



Bulletin No. 490131  
February 2016  
Supersedes July 2015

**PRODUCT SPECIFICATIONS**



**072-090 Models**



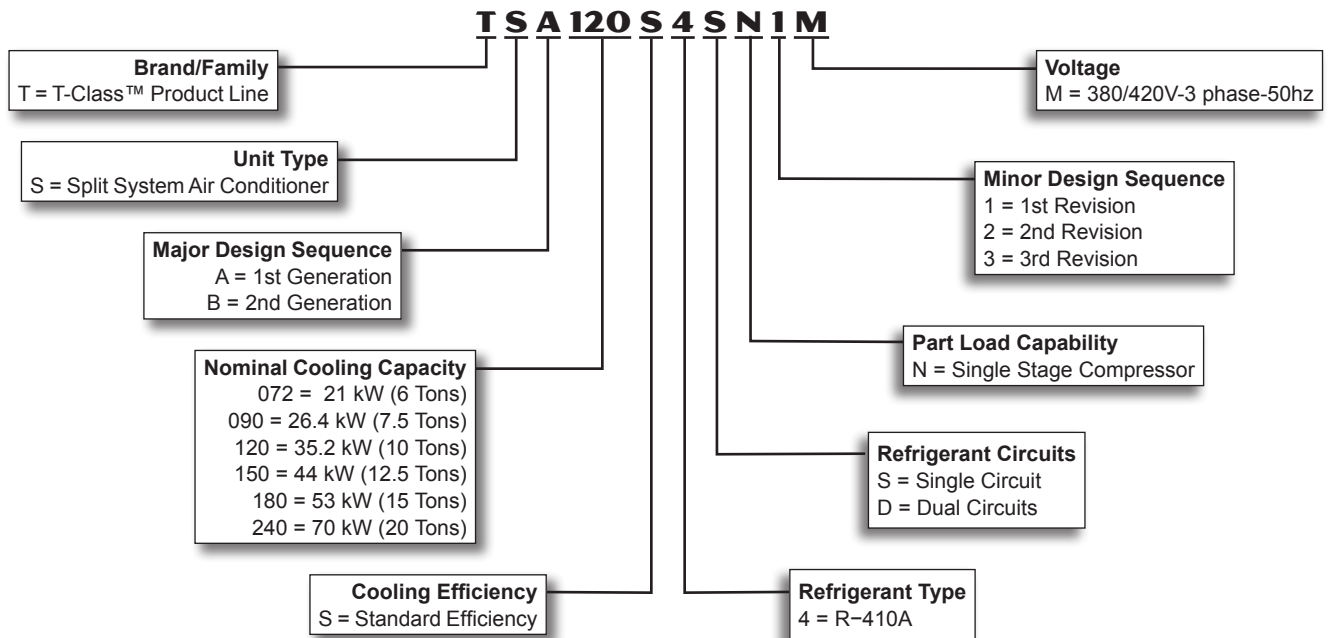
**120-150 Models**



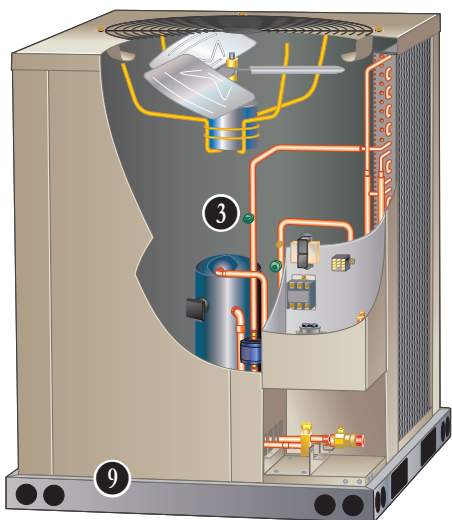
**180-240 Models**

**Nominal Capacity – 21 to 70 kW**  
**Cooling Capacity – 17.3 to 60.0 kW**

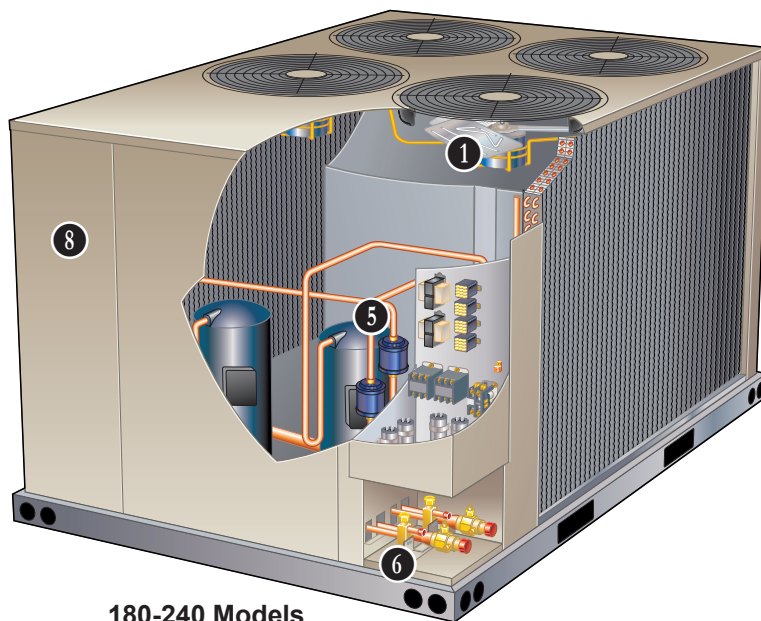
**MODEL NUMBER IDENTIFICATION**



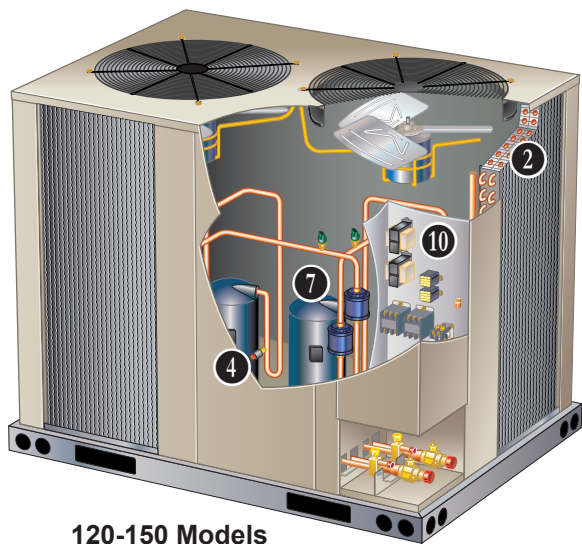
## FEATURES AND BENEFITS



072-090 Models



180-240 Models



120-150 Models

### APPLICATIONS

Air conditioners are available in 21, 26.4, 35.2 kW (one compressor) and 35.2, 44, 53 and 70 kW (two compressors) nominal sizes.

Matching air handlers provide a wide range of cooling capacities and applications. See 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 certified environmental testing facility.

Cooling performance is rated at test conditions included in Air-Conditioning, Heating and Refrigeration Institute (AHRI) Standard 340/360-2007 while operating at rated voltage and air volumes.

Sound tested in Lennox reverberant sound test room in accordance with test conditions included in Air-Conditioning, Heating and Refrigeration Institute (AHRI) Standard 270-2008.

Components bonded for grounding to meet safety standards for servicing required by Underwriters Laboratories (UL) and the International Electrotechnical Commission (IEC).

International Organization for Standardization (ISO) 9001 Registered Manufacturing Quality System.

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## 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.

#### **5 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.

#### **7 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.
- 9 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.

### 10 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

##### 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.


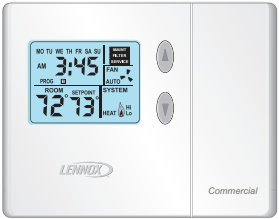
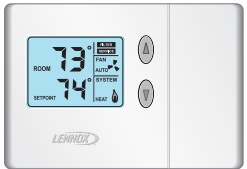
## SOUND DATA

<sup>1</sup> Unit Model No.	Octave Band Sound Power Levels dBA, re 10 <sup>-12</sup> Watts Center Frequency - HZ								<sup>1</sup> Sound Rating Number (dB)
	63	125	250	500	1000	2000	4000	8000	
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>1</sup> Tested according to AHRI Standard 270-2008 test conditions.

## OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS

Item	Model No.	Catalog No.
<b>COMFORTSENSE® 7500 COMMERCIAL 7-DAY PROGRAMMABLE THERMOSTAT</b>		
 <ul style="list-style-type: none"> <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	<b>13H15</b>
<b>Optional Accessories</b>		
<sup>1</sup> Remote non-adjustable wall mount 20k temperature sensor	C0SNZN01AE2-	<b>47W36</b>
<sup>1</sup> Remote non-adjustable wall mount 10k temperature sensor	C0SNZN73AE1-	<b>47W37</b>
Remote non-adjustable discharge air (duct mount) temperature sensor	C0SNDC00AE1-	<b>19L22</b>
Outdoor temperature sensor	C0SNSR03AE1-	<b>X2658</b>
Locking cover (clear)	C0MISC15AE1-	<b>39P21</b>
<sup>1</sup> Remote 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		
<b>COMFORTSENSE® 3000 COMMERCIAL 5-2 DAY PROGRAMMABLE THERMOSTAT</b>		
 <ul style="list-style-type: none"> <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	<b>11Y05</b>
<b>Optional Accessories</b>		
Remote non-adjustable wall mount 10k averaging temperature sensor	C0SNZN73AE1-	<b>47W37</b>
Optional wall mounting plate	C0MISC17AE1-	<b>X2659</b>
<b>DIGITAL NON-PROGRAMMABLE THERMOSTAT</b>		
 <ul style="list-style-type: none"> <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	<b>51M32</b>
<b>Optional Accessories</b>		
Outdoor temperature sensor	C0SNSR04AE1-	<b>X2658</b>
Optional wall mounting plate	C0MISC17AE1-	<b>X2659</b>

## SPECIFICATIONS

General Data		Model No.	TSA 072S4S	TSA 090S4S	TSA 120S4S	TSA 120S4D	TSA 150S4D	TSA 180S4D	TSA 240S4D
Nominal Size - kW			<b>21.0</b>	<b>26.4</b>	<b>35.2</b>	<b>35.2</b>	<b>44.0</b>	<b>53</b>	<b>70</b>
<b>Connections (sweat)</b>	Liquid line - mm (in.) (o.d)	(1) 15.8 (5/8)	(1) 15.8 (5/8)	(1) 15.8 (5/8)	(2) 15.8 (5/8)	(2) 15.8 (5/8)	(2) 15.8 (5/8)	(2) 15.8 (5/8)	(2) 15.8 (5/8)
	Suction line - mm (in.) (o.d)	(1) 28.6 (1-1/8)	(1) 28.6 (1-1/8)	(1) 28.6 (1-1/8)	(2) 28.6 (1-1/8)	(2) 28.6 (1-1/8)	(2) 28.6 (1-1/8)	(2) 28.6 (1-1/8)	(2) 34.9 1-3/8
<b>Refrigerant (R-410A)</b>		Factory installed holding charge per stage - 0.45 kg (1 lb.)							
<sup>1</sup> Field provided charge with 7.6 m (25 ft.) line set		5.0 kg (11 lbs.)	7.3 kg (16 lbs.)	7.7 kg (17 lbs.)	9.1 kg (20 lbs.)	9.5 kg (21 lbs.)	13.2 kg (29 lbs.)	15.9 kg (35 lbs.)	
<b>Condenser Coil</b>	Net face area - m2 (sq. ft.) Outer coil	2.72 (29.3)	2.72 (29.3)	2.72 (29.3)	2.72 (29.3)	3.18 (34.2)	5.45 (58.7)	5.45 (58.7)	
	Inner coil	- - -	2.64 (28.4)	2.64 (28.4)	2.64 (28.4)	3.09 (33.3)	5.36 (57.7)	5.36 (57.7)	
	Tube diameter - in. & no. of rows	3/8 - 1	3/8 - 2	3/8 - 2	3/8 - 2	3/8 - 2	3/8 - 2	3/8 - 2	
	Fins per meter (Fins per inch)	787 (20)	787 (20)	787 (20)	787 (20)	787 (20)	787 (20)	787 (20)	787 (20)
<b>Condenser Fan(s)</b>	Diameter - in. & no. of blades	(1) 610 (24) - 3	(1) 610 (24) - 4	(2) 610 (24) - 3	(2) 610 (24) - 3	(2) 610 (24) - 4	(4) 610 (24) - 3	(4) 24 (610) - 3	
	Nominal Motor W (hp)	(1) 249 (1/3)	(1) 373 (1/2)	(2) 249 (1/3)	(2) 249 (1/3)	(2) 373 (1/2)	(4) 249 (1/3)	(4) 249 (1/3)	
	Total air volume - L/s (cfm)	2010 (4260)	2195 (4650)	3270 (6930)	3270 (6930)	4060 (8600)	6515 (13 800)	6515 (13 800)	
	Rev/min	900	900	900	900	900	900	900	900
	Watts	330	440	630	630	860	1270	1270	

## ELECTRICAL DATA

Line voltage data - 50 hz - 3 phase		<b>380/420V</b>	<b>380/420V</b>	<b>380/420V</b>	<b>380/420V</b>	<b>380/420V</b>	<b>380/420V</b>	<b>380/420V</b>
<sup>2</sup> Maximum Overcurrent Protection (amps)		20	25	40	25	30	40	50
<sup>3</sup> Minimum circuit ampacity		14	17	24	21	25	33	43
<b>Compressor</b>	No. of Compressors	1	1	1	2	2	2	2
	Rated load amps (total)	9.7	12.2	16.7	7.8 (15.6)	9.7 (19.4)	12.2 (24.4)	16.7 (33.4)
	Locked rotor amps (total)	62.0	100.0	114.0	52.0 (104)	62.0 (124.0)	100.0 (200.0)	114.0 (228.0)
<b>Condenser Fan Motor (1 phase)</b>	No. of motors	1	1	2	2	2	4	4
	Full load amps (total)	1.3	1.5	1.3 (2.6)	1.3 (2.6)	1.5 (3)	1.3 (5.2)	1.3 (5.2)
	Locked rotor amps (total)	2.4	3.0	2.4 (4.8)	2.4 (4.8)	3.0 (6.0)	2.4 (9.6)	2.4 (9.6)

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

<sup>1</sup> Refer to the Lennox Refrigerant Piping Manual to determine charge at various line set lengths.

<sup>2</sup> Heating Air-Conditioning Refrigeration type breaker or fuse.

<sup>3</sup> Refer to local codes to determine wire, fuse and disconnect size requirements.

## OPTIONS / ACCESSORIES

Item	Catalog No.	072S4S	090S4S	120S4S	120S4D	150S4D	180S4D	240S4D
<b>CABINET</b>								
Combined Coil/Hail Guards	T2GARD51L-1	13T29	X	X				
	T2GARD51M11	13T30			X	X		
	T2GARD51M21	13T32					X	
	T2GARD51N-1	13T37						X
Corrosion Protection	Factory	O	O	O	O	O	O	O
<b>CONTROLS</b>								
Low Ambient Control (0°F)	T2CWKT01LM1-	44W17	X	X	X			
	T2CWKT02M-1-	44W18				X	X	
	T2CWKT03N-1-	44W19						X
Network Thermostat Controller	C0CTRL07AE1L	17M10	X	X	X	X	X	X

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

O - Factory Installed with extended lead time.

X - Field Installed

## WEIGHT DATA

Model No.	Net		Shipping	
	kg	lbs.	kg	lbs.
072	138	305	147	325
090	161	355	170	375
120S	211	465	222	490
120D	218	480	229	505
150	243	535	254	560
180	352	775	363	800
240	392	865	404	890

## OPTIONS / ACCESSORIES

### COMBINED COIL/HAIL GUARDS

T2GARD20L-1	18	40	20	45
T2GARD20M-1	20	45	23	50
T2GARD21M-1	20	45	23	50
T2GARD20N-1-	41	90	45	100

## RATINGS

Model Number	1 Gross Cooling Capacity		1 Net Cooling Capacity		1 Coefficient of Performance (Output/Input)	1 Energy Efficiency Ratio at 35°C (Btuh/Watt)	2 Energy Efficiency Ratio at 46°C (Btuh/Watt)	Indoor Unit Model Number	Expansion Device Required
	kW	Btuh	kW	Btuh					
TSA072S4S	18.8	64 200	18.3	62 500	3.40	11.60	9.00	TAA072S4S	Factory
TSA072S4S	18.6	63 500	17.8	60 700	3.14	10.70	---	CX34-62D-6F	Factory
TSA072S4S	19.3	65 800	18.6	63 500	3.25	11.10	---	(2) CX34-43B/C-6F	Factory
TSA072S4S	18.1	61 900	17.3	59 100	3.10	10.60	---	CH33-62-2F	<b>12J20</b> (order 1)
TSA090S4S	23.5	80 100	22.5	77 000	3.34	11.40	9.00	TAA090S4D	Factory
TSA090S4S	24.0	81 800	23.0	78 500	3.34	11.40	---	TAA120	Factory
TSA090S4S	23.4	80 000	22.4	76 500	3.17	10.80	---	(2) CX34-49C-6F	Factory
TSA090S4S	23.0	78 600	22.0	75 000	3.14	10.70	---	(2) CR33-50/60C-F	<b>12J20</b> (order 2)
TSA090S4S	23.5	80 200	22.5	76 700	3.19	10.90	---	(2) CH33-49C-2F	<b>12J20</b> (order 2)
TSA120S4S	29.9	102 200	28.7	98 000	3.34	11.40	9.40	TAA120S4D	Factory
TSA120S4S	29.5	100 900	28.1	96 000	3.22	11.00	---	(2) CX34-62D-6F	Factory
TSA120S4S	28.6	97 600	27.2	93 000	3.17	10.80	---	(2) CR33-50/60-F	<b>12J20</b> (order 2)
TSA120S4S	29.7	101 400	28.3	96 700	3.19	10.90	---	(2) CH33-62D-2F	<b>12J20</b> (order 2)
TSA120S4D	30.2	103 000	28.8	98 500	3.34	11.40	9.20	TAA120S4D	Factory
TSA120S4D	29.7	101 400	28.2	96 300	3.22	11.00	---	(2) CX34-60D-6F	Factory
TSA120S4D	29.8	101 900	28.4	96 900	3.25	11.10	---	(2) CX34-62D-6F	Factory
TSA120S4D	28.6	97 800	27.3	93 200	3.19	10.90	---	(2) CR33-60D-F	<b>12J20</b> (order 2)
TSA120S4D	29.7	101 400	28.5	97 200	3.22	11.00	---	(2) CH33-62D-2F	<b>12J20</b> (order 2)
TSA150S4D	36.3	124 000	35.2	120 200	3.34	11.40	9.10	TAA120	Factory
TSA150S4D	35.8	122 400	34.7	118 500	3.31	11.30	---	TAA150S4D	Factory
TSA180S4D	47.1	161 000	45.7	156 000	3.31	11.30	8.90	TAA180S4D	Factory
TSA180S4D	49.3	168 400	47.4	162 000	3.37	11.50	---	(2) TAA090S4D	Factory
TSA240S4D	61.3	209 400	58.6	201 000	3.28	11.20	8.90	TAA240S4D	Factory
TSA240S4D	62.5	213 600	60.0	205 000	3.37	11.50	---	(2) TAA120S4D	Factory

NOTE - Net capacity includes indoor blower motor heat deduction. Gross capacity does not include indoor blower motor heat deduction.

