



# MAINLINE® PACKAGE AIR CONDITIONER



## **RLNL-C**

With Direct Digital Control (DDC)  
Nominal Sizes 15-25 Tons [52.8-87.9 kW]  
ASHRAE 90.1-2007 Compliant

## **RLNL-H**

With Direct Digital Control (DDC)  
and VFD Technology  
Nominal Sizes 15-25 Tons [52.8-87.9 kW]  
ASHRAE 90.1-2010 Compliant

Manufactured for  
**Mainline®**  
HVACmainline.com



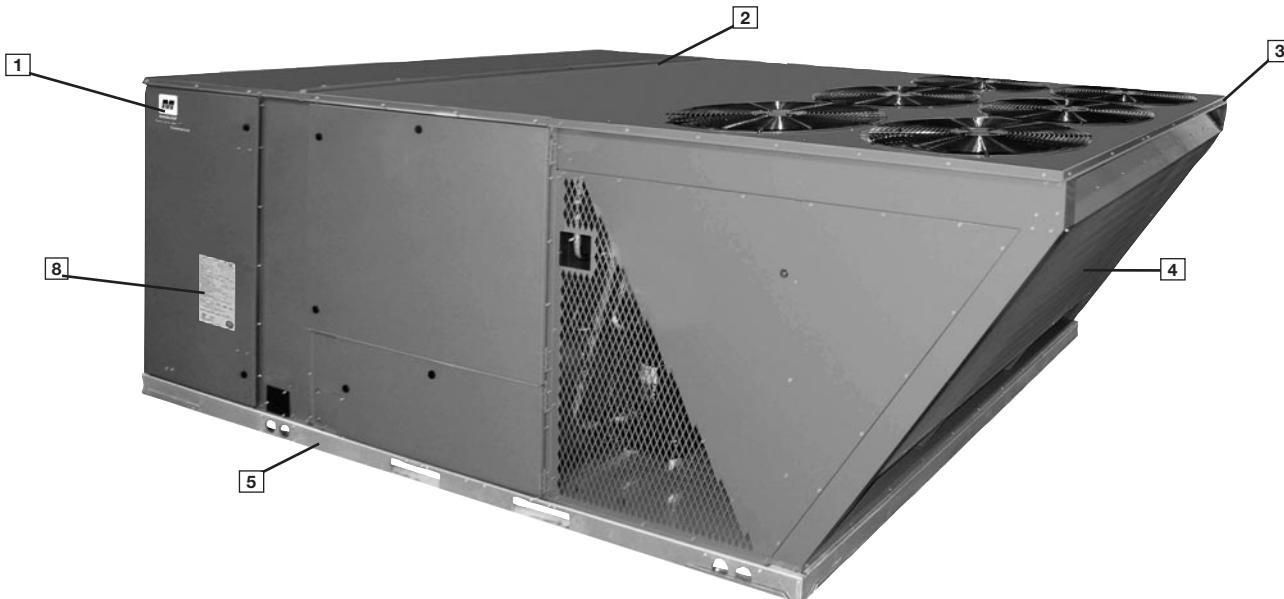
## Table of Contents

Unit Features & Benefits .....	3-7
Model Number Identification .....	8
Options.....	9
Selection Procedure .....	10
General Data	
RLNL-C/H .....	11-19
Gross Systems Performance Data	
RLNL-C/H .....	20-23
Indoor Airflow Performance	
RLNL-C/H .....	24-33
Electrical Data	
RLNL-C/H .....	34-38
Electric Heater Kits .....	39-44
Dimensional Data .....	45-48
Accessories .....	49-63
Mechanical Specifications .....	64-69
Limited Warranty .....	70



## RLNL-C/H 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.
- Dual stage compressor on all models.
- Convertible airflow – vertical downflow or horizontal sideflow.
- TXV refrigerant metering system on each circuit.
- High Pressure and Low Pressure/Loss of charge protection standard on all models.
- Solid Core liquid line filter drier on each circuit.
- Single slab, single pass designed evaporator and condenser coils facilitate easy cleaning for maintaining high efficiencies.
- Cooling operation up to 125 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.
- Base pan with drawn supply and return opening for superior water management.
- Forkable base rails for easy handling and lifting.
- Single point electrical connections.
- Internally sloped slide out condensate pan conforms to ASHRAE 62 standards.
- High performance belt drive motor with variable pitch pulleys and quick adjust belt system.
- Permanently lubricated evaporator, condenser and gas heat inducer motors.
- Condenser motors are internally protected, totally enclosed with shaft down design.
- 2 inch filter standard with slide out design.
- 24 volt control system with resettable circuit breakers.
- Colored and labeled wiring.
- Copper tube/Aluminum Fin coils. (Exception: C241 has microchannel condenser coils)
- Supplemental electric heat provides 100% efficient heating.
- Factory Installed Direct Digital Control (DDC) and sensors which can connect to LonWorks™ or BACnet® BAS systems for remote monitoring and control.
- -H models with Variable Frequency Drive (VFD) meet ASHRAE 90.1-2010 and California Title 24.
- MERV 8 (RXMF-M08A22520) & MERV 13 (RXMF-M13A22520) filters are available as an accessory.



Mainline 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 Mainline label (**1**) identifies the brand to the customer. The sheet-metal cabinet (**2**) uses nothing less than 20-gauge material for structural components with an underlying coat of G90. To ensure the leak-proof integrity of these units, the design utilizes a top with a 1/8" drip lip (**3**), gasket-protected panels and screws. (**4**) The outdoor coil is slanted to protect from hail. Every Mainline 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.

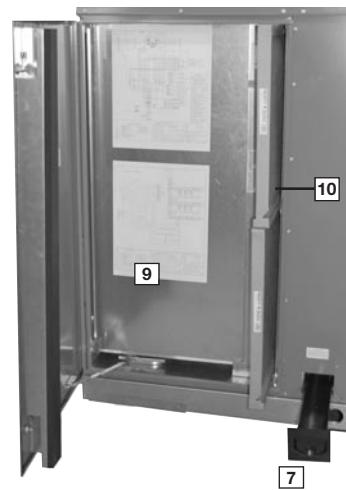
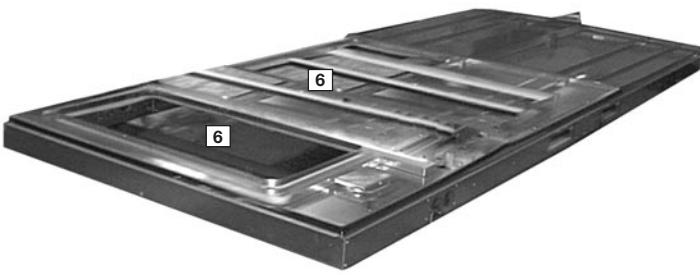
Anything built to last must start with the right foundation. In this case, the foundation is 14-gauge, commercial-grade, full-perimeter base rails (**5**), which integrate fork slots and rigging holes to save set-up time on the job site. The base pan is stamped, which forms a 1-1/8" flange around the 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 Mainline-required reliability tests. Mainline adheres to stringent ISO 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 Mainline 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 with 1/4 turn latches. On the outside of the panel is the unit nameplate, which contains the model and serial number, electrical data and other important unit information.

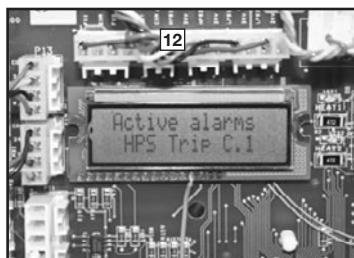
The unit charging chart is located on the inside of the electrical and filter compartment door. Electrical wiring diagrams are found on the control box cover, which allows contractors to move them to more readable locations. To the right of the control box the model and serial number can be found. Having 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.

As part of the Direct Digital Control (DDC) system which allows real time monitoring and communication between rooftop units, the RLNL-C/H Package Air Conditioner has a Rooftop Unit Controller (RTU-C) factory mounted and wired in the control panel. The RTU-C is a solid-state microprocessor-based control board that provides flexible control and extensive diagnostics for all unit functions. The RTU-C through proportional/integral control algorithms perform specific unit functions that govern unit operation in response to: zone conditions, system temperatures, system pressures, ambient conditions and electrical inputs. The RTU-C features a 16 x 2 character LCD display and a five-button keypad for local configuration and direct diagnosis of the system ([12]). New features include a clogged filter switch (CFS), fan proving switch (FPS), return air temperature sensor (RAT), discharge air temperature sensor (DAT) and outdoor air temperature sensor (OAT). Freeze sensors (FS) are used in place of freezestats to allow measurement of refrigerant suction line temperatures. The RLNL-C/H Package Air Conditioner with the Direct Digital Control (DDC) is specifically designed to be applied in four distinct applications:



The RLNL-C/H is compatible with a third party building management system that supports the BACnet Application Specific Controller device profile, with the use of a field installed BACnet Communication Module. The BACnet Communication Module plugs onto the unit RTU-C controller and allows communication between Direct Digital Control (DDC) and the BACnet MSTP network. A zone sensor, a BACnet network zone sensor, a BACnet thermostat or DDC controller may be used to send the zone temperature or thermostat demands to the RTU-C. The BACnet Communication Module is compatible with MSTP EIA-485 daisy chain networks communicating at 38.4 bps. It is compatible with twisted pair, shielded cables.

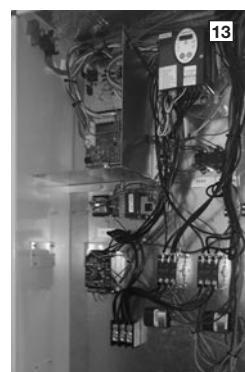
The RLNL-C/H is compatible with a third party building management system that supports the LonMark Space Comfort Controller (SCC) functional profile or LonMark Discharge Air Controller (DAC) functional profile. This is accomplished with a field installed LonMark communication module. The LonMark Communication Module plugs onto the RTU-C controller and allows communication between Direct Digital Control (DDC) and a LonWorks Network. A zone sensor, a LonTalk network zone sensor, or a LonTalk thermostat or DDC controller may be used to send the zone temperature or thermostat demands to the RTU-C. The LonMark Communication Module utilizes an FTT-10A free topology transceiver communicating at 78.8 kbps. It is compatible with Echelon qualified twisted pair cable, Belden 8471 or NEMA Level 4 cables. The Module can communicate up to 1640 ft. with no repeater. The LonWorks limit of 64 nodes per segment applies to this device.

The RLNL-C/H is compatible with a programmable 24 volt thermostat. Connections are made via conventional thermostat screw terminals. Extensive unit status and diagnostics are displayed on the LCD screen of the RTU-C.

The RLNL-C/H is compatible with a zone sensor and mechanical or solid state time clock connected to the RTU-C. Extensive unit status and diagnostics are displayed on the LCD screen of the Direct Digital Control (DDC).

