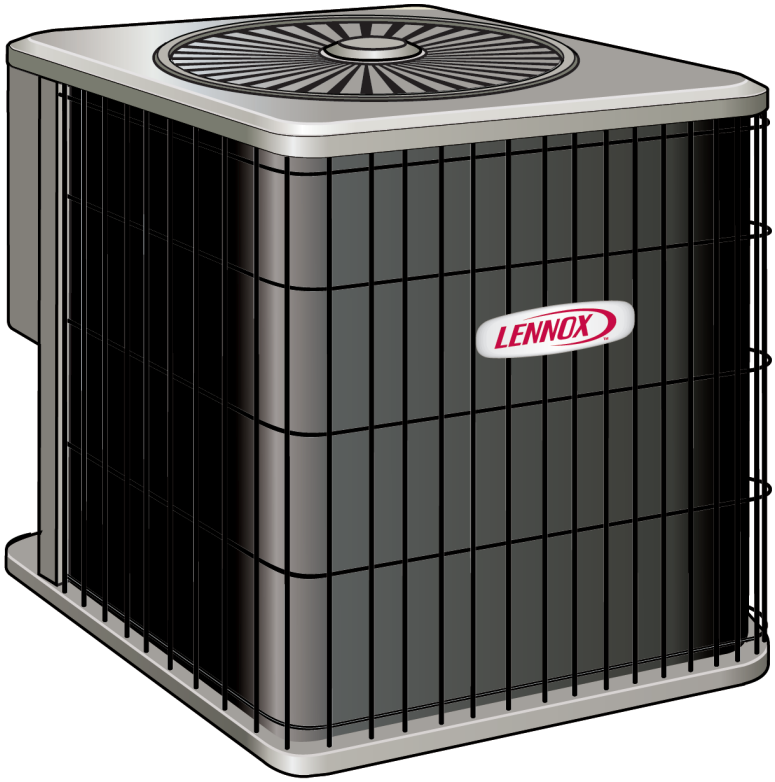
AIR CONDITIONERS

TS

T-Class™ Split System Units
R-410A - 50 HZ

PRODUCT SPECIFICATIONS

Bulletin No. 490135
February 2010
Supersedes October 2009



Nominal Capacity - 7 to 17.6 kW (2 to 5 Ton)
Cooling Capacity - 6.4 to 17.6 kW (21 800 to 60 000 Btuh)

MODEL NUMBER IDENTIFICATION

T S A 048 S 4 N 4 1 T

Family
T = Product Line

Unit Type
S = Split-System Air Conditioner

Major Design Sequence
A= First Generation
B = Second Generation

Nominal Cooling Capacity
024 = 7.0 kW (2 tons)
030 = 8.8 kW (2.5 tons)
036 = 10.5 kW (3 tons)
048 = 14.1 kW(4 tons)
060 = 17.6 kW (5 tons)

Cooling Efficiency
S = Standard Efficiency

Refrigerant Type
4 = R-410A

Part Load Capability
N = No part load, single-stage compressor

Coil Type
4 = Four-sided

Minor Design Sequence
1 = First revision
2 = Second Revision
3 = Third Revision

Voltage
T = 220/240V-1phase-50hz
M = 380/420-3phase-50hz

CONTENTS

TESTING

Rated at test conditions included in Air-Conditioning, Heating and Refrigeration Institute (AHRI) Standard 210/240 when operating at rated voltage and air volumes.

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

Units tested by Intertek for conformity assessment on the conditions set out in the New Approach Directives in support of CE marking. The CE (Conformité Européenne) marking certifies that a product has met EU (European Union) consumer safety, health or environmental requirements.

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

APPLICATIONS

7 through 17.6 kW

Single or three-phase power supply.

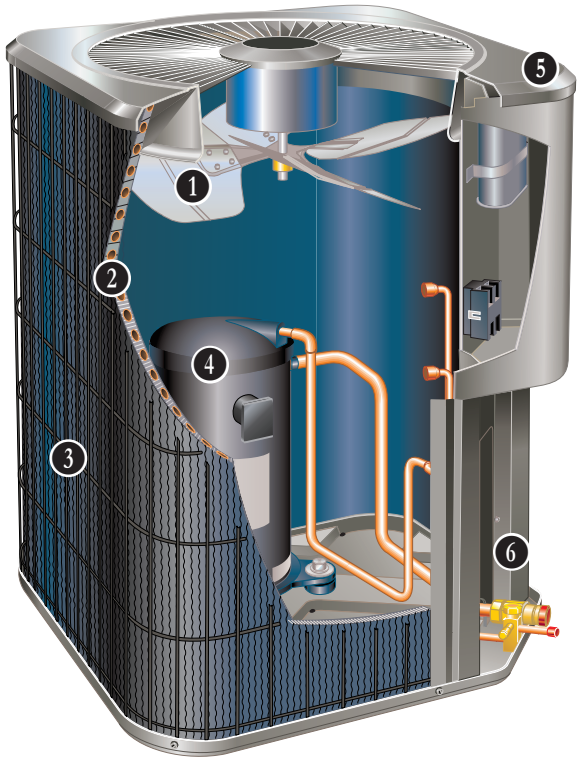
Vertical air discharge allows concealment behind shrubs at grade level or out of sight on a roof.

Matching add-on furnace indoor coils or air handlers provide a wide range of cooling capacities and applications. See Ratings table.

See Indoor Coils and Air Handlers sections for data.

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

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



REFRIGERATION SYSTEM

R-410A Refrigerant

Non-chlorine, ozone friendly, R-410A Unit pre-charged with refrigerant. See Specification table.

1. **Condenser Fan**

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

Vertical air discharge minimizes operating sounds and eliminates damage to lawn and shrubs.

Louvered steel top fan guard furnished as standard.

Fan service access accomplished by removal of top panel.

2. **Copper Tube/Enhanced Fin Coil**

Lennox designed and fabricated coil.

Ripple-edged aluminum fins.

Copper tube construction.

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

Fin collars grip tubing for maximum contact area.

Flared shoulder tubing connections/silver soldering construction.

Coil is factory tested under high pressure to ensure leakproof construction.

Entire coil is accessible for cleaning.

3. Polyvinyl Chloride (PVC) coated steel wire coil guard furnished.

FEATURES AND BENEFITS

High Capacity Liquid Line Drier

Furnished with unit for field installation.

Approved for use with R-410A systems.

Traps any moisture or dirt that could contaminate the refrigerant system.

High Pressure Switch

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

Protects compressor from excessive condensing pressure.

Manual reset.

OPTIONS

Expansion Valve Kits

Must be ordered extra and field installed on certain indoor units. See Ratings Table.

Chatleff-style fittings.

Freezestat

Installs on or near the vapor line of the indoor coil or on the suction line.

Senses suction line temperature and cycles the compressor off when suction line temperature falls below it's setpoint.

Opens at -2°C and closes at 14°C

Loss of Charge Switch Kit

Helps protect the compressor from damage due low refrigerant charge conditions.

Single Pole, Single Throw (SPST), normally-closed switch, automatic reset switch mounted on suction line.

Refrigerant Line Kits

Refrigerant lines (suction & liquid) are shipped refrigeration clean. Lines are cleaned, dried, pressurized and sealed at factory.

Suction line fully insulated.

Lines are stubbed at both ends.

Not available for -060 models. Must be field fabricated.

COMPRESSOR

4 Scroll Compressor

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 at high pressure and is forced out of a port located in the center of the fixed scrolls.

During compression, several pockets are compressed simultaneously resulting in a smooth continuous compression cycle.

Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency.

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.

Factory installed crankcase heater protects against refrigerant migration that can occur during low ambient operation.

OPTIONS

Compressor Sound Cover

A reinforced vinyl compressor cover containing a 38 mm thick batt of fiberglass insulation.

All open edges are sealed with a 25 mm wide hook and loop fastening tape.

FEATURES AND BENEFITS

CONTROLS

OPTIONS

Compressor Hard Start Kit

Single-phase units are equipped with a permanent split capacitor (PSC) compressor motor. This type of motor normally doesn't need a potential relay and start capacitor.

In conditions such as low voltage, this kit may be required to increase the compressor starting torque.

Compressor Low Ambient Cut-Off

Non-adjustable switch (low ambient cut-out) prevents compressor operation when outdoor temperature is below 2°C.

Compressor Time-Off Control

Kit prevents compressor short-cycling and allows time for suction and discharge pressure to equalize.

Permits compressor start-up in an unloaded condition.

Automatic reset with 5 minute delay between compressor shut-off and start-up.

Indoor Blower Off Delay Relay

Delays the indoor blower-off time during the cooling cycle.

See Ratings Tables for usage.

Low Ambient Kit

Air conditioners operate satisfactorily down to 7°C outdoor air temperature without any additional controls.

Low Ambient Control Kit can be field installed, allowing unit operation down to -1°C.

Thermostat

Thermostat not furnished with unit and must be ordered extra. See Page 7.

Timed-Off Control

Kit prevents compressor short-cycling and allows time for suction and discharge pressure to equalize.

Permits compressor start-up in an unloaded condition.

Automatic reset with 5 minute delay between compressor shut-off and start-up.

CABINET

5 Heavy gauge steel cabinet with five station metal wash process.

Powder paint finish provides superior rust and corrosion protection.

Painted base section.

Control box is conveniently located with all controls factory wired.

Corner patch plate allows access to compressor components.

Drainage holes are provided in base section for moisture removal.

6 **Refrigerant Line Connections, Electrical Inlets, Service Valves**

Sweat connection suction and liquid lines are located on corner of unit cabinet.

Fully serviceable brass service valves prevent corrosion and provide access to refrigerant system. Suction valve can be fully shut off, while liquid valve may be front seated to manage refrigerant charge while servicing system.

Refrigerant line connections and field wiring inlets are located in one central area of cabinet for easy access. See dimension drawing.

OPTIONS

Hail Guards

Constructed of louvered, heavy-gauge steel painted to match cabinet.

Surrounds unit on all four sides to prevent damage to the coil.

Mounting Base

Provides permanent foundation for outdoor units.

High density polyethylene structural material is lightweight, sturdy, sound absorbing and will withstand the rigors of the sun, heat, cold, moisture, oil and refrigerant. Will not mildew or rot.

Can be shipped singly or in packages of 6 to a carton.

Unit Stand-Off Kit

Black, high-density polyethylene feet are available to raise unit off of mounting surface away from damaging moisture.

Four feet are furnished per order number.

