

ELECTRIC COOLING, R-410A SINGLE PACKAGE ROOFTOP 3 – 15 TONS (1 & 3-Phase)

BUILT TO LAST, EASY TO INSTALL AND SERVICE

- One-piece, standard efficiency electric cooling with a low profile, prewired, tested, and charged at the factory
- Field Convertible from vertical to horizontal airflow on all models. No special kit required on 036–150 models. Field accessory supply duct kit required for 180 size model only.
- Full perimeter base rail with built-in rigging adapters and fork truck slots
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Fully insulated cabinet
- Single-stage or two stage cooling capacity control
- Single or dual scroll compressor with internal line-break overload protection
- All units have high and low pressure switches
- Two inch disposable fiberglass type return air filters in dedicated rack with tool-less filter access door
- Refrigerant circuits contain a liquid line filter drier to trap dirt and moisture
- Indoor and outdoor coils constructed of aluminum fins mechanically bonded to seamless copper tubes
- Newly-designed indoor refrigerant header for easier maintenance and replacement
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE 62 Standard, sloping design; side or center drain
- Belt drive evaporator-fan motor and pulley combinations available to meet any application
- Access panels with easy grip handles provide quick and easy access to the blower and blower motor, control box, and compressor.
- "No-strip" screw system has superior holding power and guides screws into position while preventing the screw from stripping the unit's metal.
- Newly designed terminal board facilitates simple safety circuit troubleshooting and simplified control box arrangement
- Outdoor temperature cooling operation range up to 115°F (46°C) and down to 40°F (4°C) using winter start kit
- Fixed orifice metering devices on all models to precisely control refrigerant flow
- Large, laminated control wiring and power wiring drawings are affixed to unit to make troubleshooting easy
- Standard, medium and high static fan motor options available
- Capable of thru-the-base or thru-the-curb electrical routing
- Single point electrical connections

WARRANTY

- 5 Year limited warranty on compressor
- 5 Year limited warranty on electric heater parts
- 1 Year limited warranty on parts



RAS036-072



RAS090-121



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.

UNIT PERFORMANCE DATA - Single Stage Cooling

UNIT	COOLING					Unit Dimensions H x W x L	Unit Weight lb. [kg]
	Nom. Tons	Net Cap. (Btuh)	SEER	EER	Total Power (kW)		
RAS036*0AA0AAA	3	34,600	13.0	11.0	3.1	33-3/8" x 46-3/4" x 74-3/8" (847 x 1187 x 1888)	438 [199]
RAS048*0AA0AAA	4	45,000	13.0	11.0	4.0	33-3/8" x 46-3/4" x 74-3/8" (847 x 1187 x 1888)	494 [224]
RAS060*0AA0AAA	5	59,000	13.0	10.8	5.5	33-3/8" x 46-3/4" x 74-3/8" (847 x 1187 x 1888)	524 [238]
RAS072*0AA0AAA	6	70,000	N/A	11.2	6.4	41-3/8" x 46-3/4" x 74-3/8" (1051 x 1187 x 1888)	607 [275]
RAS091*0AA0AAA	7-1/2	88,000	N/A	11.2	8.0	41-3/8" x 59-1/2" x 88-1/8" (1051 x 1510 x 2238)	705 [320]
RAS101*0AA0AAA	8-1/2	97,000	N/A	11.2	8.8	49-3/8" x 59-1/2" x 88-1/8" (1253 x 1510 x 2238)	845 [384]
RAS121*0AA0AAA	10	117,000	N/A	11.2	10.6	49-3/8" x 59-1/2" x 88-1/8" (1253 x 1510 x 2238)	855 [388]

UNIT PERFORMANCE DATA - Dual Stage Cooling

UNIT	COOLING					Unit Dimensions H x W x L	Unit Weight lb. [kg]
	Nom. Tons	Net Cap. (Btuh)	SEER	EER	Total Power (kW)		
RAS090*0AA0AAA	7-1/2	83,000	N/A	11.2	7.4	41-3/8" x 59-1/2" x 88-1/8" (1051 x 1510 x 2238)	760 [345]
RAS102*0AA0AAA	8-1/2	97,000	N/A	11.2	9.0	49-3/8" x 59-1/2" x 88-1/8" (1253 x 1510 x 2238)	855 [388]
RAS120*0AA0AAA	10	114,000	N/A	11.3	10.1	49-3/8" x 59-1/2" x 88-1/8" (1253 x 1510 x 2238)	865 [393]
RAS150*0AA0AAA	12-1/2	140,000	N/A	11.0	12.7	49-3/8" x 59-1/2" x 88-1/8" (1253 x 1510 x 2238)	1075 [489]
RAS180*0AA0AAA	15	174,000	N/A	11.0	15.8	57-3/8" x 63-3/8" x 115-7/8" (1456 x 1609 x 2942)	1305 [593]

* Indicates Unit voltage: K = 208/230-1-60, H = 208/230-3-60, L = 460-3-60, S = 575-3-60

NOTE: BASE MODEL NUMBERS LISTED. SEE MODEL NOMENCLATURE LISTING FOR ADDITIONAL OPTIONS

TABLE OF CONTENTS

	PAGE
MODEL NUMBER NOMENCLATURE	3
FACTORY OPTIONS AND/OR ACCESSORIES	5
AHRI COOLING RATING TABLE	13
MINIMUM/MAXIMUM AIRFLOW TABLE	14
SOUND PERFORMANCE TABLE	14
PHYSICAL DATA	15
CURBS & WEIGHTS DIMENSIONS	18
OPTIONAL ACCESSORY WEIGHTS	29
APPLICATION DATA	30
COOLING TABLES	32
STATIC PRESSURE ADDERS	53
OUTDOOR AIR INTAKE & EXHAUST PERF	54
FAN PERFORMANCE	56
ELECTRICAL INFO FOR UNITS MADE ON OR AFTER JULY 30, 2012	70
ELECTRICAL HEATER INFO FOR UNITS MADE ON OR AFTER JULY 30, 2012	76
UNIT WIRE/FUSE OR BKR SIZING DATA	105
ELECTRICAL INFO FOR UNITS MADE PRIOR TO JULY 30, 2012	124
ELECTRICAL HEATER INFO FOR UNITS MADE PRIOR TO JULY 30, 2012	130
UNIT WIRE/FUSE OR BKR SIZING DATA	148
SEQUENCE OF OPERATION	166
HOT GAS REHEAT DIAGRAMS	168
GUIDE SPECIFICATIONS	169

3 to 15 TON ROOFTOP UNIT FIOP CODES (Use with Model Nomenclature on next page)			
OPTION	DESCRIPTION	NOMENCLATURE	
		CODE	OPTIONS
2	Non-Fused Disconnect Switch	0A	None
4	Easy Access Hinged Panels	4B	2
5	Unpowered Convenience Outlet	AT	5
9	Supply Air Smoke Detector	BR	9
		7C	2, 5
		7K	2,5,9
		BA	5, 9
		8A	2, 9
		AA	4
		6C	2, 4
		6D	2, 4, 5
		6L	2, 4, 5, 9
		7B	2, 4, 9
		AB	4, 5
		AJ	4, 5, 9
		CH	4, 9

MODEL NOMENCLATURE (With Single Speed IFM)

MODEL SERIES	R	A	S	0	9	1	H	0	A	A	0	A	A	A
Position Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14
R = Rooftop														
A = Air Conditioning (Cooling Only) H = Heat Pump G = Gas/Electric			Type											
S = Standard ASHRAE 90.1–2010 Efficiency			Efficiency											
036 = 3 Tons 048 = 4 Tons 060 = 5 Tons 072 = 6 Tons 091 = 7.5 Tons (Single Compressor) 090 = 7.5 Tons (Dual Compressor) 101 = 8.5 Tons (Single Compressor) 102 = 8.5 Tons (Dual Compressor) 121 = 10 Tons (Single Compressor) 120 = 10 Tons (Dual Compressor) 150 = 12.5 Tons (Dual Compressor) 180 = 15 Tons (Dual Compressor)														
K = 208/230–1–60 H = 208/230–3–60 L = 460–3–60 S = 575–3–60														
0 = No Heat														
A = Standard Motor (3 – 15 ton) B = High Static Motor (6 – 12.5 ton, 3 phase models only) E = High Static, High Efficiency Motor (15 ton only) C = Medium Static Motor (Not available on 3, 4, & 8.5 ton) G = High Static Motor / Drive with Hot Gas Re-heat (15 Ton only) H = High Static Motor / Drive with Hot Gas Re-heat (3 – 12.5 ton, 3 phase models only)														
A = None B = Economizer w/Baro-relief, OA Temp sensor E = Economizer w/Baro-relief + CO2 Sensor, OA Temp sensor H = Economizer w/Baro-relief, enthalpy sensor L = Economizer w/Baro-relief + CO2 Sensor, enthalpy sensor P = 2-Position damper														
OA = No Options AT = Non-powered 115v C.O. BR = Supply Air Smoke Detector AA = Easy Access Hinged Panels														
A = Aluminum / Copper Cond & Evap Coil B = Precoat Alum/Copper Cond & Alum / Copper Evap (3 phase only) C = E-Coated Alum/Copper Cond & Alum / Copper Evap (3 phase only) D = E-Coated Alum / Copper Cond & Evap (3 phase only) E = Copper/Copper Cond & Alum/Copper Evap (3 phase only) F = Copper/Copper Cond & Evap (3 phase only)														
A = Standard Single Speed Indoor Fan Motor														

Note: On single phase (K voltage code) motors, the following are not available as factory installed options: Coated or copper fin coils and Economizers or 2 position dampers.

MODEL NOMENCLATURE (With Two Speed IFM)

MODEL SERIES	R	A	S	0	9	1	H	0	A	A	0	A	A	T
Position Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14
R = Rooftop														
A = Air Conditioning (Cooling Only)														
H = Heat Pump														
G = Gas/Electric Type														
S = Standard ASHRAE 90.1–2010 Efficiency Efficiency														
090 = 7.5 Tons (Dual Compressor)														
102= 8.5 Tons (Dual Compressor)														
120 = 10 Tons (Dual Compressor)														
150 = 12.5 Tons (Dual Compressor)														
180 = 15 Tons (Dual Compressor) Nominal Cooling Capacity														
H = 208/230–3–60														
L = 460–3–60														
S = 575–3–60 Voltage														
0 = No Heat Heating Capacity (See spec sheet for actual capacity)														
A = Standard Motor														
B = High Static Motor (7.5 – 15 ton)														
C = Medium Static Motor (Not available on 8.5 ton)														
H = High Static Motor / Drive with Hot Gas Re-heat Motor Option														
A = None														
B = Economizer w/Baro-relief, OA Temp sensor														
E = Economizer w/Baro-relief + CO2 Sensor, OA Temp sensor														
H = Economizer w/Baro-relief, enthalpy sensor														
L = Economizer w/Baro-relief + CO2 Sensor, enthalpy sensor														
U = Temp Ultra Low Leak Economizer w/Baro-relief														
W = Enthalpy Ultra Low Leak Economizer w/Baro-relief														
Outdoor Air Options / Control (See spec sheet for details)														
OA = No Options														
AT = Non-powered 115v C.O.														
BR = Sup. Air Smoke Detector														
AA = Easy Access Hinged Panels														
Factory Installed Options (3 Phase Only)														
A = Aluminum / Copper Cond & Evap Coil														
B = Precoat Alum/Copper Cond & Alum / Copper Evap (3 phase only)														
C = E-Coated Alum/Copper Cond & Alum / Copper Evap (3 phase only)														
D = E-Coated Alum / Copper Cond & Evap (3 phase only)														
E = Copper/Copper Cond & Alum/Copper Evap (3 phase only)														
F = Copper/Copper Cond & Evap (3 phase only) Condenser / Evaporator Coil Configuration														
T = 2 Speed Indoor Fan Motor VFD Controller (For 2-stage units only) Motor Type Option														

Table 1 – FACTORY INSTALLED OPTIONS AND FIELD INSTALLED ACCESSORIES

CATEGORY	ITEM	FACTORY INSTALLED OPTION	FIELD INSTALLED ACCESSORY
Cabinet	Thru-the-base electrical connections		X
	Supply Duct Cover (15 ton only)		X
	Hinged Access Panels	X	X
Coil Options	Copper/Copper indoor and/or outdoor coils	X	
	Pre-coated outdoor coils	X	
	Premium, E-coated outdoor coils	X	
Humidity Control	Hot Gas Reheat	X	
Condenser Protection	Condenser coil hail guard (louvered design)		X
Controls	Smoke detector (supply air)	X	
	Time Guard II compressor delay control circuit		X
	Phase Monitor		X
Economizers & Outdoor Air Dampers	Economizer IV (for electro-mechanical controlled RTUs)	X	X
	Motorized 2 position outdoor-air damper	X	X
	Manual outdoor-air damper		X
	Barometric relief ¹	X	X
	Power exhaust		X
	Ultra Low Leak Economizer X (for 2-Speed Indoor Fan Motor System only 090 to 150 sizes with 2 stages of cooling), vertical supply and return air only.	X	X
Economizer Sensors & IAQ Devices	Single dry bulb temperature sensors ²	X	X
	Single enthalpy sensors ²	X	X
	Differential enthalpy sensors ²		X
	CO ₂ sensor (wall, duct, or unit mounted) ²		X
Indoor Motor & Drive	Multiple motor and drive packages	X	
	2-Speed Indoor Fan Motor System w/VFD controller	X	
Electric Heat	Electric Resistance Heaters		X
	Single Point Kit		X
Low Ambient Control	Winter start kit ³		X
	Head pressure controller ³		X
Power Options	Convenience outlet (unpowered)	X	
	Non-fused disconnect ⁴	X	
Roof Curbs	Roof curb 14" (356mm)		X
	Roof curb 24" (610mm)		X

NOTES:

1. Included with economizer.
2. Sensors used to optimize economizer performance.
3. See application data for assistance.
4. Available on units with MOCP's of 80 amps or less
5. All FIOP's are 3 phase only

FACTORY OPTIONS AND/OR ACCESSORIES

Economizer (dry-bulb or enthalpy)

Economizers save money. They bring in fresh, outside air for ventilation; and provide cool, outside air to cool your building. This is the preferred method of low ambient cooling. When coupled to CO₂ sensors, Economizers can provide even more savings by coupling the ventilation air to only that amount required.

Economizers are available, installed and tested by the factory, with either enthalpy or dry-bulb temperature inputs. There are also models for electromechanical as well as direct digital controllers. Additional sensors are available as accessories to optimize the economizers.

Economizers include gravity controlled, barometric relief which equalizes building pressure and ambient air pressures. This can be a cost effective solution to prevent building pressurization.

CO₂ Sensor

Improves productivity and saves money by working with the economizer to intake only the correct amount of outside air for ventilation. As occupants fill your building, the CO₂ sensor detects their presence through increasing CO₂ levels, and opens the economizer appropriately.

When the occupants leave, the CO₂ levels decrease, and the sensor appropriately closes the economizer. This intelligent control of the ventilation air, called Demand Control Ventilation (DCV) reduces the overall load on the rooftop, saving money. CO₂ sensors are available with the economizer, installed and tested by the factory.

Smoke Detectors

Smoke detectors immediately shut down the rooftop unit when smoke is detected. Supply air smoke detectors are available, installed by the factory.

Louvered Hail Guards

Sleek, accessory louvered panels protect the condenser coil from hail damage, foreign objects, and incidental contact.

Convenience Outlet (un-powered)

Lower service bills by including a convenience outlet in your specification. Provides a convenient, 15 amp, 115v GFCI receptacle.

Non-fused Disconnect

This OSHA-compliant, factory-installed, safety switch allows a service technician to locally secure power to the rooftop.

Barometric Relief

Gravity controlled, barometric relief equalizes building pressure and ambient air pressures. This can be a cost effective solution to prevent building pressurization.

Power Exhaust

Superior internal building pressure control. This field-installed accessory may eliminate the need for costly, external pressure control fans.

Time Guard II Control Circuit

This accessory protects your compressor by preventing short-cycling in the event of some other failure, prevents the compressor from restarting for 30 seconds after stopping. Not required with authorized commercial thermostats.

Motorized 2-Position Damper

A 2-position, motorized outdoor air damper is available as a field installed accessory and admits up to 100% outside air. Using reliable, gear-driven technology, the 2-position damper opens to allow ventilation air and closes when the rooftop stops, stopping unwanted infiltration.

Manual OA Damper

Accessory manual outdoor air dampers are an economical way to bring in ventilation air.

2-Speed Indoor Fan Speed Motor System

The 2-Speed Indoor Fan Motor System saves energy and installation time by utilizing a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor speed in sequence with the units cooling operation. Per ASHRAE 90.1 2010 standard section 6.4.3.10.b, during the first stage of cooling operation the VFD will adjust the fan motor to provide 2/3rd of the total cfm established for the unit. When a call for the second stage of cooling is required, the VFD will allow the total cfm for the unit established (100%). During the heating mode the VFD will allow total design cfm (100%) operation and during the ventilation mode the VFD will allow operation to 2/3rd of total cfm.

Compared to 1-speed indoor fan motor systems, the 2-Speed Indoor Fan Motor System can save substantial energy, 25%+/-, versus 1-speed indoor fan motor systems.

The VFD used in the 2-Speed Indoor Fan Motor System has soft start capabilities to slowly ramp up the speeds, thus eliminating any high inrush air volume during initial start-up. It also has internal over-current protection for the fan motor and a field installed display kit that allows adjustment and in depth diagnostics of the VFD.

This 2-Speed Indoor Fan Motor System is available on models with 2-stage cooling operation with electromechanical or RTU Open, Multi Protocol controls. Both space sensor and conventional thermostats/controls can be used to provide accurate control in any application.

The 2-Speed Indoor Fan Motor System is very flexible for initial fan performance set up and adjustment. The standard factory shipped VFD is pre-programmed to automatically stage the fan speed between the first and second stage of cooling. The unit fan performance static pressure and cfm can be easily adjusted using the traditional means of pulley adjustments. The other means to adjust the unit static and cfm performance is to utilize the field installed Display Kit and adjust the frequency and voltage in the VFD to performance requirements. In either case, once set up, the VFD will automatically adjust the speed between the cooling stage operations.

Optional Hot Gas Reheat System

The Hot Gas Reheat System is an all-inclusive factory-installed option that can be ordered with any 3 phase RAS unit.

This system expands the envelope of operation of our rooftop products to provide unprecedented flexibility to meet year-round comfort conditions.

The Hot Gas Reheat System has the industry's only dual dehumidification mode setting. The Hot Gas Reheat System includes two new modes of operation.

The RAS rooftop coupled with the Hot Gas Reheat system is capable of operating in normal design cooling mode, subcooling mode, and hot gas reheat mode. Normal design cooling mode is when the unit will operate under its normal sequence of operation by cycling compressors to maintain comfort conditions.

Subcooling mode will operate to satisfy part load type conditions when the space requires combined sensible and a higher proportion of latent load control. Hot Gas Reheat mode will operate when outdoor temperatures diminish and the need for latent capacity is required for sole humidity control. Hot Gas Reheat mode will provide neutral air for maximum dehumidification operation.

Head Pressure Controller

The motor controller is a low ambient, head pressure controller kit that is designed to maintain the unit's condenser head pressure during periods of low ambient cooling operation. This device should be used as an alternative to economizer free cooling not when economizer usage is either not appropriate or desired. The controller will either cycle the outdoor-fan motors or operate them at reduced speed to maintain the unit operation, depending on the model.

Hinged Access Panels

Allows access to unit's major components with specifically designed hinged access panels. Panels are: filters, control box, fan motor and compressor.

Winter Start Kit

The accessory winter start kit extends the low ambient limit of your rooftop to 25°F (-4°C). The kit bypasses the low pressure switch, preventing nuisance tripping of the low pressure switch. Other low ambient precautions may still be prudent.

Alternate Motors and Drives

Some applications need larger horsepower motors, some need more airflow, and some need both. Regardless of the case, your unit has a factory installed combination to meet your application. A wide selection of motors and pulleys (drives) are available, factory installed, to handle nearly any application.

Thru-the-Base Connections

Thru-the-base connections, available as an accessory, are necessary to ensure proper connection and seal when routing wire and piping through the rooftop's basepan and curb. These couplings eliminate roof penetration and should be considered for main power lines, as well as control power.

Electric Heaters

RAS units offer a full-line of accessory heaters. The heaters are very easy to use / install and are pre-engineered and certified.

Supply Duct Cover

This supply duct cover is required when field converting the factory standard vertical duct supply to horizontal duct supply configuration. One required per unit. (180 size only)

ACCESSORIES – RAS036–180

ECONOMIZERS		
Model Number	Description	Use With Model Size
DNECOMZR020A02	Vertical Economizer IV with solid-state controller, gear-driven, 3-position modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air sensors, and CO2 sensor compatible.	036 – 072
DNECOMZR021A03	Vertical Economizer IV with solid-state controller, gear-driven, 3-position modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air sensors, and CO2 sensor compatible.	090 – 150
DNECOMZR062A00	Vertical Economizer IV with solid-state controller, gear-driven, 3-position modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air sensors, and CO2 sensor compatible.	180
CRECOMZR069A00 ^{1,2}	Ultra Low Leak Vertical ³ Economizer X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air sensors, and CO2 sensor compatible, for use in electro mechanical controls only.	090 – 150
CRECOMZR071A00 ^{1,2}	Ultra Low Leak Vertical ³ Economizer X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air sensors, and CO2 sensor compatible, for use in electro mechanical controls only.	180
DNECOMZR024A02	Horizontal Economizer IV with solid-state controller, gear-driven, 3-position modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air sensors, and CO2 sensor compatible.	036 – 072
DNECOMZR025A02	Horizontal Economizer IV with solid-state controller, gear-driven, 3-position modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air sensors, and CO2 sensor compatible.	090 – 150
DNECOMZR064A00	Horizontal Economizer IV with solid-state controller, gear-driven, 3-position modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air sensors, and CO2 sensor compatible.	180
¹ Economizer X cannot be installed with Economizer IV, manual damper, or motorized damper. ² Can only be used on electrical mechanical units with 2-stage cooling and 2-speed fan control. ³ Economizer X is currently only available on vertical air flow configuration models.		
ECONOMIZER SENSORS		
Model Number	Description	Use With Model Size
DNTEMPSN002A00	Outdoor or Return Dry Bulb Temperature Sensor used with Electro-Mechanical control.	Economizer IV
DNCBDIOX005A00	CO ₂ Sensor for use in return airstream. Also includes Aspirator Box required for Duct Mounting.	Economizer IV
DNENTDIF004A00	Return Air Enthalpy Sensor used with Electro-Mechanical controls, use with AXB078ENT for differential enthalpy control.	Economizer IV
AXB078ENT	Accusensor II Economizer Differential Enthalpy Control Upgrade	Economizer IV
CRTEMPSN005A00	Outdoor or return dry bulb temperature sensor used with Honeywell W7220 electro-mechanical control.	Economizer X
HH57AC081	Enthalpy control for W7220 controller only. (One required for single enthalpy, two required for differential enthalpy)	Economizer X
NOTE: Supply air temperature sensor (SAT and low ambient lockout switch) provided with economizer IV or economizer X.		

ACCESSORIES – RAS036–180 (cont.)

POWER EXHAUST		
Model Number	Description	Use With Model Size
DNPWREXH030A01	Vertical Power Exhaust 208/230 volt (1 or 3 Phase)	036 – 072
DNPWREXH021A01	Vertical Power Exhaust 460 volt	036 – 072
DNPWREXH022A01	Vertical Power Exhaust 208/230 volt (1 or 3 Phase)	090 – 150
DNPWREXH023A01	Vertical Power Exhaust 460 volt	090 – 150
DNPWREXH080A00	Vertical Power Exhaust 208/230 volt	180
DNPWREXH081A00	Vertical Power Exhaust 460 volt	180
DNPWREXH028A01	Horizontal Power Exhaust 208/230 & 575 volt (1 or 3 Phase)	036 – 150
DNPWREXH029A01	Horizontal Power Exhaust 460 volt	036 – 150
DNPWREXH082A00	Horizontal Power Exhaust 208/230 & 575 volt	180
DNPWREXH083A00	Horizontal Power Exhaust 460 volt	180
575V TRANSFORMER		
Model Number	Description	Use With Model Size
1171494 ²	Transformer for conversion from 575v to 208/230v power exhaust applications.	ALL
FLAT ROOF CURBS		
Model Number	Description	Use With Model Size
CRRFCURB001A01	14" High Roof Curb. Ductwork attaches to the roof curb. Includes thru-the-bottom capability.	036 – 072
CRRFCURB003A01		090 – 150
CRRFCURB074A00		180
CRRFCURB002A01	24" High Roof Curb. Ductwork attaches to the roof curb. Includes thru-the-bottom capability.	036 – 072
CRRFCURB004A01		090 – 150
CRRFCURB075A00		180
HAIL GUARDS		
Model Number	Description	Use With Model Size
CRLVHLGD011A00	Louvered Condenser Coil Hail Guard	036
CRLVHLGD012A00	Louvered Condenser Coil Hail Guard	048 – 060
CRLVHLGD013A00	Louvered Condenser Coil Hail Guard	072
CRLVHLGD014A00	Louvered Condenser Coil Hail Guard	090, 091
CRLVHLGD015A00	Louvered Condenser Coil Hail Guard	101
CRLVHLGD016A00	Louvered Condenser Coil Hail Guard	102, 120, 121, 150
CRLVHLGD032A00	Louvered Condenser Coil Hail Guard	180
ACCESSORY KITS FOR UNITS WITH HINGED ACCESS PANELS		
Model Number	Description	Use With Model Size
CRPECONV003A00	Vertical accessory kit used with installing a vertical economizer on a unit that has hinged access panels. Includes angle and seal strip	036–072
CRPECONV004A00	Vertical accessory kit used with installing a vertical economizer on a unit that has hinged access panels. Includes angle and seal strip	090–150
CRPECONV007A00	Vertical & Horizontal accessory kit used with installing a 2–position damper or vertical & horizontal economizer on a unit that has hinged access panels. Includes angle and seal strip	180
CRHNGPNL001A00	Horizontal accessory kit used with installing a vertical economizer on a unit that has hinged access panels. Includes angle and seal strip	036–072
CRHNGPNL002A00	Horizontal accessory kit used with installing a vertical economizer on a unit that has hinged access panels. Includes angle and seal strip	090–150
CRHNGPNL007A00	Vertical & Horizontal accessory kit used with installing a 2–position damper or vertical & horizontal economizer on a unit that has hinged access panels. Includes angle and seal strip	180

ACCESSORIES – RAS036–180 (cont.)

MANUAL OUTDOOR AIR DAMPERS		
Model Number	Description	Use With Model Size
CRMANDPR001A03	25% Open Manual Fresh Air Damper	036 – 072
CRMANDPR001A02	50% Open Manual Fresh Air Damper	036 – 072
CRMANDPR002A03	25% Open Manual Fresh Air Damper	090 – 150
CRMANDPR002A02	50% Open Manual Fresh Air Damper	090 – 150
CRMANDPR011A00	50% Open Manual Fresh Air Damper	180
MOTORIZED OUTDOOR AIR DAMPERS		
Model Number	Description	Use With Model Size
CRTWOPOS010A00	Motorized 2 position outdoor air damper (25–100% Outdoor Air)	036 – 072
CRTWOPOS011A00	Motorized 2 position outdoor air damper (25–100% Outdoor Air)	090 – 150
CRTWOPOS014A00	Motorized 2 position outdoor air damper (25–100% Outdoor Air)	180
SPECIAL – 180 SIZE SPECIFIC ASSESSORIES		
Model Number	Description	Use With Model Size
CRDISBKT001A00	Disconnect Switch Bracket – Provides a pre engineered and sized mounting bracket for applications requiring a unit mounted fused disconnect of greater than 100 amps. Bracket assures that no damage will occur to coils when mounting with screws and other fasteners.	180
CRDUCTCV002A00	Supply Duct Cover – This supply duct cover is required when field converting the factory standard vertical duct supply to horizontal duct supply configuration. One required per unit.	180
THROUGH-THE-BOTTOM/CURB POWER CONNECTION		
Model Number	Description	Use With Model Size
CRBTMPWR001A01	Thru-the-bottom electrical connections and thru-the-curb gas connections. Includes a 3/4-inch diameter liquid tight conduit fitting for high voltage power wires	036 – 072
CRBTMPWR002A01	Thru-the-bottom electrical connections and thru-the-curb gas connections. Includes a 1–1/4-inch diameter liquid tight conduit fitting for high voltage power wires	090 – 150
CRBTMPWR003A01	Thru-the-bottom power, control, and gas connections. Includes a 3/4-inch diameter liquid tight conduit fitting for high voltage power wires	036 – 072
CRBTMPWR004A01	Thru-the-bottom power, control, and gas connections. Includes a 1–1/4-inch diameter liquid tight conduit fitting for high voltage power wires	090 – 150
CRBTMPWR005A00	Thru-the-bottom power, control, and gas connections. Includes a 1–1/4 inch diameter liquid tight conduit fitting for high voltage power wires	180
CRBTMPWR006A00	Thru-the-bottom power, control, and gas connections. Includes a 1–1/2 inch diameter liquid tight conduit fitting for high voltage power wires	
CRBTMPWR007A00	Thru-the-bottom power, control, and gas connections. Includes a 2 inch diameter liquid tight conduit fitting for high voltage power wires	

NOTE: Economizer IV, Economizer X, Manual Damper and 2–Position damper are all mutually exclusive and cannot be installed together.

- Manual dampers include hood assembly, bird screen, adjustable damper blade (to allow up to the rated outdoor air %), and bottom panel with opening.
- Motorized dampers include bottom panel with opening (100% two–position damper includes 30% barometric relief capability), and adjustable damper (to allow up to the rated outdoor air %)
- Motorized dampers will close on loss of power to the rooftop unit.
Manual and motorized dampers are not compatible with a vertical power exhaust module.

ACCESSORIES – RAS036–180 (cont.)

LOW AMBIENT CONTROLS *		
Model Number	Description	Use With Model Size
32LT900301 ¹	Motormaster I Solid-State Variable Speed Motor Controller enables cooling down to –20° F by varying the speed on the condenser fan.	036 – 121 208/230–1–60, 208/203–3–60, 575–3–60
32LT900611 ¹	MotorMaster I Solid-State Variable Speed Motor Controller enables cooling down to –20° F by varying the speed on the condenser fan.	036 – 121 460–3–60
CPLOWAMB001A00	Motormaster® II Low Ambient Control – Enables cooling system to operate down to 0° F by cycling condenser fan on and off. The control is activated by a temperature sensor. No motor change-out required.	036 – 121 208/230–3–60, 460–3–60 ⁴
1171974 ²	Motormaster I Compatible Condenser Fan Motor	036 – 121 208/230–1–60, 208/230–3–60, 575–3–60
1171975 ²	Motormaster I Compatible Condenser Fan Motor	036 – 121 460–3–60
CRLOWAMB030A00 ³	Motormaster V Low Ambient Kit. Mechanical cooling operation down to –20° F (– 29° C)	150 208/230–3–60
CRLOWAMB031A00 ³	Motormaster V Low Ambient Kit. Mechanical cooling operation down to –20° F (– 29° C)	150 460–3–60
CRLOWAMB032A00 ³	Motormaster V Low Ambient Kit. Mechanical cooling operation down to –20° F (– 29° C).	150 575–3–60
CRLOWAMB039A00	Motormaster I Low Ambient Kit. Mechanical cooling operation down to –20° F (– 29° C). Kit includes 3 motors, MotorMaster controller, wiring label, and required wire ties and connectors, DNWINSTR001A00 also required (one per refrigerant circuit)	180 208/230–3–60
CRLOWAMB040A00	Motormaster I Low Ambient Kit. Mechanical cooling operation down to –20° F (– 29° C). Kit includes 3 motors, MotorMaster controller, wiring label, and required wire ties and connectors) 575 Volt models also require CRTRXKIT002A00 plus DNWINSTR001A00 also required (one per refrigerant circuit)	180 460–3–60
CRTRXKIT001A00	Motormaster I Low Ambient Control – Transformer Kit. Must be used in conjunction with Low Ambient Controller if used on 575–3–60 volt models.	180 575–3–60

CONTROL UPGRADE KITS		
Model Number	Description	Use With Model Size
CRDISKIT001A00	2-Speed VFD display kit provides the field capability to set up points and troubleshooting codes on the VFD controller. Can be used for any associated unit with VFD.	All 2-Speed VFD Controllers
NRTIMEGD001A00	Time Guard II	036 – 180
CRSDTEST001A00	Remote keyed attenuator / test / reset station	036 – 180
DNWINSTR001A00	Electronic phase monitor breaks “R” control signal if trouble is detected. (Allows operation down to 25°F from standard 40°F.)	036 – 180
CRPHASE3001A02	Phase Monitor Control	036 – 180 (3 Phase only)
CRPHASE3002A00	Phase Monitor Control	036 – 180 (575v only)
CRSTATUS001A00	Fan/Filter Status Switch – Indicator light not included	036 – 180

*See usage tables in kit instructions.

¹ Requires motor change out. Sizes 036–072 require one (1) Low Ambient Controller and one (1) compatible condenser fan motor for change-out. Sizes 090–121 require one (1) Low Ambient Controller and two (2) compatible condenser fan motors for change-out.

See Motormaster I kit instructions for capacitor replacement information.

² Available from FAST Parts.

³ No motor change is required on these specific models.

⁴ One DNWINSTR001A00 also required per refrigerant circuit.

ACCESSORIES – RAS036–180 (cont.)

ELECTRIC HEATERS			
Model Number	Voltage	Nominal Power (kW)	Used With Model Size
CRHEATER101A00	208/230	4.4	036 – 072
CRHEATER102A00	208/230	6.5	036 – 072
CRHEATER103B00	208/230	8.7	036 – 060
CRHEATER104B00	208/230	10.5	036 – 072
CRHEATER105A00	208/230	16	036 – 072
CRHEATER106A00	460	6	036 – 072
CRHEATER107A00	460	8.8	036
CRHEATER108A00	460	11.5	036 – 072
CRHEATER109A00	460	14	036 – 072
CRHEATER110A00	208/230	16	090 – 150
CRHEATER111A00	208/230	24.8	090 – 121
CRHEATER112A00	208/230	32	090 – 150
CRHEATER113A00	460	16.5	090 – 150
CRHEATER114A00	460	27.8	090 – 150
CRHEATER115A00	460	33	090 – 150
CRHEATER116A00	460	13.9	090 – 150
CRHEATER117A00	208/230	10.4	090 – 150
CRHEATER118A00	575	17	090 – 150
CRHEATER119A00	575	34	090 – 150
CRHEATER288A00	208/230	10.0	180
CRHEATER289A00	460	10.0	180
CRHEATER290A00	575	10.0	180
CRHEATER291A00	208/230	16.5	180
CRHEATER292A00	460	16.5	180
CRHEATER293A00	575	16.5	180
CRHEATER294A00	208/230	33.5	180
CRHEATER295A00	460	33.5	180
CRHEATER296A00	575	33.5	180
SINGLE POINT WIRING KITS			
Model Number	Voltage	Used With Model Size	
CRSINGLE037A00	208/230/460–3–60	072	
CRSINGLE038A00	208/230–3–60	048, 60	
CRSINGLE040A00	208/230–1–60	036, 048, 60	
CRSINGLE042A00	208/230/460/575–3–60	090, 091	
CRSINGLE043A00	208/230–3–60	090, 091	
CRSINGLE044A00	460/575–3–60	090, 091	
CRSINGLE045A00	208/230–3–60	090, 091	
CRSINGLE047A00	208/230/460/575–3–60	101, 102, 120, 121, 150, 180	
CRSINGLE049A00	208/230–3–60	101, 102, 120, 121, 150, 180	
CRSINGLE050A00	460/575–3–60	101, 102, 120, 121, 150, 180	
CRSINGLE051A00	208/230–3–60	101, 102, 120, 121, 150, 180	
CRSINGLE053A00	208/230–3–60	180	

Table 2 – AHRI COOLING RATING TABLE – Single Stage Cooling

UNIT RAS	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (KW)	SEER	EER	IEER
036	1	3	34.6	3.1	13.0	11.0	–
048	1	4	45.0	4.0	13.0	11.0	–
060	1	5	59.0	5.5	13.0	10.8	–
072	1	6	70.0	6.4	–	11.2	11.4
091	1	7.5	88.0	8.0	–	11.2	11.4
101	1	8.5	97.0	8.8	–	11.2	11.4
121	1	10	117.0	10.6	–	11.2	11.4

Table 3 – AHRI COOLING RATING TABLE – Two Stage Cooling

UNIT RAS	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	SEER	EER	IEER WITH 1–SPEED INDOOR FAN MOTOR	IEER WITH 2–SPEED INDOOR FAN MOTOR
090	2	7.5	83.0	7.4	N/A	11.2	11.7	13.0
102	2	8.5	99.0	9.0	N/A	11.2	11.7	13.0
120	2	10	114.0	10.1	N/A	11.3	12.2	13.0
150	2	12.5	140.0	12.7	N/A	11.0	11.2	12.0
180	2	15	174.0	15.8	N/A	11.0	11.5	12.6

LEGEND

AHRI – Air-Conditioning, Heating & Refrigeration Institute
 ASHRAE – American Society of Heating, Refrigerating and Air Conditioning, Inc.
 EER – Energy Efficiency Ratio
 IEER – Integrated Energy Efficiency Ratio
 SEER – Seasonal Energy Efficiency Ratio

NOTES:

1. Rated and certified under AHRI Standard 340/360–04, as appropriate.
2. Ratings are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temp and 95°F (35°C) db outdoor air temp.
IEER Standard: A measure that expresses cooling part-load EER efficiency for commercial unitary air conditioning and heat pump equipment on the basis of weighted operation at various load capacities.
3. All RAS units comply with ASHRAE 90.1 2001, 2004 Energy Standard for minimum SEER and EER requirements.
4. Where appropriate, RAS units comply with US Energy Policy Act (2005). Refer to state and local codes.



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.

Table 4 – MINIMUM – MAXIMUM AIRFLOWS ELECTRIC HEAT

UNIT RAS	COOLING		ELECTRIC HEATERS	
	Minimum	Maximum	Minimum	Maximum
036	900	1500	900	1500
048	1200	2000	1200	2000
060	1500	2500	1500	2500
072	1800	3000	1800	3000
090/091	2250	3750	2250*	3750
101/102	2550	4250	2250*	4250
120/121	3000	5000	3000*	5000
150	3600	6000	3000*	6000
180	4500	7500	4500	7500

* Minimum electric heat CFM exceptions :

UNIT RAS	UNIT VOLTAGE	HEATER KW	UNIT CONFIGURATION	REQUIRED MINIMUM CFM
120 150	208/230	42.4	Horizontal	3200
120 150	208/230	50.0	Horizontal	3200
120 150	460	50.0	Horizontal or Vertical	3200
090/091 101/102 120/121 150	575	17.0	Horizontal or Vertical	2800
		34.0		2350

Table 5 – SOUND PERFORMANCE TABLE

UNIT RAS	COOLING STAGES	OUTDOOR SOUND (dB)								
		A-WEIGHTED	63	125	250	500	1000	2000	4000	8000
036	1	80	90.6	80.9	80.2	76	74.6	71.3	68.5	63.9
048	1	81	90.9	84.6	79.5	77.9	76.5	71.1	66.9	62.5
060	1	78	84.0	82.2	76.3	74.8	72.5	68.8	65.6	61.8
072	1	78	88.8	81.8	76.9	74.4	73.3	69.8	66.3	62.7
091	1	82	90.1	82.6	81.0	79.4	77.0	73.0	70.4	66.7
090	2	82	85.8	84.3	80.5	78.7	76.4	72.7	68.3	65.1
101	1	83	91.2	86.4	81.9	81.0	78.3	73.9	71.4	67.3
102	2	82	88.6	85.0	81.6	79.5	77.4	74.1	71.0	66.3
121	1	82	88.6	85.0	81.6	79.5	77.4	74.1	71.0	66.3
120	2	82	89.0	83.1	80.5	78.5	75.5	71.6	69.6	69.3
150	2	87	87.0	85.2	84.6	84.9	82.2	78.4	75.3	72.9
180	2	87	87.0	85.2	84.6	84.9	82.2	78.4	75.3	72.9

LEGEND

dB – Decibel



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.

NOTES:

1. Outdoor sound data is measure in accordance with AHRI standard 270-95.
2. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environmental factors which normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
3. A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of "average" human ear. A-weighted measurements are taken in accordance with AHRI standard 270-95.

Table 6 – PHYSICAL DATA (COOLING) 3 – 6 TONS

		RAS036	RAS048	RAS060	RAS072
Refrigeration System					
# Circuits / # Comp. / Type		1 / 1 / Scroll	1 / 1 / Scroll	1 / 1 / Scroll	1 / 1 / Scroll
Refrig. R-410A) charge (lbs-oz)		5–10	8–8	10–11	14–2
Hot Gas Reheat Refrig. R-410A charge (lbs-oz)		8–11	14–13	16–0	22–5
Metering Device		Fixed Metering Device			
High–press. Trip / Reset (psig)		630 / 505	630 / 505	630 / 505	630 / 505
Low–press. Trip / Reset (psig)		54 / 117	54 / 117	54 / 117	54 / 117
Evap. Coil					
Material		Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type		3/8" RTPF	3/8" RTPF	3/8" RTPF	3/8" RTPF
Rows / FPI		2 / 15	2 / 15	4 / 15	4 / 15
Total Face Area (ft ²)		5.5	5.5	5.5	7.3
Condensate Drain Conn. Size		3/4"	3/4"	3/4"	3/4"
Evap. Fan and Motor					
Standard Static 1 phase	Motor Qty / Drive Type	1 / Belt	1 / Belt	1 / Belt	–
	Max BHP	1.2	1.2	1.2	–
	RPM Range	560–854	560–854	770–1175	–
	Motor Frame Size	48	48	48	–
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	–
Medium Static 1 phase	Fan Diameter (in)	10 x 10	10 x 10	10 x 10	–
	Motor Qty / Drive Type	–	–	1 / Belt	–
	Max BHP	–	–	1.5	–
	RPM Range	–	–	1035–1466	–
	Motor Frame Size	–	–	56	–
Standard Static 3 phase	Fan Qty / Type	–	–	1 / Centrifugal	–
	Fan Diameter (in)	–	–	10 x 10	–
	Motor Qty / Drive Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	1.2	1.2	1.5	2.4
	RPM Range	560–854	560–854	770–1175	1073–1457
Medium Static 3 phase	Motor Frame Size	48	48	48	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in)	10 x 10	10 x 10	10 x 10	10 x 10
	Motor Qty / Drive Type	–	–	1 / Belt	1 / Belt
	Max BHP	–	–	2.4	2.9*
High Static 3 phase	RPM Range	–	–	1035–1466	1173–1518
	Motor Frame Size	–	–	56	56
	Fan Qty / Type	–	–	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in)	–	–	10 x 10	10 x 10
	Motor Qty / Drive Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.4	2.4	2.9	3.7
	RPM Range	1035–1466	1035–1466	1303–1687	1474–1788
	Motor Frame Size	56	56	56	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in)	10 x 10	10 x 10	10 x 10	10 x 10
Cond. Coil					
Material		Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type		3/8" RTPF	3/8" RTPF	3/8" RTPF	3/8" RTPF
Rows / FPI		1 / 17	2 / 17	2 / 17	2 / 17
Total Face Area (ft ²)		14.6	16.5	16.5	21.3
Hot Gas Reheat Coil					
Material		Cu / Al	Cu / Al	Cu / Al	Cu / Al
Rows / FPI		1 / 17	2 / 17	2 / 17	2 / 17
Total Face Area (ft ²)		3.9	3.9	3.9	5.2
Cond. fan / motor					
Qty / Motor Drive Type		1/ Direct	1/ Direct	1/ Direct	1/ Direct
Motor HP / RPM		1/4 / 1100	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan diameter (in)		22	22	22	22
Filters					
RA Filter # / Size (in)		2 / 16 x 25 x 2	2 / 16 x 25 x 2	2 / 16 x 25 x 2	4 / 16 x 16 x 2
OA inlet screen # / Size (in)		1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1

* RTPF – Round Tube Plate Fin Coil Design

Table 6 – (Cont.) PHYSICAL DATA (COOLING) 7.5 – 8.5 TONS

		RAS091	RAS090	RAS101	RAS102
Refrigeration System					
# Circuits / # Comp. / Type		1 / 1 / Scroll	2 / 2 / Scroll	1 / 1 / Scroll	2 / 2 / Scroll
RTPF models R-410a charge A/B (lbs – oz)		13 – 12	8 – 5 / 8 – 2	15 – 4	10 – 5 / 10 – 12
Hot Gas Reheat RTPF models R-410a charge A/B (lbs – oz)		–	13 – 3 / 13 – 3	–	16 – 13 / 16 – 13
Metering device		Fixed Metering Device			
High–press. Trip / Reset (psig)		630 / 505	630 / 505	630 / 505	630 / 505
Low–press. Trip / Reset (psig)		54 / 117	54 / 117	54 / 117	54 / 117
Evap. Coil					
Material		Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type		3/8" RTPF	3/8" RTPF	3/8" RTPF	3/8" RTPF
Rows / FPI		3 / 15	3 / 15	3 / 15	3 / 15
total face area (ft2)		8.9	8.9	11.1	11.1
Condensate drain conn. size		3/4"	3/4"	3/4"	3/4"
Hot Gas Reheat Coil					
Material		–	Cu / Al	–	Cu / Al
Coil type		–	3/8" RTPF	–	3/8" RTPF
Rows / FPI		–	2 / 17	–	2 / 17
total face area (ft2)		–	6.3	–	8.4
Evap. fan and motor					
Standard Static 3 phase	Motor Qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	1.7	1.7	1.7	1.7
	RPM range	489–747	489–747	518–733	518–733
	motor frame size	56	56	56	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in)	15 x 15	15 x 15	15 x 15	15 x 15
Medium Static 3 phase	Motor Qty / Drive type	1 / Belt	1 / Belt	–	–
	Max BHP	2.9	2.9	–	–
	RPM range	733–949	733–949	–	–
	motor frame size	56	56	–	–
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	–	–
	Fan Diameter (in)	15 x 15	15 x 15	–	–
High Static 3 phase	Motor Qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	4.7	4.7	3.7	3.7
	RPM range	909–1102	909–1102	838–1084	838–1084
	motor frame size	145TY	145TY	56	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in)	15 x 15	15 x 15	15 x 15	15 x 15
Cond. Coil					
Material		Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type		3/8" RTPF*	3/8" RTPF*	3/8" RTPF*	3/8" RTPF*
Rows / FPI		2 / 17	2 / 17	2 / 17	2 / 17
Total Face Area (ft2)		20.5	20.5	21.4	25.1
Cond. fan / motor					
Qty / Motor drive type		2 / direct	2 / direct	2 / direct	2 / direct
Motor HP / RPM		1/4 / 1100	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan diameter (in)		22	22	22	22
Filters					
RA Filter # / size (in)		4 / 16 x 20 x 2	4 / 16 x 20 x 2	4 / 20 x 20 x 2	4 / 20 x 20 x 2
OA inlet screen # / size (in)		1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1

* RTPF – Round Tube Plate Fin Coil Design

Table 6 – (Cont.) PHYSICAL DATA (COOLING) 10 – 15 TONS

Refrigeration System		RAS121	RAS120	RAS150	RAS180
# Circuits / # Comp. / Type		1 / 1 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll
RTPF models R-410a charge A/B (lbs – oz)		20 – 0 / –	10 – 5 / 10 – 3	11 – 0 / 11 – 6	15–14/16–12
Hot Gas Reheat RTPF models R-410a charge A/B (lbs – oz)		– / –	16 – 0 / 16 – 0	17 – 0 / 18 – 3	– / –
Metering device		Fixed Metering Device			
High–press. Trip / Reset (psig)		630 / 505	630 / 505	630 / 505	630 / 505
Low–press. Trip / Reset (psig)		54 / 117	54 / 117	54 / 117	54 / 117
Evap. Coil					
Material		Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type		3/8" RTPF	3/8" RTPF	3/8" RTPF	3/8" RTPF
Rows / FPI		4 / 15	4 / 15	4 / 15	3 / 15
total face area (ft ²)		11.1	11.1	11.1	17.5
Condensate drain conn. size		3/4"	3/4"	3/4"	3/4"
Evap. fan and motor					
Standard Static 3 phase	Motor Qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.4	2.4	2.9	2.9
	RPM range	591–838	591–838	652–843	507–676
	motor frame size	56	56	56	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in)	15 x 15	15 x 15	15 x 15	18 x 18
Medium Static 3 phase	Motor Qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	3.7	3.7	3.7	3.7
	RPM range	838–1084	838–1084	838–1084	627–851
	motor frame size	56	56	56	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in)	15 x 15	15 x 15	15 x 15	18 x 18
High Static 3 phase	Motor Qty / Drive type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	4.7	4.7	4.7	6.1
	RPM range	1022–1240	1022–1240	1022–1240	776–955
	motor frame size	14	14	14	S184T
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in)	15 x 15	15 x 15	15 x 15	18 x 18
High Static High Efficiency 3 phase *	Motor Qty / Drive type	–	–	–	1 / Belt
	Max BHP	–	–	–	6.1
	RPM range	–	–	–	776–955
	motor frame size	–	–	–	S184T
	Fan Qty / Type	–	–	–	1 / Centrifugal
	Fan Diameter (in)	–	–	–	18 x 18
Cond. Coil					
Material		Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type		3/8" RTPF	3/8" RTPF	3/8" RTPF	3/8" RTPF
Rows / FPI		2 / 17	2 / 17	3 / 17	2/17
total face area (ft ²)		25.1	25.1	25.1	2 @ 23.1
Cond. fan / motor					
Qty / Motor drive type		2 / direct	2 / direct	1 / direct	3 / direct
Motor HP / RPM		1/4 / 1100	1/4 / 1100	1 / 1175	1/4 / 1100
Fan diameter (in)		22	22	30	22
Filters					
RA Filter # / Size (in)		4 / 20 x 20 x 2	4 / 20 x 20 x 2	4 / 20 x 20 x 2	6 / 18 x 24 x 2 V2 / 24 x 27 x 1
OA inlet screen # / Size (in)		1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1	H1 / 30 x 39 x 1

* RTPF – Round Tube Plate Fin Coil Design

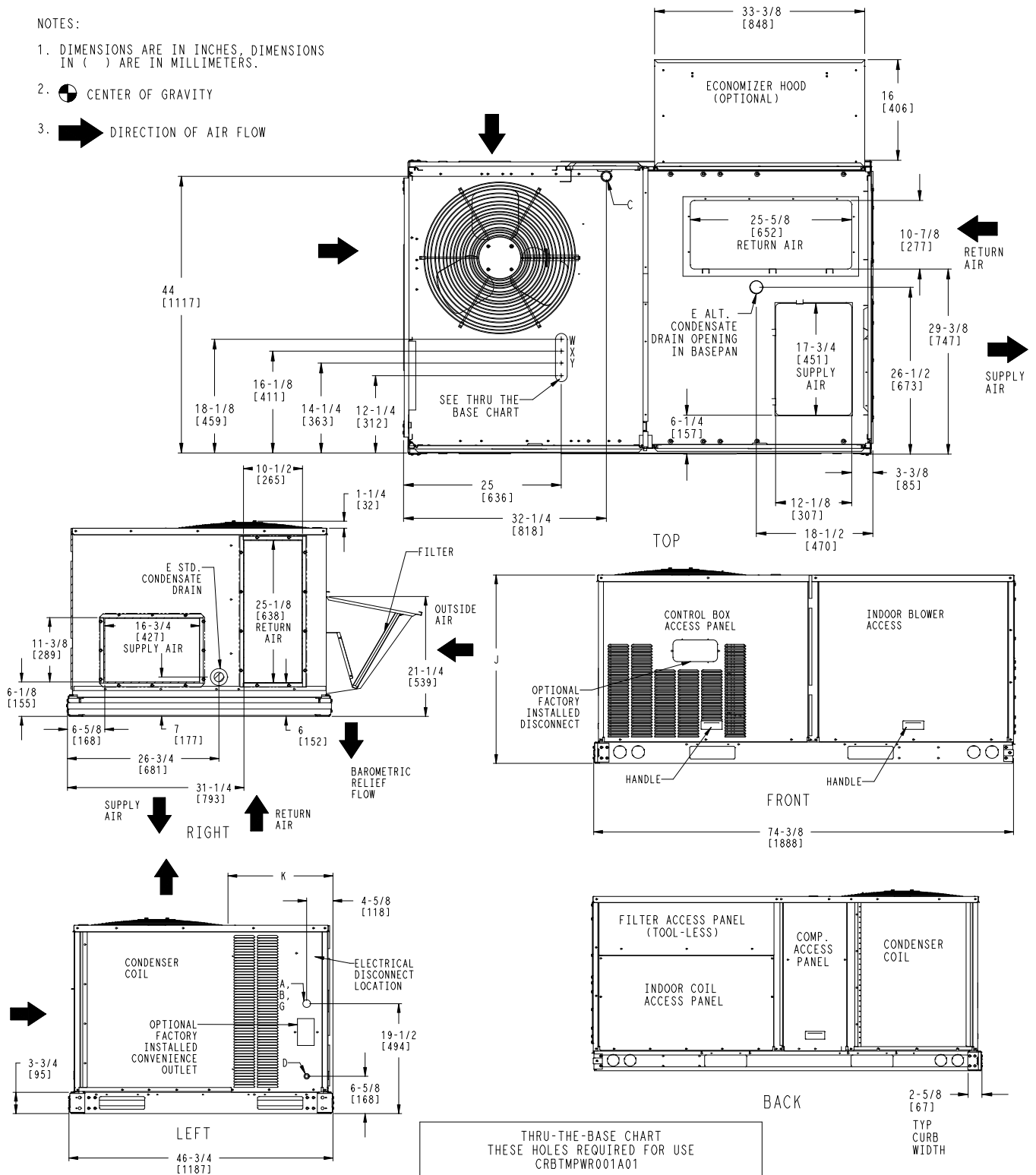
BASE UNIT DIMENSIONS – RAS036-072

NOTES:

1. DIMENSIONS ARE IN INCHES, DIMENSIONS IN () ARE IN MILLIMETERS.

2.  CENTER OF GRAVITY

3.  DIRECTION OF AIR FLOW



CONNECTION SIZES	
A	1 3/8" DIA [35] FIELD POWER SUPPLY HOLE
B	2" DIA [51] POWER SUPPLY KNOCKOUT
C	1 3/4" DIA [44] GAUGE ACCESS PLUG
D	7/8" DIA [22] FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
G	2 1/2" DIA [64] POWER SUPPLY KNOCK-OUT

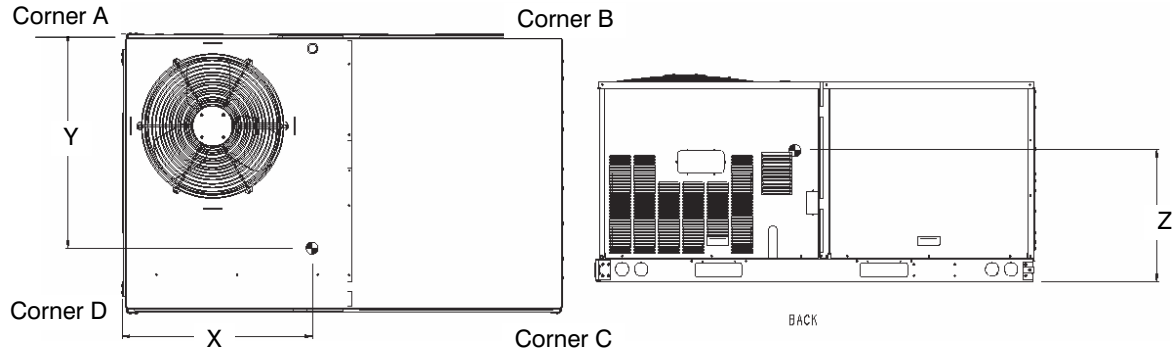
THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMPWR001A01			
	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2"	ACC.	7/8" (22.2)
X	1/2"	24V	7/8" (22.2)
Y *	3/4" (#001)	POWER	1 1/8" (28.4)
	FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X & Y ARE PROVIDED		
*	SELECT EITHER 3/4" OR 1/2" FOR POWER, DEPENDING ON WIRE SIZE		

UNIT	J	K
036	33 3/8 [847]	18 5/8 [472]
048	33 3/8 [847]	14 7/8 [377]
060	33 3/8 [847]	14 7/8 [377]
072	41 3/8 [1051]	14 7/8 [377]

2-5/8" [67]
TYP
CURB
WIDTH

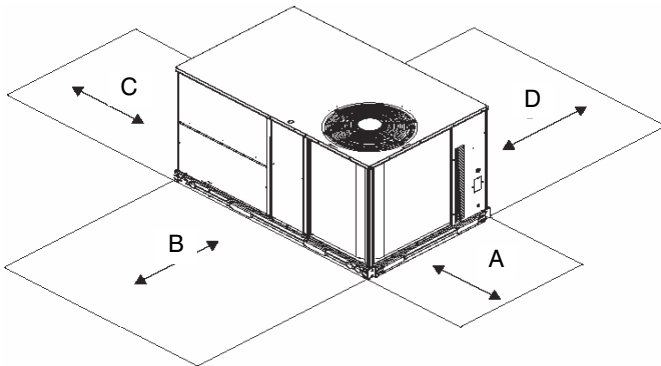
WEIGHT & CLEARANCE DIMENSIONS – RAS036–072 (cont.)

UNIT	BASE UNIT WEIGHT		Corner Weight A		Corner Weight B		Corner Weight C		Corner Weight D		Center of Gravity In [mm]		
	LBS	KG	LBS	KG	LBS	KG	LBS	KG	LBS	KG	X	Y	Z
RAS036	438	199	108	49	115	52	110	50	104	47	38 [965]	22 [559]	17–1/4 [438]
RAS048	494	224	122	55	130	59	125	57	117	53	38 [965]	22 [559]	17–1/2 [445]
RAS060	524	238	130	59	138	63	132	60	124	56	38 [965]	22 [559]	17–3/4 [451]
RAS072	607	275	150	68	160	73	153	69	144	65	38 [965]	22 [559]	20–3/4 [527]



UNIT CLEARANCES

LOC	DIMENSION	CONDITION
A	48" (1219 mm)	Unit disconnect is mounted on panel
	18" (457 mm)	No disconnect, convenience outlet option
	18" (457 mm)	Recommended service clearance
	12" (305 mm)	Minimum clearance
B	42" (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall)
	36" (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)
	Special	Check for sources of flue products within 10–ft of unit fresh air intake hood
C	36" (914 mm)	Side condensate drain is used
	18" (457 mm)	Minimum clearance
D	48" (1219 mm)	No flue discharge accessory installed, surface is combustible material
	42" (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall, another unit)
	36" (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)
	Special	Check for adjacent units or building fresh air intakes within 10–ft of this unit's flue outlet



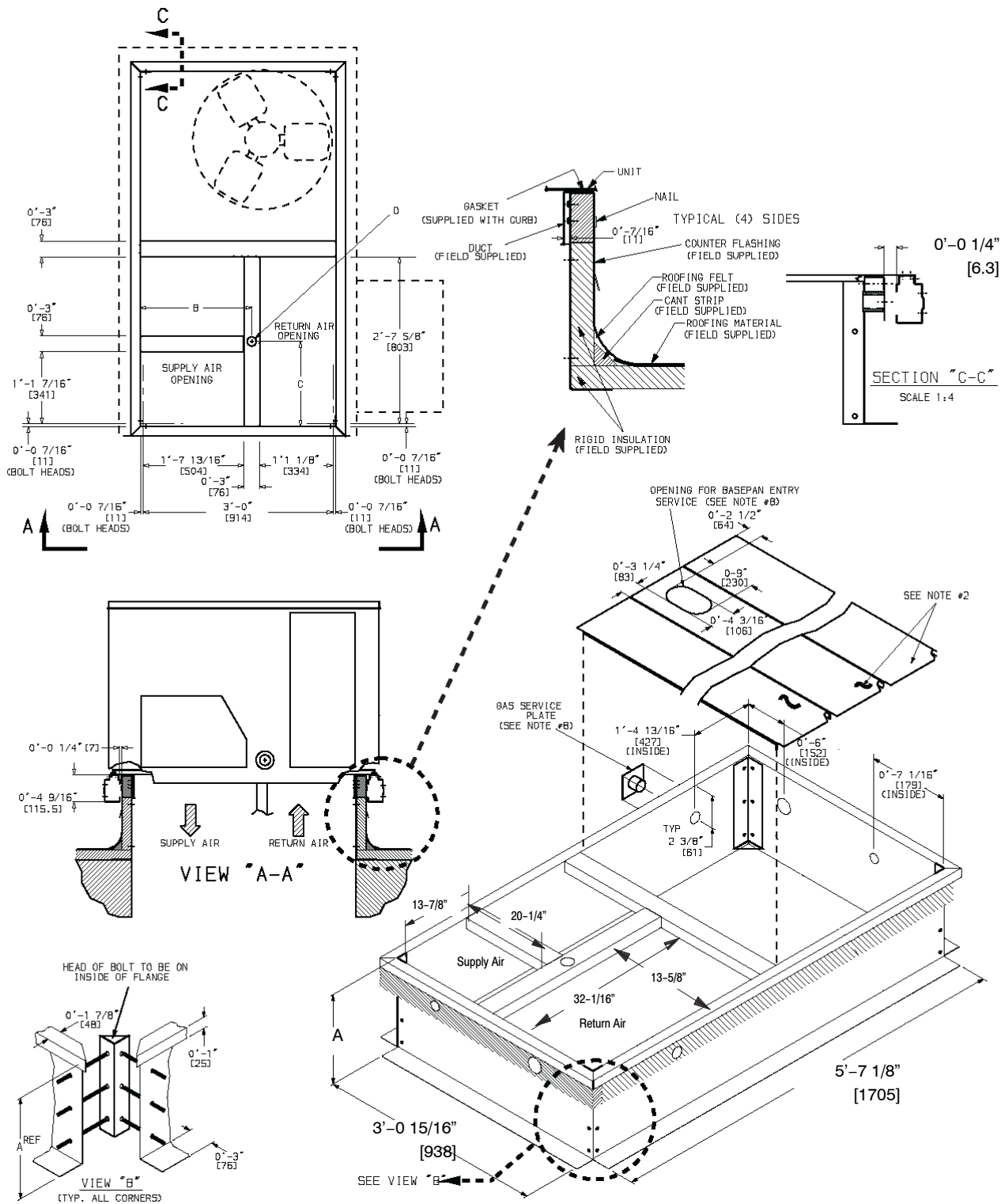
ROOF CURB DETAILS – RAS036–072

Roof Curb Accessory	A	Unit Size
CRRFCURB001A01	1' 2" [356]	RAS036–072
CRRFCURB002A01	2' 0" [610]	

NOTES:

1. Roofcurb accessory is shipped disassembled.
2. Insulated panels, 1" thick polyurethane foam, 1–3/4# density.
3. Dimensions in. [] in millimeters.
4. Roofcurb 16ga steel.
5. Attach ductwork to curb (Flanges of duct rest on curb)
6. Service clearance 4' on each side.
7. ➡ Direction of airflow.
8. Connector pkg. CRBTMPWR001A01 is for thru-the-curb gas connections.
Pkg. CRBTMPWR003A01 is for thru-the-bottom gas connections.

Connector Pkg. Acc.	Gas Connection Type	Gas	Power	Control	Accessory Power
CRBTMPWR001A01	Thru the Curb	3/4" [19] NPT	3/4" [19] NPT	1/2" [12.7] NPT	1/2" [12.7] NPT
CRBTMPWR003A01	Thru the Bottom	1/2" [12.7] NPT			



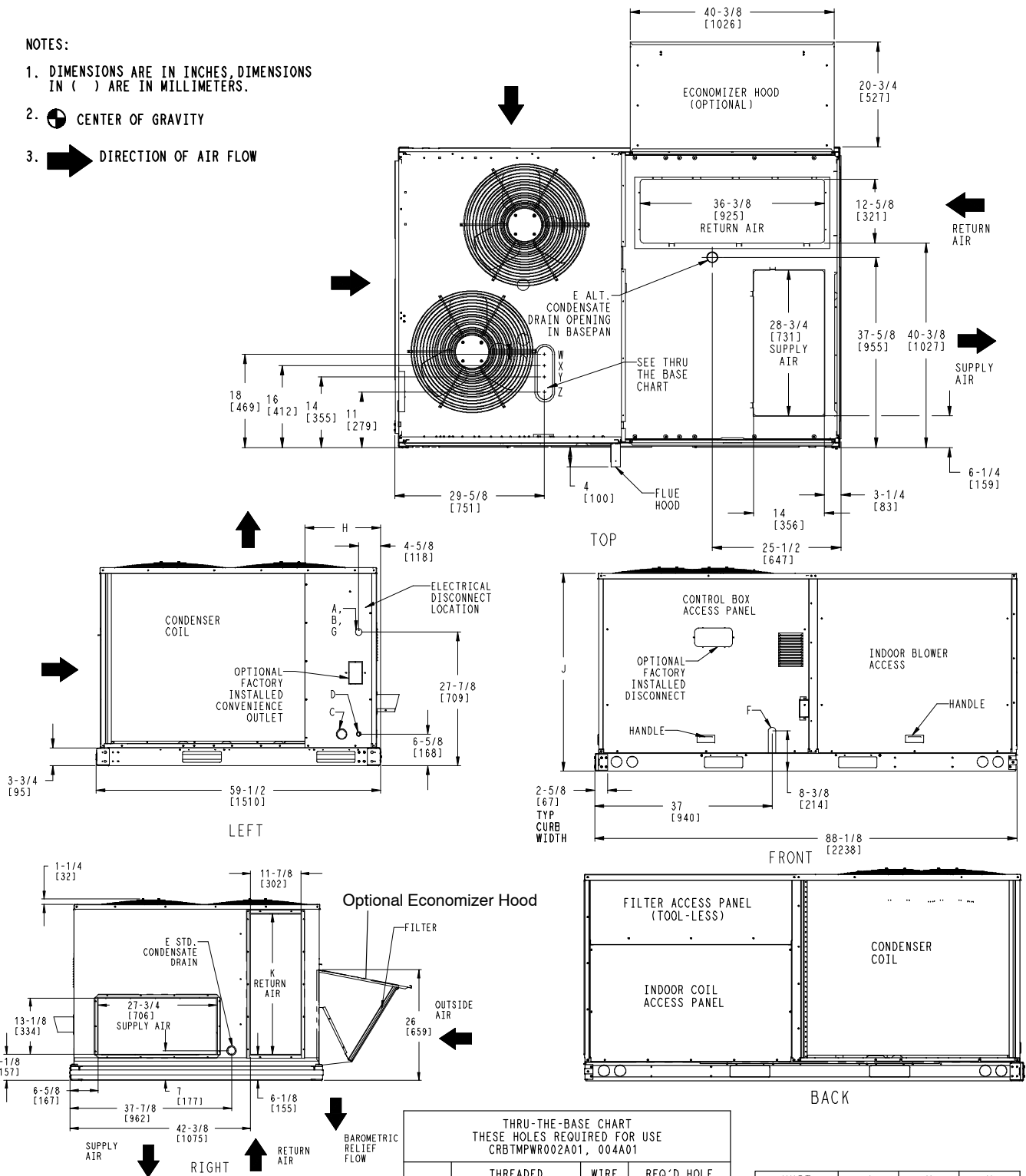
BASE UNIT DIMENSIONS – RAS090–121

NOTES:

1. DIMENSIONS ARE IN INCHES, DIMENSIONS IN () ARE IN MILLIMETERS.

2.  CENTER OF GRAVITY

3.  DIRECTION OF AIR FLOW



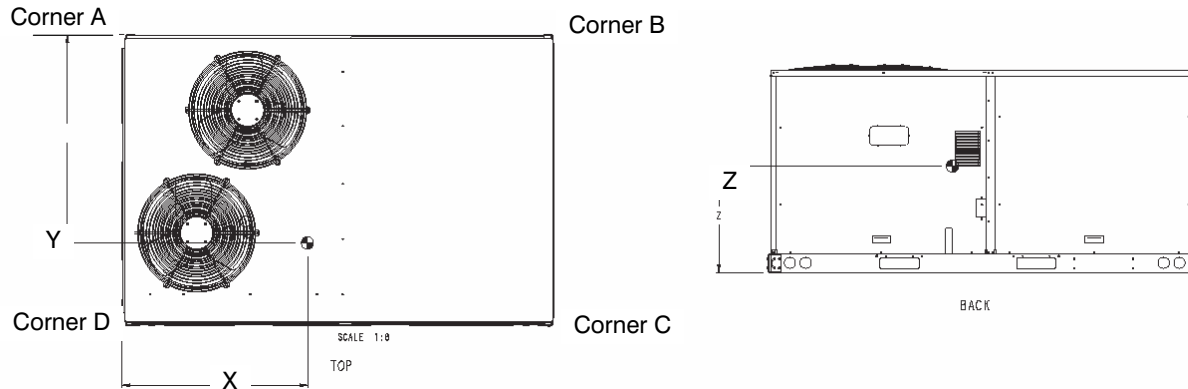
CONNECTION SIZES	
A	1 3/8" DIA [35] FIELD POWER SUPPLY HOLE
B	2 1/2" [64] DIA POWER SUPPLY KNOCKOUT
C	1 3/4" DIA [51] GAUGE ACCESS PLUG
D	7/8" DIA [22] FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
F	1/2"-14 NPT GAS CONNECTION 3/4"-14 NPT GAS CONNECTION
G	2" DIA [51] POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMPWR002A01, 004A01			
	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2"	ACC.	7/8" (22.2)
X	1/2"	24V	7/8" (22.2)
Y	1 1/4" (002,004)	POWER	1 3/4" (44.4)
Z **, *	(004) 3/4" FPT	GAS	1 5/8" (41.3)
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X, Y, & Z ARE PROVIDED			
FOR HEAT SIZES "D" & "S" - A FIELD SUPPLIED 1/2" ADAPTER IS REQUIRED BETWEEN BASE PAN FITTING AND GAS VALVE.			
*			
**	(002) PROVIDES 3/4" FPT THRU CURB FLANGE & FITTING.		