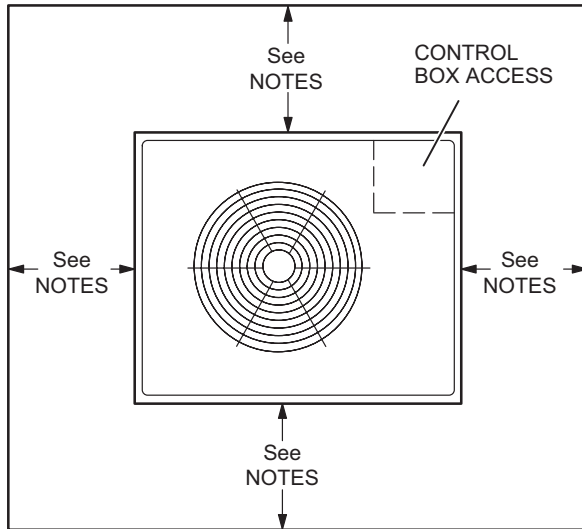
<sup>1</sup> Rating test conditions are those included in Air-Conditioning, Heating and Refrigeration Institute (AHRI) Standard 340/360; 35°C (95°F) outdoor air temperature and 27°C (80°F) db/19°C (67°F) wb entering evaporator air; minimum external duct static pressure while operating at rated voltage and air volumes.

<sup>2</sup> Rated at 46°C (115°F) outdoor air temperature and 27°C (80°F) db/19°C (67°F) wb entering evaporator air (T3 Conditions).



## UNIT CLEARANCES - MM (INCHES)

### TSA072 and TSA090



#### NOTES:

Service clearance of 762 mm (30 in.) must be maintained on one of the sides adjacent to the control box.

Clearance to one of the other three sides must be 914 mm (36 in.).

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

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

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

### TSA120 and TSA150

#### NOTES:

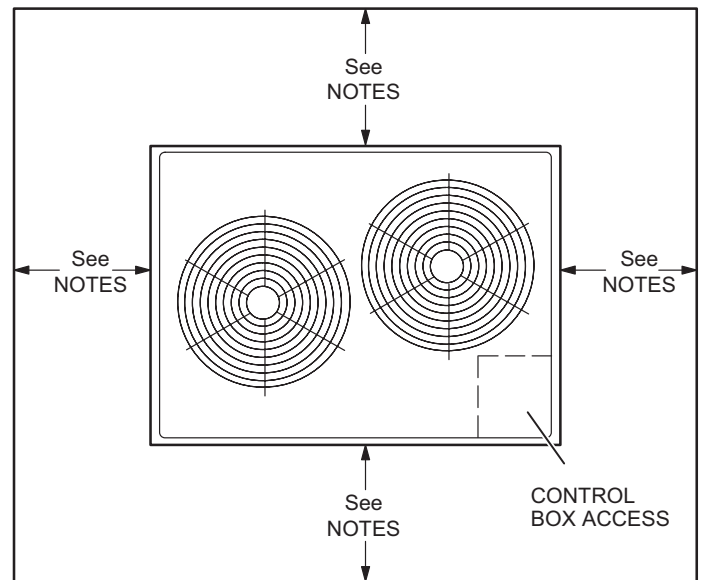
Service clearance of 762 mm (30 in.) must be maintained on one of the sides adjacent to the control box.

Clearance to one of the other three sides must be 914 mm (36 in.).

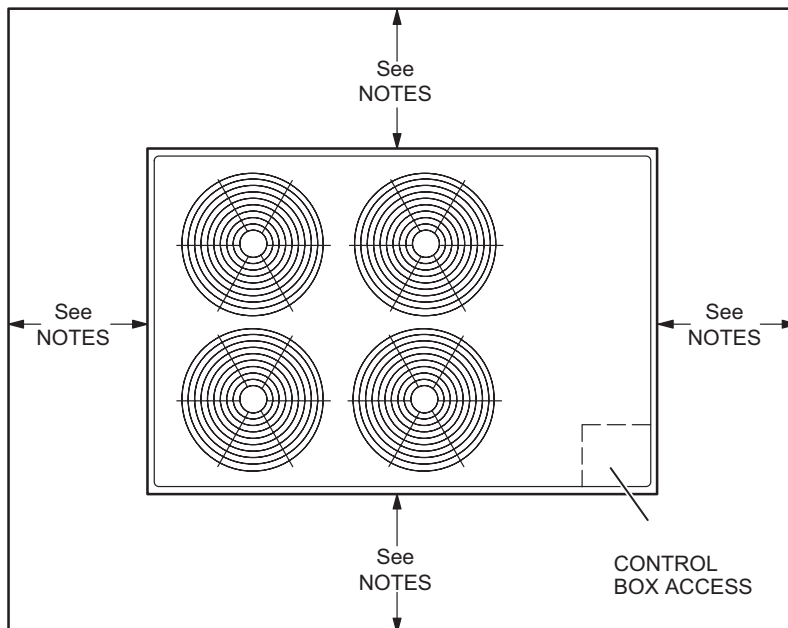
Clearance to one of the remaining two sides may be 305 mm (12 in.) and the final side may be 152 mm (6 in.).

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

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



### TSA180 and TSA240



#### NOTES:

Service clearance of 762 mm (30 in.) must be maintained on one of the sides adjacent to the control box.

Clearance to one of the other three sides must be 914 mm (36 in.).

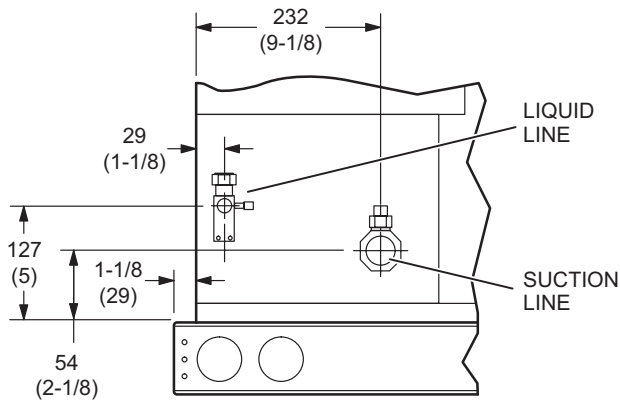
Clearance to one of the remaining two sides may be 305 mm (12 in.) and the final side may be 152 mm (6 in.).

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

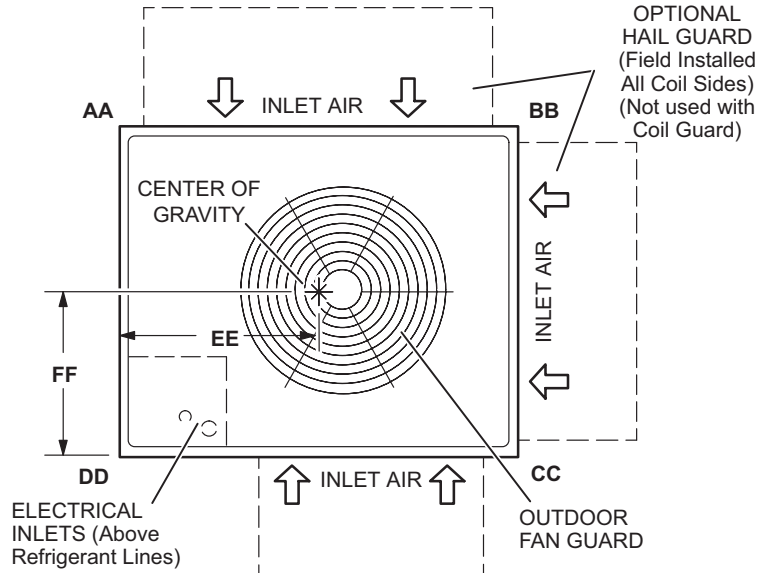
1219 mm (48 in.) clearance required on top of unit.

# DIMENSIONS - MM (INCHES) - TSA072 AND TSA090

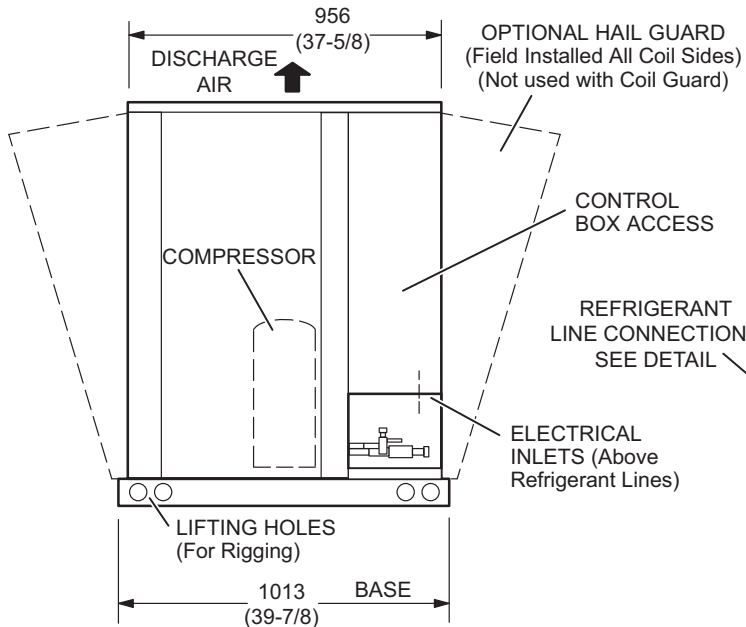
Model No.	CORNER WEIGHTS								CENTER OF GRAVITY			
	A		B		C		D		EE		FF	
	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	mm	in.	mm	in.
TSA072S4S	33	73	30	67	35	78	39	85	584	33	470	18-1/2
TSA090S4S	39	86	42	93	42	92	39	85	635	25	514	20-1/4



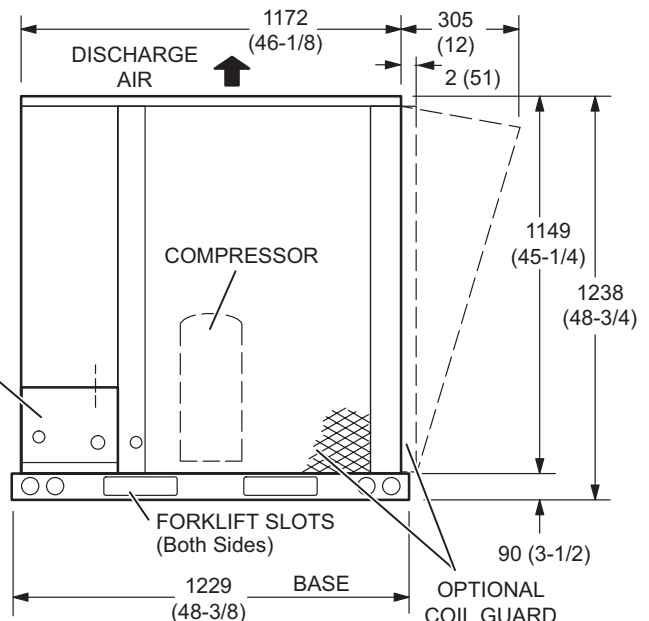
**REFRIGERANT LINE CONNECTIONS DETAIL**



**TOP VIEW**



**FRONT VIEW**

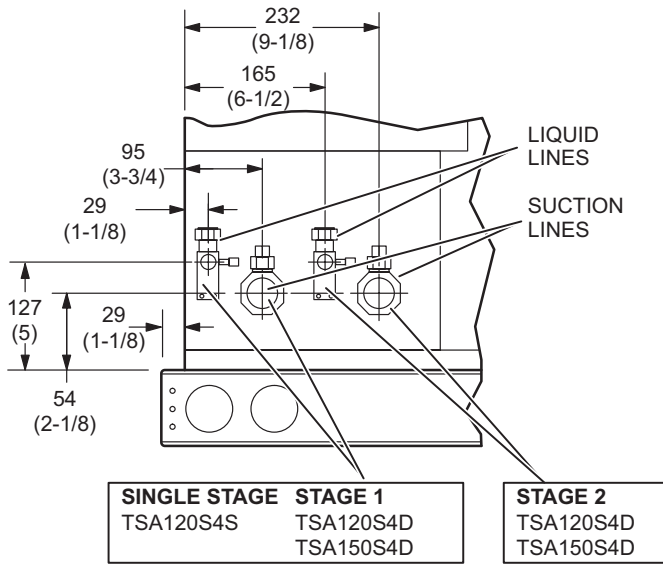


**SIDE VIEW**

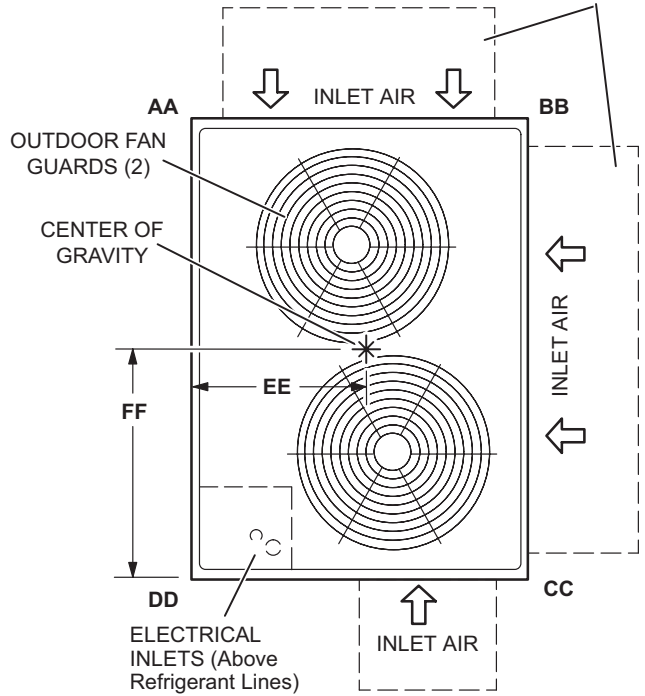
# DIMENSIONS - MM (INCHES) - TSA120 AND TSA150

Model No.	CORNER WEIGHTS								CENTER OF GRAVITY			
	A		B		C		D		EE		FF	
	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	mm	in.	mm	in.
TSA120S4S	62	136	55	121	44	96	49	108	521	20-1/2	851	33-1/2
TSA120S4D	54	120	51	112	56	124	60	133	533	21	724	28-1/2
TSA150S4D	69	152	53	117	53	117	69	152	483	19	762	30

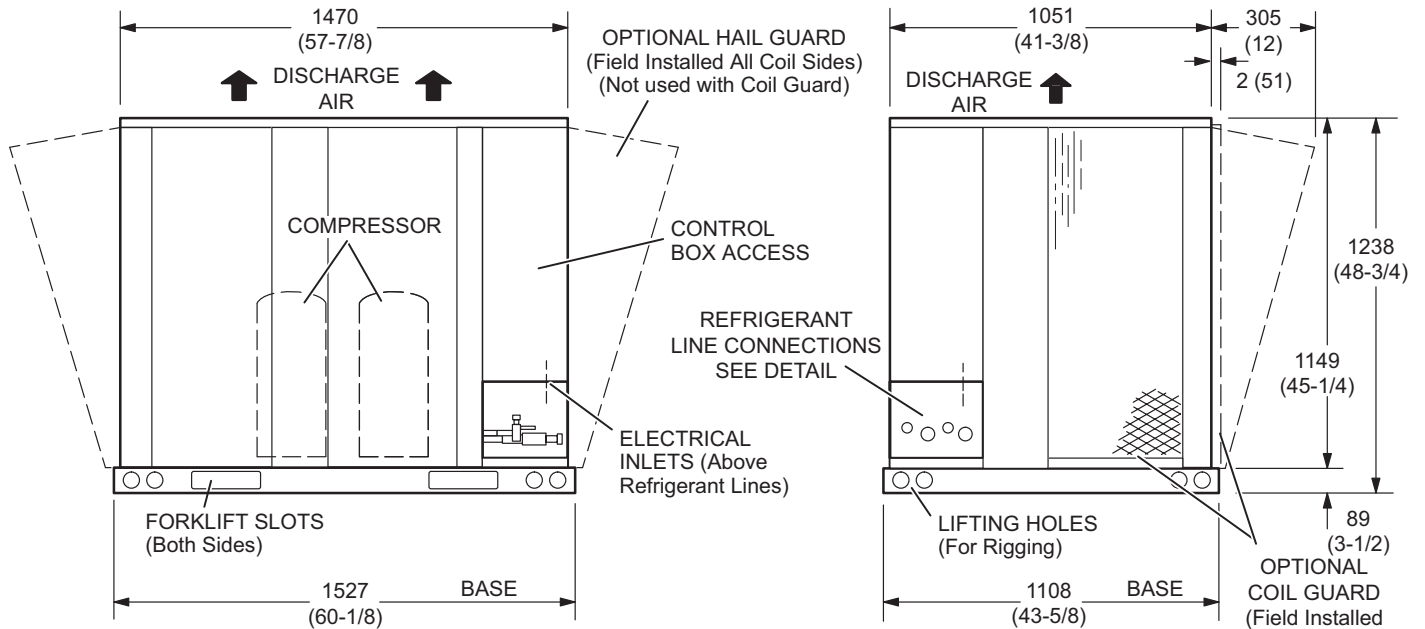
OPTIONAL HAIL GUARD  
(Field Installed All Coil Sides)  
(Not used with Coil Guard)



