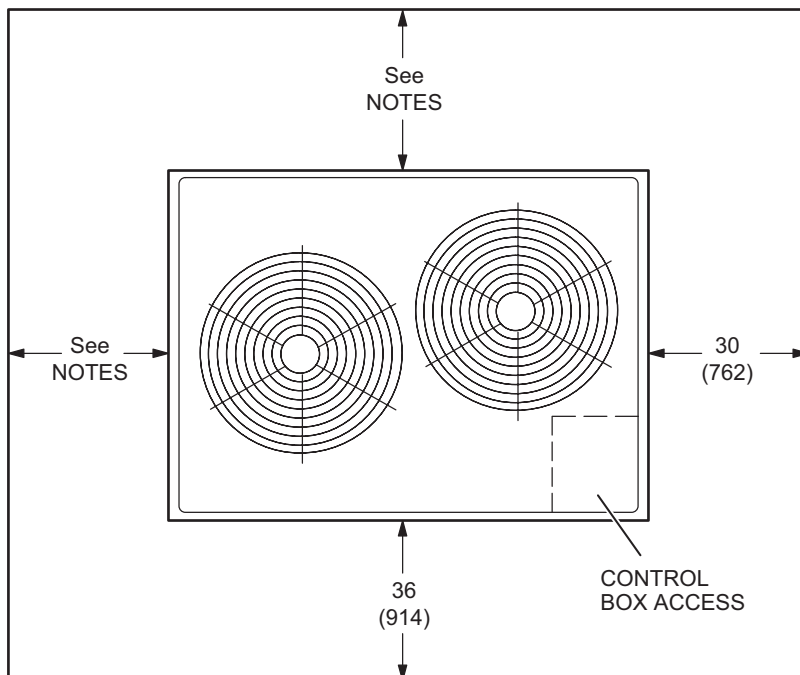
Model No.	Net		Shipping	
	lbs.	kg	lbs.	kg
EL072XPSST	425	193	450	204
EL090XPSST	425	193	450	204
EL120XPSST	502	228	527	239

## OPTIONS / ACCESSORIES

### COMBINED COIL/HAIL GUARDS

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

## INSTALLATION CLEARANCES



### NOTES:

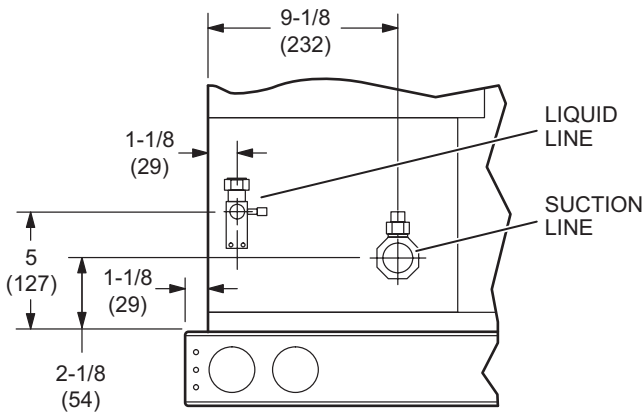
Clearance to one of the remaining two sides may be 12 in. (305 mm) and the final side may be 6 in. (152 mm).

