

**HIGH-EFFICIENCY PACKAGE ELECTRIC COOLING,
R-410A SINGLE PACKAGE ROOFTOP 3 – 12.5 TONS (1 & 3-Phase)**

BUILT TO LAST, EASY TO INSTALL AND SERVICE

- One-piece, high efficiency electric cooling with a low profile, prewired, tested, and charged at the factory.
- Field convertible from vertical to horizontal airflow on all models. No special kit required on 036-120 models. Field accessory supply duct kit required for 150 size model only.
- Full perimeter base rail with built-in rigging adapters and fork truck slots.
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection.
- Fully insulated cabinet.
- Single-stage cooling capacity control on 036-072 models.
- Two-stage cooling capacity control on 073-150 models.
- Single scroll compressor on 036-073 models, dual scroll compressors on 090-150 models with internal line-break overload protection.
- Two inch disposable fiberglass type return air filters in dedicated rack with tool-less filter access door.
- All units have high and low pressure switches.
- Refrigerant circuits contain a liquid line filter drier to trap dirt and moisture.
- Indoor and outdoor coils constructed of aluminum fins mechanically bonded to seamless copper tubes.
- Newly designed indoor refrigerant header for easier maintenance and replacement.
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE 62 Standard, sloping design; side or center drain.
- Direct drive high-efficiency ECM blower motors on 036-060 single phase models.
- Belt drive evaporator-fan motor and pulley combinations available on all three phase models.
- Access panels with easy grip handles provide quick and easy access to the blower and blower motor, control box, and compressor.
- “No-strip” screw system has superior holding power and guides screws into position while preventing the screw from stripping the unit’s metal.
- Central terminal board facilitates simple safety circuit troubleshooting and simplified control box arrangement.
- Outdoor temperature cooling operation range up to 125°F (52°C) and down to 35°F (–2°C) using winter start kit.
- TXV refrigerant metering devices on all models to precisely control refrigerant flow.
- Large, laminated control wiring and power wiring drawings are affixed to unit to make troubleshooting easy.
- Standard, medium, and high static fan motor options available.
- Provisions for thru-the-bottom power entry capabilities.
- Single point electrical connection.



RAH036-060



RAH072-120



OR



Intertek

WARRANTY

- 5 year compressor limited warranty
- 1 year standard parts limited warranty



SINGLE STAGE COOLING						
UNIT	NOM. TONS	COOLING			UNIT DIMENSIONS H x W x L in (mm)	UNIT WEIGHT lb. (kg)
		NET CAP. (Btuh)	SEER	EER		
RAH036*0XA0AAA	3	35,400	15.0	12.50	33 ³ / ₈ x 46 ³ / ₄ x 74 ³ / ₈ (847 x 1187 x 1888)	458 (208)
RAH048*0XA0AAA	4	48,500	15.6	13.00	41 ³ / ₈ x 46 ³ / ₄ x 74 ³ / ₈ (1051 x 1187 x 1888)	545 (207)
RAH060*0XA0AAA	5	57,500	15.2	12.45	41 ³ / ₈ x 46 ³ / ₄ x 74 ³ / ₈ (1051 x 1187 x 1888)	550 (249)
RAH072*0XA0AAA	6	73,000	N/A	12.20	41 ¹ / ₄ x 59 ¹ / ₂ x 88 ¹ / ₈ (1048 x 1510 x 2238)	715 (324)
TWO STAGE COOLING						
UNIT	NOM. TONS	COOLING			UNIT DIMENSIONS H x W x L in (mm)	UNIT WEIGHT lb. (kg)
		NET CAP. (Btuh)	SEER	EER		
RAH073*0AA0AAA	6.0	72,000	N/A	12.20	41 ¹ / ₄ x 59 ¹ / ₂ x 88 ¹ / ₈ (1048 x 1510 x 2238)	765 (347)
RAH090*0AA0AAA	7.5	89,000	N/A	12.20	49 ³ / ₈ x 59 ¹ / ₂ x 88 ¹ / ₈ (1253 x 1510 x 2238)	925 (420)
RAH102*0AA0AAA	8.5	97,000	N/A	12.20	49 ³ / ₈ x 59 ¹ / ₂ x 88 ¹ / ₈ (1253 x 1510 x 2238)	925 (420)
RAH110*0AA0AAA	10.0	111,000	N/A	12.00	49 ³ / ₈ x 59 ¹ / ₂ x 88 ¹ / ₈ (1253 x 1510 x 2238)	1090 (495)
RAH120*0AA0AAA	10.0	115,000	N/A	11.70	49 ³ / ₈ x 59 ¹ / ₂ x 88 ¹ / ₈ (1253 x 1510 x 2238)	1090 (495)
RAH150*0AA0AAA	12.5	146,000	N/A	12.40	57 ³ / ₈ x 63 ³ / ₈ x 115 ⁷ / ₈ (1456 x 1609 x 2942)	1430 (649)

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Model number nomenclature

RAH 036-150 MODEL NUMBER NOMENCLATURE

MODEL SERIES	R	A	H	0	9	0	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)			Type											
H = High Efficiency			Efficiency											
036 = 3 Tons		090 = 7.5 Tons (Dual Compressor)												
048 = 4 Tons		102 = 8.5 Tons (Dual Compressor)												
060 = 5 Tons		110 = 10 Tons (Dual Compressor) 12.0 EER*												
072 = 6 Tons (Single Compressor/Single-Stage)		120 = 10 Tons (Dual Compressor) 11.7 EER*												
073 = 6 Tons (Single Compressor/2-Stage)		150 = 12.5 Tons (Dual Compressor)												
Nominal Cooling Capacity														
K = 208/230-1-60		L = 460-3-60												
H = 208/230-3-60		S = 575-3-60												
Voltage														
0 = No Heat		Heating Capacity (See spec sheet for actual capacity)												
X = Direct drive ECM motor (3-5 Ton All voltages 1 & 3 phase)														
A = Standard Static Option - (Belt Drive) 6-12.5 Ton with 1 speed IFM , 3 phase only)														
C = Medium Static Option (Belt Drive) (3-12.5 Ton with 1 speed IFM, 3 phase only)														
B = High Static Option (Belt Drive) (3-10 Ton with 1 speed IFM, 3 phase only)														
E = High Static High Efficiency Option (Belt Drive) (12.5 Ton with 1 speed IFM)														
G = High Static Motor / Drive with Hot Gas Re-heat (12.5 Ton with 1 speed IFM)														
H = High Static Motor / Drive with Hot Gas Re-heat (3-10 Ton with 1 speed IFM, 7.5 to 12.5 ton with 2 speed IFM)														
Motor Option														
A = None														
B = Economizer w/Barometric relief, OA Temp sensor														
E = Economizer w/Barometric relief + CO ₂ Sensor, OA Temp sensor														
H = Economizer w/Barometric relief, enthalpy sensor														
L = Economizer w/Barometric relief + CO ₂ Sensor, enthalpy sensor														
P = 2-Position damper w/Baro-relief														
U = Temp Ultra Low Leak Economizer w/Barometric relief														
W = Enthalpy Ultra Low Leak Economizer w/Barometric relief														
Outdoor Air Options / Control (See spec sheet for details)														
0A = No Options														
4B = Non-Fused Disconnect														
BB = Powered 115v Convenience Outlet														
AT = Non-powered 115v Convenience Outlet														
BR = Supply Air Smoke Detector														
AA = Easy Access Hinged Panels														
Factory Installed Options														
A = Aluminum / Copper Cond & Alum/Copper Evap Coil														
B = Pre-coat Alum/Copper Cond & Alum / Copper Evap														
C = E-Coated Alum/Copper Cond & Alum / Copper Evap														
D = E-Coated Alum / Copper Cond & E-Coated Alum/Copper Evap														
E = Copper/Copper Cond & Alum/Copper Evap														
F = Copper/Copper Cond & Copper/Copper Evap														
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 Fan VFD Controller (For 2-stage units only)														
Motor Type Option														

NOTE: On single phase (K voltage code) models, the following are not available as factory installed options:

- Coated or copper fin coils
- Economizers or 2 position dampers
- Hot Gas Re-heat

* Two speed fan is required for sale in the U.S. or Canada.

Options and accessories

ITEM	OPTION*	ACCESSORY†
CABINET		
Thru-the-base electrical connections	X	X
Hinged access panels	X	
Supply duct cover (Model 150 only)		X
COIL OPTIONS		
Cu/Cu indoor and/or outdoor coils ¹	X	
Pre-coated outdoor coils ¹	X	
Premium, E-coated outdoor coils ¹	X	
HOT GAS RE-HEAT CONTROL		
Hot Gas Re-Heat Dehumidification System ¹	X	
CONDENSER PROTECTION		
Condenser coil hail guard (louvered design) ¹	X	X
CONTROLS		
Thermostats, temperature sensors, and subbases		X
Smoke detector (supply and/or return air)	X	
Horn/Strobe Annunciator ⁸		X
Time Guard II compressor delay control circuit		X
Phase Monitor		X
Condensate overflow switch - for electro-mechanical controls only	X	X
ECONOMIZERS AND OUTDOOR AIR DAMPERS		
Economizer IV for electro-mechanical controls - Non FDD (Standard air leak damper models) ^{1, 7}	X	X
Motorized 2 position outdoor-air damper ¹	X	X
Manual outdoor-air damper (25% and 50%)		X
Barometric relief ²	X	X
Power exhaust - prop design		X
Economizer X for electro-mechanical controls, complies with FDD (Standard and Ultra Low Leak air damper models) ^{1, 7}	X	X
ECONOMIZER SENSORS AND 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

ITEM	OPTION*	ACCESSORY†
CO ₂ sensor (wall, duct, or unit mounted) ³	X	X
ELECTRIC HEAT		
Electric Resistance Heaters	X	X
Single Point Kit	X	X
INDOOR MOTOR AND DRIVE		
Multiple motor and drive packages	X	
2-Speed Indoor Fan Motor system w/VFD controller (2-stage cool only with electro-mechanical controls)	X	
Display Kit for 2-Speed Indoor Fan Motor system with VFD		X
LOW AMBIENT CONTROL		
Winter start kit ⁴		X
Motormaster® head pressure controller to -20°F (-29°C) ⁴		X
Cooling Low Ambient Controller to 0°F/-18°C (except 11 size) ⁴	X	
POWER OPTIONS		
Convenience outlet (powered) ^{1, 5}	X	
Convenience outlet (unpowered)	X	
Non-fused disconnect ⁶	X	
ROOF CURBS		
Roof curb 14-in. (356 mm)		X
Roof curb 24-in. (610 mm)		X

* Factory-installed option.
† Field-installed accessory.

NOTES:

- Not available as factory-installed option on single phase (208/230-1-60) models. Use field-installed accessory where available.
- Included with economizer.
- Sensors used to optimize economizer performance.
- See application data for assistance.
- Powered convenience outlet is not available on 110 size models with 460/3/60 or 575/3/60 voltage.
- Non-fused disconnect switch cannot be used when unit electrical rating with field-installed electric heat exceeds-
036-120 sizes: 208/230-1-60 or 208/230-3-60 = 100 amps (FLA)
460-3-60 or 575-3-60 = 80 amps (FLA)
150 size: 208/230-3-60 = 200 amps (FLA)
460-3-60 or 575-3-60 = 100 amps (FLA)
- FDD - (Fault Detection and Diagnostic) capability per California Title 24 section 120.2.
- Requires a field-supplied 24V transformer for each application. See price pages for details.

Factory-Installed Options

Economizer (Dry-Bulb or Enthalpy)

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

Economizers are available, installed and tested by the factory, with either enthalpy or dry-bulb temperature inputs. Additional sensors are available as accessories to optimize the economizers. Economizers include a powered exhaust system to help equalize building pressures.

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. Economizers can be factory-installed or easily field-installed.

CO₂ Sensor

The CO₂ sensor works with the economizer to intake only the correct amount of outside air for ventilation. As occupants fill your building, the CO₂ sensor detects their presence through increasing CO₂ levels, and opens the economizer appropriately.

When the occupants leave, the CO₂ levels decrease, and the sensor appropriately closes the economizer. This intelligent control of the ventilation air, called Demand Controlled Ventilation (DCV), reduces the overall load on the rooftop, saving money. Also available as a field-installed accessory.

Smoke Detectors

Trust the experts. Smoke detectors make your application safer and your job easier. The 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. Also available as a field-installed accessory.

Convenience Outlet (Powered or Un-Powered)

Reduce service and/or installation costs by including a convenience outlet in your specification. This service feature will be installed at the 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. When selecting a factory-installed non-fused disconnect, note they are sized for the unit as ordered from the factory. The sizing of these do not accommodate field-installed items such as power exhaust devices, etc. If field installing electric heat with factory-installed non-fused disconnect switch, a Single Point Kit may or may not be required.

Motorized 2-Position Damper

The 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.

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.

Optional Hot Gas Re-Heat Dehumidification System

The Hot Gas Re-Heat dehumidification system is an all-inclusive factory-installed option that can be ordered with any RAH Series 036-150 rooftop unit, with the exception of single phase voltage (208/230-1-60) units.

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

The Hot Gas Re-Heat dehumidification system has a unique dual operational mode setting. The Hot Gas Re-Heat system provides greater dehumidification of the occupied space by two modes of dehumidification operations in addition to its normal design cooling mode.

The RAH series 036-150 rooftop coupled with the Hot Gas Re-Heat dehumidification system is capable of operating in normal design cooling mode, subcooling mode, and hot gas reheat mode. Normal design cooling mode is when the unit will operate under its normal sequence of operation by cycling compressors to maintain comfort conditions.

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

Options and accessories (cont)

2-Speed Indoor Fan Motor System

The 2-Speed Indoor Fan Motor system saves energy and installation time by utilizing a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor speed in sequence with the units cooling operation. Per ASHRAE 90.1-2016 standard section 6.4.3.10.b, during the first stage of cooling operation the VFD will adjust the fan motor to provide 66% 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 66% of total cfm. Units 073-150 meet ASHRAE 90.1-2016 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers), DOE-2018 (Department of Energy), and IECC-2015 (International Energy Conservation Code) minimum efficiency requirements when equipped with 2-speed indoor fan motor system.

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

Data based on .10 (\$/kWh) in an office application utilizing Rooftop Energy Savings Calculator simulation software program.

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

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

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

A display kit for the 2-Speed Indoor Fan Motor system is available as a field-installed accessory (CRDISKIT001A00).

Hinged Access Panels

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

Alternate Motors and Drives

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

Thru-the-Base Connections

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

Electric Heaters

A full-line of factory and field-installed accessory heaters is offered. The heaters are very easy to install and use, and are all pre-engineered and certified.

Low Ambient Controller

The low ambient controller is a 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 low ambient controller will either cycle the outdoor fan motors or operate them at reduced speed to maintain the unit operation, depending on the model. This controller allows cooling operation down to 0°F (-18°C) ambient conditions. (Not available on 110 size models as standard unit cooling operation down to 0°F /-18°C.)

Condensate Overflow Switch

(Factory-Installed Option) This sensor and related controller monitors the condensate level in the drain pan and shuts down compression operation when overflow conditions occur. It includes:

- Indicator light — solid red (more than 10 seconds on water contact — compressors disabled), blinking red (sensor disconnected)
- 10 second delay to break — eliminates nuisance trips from splashing or waves in pan (sensor needs 10 seconds of constant water contact before tripping)
- Disables the compressor(s) operation when condensate plug is detected, but still allows fans to run for Economizer.

OPTION AND ACCESSORY WEIGHTS

OPTION / ACCESSORY NAME	RAH UNIT WEIGHT																	
	036		048		060		072/073		090		102		110		120		150	
	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
Hot Gas Re-Heat System*	50	23	55	25	55	25	80	36	80	36	80	36	85	39	85	39	90	41
Power Exhaust - Vertical	50	23	50	23	50	23	75	34	75	34	75	34	75	34	75	34	85	39
Power Exhaust - Horizontal	30	14	30	14	30	14	30	14	30	14	30	14	30	14	30	14	75	34
Economizer (X or IV)	50	23	50	23	50	23	75	34	75	34	75	34	75	34	75	34	132	60
Two Position Damper	39	18	39	18	39	18	58	26	58	26	58	26	58	26	58	26	65	29
Manual Dampers	12	5	12	5	12	5	18	8	18	8	18	8	18	8	18	8	25	11
Hail Guard (louvered)	16	7	16	7	16	7	34	15	34	15	34	15	34	15	34	15	45	20
Cu/Cu Condenser Coil	35	16	35	16	35	16	95	43	95	43	95	43	170	77	170	77	190	86
Cu/Cu Cond. & Evap. Coils	60	27	60	27	90	41	140	64	140	64	195	88	270	122	270	122	280	127
Roof Curb (14-in. curb)	115	52	115	52	115	52	143	65	143	65	143	65	143	65	143	65	180	82
Roof Curb (24-in. curb)	197	89	197	89	197	89	245	111	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
Optional Indoor Motor/Drive	10	5	10	5	10	5	15	7	15	7	15	7	15	7	15	7	45	20
Motormaster® Controller	35	16	35	16	35	16	35	16	35	16	35	16	35	16	35	16	40	18
Low Ambient Controller	5	2	5	2	5	2	5	2	5	2	5	2	8	3	10	5	30	14
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
Fan/Filter Status Switch	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
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	20	9

LEGEND

— Not Available

* For Hot Gas Re-Heat system add Motormaster® controller.

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

Capacity ratings

AHRI RATINGS

RAH UNIT SIZE	COOLING STAGES	NOMINAL CAPACITY (TONS)	NOMINAL COOLING CAPACITY (BTUH)	TOTAL POWER (kW)	SEER	EER	IEER	IEER WITH 2-SPEED INDOOR MOTOR
036	1	3.0	35.4	2.8	15.0	12.50	N/A	N/A
048	1	4.0	48.5	3.7	15.6	13.00	N/A	N/A
060	1	5.0	57.5	4.6	15.2	12.45	N/A	N/A
072	1	6.0	73.0	6.0	N/A	12.20	13.2	N/A
073	2	6.0	72.0	5.9	N/A	12.20	14.2	16.2
090	2	7.5	89.0	7.3	N/A	12.20	13.2	14.0
102	2	8.5	97.0	8.0	N/A	12.20	13.2	14.0
110	2	10.0	111.0	9.3	N/A	12.00	12.6*	14.5
120	2	10.0	115.0	9.8	N/A	11.70	12.2*	12.9
150	2	12.5	146.0	11.8	N/A	12.40	13.2	14.1

LEGEND

AHRI — Air-Conditioning, Heating and Refrigeration Institute

COP — Coefficient of Performance

EER — Energy Efficiency Ratio

IEER — Integrated Energy Efficiency Ratio

SEER — Seasonal Energy Efficiency Ratio

* Two-speed indoor fan is required on RAH 110 and 120 for sale in the US and Canada.

NOTES:

1. Rated in accordance with AHRI Standards 210/240 (036-060 size) and 340/360 (072-150 size).
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 RAH units comply with ASHRAE 90.1-2016 Energy Standard for minimum SEER and EER requirements.
4. RAH units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes



Physical data

SOUND RATINGS TABLE

RAH UNIT SIZE	COOLING STAGES	OUTDOOR SOUND (dB) AT 60 HZ								
		A-WEIGHTED	63	125	250	500	1000	2000	4000	8000
036	1	76	78.2	78.0	74.2	73.3	70.6	66.0	62.4	56.9
048	1	78	84.7	83.6	77.1	74.6	72.3	68.3	64.7	60.9
060	1	77	87.5	82.5	76.1	73.6	71.3	67.1	64.1	60.0
072	1	82	90.1	82.6	81.0	79.4	77.0	73.0	70.4	66.7
073	2	82	90.1	82.6	81.0	79.4	77.0	73.0	70.4	66.7
090	2	82	90.6	84.3	80.2	79.3	77.1	72.2	67.4	63.7
102	2	82	88.6	85.0	81.6	79.5	77.4	74.1	71.0	66.3
110	2	87	85.9	87.9	85.6	84.4	82.8	78.5	74.9	72.5
120	2	87	85.9	87.9	85.6	84.4	82.8	78.5	74.9	72.5
150	2	83	89.3	86.0	82.9	80.7	78.5	73.6	69.6	64.5

LEGEND

dB — Decibel

NOTES:

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

MINIMUM - MAXIMUM AIRFLOW RATINGS (CFM) — ELECTRIC HEAT

RAH UNIT	COOLING				ELECTRIC HEATING	
	Minimum	Minimum 2-Speed Fan Motor (at High Speed)	Minimum 2-Speed Fan Motor (at Low Speed)	Maximum	Minimum	Maximum
036	900	—	—	1500	900	1500
048	1200	—	—	2000	1200	2000
060	1500	—	—	2500	1500	2500
072/073	1800	1800	1200	3000	1800	3000
090	2250	2535	1690	3750	2250	3750
102	2550	2550	1700	4250	2550	4250
110	3000	3380	2253	5000	3000	5000
120	3000	3380	2253	5000	3000	5000
150	3750	4056	2704	6250	3750	6250

— Not Available

Physical data (cont)

RAH 3 TO 6 TON PHYSICAL DATA

RAH UNIT	RAH036	RAH048	RAH060	RAH072	RAH073
NOMINAL TONS	3	4	5	6	6
BASE UNIT OPERATING WT (lb)	505	590	600	925	925
REFRIGERATION SYSTEM					
No. Circuits/No. Compressors/Type	1/1/Scroll	1/1/Scroll	1/1/Scroll	1/1/Scroll	1/1/2-Stage Scroll
R-410A Refrigerant Charge (lb-oz)	9-0	12-8	13-8	14-0	14-0
Hot Gas Re-Heat R-410A Refrigerant Charge	11-0	19-12	20-0	22-8	—
Metering Device	TXV	TXV	TXV	TXV	TXV
High Pressure Trip/Reset (psig)	630/505	630/505	630/505	630/505	630/505
Low Pressure Trip/Reset (psig)	54/117	54/117	54/117	54/117	54/117
EVAPORATOR COIL					
Material (Tube Fin)	Cu/Al	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	3/8-in. RTPF
Rows/FPI	3/15	3/15	4/15	3/15	3/15
Total Face Area (ft²)	5.5	7.3	7.3	8.9	8.9
Condensate Drain Connection Size	3/4-in.	3/4-in.	3/4-in.	3/4-in.	3/4-in.
HOT GAS RE-HEAT 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	1/17	2/17	2/17	2/17	—
Total Face Area (ft²)	3.9	5.2	5.2	5.2	—
EVAPORATOR FAN MOTOR					
STANDARD STATIC 1 PHASE					
Motor Quantity/Drive Type	1/Direct	1/Direct	1/Direct	—	—
Max BHP	1.0	1.0	1.0	—	—
RPM Range	600-1200	600-1200	600-1200	—	—
Motor Frame Size	48	48	48	—	—
Fan Quantity/Type	1/Centrifugal	1/Centrifugal	1/Centrifugal	—	—
Fan Diameter (in.)	10 x 10	10 x 10	10 x 10	—	—
STANDARD STATIC 3 PHASE					
Motor Quantity/Drive Type	1/Direct	1/Direct	1/Direct	1/Belt	1/Belt
Max BHP	1.0	1.0	1.0	1.7	1.7
RPM Range	600-1200	600-1200	600-1200	489-747	489-747
Motor Frame Size	48	48	48	56	56
Fan Quantity/Type	1/Centrifugal	1/Centrifugal	1/Centrifugal	1/Centrifugal	1/Centrifugal
Fan Diameter (in.)	10 x 10	10 x 10	11 x 10	15 x 15	15 x 15
MEDIUM STATIC 3 PHASE					
Motor Quantity/Drive Type			1/Belt		
Max BHP	1.7	1.7	2.4	2.9	2.9
RPM Range	770-1175	920-1303	1035-1466	733-949	733-949
Motor Frame Size	48	56	56	56	56
Fan Quantity/Type	1/Centrifugal	1/Centrifugal	1/Centrifugal	1/Centrifugal	1/Centrifugal
Fan Diameter (in.)	10x10	10x10	10x10	15x15	15x15

RAH 3 TO 6 TON PHYSICAL DATA (cont)

RAH UNIT	RAH036	RAH048	RAH060	RAH072	RAH073
HIGH STATIC 3 PHASE					
Motor Quantity/Drive Type	1/Belt	1/Belt	1/Belt	1/Belt	1/Belt
Max BHP	2.4	2.9	2.9	4.7	4.7
RPM Range	1035-1466	1208-1639	1303-1687	909-1102	909-1102
Motor Frame Size	56	56	56	14	14
Fan Quantity/Type	1/Centrifugal	1/Centrifugal	1/Centrifugal	1/Centrifugal	1/Centrifugal
Fan Diameter (in.)	10x10	10x10	10x10	15x15	15x15
CONDENSER COIL					
Material (Tube/Fin)	Cu/Al	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	³ / ₈ -in. RTPF
Rows/FPI	2/17	2/17	2/17	2/17	2/17
Total Face Area (ft ²)	12.7	21.3	21.3	20.5	20.5
CONDENSER FAN/MOTOR					
Quantity/Motor Drive Type	1/Direct	1/Direct	1/Direct	1/Direct	2/Direct
Motor HP/RPM	¹ / ₈ / 825	¹ / ₄ / 1100	¹ / ₄ / 1100	¹ / ₄ / 1100	¹ / ₄ / 1100
Fan Diameter (in.)	22	22	22	22	22
FILTERS					
RA Filter Qty / Size (in.)	2 / 16x25x2	1 / 16x16x2	4 / 16x16x2	4 / 16x20x2	4 / 16x20x2
OA Inlet Screen #/Size (in.)	1 / 20x24x1	1 / 20x24x1	1 / 20x24x1	1 / 20x36x1	1 / 20x36x1

LEGEND

BHP — Brake Horsepower
FPI — Fins Per Inch
OA — Outdoor Air
RA — Return Air
RTPF — Round Tube, Plate Fin
TXV — Thermostatic Expansion Valve
— — Not Available

Physical data (cont)

RAH 7.5 TO 12.5 TON PHYSICAL DATA

RAH UNIT	RAH090	RAH102	RAH110*	RAH120*	RAH150
NOMINAL TONS	7.5	8.5	10	10	12.5
BASE UNIT OPERATING WT (lb)	925	925	1090	1090	1430
REFRIGERATION SYSTEM					
No. Circuits/No. Compressors/Type	2 / 2 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll
R-410A Refrigerant Charge A/B (lb-oz)	9-10 / 9-10	9-14 / 9-14	12-10 / 13-0	12-11 / 12-5	16-7 / 15-5
Hot Gas Re-Heat R-410A Refrigerant Charge A/B	17-0 / 17-0	15-2 / 15-2	18-0 / 18-0	18-3 / 17-3	25-8 / 22-8
Metering Device	TXV	TXV	TXV	TXV	TXV
High Pressure Trip/Reset (psig)	630 / 505	630 / 505	630 / 505	630 / 505	630 / 505
Low Pressure Trip/Reset (psig)	54 / 117	54 / 117	54 / 117	54 / 117	54 / 117
Compressor Capacity Staging (%)	50% / 100%	50% / 100%	50% / 100%	50% / 100%	50% / 100%
EVAPORATOR COIL					
Material (Tube Fin)	Cu / Al	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	3/8-in. RTPF
Rows/FPI	4 / 15	4 / 15	4 / 15	4 / 15	4 / 15
Total Face Area (ft²)	11.1	11.1	11.1	11.1	17.5
Condensate Drain Connection Size	3/4-in.	3/4-in.	3/4-in.	3/4-in.	3/4-in.
HOT GAS REHEAT COIL					
Material (Tube Fin)	Cu / Al	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	3/8-in. RTPF
Rows/FPI	2 / 17	2 / 17	2 / 17	2 / 17	1 / 17
Total Face Area (ft²)	6.3	8.4	8.6	8.6	13.8
EVAPORATOR FAN MOTOR					
STANDARD STATIC 3 PHASE					
Motor Quantity/Drive Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt	1 / Belt
Max BHP	1.7	1.7	2.4	2.4	2.9
RPM Range	518-733	518-733	591-838	591-838	591-838
Motor Frame Size	56	56	56	56	56Y
Fan Quantity/Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
Fan Diameter (in.)	15 x 15	15 x 15	15 x 15	15 x 15	18 x 18
MEDIUM STATIC 3 PHASE					
Motor Quantity/Drive Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt	1 / Belt
Max BHP	2.4	2.4	3.7	3.7	3.7
RPM Range	690-936	690-936	838-1084	838-1084	609-778
Motor Frame Size	56	56	56HZ	56HZ	56HZ
Fan Quantity/Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
Fan Diameter (in.)	15 x 15	15 x 15	15 x 15	15 x 15	18 x 18
HIGH STATIC 3 PHASE					
Motor Quantity/Drive Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt	—
Max BHP	3.7	3.7	4.9	4.9	—
RPM Range	838-1084	838-1084	1022-1240	1022-1240	—
Motor Frame Size	56	56	145TY	145TY	—
Fan Quantity/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 – HIGH EFFICIENCY 3 PHASE					
Motor Quantity/Drive Type	—	—	—	—	1 / Belt
Max BHP (208-v / 230-v / 460-v / 575-v)	—	—	—	—	6.5 / 6.9 / 7.0 / 8.3
RPM Range	—	—	—	—	776-955
Motor Frame Size	—	—	—	—	S184T
Fan Quantity/Type	—	—	—	—	1/Centrifugal
Fan Diameter (in.)	—	—	—	—	18 x 18

RAH 7.5 TO 12.5 TON PHYSICAL DATA (cont)

RAH UNIT	RAH090	RAH102	RAH110*	RAH120*	RAH150
CONDENSER COIL					
Material (Tube/Fin)	Cu / Al	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	³ / ₈ in. RTPF
Rows/FPI	2 / 17	2 / 17	3 / 17	3 / 17	2 / 17
Total Face Area (ft ²)	25.1	25.1	25.1	25.1	2 at 23.1
CONDENSER FAN/MOTOR					
Quantity/Motor Drive Type	2 / Direct	2 / Direct	1 / Direct ECM	1 / Direct	3 / Direct
Motor HP/RPM	¹ / ₄ / 1100	¹ / ₄ / 1100	1 / 1050	1 / 1175	³ / ₄ / 1100
Fan Diameter	22	22	30	30	22
FILTERS					
RA Filter # / Size (in.)	4 / 20 x 20 x 2				6 / 18 x 24 x 2
OA Inlet Screen # / Size (in.)	1 / 20 x 24 x 1				V - 2 / 24 x 27 x 1 H - 1 / 30 x 39 x 1

LEGEND

BHP — Brake Horsepower
EAT — Entering Air Temperature
FPI — Fins Per Inch
OA — Outdoor Air
RA — Return Air
TXV — Thermostatic Expansion Valve

* RAH sizes 110 and 120 are only available with 2-speed indoor fan.

RAH036-060 BASE UNIT DIMENSIONS — UNITS BUILT ON AND AFTER 4/15/2019



DRAWING REPRESENTS PRODUCT BUILT ON AND PRIOR TO 04/14/2019
SEE DETAIL "B" SHT 5

NOTES:

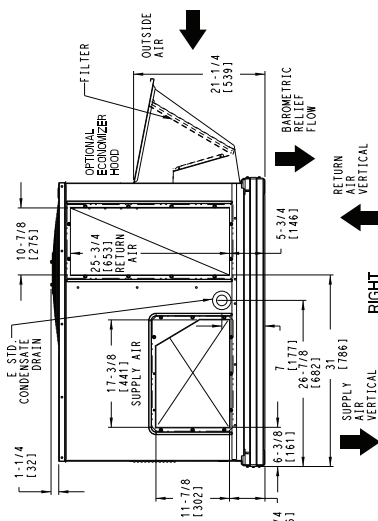
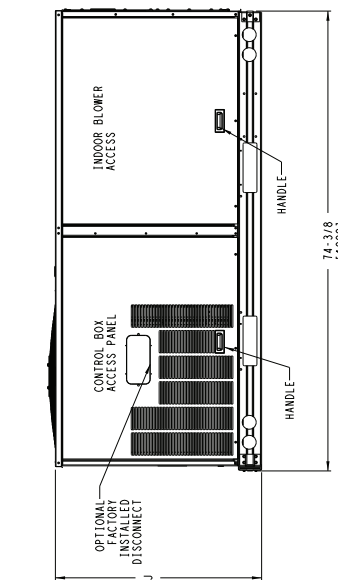
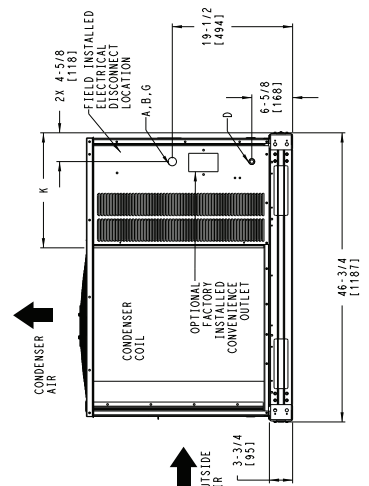
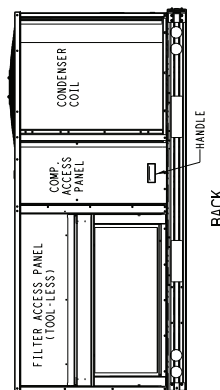
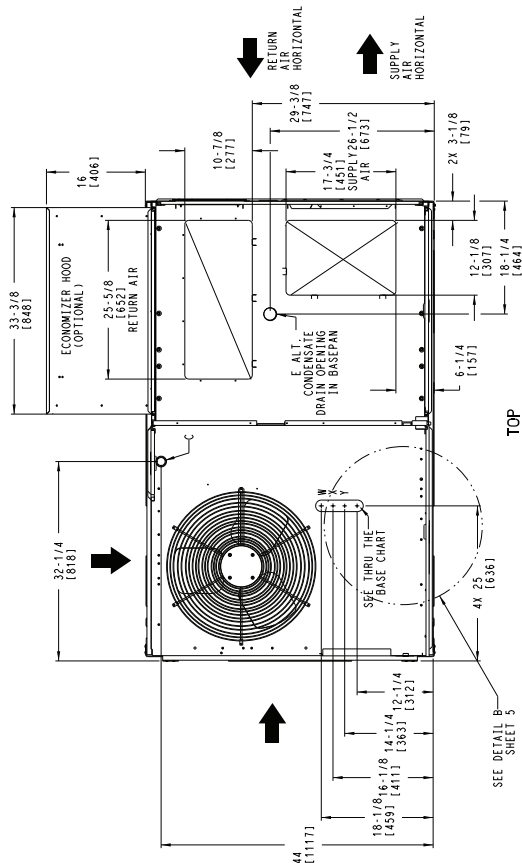
1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE IN MILLIMETERS.
2. CENTER OF GRAVITY
3. DIRECTION OF AIR FLOW
4. ALL VIEW DRAWN USING 3RD ANGLE

UNIT	J	K
RAH036	33 3/8 [847]	18 5/8 [472]
RAH048	41 3/8 [1051]	14 7/8 [377]
RAH060	41 3/8 [1051]	14 7/8 [377]

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

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CUTTING TOOL A01				
	THREADED CONDUIT SIZE	WIRE USE SIZE (MAX.)	REQ'D HOLE SIZE (MAX.)	
W	1/2"	ACC.	7/8" [22.2]	
X	1/2"	24V	7/8" [22.2]	
Y *	3/4" (001A01)	POWER	1 1/8" [28.4]	

* SELECT EITHER 3/4" OR 1/2"
FOR POWER, DEPENDING ON WIRE SIZE

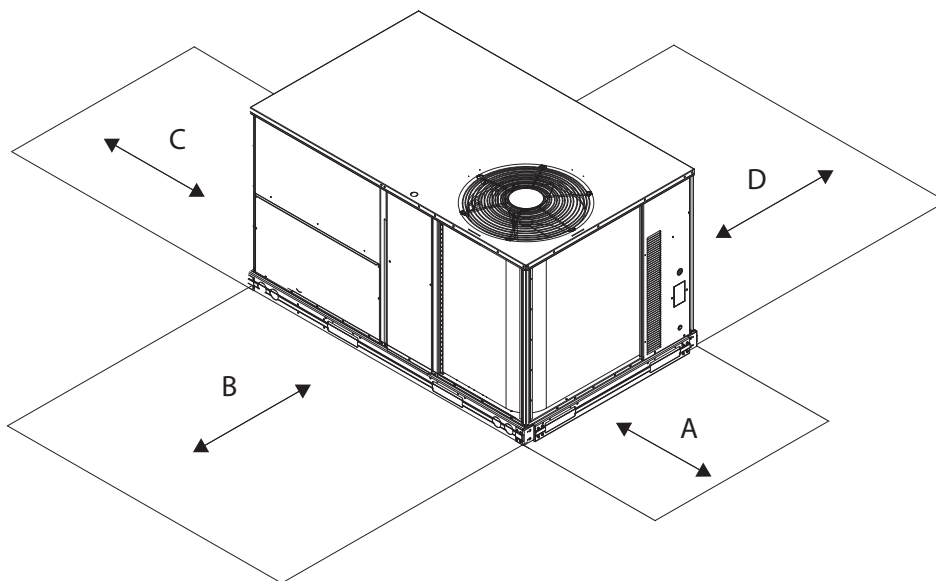


ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	RAH 036 - 060 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT
U.S. ECCN-NSR	2 OF 5	01/02/19	01/14/10	

48TM502593	REV B
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Base unit dimensions (cont)

RAH036-060 — SERVICE CLEARANCES



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

RAH072-102 BASE UNIT DIMENSIONS

NOTES:

1. DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE IN MILLIMETERS.
2. CENTER OF GRAVITY
3. DIRECTION OF AIR FLOW

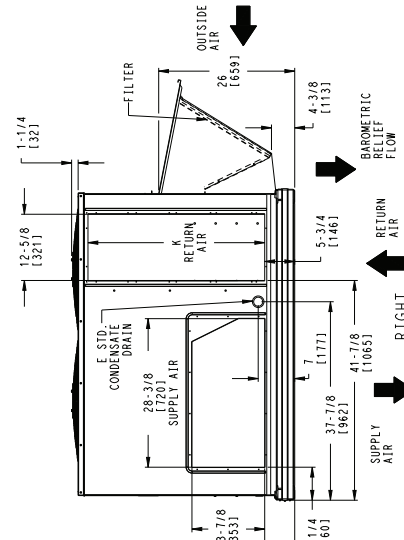
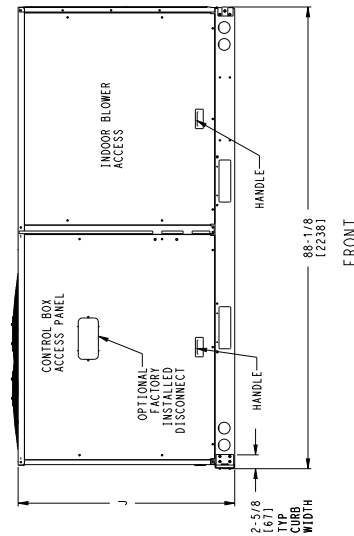
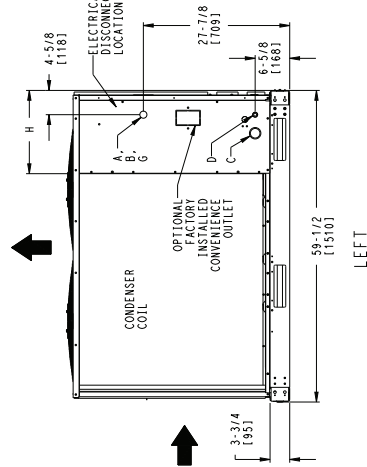
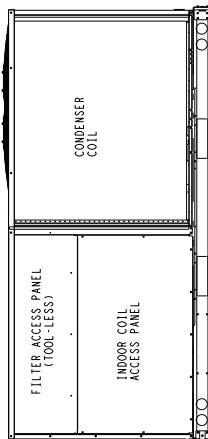
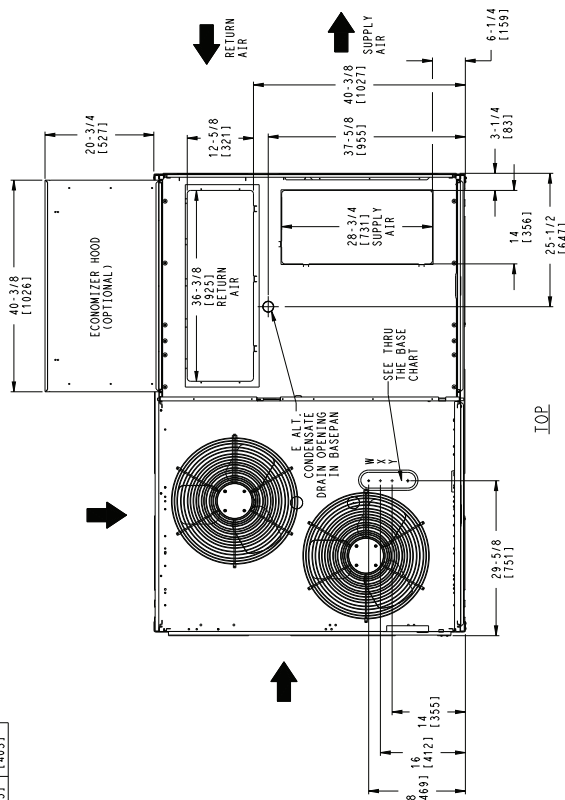
UNIT	J	K	H
RAH072, 073	41 1/4 [1048]	33 3/4 [857]	15 7/8 [403]
RAH090	49 3/8 [1253]	36 3/8 [925]	15 7/8 [403]
RAH102	49 3/8 [1253]	36 3/8 [925]	15 7/8 [403]

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

THRU-THE-BASE CHART (FIELD INST.)	
THESE HOLES REQUIRED FOR USE WITH ACCY KITS:	
CRB1MPW001A01	012, 013
CRB1MPW002A01	090, 102

	THREADED CONDUIT SIZE	WIRE USE SIZES (MAX.)
W	1/2"	7/8" [22.2]
X	1/2"	24V 7/8" [22.2]
Y	3/4" [100.1]	POWER 1 1/8" [28.6]
	1 1/4" [100.2]	POWER 1 3/4" [44.4]

THRU-THE-BASE CHART (FIOP)	
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X & Y ARE PROVIDED:	
(11) 1/2"	& (1) 1 1/4" ELECTRICAL FITTINGS.



I/C CLASSIFICATION	SHEET	DATE	SUPERCEDES	REV
U.S. ECCN: NSR	1 OF 2	10-03-16	10-07-10	B

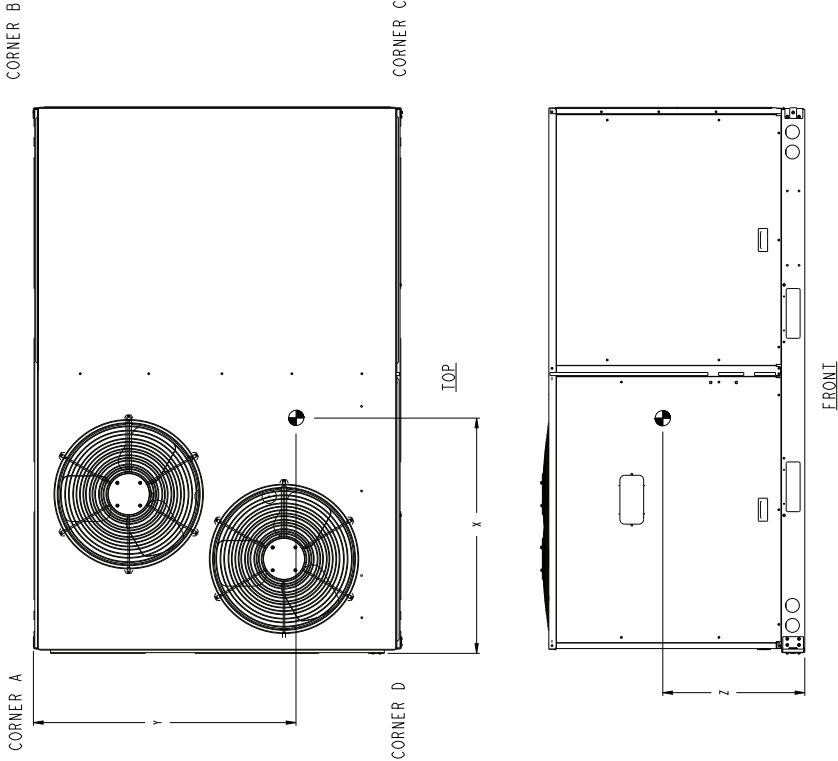
RAH 072 - 102 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT		48MS02713
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Base unit dimensions (cont)

RAH072-102 BASE UNIT DIMENSIONS (CONT)

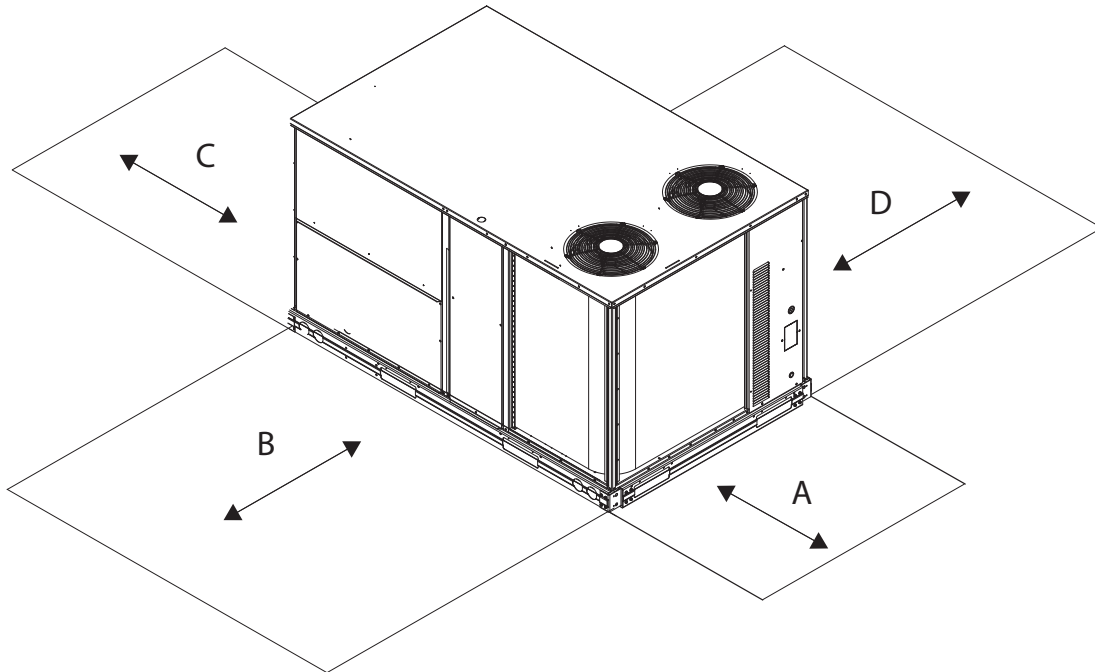
UNIT	STD. UNIT WEIGHT *		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.			
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z	
RAH072-073	715	324.3	161.3	73.2	142.4	64.6	192.9	87.5	218.5	99.1	41 3/8 (1051)	34 1/4 (870)	20 1/2 (521)	
RAH090	860	390	199.4	90.4	176.4	80	227.3	103	256.9	116.5	41 3/8 (1051)	33 1/2 (851)	23 3/4 (603)	
RAH102	860	390	199.4	90.4	176.4	80	227.3	103	256.9	116.5	41 3/8 (1051)	33 1/2 (851)	23 3/4 (603)	

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



ITC CLASSIFICATION U.S. ECCN: NSR	SHEET 2 OF 2	DATE 10-03-16	SUPERCEDES 10-07-10	RAH 072 - 102 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	487M502713	REV B
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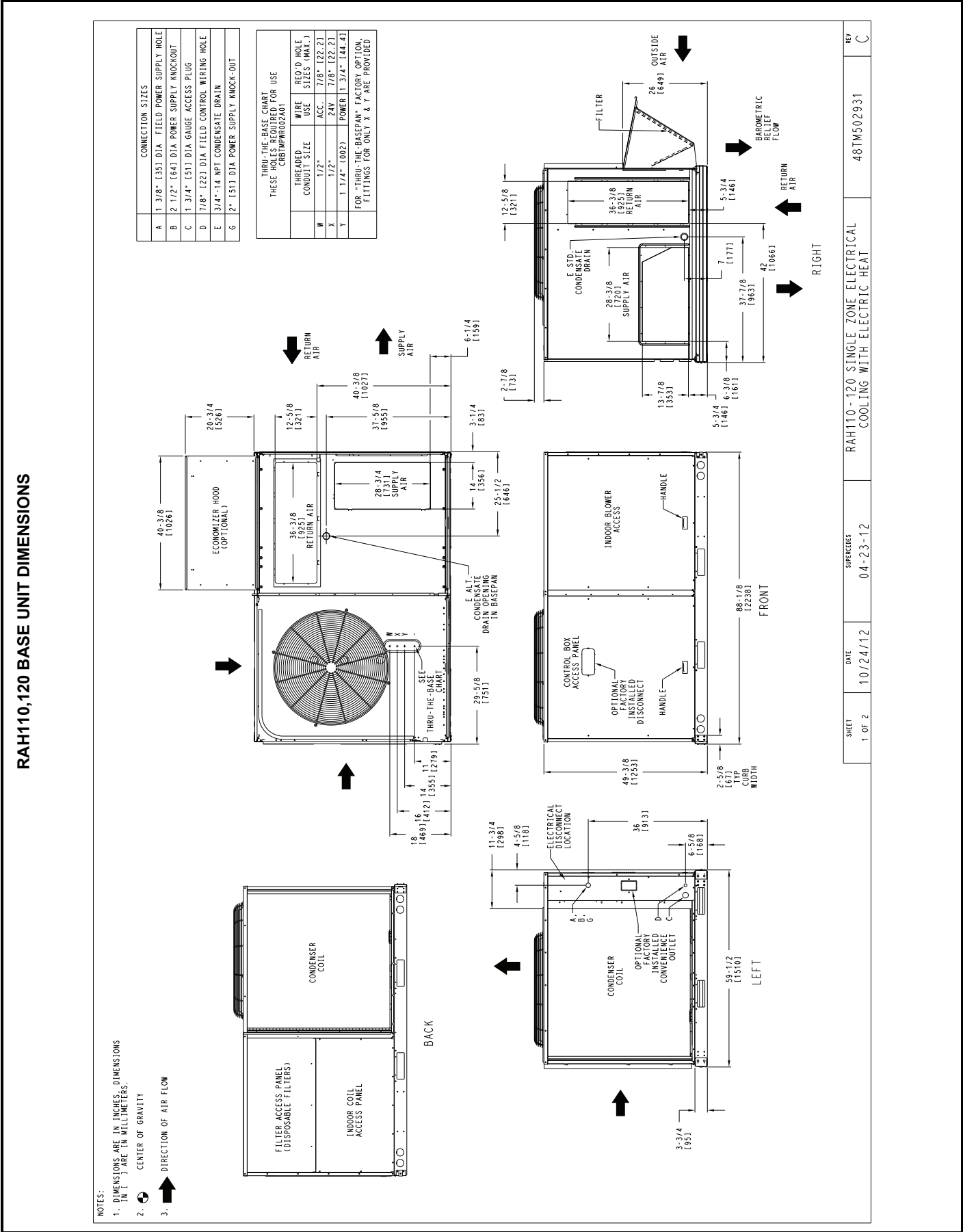
RAH072-102 — SERVICE CLEARANCES



