SELF-CONTAINED HEAT PUMP PACKAGE UNITS

FORM NO. EXP11-782

Featuring Industry Standard R-410A Refrigerant

formerly Puron®

R-410A

SJNL- HIGH EFFICIENCY SERIES

NOMINAL SIZES 7.5 & 10 TONS [26.4 & 35.2 kW]

Accredited by the RvA

ABS Quality Evaluations, Inc. Management System Certification

ANAB ACCREDITED

ISO 9001:2008

Certificate Number: 30164

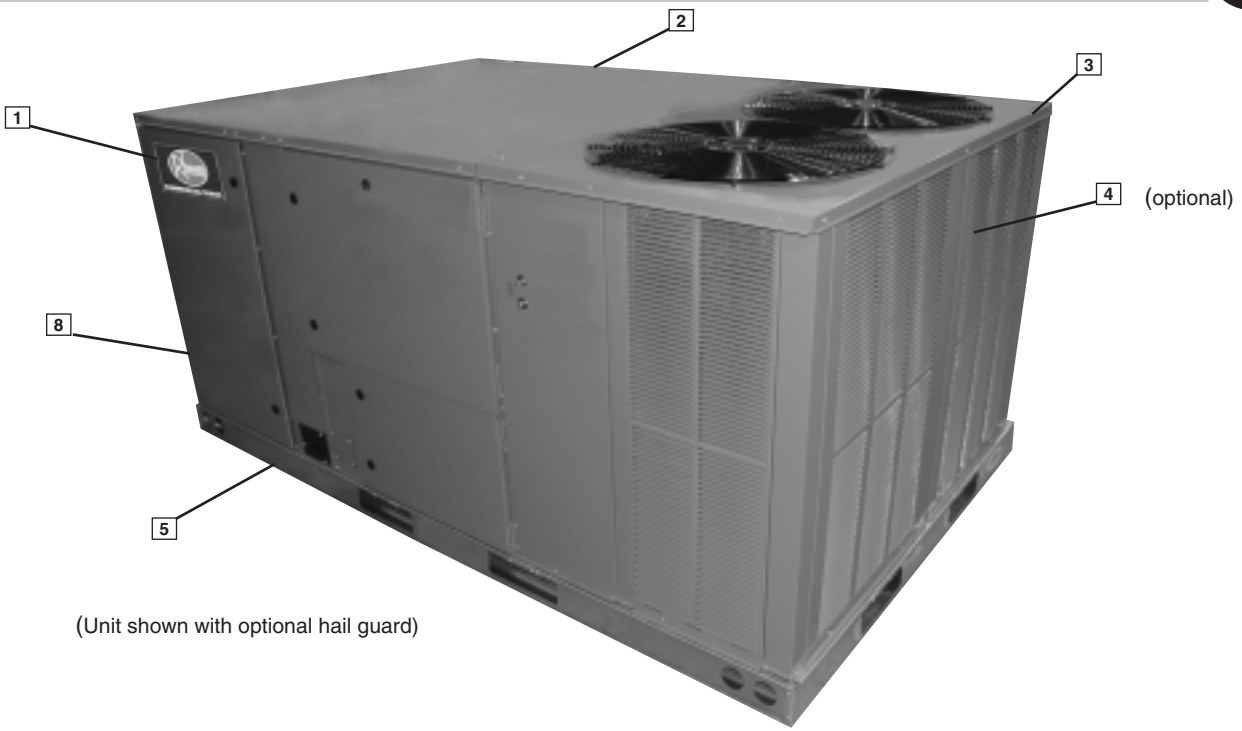
TABLE OF CONTENTS

These quality features are included in the Rheem 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.
- Convertible airflow.
- TXV refrigerant metering system.
- High Pressure and Low Pressure/Loss of charge protection standard on all models.
- Solid Core liquid line filter drier.
- 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, 1/4 turn latches and door retainers.
- Slide Out Indoor fan assembly for added service convenience.
- Powder Paint Finish meets ASTMB117 steel coated on each side for maximum protection. G90 galvanized.
- One piece top cover and one piece 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.
- 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 coils.
- Supplemental electric heat provides 100% efficient heating.

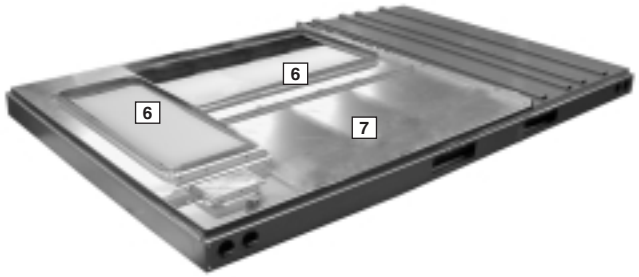
UNIT FEATURES & BENEFITS—SJNL- SERIES



(Unit shown with optional hail guard)

Rheem 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 Rheem label **(**1**)** identifies the brand to the customer. The sheet-metal cabinet **(**2**)** uses nothing less than 18-gauge material for structural components with an underlying coat of G90. To ensure the leak-proof integrity of these units, the design utilizes a one-piece top with a 1/8" drip lip **(**3**)**, gasket-protected panels and screws. The optional Rheem hail guard **(**4**)** is its trademark, and sets the standard for coil protection in the industry. Every Rheem 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. The drainpan 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.

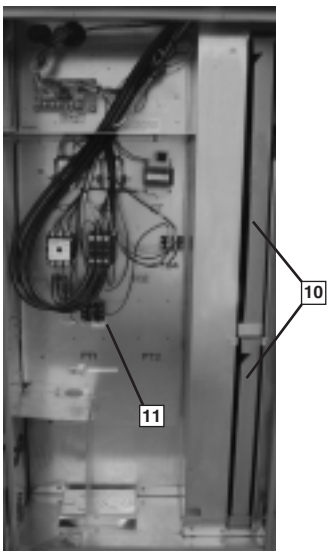


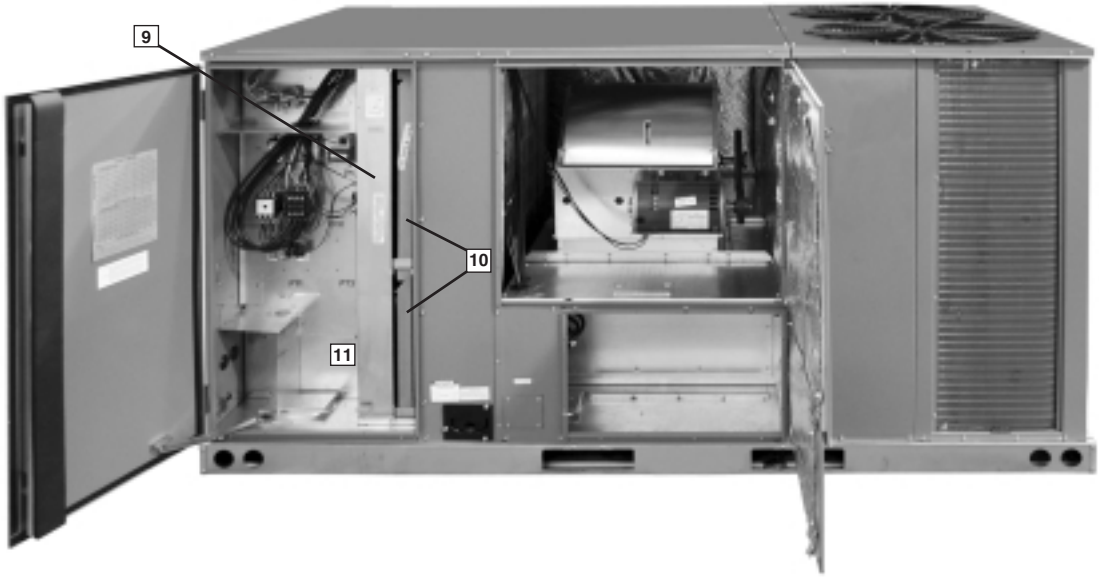
During development, each unit was tested to U.L. 1995, AHRI 340-370 and other Rheem-required reliability tests. Rheem adheres to stringent IS0 9002 quality procedures, and each unit bears the U.L. and AHRI certification labels located on the unit nameplate **(**8**)**. Contractors can rest assured that when a Rheem package unit arrives at the job, it is ready to go with a factory charge and quality checks. Each unit also proudly displays the "Made in the USA" designation.

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).

Control/filter blower and electric heat compartment access are through large, hinged-access panels secured with 1/4 turn fasteners. 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.

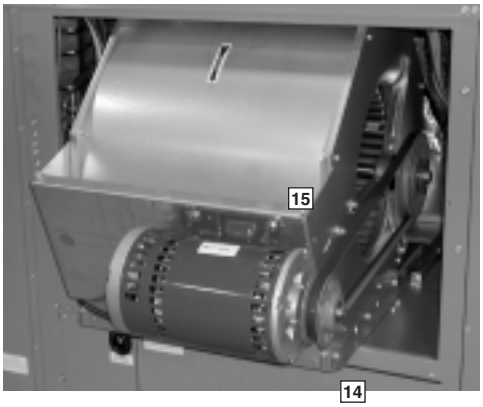




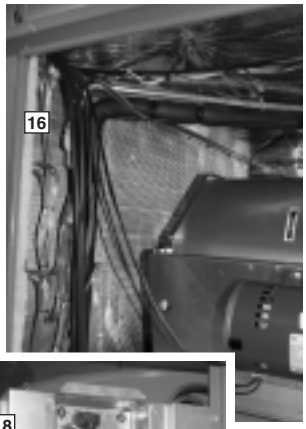
Inside the control box **(**11**)**, each electrical component is clearly identified with a label that matches the component to the wire diagram for ease of trouble shooting. All wiring is numbered on each end of the termination and color-coded to match the wiring diagram. The control transformer has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

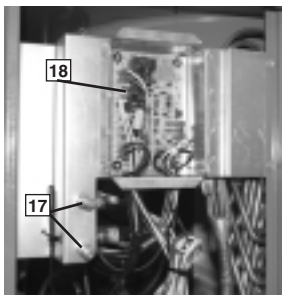
For added convenience in the field, a factory-installed convenience outlet **(**12**)** is available. Low and High voltage can enter either from the side or through the base. Low-voltage connections are made through the low-voltage terminal strip on the cooling control board. The high-voltage connection is terminated at the terminal block inside electric heat compartment. The suggested mounting for the field-installed disconnect is on the exterior side of the electrical control box.

The externally mounted gauge ports, which are permanently identified by embossed wording that clearly identifies the high pressure connection and the low pressure connection, extend through the compressor access panel **(**13**)**. With the gauge ports mounted externally, an accurate diagnostic of system operation can be performed quickly and easily. The blower compartment access door is hinged and secured with 1/4 turn fasteners to allow easy maintenance of the blower assembly, the entire assembly slides out by removing the 3/8" screws from the blower retention bracket. The adjustable motor pulley **(**14**)** can easily be adjusted by loosening the bolts on either side of the motor mount. Removing the bolts allows for easy removal of the blower pulley by pushing the blower assembly up to loosen the belt. Once the pulley is removed, the motor sheave can be adjusted to the desired number of turns, ranging from 0 to 6 turns open. Where the demands for the job require high static, Rheem has high-static drives available that deliver nominal airflow up to 2" of static. By referring to the airflow performance tables listed in the installation instructions, proper static pressure and CFM requirements can be dialed in. The scroll housing **(**15**)** and blower scroll provide quiet and efficient airflow. The blower sheave is secured by an “H” bushing which firmly secures the pulley to the blower shaft for years of trouble-free operation. The “H” bushing allows for easy removal of the blower pulley from the shaft, as opposed to the use of a set screw, which can score the shaft, creating burrs that make blower-pulley removal difficult.

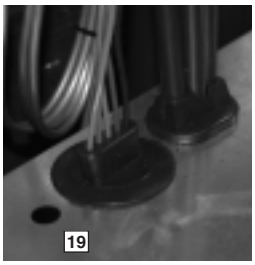


The optional freeze stat refrigerant safety device **(16)** is attached to the suction line in the blower section. The freeze stat protects the compressor if evaporator coil gets too cold (below freezing) due to low airflow or low evaporator load. The high and low pressure switches **(17)** and the optional low ambient control are mounted on the gauge port lines inside the compressor access panel. The high pressure switch will shut off the compressor if pressure exceeds 610 PSIG. The low pressure switch is used for loss of charge protection. The low ambient control allows for cooling operation down to 0 degrees ambient by cycling the outdoor fans. Enhanced feature demand defrost control has high and low pressure control inputs with unique pressure switch logic built into the microprocessor to provide compressor and system protection without nuisance lock-outs. LED's on the defrost control provide diagnostic information for service personnel. **(18)**

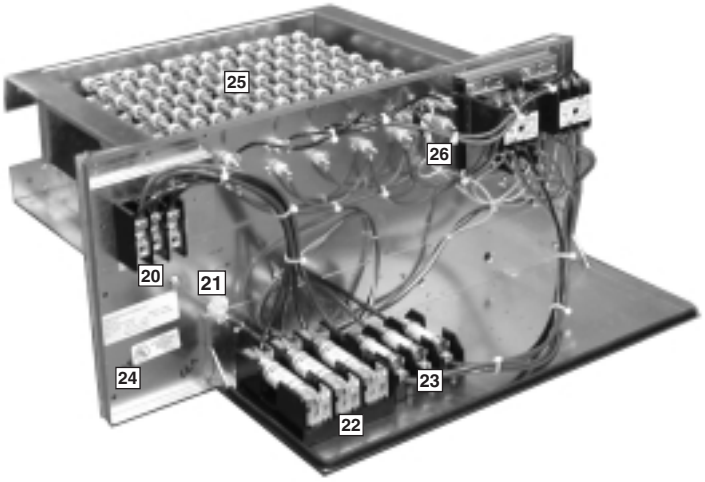




Inside the blower compartment the evaporator can also be viewed. The evaporator uses enhanced fin technology for maximum heat transfer. The thermal expansion valve and venturi distributor assure even distribution of refrigerant throughout the evaporator.



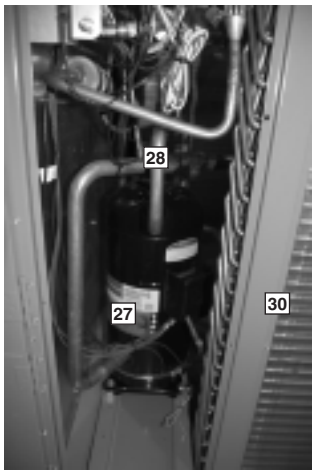
Wiring throughout the unit is neatly bundled and routed. Where wire harnesses go through the condenser bulkhead or blower deck, a molded wire harness assembly **(19)** provides an air-tight and water-tight seal, and provides strain relief. Care is also taken to tuck raw edges of insulation behind sheet 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 for slide-in, plug-and-play installation in the field. With choices of 15 to 40 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 **(20)** and a polarized plug for the low-voltage connection **(21)**. The electric furnace comes with fuses for the unit **(22)** and for the electric furnace **(23)**, and is UL certified **(24)**. The electric heating elements are of a wound-wire construction **(25)** and isolated with ceramic bushings. The limit switch **(26)** protects the design from over-temperature conditions. Each electric furnace has the capability to be converted from single-stage operation to two-stage operation by removing a jumper on the low-voltage terminal strip.

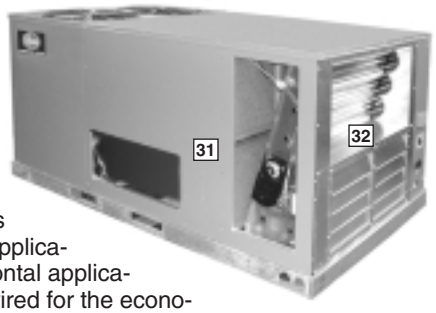
The compressor compartment houses the heartbeat of the unit. The scroll compressor **(**27**)** is known for its long life, and for reliable, quiet, and efficient operation. The suction and discharge lines **(**28**)** are designed to absorb the strain and stress that the starting torque, steady state operation, and shut down cycle imposed on the refrigerant tubing.



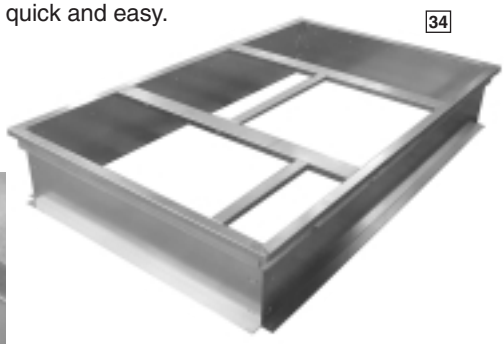
A liquid line bi-flow filter drier **(**29**)** is conveniently located near the TXV in the outdoor section. The condenser fan motors **(**29**)** can easily be accessed and maintained through the unit top. The polarized plug connection allows the motor to be changed quickly and eliminates the need to snake wires through the unit.

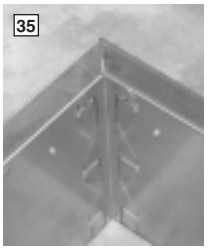
The outdoor coil uses the latest enhanced fin design **(**30**)** for the most effective method of heat transfer. Optional louvered panels offer hail protection to outdoor coils without obstructing airflow.

Each unit is designed for both downflow or horizontal applications **(**31**)** for job configuration flexibility. The return air compartment can also contain an economizer **(**32**)**. Two economizer models exit, one for downflow applications, and one for horizontal applications. Each unit is pre-wired for the economizer to allow quick plug-in installation. The economizer is also available as a factory-installed option. The economizer, which provides free cooling when outdoor conditions are suitable and also provides fresh air to meet local requirements, comes standard with single enthalpy controls. The controls can be upgraded to dual enthalpy easily in the field. The direct drive actuator combined with gear drive dampers has eliminated the need for linkage adjustment in the field. The economizer control has a minimum position setpoint, an outdoor-air setpoint, a mix-air setpoint, and a CO^2 setpoint. Barometric relief is standard on all economizers. Power Exhaust **(**33**)** is easily field-installed. The power exhaust is housed in the barometric relief opening and is easily slipped in with a plug-in assembly.



The Rheem roofcurb **(**34**)** is made for toolless assembly at the jobsite by sequentially engaging the corner brackets into the adjacent curb sides **(**35**)**, which makes the assembly process quick and easy.





SELECTION PROCEDURE

To select an SJNL-B Heat Pump 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—	415 V – 3 Phase – 50 Hz
Total Cooling Capacity—	100,000 BTUH [29.3 kW]
Sensible Cooling Capacity—	75,000 BTUH [22.0 kW]
Heating Capacity—	90,000 BTUH [26.4 kW]
*Condenser Entering Air—	95°F [35°C] DB
*Evaporator Mixed Air Entering—	65°F [18.3°C] WB; 78°F [25.6°C] DB
*Indoor Air Flow (vertical)—	3500 CFM [1652 L/s]
*External Static Pressure—	0.40 in. WG [.10 kPa]

2. SELECT UNIT TO MEET COOLING REQUIREMENTS.

Since total cooling is within the range of a nominal 10 ton [35.1 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 3150 CFM [1486 L/s] indoor air flow (table basis):

Total Capacity = 102,750 BTUH [30.09 kW]
Sensible Capacity = 81,400 BTUH [23.83 kW]
Power Input (Compressor and Cond. Fans) = 7,500 watts

Use formula in note ① to determine sensible capacity at 78°F [26°C] DB evaporator entering air:

81,400 + (1.10 x 3,500 x (1 - 0.03) x (78 - 80))
Sensible Capacity = 73,931 BTUH [21.65 kW]

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

Select factors from airflow correction table at 3500 CFM [1652 L/s] and apply to data obtained in step 2 to obtain gross capacity:

Total Capacity, 102,750 x 1.02 = 104,805 BTUH [30.69 kW]
Sensible Capacity = 73,931 x 1.06 = 78,367 BTUH [22.95 kW]
Power Input = 7,500 x 1.01 = 7,575 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 3500 CFM [1652 L/s]. Total ESP (external static pressure) per the spec of 0.40 in. WG [.10 kPa] includes the system duct and grilles. Add from the table 'Component Air Resistance', 0.07 in. WG [.02 kPa]for wet coil, 0 in. WG [.00 kPa] for downflow air flow, for a total selection static pressure of 0.47 (0.5) in. WG [.12 kPa], and determine:

RPM = 664
WATTS = 974
DRIVE = L (standard 2 H.P. motor)

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

974 x 3.412 = 3,323 BTUH [0.97 kW]

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

Net Total Capacity = 104,805 – 3,323 = 101,482 BTUH [29.71 kW]

Net Sensible Capacity = 78,367 – 3,323 = 75,044 BTUH [21.97 kW]

7. CALCULATE UNIT INPUT AND JOB EER.

Total Power Input = 7,575 (step 3) + 974 (step 4) = 8,549 Watts

$$EER = \frac{\text{Net Total BTUH [kW] (step 6)}}{\text{Power Input, Watts (above)}} = \frac{101,482}{8,549} = 11.87$$

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 40 kW Heater Kit
Heater Kit Model: Heater Kit Capacity:
RXJJ-CC40D 97,924 BTUH [28.7 kW]

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

97,924 + 3,323 = 101,247 BTUH [29.6 kW]

9. CHOOSE MODEL SJNL-B120NL040

*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

S J N L — B 090 N L 000 X X X

- Economizer Option (See Next Page)
- Factory Installed Options (See Next Page)
- Electric Heat
  - 000 = No Resistance Heat
  - 015 = 15 kW Resistance Heat
  - 020 = 20 kW Resistance Heat
  - 030 = 30 kW Resistance Heat
  - 040 = 40 kW Resistance Heat
- Drive Package
  - L = Belt Drive (Low Static) (120)
  - M = Belt Drive—Med Static (090)
- Electrical Designation
  - N = 380-415 V, 3 PH, 50 Hz
- Nominal Cooling Capacity (BTUH) [kW]
  - 090 = 90,000 [26.38]
  - 120 = 120,000 [35.17]
- Future Technical Variations
- Design Series
  - L = 1st Design
- Efficiency Designation
  - N = High Efficiency
- Product Classification
  - J = Package Heat Pump
- Tradebrand
  - S = Rheem Export

[ ] Designates Metric Conversions

FACTORY INSTALLED OPTION CODES FOR SJNL (7.5 & 10 TON) [26.4 & 35.2 kW]

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

ECONOMIZER SELECTION FOR SJNL (7.5 & 10 TON) [26.4 & 35.2 kW]

	No Economizer	Single Enthalpy Economizer With Barometric Relief	Single Enthalpy Economizer With Barometric Relief And Smoke Detector
A	x		
B		x	
C			x

"x" indicates factory installed option.

