HEATING & COOLING PRODUCTS

RAS
Product Specifications

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

BUILT TO LAST, EASY TO INSTALL AND SERVICE

- ASHRAE 90.1 energy compliant efficiency levels
- Single-stage cooling capacity control on all 036-072 models and the 091,101 and 121 models
- Two-stage cooling capacity control on 090,102,120,150 and 180 models
- Rated in accordance with ARI Standard 210/240 (036-060 sizes) and 340/360 (072-180 sizes)
- SEER's up to 13.0, EER's up to 11.3
- IEER's up to 12.2 with single speed indoor fan motor
- IEER's up to 13.0 with 2-speed/VFD indoor fan motor
- Designed in accordance with Underwriters' Laboratories Standard 1995
- Listed by UL and UL, Canada or ETL and ETL, Canada
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE 62 Standard, sloping design; side or center drain
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Fixed refrigerant metering system
- Fully insulated cabinet
- Cooling operating range from 40 F up to 115 F
- Access panels with easy grip handles and no-strip screw feature
- Two-inch disposable return air filters
- Tool-less filter access door
- Standard belt drive, constant torque motor
- Advanced terminal board for simple safety circuit troubleshooting and control box arrangement
- Field Convertible from vertical to horizontal airflow configuration on all models.
  No special kit required on 036-150 models. Field accessory supply duct kit required for 180 size models only.
- Provisions for thru-the-bottom power entry capability
- Single point electric connections
- Full perimeter base rail with built-in rigging adapters and fork truck slots
- Scroll compressors with internal line-break overload protection
  Copper tube, aluminum fin coils
- 24-volt control circuit protected with resettable circuit breaker
- Permanently lubricated evaporator-fan motor
- Permanently lubricated, totally enclosed condenser-fan motors
- Low pressure, freeze protection, and high-pressure switches
- Liquid line filter drier standard

FACTORY OPTIONS INCLUDING BUT NOT LIMITED TO:

- Economizer and two position damper options
- Disconnect and convenience outlet options
- Multiple optional motor and pulley combinations
- Corrosion resistant options for evaporator and condenser coils
- 2 speed indoor fan motor on 2 stage cooling models
- Integrated economizer system. Standard and Ultra Low Leak versions available

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

c UL us

ASHRAE 90.1 COMPLIANT

AHRI CERTIFIED c www.ahridirectory.org

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 Nom. Tons	Net Cap. (Btuh)	SEER	EER	Total Power (kW)	Unit Dimensions H x W x L	Unit Weight lb. [kg]
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 Nom. Tons	Net Cap. (Btuh)	SEER	EER	Total Power (kW)	Unit Dimensions H x W x L	Unit Weight lb. [kg]
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

MODEL NUMBER NOMENCLATURE

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)
101 = 8.5 Tons (Single Compressor)
121 = 10 Tons (Single Compressor)
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

K = 208/230-1-60
H = 208/230-3-60
L = 460-3-60
S = 575-3-60 — **Voltage**

0 = No Heat
Heating Capacity

A = Standard Motor (3 to 15 Ton- 1 speed, 7.5 to 15 ton- 2 speed)
B = High Static Motor (3-12.5 ton, 1 Speed, 3 phase models only, 7.5 to 15 ton, 2 speed)
C = Medium Static Motor (3 to 15 Ton)
E = High Static Motor , High Efficiency Motor (15 ton only)
G = High Static Motor with Hot Gas Reheat (15 ton only)
H = High Static Motor with Hot Gas Re-Heat (3 to 12.5 ton, single speed motors), (7.5 to 15 ton, 2-speed motors)
X = Direct Drive ECM (036-060, H Voltage Only) — **Motor Option (Indoor Fan)**

A = None
B = Economizer w/Bara-relief, OA Temp sensor
E = Economizer w/Bara-relief + CO2 Sensor, OA Temp sensor
H = Economizer w/Bara-relief, enthalpy sensor
L = Economizer w/Bara-relief + CO2 Sensor, enthalpy sensor
P = 2-Position damper
U = Temp Ultra Low Leak Economizer w/Bara-relief
W = Enthalpy Ultra Low Leak Economizer w/Bara-relief — **Outdoor Air Options / Control [1]**

0A = No Options
AT = Non-powered 115v C.O.
4B = Non-Fused Disconnect
BB = Powered Convenience Outlet
BR = Supply Air Smoke Detector
BP = Return Air Smoke Detector
AA = Easy Access Hinged Panels — **Factory Installed Options**

A = Aluminum / Copper Cond & Evap Coil
B = Precoat Alum/Copper Cond with Alum / Copper Evap (3 phase only)
C = E-Coated Alum/Copper Cond with 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**

A = Standard Single Speed Indoor Fan Motor. For W7212 controls
B = Standard Single Speed Indoor Fan Motor. For W7220 controls
T = 2 Speed Indoor Motor VFD Controller (For 2-stage units only) — **Motor Type Option**

NOTE: Factory installed options are NOT available on single phase models. This includes economizers and 2 position dampers.

[1] A combinations of FIOPS are available.

Table 1 – FACTORY-INSTALLED OPTIONS AND FIELD-INSTALLED ACCESSORIES

CATEGORY	ITEM	FACTORY INSTALLED OPTION	FIELD INSTALLED ACCESSORY
Cabinet	Supply Duct Cover (180 size only)		X
	Thru-the-base electrical connections	X	X
	Hinged Access Panels	X	
Coil Options	Cu/Cu indoor and/or outdoor coils[1, 6]	X	
	Pre-coated outdoor coils[1, 6]	X	
	Premium, E-coated outdoor coils[1, 6]	X	
Humidity Control	Hot Gas Re-Heat Dehumidification System[6, 8]	X	
Condenser Protection	Condenser coil hail guard (louvered design)[6]	X	X
Controls	Thermostats, temperature sensors, and subbases		X
	Smoke detector (supply and/or return air)	X	
	Time Guard II compressor delay control circuit		X
	Phase Monitor		X
Economizers & Outdoor Air Dampers	EconoMi$er IV (for electro-mechanical controlled - Non FDD (Standard air leak damper models)[6,7]	X	X
	EconoMi$er2 for DDC controls, complies with FDD (Standard and Ultra Low Leak air damper models)[6,8]	X	X
	Motorized 2 position outdoor-air damper[6]	X	X
	Manual outdoor-air damper (25% and 50%)		X
	Barometric relief[2]	X	X
	Power exhaust		X
	EconoMi$er X for electro-mechanical controls, complies with FDD (Standard and Ultra Low Leak air damper models)[6,7]	X	X
Economizer Sensors & IAQ Devices	Single dry bulb temperature sensors[3]	X	X
	Differential dry bulb temperature sensors[3]		X
	Single enthalpy sensors[3]	X	X
	Differential enthalpy sensors[3]		X
	CO_2 sensor (wall, duct, or unit mounted)[3]	X	X
Electric Heat	Electric Resistance Heaters		X
	Single Point Kit		X
Indoor Motor & Drive	Multiple motor and drive packages	X	
	2-Speed Indoor Fan System w/VFD controller (2-stage cool only)	X	
	Display Kit for 2-Speed Indoor Fan System system with VFD		X
Low Ambient Control	Winter start kit[4]		X
	Motormaster® head pressure controller[4]		X
Power Options	Convenience outlet (powered)[5]	X	
	Convenience outlet (unpowered)	X	
Power Options	Non-fused disconnect[5]	X	
	Disconnect Switch Bracket (180 size only)		X
Roof Curbs	Roof curb 14-in (356mm)		X
	Roof curb 24-in (610mm)		X

NOTES:

1. Included with economizer.
2. Sensors for optimizing economizer.
3. See application data for assistance.
4. Available on units with MOCP's of 80 amps or less.
5. Not available as factory installed option on single phase (208/230/1/60) models. Use field-installed accessory where available.
6. FDD -(Fault Detection and Diagnostic) capability per California Title 24 section 120.2
7. Hot Gas Re-Heat is no longer available for RAS size 036-060 models

NOTE: All Factory installed Economizers on 036-180 units are downflow. Horizontal economizers will need to be field installed.

FACTORY OPTIONS AND/OR ACCESSORIES

Economizer (dry-bulb or enthalpy)

Economizers save energy, money and improve comfort levels in the conditioned space. They bring in fresh, outside air for ventilation; and provide cool outside air to cool your building. This also is the preferred method of low ambient cooling. When integrated with CO2 sensors, economizers can provide even more savings by coupling the ventilation air to only that amount required based on space occupancy. Economizers are available, installed and tested by the factory, with either enthalpy or temperature dry-bulb inputs. There are also models for electromechanical, direct digital controllers and single speed fan or 2-speed indoor fan motors. Additional sensors are available as accessories to optimize the economizer. Economizers include gravity controlled barometric relief that helps equalize building pressure and ambient air pressures. This can be a cost effective solution to prevent building pressurization. Economizers are available in Ultra Low Leak and standard low leak versions.

CO_2 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 CO_2 sensor detects their presence through increasing CO_2 levels, and opens the economizer appropriately.

When the occupants leave, the CO_2 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.

Smoke Detectors

Trust the experts. Smoke detectors make your application safer and your job easier. ICP smoke detectors immediately shut down the rooftop unit when smoke is detected. They are available, installed by the factory, for supply air, return air, or both.

Louvered Hail Guards

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

Convenience Outlet (Powered or un-powered)

Reduce service and/or installation costs by including a convenience outlet in your specification. ICP will install this service feature at our factory. Provides a convenient, 15 amp, 115v GFCI receptacle with “Wet in Use” cover. The “powered” option allows the installer to power the outlet from the line side of the disconnect or load side as required by code. The “unpowered” option is to be powered from a separate 115/120v power source.

Non-fused Disconnect

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

Disconnect Switch Bracket

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 (180 size only).

Power Exhaust with Barometric Relief

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.

Filter or Fan Status Switches

Use these differential pressure switches to detect a filter clog or indoor fan motor failure. When used in conjunction with a compatible unit controller/thermostat, the switches will activate an alarm to warn the appropriate personnel.

Motorized 2-Position Damper

The new ICP 2-position, motorized outdoor air damper 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. Not available with 2-speed indoor fan motor models.

Manual OA Damper

Manual outdoor air dampers are an economical way to bring in ventilation air. The dampers are available in 25% and 50% versions. Not available with 2-speed indoor fan motor models.

Optional Hot Gas Re-Heat Dehumidification System

ICP’s Hot Gas Re-Heat dehumidification system is an all-inclusive factory-installed option that can be ordered with any RAS072-180 rooftop unit.

NOTE: Hot Gas Re-Heat is no longer available for RAS size 036-060 models. When Hot Gas re-Heat is required on 3 to 5 ton units use the equivalent RAX or RAH.

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

The Hot Gas Re-Heat dehumidification system has the industry’s only dual dehumidification mode setting. The Hot Gas Re-Heat system includes two new modes of operation.

The RAS180 rooftop coupled with the Hot Gas Re-Heat 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.

FACTORY OPTIONS AND/OR ACCESSORIES (cont.)

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.

2-Speed Indoor Fan Motor Indoor Fan Speed System

ICP's 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 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 single speed indoor fan motor systems, ICP's 2-speed indoor fan motor system can save substantial energy, 25%+, versus single speed indoor fan motor systems.

The VFD used in ICP's 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 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.

Motormaster Head Pressure Controller

The Motormaster 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 when economizer usage is either not appropriate or desired. The Motormaster 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 winter start kit by ICP 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 ICP expert 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 either an accessory or as a factory option, 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 gas lines, main power lines, as well as control power.

Electric Heaters

ICP offers a full-line of field-installed accessory heaters. The heaters are very easy to use, install and are all 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

ECONOMI$ER IV FOR 1-SPEED INDOOR FAN MOTOR ONLY)
STANDARD LEAK CONTROLLER INCLUDED

VERTICAL

Model Number	Description	Use With Model Size
CRECOMZR020A02	STANDARD LEAK Vertical EconoMi$er IV with solid-state controller, gear-driven, damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in non-DDC applications.	036 - 072
CRECOMZR021A03	STANDARD LEAK Vertical EconoMi$er IV with solid-state controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in non-DDC applications.	090 - 150
CRECOMZR062A00	STANDARD LEAK Vertical EconoMi$er IV with solid-state controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in non-DDC applications.	180
	HORIZONTAL	
CRECOMZR024A02	STANDARD LEAK Horizontal EconoMi$er IV with solid-state controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in non-DDC applications.	036 - 072
CRECOMZR025A02	STANDARD LEAK Horizontal EconoMi$er IV with solid-state controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in non-DDC applications.	090 - 150
CRECOMZR064A00	STANDARD LEAK Horizontal EconoMi$er IV with solid-state controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in non-DDC applications.	180

[1] EconoMi$er IV cannot be installed with an EconoMi$er X, Manual Damper, or Motorized Damper.
[2] When installed on a unit with hinged panels, hinged panel access kit is also required.
[3] Add AXB078EXT for Humidity/Temp control.

ECONOMI$ER X (FOR 1 & 2-SPEED INDOOR FAN MOTOR)
STANDARD LEAK, CONTROLLER INCLUDED

VERTICAL

CRECOMZR076A00	STANDARD LEAK - Vertical EconoMi$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in electro mechanical controls only. Controller meets California Title 24 Section 120.2 Fault Detection and Diagnostic (FDD) requirements.	036 - 172
CRECOMZR078A00	STANDARD LEAK - Vertical EconoMi$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in electro mechanical controls only. Controller meets California Title 24 Section 120.2 Fault Detection and Diagnostic (FDD) requirements.	090 - 150
CRECOMZR080A00	STANDARD LEAK - Vertical EconoMi$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in electro mechanical controls only. Controller meets California Title 24 Section 120.2 Fault Detection and Diagnostic (FDD) requirements.	180

[1] EconoMi$er X cannot be installed with an EconoMi$er IV, Manual Damper, or Motorized Damper.
[2] When installed on a unit with hinged panels, hinged panel access kit is also required.
[3] Add AXB078EXT for Humidity/Temp control.

NOTE: If “CR” is not found, “DN” may be substituted.

ACCESSORIES - RAS036-180 (cont.)

ECONOMI$ER X (FOR 1 & 2-SPEED INDOOR FAN MOTOR) STANDARD LEAK, CONTROLLER INCLUDED		
HORIZONTAL		
Model Number	**Description**	**Use With Model Size**
CRECOMZR077A00	STANDARD LEAK - Horizontal EconoMi$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in electro mechanical controls only. Controller meets California title 24 Section 120.2 Fault Detection and Diagnostic (FDD) requirements.	036 – 172
CRECOMZR079A00	STANDARD LEAK - Horizontal EconoMi$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in electro mechanical controls only. Controller meets California Title 24 Section 120.2 Fault Detection and Diagnostic (FDD) requirements.	090 – 150
CRECOMZR081A00	STANDARD LEAK - Horizontal EconoMi$er 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. Controller meets California Title 24 Section 120.2 Fault Detection and Diagnostic (FDD) requirements.	180
[1] EconoMi$er X cannot be installed with an EconoMi$er IV, Manual Damper, or Motorized Damper. [2] When installed on a unit with hinged panels, hinged panel access kit is also required. [3] Add AXB078EXT for Humidity/Temp control.		

ECONOMI$ER X (FOR 1 & 2-SPEED INDOOR FAN MOTOR) ULTRA LOW LEAK, CONTROLLER INCLUDED		
VERTICAL		
CRECOMZR067A00	Ultra LOW LEAK - Vertical EconoMi$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in electro mechanical controls only. Also includes return, outside air, and relief air damper leakage that meets Title 24 section 140.4 and ASHRAE 90.1 requirements. Controller meets California Title 24 Fault Detection and Diagnostic (FDD) requirements.	036 – 072
CRECOMZR069A00	Ultra LOW LEAK - Vertical EconoMi$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator, up to 100% barometric relief, supply and outdoor air temperature sensors, and CO2 sensor compatible, for use in electro mechanical controls only. Also includes return, outside air, and relief air damper leakage that meets Title 24 section 140.4 and ASHRAE 90.1 requirements. Controller meets California Title 24 Fault Detection and Diagnostic (FDD) requirements	090 – 150
CRECOMZR071A00	Ultra LOW LEAK - Vertical EconoMi$er 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. Also includes return, outside air, and relief air damper leakage that meets Title 24 section 140.4 and ASHRAE 90.1 requirements. Controller meets California Title 24 Fault Detection and Diagnostic (FDD) requirements.	180
[1] EconoMi$er X cannot be installed with an EconoMi$er IV, Manual Damper or Motorized Damper. [2] Currently only available on vertical air flow configuration models. Contact your local MicroMetl account manager 1-800-884-4662 if horizontal model is required. [3] When installed on a unit with hinged panels, hinged panel access kit is also required. [4] Add AXB078EXT for Humidity/Temp control.		

NOTE: If “CR” is not found, “DN” may be substituted.

ACCESSORIES - RAS036-180 (cont.)

ACCESSORY KITS FOR UNITS WITH HINGED ACCESS PANELS		
Model Number	**Description**	**Use With Model Size**
	VERTICAL	
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
CRPECONV007B00	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
	HORIZONTAL	
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
CRHNGPNL003A00	Currently in development - please contact application engineering ... Hinged filter access door kit for use with horizontal economizer accessory. Replaces door sent with economizer. Includes door panel, angle and seal strip.	180
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 & X**
DNENTDIF004A00	Return Air Enthalpy Sensor used with Electro-Mechanical controls, use with AXB078ENT for differential enthalpy control.	**ECONOMIZER IV**
AXB078ENT	Economizer Differential Enthalpy Control Upgrade	**ECONOMIZER IV**
CRTEMPSN005A00	Outdoor or return dry bulb temperature sensor used with Honeywell W7220 electro-mechanical control.	**ECONOMIZER X**
--HH--57AC-081	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.
Currently only available on vertical air flow configuration models. Contact your local MicroMetl account manager 1-800-884-4662 if horizontal model is required.

ECONOMIZER SENSOR USAGE CHART			
DESIRED CONTROL METHOD		ECONOMI$ER IV [1] REQUIRED FIELD-INSTALLED SENSOR(S)	ECONOMI$ER X [1] REQUIRED FIELD-INSTALLED SENSOR(S)
Single Dry Bulb Control		None. Outside Air dry bulb sensor is factory installed.	None. Outside Air dry bulb sensor is factory installed.
Single Enthalpy Control		(1) AXB078ENT	(1) --HH--57AC-081
Differential Dry Bulb		NA	(1) --HH--57AC-081
Differential Enthalpy Control		(1) AXB078ENT & (1) DNENTDIF004A00	(2) --HH--57AC-081
To Add CO_2 DCV Control with above:	Duct Mount	(1) DNCBDIOX005A00	(1) DNCBDIOX005A00

[1] OAT and SAT sensors included for EconoMi$er 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
NOTES	Vertical Power Exhaust requires a vertical Economizer Vertical Power Exhaust package includes exhaust hood, screens, and propeller fan system	
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
NOTES	Horizontal Power Exhaust should be duct-mounted in the return duct Horizontal Power Exhaust package includes exhaust hood, screens, and propeller fan system	

575V TRANSFORMER

Model Number	Description	Use With Model Size
1171494	Transformer for conversion from 575v to 208/230v power exhaust applications.	ALL

NOTES:

1. Vertical power exhaust package includes exhaust hood, screens and propeller fan system.
2. 24" Roof curbs are NOT required with vertical power exhaust.
3. Horizontal power exhaust should be duct-mounted in the return ductwork and is supplied with a single fan and wiring harness.
4. Both vertical and horizontal power exhaust packages can be used with either EconoMi$er IV or EconoMi$er X. In either case, the power exhaust is controlled by the EconoMi$er IV, X controller.
5. Order --HT--01AH-859 / FAST# 1171494for 575V applications.

NOTES: If "CR" is not found, "DN" may be substituted.

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

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

ACCESSORIES - RAS036-180 (cont.)

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

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

SPECIAL - 180 SIZE SPECIFIC ACCESSORIES		
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	

1. Manual dampers include hood assembly, bird screen, adjustable damper blade (to allow up to the rated outdoor air %), and bottom panel with opening.
2. 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 %)
3. 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.

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. Kit includes display and cable. If preferred, kit can be used for any associated unit with VFD.	All 2-Speed VFD Controllers
NRTIMEGD001A00	Time Guard II - Automatically prevents the compressor from restarting for at least 4 minutes and 45 seconds after shutdown of the compressor. Not required when a commercial thermostat has a minimum 5 min time delay between cooling cycles available (One required per unit)	036 - 180
CRSDTEST001A00	Remote keyed attenuator / test / reset station	036 - 180
DNWINSTR001A00	Winter Start Package - Contains time delay relay for timed bypass of low pressure switch on startup. (One required per refrigerant circuit)[1]	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

[1] If mechanical cooling below 25 degrees ambient is necessary, consider additional low0ambient control measures (for example, economizer or motormaster)

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
1171807 [2]	MFD 10	036 - 121 208/230-1-60, 208/230-3-60, 575-3-60
1175708 [2]	Dual MFD 10 + 10	036 - 121 460-3-60
1173702 [2]	Dual MFD 45 + 10	036 208/230-1-60
1177750 [2]	Dual MFD 70 + 10	048 208/230-1-60
1173703 [2]	Dual MFD 80 + 10	060 208/230-1-60
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 DN-WINSTR001A00 also required (one per refrigerant circuit)	180 460-3-60
CRTRXKIT002A00	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

*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 TABLES

Unit	Cooling Stages	Nom. Capacity (tons)	Net Cooling Capacity (MBH)	Total Power (KW)	SEER	EER	IEER WITH SINGLE SPEED INDOOR MOTOR	IEER with 2-speed INDOOR MOTOR
036	1	3	34.0	3.2	13.0	10.60	N/A	N/A
048	1	4	45.0	4.0	13.0	11.00	N/A	N/A
060	1	5	59.0	5.5	13.0	10.75	N/A	N/A
072	1	6	70.0	6.4	N/A	11.20	11.4	N/A
091	1	7.5	88.0	8.0	N/A	11.20	11.4	N/A
090	2	7.5	83.0	7.5	N/A	11.20	11.7	13.0
101	1	8.5	97.0	8.8	N/A	11.20	11.4	N/A
102	2	8.5	99.0	9.0	N/A	11.20	11.7	13.0
121	1	10	117.0	10.6	N/A	11.20	11.4	N/A
120	2	10	114.0	10.3	N/A	11.30	12.2	13.0
150	2	12.5	140.0	12.9	N/A	11.00	11.2	12.4
180	2	15	174.0	16.1	N/A	11.00	11.5	12.6

Table 3 – DIRECT DRIVE INDOOR ECM – X13 MOTOR

UNIT	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (KW)	SEER	EER
036	1	3	34.4	3.1	13.4	11.00
048	1	4	45.0	3.9	13.4	11.40
060	1	5	59.0	5.5	13.2	10.75

LEGEND

AHRI - Air Conditioning, Heating and Refrigeration Institute Test Standard
ASHRAE - American Society of Heating, Refrigerating and Air Conditioning, Inc.
EER - Energy Efficiency Ratio
IEER - Integrated Energy Efficiency Ratio
N/A - Not Applicable
SEER - Seasonal Energy Efficiency Ratio

NOTES:

1. Rated in accordance with AHRI Standard 210/240 or 340/360, 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 Energy Standard for minimum SEER and EER requirements.
4. RAS units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, 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 COOLING AND ELECTRIC HEAT

Unit	Cooling		Electric Heaters	
	Minimum	Maximum	Minimum	Maximum
RAS036	900	1500	900	1500
RAS048	1200	2000	1200	2000
RAS060	1500	2500	1500	2500
RAS072	1800	3000	1800	3000
RAS090/091	2250	3750	2250†	3750
RAS101/102	2550	4250	2550†	4250
RAS120/121	3000	5000	3000†	5000
RAS150	3600	6000	3000†	6000
RAS180	4500	7500	4500	7500

† **Minimum electric heat CFM exceptions :**

Unit	Unit voltage	Heater kW	Unit Configuration	Required Minimum CFM
RAS120/121 RAS150	208/230	42.4	Horizontal	3200
RAS120/121 RAS150	208/230	50.0	Horizontal	3200
RAS120/121 RAS150	460	50.0	Horizontal or Vertical	3200
RAS90/91	575	17.0	Horizontal or Vertical	2800
RAS101/102 RAS120/121 RAS150	575	34.0	Horizontal or Vertical	2350

Table 5 – SOUND PERFORMANCE TABLE

Unit	Cooling Stages	OUTDOOR SOUND (dB) @60Hz								
		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

NOTES:

1. Outdoor sound data is measure in accordance with AHRI standard 270-2008.
2. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure accounts for specific environmental factors which 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 an “average” human ear. A-weighted measurements for ICP units are taken in accordance with 270-2008.

Table 6 – PHYSICAL DATA (COOLING) 3 - 4 TONS

	RAS036 Produced On or Prior to 7/26/2015	RAS036 Produced On or After 7/27/2015	RAS048 Produced On or Prior to 7/26/0215	RAS048 Produced On or After 7/27/2015
Refrigeration System				
# Circuits / # Comp. / Type	1 / 1 / Scroll	1 / 1 / Scroll	1 / 1 / Scroll	1 / 1 / Scroll
R-410A refrig. (lbs-oz)	5-10	4-4	8-8	7-5
Hot Gas Re-Heat R-410A refrig. charge A/B (lbs - oz)	8-11	-	-	-
Metering Device	Acutrol	Acutrol	Acutrol	Acutrol
Hot Gas Re-Heat 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
Compressor Capacity Staging (%)	100%	100%	100%	100%
Evap. Coil				
Material (Tube/Fin)	Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF
Rows / FPI	2 / 15	2 / 15	2 / 15	2 / 15
Total Face Area (ft^2)	5.5	5.5	5.5	5.5
Condensate Drain Conn. Size	3/4-in	3/4-in	3/4-in	3/4-in
Hot Gas Re-Heat Coil				
Material (Tube/Fin)	-	-	-	-
Coil type	-	-	-	-
Rows..Fins/in.	-	-	-	-
Total Face Area (ft^2)	-	-	-	-
Evap. Fan and Motor				
Standard Direct Drive 3 phase – Motor Qty / Drive Type	-	1 / Direct	-	1 / Direct
Max BHP	-	0.75	-	0.75
RPM Range	-	600-1200	-	600-1200
Motor Frame Size	-	48	-	48
Fan Qty / Type	-	1 / Centrifugal	-	1 / Centrifugal
Fan Diameter (in)	-	10 x 11	-	10 x 11
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	560-854	560-854	560-854	560-854
Motor Frame Size	48	48	48	48
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
Medium 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	770-1175	770-1175	770-1175	770-1175
Motor Frame Size	48	48	48	48
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
High Statoc 3 phase – Motor Qty / Drive Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt
Max BHP	2.4	2.4	2.4	2.4
RPM Range	1035-1466	1035-1466	1035-1466	1035-1466
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 (Tube/Fin)	Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type	3/8-in RTPF	5/16-in RTPF	3/8-in RTPF	5/16-in RTPF
Rows / FPI	1 / 17	1 / 17	2 / 17	2 / 17
Total Face Area (ft^2)	14.6	12.6	16.5	15.6
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	2 / 16 x 25 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

NOTE: Hot Gas Re-Heat is no longer available for RAS size 036-060 models.
- Not applicable

Table 7 – PHYSICAL DATA (COOLING) 5 - 6 TONS

		RAS060 Produced On or Prior to 7/26/0215	RAS060 Produced On or After 7/27/2015	RAS072
Refrigeration System				
	# Circuits / # Comp. / Type	1 / 1 / Scroll	1 / 1 / Scroll	1 / 1 / Scroll
	R-410A refrig. (lbs-oz)	10-11	9-0	14-2
	Hot Gas Re-Heat R-410A refrig. charge A/B (lbs - oz)	16-0	-	22-5
	Metering Device	Acutrol	Acutrol	Acutrol
	Hot Gas Re-Heat Humidity Metering Device	-	-	Acutrol + TXV
	High-press. Trip / Reset (psig)	630 / 505	630 / 505	630 / 505
	Low-press. Trip / Reset (psig)	54 / 117	54 / 117	54 / 117
	Compressor Capacity Staging (%)	100%	100%	100%
Evap. Coil				
	Material (Tube/Fin)	Cu / Al	Cu / Al	Cu / Al
	Coil type	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF
	Rows / FPI	4 / 15	4 / 15	4 / 15
	Total Face Area (ft^2)	5.5	5.5	7.3
	Condensate Drain Conn. Size	3/4-in	3/4-in	3/4-in
Hot Gas Re-Heat Coil				
	Material (Tube/Fin)	-	-	Cu / Al
	Coil type	-	-	3/8-in RTPF
	Rows..Fins/in.	-	-	2 / 17
	Total Face Area (ft^2)	-	-	5.2
Evap. Fan and Motor				
Standard Direct Drive 3 phase	Motor Qty / Drive Type	-	1 / Direct	-
	Max BHP	-	1	-
	RPM Range	-	600-1200	-
	Motor Frame Size	-	48	-
	Fan Qty / Type	-	1 / Centrifugal	-
	Fan Diameter (in)	-	10 x 11	-
Standard Static 3 phase	Motor Qty / Drive Type	1 / Belt	1 / Belt	1 / Belt
	Max BHP	1.7	1.7	2.4
	RPM Range	770-1175	770-1175	1073-1457
	Motor Frame Size	48	48	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in)	10 x 10	10 x 10	10 x 10
Medium Static 3 phase	Motor Qty / Drive Type	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.4	2.4	2.9 †
	RPM Range	1035-1466	1035-1466	1173-1518
	Motor Frame Size	56	56	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in)	10 x 10	10 x 10	10 x 10
High Statoc 3 phase	Motor Qty / Drive Type	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.9	2.9	3.7
	RPM Range	1303-1687	1303-1687	1474-1788
	Motor Frame Size	56	56	56
	Fan Qty / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Diameter (in)	10 x 10	10 x 10	10 x 10
Cond. Coil				
	Material (Tube/Fin)	Cu / Al	Cu / Al	Cu / Al
	Coil type	3/8-in RTPF	5/16-in RTPF	3/8-in RTPF
	Rows / FPI	2 / 17	2 / 17	2 / 17
	Total Face Area (ft^2)	16.5	15.6	21.3
Cond. fan / motor				
	Qty / Motor Drive Type	1/ Direct	1/ Direct	1/ Direct
	Motor HP / RPM	1/4 / 1100	1/4 / 1100	1/4 / 1100
	Fan diameter (in)	22	22	22
Filters				
	RA Filter # / Size (in)	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

NOTE: Hot Gas Re-Heat is no longer available for RAS size 036-060 models.

- Not applicable

† 575V motor utilizes 3.7 BHP.

Table 8 – 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
Alternate (Hot Gas Re-Heat) R-410A charge A/B (lbs - oz)		13 - 3 / 13 - 3		16 - 13 / 16 - 13
Metering device	Acutrol	Acutrol	Acutrol	Acutrol
Alternate (Hot Gas Re-Heat) Metering device	-	Acutrol + TXV	-	Acutrol + TXV
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
Compressor Capacity Staging (%)	100%	50% / 100%	100%	50% / 100%
Evap. Coil				
Material	Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF
Rows / FPI	3 / 15	3 / 15	3 / 15	3 / 15
Total face area (ft^2)	8.9	8.9	11.1	11.1
Condensate drain conn. size	3/4-in	3/4-in	3/4-in	3/4-in
Hot Gas Re-Heat Coil				
Material	-	Cu / Al	-	Cu / Al
Coil type	-	3/8-in RTPF	-	3/8-in RTPF
Rows / FPI	-	2 / 17	-	2 / 17
Total face area (ft^2)	-	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	1 / Belt	1 / Belt
Max BHP	2.9†	2.9†	2.4	2.4
RPM range	733-949	733-949	690-936	690-936
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
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	14	14	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-in RTPF	3/8-in RTPF	3/8-in RTPF	3/8-in 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

NOTE: Hot Gas Re-Heat Humidity is available with only Round Tube/Plate Fin (RTPF).

- Not applicable

† 575V motor utilizes 3.7 BHP

Table 9 – PHYSICAL DATA (COOLING) 10 - 15 TONS

		RAS121	RAS121 G/K	RAS150G/K	RAS180G/K
Refrigeration System					
	# 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
	Alternate (Hot Gas Re-Heat) R-410A charge A/B (lbs - oz)	-	16 - 10 / 16 - 0	17 - 10 / 18 - 3	-
	Metering device	Acutrol	Acutrol	Acutrol	Acutrol
	Alternate (Hot Gas Re-Heat) Metering device	-	Acutrol + TXV	Acutrol + TXV	-
	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
	Compressor Capacity Staging (%)	100%	50% / 100%	50% / 100%	50% / 100%
Evap. Coil					
	Material	Cu / Al	Cu / Al	Cu / Al	Cu / Al
	Coil type	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF	3/8-in 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-in	3/4-in	3/4-in	3/4-in
Hot Gas Re-Heat Coil					
	Material	-	Cu / Al	Cu / Al	Cu / Al
	Coil type	-	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF
	Rows / FPI	-	2 / 17	2 / 17	1 / 17
	Total face area (ft^2)	-	8.4	8.4	13.8
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	6.5 / 6.9 / 7.0 / 8.3‡
	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
Cond. Coil					
	Material	Cu / Al	Cu / Al	Cu / Al	Cu / Al
	Coil type	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF
	Rows / FPI	2 / 17	2 / 17	3 / 17	2 / 17
	Total face area (ft2)	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 2 / 24 x 27 x 1 (vert.)
	OA inlet screen # / Size (in)	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 30 x 39 x 1 (horiz)

NOTE: Hot Gas Re-Heat Humidity is available with only Round Tube/Plate Fin (RTPF) up to 180 size

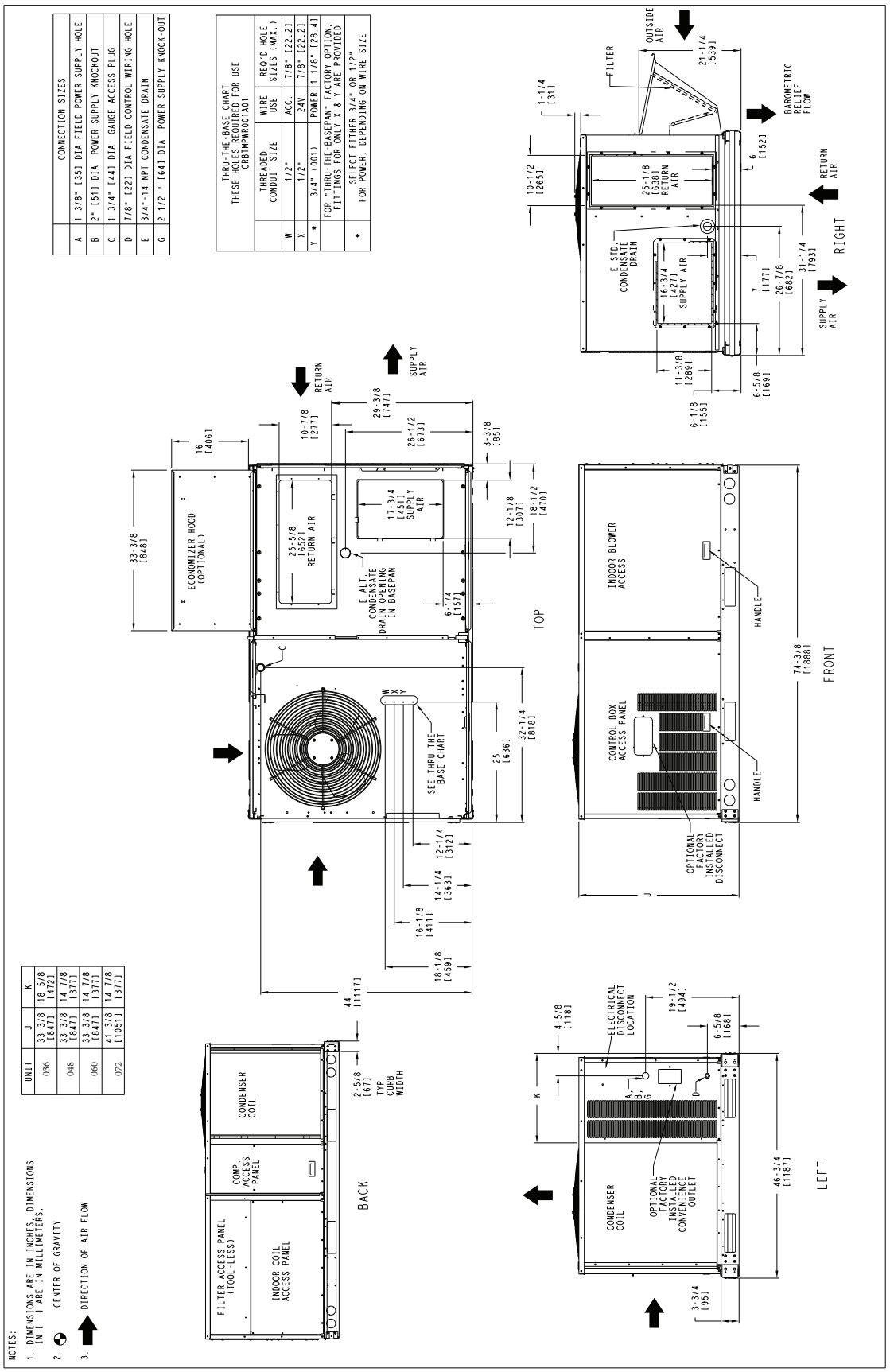
- Not applicable

† 575V motor utilizes 3.7 BHP

‡ On Size 180 units, Max BHP for the High Static motor varies with the motor's voltage; see the table below.

Voltage	BHP
208	6.5
230	6.9
460	7.0
575	8.3

CURBS, WEIGHTS & DIMENSIONS



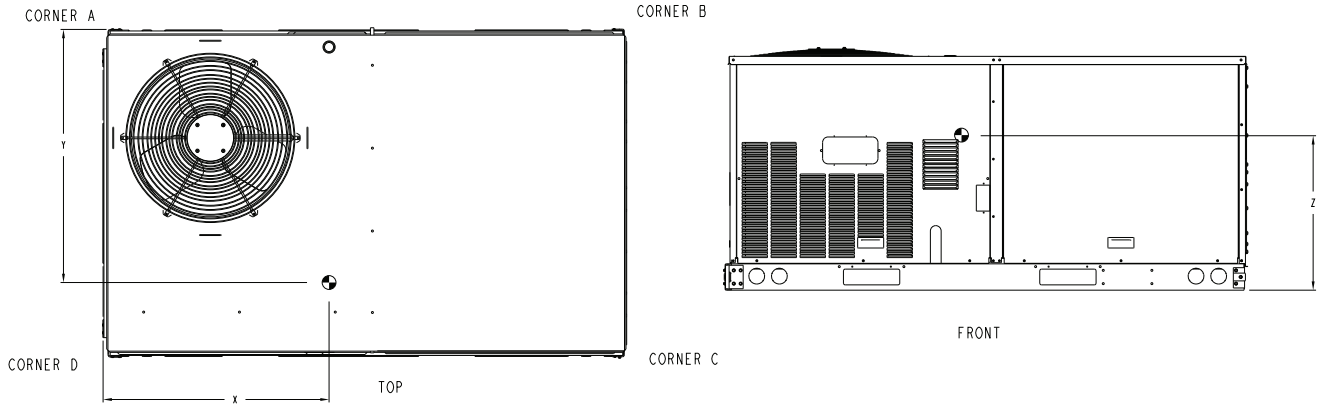
C150299

Fig. 1 - Dimensions RAS 036-072 (Sheet 1 of 2)

CURBS, WEIGHTS & DIMENSIONS (cont.)