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

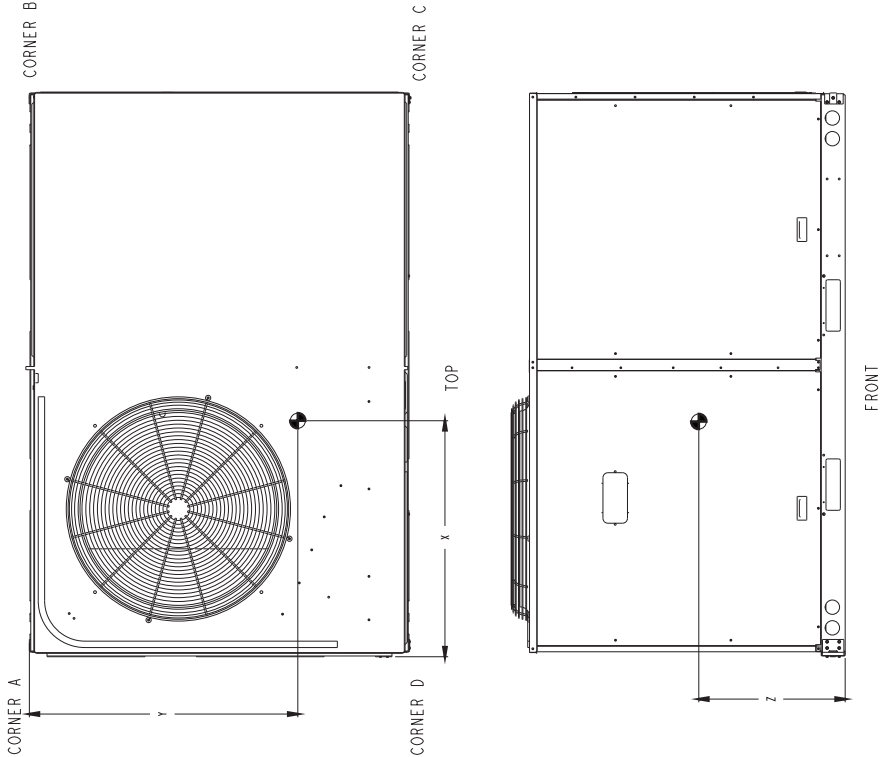
Base unit dimensions (cont)



RAH110,120 BASE UNIT DIMENSIONS (cont)

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.	X	Y	Z	
RAH110	1025	466	308	140	146	66	184	84	387	176	28 3/8 [721]	33 1/8 [841]	21 3/8 [543]
RAH120	1025	466	308	140	146	66	184	84	387	176	28 3/8 [721]	33 1/8 [841]	21 3/8 [543]

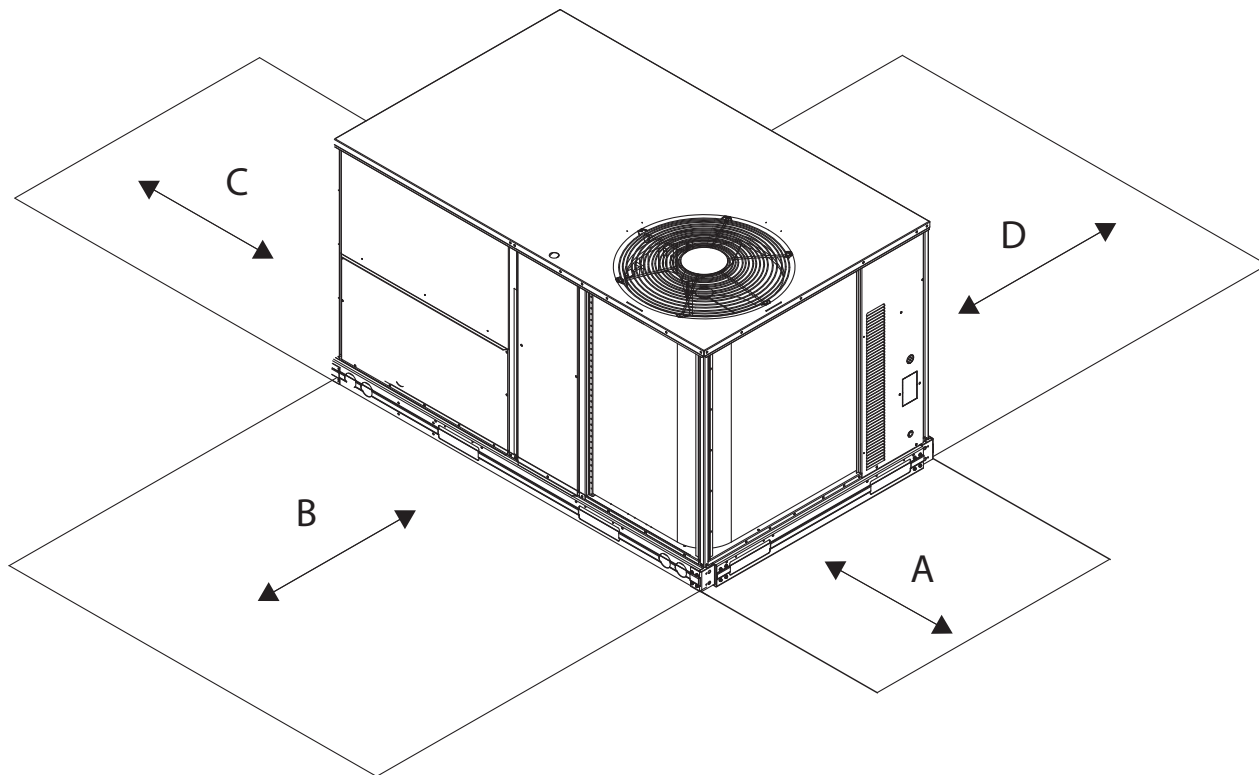
* STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING. FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



SHEET	DATE	SUPERCHIPS	RAH110-120 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48TM502931	REV
2 OF 2	10/24/12	04-23-12			C

Base unit dimensions (cont)

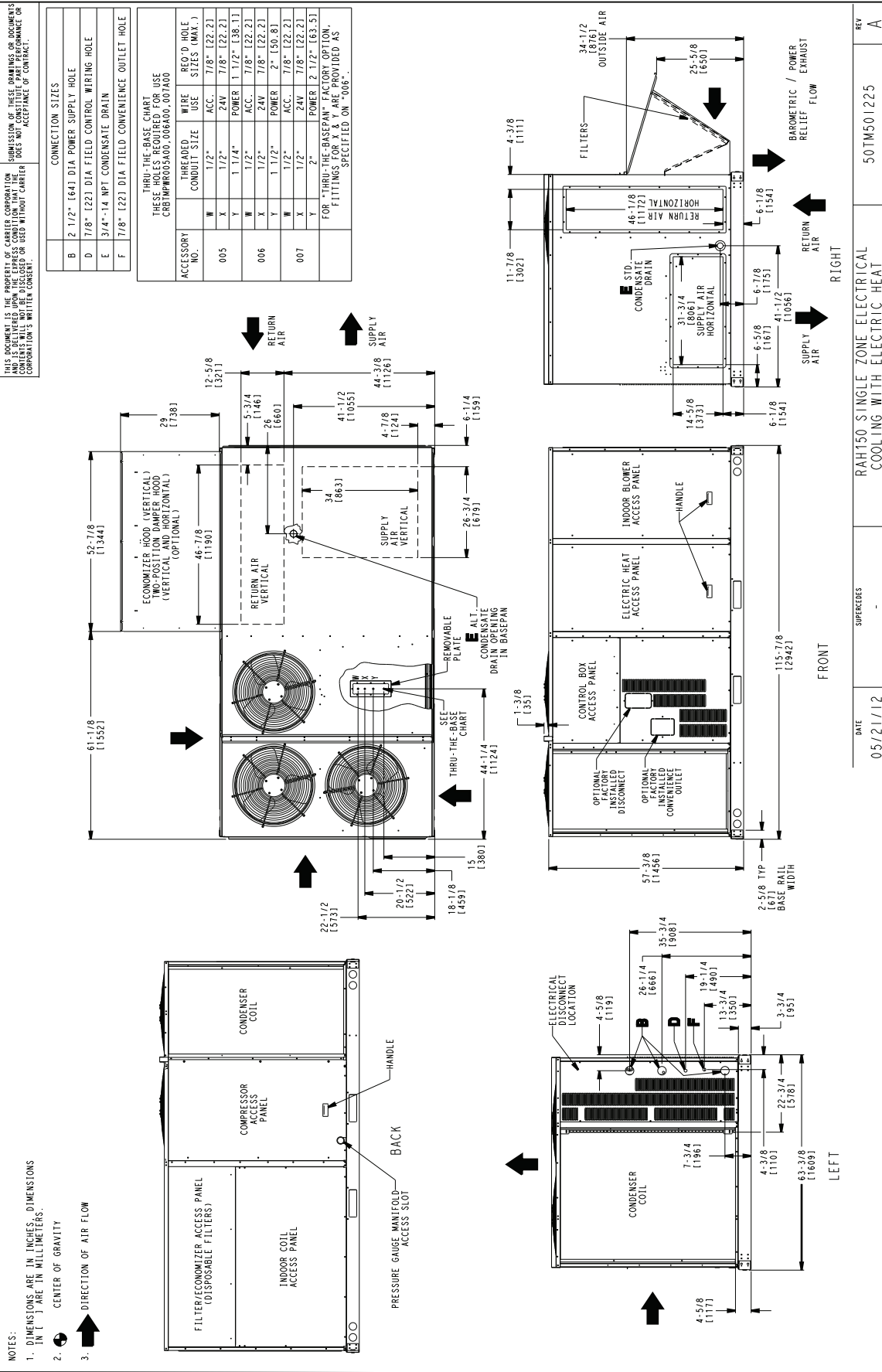
RAH110-120 — SERVICE CLEARANCES



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

RAH150 BASE UNIT DIMENSIONS



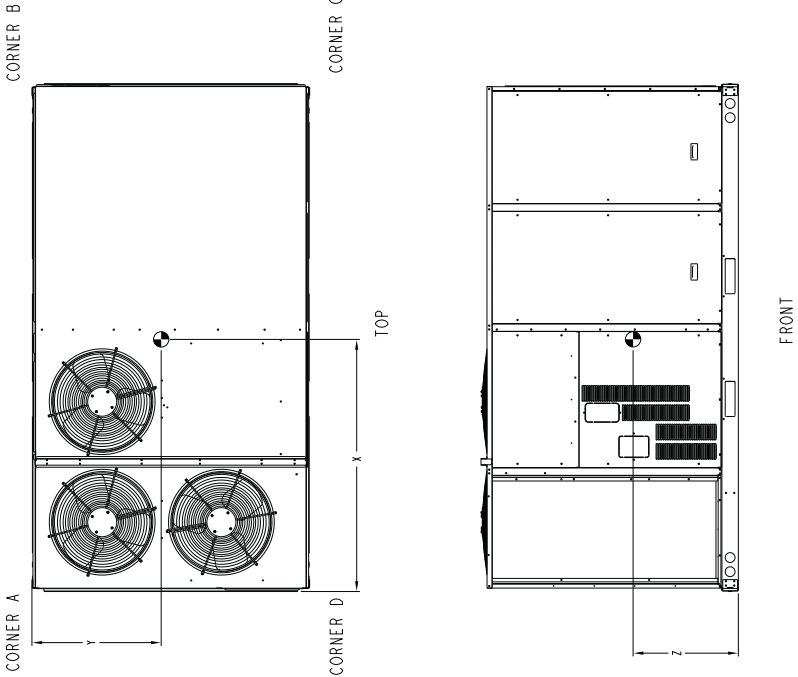
Base unit dimensions (cont)

RAH150 BASE UNIT DIMENSIONS (cont)

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
RAH150	1360	617	335	151	361	164	344	156	320	145	60 1/8 (1527)	31 (787)	21 1/8 (536)

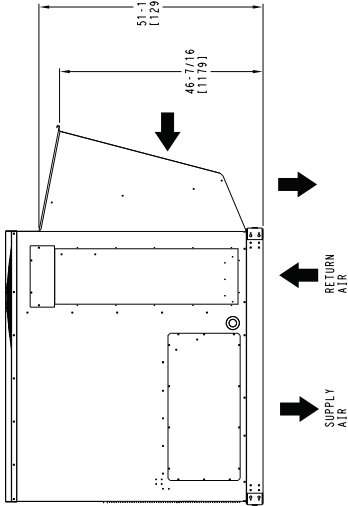
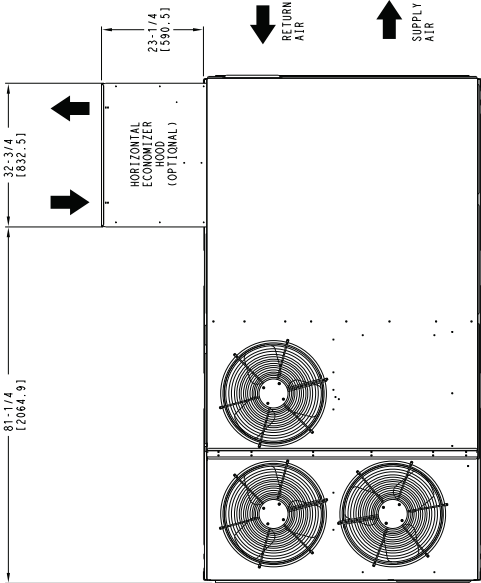
STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT & WITHOUT PACKAGING.

FOR OPTIONS & ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



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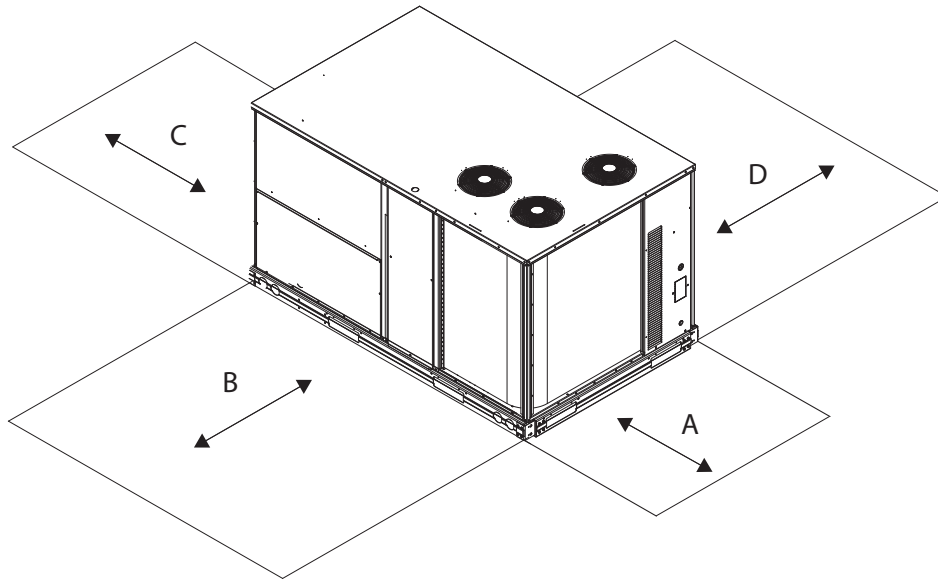
HORIZONTAL ECONOMIZER

DATE	SUPPLEMENT	REV
05/21/12	-	A

RAH150 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT

50TM501225

RAH150 — SERVICE CLEARANCES



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

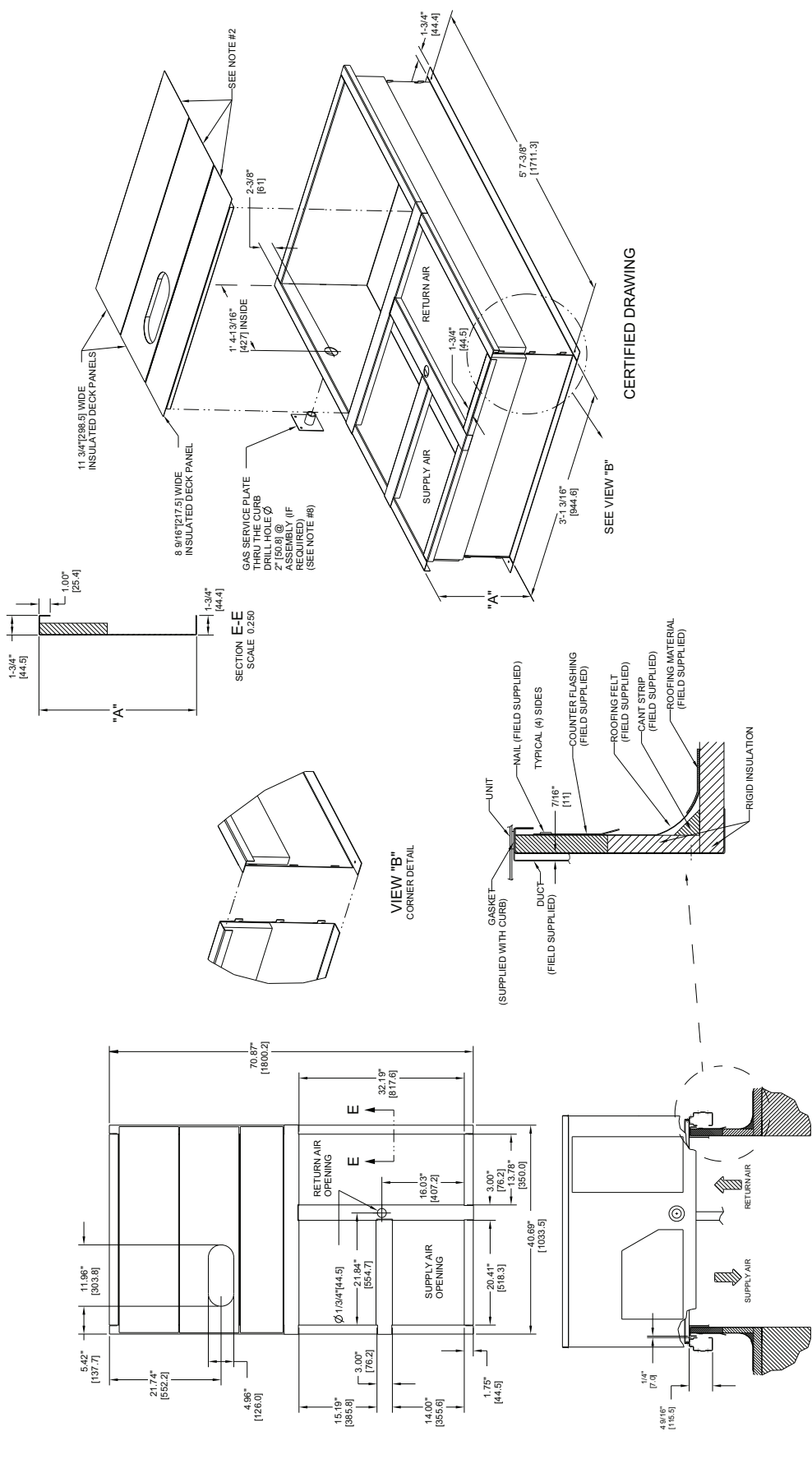
Accessory dimensions

RAH036-060 — ROOF CURB DIMENSIONS

ROOF CURB ACCESSORY #	A
CRRCURB001A01	14" [356]
CRRCURB002A01	24" [610]

- NOTES:
1. CURB ACCESSORY IS SHIPPED DISASSEMBLED.
 2. INSULATED PANELS 25.4 [1 THK POLYURETHANE FOAM, 44.5 [1-3/4] # DENSITY.
 3. DIMENSIONS IN [] ARE IN MILLIMETERS.
 4. ROOF CURB: 18 GAGE STEEL.
 5. ATTACH DUCTWORK TO CURB. (FLANGES OF DUCT REST ON CURB).
 6. DUCTWORK SHALL BE 4 FEET LONG.
 7. 2" ZEPHYRUS DUCTWORK.
 8. CONNECTOR PACKAGE CRBTMPWR003A01 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			

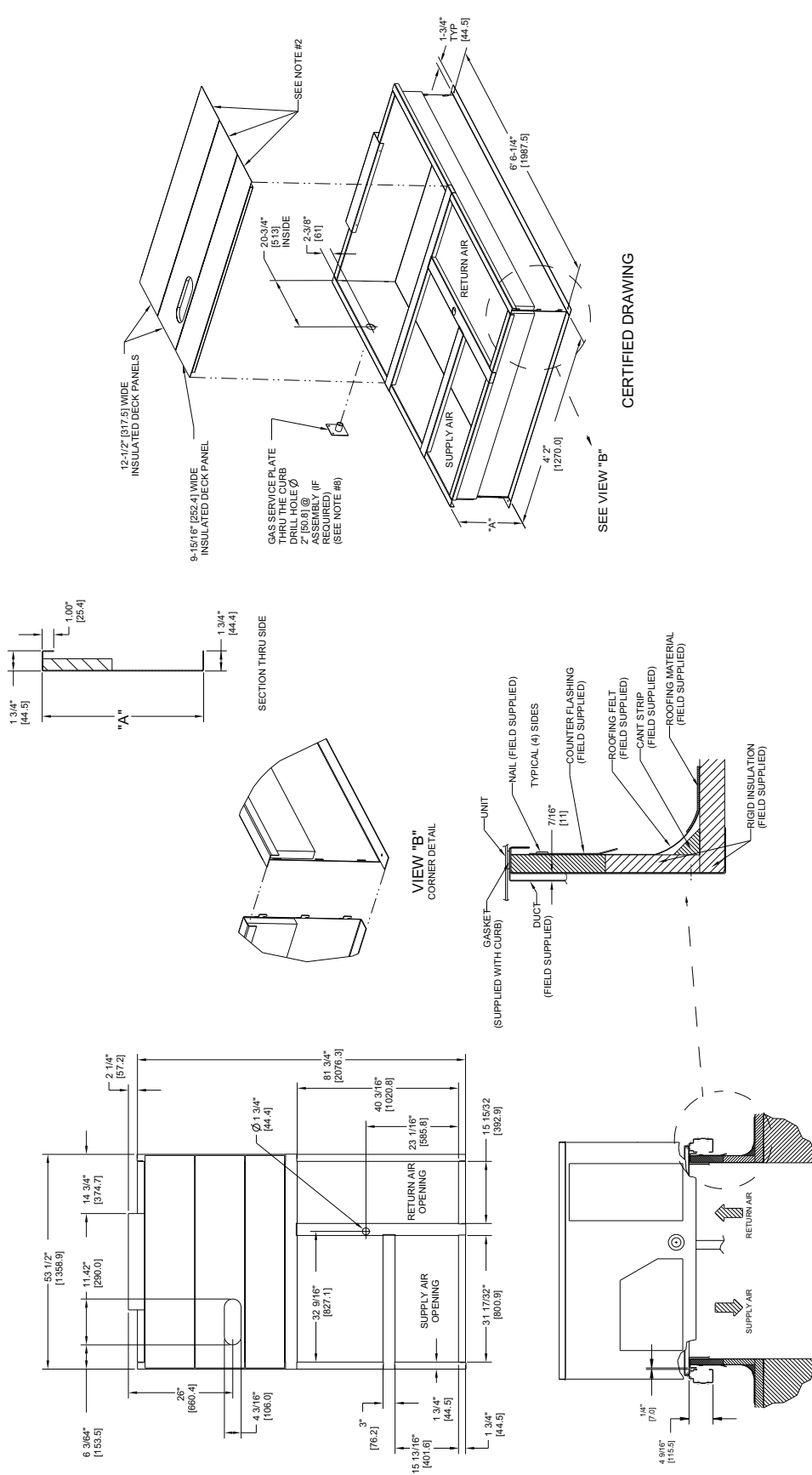


RAH072-120 UNITS — ROOF CURB DIMENSIONS

ROOF CURB ACCESSORY #	A
CRRFCURB003A01	14" [356]
CRRFCURB004A01	24" [610]

- NOTES:
1. ROOF CURB ACCESSORY IS SHIPPED DISASSEMBLED.
 2. INSULATED PANELS: 25.4 [1"] THK. POLYURETHANE FOAM, 44.5 [1.34] # DENSITY.
 3. DIMENSIONS IN [] ARE IN MILLIMETERS.
 4. ROOF CURB: 18 GAGE STEEL.
 5. ROOF CURB: 18 GAGE STEEL.
 6. SERVICE CLEARANCE: 9 FEET ON EACH SIDE.
 7. DIRECTION OF AIR FLOW.
 8. CONNECTOR PACKAGE CRRBMPWR002A01 IS FOR THRU-THE-CURB GAS TYPE. PACKAGE CRRBMPWR004A01 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
CRRBMPWR002A01	THRU THE CURB	3/4" [19] NPT	1 1/4" [31.7] NPT	1/2" [12.7] NPT	1/2" [12.7] NPT
CRRBMPWR004A01	THRU THE BOTTOM				



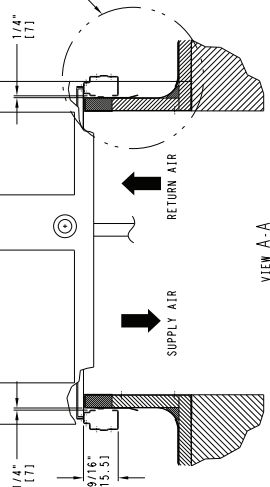
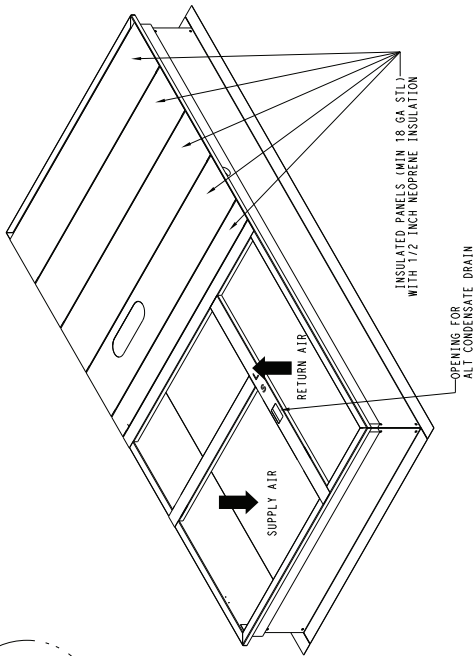
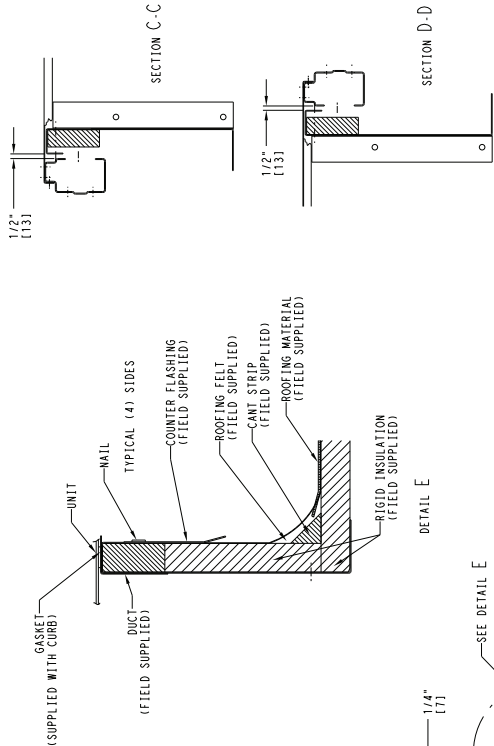
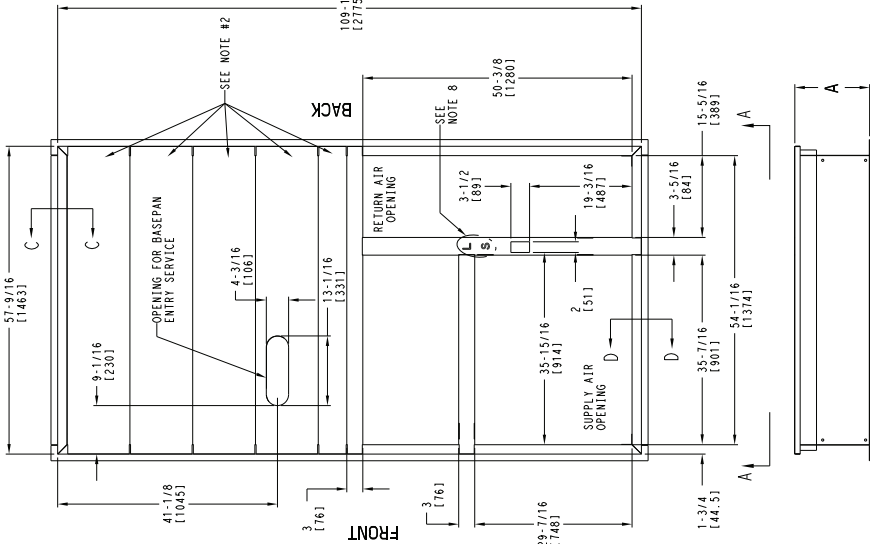
CERTIFIED DRAWING

Accessory dimensions (cont)

RAH150 UNITS — ROOF CURB DIMENSIONS

- NOTES:
1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
 2. INSULATED PANELS: 1/2" THK. NEOPRENE FOAM, 1.0# DENSITY.
 3. DIMENSIONS IN INCHES ARE GIVEN IN PARENT UNITS. DIMENSIONS IN MILLIMETERS ARE GIVEN IN BRACKETED UNITS.
 4. DUCTWORK SHALL BE 18 GA. 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. POSITIONING DIMENSIONS INDICATE LOCATION OF COMMON CROSS RAIL.
 9. POSITION "L" FOR LARGE DUCT OPENING CURB.

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



MAX CURB LEVELING TOLERANCES

Selection procedure

I Determine cooling and heating loads.

Given:

Mixed Air Dry Bulb Temperature	80°F (27°C)
Mixed Air Wet Bulb Temperature	67°F (19°C)
Ambient Dry Bulb Temperature	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 RAH072.

III Look up the rooftop's TC and SHC.

Cooling Capacity Table shows that, at the application's supply air CFM, mixed air and ambient temperatures, the RAH072 supplies:

TC = 73.6 MBH

SHC = 53.3 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 = 73.6 MBH - 53.3 MBH = 20.3 MBH

VI Compare RTU capacities to loads.

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 +0.05 in. wg

Total Static Pressure = 0.71 in. wg

IX Look up the Indoor Fan RPM and BHP.

The table on page 74 shows, at 2100 CFM and ESP = 0.80, RPM = 681 and BHP = 1.01

X Convert BHP (Step IX) into fan motor heat.

Fan Motor Heat = 2.546 * 1.01 * .80 efficiency.

Fan Motor Heat = 2.06 MBH

Deduct this value from the gross capacity values for net capacity.

XI Determine electrical requirements

MCA/MOCP table on page 101 shows the MCA and MOCP of a RAH072 (without convenience outlet) as:

MCA = 33 amps and Breaker size = 50 amps

Min. Disconnect Size: FLA = 32 and LRA = 161.

Performance data

RAH036 — 3 TON — SINGLE STAGE COOLING CAPACITIES

RAH036				AMBIENT TEMPERATURE (F)														
				85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
900 Cfm	EAT (wb)	58	TC	32.1	32.1	36.3	30.8	30.8	34.9	29.4	29.4	33.4	28.0	28.0	31.7	26.3	26.3	29.8
			SHC	27.8	32.1	36.3	26.7	30.8	34.9	25.5	29.4	33.4	24.2	28.0	31.7	22.8	26.3	29.8
		62	TC	34.0	34.0	34.3	32.3	32.3	33.5	30.6	30.6	32.6	28.7	28.7	31.7	26.6	26.6	30.6
			SHC	25.0	29.7	34.3	24.2	28.9	33.5	23.4	28.0	32.6	22.5	27.1	31.7	21.5	26.0	30.6
		67	TC	37.3	37.3	37.3	35.5	35.5	35.5	33.6	33.6	33.6	31.5	31.5	31.5	29.2	29.2	29.2
			SHC	20.7	25.4	30.0	20.0	24.6	29.3	19.2	23.8	28.4	18.3	22.9	27.6	17.4	22.0	26.6
		72	TC	40.8	40.8	40.8	38.9	38.9	38.9	36.9	36.9	36.9	34.6	34.6	34.6	32.2	32.2	32.2
			SHC	16.3	21.0	25.7	15.6	20.3	25.0	14.8	19.5	24.1	13.9	18.6	23.3	13.0	17.7	22.3
		76	TC	—	43.9	43.9	—	41.8	41.8	—	39.6	39.6	—	37.2	37.2	—	34.6	34.6
			SHC	—	17.4	22.4	—	16.7	21.7	—	15.9	20.8	—	15.1	19.9	—	14.2	19.0
1050 Cfm	EAT (wb)	58	TC	33.8	33.8	38.4	32.5	32.5	36.8	31.0	31.0	35.1	29.4	29.4	33.3	27.6	27.6	31.3
			SHC	29.3	33.8	38.4	28.1	32.5	36.8	26.9	31.0	35.1	25.5	29.4	33.3	23.9	27.6	31.3
		62	TC	35.1	35.1	37.5	33.3	33.3	36.6	31.5	31.5	35.7	29.6	29.6	34.5	27.7	27.7	32.6
			SHC	26.9	32.2	37.5	26.0	31.3	36.6	25.1	30.4	35.7	24.1	29.3	34.5	22.7	27.7	32.6
		67	TC	38.4	38.4	38.4	36.5	36.5	36.5	34.5	34.5	34.5	32.3	32.3	32.3	29.9	29.9	29.9
			SHC	22.0	27.3	32.7	21.2	26.5	31.9	20.3	25.7	31.0	19.4	24.8	30.1	18.5	23.8	29.1
		72	TC	42.0	42.0	42.0	40.0	40.0	40.0	37.8	37.8	37.8	35.5	35.5	35.5	32.9	32.9	32.9
			SHC	16.9	22.3	27.6	16.1	21.5	26.9	15.3	20.7	26.0	14.4	19.8	25.1	13.5	18.8	24.2
		76	TC	—	45.0	45.0	—	42.9	42.9	—	40.6	40.6	—	38.0	38.0	—	35.3	35.3
			SHC	—	18.1	23.8	—	17.4	23.0	—	16.6	22.2	—	15.7	21.3	—	14.8	20.3
1200 Cfm	EAT (wb)	58	TC	35.3	35.3	40.0	33.9	33.9	38.4	32.3	32.3	36.6	30.6	30.6	34.7	28.7	28.7	32.5
			SHC	30.6	35.3	40.0	29.4	33.9	38.4	28.0	32.3	36.6	26.5	30.6	34.7	24.9	28.7	32.5
		62	TC	35.9	35.9	40.5	34.2	34.2	39.4	32.4	32.4	38.1	30.6	30.6	36.1	28.7	28.7	33.9
			SHC	28.6	34.5	40.5	27.7	33.6	39.4	26.6	32.4	38.1	25.2	30.6	36.1	23.6	28.7	33.9
		67	TC	39.3	39.3	39.3	37.3	37.3	37.3	35.2	35.2	35.2	32.9	32.9	32.9	30.5	30.5	31.6
			SHC	23.1	29.1	35.2	22.3	28.3	34.4	21.4	27.5	33.5	20.5	26.6	32.6	19.5	25.6	31.6
		72	TC	42.9	42.9	42.9	40.8	40.8	40.8	38.5	38.5	38.5	36.1	36.1	36.1	33.4	33.4	33.4
			SHC	17.3	23.4	29.5	16.6	22.6	28.7	15.7	21.8	27.9	14.8	20.9	27.0	13.9	19.9	26.0
		76	TC	—	45.9	45.9	—	43.7	43.7	—	41.3	41.3	—	38.7	38.7	—	35.9	35.9
			SHC	—	18.8	25.1	—	18.0	24.3	—	17.2	23.4	—	16.3	22.5	—	15.4	21.5
1350 Cfm	EAT (wb)	58	TC	36.6	36.6	41.5	35.1	35.1	39.7	33.4	33.4	37.9	31.6	31.6	35.8	29.6	29.6	33.6
			SHC	31.7	36.6	41.5	30.4	35.1	39.7	28.9	33.4	37.9	27.4	31.6	35.8	25.7	29.6	33.6
		62	TC	36.7	36.7	43.2	35.1	35.1	41.3	33.4	33.4	39.4	31.6	31.6	37.3	29.6	29.6	34.9
			SHC	30.2	36.7	43.2	28.8	35.1	41.3	27.5	33.4	39.4	26.0	31.6	37.3	24.4	29.6	34.9
		67	TC	39.9	39.9	39.9	37.9	37.9	37.9	35.8	35.8	35.9	33.4	33.4	34.9	30.9	30.9	33.9
			SHC	24.2	30.9	37.6	23.4	30.1	36.8	22.5	29.2	35.9	21.6	28.3	34.9	20.6	27.2	33.9
		72	TC	43.6	43.6	43.6	41.4	41.4	41.4	39.1	39.1	39.1	36.6	36.6	36.6	33.9	33.9	33.9
			SHC	17.8	24.5	31.3	17.0	23.7	30.5	16.1	22.9	29.6	15.2	22.0	28.7	14.3	21.0	27.7
		76	TC	—	46.7	46.7	—	44.4	44.4	—	41.9	41.9	—	39.2	39.2	—	36.3	36.3
			SHC	—	19.4	26.3	—	18.6	25.5	—	17.8	24.6	—	16.9	23.7	—	15.9	22.7
1500 Cfm	EAT (wb)	58	TC	37.7	37.7	42.7	36.1	36.1	40.9	34.3	34.3	38.9	32.5	32.5	36.8	30.4	30.4	34.4
			SHC	32.6	37.7	42.7	31.3	36.1	40.9	29.8	34.3	38.9	28.1	32.5	36.8	26.3	30.4	34.4
		62	TC	37.7	37.7	44.4	36.1	36.1	42.5	34.4	34.4	40.5	32.5	32.5	38.3	30.4	30.4	35.8
			SHC	31.0	37.7	44.4	29.7	36.1	42.5	28.3	34.4	40.5	26.7	32.5	38.3	25.0	30.4	35.8
		67	TC	40.5	40.5	40.5	38.4	38.4	39.1	36.2	36.2	38.2	33.8	33.8	37.2	31.2	31.2	36.1
			SHC	25.2	32.6	40.0	24.4	31.7	39.1	23.5	30.8	38.2	22.5	29.9	37.2	21.5	28.8	36.1
		72	TC	44.2	44.2	44.2	41.9	41.9	41.9	39.6	39.6	39.6	37.0	37.0	37.0	34.2	34.2	34.2
			SHC	18.2	25.6	33.0	17.4	24.8	32.2	16.5	23.9	31.3	15.6	23.0	30.4	14.7	22.0	29.4
		76	TC	—	47.2	47.2	—	44.9	44.9	—	42.3	42.3	—	39.6	39.6	—	36.7	36.7
			SHC	—	19.9	27.5	—	19.1	26.7	—	18.3	25.8	—	17.4	24.9	—	16.4	23.9

LEGEND

—	DB/WB combo not possible
Cfm	Cubic feet per minute (supply air)
EAT (db)	Entering air temperature (dry bulb)
EAT (wb)	Entering air temperature (wet bulb)
SDT	Saturated discharge temperature
SHC	Sensible heat capacity (1000 Btuh) gross
SST	Saturated suction temperature
TC	Total capacity (1000 Btuh) gross

NOTE: For more information, see General Fan Performance Notes on page 64.

— Points are outside SST and SDT operating range

RAH036 — 3 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN SUBCOOLING MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	44.60	40.30	36.50	47.00	43.00	39.10	48.80	44.30	40.80
	SHC	19.80	24.50	29.30	22.60	29.10	35.30	25.40	33.00	40.40
	kW	2.02	1.97	1.93	1.96	2.00	2.05	2.08	2.02	1.98
75	TC	42.10	38.10	34.40	44.60	40.50	36.90	46.10	41.90	38.60
	SHC	17.50	22.50	27.40	20.40	26.80	33.20	22.90	30.80	38.20
	kW	2.28	2.23	2.19	2.22	2.26	2.31	2.33	2.28	2.24
70	TC	39.60	35.80	32.30	41.90	38.00	34.50	43.20	39.30	36.20
	SHC	15.20	20.30	25.50	17.80	24.50	31.10	20.20	28.40	35.90
	kW	2.56	2.51	2.47	2.50	2.54	2.60	2.62	2.56	2.52
60	TC	36.80	33.20	30.00	38.90	35.30	32.00	40.20	36.50	33.60
	SHC	12.70	18.10	23.40	15.10	22.00	28.80	17.50	25.80	33.60
	kW	2.88	2.83	2.79	2.82	2.86	2.91	2.93	2.88	2.84
50	TC	33.90	30.50	27.50	35.80	32.40	29.40	37.00	33.50	30.90
	SHC	10.10	15.70	21.20	12.30	19.50	26.40	14.50	23.10	30.90
	kW	3.23	3.19	3.15	3.17	3.21	3.26	3.28	3.23	3.19
40	TC	30.80	27.70	24.90	32.50	29.30	26.50	33.50	30.30	27.90
	SHC	7.30	13.10	18.90	9.40	16.70	23.90	11.40	20.30	27.90
	kW	3.62	3.59	3.56	3.57	3.60	3.65	3.66	3.62	3.59

Performance data (cont)

RAH036 — 3 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN HOT GAS REHEAT MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	16.46	17.15	17.74	16.66	17.23	17.79	16.85	17.74	18.29
	SHC	5.10	6.60	8.15	3.21	4.33	5.61	1.59	2.75	3.83
	kW	1.94	2.01	2.02	2.04	2.13	2.15	2.12	2.14	2.16
75	TC	16.61	17.52	18.09	17.18	18.09	18.67	17.69	18.61	19.19
	SHC	5.24	6.96	8.48	3.71	5.15	6.45	2.40	3.59	4.69
	kW	1.98	2.00	2.01	1.99	2.01	2.02	2.00	2.02	2.03
70	TC	17.00	18.06	18.63	17.56	18.46	19.40	18.41	19.35	20.10
	SHC	5.62	7.47	9.00	4.08	5.50	7.16	3.09	4.31	5.58
	kW	1.96	1.94	1.96	1.97	2.00	1.94	1.91	1.94	1.92
60	TC	17.63	18.49	19.37	18.17	19.38	19.95	18.66	19.52	20.46
	SHC	6.21	7.89	9.71	4.66	6.39	7.68	3.31	4.45	5.90
	kW	1.93	1.96	1.92	1.95	1.92	1.94	1.97	2.00	1.96
50	TC	17.82	18.59	19.72	18.31	19.73	20.26	18.76	20.21	20.73
	SHC	6.40	7.99	10.05	4.79	6.71	7.97	3.40	5.11	6.16
	kW	1.98	2.03	1.94	2.01	1.94	1.97	2.03	1.96	1.99
40	TC	17.70	19.38	19.85	19.10	20.30	20.34	19.53	20.76	21.26
	SHC	6.30	8.74	10.17	5.54	7.26	8.05	4.13	5.64	6.67
	kW	2.07	1.95	1.99	1.93	1.91	2.02	1.96	1.94	1.97

LEGEND

Edb	— Entering Wet-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.

RAH048 — 4 TON — SINGLE STAGE COOLING CAPACITIES

RAH048				AMBIENT TEMPERATURE (F)														
				85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
1200 Cfm	EAT (wb)	58	TC	43.2	43.2	49.1	41.5	41.5	47.2	39.7	39.7	45.1	37.7	37.7	42.9	35.6	35.6	40.4
			SHC	37.3	43.2	49.1	35.9	41.5	47.2	34.3	39.7	45.1	32.6	37.7	42.9	30.7	35.6	40.4
		62	TC	45.9	45.9	46.0	43.7	43.7	45.0	41.3	41.3	43.8	38.8	38.8	42.6	36.0	36.0	41.2
			SHC	33.5	39.8	46.0	32.5	38.7	45.0	31.3	37.6	43.8	30.1	36.3	42.6	28.8	35.0	41.2
		67	TC	50.5	50.5	50.5	48.0	48.0	48.0	45.4	45.4	45.4	42.6	42.6	42.6	39.6	39.6	39.6
			SHC	27.9	34.1	40.4	26.8	33.1	39.4	25.7	32.0	38.2	24.5	30.8	37.1	23.2	29.5	35.8
		72	TC	55.4	55.4	55.4	52.7	52.7	52.7	49.9	49.9	49.9	46.8	46.8	46.8	43.5	43.5	43.5
			SHC	22.0	28.4	34.7	21.0	27.3	33.7	19.9	26.2	32.5	18.7	25.0	31.3	17.4	23.8	30.1
		76	TC	—	59.7	59.7	—	56.8	56.8	—	53.7	53.7	—	50.4	50.4	—	46.8	46.8
			SHC	—	23.6	30.2	—	22.6	29.2	—	21.5	28.1	—	20.3	26.8	—	19.1	25.5
1400 Cfm	EAT (wb)	58	TC	45.6	45.6	51.9	43.8	43.8	49.8	41.9	41.9	47.6	39.7	39.7	45.1	37.3	37.3	42.4
			SHC	39.4	45.6	51.9	37.9	43.8	49.8	36.2	41.9	47.6	34.3	39.7	45.1	32.3	37.3	42.4
		62	TC	47.4	47.4	50.5	45.1	45.1	49.3	42.6	42.6	48.0	40.0	40.0	46.5	37.4	37.4	44.2
			SHC	36.0	43.2	50.5	34.9	42.1	49.3	33.7	40.9	48.0	32.4	39.5	46.5	30.6	37.4	44.2
		67	TC	52.1	52.1	52.1	49.5	49.5	49.5	46.7	46.7	46.7	43.7	43.7	43.7	40.5	40.5	40.5
			SHC	29.5	36.8	44.0	28.4	35.7	42.9	27.3	34.5	41.8	26.0	33.3	40.5	24.7	32.0	39.2
		72	TC	57.1	57.1	57.1	54.3	54.3	54.3	51.2	51.2	51.2	48.0	48.0	48.0	44.5	44.5	44.5
			SHC	22.8	30.1	37.4	21.7	29.0	36.3	20.5	27.8	35.1	19.3	26.6	33.9	18.0	25.3	32.6
		76	TC	—	61.4	61.4	—	58.3	58.3	—	55.1	55.1	—	51.6	51.6	—	47.8	47.8
			SHC	—	24.6	32.2	—	23.5	31.1	—	22.4	29.9	—	21.2	28.7	—	19.9	27.4
1600 Cfm	EAT (wb)	58	TC	47.7	47.7	54.2	45.8	45.8	52.0	43.7	43.7	49.6	41.3	41.3	47.0	38.8	38.8	44.1
			SHC	41.2	47.7	54.2	39.5	45.8	52.0	37.7	43.7	49.6	35.7	41.3	47.0	33.5	38.8	44.1
		62	TC	48.7	48.7	54.5	46.3	46.3	53.2	43.7	43.7	51.7	41.4	41.4	48.9	38.8	38.8	45.9
			SHC	38.3	46.4	54.5	37.1	45.2	53.2	35.8	43.7	51.7	33.9	41.4	48.9	31.8	38.8	45.9
		67	TC	53.3	53.3	53.3	50.6	50.6	50.6	47.7	47.7	47.7	44.6	44.6	44.6	41.2	41.2	42.6
			SHC	31.0	39.2	47.5	29.9	38.1	46.3	28.7	37.0	45.2	27.5	35.7	43.9	26.2	34.4	42.6
		72	TC	58.4	58.4	58.4	55.4	55.4	55.4	52.3	52.3	52.3	48.9	48.9	48.9	45.2	45.2	45.2
			SHC	23.4	31.7	39.9	22.3	30.6	38.8	21.1	29.4	37.6	19.9	28.2	36.4	18.6	26.8	35.1
		76	TC	—	62.7	62.7	—	59.5	59.5	—	56.1	56.1	—	52.5	52.5	—	48.6	48.6
			SHC	—	25.5	34.0	—	24.4	32.9	—	23.2	31.7	—	22.0	30.4	—	20.7	29.1
1800 Cfm	EAT (wb)	58	TC	49.5	49.5	56.2	47.4	47.4	53.9	45.2	45.2	51.3	42.7	42.7	48.5	40.1	40.1	45.5
			SHC	42.8	49.5	56.2	41.0	47.4	53.9	39.0	45.2	51.3	36.9	42.7	48.5	34.6	40.1	45.5
		62	TC	49.8	49.8	58.1	47.5	47.5	56.1	45.2	45.2	53.4	42.8	42.8	50.5	40.1	40.1	47.4
			SHC	40.4	49.2	58.1	38.8	47.5	56.1	37.0	45.2	53.4	35.0	42.8	50.5	32.8	40.1	47.4
		67	TC	54.3	54.3	54.3	51.5	51.5	51.5	48.5	48.5	48.5	45.3	45.3	47.1	41.8	41.8	45.7
			SHC	32.5	41.7	50.8	31.4	40.5	49.7	30.2	39.3	48.5	28.9	38.0	47.1	27.5	36.6	45.7
		72	TC	59.4	59.4	59.4	56.3	56.3	56.3	53.1	53.1	53.1	49.6	49.6	49.6	45.8	45.8	45.8
			SHC	24.0	33.2	42.4	22.9	32.1	41.3	21.7	30.9	40.1	20.4	29.6	38.8	19.1	28.3	37.5
		78	TC	—	63.8	63.8	—	60.5	60.5	—	57.0	57.0	—	53.2	53.2	—	49.2	49.2
			SHC	—	26.3	35.8	—	25.2	34.6	—	24.0	33.4	—	22.8	32.1	—	21.5	30.8
2000 Cfm	EAT (wb)	58	TC	51.0	51.0	58.0	48.8	48.8	55.5	46.5	46.5	52.8	43.9	43.9	49.9	41.1	41.1	46.7
			SHC	44.1	51.0	58.0	42.2	48.8	55.5	40.2	46.5	52.8	37.9	43.9	49.9	35.5	41.1	46.7
		62	TC	51.1	51.1	60.4	48.9	48.9	57.8	46.5	46.5	55.0	44.0	44.0	51.9	41.1	41.1	48.6
			SHC	41.8	51.1	60.4	40.0	48.9	57.8	38.1	46.5	55.0	36.0	44.0	51.9	33.7	41.1	48.6
		67	TC	55.1	55.1	55.1	52.1	52.1	52.9	49.1	49.1	51.6	45.8	45.8	50.2	42.3	42.3	48.7
			SHC	33.9	44.0	54.1	32.7	42.8	52.9	31.5	41.5	51.6	30.2	40.2	50.2	28.8	38.8	48.7
		72	TC	60.3	60.3	60.3	57.1	57.1	57.1	53.7	53.7	53.7	50.1	50.1	50.1	46.3	46.3	46.3
			SHC	24.5	34.7	44.8	23.4	33.5	43.6	22.2	32.3	42.4	21.0	31.1	41.2	19.6	29.7	39.8
		76	TC	—	64.6	64.6	—	61.2	61.2	—	57.6	57.6	—	53.8	53.8	—	49.7	49.7
			SHC	—	27.1	37.5	—	26.0	36.3	—	24.8	35.1	—	23.5	33.8	—	22.2	32.4

LEGEND

—	DB/WB combo not possible
Cfm	Cubic feet per minute (supply air)
EAT (db)	Entering air temperature (dry bulb)
EAT (wb)	Entering air temperature (wet bulb)
SDT	Saturated discharge temperature
SHC	Sensible heat capacity (1000 Btuh) gross
SST	Saturated suction temperature
TC	Total capacity (1000 Btuh) gross

NOTE: For more information, see General Fan Performance Notes on page 64.

— Points are outside SST and SDT operating range

Performance data (cont)

RAH048 — 4 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN SUBCOOLING MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	57.80	52.30	47.20	61.50	55.60	50.60	63.70	57.90	0.00
	SHC	24.20	30.50	36.80	27.90	35.90	44.00	31.20	40.90	0.00
	kW	2.50	2.47	2.44	2.46	2.48	2.51	2.53	2.50	0.00
75	TC	54.10	48.90	44.10	57.10	52.00	47.30	59.60	54.00	49.50
	SHC	20.70	27.30	33.90	23.90	32.60	41.00	27.30	37.30	47.10
	kW	2.81	2.78	2.76	2.78	2.80	2.82	2.84	2.81	2.79
70	TC	50.10	45.30	40.80	53.30	48.20	43.70	55.20	50.10	45.80
	SHC	17.00	24.00	30.90	20.40	29.10	37.70	23.30	33.60	43.60
	kW	3.16	3.14	3.12	3.13	3.15	3.18	3.19	3.16	3.14
60	TC	45.70	41.10	37.20	48.60	43.80	39.80	50.50	45.50	41.80
	SHC	12.90	20.10	27.60	16.00	25.00	34.10	19.00	29.40	39.90
	kW	3.56	3.54	3.52	3.54	3.55	3.58	3.59	3.56	3.55
50	TC	41.10	37.00	33.20	43.50	39.20	35.50	45.40	41.10	37.50
	SHC	8.70	16.40	23.90	11.30	20.70	30.10	14.30	25.40	35.80
	kW	4.02	4.01	4.00	4.00	4.01	4.03	4.04	4.03	4.01
40	TC	36.30	32.50	29.00	38.60	34.70	31.20	40.20	36.10	32.90
	SHC	4.30	12.20	20.10	6.80	16.60	26.20	9.40	20.80	31.50
	kW	4.54	4.53	4.53	4.53	4.54	4.54	4.55	4.54	4.54

RAH048 — 4 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN HOT GAS REHEAT MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	18.64	19.95	20.78	19.35	20.71	21.51	20.00	21.37	22.33
	SHC	0.78	4.36	8.24	-1.95	1.01	4.29	-4.33	-1.91	0.99
	kW	2.66	2.68	2.69	2.67	2.69	2.69	2.68	2.69	2.68
75	TC	19.37	21.21	22.15	20.47	21.97	22.92	21.15	22.78	23.65
	SHC	1.48	5.52	9.49	-0.91	2.18	5.57	-3.26	-0.61	2.20
	kW	2.62	2.54	2.54	2.56	2.55	2.55	2.56	2.55	2.56
70	TC	19.92	21.63	22.64	20.77	22.52	23.61	21.70	23.39	24.26
	SHC	2.01	5.94	9.98	-0.61	2.70	6.23	-2.72	-0.02	2.78
	kW	2.60	2.56	2.54	2.58	2.54	2.53	2.54	2.52	2.54
60	TC	20.11	21.27	22.23	20.75	23.15	23.43	22.49	23.78	24.55
	SHC	2.24	5.70	9.70	-0.57	3.35	6.15	-1.95	0.40	3.13
	kW	2.69	2.74	2.73	2.72	2.58	2.68	2.56	2.60	2.63
50	TC	21.56	22.70	23.37	22.18	23.33	24.01	22.75	23.90	25.40
	SHC	3.61	7.03	10.76	0.78	3.57	6.73	-1.67	0.57	3.96
	kW	2.57	2.63	2.66	2.60	2.66	2.69	2.63	2.69	2.62
40	TC	21.67	23.23	24.04	22.76	23.82	25.57	23.28	24.34	26.13
	SHC	3.74	7.56	9.89	1.35	4.06	8.17	-1.15	1.01	4.67
	kW	2.64	2.64	2.69	2.61	2.67	2.58	2.64	2.70	2.61

LEGEND

Edb	— Entering Wet-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.

