



FRIEDRICH

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Commercial Resolute™ Line F-Series™ Packaged Gas Electric Units



RGEH Series (15-25 Ton Models)

Cooling Efficiencies up to: 10.8 EER & 14 IEER

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

Cooling Capacities: 17.2k Btu/h [50.41 kW] to 28.4k Btu/h [83.23 kW]

Refrigerant Type: R-454B

ASHRAE 90.1 2022 Compliant Models



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RGEH STANDARD FEATURES INCLUDE:

- Factory charged with R-454B refrigerant
- Wired and run tested
- Scroll compressors with internal line break overload and high-pressure protection
- Dual stage compressors
- Field convertible airflow – vertical downflow or horizontal sideflow
- TXV refrigerant metering system on each circuit
- High Pressure and Low Pressure/Loss of charge protection standard on all models
- Solid Core liquid line filter drier on each circuit
- Single slab, single pass designed evaporator and condenser coils facilitate easy cleaning for maintaining high efficiencies
- Cooling operation up to 125°F ambient
- Foil faced insulation encapsulated throughout entire unit minimizes airborne fibers from the air stream
- Hinged major access doors with heavy-duty gasketing, 1/4 turn latches and door retainers
- Slide Out Indoor fan assembly for added service convenience
- Powder Paint Finish meets ASTM B117 steel coated on each side for maximum protection. G90 galvanized
- Base pan with drawn supply and return opening for superior water management
- Forkable base rails for easy handling and lifting.
- Single point electrical connections
- Internally sloped slide out condensate pan conforms to ASHRAE 62 standards
- High performance belt drive motor with variable pitch pulleys and quick adjust belt system
- Permanently lubricated evaporator, condenser and gas heat inducer motors
- Condenser motors are internally protected, totally enclosed with shaft down design
- 2 inch standard filter with slide out filter rack
- Two stage gas valve, direct spark ignition, and induced draft for efficiency and reliability
- Tubular heat exchange for long life and induced draft for efficiency and reliability
- Solid state furnace control with on board diagnostics
- 24 volt control system with resettable circuit breakers
- Colored and labeled wiring
- Copper tube/Aluminum Fin indoor coils
- Factory Installed ClearControl™ Direct Digital Control (DDC) and sensors which can connect to LonWorks® or BACnet® BAS systems for remote monitoring and control
- Blower with Variable Frequency Drive (VFD) control is standard
- MERV 8 & MERV 13 filters are available as a factory or field-installed option
- Standard Modbus interface
- Refrigerant leak detection system

Designing for Sustainability with Low GWP



For 2025, the Environmental Protection Agency (EPA) has set a global warming potential (GWP) limit of 700 for refrigerant used in most heating and cooling systems. This new requirement will result in a 78%¹ lower GWP than previous-generation refrigerants—with only minimal changes to system installation. For us, this is another step toward our ongoing sustainability goal of reducing greenhouse gas emissions, while still delivering an exceptional level of energy efficient, dependable comfort.

¹When comparing the GWP of R-454B to R-410A refrigerant.

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>Ruskin Rooftop Systems Economizer with Honeywell Controller</i>	AXRD-01RMDCM3	Yes
DDC Economizer with Single Enthalpy (Downflow) <i>Ruskin Rooftop Systems Economizer with Honeywell Controller w/ Smoke Detector</i>	AXRD-01RMDDM3	Yes
DDC Economizer with Single Enthalpy (Horizontal) <i>Ruskin Rooftop Systems Economizer with Honeywell Controller</i>	AXRD-01RMHCM3	No
Non-DDC Economizer with Single Enthalpy (Downflow) <i>Ruskin Rooftop Systems Economizer with Siemens Controller</i>	RXRD-51MHDAM3	Yes
Non-DDC Economizer with Single Enthalpy (Horizontal) <i>Ruskin Rooftop Systems Economizer with Siemens Controller</i>	RXRD-51MHHAM3	No
Economizer Universal DDC Interface Kit	RXRX-DDC02	Yes

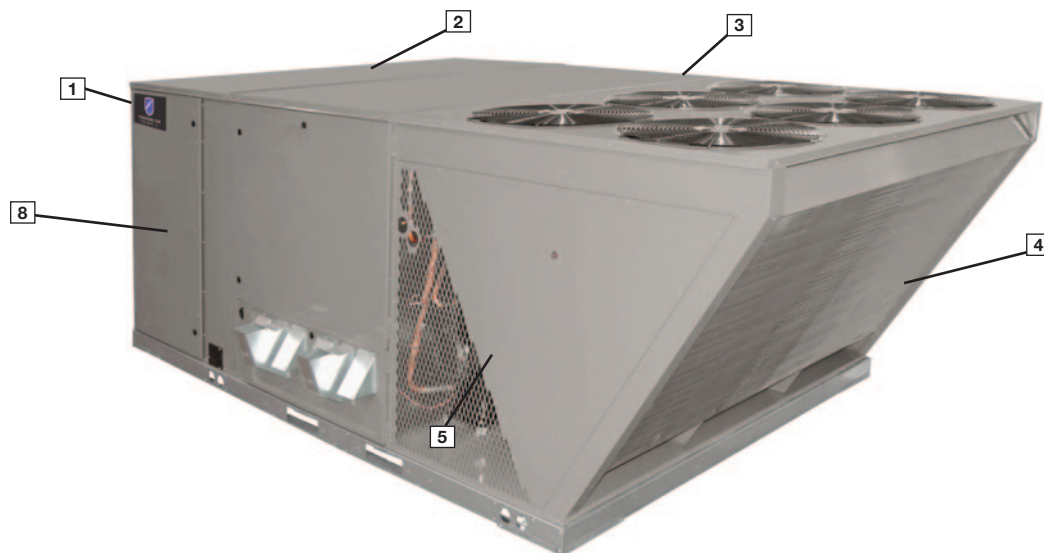
Accessory	Model Number	Factory Installation Available?
Comfort Alert® (1 per Compressor) (DDC)	RXRX-AZ01	Yes
Communication Card, BACnet	RXRX-AY01	No
Communication Card, LonWorks	RXRX-AY02	No
Concentric Adapter/Transition (15 & 17.5 ton)	RXMC-CJ07	No
Concentric Adapter/Transition (20 ton)	RXMC-CK08	No
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 ²	RXRX-AN01	Yes
Dual Enthalpy, Temperature and Humidity Sensor (for Honeywell DDC)	RXRX-AV04	No
Dual Enthalpy, Temperature and Humidity Sensor (for Honeywell Non-DDC)	RXRX-BV02	No
Dual Enthalpy, Temperature and Humidity Sensor (for Siemens Non-DDC)	PD555460	No

Accessory	Model Number	Factory Installation Available?
Fresh Air Damper ¹ , Manual	AXRF-KFA1	No
Fresh Air Damper, Motorized (DDC)	RXRX-AW05	No
Hail Guard Louvers	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 (RRS)	RXRX-BGF05C	No
Power Exhaust (460V) Kit, Convertible (RRS)	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
Unfused Service Disconnect ²	RXRX-AP01	Yes

¹Motorized Kit and Manual Fresh Air Damper must be combined for a complete Motorized Outside Air Damper Selection.

Conversions

²Only available on 15 and 17.5 ton models



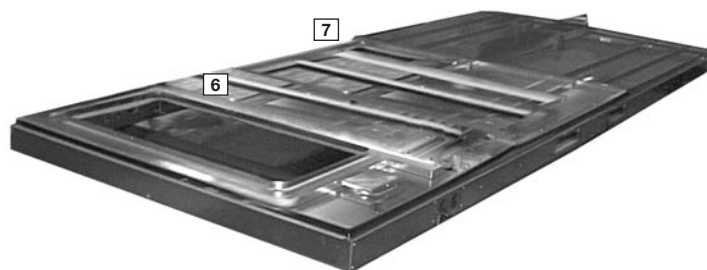
Cabinet and Foundation

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. The slanted outdoor coil protects the coil from hail damage (4). 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 opening 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 drainpan slides out for easy cleaning.

Test Standards

During development, each unit was tested to U.L. 60335-2-40, ANSI 21.47, 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. Hinged access is standard for the electrical, blower, compressor and filter compartments.

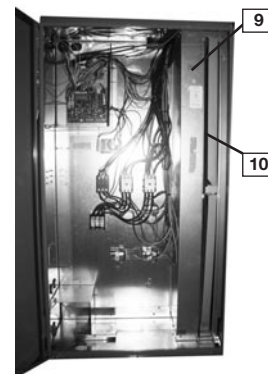
Easy Access

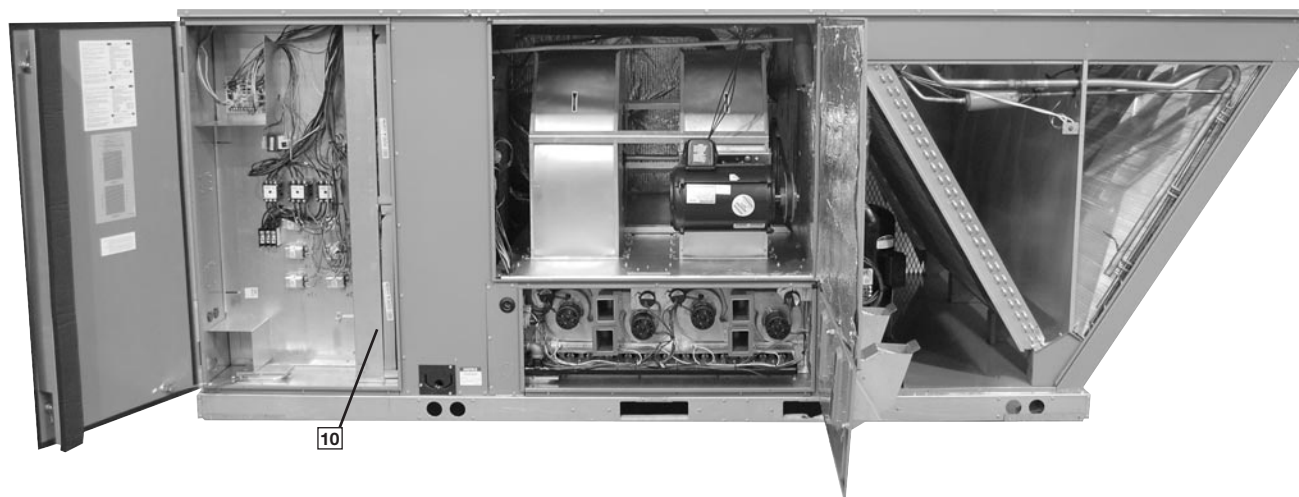
Access to all major compartments is from the front of the unit, including the filter and electrical compartment (8), blower compartment, furnace section, and outdoor section. Each panel is permanently embossed with the compartment name (control/filter access, blower access and furnace access). Hinged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

Electrical and filter compartment access is through a large, toolless, 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).



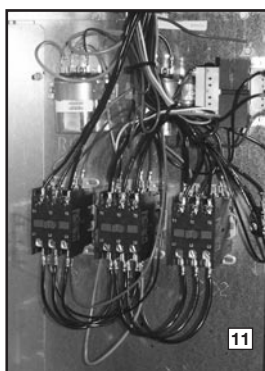


Filter Rack

The tracked filter rack 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 integrated furnace control, used to control furnace operation, incorporates a flashing LED troubleshooting device. Flash codes are clearly outlined on the unit 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 compressor contactor for each compressor.



ClearControl

As part of the ClearControl system which allows real time monitoring and communication between rooftop units, the RGEH Package Gas Electric Unit 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. 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 RGEH Package Gas/Electric with 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. 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 RTU-C.

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 and disconnect (13) are 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.



External Gauge Ports

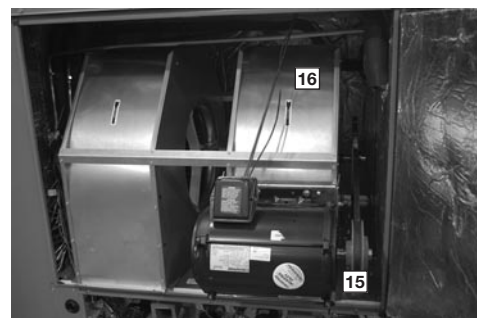
In the outdoor section are the external gauge ports. (14). With gauge ports mounted externally, an accurate diagnostic of system operation can be performed quickly and easily. To identify the use of A2L class refrigerant R-454B, refrigerant ports are covered with red caps.



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 (15) can easily be adjusted by loosening the bolts on either side of the motor

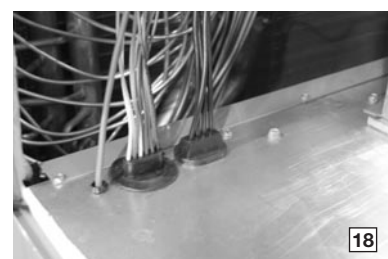


mount. Removing the bolts allows for easy removal of the blower pulley by pushing the blower assembly up to loosen the belt. Once the belt is removed, the motor sheave can be adjusted to the desired number of turns, ranging from 1 to 6 turns open. Where the demands for the job require high static, Friedrich® 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 (16) 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.

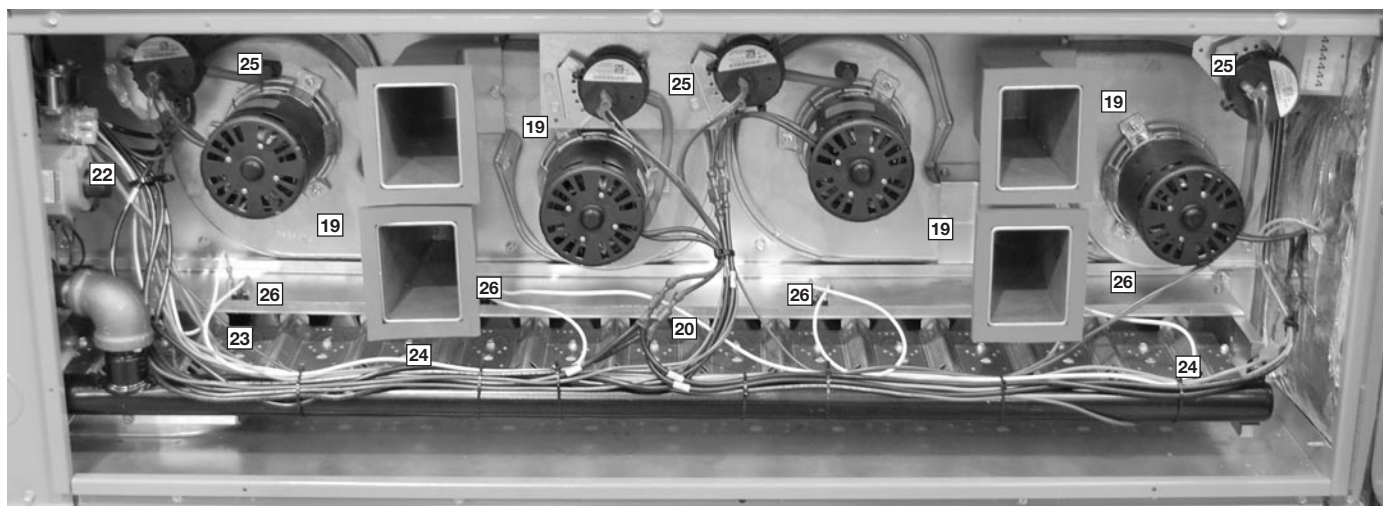
Also inside the blower compartment are the optional low-ambient controls (17). The low-ambient controls allow for operation of the compressor down to 0 degrees ambient temperature by cycling the outdoor fans on high pressure. Use of polarized plugs and schrader fittings allow for easy field or factory installation. The freeze sensor clips on the suction line near the evaporator outlet. 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.



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 (18) 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.



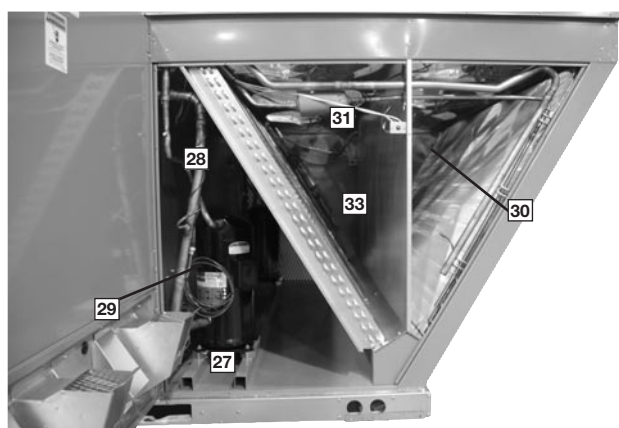
Furnace & Gas Heat Exchanger

The furnace compartment contains the latest furnace technology on the market. The draft inducers (19) draw the flame from the Friedrich® exclusive in-shot burners (20) into the aluminized tubular heat exchanger (21) for clean, efficient gas heat. Stainless steel heat exchangers can be factory installed for those applications that have high fresh-air requirements, or applications in corrosive environments. Each furnace is equipped with a two-stage gas valve (22), which provides two stages of gas heat input. The first stage operates at 50% of the second stage (full fire). 81% steady state efficiency is maintained on both first and second stage by staging the multiple inducers to optimize the combustion airflow and maintain a near stoichiometric burn at each stage.

The direct spark igniter (23) assures reliable ignition in the most adverse conditions. This is coupled with remote flame sense (24) to assure that the flame has carried across the entire length of the burner assembly. Gas supply can be routed from the side or up through the base.

Each furnace has the following safety devices to assure consistent and reliable operation after ignition:

- Pressures switches (25) to assure adequate combustion airflow before ignition.
- Rollout switches (26) to assure no obstruction or cracks in the heat exchanger.
- A limit device that protects the furnace from over-temperature problems.



Compressor

The compressor compartment houses the heartbeat of the unit. The scroll compressor (27) is known for its long life, and for reliable, quiet, and efficient operation. The suction and discharge lines are designed with shock loops (28) 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.

High and Low Pressure Switches & Filter Dryer

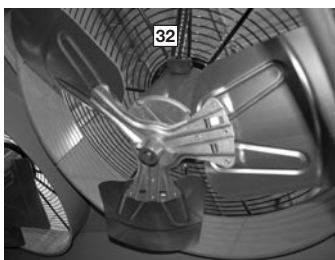
The low-pressure switches (29) and high-pressure switches (30) are mounted on the appropriate refrigerant lines in the condenser section. The high-pressure switch will shut off the compressors if pressures exceeding 610 PSIG are detected as may occur if the outdoor fan motor fails. The low-pressure switches shut off the compressors if low pressure is detected due to loss of refrigerant charge. Each factory-installed option is brazed into the appropriate high or low side and wired appropriately. Use of polarized plugs allow for easy field inspection and repair. Each unit comes standard with filter dryer (31).

Condenser Fans

The condenser fan motor (32) 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. The outdoor coil uses the latest enhanced fin design (33) for the most effective method of heat transfer.

MicroChannel Condenser Coil

The condenser coil uses MicroChannel technology for maximum heat transfer, light weight, fewer manually brazed connections and reduced refrigerant charge (33). The outdoor coil is slanted to protect it from Mother Nature.



Economizer and Dampers

Each unit is designed for both downflow or horizontal applications (34) for job configuration flexibility. The return air compartment can also contain an economizer (35). Three models exist; two for downflow applications (a downflow economizer with factory installed smoke detector in the return section is available), and one for horizontal applications. 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. Power Exhaust is easily field-installed. 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.



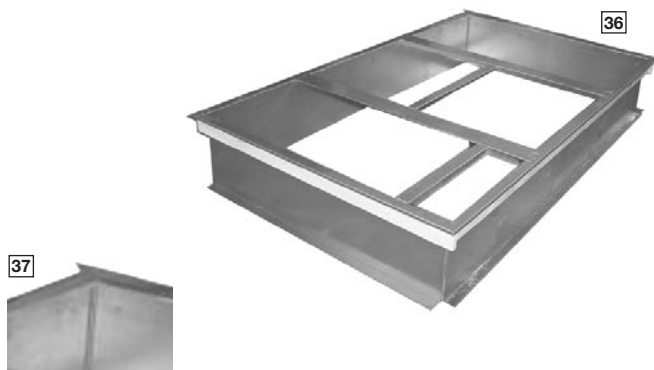
Power Exhaust is easily field-installed. The power exhaust is housed in the barometric relief opening and is easily slipped in with a plug-in assembly. The wire harness to the economizer also has accommodations for a smoke detector.

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.

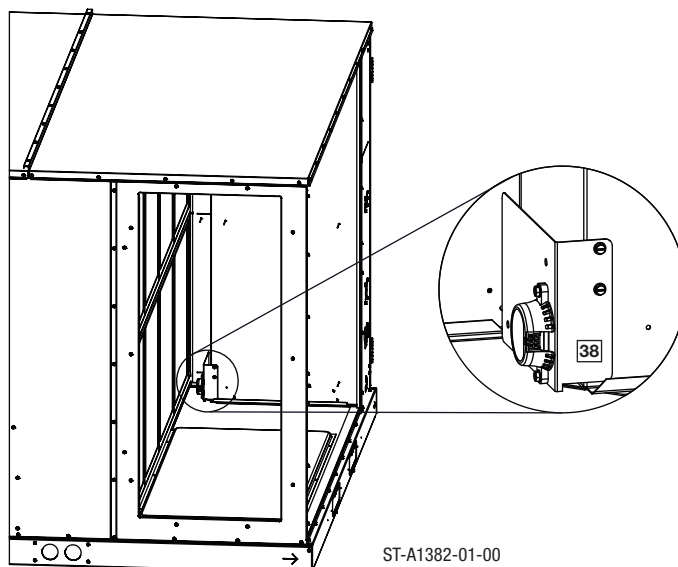
Roofcurb

The Friedrich® roofcurb (36) is made for toolless assembly at the jobsite by inserting a pin into a hinge in each corner of the adjacent curb sides (37), which makes the assembly process quick and easy.