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

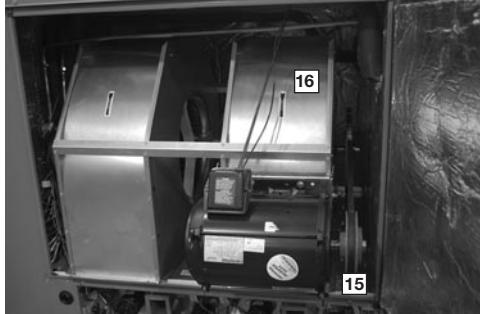
-H models with factory installed supply fan VFD ([13]) (variable frequency drive) optimizes energy usage year round by providing a lower speed for first stage cooling operation improving IEER's by up to 33% over the conventional constant fan system. Furthermore, operating in the constant fan mode at the reduced speed can use as little as 1/8<sup>th</sup> of the energy of a conventional constant fan system. Also, by operating at a lower speed on first stage cooling up to 126% more moisture is removed improving comfort during low load operation. The VFD equipped units meet California Title 24 and ASHRAE 90.1-2010 requirements for multi blower speed control. VFD also ramps up to the desired speed reducing stress on the supply fan components and reducing the noise from sudden inrush of air. Because the airflow is cut in half during first stage cooling and constant fan operation, noise is much less during these modes of operation.



For added convenience in the field, a factory-installed convenience outlet ([14]) 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 ([15]) can easily be adjusted by loosening the bolts on either side of the motor mount. Removing the bolts allows for easy removal of the blower pulley by pushing the blower assembly up to loosen the belt. Once the pulley is removed, the motor sheave can be adjusted to the desired number of turns, ranging from 1 to 6 turns open. Where the demands for the job require high static, Mainline has high-static drives available that deliver nominal airflow up to 2" of static. By referring to the airflow performance tables listed in the installation instructions, proper static pressure and CFM requirements can be dialed in. The scroll housing ([16]) and blower scroll provide quiet and efficient airflow. The blower sheave is secured by an "H" bushing which firmly secures the pulley to the blower shaft for years of trouble-free operation. The "H" bushing allows for easy removal of the blower pulley from the shaft, as opposed to the use of a set screw, which can score the shaft, creating burrs that make blower-pulley removal difficult.



Also inside the blower compartment are the optional low-ambient controls ([17]). The optional low-ambient controls allow for operation of the compressors down to 0 degrees ambient temperature by cycling the outdoor fans on high pressure. The freeze sensor protects the compressor if the evaporator coil gets too cold (below freezing) due to low airflow, and allows monitoring of the suction line temperature on the controller display. The sensor clips on the suction line near the evaporator outlet.



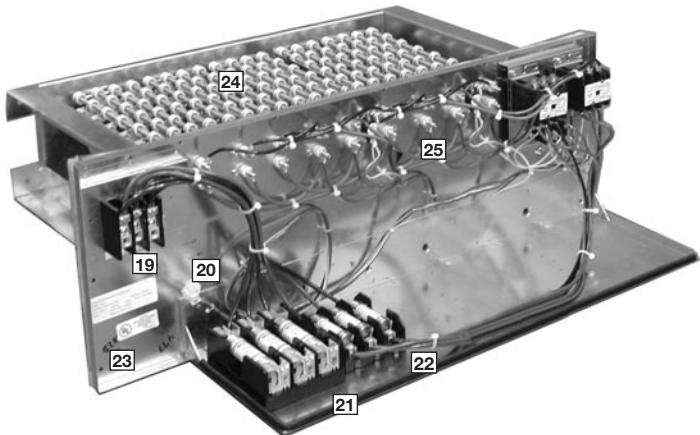
Inside the blower compartment the interlaced evaporator can also be viewed. The evaporator uses enhanced fin technology for maximum heat transfer. The TXV metering device assures even distribution of refrigerant throughout the evaporator.

Wiring throughout the unit is neatly bundled and routed. Where wire harnesses go through the condenser bulkhead or blower deck, a molded wire harness assembly ([18]) provides an air-tight and water-tight seal, and provides strain relief. Care is also taken to tuck raw edges of insulation behind sheet metal to improve indoor air quality.

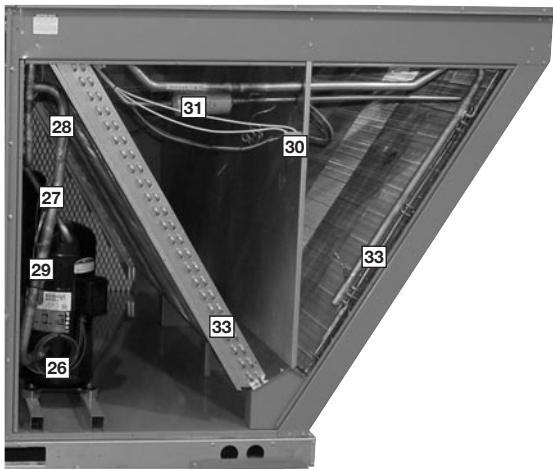
The heating compartment contains the latest electric furnace technology on the market. The 100% efficient electric furnace can be factory-installed or easily field-installed. Built with ease-of-installation in mind, the electric furnace is completely wired up for slide-in, plug-and-play installation 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.



[18]



Power hook-up in the field is easy with single-point wiring to a terminal block ([19]) and a polarized plug for the low-voltage connection ([20]). The electric furnace comes with fuses for the unit ([21]) and for the electric furnace ([22]), and is UL certified ([23]). The electric heating elements are of a wound-wire construction ([24]) and isolated with ceramic bushings. The limit switch ([25]) protects the design from over-temperature conditions.



The compressor compartment houses the heartbeat of the unit. The scroll compressor (**26**) is known for its long life, and for reliable, quiet, and efficient operation. The suction and discharge lines are designed with shock loops (**27**) 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.

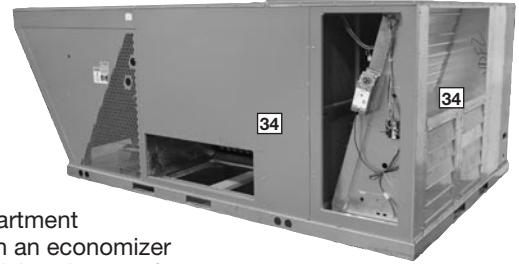
In the outdoor section are the external gauge ports (**28**). With the gauge ports mounted externally, an accurate diagnosis of system operation can be performed quickly and easily. Also located in this area are the refrigerant safety devices: the low-pressure switches (**29**) and the high-pressure switches. (**30**) The high-pressure switches will shut off the compressors if pressures exceeding 610 psig are detected as may occur if the outdoor fan motor fails. The low pressure switches shut off the compressors if low pressure is detected due to loss of refrigerant charge. The factory-installed high and low pressure switches are brazed into the appropriate high or low side and wired appropriately.

Each unit comes standard with filter dryer (**31**). The condenser fan motor (**32**) can easily be accessed and maintained by removing the protective fan grille. The polarized plug connection allows the motor to be changed quickly and eliminates the need to snake wires through the unit.

The outdoor coil uses the latest enhanced fin design (**33**) for the most effective method of heat transfer. The outdoor coil is slanted to protect the unit from Mother Nature.



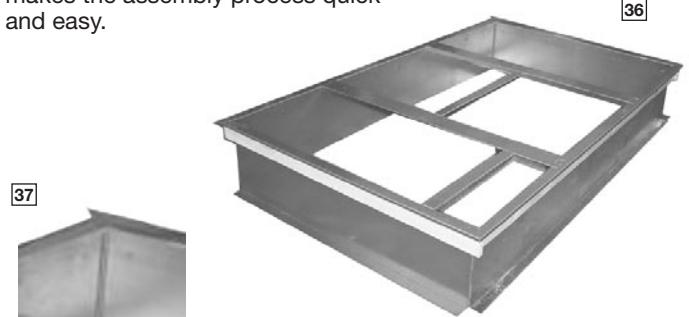
Each unit is designed for both downflow or horizontal applications (**34**) for job configuration flexibility. The return air compartment can also contain an economizer (**35**). Three models exist; two for downflow applications, and one for horizontal applications. (A downflow economizer with factory installed smoke detector in the return section is available). Each unit is pre-wired for the economizer to allow quick plug-in installation. The downflow economizer is also available as a factory-installed option. The economizer, which provides free cooling when outdoor conditions are suitable and also provides fresh air to meet local requirements, comes standard with single enthalpy controls. The controls can be upgraded to dual enthalpy easily in the field. The direct drive actuator combined with gear drive dampers has eliminated the need for linkage adjustment in the field. The economizer control has a minimum position setpoint, an outdoor-air setpoint, a mix-air setpoint, and a CO<sub>2</sub> setpoint. Barometric relief is standard on all economizers. Power Exhaust is easily field-installed. The power exhaust is housed in the barometric relief opening and is easily slipped in with a plug-in assembly. The wire harness to the economizer also has accommodations for a smoke detector.

