Real People. Real Savings. Real Fast.®

MODEL: RLKL-B
Package Air Conditioner

FORM NO. SSC-960

Sure Comfort® RLKL-B
Package Air Conditioner

With optional hail guard shown.

RLKL-B Standard Efficiency

- Nominal Sizes 15 & 20 Tons [52.8 & 70.3 kW]
- ASHRAE 90.1-2007 Compliant Model

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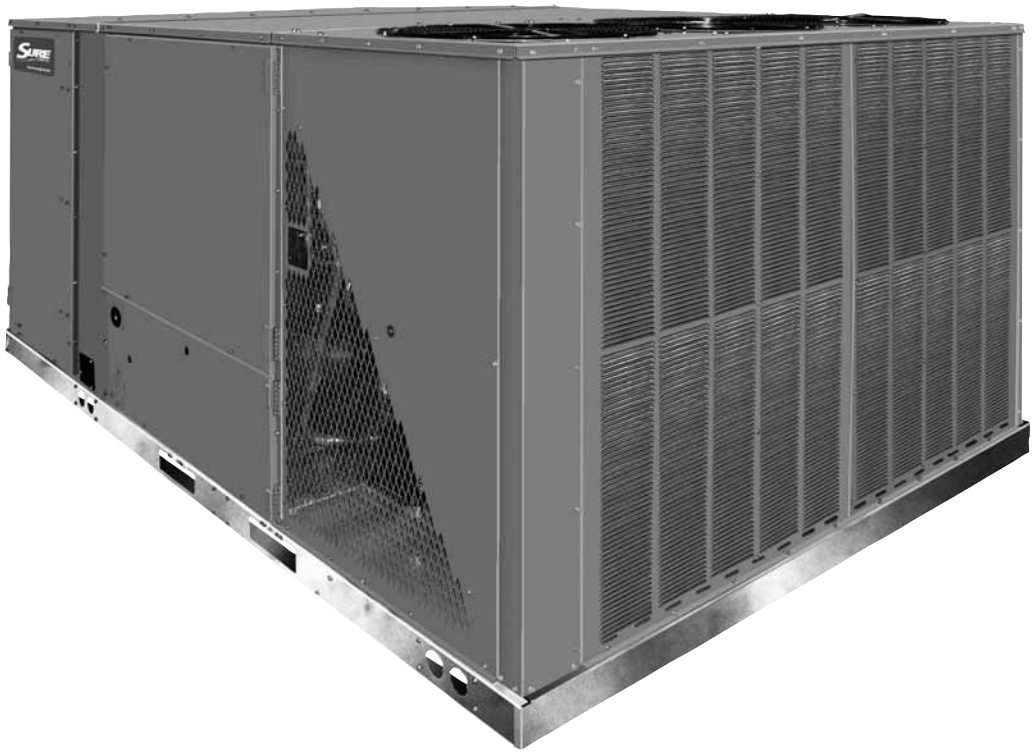
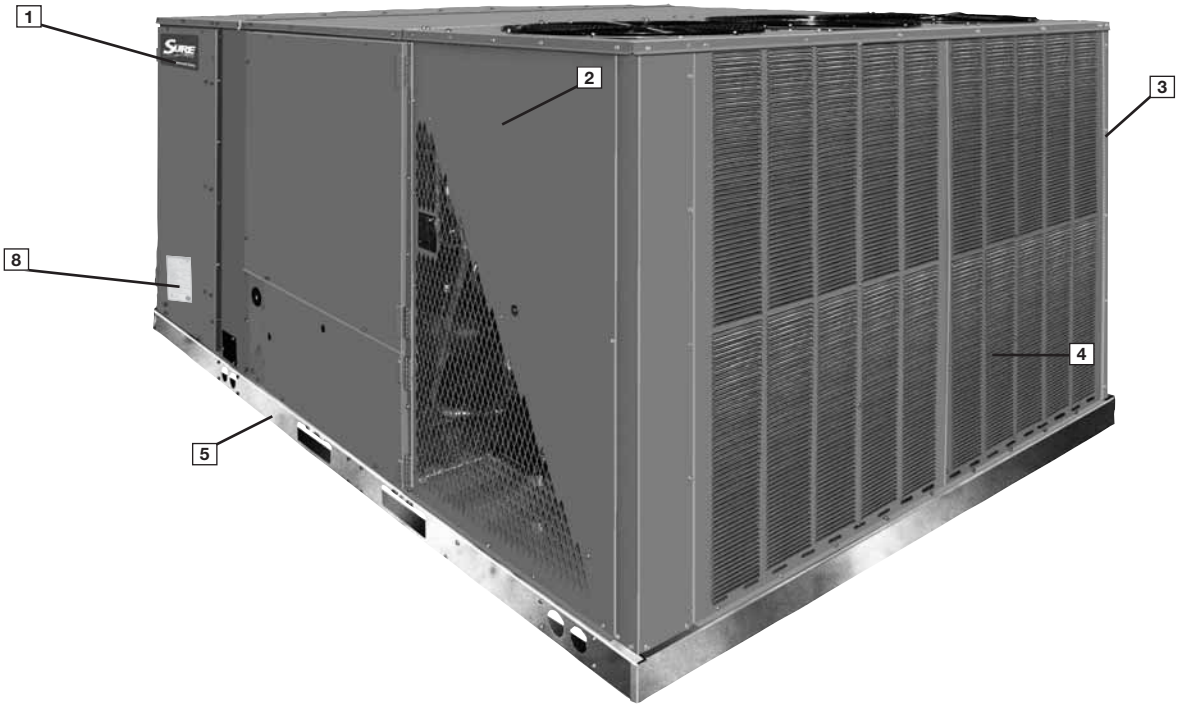
These quality features are included in the Sure Comfort Package Air Conditioner Unit



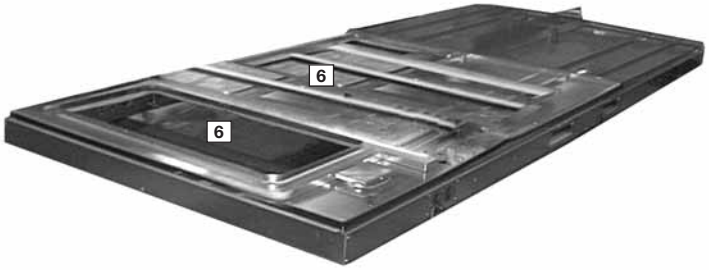
STANDARD FEATURES INCLUDE:

- R-410A HFC refrigerant.
- Complete factory charged, wired and run tested.
- Scroll compressors with internal line break overload and high-pressure protection.
- Two independent refrigerant circuits each with a scroll compressor provide two stage cooling operation.
- Convertible airflow – vertical downflow or horizontal sideflow.
- Capillary tube 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 degree F ambient.
- Foil faced insulation encapsulated throughout entire unit minimizes airborne fibers from the air stream.
- Hinged major access door with heavy-duty gasketing.
- Slide Out Indoor fan assembly for added service convenience.
- Powder Paint Finish meets ASTMB117 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 and condenser motors.
- Condenser motors are internally protected, totally enclosed with shaft down design.
- 2 inch filter standard with slide out design.
- 24 volt control system with resettable circuit breakers.
- Colored and labeled wiring.
- Copper tube/Aluminum Fin indoor coil.
- Aluminum MicroChannel outdoor coil(s).
- Supplemental electric heat provides 100% efficient heating.



Sure Comfort Package equipment is designed from the ground up with the latest features and benefits required to compete in today's market. The clean design stands alone in the industry and is a testament to the quality, reliability, ease of installation and serviceability that goes into each unit. Outwardly, the large Sure Comfort 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 (optional) hail guard protects the coil from hail damage **(4)**. Every Sure Comfort 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. The base pan is stamped, which forms a 1-1/8" flange around the supply and return cover and has eliminated the worry of water entering the conditioned space **(6)**. The drainpan **(7)** is made of material that resists the growth of harmful bacteria and is sloped for the latest IAQ benefits. Furthermore, the drain pan slides out for easy cleaning. 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.

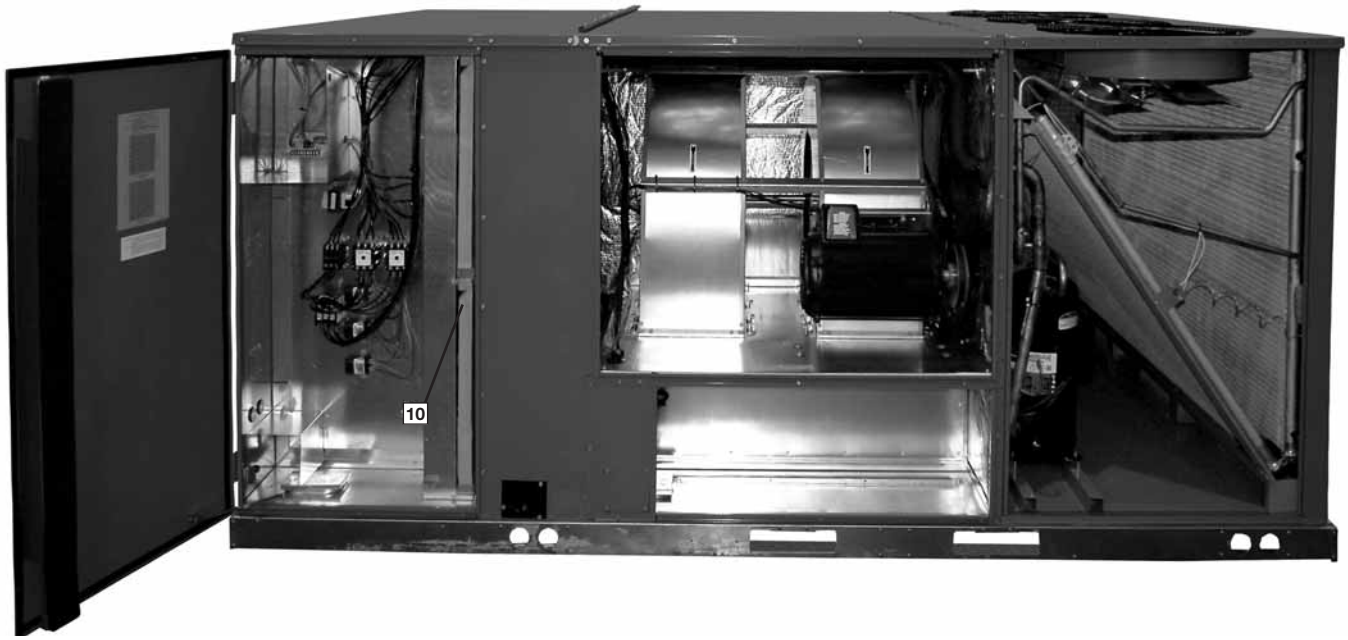


During development, each unit was tested to U.L. 1995, AHRI 340-360 and other Sure Comfort-required reliability tests. Sure Comfort adheres to stringent IS0 9002 quality procedures, and each unit bears the U.L. and AHRI certification labels located on the unit nameplate **(8)**. Contractors can rest assured that when a Sure Comfort package unit arrives at the job, it is ready to go with a factory charge and quality checks.

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

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

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)**. The two-inch throwaway filters **(10)** are easily removed on a tracked system for easy replacement.



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

For added convenience in the field, a factory-installed convenience outlet **(12)** is available. Low and High voltage can enter either from the side or through the base. Low-voltage connections are made through the low-voltage terminal strip. For ease of access, the U.L.-required low voltage barrier can be temporarily removed for low-voltage termination and then reinstalled. The high-voltage connection is terminated at the high voltage terminal block. The suggested mounting for the field-installed disconnect is on the exterior side of the electrical control box.

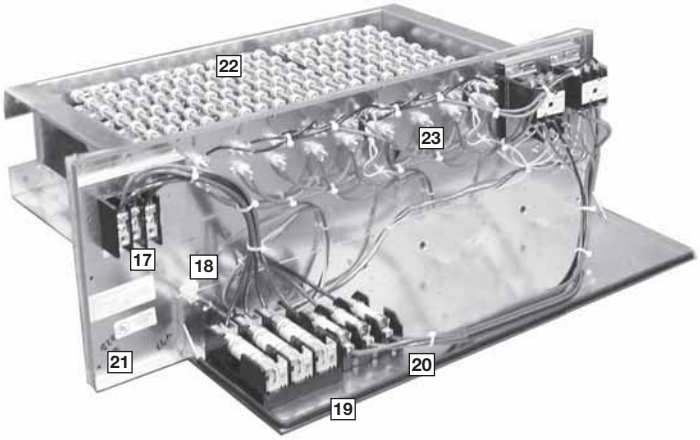
The blower compartment is to the right of the control box and can be accessed by 1/4 turn latches. To allow easy maintenance of the blower assembly, the entire assembly easily slides out by removing four #10 screws from the blower assembly. The adjustable motor pulley **(13)** can easily be adjusted by loosening the bolts on either side of the motor mount. Removing the bolts allows for easy removal of the blower pulley by pushing the blower assembly up to loosen the belt. Once the pulley is removed, the motor sheave can be adjusted to the desired number of turns, ranging from 0 to 6 turns open. Where the demands for the job require high static, Sure Comfort 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 **(14)** 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 **(15)**. The optional low-ambient controls allow for operation of the compressors down to 0 degrees ambient temperature by cycling the outdoor fans on high pressure.

Inside the blower compartment the interlaced evaporator can also be viewed. The evaporator uses enhanced fin technology for maximum heat transfer. The capillary tube metering device assures even distribution of refrigerant throughout the evaporator.

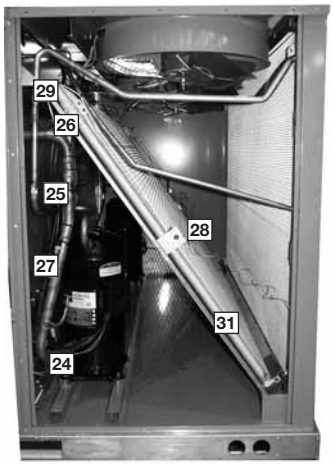
Wiring throughout the unit is neatly bundled and routed. Where wire harnesses go through the condenser bulkhead or blower deck, a molded wire harness assembly **(16)** provides an air-tight and water-tight seal, and provides strain relief. Care is also taken to tuck raw edges of insulation behind sheet metal to improve indoor air quality.

The heating compartment contains the latest electric furnace technology on the market. The 100% efficient electric furnace can be factory-installed or easily field-installed. Built with ease-of-installation in mind, the electric furnace is completely wired up for slide-in, plug-and-play installation in the field. With choices of up to four kilowatt offerings, the contractor is assured to get the correct amount of heating output to meet the designed heating load.



Power hook-up in the field is easy with single-point wiring to a terminal block **(17)** and a polarized plug for the low-voltage connection **(18)**. The electric furnace comes with fuses for the unit **(19)** and for the electric furnace **(20)**, and is UL certified **(21)**. The electric heating elements are of a wound-wire construction **(22)** and isolated with ceramic bushings. The limit switch **(23)** protects the design from over-temperature conditions.

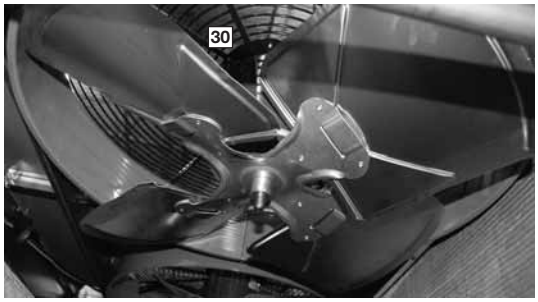
The compressor compartment houses the heartbeat of the unit. The scroll compressor **(24)** is known for its long life, and for reliable, quiet, and efficient operation. The suction and discharge lines are designed with shock loops **(25)** to absorb the strain and stress that the starting torque, steady 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.

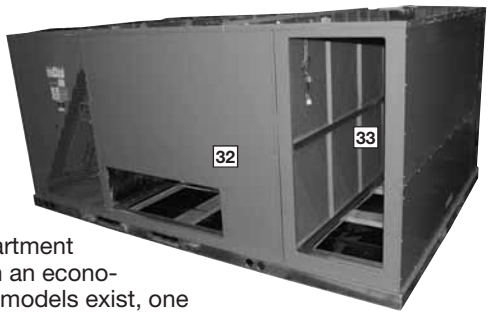


In the outdoor section are the external gauge ports **(26)**. With the gauge ports mounted externally, an accurate diagnosis of system operation can be performed quickly and easily. Also located in this area are the refrigerant safety devices: the low-pressure switches **(27)**, high-pressure switches **(28)** and the optional freeze-stats **(29)**. The high-pressure switches will shut off the compressors if pressures exceeding 610 psig are detected as may occur if the outdoor fan motor fails. The low pressure switches shut off the compressors if low pressure is detected due to loss of refrigerant charge. The optional freeze-stats protect the compressors if the evaporator gets too cold (below freezing) due to low airflow. The factory-installed high and low pressure switches are brazed into the appropriate high or low side and wired appropriately. The optional freezestats clip on the suction lines above the compressors and connect to the low voltage circuit with the use of polarized plugs and a removable jumper for easy field or factory installation.

The condenser fan motor **(30)** 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.

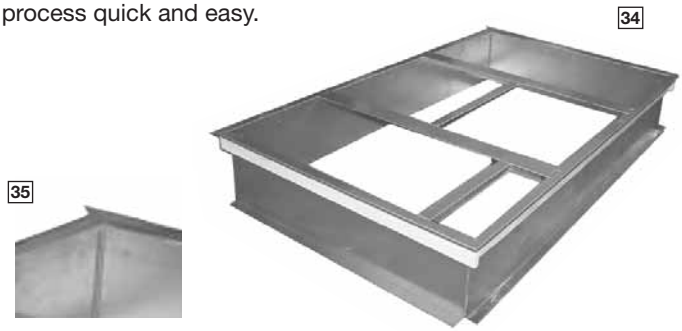
The aluminum MicroChannel outdoor coil uses the latest enhanced fin design **(31)** for the most effective method of heat transfer with a reduction in refrigerant charge and unit weight. The outdoor coil is protected by optional louvered panels, which allow unobstructed airflow while protecting the unit from both Mother Nature and vandalism.





Each unit is designed for both downflow or horizontal applications **(32)** for job configuration flexibility. The return air compartment can also contain an economizer **(33)**. Two models exist, one for downflow applications, 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 CO^2 setpoint. Barometric relief is standard on all economizers. The power exhaust is housed in the barometric relief opening and is easily slipped in with a plug-in assembly.

The Sure Comfort roofcurb **(34)** is made for toolless assembly at the jobsite by inserting a pin into the hinged corners **(35)**, which makes the assembly process quick and easy.



To select an RLKL-B 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—	240V—3 Phase—60 Hz
Total Cooling Capacity—	205,000 BTUH [60.0 kW]
Sensible Cooling Capacity—	155,000 BTUH [45.4 kW]
Heating Capacity—	235,000 BTUH [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—	.70 in. WG [.17 kPa]

2. SELECT UNIT TO MEET COOLING REQUIREMENTS.

Since total cooling is within the range of a nominal 20 ton [70.3 kW] unit, enter cooling performance table at 95°F [35.0 °C] DB condenser inlet air. Interpolate between 63°F [17.2 °C] WB and 67°F [19.4 °C] WB to determine total and sensible capacity and power input for 65°F [18.3 °C] WB evaporator inlet air at 7825 CFM [3692 L/s] indoor air flow (table basis):

Total Cooling Capacity = 245,500 BTUH [71.88 kW]
Sensible Cooling Capacity = 201,150 BTUH [58.90 kW]
Power Input (Compressor and Cond. Fans) = 19,750 watts

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

201,150 + (1.10 x 7,200 x (1 - 0.11) x (78 - 80))
Sensible Cooling Capacity = 187,052 BTUH [54.77 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 = 245,500 x 0.99 = 243,045 BTUH [71.17 kW]
Sensible Capacity = 187,052 x 0.95 = 177,699 BTUH [52.03 kW]
Power Input = 19,750 x 0.99 = 19,553 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 = 741
WATTS = 2,895
DRIVE = L (standard 5 H.P. motor)

5. CALCULATE INDOOR BLOWER BTUH HEAT EFFECT FROM MOTOR WATTS, STEP 4.

2,895 x 3.412 = 9,878 BTUH [2.89 kW]

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

Net Total Capacity = 243,045-9,878 = 233,167 BTUH [68.27 kW]
Net Sensible Capacity = 177,699 - 9,878 = 167,821 BTUH [49.14 kW]

7. CALCULATE UNIT INPUT AND JOB EER.

Total Power Input = 19,553 (step 3) + 2,895 (step 4) = 22,448 Watts

$$EER = \frac{\text{Net Total BTUH [kW] (step 6)}}{\text{Power Input, Watts (above)}} = \frac{233,167}{22,448} = 10.39$$

8. SELECT UNIT HEATING CAPACITY.

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

Use 75 kW Heater Kit
Heater Kit Model: RXJJ-CE75C
Heater Kit Capacity: 245,323 BTUH [71.8 kW]

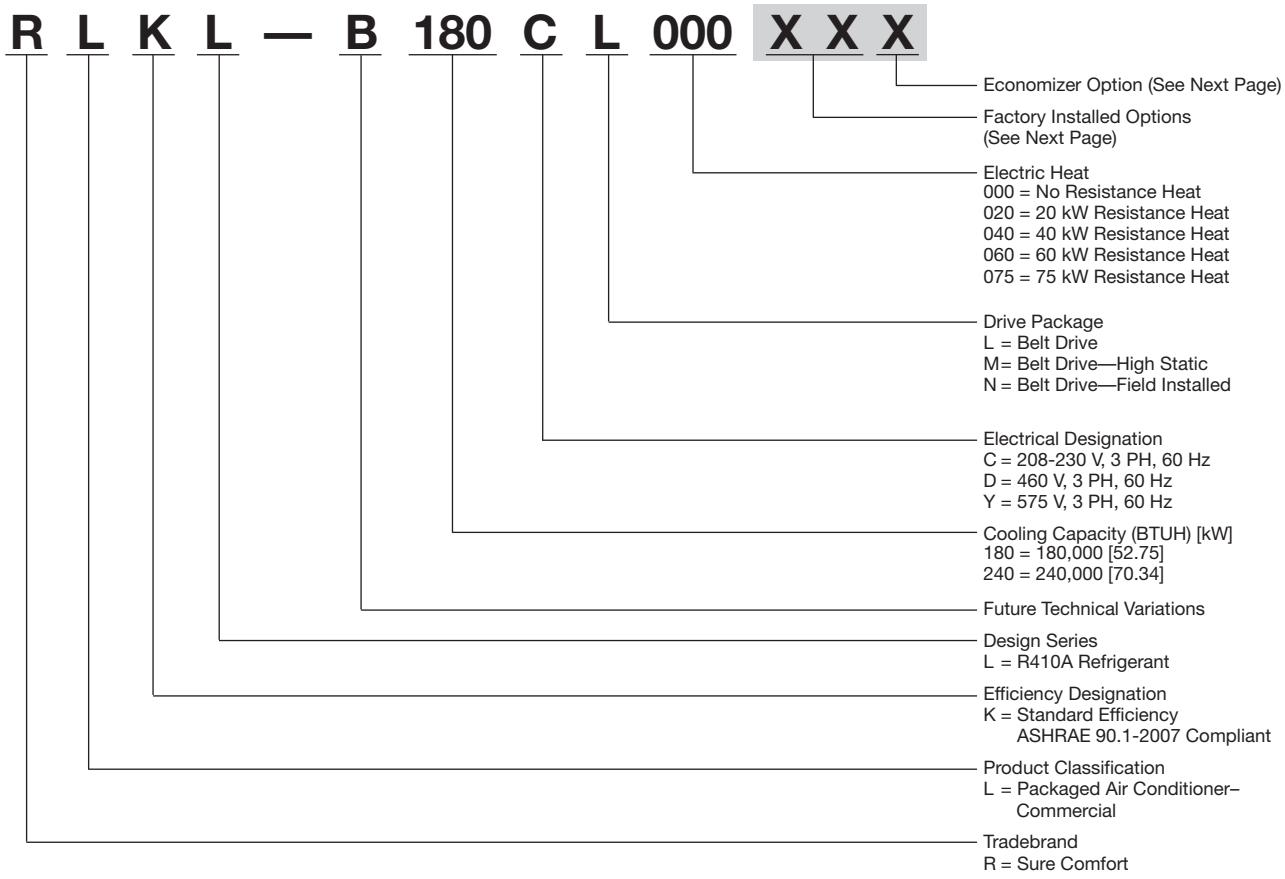
Add indoor blower heat effect (STEP 5) to Heater Kit Capacity to get total heating capacity:

245,323 + 9,878 = 255,201 BTUH [74.7 kW]

9. CHOOSE MODEL RLKL-B240CL075

*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



[ ] Designates Metric Conversions

FACTORY INSTALLED OPTION CODES FOR RLKL- (15 & 20 TON) [52.8 & 70.3 kW] (B180 & B240)

Option Code	Hail Guard	Non-Powered Convenience Outlet	Low Ambient / Freeze Stat
AD	x		
AG		x	
AP			x
BJ	x	x	
BY	x		x
JC		x	x
CX	x	x	x

Example: RLKL-B180CL000**XXX** *(where **XX** is factory installed option)*
Example: No Options
RLKL-B180CL000
Example: No Options with factory installed economizer
RLKL-B180CL000AAF
Example: Options with low ambient/freezestat and no factory installed economizer
RLKL-B180CL000APA
Example: Options same as above with factory installed economizer
RLKL-B180CL000APF

ECONOMIZER SELECTION FOR RLKL- (B180 & B240)

Option Code	No Economizer	Single Enthalpy Economizer* With Barometric Relief	Single Enthalpy Economizer* With Barometric Relief and Smoke Detector
A	x		
F		x	
G			x

"x" indicates factory installed option.
*Downflow economizer only.