Performance data (cont)

RAH060 — 5 TON — SINGLE STAGE COOLING CAPACITIES

RAH060				AMBIENT TEMPERATURE (F)											
				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	53.4	53.4	60.6	51.3	51.3	58.2	49.0	49.0	55.6	46.5	46.5	52.7
			SHC	46.3	53.4	60.6	44.5	51.3	58.2	42.5	49.0	55.6	40.3	46.5	52.7
		62	TC	55.6	55.6	58.2	52.9	52.9	56.9	50.0	50.0	55.5	46.9	46.9	53.9
			SHC	42.0	50.1	58.2	40.7	48.8	56.9	39.4	47.4	55.5	37.9	45.9	53.9
		67	TC	60.8	60.8	60.8	57.8	57.8	57.8	54.6	54.6	54.6	51.1	51.1	51.1
			SHC	34.4	42.6	50.7	33.2	41.3	49.4	31.8	39.9	48.1	30.4	38.5	46.6
		72	TC	66.6	66.6	66.6	63.2	63.2	63.2	59.7	59.7	59.7	55.9	55.9	55.9
			SHC	26.7	34.8	43.0	25.4	33.6	41.7	24.1	32.2	40.4	22.6	30.8	38.9
		76	TC	—	71.4	71.4	—	67.9	67.9	—	64.0	64.0	—	59.9	59.9
			SHC	—	28.5	36.7	—	27.2	35.5	—	25.9	34.2	—	24.5	32.7
			TC	56.3	56.3	63.8	54.0	54.0	61.2	51.5	51.5	58.3	48.7	48.7	55.2
			SHC	48.8	56.3	63.8	46.8	54.0	61.2	44.6	51.5	58.3	42.2	48.7	55.2
1750 Cfm	EAT (wb)	58	TC	57.3	57.3	64.0	54.5	54.5	62.5	51.6	51.6	60.7	48.8	48.8	57.5
			SHC	45.3	54.7	64.0	44.0	53.3	62.5	42.4	51.6	60.7	40.1	48.8	57.5
		62	TC	62.5	62.5	62.5	59.3	59.3	59.3	55.9	55.9	55.9	52.3	52.3	52.3
			SHC	36.6	46.0	55.4	35.3	44.7	54.1	33.9	43.3	52.7	32.4	41.8	51.3
		67	TC	68.3	68.3	68.3	64.8	64.8	64.8	61.0	61.0	61.0	57.0	57.0	57.0
			SHC	27.5	37.0	46.5	26.2	35.7	45.2	24.9	34.4	43.8	23.4	32.9	42.4
		72	TC	—	73.2	73.2	—	69.4	69.4	—	65.4	65.4	—	61.1	61.1
			SHC	—	29.7	39.3	—	28.4	38.0	—	27.1	36.7	—	25.6	35.2
		76	TC	—	73.2	73.2	—	69.4	69.4	—	65.4	65.4	—	61.1	61.1
			SHC	—	29.7	39.3	—	28.4	38.0	—	27.1	36.7	—	25.6	35.2
			TC	58.7	58.7	66.5	56.2	56.2	63.7	53.5	53.5	60.6	50.6	50.6	57.3
			SHC	50.9	58.7	66.5	48.7	56.2	63.7	46.4	53.5	60.6	43.8	50.6	57.3
2000 Cfm	EAT (wb)	58	TC	58.8	58.8	69.2	56.3	56.3	66.3	53.6	53.6	63.1	50.6	50.6	59.6
			SHC	48.3	58.8	69.2	46.3	56.3	66.3	44.0	53.6	63.1	41.6	50.6	59.6
		62	TC	63.8	63.8	63.8	60.4	60.4	60.4	56.9	56.9	57.3	53.1	53.1	55.8
			SHC	38.6	49.3	60.1	37.3	48.0	58.7	35.9	46.6	57.3	34.4	45.1	55.8
		67	TC	69.6	69.6	69.6	65.9	65.9	65.9	62.1	62.1	62.1	57.9	57.9	57.9
			SHC	28.4	39.1	49.9	27.0	37.8	48.6	25.7	36.4	47.2	24.2	35.0	45.7
		72	TC	—	74.5	74.5	—	70.6	70.6	—	66.5	66.5	—	62.0	62.0
			SHC	—	30.8	41.8	—	29.5	40.4	—	28.2	39.0	—	26.7	37.6
		76	TC	—	74.5	74.5	—	70.6	70.6	—	66.5	66.5	—	62.0	62.0
			SHC	—	30.8	41.8	—	29.5	40.4	—	28.2	39.0	—	26.7	37.6
			TC	60.7	60.7	68.8	58.1	58.1	65.8	55.2	55.2	62.6	52.1	52.1	59.1
			SHC	52.6	60.7	68.8	50.3	58.1	65.8	47.9	55.2	62.6	45.2	52.1	59.1
2250 Cfm	EAT (wb)	58	TC	60.8	60.8	71.6	58.1	58.1	68.5	55.3	55.3	65.1	52.2	52.2	61.4
			SHC	50.0	60.8	71.6	47.8	58.1	68.5	45.4	55.3	65.1	42.9	52.2	61.4
		62	TC	64.7	64.7	64.7	61.3	61.3	63.2	57.7	57.7	61.7	53.8	53.8	60.1
			SHC	40.6	52.6	64.5	39.2	51.2	63.2	37.8	49.7	61.7	36.2	48.2	60.1
		67	TC	70.6	70.6	70.6	66.8	66.8	66.8	62.8	62.8	62.8	58.6	58.6	58.6
			SHC	29.1	41.2	53.3	27.8	39.9	51.9	26.4	38.4	50.5	24.9	37.0	49.0
		72	TC	—	75.6	75.6	—	71.6	71.6	—	67.3	67.3	—	—	—
			SHC	—	31.9	44.1	—	30.6	42.8	—	29.2	41.4	—	—	—
		76	TC	—	75.6	75.6	—	71.6	71.6	—	67.3	67.3	—	—	—
			SHC	—	31.9	44.1	—	30.6	42.8	—	29.2	41.4	—	—	—
			TC	62.5	62.5	70.8	59.7	59.7	67.6	56.7	56.7	64.2	53.4	53.4	60.5
			SHC	54.1	62.5	70.8	51.7	59.7	67.6	49.1	56.7	64.2	46.3	53.4	60.5
2500 Cfm	EAT (wb)	58	TC	62.5	62.5	73.6	59.7	59.7	70.3	56.7	56.7	66.8	53.5	53.5	63.0
			SHC	51.4	62.5	73.6	49.1	59.7	70.3	46.6	56.7	66.8	43.9	53.5	63.0
		62	TC	65.5	65.5	68.9	62.0	62.0	67.4	58.3	58.3	65.9	54.4	54.4	64.2
			SHC	42.5	55.7	68.9	41.1	54.3	67.4	39.6	52.7	65.9	38.0	51.1	64.2
		67	TC	71.4	71.4	71.4	67.5	67.5	67.5	63.4	63.4	63.4	59.1	59.1	59.1
			SHC	29.9	43.2	56.5	28.5	41.8	55.2	27.1	40.4	53.7	25.6	38.9	52.2
		72	TC	—	76.4	76.4	—	72.3	72.3	—	—	—	—	—	—
			SHC	—	33.0	46.4	—	31.6	45.1	—	—	—	—	—	—
		76	TC	—	76.4	76.4	—	72.3	72.3	—	—	—	—	—	—
			SHC	—	33.0	46.4	—	31.6	45.1	—	—	—	—	—	—

LEGEND

—	DB/WB combo not possible
Cfm	Cubic feet per minute (supply air)
EAT (db)	Entering air temperature (dry bulb)
EAT (wb)	Entering air temperature (wet bulb)
SDT	Saturated discharge temperature
SHC	Sensible heat capacity (1000 Btuh) gross
SST	Saturated suction temperature
TC	Total capacity (1000 Btuh) gross

NOTE: For more information, see General Fan Performance Notes on page 64.

— Points are outside SST and SDT operating range

RAH060 — 5 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN SUBCOOLING MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	66.90	60.30	54.80	71.00	64.40	58.60	73.50	66.90	61.60
	SHC	25.80	34.10	43.00	30.50	41.70	52.60	35.00	48.60	61.20
	kW	3.11	3.06	3.03	3.05	3.09	3.16	3.16	3.11	3.07
75	TC	62.40	56.50	51.20	66.30	60.10	54.70	68.20	62.30	57.50
	SHC	21.50	30.60	39.60	26.10	37.60	49.00	29.90	44.20	57.20
	kW	3.47	3.43	3.39	3.42	3.46	3.51	3.52	3.48	3.44
70	TC	57.80	52.30	47.30	61.30	55.60	50.60	63.50	57.70	53.20
	SHC	17.20	26.60	35.90	21.40	33.30	45.10	25.60	39.90	53.20
	kW	3.89	3.85	3.80	3.83	3.88	3.93	3.95	3.90	3.86
60	TC	52.80	47.50	42.90	55.40	50.00	45.30	58.00	52.20	47.90
	SHC	12.50	22.10	31.70	15.80	28.10	40.10	20.40	34.70	47.90
	kW	4.36	4.31	4.26	4.29	4.33	4.38	4.42	4.36	4.32
50	TC	47.40	42.80	38.60	50.10	45.20	41.10	51.80	47.10	43.40
	SHC	7.40	17.70	27.80	11.00	23.60	36.10	14.70	30.00	43.40
	kW	4.88	4.83	4.78	4.81	4.86	4.91	4.93	4.88	4.84
40	TC	41.60	37.50	33.80	44.00	39.70	35.80	45.80	41.30	38.00
	SHC	2.10	12.80	23.30	5.30	18.60	31.20	9.10	24.70	38.00
	kW	5.44	5.39	5.35	5.37	5.42	5.47	5.49	5.44	5.40

Performance data (cont)

RAH060 — 5 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN HOT GAS REHEAT MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	25.29	27.61	28.72	26.81	28.62	29.71	27.68	29.53	30.63
	SHC	5.06	10.68	15.86	2.37	6.73	11.22	−0.40	3.30	7.17
	kW	3.23	3.12	3.13	3.12	3.13	3.14	3.12	3.14	3.15
75	TC	26.69	28.45	29.73	27.65	29.64	30.73	28.53	30.55	31.65
	SHC	6.39	11.52	16.85	3.20	7.72	12.20	0.43	4.29	8.16
	kW	3.08	3.11	3.09	3.10	3.09	3.11	3.11	3.10	3.12
70	TC	27.04	29.08	30.15	28.29	30.04	31.09	29.13	30.91	31.97
	SHC	6.76	12.14	17.28	3.82	8.14	12.60	1.02	4.67	8.51
	kW	3.15	3.12	3.15	3.11	3.14	3.17	3.13	3.16	3.18
60	TC	27.99	29.57	31.33	28.86	30.46	32.25	29.63	32.44	33.81
	SHC	7.70	12.66	18.45	4.41	8.60	13.74	1.54	6.16	10.28
	kW	3.17	3.23	3.15	3.21	3.26	3.18	3.23	3.12	3.10
50	TC	30.09	31.66	32.64	30.93	32.57	33.53	31.73	33.38	34.35
	SHC	9.72	14.66	19.72	6.40	10.61	14.99	3.56	7.10	10.85
	kW	3.01	3.07	3.11	3.04	3.10	3.15	3.07	3.14	3.18
40	TC	28.39	30.78	32.67	31.13	32.60	34.40	31.86	33.33	36.07
	SHC	8.17	13.89	19.80	6.63	10.69	15.85	3.72	7.10	12.51
	kW	3.39	3.32	3.24	3.14	3.23	3.15	3.18	3.27	3.08

LEGEND

Edb	— Entering Wet-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.

RAH072 — 6 TON — SINGLE STAGE COOLING CAPACITIES

RAH072				AMBIENT TEMPERATURE (F)														
				85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
1800 Cfm	EAT (wb)	58	TC	64.1	64.1	72.5	61.8	61.8	69.9	59.2	59.2	67.0	56.3	56.3	63.7	53.2	53.2	60.2
			SHC	55.7	64.1	72.5	53.7	61.8	69.9	51.4	59.2	67.0	48.9	56.3	63.7	46.2	53.2	60.2
		62	TC	67.9	67.9	68.5	64.9	64.9	67.0	61.5	61.5	65.3	57.9	57.9	63.5	54.0	54.0	61.4
			SHC	50.2	59.4	68.5	48.8	57.9	67.0	47.1	56.2	65.3	45.4	54.4	63.5	43.4	52.4	61.4
		67	TC	74.8	74.8	74.8	71.5	71.5	71.5	67.8	67.8	67.8	63.8	63.8	63.8	59.5	59.5	59.5
			SHC	41.8	50.9	60.1	40.3	49.5	58.7	38.8	47.9	57.1	37.1	46.2	55.4	35.3	44.4	53.6
		72	TC	82.2	82.2	82.2	78.7	78.7	78.7	74.7	74.7	74.7	70.4	70.4	70.4	65.6	65.6	65.6
			SHC	33.0	42.3	51.6	31.6	40.9	50.2	30.1	39.3	48.6	28.4	37.7	46.9	26.7	35.9	45.1
		76	TC		88.7	88.7		84.8	84.8		80.6	80.6		76.0	76.0		70.9	70.9
			SHC		35.3	45.2		33.9	43.7		32.4	42.0		30.7	40.3		28.9	38.5
2100 Cfm	EAT (wb)	58	TC	67.6	67.6	76.5	65.1	65.1	73.7	62.3	62.3	70.5	59.3	59.3	67.1	55.9	55.9	63.2
			SHC	58.7	67.6	76.5	56.6	65.1	73.7	54.1	62.3	70.5	51.5	59.3	67.1	48.5	55.9	63.2
		62	TC	70.1	70.1	74.9	67.0	67.0	73.2	63.5	63.5	71.3	59.7	59.7	69.1	56.0	56.0	65.8
			SHC	53.9	64.4	74.9	52.4	62.8	73.2	50.6	61.0	71.3	48.7	58.9	69.1	46.2	56.0	65.8
		67	TC	77.1	77.1	77.1	73.6	73.6	73.6	69.7	69.7	69.7	65.5	65.5	65.5	60.9	60.9	60.9
			SHC	44.2	54.8	65.3	42.7	53.3	63.9	41.2	51.7	62.3	39.4	50.0	60.5	37.6	48.1	58.6
		72	TC	84.7	84.7	84.7	80.9	80.9	80.9	76.8	76.8	76.8	72.2	72.2	72.2	67.2	67.2	67.2
			SHC	34.2	44.8	55.5	32.7	43.4	54.0	31.1	41.8	52.4	29.5	40.1	50.7	27.6	38.2	48.8
		76	TC		91.3	91.3		87.2	87.2		82.7	82.7		77.8	77.8		72.5	72.5
			SHC		36.7	47.8		35.3	46.3		33.7	44.7		32.0	43.0		30.2	41.1
2400 Cfm	EAT (wb)	58	TC	70.6	70.6	79.9	68.0	68.0	76.9	65.0	65.0	73.5	61.7	61.7	69.8	58.1	58.1	65.8
			SHC	61.3	70.6	79.9	59.0	68.0	76.9	56.4	65.0	73.5	53.6	61.7	69.8	50.5	58.1	65.8
		62	TC	72.0	72.0	80.6	68.7	68.7	78.7	65.2	65.2	76.6	61.8	61.8	72.6	58.2	58.2	68.4
			SHC	57.3	69.0	80.6	55.6	67.2	78.7	53.7	65.2	76.6	50.9	61.8	72.6	48.0	58.2	68.4
		67	TC	78.9	78.9	78.9	75.2	75.2	75.2	71.2	71.2	71.2	66.8	66.8	66.8	62.0	62.0	63.4
			SHC	46.5	58.4	70.3	45.0	56.9	68.8	43.4	55.3	67.2	41.6	53.5	65.4	39.7	51.6	63.4
		72	TC	86.6	86.6	86.6	82.7	82.7	82.7	78.3	78.3	78.3	73.6	73.6	73.6	68.4	68.4	68.4
			SHC	35.2	47.2	59.2	33.7	45.7	57.7	32.1	44.1	56.0	30.4	42.3	54.3	28.5	40.5	52.4
		76	TC		93.3	93.3		89.0	89.0		84.4	84.4		79.3	79.3		73.7	73.7
			SHC		38.0	50.4		36.6	48.9		35.0	47.3		33.3	45.5		31.4	43.6
2700 Cfm	EAT (wb)	58	TC	73.2	73.2	82.8	70.4	70.4	79.6	67.3	67.3	76.1	63.8	63.8	72.2	60.0	60.0	67.9
			SHC	63.6	73.2	82.8	61.1	70.4	79.6	58.4	67.3	76.1	55.4	63.8	72.2	52.1	60.0	67.9
		62	TC	73.7	73.7	85.5	70.5	70.5	82.8	67.3	67.3	79.1	63.9	63.9	75.1	60.1	60.1	70.6
			SHC	60.2	72.9	85.5	58.1	70.5	82.8	55.5	67.3	79.1	52.7	63.9	75.1	49.5	60.1	70.6
		67	TC	80.3	80.3	80.3	76.5	76.5	76.5	72.4	72.4	72.4	67.8	67.8	70.0	62.9	62.9	67.9
			SHC	48.7	61.9	75.1	47.1	60.4	73.6	45.5	58.7	71.9	43.7	56.8	70.0	41.7	54.8	67.9
		72	TC	88.2	88.2	88.2	84.0	84.0	84.0	79.6	79.6	79.6	74.6	74.6	74.6	69.3	69.3	69.3
			SHC	36.1	49.4	62.7	34.6	47.9	61.2	33.0	46.2	59.5	31.2	44.5	57.7	29.3	42.6	55.8
		78	TC		94.9	94.9		90.4	90.4		85.6	85.6		80.4	80.4		74.7	74.7
			SHC		39.2	52.9		37.7	51.4		36.1	49.7		34.4	47.9		32.5	46.0
3000 Cfm	EAT (wb)	58	TC	75.4	75.4	85.3	72.5	72.5	82.0	69.2	69.2	78.3	65.6	65.6	74.2	61.7	61.7	69.8
			SHC	65.5	75.4	85.3	62.9	72.5	82.0	60.1	69.2	78.3	57.0	65.6	74.2	53.5	61.7	69.8
		62	TC	75.5	75.5	88.7	72.5	72.5	85.3	69.3	69.3	81.4	65.7	65.7	77.2	61.7	61.7	72.5
			SHC	62.2	75.5	88.7	59.8	72.5	85.3	57.1	69.3	81.4	54.1	65.7	77.2	50.9	61.7	72.5
		67	TC	81.4	81.4	81.4	77.5	77.5	78.1	73.3	73.3	76.4	68.7	68.7	74.4	63.7	63.7	72.2
			SHC	50.7	65.2	79.7	49.2	63.7	78.1	47.5	61.9	76.4	45.6	60.0	74.4	43.6	57.9	72.2
		72	TC	89.4	89.4	89.4	85.2	85.2	85.2	80.5	80.5	80.5	75.5	75.5	75.5	70.1	70.1	70.1
			SHC	36.9	51.5	66.1	35.4	50.0	64.6	33.8	48.3	62.9	32.0	46.5	61.1	30.1	44.6	59.1
		76	TC		96.1	96.1		91.6	91.6		86.7	86.7		81.3	81.3		75.5	75.5
			SHC		40.4	55.3		38.9	53.8		37.2	52.1		35.5	50.3		33.6	48.3

LEGEND

Cfm — Cubic feet per minute (supply air)
EAT (db) — Entering air temperature (dry bulb)
EAT (wb) — Entering air temperature (wet bulb)
SDT — Saturated discharge temperature
SHC — Sensible heat capacity (1000 Btuh) gross
SST — Saturated suction temperature
TC — Total capacity (1000 Btuh) gross

NOTE: For more information, see General Fan Performance Notes on page 64.

— Points are outside SST and SDT operating range

Performance data (cont)

RAH073 — 6 TON — 2-STAGE COOLING CAPACITIES

RAH073				AMBIENT TEMPERATURE (F)														
				85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
1800 Cfm	EAT (wb)	58	THC	64.6	64.6	72.9	62.0	62.0	70.1	59.3	59.3	67.0	56.3	56.3	63.6	53.0	53.0	60.0
			SHC	56.3	64.6	72.9	54.0	62.0	70.1	51.6	59.3	67.0	49.0	56.3	63.6	46.1	53.0	60.0
		62	THC	68.3	68.3	68.9	65.0	65.0	67.1	61.5	61.5	65.2	57.8	57.8	63.2	53.8	53.8	60.9
			SHC	50.8	59.8	68.9	49.1	58.1	67.1	47.3	56.3	65.2	45.3	54.3	63.2	43.2	52.1	60.9
		67	THC	74.8	74.8	74.8	71.2	71.2	71.2	67.4	67.4	67.4	63.4	63.4	63.4	58.9	58.9	58.9
			SHC	42.0	51.0	60.1	40.3	49.4	58.4	38.5	47.6	56.6	36.7	45.7	54.8	34.7	43.7	52.8
		72	THC	82.0	82.0	82.0	78.1	78.1	78.1	73.9	73.9	73.9	69.4	69.4	69.4	64.7	64.7	64.7
			SHC	33.0	42.1	51.3	31.3	40.5	49.6	29.6	38.7	47.9	27.7	36.8	46.0	25.8	34.9	44.0
		76	THC		88.0	88.0		83.8	83.8		79.4	79.4		74.6	74.6		69.4	69.4
			SHC		34.9	44.8		33.3	43.1		31.5	41.2		29.7	39.3		27.7	37.3
2100 Cfm	EAT (wb)	58	THC	68.1	68.1	76.8	65.3	65.3	73.7	62.3	62.3	70.3	59.1	59.1	66.7	55.6	55.6	62.8
			SHC	59.3	68.1	76.8	56.9	65.3	73.7	54.2	62.3	70.3	51.4	59.1	66.7	48.3	55.6	62.8
		62	THC	70.4	70.4	75.2	66.9	66.9	73.3	63.3	63.3	71.2	59.5	59.5	68.8	55.6	55.6	65.3
			SHC	54.5	64.9	75.2	52.7	63.0	73.3	50.8	61.0	71.2	48.6	58.7	68.8	45.9	55.6	65.3
		67	THC	77.1	77.1	77.1	73.2	73.2	73.2	69.2	69.2	69.2	64.9	64.9	64.9	60.3	60.3	60.3
			SHC	44.5	54.9	65.4	42.8	53.2	63.6	41.0	51.4	61.7	39.1	49.4	59.8	37.0	47.4	57.8
		72	THC	84.3	84.3	84.3	80.2	80.2	80.2	75.8	75.8	75.8	71.1	71.1	71.1	66.1	66.1	66.1
			SHC	34.1	44.6	55.2	32.4	42.9	53.4	30.6	41.1	51.6	28.8	39.2	49.6	26.8	37.2	47.6
		76	THC		90.4	90.4		86.0	86.0		81.3	81.3		76.3	76.3		70.9	70.9
			SHC		36.3	47.4		34.6	45.7		32.8	43.8		31.0	41.8		29.0	39.8
2400 Cfm	EAT (wb)	58	THC	70.9	70.9	80.0	68.0	68.0	76.7	64.8	64.8	73.1	61.4	61.4	69.3	57.7	57.7	65.2
			SHC	61.8	70.9	80.0	59.2	68.0	76.7	56.4	64.8	73.1	53.4	61.4	69.3	50.2	57.7	65.2
		62	THC	72.1	72.1	80.9	68.6	68.6	78.6	64.9	64.9	76.1	61.4	61.4	72.1	57.7	57.7	67.8
			SHC	57.9	69.4	80.9	55.9	67.3	78.6	53.7	64.9	76.1	50.8	61.4	72.1	47.7	57.7	67.8
		67	THC	78.7	78.7	78.7	74.7	74.7	74.7	70.5	70.5	70.5	66.1	66.1	66.1	61.3	61.3	62.5
			SHC	46.8	58.6	70.3	45.1	56.8	68.5	43.2	54.9	66.6	41.3	53.0	64.7	39.2	50.9	62.5
		72	THC	86.0	86.0	86.0	81.7	81.7	81.7	77.2	77.2	77.2	72.3	72.3	72.3	67.1	67.1	67.1
			SHC	35.2	47.0	58.8	33.4	45.2	57.0	31.6	43.4	55.1	29.7	41.4	53.1	27.7	39.4	51.1
		76	THC		92.2	92.2		87.6	87.6		82.7	82.7		77.5	77.5		72.0	72.0
			SHC		37.6	49.9		35.9	48.1		34.1	46.2		32.2	44.2		30.1	42.1
2700 Cfm	EAT (wb)	58	THC	73.3	73.3	82.7	70.2	70.2	79.3	66.9	66.9	75.5	63.3	63.3	71.5	59.4	59.4	67.1
			SHC	64.0	73.3	82.7	61.2	70.2	79.3	58.3	66.9	75.5	55.1	63.3	71.5	51.7	59.4	67.1
		62	THC	73.6	73.6	86.1	70.3	70.3	82.3	67.0	67.0	78.5	63.4	63.4	74.3	59.5	59.5	69.8
			SHC	61.0	73.6	86.1	58.2	70.3	82.3	55.4	67.0	78.5	52.4	63.4	74.3	49.1	59.5	69.8
		67	THC	80.0	80.0	80.0	75.9	75.9	75.9	71.6	71.6	71.6	67.0	67.0	69.3	62.1	62.1	67.0
			SHC	49.0	62.0	75.0	47.2	60.2	73.2	45.4	58.3	71.3	43.4	56.3	69.3	41.3	54.1	67.0
		72	THC	87.4	87.4	87.4	83.0	83.0	83.0	78.3	78.3	78.3	73.3	73.3	73.3	68.0	68.0	68.0
			SHC	36.1	49.2	62.2	34.3	47.4	60.4	32.5	45.5	58.5	30.6	43.5	56.5	28.5	41.4	54.3
		78	THC		93.6	93.6		88.9	88.9		83.9	83.9		78.5	78.5		72.8	72.8
			SHC		38.8	52.3		37.0	50.5		35.2	48.5		33.2	46.5		31.2	44.3
3000 Cfm	EAT (wb)	58	THC	75.6	75.6	85.2	72.2	72.2	81.5	68.7	68.7	77.6	65.0	65.0	73.4	60.9	60.9	68.8
			SHC	65.9	75.6	85.2	62.9	72.2	81.5	59.9	68.7	77.6	56.6	65.0	73.4	53.0	60.9	68.8
		62	THC	75.6	75.6	88.5	72.3	72.3	84.6	68.8	68.8	80.6	65.0	65.0	76.3	60.9	60.9	71.5
			SHC	62.7	75.6	88.5	59.9	72.3	84.6	57.0	68.8	80.6	53.8	65.0	76.3	50.4	60.9	71.5
		67	THC	81.1	81.1	81.1	76.9	76.9	77.7	72.4	72.4	75.7	67.7	67.7	73.5	62.8	62.8	71.1
			SHC	51.1	65.4	79.6	49.3	63.5	77.7	47.4	61.6	75.7	45.4	59.4	73.5	43.2	57.1	71.1
		72	THC	88.6	88.6	88.6	84.0	84.0	84.0	79.2	79.2	79.2	74.1	74.1	74.1	68.7	68.7	68.7
			SHC	37.0	51.3	65.5	35.2	49.4	63.7	33.3	47.5	61.7	31.4	45.5	59.7	29.3	43.4	57.5
		76	THC		94.8	94.8		89.9	89.9		84.8	84.8		79.3	79.3		73.5	73.5
			SHC		39.9	54.6		38.1	52.7		36.2	50.8		34.3	48.7		32.2	46.5

LEGEND

Cfm — Cubic feet per minute (supply air)
EAT (db) — Entering air temperature (dry bulb)
EAT (wb) — Entering air temperature (wet bulb)
SDT — Saturated discharge temperature
SHC — Sensible heat capacity (1000 Btuh) gross
SST — Saturated suction temperature
TC — Total capacity (1000 Btuh) gross

NOTE: For more information, see General Fan Performance Notes on page 64.

— Points are outside SST and SDT operating range

RAH072 — 6 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN SUBCOOLING MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	85.70	77.40	70.00	91.10	82.60	74.90	94.50	85.70	78.40
	SHC	38.20	47.10	56.10	43.90	55.60	67.10	49.00	63.10	76.40
	kW	4.05	4.01	3.97	4.00	4.04	4.08	4.09	4.05	4.02
75	TC	80.90	73.10	66.00	85.90	77.90	70.60	89.20	80.90	73.90
	SHC	33.50	42.90	52.30	38.80	51.10	63.00	43.90	58.60	72.10
	kW	4.46	4.43	4.39	4.42	4.45	4.48	4.51	4.47	4.43
70	TC	75.70	68.40	61.70	80.60	72.90	66.00	83.60	75.70	69.10
	SHC	28.70	38.50	48.30	33.80	46.40	58.70	38.60	53.70	67.60
	kW	4.92	4.89	4.86	4.88	4.91	4.95	4.96	4.92	4.90
60	TC	70.20	63.30	57.00	74.70	67.50	61.10	77.50	70.10	64.00
	SHC	23.60	33.90	44.10	28.40	41.40	54.20	32.90	48.60	62.70
	kW	5.43	5.40	5.37	5.39	5.42	5.45	5.47	5.43	5.41
50	TC	64.30	57.80	52.00	68.40	61.70	55.70	71.00	64.10	58.30
	SHC	18.20	28.90	39.60	22.70	36.20	49.40	27.00	43.10	58.20
	kW	5.99	5.96	5.93	5.95	5.98	6.01	6.02	5.99	5.97
40	TC	57.90	52.00	46.60	61.60	55.40	49.90	64.00	57.50	52.40
	SHC	12.40	23.80	34.90	16.60	30.70	44.30	20.70	37.30	52.40
	kW	6.59	6.57	6.55	6.56	6.59	6.61	6.62	6.60	6.58

Performance data (cont)

RAH072 — 6 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN HOT GAS REHEAT MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	24.17	25.88	26.92	25.35	27.08	28.15	26.39	28.18	29.25
	SHC	−1.44	2.99	7.86	−5.08	−1.55	2.50	−8.25	−5.47	−2.14
	kW	4.15	4.16	4.17	4.17	4.18	4.18	4.18	4.19	4.20
75	TC	26.03	27.87	28.95	27.27	29.11	30.21	28.36	30.24	31.35
	SHC	0.43	4.97	9.86	−3.12	0.49	4.56	−6.19	−3.36	−0.03
	kW	3.96	3.97	3.98	3.98	3.99	4.00	4.00	4.01	4.01
70	TC	26.50	28.76	30.07	27.92	29.99	31.34	29.45	31.67	33.23
	SHC	0.87	5.84	10.97	−2.49	1.35	5.68	−5.06	−1.85	1.94
	kW	3.97	3.93	3.91	3.96	3.95	3.93	3.92	3.89	3.87
60	TC	27.59	29.22	30.17	28.70	30.33	31.30	31.50	31.32	32.91
	SHC	1.91	6.25	11.02	−1.79	1.63	5.57	−3.31	−2.39	1.45
	kW	3.95	3.99	4.01	3.99	4.02	4.04	4.09	4.05	4.01
50	TC	27.77	29.18	30.03	28.75	30.18	32.02	29.63	32.07	32.96
	SHC	2.03	6.18	10.85	−1.80	1.43	6.25	−5.14	−1.69	1.45
	kW	4.03	4.08	4.11	4.07	4.12	4.05	4.12	4.06	4.09
40	TC	29.02	30.38	31.46	29.96	31.32	32.09	30.79	33.49	34.34
	SHC	3.26	7.34	10.07	−0.63	2.54	6.29	−4.01	−0.30	2.80
	kW	3.96	4.02	4.08	4.01	4.08	4.11	4.06	4.00	4.03

LEGEND

Edb	— Entering Wet-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.

RAH073 — 6 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN SUBCOOLING MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	83.50	75.60	68.50	88.50	76.00	72.90	91.70	83.40	76.20
	SHC	37.00	47.00	55.40	43.60	51.90	65.60	47.90	62.00	74.20
	kW	3.49	3.50	3.45	3.57	3.53	3.48	3.58	3.56	3.50
75	TC	79.00	71.50	64.70	83.60	75.50	68.70	86.40	78.50	71.80
	SHC	32.90	43.20	51.90	39.50	50.60	61.70	43.70	57.30	70.10
	kW	3.94	3.94	3.90	4.03	3.97	3.91	4.08	3.97	3.95
70	TC	73.50	67.10	60.70	70.20	71.20	64.60	81.30	73.70	67.10
	SHC	26.60	39.30	48.20	31.50	46.70	57.90	39.50	53.30	65.60
	kW	4.39	4.44	4.40	4.54	4.48	4.43	4.56	4.50	4.44
60	TC	68.60	62.60	56.50	73.30	66.30	60.10	75.70	68.40	62.60
	SHC	25.50	35.30	44.40	30.50	42.30	53.80	34.60	48.60	61.50
	kW	5.05	5.02	4.98	5.10	5.05	5.00	5.12	5.06	5.02
50	TC	64.20	57.80	52.00	67.80	61.20	55.30	69.90	63.20	57.60
	SHC	21.70	31.10	40.50	25.80	37.80	49.50	29.50	44.00	57.60
	kW	5.72	5.68	5.64	5.74	5.70	5.66	5.76	5.72	5.67
40	TC	58.80	52.80	47.40	62.10	55.80	50.30	63.60	57.60	52.40
	SHC	17.10	26.70	36.30	20.80	33.00	45.00	24.10	39.10	52.40
	kW	6.46	6.43	6.41	6.48	6.44	6.41	6.48	6.45	6.42

Performance data (cont)

RAH073 — 6 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN HOT GAS REHEAT MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	27.93	28.67	29.02	28.32	29.87	30.25	29.63	30.24	31.31
	SHC	6.95	10.60	14.71	2.87	6.41	9.76	0.19	2.12	5.43
	kW	3.80	3.79	3.78	3.79	3.78	3.78	3.79	3.78	3.77
75	TC	28.78	30.12	30.68	29.82	30.63	31.42	30.45	31.77	32.14
	SHC	7.76	12.01	16.31	4.30	7.17	10.89	1.00	3.59	6.24
	kW	3.80	3.79	3.78	3.79	3.78	3.78	3.79	3.78	3.77
70	TC	29.64	30.80	31.85	30.48	31.97	32.67	31.55	32.79	33.12
	SHC	8.60	12.69	17.46	4.95	8.46	12.12	2.06	4.59	7.21
	kW	3.80	3.79	3.78	3.79	3.78	3.78	3.79	3.78	3.77
60	TC	31.14	32.55	33.57	32.03	33.49	34.38	32.98	34.50	35.39
	SHC	10.05	14.38	19.13	6.45	9.96	13.79	3.45	6.26	9.41
	kW	3.80	3.79	3.78	3.79	3.78	3.78	3.79	3.78	3.77
50	TC	32.23	33.83	34.70	33.47	34.97	35.86	34.42	35.95	36.90
	SHC	11.11	15.63	20.24	7.83	11.39	15.24	4.84	7.67	10.88
	kW	3.80	3.79	3.78	3.79	3.78	3.78	3.79	3.78	3.77
40	TC	33.41	35.02	35.91	34.52	36.20	37.25	35.66	37.22	38.32
	SHC	12.24	16.78	21.43	8.85	12.58	16.58	6.03	8.90	12.27
	kW	3.80	3.79	3.78	3.79	3.78	3.78	3.79	3.78	3.77

LEGEND

Edb	— Entering Wet-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.

RAH090 — 7.5 TON — 2-STAGE COOLING CAPACITIES

RAH090				AMBIENT TEMPERATURE (F)														
				85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
1800 Cfm	EAT (wb)	58	TC	81.0	81.0	91.8	77.9	77.9	88.4	74.7	74.7	84.6	71.1	71.1	80.6	67.3	67.3	76.3
			SHC	70.2	81.0	91.8	67.5	77.9	88.4	64.7	74.7	84.6	61.6	71.1	80.6	58.3	67.3	76.3
		62	TC	85.1	85.1	87.2	81.1	81.1	85.3	76.9	76.9	83.2	72.5	72.5	81.0	67.8	67.8	78.5
			SHC	63.3	75.3	87.2	61.4	73.4	85.3	59.5	71.3	83.2	57.3	69.2	81.0	55.0	66.7	78.5
		67	TC	93.3	93.3	93.3	89.0	89.0	89.0	84.3	84.3	84.3	79.4	79.4	79.4	74.1	74.1	74.1
			SHC	52.3	64.2	76.2	50.4	62.4	74.4	48.4	60.4	72.4	46.4	58.3	70.3	44.2	56.2	68.1
		72	TC	102.3	102.3	102.3	97.5	97.5	97.5	92.5	92.5	92.5	87.1	87.1	87.1	81.3	81.3	81.3
			SHC	40.9	53.0	65.0	39.0	51.1	63.1	37.1	49.2	61.2	35.1	47.1	59.1	32.9	44.9	57.0
		76	TC		110.0	110.0		104.8	104.8		99.4	99.4		93.5	93.5		87.3	87.3
			SHC		43.7	56.1		41.9	54.2		39.9	52.2		37.9	50.2		35.8	48.0
2100 Cfm	EAT (wb)	58	TC	85.4	85.4	96.9	82.1	82.1	93.1	78.6	78.6	89.1	74.7	74.7	84.7	70.5	70.5	80.0
			SHC	74.0	85.4	96.9	71.2	82.1	93.1	68.1	78.6	89.1	64.7	74.7	84.7	61.1	70.5	80.0
		62	TC	87.8	87.8	95.7	83.7	83.7	93.6	79.3	79.3	91.3	75.0	75.0	87.8	70.6	70.6	83.2
			SHC	68.2	82.0	95.7	66.2	79.9	93.6	64.1	77.7	91.3	61.3	74.6	87.8	58.0	70.6	83.2
		67	TC	96.0	96.0	96.0	91.4	91.4	91.4	86.5	86.5	86.5	81.3	81.3	81.3	75.8	75.8	75.8
			SHC	55.4	69.3	83.2	53.5	67.4	81.2	51.5	65.4	79.2	49.4	63.2	77.1	47.2	61.0	74.8
		72	TC	105.2	105.2	105.2	100.1	100.1	100.1	94.8	94.8	94.8	89.1	89.1	89.1	83.0	83.0	83.0
			SHC	42.3	56.2	70.2	40.4	54.3	68.2	38.4	52.3	66.2	36.3	50.2	64.1	34.1	48.0	61.9
		76	TC		112.9	112.9		107.5	107.5		101.7	101.7		95.6	95.6		89.1	89.1
			SHC		45.5	59.8		43.6	57.8		41.7	55.8		39.6	53.7		37.4	51.5
2400 Cfm	EAT (wb)	58	TC	89.2	89.2	101.1	85.6	85.6	97.1	81.8	81.8	92.8	77.7	77.7	88.1	73.2	73.2	83.0
			SHC	77.3	89.2	101.1	74.2	85.6	97.1	70.9	81.8	92.8	67.3	77.7	88.1	63.5	73.2	83.0
		62	TC	90.1	90.1	103.5	86.1	86.1	100.3	81.9	81.9	96.5	77.8	77.8	91.6	73.3	73.3	86.4
			SHC	72.7	88.1	103.5	70.1	85.2	100.3	67.3	81.9	96.5	63.9	77.8	91.6	60.2	73.3	86.4
		67	TC	98.1	98.1	98.1	93.3	93.3	93.3	88.2	88.2	88.2	82.8	82.8	83.6	77.0	77.0	81.3
			SHC	58.4	74.1	89.9	56.5	72.2	87.9	54.4	70.1	85.8	52.3	67.9	83.6	50.0	65.6	81.3
		72	TC	107.3	107.3	107.3	102.1	102.1	102.1	96.5	96.5	96.5	90.6	90.6	90.6	84.3	84.3	84.3
			SHC	43.5	59.3	75.1	41.6	57.3	73.1	39.5	55.3	71.1	37.4	53.2	69.0	35.2	50.9	66.7
		76	TC		115.2	115.2		109.5	109.5		103.5	103.5		97.2	97.2		90.4	90.4
			SHC		47.2	63.2		45.3	61.3		43.3	59.3		41.2	57.1		38.9	54.8
2700 Cfm	EAT (wb)	58	TC	92.4	92.4	104.7	88.6	88.6	100.4	84.6	84.6	95.9	80.2	80.2	90.9	75.5	75.5	85.6
			SHC	80.0	92.4	104.7	76.8	88.6	100.4	73.3	84.6	95.9	69.5	80.2	90.9	65.4	75.5	85.6
		62	TC	92.5	92.5	109.0	88.7	88.7	104.5	84.6	84.6	99.7	80.3	80.3	94.6	75.6	75.6	89.0
			SHC	76.0	92.5	109.0	72.9	88.7	104.5	69.6	84.6	99.7	66.0	80.3	94.6	62.1	75.6	89.0
		67	TC	99.7	99.7	99.7	94.8	94.8	94.8	89.5	89.5	92.2	84.0	84.0	89.9	78.0	78.0	87.4
			SHC	61.3	78.8	96.4	59.3	76.8	94.3	57.2	74.7	92.2	55.0	72.4	89.9	52.6	70.0	87.4
		72	TC	109.0	109.0	109.0	103.6	103.6	103.6	97.8	97.8	97.8	91.8	91.8	91.8	85.3	85.3	85.3
			SHC	44.6	62.2	79.9	42.7	60.3	77.9	40.6	58.2	75.8	38.5	56.1	73.6	36.2	53.8	71.3
		78	TC		116.9	116.9		111.1	111.1		104.9	104.9		98.4	98.4		91.5	91.5
			SHC		48.8	66.6		46.8	64.6		44.8	62.6		42.7	60.4		40.4	58.1
3000 Cfm	EAT (wb)	58	TC	95.1	95.1	107.8	91.2	91.2	103.3	86.9	86.9	98.5	82.3	82.3	93.3	77.4	77.4	87.8
			SHC	82.4	95.1	107.8	79.0	91.2	103.3	75.3	86.9	98.5	71.3	82.3	93.3	67.1	77.4	87.8
		62	TC	95.2	95.2	112.2	91.2	91.2	107.5	87.0	87.0	102.5	82.4	82.4	97.1	77.5	77.5	91.3
			SHC	78.2	95.2	112.2	75.0	91.2	107.5	71.5	87.0	102.5	67.7	82.4	97.1	63.7	77.5	91.3
		67	TC	101.1	101.1	102.6	96.0	96.0	100.5	90.6	90.6	98.3	84.9	84.9	95.9	78.9	78.9	93.2
			SHC	64.0	83.3	102.6	62.0	81.2	100.5	59.8	79.1	98.3	57.6	76.7	95.9	55.1	74.2	93.2
		72	TC	110.4	110.4	110.4	104.8	104.8	104.8	98.9	98.9	98.9	92.7	92.7	92.7	86.1	86.1	86.1
			SHC	45.7	65.1	84.5	43.7	63.1	82.5	41.7	61.0	80.4	39.5	58.8	78.2	37.2	56.5	75.9
		76	TC		118.3	118.3		112.4	112.4		106.0	106.0		99.4	99.4		92.3	92.3
			SHC		50.3	69.9		48.3	67.9		46.2	65.8		44.1	63.6		41.8	61.3

LEGEND

Cfm	— Cubic feet per minute (supply air)
EAT (db)	— Entering air temperature (dry bulb)
EAT (wb)	— Entering air temperature (wet bulb)
SDT	— Saturated discharge temperature
SHC	— Sensible heat capacity (1000 Btuh) gross
SST	— Saturated suction temperature
TC	— Total capacity (1000 Btuh) gross

NOTE: For more information, see General Fan Performance Notes on page 64.

— Points are outside SST and SDT operating range

Performance data (cont)

RAH090 — 7.5 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN SUBCOOLING MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	101.90	92.90	84.00	109.60	96.30	89.90	113.60	103.00	94.50
	SHC	43.90	54.60	66.70	50.20	62.70	80.90	56.80	75.80	93.00
	kW	4.60	4.54	4.48	4.65	4.50	4.52	4.68	4.60	4.55
75	TC	96.60	87.30	78.90	102.80	92.90	84.50	106.50	96.70	88.70
	SHC	36.80	49.30	61.90	43.80	59.70	75.90	50.20	69.80	87.40
	kW	5.15	5.09	5.04	5.20	5.13	5.08	5.22	5.16	5.11
70	TC	90.20	81.40	73.50	95.70	86.80	78.80	99.40	90.10	82.70
	SHC	30.80	43.90	56.90	37.20	54.10	70.50	43.60	63.80	81.60
	kW	5.78	5.72	5.67	5.82	5.760	5.71	5.85	5.79	5.74
60	TC	83.50	75.20	67.80	88.80	80.20	72.70	92.00	83.20	76.40
	SHC	24.60	38.20	51.70	30.80	48.00	64.90	36.70	57.40	75.50
	kW	6.50	6.45	6.40	6.54	6.48	6.43	6.57	6.50	6.46
50	TC	76.30	68.70	61.80	81.10	73.20	66.30	84.10	76.00	69.70
	SHC	17.90	32.10	46.20	23.70	41.50	59.00	29.40	50.70	69.00
	kW	7.32	7.28	7.24	7.35	7.31	7.27	7.38	7.32	7.29
40	TC	68.60	61.60	55.40	73.00	65.70	59.30	75.80	68.20	62.60
	SHC	10.90	25.60	40.30	16.20	34.70	52.60	21.70	43.60	62.10
	kW	8.24	8.22	8.20	8.27	8.23	8.21	8.29	8.25	8.22

RAH090 — 7.5 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN HOT GAS REHEAT MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	24.06	26.14	27.48	25.50	27.56	28.78	26.59	28.71	29.96
	SHC	−5.55	1.16	8.38	−10.20	−4.69	1.40	−14.39	−9.85	−4.68
	KW	4.43	4.42	4.41	4.40	4.41	4.42	4.42	4.43	4.44
75	TC	24.87	27.26	28.47	26.06	28.53	30.02	27.67	29.77	31.02
	SHC	−4.77	2.23	9.32	-9.65	−3.76	2.59	−13.35	−8.83	−3.66
	KW	4.42	4.36	4.38	4.45	4.38	4.36	4.36	4.39	4.40
70	TC	25.16	27.88	28.56	26.72	29.10	30.26	28.17	30.20	31.83
	SHC	-4.48	2.84	9.45	−9.02	−3.19	2.85	−12.88	−8.40	−2.87
	KW	4.49	4.38	4.48	4.44	4.41	4.44	4.40	4.44	4.40
60	TC	26.43	28.14	29.14	27.49	29.24	30.27	28.50	30.24	32.33
	SHC	−3.25	3.14	10.05	−8.26	−2.99	2.94	−12.54	−8.29	−2.32
	KW	4.48	4.55	4.59	4.53	4.60	4.65	4.58	4.65	4.54
50	TC	27.19	29.55	31.26	28.94	30.59	32.36	30.54	31.54	32.52
	SHC	−2.50	4.50	12.05	−6.87	−1.69	4.92	−10.60	−7.02	−2.07
	KW	4.53	4.51	4.46	4.48	4.57	4.52	4.43	4.63	4.70
40	TC	27.92	31.58	32.82	28.81	32.60	33.54	31.82	33.50	34.44
	SHC	−1.79	6.42	10.84	−6.94	0.23	6.05	−9.36	−5.15	−0.25
	KW	4.57	4.37	4.46	4.65	4.45	4.51	4.40	4.51	4.58

LEGEND

Edb	— Entering Wet-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.