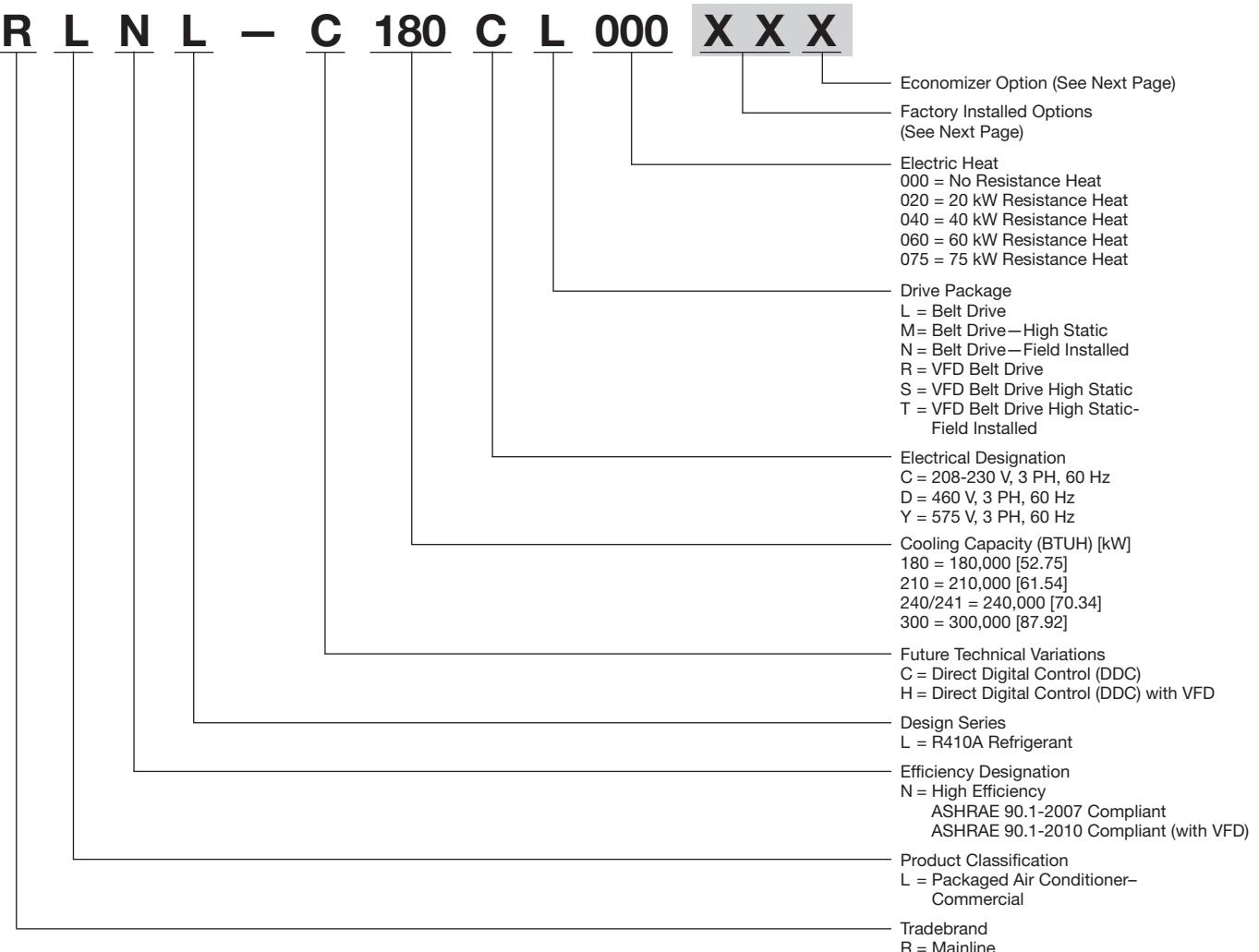


The damper minimum position, actual damper position, power exhaust on/off setpoint, mixed air temperature limit setpoint and Demand Controlled Ventilation (DCV) setpoint can be read and adjusted at the unit controller display or remotely through a network connection.

The Space CO<sub>2</sub> level, mixed air temperature, and Economizer Status (Free Cooling Available, Single or Dual Enthalpy) can be read at the unit controller display or remotely through a network connection. Economizer Faults will trigger a network Alarm and can be read at the unit controller display or remotely through a network connection.

The Mainline roofcurb (**36**) is made for toolless assembly at the jobsite by inserting a pin into the hinged corners (**37**), which makes the assembly process quick and easy.





[ ] Designates Metric Conversions

## FACTORY INSTALLED OPTION CODES FOR RLNL-C/H (15-25 TON) [52.8-87.9 kW]

Option Code	Hail Guard	Non-Powered Convenience Outlet	Low Ambient/Comfort Alert
AD	X		
AG		X	
AR			X
JD	X		X
BJ	X	X	
JE		X	X
CZ	X	X	X

Example: RLNL-C/H180CL000**XX** (where **XX** is factory installed option)

Example: No Options

RLNL-C/H180CL000

Example: No Options with factory installed economizer

RLNL-C/H180CL000AAH

Example: Options with low ambient/comfort alert and no factory installed economizer

RLNL-C/H180CL000ARA

Example: Options same as above with factory installed economizer

RLNL-C/H180CL000ARH

## ECONOMIZER SELECTION FOR RLNL-C/H (15-25 TON) [52.8-87.9 kW]

Option Code	No Economizer	DDC Single Enthalpy Economizer* With Barometric Relief	DDC Single Enthalpy Economizer* With Barometric Relief and Smoke Detector
A	X		
H		X	
J			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

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

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

### Example:

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

## 2. SELECT UNIT TO MEET COOLING REQUIREMENTS.

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

Total Cooling Capacity = 238,300 BTUH [69.76 kW]  
Sensible Cooling Capacity = 192,500 BTUH [56.38 kW]  
Power Input (Compressor and Cond. Fans) = 18,200 watts  
Use formula in note ① to determine sensible capacity at 78°F [25.6] DB evaporator entering air:

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

$$\text{Sensible Cooling Capacity} = 178,452 \text{ BTUH [52.25 kW]}$$

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

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

$$\begin{aligned}\text{Total Capacity} &= 238,300 \times .99 = 235,868 \text{ BTUH [69.06 kW]} \\ \text{Sensible Capacity} &= 178,452 \times 0.96 = 171,314 \text{ BTUH [50.16 kW]} \\ \text{Power Input} &= 18,200 \times 0.99 = 18,018 \text{ Watts}\end{aligned}$$

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

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

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

RPM = 739

WATTS = 2,862

DRIVE = L (standard 5 H.P. motor)

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

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

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

$$\begin{aligned}\text{Net Total Capacity} &= 235,868 - 9,765 = \\ &226,103 \text{ BTUH [66.21 kW]}\end{aligned}$$

$$\begin{aligned}\text{Net Sensible Capacity} &= 171,314 - 9,765 = \\ &161,549 \text{ BTUH [47.30 kW]}\end{aligned}$$

## 7. CALCULATE UNIT INPUT AND JOB EER.

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

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

## 8. SELECT UNIT HEATING CAPACITY.

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

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

## 9. CHOOSE MODEL RLNL-C/H240CL075

\*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

## NOM. SIZES 15-25 TONS [52.8-87.9 kW] MODELS

Model RLNL- Series	C180CL	C180CM	C180DL	C180DM
Model RLNL- Series (with VFD)	H180CR	H180CS	H180DR	H180DS
<b>Cooling Performance<sup>1</sup></b>	<b>CONTINUED →</b>			
Gross Cooling Capacity Btu [kW]	188,000 [53.47]	188,000 [53.47]	188,000 [53.47]	188,000 [53.47]
EER/SEER <sup>2</sup>	11/NA	11/NA	11/NA	11/NA
Nominal CFM/AHRI Rated CFM [L/s]	6000/5900 [2831/2784]	6000/5900 [2831/2784]	6000/5900 [2831/2784]	6000/5900 [2831/2784]
AHRI Net Cooling Capacity Btu [kW]	172,000 [48.92]	172,000 [48.92]	172,000 [48.92]	172,000 [48.92]
Net Sensible Capacity Btu [kW]	125,700 [35.75]	125,700 [35.75]	125,700 [35.75]	125,700 [35.75]
Net Latent Capacity Btu [kW]	46,300 [13.17]	46,300 [13.17]	46,300 [13.17]	46,300 [13.17]
IEER <sup>3</sup>	12.4/14.2	12.4/14.2	12.4/14.2	12.4/14.2
Net System Power [kW]	15.64	15.64	15.64	15.64
<b>Compressor</b>				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
<b>Outdoor Sound Rating (dB)<sup>4</sup></b>	91	91	91	91
<b>Outdoor Coil—Fin Type</b>	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	53.3 [4.95]	53.3 [4.95]	53.3 [4.95]	53.3 [4.95]
Rows / FPI [FPcm]	1 / 22 [9]	1 / 22 [9]	1 / 22 [9]	1 / 22 [9]
<b>Indoor Coil—Fin Type</b>	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	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
<b>Outdoor Fan—Type</b>	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	4/24 [609.6]	4/24 [609.6]	4/24 [609.6]	4/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	16000 [7550]	16000 [7550]	16000 [7550]	16000 [7550]
No. Motors/HP	4 at 1/3 HP			
Motor RPM	1075	1075	1075	1075
<b>Indoor Fan—Type</b>	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	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds (Standard / VFD)	Single / Multiple	Single / Multiple	Single / Multiple	Single / Multiple
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
<b>Filter—Type</b>	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]
<b>Refrigerant Charge Oz. [g] (Sys. 1/Sys. 2) [g]</b>	205/211 [5812/5982]	205/211 [5812/5982]	205/211 [5812/5982]	205/211 [5812/5982]
<b>Weights</b>				
Net Weight lbs. [kg]	1826 [828]	1855 [841]	1826 [828]	1855 [841]
Ship Weight lbs. [kg]	1952 [885]	1981 [899]	1952 [885]	1981 [899]

### 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 340/360.
2. EER is rated at AHRI conditions and in accordance with DOE test procedures.
3. Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI Standard 340/360.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.
5. 25 Ton Model is outside the scope of AHRI Standard 340/360.

[ ] Designates Metric Conversions

## NOM. SIZES 15-25 TONS [52.8-87.9 kW] MODELS

Model RLNL- Series	C180YL	C180YM	C210CL H210CR	C210CM H210CS
<b>Cooling Performance<sup>1</sup></b>				
Gross Cooling Capacity Btu [kW]	188,000 [53.47]	188,000 [53.47]	212,000 [60.30]	212,000 [60.30]
EER/SEER <sup>2</sup>	11/NA	11/NA	11/NA	11/NA
Nominal CFM/AHRI Rated CFM [L/s]	6000/5900 [2831/2784]	6000/5900 [2831/2784]	7000/6900 [3303/3256]	7000/6900 [3303/3256]
AHRI Net Cooling Capacity Btu [kW]	172,000 [48.92]	172,000 [48.92]	200,000 [56.88]	200,000 [56.88]
Net Sensible Capacity Btu [kW]	125,700 [35.75]	125,700 [35.75]	150,900 [42.91]	150,900 [42.91]
Net Latent Capacity Btu [kW]	46,300 [13.17]	46,300 [13.17]	49,100 [13.96]	49,100 [13.96]
IEER <sup>3</sup>	12.4/14.2	12.4/14.2	12.4/14	12.4/14
Net System Power [kW]	15.64	15.64	18.18	18.18
<b>Compressor</b>				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
<b>Outdoor Sound Rating (dB)<sup>4</sup></b>				
	91	91	91	91
<b>Outdoor Coil—Fin Type</b>				
Tube Type	Louvered	Louvered	Louvered	Louvered
Tube Size in. [mm] OD	Rifled	Rifled	Rifled	Rifled
Face Area sq. ft. [sq. m]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Rows / FPI [FPCm]	53.3 [4.95]	53.3 [4.95]	53.3 [4.95]	53.3 [4.95]
Rows / FPI [FPCm]	1 / 22 [9]	1 / 22 [9]	2 / 18 [7]	2 / 18 [7]
<b>Indoor Coil—Fin Type</b>				
Tube Type	Louvered	Louvered	Louvered	Louvered
Tube Size in. [mm]	Rifled	Rifled	Rifled	Rifled
Face Area sq. ft. [sq. m]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Rows / FPI [FPCm]	26.67 [2.48]	26.67 [2.48]	26.67 [2.48]	26.67 [2.48]
Refrigerant Control	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]
Drain Connection No./Size in. [mm]	TX Valves	TX Valves	TX Valves	TX Valves
	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
<b>Outdoor Fan—Type</b>				
No. Used/Diameter in. [mm]	Propeller	Propeller	Propeller	Propeller
Drive Type/No. Speeds	4/24 [609.6]	4/24 [609.6]	4/24 [609.6]	4/24 [609.6]
CFM [L/s]	Direct/1	Direct/1	Direct/1	Direct/1
No. Motors/HP	16000 [7550]	16000 [7550]	14800 [6984]	14800 [6984]
Motor RPM	4 at 1/3 HP			
	1075	1075	1075	1075
<b>Indoor Fan—Type</b>				
No. Used/Diameter in. [mm]	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
Drive Type	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]
No. Speeds (Standard / VFD)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Motors	Single	Single	Single / Multiple	Single / Multiple
Motor HP	1	1	1	1
Motor RPM	3	5	3	5
Motor Frame Size	1725	1725	1725	1725
	56	184	56	184
<b>Filter—Type</b>				
Furnished	Disposable	Disposable	Disposable	Disposable
(NO.) Size Recommended in. [mm x mm x mm]	Yes	Yes	Yes	Yes
(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]
<b>Refrigerant Charge Oz. [g] (Sys. 1/Sys. 2) [g]</b>	205/211 [5812/5982]	205/211 [5812/5982]	294/302 [8335/8562]	294/302 [8335/8562]
<b>Weights</b>				
Net Weight lbs. [kg]	1826 [828]	1855 [841]	2013 [913]	2042 [926]
Ship Weight lbs. [kg]	1952 [885]	1981 [899]	2140 [971]	2160 [980]