Instructions for Factory Installed Option(s) Selection

Note: Three 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, nothing follows the model number.

Step 1. After a basic rooftop model is selected, choose a *two-character* option code from the FACTORY INSTALLED OPTION SELECTION TABLE.

Proceed to Step 2.

Step 2. The last option code character is utilized for factory-installed economizers. Choose a character from the FACTORY INSTALLED ECONOMIZER SELECTION TABLE.

[ ] Designates Metric Conversions

NOM. SIZES 15 & 20 TONS [52.8 & 70.3]

Model RLKL-	B180CL	B180CM	B180DL	B180DM
Cooling Performance[1]				CONTINUED →
Gross Cooling Capacity Btu [kW]	174,000 [50.98]	174,000 [50.98]	174,000 [50.98]	174,000 [50.98]
EER/SEER[2]	11/NA	11/NA	11/NA	11/NA
Nominal CFM/AHRI Rated CFM [L/s]	6000/5500 [2831/2595]	6000/5500 [2831/2595]	6000/5500 [2831/2595]	6000/5500 [2831/2595]
AHRI Net Cooling Capacity Btu [kW]	170,000 [49.81]	170,000 [49.81]	170,000 [49.81]	170,000 [49.81]
Net Sensible Capacity Btu [kW]	125,400 [36.74]	125,400 [36.74]	125,400 [36.74]	125,400 [36.74]
Net Latent Capacity Btu [kW]	44,600 [13.07]	44,600 [13.07]	44,600 [13.07]	44,600 [13.07]
IEER[3]	11.1	11.1	11.1	11.1
Net System Power [kW]	15.45	15.45	15.45	15.45
Compressor				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
Outdoor Sound Rating (dB)[4]	91	91	91	91
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth In. [mm]	1 [25.4]	1 [25.4]	1 [25.4]	1 [25.4]
Face Area sq. ft. [sq. m]	27.46 [2.55]	27.46 [2.55]	27.46 [2.55]	27.46 [2.55]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	26.67 [2.48]	26.67 [2.48]	26.67 [2.48]	26.67 [2.48]
Rows / FPI [FPcm]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]
Refrigerant Control	Capillary Tubes	Capillary Tubes	Capillary Tubes	Capillary Tubes
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	3/24 [609.6]	3/24 [609.6]	3/24 [609.6]	3/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	10000 [4719]	10000 [4719]	10000 [4719]	10000 [4719]
No. Motors/HP	3 at 1/2 HP	3 at 1/2 HP	3 at 1/2 HP	3 at 1/2 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]
Drive Type/No. Speeds	Belt/Variable	Belt/Variable	Belt/Variable	Belt/Variable
No. Motors	1	1	1	1
Motor HP	3	5	3	5
Motor RPM	1725	1725	1725	1725
Motor Frame Size	56	184	56	184
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]
Refrigerant Charge Oz. [g]	115/119 [3260/3374]	115/119 [3260/3374]	115/119 [3260/3374]	115/119 [3260/3374]
Weights				
Net Weight lbs. [kg]	1667 [756]	1696 [769]	1667 [756]	1696 [769]
Ship Weight lbs. [kg]	1794 [814]	1823 [827]	1794 [814]	1823 [827]

See Page 15 for Notes.

[ ] Designates Metric Conversions

NOM. SIZES 15 & 20 TONS [52.8 & 70.3]

Model RLKL-	B180YL	B180YM	B240CL	B240CM
Cooling Performance[1]				CONTINUED →
Gross Cooling Capacity Btu [kW]	174,000 [50.98]	174,000 [50.98]	250,000 [73.25]	250,000 [73.25]
EER/SEER[2]	11/NA	11/NA	10.5/NA	10.5/NA
Nominal CFM/AHRI Rated CFM [L/s]	6000/5500 [2831/2595]	6000/5500 [2831/2595]	8000/7825 [3775/3693]	8000/7825 [3775/3693]
AHRI Net Cooling Capacity Btu [kW]	170,000 [49.81]	170,000 [49.81]	240,000 [70.32]	240,000 [70.32]
Net Sensible Capacity Btu [kW]	125,400 [36.74]	125,400 [36.74]	175,000 [51.27]	175,000 [51.27]
Net Latent Capacity Btu [kW]	44,600 [13.07]	44,600 [13.07]	65,000 [19.04]	65,000 [19.04]
IEER[3]	11.1	11.1	10.5	10.5
Net System Power [kW]	15.45	15.45	22.88	22.88
Compressor				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
Outdoor Sound Rating (dB)[4]	91	91	91	91
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth In. [mm]	1 [25.4]	1 [25.4]	1 [25.4]	1 [25.4]
Face Area sq. ft. [sq. m]	27.46 [2.55]	27.46 [2.55]	50.8 [4.72]	50.8 [4.72]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	26.67 [2.48]	26.67 [2.48]	26.67 [2.48]	26.67 [2.48]
Rows / FPI [FPcm]	2 / 18 [7]	2 / 18 [7]	3 / 13 [5]	3 / 13 [5]
Refrigerant Control	Capillary Tubes	Capillary Tubes	Capillary Tubes	Capillary Tubes
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	3/24 [609.6]	3/24 [609.6]	3/24 [609.6]	3/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	10000 [4719]	10000 [4719]	10000 [4719]	10000 [4719]
No. Motors/HP	3 at 1/2 HP	3 at 1/2 HP	3 at 1/2 HP	3 at 1/2 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]
Drive Type/No. Speeds	Belt/Variable	Belt/Variable	Belt/Variable	Belt/Variable
No. Motors	1	1	1	1
Motor HP	3	5	5	7 1/2
Motor RPM	1725	1725	1725	1725
Motor Frame Size	56	184	184	213
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]
Refrigerant Charge Oz. [g]	115/119 [3260/3374]	115/119 [3260/3374]	200/219 [5670/6209]	200/219 [5670/6209]
Weights				
Net Weight lbs. [kg]	1667 [756]	1696 [769]	1883 [854]	1921 [871]
Ship Weight lbs. [kg]	1794 [814]	1823 [827]	2009 [911]	2047 [929]

See Page 15 for Notes.

[ ] Designates Metric Conversions

NOM. SIZES 15 & 20 TONS [52.8 & 70.3]

Model RLKL-	B240CN	B240DL	B240DM	B240DN
Cooling Performance[1]				CONTINUED →
Gross Cooling Capacity Btu [kW]	250,000 [73.25]	250,000 [73.25]	250,000 [73.25]	250,000 [73.25]
EER/SEER[2]	10.5/NA	10.5/NA	10.5/NA	10.5/NA
Nominal CFM/AHRI Rated CFM [L/s]	8000/7825 [3775/3693]	8000/7825 [3775/3693]	8000/7825 [3775/3693]	8000/7825 [3775/3693]
AHRI Net Cooling Capacity Btu [kW]	240,000 [70.32]	240,000 [70.32]	240,000 [70.32]	240,000 [70.32]
Net Sensible Capacity Btu [kW]	175,000 [51.27]	175,000 [51.27]	175,000 [51.27]	175,000 [51.27]
Net Latent Capacity Btu [kW]	65,000 [19.04]	65,000 [19.04]	65,000 [19.04]	65,000 [19.04]
IEER[3]	10.5	10.5	10.5	10.5
Net System Power [kW]	22.88	22.88	22.88	22.88
Compressor				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
Outdoor Sound Rating (dB)[4]	91	91	91	91
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth In. [mm]	1 [25.4]	1 [25.4]	1 [25.4]	1 [25.4]
Face Area sq. ft. [sq. m]	50.8 [4.72]	50.8 [4.72]	50.8 [4.72]	50.8 [4.72]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	26.67 [2.48]	26.67 [2.48]	26.67 [2.48]	26.67 [2.48]
Rows / FPI [FPcm]	3 / 13 [5]	3 / 13 [5]	3 / 13 [5]	3 / 13 [5]
Refrigerant Control	Capillary Tubes	Capillary Tubes	Capillary Tubes	Capillary Tubes
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	3/24 [609.6]	3/24 [609.6]	3/24 [609.6]	3/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	10000 [4719]	10000 [4719]	10000 [4719]	10000 [4719]
No. Motors/HP	3 at 1/2 HP	3 at 1/2 HP	3 at 1/2 HP	3 at 1/2 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]
Drive Type/No. Speeds	Belt/Variable	Belt/Variable	Belt/Variable	Belt/Variable
No. Motors	1	1	1	1
Motor HP	7 1/2	5	7 1/2	7 1/2
Motor RPM	1725	1725	1725	1725
Motor Frame Size	213	184	184	184
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]
Refrigerant Charge Oz. [g]	200/219 [5670/6209]	200/219 [5670/6209]	200/219 [5670/6209]	200/219 [5670/6209]
Weights				
Net Weight lbs. [kg]	1919 [870]	1883 [854]	1921 [871]	1919 [870]
Ship Weight lbs. [kg]	2046 [928]	2009 [911]	2047 [929]	2046 [928]

See Page 15 for Notes.

[ ] Designates Metric Conversions

NOM. SIZES 15 & 20 TONS [52.8 & 70.3]

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

See Page 15 for Notes.

[ ] Designates Metric Conversions

NOTES:

1. 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 ±20% of nominal cfm. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 210/240 or 360.
2. EER and/or SEER are rated at AHRI conditions and in accordance with DOE test procedures.
3. IEER is rated in accordance with AHRI Standard 340/360.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

GROSS SYSTEMS PERFORMANCE DATA—B180

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]			7200 [3398]	5500 [2596]	4800 [2265]	7200 [3398]	5500 [2596]	4800 [2265]	7200 [3398]	5500 [2596]	4800 [2265]
DR ①			0.05	0.11	0.14	0.05	0.11	0.14	0.05	0.11	0.14
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW]	205.0 [60.1]	194.1 [56.9]	189.6 [55.6]	196.7 [57.6]	186.3 [54.6]	182.0 [53.3]	190.1 [55.7]	180.0 [52.8]	175.8 [51.5]
		Sens BTUH [kW]	133.0 [39.0]	105.3 [30.9]	94.8 [27.8]	161.3 [47.3]	130.6 [38.3]	118.8 [34.8]	184.2 [54.0]	150.9 [44.2]	138.0 [40.5]
		Power	12.1	11.8	11.7	12.0	11.6	11.5	11.8	11.5	11.3
	80 [26.7]	Total BTUH [kW]	202.7 [59.4]	191.9 [56.2]	187.4 [54.9]	194.4 [57.0]	184.1 [54.0]	179.8 [52.7]	187.7 [55.0]	177.7 [52.1]	173.6 [50.9]
		Sens BTUH [kW]	133.8 [39.2]	106.1 [31.1]	95.6 [28.0]	162.1 [47.5]	131.4 [38.5]	119.6 [35.1]	184.9 [54.2]	151.6 [44.4]	138.7 [40.7]
		Power	12.7	12.4	12.2	12.5	12.2	12.1	12.4	12.0	11.9
	85 [29.4]	Total BTUH [kW]	199.8 [58.6]	189.1 [55.4]	184.8 [54.2]	191.5 [56.1]	181.3 [53.1]	177.1 [51.9]	184.8 [54.2]	175.0 [51.3]	171.0 [50.1]
		Sens BTUH [kW]	133.8 [39.2]	106.2 [31.1]	95.8 [28.1]	162.1 [47.5]	131.5 [38.5]	119.7 [35.1]	184.8 [54.2]	151.8 [44.5]	139.0 [40.7]
		Power	13.4	13.0	12.9	13.2	12.8	12.7	13.0	12.7	12.5
	90 [32.2]	Total BTUH [kW]	196.3 [57.5]	185.9 [54.5]	181.6 [53.2]	188.1 [55.1]	178.1 [52.2]	174.0 [51.0]	181.4 [53.2]	171.8 [50.3]	167.8 [49.2]
		Sens BTUH [kW]	132.8 [38.9]	105.7 [31.0]	95.4 [28.0]	161.3 [47.3]	131.0 [38.4]	119.4 [35.0]	181.4 [53.2]	151.3 [44.4]	138.6 [40.6]
		Power	14.0	13.7	13.5	13.9	13.5	13.3	13.7	13.3	13.2
	95 [35]	Total BTUH [kW]	192.3 [56.4]	182.1 [53.4]	177.9 [52.1]	184.1 [54.0]	174.3 [51.1]	170.3 [49.9]	177.4 [52.0]	168.0 [49.2]	164.1 [48.1]
		Sens BTUH [kW]	131.1 [38.4]	104.4 [30.6]	94.2 [27.6]	159.6 [46.8]	129.7 [38.0]	118.2 [34.7]	177.4 [52.0]	150.0 [44.0]	137.4 [40.3]
		Power	14.8	14.4	14.2	14.6	14.2	14.0	14.4	14.0	13.9
	100 [37.8]	Total BTUH [kW]	187.8 [55.0]	177.8 [52.1]	173.7 [50.9]	179.6 [52.6]	170.0 [49.8]	166.1 [48.7]	172.9 [50.7]	163.7 [48.0]	159.9 [46.9]
		Sens BTUH [kW]	128.6 [37.7]	102.4 [30.0]	92.5 [27.1]	157.2 [46.1]	127.8 [37.5]	116.5 [34.2]	172.9 [50.7]	148.1 [43.4]	135.7 [39.8]
		Power	15.5	15.1	14.9	15.3	14.9	14.8	15.2	14.8	14.6
	105 [40.6]	Total BTUH [kW]	182.7 [53.5]	173.0 [50.7]	169.0 [49.5]	174.5 [51.1]	165.2 [48.4]	161.4 [47.3]	167.8 [49.2]	158.9 [46.6]	155.2 [45.5]
		Sens BTUH [kW]	125.3 [36.7]	99.8 [29.3]	90.1 [26.4]	153.9 [45.1]	125.2 [36.7]	114.2 [33.5]	167.8 [49.2]	145.5 [42.7]	133.4 [39.1]
		Power	16.3	15.9	15.7	16.1	15.7	15.5	16.0	15.5	15.4
	110 [43.3]	Total BTUH [kW]	177.1 [51.9]	167.7 [49.1]	163.8 [48.0]	168.8 [49.5]	159.8 [46.8]	156.1 [45.7]	162.2 [47.5]	153.5 [45.0]	150.0 [44.0]
		Sens BTUH [kW]	121.3 [35.6]	96.6 [28.3]	87.2 [25.6]	149.7 [43.9]	121.8 [35.7]	111.1 [32.6]	162.2 [47.5]	142.1 [41.7]	130.4 [38.2]
		Power	17.1	16.7	16.5	17.0	16.5	16.3	16.8	16.4	16.2
	115 [46.1]	Total BTUH [kW]	170.9 [50.1]	161.8 [47.4]	158.1 [46.3]	162.6 [47.7]	154.0 [45.1]	150.4 [44.1]	156.0 [45.7]	147.7 [43.3]	144.3 [42.3]
		Sens BTUH [kW]	116.3 [34.1]	92.5 [27.1]	83.5 [24.5]	144.6 [42.4]	117.8 [34.5]	107.4 [31.5]	156.0 [45.7]	138.1 [40.5]	126.7 [37.1]
		Power	18.0	17.5	17.4	17.9	17.4	17.2	17.7	17.2	17.0

GROSS SYSTEMS PERFORMANCE DATA—B240

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]			9600 [4531]	7825 [3693]	6400 [3020]	9600 [4531]	7825 [3693]	6400 [3020]	9600 [4531]	7825 [3693]	6400 [3020]
DR ①			0.06	0.11	0.15	0.06	0.11	0.15	0.06	0.11	0.15
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW]	295.2 [86.5]	283.5 [83.1]	274.1 [80.3]	281.3 [82.4]	270.2 [79.2]	261.3 [76.6]	271.4 [79.5]	260.6 [76.4]	252.0 [73.9]
		Sens BTUH [kW]	188.5 [55.3]	158.8 [46.5]	136.7 [40.1]	226.4 [66.4]	193.6 [56.7]	169.0 [49.5]	261.1 [76.5]	225.3 [66.0]	198.3 [58.1]
		Power	17.0	16.6	16.4	16.7	16.4	16.1	16.4	16.1	15.8
	80 [26.7]	Total BTUH [kW]	291.1 [85.3]	279.6 [81.9]	270.4 [79.2]	277.3 [81.3]	266.3 [78.0]	257.5 [75.5]	267.3 [78.3]	256.7 [75.2]	248.2 [72.7]
		Sens BTUH [kW]	186.7 [54.7]	157.3 [46.1]	135.5 [39.7]	224.6 [65.8]	192.1 [56.3]	167.7 [49.2]	259.2 [76.0]	223.8 [65.6]	197.0 [57.7]
		Power	17.8	17.4	17.2	17.5	17.2	16.9	17.2	16.9	16.6
	85 [29.4]	Total BTUH [kW]	286.3 [83.9]	275.0 [80.6]	265.9 [77.9]	272.5 [79.9]	261.7 [76.7]	253.0 [74.1]	262.5 [76.9]	252.1 [73.9]	243.7 [71.4]
		Sens BTUH [kW]	184.3 [54.0]	155.4 [45.6]	133.9 [39.3]	222.3 [65.2]	190.2 [55.8]	166.1 [48.7]	256.9 [75.3]	221.9 [65.0]	195.4 [57.3]
		Power	18.7	18.3	18.0	18.4	18.0	17.7	18.1	17.7	17.4
	90 [32.2]	Total BTUH [kW]	280.8 [82.3]	269.6 [79.0]	260.7 [76.4]	266.9 [78.2]	256.3 [75.1]	247.8 [72.6]	256.9 [75.3]	246.7 [72.3]	238.6 [69.9]
		Sens BTUH [kW]	181.7 [53.3]	153.1 [44.9]	131.9 [38.7]	219.5 [64.3]	187.9 [55.1]	164.2 [48.1]	254.1 [74.5]	219.6 [64.4]	193.5 [56.7]
		Power	19.6	19.2	18.9	19.3	18.9	18.6	19.0	18.6	18.3
	95 [35]	Total BTUH [kW]	274.4 [80.4]	263.6 [77.3]	254.9 [74.7]	260.6 [76.4]	250.3 [73.4]	242.0 [70.9]	250.6 [73.4]	240.7 [70.5]	232.7 [68.2]
		Sens BTUH [kW]	178.4 [52.3]	150.5 [44.1]	129.7 [38.0]	216.3 [63.4]	185.3 [54.3]	162.0 [47.5]	250.6 [73.5]	217.0 [63.6]	191.2 [56.0]
		Power	20.6	20.2	19.8	20.3	19.9	19.6	20.0	19.6	19.3
	100 [37.8]	Total BTUH [kW]	267.4 [78.4]	256.8 [75.3]	248.3 [72.8]	253.5 [74.3]	243.5 [71.4]	235.4 [69.0]	243.5 [71.4]	233.9 [68.5]	226.1 [66.3]
		Sens BTUH [kW]	174.7 [51.2]	147.4 [43.2]	127.1 [37.3]	212.5 [62.3]	182.2 [53.4]	159.3 [46.7]	243.5 [71.4]	214.0 [62.7]	188.7 [55.3]
		Power	21.6	21.2	20.8	21.3	20.9	20.5	21.0	20.6	20.3
	105 [40.6]	Total BTUH [kW]	259.6 [76.1]	249.3 [73.1]	241.0 [70.6]	245.7 [72.0]	236.0 [69.2]	228.2 [66.9]	235.7 [69.1]	226.4 [66.4]	218.9 [64.2]
		Sens BTUH [kW]	170.6 [50.0]	144.0 [42.2]	124.2 [36.4]	208.5 [61.1]	178.8 [52.4]	156.5 [45.9]	235.7 [69.1]	210.5 [61.7]	185.7 [54.4]
		Power	22.7	22.2	21.9	22.4	21.9	21.6	22.1	21.7	21.3
	110 [43.3]	Total BTUH [kW]	251.0 [73.6]	241.1 [70.7]	233.1 [68.3]	237.1 [69.5]	227.7 [66.7]	220.2 [64.5]	227.1 [66.6]	218.1 [63.9]	210.9 [61.8]
		Sens BTUH [kW]	166.1 [48.7]	140.3 [41.1]	121.1 [35.5]	203.9 [59.8]	175.0 [51.3]	153.3 [44.9]	227.1 [66.6]	206.7 [60.6]	182.5 [53.5]
		Power	23.8	23.3	22.9	23.5	23.0	22.7	23.2	22.8	22.4
	115 [46.1]	Total BTUH [kW]	241.7 [70.8]	232.1 [68.0]	224.4 [65.8]	227.8 [66.8]	218.8 [64.1]	211.5 [62.0]	217.8 [63.8]	209.2 [61.3]	202.3 [59.3]
		Sens BTUH [kW]	161.0 [47.2]	136.0 [39.9]	117.4 [34.4]	198.8 [58.3]	170.8 [50.1]	149.6 [43.9]	217.8 [63.8]	202.5 [59.4]	179.0 [52.5]
		Power	25.0	24.5	24.1	24.7	24.2	23.8	24.4	23.9	23.5

