



FRIEDRICH

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Commercial Resolute™ Line F-Series™ Packaged Air Conditioners



RACH Series (15-25 Ton Models)

Cooling Efficiencies up to: 11.0 EER & 14.2 IEER

Nominal Sizes: 15, 17.5, 20 & 25 Tons [52.8, 61.5, 70.3 & 87.9 kW]

Cooling Capacities: 172.0k Btu/h [50.41 kW] to 284.0k Btu/h [83.23 kW]

Refrigerant Type: R-454B

ASHRAE 90.1 2022 Compliant Models



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RACH STANDARD FEATURES INCLUDE:

Convenience & Serviceability Features

- Fork-able base rails for easy handling and lifting
- Color-coded and labeled wiring
- Single point electrical connections
- Field convertible airflow - vertical downflow or horizontal sideflow
- Solid-core liquid line filter drier
- Hinged major access doors with heavy-duty gasketing and 1/4 turn latches
- Slide-out indoor fan assembly for added service convenience
- Slide-out, internally sloped condensate drain pan with overflow switch, conforms to ASHRAE 62 standards
- Slide-out filter rack with 2-inch filters
- MERV8 and MERV13 filters available as a factory-installed option
- Factory-installed refrigerant leak detection system

Quality Manufacturing Features

- Factory charged with R-454 refrigerant
- Wired and run tested at the factory
- Powder Paint Finish meets ASTM B117 test requirements. G90 galvanized steel coated on each side for maximum protection.
- Foil faced insulation encapsulated throughout entire unit minimizes airborne fibers in the air stream

Performance Features

- Cooling operation up to 125°F ambient
- Scroll compressors with internal line break overload and high-pressure protection
- Dual stage compressor, 2 stages of cooling
- MicroChannel condenser coil and Tube and Fin evaporator coil
- Blower with variable frequency drive (VFD) control
- High pressure and low pressure/loss of charge protection
- Permanently lubricated gas heat inducer, evaporator and condenser motors
- Internally protected condenser motors with totally enclosed shaft down design

Controls Features

- Standard Modbus interface
- Factory-installed DDC control and sensors, enabling easy connectivity with LonWorks® or BACnet® BAS systems for remote monitoring and control

FACTORY-INSTALLED OPTIONS:

- Economizer w/Single Enthalpy (Downflow/Vertical)
- Economizer w/Single Enthalpy (Downflow/Vertical) DDC
- Low-Ambient Control Kit
- Freeze Stat Kit
- Electric Heater Kits
- Return/Supply Smoke Detector (Downflow/Vertical)

FIELD-INSTALLED ACCESSORY EQUIPMENT:

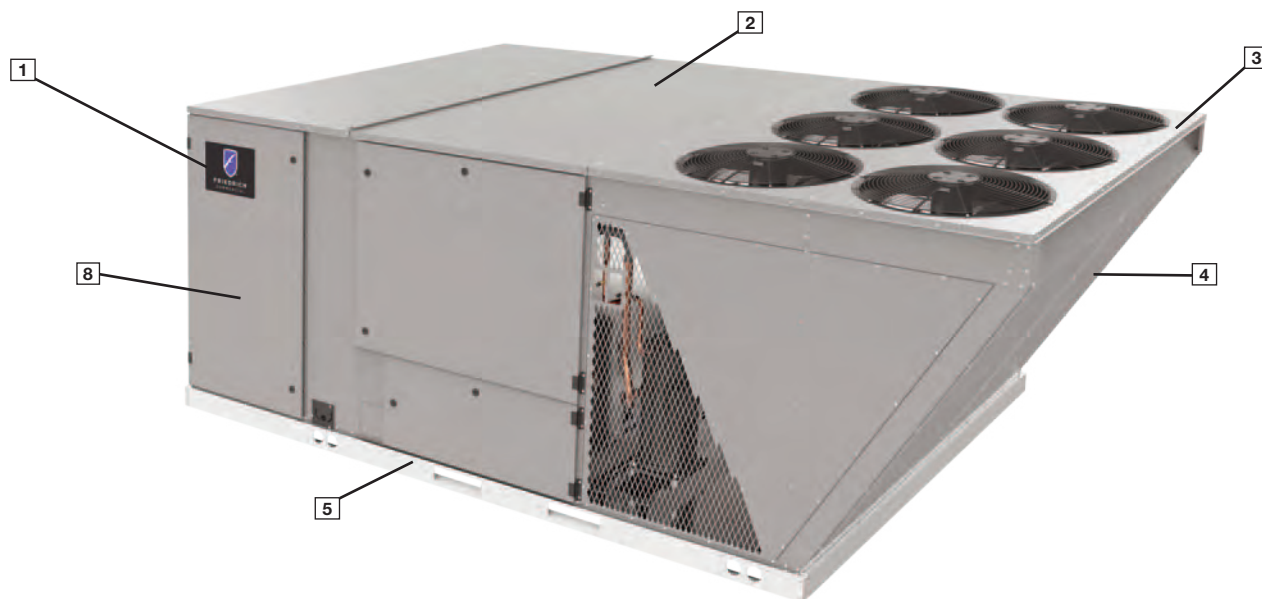
Accessory	Model Number	Factory Installation Available?
Economizers		
DDC Economizer with Single Enthalpy (Downflow) <i>RRS Economizer with Honeywell Controller</i>	AXRD-01RMDCM3	Yes
DDC Economizer with Single Enthalpy (Downflow) <i>RRS Economizer with Honeywell Controller with Smoke Detector</i>	AXRD-01RMDDM3	Yes
DDC Economizer with Single Enthalpy (Horizontal) <i>RRS Economizer with Honeywell Controller</i>	AXRD-01RMHCM3	No
Non-DDC Economizer with Single Enthalpy (Downflow) <i>RRS Economizer with Siemens Controller</i>	RXRD-51RHDAM3	Yes
Non-DDC Economizer with Single Enthalpy (Horizontal) <i>RRS Economizer with Siemens Controller</i>	RXRD-51RHHAM3	No
Economizer Universal DDC Interface Kit	RXRX-DDC02	Yes ¹

¹When a factory installed economizer is selected in the unit option codes, this accessory is automatically factory installed if required

Accessory	Model Number	Factory Installation Available?
Comfort Alert® (1 per Compressor)	RXRX-AZ01	Yes
Communication Card, BACnet	RXRX-AY01	No
Communication Card, LonWorks	RXRX-AY02	No
Concentric Adapter/Transition (15 & 17.5 ton)	RXMC-CJ07	No
Concentric Adapter/Transition (20 ton)	RXMC-CK08	No
Concentric Adapter/Transition (25 ton)	RXMC-CL09	No
Concentric Flush Mount Diffuser (15 & 17.5 ton)	RXRN-AD80	No
Concentric Step Down Diffuser (15 & 17.5 ton)	RXRN-AD81	No
Concentric Step Down Diffuser (20 ton)	RXRN-AD86	No
Concentric Step Down Diffuser (25 ton)	RXRN-AD88	No
Convenience Outlet, Non-Powered	RXRX-AN01	Yes
Dual Enthalpy, Temperature and Humidity Sensor (for Honeywell DDC)	RXRX-AV02	No
Dual Enthalpy, Temperature and Humidity Sensor (for Siemens Non-DDC)	PD555460	No
Electric Heaters	RXJJ-CE20 (C, D)	Yes
	RXJJ-CE40 (C, D)	Yes
	RXJJ-CE60 (C, D)	Yes
	RXJJ-CE75 (C, D)	Yes

Accessory	Model Number	Factory Installation Available?
Fresh Air Damper ² , Manual	AXRF-KFA1	No
Fresh Air Damper ² , Motorized (DDC)	RXRX-AW05	No
Outdoor Coil Louver Kit (15 Ton)	AXRX-AAD01K	Yes
Outdoor Coil Louver Kit (17.5-25 Ton)	AXRX-AAD01L	Yes
Low-Ambient Control Kit (1 Per Compressor)	RXRZ-C02	Yes
MERV 8 Filter	RXMF-M08A22520	Yes
MERV 13 Filter	RXMF-M13A22520	Yes
Power Exhaust (208/230V) Kit, Convertible <i>RRS</i>	RXRX-BGF05C	No
Power Exhaust (460V) Kit, Convertible <i>RRS</i>	RXRX-BGF05D	No
Roofcurb, 14"	RXKG-CBH14	No
Roofcurb Adapter to RXKG-CAF14	RXRX-CJCF14	No
Roofcurb Adapter to RXRK-E56	RXRX-CJCE56	No
Sensor, Carbon Dioxide (Wall Mount)	RXRX-AR02	No
Sensor, Room Humidity	RHC-ZNS4	No
Sensor, Room Temperature and Relative Humidity	RHC-ZNS5	No

²Motorized Kit and Manual Fresh Air Damper must be combined for a complete Motorized Outside Air Damper Selection.



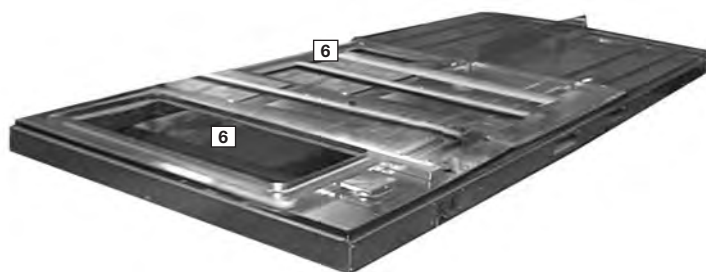
Cabinet and Foundation

Outwardly, the large Friedrich® Commercial Series label (1) identifies the brand to the customer. The sheet-metal cabinet (2) uses nothing less than 20-gauge material for structural components with an underlying coat of G90. To ensure the leak-proof integrity of these units, the design utilizes a top with a 1/8" drip lip (3), gasket-protected panels and screws. (4) The outdoor coil is slanted to protect from hail. Every Friedrich package unit uses the toughest finish in the industry, using electro deposition baked-on enamel tested to withstand a rigorous 1000-hour salt spray test, per ASTM B117.

Anything built to last must start with the right foundation. In this case, the foundation is 14-gauge, commercial-grade, full-perimeter base rails (5), which integrate fork slots and rigging holes to save set-up time on the job site.

Base Pan

The base pan is stamped, which forms a 1-1/8" flange around the supply and return cover and has eliminated the worry of water entering the conditioned space (6). The insulation has been placed on the underside of the basepan, removing areas that would allow for potential moisture accumulation, which can facilitate growth of harmful bacteria. All insulation is secured with both adhesive and mechanical fasteners, and all edges are hidden.



Drain Pan

The drainpan (7) is made of plastic that resists the growth of harmful bacteria and is sloped for the latest IAQ benefits. Furthermore, the drain pan slides out for easy cleaning.

Test Standards

During development, each unit was tested to U.L. 60335-2-40, AHRI 340-360 and other Friedrich-required reliability tests. Friedrich adheres to stringent ISO 9001:2015 quality procedures, and each unit bears the U.L. and AHRI certification labels located on the unit nameplate. Contractors can rest assured that when a Friedrich package unit arrives at the job, it is ready to go with a factory charge and quality checks.

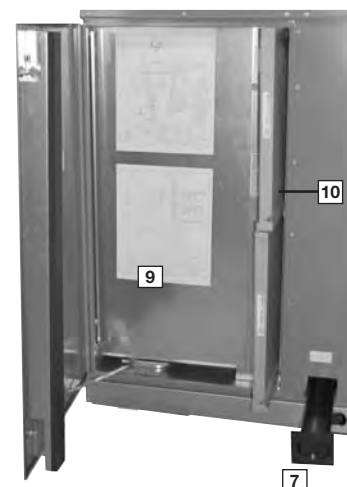
Easy Access

Access to all major compartments is from the front of the unit, including the filter and electrical compartment (8), blower compartment, heating section, and outdoor section. Each panel is permanently embossed with the compartment name (control/filter access, blower access). Hinged access is standard for the electrical, blower, compressor, and filter compartments.

Electrical and filter compartment access is through a large, hinged-access panel with 1/4 turn latches. On the outside of the panel is the unit nameplate, which contains the model and serial number, electrical data and other important unit information.

Charging Charts, Wiring Diagrams & Labels

The unit charging chart is located on the inside of the electrical and filter compartment door. Electrical wiring diagrams are found on the control box cover, which allows contractors to move them to more readable locations. To the right of the control box the model and serial number can be found. Having this information on the inside will assure model identification for the life of the product. The production line quality test assurance label is also placed in this location (9).





Filter Rack

The tracked filter rack (10) allows for easy change of eight 2" x 20" x 25" standard sized filters.

Control Box

Inside the control box (11), each electrical component is clearly identified with a label that matches the component to the wire diagram for ease of trouble shooting. All wiring is numbered on each end of the termination and color-coded to match the wiring diagram. The control transformer has a low voltage circuit breaker that trips if a low voltage electrical short occurs. There is a blower contactor and contactor for each compressor.



ClearControl

As part of the ClearControl system which allows real time monitoring and communication between rooftop units, the RACH Package Air Conditioner has a Rooftop Unit Controller (RTU-C) factory mounted and wired in the control panel. The RTU-C is a solid-state microprocessor-based control board that provides flexible control and extensive diagnostics for all unit functions. The RTU-C through proportional/integral control algorithms perform specific unit functions that govern unit operation in response to: zone conditions, system temperatures, system pressures, ambient conditions and electrical inputs. The RTU-C features a 16 x 2 character LCD display and a five-button keypad for local configuration and direct diagnosis of the system (12).



New features include a clogged filter switch (CFS), fan proving switch (FPS), return air temperature sensor (RAT), discharge air temperature sensor (DAT) and outdoor air temperature sensor (OAT). Freeze sensors (FS) are used in place of freezestats to allow measurement of refrigerant suction line temperatures.

The RACH Package Air Conditioner with the ClearControl is specifically designed to be applied in four distinct applications:

- 1. BACnet Communication** — The unit is compatible with a third party building management system that supports the BACnet Application Specific Controller device profile, with the use of a field-installed BACnet Communication Module. The BACnet Communication Module plugs into the unit RTU-C controller and allows communication between ClearControl™ and the BACnet MSTP or IP network. A zone sensor, a BACnet network zone sensor, a BACnet thermostat or DDC controller may be used to send the zone temperature or thermostat demands to the RTU-C. The BACnet Communication Module is compatible with MSTP EIA-485 daisy chain networks communicating at 38.4 bps. It is compatible with twisted pair, shielded cables.
- 2. LonWorks Communication** — The unit is compatible with a third party building management system that supports the LonMark Space Comfort Controller (SCC) functional profile or LonMark Discharge Air Controller (DAC) functional profile. This is accomplished with a field-installed LonMark communication module. The LonMark Communication Module plugs onto the RTU-C controller and allows communication between ClearControl and a LonWorks Network. A zone sensor, a LonTalk network zone sensor, or a LonTalk thermostat or DDC controller may be used to send the zone temperature or thermostat demands to the RTU-C. The LonMark Communication Module utilizes an FTT-10A free topology transceiver communicating at 78.8 kbps. It is compatible with Echelon qualified twisted pair cable, Belden 8471 or NEMA Level 4 cables. The Module can communicate up to 1640 ft. with no repeater. The LonWorks limit of 64 nodes per segment applies to this device.
- 3. 24V Thermostat Compatibility** — The unit is compatible with a programmable 24 volt thermostat. Connections are made via conventional thermostat screw terminals. Extensive unit status and diagnostics are displayed on the LCD screen of the RTU-C.
- 4. Zone Sensor Compatibility** — The unit is compatible with a zone sensor and mechanical or solid state time clock connected to the RTU-C. Extensive unit status and diagnostics are displayed on the LCD screen of the ClearControl.

Comfort Alert

A factory or field-installed Comfort Alert module is available for power phase-monitoring protection and additional compressor diagnostics. The alarms can be displayed on the ClearControl display, through the (BAS) network, or connected to the “L-Terminal” of a thermostat for notification.

Variable Frequency Drive

The supply fan Variable Frequency Drive (VFD) comes standard and optimizes energy usage year round by providing a lower speed for first stage cooling operation improving IEER's over the conventional constant fan system. Furthermore, operating in the constant fan mode at the reduced speed can use as little as 1/5th of the energy of a conventional constant fan system. Also, by operating at a lower speed on first stage cooling up to 51% more moisture is removed improving comfort during low load operation. The VFD supply fan factory option meet's California Title 24 and ASHRAE 90.1-2022 requirements for multi blower speed control. VFD also ramps up to the desire speed reducing stress on the supply fan components and reducing the noise from sudden inrush of air. Because the airflow is cut in half during first stage cooling and constant fan operation, noise is much less during these modes of operation.

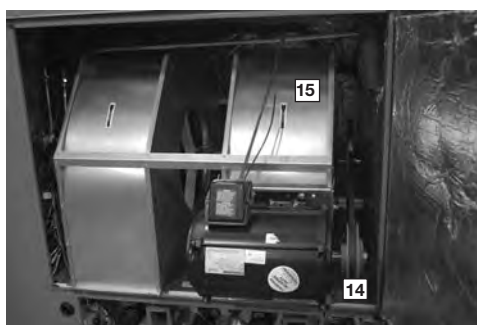
Convenience Outlet & Disconnect

For added convenience in the field, a factory-installed convenience outlet (13) is available. Low and High voltage can enter either from the side or through the base. Low-voltage connections are made through the low-voltage terminal strip. For ease of access, the U.L.-required low voltage barrier can be temporarily removed for low-voltage termination and then reinstalled. The high-voltage connection is terminated at the high voltage terminal block. The suggested mounting for the field-installed disconnect is on the exterior side of the electrical control box.



Blower Compartment

The blower compartment is to the right of the control box and can be accessed by 1/4 turn latches. To allow easy maintenance of the blower assembly, the entire assembly easily slides out by removing four #10 screws from



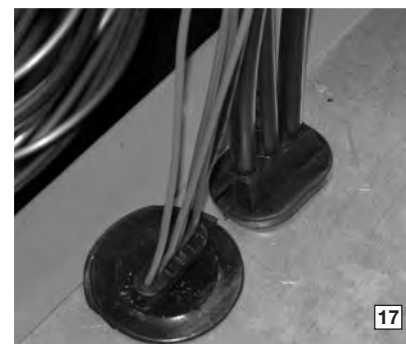
the blower assembly. The adjustable motor pulley (14) can easily be adjusted by loosening the bolts on either side of the motor mount. Removing the bolts allows for easy removal of the blower pulley by pushing the blower assembly up to loosen the belt. Once the pulley is removed, the motor sheave can be adjusted to the desired number of turns, ranging from 1 to 6 turns open. Where the demands for the job require high static, Friedrich has high-static drives available that deliver nominal airflow up to 2" of static. By referring to the airflow performance tables listed in the installation instructions, proper static pressure and CFM requirements can be dialed in. The scroll housing (15) and blower scroll provide quiet and efficient

airflow. The blower sheave is secured by an “H” bushing which firmly secures the pulley to the blower shaft for years of trouble-free operation. The “H” bushing allows for easy removal of the blower pulley from the shaft, as opposed to the use of a set screw, which can score the shaft, creating burrs that make blower-pulley removal difficult.

Also inside the blower compartment are the optional low-ambient controls (16). The optional low-ambient controls allow for operation of the compressors down to 0 degrees ambient temperature by cycling the outdoor fans on high pressure. The freeze sensor protects the compressor if the evaporator coil gets too cold (below freezing) due to low airflow, and allows monitoring of the suction line temperature on the controller display. The sensor clips on the suction line near the evaporator outlet.

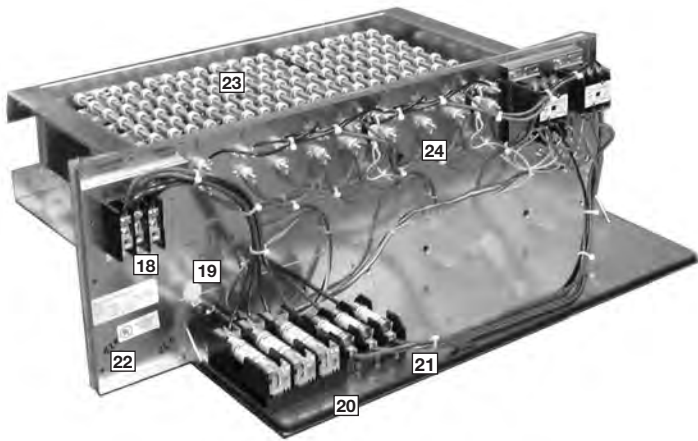


Inside the blower compartment the interlaced evaporator can also be viewed. The evaporator uses enhanced fin technology for maximum heat transfer. The TXV metering device assures even distribution of refrigerant throughout the evaporator. Wiring throughout the unit is neatly bundled and routed. Where wire harnesses go through the condenser bulkhead or blower deck, a molded wire harness assembly (17) provides an air-tight and water-tight seal, and provides strain relief. Care is also taken to tuck raw edges of insulation behind sheet metal to improve indoor air quality.

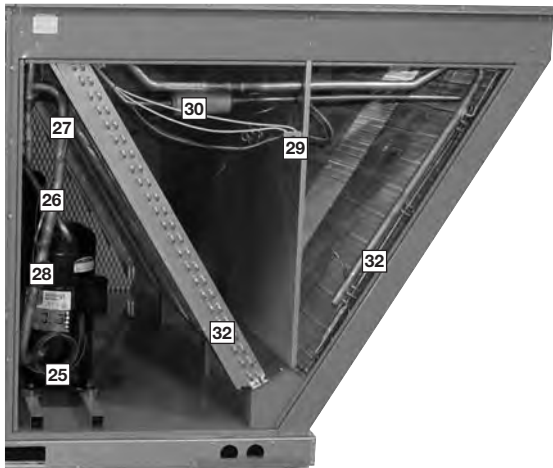


Electric Heater Kits

The electric heater kits are located in the heater compartment. The two-stage resistive heater kits are available for factory or field installation. With choices that range from 18 to 72 kW, the contractor is assured to get the correct amount of heating output to meet the design heating load. Engineered with ease of installation in mind, the heater kit is completely wired up for slide-in plug-and-play installation in the field.



Power hook-up in the field is easy with single-point wiring to a terminal block (18) and a polarized plug for the low-voltage connection (19). The electric furnace comes with fuses for the unit (20) and for the electric furnace (21), and is UL certified (22). The electric heating elements are of a wound-wire construction (23) and isolated with ceramic bushings. The limit switch (24) protects the design from over-temperature conditions.



Compressor

The compressor compartment houses the heartbeat of the unit. The scroll compressor (25) is known for its long life, and for reliable, quiet, and efficient operation. The suction and discharge lines are designed with shock loops (26) to absorb the strain and stress that the starting torque, steady state operation, and shut down cycle impose on the refrigerant tubing. Each compressor and circuit is independent for built-in redundancy, and each circuit is clearly marked throughout the system. Each unit has two stages of efficient cooling operation, first stage is approximately 50% of second stage.

External Gauge Port, High and Low Pressure Switches & Filter Dryer

In the outdoor section are the external gauge ports (27). With the gauge ports mounted externally, an accurate diagnosis of system operation can be performed quickly and easily. To identify the use of A2L class refrigerant R-454B, refrigerant ports are covered with red caps. Also located in this area are the refrigerant safety devices: the low-pressure switches (28) and the high-pressure switches. (29) The high-pressure switches will shut off the compressors if pressures exceeding 610 psig are detected as may occur if the outdoor fan motor fails. The low pressure switches shut off the compressors if low pressure is detected

due to loss of refrigerant charge. The factory-installed high and low pressure switches are brazed into the appropriate high or low side and wired appropriately. Each unit comes standard with filter dryer (30).

Condenser Fans

The condenser fan motor (31) can easily be accessed and maintained by removing the protective fan grille. The polarized plug connection allows the motor to be changed quickly and eliminates the need to snake wires through the unit.



MicroChannel Condenser Coil

The condenser coil uses MicroChannel technology for maximum heat transfer, light weight, fewer manually brazed connections and reduced refrigerant charge (32). The outdoor coil is slanted to protect the unit from Mother Nature.



Economizers and Dampers

Each unit is designed for both downflow or horizontal applications (33) for job configuration flexibility. The return air compartment can also contain an economizer (34). Three models exist; two for downflow applications, and one for horizontal applications. (A downflow economizer with factory-installed smoke detector in the return section is available). Each unit is pre-wired for the economizer to allow quick plug-in installation. The downflow economizer is also available as a factory-installed option. The economizer, which provides free cooling when outdoor conditions are suitable and also provides fresh air to meet local requirements, comes standard with single enthalpy controls. The controls can be upgraded to dual enthalpy easily in the field. The direct drive actuator combined with gear drive dampers has eliminated the need for linkage adjustment in the field. The economizer control has a minimum position setpoint, an outdoor-air setpoint, a mix-air setpoint, and a CO₂ setpoint. Barometric relief is standard on all economizers.



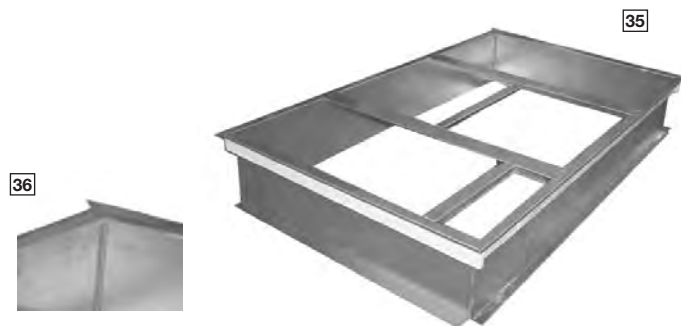
Power Exhaust is easily field-installed. The power exhaust is housed in the barometric relief opening and is easily slipped in with a plug-in assembly. The wire harness to the economizer also has accommodations for a smoke detector.

The damper minimum position, actual damper position, power exhaust on/off setpoint, mixed air temperature limit setpoint and Demand Controlled Ventilation (DCV) setpoint can be read and adjusted at the unit controller display or remotely through a network connection.

The Space CO₂ level, mixed air temperature, and Economizer Status (Free Cooling Available, Single or Dual Enthalpy) can be read at the unit controller display or remotely through a network connection. Economizer Faults will trigger a network Alarm and can be read at the unit controller display or remotely through a network connection.

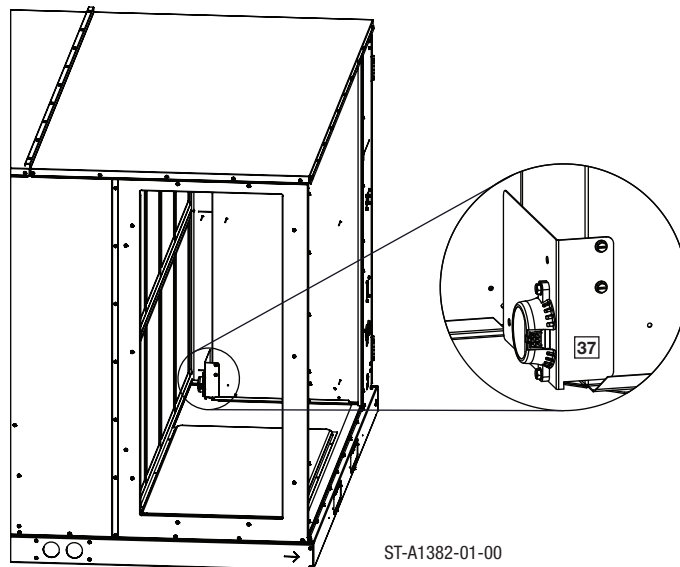
Roofcurb

The roofcurb (35) is made for toolless assembly at the jobsite by inserting a pin into the hinged corners (36), which makes the assembly process quick and easy.



Refrigerant Leak Detection

In the event of a detected refrigerant leak, the refrigerant leak detection sensor (37) will trigger the mitigation procedure that shuts off the compressor(s) and turns on the indoor blower motor.



ST-A1382-01-00

HUMIDIDRY SYSTEM FEATURES

HumidiDry® is Friedrich’s exclusive dehumidification packaged unit solution. It delivers maximum humidity control without compromising desired temperature set point for better occupant comfort. HumidiDry maintains humidity levels at a desired better occupant set point when there’s little or no demand for air conditioning. Packaged units with HumidiDry hot gas reheat are controlled by a thermostat and humidistat. The thermostat takes priority on single-stage system. When the thermostat is activated by temperatures that exceed it set point, HumidiDry operates like a standard rooftop unit. It can operate on first stage cooling when demand is low or at full capacity when air conditioning load is high. Unlike other rooftop or reheat units, HumidiDry is uniquely designed so the VFD will operate at a low speed, increasing moisture removal during first-stage cooling operation. This provides initial defense for controlling humidity. When temperature is satisfied but humidity exceeds the humidistat set point, the unit initiates a dehumidification cycle using a combination of hot gas and sub-cooled liquid reheat and the VFD operates at low speed. During this cycle, the unit delivers dry, neutral air. On a two-stage system, it is possible for both a thermostat and humidistat to register readings above set point. Under this condition, the first-stage system runs in the dehumidification cycle, the second-stage system runs in a cooling cycle and the VFD operates on high speed. This provides dry conditioned air.

Figure 1 shows the refrigerant path during the normal cooling mode. The liquid refrigerant leaves the TXV with the sudden pressure drop causing the liquid to expand to a vapor and absorbing the heat from the supply air going through the evaporator coil. The refrigerant vapor then travels to the compressor where it is elevated to a higher pressure and temperature. The superheated refrigerant vapor next carries the heat to the outside coil where the heat is then rejected and the refrigerant condenses into a subcooled liquid where the process repeats itself.

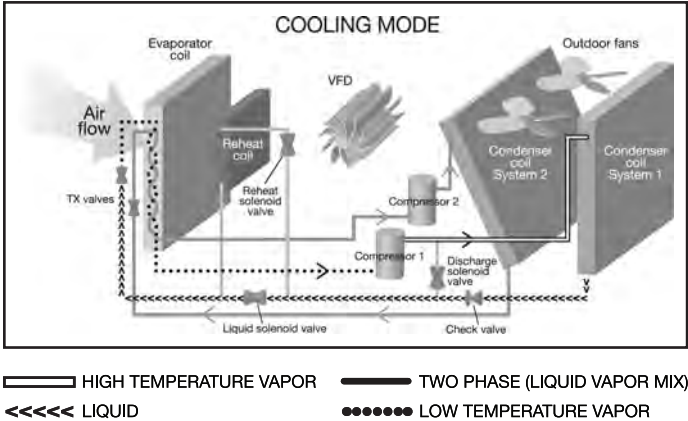


Figure 1

Figure 2 shows the refrigerant path during the reheat mode. When the reheat cycle is energized by the RTU-C, the reheat solenoid valve, upstream of the reheat coil opens. The liquid solenoid valve ahead of the TXV, closes. The discharge solenoid valve, in the compressor discharge line, opens. The liquid refrigerant leaves the TXV with the sudden pressure drop causing the liquid to expand to a vapor and absorbing the heat from the supply air going through the evaporator coil. The refrigerant vapor then travels to the compressor where it is elevated to a higher pressure and temperature. The refrigerant next carries the heat to a parallel path between the condenser coil and a bypass circuit where some of the heat is rejected outdoors. The ratio of heat rejected outdoors versus indoors is controlled by an outdoor fan motor controller (OFMC) that monitors the two-phase vapor temperature and varies the fan speed. This 2-phase refrigerant vapor is then sent to the reheat coil. As the refrigerant travels through the reheat coil it condenses into a subcooled liquid where the process repeats itself.

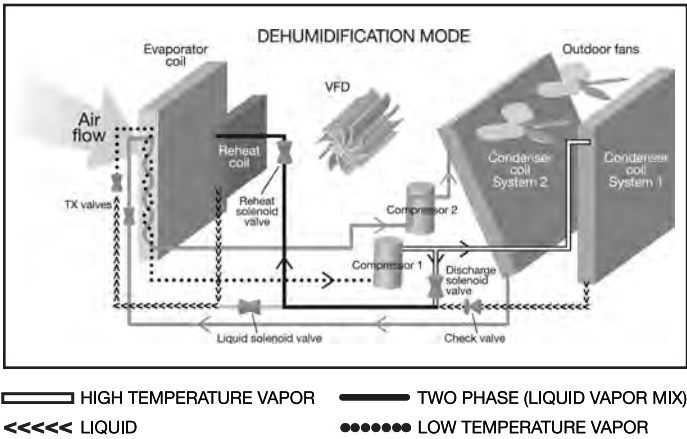


Figure 2

R	AC	H	Y	B	180	A	C	F	00	0	C	A	****				
1	23	4	5	6	789	10	11	12	13	14	15	16	17	18	19	20	21

1—Brand

R = Friedrich

2, 3—Unit Type

AC = Packaged AC

4—Cabinet Type

H = Large Commercial

5—Refrigerant

Y = R-454B

6—Efficiency Level

B = Standard Efficiency

7, 8, 9—Capacity

180 = 15 Ton

210 = 17.5 Ton

240 = 20 Ton

300 = 25 Ton

10—Major Series

A = 1st Design

11—Voltage

C = 3 PH, 208-230V/60 Hz

D = 3 PH, 460V/60 Hz

12—Drive

F = Belt Drive – VFD Low

G = Belt Drive – VFD Medium

H = Belt Drive – VFD High

(H-Drive only available

Field-Installed on 20 Ton)

13, 14—Heat Capacity

00 = No Heat

20 = 20 kW

40 = 40 kW

60 = 60 kW

75 = 75 kW

15—Heat Configuration

0 = No Stages

1 = 1-Stage

2 = 2-Stage

16—Control

C = ClearControl

D = ClearControl &
Comfort Alert

17—Minor Series

A = 1st Design

18, 19, 20, 21—Option Code

See next page

FACTORY-INSTALLED OPTION CODES FOR RACH (15-25 TON)

18					19					20				21	
LV = Louver protection					LF = Low Ambient					EC = Downflow Economizer				M8 = MERV 8 Filter	
RH = HumidiDry / HGRH (Hot Gas Reheat) ¹					NP = Non-Powered Convenience Outlet					RS = Return Smoke Detector				M13 = MERV 13 Filter	
HA = Hinged Access (Standard)															
CC = Coil Coating															
OPTION CODE CHARACTER HIGHLIGHTED BELOW															
C	HA				A	None				0	None			A	Standard
D	LV	HA			B	LF				1	EC			D	M8
F	LV	HA	CC		C	NP				3	EC	RS		G	M13
Q	RH	HA			D	LF	NP								
S	LV	RH	HA												
T	LV	RH	HA	CC											

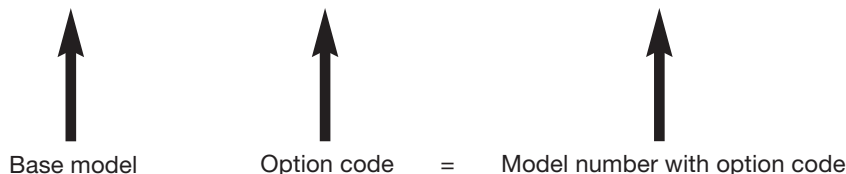
¹RH Not available for 17.5T

Instructions for Factory-Installed Option(s) Selection

NOTE: Four characters following the model number will be utilized to designate a factory-installed option or combination of options. If no factory option(s) is required, "CA0A" follows the model number.

- **Step 1:** In the table above, based on the desired features, choose option code character from highlighted options on the left side under the number 18. For example, the option code character "D" has Louver protection and Hot Gas Reheat.
- **Step 2:** In the table above, based on the desired features, choose option code character from highlighted options on the left side under the number 19. For example, the option code character "B" has Low Ambient Controls.
- **Step 3:** In the table above, based on the desired features, choose option code character from highlighted options on the left side under the number 20. For example, the option code character "3" has Economizer and Return Smoke.
- **Step 4:** In the table above, based on the desired features, choose option code from highlighted options on the left side under the number 21. For example, the option code character "D" has MERV 8 filters.
- The resulting option code from examples above is: "ED3"
- **Step 5:** Add your option code selection to the end of model number.

◦ Example: RACHYB180ACF000CA DB3D = RACHYB180ACF000CADB3D



To select an RACH Cooling and Heating unit to meet a job requirement, follow this procedure, with example, using data supplied in this specification sheet.

1. DETERMINE COOLING AND HEATING REQUIREMENTS AND SPECIFIC OPERATING CONDITIONS FROM PLANS AND SPECS.

Example:

Voltage—	240 V – 3 Phase – 60 Hz
Total Cooling Capacity—	205,000 Btu/h [60.0 kW]
Sensible Cooling Capacity—	155,000 Btu/h [45.4 kW]
Heating Capacity—	235,000 Btu/h [68.8 kW]
*Condenser Entering Air—	95°F [35°C] DB
*Evaporator Mixed Air Entering—	65°F [18.3] WB; 78°F [25.6] DB
*Indoor Air Flow (vertical)—	7200 CFM [3398 L/s]
*External Static Pressure—	0.70 in. WG [.17 kPa]

2. SELECT UNIT TO MEET COOLING REQUIREMENTS.

Since total cooling is within the range of a nominal 20 ton [70.3 kW] unit, enter cooling performance table at 95°F [35.0 °C] DB condenser inlet air. Interpolate between 63°F [17.2 °C] WB and 67°F [19.4 °C] WB to determine total and sensible capacity and power input for 65°F [18.3 °C] WB evaporator inlet air at 7725 CFM [3645 L/s] indoor air flow (table basis):

Total Cooling Capacity = 238,300 Btu/h [69.76 kW]
Sensible Cooling Capacity = 192,500 Btu/h [56.38 kW]
Power Input (Compressor and Cond. Fans) = 18,200 watts

Use formula in note ① to determine sensible capacity at 78°F [25.6] DB evaporator entering air:

$$192,550 + (1.10 \times 7,200 \times (1 - 0.11) \times (78 - 80))$$

Sensible Cooling Capacity = 178,452 Btu/h [52.25 kW]

3. CORRECT CAPACITIES OF STEP 2 FOR ACTUAL AIR FLOW.

Select factors from airflow correction table at 7200 CFM [3398 L/s] and apply to data obtained in step 2 to obtain gross capacity:

Total Capacity = 238,300 x .99 = 235,868 Btu/h [69.06 kW]
Sensible Capacity = 178,452 x 0.96 = 171,314 Btu/h [50.16 kW]
Power Input = 18,200 x 0.99 = 18,018 Watts

These are Gross Capacities, not corrected for blower motor heat or power.

4. DETERMINE BLOWER SPEED AND WATTS TO MEET SYSTEM DESIGN.

Enter Indoor Blower performance table at 7200 CFM [3398 L/s]. Total ESP (external static pressure) per the spec of 0.70 in. WG [.17 kPa] includes the system duct and grilles. Add from the table 'Component Air Resistance', 0.01 in. WG [.00 kPa] for wet coil, 0.08 in. WG [.02 kPa] for downflow air flow, for a total selection static pressure of 0.79 (0.8) in. WG [.20 kPa], and determine:

RPM = 739

WATTS = 2,862

DRIVE = F (Belt Drive - VFD Low)

5. CALCULATE INDOOR BLOWER Btu/h HEAT EFFECT FROM MOTOR WATTS, STEP 4.

$$2,862 \times 3.412 = 9,765 \text{ Btu/h [2.86 kW]}$$

6. CALCULATE NET COOLING CAPACITIES, EQUAL TO GROSS CAPACITY, STEP 3, MINUS INDOOR BLOWER MOTOR HEAT.

$$\text{Net Total Capacity} = 235,868 - 9,765 = 226,103 \text{ Btu/h [66.21 kW]}$$

$$\text{Net Sensible Capacity} = 171,314 - 9,765 = 161,549 \text{ Btu/h [47.30 kW]}$$

7. CALCULATE UNIT INPUT AND JOB EER.

$$\text{Total Power Input} = 18,018 \text{ (step 3)} + 2,862 \text{ (step 4)} = 20,880 \text{ Watts}$$

$$\text{EER} = \frac{\text{Net Total Btu/h [kW] (step 6)}}{\text{Power Input, Watts (above)}} = \frac{226,103}{20,880} = 10.83$$

8. SELECT UNIT HEATING CAPACITY.

From Heater Kit Table select kW to meet heating capacity requirement; multiply kW x 3412 to convert to Btu/h

Use 75 kW Heater Kit

Heater Kit Model: RXJJ-CE75C

Heater Kit Capacity: 245,323 Btu/h [71.8 kW]

Add indoor blower heat effect (step 5) to Heater Kit Capacity to get total heating capacity:

$$245,323 + 9,765 = 255,088 \text{ Btu/h [74.7 kW]}$$

9. CHOOSE MODEL RACHYB240ACF752CAQA0A

*NOTE: These operating conditions are typical of a commercial application in a 95°F/79°F [35°C/26°C] design area with indoor design of 76°F [24°C] DB and 50% RH and 10% ventilation air, with the unit roof mounted and centered on the zone it conditions by ducts.