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

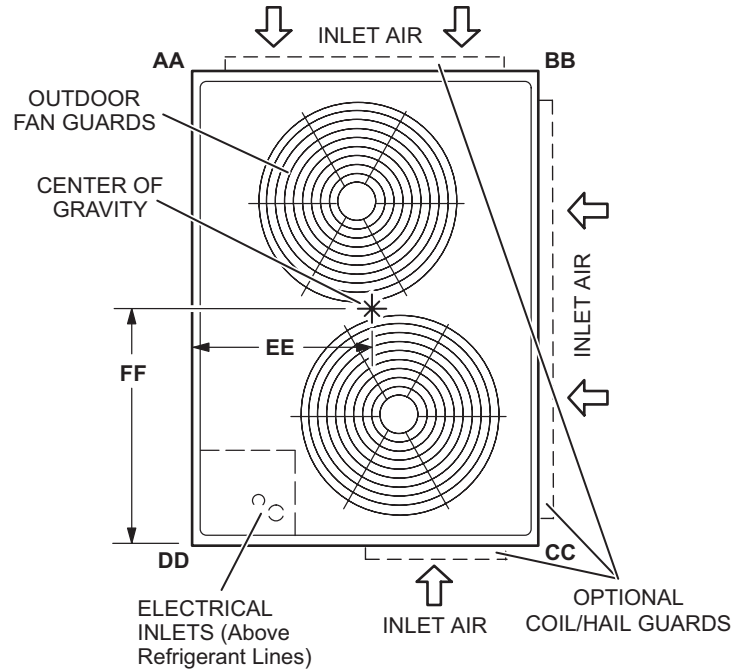
48 in. (1219 mm) clearance required on top of unit.

# DIMENSIONS - UNIT

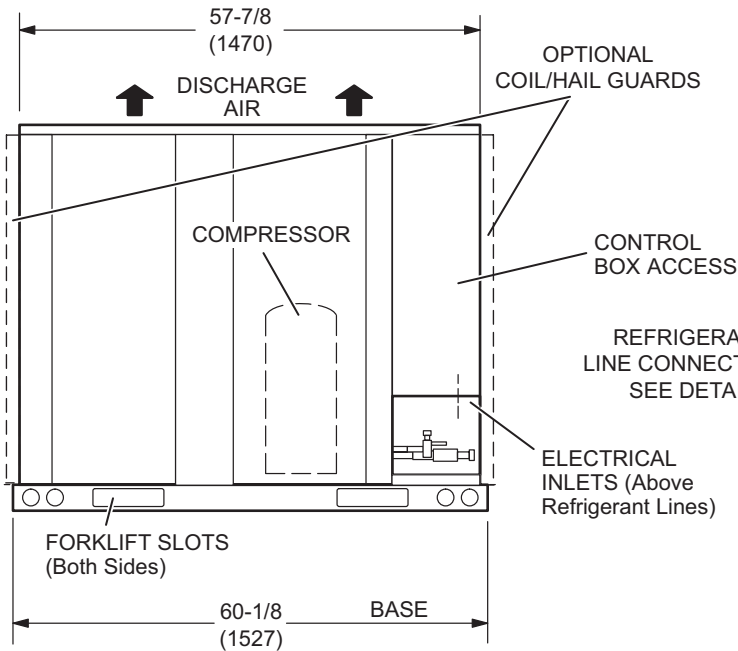
Model No.	CORNER WEIGHTS								CENTER OF GRAVITY			
	AA		BB		CC		DD		EE		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
EL072XPSST	103	47	103	47	116	53	118	54	21-1/2	546	27	686
EL090XPSST	108	49	108	49	114	52	114	52	21-3/4	552	29	737
EL120XPSST	120	54	114	52	139	63	149	68	20	508	25-1/4	641