### 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 340/360.
  2. EER is rated at AHRI conditions and in accordance with DOE test procedures.
  3. Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI Standard 340/360.
  4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.
  5. 25 Ton Model is outside the scope of AHRI Standard 340/360.
- [ ] Designates Metric Conversions

## NOM. SIZES 15-25 TONS [52.8-87.9 kW] MODELS

Model RLNL- Series	C210DL	C210DM	C210YL	C210YM
Model RLNL- Series (with VFD)	H210DR	H210DS		
<b>Cooling Performance<sup>1</sup></b>	<b>CONTINUED →</b>			
Gross Cooling Capacity Btu [kW]	212,000 [60.30]	212,000 [60.30]	212,000 [60.30]	212,000 [60.30]
EER/SEER <sup>2</sup>	11/NA	11/NA	11/NA	11/NA
Nominal CFM/AHRI Rated CFM [L/s]	7000/6900 [3303/3256]	7000/6900 [3303/3256]	7000/6900 [3303/3256]	7000/6900 [3303/3256]
AHRI Net Cooling Capacity Btu [kW]	200,000 [56.88]	200,000 [56.88]	200,000 [56.88]	200,000 [56.88]
Net Sensible Capacity Btu [kW]	150,900 [42.91]	150,900 [42.91]	150,900 [42.91]	150,900 [42.91]
Net Latent Capacity Btu [kW]	49,100 [13.96]	49,100 [13.96]	49,100 [13.96]	49,100 [13.96]
IEER <sup>3</sup>	12.4/14.2	12.4/14.2	12.4	12.4
Net System Power [kW]	18.18	18.18	18.18	18.18
<b>Compressor</b>				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
<b>Outdoor Sound Rating (dB)<sup>4</sup></b>	91	91	91	91
<b>Outdoor Coil—Fin Type</b>	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	53.3 [4.95]	53.3 [4.95]	53.3 [4.95]	53.3 [4.95]
Rows / FPI [FPcm]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]	2 / 18 [7]
<b>Indoor Coil—Fin Type</b>	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	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
<b>Outdoor Fan—Type</b>	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	4/24 [609.6]	4/24 [609.6]	4/24 [609.6]	4/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	14800 [6984]	14800 [6984]	14800 [6984]	14800 [6984]
No. Motors/HP	4 at 1/3 HP			
Motor RPM	1075	1075	1075	1075
<b>Indoor Fan—Type</b>	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	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds (Standard / VFD)	Single / Multiple	Single / Multiple	Single	Single
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
<b>Filter—Type</b>	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]
<b>Refrigerant Charge Oz. [g] (Sys. 1/Sys. 2) [g]</b>	294/302 [8335/8562]	294/302 [8335/8562]	294/302 [8335/8562]	294/302 [8335/8562]
<b>Weights</b>				
Net Weight lbs. [kg]	2013 [913]	2042 [926]	2013 [913]	2042 [926]
Ship Weight lbs. [kg]	2140 [971]	2160 [980]	2140 [971]	2160 [980]

### 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 340/360.
2. EER is rated at AHRI conditions and in accordance with DOE test procedures.
3. Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI Standard 340/360.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.
5. 25 Ton Model is outside the scope of AHRI Standard 340/360.

[ ] Designates Metric Conversions

## NOM. SIZES 15-25 TONS [52.8-87.9 kW] MODELS

Model RLNL- Series	C240CL	C240CM	C240CN	C240DL
Model RLNL- Series (with VFD)	H240CR	H240CS	H240CT	H240DR
<b>Cooling Performance<sup>1</sup></b>	<b>CONTINUED →</b>			
Gross Cooling Capacity Btu [kW]	244,000 [69.40]	244,000 [69.40]	244,000 [69.40]	244,000 [69.40]
EER/SEER <sup>2</sup>	11/NA	11/NA	11/NA	11/NA
Nominal CFM/AHRI Rated CFM [L/s]	8000/7725 [3775/3645]	8000/7725 [3775/3645]	8000/7725 [3775/3645]	8000/7725 [3775/3645]
AHRI Net Cooling Capacity Btu [kW]	228,000 [64.85]	228,000 [64.85]	228,000 [64.85]	228,000 [64.85]
Net Sensible Capacity Btu [kW]	165,600 [47.10]	165,600 [47.10]	165,600 [47.10]	165,600 [47.10]
Net Latent Capacity Btu [kW]	62,400 [17.75]	62,400 [17.75]	62,400 [17.75]	62,400 [17.75]
IEER <sup>3</sup>	12.4/14.2	12.4/14.2	12.4/14.2	12.4/14.2
Net System Power [kW]	20.73	20.73	20.73	20.73
<b>Compressor</b>				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
<b>Outdoor Sound Rating (dB)<sup>4</sup></b>	91	91	91	91
<b>Outdoor Coil—Fin Type</b>	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	53.3 [4.95]	53.3 [4.95]	53.3 [4.95]	53.3 [4.95]
Rows / FPI [FPCm]	2 / 22 [9]	2 / 22 [9]	2 / 22 [9]	2 / 22 [9]
<b>Indoor Coil—Fin Type</b>	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	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
<b>Outdoor Fan—Type</b>	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	6/24 [609.6]	6/24 [609.6]	6/24 [609.6]	6/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	19800 [9344]	19800 [9344]	19800 [9344]	19800 [9344]
No. Motors/HP	6 at 1/3 HP			
Motor RPM	1075	1075	1075	1075
<b>Indoor Fan—Type</b>	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	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds (Standard / VFD)	Single / Multiple	Single / Multiple	Single / Multiple	Single / Multiple
No. Motors	1	1	1	1
Motor HP	5	7 1/2	7 1/2	5
Motor RPM	1725	1725	1725	1725
Motor Frame Size	184	213	213	184
<b>Filter—Type</b>	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]
<b>Refrigerant Charge Oz. [g] (Sys. 1/Sys. 2) [g]</b>	402/331 [11397/9384]	402/331 [11397/9384]	402/331 [11397/9384]	402/331 [11397/9384]
<b>Weights</b>				
Net Weight lbs. [kg]	2151 [976]	2189 [993]	2187 [992]	2151 [976]
Ship Weight lbs. [kg]	2277 [1033]	2315 [1050]	2314 [1050]	2277 [1033]

### 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 340/360.
2. EER is rated at AHRI conditions and in accordance with DOE test procedures.
3. Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI Standard 340/360.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.
5. 25 Ton Model is outside the scope of AHRI Standard 340/360.

[ ] Designates Metric Conversions

## NOM. SIZES 15-25 TONS [52.8-87.9 kW] MODELS

Model RLNL- Series	C240DM	C240DN	C240YL	C240YM
Model RLNL- Series (with VFD)	H240DS	H240DT		
<b>Cooling Performance<sup>1</sup></b>	<b>CONTINUED →</b>			
Gross Cooling Capacity Btu [kW]	244,000 [69.40]	244,000 [69.40]	244,000 [69.40]	244,000 [69.40]
EER/SEER <sup>2</sup>	11/NA	11/NA	11/NA	11/NA
Nominal CFM/AHRI Rated CFM [L/s]	8000/7725 [3775/3645]	8000/7725 [3775/3645]	8000/7725 [3775/3645]	8000/7725 [3775/3645]
AHRI Net Cooling Capacity Btu [kW]	228,000 [64.85]	228,000 [64.85]	228,000 [64.85]	228,000 [64.85]
Net Sensible Capacity Btu [kW]	165,600 [47.10]	165,600 [47.10]	165,600 [47.10]	165,600 [47.10]
Net Latent Capacity Btu [kW]	62,400 [17.75]	62,400 [17.75]	62,400 [17.75]	62,400 [17.75]
IEER <sup>3</sup>	12.4/14.2	12.4/14.2	12.4	12.4
Net System Power [kW]	20.73	20.73	20.73	20.73
<b>Compressor</b>				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
<b>Outdoor Sound Rating (dB)<sup>4</sup></b>	91	91	91	91
<b>Outdoor Coil—Fin Type</b>	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	53.3 [4.95]	53.3 [4.95]	53.3 [4.95]	53.3 [4.95]
Rows / FPI [FPcm]	2 / 22 [9]	2 / 22 [9]	2 / 22 [9]	2 / 22 [9]
<b>Indoor Coil—Fin Type</b>	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	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
<b>Outdoor Fan—Type</b>	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	6/24 [609.6]	6/24 [609.6]	6/24 [609.6]	6/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	19800 [9344]	19800 [9344]	19800 [9344]	19800 [9344]
No. Motors/HP	6 at 1/3 HP			
Motor RPM	1075	1075	1075	1075
<b>Indoor Fan—Type</b>	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	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds (Standard / VFD)	Single / Multiple	Single / Multiple	Single	Single
No. Motors	1	1	1	1
Motor HP	7 1/2	7 1/2	5	7 1/2
Motor RPM	1725	1725	1725	1725
Motor Frame Size	184	184	184	213
<b>Filter—Type</b>	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]
<b>Refrigerant Charge Oz. [g] (Sys. 1/Sys. 2) [g]</b>	402/331 [11397/9384]	402/331 [11397/9384]	402/331 [11397/9384]	402/331 [11397/9384]
<b>Weights</b>				
Net Weight lbs. [kg]	2189 [993]	2187 [992]	2151 [976]	2189 [993]
Ship Weight lbs. [kg]	2315 [1050]	2314 [1050]	2277 [1033]	2315 [1050]

### 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 340/360.
2. EER is rated at AHRI conditions and in accordance with DOE test procedures.
3. Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI Standard 340/360.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.
5. 25 Ton Model is outside the scope of AHRI Standard 340/360.