[] Designates Metric Conversions

GENERAL DATA—RACHYB MODELS—15–25 TON

Model RACHYB Series	180	210	240	300
Cooling Performance^A				
Gross Cooling Capacity Btu/h [kW]	177,295 [51.9]	209,080 [61.1]	236,290 [69.2]	299,810 [87.8]
EER	11.0	11.0	11.0	10.0
IEER ^B	14.2	14.2	14.2	13.2
Nominal CFM/AHRI Rated CFM [L/s]	6,000/5,275 [2,832/2,490]	7,000/6,800 [3,304/3,209]	8,000/6,675 [3,776/3,150]	10,000/8,790 [4,719/4,148]
AHRI Net Cooling Capacity Btu/h [kW]	172,000 [50.41]	200,000 [58.61]	228,000 [66.82]	284,000 [83.23]
Net Sensible Capacity Btu/h [kW]	129,000 [37.81]	150,000 [43.96]	171,000 [50.12]	213,000 [62.42]
Net Latent Capacity Btu/h [kW]	43,000 [12.6]	50,000 [14.65]	57,000 [16.71]	71,000 [20.81]
Net System Power [kW]	15.64	18.18	20.73	28.40
Compressor				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
No. Stages	2	2	2	2
Outdoor Sound Rating (dB)^C				
	87	88	92	92
Outdoor Coil—Fin Type				
Tube Type	Louvered	Louvered	Louvered	Louvered
MicroChannel Depth in. [mm]	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Face Area sq. ft. [sq. m]	1 [25.4]	1 [25.4]	1 [25.4]	1 [25.4]
Rows / FPI [FPcm]	52.4 [4.87]	52.4 [4.87]	52.4 [4.87]	52.4 [4.87]
	2 / 23 [9]	2 / 23 [9]	2 / 23 [9]	2 / 23 [9]
Indoor Coil—Fin Type				
Tube Type	Louvered	Louvered	Louvered	Louvered
MicroChannel Depth in. [mm]	Rifled	Rifled	Rifled	Rifled
Face Area sq. ft. [sq. m]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Rows / FPI [FPcm]	26.7 [2.48]	26.7 [2.48]	26.7 [2.48]	26.7 [2.48]
Refrigerant Control	2 / 18 [7]	2 / 18 [7]	4 / 15 [7]	4 / 15 [7]
Drain Connection No./Size in. [mm]	TX Valves	TX Valves	TX Valves	TX Valves
	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type				
No. Used/Diameter in. [mm]	Propeller	Propeller	Propeller	Propeller
Drive Type/No. Speeds	3/24 [609.6]	4/24 [609.6]	6/24 [609.6]	6/24 [609.6]
CFM [L/s]	Direct/1	Direct/1	Direct/1	Direct/1
No. Motors at HP	10,000 [4,719]	14,800 [6,984]	19,800 [9,344]	19,800 [9,344]
Motor RPM	3 at 1/3 HP	4 at 1/3 HP	6 at 1/3 HP	6 at 1/3 HP
	1,075	1,075	1,075	1,075
Indoor Fan—Type				
No. Used/Diameter in. [mm]	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
Drive Type	2/18 x 9 [457 x 229]	2/18 x 9 [457 x 229]	2/18 x 9 [457 x 229]	2/18 x 9 [457 x 229]
No. Speeds	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Motors	Multiple	Multiple	Multiple	Multiple
Motor RPM	1	1	1	1
Motor Frame Size	1,725	1,725	1,760	1,760
	56 / 184	56 / 184	184 / 213	213 / 215
Filter—Type				
Furnished	Disposable	Disposable	Disposable	Disposable
(NO.) Size Recommended in. [mm]	Yes	Yes	Yes	Yes
	(8) 2 x 25 x 20	(8) 2 x 25 x 20	(8) 2 x 25 x 20	(8) 2 x 25 x 20
	[51 x 635 x 508]	[51 x 635 x 508]	[51 x 635 x 508]	[51 x 635 x 508]
Refrigerant Charge Oz. [g] Circuit 1 / Circuit 2				
Standard Models	144 [4,082]/148 [4,196]	161.6 [4,581]/168 [4,763]	212.8 [6,033]/206.4 [5,851]	228.8 [6,486]/216 [6,124]
Reheat Models	256 [7,260]/155.2 [4,400]	NA	304 [8,620]/220.8 [6,260]	316 [8,620]/220 [6,240]
Weights				
Net Weight lbs. [kg]	2,058 [933]	2,371 [1,075]	2,409 [1,093]	2,432 [1,103]
Ship Weight lbs. [kg]	2,185 [991]	2,498 [1,133]	2,536 [1,150]	2,559 [1,161]

NOTE: Please look at the rating plates pasted on the side of the unit to understand the model number of your unit. See Page 15 for Notes.

[] Designates Metric Conversions

NOTES:

- A. Cooling Performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to $\pm 20\%$ of nominal CFM. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 340/360.
- B. EER and Integrated Energy Efficiency Ratio (IEER) are rated at AHRI conditions in accordance with AHRI Standard 340/360.
- C. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

WEIGHTED SOUND POWER LEVEL (dBA)

Model	STD Rating (dBA)	Frequency (Hz)							
		63	125	250	500	1000	2000	4000	8000
RACHYB180	75.3	57.0	62.5	66.3	70.5	70.2	66.2	60.7	53.4
RACHYB210	75.5	55.6	62.0	66.5	71.1	70.4	66.3	60.7	53.1
RACHYB240	80.7	56.6	65.5	71.1	76.8	75.8	71.1	65.0	57.9
RACHYB300	80.9	58.6	64.9	71.2	76.5	76.1	72.0	66.0	56.5

GROSS SYSTEMS PERFORMANCE DATA—RACHYB180

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①											
wbE		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			
CFM [L/s]		7450 [3516]	5275 [2490]	4975 [2348]	7450 [3516]	5275 [2490]	4975 [2348]	7450 [3516]	5275 [2490]	4975 [2348]	
DR ①		.05	.09	.12	.05	.09	.12	.05	.09	.12	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	234.4 [68.7] 145.2 [42.6] 13.5	218.1 [63.9] 121.8 [35.7] 13.0	215.8 [63.2] 118.5 [34.7] 13.0	220.6 [64.7] 172.9 [50.7] 13.4	205.2 [60.1] 145.0 [42.5] 13.0	203.1 [59.5] 141.1 [41.4] 12.9	208.0 [61.0] 196.8 [57.7] 13.3	193.5 [56.7] 165.1 [48.4] 12.8	191.5 [56.1] 160.7 [47.1] 12.7
	80 [26.7]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	229.7 [67.3] 142.8 [41.9] 14.3	213.7 [62.6] 119.8 [35.1] 13.8	211.5 [62.0] 116.6 [34.2] 13.7	215.8 [63.2] 170.5 [50.0] 14.2	200.8 [58.9] 143.0 [41.9] 13.7	198.7 [58.2] 139.2 [40.8] 13.6	203.3 [59.6] 194.4 [57.0] 14.0	189.1 [55.4] 163.0 [47.8] 13.5	187.2 [54.9] 158.7 [46.5] 13.5
	85 [29.4]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	224.8 [65.9] 140.3 [41.1] 15.0	209.1 [61.3] 117.6 [34.5] 14.5	206.9 [60.6] 114.5 [33.6] 14.4	210.9 [61.8] 167.9 [49.2] 15.0	196.2 [57.5] 140.8 [41.3] 14.4	194.2 [56.9] 137.1 [40.2] 14.4	198.4 [58.1] 191.9 [56.2] 14.8	184.6 [54.1] 160.9 [47.2] 14.3	182.6 [53.5] 156.6 [45.9] 14.2
	90 [32.2]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	219.6 [64.4] 137.6 [40.3] 15.8	204.3 [59.9] 115.4 [33.8] 15.2	202.2 [59.3] 112.3 [32.9] 15.1	205.8 [60.3] 165.3 [48.4] 15.7	191.4 [56.1] 138.6 [40.6] 15.2	189.4 [55.5] 134.9 [39.5] 15.1	193.2 [56.6] 189.2 [55.5] 15.5	179.8 [52.7] 158.7 [46.5] 15.0	177.9 [52.1] 154.5 [45.3] 14.9
	95 [35]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	214.3 [62.8] 134.8 [39.5] 16.5	199.3 [58.4] 113.1 [33.1] 15.9	197.3 [57.8] 110.1 [32.3] 15.9	200.4 [58.7] 162.5 [47.6] 16.5	186.4 [54.6] 136.3 [39.9] 15.9	184.5 [54.1] 132.7 [38.9] 15.8	187.9 [55.1] 186.5 [54.7] 16.3	174.8 [51.2] 156.4 [45.8] 15.7	173.0 [50.7] 152.2 [44.6] 15.6
	100 [37.8]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	208.7 [61.2] 132.0 [38.7] 17.3	194.2 [56.9] 110.7 [32.4] 16.7	192.1 [56.3] 107.7 [31.6] 16.6	194.8 [57.1] 159.6 [46.8] 17.2	181.3 [53.1] 133.9 [39.2] 16.6	179.4 [52.6] 130.3 [38.2] 16.5	182.3 [53.4] 182.3 [53.4] 17.1	169.6 [49.7] 153.9 [45.1] 16.5	167.9 [49.2] 149.9 [43.9] 16.4
	105 [40.6]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	202.9 [59.5] 128.9 [37.8] 18.0	188.8 [55.3] 108.1 [31.7] 17.4	186.8 [54.7] 105.3 [30.9] 17.3	189.1 [55.4] 156.6 [45.9] 18.0	175.9 [51.6] 131.3 [38.5] 17.3	174.1 [51.0] 127.8 [37.5] 17.3	176.5 [51.7] 176.5 [51.7] 17.8	164.2 [48.1] 151.4 [44.4] 17.2	162.5 [47.6] 147.4 [43.2] 17.1
	110 [43.3]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	196.9 [57.7] 125.8 [36.9] 18.8	183.2 [53.7] 105.5 [30.9] 18.1	181.3 [53.1] 102.7 [30.1] 18.0	183.1 [53.7] 153.5 [45.0] 18.7	170.3 [49.9] 128.7 [37.7] 18.1	168.5 [49.4] 125.3 [36.7] 18.0	170.5 [50.0] 170.5 [50.0] 18.6	158.6 [46.5] 148.8 [43.6] 17.9	157.0 [46.0] 144.8 [42.4] 17.8
	115 [46.1]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	190.7 [55.9] 122.5 [35.9] 19.5	177.4 [52.0] 102.8 [30.1] 18.9	175.6 [51.5] 100.0 [29.3] 18.8	176.9 [51.8] 150.2 [44.0] 19.5	164.5 [48.2] 126.0 [36.9] 18.8	162.8 [47.7] 122.6 [35.9] 18.7	164.3 [48.2] 164.3 [48.2] 19.3	152.9 [44.8] 146.1 [42.8] 18.6	151.3 [44.3] 142.2 [41.7] 18.6
	120 [48.9]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	184.3 [54.0] 119.2 [34.9] 20.3	171.4 [50.2] 99.9 [29.3] 19.6	169.7 [49.7] 97.3 [28.5] 19.5	170.4 [49.9] 146.8 [43.0] 20.2	158.5 [46.5] 123.1 [36.1] 19.5	156.9 [46.0] 119.9 [35.1] 19.4	157.9 [46.3] 157.9 [46.3] 20.1	146.9 [43.1] 143.2 [42.0] 19.4	145.4 [42.6] 139.4 [40.9] 19.3
	125 [51.7]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	177.7 [52.1] 115.7 [33.9] 21.1	165.3 [48.4] 97.0 [28.4] 20.3	163.6 [47.9] 94.4 [27.7] 20.2	163.8 [48.0] 143.3 [42.0] 21.0	152.4 [44.7] 120.2 [35.2] 20.3	150.8 [44.2] 117.0 [34.3] 20.2	151.3 [44.3] 151.3 [44.3] 20.8	140.7 [41.2] 140.3 [41.1] 20.1	139.3 [40.8] 136.6 [40.0] 20.0

DR —Depression ratio
dbE —Entering air dry bulb

wbE—Entering air wet bulb
Power —kW input

NOTES: ① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding $[1.10 \times \text{CFM} \times (1 - \text{DR}) \times (\text{dbE} - 80)]$.

[] Designates Metric Conversions

GROSS SYSTEMS PERFORMANCE DATA—RACHYB210

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①											
wbE		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			
CFM [L/s]		8250 [3894]	6800 [3209]	5500 [2596]	8250 [3894]	6800 [3209]	5500 [2596]	8250 [3894]	6800 [3209]	5500 [2596]	
DR ①		.05	.09	.12	.05	.09	.12	.05	.09	.12	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	250.5 [73.4] 153.8 [45.1] 8.7	241.2 [70.7] 139.9 [41.0] 8.5	232.8 [68.2] 127.4 [37.3] 8.4	236.0 [69.2] 187.0 [54.8] 8.7	227.2 [66.6] 170.0 [49.8] 8.5	219.3 [64.3] 154.9 [45.4] 8.4	221.5 [64.9] 213.9 [62.7] 8.7	213.2 [62.5] 194.6 [57.0] 8.6	205.8 [60.3] 177.2 [51.9] 8.4
	80 [26.7]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	245.1 [71.8] 151.1 [44.3] 9.1	236.0 [69.2] 137.4 [40.3] 8.9	227.8 [66.8] 125.1 [36.7] 8.7	230.6 [67.6] 184.2 [54.0] 9.1	222.0 [65.1] 167.6 [49.1] 8.9	214.3 [62.8] 152.6 [44.7] 8.8	216.1 [63.3] 211.2 [61.9] 9.1	208.0 [61.0] 192.1 [56.3] 8.9	200.8 [58.9] 174.9 [51.3] 8.8
	85 [29.4]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	239.7 [70.3] 148.5 [43.5] 9.5	230.8 [67.6] 135.0 [39.6] 9.3	222.8 [65.3] 123.0 [36.0] 9.1	225.2 [66.0] 181.6 [53.2] 9.5	216.8 [63.5] 165.2 [48.4] 9.3	209.3 [61.3] 150.5 [44.1] 9.1	210.7 [61.8] 208.6 [61.1] 9.5	202.8 [59.4] 189.7 [55.6] 9.3	195.8 [57.4] 172.8 [50.6] 9.1
	90 [32.2]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	234.3 [68.7] 146.0 [42.8] 9.9	225.6 [66.1] 132.8 [38.9] 9.7	217.7 [63.8] 121.0 [35.5] 9.5	219.8 [64.4] 179.2 [52.5] 9.9	211.6 [62.0] 163.0 [47.8] 9.7	204.3 [59.9] 148.4 [43.5] 9.5	205.3 [60.2] 205.3 [60.2] 9.9	197.6 [57.9] 187.5 [55.0] 9.7	190.8 [55.9] 170.8 [50.1] 9.5
	95 [35]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	228.9 [67.1] 143.8 [42.1] 10.3	220.4 [64.6] 130.7 [38.3] 10.1	212.7 [62.3] 119.1 [34.9] 9.9	214.4 [62.8] 176.9 [51.8] 10.3	206.4 [60.5] 160.9 [47.2] 10.1	199.2 [58.4] 146.5 [42.9] 9.9	199.9 [58.6] 199.9 [58.6] 10.3	192.4 [56.4] 185.4 [54.3] 10.1	185.8 [54.5] 168.9 [49.5] 9.9
	100 [37.8]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	223.5 [65.5] 141.6 [41.5] 10.7	215.2 [63.1] 128.8 [37.7] 10.5	207.7 [60.9] 117.3 [34.4] 10.4	209.0 [61.3] 174.8 [51.2] 10.7	201.2 [59.0] 158.9 [46.6] 10.6	194.2 [56.9] 144.8 [42.4] 10.4	194.5 [57.0] 194.5 [57.0] 10.8	187.2 [54.9] 183.5 [53.8] 10.6	180.7 [53] 167.1 [49] 10.4
	105 [40.6]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	218.1 [63.9] 139.6 [40.9] 11.2	210.0 [61.5] 127.0 [37.2] 11.0	202.7 [59.4] 115.6 [33.9] 10.8	203.6 [59.7] 172.8 [50.6] 11.2	196.0 [57.4] 157.1 [46.0] 11.0	189.2 [55.5] 143.1 [41.9] 10.8	189.1 [55.4] 189.1 [55.4] 11.2	182.0 [53.3] 181.7 [53.3] 11.0	175.7 [51.5] 165.4 [48.5] 10.8
	110 [43.3]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	212.7 [62.3] 137.7 [40.4] 11.7	204.8 [60.0] 125.3 [36.7] 11.5	197.7 [57.9] 114.1 [33.4] 11.3	198.2 [58.1] 170.9 [50.1] 11.7	190.8 [55.9] 155.4 [45.5] 11.5	184.2 [54.0] 141.6 [41.5] 11.3	183.7 [53.8] 183.7 [53.8] 11.7	176.8 [51.8] 176.8 [51.8] 11.5	170.7 [50.0] 163.9 [48.0] 11.3
	115 [46.1]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	207.3 [60.8] 136.0 [39.9] 12.2	199.6 [58.5] 123.7 [36.3] 12.0	192.7 [56.5] 112.7 [33.0] 11.8	192.8 [56.5] 169.2 [49.6] 12.2	185.6 [54.4] 153.9 [45.1] 12.0	179.2 [52.5] 140.1 [41.1] 11.8	178.3 [52.3] 178.3 [52.3] 12.2	171.6 [50.3] 171.6 [50.3] 12.0	165.7 [48.6] 162.5 [47.6] 11.8
	120 [48.9]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	201.9 [59.2] 134.5 [39.4] 12.7	194.4 [57.0] 122.3 [35.8] 12.5	187.6 [55.0] 111.4 [32.6] 12.3	187.4 [54.9] 167.6 [49.1] 12.7	180.4 [52.9] 152.5 [44.7] 12.5	174.1 [51.0] 138.8 [40.7] 12.3	172.9 [50.7] 172.9 [50.7] 12.7	166.4 [48.8] 166.4 [48.8] 12.5	160.7 [47.1] 160.7 [47.1] 12.3
	125 [51.7]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	196.5 [57.6] 133.0 [39.0] 13.3	189.2 [55.5] 121.0 [35.5] 13.0	182.6 [53.5] 110.2 [32.3] 12.8	182.0 [53.3] 166.2 [48.7] 13.3	175.2 [51.3] 151.2 [44.3] 13.0	169.1 [49.6] 137.7 [40.4] 12.8	167.5 [49.1] 167.5 [49.1] 13.3	161.2 [47.2] 161.2 [47.2] 13.0	155.6 [45.6] 155.6 [45.6] 12.8

DR —Depression ratio
dbE —Entering air dry bulb

wbE —Entering air wet bulb
Power —kW input

NOTES: ① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding $[1.10 \times \text{CFM} \times (1 - \text{DR}) \times (\text{dbE} - 80)]$.

[] Designates Metric Conversions

GROSS SYSTEMS PERFORMANCE DATA—RACHYB240

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①											
wbE			71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]		
CFM [L/s]			9350 [4413]	6675 [3150]	6225 [2938]	9350 [4413]	6675 [3150]	6225 [2938]	9350 [4413]	6675 [3150]	6225 [2938]
DR ①			.05	.09	.12	.05	.09	.12	.05	.09	.12
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	303.8 [89.0] 181.1 [53.1] 17.9	283.2 [83.0] 152.5 [44.7] 17.3	279.7 [82.0] 147.7 [43.3] 17.1	277.7 [81.4] 211.7 [62.0] 17.8	258.8 [75.8] 178.4 [52.3] 17.2	255.6 [74.9] 172.8 [50.6] 17.0	264.9 [77.6] 257.2 [75.4] 17.6	246.9 [72.4] 216.7 [63.5] 17.0	243.9 [71.5] 209.9 [61.5] 16.9
	80 [26.7]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	296.3 [86.8] 176.4 [51.7] 18.8	276.2 [80.9] 148.6 [43.6] 18.1	272.8 [80.0] 143.9 [42.2] 18.0	270.1 [79.2] 207.1 [60.7] 18.7	251.8 [73.8] 174.5 [51.1] 18.0	248.7 [72.9] 169.0 [49.5] 17.9	257.4 [75.4] 252.6 [74.0] 18.6	239.9 [70.3] 212.8 [62.4] 17.9	237.0 [69.5] 206.1 [60.4] 17.8
	85 [29.4]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	289.3 [84.8] 172.3 [50.5] 19.7	269.6 [79] 145.2 [42.6] 19.0	266.3 [78.0] 140.6 [41.2] 18.9	263.1 [77.1] 203.0 [59.5] 19.6	245.3 [71.9] 171.0 [50.1] 18.9	242.3 [71.0] 165.6 [48.5] 18.8	250.4 [73.4] 248.5 [72.8] 19.5	233.4 [68.4] 209.3 [61.3] 18.8	230.5 [67.6] 202.7 [59.4] 18.7
	90 [32.2]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	282.8 [82.9] 168.8 [49.5] 20.6	263.6 [77.3] 142.2 [41.7] 19.9	260.4 [76.3] 137.7 [40.4] 19.8	256.6 [75.2] 199.5 [58.5] 20.5	239.2 [70.1] 168.0 [49.2] 19.8	236.3 [69.3] 162.8 [47.7] 19.7	243.9 [71.5] 243.9 [71.5] 20.4	227.3 [66.6] 206.4 [60.5] 19.7	224.5 [65.8] 199.9 [58.6] 19.6
	95 [35]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	276.8 [81.1] 165.9 [48.6] 21.6	258.0 [75.6] 139.7 [40.9] 20.8	254.9 [74.7] 135.3 [39.7] 20.7	250.7 [73.5] 196.5 [57.6] 21.5	233.6 [68.5] 165.6 [48.5] 20.7	230.8 [67.6] 160.4 [47.0] 20.6	237.9 [69.7] 237.9 [69.7] 21.3	221.7 [65.0] 203.9 [59.8] 20.6	219.0 [64.2] 197.5 [57.9] 20.5
	100 [37.8]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	271.4 [79.5] 163.5 [47.9] 22.5	252.9 [74.1] 137.7 [40.4] 21.7	249.8 [73.2] 133.4 [39.1] 21.6	245.2 [71.9] 194.2 [56.9] 22.4	228.6 [67.0] 163.6 [47.9] 21.6	225.8 [66.2] 158.4 [46.4] 21.5	232.4 [68.1] 232.4 [68.1] 22.3	216.7 [63.5] 201.9 [59.2] 21.5	214.0 [62.7] 195.5 [57.3] 21.4
	105 [40.6]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	266.4 [78.1] 161.7 [47.4] 23.4	248.3 [72.8] 136.2 [39.9] 22.6	245.3 [71.9] 131.9 [38.7] 22.5	240.3 [70.4] 192.4 [56.4] 23.3	224.0 [65.7] 162.0 [47.5] 22.5	221.2 [64.8] 157.0 [46.0] 22.4	227.5 [66.7] 227.5 [66.7] 23.2	212.1 [62.2] 200.4 [58.7] 22.4	209.5 [61.4] 194.1 [56.9] 22.3
	110 [43.3]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	262.0 [76.8] 160.5 [47.0] 24.3	244.2 [71.6] 135.2 [39.6] 23.5	241.2 [70.7] 130.9 [38.4] 23.4	235.8 [69.1] 191.1 [56.0] 24.2	219.8 [64.4] 161.0 [47.2] 23.4	217.1 [63.6] 155.9 [45.7] 23.3	223.1 [65.4] 223.1 [65.4] 24.1	207.9 [60.9] 199.3 [58.4] 23.3	205.4 [60.2] 193.1 [56.6] 23.2
	115 [46.1]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	258.1 [75.6] 159.8 [46.8] 25.3	240.6 [70.5] 134.6 [39.4] 24.4	237.6 [69.6] 130.4 [38.2] 24.3	231.9 [68.0] 190.5 [55.8] 25.2	216.2 [63.4] 160.5 [47.0] 24.3	213.5 [62.6] 155.4 [45.5] 24.2	219.2 [64.2] 219.2 [64.2] 25.0	204.3 [59.9] 198.8 [58.3] 24.2	201.8 [59.1] 192.5 [56.4] 24.0
	120 [48.9]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	254.7 [74.6] 159.7 [46.8] 26.2	237.4 [69.6] 134.5 [39.4] 25.3	234.5 [68.7] 130.3 [38.2] 25.2	228.6 [67.0] 190.4 [55.8] 26.1	213.0 [62.4] 160.4 [47.0] 25.2	210.4 [61.7] 155.3 [45.5] 25.1	215.8 [63.2] 215.8 [63.2] 26.0	201.1 [58.9] 198.7 [58.2] 25.1	198.7 [58.2] 192.5 [56.4] 24.9
125 [51.7]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	251.8 [73.8] 160.2 [47.0] 27.1	234.7 [68.8] 135.0 [39.6] 26.2	231.9 [68.0] 130.7 [38.3] 26.0	225.7 [66.1] 190.9 [55.9] 27.0	210.4 [61.7] 160.8 [47.1] 26.1	207.8 [60.9] 155.7 [45.6] 25.9	212.9 [62.4] 212.9 [62.4] 26.9	198.5 [58.2] 198.5 [58.2] 26.0	196.0 [57.4] 192.9 [56.5] 25.8	

DR —Depression ratio
dbE —Entering air dry bulb

wbE—Entering air wet bulb
Power —kW input

NOTES: ① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding $[1.10 \times \text{CFM} \times (1 - \text{DR}) \times (\text{dbE} - 80)]$.

[] Designates Metric Conversions

GROSS SYSTEMS PERFORMANCE DATA—RACHYB300

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①											
wbE		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			
CFM [L/s]		12300 [5805]	8800 [4153]	8200 [3870]	12300 [5805]	8800 [4153]	8200 [3870]	12300 [5805]	8800 [4153]	8200 [3870]	
DR ①		.05	.09	.12	.05	.09	.12	.05	.09	.12	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	387.7 [113.6] 233.7 [68.5] 25.1	361.5 [105.9] 197.1 [57.8] 24.3	357.1 [104.7] 190.8 [55.9] 24.1	363.9 [106.7] 281.2 [82.4] 25.2	339.4 [99.5] 237.2 [69.5] 24.3	335.2 [98.2] 229.6 [67.3] 24.2	344.9 [101.1] 333.9 [97.9] 25.1	321.6 [94.3] 281.6 [82.5] 24.2	317.6 [93.1] 272.7 [79.9] 24.1
	80 [26.7]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	379.3 [111.2] 229.6 [67.3] 26.4	353.7 [103.7] 193.7 [56.8] 25.5	349.4 [102.4] 187.5 [55.0] 25.4	355.6 [104.2] 277.2 [81.2] 26.5	331.6 [97.2] 233.8 [68.5] 25.6	327.5 [96.0] 226.3 [66.3] 25.4	336.5 [98.6] 329.9 [96.7] 26.4	313.8 [92.0] 278.2 [81.5] 25.5	309.9 [90.8] 269.4 [79.0] 25.3
	85 [29.4]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	370.9 [108.7] 225.5 [66.1] 27.8	345.9 [101.4] 190.2 [55.7] 26.8	341.6 [100.1] 184.1 [54.0] 26.6	347.1 [101.7] 273.0 [80.0] 27.8	323.7 [94.9] 230.3 [67.5] 26.8	319.7 [93.7] 222.9 [65.3] 26.7	328.0 [96.1] 325.7 [95.5] 27.7	305.9 [89.7] 274.7 [80.5] 26.7	302.1 [88.5] 266.0 [78.0] 26.6
	90 [32.2]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	362.3 [106.2] 221.2 [64.8] 29.1	337.9 [99.0] 186.6 [54.7] 28.1	333.7 [97.8] 180.7 [53.0] 27.9	338.6 [99.2] 268.8 [78.8] 29.1	315.7 [92.5] 226.7 [66.4] 28.1	311.8 [91.4] 219.5 [64.3] 27.9	319.5 [93.6] 319.5 [93.6] 29.0	297.9 [87.3] 271.1 [79.5] 28.0	294.3 [86.3] 262.5 [76.9] 27.8
	95 [35]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	353.7 [103.7] 216.9 [63.6] 30.4	329.8 [96.7] 182.9 [53.6] 29.3	325.7 [95.5] 177.1 [51.9] 29.2	329.9 [96.7] 264.4 [77.5] 30.4	307.7 [90.2] 223.0 [65.4] 29.4	303.9 [89.1] 215.9 [63.3] 29.2	310.8 [91.1] 310.8 [91.1] 30.3	289.9 [85.0] 267.5 [78.4] 29.3	286.3 [83.9] 259.0 [75.9] 29.1
	100 [37.8]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	344.9 [101.1] 212.4 [62.3] 31.7	321.7 [94.3] 179.2 [52.5] 30.6	317.7 [93.1] 173.5 [50.8] 30.4	321.2 [94.1] 260.0 [76.2] 31.7	299.5 [87.8] 219.3 [64.3] 30.6	295.8 [86.7] 212.3 [62.2] 30.4	302.1 [88.5] 302.1 [88.5] 31.6	281.7 [82.6] 263.7 [77.3] 30.5	278.2 [81.5] 255.3 [74.8] 30.4
	105 [40.6]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	336.1 [98.5] 207.9 [60.9] 33.0	313.4 [91.9] 175.3 [51.4] 31.9	309.5 [90.7] 169.7 [49.7] 31.7	312.3 [91.5] 255.4 [74.9] 33.0	291.3 [85.4] 215.4 [63.1] 31.9	287.7 [84.3] 208.6 [61.1] 31.7	293.3 [86.0] 293.3 [86.0] 32.9	273.5 [80.2] 259.9 [76.2] 31.8	270.1 [79.2] 251.6 [73.7] 31.6
	110 [43.3]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	327.1 [95.9] 203.2 [59.6] 34.3	305.1 [89.4] 171.4 [50.2] 33.1	301.3 [88.3] 165.9 [48.6] 32.9	303.4 [88.9] 250.7 [73.5] 34.3	282.9 [82.9] 211.5 [62.0] 33.2	279.4 [81.9] 204.7 [60.0] 33.0	284.3 [83.3] 284.3 [83.3] 34.2	265.1 [77.7] 255.9 [75.0] 33.1	261.9 [76.8] 247.8 [72.6] 32.9
	115 [46.1]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	318.1 [93.2] 198.4 [58.1] 35.6	296.6 [86.9] 167.3 [49.0] 34.4	293.0 [85.9] 162.0 [47.5] 34.2	294.4 [86.3] 245.9 [72.1] 35.6	274.5 [80.5] 207.4 [60.8] 34.4	271.1 [79.5] 200.8 [58.9] 34.2	275.3 [80.7] 275.3 [80.7] 35.5	256.7 [75.2] 251.9 [73.8] 34.3	253.5 [74.3] 243.9 [71.5] 34.1
	120 [48.9]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	309.0 [90.6] 193.5 [56.7] 36.9	288.1 [84.4] 163.2 [47.8] 35.7	284.6 [83.4] 158.0 [46.3] 35.4	285.2 [83.6] 241.1 [70.7] 36.9	266.0 [78.0] 203.3 [59.6] 35.7	262.7 [77.0] 196.9 [57.7] 35.5	266.1 [78.0] 266.1 [78.0] 36.8	248.2 [72.7] 247.8 [72.6] 35.6	245.1 [71.8] 239.9 [70.3] 35.4
	125 [51.7]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	299.7 [87.8] 188.5 [55.2] 38.2	279.5 [81.9] 159.0 [46.6] 36.9	276.1 [80.9] 154.0 [45.1] 36.7	276.0 [80.9] 236.1 [69.2] 38.2	257.4 [75.4] 199.1 [58.4] 36.9	254.2 [74.5] 192.8 [56.5] 36.7	256.9 [75.3] 256.9 [75.3] 38.2	239.6 [70.2] 239.6 [70.2] 36.9	236.6 [69.3] 235.8 [69.1] 36.6

DR —Depression ratio
dbE —Entering air dry bulbwbE —Entering air wet bulb
Power —kW inputNOTES: ① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding $[1.10 \times \text{CFM} \times (1 - \text{DR}) \times (\text{dbE} - 80)]$.

[] Designates Metric Conversions

GROSS SYSTEMS PERFORMANCE DATA (LOW HUMIDIDRY MODE)—RACHYB180

ENTERING INDOOR AIR @ 75°F [23.9°C] dbE ①											
wbE			65.3°F [18.5°C]			64°F [17.8°C]			62.5°F [16.9°C]		
CFM [L/s]			3000 [1416]	2500 [1180]	2000 [944]	3000 [1416]	2500 [1180]	2000 [944]	3000 [1416]	2500 [1180]	2000 [944]
OUTDOOR DRY BULB TEMPERATURE °F [°C]	60 [15.6]	Total kBtu/h [kW]	43.7 [12.8]	42.1 [12.3]	40.6 [11.9]	45.2 [13.2]	43.6 [12.8]	42.0 [12.3]	39.8 [11.7]	38.4 [11.3]	37.0 [10.9]
		Sens kBtu/h [kW]	3.4 [1.0]	3.1 [0.9]	2.8 [0.8]	10.9 [3.2]	10.0 [2.9]	9.0 [2.7]	12.9 [3.8]	11.8 [3.4]	10.7 [3.1]
		Power	7.5	7.4	7.3	7.5	7.4	7.2	7.5	7.4	7.2
	65 [18.3]	Total kBtu/h [kW]	40.5 [11.9]	39.1 [11.5]	37.7 [11.0]	42.0 [12.3]	40.5 [11.9]	39.1 [11.4]	36.6 [10.7]	35.4 [10.4]	34.1 [10.0]
		Sens kBtu/h [kW]	0.8 [0.2]	0.7 [0.2]	0.6 [0.2]	8.3 [2.4]	7.6 [2.2]	6.9 [2.0]	10.2 [3.0]	9.4 [2.7]	8.5 [2.5]
		Power	7.7	7.6	7.4	7.7	7.5	7.4	7.6	7.5	7.4
	70 [21.1]	Total kBtu/h [kW]	37.8 [11.1]	36.5 [10.7]	35.1 [10.3]	39.3 [11.5]	37.9 [11.1]	36.5 [10.7]	33.9 [9.9]	32.7 [9.6]	31.6 [9.2]
		Sens kBtu/h [kW]	-1.5 [-0.4]	-1.4 [-0.4]	-1.2 [-0.4]	6.1 [1.8]	5.5 [1.6]	5.0 [1.5]	8.0 [2.3]	7.3 [2.1]	6.6 [1.9]
		Power	7.9	7.7	7.6	7.8	7.7	7.6	7.8	7.7	7.6
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total kBtu/h [kW]	35.5 [10.4]	34.3 [10.0]	33.0 [9.7]	37.1 [10.9]	35.8 [10.5]	34.5 [10.1]	31.7 [9.3]	30.6 [9.0]	29.5 [8.6]
		Sens kBtu/h [kW]	-3.3 [-1.0]	-3.0 [-0.9]	-2.8 [-0.8]	4.2 [1.2]	3.8 [1.1]	3.5 [1.0]	6.2 [1.8]	5.6 [1.7]	5.1 [1.5]
		Power	8.1	7.9	7.8	8.0	7.9	7.8	8.0	7.9	7.7
	80 [26.7]	Total kBtu/h [kW]	33.8 [9.9]	32.6 [9.5]	31.4 [9.2]	35.3 [10.3]	34.0 [10.0]	32.8 [9.6]	29.9 [8.8]	28.9 [8.5]	27.8 [8.2]
		Sens kBtu/h [kW]	-4.8 [-1.4]	-4.4 [-1.3]	-4.0 [-1.2]	2.7 [0.8]	2.5 [0.7]	2.3 [0.7]	4.7 [1.4]	4.3 [1.3]	3.9 [1.1]
		Power	8.3	8.1	8.0	8.2	8.1	7.9	8.2	8.1	7.9
	85 [29.4]	Total kBtu/h [kW]	32.5 [9.5]	31.3 [9.2]	30.2 [8.8]	34.0 [10.0]	32.8 [9.6]	31.6 [9.3]	28.6 [8.4]	27.6 [8.1]	26.6 [7.8]
		Sens kBtu/h [kW]	-5.9 [-1.7]	-5.4 [-1.6]	-4.9 [-1.4]	1.7 [0.5]	1.5 [0.4]	1.4 [0.4]	3.6 [1.1]	3.3 [1.0]	3.0 [0.9]
		Power	8.5	8.3	8.2	8.5	8.3	8.2	8.4	8.3	8.1
OUTDOOR DRY BULB TEMPERATURE °F [°C]	90 [32.2]	Total kBtu/h [kW]	31.6 [9.3]	30.5 [8.9]	29.4 [8.6]	33.1 [9.7]	32.0 [9.4]	30.8 [9.0]	27.8 [8.1]	26.8 [7.9]	25.8 [7.6]
		Sens kBtu/h [kW]	-6.6 [-1.9]	-6.0 [-1.8]	-5.4 [-1.6]	1.0 [0.3]	0.9 [0.3]	0.8 [0.2]	2.9 [0.9]	2.7 [0.8]	2.4 [0.7]
		Power	8.7	8.6	8.4	8.7	8.5	8.4	8.7	8.5	8.4

GROSS SYSTEMS PERFORMANCE DATA (HIGH HUMIDIDRY MODE)—RACHYB180

ENTERING INDOOR AIR @ 75°F [23.9°C] dbE ①											
wbE			65.3°F [18.5°C]			64°F [17.8°C]			62.5°F [16.9°C]		
CFM [L/s]			7200 [3398]	5275 [2490]	4800 [2265]	7200 [3398]	5275 [2490]	4800 [2265]	7200 [3398]	5275 [2490]	4800 [2265]
OUTDOOR DRY BULB TEMPERATURE °F [°C]	60 [15.6]	Total kBtu/h [kW]	156.3 [45.8]	146.6 [43.0]	144.2 [42.3]	142.7 [41.8]	133.8 [39.2]	131.7 [38.6]	-271.9 [-79.7]	-255.0 [-74.7]	-250.8 [-73.5]
		Sens kBtu/h [kW]	74.5 [21.8]	63.6 [18.6]	60.9 [17.9]	88.5 [25.9]	75.6 [22.2]	72.4 [21.2]	-308.6 [-90.4]	-263.7 [-77.3]	-252.6 [-74.0]
		Power	16.1	15.6	15.4	15.2	14.7	14.6	11.9	11.6	11.5
	70 [21.1]	Total kBtu/h [kW]	150.3 [44.0]	140.9 [41.3]	138.6 [40.6]	136.7 [40.1]	128.2 [37.6]	126.1 [36.9]	-278.0 [-81.5]	-260.7 [-76.4]	-256.4 [-75.1]
		Sens kBtu/h [kW]	69.6 [20.4]	59.5 [17.4]	57.0 [16.7]	83.7 [24.5]	71.5 [20.9]	68.5 [20.1]	-313.4 [-91.8]	-267.8 [-78.5]	-256.5 [-75.2]
		Power	17.4	16.9	16.7	16.5	16.0	15.9	13.3	12.8	12.7
	80 [26.7]	Total kBtu/h [kW]	144.0 [42.2]	135.0 [39.6]	132.8 [38.9]	130.4 [38.2]	122.3 [35.8]	120.3 [35.3]	-284.2 [-83.3]	-266.6 [-78.1]	-262.2 [-76.8]
		Sens kBtu/h [kW]	64.7 [19.0]	55.3 [16.2]	53.0 [15.5]	78.8 [23.1]	67.3 [19.7]	64.5 [18.9]	-318.3 [-93.3]	-272.0 [-79.7]	-262.2 [-76.8]
		Power	18.5	17.9	17.8	17.6	17.1	17.0	14.4	13.9	13.8
OUTDOOR DRY BULB TEMPERATURE °F [°C]	90 [32.2]	Total kBtu/h [kW]	137.5 [40.3]	128.9 [37.8]	126.8 [37.2]	123.9 [36.3]	116.2 [34.1]	114.3 [33.5]	-290.8 [-85.2]	-272.7 [-79.9]	-268.2 [-78.6]
		Sens kBtu/h [kW]	59.8 [17.5]	51.1 [15.0]	48.9 [14.3]	73.8 [21.6]	63.1 [18.5]	60.4 [17.7]	-323.3 [-94.7]	-276.2 [-80.9]	-268.2 [-78.6]
		Power	19.5	18.8	18.7	18.6	18.0	17.9	15.3	14.8	14.7
	100 [37.8]	Total kBtu/h [kW]	130.7 [38.3]	122.6 [35.9]	120.6 [35.3]	117.2 [34.3]	109.9 [32.2]	108.1 [31.7]	-297.5 [-87.2]	-279.0 [-81.8]	-274.4 [-80.4]
		Sens kBtu/h [kW]	54.8 [16.0]	46.8 [13.7]	44.8 [13.1]	68.8 [20.2]	58.8 [17.2]	56.3 [16.5]	-328.3 [-96.2]	-280.5 [-82.2]	-274.4 [-80.4]
		Power	20.2	19.6	19.4	19.3	18.7	18.6	16.0	15.5	15.4
	110 [43.3]	Total kBtu/h [kW]	123.7 [36.3]	116.0 [34.0]	114.1 [33.5]	110.2 [32.3]	103.3 [30.3]	101.6 [29.8]	-304.5 [-89.2]	-285.6 [-83.7]	-280.9 [-82.3]
		Sens kBtu/h [kW]	49.7 [14.6]	42.4 [12.4]	40.7 [11.9]	63.7 [18.7]	54.4 [15.9]	52.1 [15.3]	-333.4 [-97.7]	-285.6 [-83.7]	-280.9 [-82.3]
		Power	20.7	20.1	19.9	19.9	19.2	19.1	16.6	16.1	15.9
OUTDOOR DRY BULB TEMPERATURE °F [°C]	120 [48.9]	Total kBtu/h [kW]	116.5 [34.1]	109.3 [32.0]	107.5 [31.5]	102.9 [30.2]	96.5 [28.3]	95.0 [27.8]	-311.7 [-91.3]	-292.3 [-85.7]	-287.5 [-84.3]
		Sens kBtu/h [kW]	44.5 [13.0]	38.0 [11.1]	36.4 [10.7]	58.5 [17.2]	50.0 [14.7]	47.9 [14.0]	-338.5 [-99.2]	-292.3 [-85.7]	-287.5 [-84.3]
		Power	21.1	20.4	20.3	20.2	19.6	19.4	16.9	16.4	16.3

DR —Depression ratio
dbE —Entering air dry bulb

wbE—Entering air wet bulb
Power —kW input

NOTES: ① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding [1.10 x CFM x (1 - DR) x (dbE - 80)].