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

Total —Total capacity x 1000 BTUH
Sens —Sensible capacity x 1000 BTUH
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

AIRFLOW PERFORMANCE—15 TON [52.8 kW]–SIDEFLOW

Air Flow CFM [L/s]	Model RLKL-B180 Voltage 208/230, 460, 575 — 3 Phase 60 Hz																																			
	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	RPM	W	RPM	W	RPM	W
4800 [2265]	—	—	—	—	—	—	—	—	—	—	589	1395	613	1488	636	1584	659	1681	681	1781	703	1883	725	1987	746	2093	766	2202	787	2313	806	2426	826	2541	845	2658	863	2778	881	2900
5000 [2359]	—	—	—	—	—	—	—	—	574	1376	598	1469	621	1565	644	1663	667	1763	689	1866	710	1971	732	2078	752	2187	773	2299	793	2412	812	2528	831	2647	850	2767	868	2890	886	3014
5200 [2454]	—	—	—	—	—	—	—	—	583	1452	607	1549	630	1647	652	1748	675	1852	696	1957	718	2065	739	2175	759	2287	779	2401	799	2518	818	2637	837	2758	856	2881	874	3007	891	3134
5400 [2548]	—	—	—	—	—	—	—	—	592	1534	615	1634	638	1735	661	1839	683	1945	704	2054	725	2164	746	2277	766	2392	786	2509	806	2629	825	2751	843	2875	862	3001	879	3129	897	3260
5600 [2643]	—	—	—	—	—	—	578	1522	601	1622	624	1724	647	1829	669	1936	691	2045	712	2156	733	2270	753	2385	773	2503	793	2623	812	2746	831	2870	849	2997	867	3126	885	3258	902	3391
5800 [2737]	—	—	—	—	—	—	587	1612	610	1715	633	1821	655	1928	677	2038	699	2150	720	2264	741	2380	761	2499	781	2620	800	2743	819	2868	837	2996	856	3126	873	3258	891	3392	907	3528
6000 [2831]	—	—	—	—	573	1605	597	1709	620	1815	642	1923	664	2033	686	2146	707	2261	728	2378	748	2497	768	2618	788	2742	807	2868	826	2996	844	3127	862	3260	879	3394	896	3532	913	3671
6200 [2926]	—	—	—	—	583	1704	606	1811	629	1919	651	2030	673	2144	695	2259	715	2377	736	2497	756	2619	776	2744	795	2870	814	2999	832	3130	851	3264	868	3399	885	3537	902	3677	918	3819
6400 [3020]	—	—	570	1701	593	1809	616	1918	639	2030	661	2144	682	2260	703	2378	724	2499	744	2622	764	2747	784	2874	803	3004	821	3136	839	3270	857	3406	875	3544	892	3685	908	3828	924	3973
6600 [3114]	—	—	580	1809	603	1919	626	2031	648	2146	670	2263	691	2382	712	2503	732	2627	753	2753	772	2881	791	3011	810	3143	829	3278	846	3415	864	3554	881	3695	898	3839	914	3985	930	4133
6800 [3209]	—	—	591	1922	614	2035	636	2150	658	2268	679	2388	700	2510	721	2634	741	2760	761	2889	780	3020	799	3153	818	3288	836	3426	854	3566	871	3708	888	3852	904	3999	920	4147	—	—
7000 [3303]	578	1927	601	2041	624	2157	646	2275	667	2395	689	2518	709	2643	730	2770	750	2899	769	3031	788	3165	807	3301	825	3439	843	3579	861	3722	878	3867	894	4014	911	4164	926	4315	—	—
7200 [3398]	589	2049	612	2165	634	2284	656	2405	677	2528	698	2654	719	2782	739	2912	759	3044	778	3178	797	3315	815	3454	833	3595	851	3739	868	3884	885	4032	901	4182	917	4335	—	—	—	—

NOTE: L-Drive left of bold line, M-Drive right of bold line.

Drive Package	L						M					
Motor H.P. [W]	3.0 [2237.1]						5.0 [3728.5]					
Blower Sheave	BK105H						BK105H					
Motor Sheave	1VL-44						1VP-56					
Turns Open	1	2	**3**	4	5	6	1	2	3	**4**	5	6
RPM	733	701	**669**	640	605	572	927	903	873	**840**	808	775

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

COMPONENT AIR RESISTANCE—15 TON [52.8 kW]

CFM [L/s]	4800 [2265]	5000 [2359]	5200 [2454]	5400 [2548]	5600 [2643]	5800 [2737]	6000 [2831]	6200 [2926]	6400 [3020]	6600 [3114]	6800 [3209]	7000 [3303]	7200 [3398]
	Resistance — Inches of Water [kPa]												
Wet Coil	0.03 [0.01]	0.04 [0.01]	0.05 [0.01]	0.06 [0.01]	0.06 [0.01]	0.07 [0.02]	0.08 [0.02]	0.09 [0.02]	0.10 [0.02]	0.10 [0.02]	0.11 [0.03]	0.12 [0.03]	0.13 [0.03]
Downflow	0.05 [0.01]	0.05 [0.01]	0.05 [0.01]	0.05 [0.01]	0.05 [0.01]	0.05 [0.01]	0.05 [0.01]	0.06 [0.01]	0.06 [0.01]	0.06 [0.01]	0.07 [0.02]	0.08 [0.02]	0.08 [0.02]
Downflow Economizer R.A. Damper Open	0.09 [0.02]	0.10 [0.02]	0.10 [0.02]	0.11 [0.03]	0.12 [0.03]	0.13 [0.03]	0.13 [0.03]	0.14 [0.03]	0.15 [0.04]	0.16 [0.04]	0.16 [0.04]	0.17 [0.04]	0.18 [0.04]
Horizontal Economizer R.A. Damper Open	0.00 [0.00]	0.01 [0.00]	0.01 [0.00]	0.02 [0.00]	0.02 [0.00]	0.03 [0.01]	0.03 [0.01]	0.04 [0.01]	0.04 [0.01]	0.05 [0.01]	0.05 [0.01]	0.06 [0.01]	0.06 [0.01]
Concentric Grill RXRN-AD80 or RXRN-AD81 & Transition RXMC-CJ07	0.21 [0.05]	0.25 [0.06]	0.28 [0.07]	0.32 [0.08]	0.35 [0.09]	0.39 [0.10]	0.43 [0.11]	0.46 [0.11]	0.50 [0.12]	0.54 [0.13]	0.57 [0.14]	0.61 [0.15]	0.64 [0.16]

NOTE: Add component resistance to duct resistance to determine total external static pressure.

AIRFLOW CORRECTION FACTORS—15 TON [52.8 kW]

ACTUAL—CFM [L/s]	4800 [2265]	5000 [2359]	5200 [2454]	5400 [2548]	5600 [2643]	5800 [2737]	6000 [2831]	6200 [2926]	6400 [3020]	6600 [3114]	6800 [3209]	7000 [3303]	7200 [3398]
TOTAL MBH	0.98	0.98	0.99	1.00	1.00	1.01	1.02	1.02	1.03	1.04	1.04	1.05	1.06
SENSIBLE MBH	0.91	0.94	0.96	0.99	1.02	1.04	1.07	1.10	1.12	1.15	1.18	1.20	1.23
POWER kW	0.99	0.99	0.99	1.00	1.00	1.00	1.01	1.01	1.01	1.02	1.02	1.02	1.03

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]–SIDEFLOW

Air Flow CFM [L/s]	Model RLKL-B240 Voltage 208/230, 460, 575 — 3 Phase 60 Hz																																			
	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	RPM	W	RPM	W	RPM	W
6400 [3020]	—	—	—	—	—	—	—	—	—	—	652	2091	676	2222	699	2354	722	2487	745	2621	766	2756	788	2893	808	3031	829	3170	848	3311	868	3453	887	3595	906	3761	923	3902	937	4121
6600 [3114]	—	—	—	—	—	—	—	—	639	2074	663	2207	687	2341	710	2476	732	2613	754	2751	775	2890	796	3030	817	3172	837	3314	856	3458	875	3604	894	3750	912	3912	930	4056	944	4271
6800 [3209]	—	—	—	—	—	—	—	—	651	2194	674	2331	697	2468	720	2607	742	2747	764	2889	785	3031	805	3175	825	3321	845	3467	864	3614	883	3763	901	3913	919	4072	933	4283	950	4432
7000 [3303]	—	—	—	—	—	—	638	2184	662	2323	685	2463	708	2604	730	2747	752	2890	773	3035	794	3182	814	3329	834	3478	853	3628	872	3779	891	3931	908	4085	926	4240	940	4448	957	4603
7200 [3398]	—	—	—	—	—	—	650	2318	674	2460	697	2604	719	2749	741	2895	762	3042	783	3191	804	3340	824	3492	843	3644	862	3797	880	3952	898	4108	916	4265	932	4417	947	4624	964	4784
7400 [3492]	—	—	—	—	639	2315	662	2460	685	2606	708	2753	730	2902	752	3051	773	3202	793	3354	813	3508	833	3662	852	3818	871	3975	889	4134	906	4293	923	4454	938	4650	954	4810	971	4976
7600 [3586]	—	—	—	—	651	2462	674	2611	697	2760	719	2911	741	3063	762	3216	783	3371	803	3526	823	3683	842	3842	861	4001	879	4162	897	4324	914	4487	931	4651	945	4841	962	5007	978	5179
7800 [3681]	—	—	640	2467	664	2618	687	2770	709	2923	731	3077	752	3233	773	3390	794	3548	814	3707	833	3868	852	4029	870	4192	888	4357	906	4522	923	4689	936	4878	953	5043	969	5214	986	5392
8000 [3775]	630	2475	653	2628	676	2782	699	2937	721	3094	743	3252	764	3411	784	3572	804	3733	824	3896	843	4060	861	4226	880	4392	897	4560	914	4729	931	4900	944	5084	961	5255	977	5432	993	5616
8200 [3869]	643	2640	666	2797	689	2954	711	3114	733	3274	754	3435	775	3598	795	3762	815	3927	834	4094	853	4262	871	4431	889	4601	906	4772	923	4945	936	5130	952	5300	969	5477	985	5660	1001	5850
8400 [3964]	657	2814	680	2974	702	3136	724	3298	745	3462	766	3627	787	3794	807	3961	826	4130	845	4300	863	4471	881	4644	899	4818	915	4993	932	5169	944	5352	961	5528	977	5710	993	5899	1008	6094
8600 [4058]	671	2996	693	3160	715	3325	737	3491	758	3659	778	3827	798	3997	818	4169	837	4341	856	4515	874	4690	891	4866	908	5043	925	5222	937	5408	953	5584	969	5765	985	5954	1001	6148	—	—
8800 [4153]	684	3187	707	3355	728	3523	750	3693	770	3864	790	4036	810	4210	829	4385	848	4561	866	4738	884	4916	901	5096	918	5277	933	5434	946	5645	962	5826	978	6013	993	6208	1009	6408	—	—
9000 [4247]	698	3387	720	3558	742	3730	763	3903	783	4078	803	4254	822	4431	841	4609	859	4789	877	4969	895	5151	912	5335	928	5519	939	5712	955	5892	971	6079	986	6272	1002	6472	—	—	—	—
9200 [4341]	713	3595	734	3769	755	3945	776	4122	796	4300	815	4479	834	4660	853	4842	871	5025	888	5209	905	5395	922	5582	933	5784	949	5963	964	6149	980	6342	995	6541	1010	6747	—	—	—	—
9400 [4436]	727	3811	748	3989	769	4168	789	4349	808	4531	828	4714	846	4898	865	5083	882	5270	899	5458	916	5647	932	5838	942	6040	958	6225	973	6418	989	6616	1004	6821	—	—	—	—	—	—
9600 [4530]	741	4036	762	4218	782	4400	802	4585	821	4770	840	4956	859	5144	877	5333	894	5524	911	5715	927	5908	937	6122	952	6307	968	6498	983	6696	998	6901	—	—	—	—	—	—	—	—

NOTE: L-Drive left of bold line, M-Drive right of bold line.

Drive Package	L						M						N (field installed only)					
Motor H.P. [W]	5.0 [3728.5]						7.5 [5592.7]						7.5 [5592.7]					
Blower Sheave	BK130H						BK130H						BK120H					
Motor Sheave	1VP-56						1VP-71						1VP-71					
Turns Open	1	2	**3**	4	5	6	1	2	3	**4**	5	6	1	2	3	4	5	6
RPM	756	734	**709**	683	658	631	928	902	874	**847**	820	793	1009	981	955	928	899	870

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

COMPONENT AIRFLOW RESISTANCE—20 TON [70.3 kW]

CFM [L/s]	6400 [3020]	6600 [3114]	6800 [3209]	7000 [3303]	7200 [3398]	7400 [3492]	7600 [3586]	7800 [3681]	8000 [3775]	8200 [3869]	8400 [3964]	8600 [4058]	8800 [4153]	9000 [4247]	9200 [4341]	9400 [4436]	9600 [4530]
	Resistance — Inches of Water [kPa]																
Wet Coil	0.00 [.00]	0.00 [.00]	0.00 [.00]	0.01 [.00]	0.01 [.00]	0.02 [.00]	0.02 [.00]	0.03 [.01]	0.03 [.01]	0.04 [.01]	0.04 [.01]	0.05 [.01]	0.05 [.01]	0.06 [.01]	0.06 [.01]	0.07 [.02]	0.07 [.02]
Downflow	0.06 [.01]	0.06 [.01]	0.07 [.02]	0.08 [.02]	0.08 [.02]	0.09 [.02]	0.10 [.02]	0.11 [.03]	0.12 [.03]	0.13 [.03]	0.14 [.03]	0.15 [.04]	0.16 [.04]	0.18 [.04]	0.19 [.05]	0.20 [.05]	0.22 [.05]
Downflow Economizer R.A. Damper Open	0.15 [.04]	0.16 [.04]	0.16 [.04]	0.17 [.04]	0.18 [.04]	0.19 [.05]	0.20 [.05]	0.21 [.05]	0.22 [.05]	0.23 [.06]	0.24 [.06]	0.25 [.06]	0.26 [.06]	0.27 [.07]	0.28 [.07]	0.29 [.07]	0.30 [.07]
Horizontal Economizer R.A. Damper Open	0.04 [.01]	0.05 [.01]	0.05 [.01]	0.06 [.01]	0.06 [.01]	0.07 [.02]	0.07 [.02]	0.08 [.02]	0.09 [.02]	0.09 [.02]	0.10 [.02]	0.10 [.02]	0.11 [.03]	0.11 [.03]	0.12 [.03]	0.12 [.03]	0.13 [.03]
Concentric Grill RXRN-AD86 & Transition RXMC-CK08	0.26 [.06]	0.29 [.07]	0.32 [.08]	0.35 [.09]	0.38 [.09]	0.41 [.10]	0.44 [.11]	0.47 [.12]	0.5 [.12]	0.53 [.13]	0.56 [.14]	0.59 [.15]	0.62 [.15]	0.65 [.16]	0.69 [.17]	0.72 [.18]	0.75 [.19]

AIRFLOW CORRECTION FACTORS—20 TON [70.3 kW]

ACTUAL—CFM [L/s]	6400 [3020]	6600 [3114]	6800 [3209]	7000 [3303]	7200 [3398]	7400 [3492]	7600 [3586]	7800 [3681]	8000 [3775]	8200 [3869]	8400 [3964]	8600 [4058]	8800 [4153]	9000 [4247]	9200 [4341]	9400 [4436]	9600 [4530]
TOTAL MBH	0.97	0.97	0.98	0.98	0.99	0.99	0.99	1.00	1.00	1.01	1.01	1.02	1.02	1.03	1.03	1.04	1.04
SENSIBLE MBH	0.87	0.89	0.91	0.93	0.95	0.97	0.98	1.00	1.02	1.04	1.06	1.08	1.09	1.11	1.13	1.15	1.17
POWER kW	0.98	0.99	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.01	1.02	1.02	1.02

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

[ ] Designates Metric Conversions

ELECTRICAL DATA – RLKL-

		B180CL	B180CM	B180DL	B180DM	B180YL	B180YM
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506	518-633	518-633
	Volts	208/230	208/230	460	460	575	575
	Minimum Circuit Ampacity	75/75	78/78	38	40	28	30
	Minimum Overcurrent Protection Device Size	90/90	90/90	45	45	30	35
	Maximum Overcurrent Protection Device Size	90/90	100/100	50	50	35	35
Compressor Motor	No.	2	2	2	2	2	2
	Volts	200/230	200/230	460	460	575	575
	Phase	3	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450	3450
	HP, Compressor 1	7	7	7	7	7	7
	Amps (RLA), Comp. 1	25/25	25/25	12.2	12.2	9	9
	Amps (LRA), Comp. 1	164/164	164/164	100	100	78	78
	HP, Compressor 2	6	6	6	6	6	6
	Amps (RLA), Comp. 2	25/25	25/25	12.8	12.8	9.6	9.6
	Amps (LRA), Comp. 2	164/164	164/164	100	100	78	78
Compressor Motor	No.	3	3	3	3	3	3
	Volts	208/230	208/230	460	460	575	575
	Phase	1	1	1	1	1	1
	HP	1/2	1/2	1/2	1/2	1/2	1/2
	Amps (FLA, each)	2.3/2.3	2.3/2.3	1.5	1.5	1	1
	Amps (LRA, each)	5.6/5.6	5.6/5.6	3.1	3.1	2.2	2.2
Evaporator Fan	No.	1	1	1	1	1	1
	Volts	208/230	208/230	460	460	575	575
	Phase	3	3	3	3	3	3
	HP	3	5	3	5	3	5
	Amps (FLA, each)	11.5/11.5	14.9/14.9	4.6	6.6	3.5	5.3
	Amps (LRA, each)	74.5/74.5	82.6/82.6	38.1	46.3	20	39.4

ELECTRICAL DATA – RLKL-

		B240CL	B240CM	B240CN	B240DL	B240DM	B240DN	B240YL	B240YM	B240YN
Unit Information	Unit Operating Voltage Range	187-253	187-253	187-253	414-506	414-506	414-506	518-632	518-632	518-632
	Volts	208/230	208/230	208/230	460	460	460	575	575	575
	Minimum Circuit Ampacity	94/94	102/102	102/102	51	54	54	37	39	39
	Minimum Overcurrent Protection Device Size	110/110	110/110	110/110	60	60	60	40	45	45
	Maximum Overcurrent Protection Device Size	125/125	125/125	125/125	60	70	70	45	50	50
Compressor Motor	No.	2	2	2	2	2	2	2	2	2
	Volts	200/230	200/230	200/230	460	460	460	575	575	575
	Phase	3	3	3	3	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450	3450	3450	3450	3450
	HP, Compressor 1	10	10	10	10	10	10	10	10	10
	Amps (RLA), Comp. 1	33.6/33.6	33.6/33.6	33.6/33.6	17.9	17.9	17.9	12.8	12.8	12.8
	Amps (LRA), Comp. 1	239/239	239/239	239/239	125	125	125	80	80	80
	HP, Compressor 2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2
	Amps (RLA), Comp. 2	30.1/30.1	30.1/30.1	30.1/30.1	16.7	16.7	16.7	12.2	12.2	12.2
	Amps (LRA), Comp. 2	225/225	225/225	225/225	114	114	114	80	80	80
Compressor Motor	No.	3	3	3	3	3	3	3	3	3
	Volts	208/230	208/230	208/230	460	460	460	575	575	575
	Phase	1	1	1	1	1	1	1	1	1
	HP	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
	Amps (FLA, each)	2.3/2.3	2.3/2.3	2.3/2.3	1.5	1.5	1.5	1	1	1
	Amps (LRA, each)	5.6/5.6	5.6/5.6	5.6/5.6	3.1	3.1	3.1	2.2	2.2	2.2
Evaporator Fan	No.	1	1	1	1	1	1	1	1	1
	Volts	208/230	208/230	208/230	460	460	460	575	575	575
	Phase	3	3	3	3	3	3	3	3	3
	HP	5	7 1/2	7 1/2	5	7 1/2	7 1/2	5	7 1/2	7 1/2
	Amps (FLA, each)	14.7/14.7	23.1/23.1	23.1/23.1	6.6	9.6	9.6	5.3	7.8	7.8
	Amps (LRA, each)	82.6/82.6	136/136	136/136	46.3	67	67	39.4	53.8	53.8

208/240 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION													
Single Power Supply for Both Unit and Heater Kit									Separate Power Supply for Both Unit and Heater Kit				
	Heater Kit					Air Conditioner			Heater Kit		Air Conditioner		
Model No. RLKL-	RXJJ- Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 208/240V	Heater kBTU/Hr @ 208/240V	Heater Amps @ 208/240V	Unit Min. Ckt. Ampacity @ 208/240V	Over Current Protective Device Size		Min. Ckt. Ampacity 208/240V	Max. Fuse Size 208/240V	Min. Circuit Ampacity 208/240V	Over Current Protective Device Size	
							Min./Max 208V	Min./Max. 240V				Min./Max. 208V	Min./Max. 240V
B180CL	No Heat	—	—	—	—	75/75	90/90	90/90	—	—	75/75	90/90	90/90
	CE20C	1	14.4/19.2	49.13/65.5	40/46.2	75/75	90/90	90/90	50/58	50/60	75/75	90/90	90/90
	CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	115/130	125/125	150/150	100/116	100/125	75/75	90/90	90/90
	CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	165/188	175/175	200/200	150/173	150/175	75/75	90/90	90/90
	CE75C	2	54/71.9	184.22/245.29	149.8/172.8	202/231	225/225	250/250	188/217	200/225	75/75	90/90	90/90
B240CL	No Heat	—	—	—	—	94/94	110/125	110/125	—	—	94/94	110/125	110/125
	CE20C	1	14.4/19.2	49.13/65.5	40/46.2	94/94	110/125	110/125	50/58	50/60	94/94	110/125	110/125
	CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	119/134	125/125	150/150	100/116	100/125	94/94	110/125	110/125
	CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	169/192	175/175	200/200	150/173	150/175	94/94	110/125	110/125
	CE75C	2	54/71.9	184.22/245.29	149.8/172.8	206/235	225/225	250/250	188/217	200/225	94/94	110/125	110/125
B180CM	No Heat	—	—	—	—	78/78	90/100	90/100	—	—	78/78	90/100	90/100
	CE20C	1	14.4/19.2	49.13/65.5	40/46.2	78/78	90/100	90/100	50/58	50/60	78/78	90/100	90/100
	CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	119/134	125/125	150/150	100/116	100/125	78/78	90/100	90/100
	CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	169/192	175/175	200/200	150/173	150/175	78/78	90/100	90/100
	CE75C	2	54/71.9	184.22/245.29	149.8/172.8	206/235	225/225	250/250	188/217	200/225	78/78	90/100	90/100
B240CM	No Heat	—	—	—	—	102/102	110/125	110/125	—	—	102/102	110/125	110/125
	CE20C	1	14.4/19.2	49.13/65.5	40/46.2	102/102	125/125	125/125	50/58	50/60	102/102	110/125	110/125
	CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	129/145	150/150	150/150	100/116	100/125	102/102	110/125	110/125
	CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	179/202	200/200	225/225	150/173	150/175	102/102	110/125	110/125
	CE75C	2	54/71.9	184.22/245.29	149.8/172.8	217/245	225/225	250/250	188/217	200/225	102/102	110/125	110/125
B240CN	No Heat	—	—	—	—	101/101	110/125	110/125	—	—	102/102	110/125	110/125
	CE20C	1	14.4/19.2	49.13/65.5	40/46.2	101/101	125/125	125/125	50/58	50/60	102/102	110/125	110/125
	CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	129/145	150/150	150/150	100/116	100/125	102/102	110/125	110/125
	CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	179/202	200/200	225/225	150/173	150/175	102/102	110/125	110/125
	CE75C	2	54/71.9	184.22/245.29	149.8/172.8	217/245	225/225	250/250	188/217	200/225	102/102	110/125	110/125

+ = Field installed only.