SPECIFICATIONS - SINGLE PHASE

General Data	Model No.	TSA024S4	TSA030S4	TSA036S4	TSA048S4	TSA060S4
	Nominal kW (tonnage)	7.0 (2)	8.8 (2.5)	10.5 (3)	14.1 (4)	17.6 (5)
Connections (sweat)	Liquid line o.d. - in.	3/8	3/8	3/8	3/8	3/8
	Suction line o.d. - in.	3/4	3/4	7/8	7/8	1-1/8
[1] **Refrigerant (R-410A) furnished**		1.98 kg (4 lbs. 6 oz.)	1.93 kg (4 lbs. 4 oz.)	2.89 kg (6 lbs. 6 oz.)	3.40 kg (7 lbs. 8 oz.)	4.54 kg (10 lbs.)
Outdoor Coil	Net face area m^2 (sq. ft.) Outer coil	1.05 (11.33)	1.23 (13.22)	1.52 (16.33)	1.95 (21.0)	1.73 (18.67)
	Net face area m^2 (sq. ft.) Inner coil	- - -	- - -	- - -	- - -	1.67 (17.96)
	Tube diameter - in.	5/16	5/16	5/16	5/16	5/16
	Number of rows	1	1	1	1	2
	Fins per meter (per inch)	1024 (26)	1024 (26)	1024 (26)	1024 (26)	866 (22)
Outdoor Fan	Diameter - mm.	457 (18)	457 (18)	559 (24)	559 (24)	559 (24)
	Number of blades	3	4	4	4	4
	Motor W (hp)	75 (1/10)	150 (1/5)	185 (1/4)	185 (1/4)	185 (1/4)
	L/s (cfm)	924 (1958)	944 (2000)	1377 (2917)	1443 (3058)	1416 (3000)
	Rev/min	842	908	688	696	692
	Watts	138	154	250	246	238
Shipping Data - kg (lb.) 1 package		56 (123)	60 (133)	81 (178)	88 (194)	99 (218)
ELECTRICAL DATA						
Line voltage data - 50 hz - 1 phase		220 / 240V	220 / 240V	220 / 240V	220 / 240V	220 / 240V
[2] Maximum overcurrent protection (amps)		25	25	35	35	45
[3] Minimum circuit ampacity		14.3	16.9	21.7	21.6	26.9
Compressor	Rated load amps	10.9	12.2	16.0	15.9	20.2
	Locked rotor amps	60.0	67.0	87.0	98.0	128.0
Condenser Fan Motor	Full load amps	0.7	1.1	1.7	1.7	1.7
	Locked rotor amps	1.4	2.0	3.1	3.1	3.1
OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA						
Compressor Hard Start Kit	**10J42**	•				
	88M91		•	•	•	•
Compressor Low Ambient Cut-Off	**45F08**	•	•	•	•	•
Compressor Sound Cover	**69J03**	•	•	•	•	•
Compressor Time-Off Control	**47J27**	•	•	•	•	•
Freezestat 3/8 in. tubing	**93G35**	•	•	•	•	•
5/8 in. tubing	**50A93**	•	•	•	•	•
Hail Guards	**92M87**	•	•			
	92M88			•	•	
	92M93					•
Indoor Blower Off Delay Relay	**58M81**	•	•	•	•	•
Loss of Charge Switch Kit	**84M23**	•	•	•	•	•
Low Ambient Kit	**34M72**	•	•	•	•	•
Mounting Base	**69J06**	•	•	•	•	
	69J07					•
Refrigerant Line Sets	L15-41-20, L15-41-30, L15-41-40, L15-41-50	•	•			
	L15-65-30, L15-65-40, L15-65-50			•	•	
	Field Fabricate					•
Unit Stand-Off Kit	**94J45**	•	•	•	•	•

NOTE - Extremes of operating range are plus 10% and minus 5% of line voltage.

[1] Refrigerant charge sufficient for 4.6 m (15 ft.) length of refrigerant lines.

[2] Heating Air Conditioning and Refrigeration type circuit breaker or fuse.

[3] Refer to local codes to determine wire, fuse and disconnect size requirements

SPECIFICATIONS - THREE PHASE

General Data		**Model No.**	**TSA036S4**	**TSA048S4**	**TSA060S4**
		Nominal kW (tonnage)	10.6 (3)	14.0 (4)	17.6 (5)
Connections (sweat)		Liquid line o.d. - in.	3/8	3/8	3/8
		Suction line o.d. - in.	7/8	7/8	1-1/8
[1] **Refrigerant (R-410A) furnished**			2.52 kg (5 lbs. 9 oz.)	3.40 kg (7 lbs. 8 oz.)	4.54 kg (10 lbs.)
Outdoor Coil	Net face area m^2 (sq. ft.)	Outer coil	1.23 (13.22)	1.95 (21.00)	1.73 (18.67)
		Inner coil	- - -	- - -	1.67 (17.96)
		Tube diameter - in.	5/16	5/16	5/16
		Number of rows	1	1	2
		Fins per meter (per inch)	1024 (26)	1024 (26)	866 (22)
Outdoor Fan		Diameter - mm (in.).	457 (18)	559 (22)	559 (22)
		Number of blades	4	4	4
		Motor W (hp)	125 (1/6)	185 (1/4)	185 (1/4)
		L/s (cfm)	944 (2000)	1443 (3058)	1416 (3000)
		Rev/min	908	688	692
		Watts	154	246	238
Shipping Data - kg (lb) 1 package			61 (135)	88 (194)	99 (218)
ELECTRICAL DATA					
		Line voltage data - 50 hz - 3 phase	380 / 420V	380 / 420V	380 / 420V
		[2] Maximum overcurrent protection (amps)	10	15	20
		[3] Minimum circuit ampacity	8.0	10.7	14.2
Compressor		Rated load amps	6.0	7.8	10.6
		Locked rotor amps	46.0	51.5	74.0
Condenser Fan Motor		Full load amps	0.55	1.0	1.0
		Locked rotor amps	1.1	2.3	2.3
OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA					
Compressor Crankcase Heater		**93M04**	•	•	
		93M05			•
Compressor Low Ambient Cut-Off		**45F08**	•	•	•
Compressor Sound Cover		**69J03**	•	•	•
Compressor Time-Off Control		**47J27**	•	•	•
Freezestat	3/8 in. tubing	**93G35**	•	•	•
	5/8 in. tubing	**50A93**	•	•	•
Hail Guards		**92M87**			
		92M88	•	•	
		92M93			•
Indoor Blower Off Delay Relay		**58M81**	•	•	•
Loss of Charge Switch Kit		**84M23**	•	•	•
Low Ambient Kit		**34M72**	•	•	•
Mounting Base		**69J06**	•	•	
		69J07			•
Refrigerant Line Sets		L15-65-30, L15-65-40, L15-65-50	•	•	
		Field Fabricate			•
Unit Stand-Off Kit		**94J45**	•	•	•

NOTE - Extremes of operating range are plus 10% and minus 5% of line voltage.
[1] Refrigerant charge sufficient for 4.6 m (15 ft.) length of refrigerant lines.
[2] Heating Air Conditioning and Refrigeration type circuit breaker or fuse.
[3] Refer to local codes to determine wire, fuse and disconnect size requirements.

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS - FIELD INSTALLED

COMMERCIAL TOUCHSCREEN THERMOSTAT

Intuitive Touchscreen Interface - **Two Stage Heating / Two Stage Cooling Conventional or Heat Pump** - Seven Day Programmable - Four Time Periods/Day - Economizer Output - Title 24 Compliant - ENERGY STAR® Qualified - Backlit Display - Automatic Changeover	C0STAT02AE1L **(14W81)**
Sensors For Touchscreen Thermostat	
[1] Remote non-adjustable wall mount 20k temperature sensor	C0SNZN01AE2- **(47W36)**
[1] Remote non-adjustable wall mount 10k averaging temperature sensor	C0SNZN73AE1- **(47W37)**
[1] Remote non-adjustable duct mount temperature sensor	C0SNDC00AE1- **(19L22)**
Outdoor temperature sensor.....	C0SNSR03AE1- **(X4148)**
Accessories For Touchscreen Thermostat	
Locking cover (clear)	C0MISC15AE1- **(39P21)**

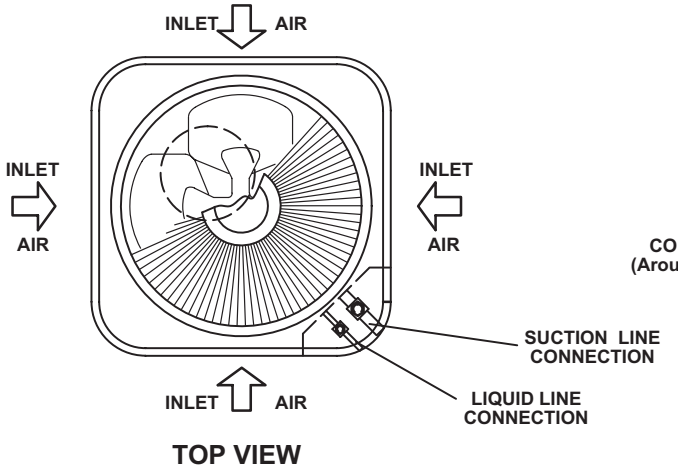
[1] Remote sensors for C0STAT02AE1L can be applied in the following combinations: (1) C0SNZN01AE1-, (2) C0SNZN73AE1-, (2) C0SNZN01AE1- and (1) C0SNZN73AE1-, (4) C0SNZN01AE1-, (3) C0SNZN01AE1- and (2) C0SNZN73AE1.

DIGITAL NON-PROGRAMMABLE THERMOSTATS

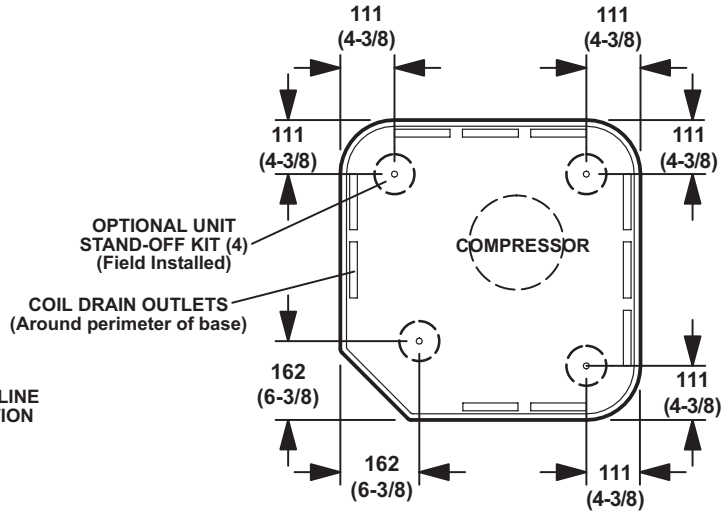
Intuitive Interface - Automatic Changeover - Simple Up and Down Temperature Control	
Two-stage heating / cooling conventional systems	C0STAT10AE1L **(13K98)**
Sensor For Digital Non-Programmable Thermostats Above	
Remote wall mounted temperature sensor.....	C0SNZN00AE1- **(26K57)**

Intuitive Interface - Automatic Changeover - Backlit Display - Simple Up and Down Temperature Control	
One-stage heating / cooling conventional systems	C0STAT12AE1L **(51M32)**
Sensor For Digital Non-Programmable Thermostats Above	
Outdoor temperature sensor.....	C0SNSR04AE1- **(X2658)**
Accessories For Digital Non-Programmable Thermostats Above	
Optional wall mounting plate.....	C0MISC17AE1- **(X2659)**

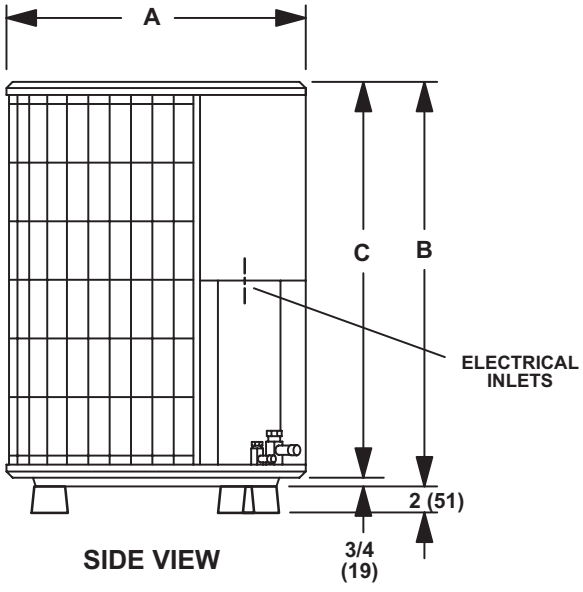
DIMENSIONS - MM (INCHES)