Refrigerant Leak Detection

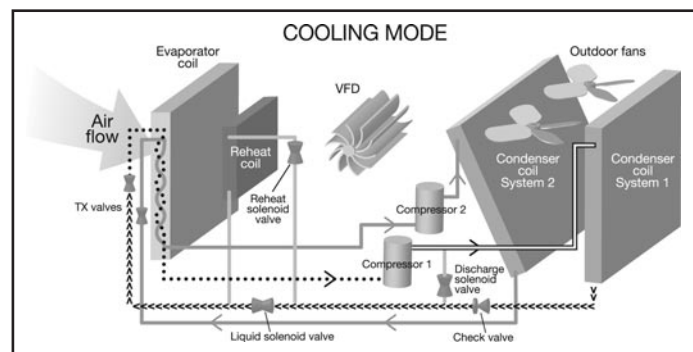
In the event of a detected refrigerant leak, the refrigerant leak detection sensor (38) will trigger the mitigation procedure that shuts off the compressor(s) and turns on the indoor blower motor.



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 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.

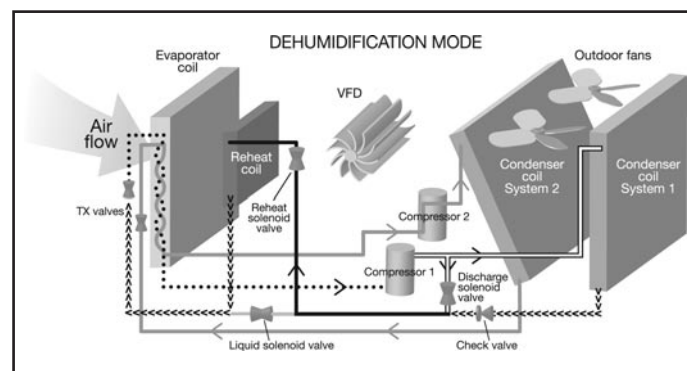
Figure 1 shows the refrigerant path during the normal cooling mode. The liquid refrigerant leaves the TXV with the sudden pressure drop causing the liquid to expand to a vapor and absorbing the heat from the supply air going through the evaporator coil. The refrigerant vapor then travels to the compressor 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.



HIGH TEMPERATURE VAPOR TWO PHASE (LIQUID VAPOR MIX)
 LIQUID LOW TEMPERATURE VAPOR

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 refrigerant 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.



HIGH TEMPERATURE VAPOR TWO PHASE (LIQUID VAPOR MIX)
 LIQUID LOW TEMPERATURE VAPOR

Figure 2

<u>R</u>	<u>GE</u>	<u>H</u>	<u>Y</u>	<u>B</u>	<u>180</u>	<u>A</u>	<u>C</u>	<u>F</u>	<u>25</u>	<u>2</u>	<u>C</u>	<u>A</u>	<u>***</u>				
1	23	4	5	6	789	10	11	12	13	14	15	16	17	18	19	20	21

1—Brand R = Friedrich®	10—Major series A = 1st Design	15—Number of stages 2 = 2 Stage B = 2 Stage Stainless
2, 3—Unit Type GE = Packaged Gas/Electric	11—Voltage C = 3 PH/208-230 V/60 Hz D = 3 PH/460 V60 Hz	16—Control C = ClearControl D = ClearControl & Comfort Alert
4—Cabinet Type H = Large Commercial	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)	17—Minor series A = 1st Design
5—Refrigerant Y = R-454B	13, 14—Heat Capacity 25 = 250,000 Btu/h 30 = 300,000 Btu/h 35 = 350,000 Btu/h 40 = 400,000 Btu/h	18, 19, 20, 21—Option Code See next page
6—Efficiency Level B = Standard Efficiency		
7, 8, 9—Capacity 180 = 15 Ton 210 = 17.5 Ton 240 = 20 Ton 300 = 25 Ton		

FACTORY-INSTALLED OPTION CODES FOR RGEH (15-25 TON) [52.8-87.9 kW]

18				19				20			21	
LV = Louver protection				DC = Disconnect ³				EC = DDC Single Enthalpy Economizer with Barometric Relief ¹			M8 = MERV 8 Filter	
RH = HumidiDry HGRH (Hot Gas Reheat) ²				NP = Non-Powered Convenience Outlet				RS = Return Smoke Detector			M13 = MERV 13 Filter	
HA = Hinged Access (Standard)				LF = Low Ambient								
Option code character highlighted below												
C	HA			A	None			0	None		A	Standard
D	LV	HA		B	LF			1	EC		D	M8
Q	RH	HA		H	NP	DC		3	EC	RS	G	M13
S	LV	RH	HA	K	LF	NP	DC					

¹Downflow economizer only²RH Not available for 17.5T³Only available for 15T and 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: “DB3D”
- **Step 5:** Add your option code selection to the end of model number.

◦ Example: RGEHYB180ACF252CA DB3D = RGEHYB180ACF252CADB3D



Base model Option code = Model number with option code

To select an RGEH 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—	208/240V – 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 [35.0°C] DB
*Evaporator Mixed Air Entering—	65°F [18.3°C] WB 78°F [25.6°C] 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] 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 = 238,250 Btu/h [69.76 kW]
Sensible Cooling Capacity = 192,550 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°C] 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 = $238,250 \times 0.99 = 235,868$ Btu/h [69.06 kW]
Sensible Capacity = $178,452 \times 0.96 = 171,314$ Btu/h [50.16 kW]
Power Input = $18,200 \times 0.99 = 18,018$ 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 (VFD Low)

5. CALCULATE INDOOR BLOWER BTU/H HEAT EFFECT FROM MOTOR WATTS, STEP 4.

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

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

Net Total Capacity = $235,868 - 9,765 = 226,103$ Btu/h [66.21 kW]
Net Sensible Capacity = $171,314 - 9,765 = 161,549$ Btu/h [47.30 kW]

7. CALCULATE UNIT INPUT AND JOB EER.

Total Power Input = 18,018 (step 3) + 2,862 (step 4) = 20,880 Watts

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

8. SELECT UNIT HEATING CAPACITY.

From Physical Data Table read that gas heating output (input rating x efficiency) is:

Heating Capacity = 243,000 Btu/h [71.2 kW]

9. CHOOSE MODEL RGEHYB240ACF252CAQA0A.

***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—RGEHYB MODELS – 15-25 TON [52.8-87.9 kW]

Model RGEHYB 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	10.8	10.8	10.8	9.8
IEER ^B	14	14	14	13
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	15.93	18.52	21.11	28.98
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
Tube Size 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/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	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]
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 (F / G Package)	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 x mm x mm]	Yes	Yes	Yes	Yes
	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]
Refrigerant Charge Oz. [g] Circuit 1 / Circuit 2				
	144 [4082]/148 [4196]	161.6 [4581]/168 [4763]	212.8 [6033]/206.4 [5851]	228.8 [6486]/216 [6124]
Weights				
Net Weight lbs. [kg]	2,196 [996]	2,509 [1138]	2,547 [1155]	2,570 [1166]
Ship Weight lbs. [kg]	2,323 [1054]	2,636 [1195]	2,674 [1213]	2,697 [1223]

NOTE: Please look at the rating plates pasted on the side of the unit to understand the model number of your unit. See Page 16 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.

[] Designates Metric Conversions

WEIGHTED SOUND POWER LEVEL (dBA)

Model	Standard Rating	Frequency (Hz)						
		125	250	500	1000	2000	4000	8000
RGEHYB180	86.7	80.3	79.4	78.9	77.4	72.6	71.8	63.0
RGEHYB210	88.0	83.2	81.5	81.4	77.7	72.9	70.7	62.1
RGEHYB240	91.5	82.8	85.1	85.9	80.9	76.4	71.7	63.7
RGEHYB300	91.7	84.2	85.6	86.1	81.5	76.1	70.9	64.3

GROSS SYSTEMS PERFORMANCE DATA—RGEHYB180

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

Total —Total capacity x 1000 Btu/h
Sens —Sensible capacity x 1000 Btu/h
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—RGEHYB210

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 [53.0] 167.1 [49.0] 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	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	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

Total —Total capacity x 1000 Btu/h
Sens —Sensible capacity x 1000 Btu/h
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—RGEHYB240

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 [79.0] 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

Total —Total capacity x 1000 Btu/h
Sens —Sensible capacity x 1000 Btu/h
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—RGEHYB300

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 bulb
wbE —Entering air wet bulb

Total —Total capacity x 1000 Btu/h
Sens —Sensible capacity x 1000 Btu/h
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)—RGEHYB180

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
	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	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	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
	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)—RGEHYB180

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	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	14.4	13.9	13.8
	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	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
	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

Total —Total capacity x 1000 Btu/h
Sens —Sensible capacity x 1000 Btu/h
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 (LOW HUMIDIDRY MODE)—RGEHYB240

ENTERING INDOOR AIR @ 75°F [23.9°C] dbE ①											
wbE			65.3°F [18.5°C]			64°F [17.8°C] ①			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	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)—RGEHYB240

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]	773.8 [226.8]	716.7 [210.0]	711.4 [208.5]	204.8 [60.0]	189.7 [55.6]	188.2 [55.2]	199.0 [58.3]	184.3 [54]	182.9 [53.6]
		Sens kBtu/h [kW]	578.7 [169.6]	480.4 [140.8]	471.2 [138.1]	115.2 [33.7]	95.6 [28.0]	93.8 [27.5]	131.4 [38.5]	109.1 [32]	107.0 [31.4]
		Power	-21.2	-20.4	-20.4	14.1	13.5	13.5	14	13.5	13.5
	70 [21.1]	Total kBtu/h [kW]	767.7 [225.0]	711.1 [208.4]	705.8 [206.8]	198.7 [58.2]	184.0 [53.9]	182.6 [53.5]	192.9 [56.5]	178.7 [52.4]	177.3 [52.0]
		Sens kBtu/h [kW]	573.8 [168.1]	476.4 [139.6]	467.2 [136.9]	110.3 [32.3]	91.5 [26.8]	89.8 [26.3]	126.5 [37.1]	105.0 [30.8]	103.0 [30.2]
		Power	-20.5	-19.8	-19.7	14.8	14.2	14.2	14.7	14.2	14.1
	80 [26.7]	Total kBtu/h [kW]	759.4 [222.5]	703.4 [206.1]	698.1 [204.6]	190.4 [55.8]	176.3 [51.7]	175.0 [51.3]	184.6 [54.1]	171.0 [50.1]	169.7 [49.7]
		Sens kBtu/h [kW]	567.2 [166.2]	470.9 [138.0]	461.9 [135.3]	103.7 [30.4]	86.1 [25.2]	84.4 [24.7]	119.9 [35.1]	99.5 [29.2]	97.6 [28.6]
Power		-19.5	-18.8	-18.7	15.8	15.2	15.2	15.8	15.2	15.1	
90 [32.2]	Total kBtu/h [kW]	749.0 [219.5]	693.7 [203.3]	688.5 [201.8]	179.9 [52.7]	166.6 [48.8]	165.4 [48.5]	174.2 [51.0]	161.3 [47.3]	160.1 [46.9]	
	Sens kBtu/h [kW]	558.9 [163.8]	464.0 [136.0]	455.1 [133.4]	95.4 [28.0]	79.2 [23.2]	77.7 [22.8]	111.6 [32.7]	92.7 [27.2]	90.9 [26.6]	
	Power	-18.1	-17.5	-17.4	17.2	16.5	16.5	17.1	16.5	16.4	
100 [37.8]	Total kBtu/h [kW]	736.3 [215.8]	682.0 [199.9]	676.9 [198.4]	167.3 [49.0]	154.9 [45.4]	153.8 [45.1]	161.5 [47.3]	149.6 [43.8]	148.5 [43.5]	
	Sens kBtu/h [kW]	548.9 [160.9]	455.7 [133.5]	447.0 [131.0]	85.4 [25.0]	70.9 [20.8]	69.5 [20.4]	101.6 [29.8]	84.4 [24.7]	82.7 [24.2]	
	Power	-16.4	-15.8	-15.8	18.9	18.2	18.1	18.8	18.1	18.1	
110 [43.3]	Total kBtu/h [kW]	721.5 [211.4]	668.3 [195.8]	663.3 [194.4]	152.5 [44.7]	141.2 [41.4]	140.1 [41.1]	146.7 [43.0]	135.9 [39.8]	134.9 [39.5]	
	Sens kBtu/h [kW]	537.2 [157.4]	446.0 [130.7]	437.4 [128.2]	73.7 [21.6]	61.2 [17.9]	60.0 [17.6]	89.9 [26.4]	74.7 [21.9]	73.2 [21.5]	
	Power	-14.4	-13.9	-13.8	20.9	20.1	20	20.8	20.1	20.0	
120 [48.9]	Total kBtu/h [kW]	704.5 [206.5]	652.5 [191.2]	647.7 [189.8]	135.5 [39.7]	125.5 [36.8]	124.5 [36.5]	129.7 [38.0]	120.1 [35.2]	119.2 [34.9]	
	Sens kBtu/h [kW]	523.8 [153.5]	434.9 [127.4]	426.5 [125.0]	60.3 [17.7]	50.1 [14.7]	49.1 [14.4]	76.5 [22.4]	63.5 [18.6]	62.3 [18.3]	
	Power	-12.1	-11.6	-11.6	23.2	22.4	22.3	23.2	22.3	22.3	

DR —Depression ratio
dbE —Entering air dry bulb
wbE—Entering air wet bulb

Total —Total capacity x 1000 Btu/h
Sens —Sensible capacity x 1000 Btu/h
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 (LOW HUMIDIDRY MODE)—RGEHYB300

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]	79.2 [23.2]	76.4 [22.4]	73.6 [21.6]	75.6 [22.1]	72.9 [21.4]	70.3 [20.6]	70.8 [20.7]	68.3 [20.0]	65.8 [19.3]
		Sens kBtu/h [kW]	8.7 [2.6]	8.0 [2.3]	7.2 [2.1]	14.7 [4.3]	13.4 [3.9]	12.2 [3.6]	21.1 [6.2]	19.3 [5.7]	17.5 [5.1]
		Power	10.7	10.5	10.3	10.7	10.5	10.3	10.6	10.4	10.2
	65 [18.3]	Total kBtu/h [kW]	76.9 [22.5]	74.2 [21.8]	71.5 [21.0]	73.3 [21.5]	70.7 [20.7]	68.1 [20.0]	68.5 [20.1]	66.1 [19.4]	63.7 [18.7]
		Sens kBtu/h [kW]	7.0 [2.0]	6.4 [1.9]	5.8 [1.7]	12.9 [3.8]	11.8 [3.5]	10.7 [3.1]	19.3 [5.7]	17.7 [5.2]	16.0 [4.7]
		Power	10.8	10.6	10.5	10.8	10.6	10.4	10.7	10.6	10.4
	70 [21.1]	Total kBtu/h [kW]	74.5 [21.8]	71.9 [21.1]	69.3 [20.3]	70.9 [20.8]	68.4 [20]	65.9 [19.3]	66.1 [19.4]	63.8 [18.7]	61.5 [18.0]
		Sens kBtu/h [kW]	5.0 [1.5]	4.6 [1.4]	4.2 [1.2]	11.0 [3.2]	10.1 [3.0]	9.1 [2.7]	17.4 [5.1]	15.9 [4.7]	14.4 [4.2]
		Power	11.0	10.8	10.6	11.0	10.8	10.6	10.9	10.7	10.5
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total kBtu/h [kW]	72.0 [21.1]	69.5 [20.4]	66.9 [19.6]	68.3 [20.0]	65.9 [19.3]	63.5 [18.6]	63.5 [18.6]	61.3 [18]	59.1 [17.3]
		Sens kBtu/h [kW]	2.9 [0.9]	2.7 [0.8]	2.4 [0.7]	8.9 [2.6]	8.2 [2.4]	7.4 [2.2]	15.3 [4.5]	14.0 [4.1]	12.7 [3.7]
		Power	11.2	11.0	10.8	11.1	10.9	10.8	11.1	10.9	10.7
	80 [26.7]	Total kBtu/h [kW]	69.3 [20.3]	66.9 [19.6]	64.4 [18.9]	65.7 [19.2]	63.3 [18.6]	61.0 [17.9]	60.9 [17.8]	58.7 [17.2]	56.6 [16.6]
		Sens kBtu/h [kW]	0.7 [0.2]	0.6 [0.2]	0.6 [0.2]	6.6 [1.9]	6.1 [1.8]	5.5 [1.6]	13.0 [3.8]	11.9 [3.5]	10.8 [3.2]
		Power	11.4	11.2	11	11.3	11.1	10.9	11.3	11.1	10.9
	85 [29.4]	Total kBtu/h [kW]	66.5 [19.5]	64.1 [18.8]	61.8 [18.1]	62.8 [18.4]	60.6 [17.8]	58.4 [17.1]	58.0 [17.0]	56.0 [16.4]	54.0 [15.8]
		Sens kBtu/h [kW]	-1.8 [-0.5]	-1.6 [-0.5]	-1.5 [-0.4]	4.2 [1.2]	3.8 [1.1]	3.5 [1.0]	10.6 [3.1]	9.7 [2.8]	8.8 [2.6]
		Power	11.6	11.4	11.2	11.6	11.4	11.2	11.5	11.3	11.1
OUTDOOR DRY BULB TEMPERATURE °F [°C]	90 [32.2]	Total kBtu/h [kW]	63.5 [18.6]	61.3 [18.0]	59.1 [17.3]	59.9 [17.5]	57.8 [16.9]	55.7 [16.3]	55.1 [16.1]	53.1 [15.6]	51.2 [15.0]
		Sens kBtu/h [kW]	-4.4 [-1.3]	-4.0 [-1.2]	-3.6 [-1.1]	1.6 [0.5]	1.5 [0.4]	1.3 [0.4]	8.0 [2.3]	7.3 [2.1]	6.6 [1.9]
		Power	11.8	11.6	11.4	11.8	11.6	11.4	11.8	11.6	11.3

GROSS SYSTEMS PERFORMANCE DATA (HIGH HUMIDIDRY MODE)—RGEHYB300

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]	268.2 [78.6]	251.5 [73.7]	247.4 [72.5]	258.5 [75.8]	242.4 [71.0]	238.5 [69.9]	252.7 [74.0]	236.9 [69.4]	233.1 [68.3]
		Sens kBtu/h [kW]	101.6 [29.8]	86.8 [25.4]	83.1 [24.4]	147.3 [43.2]	125.9 [36.9]	120.6 [35.3]	167.3 [49.0]	142.9 [41.9]	136.9 [40.1]
		Power	19.0	18.4	18.3	18.8	18.2	18.1	19.0	18.4	18.3
	70 [21.1]	Total kBtu/h [kW]	257.4 [75.4]	241.4 [70.7]	237.5 [69.6]	247.8 [72.6]	232.4 [68.1]	228.6 [67.0]	241.9 [70.9]	226.9 [66.5]	223.2 [65.4]
		Sens kBtu/h [kW]	94.3 [27.6]	80.5 [23.6]	77.2 [22.6]	140.0 [41.0]	119.6 [35.1]	114.6 [33.6]	160.0 [46.9]	136.7 [40.1]	130.9 [38.4]
		Power	20.2	19.6	19.5	20.1	19.4	19.3	20.2	19.6	19.5
	80 [26.7]	Total kBtu/h [kW]	245.7 [72.0]	230.4 [67.5]	226.6 [66.4]	236.0 [69.2]	221.3 [64.9]	217.7 [63.8]	230.2 [67.4]	215.8 [63.2]	212.3 [62.2]
		Sens kBtu/h [kW]	86.1 [25.2]	73.5 [21.6]	70.5 [20.6]	131.8 [38.6]	112.6 [33.0]	107.9 [31.6]	151.8 [44.5]	129.7 [38.0]	124.2 [36.4]
		Power	21.8	21.1	21.0	21.6	20.9	20.8	21.8	21.1	21
OUTDOOR DRY BULB TEMPERATURE °F [°C]	90 [32.2]	Total kBtu/h [kW]	232.8 [68.2]	218.3 [64.0]	214.8 [62.9]	223.2 [65.4]	209.3 [61.3]	205.8 [60.3]	217.3 [63.7]	203.8 [59.7]	200.5 [58.7]
		Sens kBtu/h [kW]	77.0 [22.6]	65.8 [19.3]	63.0 [18.5]	122.7 [36.0]	104.9 [30.7]	100.5 [29.4]	142.7 [41.8]	121.9 [35.7]	116.8 [34.2]
		Power	23.7	23.0	22.8	23.5	22.8	22.6	23.7	23	22.8
	100 [37.8]	Total kBtu/h [kW]	218.9 [64.1]	205.3 [60.2]	201.9 [59.2]	209.3 [61.3]	196.2 [57.5]	193.0 [56.6]	203.4 [59.6]	190.7 [55.9]	187.6 [55.0]
		Sens kBtu/h [kW]	67.0 [19.6]	57.2 [16.8]	54.8 [16.1]	112.7 [33.0]	96.3 [28.2]	92.3 [27.0]	132.7 [38.9]	113.4 [33.2]	108.6 [31.8]
		Power	26.0	25.2	25	25.8	25	24.8	26.0	25.2	25
	110 [43.3]	Total kBtu/h [kW]	203.9 [59.8]	191.3 [56.0]	188.1 [55.1]	194.3 [56.9]	182.2 [53.4]	179.2 [52.5]	188.4 [55.2]	176.7 [51.8]	173.8 [50.9]
		Sens kBtu/h [kW]	56.1 [16.4]	47.9 [14.0]	45.9 [13.5]	101.9 [29.8]	87 [25.5]	83.4 [24.4]	121.8 [35.7]	104.1 [30.5]	99.7 [29.2]
		Power	28.6	27.7	27.5	28.4	27.5	27.3	28.6	27.7	27.5
OUTDOOR DRY BULB TEMPERATURE °F [°C]	120 [48.9]	Total kBtu/h [kW]	187.9 [55.1]	176.2 [51.6]	173.3 [50.8]	178.3 [52.2]	167.2 [49]	164.4 [48.2]	172.4 [50.5]	161.7 [47.4]	159.0 [46.6]
		Sens kBtu/h [kW]	44.3 [13.0]	37.9 [11.1]	36.3 [10.6]	90.1 [26.4]	77 [22.6]	73.7 [21.6]	110.0 [32.2]	94.0 [27.5]	90.1 [26.4]
		Power	31.5	30.5	30.3	31.3	30.4	30.1	31.5	30.6	30.3

DR —Depression ratio
dbE —Entering air dry bulb
wbE—Entering air wet bulb

Total —Total capacity x 1000 Btu/h
Sens —Sensible capacity x 1000 Btu/h
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 [52.7 kW] — 60 Hz — DOWNFLOW

Air Flow CFM [L/s]	Model RGEHYB180 Voltage 208/230, 460 — 3 phase										External Static Pressure—Inches of Water [kPa]																															
	0.1 [0.2]		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	889	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]	—	—	—	—	—	—	—	556	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	889	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 [2237]					5 [3728.5]				
Blower Sheave	BK105H					BK105H				
Motor Sheave	1VL-44					1VP-56				
Turns Open	1	2	3	4	5	6	1	2	3	4
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.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE — 15 TON [52.7 KW] — 60 HZ — DOWNFLOW (CON'T.)