[] Designates Metric Conversions

GROSS SYSTEMS PERFORMANCE DATA (LOW HUMIDIDRY MODE)—RACHYB240

ENTERING INDOOR AIR @ 75°F [23.9°C] dbE ①											
wbE			65.3°F [18.5°C]			64°F [17.8°C]			62.5°F [16.9°C]		
CFM [L/s]			3660 [1727]	3050 [1439]	2440 [1152]	3660 [1727]	3050 [1439]	2440 [1152]	3660 [1727]	3050 [1439]	2440 [1152]
OUTDOOR DRY BULB TEMPERATURE °F [°C]	60 [15.6]	Total kBtu/h [kW]	67.9 [19.9]	65.5 [19.2]	63.2 [18.5]	65.3 [19.1]	63.0 [18.5]	60.7 [17.8]	62.0 [18.2]	59.8 [17.5]	57.6 [16.9]
		Sens kBtu/h [kW]	4.6 [1.3]	4.2 [1.2]	3.8 [1.1]	9.7 [2.8]	8.9 [2.6]	8.1 [2.4]	16.0 [4.7]	14.7 [4.3]	13.3 [3.9]
		Power	9.7	9.6	9.4	9.7	9.5	9.4	9.7	9.5	9.4
	65 [18.3]	Total kBtu/h [kW]	66.8 [19.6]	64.4 [18.9]	62.1 [18.2]	64.1 [18.8]	61.9 [18.1]	59.6 [17.5]	60.8 [17.8]	58.7 [17.2]	56.6 [16.6]
		Sens kBtu/h [kW]	3.4 [1.0]	3.1 [0.9]	2.8 [0.8]	8.5 [2.5]	7.8 [2.3]	7.1 [2.1]	14.9 [4.4]	13.6 [4.0]	12.3 [3.6]
		Power	9.8	9.7	9.5	9.8	9.6	9.5	9.8	9.6	9.5
	70 [21.1]	Total kBtu/h [kW]	65.3 [19.2]	63.1 [18.5]	60.8 [17.8]	62.7 [18.4]	60.5 [17.7]	58.3 [17.1]	59.4 [17.4]	57.3 [16.8]	55.2 [16.2]
		Sens kBtu/h [kW]	2.1 [0.6]	1.9 [0.6]	1.7 [0.5]	7.2 [2.1]	6.6 [1.9]	6.0 [1.8]	13.5 [4.0]	12.4 [3.6]	11.2 [3.3]
Power		10.0	9.8	9.6	9.9	9.7	9.6	9.9	9.8	9.6	
75 [23.9]	Total kBtu/h [kW]	63.6 [18.6]	61.4 [18.0]	59.1 [17.3]	60.9 [17.9]	58.8 [17.2]	56.7 [16.6]	57.6 [16.9]	55.6 [16.3]	53.6 [15.7]	
	Sens kBtu/h [kW]	0.6 [0.2]	0.5 [0.2]	0.5 [0.1]	5.7 [1.7]	5.3 [1.5]	4.8 [1.4]	12.1 [3.5]	11.0 [3.2]	10.0 [2.9]	
	Power	10.1	9.9	9.8	10.1	9.9	9.7	10.1	9.9	9.7	
80 [26.7]	Total kBtu/h [kW]	61.6 [18.0]	59.4 [17.4]	57.2 [16.8]	58.9 [17.3]	56.8 [16.7]	54.8 [16.0]	55.6 [16.3]	53.6 [15.7]	51.7 [15.1]	
	Sens kBtu/h [kW]	-1.0 [-0.3]	-0.9 [-0.3]	-0.9 [-0.3]	4.1 [1.2]	3.8 [1.1]	3.4 [1.0]	10.4 [3.1]	9.5 [2.8]	8.7 [2.5]	
	Power	10.3	10.1	9.9	10.2	10.1	9.9	10.2	10.1	9.9	
85 [29.4]	Total kBtu/h [kW]	59.2 [17.3]	57.1 [16.7]	55.0 [16.1]	56.5 [16.6]	54.6 [16.0]	52.6 [15.4]	53.2 [15.6]	51.4 [15.1]	49.5 [14.5]	
	Sens kBtu/h [kW]	-2.8 [-0.8]	-2.6 [-0.8]	-2.3 [-0.7]	2.3 [0.7]	2.1 [0.6]	1.9 [0.6]	8.7 [2.5]	7.9 [2.3]	7.2 [2.1]	
	Power	10.5	10.3	10.1	10.4	10.2	10.1	10.4	10.3	10.1	
90 [32.2]	Total kBtu/h [kW]	56.5 [16.6]	54.6 [16.0]	52.6 [15.4]	53.9 [15.8]	52.0 [15.2]	50.1 [14.7]	50.6 [14.8]	48.8 [14.3]	47.0 [13.8]	
	Sens kBtu/h [kW]	-4.8 [-1.4]	-4.4 [-1.3]	-3.9 [-1.2]	0.4 [0.1]	0.4 [0.1]	0.3 [0.1]	6.7 [2.0]	6.1 [1.8]	5.6 [1.6]	
	Power	10.7	10.5	10.3	10.6	10.5	10.3	10.7	10.5	10.3	

GROSS SYSTEMS PERFORMANCE DATA (HIGH HUMIDIDRY MODE)—RACHYB240

ENTERING INDOOR AIR @ 75°F [23.9°C] dbE ①											
wbE			65.3°F [18.5°C]			64°F [17.8°C]			62.5°F [16.9°C]		
CFM [L/s]			9600 [4531]	6675 [3150]	6400 [3020]	9600 [4531]	6675 [3150]	6400 [3020]	9600 [4531]	6675 [3150]	6400 [3020]
OUTDOOR DRY BULB TEMPERATURE °F [°C]	60 [15.6]	Total kBtu/h [kW]	221.7 [65.0]	205.3 [60.2]	203.8 [59.7]	207.9 [60.9]	192.6 [56.4]	191.1 [56.0]	204.8 [60.0]	189.6 [55.6]	188.2 [55.2]
		Sens kBtu/h [kW]	98.9 [29.0]	82.1 [24.1]	80.5 [23.6]	117.9 [34.6]	97.9 [28.7]	96.0 [28.1]	136.4 [40.0]	113.3 [33.2]	111.1 [32.5]
		Power	13.5	13.0	13.0	13.9	13.3	13.3	13.7	13.2	13.1
	70 [21.1]	Total kBtu/h [kW]	211.0 [61.8]	195.4 [57.3]	193.9 [56.8]	197.2 [57.8]	182.7 [53.5]	181.3 [53.1]	194.1 [56.9]	179.8 [52.7]	178.4 [52.3]
		Sens kBtu/h [kW]	90.0 [26.4]	74.7 [21.9]	73.3 [21.5]	109.0 [32.0]	90.5 [26.5]	88.8 [26.0]	127.5 [37.4]	105.9 [31.0]	103.9 [30.4]
		Power	14.5	14.0	13.9	14.9	14.3	14.2	14.7	14.1	14.1
	80 [26.7]	Total kBtu/h [kW]	199.5 [58.5]	184.7 [54.1]	183.4 [53.7]	185.7 [54.4]	172.0 [50.4]	170.7 [50.0]	182.6 [53.5]	169.1 [49.6]	167.8 [49.2]
		Sens kBtu/h [kW]	80.6 [23.6]	66.9 [19.6]	65.6 [19.2]	99.6 [29.2]	82.7 [24.2]	81.1 [23.8]	118.1 [34.6]	98.1 [28.7]	96.2 [28.2]
		Power	15.8	15.2	15.1	16.1	15.5	15.4	15.9	15.3	15.3
	90 [32.2]	Total kBtu/h [kW]	187.1 [54.8]	173.3 [50.8]	172.0 [50.4]	173.4 [50.8]	160.6 [47.1]	159.4 [46.7]	170.2 [49.9]	157.7 [46.2]	156.5 [45.9]
		Sens kBtu/h [kW]	70.7 [20.7]	58.7 [17.2]	57.5 [16.9]	89.7 [26.3]	74.5 [21.8]	73.0 [21.4]	108.2 [31.7]	89.8 [26.3]	88.1 [25.8]
		Power	17.2	16.6	16.5	17.6	16.9	16.9	17.4	16.7	16.7
	100 [37.8]	Total kBtu/h [kW]	173.9 [51.0]	161.1 [47.2]	159.9 [46.9]	160.2 [46.9]	148.4 [43.5]	147.2 [43.1]	157.0 [46.0]	145.4 [42.6]	144.3 [42.3]
		Sens kBtu/h [kW]	60.2 [17.6]	50.0 [14.6]	49.0 [14.4]	79.2 [23.2]	65.8 [19.3]	64.5 [18.9]	97.7 [28.6]	81.1 [23.8]	79.6 [23.3]
		Power	19.0	18.3	18.2	19.3	18.6	18.5	19.1	18.4	18.3
	110 [43.3]	Total kBtu/h [kW]	159.9 [46.9]	148.1 [43.4]	147.0 [43.1]	146.2 [42.8]	135.4 [39.7]	134.4 [39.4]	143.0 [41.9]	132.4 [38.8]	131.5 [38.5]
		Sens kBtu/h [kW]	49.2 [14.4]	40.8 [12.0]	40.1 [11.7]	68.2 [20.0]	56.6 [16.6]	55.6 [16.3]	86.7 [25.4]	72.0 [21.1]	70.6 [20.7]
		Power	20.9	20.2	20.1	21.3	20.5	20.4	21.1	20.3	20.2
	120 [48.9]	Total kBtu/h [kW]	145.0 [42.5]	134.3 [39.4]	133.3 [39.1]	131.3 [38.5]	121.6 [35.6]	120.7 [35.4]	128.1 [37.5]	118.7 [34.8]	117.8 [34.5]
		Sens kBtu/h [kW]	37.7 [11.0]	31.3 [9.2]	30.7 [9.0]	56.7 [16.6]	47.1 [13.8]	46.2 [13.5]	75.2 [22.0]	62.4 [18.3]	61.2 [17.9]
		Power	23.2	22.3	22.2	23.5	22.6	22.5	23.3	22.4	22.3

DR —Depression ratio
dbE —Entering air dry bulbwbE —Entering air wet bulb
Power —kW input**NOTES:** ① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding [1.10 x CFM x (1 - DR) x (dbE - 80)].

[] Designates Metric Conversions

GROSS SYSTEMS PERFORMANCE DATA (LOW HUMIDIDRY MODE)—RACHYB300

ENTERING INDOOR AIR @ 75°F [23.9°C] dbE ①											
wbE		65.3°F [18.5°C]			64°F [17.8°C]			62.5°F [16.9°C]			
CFM [L/s]		5040 [2379]	4200 [1982]	3360 [1586]	5040 [2379]	4200 [1982]	3360 [1586]	5040 [2379]	4200 [1982]	3360 [1586]	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	60 [15.6]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	79.2 [23.2] 8.7 [2.6] 10.7	76.4 [22.4] 8.0 [2.3] 10.5	73.6 [21.6] 7.2 [2.1] 10.3	75.6 [22.1] 14.7 [4.3] 10.7	72.9 [21.4] 13.4 [3.9] 10.5	70.3 [20.6] 12.2 [3.6] 10.3	70.8 [20.7] 21.1 [6.2] 10.6	68.3 [20.0] 19.3 [5.7] 10.4	65.8 [19.3] 17.5 [5.1] 10.2
	65 [18.3]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	76.9 [22.5] 7.0 [2.0] 10.8	74.2 [21.8] 6.4 [1.9] 10.6	71.5 [21.0] 5.8 [1.7] 10.5	73.3 [21.5] 12.9 [3.8] 10.8	70.7 [20.7] 11.8 [3.5] 10.6	68.1 [20.0] 10.7 [3.1] 10.4	68.5 [20.1] 19.3 [5.7] 10.7	66.1 [19.4] 17.7 [5.2] 10.6	63.7 [18.7] 16.0 [4.7] 10.4
	70 [21.1]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	74.5 [21.8] 5.0 [1.5] 11.0	71.9 [21.1] 4.6 [1.4] 10.8	69.3 [20.3] 4.2 [1.2] 10.6	70.9 [20.8] 11.0 [3.2] 11.0	68.4 [20.0] 10.1 [3.0] 10.8	65.9 [19.3] 9.1 [2.7] 10.6	66.1 [19.4] 17.4 [5.1] 10.9	63.8 [18.7] 15.9 [4.7] 10.7	61.5 [18.0] 14.4 [4.2] 10.5
	75 [23.9]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	72.0 [21.1] 2.9 [0.9] 11.2	69.5 [20.4] 2.7 [0.8] 11.0	66.9 [19.6] 2.4 [0.7] 10.8	68.3 [20.0] 8.9 [2.6] 11.1	65.9 [19.3] 8.2 [2.4] 10.9	63.5 [18.6] 7.4 [2.2] 10.8	63.5 [18.6] 15.3 [4.5] 11.1	61.3 [18.0] 14.0 [4.1] 10.9	59.1 [17.3] 12.7 [3.7] 10.7
	80 [26.7]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	69.3 [20.3] 0.7 [0.2] 11.4	66.9 [19.6] 0.6 [0.2] 11.2	64.4 [18.9] 0.6 [0.2] 11.0	65.7 [19.2] 6.6 [1.9] 11.3	63.3 [18.6] 6.1 [1.8] 11.1	61.0 [17.9] 5.5 [1.6] 10.9	60.9 [17.8] 13.0 [3.8] 11.3	58.7 [17.2] 11.9 [3.5] 11.1	56.6 [16.6] 10.8 [3.2] 10.9
	85 [29.4]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	66.5 [19.5] -1.8 [-0.5] 11.6	64.1 [18.8] -1.6 [-0.5] 11.4	61.8 [18.1] -1.5 [-0.4] 11.2	62.8 [18.4] 4.2 [1.2] 11.6	60.6 [17.8] 3.8 [1.1] 11.4	58.4 [17.1] 3.5 [1.0] 11.2	58.0 [17.0] 10.6 [3.1] 11.5	56.0 [16.4] 9.7 [2.8] 11.3	54.0 [15.8] 8.8 [2.6] 11.1
	90 [32.2]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	63.5 [18.6] -4.4 [-1.3] 11.8	61.3 [18.0] -4.0 [-1.2] 11.6	59.1 [17.3] -3.6 [-1.1] 11.4	59.9 [17.5] 1.6 [0.5] 11.8	57.8 [16.9] 1.5 [0.4] 11.6	55.7 [16.3] 1.3 [0.4] 11.4	55.1 [16.1] 8.0 [2.3] 11.8	53.1 [15.6] 7.3 [2.1] 11.6	51.2 [15.0] 6.6 [1.9] 11.3

GROSS SYSTEMS PERFORMANCE DATA (HIGH HUMIDIDRY MODE)—RACHYB300

ENTERING INDOOR AIR @ 75°F [23.9°C] dbE ①											
wbE		65.3°F [18.5°C]			64°F [17.8°C]			62.5°F [16.9°C]			
CFM [L/s]		12000 [5663]	8790 [4148]	8000 [3776]	12000 [5663]	8790 [4148]	8000 [3776]	12000 [5663]	8790 [4148]	8000 [3776]	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	60 [15.6]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	268.2 [78.6] 101.6 [29.8] 19.0	251.5 [73.7] 86.8 [25.4] 18.4	247.4 [72.5] 83.1 [24.4] 18.3	258.5 [75.8] 147.3 [43.2] 18.8	242.4 [71.0] 125.9 [36.9] 18.2	238.5 [69.9] 120.6 [35.3] 18.1	252.7 [74.0] 167.3 [49.0] 19.0	236.9 [69.4] 142.9 [41.9] 18.4	233.1 [68.3] 136.9 [40.1] 18.3
	70 [21.1]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	257.4 [75.4] 94.3 [27.6] 20.2	241.4 [70.7] 80.5 [23.6] 19.6	237.5 [69.6] 77.2 [22.6] 19.5	247.8 [72.6] 140.0 [41.0] 20.1	232.4 [68.1] 119.6 [35.1] 19.4	228.6 [67.0] 114.6 [33.6] 19.3	241.9 [70.9] 160.0 [46.9] 20.2	226.9 [66.5] 136.7 [40.1] 19.6	223.2 [65.4] 130.9 [38.4] 19.5
	80 [26.7]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	245.7 [72.0] 86.1 [25.2] 21.8	230.4 [67.5] 73.5 [21.6] 21.1	226.6 [66.4] 70.5 [20.6] 21.0	236.0 [69.2] 131.8 [38.6] 21.6	221.3 [64.9] 112.6 [33.0] 20.9	217.7 [63.8] 107.9 [31.6] 20.8	230.2 [67.4] 151.8 [44.5] 21.8	215.8 [63.2] 129.7 [38.0] 21.1	212.3 [62.2] 124.2 [36.4] 21.0
	90 [32.2]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	232.8 [68.2] 77.0 [22.6] 23.7	218.3 [64.0] 65.8 [19.3] 23.0	214.8 [62.9] 63.0 [18.5] 22.8	223.2 [65.4] 122.7 [36.0] 23.5	209.3 [61.3] 104.9 [30.7] 22.8	205.8 [60.3] 100.5 [29.4] 22.6	217.3 [63.7] 142.7 [41.8] 23.7	203.8 [59.7] 121.9 [35.7] 23.0	200.5 [58.7] 116.8 [34.2] 22.8
	100 [37.8]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	218.9 [64.1] 67.0 [19.6] 26	205.3 [60.2] 57.2 [16.8] 25.2	201.9 [59.2] 54.8 [16.1] 25.0	209.3 [61.3] 112.7 [33.0] 25.8	196.2 [57.5] 96.3 [28.2] 25.0	193.0 [56.6] 92.3 [27.0] 24.8	203.4 [59.6] 132.7 [38.9] 26.0	190.7 [55.9] 113.4 [33.2] 25.2	187.6 [55.0] 108.6 [31.8] 25.0
	110 [43.3]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	203.9 [59.8] 56.1 [16.4] 28.6	191.3 [56.0] 47.9 [14.0] 27.7	188.1 [55.1] 45.9 [13.5] 27.5	194.3 [56.9] 101.9 [29.8] 28.4	182.2 [53.4] 87.0 [25.5] 27.5	179.2 [52.5] 83.4 [24.4] 27.3	188.4 [55.2] 121.8 [35.7] 28.6	176.7 [51.8] 104.1 [30.5] 27.7	173.8 [50.9] 99.7 [29.2] 27.5
	120 [48.9]	Total kBtu/h [kW] Sens kBtu/h [kW] Power	187.9 [55.1] 44.3 [13.0] 31.5	176.2 [51.6] 37.9 [11.1] 30.5	173.3 [50.8] 36.3 [10.6] 30.3	178.3 [52.2] 90.1 [26.4] 31.3	167.2 [49.0] 77.0 [22.6] 30.4	164.4 [48.2] 73.7 [21.6] 30.1	172.4 [50.5] 110.0 [32.2] 31.5	161.7 [47.4] 94.0 [27.5] 30.6	159.0 [46.6] 90.1 [26.4] 30.3

DR —Depression ratio
dbE —Entering air dry bulb

wbE—Entering air wet bulb
Power —kW input

NOTES: ① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding $[1.10 \times \text{CFM} \times (1 - \text{DR}) \times (\text{dbE} - 80)]$.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE— 15 TON — 60 Hz — DOWNFLOW

Air Flow CFM [L/s]	Model RACHYB180										Voltage 208/230, 460 — 3 phase										External Static Pressure—Inches of Water [kPa]																						
	0.1 [0.02]		0.2 [0.05]		0.3 [0.07]		0.4 [0.10]		0.5 [0.12]		0.6 [0.15]		0.7 [0.17]		0.8 [0.20]		0.9 [0.22]		1.0 [0.25]		1.1 [0.27]		1.2 [0.30]		1.3 [0.32]		1.4 [0.35]		1.5 [0.37]		1.6 [0.40]		1.7 [0.42]		1.8 [0.45]		1.9 [0.47]		2.0 [0.50]				
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W			
4800 [2265]	—	—	—	—	—	—	—	—	—	558	1427	591	1572	623	1727	654	1892	684	2066	714	2249	742	2442	770	2644	797	2856	823	3077	848	3308	873	3548	896	3797	919	4056	—	—	—	—		
5000 [2359]	—	—	—	—	—	—	—	—	—	565	1500	597	1650	629	1809	660	1978	690	2156	719	2343	747	2540	775	2747	801	2962	827	3188	852	3422	876	3667	899	3920	921	4183	—	—	—	—		
5200 [2454]	—	—	—	—	—	—	—	—	—	572	1579	605	1733	636	1896	666	2069	696	2251	725	2443	752	2644	779	2854	806	3074	831	3304	855	3543	879	3791	902	4048	923	4316	—	—	—	—		
5400 [2548]	—	—	—	—	—	—	—	—	—	580	1663	612	1821	643	1989	673	2165	702	2352	730	2548	758	2753	784	2967	810	3192	835	3425	859	3668	882	3920	904	4182	926	4454	—	—	—	—		
5600 [2643]	—	—	—	—	—	—	—	—	—	588	1600	588	1753	619	1915	650	2086	679	2267	708	2458	736	2658	763	2867	789	3086	815	3314	839	3552	863	3799	886	4056	908	4321	—	—	—	—		
5800 [2737]	—	—	—	—	—	—	—	—	—	564	1691	596	1848	627	2014	657	2190	686	2375	715	2570	742	2774	769	2987	795	3210	820	3442	844	3684	867	3935	899	4196	911	4466	—	—	—	—		
6000 [2831]	—	—	—	—	—	—	—	—	—	573	1787	604	1948	635	2119	664	2298	693	2488	721	2687	748	2895	775	3112	800	3339	825	3576	848	3822	871	4077	893	4342	914	4616	—	—	—	—		
6200 [2926]	—	—	—	—	—	—	—	—	—	581	1889	612	2054	643	2229	672	2413	700	2606	728	2809	755	3021	781	3243	806	3474	830	3715	853	3965	876	4224	897	4493	918	4772	—	—	—	—		
6400 [3020]	—	—	—	—	—	—	—	—	—	559	1836	590	1996	621	2165	651	2344	680	2532	708	2730	735	2937	761	3153	787	3379	812	3615	835	3859	858	4113	880	4377	902	4650	922	4933	—	—	—	—
6600 [3114]	—	—	—	—	—	—	—	—	—	568	1945	600	2109	630	2282	659	2465	688	2657	715	2859	742	3070	768	3291	793	3521	818	3760	841	4009	864	4267	885	4535	906	4812	926	5099	—	—	—	—
6800 [3209]	—	—	—	—	—	—	—	—	—	578	2059	609	2227	639	2404	668	2591	696	2788	723	2994	750	3209	775	3434	800	3668	824	3911	847	4164	869	4427	890	4699	911	4980	—	—	—	—		
7000 [3303]	—	—	—	—	—	—	—	—	—	557	2015	588	2178	618	2350	648	2532	676	2723	704	2924	731	3134	757	3353	782	3582	807	3820	830	4068	853	4325	875	4592	895	4868	916	5153	—	—	—	—
7200 [3398]	—	—	—	—	—	—	—	—	—	567	2136	598	2303	628	2479	657	2665	685	2860	713	3065	739	3279	765	3503	790	3736	814	3978	837	4230	859	4491	880	4762	901	5042	921	5332	—	—	—	—

NOTE: F-Drive left of bold line, G-Drive right of bold line.

Drive Package	F										G									
Motor H.P. [W]	3 [2,237.1]										5 [3,728.5]									
Blower Sheave	BK105H										BK105H									
Motor Sheave	1VL-44										1VP-56									
Turns Open	1	2	3	4	5	6	1	2	3	4	5	6								
RPM	702	674	647	616	582	556	917	893	865	833	802	769								

- NOTES: 1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—15 TON — 60 Hz — DOWNFLOW (CONTINUED)

Airflow	AIRFLOW CORRECTION FACTORS *				COMPONENT AIRFLOW RESISTANCE					
	CFM [L/s]	Sensible kBtu/h		Power kW	Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Diffuser RXRN-AD80 or RXRN-AD81 & Transition RXMC-CJ07	MERV 8 Filter	MERV 13 Filter
		Total kBtu/h								
4800 [2265]	0.97	0.87	0.98	0.03 [.01]	0.09 [.02]	0.00 [.00]	0.21 [.05]	0.07 [.02]	0.01 [.00]	
5000 [2359]	0.97	0.90	0.98	0.04 [.01]	0.10 [.02]	0.01 [.00]	0.25 [.06]	0.07 [.02]	0.02 [.00]	
5200 [2454]	0.98	0.92	0.99	0.05 [.01]	0.10 [.02]	0.01 [.00]	0.28 [.07]	0.08 [.02]	0.02 [.01]	
5400 [2548]	0.98	0.94	0.99	0.06 [.01]	0.11 [.03]	0.02 [.00]	0.32 [.08]	0.08 [.02]	0.03 [.01]	
5600 [2643]	0.99	0.97	0.99	0.06 [.01]	0.12 [.03]	0.02 [.00]	0.35 [.09]	0.08 [.02]	0.03 [.01]	
5800 [2737]	1.00	0.99	1.00	0.07 [.02]	0.13 [.03]	0.03 [.01]	0.39 [.10]	0.09 [.02]	0.04 [.01]	
6000 [2831]	1.00	1.02	1.00	0.08 [.02]	0.13 [.03]	0.03 [.01]	0.43 [.11]	0.09 [.02]	0.05 [.01]	
6200 [2926]	1.01	1.04	1.00	0.09 [.02]	0.14 [.03]	0.04 [.01]	0.46 [.11]	0.10 [.02]	0.05 [.01]	
6400 [3020]	1.02	1.06	1.01	0.10 [.02]	0.15 [.04]	0.04 [.01]	0.50 [.12]	0.10 [.02]	0.06 [.01]	
6600 [3114]	1.02	1.09	1.01	0.10 [.02]	0.16 [.04]	0.05 [.01]	0.54 [.13]	0.10 [.03]	0.07 [.02]	
6800 [3209]	1.03	1.11	1.01	0.11 [.03]	0.16 [.04]	0.05 [.01]	0.57 [.14]	0.11 [.03]	0.07 [.02]	
7000 [3303]	1.03	1.14	1.02	0.12 [.03]	0.17 [.04]	0.06 [.01]	0.61 [.15]	0.11 [.03]	0.08 [.02]	
7200 [3398]	1.04	1.16	1.02	0.13 [.03]	0.18 [.04]	0.06 [.01]	0.64 [.16]	0.12 [.03]	0.08 [.02]	

*NOTE: Multiply correction factor times gross performance data—resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE— 15 TON — 60 Hz — SIDEFLOW

Air Flow CFM [L/s]	Model RACHYB180																		Voltage 208/230, 460 — 3 phase																		External Static Pressure—Inches of Water [kPa]																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	0.1 [0.02]				0.2 [0.05]				0.3 [0.07]				0.4 [0.10]				0.5 [0.12]				0.6 [0.15]				0.7 [0.17]				0.8 [0.20]				0.9 [0.22]				1.0 [0.25]				1.1 [0.27]				1.2 [0.30]				1.3 [0.32]				1.4 [0.35]				1.5 [0.37]				1.6 [0.40]				1.7 [0.42]				1.8 [0.45]				1.9 [0.47]				2.0 [0.50]																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W

NOTE: F-Drive left of bold line, G-Drive right of bold line.

Drive Package	F									G								
Motor H.P. [W]	3 [2,237.1]									5 [3,728.5]								
Blower Sheave	BK105H									BK105H								
Motor Sheave	1VL-44									1VP-56								
Turns Open	1	2	3	4	5	6	1	2	3	4	5	6						
RPM	722	695	665	634	601	569	925	899	868	836	807	775						

- NOTES: 1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—15 TON — 60 Hz — SIDEFLOW (CONTINUED)

Airflow	AIRFLOW CORRECTION FACTORS *	COMPONENT AIRFLOW RESISTANCE					MERV 8 Filter	MERV 13 Filter
CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Diffuser RXRN-AD80 or RXRN-AD81 & Transition RXMC-CJ07	
Resistance — Inches of Water [kPa]								
4800 [2265]	0.97	0.87	0.98	0.03 [.01]	0.09 [.02]	0.00 [.00]	0.21 [.05]	0.07 [.02]
5000 [2359]	0.97	0.90	0.98	0.04 [.01]	0.10 [.02]	0.01 [.00]	0.25 [.06]	0.07 [.02]
5200 [2454]	0.98	0.92	0.99	0.05 [.01]	0.10 [.02]	0.01 [.00]	0.28 [.07]	0.08 [.02]
5400 [2548]	0.98	0.94	0.99	0.06 [.01]	0.11 [.03]	0.02 [.00]	0.32 [.08]	0.08 [.02]
5600 [2643]	0.99	0.97	0.99	0.06 [.01]	0.12 [.03]	0.02 [.00]	0.35 [.09]	0.08 [.02]
5800 [2737]	1.00	0.99	1.00	0.07 [.02]	0.13 [.03]	0.03 [.01]	0.39 [.10]	0.09 [.02]
6000 [2831]	1.00	1.02	1.00	0.08 [.02]	0.13 [.03]	0.03 [.01]	0.43 [.11]	0.09 [.02]
6200 [2926]	1.01	1.04	1.00	0.09 [.02]	0.14 [.03]	0.04 [.01]	0.46 [.11]	0.10 [.02]
6400 [3020]	1.02	1.06	1.01	0.10 [.02]	0.15 [.04]	0.04 [.01]	0.50 [.12]	0.10 [.02]
6600 [3114]	1.02	1.09	1.01	0.10 [.02]	0.16 [.04]	0.05 [.01]	0.54 [.13]	0.10 [.03]
6800 [3209]	1.03	1.11	1.01	0.11 [.03]	0.16 [.04]	0.05 [.01]	0.57 [.14]	0.11 [.03]
7000 [3303]	1.03	1.14	1.02	0.12 [.03]	0.17 [.04]	0.06 [.01]	0.61 [.15]	0.11 [.03]
7200 [3398]	1.04	1.16	1.02	0.13 [.03]	0.18 [.04]	0.06 [.01]	0.64 [.16]	0.12 [.03]

*NOTE: Multiply correction factor times gross performance data—resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—17.5 TON — 60 Hz — DOWNFLOW

Air Flow CFM [L/s]		Model RACHYB210 Voltage 208/230, 460 — 3 phase										External Static Pressure—Inches of Water [kPa]																								
		0.1 [0.02]	0.2 [0.05]	0.3 [0.07]	0.4 [0.10]	0.5 [0.12]	0.6 [0.15]	0.7 [0.17]	0.8 [0.20]	0.9 [0.22]	1.0 [0.25]	1.1 [0.27]	1.2 [0.30]	1.3 [0.32]	1.4 [0.35]	1.5 [0.37]	1.6 [0.40]	1.7 [0.42]	1.8 [0.45]	1.9 [0.47]	2.0 [0.50]															
RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	
5600 [2643]	—	—	—	—	580	1642	607	1790	634	1942	660	2098	686	2259	711	2423	736	2591	760	2764	783	2941	806	3122	828	3307	850	3496	871	3689	891	3886	911	4088	930	4293
5800 [2737]	—	—	—	—	588	1736	615	1887	642	2043	668	2202	693	2365	718	2533	742	2704	766	2880	789	3060	811	3244	833	3432	854	3624	875	3820	895	4021	914	4225	—	
6000 [2831]	—	—	—	—	596	1838	623	1992	649	2150	675	2312	700	2479	724	2649	748	2824	772	3003	794	3186	817	3373	838	3564	859	3759	879	3958	899	4162	918	4370	—	
6200 [2926]	—	—	—	—	605	1945	631	2103	657	2264	682	2429	707	2599	731	2773	755	2950	778	3132	800	3318	822	3508	843	3703	864	3901	884	4103	904	4310	923	4521	—	
6400 [3020]	—	—	—	—	586	1904	613	2060	640	2220	665	2385	690	2553	715	2726	739	2903	762	3084	785	3269	807	3458	828	3651	849	3848	869	4050	889	4255	908	4465	927	4679
6600 [3114]	—	—	—	—	596	2022	622	2182	648	2345	674	2513	698	2684	722	2860	746	3040	769	3224	791	3412	813	3604	834	3800	855	4001	875	4205	895	4414	913	4627	—	
6800 [3209]	—	—	—	—	578	1990	605	2148	631	2310	657	2477	682	2647	707	2822	730	3001	754	3184	776	3371	798	3562	820	3757	841	3957	861	4160	881	4368	900	4580	919	4796
7000 [3303]	—	—	—	—	589	2119	615	2280	641	2445	666	2615	691	2789	715	2967	739	3148	762	3334	784	3525	806	3719	827	3917	847	4120	868	4326	887	4537	906	4752	924	4971
7200 [3398]	—	—	—	—	583	2234	609	2397	635	2565	660	2737	685	2912	709	3092	733	3276	756	3464	778	3657	800	3853	821	4053	842	4258	862	4467	881	4679	900	4896	918	5117
7600 [3586]	—	—	—	—	594	2380	620	2547	646	2718	671	2892	695	3071	719	3254	742	3441	765	3632	787	3828	808	4027	829	4231	849	4438	869	4650	888	4866	906	5086	924	5310
7800 [3681]	579	2368	605	2534	631	2703	656	2877	681	3055	705	3237	729	3423	751	3613	774	3907	795	4006	817	4208	837	4415	857	4626	876	4841	895	5060	913	5283	931	5510	—	
8000 [3775]	591	2526	617	2662	642	2867	667	3044	692	3224	715	3410	739	3599	761	3792	783	3989	805	4191	825	4396	846	4604	865	4821	884	5038	903	5260	921	5486	—	—		
8200 [3869]	603	2689	629	2861	654	3037	679	3217	702	3401	726	3589	749	3781	771	3978	793	4178	818	4384	834	4591	854	4804	874	4921	893	5147	932	5367	928	5697	—	—		
8400 [3964]	615	2860	641	3035	665	3214	690	3397	714	3584	737	3775	759	3971	781	4170	803	4374	823	4581	844	4793	863	5009	882	5229	901	5453	919	5682	—	—	—	—		

NOTE: F-Drive left of bold line, G-Drive right of bold line.