UNIT	STD. UNIT WEIGHT*		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		HEIGHT
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
036	435	197	93	42	106	48	126	57	111	50	39 [991]	25 [635]	17 1/4 [438]
048	485	220	117	53	115	52	126	57	128	58	37 [940]	24 [610]	17 1/2 [445]
060	515	234	116	53	125	57	143	65	132	60	38 [955]	24 [610]	17 3/4 [451]
072	607	275	150	68	160	73	153	69	144	65	38 [965]	22 [559]	20 3/4 [527]

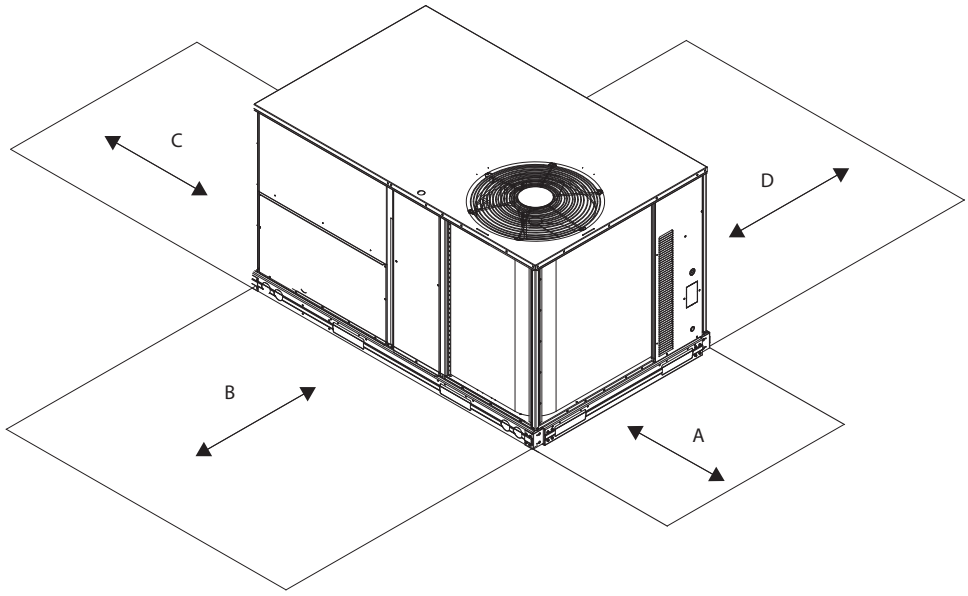
* STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING.
FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



C150300

Fig. 2 - Dimensions RAS 036-072 (Sheet 2 of 2)

CURBS, WEIGHTS & DIMENSIONS (cont.)

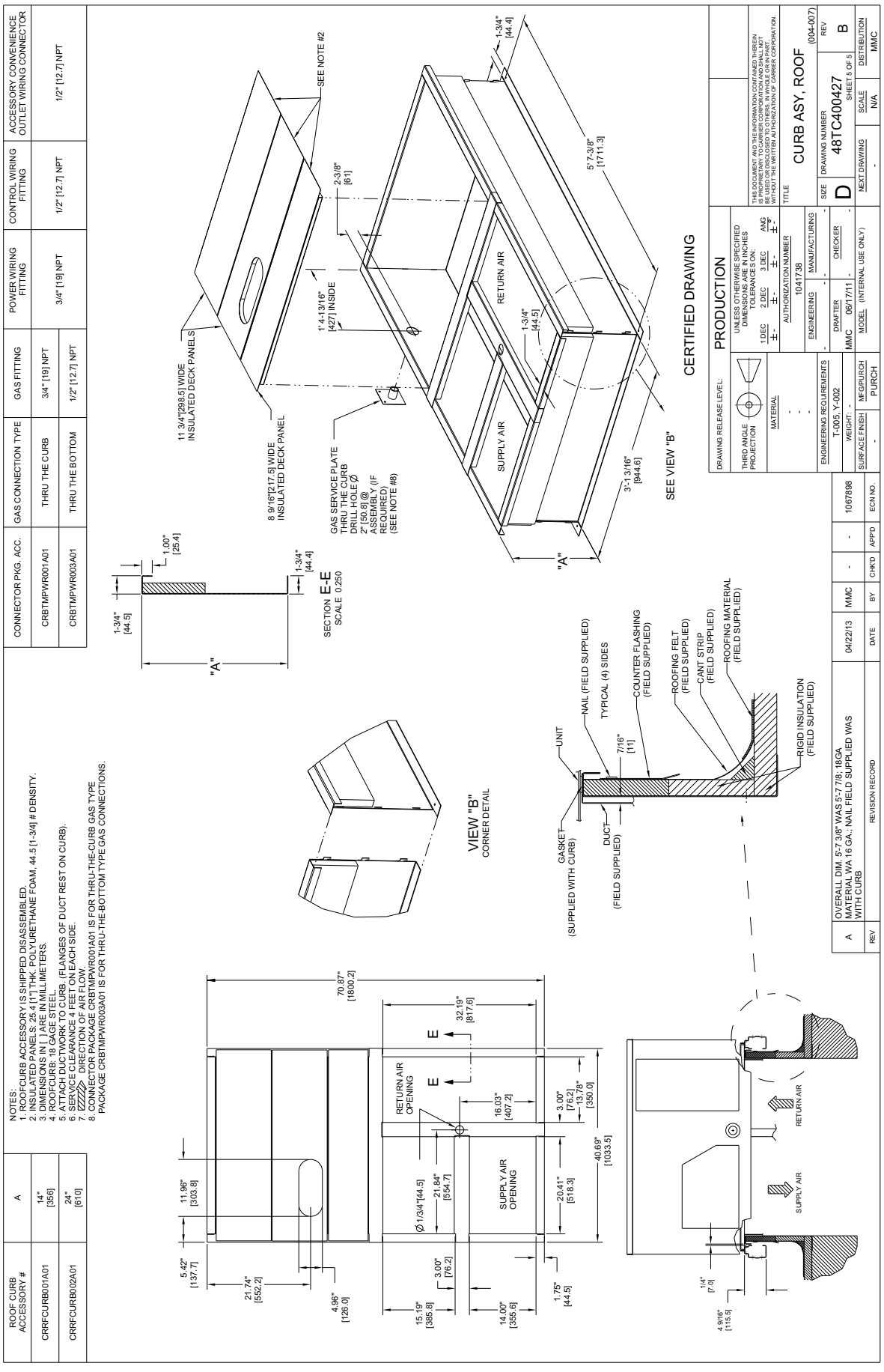


C08337

Fig. 3 - Service Clearance

LOC	DIMENSION	CONDITION
A	48-in (1219 mm)	Unit disconnect is mounted on panel
	18-in (457 mm)	No disconnect, convenience outlet option
	18-in (457 mm)	Recommended service clearance
	12-in (305 mm)	Minimum clearance
B	42-in (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall)
	36-in (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-in (914 mm)	Side condensate drain is used
	18-in (457 mm)	Minimum clearance
D	42-in (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall, another unit)
	36-in (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)

NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or vertical clearances.



ROOF CURB ACCESSORY #	A
CRRFCURB001A01	14" [356]
CRRFCURB002A01	24" [610]

NOTES:
1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
2. INSULATED PANELS 2.25 (.177) THK. POLYURETHANE FOAM, 44.5 [1-3/4] # DENSITY.
3. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
4. ROOFCURB, 18 GAGE STEEL.
5. ATTACH DUCTWORK TO CURB. (FLANGES OF DUCT REST ON CURB).
6. SERVICE CLEARANCE 4 FEET ON EACH SIDE.
7. ▨ DIRECTION OF AIR FLOW.
8. CONNECTOR PACKAGE CRBTMPWR001A01 IS FOR THRU-THE-CURB GAS TYPE PACKAGE CRBTMPWR003A01 IS FOR THRU-THE-BOTTOM TYPE GAS CONNECTIONS.

CONNECTOR PKG. ACC.	GAS CONNECTION TYPE	GAS FITTING	POWER WIRING FITTING	CONTROL WIRING FITTING	ACCESSORY CONVENIENCE OUTLET WIRING CONNECTOR
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			

REV	REVISION RECORD	DATE	BY	CHK'D	APP'D	ECN NO.
A	OVERALL DIM. 5'-7 3/8" WAS 5'-7 7/8; 18GA MATERIAL WA 16 GA.; NAIL FIELD SUPPLIED WAS WITH CURB	04/22/13	MMC	-	-	1067898

DRAWING RELEASE LEVEL:	PRODUCTION
THIRD ANGLE PROJECTION	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: 1 DEC ±.- 2 DEC ±.- 3 DEC ±.- ANG ±.°
MATERIAL - - -	AUTHORIZATION NUMBER 1041738
ENGINEERING REQUIREMENTS T-005, Y-002	ENGINEERING - MANUFACTURING - DRAFTER - CHECKER MMC 06/17/11 - MODEL (INTERNAL USE ONLY) -
WEIGHT: -	
SURFACE FINISH -	MFG/PURCH PURCH

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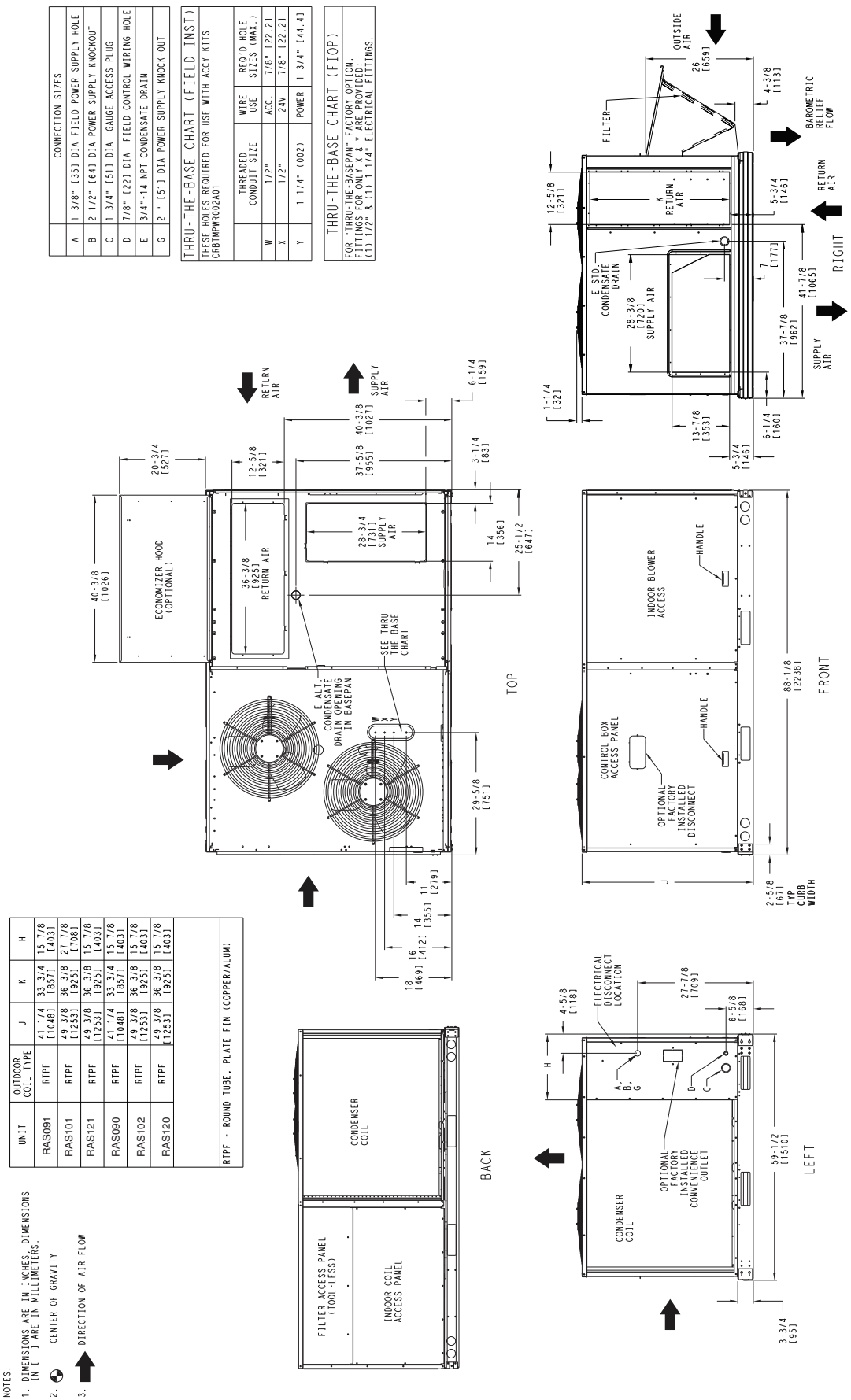
TITLE	DRAWING NUMBER	SCALE	DISTRIBUTION
	NEXT DRAWING -	N/A	MMC

C13310

Fig. 4 - Roof Curb Details RAS 036-072



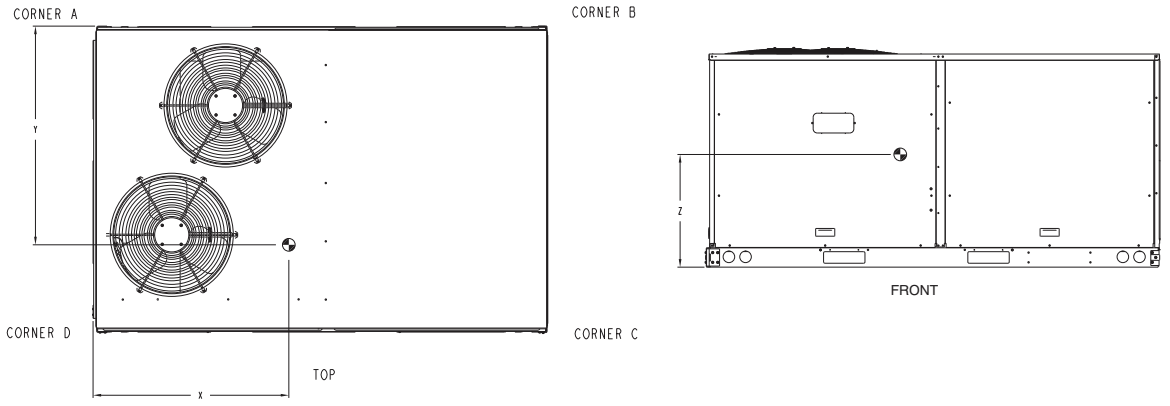
C101205B

Fig. 5 - Dimensions RAS 090-121 (Sheet 1 of 2)

CURBS, WEIGHTS & DIMENSIONS (cont.)

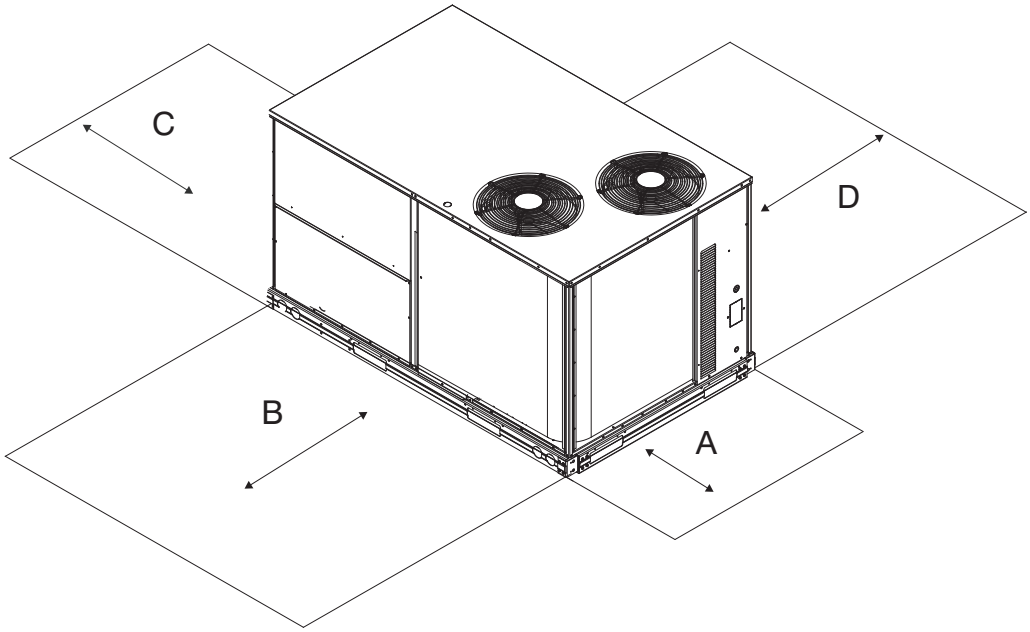
UNIT	OUTDOOR COIL TYPE	STD. UNIT WEIGHT ***		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
		LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
RAS091	RTPF	705	320	172	78	142	64.5	177	80.4	214	97.2	39 7/8 [1013]	33 [838]	21 1/4 [540]
RAS101	RTPF	845	383.6	206	93.5	167	76	212	96.2	261	118.5	39 1/2 [1003]	33 1/4 [845]	24 [610]
RAS121	RTPF	855	388	210	95.3	180	81.7	215	97.6	250	113.5	40 3/4 [1035]	32 3/8 [822]	25 1/4 [641]
RAS090	RTPF	760	345	158	71.7	155	70.4	222	100.8	225	102.2	43 3/4 [1111.3]	35 [889]	20 [508]
RAS102	RTPF	855	388.2	223	101.2	171	77.6	200	90.8	261	118.5	38 3/8 [975]	32 1/8 [816]	19 1/8 [486]
RAS120	RTPF	865	392.7	225	102.2	173	78.5	203	92.2	264	120	38 3/8 [975]	32 1/8 [816]	19 1/8 [486]

RTPF - ROUND TUBE, PLATE FIN (COPPER/ALUM)



C101206B

Fig. 6 - Dimensions RAS 090-121 (Sheet 2 of 2)



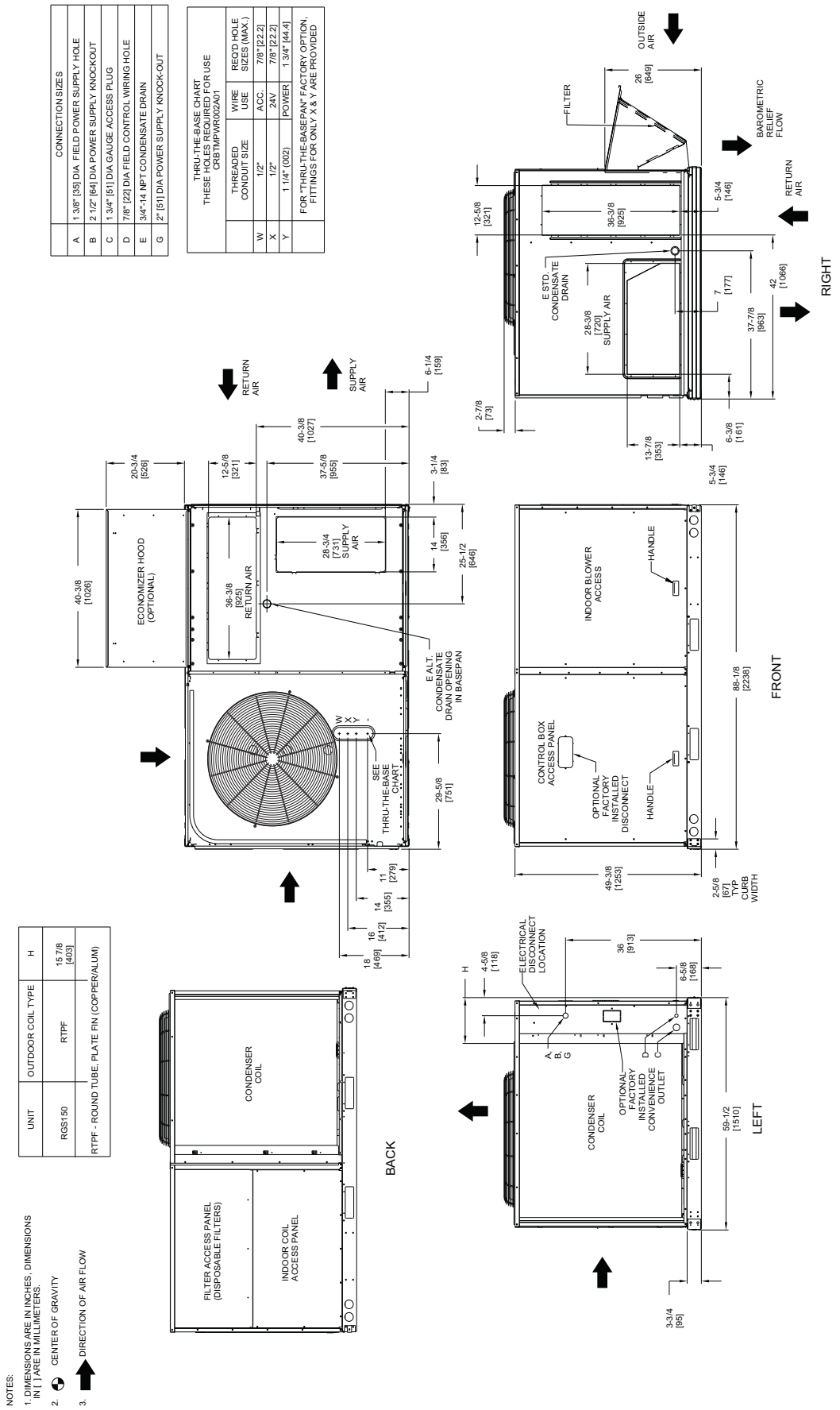
C11247

Fig. 7 - Service Clearance

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

NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or vertical clearances.

CURBS, WEIGHTS & DIMENSIONS (cont.)

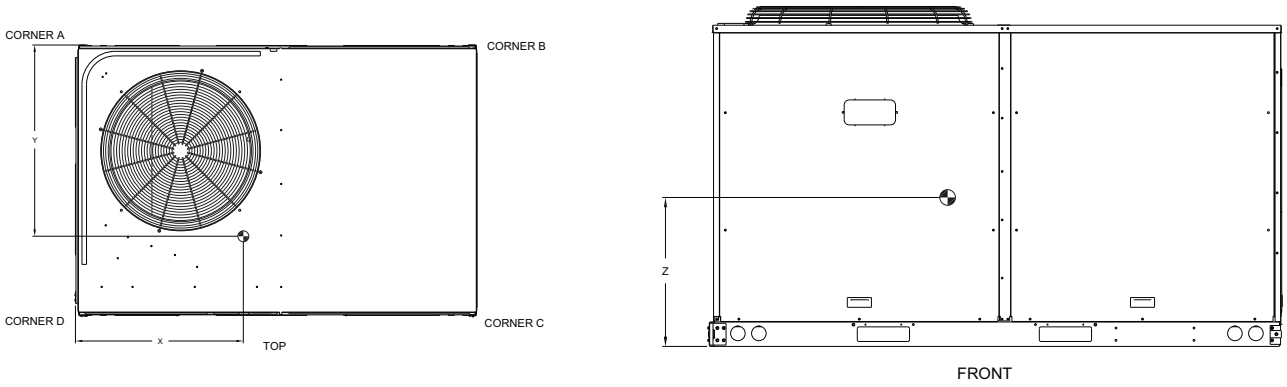


C101207B

Fig. 8 - Dimensions RAS150 (Sheet 1 of 2)

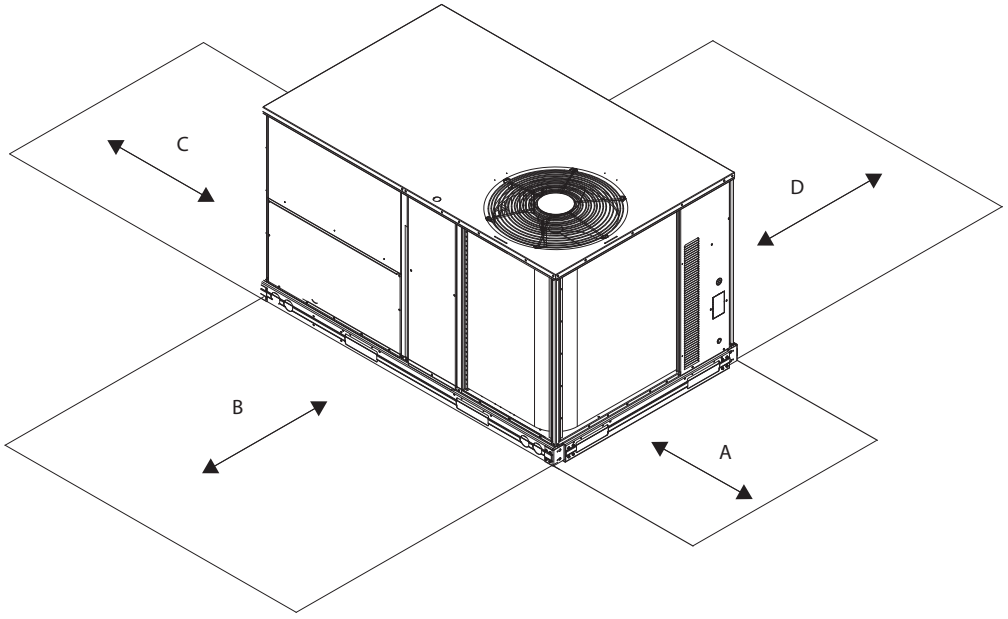
CURBS, WEIGHTS & DIMENSIONS (cont.)

UNIT	OUTDOOR COIL TYPE	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	RTPF	1075	489	340	155	155	70	181	82	399	181	27 1/2 [699]	32 [813]	20 1/2 [523]
RTPF - ROUND TUBE, PLATE FIN (COPPER/ALUM)														



C101260

Fig. 9 - Dimensions RAS150 (Sheet 2 of 2)

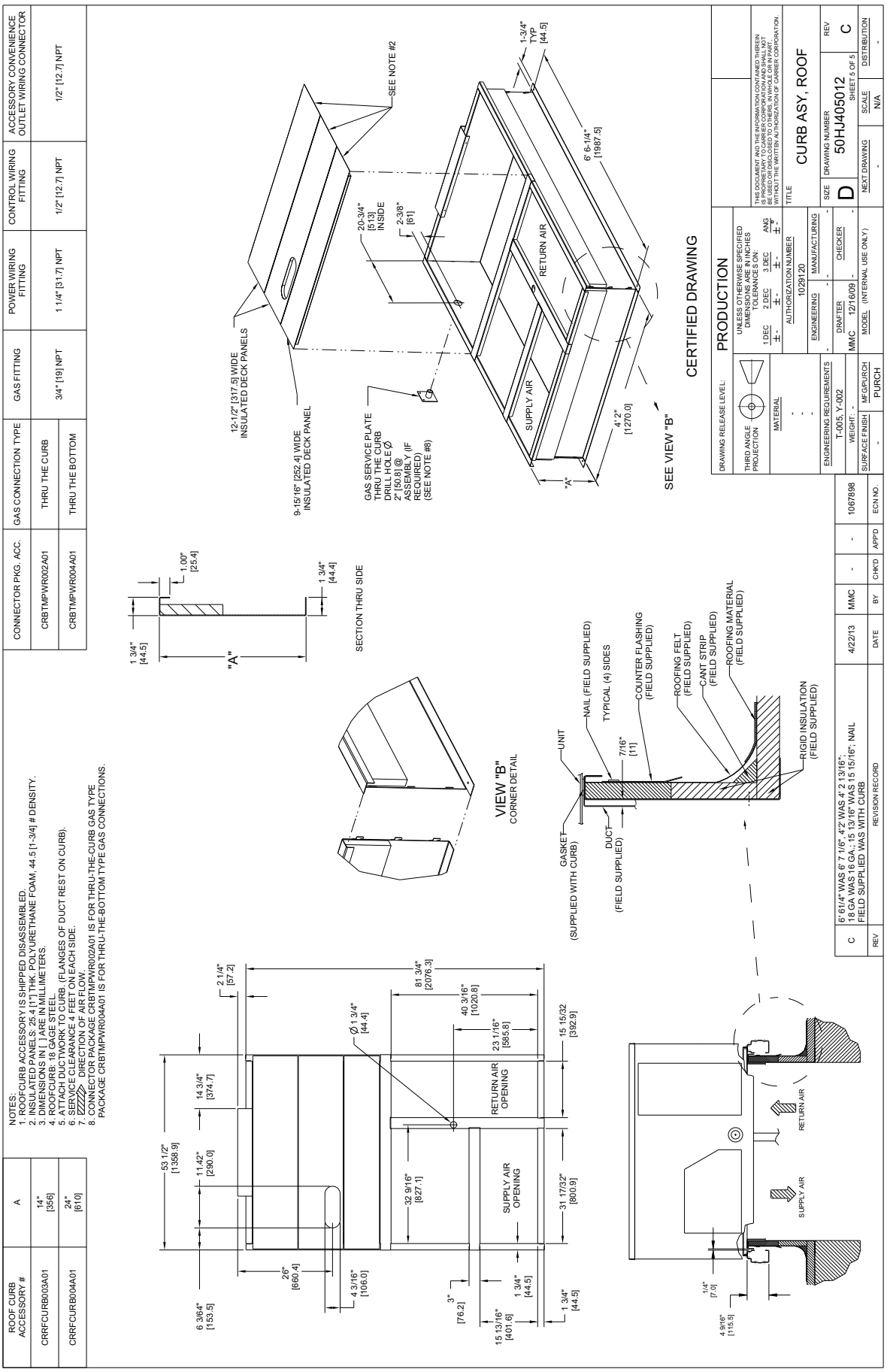


C08337

Fig. 10 - Service Clearance

LOC	DIMENSION	CONDITION
A	48-in (1219 mm)	Unit disconnect is mounted on panel
	18-in (457 mm)	No disconnect, convenience outlet option
	18-in (457 mm)	Recommended service clearance
	12-in (305 mm)	Minimum clearance
B	42-in (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall)
	36-in (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-in (914 mm)	Side condensate drain is used
	18-in (457 mm)	Minimum clearance
D	42-in (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall, another unit)
	36-in (914 mm)	Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)

NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or vertical clearances.



C13311

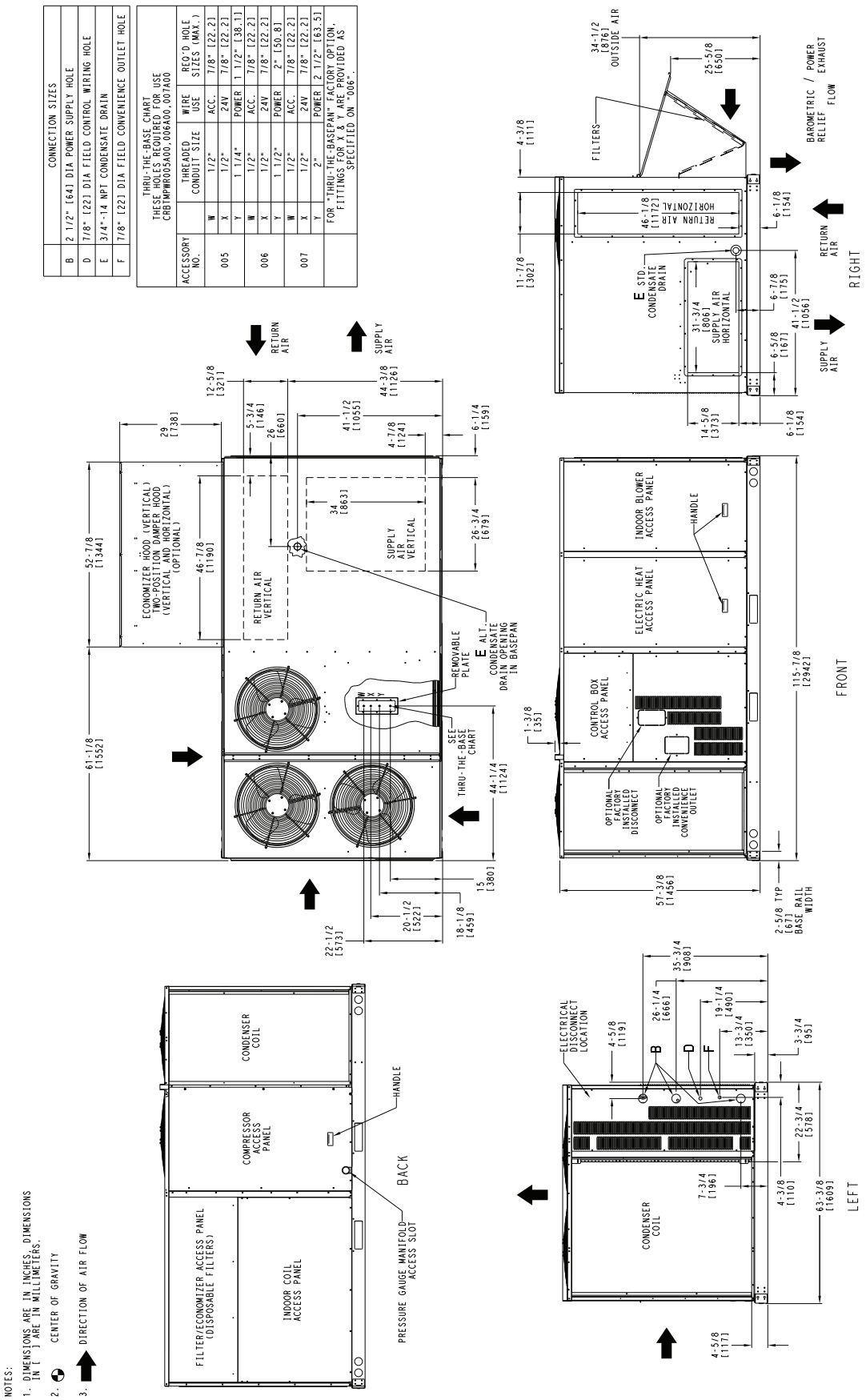
Fig. 11 - Roof Curb Details RAS 090-150

CURBS, WEIGHTS & DIMENSIONS (cont.)

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

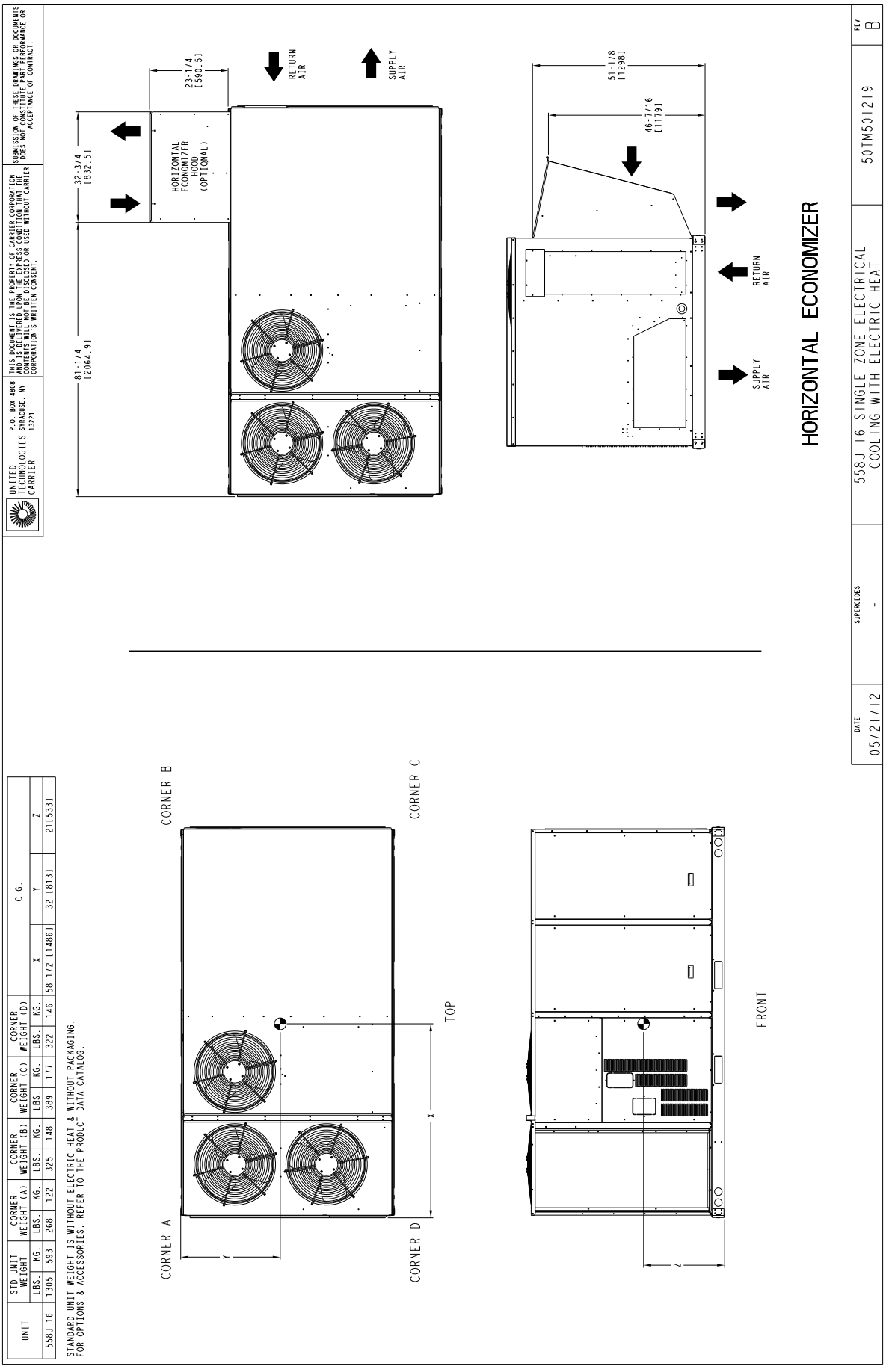
THRU-THE-BASE CHART
THESE HOLES REQUIRED FOR USE
CRBTMPWR005A00,006A00,007A00

ACCESSORY NO.		THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
005	W	1/2"	ACC.	7/8" [22.2]
	X	1/2"	24V	7/8" [22.2]
	Y	1 1/4"	POWER	1 1/2" [38.1]
006	W	1/2"	ACC.	7/8" [22.2]
	X	1/2"	24V	7/8" [22.2]
	Y	1 1/2"	POWER	2" [50.8]
007	W	1/2"	ACC.	7/8" [22.2]
	X	1/2"	24V	7/8" [22.2]
	Y	2"	POWER	2 1/2" [63.5]
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR X & Y ARE PROVIDED AS SPECIFIED ON "006".				