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.

Examples:

SJNL-A090CL000**XX**X .....*(where **XX** is factory installed option)*

SJNL-A090CL000 .....No options

SJNL-A090CL000**AAB** .....No option with factory installed economizer

SJNL-A090CL000**ADA** .....Hailguard with no factory installed economizer

SJNL-A090CL000**ADB** .....Options same as above with factory installed economizer

[ ] Designates Metric Conversions

NOMINAL SIZES 7.5 & 10 TONS [26.4 & 35.2 kW]

Model SJNL- Series	B090NM	B120NL
Cooling Performance[1]		
Gross Cooling Capacity Btu [kW]	82,000 [24.03]	104,000 [30.47]
EER/SEER[2]	10.9/NA	11.5/NA
Nominal CFM/AHRI Rated CFM [L/s]	2525 [1192]	3150 [1486]
AHRI Net Cooling Capacity Btu [kW]	79,000 [23.15]	100,000 [29.3]
Net Sensible Capacity Btu [kW]	59,800 [17.52]	74,400 [21.8]
Net Latent Capacity Btu [kW]	19,200 [5.63]	25,600 [7.5]
Integrated Part Load Value[3]	12	11.8
Net System Power kW	7.25	8.7
Heating Performance (Heat Pumps)		
Heating Input Btu [kW] Rating	72,000 [21.1]	91,000 [26.66]
System Power KW/COP	6.2/3.4	7.84/3.4
Low Temp. Btuh [kW] Rating	45,000 [13.18]	57,500 [16.85]
System Power KW/COP	5.73/2.3	7.39/2.28
Compressor		
No./Type	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)[4]	88	88
Outdoor Coil—Fin Type	Louvered	Louvered
Tube Type	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	24.88 [2.31]	28.8 [2.68]
Rows / FPI [FPcm]	2 / 22 [9]	2 / 22 [9]
Refrigerant Control	TX Valves	TX Valves
Indoor Coil—Fin Type	Louvered	Louvered
Tube Type	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.5 [1.25]	15.75 [1.46]
Rows / FPI [FPcm]	3 / 18 [7]	4 / 15 [6]
Refrigerant Control	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]
Outdoor Fan—Type	Propeller	Propeller
No. Used/Diameter in. [mm]	2/24 [609.6]	2/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1
CFM [L/s]	8000 [3775]	8000 [3775]
No. Motors/HP	2 at 1/3 HP	2 at 1/2 HP
Motor RPM	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/15x15 [381x381]	1/15x15 [381x381]
Drive Type/No. Speeds	Belt/Variable	Belt/Variable
No. Motors	1	1
Motor HP	2	2
Motor RPM	1725	1725
Motor Frame Size	56	56
Filter—Type	Disposable	Disposable
Furnished	Yes	Yes
(No.) Size Recommended in. [mm]	(6)2x18x18 [51x457x457]	(3)2x18x18 [51x457x457] (3)2x18x24 [51x457x610]
Refrigerant Charge Oz. (Sys. 1/Sys. 2) [g]	350 [9922]	496 [14062]
Weights		
Net Weight lbs. [kg]	1009 [458]	1185 [538]
Ship Weight lbs. [kg]	1089 [494]	1265 [574]

See Page 12 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. Integrated Part Load Value is rated in accordance with AHRI Standard 210/240 or 360. Units are rated at 80° F ambient, 80° F entering dry bulb, and 67° F entering wet bulb at AHRI rated cfm.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

COOLING PERFORMANCE DATA—B090

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]			3030 [1430]	2525 [1192]	2020 [953]	3030 [1430]	2525 [1192]	2020 [953]	3030 [1430]	2525 [1192]	2020 [953]
DR ①			.0	.03	.08	.0	.03	.08	.0	.03	.08
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW]	101.5 [29.7]	98.0 [28.7]	94.4 [27.7]	96.6 [28.3]	93.2 [27.3]	89.8 [26.3]	93.7 [27.5]	90.4 [26.5]	87.1 [25.5]
		Sens BTUH [kW]	65.8 [19.3]	56.7 [16.6]	48.1 [16.6]	78.0 [22.9]	67.9 [19.9]	58.5 [19.9]	89.0 [26.1]	78.1 [22.9]	67.8 [22.9]
		Power	5.3	5.2	5.1	5.2	5.1	5.0	5.1	5.0	4.9
	80 [26.7]	Total BTUH [kW]	98.7 [28.9]	95.3 [27.9]	91.8 [26.9]	93.8 [27.5]	90.5 [26.5]	87.2 [25.5]	90.9 [26.6]	87.7 [25.7]	84.5 [24.8]
		Sens BTUH [kW]	64.4 [18.9]	55.5 [16.3]	47.1 [16.3]	76.5 [22.4]	66.7 [19.5]	57.5 [19.5]	87.6 [25.7]	76.9 [22.5]	66.8 [22.5]
		Power	5.6	5.5	5.4	5.5	5.4	5.3	5.4	5.3	5.2
	85 [29.4]	Total BTUH [kW]	95.9 [28.1]	92.5 [27.1]	89.2 [26.1]	90.9 [26.6]	87.7 [25.7]	84.5 [24.8]	88.1 [25.8]	85.0 [24.9]	81.9 [24.0]
		Sens BTUH [kW]	63.0 [18.5]	54.2 [15.9]	46.1 [15.9]	75.1 [22.0]	65.5 [19.2]	56.5 [19.2]	86.2 [25.3]	75.7 [22.2]	65.8 [22.2]
		Power	5.9	5.8	5.7	5.8	5.7	5.6	5.7	5.6	5.5
	90 [32.2]	Total BTUH [kW]	93.0 [27.2]	89.8 [26.3]	86.5 [25.3]	88.0 [25.8]	85.0 [24.9]	81.9 [24.0]	85.2 [25.0]	82.2 [24.1]	79.2 [23.2]
		Sens BTUH [kW]	61.4 [18.0]	53.0 [15.5]	45.1 [15.5]	73.6 [21.6]	64.3 [18.8]	55.5 [18.8]	84.6 [24.8]	74.4 [21.8]	64.7 [21.8]
		Power	6.2	6.1	6.0	6.1	6.0	5.9	6.0	5.9	5.8
	95 [35]	Total BTUH [kW]	90.1 [26.4]	86.9 [25.5]	83.8 [24.6]	85.1 [24.9]	82.1 [24.1]	79.2 [23.2]	82.3 [24.1]	79.4 [23.3]	76.5 [22.4]
		Sens BTUH [kW]	60.0 [17.6]	51.7 [15.1]	44.1 [15.1]	72.1 [21.1]	62.9 [18.4]	54.4 [18.4]	82.3 [24.1]	73.2 [21.4]	63.7 [21.4]
		Power	6.5	6.4	6.3	6.4	6.3	6.2	6.4	6.2	6.1
	100 [37.8]	Total BTUH [kW]	87.2 [25.5]	84.1 [24.6]	81.1 [23.8]	82.2 [24.1]	79.3 [23.2]	76.4 [22.4]	79.4 [23.3]	76.6 [22.4]	73.8 [21.6]
		Sens BTUH [kW]	58.5 [17.1]	50.4 [14.8]	43.0 [14.8]	70.5 [20.7]	61.6 [18.0]	53.2 [18.0]	79.4 [23.3]	71.9 [21.1]	62.7 [21.1]
		Power	6.9	6.8	6.6	6.8	6.7	6.6	6.7	6.6	6.5
	105 [40.6]	Total BTUH [kW]	84.2 [24.7]	81.2 [23.8]	78.3 [22.9]	79.2 [23.2]	76.4 [22.4]	73.7 [21.6]	76.4 [22.4]	73.7 [21.6]	71.0 [20.8]
		Sens BTUH [kW]	56.9 [16.7]	49.0 [14.4]	41.8 [14.4]	68.9 [20.2]	60.2 [17.6]	52.1 [17.6]	76.4 [22.4]	70.5 [20.7]	61.5 [20.7]
		Power	7.3	7.1	7.0	7.2	7.1	6.9	7.1	7.0	6.9
	110 [43.3]	Total BTUH [kW]	81.2 [23.8]	78.3 [22.9]	75.5 [22.1]	76.2 [22.3]	73.5 [21.5]	70.9 [20.8]	73.4 [21.5]	70.8 [20.7]	68.2 [20.0]
		Sens BTUH [kW]	55.2 [16.2]	47.6 [13.9]	40.6 [13.9]	67.3 [19.7]	58.9 [17.3]	51.0 [17.3]	73.4 [21.5]	69.1 [20.2]	60.3 [20.0]
		Power	7.7	7.6	7.4	7.6	7.5	7.3	7.5	7.4	7.3
	115 [46.1]	Total BTUH [kW]	78.1 [22.9]	75.4 [22.1]	72.7 [21.3]	73.2 [21.4]	70.6 [20.7]	68.0 [19.9]	70.3 [20.6]	67.9 [19.9]	65.4 [19.2]
		Sens BTUH [kW]	53.5 [15.7]	46.2 [13.5]	39.4 [13.5]	65.7 [19.2]	57.5 [16.8]	49.8 [16.8]	70.3 [20.6]	67.7 [19.8]	59.1 [19.2]
		Power	8.1	8.0	7.8	8.0	7.9	7.8	8.0	7.8	7.7
	120 [48.9]	Total BTUH [kW]	75.1 [22.0]	72.4 [21.2]	69.8 [20.5]	70.1 [20.5]	67.6 [19.8]	65.2 [19.1]	67.3 [19.7]	64.9 [19.0]	62.5 [18.3]
		Sens BTUH [kW]	51.9 [15.2]	44.8 [13.1]	38.3 [13.1]	64.0 [18.8]	56.0 [16.4]	48.6 [16.4]	67.3 [19.7]	64.9 [19.0]	57.9 [18.3]
		Power	8.6	8.4	8.3	8.5	8.3	8.2	8.4	8.3	8.1

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)].

HEATING PERFORMANCE DATA—B090

IDB			60°F [15.5°C]			70°F [21.1°C]			80°F [26.7°C]		
CFM [L/s]			3030 [1430]	2525 [1192]	2020 [953]	3030 [1430]	2525 [1192]	2020 [953]	3030 [1430]	2525 [1192]	2020 [953]
OUTDOOR DRY BULB TEMPERATURE °F [°C]	0 [-17.8]	Total BTUH [kW]	28.7 [8.4]	28.3 [8.3]	27.9 [8.2]	26.6 [7.8]	26.2 [7.7]	25.8 [7.6]	24.5 [7.2]	24.1 [7.1]	23.8 [7.0]
		Power	3.9	4.0	4.1	4.3	4.5	4.6	4.9	5.0	5.2
	5 [26.7]	Total BTUH [kW]	33.3 [9.8]	32.8 [9.6]	32.4 [9.5]	31.2 [9.1]	30.7 [9.0]	30.3 [8.9]	29.1 [8.5]	28.7 [8.4]	28.3 [8.3]
		Power	4.0	4.1	4.2	4.4	4.5	4.7	5.0	5.1	5.3
	10 [-12.2]	Total BTUH [kW]	37.9 [11.1]	37.4 [11.0]	36.8 [10.8]	35.8 [10.5]	35.3 [10.3]	34.8 [10.2]	33.7 [9.9]	33.2 [9.7]	32.7 [9.6]
		Power	4.0	4.1	4.2	4.5	4.6	4.8	5.1	5.2	5.3
	15 [32.2]	Total BTUH [kW]	42.5 [12.5]	41.9 [12.3]	41.3 [12.1]	40.4 [11.8]	39.8 [11.7]	39.2 [11.5]	38.3 [11.2]	37.7 [11.0]	37.2 [10.9]
		Power	4.1	4.2	4.3	4.6	4.7	4.8	5.2	5.3	5.4
	20 [-6.6]	Total BTUH [kW]	47.1 [13.8]	46.4 [13.6]	45.8 [13.4]	45.0 [13.2]	44.4 [13.0]	43.7 [12.8]	42.9 [12.6]	42.3 [12.4]	41.7 [12.2]
		Power	4.2	4.3	4.4	4.7	4.8	4.9	5.3	5.4	5.5
	25 [37.8]	Total BTUH [kW]	51.7 [15.1]	51.0 [14.9]	50.2 [14.7]	49.6 [14.5]	48.9 [14.3]	48.2 [14.1]	47.5 [13.9]	46.8 [13.7]	46.1 [13.5]
		Power	4.3	4.4	4.5	4.8	4.9	5.0	5.3	5.5	5.6
	30 [-1.1]	Total BTUH [kW]	56.3 [16.5]	55.5 [16.3]	54.7 [16.0]	54.2 [15.9]	53.4 [15.6]	52.7 [15.4]	52.1 [15.3]	51.3 [15.0]	50.6 [14.8]
		Power	4.4	4.5	4.6	4.9	5.0	5.1	5.4	5.6	5.7
	35 [43.3]	Total BTUH [kW]	60.9 [17.8]	60.0 [17.6]	59.2 [17.3]	58.8 [17.2]	58.0 [17.0]	57.1 [16.7]	56.7 [16.6]	55.9 [16.4]	55.1 [16.1]
		Power	4.5	4.6	4.7	4.9	5.1	5.2	5.5	5.6	5.8
	40 [4.4]	Total BTUH [kW]	65.5 [19.2]	64.6 [18.9]	63.7 [18.7]	63.4 [18.6]	62.5 [18.3]	61.6 [18.0]	61.3 [18.0]	60.4 [17.7]	59.6 [17.5]
		Power	4.6	4.7	4.8	5.0	5.2	5.3	5.6	5.7	5.9
	45 [46.1]	Total BTUH [kW]	70.1 [20.5]	69.1 [20.2]	68.1 [20.0]	68.0 [19.9]	67.0 [19.6]	66.1 [19.4]	65.9 [19.3]	65.0 [19.0]	64.0 [18.8]
		Power	4.6	4.8	4.9	5.1	5.2	5.4	5.7	5.8	6.0
	50 [10]	Total BTUH [kW]	74.7 [21.9]	73.7 [21.6]	72.6 [21.3]	72.6 [21.3]	71.6 [21.0]	70.6 [20.7]	70.5 [20.7]	69.5 [20.4]	68.5 [20.1]
		Power	4.7	4.8	5.0	5.2	5.3	5.5	5.8	5.9	6.1

IDB—Indoor air dry bulb

[ ] Designates Metric Conversions

COOLING PERFORMANCE DATA—B120

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]			3780 [1784]	3150 [1487]	2520 [1189]	3780 [1784]	3150 [1487]	2520 [1189]	3780 [1784]	3150 [1487]	2520 [1189]
DR ①			.01	.05	.01	.01	.05	.01	.01	.05	.01
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW]	128.9 [37.8]	124.4 [36.4]	119.9 [35.1]	120.2 [35.2]	116.0 [34.0]	111.7 [32.7]	115.4 [33.8]	111.3 [32.6]	107.3 [31.4]
		Sens BTUH [kW]	82.3 [24.1]	70.8 [20.7]	60.1 [20.7]	96.0 [28.1]	83.6 [24.5]	71.9 [24.5]	109.3 [32.0]	95.9 [28.1]	83.3 [28.1]
		Power	6.4	6.3	6.2	6.4	6.2	6.1	6.3	6.2	6.1
	80 [26.7]	Total BTUH [kW]	125.7 [36.8]	121.3 [35.5]	116.9 [34.3]	116.9 [34.3]	112.8 [33.1]	108.7 [31.8]	112.1 [32.8]	108.2 [31.7]	104.3 [30.6]
		Sens BTUH [kW]	80.7 [23.6]	69.4 [20.3]	58.9 [20.3]	94.2 [27.6]	82.1 [24.1]	70.7 [24.1]	107.6 [31.5]	94.5 [27.7]	82.1 [27.7]
		Power	6.7	6.6	6.5	6.7	6.5	6.4	6.6	6.5	6.4
	85 [29.4]	Total BTUH [kW]	122.5 [35.9]	118.2 [34.6]	113.9 [33.4]	113.8 [33.3]	109.8 [32.2]	105.8 [31.0]	109.0 [31.9]	105.2 [30.8]	101.3 [29.7]
		Sens BTUH [kW]	79.0 [23.1]	68.0 [19.9]	57.8 [19.9]	92.7 [27.2]	80.8 [23.7]	69.6 [23.7]	106.1 [31.1]	93.2 [27.3]	81.0 [27.3]
		Power	7.0	6.9	6.8	7.0	6.9	6.7	6.9	6.8	6.7
	90 [32.2]	Total BTUH [kW]	119.5 [35.0]	115.3 [33.8]	111.1 [32.6]	110.7 [32.4]	106.8 [31.3]	102.9 [30.1]	105.9 [31.0]	102.2 [29.9]	98.5 [28.9]
		Sens BTUH [kW]	77.6 [22.7]	66.8 [19.6]	56.8 [19.6]	91.2 [26.7]	79.5 [23.3]	68.5 [23.3]	104.5 [30.6]	91.9 [26.9]	80.0 [26.9]
		Power	7.4	7.3	7.1	7.3	7.2	7.1	7.2	7.1	7.0
	95 [35]	Total BTUH [kW]	116.5 [34.1]	112.4 [32.9]	108.3 [31.7]	107.7 [31.6]	103.9 [30.4]	100.1 [29.3]	102.9 [30.1]	99.3 [29.1]	95.7 [28.0]
		Sens BTUH [kW]	76.2 [22.3]	65.6 [19.2]	55.8 [19.2]	89.8 [26.3]	78.3 [22.9]	67.5 [22.9]	102.9 [30.1]	90.7 [26.6]	79.0 [26.6]
		Power	7.8	7.6	7.5	7.7	7.5	7.4	7.6	7.5	7.3
	100 [37.8]	Total BTUH [kW]	113.5 [33.3]	109.6 [32.1]	105.6 [30.9]	104.8 [30.7]	101.1 [29.6]	97.4 [28.5]	100.0 [29.3]	96.5 [28.3]	93.0 [27.2]
		Sens BTUH [kW]	74.8 [21.9]	64.5 [18.9]	54.9 [18.9]	88.5 [25.9]	77.2 [22.6]	66.6 [22.6]	100.0 [29.3]	89.6 [26.3]	78.1 [26.3]
		Power	8.1	8.0	7.9	8.1	7.9	7.8	8.0	7.9	7.7
	105 [40.6]	Total BTUH [kW]	110.7 [32.4]	106.8 [31.3]	102.9 [30.1]	101.9 [29.9]	98.4 [28.8]	94.8 [27.8]	97.1 [28.5]	93.7 [27.5]	90.3 [26.5]
		Sens BTUH [kW]	73.6 [21.6]	63.4 [18.6]	53.9 [18.6]	87.1 [25.5]	76.2 [22.3]	65.8 [22.3]	97.1 [28.5]	88.5 [25.9]	77.2 [25.9]
		Power	8.5	8.4	8.3	8.5	8.3	8.2	8.4	8.3	8.1
	110 [43.3]	Total BTUH [kW]	107.9 [31.6]	104.1 [30.5]	100.3 [29.4]	99.2 [29.1]	95.7 [28.0]	92.2 [27.0]	94.4 [27.7]	91.0 [26.7]	87.7 [25.7]
		Sens BTUH [kW]	72.4 [21.2]	62.4 [18.3]	53.1 [18.3]	86.0 [25.2]	75.2 [22.0]	65.0 [22.0]	94.4 [27.7]	87.5 [25.6]	76.3 [25.6]
		Power	9.0	8.8	8.7	8.9	8.8	8.6	8.8	8.7	8.5
	115 [46.1]	Total BTUH [kW]	105.2 [30.8]	101.5 [29.7]	97.8 [28.7]	96.5 [28.3]	93.1 [27.3]	89.7 [26.3]	91.7 [26.9]	88.5 [25.9]	85.2 [25.0]
		Sens BTUH [kW]	71.3 [20.9]	61.5 [18.0]	52.4 [18.0]	85.1 [24.9]	74.4 [21.8]	64.4 [21.8]	91.7 [26.9]	86.7 [25.4]	75.6 [25.0]
		Power	9.4	9.3	9.1	9.4	9.2	9.0	9.3	9.1	9.0
	120 [48.9]	Total BTUH [kW]	102.6 [30.1]	99.0 [29.0]	95.4 [28.0]	93.9 [27.5]	90.6 [26.5]	87.3 [25.6]	89.1 [26.1]	85.9 [25.2]	82.8 [24.3]
		Sens BTUH [kW]	70.4 [20.6]	60.8 [17.8]	51.9 [17.8]	84.1 [24.6]	73.6 [21.6]	63.7 [21.6]	89.1 [26.1]	85.9 [25.2]	75.1 [24.3]
		Power	9.9	9.7	9.6	9.8	9.7	9.5	9.8	9.6	9.4

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)].