Drive Package	F						G					
Motor H.P. [W]	3 [2,237.1]						5 [3,728.5]					
Blower Sheave	BK100H						BK105H					
Motor Sheave	1VL-44						1VP-56					
Turns Open	1	2	3	4	5	6	1	2	3	4	5	6
RPM	742	711	679	649	617	585	922	897	866	836	805	775

NOTES: 1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—17.5 TON — 60 Hz — DOWNFLOW (CONTINUED)

Airflow	AIRFLOW CORRECTION FACTORS *				COMPONENT AIRFLOW RESISTANCE						
	CFM [L/s]	Sensible kBtu/h		Power kW	Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Diffuser RXRN-AD80 or RXRN-AD81 & Transition RXMC-CJ07	MERV 8 Filter	MERV 13 Filter	
		Total kBtu/h									
5600 [2643]	0.97	0.87	0.98	0.06 [.01]	0.12 [.03]	0.02 [.00]	0.35 [.09]	0.08 [.02]		0.03 [.01]	
5800 [2737]	0.97	0.90	0.98	0.07 [.02]	0.13 [.03]	0.03 [.01]	0.39 [.10]	0.09 [.02]		0.04 [.01]	
6000 [2831]	0.98	0.92	0.99	0.08 [.02]	0.13 [.03]	0.03 [.01]	0.43 [.11]	0.09 [.02]		0.05 [.01]	
6200 [2926]	0.98	0.94	0.99	0.09 [.02]	0.14 [.03]	0.04 [.01]	0.46 [.11]	0.10 [.02]		0.05 [.01]	
6400 [3020]	0.99	0.97	0.99	0.10 [.02]	0.15 [.04]	0.04 [.01]	0.50 [.12]	0.10 [.02]		0.06 [.01]	
6600 [3114]	1.00	0.99	1.00	0.10 [.02]	0.16 [.04]	0.05 [.01]	0.54 [.13]	0.10 [.03]		0.07 [.02]	
6800 [3209]	1.00	1.02	1.00	0.11 [.03]	0.16 [.04]	0.05 [.01]	0.57 [.14]	0.11 [.03]		0.07 [.02]	
7000 [3303]	1.01	1.04	1.00	0.12 [.03]	0.17 [.04]	0.06 [.01]	0.61 [.15]	0.11 [.03]		0.08 [.02]	
7200 [3398]	1.02	1.06	1.01	0.13 [.03]	0.18 [.04]	0.06 [.01]	0.64 [.16]	0.12 [.03]		0.08 [.02]	
7400 [3492]	1.02	1.09	1.01	0.14 [.03]	0.19 [.05]	0.07 [.02]	0.68 [.17]	0.12 [.03]		0.09 [.02]	
7600 [3586]	1.03	1.11	1.01	0.14 [.03]	0.20 [.05]	0.07 [.02]	0.72 [.18]	0.12 [.03]		0.10 [.02]	
7800 [3681]	1.03	1.14	1.02	0.15 [.04]	0.21 [.05]	0.08 [.02]	0.75 [.19]	0.13 [.03]		0.10 [.03]	
8000 [3775]	1.04	1.16	1.02	0.16 [.04]	0.22 [.05]	0.09 [.02]	0.79 [.20]	0.13 [.03]		0.11 [.03]	
8200 [3869]	1.03	1.14	1.02	0.17 [.04]	0.23 [.06]	0.09 [.02]	0.83 [.21]	0.14 [.03]		0.11 [.03]	
8400 [3964]	1.04	1.16	1.02	0.18 [.04]	0.24 [.06]	0.10 [.02]	0.86 [.21]	0.14 [.03]		0.12 [.03]	

*NOTES: Multiply correction factor times gross performance data—resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—17.5 TON — 60 Hz — SIDEFLOW

Model RACHYB210		Voltage 208/230, 460 — 3 phase																							
Air Flow CFM [L/s]		External Static Pressure—Inches of Water [kPa]																							
		0.1 [0.02]												0.2 [0.05]											
		RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
5600 [2643]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5800 [2737]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6000 [2831]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6200 [2926]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6400 [3020]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6600 [3114]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6800 [3209]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7000 [3303]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7200 [3398]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7400 [3492]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7600 [3586]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8000 [3775]	591	2619	613	2733	635	2855	657	2984	678	3120	699	3264	720	3415	740	3574	760	3739	780	3913	800	4093	819	4281	838
8200 [3869]	604	2793	626	2909	647	3032	668	3162	689	3300	710	3445	730	3597	750	3757	770	3924	789	4098	808	4280	827	4469	846
8400 [3964]	618	2975	639	3092	660	3216	681	3348	701	3487	721	3633	741	3787	761	3948	780	4116	799	4292	817	4475	836	4665	854

NOTE: F—Drive left of bold line, G—Drive right of bold line.

Drive Package	F												G											
Motor H.P. [W]	3 [2.237.1]												5 [3.728.5]											
Blower Sheave	BK100H												BK105H											
Motor Sheave	1VL-44												1VP-56											
Turns Open	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
RPM	741	712	679	648	616	585	923	893	866	836	806	775	5068	4889	4720	4550	4380	4210	4040	3870	3700	3530	3360	3190

- NOTES: 1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—17.5 TON — 60 Hz — SIDEFLOW (CONTINUED)

Airflow	AIRFLOW CORRECTION FACTORS *			COMPONENT AIRFLOW RESISTANCE							
	CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	Wet Coil	Downflow	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Diffuser RXRN-AD80 or RXRN-AD81 & Transition RXMC-CJ07	MERV 8 Filter	MERV 13 Filter
5600 [2643]	0.97	0.87	0.98		0.06 [0.01]	0.05 [0.01]	0.12 [0.03]	0.02 [0.00]	0.35 [0.09]	0.08 [0.02]	0.03 [0.01]
5800 [2737]	0.97	0.90	0.98		0.07 [0.02]	0.05 [0.01]	0.13 [0.03]	0.03 [0.01]	0.39 [0.10]	0.09 [0.02]	0.04 [0.01]
6000 [2831]	0.98	0.92	0.99		0.08 [0.02]	0.05 [0.01]	0.13 [0.03]	0.03 [0.01]	0.43 [0.11]	0.09 [0.02]	0.05 [0.01]
6200 [2926]	0.98	0.94	0.99		0.09 [0.02]	0.06 [0.01]	0.14 [0.03]	0.04 [0.01]	0.46 [0.11]	0.10 [0.02]	0.05 [0.01]
6400 [3020]	0.99	0.97	0.99		0.10 [0.02]	0.06 [0.01]	0.15 [0.04]	0.04 [0.01]	0.50 [0.12]	0.10 [0.02]	0.06 [0.01]
6600 [3114]	1.00	0.99	1.00		0.10 [0.02]	0.06 [0.01]	0.16 [0.04]	0.05 [0.01]	0.54 [0.13]	0.10 [0.03]	0.07 [0.02]
6800 [3209]	1.00	1.02	1.00		0.11 [0.03]	0.07 [0.02]	0.16 [0.04]	0.05 [0.01]	0.57 [0.14]	0.11 [0.03]	0.07 [0.02]
7000 [3303]	1.01	1.04	1.00		0.12 [0.03]	0.08 [0.02]	0.17 [0.04]	0.06 [0.01]	0.61 [0.15]	0.11 [0.03]	0.08 [0.02]
7200 [3398]	1.02	1.06	1.01		0.13 [0.03]	0.08 [0.02]	0.18 [0.04]	0.06 [0.02]	0.64 [0.16]	0.12 [0.03]	0.08 [0.02]
7400 [3492]	1.02	1.09	1.01		0.14 [0.03]	0.09 [0.02]	0.19 [0.05]	0.07 [0.02]	0.68 [0.17]	0.12 [0.03]	0.09 [0.02]
7600 [3586]	1.03	1.11	1.01		0.14 [0.03]	0.10 [0.02]	0.20 [0.05]	0.07 [0.02]	0.72 [0.18]	0.12 [0.03]	0.10 [0.02]
7800 [3681]	1.03	1.14	1.02		0.15 [0.04]	0.11 [0.03]	0.21 [0.05]	0.08 [0.02]	0.75 [0.19]	0.13 [0.03]	0.10 [0.03]
8000 [3775]	1.04	1.16	1.02		0.16 [0.04]	0.12 [0.03]	0.22 [0.05]	0.09 [0.02]	0.79 [0.20]	0.13 [0.03]	0.11 [0.03]
8200 [3869]	1.03	1.14	1.02		0.17 [0.04]	0.13 [0.03]	0.23 [0.06]	0.09 [0.02]	0.83 [0.21]	0.14 [0.03]	0.11 [0.03]
8400 [3964]	1.04	1.16	1.02		0.18 [0.04]	0.14 [0.03]	0.24 [0.06]	0.10 [0.02]	0.86 [0.21]	0.14 [0.03]	0.12 [0.03]

*NOTES: Multiply correction factor times gross performance data—resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE — 20 TON — 60 Hz — DOWNFLOW

Model RACHY8240		Voltage 208/230, 460 — 3 phase																							
Air Flow CFM [L/s]	RPM	External Static Pressure—Inches of Water [kPa]																							
		0.1 [.02]												0.2 [.05]											
		W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM
6400 [3020]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6600 [3114]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6800 [3209]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7000 [3303]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7200 [3398]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7400 [3492]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7600 [3586]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7800 [3681]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8000 [3775]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8200 [3869]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8400 [3964]	650	2874	678	3072	705	3274	731	3483	757	3697	782	3917	806	4142	830	4372	853	4608	875	4850	897	5097	918	5350	938
8600 [4058]	663	3052	690	3254	717	3461	743	3674	768	3892	792	4116	816	4345	840	4580	862	4821	884	5067	906	5318	926	5575	947
8800 [4153]	675	3238	702	3444	728	3656	754	3873	779	4095	803	4323	827	4557	850	4796	872	5041	894	5292	915	5547	935	5809	955
9000 [4247]	688	3432	714	3642	740	3858	765	4079	790	4306	814	4539	837	4777	860	5020	882	5270	903	5524	924	5784	944	6050	963
9200 [4341]	700	3633	726	3848	752	4068	777	4294	801	4525	825	4762	848	5005	870	5252	892	5506	913	5765	933	6029	953	6299	972
9400 [4436]	713	3843	739	4062	764	4287	789	4517	813	4752	836	4993	859	5240	881	5492	902	5750	923	6013	943	6282	962	6556	981
9600 [4530]	726	4061	751	4284	776	4513	801	4747	824	4987	847	5233	870	5484	891	5740	912	6002	933	6270	952	6543	971	6821	990

NOTE: F-Drive left of first bold line, G-Drive in between bold lines, H-Drive right of second bold line.

Drive Package	F						G						H					
Motor H.P. [W]	5 [3,728.5]						7.5 [5,592.7]						7.5 [5,592.7]					
Blower Sheave	BK130H						BK130H						BK120H					
Motor Sheave	1VP56						1VP71						1VP71					
Turns Open	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
RPM	751	730	705	679	654	655	941	914	886	846	826	806	1,016	988	960	918	896	875

NOTES: 1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE — 20 TON — 60 Hz — DOWNFLOW (CONTINUED)

Airflow	AIRFLOW CORRECTION FACTORS *				COMPONENT AIRFLOW RESISTANCE					
	CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Diffuser RXRN-AD86 & Transition RXMC-CK08	MERV 8 Filter	MERV 13 Filter
					Resistance — Inches of Water [kPa]					
8000 [3775]	0.97	0.89	0.99	0.99	0.07 [.02]	0.22 [.05]	0.09 [.02]	0.17 [.04]	0.10 [.02]	0.06 [.01]
8400 [3964]	0.98	0.92	0.99	0.99	0.09 [.02]	0.24 [.06]	0.10 [.02]	0.23 [.06]	0.10 [.03]	0.07 [.02]
8800 [4153]	0.99	0.95	1.00	1.00	0.10 [.02]	0.26 [.06]	0.11 [.03]	0.30 [.07]	0.11 [.03]	0.07 [.02]
9200 [4341]	0.99	0.98	1.00	1.00	0.12 [.03]	0.28 [.07]	0.12 [.03]	0.36 [.09]	0.11 [.03]	0.08 [.02]
9600 [4530]	1.00	1.01	1.00	1.00	0.13 [.03]	0.30 [.07]	0.13 [.03]	0.43 [.11]	0.12 [.03]	0.08 [.02]
10000 [4719]	1.01	1.04	1.01	1.01	0.15 [.04]	0.32 [.08]	0.14 [.03]	0.50 [.14]	0.12 [.03]	0.09 [.02]
10400 [4908]	1.02	1.08	1.01	1.01	0.16 [.04]	0.34 [.08]	0.15 [.04]	0.56 [.16]	0.12 [.03]	0.10 [.02]
10800 [5096]	1.03	1.11	1.01	1.01	0.18 [.04]	0.37 [.09]	0.16 [.04]	0.63 [.17]	0.13 [.03]	0.10 [.03]
11200 [5285]	1.03	1.14	1.02	1.02	0.19 [.05]	0.39 [.10]	0.17 [.04]	0.69 [.19]	0.13 [.03]	0.11 [.03]
11600 [5474]	1.04	1.17	1.02	1.02	0.21 [.05]	0.41 [.10]	0.18 [.04]	0.76 [.25]	0.14 [.03]	0.11 [.03]
12000 [5663]	1.05	1.20	1.02	1.02	0.22 [.05]	0.44 [.11]	0.19 [.05]	0.82 [.20]	0.14 [.03]	0.12 [.03]
12400 [5851]	1.06	1.23	1.03	1.03	0.24 [.06]	0.46 [.11]	0.20 [.05]	0.89 [.22]	0.14 [.04]	0.13 [.03]
12800 [6040]	1.06	1.26	1.03	1.03	0.25 [.06]	0.49 [.12]	0.21 [.05]	0.96 [.24]	0.15 [.04]	0.13 [.03]
13200 [6229]	1.07	1.29	1.04	1.04	0.27 [.07]	0.52 [.13]	0.22 [.05]	1.02 [.25]	0.15 [.04]	0.14 [.03]
13600 [6418]	1.08	1.32	1.04	1.04	0.28 [.07]	0.54 [.13]	0.23 [.06]	1.09 [.27]	0.16 [.04]	0.15 [.04]

*NOTES: Multiply correction factor times gross performance data—resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE — 20 TON — 60 Hz — SIDEFLOW

Air Flow CFM [L/s]	Model RACHYB240 Voltage 208/230, 460 — 3 phase																																										
	External Static Pressure—Inches of Water [kPa]																																										
	0.1 [0.02] RPM	0.2 [0.05] W	0.3 [0.07] RPM	0.4 [0.10] W	0.5 [0.12] RPM	0.6 [0.15] W	0.7 [0.17] RPM	0.8 [0.20] W	0.9 [0.22] RPM	1.0 [0.25] W	1.1 [0.27] RPM	1.2 [0.30] W	1.3 [0.32] RPM	1.4 [0.35] W	1.5 [0.37] RPM	1.6 [0.40] W	1.7 [0.42] RPM	1.8 [0.45] W	1.9 [0.47] RPM	2.0 [0.50] W																							
6400 [3020]	—	—	—	—	—	625	1907	648	2055	671	2207	694	2362	716	2520	738	2681	760	2845	782	3012	804	3182	825	3355	847	3532	868	3711	889	3894	910	4080	931	4268								
6600 [3114]	—	—	—	—	—	632	2014	655	2164	677	2316	700	2472	722	2631	744	2793	765	2959	787	3127	808	3298	830	3473	851	3651	871	3831	892	4015	913	4202	933	4392								
6800 [3209]	—	—	—	—	—	640	2128	662	2279	684	2433	706	2590	728	2750	749	2914	771	3080	792	3249	813	3422	834	3598	855	3776	875	3958	895	4143	916	4331	936	4522								
7000 [3303]	—	—	—	—	—	647	2249	669	2401	691	2557	713	2715	734	2876	755	3041	776	3208	797	3379	818	3553	838	3730	859	3909	879	4093	899	4279	919	4468	939	4660								
7200 [3398]	—	—	—	—	—	633	2228	655	2378	677	2531	698	2687	719	2847	741	3009	761	3175	782	3344	803	3516	823	3691	843	3869	863	4050	883	4234	903	4421	922	4612	942	4805						
7400 [3492]	—	—	—	—	—	642	2362	663	2514	685	2668	706	2825	727	2986	747	3150	768	3317	788	3487	809	3660	829	3836	848	4015	868	4197	888	4382	907	4571	926	4762	945	4957						
7600 [3586]	—	—	—	—	—	629	2354	651	2504	672	2656	693	2812	713	2971	734	3132	754	3297	775	3465	795	3636	815	3811	834	3988	854	4168	873	4352	892	4538	911	4728	930	4921	949	5116				
7800 [3681]	—	—	—	—	—	639	2502	660	2653	680	2806	701	2963	721	3123	742	3286	762	3452	782	3621	801	3793	821	3969	840	4147	859	4329	878	4513	897	4701	916	4892	934	5086	953	5283				
8000 [3775]	—	—	—	—	—	627	2508	648	2657	669	2809	689	2964	710	3122	730	3283	750	3447	769	3614	789	3784	808	3958	827	4134	846	4314	865	4496	884	4682	903	4871	921	5063	939	5258	957	5456		
8200 [3869]	—	—	—	—	—	638	2669	658	2819	678	2972	698	3128	718	3287	738	3449	758	3615	777	3783	796	3954	815	4129	834	4307	853	4488	871	4671	890	4858	908	5048	926	5241	944	5438	961	5637		
8400 [3964]	—	—	—	—	—	628	2689	648	2837	668	2988	688	3142	708	3300	727	3460	747	3623	766	3790	785	3959	804	4132	823	4308	841	4486	860	4668	878	4853	896	5042	914	5233	931	5427	949	5624	966	5825
8600 [4058]	—	—	—	—	—	639	2863	659	3012	679	3165	698	3320	718	3478	737	3640	756	3804	775	3972	794	4143	831	4493	849	4673	867	4856	885	5043	902	5232	920	5424	937	5620	954	5818	971	6020		
8800 [4153]	630	2897	650	3045	670	3195	689	3348	708	3505	728	3664	746	3827	765	3992	784	4161	802	4333	820	4508	838	4686	856	4867	874	5052	891	5239	909	5429	926	5623	943	5820	960	6019	976	6222			
9000 [4247]	642	3085	662	3233	681	3384	700	3539	719	3696	738	3857	756	4021	775	4188	793	4358	811	4531	829	4707	847	4886	864	5069	882	5254	899	5443	916	5634	932	5829	949	6027	966	6228	982	6432			
9200 [4341]	654	3279	673	3428	692	3581	711	3737	730	3895	748	4057	767	4222	785	4390	802	4562	820	4736	838	4913	855	5093	872	5277	889	5464	906	5653	923	5846	939	6042	956	6241	972	6443	988	6648			
9400 [4436]	667	3480	686	3631	704	3785	723	3942	741	4102	759	4265	777	4431	795	4600	812	4772	830	4948	847	5126	864	5308	881	5493	897	5680	914	5871	930	6065	946	6262	962	6462	978	6666	994	6872			
9600 [4530]	679	3689	698	3841	716	3996	734	4154	752	4315	770	4479	788	4647	805	4817	822	4990	839	5167	856	5347	873	5529	889	5715	906	5904	922	6096	938	6291	954	6490	969	6691	985	6895	1000	7103			

NOTE: F-Drive left of first bold line, G-Drive in between bold lines, H-Drive right of second bold line.

Drive Package	F						G						H					
Motor H.P. [W]	5 [3,728.5]						7.5 [5,592.7]						7.5 [5,592.7]					
Blower Sheave	BK130H						BK130H						BK120H					
Motor Sheave	1VP56						1VP71						1VP71					
Turns Open	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
RPM	752	728	702	677	651	625	939	911	885	859	833	806	1,005	978	952	925	898	869

- NOTES: 1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—20 TON — 60 Hz — SIDEFLOW (CONTINUED)

Airflow	AIRFLOW CORRECTION FACTORS *				COMPONENT AIRFLOW RESISTANCE					
	CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Diffuser RXRN-AD86 & Transition RXMC-CK08	MERV 8 Filter	MERV 13 Filter
						Resistance — Inches of Water [kPa]				
	6400 [3020]	0.94	0.77	0.97	0.01 [.00]	0.15 [.04]	0.04 [.01]	-0.10 [.02]	0.10 [.02]	0.06 [.01]
	6600 [3114]	0.94	0.79	0.97	0.02 [.00]	0.16 [.04]	0.05 [.01]	-0.06 [.01]	0.10 [.03]	0.07 [.02]
	6800 [3209]	0.95	0.80	0.98	0.03 [.01]	0.16 [.04]	0.05 [.01]	-0.03 [.01]	0.11 [.03]	0.07 [.02]
	7000 [3303]	0.95	0.82	0.98	0.03 [.01]	0.17 [.04]	0.06 [.01]	0.00 [.00]	0.11 [.03]	0.08 [.02]
	7200 [3398]	0.96	0.83	0.98	0.04 [.01]	0.18 [.04]	0.06 [.01]	0.04 [.01]	0.12 [.03]	0.08 [.02]
	7400 [3492]	0.96	0.85	0.98	0.05 [.01]	0.19 [.05]	0.07 [.02]	0.07 [.02]	0.12 [.03]	0.09 [.02]
	7600 [3586]	0.96	0.86	0.98	0.06 [.01]	0.20 [.05]	0.07 [.02]	0.10 [.02]	0.12 [.03]	0.10 [.02]
	7800 [3681]	0.97	0.88	0.99	0.06 [.01]	0.21 [.05]	0.08 [.02]	0.13 [.03]	0.13 [.03]	0.10 [.03]
	8000 [3775]	0.97	0.89	0.99	0.07 [.02]	0.22 [.05]	0.09 [.02]	0.17 [.04]	0.13 [.03]	0.11 [.03]
	8200 [3869]	0.98	0.91	0.99	0.08 [.02]	0.23 [.06]	0.09 [.02]	0.20 [.05]	0.14 [.03]	0.11 [.03]
	8400 [3964]	0.98	0.92	0.99	0.09 [.02]	0.24 [.06]	0.10 [.02]	0.23 [.06]	0.14 [.03]	0.12 [.03]
	8600 [4058]	0.98	0.94	0.99	0.09 [.02]	0.25 [.06]	0.10 [.02]	0.27 [.07]	0.14 [.04]	0.13 [.03]
	8800 [4153]	0.99	0.95	1.00	0.10 [.02]	0.26 [.06]	0.11 [.03]	0.30 [.07]	0.15 [.04]	0.13 [.03]
	9000 [4247]	0.99	0.97	1.00	0.11 [.03]	0.27 [.07]	0.11 [.03]	0.33 [.08]	0.15 [.04]	0.14 [.03]
	9200 [4341]	0.99	0.98	1.00	0.12 [.03]	0.28 [.07]	0.12 [.03]	0.36 [.09]	0.16 [.04]	0.15 [.04]
	9400 [4436]	1.00	1.00	1.00	0.12 [.03]	0.29 [.07]	0.12 [.03]	0.40 [.10]	0.16 [.04]	0.15 [.04]
	9600 [4530]	1.00	1.01	1.00	0.13 [.03]	0.30 [.07]	0.13 [.03]	0.43 [.11]	0.16 [.04]	0.16 [.04]

*NOTES: Multiply correction factor times gross performance data—resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—25 TON — 60 Hz — DOWNFLOW

Model RACHYB300		Voltage 208/230, 460 — 3 phase																			
Air Flow CFM [L/s]		External Static Pressure—Inches of Water [kPa]																			
		0.1 [0.02]										0.2 [0.05]									
		RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
8000 [3775]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8200 [3869]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8400 [3964]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8600 [4058]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8800 [4153]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9000 [4247]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9200 [4341]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9400 [4436]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9600 [4530]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9800 [4624]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10000 [4719]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10200 [4813]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10400 [4908]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10600 [5002]	803	5233	824	5482	844	5738	864	5999	883	6266	903	6539	922	6817	941	7101	960	7391	979	7686	997
10800 [5096]	815	5497	835	5754	855	6016	875	6284	894	6557	913	6836	933	7121	952	7412	970	7708	989	8010	1007
11000 [5191]	826	5773	846	6036	866	6305	886	6579	905	6859	924	7145	943	7436	962	7734	981	8036	999	8345	1017
11200 [5285]	838	6060	858	6329	877	6605	897	6885	916	7172	935	7464	954	7763	973	8066	991	8376	1009	8691	1027
11400 [5379]	850	6358	869	6634	889	6915	908	7203	927	7496	946	7795	965	8100	983	8410	1002	8726	1020	9048	1038
11600 [5474]	862	6666	881	6949	900	7237	920	7531	938	7831	957	8137	976	8448	994	8765	1012	9088	1030	9416	1048
11800 [5568]	874	6986	893	7275	912	7570	931	7871	950	8177	968	8489	987	8807	1005	9131	1023	9460	1041	9795	1058
12000 [5663]	886	7317	905	7612	924	7914	943	8221	961	8534	980	8853	998	9177	1016	9507	1034	9843	1051	10185	1069

NOTE: F-Drive left of bold line, G-Drive right of bold line.

Drive Package	F										G									
Motor H.P. [W]	7.5 [5,592.7]										10 [7,457.0]									
Blower Sheave	BK130H										BK120H									
Motor Sheave	1VP71										1VP75									
Turns Open	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2
RPM	935	909	882	857	831	805	1,064	1,037	1,009	968	947	926	1,037	1,009	968	947	926	1,037	1,009	968

- NOTES: 1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—25 TON — 60 Hz — DOWNFLOW (CONTINUED)

Airflow	AIRFLOW CORRECTION FACTORS *				COMPONENT AIRFLOW RESISTANCE					
	CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Grill RXRN-AD88 & Transition RXMC-CL09	MERV 8 Filter	MERV 13 Filter
8000 [3775]	0.97	0.89	0.99	0.07 [.02]	0.22 [.05]	0.09 [.02]	0.17 [.04]	0.13 [.03]	0.11 [.03]	
8400 [3964]	0.98	0.92	0.99	0.09 [.02]	0.24 [.06]	0.10 [.02]	0.23 [.06]	0.14 [.03]	0.12 [.03]	
8800 [4153]	0.99	0.95	1.00	0.10 [.02]	0.26 [.06]	0.11 [.03]	0.30 [.07]	0.15 [.04]	0.13 [.03]	
9200 [4341]	1.00	0.98	1.00	0.12 [.03]	0.28 [.07]	0.12 [.03]	0.36 [.09]	0.16 [.04]	0.15 [.04]	
9600 [4530]	1.01	1.01	1.00	0.13 [.03]	0.30 [.07]	0.13 [.03]	0.43 [.11]	0.16 [.04]	0.16 [.04]	
1000 [4719]	1.02	1.04	1.01	0.15 [.04]	0.32 [.08]	0.14 [.03]	0.50 [.12]	0.17 [.04]	0.17 [.04]	
10400 [4908]	1.03	1.08	1.01	0.16 [.04]	0.34 [.08]	0.15 [.04]	0.56 [.14]	0.18 [.04]	0.18 [.05]	
10800 [5096]	1.03	1.11	1.01	0.18 [.04]	0.37 [.09]	0.16 [.04]	0.63 [.16]	0.19 [.05]	0.19 [.05]	
11200 [5285]	1.03	1.14	1.02	0.19 [.05]	0.39 [.10]	0.17 [.04]	0.69 [.17]	0.20 [.05]	0.21 [.05]	
11600 [5474]	1.04	1.17	1.02	0.21 [.05]	0.41 [.10]	0.18 [.04]	0.76 [.19]	0.20 [.05]	0.22 [.05]	
12000 [5663]	1.05	1.20	1.02	0.22 [.05]	0.44 [.11]	0.19 [.05]	0.82 [.20]	0.21 [.05]	0.23 [.06]	

*NOTES: Multiply correction factor times gross performance data—resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE — 25 TON — 60 Hz — SIDEFLOW

Model RACHYB300		Voltage 208/230, 460 — 3 phase																				
Air Flow CFM [L/s]		External Static Pressure—Inches of Water [kPa]																				
		0.1 [0.02]										0.2 [0.05]										
		W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	
8000 [3775]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8200 [3869]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8400 [3964]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8600 [4058]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8800 [4153]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
9000 [4247]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
9200 [4341]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
9400 [4436]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
9600 [4530]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
9800 [4624]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10000 [4719]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10200 [4813]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10400 [4908]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10600 [5002]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10800 [5096]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
11000 [5191]	804	5320	827	5602	849	5883	871	6166	892	6448	912	6731	932	7015	951	7299	970	7583	988	7867	1005	8153
11200 [5285]	817	5596	839	5882	861	6170	883	6457	903	6745	923	7034	943	7323	962	7612	980	7901	998	8191	1015	8482
11400 [5379]	829	5881	851	6173	873	6466	894	6759	915	7052	935	7346	954	7640	973	7935	991	8230	1008	8526	1025	8821
11600 [5474]	842	6177	864	6474	885	6772	906	7071	926	7369	946	7669	965	7968	983	8268	1001	8569	1019	8870	1035	9171
11800 [5568]	854	6482	876	6785	897	7089	918	7392	938	7697	957	8001	976	8306	994	8612	1012	8918	1029	9224	1045	9531
12000 [5663]	867	6798	888	7106	909	7415	930	7724	949	8034	969	8344	987	8654	1005	8965	1023	9277	1039	9588	1056	9900

NOTE: F-Drive left of bold line, G-Drive right of bold line.

Drive Package	F										G									
Motor H.P. [W]	7.5 [5,592.7]										10 [7,457.0]									
Blower Sheave	BK130H										BK120H									
Motor Sheave	1VP71										1VP75									
Turns Open	1	2	3	4	5	6	1	2	3	4	5	6								
RPM	936	910	884	857	831	806	1,066	1,040	1,014	972	951	930								

- NOTES: 1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRl minimum External Static Pressure.
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE— 25 TON — 60 Hz — SIDEFLOW (CONTINUED)

Airflow	AIRFLOW CORRECTION FACTORS *				COMPONENT AIRFLOW RESISTANCE						
	CFM [L/s]	Sensible kBtu/h		Power kW	Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Grill RXRN-AD88 & Transition RXMC-C.09	MERV 8 Filter	MERV 13 Filter	
		Total kBtu/h									
8000 [3775]	0.97	0.89	0.99	0.07 [.02]	0.22 [.05]	0.09 [.02]	0.17 [.04]	0.13 [.03]	0.11 [.03]		
8400 [3964]	0.98	0.92	0.99	0.09 [.02]	0.24 [.06]	0.10 [.02]	0.23 [.06]	0.14 [.03]	0.12 [.03]		
8800 [4153]	0.99	0.95	1.00	0.10 [.02]	0.26 [.06]	0.11 [.03]	0.30 [.07]	0.15 [.04]	0.13 [.03]		
9200 [4341]	0.99	0.98	1.00	0.12 [.03]	0.28 [.07]	0.12 [.03]	0.36 [.09]	0.16 [.04]	0.15 [.04]		
9600 [4530]	1.00	1.01	1.00	0.13 [.03]	0.30 [.07]	0.13 [.03]	0.43 [.11]	0.16 [.04]	0.16 [.04]		
10000 [4719]	1.01	1.04	1.01	0.15 [.04]	0.32 [.08]	0.14 [.03]	0.50 [.12]	0.17 [.04]	0.17 [.04]		
10400 [4908]	1.02	1.08	1.01	0.16 [.04]	0.34 [.08]	0.15 [.04]	0.56 [.14]	0.18 [.04]	0.18 [.05]		
10800 [5096]	1.03	1.11	1.01	0.18 [.04]	0.37 [.09]	0.16 [.04]	0.63 [.16]	0.19 [.05]	0.19 [.05]		
11200 [5285]	1.03	1.14	1.02	0.19 [.05]	0.39 [.10]	0.17 [.04]	0.69 [.17]	0.20 [.05]	0.21 [.05]		
11600 [5474]	1.04	1.17	1.02	0.21 [.05]	0.41 [.10]	0.18 [.04]	0.76 [.19]	0.20 [.05]	0.22 [.05]		
12000 [5663]	1.05	1.20	1.02	0.22 [.05]	0.44 [.11]	0.19 [.05]	0.82 [.20]	0.21 [.05]	0.23 [.06]		

*NOTES: Multiply correction factor times gross performance data—resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

ELECTRICAL DATA – RACHYB SERIES					
		180ACF	180ACG	180ADF	180ADG
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	Hz	60	60	60	60
	Minimum Circuit Ampacity	79/79	84/84	35	37
	Minimum Circuit Ampacity with Power Exhaust	89/89	94/94	40	41
	Minimum Overcurrent Protection Device Size	90/90	100/100	40	40
	Minimum Overcurrent Protection Device Size with Power Exhaust	100/100	110/110	45	45
	Maximum Overcurrent Protection Device Size	100/100	110/110	45	45
	Maximum Overcurrent Protection Device Size with Power Exhaust	110/110	110/110	50	50
Compressor Motor	No.	2	2	2	2
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	Amps (RLA), Comp. 1	27.7	27.7	11.5	11.5
	Amps (LRA), Comp. 1	178.5	178.5	103.0	103.0
	Amps (RLA), Comp. 2	27.7	27.7	11.5	11.5
	Amps (LRA), Comp. 2	178.5	178.5	103.0	103.0
Condenser Motor	No.	3	3	3	3
	Volts	208/230	208/230	460	460
	Phase	1	1	1	1
	HP	1/3	1/3	1/3	1/3
	Amps (FLA, each)	2.4	2.4	1.4	1.4
	Amps (LRA, each)	4.7	4.7	2.4	2.4
Evaporator Fan	No.	1	1	1	1
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	HP	3	5	3	5
	Amps (FLA, each)	9.2	13.6	4.6	6.3
	Amps (LRA, each)	74.5	86.0	38.4	47.5

ELECTRICAL DATA – RACHYB SERIES

		210ACF	210ACG	210ADF	210ADG
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	Hz	60	60	60	60
	Minimum Circuit Ampacity	84/84	88/88	39	40
	Minimum Circuit Ampacity with Power Exhaust	94/94	98/98	43	45
	Minimum Overcurrent Protection Device Size	100/100	100/100	45	45
	Minimum Overcurrent Protection Device Size with Power Exhaust	110/110	110/110	50	50
	Maximum Overcurrent Protection Device Size	110/110	110/110	50	50
	Maximum Overcurrent Protection Device Size with Power Exhaust	110/110	125/125	50	50
Compressor Motor	No.	2	2	2	2
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	Amps (RLA), Comp. 1	28.7	28.7	12.4	12.4
	Amps (LRA), Comp. 1	207.5	207.5	100.2	100.2
	Amps (RLA), Comp. 2	28.7	28.7	12.4	12.4
	Amps (LRA), Comp. 2	207.5	207.5	100.2	100.2
Condenser Motor	No.	4	4	4	4
	Volts	208/230	208/230	460	460
	Phase	1	1	1	1
	HP	1/3	1/3	1/3	1/3
	Amps (FLA, each)	2.4	2.4	1.4	1.4
	Amps (LRA, each)	4.7	4.7	2.4	2.4
Evaporator Fan	No.	1	1	1	1
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	HP	3	5	3	5
	Amps (FLA, each)	9.2	13.6	4.6	6.3
	Amps (LRA, each)	74.5	86.0	38.4	47.5

ELECTRICAL DATA – RACHYB SERIES					
		240ACF	240ACG 240ACH	240ADF	240ADG 240ADH
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	Hz	60	60	60	60
	Minimum Circuit Ampacity	99/99	106/106	47	50
	Minimum Circuit Ampacity with Power Exhaust	109/109	116/116	51	55
	Minimum Overcurrent Protection Device Size	110/110	125/125	60	60
	Minimum Overcurrent Protection Device Size with Power Exhaust	125/125	125/125	60	60
	Maximum Overcurrent Protection Device Size	125/125	125/125	60	60
	Maximum Overcurrent Protection Device Size with Power Exhaust	125/125	125/125	60	60
Compressor Motor	No.	2	2	2	2
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	Amps (RLA), Comp. 1	33.3	33.3	15.4	15.4
	Amps (LRA), Comp. 1	255.0	255.0	140.0	140.0
	Amps (RLA), Comp. 2	28.7	28.7	12.4	12.4
	Amps (LRA), Comp. 2	207.5	207.5	100.2	100.2
Condenser Motor	No.	6	6	6	6
	Volts	208/230	208/230	460	460
	Phase	1	1	1	1
	HP	1/3	1/3	1/3	1/3
	Amps (FLA, each)	2.4	2.4	1.4	1.4
	Amps (LRA, each)	4.7	4.7	2.4	2.4
Evaporator Fan	No.	1	1	1	1
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	HP	5	7.5	5	7.5
	Amps (FLA, each)	13.6	21.0	6.3	9.6
	Amps (LRA, each)	86.0	115.0	47.5	63.5

ELECTRICAL DATA – RACHYB SERIES

		300ACF	300ACG	300ADF	300ADG
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	Hz	60	60	60	60
	Minimum Circuit Ampacity	128/128	135/135	62	65
	Minimum Circuit Ampacity with Power Exhaust	138/138	145/145	67	69
	Minimum Overcurrent Protection Device Size	150/150	150/150	70	70
	Minimum Overcurrent Protection Device Size with Power Exhaust	150/150	175/175	80	80
	Maximum Overcurrent Protection Device Size	150/150	150/150	80	80
	Maximum Overcurrent Protection Device Size with Power Exhaust	175/175	175/175	80	80
Compressor Motor	No.	2	2	2	2
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	Amps (RLA), Comp. 1	40.8	40.8	19.4	19.4
	Amps (LRA), Comp. 1	270.0	270.0	147.0	147.0
	Amps (RLA), Comp. 2	40.8	40.8	19.4	19.4
	Amps (LRA), Comp. 2	270.0	270.0	147.0	147.0
Condenser Motor	No.	6	6	6	6
	Volts	208/230	208/230	460	460
	Phase	1	1	1	1
	HP	1/3	1/3	1/3	1/3
	Amps (FLA, each)	2.4	2.4	1.4	1.4
	Amps (LRA, each)	4.7	4.7	2.4	2.4
Evaporator Fan	No.	1	1	1	1
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	HP	7.5	10	7.5	10
	Amps (FLA, each)	21.0	28.0	9.6	12.5
	Amps (LRA, each)	115.0	149.2	63.5	76.0

208/230V THREE PHASE, 60 Hz, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION

Single Power Supply For Both Unit and Heater Kit

Separate Power Supply For Both Unit and Heater Kit

Unit Model No. RACHYB	Heater Kit			Air Conditioner				Heater Kit		Air Conditioner			
	Model No. RXJJ-	Rated Heater kW @ 208/230V	Heater Kit FLA	Unit Min. Ckt. Ampacity	Unit Min. Ckt. Ampacity with Optional Powered Exhaust	Max. Fuse or Ckt. Bkr. Size	Max. Fuse or Ckt. Bkr. Size With Optional Powered Exhaust	Heater Kit Min. Ckt. Ampacity	Heater Kit Max Fuse or Ckt. Bkr. Ampacity	Air Cond. Min. Ckt. Ampacity	Air Cond. Min. Ckt. Ampacity with Optional Powered Exhaust	Air Cond. Max Fuse or Ckt. Bkt. Size	Air Cond. Max Fuse or Ckt. Bkr. Size with Optional Powered Exhaust
180ACF	NONE	—/—	—/—	79/79	89/89	100/100	110/110	—	—	79/79	89/89	100/100	110/110
	CE20C	14.4/19.2	40.0/46.2	79/79	89/89	100/100	110/110	50/58	50/60	79/79	89/89	100/100	110/110
	CE40C	28.8/38.4	79.9/92.4	112/127	124/140	125/150	125/150	100/116	100/125	79/79	89/89	100/100	110/110
	CE60C	43.2/57.6	119.9/138.6	162/185	174/198	175/200	175/200	150/174	150/175	79/79	89/89	100/100	110/110
	CE75C	54.0/72.0	149.9/173.2	199/228	212/241	200/250	225/250	188/217	200/225	79/79	89/89	100/100	110/110
180ACG	NONE	—/—	—/—	84/84	94/94	110/110	110/110	—	—	84/84	94/94	110/110	110/110
	CE20C	14.4/19.2	40.0/46.2	84/84	94/94	110/110	110/110	50/58	50/60	84/84	94/94	110/110	110/110
	CE40C	28.8/38.4	79.9/92.4	117/133	130/145	125/150	150/150	100/116	100/125	84/84	94/94	110/110	110/110
	CE60C	43.2/57.6	119.9/138.6	167/191	180/203	175/200	200/225	150/174	150/175	84/84	94/94	110/110	110/110
	CE75C	54.0/72.0	149.9/173.2	205/234	217/246	225/250	225/250	188/217	200/225	84/84	94/94	110/110	110/110
210ACF	NONE	—/—	—/—	84/84	94/94	110/110	110/110	—	—	84/84	94/94	110/110	110/110
	CE20C	14.4/19.2	40.0/46.2	84/84	94/94	110/110	110/110	50/58	50/60	84/84	94/94	110/110	110/110
	CE40C	28.8/38.4	79.9/92.4	112/127	124/140	125/150	125/150	100/116	100/125	84/84	94/94	110/110	110/110
	CE60C	43.2/57.6	119.9/138.6	162/185	174/198	175/200	175/200	150/174	150/175	84/84	94/94	110/110	110/110
	CE75C	54.0/72.0	149.9/173.2	199/228	212/241	200/250	225/250	188/217	200/225	84/84	94/94	110/110	110/110
210ACG	NONE	—/—	—/—	88/88	98/98	110/110	125/125	—	—	88/88	98/98	110/110	125/125
	CE20C	14.4/19.2	40.0/46.2	88/88	98/98	110/110	125/125	50/58	50/60	88/88	98/98	110/110	125/125
	CE40C	28.8/38.4	79.9/92.4	117/133	130/145	125/150	150/150	100/116	100/125	88/88	98/98	110/110	125/125
	CE60C	43.2/57.6	119.9/138.6	167/191	180/203	175/200	200/225	150/174	150/175	88/88	98/98	110/110	125/125
	CE75C	54.0/72.0	149.9/173.2	205/234	217/246	225/250	225/250	188/217	200/225	88/88	98/98	110/110	125/125