UNIT	J	K	H
091	41-1/4 [1048]	33-3/4 [857]	15-7/8 [403]
101	49-3/8 [1253]	36-3/8 [925]	27-7/8 [708]
121	49-3/8 [1253]	36-3/8 [925]	15-7/8 [403]
090	41-1/4 [1048]	33-3/4 [857]	15-7/8 [403]
102	49-3/8 [1253]	36-3/8 [925]	15-7/8 [403]
120	49-3/8 [1253]	36-3/8 [925]	15-7/8 [403]

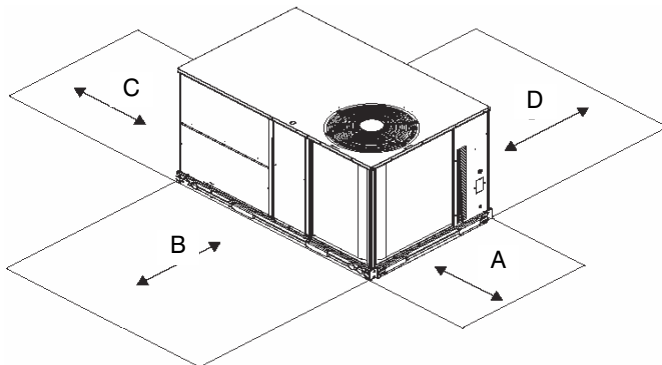
WEIGHT & CLEARANCE DIMENSIONS – RAS090–121 (cont.)

UNIT	BASE UNIT WEIGHT		Corner Weight A		Corner Weight B		Corner Weight C		Corner Weight D		Center of Gravity In [mm]		
	LBS	KG	LBS	KG	LBS	KG	LBS	KG	LBS	KG	X	Y	Z
RAS091	705	320	172	78	142	65	177	80	214	97	40 [1013]	33 [838]	21 [540]
RAS101	845	384	206	94	167	76	212	96	261	119	40 [1003]	33 [845]	24 [610]
RAS121	855	388	210	95	180	82	215	98	250	114	41 [1035]	32 [822]	25 [641]
RAS090	760	345	158	72	155	70	222	101	225	102	44 [1111]	35 [889]	20 [508]
RAS102	855	388	223	101	171	77	200	91	261	119	38 [975]	32 [816]	19 [486]
RAS120	865	393	225	102	173	79	203	92	264	120	38 [975]	32 [816]	19 [486]



UNIT CLEARANCES

LOC	DIMENSION	CONDITION
A	48" (1219 mm)	Unit disconnect is mounted on panel
	36" (914 mm)	If dimension-B is 12"
	18" (457 mm)	No disconnect, convenience outlet option
	18" (457 mm)	Recommended service clearance (use electric screwdriver)
	12" (305 mm)	Minimum clearance (use manual ratchet screwdriver)
B	36" (914 mm)	Unit has economizer
	12" (305 mm)	If dimension-A is 36"
	Special	Check for sources of flue products within 10-ft of unit fresh air intake hood
C	36" (914 mm)	Side condensate drain is used
	18" (457 mm)	Minimum clearance
D	42" (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall, another unit)
	36" (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)



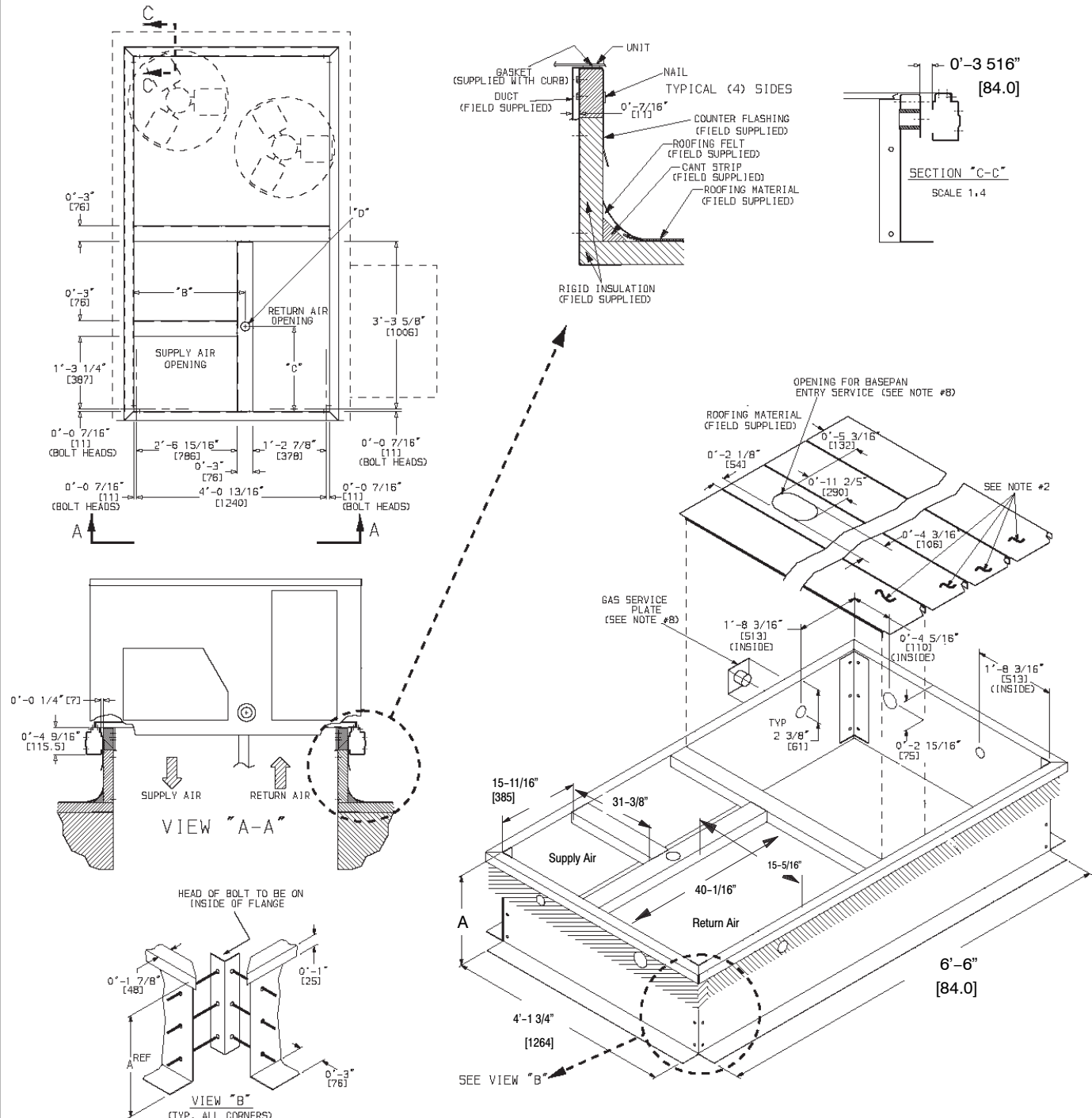
ROOF CURB DETAILS – RAS090 – 150

Roof Curb Accessory	A	Unit Size
CRRFCURB003A01	1' 2" [356]	RAS090-150
CRRFCURB004A01	2' 0" [610]	

NOTES:

1. Roofcurb accessory is shipped disassembled.
2. Insulated panels, 1" thick polyurethane foam, 1-3/4# density.
3. Dimensions in. [] in millimeters.
4. Roofcurb 16ga steel.
5. Attach ductwork to curb (Flanges of duct rest on curb)
6. Service clearance 4' on each side.
7. ➡ Direction of airflow.
8. Connector pkg. CRBTMPWR002A01 is for thru-the-curb gas connections.
Pkg. CRBTMPWR004A01 is for thru-the-bottom gas connections.

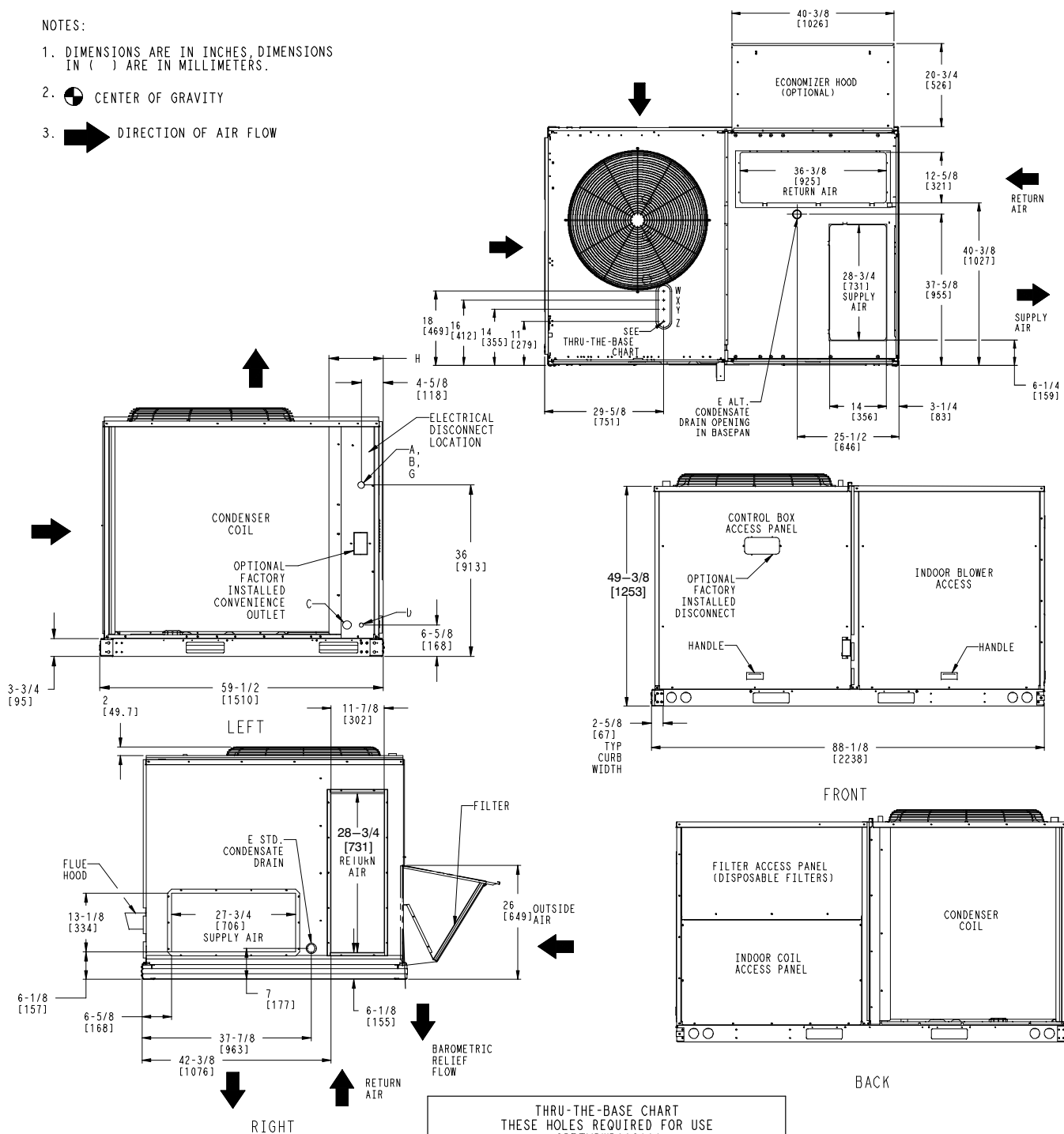
Connector Pkg. Acc.	Gas Connection Type	Gas	Power	Control	Accessory Power
CRBTMPWR002A01	Thru the Curb	3/4" [19] NPT	11-1/4" [31.7] NPT	1/2" [12.7] NPT	1/2" [12.7] NPT
CRBTMPWR004A01	Thru the Bottom				



BASE UNIT DIMENSIONS – RAS150

NOTES:

1. DIMENSIONS ARE IN INCHES, DIMENSIONS IN () ARE IN MILLIMETERS.
2.  CENTER OF GRAVITY
3.  DIRECTION OF AIR FLOW



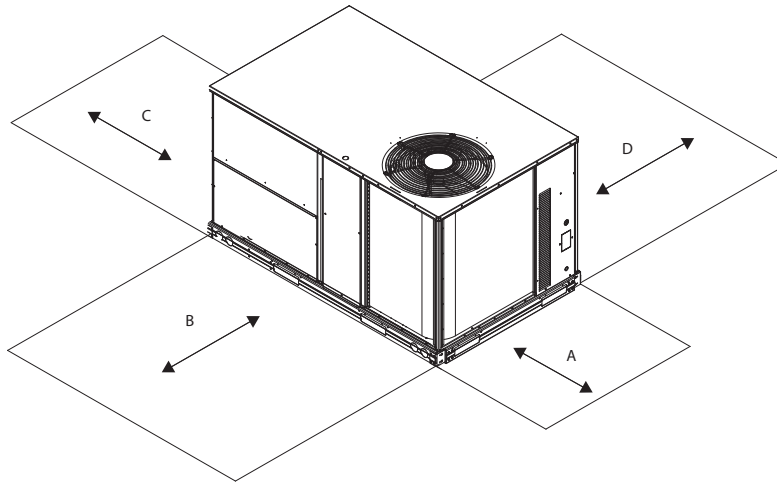
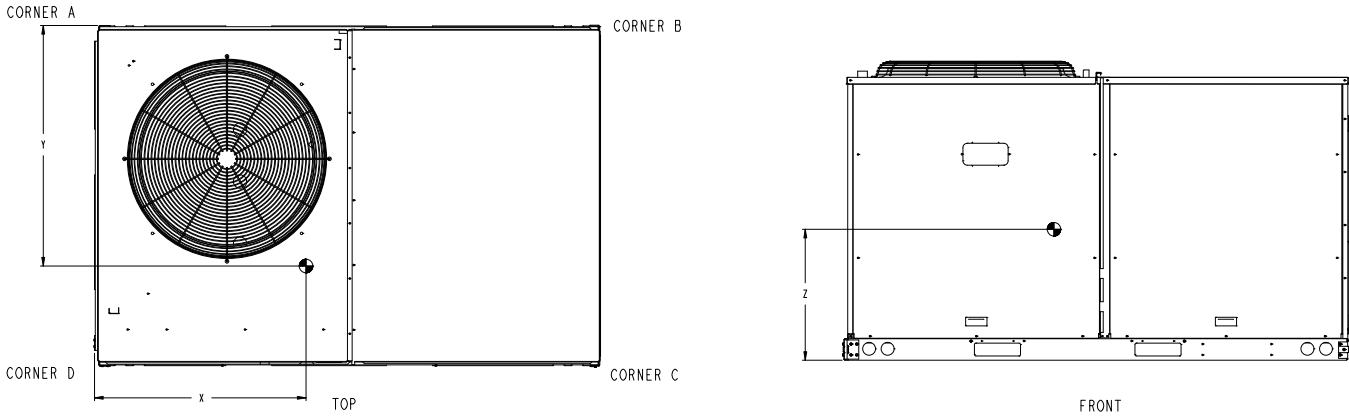
CONNECTION SIZES	
A	1 3/8" [35] DIA FIELD POWER SUPPLY HOLE
B	2 1/2" [64] DIA POWER SUPPLY KNOCKOUT
C	1 3/4" [51] DIA GAUGE ACCESS PLUG
D	7/8" [22] DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
G	2" [51] DIA POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMPWR002A01			
	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2"	ACC.	7/8" (22.2)
X	1/2"	24V	7/8" (22.2)
Y	1 1/4" (002,004)	POWER	1 3/4" (44.4)
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X, Y ARE PROVIDED			

UNIT	H
150	15-7/8 [403]

BASE UNIT DIMENSIONS – RAS150

UNIT	STD. UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
RAS150	1075	489	340	155	155	70	181	82	399	181	27–1/2 [721]	32 [813]	20–1/2 [523]



Service Clearance

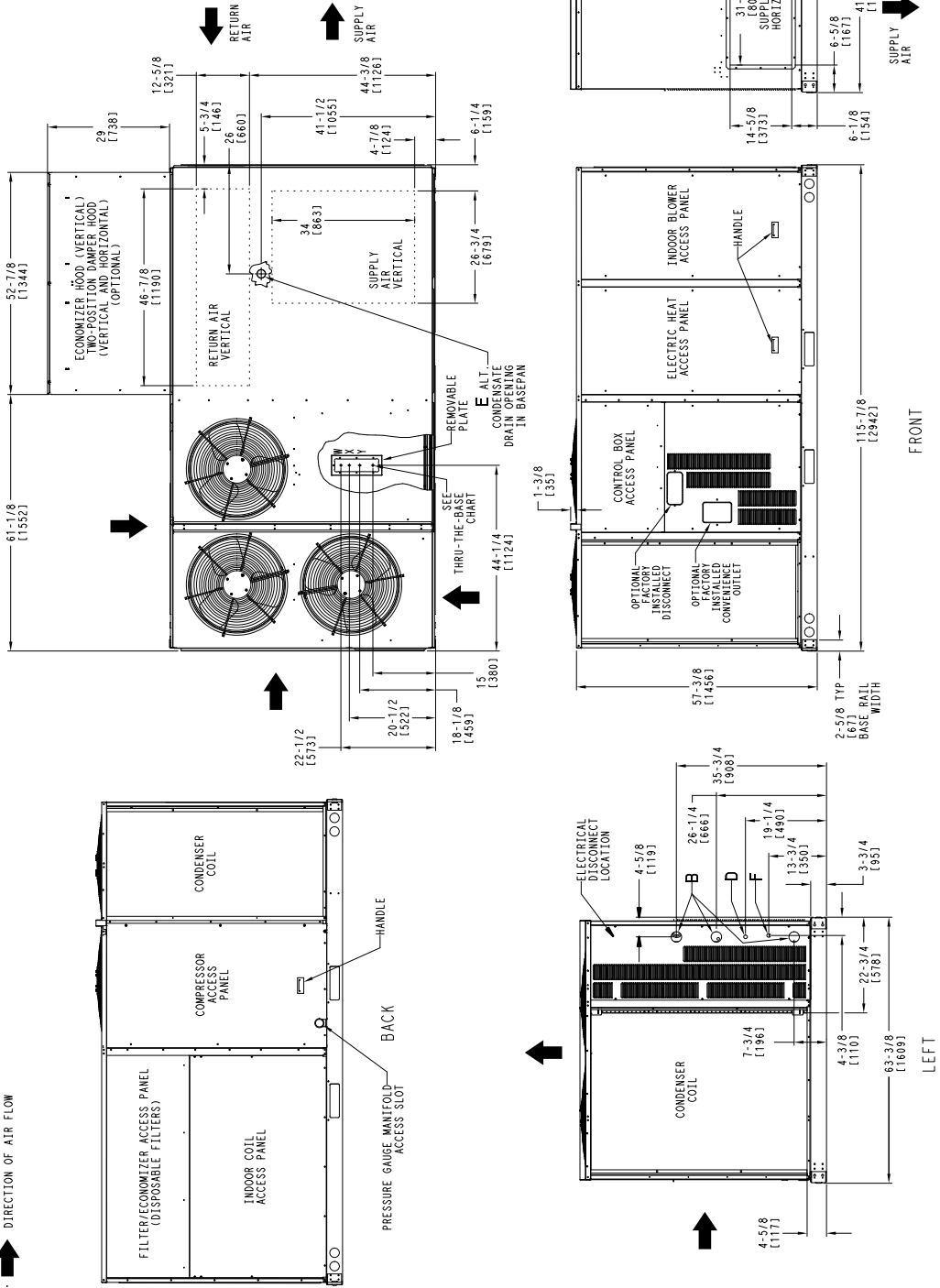
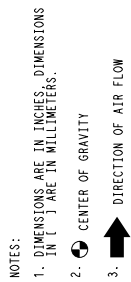
LOC	DIMENSION	CONDITION
A	48" (1219 mm)	Unit disconnect is mounted on panel
	18" (457 mm)	No disconnect, convenience outlet option
	18" (457 mm)	Recommended service clearance
	12" (305 mm)	Minimum clearance
B	42" (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall)
	36" (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)
	Special	Check for sources of flue products within 10-ft of unit fresh air intake hood
C	36" (914 mm)	Side condensate drain is used
	18" (457 mm)	Minimum clearance
D	42" (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall, another unit)
	36" (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)

BASE UNIT DIMENSIONS – RAS180

CONNECTION SIZES	
B	2 1/2" [64] DIA POWER SUPPLY HOLE
D	7/8" [22] DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
F	7/8" [22] DIA FIELD CONVENIENCE OUTLET HOLE

THRU-THE-BASE CHART			
THESE HOLES REQUIRED FOR USE CRBTHPR005A000, 006A000, 007A000			
ACCESSORY NO.	THREADED CONDUIT SIZE	WIRE SIZE (MAX.)	HOLE'S SIZES (MAX.)
005	W	1 1/2" ACC.	7/8" [22-2]
	Y	1 1/2" 24V	7/8" [22-2]
	Y	1 1/4" POWER	1 1/2" [38-1]
006	W	1 1/2" ACC.	7/8" [22-2]
	X	1 1/2" 24V	7/8" [22-2]
	Y	1 1/2" POWER	2" [50-8]
007	W	1 1/2" ACC.	7/8" [22-2]
	X	1 1/2" 24V	7/8" [22-2]
	Y	2" POWER	2 1/2" [63-5]

FOR "THRU-THE-BASE" FACTORY OPTION,
FITTINGS FOR X & Y ARE PROVIDED AS
SPECIFIED ON "008".

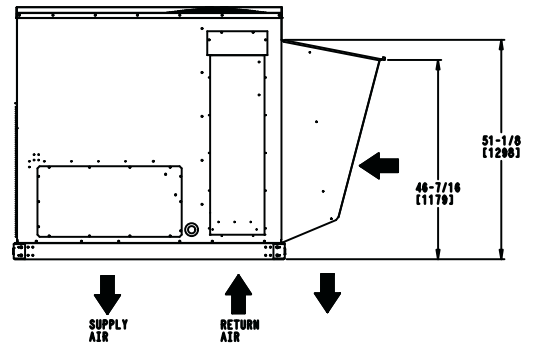
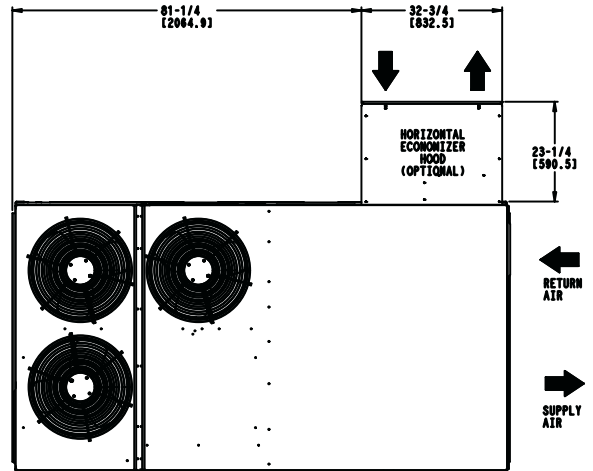
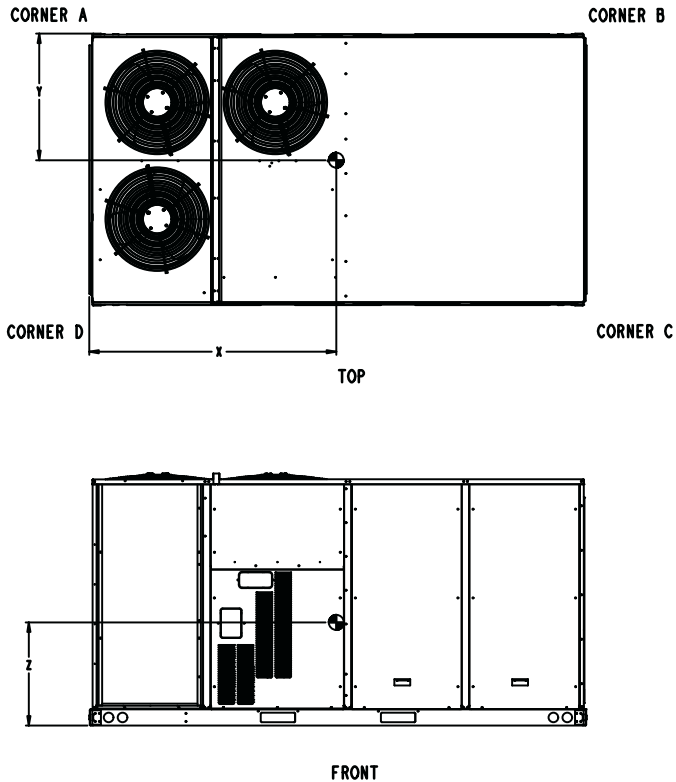


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BASE UNIT DIMENSIONS – RAS180

UNIT	STD UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
RAS180	1305	593	268	122	325	148	389	177	322	146	58 1/2 [1486]	32 [813]	21 [533]

STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT & WITHOUT PACKAGING.



HORIZONTAL ECONOMIZER

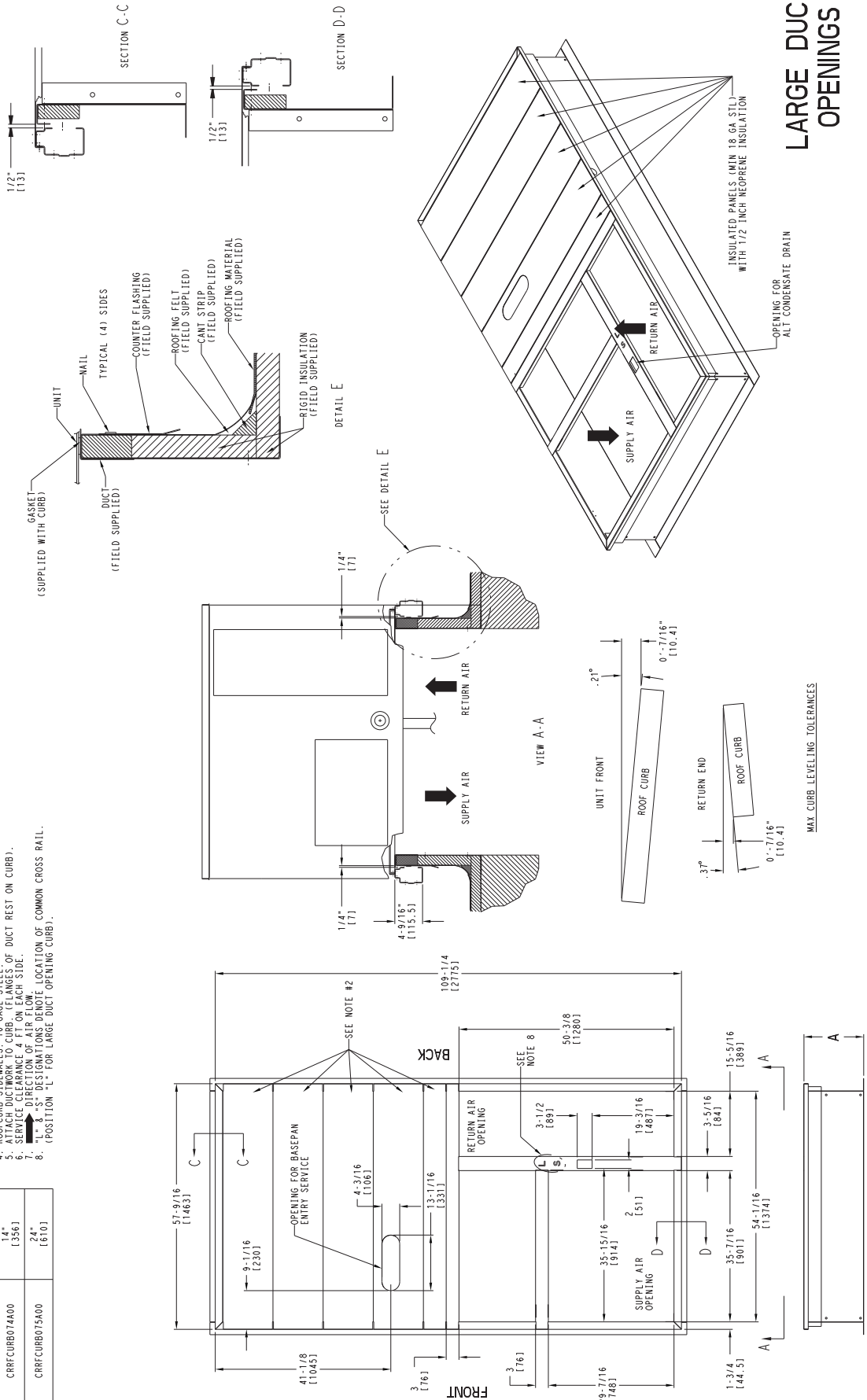
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ROOF CURB DETAILS – RAS180

ROOF CURB ACCESSORY #	A
CRRFCURB074A00	14" [356]
CRRFCURB075A00	24" [610]

NOTES:

1. ROOT CURB ACCESSORY IS SHIPPED DISASSEMBLED.
2. INSULATED PANELS: 1/2" THK. NEOPRENE FOAM, 1.0# DENSITY.
3. DIMENSIONS IN L ARE IN MILLIMETERS.
4. ROOT CURB SIDEWALLS: 16 GAGE STEEL.
5. ATTACH DUCTWORK TO CURB. (FLANGES OF DUCT REST ON CURB).
6. SERVICE CLEARANCE 4 FT ON EACH SIDE.
7.  DIRECTION OF AIR FLOW.
8. "L" & "S" DESIGNATIONS DENOTE LOCATION OF COMMON CROSS RAIL.
(POSITION "L" FOR LARGE DUCT OPENING CURB).



OPTION / ACCESSORY WEIGHTS

OPTION / ACCESSORY	OPTION / ACCESSORY WEIGHTS																	
	Unit Size (ton)																	
	3		4		5		6		7.5		8.5		10		12.5		15	
	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
Hot Gas Reheat	15	7	23	10	25	11	29	13	38	17	47	21	57	21	47	21	57	26
Power Exhaust — vertical	50	23	50	23	50	23	50	23	75	34	75	34	75	34	75	34	85	39
Power Exhaust — horizontal	30	14	30	14	30	14	30	14	30	14	30	14	30	14	30	14	75	34
Economizer (IV or X)	50	23	50	23	50	23	50	23	75	34	75	34	75	34	75	34	115	52
Two Position damper	39	18	39	18	39	18	39	18	58	26	58	26	58	26	58	26	65	29
Manual Dampers	12	5	12	5	12	5	12	5	18	8	18	8	18	8	18	8	25	11
Hail Guard (louvered)	16	7	16	7	16	7	16	7	34	15	34	15	34	15	34	15	45	20
Cu/Cu Condenser Coil ¹	6	3	13	6	13	6	15	7	12	5	23	10	23	10	23	10	190	86
Cu/Cu Cond. & Evaporator Coils ¹	12	5	19	9	21	10	26	12	25	11	49	22	49	22	49	22	280	127
Roof Curb (14—in. curb)	115	52	115	52	115	52	115	52	143	65	143	65	143	65	143	65	180	82
Roof Curb (24—in. curb)	197	89	197	89	197	89	197	89	245	111	245	111	245	111	245	111	255	116
CO ₂ sensor	5	2	5	2	5	2	5	2	5	2	5	2	5	2	5	2	5	2
Electric Heater	30	14	30	14	30	14	30	14	45	20	45	20	45	20	45	20	25	11
Single Point Kit	10	5	10	5	10	5	10	5	12	5	12	5	12	5	15	7	25	11
Optional Indoor Motor / Drive	10	5	10	5	10	5	10	5	15	7	15	7	15	7	15	7	45	20
Motor Master Controller	35	16	35	16	35	16	35	16	35	16	35	16	35	16	40	18	35	16
Supply Smoke Detector	5	2	5	2	5	2	5	2	5	2	5	2	5	2	5	2	5	2
Non—Fused Disconnect	15	7	15	7	15	7	15	7	15	7	15	7	15	7	15	7	15	7
Non—Powered Convenience outlet	5	2	5	2	5	2	5	2	5	2	5	2	5	2	5	2	5	2
Enthalpy Sensor	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
Differential Enthalpy Sensor	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1
2 Speed Indoor Fan Motor System with VFD	—	—	—	—	—	—	—	—	20	9	20	9	20	9	20	9	20	9

NOTE: Where multiple variations are available, the heaviest combination is listed.

¹ Where Available

APPLICATION DATA

Min operating ambient temp (cooling):

In mechanical cooling mode, your rooftop can safely operate down to an outdoor ambient temperature of 25°F (-4°C), with an accessory winter start kit; 40°F (4°C) standard min operating temperature. It is possible to provide cooling at lower outdoor ambient temperatures by using less outside air, economizers, and/or accessory low ambient kits.

Max operating ambient temp (cooling):

The maximum operating ambient temperature for cooling mode is 115°F (46°C). While cooling operation above 115°F (46°C) may be possible, it could cause either a reduction in performance, reliability, or a protective action by the unit's internal safety devices.

Min and max airflow (heating and cooling):

To maintain safe and reliable operation of your rooftop, operate within the cooling airflow limits. Operating above the max may cause blow-off, undesired airflow noise, or airflow related problems with the rooftop unit. Operating below the min may cause problems with coil freeze-up.

Airflow:

All units are draw-through in cooling mode.

Outdoor air application strategies:

Economizers reduce operating expenses and compressor run time by providing a free source of cooling and a means of ventilation to match application changing needs. In fact, they should be considered for most applications. Also, consider the various economizer control methods and their benefits, as well as sensors required to accomplish your application goals. Please contact your local sales representative for assistance.

Motor limits, break horsepower (BHP):

Due to the internal unit design, air path, and specially designed motors, the full horsepower (maximum continuous BHP) band, as listed in Table 6, can be used with the utmost confidence. There is no need for extra safety factors, the motors are designed and rigorously tested to use the entire, listed BHP range without either nuisance tripping or premature motor failure.

Sizing a rooftop

Bigger isn't necessarily better. While an air conditioner needs to have enough capacity to meet the design loads, it doesn't need excess capacity. In fact, excess capacity typically results in very poor partload performance and humidity control.

Using higher design temperatures than ASHRAE recommends for your location, adding "safety factors" to the calculated load, are all signs of oversizing air conditioners. Oversizing the air conditioner leads to short cycling (quick on-off cycles) which results in poor humidity control, reduced efficiency, higher utility bills, larger indoor temperature swings, excessive noise, and increased wear and tear on the air conditioner.

Rather than oversizing an air conditioner, engineers should "right-size" or even slightly undersize air conditioners. Correctly sizing an air conditioner controls humidity better; promotes efficiency; reduces utility bills; extends equipment life, and maintains even, comfortable temperatures. Please contact your local representative for assistance.

Low ambient applications

The optional economizer can adequately cool your space by bringing in fresh, cool outside air. In fact, when so equipped, accessory low-ambient kit may not be necessary. In low ambient conditions, unless the outdoor air is excessively humid or contaminated, economizer-based "free cooling" is the preferred less costly and energy conscious method.

In low ambient applications where outside air might not be desired (such as contaminated or excessively humid outdoor environments), your rooftop can operate to ambient temperatures down to -20°F (-29°C) using the recommended accessory Motormaster low ambient controller.

Winter start

A winter start kit extends the low ambient limit of your rooftop to 25°F (-4°C). The kit bypasses the low pressure switch, preventing nuisance tripping of the low pressure switch. Other low ambient precautions may still be prudent.

2-speed indoor fan motor with Variable Frequency Drive (VFD)

The 2-Speed Indoor Fan Motor System utilizes a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor speed in sequence with the units cooling operation. Per ASHRAE 90.1 2010 standard section 6.4.3.10.b, during the first stage of cooling operation the VFD will adjust the fan motor to provide 2/3rd of the total cfm established for the unit. When a call for the second stage of cooling is required, the VFD will allow the total cfm for the unit established (100%). During the heating mode, the VFD will allow total design cfm (100%) operation and during the ventilation mode the VFD will allow operation to 2/3rd of total cfm.

The VFD used in the 2-Speed Indoor Fan Motor System has soft start capabilities to slowly ramp up the speeds, thus eliminating any high inrush air volume during initial start-up. It also has internal over current protection for the fan motor and a field installed display kit that allows adjustment and in depth diagnostics of the VFD.

This 2-Speed Indoor Fan Motor System is available on models with 2-stage cooling operation with electrical mechanical or RTU Open (multi Protocol) controls. Both space sensor and conventional thermostats/controls can be used to provide accurate control in any application.

The 2-Speed Indoor Fan Motor System is very flexible for initial fan performance set up and adjustment. The standard factory shipped VFD is pre programmed to automatically stage the fan speed between the first and second stage of cooling. The unit fan performance static pressure and cfm can be easily adjusted using the traditional means of pulley adjustments. The other means to adjust the unit static and cfm performance is to utilize the field installed display module and adjust the frequency and voltage in the VFD to required performance requirements. In either case, once set up the VFD will automatically adjust the speed between the cooling stage operation.

SELECTION PROCEDURE (WITH RAS072 EXAMPLE)¹

I. Determine cooling and heating loads.

Given:

Mixed air drybulb	80°F (27°C)
Mixed air wetbulb	67°F (19°C)
Ambient drybulb	95°F (35°C)
TC _{Load}	69.0 MBH
SHC _{Load}	51.0 MBH
Vertical supply air	2100 CFM
Heating load	85.0 MBH
External static pressure	0.66 in.wg
Electrical characteristics	230–3–60

II. Make an initial guess at cooling tons.

Refrig. tons = TC_{Load} / 12 MBH per ton

Refrig. tons = 69.0 / 12 = 5.75 tons

In this case, start by looking at the RAS072.

III. Look up the rooftop's TC and SHC.

Table 7 shows that, at the application's supply air CFM, mixed air and ambient temperatures, the RAS072 supplies:

TC = 73.7 MBH

SHC = 54.4 MBH.

IV. Calculate the building latent heat load.

LHC_{Load} = TC_{Load} – SHC_{Load}

LHC_{Load} = 69.0 MBH – 51.0 MBH = 18.0 MBH

V. Calculate RTU latent heat capacity.

LHC = TC – SHC

LHC = 73.7 MBH – 54.3 MBH = 19.4 MBH

VI. Compare RTU capacities to loads. ^{2,3}

Compare the rooftop's SHC and LHC to the building's sensible and latent heat loads.

VII. Select factory options (FIOP)

Local code requires an economizer for any unit with TC less than 65.0 MBH.

VIII. Calculate the total static pressure.

External static pressure 0.66 in. wg

Sum of FIOP / Accessory static +0.14 in. wg

Total Static Pressure 0.80 in. wg

IX. Look up the indoor fan RPM & BHP.

Table 22 shows, at 2100 CFM & ESP= 0.8, RPM = 1268 & BHP = 1.52

X. Determine electrical requirements.

Table 43 shows the MCA and MOCP of a RAS072 (without convenience outlet) as:

MCA = 30.5 amps & MOCP = 45.0 amps

Min. disconnect size: FLA = 30 & LRA = 157.

LEGEND

BHP	— Break horsepower
FLA	— Full load amps
LC	— Latent capacity
LRA	— Lock rotor amp
MBH	— (1,000) BTUH
MCA	— Min. circuit ampacity
MOCP	— Max. over-current protection
RPM	— Revolutions per minute
RTU	— Rooftop unit
SHC	— Sensible heat capacity
TC	— Total capacity

NOTES:

1. Selection software saves time by performing many of the steps above. Contact your sales representative for assistance.
2. Selecting a unit with a SHC slightly lower than the SHC_{Load} is often better than oversizing. Slightly lower SHC's will help control indoor humidity, and prevent temperature swings.
3. If the rooftop's capacity meets the Sensible Heat Load, but not the Latent Heat Load.
4. Indoor fan motor efficiency is available in the electrical tables. Use the decimal form in the equation, eg. 80% = .8.

Table 7 – COOLING CAPACITIES

1-STAGE COOLING

3 TONS

RAS036				AMBIENT TEMPERATURE											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
900 Cfm	EAT (wb)	58	TC	28.1	28.1	31.7	26.3	26.3	29.8	24.5	24.5	27.7	22.6	22.6	25.5
			SHC	24.4	28.1	31.7	22.9	26.3	29.8	21.3	24.5	27.7	19.6	22.6	25.5
		62	TC	30.3	30.3	31.0	27.8	27.8	29.8	25.1	25.1	28.4	22.6	22.6	26.5
			SHC	22.6	26.8	31.0	21.5	25.7	29.8	20.2	24.3	28.4	18.7	22.6	26.5
		67	TC	35.5	35.5	35.5	33.1	33.1	33.1	30.5	30.5	30.5	27.5	27.5	27.5
			SHC	19.5	23.7	27.9	18.5	22.7	26.9	17.4	21.6	25.8	16.2	20.4	24.6
		72	TC	39.0	39.0	39.0	37.1	37.1	37.1	35.1	35.1	35.1	32.7	32.7	32.7
			SHC	15.3	19.5	23.7	14.5	18.8	23.0	13.7	17.9	22.2	12.9	17.1	21.3
		76	TC	—	41.4	41.4	—	39.6	39.6	—	37.6	37.6	—	35.4	35.4
			SHC	—	16.0	21.0	—	15.4	20.2	—	14.6	19.3	—	13.8	18.3
1050 Cfm	EAT (wb)	58	TC	30.2	30.2	34.2	28.4	28.4	32.2	26.5	26.5	30.0	24.5	24.5	27.7
			SHC	26.3	30.2	34.2	24.7	28.4	32.2	23.1	26.5	30.0	21.3	24.5	27.7
		62	TC	31.9	31.9	34.2	29.4	29.4	32.8	26.7	26.7	31.2	24.5	24.5	28.8
			SHC	24.6	29.4	34.2	23.4	28.1	32.8	22.0	26.6	31.2	20.3	24.5	28.8
		67	TC	36.7	36.7	36.7	34.8	34.8	34.8	32.2	32.2	32.2	29.1	29.1	29.1
			SHC	20.6	25.4	30.2	19.8	24.6	29.4	18.8	23.6	28.4	17.6	22.4	27.2
		72	TC	40.1	40.1	40.1	38.2	38.2	38.2	36.1	36.1	36.1	33.7	33.7	33.7
			SHC	15.7	20.5	25.3	15.0	19.8	24.6	14.2	19.0	23.8	13.4	18.2	23.0
		76	TC	—	42.4	42.4	—	40.6	40.6	—	38.5	38.5	—	36.2	36.2
			SHC	—	16.6	22.2	—	15.9	21.3	—	15.2	20.4	—	14.4	19.5
1200 Cfm	EAT (wb)	58	TC	32.2	32.2	36.4	30.4	30.4	34.3	28.4	28.4	32.1	26.3	26.3	29.7
			SHC	28.0	32.2	36.4	26.4	30.4	34.3	24.7	28.4	32.1	22.8	26.3	29.7
		62	TC	33.3	33.3	37.0	30.8	30.8	35.5	28.4	28.4	33.4	26.3	26.3	30.9
			SHC	26.4	31.7	37.0	25.1	30.3	35.5	23.4	28.4	33.4	21.7	26.3	30.9
		67	TC	37.7	37.7	37.7	35.6	35.6	35.6	33.4	33.4	33.4	30.4	30.4	30.4
			SHC	21.7	27.0	32.4	20.9	26.3	31.6	20.0	25.4	30.8	18.8	24.2	29.6
		72	TC	40.9	40.9	40.9	39.0	39.0	39.0	36.9	36.9	36.9	34.4	34.4	34.4
			SHC	16.1	21.5	26.8	15.4	20.8	26.1	14.7	20.0	25.4	13.8	19.2	24.5
		76	TC	—	43.1	43.1	—	41.3	41.3	—	39.1	39.1	—	36.8	36.8
			SHC	—	17.1	23.1	—	16.4	22.3	—	15.7	21.4	—	14.9	20.5
1350 Cfm	EAT (wb)	58	TC	—	—	—	32.1	32.1	36.3	30.0	30.0	34.0	27.9	27.9	31.5
			SHC	—	—	—	27.9	32.1	36.3	26.1	30.0	34.0	24.2	27.9	31.5
		62	TC	28.4	28.4	30.5	32.2	32.2	37.8	30.1	30.1	35.3	27.9	27.9	32.8
			SHC	17.6	24.1	30.5	26.6	32.2	37.8	24.8	30.1	35.3	23.0	27.9	32.8
		67	TC	33.2	33.2	33.2	36.4	36.4	36.4	34.1	34.1	34.1	31.5	31.5	32.0
			SHC	15.0	21.4	27.9	21.9	27.8	33.7	21.0	26.9	32.9	20.0	26.0	32.0
		72	TC	37.5	37.5	37.5	39.7	39.7	39.7	37.5	37.5	37.5	35.0	35.0	35.0
			SHC	11.8	18.3	24.8	15.8	21.7	27.5	15.0	20.9	26.8	14.2	20.1	26.0
		76	TC	—	40.1	40.1	—	41.8	41.8	—	39.6	39.6	—	37.3	37.3
			SHC	—	15.3	22.7	—	16.8	23.2	—	16.1	22.3	—	15.3	21.5
1500 Cfm	EAT (wb)	58	TC	28.1	28.1	34.2	33.7	33.7	38.1	31.6	31.6	35.7	29.3	29.3	33.2
			SHC	21.9	28.1	34.2	29.3	33.7	38.1	27.4	31.6	35.7	25.5	29.3	33.2
		62	TC	30.3	30.3	33.8	33.7	33.7	39.6	31.6	31.6	37.1	29.4	29.4	34.5
			SHC	19.8	26.8	33.8	27.8	33.7	39.6	26.1	31.6	37.1	24.2	29.4	34.5
		67	TC	35.5	35.5	35.5	36.9	36.9	36.9	34.6	34.6	34.9	32.0	32.0	34.0
			SHC	16.7	23.7	30.7	22.8	29.2	35.7	21.9	28.4	34.9	21.0	27.5	34.0
		72	TC	39.0	39.0	39.0	40.2	40.2	40.2	38.0	38.0	38.0	35.5	35.5	35.5
			SHC	12.4	19.5	26.6	16.1	22.5	28.8	15.4	21.7	28.1	14.6	21.0	27.4
		76	TC	—	41.4	41.4	—	42.2	42.2	—	40.0	40.0	—	—	—
			SHC	—	16.0	24.3	—	17.2	24.0	—	16.5	23.2	—	—	—

LEGEND:

—	Do not operate
Cfm	Cubic feet per minute (supply air)
EAT(db)	Entering air temperature (dry bulb)
EAT(wb)	Entering air temperature (wet bulb)
SHC	Sensible heat capacity
TC	Total capacity

RAS036 (3 TONS) – UNIT WITH HOT GAS REHEAT IN SUBCOOLING MODE										
Air Entering Evaporator – CFM										
Temp (F) Air Ent Condenser (Edb)		80 dry bulb			80 dry bulb			80 dry bulb		
		72 wet bulb			67 wet bulb			62 wet bulb		
		900	1200	1500	900	1200	1500	900	1200	1500
75	TC	40.6	43.2	45.3	37.0	39.4	41.3	33.4	35.6	37.4
	SHC	21.6	23.9	25.6	25.6	27.7	29.3	29.6	31.6	33.1
	kW	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
85	TC	37.0	39.6	41.7	33.6	36.0	37.9	30.2	32.3	34.1
	SHC	17.7	20.2	22.2	22.7	25.0	26.9	27.7	29.9	31.6
	kW	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
95	TC	33.5	36.0	38.1	30.2	32.5	34.4	26.9	29.1	30.8
	SHC	13.7	16.6	18.8	19.7	22.4	24.4	25.7	28.2	30.1
	kW	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.5
105	TC	29.9	32.4	34.5	26.8	29.1	31.0	23.6	25.8	27.5
	SHC	9.8	12.9	15.3	16.8	19.7	22.0	23.8	26.5	28.6
	kW	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.8
115	TC	26.3	28.8	30.9	23.3	25.7	27.5	20.4	22.5	24.2
	SHC	5.8	9.2	11.9	13.8	17.0	19.5	21.9	24.8	27.1
	kW	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1

RAS036 (3 TONS) – UNIT WITH HOT GAS REHEAT IN HOT GAS REHEAT MODE										
Air Entering Evaporator – CFM										
Temp (F) Air Ent Condenser (Edb)		75 dry bulb			75 dry bulb			75 dry bulb		
		62.5 wet bulb (50% relative)			64 wet bulb (55% relative)			65.3 wet bulb (60% relative)		
		1050	1200	1350	1050	1200	1350	1050	1200	1350
80	TC	14.7	15.5	16.2	15.9	16.7	17.4	16.9	17.7	18.4
	SHC	6.7	7.6	8.5	4.8	5.7	6.6	3.2	4.1	5.0
	kW	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
75	TC	15.1	15.8	16.4	16.2	17.0	17.6	17.2	18.0	18.6
	SHC	7.5	8.4	9.2	5.8	6.7	7.5	4.4	5.2	6.0
	kW	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0
70	TC	15.5	16.1	16.7	16.6	17.3	17.9	17.5	18.2	18.8
	SHC	8.4	9.3	10.0	6.9	7.7	8.5	5.5	6.4	7.1
	kW	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
60	TC	16.2	16.8	17.3	17.2	17.8	18.3	18.1	18.7	19.2
	SHC	10.2	10.9	11.6	8.9	9.7	10.4	7.8	8.6	9.3
	kW	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9
50	TC	17.0	17.5	17.9	17.9	18.4	18.8	18.7	19.2	19.6
	SHC	11.9	12.6	13.2	11.0	11.6	12.2	10.1	10.8	11.4
	kW	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8
40	TC	17.7	18.1	18.5	18.6	19.0	19.3	19.3	19.7	20.1
	SHC	13.7	14.3	14.8	13.0	13.6	14.1	12.4	13.0	13.5
	kW	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7

LEGEND

Edb – Entering Dry–Bulb
Ewb – Entering Wet–Bulb
kW – Compressor Motor Power Input
ldb – Leaving Dry–Bulb
lwb – Leaving Wet–Bulb
SHC – Sensible Heat Capacity (1000 Btuh) Gross
TC – Total Capacity (1000 Btuh) Gross

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet–bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

Table 7 – COOLING CAPACITIES (cont.) 1-STAGE COOLING

4 TONS

RAS048				AMBIENT TEMPERATURE											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
1200 Cfm	EAT (wb)	58	TC	—	—	—	—	—	—	36.1	36.1	40.7	34.3	34.3	38.6
			SHC	—	—	—	—	—	—	31.5	36.1	40.7	29.9	34.3	38.6
		62	TC	43.1	43.1	43.1	40.8	40.8	40.8	38.4	38.4	39.4	35.9	35.9	38.2
			SHC	31.2	36.4	41.7	30.1	35.3	40.6	28.9	34.1	39.4	27.8	33.0	38.2
		67	TC	47.4	47.4	47.4	45.2	45.2	45.2	42.9	42.9	42.9	40.3	40.3	40.3
			SHC	25.9	31.2	36.4	25.0	30.2	35.5	23.9	29.2	34.4	22.9	28.2	33.4
		72	TC	51.1	51.1	51.1	49.1	49.1	49.1	46.8	46.8	46.8	43.9	43.9	43.9
			SHC	20.1	25.5	30.9	19.4	24.7	30.1	18.4	23.7	29.0	17.4	22.7	28.0
		76	TC	—	53.3	53.3	—	51.5	51.5	—	49.2	49.2	—	45.9	45.9
			SHC	—	20.8	27.4	—	20.2	26.8	—	19.3	25.7	—	18.3	24.6
1400 cfm	EAT (wb)	58	TC	41.9	41.9	47.3	40.1	40.1	45.3	38.2	38.2	43.2	36.3	36.3	41.0
			SHC	36.6	41.9	47.3	35.0	40.1	45.3	33.3	38.2	43.2	31.7	36.3	41.0
		62	TC	44.6	44.6	45.4	42.3	42.3	44.2	39.8	39.8	42.9	37.3	37.3	41.6
			SHC	33.4	39.4	45.4	32.3	38.3	44.2	31.0	37.0	42.9	29.8	35.7	41.6
		67	TC	48.7	48.7	48.7	46.6	46.6	46.6	44.2	44.2	44.2	41.4	41.4	41.4
			SHC	27.3	33.2	39.2	26.4	32.3	38.3	25.3	31.3	37.3	24.2	30.2	36.2
		72	TC	52.2	52.2	52.2	50.3	50.3	50.3	47.8	47.8	47.8	44.8	44.8	44.8
			SHC	20.6	26.7	32.7	19.9	25.9	32.0	18.9	24.9	30.9	17.9	23.8	29.7
		76	TC	—	54.1	54.1	—	52.3	52.3	—	49.9	49.9	—	46.4	46.4
			SHC	—	21.5	29.0	—	20.8	28.0	—	19.9	26.9	—	18.8	25.7
1600 Cfm	EAT (wb)	58	TC	44.0	44.0	49.6	42.1	42.1	47.4	40.1	40.1	45.2	38.1	38.1	43.0
			SHC	38.3	44.0	49.6	36.7	42.1	47.4	34.9	40.1	45.2	33.2	38.1	43.0
		62	TC	45.7	45.7	48.6	43.5	43.5	47.5	41.0	41.0	46.0	38.5	38.5	44.4
			SHC	35.3	42.0	48.6	34.2	40.8	47.5	32.9	39.4	46.0	31.6	38.0	44.4
		67	TC	49.8	49.8	49.8	47.6	47.6	47.6	45.1	45.1	45.1	42.3	42.3	42.3
			SHC	28.4	35.0	41.6	27.6	34.2	40.9	26.5	33.2	39.9	25.4	32.1	38.7
		72	TC	53.0	53.0	53.0	51.1	51.1	51.1	48.6	48.6	48.6	45.4	45.4	45.4
			SHC	21.0	27.6	34.3	20.3	27.0	33.6	19.4	26.0	32.6	18.3	24.8	31.3
		76	TC	—	54.6	54.6	—	52.8	52.8	—	50.4	50.4	—	46.8	46.8
			SHC	—	22.0	29.9	—	21.3	29.0	—	20.3	27.9	—	19.2	26.6
1800 Cfm	EAT (wb)	58	TC	44.0	44.0	50.3	42.1	42.1	48.1	40.1	40.1	45.9	38.0	38.0	43.5
			SHC	37.6	44.0	50.3	36.0	42.1	48.1	34.3	40.1	45.9	32.6	38.0	43.5
		62	TC	45.7	45.7	49.5	43.5	43.5	48.3	41.0	41.0	46.8	38.4	38.4	45.2
			SHC	34.5	42.0	49.5	33.4	40.8	48.3	32.1	39.4	46.8	30.8	38.0	45.2
		67	TC	49.8	49.8	49.8	47.6	47.6	47.6	45.1	45.1	45.1	42.3	42.3	42.3
			SHC	27.6	35.0	42.5	26.8	34.2	41.7	25.7	33.2	40.7	24.6	32.1	39.5
		72	TC	53.0	53.0	53.0	51.1	51.1	51.1	48.6	48.6	48.6	45.4	45.4	45.4
			SHC	20.2	27.6	35.1	19.5	27.0	34.4	18.5	26.0	33.4	17.5	24.8	32.1
		76	TC	—	54.6	54.6	—	52.8	52.8	—	50.4	50.4	—	46.8	46.8
			SHC	—	22.0	30.9	—	21.3	30.0	—	20.3	28.9	—	19.2	27.5
2000 Cfm	EAT (wb)	58	TC	46.9	46.9	52.9	45.0	45.0	50.8	42.9	42.9	48.4	40.7	40.7	45.9
			SHC	40.9	46.9	52.9	39.3	45.0	50.8	37.4	42.9	48.4	35.5	40.7	45.9
		62	TC	47.5	47.5	54.0	45.3	45.3	52.5	43.0	43.0	50.3	40.7	40.7	47.7
			SHC	38.5	46.3	54.0	37.3	44.9	52.5	35.6	43.0	50.3	33.8	40.7	47.7
		67	TC	51.2	51.2	51.2	49.1	49.1	49.1	46.5	46.5	46.5	43.5	43.5	43.5
			SHC	30.5	38.3	46.0	29.8	37.6	45.5	28.7	36.6	44.5	27.5	35.4	43.2
		72	TC	54.0	54.0	54.0	52.1	52.1	52.1	49.7	49.7	49.7	46.2	46.2	46.2
			SHC	21.7	29.2	36.8	21.1	28.7	36.4	20.1	27.8	35.4	18.9	26.4	33.9
		76	TC	—	55.2	55.2	—	53.5	53.5	—	51.0	51.0	—	47.3	47.3
			SHC	—	22.7	31.4	—	22.0	30.6	—	21.1	29.6	—	19.9	28.1

LEGEND:

—	Do not operate
Cfm	Cubic feet per minute (supply air)
EAT(db)	Entering air temperature (dry bulb)
EAT(wb)	Entering air temperature (wet bulb)
SHC	Sensible heat capacity
TC	Total capacity

Table 7 – COOLING CAPACITIES (cont.) 1-STAGE COOLING

4 TONS

RAS048 (4 TONS) – UNIT WITH HOT GAS REHEAT IN SUBCOOLING MODE										
Air Entering Evaporator – CFM										
Temp (F) Air Ent Condenser (Edb)		80 dry bulb			80 dry bulb			80 dry bulb		
		72 wet bulb			67 wet bulb			62 wet bulb		
		1200	1600	2000	1200	1600	2000	1200	1600	2000
75	TC	52.5	55.9	58.6	47.1	50.2	52.7	41.7	44.5	46.8
	SHC	22.6	25.5	27.8	27.1	29.9	32.0	31.6	34.2	36.2
	kW	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
85	TC	48.7	52.2	54.9	43.4	46.5	49.0	38.0	40.8	43.1
	SHC	18.0	21.3	23.9	23.6	26.8	29.2	29.3	32.2	34.4
	kW	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
95	TC	44.9	48.4	51.2	39.6	42.8	45.3	34.3	37.1	39.4
	SHC	13.4	17.2	20.0	20.2	23.7	26.4	27.0	30.2	32.7
	kW	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.3
105	TC	41.1	44.7	47.5	35.9	39.1	41.7	30.6	33.5	35.8
	SHC	8.8	13.0	16.1	16.7	20.6	23.6	24.6	28.2	31.0
	kW	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.7	3.7
115	TC	37.4	41.0	43.9	32.1	35.4	38.0	26.8	29.8	32.1
	SHC	4.3	8.8	12.2	13.3	17.5	20.7	22.3	26.2	29.2
	kW	4.2	4.2	4.2	4.2	4.2	4.2	4.1	4.1	4.1

RAS048 (4 TONS) – UNIT WITH HOT GAS REHEAT IN HOT GAS REHEAT MODE										
Air Entering Evaporator – CFM										
Temp (F) Air Ent Condenser (Edb)		75 dry bulb			75 dry bulb			75 dry bulb		
		62.5 wet bulb (50% relative)			64 wet bulb (55% relative)			65.3 wet bulb (60% relative)		
		1200	1600	2000	1200	1600	2000	1200	1600	2000
80	TC	11.6	13.8	15.5	13.5	15.8	17.6	15.2	17.5	19.3
	SHC	–1.0	1.2	3.0	–3.1	–0.8	0.9	–4.8	–2.6	–0.9
	kW	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
75	TC	12.5	14.6	16.2	14.3	16.4	18.1	15.9	18.1	19.8
	SHC	–0.7	1.4	3.0	–2.7	–0.6	1.1	–4.3	–2.2	–0.6
	kW	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
70	TC	13.4	15.3	16.8	15.1	17.1	18.7	16.6	18.7	20.3
	SHC	–0.5	1.5	3.0	–2.3	–0.3	1.2	–3.8	–1.9	–0.3
	kW	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
60	TC	15.1	16.8	18.1	16.7	18.4	19.8	18.1	19.9	21.2
	SHC	0.0	1.7	3.1	–1.5	0.2	1.5	–2.8	–1.1	0.2
	kW	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
50	TC	16.9	18.3	19.4	18.3	19.8	20.9	19.6	21.0	22.2
	SHC	0.6	2.0	3.1	–0.7	0.7	1.8	–1.8	–0.4	0.7
	kW	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
40	TC	18.7	19.8	20.7	19.9	21.1	22.0	21.0	22.2	23.2
	SHC	1.1	2.2	3.1	0.1	1.2	2.1	–0.8	0.4	1.3
	kW	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7

LEGEND

Edb – Entering Dry–Bulb
Ewb – Entering Wet–Bulb
kW – Compressor Motor Power Input
ldb – Leaving Dry–Bulb
lwb – Leaving Wet–Bulb
SHC – Sensible Heat Capacity (1000 Btuh) Gross
TC – Total Capacity (1000 Btuh) Gross

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet–bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

Table 7 – COOLING CAPACITIES (cont.) 1-STAGE COOLING

5 TONS

RAS060				AMBIENT TEMPERATURE											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
1500 Cfm	EAT (wb)	58	TC	52.9	52.9	60.0	49.9	49.9	56.6	46.6	46.6	52.9	43.1	43.1	48.9
			SHC	45.8	52.9	60.0	43.2	49.9	56.6	40.4	46.6	52.9	37.3	43.1	48.9
		62	TC	56.2	56.2	57.6	52.2	52.2	55.7	47.8	47.8	53.5	43.2	43.2	51.0
			SHC	41.8	49.7	57.6	39.9	47.8	55.7	37.8	45.6	53.5	35.5	43.2	51.0
		67	TC	62.4	62.4	62.4	58.8	58.8	58.8	54.4	54.4	54.4	49.5	49.5	49.5
			SHC	34.8	42.8	50.7	33.2	41.2	49.1	31.4	39.3	47.3	29.4	37.3	45.3
		72	TC	68.2	68.2	68.2	64.8	64.8	64.8	60.8	60.8	60.8	56.2	56.2	56.2
			SHC	27.2	35.2	43.2	25.9	33.9	41.9	24.4	32.4	40.4	22.6	30.6	38.6
		76	TC	—	71.1	71.1	—	69.0	69.0	—	65.4	65.4	—	60.9	60.9
			SHC	—	28.4	36.6	—	27.6	35.9	—	26.3	34.6	—	24.8	33.0
1750 Cfm	EAT (wb)	58	TC	56.5	56.5	64.0	53.3	53.3	60.4	49.8	49.8	56.5	46.1	46.1	52.3
			SHC	48.9	56.5	64.0	46.1	53.3	60.4	43.1	49.8	56.5	39.9	46.1	52.3
		62	TC	58.5	58.5	63.4	54.4	54.4	61.3	49.9	49.9	58.9	46.1	46.1	54.4
			SHC	45.2	54.3	63.4	43.2	52.2	61.3	41.0	49.9	58.9	37.9	46.1	54.4
		67	TC	64.3	64.3	64.3	60.5	60.5	60.5	56.2	56.2	56.2	51.3	51.3	51.3
			SHC	36.9	46.1	55.2	35.3	44.5	53.7	33.6	42.8	51.9	31.6	40.8	49.9
		72	TC	69.5	69.5	69.5	66.5	66.5	66.5	62.4	62.4	62.4	57.7	57.7	57.7
			SHC	27.8	36.9	45.9	26.7	35.9	45.1	25.2	34.5	43.7	23.5	32.8	42.0
		76	TC	—	72.2	72.2	—	70.1	70.1	—	66.6	66.6	—	—	—
			SHC	—	29.3	38.9	—	28.6	38.2	—	27.4	36.8	—	—	—
2000 Cfm	EAT (wb)	58	TC	59.3	59.3	67.3	56.1	56.1	63.6	52.5	52.5	59.5	48.6	48.6	55.1
			SHC	51.4	59.3	67.3	48.6	56.1	63.6	45.4	52.5	59.5	42.1	48.6	55.1
		62	TC	60.1	60.1	68.5	56.2	56.2	66.3	52.5	52.5	62.0	48.7	48.7	57.4
			SHC	48.1	58.3	68.5	46.2	56.2	66.3	43.1	52.5	62.0	39.9	48.7	57.4
		67	TC	65.7	65.7	65.7	61.9	61.9	61.9	57.5	57.5	57.5	52.6	52.6	54.4
			SHC	38.8	49.1	59.5	37.3	47.7	58.1	35.6	46.0	56.4	33.6	44.0	54.4
		72	TC	70.1	70.1	70.1	67.6	67.6	67.6	63.6	63.6	63.6	58.9	58.9	58.9
			SHC	28.3	38.1	48.0	27.4	37.7	48.0	26.0	36.4	46.7	24.3	34.7	45.2
		76	TC	—	72.9	72.9	—	70.8	70.8	—	67.4	67.4	—	—	—
			SHC	—	30.1	40.7	—	29.3	39.9	—	28.2	38.7	—	—	—
2250 Cfm	EAT (wb)	58	TC	61.5	61.5	69.8	58.4	58.4	66.2	54.8	54.8	62.1	50.8	50.8	57.6
			SHC	53.2	61.5	69.8	50.5	58.4	66.2	47.4	54.8	62.1	43.9	50.8	57.6
		62	TC	61.6	61.6	72.6	58.4	58.4	68.9	54.8	54.8	64.6	50.8	50.8	59.9
			SHC	50.6	61.6	72.6	47.9	58.4	68.9	45.0	54.8	64.6	41.7	50.8	59.9
		67	TC	66.8	66.8	66.8	63.0	63.0	63.0	58.5	58.5	60.6	53.6	53.6	58.6
			SHC	40.5	52.0	63.4	39.1	50.7	62.3	37.4	49.0	60.6	35.5	47.0	58.6
		72	TC	70.8	70.8	70.8	68.5	68.5	68.5	64.5	64.5	64.5	59.8	59.8	59.8
			SHC	28.7	39.5	50.2	28.0	39.3	50.5	26.7	38.1	49.6	25.0	36.6	48.1
		76	TC	—	73.4	73.4	—	71.2	71.2	—	67.9	67.9	—	—	—
			SHC	—	30.7	42.1	—	30.0	41.4	—	28.9	40.4	—	—	—
2500 Cfm	EAT (wb)	58	TC	63.3	63.3	71.8	60.1	60.1	68.2	56.5	56.5	64.1	52.6	52.6	59.6
			SHC	54.8	63.3	71.8	52.1	60.1	68.2	49.0	56.5	64.1	45.5	52.6	59.6
		62	TC	63.4	63.4	74.7	60.2	60.2	71.0	56.6	56.6	66.7	52.6	52.6	62.1
			SHC	52.0	63.4	74.7	49.4	60.2	71.0	46.5	56.6	66.7	43.2	52.6	62.1
		67	TC	67.6	67.6	67.6	63.8	63.8	66.2	59.3	59.3	64.6	54.4	54.4	62.5
			SHC	42.1	54.6	67.1	40.9	53.5	66.2	39.2	51.9	64.6	37.2	49.8	62.5
		72	TC	71.3	71.3	71.3	69.0	69.0	69.0	65.1	65.1	65.1	60.4	60.4	60.4
			SHC	29.1	40.7	52.2	28.5	40.7	52.9	27.3	39.7	52.2	25.7	38.3	50.9
		76	TC	—	73.8	73.8	—	71.4	71.4	—	68.3	68.3	—	—	—
			SHC	—	31.2	43.3	—	30.5	42.6	—	29.6	41.9	—	—	—