[ ] Designates Metric Conversions

## NOM. SIZES 15-25 TONS [52.8-87.9 kW] MODELS

Model RLNL- Series	C240YN	C241CL	C241CM	C241DL
Model RLNL- Series (with VFD)				
<b>Cooling Performance<sup>1</sup></b>	<b>CONTINUED →</b>			
Gross Cooling Capacity Btu [kW]	244,000 [69.40]	240,000 [68.26]	240,000 [68.26]	240,000 [68.26]
EER/SEER <sup>2</sup>	11/NA	11/NA	11/NA	11/NA
Nominal CFM/AHRI Rated CFM [L/s]	8000/7725 [3775/3645]	8000/7375 [3775/3480]	8000/7375 [3775/3480]	8000/7375 [3775/3480]
AHRI Net Cooling Capacity Btu [kW]	228,000 [64.85]	228,000 [64.85]	228,000 [64.85]	228,000 [64.85]
Net Sensible Capacity Btu [kW]	165,600 [47.10]	167,000 [47.50]	167,000 [47.50]	167,000 [47.50]
Net Latent Capacity Btu [kW]	62,400 [17.75]	63,000 [17.92]	63,000 [17.92]	63,000 [17.92]
IEER <sup>3</sup>	12.4	12.4	12.4	12.4
Net System Power [kW]	20.73	20.73	20.73	20.73
<b>Compressor</b>				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
<b>Outdoor Sound Rating (dB)<sup>4</sup></b>	91	91	91	91
<b>Outdoor Coil—Fin Type</b>	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	MicroChannel	MicroChannel	MicroChannel
Tube Size in. [mm] OD	0.375 [9.5]	1 [25.4]	1 [25.4]	1 [25.4]
Face Area sq. ft. [sq. m]	53.3 [4.95]	50.8 [4.72]	50.8 [4.72]	50.8 [4.72]
Rows / FPI [FPCm]	2 / 22 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
<b>Indoor Coil—Fin Type</b>	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]	4 / 15 [6]	4 / 15 [6]	4 / 15 [6]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
<b>Outdoor Fan—Type</b>	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	6/24 [609.6]	6/24 [609.6]	6/24 [609.6]	6/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	19800 [9344]	19800 [9344]	19800 [9344]	19800 [9344]
No. Motors/HP	6 at 1/3 HP			
Motor RPM	1075	1075	1075	1075
<b>Indoor Fan—Type</b>	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	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds (Standard / VFD)	Single	Single / Multiple	Single / Multiple	Single / Multiple
No. Motors	1	1	1	1
Motor HP	7 1/2	5	7 1/2	5
Motor RPM	1725	1725	1725	1725
Motor Frame Size	213	184	213	184
<b>Filter—Type</b>	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]
<b>Refrigerant Charge Oz. [g] (Sys. 1/Sys. 2) [g]</b>	402/331 [11397/9384]	271/227 [7683/6435]	271/227 [7683/6435]	271/227 [7683/6435]
<b>Weights</b>				
Net Weight lbs. [kg]	2187 [992]	2151 [976]	2189 [993]	2289 [1038]
Ship Weight lbs. [kg]	2314 [1050]	2251 [1021]	2289 [1038]	2389 [1084]

### 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 340/360.
  2. EER is rated at AHRI conditions and in accordance with DOE test procedures.
  3. Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI Standard 340/360.
  4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.
  5. 25 Ton Model is outside the scope of AHRI Standard 340/360.
- [ ] Designates Metric Conversions

## NOM. SIZES 15-25 TONS [52.8-87.9 kW] MODELS

Model RLRL- Series	C241DM	C241YL	C241YM
Model RLRL- Series (with VFD)			
<b>Cooling Performance<sup>1</sup></b>			
Gross Cooling Capacity Btu [kW]	240,000 [68.26]	240,000 [68.26]	240,000 [68.26]
EER/SEER <sup>2</sup>	11/NA	11/NA	11/NA
Nominal CFM/AHRI Rated CFM [L/s]	8000/7375 [3775/3480]	8000/7375 [3775/3480]	8000/7375 [3775/3480]
AHRI Net Cooling Capacity Btu [kW]	228,000 [64.85]	228,000 [64.85]	228,000 [64.85]
Net Sensible Capacity Btu [kW]	167,000 [47.50]	167,000 [47.50]	167,000 [47.50]
Net Latent Capacity Btu [kW]	63,000 [17.92]	63,000 [17.92]	63,000 [17.92]
IEER <sup>3</sup>	12.4	12.4	12.4
Net System Power [kW]	20.73	20.73	20.73
<b>Compressor</b>	2/Scroll	2/Scroll	2/Scroll
No./Type	91	91	91
<b>Outdoor Sound Rating (dB)<sup>4</sup></b>	Louvered	Louvered	Louvered
<b>Outdoor Coil—Fin Type</b>	MicroChannel	MicroChannel	MicroChannel
Tube Type	1 [25.4]	1 [25.4]	1 [25.4]
Tube Size in. [mm] OD	50.8 [4.72]	50.8 [4.72]	50.8 [4.72]
Face Area sq. ft. [sq. m]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Rows / FPI [FPcm]	Louvered	Louvered	Louvered
<b>Indoor Coil—Fin Type</b>	Rifled	Rifled	Rifled
Tube Type	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Tube Size in. [mm]	26.67 [2.48]	26.67 [2.48]	26.67 [2.48]
Face Area sq. ft. [sq. m]	14 / 15 [6]	4 / 15 [6]	4 / 15 [6]
Rows / FPI [FPcm]	TX Valves	TX Valves	TX Valves
Refrigerant Control	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
Drain Connection No./Size in. [mm]	Propeller	Propeller	Propeller
<b>Outdoor Fan—Type</b>	6/24 [609.6]	6/24 [609.6]	6/24 [609.6]
No. Used/Diameter in. [mm]	Direct/1	Direct/1	Direct/1
Drive Type/No. Speeds	19800 [9344]	19800 [9344]	19800 [9344]
CFM [L/s]	6 at 1/3 HP	6 at 1/3 HP	6 at 1/3 HP
No. Motors/HP	1075	1075	1075
Motor RPM	FC Centrifugal	FC Centrifugal	FC Centrifugal
<b>Indoor Fan—Type</b>	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]
No. Used/Diameter in. [mm]	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
Drive Type	Single / Multiple	Single	Single
No. Speeds (Standard / VFD)	1	1	1
No. Motors	7 1/2	5	7 1/2
Motor HP	1725	1725	1725
Motor RPM	184	184	213
Motor Frame Size	Disposable	Disposable	Disposable
<b>Filter—Type</b>	Yes	Yes	Yes
Furnished	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]
(NO.) Size Recommended in. [mm x mm x mm]	271/227 [7683/6435]	271/227 [7683/6435]	271/227 [7683/6435]
<b>Refrigerant Charge Oz. [g] (Sys. 1/Sys. 2) [g]</b>			
<b>Weights</b>			
Net Weight lbs. [kg]	2327 [1056]	2151 [976]	2189 [993]
Ship Weight lbs. [kg]	2427 [1101]	2251 [1021]	2289 [1038]

### 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 340/360.
2. EER is rated at AHRI conditions and in accordance with DOE test procedures.
3. Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI Standard 340/360.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.
5. 25 Ton Model is outside the scope of AHRI Standard 340/360.

[ ] Designates Metric Conversions

## NOM. SIZES 15-25 TONS [52.8-87.9 kW] MODELS

Model RLNL- Series	C300CL	C300CM	C300DL	C300DM
Model RLNL- Series (with VFD)	H300CR	H300CS	H300DR	H300DS
<b>Cooling Performance<sup>1</sup></b>				
Gross Cooling Capacity Btu [kW]	312000 [88.74]	312000 [88.74]	312000 [88.74]	312,000 [88.74]
EER/SEER <sup>2</sup>	10/NA	10/NA	10/NA	10/NA
Nominal CFM/AHRI Rated CFM [L/s]	10000/9700 [4719/4577]	10000/9700 [4719/4577]	10000/9700 [4719/4577]	10000/9700 [4719/4577]
AHRI Net Cooling Capacity Btu [kW]	290,000 [84.99]	290,000 [84.99]	290,000 [84.99]	290,000 [84.99]
Net Sensible Capacity Btu [kW]	208,900 [61.22]	208,900 [61.22]	208,900 [61.22]	208,900 [61.22]
Net Latent Capacity Btu [kW]	81,100 [23.76]	81,100 [23.76]	81,100 [23.76]	81,100 [23.76]
IEER <sup>3</sup>	11.6/13	11.6/13	11.6/13	11.6/13
Net System Power [kW]	29	29	29	29
<b>Compressor</b>				
No./Type	2/Scroll	2/Scroll	2/Scroll	2/Scroll
<b>Outdoor Sound Rating (dB)<sup>4</sup></b>	92	92	92	92
<b>Outdoor Coil—Fin Type</b>				
Tube Type	Louvered	Louvered	Louvered	Louvered
Tube Size in. [mm] OD	Rifled	Rifled	Rifled	Rifled
Face Area sq. ft. [sq. m]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Rows / FPI [FPCm]	53.3 [4.95]	53.3 [4.95]	53.3 [4.95]	53.3 [4.95]
<b>Indoor Coil—Fin Type</b>	53.3 [4.95]	2 / 22 [9]	2 / 22 [9]	2 / 22 [9]
Tube Type	Louvered	Louvered	Louvered	Louvered
Tube Size in. [mm]	Rifled	Rifled	Rifled	Rifled
Face Area sq. ft. [sq. m]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Rows / FPI [FPCm]	26.67 [2.48]	26.67 [2.48]	26.67 [2.48]	26.67 [2.48]
Refrigerant Control	4 / 15 [6]	4 / 15 [6]	4 / 15 [6]	4 / 15 [6]
Drain Connection No./Size in. [mm]	TX Valves	TX Valves	TX Valves	TX Valves
1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
<b>Outdoor Fan—Type</b>				
No. Used/Diameter in. [mm]	Propeller	Propeller	Propeller	Propeller
6/24 [609.6]	6/24 [609.6]	6/24 [609.6]	6/24 [609.6]	6/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	19800 [9344]	19800 [9344]	19800 [9344]	19800 [9344]
No. Motors/HP	6 at 1/3 HP			
Motor RPM	1075	1075	1075	1075
<b>Indoor Fan—Type</b>				
No. Used/Diameter in. [mm]	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]	2/18x9 [457x229]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds (Standard / VFD)	Single / Multiple	Single / Multiple	Single / Multiple	Single / Multiple
No. Motors	1	1	1	1
Motor HP	7 1/2	10	7 1/2	10
Motor RPM	1725	1725	1725	1725
Motor Frame Size	213	215	213	215
<b>Filter—Type</b>				
Furnished	Disposable	Disposable	Disposable	Disposable
(Yes)	Yes	Yes	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(8)2x25x20 [51x1635x508]	(8)2x25x20 [51x1635x508]	(8)2x25x20 [51x1635x508]	(8)2x25x20 [51x1635x508]
<b>Refrigerant Charge Oz. [g] (Sys. 1/Sys. 2) [g]</b>	339/357 [9611/10121]	339/357 [9611/10121]	339/357 [9611/10121]	339/357 [9611/10121]
<b>Weights</b>				
Net Weight lbs. [kg]	2250 [1021]	2261 [1026]	2250 [1021]	2261 [1026]
Ship Weight lbs. [kg]	2376 [1078]	2387 [1083]	2376 [1078]	2387 [1083]

### 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 340/360.
2. EER is rated at AHRI conditions and in accordance with DOE test procedures.
3. Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI Standard 340/360.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.
5. 25 Ton Model is outside the scope of AHRI Standard 340/360.

