#### AIR CONDITIONERS



# T-CLASS™ SPLIT SYSTEM UNITS R-410A - 60 HZ

# PRODUCT SPECIFICATIONS

Bulletin No. 210524 September 2017 Supersedes November 2016



072-090 Models

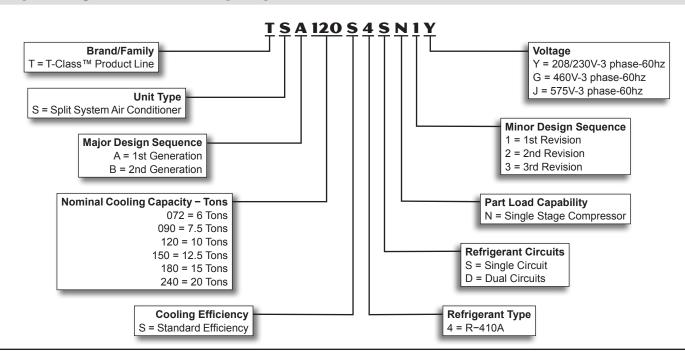


120-150 Models



EER up to 11.7 6 to 20 Tons Cooling Capacity - 71,000 to 236,000 Btuh

### **MODEL NUMBER IDENTIFICATION**



#### **FEATURES AND BENEFITS**



072-090 Models



# **CONTENTS**

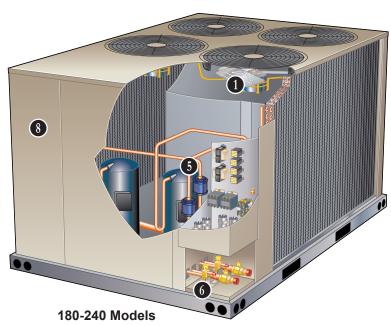
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# **EQUIPMENT WARRANTY**

**Compressor -** Limited warranty for five years in non-residential applications.

**All other covered components -** One year in non-residential applications.

Refer to Lennox Equipment Limited Warranty certificate for specific details.



## **APPLICATIONS**

Air conditioners are available in 6, 7.5, 10 ton (one compressor) and 10, 12.5, 15 and 20 ton (two compressors) nominal sizes.

Matching air handlers provide a wide range of cooling capacities and applications. See AHRI Ratings tables.

See Air Handlers sections for data.

Units shipped completely factory assembled, piped, and wired. Each unit is test operated at the factory insuring proper operation.

Installer must set air conditioner, connect refrigerant lines, add refrigerant charge and make electrical connections to complete job.

# **APPROVALS**

All units tested in Lennox' Research Laboratory environmental test room or ETL certified environmental testing facility.

AHRI Certified to AHRI Standard 340/360-2007.

Sound tested in Lennox reverberant sound test room in accordance with test conditions included in AHRI Standard 270-95 or 370-2001.

Units and components within are bonded for grounding to meet safety standards for servicing required by UL, ULC, NEC and CEC.

All units are ETL listed.

ISO 9001 Registered Manufacturing Quality System.

#### **FEATURES AND BENEFITS**

## **REFRIGERATION SYSTEM**

## Refrigerant

Units operate with chlorine-free, ozone friendly, R-410A (field furnished).



# ① Outdoor Coil Fan(s)

TSA072 and TSA090 units have one outdoor fan. TSA120 and TSA150 units have two outdoor fans. TSA180 and TSA240 units have four outdoor fans.

Direct drive fan(s) moves large volumes of air uniformly through entire condenser coil(s) for high refrigerant cooling capacity.

Upward discharge of air reduces operating sound levels and prevents damage to lawns, shrubs, and walkways.

Fan motors are totally enclosed, overload protected and equipped with a rain shield.

Fan service access is accomplished by removal of fan guard(s) or removal of access panel.

# 2 Copper Tube/Enhanced Fin Coil(s)

Units are equipped with a wrap-around "U" shaped coil (072-090-120 models) or two "L" shaped coils (150-180-240 models).

Lennox designed and fabricated coils constructed of precisely spaced ripple-edge aluminum fins machine fitted to seamless copper tubes.