Airflow	AIRFLOW CORRECTION FACTORS*			COMPONENT AIRFLOW RESISTANCE					
				Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Grill RXRN-AD80 or RXRN-AD81 & Transition RXMC-CJ07	MERV 8 Filter	MERV 13 Filter
CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	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]	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]

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

[] Designates Metric Conversions

AIRFLOW PERFORMANCE— 15 TON [52.7 kW] — 60 Hz — SIDEFLOW

Air Flow CFM [L/s]		Model RGEHYB180 Voltage 208/230, 460 — 3 phase																																				
		External Static Pressure—Inches of Water [kPa]																																				
		0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.20]	0.9 [.22]	1.0 [.25]	1.1 [.27]	1.2 [.30]	1.3 [.32]	1.4 [.35]	1.5 [.37]	1.6 [.40]	1.7 [.42]	1.8 [.45]	1.9 [.47]	2.0 [.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					
4800 [2265]	—	—	—	—	—	570	1312	597	1435	624	1564	651	1699	678	1839	704	1985	729	2137	755	2295	780	2458	804	2628	829	2803	853	2983	876	3170	899	3362	922	3560	—		
5000 [2359]	—	—	—	—	—	578	1395	605	1520	632	1651	658	1787	684	1929	710	2077	735	2231	760	2390	785	2555	809	2726	833	2903	856	3085	879	3273	902	3467	925	3667	—		
5200 [2454]	—	—	—	—	—	587	1487	614	1613	640	1746	666	1884	692	2028	717	2177	742	2333	766	2494	790	2660	814	2833	837	3011	861	3195	883	3385	906	3581	927	3782	—		
5400 [2548]	—	—	—	—	—	597	1587	623	1715	649	1849	674	1989	699	2134	724	2285	748	2442	772	2605	796	2774	819	2948	842	3128	865	3314	887	3505	909	3702	931	3905	—		
5600 [2643]	—	—	—	—	—	580	1570	606	1694	632	1824	657	1960	682	2101	707	2249	731	2402	755	2560	779	2725	802	2895	825	3071	848	3252	870	3440	892	3633	913	3832	—		
5800 [2737]	—	—	—	—	—	590	1684	616	1810	642	1942	667	2079	691	2222	715	2371	739	2526	763	2686	786	2852	809	3024	831	3202	854	3385	875	3574	897	3769	918	3970	—		
6000 [2831]	—	—	—	—	—	576	1685	601	1806	627	1934	652	2067	676	2207	700	2351	724	2502	748	2658	793	2988	816	3162	838	3341	860	3526	881	3717	902	3913	922	4116	—		
6200 [2926]	—	—	—	—	—	587	1813	613	1937	637	2066	662	2201	686	2342	710	2488	733	2641	756	2799	779	2963	801	3132	823	3307	845	3488	866	3675	887	3867	907	4066	928	4270	—
6400 [3020]	—	—	574	1831	599	1950	624	2075	648	2206	673	2343	696	2485	720	2634	743	2788	785	2947	787	3113	809	3284	831	3461	852	3644	873	3832	893	4026	913	4226	933	4432	—	
6600 [3114]	—	—	587	1974	612	2095	636	2222	660	2355	684	2493	707	2637	730	2787	752	2943	775	3104	796	3271	818	3444	839	3623	860	3807	880	3997	900	4193	920	4394	—	—		
6800 [3209]	575	2008	600	2125	624	2248	648	2377	672	2511	695	2651	718	2797	740	2948	763	3106	784	3269	806	3438	827	3612	847	3792	868	3978	888	4170	907	4368	927	4571	—	—		
7000 [3303]	589	2166	614	2284	638	2409	661	2539	684	2675	707	2817	729	2965	751	3118	773	3277	794	3442	815	3612	836	3788	856	3970	876	4158	896	4352	915	4551	—	—	—			
7200 [3398]	604	2332	628	2452	651	2578	674	2710	697	2848	719	2991	741	3141	763	3296	784	3456	805	3623	825	3795	846	3973	865	4156	885	4346	904	4541	923	4742	—	—	—			

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

Drive Package	F												G											
Motor H.P. [W]	3 [2237.1]												5 [3728.5]											
Blower Sheave	BK105H												BK105H											
Motor Sheave	1VL-44												1VP-56											
Turns Open	1	2	722	695	665	634	601	569	536	503	470	437	404	371	338	305	272	239	206	173	140	107	74	41
RPM	6	722	695	665	634	601	569	536	503	470	437	404	371	338	305	272	239	206	173	140	107	74	41	8

- 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.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE — 15 TON [52.7 kW] — 60 Hz — SIDEFLOW (CON'T.)

Airflow	AIRFLOW CORRECTION FACTORS *			COMPONENT AIRFLOW RESISTANCE					
				Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Grill RXRN-AD80 or RXRN-AD81 & Transition RXMC-CJ07	MERV 8 Filter	MERV 13 Filter
CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	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]	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	0.10 [.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]

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

[] Designates Metric Conversions

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AIRFLOW PERFORMANCE — 17.5 TON [61.5 kW] — 60 Hz — DOWNFLOW (CON'T.)

Airflow	AIRFLOW CORRECTION FACTORS*			COMPONENT AIRFLOW RESISTANCE					
				Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Grill RXRN-AD80 or RXRN-AD81 & Transition RXMC-CJ07	MERV 8 Filter	MERV 13 Filter
CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	Resistance — Inches of Water [kPa]					
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 [61.5 kW] — 60 Hz — SIDEFLOW

Air Flow CFM [L/s]		Model RGEHYB210 Voltage 208/230, 460 — 3 phase																							
		External Static Pressure—Inches of Water [kPa]																							
		0.1 [.02]	0.2 [0.05]	0.3 [.07]	0.4 [1.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.20]	0.9 [.22]	1.0 [.25]	1.1 [.27]	1.2 [.30]	1.3 [.32]	1.4 [.35]	1.5 [.37]	1.6 [.40]	1.7 [.42]	1.8 [.45]	1.9 [.47]	2.0 [.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
5600 [2643]	—	—	—	—	588	1627	613	1752	638	1882	663	2019	688	2162	712	2311	736	2466	760	2628	783	2795	806	2969	829
5800 [2737]	—	—	—	—	598	1737	623	1864	648	1997	672	2136	697	2282	720	2433	744	2591	767	2755	790	2925	813	3101	836
6000 [2831]	—	—	—	—	609	1856	633	1985	658	2121	682	2262	706	2410	729	2564	752	2724	775	2890	798	3063	820	3241	843
6200 [2926]	—	—	—	—	595	1857	619	1982	644	2114	668	2252	692	2396	715	2546	738	2703	761	2865	784	3034	806	3209	828
6400 [3020]	—	—	—	—	606	1989	631	2117	655	2251	678	2392	702	2538	725	2691	747	2850	770	3015	792	3186	814	3363	836
6600 [3114]	—	—	594	2006	618	2130	642	2260	666	2397	689	2540	712	2689	735	2844	757	3005	779	3172	801	3346	822	3526	844
6800 [3209]	—	—	607	2152	630	2279	654	2412	677	2551	701	2696	723	2847	745	3005	767	3168	789	3338	810	3514	831	3696	852
7000 [3303]	596	2184	620	2307	643	2436	666	2571	689	2713	711	2860	733	3014	755	3174	777	3340	798	3512	819	3691	840	3875	861
7200 [3398]	609	2344	633	2469	656	2601	678	2739	701	2883	723	3033	745	3189	766	3351	788	3520	809	3695	829	3876	850	4063	870
7400 [3492]	623	2513	646	2641	669	2775	691	2915	713	3061	735	3214	756	3372	777	3537	798	3708	819	3885	839	4069	859	4258	879
7600 [3586]	637	2689	660	2820	682	2956	704	3099	726	3248	747	3403	768	3564	789	3731	809	3905	830	4084	850	4270	869	4462	889
7800 [3681]	652	2875	674	3007	696	3146	717	3291	739	3443	760	3600	780	3764	801	3933	821	4109	841	4291	860	4479	880	4674	899
8000 [3775]	667	3068	688	3203	710	3344	731	3492	752	3646	773	3805	793	3971	813	4144	833	4322	852	4506	871	4697	890	4894	909
8200 [3869]	682	3269	703	3407	724	3551	745	3701	765	3857	786	4019	806	4188	825	4362	845	4543	864	4730	883	4923	901	5122	919
8400 [3964]	697	3479	718	3619	739	3765	759	3918	779	4076	799	4241	819	4412	838	4589	857	4772	876	4962	894	5157	912	5359	930

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

Drive Package	F						G					
Motor H.P. [W]	3 [2237.1]						5 [3728.5]					
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	743	713	684	653	620	588	948	899	868	838	808	776

- 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.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—17.5 TON [61.5 kW] — 60 Hz — SIDEFLOW (CON'T.)

Airflow	AIRFLOW CORRECTION FACTORS *			COMPONENT AIRFLOW RESISTANCE					
				Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Grill RXRN-AD80 or RXRN-AD81 & Transition RXMC-CJ07	MERV 8 Filter	MERV 13 Filter
CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	Resistance — Inches of Water [kPa]					
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— 20 TON [70.3 kW] — 60 Hz — DOWNFLOW

Model RGEHYB240		Voltage 208/230, 460 — 3 phase																							
Air Flow CFM [L/s]		External Static Pressure—Inches of Water [kPa]																							
		0.1 [.02]												0.2 [.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
6400 [3020]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6600 [3114]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6800 [3209]	611	2035	638	2185	664	2341	690	2502	716	2668	741	2840	765	3018	789	3201	813	3389	836	3583	858	3783	880	3987	902
7000 [3303]	625	2165	652	2321	678	2482	703	2648	728	2820	753	2998	777	3181	801	3369	824	3563	846	3762	868	3967	890	4177	911
7200 [3398]	639	2306	665	2467	691	2633	716	2805	741	2982	765	3165	789	3353	812	3547	835	3747	857	3951	879	4162	900	4377	921
7400 [3492]	653	2457	679	2623	705	2795	729	2972	754	3155	778	3343	801	3537	824	3736	846	3941	868	4151	889	4366	910	4588	930
7600 [3586]	668	2618	693	2789	718	2966	743	3149	767	3337	790	3531	813	3730	836	3935	857	4145	879	4360	900	4581	920	4808	940
7800 [3681]	682	2789	707	2966	732	3148	756	3337	780	3530	803	3729	825	3934	847	4144	869	4359	890	4580	911	4807	931	5039	950
8000 [3775]	697	2970	721	3153	746	3341	769	3534	793	3733	815	3938	837	4148	859	4363	880	4584	901	4810	921	5042	941	5280	960
8200 [3869]	711	3162	736	3350	759	3543	783	3742	806	3947	828	4156	850	4372	871	4593	892	4819	912	5051	932	5288	951	5531	970
8400 [3964]	726	3364	750	3557	773	3756	796	3960	819	4170	841	4385	862	4606	883	4832	904	5064	924	5301	943	5544	962	5792	981
8600 [4058]	741	3576	764	3775	787	3979	810	4189	832	4404	854	4625	875	4851	895	5082	915	5320	935	5562	954	5810	973	6064	991
8800 [4153]	756	3798	779	4002	802	4212	824	4427	846	4648	867	4874	887	5106	908	5343	927	5585	947	5833	965	6087	983	6346	1001
9000 [4247]	771	4031	794	4240	816	4455	838	4676	859	4902	880	5134	900	5371	920	5613	939	5861	958	6115	977	6373	994	6638	1012
9200 [4341]	786	4274	808	4489	830	4709	852	4935	873	5167	893	5403	913	5646	932	5894	951	6147	970	6406	988	6670	1005	6940	1022
9400 [4436]	801	4527	823	4747	845	4973	866	5204	886	5441	906	5684	926	5931	945	6185	964	6444	982	6708	999	6978	1016	7253	—
9600 [4530]	816	4790	838	5016	859	5247	880	5484	900	5726	920	5974	939	6227	958	6486	976	6750	994	7020	1011	7295	—	—	—

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

Drive Package	F						G						H					
Motor H.P. [W]	5 [3728.5]						7.5 [5592.7]						7.5 [5592.7]					
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	755	733	708	682	656	629	942	915	889	848	828	808	1018	990	962	919	898	876

- 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.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—20 TON [70.3 kW] — 60 Hz — DOWNFLOW (CON'T.)

Airflow	AIRFLOW CORRECTION FACTORS *			COMPONENT AIRFLOW RESISTANCE					
				Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Grill RXRN-AD86 & Transition RXMC-CK08	MERV 8 Filter	MERV 13 Filter
CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	Resistance — Inches of Water [kPa]					
8000 [3775]	0.97	0.89	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	0.09 [.02]	0.24 [.06]	0.10 [.02]	0.23 [.06]	0.10 [.03]	0.07 [.02]
8800 [4153]	0.99	0.95	1.00	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	0.12 [.03]	0.28 [.07]	0.12 [.03]	0.36 [.09]	0.11 [.03]	0.08 [.02]
9600 [4341]	1.00	1.01	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	0.15 [.04]	0.32 [.07]	0.14 [.03]	0.50 [.12]	0.12 [.03]	0.09 [.02]
10400 [4908]	1.02	1.08	1.01	0.16 [.04]	0.34 [.08]	0.15 [.04]	0.56 [.14]	0.12 [.03]	0.10 [.02]
10800 [5096]	1.03	1.11	1.01	0.18 [.04]	0.37 [.09]	0.16 [.04]	0.63 [.16]	0.13 [.03]	0.10 [.02]
11200 [5285]	1.03	1.14	1.02	0.19 [.05]	0.39 [.10]	0.17 [.04]	0.69 [.17]	0.13 [.03]	0.11 [.03]
11600 [5474]	1.04	1.17	1.02	0.21 [.05]	0.41 [.10]	0.18 [.04]	0.76 [.19]	0.14 [.03]	0.11 [.03]
12000 [5663]	1.05	1.20	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	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	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	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	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 [70.3 kW] — 60 Hz — SIDEFLOW

Air Flow CFM [L/s]	Model RGEHYB300 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																			
6400 [3020]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																			
6600 [3114]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																			
6800 [3209]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																			
7000 [3303]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																			
7200 [3398]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																			
7400 [3492]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																			
7600 [3586]	632	2349	656	2533	680	2713	702	2888	724	3059	745	3224	767	3386	784	3543	803	3695	820	3842	837	3985	853	4124	868	4258	882	4387	896	4512	908	4632	920	4748	931	4859	941	4965	950	5067
7800 [3681]	647	2540	670	2721	693	2899	715	3071	736	3239	756	3403	776	3561	794	3716	812	3866	829	4011	845	4151	860	4287	874	4419	888	4546	900	4668	912	4786	923	4893	933	5008	942	5112	951	5211
8000 [3775]	661	2735	684	2914	706	3089	727	3259	748	3424	767	3585	786	3742	804	3894	821	4041	837	4184	852	4322	867	4456	880	4585	893	4709	905	4829	916	4944	926	5055	936	5161	944	5263	952	5360
8200 [3869]	676	2935	698	3112	719	3284	740	3451	759	3615	778	3773	796	3927	813	4076	830	4221	845	4362	860	4497	873	4628	886	4755	898	4877	910	4994	920	5107	929	5216	938	5319	946	5418	953	5513
8400 [3964]	691	3139	712	3314	733	3484	752	3649	771	3809	789	3966	807	4117	823	4264	839	4406	853	4544	867	4677	880	4806	892	4930	904	5050	914	5165	924	5275	933	5381	941	5482	948	5579	954	5671
8600 [4058]	705	3349	726	3521	746	3688	765	3851	783	4009	800	4163	817	4312	833	4456	848	4596	862	4732	875	4862	887	4989	898	5110	909	5227	919	5340	928	5448	936	5551	943	5650	950	5744	955	5834
8800 [4153]	720	3563	740	3732	759	3897	777	4058	795	4213	812	4365	827	4511	842	4653	856	4791	870	4924	882	5052	894	5176	905	5295	915	5410	924	5520	932	5625	939	5726	946	5822	952	5914	956	6002
9000 [4247]	734	3782	754	3949	772	4111	790	4269	807	4422	823	4571	838	4715	852	4855	865	4990	878	5120	890	5246	901	5368	911	5484	920	5597	928	5704	936	5807	943	5906	948	6000	953	6089	958	6171
9200 [4341]	749	4005	768	4170	785	4330	802	4485	818	4636	834	4783	848	4924	862	5061	874	5194	886	5322	897	5445	907	5564	917	5679	925	5788	933	5894	940	5994	946	6090	951	6182	955	6269	959	6351
9400 [4436]	764	4234	782	4396	799	4553	815	4706	830	4855	845	4999	859	5138	871	5273	883	5403	895	5528	905	5649	914	5766	923	5878	931	5985	938	6088	944	6186	949	6279	953	6368	957	6453	960	6533
9600 [4530]	778	4467	796	4627	812	4782	827	4932	842	5078	856	5220	869	5356	881	5489	892	5616	903	5739	912	5858	921	5972	929	6081	936	6186	942	6286	948	6382	952	6473	956	6560	959	6642	961	6719

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

Drive Package	F						G						H					
Motor H.P. [W]	5 [3728.5]						7.5 [5592.7]						7.5 [5592.7]					
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	754	731	705	679	654	630	938	911	885	844	824	804	1005	979	952	910	890	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.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—20 TON [70.3 kW] — 60 Hz — SIDEFLOW (CON'T.)

Airflow	AIRFLOW CORRECTION FACTORS *			COMPONENT AIRFLOW RESISTANCE					
				Wet Coil	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Grill RXRN-AD86 & Transition RXMC-CK08	MERV 8 Filter	MERV 13 Filter
CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	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 [.02]
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 [4463]	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 [87.9 kW] — 60 Hz — DOWNFLOW

Air Flow CFM [L/s]	Model RGEHV8300 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]
RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM
8000 [3775]	—	—	—	—	—	819	3995	841	4198	862	4403	882	4610	902	4820	922
8200 [3869]	—	—	—	—	811	3994	832	4201	853	4410	873	4621	894	4834	913	5049
8400 [3964]	—	—	—	—	823	4205	845	4418	865	4632	885	4849	905	5068	925	5290
8600 [4058]	—	—	—	—	815	4211	836	4427	857	4646	877	4867	897	5089	917	5314
8800 [4153]	—	—	—	807	4218	828	4439	849	4661	870	4886	890	5112	909	5341	929
9000 [4247]	—	—	820	4451	841	4678	862	4906	882	5136	902	5369	921	5604	940	5840
9200 [4341]	—	813	4486	834	4696	855	4928	875	5162	895	5399	914	5637	933	5878	952
9400 [4436]	805	4482	826	4716	847	4952	868	5190	888	5430	907	5672	927	5916	945	6163
9600 [4530]	819	4738	840	4977	861	5219	881	5463	901	5709	920	5957	939	6207	957	6459
9800 [4624]	833	5004	854	5250	874	5497	894	5747	913	5999	932	6253	951	6509	969	6767
10000 [4719]	847	5282	867	5534	887	5787	907	6043	926	6301	945	6560	963	6822	981	7086
10200 [4813]	861	5571	881	5829	901	6088	920	6350	939	6613	957	6879	975	7147	993	7417
10400 [4908]	875	5872	895	6135	914	6401	933	6668	952	6937	970	7209	988	7483	1005	7759
10600 [5002]	889	6184	909	6453	928	6724	946	6997	965	7273	982	7550	1000	7830	1017	8112
10800 [5096]	903	6507	922	6782	941	7059	959	7338	977	7620	995	7903	1012	8188	1029	8476
11000 [5191]	917	6841	936	7122	954	7405	973	7690	990	7977	1007	8267	1024	8558	1041	8851
11200 [5285]	931	7187	950	7474	968	7763	986	8054	1003	8347	1020	8642	1037	8939	1053	9238
11400 [5379]	945	7544	963	7837	981	8132	999	8428	1016	8727	1032	9028	1049	9331	1065	9637
11600 [5474]	959	7913	977	8211	995	8512	1012	8814	1029	9119	1045	9426	1061	9735	1077	10046
11800 [5568]	973	8292	991	8597	1008	8903	1025	9212	1041	9522	1057	9835	1073	10150	—	—
12000 [5663]	987	8683	1004	8993	1021	9306	1038	9620	1054	9937	1070	10255	—	—	—	—
12200 [5757]	1001	9085	1018	9401	1035	9720	1051	10040	1067	10362	—	—	—	—	—	—
12400 [5851]	1015	9499	1031	9821	1048	10145	1064	10471	1080	10800	—	—	—	—	—	—
12600 [5946]	1029	9924	1045	10252	1061	10582	1077	10914	—	—	—	—	—	—	—	—
12800 [6040]	1042	10360	1059	10693	1075	11029	—	—	—	—	—	—	—	—	—	—

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

Drive Package	F								G							
Motor H.P. [W]	7.5 [5592.7]								10 [7457.0]							
Blower Sheave	BK130H								BK120H							
Motor Sheave	1VP71								1VP75							
Turns Open	1	2	3	4	5	6	1	2	3	4	5	6				
RPM	938	912	886	859	833	807	1070	1040	1014	984	957	931				

- 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.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—25 TON [87.9 kW] — 60 Hz — DOWNFLOW (CON'T.)