HEATING PERFORMANCE DATA—B120

IDB			60°F [15.5°C]			70°F [21.1°C]			80°F [26.7°C]		
CFM [L/s]			3780 [1784]	3150 [1487]	2520 [1189]	3780 [1784]	3150 [1487]	2520 [1189]	3780 [1784]	3150 [1487]	2520 [1189]
OUTDOOR DRY BULB TEMPERATURE °F [°C]	0 [-17.8]	Total BTUH [kW]	38.2 [11.2]	37.6 [11.0]	37.1 [10.9]	35.1 [10.3]	34.6 [10.1]	34.1 [10.0]	32.0 [9.4]	31.6 [9.3]	31.1 [9.1]
		Power	5.3	5.4	5.5	5.8	6.0	6.1	6.5	6.6	6.8
	5 [26.7]	Total BTUH [kW]	43.8 [12.8]	43.2 [12.7]	42.6 [12.5]	40.8 [12.0]	40.2 [11.8]	39.6 [11.6]	37.7 [11.0]	37.1 [10.9]	36.6 [10.7]
		Power	5.3	5.5	5.6	5.9	6.0	6.2	6.6	6.7	6.9
	10 [-12.2]	Total BTUH [kW]	49.5 [14.5]	48.8 [14.3]	48.1 [14.1]	46.4 [13.6]	45.8 [13.4]	45.1 [13.2]	43.3 [12.7]	42.7 [12.5]	42.1 [12.3]
		Power	5.4	5.6	5.7	6.0	6.1	6.3	6.6	6.8	7.0
	15 [32.2]	Total BTUH [kW]	55.2 [16.2]	54.4 [15.9]	53.6 [15.7]	52.1 [15.3]	51.3 [15.0]	50.6 [14.8]	49.0 [14.4]	48.3 [14.2]	47.6 [13.9]
		Power	5.5	5.6	5.8	6.0	6.2	6.3	6.7	6.9	7.0
	20 [-6.6]	Total BTUH [kW]	60.8 [17.8]	60.0 [17.6]	59.1 [17.3]	57.7 [16.9]	56.9 [16.7]	56.1 [16.4]	54.7 [16.0]	53.9 [15.8]	53.1 [15.6]
		Power	5.6	5.7	5.9	6.1	6.3	6.4	6.8	7.0	7.1
	25 [37.8]	Total BTUH [kW]	66.5 [19.5]	65.6 [19.2]	64.6 [18.9]	63.4 [18.6]	62.5 [18.3]	61.6 [18.0]	60.3 [17.7]	59.5 [17.4]	58.6 [17.2]
		Power	5.7	5.8	5.9	6.2	6.4	6.5	6.9	7.0	7.2
	30 [-1.1]	Total BTUH [kW]	72.2 [21.2]	71.1 [20.8]	70.1 [20.5]	69.1 [20.2]	68.1 [20.0]	67.1 [19.7]	66.0 [19.3]	65.0 [19.0]	64.1 [18.8]
		Power	5.7	5.9	6.0	6.3	6.4	6.6	6.9	7.1	7.3
	35 [43.3]	Total BTUH [kW]	77.8 [22.8]	76.7 [22.5]	75.6 [22.2]	74.7 [21.9]	73.7 [21.6]	72.6 [21.3]	71.6 [21.0]	70.6 [20.7]	69.6 [20.4]
		Power	5.8	6.0	6.1	6.3	6.5	6.7	7.0	7.2	7.4
	40 [4.4]	Total BTUH [kW]	83.5 [24.5]	82.3 [24.1]	81.1 [23.8]	80.4 [23.6]	79.3 [23.2]	78.1 [22.9]	77.3 [22.6]	76.2 [22.3]	75.1 [22.0]
		Power	5.9	6.0	6.2	6.4	6.6	6.7	7.1	7.3	7.4
	45 [46.1]	Total BTUH [kW]	89.1 [26.1]	87.9 [25.8]	86.6 [25.4]	86.1 [25.2]	84.8 [24.8]	83.6 [24.5]	83.0 [24.3]	81.8 [24.0]	80.6 [23.6]
		Power	6.0	6.1	6.3	6.5	6.7	6.8	7.2	7.3	7.5
	50 [10]	Total BTUH [kW]	94.8 [27.8]	93.5 [27.4]	92.1 [27.0]	91.7 [26.9]	90.4 [26.5]	89.1 [26.1]	88.6 [26.0]	87.4 [25.6]	86.1 [25.2]
		Power	6.0	6.2	6.3	6.6	6.7	6.9	7.2	7.4	7.6

IDB—Indoor air dry bulb

[ ] Designates Metric Conversions

AIRFLOW PERFORMANCE—7.5 TON [26.4 kW] — SIDEFLOW — 50 Hz

Air Flow CFM [L/s]	Model SJNL-B090 / Voltage 380-415—3 Phase — External Static Pressure—Inches of Water [kPa]																															
	0.1 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		1.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]		1.6 [.40]		1.7 [.42]	
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
2000 [944]	—	—	—	—	—	—	568	826	604	863	639	903	674	945	708	990	742	1037	775	1087	808	1139	840	1194	871	1251	902	1310	932	1372	962	1437	991	1504
2100 [991]	—	—	—	—	—	—	575	852	611	891	645	932	680	976	713	1022	747	1071	779	1123	811	1176	843	1233	874	1291	904	1353	934	1416	963	1482	992	1551
2200 [1038]	—	—	—	—	—	—	583	881	618	921	652	964	686	1010	719	1058	752	1108	784	1161	816	1217	847	1274	877	1335	907	1398	937	1463	966	1531	994	1601
2300 [1085]	—	—	—	—	—	—	591	913	626	955	660	999	693	1047	726	1096	758	1148	790	1203	821	1260	852	1319	882	1381	911	1445	940	1512	969	1582	997	1654
2400 [1133]	—	—	—	—	566	906	601	947	635	991	668	1037	701	1086	733	1137	765	1191	796	1247	827	1305	857	1367	887	1430	916	1496	944	1565	972	1636	1000	1709
2500 [1180]	—	—	—	—	576	942	611	985	644	1030	677	1078	710	1128	741	1181	773	1236	804	1294	834	1354	864	1417	893	1482	921	1550	949	1620	977	1693	1004	1768
2600 [1227]	—	—	—	—	588	981	621	1025	654	1072	687	1121	719	1173	750	1228	781	1285	812	1344	841	1406	871	1470	899	1537	928	1606	955	1678	982	1752	1009	1829
2700 [1274]	—	—	566	979	599	1022	633	1068	665	1117	697	1168	729	1221	760	1277	790	1336	820	1397	850	1460	878	1526	907	1594	934	1665	962	1739	988	1815	1014	1893
2800 [1321]	—	—	579	1021	612	1067	645	1114	677	1164	709	1217	740	1272	770	1330	800	1390	830	1452	859	1517	887	1585	915	1655	942	1727	969	1802	995	1880	—	—
2900 [1368]	—	—	593	1067	626	1114	658	1163	690	1215	721	1269	751	1326	781	1385	811	1447	840	1511	868	1577	896	1647	924	1718	950	1792	977	1869	1002	1948	—	—
3000 [1416]	574	1070	607	1115	640	1164	671	1215	703	1268	734	1324	764	1382	793	1443	822	1506	851	1572	879	1640	906	1711	933	1784	960	1860	985	1938	1011	2019	—	—

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

Drive Package	M						N					
Motor H.P. [W]	2.0 [1491.4]						3.0 [2237.1]					
Blower Sheave	BK90H						BK65H					
Motor Sheave	1VP-44						1VP-44					
Turns Open	1	2	**3**	4	5	6	1	2	3	4	**5**	6
RPM	731	697	**664**	631	598	565	1011	967	920	870	**823**	778

NOTES: 1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum or maximum 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.

AIRFLOW CORRECTION FACTORS—7.5 TON [26.4 kW]

ACTUAL—CFM [L/s]	2000 [944]	2100 [991]	2200 [1038]	2300 [1085]	2400 [1133]	2500 [1180]	2600 [1227]	2700 [1274]	2800 [1321]	2900 [1368]	3000 [1416]
TOTAL MBH	0.97	0.97	0.98	0.98	0.99	1.00	1.00	1.01	1.02	1.02	1.02
SENSIBLE MBH	0.87	0.90	0.92	0.94	0.97	0.99	1.02	1.04	1.06	1.06	1.06
POWER kW	0.98	0.98	0.99	0.99	0.99	1.00	1.00	1.00	1.01	1.01	1.01

NOTES: 1. Multiply correction factor times gross performance data.
2. Resulting sensible capacity cannot exceed total capacity.

[ ] Designates Metric Conversions

COMPONENT AIRFLOW RESISTANCE—7.5 TON [26.4 kW]

CFM [L/s]	Standard Indoor Airflow—CFM [L/s]										
	2000 [944]	2100 [991]	2200 [1038]	2300 [1085]	2400 [1133]	2500 [1180]	2600 [1227]	2700 [1274]	2800 [1321]	2900 [1368]	3000 [1416]
	Resistance—Inches Water [kPa]										
Wet Coil	0.06 [.01]	0.07 [.02]	0.08 [.02]	0.08 [.02]	0.09 [.02]	0.10 [.02]	0.10 [.02]	0.11 [.03]	0.11 [.03]	0.12 [.03]	0.12 [.03]
Downflow	0.04 [.01]	0.05 [.01]	0.06 [.01]	0.07 [.02]	0.08 [.02]	0.08 [.02]	0.09 [.02]	0.09 [.02]	0.10 [.02]	0.10 [.02]	0.11 [.03]
Downflow Economizer RA Damper Open	0.08 [.02]	0.09 [.02]	0.09 [.02]	0.10 [.02]	0.10 [.02]	0.10 [.02]	0.11 [.03]	0.11 [.03]	0.12 [.03]	0.12 [.03]	0.13 [.03]
Horizontal Economizer RA Damper Open	0.08 [.02]	0.09 [.02]	0.09 [.02]	0.10 [.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-FA65 or RXRN-FA75 & Transition RXMC-CC04	0.08 [.02]	0.09 [.02]	0.10 [.02]	0.12 [.03]	0.13 [.03]	0.15 [.04]	0.17 [.04]	0.19 [.05]	0.21 [.05]	0.23 [.06]	0.25 [.06]

AIRFLOW PERFORMANCE—10 TON [35.1 kW] — SIDEFLOW

Air Flow CFM [L/s]	Model	SJNL-B120																											
	Voltage	380-415—3 Phase																											
	External Static Pressure—Inches of Water [kPa]																												
	0.1 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		1.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]	
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
2500 [1180]	—	—	—	—	554	643	589	688	624	734	657	781	690	829	722	878	753	928	783	980	813	1032	842	1085	870	1139	897	1194	923	1251
2600 [1227]	—	—	—	—	566	672	600	720	634	769	667	818	699	869	731	921	762	973	791	1027	821	1082	849	1138	876	1195	903	1252	929	1311
2700 [1274]	—	—	—	—	577	706	612	757	645	808	677	860	709	913	740	968	770	1023	800	1079	829	1136	856	1195	883	1254	910	1314	935	1376
2800 [1321]	—	—	555	693	589	745	623	797	656	851	688	906	719	962	750	1018	779	1076	808	1135	837	1195	864	1256	891	1318	916	1381	941	1445
2900 [1368]	—	—	567	733	601	787	634	842	667	899	698	956	729	1014	759	1074	789	1134	817	1195	845	1258	872	1321	898	1386	923	1451	—	—
3000 [1416]	—	—	580	777	613	834	646	891	678	950	709	1010	740	1071	769	1133	798	1196	826	1260	853	1325	880	1391	905	1458	930	1526	—	—
3100 [1463]	559	767	592	825	626	884	658	945	689	1006	720	1069	750	1132	779	1196	807	1262	835	1328	862	1396	888	1464	913	1534	937	1604	—	—
3200 [1510]	572	817	605	878	638	939	670	1002	701	1066	731	1131	760	1197	789	1264	817	1332	844	1401	870	1471	896	1542	921	1614	—	—	—	—
3300 [1557]	585	871	618	934	651	999	682	1064	712	1131	742	1198	771	1267	799	1336	827	1407	853	1478	879	1551	904	1624	929	1699	—	—	—	—
3400 [1604]	599	929	632	995	663	1062	694	1130	724	1199	754	1269	782	1340	810	1412	837	1485	863	1559	888	1635	913	1711	937	1788	—	—	—	—
3500 [1652]	613	992	645	1060	676	1130	707	1200	736	1272	765	1344	793	1418	820	1493	847	1568	872	1645	897	1723	922	1801	—	—	—	—	—	—
3600 [1699]	627	1058	658	1129	689	1201	719	1275	748	1349	777	1424	804	1500	831	1577	857	1655	882	1734	907	1815	930	1896	—	—	—	—	—	—
3700 [1746]	641	1129	672	1203	702	1277	732	1353	760	1430	788	1507	816	1586	842	1666	867	1747	892	1828	916	1911	939	1995	—	—	—	—	—	—
3800 [1793]	655	1204	686	1280	716	1358	745	1436	773	1515	800	1595	827	1676	853	1759	878	1842	902	1926	926	2012	—	—	—	—	—	—	—	—

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

Drive Package	L						M					
Motor H.P. [W]	2.0 [1491.4]						3.0 [2237.1]					
Blower Sheave	BK90H						BK65H					
Motor Sheave	1VP-44						1VP-44					
Turns Open	1	**2**	3	4	5	6	1	2	3	4	**5**	6
RPM	711	**679**	647	615	583	551	982	939	895	847	**807**	763

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.

AIRFLOW CORRECTION FACTORS—10 TON [35.1 kW]

ACTUAL—CFM [L/s]	2500 [1180]	2600 [1227]	2700 [1274]	2800 [1321]	2900 [1368]	3000 [1416]	3100 [1463]	3200 [1510]	3300 [1557]	3400 [1604]	3500 [1652]	3600 [1699]	3700 [1746]	3800 [1793]
TOTAL MBH	0.97	0.97	0.98	0.98	0.99	1.00	1.00	1.01	1.02	1.02	1.02	1.02	1.02	1.02
SENSIBLE MBH	0.87	0.90	0.92	0.94	0.97	0.99	1.02	1.04	1.06	1.06	1.06	1.06	1.06	1.06
POWER kW	0.98	0.98	0.99	0.99	0.99	1.00	1.00	1.00	1.01	1.01	1.01	1.01	1.01	1.01

NOTES: 1. Multiply correction factor times gross performance data.
2. Resulting sensible capacity cannot exceed total capacity.

[ ] Designates Metric Conversions

COMPONENT AIRFLOW RESISTANCE—10 TON [35.1 kW]

CFM [L/s]	Standard Indoor Airflow—CFM [L/s]													
	2500 [1180]	2600 [1227]	2700 [1274]	2800 [1321]	2900 [1368]	3000 [1416]	3100 [1463]	3200 [1510]	3300 [1557]	3400 [1604]	3500 [1652]	3600 [1699]	3700 [1746]	3800 [1793]
	Resistance—Inches Water [kPa]													
Wet Coil	0.06 [.01]	0.06 [.01]	0.06 [.01]	0.06 [.01]	0.07 [.02]	0.07 [.02]	0.07 [.02]	0.07 [.02]	0.07 [.02]	0.07 [.02]	0.07 [.02]	0.08 [.02]	0.08 [.02]	0.08 [.02]
Downflow Economizer RA Damper Open	0.08 [.02]	0.08 [.02]	0.08 [.02]	0.09 [.02]	0.09 [.02]	0.09 [.02]	0.10 [.02]	0.10 [.02]	0.10 [.02]	0.10 [.02]	0.11 [.03]	0.11 [.03]	0.12 [.03]	0.12 [.03]
Horizontal Economizer RA Damper Open	0.04 [.01]	0.04 [.01]	0.04 [.01]	0.04 [.01]	0.05 [.01]	0.05 [.01]	0.05 [.01]	0.05 [.01]	0.05 [.01]	0.06 [.01]	0.06 [.01]	0.06 [.01]	0.06 [.01]	0.07 [.02]
Horizontal Economizer OA Damper Open	0.08 [.02]	0.08 [.02]	0.08 [.02]	0.09 [.02]	0.09 [.02]	0.10 [.02]	0.10 [.02]	0.11 [.03]	0.12 [.03]	0.12 [.03]	0.13 [.03]	0.13 [.03]	0.14 [.03]	0.14 [.03]
Concentric Grill RXRN-FA75 or RXRN-FA75 & Transition RXMC-CD04	0.15 [.04]	0.17 [.04]	0.19 [.05]	0.22 [.05]	0.24 [.06]	0.27 [.07]	0.30 [.07]	0.31 [.08]	0.34 [.03]	0.37 [.09]	DNA	DNA	DNA	DNA
Concentric Grill RXRN-AA71 or RXRN-AA75 & Transition RXMC-CE05	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	0.17 [.04]	0.18 [.04]	0.18 [.04]

380/415 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			
Model No. SJNL-	Heater Kit					Heat Pump				Heater Kit		Heat Pump	
	RXJJ- Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 380/415V	Heater kBTU/Hr @ 380/415V	Heater Amps @ 380/415V	Unit Min. Ckt. Ampacity @ 380/415V	Over Current Protective Device Size			Min. Ckt. Ampacity 380/415V	Max. Fuse Size 380/415V	Min. Circuit Ampacity 380/415V	Over Current Protective Device Size	
							Min./Max. 380V	Min./Max. 415V					Min./Max. 380V	Min./Max. 415V
B090NM	No Heat	—	—	—	—	21/21	25/30	25/30		—	—	21/21	25/30	25/30
	CC15D	1	9/10.8	30.75/36.68	13.7/15	39/40	40/45	45/45		18/19	20/20	—	—	—
	CC20D	1	12/14.4	41.06/48.97	18.3/20	44/46	50/50	50/50		23/25	25/25	—	—	—
	CC30D	1	18/21.5	61.5/73.36	27.4/29.9	56/59	60/60	70/70		35/38	35/40	—	—	—
	CC40D	1	24.1/28.7	82.12/97.95	36.6/39.9	67/71	70/70	80/80		46/50	50/50	—	—	—
B120NL	No Heat	—	—	—	—	28/28	35/45	35/45		—	—	28/28	35/45	35/45
	CC15D	1	9/10.8	30.75/36.68	13.7/15	46/47	50/50	50/50		18/19	20/20	—	—	—
	CC20D	1	12/14.4	41.06/48.97	18.3/20	51/53	60/60	60/60		23/25	25/25	—	—	—
	CC30D	1	18/21.5	61.5/73.36	27.4/29.9	63/66	70/70	70/70		35/38	35/40	—	—	—
	CC40D	1	24.1/28.7	82.12/97.95	36.6/39.9	74/78	80/80	80/80		46/50	50/50	—	—	—

*= For Canadian use only. Uses “P” fuses for inductive circuit.
+ = Field installed only.