Performance data (cont)

RAH102 — 8.5 TON — 2-STAGE COOLING CAPACITIES

RAH102				AMBIENT TEMPERATURE (F)														
				85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
2550 Cfm	EAT (wb)	58	TC	90.5	90.5	102.4	87.0	87.0	98.5	83.2	83.2	94.2	79.1	79.1	89.6	74.7	74.7	84.6
			SHC	78.6	90.5	102.4	75.5	87.0	98.5	72.2	83.2	94.2	68.7	79.1	89.6	64.8	74.7	84.6
		62	TC	94.8	94.8	98.1	90.2	90.2	95.8	85.4	85.4	93.4	80.3	80.3	90.8	74.9	74.9	87.8
			SHC	71.2	84.6	98.1	69.1	82.4	95.8	66.8	80.1	93.4	64.3	77.5	90.8	61.6	74.7	87.8
		67	TC	104.0	104.0	104.0	99.0	99.0	99.0	93.7	93.7	93.7	88.0	88.0	88.0	81.9	81.9	81.9
			SHC	58.7	72.2	85.7	56.6	70.0	83.5	54.3	67.8	81.3	52.0	65.4	78.9	49.5	62.9	76.4
		72	TC	114.0	114.0	114.0	108.5	108.5	108.5	102.7	102.7	102.7	96.5	96.5	96.5	89.8	89.8	89.8
			SHC	45.8	59.3	72.9	43.7	57.2	70.8	41.4	55.0	68.5	39.1	52.7	66.2	36.7	50.2	63.7
		76	TC		122.4	122.4		116.5	116.5		110.3	110.3		103.7	103.7		96.5	96.5
			SHC		48.8	62.8		46.7	60.6		44.5	58.4		42.2	56.0		39.8	53.5
2975 Cfm	EAT (wb)	58	TC	95.4	95.4	108.0	91.6	91.6	103.7	87.5	87.5	99.0	83.1	83.1	94.0	78.3	78.3	88.6
			SHC	82.8	95.4	108.0	79.5	91.6	103.7	75.9	87.5	99.0	72.1	83.1	94.0	68.0	78.3	88.6
		62	TC	97.7	97.7	107.4	93.0	93.0	104.9	88.1	88.1	102.1	83.2	83.2	97.9	78.4	78.4	92.2
			SHC	76.7	92.0	107.4	74.3	89.6	104.9	71.8	86.9	102.1	68.6	83.2	97.9	64.6	78.4	92.2
		67	TC	106.9	106.9	106.9	101.6	101.6	101.6	96.0	96.0	96.0	90.1	90.1	90.1	83.7	83.7	83.9
			SHC	62.3	77.8	93.4	60.1	75.6	91.2	57.8	73.3	88.9	55.4	70.9	86.5	52.8	68.3	83.9
		72	TC	117.0	117.0	117.0	111.2	111.2	111.2	105.1	105.1	105.1	98.6	98.6	98.6	91.7	91.7	91.7
			SHC	47.3	62.9	78.6	45.1	60.8	76.4	42.9	58.5	74.1	40.5	56.1	71.7	38.0	53.6	69.2
		76	TC		125.6	125.6		119.4	119.4		112.8	112.8		105.9	105.9		98.4	98.4
			SHC		50.8	66.8		48.7	64.6		46.4	62.3		44.1	59.9		41.6	57.4
3400 Cfm	EAT (wb)	58	TC	99.5	99.5	112.7	95.4	95.4	108.0	91.0	91.0	103.0	86.3	86.3	97.7	81.2	81.2	91.9
			SHC	86.4	99.5	112.7	82.8	95.4	108.0	79.0	91.0	103.0	74.9	86.3	97.7	70.5	81.2	91.9
		62	TC	100.3	100.3	115.8	95.6	95.6	112.4	91.2	91.2	107.2	86.4	86.4	101.6	81.3	81.3	95.6
			SHC	81.5	98.6	115.8	78.7	95.6	112.4	75.1	91.2	107.2	71.2	86.4	101.6	67.0	81.3	95.6
		67	TC	109.1	109.1	109.1	103.6	103.6	103.6	97.8	97.8	97.8	91.6	91.6	93.7	85.0	85.0	90.9
			SHC	65.6	83.2	100.8	63.4	81.0	98.6	61.0	78.6	96.2	58.6	76.1	93.7	55.9	73.4	90.9
		72	TC	119.3	119.3	119.3	113.3	113.3	113.3	107.0	107.0	107.0	100.3	100.3	100.3	93.0	93.0	93.0
			SHC	48.7	66.4	84.1	46.5	64.2	81.8	44.2	61.8	79.5	41.8	59.4	77.1	39.2	56.9	74.5
		76	TC		128.0	128.0		121.5	121.5		114.7	114.7		107.5	107.5		99.8	99.8
			SHC		52.6	70.6		50.5	68.4		48.2	66.1		45.8	63.6		43.3	61.1
3825 Cfm	EAT (wb)	58	TC	103.0	103.0	116.6	98.7	98.7	111.7	94.0	94.0	106.4	89.0	89.0	100.8	83.6	83.6	94.7
			SHC	89.4	103.0	116.6	85.6	98.7	111.7	81.6	94.0	106.4	77.3	89.0	100.8	72.6	83.6	94.7
		62	TC	103.1	103.1	121.3	98.8	98.8	116.1	94.1	94.1	110.7	89.1	89.1	104.8	83.7	83.7	98.4
			SHC	85.0	103.1	121.3	81.4	98.8	116.1	77.5	94.1	110.7	73.4	89.1	104.8	69.0	83.7	98.4
		67	TC	110.9	110.9	110.9	105.2	105.2	105.7	99.2	99.2	103.2	92.9	92.9	100.5	86.1	86.1	97.6
			SHC	68.8	88.4	108.0	66.5	86.1	105.7	64.1	83.7	103.2	61.6	81.1	100.5	58.9	78.3	97.6
		72	TC	121.2	121.2	121.2	114.9	114.9	114.9	108.4	108.4	108.4	101.5	101.5	101.5	94.1	94.1	94.1
			SHC	50.0	69.7	89.4	47.7	67.4	87.1	45.4	65.1	84.7	43.0	62.6	82.3	40.4	60.0	79.6
		78	TC		129.8	129.8		123.2	123.2		116.2	116.2		108.8	108.8		100.9	100.9
			SHC		54.4	74.3		52.2	72.1		49.9	69.7		47.5	67.3		44.9	64.7
4250 Cfm	EAT (wb)	58	TC	106.0	106.0	119.9	101.4	101.4	114.8	96.6	96.6	109.3	91.3	91.3	103.4	85.7	85.7	97.0
			SHC	92.0	106.0	119.9	88.0	101.4	114.8	83.8	96.6	109.3	79.3	91.3	103.4	74.4	85.7	97.0
		62	TC	106.1	106.1	124.7	101.5	101.5	119.4	96.6	96.6	113.6	91.4	91.4	107.5	85.7	85.7	100.8
			SHC	87.4	106.1	124.7	83.6	101.5	119.4	79.6	96.6	113.6	75.3	91.4	107.5	70.6	85.7	100.8
		67	TC	112.3	112.3	114.9	106.5	106.5	112.5	100.4	100.4	109.9	93.9	93.9	107.0	87.1	87.1	103.8
			SHC	71.8	93.4	114.9	69.5	91.0	112.5	67.0	88.5	109.9	64.4	85.7	107.0	61.6	82.7	103.8
		72	TC	122.6	122.6	122.6	116.2	116.2	116.2	109.5	109.5	109.5	102.5	102.5	102.5	94.9	94.9	94.9
			SHC	51.2	72.8	94.5	48.9	70.5	92.2	46.6	68.2	89.8	44.1	65.7	87.3	41.5	63.1	84.6
		76	TC		131.3	131.3		124.5	124.5		117.4	117.4		109.8	109.8		101.8	101.8
			SHC		56.0	77.9		53.8	75.6		51.5	73.3		49.1	70.8		46.5	68.1

LEGEND

Cfm — Cubic feet per minute (supply air)
EAT (db) — Entering air temperature (dry bulb)
EAT (wb) — Entering air temperature (wet bulb)
SDT — Saturated discharge temperature
SHC — Sensible heat capacity (1000 Btuh) gross
SST — Saturated suction temperature
TC — Total capacity (1000 Btuh) gross

NOTE: For more information, see General Fan Performance Notes on page 64.

— Points are outside SST and SDT operating range

RAH102 — 8.5 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN SUBCOOLING MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	114.70	103.90	93.90	104.30	110.60	100.50	122.90	114.60	105.50
	SHC	48.70	62.20	75.70	84.70	74.20	91.40	60.60	85.10	103.90
	kW	5.17	5.09	5.01	5.10	5.140	5.07	5.20	5.18	5.11
75	TC	107.80	97.40	88.00	114.20	102.90	94.20	116.20	107.60	98.70
	SHC	42.30	56.30	70.30	49.70	67.00	85.60	61.10	78.70	97.30
	kW	5.79	5.71	5.63	5.85	5.75	5.69	5.88	5.80	5.72
70	TC	100.50	90.80	82.00	106.60	96.20	87.70	110.20	100.10	92.20
	SHC	35.60	50.20	64.80	42.80	61.00	79.60	49.20	71.90	91.00
	kW	6.50	6.42	6.34	6.56	6.46	6.40	6.59	6.50	6.44
60	TC	92.70	83.80	75.70	98.50	89.00	80.90	102.10	92.40	85.10
	SHC	28.50	43.90	59.10	35.40	54.60	73.40	41.90	64.90	84.20
	kW	7.30	7.23	7.16	7.36	7.28	7.21	7.40	7.31	7.25
50	TC	85.00	76.50	69.00	90.00	81.30	73.80	93.30	84.04	77.70
	SHC	21.50	37.40	53.10	27.70	47.60	66.90	34.00	57.70	77.00
	kW	8.23	8.16	8.10	8.27	8.20	8.14	8.31	8.23	8.18
40	TC	76.50	68.80	61.80	81.10	72.90	66.20	84.10	75.80	69.80
	SHC	13.80	30.40	46.70	19.70	40.00	60.10	25.60	50.00	69.80
	kW	9.25	9.20	9.16	9.28	9.22	9.19	9.31	9.25	9.21

Performance data (cont)

RAH102 — 8.5 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN HOT GAS REHEAT MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	27.53	29.56	30.72	28.95	31.03	32.22	30.26	32.33	33.58
	SHC	-3.84	3.82	11.92	-9.25	-2.92	4.09	-13.93	-8.77	-2.82
	kW	5.09	5.11	5.13	5.11	5.14	5.15	5.14	5.15	5.17
75	TC	29.09	31.60	32.81	30.77	33.10	34.33	32.30	34.45	35.73
	SHC	-2.34	5.72	13.84	-7.51	-0.98	6.04	-11.95	-6.78	-0.82
	kW	4.97	4.91	4.93	4.95	4.94	4.95	4.94	4.96	4.97
70	TC	29.58	32.45	33.63	31.48	34.12	35.55	33.12	35.65	37.38
	SHC	-1.88	6.54	14.63	-6.83	0.00	7.20	-11.16	-5.63	0.75
	kW	4.99	4.90	4.92	4.96	4.90	4.89	4.93	4.90	4.86
60	TC	30.71	33.44	34.52	32.90	34.79	35.86	34.07	36.02	37.09
	SHC	-0.78	7.52	15.54	-5.47	0.68	7.57	-10.28	-5.24	0.55
	kW	5.03	4.95	5.00	4.94	5.01	5.05	4.99	5.06	5.09
50	TC	32.63	34.31	35.26	33.81	35.53	36.51	34.90	36.66	37.65
	SHC	1.05	8.38	16.29	-4.60	1.42	8.24	-9.49	-4.59	1.14
	kW	4.92	5.01	5.06	4.99	5.07	5.13	5.05	5.14	5.19
40	TC	31.94	33.26	35.77	32.96	35.70	37.86	35.17	38.01	38.92
	SHC	0.45	7.47	13.75	-5.35	1.63	9.52	-9.20	-3.29	2.36
	kW	5.16	5.27	5.20	5.25	5.19	5.10	5.16	5.11	5.17

LEGEND

Edb	— Entering Wet-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.

RAH110 — 10 TON — 2-STAGE COOLING CAPACITIES

RAH110				AMBIENT TEMPERATURE (F)														
				85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
3000 Cfm	EAT (wb)	58	TC	105.6	105.6	118.0	101.7	101.7	114.1	97.5	97.5	109.9	92.9	92.9	105.2	87.8	87.8	100.2
			SHC	93.3	105.6	118.0	89.4	101.7	114.1	85.1	97.5	109.9	80.5	92.9	105.2	75.4	87.8	100.2
		62	TC	110.6	110.6	110.6	105.5	105.5	108.0	100.1	100.1	105.5	94.4	94.4	102.7	88.5	88.5	98.5
			SHC	85.6	98.0	110.3	83.3	95.7	108.0	80.7	93.1	105.5	77.9	90.3	102.7	73.8	86.1	98.5
		67	TC	120.5	120.5	120.5	115.0	115.0	115.0	109.0	109.0	109.0	102.7	102.7	102.7	95.7	95.7	95.7
			SHC	70.0	82.3	94.7	67.7	80.1	92.5	65.4	77.8	90.1	63.1	75.5	87.9	60.0	72.4	84.8
		72	TC	131.4	131.4	131.4	125.4	125.4	125.4	118.8	118.8	118.8	111.7	111.7	111.7	104.2	104.2	104.2
			SHC	53.9	66.3	78.7	51.8	64.2	76.6	49.5	61.9	74.3	47.0	59.4	71.7	44.3	56.7	69.1
		76	TC	—	140.8	140.8	—	134.2	134.2	—	127.0	127.0	—	119.4	119.4	—	111.5	111.5
			SHC	—	52.5	64.9	—	50.8	63.2	—	48.7	61.1	—	46.4	58.7	—	44.0	56.4
3500 Cfm	EAT (wb)	58	TC	110.9	110.9	125.3	106.7	106.7	121.1	102.1	102.1	116.5	97.0	97.0	111.5	91.6	91.6	106.0
			SHC	96.4	110.9	125.3	92.2	106.7	121.1	87.6	102.1	116.5	82.6	97.0	111.5	77.1	91.6	106.0
		62	TC	113.6	113.6	120.7	108.4	108.4	118.1	103.1	103.1	114.5	97.9	97.9	109.5	92.0	92.0	105.3
			SHC	91.9	106.3	120.7	89.3	103.7	118.1	85.7	100.1	114.5	80.6	95.0	109.5	76.4	90.8	105.3
		67	TC	123.5	123.5	123.5	117.8	117.8	117.8	111.5	111.5	111.5	104.7	104.7	104.7	97.6	97.6	97.6
			SHC	74.2	88.6	103.1	72.2	86.6	101.0	69.8	84.3	98.7	67.0	81.4	95.9	64.3	78.8	93.2
		72	TC	134.6	134.6	134.6	128.2	128.2	128.2	121.3	121.3	121.3	113.9	113.9	113.9	106.1	106.1	106.1
			SHC	55.9	70.3	84.8	53.7	68.1	82.6	51.4	65.8	80.2	48.8	63.2	77.7	46.1	60.6	75.0
		76	TC	—	144.0	144.0	—	137.1	137.1	—	129.7	129.7	—	121.8	121.8	—	113.5	113.5
			SHC	—	55.3	69.7	—	53.1	67.6	—	50.9	65.4	—	48.6	63.0	—	46.0	60.5
4000 Cfm	EAT (wb)	58	TC	115.3	115.3	131.8	110.7	110.7	127.2	105.8	105.8	122.3	100.4	100.4	116.9	94.6	94.6	111.1
			SHC	98.8	115.3	131.8	94.2	110.7	127.2	89.3	105.8	122.3	83.9	100.4	116.9	78.1	94.6	111.1
		62	TC	116.5	116.5	129.1	112.0	112.0	124.0	106.5	106.5	120.9	100.9	100.9	116.1	94.7	94.7	111.2
			SHC	96.1	112.6	129.1	91.0	107.5	124.0	87.9	104.4	120.9	83.1	99.6	116.1	78.2	94.7	111.2
		67	TC	125.9	125.9	125.9	119.8	119.8	119.8	113.3	113.3	113.3	106.4	106.4	106.4	99.1	99.1	101.1
			SHC	78.2	94.7	111.2	76.0	92.5	109.0	73.5	90.0	106.5	70.9	87.4	103.9	68.1	84.6	101.1
		72	TC	137.0	137.0	137.0	130.3	130.3	130.3	123.2	123.2	123.2	115.6	115.6	115.6	107.5	107.5	107.5
			SHC	57.7	74.2	90.7	55.4	71.9	88.4	53.0	69.5	86.0	50.6	67.1	83.6	47.7	64.2	80.7
		76	TC	—	146.5	146.5	—	139.3	139.3	—	131.6	131.6	—	123.5	123.5	—	115.0	115.0
			SHC	—	57.4	73.9	—	55.3	71.8	—	53.0	69.5	—	50.6	67.1	—	48.0	64.5
4500 Cfm	EAT (wb)	58	TC	118.9	118.9	137.5	114.1	114.1	132.7	108.9	108.9	127.5	103.3	103.3	121.8	97.2	97.2	115.8
			SHC	100.3	118.9	137.5	95.5	114.1	132.7	90.3	108.9	127.5	84.7	103.3	121.8	78.6	97.2	115.8
		62	TC	119.9	119.9	135.3	115.0	115.0	130.8	109.2	109.2	126.7	103.3	103.3	121.9	97.2	97.2	115.8
			SHC	98.2	116.8	135.3	93.7	112.3	130.8	89.6	108.2	126.7	84.8	103.3	121.9	78.7	97.2	115.8
		67	TC	127.7	127.7	127.7	121.4	121.4	121.4	114.8	114.8	114.8	107.7	107.7	111.5	100.1	100.1	108.5
			SHC	82.1	100.7	119.3	79.8	98.3	116.9	77.2	95.8	114.4	74.4	92.9	111.5	71.4	89.9	108.5
		72	TC	138.9	138.9	138.9	132.1	132.1	132.1	124.7	124.7	124.7	116.9	116.9	116.9	108.6	108.6	108.6
			SHC	59.3	77.9	96.5	57.2	75.7	94.3	54.8	73.3	91.9	52.1	70.6	89.2	49.3	67.9	86.5
		78	TC	—	148.4	148.4	—	141.1	141.1	—	133.2	133.2	—	124.9	124.9	—	116.1	116.1
			SHC	—	59.4	78.0	—	57.2	75.8	—	54.9	73.5	—	52.5	71.0	—	49.9	68.4
5000 Cfm	EAT (wb)	58	TC	122.0	122.0	142.6	117.0	117.0	137.6	111.6	111.6	132.2	105.7	105.7	126.3	99.3	99.3	119.9
			SHC	101.4	122.0	142.6	96.4	117.0	137.6	90.9	111.6	132.2	85.0	105.7	126.3	78.7	99.3	119.9
		62	TC	122.7	122.7	141.4	117.1	117.1	137.7	111.6	111.6	132.2	105.7	105.7	126.3	99.4	99.4	120.0
			SHC	100.2	120.8	141.4	96.4	117.1	137.7	91.0	111.6	132.2	85.1	105.7	126.3	78.8	99.4	120.0
		67	TC	129.2	129.2	129.2	122.8	122.8	124.6	115.9	115.9	121.9	108.7	108.7	119.0	101.1	101.1	115.7
			SHC	85.7	106.4	127.0	83.3	104.0	124.6	80.7	101.3	121.9	77.8	98.4	119.0	74.4	95.1	115.7
		72	TC	140.5	140.5	140.5	133.4	133.4	133.4	125.9	125.9	125.9	118.0	118.0	118.0	109.6	109.6	109.6
			SHC	61.0	81.6	102.3	58.7	79.3	99.9	56.3	76.9	97.5	53.7	74.3	94.9	50.9	71.5	92.1
		76	TC	—	150.1	150.1	—	142.6	142.6	—	134.5	134.5	—	126.0	126.0	—	117.1	117.1
			SHC	—	61.4	82.0	—	59.2	79.8	—	56.8	77.4	—	54.3	74.9	—	51.7	72.3

LEGEND

—	DB/WB combo not possible
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 (1000 Btuh) gross
TC	Total capacity (1000 Btuh) gross

NOTE: For more information, see General Fan Performance Notes on page 64.

Performance data (cont)

RAH110 — 10 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN SUBCOOLING MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	121.34	110.46	99.60	139.20	125.18	111.17	157.20	140.10	110.50
	SHC	58.86	72.03	85.20	67.31	80.25	93.18	74.00	86.80	72.00
	kW	6.61	6.54	6.45	6.65	6.58	6.50	6.67	6.62	6.53
75	TC	115.30	105.01	94.73	128.03	114.90	101.77	140.90	124.90	105.00
	SHC	45.81	62.19	78.57	55.02	71.16	87.29	62.30	78.30	62.20
	kW	6.76	6.88	6.78	6.80	6.73	6.83	6.82	6.77	6.87
70	TC	109.26	99.57	89.89	116.87	104.62	92.38	124.60	109.70	99.60
	SHC	32.76	52.35	71.93	42.70	62.07	81.40	50.60	69.80	52.30
	kW	7.55	7.49	7.39	7.58	7.51	7.45	7.60	7.56	7.49
60	TC	103.21	94.13	85.04	105.71	94.34	82.98	108.20	94.60	94.10
	SHC	19.71	42.51	65.30	30.45	52.98	75.51	39.00	61.30	42.50
	kW	8.47	8.42	8.32	8.51	8.44	8.37	8.53	8.49	8.41
50	TC	97.17	88.68	80.20	94.54	84.06	73.58	91.90	79.40	88.70
	SHC	6.67	32.66	58.66	18.16	43.89	69.62	27.30	52.80	32.60
	kW	9.42	9.37	9.27	9.46	9.39	9.32	9.48	9.44	9.36
40	TC	91.12	83.24	75.36	83.38	73.78	64.19	75.60	64.20	83.20
	SHC	-6.40	22.82	52.03	5.87	34.80	63.73	15.60	44.30	22.80
	kW	10.35	10.30	10.20	10.39	10.32	10.25	10.41	10.37	10.29

RAH110 — 10 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN HOT GAS REHEAT MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	49.20	54.60	57.40	51.90	56.50	59.40	54.70	59.00	62.10
	SHC	12.50	20.00	28.80	7.90	13.30	20.30	4.20	8.50	13.70
	kW	5.87	5.88	5.90	5.88	5.90	5.92	5.91	5.93	5.94
75	TC	53.60	57.10	60.10	56.40	60.60	63.80	59.00	63.50	66.40
	SHC	17.30	25.10	33.60	12.70	18.20	25.20	8.80	13.60	18.70
	kW	5.56	5.57	5.58	5.57	5.58	5.60	5.60	5.62	5.63
70	TC	57.70	61.50	64.30	60.70	64.90	67.90	63.30	67.60	70.50
	SHC	22.10	29.80	38.30	17.50	23.00	30.20	13.90	18.70	23.80
	kW	5.28	5.29	5.30	5.29	5.30	5.32	5.32	5.34	5.35
60	TC	54.50	57.20	62.10	57.10	61.80	64.90	57.60	61.50	66.70
	SHC	15.40	23.40	32.90	9.40	15.70	22.50	2.10	10.20	16.60
	kW	6.26	6.35	6.39	6.33	6.46	6.47	6.40	6.50	6.51
50	TC	62.80	65.90	70.60	65.20	69.00	73.10	66.20	70.00	75.10
	SHC	23.30	31.00	40.40	15.00	23.60	30.30	7.80	16.70	24.60
	kW	5.68	5.76	5.80	5.74	5.84	5.85	5.80	5.92	5.94
40	TC	70.00	72.80	77.50	73.10	76.00	79.40	73.20	77.10	82.00
	SHC	31.40	38.70	48.20	23.00	31.70	38.30	15.50	23.00	32.60
	kW	5.10	5.18	5.22	5.13	5.27	5.28	5.23	5.32	5.34

LEGEND

Edb	— Entering Wet-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.

Performance data (cont)

RAH120 — 10 TON — 2-STAGE COOLING CAPACITIES

RAH120				AMBIENT TEMPERATURE (F)														
				85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
3000 Cfm	EAT (wb)	58	TC	104.3	104.3	118.5	99.5	99.5	113.0	93.4	93.4	106.1	86.7	86.7	98.6	79.7	79.7	90.6
			SHC	90.2	104.3	118.5	86.0	99.5	113.0	80.6	93.4	106.1	74.9	86.7	98.6	68.8	79.7	90.6
		62	TC	109.7	109.7	112.4	103.6	103.6	109.5	95.9	95.9	105.9	87.6	87.6	101.2	79.8	79.8	94.4
			SHC	80.8	96.6	112.4	78.0	93.8	109.5	74.5	90.2	105.9	70.3	85.7	101.2	65.2	79.8	94.4
		67	TC	121.5	121.5	121.5	115.4	115.4	115.4	107.8	107.8	107.8	98.7	98.7	98.7	89.1	89.1	89.1
			SHC	65.2	81.0	96.9	62.7	78.6	94.5	59.7	75.6	91.5	56.2	72.0	87.9	52.5	68.3	84.2
		72	TC	133.0	133.0	133.0	127.1	127.1	127.1	120.5	120.5	120.5	112.0	112.0	112.0	102.1	102.1	102.1
			SHC	48.7	64.5	80.4	46.5	62.4	78.3	44.1	60.0	75.9	41.2	57.1	73.0	37.8	53.7	69.6
		76	TC	—	140.9	140.9	—	135.1	135.1	—	128.4	128.4	—	121.3	121.3	—	112.5	112.5
			SHC	—	50.6	67.1	—	48.7	65.2	—	46.6	63.1	—	44.3	60.7	—	41.4	57.7
3500 Cfm	EAT (wb)	58	TC	109.9	109.9	124.9	104.9	104.9	119.3	98.7	98.7	112.2	91.6	91.6	104.2	84.2	84.2	95.8
			SHC	94.9	109.9	124.9	90.6	104.9	119.3	85.2	98.7	112.2	79.0	91.6	104.2	72.6	84.2	95.8
		62	TC	112.8	112.8	123.1	106.7	106.7	120.0	99.5	99.5	115.3	91.7	91.7	108.5	84.3	84.3	99.8
			SHC	86.8	104.9	123.1	83.9	102.0	120.0	80.0	97.6	115.3	74.9	91.7	108.5	68.8	84.3	99.8
		67	TC	124.2	124.2	124.2	118.0	118.0	118.0	110.3	110.3	110.3	101.0	101.0	101.0	91.0	91.0	92.5
			SHC	68.4	86.7	104.9	66.1	84.3	102.6	63.2	81.5	99.8	59.6	78.0	96.3	55.9	74.2	92.5
		72	TC	135.2	135.2	135.2	129.1	129.1	129.1	122.4	122.4	122.4	114.2	114.2	114.2	104.2	104.2	104.2
			SHC	49.2	67.3	85.4	47.1	65.3	83.4	44.8	63.0	81.2	42.0	60.4	78.7	38.7	57.1	75.5
		76	TC	—	142.4	142.4	—	136.5	136.5	—	129.6	129.6	—	122.4	122.4	—	114.0	114.0
			SHC	—	51.7	70.9	—	49.7	68.7	—	47.5	66.3	—	45.2	63.8	—	42.6	61.2
4000 Cfm	EAT (wb)	58	TC	114.3	114.3	130.0	109.2	109.2	124.2	102.9	102.9	117.0	95.4	95.4	108.7	87.7	87.7	99.9
			SHC	98.6	114.3	130.0	94.2	109.2	124.2	88.7	102.9	117.0	82.2	95.4	108.7	75.5	87.7	99.9
		62	TC	115.3	115.3	132.4	109.6	109.6	128.3	102.9	102.9	121.9	95.5	95.5	113.2	87.8	87.8	104.1
			SHC	91.9	112.2	132.4	88.7	108.5	128.3	84.0	102.9	121.9	77.9	95.5	113.2	71.5	87.8	104.1
		67	TC	125.8	125.8	125.8	119.5	119.5	119.5	111.9	111.9	111.9	102.4	102.4	104.2	92.2	92.2	100.4
			SHC	71.3	91.8	112.3	69.0	89.6	110.2	66.2	86.9	107.6	62.8	83.5	104.2	59.1	79.7	100.4
		72	TC	136.3	136.3	136.3	130.2	130.2	130.2	123.4	123.4	123.4	115.4	115.4	115.4	105.3	105.3	105.3
			SHC	49.5	69.7	89.8	47.4	67.7	87.9	45.1	65.5	85.9	42.5	63.1	83.7	39.3	60.1	80.9
		76	TC	—	143.1	143.1	—	137.1	137.1	—	130.1	130.1	—	122.6	122.6	—	114.5	114.5
			SHC	—	52.2	73.2	—	50.2	71.1	—	48.0	68.7	—	45.7	66.4	—	43.3	64.1
4500 Cfm	EAT (wb)	58	TC	117.5	117.5	133.8	112.4	112.4	127.9	106.0	106.0	120.7	98.4	98.4	112.1	90.3	90.3	103.0
			SHC	101.3	117.5	133.8	96.8	112.4	127.9	91.2	106.0	120.7	84.6	98.4	112.1	77.7	90.3	103.0
		62	TC	117.6	117.6	139.4	112.5	112.5	133.3	106.1	106.1	125.8	98.5	98.5	116.8	90.4	90.4	107.4
			SHC	95.9	117.6	139.4	91.6	112.5	133.3	86.4	106.1	125.8	80.1	98.5	116.8	73.5	90.4	107.4
		67	TC	126.6	126.6	126.6	120.2	120.2	120.2	112.8	112.8	114.8	103.2	103.2	111.6	93.0	93.0	107.6
			SHC	73.7	96.4	119.2	71.5	94.3	117.2	68.9	91.8	114.8	65.6	88.6	111.6	61.8	84.7	107.6
		72	TC	136.7	136.7	136.7	130.5	130.5	130.5	123.6	123.6	123.6	115.7	115.7	115.7	105.7	105.7	105.7
			SHC	49.4	71.6	93.7	47.4	69.7	91.9	45.1	67.5	89.9	42.7	65.4	88.2	39.5	62.6	85.8
		78	TC	—	143.1	143.1	—	137.0	137.0	—	129.9	129.9	—	122.4	122.4	—	114.3	114.3
			SHC	—	52.4	75.1	—	50.5	73.1	—	48.2	70.8	—	46.0	68.5	—	43.7	66.5
5000 Cfm	EAT (wb)	58	TC	119.9	119.9	136.7	114.7	114.7	130.7	108.4	108.4	123.6	100.6	100.6	114.8	92.3	92.3	105.4
			SHC	103.2	119.9	136.7	98.6	114.7	130.7	93.2	108.4	123.6	86.4	100.6	114.8	79.2	92.3	105.4
		62	TC	120.0	120.0	142.4	114.7	114.7	136.2	108.5	108.5	128.8	100.7	100.7	119.7	92.4	92.4	109.9
			SHC	97.6	120.0	142.4	93.3	114.7	136.2	88.1	108.5	128.8	81.7	100.7	119.7	74.9	92.4	109.9
		67	TC	126.8	126.8	126.8	120.4	120.4	123.6	113.2	113.2	121.3	103.8	103.8	118.4	93.6	93.6	114.0
			SHC	75.7	100.6	125.4	73.6	98.6	123.6	71.2	96.2	121.3	68.0	93.2	118.4	64.2	89.1	114.0
		72	TC	136.5	136.5	136.5	130.2	130.2	130.2	123.2	123.2	123.2	115.5	115.5	115.5	105.6	105.6	105.6
			SHC	49.1	73.1	97.0	47.1	71.3	95.4	44.9	69.2	93.5	42.5	67.3	92.0	39.5	64.9	90.2
		76	TC	—	142.7	142.7	—	136.5	136.5	—	129.4	129.4	—	121.6	121.6	—	113.6	113.6
			SHC	—	52.2	76.7	—	50.4	74.7	—	48.2	72.4	—	45.9	70.1	—	43.7	68.3

LEGEND

—	DB/WB combo not possible
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 (1000 Btuh) gross
TC	Total capacity (1000 Btuh) gross

NOTE: For more information, see General Fan Performance Notes on page 64.

RAH120 — 10 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN SUBCOOLING MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	135.80	123.10	111.60	144.00	130.90	119.20	148.70	135.70	122.90
	SHC	56.70	72.80	88.90	66.10	86.90	107.40	74.40	100.10	121.00
	kW	6.42	6.26	6.13	6.54	6.37	6.22	6.61	6.43	6.26
75	TC	127.30	115.40	104.50	134.90	120.10	111.70	139.30	126.90	116.80
	SHC	48.60	65.40	82.10	57.50	76.60	100.20	65.40	91.80	115.00
	kW	7.20	7.04	6.90	7.31	7.11	7.00	7.38	7.21	7.07
70	TC	118.10	106.50	96.90	125.20	113.60	103.60	129.50	117.80	108.40
	SHC	39.90	57.00	74.90	48.30	70.50	92.40	56.20	83.10	106.80
	kW	8.06	7.89	7.76	8.17	8.00	7.86	8.24	8.07	7.93
60	TC	107.30	97.80	87.80	114.50	103.80	94.50	117.60	107.30	99.00
	SHC	29.60	48.70	66.20	38.10	61.30	83.80	44.90	73.10	97.50
	kW	8.99	8.85	8.72	9.11	8.95	8.82	9.16	9.01	8.88
50	TC	95.70	86.30	78.20	102.10	91.30	83.40	105.70	95.80	88.20
	SHC	18.60	37.80	57.10	26.40	49.40	73.20	33.60	62.30	87.00
	kW	10.03	9.89	9.79	10.14	9.97	9.86	10.20	10.05	9.94
40	TC	83.70	75.20	67.70	87.50	80.10	72.50	92.10	83.10	75.20
	SHC	7.30	27.40	47.20	12.50	38.80	62.90	20.60	50.30	74.20
	kW	11.17	11.06	10.98	11.23	11.13	11.03	11.30	11.17	11.07

Performance data (cont)

RAH120 — 10 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN HOT GAS REHEAT MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	45.83	49.08	50.90	47.62	50.84	52.72	49.16	52.45	54.33
	SHC	4.82	14.45	24.36	−1.60	6.39	14.99	−7.27	−0.59	6.73
	kW	7.33	7.46	7.55	7.40	7.53	7.62	7.46	7.60	7.68
75	TC	48.52	51.89	53.81	50.31	53.74	55.73	51.92	55.47	57.43
	SHC	7.37	17.08	27.08	0.95	9.11	17.81	−4.65	2.25	9.63
	kW	6.93	7.07	7.15	7.00	7.14	7.23	7.06	7.21	7.29
70	TC	51.15	54.66	56.69	52.96	56.60	58.66	54.65	58.34	60.43
	SHC	9.87	19.70	29.80	3.47	11.82	20.57	−2.05	4.98	12.45
	kW	6.56	6.69	6.78	6.62	6.76	6.85	6.68	6.83	6.91
60	TC	52.89	56.41	59.04	55.63	59.10	62.68	58.00	62.31	64.50
	SHC	11.58	21.44	32.07	6.06	14.26	24.41	1.21	8.78	16.36
	kW	6.60	6.80	6.72	6.53	6.71	6.51	6.46	6.48	6.58
50	TC	55.13	59.53	62.75	58.04	62.61	64.69	59.64	64.34	66.41
	SHC	13.77	24.43	35.63	8.41	17.62	26.38	2.80	10.77	18.23
	kW	6.57	6.53	6.44	6.43	6.41	6.54	6.52	6.50	6.64
40	TC	57.08	60.11	64.35	58.75	63.63	65.58	60.16	65.23	69.04
	SHC	15.67	25.05	33.55	9.13	18.64	27.28	3.34	11.67	20.76
	kW	6.51	6.77	6.62	6.64	6.54	6.70	6.75	6.65	6.50

LEGEND

Edb	— Entering Wet-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.

RAH150 — 12.5 TONS — 2-STAGE COOLING CAPACITIES

RAH150				AMBIENT TEMPERATURE (F)														
				85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
3750 Cfm	EAT (wb)	58	TC	131.9	131.9	149.8	127.0	127.0	144.1	121.5	121.5	137.9	115.4	115.4	131.0	108.7	108.7	123.4
			SHC	114.1	131.9	149.8	109.8	127.0	144.1	105.0	121.5	137.9	99.8	115.4	131.0	94.0	108.7	123.4
		62	TC	138.0	138.0	143.4	131.7	131.7	140.4	124.7	124.7	136.9	117.1	117.1	133.1	109.4	109.4	127.4
			SHC	103.4	123.4	143.4	100.4	120.4	140.4	97.1	117.0	136.9	93.4	113.2	133.1	88.8	108.1	127.4
		67	TC	151.5	151.5	151.5	144.5	144.5	144.5	136.9	136.9	136.9	128.5	128.5	128.5	119.4	119.4	119.4
			SHC	85.1	105.2	125.3	82.1	102.2	122.3	78.9	99.0	119.0	75.4	95.5	115.5	71.7	91.8	111.8
		72	TC	166.1	166.1	166.1	158.5	158.5	158.5	150.2	150.2	150.2	141.1	141.1	141.1	131.3	131.3	131.3
			SHC	66.2	86.5	106.7	63.3	83.6	103.8	60.2	80.4	100.6	56.8	76.9	97.1	53.1	73.3	93.4
		76	TC	—	178.6	178.6	—	170.5	170.5	—	161.6	161.6	—	151.8	151.8	—	141.3	141.3
			SHC	—	71.1	91.8	—	68.3	88.9	—	65.2	85.8	—	61.8	82.5	—	58.2	78.7
4375 Cfm	EAT (wb)	58	TC	139.2	139.2	158.0	133.8	133.8	151.9	127.9	127.9	145.2	121.3	121.3	137.7	114.1	114.1	129.5
			SHC	120.4	139.2	158.0	115.7	133.8	151.9	110.6	127.9	145.2	104.9	121.3	137.7	98.7	114.1	129.5
		62	TC	142.4	142.4	157.6	135.8	135.8	154.1	128.9	128.9	149.2	121.7	121.7	142.9	114.2	114.2	134.8
			SHC	111.5	134.5	157.6	108.2	131.2	154.1	104.2	126.7	149.2	99.4	121.1	142.9	93.6	114.2	134.8
		67	TC	155.8	155.8	155.8	148.5	148.5	148.5	140.4	140.4	140.4	131.6	131.6	131.6	122.1	122.1	123.0
			SHC	90.3	113.6	136.8	87.3	110.5	133.8	84.0	107.2	130.5	80.4	103.6	126.8	76.6	99.8	123.0
		72	TC	170.6	170.6	170.6	162.7	162.7	162.7	154.0	154.0	154.0	144.4	144.4	144.4	134.1	134.1	134.1
			SHC	68.5	91.9	115.3	65.5	88.9	112.3	62.3	85.6	109.0	58.8	82.1	105.4	55.1	78.4	101.7
		76	TC	—	183.3	183.3	—	174.8	174.8	—	165.4	165.4	—	155.2	155.2	—	144.3	144.3
			SHC	—	74.3	98.3	—	71.3	95.2	—	68.0	91.9	—	64.6	88.3	—	60.9	84.5
5000 Cfm	EAT (wb)	58	TC	145.3	145.3	164.9	139.5	139.5	158.4	133.2	133.2	151.2	126.2	126.2	143.2	118.5	118.5	134.5
			SHC	125.6	145.3	164.9	120.7	139.5	158.4	115.2	133.2	151.2	109.1	126.2	143.2	102.5	118.5	134.5
		62	TC	146.5	146.5	169.3	140.2	140.2	163.9	133.3	133.3	157.4	126.3	126.3	149.1	118.6	118.6	140.0
			SHC	118.3	143.8	169.3	114.1	139.0	163.9	109.3	133.3	157.4	103.5	126.3	149.1	97.2	118.6	140.0
		67	TC	159.1	159.1	159.1	151.5	151.5	151.5	143.1	143.1	143.1	134.0	134.0	137.7	124.2	124.2	133.7
			SHC	95.2	121.6	148.0	92.2	118.5	144.9	88.8	115.1	141.5	85.1	111.4	137.7	81.3	107.5	133.7
		72	TC	174.1	174.1	174.1	165.9	165.9	165.9	156.8	156.8	156.8	146.9	146.9	146.9	136.2	136.2	136.2
			SHC	70.5	97.0	123.5	67.5	94.0	120.5	64.2	90.7	117.1	60.6	87.1	113.5	56.9	83.3	109.6
		76	TC	—	187.0	187.0	—	178.1	178.1	—	168.3	168.3	—	157.7	157.7	—	146.4	146.4
			SHC	—	77.0	104.0	—	74.0	100.9	—	70.7	97.5	—	67.2	93.9	—	63.4	90.0
5625 Cfm	EAT (wb)	58	TC	150.4	150.4	170.8	144.4	144.4	163.9	137.7	137.7	156.3	130.3	130.3	147.9	122.2	122.2	138.7
			SHC	130.1	150.4	170.8	124.9	144.4	163.9	119.0	137.7	156.3	112.7	130.3	147.9	105.7	122.2	138.7
		62	TC	150.7	150.7	177.9	144.5	144.5	170.6	137.8	137.8	162.7	130.4	130.4	153.9	122.3	122.3	144.4
			SHC	123.5	150.7	177.9	118.4	144.5	170.6	112.9	137.8	162.7	106.8	130.4	153.9	100.2	122.3	144.4
		67	TC	161.7	161.7	161.7	153.9	153.9	155.6	145.3	145.3	152.1	135.9	135.9	148.2	125.9	125.9	143.9
			SHC	100.0	129.4	158.8	96.8	126.2	155.6	93.4	122.7	152.1	89.7	118.9	148.2	85.6	114.8	143.9
		72	TC	176.9	176.9	176.9	168.3	168.3	168.3	159.0	159.0	159.0	148.8	148.8	148.8	137.9	137.9	137.9
			SHC	72.3	101.9	131.5	69.3	98.8	128.4	66.0	95.5	125.0	62.4	91.8	121.3	58.6	88.0	117.4
		78	TC	—	189.8	189.8	—	180.6	180.6	—	170.6	170.6	—	159.7	159.7	—	148.1	148.1
			SHC	—	79.6	109.7	—	76.5	106.5	—	73.2	103.0	—	69.6	99.2	—	65.7	95.1
6250 Cfm	EAT (wb)	58	TC	154.8	154.8	175.8	148.5	148.5	168.6	141.5	141.5	160.6	133.7	133.7	151.8	125.3	125.3	142.3
			SHC	133.9	154.8	175.8	128.4	148.5	168.6	122.3	141.5	160.6	115.6	133.7	151.8	108.4	125.3	142.3
		62	TC	155.0	155.0	183.0	148.6	148.6	175.5	141.6	141.6	167.2	133.9	133.9	158.0	125.4	125.4	148.1
			SHC	127.0	155.0	183.0	121.8	148.6	175.5	116.0	141.6	167.2	109.7	133.9	158.0	102.8	125.4	148.1
		67	TC	163.8	163.8	169.3	155.8	155.8	166.0	147.0	147.0	162.3	137.5	137.5	158.1	127.4	127.4	153.3
			SHC	104.5	136.9	169.3	101.3	133.6	166.0	97.8	130.0	162.3	93.9	126.0	158.1	89.7	121.5	153.3
		72	TC	179.1	179.1	179.1	170.3	170.3	170.3	160.8	160.8	160.8	150.3	150.3	150.3	139.2	139.2	139.2
			SHC	74.1	106.7	139.3	71.0	103.6	136.1	67.7	100.2	132.7	64.1	96.5	128.9	60.2	92.6	124.9
		76	TC	—	192.1	192.1	—	182.7	182.7	—	172.3	172.3	—	161.2	161.2	—	149.4	149.4
			SHC	—	82.1	115.1	—	79.0	111.8	—	75.6	108.2	—	71.9	104.3	—	67.9	100.0

LEGEND

—	— DB/WB combo not possible
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 (1000 Btuh) gross
TC	— Total capacity (1000 Btuh) gross

NOTE: For more information, see General Fan Performance Notes on page 64.

Performance data (cont)

RAH150 — 12.5 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN SUBCOOLING MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	162.0	147.4	132.8	185.6	167.2	148.8	209.5	187.2	164.9
	SHC	85.0	101.4	117.4	96.9	113.0	129.0	106.5	122.4	138.4
	KW	7.7	7.6	7.3	7.9	7.7	7.4	8.1	7.8	7.5
75	TC	154.8	140.9	127.0	171.7	154.4	137.1	188.8	168.0	147.2
	SHC	70.2	90.4	110.6	83.1	103.2	123.2	93.4	113.4	133.3
	KW	8.8	8.7	8.3	8.9	8.7	8.4	9.1	8.8	8.5
70	TC	147.5	134.4	121.2	157.8	141.6	125.4	168.1	148.8	129.6
	SHC	55.5	79.7	103.9	69.3	93.4	117.5	80.4	104.3	128.3
	KW	9.8	9.7	9.3	9.9	9.7	9.5	10.1	9.8	9.6
60	TC	140.3	127.8	115.4	143.8	128.7	113.7	147.4	129.7	111.9
	SHC	40.9	69.0	97.2	55.5	83.6	111.7	67.3	95.3	111.9
	KW	10.8	10.7	10.3	10.9	10.7	10.5	11.1	10.8	10.6
50	TC	133.0	121.3	109.5	129.9	115.9	101.9	126.7	110.5	94.2
	SHC	26.2	58.3	90.4	41.8	73.8	101.9	54.2	86.2	94.2
	KW	11.8	11.7	11.4	11.9	11.7	11.6	12.1	11.8	11.7
40	TC	125.8	114.7	103.7	115.9	103.1	90.2	106.0	91.3	76.6
	SHC	11.5	47.6	83.7	28.0	64.0	90.2	41.2	77.2	76.6
	KW	12.8	12.7	12.4	12.9	12.7	12.6	13.1	12.8	12.7

RAH150 — 12.5 TON — UNIT WITH HOT GAS RE-HEAT SYSTEM IN HOT GAS REHEAT MODE — COOLING CAPACITIES

TEMP (F) AIR ENTERING CONDENSER (Edb)		AIR ENTERING EVAPORATOR - CFM								
		75F Dry Bulb			75F Dry Bulb			75F Dry Bulb		
		62.5F Wet Bulb			64F Wet Bulb			65.3F Wet Bulb		
		(50% Relative Humidity)			(56% Relative Humidity)			(60% Relative Humidity)		
		Air Entering Evaporator - Ewb (cfm)								
		900	1200	1500	900	1200	1500	900	1200	1500
80	TC	57.70	60.00	66.40	60.20	66.80	69.50	64.30	69.10	72.30
	SHC	21.30	27.00	44.00	12.80	22.40	32.50	8.60	16.20	25.50
	kW	8.08	8.15	8.23	8.28	8.34	8.37	8.36	8.43	8.52
75	TC	59.00	61.20	67.90	61.40	68.10	71.00	65.80	70.70	73.70
	SHC	22.40	28.10	44.80	13.50	23.50	33.70	9.30	17.10	26.30
	kW	8.06	8.13	8.21	8.25	8.31	8.34	8.33	8.40	8.49
70	TC	60.40	62.90	69.20	63.10	69.40	72.50	67.00	72.00	75.00
	SHC	23.20	28.90	46.00	14.50	24.30	34.40	10.30	17.90	27.40
	kW	8.04	8.11	8.18	8.23	8.29	8.32	8.31	8.38	8.47
60	TC	63.40	65.70	72.00	65.90	72.30	75.20	70.00	74.80	77.80
	SHC	24.80	30.50	47.80	16.10	25.90	36.00	11.90	19.60	29.00
	kW	8.00	8.07	8.15	8.20	8.25	8.29	8.28	8.35	8.44
50	TC	66.20	68.60	74.30	68.80	74.60	78.20	72.80	77.80	80.70
	SHC	26.60	32.30	49.40	17.70	27.70	37.80	13.50	21.20	30.60
	kW	7.94	8.01	8.08	8.13	8.20	8.23	8.22	8.29	8.38
40	TC	69.10	71.60	77.80	71.80	78.00	81.00	75.70	80.60	83.70
	SHC	28.20	33.90	50.10	19.40	29.30	39.80	15.20	22.90	32.20
	kW	7.90	7.97	8.04	8.09	8.15	8.17	8.16	8.23	8.32

LEGEND

Edb	— Entering Wet-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}).

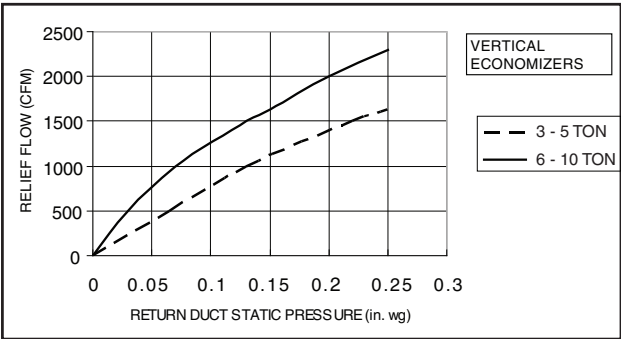
$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

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

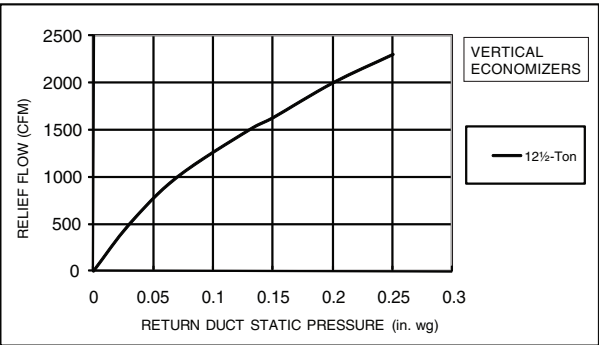
Performance data (cont)

ECONOMIZER, BAROMETRIC RELIEF AND POWER EXHAUST PERFORMANCE — VERTICAL APPLICATIONS

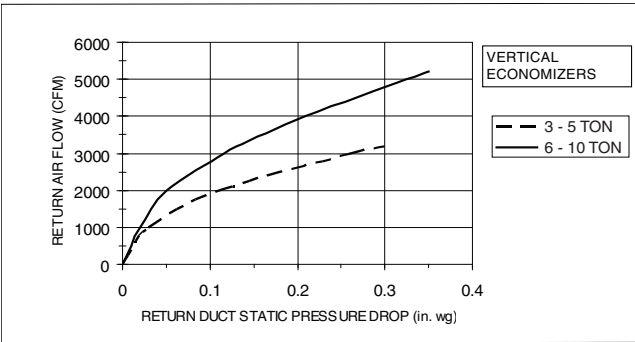
BAROMETRIC RELIEF FLOW - VERTICAL 3-10 TON



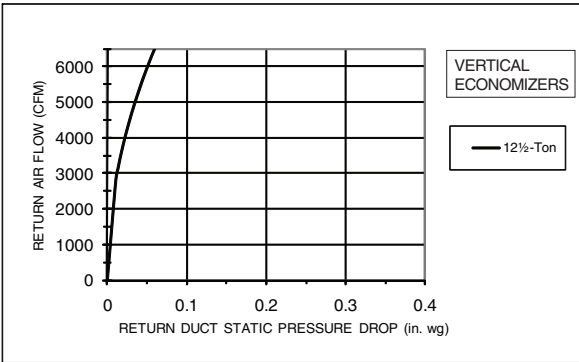
BAROMETRIC RELIEF FLOW - VERTICAL 12.5 TON



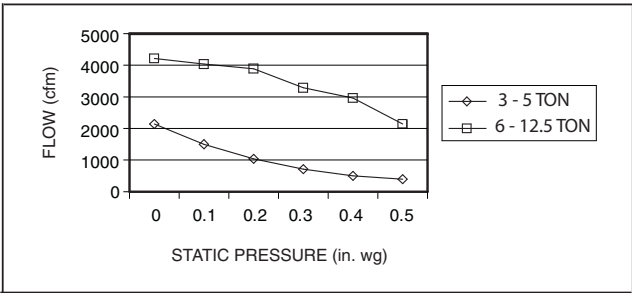
RETURN AIR PRESSURE DROP - VERTICAL 3-10 TON



RETURN AIR PRESSURE DROP - VERTICAL 12.5 TON

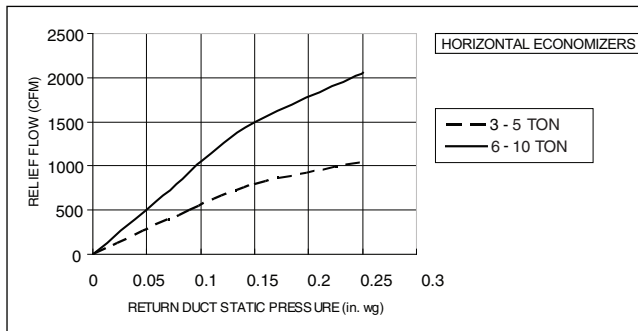


VERTICAL POWER EXHAUST PERFORMANCE

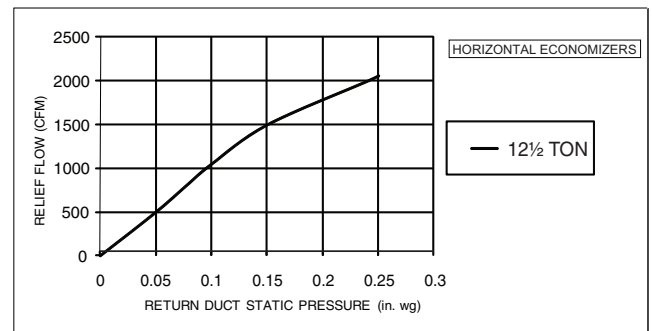


ECONOMIZER, BAROMETRIC RELIEF AND POWER EXHAUST PERFORMANCE — HORIZONTAL APPLICATIONS

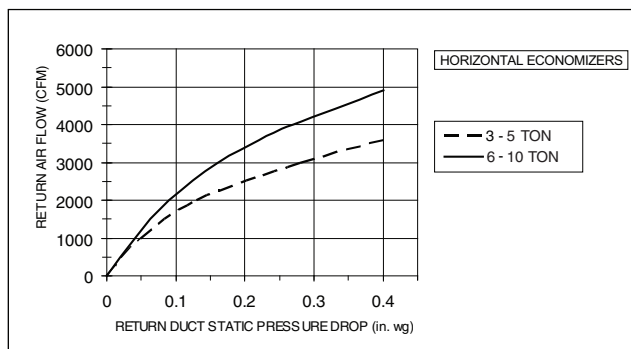
BAROMETRIC RELIEF FLOW - HORIZONTAL 3-10 TON



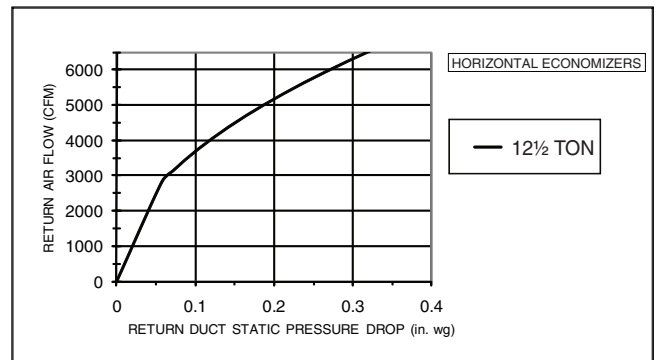
BAROMETRIC RELIEF FLOW - HORIZONTAL 12.5 TON



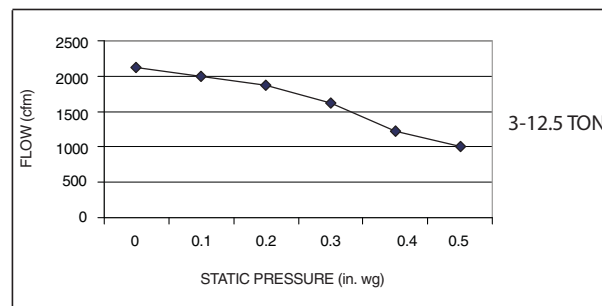
RETURN AIR PRESSURE DROP - HORIZONTAL 3-10 TON



RETURN AIR PRESSURE DROP - HORIZONTAL 12.5 TON

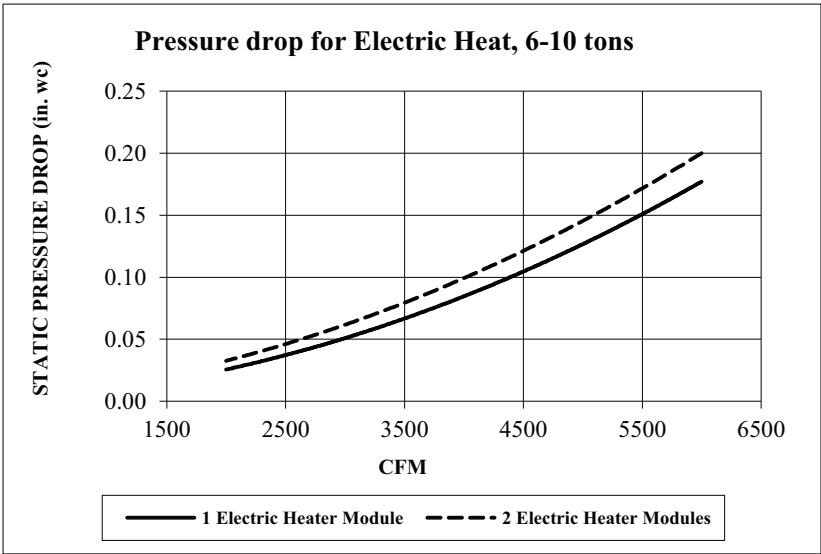


HORIZONTAL POWER EXHAUST PERFORMANCE



Performance data (cont)

RAH UNITS — ACCESSORY PRESSURE DROP
ELECTRIC HEATER PRESSURE DROP



ELECTRIC HEATER STATIC PRESSURE ADDERS

3-5 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 Module	0.13	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.18	0.18

6-10 TONS										
CFM	2250	2500	2750	3000	3250	3500	3750	4000		
1 Electric Heater Module	0.031	0.037	0.044	0.051	0.059	0.067	0.076	0.085		
2 Electric Heater Module	0.110	0.122	0.133	0.146	0.158	0.172	0.185	0.200		

6-10 TONS										
CFM	4250	4500	4750	5000	5250	5500	5750	6000		
1 Electric Heater Module	0.095	0.105	0.116	0.127	0.139	0.151	0.164	0.177		
2 Electric Heater Module	0.110	0.122	0.133	0.146	0.158	0.172	0.185	0.200		

12.5 TONS										
CFM	3750	4063	4375	4688	5000	5313	5625	5938	6000	
Vertical - 1 Electric Heater Module	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	
Vertical - 2 Electric Heater Module	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.08	
Horizontal - 1 Electric Heater Module	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.08	0.09	
Horizontal - 2 Electric Heater Module	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.08	

HOT GAS RE-HEAT SYSTEM

3-6 TONS										
CFM (in. wg)	1000	1250	1500	1750	2000	2250	2500	2750	3000	
3 Tons	0.04	0.052	0.070	—	—	—	—	—	—	
4 Tons	—	0.106	0.138	0.172	0.210	—	—	—	—	
5 Tons	—	—	0.138	0.172	0.210	0.252	0.30	—	—	
6 Tons	—	—	—	0.112	0.125	0.161	0.19	0.22	0.25	

7.5-12.5 TONS										
CFM (in. wg)	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250
7.5 Tons	—	—	—	—	—	—	—	—	—	—
8.5 Tons	0.20	0.22	—	—	—	—	—	—	—	—
10 Tons	0.20	0.22	0.24	0.26	0.28	—	—	—	—	—
12.5 Tons	0.06	0.07	0.07	0.08	0.08	0.09	0.10	0.10	0.11	0.12

Fan data

GENERAL FAN PERFORMANCE NOTES

1. Interpolation is permissible. Do not extrapolate.
2. External static pressure is the static pressure difference between the return duct and the supply duct plus the static pressure caused by any FIOPs or accessories.
3. Tabular data accounts for pressure loss due to clean filters, unit casing, and wet coils. Factory options and accessories may add static pressure losses. Selection software is available, through your salesperson, to help you select the best motor/drive combination for your application.
4. The Fan Performance tables offer motor/drive recommendations. In cases when two motor/drive combinations would work, the lower horsepower option is recommended.
5. For information on the electrical properties of motors, please see the Electrical Data section on page 80.
6. For more information on the performance limits of motors, see the Application Data section on page 111.
7. The EPACT (Energy Policy Act of 1992) regulates energy requirements for specific types of indoor fan motors. Motors regulated by EPACT include any general purpose, T-frame (three-digit, 143 and larger), single-speed, foot mounted, polyphase, squirrel cage induction motors of NEMA (National Electrical Manufacturers Association) design A and B, manufactured for use in the United States. Ranging from 1 to 200 Hp, these continuous-duty motors operate on 230 and 460 volt, 60 Hz power. If a motor does not fit into these specifications, the motor does not have to be replaced by an EPACT compliant energy-efficient motor. Variable-speed motors are exempt from EPACT compliance requirements.