**REFRIGERANT LINE CONNECTIONS DETAIL**



**TOP VIEW**

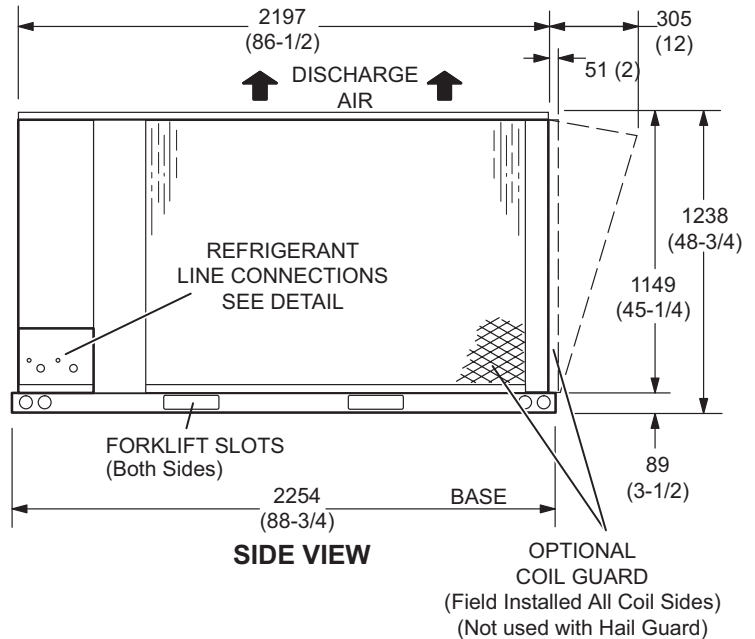
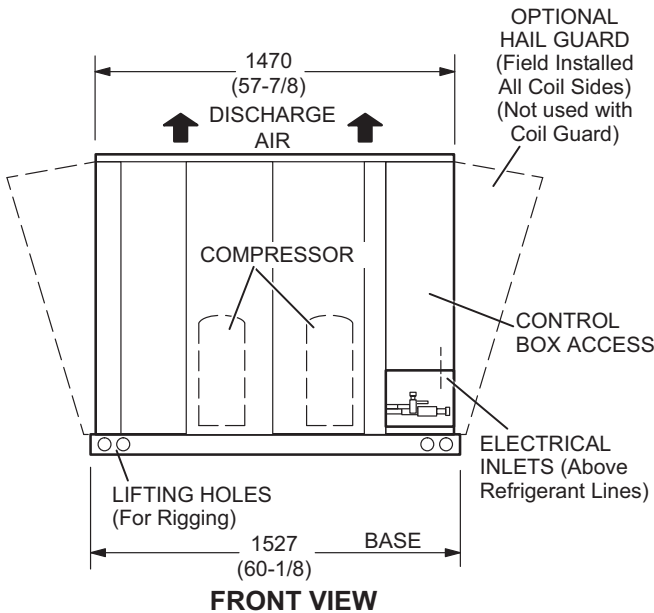
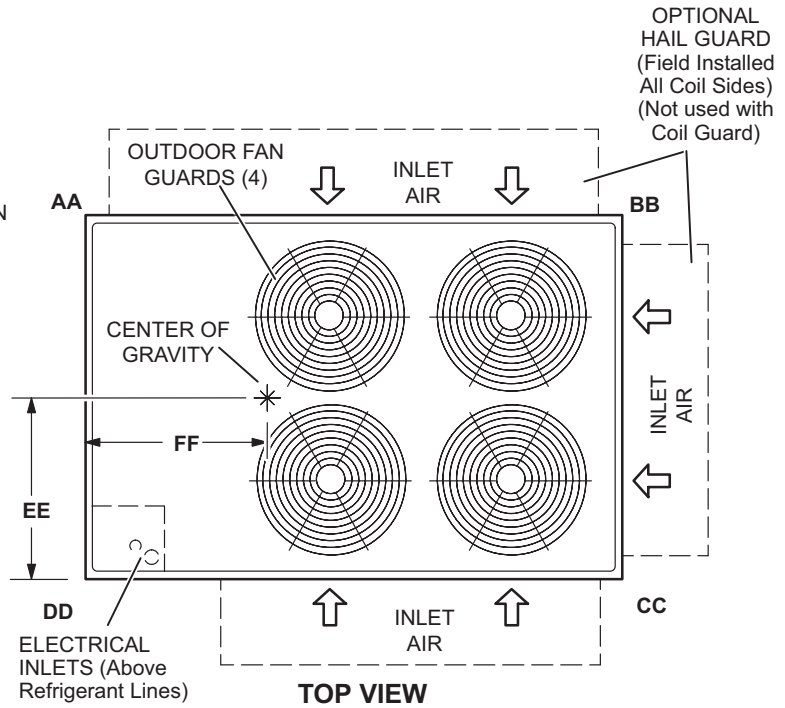
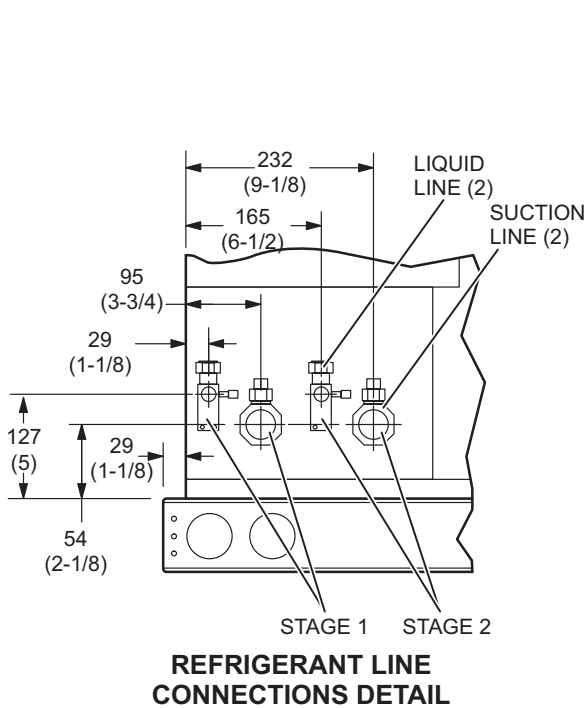


**FRONT VIEW**

**SIDE VIEW**

# DIMENSIONS - MM (INCHES) - TSA180 AND TSA240

Model No.	CORNER WEIGHTS								CENTER OF GRAVITY			
	A		B		C		D		EE		FF	
	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	mm	in.	mm	in.
TSA180S4D	101	223	75	166	81	178	108	238	737	29	965	38
TSA240S4D	120	265	89	197	89	197	120	265	762	30	965	38



# COOLING RATINGS

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

## TSA072S4S + TAA072S4S

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	906	18.6	3.77	0.71	0.88	1.00	17.4	4.42	0.73	0.93	1.00	16.0	5.18	0.76	0.99	1.00	14.4	6.12	0.82	1.00	1.00
	1133	19.5	3.79	0.76	0.99	1.00	18.2	4.43	0.80	1.00	1.00	16.9	5.21	0.85	1.00	1.00	15.3	6.14	0.93	1.00	1.00
	1359	20.3	3.80	0.83	1.00	1.00	19.1	4.45	0.88	1.00	1.00	17.7	5.22	0.94	1.00	1.00	16.0	6.17	1.00	1.00	1.00
19.4°C	906	19.6	3.79	0.55	0.68	0.83	18.3	4.43	0.57	0.71	0.88	16.9	5.20	0.59	0.74	0.94	15.1	6.13	0.61	0.79	1.00
	1133	20.5	3.81	0.59	0.74	0.94	19.1	4.45	0.60	0.76	0.99	17.5	5.21	0.62	0.82	1.00	15.6	6.14	0.66	0.90	1.00
	1359	21.1	3.82	0.61	0.80	1.00	19.7	4.46	0.64	0.85	1.00	18.0	5.22	0.66	0.91	1.00	16.1	6.16	0.70	0.99	1.00
21.7°C	906	20.7	3.81	0.41	0.54	0.66	19.4	4.46	0.42	0.56	0.69	17.8	5.23	0.43	0.57	0.71	16.0	6.16	0.44	0.60	0.76
	1133	21.6	3.83	0.43	0.58	0.72	20.2	4.47	0.44	0.59	0.74	18.5	5.24	0.45	0.62	0.78	16.5	6.18	0.46	0.65	0.86
	1359	22.3	3.84	0.44	0.61	0.77	20.7	4.48	0.45	0.63	0.82	18.9	5.25	0.46	0.66	0.88	16.9	6.19	0.48	0.69	0.97

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	906	15.5	5.45	0.83	1.00	1.00	15.1	5.68	0.79	1.00	1.00	14.7	5.91	0.80	1.00	1.00
	1133	16.4	5.48	0.91	1.00	1.00	16.1	5.71	0.89	1.00	1.00	15.6	5.93	0.91	1.00	1.00
	1359	17.1	5.49	0.98	1.00	1.00	16.8	5.72	0.99	1.00	1.00	16.4	5.95	1.00	1.00	1.00
19.4°C	906	16.3	5.48	0.63	0.80	0.98	15.9	5.70	0.60	0.76	0.99	15.4	5.92	0.61	0.77	1.00
	1133	16.9	5.49	0.67	0.88	1.00	16.5	5.71	0.64	0.86	1.00	16.0	5.94	0.65	0.88	1.00
	1359	17.4	5.50	0.72	0.95	1.00	17.0	5.73	0.68	0.96	1.00	16.5	5.96	0.69	0.98	1.00
21.7°C	906	17.3	5.50	0.45	0.62	0.78	16.9	5.72	0.44	0.59	0.74	16.4	5.95	0.44	0.59	0.75
	1133	17.8	5.51	0.47	0.66	0.86	17.4	5.74	0.45	0.63	0.83	16.9	5.98	0.46	0.64	0.84
	1359	18.3	5.52	0.49	0.71	0.93	17.8	5.75	0.47	0.67	0.93	17.4	5.98	0.48	0.69	0.95

## TSA072S4S + CX34-62D-6F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	906	18.5	3.77	0.69	0.86	1.00	17.3	4.42	0.71	0.90	1.00	15.9	5.18	0.74	0.96	1.00	14.2	6.11	0.79	1.00	1.00
	1133	19.3	3.79	0.74	0.95	1.00	18.0	4.43	0.77	0.99	1.00	16.6	5.20	0.82	1.00	1.00	15.1	6.14	0.89	1.00	1.00
	1359	20.0	3.80	0.80	1.00	1.00	18.8	4.45	0.84	1.00	1.00	17.4	5.22	0.90	1.00	1.00	15.8	6.16	0.98	1.00	1.00
19.4°C	906	19.5	3.79	0.55	0.67	0.81	18.2	4.44	0.56	0.69	0.85	16.7	5.21	0.58	0.72	0.91	15.0	6.13	0.60	0.76	0.99
	1133	20.4	3.81	0.58	0.72	0.91	19.0	4.45	0.59	0.74	0.96	17.4	5.22	0.61	0.79	1.00	15.6	6.15	0.64	0.86	1.00
	1359	21.0	3.82	0.60	0.77	0.99	19.6	4.46	0.62	0.81	1.00	17.9	5.22	0.64	0.87	1.00	16.0	6.17	0.68	0.95	1.00
21.7°C	906	20.6	3.81	0.41	0.53	0.65	19.3	4.46	0.42	0.55	0.67	17.7	5.22	0.43	0.56	0.70	15.9	6.16	0.44	0.59	0.74
	1133	21.6	3.83	0.43	0.56	0.70	20.1	4.47	0.43	0.58	0.72	18.4	5.24	0.44	0.60	0.76	16.5	6.19	0.46	0.63	0.82
	1359	22.2	3.84	0.44	0.59	0.74	20.6	4.48	0.45	0.61	0.78	18.9	5.26	0.45	0.64	0.84	16.9	6.20	0.47	0.67	0.92

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	906	15.4	5.45	0.81	0.98	1.00	14.9	5.67	0.77	0.99	1.00	14.5	5.90	0.78	1.00	1.00
	1133	16.2	5.47	0.87	1.00	1.00	15.8	5.70	0.85	1.00	1.00	15.5	5.94	0.87	1.00	1.00
	1359	16.9	5.49	0.94	1.00	1.00	16.5	5.72	0.94	1.00	1.00	16.1	5.95	0.96	1.00	1.00
19.4°C	906	16.3	5.48	0.62	0.78	0.95	15.8	5.70	0.59	0.74	0.95	15.4	5.93	0.59	0.75	0.97
	1133	16.9	5.49	0.65	0.85	1.00	16.4	5.72	0.62	0.82	1.00	16.0	5.94	0.63	0.84	1.00
	1359	17.3	5.50	0.69	0.92	1.00	16.9	5.73	0.66	0.91	1.00	16.4	5.96	0.67	0.93	1.00
21.7°C	906	17.2	5.50	0.45	0.60	0.76	16.8	5.73	0.43	0.58	0.72	16.3	5.95	0.44	0.58	0.73
	1133	17.8	5.51	0.46	0.65	0.82	17.3	5.74	0.45	0.61	0.79	16.9	5.98	0.45	0.62	0.81
	1359	18.3	5.53	0.48	0.68	0.89	17.8	5.75	0.47	0.65	0.88	17.4	5.99	0.47	0.66	0.90

# COOLING RATINGS

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

## TSA072S4S + (2) CX34-43B/C-6F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		26.7°C						35°C						43.3°C						51.7°C					
		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						
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C					
17.2°C	906	19.0	3.78	0.69	0.87	1.00	17.7	4.43	0.71	0.91	1.00	16.2	5.19	0.74	0.97	1.00	14.7	6.13	0.80	1.00	1.00				
	1133	19.9	3.80	0.74	0.97	1.00	18.6	4.44	0.78	1.00	1.00	17.2	5.22	0.83	1.00	1.00	15.6	6.15	0.91	1.00	1.00				
	1359	20.7	3.81	0.81	1.00	1.00	19.5	4.46	0.85	1.00	1.00	18.0	5.23	0.92	1.00	1.00	16.3	6.18	0.99	1.00	1.00				
19.4°C	906	20.1	3.80	0.55	0.67	0.82	18.7	4.45	0.56	0.69	0.86	17.2	5.22	0.57	0.72	0.92	15.4	6.14	0.60	0.77	0.99				
	1133	21.0	3.82	0.57	0.72	0.92	19.5	4.46	0.59	0.74	0.97	17.9	5.23	0.61	0.79	1.00	16.0	6.17	0.64	0.87	1.00				
	1359	21.6	3.83	0.60	0.78	1.00	20.1	4.47	0.62	0.83	1.00	18.4	5.25	0.65	0.89	1.00	16.5	6.18	0.68	0.96	1.00				
21.7°C	906	21.2	3.83	0.41	0.53	0.65	19.8	4.46	0.42	0.55	0.67	18.2	5.23	0.43	0.56	0.70	16.3	6.18	0.43	0.59	0.74				
	1133	22.2	3.84	0.43	0.56	0.70	20.7	4.48	0.43	0.58	0.72	18.9	5.26	0.43	0.60	0.76	16.9	6.20	0.45	0.63	0.84				
	1359	22.8	3.85	0.44	0.59	0.75	21.2	4.49	0.44	0.61	0.79	19.4	5.27	0.46	0.64	0.85	17.4	6.22	0.47	0.67	0.93				

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																	
		46°C						48°C						50°C					
		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					
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C				
17.2°C	906	15.7	5.47	0.82	0.99	1.00	15.4	5.69	0.78	1.00	1.00	15.0	5.92	0.79	1.00	1.00			
	1133	16.7	5.49	0.89	1.00	1.00	16.3	5.71	0.87	1.00	1.00	15.9	5.94	0.89	1.00	1.00			
	1359	17.5	5.51	0.96	1.00	1.00	17.1	5.74	0.96	1.00	1.00	16.7	5.97	0.98	1.00	1.00			
19.4°C	906	16.6	5.49	0.62	0.79	0.96	16.2	5.71	0.58	0.74	0.96	15.8	5.94	0.59	0.76	0.98			
	1133	17.3	5.51	0.66	0.86	1.00	16.9	5.73	0.63	0.84	1.00	16.4	5.96	0.63	0.85	1.00			
	1359	17.8	5.52	0.70	0.93	1.00	17.3	5.74	0.66	0.93	1.00	16.9	5.98	0.67	0.95	1.00			
21.7°C	906	17.6	5.52	0.44	0.60	0.76	17.2	5.74	0.42	0.58	0.72	16.6	5.96	0.43	0.58	0.73			
	1133	18.3	5.53	0.47	0.64	0.83	17.8	5.75	0.45	0.61	0.80	17.3	5.99	0.45	0.62	0.82			
	1359	18.8	5.54	0.48	0.69	0.90	18.3	5.77	0.46	0.66	0.89	17.8	6.01	0.47	0.66	0.91			

## TSA072S4S + CH33-62D-2F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		26.7°C						35°C						43.3°C						51.7°C					
		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						
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C					
17.2°C	906	18.3	3.78	0.69	0.84	1.00	17.1	4.42	0.71	0.88	1.00	15.6	5.18	0.74	0.94	1.00	14.0	6.10	0.79	1.00	1.00				
	1133	19.1	3.79	0.73	0.93	1.00	17.8	4.43	0.76	0.98	1.00	16.3	5.19	0.81	1.00	1.00	14.9	6.14	0.87	1.00	1.00				
	1359	19.7	3.80	0.78	1.00	1.00	18.5	4.44	0.82	1.00	1.00	17.1	5.22	0.88	1.00	1.00	15.5	6.16	0.96	1.00	1.00				
19.4°C	906	19.3	3.79	0.55	0.67	0.80	18.1	4.44	0.56	0.69	0.84	16.6	5.21	0.57	0.71	0.89	14.9	6.14	0.60	0.76	0.97				
	1133	20.2	3.81	0.57	0.71	0.89	18.8	4.45	0.59	0.73	0.93	17.3	5.21	0.61	0.78	0.99	15.4	6.15	0.63	0.84	1.00				
	1359	20.8	3.82	0.60	0.76	0.97	19.4	4.46	0.61	0.80	1.00	17.8	5.23	0.63	0.85	1.00	15.9	6.17	0.67	0.92	1.00				
21.7°C	906	20.4	3.81	0.41	0.53	0.65	19.0	4.46	0.42	0.54	0.66	17.6	5.22	0.43	0.56	0.69	15.8	6.16	0.44	0.59	0.73				
	1133	21.3	3.82	0.43	0.56	0.69	19.9	4.47	0.43	0.57	0.71	18.3	5.24	0.44	0.60	0.75	16.4	6.19	0.45	0.62	0.81				
	1359	22.0	3.84	0.44	0.59	0.73	20.5	4.48	0.44	0.60	0.77	18.8	5.26	0.46	0.63	0.82	16.9	6.21	0.47	0.66	0.89				