LEGEND:

—	Do not operate
Cfm	Cubic feet per minute (supply air)
EAT(db)	Entering air temperature (dry bulb)
EAT(wb)	Entering air temperature (wet bulb)
SHC	Sensible heat capacity
TC	Total capacity

RAS060 (5 TONS) – UNIT WITH HOT GAS REHEAT IN SUBCOOLING MODE										
Air Entering Evaporator – CFM										
Temp (F) Air Ent Condenser (Edb)		80 dry bulb			80 dry bulb			80 dry bulb		
		72 wet bulb			67 wet bulb			62 wet bulb		
		1750	2000	2250	1750	2000	2250	1750	2000	2250
75	TC	73.1	78.7	84.5	63.2	66.9	70.8	53.2	55.1	57.1
	SHC	35.3	37.2	38.8	42.0	43.7	45.3	48.7	50.3	51.8
	kW	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
85	TC	67.6	71.2	75.0	59.1	61.2	63.3	50.6	51.1	51.5
	SHC	27.9	30.0	31.9	36.3	38.3	40.1	44.8	46.6	48.2
	kW	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
95	TC	62.1	63.8	65.5	55.1	55.4	55.8	48.0	47.0	46.0
	SHC	20.5	22.9	24.9	30.7	32.9	34.8	40.9	42.9	44.7
	kW	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
105	TC	56.6	56.3	56.0	51.0	49.6	48.3	45.4	43.0	40.5
	SHC	13.1	15.7	18.0	25.0	27.5	29.6	36.9	39.2	41.2
	kW	4.8	4.8	4.8	4.8	4.8	4.8	4.7	4.7	4.7
115	TC	51.1	48.8	46.5	46.9	43.9	40.7	42.8	39.0	35.0
	SHC	5.8	8.6	11.0	19.4	22.0	24.4	33.0	35.5	37.7
	kW	5.3	5.3	5.3	5.3	5.3	5.3	5.2	5.2	5.2

RAS060 (5 TONS) – UNIT WITH HOT GAS REHEAT IN HOT GAS REHEAT MODE										
Air Entering Evaporator – CFM										
Temp (F) Air Ent Condenser (Edb)		75 dry bulb			75 dry bulb			75 dry bulb		
		62.5 wet bulb (50% relative)			64 wet bulb (55% relative)			65.3 wet bulb (60% relative)		
		1750	2000	2250	1750	2000	2250	1750	2000	2250
80	TC	23.0	24.4	25.6	24.7	26.2	27.4	26.3	27.7	29.0
	SHC	5.3	6.1	6.8	3.2	4.0	4.7	1.4	2.2	2.9
	kW	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
75	TC	23.3	24.6	25.7	25.0	26.3	27.5	26.4	27.8	29.0
	SHC	5.1	5.8	6.5	3.1	3.9	4.5	1.4	2.2	2.8
	kW	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
70	TC	23.5	24.8	25.9	25.2	26.4	27.5	26.6	27.9	29.0
	SHC	4.8	5.5	6.2	3.0	3.7	4.3	1.4	2.1	2.8
	kW	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
60	TC	24.1	25.2	26.1	25.6	26.7	27.7	26.9	28.0	29.0
	SHC	4.3	5.0	5.5	2.8	3.4	3.9	1.4	2.0	2.6
	kW	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
50	TC	24.7	25.6	26.4	26.1	27.0	27.8	27.2	28.2	29.0
	SHC	3.8	4.4	4.8	2.5	3.1	3.5	1.4	2.0	2.4
	kW	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
40	TC	25.3	26.0	26.7	26.5	27.3	27.9	27.6	28.3	29.0
	SHC	3.3	3.8	4.2	2.3	2.8	3.1	1.4	1.9	2.3
	kW	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2

LEGEND

Edb – Entering Dry–Bulb
Ewb – Entering Wet–Bulb
kW – Compressor Motor Power Input
ldb – Leaving Dry–Bulb
lwb – Leaving Wet–Bulb
SHC – Sensible Heat Capacity (1000 Btuh) Gross
TC – Total Capacity (1000 Btuh) Gross

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet–bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

Table 7 – COOLING CAPACITIES (cont.) 1-STAGE COOLING

6 TONS

RAS072				AMBIENT TEMPERATURE											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
1800 Cfm	EAT (wb)	58	TC	64.9	64.9	73.3	62.1	62.1	70.0	58.9	58.9	66.4	55.6	55.6	62.7
			SHC	56.6	64.9	73.3	54.1	62.1	70.0	51.4	58.9	66.4	48.5	55.6	62.7
		62	TC	68.7	68.7	70.3	64.9	64.9	68.5	60.8	60.8	66.4	56.4	56.4	64.0
			SHC	51.7	61.0	70.3	49.9	59.2	68.5	47.9	57.2	66.4	45.7	54.9	64.0
		67	TC	75.6	75.6	75.6	71.7	71.7	71.7	67.4	67.4	67.4	62.5	62.5	62.5
			SHC	42.8	52.2	61.5	41.2	50.5	59.8	39.3	48.6	58.0	37.2	46.5	55.8
		72	TC	82.6	82.6	82.6	78.5	78.5	78.5	73.7	73.7	73.7	67.8	67.8	67.8
			SHC	33.5	42.8	52.2	31.9	41.3	50.6	30.0	39.3	48.6	27.8	36.9	45.9
		76	TC	—	87.5	87.5	—	83.3	83.3	—	77.7	77.7	—	70.9	70.9
			SHC	—	35.0	44.9	—	33.5	43.4	—	31.6	41.5	—	29.3	39.1
2100 Cfm	EAT (wb)	58	TC	68.9	68.9	77.7	65.9	65.9	74.3	62.5	62.5	70.5	58.7	58.7	66.2
			SHC	60.1	68.9	77.7	57.4	65.9	74.3	54.5	62.5	70.5	51.2	58.7	66.2
		62	TC	70.9	70.9	76.9	67.1	67.1	75.0	63.0	63.0	72.5	58.7	58.7	68.7
			SHC	55.6	66.3	76.9	53.8	64.4	75.0	51.6	62.1	72.5	48.7	58.7	68.7
		67	TC	77.8	77.8	77.8	73.7	73.7	73.7	69.2	69.2	69.2	64.0	64.0	64.0
			SHC	45.4	56.1	66.8	43.7	54.4	65.2	41.8	52.5	63.2	39.6	50.2	60.7
		72	TC	84.5	84.5	84.5	80.3	80.3	80.3	75.1	75.1	75.1	68.8	68.8	68.8
			SHC	34.5	45.2	55.9	32.9	43.5	54.2	30.9	41.4	52.0	28.5	38.7	48.9
		76	TC	—	89.2	89.2	—	84.7	84.7	—	78.8	78.8	—	71.6	71.6
			SHC	—	36.3	47.8	—	34.7	46.0	—	32.6	43.7	—	30.1	40.9
2400 Cfm	EAT (wb)	58	TC	72.0	72.0	81.2	68.7	68.7	77.5	65.2	65.2	73.5	61.1	61.1	68.9
			SHC	62.8	72.0	81.2	60.0	68.7	77.5	56.9	65.2	73.5	53.3	61.1	68.9
		62	TC	72.8	72.8	82.8	68.9	68.9	80.7	65.2	65.2	76.4	61.2	61.2	71.6
			SHC	59.1	71.0	82.8	57.2	68.9	80.7	54.1	65.2	76.4	50.7	61.2	71.6
		67	TC	79.4	79.4	79.4	75.2	75.2	75.2	70.5	70.5	70.5	65.1	65.1	65.3
			SHC	47.7	59.8	71.8	46.0	58.1	70.2	44.0	56.0	68.1	41.6	53.5	65.3
		72	TC	86.0	86.0	86.0	81.6	81.6	81.6	76.1	76.1	76.1	69.6	69.6	69.6
			SHC	35.3	47.2	59.2	33.7	45.6	57.5	31.7	43.3	55.0	29.1	40.3	51.4
		76	TC	—	90.3	90.3	—	85.7	85.7	—	79.6	79.6	—	72.1	72.1
			SHC	—	37.3	49.8	—	35.6	48.0	—	33.5	45.6	—	30.8	42.5
2700 Cfm	EAT (wb)	58	TC	60.3	60.3	74.1	71.1	71.1	80.2	67.4	67.4	76.0	63.0	63.0	71.1
			SHC	46.4	60.3	74.1	62.0	71.1	80.2	58.8	67.4	76.0	55.0	63.0	71.1
		62	TC	65.4	65.4	69.3	71.2	71.2	83.3	67.5	67.5	79.0	63.1	63.1	73.8
			SHC	41.0	55.1	69.3	59.0	71.2	83.3	55.9	67.5	79.0	52.3	63.1	73.8
		67	TC	72.7	72.7	72.7	76.3	76.3	76.3	71.5	71.5	72.6	65.8	65.8	69.4
			SHC	33.8	48.0	62.2	48.2	61.6	74.9	46.1	59.3	72.6	43.5	56.5	69.4
		72	TC	79.7	79.7	79.7	82.5	82.5	82.5	76.9	76.9	76.9	70.1	70.1	70.1
			SHC	25.8	40.2	54.6	34.5	47.5	60.5	32.3	45.0	57.7	29.7	41.7	53.8
		76	TC	—	85.1	85.1	—	86.4	86.4	—	80.2	80.2	—	72.5	72.5
			SHC	—	33.5	48.4	—	36.5	49.9	—	34.3	47.3	—	31.5	44.0
3000 Cfm	EAT (wb)	58	TC	64.9	64.9	78.8	73.1	73.1	82.5	69.2	69.2	78.0	64.5	64.5	72.7
			SHC	51.1	64.9	78.8	63.8	73.1	82.5	60.3	69.2	78.0	56.2	64.5	72.7
		62	TC	68.7	68.7	76.5	73.2	73.2	85.7	69.2	69.2	81.0	64.5	64.5	75.5
			SHC	45.5	61.0	76.5	60.7	73.2	85.7	57.4	69.2	81.0	53.5	64.5	75.5
		67	TC	75.6	75.6	75.6	77.2	77.2	79.4	72.2	72.2	76.8	66.3	66.3	73.0
			SHC	36.6	52.2	67.7	50.2	64.8	79.4	48.0	62.4	76.8	45.1	59.1	73.0
		72	TC	82.6	82.6	82.6	83.3	83.3	83.3	77.5	77.5	77.5	70.5	70.5	70.5
			SHC	27.2	42.8	58.5	35.1	49.2	63.3	32.9	46.6	60.3	30.2	43.0	55.9
		76	TC	—	87.5	87.5	—	86.9	86.9	—	80.6	80.6	—	72.8	72.8
			SHC	—	35.0	51.5	—	37.3	51.6	—	35.0	48.9	—	32.1	45.3

LEGEND:

—	Do not operate in this region
Cfm	Cubic feet per minute (supply air)
EAT(db)	Entering air temperature (dry bulb)
EAT(wb)	Entering air temperature (wet bulb)
SHC	Sensible heat capacity
TC	Total capacity

RAS072 (6 TONS) – UNIT WITH HOT GAS REHEAT IN SUBCOOLING MODE										
Air Entering Evaporator – CFM										
Temp (F) Air Ent Condenser (Edb)		80 dry bulb			80 dry bulb			80 dry bulb		
		72 wet bulb			67 wet bulb			62 wet bulb		
		2100	2400	2700	2100	2400	2700	2100	2400	2700
75	TC	86.7	89.9	92.8	79.3	82.3	84.9	71.9	74.6	77.0
	SHC	40.1	41.8	43.3	46.9	48.5	49.9	53.7	55.2	56.5
	kW	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.2	4.2
85	TC	79.5	82.6	85.4	72.5	75.3	77.9	65.4	68.0	70.3
	SHC	32.1	34.0	35.7	40.7	42.5	44.1	49.4	51.0	52.5
	kW	5.0	5.0	5.0	5.0	5.0	5.0	4.9	4.9	4.9
95	TC	72.4	75.3	78.1	65.6	68.3	70.8	58.8	61.3	63.6
	SHC	24.1	26.3	28.1	34.6	36.6	38.3	45.1	46.9	48.5
	kW	5.8	5.8	5.8	5.7	5.7	5.7	5.6	5.6	5.6
105	TC	65.2	68.1	70.7	58.7	61.4	63.8	52.3	54.7	56.8
	SHC	16.2	18.5	20.5	28.5	30.6	32.6	40.7	42.8	44.6
	kW	6.5	6.5	6.5	6.4	6.4	6.4	6.3	6.3	6.3
115	TC	58.0	60.8	63.3	51.9	54.4	56.7	45.7	48.0	50.1
	SHC	8.2	10.7	13.0	22.3	24.7	26.8	36.4	38.6	40.6
	kW	7.2	7.2	7.2	7.1	7.1	7.1	7.0	7.0	7.0

RAS072 (6 TONS) – UNIT WITH HOT GAS REHEAT IN HOT GAS REHEAT MODE										
Air Entering Evaporator – CFM										
Temp (F) Air Ent Condenser (Edb)		75 dry bulb			75 dry bulb			75 dry bulb		
		62.5 wet bulb (50% relative)			64 wet bulb (55% relative)			65.3 wet bulb (60% relative)		
		2100	2400	2700	2100	2400	2700	1750	2000	2700
80	TC	16.7	19.8	22.5	18.8	21.9	24.7	16.2	19.4	26.7
	SHC	0.6	0.6	0.6	−0.4	−0.4	−0.4	−1.3	−1.3	−1.3
	kW	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
75	TC	17.7	20.6	23.1	19.6	22.6	25.3	17.3	20.3	27.1
	SHC	0.6	0.6	0.6	−0.3	−0.3	−0.3	−1.2	−1.2	−1.2
	kW	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
70	TC	18.6	21.3	23.7	20.5	23.3	25.8	18.3	21.1	27.6
	SHC	0.7	0.7	0.7	−0.2	−0.2	−0.2	−1.0	−1.0	−1.0
	kW	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1
60	TC	20.5	22.9	25.0	22.2	24.7	26.8	20.4	22.8	28.5
	SHC	0.7	0.7	0.7	−0.0	−0.0	−0.0	−0.7	−0.7	−0.7
	kW	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
50	TC	22.4	24.4	26.2	24.0	26.0	27.9	22.4	24.5	29.3
	SHC	0.8	0.8	0.8	0.1	0.1	0.1	−0.4	−0.4	−0.4
	kW	4.1	4.1	4.1	4.1	4.1	4.1	4.2	4.2	4.2
40	TC	24.3	25.9	27.4	25.7	27.4	28.9	24.5	26.3	30.2
	SHC	0.8	0.8	0.8	0.3	0.3	0.3	−0.1	−0.1	−0.1
	kW	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2

LEGEND

Edb – Entering Dry–Bulb
Ewb – Entering Wet–Bulb
kW – Compressor Motor Power Input
ldb – Leaving Dry–Bulb
lwb – Leaving Wet–Bulb
SHC – Sensible Heat Capacity (1000 Btuh) Gross
TC – Total Capacity (1000 Btuh) Gross

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet–bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

Table 7 – COOLING CAPACITIES (cont.) 1-STAGE COOLING

7.5 TONS

RAS091				AMBIENT TEMPERATURE											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
2250 Cfm	EAT (wb)	58	TC	81.2	81.2	91.8	77.5	77.5	87.7	73.6	73.6	83.3	69.5	69.5	78.7
			SHC	70.5	81.2	91.8	67.3	77.5	87.7	63.9	73.6	83.3	60.4	69.5	78.7
		62	TC	86.9	86.9	86.9	82.3	82.3	84.0	77.2	77.2	81.5	71.9	71.9	78.8
			SHC	63.6	74.9	86.2	61.4	72.7	84.0	58.9	70.2	81.5	56.3	67.6	78.8
		67	TC	95.2	95.2	95.2	90.7	90.7	90.7	85.7	85.7	85.7	79.9	79.9	79.9
			SHC	52.8	64.2	75.6	50.9	62.2	73.6	48.8	60.1	71.5	46.3	57.6	68.9
		72	TC	103.5	103.5	103.5	98.9	98.9	98.9	93.8	93.8	93.8	87.3	87.3	87.3
			SHC	41.5	53.1	64.6	39.7	51.2	62.7	37.7	49.2	60.6	35.3	46.6	57.8
		76	TC	—	109.6	109.6	—	104.8	104.8	—	99.1	99.1	—	91.6	91.6
			SHC	—	43.7	56.0	—	42.0	54.3	—	40.0	52.4	—	37.4	49.8
2625 Cfm	EAT (wb)	58	TC	85.9	85.9	97.2	82.2	82.2	93.1	78.1	78.1	88.4	73.9	73.9	83.6
			SHC	74.6	85.9	97.2	71.4	82.2	93.1	67.9	78.1	88.4	64.1	73.9	83.6
		62	TC	89.6	89.6	94.1	85.1	85.1	91.7	80.1	80.1	89.1	74.6	74.6	86.0
			SHC	68.1	81.1	94.1	65.9	78.8	91.7	63.4	76.3	89.1	60.6	73.3	86.0
		67	TC	97.9	97.9	97.9	93.2	93.2	93.2	88.1	88.1	88.1	82.0	82.0	82.0
			SHC	55.7	68.7	81.7	53.7	66.7	79.8	51.6	64.6	77.6	49.0	62.0	74.9
		72	TC	106.0	106.0	106.0	101.3	101.3	101.3	95.9	95.9	95.9	89.0	89.0	89.0
			SHC	42.7	55.8	68.9	40.9	53.9	67.0	38.8	51.8	64.7	36.2	48.9	61.7
		76	TC	—	111.8	111.8	—	106.9	106.9	—	100.7	100.7	—	92.7	92.7
			SHC	—	45.3	59.8	—	43.6	58.0	—	41.4	55.6	—	38.7	52.6
3000 Cfm	EAT (wb)	58	TC	89.6	89.6	101.4	85.9	85.9	97.2	81.7	81.7	92.5	77.0	77.0	87.1
			SHC	77.9	89.6	101.4	74.6	85.9	97.2	71.0	81.7	92.5	66.9	77.0	87.1
		62	TC	91.8	91.8	101.1	87.2	87.2	98.6	82.3	82.3	95.5	77.1	77.1	90.6
			SHC	72.2	86.7	101.1	69.9	84.3	98.6	67.2	81.3	95.5	63.5	77.1	90.6
		67	TC	99.9	99.9	99.9	95.2	95.2	95.2	89.9	89.9	89.9	83.6	83.6	83.6
			SHC	58.3	72.9	87.5	56.4	71.0	85.5	54.2	68.8	83.4	51.6	66.1	80.5
		72	TC	107.9	107.9	107.9	103.0	103.0	103.0	97.3	97.3	97.3	90.1	90.1	90.1
			SHC	43.7	58.3	72.8	41.9	56.4	70.9	39.7	54.1	68.4	37.0	51.0	65.0
		76	TC	—	113.8	113.8	—	108.4	108.4	—	102.0	102.0	—	93.4	93.4
			SHC	—	46.7	62.5	—	44.8	60.4	—	42.6	57.9	—	39.6	54.7
3375 Cfm	EAT (wb)	58	TC	92.7	92.7	104.9	88.8	88.8	100.5	84.6	84.6	95.7	79.6	79.6	90.0
			SHC	80.5	92.7	104.9	77.1	88.8	100.5	73.4	84.6	95.7	69.1	79.6	90.0
		62	TC	93.7	93.7	107.3	89.1	89.1	104.7	84.6	84.6	99.5	79.6	79.6	93.6
			SHC	75.8	91.6	107.3	73.5	89.1	104.7	69.8	84.6	99.5	65.6	79.6	93.6
		67	TC	101.5	101.5	101.5	96.7	96.7	96.7	91.3	91.3	91.3	84.8	84.8	85.7
			SHC	60.8	76.9	93.0	58.8	74.9	91.0	56.7	72.8	88.9	53.9	69.8	85.7
		72	TC	109.4	109.4	109.4	104.3	104.3	104.3	98.4	98.4	98.4	90.9	90.9	90.9
			SHC	44.6	60.5	76.4	42.8	58.6	74.4	40.5	56.2	71.8	37.7	52.8	68.0
		76	TC	—	115.1	115.1	—	109.5	109.5	—	102.8	102.8	—	94.0	94.0
			SHC	—	47.8	64.9	—	45.9	62.7	—	43.5	60.1	—	40.4	56.5
3750 Cfm	EAT (wb)	58	TC	95.3	95.3	107.8	91.3	91.3	103.3	86.9	86.9	98.3	81.7	81.7	92.4
			SHC	82.7	95.3	107.8	79.3	91.3	103.3	75.5	86.9	98.3	70.9	81.7	92.4
		62	TC	95.5	95.5	112.2	91.3	91.3	107.4	87.0	87.0	102.2	81.7	81.7	96.0
			SHC	78.7	95.5	112.2	75.3	91.3	107.4	71.7	87.0	102.2	67.4	81.7	96.0
		67	TC	102.8	102.8	102.8	97.9	97.9	97.9	92.3	92.3	94.0	85.7	85.7	90.5
			SHC	63.1	80.6	98.2	61.2	78.7	96.3	59.0	76.5	94.0	56.0	73.2	90.5
		72	TC	110.6	110.6	110.6	105.4	105.4	105.4	99.2	99.2	99.2	91.5	91.5	91.5
			SHC	45.5	62.7	79.9	43.5	60.7	77.8	41.3	58.1	75.0	38.3	54.5	70.7
		76	TC	—	116.1	116.1	—	110.3	110.3	—	103.5	103.5	—	94.5	94.5
			SHC	—	48.9	67.0	—	46.8	64.8	—	44.4	62.0	—	41.1	58.1

LEGEND:

—	Do not operate in this region
Cfm	Cubic feet per minute (supply air)
EAT(db)	Entering air temperature (dry bulb)
EAT(wb)	Entering air temperature (wet bulb)
SHC	Sensible heat capacity
TC	Total capacity

Table 7 – COOLING CAPACITIES (cont.) 2-STAGE COOLING

7.5 TONS

RAS090				AMBIENT TEMPERATURE											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
2250 Cfm	EAT (wb)	58	TC	77.4	77.4	87.8	73.8	73.8	83.8	70.1	70.1	79.5	66.0	66.0	74.9
			SHC	66.9	77.4	87.8	63.9	73.8	83.8	60.6	70.1	79.5	57.1	66.0	74.9
		62	TC	82.2	82.2	83.9	77.5	77.5	81.7	72.6	72.6	79.2	67.3	67.3	76.4
			SHC	60.8	72.4	83.9	58.6	70.1	81.7	56.3	67.7	79.2	53.6	65.0	76.4
		67	TC	90.1	90.1	90.1	86.0	86.0	86.0	81.4	81.4	81.4	75.9	75.9	75.9
			SHC	50.2	61.8	73.3	48.5	60.1	71.6	46.5	58.1	69.7	44.2	55.8	67.4
		72	TC	98.0	98.0	98.0	94.0	94.0	94.0	89.5	89.5	89.5	84.3	84.3	84.3
			SHC	39.1	50.7	62.4	37.5	49.2	60.9	35.8	47.5	59.2	33.8	45.5	57.2
		76	TC	—	104.3	104.3	—	100.4	100.4	—	95.9	95.9	—	90.7	90.7
			SHC	—	41.7	54.0	—	40.3	52.7	—	38.7	51.0	—	36.8	49.0
2625 Cfm	EAT (wb)	58	TC	82.1	82.1	93.2	78.4	78.4	89.0	74.4	74.4	84.4	70.0	70.0	79.5
			SHC	71.0	82.1	93.2	67.8	78.4	89.0	64.3	74.4	84.4	60.6	70.0	79.5
		62	TC	84.9	84.9	91.8	80.4	80.4	89.5	75.4	75.4	86.7	70.2	70.2	82.9
			SHC	65.4	78.6	91.8	63.2	76.3	89.5	60.6	73.7	86.7	57.6	70.2	82.9
		67	TC	92.5	92.5	92.5	88.3	88.3	88.3	83.6	83.6	83.6	78.3	78.3	78.3
			SHC	53.0	66.3	79.5	51.3	64.6	78.0	49.4	62.8	76.1	47.2	60.6	73.9
		72	TC	100.4	100.4	100.4	96.4	96.4	96.4	91.7	91.7	91.7	86.4	86.4	86.4
			SHC	40.2	53.5	66.7	38.7	52.0	65.3	36.9	50.3	63.7	35.0	48.4	61.8
		76	TC	—	106.5	106.5	—	102.6	102.6	—	98.0	98.0	—	92.7	92.7
			SHC	—	43.3	57.6	—	41.8	55.9	—	40.2	54.1	—	38.4	52.2
3000 Cfm	EAT (wb)	58	TC	85.7	85.7	97.3	82.2	82.2	93.3	78.0	78.0	88.6	73.5	73.5	83.4
			SHC	74.1	85.7	97.3	71.1	82.2	93.3	67.5	78.0	88.6	63.6	73.5	83.4
		62	TC	86.9	86.9	98.7	82.8	82.8	96.4	78.2	78.2	92.3	73.6	73.6	86.9
			SHC	69.3	84.0	98.7	67.2	81.8	96.4	64.1	78.2	92.3	60.3	73.6	86.9
		67	TC	94.3	94.3	94.3	90.1	90.1	90.1	85.2	85.2	85.2	79.8	79.8	80.1
			SHC	55.6	70.5	85.4	54.0	68.9	83.9	52.1	67.1	82.2	49.9	65.0	80.1
		72	TC	102.2	102.2	102.2	98.1	98.1	98.1	93.3	93.3	93.3	87.9	87.9	87.9
			SHC	41.2	56.0	70.7	39.7	54.6	69.5	38.0	53.0	68.0	36.0	51.1	66.2
		76	TC	—	108.1	108.1	—	104.2	104.2	—	99.5	99.5	—	94.2	94.2
			SHC	—	44.5	60.2	—	43.2	58.7	—	41.6	57.0	—	39.8	55.2
3375 Cfm	EAT (wb)	58	TC	88.5	88.5	100.4	85.0	85.0	96.4	81.0	81.0	92	76.5	76.5	86.8
			SHC	76.5	88.5	100.4	73.5	85.0	96.4	70.1	81.0	92	66.1	76.5	86.8
		62	TC	88.9	88.9	103.9	85.1	85.1	100.4	81.1	81.1	95.7	76.5	76.5	90.3
			SHC	72.3	88.1	103.9	69.7	85.1	100.4	66.5	81.1	95.7	62.7	76.5	90.3
		67	TC	95.8	95.8	95.8	91.5	91.5	91.5	86.6	86.6	87.9	81.1	81.1	85.8
			SHC	58.0	74.4	90.9	56.4	73.0	89.6	54.6	71.3	87.9	52.4	69.1	85.8
		72	TC	103.6	103.6	103.6	99.4	99.4	99.4	94.6	94.6	94.6	89.1	89.1	89.1
			SHC	42.0	58.3	74.5	40.6	57.0	73.4	38.9	55.5	72.0	37.0	53.7	70.3
		76	TC	—	109.2	109.2	—	105.4	105.4	—	100.7	100.7	—	95.3	95.3
			SHC	—	45.6	62.6	—	44.4	61.3	—	42.8	59.7	—	41.0	58.0
3750 Cfm	EAT (wb)	58	TC	90.8	90.8	103.0	87.3	87.3	99.1	83.3	83.3	94.5	78.8	78.8	89.4
			SHC	78.5	90.8	103.0	75.5	87.3	99.1	72.0	83.3	94.5	68.2	78.8	89.4
		62	TC	90.9	90.9	107.2	87.4	87.4	103.1	83.3	83.3	98.4	78.9	78.9	93.1
			SHC	74.5	90.9	107.2	71.6	87.4	103.1	68.3	83.3	98.4	64.7	78.9	93.1
		67	TC	97.0	97.0	97.0	92.6	92.6	95.1	87.6	87.6	93.4	82.1	82.1	91.2
			SHC	60.3	78.2	96.2	58.8	76.9	95.1	56.9	75.2	93.4	54.8	73.0	91.2
		72	TC	104.7	104.7	104.7	100.5	100.5	100.5	95.6	95.6	95.6	90.1	90.1	90.1
			SHC	42.9	60.5	78.1	41.4	59.3	77.1	39.8	57.8	75.9	37.9	56.1	74.3
		76	TC	—	110.2	110.2	—	106.2	106.2	—	101.6	101.6	—	96.1	96.1
			SHC	—	46.7	64.8	—	45.4	63.6	—	44.0	62.3	—	42.2	60.6

* See Minimum—Maximum Airflow Ratings. Do not operate outside these limits.

LEGEND:

—	Do not operate in this region
Cfm	Cubic feet per minute (supply air)
EAT(db)	Entering air temperature (dry bulb)
EAT(wb)	Entering air temperature (wet bulb)
SHC	Sensible heat capacity
TC	Total capacity

Table 7 – COOLING CAPACITIES (cont.) 2-STAGE COOLING

7.5 TONS

RAS090 COOLING CAPACITIES, UNIT WITH HOT GAS REHEAT IN SUBCOOLING MODE										
TEMP (F) AIR ENT CONDENSER (Edb)		AIR ENTERING EVAPORATOR – CFM								
		2250/0.05			3000/0.07			3750/0.09		
		Air Entering Evaporator – Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	103.05	93.02	83.60	109.77	99.52	90.08	114.01	103.69	95.19
	SHC	43.66	55.34	67.09	50.99	66.29	81.31	57.49	76.27	92.20
	kW	4.90	4.83	4.77	4.82	4.88	4.96	4.99	4.91	4.85
85	TC	95.39	85.83	76.88	101.59	91.89	82.95	105.53	95.76	87.77
	SHC	36.42	48.47	60.60	43.24	58.99	74.40	49.44	68.68	84.90
	kW	5.49	5.42	5.36	5.40	5.47	5.54	5.58	5.50	5.44
95	TC	87.48	78.44	69.97	93.21	84.05	75.61	96.84	87.63	80.14
	SHC	28.98	41.46	53.97	35.32	51.53	67.34	41.21	60.92	77.41
	kW	6.16	6.09	6.03	6.08	6.14	6.21	6.24	6.17	6.11
105	TC	79.35	70.83	62.84	84.57	75.96	68.04	87.88	79.23	72.26
	SHC	21.34	34.26	47.18	27.17	43.86	60.08	32.73	52.95	69.70
	kW	6.93	6.86	6.81	6.85	6.91	6.97	7.00	6.93	6.88
115	TC	70.87	62.89	55.42	75.58	67.54	60.15	78.56	70.51	64.06
	SHC	13.40	26.79	40.14	18.70	35.89	52.54	23.94	44.68	61.67
	kW	7.79	7.74	7.69	7.73	7.78	7.83	7.86	7.80	7.76

RAS090 COOLING CAPACITIES, UNIT WITH HOT GAS REHEAT IN HOT GAS REHEAT MODE										
TEMP (F) AIR ENT CONDENSER (Edb)		AIR ENTERING EVAPORATOR – Ewb (F)								
		75 Dry Bulb 62.5 Wet Bulb (50% Relative)			75 Dry Bulb 64 Wet Bulb (56% Relative)			75 Dry Bulb 65.3 Wet Bulb (60% Relative)		
		Air Entering Evaporator – Cfm								
		2250	3000	3750	2250	3000	3750	2250	3000	3750
80	TC	27.60	32.75	30.19	40.09	39.43	37.73	45.06	45.25	44.25
	SHC	−3.12	5.20	6.71	3.75	5.24	6.75	3.77	5.26	6.78
	kW	4.56	4.51	4.46	4.63	4.60	4.56	4.70	4.67	4.64
75	TC	35.40	33.78	31.20	41.14	40.51	38.80	46.15	46.37	45.38
	SHC	4.67	6.17	7.69	4.71	6.21	7.73	4.74	6.24	7.76
	kW	4.41	4.36	4.39	4.41	4.36	4.36	4.41	4.39	4.36
70	TC	36.36	34.71	32.18	42.10	41.47	39.77	47.08	47.31	46.32
	SHC	5.63	7.14	8.66	5.67	7.18	8.71	5.70	7.21	8.74
	kW	4.43	4.49	4.41	4.44	4.40	4.39	4.49	4.47	4.44
60	TC	38.25	36.64	34.15	43.97	43.37	41.72	48.98	49.22	48.26
	SHC	7.56	9.09	10.62	7.60	9.13	10.66	7.62	9.15	10.69
	kW	4.56	4.55	4.43	4.57	4.53	4.46	4.56	4.55	4.50
50	TC	40.15	38.60	36.14	45.95	45.37	43.73	50.57	50.97	49.56
	SHC	9.48	11.03	12.58	9.52	11.07	12.62	9.54	11.10	12.64
	kW	4.63	4.52	4.38	4.45	4.41	4.33	5.25	4.91	5.60
40	TC	42.18	40.62	38.11	47.80	47.25	45.43	52.65	52.75	51.83
	SHC	11.41	12.98	14.54	11.45	13.02	14.58	11.47	13.04	14.60
	kW	4.32	4.37	4.37	4.65	4.60	4.89	4.96	5.20	5.12

LEGEND

Edb – Entering Dry–Bulb
Ewb – Entering Wet–Bulb
kW – Compressor Motor Power Input
Idb – Leaving Dry–Bulb
Iwb – Leaving Wet–Bulb
SHC – Sensible Heat Capacity (1000 Btuh) Gross
TC – Total Capacity (1000 Btuh) Gross

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet–bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

Table 7 – COOLING CAPACITIES (cont.)

1-STAGE COOLING

8.5 TONS

RAS101				AMBIENT TEMPERATURE											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
2550 Cfm	EAT (wb)	58	TC	88.1	88.1	99.9	84.1	84.1	95.3	79.6	79.6	90.3	74.9	74.9	84.9
			SHC	76.4	88.1	99.9	72.8	84.1	95.3	69.0	79.6	90.3	64.9	74.9	84.9
		62	TC	93.9	93.9	95.2	88.6	88.6	92.6	82.8	82.8	89.7	76.6	76.6	86.5
			SHC	69.4	82.3	95.2	66.8	79.7	92.6	64.1	76.9	89.7	61.0	73.8	86.5
		67	TC	103.8	103.8	103.8	98.7	98.7	98.7	93.0	93.0	93.0	86.7	86.7	86.7
			SHC	57.8	70.7	83.6	55.6	68.5	81.4	53.1	66.1	79.0	50.5	63.4	76.4
		72	TC	113.1	113.1	113.1	108.0	108.0	108.0	102.4	102.4	102.4	96.1	96.1	96.1
			SHC	45.2	58.3	71.3	43.2	56.3	69.3	41.1	54.1	67.1	38.7	51.7	64.7
		76	TC	—	119.9	119.9	—	114.7	114.7	—	109.0	109.0	—	102.7	102.7
			SHC	—	47.9	61.9	—	46.0	60.1	—	44.1	58.1	—	41.9	55.8
2975 Cfm	EAT (wb)	58	TC	93.6	93.6	106.1	89.3	89.3	101.2	84.6	84.6	96.0	79.6	79.6	90.3
			SHC	81.1	93.6	106.1	77.4	89.3	101.2	73.3	84.6	96.0	69.0	79.6	90.3
		62	TC	97.5	97.5	104.3	92.0	92.0	101.4	86.1	86.1	98.3	79.8	79.8	94.1
			SHC	74.7	89.5	104.3	72.0	86.7	101.4	69.1	83.7	98.3	65.6	79.8	94.1
		67	TC	106.7	106.7	106.7	101.5	101.5	101.5	95.7	95.7	95.7	89.2	89.2	89.2
			SHC	61.0	75.8	90.6	58.8	73.6	88.5	56.4	71.3	86.1	53.8	68.7	83.6
		72	TC	115.8	115.8	115.8	110.6	110.6	110.6	104.9	104.9	104.9	98.4	98.4	98.4
			SHC	46.5	61.3	76.2	44.5	59.4	74.2	42.3	57.2	72.1	40.0	54.8	69.7
		76	TC	—	122.4	122.4	—	117.0	117.0	—	111.1	111.1	—	104.5	104.5
			SHC	—	49.8	66.1	—	47.8	63.9	—	45.7	61.6	—	43.4	59.0
3400 Cfm	EAT (wb)	58	TC	98.1	98.1	111.3	93.7	93.7	106.2	88.9	88.9	100.8	83.7	83.7	94.9
			SHC	85.0	98.1	111.3	81.2	93.7	106.2	77.0	88.9	100.8	72.5	83.7	94.9
		62	TC	100.0	100.0	112.3	94.9	94.9	108.6	89.1	89.1	104.9	83.8	83.8	98.7
			SHC	79.3	95.8	112.3	76.3	92.5	108.6	73.2	89.1	104.9	68.8	83.8	98.7
		67	TC	109.0	109.0	109.0	103.6	103.6	103.6	97.6	97.6	97.6	91.0	91.0	91.0
			SHC	63.9	80.5	97.2	61.8	78.5	95.2	59.4	76.1	92.9	56.8	73.5	90.3
		72	TC	117.9	117.9	117.9	112.5	112.5	112.5	106.6	106.6	106.6	100.0	100.0	100.0
			SHC	47.6	64.1	80.6	45.6	62.1	78.7	43.4	60.0	76.6	41.1	57.6	74.2
		76	TC	—	124.2	124.2	—	118.6	118.6	—	112.5	112.5	—	105.7	105.7
			SHC	—	51.2	69.0	—	49.2	66.7	—	47.0	64.4	—	44.7	61.9
3825 Cfm	EAT (wb)	58	TC	101.6	101.6	115.1	97.2	97.2	110.1	92.3	92.3	104.6	87.0	87.0	98.6
			SHC	88.0	101.6	115.1	84.2	97.2	110.1	80.0	92.3	104.6	75.4	87.0	98.6
		62	TC	101.9	101.9	120.0	97.3	97.3	114.6	92.4	92.4	108.9	87.1	87.1	102.6
			SHC	83.7	101.8	120.0	79.9	97.3	114.6	75.9	92.4	108.9	71.6	87.1	102.6
		67	TC	110.7	110.7	110.7	105.3	105.3	105.3	99.2	99.2	99.3	92.5	92.5	96.7
			SHC	66.7	85.0	103.4	64.6	83.0	101.5	62.2	80.8	99.3	59.6	78.2	96.7
		72	TC	119.4	119.4	119.4	114.0	114.0	114.0	108.0	108.0	108.0	101.3	101.3	101.3
			SHC	48.5	66.6	84.6	46.6	64.7	82.7	44.4	62.6	80.7	42.1	60.2	78.4
		76	TC	—	125.5	125.5	—	119.8	119.8	—	113.6	113.6	—	106.7	106.7
			SHC	—	52.4	71.5	—	50.4	69.3	—	48.2	67.0	—	45.9	64.4
4250 Cfm	EAT (wb)	58	TC	104.4	104.4	118.3	99.9	99.9	113.2	95.0	95.0	107.6	89.5	89.5	101.5
			SHC	90.4	104.4	118.3	86.6	99.9	113.2	82.3	95.0	107.6	77.6	89.5	101.5
		62	TC	104.4	104.4	123.0	99.9	99.9	117.8	95.0	95.0	112.0	89.6	89.6	105.6
			SHC	85.8	104.4	123.0	82.1	99.9	117.8	78.1	95.0	112.0	73.6	89.6	105.6
		67	TC	112.1	112.1	112.1	106.6	106.6	107.5	100.4	100.4	105.3	93.6	93.6	102.7
			SHC	69.2	89.2	109.2	67.2	87.3	107.5	64.9	85.1	105.3	62.3	82.5	102.7
		72	TC	120.7	120.7	120.7	115.1	115.1	115.1	109.0	109.0	109.0	102.2	102.2	102.2
			SHC	49.4	68.9	88.4	47.4	67.0	86.5	45.3	64.9	84.6	42.9	62.6	82.3
		76	TC	—	126.6	126.6	—	120.8	120.8	—	114.5	114.5	—	107.4	107.4
			SHC	—	53.5	73.9	—	51.5	71.7	—	49.3	69.4	—	46.9	66.8

LEGEND:

—	Do not operate in this region
Cfm	Cubic feet per minute (supply air)
EAT(db)	Entering air temperature (dry bulb)
EAT(wb)	Entering air temperature (wet bulb)
SHC	Sensible heat capacity
TC	Total capacity

Table 7 – COOLING CAPACITIES (cont.)

2-STAGE COOLING

8.5 TONS

RAS102				AMBIENT TEMPERATURE											
				85			95			105			115		
				EA (dB)			EA (dB)			EA (dB)			EA (dB)		
				75	80	85	75	80	85	75	80	85	75	80	85
2550 Cfm	EAT (wb)	58	TC	89.7	89.7	101.6	85.2	85.2	96.5	79.6	79.6	90.1	73.8	73.8	83.6
			SHC	77.8	89.7	101.6	73.9	85.2	96.5	69.0	79.6	90.1	64.0	73.8	83.6
		62	TC	94.3	94.3	97.9	88.7	88.7	95.2	81.3	81.3	91.5	74.3	74.3	86.5
			SHC	71.0	84.4	97.9	68.2	81.7	95.2	64.7	78.1	91.5	60.6	73.6	86.5
		67	TC	105.0	105.0	105.0	99.3	99.3	99.3	92.2	92.2	92.2	84.1	84.1	84.1
			SHC	59.0	72.6	86.1	56.6	70.1	83.7	53.6	67.1	80.7	50.3	63.8	77.3
		72	TC	115.9	115.9	115.9	110.4	110.4	110.4	104.2	104.2	104.2	96.0	96.0	96.0
			SHC	46.4	60.0	73.6	44.3	57.9	71.5	41.9	55.5	69.1	38.8	52.4	65.9
		76	TC	—	123.7	123.7	—	118.3	118.3	—	112.4	112.4	—	105.7	105.7
			SHC	—	49.3	63.3	—	47.3	61.4	—	45.3	59.3	—	42.9	56.7
2975 Cfm	EAT (wb)	58	TC	95.3	95.3	107.9	90.7	90.7	102.7	84.8	84.8	96.1	78.7	78.7	89.1
			SHC	82.6	95.3	107.9	78.6	90.7	102.7	73.5	84.8	96.1	68.2	78.7	89.1
		62	TC	97.9	97.9	107.8	92.1	92.1	104.7	85.4	85.4	99.4	78.8	78.8	92.8
			SHC	76.7	92.2	107.8	73.9	89.3	104.7	69.6	84.5	99.4	64.8	78.8	92.8
		67	TC	108.5	108.5	108.5	102.6	102.6	102.6	95.4	95.4	95.4	86.9	86.9	86.9
			SHC	62.8	78.4	94.1	60.4	76.0	91.7	57.4	73.1	88.8	54.0	69.7	85.3
		72	TC	119.1	119.1	119.1	113.5	113.5	113.5	107.2	107.2	107.2	99.2	99.2	99.2
			SHC	47.9	63.5	79.2	45.8	61.5	77.1	43.5	59.2	74.9	40.6	56.3	72.0
		76	TC	—	126.4	126.4	—	120.8	120.8	—	114.8	114.8	—	108.2	108.2
			SHC	—	51.1	67.4	—	49.2	65.3	—	47.0	63.0	—	44.8	60.7
3400 Cfm	EAT (wb)	58	TC	100.0	100.0	113.3	95.2	95.2	107.9	89.3	89.3	101.1	82.9	82.9	93.9
			SHC	86.7	100.0	113.3	82.6	95.2	107.9	77.4	89.3	101.1	71.8	82.9	93.9
		62	TC	101.1	101.1	115.8	95.7	95.7	111.7	89.4	89.4	105.3	83.0	83.0	97.7
			SHC	81.5	98.7	115.8	78.2	94.9	111.7	73.5	89.4	105.3	68.2	83.0	97.7
		67	TC	111.1	111.1	111.1	105.1	105.1	105.1	97.8	97.8	97.8	89.1	89.1	93.0
			SHC	66.2	83.9	101.6	63.9	81.6	99.3	61.0	78.7	96.5	57.5	75.3	93.0
		72	TC	121.3	121.3	121.3	115.6	115.6	115.6	109.4	109.4	109.4	101.5	101.5	101.5
			SHC	49.2	66.7	84.3	47.1	64.7	82.3	44.9	62.5	80.2	42.1	59.9	77.7
		76	TC	—	128.3	128.3	—	122.6	122.6	—	116.3	116.3	—	109.7	109.7
			SHC	—	52.7	70.7	—	50.7	68.6	—	48.6	66.4	—	46.4	64.2
3825 Cfm	EAT (wb)	58	TC	104.0	104.0	117.8	99.1	99.1	112.3	93.2	93.2	105.5	86.5	86.5	97.9
			SHC	90.2	104.0	117.8	86.0	99.1	112.3	80.8	93.2	105.5	75.0	86.5	97.9
		62	TC	104.2	104.2	122.7	99.3	99.3	116.9	93.3	93.3	109.8	86.6	86.6	101.9
			SHC	85.7	104.2	122.7	81.7	99.3	116.9	76.7	93.3	109.8	71.2	86.6	101.9
		67	TC	113.1	113.1	113.1	107.1	107.1	107.1	99.9	99.9	103.8	91.0	91.0	100.3
			SHC	69.4	89.1	108.8	67.1	86.8	106.5	64.3	84.1	103.8	60.9	80.6	100.3
		72	TC	123.0	123.0	123.0	117.2	117.2	117.2	110.9	110.9	110.9	103.3	103.3	103.3
			SHC	50.3	69.7	89.0	48.3	67.7	87.1	46.1	65.6	85.2	43.5	63.3	83.0
		76	TC	—	129.7	129.7	—	124.0	124.0	—	117.5	117.5	—	110.8	110.8
			SHC	—	54.0	73.7	—	52.1	71.7	—	50.0	69.5	—	47.8	67.4
4250 Cfm	EAT (wb)	58	TC	107.4	107.4	121.7	102.5	102.5	116.1	96.5	96.5	109.3	89.5	89.5	101.4
			SHC	93.1	107.4	121.7	88.9	102.5	116.1	83.7	96.5	109.3	77.6	89.5	101.4
		62	TC	107.5	107.5	126.6	102.6	102.6	120.8	96.6	96.6	113.7	89.6	89.6	105.5
			SHC	88.4	107.5	126.6	84.4	102.6	120.8	79.5	96.6	113.7	73.7	89.6	105.5
		67	TC	114.7	114.7	115.6	108.7	108.7	113.5	101.7	101.7	110.8	92.6	92.6	107.2
			SHC	72.5	94.0	115.6	70.2	91.8	113.5	67.5	89.2	110.8	64.0	85.6	107.2
		72	TC	124.3	124.3	124.3	118.5	118.5	118.5	112.1	112.1	112.1	104.7	104.7	104.7
			SHC	51.3	72.4	93.4	49.3	70.5	91.7	47.2	68.5	89.9	44.7	66.4	88.1
		76	TC	—	130.7	130.7	—	125.0	125.0	—	118.5	118.5	—	111.6	111.6
			SHC	—	55.3	76.5	—	53.5	74.6	—	51.3	72.4	—	49.2	70.3

* See Minimum—Maximum Airflow Rating. Do not operate outside these limits.

LEGEND:

- Do not operate in this region
- Cfm — Cubic feet per minute (supply air)
- EAT(db) — Entering air temperature (dry bulb)
- EAT(wb) — Entering air temperature (wet bulb)
- SHC — Sensible heat capacity
- TC — Total capacity

Table 7 – COOLING CAPACITIES (cont.) 2-STAGE COOLING

8.5 TONS

RAS102 COOLING CAPACITIES, UNIT WITH HOT GAS REHEAT IN SUBCOOLING MODE										
TEMP (F) AIR ENT CONDENSER (Edb)		AIR ENTERING EVAPORATOR – CFM								
		2550/0.04			3400/0.05			4250/0.07		
		Air Entering Evaporator – Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	119.20	107.44	96.41	126.95	114.98	103.92	131.87	119.81	109.54
	SHC	50.63	63.94	77.40	59.17	76.72	94.21	66.80	88.44	108.22
	kW	5.67	5.57	5.47	5.54	5.63	5.74	5.79	5.68	5.59
85	TC	110.40	99.22	88.76	117.63	106.26	95.77	122.21	110.77	101.07
	SHC	42.39	56.16	70.07	50.42	68.45	86.38	57.71	79.86	99.95
	kW	6.33	6.23	6.14	6.20	6.30	6.40	6.45	6.34	6.25
95	TC	101.37	90.79	80.86	108.07	97.31	87.39	112.29	101.47	92.38
	SHC	33.97	48.22	62.56	41.46	60.01	78.39	48.40	71.09	91.47
	kW	7.08	6.99	6.90	6.96	7.05	7.16	7.20	7.09	7.01
105	TC	92.04	82.06	72.71	98.19	88.05	78.72	102.07	91.86	83.40
	SHC	25.31	40.06	54.88	32.24	51.33	70.17	38.85	62.06	82.67
	kW	7.94	7.85	7.77	7.83	7.91	8.01	8.06	7.95	7.87
115	TC	82.37	73.01	64.24	87.95	78.45	69.73	91.46	81.90	74.09
	SHC	16.38	31.65	46.95	22.71	42.37	61.69	28.94	52.74	73.52
	kW	8.92	8.84	8.77	8.82	8.89	8.98	9.02	8.93	8.86

RAS102 COOLING CAPACITIES, UNIT WITH HOT GAS REHEAT IN HOT GAS REHEAT MODE										
TEMP (F) AIR ENT CONDENSER (Edb)		AIR ENTERING EVAPORATOR – Ewb (F)								
		75 Dry Bulb 62.5 Wet Bulb (50% Relative)			75 Dry Bulb 64 Wet Bulb (56% Relative)			75 Dry Bulb 65.3 Wet Bulb (60% Relative)		
		Air Entering Evaporator – Cfm								
		2550	3400	4250	2550	3400	4250	2550	3400	4250
80	TC	37.61	33.13	26.77	44.74	41.60	36.46	50.96	48.99	44.93
	SHC	−0.52	−0.63	−0.73	−0.46	−0.57	−0.67	−0.42	−0.53	−0.62
	kW	5.88	5.68	5.44	6.13	5.97	5.76	6.35	6.24	6.06
75	TC	38.71	34.24	27.86	45.84	42.73	37.59	52.05	50.11	46.06
	SHC	0.45	0.34	0.25	0.50	0.40	0.31	0.54	0.44	0.36
	kW	5.68	5.47	5.22	5.94	5.78	5.56	6.18	6.07	5.88
70	TC	39.70	35.25	28.83	46.80	43.70	38.59	52.97	51.04	47.02
	SHC	1.41	1.32	1.23	1.47	1.37	1.29	1.50	1.41	1.34
	kW	5.65	5.42	5.24	5.97	5.79	5.53	6.26	6.13	5.91
60	TC	41.77	37.33	30.76	48.86	45.80	40.71	55.00	53.10	49.12
	SHC	3.34	3.26	3.18	3.40	3.32	3.25	3.43	3.36	3.29
	kW	5.42	5.15	5.17	5.80	5.59	5.30	6.16	6.01	5.75
50	TC	43.83	39.27	32.61	50.92	47.89	42.70	57.04	55.16	51.22
	SHC	5.27	5.21	5.14	5.32	5.27	5.21	5.36	5.31	5.25
	kW	5.18	5.15	5.17	5.62	5.39	5.05	6.04	5.87	5.59
40	TC	45.75	41.13	34.50	53.08	50.00	44.64	59.24	57.40	53.44
	SHC	7.20	7.15	6.95	7.26	7.21	7.16	7.29	7.25	7.21
	kW	4.79	4.98	4.80	5.25	5.01	5.23	5.68	5.51	5.21

LEGEND

Edb – Entering Dry–Bulb
Ewb – Entering Wet–Bulb
kW – Compressor Motor Power Input
ldb – Leaving Dry–Bulb
lwb – Leaving Wet–Bulb
SHC – Sensible Heat Capacity (1000 Btuh) Gross
TC – Total Capacity (1000 Btuh) Gross

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

t_{lwb} = Wet–bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb})

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

Table 7 – COOLING CAPACITIES (cont.) 1-STAGE COOLING

10 TONS

RAS121				AMBIENT TEMPERATURE											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
3000 Cfm	EAT (wb)	58	TC	106.3	106.3	120.5	101.7	101.7	115.2	96.6	96.6	109.4	91.0	91.0	103.1
			SHC	92.2	106.3	120.5	88.2	101.7	115.2	83.8	96.6	109.4	78.9	91.0	103.1
		62	TC	112.5	112.5	115.2	106.5	106.5	112.3	99.9	99.9	109.0	92.7	92.7	105.2
			SHC	83.8	99.5	115.2	81.0	96.6	112.3	77.8	93.4	109.0	74.2	89.7	105.2
		67	TC	123.5	123.5	123.5	117.8	117.8	117.8	111.3	111.3	111.3	104.0	104.0	104.0
			SHC	69.2	85.0	100.7	66.8	82.5	98.3	64.1	79.8	95.5	61.0	76.8	92.5
		72	TC	134.3	134.3	134.3	128.5	128.5	128.5	122.0	122.0	122.0	114.7	114.7	114.7
			SHC	53.8	69.6	85.5	51.6	67.4	83.2	49.1	64.9	80.7	46.3	62.1	77.9
		76	TC	—	142.4	142.4	—	136.3	136.3	—	129.5	129.5	—	121.8	121.8
			SHC	—	56.8	73.3	—	54.7	71.2	—	52.3	68.8	—	49.7	66.2
3500 Cfm	EAT (wb)	58	TC	112.9	112.9	127.8	108.0	108.0	122.3	102.7	102.7	116.3	96.8	96.8	109.7
			SHC	97.9	112.9	127.8	93.6	108.0	122.3	89.0	102.7	116.3	83.9	96.8	109.7
		62	TC	116.3	116.3	126.2	110.5	110.5	123.3	103.8	103.8	119.5	97.1	97.1	114.3
			SHC	90.2	108.2	126.2	87.4	105.3	123.3	84.0	101.8	119.5	79.8	97.1	114.3
		67	TC	126.9	126.9	126.9	120.9	120.9	120.9	114.3	114.3	114.3	106.8	106.8	106.8
			SHC	73.2	91.3	109.4	70.8	88.9	107.1	68.1	86.2	104.4	65.0	83.2	101.3
		72	TC	137.5	137.5	137.5	131.4	131.4	131.4	124.7	124.7	124.7	117.2	117.2	117.2
			SHC	55.3	73.4	91.5	53.1	71.1	89.2	50.6	68.7	86.7	47.8	65.9	83.9
		76	TC	—	145.1	145.1	—	138.8	138.8	—	131.7	131.7	—	123.6	123.6
			SHC	—	59.0	78.2	—	56.7	75.8	—	54.3	73.1	—	51.5	70.0
4000 Cfm	EAT (wb)	58	TC	117.8	117.8	133.5	113.0	113.0	128.0	107.5	107.5	121.8	101.5	101.5	115.0
			SHC	102.2	117.8	133.5	98.0	113.0	128.0	93.3	107.5	121.8	88.0	101.5	115.0
		62	TC	119.1	119.1	136.0	113.5	113.5	132.5	107.7	107.7	126.7	101.6	101.6	119.6
			SHC	95.8	115.9	136.0	92.8	112.6	132.5	88.6	107.7	126.7	83.6	101.6	119.6
		67	TC	129.4	129.4	129.4	123.3	123.3	123.3	116.5	116.5	116.5	108.9	108.9	109.8
			SHC	76.9	97.3	117.7	74.5	95.0	115.4	71.8	92.3	112.8	68.8	89.3	109.8
		72	TC	139.7	139.7	139.7	133.5	133.5	133.5	126.6	126.6	126.6	118.8	118.8	118.8
			SHC	56.7	76.8	97.0	54.4	74.6	94.7	51.9	72.1	92.3	49.1	69.3	89.5
		76	TC	—	147.0	147.0	—	140.5	140.5	—	133.2	133.2	—	124.9	124.9
			SHC	—	60.6	81.7	—	58.4	79.3	—	55.8	76.5	—	53.0	73.5
4500 Cfm	EAT (wb)	58	TC	121.7	121.7	137.9	116.8	116.8	132.3	111.2	111.2	126.0	105.0	105.0	118.9
			SHC	105.6	121.7	137.9	101.3	116.8	132.3	96.4	111.2	126.0	91.0	105.0	118.9
		62	TC	121.8	121.8	143.4	116.9	116.9	137.6	111.3	111.3	131.0	105.1	105.1	123.7
			SHC	100.2	121.8	143.4	96.1	116.9	137.6	91.6	111.3	131.0	86.5	105.1	123.7
		67	TC	131.3	131.3	131.3	125.1	125.1	125.1	118.2	118.2	120.8	110.5	110.5	117.7
			SHC	80.3	102.9	125.5	78.0	100.7	123.3	75.3	98.0	120.8	72.3	95.0	117.7
		72	TC	141.5	141.5	141.5	135.1	135.1	135.1	128.0	128.0	128.0	120.1	120.1	120.1
			SHC	57.9	80.0	102.1	55.6	77.7	99.9	53.1	75.2	97.4	50.3	72.4	94.6
		76	TC	—	148.3	148.3	—	141.8	141.8	—	134.3	134.3	—	125.8	125.8
			SHC	—	62.1	84.9	—	59.8	82.5	—	57.3	79.7	—	54.4	76.6
5000 Cfm	EAT (wb)	58	TC	125.0	125.0	141.6	120.0	120.0	135.9	114.3	114.3	129.5	107.9	107.9	122.3
			SHC	108.4	125.0	141.6	104.0	120.0	135.9	99.1	114.3	129.5	93.6	107.9	122.3
		62	TC	125.1	125.1	147.2	120.1	120.1	141.4	114.4	114.4	134.7	108.0	108.0	127.2
			SHC	102.9	125.1	147.2	98.8	120.1	141.4	94.1	114.4	134.7	88.9	108.0	127.2
		67	TC	132.8	132.8	133.0	126.5	126.5	130.8	119.6	119.6	128.2	111.8	111.8	125.1
			SHC	83.6	108.3	133.0	81.2	106.0	130.8	78.6	103.4	128.2	75.6	100.3	125.1
		72	TC	142.8	142.8	142.8	136.3	136.3	136.3	129.1	129.1	129.1	121.1	121.1	121.1
			SHC	59.0	82.9	106.9	56.7	80.7	104.7	54.1	78.2	102.2	51.3	75.4	99.4
		76	TC	—	149.4	149.4	—	142.8	142.8	—	135.1	135.1	—	126.5	126.5
			SHC	—	63.4	87.9	—	61.2	85.5	—	58.6	82.7	—	55.6	79.4

LEGEND:

—	Do not operate in this region
Cfm	Cubic feet per minute (supply air)
EAT(db)	Entering air temperature (dry bulb)
EAT(wb)	Entering air temperature (wet bulb)
SHC	Sensible heat capacity
TC	Total capacity

Table 7 – COOLING CAPACITIES (cont.) 2-STAGE COOLING

10 TONS

RAS120				AMBIENT TEMPERATURE											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
3000 Cfm	EAT (wb)	58	TC	107.6	107.6	121.9	102.5	102.5	116.2	96.8	96.8	109.7	90.5	90.5	102.6
			SHC	93.2	107.6	121.9	88.8	102.5	116.2	83.9	96.8	109.7	78.4	90.5	102.6
		62	TC	113.6	113.6	116.5	107.1	107.1	113.4	99.7	99.7	109.8	91.8	91.8	104.9
			SHC	84.6	100.6	116.5	81.5	97.4	113.4	78.0	93.9	109.8	73.7	89.3	104.9
		67	TC	124.4	124.4	124.4	118.4	118.4	118.4	111.5	111.5	111.5	103.3	103.3	103.3
			SHC	69.7	85.7	101.7	67.1	83.2	99.2	64.3	80.3	96.3	60.8	76.8	92.8
		72	TC	135.8	135.8	135.8	129.7	129.7	129.7	122.8	122.8	122.8	115	115	115
			SHC	54.3	70.4	86.6	52.0	68.1	84.2	49.3	65.4	81.6	46.4	62.5	78.6
		76	TC	—	145.3	145.3	—	139	139	—	131.9	131.9	—	124.1	124.1
			SHC	—	57.8	74.3	—	55.6	72.1	—	53.1	69.6	—	50.4	66.9
3500 Cfm	EAT (wb)	58	TC	114.2	114.2	129.4	108.9	108.9	123.4	102.9	102.9	116.6	96.3	96.3	109.1
			SHC	98.9	114.2	129.4	94.3	108.9	123.4	89.1	102.9	116.6	83.4	96.3	109.1
		62	TC	117.2	117.2	127.9	111.0	111.0	124.7	104.0	104.0	119.5	96.5	96.5	113.7
			SHC	91.1	109.5	127.9	88.1	106.4	124.7	83.9	101.7	119.5	79.3	96.5	113.7
		67	TC	127.8	127.8	127.8	121.7	121.7	121.7	114.5	114.5	114.5	106.6	106.6	106.6
			SHC	73.8	92.3	110.8	71.3	89.8	108.3	68.4	87.0	105.5	65.2	83.8	102.3
		72	TC	139.4	139.4	139.4	133.0	133.0	133	125.8	125.8	125.8	117.9	117.9	117.9
			SHC	56.0	74.6	93.1	53.7	72.2	90.8	51.0	69.6	88.2	48.1	66.7	85.4
		76	TC	—	148.8	148.8	—	142.2	142.2	—	134.9	134.9	—	126.8	126.8
			SHC	—	60.2	79.5	—	58.0	77.1	—	55.4	74.5	—	52.7	71.6
4000 Cfm	EAT (wb)	58	TC	119.0	119.0	134.9	114.0	114.0	129.2	108.0	108.0	122.4	101.1	101.1	114.6
			SHC	103.1	119.0	134.9	98.7	114.0	129.2	93.6	108.0	122.4	87.6	101.1	114.6
		62	TC	120.3	120.3	137.1	114.7	114.7	132.8	108.2	108.2	127.5	101.3	101.3	119.3
			SHC	96.5	116.8	137.1	93.0	112.9	132.8	88.9	108.2	127.5	83.2	101.3	119.3
		67	TC	130.5	130.5	130.5	124.1	124.1	124.1	116.8	116.8	116.8	108.7	108.7	111.1
			SHC	77.7	98.6	119.5	75.2	96.2	117.2	72.3	93.3	114.4	69.1	90.1	111.1
		72	TC	142.1	142.1	142.1	135.5	135.5	135.5	128.2	128.2	128.2	120.0	120.0	120.0
			SHC	57.6	78.4	99.3	55.2	76.1	97.1	52.5	73.6	94.6	49.7	70.7	91.8
		76	TC	—	151.4	151.4	—	144.7	144.7	—	137.1	137.1	—	—	—
			SHC	—	62.3	83.8	—	60.0	81.4	—	57.5	78.8	—	—	—
4500 Cfm	EAT (wb)	58	TC	123.0	123.0	139.5	117.8	117.8	133.6	111.9	111.9	126.9	105.3	105.3	119.3
			SHC	106.6	123.0	139.5	102.1	117.8	133.6	97.0	111.9	126.9	91.2	105.3	119.3
		62	TC	123.4	123.4	144.4	117.9	117.9	139.0	112.0	112.0	132.0	105.4	105.4	124.2
			SHC	100.9	122.7	144.4	96.9	117.9	139	92.1	112.0	132	86.6	105.4	124.2
		67	TC	132.6	132.6	132.6	126.0	126	126.0	118.7	118.7	122.9	110.4	110.4	119.6
			SHC	81.4	104.6	127.9	78.9	102.3	125.7	76.1	99.5	122.9	72.9	96.2	119.6
		72	TC	144.2	144.2	144.2	137.4	137.4	137.4	129.9	129.9	129.9	121.6	121.6	121.6
			SHC	59.0	82.1	105.2	56.6	79.8	103.1	54.0	77.3	100.7	51.1	74.5	98
		76	TC	—	153.4	153.4	—	146.6	146.6	—	138.9	138.9	—	—	—
			SHC	—	64.1	87.8	—	61.9	85.6	—	59.4	83	—	—	—
5000 Cfm	EAT (wb)	58	TC	126.5	126.5	143.3	121.2	121.2	137.4	115.1	115.1	130.5	108.4	108.4	122.8
			SHC	109.6	126.5	143.3	105.0	121.2	137.4	99.8	115.1	130.5	93.9	108.4	122.8
		62	TC	126.5	126.5	149.1	121.3	121.3	142.9	115.2	115.2	135.8	108.5	108.5	127.8
			SHC	104.0	126.5	149.1	99.7	121.3	142.9	94.7	115.2	135.8	89.1	108.5	127.8
		67	TC	134.2	134.2	135.9	127.5	127.5	133.8	120.1	120.1	131.0	111.9	111.9	127.6
			SHC	84.9	110.4	135.9	82.4	108.1	133.8	79.6	105.3	131	76.4	102.0	127.6
		72	TC	145.8	145.8	145.8	139.0	139.0	139.0	131.3	131.3	131.3	122.9	122.9	122.9
			SHC	60.3	85.6	110.8	57.9	83.4	108.9	55.3	81.0	106.6	52.5	78.2	104
		76	TC	—	155.1	155.1	—	148.2	148.2	—	—	—	—	—	—
			SHC	—	65.9	91.5	—	63.7	89.5	—	—	—	—	—	—

* See Minimum—Maximum Airflow Ratings. Do not operate outside these limits.