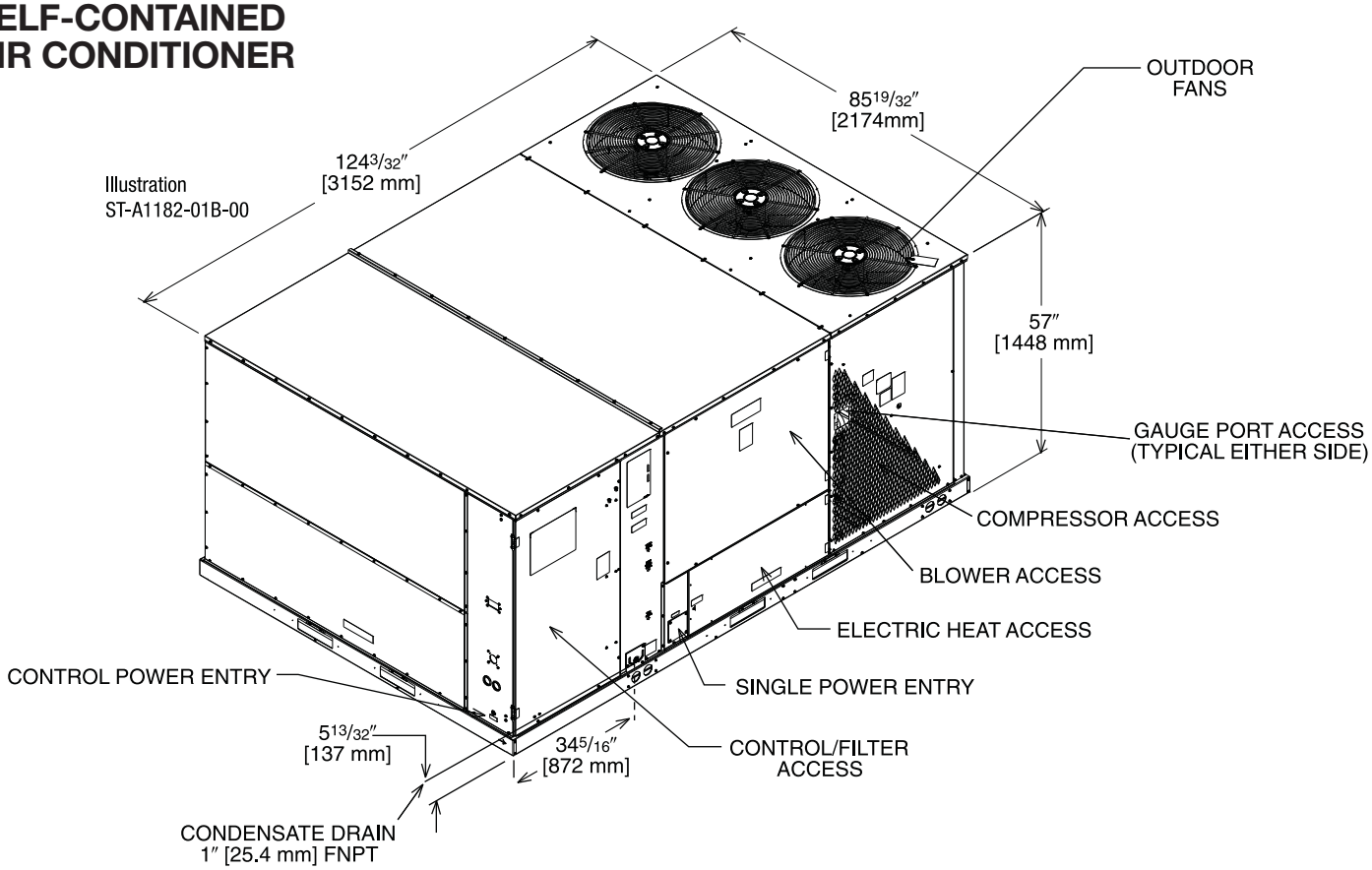
480 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION													
Single Power Supply for Both Unit and Heater Kit									Separate Power Supply for Both Unit and Heater Kit				
	Heater Kit					Air Conditioner			Heater Kit		Air Conditioner		
Model No. RLKL-	RXJJ- Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 480V	Heater kBTU/Hr @ 480V	Heater Amps @ 480V	Unit Min. Ckt. Ampacity @ 480V	Over Current Protective Device Size		Min. Ckt. Ampacity 480V	Max. Fuse Size 480V	Min. Circuit Ampacity 480V	Over Current Protective Device Size	
							Min./Max 480V	Min./Max. 480V				Min./Max. 480V	Min./Max. 480V
180DL	No Heat	—	—	—	—	38	45/50	—	—	—	38	45/50	—
	CE20D	1	19.2	65.5	23.1	38	45/50	—	29	30	38	45/50	—
	CE40D	2	38.4	131	46.2	64	70/70	—	58	60	38	45/50	—
	CE60D	2	57.6	196.5	69.3	93	100/100	—	87	90	38	45/50	—
	CE75D	2	72	245.63	86.6	114	125/125	—	109	110	38	45/50	—
240DL	No Heat	—	—	—	—	51	60/60	—	—	—	51	60/60	—
	CE20D	1	19.2	65.5	23.1	51	60/60	—	29	30	51	60/60	—
	CE40D	2	38.4	131	46.2	67	70/70	—	58	60	51	60/60	—
	CE60D	2	57.6	196.5	69.3	95	100/100	—	87	90	51	60/60	—
	CE75D	2	72	245.63	86.6	117	125/125	—	109	110	51	60/60	—
180DM	No Heat	—	—	—	—	40	45/50	—	—	—	40	45/50	—
	CE20D	1	19.2	65.5	23.1	40	45/50	—	29	30	40	45/50	—
	CE40D	2	38.4	131	46.2	67	70/70	—	58	60	40	45/50	—
	CE60D	2	57.6	196.5	69.3	95	100/100	—	87	90	40	45/50	—
	CE75D	2	72	245.63	86.6	117	125/125	—	109	110	40	45/50	—
240DM	No Heat	—	—	—	—	54	60/70	—	—	—	54	60/70	—
	CE20D	1	19.2	65.5	23.1	54	60/70	—	29	30	54	60/70	—
	CE40D	2	38.4	131	46.2	70	70/70	—	58	60	54	60/70	—
	CE60D	2	57.6	196.5	69.3	99	100/100	—	87	90	54	60/70	—
	CE75D	2	72	245.63	86.6	121	125/125	—	109	110	54	60/70	—
240DN	No Heat	—	—	—	—	54	60/70	—	—	—	54	60/70	—
	CE20D	1	19.2	65.5	23.1	54	60/70	—	29	30	54	60/70	—
	CE40D	2	38.4	131	46.2	70	70/70	—	58	60	54	60/70	—
	CE60D	2	57.6	196.5	69.3	99	100/100	—	87	90	54	60/70	—
	CE75D	2	72	245.63	86.6	121	125/125	—	109	110	54	60/70	—

+ = Field installed only.

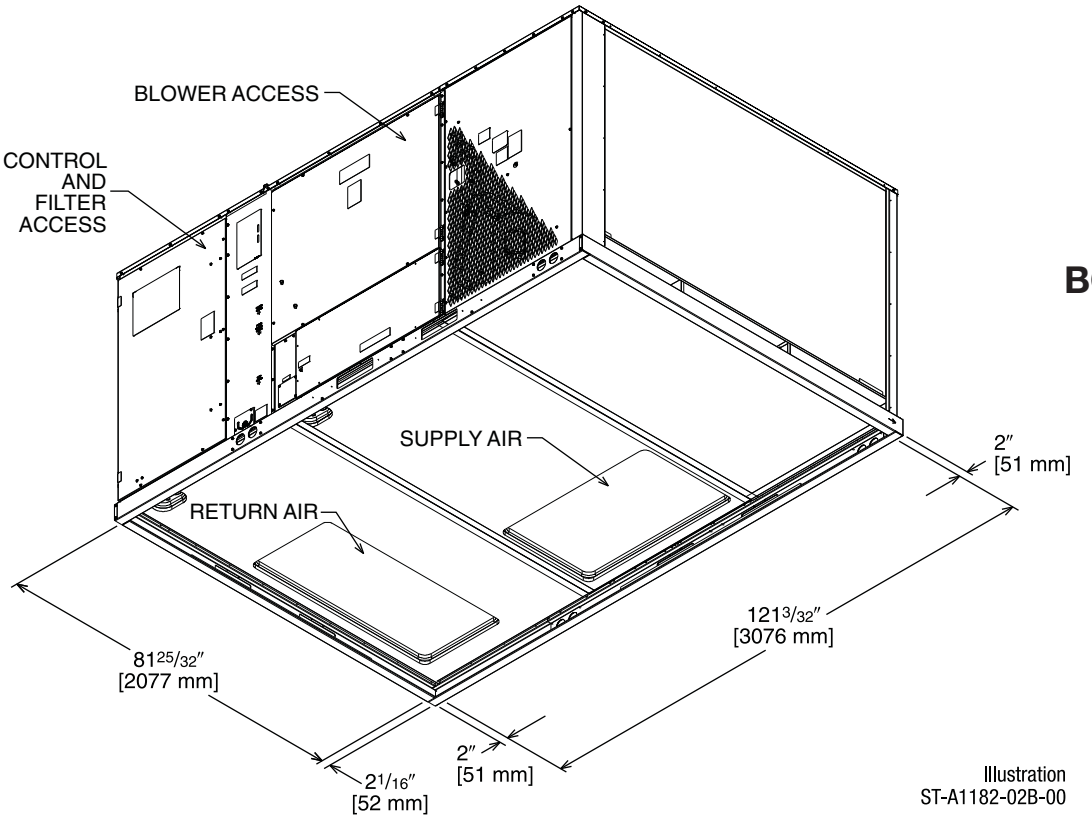
600 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION													
Single Power Supply for Both Unit and Heater Kit									Separate Power Supply for Both Unit and Heater Kit				
	Heater Kit					Air Conditioner			Heater Kit		Air Conditioner		
Model No. RLKL-	RXJJ- Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 600V	Heater kBTU/Hr @ 600V	Heater Amps @ 600V	Unit Min. Ckt. Ampacity @ 600V	Over Current Protective Device Size		Min. Ckt. Ampacity 600V	Max. Fuse Size 600V	Min. Circuit Ampacity 600V	Over Current Protective Device Size	
							Min./Max 600V	Min./Max. 600V				Min./Max. 600V	Min./Max. 600V
B180YL	No Heat	—	—	—	—	28	30/35	—	—	—	28	30/35	—
	CE20Y	1	19.2	65.5	18.5	28	30/35	—	24	25	28	30/35	—
	CE40Y	2	38.4	131	37	51	60/60	—	47	50	28	30/35	—
	CE60Y	2	57.6	196.5	55.4	74	80/80	—	70	70	28	30/35	—
	CE75Y	2	72	245.63	69.3	92	100/100	—	87	90	28	30/35	—
B240YL	No Heat	—	—	—	—	37	40/45	—	—	—	37	40/45	—
	CE20Y	1	19.2	65.5	18.5	37	40/45	—	24	25	37	40/45	—
	CE40Y	2	38.4	131	37	53	60/60	—	47	50	37	40/45	—
	CE60Y	2	57.6	196.5	55.4	76	80/80	—	70	70	37	40/45	—
	CE75Y	2	72	245.63	69.3	94	100/100	—	87	90	37	40/45	—
B180YM	No Heat	—	—	—	—	30	35/35	—	—	—	30	35/35	—
	CE20Y	1	19.2	65.5	18.5	30	35/35	—	24	25	30	35/35	—
	CE40Y	2	38.4	131	37	53	60/60	—	47	50	30	35/35	—
	CE60Y	2	57.6	196.5	55.4	76	80/80	—	70	70	30	35/35	—
	CE75Y	2	72	245.63	69.3	94	100/100	—	87	90	30	35/35	—
B240YM	No Heat	—	—	—	—	39	45/50	—	—	—	39	45/50	—
	CE20Y	1	19.2	65.5	18.5	39	45/50	—	24	25	39	45/50	—
	CE40Y	2	38.4	131	37	57	60/60	—	47	50	39	45/50	—
	CE60Y	2	57.6	196.5	55.4	80	80/80	—	70	70	39	45/50	—
	CE75Y	2	72	245.63	69.3	97	100/100	—	87	90	39	45/50	—
B240YN	No Heat	—	—	—	—	39	45/50	—	—	—	39	45/50	—
	CE20Y	1	19.2	65.5	18.5	39	45/50	—	24	25	39	45/50	—
	CE40Y	2	38.4	131	37	57	60/60	—	47	50	39	45/50	—
	CE60Y	2	57.6	196.5	55.4	80	80/80	—	70	70	39	45/50	—
	CE75Y	2	72	245.63	69.3	97	100/100	—	87	90	39	45/50	—

+ = Field installed only.

SELF-CONTAINED AIR CONDITIONER



BOTTOM VIEW



[ ] Designates Metric Conversions

SELF-CONTAINED AIR CONDITIONER

SUPPLY AND RETURN DIMENSIONS FOR HORIZONTAL APPLICATIONS

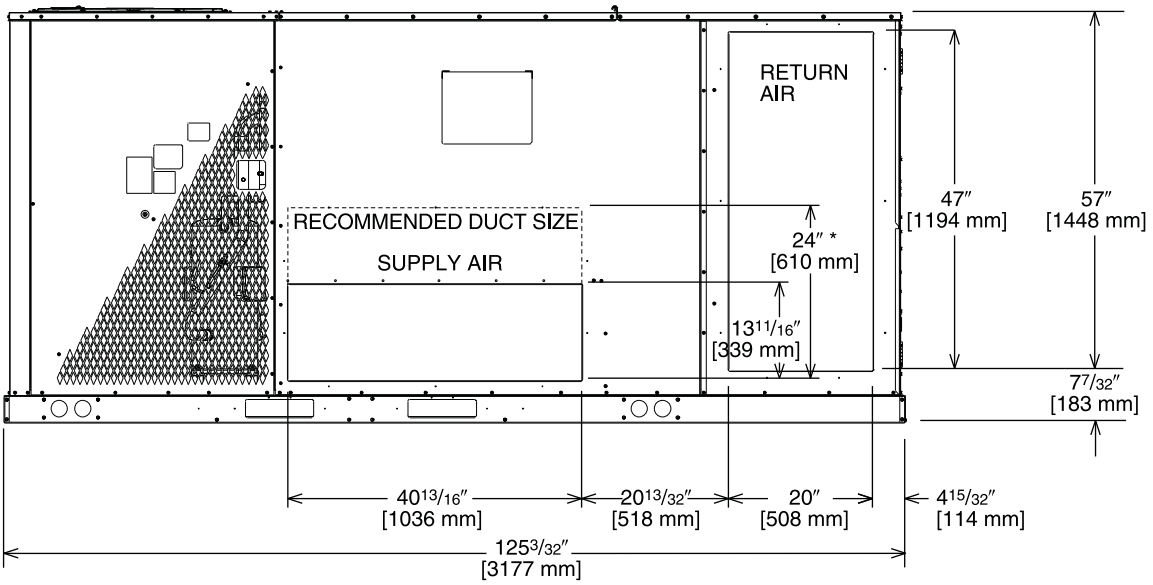


Illustration
ST-A1182-08B-00

* RECOMMENDED DUCT SIZE

DUCT SIDE VIEW (REAR)

SUPPLY AND RETURN DIMENSIONS FOR DOWNFLOW APPLICATIONS

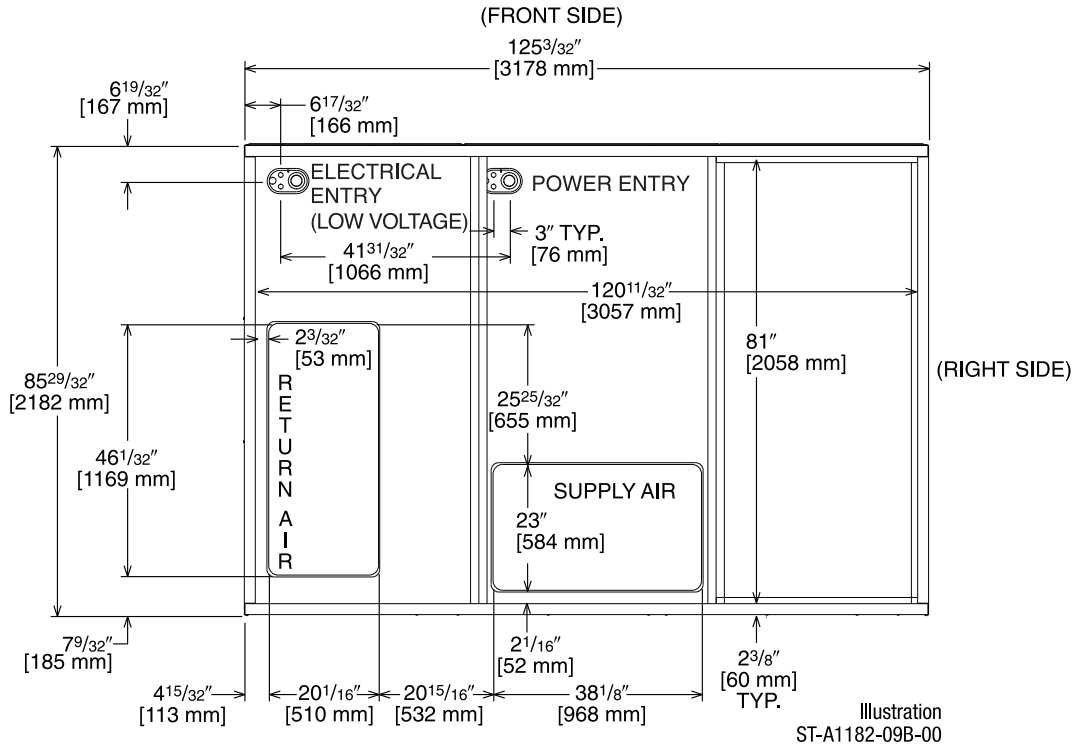


Illustration
ST-A1182-09B-00

BOTTOM VIEW

[ ] Designates Metric Conversions

UNIT DIMENSIONS SELF-CONTAINED AIR CONDITIONER

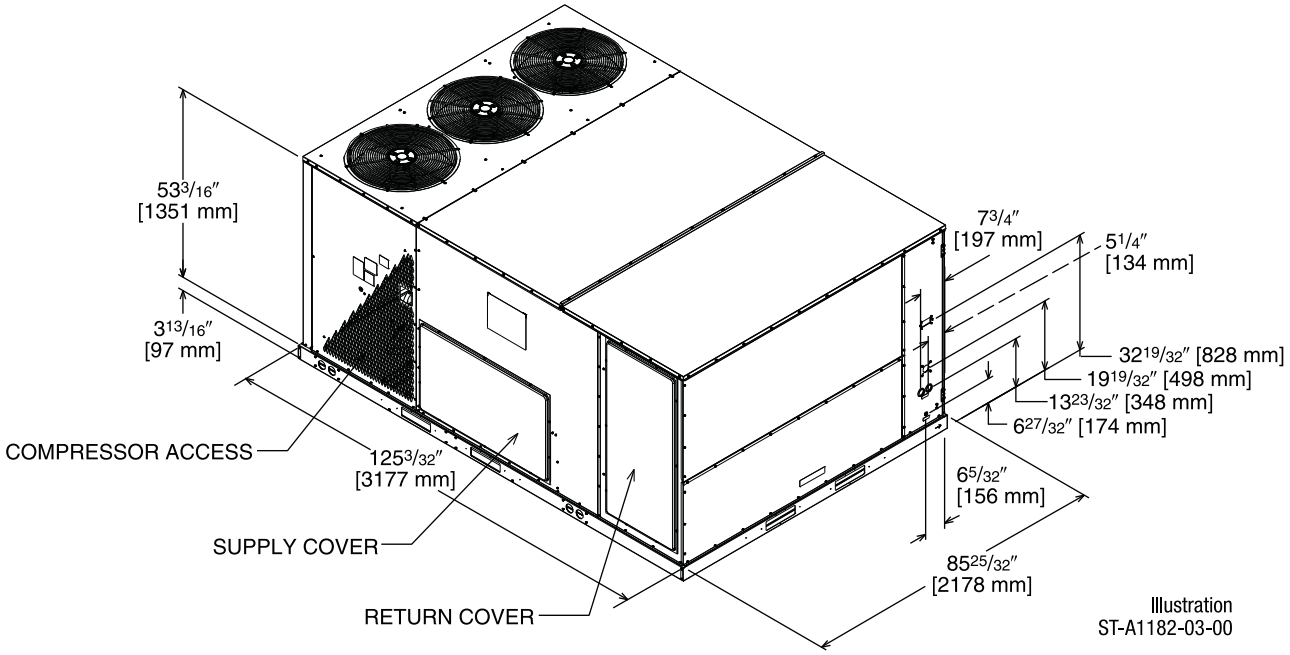


Illustration ST-A1182-03-00

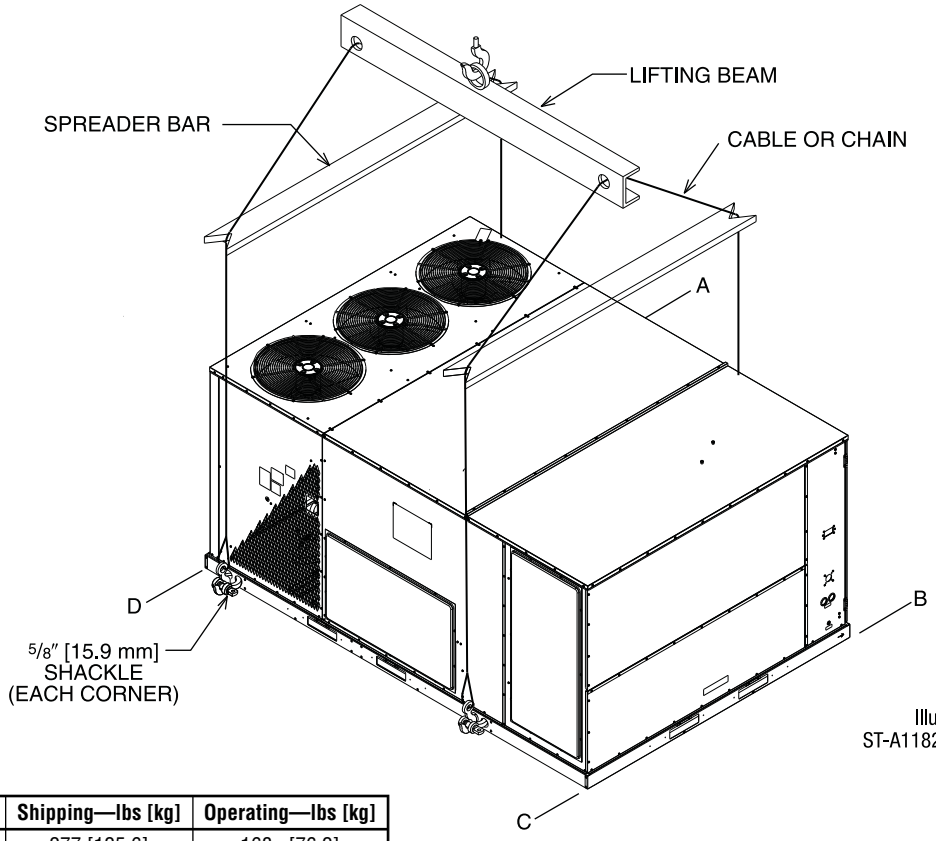


Illustration ST-A1182-25-00

WEIGHTS

Accessory	Shipping—lbs [kg]	Operating—lbs [kg]
Downflow Economizer	277 [125.6]	168 [76.2]
Horizontal Economizer	333 [151.0]	301 [136.5]
Power Exhaust	119 [54.0]	59 [26.8]
Manual Fresh Air Damper*	61 [27.7]	52 [23.6]
Motor Kit for Fresh Air Damper*	42 [19.1]	35 [15.9]
Roofcurb, 14"	184 [83.5]	176 [79.8]
Hail Guard	50 [22.7]	45 [20.4]

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

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

*Note: Corner weights measured at base of unit.