[ ] Designates Metric Conversions

## NOM. SIZES 15-25 TONS [52.8-87.9 kW] MODELS

	C300YL	C300YM
<b>Model RLNL- Series</b>		
<b>Model RLNL- Series (with VFD)</b>		
<b>Cooling Performance<sup>1</sup></b>		
Gross Cooling Capacity Btu [kW]	312,000 [91.42]	312,000 [91.42]
EER/SEER <sup>2</sup>	10/NA	10/NA
Nominal CFM/AHRI Rated CFM [L/s]	10000/9700 [4719/4577]	10000/9700 [4719/4577]
AHRI Net Cooling Capacity Btu [kW]	290,000 [84.99]	290,000 [84.99]
Net Sensible Capacity Btu [kW]	208,900 [61.22]	208,900 [61.22]
Net Latent Capacity Btu [kW]	81,100 [25.76]	81,100 [25.76]
IEER <sup>3</sup> (Standard / VFD)	11.6	11.6
Net System Power [kW]	29	29
<b>Compressor</b>		
No./Type	2/Scroll	2/Scroll
<b>Outdoor Sound Rating (dB)<sup>4</sup></b>	92	92
<b>Outdoor Coil—Fin Type</b>	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]	53.3 [4.95]	53.3 [4.95]
Rows / FPI [FPcm]	2 / 22 [9]	2 / 22 [9]
<b>Indoor Coil—Fin Type</b>	Louvered	Louvered
Tube Type	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	26.67 [2.48]	26.67 [2.48]
Rows / FPI [FPcm]	4 / 15 [6]	4 / 15 [6]
Refrigerant Control	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/1 [25.4]	1/1 [25.4]
<b>Outdoor Fan—Type</b>	Propeller	Propeller
No. Used/Diameter in. [mm]	6/24 [609.6]	6/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1
CFM [L/s]	19800 [9344]	19800 [9344]
No. Motors/HP	6 at 1/3 HP	6 at 1/3 HP
Motor RPM	1075	1075
<b>Indoor Fan—Type</b>	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	2/18x9 [457x229]	2/18x9 [457x229]
Drive Type	Belt (Adjustable)	Belt (Adjustable)
No. Speeds (Standard / VFD)	Single	Single
No. Motors	1	1
Motor HP	7 1/2	10
Motor RPM	1725	1725
Motor Frame Size	213	215
<b>Filter—Type</b>	Disposable	Disposable
Furnished	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(8)2x25x20 [51x635x508]	(8)2x25x20 [51x635x508]
<b>Refrigerant Charge Oz. [g] (Sys. 1/Sys. 2) [g]</b>	339/357 [9611/10121]	339/357 [9611/10121]
<b>Weights</b>		
Net Weight lbs. [kg]	2250 [1021]	2261 [1026]
Ship Weight lbs. [kg]	2376 [1078]	2387 [1083]

### 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 Energy Efficiency Ratio (IEER) is rated in accordance with AHRI Standard 210/240 or 340/360.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.
5. 25 Ton Model is outside the scope of AHRI Standard 340/360.

[ ] Designates Metric Conversions

## GROSS SYSTEMS PERFORMANCE DATA—C/H180

ENTERING INDOOR AIR @ 80°F [26.7°C] dB E ①											
wbE		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			
CFM [L/s]		7200 [3398]	5900 [2784]	4800 [2265]	7200 [3398]	5900 [2784]	4800 [2265]	7200 [3398]	5900 [2784]	4800 [2265]	
DR ②		.04	.08	.13	.04	.08	.13	.04	.08	.13	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW]	226.5 [66.4]	217.8 [63.8]	210.4 [61.7]	214.3 [62.8]	206.0 [60.4]	199.0 [58.3]	206.3 [60.5]	198.4 [58.1]	191.7 [56.2]
		Sens BTUH [kW]	148.8 [43.6]	126.2 [37.0]	108.5 [31.8]	174.1 [51.0]	149.6 [43.9]	130.2 [38.2]	193.4 [56.7]	167.5 [49.1]	146.8 [43.0]
		Power	12.6	12.3	12.1	12.4	12.2	12.0	12.2	12.0	11.8
	80 [26.7]	Total BTUH [kW]	222.2 [65.1]	213.6 [62.6]	206.4 [60.5]	209.9 [61.5]	201.8 [59.1]	195.0 [57.1]	202.0 [59.2]	194.2 [56.9]	187.6 [55.0]
		Sens BTUH [kW]	146.6 [43.0]	124.3 [36.4]	106.9 [31.3]	171.9 [50.4]	147.8 [43.3]	128.7 [37.7]	191.3 [56.1]	165.7 [48.6]	145.3 [42.6]
		Power	13.1	12.9	12.7	13.0	12.7	12.5	12.8	12.6	12.4
	85 [29.4]	Total BTUH [kW]	217.5 [63.7]	209.1 [61.3]	202.0 [59.2]	205.3 [60.2]	197.3 [57.8]	190.7 [55.9]	197.3 [57.8]	189.7 [55.6]	183.3 [53.7]
		Sens BTUH [kW]	144.1 [42.2]	122.3 [35.9]	105.2 [30.8]	169.5 [49.7]	145.7 [42.7]	127.0 [37.2]	188.8 [55.3]	163.6 [48.0]	143.5 [42.1]
		Power	13.8	13.5	13.3	13.6	13.4	13.1	13.5	13.2	13.0
OUTDOOR DRY BULB TEMPERATURE °F [°C]	90 [32.2]	Total BTUH [kW]	212.5 [62.3]	204.3 [59.9]	197.4 [57.9]	200.2 [58.7]	192.5 [56.4]	186.0 [54.5]	192.3 [56.4]	184.9 [54.2]	178.6 [52.3]
		Sens BTUH [kW]	141.4 [41.5]	120.0 [35.2]	103.3 [30.3]	166.7 [48.9]	143.5 [42.1]	125.1 [36.7]	186.2 [54.6]	161.4 [47.3]	141.6 [41.5]
		Power	14.5	14.2	14.0	14.3	14.0	13.8	14.2	13.9	13.7
	95 [35]	Total BTUH [kW]	207.2 [60.7]	199.2 [58.4]	192.4 [56.4]	194.9 [57.1]	187.4 [54.9]	181.0 [53.0]	187.0 [54.8]	179.8 [52.7]	173.7 [50.9]
		Sens BTUH [kW]	138.5 [40.6]	117.6 [34.5]	101.2 [29.7]	163.9 [48.0]	141.1 [41.4]	123.0 [36.1]	183.3 [53.7]	159.0 [46.6]	139.6 [40.9]
		Power	15.2	14.9	14.7	15.1	14.8	14.5	14.9	14.6	14.4
	100 [37.8]	Total BTUH [kW]	201.5 [59.1]	193.7 [56.8]	187.2 [54.9]	189.2 [55.4]	181.9 [53.3]	175.8 [51.5]	181.3 [53.1]	174.3 [51.1]	168.4 [49.4]
		Sens BTUH [kW]	135.4 [39.7]	115.0 [33.7]	99.1 [29.1]	160.7 [47.1]	138.4 [40.6]	120.8 [35.4]	180.1 [52.8]	156.3 [45.8]	137.3 [40.2]
		Power	16.0	15.7	15.4	15.9	15.6	15.3	15.7	15.4	15.1
OUTDOOR DRY BULB TEMPERATURE °F [°C]	105 [40.6]	Total BTUH [kW]	195.5 [57.3]	188.0 [55.1]	181.6 [53.2]	183.2 [53.7]	176.2 [51.6]	170.2 [49.9]	175.3 [51.4]	168.5 [49.4]	162.8 [47.7]
		Sens BTUH [kW]	132.0 [38.7]	112.2 [32.9]	96.6 [28.3]	157.3 [46.1]	135.6 [39.8]	118.3 [34.7]	175.3 [51.4]	153.4 [45.0]	134.8 [39.5]
		Power	16.9	16.5	16.3	16.7	16.4	16.1	16.5	16.2	16.0
	110 [43.3]	Total BTUH [kW]	189.2 [55.4]	181.9 [53.3]	175.7 [51.5]	176.9 [51.8]	170.1 [49.9]	164.3 [48.2]	169.0 [49.5]	162.5 [47.6]	156.9 [46.0]
		Sens BTUH [kW]	128.4 [37.6]	109.1 [32.0]	93.9 [27.5]	153.7 [45.1]	132.6 [38.9]	115.8 [33.9]	169.0 [49.5]	150.5 [44.1]	132.3 [38.8]
		Power	17.8	17.4	17.1	17.6	17.3	17.0	17.5	17.1	16.8
	115 [46.1]	Total BTUH [kW]	182.5 [53.5]	175.5 [51.4]	169.5 [49.7]	170.2 [49.9]	163.7 [48.0]	158.1 [46.3]	162.3 [47.6]	156.0 [45.7]	150.8 [44.2]
		Sens BTUH [kW]	124.5 [36.5]	105.9 [31.0]	91.2 [26.7]	149.9 [43.9]	129.4 [37.9]	113.0 [33.1]	162.3 [47.6]	147.2 [43.2]	129.6 [38.0]
		Power	18.7	18.4	18.1	18.6	18.2	17.9	18.4	18.1	17.8