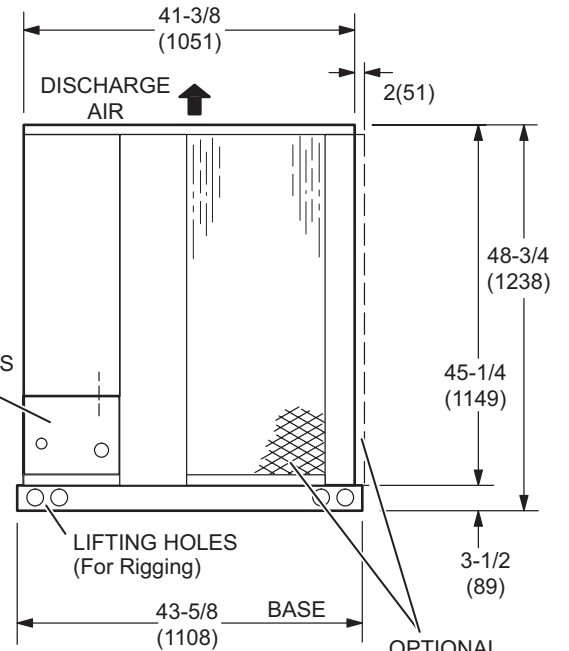
**REFRIGERANT LINE CONNECTIONS DETAIL**



**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.

## EL072XPSST + EL090XASD - 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	1280	53.2	2.09	0.70	0.82	0.94	51.3	2.39	0.71	0.83	0.96	49.2	2.73	0.72	0.85	0.98	46.8	3.12	0.74	0.87	1.00
	1600	56.4	2.07	0.74	0.88	1.00	54.4	2.37	0.76	0.90	1.00	52.1	2.71	0.77	0.92	1.00	49.5	3.11	0.79	0.94	1.00
	1920	58.8	2.05	0.79	0.94	1.00	56.6	2.35	0.80	0.96	1.00	54.3	2.70	0.82	0.98	1.00	51.6	3.09	0.83	1.00	1.00
67°F	1280	57.0	2.06	0.56	0.67	0.79	55.0	2.36	0.56	0.68	0.80	52.7	2.71	0.57	0.69	0.81	50.2	3.10	0.58	0.71	0.83
	1600	60.4	2.04	0.58	0.72	0.84	58.3	2.34	0.58	0.73	0.86	55.7	2.68	0.60	0.74	0.88	52.9	3.08	0.61	0.76	0.91
	1920	62.9	2.02	0.61	0.76	0.90	60.6	2.33	0.62	0.77	0.92	58.0	2.67	0.63	0.79	0.95	54.8	3.06	0.64	0.81	0.97
71°F	1280	60.8	2.04	0.43	0.54	0.65	58.7	2.34	0.44	0.55	0.66	56.3	2.68	0.44	0.55	0.66	53.7	3.07	0.44	0.56	0.68
	1600	64.4	2.01	0.44	0.57	0.69	62.0	2.31	0.44	0.57	0.71	59.4	2.66	0.45	0.58	0.71	56.7	3.05	0.45	0.60	0.73
	1920	66.9	1.99	0.45	0.59	0.74	64.6	2.29	0.45	0.61	0.75	61.7	2.64	0.46	0.62	0.76	58.5	3.03	0.46	0.62	0.79

## EL072XPSST + EL090XASD - 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	1920	69.6	3.83	0.74	0.87	1.00	66.2	4.35	0.75	0.89	1.00	62.6	4.94	0.77	0.92	1.00	58.8	5.62	0.79	0.95	1.00
	2400	73.0	3.85	0.79	0.95	1.00	69.5	4.36	0.81	0.97	1.00	65.7	4.95	0.83	1.00	1.00	61.9	5.62	0.86	1.00	1.00
	2880	75.8	3.86	0.85	1.00	1.00	72.3	4.37	0.86	1.00	1.00	68.9	4.96	0.89	1.00	1.00	65.1	5.63	0.93	1.00	1.00
67°F	1920	74.2	3.85	0.58	0.71	0.84	70.7	4.37	0.59	0.73	0.86	66.7	4.95	0.60	0.74	0.89	62.7	5.63	0.62	0.77	0.92
	2400	77.5	3.87	0.62	0.77	0.92	73.6	4.38	0.63	0.79	0.94	69.5	4.96	0.64	0.81	0.97	64.9	5.63	0.65	0.84	1.00
	2880	79.8	3.88	0.65	0.82	0.98	75.6	4.39	0.66	0.84	1.00	71.5	4.97	0.68	0.87	1.00	66.9	5.64	0.69	0.90	1.00
71°F	1920	78.4	3.87	0.44	0.56	0.68	74.8	4.38	0.44	0.58	0.71	70.8	4.97	0.45	0.58	0.72	66.5	5.64	0.45	0.60	0.75
	2400	82.0	3.89	0.45	0.60	0.74	78.0	4.40	0.46	0.61	0.76	73.8	4.98	0.46	0.63	0.79	69.1	5.65	0.47	0.65	0.81
	2880	84.5	3.91	0.47	0.64	0.80	80.2	4.42	0.47	0.65	0.82	75.6	4.99	0.48	0.67	0.85	70.7	5.65	0.49	0.69	0.88