LEGEND:

- Do not operate in this region
- Cfm — Cubic feet per minute (supply air)
- EAT(db) — Entering air temperature (dry bulb)
- EAT(wb) — Entering air temperature (wet bulb)
- SHC — Sensible heat capacity
- TC — Total capacity

Table 7 – COOLING CAPACITIES (cont.) 2-STAGE COOLING

10 TONS

RAS120 COOLING CAPACITIES, UNIT WITH HOT GAS REHEAT IN SUBCOOLING MODE										
TEMP (F) AIR ENT CONDENSER (Edb)		AIR ENTERING EVAPORATOR – CFM								
		3000/0.04			4000/0.06			5000/0.07		
		Air Entering Evaporator – Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	142.85	129.44	116.93	152.09	138.44	125.76	157.99	144.23	132.06
	SHC	58.38	74.88	91.58	67.96	89.45	111.02	76.63	102.94	127.93
	kW	7.19	6.97	6.79	6.92	7.12	7.35	7.45	7.22	7.02
85	TC	132.33	119.68	107.86	140.92	128.03	116.10	146.41	133.41	121.98
	SHC	48.44	65.56	82.83	57.37	79.50	101.68	65.65	92.58	118.12
	kW	7.98	7.77	7.58	7.72	7.92	8.14	8.25	8.01	7.82
95	TC	121.41	109.52	98.43	129.35	117.22	106.04	134.43	122.20	111.50
	SHC	38.19	55.92	73.78	46.47	69.22	92.01	54.34	81.92	107.96
	kW	8.87	8.66	8.48	8.61	8.80	9.03	9.14	8.90	8.71
105	TC	110.04	98.92	88.56	117.27	105.94	95.53	121.88	110.46	100.54
	SHC	27.59	45.94	64.39	35.16	58.57	81.98	42.56	70.82	97.40
	kW	9.86	9.66	9.48	9.61	9.79	10.02	10.12	9.89	9.70
115	TC	98.09	87.74	78.13	104.62	94.08	84.45	108.76	98.13	89.01
	SHC	16.52	35.47	54.53	23.37	47.44	71.46	30.32	59.25	86.31
	kW	10.95	10.76	10.60	10.72	10.89	11.10	11.19	10.98	10.81

RAS120 COOLING CAPACITIES, UNIT WITH HOT GAS REHEAT IN HOT GAS REHEAT MODE										
TEMP (F) AIR ENT CONDENSER (Edb)		AIR ENTERING EVAPORATOR – Ewb (F)								
		75 Dry Bulb 62.5 Wet Bulb (50% Relative)			75 Dry Bulb 64 Wet Bulb (56% Relative)			75 Dry Bulb 65.3 Wet Bulb (60% Relative)		
		Air Entering Evaporator – Cfm								
		3000	4000	5000	3000	4000	5000	3000	4000	5000
80	TC	44.78	39.41	31.89	53.22	49.44	43.38	60.56	58.12	53.32
	SHC	−0.44	−0.57	−0.69	−0.37	−0.51	−0.61	−0.33	−0.46	−0.56
	kW	6.96	6.77	6.52	7.26	7.13	6.91	7.54	7.45	7.27
75	TC	45.84	40.46	32.86	54.28	50.51	44.45	61.61	59.19	54.40
	SHC	0.53	0.40	0.29	0.60	0.47	0.37	0.64	0.52	0.42
	kW	6.77	6.56	6.29	7.11	6.95	6.72	7.41	7.31	7.12
70	TC	46.91	41.48	33.50	55.36	51.59	45.50	62.69	60.28	55.49
	SHC	1.51	1.38	1.27	1.57	1.45	1.35	1.61	1.50	1.40
	kW	6.54	6.32	6.02	6.90	6.74	6.49	7.23	7.13	6.92
60	TC	48.88	43.42	35.76	57.29	53.56	47.48	64.56	62.16	57.42
	SHC	3.44	3.34	3.24	3.51	3.40	3.31	3.55	3.45	3.37
	kW	6.45	6.16	6.70	6.93	6.72	6.39	7.38	7.24	6.96
50	TC	50.83	45.28	37.67	59.22	55.52	49.43	66.05	64.03	59.34
	SHC	5.38	5.29	5.20	5.45	5.36	5.28	5.48	5.40	5.33
	kW	6.46	6.01	6.34	6.98	6.71	6.29	8.15	7.38	7.02
40	TC	52.82	47.29	39.50	61.14	57.48	51.39	68.23	65.88	61.25
	SHC	7.32	7.24	7.20	7.38	7.31	7.24	7.43	7.36	7.29
	kW	6.29	6.09	6.12	7.05	6.72	6.29	7.78	7.55	7.10

LEGEND

Edb – Entering Dry–Bulb
Ewb – Entering Wet–Bulb
kW – Compressor Motor Power Input
ldb – Leaving Dry–Bulb
lwb – Leaving Wet–Bulb
SHC – Sensible Heat Capacity (1000 Btuh) Gross
TC – Total Capacity (1000 Btuh) Gross

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet–bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

Table 7 – COOLING CAPACITIES (cont.) 2-STAGE COOLING

12.5 TONS

RAS150				AMBIENT TEMPERATURE											
				85			95			105			115		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85
3600 Cfm	EAT (wb)	58	TC	127.6	127.6	142.9	121.7	121.7	137.6	115.0	115.0	130	108.3	108.3	122.6
			SHC	110.3	126.6	142.9	105.8	121.7	137.6	99.9	115.0	130	94.1	108.3	122.6
		62	TC	136.1	136.1	136.1	131.1	131.1	131.1	123.8	123.8	124.5	114.9	114.9	120.3
			SHC	96.6	112.8	129.0	94.7	111.2	127.7	91.4	108.0	124.5	87.3	103.8	120.3
		67	TC	146.2	146.2	146.2	142.0	142.0	142.0	136.2	136.2	136.2	128.8	128.8	128.8
			SHC	78.5	94.4	110.3	76.9	93.1	109.2	74.7	91.0	107.3	71.7	88.1	104.6
		72	TC	155.9	155.9	155.9	152.4	152.4	152.4	147.2	147.2	147.2	140.1	140.1	140.1
			SHC	60.1	76.6	93.2	58.7	75.2	91.7	56.8	73.3	89.7	54.2	70.6	87.0
		76	TC	—	163.0	163	—	160.0	160	—	155.1	155.1	—	148.2	148.2
			SHC	—	62.0	81.8	—	61.1	80.9	—	59.5	79.3	—	57.0	76.3
4200 Cfm	EAT (wb)	58	TC	132.2	132.2	149.5	128.2	128.2	144.9	121.9	121.9	137.8	115.0	115.0	130.1
			SHC	115.0	132.2	149.5	111.5	128.2	144.9	106.0	121.9	137.8	99.9	115.0	130.1
		62	TC	139.6	139.6	139.6	134.7	134.7	138	128.0	128.0	135.6	119.1	119.1	131.2
			SHC	102.5	120.8	139	100.8	119.4	138	98.1	116.8	135.6	93.9	112.6	131.2
		67	TC	149.5	149.5	149.5	145.4	145.4	145.4	139.6	139.6	139.6	132.1	132.1	132.1
			SHC	81.8	99.6	117.4	80.6	98.7	116.8	78.5	96.9	115.2	75.7	94.3	112.8
		72	TC	159.0	159.0	159.0	155.5	155.5	155.5	150.3	150.3	150.3	143.1	143.1	143.1
			SHC	61.4	79.6	97.8	60.2	78.5	96.8	58.3	76.7	95	55.8	74.2	92.5
		76	TC	—	165.7	165.7	—	162.8	162.8	—	157.8	157.8	—	150.8	150.8
			SHC	—	64.6	87.7	—	63.5	86.3	—	61.5	83.3	—	58.9	79.9
4800 Cfm	EAT (wb)	58	TC	136.7	136.7	154.5	133.0	133.0	150.3	127.7	127.7	144.3	120.6	120.6	136.4
			SHC	118.9	136.7	154.5	115.7	133.0	150.3	111.0	127.7	144.3	104.9	120.6	136.4
		62	TC	142.2	142.2	147.8	137.4	137.4	147.1	131.0	131.0	144.7	122.8	122.8	140.3
			SHC	107.7	127.8	147.8	106.2	126.7	147.1	103.6	124.2	144.7	99.3	119.8	140.3
		67	TC	152.1	152.1	152.1	148.0	148	148	142.2	142.2	142.2	134.6	134.6	134.6
			SHC	84.8	104.3	123.7	83.8	103.8	123.7	82.0	102.3	122.6	79.4	99.9	120.4
		72	TC	161.3	161.3	161.3	157.8	157.8	157.8	152.5	152.5	152.5	145.4	145.4	145.4
			SHC	62.6	82.2	101.9	61.4	81.4	101.3	59.7	79.7	99.8	57.2	77.3	97.5
		76	TC	—	167.7	167.7	—	164.9	164.9	—	159.9	159.9	—	152.8	152.8
			SHC	—	66.4	91.4	—	65	89.2	—	63.1	86.4	—	60.5	83.1
5400 Cfm	EAT (wb)	58	TC	140.5	140.5	158.8	136.9	136.9	154.7	131.8	131.8	149	125.2	125.2	141.6
			SHC	122.2	140.5	158.8	119	136.9	154.7	114.7	131.8	149	108.9	125.2	141.6
		62	TC	144.3	144.3	155.7	139.6	139.6	155	133.5	133.5	152.4	125.8	125.8	147.8
			SHC	112.2	133.9	155.7	110.9	132.9	155	108.1	130.2	152.4	103.9	125.8	147.8
		67	TC	154.2	154.2	154.2	150.0	150.0	150.0	144.2	144.2	144.2	136.7	136.7	136.7
			SHC	87.6	108.6	129.6	86.8	108.5	130.1	85.2	107.3	129.4	82.8	105.1	127.4
		72	TC	163.1	163.1	163.1	159.7	159.7	159.7	154.3	154.3	154.3	147.1	147.1	147.1
			SHC	63.6	84.6	105.6	62.5	83.9	105.4	60.8	82.5	104.2	58.4	80.2	102
		76	TC	—	169.3	169.3	—	166.5	166.5	—	161.5	161.5	—	154.2	154.2
			SHC	—	67.6	93.7	—	66.4	91.7	—	64.5	89.2	—	61.9	86.1
6000 Cfm	EAT (wb)	58	TC	143.6	143.6	162.3	140.1	140.1	158.3	135.1	135.1	152.7	128.7	128.7	145.5
			SHC	124.9	143.6	162.3	121.8	140.1	158.3	117.5	135.1	152.7	111.9	128.7	145.5
		62	TC	146.1	146.1	162.4	141.7	141.7	161.5	135.6	135.6	159.2	128.8	128.8	151.2
			SHC	116.1	139.3	162.4	114.7	138.1	161.5	112.1	135.6	159.2	106.4	128.8	151.2
		67	TC	155.8	155.8	155.8	151.6	151.6	151.6	145.9	145.9	145.9	138.3	138.3	138.3
			SHC	90.1	112.6	135	89.6	112.8	136	88.3	112.0	135.8	85.9	110.0	134.1
		72	TC	164.5	164.5	164.5	161.2	161.2	161.2	155.8	155.8	155.8	148.5	148.5	148.5
			SHC	64.5	86.7	108.9	63.5	86.3	109.1	61.9	85.1	108.2	59.6	82.9	106.3
		76	TC	—	170.6	170.6	—	167.8	167.8	—	162.8	162.8	—	155.5	155.5
			SHC	—	68.7	95.8	—	67.5	94.1	—	65.7	91.8	—	63.3	88.8

* See Minimum—Maximum Airflow Rating. Do not operate outside these limits.

LEGEND:

- Do not operate in this region
- Cfm — Cubic feet per minute (supply air)
- EAT(db) — Entering air temperature (dry bulb)
- EAT(wb) — Entering air temperature (wet bulb)
- SHC — Sensible heat capacity
- TC — Total capacity

Table 7 – COOLING CAPACITIES (cont.) 2-STAGE COOLING

12.5 TONS

RAS150 COOLING CAPACITIES, UNIT WITH HOT GAS REHEAT IN SUBCOOLING MODE										
TEMP (F) AIR ENT CONDENSER (Edb)		AIR ENTERING EVAPORATOR – CFM								
		3750/0.02			5000/0.06			6250/0.05		
		Air Entering Evaporator – Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	183.66	166.86	151.43	194.90	177.83	162.05	201.97	184.84	170.53
	SHC	79.39	100.52	121.91	91.70	119.42	147.05	102.94	137.00	166.71
	kW	9.82	9.63	9.46	9.58	9.76	9.96	10.04	9.84	9.67
85	TC	172.71	156.78	142.09	183.32	167.13	152.17	189.98	173.73	160.25
	SHC	69.03	90.92	112.95	80.69	109.17	137.51	91.49	126.33	156.65
	kW	10.82	10.63	10.45	10.57	10.76	10.96	11.04	10.84	10.67
95	TC	161.37	146.24	132.38	171.36	156.04	141.86	177.62	162.22	149.50
	SHC	58.44	81.04	103.77	69.42	98.67	127.71	79.83	115.45	146.15
	kW	11.92	11.73	11.56	11.68	11.86	12.05	12.14	11.93	11.77
105	TC	149.57	135.32	122.21	158.89	144.45	131.10	164.74	150.27	138.35
	SHC	47.57	70.92	94.32	57.85	87.91	117.61	67.79	104.26	135.30
	kW	13.12	12.94	12.77	12.89	13.06	13.24	13.32	13.13	12.97
115	TC	137.22	123.88	111.55	145.85	132.33	119.84	151.27	137.71	126.67
	SHC	36.31	60.47	84.57	45.87	76.77	107.19	55.34	92.66	123.98
	kW	14.41	14.25	14.10	14.20	14.35	14.53	14.59	14.42	14.28

RAS150 COOLING CAPACITIES, UNIT WITH HOT GAS REHEAT IN HOT GAS REHEAT MODE										
TEMP (F)AIR ENT CONDENSER(Edb)		AIR ENTERING EVAPORATOR – Ewb (F)								
		75 Dry Bulb 62.5 Wet Bulb (50% Relative)			75 Dry Bulb 64 Wet Bulb (56% Relative)			75 Dry Bulb 65.3 Wet Bulb (60% Relative)		
		Air Entering Evaporator – Cfm								
		3750	5000	6250	3750	5000	6250	3750	5000	6250
80	TC	52.42	45.88	36.99	62.64	58.07	51.07	71.56	68.64	63.23
	SHC	−0.39	−0.54	−0.67	−0.31	−0.46	−0.58	−0.26	−0.40	−0.52
	kW	9.65	9.39	9.07	9.97	9.77	9.50	10.25	10.11	9.89
75	TC	53.45	46.63	36.10	63.77	59.11	51.87	72.76	69.80	64.31
	SHC	0.59	0.44	0.30	0.67	0.52	0.40	0.72	0.58	0.47
	kW	9.09	8.83	8.49	9.39	9.20	8.94	9.67	9.53	9.32
70	TC	54.33	46.91	37.58	64.77	60.01	52.30	73.80	70.80	65.24
	SHC	1.56	1.41	1.29	1.64	1.50	1.38	1.70	1.56	1.45
	kW	8.81	8.53	8.62	9.15	8.94	8.65	9.46	9.31	9.08
60	TC	55.47	49.48	40.48	66.62	62.07	54.88	75.68	72.76	67.28
	SHC	3.50	3.38	3.27	3.59	3.47	3.36	3.65	3.52	3.42
	kW	8.36	8.84	8.98	9.88	9.56	9.10	9.83	9.64	9.31
50	TC	58.33	51.72	42.81	68.72	63.93	55.84	77.74	74.77	69.24
	SHC	5.47	5.35	5.24	5.54	5.43	5.32	5.60	5.49	5.39
	kW	8.98	9.25	9.43	9.33	8.97	8.73	9.55	9.33	9.70
40	TC	60.33	53.69	46.89	70.67	65.93	49.83	79.46	76.62	71.24
	SHC	7.42	7.31	7.22	7.49	7.39	7.23	7.55	7.45	7.37
	kW	9.16	9.88	9.06	9.50	9.05	9.47	10.31	10.00	9.48

LEGEND

Edb – Entering Dry–Bulb
Ewb – Entering Wet–Bulb
kW – Compressor Motor Power Input
ldb – Leaving Dry–Bulb
lwb – Leaving Wet–Bulb
SHC – Sensible Heat Capacity (1000 Btuh) Gross
TC – Total Capacity (1000 Btuh) Gross

Table 7 – COOLING CAPACITIES (cont.) 2-STAGE COOLING

15 TONS

RAS180				Ambient Temperature											
				85			95			105			115		
				EA (dB)			EA (dB)			EA (dB)			EA (dB)		
				75	80	85	75	80	85	75	80	85	75	80	85
4500 Cfm	EAT (wb)	58	THC	156.6	156.6	175.2	149.4	149.4	169.1	141.6	141.6	160.2	133.3	133.3	150.9
			SHC	134.7	154.9	175.2	129.8	149.4	169.1	123.0	141.6	160.2	115.7	133.3	150.9
		62	THC	166.7	166.7	166.9	158.0	158.0	162.6	147.6	147.6	157.2	136.8	136.8	150.3
			SHC	122.8	144.9	166.9	118.6	140.6	162.6	113.5	135.3	157.2	107.4	128.8	150.3
		67	THC	184.1	184.1	184.1	175.6	175.6	175.6	165.6	165.6	165.6	154.5	154.5	154.5
			SHC	101.6	123.7	145.7	98.1	120.2	142.3	94.0	116.1	138.2	89.4	111.5	133.6
		72	THC	200.3	200.3	200.3	192.0	192.0	192.0	182.9	182.9	182.9	172.2	172.2	172.2
			SHC	78.7	101.1	123.5	75.5	97.9	120.2	72.1	94.4	116.7	68.2	90.5	112.7
		76	THC	-	211.4	211.4	-	203.1	203.1	-	193.8	193.8	-	183.9	183.9
			SHC	-	82.2	107.0	-	79.3	103.8	-	76.0	100.2	-	72.6	96.5
5250 Cfm	EAT (wb)	58	THC	165.2	165.2	186.9	158.2	158.2	179.0	150.0	150.0	169.7	141.3	141.3	160.0
			SHC	143.5	165.2	186.9	137.4	158.2	179.0	130.2	150.0	169.7	122.7	141.3	160.0
		62	THC	172.3	172.3	181.7	163.4	163.4	176.9	153.1	153.1	169.3	143.4	143.4	161.4
			SHC	131.6	156.6	181.7	127.1	152.0	176.9	120.5	144.9	169.3	114.1	137.8	161.4
		67	THC	189.5	189.5	189.5	180.9	180.9	180.9	170.7	170.7	170.7	159.1	159.1	159.1
			SHC	107.2	132.4	157.5	103.8	129.0	154.1	99.9	125.1	150.4	95.3	120.6	145.8
		72	THC	205.0	205.0	205.0	196.5	196.5	196.5	187.1	187.1	187.1	176.4	176.4	176.4
			SHC	80.9	106.1	131.3	77.7	102.9	128.1	74.4	99.5	124.7	70.6	95.8	121.0
		76	THC	-	215.4	215.4	-	206.8	206.8	-	197.1	197.1	-	186.9	186.9
			SHC	-	85.0	113.0	-	82.0	109.8	-	78.8	106.4	-	75.4	102.8
6000 Cfm	EAT (wb)	58	THC	172.7	172.7	195.4	165.5	165.5	187.3	157.1	157.1	177.8	148.1	148.1	167.7
			SHC	150.0	172.7	195.4	143.8	165.5	187.3	136.4	157.1	177.8	128.6	148.1	167.7
		62	THC	176.6	176.6	195.7	168.1	168.1	187.6	158.9	158.9	180.2	148.9	148.9	172.1
			SHC	139.6	167.7	195.7	133.2	160.4	187.6	127.1	153.7	180.2	120.7	146.4	172.1
		67	THC	193.6	193.6	193.6	184.8	184.8	184.8	174.7	174.7	174.7	162.7	162.7	162.7
			SHC	112.3	140.3	168.3	108.9	137.0	165.2	105.2	133.5	161.7	100.7	129.0	157.3
		72	THC	208.4	208.4	208.4	199.6	199.6	199.6	190.2	190.2	190.2	179.5	179.5	179.5
			SHC	82.7	110.5	138.3	79.6	107.3	135.1	76.2	104.0	131.8	72.6	100.6	128.5
		76	THC	-	218.2	218.2	-	209.5	209.5	-	199.5	199.5	-	189.0	189.0
			SHC	-	87.5	118.6	-	84.5	115.2	-	81.1	111.3	-	77.5	107.3
6750 Cfm	EAT (wb)	58	THC	178.8	178.8	202.4	171.6	171.6	194.2	163.1	163.1	184.6	153.8	153.8	174.1
			SHC	155.3	178.8	202.4	149.0	171.6	194.2	141.6	163.1	184.6	133.5	153.8	174.1
		62	THC	181.0	181.0	203.6	173.0	173.0	197.5	163.8	163.8	190.1	153.9	153.9	181.1
			SHC	144.1	173.9	203.6	139.1	168.3	197.5	133.3	161.7	190.1	126.7	153.9	181.1
		67	THC	196.8	196.8	196.8	187.9	187.9	187.9	177.7	177.7	177.7	165.5	165.5	167.9
			SHC	117.0	147.7	178.4	113.7	144.5	175.4	110.1	141.1	172.2	105.6	136.8	167.9
		72	THC	211.0	211.0	211.0	202.2	202.2	202.2	192.5	192.5	192.5	181.8	181.8	181.8
			SHC	84.3	114.5	144.7	81.2	111.5	141.7	77.9	108.1	138.4	74.4	104.9	135.4
		76	THC	-	220.2	220.2	-	211.5	211.5	-	201.3	201.3	-	190.6	190.6
			SHC	-	89.5	122.8	-	86.4	119.4	-	83.0	115.4	-	79.4	111.5
7500 Cfm	EAT (wb)	58	THC	183.9	183.9	208.2	176.6	176.6	199.8	168.2	168.2	190.3	158.6	158.6	179.5
			SHC	159.7	183.9	208.2	153.3	176.6	199.8	146.0	168.2	190.3	137.7	158.6	179.5
		62	THC	185.1	185.1	212.5	177.1	177.1	206.2	168.3	168.3	197.9	158.7	158.7	186.7
			SHC	149.5	181.0	212.5	144.5	175.4	206.2	138.7	168.3	197.9	130.8	158.7	186.7
		67	THC	199.3	199.3	199.3	190.3	190.3	190.3	180.0	180.0	181.7	167.8	167.8	177.8
			SHC	121.3	154.6	187.9	118.1	151.6	185.1	114.4	148.1	181.7	110.1	144.0	177.8
		72	THC	213.0	213.0	213.0	204.1	204.1	204.1	194.2	194.2	194.2	183.5	183.5	183.5
			SHC	85.8	118.2	150.5	82.7	115.2	147.7	79.4	111.9	144.4	76.0	108.8	141.6
		76	THC	-	221.9	221.9	-	213.0	213.0	-	202.7	202.7	-	191.8	191.8
			SHC	-	91.2	126.5	-	88.2	123.1	-	84.7	119.2	-	81.2	115.3

* See Minimum–Maximum Airflow Ratings. Do not operate outside these limits.

LEGEND:

- Do not operate in this region
- Cfm – Cubic feet per minute (supply air)
- EAT(db) – Entering air temperature (dry bulb)
- EAT(wb) – Entering air temperature (wet bulb)
- SHC – Sensible heat capacity
- TC – Total capacity

Table 7 – COOLING CAPACITIES (cont.) 2-STAGE COOLING
15 TONS

RAS180 Cooling Capacities, Subcooling Mode										
TEMP (F) AIR ENT CONDENSER (Edb)		AIR ENTERING EVAPORATOR – CFM								
		4500/0.02			6000/0.06			7500/0.05		
		Air Entering Evaporator – Ewb (F)								
		72	67	62	72	67	62	72	67	62
75	TC	204.4	186.3	168.2	218.4	199.6	180.9	229.6	210.4	191.2
	SHC	98.9	118.1	137.2	114.8	133.7	152.6	127.6	146.2	164.9
	kW	11.57	11.22	10.77	11.78	11.45	11.00	12.06	11.64	11.35
85	TC	189.2	171.7	154.1	203.0	184.8	166.7	214.1	195.5	176.9
	SHC	79.5	103.4	127.3	96.5	120.2	144.0	110.2	133.7	157.3
	kW	12.59	12.24	11.81	12.81	12.50	12.03	13.05	12.66	12.47
95	TC	174.0	157.0	140.0	187.6	170.1	152.5	198.6	180.6	162.7
	SHC	60.0	88.7	117.5	78.2	106.8	135.3	92.9	121.3	149.7
	kW	13.68	13.35	12.86	13.91	13.57	13.05	14.15	13.75	13.47
105	TC	158.8	142.3	125.8	172.2	155.3	138.3	183.1	165.7	148.4
	SHC	40.5	74.1	107.7	59.9	93.3	126.7	75.5	108.8	142.0
	kW	14.67	14.41	13.88	14.90	14.55	14.10	15.15	14.73	14.53
115	TC	143.6	127.6	111.7	156.8	140.5	124.1	167.6	150.9	134.2
	SHC	21.0	59.4	97.8	41.6	79.9	118.1	58.1	96.3	134.2
	kW	15.77	15.38	14.88	15.88	15.65	15.10	16.12	15.84	15.54

RAS180 Cooling Capacities, Hot Gas Reheat Mode										
TEMP (F) AIR ENT CONDENSER Edb)		AIR ENTERING EVAPORATOR – Ewb (F)								
		75 Dry Bulb 62.5 Wet Bulb (50% Relative)			75 Dry Bulb 64 Wet Bulb (56% Relative)			75 Dry Bulb 65.3 Wet Bulb (60% Relative)		
		Air Entering Evaporator – Cfm								
		4500	6000	7500	4500	6000	7500	4500	6000	7500
80	TC	83.75	84.85	88.95	86.65	91.90	92.90	87.90	91.75	96.30
	SHC	37.50	42.80	55.10	30.90	40.40	44.50	24.80	29.30	34.10
	kW	10.50	11.49	11.60	10.56	10.65	11.70	11.60	11.72	11.77
75	TC	85.00	86.00	90.50	88.05	93.60	94.65	89.20	93.45	97.85
	SHC	40.00	45.00	57.30	33.20	42.30	46.90	26.90	31.50	36.30
	kW	10.16	11.15	11.25	10.21	10.31	11.33	11.26	11.35	11.42
70	TC	86.15	87.35	91.50	89.20	94.30	96.10	90.40	94.10	98.95
	SHC	42.10	47.50	59.80	35.50	45.30	49.50	29.50	33.90	38.70
	kW	9.84	10.83	10.94	10.02	10.13	11.03	10.95	11.05	11.12
60	TC	88.90	90.10	94.25	92.00	97.10	98.20	93.20	96.90	101.75
	SHC	46.80	52.30	64.60	40.20	50.10	54.10	34.10	38.60	43.40
	kW	9.37	10.36	10.44	9.42	9.52	10.55	10.45	10.57	10.64
50	TC	91.70	92.80	97.00	94.80	99.90	101.00	96.10	99.70	104.20
	SHC	51.50	57.10	69.40	44.80	54.80	58.90	38.70	43.20	49.00
	kW	9.12	10.09	10.16	9.17	9.28	10.26	10.17	10.26	10.32
40	TC	94.45	95.60	99.80	97.45	102.55	103.70	98.65	102.35	107.00
	SHC	56.30	61.40	73.70	49.70	59.20	63.30	43.60	48.10	52.90
	kW	9.05	10.02	10.10	9.10	9.21	10.18	10.11	10.20	10.26

LEGEND

Edb – Entering Dry–Bulb
Ewb – Entering Wet–Bulb
kW – Compressor Motor Power Input
ldb – Leaving Dry–Bulb
lwb – Leaving Wet–Bulb
SHC – Sensible Heat Capacity (1000 Btuh) Gross
TC – Total Capacity (1000 Btuh) Gross

Table 8 – STATIC PRESSURE ADDERS (IN. WG) (FACTORY OPTIONS AND/OR ACCESSORIES)

ELECTRIC HEATERS

3–6 TONS										
CFM	600	900	1200	1400	1600	1800	2000	2200	2400	2600
1 Electric Heater Module	0.03	0.05	0.07	0.09	0.09	0.10	0.11	0.11	0.12	0.13
2 Electric Heater Modules	0.13	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.18	0.18

7.5 – 12.5 TONS																
CFM	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
1 Electric Heater Module	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.18
2 Electric Heater Modules	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.15	0.16	0.17	0.19	0.20

15 TON												
CFM	2813	3125	3438	3750	4063	4375	4688	5000	5313	5625	5938	6250
Vertical - 1 Electric Heater Module	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04
Vertical - 2 Electric Heater Modules	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.08
Horizontal - 1 Electric Heater Module	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.08	0.09
Horizontal - 2 Electric Heater Modules	0.02	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.08

HOT GAS REHEAT

3–6 TONS									
CFM	1000	1250	1500	1750	2000	2250	2500	2750	3000
3 Tons	0.04	0.052	0.07	—	—	—	—	—	—
4 Tons	—	0.106	0.138	0.172	0.21	—	—	—	—
5 Tons	—	—	0.138	0.172	0.21	0.252	0.30	—	—
6 Tons	—	—	—	0.112	0.125	0.161	0.19	0.22	0.25

7.5–12.5 TONS																
CFM	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
7.5 Tons	0.12	0.14	0.16	0.19	0.21	0.23	0.26	—	—	—	—	—	—	—	—	—
8.5 Tons	—	0.11	0.12	0.13	0.15	0.17	0.18	0.20	0.22	—	—	—	—	—	—	—
10 Tons	—	—	—	0.13	0.15	0.17	0.18	0.20	0.22	0.24	0.26	0.28	—	—	—	—
12.5 Tons	—	—	—	—	—	0.17	0.18	0.20	0.22	0.24	0.26	0.28	0.31	0.33	0.36	0.39

15 TONS														
CFM	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250	6500	6750	7000	7250
15 Tons	0.06	0.07	0.07	0.08	0.08	0.09	0.10	0.10	0.11	0.12	0.12	0.13	0.14	0.15

ECONOMIZER, BAROMETRIC RELIEF AND PE PERFORMANCE

Vertical Application

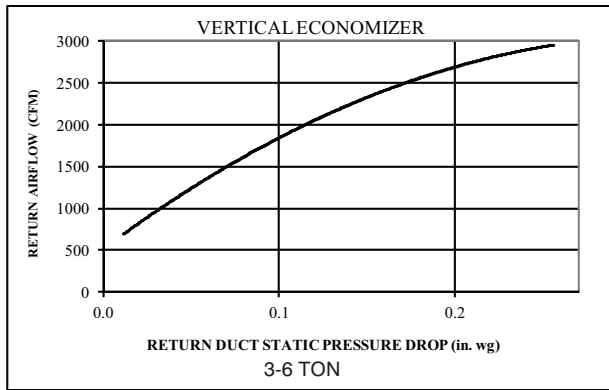


Fig. 1 – Return Air Pressure Drop

C11238

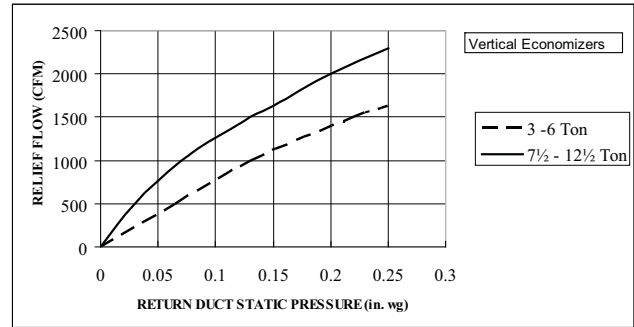


Fig. 4 – Barometric Relief Flow Capacity

C08073

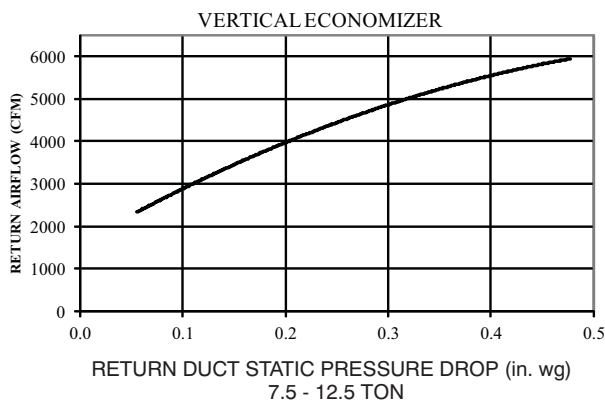


Fig. 2 – Return Air Pressure Drop

C11240

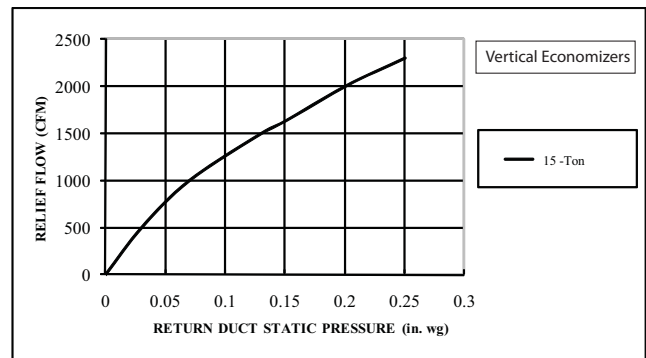


Fig. 5 – Barometric Relief Flow-Vertical 15 Ton

C101122

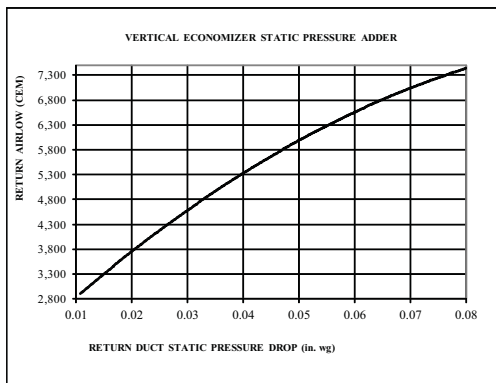


Fig. 3 – Return Air Pressure Drop-Vertical 15 Tons

C11257

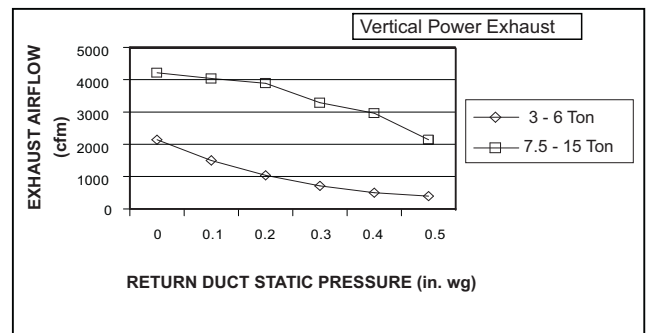


Fig. 6 – Vertical Power Exhaust Performance

C11248

ECONOMIZER, BAROMETRIC RELIEF AND PE PERFORMANCE (cont.)

Horizontal Application

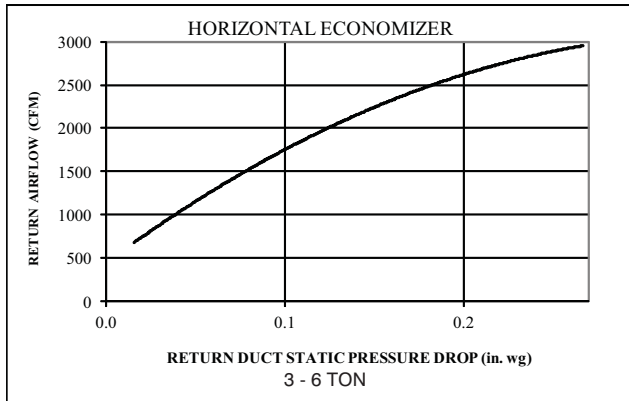


Fig. 7 – Return Air Pressure Drop

C11239

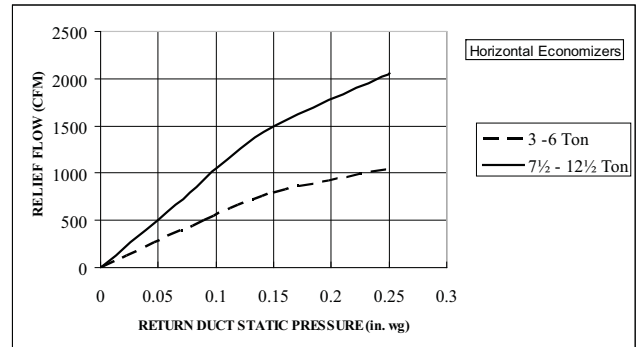


Fig. 10 – Barometric Relief Flow Capacity

C08070

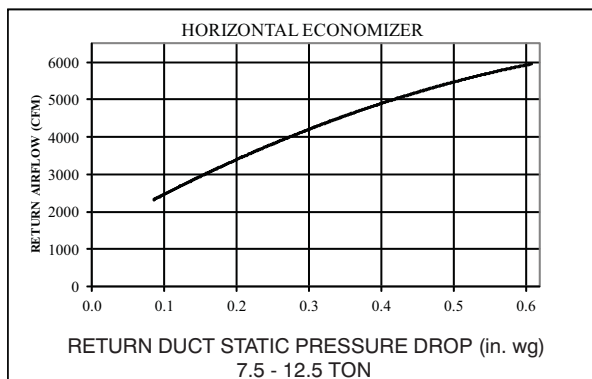


Fig. 8 – Return Air Pressure Drop

C11241

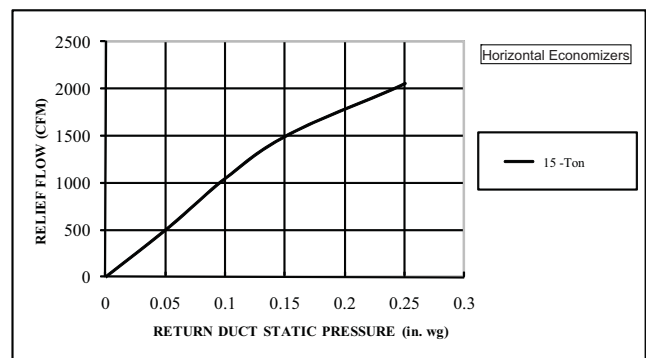


Fig. 11 – Barometric Relief Flow-Horizontal 15 Ton

C101120

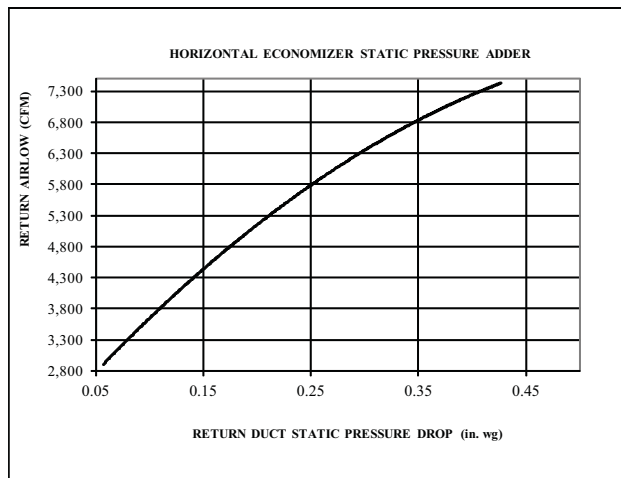


Fig. 9 – Return Air Pressure Drop-Horizontal 15 Ton

C11258

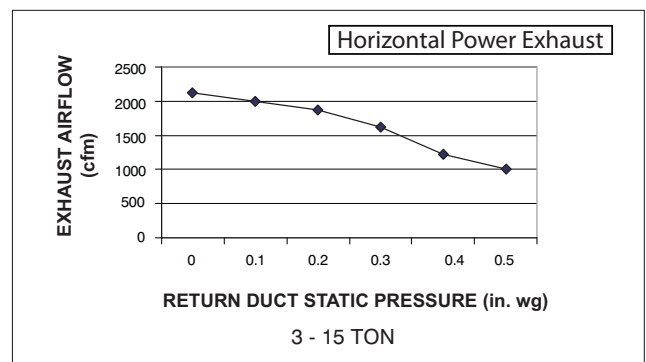


Fig. 12 – Horizontal Power Exhaust Performance

C08012

GENERAL FAN PERFORMANCE NOTES

1. Interpolation is permissible. Do not extrapolate.
2. External static pressure is the static pressure difference between the return duct and the supply duct plus the static pressure caused by any FIOPs or accessories.
3. Tabular data accounts for pressure loss due to clean filters, unit casing, and wet coils. Factory options and accessories may add static pressure losses. Selection software is available, through your salesperson, to help you select the best motor/drive combination for your application.
4. The Fan Performance tables offer motor/drive recommendations. In cases when two motor/drive combinations would work, we recommended the lower horsepower option.
5. For information on the electrical properties of the motors, please see the Electrical information section of this book.
6. For more information on the performance limits of motors, see the application data section of this book.
7. The EPACT (Energy Policy Act of 1992) regulates energy requirements for specific types of indoor fan motors. Motors regulated by EPACT include any general purpose, T-frame (three-digit, 143 and larger), single-speed, foot mounted, polyphase, squirrel cage induction motors of NEMA (National Electrical Manufacturers Association) design A and B, manufactured for use in the United States. Ranging from 1 to 200 Hp, these continuous-duty motors operate on 230 and 460 volt, 60 Hz power. If a motor does not fit into these specifications, the motor does not have to be replaced by an EPACT compliant energy-efficient motor. Variable-speed motors are exempt from EPACT compliance requirements. Therefore, the indoor fan motors for RAS036-180 units are exempt from these requirements.

FAN PERFORMANCE

Table 9 – RAS036, 1 PHASE, 3 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹		Standard Static Option				Medium Static Option			
900	554	0.14	681	0.22	783	0.32	870	0.42	947	0.53
975	575	0.16	701	0.25	801	0.35	888	0.45	965	0.57
1050	597	0.18	721	0.28	821	0.38	906	0.49	983	0.61
1125	620	0.21	741	0.31	840	0.42	925	0.54	1001	0.66
1200	643	0.23	762	0.35	860	0.46	944	0.58	1020	0.71
1275	666	0.27	784	0.38	880	0.50	964	0.63	1039	0.76
1350	690	0.30	805	0.42	900	0.55	983	0.68	1058	0.82
1425	714	0.34	827	0.47	921	0.60	1003	0.74	1077	0.88
1500	738	0.38	849	0.52	942	0.66	1024	0.80	1097	0.95

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option						Field Supplied Drive ²			
900	1017	0.64	1082	0.76	1143	0.88	1200	1.01	1254	1.14
975	1035	0.68	1100	0.81	1160	0.93	1217	1.07	1271	1.20
1050	1053	0.73	1117	0.86	1177	0.99	1234	1.13	—	—
1125	1071	0.78	1135	0.92	1195	1.05	1251	1.19	—	—
1200	1089	0.84	1153	0.98	1212	1.12	—	—	—	—
1275	1107	0.90	1171	1.04	1230	1.19	—	—	—	—
1350	1126	0.96	1189	1.11	—	—	—	—	—	—
1425	1145	1.03	1208	1.18	—	—	—	—	—	—
1500	1164	1.10	—	—	—	—	—	—	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1178488) and belt (part no. 1177401).

2. Recommend using field-supplied motor pulley (part no. 1175832), and belt (part no. 1178128).

Table 10 – RAS036, 1 PHASE, 3 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹		Standard Static Option				Medium Static Option			
900	566	0.14	690	0.23	791	0.32	879	0.42	957	0.52
975	590	0.17	711	0.26	811	0.36	897	0.46	975	0.57
1050	615	0.19	733	0.29	831	0.39	916	0.50	993	0.62
1125	640	0.22	755	0.33	851	0.43	936	0.55	1012	0.67
1200	666	0.25	778	0.36	873	0.48	956	0.60	1031	0.72
1275	692	0.29	802	0.41	894	0.53	976	0.65	1051	0.78
1350	719	0.33	825	0.45	916	0.58	997	0.71	1071	0.84
1425	746	0.37	850	0.50	939	0.63	1019	0.77	1091	0.91
1500	774	0.42	875	0.55	962	0.69	1041	0.83	1112	0.98

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option						Field Supplied Drive ²			
900	1029	0.63	1095	0.75	1157	0.86	1216	0.99	1272	1.11
975	1046	0.68	1112	0.80	1174	0.92	1232	1.05	1287	1.18
1050	1064	0.73	1129	0.86	1190	0.98	1248	1.11	—	—
1125	1082	0.79	1147	0.92	1208	1.05	1265	1.18	—	—
1200	1100	0.85	1165	0.98	1225	1.12	—	—	—	—
1275	1119	0.91	1183	1.05	1243	1.19	—	—	—	—
1350	1139	0.98	1202	1.12	—	—	—	—	—	—
1425	1159	1.05	1221	1.20	—	—	—	—	—	—
1500	1179	1.13	—	—	—	—	—	—	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1178488) and belt (part no. 1177401).

2. Recommend using field-supplied motor pulley (part no. 1175832) and belt (part no. 1178128).

FAN PERFORMANCE (cont.)

Table 11 – RAS036, 3 PHASE, 3 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)							
	0.2		0.4		0.6		0.8	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹		Standard Static Option		Medium Static Option			
900	554	0.14	681	0.22	783	0.32	870	0.42
975	575	0.16	701	0.25	801	0.35	888	0.45
1050	597	0.18	721	0.28	821	0.38	906	0.49
1125	620	0.21	741	0.31	840	0.42	925	0.54
1200	643	0.23	762	0.35	860	0.46	944	0.58
1275	666	0.27	784	0.38	880	0.50	964	0.63
1350	690	0.30	805	0.42	900	0.55	983	0.68
1425	714	0.34	827	0.47	921	0.60	1003	0.74
1500	738	0.38	849	0.52	942	0.66	1024	0.80

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)							
	1.2		1.4		1.6		1.8	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option				High Static Option			
900	1017	0.64	1082	0.76	1143	0.88	1200	1.01
975	1035	0.68	1100	0.81	1160	0.93	1217	1.07
1050	1053	0.73	1117	0.86	1177	0.99	1234	1.13
1125	1071	0.78	1135	0.92	1195	1.05	1251	1.19
1200	1089	0.84	1153	0.98	1212	1.12	1269	1.26
1275	1107	0.90	1171	1.04	1230	1.19	1286	1.33
1350	1126	0.96	1189	1.11	1249	1.26	1304	1.41
1425	1145	1.03	1208	1.18	1267	1.33	1323	1.49
1500	1164	1.10	1227	1.25	1285	1.41	1341	1.58

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1178448) and belt (part no. 1177401).

Table 12 – RAS036, 3 PHASE, 3 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)							
	0.2		0.4		0.6		0.8	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹		Standard Static Option		Medium Static Option			
900	566	0.14	690	0.23	791	0.32	879	0.42
975	590	0.17	711	0.26	811	0.36	897	0.46
1050	615	0.19	733	0.29	831	0.39	916	0.50
1125	640	0.22	755	0.33	851	0.43	936	0.55
1200	666	0.25	778	0.36	873	0.48	956	0.60
1275	692	0.29	802	0.41	894	0.53	976	0.65
1350	719	0.33	825	0.45	916	0.58	997	0.71
1425	746	0.37	850	0.50	939	0.63	1019	0.77
1500	774	0.42	875	0.55	962	0.69	1041	0.83

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)							
	1.2		1.4		1.6		1.8	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option				High Static Option			
900	1029	0.63	1095	0.75	1157	0.86	1216	0.99
975	1046	0.68	1112	0.80	1174	0.92	1232	1.05
1050	1064	0.73	1129	0.86	1190	0.98	1248	1.11
1125	1082	0.79	1147	0.92	1208	1.05	1265	1.18
1200	1100	0.85	1165	0.98	1225	1.12	1282	1.26
1275	1119	0.91	1183	1.05	1243	1.19	1300	1.34
1350	1139	0.98	1202	1.12	1262	1.27	1318	1.42
1425	1159	1.05	1221	1.20	1280	1.35	1336	1.51
1500	1179	1.13	1241	1.28	1300	1.44	1355	1.60

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1178448) and belt (part no. 1177401).

FAN PERFORMANCE (cont.)

Table 13 – RAS048, 1 PHASE, 4 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard Static Option				Medium Static Option					
1200	643	0.23	762	0.35	860	0.46	944	0.58	1020	0.71
1300	674	0.28	791	0.40	887	0.52	970	0.65	1045	0.78
1400	706	0.33	820	0.45	914	0.59	997	0.72	1071	0.86
1500	738	0.38	849	0.52	942	0.66	1024	0.80	1097	0.95
1600	771	0.44	879	0.59	971	0.74	1051	0.89	1124	1.04
1700	804	0.51	910	0.66	1000	0.82	1079	0.98	1151	1.14
1800	837	0.59	941	0.75	1029	0.91	1107	1.08	—	—
1900	871	0.67	972	0.84	1059	1.02	1136	1.19	—	—
2000	906	0.76	1004	0.94	1089	1.12	—	—	—	—

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option				Field Supplied Drive ¹					
1200	1089	0.84	1153	0.98	1212	1.12	—	—	—	—
1300	1114	0.92	1177	1.06	—	—	—	—	—	—
1400	1139	1.01	1202	1.15	—	—	—	—	—	—
1500	1164	1.10	—	—	—	—	—	—	—	—
1600	1190	1.20	—	—	—	—	—	—	—	—
1700	—	—	—	—	—	—	—	—	—	—
1800	—	—	—	—	—	—	—	—	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied motor pulley (part no. 1175832) and belt (part no. 1178128).

Table 14 – RAS048, 1 PHASE, 4 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard Static Option				Medium Static Option					
1200	666	0.25	778	0.36	873	0.48	956	0.60	1031	0.72
1300	701	0.30	809	0.42	902	0.54	983	0.67	1057	0.80
1400	737	0.36	842	0.48	932	0.61	1012	0.75	1085	0.89
1500	774	0.42	875	0.55	962	0.69	1041	0.83	1112	0.98
1600	811	0.49	909	0.63	994	0.78	1071	0.93	1141	1.08
1700	849	0.57	943	0.72	1026	0.87	1101	1.03	1170	1.19
1800	887	0.65	978	0.81	1059	0.98	1133	1.14	—	—
1900	926	0.75	1014	0.92	1092	1.09	—	—	—	—
2000	965	0.86	1050	1.03	—	—	—	—	—	—

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option				Field Supplied Drive ¹					
1200	1100	0.85	1165	0.98	1225	1.12	—	—	—	—
1300	1126	0.94	1189	1.07	—	—	—	—	—	—
1400	1152	1.03	1215	1.17	—	—	—	—	—	—
1500	1179	1.13	—	—	—	—	—	—	—	—
1600	1206	1.24	—	—	—	—	—	—	—	—
1700	1235	1.36	—	—	—	—	—	—	—	—
1800	1264	1.48	—	—	—	—	—	—	—	—
1900	1293	1.62	—	—	—	—	—	—	—	—
2000	1324	1.77	—	—	—	—	—	—	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

FAN PERFORMANCE (cont.)

Table 15 – RAS048, 3 PHASE, 4 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard Static Option				Medium Static Option					
1200	643	0.23	762	0.35	860	0.46	944	0.58	1020	0.71
1300	674	0.28	791	0.40	887	0.52	970	0.65	1045	0.78
1400	706	0.33	820	0.45	914	0.59	997	0.72	1071	0.86
1500	738	0.38	849	0.52	942	0.66	1024	0.80	1097	0.95
1600	771	0.44	879	0.59	971	0.74	1051	0.89	1124	1.04
1700	804	0.51	910	0.66	1000	0.82	1079	0.98	1151	1.14
1800	837	0.59	941	0.75	1029	0.91	1107	1.08	1178	1.25
1900	871	0.67	972	0.84	1059	1.02	1136	1.19	1206	1.37
2000	906	0.76	1004	0.94	1089	1.12	1165	1.31	1234	1.49

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option				High Static Option					
1200	1089	0.84	1153	0.98	1212	1.12	1269	1.26	1322	1.41
1300	1114	0.92	1177	1.06	1236	1.21	1292	1.36	1346	1.52
1400	1139	1.01	1202	1.15	1261	1.31	1316	1.47	1369	1.63
1500	1164	1.10	1227	1.25	1285	1.41	1341	1.58	1394	1.75
1600	1190	1.20	1252	1.36	1311	1.53	1366	1.70	1418	1.87
1700	1217	1.31	1278	1.48	1336	1.65	1391	1.83	1443	2.01
1800	1244	1.42	1305	1.60	1362	1.78	1416	1.97	1468	2.15
1900	1271	1.55	1331	1.73	1388	1.92	1442	2.11	1494	2.31
2000	1298	1.68	1358	1.87	1415	2.07	1468	2.27	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1175314), motor pulley (part no. 1170551) and belt (part no. 1178451).

Table 16 – RAS048, 3 PHASE, 4 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard Static Option				Medium Static Option					
1200	666	0.25	778	0.36	873	0.48	956	0.60	1031	0.72
1300	701	0.30	809	0.42	902	0.54	983	0.67	1057	0.80
1400	737	0.36	842	0.48	932	0.61	1012	0.75	1085	0.89
1500	774	0.42	875	0.55	962	0.69	1041	0.83	1112	0.98
1600	811	0.49	909	0.63	994	0.78	1071	0.93	1141	1.08
1700	849	0.57	943	0.72	1026	0.87	1101	1.03	1170	1.19
1800	887	0.65	978	0.81	1059	0.98	1133	1.14	1200	1.31
1900	926	0.75	1014	0.92	1092	1.09	1164	1.26	1231	1.44
2000	965	0.86	1050	1.03	1127	1.21	1197	1.39	1262	1.58

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option				High Static Option					
1200	1100	0.85	1165	0.98	1225	1.12	1282	1.26	1337	1.40
1300	1126	0.94	1189	1.07	1249	1.22	1306	1.36	1360	1.51
1400	1152	1.03	1215	1.17	1274	1.32	1330	1.48	1384	1.63
1500	1179	1.13	1241	1.28	1300	1.44	1355	1.60	1408	1.76
1600	1206	1.24	1268	1.40	1326	1.56	1381	1.73	1433	1.90
1700	1235	1.36	1295	1.52	1352	1.69	1407	1.87	1459	2.04
1800	1264	1.48	1323	1.66	1380	1.84	1434	2.02	1485	2.20
1900	1293	1.62	1352	1.80	1408	1.99	1461	2.17	1512	2.37
2000	1324	1.77	1381	1.96	1436	2.15	1489	2.34	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1175314), motor pulley (part no. 1170551) and belt (part no. 1178451).

FAN PERFORMANCE (cont.)

Table 17 – RAS060, 1 PHASE, 5 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹		Standard Static Option							
1500	724	0.33	837	0.45	937	0.59	1028	0.74	1111	0.91
1625	765	0.40	873	0.53	969	0.67	1056	0.83	1137	1.00
1750	806	0.48	909	0.61	1002	0.76	1087	0.92	1165	1.10
1875	849	0.57	947	0.71	1036	0.86	1118	1.03	1195	1.21
2000	892	0.67	986	0.82	1072	0.98	1151	1.15	1226	1.33
2125	935	0.79	1025	0.94	1108	1.11	1185	1.29	1258	1.47
2250	980	0.92	1066	1.08	1146	1.25	1220	1.43	—	—
2375	1024	1.06	1107	1.23	1184	1.41	—	—	—	—
2500	1069	1.22	1149	1.39	—	—	—	—	—	—

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option									
1500	1188	1.09	1261	1.29	1330	1.49	—	—	—	—
1625	1213	1.18	1284	1.38	—	—	—	—	—	—
1750	1239	1.28	1309	1.49	—	—	—	—	—	—
1875	1267	1.40	—	—	—	—	—	—	—	—
2000	—	—	—	—	—	—	—	—	—	—
2125	—	—	—	—	—	—	—	—	—	—
2250	—	—	—	—	—	—	—	—	—	—

NOTE: For more information, see General Fan Performance Notes.

1. Recommend using field-supplied fan pulley (part no. 1178034) and belt (part no. 1178127).

Table 18 – RAS060, 1 PHASE, 5 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard Static Option									
1500	790	0.40	897	0.53	991	0.68	1075	0.83	1152	1.00
1625	837	0.48	940	0.62	1030	0.77	1112	0.94	1187	1.11
1750	885	0.58	983	0.73	1070	0.89	1150	1.06	1223	1.24
1875	934	0.69	1027	0.85	1112	1.01	1189	1.19	1260	1.38
2000	983	0.81	1073	0.98	1154	1.16	1229	1.34	—	—
2125	1033	0.95	1119	1.13	1198	1.31	1270	1.50	—	—
2250	1084	1.11	1166	1.29	1242	1.49	—	—	—	—
2375	1134	1.28	1214	1.48	—	—	—	—	—	—
2500	1185	1.48	—	—	—	—	—	—	—	—

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option									
1500	1224	1.18	1291	1.36	—	—	—	—	—	—
1625	1257	1.30	1323	1.49	—	—	—	—	—	—
1750	1292	1.43	—	—	—	—	—	—	—	—
1875	—	—	—	—	—	—	—	—	—	—
2000	—	—	—	—	—	—	—	—	—	—
2125	—	—	—	—	—	—	—	—	—	—
2250	—	—	—	—	—	—	—	—	—	—
2375	—	—	—	—	—	—	—	—	—	—
2500	—	—	—	—	—	—	—	—	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

FAN PERFORMANCE (cont.)

Table 19 – RAS060, 3 PHASE, 5 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹					Standard Static Option				
1800	822	0.51	927	0.66	1018	0.82	1100	0.98	1174	1.15
1950	872	0.62	973	0.79	1061	0.95	1140	1.13	1213	1.31
2100	923	0.75	1019	0.92	1104	1.10	1182	1.29	1253	1.48
2250	974	0.90	1067	1.08	1149	1.27	1224	1.46	1294	1.66
2400	1026	1.06	1115	1.26	1195	1.46	1268	1.66	1336	1.87
2550	1079	1.25	1164	1.46	1241	1.67	1312	1.88	1379	2.10
2700	1132	1.46	1214	1.67	1289	1.90	1358	2.12	1422	2.35
2850	1186	1.69	1264	1.92	1336	2.15	1404	2.39	1467	2.63
3000	1240	1.94	1315	2.18	1385	2.43	1451	2.68	1512	2.93

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard Static Option								Medium Static Option	
1800	1244	1.33	1308	1.51	1369	1.70	1427	1.90	1483	2.10
1950	1281	1.49	1345	1.68	1405	1.88	1462	2.09	1517	2.30
2100	1320	1.67	1382	1.87	1441	2.08	1498	2.29	1552	2.51
2250	1359	1.87	1420	2.08	1479	2.29	1534	2.51	1587	2.74
2400	1400	2.09	1460	2.31	1517	2.53	1572	2.76	1624	2.99
2550	1441	2.33	1500	2.55	1557	2.79	1610	3.03	1662	3.27
2700	1483	2.59	1541	2.83	1597	3.07	1650	3.32	1701	3.57
2850	1527	2.87	1583	3.12	1638	3.37	1690	3.63	—	—
3000	1571	3.18	1626	3.44	1680	3.70	—	—	—	—

NOTE: For more information, see General Fan Performance Notes.

■ – High Static Option

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1178034) and belt (part no. 1178127).

Table 20 – RAS060, 3 PHASE, 5 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard Static Option									
1500	790	0.40	897	0.53	991	0.68	1075	0.83	1152	1.00
1625	837	0.48	940	0.62	1030	0.77	1112	0.94	1187	1.11
1750	885	0.58	983	0.73	1070	0.89	1150	1.06	1223	1.24
1875	934	0.69	1027	0.85	1112	1.01	1189	1.19	1260	1.38
2000	983	0.81	1073	0.98	1154	1.16	1229	1.34	1299	1.53
2125	1033	0.95	1119	1.13	1198	1.31	1270	1.50	1338	1.71
2250	1084	1.11	1166	1.29	1242	1.49	1312	1.69	1386	1.89
2375	1134	1.28	1214	1.48	1287	1.68	1355	1.89	1420	2.10
2500	1185	1.48	1262	1.68	1333	1.89	1399	2.10	1462	2.33

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option								High Static Option	
1500	1224	1.18	1291	1.36	1354	1.56	1414	1.77	1472	1.98
1625	1257	1.30	1323	1.49	1385	1.69	1445	1.90	1501	2.12
1750	1292	1.43	1356	1.63	1418	1.83	1476	2.05	1532	2.27
1875	1327	1.57	1391	1.78	1451	1.99	1509	2.21	1564	2.44
2000	1364	1.74	1427	1.95	1486	2.17	1542	2.39	1596	2.63
2125	1402	1.92	1463	2.13	1521	2.36	1577	2.59	1630	2.83
2250	1441	2.11	1501	2.34	1558	2.57	1612	2.81	—	—
2375	1481	2.33	1539	2.56	1595	2.80	—	—	—	—
2500	1522	2.56	1579	2.80	—	—	—	—	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

FAN PERFORMANCE (cont.)

Table 21 – RAS072, 3 PHASE, 6 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)							
	0.2		0.4		0.6		0.8	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹				Standard Static Option			
1800	822	0.51	927	0.66	1018	0.82	1100	0.98
1950	872	0.62	973	0.79	1061	0.95	1140	1.13
2100	923	0.75	1019	0.92	1104	1.10	1182	1.29
2250	974	0.90	1067	1.08	1149	1.27	1224	1.46
2400	1026	1.06	1115	1.26	1195	1.46	1268	1.66
2550	1079	1.25	1164	1.46	1241	1.67	1312	1.88
2700	1132	1.46	1214	1.67	1289	1.90	1358	2.12
2850	1186	1.69	1264	1.92	1336	2.15	1404	2.39
3000	1240	1.94	1315	2.18	1385	2.43	1451	2.68

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)							
	1.2		1.4		1.6		1.8	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard Static Option				Medium Static Option			
1800	1244	1.33	1308	1.51	1369	1.70	1427	1.90
1950	1281	1.49	1345	1.68	1405	1.88	1462	2.09
2100	1320	1.67	1382	1.87	1441	2.08	1498	2.29
2250	1359	1.87	1420	2.08	1479	2.29	1534	2.51
2400	1400	2.09	1460	2.31	1517	2.53	1572	2.76
2550	1441	2.33	1500	2.55	1557	2.79	1610	3.03
2700	1483	2.59	1541	2.83	1597	3.07	1650	3.32
2850	1527	2.87	1583	3.12	1638	3.37	1690	3.63
3000	1571	3.18	1626	3.44	1680	3.70	—	—

NOTE: For more information, see General Fan Performance Notes.

■ – Medium Static Option

■ – High Static Option

Boldface indicates field—supplied drive is required.

1. Recommend using field—supplied fan pulley (part no. 1175830), motor pulley (part no. 1175849) and belt (part no. 1178128).

Table 22 – RAS072, 3 PHASE, 6 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)							
	0.2		0.4		0.6		0.8	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹				Standard Static Option			
1800	907	0.63	1006	0.80	1092	0.97	1169	1.14
1950	965	0.77	1060	0.95	1143	1.13	1218	1.32
2100	1024	0.93	1115	1.12	1195	1.32	1268	1.52
2250	1083	1.11	1170	1.32	1248	1.53	1319	1.74
2400	1143	1.32	1227	1.54	1302	1.76	1371	1.99
2550	1203	1.55	1284	1.78	1357	2.02	1424	2.26
2700	1264	1.81	1342	2.06	1412	2.31	1478	2.56
2850	1326	2.09	1400	2.36	1469	2.62	1532	2.89
3000	1387	2.41	1459	2.69	1525	2.97	1587	3.25

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)							
	1.2		1.4		1.6		1.8	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard Static Option				Medium Static Option		High Static Option	
1800	1304	1.51	1365	1.69	1422	1.88	1477	2.08
1950	1350	1.71	1410	1.91	1467	2.11	1520	2.31
2100	1398	1.93	1457	2.14	1512	2.35	1565	2.57
2250	1446	2.18	1504	2.40	1559	2.62	1611	2.85
2400	1496	2.45	1552	2.68	1606	2.92	1658	3.16
2550	1546	2.75	1601	2.99	1654	3.24	1705	3.50
2700	1597	3.07	1651	3.33	1703	3.59	—	—
2850	1648	3.43	1702	3.70	—	—	—	—
3000	—	—	—	—	—	—	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field—supplied drive is required.

1. Recommend using field—supplied fan pulley (part no. 1175830), motor pulley (part no. 1175849) and belt (part no. 1178128).

FAN PERFORMANCE (cont.)

Table 23 – RAS090 / 091, 3 PHASE, 7.5 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹		Standard Static Option						Medium Static Option	
2250	465	0.43	555	0.64	629	0.86	694	1.10	753	1.34
2438	488	0.51	575	0.73	648	0.97	712	1.21	769	1.47
2625	510	0.60	595	0.84	666	1.09	729	1.34	786	1.62
2813	533	0.70	616	0.95	686	1.22	748	1.49	804	1.77
3000	557	0.82	637	1.08	705	1.36	766	1.64	822	1.94
3188	581	0.94	659	1.23	726	1.51	785	1.81	840	2.12
3375	606	1.08	681	1.38	746	1.68	805	2.00	859	2.32
3563	630	1.24	703	1.55	767	1.87	825	2.20	878	2.53
3750	655	1.41	726	1.74	789	2.07	845	2.41	897	2.76

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option								High Static Option	
2250	806	1.60	856	1.87	903	2.15	947	2.45	988	2.75
2438	822	1.74	872	2.03	918	2.32	961	2.62	1003	2.93
2625	839	1.90	887	2.19	933	2.49	977	2.81	1018	3.13
2813	856	2.06	904	2.37	949	2.68	992	3.01	1033	3.34
3000	873	2.24	921	2.56	966	2.89	1008	3.22	1049	3.56
3188	891	2.44	938	2.77	982	3.10	1025	3.45	1065	3.81
3375	909	2.65	955	2.99	1000	3.34	1041	3.70	1081	4.06
3563	927	2.88	973	3.23	1017	3.59	1059	3.96	1098	4.34
3750	946	3.12	992	3.48	1035	3.86	1076	4.24	1115	4.63 ²

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1178189), motor pulley (part no. 1175832) and belt (part no. 1178128).
2. Recommend using field-supplied fan pulley (part no. 1175896) and belt (part no. 1178182).

Table 24 – RAS090 / 091, 3 PHASE, 7.5 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard Static Option						Medium Static Option			
2250	511	0.53	591	0.73	660	0.95	722	1.19	779	1.44
2438	540	0.64	616	0.85	683	1.08	743	1.33	799	1.59
2625	569	0.76	642	0.99	706	1.23	765	1.49	819	1.76
2813	599	0.90	669	1.14	731	1.39	788	1.66	841	1.94
3000	630	1.06	696	1.31	756	1.58	811	1.86	863	2.15
3188	661	1.23	724	1.50	782	1.78	836	2.07	886	2.38
3375	692	1.43	753	1.71	809	2.00	861	2.31	910	2.62
3563	723	1.65	782	1.94	836	2.25	887	2.56	934	2.89
3750	755	1.89	811	2.20	864	2.52	913	2.84	959	3.18

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option					High Static Option				
2250	832	1.71	882	1.99	928	2.29	973	2.59	1015	2.92
2438	851	1.87	899	2.16	945	2.46	989	2.78	1031	3.11
2625	870	2.04	918	2.34	963	2.66	1006	2.98	1048	3.32
2813	890	2.24	937	2.55	982	2.87	1024	3.21	1065	3.55
3000	912	2.46	958	2.78	1001	3.11	1043	3.45	1083	3.80
3188	934	2.69	979	3.02	1022	3.36	1063	3.72	1102	4.08
3375	956	2.95	1000	3.29	1042	3.64	1083	4.00	1122	4.38
3563	980	3.23	1023	3.58	1064	3.94	1104	4.32	1142	4.70
3750	1004	3.54	1046	3.90	1086	4.27	1125	4.65	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1175896) and belt (part no. 1178182).

FAN PERFORMANCE (cont.)

Table 25 – RAS101 / 102, 3 PHASE, 8.5 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹		Standard Static Option							
2550	438	0.39	523	0.50	595	0.64	658	0.78	716	0.94
2763	459	0.47	541	0.60	611	0.73	673	0.88	730	1.05
2975	481	0.56	560	0.70	628	0.84	689	1.00	745	1.16
3188	504	0.67	580	0.82	646	0.97	705	1.13	760	1.30
3400	526	0.80	600	0.95	664	1.11	722	1.27	776	1.45
3613	550	0.94	620	1.10	683	1.26	740	1.43	793	1.62
3825	573	1.09	641	1.26	702	1.43	758	1.61	810	1.80
4038	597	1.26	663	1.44	722	1.62	777	1.81	827	2.00
4250	621	1.45	685	1.64	743	1.83	796	2.02	845	2.22

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option								High Static Option	
2550	769	1.11	819	1.30	865	1.49	909	1.70	951	1.92
2763	782	1.22	831	1.41	877	1.60	921	1.81	963	2.04
2975	796	1.34	845	1.53	890	1.73	933	1.94	974	2.16
3188	811	1.48	858	1.67	903	1.88	946	2.09	987	2.31
3400	826	1.63	873	1.83	917	2.04	959	2.25	1000	2.48
3613	842	1.81	888	2.01	932	2.22	973	2.44	1013	2.67
3825	858	2.00	903	2.20	946	2.42	988	2.64	1027	2.87
4038	875	2.20	919	2.41	962	2.63	1002	2.86	1041	3.10
4250	892	2.43	936	2.65	978	2.87	1018	3.10	1056	3.34

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1178189) and belt (part no. 1179767).

Table 26 – RAS101 / 102, 3 PHASE, 8.5 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹		Standard Static Option							
2550	477	0.43	556	0.57	624	0.71	685	0.85	742	0.99
2763	503	0.52	578	0.67	644	0.82	704	0.97	759	1.13
2975	529	0.62	601	0.79	665	0.95	724	1.11	777	1.28
3188	556	0.74	625	0.92	687	1.09	744	1.26	796	1.44
3400	583	0.88	650	1.06	710	1.24	765	1.43	816	1.62
3613	611	1.03	675	1.22	733	1.42	787	1.61	836	1.81
3825	639	1.19	701	1.40	757	1.61	809	1.81	857	2.02
4038	668	1.38	727	1.60	781	1.81	832	2.03	879	2.25
4250	696	1.58	753	1.81	806	2.04	855	2.27	901	2.50

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option								High Static Option	
2550	794	1.14	842	1.29	888	1.44	932	1.59	973	1.75
2763	810	1.28	858	1.44	903	1.60	946	1.77	987	1.93
2975	827	1.44	874	1.61	919	1.78	961	1.95	1001	2.13
3188	845	1.62	891	1.79	935	1.98	977	2.16	1017	2.34
3400	864	1.80	909	1.99	952	2.18	993	2.38	1033	2.57
3613	883	2.01	928	2.21	970	2.41	1010	2.61	1049	2.82
3825	903	2.23	947	2.44	988	2.65	1028	2.87	1066	3.08
4038	924	2.47	967	2.70	1008	2.92	1047	3.14	1084	3.37
4250	945	2.73	987	2.97	1027	3.20	1066	3.43	1103	3.67²

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1178189) and belt (part no. 1179767).