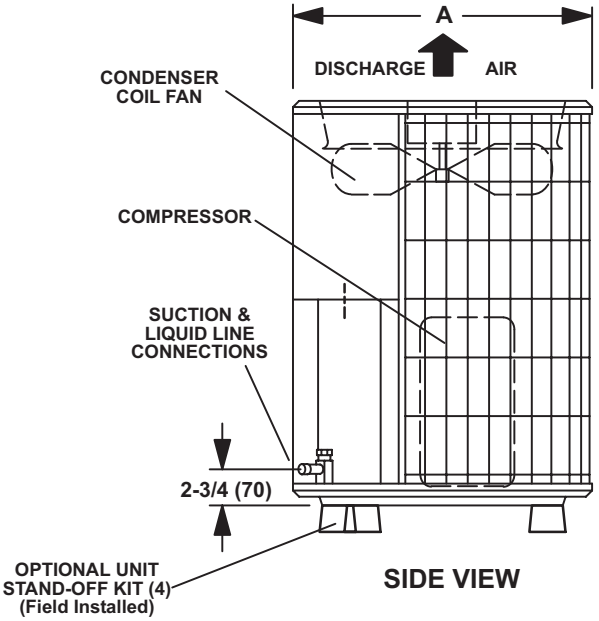
TOP VIEW



TOP VIEW BASE SECTION



SIDE VIEW



SIDE VIEW

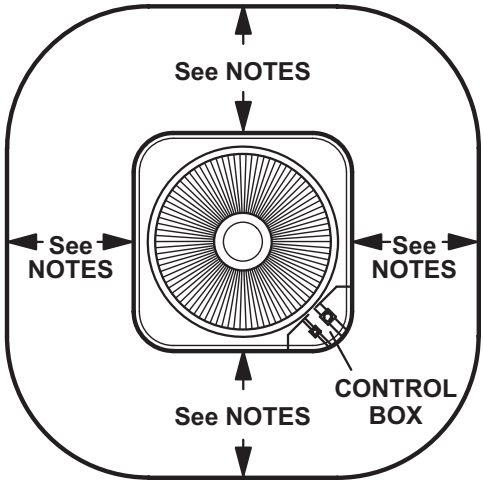
Model No.	A		B		C	
	mm	inches	mm	inches	mm	inches
TSA024S4	616	24-1/4	641	25-1/4	616	24-1/4
TSA030S4	616	24-1/4	743	29-1/4	724	28-1/2
TSA036S4 - Single Phase	616	24-1/4	743	29-1/4	724	28-1/2
TSA036S4 - Three Phase	718	28-1/4	743	29-1/4	724	28-1/2
TSA048S4	718	28-1/4	946	37-1/4	921	36-1/4
TSA060S4	718	28-1/4	845	33-1/4	826	32-1/2

SOUND DATA

[1] Unit Model No.	Octave Band Sound Power Levels dBA, re 10^{-12} Watts Center Frequency - HZ							[1] Sound Rating Number (dB)
	125	250	500	1000	2000	4000	8000	
220/240V - Single Phase Models								
TSA024S4	51.5	62	64.5	68.5	67	60.5	53.5	76
TSA030S4	52.5	62	67.5	69	67	61.5	54.5	76
TSA036S4	58	68	73.5	75.5	74	69.5	62.5	80
TSA048S4	57.5	67	73	74.5	71	64	58.5	80
TSA060S4	57	63	69.5	71.5	71	65.5	60.5	80
380/420V - Three Phase Models								
TSA036S4	52.5	61	67	69	67	61.5	52.5	80
TSA048S4	57.5	67	73	74.5	71	64	58.5	80
TSA060S4	57	63	69.5	71.5	71	65.5	60.5	80

NOTE - the octave sound power data does not include tonal correction.
[1] Tested according to Air-Conditioning, Heating and Refrigeration Institute (AHRI) Standard 270-95 test conditions.

INSTALLATION CLEARANCES - MM (INCHES)



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.

RATINGS - SINGLE PHASE

Model Number	Gross Cooling Capacity		Net Cooling Capacity		Total Power Input kW	EER (Energy Efficiency Rating)	COP (Coefficient of Perfomance) Output/Input	Indoor Unit Model Number	Expansion Device Required
	kW	Btuh	kW	Btuh					
TSA024S4	7.0	23 800	6.6	22 600	2.10	10.75	3.15	BCRMA7924S005	Factory Installed
TSA024S4	6.9	23 600	6.6	22 600	2.04	11.10	3.25	CX34-30A/B/C-6F	Factory Installed
TSA024S4	6.7	22 800	6.4	21 800	2.03	10.75	3.15	CR33-24B-F	**37L51**
TSA024S4	6.9	23 600	6.6	22 600	2.04	11.10	3.25	CH33-25B-2F	**37L51**
TSA030S4	8.4	28 500	8.0	27 200	2.47	11.00	3.22	BCRMA7924S005	Factory Installed
TSA030S4	8.3	28 300	7.9	27 000	2.45	11.05	3.24	CX34-30A/B/C-6F	Factory Installed
TSA030S4	8.7	29 600	8.3	28 400	2.46	11.55	3.38	CR33-30/36B-F	**37L51**
TSA030S4	8.9	30 200	8.5	29 000	2.47	11.75	3.44	CH33-31B-2F	**37L51**
TSA036S4	10.5	35 900	9.9	33 800	3.31	10.20	2.99	BCRMB9937S005	Factory Installed
TSA036S4	10.2	34 900	9.8	33 400	3.10	10.75	3.15	CX34-36B/C-6F	Factory Installed
TSA036S4	10.3	35 200	9.9	33 800	3.11	10.90	3.19	CR33-30/36B-F	**37L51**
TSA036S4	10.2	34 800	9.8	33 400	3.10	10.75	3.15	CH33-36B-2F	**37L51**
TSA048S4	14.3	48 600	13.5	46 000	4.52	10.20	2.99	BCRMC9960S005	Factory Installed
TSA048S4	14.1	47 900	13.5	46 000	4.30	10.70	3.14	CX34-44/48C-6F	Factory Installed
TSA048S4	13.8	47 200	13.2	45 000	4.29	10.50	3.08	CR33-48C-F	**91M02**
TSA048S4	14.3	48 600	13.6	46 500	4.31	10.80	3.17	CH33-48C-2F	**91M02**
TSA060S4	15.8	53 700	14.8	50 500	4.82	10.50	3.08	BCRMD1960S005	Factory Installed
TSA060S4	16.1	54 800	15.4	52 500	4.67	11.25	3.30	CX34-62D-6F	Factory Installed
TSA060S4	15.8	53 800	14.9	51 000	4.65	11.00	3.22	CR33-60D-F	**91M02**
TSA060S4	15.8	54 000	15.1	51 500	4.65	11.10	3.25	CH33-60D-2F	**91M02**

Rating test conditions are those included in Air-Conditioning and Refrigeration Institute (ARI) Standard 210/240; 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.

All ratings include the use of a blower time delay relay (TDR). Furnaces and Air Handlers may require an optional time delay relay (**58M81**) for field installation. See furnace or air handler specifications to determine if relay is needed.

RATINGS - THREE PHASE

Model Number	Gross Cooling Capacity		Net Cooling Capacity		Total Power Input	EER (Energy Efficiency Rating)	COP (Coefficient of Perfomance) Output/Input	Indoor Unit Model Number	Expansion Device Required
	kW	Btuh	kW	Btuh					
TSA036S4	10.0	34 200	9.4	32 200	3.28	9.85	2.89	BCRMB9937S005	**37L51**
TSA036S4	9.9	33 600	9.4	32 200	3.07	10.50	3.08	CX34-36B/C-6F	Factory Installed
TSA036S4	10.0	34 000	9.6	32 600	3.07	10.60	3.11	CR33-30/36B-F	**37L51**
TSA036S4	9.8	33 500	9.4	32 000	3.07	10.40	3.05	CH33-36B-2F	**37L51**
TSA048S4	14.2	48 300	13.3	45 500	4.42	10.30	3.02	BCRMC9960S005	**91M02**
TSA048S4	14.0	47 600	13.3	45 500	4.20	10.85	3.18	CX34-44/48C-6F	Factory Installed
TSA048S4	13.8	46 900	13.2	45 000	4.19	10.75	3.15	CR33-48C-F	**91M02**
TSA048S4	14.2	48 400	13.6	46 500	4.21	11.05	3.24	CH33-48C-2F	**91M02**
TSA060S4	17.9	61 100	17.0	58 000	5.85	9.90	2.90	BCRMD1960S005	**91M02**
TSA060S4	18.3	62 400	17.6	60 000	5.71	10.50	3.08	CX34-62D-6F	Factory Installed
TSA060S4	17.9	61 000	17.1	58 500	5.68	10.30	3.02	CR33-60D-F	**91M02**
TSA060S4	18.0	61 500	17.3	59 000	5.69	10.40	3.05	CH33-60D-2F	**91M02**

Rating test conditions are those included in Air-Conditioning and Refrigeration Institute (ARI) Standard 210/240; 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.

All ratings include the use of a blower time delay relay (TDR). Furnaces and Air Handlers may require an optional time delay relay (**58M81**) for field installation. See furnace or air handler specifications to determine if relay is needed.

EXPANDED RATINGS - SINGLE PHASE MODELS

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

TSA024S4 Cooling Capacity with BCRMA7924S005

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	315	6.8	1.31	0.75	0.88	0.99	6.3	1.60	0.77	0.91	1.00	5.8	1.94	0.81	0.96	1.00	5.1	2.38	0.86	1.00	1.00
	390	7.1	1.32	0.79	0.94	1.00	6.6	1.60	0.83	0.98	1.00	6.1	1.95	0.87	1.00	1.00	5.5	2.39	0.94	1.00	1.00
	470	7.4	1.32	0.84	0.99	1.00	6.9	1.60	0.89	1.00	1.00	6.4	1.96	0.94	1.00	1.00	5.7	2.40	1.00	1.00	1.00
19°C	315	7.2	1.32	0.60	0.72	0.84	6.7	1.60	0.62	0.75	0.88	6.1	1.95	0.64	0.78	0.93	5.4	2.39	0.67	0.84	0.99
	390	7.5	1.32	0.63	0.77	0.91	7.0	1.61	0.65	0.80	0.95	6.4	1.95	0.68	0.85	1.00	5.6	2.40	0.72	0.92	1.00
	470	7.8	1.32	0.66	0.82	0.98	7.2	1.61	0.69	0.86	1.00	6.6	1.96	0.72	0.92	1.00	5.8	2.40	0.77	0.99	1.00
22°C	315	7.6	1.32	0.47	0.58	0.70	7.1	1.61	0.47	0.60	0.72	6.4	1.96	0.49	0.62	0.76	5.7	2.40	0.50	0.66	0.81
	390	7.9	1.32	0.48	0.62	0.75	7.4	1.61	0.49	0.64	0.78	6.7	1.96	0.51	0.67	0.82	5.9	2.41	0.52	0.71	0.89
	470	8.2	1.33	0.50	0.65	0.80	7.6	1.61	0.51	0.68	0.83	6.9	1.96	0.52	0.71	0.89	6.1	2.41	0.56	0.76	0.97

TSA024S4 Cooling Capacity with CX34-30A/B/C

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	330	6.9	1.31	0.76	0.90	1.00	6.4	1.60	0.79	0.93	1.00	5.8	1.94	0.83	0.98	1.00	5.2	2.38	0.89	1.00	1.00
	380	7.1	1.32	0.79	0.93	1.00	6.5	1.60	0.82	0.98	1.00	6.0	1.95	0.87	1.00	1.00	5.4	2.39	0.93	1.00	1.00
	425	7.2	1.32	0.82	0.97	1.00	6.7	1.60	0.85	1.00	1.00	6.2	1.95	0.90	1.00	1.00	5.6	2.40	0.97	1.00	1.00
19°C	330	7.2	1.32	0.62	0.74	0.86	6.7	1.60	0.63	0.77	0.90	6.2	1.95	0.65	0.80	0.95	5.4	2.39	0.69	0.86	1.00
	380	7.4	1.32	0.63	0.77	0.90	6.9	1.61	0.65	0.80	0.94	6.3	1.95	0.67	0.84	0.99	5.6	2.40	0.71	0.90	1.00
	425	7.6	1.32	0.65	0.80	0.94	7.1	1.60	0.67	0.83	0.98	6.4	1.96	0.70	0.88	1.00	5.7	2.40	0.74	0.94	1.00
22°C	330	7.6	1.32	0.47	0.60	0.72	7.1	1.61	0.48	0.62	0.74	6.4	1.96	0.49	0.64	0.78	5.7	2.39	0.50	0.67	0.83
	380	7.8	1.32	0.48	0.62	0.75	7.3	1.61	0.49	0.64	0.77	6.7	1.96	0.50	0.66	0.81	5.9	2.40	0.52	0.70	0.87
	425	8.0	1.33	0.49	0.64	0.77	7.4	1.61	0.50	0.66	0.81	6.8	1.96	0.51	0.69	0.85	6.0	2.41	0.54	0.73	0.92