C14184B

Fig. 12 - Dimensions RAS180 (Sheet 1 of 2)



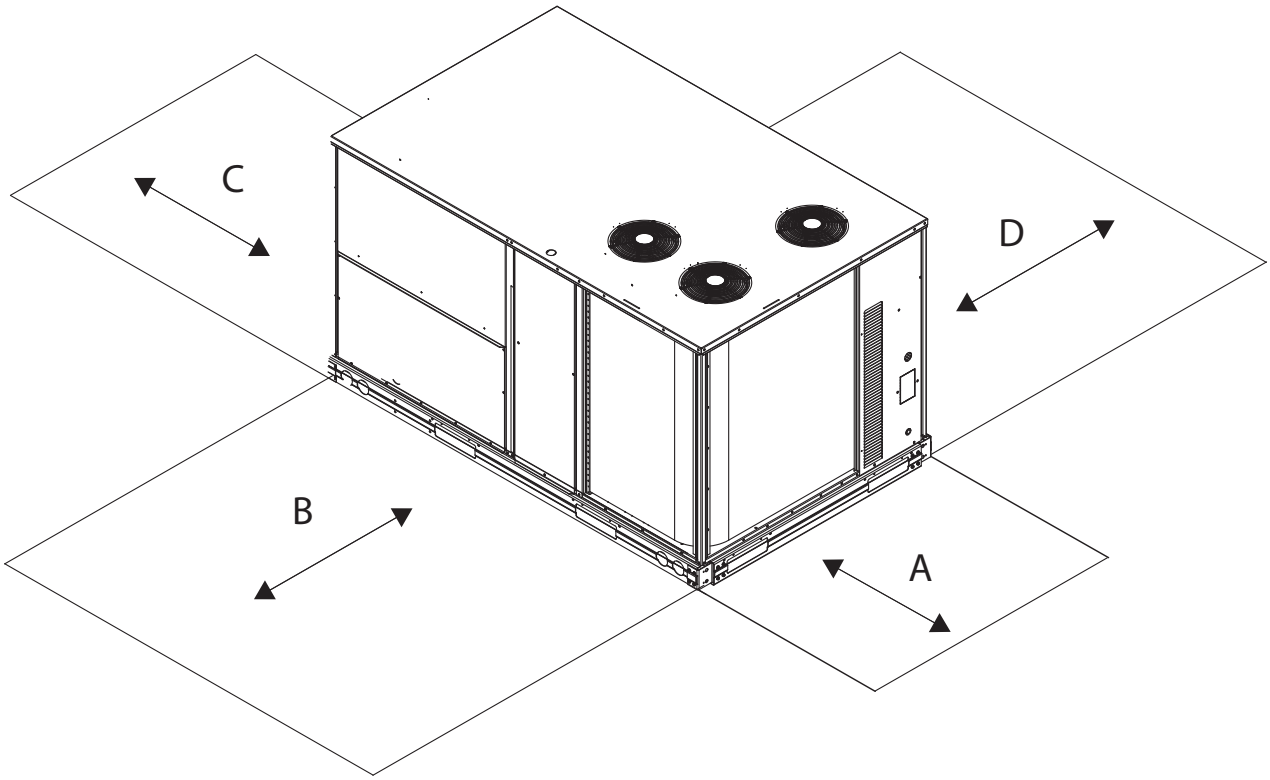
UNIT	STD UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
558J 16	1305	593	268	122	325	148	389	177	322	146	58 1/2 [1486]	32 [813]	21[5333]

STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT & WITHOUT PACKAGING.
FOR OPTIONS & ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.

C14187

Fig. 13 - Dimensions RAS180 (Sheet 2 of 2)

CURBS, WEIGHTS & DIMENSIONS (cont.)

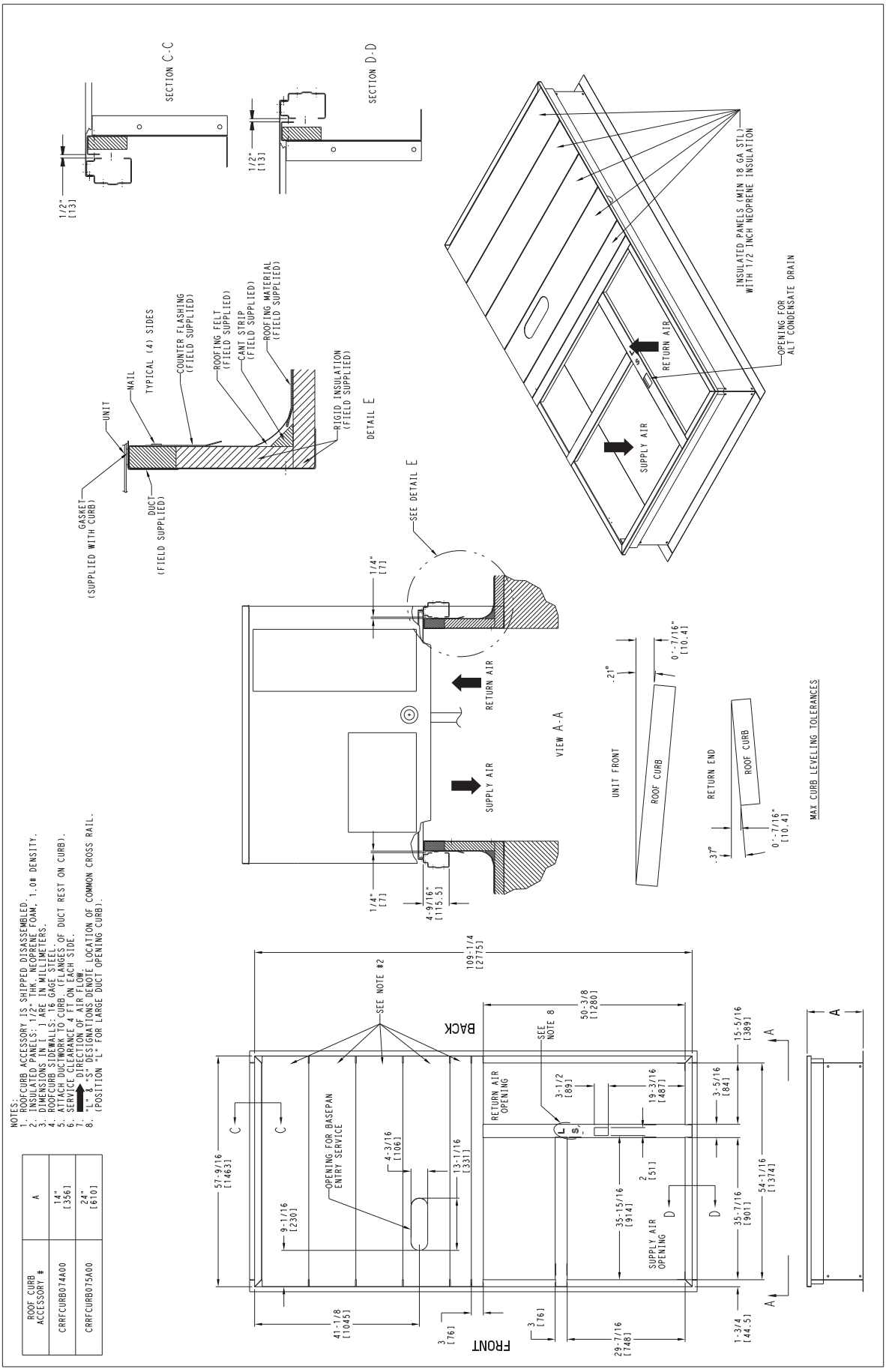


C10578B

Fig. 14 - Service Clearance

LOC	DIMENSION	CONDITION
A	48-in (1219 mm)	Unit disconnect is mounted on panel
	18-in (457 mm)	No disconnect, convenience outlet option
	18-in (457 mm)	Recommended service clearance
	12-in (305 mm)	Minimum clearance
B	42-in (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall)
	36-in (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-in (914 mm)	Side condensate drain is used
	18-in (457 mm)	Minimum clearance
D	48-in (1219 mm)	No flue discharge accessory installed, surface is combustible material
	42-in (1067 mm)	Surface behind servicer is grounded (e.g., metal, masonry wall, another unit)
	36-in (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

NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or vertical clearances.



NOTES:
1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
2. INSULATED PANELS: 1 1/2" THK. NEOPRENE FOAM, 1.0# DENSITY.
3. ALL DIMENSIONS ARE IN MILLIMETERS.
4. ROOFCURB 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).

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

C10772B

Fig. 15 - Roof Curb Details RAS180

OPTION / ACCESSORY WEIGHTS

Option / Accessory	OPTION / ACCESSORY WEIGHTS																	
	036		048		060		072		090/091		101/102		120/121		150		180	
	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
Hot Gas Re-Heat[1, 3]	-	-	-	-	-	-	55	25	80	36	80	36	80	36	85	39	90	41
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
EconoMi$er (IV, X or 2)	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[2]	6	3	13	6	13	6	15	7	12	5	23	10	23	10	23	10	190	86
Cu/Cu Cond. & Evaporator Coils[2]	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
Return Smoke Detector	5	2	5	2	5	2	5	2	5	2	5	2	5	2	5	2	5	2
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
Powered Convenience outlet	35	16	35	16	35	16	35	16	35	16	35	16	35	16	35	16	35	16
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.

- Not Available

1 For Hot Gas Re-Heat add MotorMaster Controller.

2 Where available.

3 Hot Gas Re-Heat is no longer available for RAS size 036-060 models.

APPLICATION DATA

Min operating ambient temp (cooling):

In mechanical cooling mode, your ICP rooftop can safely operate down to an outdoor ambient temperature of 40°F (4°C) and 25°F (-4°C), with an accessory winter start kit. 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 (cooling mode):

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 ICP representative for assistance.

Motor limits, Brake horsepower (BHP):

Due to ICP's internal unit design, air path, and specially designed motors, the full horsepower (maximum continuous BHP) band, as listed in the Physical Data tables, can be used with the utmost confidence. There is no need for extra safety factors, as ICP's 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 load, it doesn't need excess capacity. In fact, having excess capacity typically results in very poor part load performance and humidity control.

Using higher design temperatures than ASHRAE recommends for your location, adding "safety factors" to the calculated load, and rounding up to the next largest unit, are all signs of oversizing air conditioners. Oversizing can cause short-cycling, and short cycling leads to poor humidity control, reduced efficiency, higher utility bills, drastic indoor temperature swings, excessive noise, and increased wear and tear on the air conditioner.

Rather than oversizing an air conditioner, wise contractors and engineers "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.

Low ambient applications

When equipped with a ICP economizer, your rooftop unit can 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 ICP rooftop can operate at ambient temperatures down to -20°F (-29°C) using the recommended accessory Motormaster low ambient controller.

Winter start

ICP's 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 System with Variable Frequency Drive (VFD)

ICP's 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 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 ICP's 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 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.

RAS - 2-Speed Indoor Fan Motor System - Variable Frequency Drive (VFD) HP Rating

UNIT SIZE	VOLTAGE	STATIC OPTION	VFD HP RATING
090/091	208/230, 460, 575	STD	3
	208/230, 460	MED	3
	575	MED	5
	208/230, 460, 575	HIGH	7.5
101/102	208/230, 460, 575	STD	3
	208/230, 460, 575	MED	3
	208/230, 460, 575	HIGH	5
120/121	208/230, 460, 575	STD	3
	208/230, 460, 575	MED	3
	208/230, 460, 575	HIGH	7.5
150	208/230, 460	STD	3
	575	STD	5
	208/230, 460, 575	MED	5
	208/230, 460, 575	HIGH	7.5
180	208/230. 460	STD	3
	575	STD	5
	208/230, 460, 575	MED	5
	208/230, 460, 575	HIGH	7.5

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
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 558J*07.

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

Table 13 shows that, at the application's supply air CFM, mixed air and ambient temperatures, the 558J*07A supplies:
TC_{Load} = 73.7 MBH
SHC_{Load} = 54.4 MBH.

IV. Calculate the building Latent Heat Load.

$LC_{Load} = TC_{Load} - SHC_{Load}$
LC_{Load} = 69.0 MBH – 51.0 MBH = 18.0 MBH

V. Calculate RTU Latent Heat Capacity

LC = TC – SHC
LC = 73.7 MBH – 54.4 MBH = 19.3 MBH

VI. Compare RTU capacities to loads. [2,3]

Compare the rooftop's SHC and LC to the building's Sensible and Latent Heat Loads.

VII. Select factory options (FIOP)

Local code requires an economizer for any unit with TC larger 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 47 shows, at 2100 CFM & ESP= 0.8,
RPM = 1268 & BHP = 1.52

X. Determine electrical requirements

The MCA and MOCP tables show a 558J*07A (without convenience outlet) as:

MCA = 30.5 amps & MOCP = 45 amps
Min. Disconnect Size: FLA = 30 & LRA = 157.

Legend:

BHP	—	Brake 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 by ICP saves time by performing many of the steps above. Contact your ICP 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 Electrical Information. Use the decimal form in the equation eg. 80% =.8.

Table 10 – COOLING CAPACITIES 1-STAGE COOLING 3 TONS

RAS036 (RTPF)				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	29.0	29.0	32.9	26.8	26.8	30.5	24.5	24.5	28.0	22.0	22.0	25.3
			SHC	25.1	29.0	32.9	23.1	26.8	30.5	21.0	24.5	28.0	18.8	22.0	25.3
		62	TC	31.3	31.3	31.4	28.4	28.4	29.8	25.4	25.4	28.1	22.2	22.2	26.1
			SHC	22.8	27.1	31.4	21.2	25.5	29.8	19.5	23.8	28.1	17.6	21.9	26.1
		67	TC	35.3	35.3	35.3	32.6	32.6	32.6	29.7	29.7	29.7	26.3	26.3	26.3
			SHC	19.0	23.2	27.3	17.5	21.7	25.9	16.0	20.3	24.6	14.4	18.7	23.0
		72	TC	39.3	39.3	39.3	36.9	36.9	36.9	34.1	34.1	34.1	30.8	30.8	30.8
			SHC	15.1	19.1	23.0	13.9	17.9	21.8	12.4	16.5	20.5	10.8	14.9	19.0
		76	TC	-	42.1	42.1	-	40.0	40.0	-	37.5	37.5	-	-	-
			SHC	-	15.7	20.7	-	14.5	19.5	-	13.3	18.3	-	-	-
1050 Cfm	EAT (wb)	58	TC	31.1	31.1	35.2	28.8	28.8	32.7	26.4	26.4	30.1	23.8	23.8	27.2
			SHC	26.9	31.1	35.2	24.8	28.8	32.7	22.7	26.4	30.1	20.4	23.8	27.2
		62	TC	32.6	32.6	34.6	29.7	29.7	33.0	26.6	26.6	30.8	24.0	24.0	27.8
			SHC	24.8	29.7	34.6	23.1	28.1	33.0	21.2	26.0	30.8	19.0	23.4	27.8
		67	TC	36.6	36.6	36.6	33.9	33.9	33.9	30.8	30.8	30.8	27.4	27.4	27.4
			SHC	20.2	25.0	29.8	18.9	23.8	28.7	17.3	22.3	27.2	15.7	20.6	25.6
		72	TC	40.4	40.4	40.4	38.1	38.1	38.1	35.2	35.2	35.2	32.0	32.0	32.0
			SHC	15.7	20.2	24.8	14.4	19.1	23.8	13.0	17.8	22.5	11.5	16.3	21.1
		76	TC	-	43.4	43.4	-	41.1	41.1	-	38.6	38.6	-	-	-
			SHC	-	16.4	22.1	-	15.3	19.5	-	14.1	18.4	-	-	-
1200 Cfm	EAT (wb)	58	TC	32.8	32.8	37.2	30.5	30.5	34.6	28.0	28.0	31.9	25.3	25.3	28.9
			SHC	28.4	32.8	37.2	26.3	30.5	34.6	24.1	28.0	31.9	21.7	25.3	28.9
		62	TC	33.7	33.7	37.5	30.7	30.7	35.5	28.3	28.3	32.6	25.4	25.4	30.2
			SHC	26.5	32.0	37.5	24.7	30.1	35.5	22.5	27.6	32.6	20.5	25.4	30.2
		67	TC	37.6	37.6	37.6	34.9	34.9	34.9	31.7	31.7	31.7	28.2	28.2	28.2
			SHC	21.3	26.7	32.0	20.1	25.6	31.1	18.6	24.2	29.7	16.9	22.5	28.1
		72	TC	41.2	41.2	41.2	39.0	39.0	39.0	36.1	36.1	36.1	32.7	32.7	32.7
			SHC	16.1	21.3	26.4	15.0	20.2	25.5	13.6	19.0	24.3	12.0	17.5	22.9
		76	TC	-	44.2	44.2	-	41.8	41.8	-	-	-	-	-	-
			SHC	-	17.0	21.8	-	15.9	20.9	-	-	-	-	-	-
1350 Cfm	EAT (wb)	58	TC	34.3	34.3	38.9	31.9	31.9	36.2	29.4	29.4	33.4	26.6	26.6	30.4
			SHC	29.7	34.3	38.9	27.6	31.9	36.2	25.3	29.4	33.4	22.8	26.6	30.4
		62	TC	34.7	34.7	39.6	32.3	32.3	37.0	29.4	29.4	34.8	26.7	26.7	31.7
			SHC	27.9	33.7	39.6	25.9	31.4	37.0	24.0	29.4	34.8	21.6	26.7	31.7
		67	TC	38.5	38.5	38.5	35.7	35.7	35.7	32.5	32.5	32.5	28.9	28.9	30.4
			SHC	22.4	28.2	34.0	21.2	27.3	33.3	19.8	25.9	32.1	18.0	24.2	30.4
		72	TC	42.0	42.0	42.0	39.6	39.6	39.6	36.7	36.7	36.7	-	-	-
			SHC	16.6	22.2	27.8	15.4	21.2	26.9	14.1	20.0	26.0	-	-	-
		76	TC	-	44.9	44.9	-	42.5	42.5	-	-	-	-	-	-
			SHC	-	17.6	23.0	-	16.5	22.0	-	-	-	-	-	-
1500 Cfm	EAT (wb)	58	TC	35.5	35.5	40.2	33.2	33.2	37.7	30.5	30.5	34.7	27.7	27.7	31.6
			SHC	30.8	35.5	40.2	28.7	33.2	37.7	26.3	30.5	34.7	23.8	27.7	31.6
		62	TC	35.8	35.8	40.9	33.7	33.7	38.3	30.6	30.6	36.2	27.8	27.8	33.0
			SHC	28.9	34.9	40.9	26.9	32.6	38.3	25.0	30.6	36.2	22.6	27.8	33.0
		67	TC	39.1	39.1	39.1	36.3	36.3	36.3	33.1	33.1	34.4	29.4	29.4	32.7
			SHC	23.3	29.6	35.9	22.2	28.8	35.4	20.9	27.6	34.4	19.1	25.9	32.7
		72	TC	42.6	42.6	42.6	40.1	40.1	40.1	37.4	37.4	37.4	-	-	-
			SHC	17.0	23.1	29.2	15.8	22.1	28.3	14.5	21.0	27.5	-	-	-
		76	TC	-	45.4	45.4	-	43.0	43.0	-	-	-	-	-	-
			SHC	-	18.0	24.0	-	16.9	23.0	-	-	-	-	-	-

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 11 – COOLING CAPACITIES 1-STAGE COOLING 4 TONS

RAS048 (RTPF)				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	39.1	39.1	42.6	36.6	36.6	39.6	33.1	33.1	37.8	30.1	30.1	34.4
			SHC	32.9	37.7	42.6	30.5	35.0	39.6	28.5	33.1	37.8	25.8	30.1	34.4
		62	TC	42.3	42.3	42.3	39.1	39.1	39.1	35.3	35.3	36.8	31.2	31.2	34.6
			SHC	30.0	35.2	40.5	28.3	33.7	39.0	26.2	31.5	36.8	24.0	29.3	34.6
		67	TC	47.0	47.0	47.0	44.7	44.7	44.7	40.8	40.8	40.8	36.7	36.7	36.7
			SHC	25.0	29.9	34.9	23.7	28.9	34.0	21.7	26.9	32.1	19.7	25.0	30.2
		72	TC	50.4	50.4	50.4	48.9	48.9	48.9	46.1	46.1	46.1	42.5	42.5	42.5
			SHC	19.7	24.3	28.8	18.7	23.5	28.3	17.2	22.0	26.8	15.4	20.2	25.1
		76	TC	-	52.3	52.3	-	50.9	50.9	-	49.3	49.3	-	46.3	46.3
			SHC	-	20.0	25.1	-	18.8	25.4	-	17.8	24.4	-	16.2	22.8
1400 cfm	EAT (wb)	58	TC	42.0	42.0	45.1	38.5	38.5	43.8	35.6	35.6	40.5	32.5	32.5	37.0
			SHC	35.0	40.1	45.1	33.3	38.5	43.8	30.7	35.6	40.5	27.9	32.5	37.0
		62	TC	44.4	44.4	44.7	40.7	40.7	42.8	36.9	36.9	40.7	32.9	32.9	37.8
			SHC	32.6	38.6	44.7	30.7	36.8	42.8	28.5	34.6	40.7	26.1	32.0	37.8
		67	TC	48.3	48.3	48.3	45.8	45.8	45.8	42.4	42.4	42.4	38.3	38.3	38.3
			SHC	26.2	31.8	37.3	25.1	31.0	36.9	23.4	29.3	35.3	21.5	27.6	33.6
		72	TC	51.2	51.2	51.2	49.8	49.8	49.8	47.4	47.4	47.4	43.7	43.7	43.7
			SHC	20.0	25.2	30.4	19.1	24.6	30.2	17.8	23.5	29.3	16.0	21.8	27.7
		76	TC	-	52.8	52.8	-	51.4	51.4	-	50.1	50.1	-	47.0	47.0
			SHC	-	20.3	25.7	-	19.2	26.9	-	18.5	24.0	-	17.1	22.7
1600 Cfm	EAT (wb)	58	TC	43.6	43.6	49.3	40.7	40.7	46.2	37.7	37.7	42.9	34.5	34.5	39.3
			SHC	37.8	43.6	49.3	35.2	40.7	46.2	32.5	37.7	42.9	29.6	34.5	39.3
		62	TC	45.6	45.6	47.6	42.1	42.1	46.1	38.3	38.3	43.7	34.8	34.8	39.8
			SHC	34.4	41.0	47.6	32.7	39.4	46.1	30.5	37.1	43.7	27.5	33.6	39.8
		67	TC	49.2	49.2	49.2	47.0	47.0	47.0	43.6	43.6	43.6	39.3	39.3	39.3
			SHC	27.2	33.3	39.4	26.4	32.9	39.5	24.8	31.6	38.3	22.8	29.6	36.4
		72	TC	51.8	51.8	51.8	50.4	50.4	50.4	48.2	48.2	48.2	44.6	44.6	44.6
			SHC	20.3	26.0	31.7	19.5	25.5	31.6	18.3	24.7	31.2	16.6	23.2	29.8
		76	TC	-	53.2	53.2	-	51.6	51.6	-	50.5	50.5	-	47.8	47.8
			SHC	-	20.6	26.4	-	19.7	25.8	-	19.1	25.4	-	17.8	24.3
1800 Cfm	EAT (wb)	58	TC	45.3	45.3	51.2	42.6	42.6	48.3	39.5	39.5	44.9	36.2	36.2	41.2
			SHC	39.3	45.3	51.2	36.9	42.6	48.3	34.1	39.5	44.9	31.1	36.2	41.2
		62	TC	46.5	46.5	50.1	43.5	43.5	49.0	40.0	40.0	45.4	36.7	36.7	41.7
			SHC	36.0	43.0	50.1	34.5	41.7	49.0	31.7	38.6	45.4	29.0	35.3	41.7
		67	TC	50.0	50.0	50.0	48.1	48.1	48.1	44.5	44.5	44.5	40.4	40.4	40.4
			SHC	28.1	34.7	41.3	27.8	35.1	42.3	26.1	33.6	41.0	24.3	31.8	39.4
		72	TC	52.2	52.2	52.2	50.9	50.9	50.9	48.7	48.7	48.7	45.4	45.4	45.4
			SHC	20.6	26.7	32.8	19.8	26.4	33.0	18.7	25.8	32.8	17.2	24.4	31.6
		76	TC	-	53.5	53.5	-	51.9	51.9	-	51.0	51.0	-	48.2	48.2
			SHC	-	21.1	27.7	-	20.2	26.9	-	19.6	26.5	-	18.4	25.5
2000 Cfm	EAT (wb)	58	TC	46.6	46.6	52.7	44.2	44.2	50.1	41.1	41.1	46.6	37.6	37.6	42.8
			SHC	40.5	46.6	52.7	38.3	44.2	50.1	35.5	41.1	46.6	32.4	37.6	42.8
		62	TC	47.4	47.4	51.9	44.9	44.9	50.8	41.6	41.6	47.0	37.7	37.7	44.6
			SHC	37.1	44.5	51.9	35.9	43.4	50.8	32.9	39.9	47.0	30.7	37.7	44.6
		67	TC	50.4	50.4	50.4	48.6	48.6	48.6	45.2	45.2	45.2	41.3	41.3	42.1
			SHC	28.8	35.8	42.8	28.5	36.2	43.8	27.3	35.3	43.3	25.6	33.8	42.1
		72	TC	52.5	52.5	52.5	51.0	51.0	51.0	49.4	49.4	49.4	46.0	46.0	46.0
			SHC	20.8	27.4	33.9	20.0	26.9	33.8	19.1	26.7	34.2	17.6	25.5	33.3
		76	TC	-	53.7	53.7	-	52.1	52.1	-	51.1	51.1	-	48.5	48.5
			SHC	-	21.6	28.8	-	20.6	27.8	-	20.0	27.4	-	18.9	26.6

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 12 – COOLING CAPACITIES 1-STAGE COOLING 5 TONS

RAS060 (RTPF)				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	52.4	52.4	59.3	48.8	48.8	55.4	45.1	45.1	51.3	41.2	41.2	46.9
			SHC	45.4	52.4	59.3	42.3	48.8	55.4	38.9	45.1	51.3	35.4	41.2	46.9
		62	TC	56.1	56.1	56.5	51.5	51.5	54.1	46.5	46.5	51.5	41.5	41.5	48.4
			SHC	41.2	48.8	56.5	38.8	46.5	54.1	36.2	43.9	51.5	33.4	40.9	48.4
		67	TC	62.7	62.7	62.7	58.7	58.7	58.7	53.6	53.6	53.6	48.2	48.2	48.2
			SHC	34.2	41.7	49.1	32.2	39.8	47.4	29.8	37.4	45.0	27.3	34.9	42.6
		72	TC	69.6	69.6	69.6	65.8	65.8	65.8	61.0	61.0	61.0	55.7	55.7	55.7
			SHC	27.3	34.4	41.5	25.3	32.6	39.8	23.1	30.5	37.8	20.8	28.2	35.6
		76	TC	-	74.9	74.9	-	71.2	71.2	-	66.9	66.9	-	62.0	62.0
			SHC	-	28.0	36.3	-	26.2	34.5	-	24.6	32.8	-	22.5	30.8
1750 Cfm	EAT (wb)	58	TC	56.1	56.1	63.5	52.6	52.6	59.6	48.4	48.4	55.0	44.2	44.2	50.3
			SHC	48.7	56.1	63.5	45.6	52.6	59.6	41.8	48.4	55.0	38.1	44.2	50.3
		62	TC	58.5	58.5	62.4	53.8	53.8	59.9	48.7	48.7	56.6	44.5	44.5	51.6
			SHC	44.9	53.7	62.4	42.4	51.1	59.9	39.4	48.0	56.6	35.7	43.7	51.6
		67	TC	64.6	64.6	64.6	60.7	60.7	60.7	55.6	55.6	55.6	49.9	49.9	49.9
			SHC	36.4	44.9	53.5	34.6	43.4	52.2	32.2	41.0	49.8	29.6	38.4	47.2
		72	TC	71.6	71.6	71.6	67.7	67.7	67.7	63.2	63.2	63.2	57.5	57.5	57.5
			SHC	28.2	36.6	44.9	26.3	34.8	43.3	24.3	32.8	41.4	21.8	30.5	39.1
		76	TC	-	76.8	76.8	-	72.9	72.9	-	68.5	68.5	-	63.7	63.7
			SHC	-	29.4	39.1	-	27.7	35.0	-	25.9	33.7	-	23.9	31.9
2000 Cfm	EAT (wb)	58	TC	58.9	58.9	66.7	55.5	55.5	62.8	51.2	51.2	58.1	46.8	46.8	53.2
			SHC	51.2	58.9	66.7	48.1	55.5	62.8	44.3	51.2	58.1	40.4	46.8	53.2
		62	TC	60.0	60.0	67.6	55.8	55.8	64.5	51.5	51.5	59.5	46.8	46.8	55.4
			SHC	47.9	57.8	67.6	45.3	54.9	64.5	41.6	50.6	59.5	38.3	46.8	55.4
		67	TC	66.5	66.5	66.5	62.3	62.3	62.3	57.3	57.3	57.3	51.2	51.2	51.7
			SHC	38.7	48.5	58.4	36.8	46.7	56.6	34.4	44.4	54.3	31.7	41.7	51.7
		72	TC	73.2	73.2	73.2	69.1	69.1	69.1	64.6	64.6	64.6	59.0	59.0	59.0
			SHC	29.1	38.6	48.1	27.3	36.8	46.4	25.2	34.9	44.6	22.9	32.6	42.4
		76	TC	-	78.4	78.4	-	74.3	74.3	-	69.8	69.8	-	-	-
			SHC	-	30.7	39.4	-	28.9	37.9	-	27.0	36.2	-	-	-
2250 Cfm	EAT (wb)	58	TC	61.5	61.5	69.5	57.9	57.9	65.5	53.6	53.6	60.8	49.0	49.0	55.7
			SHC	53.4	61.5	69.5	50.2	57.9	65.5	46.4	53.6	60.8	42.3	49.0	55.7
		62	TC	61.9	61.9	71.3	58.1	58.1	67.0	53.7	53.7	63.3	49.0	49.0	58.0
			SHC	50.4	60.8	71.3	47.1	57.1	67.0	44.1	53.7	63.3	40.1	49.0	58.0
		67	TC	67.9	67.9	67.9	63.5	63.5	63.5	58.6	58.6	58.7	52.4	52.4	56.0
			SHC	40.8	51.7	62.6	38.7	49.7	60.7	36.6	47.6	58.7	33.8	44.9	56.0
		72	TC	74.4	74.4	74.4	70.3	70.3	70.3	65.7	65.7	65.7	60.2	60.2	60.2
			SHC	29.9	40.5	51.1	28.1	38.8	49.5	26.1	36.9	47.7	23.8	34.8	45.7
		76	TC	-	79.6	79.6	-	75.5	75.5	-	70.9	70.9	-	-	-
			SHC	-	31.7	41.7	-	30.0	40.2	-	28.1	38.5	-	-	-
2500 Cfm	EAT (wb)	58	TC	63.6	63.6	71.9	60.0	60.0	67.9	55.7	55.7	63.1	50.9	50.9	57.8
			SHC	55.3	63.6	71.9	52.1	60.0	67.9	48.2	55.7	63.1	44.0	50.9	57.8
		62	TC	64.0	64.0	74.0	60.6	60.6	69.5	55.7	55.7	65.7	51.0	51.0	60.2
			SHC	52.2	63.1	74.0	49.0	59.2	69.5	45.8	55.7	65.7	41.7	51.0	60.2
		67	TC	68.9	68.9	68.9	64.6	64.6	64.8	59.7	59.7	62.8	53.4	53.4	60.1
			SHC	42.7	54.7	66.7	40.7	52.7	64.8	38.5	50.7	62.8	35.7	47.9	60.1
		72	TC	75.4	75.4	75.4	71.2	71.2	71.2	66.6	66.6	66.6	61.1	61.1	61.1
			SHC	30.7	42.3	53.9	28.9	40.7	52.4	26.9	38.8	50.6	24.6	36.6	48.7
		76	TC	-	80.6	80.6	-	76.4	76.4	-	-	-	-	-	-
			SHC	-	32.7	43.8	-	31.0	42.3	-	-	-	-	-	-

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 13 – COOLING CAPACITIES 1-STAGE COOLING 6 TONS

RAS072 (RTPF)				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 RE-HEAT SYSTEM 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 RE-HEAT SYSTEM 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 15 – COOLING CAPACITIES 1-STAGE COOLING 7.5 TONS

RAS091 (RTPF)				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 16 – COOLING CAPACITIES 2-STAGE COOLING 7.5 TONS

RAS090 (RTPF)				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 in Table 4. 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 17 – COOLING CAPACITIES 2-STAGE COOLING 7.5 TONS

RAS090/091 Cooling Capacities, UNIT WITH HOT GAS RE-HEAT SYSTEM 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

RAS090/091 Cooling Capacities, UNIT WITH HOT GAS RE-HEAT SYSTEM 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 18 – COOLING CAPACITIES 1-STAGE COOLING 8.5 TONS

RAS101 (RTPF)				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 19 – COOLING CAPACITIES 2-STAGE COOLING 8.5 TONS

RAS102 (RTPF)				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	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 Ratings in Table 4. 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 20 – COOLING CAPACITIES 2-STAGE COOLING 8.5 TONS

RAS101/102 Cooling Capacities, UNIT WITH HOT GAS RE-HEAT SYSTEM 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

RAS101/102 Cooling Capacities, UNIT WITH HOT GAS RE-HEAT SYSTEM 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
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 21 – COOLING CAPACITIES 1-STAGE COOLING 10 TONS

RAS121 (RTPF)				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 22 – COOLING CAPACITIES 2-STAGE COOLING 10 TONS

RAS120 (RTPF)				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 in Table 4. 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 23 – COOLING CAPACITIES 2-STAGE COOLING 10 TONS

RAS120/121 Cooling Capacities, UNIT WITH HOT GAS RE-HEAT SYSTEM 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

RAS120/121 Cooling Capacities, UNIT WITH HOT GAS RE-HEAT SYSTEM 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
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 24 – COOLING CAPACITIES 2-STAGE COOLING 12.5 TONS

RAS150 (RTPF)				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 Ratings in Table 4. 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 25 – COOLING CAPACITIES 2-STAGE COOLING 12.5 TONS

RAS150 Cooling Capacities, UNIT WITH HOT GAS RE-HEAT SYSTEM 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 RE-HEAT SYSTEM 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
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 26 – COOLING CAPACITIES 2-STAGE COOLING 15 TONS

		RAS180 (RTPF)		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
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 in Table 4. 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 27 – COOLING CAPACITIES 2-STAGE COOLING 15 TONS

RAS180 COOLING CAPACITIES, UNIT WITH HOT GAS RE-HEAT SYSTEM IN 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, UNIT WITH HOT GAS RE-HEAT SYSTEM 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								
		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 28 – 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 Module	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 Re-Heat

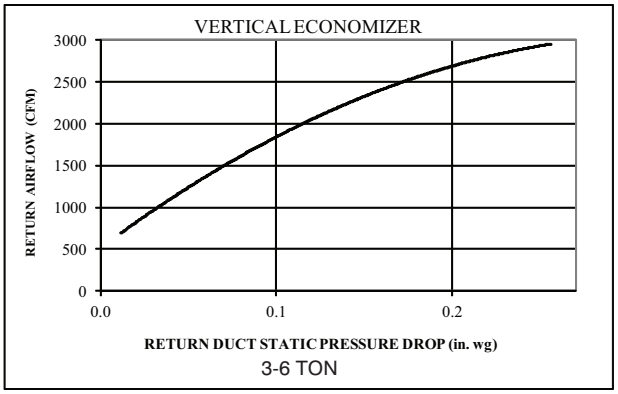
3-6 TONS									
CFM	1000	1250	1500	1750	2000	2250	2500	2750	3000
6 Tons	-	-	-	0.112	0.125	0.161	0.19	0.22	0.25

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

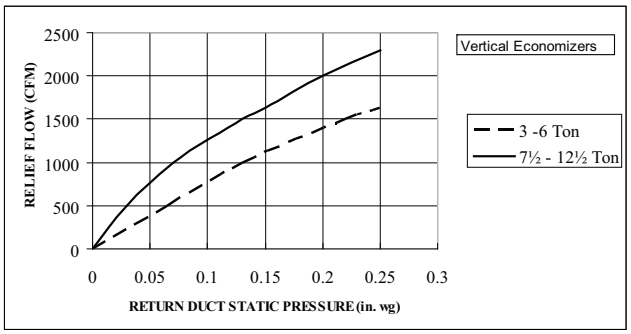
ECONOMIZER, BAROMETRIC RELIEF AND PE PERFORMANCE

Vertical Application



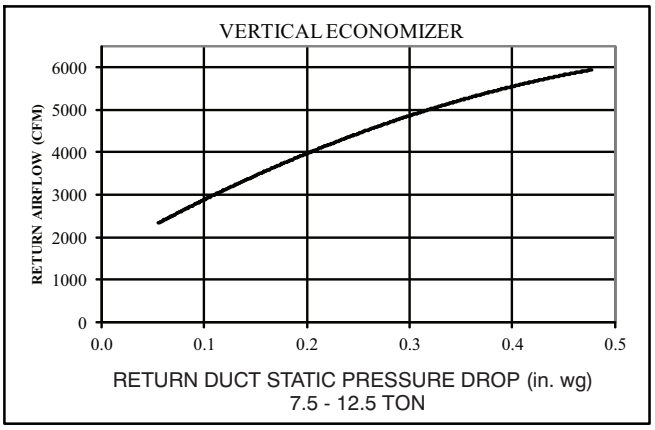
C11238

Fig. 16 - Return Air Pressure Drop



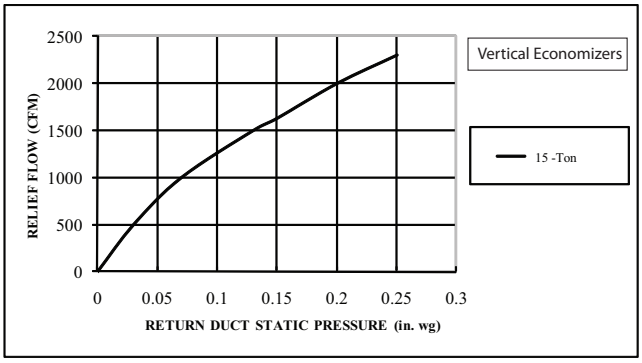
C08073

Fig. 19 - Barometric Relief Flow Capacity



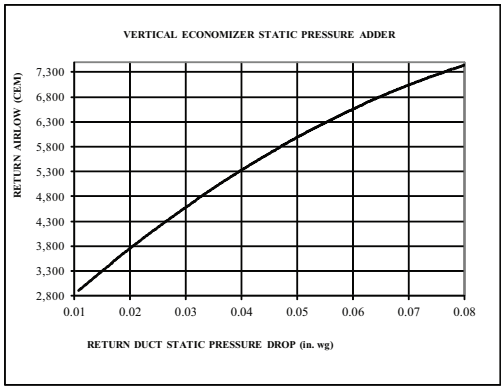
C11240

Fig. 17 - Return Air Pressure Drop



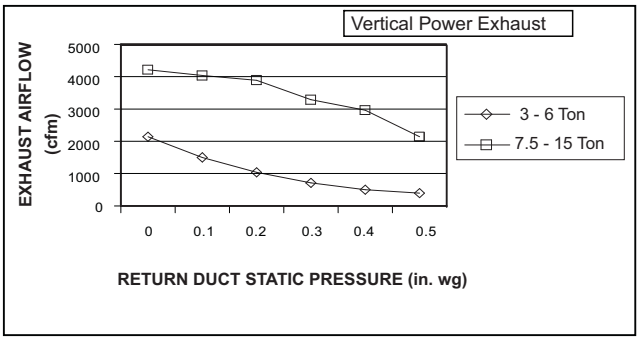
C101122

Fig. 20 - Barometric Relief Flow-Vertical 15 Ton



C11257

Fig. 18 - Return Air Pressure Drop-Vertical 15 Tons

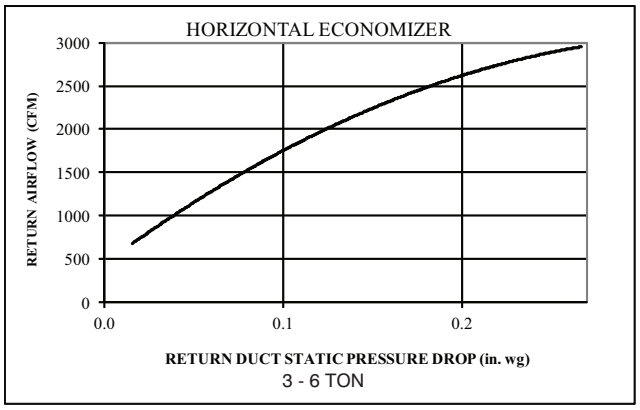


C11248

Fig. 21 - Vertical Power Exhaust Performance

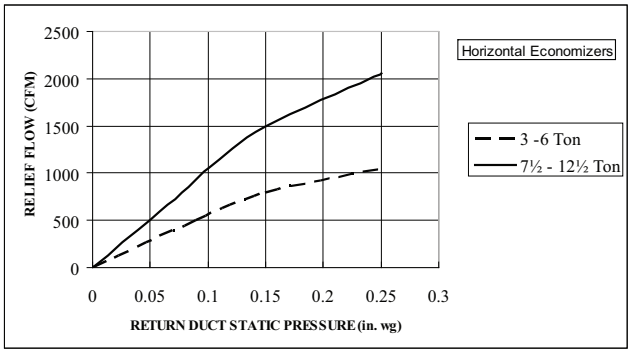
ECONOMIZER, BAROMETRIC RELIEF AND PE PERFORMANCE (cont.)