ELECTRICAL DATA – SJNL- SERIES			
		B090NM	B120NL
Unit Information	Unit Operating Voltage Range	342-457	342-457
	Volts	380/415	380/415
	Minimum Circuit Ampacity	21/21	28/28
	Minimum Overcurrent Protection Device Size	25/25	35/35
	Maximum Overcurrent Protection Device Size	30/30	45/45
Compressor Motor	No.	1	1
	Volts	380/415	380/415
	Phase	3	3
	RPM	3450	3450
	HP, Compressor 1	10 1/4	12 3/4
	Amps (RLA), Comp. 1	12.2/12.2	16.7/16.7
	Amps (LRA), Comp. 1	101/101	111/111
	HP, Compressor 2		
	Amps (RLA), Comp. 2		
	Amps (LRA), Comp. 2		
Condenser Motor	No.	2	2
	Volts	380/415	380/415
	Phase	1	1
	HP	1/3	1/2
	Amps (FLA, each)	1/1	1.5/1.5
	Amps (LRA, each)	1.8/1.8	3.1/3.1
Evaporator Fan	No.	1	1
	Volts	380/415	380/415
	Phase	3	3
	HP	2	2
	Amps (FLA, each)	4/4	4/4
	Amps (LRA, each)	28/28	28/28

UNIT DIMENSIONS
PACKAGE
HEAT PUMPS

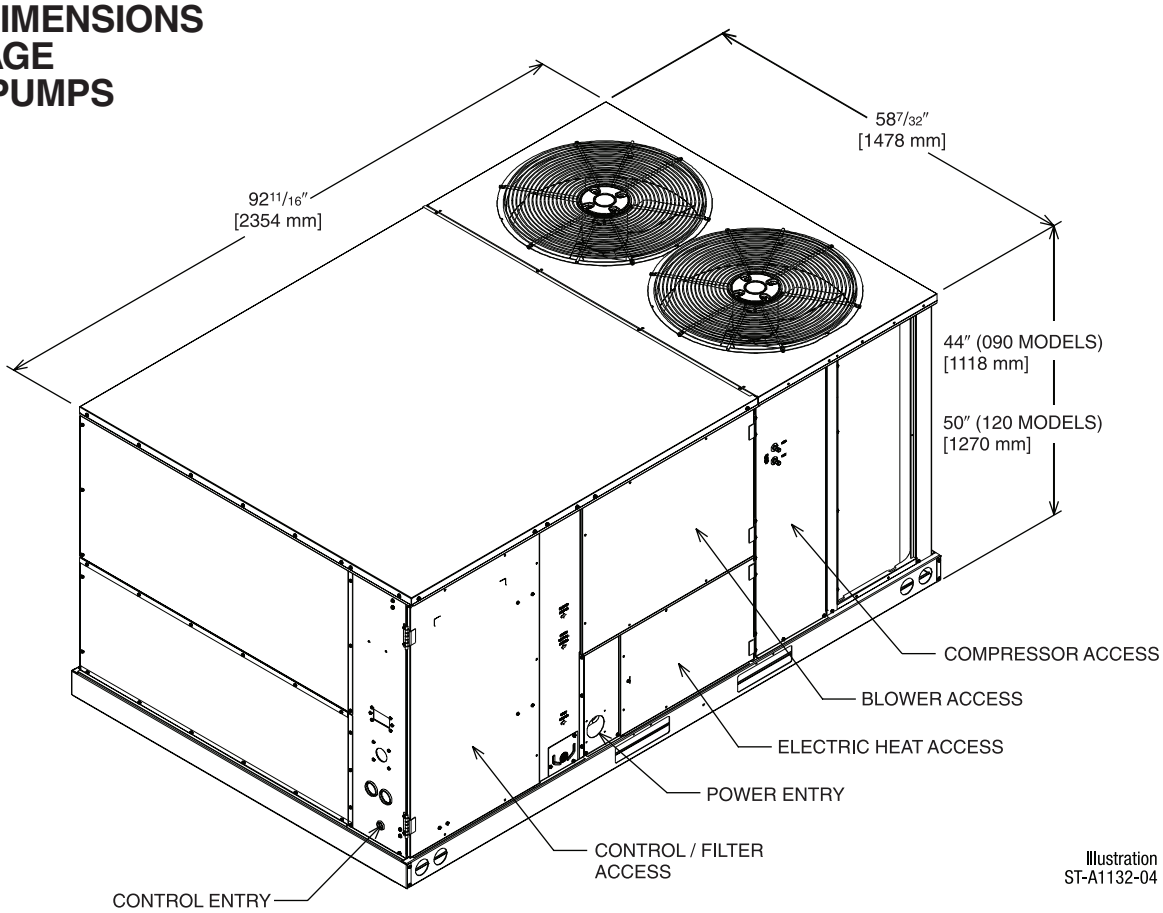


Illustration
ST-A1132-04

BOTTOM VIEW

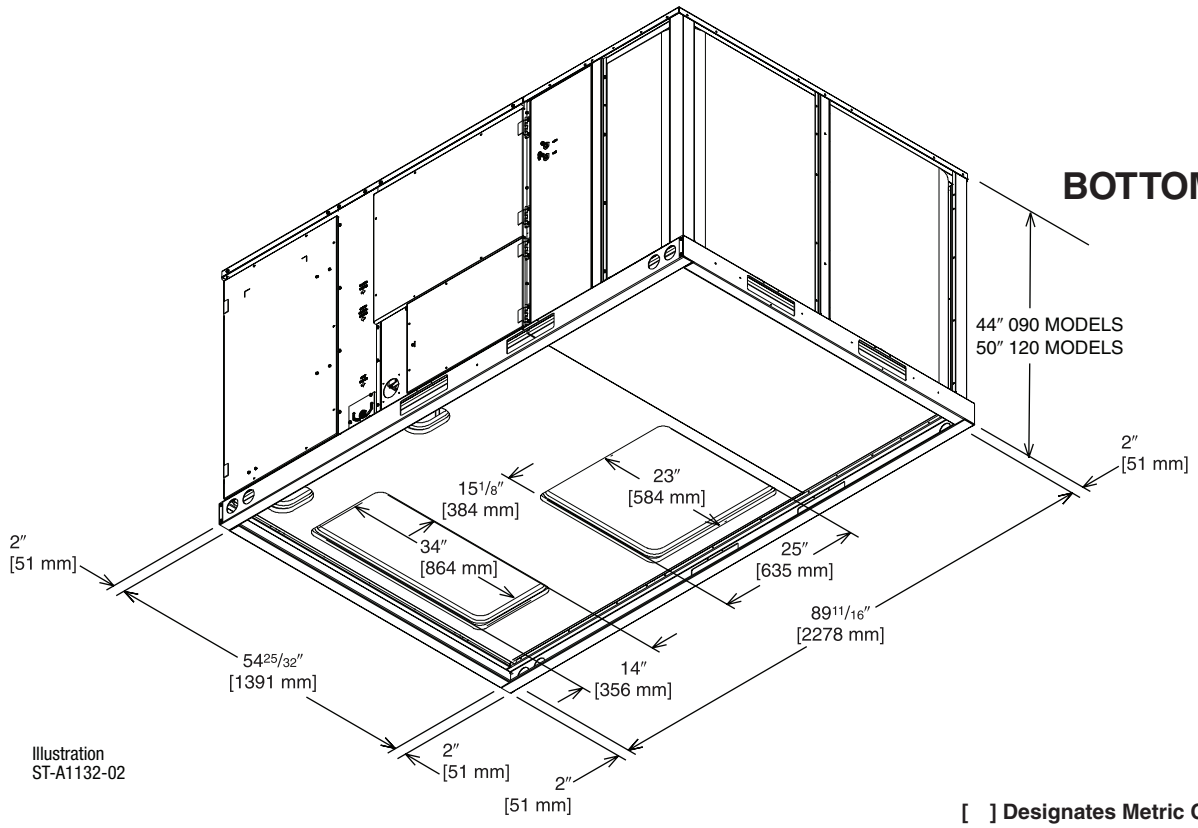


Illustration
ST-A1132-02

[ ] Designates Metric Conversions

UNIT DIMENSIONS
PACKAGE
HEAT PUMPS

SUPPLY AND RETURN DIMENSIONS FOR HORIZONTAL APPLICATION

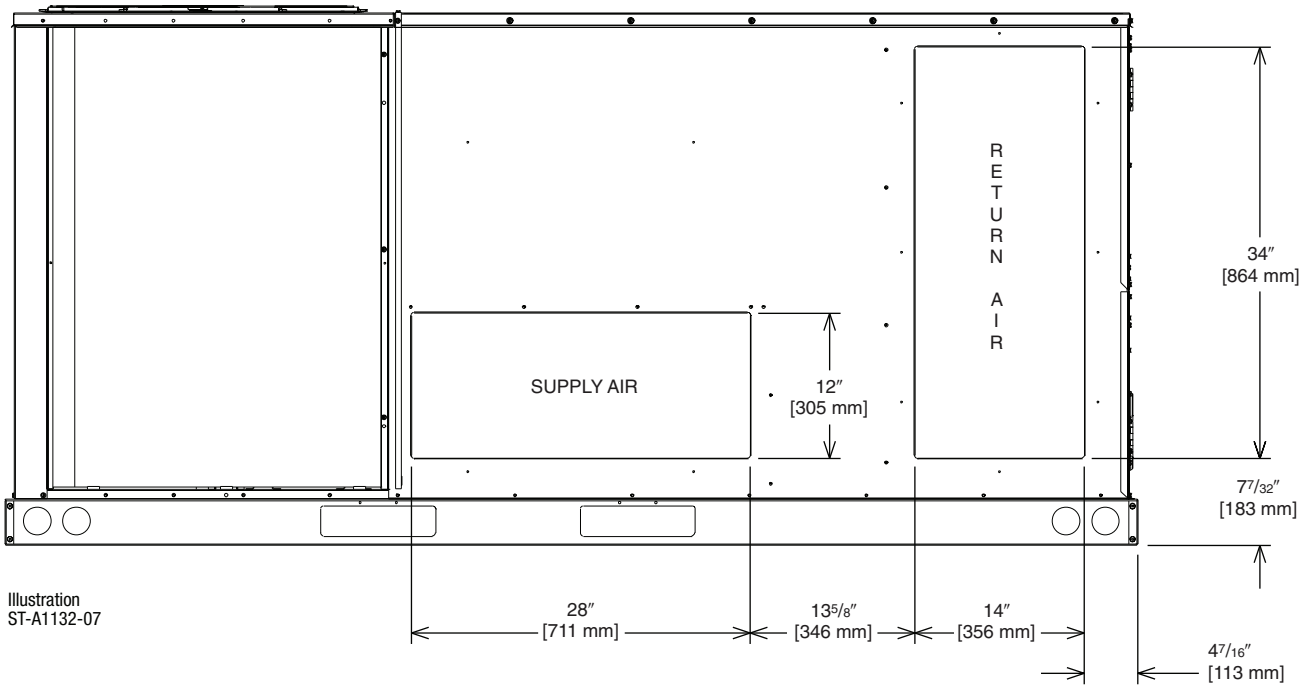


Illustration
ST-A1132-07

SUPPLY AND RETURN DIMENSIONS FOR DOWNFLOW APPLICATIONS

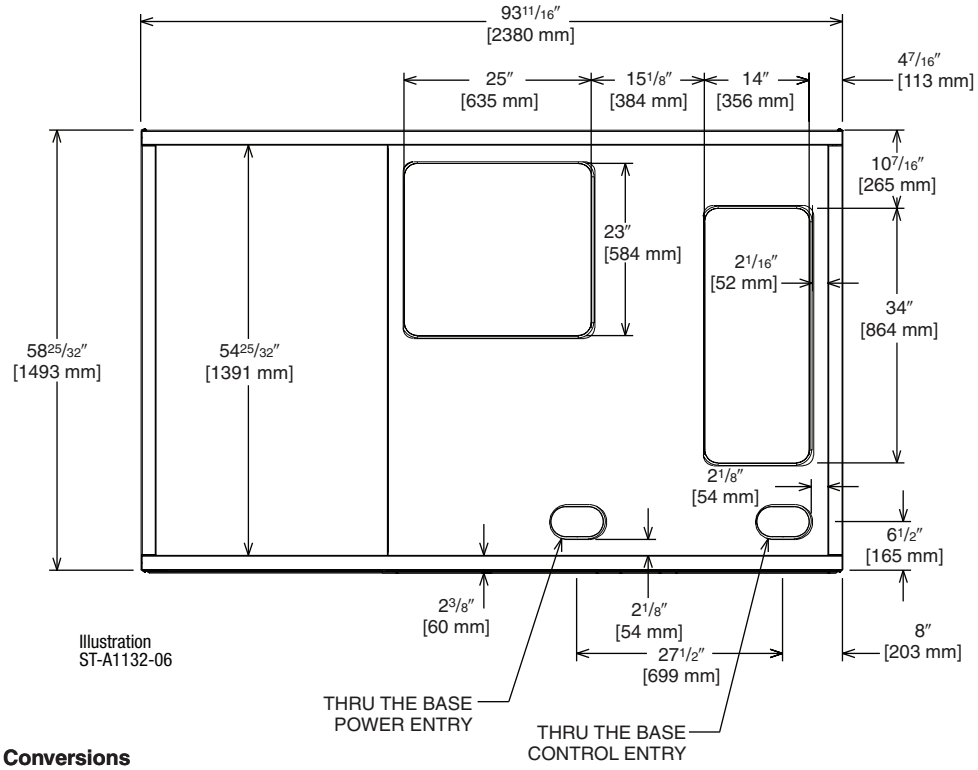
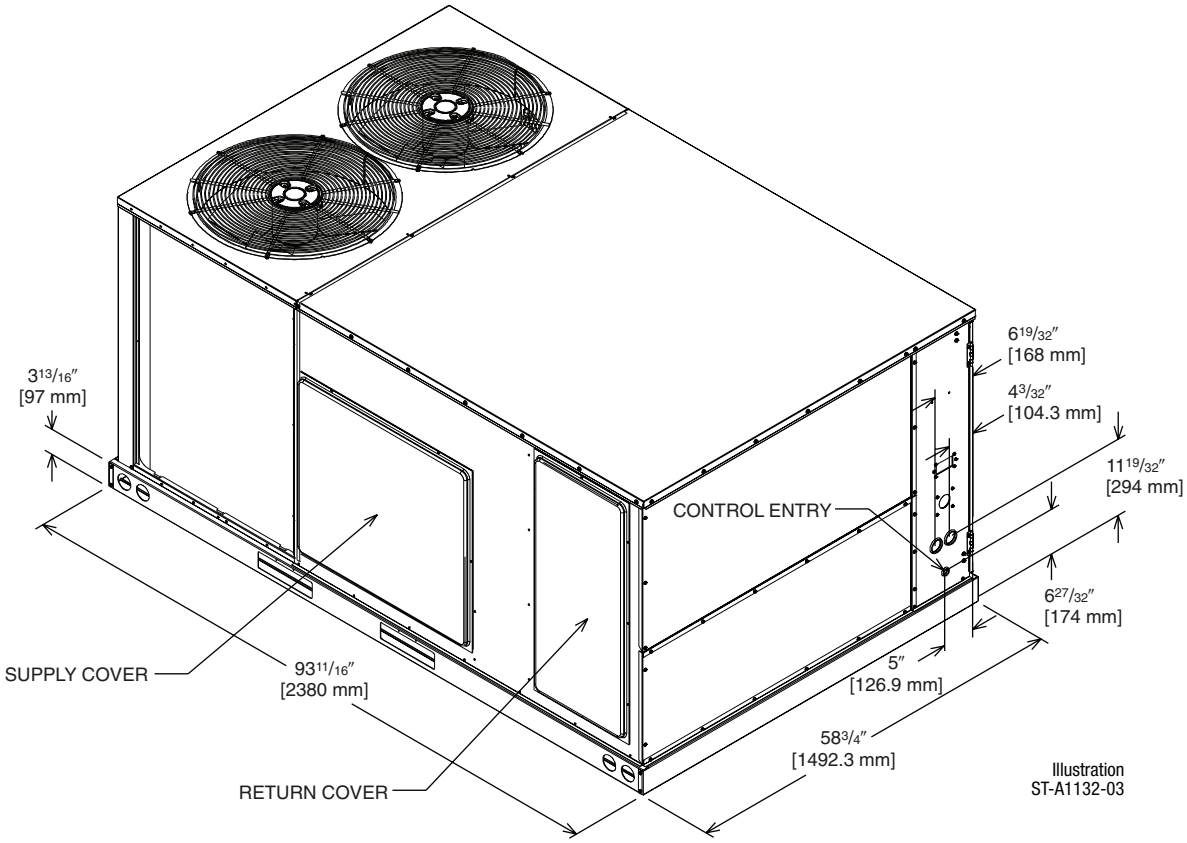


Illustration
ST-A1132-06

[ ] Designates Metric Conversions

UNIT DIMENSIONS
PACKAGE
HEAT PUMPS



[ ] Designates Metric Conversions

CORNER WEIGHTS

Capacity Tons [kW]	Corner Weights by Percentage			
	A	B	C	D
7.5-10 [26.4-35.2]	32%	26%	20%	22%

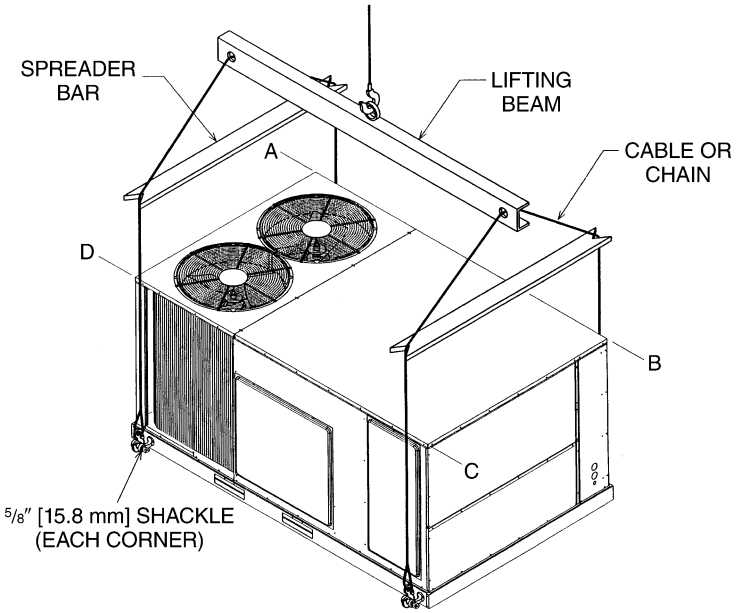


Illustration ST-A0718-01

CLEARANCES

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

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

[ ] Designates Metric Conversions

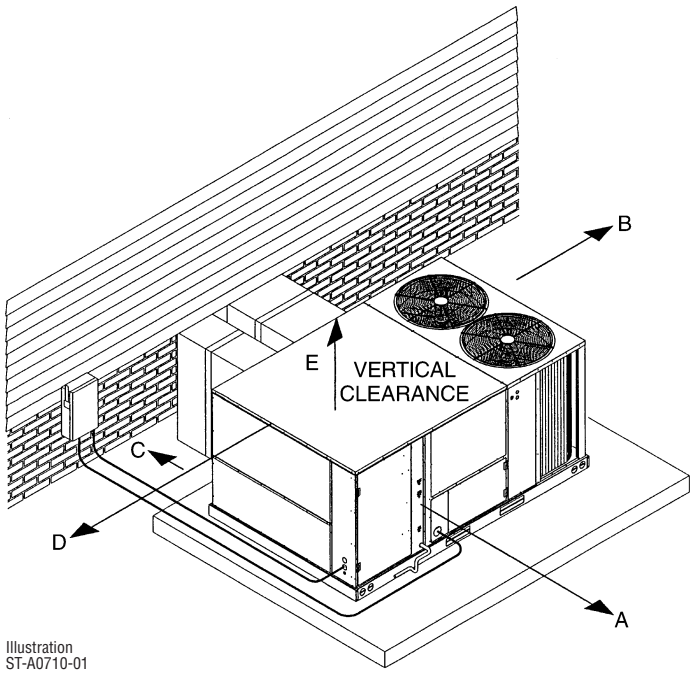


Illustration ST-A0710-01

FIELD INSTALLED ACCESSORY EQUIPMENT

Accessory	Model Number	Shipping Weight Lbs. [kg]	Installed Weight Lbs. [kg]	Factory Installation Available?
Thermostats	See Thermostat Specification Sheet for Details (T11-001)			No
Electric Heaters	RXJJ-CC15 (D)	46 [20.9]	36 [16.3]	Yes
	RXJJ-CC20 (D)	46 [20.9]	36 [16.3]	Yes
	RXJJ-CC30 (D)	47 [21.3]	37 [16.8]	Yes
	RXJJ-CC40 (D)	49 [22.2]	39 [17.7]	Yes
Economizer w/Single Enthalpy	RXRD-PDCM3	90 [40.8]	81 [36.7]	Yes
Economizer w/Single Enthalpy and Smoke Detector	RXRD-SDCM3	91 [41.3]	82 [57.2]	Yes
Dual Enthalpy Kit	RXRX-AV02	3 [1.4]	1 [.5]	Yes
Horizontal Economizer w/Single Enthalpy	RXRD-RDCM3	94 [42.6]	89 [40.4]	No
Carbon Dioxide Sensor	RXRX-AR02	3 [1.4]	2 [1.0]	No
Manual Fresh Air (Left Panel Mounted)	RXRF-KDA1	38 [17.2]	31 [14.0]	No
Manual Fresh Air (Return Panel)	RXRF-JDA1	26 [11.8]	21 [9.5]	No
Motorized Fresh Air (Return Panel)	RXRF-JDB1	43 [19.5]	38 [17.2]	No
Motor Kit for RXRF-KDA1	RXRX-AW02	35 [15.9]	27 [12.2]	No
Roofcurb, 14"	RXKG-CAE14	90 [40.8]	85 [38.5]	No
Roofcurb, 24"	RXKG-CAE24	140 [63.5]	135 [61.2]	No
Roofcurb Adapters	RXRX-CDCE50	300 [136.1]	290 [131.5]	No
	RXRX-CFCE54	325 [147.4]	315 [142.9]	No
	RXRX-CFCE56	350 [158.8]	340 [154.2]	No
	RXRX-CGCC12	450 [204.1]	410 [186.0]	No
Concentric Diffuser (Step-Down, 20" Round)	RXRN-FA65	139 [63.0]	60 [27.2]	No
Concentric Diffuser (Flush, 20" Round)	RXRN-FA75	54 [24.4]	42 [19.0]	No
Concentric Diffuser (Step-Down, 18 x 28)	RXRN-AA61	200 [90.7]	185 [83.9]	No
Concentric Diffuser (Step-Down, 18 x 32)	RXRN-AA66	247 [112.0]	227 [103.0]	No
Concentric Diffuser (Flush, 18 x 28)	RXRN-AA71	170 [77.1]	155 [70.3]	No
Concentric Diffuser (Flush, 18 x 32)	RXRN-AA76	176 [79.8]	161 [73.0]	No
Downflow Transition (Rect. to Round)	RXMC-CD04	15 [6.8]	13 [5.9]	No
Downflow Transition (Rect. to Rect., 18 x 28)	RXMC-CE05 ①	18 [8.2]	16 [7.3]	No
Downflow Transition (Rect. to Rect., 18 x 32)	RXMC-CF06 ②	20 [9.1]	18 [8.2]	No
Low-Ambient Control Kit	RXRZ-A03	3 [1.4]	2 [1.0]	Yes
Freeze-Stat Kit	RXRX-AM05	1 [.5]	0.5 [.2]	Yes
Outdoor Coil Louver Kit (090)	RXRX-AAD01H	25 [11.3]	22 [10.0]	Yes
Outdoor Coil Louver Kit (120)	RXRX-AAD01J	29 [13.2]	26 [11.8]	Yes
Non-Powered Convenience Outlet	RXRX-AN01	2 [1.0]	1.5 [0.7]	Yes

NOTES: ① Used with RXRN-AA61 and RXRN-AA71 concentric diffusers.
② Used with RXRN-AA66 and RXRN-AA76 concentric diffusers.