RAH036 VERTICAL UNIT — DIRECT DRIVE FAN PERFORMANCE

SPEED (TORQUE) TAP	CFM	ESP	BHP
1	900	0.36	0.16
	975	0.27	0.16
	1050	0.18	0.15
	1125	0.10	0.15
	1200	0.04	0.16
	1275	—	—
	1350	—	—
	1425	—	—
	1500	—	—
2	900	0.51	0.21
	975	0.40	0.20
	1050	0.30	0.19
	1125	0.21	0.18
	1200	0.11	0.17
	1275	0.02	0.16
	1350	—	—
	1425	—	—
	1500	—	—
3	900	0.84	0.33
	975	0.72	0.32
	1050	0.60	0.31
	1125	0.49	0.29
	1200	0.38	0.28
	1275	0.28	0.26
	1350	0.17	0.25
	1425	0.07	0.24
	1500	—	—
4	900	1.06	0.41
	975	0.96	0.41
	1050	0.86	0.41
	1125	0.74	0.40
	1200	0.63	0.38
	1275	0.50	0.37
	1350	0.38	0.35
	1425	0.26	0.34
	1500	0.15	0.32
5	900	1.24	0.51
	975	1.19	0.52
	1050	1.14	0.54
	1125	1.08	0.57
	1200	1.03	0.59
	1275	0.98	0.61
	1350	0.93	0.64
	1425	0.88	0.67
	1500	0.82	0.69

LEGEND

BHP — Brake Horsepower
CFM — Cubic Feet Per Minute
ESP — External Static Pressure

RAH036 HORIZONTAL UNIT — DIRECT DRIVE FAN PERFORMANCE

SPEED (TORQUE) TAP	CFM	ESP	BHP
1	900	0.47	0.21
	975	0.38	0.20
	1050	0.29	0.19
	1125	0.21	0.18
	1200	0.13	0.18
	1275	0.06	0.20
	1350	—	—
	1425	—	—
	1500	—	—
2	900	0.65	0.27
	975	0.54	0.26
	1050	0.44	0.25
	1125	0.33	0.24
	1200	0.23	0.23
	1275	0.13	0.21
	1350	0.02	0.20
	1425	—	—
	1500	—	—
3	900	0.96	0.38
	975	0.84	0.37
	1050	0.73	0.36
	1125	0.61	0.34
	1200	0.50	0.33
	1275	0.38	0.31
	1350	0.26	0.30
	1425	0.15	0.28
	1500	0.04	0.26
4	900	1.17	0.46
	975	1.08	0.46
	1050	0.98	0.46
	1125	0.87	0.45
	1200	0.75	0.44
	1275	0.63	0.42
	1350	0.51	0.40
	1425	0.39	0.39
	1500	0.27	0.37
5	900	1.35	0.52
	975	1.30	0.54
	1050	1.26	0.57
	1125	1.21	0.59
	1200	1.16	0.62
	1275	1.12	0.64
	1350	1.07	0.67
	1425	1.02	0.70
	1500	0.97	0.73

LEGEND

BHP — Brake Horsepower
CFM — Cubic Feet Per Minute
ESP — External Static Pressure

Fan data (cont)

RAH048 VERTICAL UNIT — DIRECT DRIVE FAN PERFORMANCE

SPEED (TORQUE) TAP	CFM	ESP	BHP
1	1200	0.57	0.31
	1300	0.44	0.29
	1400	0.30	0.27
	1500	0.16	0.25
	1600	0.03	0.25
	1700	—	—
	1800	—	—
	1900	—	—
	2000	—	—
2	1200	0.68	0.35
	1300	0.54	0.33
	1400	0.40	0.31
	1500	0.24	0.28
	1600	0.10	0.26
	1700	—	—
	1800	—	—
	1900	—	—
	2000	—	—
3	1200	—	—
	1300	1.09	0.54
	1400	1.02	0.55
	1500	0.93	0.58
	1600	0.82	0.57
	1700	0.69	0.55
	1800	0.54	0.52
	1900	0.38	0.50
	2000	0.21	0.47
4	1200	1.16	0.56
	1300	1.12	0.59
	1400	1.07	0.61
	1500	1.00	0.65
	1600	0.92	0.65
	1700	0.80	0.66
	1800	0.67	0.65
	1900	0.51	0.62
	2000	0.34	0.59
5	1200	1.16	0.59
	1300	1.11	0.63
	1400	1.00	0.67
	1500	0.88	0.67
	1600	0.96	0.75
	1700	0.91	0.75
	1800	0.86	0.83
	1900	0.80	0.87
	2000	0.74	0.91

LEGEND

BHP — Brake Horsepower
CFM — Cubic Feet Per Minute
ESP — External Static Pressure

RAH048 HORIZONTAL UNIT — DIRECT DRIVE FAN PERFORMANCE

SPEED (TORQUE) TAP	CFM	ESP	BHP
1	1200	0.62	0.34
	1300	0.48	0.32
	1400	0.35	0.30
	1500	0.23	0.28
	1600	0.12	0.28
	1700	0.02	0.27
	1800	—	—
	1900	—	—
	2000	—	—
2	1200	0.74	0.39
	1300	0.60	0.37
	1400	0.46	0.35
	1500	0.32	0.32
	1600	0.19	0.30
	1700	0.07	0.27
	1800	—	—
	1900	—	—
	2000	—	—
3	1200	1.20	0.59
	1300	1.12	0.60
	1400	1.01	0.61
	1500	0.89	0.62
	1600	0.76	0.59
	1700	0.61	0.56
	1800	0.47	0.53
	1900	0.32	0.50
	2000	0.18	0.47
4	1200	1.24	0.60
	1300	1.18	0.63
	1400	1.11	0.65
	1500	1.03	0.69
	1600	0.93	0.69
	1700	0.82	0.69
	1800	0.70	0.69
	1900	0.56	0.66
	2000	0.41	0.63
5	1200	1.25	0.61
	1300	1.20	0.65
	1400	1.11	0.68
	1500	1.03	0.68
	1600	1.05	0.76
	1700	1.01	0.76
	1800	0.96	0.84
	1900	0.91	0.89
	2000	0.87	0.93

LEGEND

BHP — Brake Horsepower
CFM — Cubic Feet Per Minute
ESP — External Static Pressure

RAH060 VERTICAL UNIT — DIRECT DRIVE FAN PERFORMANCE

SPEED (TORQUE) TAP	CFM	ESP	BHP
1	1500	0.50	0.44
	1625	0.32	0.42
	1750	0.14	0.39
	1875	—	—
	2000	—	—
	2125	—	—
	2250	—	—
	2375	—	—
2	2500	—	—
	1500	0.72	0.56
	1625	0.53	0.53
	1750	0.34	0.50
	1875	0.18	0.48
	2000	—	—
	2125	—	—
	2250	—	—
3	2375	—	—
	2500	—	—
	1500	1.20	0.84
	1625	1.02	0.82
	1750	0.82	0.82
	1875	0.61	0.79
	2000	0.40	0.75
	2125	0.20	0.71
4	2250	0.04	0.67
	2375	—	—
	2500	—	—
	1500	1.31	0.92
	1625	1.17	0.92
	1750	0.99	0.95
	1875	0.80	0.94
	2000	0.59	0.90
5	2125	0.37	0.86
	2250	0.17	0.83
	2375	0.00	0.79
	2500	—	—
	1500	1.36	0.94
	1625	1.24	0.99
	1750	0.99	1.02
	1875	0.80	1.05
	2000	0.74	1.03
	2125	0.53	0.99
	2250	0.31	0.94
	2375	0.08	0.90
	2500	—	0.86

LEGEND

BHP — Brake Horsepower
CFM — Cubic Feet Per Minute
ESP — External Static Pressure

RAH060 HORIZONTAL UNIT — DIRECT DRIVE FAN PERFORMANCE

SPEED (TORQUE) TAP	CFM	ESP	BHP
1	1500	0.63	0.49
	1625	0.45	0.46
	1750	0.27	0.43
	1875	0.10	0.39
	2000	—	—
	2125	—	—
	2250	—	—
	2375	—	—
2	2500	—	—
	1500	0.88	0.61
	1625	0.69	0.58
	1750	0.49	0.55
	1875	0.30	0.51
	2000	0.12	0.48
	2125	—	—
	2250	—	—
3	2375	—	—
	2500	—	—
	1500	1.37	0.89
	1625	1.20	0.87
	1750	1.02	0.86
	1875	0.81	0.83
	2000	0.60	0.79
	2125	0.39	0.75
4	2250	0.21	0.71
	2375	0.07	0.67
	2500	—	—
	1500	1.48	0.95
	1625	1.35	0.95
	1750	1.20	0.99
	1875	1.03	0.99
	2000	0.83	0.96
5	2125	0.63	0.93
	2250	0.42	0.89
	2375	0.22	0.84
	2500	0.05	0.78
	1500	1.52	0.97
	1625	1.42	1.01
	1750	1.20	1.05
	1875	1.03	1.09
	2000	1.00	1.09
	2125	0.82	1.06
	2250	0.62	1.02
	2375	0.40	0.98
	2500	0.16	0.93

LEGEND

BHP — Brake Horsepower
CFM — Cubic Feet Per Minute
ESP — External Static Pressure

Fan data (cont)

RAH036, 3 PHASE WITHOUT HOT GAS RE-HEAT, 3 TON, HORIZONTAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	574	0.13	707	0.23	817	0.34	913	0.47	999	0.61
975	597	0.15	727	0.25	835	0.37	929	0.50	1015	0.64
1050	621	0.18	747	0.28	853	0.40	946	0.53	1030	0.68
1125	646	0.20	768	0.31	872	0.43	964	0.57	1047	0.72
1200	671	0.23	790	0.34	892	0.47	982	0.61	1064	0.76
1275	696	0.26	812	0.38	912	0.51	1001	0.65	1082	0.81
1350	723	0.30	835	0.42	933	0.55	1020	0.70	1100	0.86
1425	749	0.34	859	0.46	955	0.60	1040	0.75	1119	0.91
1500	776	0.38	883	0.51	977	0.65	1061	0.80	1138	0.97

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	1078	0.77	1151	0.93	1220	1.11	1284	1.30	1346	1.49
975	1093	0.80	1165	0.97	1233	1.15	1297	1.33	1358	1.53
1050	1108	0.84	1180	1.01	1247	1.19	1311	1.38	1371	1.58
1125	1123	0.88	1195	1.05	1261	1.23	1325	1.42	1385	1.62
1200	1140	0.92	1210	1.10	1276	1.28	1339	1.47	1399	1.68
1275	1157	0.97	1226	1.15	1292	1.33	1354	1.53	1414	1.73
1350	1174	1.02	1243	1.20	1308	1.39	1370	1.59	1429	1.80
1425	1192	1.08	1260	1.26	1325	1.45	1386	1.65	1444	1.86
1500	1210	1.14	1278	1.33	1342	1.52	1403	1.72	1461	1.93

RAH036, 3 PHASE WITHOUT HOT GAS RE-HEAT, 3 TON, VERTICAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	594	0.15	740	0.25	867	0.37	981	0.52	1084	0.68
975	618	0.17	758	0.28	881	0.40	991	0.55	1092	0.71
1050	642	0.19	777	0.30	896	0.43	1003	0.58	1102	0.75
1125	668	0.22	797	0.34	912	0.47	1017	0.62	1113	0.79
1200	695	0.25	818	0.37	930	0.51	1032	0.66	1126	0.83
1275	722	0.29	841	0.41	949	0.55	1048	0.71	1140	0.88
1350	750	0.33	864	0.46	968	0.60	1065	0.76	1155	0.93
1425	778	0.37	888	0.50	989	0.65	1083	0.81	1171	0.99
1500	807	0.42	913	0.56	1011	0.71	1103	0.87	1188	1.05

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	1180	0.86	1269	1.05	1354	1.25	1434	1.47	1511	1.70
975	1186	0.89	1275	1.08	1358	1.29	1437	1.51	1513	1.74
1050	1194	0.92	1281	1.12	1363	1.32	1441	1.54	1516	1.78
1125	1204	0.97	1289	1.16	1370	1.37	1447	1.59	1520	1.82
1200	1215	1.01	1298	1.21	1378	1.42	1454	1.64	1526	1.87
1275	1227	1.06	1309	1.26	1387	1.47	1462	1.69	1533	1.92
1350	1240	1.12	1321	1.32	1397	1.53	1471	1.75	1541	1.99
1425	1254	1.18	1333	1.38	1409	1.59	1481	1.82	—	—
1500	1270	1.24	1347	1.45	1421	1.66	1492	1.89	—	—

Boldface indicates field-supplied drive is required.

Medium static 770-1175 RPM, 1.7 BHP, max

High static 1035-1466 RPM, 2.4 BHP max

RAH036, 3 PHASE WITH HOT GAS RE-HEAT, 3 TON, HORIZONTAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	574	0.13	707	0.23	817	0.34	913	0.47	999	0.61
975	597	0.15	727	0.25	835	0.37	929	0.50	1015	0.64
1050	621	0.18	747	0.28	853	0.40	946	0.53	1030	0.68
1125	646	0.20	768	0.31	872	0.43	964	0.57	1047	0.72
1200	671	0.23	790	0.34	892	0.47	982	0.61	1064	0.76
1275	696	0.26	812	0.38	912	0.51	1001	0.65	1082	0.81
1350	723	0.30	835	0.42	933	0.55	1020	0.70	1100	0.86
1425	749	0.34	859	0.46	955	0.60	1040	0.75	1119	0.91
1500	776	0.38	883	0.51	977	0.65	1061	0.80	1138	0.97

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	1078	0.77	1151	0.93	1220	1.11	1284	1.30	1346	1.49
975	1093	0.80	1165	0.97	1233	1.15	1297	1.33	1358	1.53
1050	1108	0.84	1180	1.01	1247	1.19	1311	1.38	1371	1.58
1125	1123	0.88	1195	1.05	1261	1.23	1325	1.42	1385	1.62
1200	1140	0.92	1210	1.10	1276	1.28	1339	1.47	1399	1.68
1275	1157	0.97	1226	1.15	1292	1.33	1354	1.53	1414	1.73
1350	1174	1.02	1243	1.20	1308	1.39	1370	1.59	1429	1.80
1425	1192	1.08	1260	1.26	1325	1.45	1386	1.65	1444	1.86
1500	1210	1.14	1278	1.33	1342	1.52	1403	1.72	1461	1.93

RAH036, 3 PHASE WITH HOT GAS RE-HEAT, 3 TON, VERTICAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	594	0.15	740	0.25	867	0.37	981	0.52	1084	0.68
975	618	0.17	758	0.28	881	0.40	991	0.55	1092	0.71
1050	642	0.19	777	0.30	896	0.43	1003	0.58	1102	0.75
1125	668	0.22	797	0.34	912	0.47	1017	0.62	1113	0.79
1200	695	0.25	818	0.37	930	0.51	1032	0.66	1126	0.83
1275	722	0.29	841	0.41	949	0.55	1048	0.71	1140	0.88
1350	750	0.33	864	0.46	968	0.60	1065	0.76	1155	0.93
1425	778	0.37	888	0.50	989	0.65	1083	0.81	1171	0.99
1500	807	0.42	913	0.56	1011	0.71	1103	0.87	1188	1.05

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	1180	0.86	1269	1.05	1354	1.25	1434	1.47	1511	1.70
975	1186	0.89	1275	1.08	1358	1.29	1437	1.51	1513	1.74
1050	1194	0.92	1281	1.12	1363	1.32	1441	1.54	1516	1.78
1125	1204	0.97	1289	1.16	1370	1.37	1447	1.59	1520	1.82
1200	1215	1.01	1298	1.21	1378	1.42	1454	1.64	1526	1.87
1275	1227	1.06	1309	1.26	1387	1.47	1462	1.69	1533	1.92
1350	1240	1.12	1321	1.32	1397	1.53	1471	1.75	1541	1.99
1425	1254	1.18	1333	1.38	1409	1.59	1481	1.82	—	—
1500	1270	1.24	1347	1.45	1421	1.66	1492	1.89	—	—

Boldface indicates field-supplied drive is required.

Standard static 560-854 RPM, 1.7 BHP max

Medium static 770-1175 RPM, 1.7 BHP, max

High static 1035-1466 RPM, 2.4 BHP max

Fan data (cont)

RAH048, 3 PHASE WITHOUT HOT GAS RE-HEAT, 4 TON, HORIZONTAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	671	0.23	790	0.34	892	0.47	982	0.61	1064	0.76
1300	705	0.28	820	0.39	919	0.52	1007	0.67	1088	0.82
1400	740	0.33	851	0.45	947	0.58	1034	0.73	1113	0.89
1500	776	0.38	883	0.51	977	0.65	1061	0.80	1138	0.97
1600	813	0.45	916	0.58	1007	0.73	1089	0.89	1165	1.05
1700	851	0.52	949	0.66	1038	0.81	1118	0.97	1192	1.15
1800	888	0.60	984	0.75	1069	0.90	1148	1.07	1221	1.25
1900	927	0.69	1019	0.84	1102	1.00	1179	1.18	1250	1.36
2000	965	0.78	1054	0.94	1135	1.11	1210	1.29	1280	1.48

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	1140	0.92	1210	1.10	1276	1.28	1339	1.47	1399	1.68
1300	1162	0.99	1232	1.16	1297	1.35	1360	1.55	1419	1.75
1400	1186	1.06	1254	1.24	1319	1.43	1381	1.63	1439	1.84
1500	1210	1.14	1278	1.33	1342	1.52	1403	1.72	1461	1.93
1600	1236	1.23	1302	1.42	1365	1.62	1425	1.82	1483	2.04
1700	1262	1.33	1328	1.52	1390	1.72	1449	1.93	1505	2.15
1800	1289	1.44	1354	1.63	1415	1.84	1473	2.05	1529	2.27
1900	1317	1.55	1380	1.75	1441	1.96	1498	2.18	—	—
2000	1345	1.68	1408	1.88	1467	2.10	1524	2.32	—	—

Boldface indicates field-supplied drive is required.

Medium static 920-1303 RPM, 1.7 BHP, max
High static 1208-1550 RPM, 2.9 BHP max

RAH048, 3 PHASE WITHOUT HOT GAS RE-HEAT, 4 TON, VERTICAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	695	0.25	818	0.37	930	0.51	1032	0.66	1126	0.83
1300	731	0.30	849	0.43	955	0.57	1053	0.72	1145	0.89
1400	769	0.36	880	0.49	982	0.63	1077	0.79	1166	0.97
1500	807	0.42	913	0.56	1011	0.71	1103	0.87	1188	1.05
1600	847	0.49	948	0.63	1042	0.79	1130	0.96	1213	1.14
1700	887	0.57	983	0.72	1073	0.88	1158	1.06	1239	1.24
1800	928	0.66	1020	0.82	1106	0.98	1188	1.16	1266	1.35
1900	969	0.76	1057	0.92	1140	1.09	1219	1.28	1295	1.48
2000	1010	0.87	1095	1.04	1175	1.21	1251	1.41	1325	1.61

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	1215	1.01	1298	1.21	1378	1.42	1454	1.64	1526	1.87
1300	1231	1.08	1313	1.28	1390	1.49	1465	1.71	1536	1.94
1400	1249	1.16	1329	1.36	1405	1.57	1478	1.79	1547	2.03
1500	1270	1.24	1347	1.45	1421	1.66	1492	1.89	—	—
1600	1292	1.34	1367	1.54	1440	1.76	1509	1.99	—	—
1700	1315	1.44	1389	1.65	1459	1.88	1527	2.11	—	—
1800	1341	1.56	1412	1.77	1481	2.00	1547	2.23	—	—
1900	1367	1.68	1437	1.90	1504	2.13	—	—	—	—
2000	1395	1.82	1463	2.04	1528	2.28	—	—	—	—

Boldface indicates field-supplied drive is required.

Medium static 920-1303 RPM, 1.7 BHP, max
High static 1208-1639 RPM, 2.9 BHP max

RAH048, 3 PHASE WITH HOT GAS RE-HEAT, 4 TON, HORIZONTAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	671	0.23	790	0.34	892	0.47	982	0.61	1064	0.76
1300	705	0.28	820	0.39	919	0.52	1007	0.67	1088	0.82
1400	740	0.33	851	0.45	947	0.58	1034	0.73	1113	0.89
1500	776	0.38	883	0.51	977	0.65	1061	0.80	1138	0.97
1600	813	0.45	916	0.58	1007	0.73	1089	0.89	1165	1.05
1700	851	0.52	949	0.66	1038	0.81	1118	0.97	1192	1.15
1800	888	0.60	984	0.75	1069	0.90	1148	1.07	1221	1.25
1900	927	0.69	1019	0.84	1102	1.00	1179	1.18	1250	1.36
2000	965	0.78	1054	0.94	1135	1.11	1210	1.29	1280	1.48

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	1140	0.92	1210	1.10	1276	1.28	1339	1.47	1399	1.68
1300	1162	0.99	1232	1.16	1297	1.35	1360	1.55	1419	1.75
1400	1186	1.06	1254	1.24	1319	1.43	1381	1.63	1439	1.84
1500	1210	1.14	1278	1.33	1342	1.52	1403	1.72	1461	1.93
1600	1236	1.23	1302	1.42	1365	1.62	1425	1.82	1483	2.04
1700	1262	1.33	1328	1.52	1390	1.72	1449	1.93	1505	2.15
1800	1289	1.44	1354	1.63	1415	1.84	1473	2.05	1529	2.27
1900	1317	1.55	1380	1.75	1441	1.96	1498	2.18	—	—
2000	1345	1.68	1408	1.88	1467	2.10	1524	2.32	—	—

RAH048, 3 PHASE WITH HOT GAS RE-HEAT, 4 TON, VERTICAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	695	0.25	818	0.37	930	0.51	1032	0.66	1126	0.83
1300	731	0.30	849	0.43	955	0.57	1053	0.72	1145	0.89
1400	769	0.36	880	0.49	982	0.63	1077	0.79	1166	0.97
1500	807	0.42	913	0.56	1011	0.71	1103	0.87	1188	1.05
1600	847	0.49	948	0.63	1042	0.79	1130	0.96	1213	1.14
1700	887	0.57	983	0.72	1073	0.88	1158	1.06	1239	1.24
1800	928	0.66	1020	0.82	1106	0.98	1188	1.16	1266	1.35
1900	969	0.76	1057	0.92	1140	1.09	1219	1.28	1295	1.48
2000	1010	0.87	1095	1.04	1175	1.21	1251	1.41	1325	1.61

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	1215	1.01	1298	1.21	1378	1.42	1454	1.64	1526	1.87
1300	1231	1.08	1313	1.28	1390	1.49	1465	1.71	1536	1.94
1400	1249	1.16	1329	1.36	1405	1.57	1478	1.79	1547	2.03
1500	1270	1.24	1347	1.45	1421	1.66	1492	1.89	—	—
1600	1292	1.34	1367	1.54	1440	1.76	1509	1.99	—	—
1700	1315	1.44	1389	1.65	1459	1.88	1527	2.11	—	—
1800	1341	1.56	1412	1.77	1481	2.00	1547	2.23	—	—
1900	1367	1.68	1437	1.90	1504	2.13	—	—	—	—
2000	1395	1.82	1463	2.04	1528	2.28	—	—	—	—

Standard static 560-854 RPM, 1.7 BHP max
Medium static 770-1175 RPM, 1.7 BHP, max
High static 1035-1550 RPM, 2.9 BHP max

Fan data (cont)

RAH060, 3 PHASE WITHOUT HOT GAS RE-HEAT, 5 TON, HORIZONTAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	725	0.33	840	0.46	937	0.60	1023	0.75	1101	0.90
1625	765	0.40	876	0.54	970	0.68	1054	0.84	1131	1.00
1750	806	0.48	912	0.63	1004	0.78	1087	0.94	1162	1.11
1875	847	0.57	950	0.72	1039	0.88	1120	1.05	1194	1.23
2000	889	0.66	988	0.83	1075	1.00	1154	1.18	1226	1.36
2125	931	0.78	1027	0.95	1112	1.13	1189	1.31	1260	1.50
2250	974	0.90	1067	1.08	1149	1.27	1224	1.46	1294	1.66
2375	1018	1.03	1107	1.23	1187	1.43	1261	1.63	1329	1.84
2500	1061	1.19	1148	1.39	1226	1.59	1297	1.81	1364	2.02

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	1172	1.06	1239	1.23	1302	1.40	1361	1.58	1418	1.77
1625	1201	1.16	1267	1.34	1329	1.52	1388	1.71	1444	1.90
1750	1231	1.28	1296	1.46	1358	1.65	1416	1.84	1472	2.04
1875	1262	1.41	1326	1.60	1387	1.79	1445	1.99	1499	2.20
2000	1294	1.55	1357	1.74	1417	1.95	1474	2.15	1528	2.36
2125	1326	1.70	1388	1.90	1447	2.11	1504	2.33	—	—
2250	1359	1.87	1420	2.08	1479	2.29	1534	2.51	—	—
2375	1393	2.05	1453	2.27	1511	2.49	—	—	—	—
2500	1427	2.24	1487	2.47	1543	2.70	—	—	—	—

RAH060, 3 PHASE WITHOUT HOT GAS RE-HEAT, 5 TON, VERTICAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	794	0.41	902	0.55	993	0.69	1074	0.85	1147	1.00
1625	840	0.49	945	0.64	1034	0.80	1113	0.96	1185	1.13
1750	888	0.59	988	0.75	1075	0.92	1153	1.09	1223	1.26
1875	936	0.70	1033	0.87	1117	1.05	1193	1.23	1263	1.41
2000	984	0.82	1078	1.00	1160	1.19	1235	1.39	1303	1.58
2125	1033	0.96	1124	1.15	1204	1.35	1277	1.56	1343	1.76
2250	1083	1.11	1170	1.32	1248	1.53	1319	1.74	1385	1.96
2375	1133	1.28	1217	1.50	1293	1.72	1363	1.95	1427	2.17
2500	1183	1.47	1265	1.70	1339	1.93	1406	2.17	1470	2.41

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	1214	1.16	1277	1.33	1336	1.50	1392	1.67	1445	1.85
1625	1251	1.30	1313	1.47	1371	1.65	1427	1.83	1479	2.02
1750	1289	1.44	1350	1.63	1407	1.81	1462	2.01	1514	2.20
1875	1327	1.60	1387	1.80	1444	1.99	1498	2.19	1550	2.40
2000	1366	1.78	1426	1.98	1482	2.19	1535	2.40	—	—
2125	1406	1.97	1464	2.18	1520	2.40	—	—	—	—
2250	1446	2.18	1504	2.40	—	—	—	—	—	—
2375	1487	2.40	1544	2.63	—	—	—	—	—	—
2500	1529	2.64	—	—	—	—	—	—	—	—

Boldface indicates field-supplied drive is required.

Medium static 1035-1466 RPM, 2.4 BHP, max
High static 1303-1550 RPM, 2.9 BHP max

RAH060, 3 PHASE WITH HOT GAS RE-HEAT, 5 TON, HORIZONTAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	725	0.33	840	0.46	937	0.60	1023	0.75	1101	0.90
1625	765	0.40	876	0.54	970	0.68	1054	0.84	1131	1.00
1750	806	0.48	912	0.63	1004	0.78	1087	0.94	1162	1.11
1875	847	0.57	950	0.72	1039	0.88	1120	1.05	1194	1.23
2000	889	0.66	988	0.83	1075	1.00	1154	1.18	1226	1.36
2125	931	0.78	1027	0.95	1112	1.13	1189	1.31	1260	1.50
2250	974	0.90	1067	1.08	1149	1.27	1224	1.46	1294	1.66
2375	1018	1.03	1107	1.23	1187	1.43	1261	1.63	1329	1.84
2500	1061	1.19	1148	1.39	1226	1.59	1297	1.81	1364	2.02

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	1172	1.06	1239	1.23	1302	1.40	1361	1.58	1418	1.77
1625	1201	1.16	1267	1.34	1329	1.52	1388	1.71	1444	1.90
1750	1231	1.28	1296	1.46	1358	1.65	1416	1.84	1472	2.04
1875	1262	1.41	1326	1.60	1387	1.79	1445	1.99	1499	2.20
2000	1294	1.55	1357	1.74	1417	1.95	1474	2.15	1528	2.36
2125	1326	1.70	1388	1.90	1447	2.11	1504	2.33	—	—
2250	1359	1.87	1420	2.08	1479	2.29	1534	2.51	—	—
2375	1393	2.05	1453	2.27	1511	2.49	—	—	—	—
2500	1427	2.24	1487	2.47	1543	2.70	—	—	—	—

RAH060, 3 PHASE WITH HOT GAS RE-HEAT, 5 TON, VERTICAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	794	0.41	902	0.55	993	0.69	1074	0.85	1147	1.00
1625	840	0.49	945	0.64	1034	0.80	1113	0.96	1185	1.13
1750	888	0.59	988	0.75	1075	0.92	1153	1.09	1223	1.26
1875	936	0.70	1033	0.87	1117	1.05	1193	1.23	1263	1.41
2000	984	0.82	1078	1.00	1160	1.19	1235	1.39	1303	1.58
2125	1033	0.96	1124	1.15	1204	1.35	1277	1.56	1343	1.76
2250	1083	1.11	1170	1.32	1248	1.53	1319	1.74	1385	1.96
2375	1133	1.28	1217	1.50	1293	1.72	1363	1.95	1427	2.17
2500	1183	1.47	1265	1.70	1339	1.93	1406	2.17	1470	2.41

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	1214	1.16	1277	1.33	1336	1.50	1392	1.67	1445	1.85
1625	1251	1.30	1313	1.47	1371	1.65	1427	1.83	1479	2.02
1750	1289	1.44	1350	1.63	1407	1.81	1462	2.01	1514	2.20
1875	1327	1.60	1387	1.80	1444	1.99	1498	2.19	1550	2.40
2000	1366	1.78	1426	1.98	1482	2.19	1535	2.40	—	—
2125	1406	1.97	1464	2.18	1520	2.40	—	—	—	—
2250	1446	2.18	1504	2.40	—	—	—	—	—	—
2375	1487	2.40	1544	2.63	—	—	—	—	—	—
2500	1529	2.64	—	—	—	—	—	—	—	—

Standard static 770-1175 RMP, 1.7 BHP max

Medium static 1035-1466 RPM, 2.4 BHP, max

High static 1303-1550 RPM, 2.9 BHP max

Fan data (cont)

RAH072, 3 PHASE WITHOUT HOT GAS RE-HEAT, 6 TON, HORIZONTAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	415	0.28	510	0.46	588	0.65	655	0.85	715	1.08
1950	431	0.32	525	0.51	601	0.71	668	0.93	727	1.16
2100	448	0.38	540	0.57	615	0.78	681	1.01	740	1.25
2250	465	0.43	555	0.64	629	0.86	694	1.10	753	1.34
2400	483	0.49	571	0.71	644	0.94	708	1.19	766	1.45
2550	501	0.56	587	0.79	659	1.04	722	1.29	779	1.56
2700	519	0.64	603	0.88	674	1.14	737	1.40	793	1.68
2850	538	0.72	620	0.98	689	1.24	751	1.52	807	1.80
3000	557	0.82	637	1.08	705	1.36	766	1.64	822	1.94

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	770	1.31	821	1.56	868	1.82	913	2.09	955	2.36
1950	782	1.40	832	1.66	879	1.92	924	2.20	966	2.49
2100	794	1.50	844	1.76	891	2.03	935	2.32	977	2.61
2250	806	1.60	856	1.87	903	2.15	947	2.45	988	2.75
2400	819	1.71	868	1.99	915	2.28	958	2.58	1000	2.89
2550	832	1.83	881	2.12	927	2.42	971	2.73	1012	3.05
2700	845	1.96	894	2.26	940	2.57	983	2.88	1024	3.21
2850	859	2.10	907	2.41	953	2.72	995	3.05	1036	3.38
3000	873	2.24	921	2.56	966	2.89	1008	3.22	1049	3.56

RAH072, 3 PHASE WITHOUT HOT GAS RE-HEAT, 6 TON, VERTICAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	446	0.33	534	0.50	609	0.70	676	0.91	736	1.14
1950	467	0.39	552	0.57	625	0.77	690	0.99	750	1.23
2100	489	0.45	571	0.64	642	0.86	706	1.08	764	1.33
2250	511	0.53	591	0.73	660	0.95	722	1.19	779	1.44
2400	534	0.61	611	0.82	678	1.05	739	1.30	795	1.56
2550	558	0.71	631	0.93	697	1.17	756	1.42	811	1.69
2700	581	0.81	652	1.04	716	1.29	774	1.55	828	1.83
2850	605	0.93	674	1.17	736	1.43	792	1.70	845	1.98
3000	630	1.06	696	1.31	756	1.58	811	1.86	863	2.15

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	791	1.39	843	1.65	892	1.93	938	2.22	981	2.53
1950	804	1.49	855	1.76	903	2.04	949	2.34	992	2.65
2100	818	1.59	868	1.87	915	2.16	961	2.46	1003	2.78
2250	832	1.71	882	1.99	928	2.29	973	2.59	1015	2.92
2400	847	1.83	896	2.12	942	2.43	986	2.74	1028	3.07
2550	862	1.97	910	2.27	956	2.58	999	2.90	1041	3.23
2700	878	2.12	926	2.42	971	2.74	1013	3.07	1055	3.41
2850	895	2.28	941	2.59	986	2.92	1028	3.25	1069	3.60
3000	912	2.46	958	2.78	1001	3.11	1043	3.45	1083	3.80

Standard static 489-747 RPM, 1.7 BHP max

Medium static 733-949 RPM, 2.9 BHP, max

High static 909-1102 RPM, 4.7 BHP max

RAH090, 3 PHASE WITHOUT HOT GAS RE-HEAT, 7.5 TON, HORIZONTAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	433	0.29	518	0.41	596	0.54	667	0.67	733	0.81
2438	454	0.35	535	0.48	609	0.61	677	0.75	741	0.90
2625	477	0.42	553	0.55	624	0.69	689	0.84	751	1.00
2813	500	0.49	572	0.64	640	0.78	703	0.94	763	1.10
3000	523	0.58	592	0.73	657	0.88	718	1.05	775	1.22
3188	547	0.68	613	0.83	675	1.00	733	1.17	789	1.34
3375	571	0.78	634	0.95	694	1.12	750	1.30	804	1.48
3563	596	0.90	656	1.07	713	1.25	768	1.44	820	1.63
3750	621	1.03	679	1.21	734	1.40	786	1.59	837	1.79

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	795	0.96	854	1.11	910	1.27	963	1.43	1014	1.60
2438	802	1.05	859	1.21	913	1.38	966	1.55	1016	1.72
2625	810	1.16	865	1.32	919	1.49	970	1.67	1019	1.85
2813	819	1.27	874	1.44	925	1.62	975	1.80	1023	1.99
3000	830	1.39	883	1.57	934	1.76	982	1.95	1029	2.14
3188	843	1.53	894	1.71	943	1.90	990	2.10	1036	2.30
3375	856	1.67	905	1.86	953	2.06	1000	2.27	1045	2.48
3563	870	1.83	918	2.03	965	2.23	1010	2.44	1054	2.66
3750	885	1.99	932	2.20	978	2.42	1022	2.64	1065	2.86

RAH090, 3 PHASE WITHOUT HOT GAS RE-HEAT, 7.5 TON, VERTICAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	482	0.36	577	0.51	659	0.66	732	0.82	799	0.98
2438	505	0.43	597	0.59	676	0.75	748	0.92	813	1.09
2625	529	0.51	617	0.68	694	0.85	764	1.03	827	1.22
2813	554	0.60	638	0.78	713	0.97	781	1.16	843	1.35
3000	579	0.70	660	0.89	732	1.09	799	1.29	860	1.50
3188	604	0.81	683	1.02	753	1.23	817	1.44	877	1.65
3375	630	0.94	706	1.15	774	1.37	836	1.60	895	1.82
3563	657	1.08	729	1.31	795	1.54	856	1.77	913	2.01
3750	683	1.23	753	1.47	817	1.71	877	1.96	933	2.21

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	860	1.14	917	1.31	971	1.48	1022	1.66	1071	1.84
2438	873	1.27	929	1.45	983	1.63	1033	1.81	1081	2.00
2625	887	1.40	942	1.59	995	1.78	1045	1.98	1092	2.18
2813	901	1.55	956	1.75	1008	1.95	1057	2.15	1104	2.36
3000	917	1.70	970	1.91	1021	2.13	1070	2.34	1117	2.56
3188	933	1.87	986	2.09	1036	2.32	1084	2.54	1130	2.77
3375	950	2.05	1002	2.29	1051	2.52	1098	2.76	1144	3.00
3563	967	2.25	1018	2.49	1067	2.74	1113	2.99	1158	3.24
3750	985	2.46	1035	2.71	1083	2.97	1129	3.23	1173	3.49

Boldface indicates field-supplied drive is required.

	Standard static 518-733 RPM, 1.7 BHP max
	Medium static 690-936 RPM, 2.4 BHP, max
	High static 838-1084 RPM, 3.7 BHP max

Fan data (cont)

RAH102, 3 PHASE WITHOUT HOT GAS RE-HEAT, 8.5 TON, HORIZONTAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	468	0.39	546	0.52	618	0.66	684	0.80	747	0.96
2750	492	0.47	566	0.61	634	0.75	698	0.91	759	1.07
3000	523	0.58	592	0.73	657	0.88	718	1.05	775	1.22
3200	549	0.68	614	0.84	676	1.00	735	1.17	790	1.35
3400	575	0.80	637	0.96	696	1.14	752	1.31	806	1.50
3600	601	0.93	661	1.10	717	1.28	771	1.47	823	1.66
3850	635	1.11	691	1.29	745	1.48	796	1.68	846	1.88
4050	662	1.27	716	1.46	767	1.66	817	1.87	865	2.08
4250	689	1.45	741	1.65	790	1.86	838	2.07	885	2.29

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	806	1.11	863	1.28	916	1.45	968	1.62	1018	1.80
2750	816	1.23	871	1.40	923	1.58	973	1.76	1022	1.94
3000	830	1.39	883	1.57	934	1.76	982	1.95	1029	2.14
3200	843	1.53	894	1.72	944	1.91	991	2.11	1037	2.31
3400	858	1.69	907	1.88	955	2.09	1001	2.29	1046	2.50
3600	873	1.86	921	2.06	967	2.27	1012	2.48	1056	2.70
3850	894	2.09	940	2.30	985	2.52	1028	2.74	1071	2.97
4050	911	2.29	956	2.51	1000	2.74	1042	2.97	1083	3.20
4250	930	2.51	973	2.74	1015	2.97	1057	3.21	1097	3.45

RAH102, 3 PHASE WITHOUT HOT GAS RE-HEAT, 8.5 TON, VERTICAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	495	0.43	570	0.56	634	0.70	693	0.83	746	0.96
2750	522	0.52	593	0.66	656	0.80	712	0.94	764	1.09
3000	556	0.65	623	0.80	684	0.95	738	1.11	789	1.26
3200	583	0.76	648	0.93	707	1.09	760	1.26	809	1.42
3400	611	0.89	674	1.07	730	1.24	782	1.42	831	1.59
3600	639	1.04	700	1.22	754	1.41	805	1.59	852	1.78
3850	675	1.24	733	1.44	785	1.64	834	1.83	880	2.03
4050	704	1.42	760	1.63	811	1.84	858	2.05	903	2.25
4250	733	1.62	787	1.84	836	2.06	883	2.28	926	2.49

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	795	1.09	841	1.23	885	1.36	926	1.50	965	1.64
2750	813	1.23	858	1.37	901	1.52	942	1.66	981	1.81
3000	836	1.42	881	1.57	923	1.73	963	1.89	1001	2.05
3200	856	1.58	899	1.75	941	1.92	980	2.08	1018	2.25
3400	876	1.76	919	1.94	960	2.12	998	2.29	1036	2.47
3600	897	1.96	939	2.14	979	2.33	1017	2.52	1054	2.70
3850	923	2.23	964	2.42	1004	2.62	1041	2.82	1077	3.02
4050	945	2.46	986	2.67	1024	2.88	1061	3.08	1097	3.29
4250	968	2.71	1007	2.93	1045	3.15	1081	3.36	1117	3.58

Boldface indicates field-supplied drive is required.

	Standard static 518-733 RPM, 1.7 BHP max
	Medium static 690-936 RPM, 2.4 BHP, max
	High static 838-1084 RPM, 3.7 BHP max

RAH110, 3 PHASE WITHOUT HOT GAS RE-HEAT, 10 TON, HORIZONTAL SUPPLY — BELT DRIVE FAN PERFORMANCE

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

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

RAH110, 3 PHASE WITHOUT HOT GAS RE-HEAT, 10 TON, VERTICAL SUPPLY — BELT DRIVE FAN PERFORMANCE

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

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

Standard static 591-838 RPM, 2.4 BHP max
Medium static 838-1084 RPM, 3.7 BHP, max
High static 1022-1240 RPM, 4.9 BHP max

Fan data (cont)

RAH120, 3 PHASE WITHOUT HOT GAS RE-HEAT, 10 TON, HORIZONTAL SUPPLY — BELT DRIVE FAN PERFORMANCE

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

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

RAH120, 3 PHASE WITHOUT HOT GAS RE-HEAT, 10 TON, VERTICAL SUPPLY — BELT DRIVE FAN PERFORMANCE

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

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

Standard static 591-838 RPM, 2.4 BHP max
Medium static 838-1084 RPM, 3.7 BHP, max
High static 1022-1240 RPM, 4.9 BHP max

RAH150, 3 PHASE WITHOUT HOT GAS RE-HEAT, 12.5 TON, HORIZONTAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3438	379	0.48	455	0.69	526	0.94	593	1.23	655	1.54
3750	399	0.59	469	0.80	536	1.06	600	1.35	660	1.67
4063	420	0.71	486	0.93	549	1.19	609	1.49	667	1.81
4375	442	0.84	503	1.08	562	1.35	620	1.65	675	1.97
4688	464	1.00	522	1.25	578	1.52	632	1.83	685	2.16
5000	486	1.17	541	1.44	594	1.72	646	2.03	696	2.37
5313	509	1.37	561	1.64	612	1.94	661	2.26	708	2.60
5625	532	1.58	582	1.87	630	2.18	677	2.51	722	2.86
5938	555	1.82	603	2.13	649	2.45	694	2.78	737	3.14
6250	578	2.09	625	2.41	669	2.74	711	3.09	753	3.45

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3438	713	1.89	766	2.25	816	2.64	863	3.04	907	3.46
3750	717	2.02	770	2.39	820	2.79	867	3.20	911	3.63
4063	722	2.17	774	2.55	824	2.95	870	3.37	914	3.81
4375	728	2.33	779	2.72	828	3.13	874	3.56	918	4.00
4688	736	2.52	785	2.91	832	3.32	878	3.76	922	4.21
5000	745	2.73	792	3.12	838	3.54	883	3.98	926	4.44
5313	755	2.97	801	3.36	846	3.78	889	4.23	931	4.69
5625	767	3.23	811	3.63	854	4.05	896	4.50	937	4.97
5938	780	3.52	822	3.92	864	4.35	904	4.80	944	5.27
6250	794	3.84	835	4.25	875	4.68	914	5.13	952	5.61

RAH150, 3 PHASE WITHOUT HOT GAS RE-HEAT, 12.5 TON, VERTICAL SUPPLY — BELT DRIVE FAN PERFORMANCE

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3438	383	0.46	458	0.66	530	0.91	601	1.20	668	1.53
3750	402	0.56	474	0.77	540	1.01	605	1.30	670	1.64
4063	422	0.67	491	0.90	552	1.14	613	1.43	674	1.76
4375	443	0.79	508	1.04	567	1.29	623	1.58	680	1.90
4688	464	0.93	527	1.19	583	1.46	636	1.75	689	2.07
5000	486	1.10	546	1.37	600	1.65	651	1.95	700	2.27
5313	509	1.28	565	1.56	618	1.86	666	2.17	713	2.49
5625	533	1.48	585	1.77	636	2.09	683	2.41	728	2.74
5938	557	1.71	605	2.01	655	2.34	701	2.67	744	3.02
6250	581	1.97	626	2.26	673	2.61	718	2.96	760	3.32

CFM	AVAILABLE EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3438	729	1.88	783	2.25	833	2.62	879	2.99	921	3.37
3750	731	2.00	787	2.39	838	2.78	885	3.18	929	3.59
4063	733	2.13	789	2.52	841	2.94	890	3.36	935	3.79
4375	736	2.27	791	2.67	843	3.10	892	3.54	938	3.99
4688	741	2.43	794	2.83	845	3.26	894	3.72	941	4.19
5000	749	2.63	799	3.02	848	3.45	896	3.90	942	4.39
5313	760	2.85	806	3.23	853	3.66	899	4.11	944	4.60
5625	772	3.10	816	3.48	860	3.90	904	4.35	947	4.83
5938	786	3.38	827	3.76	869	4.18	911	4.62	952	5.09
6250	801	3.69	841	4.07	880	4.49	920	4.93	959	5.40

Boldface indicates field-supplied drive is required.

	Standard static 440-609 RPM, 2.9 BHP max
	Medium static 609-778 RPM, 3.7 BHP, max
	High static 776-955 RPM, 6.1 BHP max

Electrical data

RAH036-150 SINGLE SPEED BLOWER COOLING ELECTRICAL DATA

RAH UNIT*	V-Ph-Hz	UNIT VOLTAGE		COMP 1		OFM (EA)		IFM			CMBST. FAN MOTOR	POWER EXHAUST	
		RANGE		RLA	LRA	WATTS	FLA	TYPE	EFFCY AT FULL LOAD	FLA		KIT QTY	FLA (EA KIT)
		MIN	MAX										
036	208/230-1-60	187	253	16.6	79	190	1.0	DD-STD STD MED	78% — —	7.4 — —	0.48	1	1.9
	208-3-60	187	253	10.4	73	190	1.0	DD-STD STD MED HIGH	78% 67% 67% 78%	7.4 4.9 4.9 7.4	0.48	1	1.9
	230-3-60	187	253	10.4	73	190	1.0	DD-STD STD MED HIGH	75% 87% 89% 78%	5.2 5.2 8.4 7.4	0.48	1	1.9
	460-3-60	414	506	5.8	38	190	0.5	DD-STD STD MED HIGH	75% 87% 89% 78%	5.2 4.9 8.3 4.0	0.25	1	1.0
	575-3-60	518	633	3.8	37	190	0.5	DD-STD STD MED HIGH	75% 87% 89% 78%	2.6 2.5 4.2 4.0	0.24	1	1.9
	208/230-1-60	187	253	21.8	117	325	1.4	DD-STD STD MED	73% — —	1.2 — —	0.48	1	1.9
	208-3-60	187	253	13.7	83	325	1.4	DD-STD STD MED HIGH	78% 67% 67% 78%	7.4 4.9 4.9 7.4	0.48	1	1.9
	230-3-60	187	253	13.7	83	325	1.4	DD-STD STD MED HIGH	67% 67% 78% 75%	4.9 4.9 7.4 5.2	0.48	1	1.9
	460-3-60	414	506	6.2	41	325	0.9	DD-STD STD MED HIGH	87% 89% 78% 75%	5.2 8.4 7.4 5.2	0.25	1	1.0
	575-3-60	518	633	4.8	33	325	0.9	DD-STD STD MED HIGH	87% 89% 78% 75%	4.9 8.3 4.0 2.6	0.24	1	1.9

See legend on page 82.