Lanced fins provide maximum exposure of fin surface to air stream resulting in excellent heat transfer.

Fins equipped with collars that grip tubing for maximum contact area.

Flared shoulder tubing connections and machine brazed silver soldering provide tight, leakproof joints.

Long life copper tubing is corrosion-resistant and easy to field service.

Thoroughly factory tested under high pressure to ensure leakproof construction.

Completely accessible for cleaning.

# 3 High Pressure Switch

Shuts off unit if abnormal operating conditions cause discharge pressure to rise above setting.

Protects the compressor from excessive condensing pressure.

Manual reset.

# 4 Loss of Charge Switch

Shuts off unit if liquid line pressure falls below setting. Provides loss of charge and freeze-up protection. Automatic reset.

# 6 Hi-Capacity Drier(s)

Drier traps moisture or dirt that could contaminate the refrigerant system.

# **6** Refrigerant Lines and Service Valves

Suction and liquid lines are located on corner of unit cabinet and are made with sweat connections. See dimension drawings.

Fully serviceable suction and liquid line service valves provide complete service access to refrigerant system.

Suction valve can be fully shut off, while liquid valve can be front seated to manage refrigerant charge while servicing system. Accessible outside of unit cabinet.

# **1** COMPRESSORS

TSA072, TSA090 and TSA120S4S models feature a single scroll compressor. TSA120S4D, TSA150, TSA180 and TSA240 models have two scroll compressors.

Compressor features high efficiency with uniform suction flow, constant discharge flow and high volumetric efficiency and quiet operation.

Compressor consists of two involute spiral scrolls matched together to 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 pocket reaches the center, gas is now 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.

Scroll 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.

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 resilient rubber mounts for vibration free operation.

### Crankcase Heater(s) (All Models)

Crankcase heater(s) prevents migration of liquid refrigerant into compressor(s) and ensures proper compressor lubrication.

#### **FEATURES AND BENEFITS**

#### **CABINET**

- 8 Heavy-gauge, pre-painted steel cabinet provides superior rust and corrosion protection.
  - Removable panels allow access for unit servicing.
- Heavy duty steel base channels raise the unit off of mounting surface away from damaging moisture. Unit lifting holes and forklift slots furnished in base rails. See dimension drawings.

# **(1)** Control Box

Control box located in separate compartment in unit cabinet .

All controls are pre-wired at the factory.

Control box is large enough for field installed DDC or other field supplied control modules.

# **Options/Accessories**

# **Factory Installed**

#### **Corrosion Protection**

Polymeric epoxy coating that is deposited by electrical transport (electrophoresis), using a process known as electrocoat (e-coat). Available for enhanced coil corrosion protection. Factory installed on the condenser coil. Painted base pan is provided with this option.

# **Field Installed**

#### **Combination Coil/Hail Guards**

Heavy gauge steel frame painted to match cabinet with expanded metal mesh to protect the outdoor coil from damage.

# **CONTROLS**

# **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**

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

#### **Low Ambient Control**

Air conditioning units operate satisfactorily down to 30°F outdoor air temperature without any additional controls.

Low Ambient Control Kit can be field installed, allowing unit operation down to 0°F.

#### **Thermostat**

Thermostat is not furnished with unit and must be ordered extra.

See page 5, individual Thermostat bulletins and Lennox Price Book.

SOUND DATA											
<sup>1</sup> Unit	Octave	Octave Band Linear Sound Power Levels dB, re 10 <sup>-12</sup> Watts Center Frequency - HZ									
Model No.	63	125	250	500	1000	2000	4000	8000	Number (dB)		
TSA072S4S	60	65	68	73	76	72	68	63	81		
TSA090S4S	56	64	69	73	77	74	70	63	81		
TSA120S4S	61	70	77	82	81	77	75	71	86		
TSA120S4D	65	71	77	80	80	77	72	67	85		
TSA150S4D	62	68	77	80	82	78	73	65	86		
TSA180S4D	66	73	80	83	83	79	74	66	88		
TSA240S4D	66	73	80	85	84	80	78	74	89		

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

<sup>&</sup>lt;sup>1</sup> Tested according to AHRI Standard 270-2008 test conditions.