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																	
		46°C						48°C						50°C					
		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					
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C				
17.2°C	906	15.2	5.46	0.80	0.97	1.00	14.8	5.67	0.76	0.98	1.00	14.3	5.90	0.77	0.99	1.00			
	1133	15.9	5.47	0.86	1.00	1.00	15.5	5.70	0.84	1.00	1.00	15.2	5.93	0.86	1.00	1.00			
	1359	16.6	5.50	0.92	1.00	1.00	16.3	5.71	0.92	1.00	1.00	15.9	5.95	0.94	1.00	1.00			
19.4°C	906	16.1	5.48	0.61	0.77	0.93	15.7	5.71	0.58	0.73	0.93	15.3	5.93	0.59	0.74	0.95			
	1133	16.7	5.49	0.65	0.83	1.00	16.3	5.72	0.62	0.81	1.00	15.8	5.95	0.63	0.83	1.00			
	1359	17.2	5.51	0.68	0.90	1.00	16.8	5.73	0.65	0.89	1.00	16.3	5.96	0.66	0.90	1.00			
21.7°C	906	17.0	5.50	0.45	0.60	0.75	16.6	5.73	0.43	0.57	0.71	16.2	5.96	0.43	0.58	0.72			
	1133	17.7	5.52	0.46	0.64	0.81	17.2	5.75	0.45	0.61	0.78	16.8	5.98	0.45	0.61	0.79			
	1359	18.2	5.54	0.48	0.67	0.87	17.7	5.76	0.46	0.65	0.85	17.2	5.99	0.47	0.65	0.87			

## COOLING RATINGS

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

### TSA090S4S + TAA090S4D

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1133	23.2	4.58	0.72	0.88	1.00	21.7	5.34	0.74	0.91	1.00	20.0	6.24	0.76	0.96	1.00	18.3	7.35	0.80	1.00	1.00
	1416	24.2	4.64	0.77	0.96	1.00	22.7	5.40	0.80	1.00	1.00	21.1	6.31	0.84	1.00	1.00	19.2	7.42	0.90	1.00	1.00
	1699	25.1	4.70	0.84	1.00	1.00	23.6	5.46	0.87	1.00	1.00	22.0	6.37	0.92	1.00	1.00	20.1	7.49	0.98	1.00	1.00
19.4°C	1133	24.6	4.66	0.56	0.70	0.84	22.9	5.41	0.58	0.72	0.87	21.1	6.31	0.59	0.74	0.92	19.2	7.41	0.61	0.78	0.98
	1416	25.4	4.72	0.59	0.75	0.93	23.7	5.46	0.61	0.78	0.97	21.9	6.36	0.63	0.82	1.00	19.8	7.46	0.66	0.88	1.00
	1699	26.1	4.76	0.64	0.81	1.00	24.4	5.51	0.65	0.85	1.00	22.4	6.41	0.67	0.90	1.00	20.2	7.50	0.71	0.97	1.00
21.7°C	1133	25.8	4.74	0.43	0.55	0.67	24.1	5.49	0.42	0.57	0.70	22.2	6.39	0.44	0.58	0.72	20.2	7.49	0.45	0.61	0.76
	1416	26.7	4.80	0.44	0.58	0.73	24.9	5.55	0.44	0.59	0.76	22.9	6.44	0.46	0.62	0.80	20.7	7.54	0.47	0.66	0.85
	1699	27.4	4.85	0.45	0.63	0.79	25.5	5.59	0.47	0.64	0.83	23.4	6.49	0.47	0.67	0.88	21.2	7.57	0.50	0.71	0.95

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1133	19.5	6.56	0.81	0.98	1.00	19.0	6.83	0.78	0.98	1.00	18.6	7.11	0.80	1.00	1.00
	1416	20.5	6.64	0.88	1.00	1.00	20.0	6.90	0.88	1.00	1.00	19.6	7.18	0.89	1.00	1.00
	1699	21.4	6.70	0.95	1.00	1.00	20.9	6.96	0.96	1.00	1.00	20.4	7.24	0.97	1.00	1.00
19.4°C	1133	20.5	6.64	0.62	0.79	0.95	20.0	6.90	0.60	0.76	0.95	19.5	7.17	0.61	0.77	0.96
	1416	21.2	6.69	0.66	0.86	1.00	20.8	6.96	0.65	0.85	1.00	20.3	7.23	0.65	0.86	1.00
	1699	21.7	6.73	0.71	0.94	1.00	21.2	6.99	0.69	0.94	1.00	20.7	7.26	0.70	0.95	1.00
21.7°C	1133	21.5	6.71	0.44	0.60	0.76	21.1	6.98	0.44	0.59	0.74	20.6	7.25	0.44	0.59	0.75
	1416	22.3	6.76	0.47	0.66	0.84	21.8	7.03	0.46	0.64	0.82	21.2	7.29	0.46	0.65	0.84
	1699	22.8	6.81	0.49	0.70	0.92	22.2	7.07	0.48	0.69	0.92	21.7	7.34	0.48	0.70	0.93

### TSA090S4S + TAA120S4D

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1133	23.5	4.59	0.72	0.88	1.00	21.9	5.34	0.75	0.92	1.00	20.3	6.24	0.77	0.96	1.00	18.5	7.36	0.81	1.00	1.00
	1416	24.5	4.65	0.78	0.97	1.00	23.0	5.41	0.81	1.00	1.00	21.4	6.33	0.85	1.00	1.00	19.5	7.43	0.92	1.00	1.00
	1699	25.6	4.72	0.85	1.00	1.00	24.0	5.48	0.89	1.00	1.00	22.4	6.39	0.94	1.00	1.00	20.4	7.50	0.99	1.00	1.00
19.4°C	1133	24.8	4.67	0.57	0.70	0.84	23.2	5.42	0.58	0.73	0.88	21.4	6.32	0.60	0.75	0.93	19.4	7.42	0.62	0.79	0.99
	1416	25.8	4.73	0.60	0.75	0.94	24.0	5.48	0.62	0.78	0.98	22.2	6.38	0.64	0.83	1.00	20.0	7.47	0.67	0.89	1.00
	1699	26.5	4.78	0.65	0.83	1.00	24.6	5.52	0.65	0.87	1.00	22.7	6.42	0.69	0.92	1.00	20.5	7.50	0.72	0.98	1.00
21.7°C	1133	26.2	4.76	0.43	0.56	0.68	24.5	5.51	0.43	0.57	0.70	22.6	6.40	0.43	0.58	0.73	20.4	7.49	0.45	0.61	0.77
	1416	27.1	4.82	0.44	0.59	0.73	25.4	5.57	0.45	0.62	0.77	23.2	6.46	0.45	0.63	0.81	21.1	7.55	0.47	0.67	0.87
	1699	27.8	4.87	0.46	0.62	0.80	25.8	5.61	0.46	0.64	0.84	23.8	6.50	0.48	0.68	0.90	21.5	7.59	0.50	0.72	0.96

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1133	19.7	6.57	0.81	0.98	1.00	19.3	6.83	0.79	0.99	1.00	18.8	7.11	0.81	1.00	1.00
	1416	20.8	6.64	0.89	1.00	1.00	20.3	6.91	0.89	1.00	1.00	19.9	7.18	0.90	1.00	1.00
	1699	21.7	6.71	0.97	1.00	1.00	21.2	6.98	0.97	1.00	1.00	20.8	7.25	0.98	1.00	1.00
19.4°C	1133	20.7	6.64	0.62	0.79	0.96	20.2	6.90	0.61	0.77	0.96	19.8	7.18	0.61	0.78	0.97
	1416	21.4	6.69	0.67	0.87	1.00	21.0	6.96	0.66	0.87	1.00	20.5	7.23	0.67	0.88	1.00
	1699	22.0	6.74	0.72	0.95	1.00	21.5	7.00	0.70	0.95	1.00	20.9	7.26	0.71	0.97	1.00
21.7°C	1133	21.9	6.73	0.45	0.61	0.76	21.4	6.99	0.45	0.60	0.75	20.8	7.25	0.45	0.60	0.76
	1416	22.6	6.77	0.47	0.66	0.85	22.1	7.04	0.46	0.65	0.84	21.6	7.31	0.47	0.66	0.86
	1699	23.2	6.82	0.50	0.72	0.93	22.6	7.09	0.49	0.70	0.93	22.0	7.35	0.49	0.71	0.95

## COOLING RATINGS

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

### TSA090S4S + (2) CX34-49C-6F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		26.7°C						35°C						43.3°C						51.7°C					
		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						
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C					
17.2°C	1133	22.9	4.55	0.70	0.85	1.00	21.4	5.31	0.72	0.89	1.00	19.8	6.21	0.75	0.94	1.00	18.0	7.32	0.79	0.99	1.00				
	1416	23.9	4.62	0.75	0.94	1.00	22.4	5.36	0.78	0.98	1.00	20.7	6.28	0.82	1.00	1.00	19.0	7.39	0.87	1.00	1.00				
	1699	24.7	4.66	0.81	1.00	1.00	23.3	5.43	0.84	1.00	1.00	21.7	6.34	0.89	1.00	1.00	19.8	7.45	0.96	1.00	1.00				
19.4°C	1133	24.0	4.62	0.56	0.68	0.81	22.5	5.37	0.57	0.70	0.85	20.9	6.28	0.59	0.73	0.90	18.9	7.38	0.60	0.76	0.96				
	1416	25.1	4.69	0.59	0.73	0.90	23.4	5.44	0.60	0.75	0.95	21.6	6.34	0.62	0.79	1.00	19.6	7.43	0.65	0.85	1.00				
	1699	25.8	4.74	0.61	0.78	0.98	24.1	5.48	0.63	0.82	1.00	22.2	6.38	0.66	0.87	1.00	20.1	7.48	0.68	0.94	1.00				
21.7°C	1133	25.1	4.69	0.42	0.54	0.66	23.5	5.44	0.43	0.56	0.68	21.8	6.35	0.44	0.57	0.71	19.8	7.45	0.44	0.59	0.74				
	1416	26.2	4.76	0.44	0.58	0.71	24.5	5.51	0.44	0.59	0.73	22.7	6.41	0.45	0.61	0.77	20.5	7.50	0.46	0.64	0.83				
	1699	27.0	4.82	0.45	0.61	0.76	25.2	5.56	0.46	0.62	0.80	23.3	6.46	0.47	0.65	0.85	21.1	7.55	0.48	0.68	0.91				

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1133	19.3	6.54	0.79	0.96	1.00	18.9	6.80	0.77	0.97	1.00	18.4	7.08	0.78	0.98	1.00
	1416	20.3	6.60	0.86	1.00	1.00	19.8	6.88	0.85	1.00	1.00	19.4	7.15	0.86	1.00	1.00
	1699	21.1	6.66	0.93	1.00	1.00	20.7	6.93	0.93	1.00	1.00	20.2	7.21	0.94	1.00	1.00
19.4°C	1133	20.3	6.60	0.61	0.77	0.93	19.8	6.87	0.60	0.74	0.93	19.3	7.14	0.60	0.75	0.95
	1416	21.0	6.66	0.65	0.84	1.00	20.6	6.93	0.63	0.82	1.00	20.0	7.19	0.64	0.84	1.00
	1699	21.6	6.70	0.69	0.91	1.00	21.1	6.97	0.67	0.90	1.00	20.5	7.23	0.68	0.92	1.00
21.7°C	1133	21.2	6.67	0.45	0.60	0.75	20.7	6.94	0.44	0.59	0.72	20.2	7.21	0.44	0.59	0.73
	1416	22.0	6.73	0.47	0.65	0.82	21.5	7.00	0.45	0.63	0.80	21.0	7.26	0.46	0.63	0.81
	1699	22.6	6.78	0.49	0.69	0.89	22.1	7.04	0.47	0.67	0.88	21.5	7.31	0.48	0.67	0.90

### TSA090S4S + (2) CR33-50/60C-F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		26.7°C						35°C						43.3°C						51.7°C					
		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						
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C					
17.2°C	1133	22.5	4.53	0.70	0.85	1.00	21.1	5.28	0.72	0.89	1.00	19.4	6.19	0.74	0.93	1.00	17.6	7.28	0.79	0.99	1.00				
	1416	23.4	4.58	0.75	0.94	1.00	21.9	5.33	0.78	0.98	1.00	20.4	6.25	0.82	1.00	1.00	18.7	7.37	0.86	1.00	1.00				
	1699	24.3	4.64	0.81	1.00	1.00	22.8	5.39	0.84	1.00	1.00	21.2	6.31	0.89	1.00	1.00	19.3	7.41	0.94	1.00	1.00				
19.4°C	1133	23.8	4.61	0.56	0.68	0.82	22.2	5.35	0.57	0.70	0.85	20.5	6.26	0.59	0.73	0.90	18.6	7.36	0.61	0.76	0.95				
	1416	24.7	4.67	0.59	0.73	0.91	23.0	5.41	0.60	0.75	0.95	21.2	6.31	0.62	0.79	0.99	19.1	7.40	0.64	0.84	1.00				
	1699	25.4	4.71	0.62	0.79	0.98	23.6	5.45	0.63	0.82	1.00	21.7	6.35	0.65	0.86	1.00	19.5	7.43	0.68	0.93	1.00				
21.7°C	1133	24.9	4.68	0.42	0.55	0.66	23.4	5.43	0.42	0.56	0.68	21.6	6.33	0.43	0.57	0.71	19.5	7.43	0.44	0.60	0.74				
	1416	26.0	4.75	0.43	0.58	0.71	24.2	5.49	0.44	0.59	0.73	22.4	6.39	0.45	0.61	0.77	20.2	7.48	0.46	0.64	0.82				
	1699	26.7	4.79	0.45	0.61	0.76	24.9	5.54	0.46	0.63	0.80	22.9	6.43	0.47	0.65	0.84	20.7	7.52	0.48	0.68	0.91				

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1133	18.8	6.50	0.79	0.96	1.00	18.4	6.77	0.76	0.96	1.00	18.0	7.05	0.77	0.98	1.00
	1416	19.8	6.58	0.86	1.00	1.00	19.4	6.84	0.84	1.00	1.00	19.0	7.12	0.85	1.00	1.00
	1699	20.7	6.63	0.92	1.00	1.00	20.2	6.90	0.92	1.00	1.00	19.8	7.18	0.93	1.00	1.00
19.4°C	1133	19.9	6.58	0.62	0.77	0.93	19.5	6.84	0.60	0.74	0.93	19.0	7.12	0.60	0.75	0.94
	1416	20.6	6.63	0.65	0.84	1.00	20.1	6.89	0.63	0.82	1.00	19.6	7.16	0.64	0.83	1.00
	1699	21.1	6.66	0.69	0.90	1.00	20.5	6.92	0.67	0.90	1.00	20.0	7.19	0.67	0.91	1.00
21.7°C	1133	21.0	6.65	0.45	0.60	0.75	20.5	6.92	0.44	0.59	0.72	20.0	7.20	0.44	0.59	0.73
	1416	21.7	6.71	0.47	0.65	0.82	21.1	6.97	0.46	0.63	0.80	20.6	7.24	0.46	0.63	0.81
	1699	22.2	6.75	0.49	0.68	0.88	21.7	7.01	0.48	0.66	0.87	21.1	7.27	0.48	0.67	0.89



# COOLING RATINGS

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

## TSA090S4S + (2) CH33-49C-2F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1133	23.0	4.56	0.70	0.85	1.00	21.5	5.31	0.72	0.89	1.00	19.9	6.22	0.75	0.94	1.00	18.0	7.32	0.79	0.99	1.00
	1416	24.0	4.62	0.75	0.94	1.00	22.4	5.37	0.78	0.98	1.00	20.7	6.28	0.82	1.00	1.00	19.0	7.40	0.87	1.00	1.00
	1699	24.7	4.67	0.81	1.00	1.00	23.3	5.43	0.84	1.00	1.00	21.7	6.34	0.89	1.00	1.00	19.8	7.45	0.96	1.00	1.00
19.4°C	1133	24.2	4.64	0.55	0.68	0.81	22.7	5.39	0.57	0.70	0.85	20.9	6.29	0.58	0.72	0.90	18.9	7.39	0.60	0.76	0.96
	1416	25.2	4.70	0.58	0.73	0.91	23.5	5.44	0.60	0.75	0.95	21.7	6.35	0.62	0.79	1.00	19.6	7.44	0.64	0.85	1.00
	1699	25.9	4.74	0.61	0.77	0.99	24.1	5.49	0.63	0.82	1.00	22.2	6.39	0.65	0.87	1.00	20.1	7.48	0.68	0.93	1.00
21.7°C	1133	25.4	4.71	0.42	0.54	0.66	23.8	5.46	0.43	0.55	0.68	22.0	6.37	0.43	0.57	0.70	19.9	7.46	0.44	0.59	0.74
	1416	26.5	4.78	0.43	0.57	0.71	24.7	5.53	0.44	0.58	0.73	22.8	6.42	0.45	0.60	0.77	20.6	7.51	0.46	0.64	0.82
	1699	27.2	4.83	0.44	0.60	0.77	25.4	5.57	0.46	0.62	0.80	23.3	6.46	0.46	0.64	0.85	21.1	7.56	0.48	0.68	0.91
Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		46°C					48°C					50°C									
		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							
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C						
17.2°C	1133	19.3	6.54	0.79	0.96	1.00	18.9	6.81	0.77	0.97	1.00	18.4	7.08	0.78	0.98	1.00					
	1416	20.3	6.60	0.86	1.00	1.00	19.8	6.88	0.84	1.00	1.00	19.4	7.16	0.86	1.00	1.00					
	1699	21.1	6.66	0.93	1.00	1.00	20.6	6.94	0.93	1.00	1.00	20.2	7.21	0.94	1.00	1.00					
19.4°C	1133	20.3	6.60	0.61	0.77	0.93	19.8	6.88	0.59	0.74	0.93	19.3	7.15	0.60	0.75	0.95					
	1416	21.0	6.66	0.65	0.84	1.00	20.5	6.93	0.63	0.82	1.00	20.0	7.20	0.64	0.83	1.00					
	1699	21.6	6.70	0.69	0.91	1.00	21.1	6.97	0.67	0.90	1.00	20.6	7.24	0.68	0.92	1.00					
21.7°C	1133	21.2	6.67	0.45	0.60	0.75	20.9	6.95	0.44	0.58	0.72	20.4	7.23	0.44	0.59	0.73					
	1416	22.0	6.73	0.47	0.65	0.82	21.6	7.01	0.46	0.62	0.80	21.1	7.28	0.46	0.63	0.81					
	1699	22.6	6.78	0.49	0.69	0.89	22.1	7.05	0.47	0.66	0.88	21.6	7.32	0.48	0.67	0.90					