## EL072XPSST + EL090XASD - 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
1920	85.8	4.77	67.4	4.48	49.1	4.21	30.7	3.69	15.3	2.76
2400	87.0	4.51	68.6	4.22	50.3	3.95	31.9	3.44	16.5	2.50
2880	87.9	4.39	69.5	4.10	51.2	3.83	32.8	3.32	17.4	2.38

### EL072XPSST + EL090XASD HEATING PERFORMANCE at 2400 cfm Indoor Coil Air Volume

Temperature °F	Motor Input kW	Output kBtuh
65	4.51	87
60	4.43	82.4
55	4.36	77.7
50	4.28	73.1
47	4.23	70.3
45	4.22	68.6
40	4.19	64.4
35	4.16	60.2
30	4.06	55.2
25	3.95	50.3
20	3.84	45.3
17	3.78	42.3
15	3.75	40.5
10	3.67	35.8
5	3.44	31.9
0	3.2	28.1
-5	2.97	24.2
-10	2.74	20.4
-15	2.5	16.5
-20	2.27	12.7

## RATINGS

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

### EL090XPSST + EL090XASD - 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	1600	65.2	2.60	0.71	0.83	0.95	62.5	3.06	0.72	0.85	0.97	59.5	3.57	0.73	0.87	0.99	56.2	4.14	0.75	0.89	1.00
	2000	69.1	2.58	0.75	0.89	1.00	66.0	3.04	0.77	0.92	1.00	62.6	3.55	0.78	0.94	1.00	59.1	4.12	0.81	0.97	1.00
	2400	71.9	2.56	0.80	0.95	1.00	68.7	3.02	0.81	0.98	1.00	65.2	3.54	0.83	1.00	1.00	61.8	4.11	0.86	1.00	1.00
67°F	1600	69.7	2.57	0.56	0.68	0.80	66.8	3.03	0.57	0.69	0.81	63.6	3.54	0.58	0.71	0.83	60.0	4.11	0.59	0.72	0.85
	2000	73.7	2.56	0.59	0.72	0.86	70.5	3.02	0.60	0.74	0.88	66.9	3.53	0.61	0.76	0.90	63.0	4.10	0.62	0.78	0.93
	2400	76.5	2.54	0.62	0.77	0.92	73.2	3.00	0.63	0.79	0.94	69.1	3.52	0.64	0.81	0.97	65.1	4.09	0.66	0.84	0.99
71°F	1600	74.2	2.55	0.43	0.55	0.65	71.1	3.01	0.44	0.55	0.66	67.8	3.52	0.44	0.56	0.68	63.9	4.09	0.44	0.57	0.70
	2000	78.5	2.54	0.45	0.58	0.70	74.8	2.99	0.45	0.58	0.71	71.1	3.50	0.45	0.60	0.73	67.1	4.07	0.46	0.61	0.75
	2400	81.4	2.52	0.46	0.60	0.75	77.6	2.98	0.46	0.61	0.76	73.5	3.49	0.46	0.63	0.79	69.3	4.06	0.47	0.64	0.81