2. Recommend using field-supplied fan pulley (part no. 1175896), motor pulley (part no. 1178133) and belt (part no. 1178182).

FAN PERFORMANCE (cont.)

Table 27 – RAS120 / 121, 3 PHASE, 10 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹		Standard Static Option							
3000	523	0.58	592	0.73	657	0.88	718	1.05	775	1.22
3250	555	0.71	620	0.87	681	1.04	739	1.21	794	1.39
3500	588	0.86	649	1.03	707	1.21	762	1.39	815	1.58
3750	621	1.03	679	1.21	734	1.40	786	1.59	837	1.79
4000	655	1.23	709	1.42	761	1.61	812	1.82	860	2.03
4250	689	1.45	741	1.65	790	1.86	838	2.07	885	2.29
4500	723	1.69	773	1.90	820	2.12	866	2.35	910	2.57
4750	758	1.96	805	2.19	850	2.42	894	2.65	937	2.89
5000	793	2.26	838	2.50	881	2.74	923	2.98	965	3.23

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Standard Static Opt.		Medium Static Option							
3000	830	1.39	883	1.57	934	1.76	982	1.95	1029	2.14
3250	847	1.57	897	1.76	946	1.96	993	2.16	1039	2.36
3500	865	1.77	914	1.97	961	2.18	1007	2.38	1051	2.60
3750	885	1.99	932	2.20	978	2.42	1022	2.64	1065	2.86
4000	907	2.24	952	2.46	996	2.68	1038	2.91	1080	3.14
4250	930	2.51	973	2.74	1015	2.97	1057	3.21	1097	3.45
4500	954	2.81	996	3.05	1037	3.29	1076	3.54	1115	3.79
4750	979	3.13	1019	3.38	1059	3.63	1097	3.89	1135	4.15
5000	1005	3.49	1044	3.74	1082	4.01	1119	4.27	1156	4.55

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1178190) and belt (part no. 1178181).

Table 28 – RAS120 / 121, 3 PHASE, 10 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹		Standard Static Option							
3000	556	0.65	623	0.80	684	0.95	738	1.11	789	1.26
3250	590	0.79	655	0.96	713	1.13	766	1.29	815	1.46
3500	625	0.96	687	1.14	742	1.32	794	1.50	841	1.68
3750	661	1.16	719	1.35	773	1.54	822	1.73	869	1.93
4000	697	1.37	753	1.58	804	1.79	852	1.99	897	2.20
4250	733	1.62	787	1.84	836	2.06	883	2.28	926	2.49
4500	770	1.89	821	2.13	869	2.36	914	2.59	956	2.82
4750	807	2.20	856	2.45	902	2.69	945	2.94	986	3.18
5000	844	2.54	891	2.80	936	3.06	978	3.31	1018	3.57

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option									
3000	836	1.42	881	1.57	923	1.73	963	1.89	1001	2.05
3250	861	1.63	904	1.79	945	1.96	985	2.13	1023	2.30
3500	886	1.86	929	2.04	969	2.22	1008	2.40	1045	2.58
3750	912	2.12	954	2.31	994	2.50	1031	2.70	1068	2.89
4000	940	2.40	980	2.61	1019	2.81	1056	3.02	1092	3.22
4250	968	2.71	1007	2.93	1045	3.15	1081	3.36	1117	3.58
4500	996	3.05	1035	3.28	1072	3.51	1108	3.74	1142	3.97
4750	1026	3.42	1063	3.66	1100	3.91	1135	4.15	1168	4.39
5000	1056	3.82	1093	4.08	1128	4.34	1162	4.59	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1178190) and belt (part no. 1178181).

FAN PERFORMANCE (cont.)

Table 29 – RAS150, 3 PHASE, 12.5 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)							
	0.2		0.4		0.6		0.8	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹		Standard Static Option					
3438	580	0.82	642	0.99	700	1.16	756	1.34
3750	621	1.03	679	1.21	734	1.40	786	1.59
4063	663	1.28	717	1.47	769	1.67	818	1.88
4375	706	1.56	757	1.77	805	1.98	852	2.20
4688	749	1.89	797	2.11	843	2.34	887	2.57
5000	793	2.26	838	2.50	881	2.74	923	2.98
5313	837	2.69	880	2.93	921	3.19	961	3.44
5625	882	3.16	922	3.42	961	3.68	999	3.95
5938	926	3.68	964	3.96	1001	4.23	1038	4.52
6250	971	4.26	1007	4.55	—	—	—	—

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)							
	1.2		1.4		1.6		1.8	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option							
3438	860	1.72	910	1.92	957	2.12	1003	2.32
3750	885	1.99	932	2.20	978	2.42	1022	2.64
4063	912	2.31	957	2.53	1001	2.75	1043	2.98
4375	941	2.66	984	2.89	1026	3.13	1066	3.37
4688	972	3.05	1013	3.29	1053	3.54	1092	3.80
5000	1005	3.49	1044	3.74	1082	4.01	1119	4.27
5313	1038	3.97	1076	4.24	1113	4.52	—	—
5625	1073	4.51	—	—	—	—	—	—
5938	—	—	—	—	—	—	—	—
6250	—	—	—	—	—	—	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1178189) and belt (part no. 1179767).

2. Recommend using field-supplied fan pulley (part no. 1175896), motor pulley (part no. 1178133) and belt (part no. 1178182).

Table 30 – RAS150, 3 PHASE, 12.5 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)							
	0.2		0.4		0.6		0.8	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Supplied Drive ¹		Standard Static Option					
3438	616	0.92	679	1.10	735	1.27	786	1.45
3750	661	1.16	719	1.35	773	1.54	822	1.73
4063	706	1.43	761	1.64	812	1.85	860	2.06
4375	752	1.75	804	1.98	852	2.20	898	2.43
4688	798	2.12	847	2.36	894	2.60	937	2.85
5000	844	2.54	891	2.80	936	3.06	978	3.31
5313	891	3.01	936	3.28	978	3.56	1019	3.83
5625	938	3.53	981	3.83	1022	4.12	1060	4.41
5938	986	4.12	1026	4.43	—	—	—	—
6250	—	—	—	—	—	—	—	—

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (IN. WG)							
	1.2		1.4		1.6		1.8	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Medium Static Option							
3438	880	1.80	922	1.98	963	2.15	1002	2.33
3750	912	2.12	954	2.31	994	2.50	1031	2.70
4063	947	2.48	987	2.68	1025	2.89	1062	3.10
4375	982	2.88	1021	3.10	1058	3.32	1094	3.55
4688	1018	3.33	1056	3.57	1093	3.81	1128	4.04
5000	1056	3.82	1093	4.08	1128	4.34	1162	4.59
5313	1094	4.38	1130	4.65	—	—	—	—
5625	—	—	—	—	—	—	—	—
5938	—	—	—	—	—	—	—	—
6250	—	—	—	—	—	—	—	—

NOTE: For more information, see General Fan Performance Notes.

Boldface indicates field-supplied drive is required.

1. Recommend using field-supplied fan pulley (part no. 1178189) and belt (part no. 1179767).

2. Recommend using field-supplied fan pulley (part no. 1175896), motor pulley (part no. 1178133) and belt (part no. 1178182).

FAN PERFORMANCE (cont.)

Table 31 – RAS180, 3 PHASE, 15 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4500	425	0.76	490	1.02	550	1.30	607	1.61	664	1.96
4875	448	0.92	510	1.20	566	1.49	621	1.81	674	2.15
5250	472	1.10	531	1.40	584	1.70	636	2.03	686	2.38
5625	496	1.30	552	1.62	603	1.94	652	2.28	699	2.64
6000	520	1.52	574	1.86	623	2.20	670	2.55	715	2.92
6375	544	1.77	596	2.13	644	2.49	688	2.86	731	3.24
6750	568	2.05	618	2.43	664	2.81	707	3.19	749	3.59
7125	593	2.35	641	2.75	685	3.16	727	3.56	767	3.97
7500	617	2.69	664	3.11	707	3.53	747	3.95	786	4.38

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4500	719	2.34	772	2.76	823	3.20	872	3.67	918	4.16
4875	725	2.54	776	2.95	825	3.40	873	3.87	919	4.37
5250	734	2.76	783	3.18	830	3.63	876	4.10	920	4.60
5625	746	3.03	791	3.44	836	3.89	880	4.36	923	4.86
6000	759	3.32	802	3.74	845	4.18	887	4.66	928	5.16
6375	773	3.64	814	4.07	855	4.52	895	4.99	935	5.49
6750	789	4.00	828	4.43	867	4.89	905	5.36	943	5.87
7125	806	4.39	844	4.84	881	5.29	917	5.78	—	—
7500	823	4.82	860	5.27	895	5.74	—	—	—	—

NOTE: For more information, see General Fan Performance Notes.

Table 32 – RAS180, 3 PHASE, 15 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4500	423	0.77	487	0.99	545	1.22	601	1.47	655	1.73
4875	447	0.94	507	1.18	563	1.42	615	1.67	666	1.95
5250	471	1.13	528	1.38	581	1.64	631	1.91	679	2.19
5625	496	1.35	550	1.62	600	1.89	648	2.17	694	2.46
6000	520	1.59	572	1.88	620	2.17	666	2.46	710	2.76
6375	545	1.86	594	2.17	640	2.47	684	2.78	726	3.10
6750	571	2.17	617	2.48	661	2.81	704	3.13	744	3.46
7125	596	2.50	640	2.83	683	3.17	724	3.52	763	3.86
7500	622	2.87	663	3.22	705	3.58	744	3.93	782	4.30

CFM	Available External Static Pressure (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4500	707	2.02	758	2.33	806	2.66	853	3.01	898	3.37
4875	716	2.24	764	2.55	811	2.89	856	3.24	900	3.61
5250	726	2.49	772	2.81	817	3.14	860	3.50	903	3.87
5625	738	2.77	782	3.09	825	3.43	867	3.79	908	4.17
6000	752	3.08	794	3.41	835	3.76	875	4.12	914	4.50
6375	767	3.42	807	3.76	846	4.12	885	4.49	923	4.87
6750	784	3.80	822	4.15	859	4.51	896	4.89	933	5.28
7125	801	4.22	838	4.58	874	4.95	909	5.33	944	5.73
7500	818	4.66	854	5.04	889	5.42	923	5.81	—	—

NOTE: For more information, see General Fan Performance Notes.

FAN PERFORMANCE (cont.)

Table 33 – PULLEY ADJUSTMENT

UNIT RAS		MOTOR/DRIVE COMBO	MOTOR PULLEY TURNS OPEN										
			0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
036	1 phase	Standard Static	854	825	795	766	736	707	678	648	619	589	560
		Medium Static	–	–	–	–	–	–	–	–	–	–	–
		High Static	–	–	–	–	–	–	–	–	–	–	–
	3 phase	Standard Static	854	825	795	766	736	707	678	648	619	589	560
		Medium Static	–	–	–	–	–	–	–	–	–	–	–
		High Static	1466	1423	1380	1337	1294	1251	1207	1164	1121	1078	1035
048	1 phase	Standard Static	854	825	795	766	736	707	678	648	619	589	560
		Medium Static	–	–	–	–	–	–	–	–	–	–	–
		High Static	–	–	–	–	–	–	–	–	–	–	–
	3 phase	Standard Static	854	825	795	766	736	707	678	648	619	589	560
		Medium Static	–	–	–	–	–	–	–	–	–	–	–
		High Static	1466	1423	1380	1337	1294	1251	1207	1164	1121	1078	1035
060	1 phase	Standard Static	1175	1135	1094	1054	1013	973	932	892	851	811	770
		Medium Static	1466	1423	1380	1337	1294	1251	1207	1164	1121	1078	1035
		High Static	–	–	–	–	–	–	–	–	–	–	–
	3 phase	Standard Static	1175	1135	1094	1054	1013	973	932	892	851	811	770
		Medium Static	1466	1423	1380	1337	1294	1251	1207	1164	1121	1078	1035
		High Static	1687	1649	1610	1572	1533	1495	1457	1418	1380	1341	1303
072	3 phase	Standard Static	1457	1419	1380	1342	1303	1265	1227	1188	1150	1111	1073
		Medium Static	1518	1484	1449	1415	1380	1346	1311	1277	1242	1208	1173
		High Static	1788	1757	1725	1694	1662	1631	1600	1568	1537	1505	1474
090/091	3 phase	Standard Static	747	721	695	670	644	618	592	566	541	515	489
		Medium Static	949	927	906	884	863	841	819	798	776	755	733
		High Static	1102	1083	1063	1044	1025	1006	986	967	948	928	909
101/102	3 phase	Standard Static	733	712	690	669	647	626	604	583	561	540	518
		Medium Static	936	911	887	862	838	813	788	764	739	715	690
		High Static	1084	1059	1035	1010	986	961	936	912	887	863	838
120/121	3 phase	Standard Static	838	813	789	764	739	715	690	665	640	616	591
		Medium Static	1084	1059	1035	1010	986	961	936	912	887	863	838
		High Static	1240	1218	1196	1175	1153	1131	1109	1087	1066	1044	1022
150	3 phase	Standard Static	838	813	789	764	739	715	690	665	640	616	591
		Medium Static	1084	1059	1035	1010	986	961	936	912	887	863	838
		High Static	1240	1218	1196	1175	1153	1131	1109	1087	1066	1044	1022
180	3 phase	Standard Static	676	659	642	625	608	592	575	558	541	524	507
		Medium Static	851	829	806	784	761	739	717	694	672	649	627
		High Static	955	937	919	901	883	866	848	830	812	794	776

NOTE: Do not adjust pulley further than 5 turns open.

■ – Factory settings

NOTE: Check the serial number of unit to verify production date.

SERIAL NUMBER

1	2	3	4	5	6	7	8	9	10
U	1	2	3	1	1	2	3	4	5

Manufacture Location

Week of Manufacture
(fiscal calendar)

Sequence Number

Year of Manufacture
(12 = 2012)

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 34 – RAS036 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR 3 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–1–60	187	253	16.6	79	325	1.5	STD	67%	4.9
					325	1.5	MED	67%	4.9
230–1–60	187	253	16.6	79	325	1.5	STD	67%	4.9
					325	1.5	MED	67%	4.9
208–3–60	187	253	10.4	73	325	1.5	STD	75%	5.2
					325	1.5	MED	75%	5.2
					325	1.5	HIGH	87%	6.9
230–3–60	187	253	10.4	73	325	1.5	STD	75%	5.2
					325	1.5	MED	75%	5.2
					325	1.5	HIGH	87%	6.7
460–3–60	414	506	5.8	38	325	0.8	STD	75%	2.6
					325	0.8	MED	75%	2.6
					325	0.8	HIGH	87%	3.4
575–3–60	518	633	3.8	37	325	0.6	STD	73%	2.4
					325	0.6	MED	73%	2.4
					325	0.6	HIGH	78%	2.0

Table 34 (cont.) – RAS048 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR 4 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–1–60	187	253	21.8	117	325	1.5	STD	67%	4.9
					325	1.5	MED	67%	4.9
230–1–60	187	253	21.8	117	325	1.5	STD	67%	4.9
					325	1.5	MED	67%	4.9
208–3–60	187	253	13.7	83	325	1.5	STD	75%	5.2
					325	1.5	MED	75%	5.2
					325	1.5	HIGH	87%	6.9
230–3–60	187	253	13.7	83	325	1.5	STD	75%	5.2
					325	1.5	MED	75%	5.2
					325	1.5	HIGH	87%	6.7
460–3–60	414	506	6.2	41	325	0.8	STD	75%	2.6
					325	0.8	MED	75%	2.6
					325	0.8	HIGH	87%	3.4
575–3–60	518	633	4.8	33	325	0.6	STD	73%	2.4
					325	0.6	MED	73%	2.4
					325	0.6	HIGH	78%	2.0

Table 34 (cont.) – RAS060 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR 5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–1–60	187	253	26.2	134	325	1.5	STD	67%	4.9
					325	1.5	MED	76%	7.0
230–1–60	187	253	26.2	134	325	1.5	STD	67%	4.9
					325	1.5	MED	76%	7.0
208–3–60	187	253	15.6	110	325	1.5	STD	75%	5.2
					325	1.5	MED	87%	6.9
					325	1.5	HIGH	89%	8.4
230–3–60	187	253	15.6	110	325	1.5	STD	75%	5.2
					325	1.5	MED	87%	6.7
					325	1.5	HIGH	89%	8.3
460–3–60	414	506	7.7	52	325	0.8	STD	75%	2.6
					325	0.8	MED	87%	3.4
					325	0.8	HIGH	89%	4.2
575–3–60	518	633	5.8	39	325	0.6	STD	73%	2.4
					325	0.6	MED	78%	2.0
					325	0.6	HIGH	77%	2.8

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 34 (cont.) – RAS072 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

6 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	19.0	123	325	1.5	STD	87%	6.9
					325	1.5	MED	89%	8.4
					325	1.5	HIGH	87%	10.6
230–3–60	187	253	19.0	123	325	1.5	STD	87%	6.7
					325	1.5	MED	89%	8.3
					325	1.5	HIGH	87%	10.6
460–3–60	414	506	9.7	62	325	0.8	STD	87%	3.4
					325	0.8	MED	89%	4.2
					325	0.8	HIGH	87%	5.3
575–3–60	518	633	7.4	50	325	0.6	STD	78%	2.0
					325	0.6	MED	77%	2.8
					325	0.6	HIGH	77%	2.8

Table 34 (cont.) – RAS091 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

7.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	25.0	164	325	1.5	STD	87%	5.2
					325	1.5	MED	89%	8.4
					325	1.5	HIGH	83%	13.6
230–3–60	187	253	25.0	164	325	1.5	STD	87%	4.9
					325	1.5	MED	89%	8.3
					325	1.5	HIGH	83%	12.7
460–3–60	414	506	12.2	100	325	0.8	STD	87%	2.5
					325	0.8	MED	89%	4.2
					325	0.8	HIGH	83%	6.4
575–3–60	518	633	9.0	78	325	0.6	STD	72%	1.6
					325	0.6	MED	77%	2.8
					325	0.6	HIGH	81%	5.6

Table 34 (cont.) – RAS090 2-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

7.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	13.6	83	13.6	83	325	1.5	STD	87%	5.2
							325	1.5	MED	89%	8.4
							325	1.5	HIGH	83%	13.6
230–3–60	187	253	13.6	83	13.6	83	325	1.5	STD	87%	4.9
							325	1.5	MED	89%	8.3
							325	1.5	HIGH	83%	12.7
460–3–60	414	506	6.1	41	6.1	41	325	0.8	STD	87%	2.5
							325	0.8	MED	89%	4.2
							325	0.8	HIGH	83%	6.4
575–3–60	518	633	4.2	33	4.2	33	325	0.6	STD	72%	1.6
							325	0.6	MED	77%	2.8
							325	0.6	HIGH	81%	5.6

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 34 (cont.) – RAS090 2-STAGE COOLING WITH 2 SPEED INDOOR FAN MOTOR

7.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	13.6	83	13.6	83	325	1.5	STD	0.84	5.8
							325	1.5	MED	0.85	8.6
							325	1.5	HIGH	0.84	13.6
230–3–60	187	253	13.6	83	13.6	83	325	1.5	STD	0.84	5.6
							325	1.5	MED	0.85	7.8
							325	1.5	HIGH	0.84	12.7
460–3–60	414	506	6.1	41	6.1	41	325	0.8	STD	0.79	2.9
							325	0.8	MED	0.85	3.8
							325	0.8	HIGH	0.84	6.4
575–3–60	518	633	4.2	33	4.2	33	325	0.6	STD	0.81	2.8
							325	0.6	MED	0.84	4.5
							325	0.6	HIGH	0.83	6.2

Table 34 (cont.) – RAS101 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

8.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM			
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA	
208–3–60	187	253	29.5	195	325	1.5	STD	87%	5.2	
					325	1.5	MED	87%	6.9	
					325	1.5	HIGH	87%	10.6	
230–3–60	187	253	29.5	195	325	1.5	STD	87%	4.9	
					325	1.5	MED	87%	6.7	
					325	1.5	HIGH	87%	10.6	
460–3–60	414	506	14.7	95	325	0.8	STD	87%	2.5	
					325	0.8	MED	87%	3.4	
					325	0.8	HIGH	87%	5.3	
575–3–60	518	633	12.2	80	325	0.6	STD	72%	1.6	
					325	0.6	MED	78%	2.0	
					325	0.6	HIGH	77%	2.8	

Table 34 (cont.) – RAS102 2-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

8.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	14.5	98	13.7	83	325	1.5	STD	87%	5.2
							325	1.5	MED	87%	6.9
							325	1.5	HIGH	87%	10.6
230–3–60	187	253	14.5	98	13.7	83	325	1.5	STD	87%	4.9
							325	1.5	MED	87%	6.7
							325	1.5	HIGH	87%	10.6
460–3–60	414	506	6.3	55	6.2	41	325	0.8	STD	87%	2.5
							325	0.8	MED	87%	3.4
							325	0.8	HIGH	87%	5.3
575–3–60	518	633	6.0	41	4.8	33	325	0.6	STD	72%	1.6
							325	0.6	MED	78%	2.0
							325	0.6	HIGH	77%	2.8

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 34 (cont.) – RAS102 2-STAGE COOLING WITH 2 SPEED INDOOR FAN MOTOR

8.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	14.5	98	13.7	83	325	1.5	STD	0.84	5.8
							325	1.5	MED	0.77	7.1
							325	1.5	HIGH	0.82	10.8
230–3–60	187	253	14.5	98	13.7	83	325	1.5	STD	0.84	5.6
							325	1.5	MED	0.77	6.8
							325	1.5	HIGH	0.82	9.8
460–3–60	414	506	6.3	55	6.2	41	325	0.8	STD	0.79	2.9
							325	0.8	MED	0.77	3.8
							325	0.8	HIGH	0.82	4.9
575–3–60	518	633	6.0	41	4.8	33	325	0.6	STD	0.81	2.8
							325	0.6	MED	0.80	3.5
							325	0.6	HIGH	0.84	4.5

Table 34 (cont.) – RAS121 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

10 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM			
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA	
208–3–60	187	253	30.1	225	325	1.5	STD	87%	6.9	
					325	1.5	MED	87%	10.6	
					325	1.5	HIGH	83%	13.6	
230–3–60	187	253	30.1	225	325	1.5	STD	87%	6.7	
					325	1.5	MED	87%	10.6	
					325	1.5	HIGH	83%	12.7	
460–3–60	414	506	16.7	114	325	0.8	STD	87%	3.4	
					325	0.8	MED	87%	5.3	
					325	0.8	HIGH	83%	6.4	
575–3–60	518	633	12.2	80	325	0.6	STD	78%	2.0	
					325	0.6	MED	77%	2.8	
					325	0.6	HIGH	81%	5.6	

Table 34 (cont.) – RAS120 2-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

10 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	15.6	110	15.9	110	325	1.5	STD	87%	6.9
							325	1.5	MED	87%	10.6
							325	1.5	HIGH	83%	13.6
230–3–60	187	253	15.6	110	15.9	110	325	1.5	STD	87%	6.7
							325	1.5	MED	87%	10.6
							325	1.5	HIGH	83%	12.7
460–3–60	414	506	7.7	52	7.7	52	325	0.8	STD	87%	3.4
							325	0.8	MED	87%	5.3
							325	0.8	HIGH	83%	6.4
575–3–60	518	633	5.8	39	5.7	39	325	0.6	STD	78%	2.0
							325	0.6	MED	77%	2.8
							325	0.6	HIGH	81%	5.6

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 34 (cont.) – RAS120 2-STAGE COOLING WITH 2 SPEED INDOOR FAN MOTOR

10 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	15.6	110	15.9	110	325	1.5	STD	0.77	7.1
							325	1.5	MED	0.82	10.8
							325	1.5	HIGH	0.84	13.6
230–3–60	187	253	15.6	110	15.9	110	325	1.5	STD	0.77	6.8
							325	1.5	MED	0.82	9.8
							325	1.5	HIGH	0.84	12.7
460–3–60	414	506	7.7	52	7.7	52	325	0.8	STD	0.77	3.8
							325	0.8	MED	0.82	4.9
							325	0.8	HIGH	0.84	6.4
575–3–60	518	633	5.8	39	5.7	39	325	0.6	STD	0.80	3.5
							325	0.6	MED	0.84	4.5
							325	0.6	HIGH	0.83	6.2

Table 34 (cont.) – RAS150 2-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

12.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	19.0	123	22.4	149	1070	6.2	STD	89%	8.4
							1070	6.2	MED	87%	10.6
							1070	6.2	HIGH	83%	13.6
230–3–60	187	253	19.0	123	22.4	149	1070	6.2	STD	89%	8.3
							1070	6.2	MED	87%	10.6
							1070	6.2	HIGH	83%	12.7
460–3–60	414	506	9.7	62	10.6	75	1070	3.1	STD	89%	4.2
							1070	3.1	MED	87%	5.3
							1070	3.1	HIGH	83%	6.4
575–3–60	518	633	7.4	50	7.7	54	1070	2.5	STD	77%	2.8
							1070	2.5	MED	77%	2.8
							1070	2.5	HIGH	81%	5.6

Table 34 (cont.) – RAS150 2-STAGE COOLING WITH 2 SPEED INDOOR FAN MOTOR

12.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	19.0	123	22.4	149	1070	6.2	STD	0.85	8.6
							1070	6.2	MED	0.82	10.8
							1070	6.2	HIGH	0.84	13.6
230–3–60	187	253	19.0	123	22.4	149	1070	6.2	STD	0.85	7.8
							1070	6.2	MED	0.82	9.8
							1070	6.2	HIGH	0.84	12.7
460–3–60	414	506	9.7	62	10.6	75	1070	3.1	STD	0.85	3.8
							1070	3.1	MED	0.82	4.9
							1070	3.1	HIGH	0.84	6.4
575–3–60	518	633	7.4	50	7.7	54	1070	2.5	STD	0.84	4.5
							1070	2.5	MED	0.84	4.5
							1070	2.5	HIGH	0.83	6.2

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 34 (cont.) – RAS180 2-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

15 TONS

V-Ph-Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	25.0	164	25.0	164	280	1.5	STD	89%	8.4
							280	1.5	MED	87%	10.6
							280	1.5	HIGH	90%	20.4
230-3-60	187	253	25.0	164	25.0	164	280	1.5	STD	89%	8.3
							280	1.5	MED	87%	10.6
							280	1.5	HIGH	90%	20.4
460-3-60	414	506	12.2	100	12.8	100	280	0.8	STD	89%	4.2
							280	0.8	MED	87%	5.3
							280	0.8	HIGH	90%	10.2
575-3-60	518	633	9.8	78	9.6	78	280	0.6	STD	77%	2.8
							280	0.6	MED	77%	2.8
							280	0.6	HIGH	94%	9.0

Table 34 (cont.) –RAS180 2-STAGE COOLING WITH 2 SPEED INDOOR FAN MOTOR

15 TONS

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	25.0	164	25.0	164	280	1.5	STD	0.85	8.6
							280	1.5	MED	0.82	10.8
							280	1.5	HIGH	0.90	20.4
230-3-60	187	253	25.0	164	25.0	164	280	1.5	STD	0.85	7.8
							280	1.5	MED	0.82	9.8
							280	1.5	HIGH	0.90	20.4
460-3-60	414	506	12.2	100	12.8	100	280	0.8	STD	0.85	3.8
							280	0.8	MED	0.82	4.9
							280	0.8	HIGH	0.90	10.2
575-3-60	518	633	9.8	78	9.6	78	280	0.6	STD	0.84	4.5
							280	0.6	MED	0.84	4.5
							280	0.6	HIGH	0.94	9

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 – RAS036

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/RE. (pwr fr/unit)
208/ 230–1–60	STD	101A00	4.4	3.3/4.0	–	–
		102A00	6.5	4.9/6.0	–	–
		103B00	8.7	6.5/8.0	037	037
		104B00	10.5	7.9/9.6	040	040
		102A00,102A00	13.0	9.8/11.9	040	040
208/ 230–3–60	STD	101A00	4.4	3.3/4.0	–	–
		102A00	6.5	4.9/6.0	–	–
		103B00	8.7	6.5/8.0	–	–
		104B00	10.5	7.9/9.6	–	–
		105A00	16.0	12.0/14.7	037	037
	HIGH	101A00	4.4	3.3/4.0	–	–
		102A00	6.5	4.9/6.0	–	–
		103B00	8.7	6.5/8.0	–	–
		104B00	10.5	7.9/9.6	–	–
		105A00	16.0	12.0/14.7	037	037
460–3–60	STD	106A00	6.0	5.5	–	–
		107A00	8.8	8.1	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
	HIGH	106A00	6.0	5.5	–	–
		107A00	8.8	8.1	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS036

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwr fr/unit)
208/ 230–1–60	STD	101A00	4.4	3.3/4.0	037	037
		102A00	6.5	4.9/6.0	037	037
		103B00	8.7	6.5/8.0	037	037
		104B00	10.5	7.9/9.6	040	040
		102A00, 102A00	13.0	9.8/11.9	040	040
208/ 230–3–60	STD	101A00	4.4	3.3/4.0	037	037
		102A00	6.5	4.9/6.0	037	037
		103B00	8.7	6.5/8.0	037	037
		104B00	10.5	7.9/9.6	037	037
		105A00	16.0	12.0/14.7	037	037
	HIGH	101A00	4.4	3.3/4.0	037	037
		102A00	6.5	4.9/6.0	037	037
		103B00	8.7	6.5/8.0	037	037
		104B00	10.5	7.9/9.6	037	037
		105A00	16.0	12.0/14.7	037	037
460–3–60	STD	106A00	6.0	5.5	–	–
		107A00	8.8	8.1	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
	HIGH	106A00	6.0	5.5	–	–
		107A00	8.8	8.1	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS048

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–1–60	STD	101A00	4.4	3.3/4.0	–	–
		103B00	8.7	6.5/8.0	037	037
		102A00,102A00	13.0	9.8/11.9	040	040
		103B00,103B00	17.4	13.1/16.0	040	040
		104B00,104B00	21.0	15.8/19.3	040	040
208/ 230–3–60	STD	102A00	6.5	4.9/6.0	–	–
		103B00	8.7	6.5/8.0	–	–
		105A00	16.0	12.0/14.7	037	037
		104B00,104B00	21.0	15.8/19.3	038	038
	HIGH	102A00	6.5	4.9/6.0	–	–
		103B00	8.7	6.5/8.0	–	–
		105A00	16.0	12.0/14.7	037	037
		104B00,104B00	21.0	15.8/19.3	038	038
460–3–60	STD	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037	037
	HIGH	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037	037

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS048

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwr fr/unit)
208/ 230–1–60	STD	101A00	4.4	3.3/4.0	037	037
		103B00	8.7	6.5/8.0	037	037
		102A00,102A00	13.0	9.8/11.9	040	040
		103B00,103B00	17.4	13.1/16.0	040	040
		104B00,104B00	21.0	15.8/19.3	040	040
208/ 230–3–60	STD	102A00	6.5	4.9/6.0	037	037
		103B00	8.7	6.5/8.0	037	037
		105A00	16.0	12.0/14.7	037	037
		104B00,104B00	21.0	15.8/19.3	038	038
	HIGH	102A00	6.5	4.9/6.0	037	037
		103B00	8.7	6.5/8.0	037	037
		105A00	16.0	12.0/14.7	037	037
		104B00,104B00	21.0	15.8/19.3	038	038
460–3–60	STD	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037	037
	HIGH	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037	037

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS060

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–1–60	STD	102A00	6.5	4.9/6.0	—	—
		103B00	8.7	6.5/8.0	037	037
		102A00,102A00	13.0	9.8/11.9	040	040
		103B00,103B00	17.4	13.1/16.0	040	040
		104B00,104B00	21.0	15.8/19.3	040	040
	MED	102A00	6.5	4.9/6.0	—	—
		103B00	8.7	6.5/8.0	037	037
		102A00,102A00	13.0	9.8/11.9	040	040
		103B00,103B00	17.4	13.1/16.0	040	040
		104B00,104B00	21.0	15.8/19.3	040	040
208/ 230–3–60	STD	102A00	6.5	4.9/6.0	—	—
		104B00	10.5	7.9/9.6	—	—
		105A00	16.0	12.0/14.7	037	037
		104B00,104B00	21.0	15.8/19.3	038	038
		104B00,105A00	26.5	19.9/24.3	038	038
	MED	102A00	6.5	4.9/6.0	—	—
		104B00	10.5	7.9/9.6	—	—
		105A00	16.0	12.0/14.7	037	037
		104B00,104B00	21.0	15.8/19.3	038	038
		104B00,105A00	26.5	19.9/24.3	038	038
	HIGH	102A00	6.5	4.9/6.0	—	—
		104B00	10.5	7.9/9.6	—	—
		105A00	16.0	12.0/14.7	037	038
		104B00,104B00	21.0	15.8/19.3	038	038
		104B00,105A00	26.5	19.9/24.3	038	038
460–3–60	STD	106A00	6.0	5.5	—	—
		108A00	11.5	10.6	—	—
		109A00	14.0	12.9	—	—
		108A00,108A00	23.0	21.1	037	037
		108A00,109A00	25.5	23.4	037	037
	MED	106A00	6.0	5.5	—	—
		108A00	11.5	10.6	—	—
		109A00	14.0	12.9	—	—
		108A00,108A00	23.0	21.1	037	037
		108A00,109A00	25.5	23.4	037	037
	HIGH	106A00	6.0	5.5	—	—
		108A00	11.5	10.6	—	—
		109A00	14.0	12.9	—	—
		108A00,108A00	23.0	21.1	037	037
		108A00,109A00	25.5	23.4	037	037

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS060

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–1–60	STD	102A00	6.5	4.9/6.0	037	037
		103B00	8.7	6.5/8.0	037	037
		102A00,102A00	13.0	9.8/11.9	040	040
		103B00,103B00	17.4	13.1/16.0	040	040
		104B00,104B00	21.0	15.8/19.3	040	040
	MED	102A00	6.5	4.9/6.0	037	037
		103B00	8.7	6.5/8.0	037	037
		102A00,102A00	13.0	9.8/11.9	040	040
		103B00,103B00	17.4	13.1/16.0	040	040
		104B00,104B00	21.0	15.8/19.3	040	040
208/ 230–3–60	STD	102A00	6.5	4.9/6.0	037	037
		104B00	10.5	7.9/9.6	037	037
		105A00	16.0	12.0/14.7	037	037
		104B00,104B00	21.0	15.8/19.3	038	038
		104B00,105A00	26.5	19.9/24.3	038	038
	MED	102A00	6.5	4.9/6.0	037	037
		104B00	10.5	7.9/9.6	037	037
		105A00	16.0	12.0/14.7	037	037
		104B00,104B00	21.0	15.8/19.3	038	038
		104B00,105A00	26.5	19.9/24.3	038	038
	HIGH	102A00	6.5	4.9/6.0	037	037
		104B00	10.5	7.9/9.6	037	037
		105A00	16.0	12.0/14.7	037	038
		104B00,104B00	21.0	15.8/19.3	038	038
		104B00,105A00	26.5	19.9/24.3	038	038
460–3–60	STD	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037	037
		108A00,109A00	25.5	23.4	037	037
	MED	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037	037
		108A00,109A00	25.5	23.4	037	037
	HIGH	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037	037
		108A00,109A00	25.5	23.4	037	037

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS072

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwr fr/unit)
208/ 230–3–60	STD	102A00	6.5	4.9/6.0	—	—
		104B00	10.5	7.9/9.6	—	—
		105A00	16.0	12.0/14.7	037	037
		104B00,104B00	21.0	15.8/19.3	038	038
		104B00,105A00	26.5	19.9/24.3	038	038
	MED	102A00	6.5	4.9/6.0	—	—
		104B00	10.5	7.9/9.6	—	—
		105A00	16.0	12.0/14.7	037	038
		104B00,104B00	21.0	15.8/19.3	038	038
		104B00,105A00	26.5	19.9/24.3	038	038
	HIGH	102A00	6.5	4.9/6.0	—	—
		104B00	10.5	7.9/9.6	—	—
		105A00	16.0	12.0/14.7	038	038
		104B00,104B00	21.0	15.8/19.3	038	038
		104B00,105A00	26.5	19.9/24.3	038	038
460–3–60	STD	106A00	6.0	5.5	—	—
		108A00	11.5	10.6	—	—
		109A00	14.0	12.9	—	—
		108A00,108A00	23.0	21.1	037	037
		108A00,109A00	25.5	23.4	037	037
	MED	106A00	6.0	5.5	—	—
		108A00	11.5	10.6	—	—
		109A00	14.0	12.9	—	—
		108A00,108A00	23.0	21.1	037	037
		108A00,109A00	25.5	23.4	037	037
	HIGH	106A00	6.0	5.5	—	—
		108A00	11.5	10.6	—	—
		109A00	14.0	12.9	—	—
		108A00,108A00	23.0	21.1	037	037
		108A00,109A00	25.5	23.4	037	037

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS072

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwr fr/unit)
208/ 230–3–60	STD	102A00	6.5	4.9/6.0	037	037
		104B00	10.5	7.9/9.6	037	037
		105A00	16.0	12.0/14.7	037	037
		104B00,104B00	21.0	15.8/19.3	038	038
		104B00,105A00	26.5	19.9/24.3	038	038
	MED	102A00	6.5	4.9/6.0	037	037
		104B00	10.5	7.9/9.6	037	037
		105A00	16.0	12.0/14.7	037	038
		104B00,104B00	21.0	15.8/19.3	038	038
		104B00,105A00	26.5	19.9/24.3	038	038
	HIGH	102A00	6.5	4.9/6.0	037	037
		104B00	10.5	7.9/9.6	037	037
		105A00	16.0	12.0/14.7	038	038
		104B00,104B00	21.0	15.8/19.3	038	038
		104B00,105A00	26.5	19.9/24.3	038	038
460–3–60	STD	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037	037
		108A00,109A00	25.5	23.4	037	037
	MED	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037	037
		108A00,109A00	25.5	23.4	037	037
	HIGH	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037	037
		108A00,109A00	25.5	23.4	037	037

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS091

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	042	042
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
	MED	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	042	043
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
	HIGH	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	043	043
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
460–3–60	STD	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
	MED	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
	HIGH	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
575–3–60	STD	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	042
	MED	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	042
	HIGH	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	044

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS091

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	042	042
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
	MED	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	042	043
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
	HIGH	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	043	043
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
460–3–60	STD	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
	MED	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
	HIGH	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
575–3–60	STD	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	042
	MED	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	042
	HIGH	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	044

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS090

2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	042	042
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
	MED	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	042	043
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
	HIGH	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	043	043
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
460–3–60	STD	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
	MED	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
	HIGH	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
575–3–60	STD	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	042
	MED	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	042
	HIGH	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	044

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS090

2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	042	042
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
	MED	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	042	043
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
	HIGH	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	043	043
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
460–3–60	STD	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
	MED	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
	HIGH	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
575–3–60	STD	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	042
	MED	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	042
	HIGH	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	044

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS090

2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwr fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	042	042
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
	MED	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	042	043
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
	HIGH	117A00	10.4	7.8/9.6	042	042
		110A00	16.0	12.0/14.7	043	043
		111A00	24.8	18.6/22.8	043	043
		112A00	32.0	24.0/29.4	043	043
		112A00,117A00	42.4	31.8/38.9	045	045
460–3–60	STD	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
	MED	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
	HIGH	116A00	13.9	12.8	042	042
		113A00	16.5	15.2	042	042
		114A00	27.8	25.5	042	042
		115A00	33.0	30.3	042	042
		114A00,116A00	41.7	38.3	044	044
575–3–60	STD	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	042
	MED	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	044
	HIGH	118A00	17.0	17.0	042	042
		119A00	34.0	34.0	042	044

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS101

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 203–3–60	STD	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	047
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
	MED	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	049
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
	HIGH	117A00	10.4	7.8/9.6	047	049
		110A00	16.0	12.0/14.7	049	049
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS101

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 203–3–60	STD	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	047
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
	MED	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	049
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
	HIGH	117A00	10.4	7.8/9.6	047	049
		110A00	16.0	12.0/14.7	049	049
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS102

2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwr fr/unit)
208/ 203–3–60	STD	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	047
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
	MED	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	049
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	049	049
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS102

2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwr fr/unit)
208/ 203–3–60	STD	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	047
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
	MED	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	049
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	049	049
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS102

2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 203–3–60	STD	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	047
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
	MED	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	049
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	049	049
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS121

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	MED	117A00	10.4	7.8/9.6	047	049
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	HIGH	117A00	10.4	7.8/9.6	049	049
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
		118A00,119A00	51.0	51.0	050	050
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
		118A00,119A00	51.0	51.0	050	050
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
		118A00,119A00	51.0	51.0	050	050

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) –RAS121

1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrdr fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	MED	117A00	10.4	7.8/9.6	047	049
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	HIGH	117A00	10.4	7.8/9.6	049	049
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
		118A00,119A00	51.0	51.0	050	050
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
		118A00,119A00	51.0	51.0	050	050
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
		118A00,119A00	51.0	51.0	050	050

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS120

2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	MED	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
		118A00,119A00	51.0	51.0	050	050
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
		118A00,119A00	51.0	51.0	050	050
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
		118A00,119A00	51.0	51.0	050	050

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS120

2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	MED	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
		118A00,119A00	51.0	51.0	050	050
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
		118A00,119A00	51.0	51.0	050	050
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
		118A00,119A00	51.0	51.0	050	050

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS120

2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	MED	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
		118A00,119A00	51.0	51.0	050	050
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
		118A00,119A00	51.0	51.0	050	050
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
		118A00,119A00	51.0	51.0	050	050

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS150

2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	049	049
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	MED	117A00	10.4	7.8/9.6	049	049
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	HIGH	117A00	10.4	7.8/9.6	049	049
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
		118A00,119A00	51.0	51.0	050	050
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
		118A00,119A00	51.0	51.0	050	050
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
		118A00,119A00	51.0	51.0	050	050

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS150

2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	049	049
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	MED	117A00	10.4	7.8/9.6	049	049
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	HIGH	117A00	10.4	7.8/9.6	—	—
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
		118A00,119A00	51.0	51.0	050	050
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
		118A00,119A00	51.0	51.0	050	050
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
		118A00,119A00	51.0	51.0	050	050

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS150

2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	049	049
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	MED	117A00	10.4	7.8/9.6	049	049
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
	HIGH	117A00	10.4	7.8/9.6	—	—
		110A00	16.0	12.0/14.7	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
		112A00,110A00	50.0	37.6/45.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
		115A00,113A00	50.0	45.9	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
		118A00,119A00	51.0	51.0	050	050
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
		118A00,119A00	51.0	51.0	050	050
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	050
		118A00,119A00	51.0	51.0	050	050

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS180

2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwr fr/unit)
208/ 230–3–60	STD	291A00	16.5	12.4/15.2	049	049
		294A00	33.5	25.2/30.8	049	049
		288A00,294A00	43.5	32.7/40.0	051	051
		291A00,294A00	50.0	37.6/45.9	051	051
		294A00,294A00	67.0	50.3/61.5	053	053
	MED	291A00	16.5	12.4/15.2	049	049
		294A00	33.5	25.2/30.8	049	049
		288A00,294A00	43.5	32.7/40.0	051	051
		291A00,294A00	50.0	37.6/45.9	051	051
		294A00,294A00	67.0	50.3/61.5	053	053
	HIGH	291A00	16.5	12.4/15.2	049	049
		294A00	33.5	25.2/30.8	049	049
		288A00,294A00	43.5	32.7/40.0	051	051
		291A00,294A00	50.0	37.6/45.9	051	051
		294A00,294A00	67.0	50.3/61.5	053	053
460–3–60	STD	292A00	16.5	15.2	—	—
		295A00	33.5	30.8	047	047
		289A00,295A00	43.5	40.0	050	050
		292A00,295A00	50.0	45.9	050	050
		295A00,295A00	67.0	61.5	050	050
	MED	292A00	16.5	15.2	—	—
		295A00	33.5	30.8	047	047
		289A00,295A00	43.5	40.0	050	050
		292A00,295A00	50.0	45.9	050	050
		295A00,295A00	67.0	61.5	050	050
	HIGH	292A00	16.5	15.2	—	—
		295A00	33.5	30.8	050	050
		289A00,295A00	43.5	40.0	050	050
		292A00,295A00	50.0	45.9	050	050
		295A00,295A00	67.0	61.5	050	050
575–3–60	STD	293A00	16.5	15.2	—	—
		296A00	33.5	30.8	047	047
		290A00,296A00	43.5	40.0	047	050
		293A00,296A00	50.0	45.9	047	047
		296A00,296A00	67.0	61.5	050	050
	MED	293A00	16.5	15.2	—	—
		296A00	33.5	30.8	047	047
		290A00,296A00	43.5	40.0	047	050
		293A00,296A00	50.0	45.9	047	047
		296A00,296A00	67.0	61.5	050	050
	HIGH	293A00	16.5	15.2	—	—
		296A00	33.5	30.8	047	047
		290A00,296A00	43.5	40.0	050	050
		293A00,296A00	50.0	45.9	050	050
		296A00,296A00	67.0	61.5	050	050

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS180

2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR WITH FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	291A00	16.5	12.4/15.2	049	049
		294A00	33.5	25.2/30.8	049	049
		288A00,294A00	43.5	32.7/40.0	051	051
		291A00,294A00	50.0	37.6/45.9	051	051
		294A00,294A00	67.0	50.3/61.5	053	053
	MED	291A00	16.5	12.4/15.2	049	049
		294A00	33.5	25.2/30.8	049	049
		288A00,294A00	43.5	32.7/40.0	051	051
		291A00,294A00	50.0	37.6/45.9	051	051
		294A00,294A00	67.0	50.3/61.5	053	053
	HIGH	291A00	16.5	12.4/15.2	049	049
		294A00	33.5	25.2/30.8	049	049
		288A00,294A00	43.5	32.7/40.0	051	051
		291A00,294A00	50.0	37.6/45.9	051	051
		294A00,294A00	67.0	50.3/61.5	053	053
460–3–60	STD	292A00	16.5	15.2	—	—
		295A00	33.5	30.8	047	047
		289A00,295A00	43.5	40.0	050	050
		292A00,295A00	50.0	45.9	050	050
		295A00,295A00	67.0	61.5	050	050
	MED	292A00	16.5	15.2	—	—
		295A00	33.5	30.8	047	047
		289A00,295A00	43.5	40.0	050	050
		292A00,295A00	50.0	45.9	050	050
		295A00,295A00	67.0	61.5	050	050
	HIGH	292A00	16.5	15.2	—	—
		295A00	33.5	30.8	050	050
		289A00,295A00	43.5	40.0	050	050
		292A00,295A00	50.0	45.9	050	050
		295A00,295A00	67.0	61.5	050	050
575–3–60	STD	293A00	16.5	15.2	—	—
		296A00	33.5	30.8	047	047
		290A00,296A00	43.5	40.0	047	050
		293A00,296A00	50.0	45.9	047	047
		296A00,296A00	67.0	61.5	050	050
	MED	293A00	16.5	15.2	—	—
		296A00	33.5	30.8	047	047
		290A00,296A00	43.5	40.0	047	050
		293A00,296A00	50.0	45.9	047	047
		296A00,296A00	67.0	61.5	050	050
	HIGH	293A00	16.5	15.2	—	—
		296A00	33.5	30.8	047	047
		290A00,296A00	43.5	40.0	050	050
		293A00,296A00	50.0	45.9	050	050
		296A00,296A00	67.0	61.5	050	050

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRIC HEAT – ELECTRICAL INFORMATION (UNITS PRODUCED ON OR AFTER JULY 30, 2012)

Table 35 (cont.) – RAS180

2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR WITHOUT FACTORY INSTALLED NON-FUSED DISCONNECT

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	291A00	16.5	12.4/15.2	049	049
		294A00	33.5	25.2/30.8	049	049
		288A00,294A00	43.5	32.7/40.0	051	051
		291A00,294A00	50.0	37.6/45.9	051	051
		294A00,294A00	67.0	50.3/61.5	053	053
	MED	291A00	16.5	12.4/15.2	049	049
		294A00	33.5	25.2/30.8	049	049
		288A00,294A00	43.5	32.7/40.0	051	051
		291A00,294A00	50.0	37.6/45.9	051	051
		294A00,294A00	67.0	50.3/61.5	053	053
	HIGH	294A00	33.5	25.2/30.8	049	049
		288A00,294A00	43.5	32.7/40.0	051	051
		291A00,294A00	50.0	37.6/45.9	051	051
		294A00,294A00	67.0	50.3/61.5	053	053
	STD	292A00	16.5	15.2	—	—
		295A00	33.5	30.8	047	047
		289A00,295A00	43.5	40.0	050	050
		292A00,295A00	50.0	45.9	050	050
		295A00,295A00	67.0	61.5	050	050
460–3–60	MED	292A00	16.5	15.2	—	—
		295A00	33.5	30.8	047	047
		289A00,295A00	43.5	40.0	050	050
		292A00,295A00	50.0	45.9	050	050
		295A00,295A00	67.0	61.5	050	050
	HIGH	292A00	16.5	15.2	—	—
		295A00	33.5	30.8	050	050
		289A00,295A00	43.5	40.0	050	050
		292A00,295A00	50.0	45.9	050	050
		295A00,295A00	67.0	61.5	050	050
575–3–60	STD	293A00	16.5	15.2	—	—
		296A00	33.5	30.8	047	047
		290A00,296A00	43.5	40.0	047	050
		293A00,296A00	50.0	45.9	047	047
		296A00,296A00	67.0	61.5	050	050
	MED	293A00	16.5	15.2	—	—
		296A00	33.5	30.8	047	047
		290A00,296A00	43.5	40.0	047	050
		293A00,296A00	50.0	45.9	047	047
		296A00,296A00	67.0	61.5	050	050
	HIGH	293A00	16.5	15.2	—	—
		296A00	33.5	30.8	047	047
		290A00,296A00	43.5	40.0	050	050
		293A00,296A00	50.0	45.9	050	050
		296A00,296A00	67.0	61.5	050	050

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
PWRD	– Powered convenience outlet
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 36 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA

Model	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwr fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS036	208/230-1-60	STD	NONE	—	—	28	40	26	95	30	45	29	97
			101A	3.3/4.4	15.9/18.3	28/29	40/40	26/27	95/95	30/32	45/45	29/29	97/97
			102A	4.9/6.5	23.5/27.1	36/40	40/45	33/37	95/95	38/43	45/45	35/39	97/97
			103B	6.5/8.7	31.4/36.3	46/52	50/60	42/47	95/95	48/54	50/60	44/50	97/97
			104B	7.9/10.5	37.9/43.8	54/61	60/70	49/56	95/95	56/64	60/70	51/58	97/97
			102A+102A	9.8/13.0	46.9/54.2	65/74	70/80	60/68	95/95	68/77	70/80	62/70	97/97
	208/230-3-60	STD	NONE	—	—	20	30	20	96	22	30	22	98
			101A	3.3/4.4	9.2/10.6	20/20	30/30	20/20	96/96	22/23	30/30	22/22	98/98
			102A	4.9/6.5	13.6/15.6	24/26	30/30	22/24	96/96	26/29	30/30	24/26	98/98
			103B	6.5/8.7	18.1/20.9	30/33	30/35	27/30	96/96	32/35	35/40	29/32	98/98
			104B	7.9/10.5	21.9/25.3	34/39	35/40	31/35	96/96	37/41	40/45	33/37	98/98
			105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	96/96	51/57	60/60	47/52	98/98
		HIGH	NONE	—	—	22/22	30/30	22/21	134	24/24	30/30	24/24	136
			101A	3.3/4.4	9.2/10.6	22/22	30/30	22/21	134/134	24/24	30/30	24/24	136/136
			102A	4.9/6.5	13.6/15.6	26/28	30/30	24/26	134/134	28/31	30/35	26/28	136/136
			103B	6.5/8.7	18.1/20.9	32/35	35/35	29/32	134/134	34/37	35/40	31/34	136/136
			104B	7.9/10.5	21.9/25.3	36/40	40/40	33/37	134/134	39/43	40/45	35/39	136/136
			105A	12.0/16.0	33.4/38.5	51/57	60/60	46/52	134/134	53/59	60/60	49/54	136/136
		STD	NONE	—	—	11	15	11	49	12	15	12	50
			106A	6.0	7.2	13	15	11	49	14	15	12	50
			107A	8.8	10.6	17	20	15	49	18	20	16	50
			108A	11.5	13.8	21	25	19	49	22	25	20	50
			109A	14.0	16.8	25	25	22	49	26	30	23	50
	460-3-60	HIGH	NONE	—	—	12	15	12	68	13	15	13	69
			106A	6.0	7.2	14	15	12	68	15	15	13	69
			107A	8.8	10.6	18	20	16	68	19	20	17	69
			108A	11.5	13.8	22	25	20	68	23	25	21	69
			109A	14.0	16.8	26	30	23	68	27	30	24	69
		STD	NONE	—	—	8	15	8	46	10	15	10	48
			NONE	—	—	8	15	7	50	10	15	10	52
	575-3-60	STD	NONE	—	—	8	15	8	46	10	15	10	48
		HIGH	NONE	—	—	8	15	7	50	10	15	10	52

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 36 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont.)

Unit	NO M. V.–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwr fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS048	208/230–1–60	STD	NONE	–	–	34	50	32	133	36	50	35	135
			101A	3.3/4.4	15.9/18.3	34/34	50/50	32/32	133/133	36/36	50/50	35/35	135/135
			103B	6.5/8.7	31.4/36.3	46/52	50/60	42/47	133/133	48/54	50/60	44/50	135/135
			102A+102A	9.8/13.0	46.9/54.2	65/74	70/80	60/68	133/133	68/77	70/80	62/70	135/135
			103B+103B	13.1/17.4	62.8/72.5	85/97	90/100	78/89	133/133	87/100	90/100	80/91	135/135
			104B+104B	15.8/21.0	75.8/87.5	101/116	110/125	93/106	133/133	104/118	110/125	95/108	135/135
	208/230–3–60	STD	NONE	–	–	24	30	23	106	26	30	26	108
			102A	4.9/6.5	13.6/15.6	24/26	30/30	23/24	106/106	26/29	30/30	26/26	108/108
			103B	6.5/8.7	18.1/20.9	30/33	30/35	27/30	106/106	32/35	35/40	29/32	108/108
			105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	106/106	51/57	60/60	47/52	108/108
			104B+104B	15.8/21.0	43.8/50.5	62/70	70/70	56/64	106/106	64/72	70/80	59/66	108/108
		HIGH	NONE	–	–	26/26	30/30	25/25	144	28/28	40/40	28/27	146
			102A	4.9/6.5	13.6/15.6	26/28	30/30	25/26	144/144	28/31	40/40	28/28	146/146
			103B	6.5/8.7	18.1/20.9	32/35	35/35	29/32	144/144	34/37	40/40	31/34	146/146
			105A	12.0/16.0	33.4/38.5	51/57	60/60	46/52	144/144	53/59	60/60	49/54	146/146
			104B+104B	15.8/21.0	43.8/50.5	64/72	70/80	58/66	144/144	66/74	70/80	60/68	146/146
	460–3–60	STD	NONE	–	–	12	15	11	52	13	15	12	53
			106A	6.0	7.2	13	15	11	52	14	15	12	53
			108A	11.5	13.8	21	25	19	52	22	25	20	53
			109A	14.0	16.8	25	25	22	52	26	30	23	53
			108A+108A	23.0	27.7	38	40	35	52	40	40	36	53
		HIGH	NONE	–	–	12	15	12	71	13	15	13	72
			106A	6.0	7.2	14	15	12	71	15	15	13	72
			108A	11.5	13.8	22	25	20	71	23	25	21	72
			109A	14.0	16.8	26	30	23	71	27	30	24	72
			108A+108A	23.0	27.7	39	40	36	71	41	45	37	72
	575–3–60	STD	NONE	–	–	9	15	9	42	11	15	11	44
		HIGH	NONE	–	–	9	15	9	46	11	15	11	48

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 36 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont.)

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS060	208/230-1-60	STD	NONE	—	—	40	60	37	150	42	60	40	152
			102A	4.9/6.5	23.5/27.1	40/40	60/60	37/37	150/150	42/43	60/60	40/40	152/152
			103B	6.5/8.7	31.4/36.3	46/52	60/60	42/47	150/150	48/54	60/60	44/50	152/152
			102A+102A	9.8/13.0	46.9/54.2	65/74	70/80	60/68	150/150	68/77	70/80	62/70	152/152
			103B+103B	13.1/17.4	62.8/72.5	85/97	90/100	78/89	150/150	87/100	90/100	80/91	152/152
			104B+104B	15.8/21.0	75.8/87.5	101/116	110/125	93/106	150/150	104/118	110/125	95/108	152/152
		MED	NONE	—	—	42	60	40	175	44	60	42	177
			102A	4.9/6.5	23.5/27.1	42/43	60/60	40/40	175/175	44/45	60/60	42/42	177/177
			103B	6.5/8.7	31.4/36.3	48/55	60/60	44/50	175/175	51/57	60/60	46/52	177/177
			102A+102A	9.8/13.0	46.9/54.2	68/77	70/80	62/70	175/175	70/79	70/80	64/73	177/177
			103B+103B	13.1/17.4	62.8/72.5	88/100	90/100	80/91	175/175	90/102	90/110	82/94	177/177
			104B+104B	15.8/21.0	75.8/87.5	104/119	110/125	95/109	175/175	106/121	110/125	97/111	177/177
	208/230-3-60	STD	NONE	—	—	27	40	26	133	29	40	28	135
			102A	4.9/6.5	13.6/15.6	27/27	40/40	26/26	133/133	29/29	40/40	28/28	135/135
			104B	7.9/10.5	21.9/25.3	34/39	40/40	31/35	133/133	37/41	40/45	33/37	135/135
			105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	133/133	51/57	60/60	47/52	135/135
			104B+104B	15.8/21.0	43.8/50.5	62/70	70/70	56/64	133/133	64/72	70/80	59/66	135/135
			104B+105A	19.9/26.5	55.2/63.8	76/87	80/90	69/79	133/133	78/89	80/90	72/82	135/135
		MED	NONE	—	—	28/28	40/40	28/27	171	30/30	45/45	30/30	173
			102A	4.9/6.5	13.6/15.6	28/28	40/40	28/27	171/171	30/31	45/45	30/30	173/173
			104B	7.9/10.5	21.9/25.3	36/40	40/40	33/37	171/171	39/43	45/45	35/39	173/173
			105A	12.0/16.0	33.4/38.5	51/57	60/60	46/52	171/171	53/59	60/60	49/54	173/173
			104B+104B	15.8/21.0	43.8/50.5	64/72	70/80	58/66	171/171	66/74	70/80	60/68	173/173
			104B+105A	19.9/26.5	55.2/63.8	78/89	80/90	71/81	171/171	80/91	90/100	74/83	173/173
		HIGH	NONE	—	—	30/30	45/40	29/29	186	32/32	45/45	32/31	188
			102A	4.9/6.5	13.6/15.6	30/30	45/40	29/29	186/186	32/33	45/45	32/31	188/188
			104B	7.9/10.5	21.9/25.3	38/42	45/45	35/39	186/186	41/45	45/45	37/41	188/188
			105A	12.0/16.0	33.4/38.5	53/59	60/60	48/54	186/186	55/61	60/70	50/56	188/188
			104B+104B	15.8/21.0	43.8/50.5	66/74	70/80	60/68	186/186	68/76	70/80	62/70	188/188
			104B+105A	19.9/26.5	55.2/63.8	80/91	80/100	73/83	186/186	82/93	90/100	75/85	188/188
	460-3-60	STD	NONE	—	—	13	20	13	63	14	20	14	64
			106A	6.0	7.2	13	20	13	63	14	20	14	64
			108A	11.5	13.8	21	25	19	63	22	25	20	64
			109A	14.0	16.8	25	25	22	63	26	30	23	64
			108A+108A	23.0	27.7	38	40	35	63	40	40	36	64
			108A+109A	25.5	30.7	42	45	38	63	43	45	39	64
		MED	NONE	—	—	14	20	14	82	15	20	15	83
			106A	6.0	7.2	14	20	14	82	15	20	15	83
			108A	11.5	13.8	22	25	20	82	23	25	21	83
			109A	14.0	16.8	26	30	23	82	27	30	24	83
			108A+108A	23.0	27.7	39	40	36	82	41	45	37	83
			108A+109A	25.5	30.7	43	45	39	82	44	45	40	83
		HIGH	NONE	—	—	15	20	15	90	16	20	16	91
			106A	6.0	7.2	15	20	15	90	16	20	16	91
			108A	11.5	13.8	23	25	21	90	24	25	22	91
			109A	14.0	16.8	27	30	24	90	28	30	25	91
			108A+108A	23.0	27.7	40	40	37	90	42	45	38	91
			108A+109A	25.5	30.7	44	45	40	90	45	45	41	91
	575-3-60	STD	NONE	—	—	11	15	10	48	13	15	12	50
		MED	NONE	—	—	10	15	10	52	12	15	12	54
		HIGH	NONE	—	—	11	15	11	63	13	15	13	65

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 36 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont.)

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS072	208/230-3-60	STD	NONE	-	-	33/32	50/50	32/31	184	35/34	50/50	34/33	186
			102A	4.9/6.5	13.6/15.6	33/32	50/50	32/31	184/184	35/34	50/50	34/33	186/186
			104B	7.9/10.5	21.9/25.3	36/40	50/50	33/37	184/184	39/43	50/50	35/39	186/186
			105A	12.0/16.0	33.4/38.5	51/57	60/60	46/52	184/184	53/59	60/60	49/54	186/186
			104B+104B	15.8/21.0	43.8/50.5	64/72	70/80	58/66	184/184	66/74	70/80	60/68	186/186
			104B+105A	19.9/26.5	55.2/63.8	78/89	80/90	71/81	184/184	80/91	90/100	74/83	186/186
		MED	NONE	-	-	34/34	50/50	33/33	199	36/36	50/50	35/35	201
			102A	4.9/6.5	13.6/15.6	34/34	50/50	33/33	199/199	36/36	50/50	35/35	201/201
			104B	7.9/10.5	21.9/25.3	38/42	50/50	35/39	199/199	41/45	50/50	37/41	201/201
			105A	12.0/16.0	33.4/38.5	53/59	60/60	48/54	199/199	55/61	60/70	50/56	201/201
			104B+104B	15.8/21.0	43.8/50.5	66/74	70/80	60/68	199/199	68/76	70/80	62/70	201/201
			104B+105A	19.9/26.5	55.2/63.8	80/91	80/100	73/83	199/199	82/93	90/100	75/85	201/201
		HIGH	NONE	-	-	36	50	36	213	38	50	38	215
			102A	4.9/6.5	13.6/15.6	36/36	50/50	36/36	213/213	38/38	50/50	38/38	215/215
			104B	7.9/10.5	21.9/25.3	41/45	50/50	37/41	213/213	43/48	50/50	40/43	215/215
			105A	12.0/16.0	33.4/38.5	55/62	60/70	51/56	213/213	58/64	60/70	53/59	215/215
			104B+104B	15.8/21.0	43.8/50.5	68/77	70/80	63/70	213/213	71/79	80/80	65/72	215/215
			104B+105A	19.9/26.5	55.2/63.8	83/93	90/100	76/86	213/213	85/96	90/100	78/88	215/215
	460-3-60	STD	NONE	-	-	17	25	16	92	18	25	17	93
			106A	6.0	7.2	17	25	16	92	18	25	17	93
			108A	11.5	13.8	22	25	20	92	23	25	21	93
			109A	14.0	16.8	26	30	23	92	27	30	24	93
			108A+108A	23.0	27.7	39	40	36	92	41	45	37	93
			108A+109A	25.5	30.7	43	45	39	92	44	45	40	93
		MED	NONE	-	-	18	25	17	100	19	25	18	101
			106A	6.0	7.2	18	25	17	100	19	25	18	101
			108A	11.5	13.8	23	25	21	100	24	25	22	101
			109A	14.0	16.8	27	30	24	100	28	30	25	101
			108A+108A	23.0	27.7	40	40	37	100	42	45	38	101
			108A+109A	25.5	30.7	44	45	40	100	45	45	41	101
		HIGH	NONE	-	-	19	25	18	107	20	25	19	108
			106A	6.0	7.2	19	25	18	107	20	25	19	108
			108A	11.5	13.8	24	25	22	107	26	30	23	108
			109A	14.0	16.8	28	30	25	107	29	30	27	108
			108A+108A	23.0	27.7	42	45	38	107	43	45	39	108
			108A+109A	25.5	30.7	45	50	41	107	47	50	43	108
	575-3-60	STD	NONE	-	-	12	15	12	63	14	20	14	65
		MED	NONE	-	-	13	20	12	74	15	20	15	76
		HIGH	NONE	-	-	13	20	12	74	15	20	15	76

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 36 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont.)

UNIT	NO M. V—Ph—HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS091	208/230—3—60	STD	NONE	—	—	40/40	60/60	38/38	208	44/43	60/60	43/42	212
			117A	7.8/10.4	21.7/25.0	40/40	60/60	38/38	208/208	44/43	60/60	43/42	212/212
			110A	12.0/16.0	33.4/38.5	49/55	60/60	44/50	208/208	53/59	60/60	49/54	212/212
			111A	18.6/24.8	51.7/59.7	72/81	80/90	65/74	208/208	76/86	80/90	70/79	212/212
			112A	24.0/32.0	66.7/77.0	90/103	90/110	83/94	208/208	95/108	100/110	87/99	212/212
			112A+117A	31.8/42.4	88.4/102.0	117/134	125/150	108/123	208/208	122/139	125/150	112/127	212/212
		MED	NONE	—	—	43/43	60/60	42/42	244	47/47	60/60	46/46	248
			117A	7.8/10.4	21.7/25.0	43/43	60/60	42/42	244/244	47/47	60/60	46/46	248/248
			110A	12.0/16.0	33.4/38.5	53/59	60/60	48/54	244/244	57/64	60/70	52/58	248/248
			111A	18.6/24.8	51.7/59.7	76/85	80/90	69/78	244/244	80/90	80/90	73/83	248/248
			112A	24.0/32.0	66.7/77.0	94/107	100/110	86/98	244/244	99/112	100/125	91/102	248/248
			112A+117A	31.8/42.4	88.4/102.0	121/138	125/150	111/127	244/244	126/143	150/150	116/131	248/248
		HIGH	NONE	—	—	48/47	60/60	48/47	260	52/51	60/60	52/51	264
			117A	7.8/10.4	21.7/25.0	48/48	60/60	48/47	260/260	52/52	60/60	52/51	264/264
			110A	12.0/16.0	33.4/38.5	59/64	60/70	54/59	260/260	64/69	70/70	58/63	264/264
			111A	18.6/24.8	51.7/59.7	82/91	90/100	75/83	260/260	87/96	90/100	79/88	264/264
			112A	24.0/32.0	66.7/77.0	101/113	110/125	92/103	260/260	106/117	110/125	97/108	264/264
			112A+117A	31.8/42.4	88.4/102.0	128/144	150/150	117/132	260/260	133/149	150/150	122/136	264/264
	460—3—60	STD	NONE	—	—	20	30	19	122	22	30	21	124
			116A	13.9	16.7	24	30	22	122	27	30	24	124
			113A	16.5	19.8	28	30	26	122	31	35	28	124
			114A	27.8	33.4	45	45	41	122	48	50	43	124
			115A	33.0	39.7	53	60	49	122	55	60	51	124
			114A+116A	41.7	50.2	66	70	61	122	69	70	63	124
		MED	NONE	—	—	22	30	21	140	23	30	23	142
			116A	13.9	16.7	27	30	24	140	29	30	26	142
			113A	16.5	19.8	30	30	28	140	33	35	30	142
			114A	27.8	33.4	47	50	43	140	50	50	45	142
			115A	33.0	39.7	55	60	50	140	58	60	53	142
			114A+116A	41.7	50.2	68	70	63	140	71	80	65	142
		HIGH	NONE	—	—	24	30	23	148	26	30	25	150
			116A	13.9	16.7	29	30	27	148	32	35	29	150
			113A	16.5	19.8	33	35	30	148	35	35	32	150
			114A	27.8	33.4	50	50	46	148	52	60	48	150
			115A	33.0	39.7	58	60	53	148	60	60	55	150
			114A+116A	41.7	50.2	71	80	65	148	73	80	67	150
	575—3—60	STD	NONE	—	—	15	20	14	89	18	25	18	93
			118A	17.0	20.4	28	30	25	89	33	35	30	93
			119A	34.0	40.9	54	60	49	89	58	60	53	93
		MED	NONE	—	—	16	20	15	104	20	25	19	108
			118A	17.0	20.4	29	30	27	104	34	35	31	108
			119A	34.0	40.9	55	60	50	104	60	60	55	108
		HIGH	NONE	—	—	19	25	18	118	22	30	23	122
			118A	17.0	20.4	33	35	30	118	38	40	34	122
			119A	34.0	40.9	59	60	53	118	63	70	58	122

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 36 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont.)