Item	Model No.	Catalog No.
COMFORTSENSE® 7500 COMMERCIAL 7-DAY PROGRAMMABLE THERMOSTAT		
<ul> <li>Four-Stage Heating / Two-Stage Cooling Universal Multi-Stage</li> <li>Intuitive Touchscreen Interface</li> <li>Remote Indoor Temperature Sensing with Averaging</li> <li>Outside or Discharge Air Temperature Display</li> <li>Full Seven-Day Programming</li> <li>Four Time Periods Per Day</li> <li>Occupancy Scheduling with Economizer Relay Control</li> <li>Away Mode</li> <li>Holiday Scheduling</li> <li>Smooth Setback Recovery (SSR)</li> <li>Performance Reports</li> <li>Notifications/Reminders</li> <li>Dehumidification/Humiditrol® Control for Split Systems and Rooftop Units</li> <li>Economizer Relay Control</li> <li>Backlit Display</li> <li>Wallplate Furnished</li> </ul>	C0STAT06FF1L	13H15
Optional Accessories		
Remote non-adjustable wall mount 20k temperature sensor	C0SNZN01AE2-	47W36
<sup>1</sup> Remote non-adjustable wall mount 10k temperature sensor	C0SNZN73AE1-	47W37
Remote non-adjustable discharge air (duct mount) temperature sensor	C0SNDC00AE1-	19L22
Outdoor temperature sensor	C0SNSR03AE1-	X2658
Locking cover (clear)	C0MISC15AE1-	39P21
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		
COMFORTSENSE® 3000 COMMERCIAL 5-2 DAY PROGRAMMABLE THERMOSTAT		
<ul> <li>Two-Stage Heating / Two-Stage Cooling Conventional Systems</li> <li>Intuitive Interface</li> <li>5-2 Day Programming</li> <li>Program Hold</li> <li>Remote Indoor Temperature Sensing</li> <li>Smooth Setback Recovery (SSR)</li> <li>Economizer Relay Control</li> <li>Maintenance/Filter/Service Reminders</li> <li>Backlit Display</li> <li>Wallplate Furnished</li> <li>Simple Up and Down Temperature Control.</li> </ul>	C0STAT05FF1L	11Y05
Optional Accessories		
Remote non-adjustable wall mount 10k averaging temperature sensor	C0SNZN73AE1-	47W37
Optional wall mounting plate	C0MISC17AE1-	X2659
DIGITAL NON-PROGRAMMABLE THERMOSTAT		
<ul> <li>One-Stage Heating / Cooling Conventional Systems</li> <li>Intuitive Interface</li> <li>Automatic Changeover</li> <li>Backlit Display</li> <li>Simple Up and Down Temperature Control.</li> </ul>	C0STAT12AE1L	51M32
Optional Accessories		
Outdoor temperature sensor	C0SNSR04AE1-	X2658

SPECIFIC	ATIONS - 6 - 7.5 TON								
General	Model No.		TSA072S4S			TSA090S4S			
Data	Nominal Size - Tons		6		7.5				
Connections	Liquid line - in. (o.d)		(1) 5/8			(1) 5/8			
(sweat)	Suction line - in. (o.d)		(1) 1-1/8			(1) 1-1/8			
Refrigerant (R	-410A)	F	actory install	ed R-410A hol	Iding charge (2	2 lb. per stage	:)		
<sup>1</sup> Field	d provided charge with 25 ft. line set		10 lbs. 0 oz.			15 lbs. 0 oz.			
Condenser	Net face area - sq. ft. Outer coil		29.3			29.3			
Coil	Inner coil					28.4			
	Tube diameter - in. & no. of rows		3/8 - 1			3/8 - 2			
	Fins per inch		20			20			
Condenser	Diameter - in. & no. of blades		(1) 24 - 3			(1) 24 - 4			
Fan(s)	Motor hp		(1) 1/3	(1) 1/2					
	Total air volume - cfm		5100		5600				
	Rpm		1075			1075			
	Watts		430			580			
ELECTRIC	CAL DATA								
	Line voltage data - 60 hz - 3 phase	208/230V	460V	575V	208/230V	460V	575V		
<sup>2</sup> Maxir	mum Overcurrent Protection (amps)	45	20	15	50	25	20		
	<sup>3</sup> Minimum circuit ampacity	27	14	11	35	17	13		
Compressor	No. of Compressors	1	1	1	1	1	1		
	Rated load amps	19	9.7	7.4	25	12.2	9		
	Locked rotor amps	123	62	50	164	100	78		
Condenser	No. of motors	1	1	1	1	1	1		
Fan Motor	Full load amps	2.4	1.3	1	3	1.5	1.2		
(1 phase)	Locked rotor amps	4.7	2.4	1.9	6	3	2.9		