Airflow	AIRFLOW CORRECTION FACTORS*			COMPONENT AIRFLOW RESISTANCE					
				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
CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	Resistance — Inches of Water [kPa]					
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 [4341]	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 [.07]	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

AIRFLOW PERFORMANCE— 25 TON [87.9 kW] — 60 Hz — SIDEFLOW

Air Flow CFM [L/s]	Model RGEHYB300 Voltage 208/230, 460 — 3 phase																																							
	External Static Pressure—Inches of Water [kPa]																																							
	0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.20]	0.9 [.22]	1.0 [.25]	1.1 [.27]	1.2 [.30]	1.3 [.32]	1.4 [.35]	1.5 [.37]	1.6 [.40]	1.7 [.42]	1.8 [.45]	1.9 [.47]	2.0 [.50]																				
RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W																			
6400 [3020]	—	—	—	627	1890	654	2075	679	2255	703	2431	727	2603	749	2770	771	2932	792	3090	812	3243	832	3392	850	3536	868	3675	884	3810	900	3940	915	4066	930	4187	943	4304			
6600 [3114]	—	—	—	640	2044	665	2227	690	2405	713	2579	736	2748	758	2912	779	3072	800	3227	819	3378	838	3524	855	3666	872	3803	888	3935	904	4063	918	4187	931	4305	944	4419			
6800 [3209]	—	—	—	627	2019	652	2203	677	2384	701	2559	724	2731	746	2897	767	3059	788	3217	807	3369	826	3518	844	3661	861	3803	877	3935	892	4065	907	4191	920	4311	933	4428	945	4540	
7000 [3303]	—	—	—	640	2185	665	2367	689	2545	712	2719	734	2887	755	3051	776	3211	796	3366	815	3516	833	3662	850	3803	866	3940	882	4072	896	4200	910	4323	923	4441	935	4555	946	4664	
7200 [3398]	—	628	2172	653	2356	677	2536	701	2712	723	2882	744	3049	765	3210	785	3367	804	3520	822	3668	839	3811	856	3950	871	4084	886	4214	900	4339	913	4460	925	4576	937	4687	947	4794	
7400 [3492]	—	642	2350	667	2532	690	2710	712	2883	734	3051	755	3215	775	3374	794	3529	812	3679	830	3824	846	3965	862	4102	877	4233	891	4361	904	4483	916	4601	928	4715	939	4824	949	4928	
7600 [3586]	632	2349	656	2533	680	2713	702	2888	724	3059	745	3224	765	3386	784	3543	803	3695	820	3842	837	3985	853	4124	868	4258	882	4387	896	4512	908	4632	920	4748	931	4859	941	4965	950	5067
7800 [3681]	647	2540	670	2721	693	2899	715	3071	736	3239	756	3403	776	3561	794	3716	812	3866	829	4011	845	4151	860	4287	874	4419	888	4546	900	4668	912	4786	923	4899	933	5008	942	5112	951	5211
8000 [3775]	661	2735	684	2914	706	3089	727	3259	748	3424	767	3585	786	3742	804	3894	821	4041	837	4184	852	4322	867	4456	880	4585	893	4709	905	4829	916	4944	926	5055	936	5161	944	5263	952	5360
8200 [3869]	676	2935	698	3112	719	3284	740	3451	759	3615	778	3773	796	3927	813	4076	830	4221	845	4362	860	4497	873	4628	886	4755	888	4877	910	4994	920	5107	929	5216	938	5319	946	5418	953	5513
8400 [3964]	691	3139	712	3314	733	3484	752	3649	771	3809	789	3966	807	4117	823	4264	839	4406	853	4544	867	4677	880	4806	892	4930	904	5050	914	5165	924	5275	933	5381	941	5482	948	5579	954	5671
8600 [4058]	705	3349	726	3521	746	3688	765	3851	783	4009	800	4163	817	4312	833	4456	848	4596	862	4732	875	4862	887	4989	898	5110	909	5227	919	5340	928	5448	936	5551	943	5650	950	5744	955	5834
8800 [4153]	720	3563	740	3732	759	3897	777	4058	795	4213	812	4365	827	4511	842	4653	856	4791	870	4924	882	5052	894	5176	905	5295	915	5410	924	5520	932	5625	939	5726	946	5822	952	5914	956	6002
9000 [4247]	734	3782	754	3949	772	4111	790	4269	807	4422	823	4571	838	4715	852	4855	865	4990	878	5120	890	5246	901	5368	911	5484	920	5597	928	5704	936	5807	943	5906	948	6000	953	6089	958	6174
9200 [4341]	749	4005	768	4170	785	4330	802	4485	818	4636	834	4783	848	4924	862	5061	874	5194	886	5322	897	5445	907	5564	917	5679	925	5788	933	5894	940	5994	946	6090	951	6182	955	6269	959	6351
9400 [4436]	764	4234	782	4396	799	4553	815	4706	830	4855	845	4999	859	5138	871	5273	883	5403	895	5528	905	5649	914	5766	923	5878	931	5985	938	6088	944	6186	949	6279	953	6368	957	6453	960	6533
9600 [4530]	778	4467	796	4627	812	4782	827	4932	842	5078	856	5220	869	5356	881	5489	892	5616	903	5739	912	5858	921	5972	929	6081	936	6186	942	6286	948	6382	952	6473	956	6560	959	6642	961	6719

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

		F							G						
Drive Package															
Motor H.P. [W]		7.5 [5592.7]							10 [7457.0]						
Blower Sheave		BK130H							BK120H						
Motor Sheave		1VP71							1VP75						
Turns Open		0	1	2	3	4	5	6	0	1	2	3	4	5	6
RPM		I	935	909	882	857	831	805	I	1064	1037	1009	968	947	926

- 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.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—25 TON [87.9 kW] — 60 Hz — SIDEFLOW (CON'T.)

Airflow	AIRFLOW CORRECTION FACTORS *			COMPONENT AIRFLOW RESISTANCE					
				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
CFM [L/s]	Total kBtu/h	Sensible kBtu/h	Power kW	Resistance — Inches of Water [kPa]					
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 [4341]	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 [.07]	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 – RGEHYB SERIES					
		180ACF25 180ACF35	180ACG25 180ACG35	180ADF25 180ADF35	180ADG25 180ADG35
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

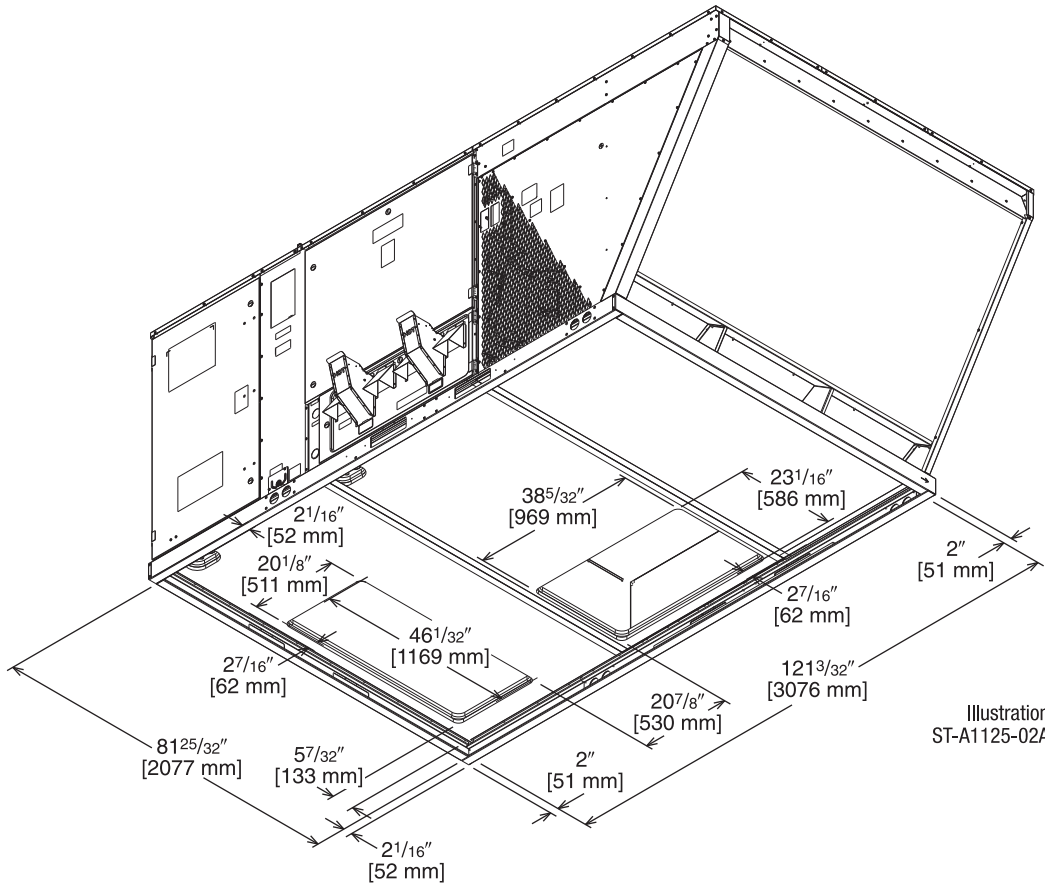
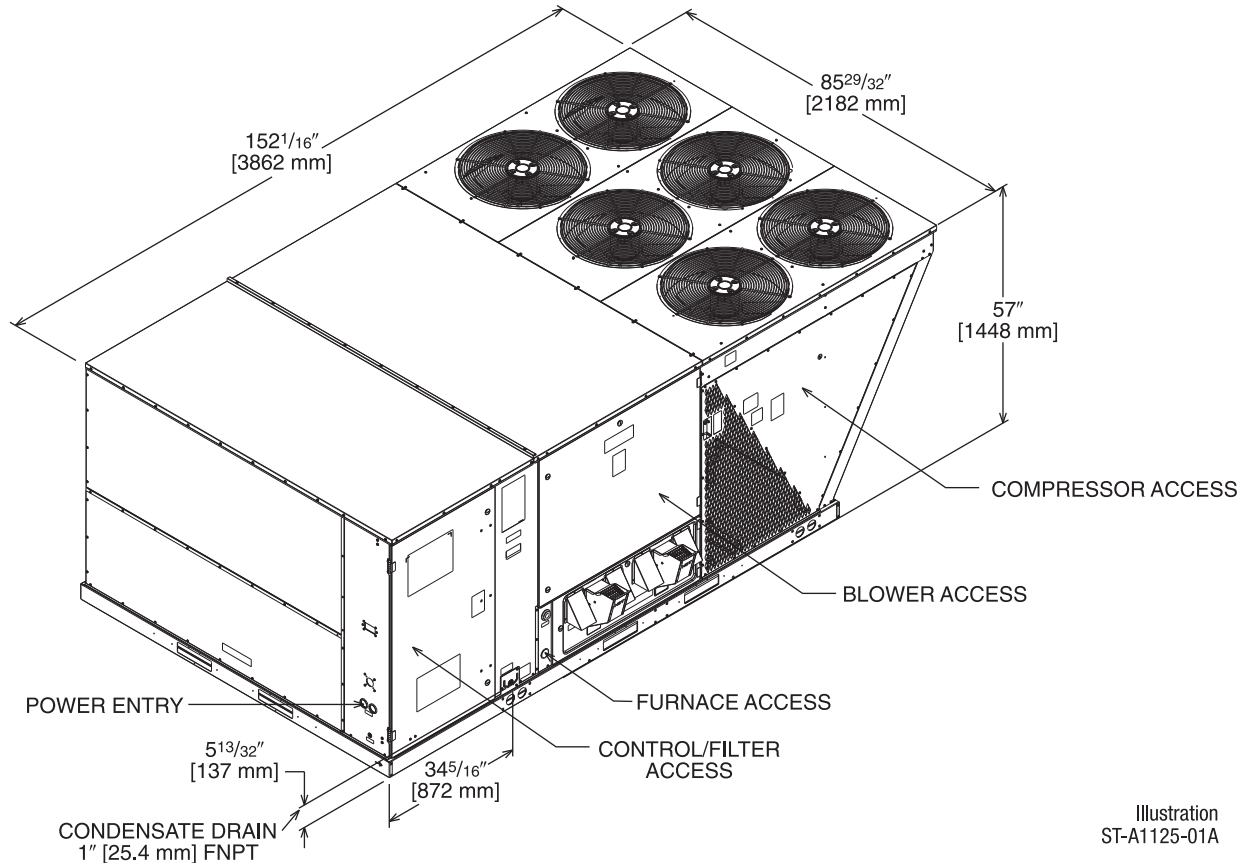
ELECTRICAL DATA – RGEHYB SERIES					
		210ACF25 210ACF35	210ACG25 210ACG35	210ADF25 210ADF35	210ADG25 210ADG35
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	Hz	60	60	60	60
	Minimum Circuit Ampacity	84/84	88/88	39	40
	Minimum 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 – RGEHYB SERIES					
		240ACF30 240ACF40	240ACG30 240ACG40 240ACH30 240ACH40	240ADF30 240ADF40	240ADG30 240ADG40 240ADH30 240ADH40
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 – RGEHYB SERIES					
		300ACF30 300ACF40	300ACG30 300ACG40	300ADF30 300ADF40	300ADG30 300ADG40
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

A2L REFRIGERANT INSTALLATION SAFETY DATA

Model		RGEHYB180	RGEHYB210	RGEHYB240	RGEHYB300	RGEHYB180 w/HumidiDry	RGEHYB240 w/HumidiDry	RGEHYB300 w/HumidiDry
Refrigerant Charge Weight (oz) Circuit 1/Circuit 2		142.4/146.4	161.6/168	212.8/206.4	228.8/216	255.36/160	300.8/220.8	316/221.6
Minimum Circulation		487	559	708	761	849	1000	1051
Altitude above Sea Level (Ft.)	Altitude Adjustment Factor	Minimum Total Space Area, T _{Amin} (Sq. Ft.)						
0	1.000	270	310	392	422	471	554	582
1000	1.025	277	317	402	432	482	568	597
2000	1.051	284	325	412	443	495	583	612
3000	1.078	291	334	423	455	507	598	628
4000	1.107	299	343	434	467	521	614	645
5000	1.138	307	352	446	480	536	631	663
6000	1.170	316	362	459	493	551	649	681
6500	1.187	320	368	466	501	559	658	691



BOTTOM VIEW

[] Designates Metric Conversions

SUPPLY AND RETURN DIMENSIONS FOR HORIZONTAL APPLICATIONS
(VIEW FROM REAR DUCT SIDE)

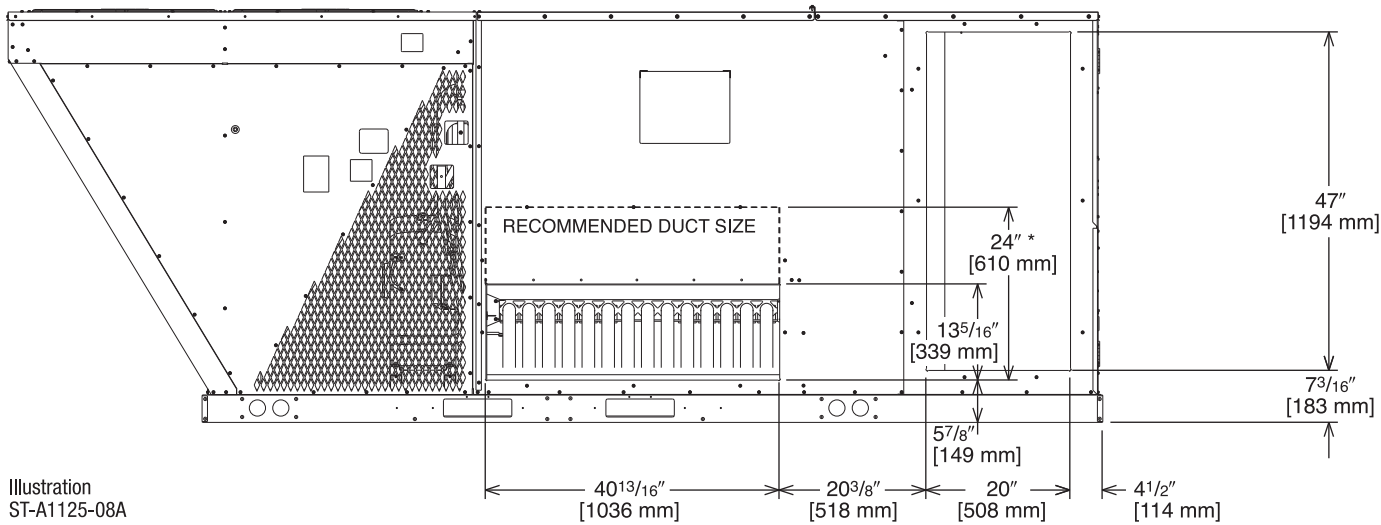


Illustration
ST-A1125-08A

* RECOMMENDED DUCT CONNECTION SIZE

SUPPLY AND RETURN DIMENSIONS FOR DOWNFLOW APPLICATIONS
(VIEW FROM BOTTOM UP)

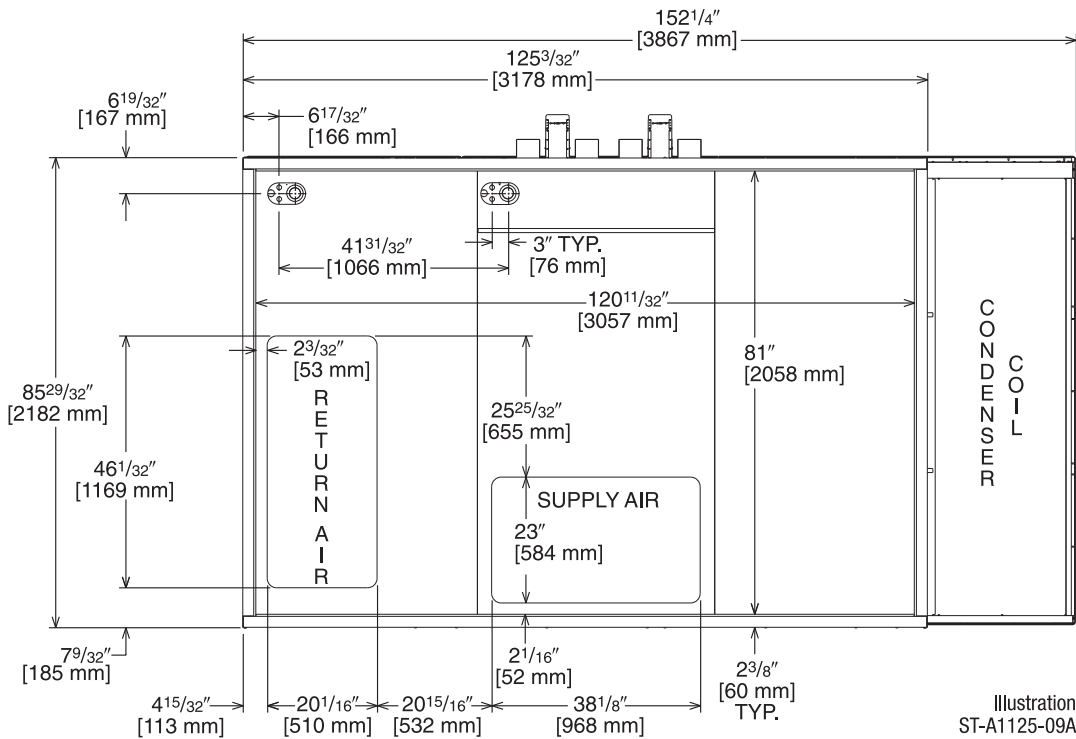
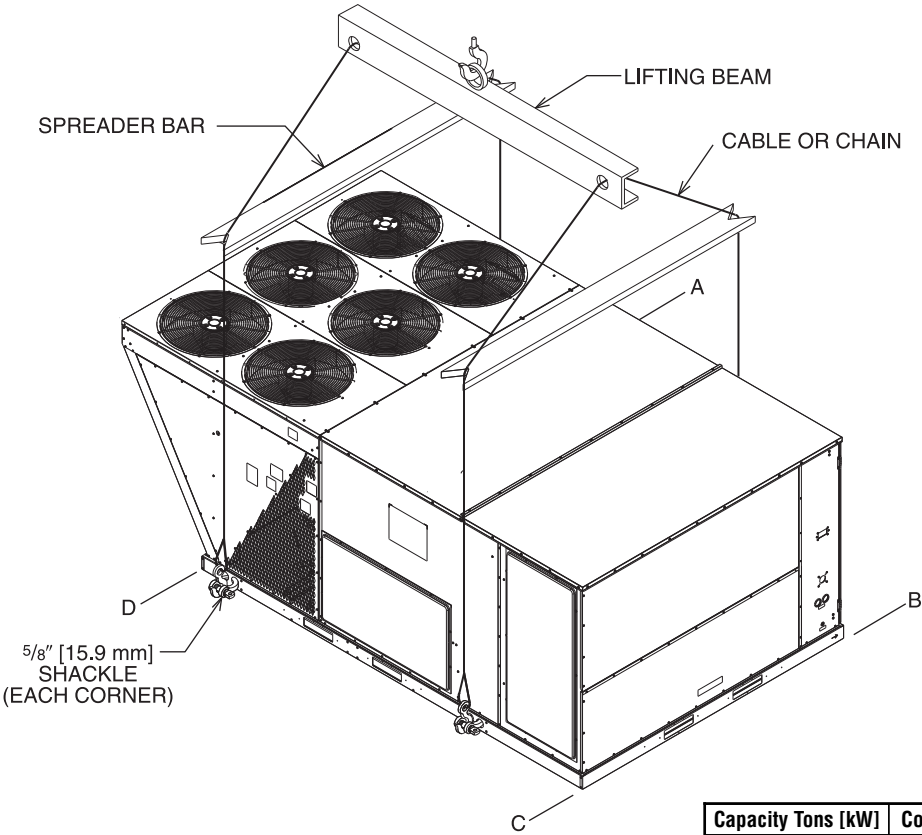
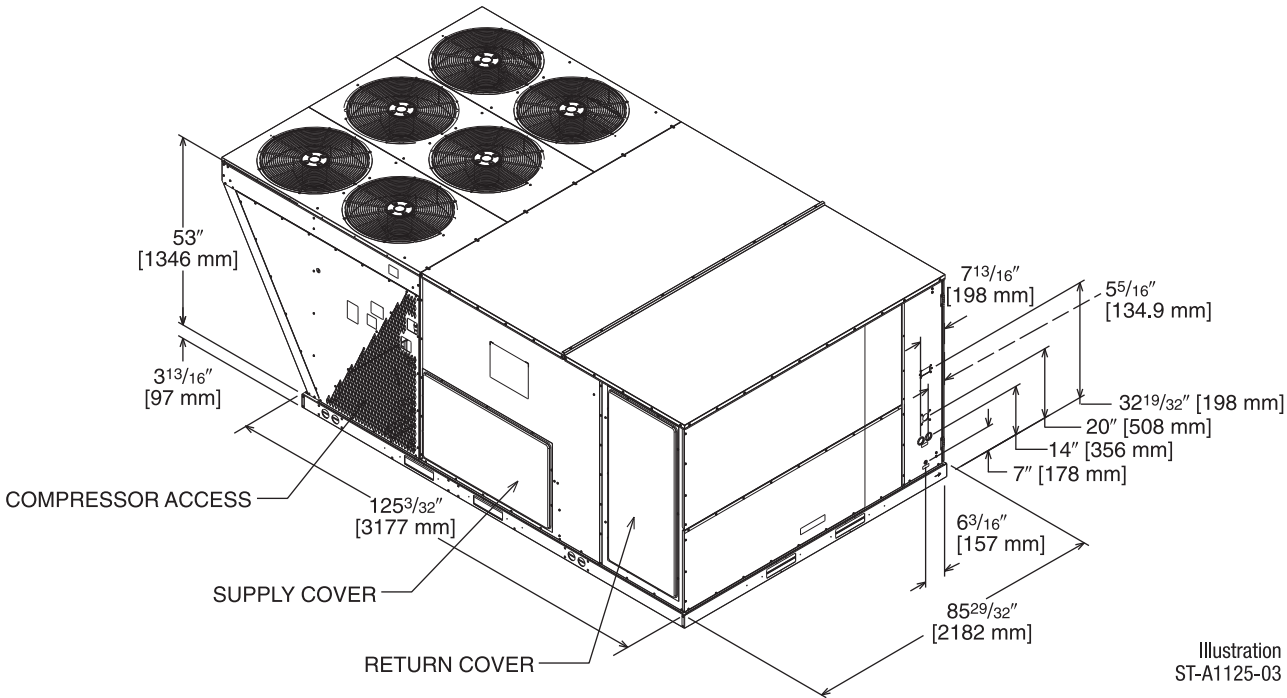