TSA024S4 Cooling Capacity with CR33-24B-F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	330	6.6	1.31	0.75	0.88	0.99	6.1	1.59	0.77	0.91	1.00	5.6	1.94	0.81	0.96	1.00	5.0	2.37	0.86	1.00	1.00
	380	6.8	1.31	0.78	0.92	1.00	6.3	1.60	0.80	0.95	1.00	5.8	1.94	0.84	0.99	1.00	5.2	2.38	0.90	1.00	1.00
	425	7.0	1.32	0.80	0.95	1.00	6.5	1.60	0.83	0.98	1.00	6.0	1.95	0.88	1.00	1.00	5.4	2.39	0.94	1.00	1.00
19°C	330	7.1	1.32	0.61	0.73	0.85	6.6	1.60	0.62	0.75	0.88	5.9	1.94	0.64	0.79	0.93	5.2	2.39	0.67	0.84	0.98
	380	7.2	1.32	0.62	0.75	0.89	6.7	1.60	0.64	0.78	0.92	6.1	1.95	0.66	0.82	0.97	5.4	2.39	0.70	0.88	1.00
	425	7.4	1.32	0.64	0.78	0.92	6.8	1.60	0.65	0.81	0.96	6.2	1.95	0.68	0.85	0.99	5.5	2.39	0.72	0.91	1.00
22°C	330	7.5	1.32	0.47	0.59	0.70	6.9	1.60	0.48	0.61	0.73	6.3	1.96	0.49	0.63	0.76	5.6	2.40	0.51	0.66	0.81
	380	7.6	1.32	0.48	0.61	0.73	7.1	1.61	0.49	0.63	0.76	6.5	1.96	0.50	0.65	0.79	5.7	2.40	0.52	0.69	0.86
	425	7.9	1.32	0.49	0.62	0.76	7.3	1.61	0.50	0.64	0.79	6.6	1.96	0.51	0.67	0.83	5.8	2.40	0.53	0.71	0.89

TSA024S4 Cooling Capacity with CH33-25B-2F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	330	7.1	1.32	0.77	0.91	1.00	6.5	1.60	0.80	0.95	1.00	5.9	1.95	0.84	1.00	1.00	5.3	2.39	0.90	1.00	1.00
	380	7.3	1.32	0.81	0.96	1.00	6.7	1.60	0.84	0.99	1.00	6.2	1.95	0.88	1.00	1.00	5.5	2.39	0.95	1.00	1.00
	425	7.5	1.32	0.84	0.99	1.00	6.9	1.60	0.87	1.00	1.00	6.4	1.95	0.92	1.00	1.00	5.7	2.40	0.99	1.00	1.00
19°C	330	7.4	1.32	0.62	0.75	0.88	6.9	1.60	0.63	0.78	0.92	6.3	1.95	0.66	0.81	0.97	5.5	2.39	0.69	0.87	1.00
	380	7.6	1.32	0.64	0.78	0.92	7.1	1.61	0.66	0.81	0.96	6.4	1.96	0.68	0.86	1.00	5.7	2.40	0.72	0.92	1.00
	425	7.8	1.32	0.66	0.81	0.97	7.2	1.61	0.68	0.85	1.00	6.6	1.96	0.71	0.90	1.00	5.7	2.40	0.75	0.97	1.00
22°C	330	7.7	1.32	0.48	0.60	0.73	7.2	1.61	0.48	0.62	0.75	6.6	1.96	0.49	0.64	0.79	5.8	2.40	0.51	0.68	0.85
	380	8.0	1.32	0.48	0.62	0.76	7.4	1.61	0.49	0.64	0.79	6.7	1.96	0.50	0.67	0.83	5.9	2.41	0.52	0.71	0.90
	425	8.2	1.33	0.49	0.64	0.79	7.6	1.61	0.50	0.67	0.83	6.9	1.96	0.52	0.70	0.87	6.1	2.41	0.54	0.75	0.94

EXPANDED RATINGS - SINGLE PHASE MODELS

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

TSA030S4 Cooling Capacity with BCRMA7924S005

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	355	8.1	1.56	0.75	0.86	0.98	7.6	1.90	0.76	0.89	1.00	6.9	2.32	0.79	0.94	1.00	6.2	2.83	0.83	0.99	1.00
	445	8.6	1.58	0.78	0.93	1.00	8.0	1.91	0.81	0.97	1.00	7.3	2.33	0.85	1.00	1.00	6.6	2.85	0.91	1.00	1.00
	535	8.9	1.59	0.83	0.99	1.00	8.3	1.92	0.86	1.00	1.00	7.6	2.35	0.91	1.00	1.00	6.9	2.86	0.97	1.00	1.00
19°C	355	8.6	1.57	0.60	0.72	0.83	8.0	1.91	0.61	0.74	0.86	7.3	2.33	0.63	0.77	0.90	6.5	2.84	0.66	0.81	0.96
	445	9.0	1.59	0.62	0.76	0.89	8.4	1.93	0.64	0.79	0.93	7.6	2.35	0.67	0.83	0.98	6.8	2.86	0.68	0.88	1.00
	535	9.3	1.60	0.65	0.81	0.96	8.7	1.94	0.67	0.84	0.99	7.9	2.35	0.70	0.89	1.00	7.0	2.87	0.74	0.95	1.00
22°C	355	9.0	1.59	0.46	0.58	0.69	8.4	1.93	0.47	0.60	0.71	7.7	2.35	0.48	0.61	0.74	6.9	2.86	0.50	0.64	0.79
	445	9.5	1.60	0.48	0.61	0.74	8.8	1.94	0.49	0.63	0.76	8.0	2.36	0.50	0.65	0.80	7.1	2.88	0.51	0.69	0.86
	535	9.8	1.61	0.49	0.64	0.79	9.1	1.96	0.51	0.66	0.82	8.3	2.37	0.52	0.69	0.86	7.3	2.88	0.54	0.73	0.93

TSA030S4 Cooling Capacity with CX34-30A/B/C-6F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	355	8.0	1.67	.74	.87	.99	7.6	1.90	.76	.89	1.00	7.2	2.17	.78	.92	1.00	6.7	2.48	.80	.96	1.00
	445	8.4	1.68	.79	.94	1.00	7.9	1.91	.81	.97	1.00	7.5	2.18	.84	.99	1.00	7.0	2.49	.87	1.00	1.00
	535	8.7	1.69	.84	.99	1.00	8.1	1.92	.86	1.00	1.00	7.9	2.19	.89	1.00	1.00	7.4	2.50	.93	1.00	1.00
19°C	355	8.4	1.68	.60	.72	.84	8.1	1.91	.61	.74	.86	7.6	2.18	.62	.75	.89	7.0	2.49	.63	.78	.92
	445	8.8	1.69	.63	.77	.91	8.3	1.93	.64	.79	.93	7.9	2.20	.66	.81	.97	7.4	2.50	.68	.84	.99
	535	9.1	1.71	.66	.82	.97	8.5	1.94	.67	.84	.99	8.1	2.20	.69	.87	1.00	7.6	2.51	.71	.91	1.00
22°C	355	8.9	1.70	.47	.59	.70	8.4	1.93	.47	.60	.71	7.9	2.20	.48	.61	.73	7.4	2.51	.49	.62	.75
	445	9.3	1.71	.48	.62	.75	8.7	1.94	.49	.63	.76	8.3	2.21	.50	.65	.79	7.7	2.52	.50	.66	.82
	535	9.6	1.72	.50	.65	.80	8.9	1.96	.51	.66	.82	8.6	2.22	.51	.68	.85	8.0	2.53	.52	.70	.88

TSA030S4 Cooling Capacity with CR33-30/36B-F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	400	8.7	1.58	0.78	0.92	1.00	8.1	1.92	0.80	0.95	1.00	7.3	2.33	0.84	0.99	1.00	6.6	2.85	0.90	1.00	1.00
	470	9.0	1.59	0.82	0.97	1.00	8.3	1.92	0.85	1.00	1.00	7.6	2.34	0.89	1.00	1.00	6.9	2.86	0.95	1.00	1.00
	545	9.2	1.59	0.85	1.00	1.00	8.6	1.93	0.89	1.00	1.00	7.9	2.35	0.93	1.00	1.00	7.1	2.87	0.99	1.00	1.00
19°C	400	9.1	1.59	0.62	0.75	0.89	8.4	1.93	0.63	0.78	0.92	7.7	2.35	0.66	0.82	0.97	6.8	2.86	0.69	0.87	1.00
	470	9.4	1.60	0.64	0.79	0.94	8.7	1.94	0.66	0.83	0.97	7.9	2.36	0.69	0.87	1.00	7.0	2.87	0.73	0.92	1.00
	545	9.6	1.61	0.67	0.83	0.98	8.9	1.94	0.69	0.87	1.00	8.1	2.36	0.72	0.91	1.00	7.1	2.87	0.76	0.97	1.00
22°C	400	9.6	1.60	0.47	0.60	0.73	8.9	1.95	0.48	0.62	0.76	8.1	2.37	0.49	0.64	0.80	7.2	2.88	0.51	0.68	0.85
	470	9.9	1.62	0.49	0.63	0.77	9.1	1.96	0.49	0.65	0.80	8.3	2.37	0.50	0.68	0.84	7.4	2.88	0.53	0.72	0.90
	545	10.1	1.62	0.50	0.66	0.81	9.3	1.96	0.51	0.68	0.85	8.4	2.38	0.52	0.71	0.89	7.4	2.89	0.55	0.76	0.96

TSA030S4 Cooling Capacity with CH33-31B-2F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	400	8.8	1.58	0.77	0.91	1.00	8.1	1.92	0.80	0.95	1.00	7.4	2.33	0.84	0.99	1.00	6.7	2.85	0.89	1.00	1.00
	470	9.1	1.59	0.81	0.97	1.00	8.4	1.93	0.84	1.00	1.00	7.7	2.35	0.89	1.00	1.00	6.9	2.86	0.95	1.00	1.00
	545	9.3	1.60	0.85	1.00	1.00	8.7	1.94	0.88	1.00	1.00	8.0	2.36	0.93	1.00	1.00	7.2	2.88	1.00	1.00	1.00
19°C	400	9.3	1.60	0.62	0.75	0.88	8.6	1.94	0.63	0.78	0.92	7.8	2.35	0.65	0.81	0.96	6.9	2.87	0.68	0.87	1.00
	470	9.6	1.61	0.64	0.79	0.94	8.9	1.95	0.66	0.82	0.97	8.1	2.36	0.68	0.86	1.00	7.1	2.87	0.72	0.92	1.00
	545	9.8	1.61	0.65	0.83	0.98	9.1	1.95	0.68	0.86	1.00	8.2	2.37	0.71	0.91	1.00	7.2	2.88	0.76	0.98	1.00
22°C	400	9.7	1.61	0.47	0.60	0.72	9.0	1.95	0.48	0.62	0.75	8.2	2.37	0.49	0.63	0.79	7.3	2.88	0.50	0.68	0.84
	470	10.0	1.62	0.48	0.63	0.77	9.3	1.96	0.49	0.65	0.80	8.4	2.38	0.51	0.67	0.84	7.5	2.89	0.52	0.71	0.90
	545	10.3	1.63	0.50	0.64	0.80	9.5	1.97	0.49	0.67	0.84	8.6	2.38	0.52	0.70	0.89	7.6	2.90	0.54	0.75	0.96