RAH036-150 SINGLE SPEED BLOWER COOLING ELECTRICAL DATA (cont)

RAH UNIT*	V-Ph-Hz	UNIT VOLTAGE		COMP 1		COMP 2		OFM (EA)		IFM			CMBST. FAN MOTOR	POWER EXHAUST	
		RANGE		RLA	LRA	WATTS	FLA	WATTS	FLA	TYPE	EFFCY AT FULL LOAD	FLA		FLA	KIT QTY
		MIN	MAX												
060	208/230-1-60	187	253	25.0	134	—	—	325	1.4	DD-STD STD MED	87% — —	2.5 — —	0.48	1	1.9
	208-3-60	187	253	15.9	110	—	—	325	1.4	DD-STD STD MED HIGH	73% 72% 77% 78%	1.2 1.6 2.8 7.4	0.48	1	1.9
	230-3-60	187	253	15.9	110	—	—	325	1.4	DD-STD STD MED HIGH	67% 76% 78% 67%	4.9 7.0 7.4 4.9	0.48	1	1.9
	460-3-60	414	506	7.0	52	—	—	325	0.9	DD-STD STD MED HIGH	76% 78% 75% 89%	7.0 7.4 5.2 8.4	0.25	1	1.0
	575-3-60	518	633	5.1	40	—	—	325	0.9	DD-STD STD MED HIGH	89% 78% 75% 89%	8.4 7.4 5.2 8.3	0.24	1	1.9
072	208-3-60	187	253	19.6	136	—	—	325	1.5	STD MED HIGH	75% 89% 83%	5.2 8.4 13.6	0.48	1	3.8
	230-3-60	187	253	19.6	136	—	—	325	1.5	STD MED HIGH	75% 89% 83%	5.2 8.3 12.7	0.48	1	3.8
	460-3-60	414	506	8.2	66	—	—	325	0.8	STD MED HIGH	75% 89% 83%	2.6 4.2 6.4	0.25	1	1.8
	575-3-60	518	633	6.6	55	—	—	325	0.6	STD MED HIGH	72% 77% 81%	1.6 2.8 5.6	0.24	1	3.8
073	208-3-60	187	253	17.5	136	—	—	325	1.5	STD MED HIGH	75% 89% 83%	5.2 8.4 13.6	0.48	1	3.8
	230-3-60	187	253	17.5	136	—	—	325	1.5	STD MED HIGH	75% 89% 83%	5.2 8.3 12.7	0.48	1	3.8
	460-3-60	414	506	8.4	66	—	—	325	0.8	STD MED HIGH	75% 89% 83%	2.6 4.2 6.4	0.25	1	1.8
	575-3-60	518	633	6.3	55	—	—	325	0.6	STD MED HIGH	72% 77% 81%	1.6 2.8 5.6	0.24	1	3.8
090	208-3-60	187	253	13.6	83	13.6	83	325	1.5	STD MED HIGH	75% 87% 87%	5.2 6.9 10.6	0.48	1	3.8
	230-3-60	187	253	13.6	83	13.6	83	325	1.5	STD MED HIGH	75% 87% 87%	5.2 6.7 10.6	0.48	1	3.8
	460-3-60	414	506	6.1	41	6.1	41	325	0.8	STD MED HIGH	75% 87% 87%	2.6 3.4 5.3	0.25	1	1.8
	575-3-60	518	633	4.2	33	4.2	33	325	0.6	STD MED HIGH	72% 78% 77%	1.6 2.0 2.8	0.24	1	3.8

Electrical data (cont)

RAH036-150 SINGLE SPEED BLOWER COOLING ELECTRICAL DATA (cont)

RAH UNIT SIZE*	V-Ph-Hz	UNIT VOLTAGE		COMP 1		COMP 2		OFM (EA)		IFM			CMBST FAN MOTOR	POWER EXHAUST	
		RANGE		RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFFCY AT FULL LOAD	FLA		FLA	KIT QTY
		MIN	MAX												
102	208-3-60	187	253	13.7	83	13.7	83	325	1.5	STD MED HIGH	75% 87% 87%	5.2 6.9 10.6	0.48	1	3.8
	230-3-60	187	253	13.7	83	13.7	83	325	1.5	STD MED HIGH	75% 87% 87%	5.2 6.7 10.6	0.48	1	3.8
	460-3-60	414	506	6.2	41	6.2	41	325	0.8	STD MED HIGH	75% 87% 87%	2.6 3.4 5.3	0.25	1	1.8
	575-3-60	518	633	4.8	33	4.8	33	325	0.6	STD MED HIGH	72% 78% 77%	1.6 2.0 2.8	0.24	1	3.8
110	208-3-60	187	253	15.9	110	15.9	110	610	7.4	STD MED HIGH	69% 87% 83%	5.2 10.6 13.6	0.48	1	3.8
	230-3-60	187	253	15.9	110	15.9	110	610	7.4	STD MED HIGH	69% 87% 83%	5.2 10.6 12.7	0.48	1	3.8
	460-3-60	414	506	7.0	52	7.0	52	610	3.6	STD MED HIGH	69% 87% 83%	2.6 5.3 6.4	0.25	1	1.8
	575-3-60	518	633	5.1	40	5.1	40	610	3.6	STD MED HIGH	78% 77% 81%	2.0 2.8 5.6	0.24	1	3.8
120	208-3-60	187	253	15.9	110	15.9	110	1070	6.2	STD MED HIGH	69% 87% 83%	5.2 10.6 13.6	0.48	1	3.8
	230-3-60	187	253	15.9	110	15.9	110	1070	6.2	STD MED HIGH	69% 87% 83%	5.2 10.6 12.7	0.48	1	3.8
	460-3-60	414	506	7.7	52	7.7	52	1070	3.1	STD MED HIGH	69% 87% 83%	2.6 5.3 6.4	0.25	1	1.8
	575-3-60	518	633	5.7	39	5.7	39	1070	2.5	STD MED HIGH	78% 77% 81%	2.0 2.8 5.6	0.24	1	3.8
150	208-3-60	187	253	19.6	136	19.6	136	280	1.5	STD MED HIGH HIGH-HE	79% 87% 87% 90%	7.5 10.6 17.0 20.4	0.48	1	3.8
	230-3-60	187	253	19.6	136	19.6	136	280	1.5	STD MED HIGH HIGH-HE	79% 87% 87% 90%	7.5 10.6 15.0 20.4	0.48	1	3.8
	460-3-60	414	506	8.2	66	8.2	66	280	0.8	STD MED HIGH HIGH-HE	79% 87% 87% 90%	3.4 5.3 7.6 10.2	0.25	1	1.8
	575-3-60	518	633	6.6	55	6.6	55	280	0.7	STD MED HIGH HIGH-HE	77% 77% 90% 94%	2.8 2.8 6.1 9.0	0.24	1	3.8

LEGEND

FLA — Full Load Amps
IFM — Indoor (Evaporator) Fan Motor
LRA — Locked Rotor Amps
RLA — Rated Load Amps

* RAH036-RAH072 — One-Stage Cooling
 RAH073-RAH150 — Two-Stage Cooling

RAH073-150 TWO-SPEED BLOWER COOLING ELECTRICAL DATA

RAH UNIT	V-Ph-Hz	VOLTAGE		COMP 1		COMP 2		OFM (EA)		IFM			CMBST FAN MOTOR	PWR EXH	
		RANGE													
		MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at FULL LOAD	FLA	FLA	QTY	FLA
073	208-3-60	187	253	17.5	136	—	—	325	1.5	STD MED HIGH	84% 85% 84%	5.8 8.6 13.6	0.48	1	3.8
	230-3-60	187	253	17.5	136	—	—	325	1.5	STD MED HIGH	84% 85% 84%	5.6 7.8 12.7	0.48	1	3.8
	460-3-60	414	506	8.4	66	—	—	325	0.8	STD MED HIGH	79% 85% 84%	2.9 3.8 6.4	0.25	1	1.8
	575-3-60	518	633	6.3	55	—	—	325	0.6	STD MED HIGH	81% 84% 83%	2.8 4.5 6.2	0.24	1	3.8
090	208-3-60	187	253	13.6	83	13.6	83	325	1.5	STD MED HIGH	84% 77% 82%	5.8 7.1 10.8	0.48	1	3.8
	230-3-60	187	253	13.6	83	13.6	83	325	1.5	STD MED HIGH	84% 77% 82%	5.6 6.8 9.8	0.48	1	3.8
	460-3-60	414	506	6.1	41	6.1	41	325	0.8	STD MED HIGH	79% 77% 82%	2.9 3.4 4.9	0.25	1	1.8
	575-3-60	518	633	4.2	33	4.2	33	325	0.6	STD MED HIGH	81% 80% 84%	2.8 3.5 4.5	0.24	1	3.8
102	208-3-60	187	253	13.7	83	13.7	83	325	1.5	STD MED HIGH	84% 77% 82%	5.8 7.1 10.8	0.48	1	3.8
	230-3-60	187	253	13.7	83	13.7	83	325	1.5	STD MED HIGH	84% 77% 82%	5.6 6.8 9.8	0.48	1	3.8
	460-3-60	414	506	6.2	41	6.2	41	325	0.8	STD MED HIGH	79% 77% 82%	2.9 3.4 4.9	0.25	1	1.8
	575-3-60	518	633	4.8	33	4.8	33	325	0.6	STD MED HIGH	81% 80% 84%	2.8 3.5 4.5	0.24	1	3.8
110	208-3-60	187	253	15.9	110	15.9	110	610	7.4	STD MED HIGH	77% 82% 84%	7.1 10.8 13.6	0.48	1	3.8
	230-3-60	187	253	15.9	110	15.9	110	610	7.4	STD MED HIGH	77% 82% 84%	6.8 9.8 12.7	0.48	1	3.8
	460-3-60	414	506	7.0	52	7.0	52	610	3.6	STD MED HIGH	77% 82% 84%	3.4 4.9 6.4	0.25	1	1.8
	575-3-60	518	633	5.1	40	5.1	40	610	3.6	STD MED HIGH	80% 84% 83%	3.5 4.5 6.2	0.24	1	3.8
120	208-3-60	187	253	15.9	110	15.9	110	1070	6.2	STD MED HIGH	77% 82% 84%	7.1 10.8 13.6	0.48	1	3.8
	230-3-60	187	253	15.9	110	15.9	110	1070	6.2	STD MED HIGH	77% 82% 84%	6.8 9.8 12.7	0.48	1	3.8
	460-3-60	414	506	7.7	52	7.7	52	1070	3.1	STD MED HIGH	77% 82% 84%	3.4 4.9 6.4	0.25	1	1.8
	575-3-60	518	633	5.7	39	5.7	39	1070	2.5	STD MED HIGH	80% 84% 83%	3.5 4.5 6.2	0.24	1	3.8

See legend on page 84.

Electrical data (cont)

RAH073-150 TWO-SPEED BLOWER COOLING ELECTRICAL DATA (cont)

RAH UNIT	V-Ph-Hz	VOLTAGE		COMP 1		COMP 2		OFM (EA)		IFM			CMBST FAN MOTOR	PWR EXH	
		RANGE													
		MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at FULL LOAD	FLA	FLA	QTY	FLA
150	208-3-60	187	253	19.6	136	19.6	136	280	1.5	STD MED HIGH	85% 82% 90%	8.6 10.8 20.4	0.48	1	3.8
	230-3-60	187	253	19.6	136	19.6	136	280	1.5	STD MED HIGH	85% 82% 90%	7.8 9.8 20.4	0.48	1	3.8
	460-3-60	414	506	8.2	66	8.2	66	280	0.8	STD MED HIGH	85% 82% 90%	3.8 4.9 10.2	0.25	1	1.8
	575-3-60	518	633	6.6	55	6.6	55	280	0.7	STD MED HIGH	84% 84% 94%	4.5 4.5 9.0	0.24	1	3.8

LEGEND

FLA — Full Load Amps
IFM — Indoor (Evaporator) Fan Motor
LRA — Locked Rotor Amps
RLA — Rated Load Amps

RAH036-150 ELECTRIC HEAT DATA

RAH UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER	NOM (kW)	APPLICATION (kW)	APPLICATION OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER			
							NO C.O. OR UNPOWERED C.O.		W/PWRD C.O.	
							NO P.E.	WITH P.E. (pwrd fr/unit)	NO P.E.	WITH P.E. (pwrd fr/unit)
036	208/230-1-60	DD-STD	CRHEATER101A00	4.4	3.3/4.0	11.3/13.8	—	—	—	—
			CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER103B00	8.7	6.5/8.0	22.3/27.3	037	037	—	—
			CRHEATER104B00	10.5	7.9/9.6	26.9/32.9	040	040	—	—
			CRHEATER102A00,102A00	13.0	9.8/11.9	33.3/40.7	040	040	—	—
		STD	—	—	—	—	—	—	—	—
		MED	—	—	—	—	—	—	—	—
	208/230-3-60	DD-STD	CRHEATER101A00	4.4	3.3/4.0	11.3/13.8	—	—	—	—
			CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER103B00	8.7	6.5/8.0	22.3/27.3	—	—	—	—
			CRHEATER104B00	10.5	7.9/9.6	26.9/32.9	—	—	—	—
			CRHEATER105A00	16.0	12.0/14.7	41.0/50.1	037	037	038	038
		STD	CRHEATER101A00	4.4	3.3/4.0	11.3/13.8	—	—	—	—
			CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER103B00	8.7	6.5/8.0	22.3/27.3	—	—	—	—
			CRHEATER104B00	10.5	7.9/9.6	26.9/32.9	—	—	—	—
			CRHEATER105A00	16.0	12.0/14.7	41.0/50.1	037	037	038	038
		MED	CRHEATER101A00	4.4	3.3/4.0	11.3/13.8	—	—	—	—
			CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER103B00	8.7	6.5/8.0	22.3/27.3	—	—	—	—
			CRHEATER104B00	10.5	7.9/9.6	26.9/32.9	—	—	—	—
			CRHEATER105A00	16.0	12.0/14.7	41.0/50.1	037	037	038	038
		HIGH	CRHEATER101A00	4.4	3.3/4.0	11.3/13.8	—	—	—	—
			CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER103B00	8.7	6.5/8.0	22.3/27.3	—	—	—	—
			CRHEATER104B00	10.5	7.9/9.6	26.9/32.9	—	—	—	037
			CRHEATER105A00	16.0	12.0/14.7	41.0/50.1	037	037	038	038
	460-3-60	DD-STD	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER107A00	8.8	8.1	27.6	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
			CRHEATER109A00	14.0	12.9	43.9	—	—	—	—
		STD	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER107A00	8.8	8.1	27.6	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
			CRHEATER109A00	14.0	12.9	43.9	—	—	—	—
		MED	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER107A00	8.8	8.1	27.6	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
			CRHEATER109A00	14.0	12.9	43.9	—	—	—	—
		HIGH	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER107A00	8.8	8.1	27.6	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
			CRHEATER109A00	14.0	12.9	43.9	—	—	—	—
	575-3-60†	DD-STD	CRHEATER297A00	10.0	9.2	31.3	—	—	—	—
			CRHEATER298A00	15.0	13.8	47.0	—	—	—	—
		STD	CRHEATER297A00	10.0	9.2	31.3	—	—	—	—
			CRHEATER298A00	15.0	13.8	47.0	—	—	—	—
		MED	CRHEATER297A00	10.0	9.2	31.3	—	—	—	—
			CRHEATER298A00	15.0	13.8	47.0	—	—	—	—
		HIGH	CRHEATER297A00	10.0	9.2	31.3	—	—	—	—
			CRHEATER298A00	15.0	13.8	47.0	—	—	—	—

See legend on page 94.

Electrical data (cont)

RAH036-150 ELECTRIC HEAT DATA (cont)

RAH UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER	NOM (kW)	APPLICATION (kW)	APPLICATION OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER (CRSINGLEXXXA00)			
							NO C.O. OR UNPOWERED C.O.		W/PWRD C.O.	
							NO P.E.	WITH P.E. (pwr fr/unit)	NO P.E.	WITH P.E. (pwr fr/unit)
048	208/230-1-60	DD-STD	CRHEATER101A00	4.4	3.3/4.0	11.3/13.8	—	—	—	—
			CRHEATER103B00	8.7	6.5/8.0	22.3/27.3	037	037	—	—
			CRHEATER102A00,102A00	13.0	9.8/11.9	33.3/40.7	040	040	—	—
			CRHEATER103B00,103B00	17.4	13.1/16.0	44.6/54.5	040	040	—	—
			CRHEATER104B00,104B00	21.0	15.8/19.3	53.8/65.8	040	040	—	—
		STD	—	—	—	—	—	—	—	—
		MED	—	—	—	—	—	—	—	—
	208/230-3-60	DD-STD	CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER103B00	8.7	6.5/8.0	22.3/27.3	—	—	—	—
			CRHEATER105A00	16.0	12.0/14.7	41.0/50.1	037	037	038	038
			CRHEATER104B00,104B00	21.0	15.8/19.3	53.8/65.8	038	038	038	038
		STD	CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER103B00	8.7	6.5/8.0	22.3/27.3	—	—	—	—
			CRHEATER105A00	16.0	12.0/14.7	41.0/50.1	037	037	038	038
			CRHEATER104B00,104B00	21.0	15.8/19.3	53.8/65.8	038	038	038	038
		MED	CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER103B00	8.7	6.5/8.0	22.3/27.3	—	—	—	—
			CRHEATER105A00	16.0	12.0/14.7	41.0/50.1	037	037	038	038
			CRHEATER104B00,104B00	21.0	15.8/19.3	53.8/65.8	038	038	038	038
		HIGH	CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER103B00	8.7	6.5/8.0	22.3/27.3	—	—	—	—
			CRHEATER105A00	16.0	12.0/14.7	41.0/50.1	037	038	038	038
			CRHEATER104B00,104B00	21.0	15.8/19.3	53.8/65.8	038	038	038	038
	460-3-60	DD-STD	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
			CRHEATER109A00	14.0	12.9	43.9	—	—	—	—
			CRHEATER108A00,108A00	23.0	21.1	72.1	037	037	037	037
		STD	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
			CRHEATER109A00	14.0	12.9	43.9	—	—	—	—
			CRHEATER108A00,108A00	23.0	21.1	72.1	037	037	037	037
		MED	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
			CRHEATER109A00	14.0	12.9	43.9	—	—	—	—
			CRHEATER108A00,108A00	23.0	21.1	72.1	037	037	037	037
	575-3-60†	DD-STD	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
		STD	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
		MED	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
		HIGH	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—

See legend on page 94.

RAH036-150 ELECTRIC HEAT DATA (cont)

RAH UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER	NOM (kW)	APPLICATION (kW)	APPLICATION OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER (CRSINGLEXXXA00)			
							NO C.O. OR UNPOWERED C.O.		W/PWRD C.O.	
							NO P.E.	WITH P.E. (pwrd fr/unit)	NO P.E.	WITH P.E. (pwrd fr/unit)
060	208/230-1-60	DD-STD	CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	037
			CRHEATER103B00	8.7	6.5/8.0	22.3/27.3	037	037	040	040
			CRHEATER102A00,102A00	13.0	9.8/11.9	33.3/40.7	040	040	040	040
			CRHEATER103B00,103B00	17.4	13.1/16.0	44.6/54.5	040	040	040	040
			CRHEATER104B00,104B00	21.0	15.8/19.3	53.8/65.8	040	040	040	040
		STD	—	—	—	—	—	—	—	—
		MED	—	—	—	—	—	—	—	—
	208/230-3-60	DD-STD	CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER104B00	10.5	7.9/9.6	26.9/32.9	—	—	—	—
			CRHEATER105A00	16.0	12.0/14.7	41.0/50.1	037	037	038	038
			CRHEATER104B00,104B00	21.0	15.8/19.3	53.8/65.8	038	038	038	038
			CRHEATER104B00,105A00	26.5	19.9/24.3	67.9/83.0	038	038	038	038
		STD	CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER104B00	10.5	7.9/9.6	26.9/32.9	—	—	—	—
			CRHEATER105A00	16.0	12.0/14.7	41.0/50.1	037	037	038	038
			CRHEATER104B00,104B00	21.0	15.8/19.3	53.8/65.8	038	038	038	038
			CRHEATER104B00,105A00	26.5	19.9/24.3	67.9/83.0	038	038	038	038
		MED	CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER104B00	10.5	7.9/9.6	26.9/32.9	—	—	—	037
			CRHEATER105A00	16.0	12.0/14.7	41.0/50.1	037	038	038	038
			CRHEATER104B00,104B00	21.0	15.8/19.3	53.8/65.8	038	038	038	038
			CRHEATER104B00,105A00	26.5	19.9/24.3	67.9/83.0	038	038	038	038
		HIGH	CRHEATER102A00	6.5	4.9/6.0	16.7/20.4	—	—	—	—
			CRHEATER104B00	10.5	7.9/9.6	26.9/32.9	—	—	—	037
			CRHEATER105A00	16.0	12.0/14.7	41.0/50.1	037	038	038	038
			CRHEATER104B00,104B00	21.0	15.8/19.3	53.8/65.8	038	038	038	038
			CRHEATER104B00,105A00	26.5	19.9/24.3	67.9/83.0	038	038	038	038
	460-3-60	DD-STD	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
			CRHEATER109A00	14.0	12.9	43.9	—	—	—	—
			CRHEATER108A00,108A00	23.0	21.1	72.1	037	037	037	037
			CRHEATER108A00,109A00	25.5	23.4	79.9	037	037	037	037
		STD	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
			CRHEATER109A00	14.0	12.9	43.9	—	—	—	—
			CRHEATER108A00,108A00	23.0	21.1	72.1	037	037	037	037
			CRHEATER108A00,109A00	25.5	23.4	79.9	037	037	037	037
		MED	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
			CRHEATER109A00	14.0	12.9	43.9	—	—	—	—
			CRHEATER108A00,108A00	23.0	21.1	72.1	037	037	037	037
			CRHEATER108A00,109A00	25.5	23.4	79.9	037	037	037	037
		HIGH	CRHEATER106A00	6.0	5.5	18.8	—	—	—	—
			CRHEATER108A00	11.5	10.6	36.0	—	—	—	—
			CRHEATER109A00	14.0	12.9	43.9	—	—	—	—
			CRHEATER108A00,108A00	23.0	21.1	72.1	037	037	037	037
			CRHEATER108A00,109A00	25.5	23.4	79.9	037	037	037	037
	575-3-60†	DD-STD	CRHEATER298A00	15.0	13.8	47.0	—	—	—	—
			CRHEATER301A00	25.0	23.0	78.3	037	037	037	037
		STD	CRHEATER298A00	15.0	13.8	47.0	—	—	—	—
			CRHEATER301A00	25.0	23.0	78.3	037	037	037	037
		MED	CRHEATER298A00	15.0	13.8	47.0	—	—	—	—
			CRHEATER301A00	25.0	23.0	78.3	037	037	037	037
		HIGH	CRHEATER298A00	15.0	13.8	47.0	—	—	—	—
			CRHEATER301A00	25.0	23.0	78.3	037	037	037	037

Electrical data (cont)

RAH036-150 ELECTRIC HEAT DATA (cont)

RAH UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER	NOM (kW)	APPLICATION (kW)	APPLICATION OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER (CRSINGLEXXXXA00)			
							NO C.O. OR UNPOWERED C.O.		W/PWRD C.O.	
							NO P.E.	WITH P.E. (pwrdr fr/unit)	NO P.E.	WITH P.E. (pwrdr fr/unit)
072	208/230-3-60	STD	CRHEATER264A00	6.5	4.9/6.0	16.7/20.4	042	042	042	042
			CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	042	042	042	042
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	042	042	043	043
			CRHEATER117A00,117A00	21.0	15.8/19.3	53.8/65.8	043	043	043	043
			CRHEATER110A00,117A00	26.5	19.9/24.3	67.9/83.0	043	043	043	043
		MED	CRHEATER264A00	6.5	4.9/6.0	16.7/20.4	042	042	042	042
			CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	042	042	042	042
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	042	043	043	043
			CRHEATER117A00,117A00	21.0	15.8/19.3	53.8/65.8	043	043	043	043
			CRHEATER110A00,117A00	26.5	19.9/24.3	67.9/83.0	043	043	043	043
		HIGH	CRHEATER264A00	6.5	4.9/6.0	16.7/20.4	042	042	042	042
			CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	042	042	042	042
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	043	043	043	043
			CRHEATER117A00,117A00	21.0	15.8/19.3	53.8/65.8	043	043	043	043
			CRHEATER110A00,117A00	26.5	19.9/24.3	67.9/83.0	043	043	043	043
	460-3-60	STD	CRHEATER265A00	6.0	5.5	18.8	042	042	042	042
			CRHEATER266A00	11.5	10.6	36.0	042	042	042	042
			CRHEATER267A00	14.0	12.9	43.9	042	042	042	042
			CRHEATER268A00	23.0	21.1	72.1	042	042	042	042
			CRHEATER269A00	25.5	23.4	79.9	042	042	042	042
		MED	CRHEATER265A00	6.0	5.5	18.8	042	042	042	042
			CRHEATER266A00	11.5	10.6	36.0	042	042	042	042
			CRHEATER267A00	14.0	12.9	43.9	042	042	042	042
			CRHEATER268A00	23.0	21.1	72.1	042	042	042	042
			CRHEATER269A00	25.5	23.4	79.9	042	042	042	042
		HIGH	CRHEATER265A00	6.0	5.5	18.8	042	042	042	042
			CRHEATER266A00	11.5	10.6	36.0	042	042	042	042
			CRHEATER267A00	14.0	12.9	43.9	042	042	042	042
			CRHEATER268A00	23.0	21.1	72.1	042	042	042	042
			CRHEATER269A00	25.5	23.4	79.9	042	042	042	042
	575-3-60†	STD	CRHEATER118A00	18.0	16.5	56.4	042	042	042	042
			CRHEATER299A00	28.0	25.7	87.7	042	042	042	042
		MED	CRHEATER118A00	18.0	16.5	56.4	042	042	042	042
			CRHEATER299A00	28.0	25.7	87.7	042	042	042	042
		HIGH	CRHEATER118A00	18.0	16.5	56.4	042	042	042	042
			CRHEATER299A00	28.0	25.7	87.7	042	042	042	042

See legend on page 94.

RAH036-150 ELECTRIC HEAT DATA (cont)

RAH UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER	NOM (kW)	APPLICATION (kW)	APPLICATION OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER (CRSINGLEXXXXA00)			
							NO C.O. OR UNPOWERED C.O.		W/PWRD C.O.	
							NO P.E.	WITH P.E. (pwrdr fr/unit)	NO P.E.	WITH P.E. (pwrdr fr/unit)
073	208/230-3-60	STD	CRHEATER264A00	6.5	4.9/6.0	16.7/20.4	042	042	042	042
			CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	042	042	042	042
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	042	042	043	043
			CRHEATER117A00,117A00	21.0	15.8/19.3	53.8/65.8	043	043	043	043
			CRHEATER110A00,117A00	26.5	19.9/24.3	67.9/83.0	043	043	043	043
		MED	CRHEATER264A00	6.5	4.9/6.0	16.7/20.4	042	042	042	042
			CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	042	042	042	042
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	042	043	043	043
			CRHEATER117A00,117A00	21.0	15.8/19.3	53.8/65.8	043	043	043	043
			CRHEATER110A00,117A00	26.5	19.9/24.3	67.9/83.0	043	043	043	043
		HIGH	CRHEATER264A00	6.5	4.9/6.0	16.7/20.4	042	042	042	042
			CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	042	042	043	042
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	043	043	043	043
			CRHEATER117A00,117A00	21.0	15.8/19.3	53.8/65.8	043	043	043	043
			CRHEATER110A00,117A00	26.5	19.9/24.3	67.9/83.0	043	043	043	043
	460-3-60	STD	CRHEATER265A00	6.0	5.5	18.8	042	042	042	042
			CRHEATER266A00	11.5	10.6	36.0	042	042	042	042
			CRHEATER267A00	14.0	12.9	43.9	042	042	042	042
			CRHEATER268A00	23.0	21.1	72.1	042	042	042	042
			CRHEATER269A00	25.5	23.4	79.9	042	042	042	042
		MED	CRHEATER265A00	6.0	5.5	18.8	042	042	042	042
			CRHEATER266A00	11.5	10.6	36.0	042	042	042	042
			CRHEATER267A00	14.0	12.9	43.9	042	042	042	042
			CRHEATER268A00	23.0	21.1	72.1	042	042	042	042
			CRHEATER269A00	25.5	23.4	79.9	042	042	042	042
		HIGH	CRHEATER265A00	6.0	5.5	18.8	042	042	042	042
			CRHEATER266A00	11.5	10.6	36.0	042	042	042	042
			CRHEATER267A00	14.0	12.9	43.9	042	042	042	042
			CRHEATER268A00	23.0	21.1	72.1	042	042	042	042
			CRHEATER269A00	25.5	23.4	79.9	042	042	042	042
	575-3-60†	STD	CRHEATER118A00	18.0	16.5	56.4	042	042	042	042
			CRHEATER299A00	28.0	25.7	87.7	042	042	042	042
		MED	CRHEATER118A00	18.0	16.5	56.4	042	042	042	042
			CRHEATER299A00	28.0	25.7	87.7	042	042	042	042
		HIGH	CRHEATER118A00	18.0	16.5	56.4	042	042	042	042
			CRHEATER299A00	28.0	25.7	87.7	042	042	042	042

Electrical data (cont)

RAH036-150 ELECTRIC HEAT DATA (cont)

RAH UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER	NOM (kW)	APPLICATION (kW)	APPLICATION OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER (CRSINGLEXXXXA00)			
							NO C.O. OR UNPOWERED C.O.		W/PWRD C.O.	
							NO P.E.	WITH P.E. (pwrdr fr/unit)	NO P.E.	WITH P.E. (pwrdr fr/unit)
090	208/230-3-60	STD	CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	047	047	047	047
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	047	047	049	049
			CRHEATER111A00	24.8	18.6/22.8	63.5/77.7	049	049	049	049
			CRHEATER112A00	32.0	24.0/29.4	82.0/100.3	049	049	049	049
			CRHEATER112A00,117A00	42.4	31.8/38.9	108.6/132.9	051	051	051	051
		MED	CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	047	047	047	051
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	047	049	049	049
			CRHEATER111A00	24.8	18.6/22.8	63.5/77.7	049	049	049	049
			CRHEATER112A00	32.0	24.0/29.4	82.0/100.3	049	049	049	049
			CRHEATER112A00,117A00	42.4	31.8/38.9	108.6/132.9	051	051	051	051
		HIGH	CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	047	047	047	047
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	049	049	049	049
			CRHEATER111A00	24.8	18.6/22.8	63.5/77.7	049	049	049	049
			CRHEATER112A00	32.0	24.0/29.4	82.0/100.3	049	049	049	049
			CRHEATER112A00,117A00	42.4	31.8/38.9	108.6/132.9	051	051	051	051
	460-3-60	STD	CRHEATER116B00	13.9	12.8	43.6	047	047	047	047
			CRHEATER113B00	16.5	15.2	51.7	047	047	047	047
			CRHEATER114B00	27.8	25.5	87.1	047	047	047	047
			CRHEATER115B00	33.0	30.3	103.4	047	047	047	047
			CRHEATER128B00	41.7	38.3	130.7	050	050	050	050
		MED	CRHEATER116B00	13.9	12.8	43.6	047	047	047	047
			CRHEATER113B00	16.5	15.2	51.7	047	047	047	047
			CRHEATER114B00	27.8	25.5	87.1	047	047	047	047
			CRHEATER115B00	33.0	30.3	103.4	047	047	047	047
			CRHEATER128B00	41.7	38.3	130.7	050	050	050	050
		HIGH	CRHEATER116B00	13.9	12.8	43.6	047	047	047	047
			CRHEATER113B00	16.5	15.2	51.7	047	047	047	047
			CRHEATER114B00	27.8	25.5	87.1	047	047	047	047
			CRHEATER115B00	33.0	30.3	103.4	047	047	047	050
			CRHEATER128B00	41.7	38.3	130.7	050	050	050	050
	575-3-60†	STD	CRHEATER118A00	18.0	16.5	56.4	047	047	047	047
			CRHEATER119A00	36.0	33.1	112.8	047	047	047	047
		MED	CRHEATER118A00	18.0	16.5	56.4	047	047	047	047
			CRHEATER119A00	36.0	33.1	112.8	047	047	047	047
		HIGH	CRHEATER118A00	18.0	16.5	56.4	047	047	047	047
			CRHEATER119A00	36.0	33.1	112.8	047	047	047	047

See legend on page 94.

RAH036-150 ELECTRIC HEAT DATA (cont)

RAH UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER	NOM (kW)	APPLICATION (kW)	APPLICATION OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER (CRSINGLEXXXXA00)			
							NO C.O. OR UNPOWERED C.O.		W/PWRD C.O.	
							NO P.E.	WITH P.E. (pwrdr fr/unit)	NO P.E.	WITH P.E. (pwrdr fr/unit)
102	208/230-3-60	STD	CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	047	047	047	047
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	047	047	049	049
			CRHEATER111A00	24.8	18.6/22.8	63.5/77.7	049	049	049	049
			CRHEATER112A00	32.0	24.0/29.4	82.0/100.3	049	049	049	049
			CRHEATER112A00,117A00	42.4	31.8/38.9	108.6/132.9	051	051	051	051
		MED	CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	047	047	047	047
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	047	049	049	049
			CRHEATER111A00	24.8	18.6/22.8	63.5/77.7	049	049	049	049
			CRHEATER112A00	32.0	24.0/29.4	82.0/100.3	049	049	049	049
			CRHEATER112A00,117A00	42.4	31.8/38.9	108.6/132.9	051	051	051	051
		HIGH	CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	047	047	047	047
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	049	049	049	049
			CRHEATER111A00	24.8	18.6/22.8	63.5/77.7	049	049	049	049
			CRHEATER112A00	32.0	24.0/29.4	82.0/100.3	049	049	049	049
			CRHEATER112A00,117A00	42.4	31.8/38.9	108.6/132.9	051	051	051	051
	460-3-60	STD	CRHEATER116B00	13.9	12.8	43.6	047	047	047	047
			CRHEATER113B00	16.5	15.2	51.7	047	047	047	047
			CRHEATER114B00	27.8	25.5	87.1	047	047	047	047
			CRHEATER115B00	33.0	30.3	103.4	047	047	047	047
			CRHEATER128B00	41.7	38.3	130.7	050	050	050	050
		MED	CRHEATER116B00	13.9	12.8	43.6	047	047	047	047
			CRHEATER113B00	16.5	15.2	51.7	047	047	047	047
			CRHEATER114B00	27.8	25.5	87.1	047	047	047	047
			CRHEATER115B00	33.0	30.3	103.4	047	047	047	047
			CRHEATER128B00	41.7	38.3	130.7	050	050	050	050
		HIGH	CRHEATER116B00	13.9	12.8	43.6	047	047	047	047
			CRHEATER113B00	16.5	15.2	51.7	047	047	047	047
			CRHEATER114B00	27.8	25.5	87.1	047	047	047	047
			CRHEATER115B00	33.0	30.3	103.4	047	047	047	050
			CRHEATER128B00	41.7	38.3	130.7	050	050	050	050
	575-3-60†	STD	CRHEATER118A00	18.0	16.5	56.4	047	047	047	047
			CRHEATER119A00	36.0	33.1	112.8	047	047	047	047
		MED	CRHEATER118A00	18.0	16.5	56.4	047	047	047	047
			CRHEATER119A00	36.0	33.1	112.8	047	047	047	047
		HIGH	CRHEATER118A00	18.0	16.5	56.4	047	047	047	047
			CRHEATER119A00	36.0	33.1	112.8	047	047	047	047

Electrical data (cont)

RAH036-150 ELECTRIC HEAT DATA (cont)

RAH UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER	NOM (kW)	APPLICATION (kW)	APPLICATION OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER (CRSINGLEXXXXA00)			
							NO C.O. OR UNPOWERED C.O.		W/PWRD C.O.	
							NO P.E.	WITH P.E. (pwrdr fr/unit)	NO P.E.	WITH P.E. (pwrdr fr/unit)
110	208/230-3-60	STD	CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	047	047	047	049
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	047	047	049	049
			CRHEATER112A00	32.0	24.0/29.4	82.0/100.3	049	049	049	049
			CRHEATER112A00,117A00	42.4	31.8/38.9	108.6/132.9	051	051	051	051
			CRHEATER112A00,110A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
		MED	CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	047	049	049	049
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	049	049	049	049
			CRHEATER112A00	32.0	24.0/29.4	82.0/100.3	049	049	049	049
			CRHEATER112A00,117A00	42.4	31.8/38.9	108.6/132.9	051	051	051	051
			CRHEATER112A00,110A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
		HIGH	CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	049	049	049	049
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	049	049	049	049
			CRHEATER112A00	32.0	24.0/29.4	82.0/100.3	049	049	049	049
			CRHEATER112A00,117A00	42.4	31.8/38.9	108.6/132.9	051	051	051	051
			CRHEATER112A00,110A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
	460-3-60	STD	CRHEATER116B00	13.9	12.8	43.6	047	047	047	047
			CRHEATER113B00	16.5	15.2	51.7	047	047	047	047
			CRHEATER115B00	33.0	30.3	103.4	047	047	047	047
			CRHEATER128B00	41.7	38.3	130.7	050	050	050	050
			CRHEATER129B00	50.0	45.9	156.7	050	050	050	050
		MED	CRHEATER116B00	13.9	12.8	43.6	047	047	047	047
			CRHEATER113B00	16.5	15.2	51.7	047	047	047	047
			CRHEATER115B00	33.0	30.3	103.4	047	047	047	050
			CRHEATER128B00	41.7	38.3	130.7	050	050	050	050
			CRHEATER129B00	50.0	45.9	156.7	050	050	050	050
		HIGH	CRHEATER116B00	13.9	12.8	43.6	047	047	047	047
			CRHEATER113B00	16.5	15.2	51.7	047	047	047	047
			CRHEATER115B00	33.0	30.3	103.4	047	047	050	050
			CRHEATER128B00	41.7	38.3	130.7	050	050	050	050
			CRHEATER129B00	50.0	45.9	156.7	050	050	050	050
	575-3-60†	STD	CRHEATER118A00	18.0	16.5	56.4	047	047	047	047
			CRHEATER119A00	36.0	33.1	112.8	047	047	047	047
			CRHEATER118A00,119A00	54.0	49.6	169.2	047	047	047	050
		MED	CRHEATER118A00	18.0	16.5	56.4	047	047	047	047
			CRHEATER119A00	36.0	33.1	112.8	047	047	047	047
			CRHEATER118A00,119A00	54.0	49.6	169.2	047	050	047	050
		HIGH	CRHEATER118A00	18.0	16.5	56.4	047	047	047	047
			CRHEATER119A00	36.0	33.1	112.8	047	047	047	047
			CRHEATER118A00,119A00	54.0	49.6	169.2	050	050	050	050

See legend on page 94.

RAH036-150 ELECTRIC HEAT DATA (cont)

RAH UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER	NOM (kW)	APPLICATION (kW)	APPLICATION OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER (CRSINGLEXXXXA00)			
							NO C.O. OR UNPOWERED C.O.		W/PWRD C.O.	
							NO P.E.	WITH P.E. (pwrdr fr/unit)	NO P.E.	WITH P.E. (pwrdr fr/unit)
120	208/230-3-60	STD	CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	047	047	047	047
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	047	047	049	049
			CRHEATER112A00	32.0	24.0/29.4	82.0/100.3	049	049	049	049
			CRHEATER112A00,117A00	42.4	31.8/38.9	108.6/132.9	051	051	051	051
			CRHEATER112A00,110A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
		MED	CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	047	049	049	049
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	049	049	049	049
			CRHEATER112A00	32.0	24.0/29.4	82.0/100.3	049	049	049	049
			CRHEATER112A00,117A00	42.4	31.8/38.9	108.6/132.9	051	051	051	051
			CRHEATER112A00,110A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
		HIGH	CRHEATER117A00	10.4	7.8/9.6	26.6/32.6	047	049	049	049
			CRHEATER110A00	16.0	12.0/14.7	41.0/50.1	049	049	049	049
			CRHEATER112A00	32.0	24.0/29.4	82.0/100.3	049	049	049	049
			CRHEATER112A00,117A00	42.4	31.8/38.9	108.6/132.9	051	051	051	051
			CRHEATER112A00,110A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
	460-3-60	STD	CRHEATER116B00	13.9	12.8	43.6	047	047	047	047
			CRHEATER113B00	16.5	15.2	51.7	047	047	047	047
			CRHEATER115B00	33.0	30.3	103.4	047	047	047	047
			CRHEATER128B00	41.7	38.3	130.7	050	050	050	050
			CRHEATER129B00	50.0	45.9	156.7	050	050	050	050
		MED	CRHEATER116B00	13.9	12.8	43.6	047	047	047	047
			CRHEATER113B00	16.5	15.2	51.7	047	047	047	047
			CRHEATER115B00	33.0	30.3	103.4	047	047	047	050
			CRHEATER128B00	41.7	38.3	130.7	050	050	050	050
			CRHEATER129B00	50.0	45.9	156.7	050	050	050	050
		HIGH	CRHEATER116B00	13.9	12.8	43.6	047	047	047	047
			CRHEATER113B00	16.5	15.2	51.7	047	047	047	047
			CRHEATER115B00	33.0	30.3	103.4	047	047	050	050
			CRHEATER128B00	41.7	38.3	130.7	050	050	050	050
			CRHEATER129B00	50.0	45.9	156.7	050	050	050	050
	575-3-60†	STD	CRHEATER118A00	18.0	16.5	56.4	047	047	047	047
			CRHEATER119A00	36.0	33.1	112.8	047	047	047	047
			CRHEATER118A00,119A00	54.0	49.6	169.2	047	047	047	050
		MED	CRHEATER118A00	18.0	16.5	56.4	047	047	047	047
			CRHEATER119A00	36.0	33.1	112.8	047	047	047	047
			CRHEATER118A00,119A00	54.0	49.6	169.2	047	050	047	050
		HIGH	CRHEATER118A00	18.0	16.5	56.4	047	047	047	047
			CRHEATER119A00	36.0	33.1	112.8	047	047	047	047
			CRHEATER118A00,119A00	54.0	49.6	169.2	050	050	050	050

Electrical data (cont)

RAH036-150 ELECTRIC HEAT DATA (cont)

RAH UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER	NOM. (kW)	APPLICATION (kW)	APPLICATION OUTPUT (MBH)	SINGLE POINT OR JUNCTION KIT PART NUMBER (CRSINGLEXXXXA00)			
							NO C.O. OR UNPOWERED C.O.		W/PWRD C.O.	
							NO P.E.	WITH P.E. (pwrd fr/unit)	NO P.E.	WITH P.E. (pwrd fr/unit)
150	208/230-3-60	STD	CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	049	049	049	049
			CRHEATER288A00,291A00	26.5	19.9/24.3	67.9/83.0	049	049	049	049
			CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
			CRHEATER288A00,294A00	43.5	32.7/40.0	111.5/136.3	051	051	051	051
			CRHEATER291A00,294A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
		MED	CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	049	049	049	049
			CRHEATER288A00,291A00	26.5	19.9/24.3	67.9/83.0	049	049	049	049
			CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
			CRHEATER288A00,294A00	43.5	32.7/40.0	111.5/136.3	051	051	051	051
			CRHEATER291A00,294A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
		HIGH	CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	049	049	049	049
			CRHEATER288A00,291A00	26.5	19.9/24.3	67.9/83.0	049	049	049	049
			CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
			CRHEATER288A00,294A00	43.5	32.7/40.0	111.5/136.3	051	051	051	051
			CRHEATER291A00,294A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
		HIGH-HE	CRHEATER291A00	16.5	12.4/15.2	42.3/51.7	049	049	049	049
			CRHEATER288A00,291A00	26.5	19.9/24.3	67.9/83.0	049	049	049	049
			CRHEATER294A00	33.5	25.2/30.8	85.9/105.0	049	049	049	049
			CRHEATER288A00,294A00	43.5	32.7/40.0	111.5/136.3	051	051	051	051
			CRHEATER291A00,294A00	50.0	37.6/45.9	128.1/156.7	051	051	051	051
	460-3-60	STD	CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
			CRHEATER289A00,292A00	26.5	24.3	83.0	047	047	047	047
			CRHEATER295A00	33.5	30.8	105.0	047	047	047	047
			CRHEATER289A00,295A00	43.5	40.0	136.3	050	050	050	050
			CRHEATER292A00,295A00	50.0	45.9	156.7	050	050	050	050
		MED	CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
			CRHEATER289A00,292A00	26.5	24.3	83.0	047	047	047	047
			CRHEATER295A00	33.5	30.8	105.0	047	047	047	050
			CRHEATER289A00,295A00	43.5	40.0	136.3	050	050	050	050
			CRHEATER292A00,295A00	50.0	45.9	156.7	050	050	050	050
		HIGH	CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
			CRHEATER289A00,292A00	26.5	24.3	83.0	047	047	047	047
			CRHEATER295A00	33.5	30.8	105.0	047	050	050	050
			CRHEATER289A00,295A00	43.5	40.0	136.3	050	050	050	050
			CRHEATER292A00,295A00	50.0	45.9	156.7	050	050	050	050
		HIGH-HE	CRHEATER292A00	16.5	15.2	51.7	—	—	—	—
			CRHEATER289A00,292A00	26.5	24.3	83.0	047	047	047	047
			CRHEATER295A00	33.5	30.8	105.0	050	050	050	050
			CRHEATER289A00,295A00	43.5	40.0	136.3	050	050	050	050
			CRHEATER292A00,295A00	50.0	45.9	156.7	050	050	050	050
150	575-3-60†	STD	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
			CRHEATER290A00,293A00	26.5	24.3	83.0	047	047	047	047
			CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
			CRHEATER290A00,296A00	43.5	40.0	136.3	047	050	047	050
			CRHEATER293A00,296A00	50.0	45.9	156.7	047	047	047	047
		MED	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
			CRHEATER290A00,293A00	26.5	24.3	83.0	047	047	047	047
			CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
			CRHEATER290A00,296A00	43.5	40.0	136.3	047	050	047	050
			CRHEATER293A00,296A00	50.0	45.9	156.7	047	047	047	047
		HIGH	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
			CRHEATER290A00,293A00	26.5	24.3	83.0	047	047	047	047
			CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
			CRHEATER290A00,296A00	43.5	40.0	136.3	047	050	050	050
			CRHEATER293A00,296A00	50.0	45.9	156.7	047	050	047	050
		HIGH-HE	CRHEATER293A00	16.5	15.2	51.7	—	—	—	—
			CRHEATER290A00,293A00	26.5	24.3	83.0	047	047	047	047
			CRHEATER296A00	33.5	30.8	105.0	047	047	047	047
			CRHEATER290A00,296A00	43.5	40.0	136.3	050	050	050	050
			CRHEATER293A00,296A00	50.0	45.9	156.7	050	050	050	050

LEGEND

C.O. — Convenience Outlet
HIGH-HE — High-High Efficiency
IFM — Indoor (Evaporator) Fan Motor
P.E. — Power Exhaust

* RAH036-RAH072 — One-Stage Cooling
 RAH073-RAH150 — Two-Stage Cooling

† On 575v units, the ERV motors are 230v or 460v.

NOTES: "STD" and "MED" IFM type are belt drive for single phase RAH units with Hot Gas Re-Heat system. Single phase RAH units without Hot Gas Re-Heat must use "DD-STD" IFM type only.

RAH036-150 MCA MOCP DATA

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAH036	208/230-1-60	DD- STD	NONE	—	—	30	45	29	88	32	45	31	90	—	—	—	—	—	—	—	—
			101A	3.3/4.4	15.9/ 18.3	30/33	45/45	29/30	88/88	32/35	45/45	31/32	90/90	—	—	—	—	—	—	—	—
			102A	4.9/6.5	23.5/ 27.1	39/44	45/45	36/40	88/88	41/46	45/50	38/42	90/90	—	—	—	—	—	—	—	—
			103B	6.5/8.7	31.4/ 36.3	49/55	50/60	45/50	88/88	51/57	60/60	47/52	90/90	—	—	—	—	—	—	—	—
			104B	7.9/ 10.5	37.9/ 43.8	57/64	60/70	52/59	88/88	59/67	60/70	54/61	90/90	—	—	—	—	—	—	—	—
			102A+102A	9.8/ 13.0	46.9/ 54.2	68/77	70/80	62/71	88/88	71/80	80/80	65/73	90/90	—	—	—	—	—	—	—	—
			NONE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		STD	101A	3.3/4.4	15.9/ 18.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			102A	4.9/6.5	23.5/ 27.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			103B	6.5/8.7	31.4/ 36.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			104B	7.9/ 10.5	37.9/ 43.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			102A+102A	9.8/ 13.0	46.9/ 54.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			NONE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		MED	101A	3.3/4.4	15.9/ 18.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			102A	4.9/6.5	23.5/ 27.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			103B	6.5/8.7	31.4/ 36.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			104B	7.9/ 10.5	37.9/ 43.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			102A+102A	9.8/ 13.0	46.9/ 54.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			NONE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

See legend on page 108.

Electrical data (cont)

RAH036-150 MCA MOC P DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwrd fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwrd fr/unit)			
						FUSE or HACR BRKR		DISC. SIZE		FUSE or HACR BRKR		DISC. SIZE		FUSE or HACR BRKR		DISC. SIZE		FUSE or HACR BRKR		DISC. SIZE	
						MCA	FLA	LRA	MCA	FLA	LRA	MCA	FLA	LRA	MCA	FLA	LRA	MCA	FLA	LRA	
RAH036	208/230-3-60	DD- STD	NONE	—	—	22	30	22	82	24	30	24	84	27	30	27	87	29	35	29	89
			101A	3.3/4.4	9.2/ 10.6	22/23	30/30	22/22	82/82	24/25	30/30	24/24	84/84	27/29	30/30	27/27	87/87	30/31	35/35	29/29	89/89
			102A	4.9/6.5	13.6/ 15.6	27/29	30/30	24/26	82/82	29/32	30/35	26/29	84/84	33/35	35/35	30/32	87/87	35/38	35/40	32/34	89/89
			103B	6.5/8.7	18.1/ 20.9	32/36	35/40	29/33	82/82	35/38	35/40	32/35	84/84	38/42	40/45	35/38	87/87	41/44	45/45	37/40	89/89
			104B	7.9/ 10.5	21.9/ 25.3	37/41	40/45	34/38	82/82	39/44	40/45	36/40	84/84	43/47	45/50	39/43	87/87	45/50	50/50	41/45	89/89
			105A	12.0/ 16.0	33.4/ 38.5	51/58	60/60	47/53	82/82	54/60	60/60	49/55	84/84	57/64	60/70	52/58	87/87	60/66	60/70	55/60	89/89
		STD	NONE	—	—	20	25	19	94	22	30	21	96	24	30	25	99	26	30	27	101
			101A	3.3/4.4	9.2/ 10.6	20/20	25/25	19/19	94/94	22/23	30/30	21/21	96/96	24/26	30/30	25/25	99/99	27/29	30/30	27/27	101/ 101
			102A	4.9/6.5	13.6/ 15.6	24/26	25/30	22/24	94/94	26/29	30/30	24/26	96/96	30/32	30/35	27/29	99/99	32/35	35/35	29/32	101/ 101
			103B	6.5/8.7	18.1/ 20.9	30/33	30/35	27/30	94/94	32/35	35/40	29/32	96/96	36/39	40/40	32/36	99/99	38/41	40/45	35/38	101/ 101
			104B	7.9/ 10.5	21.9/ 25.3	34/39	35/40	31/35	94/94	37/41	40/45	33/37	96/96	40/45	40/45	37/41	99/99	43/47	45/50	39/43	101/ 101
			105A	12.0/ 16.0	33.4/ 38.5	49/55	50/60	44/50	94/94	51/57	60/60	47/52	96/96	55/61	60/70	50/56	99/99	57/63	60/70	52/58	101/ 101
		MED	NONE	—	—	20/19	25/25	19/19	111	22/21	30/30	21/21	113	24/24	30/30	25/24	116	26/26	30/30	27/26	118
			101A	3.3/4.4	9.2/ 10.6	20/20	25/25	19/19	111/ 111	22/22	30/30	21/21	113/ 113	24/26	30/30	25/24	116/ 116	27/28	30/30	27/26	118/ 118
			102A	4.9/6.5	13.6/ 15.6	24/26	25/30	22/24	111/ 111	26/28	30/30	24/26	113/ 113	30/32	30/35	27/29	116/ 116	32/34	35/35	29/31	118/ 118
			103B	6.5/8.7	18.1/ 20.9	30/33	30/35	27/30	111/ 111	32/35	35/35	29/32	113/ 113	36/39	40/40	32/35	116/ 116	38/41	40/45	35/37	118/ 118
			104B	7.9/ 10.5	21.9/ 25.3	34/38	35/40	31/35	111/ 111	37/41	40/45	33/37	113/ 113	40/44	40/45	37/40	116/ 116	43/47	45/50	39/42	118/ 118
			105A	12.0/ 16.0	33.4/ 38.5	49/55	50/60	44/50	111/ 111	51/57	60/60	47/52	113/ 113	55/61	60/70	50/55	116/ 116	57/63	60/70	52/58	118/ 118
		HIGH	NONE	—	—	23/23	30/30	23/23	147	25/25	30/30	25/25	149	28/28	30/30	28/28	152	30/29	35/35	30/30	154
			101A	3.3/4.4	9.2/ 10.6	23/24	30/30	23/23	147/ 147	25/26	30/30	25/25	149/ 149	28/30	30/30	28/28	152/ 152	31/32	35/35	30/30	154/ 154
			102A	4.9/6.5	13.6/ 15.6	28/30	30/30	25/27	147/ 147	30/33	30/35	27/30	149/ 149	34/36	35/40	31/33	152/ 152	36/39	40/40	33/35	154/ 154
			103B	6.5/8.7	18.1/ 20.9	34/37	35/40	30/34	147/ 147	36/39	40/40	33/36	149/ 149	40/43	40/45	36/39	152/ 152	42/45	45/45	38/41	154/ 154
			104B	7.9/ 10.5	21.9/ 25.3	38/42	40/45	35/39	147/ 147	41/45	45/45	37/41	149/ 149	44/48	45/50	40/44	152/ 152	47/51	50/60	43/46	154/ 154
			105A	12.0/ 16.0	33.4/ 38.5	53/59	60/60	48/54	147/ 147	55/61	60/70	50/56	149/ 149	59/65	60/70	54/59	152/ 152	61/67	70/70	56/62	154/ 154

See legend on page 108.