Illustration
ST-A1125-09A

[] Designates Metric Conversions

UNIT DIMENSIONS

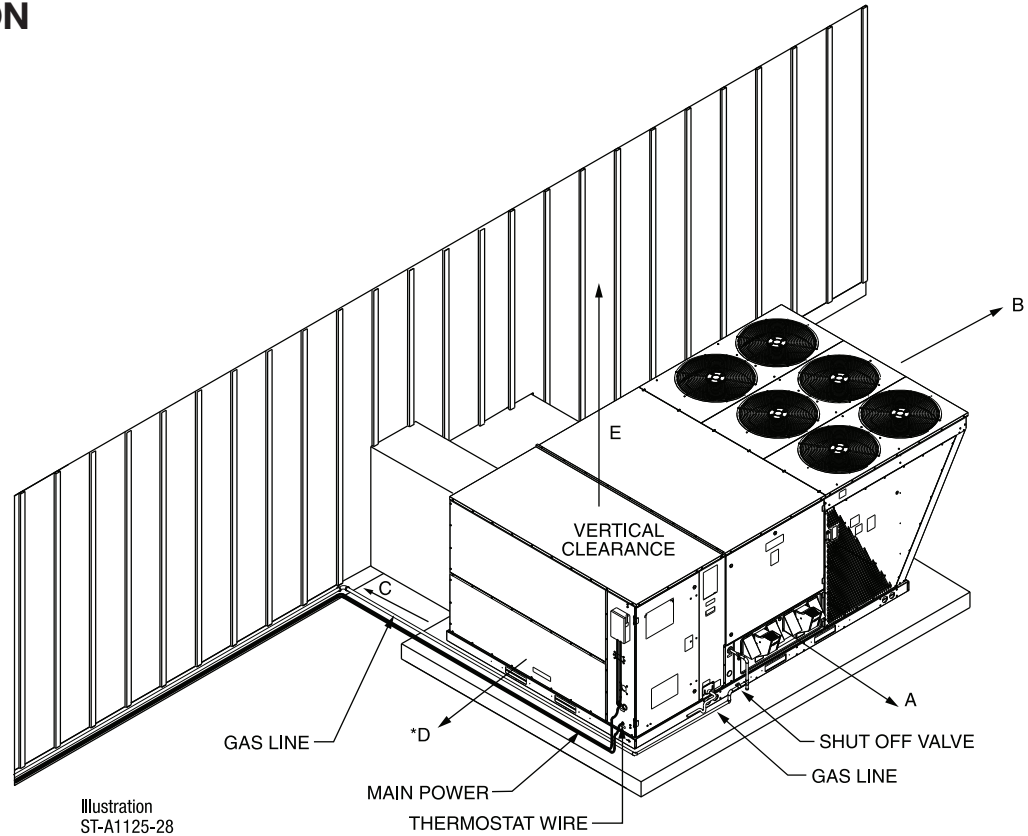


Capacity Tons [kW]	Corner Weights by Percentage			
	A	B	C	D
15-25 [52.8-87.9]	32%	27%	16%	24%

Corner weights measured at base of unit.

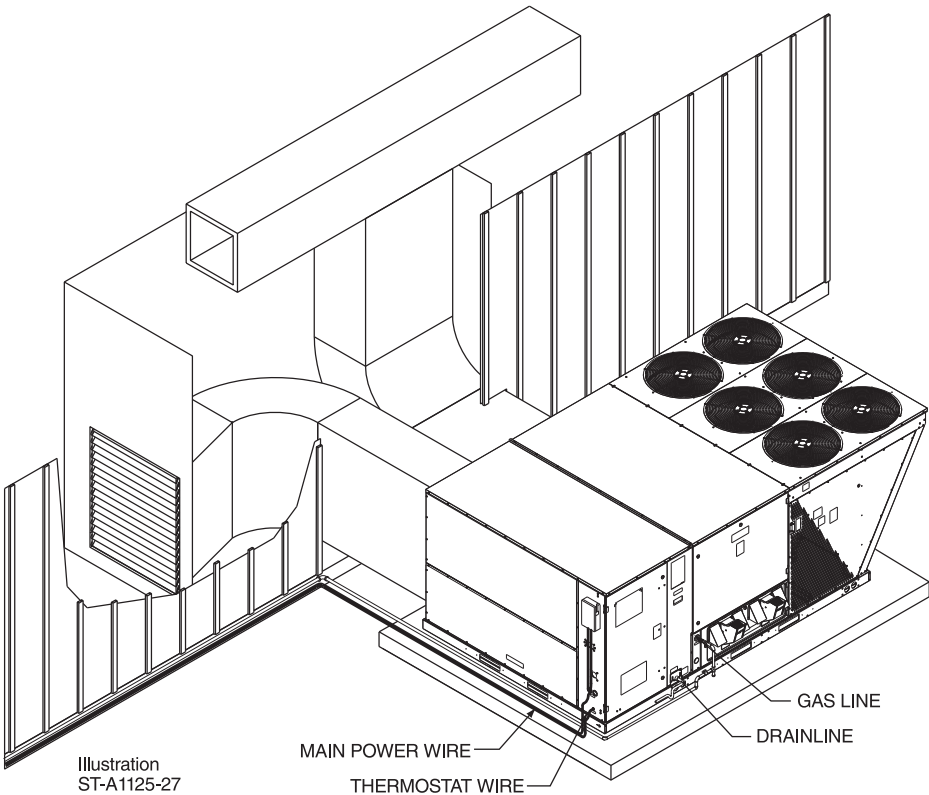
[] Designates Metric Conversions

SLAB INSTALLATION



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 Economizer. 48" [1219 mm] With Economizer +Without Horizontal Economizer, 42" [1067 mm] with Horizontal Economizer	



[] Designates Metric Conversions

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>Ruskin Rooftop Systems Economizer with Honeywell Controller</i>	AXRD-01RMDCM3	277 [125.6]	168 [76.2]	Yes
DDC Economizer with Single Enthalpy (Downflow) <i>Ruskin Rooftop Systems Economizer with Honeywell Controller w/ Smoke Detector</i>	AXRD-01RMDDM3	277 [125.6]	168 [76.2]	Yes
DDC Economizer with Single Enthalpy (Horizontal) <i>Ruskin Rooftop Systems Economizer with Honeywell Controller</i>	AXRD-01RMHCM3	333 [151.0]	301 [36.5]	No
Non-DDC Economizer with Single Enthalpy (Downflow) <i>Ruskin Rooftop Systems Economizer with Siemens Controller</i>	RXRD-51MHDAM3	277 [125.6]	168 [76.2]	Yes
Non-DDC Economizer with Single Enthalpy (Horizontal) <i>Ruskin Rooftop Systems Economizer with Siemens Controller</i>	RXRD-51MHHAM3	333 [151.0]	301 [36.5]	No
Economizer Universal DDC Interface Kit	RXXR-DDC02	40 [18.1]	34 [15.4]	Yes

Accessory	Model Number	Shipping Weight Lbs. [kg]	Installed Weight Lbs. [kg]	Factory Installation Available?
Comfort Alert (1 per Compressor) (DDC)	RXXR-AZ01	3 [1.4]	2 [0.9]	Yes
Communication Card, BACnet	RXXR-AY01	1 [0.5]	1 [0.5]	No
Communication Card, LonWorks	RXXR-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 ²	RXXR-AN01	2 [0.9]	1.5 [.7]	Yes
Dual Enthalpy, Temperature and Humidity Sensor (for Honeywell DDC)	RXXR-AV04	1 [0.5]	1 [0.5]	No
Dual Enthalpy, Temperature and Humidity Sensor (for Honeywell Non-DDC)	RXXR-BV02	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
Fresh Air Damper ¹ , Manual	AXRF-KFA1	61 [27.7]	52 [23.6]	No
Fresh Air Damper, Motorized (DDC)	RXXR-AW05	45 [20.4]	38 [17.2]	No
Hail Guard Louvers	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 (RRS)	RXXR-BGF05C	119 [54.0]	59 [26.8]	No
Power Exhaust (460V) Kit, Convertible (RRS)	RXXR-BGF05D	119 [54.0]	59 [26.8]	No
Roofcurb, 14"	RXKG-CBH14	184 [83.5]	176 [79.8]	No
Roofcurb Adapter to RXKG-CAF14	RXXR-CJCF14	555 [251.7]	505 [29.1]	No
Roofcurb Adapter to RXRK-E56	RXXR-CJCE56	465 [210.9]	415 [88.2]	No
Sensor, Carbon Dioxide (Wall Mount)	RXXR-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
Unfused Service Disconnect ²	RXXR-AP01	10 [4.5]	9 [4.1]	Yes

¹Motorized Kit and Manual Fresh Air Damper must be combined for a complete Motorized Outside Air Damper Selection.

²Only available on 15 and 17.5 ton models

[] 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

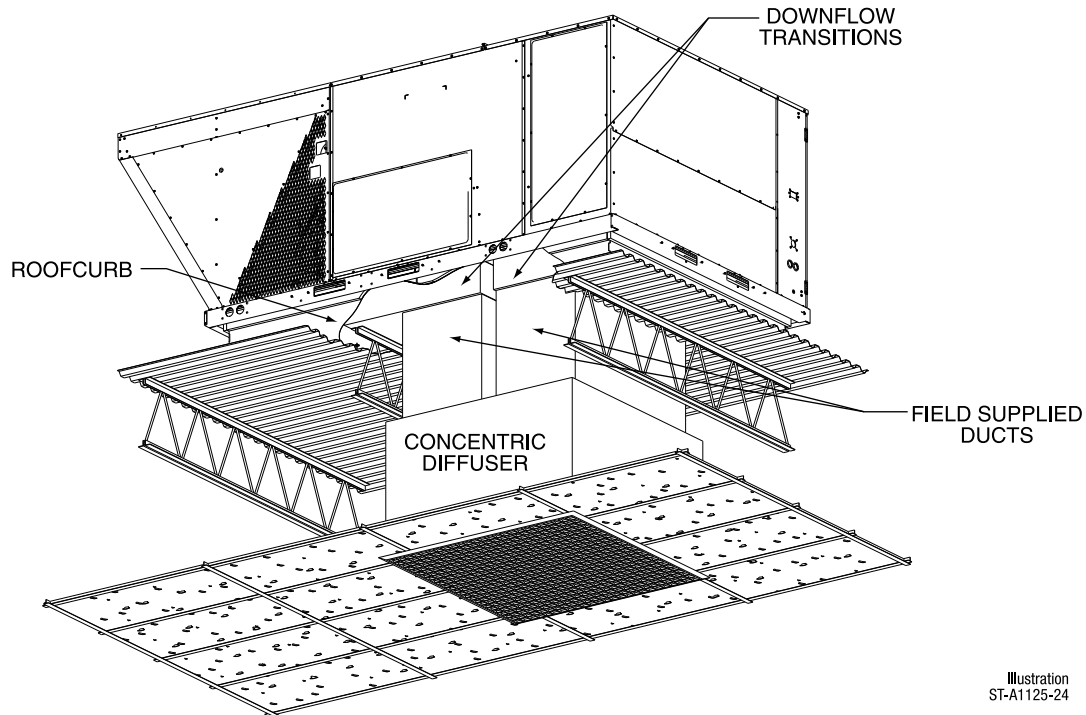


Illustration
ST-A1125-24

DOWNFLOW TRANSITION DRAWINGS

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

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

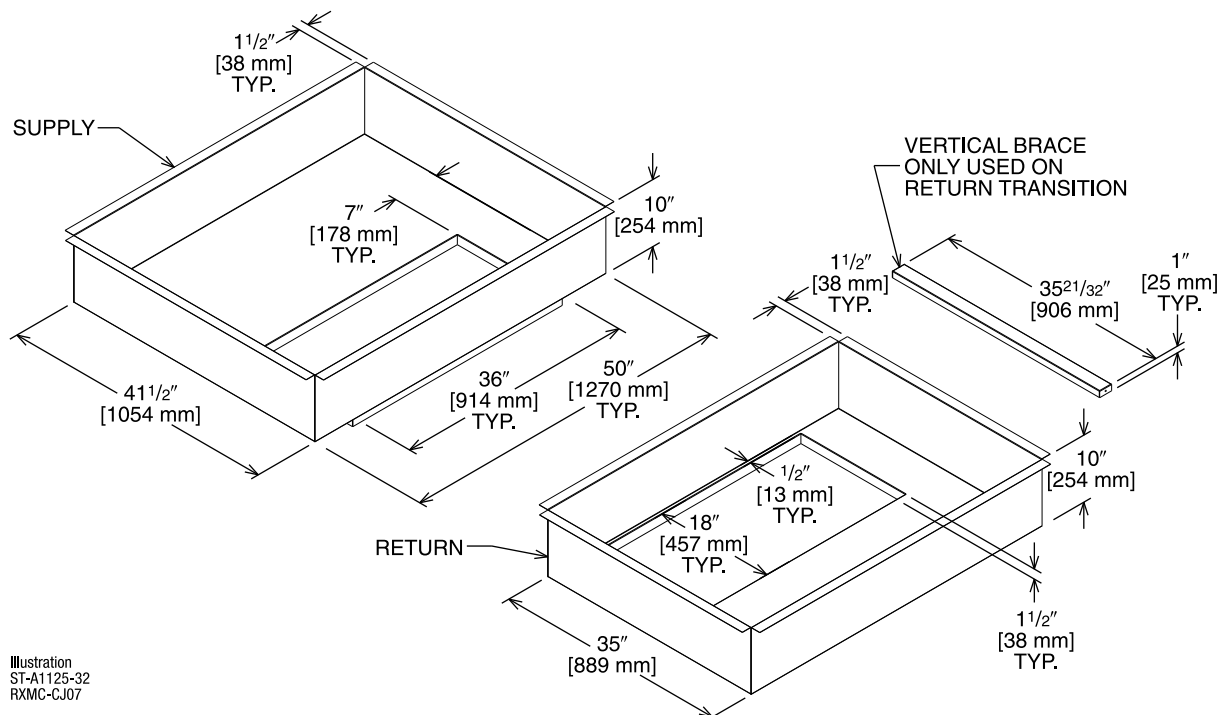


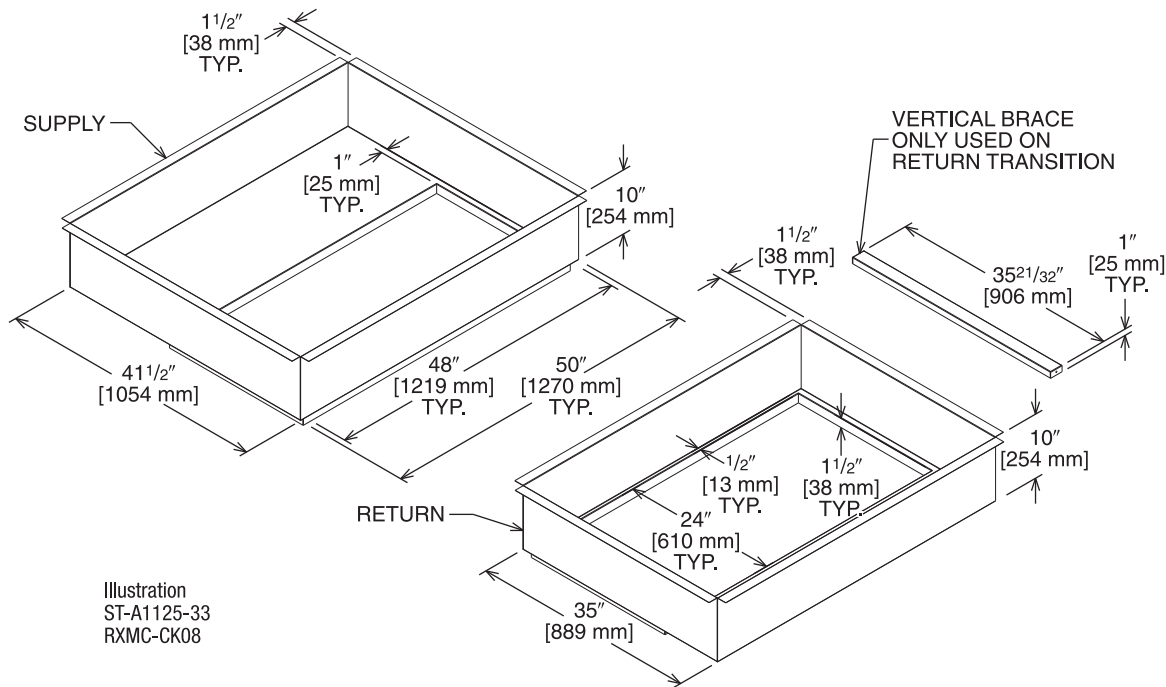
Illustration
ST-A1125-32
RXMC-CJ07

[] Designates Metric Conversions

DOWNFLOW TRANSITION DRAWINGS (CONTINUED)

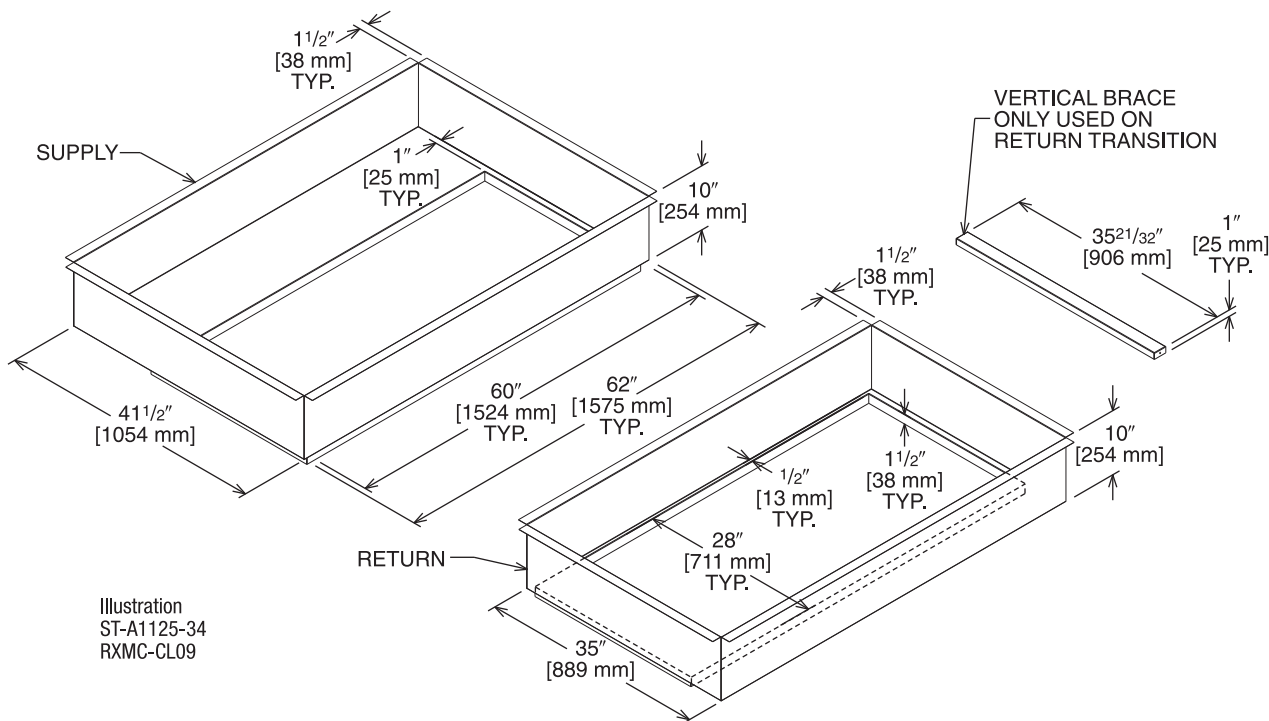
RXMC-CK08 - Concentric Adapter/Transition (20 ton)