## TSA120S4S + TAA120S4D

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	29.7	5.58	0.75	0.91	1.00	27.7	6.55	0.78	0.94	1.00	25.6	7.71	0.80	0.98	1.00	23.3	9.15	0.85	1.00	1.00
	1888	30.9	5.65	0.81	0.99	1.00	29.0	6.62	0.84	1.00	1.00	27.0	7.80	0.88	1.00	1.00	24.6	9.23	0.94	1.00	1.00
	2265	32.4	5.74	0.88	1.00	1.00	30.4	6.71	0.91	1.00	1.00	28.2	7.87	0.96	1.00	1.00	25.7	9.30	1.00	1.00	1.00
19.4°C	1510	31.4	5.68	0.59	0.73	0.87	29.3	6.64	0.60	0.75	0.91	27.0	7.80	0.62	0.78	0.95	24.4	9.21	0.64	0.82	1.00
	1888	32.6	5.76	0.62	0.79	0.96	30.3	6.71	0.65	0.82	0.99	27.9	7.85	0.66	0.86	1.00	25.1	9.26	0.70	0.92	1.00
	2265	33.5	5.81	0.66	0.85	1.00	31.2	6.76	0.68	0.89	1.00	28.6	7.91	0.71	0.94	1.00	25.8	9.29	0.75	0.99	1.00
21.7°C	1510	33.1	5.79	0.44	0.57	0.71	31.0	6.75	0.45	0.59	0.73	28.5	7.89	0.45	0.61	0.76	25.6	9.28	0.46	0.64	0.80
	1888	34.4	5.87	0.46	0.62	0.76	32.0	6.82	0.46	0.64	0.80	29.4	7.95	0.47	0.65	0.84	26.5	9.35	0.50	0.69	0.90
	2265	35.3	5.93	0.47	0.66	0.83	32.7	6.86	0.48	0.67	0.87	30.1	8.00	0.50	0.71	0.92	27.0	9.38	0.51	0.75	0.98
Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		46°C					48°C					50°C									
		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							
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C						
17.2°C	1510	24.8	8.12	0.83	0.99	1.00	24.3	8.47	0.82	1.00	1.00	23.8	8.83	0.83	1.00	1.00					
	1888	26.3	8.22	0.91	1.00	1.00	25.8	8.56	0.91	1.00	1.00	25.1	8.92	0.93	1.00	1.00					
	2265	27.5	8.29	0.98	1.00	1.00	26.8	8.62	0.98	1.00	1.00	26.2	8.99	0.99	1.00	1.00					
19.4°C	1510	26.1	8.20	0.63	0.80	0.97	25.5	8.54	0.64	0.80	0.98	24.9	8.88	0.64	0.81	0.99					
	1888	27.1	8.27	0.68	0.88	1.00	26.4	8.60	0.68	0.89	1.00	25.7	8.95	0.69	0.91	1.00					
	2265	27.8	8.31	0.73	0.96	1.00	27.1	8.65	0.73	0.97	1.00	26.4	8.99	0.74	0.98	1.00					
21.7°C	1510	27.6	8.30	0.46	0.62	0.78	27.0	8.64	0.46	0.63	0.78	26.3	8.99	0.46	0.63	0.80					
	1888	28.5	8.36	0.48	0.67	0.86	27.7	8.69	0.48	0.67	0.87	27.1	9.03	0.49	0.68	0.88					
	2265	29.1	8.40	0.51	0.73	0.94	28.4	8.73	0.51	0.73	0.95	27.7	9.08	0.51	0.74	0.97					

## COOLING RATINGS

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

### TSA120S4S + (2) CX34-62D-6F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		26.7°C						35°C						43.3°C						51.7°C					
		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						
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C					
17.2°C	1510	29.1	5.54	0.73	0.87	1.00	27.3	6.51	0.75	0.91	1.00	25.2	7.69	0.78	0.95	1.00	22.8	9.10	0.82	1.00	1.00				
	1888	30.4	5.62	0.78	0.95	1.00	28.4	6.59	0.81	0.99	1.00	26.4	7.75	0.84	1.00	1.00	24.1	9.20	0.89	1.00	1.00				
	2265	31.4	5.68	0.83	1.00	1.00	29.6	6.66	0.86	1.00	1.00	27.5	7.82	0.91	1.00	1.00	25.1	9.25	0.97	1.00	1.00				
19.4°C	1510	30.6	5.63	0.58	0.71	0.84	28.7	6.60	0.59	0.73	0.87	26.5	7.77	0.61	0.76	0.92	24.0	9.18	0.63	0.79	0.97				
	1888	32.0	5.71	0.61	0.76	0.92	29.9	6.67	0.62	0.78	0.96	27.6	7.83	0.64	0.82	1.00	24.8	9.23	0.67	0.87	1.00				
	2265	32.9	5.77	0.64	0.81	0.99	30.7	6.73	0.65	0.84	1.00	28.3	7.87	0.68	0.89	1.00	25.5	9.28	0.71	0.95	1.00				
21.7°C	1510	32.3	5.73	0.44	0.56	0.68	30.2	6.70	0.44	0.58	0.71	27.9	7.85	0.45	0.60	0.74	25.2	9.25	0.46	0.62	0.77				
	1888	33.7	5.82	0.45	0.60	0.74	31.4	6.77	0.46	0.61	0.76	28.8	7.91	0.47	0.63	0.80	26.1	9.32	0.48	0.66	0.85				
	2265	34.6	5.88	0.46	0.63	0.79	32.2	6.82	0.47	0.65	0.82	29.7	7.97	0.48	0.67	0.86	26.8	9.36	0.50	0.71	0.93				

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	24.5	8.10	0.80	0.97	1.00	23.9	8.44	0.80	0.98	1.00	23.4	8.80	0.81	0.99	1.00
	1888	25.7	8.17	0.87	1.00	1.00	25.2	8.53	0.87	1.00	1.00	24.6	8.88	0.88	1.00	1.00
	2265	26.8	8.24	0.93	1.00	1.00	26.2	8.59	0.94	1.00	1.00	25.6	8.94	0.96	1.00	1.00
19.4°C	1510	25.8	8.18	0.62	0.78	0.94	25.2	8.53	0.62	0.77	0.95	24.5	8.87	0.62	0.78	0.96
	1888	26.8	8.24	0.66	0.85	1.00	26.1	8.58	0.66	0.85	1.00	25.4	8.93	0.66	0.86	1.00
	2265	27.4	8.28	0.70	0.91	1.00	26.8	8.62	0.70	0.92	1.00	26.1	8.97	0.70	0.93	1.00
21.7°C	1510	27.1	8.26	0.46	0.61	0.76	26.5	8.60	0.46	0.61	0.75	25.8	8.94	0.46	0.61	0.76
	1888	28.1	8.33	0.47	0.65	0.83	27.4	8.66	0.47	0.65	0.82	26.7	9.01	0.48	0.66	0.84
	2265	28.8	8.37	0.50	0.69	0.89	28.1	8.71	0.50	0.69	0.90	27.4	9.06	0.50	0.70	0.91

### TSA120S4S + (2) CR33-50/60-F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		26.7°C						35°C						43.3°C						51.7°C					
		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						
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C					
17.2°C	1510	28.3	5.50	0.74	0.89	1.00	26.5	6.46	0.76	0.92	1.00	24.4	7.63	0.79	0.95	1.00	22.2	9.07	0.82	0.99	1.00				
	1888	29.5	5.56	0.79	0.96	1.00	27.5	6.52	0.82	0.99	1.00	25.6	7.70	0.85	1.00	1.00	23.4	9.14	0.90	1.00	1.00				
	2265	30.5	5.62	0.84	1.00	1.00	28.7	6.59	0.87	1.00	1.00	26.7	7.77	0.91	1.00	1.00	24.3	9.18	0.96	1.00	1.00				
19.4°C	1510	30.0	5.59	0.59	0.72	0.85	28.0	6.55	0.60	0.74	0.89	25.8	7.71	0.62	0.77	0.92	23.3	9.12	0.64	0.80	0.98				
	1888	31.2	5.66	0.62	0.77	0.93	29.1	6.61	0.63	0.79	0.96	26.7	7.77	0.65	0.83	0.99	24.1	9.17	0.68	0.88	1.00				
	2265	32.0	5.71	0.65	0.82	0.99	29.8	6.66	0.66	0.85	1.00	27.3	7.81	0.69	0.89	1.00	24.6	9.21	0.72	0.95	1.00				
21.7°C	1510	31.5	5.68	0.44	0.57	0.70	29.5	6.64	0.44	0.59	0.72	27.2	7.80	0.45	0.61	0.75	24.6	9.21	0.47	0.63	0.78				
	1888	32.8	5.75	0.46	0.61	0.75	30.6	6.71	0.46	0.62	0.77	28.2	7.86	0.47	0.64	0.81	25.4	9.27	0.49	0.67	0.86				
	2265	33.7	5.81	0.47	0.64	0.80	31.4	6.76	0.48	0.66	0.83	28.8	7.90	0.49	0.68	0.87	25.9	9.30	0.51	0.71	0.93				

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	23.7	8.05	0.81	0.97	1.00	23.2	8.39	0.81	0.98	1.00	22.6	8.75	0.81	0.99	1.00
	1888	25.0	8.12	0.87	1.00	1.00	24.4	8.47	0.87	1.00	1.00	23.9	8.82	0.89	1.00	1.00
	2265	26.0	8.19	0.93	1.00	1.00	25.4	8.54	0.94	1.00	1.00	24.9	8.89	0.95	1.00	1.00
19.4°C	1510	25.1	8.13	0.63	0.79	0.94	24.5	8.47	0.63	0.78	0.95	23.9	8.83	0.63	0.79	0.96
	1888	25.9	8.19	0.67	0.86	1.00	25.2	8.51	0.67	0.86	1.00	24.6	8.86	0.67	0.87	1.00
	2265	26.5	8.22	0.71	0.92	1.00	25.8	8.55	0.70	0.92	1.00	25.1	8.90	0.71	0.94	1.00
21.7°C	1510	26.4	8.21	0.46	0.62	0.77	25.8	8.56	0.46	0.62	0.76	25.2	8.91	0.46	0.62	0.77
	1888	27.3	8.27	0.48	0.66	0.83	26.7	8.61	0.48	0.66	0.83	25.9	8.94	0.49	0.67	0.85
	2265	27.9	8.30	0.50	0.70	0.90	27.3	8.65	0.50	0.70	0.90	26.6	8.99	0.51	0.71	0.92

## COOLING RATINGS

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

### TSA120S4S + (2) CH33-62D-2F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	28.9	5.53	0.73	0.87	1.00	27.0	6.49	0.74	0.90	1.00	25.0	7.67	0.77	0.94	1.00	22.6	9.09	0.81	0.99	1.00
	1888	30.1	5.60	0.77	0.94	1.00	28.2	6.56	0.80	0.98	1.00	26.0	7.72	0.83	1.00	1.00	23.8	9.17	0.88	1.00	1.00
	2265	31.1	5.65	0.82	1.00	1.00	29.1	6.62	0.85	1.00	1.00	27.1	7.80	0.89	1.00	1.00	24.8	9.22	0.95	1.00	1.00
19.4°C	1510	30.4	5.61	0.58	0.70	0.83	28.4	6.58	0.59	0.72	0.86	26.4	7.75	0.60	0.75	0.90	23.9	9.17	0.63	0.78	0.96
	1888	31.7	5.69	0.60	0.75	0.90	29.7	6.65	0.62	0.77	0.94	27.4	7.81	0.64	0.81	0.99	24.7	9.23	0.66	0.86	1.00
	2265	32.8	5.75	0.63	0.80	0.97	30.5	6.71	0.65	0.83	1.00	28.1	7.86	0.67	0.87	1.00	25.3	9.26	0.70	0.93	1.00
21.7°C	1510	32.0	5.71	0.44	0.56	0.68	30.0	6.67	0.44	0.57	0.70	27.7	7.83	0.45	0.59	0.73	25.1	9.25	0.46	0.61	0.76
	1888	33.4	5.80	0.45	0.59	0.73	31.2	6.75	0.46	0.61	0.75	28.8	7.90	0.47	0.63	0.79	26.0	9.30	0.48	0.66	0.83
	2265	34.4	5.86	0.46	0.62	0.77	32.1	6.81	0.47	0.64	0.81	29.5	7.95	0.48	0.66	0.85	26.6	9.34	0.50	0.70	0.90

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	24.3	8.09	0.80	0.96	1.00	23.8	8.43	0.79	0.97	1.00	23.1	8.78	0.80	0.98	1.00
	1888	25.4	8.15	0.86	1.00	1.00	24.8	8.49	0.85	1.00	1.00	24.3	8.86	0.87	1.00	1.00
	2265	26.4	8.22	0.91	1.00	1.00	25.9	8.55	0.92	1.00	1.00	25.3	8.91	0.94	1.00	1.00
19.4°C	1510	25.6	8.16	0.62	0.77	0.93	25.1	8.52	0.61	0.77	0.93	24.4	8.86	0.62	0.78	0.95
	1888	26.6	8.22	0.66	0.83	1.00	25.9	8.56	0.65	0.83	1.00	25.3	8.90	0.66	0.84	1.00
	2265	27.3	8.27	0.69	0.89	1.00	26.6	8.61	0.69	0.90	1.00	25.9	8.96	0.70	0.91	1.00
21.7°C	1510	27.0	8.24	0.46	0.61	0.75	26.3	8.58	0.45	0.60	0.75	25.7	8.94	0.46	0.61	0.76
	1888	27.9	8.31	0.47	0.65	0.81	27.3	8.65	0.47	0.64	0.81	26.6	8.99	0.48	0.65	0.82
	2265	28.7	8.36	0.49	0.68	0.88	28.0	8.69	0.49	0.68	0.88	27.3	9.03	0.49	0.69	0.89

## COOLING RATINGS

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

### TSA120S4D + TAA120S4D - (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.3°C					23.9°C					29.4°C					35°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	15.9	2.25	0.67	0.83	1.00	15.2	2.55	0.69	0.86	1.00	14.6	2.88	0.70	0.89	1.00	13.9	3.24	0.72	0.93	1.00
	1888	16.6	2.28	0.73	0.95	1.00	15.9	2.58	0.74	0.97	1.00	15.2	2.90	0.75	1.00	1.00	14.6	3.28	0.79	1.00	1.00
	2265	17.2	2.31	0.78	1.00	1.00	16.5	2.60	0.82	1.00	1.00	15.9	2.94	0.84	1.00	1.00	15.2	3.31	0.88	1.00	1.00
19.4°C	1510	16.8	2.29	0.53	0.65	0.79	16.1	2.58	0.54	0.66	0.81	15.4	2.91	0.55	0.68	0.84	14.7	3.28	0.56	0.70	0.88
	1888	17.5	2.32	0.56	0.71	0.90	16.7	2.61	0.57	0.72	0.93	16.0	2.94	0.58	0.73	0.97	15.2	3.30	0.59	0.75	1.00
	2265	18.0	2.34	0.59	0.76	0.99	17.2	2.63	0.60	0.79	1.00	16.4	2.96	0.61	0.81	1.00	15.6	3.33	0.63	0.86	1.00
21.7°C	1510	17.7	2.33	0.40	0.52	0.63	17.0	2.63	0.40	0.52	0.64	16.3	2.95	0.40	0.54	0.66	15.5	3.32	0.41	0.55	0.68
	1888	18.4	2.36	0.41	0.55	0.69	17.7	2.66	0.42	0.56	0.70	16.9	2.98	0.42	0.57	0.72	16.0	3.35	0.43	0.59	0.74
	2265	18.9	2.38	0.43	0.58	0.74	18.1	2.68	0.43	0.60	0.75	17.2	3.00	0.44	0.60	0.79	16.4	3.37	0.44	0.62	0.83

### TSA120S4D + TAA120S4D - (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	29.7	5.42	0.69	0.87	1.00	27.7	6.49	0.72	0.93	1.00	25.4	7.80	0.74	0.98	1.00	23.2	9.43	0.80	1.00	1.00
	1888	31.0	5.47	0.74	0.99	1.00	29.0	6.55	0.79	1.00	1.00	26.9	7.87	0.85	1.00	1.00	24.4	9.48	0.93	1.00	1.00
	2265	32.4	5.53	0.83	1.00	1.00	30.3	6.61	0.88	1.00	1.00	28.1	7.94	0.95	1.00	1.00	25.5	9.56	1.00	1.00	1.00
19.4°C	1510	31.5	5.49	0.54	0.67	0.83	29.3	6.57	0.56	0.70	0.88	26.8	7.86	0.57	0.72	0.94	24.1	9.48	0.59	0.77	1.00
	1888	32.6	5.55	0.58	0.73	0.95	30.2	6.61	0.59	0.76	1.00	27.8	7.92	0.61	0.81	1.00	24.9	9.52	0.65	0.90	1.00
	2265	33.5	5.59	0.61	0.80	1.00	31.0	6.66	0.63	0.86	1.00	28.3	7.95	0.66	0.93	1.00	25.4	9.54	0.69	1.00	1.00
21.7°C	1510	33.1	5.57	0.40	0.53	0.65	30.9	6.65	0.41	0.55	0.68	28.3	7.94	0.42	0.56	0.70	25.4	9.55	0.43	0.59	0.74
	1888	34.4	5.63	0.42	0.57	0.71	31.9	6.70	0.43	0.59	0.74	29.2	8.00	0.44	0.61	0.78	26.1	9.60	0.45	0.64	0.87
	2265	35.3	5.67	0.43	0.60	0.77	32.6	6.74	0.44	0.62	0.83	29.8	8.03	0.45	0.65	0.90	26.8	9.63	0.48	0.69	0.98