RAH036-150 MCA MOCP DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAH036	460-3-60	DD-STD	NONE	—	—	12	15	12	43	13	15	13	44	14	20	14	45	15	20	16	46
			106A	6.0	7.2	14	15	13	43	16	20	14	44	17	20	15	45	18	20	17	46
			107A	8.8	10.6	19	20	17	43	20	20	18	44	21	25	19	45	23	25	20	46
			108A	11.5	13.8	23	25	20	43	24	25	22	44	25	25	23	45	27	30	24	46
			109A	14.0	16.8	26	30	24	43	28	30	25	44	29	30	26	45	30	30	28	46
		STD	NONE	—	—	11	15	10	48	12	15	11	49	13	15	13	50	14	20	14	51
			106A	6.0	7.2	13	15	11	48	14	15	12	49	15	15	14	50	17	20	15	51
			107A	8.8	10.6	17	20	15	48	18	20	16	49	20	20	18	50	21	25	19	51
			108A	11.5	13.8	21	25	19	48	22	25	20	49	24	25	21	50	25	25	23	51
			109A	14.0	16.8	25	25	22	48	26	30	23	49	27	30	25	50	29	30	26	51
		MED	NONE	—	—	11	15	10	57	12	15	11	58	13	15	13	59	14	15	14	60
			106A	6.0	7.2	13	15	11	57	14	15	12	58	15	15	14	59	17	20	15	60
			107A	8.8	10.6	17	20	15	57	18	20	16	58	20	20	18	59	21	25	19	60
			108A	11.5	13.8	21	25	19	57	22	25	20	58	24	25	21	59	25	25	22	60
			109A	14.0	16.8	25	25	22	57	26	30	23	58	27	30	25	59	29	30	26	60
		HIGH	NONE	—	—	12	15	12	75	13	15	13	76	15	20	15	77	16	20	16	78
			106A	6.0	7.2	15	15	13	75	16	20	14	76	17	20	16	77	19	20	17	78
			107A	8.8	10.6	19	20	17	75	20	20	18	76	22	25	20	77	23	25	21	78
			108A	11.5	13.8	23	25	21	75	24	25	22	76	26	30	23	77	27	30	24	78
			109A	14.0	16.8	27	30	24	75	28	30	25	76	29	30	27	77	31	35	28	78
	575-3-60	DD-STD	NONE	—	—	10	15	10	42	12	15	12	44	11	15	12	44	13	15	14	46
			297A	10.0	9.6	17	20	16	42	20	20	18	44	20	20	18	44	22	25	20	46
			298A	15.0	14.4	23	25	21	42	26	30	23	44	26	30	23	44	28	30	25	46
		STD	NONE	—	—	7	15	6	45	9	15	9	47	9	15	8	47	11	15	10	49
			297A	10.0	9.6	14	15	12	45	16	20	15	47	16	20	14	47	18	20	17	49
			298A	15.0	14.4	20	20	18	45	22	25	20	47	22	25	20	47	24	25	22	49
		MED	NONE	—	—	7	15	6	45	9	15	9	47	9	15	8	47	11	15	10	49
			297A	10.0	9.6	14	15	12	45	16	20	15	47	16	20	14	47	18	20	17	49
			298A	15.0	14.4	20	20	18	45	22	25	20	47	22	25	20	47	24	25	22	49
		HIGH	NONE	—	—	8	15	7	49	10	15	9	51	9	15	9	51	11	15	11	53
			297A	10.0	9.6	15	15	13	49	17	20	16	51	17	20	15	51	19	20	17	53
			298A	15.0	14.4	21	25	19	49	23	25	21	51	23	25	21	51	25	30	23	53
RAH048	208/230-1-60	DD-STD	NONE	—	—	37	50	35	127	38	50	37	129	—	—	—	—	—	—	—	—
			101A	3.3/4.4	15.9/18.3	37/37	50/50	35/35	127/127	38/38	50/50	37/37	129/129	—	—	—	—	—	—	—	—
			103B	6.5/8.7	31.4/36.3	49/55	50/60	45/50	127/127	51/57	60/60	47/52	129/129	—	—	—	—	—	—	—	—
			102A+102A	9.8/13.0	46.9/54.2	68/77	70/80	62/71	127/127	71/80	80/80	65/73	129/129	—	—	—	—	—	—	—	—
			103B+103B	13.1/17.4	62.8/72.5	88/100	90/100	81/92	127/127	91/103	100/110	83/94	129/129	—	—	—	—	—	—	—	—
		STD	104B+104B	15.8/21.0	75.8/87.5	104/119	110/125	96/109	127/127	107/121	110/125	98/111	129/129	—	—	—	—	—	—	—	—
			NONE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			101A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			103B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			102A+102A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		MED	103B+103B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			104B+104B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			NONE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			101A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			103B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			102A+102A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			103B+103B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			104B+104B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Electrical data (cont)

RAH036-150 MCA MOCP DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwrd fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwrd fr/unit)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAH048	208/230-3-60	DD-STD	NONE	—	—	26	30	26	93	28	40	28	95	31	40	31	98	33	45	34	100
			102A	4.9/6.5	13.6/15.6	27/29	30/30	26/26	93/93	29/32	40/40	28/29	95/95	33/35	40/40	31/32	98/98	35/38	45/45	34/34	100/100
			103B	6.5/8.7	18.1/20.9	32/36	35/40	29/33	93/93	35/38	40/40	32/35	95/95	38/42	40/45	35/38	98/98	41/44	45/45	37/40	100/100
			105A	12.0/16.0	33.4/38.5	51/58	60/60	47/53	93/93	54/60	60/60	49/55	95/95	57/64	60/70	52/58	98/98	60/66	60/70	55/60	100/100
			104B+104B	15.8/21.0	43.8/50.5	64/73	70/80	59/67	93/93	67/75	70/80	61/69	95/95	70/79	80/80	64/72	98/98	73/81	80/90	67/74	100/100
		STD	NONE	—	—	24	30	23	105	26	30	26	107	29	40	29	110	31	40	31	112
			102A	4.9/6.5	13.6/15.6	24/26	30/30	23/24	105/105	26/29	30/30	26/26	107/107	30/32	40/40	29/29	110/110	32/35	40/40	31/32	112/112
			103B	6.5/8.7	18.1/20.9	30/33	30/35	27/30	105/105	32/35	35/40	29/32	107/107	36/39	40/40	32/36	110/110	38/41	40/45	35/38	112/112
			105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	105/105	51/57	60/60	47/52	107/107	55/61	60/70	50/56	110/110	57/63	60/70	52/58	112/112
			104B+104B	15.8/21.0	43.8/50.5	62/70	70/70	56/64	105/105	64/72	70/80	59/66	107/107	68/76	70/80	62/70	110/110	70/78	70/80	64/72	112/112
		MED	NONE	—	—	24/24	30/30	23/23	122	26/26	30/30	26/25	124	29/29	40/40	29/29	127	31/31	40/40	31/31	129
			102A	4.9/6.5	13.6/15.6	24/26	30/30	23/24	122/122	26/28	30/30	26/26	124/124	30/32	40/40	29/29	127/127	32/34	40/40	31/31	129/129
			103B	6.5/8.7	18.1/20.9	30/33	30/35	27/30	122/122	32/35	35/35	29/32	124/124	36/39	40/40	32/35	127/127	38/41	40/45	35/37	129/129
			105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	122/122	51/57	60/60	47/52	124/124	55/61	60/70	50/55	127/127	57/63	60/70	52/58	129/129
			104B+104B	15.8/21.0	43.8/50.5	62/70	70/70	56/64	122/122	64/72	70/80	59/66	124/124	68/76	70/80	62/69	127/127	70/78	70/80	64/71	129/129
		HIGH	NONE	—	—	27/27	40/40	27/27	158	29/29	40/40	29/29	160	32/32	45/45	33/32	163	34/34	45/45	35/35	165
			102A	4.9/6.5	13.6/15.6	28/30	40/40	27/27	158/158	30/33	40/40	29/30	160/160	34/36	45/45	33/33	163/163	36/39	45/45	35/35	165/165
			103B	6.5/8.7	18.1/20.9	34/37	40/40	30/34	158/158	36/39	40/40	33/36	160/160	40/43	45/45	36/39	163/163	42/45	45/45	38/41	165/165
			105A	12.0/16.0	33.4/38.5	53/59	60/60	48/54	158/158	55/61	60/70	50/56	160/160	59/65	60/70	54/59	163/163	61/67	70/70	56/62	165/165
			104B+104B	15.8/21.0	43.8/50.5	66/74	70/80	60/68	158/158	68/76	70/80	62/70	160/160	72/80	80/80	66/73	163/163	74/82	80/90	68/75	165/165
	460-3-60	DD-STD	NONE	—	—	13	15	13	47	14	20	14	48	15	20	15	49	16	20	16	50
			106A	6.0	7.2	14	15	13	47	16	20	14	48	17	20	15	49	18	20	17	50
			108A	11.5	13.8	23	25	20	47	24	25	22	48	25	25	23	49	27	30	24	50
			109A	14.0	16.8	26	30	24	47	28	30	25	48	29	30	26	49	30	30	28	50
			108A+108A	23.0	27.7	40	40	36	47	41	45	38	48	43	45	39	49	44	45	40	50
		STD	NONE	—	—	12	15	11	52	13	15	12	53	14	20	14	54	15	20	15	55
			106A	6.0	7.2	13	15	11	52	14	15	12	53	15	20	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	61	13	15	12	62	14	15	14	63	15	20	15	64
			106A	6.0	7.2	13	15	11	61	14	15	12	62	15	15	14	63	17	20	15	64
			108A	11.5	13.8	21	25	19	61	22	25	20	62	24	25	21	63	25	25	22	64
			109A	14.0	16.8	25	25	22	61	26	30	23	62	27	30	25	63	29	30	26	64
			108A+108A	23.0	27.7	38	40	35	61	39	40	36	62	41	45	37	63	42	45	38	64
		HIGH	NONE	—	—	13	15	13	79	14	20	14	80	16	20	16	81	17	20	17	82
			106A	6.0	7.2	15	15	13	79	16	20	14	80	17	20	16	81	19	20	17	82
			108A	11.5	13.8	23	25	21	79	24	25	22	80	26	30	23	81	27	30	24	82
			109A	14.0	16.8	27	30	24	79	28	30	25	80	29	30	27	81	31	35	28	82
			108A+108A	23.0	27.7	40	40	37	79	42	45	38	80	43	45	39	81	44	45	40	82
	575-3-60	DD-STD	NONE	—	—	11	15	11	39	13	15	13	41	13	15	13	41	15	20	15	43
			297A	10.0	9.6	17	20	16	39	20	20	18	41	20	20	18	41	22	25	20	43
			298A	15.0	14.4	23	25	21	39	26	30	23	41	26	30	23	41	28	30	25	43
		STD	NONE	—	—	9	15	8	42	10	15	10	44	10	15	10	44	12	15	12	46
			297A	10.0	9.6	14	15	12	42	16	20	15	44	16	20	14	44	18	20	17	46
			298A	15.0	14.4	20	20	18	42	22	25	20	44	22	25	20	44	24	25	22	46
		MED	NONE	—	—	9	15	8	42	11	15	11	44	11	15	10	44	13	15	13	46
			297A	10.0	9.6	14	15	13	42	17	20	15	44	17	20	15	44	19	20	17	46
			298A	15.0	14.4	20	25	18	42	23	25	21	44	23	25	20	44	25	25	23	46
		HIGH	NONE	—	—	10	15	10	57	12	15	12	59	12	15	12	59	14	15	14	61
			297A	10.0	9.6	16	20	14	57	18	20	16	59	18	20	16	59	20	25	18	61
			298A	15.0	14.4	22	25	20	57	24	25	22	59	24	25	22	59	26	30	24	61

RAH036-150 MCA MOCP DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA
RAH060	208/230-1-60	DD-STD	NONE	—	—	41	60	39	144	42	60	41	146	—	—	—	—	—	—	—	—
			102A	4.9/6.5	23.5/27.1	41/44	60/60	39/40	144/144	42/46	60/60	41/42	146/146	—	—	—	—	—	—	—	—
			103B	6.5/8.7	31.4/36.3	49/55	60/60	45/50	144/144	51/57	60/60	47/52	146/146	—	—	—	—	—	—	—	—
			102A+102A	9.8/13.0	46.9/54.2	68/77	70/80	62/71	144/144	71/80	80/80	65/73	146/146	—	—	—	—	—	—	—	—
			103B+103B	13.1/17.4	62.8/72.5	88/100	90/100	81/92	144/144	91/103	100/110	83/94	146/146	—	—	—	—	—	—	—	—
			104B+104B	15.8/21.0	75.8/87.5	104/119	110/125	96/109	144/144	107/121	110/125	98/111	146/146	—	—	—	—	—	—	—	—
		STD	NONE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			102A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			103B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			102A+102A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			103B+103B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			104B+104B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		MED	NONE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			102A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			103B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			102A+102A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			103B+103B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			104B+104B	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	208/230-3-60	DD-STD	NONE	—	—	29	40	28	120	31	45	31	122	34	45	34	125	36	50	36	127
			102A	4.9/6.5	13.6/15.6	29/29	40/40	28/28	120/120	31/32	45/45	31/31	122/122	34/35	45/45	34/34	125/125	36/38	50/50	36/36	127/127
			104B	7.9/10.5	21.9/25.3	37/41	40/45	34/38	120/120	39/44	45/45	36/40	122/122	43/47	45/50	39/43	125/125	45/50	50/50	41/45	127/127
			105A	12.0/16.0	33.4/38.5	51/58	60/60	47/53	120/120	54/60	60/60	49/55	122/122	57/64	60/70	52/58	125/125	60/66	60/70	55/60	127/127
			104B+104B	15.8/21.0	43.8/50.5	64/73	70/80	59/67	120/120	67/75	70/80	61/69	122/122	70/79	80/80	64/72	125/125	73/81	80/90	67/74	127/127
			104B+105A	19.9/26.5	55.2/63.8	79/89	80/90	72/82	120/120	81/92	90/100	74/84	122/122	85/95	90/100	78/87	125/125	87/98	90/100	80/90	127/127
		STD	NONE	—	—	27	40	26	132	29	40	28	134	32	45	31	137	34	45	34	139
			102A	4.9/6.5	13.6/15.6	27/27	40/40	26/26	132/132	29/29	40/40	28/28	134/134	32/32	45/45	31/31	137/137	34/35	45/45	34/34	139/139
			104B	7.9/10.5	21.9/25.3	34/39	40/40	31/35	132/132	37/41	40/45	33/37	134/134	40/45	45/45	37/41	137/137	43/47	45/50	39/43	139/139
			105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	132/132	51/57	60/60	47/52	134/134	55/61	60/70	50/56	137/137	57/63	60/70	52/58	139/139
			104B+104B	15.8/21.0	43.8/50.5	62/70	70/70	56/64	132/132	64/72	70/80	59/66	134/134	68/76	70/80	62/70	137/137	70/78	70/80	64/72	139/139
			104B+105A	19.9/26.5	55.2/63.8	76/87	80/90	69/79	132/132	78/89	80/90	72/82	134/134	82/93	90/100	75/85	137/137	84/95	90/100	77/87	139/139
		MED	NONE	—	—	30/30	45/45	30/29	185	32/32	45/45	32/32	187	35/35	50/50	35/35	190	37/37	50/50	37/37	192
			102A	4.9/6.5	13.6/15.6	30/30	45/45	30/29	185/185	32/33	45/45	32/32	187/187	35/36	50/50	35/35	190/190	37/39	50/50	37/37	192/192
			104B	7.9/10.5	21.9/25.3	38/42	45/45	35/39	185/185	41/45	45/45	37/41	187/187	44/48	50/50	40/44	190/190	47/51	50/60	43/46	192/192
			105A	12.0/16.0	33.4/38.5	53/59	60/60	48/54	185/185	55/61	60/70	50/56	187/187	59/65	60/70	54/59	190/190	61/67	70/70	56/62	192/192
			104B+104B	15.8/21.0	43.8/50.5	66/74	70/80	60/68	185/185	68/76	70/80	62/70	187/187	72/80	80/80	66/73	190/190	74/82	80/90	68/75	192/192
			104B+105A	19.9/26.5	55.2/63.8	80/91	80/100	73/83	185/185	82/93	90/100	75/85	187/187	86/97	90/100	79/88	190/190	88/99	90/100	81/91	192/192
		HIGH	NONE	—	—	30/30	45/45	30/29	185	32/32	45/45	32/32	187	35/35	50/50	35/35	190	37/37	50/50	37/37	192
			102A	4.9/6.5	13.6/15.6	30/30	45/45	30/29	185/185	32/33	45/45	32/32	187/187	35/36	50/50	35/35	190/190	37/39	50/50	37/37	192/192
			104B	7.9/10.5	21.9/25.3	38/42	45/45	35/39	185/185	41/45	45/45	37/41	187/187	44/48	50/50	40/44	190/190	47/51	50/60	43/46	192/192
			105A	12.0/16.0	33.4/38.5	53/59	60/60	48/54	185/185	55/61	60/70	50/56	187/187	59/65	60/70	54/59	190/190	61/67	70/70	56/62	192/192
			104B+104B	15.8/21.0	43.8/50.5	66/74	70/80	60/68	185/185	68/76	70/80	62/70	187/187	72/80	80/80	66/73	190/190	74/82	80/90	68/75	192/192
			104B+105A	19.9/26.5	55.2/63.8	80/91	80/100	73/83	185/185	82/93	90/100	75/85	187/187	86/97	90/100	79/88	190/190	88/99	90/100	81/91	192/192

See legend on page 108.

Electrical data (cont)

RAH036-150 MCA MOCP DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)			
						DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR
						FLA	LRA			FLA	LRA			FLA	LRA			FLA	LRA		
RAH060	460-3-60	DD-STD	NONE	—	—	14	20	14	58	15	20	15	59	16	20	16	60	17	20	17	61
			106A	6.0	7.2	14	20	14	58	16	20	15	59	17	20	16	60	18	20	17	61
			108A	11.5	13.8	23	25	20	58	24	25	22	59	25	25	23	60	27	30	24	61
			109A	14.0	16.8	26	30	24	58	28	30	25	59	29	30	26	60	30	30	28	61
			108A+108A	23.0	27.7	40	40	36	58	41	45	38	59	43	45	39	60	44	45	40	61
			108A+109A	25.5	30.7	44	45	40	58	45	45	41	59	47	50	42	60	48	50	44	61
		STD	NONE	—	—	13	15	12	63	14	20	13	64	15	20	15	65	16	20	16	66
			106A	6.0	7.2	13	15	12	63	14	20	13	64	15	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	90	15	20	15	91	17	20	16	92	18	20	18	93
			106A	6.0	7.2	15	20	14	90	16	20	15	91	17	20	16	92	19	20	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
		HIGH	NONE	—	—	14	20	14	90	15	20	15	91	17	20	16	92	18	20	18	93
			106A	6.0	7.2	15	20	14	90	16	20	15	91	17	20	16	92	19	20	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	DD-STD	NONE	—	—	12	15	12	46	14	15	14	48	13	15	13	48	15	20	16	50
			298A	—	—	23	25	21	46	26	30	23	48	26	30	23	48	28	30	25	50
			301A	25.0	24.1	36	40	32	46	38	40	35	48	38	40	34	48	40	40	36	50
		STD	NONE	—	—	9	15	8	49	11	15	10	51	11	15	10	51	13	15	12	53
			298A	15.0	14.4	20	20	18	49	22	25	20	51	22	25	20	51	24	25	22	53
			301A	25.0	24.1	32	35	29	49	34	35	31	51	34	35	31	51	37	40	33	53
		MED	NONE	—	—	10	15	9	53	12	15	11	55	11	15	11	55	13	15	13	57
			298A	15.0	14.4	21	25	19	53	23	25	21	55	23	25	21	55	25	30	23	57
			301A	25.0	24.1	33	35	30	53	35	40	32	55	35	35	32	55	38	40	34	57
		HIGH	NONE	—	—	11	15	10	64	12	15	12	66	12	15	12	66	14	15	14	68
			298A	15.0	14.4	22	25	20	64	24	25	22	66	24	25	22	66	26	30	24	68
			301A	25.0	24.1	34	35	31	64	36	40	33	66	36	40	33	66	39	40	35	68

RAH036-150 MCA MOCP DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwrdr fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwrdr fr/unit)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	FLA	LRA	MCA	FUSE or HACR BRKR	FLA	LRA
								FLA	LRA			FLA	LRA								
RAH072	208/230-3-60	STD	NONE	—	—	33	50	32	161	37	50	36	165	38	50	37	166	42	60	42	170
			264A	4.9/6.5	13.6/ 15.6	33/33	50/50	32/32	161/ 161	37/37	50/50	36/36	165/ 165	38/38	50/50	37/37	166/ 166	42/42	60/60	42/42	170/ 170
			117A	7.8/ 10.4	21.7/ 25.0	34/38	50/50	32/35	161/ 161	39/43	50/50	36/39	165/ 165	40/44	50/50	37/40	166/ 166	45/49	60/60	42/45	170/ 170
			110A	12.0/ 16.0	33.4/ 38.5	49/55	50/60	44/50	161/ 161	53/60	60/60	49/55	165/ 165	55/61	60/70	50/56	166/ 166	59/66	60/70	54/60	170/ 170
			117A+117A	15.8/ 21.0	43.8/ 50.5	62/70	70/70	56/64	161/ 161	66/75	70/80	61/68	165/ 165	68/76	70/80	62/70	166/ 166	72/81	80/90	66/74	170/ 170
			110A+117A	19.9/ 26.5	55.2/ 63.8	76/87	80/90	69/79	161/ 161	81/91	90/100	74/84	165/ 165	82/93	90/100	75/85	166/ 166	87/97	90/100	79/89	170/ 170
		MED	NONE	—	—	36/36	50/50	36/36	214	40/40	50/50	40/40	218	41/41	60/60	41/41	219	45/45	60/60	46/45	223
			264A	4.9/6.5	13.6/ 15.6	36/36	50/50	36/36	214/ 214	40/40	50/50	40/40	218/ 218	41/41	60/60	41/41	219/ 219	45/45	60/60	46/45	223/ 223
			117A	7.8/ 10.4	21.7/ 25.0	38/42	50/50	36/38	214/ 214	43/47	50/50	40/43	218/ 218	44/48	60/60	41/44	219/ 219	49/53	60/60	46/48	223/ 223
			110A	12.0/ 16.0	33.4/ 38.5	53/59	60/60	48/54	214/ 214	57/64	60/70	52/58	218/ 218	59/65	60/70	54/59	219/ 219	63/70	70/70	58/64	223/ 223
			117A+117A	15.8/ 21.0	43.8/ 50.5	66/74	70/80	60/68	214/ 214	70/79	80/80	64/72	218/ 218	72/80	80/80	66/73	219/ 219	76/85	80/90	70/78	223/ 223
			110A+117A	19.9/ 26.5	55.2/ 63.8	80/91	80/100	73/83	214/ 214	85/95	90/100	78/87	218/ 218	86/97	90/100	79/88	219/ 219	91/ 101	100/ 110	83/93	223/ 223
		HIGH	NONE	—	—	42/41	60/50	42/41	230	45/44	60/60	46/45	234	46/45	60/60	47/46	235	50/49	60/60	52/50	239
			264A	4.9/6.5	13.6/ 15.6	42/41	60/50	42/41	230/ 230	45/44	60/60	46/45	234/ 234	46/45	60/60	47/46	235/ 235	50/49	60/60	52/50	239/ 239
			117A	7.8/ 10.4	21.7/ 25.0	45/48	60/50	42/43	230/ 230	49/52	60/60	46/48	234/ 234	51/54	60/60	47/49	235/ 235	55/58	60/60	52/53	239/ 239
			110A	12.0/ 16.0	33.4/ 38.5	59/64	60/70	54/59	230/ 230	64/69	70/70	58/63	234/ 234	65/70	70/70	60/64	235/ 235	70/75	70/80	64/69	239/ 239
			117A+117A	15.8/ 21.0	43.8/ 50.5	72/79	80/80	66/73	230/ 230	77/84	80/90	70/77	234/ 234	78/85	80/90	72/78	235/ 235	83/90	90/90	76/83	239/ 239
			110A+117A	19.9/ 26.5	55.2/ 63.8	86/96	90/100	79/88	230/ 230	91/ 101	100/ 110	83/92	234/ 234	92/ 102	100/ 110	85/93	235/ 235	97/ 107	100/ 110	89/98	239/ 239
	460-3-60	STD	NONE	—	—	15	20	14	79	17	20	16	81	17	20	17	81	19	25	19	83
			265A	6.0	7.2	15	20	14	79	17	20	16	81	17	20	17	81	19	25	19	83
			266A	11.5	13.8	21	25	19	79	23	25	21	81	24	25	21	81	26	30	23	83
			267A	14.0	16.8	25	25	22	79	27	30	24	81	27	30	25	81	30	30	27	83
			268A	23.0	27.7	38	40	35	79	41	45	37	81	41	45	37	81	43	45	39	83
			269A	25.5	30.7	42	45	38	79	44	45	40	81	45	45	41	81	47	50	43	83
		MED	NONE	—	—	17	20	16	106	18	25	18	108	19	25	19	108	21	25	21	110
			265A	6.0	7.2	17	20	16	106	18	25	18	108	19	25	19	108	21	25	21	110
			266A	11.5	13.8	23	25	21	106	25	25	23	108	26	30	23	108	28	30	25	110
			267A	14.0	16.8	27	30	24	106	29	30	26	108	29	30	27	108	32	35	29	110
			268A	23.0	27.7	40	40	37	106	43	45	39	108	43	45	39	108	45	45	41	110
			269A	25.5	30.7	44	45	40	106	46	50	42	108	47	50	43	108	49	50	45	110
		HIGH	NONE	—	—	19	25	19	114	21	25	21	116	21	25	21	116	23	30	23	118
			265A	6.0	7.2	19	25	19	114	21	25	21	116	21	25	21	116	23	30	23	118
			266A	11.5	13.8	26	30	23	114	28	30	25	116	28	30	26	116	31	35	28	118
			267A	14.0	16.8	29	30	27	114	32	35	29	116	32	35	29	116	34	35	31	118
			268A	23.0	27.7	43	45	39	114	45	45	41	116	46	50	42	116	48	50	44	118
			269A	25.5	30.7	47	50	43	114	49	50	45	116	50	50	45	116	52	60	47	118
	575-3-60	STD	NONE	—	—	12	15	11	66	15	20	15	70	13	15	13	68	17	20	17	72
			118A	18.0	17.3	24	25	22	66	29	30	26	70	26	30	24	68	31	35	28	72
			299A	28.0	26.9	36	40	33	66	41	45	37	70	38	40	35	68	43	45	39	72
		MED	NONE	—	—	13	15	12	81	17	20	17	85	14	20	14	83	18	20	19	87
			118A	18.0	17.3	26	30	23	81	30	30	27	85	28	30	25	83	32	35	29	87
			299A	28.0	26.9	38	40	34	81	42	45	39	85	40	40	36	83	44	45	40	87
		HIGH	NONE	—	—	16	20	15	95	19	25	20	99	17	20	17	97	21	25	22	101
			118A	18.0	17.3	29	30	26	95	34	35	31	99	31	35	28	97	36	40	33	101
			299A	28.0	26.9	41	45	37	95	46	50	42	99	43	45	39	97	48	50	44	101

See legend on page 108.

Electrical data (cont)

RAH036-150 MCA MOCP DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwrdr fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwrdr fr/unit)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	FLA	LRA	MCA	FUSE or HACR BRKR	FLA	LRA
								FLA	LRA			FLA	LRA								
RAH073	208/230-3-60	STD	NONE	—	—	31	45	30	161	34	50	34	165	35	50	35	166	39	50	39	170
			264A	4.9/6.5	13.6/ 15.6	31/31	45/45	30/30	161/ 161	34/34	50/50	34/34	165/ 165	35/35	50/50	35/35	166/ 166	39/39	50/50	39/39	170/ 170
			117A	7.8/ 10.4	21.7/ 25.0	34/38	45/45	31/35	161/ 161	39/43	50/50	35/39	165/ 165	40/44	50/50	36/40	166/ 166	45/49	50/50	41/45	170/ 170
			110A	12.0/ 16.0	33.4/ 38.5	49/55	50/60	44/50	161/ 161	53/60	60/60	49/55	165/ 165	55/61	60/70	50/56	166/ 166	59/66	60/70	54/60	170/ 170
			117A+117A	15.8/ 21.0	43.8/ 50.5	62/70	70/70	56/64	161/ 161	66/75	70/80	61/68	165/ 165	68/76	70/80	62/70	166/ 166	72/81	80/90	66/74	170/ 170
			110A+117A	19.9/ 26.5	55.2/ 63.8	76/87	80/90	69/79	161/ 161	81/91	90/100	74/84	165/ 165	82/93	90/100	75/85	166/ 166	87/97	90/100	79/89	170/ 170
		MED	NONE	—	—	34/34	50/50	33/33	214	38/37	50/50	38/37	218	39/38	50/50	39/39	219	42/42	50/50	43/43	223
			264A	4.9/6.5	13.6/ 15.6	34/34	50/50	33/33	214/ 214	38/37	50/50	38/37	218/ 218	39/38	50/50	39/39	219/ 219	42/42	50/50	43/43	223/ 223
			117A	7.8/ 10.4	21.7/ 25.0	38/42	50/50	35/38	214/ 214	43/47	50/50	39/43	218/ 218	44/48	50/50	40/44	219/ 219	49/53	50/60	45/48	223/ 223
			110A	12.0/ 16.0	33.4/ 38.5	53/59	60/60	48/54	214/ 214	57/64	60/70	52/58	218/ 218	59/65	60/70	54/59	219/ 219	63/70	70/70	58/64	223/ 223
			117A+117A	15.8/ 21.0	43.8/ 50.5	66/74	70/80	60/68	214/ 214	70/79	80/80	64/72	218/ 218	72/80	80/80	66/73	219/ 219	76/85	80/90	70/78	223/ 223
			110A+117A	19.9/ 26.5	55.2/ 63.8	80/91	80/100	73/83	214/ 214	85/95	90/100	78/87	218/ 218	86/97	90/100	79/88	219/ 219	91/ 101	100/ 110	83/93	223/ 223
		HIGH	NONE	—	—	39/38	50/50	39/38	230	43/42	50/50	44/43	234	44/43	60/50	45/44	235	48/47	60/60	49/48	239
			264A	4.9/6.5	13.6/ 15.6	39/38	50/50	39/38	230/ 230	43/42	50/50	44/43	234/ 234	44/43	60/50	45/44	235/ 235	48/47	60/60	49/48	239/ 239
			117A	7.8/ 10.4	21.7/ 25.0	45/48	50/50	41/43	230/ 230	49/52	50/60	45/48	234/ 234	51/54	60/60	46/49	235/ 235	55/58	60/60	50/53	239/ 239
			110A	12.0/ 16.0	33.4/ 38.5	59/64	60/70	54/59	230/ 230	64/69	70/70	58/63	234/ 234	65/70	70/70	60/64	235/ 235	70/75	70/80	64/69	239/ 239
			117A+117A	15.8/ 21.0	43.8/ 50.5	72/79	80/80	66/73	230/ 230	77/84	80/90	70/77	234/ 234	78/85	80/90	72/78	235/ 235	83/90	90/90	76/83	239/ 239
			110A+117A	19.9/ 26.5	55.2/ 63.8	86/96	90/100	79/88	230/ 230	91/ 101	100/ 110	83/92	234/ 234	92/ 102	100/ 110	85/93	235/ 235	97/ 107	100/ 110	89/98	239/ 239
	460-3-60	STD	NONE	—	—	15	20	14	79	17	20	17	81	17	25	17	81	19	25	19	83
			265A	6.0	7.2	15	20	14	79	17	20	17	81	17	25	17	81	19	25	19	83
			266A	11.5	13.8	21	25	19	79	23	25	21	81	24	25	21	81	26	30	23	83
			267A	14.0	16.8	25	25	22	79	27	30	24	81	27	30	25	81	30	30	27	83
			268A	23.0	27.7	38	40	35	79	41	45	37	81	41	45	37	81	43	45	39	83
			269A	25.5	30.7	42	45	38	79	44	45	40	81	45	45	41	81	47	50	43	83
		MED	NONE	—	—	17	20	16	106	19	25	18	108	19	25	19	108	21	25	21	110
			265A	6.0	7.2	17	20	16	106	19	25	18	108	19	25	19	108	21	25	21	110
			266A	11.5	13.8	23	25	21	106	25	25	23	108	26	30	23	108	28	30	25	110
			267A	14.0	16.8	27	30	24	106	29	30	26	108	29	30	27	108	32	35	29	110
			268A	23.0	27.7	40	40	37	106	43	45	39	108	43	45	39	108	45	45	41	110
			269A	25.5	30.7	44	45	40	106	46	50	42	108	47	50	43	108	49	50	45	110
		HIGH	NONE	—	—	19	25	19	114	21	25	21	116	21	25	21	116	23	30	23	118
			265A	6.0	7.2	19	25	19	114	21	25	21	116	21	25	21	116	23	30	23	118
			266A	11.5	13.8	26	30	23	114	28	30	25	116	28	30	26	116	31	35	28	118
			267A	14.0	16.8	29	30	27	114	32	35	29	116	32	35	29	116	34	35	31	118
			268A	23.0	27.7	43	45	39	114	45	45	41	116	46	50	42	116	48	50	44	118
			269A	25.5	30.7	47	50	43	114	49	50	45	116	50	50	45	116	52	60	47	118
	575-3-60	STD	NONE	—	—	11	15	10	66	15	20	15	70	13	15	12	68	17	20	17	72
			118A	18.0	17.3	24	25	22	66	29	30	26	70	26	30	24	68	31	35	28	72
			299A	28.0	26.9	36	40	33	66	41	45	37	70	38	40	35	68	43	45	39	72
		MED	NONE	—	—	12	15	12	81	16	20	16	85	14	20	14	83	18	20	18	87
			118A	18.0	17.3	26	30	23	81	30	30	27	85	28	30	25	83	32	35	29	87
			299A	28.0	26.9	38	40	34	81	42	45	39	85	40	40	36	83	44	45	40	87
		HIGH	NONE	—	—	15	20	15	95	19	25	19	99	17	20	17	97	21	25	21	101
			118A	18.0	17.3	29	30	26	95	34	35	31	99	31	35	28	97	36	40	33	101
			299A	28.0	26.9	41	45	37	95	46	50	42	99	43	45	39	97	48	50	44	101

RAH036-150 MCA MOCP DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	FLA	LRA	MCA	FUSE or HACR BRKR	FLA	LRA
								FLA	LRA			FLA	LRA								
RAH090	208/230-3-60	STD	NONE	—	—	39	50	41	191	43	50	45	195	44	50	46	196	48	60	51	200
			117A	7.8/ 10.4	21.7/ 25.0	39/39	50/50	41/41	191/ 191	43/43	50/50	45/45	195/ 195	44/44	50/50	46/46	196/ 196	48/49	60/60	51/51	200/ 200
			110A	12.0/ 16.0	33.4/ 38.5	49/55	50/60	44/50	191/ 191	53/60	60/60	49/55	195/ 195	55/61	60/70	50/56	196/ 196	59/66	60/70	54/60	200/ 200
			111A	18.6/ 24.8	51.7/ 59.7	72/82	80/90	65/75	191/ 191	76/86	80/90	70/79	195/ 195	78/88	80/90	71/80	196/ 196	82/92	90/100	75/85	200/ 200
			112A	24.0/ 32.0	66.7/ 77.0	90/ 103	90/110	83/95	191/ 191	95/ 108	100/ 110	87/99	195/ 195	96/ 109	100/ 110	88/ 100	196/ 196	101/ 114	110/ 125	93/ 104	200/ 200
			112A+117A	31.8/ 42.4	88.4/ 102.0	117/ 134	125/ 150	108/ 123	191/ 191	122/ 139	125/ 150	112/ 128	195/ 195	123/ 140	125/ 150	113/ 129	196/ 196	128/ 145	150/ 150	118/ 133	200/ 200
		MED	NONE	—	—	41/41	50/50	43/42	229	45/45	50/50	47/47	233	46/46	50/50	48/48	234	50/49	60/60	53/52	238
			117A	7.8/ 10.4	21.7/ 25.0	41/41	50/50	43/42	229/ 229	45/45	50/50	47/47	233/ 233	46/46	50/50	48/48	234/ 234	50/51	60/60	53/52	238/ 238
			110A	12.0/ 16.0	33.4/ 38.5	51/57	60/60	46/52	229/ 229	56/62	60/70	51/56	233/ 233	57/63	60/70	52/58	234/ 234	62/68	70/70	56/62	238/ 238
			111A	18.6/ 24.8	51.7/ 59.7	74/83	80/90	67/76	229/ 229	78/88	80/90	72/81	233/ 233	80/89	80/90	73/82	234/ 234	84/94	90/100	77/86	238/ 238
			112A	24.0/ 32.0	66.7/ 77.0	92/ 105	100/ 110	85/96	229/ 229	97/ 110	100/ 110	89/ 101	233/ 233	98/ 111	100/ 125	90/ 102	234/ 234	103/ 116	110/ 125	95/ 106	238/ 238
			112A+117A	31.8/ 42.4	88.4/ 102.0	120/ 136	125/ 150	110/ 125	229/ 229	124/ 141	125/ 150	114/ 129	233/ 233	126/ 142	150/ 150	115/ 131	234/ 234	130/ 147	150/ 150	119/ 135	238/ 238
		HIGH	NONE	—	—	45	50	47	258	48	60	51	262	49	60	52	263	53	60	57	267
			117A	7.8/ 10.4	21.7/ 25.0	45/45	50/50	47/47	258/ 258	48/50	60/60	51/51	262/ 262	49/51	60/60	52/52	263/ 263	53/56	60/60	57/57	267/ 267
			110A	12.0/ 16.0	33.4/ 38.5	55/62	60/70	51/56	258/ 258	60/67	60/70	55/61	262/ 262	61/68	70/70	56/62	263/ 263	66/73	70/80	60/66	267/ 267
			111A	18.6/ 24.8	51.7/ 59.7	78/88	80/90	72/81	258/ 258	83/93	90/100	76/85	262/ 262	84/94	90/100	77/86	263/ 263	89/99	90/100	82/91	267/ 267
			112A	24.0/ 32.0	66.7/ 77.0	97/ 110	100/ 110	89/ 101	258/ 258	102/ 115	110/ 125	93/ 105	262/ 262	103/ 116	110/ 125	94/ 106	263/ 263	108/ 121	110/ 125	99/ 111	267/ 267
			112A+117A	31.8/ 42.4	88.4/ 102.0	124/ 141	125/ 150	114/ 129	258/ 258	129/ 146	150/ 150	118/ 134	262/ 262	130/ 147	150/ 150	119/ 135	263/ 263	135/ 152	150/ 175	124/ 139	267/ 267
	460-3-60	STD	NONE	—	—	18	20	19	95	20	25	21	97	21	25	21	97	22	25	23	99
			116B	13.9	16.7	25	25	22	95	27	30	24	97	27	30	25	97	30	30	27	99
			113B	16.5	19.8	28	30	26	95	31	35	28	97	31	35	28	97	33	35	30	99
			114B	27.8	33.4	45	50	41	95	48	50	43	97	48	50	44	97	50	60	46	99
			115B	33.0	39.7	53	60	49	95	56	60	51	97	56	60	51	97	58	60	53	99
			128B	41.7	50.2	66	70	61	95	69	70	63	97	69	70	63	97	71	80	65	99
		MED	NONE	—	—	19	25	20	114	21	25	22	116	21	25	22	116	23	25	24	118
			116B	13.9	16.7	26	30	23	114	28	30	25	116	28	30	26	116	31	35	28	118
			113B	16.5	19.8	29	30	27	114	32	35	29	116	32	35	29	116	34	35	31	118
			114B	27.8	33.4	46	50	42	114	49	50	44	116	49	50	45	116	51	60	47	118
			115B	33.0	39.7	54	60	50	114	57	60	52	116	57	60	52	116	59	60	54	118
			128B	41.7	50.2	67	70	62	114	70	70	64	116	70	70	64	116	72	80	66	118
		HIGH	NONE	—	—	21	25	22	129	23	25	24	131	23	25	24	131	25	30	27	133
			116B	13.9	16.7	28	30	25	129	30	30	27	131	31	35	28	131	33	35	30	133
			113B	16.5	19.8	32	35	29	129	34	35	31	131	35	35	31	131	37	40	33	133
			114B	27.8	33.4	49	50	45	129	51	60	47	131	52	60	47	131	54	60	49	133
			115B	33.0	39.7	57	60	52	129	59	60	54	131	59	60	54	131	62	70	56	133
			128B	41.7	50.2	70	70	64	129	72	80	66	131	73	80	66	131	75	80	68	133
	575-3-60	STD	NONE	—	—	13	15	13	77	17	20	17	81	14	15	15	79	18	20	19	83
			118A	18.0	17.3	24	25	22	77	29	30	26	81	26	30	24	79	31	35	28	83
			119A	36.0	34.6	46	50	42	77	50	60	46	81	48	50	44	79	53	60	48	83
		MED	NONE	—	—	13	15	13	81	17	20	18	85	15	20	15	83	19	20	20	87
			118A	18.0	17.3	25	25	22	81	29	30	27	85	27	30	24	83	31	35	29	87
			119A	36.0	34.6	46	50	42	81	51	60	46	85	48	50	44	83	53	60	48	87
		HIGH	NONE	—	—	14	15	14	92	18	20	19	96	16	20	16	94	19	25	21	98
			118A	18.0	17.3	26	30	23	92	30	30	27	96	28	30	25	94	32	35	29	98
			119A	36.0	34.6	47	50	43	92	52	60	47	96	49	50	45	94	54	60	49	98

See legend on page 108.

Electrical data (cont)

RAH036-150 MCA MOCP DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwrdr fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwrdr fr/unit)			
						FUSE or HACR BRKR		DISC. SIZE		FUSE or HACR BRKR		DISC. SIZE		FUSE or HACR BRKR		DISC. SIZE		FUSE or HACR BRKR		DISC. SIZE	
						MCA	FLA	LRA	MCA	FLA	LRA	MCA	FLA	LRA	MCA	FLA	LRA	MCA	FLA	LRA	MCA
RAH102	208/230-3-60	STD	NONE	—	—	39	50	41	191	43	50	45	195	44	50	46	196	48	60	51	200
			117A	7.8/ 10.4	21.7/ 25.0	39/39	50/50	41/41	191/ 191	43/43	50/50	45/45	195/ 195	44/44	50/50	46/46	196/ 196	48/49	60/60	51/51	200/ 200
			110A	12.0/ 16.0	33.4/ 38.5	49/55	50/60	44/50	191/ 191	53/60	60/60	49/55	195/ 195	55/61	60/70	50/56	196/ 196	59/66	60/70	54/60	200/ 200
			111A	18.6/ 24.8	51.7/ 59.7	72/82	80/90	65/75	191/ 191	76/86	80/90	70/79	195/ 195	78/88	80/90	71/80	196/ 196	82/92	90/100	75/85	200/ 200
			112A	24.0/ 32.0	66.7/ 77.0	90/ 103	90/110	83/95	191/ 191	95/ 108	100/ 110	87/99	195/ 195	96/ 109	100/ 110	88/ 100	196/ 196	101/ 114	110/ 125	93/ 104	200/ 200
			112A+117A	31.8/ 42.4	88.4/ 102.0	117/ 134	125/ 150	108/ 123	191/ 191	122/ 139	125/ 150	112/ 128	195/ 195	123/ 140	125/ 150	113/ 129	196/ 196	128/ 145	150/ 150	118/ 133	200/ 200
		MED	NONE	—	—	41/41	50/50	43/43	229	45/45	50/50	47/47	233	46/46	50/50	48/48	234	50/50	60/60	53/53	238
			117A	7.8/ 10.4	21.7/ 25.0	41/41	50/50	43/43	229/ 229	45/45	50/50	47/47	233/ 233	46/46	50/50	48/48	234/ 234	50/51	60/60	53/53	238/ 238
			110A	12.0/ 16.0	33.4/ 38.5	51/57	60/60	46/52	229/ 229	56/62	60/70	51/56	233/ 233	57/63	60/70	52/58	234/ 234	62/68	70/70	56/62	238/ 238
			111A	18.6/ 24.8	51.7/ 59.7	74/83	80/90	67/76	229/ 229	78/88	80/90	72/81	233/ 233	80/89	80/90	73/82	234/ 234	84/94	90/100	77/86	238/ 238
			112A	24.0/ 32.0	66.7/ 77.0	92/ 105	100/ 110	85/96	229/ 229	97/ 110	100/ 110	89/ 101	233/ 233	98/ 111	100/ 125	90/ 102	234/ 234	103/ 116	110/ 125	95/ 106	238/ 238
			112A+117A	31.8/ 42.4	88.4/ 102.0	120/ 136	125/ 150	110/ 125	229/ 229	124/ 141	125/ 150	114/ 129	233/ 233	126/ 142	150/ 150	115/ 131	234/ 234	130/ 147	150/ 150	119/ 135	238/ 238
		HIGH	NONE	—	—	45	50	47	258	49	60	52	262	50	60	53	263	53	60	57	267
			117A	7.8/ 10.4	21.7/ 25.0	45/45	50/50	47/47	258/ 258	49/50	60/60	52/52	262/ 262	50/51	60/60	53/53	263/ 263	53/56	60/60	57/57	267/ 267
			110A	12.0/ 16.0	33.4/ 38.5	55/62	60/70	51/56	258/ 258	60/67	60/70	55/61	262/ 262	61/68	70/70	56/62	263/ 263	66/73	70/80	60/66	267/ 267
			111A	18.6/ 24.8	51.7/ 59.7	78/88	80/90	72/81	258/ 258	83/93	90/100	76/85	262/ 262	84/94	90/100	77/86	263/ 263	89/99	90/100	82/91	267/ 267
			112A	24.0/ 32.0	66.7/ 77.0	97/ 110	100/ 101	89/ 101	258/ 258	102/ 115	110/ 125	93/ 105	262/ 262	103/ 116	110/ 125	94/ 106	263/ 263	108/ 121	110/ 125	99/ 111	267/ 267
			112A+117A	31.8/ 42.4	88.4/ 102.0	124/ 141	125/ 150	114/ 129	258/ 258	129/ 146	150/ 150	118/ 134	262/ 262	130/ 147	150/ 150	119/ 135	263/ 263	135/ 152	150/ 175	124/ 139	267/ 267
	460-3-60	STD	NONE	—	—	19	20	19	95	20	25	21	97	21	25	22	97	23	25	24	99
			116B	13.9	16.7	25	25	22	95	27	30	24	97	27	30	25	97	30	30	27	99
			113B	16.5	19.8	28	30	26	95	31	35	28	97	31	35	28	97	33	35	30	99
			114B	27.8	33.4	45	50	41	95	48	50	43	97	48	50	44	97	50	60	46	99
			115B	33.0	39.7	53	60	49	95	56	60	51	97	56	60	51	97	58	60	53	99
		MED	128B	41.7	50.2	66	70	61	95	69	70	63	97	69	70	63	97	71	80	65	99
			NONE	—	—	19	25	20	114	21	25	22	116	22	25	23	116	23	25	25	118
			116B	13.9	16.7	26	30	23	114	28	30	25	116	28	30	26	116	31	35	28	118
			113B	16.5	19.8	29	30	27	114	32	35	29	116	32	35	29	116	34	35	31	118
			114B	27.8	33.4	46	50	42	114	49	50	44	116	49	50	45	116	51	60	47	118
		HIGH	115B	33.0	39.7	54	60	50	114	57	60	52	116	57	60	52	116	59	60	54	118
			128B	41.7	50.2	67	70	62	114	70	70	64	116	70	70	64	116	72	80	66	118
			NONE	—	—	21	25	22	129	23	25	24	131	24	25	25	131	25	30	27	133
			116B	13.9	16.7	28	30	25	129	30	30	27	131	31	35	28	131	33	35	30	133
			113B	16.5	19.8	32	35	29	129	34	35	31	131	35	35	31	131	37	40	33	133
			114B	27.8	33.4	49	50	45	129	51	60	47	131	52	60	47	131	54	60	49	133
	575-3-60	STD	115B	33.0	39.7	57	60	52	129	59	60	54	131	59	60	54	131	62	70	56	133
			128B	41.7	50.2	70	70	64	129	72	80	66	131	73	80	66	131	75	80	68	133
			NONE	—	—	14	15	14	77	18	20	19	81	16	20	16	79	20	25	21	83
		MED	118A	18.0	17.3	24	25	22	77	29	30	26	81	26	30	24	79	31	35	28	83
			119A	36.0	34.6	46	50	42	77	50	60	46	81	48	50	44	79	53	60	48	83
			NONE	—	—	14	20	15	81	18	20	19	85	16	20	17	83	20	25	21	87
		HIGH	118A	18.0	17.3	25	25	22	81	29	30	27	85	27	30	24	83	31	35	29	87
			119A	36.0	34.6	46	50	42	81	51	60	46	85	48	50	44	83	53	60	48	87
			NONE	—	—	15	20	16	92	19	20	20	96	17	20	18	94	21	25	22	98
			118A	18.0	17.3	26	30	23	92	30	30	27	96	28	30	25	94	32	35	29	98
			119A	36.0	34.6	47	50	43	92	52	60	47	96	49	50	45	94	54	60	49	98

RAH036-150 MCA MOCP DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwrdd fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwrdd fr/unit)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	FLA	LRA	MCA	FUSE or HACR BRKR	FLA	LRA
								FLA	LRA			FLA	LRA								
RAH110	208/230-3-60	STD	NONE	—	—	49	60	51	257	53	60	55	261	54	60	57	262	57	70	61	266
			117A	7.8/ 10.4	21.7/ 25.0	49/49	60/60	51/51	257/ 257	53/53	60/60	55/55	261/ 261	54/54	60/60	57/57	262/ 262	57/57	70/70	61/61	266/ 266
			110A	12.0/ 16.0	33.4/ 38.5	49/55	60/60	51/51	257/ 257	53/60	60/60	55/55	261/ 261	55/61	60/70	57/57	262/ 262	59/66	70/70	61/61	266/ 266
			112A	24.0/ 32.0	66.7/ 77.0	90/ 103	90/110	83/95	257/ 257	95/ 108	100/ 110	87/99	261/ 261	96/ 109	100/ 110	88/ 100	262/ 262	101/ 114	110/ 125	93/ 104	266/ 266
			112A+117A	31.8/ 42.4	88.4/ 102.0	117/ 134	125/ 150	108/ 123	257/ 257	122/ 139	125/ 150	112/ 128	261/ 261	123/ 140	125/ 150	113/ 129	262/ 262	128/ 145	150/ 150	118/ 133	266/ 266
			112A+110A	37.6/ 50.0	104.2/ 120.3	137/ 127	150/ 150	126/ 144	257/ 257	142/ 132	150/ 150	130/ 149	261/ 261	143/ 133	150/ 150	131/ 150	262/ 262	148/ 138	150/ 150	136/ 154	266/ 266
		MED	NONE	—	—	54	60	57	313	58	70	62	317	59	70	63	318	63	70	67	322
			117A	7.8/ 10.4	21.7/ 25.0	54/54	60/60	57/57	313/ 313	58/58	70/70	62/62	317/ 317	59/59	70/70	63/63	318/ 318	63/63	70/70	67/67	322/ 322
			110A	12.0/ 16.0	33.4/ 38.5	55/62	60/70	57/57	313/ 313	60/67	70/70	62/62	317/ 317	61/68	70/70	63/63	318/ 318	66/73	70/80	67/67	322/ 322
			112A	24.0/ 32.0	66.7/ 77.0	97/ 110	100/ 110	89/ 101	313/ 313	102/ 115	110/ 125	93/ 105	317/ 317	103/ 116	110/ 125	94/ 106	318/ 318	108/ 121	110/ 125	99/ 111	322/ 322
			112A+117A	31.8/ 42.4	88.4/ 102.0	124/ 141	125/ 150	114/ 129	313/ 313	129/ 146	150/ 150	118/ 134	317/ 317	130/ 147	150/ 150	119/ 135	318/ 318	135/ 152	150/ 175	124/ 139	322/ 322
			112A+110A	37.6/ 50.0	104.2/ 120.3	144/ 134	150/ 150	132/ 151	313/ 313	149/ 139	150/ 150	136/ 155	317/ 317	140/ 150	150/ 150	138/ 156	318/ 318	155/ 145	175/ 175	142/ 160	322/ 322
		HIGH	NONE	—	—	57/56	70/60	61/60	315	61/60	70/70	65/64	319	62/61	70/70	66/65	320	66/65	80/80	71/70	324
			117A	7.8/ 10.4	21.7/ 25.0	57/56	70/60	61/60	315/ 315	61/60	70/70	65/64	319/ 319	62/61	70/70	66/65	320/ 320	66/65	80/80	71/70	324/ 324
			110A	12.0/ 16.0	33.4/ 38.5	59/64	70/70	61/60	315/ 315	64/69	70/70	65/64	319/ 319	65/70	70/70	66/65	320/ 320	70/75	80/80	71/70	324/ 324
			112A	24.0/ 32.0	66.7/ 77.0	101/ 113	110/ 125	92/ 103	315/ 315	106/ 117	110/ 125	97/ 108	319/ 319	107/ 119	110/ 125	98/ 109	320/ 320	112/ 123	125/ 125	102/ 113	324/ 324
			112A+117A	31.8/ 42.4	88.4/ 102.0	128/ 144	150/ 150	117/ 132	315/ 315	133/ 149	150/ 150	122/ 136	319/ 319	134/ 150	150/ 150	123/ 137	320/ 320	139/ 155	150/ 175	127/ 142	324/ 324
			112A+110A	37.6/ 50.0	104.2/ 120.3	148/ 137	150/ 150	135/ 153	315/ 315	152/ 141	175/ 175	140/ 157	319/ 319	154/ 143	175/ 175	141/ 158	320/ 320	158/ 147	175/ 175	145/ 163	324/ 324
	460-3-60	STD	NONE	—	—	22	25	23	123	24	30	25	125	—	—	—	—	—	—	—	—
			116B	13.9	16.7	25	25	23	123	27	30	25	125	—	—	—	—	—	—	—	—
			113B	16.5	19.8	28	30	26	123	31	35	28	125	—	—	—	—	—	—	—	—
			115B	33.0	39.7	53	60	49	123	56	60	51	125	—	—	—	—	—	—	—	—
			128B	41.7	50.2	66	70	61	123	69	70	63	125	—	—	—	—	—	—	—	—
		MED	129B	50.0	60.1	64	70	72	123	66	70	74	125	—	—	—	—	—	—	—	—
			NONE	—	—	25	30	26	151	27	30	28	153	—	—	—	—	—	—	—	—
			116B	13.9	16.7	28	30	26	151	30	30	28	153	—	—	—	—	—	—	—	—
			113B	16.5	19.8	32	35	29	151	34	35	31	153	—	—	—	—	—	—	—	—
			115B	33.0	39.7	57	60	52	151	59	60	54	153	—	—	—	—	—	—	—	—
		HIGH	128B	41.7	50.2	70	70	64	151	72	80	66	153	—	—	—	—	—	—	—	—
			129B	50.0	60.1	67	80	75	151	69	80	77	153	—	—	—	—	—	—	—	—
			NONE	—	—	26	30	28	152	28	30	30	154	—	—	—	—	—	—	—	—
			116B	13.9	16.7	29	30	28	152	32	35	30	154	—	—	—	—	—	—	—	—
			113B	16.5	19.8	33	35	30	152	35	35	32	154	—	—	—	—	—	—	—	—
			115B	33.0	39.7	58	60	53	152	60	60	55	154	—	—	—	—	—	—	—	—
	575-3-60	STD	128B	41.7	50.2	71	80	65	152	73	80	67	154	—	—	—	—	—	—	—	—
			129B	50.0	60.1	69	80	76	152	71	80	79	154	—	—	—	—	—	—	—	—
			NONE	—	—	18	20	18	95	21	25	23	99	—	—	—	—	—	—	—	—
			118A	18.0	17.3	25	25	22	95	29	30	27	99	—	—	—	—	—	—	—	—
		MED	119A	36.0	34.6	46	50	42	95	51	60	46	99	—	—	—	—	—	—	—	—
			118A+119A	54.0	52.0	55	60	62	95	60	60	66	99	—	—	—	—	—	—	—	—
			NONE	—	—	18	20	19	106	22	25	23	110	—	—	—	—	—	—	—	—
			118A	18.0	17.3	26	30	23	106	30	30	27	110	—	—	—	—	—	—	—	—
		HIGH	119A	36.0	34.6	47	50	43	106	52	60	47	110	—	—	—	—	—	—	—	—
			118A+119A	54.0	52.0	56	60	63	106	61	70	67	110	—	—	—	—	—	—	—	—
			NONE	—	—	21	25	22	120	25	30	27	124	—	—	—	—	—	—	—	—
			118A	18.0	17.3	29	30	26	120	34	35	31	124	—	—	—	—	—	—	—	—
			119A	36.0	34.6	51	60	46	120	55	60	51	124	—	—	—	—	—	—	—	—
			118A+119A	54.0	52.0	59	70	66	120	64	70	71	124	—	—	—	—	—	—	—	—

See legend on page 108.