 $\ensuremath{\mathsf{NOTE}}$  - Extremes of operating range are plus and minus 10% of line voltage.

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

SPECIFIC	CATIONS - 10 TON								
General	Model No.	TSA120S4S				TSA120S4D			
Data	Nominal Size - Tons		10			10			
Connections	Liquid line - in. (o.d)		(1) 5/8			(2) 5/8			
(sweat)	Suction line - in. (o.d)		(1) 1-3/8			(2) 1-1/8			
Refrigerant (R	R-410A)	F	actory install	ed R-410A ho	lding charge (2	2 lb. per stage	e)		
<sup>1</sup> Field	d provided charge with 25 ft. line set		16 lbs. 0 oz.			18 lbs. 0 oz.			
Condenser	Net face area - sq. ft. Outer coil		29.3			29.3			
Coil	Inner coil		28.4			28.4			
	Tube diameter - in. & no. of rows		3/8 - 2			3/8 - 2			
	Fins per inch		20						
Condenser	Diameter - in. & no. of blades		(2) 24 - 3						
Fan(s)	Motor hp		(2) 1/3						
	Total air volume - cfm		8300						
	Rpm		1075			1075			
	Watts		830			830			
ELECTRIC	CAL DATA								
	Line voltage data - 60 hz - 3 phase	208/230V	460V	575V	208/230V	460V	575V		
<sup>2</sup> Maxii	mum Overcurrent Protection (amps)	70	40	25	50	25	20		
	<sup>3</sup> Minimum circuit ampacity	43	24	18	41	21	15		
Compressor	No. of Compressors	1	1	1	2	2	2		
	Rated load amps (total)	30.1	16.7	12.2	18 (32)	7.8 (15.6)	5.7 (11.4)		
	Locked rotor amps (total)	225	114	80	110 (220)	52 (104)	38.9 (77.8)		
Condenser	No. of motors	2	2	2	2	2	2		
Fan Motor	Full load amps (total)	2.4 (4.8)	1.3 (2.6)	1 (2)	2.4 (4.8)	1.3 (2.6)	1 (2)		
(1 phase)	Locked rotor amps (total)	4.7 (9.4)	2.4 (4.8)	1.9 (3.8)	4.7 (9.4)	2.4 (4.8)	1.9 (3.8)		

 $<sup>\</sup>ensuremath{\mathsf{NOTE}}$  - Extremes of operating range are plus and minus 10% of line voltage.

<sup>&</sup>lt;sup>1</sup> Refer to the Lennox Refrigerant Piping Manual to determine refrigerant charge required with longer length refrigerant lines.

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

<sup>&</sup>lt;sup>1</sup> Refer to the Lennox Refrigerant Piping Manual to determine refrigerant charge required with longer length refrigerant lines.

 $<sup>^{\</sup>rm 2}$  HACR type circuit breaker or fuse.