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		46°C					48°C					50°C									
		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							
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	24.7	8.27	0.82	1.00	1.00	24.2	8.66	0.77	1.00	1.00	23.6	9.07	0.79	1.00	1.00					
	1888	26.1	8.34	0.91	1.00	1.00	25.5	8.73	0.89	1.00	1.00	24.9	9.13	0.91	1.00	1.00					
	2265	27.2	8.40	0.98	1.00	1.00	26.6	8.79	0.99	1.00	1.00	26.0	9.20	1.00	1.00	1.00					
19.4°C	1510	26.0	8.33	0.62	0.80	0.98	25.3	8.72	0.59	0.74	0.98	24.7	9.12	0.59	0.75	1.00					
	1888	26.9	8.39	0.67	0.89	1.00	26.1	8.77	0.63	0.86	1.00	25.5	9.17	0.64	0.88	1.00					
	2265	27.5	8.42	0.72	0.97	1.00	26.8	8.81	0.68	0.97	1.00	26.1	9.19	0.69	0.98	1.00					
21.7°C	1510	27.5	8.42	0.44	0.61	0.77	26.8	8.81	0.42	0.58	0.73	26.1	9.20	0.43	0.59	0.74					
	1888	28.3	8.47	0.46	0.66	0.86	27.5	8.84	0.44	0.62	0.83	26.8	9.25	0.45	0.64	0.85					
	2265	28.8	8.50	0.49	0.72	0.95	28.2	8.88	0.47	0.67	0.95	27.3	9.28	0.47	0.68	0.96					

## COOLING RATINGS

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

### TSA120S4D + (2) CX34-60D - (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.3°C					23.9°C					29.4°C					35°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	755	14.2	2.21	0.74	0.87	0.99	13.7	2.50	0.74	0.88	1.00	13.2	2.83	0.76	0.90	1.00	12.5	3.19	0.78	0.93	1.00
	944	14.9	2.24	0.78	0.93	1.00	14.3	2.53	0.80	0.95	1.00	13.7	2.86	0.81	0.98	1.00	13.1	3.22	0.83	1.00	1.00
	1133	15.4	2.26	0.83	0.99	1.00	14.8	2.55	0.84	1.00	1.00	14.2	2.88	0.86	1.00	1.00	13.6	3.25	0.88	1.00	1.00
19.4°C	755	15.0	2.24	0.58	0.71	0.83	14.5	2.54	0.59	0.72	0.85	13.8	2.86	0.60	0.73	0.87	13.2	3.23	0.61	0.75	0.89
	944	15.7	2.27	0.61	0.76	0.90	15.1	2.56	0.62	0.78	0.92	14.4	2.89	0.63	0.79	0.95	13.7	3.25	0.64	0.81	0.97
	1133	16.2	2.29	0.64	0.81	0.96	15.5	2.59	0.65	0.82	0.98	14.9	2.91	0.66	0.84	1.00	14.1	3.27	0.68	0.87	1.00
21.7°C	755	15.9	2.28	0.45	0.57	0.68	15.3	2.57	0.45	0.58	0.70	14.6	2.90	0.45	0.58	0.71	14.0	3.26	0.46	0.60	0.73
	944	16.6	2.31	0.46	0.60	0.73	15.9	2.60	0.46	0.61	0.75	15.2	2.93	0.47	0.62	0.77	14.4	3.29	0.47	0.63	0.79
	1133	17.0	2.33	0.47	0.63	0.78	16.3	2.62	0.48	0.64	0.80	15.6	2.95	0.48	0.65	0.82	14.8	3.31	0.49	0.67	0.84

### TSA120S4D + (2) CX34-60D - (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	26.8	5.32	0.75	0.89	1.00	25.1	6.39	0.78	0.93	1.00	23.2	7.69	0.81	0.97	1.00	20.9	9.30	0.84	1.00	1.00
	1888	28.0	5.38	0.81	0.96	1.00	26.2	6.44	0.83	1.00	1.00	24.2	7.74	0.87	1.00	1.00	22.1	9.36	0.91	1.00	1.00
	2265	29.0	5.42	0.85	1.00	1.00	27.2	6.49	0.89	1.00	1.00	25.2	7.80	0.92	1.00	1.00	22.9	9.41	0.98	1.00	1.00
19.4°C	1510	28.3	5.39	0.59	0.73	0.86	26.4	6.45	0.61	0.75	0.89	24.4	7.75	0.63	0.78	0.93	21.9	9.35	0.65	0.82	0.99
	1888	29.5	5.44	0.63	0.78	0.93	27.5	6.51	0.64	0.81	0.97	25.2	7.80	0.66	0.84	1.00	22.7	9.39	0.69	0.89	1.00
	2265	30.4	5.49	0.66	0.83	0.99	28.2	6.55	0.68	0.87	1.00	25.8	7.83	0.70	0.91	1.00	23.3	9.43	0.74	0.96	1.00
21.7°C	1510	29.9	5.46	0.45	0.58	0.71	27.9	6.53	0.46	0.60	0.73	25.7	7.83	0.46	0.62	0.76	23.1	9.42	0.48	0.64	0.80
	1888	31.1	5.52	0.47	0.62	0.76	28.9	6.59	0.47	0.63	0.79	26.5	7.87	0.48	0.66	0.82	23.8	9.47	0.49	0.69	0.88
	2265	31.9	5.56	0.48	0.65	0.81	29.6	6.63	0.49	0.67	0.84	27.1	7.91	0.50	0.70	0.89	24.4	9.50	0.52	0.73	0.94

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	22.5	8.16	0.82	0.98	1.00	21.9	8.54	0.82	0.99	1.00	21.4	8.95	0.83	1.00	1.00
	1888	23.6	8.22	0.88	1.00	1.00	23.1	8.61	0.89	1.00	1.00	22.5	9.01	0.90	1.00	1.00
	2265	24.5	8.26	0.94	1.00	1.00	24.0	8.65	0.95	1.00	1.00	23.4	9.05	0.97	1.00	1.00
19.4°C	1510	23.7	8.22	0.63	0.79	0.95	23.1	8.61	0.64	0.80	0.96	22.5	9.00	0.64	0.81	0.98
	1888	24.5	8.26	0.67	0.86	1.00	23.9	8.65	0.68	0.87	1.00	23.2	9.04	0.69	0.88	1.00
	2265	25.1	8.30	0.71	0.92	1.00	24.5	8.68	0.72	0.94	1.00	23.8	9.07	0.73	0.95	1.00
21.7°C	1510	24.9	8.29	0.47	0.62	0.77	24.3	8.67	0.47	0.63	0.78	23.6	9.07	0.47	0.63	0.79
	1888	25.7	8.34	0.48	0.66	0.84	25.0	8.72	0.49	0.67	0.85	24.3	9.11	0.49	0.68	0.87
	2265	26.3	8.37	0.50	0.70	0.90	25.6	8.75	0.51	0.71	0.92	24.9	9.14	0.51	0.72	0.93

## COOLING RATINGS

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

### TSA120S4D + (2) CX34-62D (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.3°C					23.9°C					29.4°C					35°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	755	15.5	2.24	0.67	0.81	0.98	14.9	2.54	0.68	0.83	1.00	14.3	2.86	0.69	0.86	1.00	13.6	3.23	0.70	0.89	1.00
	944	16.2	2.27	0.71	0.90	1.00	15.6	2.56	0.72	0.93	1.00	14.9	2.89	0.74	0.96	1.00	14.2	3.26	0.76	0.99	1.00
	1133	16.8	2.29	0.75	0.98	1.00	16.1	2.58	0.78	1.00	1.00	15.4	2.91	0.80	1.00	1.00	14.8	3.29	0.83	1.00	1.00
19.4°C	755	16.3	2.27	0.53	0.64	0.77	15.7	2.57	0.53	0.65	0.79	15.0	2.90	0.54	0.67	0.81	14.3	3.27	0.55	0.68	0.84
	944	17.0	2.30	0.55	0.69	0.85	16.4	2.60	0.56	0.70	0.89	15.6	2.93	0.57	0.72	0.92	14.9	3.29	0.58	0.73	0.96
	1133	17.6	2.32	0.58	0.73	0.95	16.9	2.62	0.59	0.75	0.98	16.1	2.95	0.60	0.77	1.00	15.3	3.32	0.61	0.81	1.00
21.7°C	755	17.2	2.31	0.40	0.52	0.62	16.5	2.61	0.41	0.52	0.63	15.9	2.93	0.41	0.53	0.65	15.1	3.30	0.41	0.54	0.66
	944	17.9	2.34	0.42	0.54	0.67	17.2	2.64	0.42	0.55	0.68	16.4	2.96	0.42	0.56	0.70	15.6	3.33	0.43	0.57	0.71
	1133	18.5	2.36	0.43	0.57	0.71	17.7	2.66	0.43	0.58	0.73	16.9	2.99	0.44	0.59	0.75	16.1	3.35	0.44	0.61	0.78

### TSA120S4D + (2) CX34-62D (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	29.2	5.39	0.68	0.84	1.00	27.2	6.47	0.70	0.89	1.00	25.1	7.78	0.73	0.95	1.00	22.6	9.40	0.77	1.00	1.00
	1888	30.5	5.44	0.73	0.95	1.00	28.4	6.52	0.76	0.99	1.00	26.3	7.84	0.81	1.00	1.00	23.9	9.47	0.88	1.00	1.00
	2265	31.5	5.49	0.79	1.00	1.00	29.5	6.58	0.83	1.00	1.00	27.4	7.90	0.89	1.00	1.00	24.9	9.53	0.97	1.00	1.00
19.4°C	1510	30.7	5.45	0.54	0.66	0.80	28.6	6.53	0.55	0.68	0.84	26.4	7.84	0.57	0.71	0.90	23.8	9.46	0.59	0.75	0.98
	1888	32.0	5.52	0.57	0.71	0.90	29.8	6.59	0.58	0.73	0.96	27.4	7.90	0.60	0.78	1.00	24.6	9.51	0.63	0.85	1.00
	2265	33.0	5.56	0.60	0.76	0.99	30.6	6.64	0.61	0.81	1.00	28.1	7.93	0.63	0.87	1.00	25.2	9.54	0.67	0.95	1.00
21.7°C	1510	32.4	5.53	0.41	0.53	0.64	30.2	6.61	0.41	0.54	0.66	27.8	7.92	0.42	0.56	0.69	24.9	9.52	0.43	0.58	0.72
	1888	33.7	5.59	0.42	0.56	0.69	31.3	6.67	0.43	0.57	0.71	28.7	7.97	0.44	0.59	0.75	25.8	9.58	0.45	0.62	0.82
	2265	34.6	5.64	0.43	0.59	0.73	32.1	6.71	0.44	0.61	0.78	29.5	8.01	0.45	0.63	0.84	26.5	9.62	0.47	0.66	0.92

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		46°C					48°C					50°C									
		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							
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	24.3	8.25	0.80	0.98	1.00	23.8	8.65	0.75	0.98	1.00	23.2	9.04	0.76	1.00	1.00					
	1888	25.6	8.31	0.87	1.00	1.00	25.0	8.71	0.84	1.00	1.00	24.5	9.12	0.86	1.00	1.00					
	2265	26.6	8.37	0.94	1.00	1.00	26.1	8.77	0.94	1.00	1.00	25.5	9.17	0.96	1.00	1.00					
19.4°C	1510	25.6	8.32	0.61	0.78	0.94	25.0	8.70	0.58	0.73	0.94	24.4	9.11	0.58	0.74	0.96					
	1888	26.5	8.36	0.65	0.85	1.00	25.8	8.75	0.62	0.81	1.00	25.2	9.15	0.62	0.83	1.00					
	2265	27.2	8.40	0.69	0.92	1.00	26.5	8.79	0.65	0.91	1.00	25.8	9.19	0.66	0.93	1.00					
21.7°C	1510	26.9	8.39	0.45	0.60	0.76	26.2	8.76	0.43	0.57	0.71	25.6	9.17	0.43	0.57	0.72					
	1888	27.9	8.44	0.46	0.64	0.83	27.2	8.83	0.44	0.61	0.79	26.4	9.21	0.45	0.62	0.80					
	2265	28.5	8.48	0.48	0.69	0.90	27.8	8.86	0.46	0.65	0.88	27.1	9.27	0.46	0.66	0.90					

## COOLING RATINGS

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

### TSA120S4D + (2) CR33-60D - (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.3°C					23.9°C					29.4°C					35°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	755	14.3	2.20	0.74	0.88	0.99	13.8	2.49	0.75	0.89	1.00	13.2	2.82	0.77	0.91	1.00	12.5	3.18	0.78	0.93	1.00
	944	14.9	2.23	0.79	0.94	1.00	14.3	2.51	0.80	0.96	1.00	13.7	2.84	0.82	0.98	1.00	13.0	3.20	0.83	0.99	1.00
	1133	15.4	2.24	0.83	0.99	1.00	14.8	2.54	0.85	1.00	1.00	14.2	2.86	0.87	1.00	1.00	13.6	3.23	0.89	1.00	1.00
19.4°C	755	15.1	2.23	0.59	0.72	0.84	14.5	2.53	0.60	0.73	0.86	13.9	2.85	0.61	0.74	0.88	13.3	3.22	0.62	0.76	0.90
	944	15.8	2.26	0.62	0.77	0.91	15.2	2.55	0.63	0.78	0.93	14.5	2.88	0.64	0.80	0.95	13.7	3.24	0.65	0.81	0.97
	1133	16.2	2.28	0.65	0.81	0.97	15.6	2.57	0.66	0.83	0.99	14.8	2.89	0.67	0.85	1.00	14.1	3.26	0.68	0.87	1.00
21.7°C	755	15.9	2.27	0.44	0.58	0.70	15.3	2.56	0.45	0.58	0.71	14.7	2.88	0.45	0.59	0.72	14.0	3.25	0.45	0.60	0.74
	944	16.6	2.29	0.46	0.61	0.74	15.9	2.59	0.46	0.62	0.76	15.2	2.91	0.47	0.63	0.78	14.5	3.28	0.47	0.64	0.79
	1133	17.1	2.32	0.47	0.64	0.79	16.4	2.61	0.48	0.65	0.81	15.6	2.93	0.49	0.66	0.83	14.8	3.30	0.49	0.67	0.85

### TSA120S4D + (2) CR33-60D - (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	27.0	5.30	0.76	0.90	1.00	25.1	6.36	0.78	0.93	1.00	23.1	7.66	0.81	0.97	1.00	20.9	9.28	0.85	1.00	1.00
	1888	28.0	5.35	0.81	0.97	1.00	26.1	6.41	0.83	0.99	1.00	24.2	7.72	0.87	1.00	1.00	22.1	9.33	0.92	1.00	1.00
	2265	29.0	5.39	0.86	1.00	1.00	27.2	6.47	0.89	1.00	1.00	25.2	7.77	0.93	1.00	1.00	22.9	9.38	0.97	1.00	1.00
19.4°C	1510	28.5	5.37	0.60	0.74	0.87	26.6	6.43	0.62	0.76	0.90	24.4	7.73	0.63	0.79	0.94	21.9	9.32	0.66	0.83	0.98
	1888	29.6	5.42	0.63	0.79	0.94	27.5	6.48	0.65	0.81	0.97	25.2	7.76	0.67	0.85	1.00	22.6	9.36	0.70	0.90	1.00
	2265	30.4	5.46	0.66	0.84	0.99	28.2	6.52	0.68	0.87	1.00	25.8	7.80	0.70	0.91	1.00	23.1	9.39	0.74	0.96	1.00
21.7°C	1510	30.0	5.44	0.45	0.59	0.72	27.9	6.50	0.45	0.60	0.74	25.7	7.79	0.47	0.62	0.77	23.1	9.39	0.48	0.65	0.81
	1888	31.2	5.50	0.47	0.62	0.77	29.0	6.56	0.47	0.64	0.79	26.5	7.84	0.49	0.66	0.83	23.8	9.43	0.50	0.69	0.88
	2265	32.0	5.54	0.48	0.65	0.82	29.7	6.59	0.49	0.67	0.85	27.2	7.88	0.50	0.70	0.89	24.4	9.47	0.52	0.73	0.95

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	22.4	8.13	0.82	0.98	1.00	21.9	8.51	0.83	0.99	1.00	21.4	8.91	0.84	0.99	1.00
	1888	23.6	8.19	0.88	1.00	1.00	23.1	8.57	0.89	1.00	1.00	22.5	8.97	0.90	1.00	1.00
	2265	24.5	8.24	0.94	1.00	1.00	24.0	8.62	0.95	1.00	1.00	23.4	9.00	0.96	1.00	1.00
19.4°C	1510	23.7	8.19	0.64	0.80	0.95	23.1	8.57	0.64	0.81	0.96	22.5	8.97	0.65	0.82	0.98
	1888	24.4	8.23	0.68	0.86	1.00	23.8	8.61	0.68	0.87	1.00	23.2	9.00	0.69	0.89	1.00
	2265	24.9	8.26	0.71	0.93	1.00	24.3	8.64	0.72	0.94	1.00	23.7	9.03	0.73	0.95	1.00
21.7°C	1510	24.9	8.26	0.47	0.63	0.78	24.3	8.64	0.47	0.64	0.79	23.7	9.04	0.47	0.64	0.80
	1888	25.7	8.31	0.49	0.67	0.84	25.1	8.68	0.49	0.68	0.86	24.4	9.07	0.50	0.69	0.87
	2265	26.3	8.34	0.51	0.71	0.91	25.6	8.72	0.51	0.72	0.92	25.0	9.11	0.52	0.73	0.93

## COOLING RATINGS

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

### TSA120S4D + (2) CH33-62D - (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.3°C					23.9°C					29.4°C					35°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	755	14.2	2.21	0.73	0.86	0.98	13.7	2.50	0.74	0.87	0.99	13.2	2.83	0.75	0.89	1.00	12.5	3.19	0.77	0.91	1.00
	944	14.9	2.24	0.77	0.92	1.00	14.3	2.53	0.78	0.94	1.00	13.7	2.85	0.80	0.96	1.00	13.1	3.22	0.82	0.98	1.00
	1133	15.4	2.26	0.81	0.97	1.00	14.8	2.55	0.83	0.99	1.00	14.1	2.87	0.85	1.00	1.00	13.5	3.24	0.87	1.00	1.00
19.4°C	755	15.0	2.24	0.58	0.71	0.82	14.4	2.54	0.59	0.72	0.84	13.8	2.86	0.60	0.73	0.86	13.2	3.23	0.60	0.74	0.88
	944	15.7	2.27	0.61	0.75	0.89	15.1	2.56	0.62	0.76	0.91	14.4	2.89	0.63	0.78	0.93	13.7	3.25	0.64	0.80	0.95
	1133	16.2	2.29	0.63	0.79	0.94	15.6	2.59	0.64	0.81	0.97	14.9	2.91	0.66	0.83	0.99	14.1	3.27	0.66	0.85	1.00
21.7°C	755	15.8	2.27	0.45	0.57	0.68	15.2	2.57	0.45	0.57	0.69	14.6	2.90	0.45	0.58	0.71	13.9	3.26	0.46	0.59	0.72
	944	16.5	2.31	0.46	0.59	0.73	15.9	2.60	0.46	0.60	0.74	15.2	2.93	0.46	0.62	0.76	14.4	3.29	0.47	0.63	0.78
	1133	17.1	2.33	0.47	0.62	0.77	16.4	2.63	0.47	0.63	0.79	15.6	2.95	0.48	0.65	0.81	14.9	3.31	0.48	0.66	0.83