[ ] Designates Metric Conversions

THERMOSTATS

100-Series *
Non-Programmable

200-Series *
Programmable

300-Series *
Deluxe
Programmable

400-Series *
Special Applications/
Programmable

500-Series *
Communicating/
Programmable

Brand	Unique Model Number Prefix		Descriptor (3 Characters)	Series (3 Characters)	System (2 Characters)	Type (2 Characters)
RHC		-	TST	101	GE	MS
RHC=Rheem			TST=Thermostat	100=Non-Programmable 200=Programmable 300=Deluxe Programmable 400=Special Applications/ Programmable 500=Communicating/ Programmable	GE=Gas/Oil/Electric HP=Heat Pump MD=Modulating Furnace DF=Dual Fuel UN=Universal AC/HP/GE CM=Communicating	SS=Single-Stage MS=Multi-Stage

** Photos are representative. Actual models may vary.*

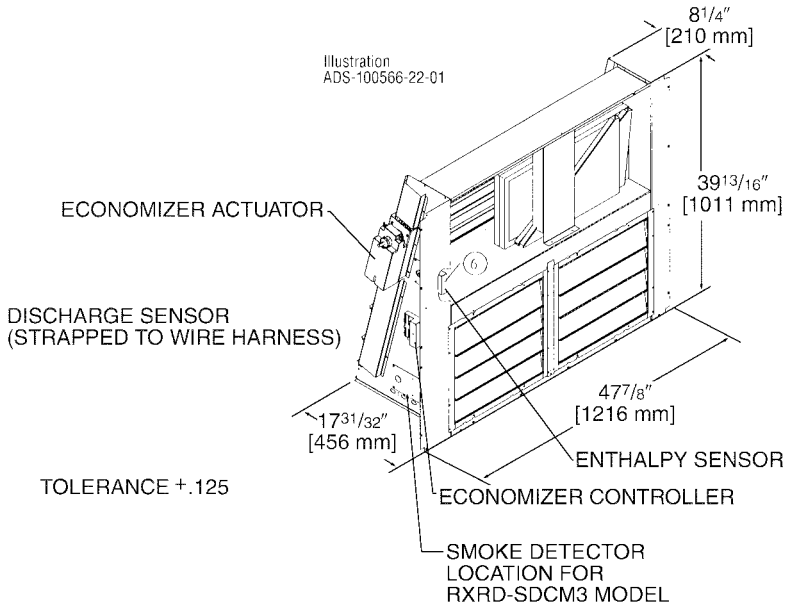
For detailed thermostat match-up information, see specification sheet form number T11-001.

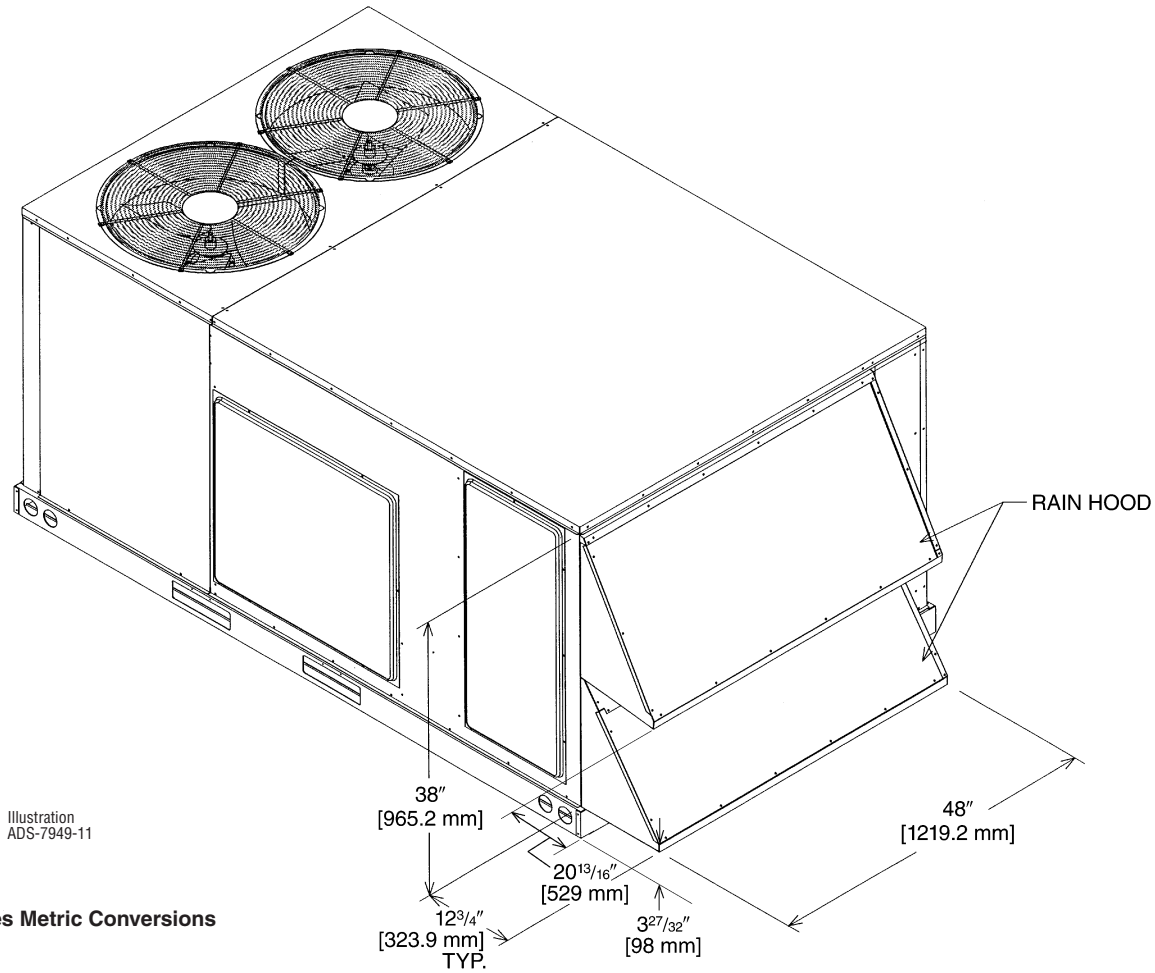
ECONOMIZERS

Use to Select Factory Installed Options Only

RXRD-PDCM3—Single Enthalpy (Outdoor)
RXRD-SDCM3—Single Enthalpy w/Smoke Detector
RXRX-AV02—Dual Enthalpy Upgrade Kit
RXRX-AR02—Optional Wall-Mounted CO_2 Sensor

- 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
- Prewired for Smoke Detector





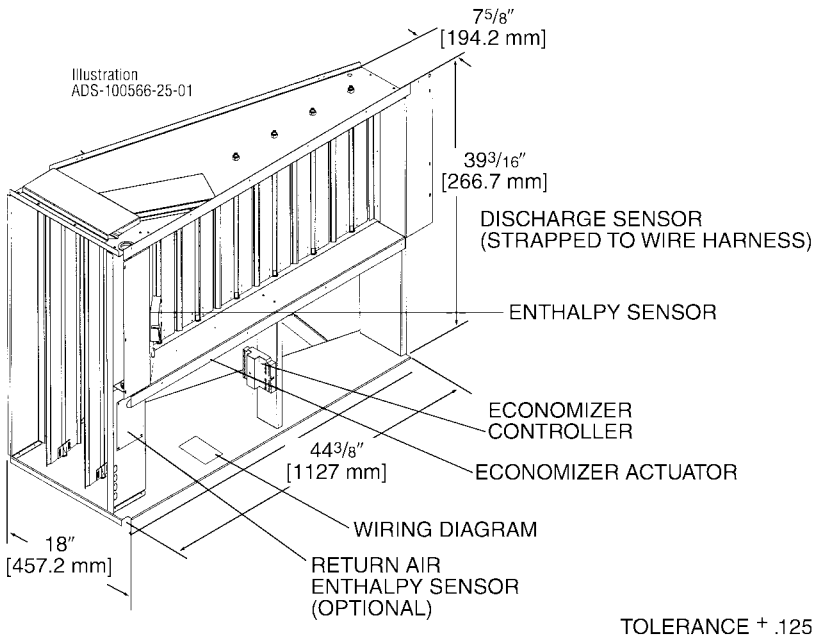
[ ] Designates Metric Conversions

ECONOMIZER FOR HORIZONTAL DUCT INSTALLATION

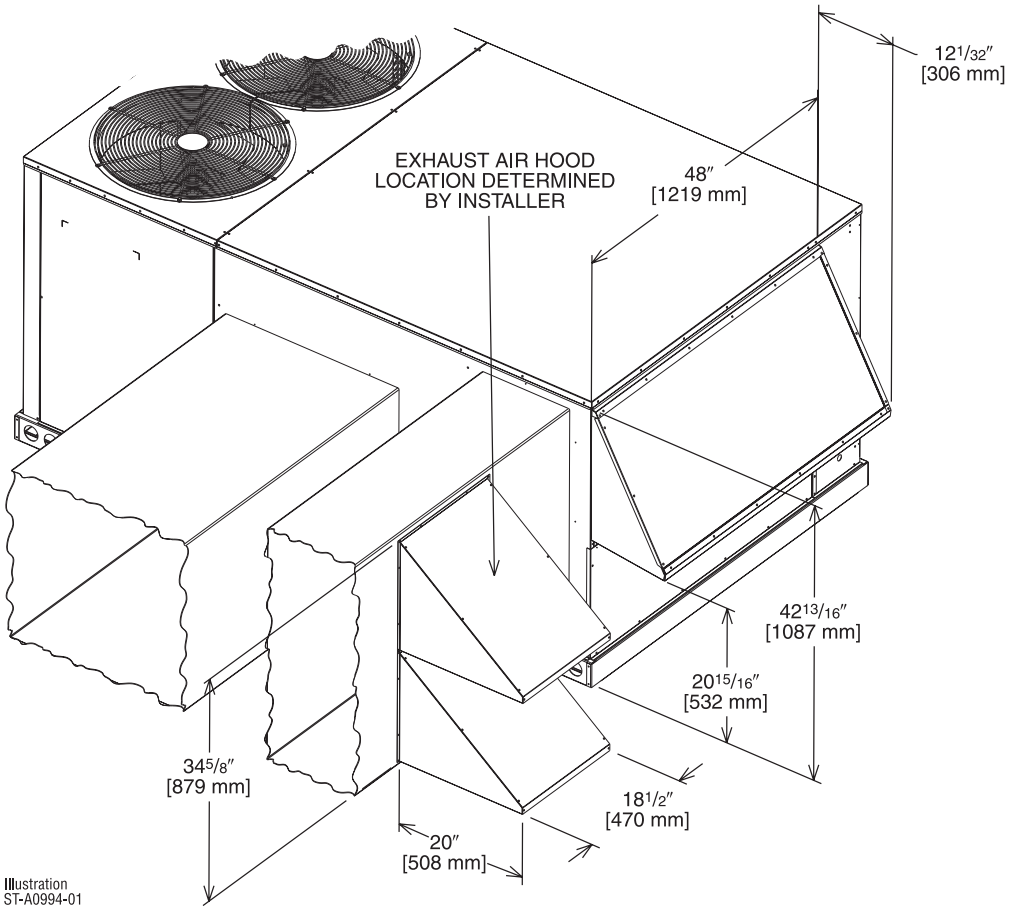
Field Installed Only

RXRD-RDCM3—Single Enthalpy (Outdoor)
RXRX-AV02—Dual Enthalpy Upgrade Kit
RXRX-AR02—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

FRESH AIR DAMPER

MOTORIZED DAMPER KIT
RXRX-AW02
(Motor Kit for RXRF-KDA1)

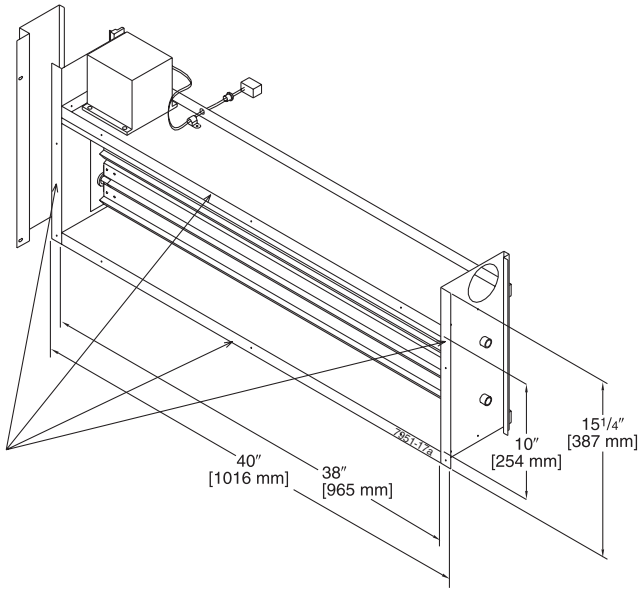


Illustration
ST-7951-17

[ ] Designates Metric Conversions

RXRF-KDA1 (Manual)

DOWNFLOW OR
HORIZONTAL APPLICATION

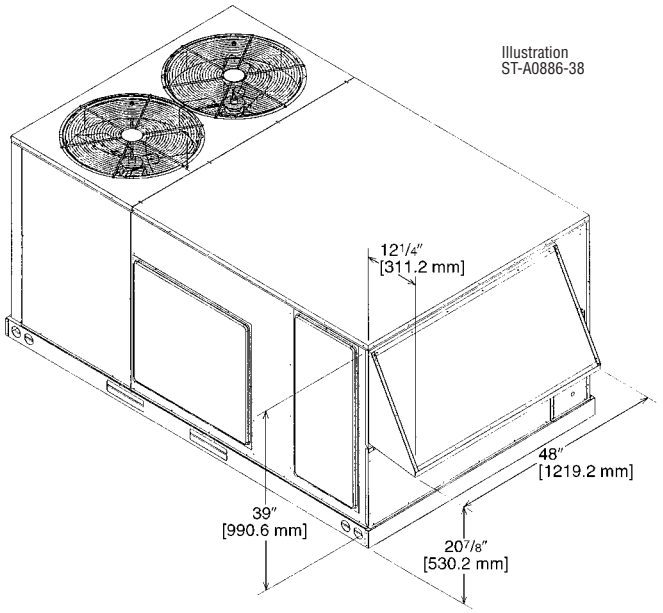


Illustration
ST-A0886-38

FRESH AIR DAMPER (Cont.)

RXRF-JDA1 (Manual)
RXRF-JDB1 (Motorized)

DOWNFLOW APPLICATION

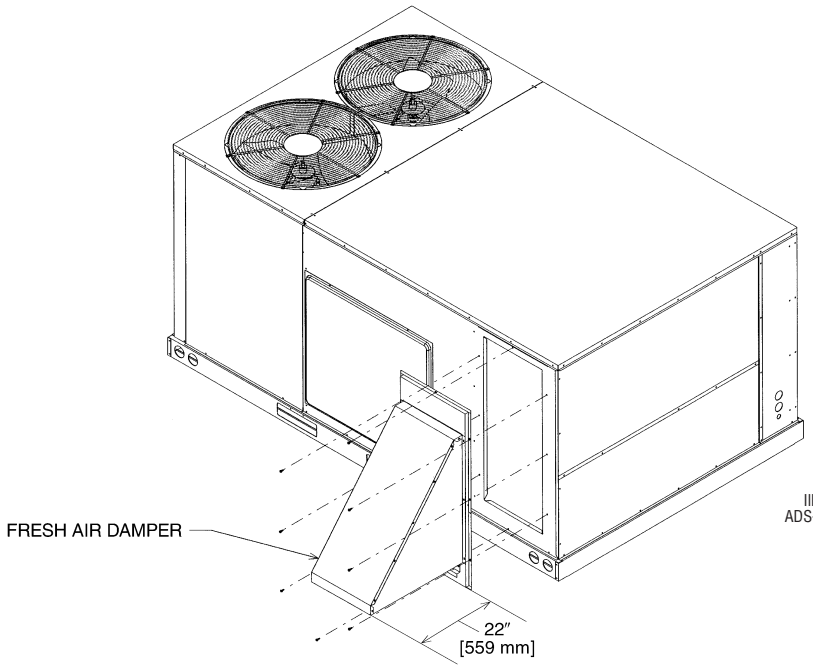
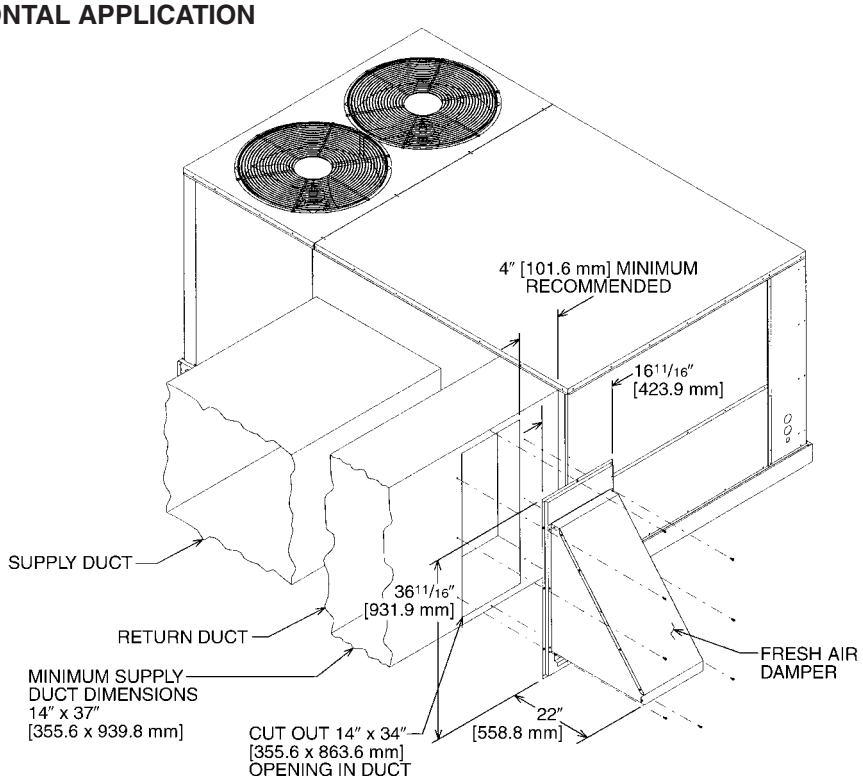


Illustration
ADS-7937-58

HORIZONTAL APPLICATION

Illustration
ST-A0901-01



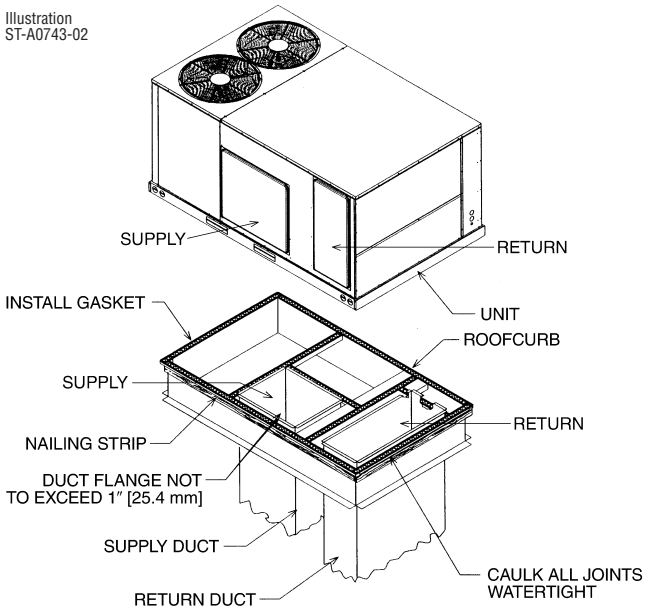
[ ] Designates Metric Conversions

ROOFCURBS (Full Perimeter)

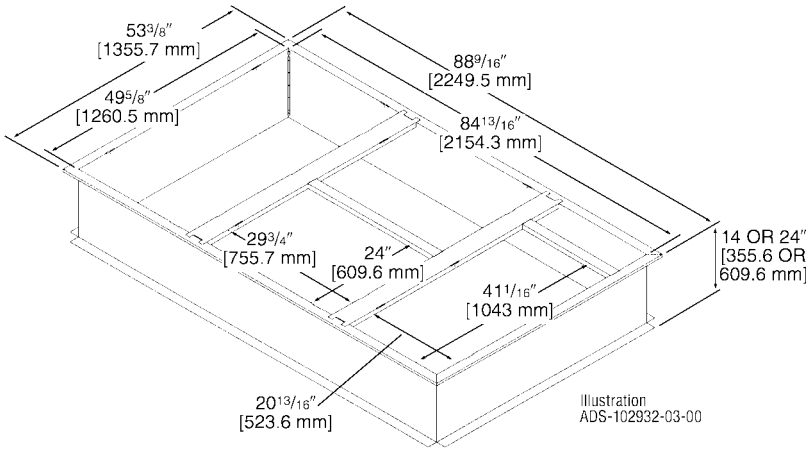
- Rheem's new roofcurb design can be utilized on 7.5 and 10 ton [26.4 and 35.2 kW] SJNL- models.
- Two available heights (14" [356 mm] and 24" [610 mm]) for ALL models.
- Quick assembly corners for simple and fast assembly.
- Opening provided in bottom pan to match the "Thru the Curb" electrical connection opening provided on the unit base pan.
- 2" [51 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.