EXPANDED RATINGS - SINGLE PHASE MODELS

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

TSA036S4 Cooling Capacity with BCRMB9937S005

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	455	10.2	1.95	0.75	0.88	0.99	9.4	2.40	0.78	0.91	1.00	8.6	2.94	0.81	0.96	1.00	7.7	3.61	0.86	1.00	1.00
	570	10.7	1.96	0.80	0.94	1.00	9.9	2.41	0.83	0.98	1.00	9.1	2.94	0.87	1.00	1.00	8.2	3.63	0.94	1.00	1.00
	685	11.2	1.97	0.85	0.99	1.00	10.4	2.42	0.88	1.00	1.00	9.6	2.96	0.93	1.00	1.00	8.6	3.64	0.99	1.00	1.00
19°C	455	10.9	1.97	0.61	0.73	0.85	10.1	2.41	0.62	0.75	0.88	9.1	2.95	0.64	0.79	0.93	8.1	3.62	0.67	0.84	0.99
	570	11.4	1.98	0.64	0.77	0.91	10.5	2.42	0.66	0.81	0.95	9.5	2.96	0.68	0.85	1.00	8.4	3.63	0.72	0.91	1.00
	685	11.8	1.98	0.67	0.82	0.97	10.8	2.42	0.69	0.86	1.00	9.8	2.96	0.72	0.91	1.00	8.6	3.64	0.76	0.98	1.00
22°C	455	11.5	1.98	0.47	0.59	0.70	10.7	2.42	0.48	0.61	0.73	9.7	2.96	0.49	0.63	0.76	8.6	3.64	0.51	0.66	0.81
	570	12.0	1.99	0.49	0.62	0.75	11.1	2.43	0.50	0.64	0.78	10.1	2.98	0.51	0.67	0.82	8.9	3.65	0.53	0.71	0.88
	685	12.5	2.00	0.51	0.65	0.80	11.5	2.44	0.52	0.68	0.84	10.4	2.98	0.53	0.71	0.89	9.1	3.65	0.56	0.76	0.95

TSA036S4 Cooling Capacity with CX34-36B/C-6F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	470	10.1	1.95	0.76	0.90	1.00	9.4	2.39	0.79	0.93	1.00	8.5	2.93	0.83	0.98	1.00	7.6	3.61	0.88	1.00	1.00
	565	10.5	1.96	0.80	0.95	1.00	9.7	2.40	0.83	0.98	1.00	8.9	2.94	0.87	1.00	1.00	8.0	3.62	0.93	1.00	1.00
	660	10.9	1.97	0.84	0.99	1.00	10.1	2.41	0.87	1.00	1.00	9.3	2.95	0.92	1.00	1.00	8.3	3.63	0.99	1.00	1.00
19°C	470	10.7	1.96	0.61	0.74	0.86	9.9	2.40	0.63	0.77	0.90	9.0	2.95	0.65	0.80	0.95	8.0	3.62	0.68	0.85	1.00
	565	11.1	1.97	0.63	0.78	0.92	10.2	2.41	0.65	0.81	0.96	9.3	2.95	0.68	0.85	1.00	8.2	3.62	0.72	0.91	1.00
	660	11.4	1.98	0.66	0.82	0.97	10.5	2.42	0.68	0.85	1.00	9.5	2.96	0.71	0.90	1.00	8.4	3.64	0.76	0.97	1.00
22°C	470	11.1	1.97	0.47	0.60	0.71	10.3	2.42	0.48	0.61	0.74	9.4	2.96	0.49	0.64	0.78	8.4	3.63	0.51	0.67	0.83
	565	11.6	1.98	0.48	0.62	0.75	10.7	2.42	0.49	0.64	0.78	9.8	2.97	0.50	0.67	0.82	8.6	3.64	0.52	0.70	0.88
	660	12.0	1.99	0.50	0.65	0.79	11.0	2.43	0.51	0.67	0.83	10.0	2.97	0.52	0.70	0.88	8.8	3.64	0.54	0.75	0.95

TSA036S4 Cooling Capacity with CR33-30/36B-F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	470	10.2	1.95	0.76	0.90	1.00	9.5	2.40	0.79	0.93	1.00	8.6	2.93	0.83	0.98	1.00	7.7	3.61	0.88	1.00	1.00
	565	10.6	1.96	0.80	0.95	1.00	9.8	2.40	0.83	0.98	1.00	9.0	2.95	0.88	1.00	1.00	8.0	3.62	0.93	1.00	1.00
	660	11.0	1.97	0.84	0.99	1.00	10.2	2.41	0.88	1.00	1.00	9.3	2.95	0.93	1.00	1.00	8.4	3.63	0.99	1.00	1.00
19°C	470	10.8	1.97	0.61	0.74	0.87	10.0	2.41	0.63	0.76	0.90	9.1	2.94	0.65	0.80	0.95	8.1	3.62	0.68	0.85	1.00
	565	11.2	1.97	0.63	0.78	0.92	10.3	2.41	0.65	0.81	0.96	9.4	2.96	0.68	0.85	1.00	8.3	3.63	0.72	0.91	1.00
	660	11.5	1.98	0.66	0.82	0.97	10.6	2.42	0.68	0.86	1.00	9.6	2.96	0.71	0.90	1.00	8.5	3.63	0.76	0.97	1.00
22°C	470	11.4	1.98	0.47	0.59	0.71	10.6	2.42	0.48	0.61	0.74	9.6	2.96	0.49	0.63	0.78	8.5	3.64	0.50	0.67	0.83
	565	11.8	1.99	0.48	0.62	0.75	10.9	2.43	0.49	0.64	0.79	9.9	2.97	0.50	0.67	0.83	8.7	3.64	0.52	0.71	0.89
	660	12.2	1.99	0.50	0.65	0.80	11.2	2.44	0.51	0.67	0.83	10.1	2.97	0.52	0.70	0.88	8.9	3.65	0.54	0.75	0.95

TSA036S4 Cooling Capacity with CH33-36B-2F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	470	10.1	1.95	0.76	0.90	1.00	9.3	2.39	0.79	0.93	1.00	8.5	2.93	0.82	0.98	1.00	7.6	3.61	0.87	1.00	1.00
	565	10.5	1.96	0.80	0.95	1.00	9.7	2.40	0.83	0.98	1.00	8.9	2.94	0.87	1.00	1.00	8.0	3.62	0.93	1.00	1.00
	660	10.8	1.97	0.84	0.99	1.00	10.1	2.41	0.87	1.00	1.00	9.2	2.95	0.92	1.00	1.00	8.3	3.63	0.98	1.00	1.00
19°C	470	10.6	1.96	0.61	0.74	0.86	9.8	2.40	0.63	0.76	0.90	9.0	2.94	0.65	0.80	0.94	8.0	3.62	0.68	0.85	1.00
	565	11.0	1.97	0.63	0.77	0.91	10.2	2.41	0.65	0.80	0.95	9.3	2.95	0.67	0.84	1.00	8.2	3.62	0.71	0.91	1.00
	660	11.4	1.98	0.66	0.81	0.96	10.5	2.42	0.68	0.85	1.00	9.5	2.96	0.71	0.90	1.00	8.4	3.63	0.75	0.96	1.00
22°C	470	11.1	1.97	0.47	0.60	0.71	10.3	2.42	0.48	0.61	0.74	9.4	2.96	0.49	0.64	0.77	8.4	3.63	0.51	0.67	0.83
	565	11.6	1.98	0.48	0.62	0.75	10.7	2.42	0.49	0.64	0.78	9.7	2.96	0.50	0.66	0.82	8.6	3.64	0.52	0.70	0.88
	660	12.0	1.99	0.50	0.65	0.79	11.0	2.43	0.51	0.67	0.83	10.0	2.97	0.52	0.70	0.87	8.8	3.64	0.54	0.75	0.94

EXPANDED RATINGS - SINGLE PHASE MODELS

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

TSA048S4 Cooling Capacity with BCRMC9960S005

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	575	13.8	2.85	0.75	0.87	0.98	12.8	3.41	0.77	0.90	1.00	11.6	4.09	0.80	0.95	1.00	10.3	4.93	0.85	1.00	1.00
	715	14.5	2.89	0.79	0.94	1.00	13.4	3.44	0.82	0.98	1.00	12.3	4.12	0.87	1.00	1.00	11.0	4.97	0.93	1.00	1.00
	860	15.1	2.91	0.84	0.99	1.00	14.0	3.47	0.88	1.00	1.00	12.9	4.15	0.93	1.00	1.00	11.5	5.00	0.99	1.00	1.00
19°C	575	14.7	2.89	0.60	0.72	0.84	13.6	3.45	0.62	0.74	0.87	12.4	4.12	0.64	0.78	0.92	10.9	4.97	0.67	0.83	0.98
	715	15.4	2.93	0.63	0.77	0.90	14.2	3.48	0.65	0.80	0.94	12.9	4.16	0.68	0.84	0.99	11.3	5.00	0.72	0.91	1.00
	860	15.9	2.95	0.66	0.81	0.96	14.7	3.50	0.68	0.85	1.00	13.3	4.18	0.72	0.91	1.00	11.6	5.01	0.77	0.97	1.00
22°C	575	15.5	2.93	0.47	0.58	0.70	14.4	3.49	0.47	0.60	0.72	13.1	4.17	0.48	0.62	0.75	11.6	5.01	0.50	0.66	0.80
	715	16.2	2.97	0.48	0.62	0.75	15.0	3.52	0.49	0.64	0.78	13.7	4.20	0.50	0.67	0.82	12.0	5.03	0.52	0.71	0.88
	860	16.8	2.99	0.50	0.65	0.79	15.5	3.55	0.51	0.67	0.83	14.0	4.22	0.53	0.71	0.88	12.3	5.06	0.55	0.76	0.95

TSA048S4 Cooling Capacity with CX34-44/48C-6F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	660	14.0	2.86	0.75	0.88	1.00	12.9	3.41	0.77	0.92	1.00	11.8	4.09	0.81	0.96	1.00	10.4	4.93	0.86	1.00	1.00
	755	14.4	2.88	0.78	0.92	1.00	13.3	3.43	0.81	0.96	1.00	12.0	4.11	0.85	1.00	1.00	10.8	4.96	0.91	1.00	1.00
	850	14.7	2.89	0.80	0.95	1.00	13.6	3.44	0.84	0.99	1.00	12.4	4.13	0.88	1.00	1.00	11.1	4.98	0.94	1.00	1.00
19°C	660	14.8	2.90	0.60	0.73	0.85	13.7	3.45	0.61	0.75	0.88	12.5	4.13	0.64	0.79	0.93	11.0	4.97	0.67	0.84	0.99
	755	15.2	2.92	0.62	0.75	0.89	14.1	3.47	0.63	0.78	0.93	12.7	4.15	0.66	0.82	0.97	11.2	4.99	0.70	0.88	1.00
	850	15.5	2.93	0.63	0.78	0.92	14.3	3.49	0.65	0.81	0.96	13.0	4.16	0.68	0.86	1.00	11.3	4.99	0.72	0.92	1.00
22°C	660	15.6	2.94	0.47	0.58	0.70	14.5	3.49	0.47	0.60	0.73	13.2	4.17	0.48	0.62	0.76	11.6	5.02	0.50	0.66	0.81
	755	16.0	2.96	0.47	0.60	0.73	14.8	3.51	0.48	0.62	0.76	13.5	4.19	0.49	0.65	0.80	11.9	5.03	0.51	0.68	0.86
	850	16.4	2.97	0.48	0.62	0.76	15.2	3.53	0.49	0.64	0.79	13.7	4.21	0.50	0.67	0.83	12.0	5.04	0.52	0.71	0.90