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

SPECIFIC	<b>CATIONS - 12.5 - 20 TON</b>										
General	Model No.	TS	A150S4	D	TS	A180S4I	D	TS	A240S4	D	
Data	Nominal Size - Tons		12.5			15			20		
Connections	Liquid line - in. (o.d)		(2) 5/8		(2) 5/8			(2) 5/8			
(sweat)	Suction line - in. (o.d)	(2	2) 1-1/8		(2	(2) 1-1/8			(2) 1-3/8		
Refrigerant (I	R-410A)		Facto	ry install	ed R-410A	holding	charge (	2 lb. per sta	age)		
<sup>1</sup> Fie	eld provided charge with 25 ft. line set	19	lbs. 0 oz	<u>.</u> .	27	lbs. 0 oz	<u>.</u> .	33	lbs. 0 oz	<u>.</u>	
Condenser	Net face area - sq. ft. Outer coil		34.2			58.7			58.7		
Coil	Inner coil		33.3			57.7			57.7		
	Tube diameter - in. & no. of rows		3/8 - 2			3/8 - 2			3/8 - 2		
	Fins per inch		20			20			20		
Condenser	Diameter - in. & no. of blades	(2	2) 24 - 4		(4	1) 24 - 3		(4	1) 24 - 3		
Fan(s)	Motor hp		(2) 1/2			(4) 1/3		(4) 1/3			
	Total air volume - cfm		10,300		16,600				16,600		
	Rpm	1075			1075				1075		
	Watts	1130				1660			1660		
<b>ELECTRI</b>	CAL DATA										
	Line voltage data - 60 hz - 3 phase	208/230V	460V	575V	208/230V	460V	575V	208/230V	460V	575V	
<sup>2</sup> Max	ximum Overcurrent Protection (amps)	60	30	25	90	40	30	100	50	40	
	<sup>3</sup> Minimum circuit ampacity	49	25	20	66	33	25	78	43	32	
Compressor	No. of Compressors	2	2	2	2	2	2	2	2	2	
	Rated load amps (total)	19 (38)	9.7 (19.4)	7.4 (14.8)	25 (50)	12.2 (24.4)	9 (18)	30.1 60.2)	16.7 (33.4)	12.2 (24.8)	
	Locked rotor amps (total)	123 (246)	62 (124)	50 (100)	164 (328)	100 (200)	78 (156)	225 (450)	114 (228)	80 (160)	
Condenser	No. of motors	2	2	2	4	4	4	4	4	4	
Fan Motor (1 phase)	Full load amps (total)	3 (6)	1.5 (3)	1.2 (2.4)	2.4 (9.6)	1.3 (5.2)	1 (4)	2.4 (9.6)	1.3 (5.2)	1 (4)	
	Locked rotor amps (total)	6 (12)	3 (6)	2.9 (5.8)	4.7 (18.8)	2.4 (9.6)	1.9 (7.6)	4.7 (18.8)	2.4 (9.6)	1.9 (7.6)	

 $<sup>\</sup>ensuremath{\mathsf{NOTE}}$  - Extremes of operating range are plus and minus 10% of line voltage.

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

OPTIONS / ACCESSO	RIES								
Item	Catalog No.	072S4S	090S4S	120S4S	120S4D	150S4D	180S4D	240S4D	
CABINET									
Combined Coil/Hail Guards	T2GARD51L-1	13T29	Х	Х					
	T2GARD51M11	13T30			Х	Х			
	T2GARD51M21	13T32					Х		
	T2GARD51N-1	13T37						Х	Х
Corrosion Protection		Factory	0	0	0	0	0	0	0
CONTROLS									
Low Ambient Control (0°F)	T2CWKT01LM1-	44W17	Х	Х	Х				
	T2CWKT02M-1-	44W18				Х	Х		
	T2CWKT03N-1-	44W19						Х	Х
L Connection® Building Automatio		Х	Х	Х	Х	Х	Х	Х	
Network Thermostat Controller	C0CTRL07AE1L	17M10	Х	Х	Х	Х	Х	Х	Х

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

<sup>&</sup>lt;sup>1</sup> Refer to the Lennox Refrigerant Piping Manual to determine refrigerant charge required with longer length refrigerant lines.

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

O - Factory Installed with extended lead time.