[ ] Designates Metric Conversions

SLAB INSTALLATION

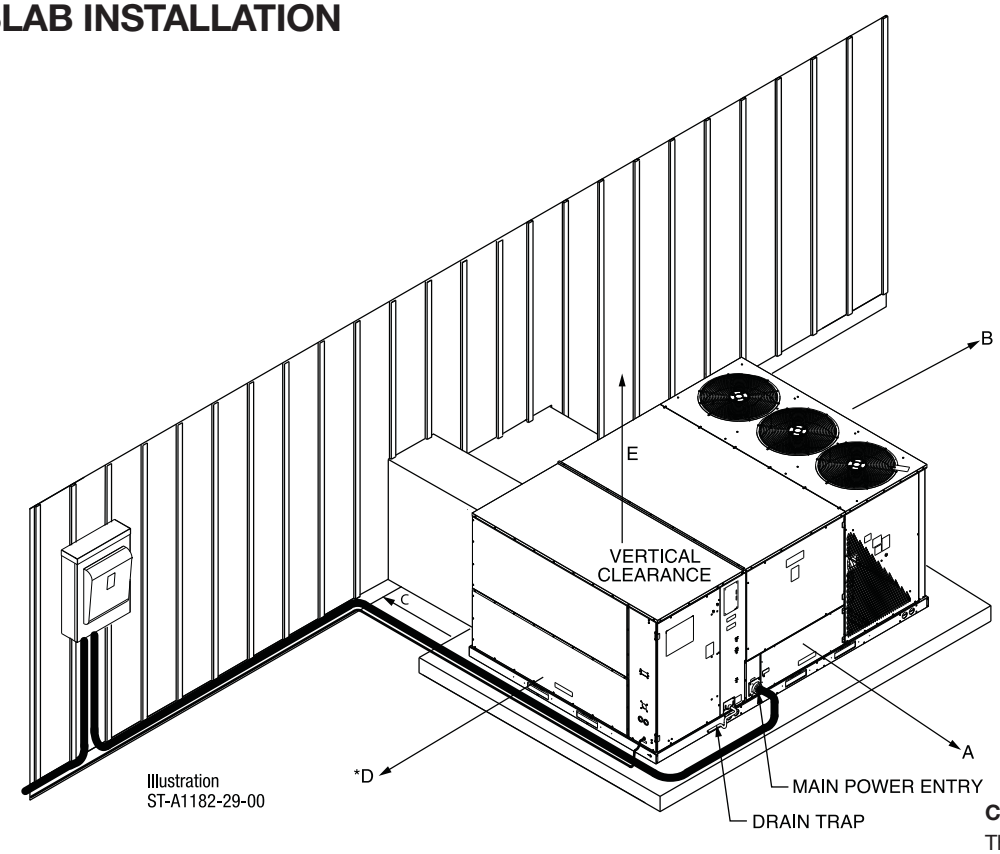


Illustration
ST-A1182-29-00

CLEARANCES

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

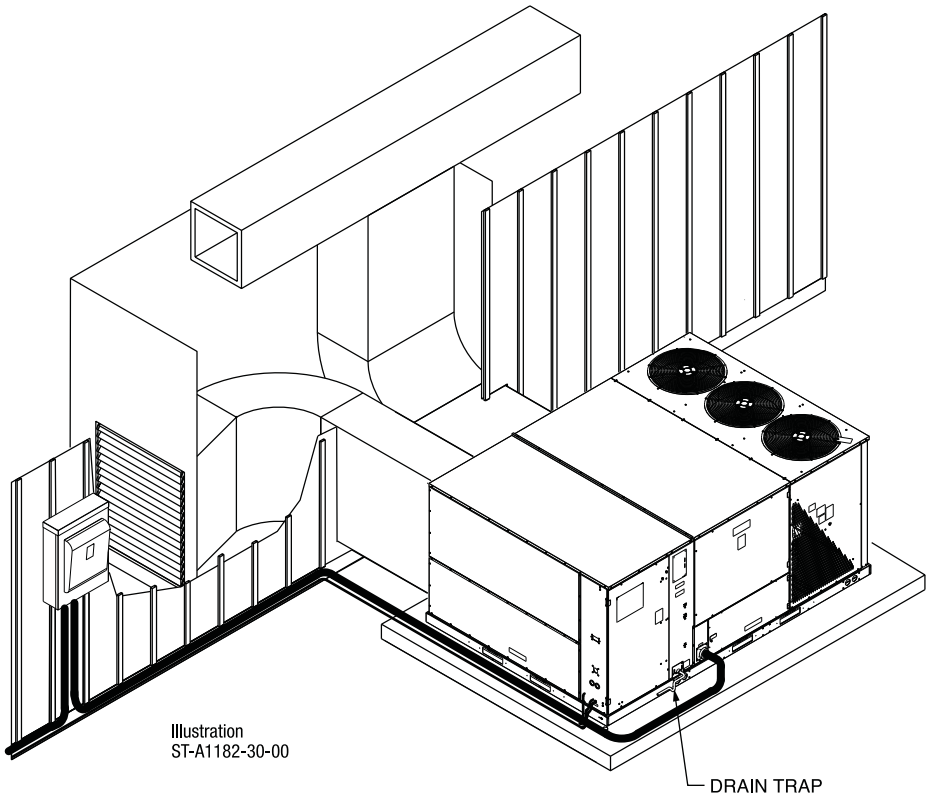


Illustration
ST-A1182-30-00

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 18" [457 mm].
With Economizer 48" [1219 mm].
+Without Horizontal Economizer 18" [457 mm].
With Horizontal Economizer 42" [1067 mm].

[ ] Designates Metric Conversions

FIELD INSTALLED ACCESSORY EQUIPMENT–SELF CONTAINED AIR CONDITIONER

Accessory Description	Model Number	Shipping Weight Lbs. [kg]	Installed Weight Lbs. [kg]	Factory Installation Available?
Electric Heaters	RXJJ-CE20 (C,D,Y)	41 [18.6]	31 [14.1]	Yes
	RXJJ-CE40 (C,D,Y)	44 [20.0]	34 [15.4]	Yes
	RXJJ-CE60 (C,D,Y)	45 [20.4]	35 [15.9]	Yes
	RXJJ-CE75 (C,D,Y)	46 [20.9]	36 [16.3]	Yes
Downflow Economizer w/Single Enthalpy	AXRD-PGCM3	277 [125.6]	168 [76.2]	Yes
Downflow Economizer w/Smoke Detector	AXRD-SGCM3	280 [127.0]	171 [77.6]	Yes
Dual Enthalpy Kit	RXRX-AV02	1 [0.5]	0.5 [0.2]	No
Horizontal Economizer w/ Single Enthalpy	AXRD-RGCM3	333 [151.0]	301 [136.5]	No
Carbon Dioxide Sensor (Wall Mount)	RXRX-AR02	3 [1.4]	2 [0.9]	No
Power Exhaust (208/230V)	RXRX-BGF05C	119 [54.0]	59 [26.8]	No
Power Exhaust (460V)	RXRX-BGF05D	119 [54.0]	59 [26.8]	No
Power Exhaust (575V)	RXRX-BGF05Y	119 [54.0]	59 [26.8]	No
Manual Fresh Air Damper*	AXRF-KFA1	61 [27.7]	52 [23.6]	No
Motorized Kit for Manual Fresh Air Damper*	RXRX-AW03	42 [19.1]	35 [15.9]	No
Roofcurb, 14"	RXKG-CBH14	184 [83.5]	176 [79.8]	No
Roofcurb Adapter to RXRK-E56	RXRX-CJCE56	465 [210.9]	415 [188.2]	No
Roofcurb Adapter to RXKG-CAF14	RXRX-CJCF14	555 [251.7]	505 [229.1]	No
Concentric Diffuser (Step-Down 18" x 36")	RXRN-AD81	310 [140.6]	157 [71.2]	No
Concentric Diffuser (Step-Down 24" x 48")	RXRN-AD86	367 [166.5]	212 [96.2]	No
Concentric Diffuser (Flush, 18" x 36")	RXRN-AD80	213 [96.6]	115 [52.2]	No
Downflow Transition (Rect. To Rect. 18" x 36")	RXMC-CJ07[1]	81 [36.7]	74 [33.6]	No
Downflow Transition (Rect. To Rect. 24" x 48")	RXMC-CK08[2]	81 [36.7]	74 [33.6]	No
Compressor Time-Delay Relay Kit	RXMD-A04	2 [0.9]	1 [0.5]	No
Low-Ambient Control Kit (1 Per Compressor)	RXRZ-C02	3 [1.4]	2 [0.9]	Yes
Freeze Stat	RXRX-AM03	1 [0.5]	0.5 [0.2]	Yes
Non-Powered Convenience Outlet	RXRX-AN01	2 [0.9]	1.5 [0.7]	Yes
Hail Guard	AXRX-AAD01K	50 [22.7]	45 [20.4]	Yes

NOTES: *Motorized Kit and Manual Fresh Air Damper must be combined for a complete Motorized Outside Air Damper Selection
1. Used with RXRN-AD81 and RXRN-AD80 concentric diffusers 2. Used with RXRN-AD86 concentric diffusers

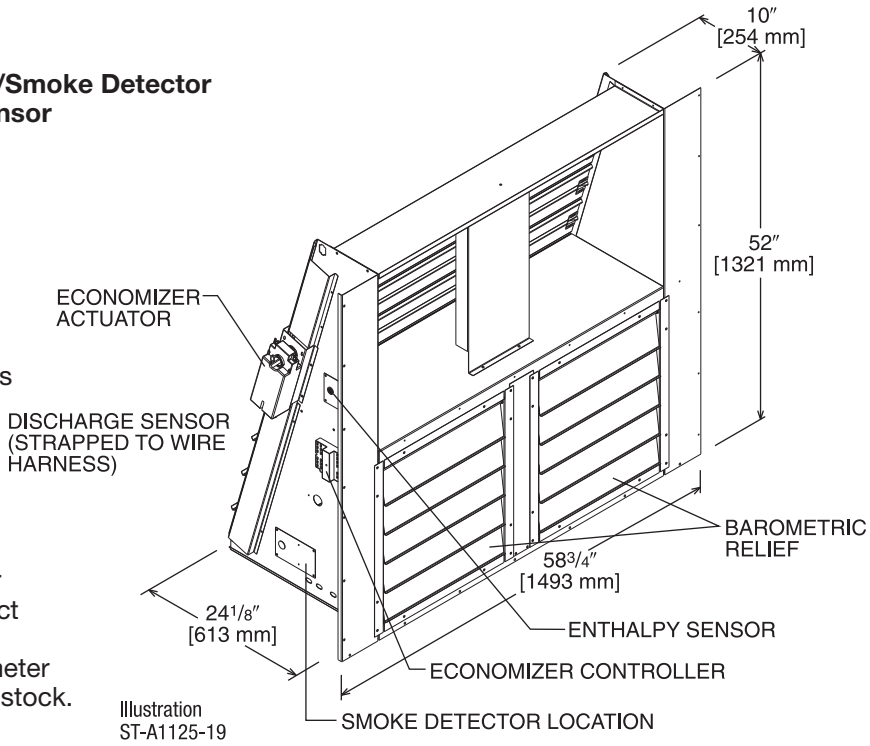
[ ] Designates Metric Conversions

ECONOMIZERS—DOWNFLOW ONLY

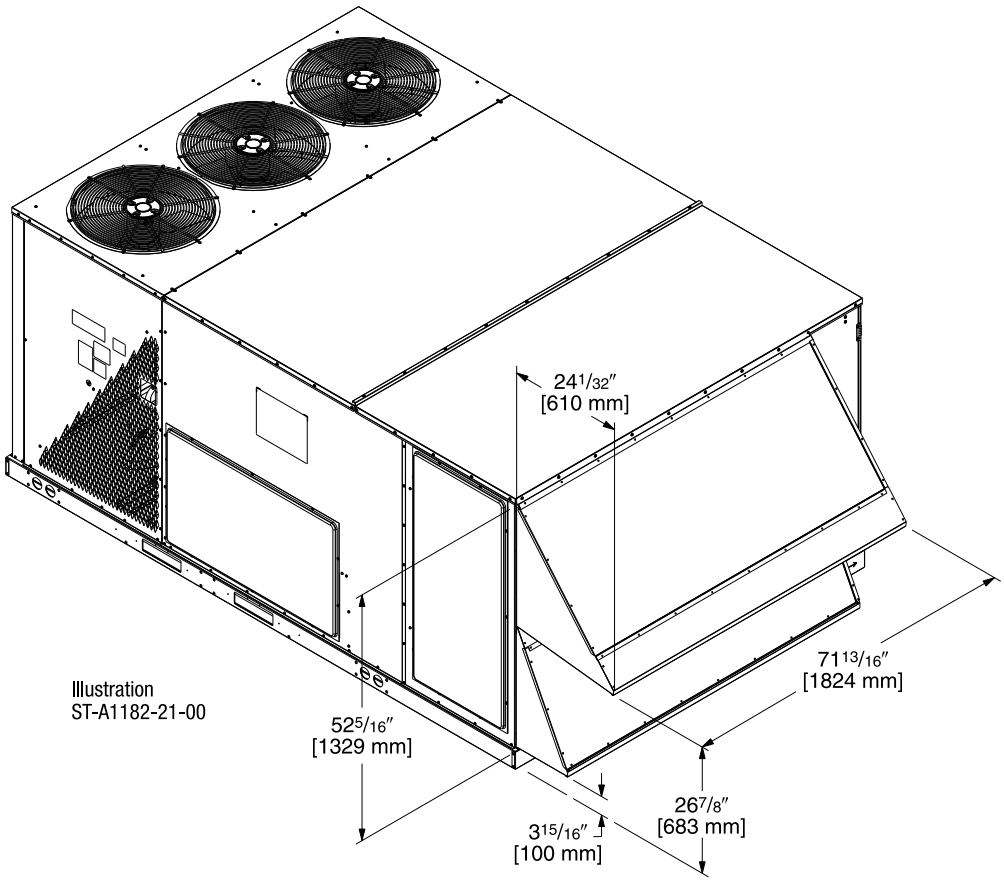
Field Installed

AXRD-PGCM3—Single Enthalpy (Outdoor)
AXRD-SGCM3—Single Enthalpy (Outdoor) w/Smoke Detector
RXRX-AR02—Optional Wall-Mounted CO_2 Sensor
RXRX-AV02—Dual Enthalpy Upgrade Kit

- Features **Honeywell** Controls
- Available Factory Installed or Field Accessory
- Gear Driven Direct Drive Actuator
- Fully Modulating (0-100%)
- Low Leakage Dampers
- Slip-In Design for Easy Installation
- Plug-In Polarized 12-pin Electrical Connections
- Pre-Configured—No Field Adjustments Necessary
- Standard Barometric Relief Damper
- Single Enthalpy with Dual Enthalpy Upgrade Kit Available
- CO_2 Input Sensor Available
- Field Assembled Hood Ships with Economizer
- Economizer Ships Complete for Downflow Duct Application.
- Optional Remote Minimum Position Potentiometer (Honeywell #S963B1128) is Available from Prostock.
- Field Installed Power Exhaust Available



TOLERANCE ±.125



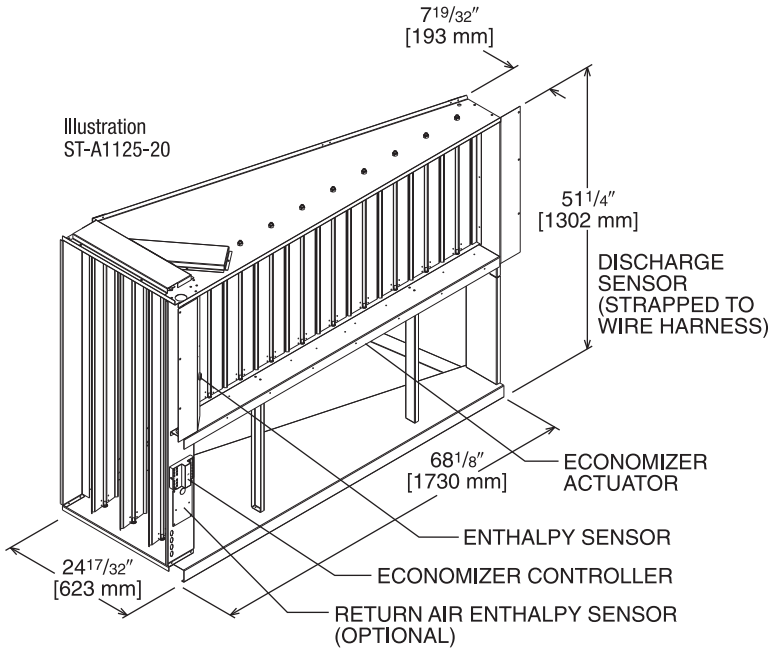
[ ] Designates Metric Conversions

ECONOMIZER FOR HORIZONTAL DUCT INSTALLATION

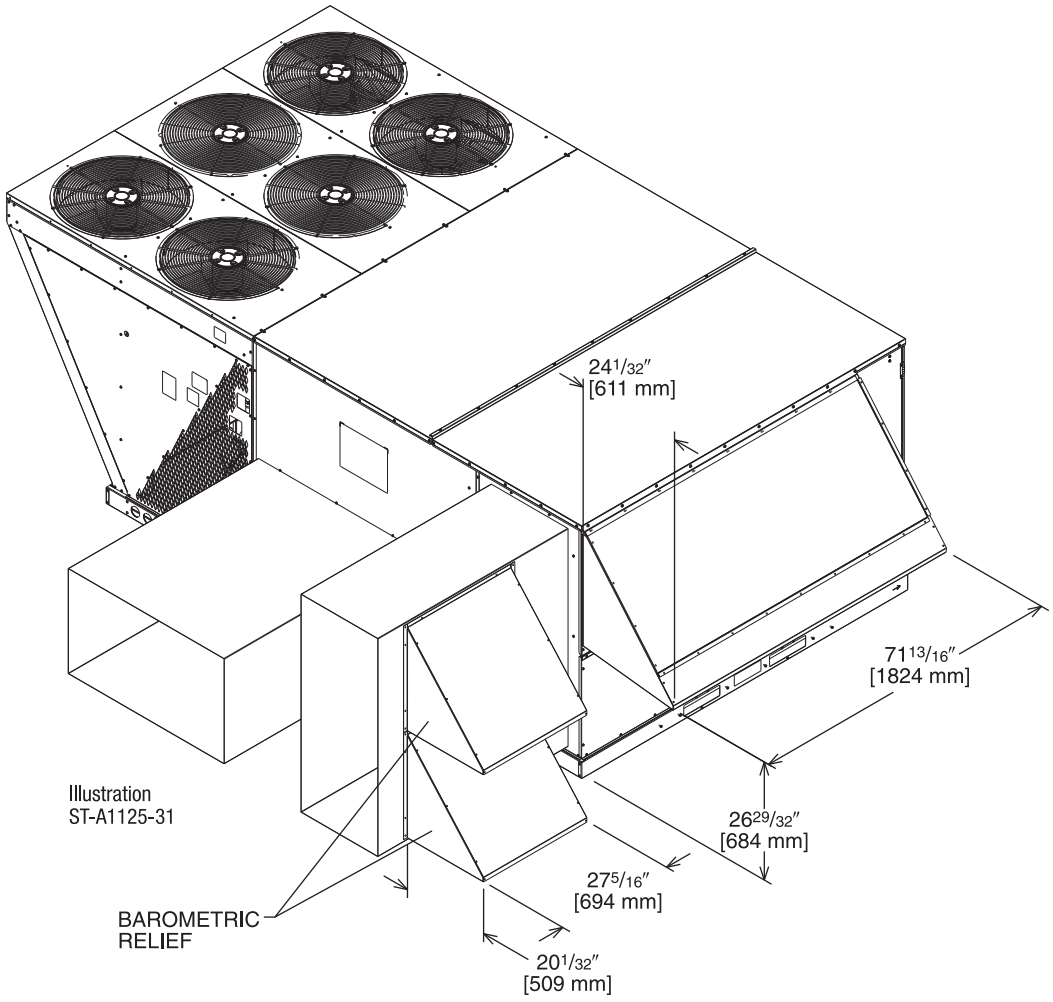
Field Installed Only

AXRD-RGCM3—Single Enthalpy (Outdoor)
RXRX-AV02—Dual Enthalpy Upgrade Kit
RXRX-AR02—Optional Wall-Mounted CO_2 Sensor

- Features **Honeywell** 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 Electrical Connections
- Pre-Configured—No Field Adjustments Necessary
- Standard Barometric Relief Damper
- Single Enthalpy with Dual Enthalpy Upgrade Kit Available
- CO_2 Input Sensor Available
- Field Assembled Hood Ships with Economizer
- Economizer Ships Complete for Horizontal Duct Application
- Optional Remote Minimum Position Potentiometer (Honeywell #S963B1128) is Available from Prostock
- Field Installed Power Exhaust Available