Horizontal Application



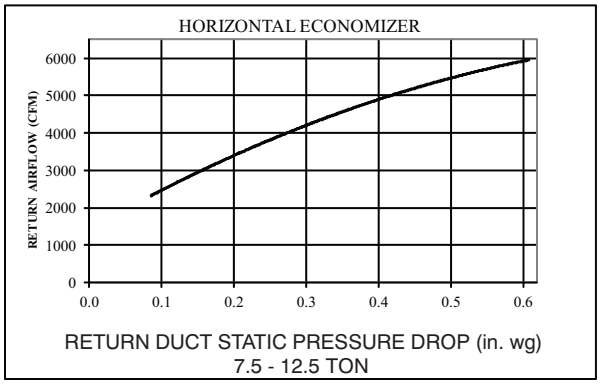
C11239

Fig. 22 - Return Air Pressure Drop



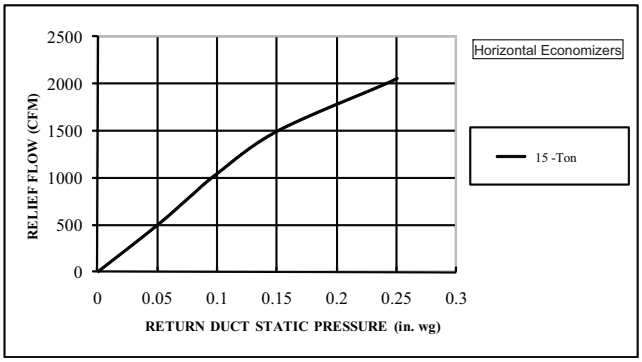
C08070

Fig. 25 - Barometric Relief Flow Capacity



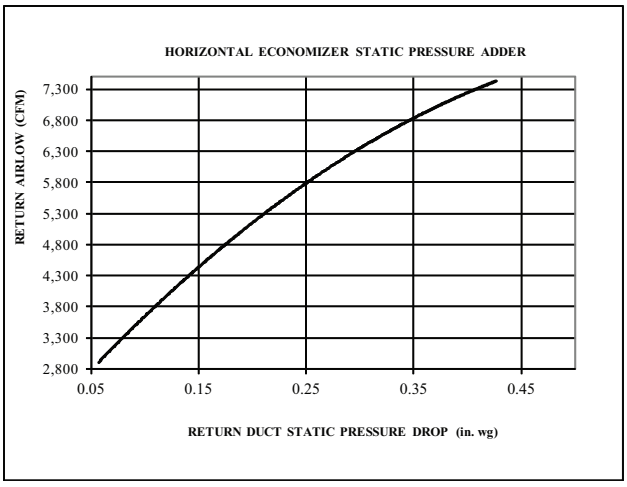
C11241

Fig. 23 - Return Air Pressure Drop



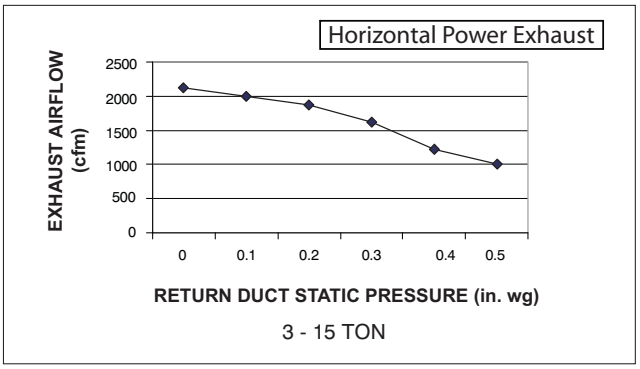
C101120

Fig. 26 - Barometric Relief Flow-Horizontal 15 Ton



C11258

Fig. 24 - Return Air Pressure Drop-Horizontal 15 Ton



C08012

Fig. 27 - Horizontal Power Exhaust Performance

GENERAL FAN PERFORMANCE NOTES

4. Interpolation is permissible. Do not extrapolate.
5. 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.
6. 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.
7. The Fan Performance tables offer motor/drive recommendations. In cases when two motor/drive combinations would work, ICP recommended the lower horsepower option.
8. For information on the electrical properties of ICP motors, please see the Electrical information section of this book.
9. For more information on the performance limits of ICP motors, see the application data section of this book.
10. 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 ICP 558J*04-16 units are exempt from these requirements.

FAN PERFORMANCE (DIRECT DRIVE)

Table 29 – RAS036 Vertical Unit - Direct Drive

Speed (Torque) tap	CFM	ESP	BHP
1	900	0.83	0.36
	975	0.70	0.35
	1050	0.58	0.33
	1125	0.47	0.31
	1200	0.37	0.30
	1275	0.27	0.28
	1350	0.17	0.27
	1425	0.08	0.26
	1500	-	-
2	900	1.09	0.46
	975	1.00	0.46
	1050	0.89	0.46
	1125	0.77	0.45
	1200	0.64	0.43
	1275	0.52	0.41
	1350	0.39	0.39
	1425	0.28	0.37
	1500	0.18	0.35
3	900	1.15	0.49
	975	1.10	0.52
	1050	1.05	0.54
	1125	1.01	0.56
	1200	0.95	0.59
	1275	0.90	0.61
	1350	0.84	0.63
	1425	0.78	0.65
	1500	0.71	0.66
4	900	1.15	0.50
	975	1.10	0.52
	1050	1.05	0.54
	1125	1.00	0.56
	1200	0.96	0.58
	1275	0.91	0.61
	1350	0.86	0.63
	1425	0.82	0.66
	1500	0.77	0.68
5	900	1.16	0.50
	975	1.11	0.52
	1050	1.06	0.54
	1125	1.01	0.57
	1200	0.97	0.59
	1275	0.92	0.62
	1350	0.87	0.64
	1425	0.82	0.67
	1500	0.77	0.69

Table 30 – RAS036 Horizontal Unit - Direct Drive

Speed (Torque) tap	CFM	ESP	BHP
1	900	0.90	0.36
	975	0.78	0.35
	1050	0.67	0.33
	1125	0.57	0.31
	1200	0.48	0.30
	1275	0.39	0.28
	1350	0.31	0.27
	1425	0.22	0.26
	1500	0.13	0.24
2	900	1.17	0.46
	975	1.08	0.46
	1050	0.98	0.46
	1125	0.87	0.45
	1200	0.75	0.43
	1275	0.64	0.41
	1350	0.53	0.39
	1425	0.42	0.37
	1500	0.34	0.35
3	900	1.22	0.49
	975	1.18	0.52
	1050	1.14	0.54
	1125	1.11	0.56
	1200	1.06	0.59
	1275	1.02	0.61
	1350	0.98	0.63
	1425	0.93	0.65
	1500	0.87	0.66
4	900	1.22	0.50
	975	1.18	0.52
	1050	1.14	0.54
	1125	1.10	0.56
	1200	1.07	0.58
	1275	1.03	0.61
	1350	1.00	0.63
	1425	0.96	0.66
	1500	0.92	0.68
5	900	1.23	0.50
	975	1.19	0.52
	1050	1.15	0.54
	1125	1.11	0.57
	1200	1.08	0.59
	1275	1.04	0.62
	1350	1.00	0.64
	1425	0.97	0.67
	1500	0.93	0.69

FAN PERFORMANCE (DIRECT DRIVE) (cont.)

Table 31 – RAS048 Vertical Unit - Direct Drive

Speed (Torque) tap	CFM	ESP	BHP
1	1200	0.36	0.30
	1300	0.23	0.28
	1400	0.10	0.26
	1500	-	-
	1600	-	-
	1700	-	-
	1800	-	-
	1900	-	-
	2000	-	-
2	1200	0.64	0.43
	1300	0.47	0.40
	1400	0.31	0.37
	1500	0.18	0.35
	1600	0.09	0.34
	1700	0.07	0.36
	1800	0.14	0.41
	1900	0.34	0.52
	2000	0.68	0.69
3	1200	0.95	0.59
	1300	0.88	0.62
	1400	0.80	0.64
	1500	0.71	0.66
	1600	0.61	0.67
	1700	0.49	0.67
	1800	0.34	0.64
	1900	0.17	0.59
	2000	-	-
4	1200	0.95	0.58
	1300	0.89	0.62
	1400	0.83	0.65
	1500	0.76	0.68
	1600	0.69	0.72
	1700	0.61	0.74
	1800	-	-
	1900	-	-
	2000	-	-
5	1200	0.96	0.59
	1300	0.90	0.62
	1400	0.83	0.66
	1500	0.77	0.69
	1600	0.71	0.73
	1700	-	-
	1800	-	-
	1900	-	-
	2000	-	-

Table 32 – RAS048 Horizontal Unit - Direct Drive

Speed (Torque) tap	CFM	ESP	BHP
1	1200	0.47	0.30
	1300	0.36	0.28
	1400	0.25	0.26
	1500	0.12	0.24
	1600	-	-
	1700	-	-
	1800	-	-
	1900	-	-
	2000	-	-
2	1200	0.75	0.43
	1300	0.60	0.40
	1400	0.45	0.37
	1500	0.34	0.35
	1600	0.27	0.34
	1700	0.26	0.36
	1800	0.36	0.41
	1900	0.57	0.52
	2000	0.94	0.69
3	1200	1.06	0.59
	1300	1.00	0.62
	1400	0.94	0.64
	1500	0.87	0.66
	1600	0.78	0.67
	1700	0.68	0.67
	1800	0.56	0.64
	1900	0.41	0.59
	2000	0.22	0.52
4	1200	1.06	0.58
	1300	1.01	0.62
	1400	0.97	0.65
	1500	0.92	0.68
	1600	0.87	0.72
	1700	0.80	0.74
	1800	-	-
	1900	-	-
	2000	-	-
5	1200	1.07	0.59
	1300	1.02	0.62
	1400	0.98	0.66
	1500	0.93	0.69
	1600	0.88	0.73
	1700	-	-
	1800	-	-
	1900	-	-
	2000	-	-

FAN PERFORMANCE (DIRECT DRIVE) (cont.)

Table 33 – RAS060 Vertical Unit - Direct Drive

Speed (Torque) tap	CFM	ESP	BHP
1	1500	0.72	0.74
	1625	0.53	0.71
	1750	0.34	0.68
	1875	0.20	0.66
	2000	0.14	0.69
	2125	0.18	0.77
	2250	0.39	0.94
	2375	-	-
	2500	-	-
2	1500	0.87	0.82
	1625	0.68	0.80
	1750	0.49	0.77
	1875	0.29	0.74
	2000	0.10	0.70
	2125	-	-
	2250	-	-
	2375	-	-
	2500	-	-
3	1500	0.89	0.84
	1625	0.72	0.83
	1750	0.54	0.81
	1875	0.33	0.77
	2000	0.12	0.72
	2125	-	-
	2250	-	-
	2375	-	-
	2500	-	-
4	1500	1.00	0.92
	1625	0.88	0.95
	1750	0.75	0.98
	1875	0.60	0.99
	2000	0.42	0.97
	2125	0.19	0.92
	2250	-	-
	2375	-	-
	2500	-	-
5	1500	1.03	0.94
	1625	0.93	0.98
	1750	-	-
	1875	-	-
	2000	-	-
	2125	-	-
	2250	-	-
	2375	-	-
	2500	-	-

Table 34 – RAS060 Horizontal Unit - Direct Drive

Speed (Torque) tap	CFM	ESP	BHP
1	1500	0.88	0.74
	1625	0.71	0.71
	1750	0.55	0.68
	1875	0.43	0.66
	2000	0.39	0.69
	2125	0.47	0.77
	2250	0.70	0.94
	2375	-	-
	2500	-	-
2	1500	1.02	0.82
	1625	0.86	0.80
	1750	0.69	0.77
	1875	0.52	0.74
	2000	0.36	0.70
	2125	0.23	0.67
	2250	0.15	0.66
	2375	0.16	0.68
	2500	0.28	0.75
3	1500	1.05	0.84
	1625	0.90	0.83
	1750	0.74	0.81
	1875	0.56	0.77
	2000	0.37	0.72
	2125	0.18	0.67
	2250	-	-
	2375	-	-
	2500	-	-
4	1500	1.16	0.92
	1625	1.06	0.95
	1750	0.96	0.98
	1875	0.83	0.99
	2000	0.67	0.97
	2125	0.48	0.92
	2250	0.23	0.83
	2375	-	-
	2500	-	-
5	1500	1.19	0.94
	1625	1.11	0.98
	1750	-	-
	1875	-	-
	2000	-	-
	2125	-	-
	2250	-	-
	2375	-	-
	2500	-	-

FAN PERFORMANCE

Table 35 – RAS036 — 1 PHASE — 3 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	566	0.14	690	0.23	791	0.32	879	0.42	957	0.52	1029	0.63	1095	0.75	1157	0.86	**1216**	**0.99**	**1272**	**1.11**
975	590	0.17	711	0.26	811	0.36	897	0.46	975	0.57	1046	0.68	1112	0.80	1174	0.92	**1232**	**1.05**	**1287**	**1.18**
1050	615	0.19	733	0.29	831	0.39	916	0.50	993	0.62	1064	0.73	1129	0.86	**1190**	**0.98**	**1248**	**1.11**	–	–
1125	640	0.22	755	0.33	851	0.43	936	0.55	1012	0.67	1082	0.79	1147	0.92	**1208**	**1.05**	**1265**	**1.18**	–	–
1200	666	0.25	778	0.36	873	0.48	956	0.60	1031	0.72	1100	0.85	1165	0.98	**1225**	**1.12**	–	–	–	–
1275	692	0.29	802	0.41	894	0.53	976	0.65	1051	0.78	1119	0.91	**1183**	**1.05**	**1243**	**1.19**	–	–	–	–
1350	719	0.33	825	0.45	916	0.58	997	0.71	1071	0.84	1139	0.98	**1202**	**1.12**	–	–	–	–	–	–
1425	746	0.37	850	0.50	939	0.63	1019	0.77	1091	0.91	1159	1.05	**1221**	**1.20**	–	–	–	–	–	–
1500	774	0.42	875	0.55	962	0.69	1041	0.83	1112	0.98	**1179**	**1.13**	–	–	–	–	–	–	–	–

STD Static - 560-854 RPM, 1.2 Max BHP

MED Static - 770-1175 RPM, 1.2 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

NOTE: Production of single phase units has been discontinued per DOE regulations. Single phase 558J models are only available until current inventories are exhausted.

Table 36 – RAS036 — 1 PHASE — 3 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	**554**	**0.14**	681	0.22	783	0.32	870	0.42	947	0.53	1017	0.64	1082	0.76	1143	0.88	**1200**	**1.01**	**1254**	**1.14**
975	575	0.16	701	0.25	801	0.35	888	0.45	965	0.57	1035	0.68	1100	0.81	1160	0.93	**1217**	**1.07**	**1271**	**1.20**
1050	597	0.18	721	0.28	821	0.38	906	0.49	983	0.61	1053	0.73	1117	0.86	**1177**	**0.99**	**1234**	**1.13**	–	–
1125	620	0.21	741	0.31	840	0.42	925	0.54	1001	0.66	1071	0.78	1135	0.92	**1195**	**1.05**	**1251**	**1.19**	–	–
1200	643	0.23	762	0.35	860	0.46	944	0.58	1020	0.71	1089	0.84	1153	0.98	**1212**	**1.12**	–	–	–	–
1275	666	0.27	784	0.38	880	0.50	964	0.63	1039	0.76	1107	0.90	1171	1.04	**1230**	**1.19**	–	–	–	–
1350	690	0.30	805	0.42	900	0.55	983	0.68	1058	0.82	1126	0.96	**1189**	**1.11**	–	–	–	–	–	–
1425	714	0.34	827	0.47	921	0.60	1003	0.74	1077	0.88	1145	1.03	**1208**	**1.18**	–	–	–	–	–	–
1500	738	0.38	849	0.52	942	0.66	1024	0.80	1097	0.95	1164	1.10	–	–	–	–	–	–	–	–

STD Static (560-854 rpm) 1.2 Max BHP

MED Static - 770-1175 RPM, 1.2 Max BHP

Bold Face = Field Supplied Drive Required

For more information, see General Fan Performance Notes on page 56.

NOTE: Production of single phase units has been discontinued per DOE regulations. Single phase 558J models are only available until current inventories are exhausted.

FAN PERFORMANCE (cont.)

Table 37 – RAS036

3 PHASE

3 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	566	0.14	690	0.23	791	0.32	879	0.42	957	0.52	1029	0.63	1095	0.75	1157	0.86	1216	0.99	1272	1.11
975	590	0.17	711	0.26	811	0.36	897	0.46	975	0.57	1046	0.68	1112	0.80	1174	0.92	1232	1.05	1287	1.18
1050	615	0.19	733	0.29	831	0.39	916	0.50	993	0.62	1064	0.73	1129	0.86	1190	0.98	1248	1.11	1304	1.25
1125	640	0.22	755	0.33	851	0.43	936	0.55	1012	0.67	1082	0.79	1147	0.92	1208	1.05	1265	1.18	1320	1.32
1200	666	0.25	778	0.36	873	0.48	956	0.60	1031	0.72	1100	0.85	1165	0.98	1225	1.12	1282	1.26	1337	1.40
1275	692	0.29	802	0.41	894	0.53	976	0.65	1051	0.78	1119	0.91	1183	1.05	1243	1.19	1300	1.34	1354	1.49
1350	719	0.33	825	0.45	916	0.58	997	0.71	1071	0.84	1139	0.98	1202	1.12	1262	1.27	1318	1.42	1372	1.57
1425	746	0.37	850	0.50	939	0.63	1019	0.77	1091	0.91	1159	1.05	1221	1.20	1280	1.35	1336	1.51	1390	1.66
1500	774	0.42	875	0.55	962	0.69	1041	0.83	1112	0.98	1179	1.13	1241	1.28	1300	1.44	1355	1.60	1408	1.76

STD Static - 560-854 RPM, 1.7 Max BHP

MED Static - 770-1175 RPM, 1.7 Max BHP

HIGH Static - 1035-1466 RPM, 2.4 Max BHP

For more information, see General Fan Performance Notes on page 56.

Table 38 – RAS036

3 PHASE

3 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	**554**	**0.14**	681	0.22	783	0.32	870	0.42	947	0.53	1017	0.64	1082	0.76	1143	0.88	1200	1.01	1254	1.14
975	575	0.16	701	0.25	801	0.35	888	0.45	965	0.57	1035	0.68	1100	0.81	1160	0.93	1217	1.07	1271	1.20
1050	597	0.18	721	0.28	821	0.38	906	0.49	983	0.61	1053	0.73	1117	0.86	1177	0.99	1234	1.13	1288	1.27
1125	620	0.21	741	0.31	840	0.42	925	0.54	1001	0.66	1071	0.78	1135	0.92	1195	1.05	1251	1.19	1305	1.34
1200	643	0.23	762	0.35	860	0.46	944	0.58	1020	0.71	1089	0.84	1153	0.98	1212	1.12	1269	1.26	1322	1.41
1275	666	0.27	784	0.38	880	0.50	964	0.63	1039	0.76	1107	0.90	1171	1.04	1230	1.19	1286	1.33	1340	1.49
1350	690	0.30	805	0.42	900	0.55	983	0.68	1058	0.82	1126	0.96	1189	1.11	1249	1.26	1304	1.41	1357	1.57
1425	714	0.34	827	0.47	921	0.60	1003	0.74	1077	0.88	1145	1.03	1208	1.18	1267	1.33	1323	1.49	1375	1.66
1500	738	0.38	849	0.52	942	0.66	1024	0.80	1097	0.95	1164	1.10	1227	1.25	1285	1.41	1341	1.58	1394	1.75

STD Static - 560-854 RPM, 1.7 Max BHP

MED Static - 770-1175 RPM, 1.7 Max BHP

HIGH Static - 1035-1466 RPM, 2.4 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

FAN PERFORMANCE (cont.)

Table 39 – RAS048 — 1 PHASE — 4 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	666	0.25	778	0.36	873	0.48	956	0.60	1031	0.72	1100	0.85	1165	0.98	**1225**	**1.12**	–	–	–	–
1300	701	0.30	809	0.42	902	0.54	983	0.67	1057	0.80	1126	0.94	**1189**	**1.07**	–	–	–	–	–	–
1400	737	0.36	842	0.48	932	0.61	1012	0.75	1085	0.89	1152	1.03	**1215**	**1.17**	–	–	–	–	–	–
1500	774	0.42	875	0.55	962	0.69	1041	0.83	1112	0.98	**1179**	**1.13**	**–**	**–**	–	–	–	–	–	–
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	1164	1.26	–	–	–	–	**–**	**–**	–	–	–	–	–	–
2000	965	0.86	1050	1.03	1127	1.21	–	–	–	–	–	–	**–**	**–**	–	–	–	–	–	–

STD Static - 560-854 RPM, 1.2 Max BHP

MED Static - 770-1175 RPM, 1.2 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

NOTE: Production of single phase units has been discontinued per DOE regulations. Single phase 558J models are only available until current inventories are exhausted.

Table 40 – RAS048 — 1 PHASE — 4 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	643	0.23	762	0.35	860	0.46	944	0.58	1020	0.71	1089	0.84	1153	0.98	**1212**	**1.12**	–	–	–	–
1300	674	0.28	791	0.40	887	0.52	970	0.65	1045	0.78	1114	0.92	**1177**	**1.06**	–	–	–	–	–	–
1400	706	0.33	820	0.45	914	0.59	997	0.72	1071	0.86	1139	1.01	**1202**	**1.15**	–	–	–	–	–	–
1500	738	0.38	849	0.52	942	0.66	1024	0.80	1097	0.95	1164	1.10	–	–	–	–	–	–	–	–
1600	771	0.44	879	0.59	971	0.74	1051	0.89	1124	1.04	**1190**	**1.20**	–	–	–	–	–	–	–	–
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	–	–	–	–	–	–	–	–	–	–	–	–	–	–

STD Static - 560-854 RPM, 1.2 Max BHP

MED Static - 770-1175 RPM, 1.2 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

NOTE: Production of single phase units has been discontinued per DOE regulations. Single phase 558J models are only available until current inventories are exhausted.

FAN PERFORMANCE (cont.)

Table 41 – RAS048

3 PHASE

4 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	666	0.25	778	0.36	873	0.48	956	0.60	1031	0.72	1100	0.85	1165	0.98	1225	1.12	1282	1.26	1337	1.40
1300	701	0.30	809	0.42	902	0.54	983	0.67	1057	0.80	1126	0.94	1189	1.07	1249	1.22	1306	1.36	1360	1.51
1400	737	0.36	842	0.48	932	0.61	1012	0.75	1085	0.89	1152	1.03	1215	1.17	1274	1.32	1330	1.48	1384	1.63
1500	774	0.42	875	0.55	962	0.69	1041	0.83	1112	0.98	1179	1.13	1241	1.28	1300	1.44	1355	1.60	1408	1.76
1600	811	0.49	909	0.63	994	0.78	1071	0.93	1141	1.08	1206	1.24	1268	1.40	1326	1.56	1381	1.73	1433	1.90
1700	849	0.57	943	0.72	1026	0.87	1101	1.03	1170	1.19	1235	1.36	1295	1.52	1352	1.69	1407	1.87	1459	2.04
1800	887	0.65	978	0.81	1059	0.98	1133	1.14	1200	1.31	1264	1.48	1323	1.66	1380	1.84	1434	2.02	**1485**	**2.20**
1900	926	0.75	1014	0.92	1092	1.09	1164	1.26	1231	1.44	1293	1.62	1352	1.80	1408	1.99	1461	2.17	**1512**	**2.37**
2000	965	0.86	1050	1.03	1127	1.21	1197	1.39	1262	1.58	1324	1.77	1381	1.96	1436	2.15	**1489**	**2.34**	–	–

STD Static - 560-854 RPM, 1.7 Max BHP

MED Static - 770-1175 RPM, 1.7 Max BHP

HIGH Static - 1035-1466 RPM, 2.4 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

Table 42 – RAS048

3 PHASE

4 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	643	0.23	762	0.35	860	0.46	944	0.58	1020	0.71	1089	0.84	1153	0.98	1212	1.12	1269	1.26	1322	1.41
1300	674	0.28	791	0.40	887	0.52	970	0.65	1045	0.78	1114	0.92	1177	1.06	1236	1.21	1292	1.36	1346	1.52
1400	706	0.33	820	0.45	914	0.59	997	0.72	1071	0.86	1139	1.01	1202	1.15	1261	1.31	1316	1.47	1369	1.63
1500	738	0.38	849	0.52	942	0.66	1024	0.80	1097	0.95	1164	1.10	1227	1.25	1285	1.41	1341	1.58	1394	1.75
1600	771	0.44	879	0.59	971	0.74	1051	0.89	1124	1.04	1190	1.20	1252	1.36	1311	1.53	1366	1.70	1418	1.87
1700	804	0.51	910	0.66	1000	0.82	1079	0.98	1151	1.14	1217	1.31	1278	1.48	1336	1.65	1391	1.83	1443	2.01
1800	837	0.59	941	0.75	1029	0.91	1107	1.08	1178	1.25	1244	1.42	1305	1.60	1362	1.78	1416	1.97	**1468**	**2.15**
1900	871	0.67	972	0.84	1059	1.02	1136	1.19	1206	1.37	1271	1.55	1331	1.73	1388	1.92	1442	2.11	**1494**	**2.31**
2000	906	0.76	1004	0.94	1089	1.12	1165	1.31	1234	1.49	1298	1.68	1358	1.87	1415	2.07	**1468**	**2.27**	–	–

STD Static - 560-854 RPM, 1.7 Max BHP

MED Static - 770-1175 RPM, 1.7 Max BHP

HIGH Static - 1035-1466 RPM, 2.4 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

FAN PERFORMANCE (cont.)

Table 43 – RAS060 — 1 PHASE — 5 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	790	0.40	897	0.53	991	0.68	1075	0.83	1152	1.00	1224	1.18	1291	1.36	–	–	–	–	–	–
1625	837	0.48	940	0.62	1030	0.77	1112	0.94	1187	1.11	1257	1.30	1323	1.49	–	–	–	–	–	–
1750	885	0.58	983	0.73	1070	0.89	1150	1.06	1223	1.24	1292	1.43	–	–	–	–	–	–	–	–
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	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

STD Static - 770-1175 RPM, 1.2 Max BHP

MED Static - 1035-1466 RPM, 1.5 Max BHP

For more information, see General Fan Performance Notes on page 56.

NOTE: Production of single phase units has been discontinued per DOE regulations. Single phase 558J models are only available until current inventories are exhausted.

Table 44 – RAS060 — 1 PHASE — 5 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	724	0.33	837	0.45	937	0.59	1028	0.74	1111	0.91	1188	1.09	1261	1.29	1330	1.49	–	–	–	–
1625	765	0.40	873	0.53	969	0.67	1056	0.83	1137	1.00	1213	1.18	1284	1.38	–	–	–	–	–	–
1750	806	0.48	909	0.61	1002	0.76	1087	0.92	1165	1.10	1239	1.28	1309	1.49	–	–	–	–	–	–
1875	849	0.57	947	0.71	1036	0.86	1118	1.03	1195	1.21	1267	1.40	–	–	–	–	–	–	–	–
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	-	-	-	-	-	-	–	–	–	–	–	–	–	–	–	–

STD Static - 770-1175 RPM, 1.2 Max BHP

MED Static - 1035-1466 RPM, 1.5 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

NOTE: Production of single phase units has been discontinued per DOE regulations. Single phase 558J models are only available until current inventories are exhausted.

FAN PERFORMANCE (cont.)

Table 45 – RAS060 — 3 PHASE — 5 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	790	0.40	897	0.53	991	0.68	1075	0.83	1152	1.00	1224	1.18	1291	1.36	1354	1.56	1414	1.77	1472	1.98
1625	837	0.48	940	0.62	1030	0.77	1112	0.94	1187	1.11	1257	1.30	1323	1.49	1385	1.69	1445	1.90	1501	2.12
1750	885	0.58	983	0.73	1070	0.89	1150	1.06	1223	1.24	1292	1.43	1356	1.63	1418	1.83	1476	2.05	1532	2.27
1875	934	0.69	1027	0.85	1112	1.01	1189	1.19	1260	1.38	1327	1.57	1391	1.78	1451	1.99	1509	2.21	1564	2.44
2000	983	0.81	1073	0.98	1154	1.16	1229	1.34	1299	1.53	1364	1.74	1427	1.95	1486	2.17	1542	2.39	1596	2.63
2125	1033	0.95	1119	1.13	1198	1.31	1270	1.50	1338	1.71	1402	1.92	1463	2.13	1521	2.36	1577	2.59	1630	2.83
2250	1084	1.11	1166	1.29	1242	1.49	1312	1.69	1379	1.89	1441	2.11	1501	2.34	1558	2.57	1612	2.81	–	–
2375	1134	1.28	1214	1.48	1287	1.68	1355	1.89	1420	2.10	1481	2.33	1539	2.56	1595	2.80	–	–	–	–
2500	1185	1.48	1262	1.68	1333	1.89	1399	2.10	1462	2.33	1522	2.56	1579	2.80	–	–	–	–	–	–

STD Static - 819-1251 RPM, 1.7 Max BHP

MED Static - 1035-1466 RPM, 1.7 Max BHP

HIGH Static - 1250-1687 RPM, 2.9 Max BHP

For more information, see General Fan Performance Notes on page 56.

Table 46 – RAS060 — 3 PHASE — 5 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	**724**	**0.33**	837	0.45	937	0.59	1028	0.74	1111	0.91	1188	1.09	1261	1.29	1330	1.49	1395	1.71	1457	1.95
1625	**765**	**0.40**	873	0.53	969	0.67	1056	0.83	1137	1.00	1213	1.18	1284	1.38	1352	1.59	1416	1.81	1478	2.04
1750	806	0.48	909	0.61	1002	0.76	1087	0.92	1165	1.10	1239	1.28	1309	1.49	1375	1.70	1439	1.92	1499	2.16
1875	849	0.57	947	0.71	1036	0.86	1118	1.03	1195	1.21	1267	1.40	1335	1.60	1400	1.82	1462	2.04	1522	2.28
2000	892	0.67	986	0.82	1072	0.98	1151	1.15	1226	1.33	1296	1.53	1363	1.74	1427	1.95	1488	2.18	1546	2.42
2125	935	0.79	1025	0.94	1108	1.11	1185	1.29	1258	1.47	1326	1.67	1392	1.88	1454	2.11	1514	2.34	1571	2.58
2250	980	0.92	1066	1.08	1146	1.25	1220	1.43	1291	1.63	1358	1.83	1421	2.05	1483	2.27	1541	2.51	1598	2.75
2375	1024	1.06	1107	1.23	1184	1.41	1256	1.60	1325	1.79	1390	2.00	1452	2.22	1512	2.45	1570	2.69	–	–
2500	1069	1.22	1149	1.39	1223	1.58	1293	1.77	1360	1.98	1424	2.19	1484	2.42	1543	2.65	1599	2.89	–	–

STD Static - 770-1175 RPM, 1.7 Max BHP

MED Static - 1180-1500 RPM, 1.7 Max BHP

HIGH Static - 1250-1687 RPM, 2.9 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

FAN PERFORMANCE (cont.)

Table 47 – RAS072

3 PHASE

6 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	**907**	**0.63**	**1006**	**0.80**	1092	0.97	1169	1.14	1239	1.32	1304	1.51	1365	1.69	1422	1.88	1477	2.08	1528	2.28
1950	**965**	**0.77**	**1060**	**0.95**	1143	1.13	1218	1.32	1287	1.51	1350	1.71	1410	1.91	1467	2.11	1520	2.31	1572	2.52
2100	**1024**	**0.93**	1115	1.12	1195	1.32	1268	1.52	1335	1.72	1398	1.93	1457	2.14	1512	2.35	1565	2.57	1616	2.79
2250	1083	1.11	1170	1.32	1248	1.53	1319	1.74	1385	1.96	1446	2.18	1504	2.40	1559	2.62	1611	2.85	1661	3.09
2400	1143	1.32	1227	1.54	1302	1.76	1371	1.99	1435	2.22	1496	2.45	1552	2.68	1606	2.92	1658	3.16	1707	3.40
2550	1203	1.55	1284	1.78	1357	2.02	1424	2.26	1487	2.50	1546	2.75	1601	2.99	1654	3.24	1705	3.50	–	–
2700	1264	1.81	1342	2.06	1412	2.31	1478	2.56	1539	2.82	1597	3.07	1651	3.33	1703	3.59	–	–	–	–
2850	1326	2.09	1400	2.36	1469	2.62	1532	2.89	1592	3.16	1648	3.43	1702	3.70	–	–	–	–	–	–
3000	1387	2.41	1459	2.69	1525	2.97	1587	3.25	1646	3.53	–	–	–	–	–	–	–	–	–	–

STD Static - 1073-1457 RPM, 2.4 Max BHP

MED Static - 1173-1518 RPM, 2.9 Max BHP

HIGH Static - 1474-1788 RPM, 3.7 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

Table 48 – RAS072

3 PHASE

6 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	**822**	**0.51**	**927**	**0.66**	**1018**	**0.82**	1100	0.98	1174	1.15	1244	1.33	1308	1.51	1369	1.70	1427	1.90	1483	2.10
1950	**872**	**0.62**	**973**	**0.79**	**1061**	**0.95**	1140	1.13	1213	1.31	1281	1.49	1345	1.68	1405	1.88	1462	2.09	1517	2.30
2100	**923**	**0.75**	**1019**	**0.92**	1104	1.10	1182	1.29	1253	1.48	1320	1.67	1382	1.87	1441	2.08	1498	2.29	1552	2.51
2250	**974**	**0.90**	**1067**	**1.08**	1149	1.27	1224	1.46	1294	1.66	1359	1.87	1420	2.08	1479	2.29	1534	2.51	1587	2.74
2400	**1026**	**1.06**	1115	1.26	1195	1.46	1268	1.66	1336	1.87	1400	2.09	1460	2.31	1517	2.53	1572	2.76	1624	2.99
2550	1079	1.25	1164	1.46	1241	1.67	1312	1.88	1379	2.10	1441	2.33	1500	2.55	1557	2.79	1610	3.03	1662	3.27
2700	1132	1.46	1214	1.67	1289	1.90	1358	2.12	1422	2.35	1483	2.59	1541	2.83	1597	3.07	1650	3.32	1701	3.57
2850	1186	1.69	1264	1.92	1336	2.15	1404	2.39	1467	2.63	1527	2.87	1583	3.12	1638	3.37	1690	3.63	–	–
3000	1240	1.94	1315	2.18	1385	2.43	1451	2.68	1512	2.93	1571	3.18	1626	3.44	1680	3.70	–	–	–	–

STD Static - 1073-1457 RPM, 2.4 Max BHP

MED Static - 1173-1518 RPM, 2.9 Max BHP

HIGH Static - 1474-1788 RPM, 3.7 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

FAN PERFORMANCE (cont.)