## GROSS SYSTEMS PERFORMANCE DATA—C/H210

ENTERING INDOOR AIR @ 80°F [26.7°C] dB E ①											
wbE		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			
CFM [L/s]		8400 [3964]	7025 [3315]	5600 [2643]	8400 [3964]	7025 [3315]	5600 [2643]	8400 [3964]	7025 [3315]	5600 [2643]	
DR ②		.06	.09	.13	.06	.09	.13	.06	.09	.13	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW]	258.4 [75.7]	249.5 [73.1]	240.3 [70.4]	244.1 [71.5]	235.7 [69.1]	227.0 [66.5]	231.9 [68.0]	223.9 [65.6]	215.7 [63.2]
		Sens BTUH [kW]	193.9 [56.8]	168.8 [49.5]	144.5 [42.4]	224.6 [65.8]	197.4 [57.9]	170.8 [50.1]	231.9 [68.0]	217.1 [63.6]	189.1 [55.4]
		Power	13.0	12.8	12.5	12.8	12.6	12.4	12.7	12.4	12.2
	80 [26.7]	Total BTUH [kW]	252.7 [74.1]	244.0 [71.5]	235.0 [68.9]	238.4 [69.9]	230.2 [67.5]	221.7 [65.0]	226.2 [66.3]	218.4 [64.0]	210.4 [61.7]
		Sens BTUH [kW]	182.3 [53.4]	158.3 [46.4]	135.2 [39.6]	131.1	121.9 [62.4]	186.9 [54.8]	161.5 [47.3]	206.6 [60.6]	179.8 [52.7]
		Power	13.6	13.4	13.1	13.4	13.2	13.0	13.3	13.0	12.8
	85 [29.4]	Total BTUH [kW]	246.7 [72.3]	238.2 [69.8]	229.4 [67.2]	232.4 [68.1]	224.4 [65.8]	216.1 [63.3]	220.2 [64.5]	212.6 [62.3]	204.8 [60.0]
		Sens BTUH [kW]	171.9 [50.4]	149.0 [43.7]	126.9 [37.2]	202.7 [59.4]	177.7 [52.1]	153.4 [45.0]	220.2 [64.5]	197.4 [57.9]	171.7 [50.3]
		Power	14.2	14.0	13.7	14.1	13.8	13.6	13.9	13.7	13.4
OUTDOOR DRY BULB TEMPERATURE °F [°C]	90 [32.2]	Total BTUH [kW]	240.4 [70.5]	232.1 [68.0]	223.5 [65.5]	226.1 [66.3]	218.3 [64.0]	210.3 [61.6]	213.9 [62.7]	206.5 [60.5]	198.9 [58.3]
		Sens BTUH [kW]	162.9 [47.8]	141.0 [41.3]	119.9 [35.1]	193.6 [56.7]	169.6 [49.7]	146.3 [42.9]	213.9 [62.7]	189.3 [55.5]	164.5 [48.2]
		Power	14.9	14.7	14.4	14.8	14.5	14.3	14.6	14.4	14.1
	95 [35]	Total BTUH [kW]	233.8 [68.5]	225.7 [66.1]	217.4 [63.7]	219.5 [64.3]	212.0 [62.1]	204.1 [59.8]	207.3 [60.8]	200.2 [58.7]	192.8 [56.5]
		Sens BTUH [kW]	155.3 [45.5]	134.2 [39.3]	114.0 [33.4]	186.0 [54.5]	162.9 [47.8]	140.3 [41.1]	207.0 [60.7]	182.6 [53.5]	158.6 [46.5]
		Power	15.7	15.4	15.1	15.5	15.2	15.0	15.3	15.1	14.8
	100 [37.8]	Total BTUH [kW]	226.9 [66.5]	219.1 [64.2]	211.0 [61.8]	212.6 [62.3]	205.3 [60.2]	197.7 [57.9]	200.4 [58.7]	193.5 [56.7]	186.4 [54.6]
		Sens BTUH [kW]	149.0 [43.7]	128.7 [37.7]	109.2 [32.0]	179.6 [52.6]	157.3 [46.1]	135.5 [39.7]	200.4 [58.7]	177.0 [51.9]	153.8 [45.1]
		Power	16.5	16.2	15.9	16.3	16.0	15.7	16.1	15.9	15.6
OUTDOOR DRY BULB TEMPERATURE °F [°C]	105 [40.6]	Total BTUH [kW]	219.7 [64.4]	212.1 [62.2]	204.3 [59.9]	205.4 [60.2]	198.3 [58.1]	191.0 [56.0]	193.2 [56.6]	186.5 [54.7]	179.7 [52.7]
		Sens BTUH [kW]	143.9 [42.2]	124.3 [36.4]	105.5 [30.9]	174.6 [51.2]	152.9 [44.8]	131.8 [38.6]	193.2 [56.6]	172.7 [50.6]	150.2 [44.0]
		Power	17.3	17.0	16.7	17.1	16.8	16.5	17.0	16.7	16.4
	110 [43.3]	Total BTUH [kW]	212.2 [62.2]	204.9 [60.1]	197.3 [57.8]	197.9 [58.0]	191.1 [56.0]	184.0 [53.9]	185.7 [54.4]	179.3 [52.5]	172.7 [50.6]
		Sens BTUH [kW]	140.3 [41.1]	121.3 [35.6]	102.9 [30.2]	171.0 [50.1]	149.9 [43.9]	129.3 [37.9]	185.7 [54.4]	169.6 [49.7]	147.6 [43.3]
		Power	18.2	17.9	17.5	18.0	17.7	17.4	17.9	17.6	17.2
	115 [46.1]	Total BTUH [kW]	204.4 [59.9]	197.3 [57.8]	190.1 [55.7]	190.1 [55.7]	183.5 [53.8]	176.8 [51.8]	177.9 [52.1]	171.8 [50.3]	165.4 [48.5]
		Sens BTUH [kW]	138.1 [40.5]	119.4 [35.0]	101.6 [29.8]	168.7 [49.5]	148.0 [43.4]	127.9 [37.5]	177.9 [52.1]	167.8 [49.2]	146.1 [42.8]
		Power	9.1	8.8	8.5	19.0	18.6	18.3	18.8	18.5	18.1

DR —Depression ratio  
dB E —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 (dB E - 80)].

[ ] Designates Metric Conversions

## GROSS SYSTEMS PERFORMANCE DATA—C/H240

wbE		ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①			67°F [19.4°C]			63°F [17.2°C]			
CFM [L/s]		9600 [4530]	7725 [3646]	6400 [3020]	9600 [4530]	7725 [3646]	6400 [3020]	9600 [4530]	7725 [3646]	6400 [3020]	
DR ①		.06	.11	.15	.06	.11	.15	.06	.11	.15	
OUTDOOR DRY BULB TEMPERATURE °F / °C	75 [23.9]	Total BTUH [kW]	283.5 [83.1]	271.5 [79.6]	263.0 [77.1]	269.6 [79.0]	258.2 [75.7]	250.2 [73.3]	258.7 [75.8]	247.8 [72.6]	240.0 [70.3]
	75 [23.9]	Sens BTUH [kW]	187.4 [54.9]	156.3 [45.8]	136.0 [39.9]	220.5 [64.6]	186.7 [54.7]	164.4 [48.2]	245.6 [72.0]	209.7 [61.5]	185.7 [54.4]
	75 [23.9]	Power	15.4	15.1	14.9	15.3	15.0	14.7	15.1	14.8	14.6
	80 [26.7]	Total BTUH [kW]	280.8 [82.3]	269.0 [78.8]	260.6 [76.4]	267.0 [78.2]	255.7 [74.9]	247.7 [72.6]	256.1 [75.1]	245.3 [71.9]	237.6 [69.6]
	80 [26.7]	Sens BTUH [kW]	186.4 [54.6]	155.6 [45.6]	135.4 [39.7]	219.6 [64.4]	186.0 [54.5]	163.8 [48.0]	244.7 [71.7]	209.0 [61.3]	185.2 [54.3]
	80 [26.7]	Power	16.2	15.9	15.6	16.0	15.7	15.5	15.9	15.5	15.3
	85 [29.4]	Total BTUH [kW]	277.4 [81.3]	265.7 [77.9]	257.4 [75.4]	263.5 [77.2]	252.4 [74.0]	244.5 [71.7]	252.6 [74.0]	242.0 [70.9]	234.4 [68.7]
	85 [29.4]	Sens BTUH [kW]	184.9 [54.2]	154.4 [45.3]	134.4 [39.4]	218.1 [63.9]	184.8 [54.2]	162.7 [47.7]	243.1 [71.3]	207.8 [60.9]	184.2 [54.0]
	85 [29.4]	Power	17.0	16.7	16.4	16.9	16.5	16.3	16.7	16.3	16.1
	90 [32.2]	Total BTUH [kW]	273.1 [80.0]	261.6 [76.7]	253.4 [74.3]	259.3 [76.0]	248.3 [72.8]	240.6 [70.5]	248.4 [72.8]	237.9 [69.7]	230.5 [67.6]
	90 [32.2]	Sens BTUH [kW]	182.8 [53.6]	152.7 [44.8]	132.9 [39.0]	216.2 [63.4]	183.2 [53.7]	161.5 [47.3]	241.1 [70.7]	206.1 [60.4]	182.8 [53.6]
	90 [32.2]	Power	17.9	17.5	17.3	17.7	17.4	17.1	17.6	17.2	16.9
	95 [35]	Total BTUH [kW]	268.1 [78.6]	256.7 [75.2]	248.7 [72.9]	254.2 [74.5]	243.5 [71.4]	235.9 [69.1]	243.3 [71.3]	233.0 [68.3]	225.8 [66.2]
	95 [35]	Sens BTUH [kW]	180.2 [52.8]	150.5 [44.1]	131.1 [38.4]	213.5 [62.6]	181.1 [53.1]	159.6 [46.8]	238.6 [69.9]	204.0 [59.8]	181.0 [53.1]
	95 [35]	Power	18.8	18.4	18.2	18.7	18.3	18.0	18.5	18.1	17.8
	100 [37.8]	Total BTUH [kW]	262.2 [76.8]	251.1 [73.6]	243.3 [71.3]	248.3 [72.8]	237.8 [69.7]	230.4 [67.5]	237.4 [69.6]	227.4 [66.6]	220.3 [64.6]
	100 [37.8]	Sens BTUH [kW]	177.1 [51.9]	148.0 [43.4]	129.0 [37.8]	210.4 [61.7]	178.5 [52.3]	157.4 [46.1]	235.3 [69.0]	201.4 [59.0]	178.7 [52.4]
	100 [37.8]	Power	19.8	19.4	19.1	19.6	19.2	18.9	19.5	19.1	18.8
	105 [40.6]	Total BTUH [kW]	255.5 [74.9]	244.7 [71.7]	237.1 [69.5]	241.6 [70.8]	231.4 [67.8]	224.2 [65.7]	230.7 [67.6]	221.0 [64.8]	214.1 [62.7]
	105 [40.6]	Sens BTUH [kW]	173.4 [50.8]	145.0 [42.5]	126.4 [37.1]	206.6 [60.6]	175.4 [51.4]	154.7 [45.3]	230.7 [67.6]	198.4 [58.2]	176.2 [51.6]
	105 [40.6]	Power	20.8	20.4	20.1	20.7	20.2	19.9	20.5	20.1	19.8
	110 [43.3]	Total BTUH [kW]	248.0 [72.7]	237.5 [69.6]	230.1 [67.4]	234.1 [68.6]	224.2 [65.7]	217.2 [63.7]	223.2 [65.4]	213.8 [62.7]	207.1 [60.7]
	110 [43.3]	Sens BTUH [kW]	169.2 [49.6]	141.5 [41.5]	123.4 [36.2]	202.4 [59.3]	171.9 [50.4]	151.7 [44.5]	223.2 [65.4]	194.9 [57.1]	173.1 [50.7]
	110 [43.3]	Power	21.9	21.5	21.1	21.7	21.3	21.0	21.6	21.1	20.8
	115 [46.1]	Total BTUH [kW]	239.6 [70.2]	229.5 [67.3]	222.3 [65.1]	225.8 [66.2]	216.2 [63.4]	209.5 [61.4]	214.9 [63.0]	205.8 [60.3]	199.4 [58.4]
	115 [46.1]	Sens BTUH [kW]	164.3 [48.2]	137.5 [40.3]	119.9 [35.1]	197.7 [58.0]	168.0 [49.2]	148.4 [43.5]	214.9 [63.0]	191.0 [56.0]	169.8 [49.8]
	115 [46.1]	Power	23.1	22.6	22.2	22.9	22.4	22.1	22.7	22.2	21.9

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

**GROSS SYSTEMS PERFORMANCE DATA—RLNL-C241**

ENTERING INDOOR AIR @ 80°F [26.7°C] dB E ①										
wbE		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]		
CFM [L/s]		8113 [3829]	7375 [3481]	6269 [2959]	8113 [3829]	7375 [3481]	6269 [2959]	8113 [3829]	7375 [3481]	6269 [2959]
DR ①		.11	.09	.06	.11	.09	.06	.11	.09	.06
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW] Sens BTUH [kW] Power	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4
	80 [26.7]	Total BTUH [kW] Sens BTUH [kW] Power	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4
	85 [29.4]	Total BTUH [kW] Sens BTUH [kW] Power	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4
	90 [32.2]	Total BTUH [kW] Sens BTUH [kW] Power	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4
	95 [35]	Total BTUH [kW] Sens BTUH [kW] Power	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4
	100 [37.8]	Total BTUH [kW] Sens BTUH [kW] Power	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4
	105 [40.6]	Total BTUH [kW] Sens BTUH [kW] Power	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4
	110 [43.3]	Total BTUH [kW] Sens BTUH [kW] Power	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4
	115 [46.1]	Total BTUH [kW] Sens BTUH [kW] Power	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4
	120 [48.9]	Total BTUH [kW] Sens BTUH [kW] Power	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4
	125 [51.7]	Total BTUH [kW] Sens BTUH [kW] Power	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4	234.4 [68.7] 165.5 [48.5] 16.2	245.4 [71.9] 186.3 [54.6] 16.5	241.0 [70.6] 178.0 [52.2] 16.4

DR —Depression ratio

dB E —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 (dB E - 80)].