### TSA120S4D + (2) CH33-62D - (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	26.9	5.32	0.75	0.88	1.00	25.1	6.38	0.77	0.91	1.00	23.1	7.68	0.79	0.95	1.00	20.9	9.29	0.83	1.00	1.00
	1888	28.0	5.37	0.79	0.95	1.00	26.1	6.44	0.82	0.98	1.00	24.0	7.73	0.85	1.00	1.00	22.0	9.35	0.90	1.00	1.00
	2265	28.9	5.42	0.84	1.00	1.00	27.1	6.48	0.87	1.00	1.00	25.1	7.79	0.91	1.00	1.00	22.9	9.41	0.96	1.00	1.00
19.4°C	1510	28.3	5.38	0.59	0.72	0.85	26.4	6.45	0.60	0.74	0.88	24.3	7.75	0.62	0.77	0.92	22.0	9.35	0.64	0.81	0.97
	1888	29.5	5.44	0.62	0.77	0.92	27.5	6.51	0.64	0.80	0.95	25.3	7.80	0.66	0.83	0.99	22.7	9.40	0.68	0.88	1.00
	2265	30.5	5.49	0.65	0.82	0.98	28.2	6.55	0.66	0.85	1.00	25.9	7.84	0.69	0.89	1.00	23.3	9.44	0.73	0.95	1.00
21.7°C	1510	29.7	5.46	0.45	0.58	0.70	27.8	6.52	0.46	0.59	0.72	25.6	7.82	0.46	0.61	0.75	23.1	9.42	0.47	0.63	0.79
	1888	31.0	5.52	0.46	0.61	0.75	28.9	6.59	0.47	0.63	0.78	26.5	7.88	0.48	0.65	0.81	23.9	9.47	0.49	0.68	0.86
	2265	32.0	5.57	0.48	0.64	0.80	29.7	6.63	0.48	0.66	0.83	27.3	7.92	0.50	0.68	0.87	24.5	9.51	0.51	0.72	0.93

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																	
		46°C					48°C					50°C							
		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					
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C				
17.2°C	1510	22.4	8.16	0.81	0.97	1.00	21.9	8.54	0.81	0.98	1.00	21.4	8.94	0.82	0.99	1.00			
	1888	23.4	8.21	0.86	1.00	1.00	22.9	8.60	0.88	1.00	1.00	22.4	9.01	0.89	1.00	1.00			
	2265	24.4	8.26	0.93	1.00	1.00	23.9	8.65	0.94	1.00	1.00	23.3	9.05	0.95	1.00	1.00			
19.4°C	1510	23.7	8.22	0.63	0.78	0.94	23.1	8.61	0.63	0.79	0.95	22.5	9.00	0.64	0.80	0.96			
	1888	24.5	8.27	0.67	0.85	1.00	23.9	8.65	0.67	0.86	1.00	23.3	9.05	0.68	0.87	1.00			
	2265	25.1	8.30	0.70	0.91	1.00	24.5	8.69	0.71	0.92	1.00	23.8	9.08	0.72	0.93	1.00			
21.7°C	1510	24.9	8.29	0.47	0.62	0.76	24.3	8.68	0.47	0.62	0.77	23.6	9.07	0.47	0.63	0.78			
	1888	25.7	8.34	0.48	0.66	0.82	25.1	8.73	0.49	0.66	0.84	24.5	9.11	0.49	0.67	0.85			
	2265	26.4	8.38	0.50	0.70	0.89	25.8	8.76	0.50	0.70	0.90	25.1	9.16	0.51	0.71	0.91			



## COOLING RATINGS

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

### TSA150S4D + TAA120S4D (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.3°C					23.9°C					29.4°C					35°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1888	18.9	3.00	0.66	0.83	1.00	18.3	3.34	0.67	0.87	1.00	17.6	3.71	0.68	0.90	1.00	16.8	4.12	0.70	0.94	1.00
	2360	19.8	3.01	0.71	0.97	1.00	19.1	3.35	0.72	0.99	1.00	18.3	3.71	0.74	1.00	1.00	17.6	4.12	0.78	1.00	1.00
	2832	20.6	3.02	0.76	1.00	1.00	19.9	3.35	0.81	1.00	1.00	19.3	3.72	0.84	1.00	1.00	18.4	4.13	0.88	1.00	1.00
19.4°C	1888	20.1	3.02	0.51	0.64	0.78	19.4	3.35	0.52	0.64	0.80	18.6	3.72	0.53	0.66	0.84	17.8	4.13	0.54	0.67	0.88
	2360	20.9	3.03	0.54	0.69	0.91	20.2	3.36	0.55	0.70	0.95	19.3	3.72	0.56	0.71	0.97	18.4	4.13	0.57	0.73	1.00
	2832	21.5	3.03	0.58	0.74	1.00	20.7	3.36	0.58	0.77	1.00	19.8	3.73	0.59	0.80	1.00	18.9	4.13	0.61	0.85	1.00
21.7°C	1888	21.2	3.03	0.39	0.50	0.62	20.5	3.36	0.39	0.51	0.62	19.7	3.73	0.39	0.51	0.64	18.8	4.13	0.39	0.52	0.65
	2360	22.1	3.04	0.40	0.54	0.67	21.3	3.37	0.40	0.54	0.68	20.5	3.73	0.41	0.55	0.70	19.5	4.14	0.41	0.56	0.71
	2832	22.7	3.05	0.41	0.57	0.71	21.9	3.38	0.41	0.58	0.73	21.0	3.74	0.42	0.59	0.77	20.0	4.14	0.42	0.60	0.81

### TSA150S4D + TAA120S4D (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1888	35.8	7.03	0.67	0.88	1.00	33.5	8.23	0.70	0.94	1.00	30.8	9.64	0.72	1.00	1.00	28.1	11.37	0.80	1.00	1.00
	2360	37.3	7.04	0.73	1.00	1.00	35.2	8.24	0.78	1.00	1.00	32.7	9.67	0.84	1.00	1.00	29.7	11.39	0.94	1.00	1.00
	2832	39.0	7.06	0.82	1.00	1.00	36.8	8.26	0.88	1.00	1.00	34.1	9.69	0.96	1.00	1.00	31.1	11.41	1.00	1.00	1.00
19.4°C	1888	37.9	7.05	0.52	0.65	0.82	35.5	8.25	0.54	0.67	0.88	32.6	9.67	0.55	0.70	0.95	29.2	11.37	0.58	0.75	1.00
	2360	39.4	7.06	0.56	0.71	0.96	36.7	8.26	0.57	0.73	1.00	33.8	9.68	0.59	0.80	1.00	30.3	11.39	0.62	0.90	1.00
	2832	40.5	7.07	0.59	0.79	1.00	37.8	8.26	0.61	0.85	1.00	34.6	9.68	0.63	0.92	1.00	31.2	11.41	0.67	1.00	1.00
21.7°C	1888	40.1	7.07	0.39	0.51	0.63	37.5	8.26	0.39	0.52	0.65	34.6	9.69	0.40	0.54	0.67	31.1	11.41	0.41	0.57	0.72
	2360	41.7	7.09	0.40	0.55	0.69	38.9	8.27	0.41	0.56	0.71	35.7	9.70	0.42	0.59	0.76	32.1	11.42	0.43	0.62	0.85
	2832	42.8	7.10	0.42	0.58	0.75	39.8	8.28	0.43	0.60	0.81	36.5	9.71	0.44	0.63	0.88	32.9	11.43	0.46	0.66	0.97

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1888	30.0	10.15	0.84	1.00	1.00	29.3	10.57	0.75	1.00	1.00	28.7	11.00	0.78	1.00	1.00
	2360	31.8	10.18	0.92	1.00	1.00	31.1	10.58	0.89	1.00	1.00	30.4	11.01	0.92	1.00	1.00
	2832	33.2	10.19	0.99	1.00	1.00	32.4	10.60	1.00	1.00	1.00	31.6	11.02	1.00	1.00	1.00
19.4°C	1888	31.6	10.17	0.61	0.81	0.98	30.8	10.59	0.57	0.72	0.99	29.9	11.00	0.58	0.73	1.00
	2360	32.7	10.18	0.67	0.89	1.00	32.0	10.60	0.60	0.85	1.00	31.0	11.02	0.62	0.87	1.00
	2832	33.5	10.19	0.72	0.97	1.00	32.7	10.61	0.65	0.97	1.00	31.8	11.04	0.66	0.98	1.00
21.7°C	1888	33.5	10.19	0.43	0.61	0.78	32.6	10.60	0.41	0.55	0.70	31.8	11.03	0.41	0.56	0.71
	2360	34.6	10.20	0.45	0.66	0.87	33.7	10.62	0.42	0.60	0.81	32.9	11.05	0.43	0.61	0.83
	2832	35.4	10.21	0.48	0.71	0.94	34.5	10.63	0.44	0.65	0.93	33.7	11.06	0.46	0.65	0.95

## COOLING RATINGS

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

### TSA150S4D + TAA150S4D (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.3°C					23.9°C					29.4°C					35°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1888	19.4	2.99	0.70	0.86	1.00	18.8	3.33	0.71	0.88	1.00	18.1	3.70	0.73	0.91	1.00	17.3	4.11	0.75	0.95	1.00
	2360	20.4	3.01	0.76	0.97	1.00	19.7	3.34	0.77	0.99	1.00	18.9	3.71	0.79	1.00	1.00	18.2	4.11	0.81	1.00	1.00
	2832	21.2	3.02	0.82	1.00	1.00	20.6	3.35	0.83	1.00	1.00	19.8	3.71	0.87	1.00	1.00	19.0	4.12	0.90	1.00	1.00
19.4°C	1888	20.7	3.01	0.55	0.68	0.82	20.0	3.34	0.56	0.69	0.84	19.2	3.71	0.57	0.71	0.87	18.3	4.12	0.58	0.72	0.90
	2360	21.5	3.02	0.59	0.74	0.92	20.7	3.35	0.60	0.75	0.95	19.9	3.72	0.61	0.77	0.98	19.0	4.12	0.61	0.78	1.00
	2832	22.1	3.03	0.62	0.79	1.00	21.3	3.36	0.62	0.81	1.00	20.5	3.72	0.63	0.84	1.00	19.5	4.13	0.65	0.87	1.00
21.7°C	1888	21.9	3.02	0.42	0.54	0.65	21.2	3.36	0.42	0.55	0.67	20.4	3.72	0.42	0.56	0.69	19.4	4.13	0.42	0.57	0.70
	2360	22.8	3.04	0.43	0.58	0.71	22.0	3.36	0.44	0.59	0.73	21.2	3.73	0.44	0.60	0.74	20.1	4.13	0.44	0.60	0.76
	2832	23.4	3.04	0.44	0.61	0.77	22.6	3.37	0.44	0.61	0.79	21.7	3.73	0.45	0.63	0.81	20.6	4.13	0.45	0.65	0.84

### TSA150S4D + TAA150S4D (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1888	36.9	7.05	0.72	0.90	1.00	34.5	8.25	0.75	0.95	1.00	31.8	9.67	0.77	0.99	1.00	29.0	11.40	0.83	1.00	1.00
	2360	38.7	7.06	0.78	1.00	1.00	36.3	8.26	0.81	1.00	1.00	33.8	9.70	0.87	1.00	1.00	30.8	11.42	0.94	1.00	1.00
	2832	40.4	7.08	0.85	1.00	1.00	38.0	8.28	0.90	1.00	1.00	35.3	9.71	0.96	1.00	1.00	32.1	11.44	1.00	1.00	1.00
19.4°C	1888	39.2	7.07	0.57	0.70	0.85	36.5	8.27	0.58	0.72	0.90	33.7	9.69	0.60	0.75	0.95	30.3	11.42	0.61	0.79	1.00
	2360	40.7	7.08	0.60	0.76	0.96	37.9	8.28	0.61	0.78	1.00	34.9	9.71	0.64	0.84	1.00	31.3	11.42	0.66	0.91	1.00
	2832	41.7	7.09	0.63	0.82	1.00	39.0	8.29	0.65	0.87	1.00	35.8	9.71	0.67	0.93	1.00	32.3	11.44	0.72	1.00	1.00
21.7°C	1888	41.6	7.09	0.42	0.56	0.68	38.9	8.28	0.42	0.57	0.70	35.8	9.72	0.43	0.58	0.73	32.2	11.43	0.44	0.61	0.77
	2360	43.2	7.10	0.43	0.59	0.74	40.2	8.29	0.44	0.60	0.76	37.0	9.73	0.45	0.63	0.80	33.3	11.44	0.47	0.66	0.88
	2832	44.3	7.11	0.45	0.62	0.79	41.3	8.30	0.45	0.65	0.84	37.9	9.73	0.47	0.67	0.90	34.1	11.47	0.49	0.71	0.97

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		46°C					48°C					50°C									
		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							
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1888	30.9	10.18	0.84	1.00	1.00	30.3	10.60	0.80	1.00	1.00	29.6	11.03	0.82	1.00	1.00					
	2360	32.9	10.21	0.92	1.00	1.00	32.2	10.62	0.90	1.00	1.00	31.4	11.05	0.93	1.00	1.00					
	2832	34.3	10.22	0.98	1.00	1.00	33.6	10.64	0.99	1.00	1.00	32.8	11.06	1.00	1.00	1.00					
19.4°C	1888	32.6	10.20	0.63	0.81	0.98	31.7	10.60	0.61	0.77	0.99	31.0	11.03	0.61	0.78	1.00					
	2360	33.8	10.21	0.68	0.89	1.00	32.9	10.63	0.65	0.88	1.00	32.0	11.05	0.66	0.89	1.00					
	2832	34.8	10.23	0.72	0.96	1.00	34.0	10.64	0.70	0.97	1.00	33.1	11.07	0.71	0.99	1.00					
21.7°C	1888	34.7	10.23	0.45	0.62	0.79	33.8	10.63	0.43	0.59	0.75	32.9	11.06	0.44	0.60	0.76					
	2360	35.9	10.24	0.47	0.67	0.87	35.0	10.65	0.46	0.65	0.84	34.0	11.07	0.46	0.65	0.86					
	2832	36.7	10.24	0.49	0.72	0.94	35.8	10.66	0.48	0.69	0.94	34.9	11.10	0.48	0.70	0.96					

## COOLING RATINGS

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

### TSA180S4D + TAA180S4D (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.3°C					23.9°C					29.4°C					35°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	2265	24.3	3.87	0.73	0.87	0.99	23.5	4.29	0.74	0.88	1.00	22.6	4.75	0.76	0.90	1.00	21.6	5.27	0.77	0.92	1.00
	2832	25.4	3.92	0.78	0.94	1.00	24.5	4.33	0.80	0.95	1.00	23.5	4.79	0.81	0.97	1.00	22.5	5.32	0.83	0.99	1.00
	3398	26.2	3.96	0.83	0.99	1.00	25.2	4.38	0.85	1.00	1.00	24.3	4.84	0.86	1.00	1.00	23.3	5.36	0.88	1.00	1.00
19.4°C	2265	25.6	3.93	0.58	0.71	0.84	24.7	4.35	0.59	0.72	0.85	23.8	4.81	0.60	0.73	0.87	22.8	5.33	0.60	0.75	0.89
	2832	26.7	3.99	0.61	0.76	0.91	25.7	4.40	0.62	0.78	0.92	24.7	4.86	0.63	0.79	0.94	23.6	5.37	0.64	0.81	0.96
	3398	27.4	4.03	0.64	0.81	0.97	26.5	4.44	0.65	0.83	0.98	25.4	4.90	0.66	0.85	1.00	24.3	5.41	0.68	0.87	1.00
21.7°C	2265	26.8	4.00	0.44	0.57	0.69	25.9	4.41	0.45	0.57	0.70	25.0	4.87	0.45	0.58	0.71	23.9	5.39	0.45	0.59	0.73
	2832	27.9	4.06	0.46	0.60	0.74	27.0	4.47	0.46	0.61	0.75	25.9	4.92	0.46	0.62	0.77	24.8	5.44	0.46	0.63	0.79
	3398	28.8	4.10	0.47	0.63	0.79	27.8	4.51	0.46	0.64	0.81	26.7	4.96	0.47	0.66	0.82	25.5	5.48	0.47	0.67	0.85

### TSA180S4D + TAA180S4D (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	2265	46.1	9.02	0.75	0.89	1.00	43.2	10.53	0.77	0.92	1.00	39.9	12.40	0.80	0.96	1.00	36.4	14.73	0.84	0.99	1.00
	2832	48.1	9.12	0.80	0.96	1.00	45.1	10.63	0.83	0.99	1.00	41.8	12.49	0.86	1.00	1.00	38.3	14.80	0.90	1.00	1.00
	3398	49.6	9.19	0.86	1.00	1.00	46.6	10.71	0.88	1.00	1.00	43.4	12.58	0.92	1.00	1.00	39.9	14.90	0.96	1.00	1.00
19.4°C	2265	48.5	9.15	0.59	0.73	0.86	45.6	10.66	0.60	0.75	0.89	42.1	12.51	0.62	0.78	0.92	38.2	14.80	0.64	0.81	0.97
	2832	50.6	9.25	0.62	0.78	0.93	47.2	10.75	0.64	0.81	0.96	43.7	12.60	0.66	0.84	0.99	39.5	14.86	0.69	0.89	1.00
	3398	51.9	9.32	0.66	0.84	0.99	48.6	10.82	0.68	0.87	1.00	44.7	12.64	0.70	0.90	1.00	40.4	14.91	0.73	0.95	1.00
21.7°C	2265	50.9	9.26	0.45	0.58	0.71	47.8	10.78	0.45	0.59	0.73	44.3	12.63	0.46	0.61	0.75	40.3	14.90	0.47	0.63	0.79
	2832	53.0	9.38	0.46	0.61	0.76	49.6	10.88	0.46	0.63	0.79	46.0	12.73	0.47	0.65	0.82	41.7	14.99	0.48	0.68	0.86
	3398	54.4	9.45	0.46	0.65	0.82	50.9	10.96	0.47	0.67	0.85	47.1	12.78	0.49	0.69	0.88	42.6	15.05	0.50	0.73	0.93