Table 49 – RAS090

3 PHASE

7.5 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	511	0.53	591	0.73	660	0.95	722	1.19	779	1.44	832	1.71	882	1.99	928	2.29	973	2.59	1015	2.92
2438	540	0.64	616	0.85	683	1.08	743	1.33	799	1.59	851	1.87	899	2.16	945	2.46	989	2.78	1031	3.11
2625	569	0.76	642	0.99	706	1.23	765	1.49	819	1.76	870	2.04	918	2.34	963	2.66	1006	2.98	1048	3.32
2813	599	0.90	669	1.14	731	1.39	788	1.66	841	1.94	890	2.24	937	2.55	982	2.87	1024	3.21	1065	3.55
3000	630	1.06	696	1.31	756	1.58	811	1.86	863	2.15	912	2.46	958	2.78	1001	3.11	1043	3.45	1083	3.80
3188	661	1.23	724	1.50	782	1.78	836	2.07	886	2.38	934	2.69	979	3.02	1022	3.36	1063	3.72	1102	4.08
3375	692	1.43	753	1.71	809	2.00	861	2.31	910	2.62	956	2.95	1000	3.29	1042	3.64	1083	4.00	**1122**	**4.38**
3563	723	1.65	782	1.94	836	2.25	887	2.56	934	2.89	980	3.23	1023	3.58	1064	3.94	**1104**	**4.32**	**1142**	**4.70**
3750	755	1.89	811	2.20	864	2.52	913	2.84	959	3.18	1004	3.54	1046	3.90	1086	4.27	**1125**	**4.65**	-	-

STD Static - 489-747 RPM, 1.7 Max BHP

MED Static - 733-949 RPM, 2.9 Max BHP

HIGH Static - 909-1102 RPM, 4.7 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

Table 50 – RAS090

3 PHASE

7.5 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	**465**	**0.43**	555	0.64	629	0.86	694	1.10	753	1.34	806	1.60	856	1.87	903	2.15	947	2.45	988	2.75
2438	**488**	**0.51**	575	0.73	648	0.97	712	1.21	769	1.47	822	1.74	872	2.03	918	2.32	961	2.62	1003	2.93
2625	510	0.60	595	0.84	666	1.09	729	1.34	786	1.62	839	1.90	887	2.19	933	2.49	977	2.81	1018	3.13
2813	533	0.70	616	0.95	686	1.22	748	1.49	804	1.77	856	2.06	904	2.37	949	2.68	992	3.01	1033	3.34
3000	557	0.82	637	1.08	705	1.36	766	1.64	822	1.94	873	2.24	921	2.56	966	2.89	1008	3.22	1049	3.56
3188	581	0.94	659	1.23	726	1.51	785	1.81	840	2.12	891	2.44	938	2.77	982	3.10	1025	3.45	1065	3.81
3375	606	1.08	681	1.38	746	1.68	805	2.00	859	2.32	909	2.65	955	2.99	1000	3.34	1041	3.70	1081	4.06
3563	630	1.24	703	1.55	767	1.87	825	2.20	878	2.53	927	2.88	973	3.23	1017	3.59	1059	3.96	1098	4.34
3750	655	1.41	726	1.74	789	2.07	845	2.41	897	2.76	946	3.12	992	3.48	1035	3.86	1076	4.24	**1115**	**4.63**

STD Static - 489-747 RPM, 1.7 Max BHP

MED Static - 733-949 RPM, 2.9 Max BHP

HIGH Static - 909-1102 RPM, 4.7 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

FAN PERFORMANCE (cont.)

Table 51 – RAS0102 — 3 PHASE — 8.5 VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	**477**	**0.43**	556	0.57	624	0.71	685	0.85	742	0.99	794	1.14	842	1.29	888	1.44	932	1.59	973	1.75
2763	**503**	**0.52**	578	0.67	644	0.82	704	0.97	759	1.13	810	1.28	858	1.44	903	1.60	946	1.77	987	1.93
2975	529	0.62	601	0.79	665	0.95	724	1.11	777	1.28	827	1.44	874	1.61	919	1.78	961	1.95	1001	2.13
3188	556	0.74	625	0.92	687	1.09	744	1.26	796	1.44	845	1.62	891	1.79	935	1.98	977	2.16	1017	2.34
3400	583	0.88	650	1.06	710	1.24	765	1.43	816	1.62	864	1.80	909	1.99	952	2.18	993	2.38	1033	2.57
3613	611	1.03	675	1.22	733	1.42	787	1.61	836	1.81	883	2.01	928	2.21	970	2.41	1010	2.61	1049	2.82
3825	639	1.19	701	1.40	757	1.61	809	1.81	857	2.02	903	2.23	947	2.44	988	2.65	1028	2.87	1066	3.08
4038	668	1.38	727	1.60	781	1.81	832	2.03	879	2.25	924	2.47	967	2.70	1008	2.92	1047	3.14	1084	3.37
4250	696	1.58	753	1.81	806	2.04	855	2.27	901	2.50	945	2.73	987	2.97	1027	3.20	1066	3.43	**1103**	**3.67**

STD Static - 518-733 RPM, 1.7 Max BHP | MED Static - 690-936 RPM, 2.4 Max BHP | HIGH Static - 838-1084 RPM, 3.7 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

Table 52 – RAS0102 — 3 PHASE — 8.5 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	**438**	**0.39**	523	0.50	595	0.64	658	0.78	716	0.94	769	1.11	819	1.30	865	1.49	909	1.70	951	1.92
2763	**459**	**0.47**	541	0.60	611	0.73	673	0.88	730	1.05	782	1.22	831	1.41	877	1.60	921	1.81	963	2.04
2975	**481**	**0.56**	560	0.70	628	0.84	689	1.00	745	1.16	796	1.34	845	1.53	890	1.73	933	1.94	974	2.16
3188	**504**	**0.67**	580	0.82	646	0.97	705	1.13	760	1.30	811	1.48	858	1.67	903	1.88	946	2.09	987	2.31
3400	526	0.80	600	0.95	664	1.11	722	1.27	776	1.45	826	1.63	873	1.83	917	2.04	959	2.25	1000	2.48
3613	550	0.94	620	1.10	683	1.26	740	1.43	793	1.62	842	1.81	888	2.01	932	2.22	973	2.44	1013	2.67
3825	573	1.09	641	1.26	702	1.43	758	1.61	810	1.80	858	2.00	903	2.20	946	2.42	988	2.64	1027	2.87
4038	597	1.26	663	1.44	722	1.62	777	1.81	827	2.00	875	2.20	919	2.41	962	2.63	1002	2.86	1041	3.10
4250	621	1.45	685	1.64	743	1.83	796	2.02	845	2.22	892	2.43	936	2.65	978	2.87	1018	3.10	1056	3.34

STD Static - 518-733 RPM, 1.7 Max BHP | MED Static - 690-936 RPM, 2.4 Max BHP | HIGH Static - 838-1084 RPM, 3.7 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

FAN PERFORMANCE (cont.)

Table 53 – RAS120 — 3 PHASE — 10 VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	**556**	**0.65**	623	0.80	684	0.95	738	1.11	789	1.26	836	1.42	881	1.57	923	1.73	963	1.89	1001	2.05
3250	**590**	**0.79**	655	0.96	713	1.13	766	1.29	815	1.46	861	1.63	904	1.79	945	1.96	985	2.13	1023	2.30
3500	625	0.96	687	1.14	742	1.32	794	1.50	841	1.68	886	1.86	929	2.04	969	2.22	1008	2.40	1045	2.58
3750	661	1.16	719	1.35	773	1.54	822	1.73	869	1.93	912	2.12	954	2.31	994	2.50	1031	2.70	1068	2.89
4000	697	1.37	753	1.58	804	1.79	852	1.99	897	2.20	940	2.40	980	2.61	1019	2.81	1056	3.02	1092	3.22
4250	733	1.62	787	1.84	836	2.06	883	2.28	926	2.49	968	2.71	1007	2.93	1045	3.15	1081	3.36	1117	3.58
4500	770	1.89	821	2.13	869	2.36	914	2.59	956	2.82	996	3.05	1035	3.28	1072	3.51	1108	3.74	1142	3.97
4750	807	2.20	856	2.45	902	2.69	945	2.94	986	3.18	1026	3.42	1063	3.66	1100	3.91	1135	4.15	1168	4.39
5000	844	2.54	891	2.80	936	3.06	978	3.31	1018	3.57	1056	3.82	1093	4.08	1128	4.34	1162	4.59	-	-

STD Static - 591-838 RPM, 2.4 Max BHP | MED Static - 838-1084 RPM, 3.7 Max BHP | HIGH Static - 1022-1240 RPM, 4.7 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

Table 54 – RAS120 — 3 PHASE — 10 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	**523**	**0.58**	592	0.73	657	0.88	718	1.05	775	1.22	830	1.39	883	1.57	934	1.76	982	1.95	1029	2.14
3250	**555**	**0.71**	620	0.87	681	1.04	739	1.21	794	1.39	847	1.57	897	1.76	946	1.96	993	2.16	1039	2.36
3500	**588**	**0.86**	649	1.03	707	1.21	762	1.39	815	1.58	865	1.77	914	1.97	961	2.18	1007	2.38	1051	2.60
3750	621	1.03	679	1.21	734	1.40	786	1.59	837	1.79	885	1.99	932	2.20	978	2.42	1022	2.64	1065	2.86
4000	655	1.23	709	1.42	761	1.61	812	1.82	860	2.03	907	2.24	952	2.46	996	2.68	1038	2.91	1080	3.14
4250	689	1.45	741	1.65	790	1.86	838	2.07	885	2.29	930	2.51	973	2.74	1015	2.97	1057	3.21	1097	3.45
4500	723	1.69	773	1.90	820	2.12	866	2.35	910	2.57	954	2.81	996	3.05	1037	3.29	1076	3.54	1115	3.79
4750	758	1.96	805	2.19	850	2.42	894	2.65	937	2.89	979	3.13	1019	3.38	1059	3.63	1097	3.89	1135	4.15
5000	793	2.26	838	2.50	881	2.74	923	2.98	965	3.23	1005	3.49	1044	3.74	1082	4.01	1119	4.27	1156	4.55

STD Static - 591-838 RPM, 2.4 Max BHP | MED Static - 838-1084 RPM, 3.7 Max BHP | HIGH Static - 1022-1240 RPM, 4.7 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

FAN PERFORMANCE (cont.)

Table 55 – RAS150 — 3 PHASE — 12.5 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3438	**616**	**0.92**	679	1.10	735	1.27	786	1.45	835	1.62	880	1.80	922	1.98	963	2.15	1002	2.33	1039	2.51
3750	661	1.16	719	1.35	773	1.54	822	1.73	869	1.93	912	2.12	954	2.31	994	2.50	1031	2.70	1068	2.89
4063	706	1.43	761	1.64	812	1.85	860	2.06	904	2.27	947	2.48	987	2.68	1025	2.89	1062	3.10	1098	3.31
4375	752	1.75	804	1.98	852	2.20	898	2.43	941	2.65	982	2.88	1021	3.10	1058	3.32	1094	3.55	1129	3.77
4688	798	2.12	847	2.36	894	2.60	937	2.85	979	3.09	1018	3.33	1056	3.57	1093	3.81	1128	4.04	1162	4.29
5000	844	2.54	891	2.80	936	3.06	978	3.31	1018	3.57	1056	3.82	1093	4.08	1128	4.34	1162	4.59	-	-
5313	891	3.01	936	3.28	978	3.56	1019	3.83	1057	4.11	1094	4.38	1130	4.65	-	-	-	-	-	-
5625	938	3.53	981	3.83	1022	4.12	1060	4.41	1097	4.70	-	-	-	-	-	-	-	-	-	-
5938	986	4.12	1026	4.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

STD Static - 652-843 RPM, 2.9 Max BHP

MED Static - 838-1084 RPM, 3.7 Max BHP

HIGH Static - 1022-1240 RPM, 4.7 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

Table 56 – RAS150 — 3 PHASE — 12.5 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3438	580	0.82	**642**	**0.99**	700	1.16	756	1.34	809	1.53	860	1.72	910	1.92	957	2.12	1003	2.32	1048	2.54
3750	621	1.03	679	1.21	734	1.40	786	1.59	837	1.79	885	1.99	932	2.20	978	2.42	1022	2.64	1065	2.86
4063	663	1.28	717	1.47	769	1.67	818	1.88	866	2.09	912	2.31	957	2.53	1001	2.75	1043	2.98	1084	3.22
4375	706	1.56	757	1.77	805	1.98	852	2.20	897	2.43	941	2.66	984	2.89	1026	3.13	1066	3.37	1106	3.62
4688	749	1.89	797	2.11	843	2.34	887	2.57	930	2.81	972	3.05	1013	3.29	1053	3.54	1092	3.80	1130	4.06
5000	793	2.26	838	2.50	881	2.74	923	2.98	965	3.23	1005	3.49	1044	3.74	1082	4.01	1119	4.27	1156	4.55
5313	837	2.69	880	2.93	921	3.19	961	3.44	1000	3.71	1038	3.97	1076	4.24	1113	4.52	-	-	-	-
5625	882	3.16	922	3.42	961	3.68	999	3.95	1037	4.23	1073	4.51	-	-	-	-	-	-	-	-
5938	926	3.68	964	3.96	1001	4.23	1038	4.52	-	-	-	-	-	-	-	-	-	-	-	-
6250	971	4.26	1007	4.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

STD Static - 652-843 RPM, 2.9 Max BHP

MED Static - 838-1084 RPM, 3.7 Max BHP

HIGH Static - 1022-1240 RPM, 4.7 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

FAN PERFORMANCE (cont.)

Table 57 – RAS180

3 PHASE

15 TON VERTICAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	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	719	2.34	772	2.76	823	3.20	872	3.67	918	4.16
4875	**448**	**0.92**	510	1.20	566	1.49	621	1.81	674	2.15	725	2.54	776	2.95	825	3.40	873	3.87	919	4.37
5250	**472**	**1.10**	531	1.40	584	1.70	636	2.03	686	2.38	734	2.76	783	3.18	830	3.63	876	4.10	920	4.60
5625	**496**	**1.30**	552	1.62	603	1.94	652	2.28	699	2.64	746	3.03	791	3.44	836	3.89	880	4.36	923	4.86
6000	520	1.52	574	1.86	623	2.20	670	2.55	715	2.92	759	3.32	802	3.74	845	4.18	887	4.66	928	5.16
6375	544	1.77	596	2.13	644	2.49	688	2.86	731	3.24	773	3.64	814	4.07	855	4.52	895	4.99	935	5.49
6750	568	2.05	618	2.43	664	2.81	707	3.19	749	3.59	789	4.00	828	4.43	867	4.89	905	5.36	943	5.87
7125	593	2.35	641	2.75	685	3.16	727	3.56	767	3.97	806	4.39	844	4.84	881	5.29	917	5.78	-	-
7500	617	2.69	664	3.11	707	3.53	747	3.95	786	4.38	823	4.82	860	5.27	895	5.74	-	-	-	-

STD Static - 507-676 RPM, 2.9 Max BHP

MED Static - 627-851 RPM, 3.7 Max BHP

HIGH Static - 776-955 RPM, 6.1 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

Table 58 – RAS180

3 PHASE

15 TON HORIZONTAL SUPPLY

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	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	707	2.02	758	2.33	806	2.66	853	3.01	898	3.37
4875	**447**	**0.94**	507	1.18	563	1.42	615	1.67	666	1.95	716	2.24	764	2.55	811	2.89	856	3.24	900	3.61
5250	**471**	**1.13**	528	1.38	581	1.64	631	1.91	679	2.19	726	2.49	772	2.81	817	3.14	860	3.50	903	3.87
5625	**496**	**1.35**	550	1.62	600	1.89	648	2.17	694	2.46	738	2.77	782	3.09	825	3.43	867	3.79	908	4.17
6000	520	1.59	572	1.88	620	2.17	666	2.46	710	2.76	752	3.08	794	3.41	835	3.76	875	4.12	914	4.50
6375	545	1.86	594	2.17	640	2.47	684	2.78	726	3.10	767	3.42	807	3.76	846	4.12	885	4.49	923	4.87
6750	571	2.17	617	2.48	661	2.81	704	3.13	744	3.46	784	3.80	822	4.15	859	4.51	896	4.89	933	5.28
7125	596	2.50	640	2.83	683	3.17	724	3.52	763	3.86	801	4.22	838	4.58	874	4.95	909	5.33	944	5.73
7500	622	2.87	663	3.22	705	3.58	744	3.93	782	4.30	818	4.66	854	5.04	889	5.42	923	5.81	-	-

STD Static - 507-676 RPM, 2.9 Max BHP

MED Static - 627-851 RPM, 3.7 Max BHP

HIGH Static - 776-955 RPM, 6.1 Max BHP

Bold Face = Field Supplied Drive Required.

For more information, see General Fan Performance Notes on page 56.

FAN PERFORMANCE (cont.)

Table 59 – PULLEY ADJUSTMENT

UNIT		MOTOR/DRIVE COMBO	MOTOR PULLEY TURNS OPEN (RPM)										
			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	1175	1135	1094	1054	1013	973	932	892	851	811	770
		High Static	–	–	–	–	–	–	–	–	–	–	–
	3 phase	Standard Static	854	825	795	766	736	707	678	648	619	589	560
		Medium Static	1175	1135	1094	1054	1013	973	932	892	851	811	770
		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	1175	1135	1094	1054	1013	973	932	892	851	811	770
		High Static	–	–	–	–	–	–	–	–	–	–	–
	3 phase	Standard Static	854	825	795	766	736	707	678	648	619	589	560
		Medium Static	1175	1135	1094	1054	1013	973	932	892	851	811	770
		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	843	824	805	786	767	748	728	709	690	671	652
		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

* Single phase voltage models have been discontinued per DOE regulations and are only available until current inventories are exhausted.

ELECTRICAL INFORMATION

Table 60 – RAS036 SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR 3 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP		OFM		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	DD-STD	78%	6.0
					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	DD-STD	78%	6.0
					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

† Single phase voltage models have been discontinued per DOE regulations and are only available until current inventories are exhausted.

Table 61 – RAS048 SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR 4 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP		OFM		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	DD-STD	78%	6.0
					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	DD-STD	78%	6.0
					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

† Single phase voltage models have been discontinued per DOE regulations and are only available until current inventories are exhausted.

Table 62 – RAS060 SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR 5 TONS

V–Ph–Hz	VOLTAGE RANGE		COMP		OFM		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	DD-STD	78%	7.6
					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	DD-STD	78%	7.6
					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

† Single phase voltage models has been discontinued per DOE regulations and will only be available until current inventories are exhausted.

Table 63 – RAS072 SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR 6 TONS

(Units Produced On or Prior to 02/08/2015)

V-Ph-Hz	VOLTAGE RANGE		COMP		OFM		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

(Units Produced Between 02/09/2015 and 06/17/2015)

V-Ph-Hz	VOLTAGE RANGE		COMP		OFM		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	19.6	136	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	19.6	136	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	8.2	66	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	6.6	55	325	0.6	STD	78%	2.0
					325	0.6	MED	77%	2.8
					325	0.6	HIGH	77%	2.8

(Units Produced on or After 06/18/2015)

V-Ph-Hz	VOLTAGE RANGE		COMP		OFM		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	19.6	136	325	1.5	STD	69%	5.2
					325	1.5	MED	89%	8.4
					325	1.5	HIGH	87%	10.6
230-3-60	187	253	19.6	136	325	1.5	STD	69%	5.2
					325	1.5	MED	89%	8.3
					325	1.5	HIGH	87%	10.6
460-3-60	414	506	8.2	66	325	0.8	STD	69%	2.6
					325	0.8	MED	89%	4.2
					325	0.8	HIGH	87%	5.3
575-3-60	518	633	6.6	55	325	0.6	STD	78%	2.0
					325	0.6	MED	77%	2.8
					325	0.6	HIGH	77%	2.8

ELECTRICAL INFORMATION cont.

Table 64 – RAS091 SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR 7.5 TONS

V-Ph-Hz	VOLTAGE RANGE		COMP		OFM		IFM		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	75%	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	75%	5.2
					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	75%	2.6
					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 65 – RAS090 2-STAGE COOLING WITH SINGLE 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	75%	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	75%	5.2
							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	75%	5.2
							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

Table 66 – RAS090 2-STAGE COOLING WITH 2 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	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 67 – RAS101 SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR 8.5 TONS

V-Ph-Hz	VOLTAGE RANGE		COMP		OFM		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	75%	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	75%	5.2
					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	75%	2.6
					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 68 – RAS102 2-STAGE COOLING WITH SINGLE 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	75%	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	75%	5.2
							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	75%	2.6
							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

Table 69 – RAS102 2-STAGE COOLING WITH 2 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	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

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Table 70 – RAS121 1-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR 10 TONS

V-Ph-Hz	VOLTAGE RANGE		COMP		OFM		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	69%	5.2
					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	69%	5.2
					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	69%	2.6
					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 71 – RAS120 2-STAGE COOLING WITH SINGLE 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	69%	5.2
							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	69%	5.2
							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	69%	2.6
							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

Table 72 – RAS120 2-STAGE COOLING WITH 2 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	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 73 – RAS150 2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR 12.5 TONS

(Units Produced on or Prior to 02/15/2015)

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

(Units Produced On or After 02/15/2015)

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	19.6	136	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	19.6	136	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	8.2	66	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	6.6	55	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 74 – RAS150 2-STAGE COOLING WITH 2 SPEED INDOOR FAN MOTOR 12.5 TONS

(Units Produced On or After 02/16/2015)

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	19.6	136	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	19.6	136	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	8.2	66	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	6.6	55	7.7	54	1070	2.5	STD	84%	4.5
							1070	2.5	MED	84%	4.5
							1070	2.5	HIGH	83%	6.2

(Units Produced on or Prior to 02/15/2015)

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	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

Table 75 – RAS180 2-STAGE COOLING WITH SINGLE 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 76 – RAS180 2-STAGE COOLING WITH 2 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	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

ELECTRIC HEAT - ELECTRICAL INFORMATION

Table 77 – RAS036

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd 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	-	-
	MED	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	DD-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	038	038
	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	038	038
	MED	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	038	038
	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	038	038
460-3-60	STD	106A00	6.0	5.5	-	-	-	-
		107A00	8.8	8.1	-	-	-	-
		108A00	11.5	10.6	-	-	-	-
		109A00	14.0	12.9	-	-	-	-
	MED	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
PWRD - Powered convenience outlet
UNPWRD - Unpowered convenience outlet

† Single phase voltage models have been discontinued per DOE regulations and are only available until current inventories are exhausted.

ELECTRIC HEAT - ELECTRICAL INFORMATION

Table 78 – RAS036

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd 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	-	-
	MED	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	DD-STD	101A00	4.4	3.3/4.0	037	037	037	037
		102A00	6.5	4.9/6.0	037	037	037	037
		103B00	8.7	6.5/8.0	037	037	037	037
		104B00	10.5	7.9/9.6	037	037	037	037
		105A00	16.0	12.0/14.7	037	037	038	038
	STD	101A00	4.4	3.3/4.0	037	037	037	037
		102A00	6.5	4.9/6.0	037	037	037	037
		103B00	8.7	6.5/8.0	037	037	037	037
		104B00	10.5	7.9/9.6	037	037	037	037
		105A00	16.0	12.0/14.7	037	037	038	038
	MED	101A00	4.4	3.3/4.0	037	037	037	037
		102A00	6.5	4.9/6.0	037	037	037	037
		103B00	8.7	6.5/8.0	037	037	037	037
		104B00	10.5	7.9/9.6	037	037	037	037
		105A00	16.0	12.0/14.7	037	037	038	038
	HIGH	101A00	4.4	3.3/4.0	037	037	037	037
		102A00	6.5	4.9/6.0	037	037	037	037
		103B00	8.7	6.5/8.0	037	037	037	037
		104B00	10.5	7.9/9.6	037	037	037	037
		105A00	16.0	12.0/14.7	037	037	038	038
460-3-60	STD	106A00	6.0	5.5	-	-	-	-
		107A00	8.8	8.1	-	-	-	-
		108A00	11.5	10.6	-	-	-	-
		109A00	14.0	12.9	-	-	-	-
	MED	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
PWRD - Powered convenience outlet
UNPWRD - Unpowered convenience outlet

† Single phase voltage models have been discontinued per DOE regulations and are only available until current inventories are exhausted.

ELECTRIC HEAT - ELECTRICAL INFORMATION

Table 79 – RAS048

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (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	-	-
	MED	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	DD-STD	102A00	6.5	4.9/6.0	-	-	-	-
		103B00	8.7	6.5/8.0	-	-	-	-
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
	STD	102A00	6.5	4.9/6.0	-	-	-	-
		103B00	8.7	6.5/8.0	-	-	-	-
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
	MED	102A00	6.5	4.9/6.0	-	-	-	-
		103B00	8.7	6.5/8.0	-	-	-	-
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	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	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	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	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	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	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

† Single phase voltage models have been discontinued per DOE regulations and are only available until current inventories are exhausted.

ELECTRIC HEAT - ELECTRICAL INFORMATION

Table 80 – RAS048

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd 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	-	-
	MED	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	DD-STD	102A00	6.5	4.9/6.0	037	037	037	037
		103B00	8.7	6.5/8.0	037	037	037	037
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
	STD	102A00	6.5	4.9/6.0	037	037	037	037
		103B00	8.7	6.5/8.0	037	037	037	037
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
	MED	102A00	6.5	4.9/6.0	037	037	037	037
		103B00	8.7	6.5/8.0	037	037	037	037
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
	HIGH	102A00	6.5	4.9/6.0	037	037	037	037
		103B00	8.7	6.5/8.0	037	037	037	037
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	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	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	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	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

† Single phase voltage models have been discontinued per DOE regulations and are only available until current inventories are exhausted.

ELECTRIC HEAT - ELECTRICAL INFORMATION

Table 81 – RAS060

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	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	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	DD-STD	102A00	6.5	4.9/6.0	-	-	-	-
		104B00	10.5	7.9/9.6	-	-	-	-
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	038	038
	STD	102A00	6.5	4.9/6.0	-	-	-	-
		104B00	10.5	7.9/9.6	-	-	-	-
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	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	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	038	038
	HIGH	102A00	6.5	4.9/6.0	-	-	-	-
		104B00	10.5	7.9/9.6	-	-	-	037
		105A00	16.0	12.0/14.7	037	038	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	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	037	037
		108A00,109A00	25.5	23.4	037	037	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	037	037
		108A00,109A00	25.5	23.4	037	037	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	037	037
		108A00,109A00	25.5	23.4	037	037	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

† Single phase voltage models have been discontinued per DOE regulations and are only available until current inventories are exhausted.

ELECTRIC HEAT - ELECTRICAL INFORMATION

Table 82 – RAS060

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (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	DD-STD	102A00	6.5	4.9/6.0	037	037	037	037
		104B00	10.5	7.9/9.6	037	037	037	037
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	038	038
	STD	102A00	6.5	4.9/6.0	037	037	037	037
		104B00	10.5	7.9/9.6	037	037	037	037
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	038	038
	MED	102A00	6.5	4.9/6.0	037	037	037	037
		104B00	10.5	7.9/9.6	037	037	037	037
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	038	038
	HIGH	102A00	6.5	4.9/6.0	037	037	037	037
		104B00	10.5	7.9/9.6	037	037	037	037
		105A00	16.0	12.0/14.7	037	038	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	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	037	037
		108A00,109A00	25.5	23.4	037	037	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	037	037
		108A00,109A00	25.5	23.4	037	037	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	037	037
		108A00,109A00	25.5	23.4	037	037	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

† Single phase voltage models have been discontinued per DOE regulations and are only available until current inventories are exhausted.

ELECTRIC HEAT - ELECTRICAL INFORMATION

Table 83 – RAS072

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd 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	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	038	038
	MED	102A00	6.5	4.9/6.0	-	-	-	-
		104B00	10.5	7.9/9.6	-	-	-	037
		105A00	16.0	12.0/14.7	037	038	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	038	038
	HIGH	102A00	6.5	4.9/6.0	-	-	-	-
		104B00	10.5	7.9/9.6	-	-	037	037
		105A00	16.0	12.0/14.7	038	038	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	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	037	037
		108A00,109A00	25.5	23.4	037	037	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	037	037
		108A00,109A00	25.5	23.4	037	037	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	037	037
		108A00,109A00	25.5	23.4	037	037	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

Table 84 – RAS072

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	102A00	6.5	4.9/6.0	037	037	037	037
		104B00	10.5	7.9/9.6	037	037	037	037
		105A00	16.0	12.0/14.7	037	037	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	038	038
	MED	102A00	6.5	4.9/6.0	037	037	037	037
		104B00	10.5	7.9/9.6	037	037	037	037
		105A00	16.0	12.0/14.7	037	038	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	038	038
	HIGH	102A00	6.5	4.9/6.0	037	037	037	037
		104B00	10.5	7.9/9.6	037	037	037	037
		105A00	16.0	12.0/14.7	038	038	038	038
		104B00,104B00	21.0	15.8/19.3	038	038	038	038
		104B00,105A00	26.5	19.9/24.3	038	038	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	037	037
		108A00,109A00	25.5	23.4	037	037	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	037	037
		108A00,109A00	25.5	23.4	037	037	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	037	037
		108A00,109A00	25.5	23.4	037	037	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

Table 85 – RAS091

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	042	042	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
	MED	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	042	043	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
	HIGH	117A00	10.4	7.8/9.6	042	042	042	043
		110A00	16.0	12.0/14.7	043	043	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
460-3-60	STD	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	042	042
		114A00,116A00	41.7	38.3	044	044	044	044
	MED	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	042	042
		114A00,116A00	41.7	38.3	044	044	044	044
	HIGH	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	044	044
		114A00,116A00	41.7	38.3	044	044	044	044
575-3-60	STD	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	042	042	044
	MED	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	042	042	044
	HIGH	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	044	044	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

Table 86 – RAS091

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	042	042	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
	MED	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	042	043	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
	HIGH	117A00	10.4	7.8/9.6	042	042	042	043
		110A00	16.0	12.0/14.7	043	043	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
460-3-60	STD	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	042	042
		114A00,116A00	41.7	38.3	044	044	044	044
	MED	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	042	042
		114A00,116A00	41.7	38.3	044	044	044	044
	HIGH	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	044	044
		114A00,116A00	41.7	38.3	044	044	044	044
575-3-60	STD	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	042	042	044
	MED	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	042	042	044
	HIGH	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	044	044	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

Table 87 – RAS090

2-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	042	042	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
	MED	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	042	043	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
	HIGH	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	043	043	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
460-3-60	STD	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	042	042
		114A00,116A00	41.7	38.3	044	044	044	044
	MED	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	042	042
		114A00,116A00	41.7	38.3	044	044	044	044
	HIGH	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	044	044
		114A00,116A00	41.7	38.3	044	044	044	044
575-3-60	STD	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	042	042	044
	MED	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	042	042	044
	HIGH	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	044	044	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

Table 88 – RAS090

2-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	042	042	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
	MED	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	042	043	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
	HIGH	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	043	043	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
460-3-60	STD	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	042	042
		114A00,116A00	41.7	38.3	044	044	044	044
	MED	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	042	042
		114A00,116A00	41.7	38.3	044	044	044	044
	HIGH	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	044	044
		114A00,116A00	41.7	38.3	044	044	044	044
575-3-60	STD	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	042	042	044
	MED	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	042	042	044
	HIGH	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	044	044	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

Table 89 – 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	042	042	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
	MED	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	042	043	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
	HIGH	117A00	10.4	7.8/9.6	042	042	042	042
		110A00	16.0	12.0/14.7	043	043	043	043
		111A00	24.8	18.6/22.8	043	043	043	043
		112A00	32.0	24.0/29.4	043	043	043	043
		112A00,117A00	42.4	31.8/38.9	045	045	045	045
460-3-60	STD	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	042	042
		114A00,116A00	41.7	38.3	044	044	044	044
	MED	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	042	042
		114A00,116A00	41.7	38.3	044	044	044	044
	HIGH	116A00	13.9	12.8	042	042	042	042
		113A00	16.5	15.2	042	042	042	042
		114A00	27.8	25.5	042	042	042	042
		115A00	33.0	30.3	042	042	044	044
		114A00,116A00	41.7	38.3	044	044	044	044
575-3-60	STD	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	042	042	044
	MED	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	044	042	044
	HIGH	118A00	17.0	17.0	042	042	042	042
		119A00	34.0	34.0	042	044	044	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

Table 90 – RAS101

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 203-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	049
		110A00	16.0	12.0/14.7	047	047	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	047	047	047	049
		110A00	16.0	12.0/14.7	047	049	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	047	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	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

Table 91 – RAS101

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 203-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	049
		110A00	16.0	12.0/14.7	047	047	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	047	047	047	049
		110A00	16.0	12.0/14.7	047	049	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	047	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	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

Table 92 – RAS102

2-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 203-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
		110A00	16.0	12.0/14.7	047	047	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	047	047	047	047
		110A00	16.0	12.0/14.7	047	049	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047	047	047
		110A00	16.0	12.0/14.7	049	049	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	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

Table 93 – RAS102

2-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 203-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
		110A00	16.0	12.0/14.7	047	047	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	047	047	047	047
		110A00	16.0	12.0/14.7	047	049	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047	047	047
		110A00	16.0	12.0/14.7	049	049	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	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

Table 94 – 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 203-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
		110A00	16.0	12.0/14.7	047	047	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	047	047	047	047
		110A00	16.0	12.0/14.7	047	049	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047	047	047
		110A00	16.0	12.0/14.7	049	049	049	049
		111A00	24.8	18.6/22.8	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		114A00	27.8	25.5	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	047	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	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

Table 95 – RAS121

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	049
		110A00	16.0	12.0/14.7	047	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	047	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	049	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	050	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	050	050
		118A00,119A00	51.0	51.0	050	050	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

Table 96 – RAS121

1-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	049
		110A00	16.0	12.0/14.7	047	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	047	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	049	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	050	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	050	050
		118A00,119A00	51.0	51.0	050	050	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

Table 97 – RAS120

2-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
		110A00	16.0	12.0/14.7	047	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	047	047	047	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	050	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	050	050
		118A00,119A00	51.0	51.0	050	050	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

Table 98 – RAS120

2-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
		110A00	16.0	12.0/14.7	047	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	047	047	047	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	050	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	050	050
		118A00,119A00	51.0	51.0	050	050	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

Table 99 – 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	047	047	047	047
		110A00	16.0	12.0/14.7	047	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	047	047	047	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	047	047	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	050	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	050	050
		118A00,119A00	51.0	51.0	050	050	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

Table 100 – RAS150

2-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	049	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	049	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	049	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	050	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	050	050
		118A00,119A00	51.0	51.0	050	050	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

Table 101 – RAS150

2-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	049	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	049	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	049	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	050	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	047	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	050	050
		118A00,119A00	51.0	51.0	050	050	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

Table 102 – 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	117A00	10.4	7.8/9.6	049	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	MED	117A00	10.4	7.8/9.6	049	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
	HIGH	117A00	10.4	7.8/9.6	049	049	049	049
		110A00	16.0	12.0/14.7	049	049	049	049
		112A00	32.0	24.0/29.4	049	049	049	049
		112A00,117A00	42.4	31.8/38.9	051	051	051	051
		112A00,110A00	50.0	37.6/45.9	051	051	051	051
460-3-60	STD	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	047
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	MED	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	047	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
	HIGH	116A00	13.9	12.8	047	047	047	047
		113A00	16.5	15.2	047	047	047	047
		115A00	33.0	30.3	047	047	050	050
		114A00,116A00	41.7	38.3	050	050	050	050
		115A00,113A00	50.0	45.9	050	050	050	050
575-3-60	STD	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	MED	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	047	050
		118A00,119A00	51.0	51.0	050	050	050	050
	HIGH	118A00	17.0	17.0	047	047	047	047
		119A00	34.0	34.0	047	050	050	050
		118A00,119A00	51.0	51.0	050	050	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

Table 103 – RAS180

2-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	291A00	16.5	12.4/15.2	049	049	049	049
		294A00	33.5	25.2/30.8	049	049	049	049
		288A00,294A00	43.5	32.7/40.0	051	051	051	051
		291A00,294A00	50.0	37.6/45.9	051	051	051	051
		294A00,294A00	67.0	50.3/61.5	053	053	053	053
	MED	291A00	16.5	12.4/15.2	049	049	049	049
		294A00	33.5	25.2/30.8	049	049	049	049
		288A00,294A00	43.5	32.7/40.0	051	051	051	051
		291A00,294A00	50.0	37.6/45.9	051	051	051	051
		294A00,294A00	67.0	50.3/61.5	053	053	053	053
	HIGH	291A00	16.5	12.4/15.2	049	049	049	049
		294A00	33.5	25.2/30.8	049	049	049	049
		288A00,294A00	43.5	32.7/40.0	051	051	051	051
		291A00,294A00	50.0	37.6/45.9	051	051	051	051
		294A00,294A00	67.0	50.3/61.5	053	053	053	053
460-3-60	STD	292A00	16.5	15.2	-	-	-	-
		295A00	33.5	30.8	047	047	047	050
		289A00,295A00	43.5	40.0	050	050	050	050
		292A00,295A00	50.0	45.9	050	050	050	050
		295A00,295A00	67.0	61.5	050	050	050	050
	MED	292A00	16.5	15.2	-	-	-	-
		295A00	33.5	30.8	047	047	047	050
		289A00,295A00	43.5	40.0	050	050	050	050
		292A00,295A00	50.0	45.9	050	050	050	050
		295A00,295A00	67.0	61.5	050	050	050	050
	HIGH	292A00	16.5	15.2	-	-	-	-
		295A00	33.5	30.8	050	050	050	050
		289A00,295A00	43.5	40.0	050	050	050	050
		292A00,295A00	50.0	45.9	050	050	050	050
		295A00,295A00	67.0	61.5	050	050	050	050
575-3-60	STD	293A00	16.5	15.2	-	-	-	-
		296A00	33.5	30.8	047	047	047	047
		290A00,296A00	43.5	40.0	047	050	047	050
		293A00,296A00	50.0	45.9	047	047	047	047
		296A00,296A00	67.0	61.5	050	050	050	050
	MED	293A00	16.5	15.2	-	-	-	-
		296A00	33.5	30.8	047	047	047	047
		290A00,296A00	43.5	40.0	047	050	047	050
		293A00,296A00	50.0	45.9	047	047	047	047
		296A00,296A00	67.0	61.5	050	050	050	050
	HIGH	293A00	16.5	15.2	-	-	-	-
		296A00	33.5	30.8	047	047	047	047
		290A00,296A00	43.5	40.0	050	050	050	050
		293A00,296A00	50.0	45.9	050	050	050	050
		296A00,296A00	67.0	61.5	050	050	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

Table 104 – RAS180

2-STAGE COOLING SINGLE 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	291A00	16.5	12.4/15.2	049	049	049	049
		294A00	33.5	25.2/30.8	049	049	049	049
		288A00,294A00	43.5	32.7/40.0	051	051	051	051
		291A00,294A00	50.0	37.6/45.9	051	051	051	051
		294A00,294A00	67.0	50.3/61.5	053	053	053	053
	MED	291A00	16.5	12.4/15.2	049	049	049	049
		294A00	33.5	25.2/30.8	049	049	049	049
		288A00,294A00	43.5	32.7/40.0	051	051	051	051
		291A00,294A00	50.0	37.6/45.9	051	051	051	051
		294A00,294A00	67.0	50.3/61.5	053	053	053	053
	HIGH	291A00	16.5	12.4/15.2	049	049	049	049
		294A00	33.5	25.2/30.8	049	049	049	049
		288A00,294A00	43.5	32.7/40.0	051	051	051	051
		291A00,294A00	50.0	37.6/45.9	051	051	051	051
		294A00,294A00	67.0	50.3/61.5	053	053	053	053
460-3-60	STD	292A00	16.5	15.2	-	-	-	-
		295A00	33.5	30.8	047	047	047	050
		289A00,295A00	43.5	40.0	050	050	050	050
		292A00,295A00	50.0	45.9	050	050	050	050
		295A00,295A00	67.0	61.5	050	050	050	050
	MED	292A00	16.5	15.2	-	-	-	-
		295A00	33.5	30.8	047	047	047	050
		289A00,295A00	43.5	40.0	050	050	050	050
		292A00,295A00	50.0	45.9	050	050	050	050
		295A00,295A00	67.0	61.5	050	050	050	050
	HIGH	292A00	16.5	15.2	-	-	-	-
		295A00	33.5	30.8	050	050	050	050
		289A00,295A00	43.5	40.0	050	050	050	050
		292A00,295A00	50.0	45.9	050	050	050	050
		295A00,295A00	67.0	61.5	050	050	050	050
575-3-60	STD	293A00	16.5	15.2	-	-	-	-
		296A00	33.5	30.8	047	047	047	047
		290A00,296A00	43.5	40.0	047	050	047	050
		293A00,296A00	50.0	45.9	047	047	047	047
		296A00,296A00	67.0	61.5	050	050	050	050
	MED	293A00	16.5	15.2	-	-	-	-
		296A00	33.5	30.8	047	047	047	047
		290A00,296A00	43.5	40.0	047	050	047	050
		293A00,296A00	50.0	45.9	047	047	047	047
		296A00,296A00	67.0	61.5	050	050	050	050
	HIGH	293A00	16.5	15.2	-	-	-	-
		296A00	33.5	30.8	047	047	047	047
		290A00,296A00	43.5	40.0	050	050	050	050
		293A00,296A00	50.0	45.9	050	050	050	050
		296A00,296A00	67.0	61.5	050	050	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