TSA048S4 Cooling Capacity with CR33-48C-F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	660	13.8	2.85	0.76	0.89	1.00	12.8	3.41	0.78	0.93	1.00	11.6	4.09	0.82	0.97	1.00	10.3	4.93	0.87	1.00	1.00
	755	14.1	2.87	0.78	0.92	1.00	13.1	3.42	0.81	0.96	1.00	11.9	4.10	0.85	1.00	1.00	10.7	4.95	0.91	1.00	1.00
	850	14.4	2.88	0.81	0.96	1.00	13.3	3.43	0.84	0.99	1.00	12.3	4.12	0.89	1.00	1.00	11.0	4.97	0.95	1.00	1.00
19°C	660	14.6	2.89	0.61	0.73	0.86	13.5	3.44	0.62	0.76	0.89	12.3	4.12	0.65	0.79	0.94	10.9	4.97	0.68	0.85	0.99
	755	14.9	2.90	0.63	0.76	0.89	13.8	3.46	0.64	0.79	0.93	12.6	4.14	0.67	0.83	0.98	11.1	4.98	0.70	0.89	1.00
	850	15.2	2.92	0.64	0.78	0.93	14.1	3.47	0.66	0.82	0.97	12.8	4.15	0.69	0.86	1.00	11.3	4.99	0.73	0.93	1.00
22°C	660	15.3	2.92	0.46	0.59	0.71	14.2	3.48	0.47	0.61	0.74	13.0	4.16	0.48	0.63	0.77	11.5	5.01	0.50	0.67	0.82
	755	15.7	2.94	0.47	0.61	0.74	14.6	3.50	0.48	0.63	0.76	13.3	4.18	0.50	0.66	0.80	11.7	5.02	0.51	0.69	0.86
	850	16.0	2.96	0.48	0.63	0.76	14.9	3.51	0.49	0.65	0.79	13.5	4.19	0.50	0.68	0.84	11.9	5.02	0.53	0.72	0.91

TSA048S4 Cooling Capacity with CH33-48C-2F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	660	14.2	2.87	0.76	0.89	1.00	13.1	3.42	0.78	0.93	1.00	11.9	4.10	0.82	0.97	1.00	10.6	4.94	0.87	1.00	1.00
	755	14.6	2.89	0.78	0.93	1.00	13.5	3.44	0.81	0.97	1.00	12.2	4.12	0.85	1.00	1.00	11.0	4.97	0.92	1.00	1.00
	850	14.9	2.90	0.81	0.96	1.00	13.8	3.46	0.84	1.00	1.00	12.6	4.14	0.89	1.00	1.00	11.3	4.99	0.96	1.00	1.00
19°C	660	15.0	2.91	0.60	0.73	0.86	13.9	3.46	0.62	0.76	0.89	12.6	4.14	0.64	0.79	0.94	11.1	4.98	0.67	0.85	1.00
	755	15.4	2.93	0.62	0.76	0.89	14.3	3.48	0.64	0.79	0.94	12.9	4.16	0.66	0.83	0.98	11.4	5.00	0.70	0.89	1.00
	850	15.8	2.94	0.64	0.79	0.93	14.5	3.50	0.66	0.82	0.97	13.2	4.17	0.69	0.87	1.00	11.5	5.00	0.73	0.93	1.00
22°C	660	15.8	2.95	0.47	0.59	0.71	14.7	3.50	0.47	0.60	0.73	13.4	4.18	0.48	0.63	0.77	11.8	5.03	0.50	0.66	0.82
	755	16.2	2.97	0.47	0.60	0.74	15.0	3.52	0.48	0.62	0.76	13.7	4.20	0.49	0.65	0.81	12.0	5.04	0.51	0.69	0.86
	850	16.6	2.98	0.48	0.62	0.76	15.4	3.54	0.49	0.65	0.80	13.9	4.22	0.51	0.67	0.84	12.2	5.06	0.53	0.72	0.91

EXPANDED RATINGS - SINGLE PHASE MODELS

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

TSA060S4 Cooling Capacity with BCRMD1960S005

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	640	15.3	3.00	0.75	0.87	0.99	14.2	3.60	0.77	0.91	1.00	12.8	4.32	0.81	0.95	1.00	11.4	5.22	0.86	1.00	1.00
	800	16.1	3.04	0.80	0.94	1.00	14.8	3.63	0.83	0.98	1.00	13.6	4.36	0.88	1.00	1.00	12.2	5.26	0.94	1.00	1.00
	960	16.7	3.06	0.85	1.00	1.00	15.6	3.67	0.89	1.00	1.00	14.3	4.40	0.94	1.00	1.00	12.8	5.29	1.00	1.00	1.00
19°C	640	16.3	3.04	0.60	0.72	0.84	15.1	3.64	0.62	0.75	0.88	13.7	4.36	0.64	0.78	0.92	12.0	5.25	0.67	0.83	0.98
	800	17.1	3.08	0.63	0.77	0.91	15.8	3.68	0.65	0.81	0.95	14.2	4.40	0.68	0.85	0.99	12.5	5.28	0.72	0.91	1.00
	960	17.7	3.11	0.67	0.83	0.98	16.2	3.70	0.69	0.87	1.00	14.7	4.42	0.73	0.92	1.00	12.9	5.30	0.78	0.98	1.00
22°C	640	17.2	3.09	0.47	0.59	0.70	16.0	3.69	0.48	0.60	0.72	14.5	4.41	0.48	0.62	0.76	12.8	5.29	0.50	0.65	0.81
	800	18.1	3.13	0.48	0.62	0.75	16.7	3.73	0.49	0.64	0.78	15.2	4.45	0.51	0.67	0.83	13.4	5.33	0.53	0.71	0.89
	960	18.8	3.16	0.50	0.65	0.81	17.3	3.76	0.51	0.68	0.85	15.6	4.47	0.53	0.72	0.90	13.7	5.35	0.55	0.77	0.96

TSA060S4 Cooling Capacity with CX34-62D-6F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	660	15.4	3.00	0.75	0.88	1.00	14.2	3.60	0.77	0.91	1.00	12.9	4.33	0.81	0.96	1.00	11.5	5.21	0.86	1.00	1.00
	755	15.9	3.02	0.77	0.92	1.00	14.6	3.62	0.80	0.96	1.00	13.3	4.35	0.84	1.00	1.00	11.9	5.24	0.90	1.00	1.00
	850	16.2	3.04	0.80	0.95	1.00	15.0	3.64	0.84	0.99	1.00	13.7	4.37	0.88	1.00	1.00	12.3	5.27	0.95	1.00	1.00
19°C	660	16.2	3.04	0.60	0.72	0.84	15.0	3.64	0.61	0.75	0.88	13.7	4.37	0.64	0.78	0.93	12.1	5.25	0.67	0.83	0.99
	755	16.6	3.06	0.61	0.75	0.88	15.4	3.66	0.63	0.78	0.92	14.0	4.39	0.66	0.82	0.97	12.4	5.27	0.69	0.88	1.00
	850	17.1	3.08	0.63	0.78	0.92	15.8	3.68	0.65	0.81	0.96	14.3	4.40	0.68	0.86	1.00	12.6	5.28	0.72	0.92	1.00
22°C	660	17.1	3.08	0.46	0.58	0.70	15.9	3.69	0.47	0.60	0.72	14.5	4.41	0.48	0.62	0.76	12.8	5.30	0.49	0.65	0.81
	755	17.6	3.11	0.47	0.60	0.73	16.3	3.71	0.48	0.62	0.76	14.9	4.43	0.49	0.65	0.80	13.1	5.31	0.51	0.68	0.85
	850	18.1	3.13	0.48	0.62	0.75	16.7	3.73	0.49	0.64	0.79	15.1	4.45	0.50	0.67	0.83	13.3	5.33	0.52	0.71	0.90

TSA060S4 Cooling Capacity with CR33-60D-F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	660	15.1	2.99	0.75	0.89	1.00	14.0	3.59	0.78	0.92	1.00	12.7	4.32	0.81	0.97	1.00	11.3	5.21	0.87	1.00	1.00
	755	15.5	3.01	0.78	0.93	1.00	14.4	3.61	0.81	0.96	1.00	13.0	4.33	0.85	1.00	1.00	11.7	5.23	0.91	1.00	1.00
	850	15.9	3.02	0.81	0.96	1.00	14.7	3.62	0.84	0.99	1.00	13.4	4.35	0.89	1.00	1.00	12.1	5.25	0.95	1.00	1.00
19°C	660	16.0	3.03	0.60	0.73	0.85	14.8	3.63	0.62	0.76	0.89	13.5	4.36	0.64	0.79	0.94	11.9	5.24	0.67	0.84	0.99
	755	16.4	3.05	0.62	0.76	0.89	15.2	3.65	0.64	0.79	0.93	13.8	4.38	0.66	0.83	0.98	12.2	5.26	0.70	0.89	1.00
	850	16.8	3.06	0.64	0.79	0.93	15.5	3.67	0.66	0.82	0.97	14.0	4.39	0.69	0.87	1.00	12.4	5.28	0.73	0.93	1.00
22°C	660	16.8	3.07	0.46	0.59	0.71	15.6	3.67	0.47	0.60	0.73	14.2	4.40	0.48	0.63	0.77	12.6	5.28	0.49	0.66	0.82
	755	17.2	3.09	0.47	0.61	0.74	16.0	3.69	0.48	0.63	0.76	14.6	4.42	0.49	0.65	0.80	12.9	5.30	0.51	0.69	0.86
	850	17.6	3.11	0.48	0.63	0.76	16.4	3.71	0.49	0.65	0.80	14.8	4.43	0.50	0.68	0.84	13.1	5.31	0.52	0.72	0.91

TSA060S4 Cooling Capacity with CH33-60D-2F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	660	15.1	2.99	0.74	0.87	0.99	14.0	3.59	0.76	0.90	1.00	12.7	4.31	0.80	0.95	1.00	11.2	5.20	0.85	1.00	1.00
	755	15.5	3.01	0.77	0.91	1.00	14.4	3.61	0.79	0.94	1.00	13.0	4.33	0.83	0.99	1.00	11.7	5.23	0.89	1.00	1.00
	850	15.9	3.03	0.79	0.94	1.00	14.7	3.63	0.82	0.98	1.00	13.4	4.35	0.87	1.00	1.00	12.0	5.25	0.93	1.00	1.00
19°C	660	16.0	3.03	0.59	0.72	0.83	14.8	3.63	0.61	0.74	0.87	13.5	4.36	0.63	0.77	0.91	11.9	5.24	0.66	0.82	0.98
	755	16.5	3.05	0.61	0.74	0.87	15.2	3.65	0.63	0.77	0.91	13.8	4.37	0.65	0.81	0.96	12.2	5.27	0.68	0.86	1.00
	850	16.9	3.07	0.63	0.77	0.91	15.6	3.67	0.64	0.80	0.95	14.1	4.39	0.67	0.84	1.00	12.4	5.27	0.71	0.90	1.00
22°C	660	16.9	3.07	0.46	0.58	0.69	15.6	3.67	0.47	0.59	0.71	14.2	4.40	0.48	0.61	0.75	12.7	5.29	0.49	0.64	0.80
	755	17.4	3.09	0.47	0.59	0.72	16.1	3.69	0.48	0.61	0.75	14.6	4.42	0.49	0.64	0.78	12.9	5.30	0.50	0.67	0.84
	850	17.8	3.11	0.48	0.61	0.74	16.4	3.72	0.48	0.63	0.78	14.9	4.44	0.50	0.66	0.82	13.1	5.31	0.51	0.70	0.88