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	2265	38.9	13.08	0.81	0.97	1.00	38.0	13.63	0.82	0.98	1.00	37.2	14.21	0.83	0.99	1.00
	2832	40.6	13.16	0.87	1.00	1.00	39.9	13.74	0.88	1.00	1.00	39.0	14.29	0.90	1.00	1.00
	3398	42.4	13.26	0.93	1.00	1.00	41.5	13.80	0.94	1.00	1.00	40.6	14.39	0.95	1.00	1.00
19.4°C	2265	40.9	13.17	0.63	0.79	0.94	40.1	13.74	0.63	0.80	0.95	39.2	14.32	0.63	0.81	0.96
	2832	42.5	13.27	0.67	0.86	1.00	41.4	13.81	0.67	0.87	1.00	40.4	14.37	0.68	0.88	1.00
	3398	43.5	13.31	0.71	0.92	1.00	42.4	13.85	0.71	0.93	1.00	41.4	14.41	0.72	0.94	1.00
21.7°C	2265	43.0	13.29	0.46	0.62	0.76	42.1	13.85	0.45	0.62	0.77	41.3	14.43	0.46	0.63	0.78
	2832	44.7	13.39	0.47	0.66	0.83	43.7	13.93	0.47	0.66	0.84	42.6	14.50	0.48	0.67	0.86
	3398	45.7	13.45	0.49	0.70	0.90	44.6	13.97	0.49	0.71	0.91	43.5	14.55	0.50	0.72	0.92

## COOLING RATINGS

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

### TSA180S4D + (2) TAA090S4D (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.3°C					23.9°C					29.4°C					35°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1133	25.5	3.92	0.72	0.85	0.99	24.6	4.34	0.73	0.87	1.00	23.7	4.80	0.75	0.89	1.00	22.7	5.32	0.76	0.91	1.00
	1416	26.6	3.98	0.77	0.94	1.00	25.7	4.40	0.78	0.95	1.00	24.7	4.85	0.80	0.97	1.00	23.6	5.37	0.82	0.99	1.00
	1699	27.5	4.03	0.82	0.99	1.00	26.6	4.44	0.84	1.00	1.00	25.6	4.90	0.86	1.00	1.00	24.6	5.43	0.88	1.00	1.00
19.4°C	1133	26.9	4.00	0.57	0.70	0.82	26.0	4.41	0.58	0.71	0.84	25.0	4.87	0.59	0.72	0.86	23.9	5.39	0.59	0.74	0.88
	1416	28.0	4.06	0.60	0.75	0.90	27.0	4.46	0.61	0.76	0.92	25.9	4.92	0.61	0.78	0.94	24.7	5.43	0.62	0.78	0.96
	1699	28.8	4.10	0.63	0.80	0.97	27.8	4.51	0.63	0.82	0.99	26.7	4.96	0.66	0.84	1.00	25.5	5.47	0.66	0.86	1.00
21.7°C	1133	28.3	4.07	0.43	0.55	0.68	27.4	4.48	0.44	0.56	0.69	26.3	4.94	0.44	0.57	0.70	25.2	5.45	0.45	0.58	0.71
	1416	29.5	4.14	0.45	0.59	0.73	28.5	4.54	0.44	0.60	0.75	27.3	4.99	0.46	0.60	0.75	26.1	5.51	0.46	0.62	0.77
	1699	30.2	4.18	0.45	0.62	0.78	29.2	4.59	0.47	0.62	0.80	28.0	5.03	0.47	0.64	0.81	26.7	5.54	0.48	0.65	0.84

### TSA180S4D + (2) TAA090S4D (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	2265	48.3	9.12	0.73	0.88	1.00	45.3	10.64	0.76	0.91	1.00	41.9	12.50	0.78	0.95	1.00	38.1	14.79	0.82	1.00	1.00
	2832	50.3	9.22	0.79	0.96	1.00	47.2	10.73	0.82	0.99	1.00	43.9	12.60	0.85	1.00	1.00	40.2	14.91	0.90	1.00	1.00
	3398	52.2	9.32	0.85	1.00	1.00	49.2	10.85	0.88	1.00	1.00	45.7	12.70	0.92	1.00	1.00	42.0	14.99	0.97	1.00	1.00
19.4°C	2265	51.1	9.27	0.59	0.71	0.84	47.9	10.77	0.59	0.74	0.88	44.1	12.61	0.60	0.76	0.92	40.1	14.88	0.63	0.79	0.97
	2832	52.8	9.36	0.62	0.76	0.93	49.4	10.86	0.62	0.78	0.96	45.9	12.70	0.64	0.83	1.00	41.5	14.98	0.67	0.88	1.00
	3398	54.4	9.44	0.65	0.82	1.00	50.9	10.94	0.66	0.86	1.00	46.9	12.76	0.69	0.90	1.00	42.6	15.03	0.72	0.96	1.00
21.7°C	2265	53.8	9.41	0.44	0.57	0.69	50.4	10.91	0.45	0.58	0.71	46.5	12.74	0.45	0.58	0.73	42.3	15.00	0.45	0.61	0.78
	2832	55.8	9.52	0.45	0.61	0.73	52.2	11.01	0.46	0.62	0.77	48.1	12.83	0.47	0.64	0.81	43.7	15.08	0.48	0.66	0.86
	3398	57.1	9.60	0.46	0.62	0.80	53.4	11.08	0.48	0.65	0.84	49.3	12.90	0.48	0.68	0.88	44.8	15.16	0.51	0.72	0.94

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																	
		46°C					48°C					50°C							
		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					
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C				
17.2°C	2265	40.6	13.15	0.80	0.97	1.00	39.8	13.71	0.80	0.98	1.00	38.8	14.26	0.81	0.99	1.00			
	2832	42.8	13.28	0.87	1.00	1.00	42.0	13.84	0.88	1.00	1.00	41.0	14.40	0.89	1.00	1.00			
	3398	44.7	13.37	0.94	1.00	1.00	43.8	13.92	0.95	1.00	1.00	42.7	14.47	0.96	1.00	1.00			
19.4°C	2265	42.9	13.29	0.62	0.78	0.94	42.0	13.83	0.61	0.78	0.94	41.0	14.40	0.62	0.79	0.96			
	2832	44.5	13.36	0.66	0.85	1.00	43.5	13.91	0.66	0.86	1.00	42.4	14.48	0.67	0.87	1.00			
	3398	45.5	13.42	0.71	0.92	1.00	44.5	13.96	0.70	0.93	1.00	43.6	14.55	0.72	0.94	1.00			
21.7°C	2265	45.3	13.41	0.45	0.61	0.76	44.3	13.95	0.45	0.61	0.75	43.2	14.50	0.45	0.61	0.77			
	2832	46.7	13.49	0.48	0.65	0.83	45.8	14.03	0.48	0.65	0.83	44.7	14.60	0.48	0.66	0.84			
	3398	47.9	13.56	0.49	0.70	0.90	46.7	14.10	0.49	0.70	0.91	45.6	14.65	0.50	0.71	0.92			

## COOLING RATINGS

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

### TSA240S4D + TAA240S4D (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.3°C					23.9°C					29.4°C					35°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	3020	32.3	4.93	0.74	0.89	1.00	31.1	5.49	0.76	0.91	1.00	29.9	6.10	0.77	0.93	1.00	28.5	6.80	0.79	0.95	1.00
	3776	33.7	5.01	0.80	0.96	1.00	32.4	5.56	0.82	0.98	1.00	31.0	6.17	0.83	0.99	1.00	29.6	6.86	0.85	1.00	1.00
	4531	34.8	5.07	0.85	1.00	1.00	33.5	5.63	0.87	1.00	1.00	32.3	6.25	0.89	1.00	1.00	31.0	6.95	0.92	1.00	1.00
19.4°C	3020	34.2	5.04	0.59	0.72	0.85	33.0	5.59	0.60	0.74	0.87	31.6	6.21	0.60	0.75	0.89	30.1	6.89	0.61	0.76	0.92
	3776	35.6	5.12	0.62	0.78	0.93	34.2	5.67	0.63	0.80	0.95	32.8	6.28	0.64	0.82	0.97	31.2	6.96	0.65	0.83	0.99
	4531	36.6	5.19	0.66	0.84	0.99	35.1	5.72	0.66	0.85	1.00	33.5	6.33	0.67	0.87	1.00	31.9	7.01	0.70	0.90	1.00
21.7°C	3020	36.0	5.15	0.44	0.57	0.70	34.7	5.70	0.45	0.58	0.71	33.3	6.31	0.45	0.59	0.73	31.7	6.99	0.45	0.60	0.74
	3776	37.5	5.24	0.45	0.61	0.75	36.0	5.79	0.46	0.62	0.78	34.5	6.39	0.46	0.63	0.79	32.9	7.06	0.47	0.65	0.81
	4531	38.5	5.31	0.47	0.64	0.81	37.0	5.85	0.47	0.66	0.83	35.3	6.44	0.48	0.67	0.85	33.7	7.12	0.48	0.69	0.88

### TSA240S4D + TAA240S4D (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	3020	61.0	11.56	0.77	0.91	1.00	57.0	13.58	0.79	0.95	1.00	52.8	16.01	0.82	0.98	1.00	47.8	18.99	0.85	1.00	1.00
	3776	63.6	11.71	0.83	0.99	1.00	59.3	13.71	0.85	1.00	1.00	55.3	16.17	0.89	1.00	1.00	50.5	19.15	0.94	1.00	1.00
	4531	65.9	11.84	0.88	1.00	1.00	62.0	13.88	0.92	1.00	1.00	57.6	16.31	0.95	1.00	1.00	52.5	19.26	1.00	1.00	1.00
19.4°C	3020	64.6	11.77	0.60	0.74	0.88	60.2	13.77	0.61	0.76	0.92	55.7	16.20	0.63	0.80	0.95	50.2	19.15	0.65	0.83	1.00
	3776	67.1	11.92	0.64	0.81	0.96	62.4	13.90	0.65	0.83	0.99	57.4	16.31	0.67	0.87	1.00	51.7	19.21	0.70	0.92	1.00
	4531	68.7	12.02	0.67	0.86	1.00	63.9	14.00	0.70	0.90	1.00	58.7	16.37	0.72	0.93	1.00	52.9	19.30	0.76	0.99	1.00
21.7°C	3020	68.0	11.98	0.45	0.59	0.72	63.4	13.96	0.45	0.60	0.74	58.5	16.37	0.46	0.62	0.78	52.9	19.30	0.47	0.64	0.81
	3776	70.6	12.15	0.46	0.62	0.78	65.9	14.12	0.47	0.65	0.81	60.5	16.50	0.47	0.66	0.85	54.5	19.39	0.49	0.70	0.90
	4531	72.4	12.25	0.47	0.66	0.84	67.4	14.22	0.48	0.69	0.88	61.9	16.59	0.49	0.72	0.92	55.6	19.47	0.51	0.75	0.97

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil														
		46°C					48°C					50°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	3020	51.1	16.88	0.82	0.99	1.00	49.8	17.59	0.84	1.00	1.00	48.7	18.32	0.85	1.00	1.00
	3776	53.8	17.04	0.91	1.00	1.00	52.7	17.77	0.91	1.00	1.00	51.6	18.50	0.92	1.00	1.00
	4531	55.9	17.17	0.97	1.00	1.00	54.7	17.88	0.98	1.00	1.00	53.5	18.62	0.99	1.00	1.00
19.4°C	3020	54.0	17.04	0.64	0.81	0.97	52.7	17.77	0.64	0.82	0.98	51.4	18.48	0.65	0.83	0.99
	3776	55.7	17.16	0.69	0.89	1.00	54.4	17.87	0.69	0.90	1.00	52.8	18.58	0.70	0.91	1.00
	4531	56.9	17.23	0.72	0.95	1.00	55.4	17.93	0.73	0.96	1.00	54.2	18.67	0.75	0.98	1.00
21.7°C	3020	57.0	17.24	0.46	0.63	0.79	55.6	17.93	0.47	0.63	0.79	54.2	18.67	0.47	0.64	0.81
	3776	58.8	17.36	0.48	0.68	0.86	57.4	18.06	0.48	0.69	0.88	55.8	18.76	0.49	0.70	0.89
	4531	60.0	17.43	0.50	0.72	0.93	58.3	18.12	0.51	0.73	0.95	57.0	18.85	0.50	0.74	0.96

## COOLING RATINGS

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

### TSA240S4D + (2) TAA120S4D (1ST STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		18.3°C					23.9°C					29.4°C					35°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	1510	32.3	4.89	0.76	0.90	1.00	31.0	5.44	0.77	0.91	1.00	29.9	6.05	0.79	0.93	1.00	28.5	6.73	0.81	0.96	1.00
	1888	33.8	4.98	0.82	0.97	1.00	32.5	5.52	0.83	0.98	1.00	31.1	6.12	0.85	1.00	1.00	29.8	6.81	0.87	1.00	1.00
	2265	35.1	5.05	0.88	1.00	1.00	33.8	5.60	0.89	1.00	1.00	32.6	6.21	0.91	1.00	1.00	31.2	6.89	0.93	1.00	1.00
19.4°C	1510	34.2	5.01	0.60	0.74	0.87	32.9	5.55	0.60	0.75	0.88	31.6	6.15	0.62	0.77	0.90	30.1	6.82	0.63	0.78	0.92
	1888	35.7	5.09	0.64	0.80	0.94	34.2	5.62	0.65	0.81	0.96	32.7	6.22	0.65	0.83	0.98	31.2	6.89	0.67	0.85	0.99
	2265	36.7	5.15	0.66	0.85	0.99	35.1	5.68	0.68	0.87	1.00	33.6	6.28	0.69	0.89	1.00	32.0	6.95	0.70	0.91	1.00
21.7°C	1510	36.2	5.12	0.45	0.58	0.72	34.7	5.66	0.45	0.59	0.72	33.3	6.26	0.46	0.60	0.74	31.8	6.94	0.46	0.61	0.76
	1888	37.6	5.21	0.47	0.62	0.78	36.2	5.75	0.47	0.64	0.79	34.5	6.34	0.47	0.65	0.81	32.9	7.00	0.47	0.66	0.83
	2265	38.7	5.28	0.48	0.66	0.82	37.1	5.81	0.48	0.68	0.86	35.3	6.39	0.50	0.68	0.86	33.6	7.05	0.50	0.70	0.89

### TSA240S4D + (2) TAA120S4D (2ND STAGE)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		26.7°C					35°C					43.3°C					51.7°C				
		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		
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	3020	62.1	11.63	0.77	0.92	1.00	57.9	13.64	0.79	0.95	1.00	53.5	16.06	0.82	0.98	1.00	48.7	19.06	0.86	1.00	1.00
	3776	64.6	11.78	0.83	0.99	1.00	60.7	13.81	0.85	1.00	1.00	56.5	16.26	0.89	1.00	1.00	51.3	19.21	0.95	1.00	1.00
	4531	67.6	11.96	0.89	1.00	1.00	63.4	13.98	0.92	1.00	1.00	58.8	16.40	0.96	1.00	1.00	53.7	19.37	1.00	1.00	1.00
19.4°C	3020	65.6	11.84	0.60	0.74	0.88	61.2	13.84	0.62	0.77	0.92	56.4	16.25	0.63	0.80	0.95	50.9	19.20	0.66	0.84	1.00
	3776	68.2	12.00	0.64	0.81	0.96	63.4	13.98	0.66	0.84	0.99	58.3	16.36	0.68	0.87	1.00	52.5	19.29	0.71	0.93	1.00
	4531	70.0	12.11	0.67	0.87	1.00	65.1	14.09	0.69	0.90	1.00	59.8	16.48	0.73	0.95	1.00	53.8	19.36	0.76	0.99	1.00
21.7°C	3020	69.2	12.06	0.45	0.58	0.72	64.7	14.07	0.46	0.60	0.75	59.6	16.45	0.46	0.62	0.77	53.5	19.35	0.47	0.65	0.82
	3776	71.9	12.24	0.47	0.63	0.78	66.9	14.21	0.47	0.65	0.82	61.3	16.57	0.48	0.67	0.86	55.4	19.48	0.50	0.71	0.91
	4531	73.8	12.36	0.48	0.67	0.84	68.4	14.30	0.49	0.68	0.88	63.0	16.67	0.51	0.72	0.93	56.4	19.55	0.52	0.76	0.98

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		46°C					48°C					50°C									
		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							
L/s	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	kW	kW	24°C	27°C	29°C	
17.2°C	3020	51.9	16.93	0.83	0.99	1.00	50.8	17.65	0.84	1.00	1.00	49.8	18.41	0.85	1.00	1.00					
	3776	55.0	17.13	0.91	1.00	1.00	53.9	17.84	0.92	1.00	1.00	52.5	18.57	0.93	1.00	1.00					
	4531	57.4	17.28	0.98	1.00	1.00	56.0	17.97	0.99	1.00	1.00	54.8	18.73	0.99	1.00	1.00					
19.4°C	3020	54.6	17.10	0.64	0.81	0.97	53.5	17.83	0.65	0.82	0.98	52.0	18.52	0.65	0.83	0.99					
	3776	56.6	17.22	0.68	0.89	1.00	55.2	17.93	0.69	0.90	1.00	53.7	18.66	0.71	0.92	1.00					
	4531	58.0	17.32	0.74	0.96	1.00	56.5	18.03	0.75	0.97	1.00	55.1	18.74	0.76	0.98	1.00					
21.7°C	3020	57.8	17.30	0.47	0.63	0.78	56.4	18.02	0.47	0.64	0.79	55.0	18.73	0.48	0.65	0.81					
	3776	59.5	17.42	0.48	0.68	0.87	57.9	18.11	0.49	0.69	0.88	56.5	18.81	0.49	0.69	0.89					
	4531	60.8	17.51	0.51	0.73	0.94	59.3	18.20	0.52	0.74	0.96	57.9	18.92	0.52	0.75	0.97					



## REVISIONS

Sections	Description of Change
Cooling Ratings	Expanded ratings updated. Added additional data for 46°C outdoor air temperatures.
Conventional Control Systems	Added new CS7500 and CS3000 Commercial Thermostats.
Ratings	Added EER ratings for T3 conditions at 46°C. Updated expansion valve usage.



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