- Used with RXRN-AD86 Concentric Diffusers



RXMC-CL09 - Concentric Adapter/Transition (25 ton)

- Used with RXRN-AD88 Concentric Diffusers

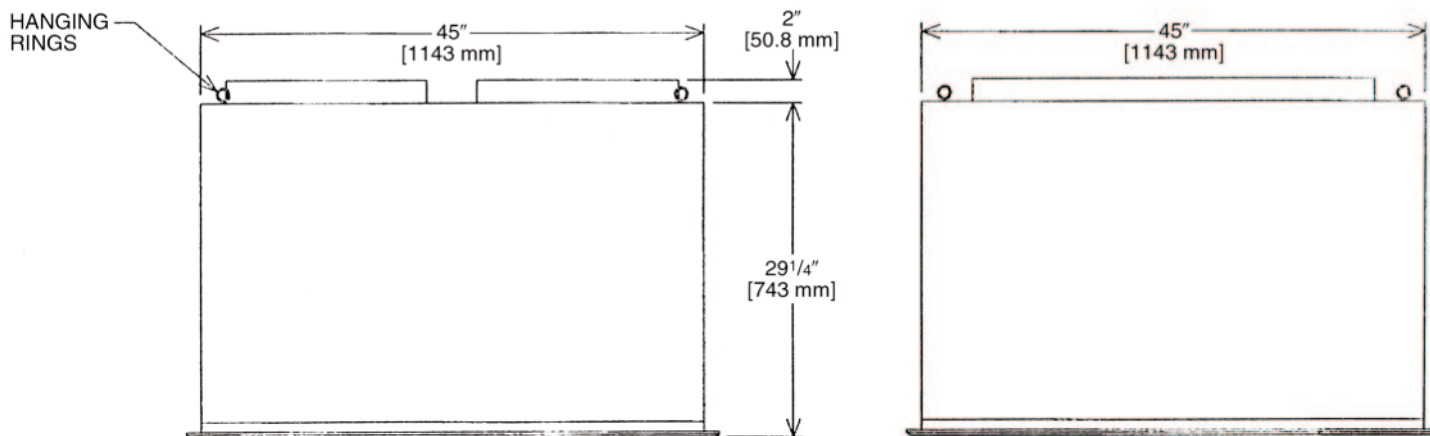
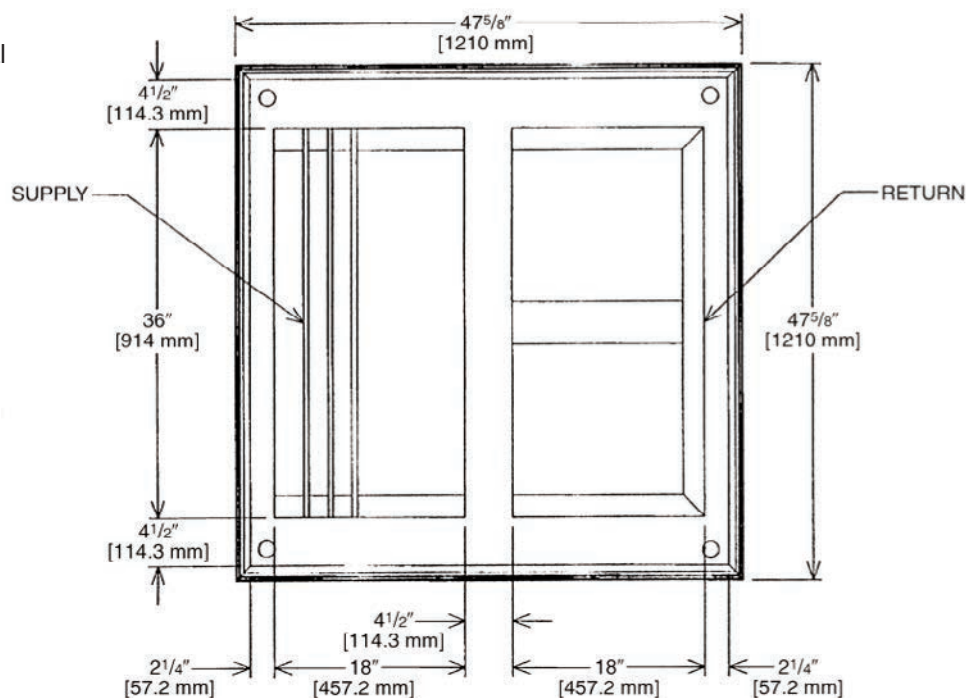


[] Designates Metric Conversions

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

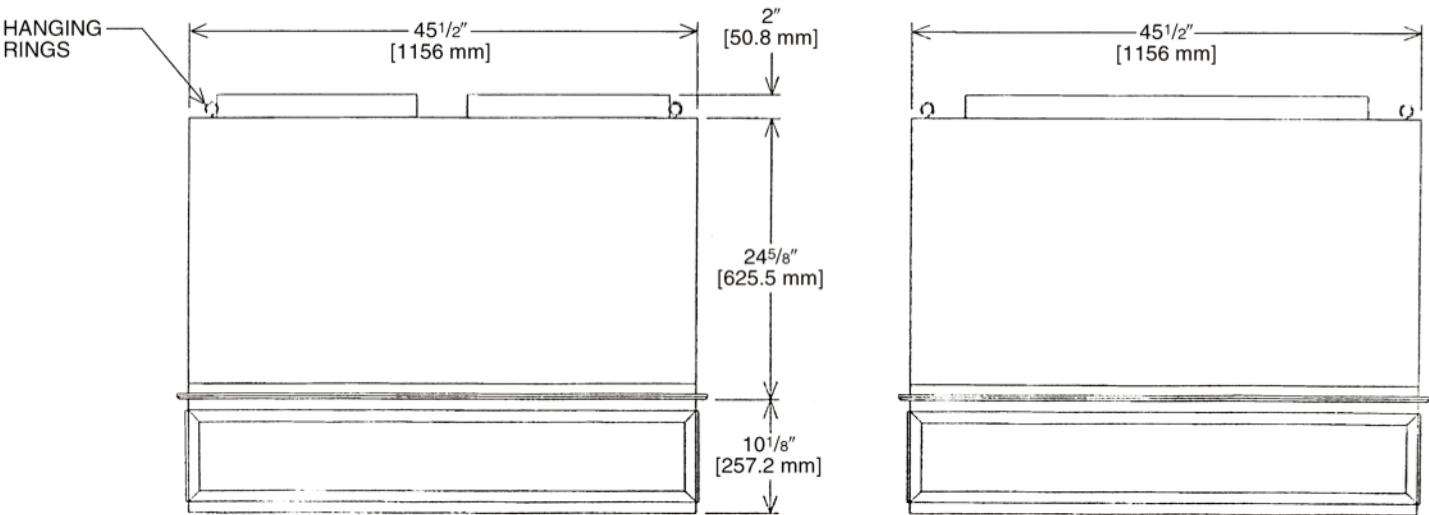
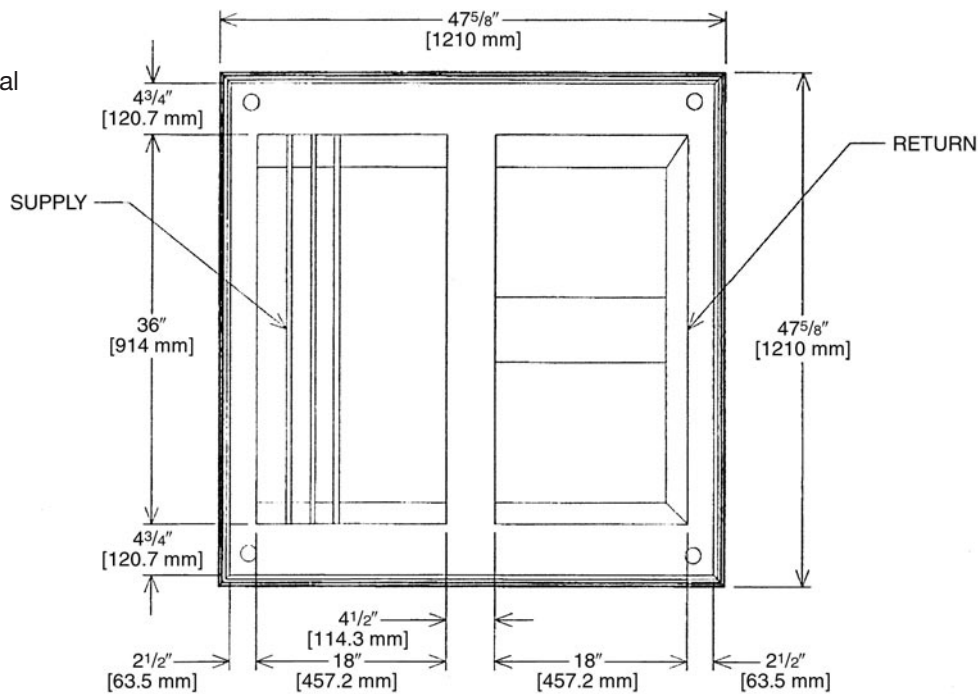
PART NUMBER	CFM [L/s]	STATIC PRESSURE	THROW FEET	NECK VELOCITY	JET VELOCITY
RXRN-AD80	5600 [2643]	0.36	28-37	1000	2082
	5800 [2737]	0.39	29-38	1036	2156
	6000 [2832]	0.42	40-50	1071	2230
	6200 [2926]	0.46	42-51	1107	2308
	6400 [3020]	0.50	43-52	1143	2379
	6600 [3115]	0.54	45-56	1179	2454

[] 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

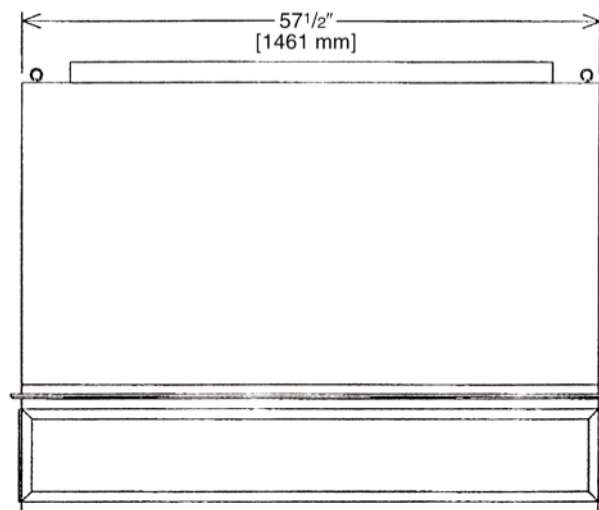
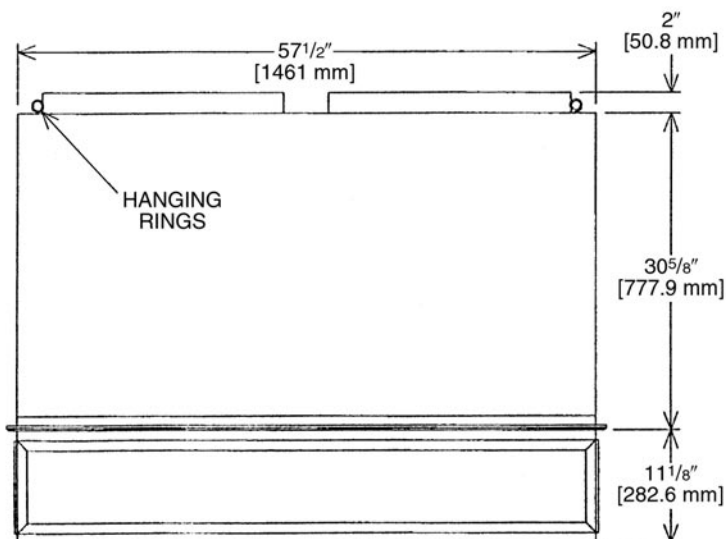
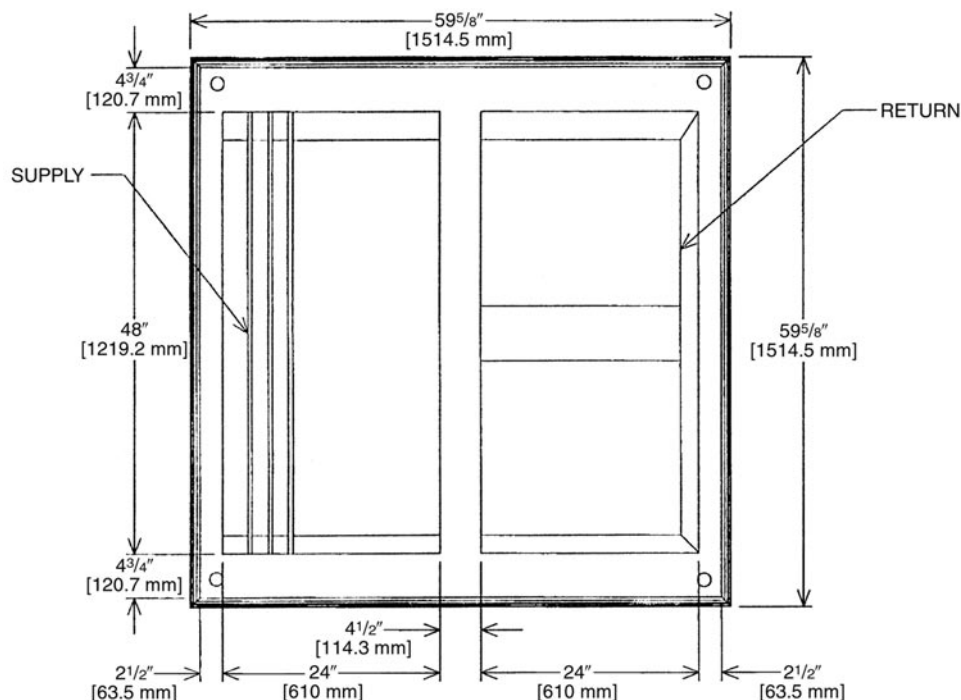
PART NUMBER	CFM [L/s]	STATIC PRESSURE	THROW FEET	NECK VELOCITY	JET VELOCITY
RXRN-AD81	5600 [2643]	0.36	39-49	920	920
	5800 [2737]	0.39	42-51	954	954
	6000 [2832]	0.42	44-54	1022	1022
	6200 [2926]	0.46	45-55	1056	1056
	6400 [3020]	0.50	46-55	1090	1090
	6600 [3115]	0.54	47-56	1124	1124

[] 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

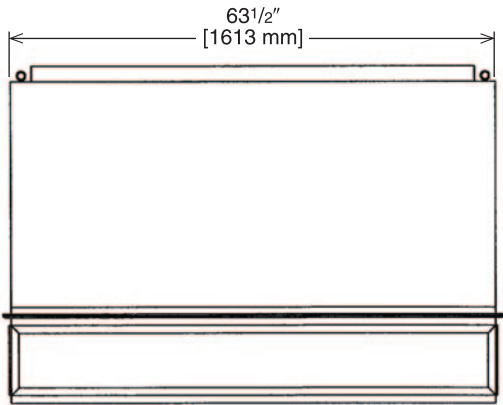
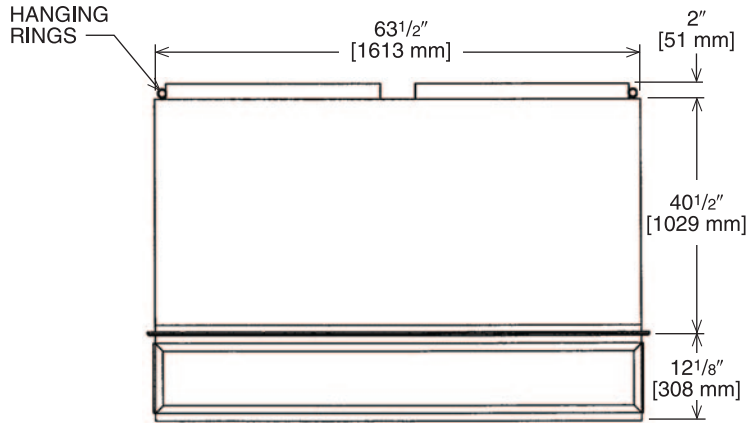
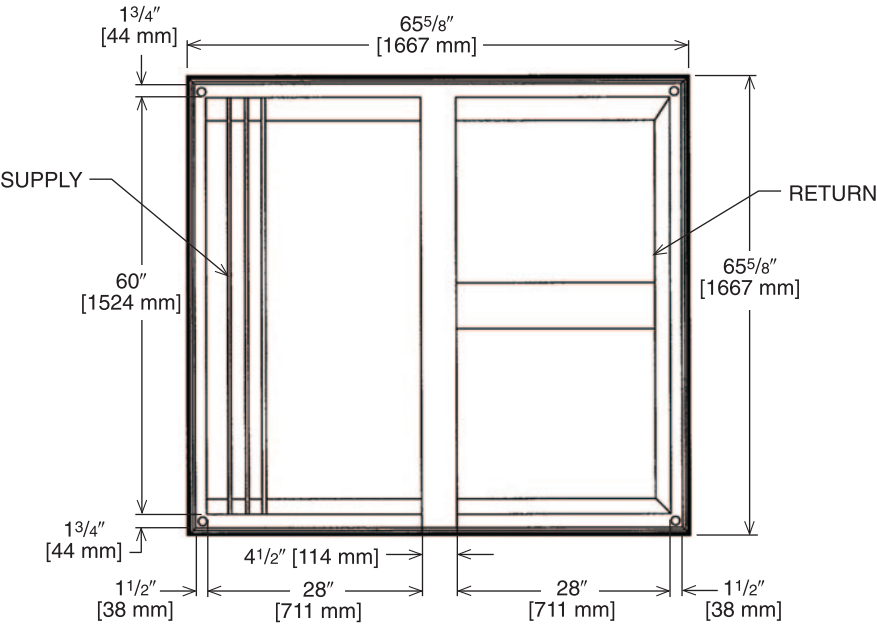
PART NUMBER	CFM [L/s]	STATIC PRESSURE	THROW FEET	NECK VELOCITY	JET VELOCITY
RXRN-AD86	7200 [3398]	0.39	33-38	827	827
	7400 [3492]	0.41	35-40	850	850
	7600 [3587]	0.43	36-41	873	873
	7800 [3681]	0.47	38-43	896	896
	8000 [3776]	0.50	39-44	918	918
	8200 [3870]	0.53	41-46	941	941
	8400 [3964]	0.56	43-49	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) RUSKIN ROOFTOP SYSTEMS ECONOMIZER WITH HONEYWELL JADE CONTROLLER

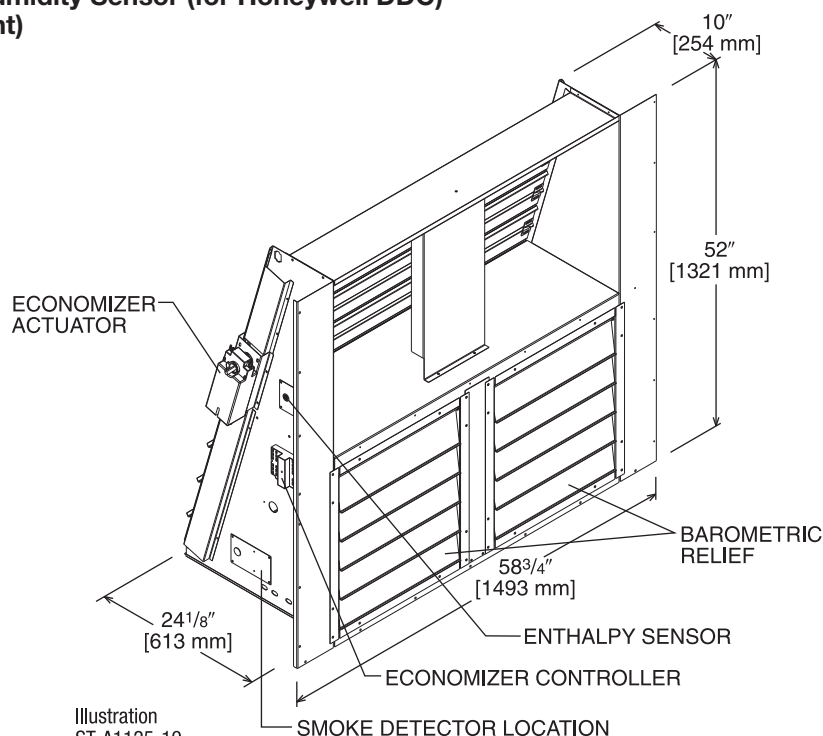
Factory or Field-Installed

AXRD-01RMDCM3

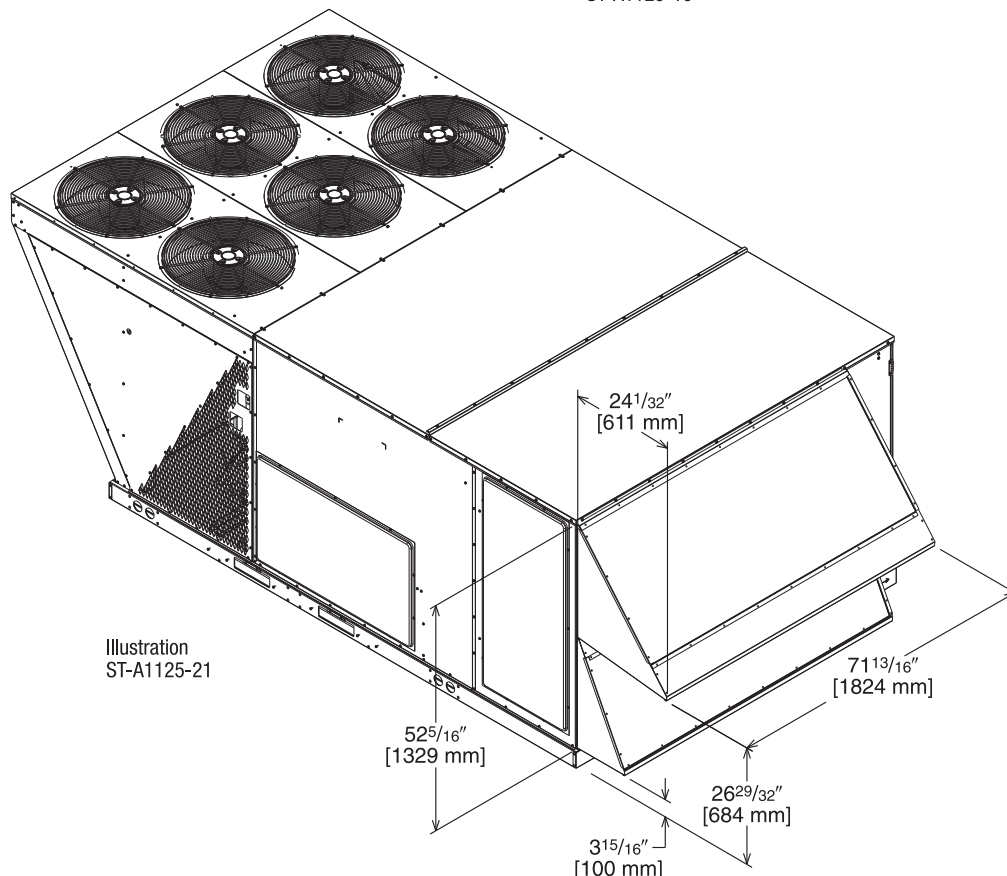
RXXR-AV04—Dual Enthalpy, Temperature and Humidity Sensor (for Honeywell DDC)