EXPANDED RATINGS - THREE PHASE MODELS

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

TSA036S4 Cooling Capacity with BCRMB9937S005

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	455	9.9	2.02	0.75	0.88	0.99	9.1	2.45	0.77	0.91	1.00	8.4	2.97	0.80	0.95	1.00	7.5	3.63	0.84	0.99	1.00
	570	10.3	2.04	0.80	0.95	1.00	9.6	2.46	0.83	0.98	1.00	8.8	2.99	0.86	1.00	1.00	7.9	3.65	0.91	1.00	1.00
	685	10.7	2.05	0.84	0.99	1.00	10.0	2.48	0.88	1.00	1.00	9.2	3.01	0.92	1.00	1.00	8.3	3.66	0.97	1.00	1.00
19°C	455	10.4	2.04	0.61	0.73	0.85	9.7	2.47	0.62	0.75	0.88	8.9	2.99	0.64	0.78	0.92	7.9	3.64	0.67	0.82	0.97
	570	10.9	2.05	0.64	0.78	0.92	10.1	2.48	0.66	0.81	0.95	9.1	3.01	0.68	0.84	0.99	8.1	3.65	0.71	0.89	1.00
	685	11.2	2.06	0.67	0.83	0.97	10.3	2.49	0.69	0.86	1.00	9.3	3.01	0.71	0.90	1.00	8.3	3.66	0.75	0.96	1.00
22°C	455	11.0	2.06	0.48	0.60	0.71	10.2	2.49	0.48	0.61	0.73	9.3	3.01	0.50	0.63	0.76	8.3	3.66	0.51	0.66	0.80
	570	11.4	2.07	0.50	0.63	0.76	10.6	2.50	0.50	0.65	0.79	9.6	3.03	0.52	0.67	0.82	8.5	3.68	0.53	0.70	0.88
	685	11.8	2.08	0.51	0.66	0.81	10.8	2.51	0.52	0.68	0.84	9.8	3.03	0.53	0.71	0.88	8.7	3.69	0.55	0.75	0.94

TSA036S4 Cooling Capacity with CX34-36B/C-6F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	470	9.8	2.02	0.77	0.90	1.00	9.1	2.45	0.79	0.93	1.00	8.4	2.97	0.82	0.97	1.00	7.5	3.62	0.87	1.00	1.00
	565	10.2	2.03	0.80	0.95	1.00	9.5	2.46	0.83	0.98	1.00	8.7	2.99	0.87	1.00	1.00	8.0	3.65	1.00	1.00	1.00
	660	10.5	2.04	0.84	0.99	1.00	9.8	2.47	0.88	1.00	1.00	9.0	3.00	0.92	1.00	1.00	8.0	3.65	1.00	1.00	1.00
19°C	470	10.3	2.04	0.62	0.74	0.87	9.6	2.46	0.63	0.77	0.90	8.7	2.99	0.65	0.80	0.94	8.3	3.66	0.97	1.00	1.00
	565	10.6	2.05	0.64	0.78	0.92	9.8	2.47	0.65	0.81	0.96	9.0	3.00	0.68	0.85	0.99	7.9	3.64	0.67	0.82	0.97
	660	10.9	2.06	0.66	0.82	0.97	10.1	2.48	0.68	0.86	1.00	9.2	3.01	0.71	0.90	1.00	8.1	3.65	0.71	0.89	1.00
22°C	470	10.7	2.05	0.48	0.60	0.72	9.9	2.48	0.48	0.62	0.75	9.1	3.00	0.49	0.64	0.78	8.3	3.66	0.75	0.96	1.00
	565	11.1	2.06	0.49	0.63	0.76	10.3	2.49	0.49	0.64	0.79	9.4	3.02	0.51	0.67	0.83	8.3	3.66	0.51	0.66	0.80
	660	11.4	2.07	0.50	0.65	0.80	10.6	2.50	0.51	0.68	0.84	9.6	3.02	0.53	0.70	0.88	8.5	3.68	0.53	0.70	0.88

TSA036S4 Cooling Capacity with CR33-30/36B-F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	470	9.9	2.02	0.77	0.90	1.00	9.2	2.45	0.79	0.93	1.00	8.5	2.97	0.82	0.97	1.00	7.6	3.63	0.87	1.00	1.00
	565	10.3	2.04	0.81	0.95	1.00	9.6	2.46	0.83	0.98	1.00	8.7	2.99	0.87	1.00	1.00	8.0	3.66	1.00	1.00	1.00
	660	10.6	2.04	0.85	0.99	1.00	9.8	2.47	0.88	1.00	1.00	9.1	3.00	0.92	1.00	1.00	8.0	3.66	1.00	1.00	1.00
19°C	470	10.5	2.04	0.61	0.74	0.87	9.7	2.47	0.63	0.77	0.90	8.9	2.99	0.65	0.80	0.95	8.3	3.66	0.97	1.00	1.00
	565	10.8	2.05	0.64	0.78	0.92	10.0	2.48	0.65	0.81	0.96	9.1	3.01	0.68	0.85	1.00	7.9	3.64	0.67	0.82	0.97
	660	11.0	2.06	0.67	0.83	0.97	10.2	2.49	0.69	0.86	1.00	9.3	3.01	0.72	0.90	1.00	8.1	3.65	0.71	0.89	1.00
22°C	470	11.0	2.06	0.47	0.60	0.72	10.2	2.49	0.48	0.62	0.75	9.3	3.01	0.49	0.64	0.78	8.3	3.66	0.75	0.96	1.00
	565	11.3	2.07	0.48	0.62	0.76	10.5	2.50	0.49	0.64	0.79	9.6	3.03	0.50	0.67	0.83	8.3	3.66	0.51	0.66	0.80
	660	11.6	2.08	0.50	0.66	0.81	10.7	2.50	0.51	0.68	0.84	9.7	3.03	0.52	0.71	0.89	8.5	3.68	0.53	0.70	0.88

TSA036S4 Cooling Capacity with CH33-36B-2F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	470	9.8	2.02	0.76	0.90	1.00	9.1	2.45	0.79	0.93	1.00	8.4	2.97	0.82	0.97	1.00	7.5	3.62	0.86	1.00	1.00
	565	10.1	2.03	0.80	0.95	1.00	9.4	2.46	0.83	0.98	1.00	8.6	2.99	0.86	1.00	1.00	7.9	3.65	1.00	1.00	1.00
	660	10.5	2.04	0.84	0.99	1.00	9.7	2.47	0.87	1.00	1.00	9.0	3.00	0.91	1.00	1.00	7.9	3.65	1.00	1.00	1.00
19°C	470	10.3	2.04	0.61	0.74	0.87	9.5	2.46	0.63	0.77	0.90	8.7	2.99	0.65	0.80	0.94	8.3	3.66	0.97	1.00	1.00
	565	10.6	2.05	0.63	0.78	0.92	9.8	2.48	0.65	0.81	0.95	9.0	3.00	0.68	0.84	0.99	7.9	3.64	0.67	0.82	0.97
	660	10.9	2.06	0.66	0.82	0.97	10.1	2.48	0.68	0.85	1.00	9.2	3.01	0.71	0.89	1.00	8.1	3.65	0.71	0.89	1.00
22°C	470	10.7	2.05	0.48	0.60	0.72	9.9	2.48	0.48	0.62	0.74	9.1	3.00	0.49	0.64	0.78	8.3	3.66	0.75	0.96	1.00
	565	11.0	2.06	0.48	0.62	0.76	10.3	2.49	0.49	0.64	0.79	9.4	3.02	0.51	0.67	0.82	8.3	3.66	0.51	0.66	0.80
	660	11.4	2.07	0.50	0.65	0.80	10.6	2.50	0.51	0.67	0.83	9.6	3.03	0.52	0.70	0.87	8.5	3.68	0.53	0.70	0.88

EXPANDED RATINGS - THREE PHASE MODELS

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

TSA048S4 Cooling Capacity with BCRMC9960S005

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	575	13.8	2.71	0.75	0.87	0.99	12.7	3.33	0.77	0.91	1.00	11.6	4.02	0.80	0.95	1.00	10.2	4.78	0.86	1.00	1.00
	715	14.5	2.74	0.79	0.94	1.00	13.4	3.35	0.82	0.98	1.00	12.2	4.05	0.87	1.00	1.00	10.9	4.81	0.94	1.00	1.00
	860	15.0	2.76	0.84	0.99	1.00	14.0	3.37	0.88	1.00	1.00	12.8	4.07	0.93	1.00	1.00	11.5	4.83	0.99	1.00	1.00
19°C	575	14.6	2.74	0.60	0.72	0.84	13.5	3.36	0.62	0.75	0.87	12.3	4.05	0.64	0.78	0.92	10.8	4.81	0.67	0.83	0.98
	715	15.3	2.77	0.63	0.77	0.90	14.2	3.38	0.65	0.80	0.95	12.9	4.07	0.68	0.84	0.99	11.3	4.83	0.72	0.91	1.00
	860	15.8	2.78	0.66	0.82	0.97	14.6	3.39	0.69	0.86	1.00	13.2	4.09	0.72	0.91	1.00	11.5	4.84	0.77	0.98	1.00
22°C	575	15.4	2.77	0.47	0.59	0.70	14.3	3.38	0.47	0.60	0.72	13.0	4.08	0.48	0.62	0.75	11.5	4.84	0.50	0.66	0.81
	715	16.1	2.80	0.49	0.62	0.75	14.9	3.40	0.49	0.64	0.78	13.6	4.10	0.50	0.67	0.82	12.0	4.85	0.52	0.71	0.88
	860	16.7	2.82	0.50	0.65	0.80	15.4	3.42	0.51	0.68	0.83	14.0	4.11	0.53	0.71	0.88	12.3	4.87	0.55	0.76	0.95

TSA048S4 Cooling Capacity with CX34-44/48C-6F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	660	14.0	2.72	0.75	0.88	1.00	12.9	3.33	0.78	0.92	1.00	11.7	4.03	0.81	0.97	1.00	10.3	4.79	0.87	1.00	1.00
	755	14.3	2.73	0.78	0.92	1.00	13.2	3.34	0.81	0.96	1.00	12.0	4.04	0.85	1.00	1.00	10.7	4.80	0.91	1.00	1.00
	850	14.7	2.74	0.80	0.95	1.00	13.5	3.35	0.84	0.99	1.00	12.3	4.05	0.88	1.00	1.00	11.0	4.82	0.95	1.00	1.00
19°C	660	14.7	2.75	0.60	0.73	0.85	13.7	3.36	0.62	0.75	0.89	12.4	4.06	0.64	0.79	0.93	10.9	4.81	0.67	0.84	0.99
	755	15.2	2.76	0.62	0.76	0.89	14.0	3.37	0.64	0.78	0.93	12.7	4.07	0.66	0.82	0.98	11.2	4.82	0.70	0.88	1.00
	850	15.4	2.77	0.63	0.78	0.92	14.2	3.38	0.66	0.81	0.96	13.0	4.08	0.68	0.86	1.00	11.3	4.83	0.72	0.93	1.00
22°C	660	15.5	2.77	0.47	0.59	0.71	14.4	3.38	0.47	0.60	0.73	13.2	4.08	0.48	0.62	0.76	11.6	4.84	0.50	0.66	0.82
	755	15.9	2.79	0.47	0.60	0.73	14.7	3.40	0.48	0.62	0.76	13.4	4.09	0.49	0.65	0.80	11.9	4.85	0.51	0.69	0.86
	850	16.2	2.80	0.48	0.62	0.76	15.0	3.41	0.49	0.64	0.79	13.7	4.10	0.50	0.67	0.83	12.0	4.85	0.52	0.71	0.90