TOLERANCE ± .125

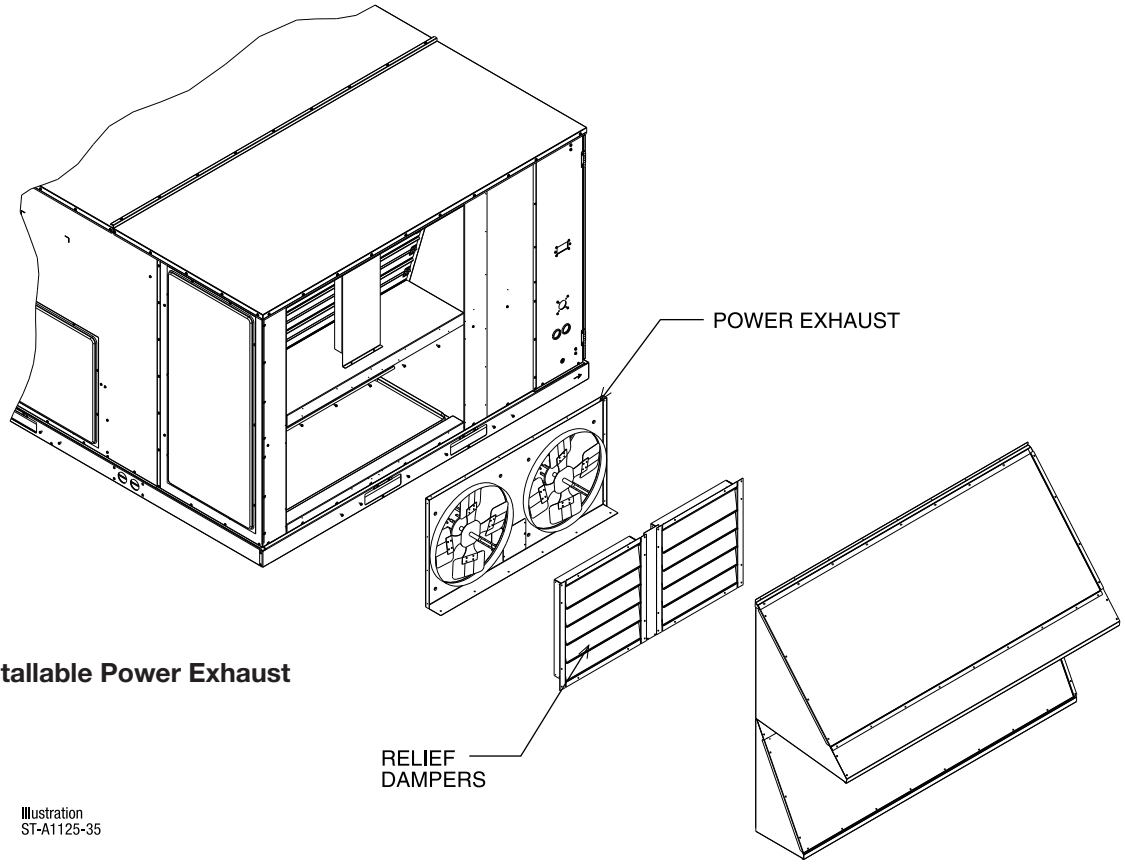


[ ] Designates Metric Conversions

INTEGRAL POWER EXHAUST KIT FOR RXRD-PGCM3 OR SGCM3 ECONOMIZERS

RXRX-BGF05 (C, D, or Y*)

***Voltage Code**



Field Installable Power Exhaust

Illustration
ST-A1125-35

Model No.	No. of Fans	Volts	Phase	HP (ea.)	Low Speed		High Speed ①		FLA (ea.)	LRA (ea.)
					CFM [L/s] ②	RPM	CFM [L/s] ②	RPM		
RXRX-BGF05C	2	208-230	1	0.75	4100 [1935]	850	5200 [2454]	1050	5	4.97
RXRX-BGF05D	2	460	1	0.75	4100 [1935]	850	5200 [2454]	1050	2.2	3.4
RXRX-BGF05Y	2	575	1	0.75	4100 [1935]	850	5200 [2454]	1050	1.5	2.84

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

[ ] Designates Metric Conversions

FRESH AIR DAMPER

MOTORIZED DAMPER KIT
RXRX-AW03
(Motor Kit for RXRF-KFA1)

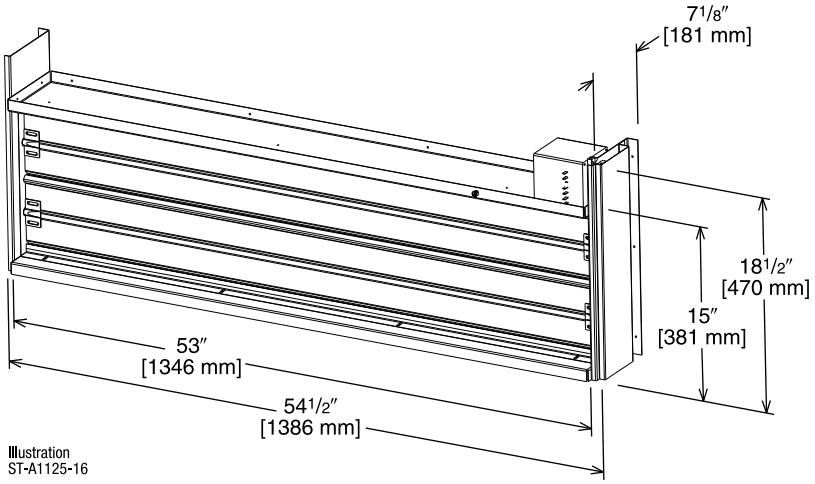


Illustration
ST-A1125-16

AXRF-KFA1 (Manual)
RXRX-AW03 (Motorized damper kit for manual fresh air damper)

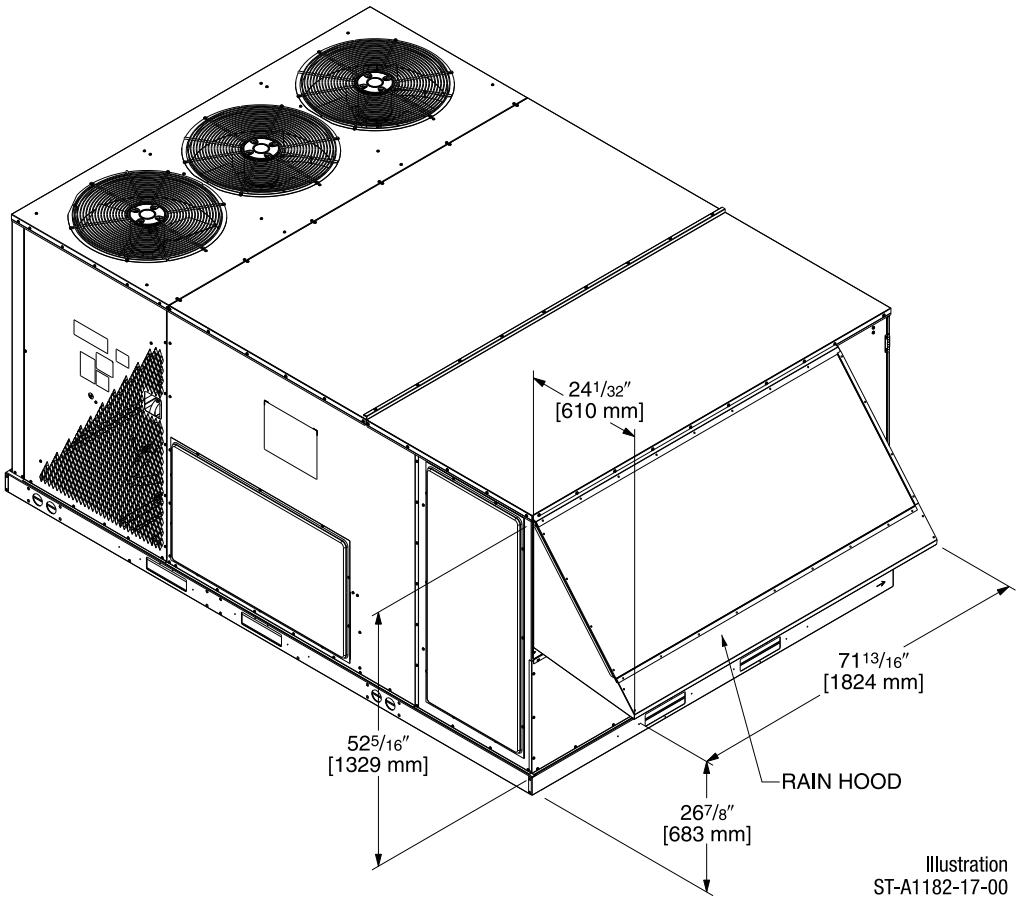


Illustration
ST-A1182-17-00

[ ] Designates Metric Conversions

ROOFCURBS (Full Perimeter)

- Sure Comfort's roofcurb design can be utilized on 15 & 20 [52.8 & 70.3 kW] models.
- One available height (14" [356 mm]).
- Quick assembly corners for simple and fast assembly.
- 1" [25.4 mm] x 4" [102 mm] Nailer 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

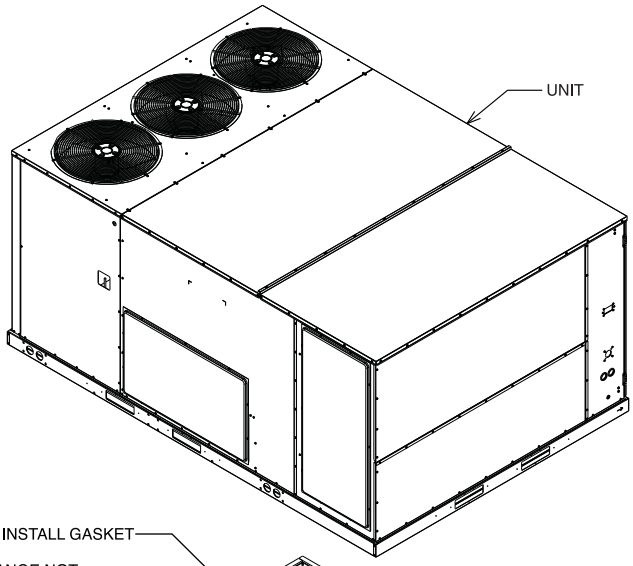
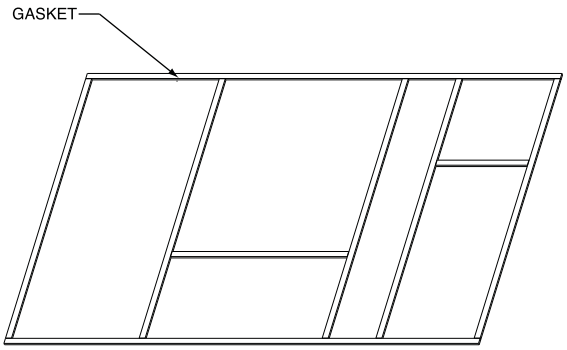
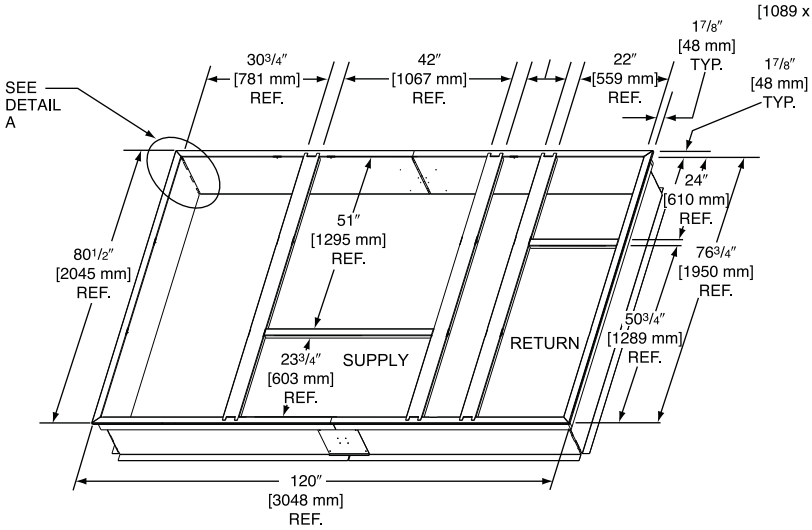
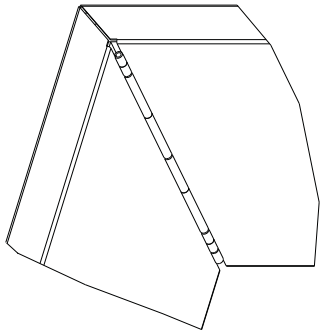


Illustration ST-A1182-14-00

ROOFCURB ASSEMBLY

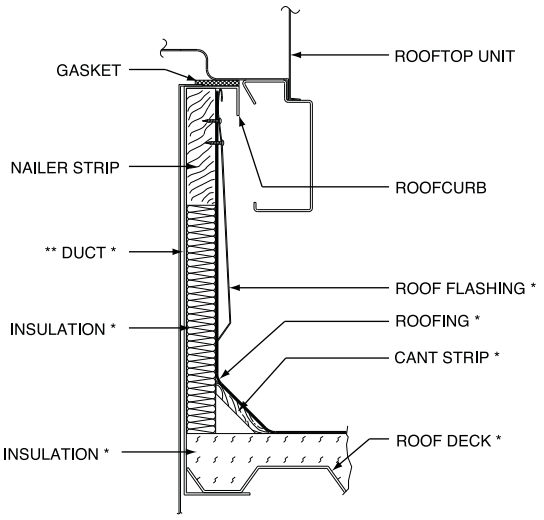






DETAIL A

Illustration ST-A1125-14



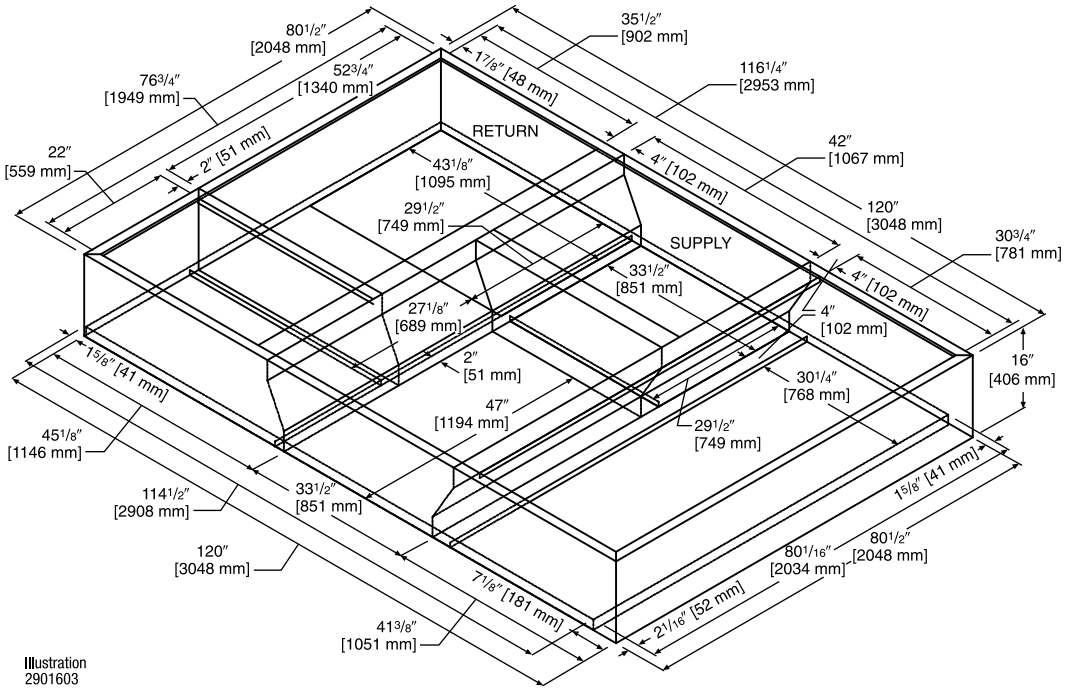
* BY CONTRACTOR

** FOR INSTALLATION OF DUCT AS SHOWN, USE RECOMMENDED DUCT SIZES FROM ROOFCURB INSTALLATION INSTRUCTIONS. FOR DUCT FLANGE ATTACHMENT TO UNIT, SEE UNIT INSTALLATION INSTRUCTIONS FOR RECOMMENDED DUCT SIZES.

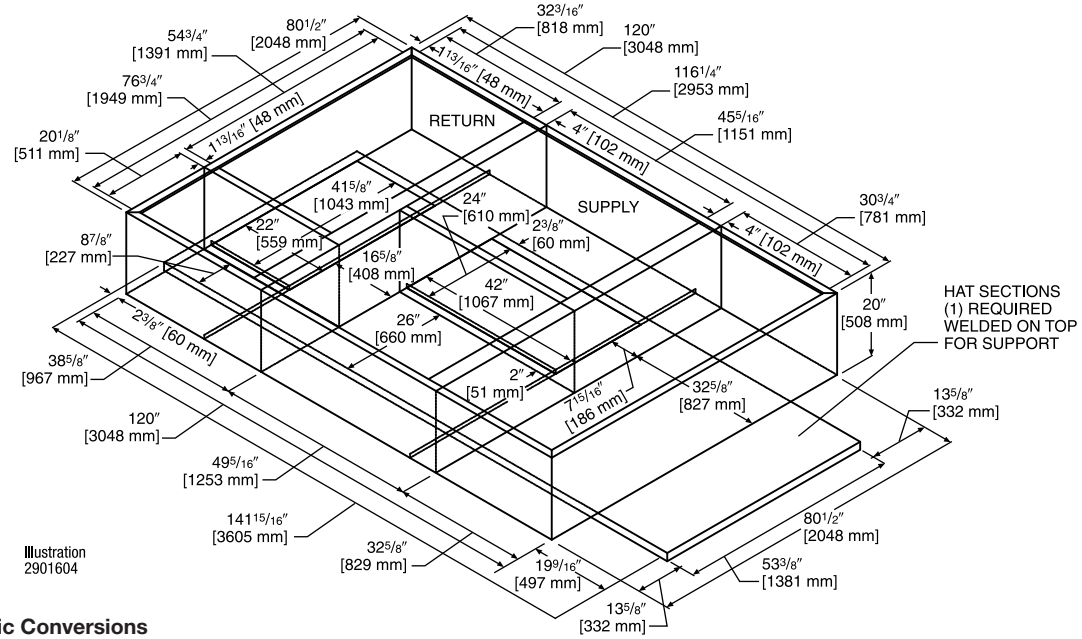
[ ] Designates Metric Conversions

ROOFCURB ADAPTERS

OLD MODELS	OLD CURB MODEL	ROOFCURB ADAPTER	NEW MODEL
COMMERCIAL CABINET (12.5, 15 & 20 TON) ([44, 52.8 & 70.3 kW]) (-)RCF, (-)RGF, (-)REF	RXRK-E56	RXRX-CJCE56	(-)LKL (15 & 20 TON) ([52.8 & 70.3 kW])



COMMERCIAL CABINET (15, 20 & 25 TON) ([52.8, 70.3 & 87.9 kW]) (-)LKB, LMB, LNB	RXKG-CAF14	RXRX-CJCF14	(-)LKL (15 & 20 TON) ([52.8 & 70.3 kW])



[ ] Designates Metric Conversions

CONCENTRIC DIFFUSER APPLICATION

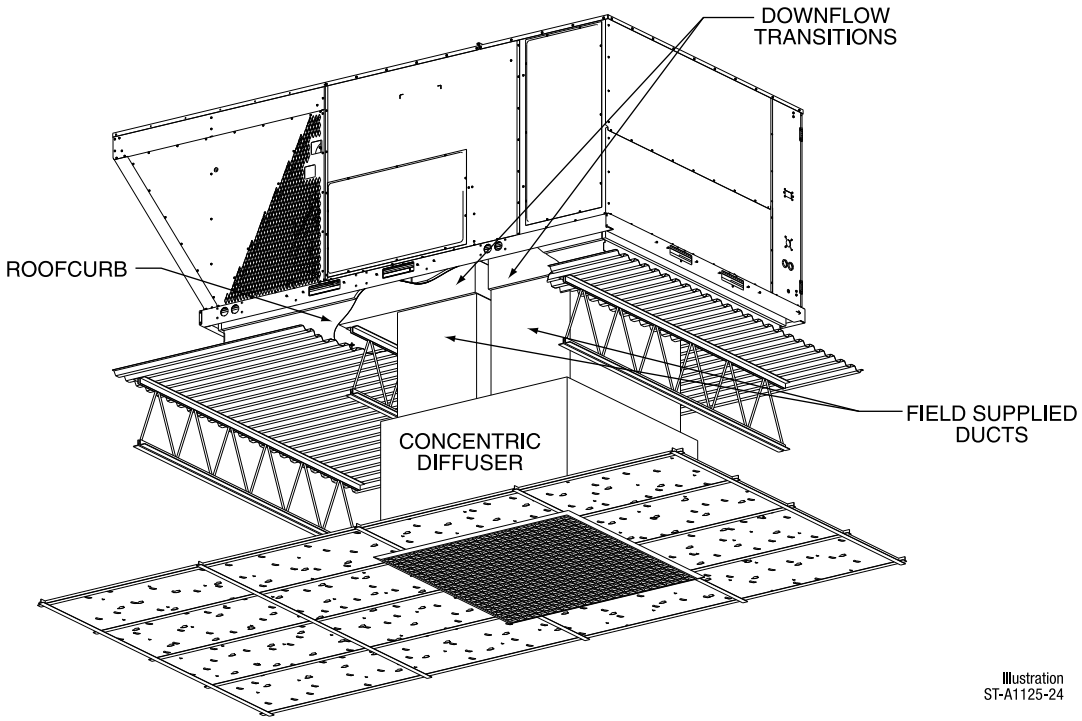


Illustration
ST-A1125-24

DOWNFLOW TRANSITION DRAWINGS

RXMC-CJ07 (15 Ton) [52.8 kW]

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

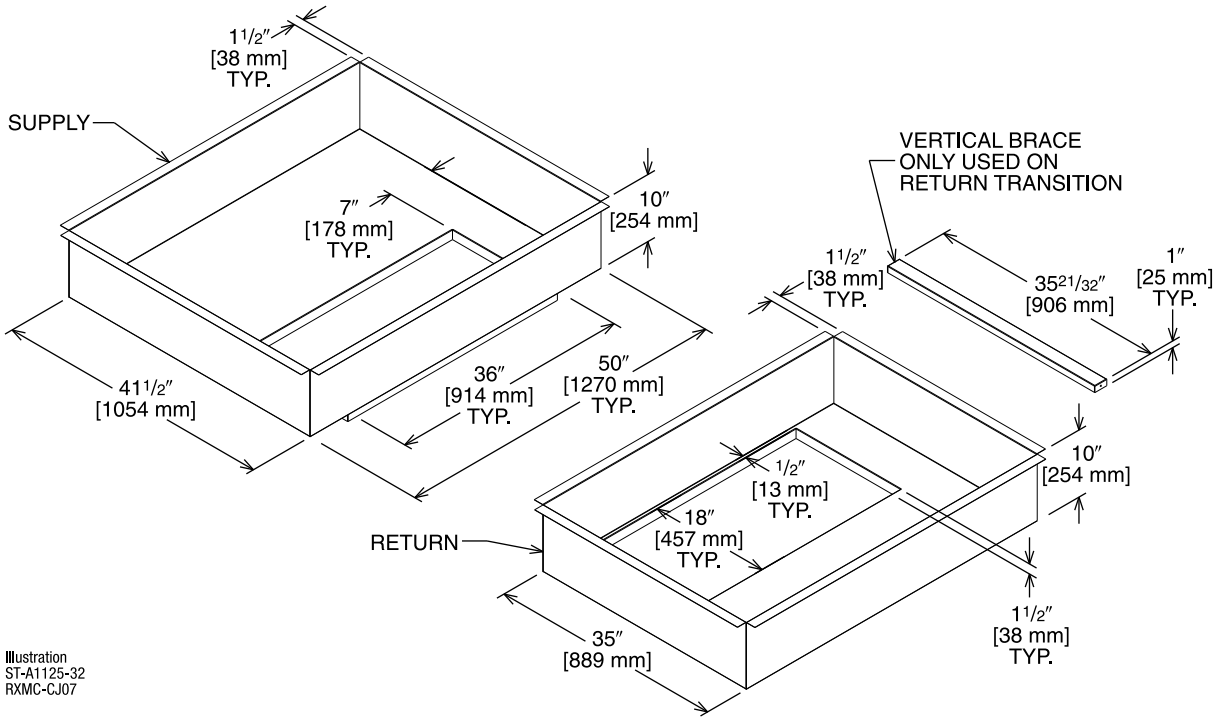


Illustration
ST-A1125-32
RXMC-CJ07

[ ] Designates Metric Conversions

DOWNFLOW TRANSITION DRAWINGS (Cont.)