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



TOLERANCE ± .125



[] Designates Metric Conversions

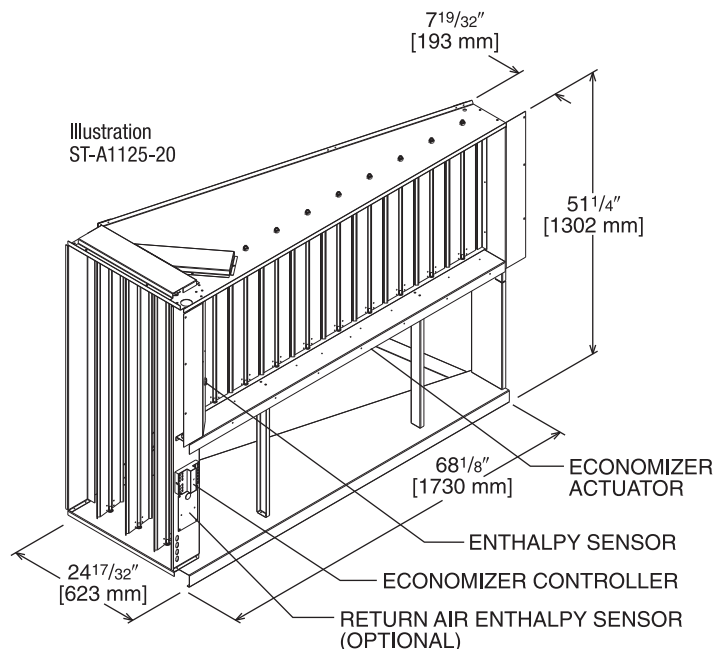
DDC ECONOMIZER WITH SINGLE ENTHALPY (DOWNFLOW) RUSKIN ROOFTOP SYSTEMS ECONOMIZER WITH HONEYWELL CONTROLLER & SMOKE DETECTOR Factory or Field-Installed

AXRD-01RMDDM3

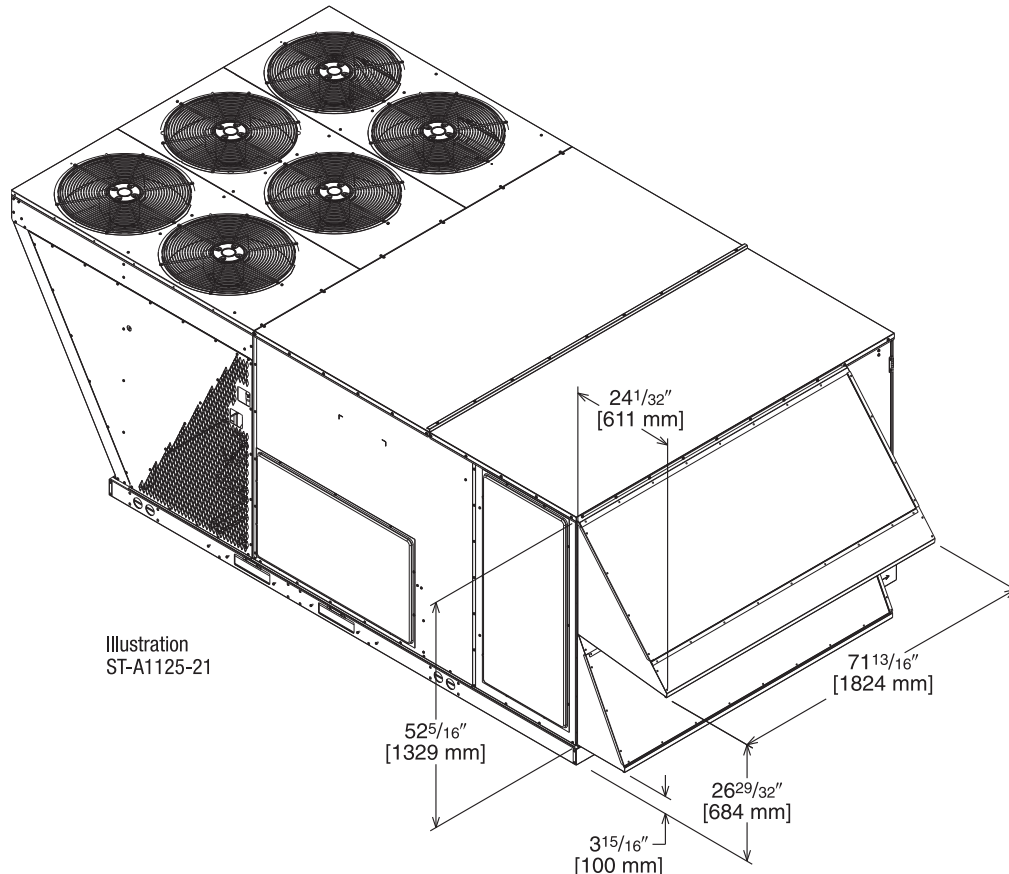
RXXR-AV04—Dual Enthalpy, Temperature and Humidity Sensor (for Honeywell DDC)

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) RUSKIN ROOFTOP SYSTEMS ECONOMIZER WITH HONEYWELL CONTROLLER

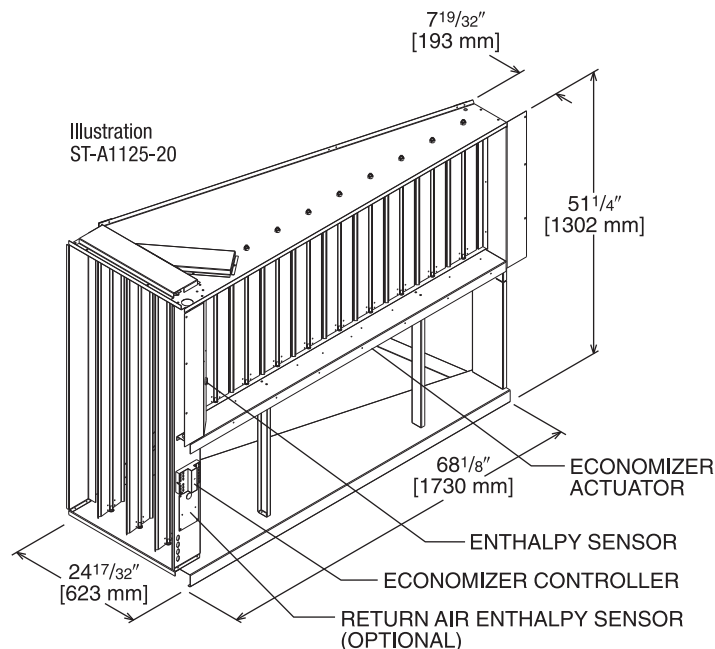
Field-Installed Only

AXRD-01RMHCM3

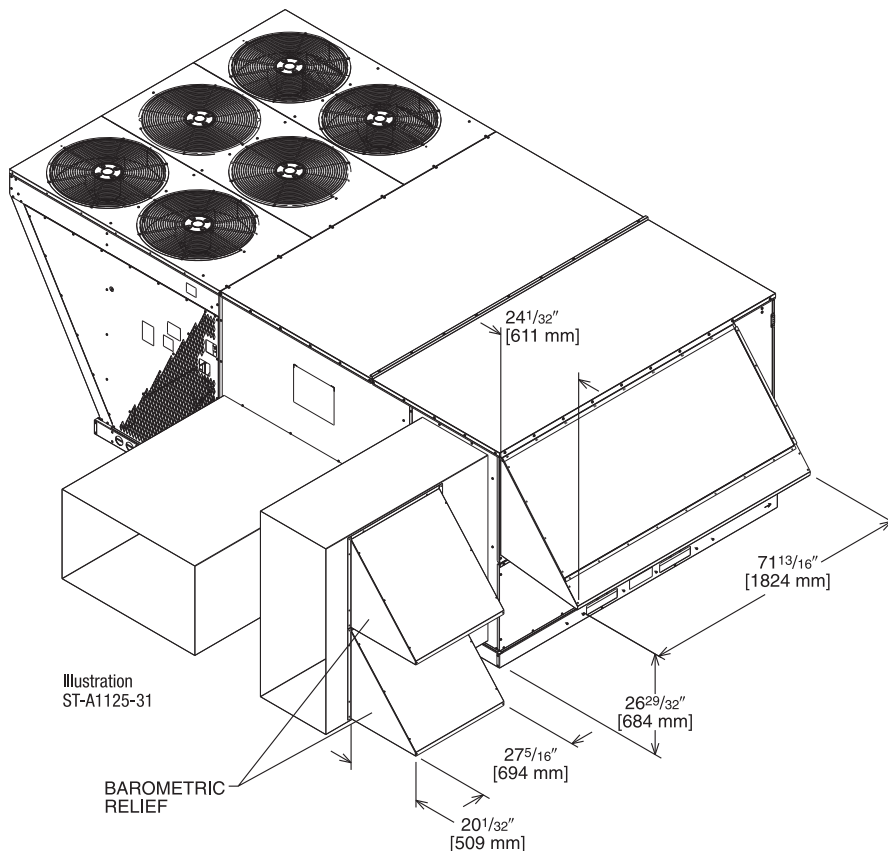
RXXRX-AV04—Dual Enthalpy, Temperature and Humidity Sensor (for Honeywell DDC)

RXXRX-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



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[] Designates Metric Conversions

NON-DDC ECONOMIZER WITH SINGLE ENTHALPY (DOWNFLOW) RUSKIN ROOFTOP SYSTEMS ECONOMIZER WITH SIEMENS CONTROLLER

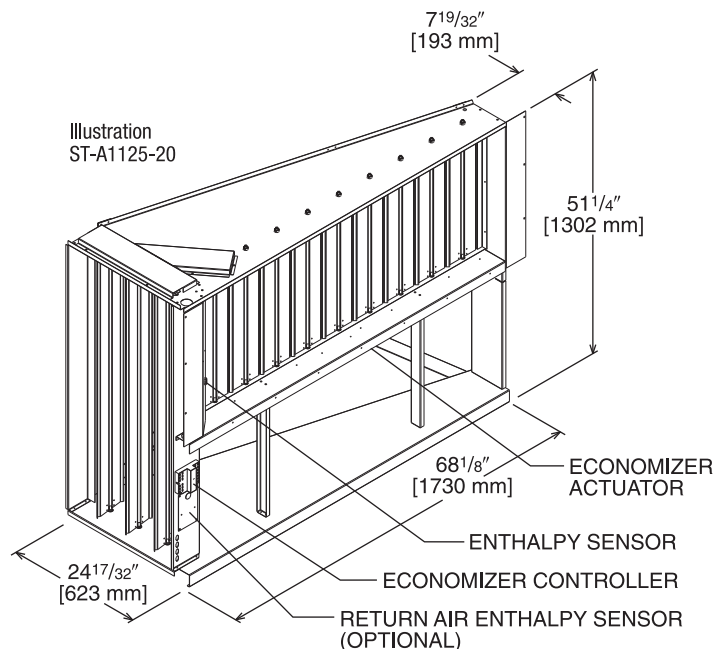
Factory or Field-Installed

RXRD-51MHDAM3

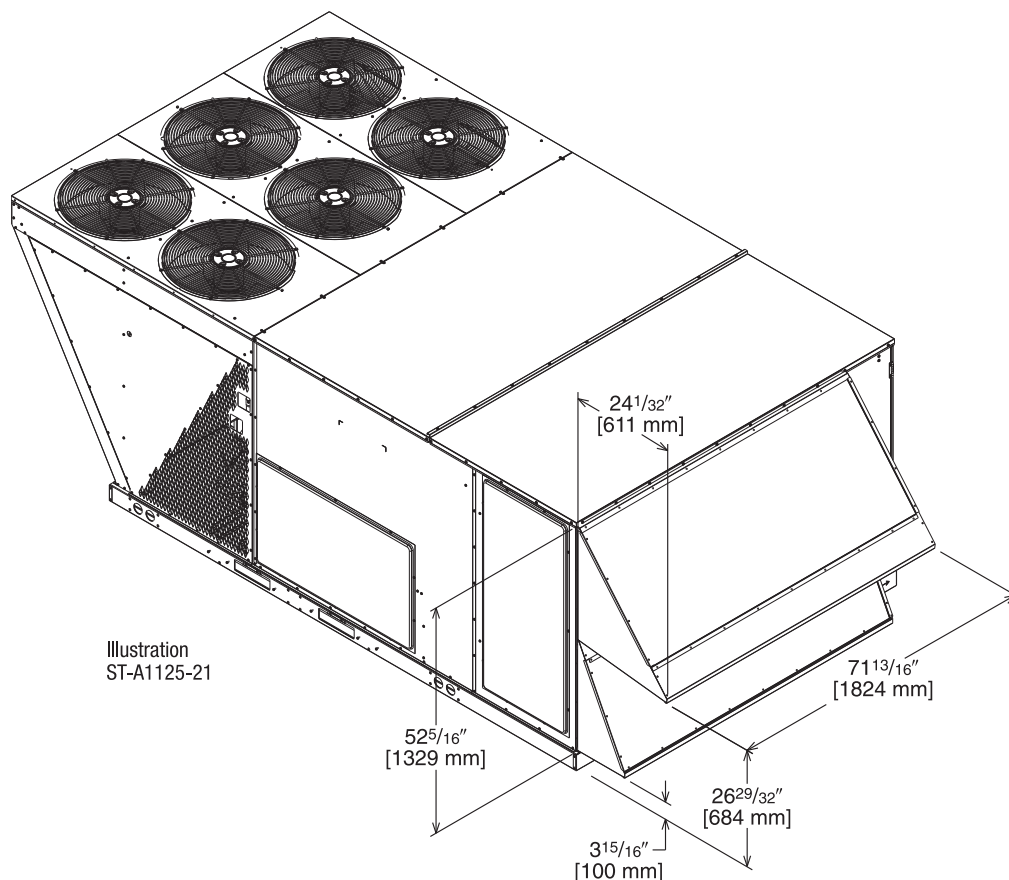
PD555460-Dual Enthalpy, Temperature and Humidity Sensor (for Siemens Non-DDC)

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
- 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 (RXXR-DDC02)



TOLERANCE $\pm .125$



[] Designates Metric Conversions

NON-DDC ECONOMIZER WITH SINGLE ENTHALPY (HORIZONTAL) RUSKIN ROOFTOP SYSTEMS ECONOMIZER WITH SIEMENS CONTROLLER

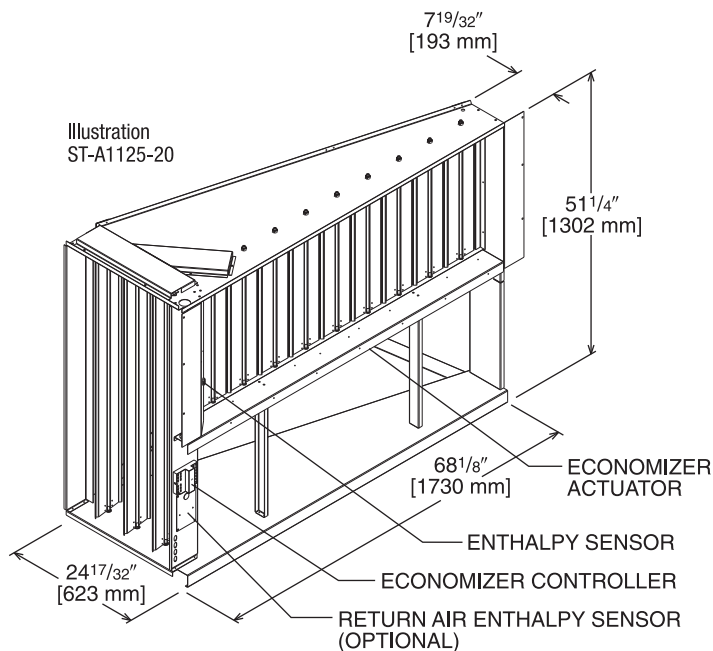
Field-Installed Only

RXRD-51MHHAM3

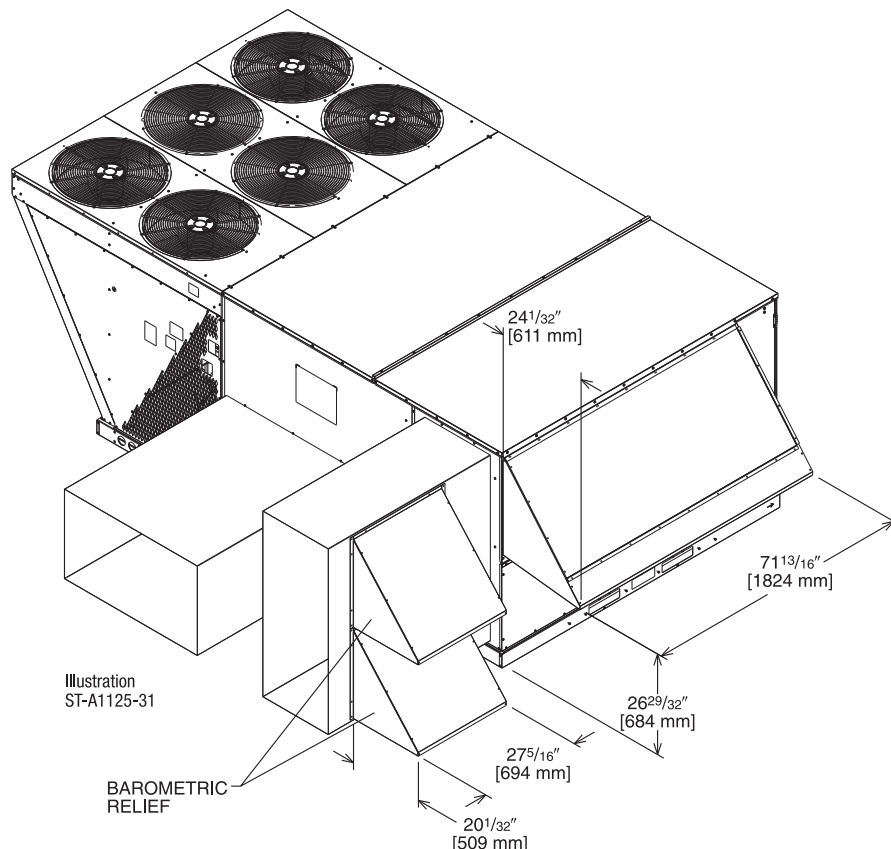
PD555460-Dual Enthalpy, Temperature and Humidity Sensor (for Siemens Non-DDC)

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

- Features **Siemens** Controls
- Available as a Field Installed Accessory Only
- 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)



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[] 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 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