UNIT	NO M. V.–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS90	208/230–3–60	STD	NONE	—	—	39/39	50/50	41/40	210	43/43	50/50	45/45	214
			117A	7.8/10.4	21.7/25.0	39/39	50/50	41/40	210/210	43/43	50/50	45/45	214/214
			110A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	210/210	53/59	60/60	49/54	214/214
			111A	18.6/24.8	51.7/59.7	72/81	80/90	65/74	210/210	76/86	80/90	70/79	214/214
			112A	24.0/32.0	66.7/77.0	90/103	90/110	83/94	210/210	95/108	100/110	87/99	214/214
			112A+117A	31.8/42.4	88.4/102.0	117/134	125/150	108/123	210/210	122/139	125/150	112/127	214/214
		MED	NONE	—	—	42/42	50/50	44/44	246	46/46	50/50	49/49	250
			117A	7.8/10.4	21.7/25.0	42/42	50/50	44/44	246/246	46/47	50/50	49/49	250/250
			110A	12.0/16.0	33.4/38.5	53/59	60/60	48/54	246/246	57/64	60/70	52/58	250/250
			111A	18.6/24.8	51.7/59.7	76/85	80/90	69/78	246/246	80/90	80/90	73/83	250/250
			112A	24.0/32.0	66.7/77.0	94/107	100/110	86/98	246/246	99/112	100/125	91/102	250/250
			112A+117A	31.8/42.4	88.4/102.0	121/138	125/150	111/127	246/246	126/143	150/150	116/131	250/250
		HIGH	NONE	—	—	48/47	60/50	50/49	262	51/51	60/60	55/54	266
			117A	7.8/10.4	21.7/25.0	48/48	60/50	50/49	262/262	51/52	60/60	55/54	266/266
			110A	12.0/16.0	33.4/38.5	59/64	60/70	54/59	262/262	64/69	70/70	58/63	266/266
			111A	18.6/24.8	51.7/59.7	82/91	90/100	75/83	262/262	87/96	90/100	79/88	266/266
			112A	24.0/32.0	66.7/77.0	101/113	110/125	92/103	262/262	106/117	110/125	97/108	266/266
			112A+117A	31.8/42.4	88.4/102.0	128/144	150/150	117/132	262/262	133/149	150/150	122/136	266/266
	460–3–60	STD	NONE	—	—	18	20	19	104	20	25	21	106
			116A	13.9	16.7	24	25	22	104	27	30	24	106
			113A	16.5	19.8	28	30	26	104	31	35	28	106
			114A	27.8	33.4	45	45	41	104	48	50	43	106
			115A	33.0	39.7	53	60	49	104	55	60	51	106
			114A+116A	41.7	50.2	66	70	61	104	69	70	63	106
		MED	NONE	—	—	20	25	21	122	22	25	23	124
			116A	13.9	16.7	27	30	24	122	29	30	26	124
			113A	16.5	19.8	30	30	28	122	33	35	30	124
			114A	27.8	33.4	47	50	43	122	50	50	45	124
			115A	33.0	39.7	55	60	50	122	58	60	53	124
			114A+116A	41.7	50.2	68	70	63	122	71	80	65	124
		HIGH	NONE	—	—	22	25	23	130	24	30	25	132
			116A	13.9	16.7	29	30	27	130	32	35	29	132
			113A	16.5	19.8	33	35	30	130	35	35	32	132
			114A	27.8	33.4	50	50	46	130	52	60	48	132
			115A	33.0	39.7	58	60	53	130	60	60	55	132
			114A+116A	41.7	50.2	71	80	65	130	73	80	67	132
	575–3–60	STD	NONE	—	—	13	15	13	77	17	20	17	81
			118A	17.0	20.4	28	30	25	77	33	35	30	81
			119A	34.0	40.9	54	60	49	77	58	60	53	81
		MED	NONE	—	—	14	15	14	92	18	20	19	96
			118A	17.0	20.4	29	30	27	92	34	35	31	96
			119A	34.0	40.9	55	60	50	92	60	60	55	96
		HIGH	NONE	—	—	17	20	17	106	21	25	22	110
			118A	17.0	20.4	33	35	30	106	38	40	34	110
			119A	34.0	40.9	59	60	53	106	63	70	58	110

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 36 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont.)

UNIT	NO M. V—Ph—HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS101	208/230—3—60	STD	NONE	—	—	46/45	60/60	43/43	239	49/49	60/60	48/47	243
			117A	7.8/10.4	21.7/25.0	46/45	60/60	43/43	239/239	49/49	60/60	48/47	243/243
			110A	12.0/16.0	33.4/38.5	49/55	60/60	44/50	239/239	53/59	60/60	49/54	243/243
			111A	18.6/24.8	51.7/59.7	72/81	80/90	65/74	239/239	76/86	80/90	70/79	243/243
			112A	24.0/32.0	66.7/77.0	90/103	90/110	83/94	239/239	95/108	100/110	87/99	243/243
			112A+117A	31.8/42.4	88.4/102.0	117/134	125/150	108/123	239/239	122/139	125/150	112/127	243/243
		MED	NONE	—	—	47/47	60/60	45/45	260	51/51	60/60	50/49	264
			117A	7.8/10.4	21.7/25.0	47/47	60/60	45/45	260/260	51/51	60/60	50/49	264/264
			110A	12.0/16.0	33.4/38.5	51/57	60/60	46/52	260/260	56/62	60/70	51/56	264/264
			111A	18.6/24.8	51.7/59.7	74/83	80/90	67/76	260/260	78/88	80/90	72/81	264/264
			112A	24.0/32.0	66.7/77.0	92/105	100/110	85/96	260/260	97/110	100/110	89/101	264/264
			112A+117A	31.8/42.4	88.4/102.0	120/136	125/150	110/125	260/260	124/141	125/150	114/129	264/264
		HIGH	NONE	—	—	51	60	50	289	55	80	54	293
			117A	7.8/10.4	21.7/25.0	51/51	60/60	50/50	289/289	55/55	80/80	54/54	293/293
			110A	12.0/16.0	33.4/38.5	55/62	60/70	51/56	289/289	60/67	80/80	55/61	293/293
			111A	18.6/24.8	51.7/59.7	78/88	80/90	72/81	289/289	83/93	90/100	76/85	293/293
			112A	24.0/32.0	66.7/77.0	97/110	100/110	89/101	289/289	102/115	110/125	93/105	293/293
			112A+117A	31.8/42.4	88.4/102.0	124/141	125/150	114/129	289/289	129/146	150/150	118/134	293/293
	460—3—60	STD	NONE	—	—	23	30	22	117	25	30	24	119
			116A	13.9	16.7	24	30	22	117	27	30	24	119
			113A	16.5	19.8	28	30	26	117	31	35	28	119
			114A	27.8	33.4	45	45	41	117	48	50	43	119
			115A	33.0	39.7	53	60	49	117	55	60	51	119
			114A+116A	41.7	50.2	66	70	61	117	69	70	63	119
		MED	NONE	—	—	24	30	23	127	26	30	25	129
			116A	13.9	16.7	26	30	23	127	28	30	25	129
			113A	16.5	19.8	29	30	27	127	32	35	29	129
			114A	27.8	33.4	46	50	42	127	49	50	44	129
			115A	33.0	39.7	54	60	50	127	57	60	52	129
			114A+116A	41.7	50.2	67	70	62	127	70	70	64	129
		HIGH	NONE	—	—	26	30	25	142	28	40	27	144
			116A	13.9	16.7	28	30	25	142	30	40	27	144
			113A	16.5	19.8	32	35	29	142	34	40	31	144
			114A	27.8	33.4	49	50	45	142	51	60	47	144
			115A	33.0	39.7	57	60	52	142	59	60	54	144
			114A+116A	41.7	50.2	70	70	64	142	72	80	66	144
	575—3—60	STD	NONE	—	—	19	30	17	91	22	30	22	95
			118A	17.0	20.4	28	30	25	91	33	35	30	95
			119A	34.0	40.9	54	60	49	91	58	60	53	95
		MED	NONE	—	—	19	30	18	95	23	30	22	99
			118A	17.0	20.4	28	30	26	95	33	35	30	99
			119A	34.0	40.9	54	60	49	95	59	60	54	99
		HIGH	NONE	—	—	20	30	19	106	24	30	23	110
			118A	17.0	20.4	29	30	27	106	34	35	31	110
			119A	34.0	40.9	55	60	50	106	60	60	55	110

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 36 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont.)

UNIT	NO M. V—Ph—HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS102	208/230—3—60	STD	NONE	—	—	40/40	50/50	42/42	225	44/44	50/50	46/46	229
			117A	7.8/10.4	21.7/25.0	40/40	50/50	42/42	225/225	44/44	50/50	46/46	229/229
			110A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	225/225	53/59	60/60	49/54	229/229
			111A	18.6/24.8	51.7/59.7	72/81	80/90	65/74	225/225	76/86	80/90	70/79	229/229
			112A	24.0/32.0	66.7/77.0	90/103	90/110	83/94	225/225	95/108	100/110	87/99	229/229
			112A+117A	31.8/42.4	88.4/102.0	117/134	125/150	108/123	225/225	122/139	125/150	112/127	229/229
		MED	NONE	—	—	42/42	50/50	44/44	246	46/46	60/50	48/48	250
			117A	7.8/10.4	21.7/25.0	42/42	50/50	44/44	246/246	46/46	60/50	48/48	250/250
			110A	12.0/16.0	33.4/38.5	51/57	60/60	46/52	246/246	56/62	60/70	51/56	250/250
			111A	18.6/24.8	51.7/59.7	74/83	80/90	67/76	246/246	78/88	80/90	72/81	250/250
			112A	24.0/32.0	66.7/77.0	92/105	100/110	85/96	246/246	97/110	100/110	89/101	250/250
			112A+117A	31.8/42.4	88.4/102.0	120/136	125/150	110/125	246/246	124/141	125/150	114/129	250/250
		HIGH	NONE	—	—	46	50	48	275	50	60	52	279
			117A	7.8/10.4	21.7/25.0	46/46	50/50	48/48	275/275	50/50	60/60	52/52	279/279
			110A	12.0/16.0	33.4/38.5	55/62	60/70	51/56	275/275	60/67	60/70	55/61	279/279
			111A	18.6/24.8	51.7/59.7	78/88	80/90	72/81	275/275	83/93	90/100	76/85	279/279
			112A	24.0/32.0	66.7/77.0	97/110	100/110	89/101	275/275	102/115	110/125	93/105	279/279
			112A+117A	31.8/42.4	88.4/102.0	124/141	125/150	114/129	275/275	129/146	150/150	118/134	279/279
	460—3—60	STD	NONE	—	—	19	20	19	118	20	25	21	120
			116A	13.9	16.7	24	25	22	118	27	30	24	120
			113A	16.5	19.8	28	30	26	118	31	35	28	120
			114A	27.8	33.4	45	45	41	118	48	50	43	120
			115A	33.0	39.7	53	60	49	118	55	60	51	120
			114A+116A	41.7	50.2	66	70	61	118	69	70	63	120
		MED	NONE	—	—	20	25	20	128	21	25	22	130
			116A	13.9	16.7	26	30	23	128	28	30	25	130
			113A	16.5	19.8	29	30	27	128	32	35	29	130
			114A	27.8	33.4	46	50	42	128	49	50	44	130
			115A	33.0	39.7	54	60	50	128	57	60	52	130
			114A+116A	41.7	50.2	67	70	62	128	70	70	64	130
		HIGH	NONE	—	—	21	25	22	143	23	25	24	145
			116A	13.9	16.7	28	30	25	143	30	30	27	145
			113A	16.5	19.8	32	35	29	143	34	35	31	145
			114A	27.8	33.4	49	50	45	143	51	60	47	145
			115A	33.0	39.7	57	60	52	143	59	60	54	145
			114A+116A	41.7	50.2	70	70	64	143	72	80	66	145
	575—3—60	STD	NONE	—	—	16	20	16	85	19	25	20	89
			118A	17.0	20.4	28	30	25	85	33	35	30	89
			119A	34.0	40.9	54	60	49	85	58	60	53	89
		MED	NONE	—	—	16	20	16	89	20	25	20	93
			118A	17.0	20.4	28	30	26	89	33	35	30	93
			119A	34.0	40.9	54	60	49	89	59	60	54	93
		HIGH	NONE	—	—	17	20	17	100	21	25	21	104
			118A	17.0	20.4	29	30	27	100	34	35	31	104
			119A	34.0	40.9	55	60	50	100	60	60	55	104

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 36 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont.)

UNIT	NO M. V. – Ph–Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO RE.				w/ RE. (pwr fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS121	208/230–3–60	STD	NONE	–	–	48/48	60/60	46/46	290	52/52	60/60	50/50	294
			117A	7.8/10.4	21.7/25.0	48/48	60/60	46/46	290/290	52/52	60/60	50/50	294/294
			110A	12.0/16.0	33.4/38.5	51/57	60/60	46/52	290/290	56/62	60/80	51/56	294/294
			112A	24.0/32.0	66.7/77.0	92/105	100/110	85/96	290/290	97/110	100/110	89/101	294/294
			112A+117A	31.8/42.4	88.4/102.0	120/136	125/150	110/125	290/290	124/141	125/150	114/129	294/294
			112A+110A	37.6/50.0	104.2/120.3	139/129	150/150	128/146	290/290	144/134	150/150	132/150	294/294
		MED	NONE	–	–	52	60	50	319	55	80	55	323
			117A	7.8/10.4	21.7/25.0	52/52	60/60	50/50	319/319	55/55	80/80	55/55	323/323
			110A	12.0/16.0	33.4/38.5	55/62	60/80	51/56	319/319	60/67	80/80	55/61	323/323
			112A	24.0/32.0	66.7/77.0	97/110	100/110	89/101	319/319	102/115	110/125	93/105	323/323
			112A+117A	31.8/42.4	88.4/102.0	124/141	125/150	114/129	319/319	129/146	150/150	118/134	323/323
			112A+110A	37.6/50.0	104.2/120.3	144/134	150/150	132/151	319/319	149/139	150/150	136/155	323/323
		HIGH	NONE	–	–	55/54	80/80	54/53	321	58/58	80/80	58/57	325
			117A	7.8/10.4	21.7/25.0	55/54	80/80	54/53	321/321	58/58	80/80	58/57	325/325
			110A	12.0/16.0	33.4/38.5	59/64	80/80	54/59	321/321	64/69	80/80	58/63	325/325
			112A	24.0/32.0	66.7/77.0	101/113	110/125	92/103	321/321	106/117	110/125	97/108	325/325
			112A+117A	31.8/42.4	88.4/102.0	128/144	150/150	117/132	321/321	133/149	150/150	122/136	325/325
			112A+110A	37.6/50.0	104.2/120.3	148/137	150/150	135/153	321/321	152/141	175/175	140/157	325/325
	460–3–60	STD	NONE	–	–	26	40	25	146	28	40	27	148
			116A	13.9	16.7	26	40	25	146	28	40	27	148
			113A	16.5	19.8	29	40	27	146	32	40	29	148
			115A	33.0	39.7	54	60	50	146	57	60	52	148
			114A+116A	41.7	50.2	67	70	62	146	70	70	64	148
			115A+113A	50.0	60.1	65	70	73	146	67	70	75	148
		MED	NONE	–	–	28	40	27	161	30	45	29	163
			116A	13.9	16.7	28	40	27	161	30	45	29	163
			113A	16.5	19.8	32	40	29	161	34	45	31	163
			115A	33.0	39.7	57	60	52	161	59	60	54	163
			114A+116A	41.7	50.2	70	70	64	161	72	80	66	163
			115A+113A	50.0	60.1	67	80	75	161	69	80	77	163
		HIGH	NONE	–	–	29	45	28	162	31	45	30	164
			116A	13.9	16.7	29	45	28	162	32	45	30	164
			113A	16.5	19.8	33	45	30	162	35	45	32	164
			115A	33.0	39.7	58	60	53	162	60	60	55	164
			114A+116A	41.7	50.2	71	80	65	162	73	80	67	164
			115A+113A	50.0	60.1	69	80	76	162	71	80	79	164
	575–3–60	STD	NONE	–	–	19	30	18	95	23	30	22	99
			118A	17.0	20.4	28	30	26	95	33	35	30	99
			119A	34.0	40.9	54	60	49	95	59	60	54	99
			118A+119A	51.0	61.3	64	70	73	95	69	80	77	99
		MED	NONE	–	–	20	30	19	106	24	30	23	110
			118A	17.0	20.4	29	30	27	106	34	35	31	110
			119A	34.0	40.9	55	60	50	106	60	60	55	110
			118A+119A	51.0	61.3	65	70	74	106	70	80	78	110
		HIGH	NONE	–	–	23	30	22	120	26	30	26	124
			118A	17.0	20.4	33	35	30	120	38	40	34	124
			119A	34.0	40.9	59	60	53	120	63	70	58	124
			118A+119A	51.0	61.3	69	80	77	120	74	80	81	124

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 36 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont.)

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwr fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS120	208/230-3-60	STD	NONE	—	—	46/46	60/60	48/47	285	50/49	60/60	52/52	289
			117A	7.8/10.4	21.7/25.0	46/46	60/60	48/47	285/285	50/49	60/60	52/52	289/289
			110A	12.0/16.0	33.4/38.5	51/57	60/60	48/52	285/285	56/62	60/70	52/56	289/289
			112A	24.0/32.0	66.7/77.0	92/105	100/110	85/96	285/285	97/110	100/110	89/101	289/289
			112A+117A	31.8/42.4	88.4/102.0	120/136	125/150	110/125	285/285	124/141	125/150	114/129	289/289
			112A+110A	37.6/50.0	104.2/120.3	139/129	150/150	128/146	285/285	144/134	150/150	132/150	289/289
		MED	NONE	—	—	50	60	52	314	53	60	56	318
			117A	7.8/10.4	21.7/25.0	50/50	60/60	52/52	314/314	53/53	60/60	56/56	318/318
			110A	12.0/16.0	33.4/38.5	55/62	60/70	52/56	314/314	60/67	60/70	56/61	318/318
			112A	24.0/32.0	66.7/77.0	97/110	100/110	89/101	314/314	102/115	110/125	93/105	318/318
			112A+117A	31.8/42.4	88.4/102.0	124/141	125/150	114/129	314/314	129/146	150/150	118/134	318/318
			112A+110A	37.6/50.0	104.2/120.3	144/134	150/150	132/151	314/314	149/139	150/150	136/155	318/318
		HIGH	NONE	—	—	53/52	60/60	55/54	316	56/55	60/60	60/59	320
			117A	7.8/10.4	21.7/25.0	53/52	60/60	55/54	316/316	56/55	60/60	60/59	320/320
			110A	12.0/16.0	33.4/38.5	59/64	60/70	55/59	316/316	64/69	70/70	60/63	320/320
			112A	24.0/32.0	66.7/77.0	101/113	110/125	92/103	316/316	106/117	110/125	97/108	320/320
			112A+117A	31.8/42.4	88.4/102.0	128/144	150/150	117/132	316/316	133/149	150/150	122/136	320/320
			112A+110A	37.6/50.0	104.2/120.3	148/137	150/150	135/153	316/316	152/141	175/175	140/157	320/320
	460-3-60	STD	NONE	—	—	23	30	23	136	25	30	26	138
			116A	13.9	16.7	26	30	23	136	28	30	26	138
			113A	16.5	19.8	29	30	27	136	32	35	29	138
			115A	33.0	39.7	54	60	50	136	57	60	52	138
			114A+116A	41.7	50.2	67	70	62	136	70	70	64	138
			115A+113A	50.0	60.1	65	70	73	136	67	70	75	138
		MED	NONE	—	—	25	30	26	151	26	30	28	153
			116A	13.9	16.7	28	30	26	151	30	30	28	153
			113A	16.5	19.8	32	35	29	151	34	35	31	153
			115A	33.0	39.7	57	60	52	151	59	60	54	153
			114A+116A	41.7	50.2	70	70	64	151	72	80	66	153
			115A+113A	50.0	60.1	67	80	75	151	69	80	77	153
		HIGH	NONE	—	—	26	30	27	152	28	30	29	154
			116A	13.9	16.7	29	30	27	152	32	35	29	154
			113A	16.5	19.8	33	35	30	152	35	35	32	154
			115A	33.0	39.7	58	60	53	152	60	60	55	154
			114A+116A	41.7	50.2	71	80	65	152	73	80	67	154
			115A+113A	50.0	60.1	69	80	76	152	71	80	79	154
	575-3-60	STD	NONE	—	—	17	20	17	93	20	25	21	97
			118A	17.0	20.4	28	30	26	93	33	35	30	97
			119A	34.0	40.9	54	60	49	93	59	60	54	97
			118A+119A	51.0	61.3	64	70	73	93	69	80	77	97
		MED	NONE	—	—	17	20	18	104	21	25	22	108
			118A	17.0	20.4	29	30	27	104	34	35	31	108
			119A	34.0	40.9	55	60	50	104	60	60	55	108
			118A+119A	51.0	61.3	65	70	74	104	70	80	78	108
		HIGH	NONE	—	—	20	25	21	118	24	30	25	122
			118A	17.0	20.4	33	35	30	118	38	40	34	122
			119A	34.0	40.9	59	60	53	118	63	70	58	122
			118A+119A	51.0	61.3	69	80	77	118	74	80	81	122

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 36 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont.)

Unit	NO M. V. – Ph–Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO RE.				w/ RE. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS150	208/230–3–60	STD	NONE	–	–	62/62	80/80	64/64	376	66/66	80/80	69/69	380
			117A	7.8/10.4	21.7/25.0	62/62	80/80	64/64	376/376	66/66	80/80	69/69	380/380
			110A	12.0/16.0	33.4/38.5	62/62	80/80	64/64	376/376	66/66	80/80	69/69	380/380
			112A	24.0/32.0	66.7/77.0	94/107	100/110	86/98	376/376	99/112	100/125	91/102	380/380
			112A+117A	31.8/42.4	88.4/102.0	121/138	125/150	111/127	376/376	126/143	150/150	116/131	380/380
			112A+110A	37.6/50.0	104.2/120.3	141/131	150/150	129/148	376/376	146/136	150/150	134/152	380/380
		MED	NONE	–	–	64	80	67	390	68	80	71	394
			117A	7.8/10.4	21.7/25.0	64/64	80/80	67/67	390/390	68/68	80/80	71/71	394/394
			110A	12.0/16.0	33.4/38.5	64/64	80/80	67/67	390/390	68/68	80/80	71/71	394/394
			112A	24.0/32.0	66.7/77.0	97/110	100/110	89/101	390/390	102/115	110/125	93/105	394/394
			112A+117A	31.8/42.4	88.4/102.0	124/141	125/150	114/129	390/390	129/146	150/150	118/134	394/394
			112A+110A	37.6/50.0	104.2/120.3	144/134	150/150	132/151	390/390	149/139	150/150	136/155	394/394
		HIGH	NONE	–	–	67/66	80/80	70/69	392	71/70	80/80	75/74	396
			117A	7.8/10.4	21.7/25.0	67/66	80/80	70/69	392/392	71/70	80/80	75/74	396/396
			110A	12.0/16.0	33.4/38.5	67/66	80/80	70/69	392/392	71/70	80/80	75/74	396/396
			112A	24.0/32.0	66.7/77.0	101/113	110/125	92/103	392/392	106/117	110/125	97/108	396/396
			112A+117A	31.8/42.4	88.4/102.0	128/144	150/150	117/132	392/392	133/149	150/150	122/136	396/396
			112A+110A	37.6/50.0	104.2/120.3	148/137	150/150	135/153	392/392	152/141	175/175	140/157	396/396
	460–3–60	STD	NONE	–	–	31	40	32	189	33	40	34	191
			116A	13.9	16.7	31	40	32	189	33	40	34	191
			113A	16.5	19.8	31	40	32	189	33	40	34	191
			115A	33.0	39.7	55	60	50	189	58	60	53	191
			114A+116A	41.7	50.2	68	70	63	189	71	80	65	191
			115A+113A	50.0	60.1	66	70	74	189	68	80	76	191
		MED	NONE	–	–	32	40	33	196	34	40	35	198
			116A	13.9	16.7	32	40	33	196	34	40	35	198
			113A	16.5	19.8	32	40	33	196	34	40	35	198
			115A	33.0	39.7	57	60	52	196	59	60	54	198
			114A+116A	41.7	50.2	70	70	64	196	72	80	66	198
			115A+113A	50.0	60.1	67	80	75	196	69	80	77	198
		HIGH	NONE	–	–	33	40	34	197	35	40	36	199
			116A	13.9	16.7	33	40	34	197	35	40	36	199
			113A	16.5	19.8	33	40	34	197	35	40	36	199
			115A	33.0	39.7	58	60	53	197	60	60	55	199
			114A+116A	41.7	50.2	71	80	65	197	73	80	67	199
			115A+113A	50.0	60.1	69	80	76	197	71	80	79	199
	575–3–60	STD	NONE	–	–	23	30	23	142	27	30	28	146
			118A	17.0	20.4	29	30	27	142	34	35	31	146
			119A	34.0	40.9	55	60	50	142	60	60	55	146
			118A+119A	51.0	61.3	65	70	74	142	70	80	78	146
		MED	NONE	–	–	23	30	23	142	27	30	28	146
			118A	17.0	20.4	29	30	27	142	34	35	31	146
			119A	34.0	40.9	55	60	50	142	60	60	55	146
			118A+119A	51.0	61.3	65	70	74	142	70	80	78	146
		HIGH	NONE	–	–	26	30	27	156	29	35	31	160
			118A	17.0	20.4	33	35	30	156	38	40	34	160
			119A	34.0	40.9	59	60	53	156	63	70	58	160
			118A+119A	51.0	61.3	69	80	77	156	74	80	81	160

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 36 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA (cont.)

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwr fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS180	208/230-3-60	STD	NONE	—	—	70/70	80/80	72/72	412	73/73	80/80	77/77	416
			291A	12.4/16.5	34.4/39.7	70/70	80/80	72/72	412/412	73/73	80/80	77/77	416/416
			294A	25.2/33.5	69.9/80.6	98/112	100/125	90/102	412/412	103/116	110/125	94/107	416/416
			288A+294A	32.7/43.5	90.7/104.7	124/142	125/150	114/130	412/412	129/146	150/150	118/134	416/416
			291A+294A	37.6/50.0	104.3/120.3	141/131	150/150	130/148	412/412	146/136	150/150	134/152	416/416
			294A+294A	50.3/67.0	139.7/161.2	151/172	175/200	170/195	412/412	155/177	175/200	175/199	416/416
		MED	NONE	—	—	72	80	75	426	76	100	79	430
			291A	12.4/16.5	34.4/39.7	72/72	80/80	75/75	426/426	76/76	100/100	79/79	430/430
			294A	25.2/33.5	69.9/80.6	101/114	110/125	93/105	426/426	106/119	110/125	97/109	430/430
			288A+294A	32.7/43.5	90.7/104.7	127/145	150/150	116/133	426/426	132/149	150/150	121/137	430/430
			291A+294A	37.6/50.0	104.3/120.3	144/134	150/150	132/151	426/426	149/139	150/150	137/155	430/430
			294A+294A	50.3/67.0	139.7/161.2	153/175	175/200	173/198	426/426	158/180	175/200	177/202	430/430
		HIGH	NONE	—	—	82	100	86	432	85	100	91	436
			291A	12.4/16.5	34.4/39.7	82/82	100/100	86/86	432/432	85/85	100/100	91/91	436/436
			294A	25.2/33.5	69.9/80.6	113/127	125/150	104/116	432/432	118/131	125/150	108/121	436/436
			288A+294A	32.7/43.5	90.7/104.7	139/157	150/175	128/144	432/432	144/162	150/175	132/148	436/436
			291A+294A	37.6/50.0	104.3/120.3	156/146	175/175	143/162	432/432	161/151	175/175	148/166	436/436
			294A+294A	50.3/67.0	139.7/161.2	166/187	175/225	184/209	432/432	170/192	175/225	188/213	436/436
	460-3-60	STD	NONE	—	—	35	45	36	242	37	45	38	244
			292A	16.5	19.9	35	45	36	242	37	45	38	244
			295A	33.5	40.3	56	60	51	242	58	60	53	244
			289A+295A	43.5	52.3	71	80	65	242	73	80	67	244
			292A+295A	50.0	60.2	66	70	74	242	68	80	76	244
			295A+295A	67.0	80.6	86	100	98	242	89	100	100	244
		MED	NONE	—	—	36	45	38	249	38	50	40	251
			292A	16.5	19.9	36	45	38	249	38	50	40	251
			295A	33.5	40.3	57	60	52	249	60	60	55	251
			289A+295A	43.5	52.3	72	80	66	249	75	80	68	251
			292A+295A	50.0	60.2	67	80	75	249	70	80	77	251
			295A+295A	67.0	80.6	88	100	99	249	90	100	101	251
		HIGH	NONE	—	—	41	50	43	252	43	50	45	254
			292A	16.5	19.9	41	50	43	252	43	50	45	254
			295A	33.5	40.3	64	70	58	252	66	70	60	254
			289A+295A	43.5	52.3	79	80	72	252	81	90	74	254
			292A+295A	50.0	60.2	73	80	81	252	76	80	83	254
			295A+295A	67.0	80.6	94	100	104	252	96	100	106	254
	575-3-60	STD	NONE	—	—	27	30	28	184	31	40	32	188
			293A	16.5	15.9	27	30	28	184	31	40	32	188
			296A	33.5	32.2	44	45	40	184	49	50	45	188
			290A+296A	43.5	41.8	56	60	51	184	61	70	56	188
			293A+296A	50.0	48.1	52	60	59	184	57	60	63	188
			296A+296A	67.0	64.4	68	80	77	184	73	80	82	188
		MED	NONE	—	—	27	30	28	184	31	40	32	188
			293A	16.5	15.9	27	30	28	184	31	40	32	188
			296A	33.5	32.2	44	45	40	184	49	50	45	188
			290A+296A	43.5	41.8	56	60	51	184	61	70	56	188
			293A+296A	50.0	48.1	52	60	59	184	57	60	63	188
			296A+296A	67.0	64.4	68	80	77	184	73	80	82	188
		HIGH	NONE	—	—	33	40	35	196	37	45	39	200
			293A	16.5	15.9	33	40	35	196	37	45	39	200
			296A	33.5	32.2	52	60	47	196	57	60	52	200
			290A+296A	43.5	41.8	64	70	58	196	69	70	63	200
			293A+296A	50.0	48.1	60	70	66	196	65	70	70	200
			296A+296A	67.0	64.4	76	80	84	196	81	90	89	200

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 37 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA WITH 2 SPEED INDOOR FAN MOTOR

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrdr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS090	208/230-3-60	STD	NONE	—	—	40/40	50/50	41/41	197	44/43	50/50	46/46	201
			117A	7.8/10.4	21.7/25.0	40/40	50/50	41/41	197/197	44/43	50/50	46/46	201/201
			110A	12.0/16.0	33.4/38.5	49/56	50/60	45/51	197/197	54/60	60/60	49/55	201/201
			111A	18.6/24.8	51.7/59.7	72/82	80/90	66/75	197/197	77/87	80/90	70/79	201/201
			112A	24.0/32.0	66.7/77.0	91/104	100/110	83/95	197/197	96/108	100/110	88/99	201/201
			112A+117A	31.8/42.4	88.4/102.0	118/135	125/150	108/124	197/197	123/140	125/150	113/128	201/201
		MED	NONE	—	—	43/42	50/50	45/44	227	46/46	50/50	49/48	231
			117A	7.8/10.4	21.7/25.0	43/42	50/50	45/44	227/227	46/46	50/50	49/48	231/231
			110A	12.0/16.0	33.4/38.5	53/58	60/60	48/53	227/227	58/63	60/70	53/58	231/231
			111A	18.6/24.8	51.7/59.7	76/85	80/90	69/78	227/227	81/90	90/90	74/82	231/231
			112A	24.0/32.0	66.7/77.0	95/106	100/110	87/98	227/227	99/111	100/125	91/102	231/231
			112A+117A	31.8/42.4	88.4/102.0	122/138	125/150	112/126	227/227	126/142	150/150	116/131	231/231
		HIGH	NONE	—	—	48/47	60/50	50/49	262	51/51	60/60	55/54	266
			117A	7.8/10.4	21.7/25.0	48/48	60/50	50/49	262/262	51/52	60/60	55/54	266/266
			110A	12.0/16.0	33.4/38.5	59/64	60/70	54/59	262/262	64/69	70/70	58/63	266/266
			111A	18.6/24.8	51.7/59.7	82/91	90/100	75/83	262/262	87/96	90/100	79/88	266/266
			112A	24.0/32.0	66.7/77.0	101/113	110/125	92/103	262/262	106/117	110/125	97/108	266/266
			112A+117A	31.8/42.4	88.4/102.0	128/144	150/150	117/132	262/262	133/149	150/150	122/136	266/266
	460-3-60	STD	NONE	—	—	19	20	19	97	20	25	21	99
			116A	13.9	16.7	25	25	23	97	27	30	25	99
			113A	16.5	19.8	29	30	26	97	31	35	28	99
			114A	27.8	33.4	46	50	42	97	48	50	44	99
			115A	33.0	39.7	54	60	49	97	56	60	51	99
			114A+116A	41.7	50.2	67	70	61	97	69	70	63	99
		MED	NONE	—	—	20	25	20	113	21	25	22	115
			116A	13.9	16.7	26	30	24	113	28	30	26	115
			113A	16.5	19.8	30	30	27	113	32	35	29	115
			114A	27.8	33.4	47	50	43	113	49	50	45	115
			115A	33.0	39.7	55	60	50	113	57	60	52	115
			114A+116A	41.7	50.2	68	70	62	113	70	70	64	115
		HIGH	NONE	—	—	22	25	23	130	24	30	25	132
			116A	13.9	16.7	29	30	27	130	32	35	29	132
			113A	16.5	19.8	33	35	30	130	35	35	32	132
			114A	27.8	33.4	50	50	46	130	52	60	48	132
			115A	33.0	39.7	58	60	53	130	60	60	55	132
			114A+116A	41.7	50.2	71	80	65	130	73	80	67	132
	575-3-60	STD	NONE	—	—	14	15	14	79	18	20	19	83
			118A	17.0	20.4	29	30	27	79	34	35	31	83
			119A	34.0	40.9	55	60	50	79	60	60	55	83
		MED	NONE	—	—	16	20	16	92	19	25	21	96
			118A	17.0	20.4	32	35	29	92	36	40	33	96
			119A	34.0	40.9	57	60	52	92	62	70	57	96
		HIGH	NONE	—	—	18	20	18	106	22	25	23	110
			118A	17.0	20.4	34	35	31	106	38	40	35	110
			119A	34.0	40.9	59	60	54	106	64	70	59	110

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 37 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA WITH 2 SPEED INDOOR FAN MOTOR (cont.)

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwr fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS102	208/230-3-60	STD	NONE	—	—	41/41	50/50	43/42	212	45/45	50/50	47/47	216
			117A	7.8/10.4	21.7/25.0	41/41	50/50	43/42	212/212	45/45	50/50	47/47	216/216
			110A	12.0/16.0	33.4/38.5	49/56	50/60	45/51	212/212	54/60	60/60	49/55	216/216
			111A	18.6/24.8	51.7/59.7	72/82	80/90	66/75	212/212	77/87	80/90	70/79	216/216
			112A	24.0/32.0	66.7/77.0	91/104	100/110	83/95	212/212	96/108	100/110	88/99	216/216
			112A+117A	31.8/42.4	88.4/102.0	118/135	125/150	108/124	212/212	123/140	125/150	113/128	216/216
		MED	NONE	—	—	42/42	50/50	44/44	216	46/46	60/50	48/48	220
			117A	7.8/10.4	21.7/25.0	42/42	50/50	44/44	216/216	46/46	60/50	48/48	220/220
			110A	12.0/16.0	33.4/38.5	51/57	60/60	47/52	216/216	56/62	60/70	51/56	220/220
			111A	18.6/24.8	51.7/59.7	74/84	80/90	68/76	216/216	79/88	80/90	72/81	220/220
			112A	24.0/32.0	66.7/77.0	93/105	100/110	85/96	216/216	97/110	100/110	89/101	220/220
			112A+117A	31.8/42.4	88.4/102.0	120/136	125/150	110/125	216/216	125/141	125/150	114/129	220/220
		HIGH	NONE	—	—	46/45	60/50	48/47	266	50/49	60/60	53/52	270
			117A	7.8/10.4	21.7/25.0	46/45	60/50	48/47	266/266	50/49	60/60	53/52	270/270
			110A	12.0/16.0	33.4/38.5	56/61	60/70	51/56	266/266	60/66	60/70	55/60	270/270
			111A	18.6/24.8	51.7/59.7	79/87	80/90	72/80	266/266	83/92	90/100	76/84	270/270
			112A	24.0/32.0	66.7/77.0	97/109	100/110	89/100	266/266	102/114	110/125	93/104	270/270
			112A+117A	31.8/42.4	88.4/102.0	124/140	125/150	114/129	266/266	129/145	150/150	118/133	270/270
	460-3-60	STD	NONE	—	—	19	25	20	111	21	25	22	113
			116A	13.9	16.7	25	25	23	111	27	30	25	113
			113A	16.5	19.8	29	30	26	111	31	35	28	113
			114A	27.8	33.4	46	50	42	111	48	50	44	113
			115A	33.0	39.7	54	60	49	111	56	60	51	113
			114A+116A	41.7	50.2	67	70	61	111	69	70	63	113
		MED	NONE	—	—	20	25	21	114	22	25	23	116
			116A	13.9	16.7	26	30	24	114	28	30	26	116
			113A	16.5	19.8	30	30	27	114	32	35	29	116
			114A	27.8	33.4	47	50	43	114	49	50	45	116
			115A	33.0	39.7	55	60	50	114	57	60	52	116
			114A+116A	41.7	50.2	68	70	62	114	70	70	64	116
		HIGH	NONE	—	—	21	25	22	139	23	25	24	141
			116A	13.9	16.7	27	30	25	139	30	30	27	141
			113A	16.5	19.8	31	35	28	139	34	35	30	141
			114A	27.8	33.4	48	50	44	139	51	60	46	141
			115A	33.0	39.7	56	60	51	139	58	60	53	141
			114A+116A	41.7	50.2	69	70	63	139	72	80	65	141
	575-3-60	STD	NONE	—	—	17	20	17	87	21	25	21	91
			118A	17.0	20.4	29	30	27	87	34	35	31	91
			119A	34.0	40.9	55	60	50	87	60	60	55	91
		MED	NONE	—	—	17	20	18	91	21	25	22	95
			118A	17.0	20.4	30	30	27	91	35	35	32	95
			119A	34.0	40.9	56	60	51	91	61	70	55	95
		HIGH	NONE	—	—	18	20	19	100	22	25	23	104
			118A	17.0	20.4	32	35	29	100	36	40	33	104
			119A	34.0	40.9	57	60	52	100	62	70	57	104

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 37 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA WITH 2 SPEED INDOOR FAN MOTOR (cont.)

UNIT	NO M. V.–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS120	208/230–3–60	STD	NONE	–	–	46/46	60/60	48/47	255	50/50	60/60	52/52	259
			117A	7.8/10.4	21.7/25.0	46/46	60/60	48/47	255/255	50/50	60/60	52/52	259/259
			110A	12.0/16.0	33.4/38.5	51/57	60/60	48/52	255/255	56/62	60/70	52/56	259/259
			112A	24.0/32.0	66.7/77.0	93/105	100/110	85/96	255/255	97/110	100/110	89/101	259/259
			112A+117A	31.8/42.4	88.4/102.0	120/136	125/150	110/125	255/255	125/141	125/150	114/129	259/259
			112A+110A	37.6/50.0	104.2/120.3	140/129	150/150	128/146	255/255	144/134	150/150	132/151	259/259
		MED	NONE	–	–	50/49	60/60	52/51	305	54/53	60/60	56/55	309
			117A	7.8/10.4	21.7/25.0	50/49	60/60	52/51	305/305	54/53	60/60	56/55	309/309
			110A	12.0/16.0	33.4/38.5	56/61	60/70	52/56	305/305	60/66	60/70	56/60	309/309
			112A	24.0/32.0	66.7/77.0	97/109	100/110	89/100	305/305	102/114	110/125	93/104	309/309
			112A+117A	31.8/42.4	88.4/102.0	124/140	125/150	114/129	305/305	129/145	150/150	118/133	309/309
			112A+110A	37.6/50.0	104.2/120.3	144/133	150/150	132/150	305/305	149/138	150/150	137/154	309/309
		HIGH	NONE	–	–	53/52	60/60	55/54	316	56/55	60/60	60/59	320
			117A	7.8/10.4	21.7/25.0	53/52	60/60	55/54	316/316	56/55	60/60	60/59	320/320
			110A	12.0/16.0	33.4/38.5	59/64	60/70	55/59	316/316	64/69	70/70	60/63	320/320
			112A	24.0/32.0	66.7/77.0	101/113	110/125	92/103	316/316	106/117	110/125	97/108	320/320
			112A+117A	31.8/42.4	88.4/102.0	128/144	150/150	117/132	316/316	133/149	150/150	122/136	320/320
			112A+110A	37.6/50.0	104.2/120.3	148/137	150/150	135/153	316/316	152/141	175/175	140/157	320/320
	460–3–60	STD	NONE	–	–	23	30	24	122	25	30	26	124
			116A	13.9	16.7	26	30	24	122	28	30	26	124
			113A	16.5	19.8	30	30	27	122	32	35	29	124
			115A	33.0	39.7	55	60	50	122	57	60	52	124
			114A+116A	41.7	50.2	68	70	62	122	70	70	64	124
			115A+113A	50.0	60.1	65	70	73	122	68	80	76	124
		MED	NONE	–	–	24	30	25	147	26	30	27	149
			116A	13.9	16.7	27	30	25	147	30	30	27	149
			113A	16.5	19.8	31	35	28	147	34	35	30	149
			115A	33.0	39.7	56	60	51	147	58	60	53	149
			114A+116A	41.7	50.2	69	70	63	147	72	80	65	149
			115A+113A	50.0	60.1	67	80	75	147	69	80	77	149
		HIGH	NONE	–	–	26	30	27	152	28	30	29	154
			116A	13.9	16.7	29	30	27	152	32	35	29	154
			113A	16.5	19.8	33	35	30	152	35	35	32	154
			115A	33.0	39.7	58	60	53	152	60	60	55	154
			114A+116A	41.7	50.2	71	80	65	152	73	80	67	154
			115A+113A	50.0	60.1	69	80	76	152	71	80	79	154
	575–3–60	STD	NONE	–	–	18	20	19	95	22	25	23	99
			118A	17.0	20.4	30	30	27	95	35	35	32	99
			119A	34.0	40.9	56	60	51	95	61	70	55	99
			118A+119A	51.0	61.3	66	70	75	95	71	80	79	99
		MED	NONE	–	–	19	25	20	104	23	25	24	108
			118A	17.0	20.4	32	35	29	104	36	40	33	108
			119A	34.0	40.9	57	60	52	104	62	70	57	108
			118A+119A	51.0	61.3	67	80	76	104	72	80	80	108
		HIGH	NONE	–	–	21	25	22	118	25	30	26	122
			118A	17.0	20.4	34	35	31	118	38	40	35	122
			119A	34.0	40.9	59	60	54	118	64	70	59	122
			118A+119A	51.0	61.3	70	80	78	118	74	80	82	122

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 37 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA WITH 2 SPEED INDOOR FAN MOTOR (cont.)

UNIT	NO. M. V. Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.			w/ P.E. (pwr fr/unit)				
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS150	208/230-3-60	STD	NONE	—	—	62/61	80/80	65/64	357	66/65	80/80	69/68	361
			117A	7.8/10.4	21.7/25.0	62/61	80/80	65/64	357/357	66/65	80/80	69/68	361/361
			110A	12.0/16.0	33.4/38.5	62/61	80/80	65/64	357/357	66/65	80/80	69/68	361/361
			112A	24.0/32.0	66.7/77.0	95/106	100/110	87/98	357/357	99/111	100/125	91/102	361/361
			112A+117A	31.8/42.4	88.4/102.0	122/138	125/150	112/126	357/357	126/142	150/150	116/131	361/361
			112A+110A	37.6/50.0	104.2/120.3	141/131	150/150	130/147	357/357	146/135	150/150	134/152	361/361
		MED	NONE	—	—	64/63	80/80	67/66	381	68/67	80/80	72/70	385
			117A	7.8/10.4	21.7/25.0	64/63	80/80	67/66	381/381	68/67	80/80	72/70	385/385
			110A	12.0/16.0	33.4/38.5	64/63	80/80	67/66	381/381	68/67	80/80	72/70	385/385
			112A	24.0/32.0	66.7/77.0	97/109	100/110	89/100	381/381	102/114	110/125	93/104	385/385
			112A+117A	31.8/42.4	88.4/102.0	124/140	125/150	114/129	381/381	129/145	150/150	118/133	385/385
			112A+110A	37.6/50.0	104.2/120.3	144/133	150/150	132/150	381/381	149/138	150/150	137/154	385/385
		HIGH	NONE	—	—	67/66	80/80	70/69	392	71/70	80/80	75/74	396
			117A	7.8/10.4	21.7/25.0	67/66	80/80	70/69	392/392	71/70	80/80	75/74	396/396
			110A	12.0/16.0	33.4/38.5	67/66	80/80	70/69	392/392	71/70	80/80	75/74	396/396
			112A	24.0/32.0	66.7/77.0	101/113	110/125	92/103	392/392	106/117	110/125	97/108	396/396
			112A+117A	31.8/42.4	88.4/102.0	128/144	150/150	117/132	392/392	133/149	150/150	122/136	396/396
			112A+110A	37.6/50.0	104.2/120.3	148/137	150/150	135/153	392/392	152/141	175/175	140/157	396/396
	460-3-60	STD	NONE	—	—	30	40	31	180	32	40	33	182
			116A	13.9	16.7	30	40	31	180	32	40	33	182
			113A	16.5	19.8	30	40	31	180	32	40	33	182
			115A	33.0	39.7	55	60	50	180	57	60	52	182
			114A+116A	41.7	50.2	68	70	62	180	70	70	64	182
			115A+113A	50.0	60.1	65	70	73	180	68	80	76	182
		MED	NONE	—	—	31	40	33	192	33	40	35	194
			116A	13.9	16.7	31	40	33	192	33	40	35	194
			113A	16.5	19.8	31	40	33	192	34	40	35	194
			115A	33.0	39.7	56	60	51	192	58	60	53	194
			114A+116A	41.7	50.2	69	70	63	192	72	80	65	194
			115A+113A	50.0	60.1	67	80	75	192	69	80	77	194
		HIGH	NONE	—	—	33	40	34	197	35	40	36	199
			116A	13.9	16.7	33	40	34	197	35	40	36	199
			113A	16.5	19.8	33	40	34	197	35	40	36	199
			115A	33.0	39.7	58	60	53	197	60	60	55	199
			114A+116A	41.7	50.2	71	80	65	197	73	80	67	199
			115A+113A	50.0	60.1	69	80	76	197	71	80	79	199
	575-3-60	STD	NONE	—	—	24	30	25	142	28	30	30	146
			118A	17.0	20.4	32	35	29	142	36	40	33	146
			119A	34.0	40.9	57	60	52	142	62	70	57	146
			118A+119A	51.0	61.3	67	80	76	142	72	80	80	146
		MED	NONE	—	—	24	30	25	142	28	30	30	146
			118A	17.0	20.4	32	35	29	142	36	40	33	146
			119A	34.0	40.9	57	60	52	142	62	70	57	146
			118A+119A	51.0	61.3	67	80	76	142	72	80	80	146
		HIGH	NONE	—	—	26	30	27	156	30	35	32	160
			118A	17.0	20.4	34	35	31	156	38	40	35	160
			119A	34.0	40.9	59	60	54	156	64	70	59	160
			118A+119A	51.0	61.3	70	80	78	156	74	80	82	160

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

Table 37 – UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA WITH 2 SPEED INDOOR FAN MOTOR (cont.)

UNIT	NO W. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
			CRHEATER***A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS180	208/230-3-60	STD	NONE	—	—	70/69	80/80	73/72	393	74/73	80/80	77/76	397
			291A	12.4/16.5	34.4/39.7	70/69	80/80	73/72	393/393	74/73	80/80	77/76	397/397
			294A	25.2/33.5	69.9/80.6	99/111	100/125	90/102	393/393	103/116	110/125	95/106	397/397
			288A+294A	32.7/43.5	90.7/104.7	125/141	125/150	114/129	393/393	129/146	150/150	119/134	397/397
			291A+294A	37.6/50.0	104.3/120.3	142/131	150/150	130/147	393/393	146/135	150/150	134/152	397/397
			294A+294A	50.3/67.0	139.7/161.2	151/171	175/200	171/194	393/393	156/176	175/200	175/199	397/397
		MED	NONE	—	—	72/71	80/80	75/74	417	76/75	100/90	79/78	421
			291A	12.4/16.5	34.4/39.7	72/71	80/80	75/74	417/417	76/75	100/90	79/78	421/421
			294A	25.2/33.5	69.9/80.6	101/113	110/125	93/104	417/417	106/118	110/125	97/108	421/421
			288A+294A	32.7/43.5	90.7/104.7	127/144	150/150	117/132	417/417	132/148	150/150	121/136	421/421
			291A+294A	37.6/50.0	104.3/120.3	144/133	150/150	132/150	417/417	149/138	150/150	137/154	421/421
			294A+294A	50.3/67.0	139.7/161.2	154/174	175/200	173/197	417/417	158/179	175/200	177/201	421/421
		HIGH	NONE	—	—	82	100	86	432	85	100	91	436
			291A	12.4/16.5	34.4/39.7	82/82	100/100	86/86	432/432	85/85	100/100	91/91	436/436
			294A	25.2/33.5	69.9/80.6	113/127	125/150	104/116	432/432	118/131	125/150	108/121	436/436
			288A+294A	32.7/43.5	90.7/104.7	139/157	150/175	128/144	432/432	144/162	150/175	132/148	436/436
			291A+294A	37.6/50.0	104.3/120.3	156/146	175/175	143/162	432/432	161/151	175/175	148/166	436/436
			294A+294A	50.3/67.0	139.7/161.2	166/187	175/225	184/209	432/432	170/192	175/225	188/213	436/436
	460-3-60	STD	NONE	—	—	35	45	36	233	37	45	38	235
			292A	16.5	19.9	35	45	36	233	37	45	38	235
			295A	33.5	40.3	56	60	51	233	58	60	53	235
			289A+295A	43.5	52.3	71	80	65	233	73	80	67	235
			292A+295A	50.0	60.2	65	70	74	233	68	80	76	235
			295A+295A	67.0	80.6	86	90	97	233	88	100	99	235
		MED	NONE	—	—	36	45	37	245	38	50	39	247
			292A	16.5	19.9	36	45	37	245	38	50	39	247
			295A	33.5	40.3	57	60	52	245	59	60	54	247
			289A+295A	43.5	52.3	72	80	66	245	74	80	68	247
			292A+295A	50.0	60.2	67	80	75	245	69	80	77	247
			295A+295A	67.0	80.6	87	100	98	245	89	100	100	247
		HIGH	NONE	—	—	41	50	43	252	43	50	45	254
			292A	16.5	19.9	41	50	43	252	43	50	45	254
			295A	33.5	40.3	64	70	58	252	66	70	60	254
			289A+295A	43.5	52.3	79	80	72	252	81	90	74	254
			292A+295A	50.0	60.2	73	80	81	252	76	80	83	254
			295A+295A	67.0	80.6	94	100	104	252	96	100	106	254
	575-3-60	STD	NONE	—	—	29	35	30	184	32	40	34	188
			293A	16.5	15.9	29	35	30	184	32	40	34	188
			296A	33.5	32.2	46	50	42	184	51	60	47	188
			290A+296A	43.5	41.8	58	60	53	184	63	70	58	188
			293A+296A	50.0	48.1	54	60	60	184	59	60	65	188
			296A+296A	67.0	64.4	70	80	79	184	75	80	84	188
		MED	NONE	—	—	29	35	30	184	32	40	34	188
			293A	16.5	15.9	29	35	30	184	32	40	34	188
			296A	33.5	32.2	46	50	42	184	51	60	47	188
			290A+296A	43.5	41.8	58	60	53	184	63	70	58	188
			293A+296A	50.0	48.1	54	60	60	184	59	60	65	188
			296A+296A	67.0	64.4	70	80	79	184	75	80	84	188
		HIGH	NONE	—	—	33	40	35	196	37	45	39	200
			293A	16.5	15.9	33	40	35	196	37	45	39	200
			296A	33.5	32.2	52	60	47	196	57	60	52	200
			290A+296A	43.5	41.8	64	70	58	196	69	70	63	200
			293A+296A	50.0	48.1	60	70	66	196	65	70	70	200
			296A+296A	67.0	64.4	76	80	84	196	81	90	89	200

ELECTRICAL INFORMATION

(UNITS PRODUCED ON OR AFTER JULY 30, 2012) cont.

LEGEND:

BRKR	— Circuit breaker
CO	— Convenience outlet
DISC	— Disconnect
FLA	— Full load amps
IFM	— Indoor fan motor
LRA	— Locked rotor amps
MCA	— Minimum circuit amps
MOCP	— MAX FUSE or HACR Breaker
PE	— Power exhaust
PWRD CO	— Powered convenient outlet
UNPWR CO	— Unpowered convenient outlet



NOTES:

1. In compliance with NEC requirements for multimotor and com ment (refer to NEC Articles 430 and 440), the overcurrent protecti shall be fuse or HACR breaker. Canadian units may be fuse or ci
2. **Unbalanced 3-Phase Supply Voltage**
Never operate a motor where a phase imbalance in supply voltag
Use the following formula to determine the percentage of voltage

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 230-3-60



AB = 224 v
BC = 231 v
AC = 226 v

$$\text{Average Voltage} = \frac{(224 + 231 + 226)}{3} = \frac{681}{3} = 227$$

Determine maximum deviation from average voltage.

(AB) 227 - 224 = 3 v

(BC) 231 - 227 = 4 v

(AC) 227 - 226 = 1 v

Maximum deviation is 4 v.

Determine percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{4}{227} = 1.76\%$$

This amount of phase imbalance is satisfactory as it is below the maxim-um allowable 2%.

IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

ELECTRICAL DATA FOR UNITS PRODUCED PRIOR TO JULY 30, 2012

NOTE: Check the serial number of unit to verify production date.

SERIAL NUMBER

1	2	3	4	5	6	7	8	9	10
U	1	2	3	1	1	2	3	4	5

Manufacture Location

Week of Manufacture
(fiscal calendar)

Sequence Number

Year of Manufacture
(12 = 2012)

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012)

Table 38 – RAS036 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

3 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–1–60	187	253	16.6	79	325	1.5	STD MED	70% 70%	4.9 4.9
230–1–60	187	253	16.6	79	325	1.5	STD MED	70% 70%	4.9 4.9
208–3–60	187	253	10.4	73	325	1.5	STD MED HIGH	70% 70% 80%	4.9 4.9 5.2
230–3–60	187	253	10.4	73	325	1.5	STD MED HIGH	70% 70% 80%	4.9 4.9 5.2
460–3–60	414	506	5.8	38	325	0.8	STD MED HIGH	70% 70% 80%	2.1 2.1 2.6
575–3–60	518	633	3.8	37	325	0.6	STD MED HIGH	71% 71% 80%	1.9 1.9 2.0

Table 38 (cont.) – RAS048 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

4 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–1–60	187	253	21.8	117	325	1.5	STD MED	70% 78%	4.9 7.0
230–1–60	187	253	21.8	117	325	1.5	STD MED	70% 78%	4.9 7.0
208–3–60	187	253	13.7	83	325	1.5	STD MED HIGH	70% 70% 80%	4.9 4.9 5.2
230–3–60	187	253	13.7	83	325	1.5	STD MED HIGH	70% 70% 80%	4.9 4.9 5.2
460–3–60	414	506	6.2	41	325	0.8	STD MED HIGH	70% 70% 80%	2.1 2.1 2.6
575–3–60	518	633	4.8	37	325	0.6	STD MED HIGH	71% 71% 80%	1.9 2.1 2.0

Table 38 (cont.) – RAS060 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–1–60	187	253	26.2	134	325	1.5	STD MED	70% 78%	4.9 7.0
230–1–60	187	253	26.2	134	325	1.5	STD MED	70% 78%	4.9 7.0
208–3–60	187	253	15.6	110	325	1.5	STD MED HIGH	70% 80% 81%	4.9 5.2 7.5
230–3–60	187	253	15.6	110	325	1.5	STD MED HIGH	70% 80% 81%	4.9 5.2 7.5
460–3–60	414	506	7.7	52	325	0.8	STD MED HIGH	70% 80% 81%	2.1 2.6 3.4
575–3–60	518	633	5.8	39	325	0.6	STD MED HIGH	71% 81% 81%	1.9 2.0 2.8

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 38 (cont.) – RAS072 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

6 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	19.0	123	325	1.5	STD	80%	5.2
							MED	81%	7.5
							HIGH	81%	7.5
230–3–60	187	253	19.0	123	325	1.5	STD	80%	5.2
							MED	81%	7.5
							HIGH	81%	7.5
460–3–60	414	506	9.7	62	325	0.8	STD	80%	2.6
							MED	81%	3.4
							HIGH	81%	4.4
575–3–60	518	633	7.4	50	325	0.6	STD	80%	2.0
							MED	81%	2.8
							HIGH	81%	2.8

Table 38 (cont.) – RAS091 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

7.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	25.0	164	325	1.5	STD	80%	5.2
							MED	81%	7.5
							HIGH	81%	15.0
230–3–60	187	253	25.0	164	325	1.5	STD	80%	5.2
							MED	81%	7.5
							HIGH	81%	15.0
460–3–60	414	506	12.2	100	325	0.8	STD	80%	2.6
							MED	81%	3.4
							HIGH	81%	7.4
575–3–60	518	633	9.0	78	325	0.6	STD	80%	2.4
							MED	81%	2.8
							HIGH	81%	5.6

Table 38 (cont.) – RAS090 2-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

7.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	13.6	83	13.6	83	325	1.5	STD	80%	5.2
									MED	81%	7.5
									HIGH	81%	15.0
230–3–60	187	253	13.6	83	13.6	83	325	1.5	STD	80%	5.2
									MED	81%	7.5
									HIGH	81%	15.0
460–3–60	414	506	6.1	41	6.1	41	325	0.8	STD	80%	2.6
									MED	81%	3.4
									HIGH	81%	7.4
575–3–60	518	633	4.2	33	4.2	33	325	0.6	STD	80%	2.4
									MED	81%	2.8
									HIGH	81%	5.6

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 38 (cont.) – RAS090 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

7.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	13.6	83	13.6	83	325	1.5	STD	84%	5.8
							325	1.5	MED	85%	8.6
							325	1.5	HIGH	84%	13.6
230–3–60	187	253	13.6	83	13.6	83	325	1.5	STD	84%	5.6
							325	1.5	MED	85%	7.8
							325	1.5	HIGH	84%	12.7
460–3–60	414	506	6.1	41	6.1	41	325	0.8	STD	79%	2.9
							325	0.8	MED	85%	3.8
							325	0.8	HIGH	84%	6.4
575–3–60	518	633	4.2	33	4.2	33	325	0.6	STD	81%	2.8
							325	0.6	MED	84%	4.5
							325	0.6	HIGH	83%	6.2

Table 38 (cont.) – RAS101 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

8.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	29.5	195	325	1.5	STD	80%	5.2
							MED	80%	5.2
							HIGH	80%	10.0
230–3–60	187	253	29.5	195	325	1.5	STD	80%	5.2
							MED	80%	5.2
							HIGH	80%	10.0
460–3–60	414	506	14.7	95	325	0.8	STD	80%	2.6
							MED	80%	2.6
							HIGH	80%	4.4
575–3–60	518	633	12.2	80	325	0.6	STD	80%	2.4
							MED	80%	2.0
							HIGH	81%	2.8

Table 38 (cont.) – RAS102 2-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

8.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	14.5	98	13.7	83	325	1.5	STD	80%	5.2
									MED	80%	5.2
									HIGH	80%	10.0
230–3–60	187	253	14.5	98	13.7	83	325	1.5	STD	80%	5.2
									MED	80%	5.2
									HIGH	80%	10.0
460–3–60	414	506	6.3	55	6.2	41	325	0.8	STD	80%	2.6
									MED	80%	2.6
									HIGH	80%	4.4
575–3–60	518	633	6.0	41	4.8	33	325	0.6	STD	80%	2.4
									MED	80%	2.0
									HIGH	81%	2.8

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 38 (cont.) – RAS102 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

8.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	14.5	98	13.7	83	325	1.5	STD	84%	5.8
							325	1.5	MED	77%	7.1
							325	1.5	HIGH	82%	10.8
230–3–60	187	253	14.5	98	13.7	83	325	1.5	STD	84%	5.6
							325	1.5	MED	77%	6.8
							325	1.5	HIGH	82%	9.8
460–3–60	414	506	6.3	55	6.2	41	325	0.8	STD	79%	2.9
							325	0.8	MED	77%	3.8
							325	0.8	HIGH	82%	4.9
575–3–60	518	633	6.0	41	4.8	33	325	0.6	STD	81%	2.8
							325	0.6	MED	80%	3.5
							325	0.6	HIGH	84%	4.5

Table 38 (cont.) – RAS121 1-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

10 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	30.1	225	325	1.5	STD	80%	5.2
							MED	81%	10.0
							HIGH	81%	15.0
230–3–60	187	253	30.1	225	325	1.5	STD	80%	5.2
							MED	81%	10.0
							HIGH	81%	15.0
460–3–60	414	506	16.7	114	325	0.8	STD	80%	2.6
							MED	81%	4.4
							HIGH	81%	7.4
575–3–60	518	633	12.2	80	325	0.6	STD	80%	2.0
							MED	81%	2.8
							HIGH	81%	5.6

Table 38 (cont.) – RAS120 2-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

10 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	15.6	110	15.9	110	325	1.5	STD	80%	5.2
									MED	81%	10.0
									HIGH	81%	15.0
230–3–60	187	253	15.6	110	15.9	110	325	1.5	STD	80%	5.2
									MED	81%	10.0
									HIGH	81%	15.0
460–3–60	414	506	7.7	52	7.7	52	325	0.8	STD	80%	2.6
									MED	81%	4.4
									HIGH	81%	7.4
575–3–60	518	633	5.8	39	5.7	39	325	0.6	STD	80%	2.0
									MED	81%	2.8
									HIGH	81%	5.6

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 38 (cont.) – RAS120 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

10 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	15.6	110	15.9	110	325	1.5	STD	77%	7.1
							325	1.5	MED	82%	10.8
							325	1.5	HIGH	84%	13.6
230–3–60	187	253	15.6	110	15.9	110	325	1.5	STD	77%	6.8
							325	1.5	MED	82%	9.8
							325	1.5	HIGH	84%	12.7
460–3–60	414	506	7.7	52	7.7	52	325	0.8	STD	77%	3.8
							325	0.8	MED	82%	4.9
							325	0.8	HIGH	84%	6.4
575–3–60	518	633	5.8	39	5.7	39	325	0.6	STD	80%	3.5
							325	0.6	MED	84%	4.5
							325	0.6	HIGH	83%	6.2

Table 38 (cont.) – RAS120 2-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

12.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	19.0	123	22.4	149	1288	6.2	STD	81%	7.5
									MED	81%	10.0
									HIGH	81%	15.0
230–3–60	187	253	19.0	123	22.4	149	1288	6.2	STD	81%	7.5
									MED	81%	10.0
									HIGH	81%	15.0
460–3–60	414	506	9.7	62	10.6	75	1288	3.1	STD	81%	3.4
									MED	81%	4.4
									HIGH	81%	7.4
575–3–60	518	633	7.4	50	7.7	54	1288	2.5	STD	81%	2.8
									MED	81%	2.8
									HIGH	81%	5.6

Table 38 (cont.) – RAS150 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

12.5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208–3–60	187	253	19.0	123	22.4	149	1070	6.2	STD	85%	8.6
							1070	6.2	MED	82%	10.8
							1070	6.2	HIGH	84%	13.6
230–3–60	187	253	19.0	123	22.4	149	1070	6.2	STD	85%	7.8
							1070	6.2	MED	82%	9.8
							1070	6.2	HIGH	84%	12.7
460–3–60	414	506	9.7	62	10.6	75	1070	3.1	STD	85%	3.8
							1070	3.1	MED	82%	4.9
							1070	3.1	HIGH	84%	6.4
575–3–60	518	633	7.4	50	7.7	54	1070	2.5	STD	84%	4.5
							1070	2.5	MED	84%	4.5
							1070	2.5	HIGH	83%	6.2

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 38 (cont.) – RAS180 2-STAGE COOLING WITH 1-SPEED INDOOR FAN MOTOR

15 TONS

V-Ph-Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	25.0	164	25.0	164	1288	1.5	STD	81%	7.5
									MED	81%	10.0
									HIGH	89.5%	20.4
230-3-60	187	253	25.0	164	25.0	164	1288	1.5	STD	81%	7.5
									MED	81%	10.0
									HIGH	89.5%	20.4
460-3-60	414	506	12.2	100	12.8	100	1288	0.8	STD	81%	3.4
									MED	81%	4.4
									HIGH	89.5%	10.2
575-3-60	518	633	9.8	78	9.6	78	1288	0.6	STD	81%	2.8
									MED	81%	2.8
									HIGH	89.5%	9.0

Table 38 (cont.) – RAS180 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

15 TONS

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	25.0	164	25.0	164	280	1.5	STD	85%	8.6
							280	1.5	MED	82%	10.8
							280	1.5	HIGH	90%	20.4
230-3-60	187	253	25.0	164	25.0	164	280	1.5	STD	85%	7.8
							280	1.5	MED	82%	9.8
							280	1.5	HIGH	90%	20.4
460-3-60	414	506	12.2	100	12.8	100	280	0.8	STD	85%	3.8
							280	0.8	MED	82%	4.9
							280	0.8	HIGH	90%	10.2
575-3-60	518	633	9.8	78	9.6	78	280	0.6	STD	84%	4.5
							280	0.6	MED	84%	4.5
							280	0.6	HIGH	94%	9.0

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 – RAS036

ELECTRIC HEAT – ELECTRICAL DATA 1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/P.E. (pwr fr/unit)
208/ 230–1–60	STD	101A00	4.4	3.3/4.0	–	–
		102A00	6.5	4.9/6.0	–	–
		103B00	8.7	6.5/8.0	037A00	037A00
		104B00	10.5	7.9/9.6	040A00	040A00
		102A00,102A00	13	9.8/11.9	040A00	040A00
208/ 230–3–60	STD	101A00	4.4	3.3/4.0	–	–
		102A00	6.5	4.9/6.0	–	–
		103B00	8.7	6.5/8.0	–	–
		104B00	10.5	7.9/9.6	–	–
		105A00	16	12.0/14.7	037A00	037A00
	HIGH	101A00	4.4	3.3/4.0	–	–
		102A00	6.5	4.9/6.0	–	–
		103B00	8.7	6.5/8.0	–	–
		104B00	10.5	7.9/9.6	–	–
		105A00	16	12.0/14.7	037A00	037A00
460–3–60	STD	106A00	6	5.5	–	–
		107A00	8.8	8.1	–	–
		108A00	11.5	10.6	–	–
		109A00	14	12.9	–	–
	HIGH	106A00	6	5.5	–	–
		107A00	8.8	8.1	–	–
		108A00	11.5	10.6	–	–
		109A00	14	12.9	–	–