TSA048S4 Cooling Capacity with CR33-48C-F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	660	13.7	2.71	0.76	0.89	1.00	12.7	3.33	0.78	0.93	1.00	11.6	4.03	0.82	0.97	1.00	10.2	4.78	0.88	1.00	1.00
	755	14.1	2.72	0.78	0.93	1.00	13.0	3.34	0.81	0.97	1.00	11.9	4.04	0.85	1.00	1.00	10.6	4.80	0.92	1.00	1.00
	850	14.4	2.73	0.81	0.96	1.00	13.3	3.35	0.84	0.99	1.00	12.2	4.05	0.89	1.00	1.00	10.9	4.82	0.96	1.00	1.00
19°C	660	14.5	2.74	0.61	0.73	0.86	13.5	3.35	0.62	0.76	0.89	12.3	4.05	0.65	0.80	0.94	10.8	4.81	0.68	0.85	1.00
	755	14.8	2.75	0.63	0.76	0.89	13.8	3.36	0.64	0.79	0.93	12.6	4.06	0.67	0.83	0.98	11.0	4.82	0.71	0.89	1.00
	850	15.2	2.76	0.64	0.79	0.93	14.0	3.37	0.66	0.82	0.97	12.8	4.07	0.69	0.86	1.00	11.2	4.82	0.73	0.93	1.00
22°C	660	15.2	2.76	0.46	0.59	0.71	14.2	3.38	0.47	0.61	0.74	13.0	4.07	0.48	0.63	0.77	11.5	4.84	0.50	0.67	0.82
	755	15.6	2.78	0.47	0.61	0.74	14.5	3.39	0.48	0.63	0.77	13.2	4.09	0.50	0.66	0.81	11.7	4.84	0.51	0.69	0.87
	850	15.9	2.79	0.49	0.63	0.76	14.8	3.40	0.49	0.65	0.80	13.5	4.09	0.50	0.68	0.84	11.9	4.85	0.53	0.72	0.91

TSA048S4 Cooling Capacity with CH33-48C-2F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	660	14.2	2.73	0.76	0.89	1.00	13.1	3.34	0.78	0.93	1.00	11.9	4.03	0.82	0.98	1.00	10.5	4.79	0.88	1.00	1.00
	755	14.5	2.74	0.78	0.93	1.00	13.4	3.35	0.82	0.97	1.00	12.2	4.05	0.86	1.00	1.00	10.9	4.81	0.92	1.00	1.00
	850	14.9	2.75	0.81	0.97	1.00	13.7	3.36	0.85	1.00	1.00	12.5	4.06	0.89	1.00	1.00	11.2	4.83	0.96	1.00	1.00
19°C	660	15.0	2.75	0.60	0.73	0.86	13.9	3.37	0.62	0.76	0.89	12.6	4.06	0.64	0.79	0.94	11.0	4.82	0.68	0.85	1.00
	755	15.3	2.77	0.62	0.76	0.90	14.2	3.38	0.64	0.79	0.94	12.9	4.07	0.66	0.83	0.99	11.3	4.83	0.70	0.89	1.00
	850	15.6	2.78	0.64	0.79	0.94	14.4	3.39	0.66	0.82	0.98	13.1	4.08	0.69	0.87	1.00	11.5	4.83	0.73	0.94	1.00
22°C	660	15.7	2.78	0.47	0.59	0.71	14.6	3.39	0.47	0.60	0.73	13.3	4.09	0.48	0.63	0.77	11.8	4.85	0.50	0.66	0.82
	755	16.1	2.80	0.47	0.61	0.74	14.9	3.40	0.48	0.63	0.77	13.6	4.10	0.49	0.65	0.81	12.0	4.86	0.51	0.69	0.87
	850	16.5	2.81	0.48	0.63	0.77	15.2	3.41	0.49	0.65	0.80	13.9	4.11	0.51	0.68	0.84	12.2	4.87	0.53	0.72	0.91

EXPANDED RATINGS - THREE PHASE MODELS

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

TSA060S4 Cooling Capacity with BCRMD1960S005

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	640	17.3	3.86	0.71	0.83	0.94	16.1	4.58	0.73	0.86	0.97	14.7	5.44	0.76	0.90	1.00	13.0	6.44	0.80	0.95	1.00
	800	18.3	3.92	0.76	0.89	1.00	16.9	4.64	0.78	0.92	1.00	15.4	5.50	0.82	0.97	1.00	13.7	6.51	0.87	1.00	1.00
	960	19.0	3.96	0.80	0.95	1.00	17.6	4.69	0.83	0.98	1.00	16.1	5.55	0.88	1.00	1.00	14.4	6.57	0.94	1.00	1.00
19°C	640	18.4	3.92	0.58	0.69	0.80	17.1	4.65	0.59	0.71	0.82	15.6	5.51	0.61	0.74	0.86	13.7	6.51	0.64	0.78	0.92
	800	19.4	3.99	0.61	0.73	0.86	17.9	4.71	0.62	0.76	0.89	16.2	5.57	0.65	0.80	0.94	14.4	6.56	0.68	0.85	0.99
	960	20.1	4.03	0.64	0.78	0.92	18.6	4.76	0.66	0.81	0.96	16.8	5.61	0.68	0.86	1.00	14.8	6.61	0.72	0.92	1.00
22°C	640	19.4	3.99	0.46	0.56	0.66	18.1	4.72	0.46	0.58	0.69	16.5	5.59	0.47	0.59	0.71	14.6	6.58	0.48	0.62	0.76
	800	20.5	4.05	0.47	0.59	0.71	19.0	4.78	0.48	0.61	0.74	17.2	5.64	0.49	0.63	0.77	15.2	6.64	0.51	0.67	0.83
	960	21.2	4.10	0.49	0.62	0.76	19.6	4.83	0.49	0.64	0.79	17.8	5.69	0.51	0.67	0.84	15.6	6.69	0.53	0.72	0.90

TSA060S4 Cooling Capacity with CX34-62D-6F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	660	17.4	3.86	0.72	0.83	0.94	16.2	4.59	0.73	0.86	0.98	14.7	5.44	0.77	0.90	1.00	13.1	6.45	0.80	0.96	1.00
	755	18.0	3.90	0.74	0.86	0.98	16.7	4.62	0.76	0.90	1.00	15.2	5.48	0.79	0.94	1.00	13.5	6.49	0.84	1.00	1.00
	850	18.4	3.92	0.76	0.90	1.00	17.1	4.65	0.79	0.93	1.00	15.6	5.51	0.82	0.98	1.00	13.9	6.53	0.88	1.00	1.00
19°C	660	18.4	3.92	0.58	0.69	0.80	17.1	4.65	0.59	0.71	0.83	15.6	5.52	0.61	0.74	0.86	13.9	6.52	0.63	0.78	0.92
	755	18.9	3.96	0.59	0.71	0.83	17.6	4.69	0.61	0.74	0.86	16.0	5.55	0.62	0.77	0.91	14.2	6.55	0.66	0.82	0.97
	850	19.4	3.99	0.61	0.74	0.86	18.0	4.71	0.62	0.76	0.90	16.4	5.58	0.65	0.80	0.95	14.4	6.57	0.68	0.85	1.00
22°C	660	19.3	3.98	0.45	0.56	0.67	18.0	4.72	0.46	0.57	0.69	16.4	5.58	0.47	0.59	0.72	14.6	6.59	0.48	0.62	0.75
	755	20.0	4.02	0.46	0.58	0.69	18.5	4.75	0.47	0.59	0.71	16.9	5.62	0.47	0.61	0.75	15.0	6.63	0.49	0.64	0.79
	850	20.4	4.05	0.47	0.59	0.72	18.9	4.78	0.47	0.61	0.74	17.2	5.65	0.48	0.63	0.78	15.3	6.65	0.50	0.67	0.83

TSA060S4 Cooling Capacity with CR33-60D-F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	660	17.1	3.84	0.72	0.84	0.95	15.9	4.56	0.74	0.87	0.98	14.4	5.43	0.77	0.91	1.00	12.7	6.42	0.81	0.97	1.00
	755	17.6	3.87	0.74	0.87	0.99	16.3	4.60	0.77	0.91	1.00	14.8	5.45	0.80	0.95	1.00	13.1	6.45	0.85	0.99	1.00
	850	18.0	3.90	0.77	0.91	1.00	16.7	4.62	0.80	0.94	1.00	15.2	5.48	0.83	0.98	1.00	13.5	6.49	0.89	1.00	1.00
19°C	660	18.0	3.90	0.58	0.70	0.81	16.7	4.63	0.59	0.72	0.84	15.3	5.49	0.61	0.75	0.88	13.5	6.49	0.64	0.79	0.93
	755	18.5	3.93	0.60	0.72	0.84	17.2	4.66	0.61	0.75	0.87	15.6	5.52	0.63	0.78	0.92	13.8	6.52	0.66	0.83	0.98
	850	18.9	3.96	0.61	0.75	0.88	17.6	4.69	0.63	0.77	0.91	16.0	5.55	0.65	0.81	0.96	14.1	6.54	0.69	0.87	1.00
22°C	660	18.9	3.96	0.45	0.56	0.67	17.6	4.68	0.46	0.58	0.69	16.0	5.55	0.47	0.60	0.72	14.3	6.56	0.48	0.63	0.76
	755	19.4	3.98	0.46	0.58	0.70	18.1	4.72	0.46	0.60	0.72	16.5	5.59	0.48	0.62	0.76	14.6	6.59	0.49	0.65	0.80
	850	19.9	4.02	0.47	0.60	0.73	18.5	4.75	0.47	0.62	0.75	16.8	5.61	0.48	0.64	0.79	14.9	6.61	0.50	0.68	0.84

TSA060S4 Cooling Capacity with CH33-60D-2F

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		27°C					35°C					43°C					52°C				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T) Dry Bulb		
	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°C	660	17.1	3.84	0.71	0.82	0.93	15.9	4.57	0.73	0.85	0.97	14.5	5.42	0.75	0.89	1.00	12.8	6.43	0.79	0.95	1.00
	755	17.6	3.87	0.73	0.85	0.97	16.4	4.60	0.75	0.88	1.00	14.9	5.46	0.78	0.93	1.00	13.2	6.46	0.83	0.99	1.00
	850	18.1	3.90	0.75	0.88	1.00	16.7	4.62	0.78	0.92	1.00	15.2	5.48	0.81	0.97	1.00	13.5	6.49	0.86	1.00	1.00
19°C	660	18.1	3.90	0.58	0.68	0.79	16.8	4.63	0.59	0.70	0.82	15.4	5.50	0.60	0.73	0.85	13.6	6.50	0.63	0.77	0.91
	755	18.6	3.94	0.59	0.71	0.82	17.3	4.67	0.60	0.73	0.85	15.8	5.53	0.62	0.76	0.90	14.0	6.54	0.65	0.81	0.96
	850	19.1	3.97	0.60	0.73	0.85	17.7	4.69	0.62	0.75	0.89	16.1	5.55	0.64	0.79	0.94	14.2	6.55	0.67	0.84	1.00
22°C	660	19.0	3.96	0.45	0.56	0.66	17.7	4.70	0.46	0.57	0.68	16.1	5.56	0.46	0.59	0.71	14.4	6.57	0.48	0.61	0.75
	755	19.6	4.00	0.46	0.57	0.68	18.2	4.73	0.46	0.59	0.70	16.6	5.60	0.47	0.61	0.73	14.7	6.60	0.49	0.64	0.78
	850	20.1	4.03	0.47	0.59	0.70	18.6	4.76	0.47	0.60	0.73	17.0	5.63	0.48	0.62	0.77	15.0	6.63	0.50	0.66	0.82

REVISIONS

Specifications	Updated electrical data on all except TSA024. Update refrigerant charge on TSA036
Ratings	Corrected model numbers for air handlers.
Expanded ratings	Updated all.

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