### EL090XPSST + EL090XASD - 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	2400	89.4	5.76	0.73	0.86	0.98	85.0	6.38	0.74	0.88	1.00	80.3	7.06	0.76	0.91	1.00	75.0	7.81	0.79	0.94	1.00
	3000	94.0	5.86	0.78	0.93	1.00	89.3	6.47	0.80	0.95	1.00	84.0	7.15	0.82	0.98	1.00	78.5	7.90	0.85	1.00	1.00
	3600	97.4	5.93	0.83	0.99	1.00	92.5	6.54	0.85	1.00	1.00	87.5	7.24	0.87	1.00	1.00	82.4	8.00	0.91	1.00	1.00
67°F	2400	95.0	5.88	0.58	0.71	0.83	90.4	6.50	0.58	0.72	0.85	85.3	7.18	0.60	0.74	0.87	79.6	7.93	0.61	0.76	0.90
	3000	99.3	5.97	0.61	0.75	0.89	94.5	6.59	0.62	0.77	0.92	88.8	7.27	0.63	0.80	0.95	82.8	8.01	0.65	0.83	0.98
	3600	102.5	6.04	0.64	0.81	0.96	97.3	6.66	0.65	0.83	0.98	91.3	7.33	0.67	0.85	1.00	85.0	8.08	0.69	0.89	1.00
71°F	2400	100.6	5.99	0.44	0.56	0.68	95.5	6.61	0.44	0.57	0.69	90.4	7.30	0.45	0.58	0.71	84.3	8.06	0.45	0.60	0.73
	3000	105.1	6.09	0.46	0.59	0.73	99.6	6.70	0.46	0.60	0.75	94.0	7.39	0.46	0.62	0.77	87.7	8.14	0.47	0.64	0.80
	3600	108.3	6.15	0.46	0.63	0.78	102.5	6.77	0.47	0.64	0.80	96.3	7.46	0.48	0.66	0.83	89.5	8.20	0.49	0.67	0.86

### EL090XPSST + EL090XASD - 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
2400	112.2	6.85	88.5	6.28	64.9	5.70	41.3	5.00	20.3	3.76
3000	114.3	6.49	90.5	5.91	66.9	5.33	43.3	4.63	22.3	3.39
3600	115.7	6.26	92.0	5.68	68.4	5.10	44.8	4.40	23.8	3.16

### EL090XPSST + EL090XASD HEATING PERFORMANCE at 3000 cfm Indoor Coil Air Volume

Temperature °F	Motor Input kW	Output kBtuh
65	6.49	114.3
60	6.35	108.3
55	6.21	102.3
50	6.07	96.3
47	5.98	92.8
45	5.91	90.5
40	5.74	85
35	5.57	79.4
30	5.45	73.2
25	5.33	66.9
20	5.21	60.7
17	5.14	56.9
15	5.08	54.5
10	4.94	48.6
5	4.63	43.3
0	4.32	38.1
-5	4.01	32.8
-10	3.7	27.6
-15	3.39	22.3
-20	3.08	17.1

# RATINGS

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

## EL120XPSST + EL120XASD - 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	2080	82.6	3.25	0.71	0.84	0.96	79.3	3.80	0.72	0.86	0.98	75.3	4.43	0.74	0.88	1.00	70.8	5.14	0.76	0.91	1.00
	2600	86.7	3.23	0.76	0.91	1.00	83.5	3.78	0.77	0.93	1.00	79.2	4.41	0.79	0.95	1.00	74.7	5.12	0.82	0.98	1.00
	3120	90.1	3.22	0.81	0.97	1.00	86.6	3.76	0.82	0.99	1.00	82.6	4.38	0.84	1.00	1.00	78.4	5.09	0.87	1.00	1.00
67°F	2080	88.0	3.23	0.57	0.69	0.81	84.5	3.77	0.57	0.70	0.82	80.6	4.40	0.58	0.71	0.84	76.0	5.11	0.59	0.73	0.87
	2600	92.4	3.21	0.60	0.73	0.87	88.9	3.75	0.60	0.75	0.89	84.5	4.37	0.61	0.77	0.92	79.7	5.08	0.63	0.79	0.95
	3120	95.6	3.20	0.62	0.79	0.94	91.9	3.74	0.63	0.80	0.96	87.5	4.36	0.65	0.82	0.98	82.1	5.06	0.66	0.85	1.00
71°F	2080	93.2	3.20	0.44	0.55	0.66	89.8	3.75	0.44	0.56	0.67	85.7	4.37	0.44	0.56	0.68	81.0	5.07	0.44	0.58	0.70
	2600	97.7	3.19	0.44	0.58	0.71	94.2	3.73	0.45	0.59	0.72	90.0	4.34	0.45	0.60	0.74	85.0	5.04	0.46	0.61	0.76
	3120	101.0	3.18	0.46	0.61	0.77	97.4	3.71	0.46	0.62	0.78	92.9	4.33	0.47	0.64	0.80	87.7	5.03	0.47	0.65	0.82