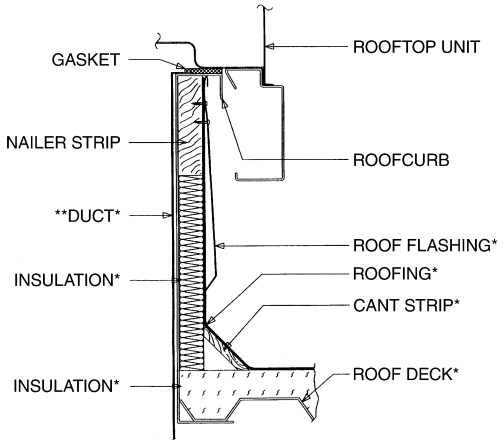
Roofcurb Model	Height of Curb
RXKG-CAE14	14" [356 mm]
RXKG-CAE24	24" [610 mm]

TYPICAL INSTALLATION



ROOFCURB INSTALLATION





*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.

Illustration
ST-A0743-02

[ ] Designates Metric Conversions

ROOFCURB ADAPTERS

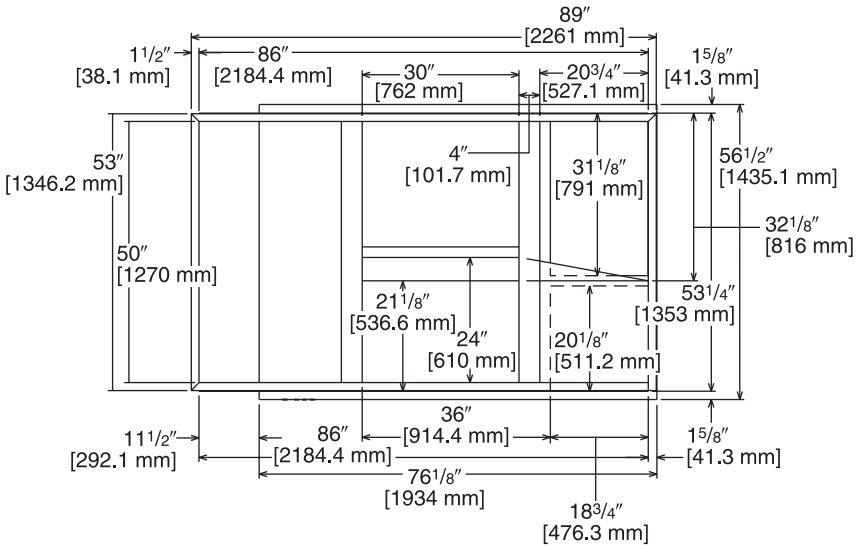
OLD MODELS	OLD ROOFCURB	ROOFCURB ADAPTER	NEW MODELS (All Share Common Footprint)
(-)RCF, (-)REF-075/076 (-)RGF-150075, (-)RGF-131076 (-)RGF-201076	RXRK-E50	RXRX-CDCE50	
(-)RGF-200075 (-)RGG, (-)REG, (-)RCG-075 (-)RGF, (-)REF, (-)RCF-085 (-)RGF, (-)REF, (-)RCF-100 (-)RGG, (-)REG, (-)RCG-100	RXRK-E54	RXRX-CFCE54	(-)JNL-B090 (-)JNL-B120
(-)RGF, (-)REF, (-)RCF-125	RXRK-E56	RXRX-CFCE56	
(-)PDC-075 (-)PDC-100/101	RXPK-C12	RXRX-CGCC12	

NOTE: Ductwork modifications may be necessary if the capacity and/or indoor airflow rate of replacement unit is not equivalent to that of the unit being replaced.

ROOFCURB ADAPTERS (Cont.)

RXRX-CDCE50

Illustration
ADS-7952-02
Sheet 2



TOP VIEW

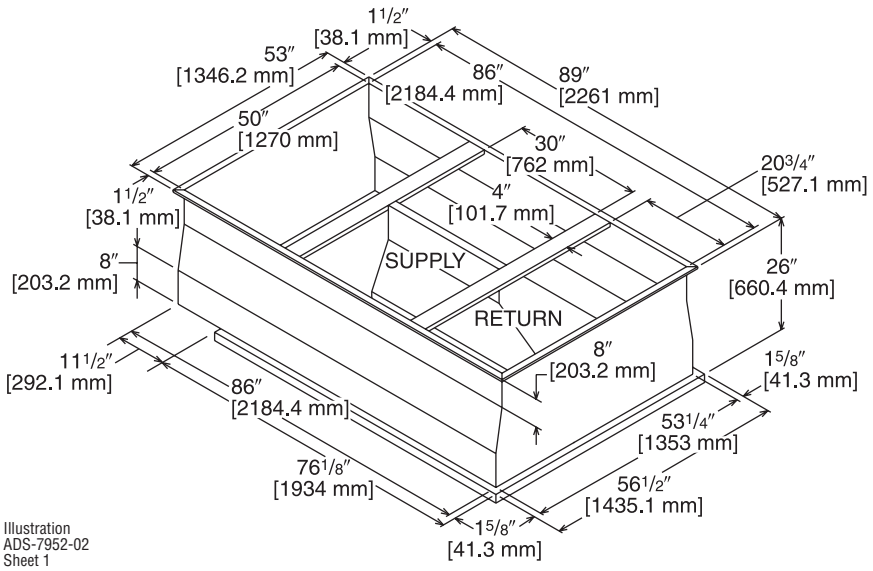


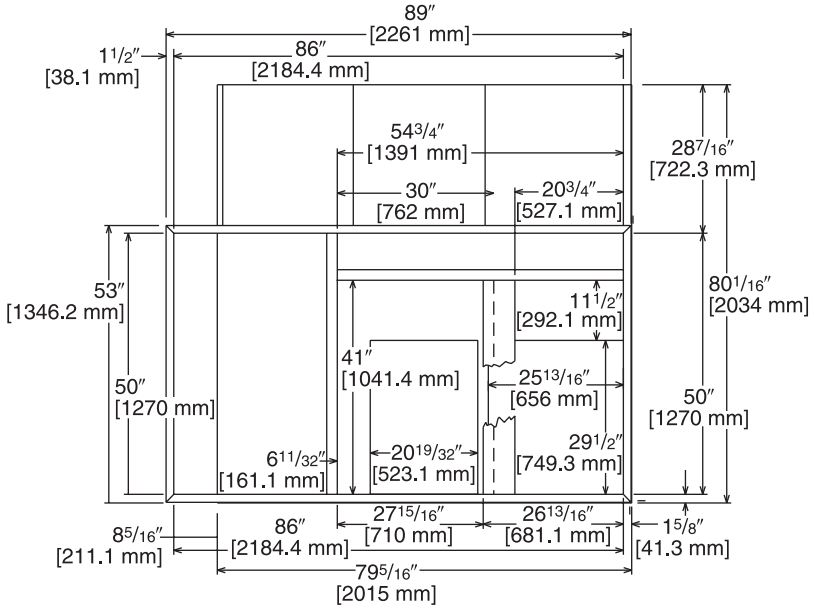
Illustration
ADS-7952-02
Sheet 1

[ ] Designates Metric Conversions

ROOFCURB ADAPTERS (Cont.)

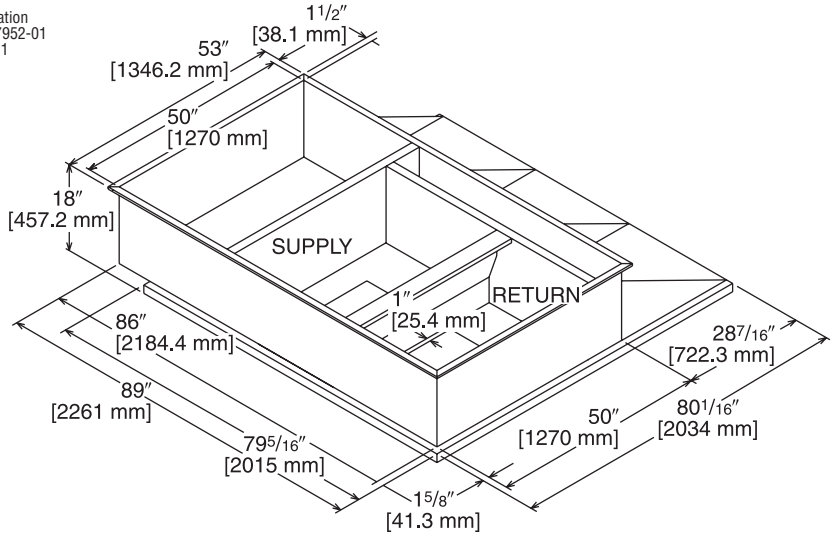
RXRX-CFCE54

Illustration
ADS-7952-01
Sheet 2



TOP VIEW

Illustration
ADS-7952-01
Sheet 1

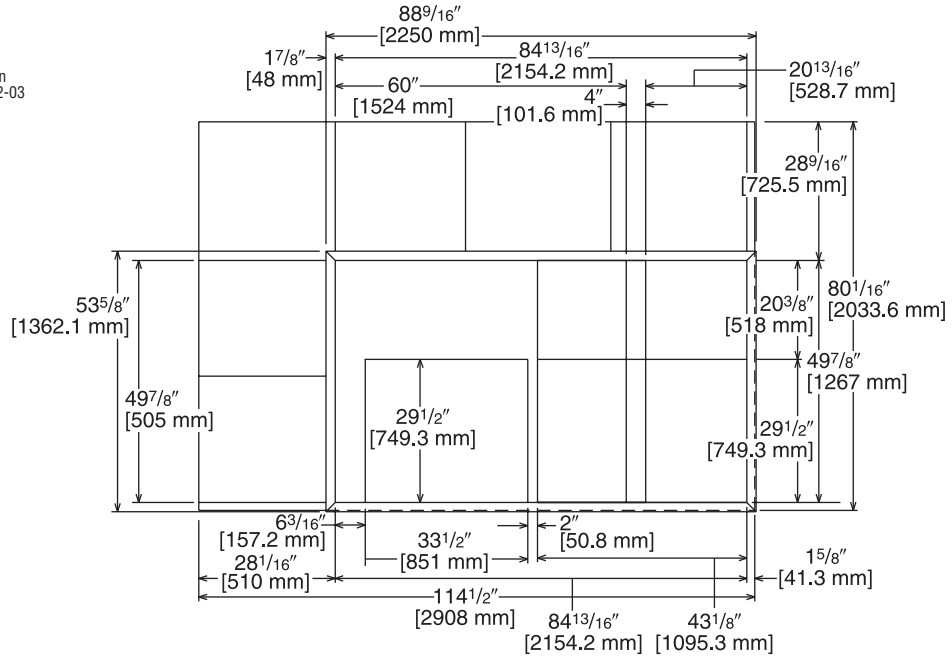


[ ] Designates Metric Conversions

ROOFCURB ADAPTERS (Cont.)

RXRX-CFCE56

Illustration
ADS-7952-03
Sheet 2



TOP VIEW

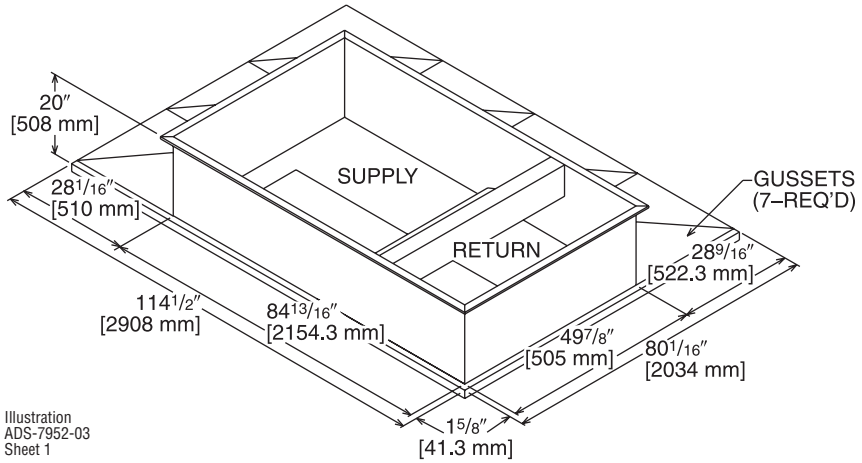


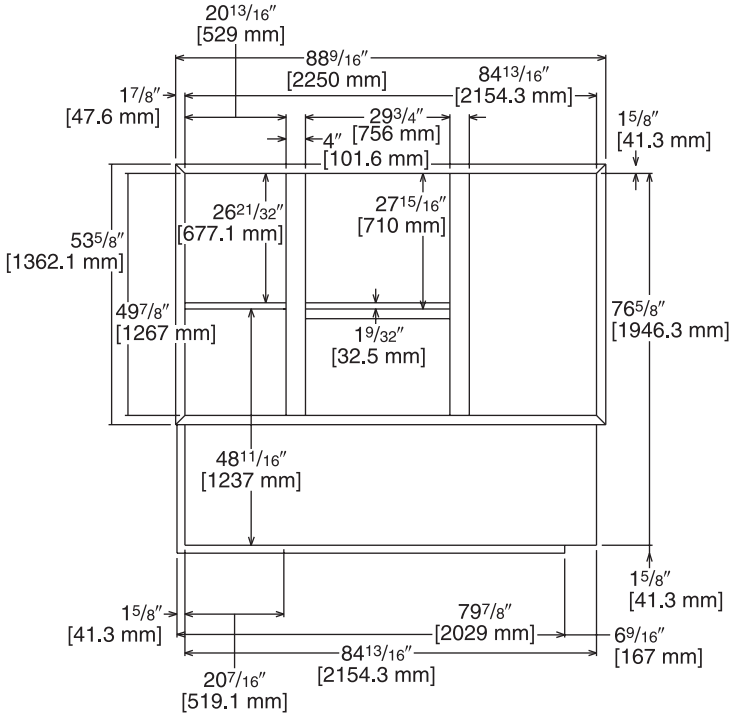
Illustration
ADS-7952-03
Sheet 1

[ ] Designates Metric Conversions

ROOFCURB ADAPTERS (Cont.)

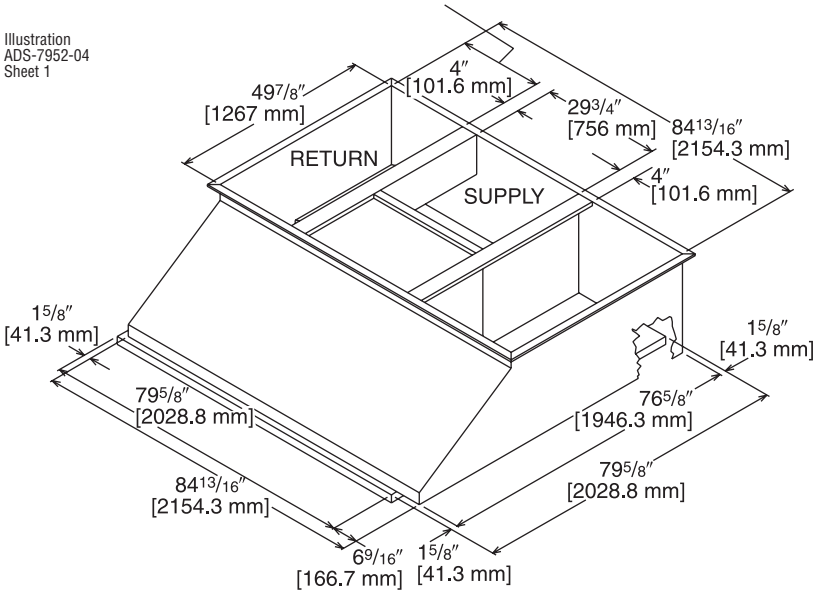
RXRX-CGCC12

Illustration
ADS-7952-04
Sheet 2



TOP VIEW

Illustration
ADS-7952-04
Sheet 1



[ ] Designates Metric Conversions

CONCENTRIC DIFFUSER APPLICATION

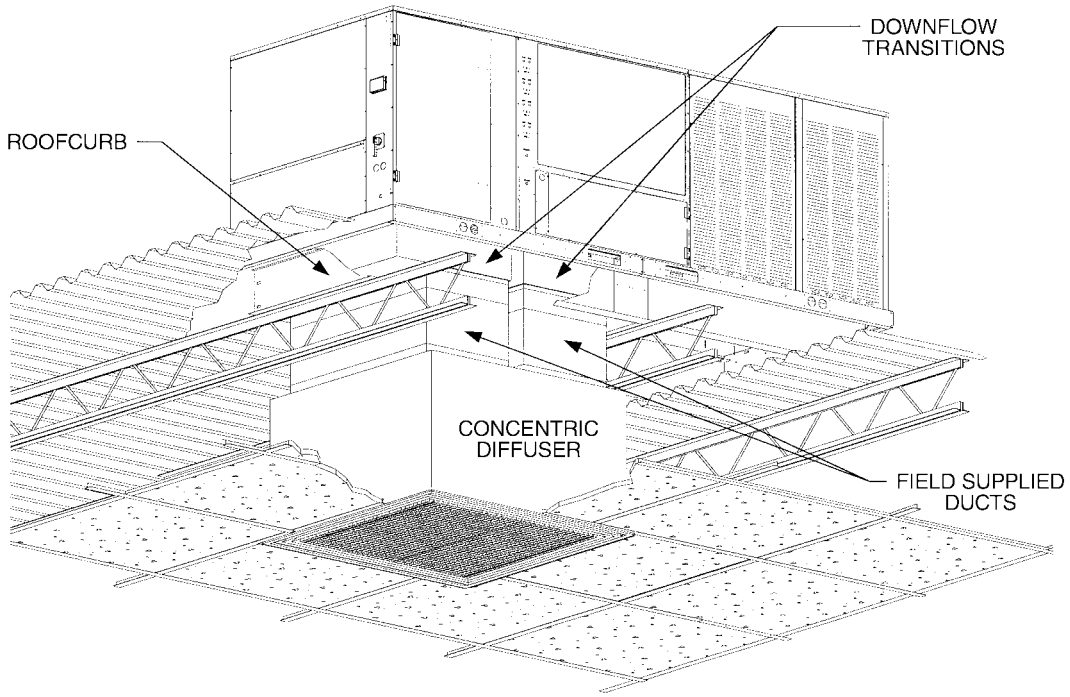


Illustration
ST-A0840-02

DOWNFLOW TRANSITION DRAWINGS

RXMC-CE05

- Used with RXRN-AA61 or RXRN-AA71 Concentric Diffusers.

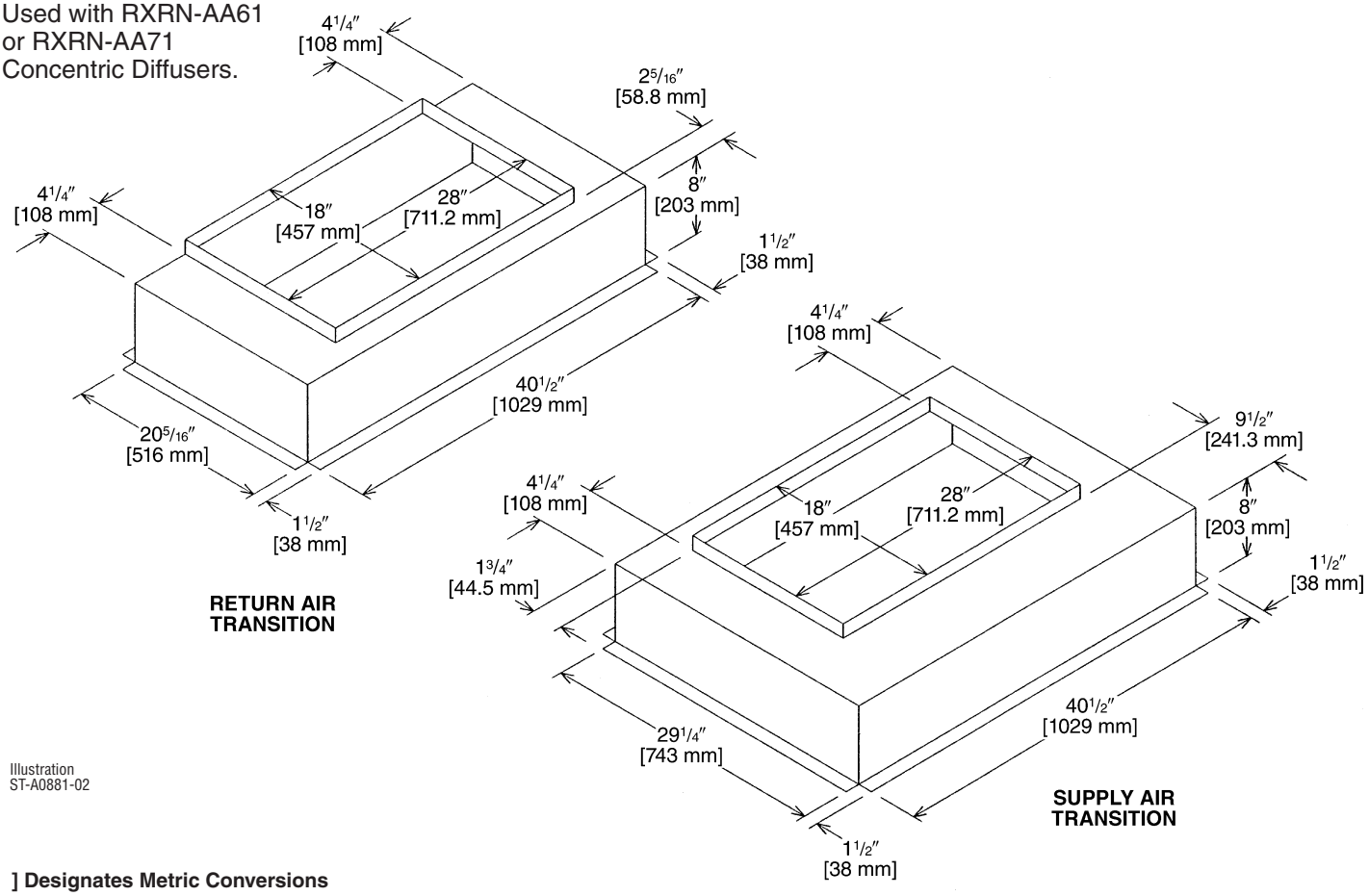


Illustration
ST-A0881-02

[ ] Designates Metric Conversions

DOWNFLOW TRANSITION DRAWINGS (Cont.)