LEGEND

APP PWR – 208 / 230V / 460V / 575V
 C.O. – Convenience outlet
 FLA – Full load amps
 IFM – Indoor fan motor
 NOM PWR – 240V / 480V / 600V
 P.E. – Power exhaust
 UNPWRD – Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS048

ELECTRIC HEAT – ELECTRICAL DATA 1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/P.E. (pwr fr/unit)
208/ 230–1–60	STD	101A00	4.4	3.3/4.0	—	—
		103B00	8.7	6.5/8.0	037A00	037A00
		102A00,102A00	13	9.8/11.9	040A00	040A00
		103B00,103B00	17.4	13.1/16.0	040A00	040A00
		104B00,104B00	21	15.8/19.3	040A00	040A00
208/ 230–3–60	STD	102A00	6.5	4.9/6.0	—	—
		103B00	8.7	6.5/8.0	—	—
		105A00	16	12.0/14.7	037A00	037A00
		104B00,104B00	21	15.8/19.3	038A00	038A00
	HIGH	102A00	6.5	4.9/6.0	—	—
		103B00	8.7	6.5/8.0	—	—
		105A00	16	12.0/14.7	037A00	037A00
		104B00,104B00	21	15.8/19.3	038A00	038A00
460–3–60	STD	106A00	6	5.5	—	—
		108A00	11.5	10.6	—	—
		109A00	14	12.9	—	—
		108A00,108A00	23	21.1	037A00	037A00
	HIGH	106A00	6	5.5	—	—
		108A00	11.5	10.6	—	—
		109A00	14	12.9	—	—
		108A00,108A00	23	21.1	037A00	037A00

LEGEND

APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience outlet
FLA	— Full load amps
IFM	— Indoor fan motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power exhaust
UNPWRD	— Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS060

ELECTRIC HEAT – ELECTRICAL DATA 1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230–1–60	STD	102A00	6.5	4.9/6.0	–	–
		103B00	8.7	6.5/8.0	037A00	037A00
		102A00,102A00	13	9.8/11.9	040A00	040A00
		103B00,103B00	17.4	13.1/16.0	040A00	040A00
		104B00,104B00	21	15.8/19.3	040A00	040A00
	MED	102A00	6.5	4.9/6.0	–	–
		103B00	8.7	6.5/8.0	037A00	037A00
		102A00,102A00	13	9.8/11.9	040A00	040A00
		103B00,103B00	17.4	13.1/16.0	040A00	040A00
		104B00,104B00	21	15.8/19.3	040A00	040A00
208/ 230–3–60	STD	102A00	6.5	4.9/6.0	–	–
		104B00	10.5	7.9/9.6	–	–
		105A00	16	12.0/14.7	037A00	037A00
		104B00,104B00	21	15.8/19.3	038A00	038A00
		104B00,105A00	26.5	19.9/24.3	038A00	038A00
	MED	102A00	6.5	4.9/6.0	–	–
		104B00	10.5	7.9/9.6	–	–
		105A00	16	12.0/14.7	037A00	037A00
		104B00,104B00	21	15.8/19.3	038A00	038A00
		104B00,105A00	26.5	19.9/24.3	038A00	038A00
	HIGH	102A00	6.5	4.9/6.0	–	–
		104B00	10.5	7.9/9.6	–	–
		105A00	16	12.0/14.7	037A00	037A00
		104B00,104B00	21	15.8/19.3	038A00	038A00
		104B00,105A00	26.5	19.9/24.3	038A00	038A00
460–3–60	STD	106A00	6	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14	12.9	–	–
		108A00,108A00	23	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	MED	106A00	6	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14	12.9	–	–
		108A00,108A00	23	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	HIGH	106A00	6	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14	12.9	–	–
		108A00,108A00	23	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS072

ELECTRIC HEAT – ELECTRICAL DATA 1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/P.E. (pwr fr/unit)
208/ 230–3–60	STD	102A00	6.5	4.9/6.0	–	–
		104B00	10.5	7.9/9.6	–	–
		105A00	16.0	12.0/14.7	037A00	037A00
		104B00,104B00	21.0	15.8/19.3	038A00	038A00
		104B00,105A00	26.5	19.9/24.3	038A00	038A00
	MED	102A00	6.5	4.9/6.0	–	–
		104B00	10.5	7.9/9.6	–	–
		105A00	16.0	12.0/14.7	037A00	037A00
		104B00,104B00	21.0	15.8/19.3	038A00	038A00
		104B00,105A00	26.5	19.9/24.3	038A00	038A00
	HIGH	102A00	6.5	4.9/6.0	–	–
		104B00	10.5	7.9/9.6	–	–
		105A00	16.0	12.0/14.7	037A00	037A00
		104B00,104B00	21.0	15.8/19.3	038A00	038A00
		104B00,105A00	26.5	19.9/24.3	038A00	038A00
460–3–60	STD	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	MED	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00
	HIGH	106A00	6.0	5.5	–	–
		108A00	11.5	10.6	–	–
		109A00	14.0	12.9	–	–
		108A00,108A00	23.0	21.1	037A00	037A00
		108A00,109A00	25.5	23.4	037A00	037A00

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS091

ELECTRIC HEAT – ELECTRICAL DATA 1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/P.E. (pwr fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	042A00	042A00
		110A00	16.0	12.0/14.7	042A00	042A00
		111A00	24.8	18.6/22.8	043A00	043A00
		112A00	32.0	24.0/29.4	043A00	043A00
		112A00,117A00	42.4	31.8/38.9	045A00	045A00
	MED	117A00	10.4	7.8/9.6	042A00	042A00
		110A00	16.0	12.0/14.7	042A00	043A00
		111A00	24.8	18.6/22.8	043A00	043A00
		112A00	32.0	24.0/29.4	043A00	043A00
		112A00,117A00	42.4	31.8/38.9	045A00	045A00
	HIGH	117A00	10.4	7.8/9.6	042A00	042A00
		110A00	16.0	12.0/14.7	043A00	043A00
		111A00	24.8	18.6/22.8	043A00	043A00
		112A00	32.0	24.0/29.4	043A00	043A00
		112A00,117A00	42.4	31.8/38.9	045A00	045A00
460–3–60	STD	116A00	13.9	12.8	042A00	042A00
		113A00	16.5	15.2	042A00	042A00
		114A00	27.8	25.5	042A00	042A00
		115A00	33.0	30.3	042A00	042A00
		114A00,116A00	41.7	38.3	044A00	044A00
	MED	116A00	13.9	12.8	042A00	042A00
		113A00	16.5	15.2	042A00	042A00
		114A00	27.8	25.5	042A00	042A00
		115A00	33.0	30.3	042A00	042A00
		114A00,116A00	41.7	38.3	044A00	044A00
	HIGH	116A00	13.9	12.8	042A00	042A00
		113A00	16.5	15.2	042A00	042A00
		114A00	27.8	25.5	042A00	042A00
		115A00	33.0	30.3	042A00	044A00
		114A00,116A00	41.7	38.3	044A00	044A00
575–3–60	STD	118A00	17.0	17.0	042A00	042A00
		119A00	34.0	34.0	042A00	042A00
	MED	118A00	17.0	17.0	042A00	042A00
		119A00	34.0	34.0	042A00	042A00
	HIGH	118A00	17.0	17.0	042A00	042A00
		119A00	34.0	34.0	042A00	044A00

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS090

ELECTRIC HEAT – ELECTRICAL DATA 2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/P.E. (pwr fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	042A00	042A00
		110A00	16.0	12.0/14.7	042A00	042A00
		111A00	24.8	18.6/22.8	043A00	043A00
		112A00	32.0	24.0/29.4	043A00	043A00
		112A00,117A00	42.4	31.8/38.9	045A00	045A00
	MED	117A00	10.4	7.8/9.6	042A00	042A00
		110A00	16.0	12.0/14.7	042A00	043A00
		111A00	24.8	18.6/22.8	043A00	043A00
		112A00	32.0	24.0/29.4	043A00	043A00
		112A00,117A00	42.4	31.8/38.9	045A00	045A00
	HIGH	117A00	10.4	7.8/9.6	042A00	042A00
		110A00	16.0	12.0/14.7	043A00	043A00
		111A00	24.8	18.6/22.8	043A00	043A00
		112A00	32.0	24.0/29.4	043A00	043A00
		112A00,117A00	42.4	31.8/38.9	045A00	045A00
460–3–60	STD	116A00	13.9	12.8	042A00	042A00
		113A00	16.5	15.2	042A00	042A00
		114A00	27.8	25.5	042A00	042A00
		115A00	33.0	30.3	042A00	042A00
		114A00,116A00	41.7	38.3	044A00	044A00
	MED	116A00	13.9	12.8	042A00	042A00
		113A00	16.5	15.2	042A00	042A00
		114A00	27.8	25.5	042A00	042A00
		115A00	33.0	30.3	042A00	042A00
		114A00,116A00	41.7	38.3	044A00	044A00
	HIGH	116A00	13.9	12.8	042A00	042A00
		113A00	16.5	15.2	042A00	042A00
		114A00	27.8	25.5	042A00	042A00
		115A00	33.0	30.3	042A00	044A00
		114A00,116A00	41.7	38.3	044A00	044A00
575–3–60	STD	118A00	17.0	17.0	042A00	042A00
		119A00	34.0	34.0	042A00	042A00
	MED	118A00	17.0	17.0	042A00	042A00
		119A00	34.0	34.0	042A00	042A00
	HIGH	118A00	17.0	17.0	042A00	042A00
		119A00	34.0	34.0	042A00	044A00

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS090

ELECTRIC HEAT – ELECTRICAL DATA 2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	042A00	042A00
		110A00	16.0	12.0/14.7	042A00	042A00
		111A00	24.8	18.6/22.8	043A00	043A00
		112A00	32.0	24.0/29.4	043A00	043A00
		112A00,117A00	42.4	31.8/38.9	045A00	045A00
	MED	117A00	10.4	7.8/9.6	042A00	042A00
		110A00	16.0	12.0/14.7	042A00	043A00
		111A00	24.8	18.6/22.8	043A00	043A00
		112A00	32.0	24.0/29.4	043A00	043A00
		112A00,117A00	42.4	31.8/38.9	045A00	045A00
	HIGH	117A00	10.4	7.8/9.6	042A00	042A00
		110A00	16.0	12.0/14.7	043A00	043A00
		111A00	24.8	18.6/22.8	043A00	043A00
		112A00	32.0	24.0/29.4	043A00	043A00
		112A00,117A00	42.4	31.8/38.9	045A00	045A00
460–3–60	STD	116A00	13.9	12.8	042A00	042A00
		113A00	16.5	15.2	042A00	042A00
		114A00	27.8	25.5	042A00	042A00
		115A00	33.0	30.3	042A00	042A00
		114A00,116A00	41.7	38.3	044A00	044A00
	MED	116A00	13.9	12.8	042A00	042A00
		113A00	16.5	15.2	042A00	042A00
		114A00	27.8	25.5	042A00	042A00
		115A00	33.0	30.3	042A00	042A00
		114A00,116A00	41.7	38.3	044A00	044A00
	HIGH	116A00	13.9	12.8	042A00	042A00
		113A00	16.5	15.2	042A00	042A00
		114A00	27.8	25.5	042A00	042A00
		115A00	33.0	30.3	042A00	042A00
		114A00,116A00	41.7	38.3	044A00	044A00
575–3–60	STD	118A00	17.0	17.0	042A00	042A00
		119A00	34.0	34.0	042A00	042A00
	MED	118A00	17.0	17.0	042A00	042A00
		119A00	34.0	34.0	042A00	044A00
	HIGH	118A00	17.0	17.0	042A00	042A00
		119A00	34.0	34.0	042A00	044A00

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS101

ELECTRIC HEAT – ELECTRICAL DATA 1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwr fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	047A00	047A00
		110A00	16.0	12.0/14.7	047A00	047A00
		111A00	24.8	18.6/22.8	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
	MED	117A00	10.4	7.8/9.6	047A00	047A00
		110A00	16.0	12.0/14.7	047A00	047A00
		111A00	24.8	18.6/22.8	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
	HIGH	117A00	10.4	7.8/9.6	047A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		111A00	24.8	18.6/22.8	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
460–3–60	STD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
	MED	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
	HIGH	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
575–3–60	STD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	047A00
	MED	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	047A00
	HIGH	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	047A00

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS102

ELECTRIC HEAT – ELECTRICAL DATA 2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/P.E. (pwr fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	047
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
	MED	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	047	047
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047
		110A00	16.0	12.0/14.7	049	049
		111A00	24.8	18.6/22.8	049	049
		112A00	32.0	24.0/29.4	049	049
		112A00,117A00	42.4	31.8/38.9	051	051
460–3–60	STD	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
	MED	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
	HIGH	116A00	13.9	12.8	047	047
		113A00	16.5	15.2	047	047
		114A00	27.8	25.5	047	047
		115A00	33.0	30.3	047	047
		114A00,116A00	41.7	38.3	050	050
575–3–60	STD	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
	MED	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047
	HIGH	118A00	17.0	17.0	047	047
		119A00	34.0	34.0	047	047

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS102

ELECTRIC HEAT – ELECTRICAL DATA 2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwr fr/unit)
208/ 203–3–60	STD	117A00	10.4	7.8/9.6	047A00	047A00
		110A00	16.0	12.0/14.7	047A00	047A00
		111A00	24.8	18.6/22.8	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
	MED	117A00	10.4	7.8/9.6	047A00	047A00
		110A00	16.0	12.0/14.7	047A00	049A00
		111A00	24.8	18.6/22.8	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
	HIGH	117A00	10.4	7.8/9.6	047A00	047A00
		110A00	16.0	12.0/14.7	049A00	049A00
		111A00	24.8	18.6/22.8	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
460–3–60	STD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
	MED	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
	HIGH	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		114A00	27.8	25.5	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
575–3–60	STD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	047A00
	MED	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	050A00
	HIGH	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	050A00

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS121

ELECTRIC HEAT – ELECTRICAL DATA 1-STAGE COOLING 1-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwr fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	047A00	047A00
		110A00	16.0	12.0/14.7	047A00	047A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
	MED	117A00	10.4	7.8/9.6	047A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
	HIGH	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
460–3–60	STD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
	MED	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
	HIGH	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	050A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
575–3–60	STD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	047A00
		118A00,119A00	51.0	51.0	050A00	050A00
	MED	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	047A00
		118A00,119A00	51.0	51.0	050A00	050A00
	HIGH	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	050A00
		118A00,119A00	51.0	51.0	050A00	050A00

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS120

ELECTRIC HEAT – ELECTRICAL DATA 2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	047A00	047A00
		110A00	16.0	12.0/14.7	047A00	047A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
	MED	117A00	10.4	7.8/9.6	047A00	047A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
	HIGH	117A00	10.4	7.8/9.6	047A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
460–3–60	STD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
	MED	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
	HIGH	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	050A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
575–3–60	STD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	047A00
		118A00,119A00	51.0	51.0	050A00	050A00
	MED	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	047A00
		118A00,119A00	51.0	51.0	050A00	050A00
	HIGH	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	050A00
		118A00,119A00	51.0	51.0	050A00	050A00

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS120

ELECTRIC HEAT – ELECTRICAL DATA 2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	047A00	047A00
		110A00	16.0	12.0/14.7	047A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
	MED	117A00	10.4	7.8/9.6	047A00	047A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
	HIGH	117A00	10.4	7.8/9.6	047A00	047A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
460–3–60	STD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
	MED	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
	HIGH	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
575–3–60	STD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	050A00
		118A00,119A00	51.0	51.0	050A00	050A00
	MED	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	050A00
		118A00,119A00	51.0	51.0	050A00	050A00
	HIGH	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	050A00
		118A00,119A00	51.0	51.0	050A00	050A00

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS150

ELECTRIC HEAT – ELECTRICAL DATA 2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR

NOM. V—PH.HZ.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/PE. (pwrd fr/unit)
208/ 230—3/60	STD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
	MED	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
	HIGH	Std Unit Without Heat	—	—	—	—
		117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
460—3—60	STD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
	MED	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
	HIGH	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	050A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
575—3—60	STD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	047A00
		118A00,119A00	51.0	51.0	050A00	050A00
	MED	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	047A00
		118A00,119A00	51.0	51.0	050A00	050A00
	HIGH	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	050A00
		118A00,119A00	51.0	51.0	050A00	050A00

LEGEND

APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience outlet
FLA	— Full load amps
IFM	— Indoor fan motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power exhaust
UNPWRD	— Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS150

ELECTRIC HEAT – ELECTRICAL DATA 2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230–3–60	STD	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
	MED	117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
		117A00	10.4	7.8/9.6	049A00	049A00
		110A00	16.0	12.0/14.7	049A00	049A00
		112A00	32.0	24.0/29.4	049A00	049A00
		112A00,117A00	42.4	31.8/38.9	051A00	051A00
		112A00,110A00	50.0	37.6/45.9	051A00	051A00
460–3–60	STD	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
	MED	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
	HIGH	116A00	13.9	12.8	047A00	047A00
		113A00	16.5	15.2	047A00	047A00
		115A00	33.0	30.3	047A00	047A00
		114A00,116A00	41.7	38.3	050A00	050A00
		115A00,113A00	50.0	45.9	050A00	050A00
575–3–60	STD	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	050A00
		118A00,119A00	51.0	51.0	050A00	050A00
	MED	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	050A00
		118A00,119A00	51.0	51.0	050A00	050A00
	HIGH	118A00	17.0	17.0	047A00	047A00
		119A00	34.0	34.0	047A00	050A00
		118A00,119A00	51.0	51.0	050A00	050A00

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS180

ELECTRIC HEAT – ELECTRICAL DATA 2-STAGE COOLING 1-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/P.E. (pwr fr/unit)
208/ 230–3–60	STD	291A00	16.5	12.4/15.2	049A00	049A00
		294A00	33.5	25.2/30.8	049A00	049A00
		288A00,294A00	43.5	32.7/40.0	051A00	051A00
		291A00,294A00	50.0	37.6/45.9	051A00	051A00
		294A00,294A00	67.0	50.3/61.5	053A00	053A00
	MED	291A00	16.5	12.4/15.2	049A00	049A00
		294A00	33.5	25.2/30.8	049A00	049A00
		288A00,294A00	43.5	32.7/40.0	051A00	051A00
		291A00,294A00	50.0	37.6/45.9	051A00	051A00
		294A00,294A00	67.0	50.3/61.5	053A00	053A00
	HIGH	291A00	16.5	12.4/15.2	049A00	049A00
		294A00	33.5	25.2/30.8	049A00	049A00
		288A00,294A00	43.5	32.7/40.0	051A00	051A00
		291A00,294A00	50.0	37.6/45.9	051A00	051A00
		294A00,294A00	67.0	50.3/61.5	053A00	053A00
460–3–60	STD	292A00	16.5	15.2	-	-
		295A00	33.5	30.8	047A00	047A00
		289A00,295A00	43.5	40.0	050A00	050A00
		292A00,295A00	50.0	45.9	050A00	050A00
		295A00,295A00	67.0	61.5	050A00	050A00
	MED	292A00	16.5	15.2	-	-
		295A00	33.5	30.8	047A00	047A00
		289A00,295A00	43.5	40.0	050A00	050A00
		292A00,295A00	50.0	45.9	050A00	050A00
		295A00,295A00	67.0	61.5	050A00	050A00
	HIGH	292A00	16.5	15.2	-	-
		295A00	33.5	30.8	050A00	050A00
		289A00,295A00	43.5	40.0	050A00	050A00
		292A00,295A00	50.0	45.9	050A00	050A00
		295A00,295A00	67.0	61.5	050A00	050A00
575–3–60	STD	293A00	16.5	15.2	-	-
		296A00	33.5	30.8	047A00	047A00
		290A00,296A00	43.5	40.0	047A00	050A00
		293A00,296A00	50.0	45.9	047A00	047A00
		296A00,296A00	67.0	61.5	050A00	050A00
	MED	293A00	16.5	15.2	-	-
		296A00	33.5	30.8	047A00	047A00
		290A00,296A00	43.5	40.0	047A00	050A00
		293A00,296A00	50.0	45.9	047A00	047A00
		296A00,296A00	67.0	61.5	050A00	050A00
	HIGH	293A00	16.5	15.2	-	-
		296A00	33.5	30.8	047A00	047A00
		290A00,296A00	43.5	40.0	050A00	050A00
		293A00,296A00	50.0	45.9	050A00	050A00
		296A00,296A00	67.0	61.5	050A00	050A00

LEGEND

APP PWR	– 208 / 230V / 460V / 575V
C.O.	– Convenience outlet
FLA	– Full load amps
IFM	– Indoor fan motor
NOM PWR	– 240V / 480V / 600V
P.E.	– Power exhaust
UNPWRD	– Unpowered convenience outlet

ELECTRICAL INFORMATION

(UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 39 (cont.) – RAS180

ELECTRIC HEAT – ELECTRICAL DATA 2-STAGE COOLING 2-SPEED INDOOR FAN MOTOR

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATERXXXXXX	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLEXXXXXX	
					NO C.O. or UNPWRD C.O.	
					NO P.E.	w/P.E. (pwr fr/unit)
208/ 230–3–60	STD	291A00	16.5	12.4/15.2	049A00	049A00
		294A00	33.5	25.2/30.8	049A00	049A00
		288A00,294A00	43.5	32.7/40.0	051A00	051A00
		291A00,294A00	50.0	37.6/45.9	051A00	051A00
		294A00,294A00	67.0	50.3/61.5	053A00	053A00
	MED	291A00	16.5	12.4/15.2	049A00	049A00
		294A00	33.5	25.2/30.8	049A00	049A00
		288A00,294A00	43.5	32.7/40.0	051A00	051A00
		291A00,294A00	50.0	37.6/45.9	051A00	051A00
		294A00,294A00	67.0	50.3/61.5	053A00	053A00
	HIGH	291A00	16.5	12.4/15.2	049A00	049A00
		294A00	33.5	25.2/30.8	049A00	049A00
		288A00,294A00	43.5	32.7/40.0	051A00	051A00
		291A00,294A00	50.0	37.6/45.9	051A00	051A00
		294A00,294A00	67.0	50.3/61.5	053A00	053A00
460–3–60	STD	292A00	16.5	15.2	–	–
		295A00	33.5	30.8	047A00	047A00
		289A00,295A00	43.5	40.0	050A00	050A00
		292A00,295A00	50.0	45.9	050A00	050A00
		295A00,295A00	67.0	61.5	050A00	050A00
	MED	292A00	16.5	15.2	–	–
		295A00	33.5	30.8	047A00	047A00
		289A00,295A00	43.5	40.0	050A00	050A00
		292A00,295A00	50.0	45.9	050A00	050A00
		295A00,295A00	67.0	61.5	050A00	050A00
	HIGH	292A00	16.5	15.2	–	–
		295A00	33.5	30.8	050A00	050A00
		289A00,295A00	43.5	40.0	050A00	050A00
		292A00,295A00	50.0	45.9	050A00	050A00
		295A00,295A00	67.0	61.5	050A00	050A00
575–3–60	STD	293A00	16.5	15.2	–	–
		296A00	33.5	30.8	047A00	047A00
		290A00,296A00	43.5	40.0	047A00	050A00
		293A00,296A00	50.0	45.9	047A00	047A00
		296A00,296A00	67.0	61.5	050A00	050A00
	MED	293A00	16.5	15.2	–	–
		296A00	33.5	30.8	047A00	047A00
		290A00,296A00	43.5	40.0	047A00	050A00
		293A00,296A00	50.0	45.9	047A00	047A00
		296A00,296A00	67.0	61.5	050A00	050A00
	HIGH	293A00	16.5	15.2	–	–
		296A00	33.5	30.8	047A00	047A00
		290A00,296A00	43.5	40.0	050A00	050A00
		293A00,296A00	50.0	45.9	050A00	050A00
		296A00,296A00	67.0	61.5	050A00	050A00

LEGEND

APP PWR – 208 / 230V / 460V / 575V
 C.O. – Convenience outlet
 FLA – Full load amps
 IFM – Indoor fan motor
 NOM PWR – 240V / 480V / 600V
 P.E. – Power exhaust
 UNPWRD – Unpowered convenience outlet

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 40 – RAS036 Unit Wire/Fuse or HACR Breaker Sizing Data 1 Stage Cooling With 1 Speed Indoor Fan Motor

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom* (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230–1–60	STD	None	None	27.2	40	26	95	29.1	45	29	97
		3.3/4.4	15.9/18.3	27.2/29.0	40/40	26/27	95/95	29.1/31.4	45/45	29/29	97/97
		4.9/6.5	23.5/27.1	35.5/40.0	40/45	33/37	95/95	37.9/42.4	45/45	35/39	97/97
		6.5/8.7	31.4/36.3	45.4/51.5	50/60	42/47	95/95	47.8/53.9	50/60	44/50	97/97
		7.9/10.5	37.9/43.8	53.5/60.9	60/70	49/56	95/95	55.9/63.3	60/70	51/58	97/97
		9.8/13.0	46.9/54.2	64.8/73.9	70/80	60/68	95/95	67.1/76.3	70/80	62/70	97/97
208/ 230–3–60	STD	None	None	19.4	25	19	89	21.3	30	22	91
		3.3/4.4	9.2/10.6	19.4/19.4	25/25	19/19	89/89	21.3/21.8	30/30	22/22	91/91
		4.9/6.5	13.6/15.6	23.1/25.6	25/30	21/24	89/89	25.5/28.0	30/30	23/26	91/91
		6.5/8.7	18.1/20.9	28.8/32.3	30/35	26/30	89/89	31.1/34.6	35/35	29/32	91/91
		7.9/10.5	21.9/25.3	33.5/37.8	35/40	31/35	89/89	35.9/40.1	40/45	33/37	91/91
		12.0/16.0	33.4/38.5	47.9/54.3	50/60	44/50	89/89	50.3/56.6	60/60	46/52	91/91
	HIGH	None	None	19.7	30	20	107	21.6	30	22	109
		3.3/4.4	9.2/10.6	19.7/19.8	30/30	20/20	107/107	21.6/22.1	30/30	22/22	109/109
		4.9/6.5	13.6/15.6	23.5/26.0	30/30	22/24	107/107	25.9/28.4	30/30	24/26	109/109
		6.5/8.7	18.1/20.9	29.1/32.6	30/35	27/30	107/107	31.5/35.0	35/40	29/32	109/109
		7.9/10.5	21.9/25.3	33.9/38.1	35/40	31/35	107/107	36.3/40.5	40/45	33/37	109/109
		12.0/16.0	33.4/38.5	48.3/54.6	50/60	44/50	107/107	50.6/57.0	60/60	47/52	109/109
460–3–60	STD	None	None	10.2	15	10	46	11.2	15	11	47
		6.0	7.2	11.6	15	11	46	12.9	15	12	47
		8.8	10.6	15.9	20	15	46	17.1	20	16	47
		11.5	13.8	19.9	20	18	46	21.1	25	19	47
		14.0	16.8	23.6	25	22	46	24.9	25	23	47
	HIGH	None	None	10.7	15	11	55	11.7	15	12	56
		6.0	7.2	12.3	15	11	55	13.5	15	12	56
		8.8	10.6	16.5	20	15	55	17.8	20	16	56
		11.5	13.8	20.5	25	19	55	21.8	25	20	56
		14.0	16.8	24.3	25	22	55	25.5	30	23	56
575–3–60	STD	None	None	7.3	15	7	44	9.2	15	9	46
	HIGH	None	None	7.4	15	7	50	9.3	15	10	52

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 41 – RAS048 Unit Wire/Fuse or HACR Breaker Sizing Data 1 Stage Cooling With 1 Speed Indoor Fan Motor

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom* (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230–1–60	STD	None	None	33.7	50	32	133	35.6	50	35	135
		3.3/4.4	15.9/18.3	33.7/33.7	50/50	32/32	133/133	35.6/35.6	50/50	35/35	135/135
		6.5/8.7	31.4/36.3	45.4/51.5	50/60	42/47	133/133	47.8/53.9	50/60	44/50	135/135
		9.8/13.0	46.9/54.2	64.8/73.9	70/80	60/68	133/133	67.1/76.3	70/80	62/70	135/135
		13.1/17.4	62.8/72.5	84.6/96.8	90/100	78/89	133/133	87.0/99.1	90/100	80/91	135/135
		15.8/21.0	75.8/87.5	100.9/115.5	110/125	93/106	133/133	103.3/117.9	110/125	95/108	135/135
208/ 230–3–60	STD	None	None	23.5	30	23	99	25.4	30	25	101
		4.9/6.5	13.6/15.6	23.5/25.6	30/30	23/24	99/99	25.5/28.0	30/30	25/26	101/101
		6.5/8.7	18.1/20.9	28.8/32.3	30/35	26/30	99/99	31.1/34.6	35/35	29/32	101/101
		12.0/16.0	33.4/38.5	47.9/54.3	50/60	44/50	99/99	50.3/56.6	60/60	46/52	101/101
		15.8/21.0	43.8/50.5	60.9/69.3	70/70	56/64	99/99	63.3/71.6	70/80	58/66	101/101
	HIGH	None	None	23.8	30	23	117	25.7	30	26	119
		4.9/6.5	13.6/15.6	23.8/26.0	30/30	23/24	117/117	25.9/28.4	30/30	26/26	119/119
		6.5/8.7	18.1/20.9	29.1/32.6	30/35	27/30	117/117	31.5/35.0	35/40	29/32	119/119
		12.0/16.0	33.4/38.5	48.3/54.6	50/60	44/50	117/117	50.6/57.0	60/60	47/52	119/119
		15.8/21.0	43.8/50.5	61.3/69.6	70/70	56/64	117/117	63.6/72.0	70/80	59/66	119/119
		None	None	10.7	15	10	49	11.7	15	12	50
		6.0	7.2	11.6	15	11	49	12.9	15	12	50
460–3–60	STD	11.5	13.8	19.9	20	18	49	21.1	25	19	50
		14.0	16.8	23.6	25	22	49	24.9	25	23	50
		23.0	27.7	37.3	40	34	49	38.5	40	35	50
		None	None	11.2	15	11	58	12.2	15	12	59
	HIGH	6.0	7.2	12.3	15	11	58	13.5	15	12	59
		11.5	13.8	20.5	25	19	58	21.8	25	20	59
		14.0	16.8	24.3	25	22	58	25.5	30	23	59
		23.0	27.7	37.9	40	35	58	39.1	40	36	59
	STD	None	None	8.5	15	8	44	10.4	15	11	46
	MED	None	None	8.5	15	8	44	10.4	15	11	46
	HIGH	None	None	8.6	15	9	50	10.5	15	11	52

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 42 – RAS060 Unit Wire/Fuse or HACR Breaker Sizing Data 1 Stage Cooling With 1 Speed Indoor Fan Motor

NOM. V—PH—Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom* (kW)	FLA	NO P.E.				w/ P.E. (pwr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230—1—60	STD	None	None	39.2	60	37	150	41.1	60	40	152
		4.9/6.5	23.5/27.1	39.2/40.0	60/60	37/37	150/150	41.1/42.4	60/60	40/40	152/152
		6.5/8.7	31.4/36.3	45.4/51.5	60/60	42/47	150/150	47.8/53.9	60/60	44/50	152/152
		9.8/13.0	46.9/54.2	64.8/73.9	70/80	60/68	150/150	67.1/76.3	70/80	62/70	152/152
		13.1/17.4	62.8/72.5	84.6/96.8	90/100	78/89	150/150	87.0/99.1	90/100	80/91	152/152
		15.8/21.0	75.8/87.5	100.9/115.5	110/125	93/106	150/150	103.3/117.9	110/125	95/108	152/152
	MED	None	None	41.3	60	40	175	43.2	60	42	177
		4.9/6.5	23.5/27.1	41.3/42.6	60/60	40/40	175/175	43.2/45.0	60/60	42/42	177/177
		6.5/8.7	31.4/36.3	48.0/54.1	60/60	44/50	175/175	50.4/56.5	60/60	46/52	177/177
		9.8/13.0	46.9/54.2	67.4/76.5	70/80	62/70	175/175	69.8/78.9	70/80	64/73	177/177
		13.1/17.4	62.8/72.5	87.3/99.4	90/100	80/91	175/175	89.6/101.8	90/110	82/94	177/177
		15.8/21.0	75.8/87.5	103.5/118.1	110/125	95/109	175/175	105.9/120.5	110/125	97/111	177/177
	STD	None	None	25.9	30	25	126	27.8	40	27	128
		4.9/6.5	13.6/15.6	25.9/25.9	30/30	25/25	126/126	27.8/28.0	40/40	27/27	128/128
		7.9/10.5	21.9/25.3	33.5/37.8	40/40	31/35	126/126	35.9/40.1	40/45	33/37	128/128
		12.0/16.0	33.4/38.5	47.9/54.3	50/60	44/50	126/126	50.3/56.6	60/60	46/52	128/128
		15.8/21.0	43.8/50.5	60.9/69.3	70/70	56/64	126/126	63.3/71.6	70/80	58/66	128/128
		19.9/26.5	55.2/63.8	75.1/85.9	80/90	69/79	126/126	77.5/88.3	80/90	71/81	128/128
	MED	None	None	26.2	40	26	144	28.1	40	28	146
		4.9/6.5	13.6/15.6	26.2/26.2	40/40	26/26	144/144	28.1/28.4	40/40	28/28	146/146
		7.9/10.5	21.9/25.3	33.9/38.1	40/40	31/35	144/144	36.3/40.5	40/45	33/37	146/146
		12.0/16.0	33.4/38.5	48.3/54.6	50/60	44/50	144/144	50.6/57.0	60/60	47/52	146/146
		15.8/21.0	43.8/50.5	61.3/69.6	70/70	56/64	144/144	63.6/72.0	70/80	59/66	146/146
		19.9/26.5	55.2/63.8	75.5/86.3	80/90	69/79	144/144	77.9/88.6	80/90	72/82	146/146
	HIGH	None	None	28.5	40	28	170	30.4	45	30	172
		4.9/6.5	13.6/15.6	28.5/28.9	40/40	28/28	170/170	30.4/31.3	45/45	30/30	172/172
		7.9/10.5	21.9/25.3	36.8/41.0	40/45	34/38	170/170	39.1/43.4	45/45	36/40	172/172
		12.0/16.0	33.4/38.5	51.1/57.5	60/60	47/53	170/170	53.5/59.9	60/60	49/55	172/172
		15.8/21.0	43.8/50.5	64.1/72.5	70/80	59/67	170/170	66.5/74.9	70/80	61/69	172/172
		19.9/26.5	55.2/63.8	78.4/89.1	80/90	72/82	170/170	80.8/91.5	90/100	74/84	172/172
460—3—60	STD	None	None	12.5	20	12	60	13.5	20	13	61
		6.0	7.2	12.5	20	12	60	13.5	20	13	61
		11.5	13.8	19.9	20	18	60	21.1	25	19	61
		14.0	16.8	23.6	25	22	60	24.9	25	23	61
		23.0	27.7	37.3	40	34	60	38.5	40	35	61
		25.5	30.7	41.0	45	38	60	42.3	45	39	61
	MED	None	None	13	20	13	69	14	20	14	70
		6.0	7.2	13.0	20	13	69	14.0	20	14	70
		11.5	13.8	20.5	25	19	69	21.8	25	20	70
		14.0	16.8	24.3	25	22	69	25.5	30	23	70
		23.0	27.7	37.9	40	35	69	39.1	40	36	70
		25.5	30.7	41.6	45	38	69	42.9	45	39	70
	HIGH	None	None	13.8	20	14	82	14.8	20	15	83
		6.0	7.2	13.8	20	14	82	14.8	20	15	83
		11.5	13.8	21.5	25	20	82	22.8	25	21	83
		14.0	16.8	25.3	30	23	82	26.5	30	24	83
		23.0	27.7	38.9	40	36	82	40.1	45	37	83
		25.5	30.7	42.6	45	39	82	43.9	45	40	83
575—3—60	STD	None	None	9.8	15	10	46	11.7	15	12	48
	MED	None	None	9.9	15	10	52	11.8	15	12	54
	HIGH	None	None	10.7	15	11	63	12.6	15	13	65

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 43 – RAS072 Unit Wire/Fuse or HACR Breaker Sizing Data 1 Stage Cooling With 1 Speed Indoor Fan Motor

NOM. V—PH—Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom* (kW)	FLA	NO RE.				w/ RE. (pwrd fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230—3—60	STD	None	None	30.5	45	30	157	32.4	50	32	159
		4.9/6.5	13.6/15.6	30.5/30.5	45/45	30/30	157/157	32.4/32.4	50/50	32/32	159/159
		7.9/10.5	21.9/25.3	33.9/38.1	45/45	31/35	157/157	36.3/40.5	50/50	33/37	159/159
		12.0/16.0	33.4/38.5	48.3/54.6	50/60	44/50	157/157	50.6/57.0	60/60	47/52	159/159
		15.8/21.0	43.8/50.5	61.3/69.6	70/70	56/64	157/157	63.6/72.0	70/80	59/66	159/159
		19.9/26.5	55.2/63.8	75.5/86.3	80/90	69/79	157/157	77.9/88.6	80/90	72/82	159/159
	MED	None	None	32.8	50	32	183	34.7	50	34	185
		4.9/6.5	13.6/15.6	32.8/32.8	50/50	32/32	183/183	34.7/34.7	50/50	34/34	185/185
		7.9/10.5	21.9/25.3	36.8/41.0	50/50	34/38	183/183	39.1/43.4	50/50	36/40	185/185
		12.0/16.0	33.4/38.5	51.1/57.5	60/60	47/53	183/183	53.5/59.9	60/60	49/55	185/185
		15.8/21.0	43.8/50.5	64.1/72.5	70/80	59/67	183/183	66.5/74.9	70/80	61/69	185/185
		19.9/26.5	55.2/63.8	78.4/89.1	80/90	72/82	183/183	80.8/91.5	90/100	74/84	185/185
	HIGH	None	None	32.8	50	32	183	34.7	50	34	185
		4.9/6.5	13.6/15.6	32.8/32.8	50/50	32/32	183/183	34.7/34.7	50/50	34/34	185/185
		7.9/10.5	21.9/25.3	36.8/41.0	50/50	34/38	183/183	39.1/43.4	50/50	36/40	185/185
		12.0/16.0	33.4/38.5	51.1/57.5	60/60	47/53	183/183	53.5/59.9	60/60	49/55	185/185
		15.8/21.0	43.8/50.5	64.1/72.5	70/80	59/67	183/183	66.5/74.9	70/80	61/69	185/185
		19.9/26.5	55.2/63.8	78.4/89.1	80/90	72/82	183/183	80.8/91.5	90/100	74/84	185/185
460—3—60	STD	None	None	15.5	25	15	79	16.5	25	16	80
		6.0	7.2	15.5	25	15	79	16.5	25	16	80
		11.5	13.8	20.5	25	19	79	21.8	25	20	80
		14.0	16.8	24.3	25	22	79	25.5	30	23	80
		23.0	27.7	37.9	40	35	79	39.1	40	36	80
		25.5	30.7	41.6	45	38	79	42.9	45	39	80
	MED	None	None	16.3	25	16	92	17.3	25	17	93
		6.0	7.2	16.3	25	16	92	17.3	25	17	93
		11.5	13.8	21.5	25	20	92	22.8	25	21	93
		14.0	16.8	25.3	30	23	92	26.5	30	24	93
		23.0	27.7	38.9	40	36	92	40.1	45	37	93
		25.5	30.7	42.6	45	39	92	43.9	45	40	93
	HIGH	None	None	17.3	25	17	101	18.3	25	18	102
		6.0	7.2	17.3	25	17	101	18.3	25	18	102
		11.5	13.8	22.8	25	21	101	24.0	25	22	102
		14.0	16.8	26.5	30	24	101	27.8	30	26	102
		23.0	27.7	40.1	45	37	101	41.4	45	38	102
		25.5	30.7	43.9	45	40	101	45.1	50	42	102
575—3—60	STD	None	None	11.9	15	12	63	13.8	20	14	65
	MED	None	None	12.7	20	12	74	14.6	20	15	76
	HIGH	None	None	12.7	20	12	74	14.6	20	15	76

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 44 – RAS091 Unit Wire/Fuse or HACR Breaker Sizing Data 1 Stage Cooling With 1 Speed Indoor Fan Motor

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom* (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230–3–60	STD	None	None	39.5	60	38	191	43.3	60	43	195
		7.8/10.4	21.7/25.0	39.5/39.5	60/60	38/38	191/191	43.3/43.3	60/60	43/43	195/195
		12.0/16.0	33.4/38.5	48.3/54.6	60/60	44/50	191/191	53.0/59.4	60/60	49/55	195/195
		18.6/24.8	51.7/59.7	71.1/81.1	80/90	65/75	191/191	75.9/85.9	80/90	70/79	195/195
		24.0/32.0	66.7/77.0	89.9/102.8	90/110	83/95	191/191	94.6/107.5	100/110	87/99	195/195
		31.8/42.4	88.4/102.0	117.0/134.0	125/150	108/123	191/191	121.8/138.8	125/150	112/128	195/195
	MED	None	None	41.8	60	41	228	45.6	60	45	232
		7.8/10.4	21.7/25.0	41.8/41.8	60/60	41/41	228/228	45.6/45.6	60/60	45/45	232/232
		12.0/16.0	33.4/38.5	51.1/57.5	60/60	47/53	228/228	55.9/62.3	60/70	51/57	232/232
		18.6/24.8	51.7/59.7	74.0/84.0	80/90	68/77	228/228	78.8/88.8	80/90	72/82	232/232
		24.0/32.0	66.7/77.0	92.8/105.6	100/110	85/97	228/228	97.5/110.4	100/125	90/102	232/232
		31.8/42.4	88.4/102.0	119.9/136.9	125/150	110/126	228/228	124.6/141.6	125/150	115/130	232/232
	HIGH	None	None	49.3	60	49	254	53.1	60	54	258
		7.8/10.4	21.7/25.0	49.3/50.0	60/60	49/49	254/254	53.1/54.8	60/60	54/54	258/258
		12.0/16.0	33.4/38.5	60.5/66.9	70/70	56/62	254/254	65.3/71.6	70/80	60/66	258/258
		18.6/24.8	51.7/59.7	83.4/93.4	90/100	77/86	254/254	88.1/98.1	90/100	81/90	258/258
		24.0/32.0	66.7/77.0	102.1/115.0	110/125	94/106	254/254	106.9/119.8	110/125	98/110	258/258
		31.8/42.4	88.4/102.0	129.3/146.3	150/150	119/135	254/254	134.0/151.0	150/175	123/139	258/258
460–3–60	STD	None	None	19.5	30	19	113	21.3	30	21	115
		13.9	16.7	24.1	30	22	113	26.4	30	24	115
		16.5	19.8	28.0	30	26	113	30.3	35	28	115
		27.8	33.4	45.0	50	41	113	47.3	50	43	115
		33.0	39.7	52.9	60	49	113	55.1	60	51	115
		41.7	50.2	66.0	70	61	113	68.3	70	63	115
	MED	None	None	20.3	30	20	132	22.1	30	22	134
		13.9	16.7	25.1	30	23	132	27.4	30	25	134
		16.5	19.8	29.0	30	27	132	31.3	35	29	134
		27.8	33.4	46.0	50	42	132	48.3	50	44	134
		33.0	39.7	53.9	60	50	132	56.1	60	52	134
		41.7	50.2	67.0	70	62	132	69.3	70	64	134
	HIGH	None	None	24.3	30	24	145	26.1	30	26	147
		13.9	16.7	30.1	35	28	145	32.4	35	30	147
		16.5	19.8	34.0	35	31	145	36.3	40	33	147
		27.8	33.4	51.0	60	47	145	53.3	60	49	147
		33.0	39.7	58.9	60	54	145	61.1	70	56	147
		41.7	50.2	72.0	80	66	145	74.3	80	68	147
575–3–60	STD	None	None	14.9	20	14	89	18.7	25	19	93
		17.0	20.4	28.5	30	26	89	33.3	35	31	93
		34.0	40.9	54.1	60	50	89	58.9	60	54	93
	MED	None	None	15.3	20	15	104	19.1	25	19	108
		17.0	20.4	29.0	30	27	104	33.8	35	31	108
		34.0	40.9	54.6	60	50	104	59.4	60	55	108
	HIGH	None	None	18.1	25	18	118	21.9	30	23	122
		17.0	20.4	32.5	35	30	118	37.3	40	34	122
		34.0	40.9	58.1	60	53	118	62.9	70	58	122

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 45 – RAS090 Unit Wire/Fuse or HACR Breaker Sizing Data 2 Stage Cooling With 1 Speed Indoor Fan Motor

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom* (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230–3–60	STD	—	—	38.8	50	41	193	42.6	50	45	197
		7.8/10.4	21.7/25.0	38.8/38.8	50/50	41/41	193/193	42.6/42.6	50/50	45/45	197/197
		12.0/16.0	33.4/38.5	48.3/54.6	50/60	44/50	193/193	53.0/59.4	60/60	49/55	197/197
		18.6/24.8	51.7/59.7	71.1/81.1	80/90	65/75	193/193	75.9/85.9	80/90	70/79	197/197
		24.0/32.0	66.7/77.0	89.9/102.8	90/110	83/95	193/193	94.6/107.5	100/110	87/99	197/197
		31.8/42.4	88.4/102.0	117.0/134.0	125/150	108/123	193/193	121.8/138.8	125/150	112/128	197/197
	MED	—	—	41.1	50	43	230	44.9	50	48	234
		7.8/10.4	21.7/25.0	41.1/41.1	50/50	43/43	230/230	44.9/45.4	50/50	48/48	234/234
		12.0/16.0	33.4/38.5	51.1/57.5	60/60	47/53	230/230	55.9/62.3	60/70	51/57	234/234
		18.6/24.8	51.7/59.7	74.0/84.0	80/90	68/77	230/230	78.8/88.8	80/90	72/82	234/234
		24.0/32.0	66.7/77.0	92.8/105.6	100/110	85/97	230/230	97.5/110.4	100/125	90/102	234/234
		31.8/42.4	88.4/102.0	119.9/136.9	125/150	110/126	230/230	124.6/141.6	125/150	115/130	234/234
	HIGH	—	—	49.0	60	52	256	52.8	60	56	260
		7.8/10.4	21.7/25.0	49.0/50.0	60/60	52/52	256/256	52.8/54.8	60/60	56/56	260/260
		12.0/16.0	33.4/38.5	60.5/66.9	70/70	56/62	256/256	65.3/71.6	70/80	60/66	260/260
		18.6/24.8	51.7/59.7	83.4/93.4	90/100	77/86	256/256	88.1/98.1	90/100	81/90	260/260
		24.0/32.0	66.7/77.0	102.1/115.0	110/125	94/106	256/256	106.9/119.8	110/125	98/110	260/260
		31.8/42.4	88.4/102.0	129.3/146.3	150/150	119/135	256/256	134.0/151.0	150/175	123/139	260/260
460–3–60	STD	—	—	17.9	20	19	95	19.7	25	21	97
		13.9	16.7	24.1	25	22	95	26.4	30	24	97
		16.5	19.8	28.0	30	26	95	30.3	35	28	97
		27.8	33.4	45.0	50	41	95	47.3	50	43	97
		33.0	39.7	52.9	60	49	95	55.1	60	51	97
		41.7	50.2	66.0	70	61	95	68.3	70	63	97
	MED	—	—	18.7	25	20	114	20.5	25	22	116
		13.9	16.7	25.1	30	23	114	27.4	30	25	116
		16.5	19.8	29.0	30	27	114	31.3	35	29	116
		27.8	33.4	46.0	50	42	114	48.3	50	44	116
		33.0	39.7	53.9	60	50	114	56.1	60	52	116
		41.7	50.2	67.0	70	62	114	69.3	70	64	116
	HIGH	—	—	23.1	30	24	127	24.9	30	26	129
		13.9	16.7	30.1	35	28	127	32.4	35	30	129
		16.5	19.8	34.0	35	31	127	36.3	40	33	129
		27.8	33.4	51.0	60	47	127	53.3	60	49	129
		33.0	39.7	58.9	60	54	127	61.1	70	56	129
		41.7	50.2	72.0	80	66	127	74.3	80	68	129
575–3–60	STD	—	—	13.1	15	14	77	16.9	20	18	81
		17.0	20.4	28.5	30	26	77	33.3	35	31	81
		34.0	40.9	54.1	60	50	77	58.9	60	54	81
	MED	—	—	13.5	15	14	92	17.3	20	19	96
		17.0	20.4	29.0	30	27	92	33.8	35	31	96
		34.0	40.9	54.6	60	50	92	59.4	60	55	96
	HIGH	—	—	16.6	20	17	106	20.4	25	22	110
		17.0	20.4	32.5	35	30	106	37.3	40	34	110
		34.0	40.9	58.1	60	53	106	62.9	70	58	110

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 46 – RAS090 Unit Wire/Fuse or HACR Breaker Sizing Data 2 Stage Cooling With 2 Speed Indoor Fan Motor

NOM. V—PH—Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230—3—60	STD	—	—	39.4/39.2	50/50	41/41	197	43.2/43.0	50/50	46/46	201
		7.8/10.4	21.7/25.0	39.4/39.2	50/50	41/41	197/197	43.2/43.0	50/50	46/46	201/201
		12.0/16.0	33.4/38.5	49.0/55.1	50/60	45/51	197/197	53.8/59.9	60/60	49/55	201/201
		18.6/24.8	51.7/59.7	71.9/81.6	80/90	66/75	197/197	76.6/86.4	80/90	70/79	201/201
		24.0/32.0	66.7/77.0	90.6/103.3	100/110	83/95	197/197	95.4/108.0	100/110	88/99	201/201
		31.8/42.4	88.4/102.0	117.8/134.5	125/150	108/124	197/197	122.5/139.3	125/150	113/128	201/201
	MED	—	—	42.2/41.4	50/50	45/44	227	46.0/45.2	50/50	49/48	231
		7.8/10.4	21.7/25.0	42.2/41.4	50/50	45/44	227/227	46.0/45.8	50/50	49/48	231/231
		12.0/16.0	33.4/38.5	52.5/57.9	60/60	48/53	227/227	57.3/62.6	60/70	53/58	231/231
		18.6/24.8	51.7/59.7	75.4/84.4	80/90	69/78	227/227	80.1/89.1	90/90	74/82	231/231
		24.0/32.0	66.7/77.0	94.1/106.0	100/110	87/98	227/227	98.9/110.8	100/125	91/102	231/231
		31.8/42.4	88.4/102.0	121.3/137.3	125/150	112/126	227/227	126.0/142.0	150/150	116/131	231/231
	HIGH	—	—	47.2/46.3	60/50	50/49	262	51.0/50.1	60/60	55/54	266
		7.8/10.4	21.7/25.0	47.2/47.1	60/50	50/49	262/262	51.0/51.9	60/60	55/54	266/266
		12.0/16.0	33.4/38.5	58.8/64.0	60/70	54/59	262/262	63.5/68.8	70/70	58/63	266/266
		18.6/24.8	51.7/59.7	81.6/90.5	90/100	75/83	262/262	86.4/95.3	90/100	79/88	266/266
		24.0/32.0	66.7/77.0	100.4/112.1	110/125	92/103	262/262	105.1/116.9	110/125	97/108	266/266
		31.8/42.4	88.4/102.0	127.5/143.4	150/150	117/132	262/262	132.3/148.1	150/150	122/136	266/266
460—3—60	STD	—	—	18.2	20	19	97	20.0	25	21	99
		13.9	16.7	24.5	25	23	97	26.8	30	25	99
		16.5	19.8	28.4	30	26	97	30.6	35	28	99
		27.8	33.4	45.4	50	42	97	47.6	50	44	99
		33.0	39.7	53.3	60	49	97	55.5	60	51	99
		41.7	50.2	66.4	70	61	97	68.6	70	63	99
	MED	—	—	19.1	25	20	113	20.9	25	22	115
		13.9	16.7	25.6	30	24	113	27.9	30	26	115
		16.5	19.8	29.5	30	27	113	31.8	35	29	115
		27.8	33.4	46.5	50	43	113	48.8	50	45	115
		33.0	39.7	54.4	60	50	113	56.6	60	52	115
		41.7	50.2	67.5	70	62	113	69.8	70	64	115
	HIGH	—	—	21.8	25	23	130	23.6	30	25	132
		13.9	16.7	28.9	30	27	130	31.1	35	29	132
		16.5	19.8	32.8	35	30	130	35.0	35	32	132
		27.8	33.4	49.8	50	46	130	52.0	60	48	132
		33.0	39.7	57.6	60	53	130	59.9	60	55	132
		41.7	50.2	70.8	80	65	130	73.0	80	67	132
575—3—60	STD	—	—	13.5	15	14	79	17.3	20	19	83
		17.0	20.4	29.0	30	27	79	33.8	35	31	83
		34.0	40.9	54.6	60	50	79	59.4	60	55	83
	MED	—	—	15.2	20	16	92	19.0	25	21	96
		17.0	20.4	31.1	35	29	92	35.9	40	33	96
		34.0	40.9	56.8	60	52	92	61.5	70	57	96
	HIGH	—	—	17.4	20	18	106	21.2	25	23	110
		17.0	20.4	33.3	35	31	106	38.0	40	35	110
		34.0	40.9	58.9	60	54	106	63.6	70	59	110

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 47 – RAS101 Unit Wire/Fuse or HACR Breaker Sizing Data 1 Stage Cooling With 1 Speed Indoor Fan Motor

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom* (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230–3–60	STD	None	None	45.1	60	43	222	48.9	60	48	226
		7.8/10.4	21.7/25.0	45.1/45.1	60/60	43/43	222/222	48.9/48.9	60/60	48/48	226/226
		12.0/16.0	33.4/38.5	48.3/54.6	60/60	44/50	222/222	53.0/59.4	60/60	49/55	226/226
		18.6/24.8	51.7/59.7	71.1/81.1	80/90	65/75	222/222	75.9/85.9	80/90	70/79	226/226
		24.0/32.0	66.7/77.0	89.9/102.8	90/110	83/95	222/222	94.6/107.5	100/110	87/99	226/226
		31.8/42.4	88.4/102.0	117.0/134.0	125/150	108/123	222/222	121.8/138.8	125/150	112/128	226/226
	MED	None	None	45.1	60	43	233	48.9	60	48	237
		7.8/10.4	21.7/25.0	45.1/45.1	60/60	43/43	233/233	48.9/48.9	60/60	48/48	237/237
		12.0/16.0	33.4/38.5	48.3/54.6	60/60	44/50	233/233	53.0/59.4	60/60	49/55	237/237
		18.6/24.8	51.7/59.7	71.1/81.1	80/90	65/75	233/233	75.9/85.9	80/90	70/79	237/237
		24.0/32.0	66.7/77.0	89.9/102.8	90/110	83/95	233/233	94.6/107.5	100/110	87/99	237/237
		31.8/42.4	88.4/102.0	117.0/134.0	125/150	108/123	233/233	121.8/138.8	125/150	112/128	237/237
	HIGH	None	None	49.9	60	49	276	53.7	80	53	280
		7.8/10.4	21.7/25.0	49.9/49.9	60/60	49/49	276/276	53.7/53.7	80/80	53/53	280/280
		12.0/16.0	33.4/38.5	54.3/60.6	60/70	50/56	276/276	59.0/65.4	80/80	54/60	280/280
		18.6/24.8	51.7/59.7	77.1/87.1	80/90	71/80	276/276	81.9/91.9	90/100	75/85	280/280
		24.0/32.0	66.7/77.0	95.9/108.8	100/110	88/100	276/276	100.6/113.5	110/125	93/104	280/280
		31.8/42.4	88.4/102.0	123.0/140.0	125/150	113/129	276/276	127.8/144.8	150/150	118/133	280/280
460–3–60	STD	None	None	22.6	30	22	108	24.4	30	24	110
		13.9	16.7	24.1	30	22	108	26.4	30	24	110
		16.5	19.8	28.0	30	26	108	30.3	35	28	110
		27.8	33.4	45.0	50	41	108	47.3	50	43	110
		33.0	39.7	52.9	60	49	108	55.1	60	51	110
		41.7	50.2	66.0	70	61	108	68.3	70	63	110
	MED	None	None	22.6	30	22	114	24.4	30	24	116
		13.9	16.7	24.1	30	22	114	26.4	30	24	116
		16.5	19.8	28.0	30	26	114	30.3	35	28	116
		27.8	33.4	45.0	50	41	114	47.3	50	43	116
		33.0	39.7	52.9	60	49	114	55.1	60	51	116
		41.7	50.2	66.0	70	61	114	68.3	70	63	116
	HIGH	None	None	24.4	30	24	136	26.2	30	26	138
		13.9	16.7	26.4	30	24	136	28.6	30	26	138
		16.5	19.8	30.3	35	28	136	32.5	40	30	138
		27.8	33.4	47.3	50	43	136	49.5	50	46	138
		33.0	39.7	55.1	60	51	136	57.4	60	53	138
		41.7	50.2	68.3	70	63	136	70.5	80	65	138
575–3–60	STD	None	None	18.9	30	18	91	22.7	30	23	95
		17.0	20.4	28.5	30	26	91	33.3	35	31	95
		34.0	40.9	54.1	60	50	91	58.9	60	54	95
	MED	None	None	18.5	30	18	95	22.3	30	22	99
		17.0	20.4	28.0	30	26	95	32.8	35	30	99
		34.0	40.9	53.6	60	49	95	58.4	60	54	99
	HIGH	None	None	19.3	30	19	106	23.1	30	23	110
		17.0	20.4	29.0	30	27	106	33.8	35	31	110
		34.0	40.9	54.6	60	50	106	59.4	60	55	110

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 48 – RAS102 Unit Wire/Fuse or HACR Breaker Sizing Data 2 Stage Cooling With 1 Speed Indoor Fan Motor

NOM. V—PH—Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom* (kW)	FLA	NO P.E.				w/ P.E. (pwr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230—3—60	STD	—	—	40.0	50	42	208	43.8	50	46	212
		7.8/10.4	21.7/25.0	40.0/40.0	50/50	42/42	208/208	43.8/43.8	50/50	46/46	212/212
		12.0/16.0	33.4/38.5	48.3/54.6	50/60	44/50	208/208	53.0/59.4	60/60	49/55	212/212
		18.6/24.8	51.7/59.7	71.1/81.1	80/90	65/75	208/208	75.9/85.9	80/90	70/79	212/212
		24.0/32.0	66.7/77.0	89.9/102.8	90/110	83/95	208/208	94.6/107.5	100/110	87/99	212/212
		31.8/42.4	88.4/102.0	117.0/134.0	125/150	108/123	208/208	121.8/138.8	125/150	112/128	212/212
	MED	—	—	40.0	50	42	219	43.8	50	46	223
		7.8/10.4	21.7/25.0	40.0/40.0	50/50	42/42	219/219	43.8/43.8	50/50	46/46	223/223
		12.0/16.0	33.4/38.5	48.3/54.6	50/60	44/50	219/219	53.0/59.4	60/60	49/55	223/223
		18.6/24.8	51.7/59.7	71.1/81.1	80/90	65/75	219/219	75.9/85.9	80/90	70/79	223/223
		24.0/32.0	66.7/77.0	89.9/102.8	90/110	83/95	219/219	94.6/107.5	100/110	87/99	223/223
		31.8/42.4	88.4/102.0	117.0/134.0	125/150	108/123	219/219	121.8/138.8	125/150	112/128	223/223
	HIGH	—	—	44.8	50	47	262	48.6	60	52	266
		7.8/10.4	21.7/25.0	44.8/44.8	50/50	47/47	262/262	48.6/48.6	60/60	52/52	266/266
		12.0/16.0	33.4/38.5	54.3/60.6	60/70	50/56	262/262	59.0/65.4	60/70	54/60	266/266
		18.6/24.8	51.7/59.7	77.1/87.1	80/90	71/80	262/262	81.9/91.9	90/100	75/85	266/266
		24.0/32.0	66.7/77.0	95.9/108.8	100/110	88/100	262/262	100.6/113.5	110/125	93/104	266/266
		31.8/42.4	88.4/102.0	123.0/140.0	125/150	113/129	262/262	127.8/144.8	150/150	118/133	266/266
460—3—60	STD	—	—	18.3	20	19	109	20.1	25	21	111
		13.9	16.7	24.1	25	22	109	26.4	30	24	111
		16.5	19.8	28.0	30	26	109	30.3	35	28	111
		27.8	33.4	45.0	50	41	109	47.3	50	43	111
		33.0	39.7	52.9	60	49	109	55.1	60	51	111
		41.7	50.2	66.0	70	61	109	68.3	70	63	111
	MED	—	—	18.3	20	19	115	20.1	25	21	117
		13.9	16.7	24.1	25	22	115	26.4	30	24	117
		16.5	19.8	28.0	30	26	115	30.3	35	28	117
		27.8	33.4	45.0	50	41	115	47.3	50	43	117
		33.0	39.7	52.9	60	49	115	55.1	60	51	117
		41.7	50.2	66.0	70	61	115	68.3	70	63	117
	HIGH	—	—	20.1	25	21	137	21.9	25	23	139
		13.9	16.7	26.4	30	24	137	28.6	30	26	139
		16.5	19.8	30.3	35	28	137	32.5	35	30	139
		27.8	33.4	47.3	50	43	137	49.5	50	46	139
		33.0	39.7	55.1	60	51	137	57.4	60	53	139
		41.7	50.2	68.3	70	63	137	70.5	80	65	139
575—3—60	STD	—	—	15.9	20	17	85	19.7	25	21	89
		17.0	20.4	28.5	30	26	85	33.3	35	31	89
		34.0	40.9	54.1	60	50	85	58.9	60	54	89
	MED	—	—	15.5	20	16	89	19.3	25	20	93
		17.0	20.4	28.0	30	26	89	32.8	35	30	93
		34.0	40.9	53.6	60	49	89	58.4	60	54	93
	HIGH	—	—	16.3	20	17	100	20.1	25	21	104
		17.0	20.4	29.0	30	27	100	33.8	35	31	104
		34.0	40.9	54.6	60	50	100	59.4	60	55	104

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 49 – RAS102 Unit Wire/Fuse or HACR Breaker Sizing Data 2 Stage Cooling With 2 Speed Indoor Fan Motor

NOM V—PH—Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230—3—60	STD	—	—	40.6/40.4	50/50	43/42	212	44.4/44.2	50/50	47/47	216
		7.8/10.4	21.7/25.0	40.6/40.4	50/50	43/42	212/212	44.4/44.2	50/50	47/47	216/216
		12.0/16.0	33.4/38.5	49.0/55.1	50/60	45/51	212/212	53.8/59.9	60/60	49/55	216/216
		18.6/24.8	51.7/59.7	71.9/81.6	80/90	66/75	212/212	76.6/86.4	80/90	70/79	216/216
		24.0/32.0	66.7/77.0	90.6/103.3	100/110	83/95	212/212	95.4/108.0	100/110	88/99	216/216
		31.8/42.4	88.4/102.0	117.8/134.5	125/150	108/124	212/212	122.5/139.3	125/150	113/128	216/216
	MED	—	—	41.9/41.6	50/50	44/44	216	45.7/45.4	60/50	48/48	220
		7.8/10.4	21.7/25.0	41.9/41.6	50/50	44/44	216/216	45.7/45.4	60/50	48/48	220/220
		12.0/16.0	33.4/38.5	50.6/56.6	60/60	47/52	216/216	55.4/61.4	60/70	51/56	220/220
		18.6/24.8	51.7/59.7	73.5/83.1	80/90	68/76	216/216	78.3/87.9	80/90	72/81	220/220
		24.0/32.0	66.7/77.0	92.3/104.8	100/110	85/96	216/216	97.0/109.5	100/110	89/101	220/220
		31.8/42.4	88.4/102.0	119.4/136.0	125/150	110/125	216/216	124.1/140.8	125/150	114/129	220/220
	HIGH	—	—	45.6/44.6	60/50	48/47	266	49.4/48.4	60/60	53/52	270
		7.8/10.4	21.7/25.0	45.6/44.6	60/50	48/47	266/266	49.4/48.4	60/60	53/52	270/270
		12.0/16.0	33.4/38.5	55.3/60.4	60/70	51/56	266/266	60.0/65.1	60/70	55/60	270/270
		18.6/24.8	51.7/59.7	78.1/86.9	80/90	72/80	266/266	82.9/91.6	90/100	76/84	270/270
		24.0/32.0	66.7/77.0	96.9/108.5	100/110	89/100	266/266	101.6/113.3	110/125	93/104	270/270
		31.8/42.4	88.4/102.0	124.0/139.8	125/150	114/129	266/266	128.8/144.5	150/150	118/133	270/270
460—3—60	STD	—	—	18.6	25	20	111	20.4	25	22	113
		13.9	16.7	24.5	25	23	111	26.8	30	25	113
		16.5	19.8	28.4	30	26	111	30.6	35	28	113
		27.8	33.4	45.4	50	42	111	47.6	50	44	113
		33.0	39.7	53.3	60	49	111	55.5	60	51	113
		41.7	50.2	66.4	70	61	111	68.6	70	63	113
	MED	—	—	19.5	25	21	114	21.3	25	23	116
		13.9	16.7	25.6	30	24	114	27.9	30	26	116
		16.5	19.8	29.5	30	27	114	31.8	35	29	116
		27.8	33.4	46.5	50	43	114	48.8	50	45	116
		33.0	39.7	54.4	60	50	114	56.6	60	52	116
		41.7	50.2	67.5	70	62	114	69.8	70	64	116
	HIGH	—	—	20.6	25	22	139	22.4	25	24	141
		13.9	16.7	27.0	30	25	139	29.3	30	27	141
		16.5	19.8	30.9	35	28	139	33.1	35	30	141
		27.8	33.4	47.9	50	44	139	50.1	60	46	141
		33.0	39.7	55.8	60	51	139	58.0	60	53	141
		41.7	50.2	68.9	70	63	139	71.1	80	65	141
575—3—60	STD	—	—	16.3	20	17	87	20.1	25	21	91
		17.0	20.4	29.0	30	27	87	33.8	35	31	91
		34.0	40.9	54.6	60	50	87	59.4	60	55	91
	MED	—	—	17.0	20	18	91	20.8	25	22	95
		17.0	20.4	29.9	30	27	91	34.6	35	32	95
		34.0	40.9	55.5	60	51	91	60.3	70	55	95
	HIGH	—	—	18.0	20	19	100	21.8	25	23	104
		17.0	20.4	31.1	35	29	100	35.9	40	33	104
		34.0	40.9	56.8	60	52	100	61.5	70	57	104

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 50 – RAS121 Unit Wire/Fuse or HACR Breaker Sizing Data 1 Stage Cooling With 1 Speed Indoor Fan Motor