X - Field Installed

AHRI SYSTEM MATCHES												
Model	Cooling Btuh	IEER	EER	Air Handler	Expansion Device	AHRI Reference						
TSA072S4S	71,000	12.5	11.20	TAA072S4S	Factory TXV	3288534						
TSA090S4S	89,000	12.1	11.20	TAA090S4D	Factory TXV	3288545						
TSA090S4S	92,000	12.3	11.30	TAA120S4D	Factory TXV	3288546						
(2) TSA090S4S	172,000	11.4	11.00	TAA180S4D	Factory TXV	3293561						
TSA120S4D	115,000	11.4	11.20	TAA120S4D	Factory TXV	3288549						
TSA120S4S	113,000	11.4	11.20	TAA120S4D	Factory TXV	3288550						
(2) TSA120S4S	222,000	11.3	11.00	TAA240S4D	Factory TXV	3293565						
TSA120S4D	108,000	13.0	11.70	(2) CBX27UH-060	Factory TXV	3894542						
TSA120S4D	112,000	12.5	11.20	(2) CBX32M-060	Factory TXV	3894535						
TSA120S4D	112,000	12.5	11.20	(2) CBX32MV-068	Factory TXV	3894575						
TSA120S4D	108,000	12.5	11.20	(2) CH23-68	<b>91M02</b> (order 2)	3894536						
TSA120S4D	108,000	12.5	11.20	(2) CH33-62D	<b>91M02</b> (order 2)	3894603						
TSA120S4D	108,000	12.5	11.20	(2) CX38-60D	Factory TXV	10346235						
TSA120S4D	108,000	12.5	11.20	(2) CX38-62D	Factory TXV	10346236						
TSA150S4D	136,000	11.2	11.00	TAA120S4D	Factory TXV	3288551						
TSA150S4D	136,000	11.2	11.00	TAA150S4D	Factory TXV	3288552						
TSA150S4D	142,000	11.2	11.20	TAA180S4D	Factory TXV	3288553						
TSA180S4D	184,000	13.3	11.40	(2) TAA090S4D	Factory TXV	3293572						
TSA180S4D	178,000	11.5	11.00	TAA180S4D	Factory TXV	3288554						
TSA180S4D	190,000	12.1	11.60	TAA240S4D	Factory TXV	3748430						
TSA240S4D	232,000	11.2	11.00	TAA240S4D	Factory TXV	3288555						
TSA240S4D	236,000	13.2	11.30	(2) TAA120S4D	Factory TXV	3293573						

NOTES - Units with capacity of 65,000 Btuh or greater are AHRI Certified to AHRI Standard 340/360: 95°F outdoor air temperature, 80°F db/67°F wb entering evaporator air (minimum external duct static pressure) with 25 ft. of connecting refrigerant lines.

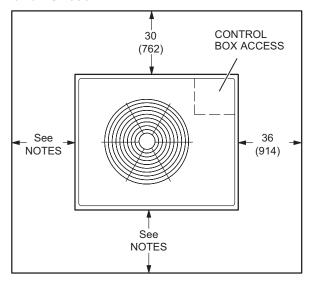
WEIGHT DATA			1		
Model No.	N	let	Shipping		
	lbs.	kg	lbs.	kg	
072	305	138	325	147	
090	355	161	375	170	
120S	465	211	490	222	
120D	480	218	505	229	
150	535	243	560	254	
180	775	352	800	363	
240	865	392	890	404	
OPTIONS / ACCESSORIES					
COMBINED COIL/HAIL GUARDS					
T2GARD20L-1	40	18	45	20	
T2GARD20M-1	45	20	50	23	
T2GARD21M-1	45	20	50	23	
T2GARD20N-1-	90	41	100	45	

<sup>&</sup>lt;sup>1</sup> These matches with two indoor units are rated with blowers operating independently from each other.

<sup>&</sup>lt;sup>2</sup> These matches with two indoor units cannot share common supply or return ductwork.