Electrical data (cont)

RAH036-150 MCA MOC P DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	FLA	LRA	MCA	FUSE or HACR BRKR	FLA	LRA
								FLA	LRA			FLA	LRA								
RAH120	208/230-3-60	STD	NONE	—	—	48	60	50	282	51	60	54	286	52	60	55	287	56	60	60	291
			117A	7.8/ 10.4	21.7/ 25.0	48/48	60/60	50/50	282/ 282	51/51	60/60	54/54	286/ 286	52/52	60/60	55/55	287/ 287	56/56	60/60	60/60	291/ 291
			110A	12.0/ 16.0	33.4/ 38.5	49/55	60/60	50/50	282/ 282	53/60	60/60	54/55	286/ 286	55/61	60/70	55/56	287/ 287	59/66	60/70	60/60	291/ 291
			112A	24.0/ 32.0	66.7/ 77.0	90/ 103	90/110	83/95	282/ 282	95/ 108	100/ 110	87/99	286/ 286	96/ 109	100/ 110	88/ 100	287/ 287	101/ 114	110/ 125	93/ 104	291/ 291
			112A+117A	31.8/ 42.4	88.4/ 102.0	117/ 134	125/ 150	108/ 123	282/ 282	122/ 139	125/ 150	112/ 128	286/ 286	123/ 140	125/ 150	113/ 129	287/ 287	128/ 145	150/ 150	118/ 133	291/ 291
			112A+110A	37.6/ 50.0	104.2/ 120.3	137/ 127	150/ 150	126/ 144	282/ 282	142/ 132	150/ 150	130/ 149	286/ 286	143/ 133	150/ 150	131/ 150	287/ 287	148/ 138	150/ 150	136/ 154	291/ 291
		MED	NONE	—	—	53	60	56	338	57	70	60	342	58	70	61	343	62	70	66	347
			117A	7.8/ 10.4	21.7/ 25.0	53/53	60/60	56/56	338/ 338	57/57	70/70	60/60	342/ 342	58/58	70/70	61/61	343/ 343	62/62	70/70	66/66	347/ 347
			110A	12.0/ 16.0	33.4/ 38.5	55/62	60/70	56/56	338/ 338	60/67	70/70	60/61	342/ 342	61/68	70/70	61/62	343/ 343	66/73	70/80	66/66	347/ 347
			112A	24.0/ 32.0	66.7/ 77.0	97/ 110	100/ 110	89/ 101	338/ 338	102/ 115	110/ 125	93/ 105	342/ 342	103/ 116	110/ 125	94/ 106	343/ 343	108/ 121	110/ 125	99/ 111	347/ 347
			112A+117A	31.8/ 42.4	88.4/ 102.0	124/ 141	125/ 150	114/ 129	338/ 338	129/ 146	150/ 150	118/ 134	342/ 342	130/ 147	150/ 150	119/ 135	343/ 343	135/ 152	150/ 175	124/ 139	347/ 347
			112A+110A	37.6/ 50.0	104.2/ 120.3	144/ 134	150/ 150	132/ 151	338/ 338	149/ 139	150/ 150	136/ 155	342/ 342	150/ 140	150/ 150	138/ 156	343/ 343	155/ 145	175/ 175	142/ 160	347/ 347
		HIGH	NONE	—	—	56/55	60/60	59/58	340	60/59	70/70	64/63	344	61/60	70/70	65/64	345	65/64	80/70	69/68	349
			117A	7.8/ 10.4	21.7/ 25.0	56/55	60/60	59/58	340/ 340	60/59	70/70	64/63	344/ 344	61/60	70/70	65/64	345/ 345	65/64	80/70	69/68	349/ 349
			110A	12.0/ 16.0	33.4/ 38.5	59/64	60/70	59/59	340/ 340	64/69	70/70	64/63	344/ 344	65/70	70/70	65/64	345/ 345	70/75	80/80	69/69	349/ 349
			112A	24.0/ 32.0	66.7/ 77.0	101/ 113	110/ 125	92/ 103	340/ 340	106/ 117	110/ 125	97/ 108	344/ 344	107/ 119	110/ 125	98/ 109	345/ 345	112/ 123	125/ 125	102/ 113	349/ 349
			112A+117A	31.8/ 42.4	88.4/ 102.0	128/ 144	150/ 150	117/ 132	340/ 340	133/ 149	150/ 150	122/ 136	344/ 344	134/ 143	150/ 150	123/ 137	345/ 345	139/ 155	150/ 175	127/ 142	349/ 349
			112A+110A	37.6/ 50.0	104.2/ 120.3	148/ 137	150/ 150	135/ 153	340/ 340	152/ 141	175/ 175	140/ 157	344/ 344	154/ 143	175/ 175	141/ 158	345/ 345	158/ 147	175/ 175	145/ 163	349/ 349
	460-3-60	STD	NONE	—	—	23	30	24	135	25	30	26	137	26	30	27	137	27	30	29	139
			116B	13.9	16.7	25	30	24	135	27	30	26	137	27	30	27	137	30	30	29	139
			113B	16.5	19.8	28	30	26	135	31	35	28	137	31	35	28	137	33	35	30	139
			115B	33.0	39.7	53	60	49	135	56	60	51	137	56	60	51	137	58	60	53	139
			128B	41.7	50.2	66	70	61	135	69	70	63	137	69	70	63	137	71	80	65	139
			129B	50.0	60.1	64	70	72	135	66	70	74	137	67	70	75	137	69	70	77	139
		MED	NONE	—	—	26	30	27	163	28	30	29	165	28	30	30	165	30	35	32	167
			116B	13.9	16.7	28	30	27	163	30	30	29	165	31	35	30	165	33	35	32	167
			113B	16.5	19.8	32	35	29	163	34	35	31	165	35	35	31	165	37	40	33	167
			115B	33.0	39.7	57	60	52	163	59	60	54	165	59	60	54	165	62	70	56	167
			128B	41.7	50.2	70	70	64	163	72	80	66	165	73	80	66	165	75	80	68	167
			129B	50.0	60.1	67	80	75	163	69	80	77	165	70	80	78	165	72	80	80	167
		HIGH	NONE	—	—	27	30	29	164	29	35	31	166	29	35	31	166	31	35	33	168
			116B	13.9	16.7	29	30	29	164	32	35	31	166	32	35	31	166	34	35	33	168
			113B	16.5	19.8	33	35	30	164	35	35	32	166	36	40	33	166	38	40	35	168
			115B	33.0	39.7	58	60	53	164	60	60	55	166	61	70	56	166	63	70	58	168
			128B	41.7	50.2	71	80	65	164	73	80	67	166	74	80	68	166	76	80	70	168
			129B	50.0	60.1	69	80	76	164	71	80	79	166	71	80	79	166	74	80	81	168
	575-3-60	STD	NONE	—	—	18	20	18	105	22	25	23	109	19	25	20	107	23	25	25	111
			118A	18.0	17.3	25	25	22	105	29	30	27	109	27	30	24	107	31	35	29	111
			119A	36.0	34.6	46	50	42	105	51	60	46	109	48	50	44	107	53	60	48	111
			118A+119A	54.0	52.0	55	60	62	105	60	60	66	109	57	60	64	107	62	70	68	111
		MED	NONE	—	—	19	20	19	116	22	25	24	120	20	25	21	118	24	30	26	122
			118A	18.0	17.3	26	30	23	116	30	30	27	120	28	30	25	118	32	35	29	122
			119A	36.0	34.6	47	50	43	116	52	60	47	120	49	50	45	118	54	60	49	122
			118A+119A	54.0	52.0	56	60	63	116	61	70	67	120	58	60	65	118	63	70	69	122
		HIGH	NONE	—	—	21	25	22	130	25	30	27	134	23	25	24	132	27	30	29	136
			118A	18.0	17.3	29	30	26	130	34	35	31	134	31	35	28	132	36	40	33	136
			119A	36.0	34.6	51	60	46	130	55	60	51	134	53	60	48	132	58	60	53	136
			118A+119A	54.0	52.0	59	70	66	130	64	70	71	134	62	70	68	132	66	70	73	136

See legend on page 108.

RAH036-150 MCA MOCPP DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (PwrD fr/unit)				No Powered Exhaust				With Powered Exhaust (PwrD fr/unit)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	FLA	LRA	MCA	FUSE or HACR BRKR	FLA	LRA
								FLA	LRA			FLA	LRA								
RAH150	208/230-3-60	STD	NONE	—	—	57	70	59	340	60	70	63	344	61	80	64	345	65	80	69	349
			291A	12.4/ 16.5	34.4/ 39.7	57/59	70/70	59/59	340/ 340	60/64	70/70	63/63	344/ 344	61/65	80/80	64/64	345/ 345	65/70	80/80	69/69	349/ 349
			288A+291A	19.9/ 26.5	55.3/ 63.8	79/90	80/90	72/82	340/ 340	84/94	90/100	77/86	344/ 344	85/96	90/100	78/88	345/ 345	90/ 100	90/100	82/92	349/ 349
			294A	25.2/ 33.5	69.9/ 80.6	97/ 111	100/ 125	89/ 101	340/ 340	102/ 115	110/ 125	93/ 106	344/ 344	103/ 117	110/ 125	95/ 107	345/ 345	108/ 121	110/ 125	99/ 111	349/ 349
			288A+294A	32.7/ 43.5	90.7/ 104.7	123/ 141	125/ 150	113/ 129	340/ 340	128/ 145	150/ 150	117/ 133	344/ 344	129/ 147	150/ 150	118/ 135	345/ 345	134/ 151	150/ 175	123/ 139	349/ 349
			291A+294A	37.6/ 50.0	104.3/ 120.3	140/ 130	150/ 150	129/ 147	340/ 340	145/ 135	150/ 150	133/ 151	344/ 344	146/ 136	150/ 150	134/ 152	345/ 345	151/ 141	175/ 150	138/ 157	349/ 349
		MED	NONE	—	—	60	70	62	370	63	80	67	374	64	80	68	375	68	80	72	379
			291A	12.4/ 16.5	34.4/ 39.7	60/63	70/70	62/62	370/ 370	63/68	80/80	67/67	374/ 374	64/69	80/80	68/68	375/ 375	68/74	80/80	72/72	379/ 379
			288A+291A	19.9/ 26.5	55.3/ 63.8	83/93	90/100	76/86	370/ 370	88/98	90/100	80/90	374/ 374	89/99	90/100	81/91	375/ 375	94/ 104	100/ 110	86/95	379/ 379
			294A	25.2/ 33.5	69.9/ 80.6	101/ 114	110/ 125	93/ 105	370/ 370	106/ 119	110/ 125	97/ 109	374/ 374	107/ 120	110/ 125	98/ 110	375/ 375	112/ 125	125/ 125	102/ 115	379/ 379
			288A+294A	32.7/ 43.5	90.7/ 104.7	127/ 145	150/ 150	116/ 133	370/ 370	132/ 149	150/ 150	121/ 137	374/ 374	133/ 151	150/ 175	122/ 138	375/ 375	138/ 155	150/ 175	126/ 142	379/ 379
			291A+294A	37.6/ 50.0	104.3/ 120.3	144/ 134	150/ 150	132/ 151	370/ 370	149/ 139	150/ 150	137/ 155	374/ 374	150/ 140	150/ 150	138/ 156	375/ 375	155/ 145	175/ 175	142/ 160	379/ 379
		HIGH	NONE	—	—	66/64	80/80	70/68	368	70/68	80/80	74/72	372	71/69	80/80	75/73	373	75/73	80/80	80/77	377
			291A	12.4/ 16.5	34.4/ 39.7	66/69	80/80	70/68	368/ 368	70/74	80/80	74/72	372/ 372	71/75	80/80	75/73	373/ 373	75/80	80/80	80/77	377/ 377
			288A+291A	19.9/ 26.5	55.3/ 63.8	91/99	100/ 100	83/91	368/ 368	96/ 104	100/ 110	88/95	372/ 372	97/ 105	100/ 110	89/96	373/ 373	102/ 110	110/ 110	93/ 101	377/ 377
			294A	25.2/ 33.5	69.9/ 80.6	109/ 120	110/ 125	100/ 110	368/ 368	114/ 125	125/ 125	104/ 114	372/ 372	115/ 126	125/ 150	105/ 115	373/ 373	120/ 131	125/ 150	110/ 120	377/ 377
			288A+294A	32.7/ 43.5	90.7/ 104.7	135/ 150	150/ 150	124/ 138	368/ 368	140/ 155	150/ 175	128/ 142	372/ 372	141/ 156	150/ 175	129/ 143	373/ 373	146/ 161	150/ 175	134/ 148	377/ 377
			291A+294A	37.6/ 50.0	104.3/ 120.3	152/ 140	175/ 175	139/ 156	368/ 368	157/ 144	175/ 175	144/ 160	372/ 372	158/ 146	175/ 175	145/ 161	373/ 373	163/ 150	175/ 175	149/ 165	377/ 377
		HIGH-HE	NONE	—	—	70	80	74	376	73	80	78	380	74	80	79	381	78	90	84	385
			291A	12.4/ 16.5	34.4/ 39.7	70/76	80/80	74/74	376/ 376	74/80	80/80	78/78	380/ 380	75/82	80/90	79/79	381/ 381	80/86	90/90	84/84	385/ 385
			288A+291A	19.9/ 26.5	55.3/ 63.8	95/ 106	100/ 110	87/97	376/ 376	100/ 110	100/ 125	91/ 101	380/ 380	101/ 112	110/ 125	93/ 102	381/ 381	106/ 116	110/ 125	97/ 107	385/ 385
			294A	25.2/ 33.5	69.9/ 80.6	113/ 127	125/ 150	104/ 116	376/ 376	118/ 131	125/ 150	108/ 121	380/ 380	119/ 133	125/ 150	109/ 122	381/ 381	124/ 137	125/ 150	114/ 126	385/ 385
			288A+294A	32.7/ 43.5	90.7/ 104.7	139/ 157	150/ 175	128/ 144	376/ 376	144/ 162	150/ 175	132/ 148	380/ 380	145/ 163	150/ 175	133/ 149	381/ 381	150/ 168	150/ 175	138/ 154	385/ 385
			291A+294A	37.6/ 50.0	104.3/ 120.3	156/ 146	175/ 175	143/ 162	376/ 376	161/ 151	175/ 175	148/ 166	380/ 380	162/ 152	175/ 175	149/ 167	381/ 381	167/ 157	175/ 175	153/ 172	385/ 385
	460-3-60	STD	NONE	—	—	25	30	26	166	27	30	28	168	27	30	28	168	29	35	30	170
			292A	16.5	19.9	30	30	27	166	32	35	29	168	32	35	29	168	35	35	31	170
			289A+292A	26.5	31.9	45	45	41	166	47	50	43	168	47	50	43	168	50	50	45	170
			295A	33.5	40.3	55	60	50	166	57	60	52	168	58	60	53	168	60	60	55	170
			289A+295A	43.5	52.3	70	70	64	166	72	80	66	168	73	80	67	168	75	80	69	170
			292A+295A	50.0	60.2	65	70	73	166	67	70	75	168	68	80	76	168	70	80	78	170
		MED	NONE	—	—	27	30	28	181	28	35	30	183	29	35	30	183	31	35	32	185
			292A	16.5	19.9	32	35	29	181	34	35	31	183	35	35	32	183	37	40	34	185
			289A+292A	26.5	31.9	47	50	43	181	49	50	45	183	50	50	45	183	52	60	47	185
			295A	33.5	40.3	57	60	52	181	60	60	55	183	60	60	55	183	62	70	57	185
			289A+295A	43.5	52.3	72	80	66	181	75	80	68	183	75	80	69	183	77	80	71	185
			292A+295A	50.0	60.2	67	80	75	181	70	80	77	183	70	80	78	183	72	80	80	185
		HIGH	NONE	—	—	29	35	30	180	31	35	32	182	31	35	33	182	33	40	35	184
			292A	16.5	19.9	35	35	32	180	37	40	34	182	38	40	34	182	40	40	36	184
			289A+292A	26.5	31.9	50	50	45	180	52	60	47	182	53	60	48	182	55	60	50	184
			295A	33.5	40.3	60	60	55	180	63	70	57	182	63	70	58	182	65	70	60	184
			289A+295A	43.5	52.3	75	80	69	180	78	80	71	182	78	80	71	182	80	80	73	184
			292A+295A	50.0	60.2	70	80	78	180	72	80	80	182	73	80	81	182	75	80	83	184
		HIGH-HE	NONE	—	—	32	40	33	184	34	40	35	186	34	40	36	186	36	45	38	188
			292A	16.5	19.9	38	40	35	184	40	40	37	186	41	45	37	186	43	45	39	188
			289A+292A	26.5	31.9	53	60	48	184	55	60	50	186	56	60	51	186	58	60	53	188
			295A	33.5	40.3	64	70	58	184	66	70	60	186	66	70	61	186	69	70	63	188
			289A+295A	43.5	52.3	79	80	72	184	81	90	74	186	81	90	74	186	84	90	76	188
			292A+295A	50.0	60.2	73	80	81	184	76	80	83	186	76	80	83	186	78	80	86	188

Electrical data (cont)

RAH036-150 MCA MOCOP DATA (cont)

UNIT*	NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO CONVENIENCE OUTLET OR UNPOWERED CONVENIENCE OUTLET								w/ PWRD C.O.							
			CRHEATER***A00	Nom (kW)	FLA	No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)				No Powered Exhaust				With Powered Exhaust (Pwr fr/unit)			
						MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	DISC. SIZE		MCA	FUSE or HACR BRKR	FLA	LRA	MCA	FUSE or HACR BRKR	FLA	LRA
								FLA	LRA			FLA	LRA								
RAH150	575-3-60	STD	NONE	—	—	20	25	21	138	24	30	25	142	22	25	23	140	26	30	27	144
			293A	16.5	15.9	24	25	22	138	29	30	26	142	26	30	23	140	31	35	28	144
			290A+293A	26.5	25.5	36	40	33	138	41	45	37	142	38	40	35	140	43	45	39	144
			296A	33.5	32.2	44	45	40	138	49	50	45	142	46	50	42	140	51	60	47	144
			290A+296A	43.5	41.9	56	60	51	138	61	70	56	142	58	60	53	140	63	70	58	144
			293A+296A	50.0	48.1	52	60	59	138	57	60	63	142	54	60	60	140	59	60	65	144
		MED	NONE	—	—	20	25	21	138	24	30	25	142	22	25	23	140	26	30	27	144
			293A	16.5	15.9	24	25	22	138	29	30	26	142	26	30	23	140	31	35	28	144
			290A+293A	26.5	25.5	36	40	33	138	41	45	37	142	38	40	35	140	43	45	39	144
			296A	33.5	32.2	44	45	40	138	49	50	45	142	46	50	42	140	51	60	47	144
			290A+296A	43.5	41.9	56	60	51	138	61	70	56	142	58	60	53	140	63	70	58	144
			293A+296A	50.0	48.1	52	60	59	138	57	60	63	142	54	60	60	140	59	60	65	144
		HIGH	NONE	—	—	24	25	25	141	27	30	29	145	25	30	27	143	29	35	31	147
			293A	16.5	15.9	28	30	25	141	33	35	30	145	30	30	27	143	35	35	32	147
			290A+293A	26.5	25.5	40	40	36	141	45	45	41	145	42	45	38	143	47	50	43	147
			296A	33.5	32.2	48	50	44	141	53	60	48	145	50	60	46	143	55	60	50	147
			290A+296A	43.5	41.9	60	60	55	141	65	70	60	145	63	70	57	143	67	70	62	147
			293A+296A	50.0	48.1	56	60	62	141	61	70	67	145	58	60	64	143	63	70	69	147
		HIGH-HE	NONE	—	—	27	30	28	150	31	35	32	154	29	35	30	152	33	40	34	156
			293A	16.5	15.9	32	35	29	150	36	40	33	154	34	35	31	152	38	40	35	156
			290A+293A	26.5	25.5	44	45	40	150	48	50	44	154	46	50	42	152	50	60	46	156
			296A	33.5	32.2	52	60	47	150	57	60	52	154	54	60	49	152	59	60	54	156
			290A+296A	43.5	41.9	64	70	59	150	69	70	63	154	66	70	60	152	71	80	65	156
			293A+296A	50.0	48.1	60	70	66	150	65	70	70	154	62	70	68	152	67	70	72	156

LEGEND

FLA	—	Full Load Amps
IFM	—	Indoor (Evaporator) Fan Motor
HIGH-HE	—	High-High Efficiency
LRA	—	Locked Rotor Amps
MCA	—	Minimum Circuit Amps
PWRD CO	—	Powered Convenience Outlet
PWRD FR/UNIT	—	Powered Front Unit
—	—	Data not available

* RAH036-RAH072 — One-Stage Cooling
RAH073-RAH150 — Two-Stage Cooling

NOTE: Refer to Packaged Rooftop Builder (Selection Software) for additional electrical data.

Sequence of operation

General

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

Electro-Mechanical 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. On two compressor units, the Y2 signal will energize compressor contactor #2 (C2), causing compressor #2 to start. On 2-Stage size 073 units, the Y1 signal energizes the IFC and C1 Contactor, causing the indoor fan and outdoor fan to start and the compressor to operate at 66% capacity. The Y2 signal will energize the compressor loader plug, allowing compressor to operate at 100% capacity. Regardless of the number of stages, the outdoor-fan motor runs continuously while unit is cooling.

Cooling (2-speed indoor fan motor)

Per ASHRAE 90.1-2016 standard section 6.4.3.10.b, during the first stage of cooling operation the VFD will adjust the fan motor to provide 66% 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 established for the unit (100%).

Heating

NOTE: The RAH 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 two-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.

Electro-Mechanical Units with an Economizer

Cooling

When free cooling is not available, the compressors will be controlled by the zone thermostat. When free cooling is available, the outdoor-air damper is modulated by the Economizer IV and X control to provide a 50°F (10°C) to 55°F (13°C) mixed-air temperature into the zone. As the mixed air temperature fluctuates above 55°F (13°C) or below 50°F (10°C) dampers will be modulated (open or close) to bring the mixed-air temperature back within control. If mechanical cooling is utilized with free cooling, the outdoor-air damper will maintain its current position at the time the compressor is started. If the increase in cooling capacity causes the mixed-air temperature to drop below 45°F (7°C), then the outdoor-air damper

position will be decreased to the minimum position. If the mixed-air temperature continues to fall, the outdoor-air damper will close. Control returns to normal once the mixed-air temperature rises above 48°F (9°C). The power exhaust fans will be energized and de-energized, if installed, as the outdoor-air damper opens and closes. If field-installed accessory CO₂ sensors are connected to the Economizer IV and X control, a demand controlled ventilation strategy will begin to operate. As the CO₂ level in the zone increases above the CO₂ setpoint, the minimum position of the damper will be increased proportionally. As the CO₂ level decreases because of the increase in fresh air, the outdoor-air damper will be proportionally closed. For Economizer IV and X operation, there must be a thermostat call for the fan (G). If the unit is occupied and the fan is on, the damper will operate at minimum position. Otherwise, the damper will be closed.

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

On the initial power to the Economizer IV and X control, it will take the damper up to 2½ 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 1½ and 2½ minutes. If free cooling can be used as determined from the appropriate changeover command (switch, dry bulb, enthalpy curve, differential dry bulb, or differential enthalpy), then the control will modulate the dampers open to maintain the mixed-air temperature setpoint at 50°F (10°C) to 55°F (13°C). If there is a further demand for cooling (cooling second stage - Y2 is energized), then the control will bring on compressor stage 1 to maintain the mixed-air temperature setpoint. The Economizer IV and X damper will be open at maximum position. Economizer IV and X operation is limited to a single compressor.

2-Speed Note: When operating in ventilation mode only, the indoor fan motor will automatically adjust to 66% of the total cfm established.

Heating

The sequence of operation for the heating is the same as an electro-mechanical 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 system option are capable of providing multiple modes of improved dehumidification as a variation of the normal cooling cycle. The Hot Gas Re-heat system 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

Sequence of operation (cont)

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

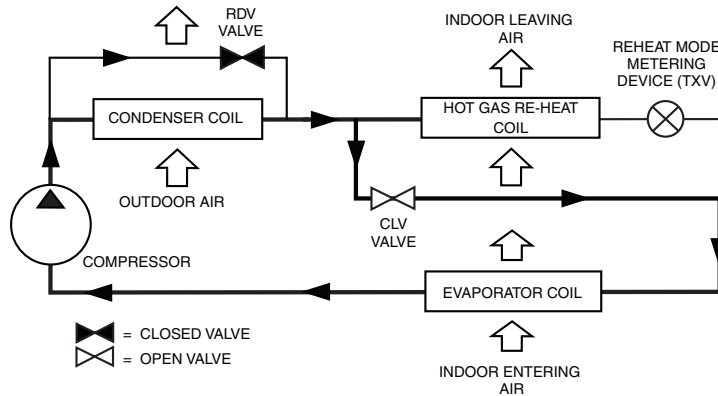
Provides increased Latent Cooling while slightly reducing the Sensible Cooling effect.

Reheat2

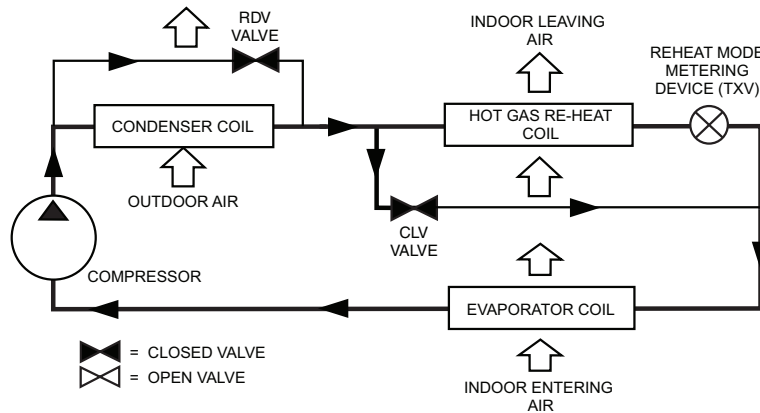
Provides normal Latent Cooling but with null or minimum Sensible Cooling effect delivered to the space.

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. See the figures below for diagrams depict piping for Single Stage cooling units.

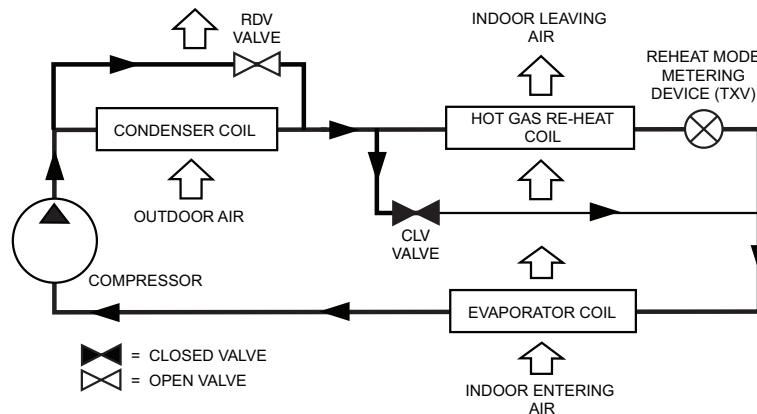
NORMAL COOLING MODE — HOT GAS RE-HEAT SYSTEM WITH SINGLE STAGE COOLING



SUBCOOLING MODE (REHEAT 1) — HOT GAS RE-HEAT SYSTEM WITH SINGLE STAGE COOLING



HOT GAS REHEAT MODE (REHEAT2) — HOT GAS RE-HEAT SYSTEM WITH SINGLE STAGE COOLING



Application data

Min operating ambient temp (cooling)

In mechanical cooling mode, your rooftop can safely operate down to an outdoor ambient temperature of 35°F (–2°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 125°F (52°C). While cooling operation above 125°F (52°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 representative for assistance.

Motor limits, break horsepower (BHP)

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

Sizing a rooftop

Bigger isn't necessarily better. While an air conditioner needs to have enough capacity to meet the 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 an 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 rooftop unit can operate to ambient temperatures down to –20°F (–29°C) using the recommended field-installed accessory Motormaster low ambient controller or 0°F (–18°C) with the factory-installed low ambient controller option.

Winter start

The 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 VFD Controller (2-Stage Cooling Models Only)

The 2-speed indoor fan motor system saves energy and installation time by utilizing a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor speed in sequence with the units cooling operation. Per ASHRAE 90.1-2016 standard during the first stage of cooling operation the VFD will adjust the fan motor to provide 66% 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 66% of total cfm.

Compared to single speed indoor fan motor systems, the 2-speed indoor fan motor system can save substantial energy, 25%+, versus single speed indoor fan motor systems.

IMPORTANT: Data based on 0.10 (\$/kWh) in an office application utilizing Rooftop Energy Savings Calculator simulation software program.

The VFD used in 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.

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

Application data (cont)

installed Display Kit 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 operations. Keypad is required for VFD troubleshooting.

RAH 2-SPEED INDOOR FAN MOTOR SYSTEM — VARIABLE FREQUENCY DRIVE (VFD) HP RATING

RAH UNIT	VOLTAGE	STATIC OPTION	VFD HP RATING
073	208/230, 460, 575	STD	3.0
	208/230, 460	MED	3.0
	575	MED	5.0
	208/230, 460, 575	HIGH	7.5
090	208/230, 460, 575	STD	3.0
	208/230, 460, 575	MED	3.0
	208/230, 460, 575	HIGH	5.0
102	208/230, 460, 575	STD	3.0
	208/230, 460, 575	MED	5.0
	208/230, 460, 575	HIGH	3.0
110	208/230, 460, 575	STD	3.0
	208/230, 460, 575	MED	5.0
	208/230, 460, 575	HIGH	7.5
120	208/230, 460, 575	STD	3.0
	208/230, 460, 575	MED	5.0
	208/230, 460, 575	HIGH	7.5
150	208/230, 460	STD	3.0
	575	STD	5.0
	208/230, 460, 575	MED	5.0
	208/230, 460, 575	HIGH	7.5

Guide specifications

Cooling Only/Electric Heat Packaged Rooftop

HVAC Guide Specifications

Size Range: **3 to 12.5 Tons (53 to 250 kW)**

Model Numbers: **RAH 036-150**

Part 1 — (23 06 80) Schedules for decentralized HVAC equipment

- 1.01 (23 06 80.13) Decentralized Unitary HVAC Equipment Schedule
- A. (23 06 80.13.A.) Rooftop unit (RTU) schedule
- Schedule is per the project specification requirements.

Part 2 — (23 07 16) HVAC equipment insulation

- 2.01 (23 07 16.13) Decentralized, Rooftop Units:
- A. (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.
 3. Unit internal insulation linings shall be resistant to mold growth in accordance with "mold growth and humidity" test in ASTM C1338, G21, and UL 181 or comparable test method. Air stream surfaces shall be evaluated in accordance with the "Erosion Test" in UL 181, as part of ASTM C1071.
- B. (23 07 16.13.B.) Electric heat compartment:
1. Aluminum foil-faced fiberglass insulation shall be used. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

Part 3 — (23 09 13) Instrumentation and control devices for HVAC

- 3.01 (23 09 13.23) Sensors and Transmitters
- A. (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.

Part 4 — (23 09 33) Electric and electronic control system for HVAC

- 4.01 (23 09 33.13) Decentralized, rooftop units
- A. (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, control options, loss of charge, freeze switch, high pressure switches.
 4. Unit shall include a minimum of one 8-pin screw terminal connection board for connection of control wiring.
- B. (23 09 33.13.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 loss of charge 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 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.

Part 5 — (23 09 93) Sequence of operations for HVAC controls

- 5.01 (23 09 93.13) Decentralized, Rooftop Units:
- A. (23 09 93.13.A) INSERT SEQUENCE OF OPERATION

Part 6 — (23 40 13) Panel air filters

- 6.01 (23 40 13 13) Decentralized rooftop units:
- A. (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.G).

Guide specifications (cont)

Part 7 — (23 81 19) Self-contained air conditioners

7.01 (23 81 19.13) Small-Capacity Self-Contained Air Conditioners (RAH036-150)

A. (23 81 19.13.A) General

1. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing hermetic scroll compressor(s) for cooling duty and optional electric heat 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 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.

B. (23 81 19.13.B.) Quality Assurance

1. Unit meets ASHRAE 90.1-2016 and IECC-2015 minimum efficiency requirements.
2. 3-phase units are ENERGY STAR¹ qualified.
3. Unit shall be rated in accordance with AHRI Standards 210/240 and 340/360.
4. Unit shall be designed to conform to ASHRAE 15.
5. Unit shall be UL-tested and certified in accordance with ANSI Z21.47 Standards and UL or ETL-listed and certified under Canadian standards as a total package for safety requirements.
6. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
7. Unit internal insulation linings shall be resistant to mold growth in accordance with "mold growth and humidity" test in ASTM C1338, G21, and UL 181 or comparable test method. Air stream surfaces shall be evaluated in accordance with the "Erosion Test" in UL 181, as part of ASTM C1071.
8. Unit casing shall be capable of withstanding 500 hour salt spray exposure per ASTM B117 (scribed specimen).
9. Roof curb shall be designed to conform to NRCA Standards.
10. Unit shall be subjected to a completely automated run test on the assembly line. The data for each unit will be stored at the factory, and must be available upon request.

1. Energy Star is registered trademark of the United States Department of Energy.

11. Unit shall be designed in accordance with UL Standard 1995, including tested to withstand rain.
12. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.
13. Unit shake tested to assurance level 1, ASTM D4169 to ensure shipping reliability.
14. High Efficiency Motors listed shall meet section 313 of the Energy Independence and Security Act of 2007 (EISA 2007).

C. (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.

D. (23 81 19.13.D) Project conditions As specified in the contract.

E. (23 81 19.13.E) Operating characteristics

1. Unit shall be capable of starting and running at 125°F (52°C) ambient outdoor temperature, meeting maximum load criteria of AHRI Standard 340/360 at ± 10% voltage.
2. Compressor with standard controls shall be capable of operation from 35°F (2°C), ambient outdoor temperatures. Accessory kits are necessary if mechanically cooling at ambient temperatures below 35°F (2°C).
3. Unit shall discharge supply air vertically as shown on contract drawings.
4. Unit shall be factory configured and ordered for vertical supply and return configurations.
5. Unit shall be factory furnished in vertical configurations.
6. Unit shall be capable of mixed operation: vertical supply with horizontal return or horizontal supply with vertical return.

F. (23 81 19.13.F) Electrical Requirements

1. Main power supply voltage, phase, and frequency must match those required by the manufacturer.
2. Control Panel SCCR (short circuit current rating): 5kA RMS at Rated Symmetrical Voltage.

G. (23 81 19.13.G) 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. Unit internal insulation linings shall be resistant to mold growth in accordance with "mold growth and humidity" test in ASTM C1338, G21, and UL 181 or comparable test method. Air stream surfaces shall be evaluated in accordance with the "Erosion Test" in UL 181, as part of ASTM C1071.
 5. Base of unit shall have a minimum of four locations for factory thru-the-base electrical connections (factory-installed or field-installed) standard. Connections shall be internal to the cabinet to protect from environmental issues.
 6. 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 gage thickness.
 7. 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-in. 14 NPT drain connection at the end of the drain pan. Connection shall be made per manufacturer's recommendations.
 8. Top panel:

Shall be a single piece top panel on sizes 036 through 120, two piece on size 150.
 9. 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.
 10. 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 and filters shall have molded composite handles while the blower access door shall have an integrated flange for easy removal.
 - 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.
- H. (23 81 19.13.H.) 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.
 - d. Corrosion durability of fin stock shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.
 - e. Corrosion durability of fin stock shall be confirmed through testing to have no visible corrosion after 48 hour immersion in a room temperature solution of 5% salt, 1% acetic acid.

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- f. Fin stock coating shall pass 2000 hours of the following: one week exposure in the prohesion chamber followed by one week of accelerated ultraviolet light testing. Prohesion chamber: the solution shall contain 3.5% sodium chloride and 0.35% ammonium sulfate. The exposure cycle is one hour of salt fog application at ambient followed by one hour drying at 95°F (35°C).
- 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 D224-92 and ASTM D870-92).
 - h. Corrosion durability shall be confirmed through testing to be no less than 6000 hours salt spray per ASTM B117-90.
- I. (23 81 19.13.I) Refrigerant components
 - 1. Refrigerant circuit shall include the following control, safety, and maintenance features:
 - a. Thermostatic Expansion Valve (TXV) shall help provide optimum performance across the entire operating range. Shall contain removable power element to allow change out of power element and bulb without removing the valve body.
 - b. Refrigerant filter drier.
 - c. Service gage connections on suction and discharge lines.
 - d. Pressure gage access through a specially designed access port in the top panel of the unit.
 - 2. There shall be gage 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 gage access port shall enable maintenance personnel to route their pressure gage lines.
 - c. This gage 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. Models shall be available with single compressor/single stage cooling designs on 036-072 models, single compressor/2-stage cooling on 073 size, and 2 compressor/2-stage cooling models on 090-150 sizes.
 - c. Compressor motors shall be cooled by refrigerant gas passing through motor windings.
 - d. Compressors shall be internally protected from high discharge temperature conditions.
 - e. Compressors shall be protected from an over-temperature and over-amperage conditions by an internal, motor overload device.
 - f. Compressor shall be factory mounted on rubber grommets.
 - g. Compressor motors shall have internal line break thermal, current overload and high pressure differential protection.
 - h. Crankcase heaters shall be utilized on all models to protect compressor with specific refrigerant charge.
- J. (23 81 19.13.J) 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.

K. (23 81 19.13.K) 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. Electric Drive (Direct Drive) X13 - 5 Speed/Torque Evaporator Fan:
 - a. Multi speed motor with easy quick adjustment settings.
 - b. Blower fan shall be double-inlet type with forward-curved blades.
 - c. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.
 - d. Standard on all 036-060 models with 208/230-1-60 operation without Hot Gas Re-Heat system.
 - e. Standard on all 036-060 3-phase models without Hot Gas Re-Heat system, with optional belt drive.
3. Belt-driven evaporator fan:
 - a. Belt drive shall include an adjustable-pitch motor pulley and belt break protection system.
 - b. Shall use rigid pillow block bearing system with lubricated fittings that are accessible or a lubrication line.
 - 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.
 - e. Standard on all 036-072 sizes and 036-060 size models with Hot Gas Re-Heat system. Optional on all 036-060 3-phase models.

L. (23 81 19.13.L) 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 all sizes.
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.

M. (23 81 19.13.M) 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. Factory-supplied VFDs qualify, through ABB for a 12-month warranty from date of commissioning or 18 months from date of sale, whichever occurs first.
 - b. Shall be installed inside the unit cabinet, mounted, wired and tested.
 - c. Shall contain Electromagnetic Interference (EMI) frequency protection.
 - d. Insulated Gate Bi-Polar Transistors (IGBT) used to produce the output pulse width modulated (PWM) waveform, allowing for quiet motor operation.
 - e. Self diagnostics with fault and power code LED indicator. Field accessory Display Kit available for further diagnostics and special setup applications.
 - f. RS485 capability standard.
 - g. Electronic thermal overload protection.
 - h. 5% swinging chokes for harmonic reduction and improved power factor.
 - i. All printed circuit boards shall be conformal coated.
3. Integrated Economizer IV and Economizer X 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.

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- d. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below set-points.
 - e. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
 - f. Low leak rate models shall be equipped with dampers not to exceed 2% leakage at 1 in. wg pressure differential.
 - g. Economizer controller on Economizer 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) LED indicators for: when free cooling is available, when module is in DCV mode, when exhaust fan contact is closed.
 - h. Economizer controller on Economizer 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 90.1-2016 and IECC-2015 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°F to 100°F (4°C to 38°C). 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 to 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 close 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 Economizer 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 set-points.
 - 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 90.1-2016 and IECC-2015 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 Economizer 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 90.1-2016 and IECC-2015 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°F to 100°F (4°C 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 to 10 vdc CO₂ sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.
 - p. Compressor lockout 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 or Field-installed on all 3 phase models)
 - a. Damper shall be a Two-Position Damper. Damper travel shall be from the full closed position to the field adjustable %-open set-point.
 - 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.
 - 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 25 or 50% outdoor air for year round ventilation.
 - 7. Hot Gas Re-Heat Dehumidification System (3-phase models only):
 - a. Hot Gas Re-Heat Dehumidification System shall be factory-installed and shall provide greater dehumidification of the occupied space by two modes of dehumidification operations in addition to its normal design cooling mode:
 - 1) Subcooling mode further sub cools 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 (Motormaster®)
 - 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

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condensing temperature at outdoor ambient temperatures down to -20°F (-29°C).

9. Low Ambient Controller (Factory-installed only)

a. Controller shall control coil head pressure by condenser-fan speed modulation or condenser-fan cycling and wind baffles.

- 1) Shall consist of solid-state control and condenser-coil temperature sensor to maintain condensing temperature at outdoor ambient temperatures down to 0°F (-18°C). (Not available on 110 size models as standard unit cooling operation down to 0°F [-18°C]).

10. Condenser Coil Hail Guard Assembly (Factory-installed option on 3-phase models. Field-installed on all 3 and 1 phase models):

- a. Shall protect against damage from hail.
- b. Shall be of louvered style.

11. Unit-Mounted, Non-Fused Disconnect Switch:

- a. Switch shall be factory-installed, internally mounted.
- b. National Electric Code (NEC) and UL or ETL 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.
- e. Sized only for the unit as ordered from the factory. Does not accommodate field-installed devices.

12. 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. Factory-installed 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.

c. Field-installed 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 field-installed and internally mounted with easily accessible 115-v female receptacle.
- 4) Outlet shall include 20 amp GFI receptacles. This kit provides a flexible installation method which allows code compliance for height requirements of the GFCI outlet from the finished roof surface as well as the capability to relocate the outlet to a more convenient location.
- 5) Outlet shall be accessible from outside the unit.
- 6) Outlet shall include a field installed "Wet in Use" cover.

13. HACR Breaker

- a. These manual reset devices provide overload and short circuit protection for the unit. Factory wired and mounted with the units, with access cover to help provide environmental protection. On 575-v applications, HACR breaker can only be used with WYE power distribution systems. Use on Delta power distribution systems is prohibited.
- b. Sized only for the unit as ordered from the factory. Does not accommodate field-installed devices.

14. 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. Factory-Installed 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.
 - c. Field-Installed 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 field-installed and internally mounted with easily accessible 115-v female receptacle.
 - 4) Outlet shall include 20 amp GFI receptacles. This kit provides a flexible installation method which allows code compliance for height requirements of the GFCI outlet from the finished roof surface as well as the capability to relocate the outlet to a more convenient location.
 - 5) Outlet shall be accessible from outside the unit.
 - 6) Outlet shall include a field installed "Wet in Use" cover.
15. 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.
16. 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 to 100% adjustable setpoint on the economizer control.
17. 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.
 - 1) Permits installation and securing of ductwork to curb prior to mounting unit on the curb.
18. High-Static Indoor Fan Motor(s) and Drive(s):
High-static motor(s) and drive(s) shall be factory-installed to provide additional performance range.
19. Condenser Coil Grille:
- a. Shall protect against damage from hail.
 - b. Shall be of louvered style.
20. Outdoor Air Enthalpy Sensor:
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.
21. Return Air Enthalpy Sensor:
The return air enthalpy sensor shall be used in conjunction with an outdoor air enthalpy sensor to provide differential enthalpy control.
22. Indoor Air Quality (CO₂) Sensor:
- a. Shall be able to provide demand ventilation indoor air quality (IAQ) control.
 - b. The IAQ sensor shall be available in duct mount, wall mount, or wall mount with LED display. The setpoint shall have adjustment capability.
23. Smoke detectors (factory or field 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.

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- 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 shut-down applications.
24. Horn/Strobe Annunciator
- a. Provides an audible/visual signaling device for use with factory-installed option or field-installed accessory smoke detectors.
 - 1) Requires installation of a field-supplied 24-v transformer suitable for 4.2 VA (AC) or 3.0 VA (DC) per horn/strobe accessory.
 - 2) Requires field-supplied electrical box, North American 1-gang box, 2-in. (51 mm) x 4-in. (102 mm).
 - 3) Shall have a clear colored lens.
25. 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).
26. Time Guard
- a. Shall prevent compressor short cycling by providing a 5-minute delay (±2 minutes) before restarting a compressor after shut-down for any reason.
 - b. One device shall be required per compressor.
27. Condensate Overflow Switch:
- a. This sensor and related controller monitors the condensate level in the drain pan and shuts down compression operation when overflow conditions occur. It includes:
 - 1) Indicator light – solid red (more than 10 seconds on water contact – compressors disabled), blinking red (sensor disconnected).
 - 2) 10 second delay to break – eliminates nuisance trips from splashing or waves in pan (sensor needs 10 seconds of constant water contact before tripping).
 - 3) Disables the compressor(s) operation when condensate plug is detected, but still allows fans to run for economizer.
28. 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 in the single point box (if applicable) for protection of internal heater circuits not exceeding 48 amps each. Electric heaters other than CRHEATER113B00-116B00 use 24v control side break/auto-reset or line-break/auto-reset limit switches to protect the unit against over-temperature situations. CRHEATER113B00-116B00 electric heater applications use a combination of 24v control side break/auto-reset, line-break/non-resettable “one shot” limit switches to protect the unit against over-temperature situations. All heaters use 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.
29. Hinged Access Panels
- a. Shall provide easy access through integrated quarter turn latches.
 - b. Shall be on major panels of filter, control box, fan motor and compressor
30. 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 with a VFD controller.

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