208/230V THREE PHASE, 60 Hz, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION												
Single Power Supply For Both Unit and Heater Kit						Separate Power Supply For Both Unit and Heater Kit						
Unit Model No. RACHYB	Heater Kit			Air Conditioner			Heater Kit		Air Conditioner			
	Model No. RXJJ-	Rated Heater kW @ 208/230V	Heater Kit FLA	Unit Min. Ckt. Ampacity	Unit Min. Ckt. Ampacity with Optional Powered Exhaust	Max. Fuse or Ckt. Bkr. Size	Heater Kit Min.Ckt. Ampacity	Heater Kit Max Fuse or Ckt. Bkr. Ampacity	Air Cond. Min. Ckt. Ampacity with Optional Powered Exhaust	Air Cond. Max Fuse or Ckt. Bkr. Size	Air Cond. Max Fuse or Ckt. Bkr. Size with Optional Powered Exhaust	
240ACF	NONE	—/—	—/—	99/99	109/109	125/125	—	—	109/109	125/125	125/125	
	CE20C	14.4/19.2	40.0/46.2	99/99	109/109	125/125	50/58	50/60	109/109	125/125	125/125	
	CE40C	28.8/38.4	79.9/92.4	117/133	130/145	125/150	100/116	100/125	109/109	125/125	125/125	
	CE60C	43.2/57.6	119.9/138.6	167/191	180/203	175/200	150/174	150/175	109/109	125/125	125/125	
	CE75C	54.0/72.0	149.9/173.2	205/234	217/246	225/250	188/217	200/225	109/109	125/125	125/125	
240ACG	NONE	—/—	—/—	106/106	116/116	125/125	—	—	116/116	125/125	125/125	
	CE20C	14.4/19.2	40.0/46.2	106/106	116/116	125/125	50/58	50/60	116/116	125/125	125/125	
	CE40C	28.8/38.4	79.9/92.4	127/142	139/155	150/175	100/116	100/125	116/116	125/125	125/125	
	CE60C	43.2/57.6	119.9/138.6	177/200	189/212	200/225	150/174	150/175	116/116	125/125	125/125	
	CE75C	54.0/72.0	149.9/173.2	214/243	227/256	225/250	188/217	200/225	116/116	125/125	125/125	
240ACH	NONE	—/—	—/—	106/106	116/116	125/125	—	—	116/116	125/125	125/125	
	CE20C	14.4/19.2	40.0/46.2	106/106	116/116	125/125	50/58	50/60	116/116	125/125	125/125	
	CE40C	28.8/38.4	79.9/92.4	127/142	139/155	150/175	100/116	100/125	116/116	125/125	125/125	
	CE60C	43.2/57.6	119.9/138.6	177/200	189/212	200/225	150/174	150/175	116/116	125/125	125/125	
	CE75C	54.0/72.0	149.9/173.2	214/243	227/256	225/250	188/217	200/225	116/116	125/125	125/125	
300ACF	NONE	—/—	—/—	128/128	138/138	150/150	—	—	138/138	150/150	175/175	
	CE20C	14.4/19.2	40.0/46.2	128/128	138/138	150/150	50/58	50/60	138/138	150/150	175/175	
	CE40C	28.8/38.4	79.9/92.4	128/142	139/155	150/150	100/116	100/125	138/138	150/150	175/175	
	CE60C	43.2/57.6	119.9/138.6	177/200	189/212	200/225	150/174	150/175	138/138	150/150	175/175	
	CE75C	54.0/72.0	149.9/173.2	214/243	227/256	225/250	188/217	200/225	138/138	150/150	175/175	
300ACG	NONE	—/—	—/—	135/135	145/145	150/150	—	—	145/145	175/175	175/175	
	CE20C	14.4/19.2	40.0/46.2	135/135	145/145	150/150	50/58	50/60	145/145	175/175	175/175	
	CE40C	28.8/38.4	79.9/92.4	135/151	148/163	150/175	100/116	100/125	145/145	175/175	175/175	
	CE60C	43.2/57.6	119.9/138.6	185/209	198/221	200/225	150/174	150/175	145/145	175/175	175/175	
	CE75C	54.0/72.0	149.9/173.2	223/252	235/264	225/300	188/217	200/225	145/145	175/175	175/175	

460V, THREE PHASE, 60 Hz, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION

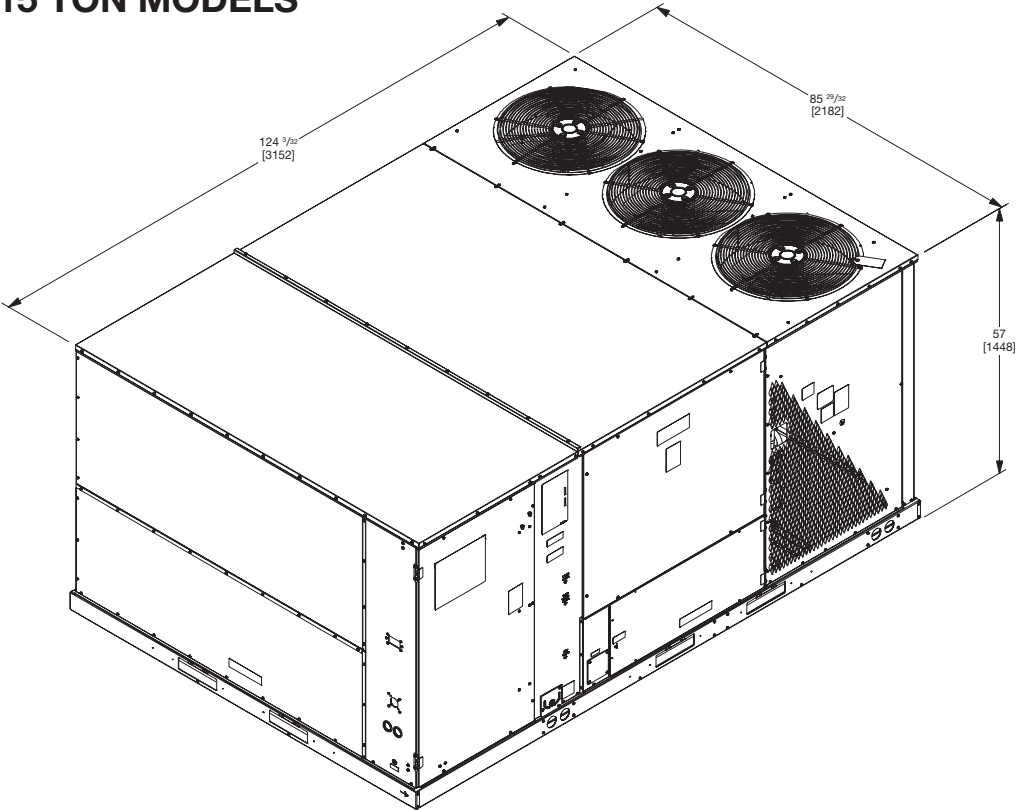
Single Power Supply For Both Unit and Heater Kit										Separate Power Supply For Both Unit and Heater Kit				
Unit Model No. RACHYB	Heater Kit			Air Conditioner			Heater Kit		Air Conditioner					
	Model No. RXJJ-	Rated Heater kW @ 460V	Heater Kit FLA	Unit Min. Ckt. Ampacity	Unit Min. Ckt. Ampacity with Optional Powered Exhaust	Max. Fuse or Ckt. Bkr. Size	Max. Fuse or Ckt. Bkr. Size With Optional Powered Exhaust	Heater Kit Min.Ckt. Ampacity	Heater Kit Max Fuse or Ckt. Bkr. Ampacity	Air Cond. Min. Ckt. Ampacity	Air Cond. Min. Ckt.Ampacity with Optional Powered Exhaust	Air Cond. Max Fuse or Ckt. Bkt. Size	Air Cond. Max Fuse or Ckt. Bkr. Size with with Optional Powered Exhaust	
180ADF	NONE	—	—	35	40	45	50	—	—	35	40	45	50	
	CE20D	19.2	23.1	35	41	45	50	29	30	35	40	45	50	
	CE40D	38.4	46.2	64	69	70	70	58	60	35	40	45	50	
	CE60D	57.6	69.3	93	98	100	100	87	90	35	40	45	50	
	CE75D	72.0	86.6	114	120	125	125	109	110	35	40	45	50	
180ADG	NONE	—	—	37	41	45	50	—	—	37	41	45	50	
	CE20D	19.2	23.1	37	43	45	50	29	30	37	41	45	50	
	CE40D	38.4	46.2	66	72	70	80	58	60	37	41	45	50	
	CE60D	57.6	69.3	95	100	100	100	87	90	37	41	45	50	
	CE75D	72.0	86.6	117	122	125	125	109	110	37	41	45	50	
210ADF	NONE	—	—	39	43	50	50	—	—	39	43	50	50	
	CE20D	19.2	23.1	39	43	50	50	29	30	39	43	50	50	
	CE40D	38.4	46.2	64	69	70	70	58	60	39	43	50	50	
	CE60D	57.6	69.3	93	98	100	100	87	90	39	43	50	50	
	CE75D	72.0	86.6	114	120	125	125	109	110	39	43	50	50	
210ADG	NONE	—	—	40	45	50	50	—	—	40	45	50	50	
	CE20D	19.2	23.1	40	45	50	50	29	30	40	45	50	50	
	CE40D	38.4	46.2	66	72	70	80	58	60	40	45	50	50	
	CE60D	57.6	69.3	95	100	100	100	87	90	40	45	50	50	
	CE75D	72.0	86.6	117	122	125	125	109	110	40	45	50	50	

460V THREE PHASE, 60 Hz, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION												
Single Power Supply For Both Unit and Heater Kit						Separate Power Supply For Both Unit and Heater Kit						
Unit Model No. RACHYB	Heater Kit			Air Conditioner			Heater Kit		Air Conditioner			
	Model No. RXJJ-	Rated Heater kW @ 460V	Heater Kit FLA	Unit Min. Ckt. Ampacity	Unit Min. Ckt. Ampacity with Optional Powered Exhaust	Max. Fuse or Ckt. Bkr. Size	Heater Kit Min. Ckt. Ampacity	Heater Kit Max Fuse or Ckt. Bkr. Ampacity	Air Cond. Min. Ckt. Ampacity	Air Cond. Max Fuse or Ckt. Bkr. Size	Air Cond. Max Fuse or Ckt. Bkr. Size with Optional Powered Exhaust	
240ADF	NONE	—	—	47	51	60	—	—	47	60	60	60
	CE20C	19.2	23.1	47	51	60	29	30	47	60	60	60
	CE40C	38.4	46.2	66	72	70	58	60	47	60	60	60
	CE60C	57.6	69.3	95	100	100	87	90	47	60	60	60
	CE75C	72.0	86.6	117	122	125	109	110	47	60	60	60
240ADG	NONE	—	—	50	55	60	—	—	50	60	60	60
	CE20D	19.2	23.1	50	55	60	29	30	50	60	60	60
	CE40D	38.4	46.2	70	76	70	58	60	50	60	60	60
	CE60D	57.6	69.3	99	105	100	87	90	50	60	60	60
	CE75D	72.0	86.6	121	126	125	109	110	50	60	60	60
240ADH	NONE	—	—	50	55	60	—	—	50	60	60	60
	CE20D	19.2	23.1	50	55	60	29	30	50	60	60	60
	CE40D	38.4	46.2	70	76	70	58	60	50	60	60	60
	CE60D	57.6	69.3	99	105	100	87	90	50	60	60	60
	CE75D	72.0	86.6	121	126	125	109	110	50	60	60	60
300ADF	NONE	—	—	62	67	80	—	—	62	80	80	80
	CE20D	19.2	23.1	62	67	80	29	30	62	80	80	80
	CE40D	38.4	46.2	70	76	80	58	60	62	80	80	80
	CE60D	57.6	69.3	99	105	100	87	90	62	80	80	80
	CE75D	72.0	86.6	121	126	125	109	110	62	80	80	80
300ADG	NONE	—	—	65	69	80	—	—	65	80	80	80
	CE20D	19.2	23.1	65	69	80	29	30	65	80	80	80
	CE40D	38.4	46.2	74	79	80	58	60	65	80	80	80
	CE60D	57.6	69.3	103	108	110	87	90	65	80	80	80
	CE75D	72.0	86.6	124	130	125	109	110	65	80	80	80

A2L REFRIGERANT INSTALLATION SAFETY DATA

		RACHYB180	RACHYB210	RACHYB240	RACHYB300	RACHYB180 w/HumidiDry	RACHYB240 w/HumidiDry	RACHYB300 w/HumidiDry
Refrigerant Charge Weight Circuit 1 / Circuit 2 (oz)		144 / 148	161.6 / 168	212.8 / 206.4	228.8 / 216	256 / 155.2	304 / 220.8	316 / 220
Minimum circulation airflow, Qmin (CFM)		492	559	708	761	851	1,011	1,051
Altitude above Sea Level (Ft.)	Altitude Adjustment Factor	Minimum Total Conditioned Room Area, T _{Amin} (Sq. Ft.)						
0	1.000	273	310	392	422	472	560	582
1000	1.025	280	317	402	432	484	574	597
2000	1.051	287	325	412	443	496	589	612
3000	1.078	294	334	423	455	509	604	628
4000	1.107	302	343	434	467	522	620	645
5000	1.138	310	352	446	480	537	638	663
6000	1.170	319	362	459	493	552	656	681
6500	1.187	324	368	466	501	560	665	691

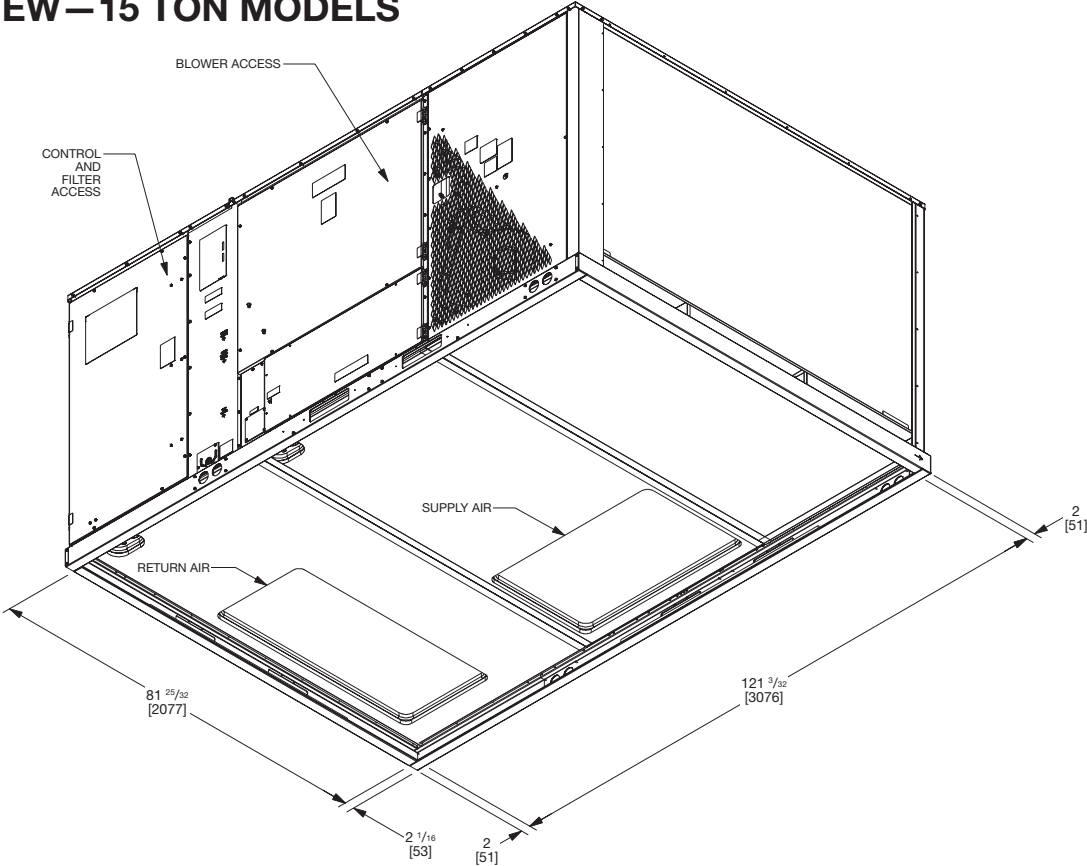
TOP VIEW — 15 TON MODELS



NOTE: ALL MEASUREMENTS ARE FORMATTED INCHES [MM].

ST-A1182-01B-01

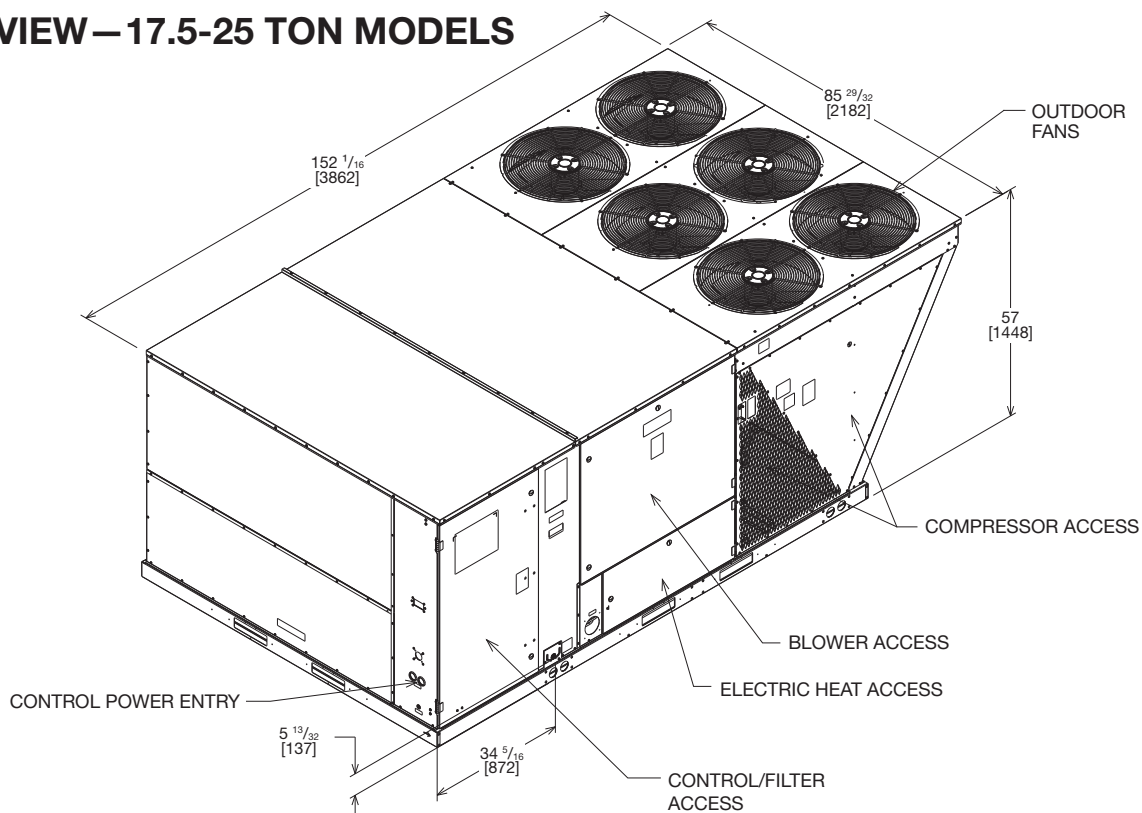
BOTTOM VIEW — 15 TON MODELS



NOTE: ALL MEASURES ARE ON A FORMAT OF INCHES [MM].

ST-A1182-02B-00

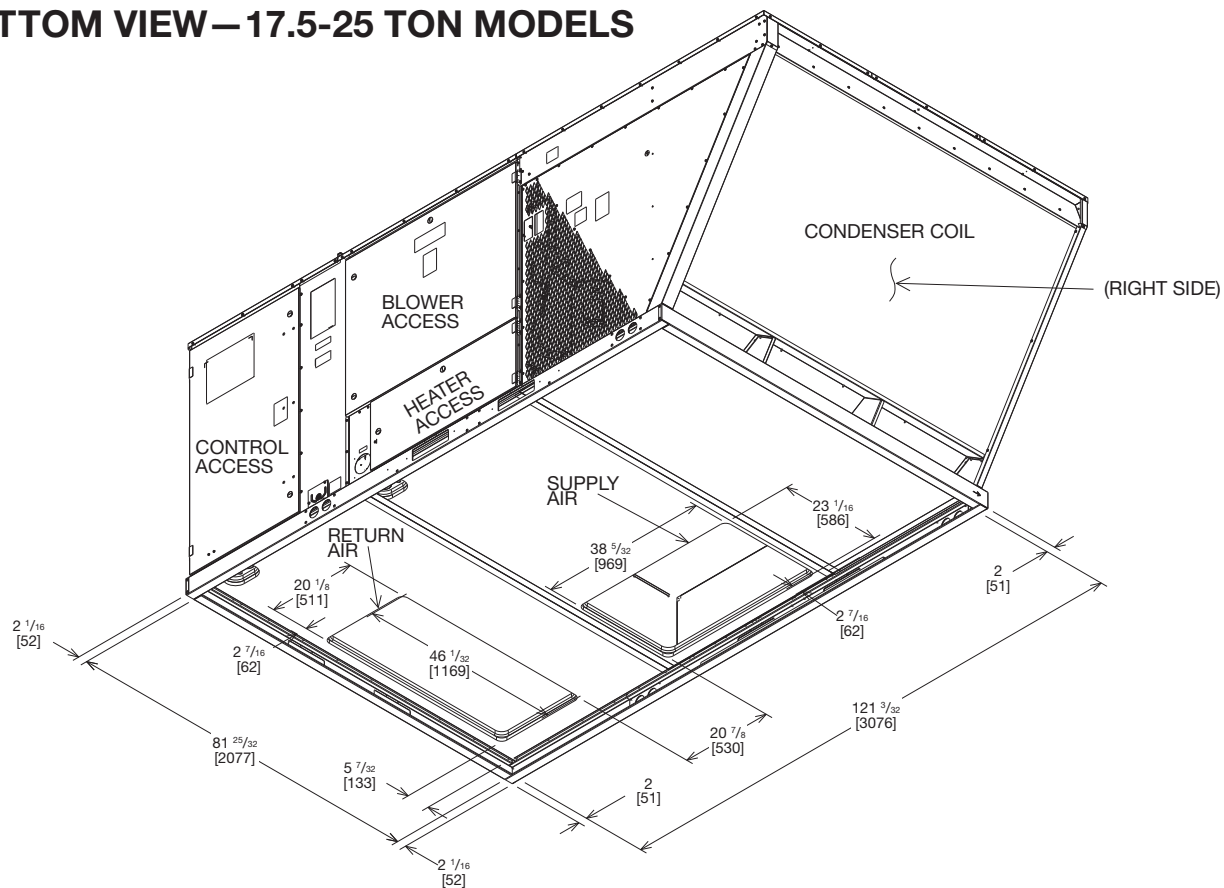
TOP VIEW — 17.5-25 TON MODELS



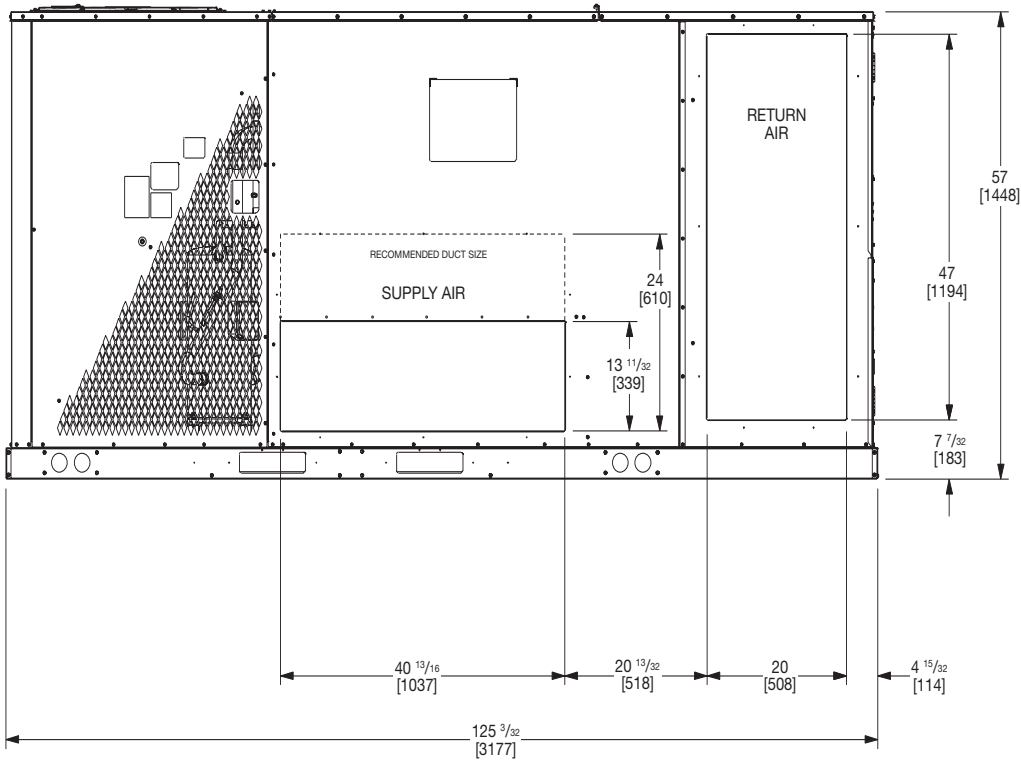
ST-A1125-01B-00

NOTE: ALL MEASURES ARE ON A FORMAT OF INCHES [MM].

BOTTOM VIEW — 17.5-25 TON MODELS

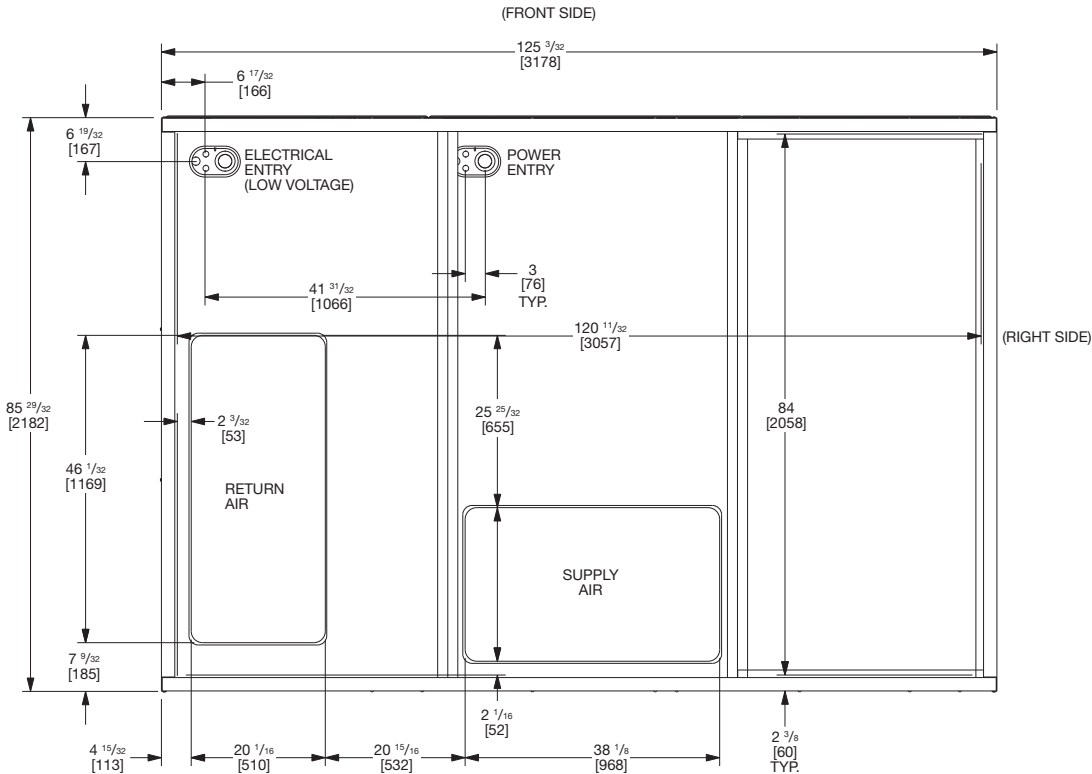


SUPPLY AND RETURN DIMENSIONS FOR HORIZONTAL APPLICATIONS—
15 TON MODELS (VIEW FROM REAR DUCT SIDE)



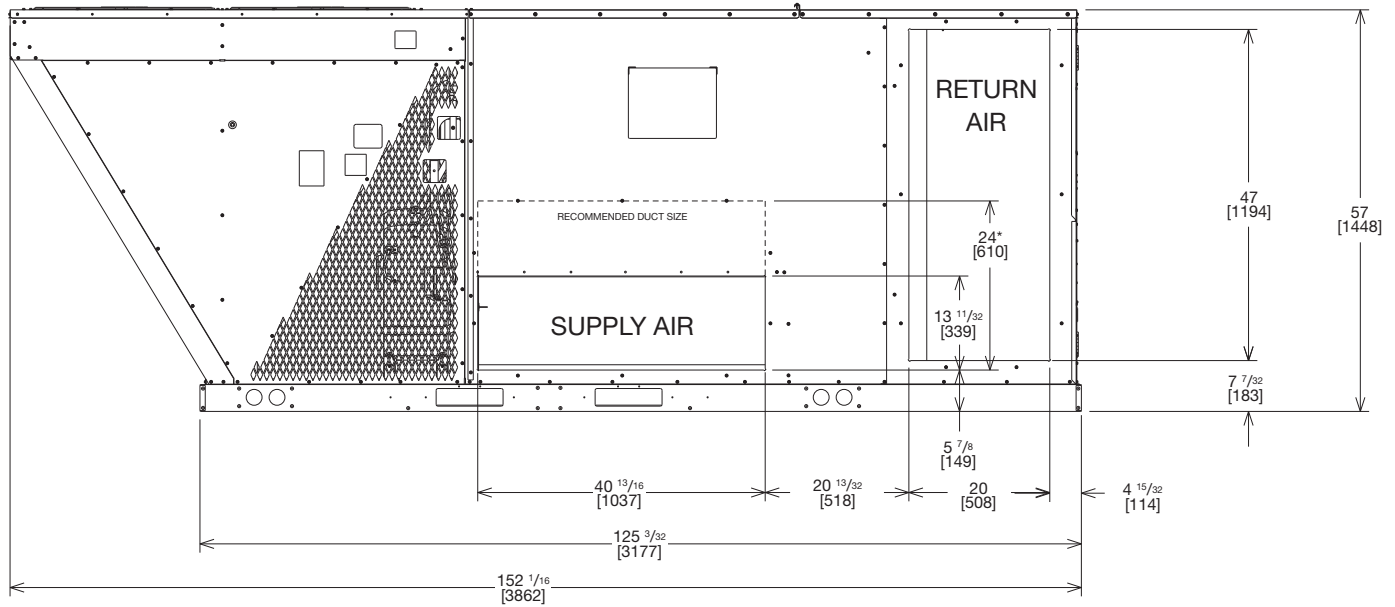
NOTE: ALL MEASURES ARE ON A FORMAT OF INCHES [MM]. ST-A1182-08B-00

SUPPLY AND RETURN DIMENSIONS FOR DOWNFLOW APPLICATIONS—
15 TON MODELS (VIEW FROM BOTTOM UP)



NOTE: ALL MEASUREMENTS ARE FORMATTED INCHES [MM]. ST-A1182-09B-01

SUPPLY AND RETURN DIMENSIONS FOR HORIZONTAL APPLICATIONS— 17.5-25 TON MODELS (VIEW FROM REAR DUCT SIDE)

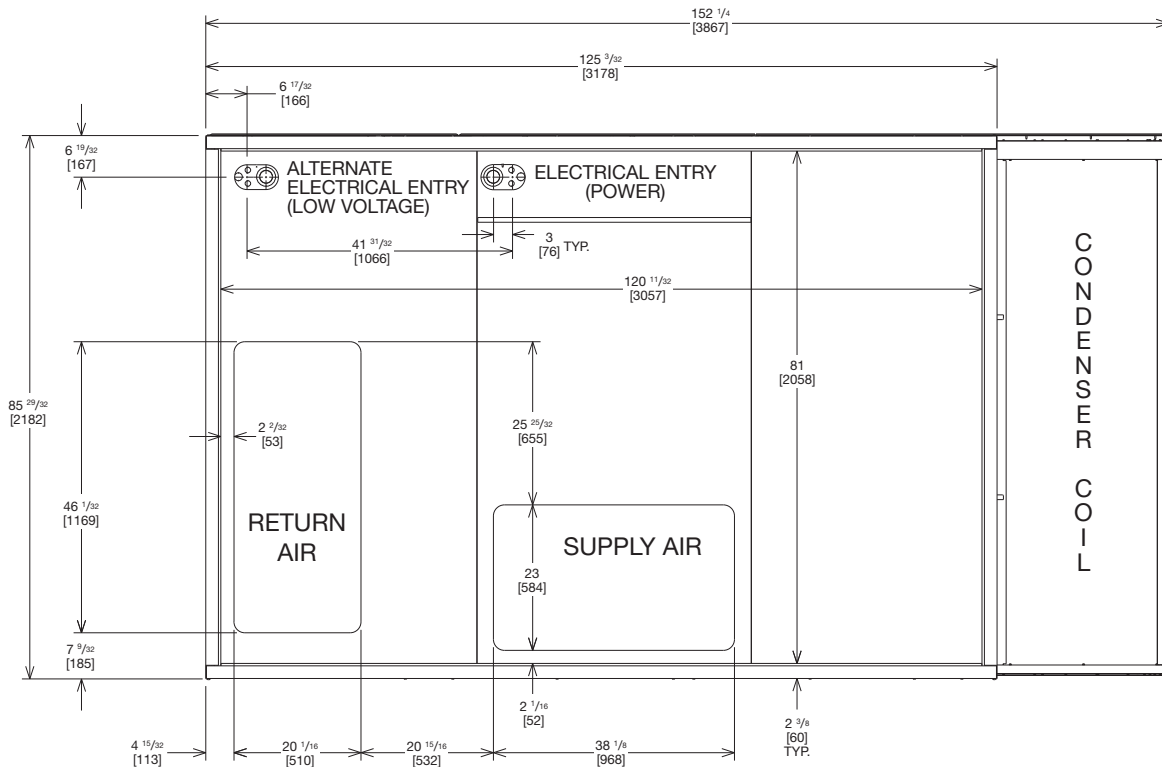


*RECOMMENDED DUCT SIZE

NOTE: ALL MEASURES ARE ON A FORMAT OF INCHES [MM].

ST-A1125-08B-00

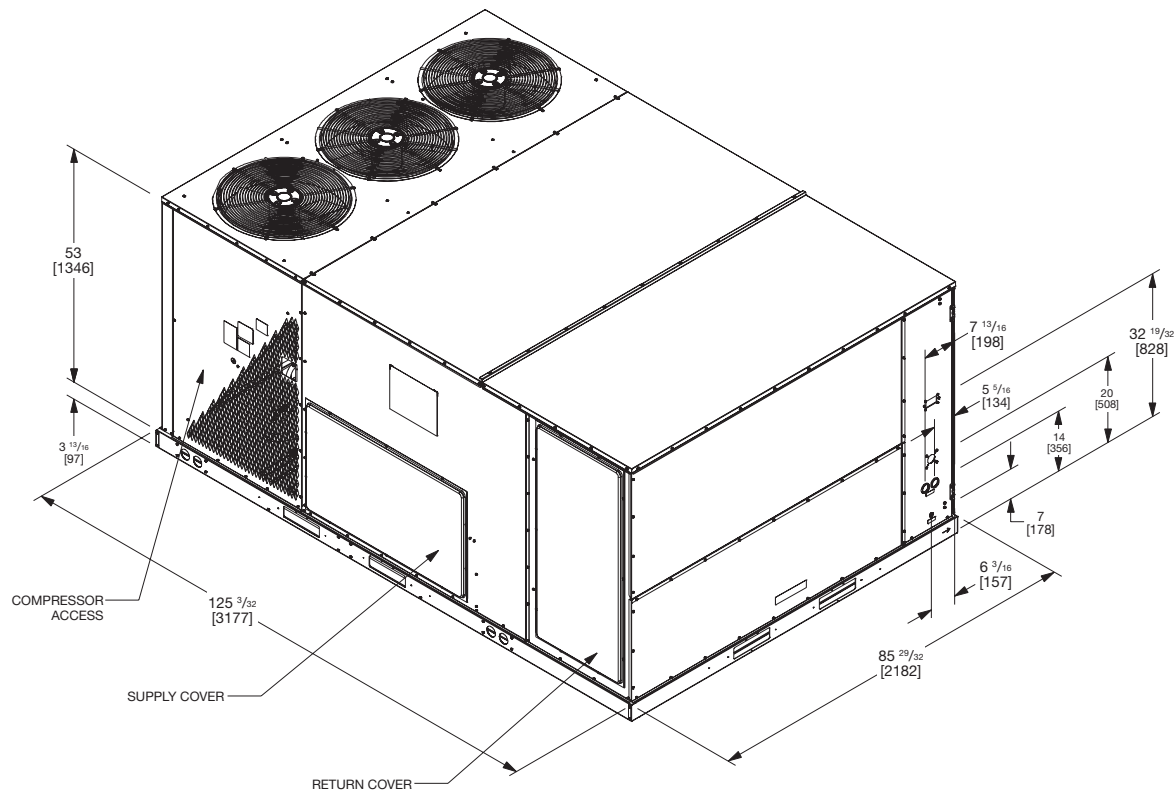
SUPPLY AND RETURN DIMENSIONS FOR DOWNFLOW APPLICATIONS— 17.5-25 TON MODELS (VIEW FROM BOTTOM UP)



NOTE: ALL MEASURES ARE ON A FORMAT OF INCHES [MM].

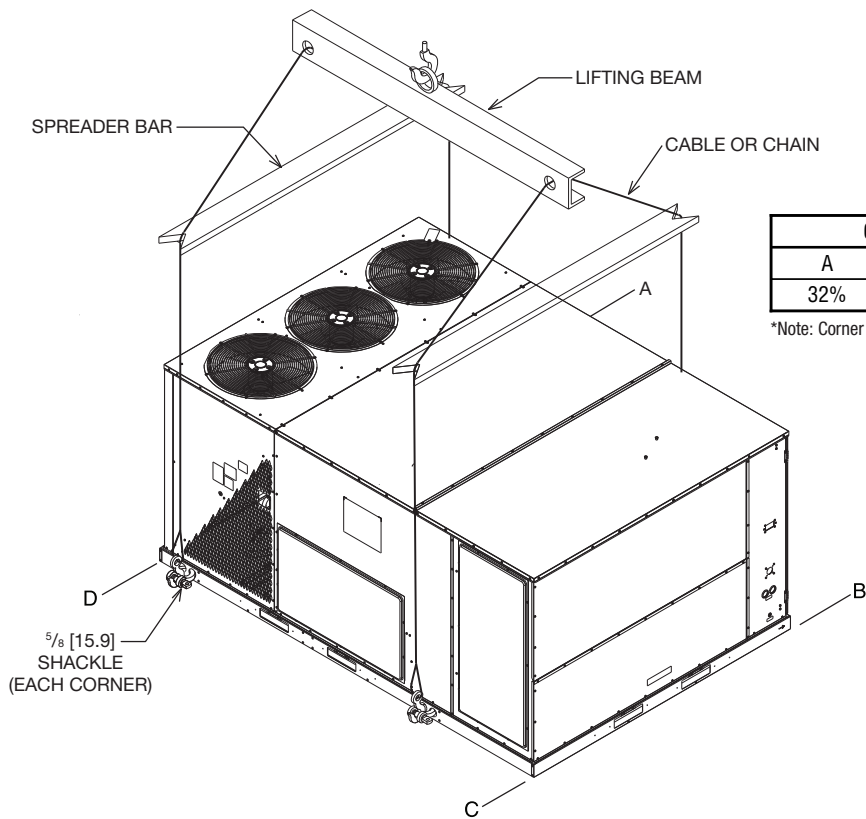
ST-A1125-09B-00

UNIT DIMENSIONS—15 TON MODELS



NOTE: ALL MEASUREMENTS ARE FORMATTED INCHES [MM].