RXMC-CK08 (20 Ton) [70.3 kW]

- Used with RXRN-AD86 Concentric Diffusers.

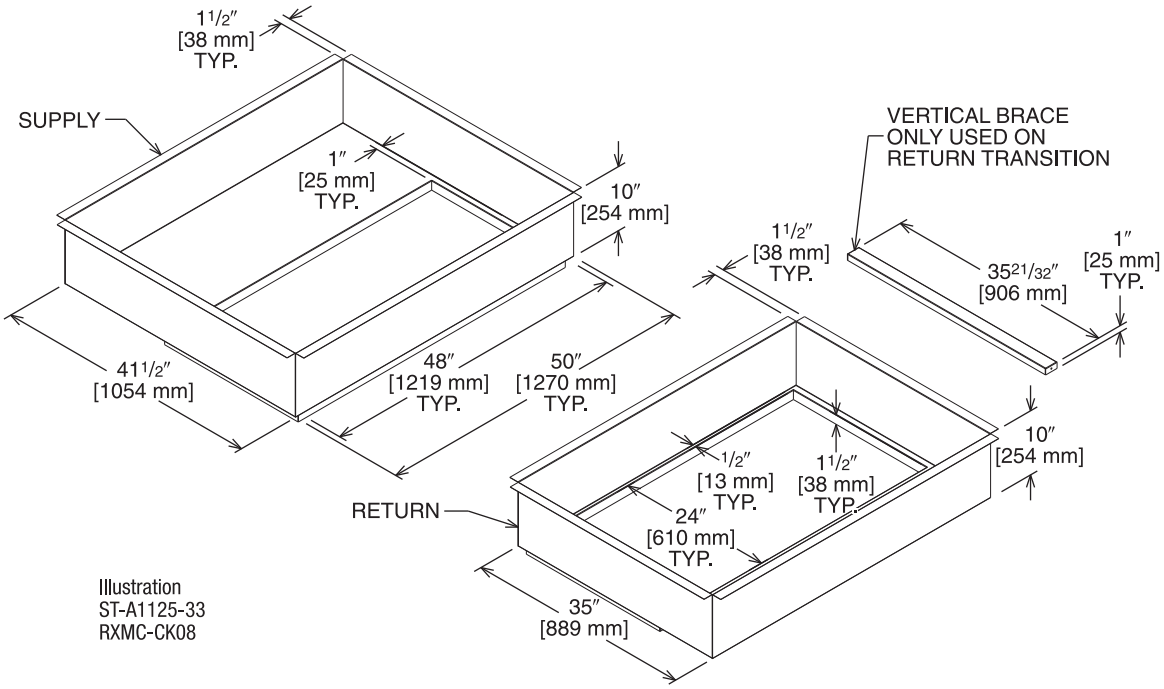
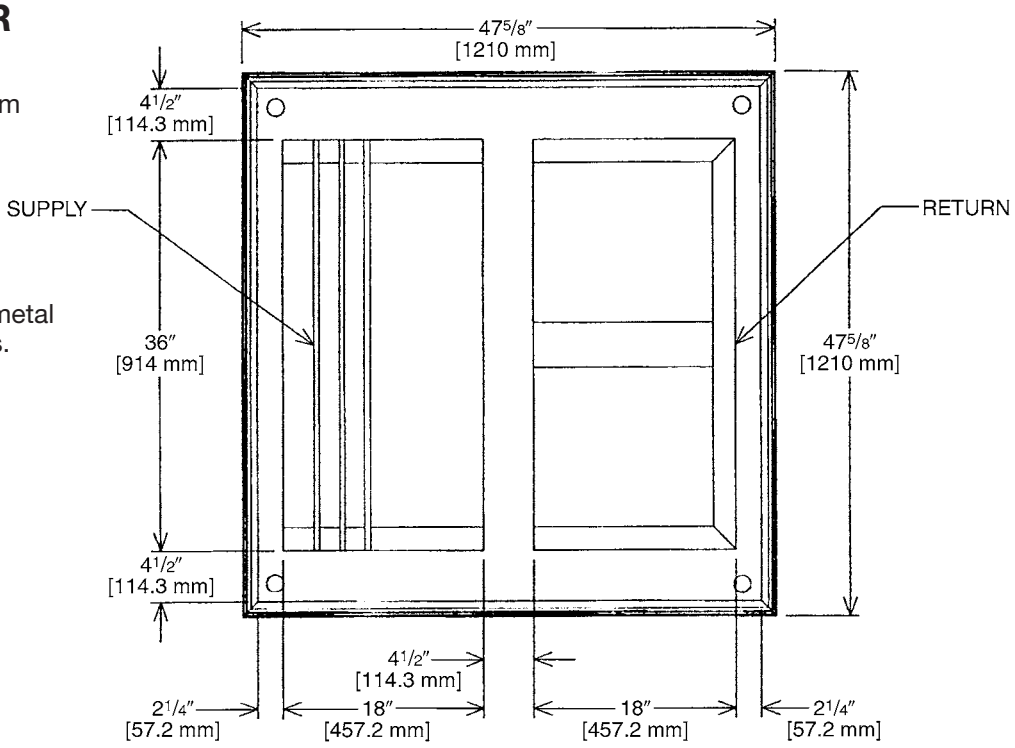


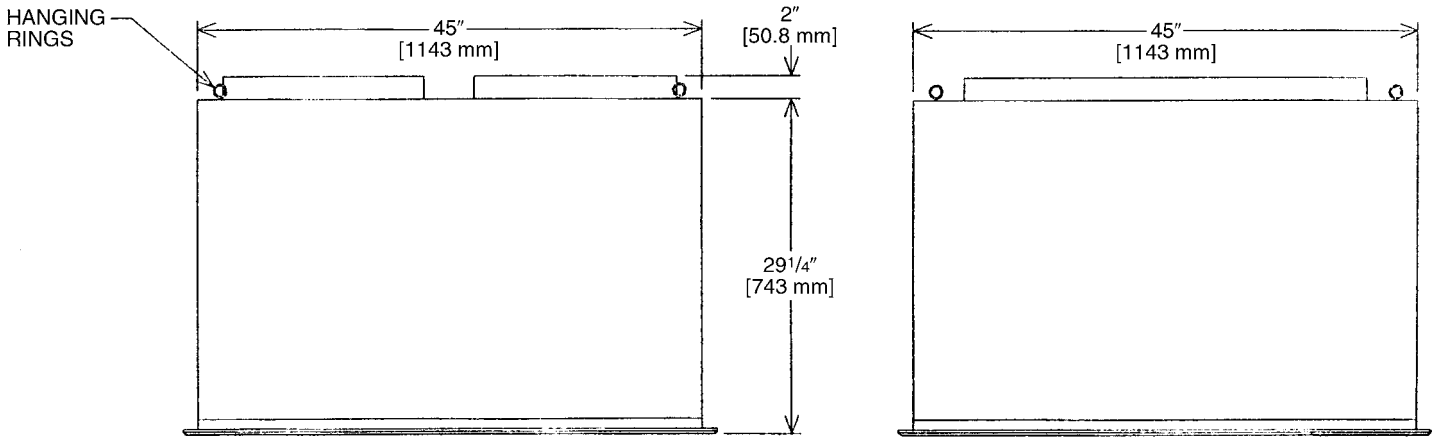
Illustration
ST-A1125-33
RXMC-CK08

[ ] Designates Metric Conversions

CONCENTRIC DIFFUSER 15 TON [52.8 kW] FLUSH

- 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.





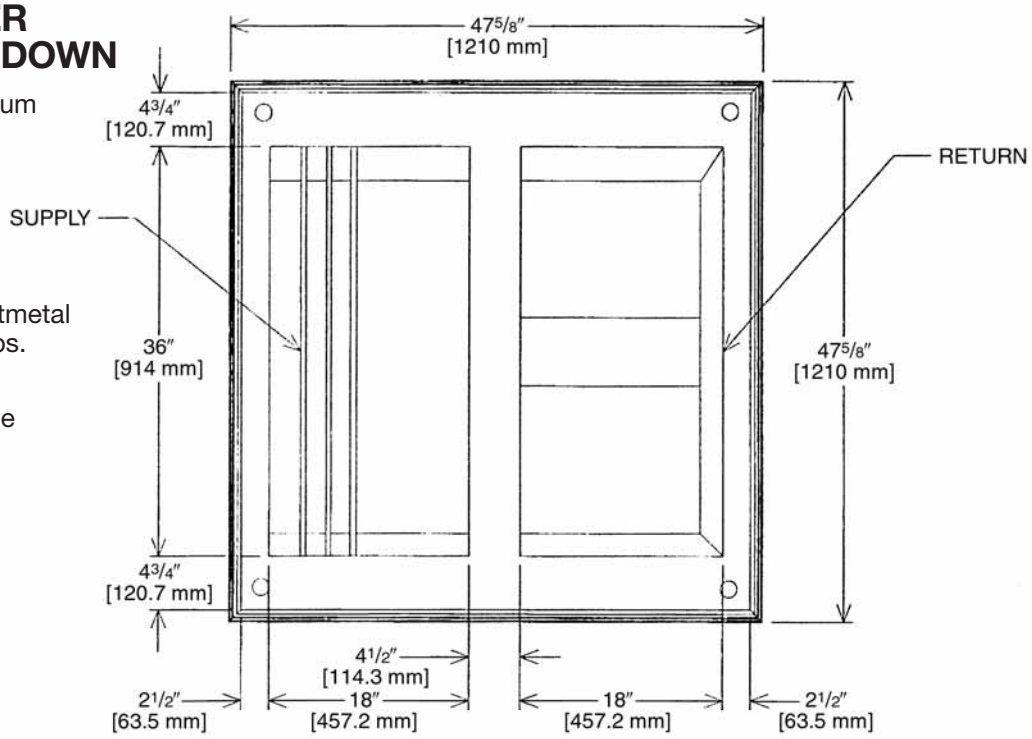
CONCENTRIC DIFFUSER SPECIFICATIONS

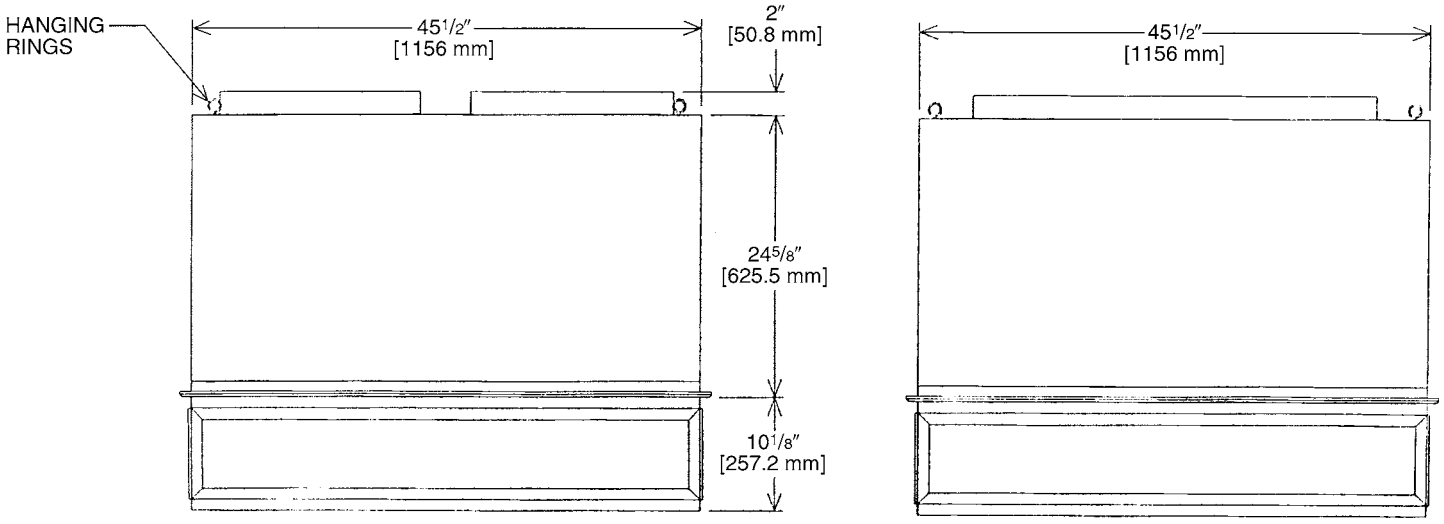
PART NUMBER	CFM [L/s]	STATIC PRESSURE	THROW FEET	NECK VELOCITY	JET VELOCITY
RXRN-AD80	5600 [2643]	0.36	28-37	1000	2082
	5800 [2737]	0.39	29-38	1036	2156
	6000 [2832]	0.42	40-50	1071	2230
	6200 [2926]	0.46	42-51	1107	2308
	6400 [3020]	0.50	43-52	1143	2379
	6600 [3115]	0.54	45-56	1179	2454

[ ] Designates Metric Conversions

CONCENTRIC DIFFUSER 15 TON [52.8 kW] STEP DOWN

- 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.





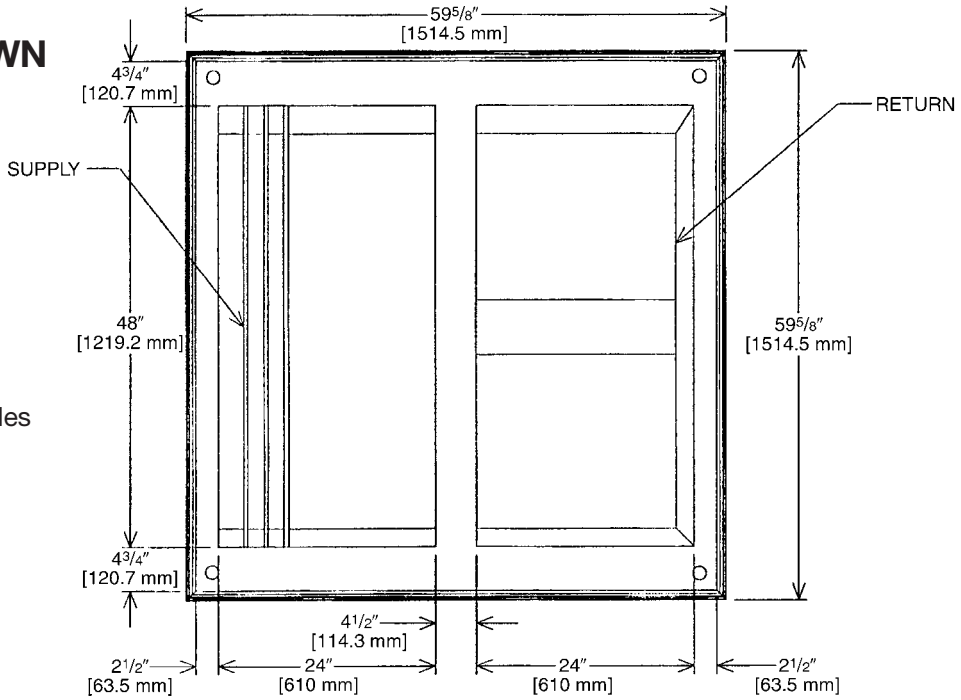
CONCENTRIC DIFFUSER SPECIFICATIONS

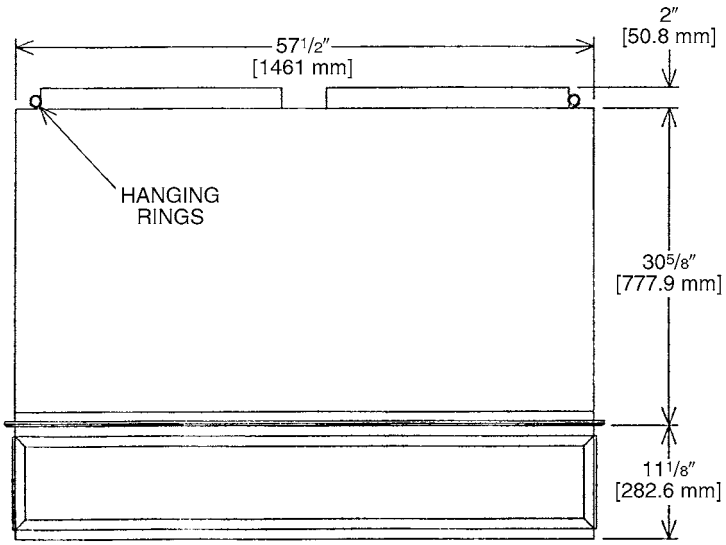
PART NUMBER	CFM [L/s]	STATIC PRESSURE	THROW FEET	NECK VELOCITY	JET VELOCITY
RXRN-AD81	5600 [2643]	0.36	39-49	920	920
	5800 [2737]	0.39	42-51	954	954
	6000 [2832]	0.42	44-54	1022	1022
	6200 [2926]	0.46	45-55	1056	1056
	6400 [3020]	0.50	46-55	1090	1090
	6600 [3115]	0.54	47-56	1124	1124

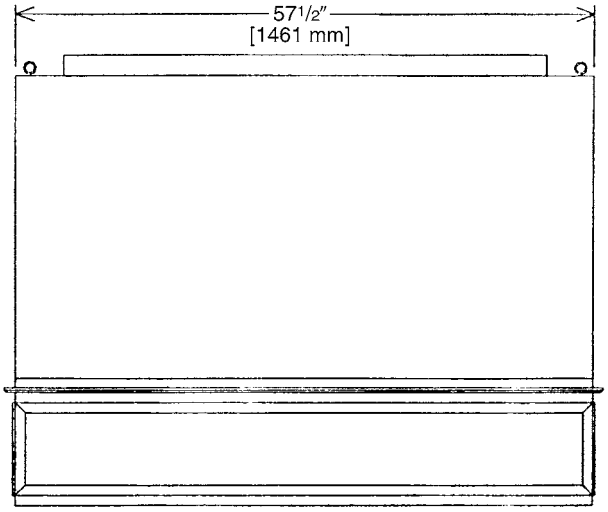
[ ] Designates Metric Conversions

CONCENTRIC DIFFUSER RXRN-AD86 SERIES 20 TON [70.3 kW] STEP DOWN

- 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

Guide Specifications RLKL-B180 thru B240

Note about this specification: Please feel free to copy this specification directly into your building spec. This specification is written to comply with the 2004 version of the "master format" as published by the Construction Specification Institute www.csinet.org.

ELECTRIC HEAT PACKAGED ROOFTOP

HVAC Guide Specifications

Size Range: 15-20 Nominal Tons

Section Description

23 06 80 Schedules for Decentralized HVAC Equipment

23 06 80.13 Decentralized Unitary HVAC Equipment Schedule

23 06 80.13.A. Rooftop unit schedule

1. Schedule is per the project specification requirements.

23 07 16 HVAC Equipment Insulation

23 07 16.13 Decentralized, Rooftop Units:

1. Interior cabinet surfaces shall be insulated with a minimum 3/4-in. thick, minimum 1-1/2 lb density, flexible fiberglass insulation bonded with a phenolic binder, with aluminum foil facing on the air side.
2. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.

23 09 13 Instrumentation and Control Devices for HVAC

23 09 13.23 Sensors and Transmitters:

23 09 13.23.A. Thermostats

23 09 33 Electric and Electronic Control System for HVAC

23 09 33.13 Decentralized, Rooftop Units:

23 09 33.13.A. General:

1. Shall be complete with self-contained low-voltage control circuit protected by a resettable circuit breaker on the 24-v transformer side.
2. Shall utilize color-coded wiring.
3. Unit shall include a minimum of one 9-pin screw terminal connection board for connection of control wiring.

23 09 33.23.B. Safeties:

1. Compressor over-temperature, over current.
2. Low-pressure switch.
3. High-pressure switch.
4. Automatic reset, motor thermal overload protector.

23 09 93 Sequence of Operations for HVAC Controls

23 09 93.13 Decentralized, Rooftop Units:

23 09 93.13 INSERT SEQUENCE OF OPERATION

23 40 13 Panel Air Filters

23 40 13.13 Decentralized, Rooftop Units:

23 40 13.13.A. Standard filter section shall

1. Shall consist of factory-installed, low velocity, throwaway 2-in. thick fiberglass filters of commercially available sizes.
2. Unit shall use only one filter size. Multiple sizes are not acceptable.
3. Filter face velocity shall not exceed 365 fpm at nominal airflows.
4. Filters shall be accessible through an access panel as described in the unit cabinet section of the specification (23 81 19.13.H).

23 81 19 Self-Contained Air Conditioners

23 81 19.13 Small-Capacity Self-Contained Air Conditioners

23 81 19.13.A. General

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

2. Factory assembled, single-piece heating and cooling rooftop unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, and special features required prior to field start-up.
3. Unit shall use environmentally safe, R410A refrigerant.
4. Unit shall be installed in accordance with the manufacturer's instructions.
5. Unit must be selected and installed in compliance with local, state, and federal codes.

23 81 19.13.B. Quality Assurance

1. Unit meets ASHRAE 90.1-2004 minimum efficiency requirements.
2. 3 phase units are Energy Star qualified.
3. Unit shall be rated in accordance with AHRI Standards 210 and 360.
4. Unit shall be designed to conform to ASHRAE 15, 2001.
5. Unit shall be UL-tested and certified in accordance with ANSI Z21.47 Standards and UL-listed and certified under Canadian standards as a total package for safety requirements.
6. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
7. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
8. Unit casing shall be capable of withstanding Federal Test Method Standard No. 141 (Method 6061) 5000-hour salt spray.
9. Unit shall be designed in accordance with ISO 9001:2000, and shall be manufactured in a facility registered by ISO 9001:2000.
10. Roof curb shall be designed to conform to NRCA Standards.
11. 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.
12. Unit shall be designed in accordance with UL Standard 1995, including tested to withstand rain.
13. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.