Table 105 – 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.		w/PWRD C.O.	
					NO P.E.	w/P.E. (pwrd fr/unit)	NO P.E.	w/P.E. (pwrd fr/unit)
208/ 230-3-60	STD	291A00	16.5	12.4/15.2	049	049	049	049
		294A00	33.5	25.2/30.8	049	049	049	049
		288A00,294A00	43.5	32.7/40.0	051	051	051	051
		291A00,294A00	50.0	37.6/45.9	051	051	051	051
		294A00,294A00	67.0	50.3/61.5	053	053	053	053
	MED	291A00	16.5	12.4/15.2	049	049	049	049
		294A00	33.5	25.2/30.8	049	049	049	049
		288A00,294A00	43.5	32.7/40.0	051	051	051	051
		291A00,294A00	50.0	37.6/45.9	051	051	051	051
		294A00,294A00	67.0	50.3/61.5	053	053	053	053
	HIGH	291A00	16.5	12.4/15.2	049	049	049	049
		294A00	33.5	25.2/30.8	049	049	049	049
		288A00,294A00	43.5	32.7/40.0	051	051	051	051
		291A00,294A00	50.0	37.6/45.9	051	051	051	051
		294A00,294A00	67.0	50.3/61.5	053	053	053	053
460-3-60	STD	292A00	16.5	15.2	-	-	-	-
		295A00	33.5	30.8	047	047	047	050
		289A00,295A00	43.5	40.0	050	050	050	050
		292A00,295A00	50.0	45.9	050	050	050	050
		295A00,295A00	67.0	61.5	050	050	050	050
	MED	292A00	16.5	15.2	-	-	-	-
		295A00	33.5	30.8	047	047	047	050
		289A00,295A00	43.5	40.0	050	050	050	050
		292A00,295A00	50.0	45.9	050	050	050	050
		295A00,295A00	67.0	61.5	050	050	050	050
	HIGH	292A00	16.5	15.2	-	-	-	-
		295A00	33.5	30.8	050	050	050	050
		289A00,295A00	43.5	40.0	050	050	050	050
		292A00,295A00	50.0	45.9	050	050	050	050
		295A00,295A00	67.0	61.5	050	050	050	050
575-3-60	STD	293A00	16.5	15.2	-	-	-	-
		296A00	33.5	30.8	047	047	047	047
		290A00,296A00	43.5	40.0	047	050	047	050
		293A00,296A00	50.0	45.9	047	047	047	050
		296A00,296A00	67.0	61.5	050	050	050	050
	MED	293A00	16.5	15.2	-	-	-	-
		296A00	33.5	30.8	047	047	047	047
		290A00,296A00	43.5	40.0	047	050	047	050
		293A00,296A00	50.0	45.9	047	047	047	050
		296A00,296A00	67.0	61.5	050	050	050	050
	HIGH	293A00	16.5	15.2	-	-	-	-
		296A00	33.5	30.8	047	047	047	047
		290A00,296A00	43.5	40.0	050	050	050	050
		293A00,296A00	50.0	45.9	050	050	050	050
		296A00,296A00	67.0	61.5	050	050	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

Table 106 – Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor

UNIT	NO M. V–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	–	–	–	–	–	–	–	–
		MED	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	25	30	25	101	27	30	27	103
			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	25/26	30/30	25/25	101/101	27/29	30/30	27/27	103/103
			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	30/32	30/35	27/29	101/101	32/35	35/35	29/32	103/103
			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	36/39	40/40	32/36	101/101	38/41	40/45	35/38	103/103
			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	40/45	40/45	37/41	101/101	43/47	45/50	39/43	103/103
			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	55/61	60/70	50/56	101/101	57/63	60/70	52/58	103/103
		MED	NONE	–	–	20	30	20	96	22	30	22	98	25	30	25	101	27	30	27	103
			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	25/26	30/30	25/25	101/101	27/29	30/30	27/27	103/103
			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	30/32	30/35	27/29	101/101	32/35	35/35	29/32	103/103
			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	36/39	40/40	32/36	101/101	38/41	40/45	35/38	103/103
			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	40/45	40/45	37/41	101/101	43/47	45/50	39/43	103/103
			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	55/61	60/70	50/56	101/101	57/63	60/70	52/58	103/103
		HIGH	NONE	–	–	22/22	30/30	22/21	134	24/24	30/30	24/24	136	27/26	30/30	27/27	139	29/28	35/35	29/29	141
			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	27/28	30/30	27/27	139/139	29/30	35/35	29/29	141/141
			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	32/34	35/35	29/31	139/139	34/37	35/40	31/33	141/141
			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	38/41	40/45	34/37	139/139	40/43	40/45	36/39	141/141
			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	42/46	45/50	39/42	139/139	45/49	45/50	41/45	141/141
			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	57/63	60/70	52/58	139/139	59/65	60/70	54/60	141/141

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NO M. V–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEAT-ER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAS036	460–3–60	STD	NONE	-	-	11	15	11	49	12	15	12	50	13	15	13	51	14	20	14	52
			106A	6.0	7.2	13	15	11	49	14	15	12	50	15	15	14	51	17	20	15	52
			107A	8.8	10.6	17	20	15	49	18	20	16	50	20	20	18	51	21	25	19	52
			108A	11.5	13.8	21	25	19	49	22	25	20	50	24	25	21	51	25	25	23	52
			109A	14.0	16.8	25	25	22	49	26	30	23	50	27	30	25	51	29	30	26	52
		MED	NONE	-	-	11	15	11	49	12	15	12	50	13	15	13	51	14	20	14	52
			106A	6.0	7.2	13	15	11	49	14	15	12	50	15	15	14	51	17	20	15	52
			107A	8.8	10.6	17	20	15	49	18	20	16	50	20	20	18	51	21	25	19	52
			108A	11.5	13.8	21	25	19	49	22	25	20	50	24	25	21	51	25	25	23	52
			109A	14.0	16.8	25	25	22	49	26	30	23	50	27	30	25	51	29	30	26	52
		HIGH	NONE	-	-	12	15	12	68	13	15	13	69	14	20	14	70	15	20	15	71
			106A	6.0	7.2	14	15	12	68	15	15	13	69	16	20	15	70	18	20	16	71
			107A	8.8	10.6	18	20	16	68	19	20	17	69	21	25	19	70	22	25	20	71
			108A	11.5	13.8	22	25	20	68	23	25	21	69	25	25	22	70	26	30	23	71
			109A	14.0	16.8	26	30	23	68	27	30	24	69	28	30	26	70	30	30	27	71
	575–3–60	STD	NONE	-	-	8	15	8	46	10	15	10	48	10	15	10	48	12	15	12	50
		MED	NONE	-	-	8	15	8	46	10	15	10	48	10	15	10	48	12	15	12	50
		HIGH	NONE	-	-	8	15	7	50	10	15	10	52	10	15	9	52	11	15	12	54

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NO M. V–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEAT-ER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	–	–	–	–	–	–	–	–
		MED	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	29	40	29	111	31	40	31	113
			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	30/32	40/40	29/29	111/111	32/35	40/40	31/32	113/113
			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	36/39	40/40	32/36	111/111	38/41	40/45	35/38	113/113
			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	55/61	60/70	50/56	111/111	57/63	60/70	52/58	113/113
			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	68/76	70/80	62/70	111/111	70/78	70/80	64/72	113/113
		MED	NONE	-	-	24	30	23	106	26	30	26	108	29	40	29	111	31	40	31	113
			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	30/32	40/40	29/29	111/111	32/35	40/40	31/32	113/113
			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	36/39	40/40	32/36	111/111	38/41	40/45	35/38	113/113
			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	55/61	60/70	50/56	111/111	57/63	60/70	52/58	113/113
			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	68/76	70/80	62/70	111/111	70/78	70/80	64/72	113/113
		HIGH	NONE	-	-	26/26	30/30	25/25	144	28/28	40/40	28/27	146	31/31	40/40	31/31	149	33/32	45/45	33/33	151
			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	32/34	40/40	31/31	149/149	34/37	45/45	33/33	151/151
			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	38/41	40/45	34/37	149/149	40/43	45/45	36/39	151/151
			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	57/63	60/70	52/58	149/149	59/65	60/70	54/60	151/151
			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	70/78	70/80	64/71	149/149	72/80	80/80	66/73	151/151

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NO M. V–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAS048	460–3–60	STD	NONE	-	-	12	15	11	52	13	15	12	53	14	15	14	54	15	20	15	55
			106A	6.0	7.2	13	15	11	52	14	15	12	53	15	15	14	54	17	20	15	55
			108A	11.5	13.8	21	25	19	52	22	25	20	53	24	25	21	54	25	25	23	55
			109A	14.0	16.8	25	25	22	52	26	30	23	53	27	30	25	54	29	30	26	55
			108A+108A	23.0	27.7	38	40	35	52	40	40	36	53	41	45	37	54	42	45	39	55
		MED	NONE	-	-	12	15	11	52	13	15	12	53	14	15	14	54	15	20	15	55
			106A	6.0	7.2	13	15	11	52	14	15	12	53	15	15	14	54	17	20	15	55
			108A	11.5	13.8	21	25	19	52	22	25	20	53	24	25	21	54	25	25	23	55
			109A	14.0	16.8	25	25	22	52	26	30	23	53	27	30	25	54	29	30	26	55
			108A+108A	23.0	27.7	38	40	35	52	40	40	36	53	41	45	37	54	42	45	39	55
		HIGH	NONE	-	-	12	15	12	71	13	15	13	72	15	20	14	73	16	20	16	74
			106A	6.0	7.2	14	15	12	71	15	15	13	72	16	20	15	73	18	20	16	74
			108A	11.5	13.8	22	25	20	71	23	25	21	72	25	25	22	73	26	30	23	74
			109A	14.0	16.8	26	30	23	71	27	30	24	72	28	30	26	73	30	30	27	74
			108A+108A	23.0	27.7	39	40	36	71	41	45	37	72	42	45	38	73	43	45	39	74
	575–3–60	STD	NONE	-	-	9	15	9	42	11	15	11	44	11	15	11	44	13	15	13	46
		MED	NONE	-	-	9	15	9	42	11	15	11	44	11	15	11	44	13	15	13	46
		HIGH	NONE	-	-	9	15	9	46	11	15	11	48	11	15	10	48	13	15	13	50

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NO M. V–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEAT-ER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	31	45	31	138	33	45	33	140
			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	31/32	45/45	31/31	138/138	33/35	45/45	33/33	140/140
			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	40/45	45/45	37/41	138/138	43/47	45/50	39/43	140/140
			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	55/61	60/70	50/56	138/138	57/63	60/70	52/58	140/140
			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	68/76	70/80	62/70	138/138	70/78	70/80	64/72	140/140
			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	82/93	90/100	75/85	138/138	84/95	90/100	77/87	140/140
		MED	NONE	-	-	28/28	40/40	28/27	171	30/30	45/45	30/30	173	33/33	45/45	33/33	176	35/35	50/50	35/35	178
			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	33/34	45/45	33/33	176/176	35/37	50/50	35/35	178/178
			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	42/46	45/50	39/42	176/176	45/49	50/50	41/45	178/178
			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	57/63	60/70	52/58	176/176	59/65	60/70	54/60	178/178
			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	70/78	70/80	64/71	176/176	72/80	80/80	66/73	178/178
			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	84/95	90/100	77/87	176/176	86/97	90/100	79/89	178/178
		HIGH	NONE	-	-	30/30	45/40	29/29	186	32/32	45/45	32/31	188	35/35	45/45	35/35	191	37/36	50/50	37/37	193
			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	35/36	45/45	35/35	191/191	37/39	50/50	37/37	193/193
			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	44/48	45/50	40/44	191/191	47/51	50/60	43/46	193/193
			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	59/65	60/70	54/59	191/191	61/67	70/70	56/62	193/193
			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	72/80	80/80	66/73	191/191	74/82	80/90	68/75	193/193
			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	86/97	90/100	79/88	191/191	88/99	90/100	81/91	193/193

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAS060	460-3-60	STD	NONE	-	-	13	20	13	63	14	20	14	64	16	20	15	65	17	20	16	66
			106A	6.0	7.2	13	20	13	63	14	20	14	64	16	20	15	65	17	20	16	66
			108A	11.5	13.8	21	25	19	63	22	25	20	64	24	25	21	65	25	25	23	66
			109A	14.0	16.8	25	25	22	63	26	30	23	64	27	30	25	65	29	30	26	66
			108A+108A	23.0	27.7	38	40	35	63	40	40	36	64	41	45	37	65	42	45	39	66
			108A+109A	25.5	30.7	42	45	38	63	43	45	39	64	45	45	41	65	46	50	42	66
		MED	NONE	-	-	14	20	14	82	15	20	15	83	16	20	16	84	17	20	17	85
			106A	6.0	7.2	14	20	14	82	15	20	15	83	16	20	16	84	18	20	17	85
			108A	11.5	13.8	22	25	20	82	23	25	21	83	25	25	22	84	26	30	23	85
			109A	14.0	16.8	26	30	23	82	27	30	24	83	28	30	26	84	30	30	27	85
			108A+108A	23.0	27.7	39	40	36	82	41	45	37	83	42	45	38	84	43	45	39	85
			108A+109A	25.5	30.7	43	45	39	82	44	45	40	83	46	50	42	84	47	50	43	85
		HIGH	NONE	-	-	15	20	15	90	16	20	16	91	17	20	17	92	18	25	18	93
			106A	6.0	7.2	15	20	15	90	16	20	16	91	17	20	17	92	19	25	18	93
			108A	11.5	13.8	23	25	21	90	24	25	22	91	26	30	23	92	27	30	24	93
			109A	14.0	16.8	27	30	24	90	28	30	25	91	29	30	27	92	31	35	28	93
			108A+108A	23.0	27.7	40	40	37	90	42	45	38	91	43	45	39	92	44	45	40	93
			108A+109A	25.5	30.7	44	45	40	90	45	45	41	91	47	50	43	92	48	50	44	93
	575-3-60	STD	NONE	-	-	11	15	10	48	13	15	12	50	12	15	12	50	14	20	14	52
		MED	NONE	-	-	10	15	10	52	12	15	12	54	12	15	12	54	14	15	14	56
		HIGH	NONE	-	-	11	15	11	63	13	15	13	65	13	15	13	65	15	20	15	67

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.) (Units Produced On or After 02/09/2015)

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAS072	208/230-3-60	STD	NONE	-	-	33/33	50/50	32/32	197	35/35	50/50	34/34	199	38/38	50/50	38/37	202	40/40	50/50	40/40	204
			102A	4.9/6.5	13.6/15.6	33/33	50/50	32/32	197/197	35/35	50/50	34/34	199/199	38/38	50/50	38/37	202/202	40/40	50/50	40/40	204/204
			104B	7.9/10.5	21.9/25.3	36/40	50/50	33/37	197/197	39/43	50/50	35/39	199/199	42/46	50/50	39/42	202/202	45/49	50/50	41/45	204/204
			105A	12.0/16.0	33.4/38.5	51/57	60/60	46/52	197/197	53/59	60/60	49/54	199/199	57/63	60/70	52/58	202/202	59/65	60/70	54/60	204/204
			104B+104B	15.8/21.0	43.8/50.5	64/72	70/80	58/66	197/197	66/74	70/80	60/68	199/199	70/78	70/80	64/71	202/202	72/80	80/80	66/73	204/204
			104B+105A	19.9/26.5	55.2/63.8	78/89	80/90	71/81	197/197	80/91	90/100	74/83	199/199	84/95	90/100	77/87	202/202	86/97	90/100	79/89	204/204
		MED	NONE	-	-	35/35	50/50	34/34	212	37/37	50/50	36/36	214	40/40	50/50	39/39	217	42/41	60/60	42/42	219
			102A	4.9/6.5	13.6/15.6	35/35	50/50	34/34	212/212	37/37	50/50	36/36	214/214	40/40	50/50	39/39	217/217	42/41	60/60	42/42	219/219
			104B	7.9/10.5	21.9/25.3	38/42	50/50	35/39	212/212	41/45	50/50	37/41	214/214	44/48	50/50	40/44	217/217	47/51	60/60	43/46	219/219
			105A	12.0/16.0	33.4/38.5	53/59	60/60	48/54	212/212	55/61	60/70	50/56	214/214	59/65	60/70	54/59	217/217	61/67	70/70	56/62	219/219
			104B+104B	15.8/21.0	43.8/50.5	66/74	70/80	60/68	212/212	68/76	70/80	62/70	214/214	72/80	80/80	66/73	217/217	74/82	80/90	68/75	219/219
			104B+105A	19.9/26.5	55.2/63.8	80/91	80/100	73/83	212/212	82/93	90/100	75/85	214/214	86/97	90/100	79/88	217/217	88/99	90/100	81/91	219/219
		HIGH	NONE	-	-	37	50	36	226	39	50	39	228	42	60	42	231	44	60	44	233
			102A	4.9/6.5	13.6/15.6	37/37	50/50	36/36	226/226	39/39	50/50	39/39	228/228	42/42	60/60	42/42	231/231	44/44	60/60	44/44	233/233
			104B	7.9/10.5	21.9/25.3	41/45	50/50	37/41	226/226	43/48	50/50	40/43	228/228	47/51	60/60	43/47	231/231	49/54	60/60	45/49	233/233
			105A	12.0/16.0	33.4/38.5	55/62	60/70	51/56	226/226	58/64	60/70	53/59	228/228	61/68	70/70	56/62	231/231	64/70	70/70	58/64	233/233
			104B+104B	15.8/21.0	43.8/50.5	68/77	70/80	63/70	226/226	71/79	80/80	65/72	228/228	74/83	80/90	68/76	231/231	77/85	80/90	70/78	233/233
			104B+105A	19.9/26.5	55.2/63.8	83/93	90/100	76/86	226/226	85/96	90/100	78/88	228/228	89/99	90/100	81/91	231/231	91/102	100/110	83/93	233/233
	460-3-60	STD	NONE	-	-	15	20	14	96	16	20	15	97	17	20	17	98	18	25	18	99
			106A	6.0	7.2	15	20	14	96	16	20	15	97	17	20	17	98	18	25	18	99
			108A	11.5	13.8	22	25	20	96	23	25	21	97	25	25	22	98	26	30	23	99
			109A	14.0	16.8	26	30	23	96	27	30	24	97	28	30	26	98	30	30	27	99
			108A+108A	23.0	27.7	39	40	36	96	41	45	37	97	42	45	38	98	43	45	39	99
			108A+109A	25.5	30.7	43	45	39	96	44	45	40	97	46	50	42	98	47	50	43	99
		MED	NONE	-	-	16	20	15	104	17	20	16	105	18	25	18	106	19	25	19	107
			106A	6.0	7.2	16	20	15	104	17	20	16	105	18	25	18	106	19	25	19	107
			108A	11.5	13.8	23	25	21	104	24	25	22	105	26	30	23	106	27	30	24	107
			109A	14.0	16.8	27	30	24	104	28	30	25	105	29	30	27	106	31	35	28	107
			108A+108A	23.0	27.7	40	40	37	104	42	45	38	105	43	45	39	106	44	45	40	107
			108A+109A	25.5	30.7	44	45	40	104	45	45	41	105	47	50	43	106	48	50	44	107
		HIGH	NONE	-	-	17	20	16	111	18	25	18	112	19	25	19	113	20	25	20	114
			106A	6.0	7.2	17	20	16	111	18	25	18	112	19	25	19	113	20	25	20	114
			108A	11.5	13.8	24	25	22	111	26	30	23	112	27	30	24	113	28	30	26	114
			109A	14.0	16.8	28	30	25	111	29	30	27	112	31	35	28	113	32	35	29	114
			108A+108A	23.0	27.7	42	45	38	111	43	45	39	112	44	45	40	113	46	50	42	114
			108A+109A	25.5	30.7	45	50	41	111	47	50	43	112	48	50	44	113	49	50	45	114
	575-3-60	STD	NONE	-	-	11	15	11	68	13	15	13	70	13	15	13	70	15	20	15	72
		MED	NONE	-	-	12	15	12	79	14	20	14	81	14	15	13	81	16	20	16	83
		HIGH	NONE	-	-	12	15	12	79	14	20	14	81	14	15	13	81	16	20	16	83

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.) (Units Produced On or Prior to 02/08/2015)

UNIT	NO M. V–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAS072	208/230–3–60	STD	NONE	-	-	33/32	50/50	32/31	184	34/34	50/50	34/33	186	37/37	50/50	37/37	189	39/39	50/50	39/39	191
			102A	4.9/6.5	13.6/15.6	33/32	50/50	32/31	184/184	35/35	50/50	34/33	186/186	37/37	50/50	37/37	189/189	39/39	50/50	39/39	191/191
			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	42/46	50/50	39/42	189/189	45/49	50/50	41/45	191/191
			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	57/63	60/70	52/58	189/189	59/65	60/70	54/60	191/191
			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	70/78	70/80	64/71	189/189	72/80	80/80	66/73	191/191
			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	84/95	90/100	77/87	189/189	86/97	90/100	79/89	191/191
		MED	NONE	-	-	34/34	50/50	33/33	199	36/36	50/50	35/35	201	39/39	50/50	39/39	204	41/41	50/50	41/41	206
			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	39/39	50/50	39/39	204/204	41/41	50/50	41/41	206/206
			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	44/48	50/50	40/44	204/204	47/51	50/60	43/46	206/206
			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	59/65	60/70	54/59	204/204	61/67	70/70	56/62	206/206
			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	72/80	80/80	66/73	204/204	74/82	80/90	68/75	206/206
			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	86/97	90/100	79/88	204/204	88/99	90/100	81/91	206/206
		HIGH	NONE	-	-	36	50	36	213	38	50	38	215	41	50	41	218	43	60	43	220
			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	41/41	50/50	41/41	218/218	43/43	60/60	43/43	220/220
			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	47/51	50/60	43/47	218/218	49/54	60/60	45/49	220/220
			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	61/68	70/70	56/62	218/218	64/70	70/70	58/64	220/220
			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	74/83	80/90	68/76	218/218	77/85	80/90	70/78	220/220
			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	89/99	90/100	81/91	218/218	91/102	100/110	83/93	220/220
	460–3–60	STD	NONE	-	-	17	25	16	92	18	25	17	93	19	25	19	94	20	25	20	95
			106A	6.0	7.2	17	25	16	92	18	25	17	93	19	25	19	94	20	25	20	95
			108A	11.5	13.8	22	25	20	92	23	25	21	93	25	25	22	94	26	30	23	95
			109A	14.0	16.8	26	30	23	92	27	30	24	93	28	30	26	94	30	30	27	95
			108A+108A	23.0	27.7	39	40	36	92	41	45	37	93	42	45	38	94	43	45	39	95
			108A+109A	25.5	30.7	43	45	39	92	44	45	40	93	46	50	42	94	47	50	43	95
		MED	NONE	-	-	18	25	17	100	19	25	18	101	20	25	19	102	21	30	21	103
			106A	6.0	7.2	18	25	17	100	19	25	18	101	20	25	19	102	21	30	21	103
			108A	11.5	13.8	23	25	21	100	24	25	22	101	26	30	23	102	27	30	24	103
			109A	14.0	16.8	27	30	24	100	28	30	25	101	29	30	27	102	31	35	28	103
			108A+108A	23.0	27.7	40	40	37	100	42	45	38	101	43	45	39	102	44	45	40	103
			108A+109A	25.5	30.7	44	45	40	100	45	45	41	101	47	50	43	102	48	50	44	103
		HIGH	NONE	-	-	19	25	18	107	20	25	19	108	21	30	21	109	22	30	22	110
			106A	6.0	7.2	19	25	18	107	20	25	19	108	21	30	21	109	22	30	22	110
			108A	11.5	13.8	24	25	22	107	26	30	23	108	27	30	24	109	28	30	26	110
			109A	14.0	16.8	28	30	25	107	29	30	27	108	31	35	28	109	32	35	29	110
			108A+108A	23.0	27.7	42	45	38	107	43	45	39	108	44	45	40	109	46	50	42	110
			108A+109A	25.5	30.7	45	50	41	107	47	50	43	108	48	50	44	109	49	50	45	110
	575–3–60	STD	NONE	-	-	12	15	12	63	14	20	14	65	14	20	13	65	16	20	16	67
		MED	NONE	-	-	13	20	12	74	15	20	15	76	15	20	14	76	17	20	17	78
		HIGH	NONE	-	-	13	20	12	74	15	20	15	76	15	20	14	76	17	20	17	78

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NO M. V–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	45/44	60/60	44/43	213	49/48	60/60	48/48	217
			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	45/44	60/60	44/43	213/213	49/49	60/60	48/48	217/217
			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	55/61	60/70	50/55	213/213	59/65	60/70	54/60	217/217
			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	78/87	80/90	71/80	213/213	82/92	90/100	75/84	217/217
			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	96/109	100/110	88/100	213/213	101/114	110/125	93/104	217/217
			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	123/140	125/150	113/128	213/213	128/145	150/150	118/133	217/217
		MED	NONE	-	-	43/43	60/60	42/42	244	47/47	60/60	46/46	248	48/48	60/60	47/47	249	52/52	60/60	52/52	253
			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	48/48	60/60	47/47	249/249	52/53	60/60	52/52	253/253
			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	59/65	60/70	54/59	249/249	63/70	70/70	58/64	253/253
			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	82/91	90/100	75/84	249/249	86/96	90/100	79/88	253/253
			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	100/113	100/125	92/104	249/249	105/118	110/125	96/108	253/253
			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	127/144	150/150	117/132	249/249	132/149	150/150	121/137	253/253
		HIGH	NONE	-	-	48/47	60/60	48/47	260	52/51	60/60	52/51	264	53/52	60/60	53/52	265	57/56	80/80	58/57	269
			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	53/54	60/60	53/52	265/265	57/58	80/80	58/57	269/269
			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	65/70	70/70	60/64	265/265	70/75	80/80	64/69	269/269
			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	88/97	90/100	81/89	265/265	93/102	100/110	85/93	269/269
			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	107/119	110/125	98/109	265/265	112/123	125/125	102/113	269/269
			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	134/150	150/150	123/137	265/265	139/155	150/175	127/142	269/269
	460–3–60	STD	NONE	-	-	20	30	19	122	22	30	21	124	22	30	21	124	24	30	23	126
			116A	13.9	16.7	24	30	22	122	27	30	24	124	27	30	25	124	29	30	27	126
			113A	16.5	19.8	28	30	26	122	31	35	28	124	31	35	28	124	33	35	30	126
			114A	27.8	33.4	45	45	41	122	48	50	43	124	48	50	44	124	50	50	46	126
			115A	33.0	39.7	53	60	49	122	55	60	51	124	56	60	51	124	58	60	53	126
			114A+116A	41.7	50.2	66	70	61	122	69	70	63	124	69	70	63	124	71	80	65	126
		MED	NONE	-	-	22	30	21	140	23	30	23	142	24	30	23	142	26	30	25	144
			116A	13.9	16.7	27	30	24	140	29	30	26	142	29	30	27	142	32	35	29	144
			113A	16.5	19.8	30	30	28	140	33	35	30	142	33	35	30	142	35	40	32	144
			114A	27.8	33.4	47	50	43	140	50	50	45	142	50	50	46	142	52	60	48	144
			115A	33.0	39.7	55	60	50	140	58	60	53	142	58	60	53	142	60	60	55	144
			114A+116A	41.7	50.2	68	70	63	140	71	80	65	142	71	80	65	142	73	80	67	144
		HIGH	NONE	-	-	24	30	23	148	26	30	25	150	26	30	26	150	28	35	28	152
			116A	13.9	16.7	29	30	27	148	32	35	29	150	32	35	29	150	34	35	31	152
			113A	16.5	19.8	33	35	30	148	35	35	32	150	36	40	33	150	38	40	35	152
			114A	27.8	33.4	50	50	46	148	52	60	48	150	53	60	48	150	55	60	50	152
			115A	33.0	39.7	58	60	53	148	60	60	55	150	61	70	56	150	63	70	58	152
			114A+116A	41.7	50.2	71	80	65	148	73	80	67	150	74	80	68	150	76	80	70	152
	575–3–60	STD	NONE	-	-	15	20	14	89	18	25	18	93	16	20	16	91	20	25	20	95
			118A	17.0	20.4	28	30	25	89	33	35	30	93	30	30	27	91	35	35	32	95
			119A	34.0	40.9	54	60	49	89	58	60	53	93	56	60	51	91	60	70	55	95
		MED	NONE	-	-	16	20	15	104	20	25	19	108	17	25	17	106	21	25	21	110
			118A	17.0	20.4	29	30	27	104	34	35	31	108	32	35	29	106	36	40	33	110
			119A	34.0	40.9	55	60	50	104	60	60	55	108	57	60	52	106	62	70	57	110
		HIGH	NONE	-	-	19	25	18	118	22	30	23	122	20	25	20	120	24	30	24	124
			118A	17.0	20.4	33	35	30	118	38	40	34	122	35	35	32	120	40	40	36	124
			119A	34.0	40.9	59	60	53	118	63	70	58	122	61	70	55	120	65	70	60	124

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAS090	208/230-3-60	STD	NONE	-	-	39/39	50/50	41/40	210	43/43	50/50	45/45	214	44/44	50/50	46/46	215	48/48	60/60	51/50	219
			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	44/44	50/50	46/46	215/215	48/49	60/60	51/50	219/219
			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	55/61	60/70	50/55	215/215	59/65	60/70	54/60	219/219
			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	78/87	80/90	71/80	215/215	82/92	90/100	75/84	219/219
			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	96/109	100/110	88/100	215/215	101/114	110/125	93/104	219/219
			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	123/140	125/150	113/128	215/215	128/145	150/150	118/133	219/219
		MED	NONE	-	-	42/42	50/50	44/44	246	46/46	50/50	49/49	250	47/47	60/60	50/50	251	51/51	60/60	54/54	255
			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	47/48	60/60	50/50	251/251	51/53	60/60	54/54	255/255
			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	59/65	60/70	54/59	251/251	63/70	70/70	58/64	255/255
			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	82/91	90/100	75/84	251/251	86/96	90/100	79/88	255/255
			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	100/113	100/125	92/104	251/251	105/118	110/125	96/108	255/255
			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	127/144	150/150	117/132	251/251	132/149	150/150	121/137	255/255
		HIGH	NONE	-	-	48/47	60/50	50/49	262	51/51	60/60	55/54	266	52/52	60/60	56/55	267	56/55	60/60	60/59	271
			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	52/54	60/60	56/55	267/267	56/58	60/60	60/59	271/271
			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	65/70	70/70	60/64	267/267	70/75	70/80	64/69	271/271
			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	88/97	90/100	81/89	267/267	93/102	100/110	85/93	271/271
			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	107/119	110/125	98/109	267/267	112/123	125/125	102/113	271/271
			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	134/150	150/150	123/137	267/267	139/155	150/175	127/142	271/271
	460-3-60	STD	NONE	-	-	18	20	19	104	20	25	21	106	20	25	21	106	22	25	23	108
			116A	13.9	16.7	24	25	22	104	27	30	24	106	27	30	25	106	29	30	27	108
			113A	16.5	19.8	28	30	26	104	31	35	28	106	31	35	28	106	33	35	30	108
			114A	27.8	33.4	45	45	41	104	48	50	43	106	48	50	44	106	50	50	46	108
			115A	33.0	39.7	53	60	49	104	55	60	51	106	56	60	51	106	58	60	53	108
			114A+116A	41.7	50.2	66	70	61	104	69	70	63	106	69	70	63	106	71	80	65	108
		MED	NONE	-	-	20	25	21	122	22	25	23	124	22	25	23	124	24	30	25	126
			116A	13.9	16.7	27	30	24	122	29	30	26	124	29	30	27	124	32	35	29	126
			113A	16.5	19.8	30	30	28	122	33	35	30	124	33	35	30	124	35	40	32	126
			114A	27.8	33.4	47	50	43	122	50	50	45	124	50	50	46	124	52	60	48	126
			115A	33.0	39.7	55	60	50	122	58	60	53	124	58	60	53	124	60	60	55	126
			114A+116A	41.7	50.2	68	70	63	122	71	80	65	124	71	80	65	124	73	80	67	126
		HIGH	NONE	-	-	22	25	23	130	24	30	25	132	24	30	26	132	26	30	28	134
			116A	13.9	16.7	29	30	27	130	32	35	29	132	32	35	29	132	34	35	31	134
			113A	16.5	19.8	33	35	30	130	35	35	32	132	36	40	33	132	38	40	35	134
			114A	27.8	33.4	50	50	46	130	52	60	48	132	53	60	48	132	55	60	50	134
			115A	33.0	39.7	58	60	53	130	60	60	55	132	61	70	56	132	63	70	58	134
			114A+116A	41.7	50.2	71	80	65	130	73	80	67	132	74	80	68	132	76	80	70	134
	575-3-60	STD	NONE	-	-	13	15	13	77	17	20	17	81	14	15	15	79	18	20	19	83
			118A	17.0	20.4	28	30	25	77	33	35	30	81	30	30	27	79	35	35	32	83
			119A	34.0	40.9	54	60	49	77	58	60	53	81	56	60	51	79	60	70	55	83
		MED	NONE	-	-	14	15	14	92	18	20	19	96	16	20	16	94	19	25	21	98
			118A	17.0	20.4	29	30	27	92	34	35	31	96	32	35	29	94	36	40	33	98
			119A	34.0	40.9	55	60	50	92	60	60	55	96	57	60	52	94	62	70	57	98
		HIGH	NONE	-	-	17	20	17	106	21	25	22	110	19	20	19	108	23	25	24	112
			118A	17.0	20.4	33	35	30	106	38	40	34	110	35	35	32	108	40	40	36	112
			119A	34.0	40.9	59	60	53	106	63	70	58	110	61	70	55	108	65	70	60	112

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAS101	208/230-3-60	STD	NONE	-	-	43/43	60/60	41/41	235	47/47	60/60	46/45	239	48/48	60/60	47/46	240	52/51	60/60	51/51	244
			117A	7.8/10.4	21.7/25.0	43/43	60/60	41/41	235/235	47/47	60/60	46/45	239/239	48/48	60/60	47/46	240/240	52/51	60/60	51/51	244/244
			110A	12.0/16.0	33.4/38.5	49/55	60/60	44/50	235/235	53/59	60/60	49/54	239/239	55/61	60/70	50/55	240/240	59/65	60/70	54/60	244/244
			111A	18.6/24.8	51.7/59.7	72/81	80/90	65/74	235/235	76/86	80/90	70/79	239/239	78/87	80/90	71/80	240/240	82/92	90/100	75/84	244/244
			112A	24.0/32.0	66.7/77.0	90/103	90/110	83/94	235/235	95/108	100/110	87/99	239/239	96/109	100/110	88/100	240/240	101/114	110/125	93/104	244/244
			112A+117A	31.8/42.4	88.4/102.0	117/134	125/150	108/123	235/235	122/139	125/150	112/127	239/239	123/140	125/150	113/128	240/240	128/145	150/150	118/133	244/244
		MED	NONE	-	-	45/45	60/60	43/43	256	49/48	60/60	47/47	260	50/49	60/60	49/48	261	53/53	60/60	53/53	265
			117A	7.8/10.4	21.7/25.0	45/45	60/60	43/43	256/256	49/48	60/60	47/47	260/260	50/49	60/60	49/48	261/261	53/53	60/60	53/53	265/265
			110A	12.0/16.0	33.4/38.5	51/57	60/60	46/52	256/256	56/62	60/70	51/56	260/260	57/63	60/70	52/58	261/261	62/68	80/80	56/62	265/265
			111A	18.6/24.8	51.7/59.7	74/83	80/90	67/76	256/256	78/88	80/90	72/81	260/260	80/89	80/90	73/82	261/261	84/94	90/100	77/86	265/265
			112A	24.0/32.0	66.7/77.0	92/105	100/110	85/96	256/256	97/110	100/110	89/101	260/260	98/111	100/125	90/102	261/261	103/116	110/125	95/106	265/265
			112A+117A	31.8/42.4	88.4/102.0	120/136	125/150	110/125	256/256	124/141	125/150	114/129	260/260	126/142	150/150	115/131	261/261	130/147	150/150	119/135	265/265
		HIGH	NONE	-	-	49	60	47	285	52	60	52	289	53	60	53	290	57	80	57	294
			117A	7.8/10.4	21.7/25.0	49/49	60/60	47/47	285/285	52/52	60/60	52/52	289/289	53/53	60/60	53/53	290/290	57/57	80/80	57/57	294/294
			110A	12.0/16.0	33.4/38.5	55/62	60/70	51/56	285/285	60/67	60/60	55/61	289/289	61/68	80/80	56/62	290/290	66/73	80/80	60/66	294/294
			111A	18.6/24.8	51.7/59.7	78/88	80/90	72/81	285/285	83/93	90/100	76/85	289/289	84/94	90/100	77/86	290/290	89/99	90/100	82/91	294/294
			112A	24.0/32.0	66.7/77.0	97/110	100/110	89/101	285/285	102/115	110/125	93/105	289/289	103/116	110/125	94/106	290/290	108/121	110/125	99/111	294/294
			112A+117A	31.8/42.4	88.4/102.0	124/141	125/150	114/129	285/285	129/146	150/150	118/134	289/289	130/147	150/150	119/135	290/290	135/152	150/175	124/139	294/294
	460-3-60	STD	NONE	-	-	21	30	19	122	22	30	22	124	23	30	22	124	25	30	24	126
			116A	13.9	16.7	24	30	22	122	27	30	24	124	27	30	25	124	29	30	27	126
			113A	16.5	19.8	28	30	26	122	31	35	28	124	31	35	28	124	33	35	30	126
			114A	27.8	33.4	45	45	41	122	48	50	43	124	48	50	44	124	50	50	46	126
			115A	33.0	39.7	53	60	49	122	55	60	51	124	56	60	51	124	58	60	53	126
			114A+116A	41.7	50.2	66	70	61	122	69	70	63	124	69	70	63	124	71	80	65	126
		MED	NONE	-	-	21	30	20	132	23	30	23	134	24	30	23	134	25	30	25	136
			116A	13.9	16.7	26	30	23	132	28	30	25	134	28	30	26	134	31	35	28	136
			113A	16.5	19.8	29	30	27	132	32	35	29	134	32	35	29	134	34	35	31	136
			114A	27.8	33.4	46	50	42	132	49	50	44	134	49	50	45	134	51	60	47	136
			115A	33.0	39.7	54	60	50	132	57	60	52	134	57	60	52	134	59	60	54	136
			114A+116A	41.7	50.2	67	70	62	132	70	70	64	134	70	70	64	134	72	80	66	136
		HIGH	NONE	-	-	23	30	23	147	25	30	25	149	26	30	25	149	27	35	27	151
			116A	13.9	16.7	28	30	25	147	30	30	27	149	31	35	28	149	33	35	30	151
			113A	16.5	19.8	32	35	29	147	34	35	31	149	35	35	31	149	37	40	33	151
			114A	27.8	33.4	49	50	45	147	51	60	47	149	52	60	47	149	54	60	49	151
			115A	33.0	39.7	57	60	52	147	59	60	54	149	59	60	54	149	62	70	56	151
			114A+116A	41.7	50.2	70	70	64	147	72	80	66	149	73	80	66	149	75	80	68	151
	575-3-60	STD	NONE	-	-	15	20	14	89	19	25	19	93	17	25	16	91	21	25	21	95
			118A	17.0	20.4	28	30	25	89	33	35	30	93	30	30	27	91	35	35	32	95
			119A	34.0	40.9	54	60	49	89	58	60	53	93	56	60	51	91	60	70	55	95
		MED	NONE	-	-	16	20	15	93	19	25	19	97	17	25	17	95	21	30	21	99
			118A	17.0	20.4	28	30	26	93	33	35	30	97	31	35	28	95	35	35	32	99
			119A	34.0	40.9	54	60	49	93	59	60	54	97	56	60	51	95	61	70	56	99
		HIGH	NONE	-	-	16	25	16	104	20	25	20	108	18	25	18	106	22	30	22	110
			118A	17.0	20.4	29	30	27	104	34	35	31	108	32	35	29	106	36	40	33	110
			119A	34.0	40.9	55	60	50	104	60	60	55	108	57	60	52	106	62	70	57	110