ST-A1182-03-01



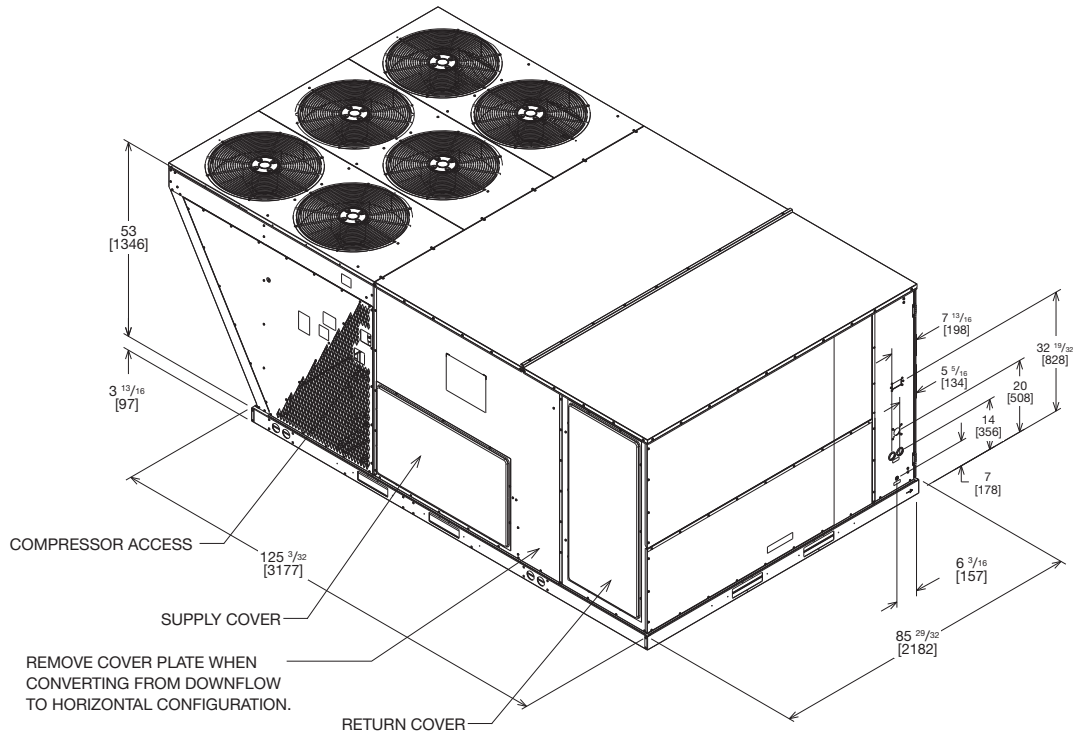
Corner Weights by Percentage			
A	B	C	D
32%	27%	16%	24%

*Note: Corner weights measured at base of unit.

NOTE: ALL MEASURES ARE ON A FORMAT OF INCHES [MM].

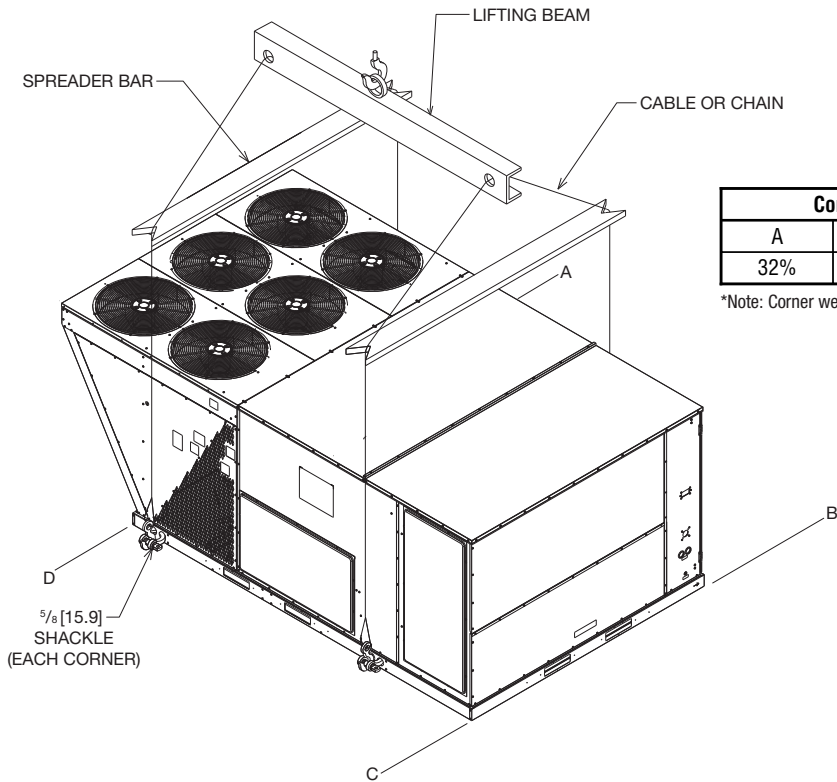
ST-A1182-25-00

UNIT DIMENSIONS—17.5-25 TON MODELS



NOTE: ALL MEASURES ARE ON A FORMAT OF INCHES [MM].

ST-A1125-03-00



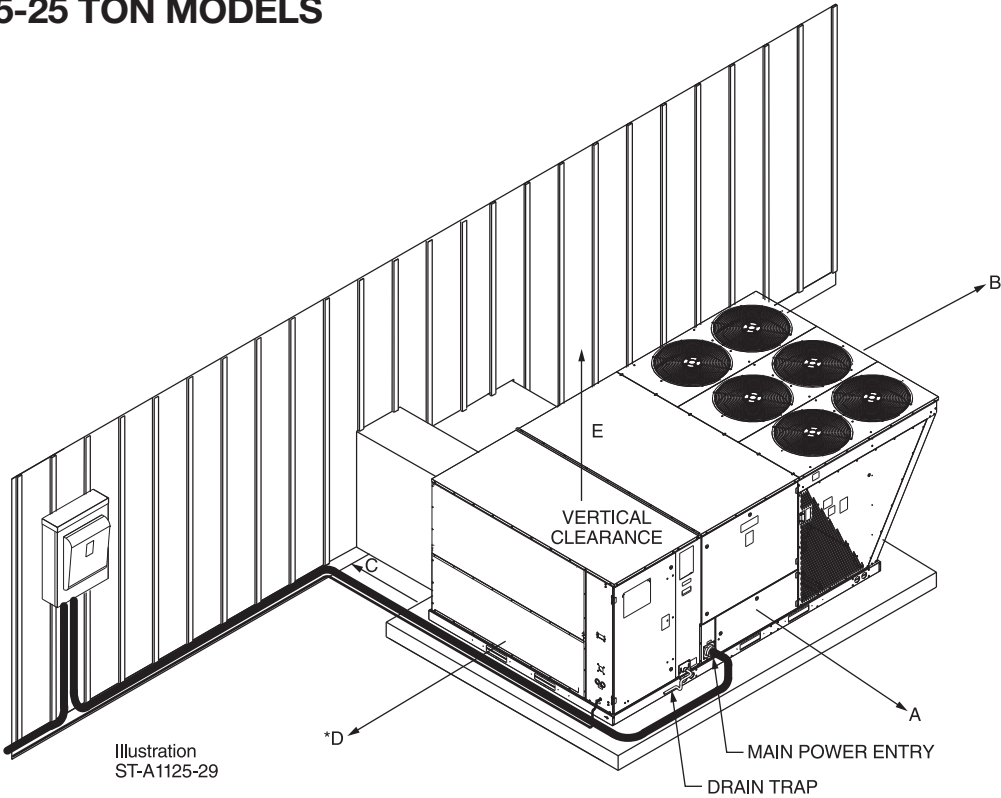
Corner Weights by Percentage			
A	B	C	D
32%	27%	16%	24%

*Note: Corner weights measured at base of unit.

NOTE: ALL MEASURES ARE ON A FORMAT OF INCHES [MM].

ST-A1125-25-00

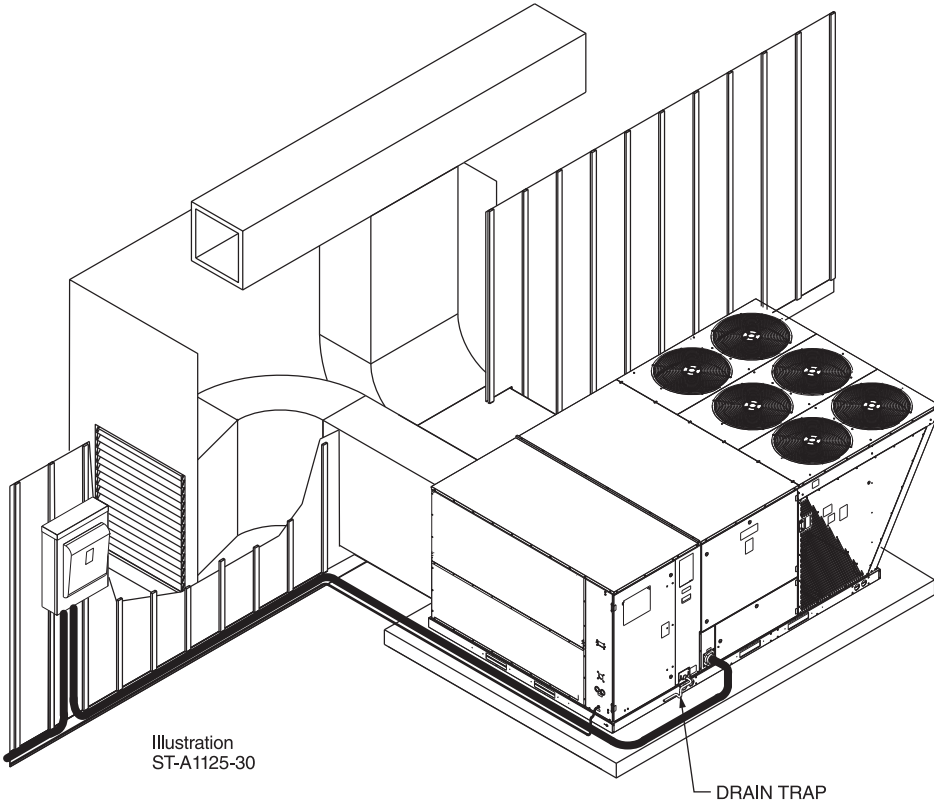
SLAB INSTALLATION — 15-25 TON MODELS



CLEARANCES

The following minimum clearances are recommended for proper unit performance and serviceability.

Recommended Clearance In. [mm]	Location
80 [2032]	A - Front
18 [457]	B - Condenser Coil
18 [457]	+C - Duct Side
18 [457]	*D - Evaporator End
60 [1524]	E - Above
+Without Horizontal Economizer 18" [457 mm]. With Horizontal Economizer 42" [1067 mm]. *Without Economizer 18" [457 mm]. With Economizer 48" [1219 mm].	



FIELD-INSTALLED ACCESSORY EQUIPMENT

Accessory	Model Number	Shipping Weight Lbs. [kg]	Installed Weight Lbs. [kg]	Factory Installation Available?
Economizers				
DDC Economizer with Single Enthalpy (Downflow) <i>RRS Economizer with Honeywell Controller</i>	AXRD-01RMDCM3	277 [125.6]	168 [76.2]	Yes
DDC Economizer with Single Enthalpy (Downflow) <i>RRS Economizer with Honeywell Controller w/Smoke Detector</i>	AXRD-01RMDDM3	277 [125.6]	168 [76.2]	Yes
DDC Economizer with Single Enthalpy (Horizontal) <i>RRS Economizer with Honeywell Controller</i>	AXRD-01RMHCM3	333 [151.0]	301 [36.5]	No
Non-DDC Economizer with Single Enthalpy (Downflow) <i>RRS Economizer with Siemens Controller</i>	RXRD-51RHDAM3	277 [125.6]	168 [76.2]	Yes
Non-DDC Economizer with Single Enthalpy (Horizontal) <i>RRS Economizer with Siemens Controller</i>	RXRD-51RHHAM3	333 [151.0]	301 [36.5]	No
Economizer Universal DDC Interface Kit	RXRX-DDC02	40. [18.1]	34 [15.4]	Yes ¹

Accessory	Model Number	Shipping Weight Lbs. [kg]	Installed Weight Lbs. [kg]	Factory Installation Available?
Comfort Alert® (1 per Compressor)	RXRX-AZ01	3 [1.4]	2 [0.9]	Yes
Communication Card, BACnet	RXRX-AY01	1 [0.5]	1 [0.5]	No
Communication Card, LonWorks	RXRX-AY02	1 [0.5]	1 [0.5]	No
Concentric Adapter/Transition (15 & 17.5 ton)	RXMC-CJ07	81 [36.7]	74 [33.6]	No
Concentric Adapter/Transition (20 ton)	RXMC-CK08	81 [36.7]	74 [33.6]	No
Concentric Adapter/Transition (25 ton)	RXMC-CL09	81 [36.7]	74 [33.6]	No
Concentric Flush Mount Diffuser (15 & 17.5 ton)	RXRN-AD80	213 [96.6]	115 [52.2]	No
Concentric Step Down Diffuser (15 & 17.5 ton)	RXRN-AD81	310 [140.6]	157 [71.2]	No
Concentric Step Down Diffuser (20 ton)	RXRN-AD86	367 [166.5]	212 [96.2]	No
Concentric Step Down Diffuser (25 ton)	RXRN-AD88	410 [186.0]	370 [67.8]	No
Convenience Outlet, Non-Powered	RXRX-AN01	2 [0.9]	1.5 [0.7]	Yes
Dual Enthalpy, Temperature and Humidity Sensor (for Honeywell DDC)	RXRX-AV02	1 [0.5]	1 [0.5]	No
Dual Enthalpy, Temperature and Humidity Sensor (for Siemens Non-DDC)	PD555460	1 [0.5]	1 [0.5]	No
Electric Heaters	RXJJ-CE20 (C, D)	41 [18.6]	31 [14.1]	Yes
	RXJJ-CE40 (C, D)	44 [20.0]	34 [15.4]	Yes
	RXJJ-CE60 (C, D)	45 [20.4]	35 [15.9]	Yes
	RXJJ-CE75 (C, D)	46 [20.8]	36 [16.3]	Yes
Fresh Air Damper ² , Manual	AXRF-KFA1	61 [27.7]	52 [23.6]	No
Fresh Air Damper ² , Motorized (DDC)	RXRX-AW05	45 [20.4]	38 [17.2]	No
Outdoor Coil Louver Kit (15 Ton)	AXRX-AAD01K	55 [24.8]	45 [20.3]	Yes
Outdoor Coil Louver Kit (17.5-25 Ton)	AXRX-AAD01L	55 [24.8]	45 [20.3]	Yes
Low-Ambient Control Kit (1 Per Compressor)	RXRZ-C02	3 [1.4]	2 [0.9]	Yes
MERV 8 Filter	RXMF-M08A22520	2 [0.9]	1 [0.45]	Yes
MERV 13 Filter	RXMF-M13A22520	2 [0.9]	1 [0.45]	Yes
Power Exhaust (208/230V) Kit, Convertible <i>RRS</i>	RXRX-BGF05C	119 [54.0]	59 [26.8]	No
Power Exhaust (460V) Kit, Convertible <i>RRS</i>	RXRX-BGF05D	119 [54.0]	59 [26.8]	No
Roofcurb, 14"	RXKG-CBH14	184 [83.5]	176 [79.8]	No
Roofcurb Adapter to RXKG-CAF14	RXRX-CJCF14	555 [251.7]	505 [29.1]	No
Roofcurb Adapter to RXRK-E56	RXRX-CJCE56	465 [210.9]	415 [88.2]	No
Sensor, Carbon Dioxide (Wall Mount)	RXRX-AR02	3 [1.4]	2 [1.0]	No
Sensor, Room Humidity	RHC-ZNS4	1 [0.5]	1 [0.5]	No
Sensor, Room Temperature and Relative Humidity	RHC-ZNS5	1 [0.5]	1 [0.5]	No

¹When a factory installed economizer is selected in the unit option codes, this accessory is automatically factory installed if required²Motorized Kit and Manual Fresh Air Damper must be combined for a complete Motorized Outside Air Damper Selection

[] Designates Metric Conversions

COMMUNICATION CARDS

Field-Installed



BACnet COMMUNICATION CARD RXRX-AY01

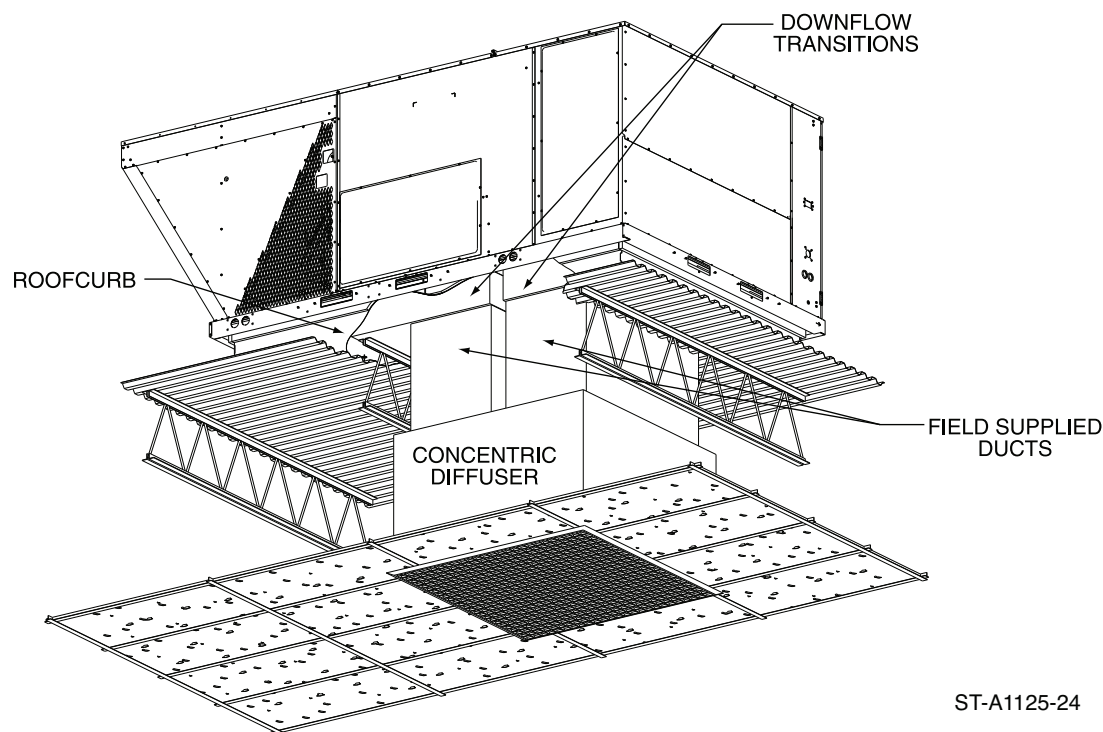
The field-installed BACnet Communication Card allows the RTU-C unit controller to communicate with a third party building management system that supports the BACnet Application Specific Controller device profile. The BACnet Communication Module plugs onto the unit RTU-C controller and allows communication between the RTU-C and the BACnet MSTP network.



LonWorks COMMUNICATION CARD RXRX-AY02

The field-installed LonWorks Communication Card allows the RTU-C unit controller to communicate with a third party building management system that supports the LonMark Space Comfort Controller (SCC) functional profile or LonMark Discharge Air Controller (DAC) functional profile. The LonMark Communication Module plugs onto the RTU-C controller and allows communication between the RTU-C and a LonWorks Network.

CONCENTRIC DIFFUSER APPLICATION

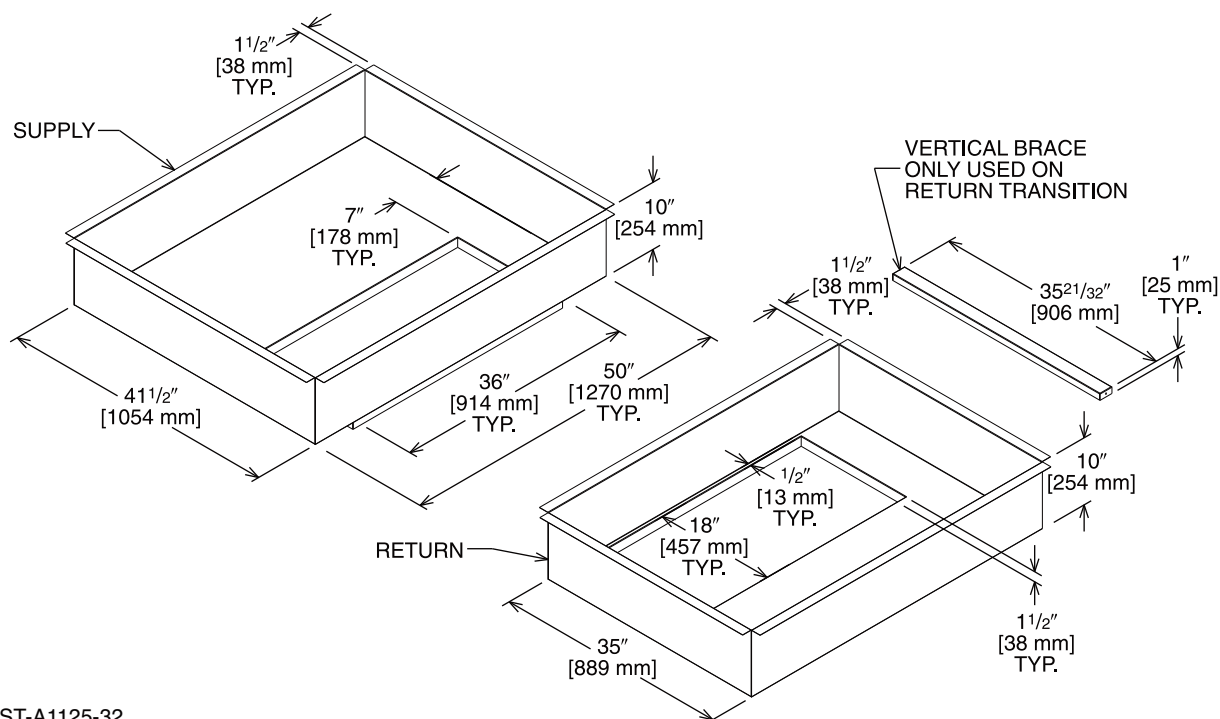


ST-A1125-24

DOWNFLOW TRANSITION DRAWINGS

RXMC-CJ07 — Concentric Adapter/Transition (15 & 17.5 Ton)

- Used with RXRN-AD80 and RXRN-AD81 Concentric Diffusers

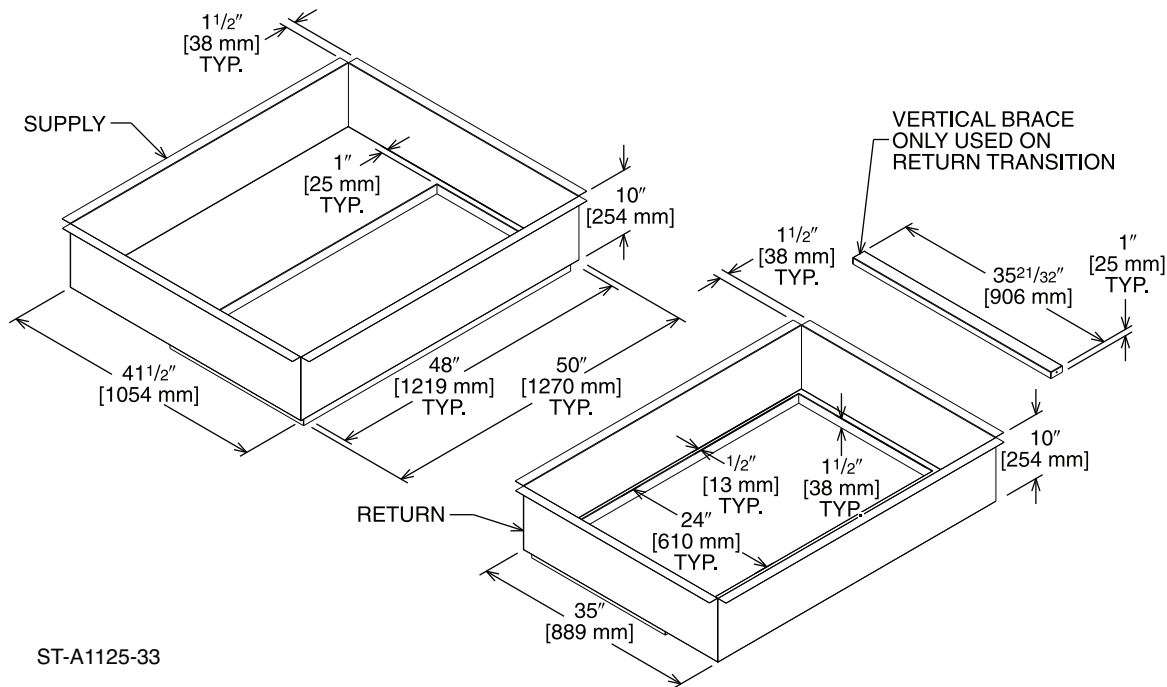


ST-A1125-32

DOWNFLOW TRANSITION DRAWINGS (CONTINUED)

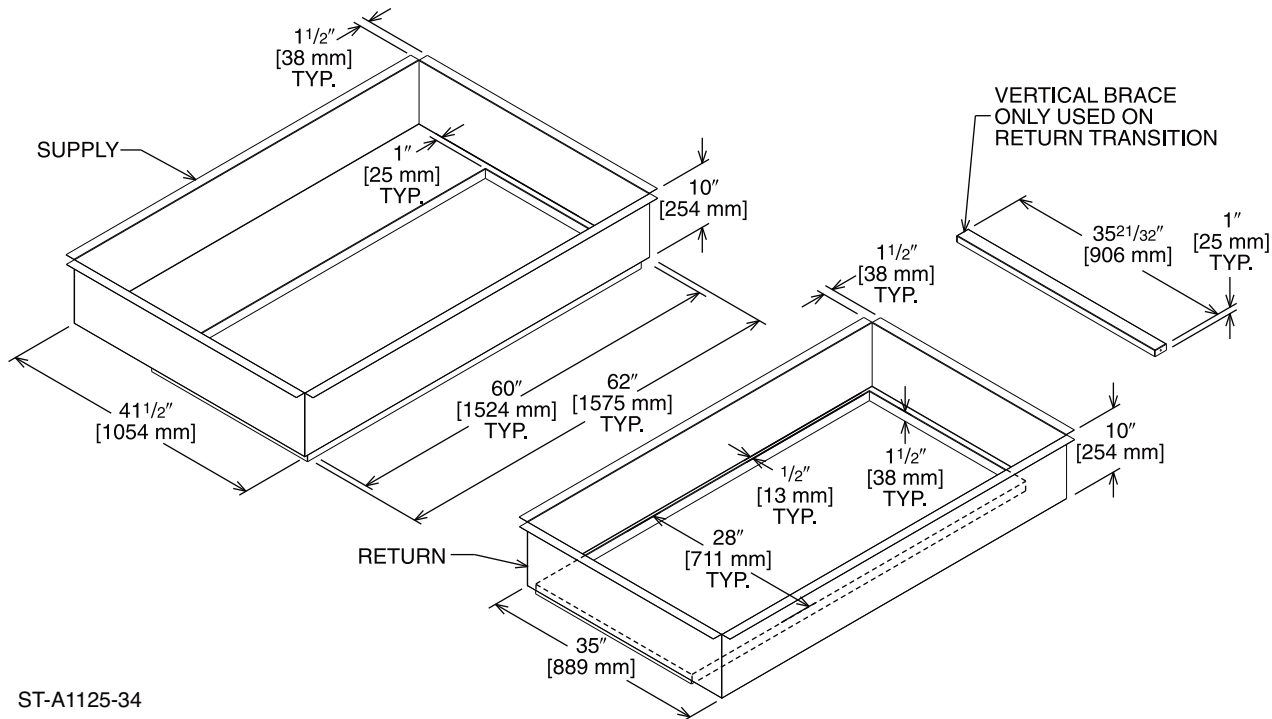
RXMC-CK08—Concentric Adapter/Transition (20 Ton)

- Used with RXRN-AD86 Concentric Diffusers



RXMC-CL09—Concentric Adapter/Transition (25 Ton)

- Used with RXRN-AD88 Concentric Diffusers

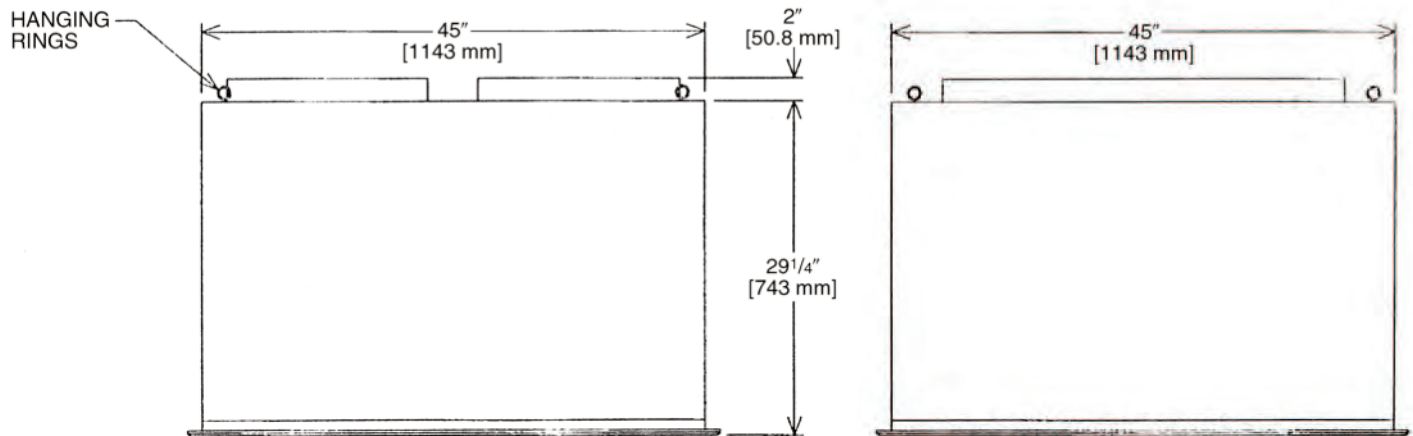
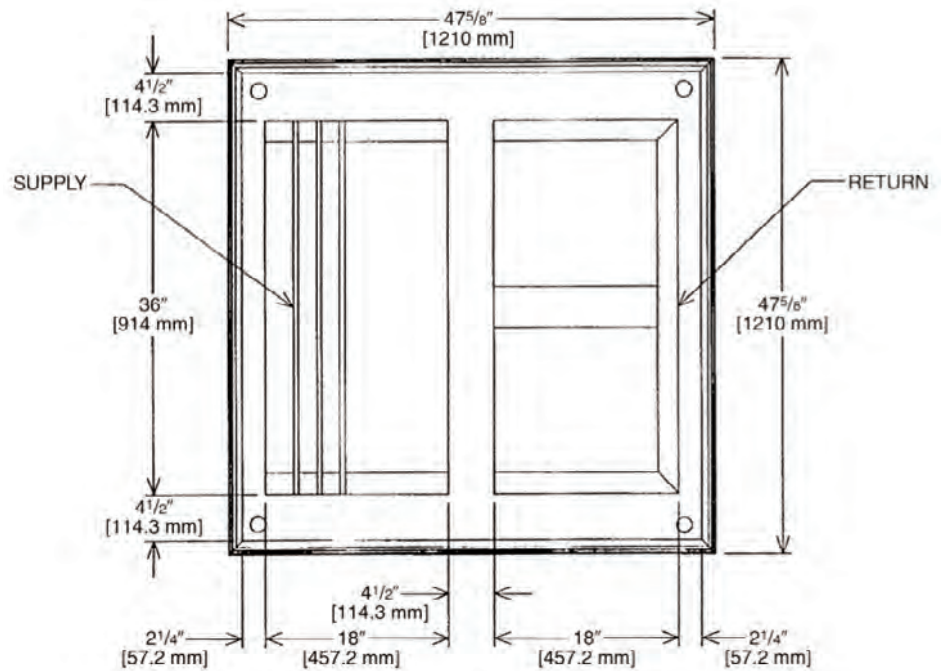


[] Designates Metric Conversions

CONCENTRIC FLUSH MOUNT DIFFUSER (15 & 17.5 TON)

RXRN-AD80

- All aluminum diffuser with aluminum return air eggcrate
- Built-in anti-sweat gasket
- Molded fiberglass supports
- Built-in hanging supports
- Diffuser box constructed of sheetmetal insulated with 1" [25.4 mm] 1.5 lbs. [.7 kg] duct liner



CONCENTRIC DIFFUSER SPECIFICATIONS

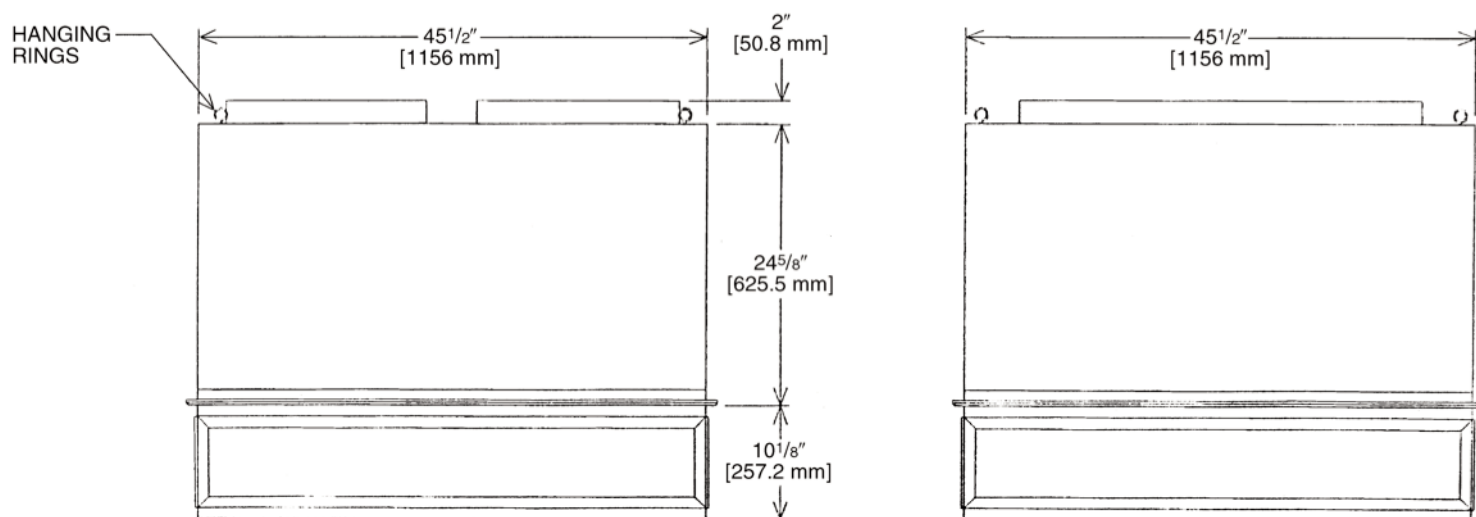
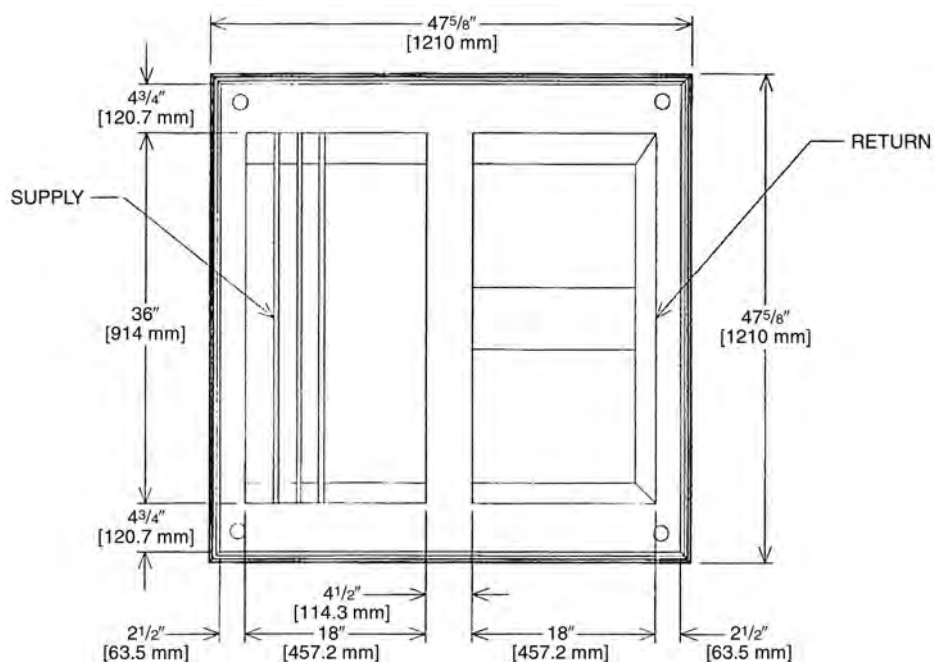
PART NUMBER	CFM [L/s]	STATIC PRESSURE	THROW FEET	NECK VELOCITY	JET VELOCITY
RXRN-AD80	5600 [2643]	0.36	28-37	1000	2082
	5800 [2737]	0.39	29-38	1036	2156
	6000 [2832]	0.42	40-50	1071	2230
	6200 [2926]	0.46	42-51	1107	2308
	6400 [3020]	0.50	43-52	1143	2379
	6600 [3115]	0.54	45-56	1179	2454

[] Designates Metric Conversions

CONCENTRIC STEP DOWN DIFFUSER (15 & 17.5 TON)

RXRN-AD81

- All aluminum diffuser with aluminum return air eggcrate
- Built-in anti-sweat gasket
- Molded fiberglass supports
- Built-in hanging supports
- Diffuser box constructed of sheetmetal insulated with 1" [25.4 mm] 1.5 lbs. [.7 kg] duct liner
- Double deflection diffuser with the blades secured by spring steel