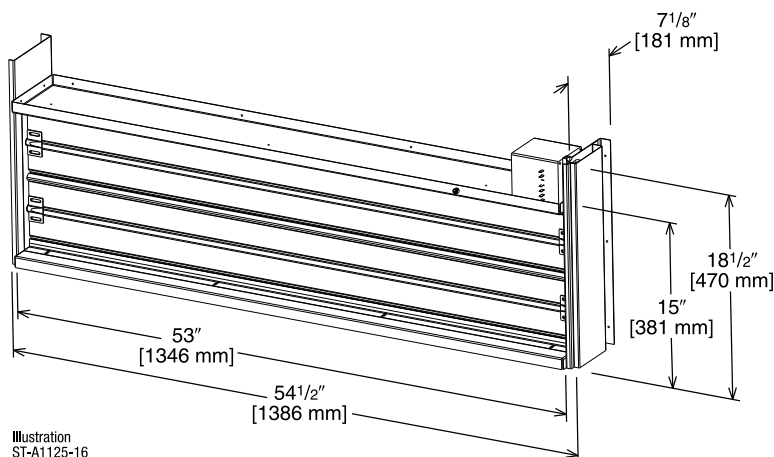


Illustration
ST-A1125-16

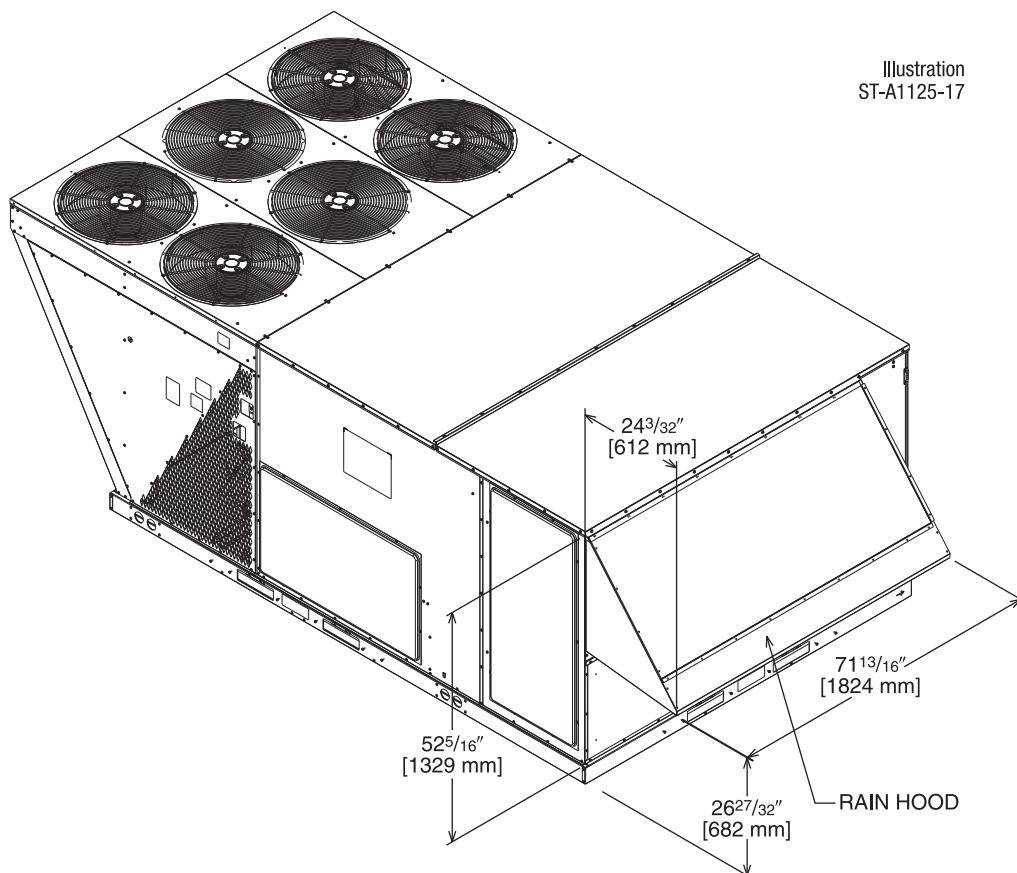


Illustration
ST-A1125-17

[] Designates Metric Conversions

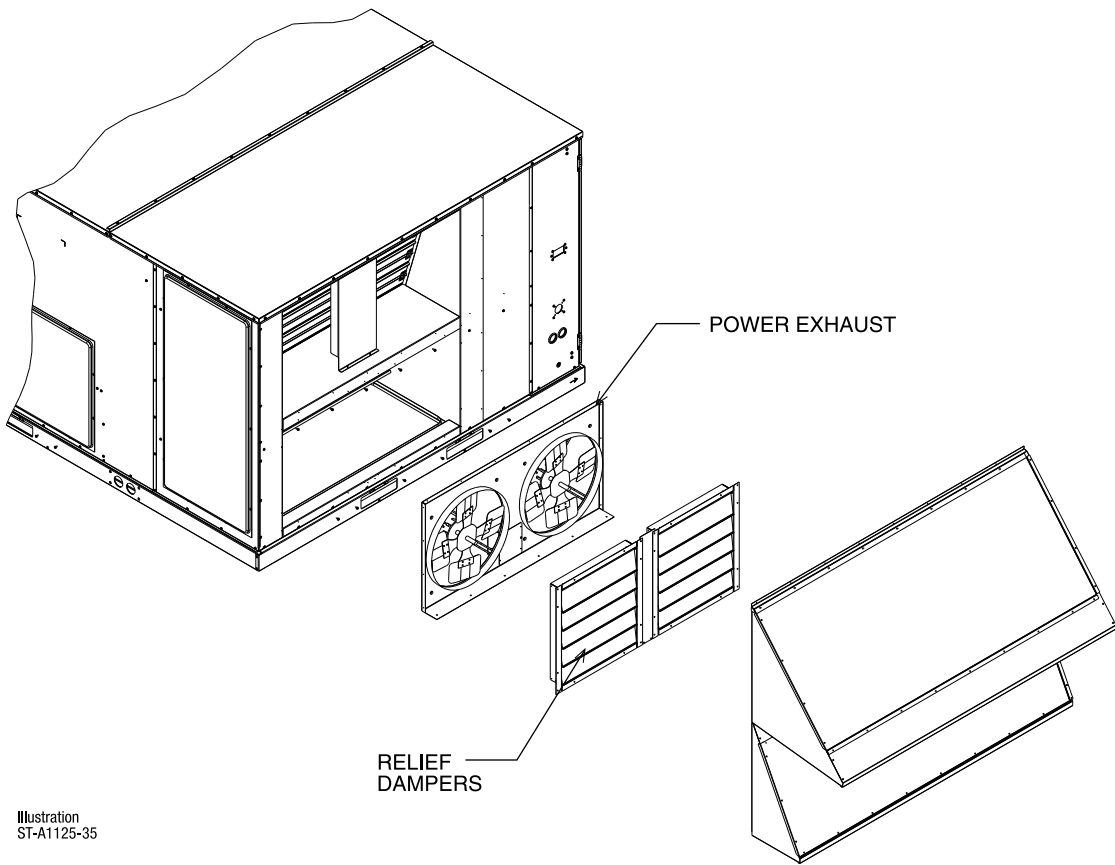
POWER EXHAUST KIT, CONVERTIBLE

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



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

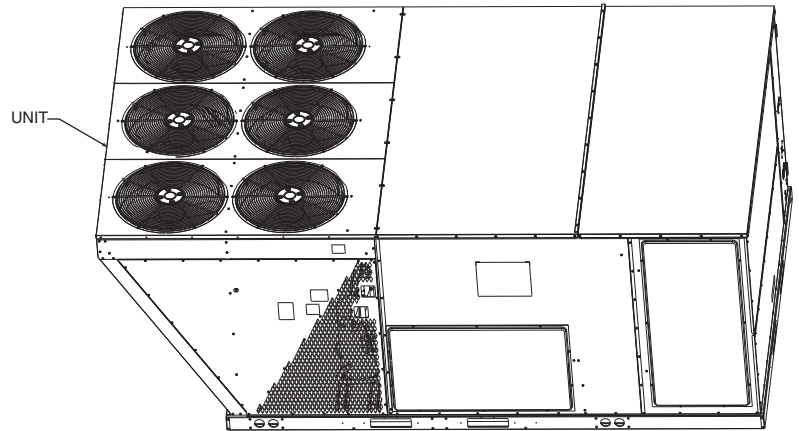
NOTES: ① Power exhaust is factory set on high speed motor tap. [] Designates Metric Conversions
② CFM is per fan at 0" w.c. external static pressure.

ROOFCURBS (Full Perimeter)

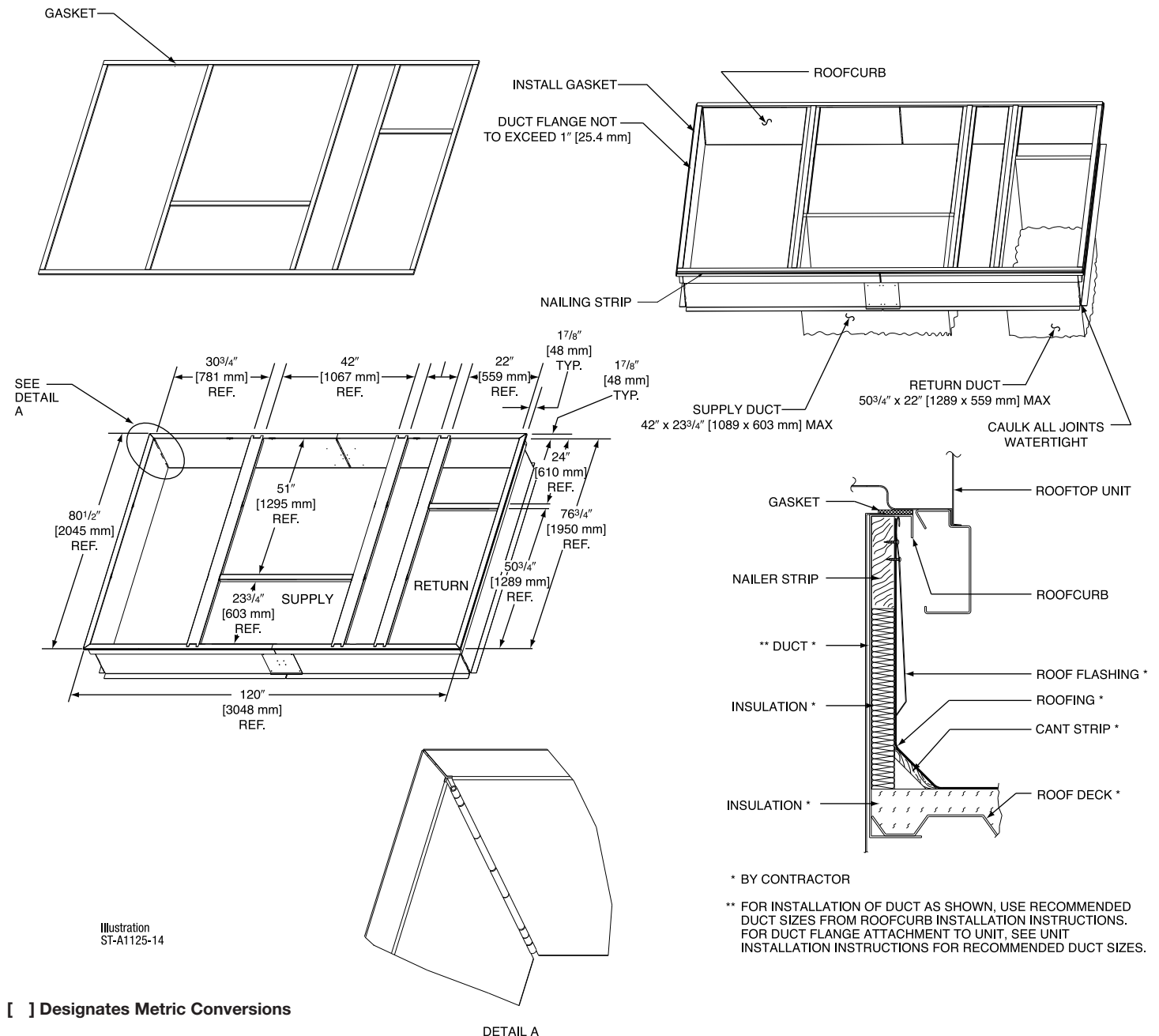
RXKG-CBH14

- Friedrich®'s new roofcurb designs can be utilized on 15, 17.5, 20, & 25 ton [52.8, 61.5, 70.3 & 87.9 kW] Resolute 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

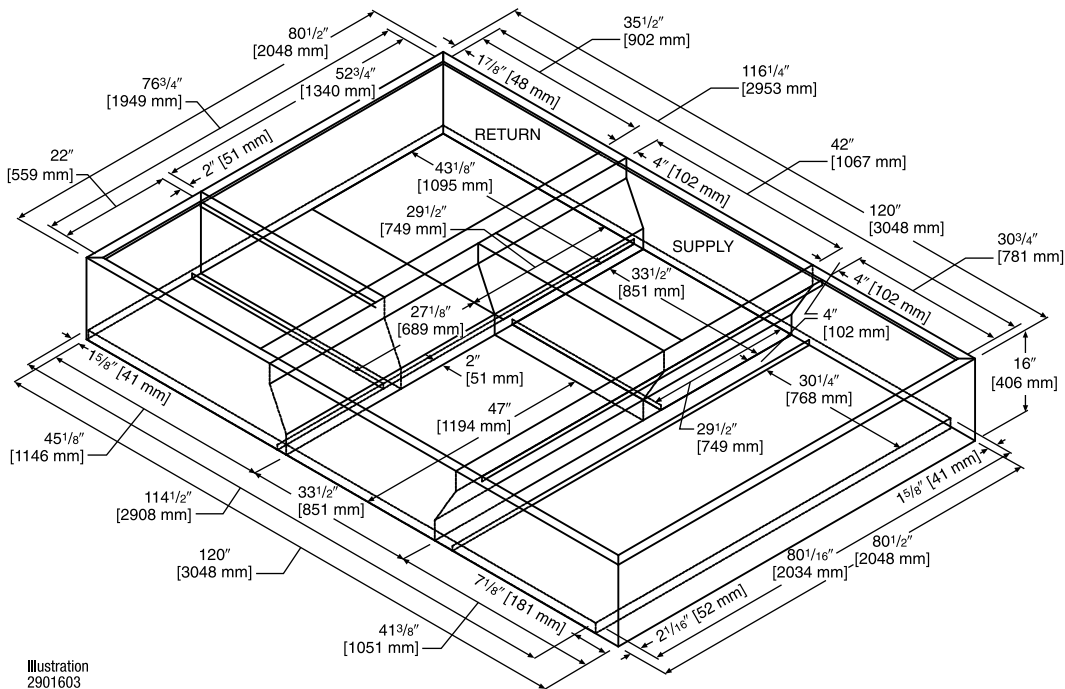
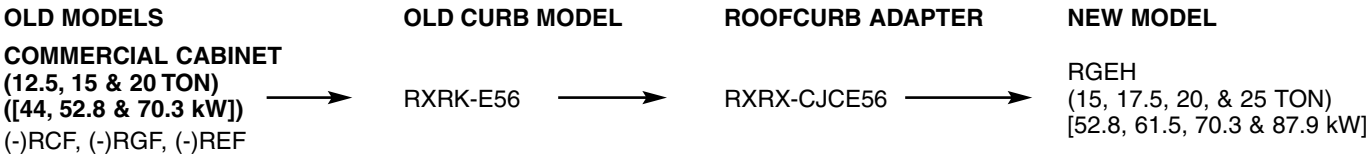
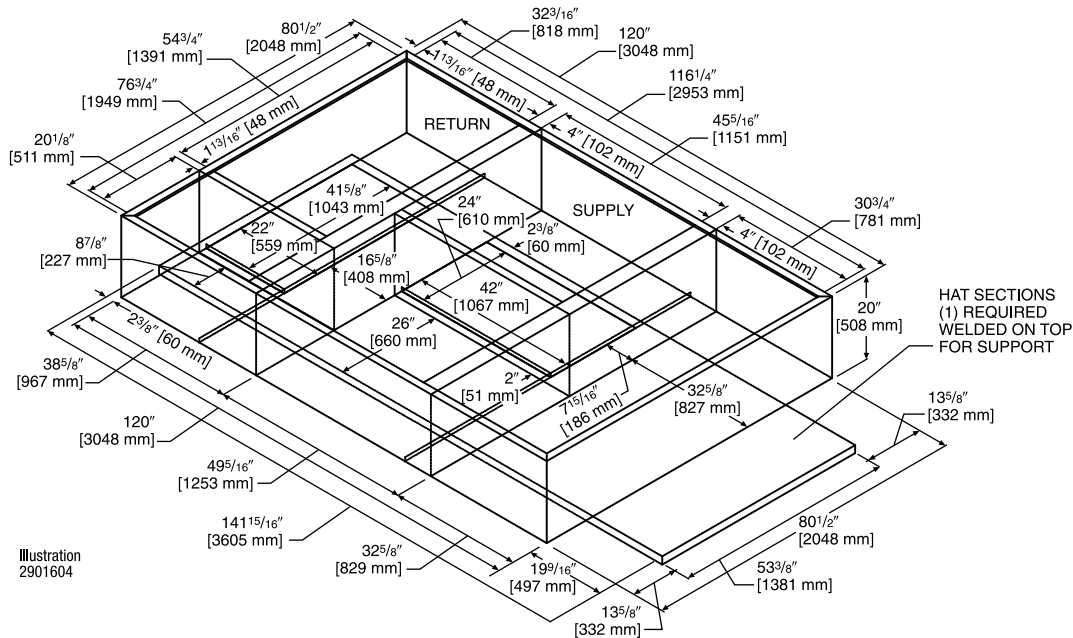
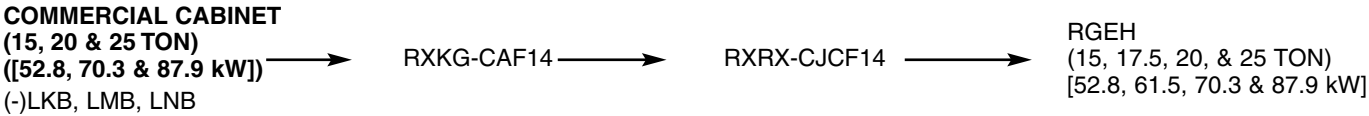


ROOFCURB ASSEMBLY



[] Designates Metric Conversions

ROOFCURB ADAPTER



[] Designates Metric Conversions

Guide Specifications RGEH – 180 – 300

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GAS 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 gas and 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 single piece top panel over indoor section.

J. Gas Connections:

- i. All gas piping connecting to unit gas valve shall enter the unit cabinet at a single location on side of unit (horizontal plane).
- ii. Thru-the-base capability:
 - a. Standard unit shall have a thru-the-base gas-line location using a raised, embossed portion of the unit basepan.
 - b. No basepan penetration, other than those authorized by the manufacturer, is permitted.

K. 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.

L. 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 $\pm 10\%$ 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 (090-150 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 both heating and cooling modes 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. Operation is slightly different between cooling and heating modes.
- 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. Compressor shall have molded electrical plug.
- 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 Gas Heat:

- A. Shall have standard two stage gas heat.
- B. Heat exchanger shall be an induced draft design. Positive pressure heat exchanger designs shall not be allowed.
- C. Shall incorporate a direct-spark ignition system and redundant main gas valve.
- D. Heat exchanger design shall allow combustion process condensate to gravity drain; maintenance to drain the gas heat exchanger shall not be required.
- E. Gas supply pressure at the inlet to the rooftop unit gas valve must match that required by the manufacturer.
- F. The heat exchanger shall be controlled by the Core Command microprocessor.
 - i. The Core Command board shall notify users of fault using two 7 segment displays.
- G. Standard Heat Exchanger construction:
 - i. Heat exchanger shall be of the tubular-section type constructed of a minimum of 20-gauge steel coated with a nominal 1.2 mil aluminum-silicone alloy for corrosion resistance.
 - ii. Burners shall be of the in-shot type constructed of aluminum-coated steel.
 - iii. Burners shall incorporate orifice for rated heat output up to 2,000 ft. (610m) elevation with a gas heating valve of 1050. Alternate orifices may be required depending on local gas heating valves and elevations.
 - iv. Each heat exchanger tube shall contain restrictions similar to dimples for increased heating effectiveness.
- H. Optional Stainless Steel Heat Exchanger construction:
 - i. Use energy saving, direct-spark ignition system.
 - ii. Use a redundant main gas valve.
 - iii. Burners shall be of the in-shot type constructed of aluminum-coated steel.
 - iv. All gas piping shall enter the unit cabinet at a single location on side of unit (horizontal plane).
 - v. The optional stainless steel heat exchanger shall be of the tubular-section type, constructed of a minimum of 20-gauge type 409 stainless steel.
 - vi. Type 409 stainless steel shall be used in heat exchanger tubes.
 - vii. Complete stainless steel heat exchanger allows for greater application flexibility.
 - a. Induced draft combustion motor and blower
 - i. Shall be a direct-drive, single inlet, forward-curved centrifugal type.
 - ii. Shall be made from steel with a corrosion-resistant finish.
 - iii. Shall be permanently lubricated sealed bearings.
 - iv. Shall have inherent thermal overload protection.
 - v. Shall have an automatic reset feature.

1.20 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. Liquid Propane (LP) Conversion Kit

- i. Package shall contain all the necessary hardware and instructions to convert a standard natural gas unit for use with liquefied propane, up to 2000 ft (610m) elevation.

F. Condenser Coil Hail Guard Assembly

- i. Shall protect against damage from hail.
- ii. Shall be louvered style.

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

- i. Switch shall be factory-installed, internally mounted.
- ii. National Electric Code (NEC) and UL approved non-fused switch shall provide unit power shutoff.
- iii. Shall be accessible from outside the unit.
- iv. Shall provide local shutdown and lockout capability.

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. 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.

J. Flue Discharge Deflector:

- i. Flue discharge deflector shall direct unit exhaust vertically instead of horizontally.
- ii. Deflector shall be defined as a "natural draft" device by the National Fuel and Gas (NFG) code.

K. 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.

L. 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.

M. 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.

N. 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.

O. Universal Gas Conversion Kit

- i. Package shall contain all the necessary hardware and instructions to convert a standard natural gas unit to operate from 2000-7000 ft (610 to 2134m) elevation with natural gas or from 0-7000 ft (90-2134m) elevation with liquefied propane.

P. 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.

Q. 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.

R. 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.

S. 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.

T. 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

U. 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.

V. Standard Factory Installed Overflow Switch:

- i. Switch shall monitor the condensate level in drain pan and stops compression operation when overflow conditions occur

W. Access Panels:

- i. Hinges with $\frac{1}{4}$ turn fasteners shall be permanently attached.
- ii. Hinges shall be powder coated and made from stainless steel.
 - a. 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.

X. 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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GENERAL TERMS OF LIMITED WARRANTY*

Friedrich® will furnish a replacement for any part of this product which fails in normal use and service within the applicable periods stated, in accordance with the terms of the limited warranty.

Compressor

Commercial Applications.....Five (5) Years

Parts

Commercial Applications.....One (1) Year

Factory Standard Heat Exchanger

Commercial ApplicationsTen (10) Years

Stainless Steel Heat Exchanger

Commercial Applications.....Twenty (20) Years

*For complete details of the Limited and Conditional Warranties, including applicable terms and conditions, contact your local contractor or the Manufacturer for a copy of the product warranty certificate.

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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