RXMC-CF06

- Used with RXRN-AA66 or RXRN-AA76 Concentric Diffusers.

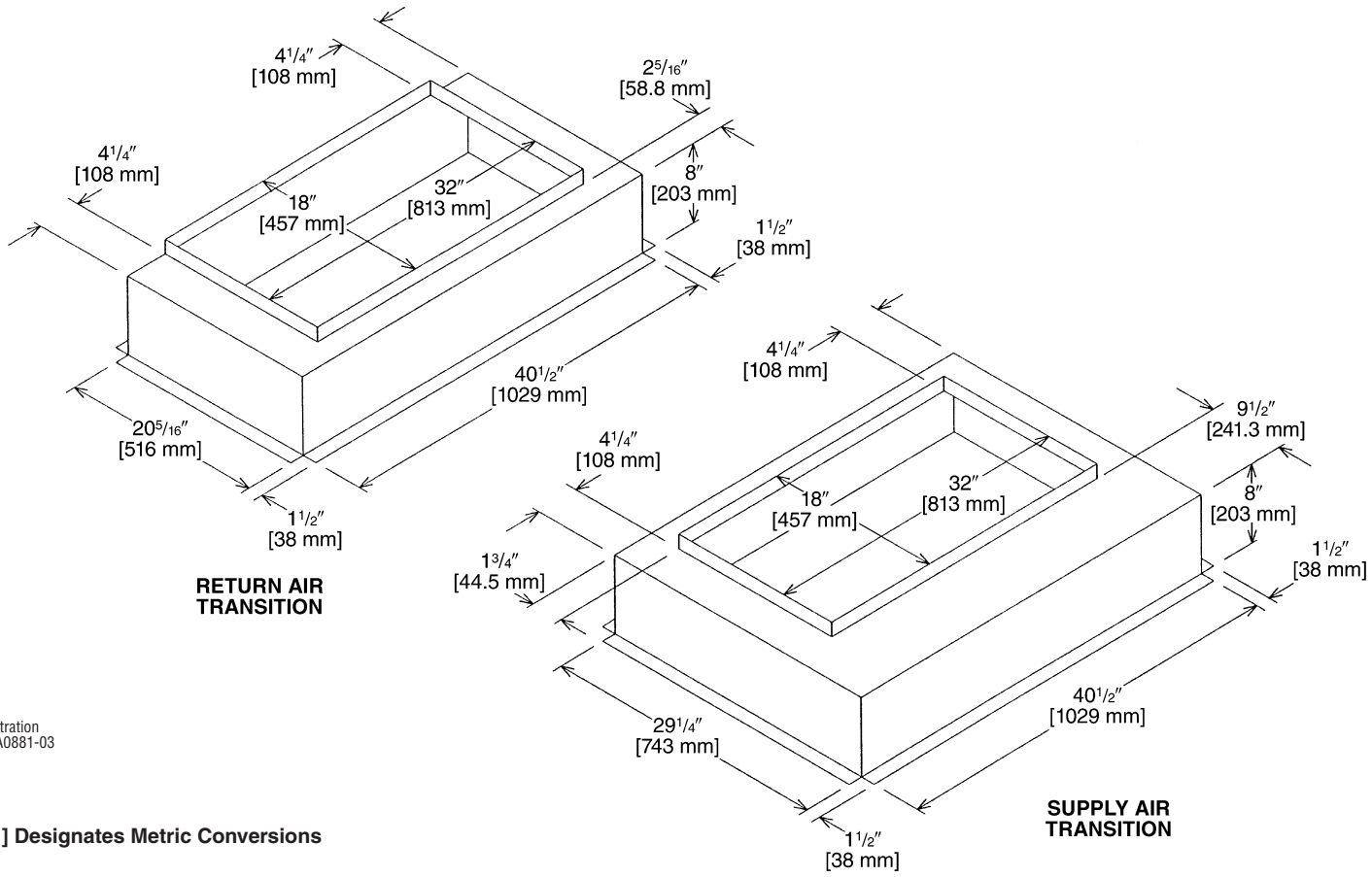


Illustration
ST-A0881-03

[ ] Designates Metric Conversions

DOWNFLOW TRANSITION DRAWINGS (Cont.)

RXMC-CD04

- Used with RXRN-FA65 or RXRN-FA75 Concentric Diffusers.

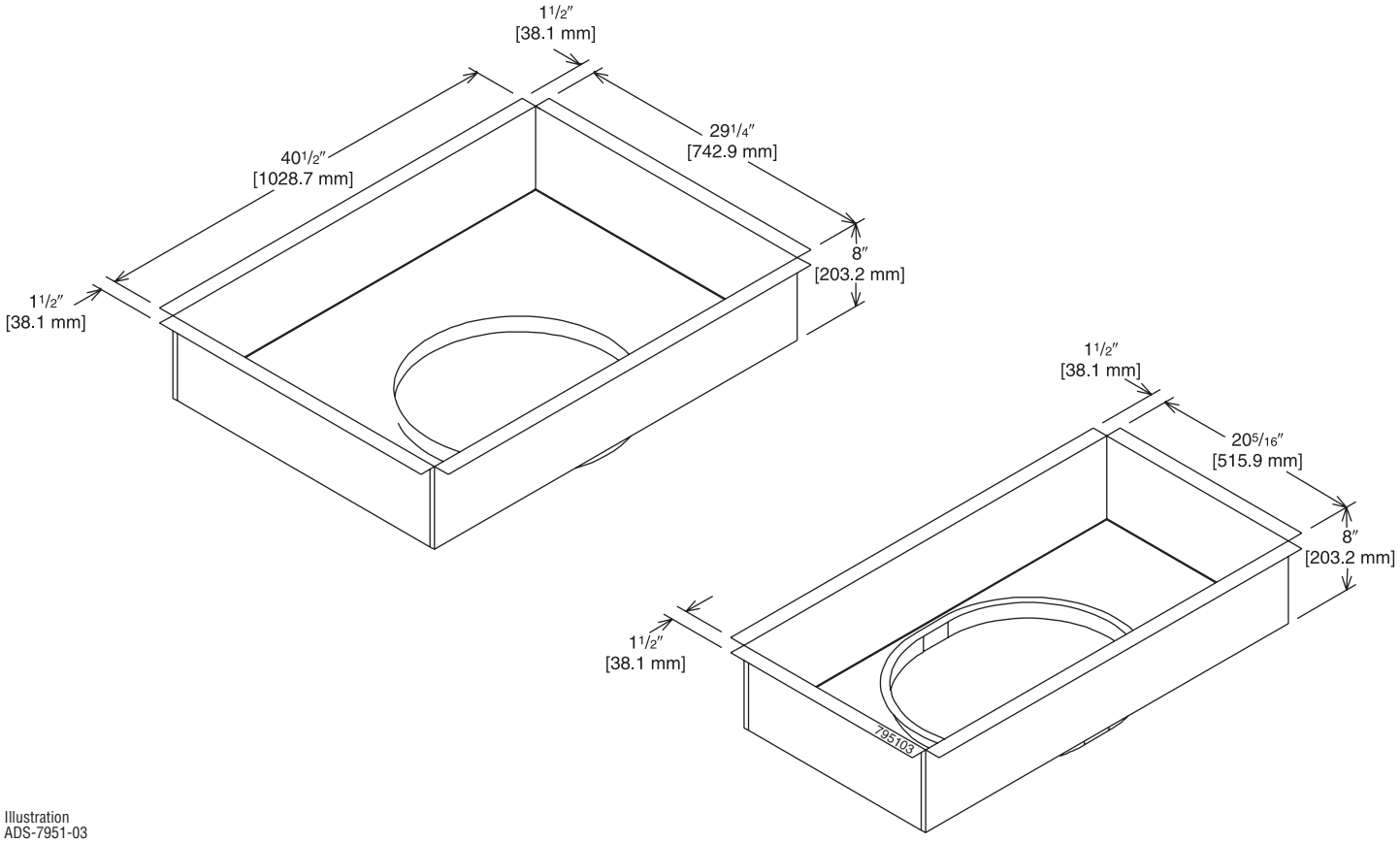


Illustration
ADS-7951-03

[ ] Designates Metric Conversions

CONCENTRIC DIFFUSER—STEP DOWN

RXRN-FA65 (7.5 Ton [29.9 kW] Model)

For Use With Downflow Transition (RXMC-CD04) and 20" [508 mm] Round Supply and Return Ducts

- 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.

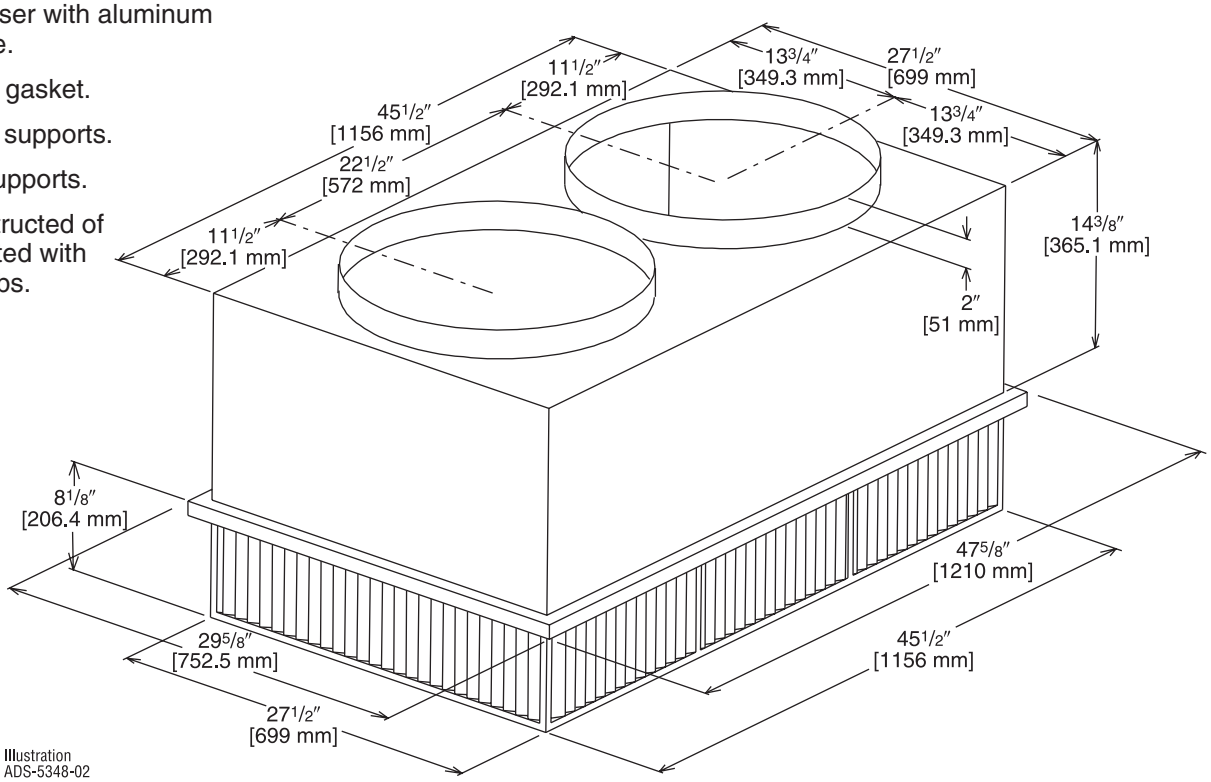


Illustration ADS-5348-02

ENGINEERING DATA①

Model No.	Flow Rate CFM [L/s]	Static Pressure in. w.c. [kPa]	Throw ② ③ Feet [m]	Neck Velocity fpm [m/s]	Noise Level ④ (dbA)
RXRN-FA65	2600 [1227]	0.17 [0.042]	24-29 [7.3-8.8]	669 [3.4]	20
	2800 [1321]	0.20 [0.050]	25-30 [7.6-9.1]	720 [3.7]	25
	3000 [1416]	0.25 [0.062]	27-33 [8.2-10.1]	772 [3.9]	25
	3200 [1510]	0.31 [0.077]	28-35 [8.5-10.7]	823 [4.2]	25
	3400 [1604]	0.37 [0.092]	30-37 [9.1-11.3]	874 [4.4]	30

NOTES: ① All data is based on the air diffusion council guidelines.
② Throw data is based on 75 FPM Terminal Velocities using isothermal air.
③ Throw is based on diffuser blades being directed in a straight pattern.
④ Actual noise levels may vary due to duct design and do not include transmitted unit noise. Adequate duct attenuation must be provided to reduce sound output from the unit.

[ ] Designates Metric Conversions

CONCENTRIC DIFFUSER—STEP DOWN 18" x 28" [457.2 x 711.2 mm]

RXRN-AA61 (10 Ton [35.2 kW] Model)

For Use With Downflow Transition (RXMC-CE05) and 18" x 28" [457.2 x 711.2 mm] Supply and Return Ducts

- 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.

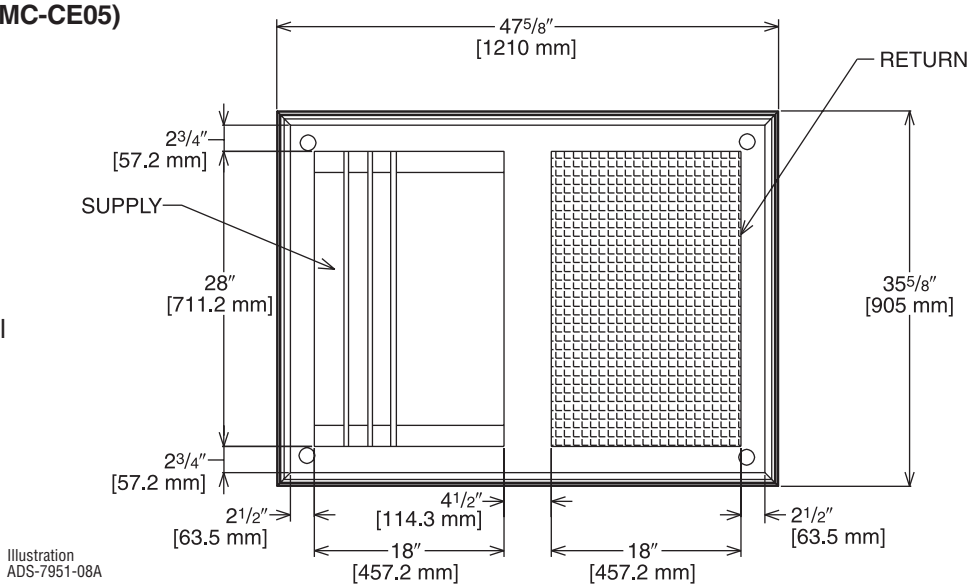


Illustration ADS-7951-08A

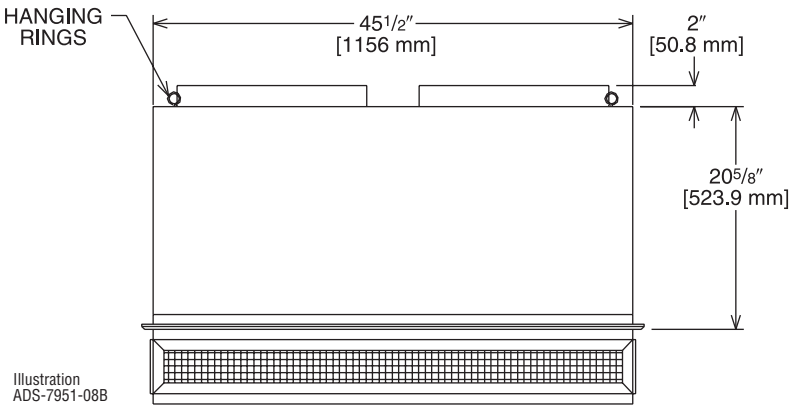


Illustration ADS-7951-08B

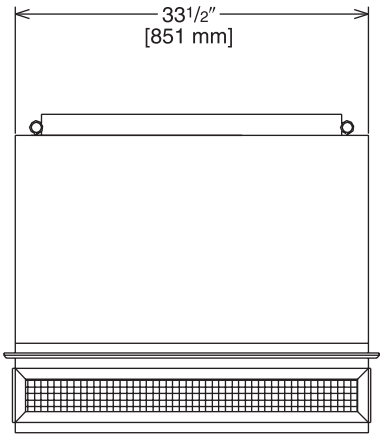


Illustration ADS-7951-08C

ENGINEERING DATA①

Model No.	Flow Rate CFM [L/s]	Static Pressure in w.c. [kPa]	Throw ②③ Feet [m]	Neck Velocity fpm [m/s]	Noise Level ④ (dbA)
RXRN-AA61	3600 [1699]	0.17 [0.042]	25-33 [7.6-10.1]	851 [4.3]	30
	3800 [1793]	0.18 [0.045]	27-35 [8.2-10.7]	898 [4.6]	30
	4000 [1888]	0.21 [0.052]	29-37 [8.8-11.3]	946 [4.8]	30
	4200 [1982]	0.24 [0.060]	32-40 [9.8-12.2]	993 [5.0]	30
	4400 [2076]	0.27 [0.067]	34-42 [10.4-12.8]	1040 [5.3]	30

NOTES: ① All data is based on the air diffusion council guidelines.
② Throw data is based on 75 FPM Terminal Velocities using isothermal air.
③ Throw is based on diffuser blades being directed in a straight pattern.
④ Actual noise levels may vary due to duct design and do not include transmitted unit noise. Adequate duct attenuation must be provided to reduce sound output from the unit.

[ ] Designates Metric Conversions

FLUSH MOUNT CONCENTRIC DIFFUSER—FLUSH

RXRN-FA75 (7.5 Ton [26.4 kW] Models)

For Use With Downflow Transition (RXMC-CD04) and 20" [508 mm] Round Supply and Return Ducts

- 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.

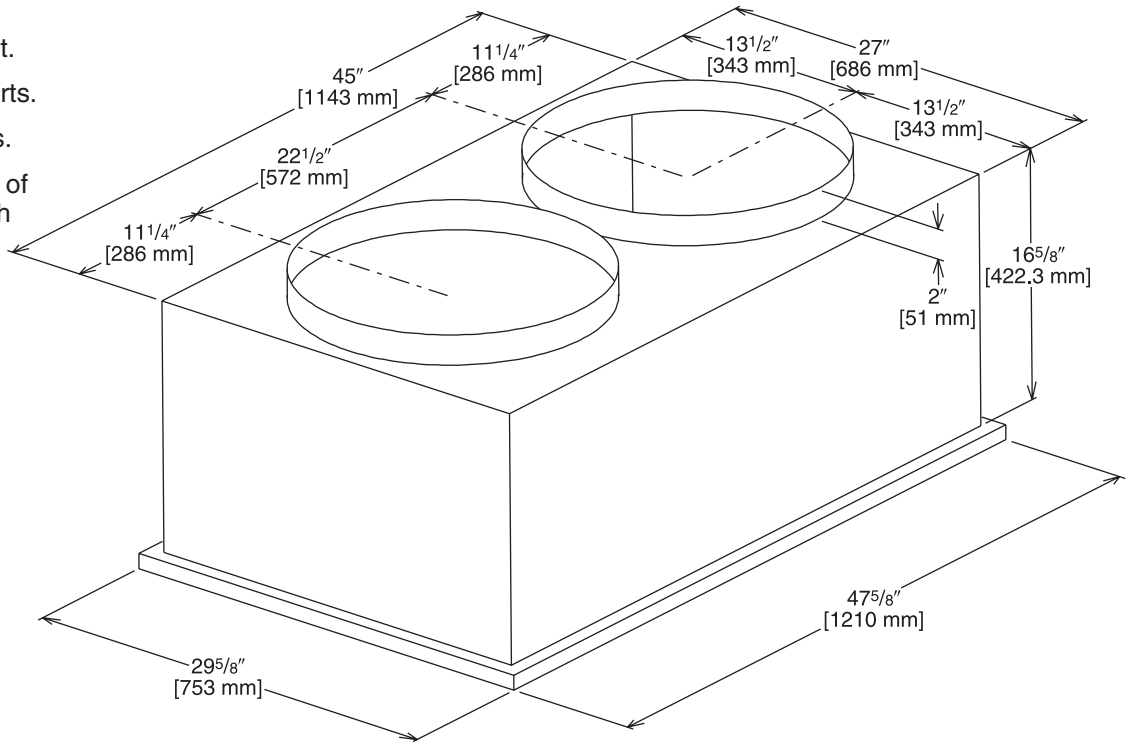


Illustration
ADS-5348-04

ENGINEERING DATA①

Model No.	Flow Rate CFM [L/s]	Static Pressure in. w.c. [kPa]	Throw ② ③ Feet [m]	Neck Velocity fpm [m/s]	Noise Level ④ (dbA)
RXRN-FA75	2600 [1227]	.17 [0.042]	19-24 [5.8-7.3]	663 [3.4]	30
	2800 [1321]	.20 [0.050]	20-28 [6.1-8.5]	714 [3.6]	35
	3000 [1416]	.25 [0.062]	21-29 [6.4-8.8]	765 [3.9]	35
	3200 [1510]	.31 [0.077]	22-29 [6.7-8.8]	816 [4.1]	40
	3400 [1604]	.37 [0.092]	22-30 [6.7-9.1]	867 [4.4]	40

NOTES: ① All data is based on the air diffusion council guidelines.
② Throw data is based on 75 FPM Terminal Velocities using isothermal air.
③ Throw is based on diffuser blades being directed in a straight pattern.
④ Actual noise levels may vary due to duct design and do not include transmitted unit noise. Adequate duct attenuation must be provided to reduce sound output from the unit.