#### **UNIT CLEARANCES - INCHES (MM)**

# TSA072 and TSA090



#### 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.

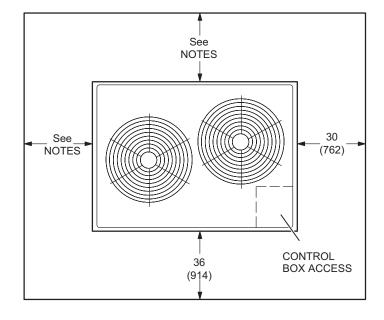
# **TSA120 and TSA150**

#### NOTES:

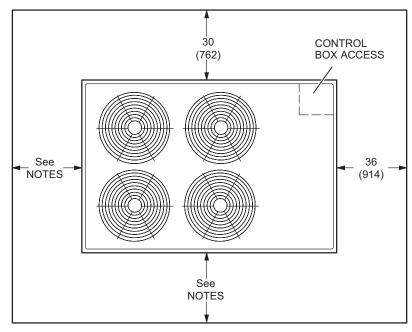
Clearance to one of the remaining two sides may be 12 in. (305 mm) and the final side may be 6 in. (152 mm).

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

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



#### **TSA180 and TSA240**



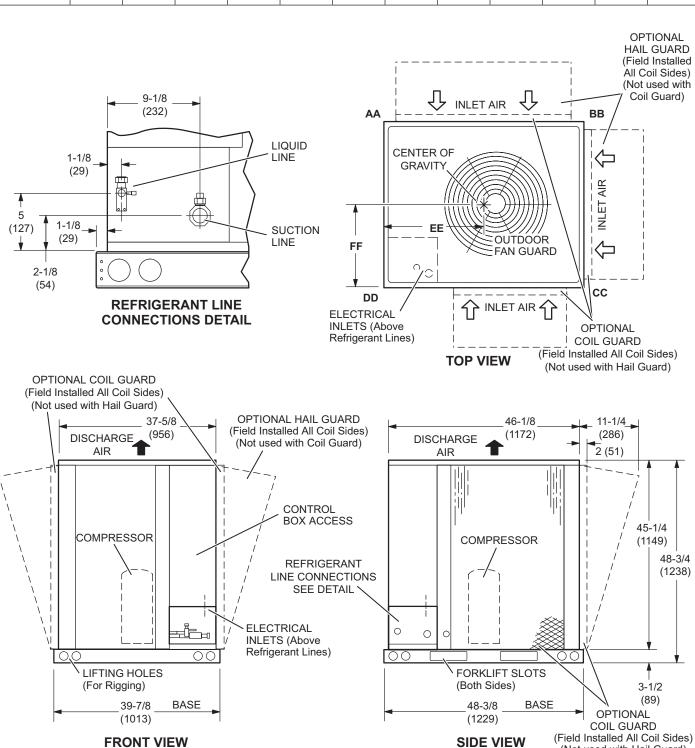
# NOTES:

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.

 $48\ \text{in.}$  (1219 mm) clearance required on top of unit.

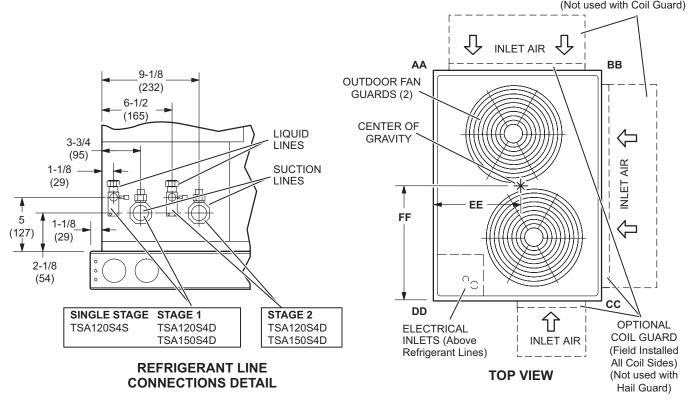
DIMENSIONS - INCHES (MM) - TSA072 AND TSA090													
										CENTER OF GRAVITY			
Model No.	A	Α	В	В	С	С	D	D	EE FF				
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm	
TSA072S4S	73	33	67	30	78	35	85	39	33	584	18-1/2	470	
TSA090S4S	86	39	93	42	92	42	85	39	25	635	20-1/4	514	