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom* (kW)	FLA	NO P.E.				w/ P.E. (pwr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230–3–60	STD	None	None	45.8	60	44	263	49.6	60	48	267
		7.8/10.4	21.7/25.0	45.8/45.8	60/60	44/44	263/263	49.6/49.6	60/60	48/48	267/267
		12.0/16.0	33.4/38.5	48.3/54.6	60/60	44/50	263/263	53.0/59.4	60/60	49/55	267/267
		24.0/32.0	66.7/77.0	89.9/102.8	90/110	83/95	263/263	94.6/107.5	100/110	87/99	267/267
		31.8/42.4	88.4/102.0	117.0/134.0	125/150	108/123	263/263	121.8/138.8	125/150	112/128	267/267
		37.6/50.0	104.2/120.3	136.8/126.8	150/150	126/144	263/263	141.5/131.6	150/150	130/149	267/267
	MED	None	None	50.6	60	50	306	54.4	80	54	310
		7.8/10.4	21.7/25.0	50.6/50.6	60/60	50/50	306/306	54.4/54.4	80/80	54/54	310/310
		12.0/16.0	33.4/38.5	54.3/60.6	60/80	50/56	306/306	59.0/65.4	80/80	54/60	310/310
		24.0/32.0	66.7/77.0	95.9/108.8	100/110	88/100	306/306	100.6/113.5	110/125	93/104	310/310
		31.8/42.4	88.4/102.0	123.0/140.0	125/150	113/129	306/306	127.8/144.8	150/150	118/133	310/310
		37.6/50.0	104.2/120.3	142.8/132.8	150/150	131/150	306/306	147.5/137.6	150/150	136/154	310/310
	HIGH	None	None	55.6	80	55	315	59.4	80	60	319
		7.8/10.4	21.7/25.0	55.6/55.6	80/80	55/55	315/315	59.4/59.4	80/80	60/60	319/319
		12.0/16.0	33.4/38.5	60.5/66.9	80/80	56/62	315/315	65.3/71.6	80/80	60/66	319/319
		24.0/32.0	66.7/77.0	102.1/115.0	110/125	94/106	315/315	106.9/119.8	110/125	98/110	319/319
		31.8/42.4	88.4/102.0	129.3/146.3	150/150	119/135	315/315	134.0/151.0	150/175	123/139	319/319
		37.6/50.0	104.2/120.3	149.0/139.1	150/175	137/156	315/315	153.8/143.8	175/175	141/160	319/319
460–3–60	STD	None	None	25.1	30	24	133	26.9	40	26	135
		13.9	16.7	25.1	30	24	133	26.9	40	26	135
		16.5	19.8	28.0	30	26	133	30.3	40	28	135
		33.0	39.7	52.9	60	49	133	55.1	60	51	135
		41.7	50.2	66.0	70	61	133	68.3	70	63	135
		50.0	60.1	63.4	70	72	133	65.6	70	74	135
	MED	None	None	26.9	40	26	155	28.7	45	28	157
		13.9	16.7	26.9	40	26	155	28.7	45	28	157
		16.5	19.8	30.3	40	28	155	32.5	45	30	157
		33.0	39.7	55.1	60	51	155	57.4	60	53	157
		41.7	50.2	68.3	70	63	155	70.5	80	65	157
		50.0	60.1	65.6	80	74	155	67.9	80	76	157
	HIGH	None	None	29.9	45	30	159	31.7	45	32	161
		13.9	16.7	30.1	45	30	159	32.4	45	32	161
		16.5	19.8	34.0	45	31	159	36.3	45	33	161
		33.0	39.7	58.9	60	54	159	61.1	70	56	161
		41.7	50.2	72.0	80	66	159	74.3	80	68	161
		50.0	60.1	69.4	80	78	159	71.6	80	80	161
575–3–60	STD	None	None	18.5	30	18	95	22.3	30	22	99
		17.0	20.4	28.0	30	26	95	32.8	35	30	99
		34.0	40.9	53.6	60	49	95	58.4	60	54	99
		51.0	61.3	63.8	70	73	95	68.6	80	77	99
	MED	None	None	19.3	30	19	106	23.1	30	23	110
		17.0	20.4	29.0	30	27	106	33.8	35	31	110
		34.0	40.9	54.6	60	50	106	59.4	60	55	110
		51.0	61.3	64.8	70	74	106	69.6	80	78	110
	HIGH	None	None	22.1	30	22	120	25.9	30	26	124
		17.0	20.4	32.5	35	30	120	37.3	40	34	124
		34.0	40.9	58.1	60	53	120	62.9	70	58	124
		51.0	61.3	68.3	80	77	120	73.1	80	81	124

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 51 – RAS120 Unit Wire/Fuse or HACR Breaker Sizing Data 2 Stage Cooling With 1 Speed Indoor Fan Motor

NOM. V—PH—Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom* (kW)	FLA	NO P.E.				w/ P.E. (pwr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230—3—60	STD	—	—	43.7	50	46	258	47.5	60	50	262
		7.8/10.4	21.7/25.0	43.7/43.7	50/50	46/46	258/258	47.5/47.5	60/60	50/50	262/262
		12.0/16.0	33.4/38.5	48.3/54.6	50/60	46/50	258/258	53.0/59.4	60/60	50/55	262/262
		24.0/32.0	66.7/77.0	89.9/102.8	90/110	83/95	258/258	94.6/107.5	100/110	87/99	262/262
		31.8/42.4	88.4/102.0	117.0/134.0	125/150	108/123	258/258	121.8/138.8	125/150	112/128	262/262
		37.6/50.0	104.2/120.3	136.8/126.8	150/150	126/144	258/258	141.5/131.6	150/150	130/149	262/262
	MED	—	—	48.5	60	51	301	52.3	60	56	305
		7.8/10.4	21.7/25.0	48.5/48.5	60/60	51/51	301/301	52.3/52.3	60/60	56/56	305/305
		12.0/16.0	33.4/38.5	54.3/60.6	60/70	51/56	301/301	59.0/65.4	60/70	56/60	305/305
		24.0/32.0	66.7/77.0	95.9/108.8	100/110	88/100	301/301	100.6/113.5	110/125	93/104	305/305
		31.8/42.4	88.4/102.0	123.0/140.0	125/150	113/129	301/301	127.8/144.8	150/150	118/133	305/305
		37.6/50.0	104.2/120.3	142.8/132.8	150/150	131/150	301/301	147.5/137.6	150/150	136/154	305/305
	HIGH	—	—	53.5	60	57	310	57.3	70	61	314
		7.8/10.4	21.7/25.0	53.5/53.5	60/60	57/57	310/310	57.3/57.3	70/70	61/61	314/314
		12.0/16.0	33.4/38.5	60.5/66.9	70/70	57/62	310/310	65.3/71.6	70/80	61/66	314/314
		24.0/32.0	66.7/77.0	102.1/115.0	110/125	94/106	310/310	106.9/119.8	110/125	98/110	314/314
		31.8/42.4	88.4/102.0	129.3/146.3	150/150	119/135	310/310	134.0/151.0	150/175	123/139	314/314
		37.6/50.0	104.2/120.3	149.0/139.1	150/175	137/156	310/310	153.8/143.8	175/175	141/160	314/314
460—3—60	STD	—	—	21.5	25	23	123	23.3	30	25	125
		13.9	16.7	24.1	25	23	123	26.4	30	25	125
		16.5	19.8	28.0	30	26	123	30.3	35	28	125
		33.0	39.7	52.9	60	49	123	55.1	60	51	125
		41.7	50.2	66.0	70	61	123	68.3	70	63	125
		50.0	60.1	63.4	70	72	123	65.6	70	74	125
	MED	—	—	23.3	30	25	145	25.1	30	27	147
		13.9	16.7	26.4	30	25	145	28.6	30	27	147
		16.5	19.8	30.3	35	28	145	32.5	35	30	147
		33.0	39.7	55.1	60	51	145	57.4	60	53	147
		41.7	50.2	68.3	70	63	145	70.5	80	65	147
		50.0	60.1	65.6	80	74	145	67.9	80	76	147
	HIGH	—	—	26.3	30	28	149	28.1	35	30	151
		13.9	16.7	30.1	35	28	149	32.4	35	30	151
		16.5	19.8	34.0	35	31	149	36.3	40	33	151
		33.0	39.7	58.9	60	54	149	61.1	70	56	151
		41.7	50.2	72.0	80	66	149	74.3	80	68	151
		50.0	60.1	69.4	80	78	149	71.6	80	80	151
575—3—60	STD	—	—	16.2	20	17	93	20.0	25	21	97
		17.0	20.4	28.0	30	26	93	32.8	35	30	97
		34.0	40.9	53.6	60	49	93	58.4	60	54	97
		51.0	61.3	63.8	70	73	93	68.6	80	77	97
	MED	—	—	17.0	20	18	104	20.8	25	22	108
		17.0	20.4	29.0	30	27	104	33.8	35	31	108
		34.0	40.9	54.6	60	50	104	59.4	60	55	108
		51.0	61.3	64.8	70	74	104	69.6	80	78	108
	HIGH	—	—	19.8	25	21	118	23.6	30	25	122
		17.0	20.4	32.5	35	30	118	37.3	40	34	122
		34.0	40.9	58.1	60	53	118	62.9	70	58	122
		51.0	61.3	68.3	80	77	118	73.1	80	81	122

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 52 – RAS120 Unit Wire/Fuse or HACR Breaker Sizing Data 2 Stage Cooling With 2 Speed Indoor Fan Motor

NOM. V—PH—Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrdr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230—3—60	STD	—	—	45.6/45.3	60/60	48/47	255	49.4/49.1	60/60	52/52	259
		7.8/10.4	21.7/25.0	45.6/45.3	60/60	48/47	255/255	49.4/49.1	60/60	52/52	259/259
		12.0/16.0	33.4/38.5	50.6/56.6	60/60	48/52	255/255	55.4/61.4	60/70	52/56	259/259
		24.0/32.0	66.7/77.0	92.3/104.8	100/110	85/96	255/255	97.0/109.5	100/110	89/101	259/259
		31.8/42.4	88.4/102.0	119.4/136.0	125/150	110/125	255/255	124.1/140.8	125/150	114/129	259/259
		37.6/50.0	104.2/120.3	139.1/128.8	150/150	128/146	255/255	143.9/133.6	150/150	132/151	259/259
	MED	—	—	49.3/48.3	60/60	52/51	305	53.1/52.1	60/60	56/55	309
		7.8/10.4	21.7/25.0	49.3/48.3	60/60	52/51	305/305	53.1/52.1	60/60	56/55	309/309
		12.0/16.0	33.4/38.5	55.3/60.4	60/70	52/56	305/305	60.0/65.1	60/70	56/60	309/309
		24.0/32.0	66.7/77.0	96.9/108.5	100/110	89/100	305/305	101.6/113.3	110/125	93/104	309/309
		31.8/42.4	88.4/102.0	124.0/139.8	125/150	114/129	305/305	128.8/144.5	150/150	118/133	309/309
		37.6/50.0	104.2/120.3	143.8/132.6	150/150	132/150	305/305	148.5/137.3	150/150	137/154	309/309
	HIGH	—	—	52.1/51.2	60/60	55/54	316	55.9/55.0	60/60	60/59	320
		7.8/10.4	21.7/25.0	52.1/51.2	60/60	55/54	316/316	55.9/55.0	60/60	60/59	320/320
		12.0/16.0	33.4/38.5	58.8/64.0	60/70	55/59	316/316	63.5/68.8	70/70	60/63	320/320
		24.0/32.0	66.7/77.0	100.4/112.1	110/125	92/103	316/316	105.1/116.9	110/125	97/108	320/320
		31.8/42.4	88.4/102.0	127.5/143.4	150/150	117/132	316/316	132.3/148.1	150/150	122/136	320/320
		37.6/50.0	104.2/120.3	147.3/136.2	150/150	135/153	316/316	152.0/140.9	175/175	140/157	320/320
460—3—60	STD	—	—	22.7	30	24	122	24.5	30	26	124
		13.9	16.7	25.6	30	24	122	27.9	30	26	124
		16.5	19.8	29.5	30	27	122	31.8	35	29	124
		33.0	39.7	54.4	60	50	122	56.6	60	52	124
		41.7	50.2	67.5	70	62	122	69.8	70	64	124
		50.0	60.1	64.9	70	73	122	67.1	80	76	124
	MED	—	—	23.8	30	25	147	25.6	30	27	149
		13.9	16.7	27.0	30	25	147	29.3	30	27	149
		16.5	19.8	30.9	35	28	147	33.1	35	30	149
		33.0	39.7	55.8	60	51	147	58.0	60	53	149
		41.7	50.2	68.9	70	63	147	71.1	80	65	149
		50.0	60.1	66.2	80	75	147	68.5	80	77	149
	HIGH	—	—	25.3	30	27	152	27.1	30	29	154
		13.9	16.7	28.9	30	27	152	31.1	35	29	154
		16.5	19.8	32.8	35	30	152	35.0	35	32	154
		33.0	39.7	57.6	60	53	152	59.9	60	55	154
		41.7	50.2	70.8	80	65	152	73.0	80	67	154
		50.0	60.1	68.1	80	76	152	70.4	80	79	154
575—3—60	STD	—	—	17.7	20	19	95	21.5	25	23	99
		17.0	20.4	29.9	30	27	95	34.6	35	32	99
		34.0	40.9	55.5	60	51	95	60.3	70	55	99
		51.0	61.3	65.7	70	75	95	70.4	80	79	99
	MED	—	—	18.7	25	20	104	22.5	25	24	108
		17.0	20.4	31.1	35	29	104	35.9	40	33	108
		34.0	40.9	56.8	60	52	104	61.5	70	57	108
		51.0	61.3	66.9	80	76	104	71.7	80	80	108
	HIGH	—	—	20.5	25	22	118	24.3	30	26	122
		17.0	20.4	33.3	35	31	118	38.0	40	35	122
		34.0	40.9	58.9	60	54	118	63.6	70	59	122
		51.0	61.3	69.1	80	78	118	73.8	80	82	122

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 53 – RAS150 Unit Wire/Fuse or HACR Breaker Sizing Data 2 Stage Cooling With 1 Speed Indoor Fan Motor

NOM. V—PH—Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom* (kW)	FLA	NO P.E.				w/ P.E. (pwr fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230—3—60	STD	—	—	60.7	80	63	360	64.5	80	68	364
		7.8/10.4	21.7/25.0	60.7/60.7	80/80	63/63	360/360	64.5/64.5	80/80	68/68	364/364
		12.0/16.0	33.4/38.5	60.7/60.7	80/80	63/63	360/360	64.5/64.5	80/80	68/68	364/364
		24.0/32.0	66.7/77.0	92.8/105.6	100/110	85/97	360/360	97.5/110.4	100/125	90/102	364/364
		31.8/42.4	88.4/102.0	119.9/136.9	125/150	110/126	360/360	124.6/141.6	125/150	115/130	364/364
		37.6/50.0	104.2/120.3	139.6/129.7	150/150	128/147	360/360	144.4/134.4	150/150	133/151	364/364
	MED	—	—	63.2	80	66	377	67.0	80	71	381
		7.8/10.4	21.7/25.0	63.2/63.2	80/80	66/66	377/377	67.0/67.0	80/80	71/71	381/381
		12.0/16.0	33.4/38.5	63.2/63.2	80/80	66/66	377/377	67.0/67.0	80/80	71/71	381/381
		24.0/32.0	66.7/77.0	95.9/108.8	100/110	88/100	377/377	100.6/113.5	110/125	93/104	381/381
		31.8/42.4	88.4/102.0	123.0/140.0	125/150	113/129	377/377	127.8/144.8	150/150	118/133	381/381
		37.6/50.0	104.2/120.3	142.8/132.8	150/150	131/150	377/377	147.5/137.6	150/150	136/154	381/381
	HIGH	—	—	68.2	80	72	386	72.0	80	76	390
		7.8/10.4	21.7/25.0	68.2/68.2	80/80	72/72	386/386	72.0/72.0	80/80	76/76	390/390
		12.0/16.0	33.4/38.5	68.2/68.2	80/80	72/72	386/386	72.0/72.0	80/80	76/76	390/390
		24.0/32.0	66.7/77.0	102.1/115.0	110/125	94/106	386/386	106.9/119.8	110/125	98/110	390/390
		31.8/42.4	88.4/102.0	129.3/146.3	150/150	119/135	386/386	134.0/151.0	150/175	123/139	390/390
		37.6/50.0	104.2/120.3	149.0/139.1	150/175	137/156	386/386	153.8/143.8	175/175	141/160	390/390
460—3—60	STD	—	—	29.5	40	31	181	31.3	40	33	183
		13.9	16.7	29.5	40	31	181	31.3	40	33	183
		16.5	19.8	29.5	40	31	181	31.3	40	33	183
		33.0	39.7	53.9	60	50	181	56.1	60	52	183
		41.7	50.2	67.0	70	62	181	69.3	70	64	183
		50.0	60.1	64.4	70	73	181	66.6	70	75	183
	MED	—	—	30.5	40	32	190	32.3	40	34	192
		13.9	16.7	30.5	40	32	190	32.3	40	34	192
		16.5	19.8	30.5	40	32	190	32.5	40	34	192
		33.0	39.7	55.1	60	51	190	57.4	60	53	192
		41.7	50.2	68.3	70	63	190	70.5	80	65	192
		50.0	60.1	65.6	80	74	190	67.9	80	76	192
	HIGH	—	—	33.5	40	35	194	35.3	45	37	196
		13.9	16.7	33.5	40	35	194	35.3	45	37	196
		16.5	19.8	34.0	40	35	194	36.3	45	37	196
		33.0	39.7	58.9	60	54	194	61.1	70	56	196
		41.7	50.2	72.0	80	66	194	74.3	80	68	196
		50.0	60.1	69.4	80	78	194	71.6	80	80	196
575—3—60	STD	—	—	22.3	30	23	142	26.1	30	28	146
		17.0	20.4	29.0	30	27	142	33.8	35	31	146
		34.0	40.9	54.6	60	50	142	59.4	60	55	146
		51.0	61.3	64.8	70	74	142	69.6	80	78	146
	MED	—	—	22.3	30	23	142	26.1	30	28	146
		17.0	20.4	29.0	30	27	142	33.8	35	31	146
		34.0	40.9	54.6	60	50	142	59.4	60	55	146
		51.0	61.3	64.8	70	74	142	69.6	80	78	146
	HIGH	—	—	25.1	30	27	156	28.9	35	31	160
		17.0	20.4	32.5	35	30	156	37.3	40	34	160
		34.0	40.9	58.1	60	53	156	62.9	70	58	160
		51.0	61.3	68.3	80	77	156	73.1	80	81	160

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 54 – RAS150 Unit Wire/Fuse or HACR Breaker Sizing Data 2 Stage Cooling With 2 Speed Indoor Fan Motor

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230–3–60	STD	—	—	61.8/61.0	80/80	65/64	357	65.6/64.8	80/80	69/68	361
		7.8/10.4	21.7/25.0	61.8/61.0	80/80	65/64	357/357	65.6/64.8	80/80	69/68	361/361
		12.0/16.0	33.4/38.5	61.8/61.0	80/80	65/64	357/357	65.6/64.8	80/80	69/68	361/361
		24.0/32.0	66.7/77.0	94.1/106.0	100/110	87/98	357/357	98.9/110.8	100/125	91/102	361/361
		31.8/42.4	88.4/102.0	121.3/137.3	125/150	112/126	357/357	126.0/142.0	150/150	116/131	361/361
		37.6/50.0	104.2/120.3	141.0/130.1	150/150	130/147	357/357	145.8/134.8	150/150	134/152	361/361
	MED	—	—	64.0/63.0	80/80	67/66	381	67.8/66.8	80/80	72/70	385
		7.8/10.4	21.7/25.0	64.0/63.0	80/80	67/66	381/381	67.8/66.8	80/80	72/70	385/385
		12.0/16.0	33.4/38.5	64.0/63.0	80/80	67/66	381/381	67.8/66.8	80/80	72/70	385/385
		24.0/32.0	66.7/77.0	96.9/108.5	100/110	89/100	381/381	101.6/113.3	110/125	93/104	385/385
		31.8/42.4	88.4/102.0	124.0/139.8	125/150	114/129	381/381	128.8/144.5	150/150	118/133	385/385
		37.6/50.0	104.2/120.3	143.8/132.6	150/150	132/150	381/381	148.5/137.3	150/150	137/154	385/385
	HIGH	—	—	66.8/65.9	80/80	70/69	392	70.6/69.7	80/80	75/74	396
		7.8/10.4	21.7/25.0	66.8/65.9	80/80	70/69	392/392	70.6/69.7	80/80	75/74	396/396
		12.0/16.0	33.4/38.5	66.8/65.9	80/80	70/69	392/392	70.6/69.7	80/80	75/74	396/396
		24.0/32.0	66.7/77.0	100.4/112.1	110/125	92/103	392/392	105.1/116.9	110/125	97/108	396/396
		31.8/42.4	88.4/102.0	127.5/143.4	150/150	117/132	392/392	132.3/148.1	150/150	122/136	396/396
		37.6/50.0	104.2/120.3	147.3/136.2	150/150	135/153	392/392	152.0/140.9	175/175	140/157	396/396
460–3–60	STD	—	—	29.9	40	31	180	31.7	40	33	182
		13.9	16.7	29.9	40	31	180	31.7	40	33	182
		16.5	19.8	29.9	40	31	180	31.8	40	33	182
		33.0	39.7	54.4	60	50	180	56.6	60	52	182
		41.7	50.2	67.5	70	62	180	69.8	70	64	182
		50.0	60.1	64.9	70	73	180	67.1	80	76	182
	MED	—	—	31.0	40	33	192	32.8	40	35	194
		13.9	16.7	31.0	40	33	192	32.8	40	35	194
		16.5	19.8	31.0	40	33	192	33.1	40	35	194
		33.0	39.7	55.8	60	51	192	58.0	60	53	194
		41.7	50.2	68.9	70	63	192	71.1	80	65	194
		50.0	60.1	66.2	80	75	192	68.5	80	77	194
	HIGH	—	—	32.5	40	34	197	34.3	40	36	199
		13.9	16.7	32.5	40	34	197	34.3	40	36	199
		16.5	19.8	32.8	40	34	197	35.0	40	36	199
		33.0	39.7	57.6	60	53	197	59.9	60	55	199
		41.7	50.2	70.8	80	65	197	73.0	80	67	199
		50.0	60.1	68.1	80	76	197	70.4	80	79	199
575–3–60	STD	—	—	24.0	30	25	142	27.8	30	30	146
		17.0	20.4	31.1	35	29	142	35.9	40	33	146
		34.0	40.9	56.8	60	52	142	61.5	70	57	146
		51.0	61.3	66.9	80	76	142	71.7	80	80	146
	MED	—	—	24.0	30	25	142	27.8	30	30	146
		17.0	20.4	31.1	35	29	142	35.9	40	33	146
		34.0	40.9	56.8	60	52	142	61.5	70	57	146
		51.0	61.3	66.9	80	76	142	71.7	80	80	146
	HIGH	—	—	25.7	30	27	156	29.5	35	32	160
		17.0	20.4	33.3	35	31	156	38.0	40	35	160
		34.0	40.9	58.9	60	54	156	63.6	70	59	160
		51.0	61.3	69.1	80	78	156	73.8	80	82	160

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 55 – RAS180 Unit Wire/Fuse or HACR Breaker Sizing Data 2 Stage Cooling With 1 Speed Indoor Fan Motor

NOM. V—PH—Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom* (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230—3—60	STD	-	-	68.3	80	71	396	72.1	80	76	400
		12.4/16.5	34.4/39.7	68.3/68.3	80/80	71/71	396/396	72.1/72.1	80/80	76/76	400/400
		25.2/33.5	69.9/80.6	96.8/110.1	100/125	89/101	396/396	101.5/114.9	110/125	93/106	400/400
		32.7/43.5	90.7/104.7	122.8/140.3	125/150	113/129	396/396	127.5/145.0	150/150	117/133	400/400
		37.6/50.0	104.3/120.3	139.8/129.7	150/150	129/147	396/396	144.5/134.4	150/150	133/151	400/400
		50.3/67.0	139.7/161.2	149.1/170.6	175/200	169/194	396/396	153.8/175.3	175/200	174/198	400/400
	MED	-	-	70.8	80	74	413	74.6	90	79	417
		12.4/16.5	34.4/39.7	70.8/70.8	80/80	74/74	413/413	74.6/74.6	90/90	79/79	417/417
		25.2/33.5	69.9/80.6	99.9/113.3	100/125	92/104	413/413	104.6/118.0	110/125	96/109	417/417
		32.7/43.5	90.7/104.7	125.9/143.4	150/150	116/132	413/413	130.6/148.1	150/150	120/136	417/417
		37.6/50.0	104.3/120.3	142.9/132.8	150/150	131/150	413/413	147.6/137.6	150/150	136/154	417/417
		50.3/67.0	139.7/161.2	152.2/173.7	175/200	172/197	413/413	157.0/178.5	175/200	177/201	417/417
	HIGH	-	-	81.2	100	86	432	85.0	100	91	436
		12.4/16.5	34.4/39.7	81.2/81.2	100/100	86/86	432/432	85.0/85.0	100/100	91/91	436/436
		25.2/33.5	69.9/80.6	112.9/126.3	125/150	104/116	432/432	117.6/131.0	125/150	108/121	436/436
		32.7/43.5	90.7/104.7	138.9/156.4	150/175	128/144	432/432	143.6/161.1	150/175	132/148	436/436
		37.6/50.0	104.3/120.3	155.9/145.8	175/175	143/162	432/432	160.6/150.6	175/175	148/166	436/436
		50.3/67.0	139.7/161.2	165.2/186.7	175/225	184/209	432/432	170.0/191.5	175/225	188/213	436/436
460—3—60	STD	-	-	34.0	45	35	234	35.8	45	37	236
		16.5	19.9	34.0	45	35	234	35.8	45	37	236
		33.5	40.3	54.6	60	50	234	56.9	60	52	236
		43.5	52.3	69.6	70	64	234	71.9	80	66	236
		50.0	60.2	64.5	70	73	234	66.7	70	75	236
		67.0	80.6	84.9	90	97	234	87.1	100	99	236
	MED	-	-	35.0	45	37	243	36.8	45	39	245
		16.5	19.9	35.0	45	37	243	36.8	45	39	245
		33.5	40.3	55.9	60	51	243	58.1	60	53	245
		43.5	52.3	70.9	80	65	243	73.1	80	67	245
		50.0	60.2	65.7	80	74	243	68.0	80	76	245
		67.0	80.6	86.1	100	98	243	88.4	100	100	245
	HIGH	-	-	40.8	50	43	252	42.6	50	45	254
		16.5	19.9	40.8	50	43	252	42.6	50	45	254
		33.5	40.3	63.1	70	58	252	65.4	70	60	254
		43.5	52.3	78.1	80	72	252	80.4	90	74	254
		50.0	60.2	73.0	80	81	252	75.2	80	83	254
		67.0	80.6	93.4	100	104	252	95.6	100	106	254
575—3—60	STD	-	-	26.5	30	28	184	30.3	40	32	188
		16.5	15.9	26.5	30	28	184	30.3	40	32	188
		33.5	32.2	43.8	45	40	184	48.5	50	45	188
		43.5	41.8	55.8	60	51	184	60.5	70	56	188
		50.0	48.1	51.6	60	59	184	56.4	60	63	188
		67.0	64.4	67.9	80	77	184	72.7	80	82	188
	MED	-	-	26.5	30	28	184	30.3	40	32	188
		16.5	15.9	26.5	30	28	184	30.3	40	32	188
		33.5	32.2	43.8	45	40	184	48.5	50	45	188
		43.5	41.8	55.8	60	51	184	60.5	70	56	188
		50.0	48.1	51.6	60	59	184	56.4	60	63	188
		67.0	64.4	67.9	80	77	184	72.7	80	82	188
	HIGH	-	-	32.7	40	35	196	36.5	45	39	200
		16.5	15.9	32.7	40	35	196	36.5	45	39	200
		33.5	32.2	51.5	60	47	196	56.3	60	52	200
		43.5	41.8	63.5	70	58	196	68.3	70	63	200
		50.0	48.1	59.4	70	66	196	64.1	70	70	200
		67.0	64.4	75.7	80	84	196	80.4	90	89	200

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

ELECTRICAL INFORMATION (UNITS PRODUCED PRIOR TO JULY 30, 2012) cont.

Table 56 – RAS180 Unit Wire/Fuse or HACR Breaker Sizing Data 2 Stage Cooling With 2 Speed Indoor Fan Motor

NOM. V–PH–Hz.	IFM TYPE	ELECTRIC HEATER		NO C.O. or UNPWR C.O.							
		Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
				MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
						FLA	LRA			FLA	LRA
208/ 230–3–60	STD	—	—	69.4/68.6	80/80	73/72	393	73.2/72.4	80/80	77/76	397
		12.4/16.5	34.4/39.7	69.4/68.6	80/80	73/72	393/393	73.2/72.4	80/80	77/76	397/397
		25.2/33.5	69.9/80.6	98.1/110.5	100/125	90/102	393/393	102.9/115.3	110/125	95/106	397/397
		32.7/43.5	90.7/104.7	124.1/140.6	125/150	114/129	393/393	128.9/145.4	150/150	119/134	397/397
		37.6/50.0	104.3/120.3	141.1/130.1	150/150	130/147	393/393	145.9/134.8	150/150	134/152	397/397
		50.3/67.0	139.7/161.2	150.5/171.0	175/200	171/194	393/393	155.2/175.7	175/200	175/199	397/397
	MED	—	—	71.6/70.6	80/80	75/74	417	75.4/74.4	100/90	79/78	421
		12.4/16.5	34.4/39.7	71.6/70.6	80/80	75/74	417/417	75.4/74.4	100/90	79/78	421/421
		25.2/33.5	69.9/80.6	100.9/113.0	110/125	93/104	417/417	105.6/117.8	110/125	97/108	421/421
		32.7/43.5	90.7/104.7	126.9/143.1	150/150	117/132	417/417	131.6/147.9	150/150	121/136	421/421
		37.6/50.0	104.3/120.3	143.9/132.6	150/150	132/150	417/417	148.6/137.3	150/150	137/154	421/421
		50.3/67.0	139.7/161.2	153.2/173.5	175/200	173/197	417/417	158.0/178.2	175/200	177/201	421/421
	HIGH	—	—	81.2	100	86	432	85.0	100	91	436
		12.4/16.5	34.4/39.7	81.2/81.2	100/100	86/86	432/432	85.0/85.0	100/100	91/91	436/436
		25.2/33.5	69.9/80.6	112.9/126.3	125/150	104/116	432/432	117.6/131.0	125/150	108/121	436/436
		32.7/43.5	90.7/104.7	138.9/156.4	150/175	128/144	432/432	143.6/161.1	150/175	132/148	436/436
		37.6/50.0	104.3/120.3	155.9/145.8	175/175	143/162	432/432	160.6/150.6	175/175	148/166	436/436
		50.3/67.0	139.7/161.2	165.2/186.7	175/225	184/209	432/432	170.0/191.5	175/225	188/213	436/436
460–3–60	STD	—	—	34.4	45	36	233	36.2	45	38	235
		16.5	19.9	34.4	45	36	233	36.2	45	38	235
		33.5	40.3	55.1	60	51	233	57.4	60	53	235
		43.5	52.3	70.1	80	65	233	72.4	80	67	235
		50.0	60.2	65.0	70	74	233	67.2	80	76	235
		67.0	80.6	85.4	90	97	233	87.6	100	99	235
	MED	—	—	35.5	45	37	245	37.3	50	39	247
		16.5	19.9	35.5	45	37	245	37.3	50	39	247
		33.5	40.3	56.5	60	52	245	58.8	60	54	247
		43.5	52.3	71.5	80	66	245	73.8	80	68	247
		50.0	60.2	66.3	80	75	245	68.6	80	77	247
		67.0	80.6	86.7	100	98	245	89.0	100	100	247
	HIGH	—	—	40.8	50	43	252	42.6	50	45	254
		16.5	19.9	40.8	50	43	252	42.6	50	45	254
		33.5	40.3	63.1	70	58	252	65.4	70	60	254
		43.5	52.3	78.1	80	72	252	80.4	90	74	254
		50.0	60.2	73.0	80	81	252	75.2	80	83	254
		67.0	80.6	93.4	100	104	252	95.6	100	106	254
575–3–60	STD	—	—	28.2	35	30	184	32.0	40	34	188
		16.5	15.9	28.2	35	30	184	32.0	40	34	188
		33.5	32.2	45.9	50	42	184	50.6	60	47	188
		43.5	41.8	57.9	60	53	184	62.6	70	58	188
		50.0	48.1	53.7	60	60	184	58.5	60	65	188
		67.0	64.4	70.0	80	79	184	74.8	80	84	188
	MED	—	—	28.2	35	30	184	32.0	40	34	188
		16.5	15.9	28.2	35	30	184	32.0	40	34	188
		33.5	32.2	45.9	50	42	184	50.6	60	47	188
		43.5	41.8	57.9	60	53	184	62.6	70	58	188
		50.0	48.1	53.7	60	60	184	58.5	60	65	188
		67.0	64.4	70.0	80	79	184	74.8	80	84	188
	HIGH	—	—	32.7	40	35	196	36.5	45	39	200
		16.5	15.9	32.7	40	35	196	36.5	45	39	200
		33.5	32.2	51.5	60	47	196	56.3	60	52	200
		43.5	41.8	63.5	70	58	196	68.3	70	63	200
		50.0	48.1	59.4	70	66	196	64.1	70	70	200
		67.0	64.4	75.7	80	84	196	80.4	90	89	200

* Nominal values, listed as 208/240V, 480V or 600V as appropriate.

LEGEND:

BRKR	— Circuit breaker
CO	— Convenience outlet
DISC	— Disconnect
FLA	— Full load amps
IFM	— Indoor fan motor
LRA	— Locked rotor amps
MCA	— Minimum circuit amps
MOCP	— MAX FUSE or HACR Breaker
PE	— Power exhaust
PWRD CO	— Powered convenient outlet
UNPWR CO	— Unpowered convenient outlet

**NOTES:**

1. In compliance with NEC requirements for multimotor and com ment (refer to NEC Articles 430 and 440), the overcurrent protecti shall be fuse or HACR breaker. Canadian units may be fuse or ci
2. **Unbalanced 3-Phase Supply Voltage**
Never operate a motor where a phase imbalance in supply voltag
Use the following formula to determine the percentage of voltage

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 230-3-60



AB = 224 v
BC = 231 v
AC = 226 v

$$\text{Average Voltage} = \frac{(224 + 231 + 226)}{3} = \frac{681}{3} = 227$$

Determine maximum deviation from average voltage.

(AB) 227 – 224 = 3 v

(BC) 231 – 227 = 4 v

(AC) 227 – 226 = 1 v

Maximum deviation is 4 v.

Determine percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{4}{227} = 1.76\%$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

SEQUENCE OF OPERATION

General

The sequence below describes the sequence of operation for an electromechanical unit with and without a factory installed Economizer IV and X (called “economizer” in this sequence). For information regarding a direct digital controller, see the start-up, operations, and troubleshooting manual for the applicable controller.

Electromechanical units with no economizer

Cooling (Single speed indoor fan motor) —

When the thermostat calls for cooling, terminals G and Y1 are energized. As a result, the indoor fan contactor (IFC) and the compressor contactor (C1) are energized, causing the indoor fan motor (IFM), compressor #1, and outdoor fan to start. If the unit has 2 stages of cooling, the thermostat will additionally energize Y2. The Y2 signal will energize compressor contactor #2 (C2), causing compressor #2 to start. Regardless of the number of stages, the outdoor fan motor runs continuously while unit is cooling.

Cooling (2-speed indoor fan motor) —

Per ASHRAE 90.1 2010 standard section 6.4.3.10.b, during the first stage of cooling operation the VFD will adjust the fan motor to provide 2/3rd of the total cfm established for the unit. When a call for the second stage of cooling is required, the VFD will allow the total cfm for the unit established (100%).

Heating

NOTE: The RAS is sold as cooling only. If electric heaters are required, use only factory-approved electric heaters. They will operate as described below.

Units have either 1 or 2 stages of electric heat. When the thermostat calls for heating, power is applied to the W1 terminal at the unit. The unit control will energize the indoor fan contactor and the first stage of electric heat. On units with 2-stage heating, when additional heating is required, the second stage of electric heat (if equipped) will be energized when power is applied at the W2 terminal on the unit.

Electromechanical units with an economizer

Cooling —

When free cooling is not available, the compressors will be controlled by the zone thermostat. When free cooling is available, the outdoor air damper is modulated by the Economizer IV and X control to provide a 50°F (10°C) to 55°F (13°C) mixed air temperature into the zone. As the mixed air temperature fluctuates above 55°F (13°C) or below 50°F (10°C) dampers will be modulated (open or close) to bring the mixed air temperature back within control. If mechanical cooling is utilized with free cooling, the outdoor air damper will maintain its current position at the time the compressor is started. If the increase in

cooling capacity causes the mixed air temperature to drop below 45°F (9°C), then the outdoor air damper position will be decreased to the minimum position. If the mixed air temperature continues to fall, the outdoor air damper will close. Control returns to normal once the mixed air temperature rises above 48°F (9°C). The power exhaust fans will be energized and de-energized, if installed, as the outdoor air damper opens and closes.

If field-installed accessory CO₂ sensors are connected to the Economizer IV and X control, a demand controlled ventilation strategy will begin to operate. As the CO₂ level in the zone increases above the CO₂ setpoint, the minimum position of the damper will be increased proportionally. As the CO₂ level decreases because of the increase in fresh air, the outdoor air damper will be proportionally closed. For Economizer IV and X operation, there must be a thermostat call for the fan (G). If the unit is occupied and the fan is on, the damper will operate at minimum position. Otherwise, the damper will be closed.

When the Economizer IV and X control is in the occupied mode and a call for cooling exists (Y1 on the thermostat), the control will first check for indoor fan operation. If the fan is not on, then cooling will not be activated. If the fan is on, then the control will open the Economizer IV and X damper to the minimum position.

On the initial power to the Economizer IV and X control, it will take the damper up to 2 1/2 minutes before it begins to position itself. After the initial power-up, further changes in damper position can take up to 30 seconds to initiate. Damper movement from full closed to full open (or vice versa) will take between 1 1/2 and 2 1/2 minutes. If free cooling can be used as determined from the appropriate changeover command (switch, dry bulb, enthalpy curve, differential dry bulb, or differential enthalpy), then the control will modulate the dampers open to maintain the mixed air temperature setpoint at 50°F (10°C) to 55°F (13°C). If there is a further demand for cooling (cooling second stage – Y2 is energized), then the control will bring on compressor stage 1 to maintain the mixed air temperature setpoint. The Economizer IV and X damper will be open at maximum position. Economizer IV and X operation is limited to a single compressor.

2-Speed Note: When operating in ventilation mode only, the indoor fan motor will automatically adjust to 2/3rd of the total cfm established.

Heating

The sequence of operation for the heating is the same as an electromechanical unit with no economizer. The only difference is how the economizer acts. The economizer will stay at the Economizer Minimum Position while the evaporator fan is operating. The outdoor air damper is closed when the indoor fan is not operating.

SEQUENCE OF OPERATION (cont.)

Optional Hot Gas Reheat System

Units with the factory equipped Hot Gas Reheat option are capable of providing multiple modes of improved dehumidification as a variation of the normal cooling cycle. The Hot Gas Reheat option includes additional valves in the liquid line and discharge line of each refrigerant circuit, a small reheat condenser coil downstream of the evaporator, and Motormaster variable-speed control of some or all outdoor fans. Operation of the revised refrigerant circuit for each mode is described below.

The Hot Gas Reheat system provides three sub-modes of operation: Cool, Reheat1, and Reheat2.

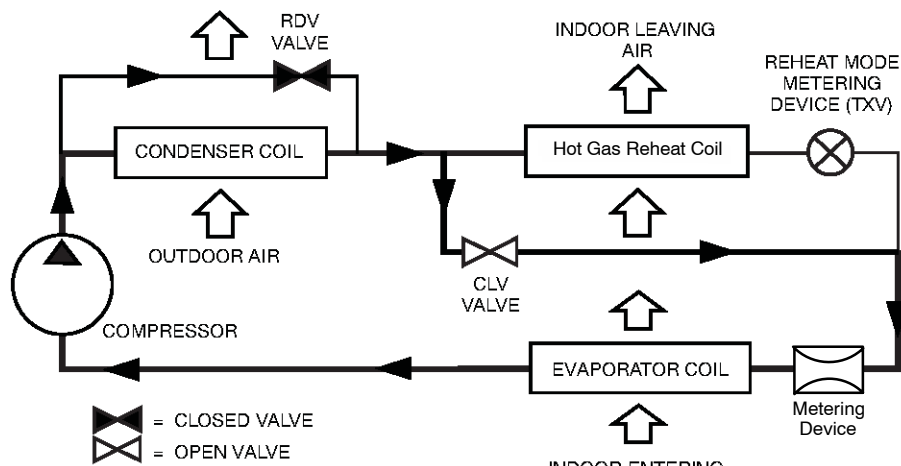
Cool mode – provides a normal ratio of Sensible and Latent Cooling effect from the evaporator coil.

Reheat1 – provides increased Latent Cooling while slightly reducing the Sensible Cooling effect.

Reheat2 – provides normal Latent Cooling but with null or minimum Sensible Cooling effect delivered to the space.

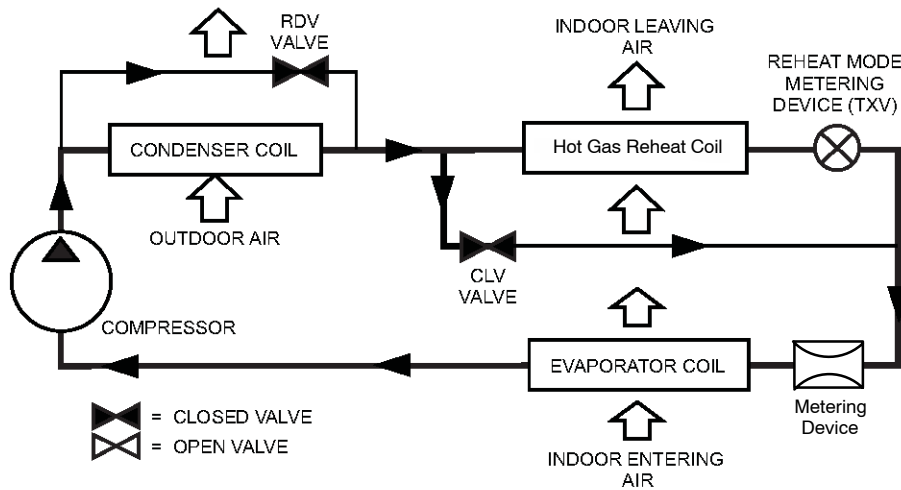
The Reheat1 and Reheat2 modes are available when the unit is not in a Heating mode and when the Low Ambient Lockout switch is closed.

The following diagrams depict piping for Single Stage cooling units.



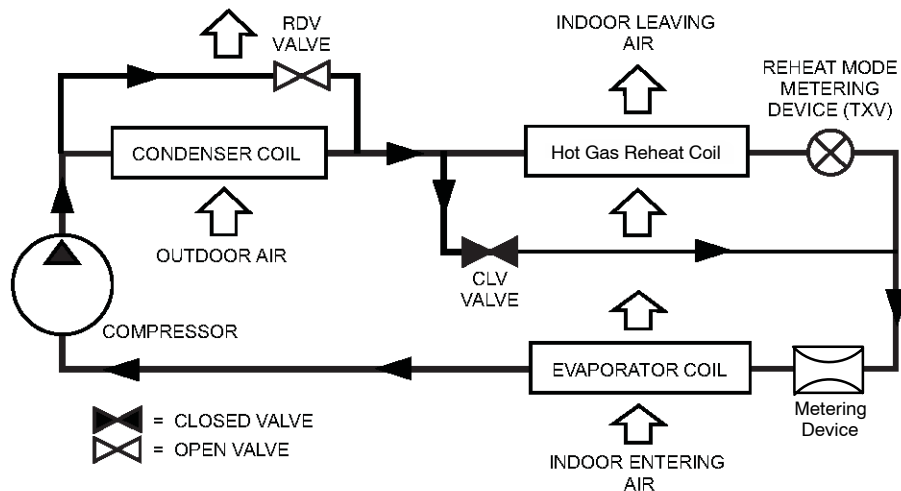
Normal Cooling Mode – Hot Gas Reheat with Single Stage Cooling

C12702



Subcooling Mode (Reheat 1) – Hot Gas Reheat System with Single Stage Cooling

C12703



Hot Gas Reheat Mode (Reheat2) – Hot Gas Reheat with Single Stage Cooling

C12704

Cooling Only/Electric Heat Packaged Rooftop HVAC Guide Specifications

Size Range: 3 to 15 Nominal
Tons

<u>Section</u>	<u>Description</u>
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23 06 80	Schedules for Decentralized HVAC Equipment
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23 06 80.13 Decentralized Unitary HVAC Equipment Schedule

23 06 80.13.A. Rooftop unit schedule

1. Schedule is per the project specification requirements.

23 07 16	HVAC Equipment Insulation
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23 07 16.13 Decentralized, Rooftop Units:

23 07 16.13.A. Evaporator fan compartment:

1. Interior cabinet surfaces shall be insulated with a minimum 1/2-in. thick, minimum 1 1/2 lb density, flexible fiberglass insulation bonded with a phenolic binder, neoprene coated on the air side.
2. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

23 07 16.13.B. Electric heat compartment:

1. Aluminum foil-faced fiberglass insulation shall be used.
2. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

23 09 13	Instrumentation and Control Devices for HVAC
-----------------	---

23 09 13.23 Sensors and Transmitters

23 09 13.23.A. Thermostats

1. Thermostat must
 - a. energize both "W" and "G" when calling for heat.
 - b. have capability to energize 2 different stages of cooling, and 2 different stages of heating.
 - c. include capability for occupancy scheduling.

23 09 23	Direct-digital Control system for HVAC
-----------------	---

23 09 23.13 Decentralized, Rooftop Units:

23 09 23.13.A. N/A

23 09 33	Electric and Electronic Control System for HVAC
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23 09 33.13 Decentralized, Rooftop Units:

23 09 33.13.A. General:

1. Shall be complete with self-contained low-voltage control circuit protected by a resettable circuit breaker on the 24-v transformer side. Transformer shall have 75VA capability.
2. Shall utilize color-coded wiring.
3. Shall include a central control terminal board to conveniently and safely provide connection points for vital control functions such as: smoke detectors, phase monitor, economizer, thermostat, DDC control options, and low and high pressure switches.
4. Unit shall include a minimum of one 8-pin screw terminal connection board for connection of control wiring.

23 09 33.23.B. Safeties:

1. Compressor over-temperature, over current.
2. Low pressure switch.
 - a. Units with 2 compressors shall have different sized connectors for the circuit 1 and circuit 2 low and high pressure switches. They shall physically prevent the cross-wiring of the safety switches between circuits 1 and 2.
 - b. Low pressure switch shall use different color wire than the high pressure switch. The purpose is to assist the installer and service technician to correctly wire and or troubleshoot the rooftop unit.
3. High pressure switch.

- a. Units with 2 compressors shall have different sized connectors for the circuit 1 and circuit 2 low and high pressure switches. They shall physically prevent the cross-wiring of the safety switches between circuits 1 and 2.
 - b. High pressure switch shall use different color wire than the low pressure switch. The purpose is to assist the installer and service technician to correctly wire and or troubleshoot the rooftop unit.
4. Automatic reset, motor thermal overload protector.

23 09 93 Sequence of Operations for HVAC Controls

23 09 93.13 Decentralized, Rooftop Units:

23 09 93.13 INSERT SEQUENCE OF OPERATION

23 40 13 Panel Air Filters

23 40 13.13 Decentralized, Rooftop Units:

23 40 13.13.A. Standard filter section

1. Shall consist of factory-installed, low velocity, throwaway 2-in. thick fiberglass filters of commercially available sizes.
2. Unit shall use only one filter size. Multiple sizes are not acceptable.
3. Filters shall be accessible through an access panel with "no-tool" removal as described in the unit cabinet section of this specification (23 81 19.13.H).

23 81 19 Self-Contained Air Conditioners

23 81 19.13 Small-Capacity Self-Contained Air Conditioners (RAS036-180)

23 81 19.13.A. General

1. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing a(n) hermetic scroll compressor(s) for cooling duty and gas combustion for heating duty.
2. Factory assembled, single-piece heating and cooling rooftop unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, and special features required prior to field start-up.
3. Unit shall use environmentally safe, R-410A refrigerant.
4. Unit shall be installed in accordance with the manufacturer's instructions.
5. Unit must be selected and installed in compliance with local, state, and federal codes.

23 81 19.13.B. Quality Assurance

1. Unit meets ASHRAE 90.1 minimum efficiency requirements.
2. Unit shall be rated in accordance with AHRI Standards 210/240 and 340/360.
3. Unit shall be designed to conform to ASHRAE 15, 2001.
4. Unit shall be UL-tested and certified in accordance with ANSI Z21.47 Standards and UL-listed and certified under Canadian standards as a total package for safety requirements.
5. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
6. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
7. Unit casing shall be capable of withstanding Federal Test Method Standard No. 141 (Method 6061) 5000-hour salt spray.
8. Unit shall be designed in accordance with ISO 9001:2000, and shall be manufactured in a facility registered by ISO 9001:2000.
9. Roof curb shall be designed to conform to NRCA Standards.
10. Unit shall be subjected to a completely automated run test on the assembly line. The data for each unit will be stored at the factory, and must be available upon request.
11. Unit shall be designed in accordance with UL Standard 1995, including tested to withstand rain.
12. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.
13. Unit shake tested to assurance level 1, ASTM D4169 to ensure shipping reliability.
14. High Efficient Motors listed shall meet section 313 of the Energy Independence and Security Act of 2007 (EISA 2007).

23 81 19.13.C. Delivery, Storage, and Handling

1. Unit shall be stored and handled per manufacturer's recommendations.
2. Lifted by crane requires either shipping top panel or spreader bars.
3. Unit shall only be stored or positioned in the upright position.

23 81 19.13.D. Project Conditions

1. As specified in the contract.

23 81 19.13.E. Project Conditions

1. As specified in the contract.

23 81 19.13.F. Operating Characteristics

1. Unit shall be capable of starting and running at 115°F (46°C) ambient outdoor temperature, meeting maximum load criteria of AHRI Standard 210/240 or 340/360 at $\pm 10\%$ voltage.
2. Compressor with standard controls shall be capable of operation down to 40°F (4°C), ambient outdoor temperatures. Accessory winter start kit is necessary if mechanically cooling at ambient temperatures down to 25°F (-4°C).
3. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.
4. Unit shall be factory configured for vertical supply & return configurations.
5. Unit shall be field convertible from vertical to horizontal airflow on all models. No special kit required on 04–14 models. Supply duct kit required for 16 size model only.
6. Unit shall be capable of mixed operation: vertical supply with horizontal return or horizontal supply with vertical return.

23 81 19.13.G. Electrical Requirements

1. Main power supply voltage, phase, and frequency must match those required by the manufacturer.

23 81 19.13.H. Unit Cabinet

1. Unit cabinet shall be constructed of galvanized steel, and shall be bonderized and coated with a pre-painted baked enamel finish on all externally exposed surfaces.
2. Unit cabinet exterior paint shall be: film thickness, (dry) 0.003 inches minimum, gloss (per ASTM D523, 60°F): 60, Hardness: H–2H Pencil hardness.
3. Evaporator fan compartment interior cabinet insulation shall conform to AHRI Standards 210/240 or 340/360 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum 1/2-in. thick, 1 lb density, flexible fiberglass insulation, neoprene coated on the air side. Aluminum foil-faced fiberglass insulation shall be used in the heat compartment.
4. Base of unit shall have a minimum of four locations for thru-the-base gas and electrical connections (factory installed or field installed), standard.
5. Base Rail
 - a. Unit shall have base rails on a minimum of 2 sides.
 - b. Holes shall be provided in the base rails for rigging shackles to facilitate maneuvering and overhead rigging.
 - c. Holes shall be provided in the base rail for moving the rooftop by fork truck.
 - d. Base rail shall be a minimum of 16 gauge thickness.
6. Condensate pan and connections:
 - a. Shall be a sloped condensate drain pan made of a non-corrosive material.
 - b. Shall comply with ASHRAE Standard 62.
 - c. Shall use a 3/4" –14 NPT drain connection, possible either through the bottom or end of the drain pan. Connection shall be made per manufacturer's recommendations.
7. Top panel:
 - a. Shall be a single piece top panel on 04 thru 12 sizes, two piece on 14 and 16 size.
8. Electrical Connections
 - a. All unit power wiring shall enter unit cabinet at a single, factory-prepared, knockout location.
 - b. Thru-the-base capability
 - (1.) Standard unit shall have a thru-the-base electrical location(s) using a raised, embossed portion of the unit basepan.
 - (2.) Optional, factory-approved, water-tight connection method must be used for thru-the-base electrical connections.
 - (3.) No basepan penetration, other than those authorized by the manufacturer, is permitted.
9. Component access panels (standard)
 - a. Cabinet panels shall be easily removable for servicing.
 - b. Unit shall have one factory installed, tool-less, removable, filter access panel.
 - c. Panels covering control box, indoor fan, indoor fan motor, gas components (where applicable), and compressors shall have molded composite handles.
 - d. Handles shall be UV modified, composite. permanently attached, and recessed into the panel.

- e. Screws on the vertical portion of all removable access panel shall engage into heat resistant, molded composite collars.
- f. Collars shall be removable and easily replaceable using manufacturer recommended parts.

23 81 19.13.I. N/A

23 81 19.13.J. Coils

1. Standard Aluminum fin – Copper Tube Coils:
 - a. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
 - b. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.
 - c. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.
2. Optional Pre-coated aluminum-fin condenser coils (3 Phase Models Only):
 - a. Shall have a durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments.
 - b. Coating shall be applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube.
 - c. Epoxy-phenolic barrier shall minimize galvanic action between dissimilar metals.
3. Optional Copper-fin evaporator and condenser coils (3 Phase Models Only):
 - a. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.
 - b. Galvanized steel tube sheets shall not be acceptable.
 - c. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.
4. Optional E-coated aluminum-fin evaporator and condenser coils (3 Phase Models Only):
 - a. Shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins.
 - b. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.
 - c. Color shall be high gloss black with gloss per ASTM D523-89.
 - d. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges.
 - e. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93.
 - f. Impact resistance shall be up to 160 in.-lb (ASTM D2794-93).
 - g. Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92).
 - h. Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.
5. Optional E-coated aluminum-fin, aluminum tube condenser coils:
 - a. Shall have a flexible epoxy polymer coating uniformly applied to all coil external surface areas without material bridging between fins or louvers.
 - b. Coating process shall ensure complete coil encapsulation, including all exposed fin edges.
 - c. E-coat thickness of 0.8 to 1.2 mil with top coat having a uniform dry film thickness from 1.0 to 2.0 mil on all external coil surface areas, including fin edges, shall be provided.
 - d. Shall have superior hardness characteristics of 2H per ASTM D3363-00 and cross-hatch adhesion of 4B-5B per ASTM D3359-02.
 - e. Shall have superior impact resistance with no cracking, chipping or peeling per NSF/ANSI 51-2002 Method 10.2.

23 81 19.13.K. Refrigerant Components

1. Refrigerant circuit shall include the following control, safety, and maintenance features:
 - a. Fixed orifice metering system shall prevent mal-distribution of two-phase refrigerant by including multiple fixed orifice devices in each refrigeration circuit. Each orifice is to be optimized to the coil circuit it serves.
 - b. Refrigerant filter drier.
 - c. Service gauge connections on suction and discharge lines.
 - d. Pressure gauge access through a specially designed access port in the top panel of the unit.
2. There shall be gauge line access port in the skin of the rooftop, covered by a black, removable plug.
 - a. The plug shall be easy to remove and replace.

- b. When the plug is removed, the gauge access port shall enable maintenance personnel to route their pressure gauge lines.
 - c. This gauge access port shall facilitate correct and accurate condenser pressure readings by enabling the reading with the compressor access panel on.
 - d. The plug shall be made of a leak proof, UV-resistant, composite material.
3. Compressors
- a. Unit shall use one fully hermetic, scroll compressor for each independent refrigeration circuit.
 - b. Compressor motors shall be cooled by refrigerant gas passing through motor windings.
 - c. Compressors shall be internally protected from high discharge temperature conditions.
 - d. Compressors shall be protected from an over-temperature and over-ampereage conditions by an internal, motor overload device.
 - e. Compressor shall be factory mounted on rubber grommets.
 - f. Compressor motors shall have internal line break thermal, current overload and high pressure differential protection.
 - g. Crankcase heaters shall not be required for normal operating range, unless provided by compressor manufacturer due to refrigerant charge limits.

23 81 19.13.L. Filter Section

- 1. Filters access is specified in the unit cabinet section of this specification.
- 2. Filters shall be held in place by a pivoting filter tray, facilitating easy removal and installation.
- 3. Shall consist of factory-installed, low velocity, throw-away 2-in. thick fiberglass filters.
- 4. Filters shall be standard, commercially available sizes.
- 5. Only one size filter per unit is allowed.

23 81 19.13.M. Evaporator Fan and Motor

- 1. Evaporator fan motor:
 - a. Shall have permanently lubricated bearings.
 - b. Shall have inherent automatic-reset thermal overload protection or circuit breaker.
 - c. Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating shall be required.
- 2. Belt-driven Evaporator Fan:
 - a. Belt drive shall include an adjustable pitch motor pulley.
 - b. Shall use sealed, permanently lubricated ball-bearing type.
 - c. Blower fan shall be double-inlet type with forward-curved blades.
 - d. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.

23 81 19.13.N. Condenser Fans and Motors

- 1. Condenser fan motors:
 - a. Shall be a totally enclosed motor.
 - b. Shall use permanently lubricated bearings.
 - c. Shall have inherent thermal overload protection with an automatic reset feature.
 - d. Shall use a shaft-down design on 036 to 120 and 180 size models and shaft-up design on 150 size with rain shield.
- 2. Condenser Fans:
 - a. Shall be a direct-driven propeller type fan.
 - b. Shall have galvalum blades riveted to corrosion-resistant steel spiders and shall be dynamically balanced.

23 81 19.13.O. Special Features, Options and Accessories

- 1. 2-speed indoor fan motor for 2-stage cooling models only.
 - a. Evaporator fan motor:
 - (1.) Shall have permanently lubricated bearings.
 - (2.) Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating.
 - (3.) Shall be Variable Frequency duty and 2-speed control.
 - (4.) Shall contain motor shaft grounding ring to prevent electrical bearing fluting damage by safely diverting harmful shaft voltages and bearing currents to ground.
- 2. Variable Frequency Drive (VFD). Only available on 2-speed indoor fan motor option:
 - a. Shall be installed inside the unit cabinet, mounted, wired and tested.

- b. Shall contain Electromagnetic Interference (EMI) frequency protection.
 - c. Insulated Gate Bi-Polar Transistors (IGBT) used to produce the output pulse width modulated (PWM) waveform, allowing for quiet motor operation.
 - d. Self diagnostics with fault and power code LED indicator. Field accessory Display Kit available for further diagnostics and special setup applications.
 - e. RS485 capability standard.
 - f. Electronic thermal overload protection.
 - g. 5% swinging chokes for harmonic reduction and improved power factor.
 - h. All printed circuit boards shall be conformal coated.
3. Standard Integrated Economizers (Factory installed on 3 Phase Models Only. Field installed on all 3 and 1 Phase Models):
- a. Integrated, gear-driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
 - b. Independent modules for vertical or horizontal return configurations shall be available. Vertical return modules shall be available as a factory installed option.
 - c. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
 - d. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
 - e. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
 - f. Standard models shall be equipped with low-leakage dampers, not to exceed 2% leakage at 1 in. wg pressure differential. Economizer controller on electromechanical units shall be Honeywell W7212 that provides:
 - (1.) Combined minimum and DCV maximum damper position potentiometers with compressor staging relay.
 - (2.) Functions with solid state analog enthalpy or dry bulb changeover control sensing.
 - (3.) Contain LED indicates for:
 - When free cooling is available
 - When module is in DCV mode
 - When exhaust fan contact is closed
 - g. Ultra low leak Economizer X system shall be available on models with 2-speed indoor fan motor 2-speed Variable Frequency Drive (VFD) systems. Only available on 2-Speed Indoor Fan Motor Systems with electromechanical controls.
 - (1.) Maximum damper leakage rate to be equal to or less than 4.0 cfm/sq. ft. at 1.0 in. w.g., meeting or exceeding ASHRAE 90.1 requirements. Economizer controller on electromechanical units shall be Honeywell W7220 that provides:
 - (2.) 2-line LCD interface screen for setup, configuration and troubleshooting
 - (3.) On-board fault detection and diagnostics
 - (4.) Sensor failure loss of communication identification
 - (5.) Automatic sensor detection
 - (6.) Capabilities for use with multiple-speed indoor fan systems
 - (7.) Utilize digital sensors: Dry bulb and Enthalpy
 - h. Shall be capable of introducing up to 100% outdoor air.
 - i. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air.
 - j. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.
 - k. Dry bulb outdoor air temperature sensor shall be provided as standard. Outdoor air sensor setpoint shall be adjustable and shall range from 40 to 100°F / 4 to 38°C. Additional sensor options shall be available as accessories.
 - l. The economizer controller shall also provide control of an accessory power exhaust unit function. Factory set at 100%, with a range of 0% to 100%.
 - m. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy. A remote potentiometer may be used to override the damper setpoint.
 - n. Dampers shall be completely closed when the unit is in the unoccupied mode.
 - o. Economizer controller shall accept a 2-10 Vdc CO₂ sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.

- p. Compressor lockout sensor shall open at 35°F (2°C) and close closes at 50°F (10°C).
 - q. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
 - r. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
4. Two-Position Damper (Factory installed on 3 Phase Models Only. Field installed on all 3 and 1 Phase Models)
 - a. Damper shall be a Two-Position Damper. Damper travel shall be from the full closed position to the field adjustable %-open setpoint.
 - b. Damper shall include adjustable damper travel from 25% to 100% (full open).
 - c. Damper shall include single or dual blade, gear driven dampers and actuator motor.
 - d. Actuator shall be direct coupled to damper gear. No linkage arms or control rods shall be acceptable.
 - e. Damper will admit up to 100% outdoor air for applicable rooftop units.
 - f. Damper shall close upon indoor (evaporator) fan shutoff and/or loss of power.
 - g. The damper actuator shall plug into the rooftop unit's wiring harness plug. No hard wiring shall be required.
 - h. Outside air hood shall include aluminum water entrainment filter
 5. Manual damper
 - a. Manual damper package shall consist of damper, air inlet screen, and rain hood which can be preset to admit up to 50% outdoor air for year round ventilation.
 6. Hot Gas Reheat System (3 Phase Models Only).
 - a. The Hot Gas Reheat System shall be factory-installed in single stage RAS036-072 and 2-stage RAS090 to 180 models with RTPF (round tube plate fin) condenser coils, and shall provide greater dehumidification of the occupied space by two modes of dehumidification operations beside its normal design cooling mode:
 - (1.) Subcooling mode further subcools the hot liquid refrigerant leaving the condenser coil when both temperature and humidity in the space are not satisfied.
 - (2.) Hot gas reheat mode shall mix a portion of the hot gas from the discharge of the compressor with the hot liquid refrigerant leaving the condenser coil to create a two-phase heat transfer in the system, resulting in a neutral leaving- air temperature when only humidity in the space is not satisfied.
 - (3.) Includes Head Pressure Controller.
 7. Head Pressure Control Package
 - a. Controller shall control coil head pressure by condenser-fan speed modulation or condenser-fan cycling and wind baffles.
 - b. Shall consist of solid-state control and condenser-coil temperature sensor to maintain condensing temperature between 90°F (32°C) and 110°F (43°C) at outdoor ambient temperatures down to -20°F (-29°C).
 8. Condenser Coil Hail Guard Assembly (Factory installed on 3 Phase Models Only. Field installed on all 3 and 1 Phase Models)
 - a. Shall protect against damage from hail.
 - b. Shall be louvered design.
 9. Unit-Mounted, Non-Fused Disconnect Switch (Available on units with MOCP's of 80 amps or less):
 - a. Switch shall be factory-installed, internally mounted.
 - b. National Electric Code (NEC) and UL approved non-fused switch shall provide unit power shutoff.
 - c. Shall be accessible from outside the unit
 - d. Shall provide local shutdown and lockout capability.
 10. Convenience Outlet (3 Phase Models Only):
 - e. Non-Powered convenience outlet.
 - (1.) Outlet shall be powered from a separate 115/120v power source.
 - (2.) A transformer shall not be included.
 - (3.) Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
 - (4.) Outlet shall include 15 amp GFI receptacles with independent fuse protection.
 - (5.) Outlet shall be accessible from outside the unit.
 - (6.) Outlet shall include a field-installed "Wet in Use" cover.
 11. Thru-the-Base Connectors:
 - a. Kits shall provide connectors to permit electrical connections to be brought to the unit through the unit basepan.
 - b. Minimum of four connection locations per unit.

12. Supply Duct Cover (16 size only):
 - a. Required when field converting the factory standard vertical duct supply to horizontal duct supply configuration. One required per unit.
13. Propeller Power Exhaust:
 - a. Power exhaust shall be used in conjunction with an integrated economizer.
 - b. Independent modules for vertical or horizontal return configurations shall be available.
 - c. Horizontal power exhaust is shall be mounted in return ductwork.
 - d. Power exhaust shall be controlled by economizer controller operation. Exhaust fans shall be energized when dampers open past the 0–100% adjustable setpoint on the economizer control.
14. Roof Curbs (Vertical):
 - a. Full perimeter roof curb with exhaust capability providing separate air streams for energy recovery from the exhaust air without supply air contamination.
 - b. Formed galvanized steel with wood nailer strip and shall be capable of supporting entire unit weight.
 - c. Permits installation and securing of ductwork to curb prior to mounting unit on the curb.
15. Thru-the-Bottom Utility Connectors:
 - a. Kit shall provide connectors to permit gas and electrical connections to be brought to the unit through the basepan.
16. Outdoor Air Enthalpy Sensor:
 - a. The outdoor air enthalpy sensor shall be used to provide single enthalpy control. When used in conjunction with a return air enthalpy sensor, the unit will provide differential enthalpy control. The sensor allows the unit to determine if outside air is suitable for free cooling.
17. Return Air Enthalpy Sensor:
 - a. The return air enthalpy sensor shall be used in conjunction with an outdoor air enthalpy sensor to provide differential enthalpy control.
18. Indoor Air Quality (CO₂) Sensor:
 - a. Shall be able to provide demand ventilation indoor air quality (IAQ) control.
 - b. The IAQ sensor shall be available in duct mount, wall mount, or wall mount with LED display. The setpoint shall have adjustment capability.
19. Smoke detectors (factory-installed only):
 - a. Shall be a Four-Wire Controller and Detector.
 - b. Shall be environmental compensated with differential sensing for reliable, stable, and drift-free sensitivity.
 - c. Shall use magnet-activated test/reset sensor switches.
 - d. Shall have tool-less connection terminal access.
 - e. Shall have a recessed momentary switch for testing and resetting the detector.
 - f. Controller shall include:
 - (1.) One set of normally open alarm initiation contacts for connection to an initiating device circuit on a fire alarm control panel.
 - (2.) Two Form-C auxiliary alarm relays for interface with rooftop unit or other equipment.
 - (3.) One Form-C supervision (trouble) relay to control the operation of the Trouble LED on a remote test/reset station.
 - (4.) Capable of direct connection to two individual detector modules.
 - (5.) Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications.
20. Winter start kit
 - a. Shall contain a bypass device around the low pressure switch.
 - b. Shall be required when mechanical cooling is required down to 25°F (–4°C).
 - c. Shall not be required to operate on an economizer when below an outdoor ambient of 40°F (4°C).
21. Time Guard
 - a. Shall prevent compressor short-cycling by providing a 5-minute delay (±2 minutes) before restarting a compressor after shutdown for any reason.
 - b. One device shall be required per compressor.
22. Electric Heat:
 - a. Heating Section
 - (1.) Heater element open coil resistance wire, nickel-chrome alloy, 0.29 inches inside diameter, strung through ceramic insulators mounted on metal frame. Coil ends are staked and welded to terminal screw slots.

- (2.) Heater assemblies are provided with integral fusing for protection of internal heater circuits not exceeding 48 amps each. Auto reset thermo limit controls, magnetic heater contactors (24 v coil) and terminal block all mounted in electric heater control box (minimum 18 ga galvanized steel) attached to end of heater assembly.
- 23. Disconnect Switch Bracket (16 size only)
 - a. Provides a pre-engineered and sized mounting bracket for applications requiring a unit mounted fused and non-fused disconnect of greater than 100 amps. Bracket assures that no damage will occur to coils when mounting with screws and other fasteners.
- 24. Hinged Access Panels
 - a. Shall provide easy access through integrated quarter turn latches.
 - b. Shall be on major panels of: filters, control box, fan motor and compressor.
- 25. Display Kit for Variable Frequency Drive
 - a. Kit allows the ability to access the VFD controller programs to provide special setup capabilities and diagnostics.
 - b. Kit contains display module, mounting bracket and communication cable.
 - c. Display Kit can be permanently installed in the unit or used on any 2-Speed Indoor Fan Motor System VFD controller as needed.