[ ] Designates Metric Conversions

CONCENTRIC DIFFUSER—FLUSH and 18" x 28" [457.2 x 711.2 mm]

RXRN-AA71 (10 Ton [35.2 kW] Model)

For Use With Downflow Transition (RXMC-CE05) and 18" x 28" [457.2 x 711.2 mm] Supply and Return Ducts

- 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.

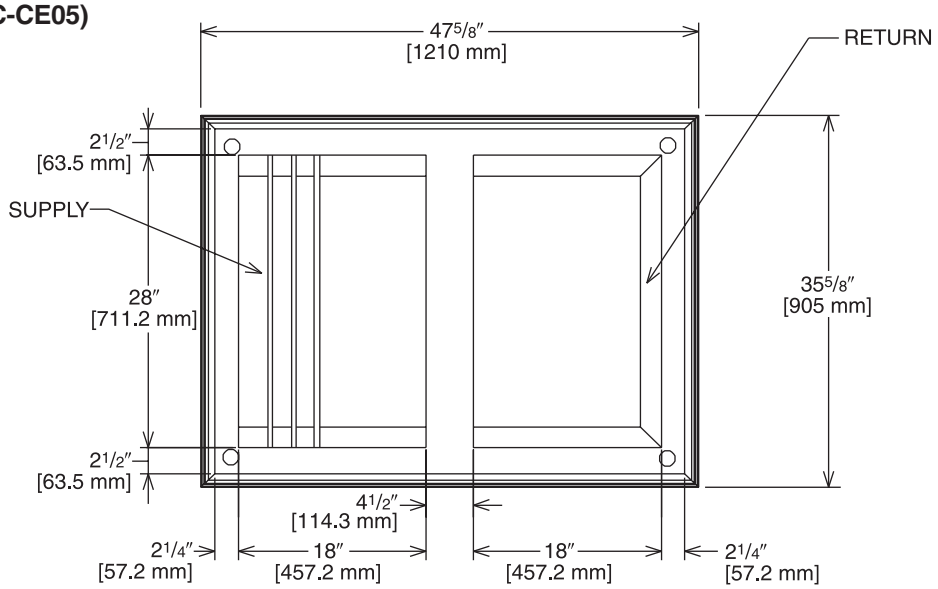


Illustration ADS-7951-06A

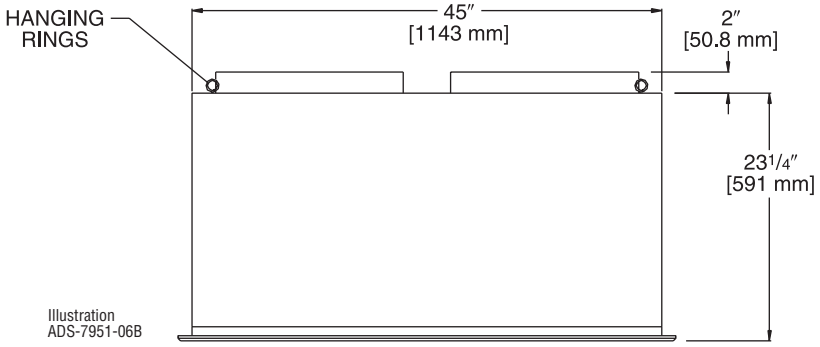


Illustration ADS-7951-06B

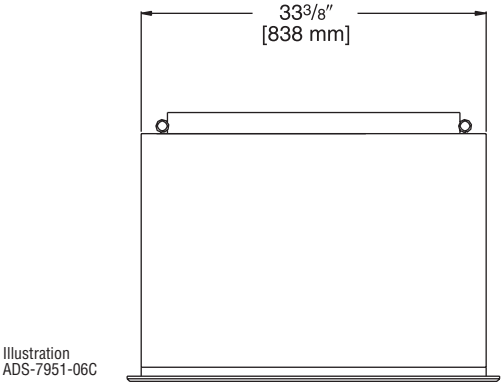


Illustration ADS-7951-06C

ENGINEERING DATA①

Model No.	Flow Rate CFM [L/s]	Static Pressure in w.c. [kPa]	Throw ② ③ Feet [m]	Neck Velocity fpm [m/s]	Noise Level ④ (dbA)
RXRN-AA71	3600 [1699]	0.17 [0.042]	22-29 [6.7-8.8]	844 [4.3]	35
	3800 [1793]	0.18 [0.045]	22-30 [6.7-9.1]	891 [4.5]	40
	4000 [1888]	0.21 [0.052]	24-33 [7.3-10.1]	938 [4.8]	40
	4200 [1982]	0.24 [0.060]	26-35 [7.9-10.7]	985 [5.0]	40
	4400 [2076]	0.27 [0.067]	28-37 [8.5-11.3]	1032 [5.2]	40

NOTES: ① All data is based on the air diffusion council guidelines.
② Throw data is based on 75 FPM Terminal Velocities using isothermal air.
③ Throw is based on diffuser blades being directed in a straight pattern.
④ Actual noise levels may vary due to duct design and do not include transmitted unit noise. Adequate duct attenuation must be provided to reduce sound output from the unit.

[ ] Designates Metric Conversions

General
Units shall be convertible airflow. All units shall be factory assembled, internally wired, fully charged with 410A, and 100 percent run-tested before leaving the factory. Wiring internal to the unit shall be colored and numbered for simplified identification. Units shall be designed n accordance with UL 1995.

Casing
Unit casing shall be constructed of zinc coated, heavy gauge, galvanized steel. Exterior surfaces shall be cleaned, phosphatized, and finished with a weather-resistant baked enamel finish. Unit's surface shall be tested 1000 hours in a salt spray test in compliance with ASTM B117. Cabinet construction shall allow for all maintenance on one side of the unit. All exposed vertical panels and top covers in the indoor air section shall be insulated with a cleanable foil faced, fire retardant permanent, odorless glass fiber material and secured with adhesive and mechanical fasteners. The base of the unit shall be insulated with foil-faced material. All insulation edges shall be either captured or sealed. The unit's base pan shall have no penetrations within the perimeter of the curb other than the raised 1-1/8″ [28.58 mm] high downflow supply return openings to provide an added water integrity precaution. The base rails of the unit shall have provisions for forklift and crane lifting, with forklift capabilities on three sides of the unit.

Unit Top
The indoor top cover shall be one-piece construction, it shall not be double-hemmed and gasket-sealed.

Filters
Two inch [50.8 mm], throwaway filters shall be standard on all units.

Compressors
Units shall have direct-drive, hermetic, scroll type compressors with centrifugal type oil pumps. Motor shall be suction gas-cooled and shall have a voltage utilization range of plus or minus 10 percent of unit nameplate voltage. Internal overloads shall be provided with the scroll compressors. The compressor shall have external isolation to minimize noise.

Refrigerant Circuits
Refrigerant circuit shall have a TXV control expansion device. External service pressure ports, shall be factory-installed as standard.

Evaporator And Condenser Coils
Internally finned, 3/8″ [9.53 mm] copper tubes mechanically bonded to a configured aluminum plate fin shall be standard. Coils shall be leak tested at the factory to ensure pressure integrity. The evaporator coil and condenser coil shall be leak tested to 250 psig and pressure tested to 550 psig. A sloped condensate drain pan shall be standard.

Outdoor Fans
The outdoor fans shall be direct-drive statically and dynamically balanced, draw-through in the vertical discharge position. The fan motor shall be permanently lubricated and shall have built-in thermal overload protection.

Indoor Fans
All 3-phase units offer belt drive, FC centrifugal fans with adjustable motor sheaves. All motors shall be thermally protected.

Controls
Unit shall be completely factory wired with necessary controls and contactor pressure lugs or terminal block for power wiring. Units shall provide an external location for mounting a fused disconnect device.

24-volt electromechanical control circuit shall include control transformer and contactor pressure lugs for power wiring. Unit shall have single point power entry as standard.

Accessories/Option
Roof Curb—The roof curb shall be designed to mate with the unit's downflow supply and return openings and provide support and a watertight installation when installed properly. The roof curb design shall allow field-fabricated rectangular supply/return ductwork to be connected directly to the curb. Curb design shall comply with NRCA requirements. Curbs shall be shipped knocked down for toolless field assembly and shall include wood nailer strips.

Economizer—This accessory shall be either field or factory-installed and is available with barometric relief standard. The assembly includes direct drive gear driver, fully modulating 0-100 percent motor and dampers, minimum position setting, mixed air sensor, wiring harness with plug, and single enthalpy control. Optional differential enthalpy control shall be field-installed. The factory-installed economizer arrives ready for operation.

Remote Potentiometer—Field installed, the minimum position setting of economizer shall be adjusted with this accessory.

Motorized Outside Air Dampers—Field-installed manually set outdoor air dampers shall provide up to 50 percent outside air. Once set, outdoor air dampers shall open to set position when indoor fan starts. The damper shall close to the full closed position when indoor fan shuts down.

Manual Outside Air Damper—Factory or field-installed rain hood and screen shall provide up to 50 percent outside air.

Oversized Motors—Factory installed belt drive oversized motors shall be available for high static applications.

[ ] Designates Metric Conversions.

Through the Base Electrical Access—An electrical service entrance shall be factory provided allowing electrical access for both, control and main power connection inside the curb and through the base of the unit.

Unpowered Convenience Outlet—This factory-installed option is a GFCI, 120v/15amp, 2 plug, and convenience outlet, unpowered. When the convenience outlet is powered, a service receptacle disconnect will be available. The convenience outlet is powered from the line side of the disconnect or circuit breaker, and therefore will not be affected by the position of the disconnect or circuit breaker. This option can only be ordered with the Disconnect Switch.

Freeze/Clogged Filter Switches—This factory or field-installed option allows for individual fan failure or dirty filter protection. If indoor coil gets too cold due to low airflow, compressor operation will be temporarily interrupted.

Enthalpy Control—Single Enthalpy Control shall be standard for all economizers. Enthalpy control offers a higher level of comfort control, along with energy savings potential, than the standard dry bulb control. This is due to the additional wet bulb sensing capability.

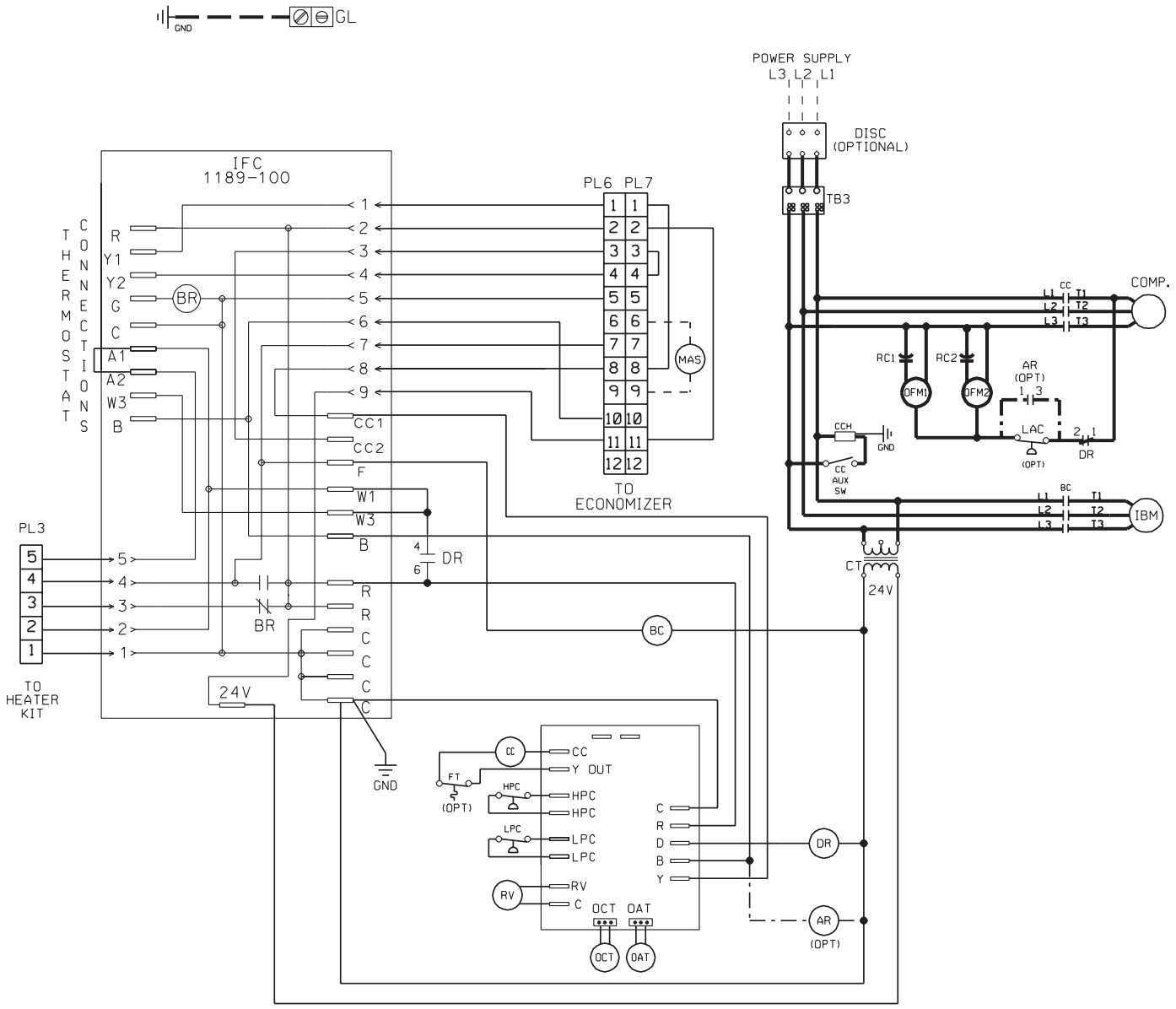
High Pressure Cutout—High pressure cutout shall be standard on all models. All scroll compressors shall include Internal Pressure Relief as standard.

Low Pressure/Loss of Charge—Low pressure switch shall be standard on all models.

Hinged Access Doors—Stainless steel metal hinges and 1/4 turn fasteners are standard on the Filter/Electrical Access Door, Heat Exchanger Door and Blower Door.

Differential Enthalpy—Adds on to the standard single control with other enthalpy sensors that compare total heat content of the indoor air and outdoor air to determine the most efficient air source. This control option offers the highest level of comfort control, plus energy efficiency available.

Low Ambient Cooling—Electromechanical models have cooling capabilities to 40°F as built, or to 0°F by adding the optional low ambient (frostat) control.



COMPONENT CODE

AUX SW	AUXILLIARY SWITCH
BC	BLOWER MOTOR CONTACTOR
BR	BLOWER RELAY
CC	COMPRESSOR CONTACTOR
CCH	CRANKCASE HEATER
COMP	COMPRESSOR
CT	CONTROL TRANSFORMER
FT	FREEZE STAT
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
MAS	MIXED AIR SENSOR
OFM	OUTDOOR FAN MOTOR
OPT	OPTIONAL
PL	PLUG
RC	RUN CAPACITOR
TB	TERMINAL BLOCK

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.

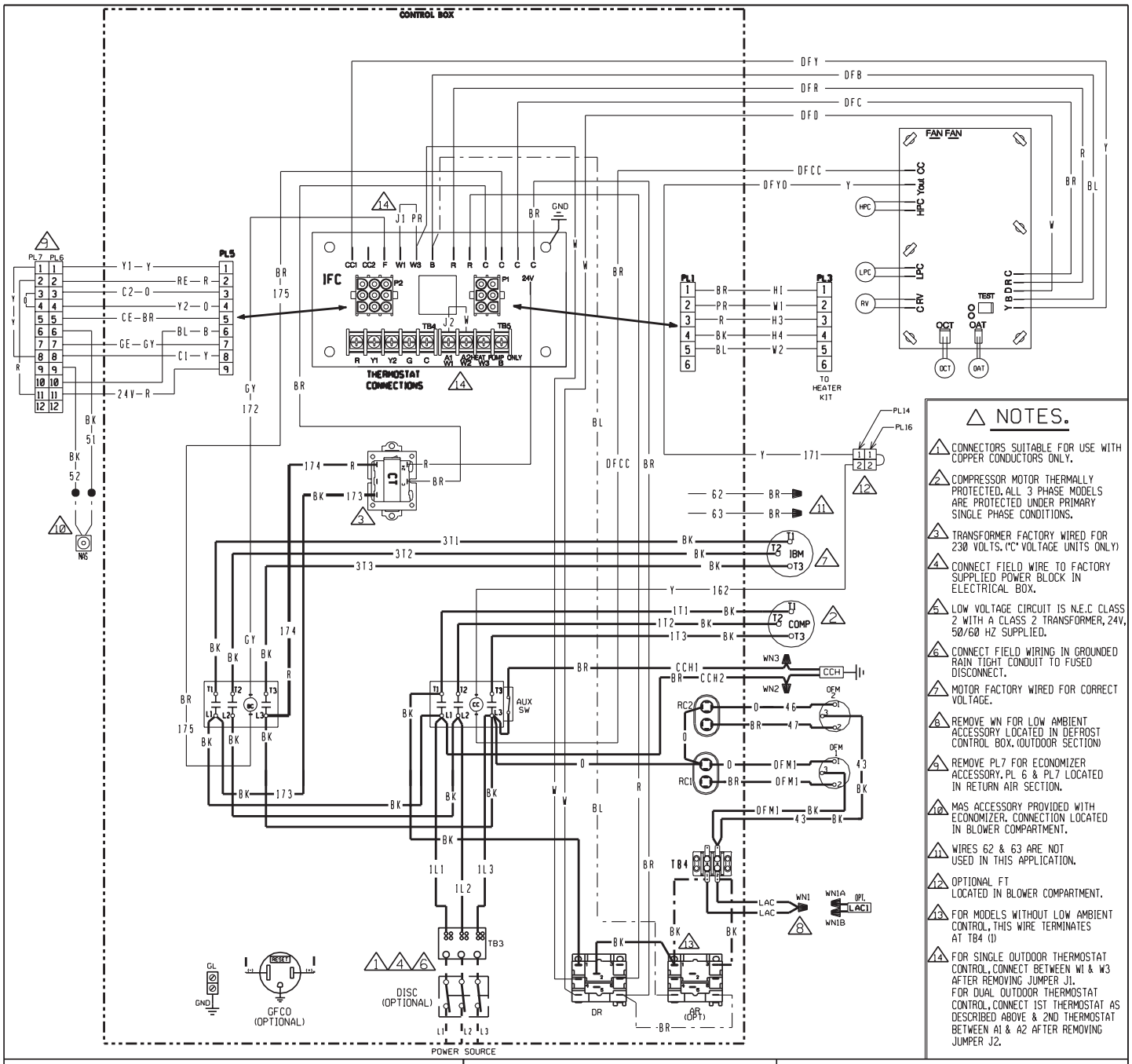
WIRE COLOR CODE

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

WIRING SCHEMATIC

7-1/2 & 10 TON PACKAGED HEAT PUMP
208-230/460/575V 3 PH, 60 HZ
380-415V 3 PH, 50 HZ.

DR. BY	APP. BY	DATE	DWG. NO.	REV
JRJ		02-10-09	90-23595-17	04



COMPONENT CODE

AR	AUXILLIARY RELAY
BC	BLOWER CONTACTOR
CC	COMPRESSOR CONTACTOR
CCH	CRANKCASE HEATER
COMP	COMPRESSOR
CT	CONTROL TRANSFORMER
DISC	DISCONNECT SWITCH
DR	DEFROST RELAY
EHR	ELECTRIC HEAT RELAY
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
PL	PLUG
RC	RUN CAPACITOR
TB	TERMINAL BLOCK
	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

7-1/2 & 10 TON PACKAGED HEAT PUMP
208-230/460/575V 3 PH, 60 HZ.
380-415V 3 PH, 50 HZ.

DR. BY	APP. BY	DATE	DWG. NO.	REV
JRJ		1-15-09	90-23595-16	04

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.

Rheem Heating, Cooling and Water Heating

P.O. Box 17010, Fort Smith, AR 72917

"In keeping with its policy of continuous progress and product improvement, Rheem reserves the right to make changes without notice."

PRINTED IN U.S.A. 6-10 DC FORM NO. EXP11-782