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	45/45	50/50	47/47	230	49/49	60/60	52/51	234
			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	45/45	50/50	47/47	230/230	49/49	60/60	52/51	234/234
			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	55/61	60/70	50/55	230/230	59/65	60/70	54/60	234/234
			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	78/87	80/90	71/80	230/230	82/92	90/100	75/84	234/234
			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	96/109	100/110	88/100	230/230	101/114	110/125	93/104	234/234
			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	123/140	125/150	113/128	230/230	128/145	150/150	118/133	234/234
		MED	NONE	-	-	42/42	50/50	44/44	246	46/46	60/50	48/48	250	47/47	60/60	49/49	251	51/51	60/60	54/53	255
			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	47/47	60/60	49/49	251/251	51/51	60/60	54/53	255/255
			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	57/63	60/70	52/58	251/251	62/68	70/70	56/62	255/255
			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	80/89	80/90	73/82	251/251	84/94	90/100	77/86	255/255
			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	98/111	100/125	90/102	251/251	103/116	110/125	95/106	255/255
			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	126/142	150/150	115/131	251/251	130/147	150/150	119/135	255/255
		HIGH	NONE	-	-	46	50	48	275	50	60	52	279	51	60	54	280	54	60	58	284
			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	51/51	60/60	54/54	280/280	54/56	60/60	58/58	284/284
			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	61/68	70/70	56/62	280/280	66/73	70/80	60/66	284/284
			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	84/94	90/100	77/86	280/280	89/99	90/100	82/91	284/284
			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	103/116	110/125	94/106	280/280	108/121	110/125	99/111	284/284
			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	130/147	150/150	119/135	280/280	135/152	150/175	124/139	284/284
	460-3-60	STD	NONE	-	-	19	20	19	118	20	25	21	120	21	25	22	120	23	25	24	122
			116A	13.9	16.7	24	25	22	118	27	30	24	120	27	30	25	120	29	30	27	122
			113A	16.5	19.8	28	30	26	118	31	35	28	120	31	35	28	120	33	35	30	122
			114A	27.8	33.4	45	45	41	118	48	50	43	120	48	50	44	120	50	50	46	122
			115A	33.0	39.7	53	60	49	118	55	60	51	120	56	60	51	120	58	60	53	122
			114A+116A	41.7	50.2	66	70	61	118	69	70	63	120	69	70	63	120	71	80	65	122
		MED	NONE	-	-	20	25	20	128	21	25	22	130	22	25	23	130	24	25	25	132
			116A	13.9	16.7	26	30	23	128	28	30	25	130	28	30	26	130	31	35	28	132
			113A	16.5	19.8	29	30	27	128	32	35	29	130	32	35	29	130	34	35	31	132
			114A	27.8	33.4	46	50	42	128	49	50	44	130	49	50	45	130	51	60	47	132
			115A	33.0	39.7	54	60	50	128	57	60	52	130	57	60	52	130	59	60	54	132
			114A+116A	41.7	50.2	67	70	62	128	70	70	64	130	70	70	64	130	72	80	66	132
		HIGH	NONE	-	-	21	25	22	143	23	25	24	145	24	25	25	145	25	30	27	147
			116A	13.9	16.7	28	30	25	143	30	30	27	145	31	35	28	145	33	35	30	147
			113A	16.5	19.8	32	35	29	143	34	35	31	145	35	35	31	145	37	40	33	147
			114A	27.8	33.4	49	50	45	143	51	60	47	145	52	60	47	145	54	60	49	147
			115A	33.0	39.7	57	60	52	143	59	60	54	145	59	60	54	145	62	70	56	147
			114A+116A	41.7	50.2	70	70	64	143	72	80	66	145	73	80	66	145	75	80	68	147
	575-3-60	STD	NONE	-	-	16	20	16	85	19	25	20	89	17	20	18	87	21	25	22	91
			118A	17.0	20.4	28	30	25	85	33	35	30	89	30	30	27	87	35	35	32	91
			119A	34.0	40.9	54	60	49	85	58	60	53	89	56	60	51	87	60	70	55	91
		MED	NONE	-	-	16	20	16	89	20	25	20	93	18	20	18	91	21	25	22	95
			118A	17.0	20.4	28	30	26	89	33	35	30	93	31	35	28	91	35	35	32	95
			119A	34.0	40.9	54	60	49	89	59	60	54	93	56	60	51	91	61	70	56	95
		HIGH	NONE	-	-	17	20	17	100	21	25	21	104	18	20	19	102	22	25	23	106
			118A	17.0	20.4	29	30	27	100	34	35	31	104	32	35	29	102	36	40	33	106
			119A	34.0	40.9	55	60	50	100	60	60	55	104	57	60	52	102	62	70	57	106

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEAT-ER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	53/53	60/60	52/51	295	57/56	80/80	56/56	299
			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	53/53	60/60	52/51	295/295	57/56	80/80	56/56	299/299
			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	57/63	60/80	52/58	295/295	62/68	80/80	56/62	299/299
			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	98/111	100/125	90/102	295/295	103/116	110/125	95/106	299/299
			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	126/142	150/150	115/131	295/295	130/147	150/150	119/135	299/299
			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	145/135	150/150	133/152	295/295	150/140	150/150	138/156	299/299
		MED	NONE	-	-	52	60	50	319	55	80	55	323	56	80	56	324	60	80	60	328
			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	56/56	80/80	56/56	324/324	60/60	80/80	60/60	328/328
			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	61/68	80/80	56/62	324/324	66/73	80/80	60/66	328/328
			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	103/116	110/125	94/106	324/324	108/121	110/125	99/111	328/328
			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	130/147	150/150	119/135	324/324	135/152	150/175	124/139	328/328
			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	150/140	150/150	138/156	324/324	155/145	175/175	142/160	328/328
		HIGH	NONE	-	-	55/54	80/80	54/53	321	58/58	80/80	58/57	325	59/59	80/80	59/58	326	63/62	80/80	64/63	330
			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	59/59	80/80	59/58	326/326	63/62	80/80	64/63	330/330
			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	65/70	80/80	60/64	326/326	70/75	80/80	64/69	330/330
			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	107/119	110/125	98/109	326/326	112/123	125/125	102/113	330/330
			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	134/150	150/150	123/137	326/326	139/155	150/175	127/142	330/330
			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	154/143	175/175	141/158	326/326	158/147	175/175	145/163	330/330
	460-3-60	STD	NONE	-	-	26	40	25	146	28	40	27	148	29	40	27	148	30	45	30	150
			116A	13.9	16.7	26	40	25	146	28	40	27	148	29	40	27	148	31	45	30	150
			113A	16.5	19.8	29	40	27	146	32	40	29	148	32	40	29	148	34	45	31	150
			115A	33.0	39.7	54	60	50	146	57	60	52	148	57	60	52	148	59	60	54	150
			114A+116A	41.7	50.2	67	70	62	146	70	70	64	148	70	70	64	148	72	80	66	150
			115A+113A	50.0	60.1	65	70	73	146	67	70	75	148	68	70	76	148	70	80	78	150
		MED	NONE	-	-	28	40	27	161	30	45	29	163	30	45	30	163	32	45	32	165
			116A	13.9	16.7	28	40	27	161	30	45	29	163	31	45	30	163	33	45	32	165
			113A	16.5	19.8	32	40	29	161	34	45	31	163	35	45	31	163	37	45	33	165
			115A	33.0	39.7	57	60	52	161	59	60	54	163	59	60	54	163	62	70	56	165
			114A+116A	41.7	50.2	70	70	64	161	72	80	66	163	73	80	66	163	75	80	68	165
			115A+113A	50.0	60.1	67	80	75	161	69	80	77	163	70	80	78	163	72	80	80	165
		HIGH	NONE	-	-	29	45	28	162	31	45	30	164	32	45	31	164	33	45	33	166
			116A	13.9	16.7	29	45	28	162	32	45	30	164	32	45	31	164	34	45	33	166
			113A	16.5	19.8	33	45	30	162	35	45	32	164	36	45	33	164	38	45	35	166
			115A	33.0	39.7	58	60	53	162	60	60	55	164	61	70	56	164	63	70	58	166
			114A+116A	41.7	50.2	71	80	65	162	73	80	67	164	74	80	68	164	76	80	70	166
			115A+113A	50.0	60.1	69	80	76	162	71	80	79	164	71	80	79	164	74	80	81	166
	575-3-60	STD	NONE	-	-	19	30	18	95	23	30	22	99	21	30	20	97	24	30	24	101
			118A	17.0	20.4	28	30	26	95	33	35	30	99	31	35	28	97	35	35	32	101
			119A	34.0	40.9	54	60	49	95	59	60	54	99	56	60	51	97	61	70	56	101
			118A+119A	51.0	61.3	64	70	73	95	69	80	77	99	66	70	75	97	71	80	79	101
		MED	NONE	-	-	20	30	19	106	24	30	23	110	21	30	21	108	25	30	25	112
			118A	17.0	20.4	29	30	27	106	34	35	31	110	32	35	29	108	36	40	33	112
			119A	34.0	40.9	55	60	50	106	60	60	55	110	57	60	52	108	62	70	57	112
			118A+119A	51.0	61.3	65	70	74	106	70	80	78	110	67	70	76	108	72	80	80	112
		HIGH	NONE	-	-	23	30	22	120	26	30	26	124	24	30	24	122	28	35	28	126
			118A	17.0	20.4	33	35	30	120	38	40	34	124	35	35	32	122	40	40	36	126
			119A	34.0	40.9	59	60	53	120	63	70	58	124	61	70	55	122	65	70	60	126
			118A+119A	51.0	61.3	69	80	77	120	74	80	81	124	71	80	79	122	76	80	83	126

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NO M. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	51/50	60/60	53/53	290	54/54	60/60	58/57	294
			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	51/50	60/60	53/53	290/290	54/54	60/60	58/57	294/294
			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	57/63	60/70	53/58	290/290	62/68	70/70	58/62	294/294
			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	98/111	100/125	90/102	290/290	103/116	110/125	95/106	294/294
			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	126/142	150/150	115/131	290/290	130/147	150/150	119/135	294/294
			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	145/135	150/150	133/152	290/290	150/140	150/150	138/156	294/294
		MED	NONE	-	-	50	60	52	314	53	60	56	318	54	60	57	319	58	70	62	323
			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	54/54	60/60	57/57	319/319	58/58	70/70	62/62	323/323
			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	61/68	70/70	57/62	319/319	66/73	70/80	62/66	323/323
			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	103/116	110/125	94/106	319/319	108/121	110/125	99/111	323/323
			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	130/147	150/150	119/135	319/319	135/152	150/175	124/139	323/323
			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	150/140	150/150	138/156	319/319	155/145	175/175	142/160	323/323
		HIGH	NONE	-	-	53/52	60/60	55/54	316	56/55	60/60	60/59	320	57/56	70/60	61/60	321	61/60	70/70	65/64	325
			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	57/56	70/60	61/60	321/321	61/60	70/70	65/64	325/325
			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	65/70	70/70	61/64	321/321	70/75	70/80	65/69	325/325
			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	107/119	110/125	98/109	321/321	112/123	125/125	102/113	325/325
			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	134/150	150/150	123/137	321/321	139/155	150/175	127/142	325/325
			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	154/143	175/175	141/158	321/321	158/147	175/175	145/163	325/325
	460-3-60	STD	NONE	-	-	23	30	23	136	25	30	26	138	25	30	26	138	27	30	28	140
			116A	13.9	16.7	26	30	23	136	28	30	26	138	28	30	26	138	31	35	28	140
			113A	16.5	19.8	29	30	27	136	32	35	29	138	32	35	29	138	34	35	31	140
			115A	33.0	39.7	54	60	50	136	57	60	52	138	57	60	52	138	59	60	54	140
			114A+116A	41.7	50.2	67	70	62	136	70	70	64	138	70	70	64	138	72	80	66	140
			115A+113A	50.0	60.1	65	70	73	136	67	70	75	138	68	70	76	138	70	80	78	140
		MED	NONE	-	-	25	30	26	151	26	30	28	153	27	30	28	153	29	35	30	155
			116A	13.9	16.7	28	30	26	151	30	30	28	153	31	35	28	153	33	35	30	155
			113A	16.5	19.8	32	35	29	151	34	35	31	153	35	35	31	153	37	40	33	155
			115A	33.0	39.7	57	60	52	151	59	60	54	153	59	60	54	153	62	70	56	155
			114A+116A	41.7	50.2	70	70	64	151	72	80	66	153	73	80	66	153	75	80	68	155
			115A+113A	50.0	60.1	67	80	75	151	69	80	77	153	70	80	78	153	72	80	80	155
		HIGH	NONE	-	-	26	30	27	152	28	30	29	154	28	30	29	154	30	35	32	156
			116A	13.9	16.7	29	30	27	152	32	35	29	154	32	35	29	154	34	35	32	156
			113A	16.5	19.8	33	35	30	152	35	35	32	154	36	40	33	154	38	40	35	156
			115A	33.0	39.7	58	60	53	152	60	60	55	154	61	70	56	154	63	70	58	156
			114A+116A	41.7	50.2	71	80	65	152	73	80	67	154	74	80	68	154	76	80	70	156
			115A+113A	50.0	60.1	69	80	76	152	71	80	79	154	71	80	79	154	74	80	81	156
	575-3-60	STD	NONE	-	-	17	20	17	93	20	25	21	97	18	20	19	95	22	25	23	99
			118A	17.0	20.4	28	30	26	93	33	35	30	97	31	35	28	95	35	35	32	99
			119A	34.0	40.9	54	60	49	93	59	60	54	97	56	60	51	95	61	70	56	99
			118A+119A	51.0	61.3	64	70	73	93	69	80	77	97	66	70	75	95	71	80	79	99
		MED	NONE	-	-	17	20	18	104	21	25	22	108	19	25	20	106	23	25	24	110
			118A	17.0	20.4	29	30	27	104	34	35	31	108	32	35	29	106	36	40	33	110
			119A	34.0	40.9	55	60	50	104	60	60	55	108	57	60	52	106	62	70	57	110
			118A+119A	51.0	61.3	65	70	74	104	70	80	78	108	67	70	76	106	72	80	80	110
		HIGH	NONE	-	-	20	25	21	118	24	30	25	122	22	25	23	120	26	30	27	124
			118A	17.0	20.4	33	35	30	118	38	40	34	122	35	35	32	120	40	40	36	124
			119A	34.0	40.9	59	60	53	118	63	70	58	122	61	70	55	120	65	70	60	124
			118A+119A	51.0	61.3	69	80	77	118	74	80	81	122	71	80	79	120	76	80	83	124

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (Units Produced On or After 02/16/2015)

UNIT	NO M. V–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAS150	208/230–3–60	STD	NONE	-	-	63/63	80/80	65/65	389	66/66	80/80	69/69	393	67/67	80/80	71/70	394	71/71	80/80	75/75	398
			117A	7.8/10.4	21.7/25.0	63/63	80/80	65/65	389/389	66/66	80/80	69/69	393/393	67/67	80/80	71/70	394/394	71/71	80/80	75/75	398/398
			110A	12.0/16.0	33.4/38.5	63/63	80/80	65/65	389/389	66/66	80/80	69/69	393/393	67/67	80/80	71/70	394/394	71/71	80/80	75/75	398/398
			112A	24.0/32.0	66.7/77.0	94/107	100/110	86/98	389/389	99/112	100/125	91/102	393/393	100/113	100/125	92/104	394/394	105/118	110/125	96/108	398/398
			112A+117A	31.8/42.4	88.4/102.0	121/138	125/150	111/127	389/389	126/143	150/150	116/131	393/393	127/144	150/150	117/132	394/394	132/149	150/150	121/137	398/398
			112A+110A	37.6/50.0	104.2/120.3	141/131	150/150	129/148	389/389	146/136	150/150	134/152	393/393	147/137	150/150	135/153	394/394	152/142	175/150	139/158	398/398
		MED	NONE	-	-	65	80	68	403	69	80	72	407	70	80	73	408	73	80	78	412
			117A	7.8/10.4	21.7/25.0	65/65	80/80	68/68	403/403	69/69	80/80	72/72	407/407	70/70	80/80	73/73	408/408	73/73	80/80	78/78	412/412
			110A	12.0/16.0	33.4/38.5	65/65	80/80	68/68	403/403	69/69	80/80	72/72	407/407	70/70	80/80	73/73	408/408	73/73	80/80	78/78	412/412
			112A	24.0/32.0	66.7/77.0	97/110	100/110	89/101	403/403	102/115	110/125	93/105	407/407	103/116	110/125	94/106	408/408	108/121	110/125	99/111	412/412
			112A+117A	31.8/42.4	88.4/102.0	124/141	125/150	114/129	403/403	129/146	150/150	118/134	407/407	130/147	150/150	119/135	408/408	135/152	150/175	124/139	412/412
			112A+110A	37.6/50.0	104.2/120.3	144/134	150/150	132/151	403/403	149/139	150/150	136/155	407/407	150/140	150/150	138/156	408/408	155/145	175/175	142/160	412/412
		HIGH	NONE	-	-	68/67	80/80	71/70	405	72/71	80/80	75/74	409	73/72	80/80	77/76	410	76/76	90/90	81/80	414
			117A	7.8/10.4	21.7/25.0	68/67	80/80	71/70	405/405	72/71	80/80	75/74	409/409	73/72	80/80	77/76	410/410	76/76	90/90	81/80	414/414
			110A	12.0/16.0	33.4/38.5	68/67	80/80	71/70	405/405	72/71	80/80	75/74	409/409	73/72	80/80	77/76	410/410	76/76	90/90	81/80	414/414
			112A	24.0/32.0	66.7/77.0	101/113	110/125	92/103	405/405	106/117	110/125	97/108	409/409	107/119	110/125	98/109	410/410	112/123	125/125	102/113	414/414
			112A+117A	31.8/42.4	88.4/102.0	128/144	150/150	117/132	405/405	133/149	150/150	122/136	409/409	134/150	150/150	123/137	410/410	139/155	150/175	127/142	414/414
			112A+110A	37.6/50.0	104.2/120.3	148/137	150/150	135/153	405/405	152/141	175/175	140/157	409/409	154/143	175/175	141/158	410/410	158/147	175/175	145/163	414/414
	460–3–60	STD	NONE	-	-	29	35	30	193	31	40	32	195	31	40	33	195	33	40	35	197
			116A	13.9	16.7	29	35	30	193	31	40	32	195	31	40	33	195	33	40	35	197
			113A	16.5	19.8	30	35	30	193	33	40	32	195	33	40	33	195	35	40	35	197
			115A	33.0	39.7	55	60	50	193	58	60	53	195	58	60	53	195	60	60	55	197
			114A+116A	41.7	50.2	68	70	63	193	71	80	65	195	71	80	65	195	73	80	67	197
			115A+113A	50.0	60.1	66	70	74	193	68	80	76	195	69	80	76	195	71	80	79	197
		MED	NONE	-	-	30	40	31	200	32	40	33	202	33	40	34	202	34	40	36	204
			116A	13.9	16.7	30	40	31	200	32	40	33	202	33	40	34	202	34	40	36	204
			113A	16.5	19.8	32	40	31	200	34	40	33	202	35	40	34	202	37	40	36	204
			115A	33.0	39.7	57	60	52	200	59	60	54	202	59	60	54	202	62	70	56	204
			114A+116A	41.7	50.2	70	70	64	200	72	80	66	202	73	80	66	202	75	80	68	204
			115A+113A	50.0	60.1	67	80	75	200	69	80	77	202	70	80	78	202	72	80	80	204
		HIGH	NONE	-	-	31	40	33	201	33	40	35	203	34	40	35	203	35	45	37	205
			116A	13.9	16.7	31	40	33	201	33	40	35	203	34	40	35	203	35	45	37	205
			113A	16.5	19.8	33	40	33	201	35	40	35	203	36	40	35	203	38	45	37	205
			115A	33.0	39.7	58	60	53	201	60	60	55	203	61	70	56	203	63	70	58	205
			114A+116A	41.7	50.2	71	80	65	201	73	80	67	203	74	80	68	203	76	80	70	205
			115A+113A	50.0	60.1	69	80	76	201	71	80	79	203	71	80	79	203	74	80	81	205
	575–3–60	STD	NONE	-	-	22	25	23	147	26	30	27	151	24	30	24	149	27	30	29	153
			118A	17.0	20.4	29	30	27	147	34	35	31	151	32	35	29	149	36	40	33	153
			119A	34.0	40.9	55	60	50	147	60	60	55	151	57	60	52	149	62	70	57	153
			118A+119A	51.0	61.3	65	70	74	147	70	80	78	151	67	70	76	149	72	80	80	153
		MED	NONE	-	-	22	25	23	147	26	30	27	151	24	30	24	149	27	30	29	153
			118A	17.0	20.4	29	30	27	147	34	35	31	151	32	35	29	149	36	40	33	153
			119A	34.0	40.9	55	60	50	147	60	60	55	151	57	60	52	149	62	70	57	153
			118A+119A	51.0	61.3	65	70	74	147	70	80	78	151	67	70	76	149	72	80	80	153
		HIGH	NONE	-	-	25	30	26	161	29	35	30	165	26	30	28	163	30	35	32	167
			118A	17.0	20.4	33	35	30	161	38	40	34	165	35	35	32	163	40	40	36	167
			119A	34.0	40.9	59	60	53	161	63	70	58	165	61	70	55	163	65	70	60	167
			118A+119A	51.0	61.3	69	80	77	161	74	80	81	165	71	80	79	163	76	80	83	167

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (Units Produced On or Before 02/15/2015)

UNIT	NO M. V–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAS150 (2 stage cool)	208/230–3–60	STD	NONE	-	–	62/62	80/80	64/64	376	66/66	80/80	69/69	380	67/67	80/80	70/70	381	71/71	80/80	74/74	385
			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	67/67	80/80	70/70	381/381	71/71	80/80	74/74	385/385
			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	67/67	80/80	70/70	381/381	71/71	80/80	74/74	385/385
			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	100/113	100/125	92/104	381/381	105/118	110/125	96/108	385/385
			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	127/144	150/150	117/132	381/381	132/149	150/150	121/137	385/385
			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	147/137	150/150	135/153	381/381	152/142	175/150	139/158	385/385
		MED	NONE	-	–	64	80	67	390	68	80	71	394	69	80	72	395	73	80	77	399
			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	69/69	80/80	72/72	395/395	73/73	80/80	77/77	399/399
			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	69/69	80/80	72/72	395/395	73/73	80/80	77/77	399/399
			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	103/116	110/125	94/106	395/395	108/121	110/125	99/111	399/399
			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	130/147	150/150	119/135	395/395	135/152	150/175	124/139	399/399
			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	150/140	150/150	138/156	395/395	155/145	175/175	142/160	399/399
		HIGH	NONE	-	–	67/66	80/80	70/69	392	71/70	80/80	75/74	396	72/71	80/80	76/75	397	76/75	90/90	80/79	401
			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	72/71	80/80	76/75	397/397	76/75	90/90	80/79	401/401
			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	72/71	80/80	76/75	397/397	76/75	90/90	80/79	401/401
			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	107/119	110/125	98/109	397/397	112/123	125/125	102/113	401/401
			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	134/150	150/150	123/137	397/397	139/155	150/175	127/142	401/401
			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	154/143	175/175	141/158	397/397	158/147	175/175	145/163	401/401
	460–3–60	STD	NONE	-	–	31	40	32	189	33	40	34	191	33	40	34	191	35	40	36	193
			116A	13.9	16.7	31	40	32	189	33	40	34	191	33	40	34	191	35	40	36	193
			113A	16.5	19.8	31	40	32	189	33	40	34	191	33	40	34	191	35	40	36	193
			115A	33.0	39.7	55	60	50	189	58	60	53	191	58	60	53	191	60	60	55	193
			114A+116A	41.7	50.2	68	70	63	189	71	80	65	191	71	80	65	191	73	80	67	193
			115A+113A	50.0	60.1	66	70	74	189	68	80	76	191	69	80	76	191	71	80	79	193
		MED	NONE	-	–	32	40	33	196	34	40	35	198	34	40	36	198	36	45	38	200
			116A	13.9	16.7	32	40	33	196	34	40	35	198	34	40	36	198	36	45	38	200
			113A	16.5	19.8	32	40	33	196	34	40	35	198	35	40	36	198	37	45	38	200
			115A	33.0	39.7	57	60	52	196	59	60	54	198	59	60	54	198	62	70	56	200
			114A+116A	41.7	50.2	70	70	64	196	72	80	66	198	73	80	66	198	75	80	68	200
			115A+113A	50.0	60.1	67	80	75	196	69	80	77	198	70	80	78	198	72	80	80	200
		HIGH	NONE	-	–	33	40	34	197	35	40	36	199	35	45	37	199	37	45	39	201
			116A	13.9	16.7	33	40	34	197	35	40	36	199	35	45	37	199	37	45	39	201
			113A	16.5	19.8	33	40	34	197	35	40	36	199	36	45	37	199	38	45	39	201
			115A	33.0	39.7	58	60	53	197	60	60	55	199	61	70	56	199	63	70	58	201
			114A+116A	41.7	50.2	71	80	65	197	73	80	67	199	74	80	68	199	76	80	70	201
			115A+113A	50.0	60.1	69	80	76	197	71	80	79	199	71	80	79	199	74	80	81	201
	575–3–60	STD	NONE	-	–	23	30	23	142	27	30	28	146	24	30	25	144	28	30	30	148
			118A	17.0	20.4	29	30	27	142	34	35	31	146	32	35	29	144	36	40	33	148
			119A	34.0	40.9	55	60	50	142	60	60	55	146	57	60	52	144	62	70	57	148
			118A+119A	51.0	61.3	65	70	74	142	70	80	78	146	67	70	76	144	72	80	80	148
		MED	NONE	-	–	23	30	23	142	27	30	28	146	24	30	25	144	28	30	30	148
			118A	17.0	20.4	29	30	27	142	34	35	31	146	32	35	29	144	36	40	33	148
			119A	34.0	40.9	55	60	50	142	60	60	55	146	57	60	52	144	62	70	57	148
			118A+119A	51.0	61.3	65	70	74	142	70	80	78	146	67	70	76	144	72	80	80	148
		HIGH	NONE	-	–	26	30	27	156	29	35	31	160	27	30	29	158	31	35	33	162
			118A	17.0	20.4	33	35	30	156	38	40	34	160	35	35	32	158	40	40	36	162
			119A	34.0	40.9	59	60	53	156	63	70	58	160	61	70	55	158	65	70	60	162
			118A+119A	51.0	61.3	69	80	77	156	74	80	81	160	71	80	79	158	76	80	83	162

ELECTRICAL INFORMATION

Table 106 – Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NO M. V–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEAT-ER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	74/74	90/90	78/78	417	78/78	100/100	82/82	421
			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	74/74	90/90	78/78	417/417	78/78	100/100	82/82	421/421
			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	104/118	110/125	96/108	417/417	109/122	110/125	100/112	421/421
			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	130/148	150/150	119/135	417/417	135/152	150/175	124/140	421/421
			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	147/137	150/150	135/153	417/417	152/142	175/150	139/158	421/421
			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	157/178	175/200	176/200	417/417	161/183	175/200	180/205	421/421
		MED	NONE	-	-	72	80	75	426	76	100	79	430	77	100	80	431	80	100	85	435
			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	77/77	100/100	80/80	431/431	80/80	100/100	85/85	435/435
			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	107/120	110/125	98/110	431/431	112/125	125/125	102/115	435/435
			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	133/151	150/175	122/138	431/431	138/155	150/175	126/142	435/435
			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	150/140	150/150	138/156	431/431	155/145	175/175	142/160	435/435
			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	159/181	175/200	178/203	431/431	164/186	175/200	183/207	435/435
		HIGH	NONE	-	-	82	100	86	432	85	100	91	436	86	100	92	437	90	100	96	441
			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	86/86	100/100	92/92	437/437	90/90	100/100	96/96	441/441
			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	119/133	125/150	109/122	437/437	124/137	125/150	114/126	441/441
			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	145/163	150/175	133/149	437/437	150/168	150/175	138/154	441/441
			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	162/152	175/175	149/167	437/437	167/157	175/175	153/172	441/441
			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	172/193	200/225	190/214	437/437	176/198	200/225	194/219	441/441
	460–3–60	STD	NONE	-	-	35	45	36	242	37	45	38	244	37	45	39	244	39	50	41	246
			292A	16.5	19.9	35	45	36	242	37	45	38	244	37	45	39	244	39	50	41	246
			295A	33.5	40.3	56	60	51	242	58	60	53	244	59	60	54	244	61	70	56	246
			289A+295A	43.5	52.3	71	80	65	242	73	80	67	244	74	80	68	244	76	80	70	246
			292A+295A	50.0	60.2	66	70	74	242	68	80	76	244	69	80	77	244	71	80	79	246
			295A+295A	67.0	80.6	86	100	98	242	89	100	100	244	89	100	100	244	91	100	102	246
		MED	NONE	-	-	36	45	38	249	38	50	40	251	39	50	40	251	40	50	42	253
			292A	16.5	19.9	36	45	38	249	38	50	40	251	39	50	40	251	40	50	42	253
			295A	33.5	40.3	57	60	52	249	60	60	55	251	60	60	55	251	62	70	57	253
			289A+295A	43.5	52.3	72	80	66	249	75	80	68	251	75	80	69	251	77	80	71	253
			292A+295A	50.0	60.2	67	80	75	249	70	80	77	251	70	80	78	251	72	80	80	253
			295A+295A	67.0	80.6	88	100	99	249	90	100	101	251	90	100	101	251	93	100	103	253
		HIGH	NONE	-	-	41	50	43	252	43	50	45	254	43	50	46	254	45	50	48	256
			292A	16.5	19.9	41	50	43	252	43	50	45	254	43	50	46	254	45	50	48	256
			295A	33.5	40.3	64	70	58	252	66	70	60	254	66	70	61	254	69	70	63	256
			289A+295A	43.5	52.3	79	80	72	252	81	90	74	254	81	90	74	254	84	90	76	256
			292A+295A	50.0	60.2	73	80	81	252	76	80	83	254	76	80	83	254	78	80	86	256
			295A+295A	67.0	80.6	94	100	104	252	96	100	106	254	97	100	107	254	99	100	109	256

ELECTRICAL INFORMATION

Table 106 - Unit Wire/Fuse or HACR Breaker Sizing Data with Single Speed Indoor Fan Motor (cont.)

UNIT	NOM. V-Ph-HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAS180	575-3-60	STD	NONE	-	-	27	30	28	184	31	40	32	188	29	35	30	186	32	40	34	190
			293A	16.5	15.9	27	30	28	184	31	40	32	188	29	35	30	186	32	40	34	190
			296A	33.5	32.2	44	45	40	184	49	50	45	188	46	50	42	186	51	60	47	190
			290A+296A	43.5	41.8	56	60	51	184	61	70	56	188	58	60	53	186	63	70	58	190
			293A+296A	50.0	48.1	52	60	59	184	57	60	63	188	54	60	60	186	59	60	65	190
			296A+296A	67.0	64.4	68	80	77	184	73	80	82	188	70	80	79	186	75	80	84	190
		MED	NONE	-	-	27	30	28	184	31	40	32	188	29	35	30	186	32	40	34	190
			293A	16.5	15.9	27	30	28	184	31	40	32	188	29	35	30	186	32	40	34	190
			296A	33.5	32.2	44	45	40	184	49	50	45	188	46	50	42	186	51	60	47	190
			290A+296A	43.5	41.8	56	60	51	184	61	70	56	188	58	60	53	186	63	70	58	190
			293A+296A	50.0	48.1	52	60	59	184	57	60	63	188	54	60	60	186	59	60	65	190
			296A+296A	67.0	64.4	68	80	77	184	73	80	82	188	70	80	79	186	75	80	84	190
		HIGH	NONE	-	-	33	40	35	196	37	45	39	200	35	40	37	198	39	45	41	202
			293A	16.5	15.9	33	40	35	196	37	45	39	200	35	40	37	198	39	45	41	202
			296A	33.5	32.2	52	60	47	196	57	60	52	200	54	60	49	198	59	60	54	202
			290A+296A	43.5	41.8	64	70	58	196	69	70	63	200	66	70	60	198	71	80	65	202
			293A+296A	50.0	48.1	60	70	66	196	65	70	70	200	62	70	68	198	67	70	72	202
			296A+296A	67.0	64.4	76	80	84	196	81	90	89	200	78	80	86	198	83	90	91	202

ELECTRICAL INFORMATION

Table 107 – 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.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	45/44	50/50	47/47	202	48/48	60/60	51/51	206
			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	45/45	50/50	47/47	202/202	48/49	60/60	51/51	206/206
			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	55/62	60/70	51/56	202/202	60/66	60/70	55/61	206/206
			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	78/88	80/90	72/81	202/202	83/93	90/100	76/85	206/206
			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	97/110	100/110	89/101	202/202	102/114	110/125	93/105	206/206
			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	124/141	125/150	114/129	202/202	129/146	150/150	118/134	206/206
		MED	NONE	-	-	43/42	50/50	45/44	227	46/46	50/50	49/48	231	47/47	60/50	50/49	232	51/50	60/60	55/54	236
			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	47/47	60/50	50/49	232/232	51/52	60/60	55/54	236/236
			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	59/64	60/70	54/59	232/232	64/69	70/70	58/63	236/236
			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	82/91	90/100	75/83	232/232	87/96	90/100	79/88	236/236
			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	101/112	110/125	92/103	232/232	105/117	110/125	96/107	236/236
			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	128/144	150/150	117/132	232/232	132/148	150/150	121/136	236/236
		HIGH	NONE	-	-	48/47	60/50	50/49	262	51/51	60/60	55/54	266	52/52	60/60	56/55	267	56/55	60/60	60/59	271
			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	52/54	60/60	56/55	267/267	56/58	60/60	60/59	271/271
			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	65/70	70/70	60/64	267/267	70/75	70/80	64/69	271/271
			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	88/97	90/100	81/89	267/267	93/102	100/110	85/93	271/271
			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	107/119	110/125	98/109	267/267	112/123	125/125	102/113	271/271
			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	134/150	150/150	123/137	267/267	139/155	150/175	127/142	271/271
	460–3–60	STD	NONE	-	-	19	20	19	97	20	25	21	99	21	25	22	99	23	25	24	101
			116A	13.9	16.7	25	25	23	97	27	30	25	99	28	30	25	99	30	30	27	101
			113A	16.5	19.8	29	30	26	97	31	35	28	99	32	35	29	99	34	35	31	101
			114A	27.8	33.4	46	50	42	97	48	50	44	99	49	50	44	99	51	60	46	101
			115A	33.0	39.7	54	60	49	97	56	60	51	99	56	60	52	99	59	60	54	101
			114A+116A	41.7	50.2	67	70	61	97	69	70	63	99	70	70	64	99	72	80	66	101
		MED	NONE	-	-	20	25	20	113	21	25	22	115	22	25	23	115	24	25	25	117
			116A	13.9	16.7	26	30	24	113	28	30	26	115	29	30	26	115	31	35	28	117
			113A	16.5	19.8	30	30	27	113	32	35	29	115	33	35	30	115	35	35	32	117
			114A	27.8	33.4	47	50	43	113	49	50	45	115	50	50	45	115	52	60	47	117
			115A	33.0	39.7	55	60	50	113	57	60	52	115	58	60	53	115	60	60	55	117
			114A+116A	41.7	50.2	68	70	62	113	70	70	64	115	71	80	65	115	73	80	67	117
		HIGH	NONE	-	-	22	25	23	130	24	30	25	132	24	30	26	132	26	30	28	134
			116A	13.9	16.7	29	30	27	130	32	35	29	132	32	35	29	132	34	35	31	134
			113A	16.5	19.8	33	35	30	130	35	35	32	132	36	40	33	132	38	40	35	134
			114A	27.8	33.4	50	50	46	130	52	60	48	132	53	60	48	132	55	60	50	134
			115A	33.0	39.7	58	60	53	130	60	60	55	132	61	70	56	132	63	70	58	134
			114A+116A	41.7	50.2	71	80	65	130	73	80	67	132	74	80	68	132	76	80	70	134
	575–3–60	STD	NONE	-	-	14	15	14	79	18	20	19	83	16	20	16	81	19	25	21	85
			118A	17.0	20.4	29	30	27	79	34	35	31	83	32	35	29	81	36	40	33	85
			119A	34.0	40.9	55	60	50	79	60	60	55	83	57	60	52	81	62	70	57	85
		MED	NONE	-	-	16	20	16	92	19	25	21	96	17	20	18	94	21	25	23	98
			118A	17.0	20.4	32	35	29	92	36	40	33	96	34	35	31	94	38	40	35	98
			119A	34.0	40.9	57	60	52	92	62	70	57	96	59	60	54	94	64	70	59	98
		HIGH	NONE	-	-	18	20	18	106	22	25	23	110	20	25	20	108	23	25	24	112
			118A	17.0	20.4	34	35	31	106	38	40	35	110	36	40	33	108	41	45	37	112
			119A	34.0	40.9	59	60	54	106	64	70	59	110	61	70	56	108	66	70	60	112