23 81 19.13.C. Delivery, Storage, and Handling

1. Unit shall be stored and handled per manufacturer's recommendations.
2. Lifted by crane requires either shipping top panel or spreader bars.
3. Unit shall only be stored or positioned in the upright position.

23 81 19.13.E. Project Conditions

1. As specified in the contract.

23 81 19.13.F. Operating Characteristics

1. Unit shall be capable of starting and running at 115°F (46°C) ambient outdoor temperature, meeting maximum load criteria of AHRI Standard 210/240 or 360 at ± 10% voltage.
2. Compressor with standard controls shall be capable of operation down to 40°F (4°C), ambient outdoor temperatures. Accessory low ambient kit is necessary if mechanically cooling at ambient temperatures below 40°F (4°C).
3. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.
4. Unit shall be factory configured for vertical supply & return configurations.
5. Unit shall be field convertible from vertical to horizontal configuration.

23 81 19.13.G. Electrical Requirements

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

23 81 19.13.H. Unit Cabinet

1. Unit cabinet shall be constructed of galvanized steel, and shall be bonderized and coated with a baked enamel finish on all externally exposed surfaces.
2. Unit cabinet exterior paint shall be: film thickness, (dry) 0.003 inches minimum, gloss (per ASTM D523, 60°F / 16°C): 60, Hardness: H-2H Pencil hardness.
3. Evaporator fan compartment interior cabinet insulation shall conform to AHRI Standards 210 or 360 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum 3/4-in. thick, 1 lb. density, flexible fiberglass insulation, aluminum foil-faced coated on the air side.
4. Base of unit shall have locations for thru-the-base gas and electrical connections (factory installed or field installed), standard.
5. Base Rail
   a. Unit shall have base rails on all sides.
   b. Holes shall be provided in the base rails for rigging shackles to facilitate maneuvering and overhead rigging.
   c. Holes shall be provided in the base rail for moving the rooftop by fork truck.
   d. Base rail shall be a minimum of 14 gauge thickness.

6. Condensate pan and connections:
   a. Shall be a sloped condensate drain pan made of a non-corrosive material.
   b. Shall comply with ASHRAE Standard 62.
   c. Shall use a 1" x 11 1/2 NPT drain connection through the side of the drain pan. Connection shall be made per manufacturer's recommendations.
7. Electrical Connections
   a. All unit power wiring shall enter unit cabinet at a single, factory-prepared, knockout location.
   b. Thru-the-base capability
      i. Standard unit shall have a thru-the-base electrical location(s) using a raised, embossed portion of the unit basepan.
      ii. No basepan penetration, other than those authorized by the manufacturer, is permitted.
8. Component access panels (standard)
   a. Cabinet panels shall be easily removable for servicing.
   b. Stainless steel metal hinges are standard on all doors.

23 81 19.13.J. Coils

1. Standard Aluminum/Copper Coils:
   a. Standard evaporator coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
   b. 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 psi.
   c. Condenser coils shall be aluminum MicroChannel coils.

23 81 19.13.K. Refrigerant Components

1. Refrigerant circuit shall include the following control, safety, and maintenance features:
   a. Capillary tubes.
   b. Refrigerant filter drier.
   c. Service gauge connections on suction and discharge lines.
   d. Pressure gauge access through an access port in the front and rear panel of the unit.
2. Compressors
   a. Unit shall use one fully hermetic, scroll compressor for each independent refrigeration circuit.
   b. Compressor motors shall be cooled by refrigerant gas passing through motor windings.
   c. Compressors shall be internally protected from high discharge temperature conditions. Advanced Scroll Temperature Protection on 240 sizes.
   d. Compressors shall be protected from an over-temperature and over-amperage conditions by an internal, motor overload device.
   e. Compressor shall be factory mounted on rubber grommets.
   f. Compressor motors shall have internal line break thermal and current overload protection.
   g. Crankcase heaters shall not be required for normal operating range.

23 81 19.13.L. Filter Section

1. Filters access is specified in the unit cabinet section of this specification.
2. Filters shall be held in place by sliding filter tray, facilitating easy removal and installation.
3. Shall consist of factory-installed, low velocity, throw-away 2-in. thick fiberglass filters.
4. Filter face velocity shall not exceed 365 fpm at nominal airflows.
5. Filters shall be standard, commercially available sizes.
6. Only one size filter per unit is allowed.

23 81 19.13.M. Evaporator Fan and Motor

1. Evaporator fan motor:
   a. Shall have permanently lubricated bearings.
   b. Shall have inherent automatic-reset thermal overload protection.
   c. Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating shall be required.

2. Belt-driven Evaporator Fan:
   a. Belt drive shall include an adjustable-pitch motor pulley.
   b. Shall use sealed, permanently lubricated ball-bearing type.
   c. Blower fan shall be double-inlet type with forward-curved blades.
   d. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.

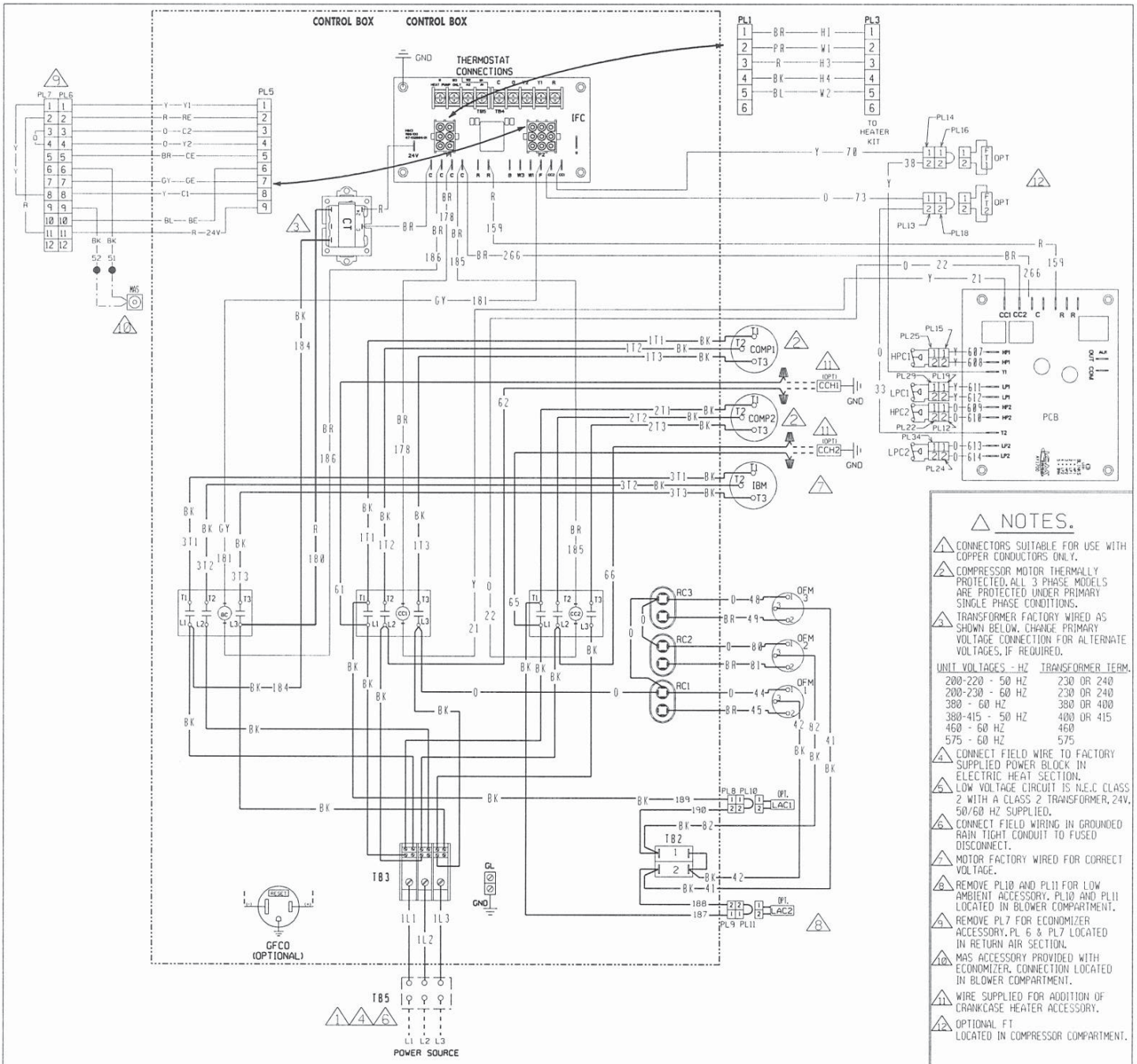
23 81 19.13.N. Condenser Fans and Motors

1. Condenser fan motors:
   a. Shall be a totally enclosed motor.
   b. Shall use permanently lubricated bearings.
   c. Shall have inherent thermal overload protection with an automatic reset feature.
   d. Shall use a shaft-down design. Shaft-up designs including those with “rain-slinger devices” shall not be allowed.
2. Condenser Fans shall:
   a. Shall be a direct-driven propeller type fan
   b. Shall have aluminum blades riveted to corrosion-resistant steel spiders and shall be dynamically balanced.

23 81 19.13.O. Special Features

1. Integrated Economizers:
   a. Integrated, gear-driven parallel modulating blade design type capable of simultaneous economizer and compressor operation.
   b. Independent modules for vertical or horizontal return configurations shall be available. Vertical return modules shall be available as a factory installed option.
   c. Damper blades shall be galvanized steel with metal gears. Plastic or composite blades on intake or return shall not be acceptable.
   d. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
   e. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
   f. Shall be capable of introducing up to 100% outdoor air.
   g. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air.
   h. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.
   i. An outdoor single enthalpy sensor shall be provided as standard. Outdoor air enthalpy set point shall be adjustable and shall range from the enthalpy equivalent of 63°F @ 50% rh to 73°F @ 50% rh. Additional sensor options shall be available as accessories.
   j. 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%.
   k. 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.
   l. Economizer controller shall accept a 2-10Vdc CO_2 sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor-air damper to provide ventilation based on the sensor input.
   m. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
   n. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
2. Two-Position Damper
   a. Damper shall be a Two-Position Damper. Damper travel shall be from the full closed position to the field adjustable %-open setpoint.
   b. Damper shall include adjustable damper travel from 25% to 100% (full open).
   c. Damper shall include single or dual blade, gear driven damper and actuator motor.
   d. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
   e. Damper will admit up to 100% outdoor air for applicable rooftop units.
   f. Damper shall close upon indoor (evaporator) fan shutoff and/or loss of power.
   g. The damper actuator shall plug into the rooftop unit’s wiring harness plug. No hard wiring shall be required.
   h. Outside air hood shall include aluminum water entrainment filter.

3. Manual damper
   a. Manual damper package shall consist of damper, air inlet screen, and rain hood which can be preset to admit up to 50% outdoor air for year round ventilation.
4. Head Pressure Control Package
   a. Controller shall control coil head pressure by condenser-fan cycling.
5. Convenience Outlet:
   a. Non-Powered convenience outlet.
   b. Outlet shall be powered from a separate 115-120v power source.
   c. A transformer shall not be included.
   d. Outlet shall be field-installed and internally mounted with easily accessible 115-v female receptacle.
   e. Outlet shall include 15 amp GFI receptacles.
   f. Outlet shall be accessible from outside the unit.
6. Thru-the-Base Connectors:
   a. Kits shall provide connectors to permit electrical connections to be brought to the unit through the unit basepan.
7. Propeller Power Exhaust:
   a. Power exhaust shall be used in conjunction with an integrated economizer.
   b. Independent modules for vertical or horizontal return configurations shall be available.
   c. Horizontal power exhaust is shall be mounted in return ductwork.
   d. Power exhaust shall be controlled by economizer controller operation. Exhaust fans shall be energized when dampers open past the 0-100% adjustable setpoint on the economizer control.
8. Roof Curbs (Vertical):
   a. Full perimeter roof curb with exhaust capability providing separate airstreams for energy recovery from the exhaust air without supply air contamination.
   b. Formed galvanized steel with wood nailer strip and shall be capable of supporting entire unit weight.
   c. Permits installation and securing of ductwork to curb prior to mounting unit on the curb.
9. Outdoor Air Enthalpy Sensor:
   a. The outdoor air enthalpy sensor shall be used to provide single enthalpy control. When used in conjunction with a return air enthalpy sensor, the unit will provide differential enthalpy control. The sensor allows the unit to determine if outside air is suitable for free cooling.
10. Return Air Enthalpy Sensor:
    a. The return air enthalpy sensor shall be used in conjunction with an outdoor air enthalpy sensor to provide differential enthalpy control.
11. Indoor Air Quality (CO_2) Sensor:
    a. Shall be able to provide demand ventilation indoor air quality (IAQ) control.
    b. The IAQ sensor shall be available in wall mount with LED display. The set point shall have adjustment capability.
12. Smoke detectors:
    a. Shall be a Four-Wire Controller and Detector.
    b. Shall be environmental compensated with differential sensing for reliable, stable, and drift-free sensitivity.
    c. Shall use magnet-activated test/reset sensor switches.
    d. Shall have tool-less connection terminal access.
    e. Shall have a recessed momentary switch for testing and resetting the detector.
    f. Controller shall include:
       i. One set of normally open alarm initiation contacts for connection to an initiating device circuit on a fire alarm control panel
       ii. Two Form-C auxiliary alarm relays for interface with rooftop unit or other equipment.
       iii. One Form-C supervision (trouble) relay to control the operation of the Trouble LED on a remote test/reset station.
       iv. Capable of direct connection to two individual detector modules.
       v. Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications.



△ NOTES.

1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. COMPRESSOR MOTOR THERMALLY PROTECTED. ALL 3 PHASE MODELS ARE PROTECTED UNDER PRIMARY SINGLE PHASE CONDITIONS.
3. TRANSFORMER FACTORY WIRED AS SHOWN BELOW. CHANGE PRIMARY VOLTAGE CONNECTION FOR ALTERNATE VOLTAGES, IF REQUIRED.

UNIT VOLTAGES - HZ	TRANSFORMER TERM.
200-220 - 50 HZ	230 OR 240
200-230 - 60 HZ	230 OR 240
380 - 60 HZ	380 OR 400
380-415 - 50 HZ	400 OR 415
460 - 60 HZ	460
575 - 60 HZ	575

4. CONNECT FIELD WIRE TO FACTORY SUPPLIED POWER BLOCK IN ELECTRIC HEAT SECTION.
5. LOW VOLTAGE CIRCUIT IS N.E.C CLASS 2 WITH A CLASS 2 TRANSFORMER, 24V, 50/60 HZ SUPPLIED.
6. CONNECT FIELD WIRING IN GROUNDED RAIN TIGHT CONDUIT TO FUSED DISCONNECT.
7. MOTOR FACTORY WIRED FOR CORRECT VOLTAGE.
8. REMOVE PL10 AND PL11 FOR LOW AMBIENT ACCESSORY. PL10 AND PL11 LOCATED IN BLOWER COMPARTMENT.
9. REMOVE PL7 FOR ECONOMIZER ACCESSORY. PL 6 & PL7 LOCATED IN RETURN AIR SECTION.
10. MAS ACCESSORY PROVIDED WITH ECONOMIZER. CONNECTION LOCATED IN BLOWER COMPARTMENT.
11. WIRE SUPPLIED FOR ADDITION OF CRANKCASE HEATER ACCESSORY.
12. OPTIONAL FT LOCATED IN COMPRESSOR COMPARTMENT.

COMPONENT CODE

BC	BLOWER CONTACTOR
CC	COMPRESSOR CONTACTOR
CCH	CRANKCASE HEATER
COMP	COMPRESSOR
CT	CONTROL TRANSFORMER
FT	FREEZE STAT
GFCO	GROUND FAULT CONVENIENCE OUTLET
GL	GROUND LUG
GND	GROUND
HPC	HIGH PRESSURE CONTROL
IBM	INDOOR BLOWER MOTOR BELT DRIVE
IFC	INTEGRATED FURNACE CONTROL
LAC	LOW AMBIENT COOLING CONTROL
LPC	LOW PRESSURE CONTROL
MAS	MIX AIR SENSOR
OFM	OUTDOOR FAN MOTOR
RC	RUN CAPACITOR
TDC	TIME DELAY CONTROL
PCB	PRESSURE CONTROL BOARD
PL	PLUG
PT	POWER TRANSFORMER
	WIRE NUT

WIRING INFORMATION

LINE VOLTAGE
- -FACTORY STANDARD
- -FACTORY OPTION
- -FIELD INSTALLED

LOW VOLTAGE
- -FACTORY STANDARD
- -FACTORY OPTION
- -FIELD INSTALLED

REPLACEMENT WIRE
- -MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105 C° MIN.)

WARNING
- -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C. AND LOCAL CODES AS APPLICABLE.

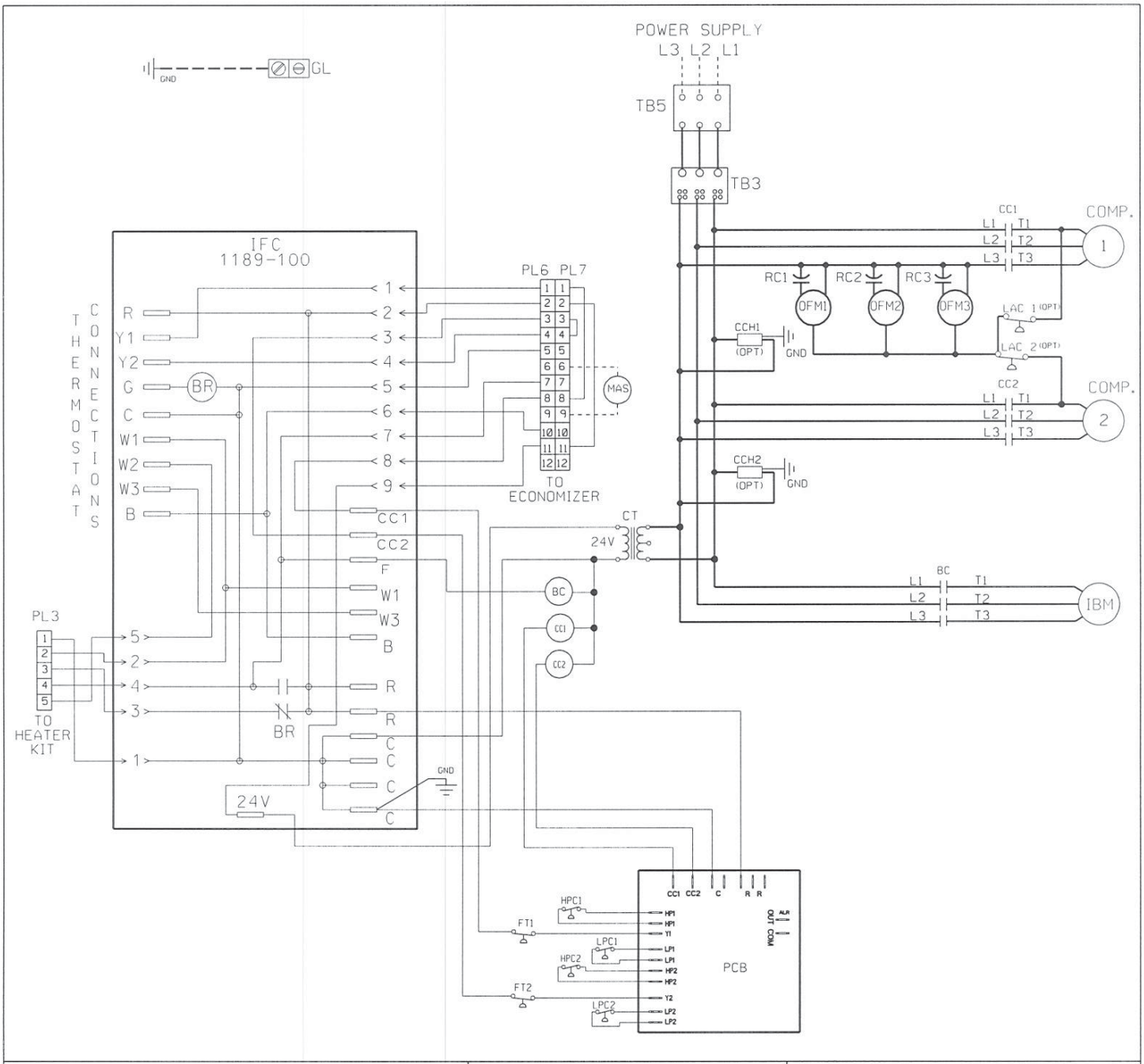
WIRE COLOR CODE

BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

WIRING DIAGRAM

RLKL-B180/240
208-230/460/575V 3 PH, 60 HZ.
200-220/380-415 3PH, 50 HZ.
PACKAGED A/C

DR. BY	APP. BY	DATE	DWG. NO.	REV
MGR	MGR	8-14-12	90-42517-52	Ø1



COMPONENT CODE

BC	BLOWER MOTOR CONTACTOR	MAS	MIXED AIR SENSOR
BR	BLOWER RELAY	OFM	OUTDOOR FAN MOTOR
CC	COMPRESSOR CONTACTOR	OPT	OPTIONAL
CCH	CRANKCASE HEATER	PCB	PRESSURE CONTROL BOARD
COMP	COMPRESSOR	PL	PLUG
CT	CONTROL TRANSFORMER	RC	RUN CAPACITOR
FT	FREEZE STAT	TB	TERMINAL BLOCK
GL	GROUND LUG		
GND	GROUND		
HPC	HIGH PRESSURE CONTROL		
IBM	INDOOR BLOWER MOTOR		
IFC	INTEGRATED FURNACE CONTROL		
LAC	LOW AMBIENT CONTROL		
LPC	LOW PRESSURE CONTROL		

WIRING INFORMATION

LINE VOLTAGE
- -FACTORY STANDARD
- -FACTORY OPTION
- -FIELD INSTALLED

LOW VOLTAGE
- -FACTORY STANDARD
- -FACTORY OPTION
- -FIELD INSTALLED

REPLACEMENT WIRE
- -MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105° C MIN.)

WARNING
- -CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.

WIRE COLOR CODE

BK	BLACK	O	ORANGE
BR	BROWN	PR	PURPLE
BL	BLUE	R	RED
G	GREEN	W	WHITE
GY	GRAY	Y	YELLOW

WIRING SCHEMATIC

RLKL-B180/240
208-230V, 3PH, 60HZ. / 460V, 3PH, 60HZ.
575V, 3PH, 60 HZ.
200-220/380-415V 3 PH, 50 HZ.
PACKAGED A/C

DR. BY	APP. BY	DATE	DWG. NO.	REV
MGR	MCB	8-16-12	90-42517-53	00

BEFORE PURCHASING THIS APPLIANCE, READ IMPORTANT ENERGY COST AND EFFICIENCY INFORMATION AVAILABLE FROM YOUR RETAILER.

GENERAL TERMS OF LIMITED WARRANTY*

Sure Comfort® 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.

***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.**

Compressor
1 & 3 Phase, Commercial Applications.....Five (5) Years
Parts
3 Phase, Commercial Applications.....One (1) Year

Sure Comfort®
P.O. Box 17010, Fort Smith, AR 72917

Real People. Real Savings. Real Fast.®

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.

12/16 QG FORM NO. SSC-960