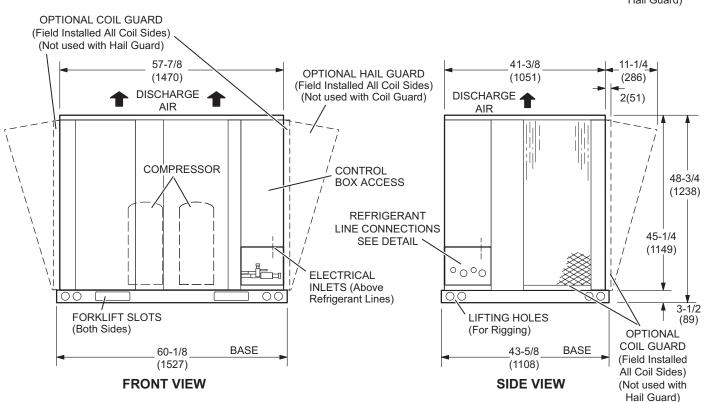


(Not used with Hail Guard)

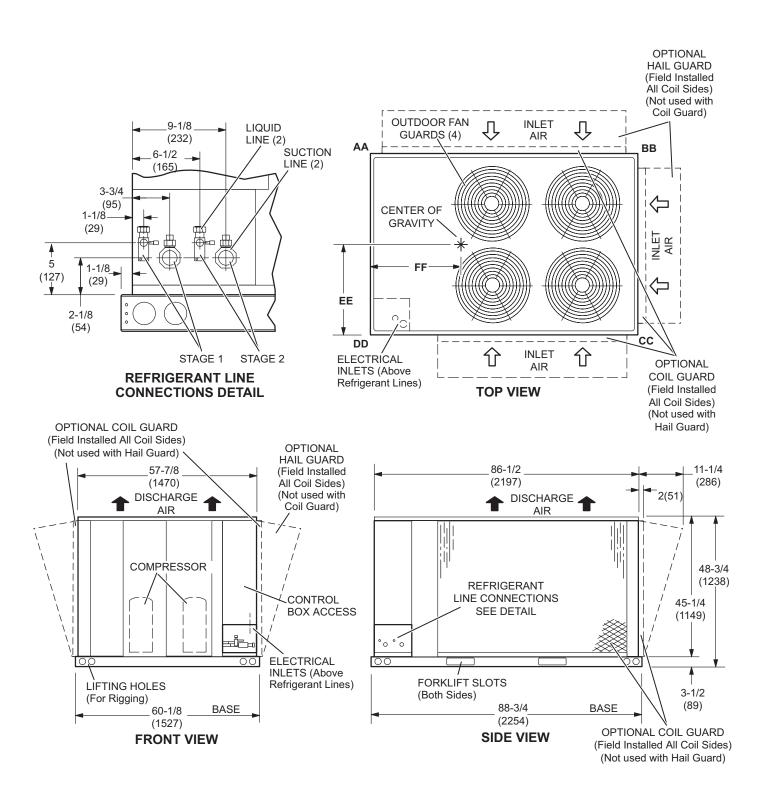
#### **DIMENSIONS - INCHES (MM) - TSA120 AND TSA150 CORNER WEIGHTS CENTER OF GRAVITY** Model BB CC DD ΕE FF AA No. lbs. kg lbs. kg lbs. kg lbs. kg in. mm in. mm 33-1/2 TSA120S4S 136 62 121 55 96 44 108 49 20-1/2 521 851 TSA120S4D 120 54 112 51 124 56 133 60 21 533 28-1/2 724 TSA150S4D 152 69 117 53 117 53 152 69 19 483 30 762

OPTIONAL HAIL GUARD (Field Installed All Coil Sides) (Not used with Coil Guard)





DIMENSIONS - INCHES (MM) - TSA180 AND TSA240														
CORNER WEIGHTS										CENTER OF GRAVITY				
Model No.	A	A	В	В	С	С	D	D	E	E	F	F		
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm		
TSA180S4D	223	101	166	75	178	81	238	108	29	737	38	965		
TSA240S4D	265	120	197	89	197	89	265	120	30	762	38	965		



REVISIONS	
Sections	Description of Change
AHRI System Matches	Updated.







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