ELECTRICAL INFORMATION

Table 107 - 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.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	46/46	50/50	48/48	217	50/49	60/60	52/52	221
			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	46/46	50/50	48/48	217/217	50/49	60/60	52/52	221/221
			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	55/62	60/70	51/56	217/217	60/66	60/70	55/61	221/221
			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	78/88	80/90	72/81	217/217	83/93	90/100	76/85	221/221
			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	97/110	100/110	89/101	217/217	102/114	110/125	93/105	221/221
			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	124/141	125/150	114/129	217/217	129/146	150/150	118/134	221/221
		MED	NONE	-	-	42/42	50/50	44/44	216	46/46	60/50	48/48	220	47/47	60/60	50/49	221	51/51	60/60	54/54	225
			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	47/47	60/60	50/49	221/221	51/51	60/60	54/54	225/225
			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	57/63	60/70	52/58	221/221	62/68	70/70	56/62	225/225
			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	80/90	80/90	73/82	221/221	85/94	90/100	78/86	225/225
			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	99/111	100/125	90/102	221/221	103/116	110/125	95/106	225/225
			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	126/142	150/150	115/131	221/221	131/147	150/150	120/135	225/225
		HIGH	NONE	-	-	46/45	60/50	48/47	266	50/49	60/60	53/52	270	51/50	60/60	54/53	271	55/54	60/60	58/57	275
			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	51/50	60/60	54/53	271/271	55/55	60/60	58/57	275/275
			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	62/67	70/70	56/61	271/271	66/72	70/80	61/65	275/275
			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	85/93	90/100	77/85	271/271	89/98	90/100	82/90	275/275
			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	103/115	110/125	95/105	271/271	108/120	110/125	99/110	275/275
			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	130/146	150/150	120/134	271/271	135/151	150/175	124/138	275/275
	460-3-60	STD	NONE	-	-	19	25	20	111	21	25	22	113	21	25	22	113	23	25	24	115
			116A	13.9	16.7	25	25	23	111	27	30	25	113	28	30	25	113	30	30	27	115
			113A	16.5	19.8	29	30	26	111	31	35	28	113	32	35	29	113	34	35	31	115
			114A	27.8	33.4	46	50	42	111	48	50	44	113	49	50	44	113	51	60	46	115
			115A	33.0	39.7	54	60	49	111	56	60	51	113	56	60	52	113	59	60	54	115
			114A+116A	41.7	50.2	67	70	61	111	69	70	63	113	70	70	64	113	72	80	66	115
		MED	NONE	-	-	20	25	21	114	22	25	23	116	22	25	23	116	24	30	25	118
			116A	13.9	16.7	26	30	24	114	28	30	26	116	29	30	26	116	31	35	28	118
			113A	16.5	19.8	30	30	27	114	32	35	29	116	33	35	30	116	35	35	32	118
			114A	27.8	33.4	47	50	43	114	49	50	45	116	50	50	45	116	52	60	47	118
			115A	33.0	39.7	55	60	50	114	57	60	52	116	58	60	53	116	60	60	55	118
			114A+116A	41.7	50.2	68	70	62	114	70	70	64	116	71	80	65	116	73	80	67	118
		HIGH	NONE	-	-	21	25	22	139	23	25	24	141	23	25	24	141	25	30	26	143
			116A	13.9	16.7	27	30	25	139	30	30	27	141	30	30	27	141	32	35	29	143
			113A	16.5	19.8	31	35	28	139	34	35	30	141	34	35	31	141	36	40	33	143
			114A	27.8	33.4	48	50	44	139	51	60	46	141	51	60	47	141	53	60	49	143
			115A	33.0	39.7	56	60	51	139	58	60	53	141	59	60	54	141	61	70	56	143
			114A+116A	41.7	50.2	69	70	63	139	72	80	65	141	72	80	66	141	74	80	68	143
	575-3-60	STD	NONE	-	-	17	20	17	87	21	25	21	91	18	20	19	89	22	25	23	93
			118A	17.0	20.4	29	30	27	87	34	35	31	91	32	35	29	89	36	40	33	93
			119A	34.0	40.9	55	60	50	87	60	60	55	91	57	60	52	89	62	70	57	93
		MED	NONE	-	-	17	20	18	91	21	25	22	95	19	25	20	93	23	25	24	97
			118A	17.0	20.4	30	30	27	91	35	35	32	95	32	35	29	93	37	40	34	97
			119A	34.0	40.9	56	60	51	91	61	70	55	95	58	60	53	93	63	70	57	97
		HIGH	NONE	-	-	18	20	19	100	22	25	23	104	20	25	21	102	24	30	25	106
			118A	17.0	20.4	32	35	29	100	36	40	33	104	34	35	31	102	38	40	35	106
			119A	34.0	40.9	57	60	52	100	62	70	57	104	59	60	54	102	64	70	59	106

ELECTRICAL INFORMATION

Table 107 - 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.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	51/51	60/60	53/53	260	55/54	60/60	58/57	264
			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	51/51	60/60	53/53	260/260	55/54	60/60	58/57	264/264
			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	57/63	60/70	53/58	260/260	62/68	70/70	58/62	264/264
			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	99/111	100/125	90/102	260/260	103/116	110/125	95/106	264/264
			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	126/142	150/150	115/131	260/260	131/147	150/150	120/135	264/264
			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	146/135	150/150	134/152	260/260	150/140	150/150	138/156	264/264
		MED	NONE	-	-	50/49	60/60	52/51	305	54/53	60/60	56/55	309	55/54	60/60	58/56	310	58/57	70/70	62/61	314
			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	55/54	60/60	58/56	310/310	58/57	70/70	62/61	314/314
			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	62/67	70/70	58/61	310/310	66/72	70/80	62/65	314/314
			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	103/115	110/125	95/105	310/310	108/120	110/125	99/110	314/314
			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	130/146	150/150	120/134	310/310	135/151	150/175	124/138	314/314
			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	150/139	150/150	138/155	310/310	155/144	175/175	142/160	314/314
		HIGH	NONE	-	-	53/52	60/60	55/54	316	56/55	60/60	60/59	320	57/56	70/60	61/60	321	61/60	70/70	65/64	325
			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	57/56	70/60	61/60	321/321	61/60	70/70	65/64	325/325
			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	65/70	70/70	61/64	321/321	70/75	70/80	65/69	325/325
			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	107/119	110/125	98/109	321/321	112/123	125/125	102/113	325/325
			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	134/150	150/150	123/137	321/321	139/155	150/175	127/142	325/325
			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	154/143	175/175	141/158	321/321	158/147	175/175	145/163	325/325
	460–3–60	STD	NONE	-	-	23	30	24	122	25	30	26	124	25	30	26	124	27	30	29	126
			116A	13.9	16.7	26	30	24	122	28	30	26	124	29	30	26	124	31	35	29	126
			113A	16.5	19.8	30	30	27	122	32	35	29	124	33	35	30	124	35	35	32	126
			115A	33.0	39.7	55	60	50	122	57	60	52	124	58	60	53	124	60	60	55	126
			114A+116A	41.7	50.2	68	70	62	122	70	70	64	124	71	80	65	124	73	80	67	126
			115A+113A	50.0	60.1	65	70	73	122	68	80	76	124	68	80	76	124	70	80	78	126
		MED	NONE	-	-	24	30	25	147	26	30	27	149	26	30	28	149	28	30	30	151
			116A	13.9	16.7	27	30	25	147	30	30	27	149	30	30	28	149	32	35	30	151
			113A	16.5	19.8	31	35	28	147	34	35	30	149	34	35	31	149	36	40	33	151
			115A	33.0	39.7	56	60	51	147	58	60	53	149	59	60	54	149	61	70	56	151
			114A+116A	41.7	50.2	69	70	63	147	72	80	65	149	72	80	66	149	74	80	68	151
			115A+113A	50.0	60.1	67	80	75	147	69	80	77	149	69	80	77	149	72	80	79	151
		HIGH	NONE	-	-	26	30	27	152	28	30	29	154	28	30	29	154	30	35	32	156
			116A	13.9	16.7	29	30	27	152	32	35	29	154	32	35	29	154	34	35	32	156
			113A	16.5	19.8	33	35	30	152	35	35	32	154	36	40	33	154	38	40	35	156
			115A	33.0	39.7	58	60	53	152	60	60	55	154	61	70	56	154	63	70	58	156
			114A+116A	41.7	50.2	71	80	65	152	73	80	67	154	74	80	68	154	76	80	70	156
			115A+113A	50.0	60.1	69	80	76	152	71	80	79	154	71	80	79	154	74	80	81	156
	575–3–60	STD	NONE	-	-	18	20	19	95	22	25	23	99	20	25	21	97	24	25	25	101
			118A	17.0	20.4	30	30	27	95	35	35	32	99	32	35	29	97	37	40	34	101
			119A	34.0	40.9	56	60	51	95	61	70	55	99	58	60	53	97	63	70	57	101
			118A+119A	51.0	61.3	66	70	75	95	71	80	79	99	68	80	76	97	73	80	81	101
		MED	NONE	-	-	19	25	20	104	23	25	24	108	21	25	22	106	25	30	26	110
			118A	17.0	20.4	32	35	29	104	36	40	33	108	34	35	31	106	38	40	35	110
			119A	34.0	40.9	57	60	52	104	62	70	57	108	59	60	54	106	64	70	59	110
			118A+119A	51.0	61.3	67	80	76	104	72	80	80	108	70	80	78	106	74	80	82	110
		HIGH	NONE	-	-	21	25	22	118	25	30	26	122	23	25	24	120	26	30	28	124
			118A	17.0	20.4	34	35	31	118	38	40	35	122	36	40	33	120	41	45	37	124
			119A	34.0	40.9	59	60	54	118	64	70	59	122	61	70	56	120	66	70	60	124
			118A+119A	51.0	61.3	70	80	78	118	74	80	82	122	72	80	80	120	76	80	84	124

ELECTRICAL INFORMATION

Table 107 - UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA WITH 2 SPEED INDOOR FAN MOTOR (cont.) (Units Produced On or After 02/16/2015)

UNIT	NO M. V–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAS150	208/230–3–60	STD	NONE	-	–	63/62	80/80	65/64	370	67/66	80/80	70/69	374	68/67	80/80	71/70	375	71/71	80/80	75/74	379
			117A	7.8/10.4	21.7/25.0	63/62	80/80	65/64	370/370	67/66	80/80	70/69	374/374	68/67	80/80	71/70	375/375	71/71	80/80	75/74	379/379
			110A	12.0/16.0	33.4/38.5	63/62	80/80	65/64	370/370	67/66	80/80	70/69	374/374	68/67	80/80	71/70	375/375	71/71	80/80	75/74	379/379
			112A	24.0/32.0	66.7/77.0	95/106	100/110	87/98	370/370	99/111	100/125	91/102	374/374	101/112	110/125	92/103	375/375	105/117	110/125	96/107	379/379
			112A+117A	31.8/42.4	88.4/102.0	122/138	125/150	112/126	370/370	126/142	150/150	116/131	374/374	128/144	150/150	117/132	375/375	132/148	150/150	121/136	379/379
			112A+110A	37.6/50.0	104.2/120.3	141/131	150/150	130/147	370/370	146/135	150/150	134/152	374/374	147/137	150/150	135/153	375/375	152/141	175/150	140/157	379/379
		MED	NONE	-	–	65/64	80/80	68/67	394	69/68	80/80	72/71	398	70/69	80/80	73/72	399	74/73	80/80	78/77	403
			117A	7.8/10.4	21.7/25.0	65/64	80/80	68/67	394/394	69/68	80/80	72/71	398/398	70/69	80/80	73/72	399/399	74/73	80/80	78/77	403/403
			110A	12.0/16.0	33.4/38.5	65/64	80/80	68/67	394/394	69/68	80/80	72/71	398/398	70/69	80/80	73/72	399/399	74/73	80/80	78/77	403/403
			112A	24.0/32.0	66.7/77.0	97/109	100/110	89/100	394/394	102/114	110/125	93/104	398/398	103/115	110/125	95/105	399/399	108/120	110/125	99/110	403/403
			112A+117A	31.8/42.4	88.4/102.0	124/140	125/150	114/129	394/394	129/145	150/150	118/133	398/398	130/146	150/150	120/134	399/399	135/151	150/175	124/138	403/403
			112A+110A	37.6/50.0	104.2/120.3	144/133	150/150	132/150	394/394	149/138	150/150	137/154	398/398	150/139	150/150	138/155	399/399	155/144	175/175	142/160	403/403
		HIGH	NONE	-	–	68/67	80/80	71/70	405	72/71	80/80	75/74	409	73/72	80/80	77/76	410	76/76	90/90	81/80	414
			117A	7.8/10.4	21.7/25.0	68/67	80/80	71/70	405/405	72/71	80/80	75/74	409/409	73/72	80/80	77/76	410/410	76/76	90/90	81/80	414/414
			110A	12.0/16.0	33.4/38.5	68/67	80/80	71/70	405/405	72/71	80/80	75/74	409/409	73/72	80/80	77/76	410/410	76/76	90/90	81/80	414/414
			112A	24.0/32.0	66.7/77.0	101/113	110/125	92/103	405/405	106/117	110/125	97/108	409/409	107/119	110/125	98/109	410/410	112/123	125/125	102/113	414/414
			112A+117A	31.8/42.4	88.4/102.0	128/144	150/150	117/132	405/405	133/149	150/150	122/136	409/409	134/150	150/150	123/137	410/410	139/155	150/175	127/142	414/414
			112A+110A	37.6/50.0	104.2/120.3	148/137	150/150	135/153	405/405	152/141	175/175	140/157	409/409	154/143	175/175	141/158	410/410	158/147	175/175	145/163	414/414
	460–3–60	STD	NONE	-	–	29	35	30	184	31	40	32	186	31	40	32	186	33	40	34	188
			116A	13.9	16.7	29	35	30	184	31	40	32	186	31	40	32	186	33	40	34	188
			113A	16.5	19.8	30	35	30	184	32	40	32	186	33	40	32	186	35	40	34	188
			115A	33.0	39.7	55	60	50	184	57	60	52	186	58	60	53	186	60	60	55	188
			114A+116A	41.7	50.2	68	70	62	184	70	70	64	186	71	80	65	186	73	80	67	188
			115A+113A	50.0	60.1	65	70	73	184	68	80	76	186	68	80	76	186	70	80	78	188
		MED	NONE	-	–	30	40	31	196	32	40	33	198	32	40	33	198	34	40	35	200
			116A	13.9	16.7	30	40	31	196	32	40	33	198	32	40	33	198	34	40	35	200
			113A	16.5	19.8	31	40	31	196	34	40	33	198	34	40	33	198	36	40	35	200
			115A	33.0	39.7	56	60	51	196	58	60	53	198	59	60	54	198	61	70	56	200
			114A+116A	41.7	50.2	69	70	63	196	72	80	65	198	72	80	66	198	74	80	68	200
			115A+113A	50.0	60.1	67	80	75	196	69	80	77	198	69	80	77	198	72	80	79	200
		HIGH	NONE	-	–	31	40	33	201	33	40	35	203	34	40	35	203	35	45	37	205
			116A	13.9	16.7	31	40	33	201	33	40	35	203	34	40	35	203	35	45	37	205
			113A	16.5	19.8	33	40	33	201	35	40	35	203	36	40	35	203	38	45	37	205
			115A	33.0	39.7	58	60	53	201	60	60	55	203	61	70	56	203	63	70	58	205
			114A+116A	41.7	50.2	71	80	65	201	73	80	67	203	74	80	68	203	76	80	70	205
			115A+113A	50.0	60.1	69	80	76	201	71	80	79	203	71	80	79	203	74	80	81	205
	575–3–60	STD	NONE	-	–	24	30	24	147	27	30	29	151	25	30	26	149	29	35	31	153
			118A	17.0	20.4	32	35	29	147	36	40	33	151	34	35	31	149	38	40	35	153
			119A	34.0	40.9	57	60	52	147	62	70	57	151	59	60	54	149	64	70	59	153
			118A+119A	51.0	61.3	67	80	76	147	72	80	80	151	70	80	78	149	74	80	82	153
		MED	NONE	-	–	24	30	24	147	27	30	29	151	25	30	26	149	29	35	31	153
			118A	17.0	20.4	32	35	29	147	36	40	33	151	34	35	31	149	38	40	35	153
			119A	34.0	40.9	57	60	52	147	62	70	57	151	59	60	54	149	64	70	59	153
			118A+119A	51.0	61.3	67	80	76	147	72	80	80	151	70	80	78	149	74	80	82	153
		HIGH	NONE	-	–	25	30	26	161	29	35	31	165	27	30	28	163	31	35	33	167
			118A	17.0	20.4	34	35	31	161	38	40	35	165	36	40	33	163	41	45	37	167
			119A	34.0	40.9	59	60	54	161	64	70	59	165	61	70	56	163	66	70	60	167
			118A+119A	51.0	61.3	70	80	78	161	74	80	82	165	72	80	80	163	76	80	84	167

ELECTRICAL INFORMATION

Table 107 - UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA WITH 2 SPEED INDOOR FAN MOTOR (cont.) (Units Produced On or Prior to 02/15/2015)

UNIT	NO M. V–Ph–HZ	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	67/66	80/80	70/69	362	71/70	80/80	75/74	366
			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	67/66	80/80	70/69	362/362	71/70	80/80	75/74	366/366
			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	67/66	80/80	70/69	362/362	71/70	80/80	75/74	366/366
			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	101/112	110/125	92/103	362/362	105/117	110/125	96/107	366/366
			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	128/144	150/150	117/132	362/362	132/148	150/150	121/136	366/366
			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	147/137	150/150	135/153	362/362	152/141	175/150	140/157	366/366
		MED	NONE	-	–	64/63	80/80	67/66	381	68/67	80/80	72/70	385	69/68	80/80	73/72	386	73/72	80/80	77/76	390
			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	69/68	80/80	73/72	386/386	73/72	80/80	77/76	390/390
			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	69/68	80/80	73/72	386/386	73/72	80/80	77/76	390/390
			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	103/115	110/125	95/105	386/386	108/120	110/125	99/110	390/390
			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	130/146	150/150	120/134	386/386	135/151	150/175	124/138	390/390
			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	150/139	150/150	138/155	386/386	155/144	175/175	142/160	390/390
		HIGH	NONE	-	–	67/66	80/80	70/69	392	71/70	80/80	75/74	396	72/71	80/80	76/75	397	76/75	90/90	80/79	401
			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	72/71	80/80	76/75	397/397	76/75	90/90	80/79	401/401
			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	72/71	80/80	76/75	397/397	76/75	90/90	80/79	401/401
			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	107/119	110/125	98/109	397/397	112/123	125/125	102/113	401/401
			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	134/150	150/150	123/137	397/397	139/155	150/175	127/142	401/401
			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	154/143	175/175	141/158	397/397	158/147	175/175	145/163	401/401
	460–3–60	STD	NONE	-	–	30	40	31	180	32	40	33	182	33	40	34	182	34	40	36	184
			116A	13.9	16.7	30	40	31	180	32	40	33	182	33	40	34	182	34	40	36	184
			113A	16.5	19.8	30	40	31	180	32	40	33	182	33	40	34	182	35	40	36	184
			115A	33.0	39.7	55	60	50	180	57	60	52	182	58	60	53	182	60	60	55	184
			114A+116A	41.7	50.2	68	70	62	180	70	70	64	182	71	80	65	182	73	80	67	184
			115A+113A	50.0	60.1	65	70	73	180	68	80	76	182	68	80	76	182	70	80	78	184
		MED	NONE	-	–	31	40	33	192	33	40	35	194	34	40	35	194	35	45	37	196
			116A	13.9	16.7	31	40	33	192	33	40	35	194	34	40	35	194	35	45	37	196
			113A	16.5	19.8	31	40	33	192	34	40	35	194	34	40	35	194	36	45	37	196
			115A	33.0	39.7	56	60	51	192	58	60	53	194	59	60	54	194	61	70	56	196
			114A+116A	41.7	50.2	69	70	63	192	72	80	65	194	72	80	66	194	74	80	68	196
			115A+113A	50.0	60.1	67	80	75	192	69	80	77	194	69	80	77	194	72	80	79	196
		HIGH	NONE	-	–	33	40	34	197	35	40	36	199	35	45	37	199	37	45	39	201
			116A	13.9	16.7	33	40	34	197	35	40	36	199	35	45	37	199	37	45	39	201
			113A	16.5	19.8	33	40	34	197	35	40	36	199	36	45	37	199	38	45	39	201
			115A	33.0	39.7	58	60	53	197	60	60	55	199	61	70	56	199	63	70	58	201
			114A+116A	41.7	50.2	71	80	65	197	73	80	67	199	74	80	68	199	76	80	70	201
			115A+113A	50.0	60.1	69	80	76	197	71	80	79	199	71	80	79	199	74	80	81	201
	575–3–60	STD	NONE	-	–	24	30	25	142	28	30	30	146	26	30	27	144	30	35	32	148
			118A	17.0	20.4	32	35	29	142	36	40	33	146	34	35	31	144	38	40	35	148
			119A	34.0	40.9	57	60	52	142	62	70	57	146	59	60	54	144	64	70	59	148
			118A+119A	51.0	61.3	67	80	76	142	72	80	80	146	70	80	78	144	74	80	82	148
		MED	NONE	-	–	24	30	25	142	28	30	30	146	26	30	27	144	30	35	32	148
			118A	17.0	20.4	32	35	29	142	36	40	33	146	34	35	31	144	38	40	35	148
			119A	34.0	40.9	57	60	52	142	62	70	57	146	59	60	54	144	64	70	59	148
			118A+119A	51.0	61.3	67	80	76	142	72	80	80	146	70	80	78	144	74	80	82	148
		HIGH	NONE	-	–	26	30	27	156	30	35	32	160	28	30	29	158	32	35	34	162
			118A	17.0	20.4	34	35	31	156	38	40	35	160	36	40	33	158	41	45	37	162
			119A	34.0	40.9	59	60	54	156	64	70	59	160	61	70	56	158	66	70	60	162
			118A+119A	51.0	61.3	70	80	78	156	74	80	82	160	72	80	80	158	76	80	84	162

ELECTRICAL INFORMATION

Table 107 - 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.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			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	75/74	90/80	78/77	398	78/78	100/100	82/82	402
			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	75/74	90/80	78/77	398/398	78/78	100/100	82/82	402/402
			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	105/117	110/125	96/107	398/398	109/122	110/125	100/112	402/402
			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	131/147	150/150	120/135	398/398	135/152	150/175	124/139	402/402
			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	148/137	150/150	135/153	398/398	152/141	175/150	140/157	402/402
			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	157/177	175/200	176/200	398/398	162/182	175/200	180/204	402/402
		MED	NONE	-	-	72/71	80/80	75/74	417	76/75	100/90	79/78	421	77/76	100/100	81/79	422	81/80	100/100	85/84	426
			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	77/76	100/100	81/79	422/422	81/80	100/100	85/84	426/426
			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	107/119	110/125	98/109	422/422	112/124	125/125	103/114	426/426
			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	133/150	150/150	122/137	422/422	138/154	150/175	127/142	426/426
			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	150/139	150/150	138/155	422/422	155/144	175/175	142/160	426/426
			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	160/180	175/200	179/202	422/422	164/185	175/200	183/207	426/426
		HIGH	NONE	-	-	82	100	86	432	85	100	91	436	86	100	92	437	90	100	96	441
			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	86/86	100/100	92/92	437/437	90/90	100/100	96/96	441/441
			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	119/133	125/150	109/122	437/437	124/137	125/150	114/126	441/441
			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	145/163	150/175	133/149	437/437	150/168	150/175	138/154	441/441
			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	162/152	175/175	149/167	437/437	167/157	175/175	153/172	441/441
			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	172/193	200/225	190/214	437/437	176/198	200/225	194/219	441/441
	460-3-60	STD	NONE	-	-	35	45	36	233	37	45	38	235	37	45	38	235	39	50	40	237
			292A	16.5	19.9	35	45	36	233	37	45	38	235	37	45	38	235	39	50	40	237
			295A	33.5	40.3	56	60	51	233	58	60	53	235	58	60	53	235	61	70	55	237
			289A+295A	43.5	52.3	71	80	65	233	73	80	67	235	73	80	67	235	76	80	69	237
			292A+295A	50.0	60.2	65	70	74	233	68	80	76	235	68	80	76	235	70	80	78	237
			295A+295A	67.0	80.6	86	90	97	233	88	100	99	235	89	100	100	235	91	100	102	237
		MED	NONE	-	-	36	45	37	245	38	50	39	247	38	50	40	247	40	50	42	249
			292A	16.5	19.9	36	45	37	245	38	50	39	247	38	50	40	247	40	50	42	249
			295A	33.5	40.3	57	60	52	245	59	60	54	247	60	60	55	247	62	70	57	249
			289A+295A	43.5	52.3	72	80	66	245	74	80	68	247	75	80	68	247	77	80	70	249
			292A+295A	50.0	60.2	67	80	75	245	69	80	77	247	70	80	77	247	72	80	79	249
			295A+295A	67.0	80.6	87	100	98	245	89	100	100	247	90	100	101	247	92	100	103	249
		HIGH	NONE	-	-	41	50	43	252	43	50	45	254	43	50	46	254	45	50	48	256
			292A	16.5	19.9	41	50	43	252	43	50	45	254	43	50	46	254	45	50	48	256
			295A	33.5	40.3	64	70	58	252	66	70	60	254	66	70	61	254	69	70	63	256
			289A+295A	43.5	52.3	79	80	72	252	81	90	74	254	81	90	74	254	84	90	76	256
			292A+295A	50.0	60.2	73	80	81	252	76	80	83	254	76	80	83	254	78	80	86	256
			295A+295A	67.0	80.6	94	100	104	252	96	100	106	254	97	100	107	254	99	100	109	256

ELECTRICAL INFORMATION

Table 107 - 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.								w/ PWRD C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)				NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER***A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAS180	575–3–60	STD	NONE	-	-	29	35	30	184	32	40	34	188	30	35	32	186	34	40	36	190
			293A	16.5	15.9	29	35	30	184	32	40	34	188	30	35	32	186	34	40	36	190
			296A	33.5	32.2	46	50	42	184	51	60	47	188	48	50	44	186	53	60	49	190
			290A+296A	43.5	41.8	58	60	53	184	63	70	58	188	60	60	55	186	65	70	60	190
			293A+296A	50.0	48.1	54	60	60	184	59	60	65	188	56	60	62	186	61	70	67	190
			296A+296A	67.0	64.4	70	80	79	184	75	80	84	188	73	80	81	186	77	80	86	190
		MED	NONE	-	-	29	35	30	184	32	40	34	188	30	35	32	186	34	40	36	190
			293A	16.5	15.9	29	35	30	184	32	40	34	188	30	35	32	186	34	40	36	190
			296A	33.5	32.2	46	50	42	184	51	60	47	188	48	50	44	186	53	60	49	190
			290A+296A	43.5	41.8	58	60	53	184	63	70	58	188	60	60	55	186	65	70	60	190
			293A+296A	50.0	48.1	54	60	60	184	59	60	65	188	56	60	62	186	61	70	67	190
			296A+296A	67.0	64.4	70	80	79	184	75	80	84	188	73	80	81	186	77	80	86	190
		HIGH	NONE	-	-	33	40	35	196	37	45	39	200	35	40	37	198	39	45	41	202
			293A	16.5	15.9	33	40	35	196	37	45	39	200	35	40	37	198	39	45	41	202
			296A	33.5	32.2	52	60	47	196	57	60	52	200	54	60	49	198	59	60	54	202
			290A+296A	43.5	41.8	64	70	58	196	69	70	63	200	66	70	60	198	71	80	65	202
			293A+296A	50.0	48.1	60	70	66	196	65	70	70	200	62	70	68	198	67	70	72	202
			296A+296A	67.0	64.4	76	80	84	196	81	90	89	200	78	80	86	198	83	90	91	202

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 combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
2. **Unbalanced 3-Phase Supply Voltage**
   Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percentage of voltage imbalance.

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

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 EconoMi$er™ 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 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 EconoMi$er 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 CO_2 sensors are connected to the EconoMi$er IV and X control, a demand controlled ventilation strategy will begin to operate. As the CO_2 level in the zone increases above the CO_2 setpoint, the minimum position of the damper will be increased proportionally. As the CO_2 level decreases because of the increase in fresh air, the outdoor air damper will be proportionally closed. For EconoMi$er 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 EconoMi$er IV and X control is in the occupied mode and a call for cooling exists (Y1 on the thermostat), the control will first check for indoor fan operation. If the fan is not on, then cooling will not be activated. If the fan is on, then the control will open the EconoMi$er IV and X damper to the minimum position.

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

Optional Hot Gas Re-Heat Dehumidification System

Units with the factory equipped Hot Gas Re-Heat option are capable of providing multiple modes of improved dehumidification as a variation of the normal cooling cycle. The Hot Gas Re-Heat 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 Re-Heat 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.

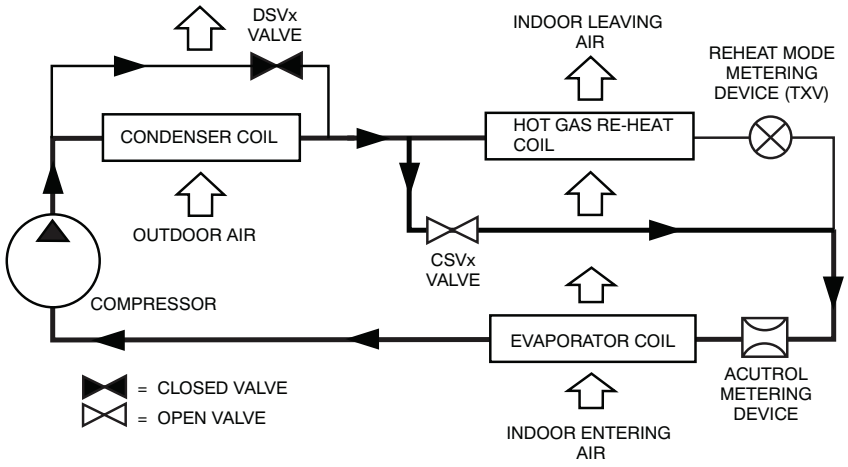
Reheat1 - provides increased Latent Cooling while slightly reducing the Sensible Cooling effect.

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.

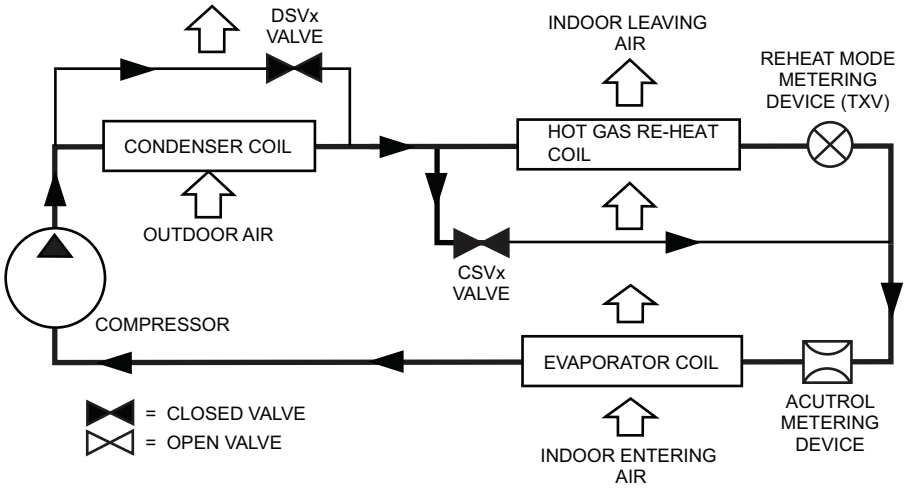
The following diagrams depict piping for Single Stage cooling units.

SEQUENCE OF OPERATION (cont.)



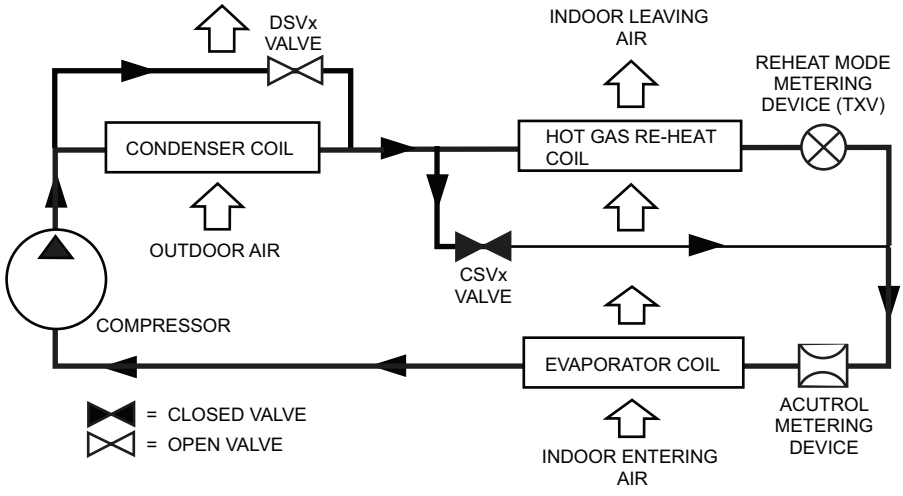
C12647B

Normal Cooling Mode - Hot Gas Re-Heat System with Single Stage Cooling



C12648B

Subcooling Mode (Reheat 1) - Hot Gas Re-Heat System with Single Stage Cooling



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Hot Gas Reheat Mode (Reheat 2) - Hot Gas Re-Heat System with Single Stage Cooling

Cooling Only/Electric Heat Packaged Rooftop

HVAC Guide Specifications

Size Range: **3 to 15 Nominal Tons**

Section Description

23 06 80 Schedules for Decentralized HVAC Equipment

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

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 33 Electric and Electronic Control System for HVAC

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.
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 shall be designed in accordance with ISO 9001:2000, and shall be manufactured in a facility registered by ISO 9001:2000.
8. Roof curb shall be designed to conform to NRCA Standards.
9. 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.
10. Unit shall be designed in accordance with UL Standard 1995, including tested to withstand rain.
11. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.
12. Unit shake tested to assurance level 1, ASTM D4169 to ensure shipping reliability.
13. 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 ± 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 0036-150 models. Supply duct kit required for 180 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 036 thru 121 sizes, two piece on 150 and 180 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-amperage 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 121 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 System 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. Integrated EconoMi$er IV, EconoMi$er2, and EconoMi$er X **standard leak rate models**. (Factory installed on 3 phase models only. Field installed on all 3 and 1 phase models)
   a. Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
   b. Independent modules for vertical or horizontal return configuration shall be available. Vertical return modules shall be available as a factory installed option.
   c. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
   d. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
   e. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
   f. Standard leak rate shall be equipped with dampers not to exceed 2% leakage at 1 in. wg pressure differential.
   g. Economizer controller on EconoMi$er IV models 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.
   h. Economizer controller on EconoMi$er X models shall be the Honeywell W7220 that provides:
      (1.) 2-line LCD interface screen for setup, configuration and troubleshooting.

(2.) On-board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24.
(3.) Sensor failure loss of communication identification
(4.) Automatic sensor detection
(5.) Capabilities for use with multiple-speed indoor fan systems
(6.) Utilize digital sensors: Dry bulb and Enthalpy

i. Shall be capable of introducing up to 100% outdoor air.
j. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air and contain seals that meet ASHRAE 90.1 requirements.
k. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.
l. Dry bulb outdoor air temperature sensor shall be provided as standard. Enthalpy sensor is also available on factory installed only. Outdoor air sensor setpoint shall be adjustable and shall range from 40 to 100F /4 to 38C. Additional sensor options shall be available as accessories.
m. 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%.
n. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.
o. Dampers shall be completely closed when the unit is in the unoccupied mode.
p. 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.
q. Compressor lockout temperature on W7220 is adjustable from -45°F to 80°F, set at a factory default of 32°F. Others shall open at 35°F (2°C) and closes at 50°F (10°C).
r. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
s. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.

4. Integrated EconoMi$er2, and EconoMi$er X **Ultra Low Leak rate models**.(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 configuration 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. Ultra Low Leak design meets California Title 24 section 140.4 and ASHRAE 90.1 requirements for 4 cfm per sq.ft. on the outside air dampers and 10 cfm per sq. ft. on the return dampers.
g. Economizer controller on EconoMi$er X models shall be the Honeywell W7220 that provides:
(1.) 2-line LCD interface screen for setup, configuration and troubleshooting
(2.) On-board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24.
(3.) Sensor failure loss of communication identification
(4.) Automatic sensor detection
(5.) Capabilities for use with multiple-speed indoor fan systems
(6.) 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 and contain seals that meet ASHRAE 90.1 requirements.
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. Enthalpy sensor is also available on factory installed only. 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.

n. Dampers shall be completely closed when the unit is in the unoccupied mode.
o. Economizer controller shall accept a 2-10 Vdc CO_2 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 temperature on W7220 is adjustable from -45° F to 80° F, set at a factory default of 32° F. Others shall open at 35°F (2°C) and 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.

5. 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
   i. Not available with 2-Speed Indoor Fan Motor models.
6. 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.
   b. Not available with 2-Speed Indoor Fan Motor models.
7. Hot Gas Re-Heat Dehumidification System (3 Phase Models Only).
   a. The Hot Gas Re-Heat Dehumidification System shall be factory-installed in single stage RAS03-150 and 2-stage RAS180 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.
8. 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).
9. 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.
10. 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.
11. Convenience Outlet
    a. Powered convenience outlet. (3 Phase Models Only)
       (1.) Outlet shall be powered from main line power to the rooftop unit.
       (2.) Outlet shall be powered from line side or load side of disconnect by installing contractor, as required by code. If outlet is powered from load side of disconnect, unit electrical ratings shall be UL certified and rated for additional outlet amperage.

(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.) Voltage required to operate convenience outlet shall be provided by a factory installed step-down transformer.
(6.) Outlet shall be accessible from outside the unit.
(7.) Outlet shall include a field installed "Wet in Use" cover.

b. 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.

12. 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.
13. Supply Duct Cover (180 size only):
a. Required when field converting the factory standard vertical duct supply to horizontal duct supply configuration. One required per unit.
14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. Indoor Air Quality (CO_2) 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.
20. 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.

21. 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).
22. 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.
23. 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.
24. Disconnect Switch Bracket (180 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.
25. 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.
26. 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 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.