CONCENTRIC DIFFUSER SPECIFICATIONS

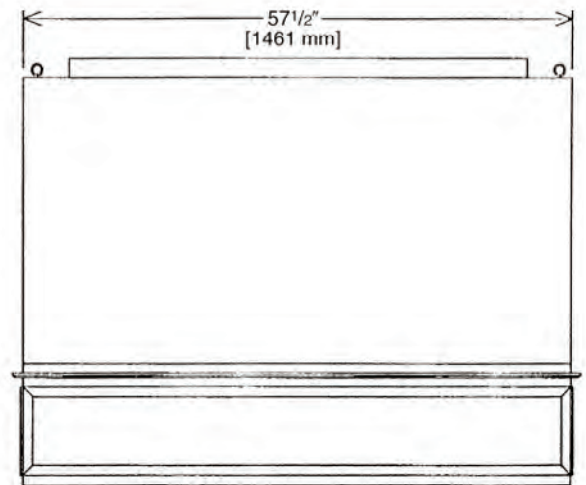
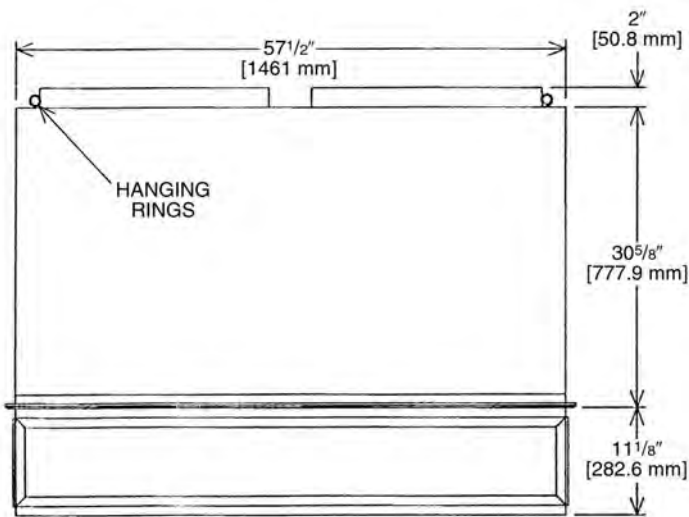
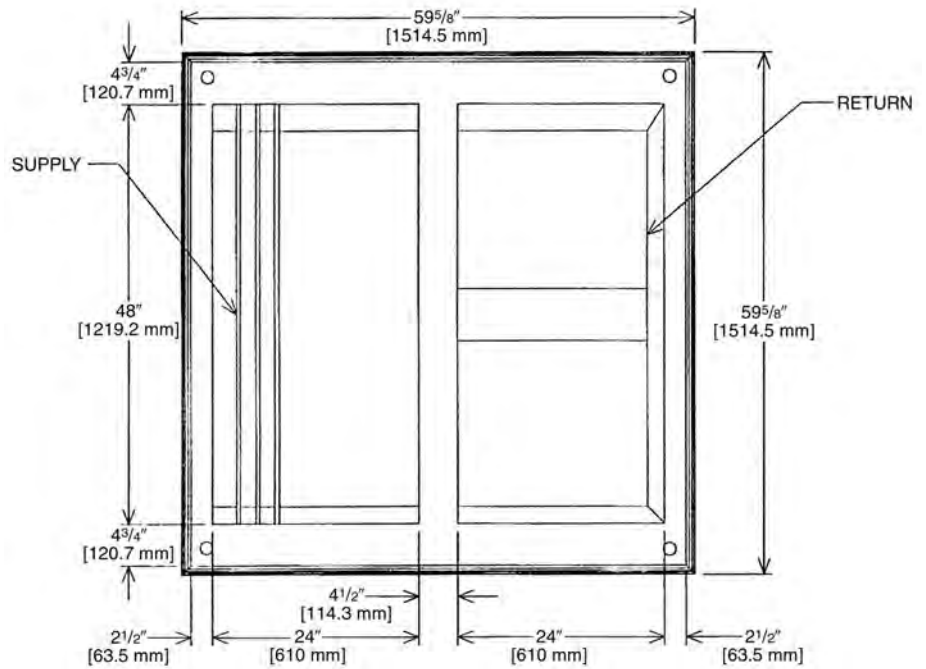
PART NUMBER	CFM [L/s]	STATIC PRESSURE	THROW FEET	NECK VELOCITY	JET VELOCITY
RXRN-AD81	5600 [2643]	0.36	39-49	920	920
	5800 [2737]	0.39	42-51	954	954
	6000 [2832]	0.42	44-54	1022	1022
	6200 [2926]	0.46	45-55	1056	1056
	6400 [3020]	0.50	46-55	1090	1090
	6600 [3115]	0.54	47-56	1124	1124

[] Designates Metric Conversions

CONCENTRIC STEP DOWN DIFFUSER (20 TON)

RXRN-AD86

- All aluminum diffuser with aluminum return air eggcrate
- Built-in anti-sweat gasket
- Molded fiberglass supports
- Built-in hanging supports
- Diffuser box constructed of sheetmetal insulated with 1" [25.4 mm] 1.5 lbs. [.7 kg] duct liner
- Double deflection diffuser with the blades secured by spring steel



CONCENTRIC DIFFUSER SPECIFICATIONS

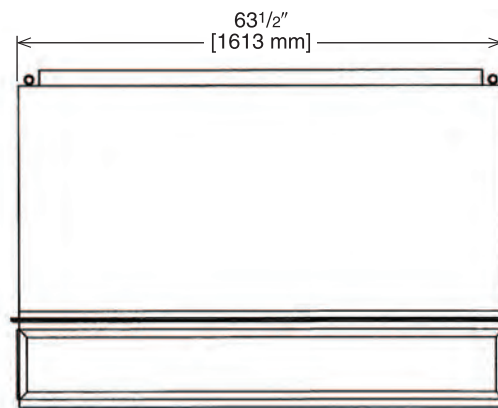
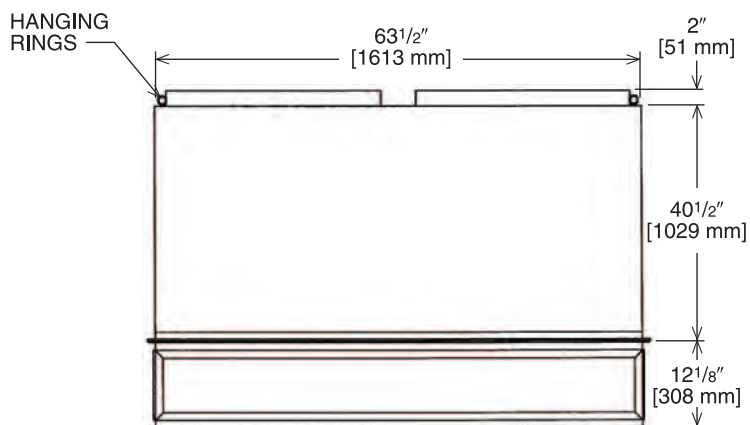
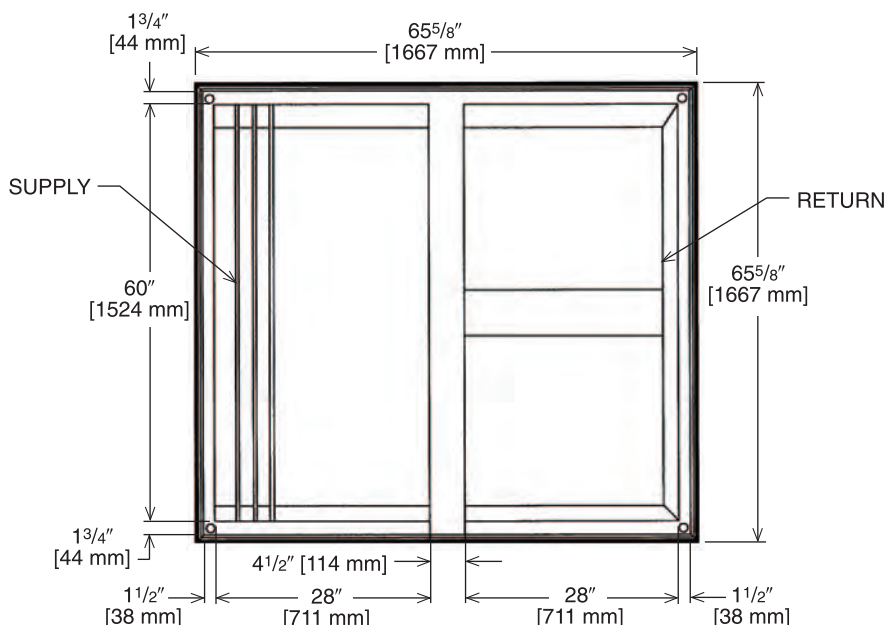
PART NUMBER	CFM [L/s]	STATIC PRESSURE	THROW FEET	NECK VELOCITY	JET VELOCITY
RXRN-AD86	7200 [3398]	0.39	33-38	827	827
	7400 [3492]	0.41	35-40	850	850
	7600 [3587]	0.43	36-41	873	873
	7800 [3681]	0.47	38-43	896	896
	8000 [3776]	0.50	39-44	918	918
	8200 [3870]	0.53	41-46	941	941
	8400 [3964]	0.56	43-49	964	964
	8600 [4059]	0.59	44-50	987	987
	8800 [4153]	0.63	47-55	1010	1010

[] Designates Metric Conversions

CONCENTRIC STEP DOWN DIFFUSER (25 TON)

RXRN-AD88

- All aluminum diffuser with aluminum return air eggcrate
- Built-in anti-sweat gasket
- Molded fiberglass supports
- Built-in hanging supports
- Diffuser box constructed of sheetmetal insulated with 1" [25.4 mm] 1.5 lbs. [.7 kg] duct liner
- Double deflection diffuser with the blades secured by spring steel



CONCENTRIC DIFFUSER SPECIFICATIONS

PART NUMBER	CFM [L/s]	STATIC PRESSURE	THROW FEET	NECK VELOCITY	JET VELOCITY
RXRN-AD88	10000 [4719]	0.51	46-54	907	907
	10500 [4955]	0.58	50-58	953	953
	11000 [5191]	0.65	53-61	998	998
	11500 [5427]	0.73	55-64	1043	1043
	12000 [5663]	0.82	58-67	1089	1089
	12500 [5898]	0.91	61-71	1134	1134
	13000 [6134]	1.00	64-74	1179	1179

[] Designates Metric Conversions

DDC ECONOMIZER WITH SINGLE ENTHALPY (DOWNFLOW) RRS ECONOMIZER WITH HONEYWELL CONTROLLER

Factory or Field-Installed

AXRD-01RMDCM3

RXXR-AV02—Dual Enthalpy, Temperature and Humidity Sensor (for Honeywell DDC)

RXXR-AR02—Sensor, Carbon Dioxide (Wall Mount)

- Features **Honeywell** Controls
- Gear Driven Direct Drive Actuator
- Fully Modulating (0-100%)
- Low Leakage Dampers
- Slip-In Design for Easy Installation
- Standard Barometric Relief Damper
- Single Enthalpy with Dual Enthalpy Upgrade Kit Available
- CO₂ Input Sensor Available
- Field Assembled Hood Ships with Economizer
- Economizer Ships Complete for Downflow Duct Application
- Optional Remote Minimum Position Potentiometer (270 ohm) (Honeywell #S963B1136) is Available from Prostock
- Field-Installed Power Exhaust Available

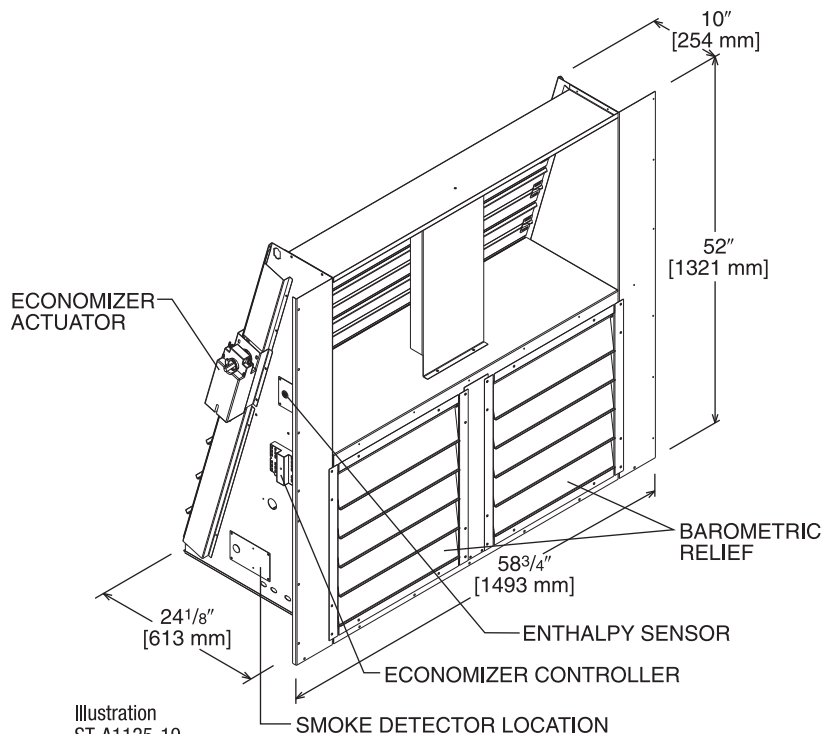


Illustration
ST-A1125-19

TOLERANCE $\pm .125$

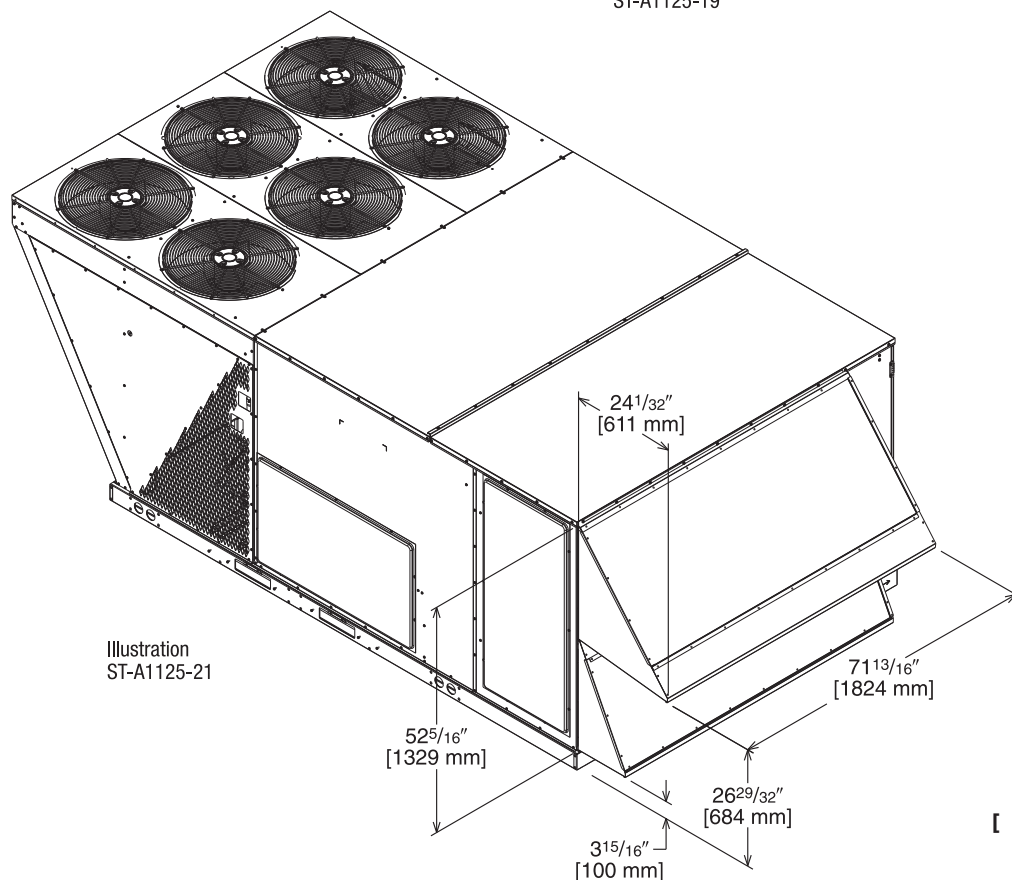


Illustration
ST-A1125-21

[] Designates Metric Conversions

DDC ECONOMIZER WITH SINGLE ENTHALPY (DOWNFLOW) RRS ECONOMIZER WITH HONEYWELL CONTROLLER & SMOKE DETECTOR

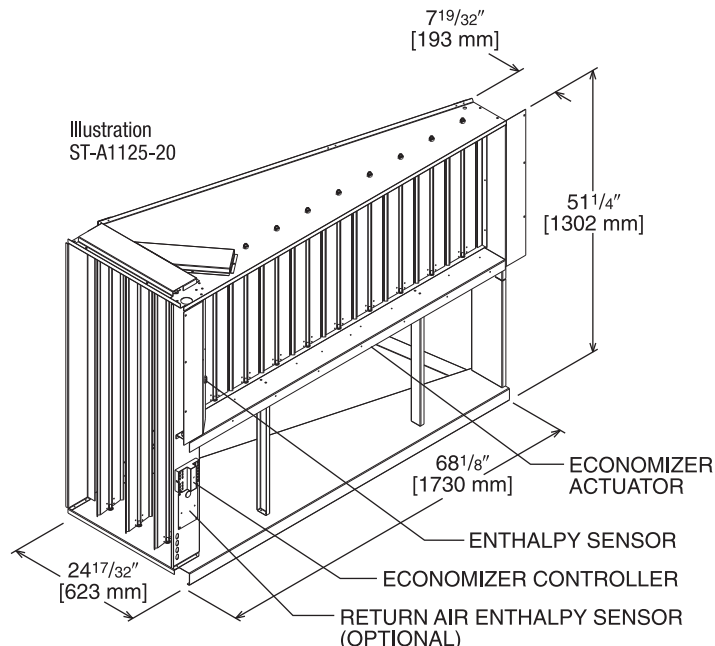
Factory or Field-Installed

AXRD-01RMDDM3

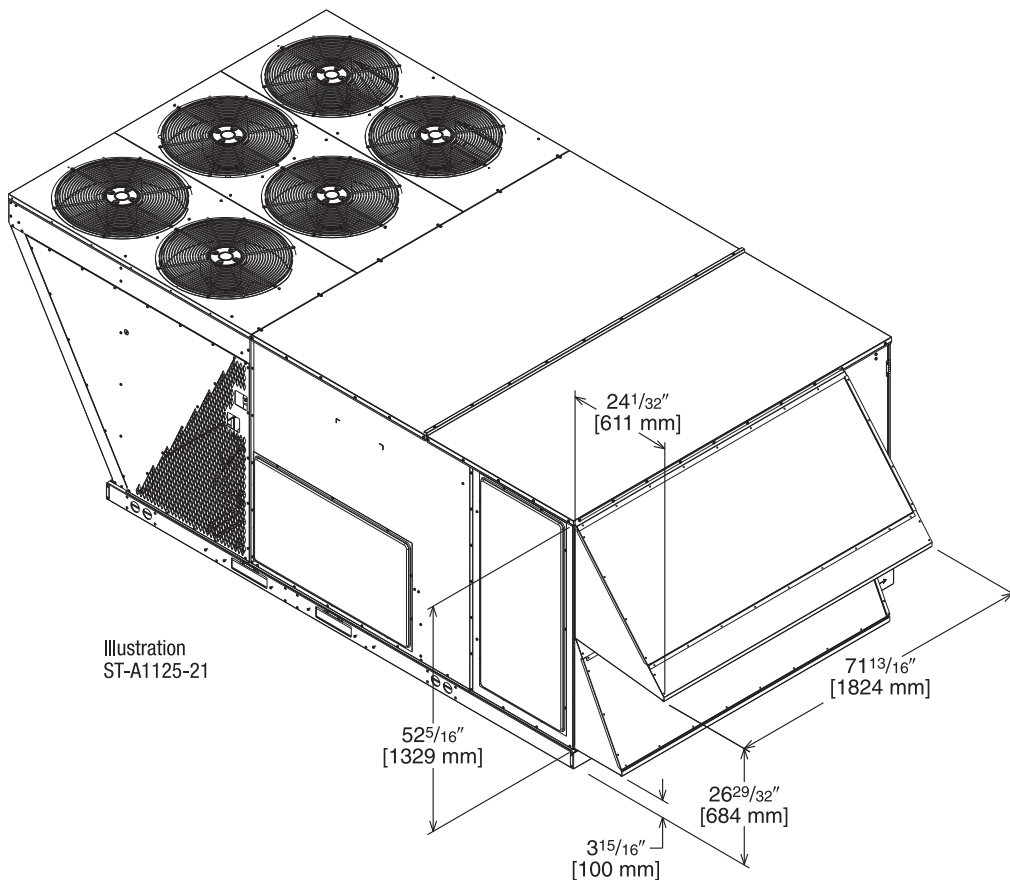
RXXR-AV02—Dual Enthalpy, Temperature and Humidity Sensor (for Honeywell DDC)

RXXR-AR02—Sensor, Carbon Dioxide (Wall Mount)

- Features **Honeywell** Controls
- Gear Driven Direct Drive Actuator
- Fully Modulating (0-100%)
- Low Leakage Dampers
- Slip-In Design for Easy Installation
- Plug-In Polarized 12-pin and 4-pin Electrical Connections
- Pre-Configured—No Field Adjustments Necessary
- Standard Barometric Relief Damper
- Single Enthalpy with Dual Enthalpy Upgrade Kit Available
- CO₂ Input Sensor Available
- Field Assembled Hood Ships with Economizer
- Economizer Ships Complete for Horizontal Duct Application
- Optional Remote Minimum Position Potentiometer (270 ohm) (Honeywell #S963B1136) is available from Prostock
- Field-Installed Power Exhaust Available
- If connected to a Building Automation System (BAS), all Economizer Functions can be Viewed on the (BAS) or 16 x 2 LCD Screen
- If Connected to Thermostat, all Economizer Functions can be Viewed on 16 x 2 Character LCD Screen



TOLERANCE $\pm .125$



[] Designates Metric Conversions

DDC ECONOMIZER (HORIZONTAL) RRS ECONOMIZER WITH HONEYWELL CONTROLLER

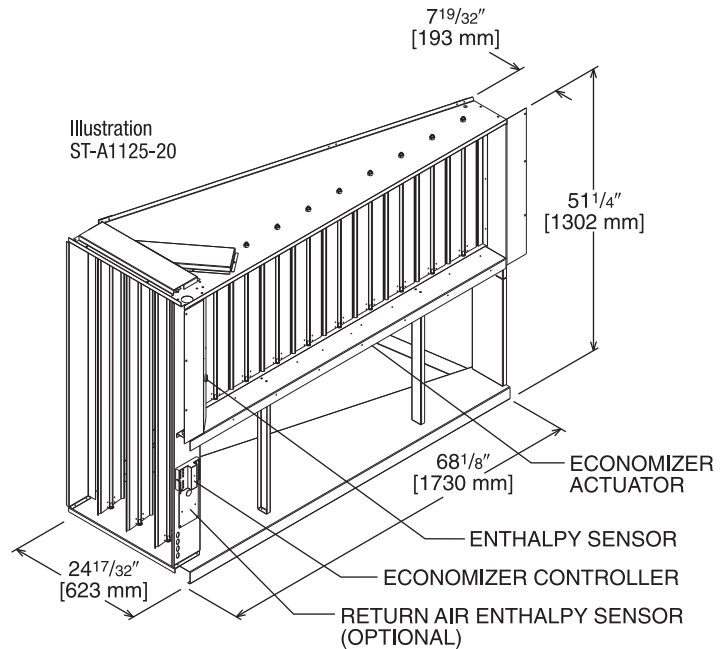
Field-Installed Only

AXRD-01RMHCM3

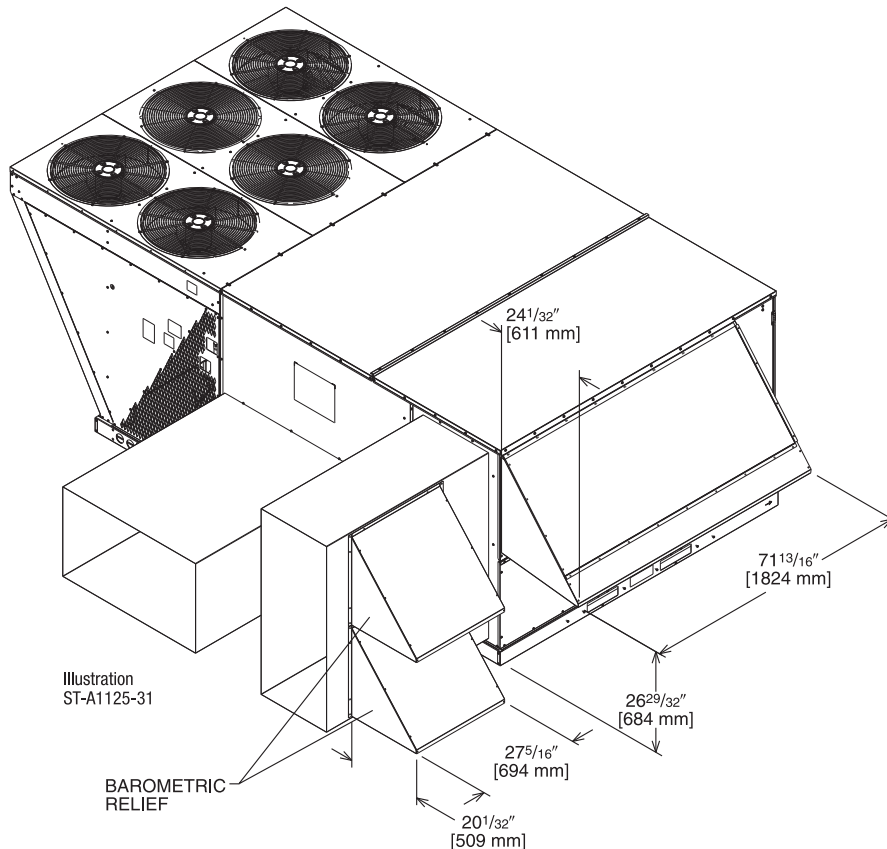
RXXR-AV02—Dual Enthalpy, Temperature and Humidity Sensor (for Honeywell DDC)

RXXR-AR02—Sensor, Carbon Dioxide (Wall Mount)

- Features **Honeywell** Controls
- Gear Driven Direct Drive Actuator
- Low Leakage Dampers
- Slip-In Design for Easy Installation
- Plug-In Polarized 12-pin and 4-pin Electrical Connections
- Pre-Configured—No Field Adjustments Necessary
- Standard Barometric Relief Damper
- Single Enthalpy with Dual Enthalpy Upgrade Kit Available
- CO₂ Input Sensor Available
- Field Assembled Hood Ships with Economizer
- Economizer Ships Complete for Horizontal Duct Application
- Optional Remote Minimum Position Potentiometer (270 ohm) (Honeywell #S963B1136) is Available from Prostock
- Field-Installed Power Exhaust Available



TOLERANCE $\pm .125$



[] Designates Metric Conversions

NON-DDC ECONOMIZER WITH SINGLE ENTHALPY (DOWNFLOW) RRS ECONOMIZER WITH SIEMENS CONTROLLER

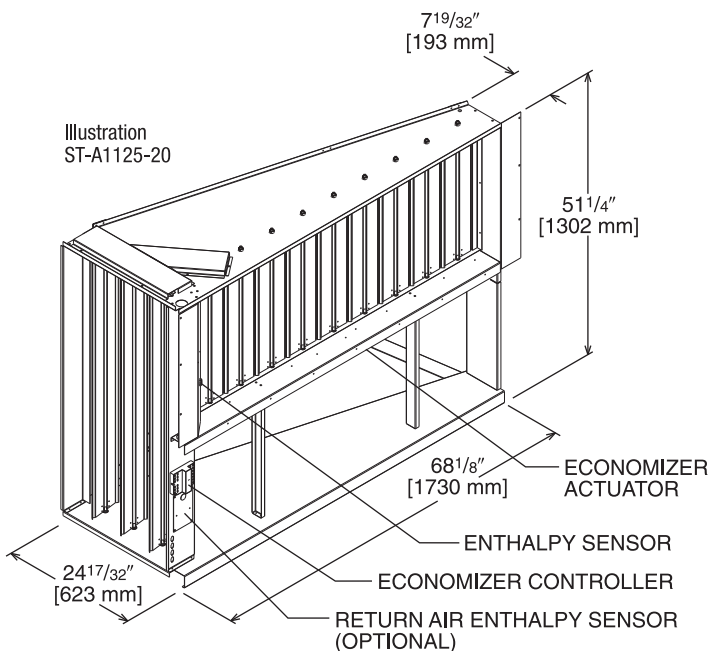
Factory or Field-Installed

RXRD-51RHDAM3

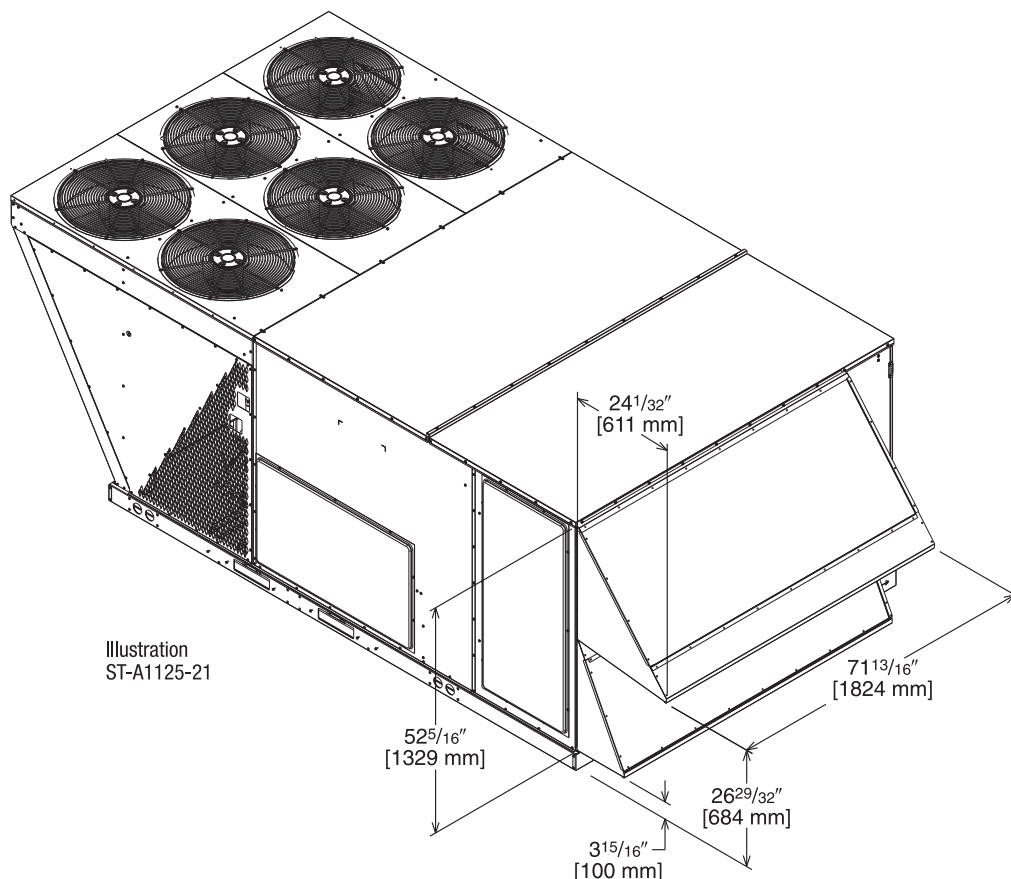
PD555460-Dual Enthalpy, Temperature and Humidity Sensor (for Siemens Non-DDC)

RXR-AR02—Sensor, Carbon Dioxide (Wall Mount)

- Features **Siemens** Controls
- Gear Driven Direct Drive Actuator
- Fully Modulating (0-100%)
- Low Leakage Dampers
- Slip-In Design for Easy Installation
- Plug-In Polarized 12-pin and 4-pin Electrical Connections
- Pre-Configured—No Field Adjustments Necessary
- Standard Barometric Relief Damper
- Single Enthalpy with Dual Enthalpy Upgrade Kit Available
- CO₂ Input Sensor Available
- Economizer Ships Complete for Downflow Duct Application
- Field Assembled Hood Ships with Economizer
- Ultra Low Leak Dampers meet California Title 24 requirements and ASHRAE 90.1 2022
- Field-Installed Power Exhaust Available
- Can be Converted to DDC Operation with the Economizer Universal DDC Interface Kit (RXRX-DDC02)



TOLERANCE $\pm .125$



[] Designates Metric Conversions

NON-DDC ECONOMIZER WITH SINGLE ENTHALPY (HORIZONTAL) RRS ECONOMIZER WITH SIEMENS CONTROLLER

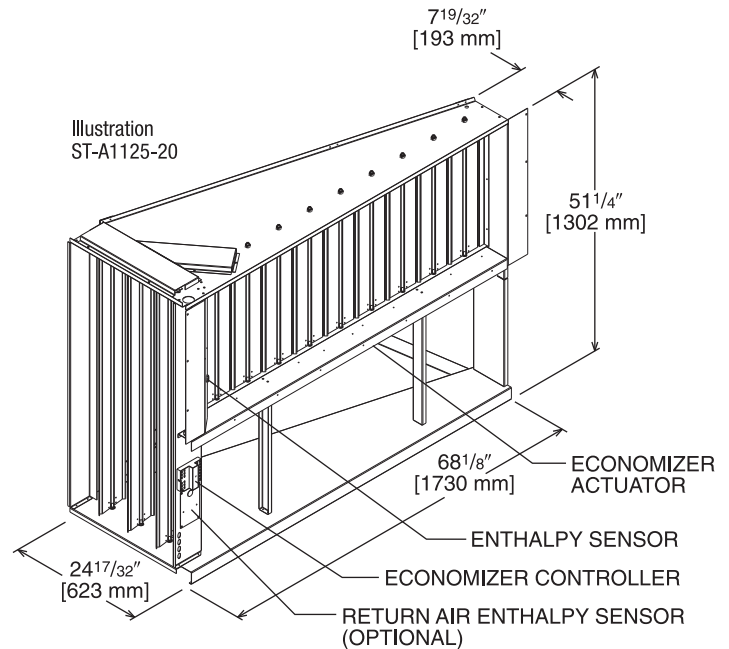
Field-Installed Only

RXRD-51RHHAM3

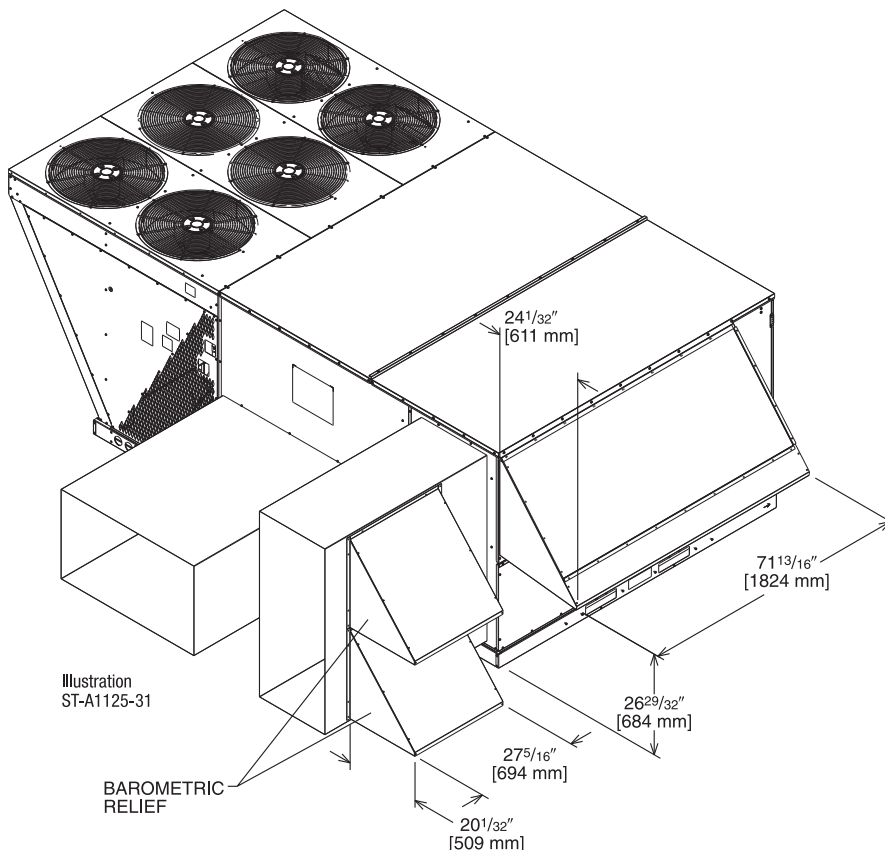
PD555460-Dual Enthalpy, Temperature and Humidity Sensor (for Siemens Non-DDC)

RXXR-AR02—Sensor, Carbon Dioxide (Wall Mount)

- Features **Siemens** Controls
- Gear Driven Direct Drive Actuator
- Fully Modulating (0-100%)
- Low Leakage Dampers
- Slip-In Design for Easy Installation
- Plug-In Polarized 12-pin and 4-pin Electrical Connections
- Pre-Configured—No Field Adjustments Necessary
- Standard Barometric Relief Damper
- Single Enthalpy with Dual Enthalpy Upgrade Kit Available
- CO₂ Input Sensor Available
- Field Assembled Hood Ships with Economizer
- Economizer Ships Complete for Horizontal Duct Application
- Ultra Low Leak Dampers meet California Title 24 requirements and ASHRAE 90.1 2022
- Field-Installed Power Exhaust Available
- Can be Converted to DDC Operation with the Economizer Universal DDC Interface Kit (RXXR-DDC02)



TOLERANCE $\pm .125$



[] Designates Metric Conversions

ECONOMIZER UNIVERSAL DDC INTERFACE KIT

Factory or Field-Installed

RXXRX-DDC02

- Allows any Non-DDC Economizer to be used with a ClearControl DDC model
- Mounts on the Economizer
- Provides Mounting location for Economizer Controller
- Provides wire management for excess wire

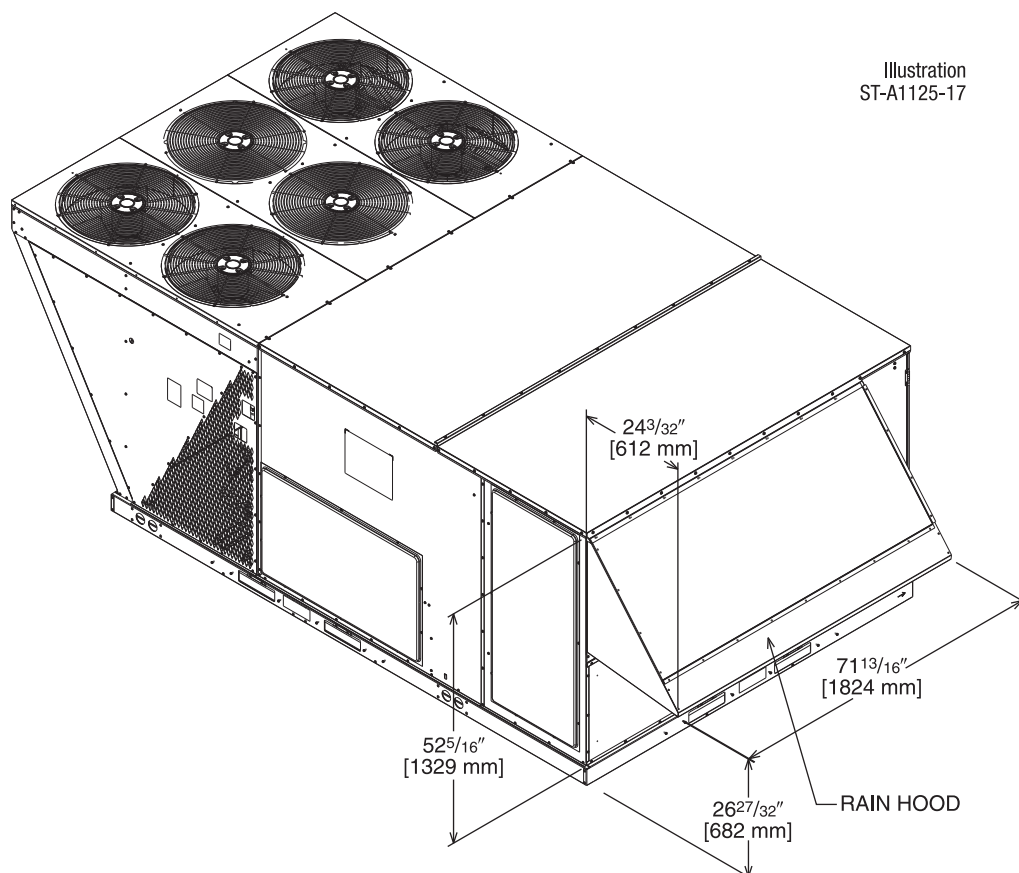
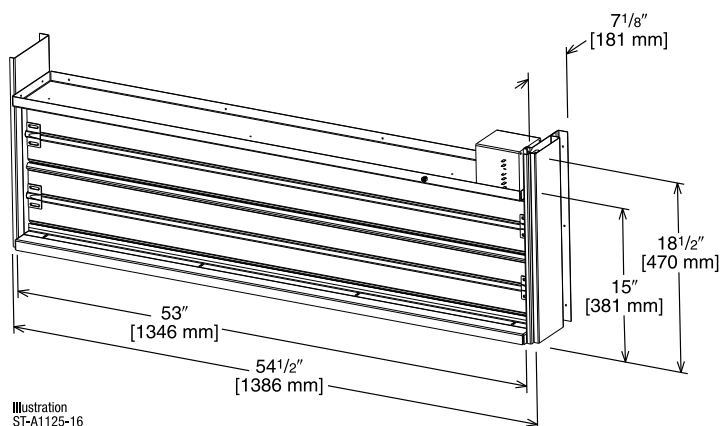
NOTE: Older DDC Models, prior to A2L, may require a field update to the ClearControl Software. The minimum version required is 3.15. Models with R-454B refrigerant will come with software version 4.0 or higher.