## EL120XPSST + EL120XASD - 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	113.9	7.05	0.74	0.88	1.00	108.3	7.84	0.76	0.90	1.00	102.2	8.75	0.78	0.93	1.00	95.7	9.79	0.80	0.96	1.00
	4000	119.1	7.13	0.80	0.96	1.00	113.2	7.91	0.82	0.98	1.00	106.9	8.81	0.84	1.00	1.00	100.8	9.86	0.87	1.00	1.00
	4800	123.5	7.19	0.85	1.00	1.00	118.0	7.98	0.87	1.00	1.00	112.0	8.88	0.90	1.00	1.00	105.5	9.92	0.94	1.00	1.00
67°F	3200	121.0	7.16	0.59	0.72	0.85	115.2	7.94	0.59	0.73	0.87	108.7	8.84	0.61	0.75	0.90	101.7	9.86	0.62	0.78	0.93
	4000	126.3	7.23	0.62	0.77	0.92	120.0	8.00	0.63	0.79	0.95	113.0	8.89	0.64	0.82	0.98	105.7	9.92	0.66	0.85	1.00
	4800	130.1	7.29	0.65	0.83	0.99	123.2	8.05	0.66	0.85	1.00	116.0	8.93	0.68	0.88	1.00	108.2	9.95	0.71	0.92	1.00
71°F	3200	128.3	7.26	0.44	0.57	0.69	121.8	8.03	0.45	0.58	0.71	115.4	8.93	0.45	0.59	0.73	107.8	9.95	0.46	0.61	0.75
	4000	133.7	7.34	0.46	0.60	0.75	127.0	8.09	0.46	0.62	0.77	119.7	8.98	0.47	0.63	0.79	111.9	10.00	0.48	0.65	0.83
	4800	137.7	7.40	0.47	0.64	0.81	130.5	8.15	0.47	0.66	0.83	122.8	9.02	0.48	0.67	0.86	114.8	10.03	0.49	0.70	0.90

## EL120XPSST + EL120XASD - 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	137.6	8.04	110.1	7.39	82.6	6.74	54.9	5.90	26.8	4.44
4000	140.0	7.58	112.5	6.93	85.0	6.28	57.3	5.44	29.2	3.99
4800	141.7	7.29	114.2	6.64	86.7	5.99	59.0	5.15	30.9	3.69

### EL120XPSST + EL120XASD HEATING PERFORMANCE at 4000 cfm Indoor Coil Air Volume

Temperature °F	Motor Input kW	Output kBtuh
65	7.58	140
60	7.42	133.2
55	7.26	126.3
50	7.1	119.4
47	7.0	115.3
45	6.93	112.5
40	6.76	105.6
35	6.58	98.8
30	6.43	91.9
25	6.28	85
20	6.13	78.1
17	6.03	74
15	5.97	71.2
10	5.81	64.3
5	5.44	57.3
0	5.08	50.3
-5	4.71	43.3
-10	4.35	36.2
-15	3.99	29.2
-20	3.62	22.2

## 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) EL090XPSST + (1) EL240XASD - 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	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) EL090XPSST + (1) EL240XASD - 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	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) EL090XPSST + (1) EL240XASD - 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	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) EL090XPSST + (1) EL240XASD HEATING PERFORMANCE AT 6000 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
Options/Accessories	CO2 Sensor usage updated.



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Contact us at 1-800-448-5872

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