FRESH AIR DAMPER

AXRF-KFA1 — Fresh Air Damper, Manual

RXXR-AW05 — Fresh Air Damper, Motorized (DDC)

- Features **Honeywell** Controls
- Gear Driven Direct Drive Actuator
- Fully Modulating (0-100%)
- Low Leakage Dampers
- Slip-In Design for Easy Installation
- Plug-In Polarized 12-pin and 4-pin Electrical Connections
- Pre-Configured — No Field Adjustments Necessary
- Addition of Dual Enthalpy Upgrade Kit allows limited Economizer function
- CO₂ Sensor Input Available for Demand Control Ventilation (DCV)
- Optional Remote Minimum Position Potentiometer (270 ohm) (Honeywell #S963B1136) is available from Prostock
- All Fresh Air Damper Functions can be Viewed at the RTU-C Unit Controller Display
- If Connected to a Building Automation System (BAS), all Fresh Air Damper Functions can be Viewed on the (BAS), 16 characters x 2 rows of text LCD Screen
- If Connected to Thermostat, all Fresh Air Damper Functions can be Viewed on 16 characters x 2 rows of text LCD Screen



[] Designates Metric Conversions

POWER EXHAUST KIT, CONVERTIBLE

RXXR-BGF05*

*Voltage Code: C or D

- Convertible between vertical airflow and horizontal airflow
- Compatible with all H-cabinet economizers
- Economizer sold separately

NOTE: Vertical Airflow Installation shown

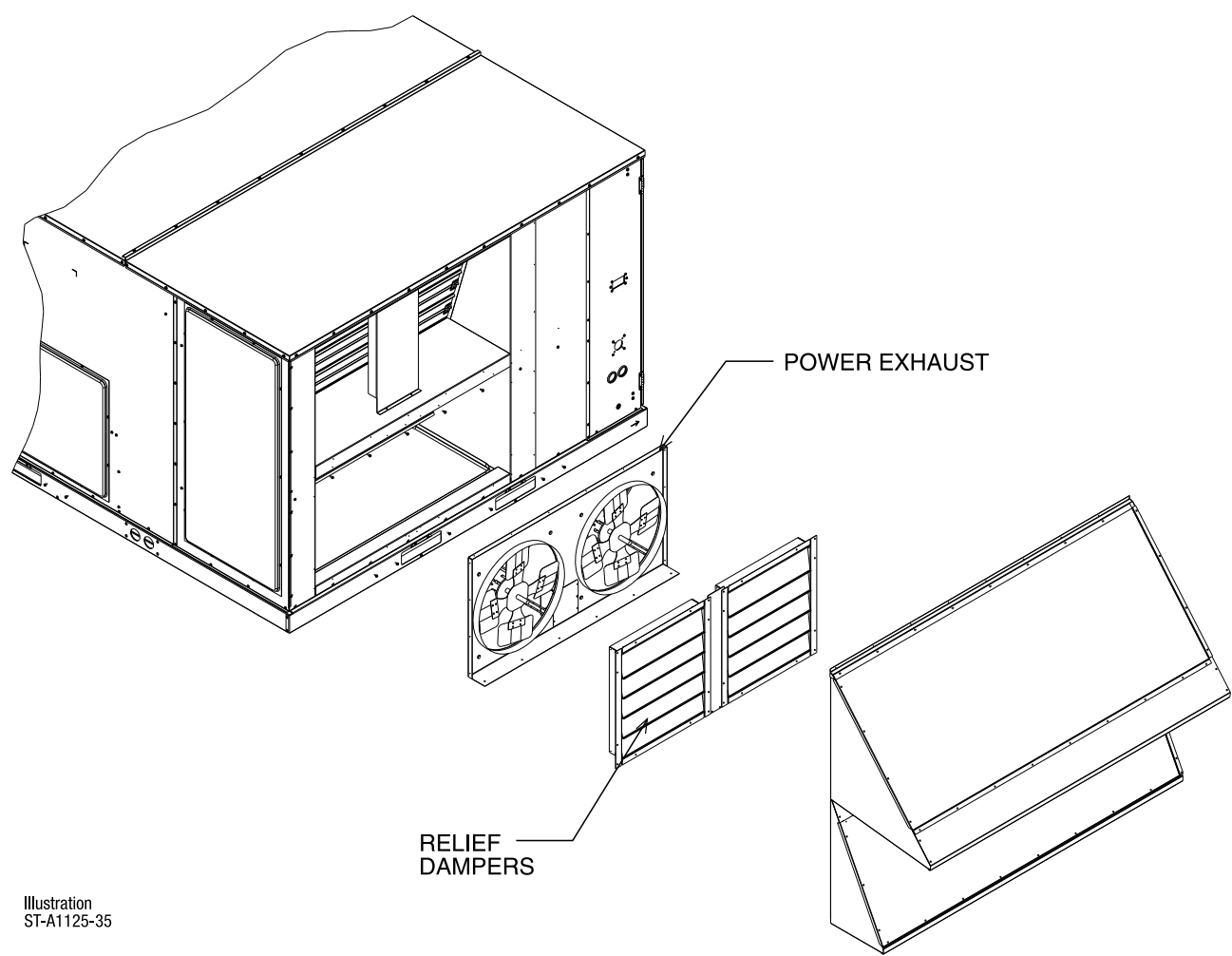


Illustration
ST-A1125-35

Model No.	No. of Fans	Volts	Phase	HP (ea.)	Low Speed		High Speed ^①		FLA (ea.)	LRA (ea.)
					CFM [L/s] ^②	RPM	CFM [L/s] ^②	RPM		
RXXR-BGF05C	2	208-230	1	0.75	4100 [1935]	850	5200 [2454]	1050	5	4.97
RXXR-BGF05D	2	460	1	0.75	4100 [1935]	850	5200 [2454]	1050	2.2	3.4

NOTES: ① Power exhaust is factory set on high speed motor tap.
② CFM is per fan at 0" w.c. external static pressure.

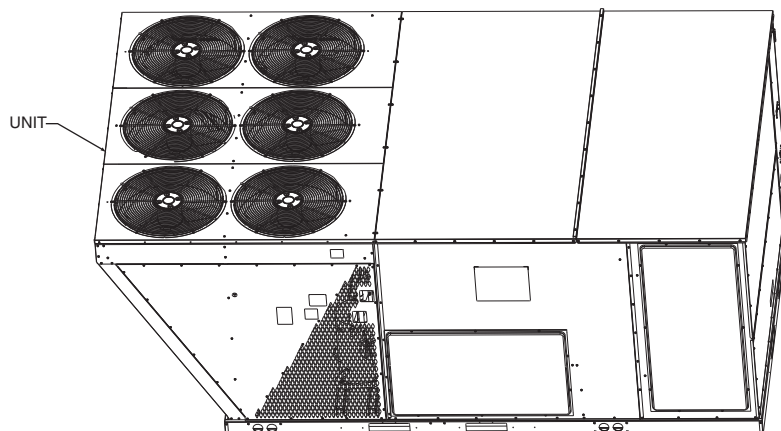
[] Designates Metric Conversions

ROOFCURBS (Full Perimeter)

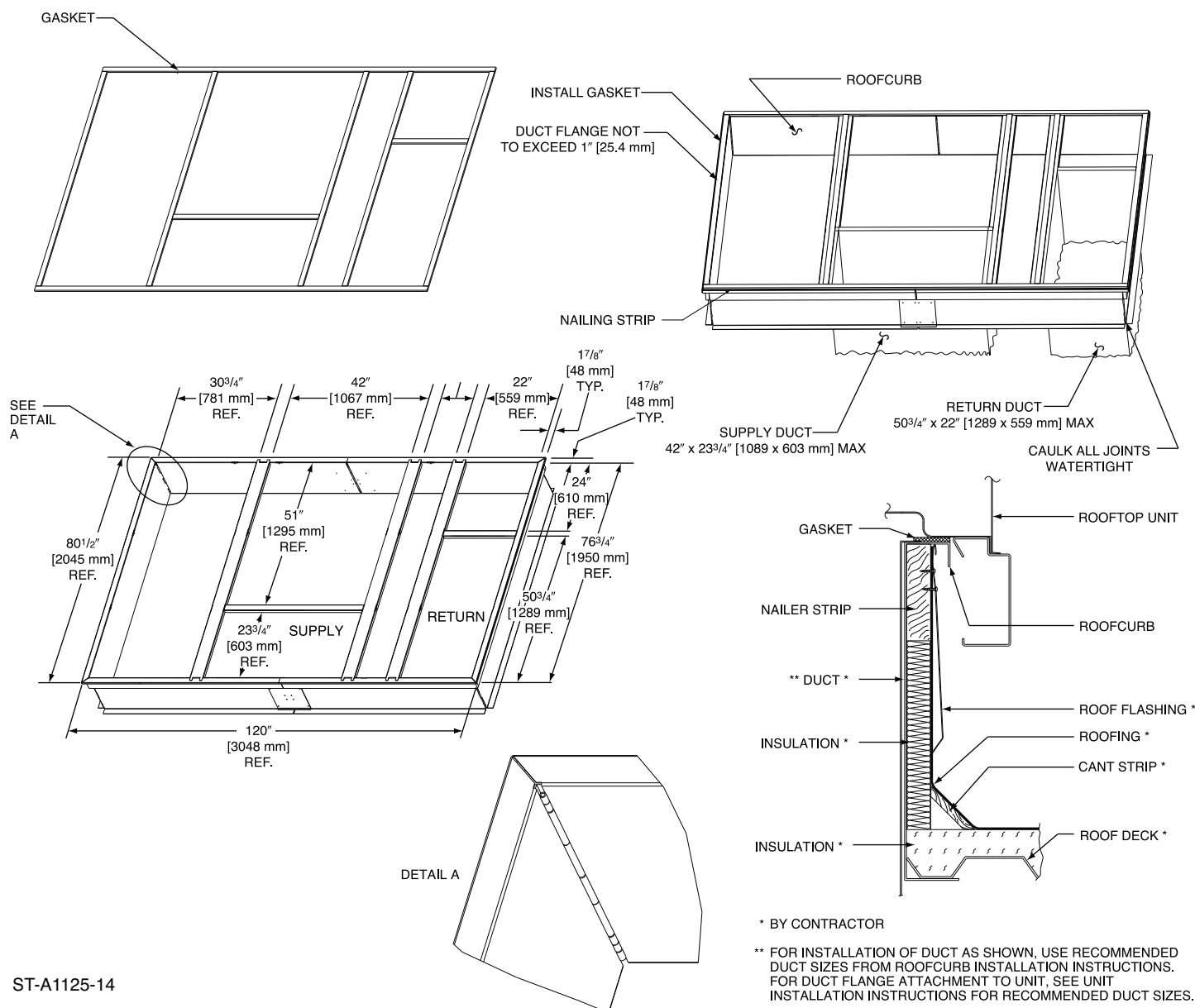
RXKG-CBH14

- The roofcurb design can be utilized on 15, 17.5, 20, & 25 Ton RACH models
- One available height (14" [356 mm])
- Quick assembly corners for simple and fast assembly
- 1" [25.4 mm] x 4" [102 mm] Nailers provided
- Insulating panels not required because of insulated outdoor base pan
- Sealing gasket (28" [711 mm]) provided with Roofcurb
- Packaged for easy field assembly

TYPICAL INSTALLATION

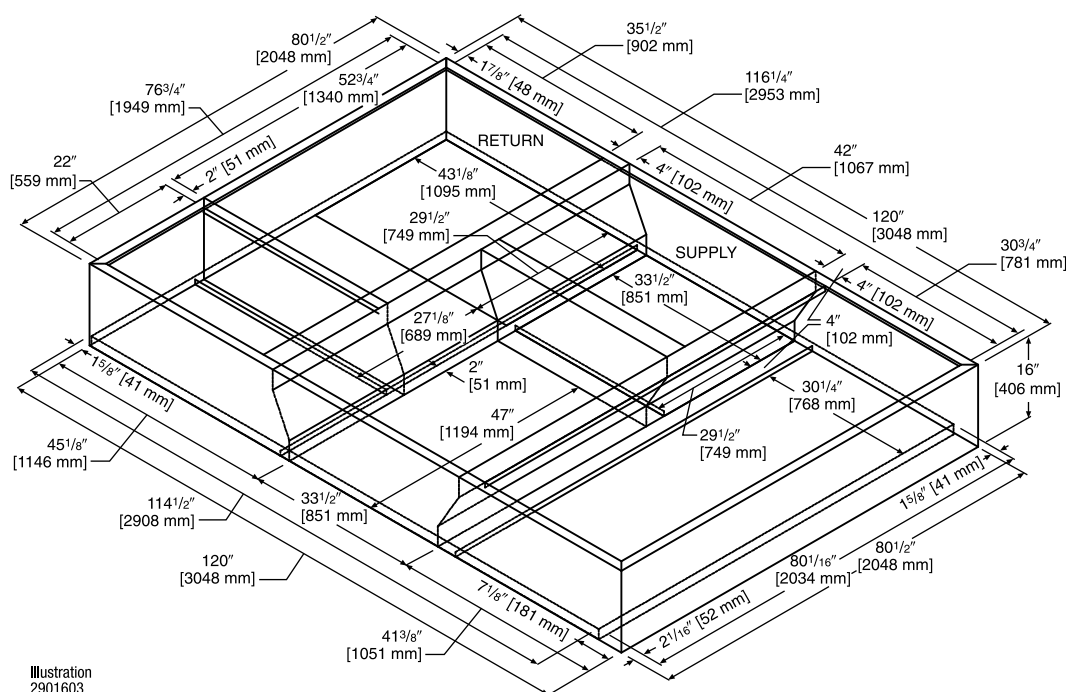
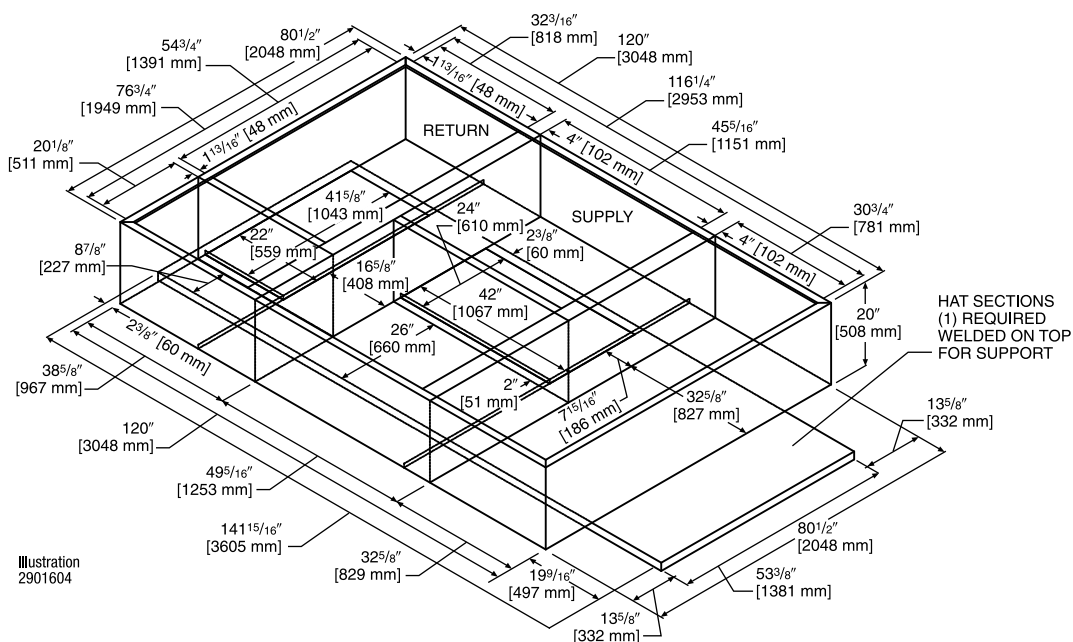
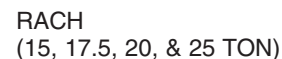


ROOFCURB ASSEMBLY



ST-A1125-14

[] Designates Metric Conversions



[] Designates Metric Conversions

Guide Specifications – RACH – 180–300

You may copy this document directly into your building specification. This specification is written to comply with the 2004 version of the “master format” as published by the Construction Specification Institute. www.csinet.org.

ELECTRIC HEAT PACKAGED ROOFTOP

HVAC Guide Specifications

Size Range: 15 to 25 Nominal Tons

1.00 General:

- A. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing a(n) hermetic scroll compressor(s) for cooling duty and heat pump for heating duty.
- B. 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.
- C. Unit shall use environmentally safe, R-454B refrigerant.
- D. Unit shall be installed in accordance with the manufacturer’s instructions.
- E. Unit must be selected and installed in compliance with local, state, and federal codes.
- F. Model and serial data shall be printed inside the control box.

1.01 Quality Assurance:

- A. Unit meets ASHRAE 90.1 2022 minimum efficiency requirements.
- B. Unit shall be rated in accordance with AHRI Standards 340/360.
- C. Unit shall be designed to conform to ASHRAE 15.
- D. Unit shall be UL-tested and certified in accordance with Standards and UL-listed and certified under Canadian standards as a total package for safety requirements.
- E. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
- F. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- G. Roof curb shall be designed to conform to NRCA Standards.
- H. 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.
- I. Unit shall be designed in accordance with UL Standard 60335-2-40 4th Edition. including tested to withstand rain.
- J. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.

1.02 Manufacturer Qualifications

- A. Unit shall be designed in accordance with ISO 9001:2015 and shall be manufactured in a facility registered by ISO 9001:2015.

1.03 Installer Qualifications

- A. The installer shall be trained to install and service equipment with A2L refrigerants.

1.04 Delivery, Storage, and Handling:

- A. Unit shall be stored and handled per manufacturer’s recommendations.
- B. Lifted by crane requires either shipping top panel or spreader bars.
- C. Unit shall only be stored or positioned in the upright position.

1.05 Unit Cabinet:

- A. Unit cabinet shall be constructed of galvanized steel and shall be coated with a baked enamel finish on all externally exposed surfaces.
- B. Unit cabinet exterior paint shall be: pre-painted steel with film thickness, (dry) 0.003 inches minimum, gloss (per ASTM D523, 60°F): 60, Hardness: H-2H Pencil hardness.
- C. The sheet-metal cabinet shall be constructed of 18-gauge material for structural components with an underlying coat of G90.
- D. Evaporator fan compartment interior cabinet insulation shall conform to AHRI Standards 340/360 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum 3/4-in. thick, 1 lb density, flexible fiberglass insulation, foil faced on the air side.
- E. Shall utilize uniform screw sizing.
- F. Base of unit shall have a location for thru-the-base electrical connections standard.
- G. Base Rail:
 - i. Unit shall have base rails on all sides.
 - ii. Holes shall be provided in the base rails for rigging shackles to facilitate maneuvering and overhead rigging.

- iii. Holes shall be provided in the base rail for moving the rooftop for fork truck.
- iv. Base rail shall be a minimum of 14 gauge thickness.
- H. Condensate pan and connections:
 - i. Shall be a sloped condensate drain pan made of a non-corrosive material and be removable for cleaning.
 - ii. Shall comply with ASHRAE Standard 62.
 - iii. Shall use a 1" – 1 1/2 NPT drain connection through either side of the drain pan. Connection shall be made per manufacturer's recommendations.
 - iv. Shall be able to be easily removed.
 - v. Shall be separate from the coil.
- I. Top panel
 - i. Shall be a two piece top panel over indoor section; with one covering the blower, and the other covering the controls and supply/return duct openings.
- J. Electrical Connections:
 - i. All unit power wiring shall enter unit cabinet at a single, factory-prepared, knockout location.
 - ii. Thru-the-base capability:
 - a. Standard unit shall have a thru-the-base electrical location(s) using a raised, embossed portion of the unit basepan.
 - b. No basepan penetration, other than those authorized by the manufacturer, is permitted.
- K. Component access panels (standard):
 - i. Cabinet panels shall be easily opened for servicing.
 - ii. Stainless steel metal hinges are standard on all doors.
 - iii. Panels covering control box, indoor fan, indoor fan motor, and electric or gas heater components (where applicable), shall have 1/4 turn latches.
 - iv. 1/4 fasteners shall be permanently attached.

1.06 Operating Characteristics:

- A. Unit shall be capable of starting and running at 115°F (46°C) ambient outdoor temperature, meeting maximum load criteria of AHRI Standard 340/360 at ± 10% voltage.
- B. Compressor with standard controls shall be capable of operation down to 40°F (4°C), ambient outdoor temperatures. Low ambient accessory kit is necessary if mechanically cooling at ambient temperatures to 40°F (4°C).
- C. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.
- D. Unit shall be factory configured for vertical supply & return configurations.
- E. Unit shall be field convertible from vertical to horizontal configuration.
- F. Unit shall be capable of mixed operation: vertical supply with horizontal return or horizontal supply with vertical return.

1.07 Electrical Requirements

- A. Main power supply voltage, phase, and frequency must match those required by the manufacturer.

1.08 Evaporator fan compartment:

- A. Interior cabinet surfaces shall be insulated with a minimum 3/4-in. thick, minimum 1 LB density, flexible fiberglass insulation bonded with foil face on the air side.
- B. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
- C. Insulation shall also be mechanically fastened with welded pin and retainer washer.

1.09 Thermostats

- A. Thermostat must:
 - i. Energize "G" when calling for heat.
 - ii. Have capability to energize 2 different stages of cooling, and 2 different stages of heating.
 - iii. Must include capability for occupancy scheduling.

1.10 Electronic Control System for HVAC:

- A. Shall be complete with self-contained low-voltage control circuit protected by a fuse on the 24-V transformer side (180-300 units have a resettable circuit breaker).
- B. Shall utilize color-coded wiring.
- C. Unit shall include a minimum of one 8-pin screw terminal connection board for connection of control wiring.
- D. Unit control board shall be provided with 7 segment readout via LCD display for status and diagnostics.

1.10.01 Safeties:

- A. Compressor over-temperature, over current.

- B. Standard Low-pressure switch:
 - i. Units shall have low pressure, loss of charge automatic reset device that will shut off compressor when tripped.
 - ii. Low pressure control
 - a. Provides active protection in cooling mode at all outdoor ambient temperatures. The low pressure control is an automatic reset type and opens at approximately 95 psig and closes at approximately 50 psig.
- C. Standard High-pressure switch:
 - i. Unit shall be equipped with high pressure switch device that will shut off compressor when tripped.
 - ii. High pressure control
 - a. The high pressure control is an automatic reset type and opens at approximately 610 psig and closes at approximately 420 psig. The compressor and fan motor will stop when the high pressure control opens and will start again if the high side pressure drops to approximately 420 psig where the automatic reset high pressure control resets. If the high pressure control opens 3 times within a particular call for heating or cooling operation, the defrost control will lock out compressor and outdoor fan operation.
- D. Automatic reset, motor thermal overload protector is standard on all models except 25 ton G-drive models.
- E. The unit must be permanently grounded.
- F. Components are not compatible between different refrigerants. Do not use R-410A service equipment or components on R-454B equipment. System or part failure could occur.

1.11 Standard Filter Section:

- A. Shall consist of factory-installed, low velocity, throwaway 2-in. thick fiberglass filters of commercially available sizes.
- B. Unit will accept only 2 inch filters.
- C. Filter face velocity shall not exceed 365 fpm at nominal airflows.
- D. Filters shall be accessible through an access panel with "no-tool" removal as described in the unit cabinet section of the specification.
- E. Filters shall be held in place by a sliding filter tray, facilitating easy removal and installation.
- F. Filters access is specified in the unit cabinet section of this specification.

1.12 Coils:

- A. Standard Aluminum/MicroChannel Condenser Coils:
 - i. Standard evaporator and condenser coils shall be aluminum.
 - ii. Evaporator and condenser coils shall be leak tested to 150 psig, pressure tested to 400 psig, and qualified to burst test at 2,200 psi.
- B. Standard Aluminum/Copper Evaporator Coils:
 - i. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
 - ii. Evaporator and Condenser coils shall be leak tested to 150 psig, pressure tested to 550 psig and qualified to UL 1995 burst test at 2,200 psig.

1.13 Refrigerant Components:

- A. Refrigerant circuit shall include the following control, safety, and maintenance features:
 - i. Thermal Expansion Valve (TXV) with orifice type distributor.
 - ii. Refrigerant filter drier.
 - iii. External service gauge connections to unit suction and discharge lines.
 - iv. Pressure gauge access through an access port in the front and rear panel of the unit.
 - v. External gauge ports shall be lockable.
- B. Compressors:
 - i. Unit shall use one fully hermetic, scroll compressor for each independent refrigeration circuit.
 - ii. Compressor motors shall be cooled by refrigerant gas passing through motor windings.
 - iii. Compressors shall be internally protected from high discharge temperature conditions. Advanced Scroll Temperature Protection on 240-300 sizes.
 - iv. Compressors shall be protected from an over-temperature and over-amperage conditions by an internal, motor overload device.
 - v. Compressor shall be factory mounted on rubber grommets.
 - vi. Compressor motors shall have internal line break thermal and current overload protection.
 - vii. Crankcase heaters shall not be required for normal operating range.
 - viii. Shall have screw terminals.

1.14 Evaporator Fan and Motor:

- A. Evaporator fan motor:
 - i. Shall have permanently lubricated bearings
 - ii. Shall have inherent automatic-reset thermal overload protection.
 - iii. Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating shall be required.
- B. Direct Drive Evaporator Fan:
 - i. Belt drive shall include an adjustable-pitch motor pulley.
 - ii. Shall use sealed, permanently lubricated ball-bearing type.
 - iii. Blower fan shall be double-inlet type with forward-curved blades.
 - iv. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.
- C. Blower Assembly:
 - i. Entire assembly shall be able to slide out completely.
 - ii. Shall be able to slide-out without the removal of the roof and condenser fan motors.

1.15 Condenser Fans and Motors:

- A. Condenser fan motors:
 - i. Shall be a totally enclosed motor.
 - ii. Shall use permanently lubricated bearings.
 - iii. Shall have inherent thermal overload protection with an automatic reset feature.
 - iv. Shall use a shaft-down design. Shaft-up designs including those with "rain-slinger devices" shall not be allowed.
- B. Condenser Fans shall:
 - i. Shall be a direct-driven propeller type fan
 - ii. Shall have blades riveted to corrosion-resistant steel spiders and shall be dynamically balanced.

1.16 RTU-C Controller:

- A. Shall be ASHRAE 62-2001 compliant.
- B. Shall accept 18-32VAC input power.
- C. Shall have an operating temperature range from -40°F (-40°C) to 158°F (70°C), 10%– 95% RH (non-condensing).
- D. Controller shall accept the following inputs: space temperature, setpoint adjustment, outdoor air temperature, indoor air quality, outdoor air enthalpy, fire shutdown, return air enthalpy, fan status, remote time clock/door switch.
- E. Shall accept a CO₂ sensor in the conditioned space and be Demand Control Ventilation (DCV) ready.
- F. Shall provide the following outputs: Economizer, fan, cooling stage 1, cooling stage 2, heat stage 1, heat stage 2, exhaust, occupied.
- G. Unit shall provide surge protection for the controller through a circuit breaker.
- H. Shall have a field-installed communication card allowing the unit to be able to communicate at a Baud rate of 19.2K or faster.
- I. Shall have an LED display independently showing the status of activity on the communication bus, and processor operation.
- J. Optional field-installed BACnet plug-in communication card which includes an EIA-485 protocol communication port, or an optional field-installed LonWorks plug-in communications card.
- K. Software upgrades will be accomplished by local download. Software upgrades through chip replacements are not allowed.
- L. Shall be shock resistant in all planes to 5G peak, 11ms during operation, and 100G peak, 11ms during storage.
- M. Shall be vibration resistant in all planes to 1.5G @ 20-300 Hz.
- N. Shall support a bus length of 4000 ft max, 60 devices per 1000 ft section, and 1 RS-485 repeater per 1000 ft sections.

1.17 Open Protocol, Direct Digital Controller:

- A. Shall be ASHRAE 62-2001 compliant.
- B. Shall accept 18-30VAC, 50-60Hz, and consumer 15VA or less power.
- C. Shall have an operating temperature range from -40°F (-40°C) to 130°F (54°C), 10% - 90% RH (non-condensing).
- D. Shall have either a field-installed BACnet plug-in communication card which includes an EIA-485 protocol communication port, or a field-installed LonWorks plug-in communications card.
- E. The BACnet plug in communication card shall include built-in protocol for BACNET (MS/TP and PTP modes)
- F. The LonWorks plug in communication card shall include the Echelon processor required for all Lon applications.
- G. Shall allow access of up to 62 network variables (SNVT). Shall be compatible with all open controllers
- H. Baud rate Controller shall be selectable through the EIA-485 protocol communication port.
- I. Shall have an LED display independently showing the status of serial communication, running, errors, power, all digital outputs, and all analog inputs.

- J. Shall accept the following inputs: space temperature, setpoint adjustment, outdoor air temperature, indoor air quality, outdoor air enthalpy, compressor lock-out, fire shutdown, enthalpy switch, and fan status/filter status/humidity/remote occupancy.
- K. Shall provide the following outputs: economizer, fan, cooling stage 1, cooling stage 2, heat stage 1, heat stage 2, exhaust.
- L. Software upgrades will be accomplished by either local or remote download. No software upgrades through chip replacements are allowed.
- M. Shall be natively equipped with Modbus communication protocol.

1.18 Adjustable Frequency Drive:

- A. Unit shall be supplied with an electronic variable frequency drive for the supply air fan.
- B. Drive shall be factory-installed in an enclosed cabinet.
- C. Drive shall meet UL Standard 60335-2-40 4th Edition.
- D. The completed unit assembly shall be UL listed.
- E. Drives are to be accessible through a tooled access hinged door assembly.
- F. The unit manufacturer shall install all power and control wiring.
- G. The supply air fan drive output shall be controlled by the factory-installed main unit control system and drive status and operating speed shall be monitored and displayed at the main unit control panel.
- H. Drive shall be programmed, and factory run tested in the unit.

1.19 Special Features:

- A. Integrated Economizers:
 - i. Integrated, gear-driven parallel modulating blade design type capable of simultaneous economizer and compressor operation.
 - ii. Independent modules for vertical or horizontal return configurations shall be available. Vertical return modules shall be available as a factory-installed option.
 - iii. Damper blades shall be galvanized steel with metal gears. Plastic or composite blades on intake or return shall not be acceptable.
 - iv. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
 - v. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
 - vi. Shall be equipped with low-leakage dampers, not to exceed 2% leakage at 1 in. wg pressure differential.
 - vii. Shall be capable of introducing up to 100% outdoor air.
 - viii. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air.
 - ix. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.
 - x. Enthalpy sensor shall be provided as standard. Outdoor air sensor set point shall be adjustable and shall range enthalpy equivalent of 63°F @ 50% RH to 73°F @ 50% RH. Additional sensor options shall be available as accessories.
 - xi. The economizer controller shall also provide control of an accessory power exhaust unit function. Factory set at 70%, with a range of 0% to 100%.
 - xii. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy. A remote potentiometer may be used to override the damper set point.
 - xiii. Dampers shall be completely closed when the unit is in the unoccupied mode.
 - xiv. Economizer controller shall accept a 2-10Vdc 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.
 - xv. Compressor lockout sensor on the unit controller is factory set at 35°F and is adjustable from 30°F (-1°C) to 50°F (10°C) and resets the cooling lockout at 5°F (+2.7°C) above the set point.
 - xvi. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
 - xvii. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
 - xviii. Economizer wire harness will have provision for smoke detector.
 - xix. Shall provide fault detection and diagnostics (FDD) system in accordance with local code. Faults shall be communicated out on an alarm signal.
- B. Two-Position Motorized Damper:
 - i. Damper shall be a Two-Position Motorized Damper. Damper travel shall be from the full closed position to the field adjustable %-open setpoint.
 - ii. Damper shall include adjustable damper travel from 25% to 100% (full open).
 - iii. Damper shall include single or dual blade, gear driven dampers and actuator motor.

- iv. Actuator shall be direct coupled to damper gear. No linkage arms or control rods shall be acceptable.
 - v. Damper will admit up to 100% outdoor air for applicable rooftop units.
 - vi. Damper shall close upon indoor (evaporator) fan shutoff and/or loss of power.
 - vii. The damper actuator shall plug into the rooftop unit's wiring harness plug. No hard wiring shall be required.
 - viii. Outside air hood shall include aluminum water entrainment filter
- C. Manual damper
- i. Manual damper package shall consist of damper, air inlet screen, and rain hood which can be preset to admit up to 50% outdoor air for year-round ventilation.
- D. Head Pressure Control Package
- i. Controller shall control coil head pressure by condenser-fan cycling.
- E. Condenser Coil Hail Guard Assembly:
- i. Shall protect against damage from hail.
 - ii. Shall be louvered style.
- F. Fan/Filter Status Switch:
- i. Switch shall provide status of indoor evaporator fan (ON/OFF) or filter (CLEAN/DIRTY).
 - ii. Status shall be displayed either over communication bus (when used with direct digital controls) or through the controller LCD display inside the unit control box.
- G. Propeller Power Exhaust:
- i. Power exhaust shall be used in conjunction with an integrated economizer.
 - ii. Independent modules for vertical or horizontal return configurations shall be available.
 - iii. Horizontal power exhaust shall be mounted in return ductwork.
 - iv. Power exhaust shall be controlled by economizer controller operation. Exhaust fans shall be energized when dampers open past the 0-100% adjustable setpoint on the economizer control.
 - v. Capable of adjustable but constant volume.
- H. Convenience Outlet:
- i. Non-Powered convenience outlet.
 - ii. Outlet shall be powered from a separate 115V-120V power source.
 - iii. A transformer shall not be included.
 - iv. Outlet shall be field-installed and internally mounted with easily accessible 115V female receptacle.
 - v. Outlet shall include 15-amp GFI receptacle with independent fuse protection.
 - vi. Outlet shall be accessible from outside the unit.
- I. Dehumidification:
- i. Shall utilize a dual-phase hot gas reheat control sequence.
 - ii. Shall be installed with a thermostat or space temperature sensor and an indoor relative humidity sensor, which shall connect to the Rooftop Unit Controller (RTU-C).
 - iii. Shall provide neutral air to the occupied space.
 - iv. Shall have two modes: Cooling and Dehumidification.
 - v. In cooling mode, the vapor refrigerant shall remove the heat to the outdoor coil, where heat is released outdoor. This allows the refrigerant to condense and become a subcooled liquid and the process shall repeat itself.
 - vi. In dehumidification mode, the refrigerant shall absorb heat via the indoor coil from the cooling area. The heat shall be carried via a parallel path to then release heat back into the cooling area allowing for the dehumidification.
 - vii. Modulate reheat coil refrigerant temperature via outdoor fan motor controller to achieve neutral air.
 - viii. Variable Frequency Drive shall allow the unit to operate with two stages of heat.
- J. Roof Curbs (Vertical):
- i. Full perimeter roof curb with exhaust capability providing separate air streams for energy recovery from the exhaust air without supply air contamination.
 - ii. Formed galvanized steel with wood nailer strip and shall be capable of supporting entire unit weight.
 - iii. Permits installation and securing of ductwork to curb prior to mounting unit on the curb.
- K. High-Static Indoor Fan Motor(s) and Drive(s)
- i. High-static motor(s) and drive(s) shall be factory-installed to provide additional performance range.
- L. Outdoor Air Enthalpy Sensor
- i. 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.

M. Return Air Enthalpy Sensor

- i. The return air enthalpy sensor shall be used in conjunction with an outdoor air enthalpy sensor to provide differential enthalpy control.

N. Indoor Air Quality (CO₂) Sensor:

- i. Shall be able to provide demand ventilation indoor air quality (IAQ) control.
- ii. The IAQ sensor shall be available in duct mount, wall mount, or wall mount with LED display. The set point shall have adjustment capability.

O. Smoke detectors:

- i. Shall be a Four-Wire Controller and Detector.
- ii. Shall be environmentally compensated with differential sensing for reliable, stable, and drift-free sensitivity.
- iii. Shall use magnet-activated test/reset sensor switches.
- iv. Shall have a recessed momentary switch for testing and resetting the detector.
- v. Controller shall include:
 - a. One set of normally open alarm initiation contacts for connection to an initiating device circuit on a fire alarm control panel
 - b. Two Form-C auxiliary alarm relays for interface with rooftop unit or other equipment
 - c. One Form-C supervision (trouble) relay to control the operation of the Trouble LED on a remote test/reset station
 - d. Capable of direct connection to two individual detector modules.
 - e. Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications.

P. Barometric relief:

- i. Shall include damper, seals, hard-ware, and hoods to relieve excess building pressure.
- ii. Damper shall gravity-close upon shutdown.
- iii. Only available with an economizer. Barometric relief is not available as a stand-alone accessory.

Q. Time Guard:

- i. Shall prevent compressor short cycling by providing a 5-minute delay (± 2 minutes) before restarting a compressor after shutdown for any reason.
- ii. One device shall be required per compressor.
- iii. Standard Factory-Installed Overflow Switch
- iv. Switch shall monitor the condensate level in drain pan and stops compression operation when overflow conditions occur

R. Access Panels:

- i. Hinges with ¼ turn fasteners shall be permanently attached.
- ii. Hinges shall be powder coated and made from stainless steel.

S. Electric Heat

- i. Heating Section:
 - a. Heater element open coil resistance wire, nickel-chrome alloy, strung through ceramic insulators mounted on metal frame. Coil ends are staked and welded to terminal screw slots.
 - b. Heater assemblies are provided with integral fusing for protection of internal heater circuits not exceeding 48 amps each. Auto reset thermostat limit controls, magnetic heater contactors (24V coil) and terminal block all mounted in electric heater control box (minimum 18 gauge galvanized steel) attached to end of heater assembly.

T. Refrigerant Detection System:

- i. In the event of a detected refrigerant leak, the refrigerant leak detection sensor(s) will trigger the mitigation procedure that shuts off the compressor(s) and turns on the indoor blower motor.
- ii. In the event of a detected refrigerant leak, the system will display a fault code on the unitary controller. For DDC systems, 'A2L Event' will appear on the LCD module.



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Compressor

Commercial ApplicationsFive (5) Years

Parts

Commercial ApplicationsOne (1) Year

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.

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