[ ] Designates Metric Conversions

## GROSS SYSTEMS PERFORMANCE DATA—C/H300

wbE		ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①			67°F [19.4°C]			63°F [17.2°C]			
CFM [L/s]		12000 [5663]	9475 [4472]	8000 [3776]	12000 [5663]	9475 [4472]	8000 [3776]	12000 [5663]	9475 [4472]	8000 [3776]	
DR ①		.02	.08	.11	.02	.08	.11	.02	.08	.11	
OUTDOOR DRY BULB TEMPERATURE °F / °C	75 [23.9]	Total BTUH [kW]	376.4 [110.3]	359.0 [105.2]	348.9 [102.3]	358.0 [104.9]	341.5 [100.1]	331.8 [97.2]	347.0 [101.7]	330.9 [97.0]	321.6 [94.3]
		Sens BTUH [kW]	251.6 [73.7]	206.4 [60.5]	182.0 [53.3]	294.2 [86.2]	245.2 [71.9]	218.4 [64.0]	326.2 [95.6]	274.0 [80.3]	245.5 [72.0]
		Power	20.8	20.3	20.0	20.5	20.0	19.7	20.2	19.7	19.5
	80 [26.7]	Total BTUH [kW]	369.9 [108.4]	352.8 [103.4]	342.8 [100.5]	351.5 [103.0]	335.2 [98.2]	325.7 [95.5]	340.4 [99.8]	324.6 [95.1]	315.5 [92.5]
		Sens BTUH [kW]	248.1 [72.7]	203.6 [59.7]	179.5 [52.6]	290.8 [85.2]	242.3 [71.0]	215.9 [63.3]	322.6 [94.6]	271.1 [79.5]	243.0 [71.2]
		Power	21.7	21.2	21.0	21.4	21.0	20.7	21.2	20.7	20.4
	85 [29.4]	Total BTUH [kW]	362.5 [106.2]	345.7 [101.3]	335.9 [98.4]	344.1 [100.8]	328.2 [96.2]	318.9 [93.5]	333.0 [97.6]	317.6 [93.1]	308.6 [90.4]
		Sens BTUH [kW]	244.2 [71.6]	200.4 [58.7]	176.8 [51.8]	286.8 [84.1]	239.2 [70.1]	213.2 [62.5]	318.6 [93.4]	268.0 [78.6]	240.2 [70.4]
	90 [32.2]	Total BTUH [kW]	354.3 [103.8]	338.0 [99.1]	328.4 [96.2]	335.9 [98.4]	320.4 [93.9]	311.3 [91.2]	324.9 [95.2]	309.8 [90.8]	301.1 [88.2]
		Sens BTUH [kW]	239.8 [70.3]	197.0 [57.7]	173.8 [50.9]	282.4 [82.8]	235.7 [69.1]	210.1 [61.6]	314.4 [92.2]	264.5 [77.5]	237.2 [69.5]
		Power	23.9	23.3	23.0	23.6	23.0	22.7	23.3	22.7	22.4
	95 [35]	Total BTUH [kW]	345.4 [101.2]	329.4 [96.5]	320.1 [93.8]	327.0 [95.8]	311.9 [91.4]	303.1 [88.8]	315.9 [92.6]	301.3 [88.3]	292.8 [85.8]
		Sens BTUH [kW]	235.2 [68.9]	193.2 [56.6]	170.5 [50.0]	277.8 [81.4]	232.0 [68.0]	207.0 [60.7]	309.7 [90.8]	260.8 [76.4]	234.0 [68.6]
		Power	25.0	24.4	24.1	24.7	24.1	23.8	24.4	23.9	23.5
	100 [37.8]	Total BTUH [kW]	335.7 [98.4]	320.2 [93.8]	311.1 [91.2]	317.3 [93.0]	302.6 [88.7]	294.1 [86.2]	306.2 [89.7]	292.1 [85.6]	283.8 [83.2]
		Sens BTUH [kW]	230.3 [67.5]	189.3 [55.5]	167.1 [49.0]	272.9 [80.0]	228.0 [66.8]	203.6 [59.7]	304.7 [89.3]	256.9 [75.3]	230.5 [67.6]
		Power	26.2	25.6	25.3	25.9	25.3	25.0	25.6	25.1	24.7
	105 [40.6]	Total BTUH [kW]	325.2 [95.3]	310.2 [90.9]	301.4 [88.3]	306.8 [89.9]	292.6 [85.8]	284.3 [83.3]	295.7 [86.7]	282.0 [82.6]	274.1 [80.3]
		Sens BTUH [kW]	224.9 [65.9]	185.0 [54.2]	163.4 [47.9]	267.5 [78.4]	223.7 [65.6]	199.8 [58.6]	295.7 [86.7]	252.5 [74.0]	226.8 [66.5]
		Power	27.5	26.9	26.5	27.2	26.6	26.2	26.9	26.3	25.9
	110 [43.3]	Total BTUH [kW]	313.9 [92.0]	299.4 [87.7]	290.9 [85.3]	295.5 [86.6]	281.9 [82.6]	273.9 [80.3]	284.4 [83.3]	271.3 [79.5]	263.6 [77.3]
		Sens BTUH [kW]	219.3 [64.3]	180.5 [52.9]	159.5 [46.8]	261.9 [76.8]	219.3 [64.3]	195.9 [57.4]	284.4 [83.4]	248.1 [72.7]	222.9 [65.3]
		Power	28.9	28.2	27.8	28.6	27.9	27.5	28.3	27.6	27.2
	115 [46.1]	Total BTUH [kW]	301.8 [88.4]	287.9 [84.4]	279.7 [82.0]	283.4 [83.1]	270.4 [79.2]	262.7 [77.0]	272.4 [79.8]	259.8 [76.1]	252.4 [74.0]
		Sens BTUH [kW]	213.2 [62.5]	175.7 [51.5]	155.3 [45.5]	255.8 [75.0]	214.5 [62.9]	191.8 [56.2]	272.4 [79.8]	243.3 [71.3]	218.8 [64.1]
		Power	30.3	29.6	29.2	30.0	29.3	28.9	29.7	29.0	28.6

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]–SIDEDFLOW

Capacity 15 Ton [52.8 kW] Voltage 208/230, 460, 575 — 3 Phase

Air Flow CFM [l/s]	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																										
4800 [2665]	—	—	—	—	—	—	—	583	1393	608	1508	632	1621	656	1732	679	1841	701	1947	723	2052	744	2154	764	2254	785	2326	805	2430	825	2537	844	2647	863	2761	881	2878								
5000 [2559]	—	—	—	—	—	—	—	591	1476	616	1593	640	1707	663	1820	686	1930	708	2038	729	2145	750	2248	771	2350	791	2420	811	2528	830	2640	850	2755	868	2873	887	2995								
5200 [2541]	—	—	—	—	—	—	—	575	1442	600	1562	624	1681	648	1797	671	1911	693	2023	715	2133	736	2241	757	2346	777	2410	797	2520	817	2633	836	2749	855	2869	874	2992	892	3118						
5400 [2548]	—	—	—	—	—	—	—	583	1530	608	1652	632	1772	655	1890	678	2005	701	2119	722	2231	743	2340	764	2447	784	2512	804	2626	823	2744	842	2865	861	2989	879	3117	897	3248						
5600 [2443]	—	—	—	—	—	—	—	592	1621	616	1745	640	1866	663	1986	686	2103	708	2218	729	2331	750	2442	770	2551	791	2620	810	2739	830	2861	849	2987	867	3116	885	3248	903	3384						
5800 [2337]	—	—	—	—	—	—	—	576	1588	601	1715	625	1840	649	1964	672	2085	694	2204	716	2321	737	2436	757	2548	778	2614	798	2735	817	2858	836	2985	855	3116	873	3249	891	3386	909	3527				
6000 [2331]	—	—	—	—	—	—	—	585	1683	610	1813	634	1940	657	2065	680	2187	702	2308	724	2426	744	2543	765	2657	785	2731	805	2856	824	2984	843	3116	861	3251	879	3389	897	3531	914	3676				
6200 [2326]	—	—	—	—	—	—	—	570	1650	595	1783	619	1913	643	2042	666	2169	688	2293	710	2415	731	2535	752	2653	773	2728	792	2854	812	2984	831	3116	850	3253	868	3392	886	3535	903	3682	920	3882		
6400 [3120]	—	—	—	—	—	—	—	579	1750	604	1885	628	2017	652	2148	674	2276	697	2402	718	2526	739	2648	760	2767	780	2852	800	2983	819	3118	838	3255	856	3386	875	3541	882	3688	909	3839	926	3994		
6600 [3114]	—	—	—	—	—	—	—	589	1854	614	1991	637	2125	663	2257	683	2386	705	2514	727	2640	748	2763	768	2884	788	2984	808	3119	827	3258	845	3400	863	3546	881	3695	899	3847	916	4003	—	—		
6800 [3209]	—	—	—	—	—	—	—	574	1822	599	1961	623	2099	647	2225	670	2369	692	2500	714	2629	735	2756	756	2882	776	2984	796	3121	815	3262	834	3405	853	3552	871	3702	888	3856	905	4013	922	4173	—	—
7000 [3303]	—	—	—	—	—	—	—	584	1930	609	2072	633	2211	656	2349	679	2484	701	2617	723	2748	744	2877	764	3003	785	3124	804	3265	823	3410	842	3559	860	3710	878	3865	895	4024	912	4185	929	4350	—	—
7200 [3398]	570	1897	595	2042	619	2185	642	2327	666	2466	689	2602	711	2737	732	2870	753	3000	773	3127	793	3270	812	3416	831	3566	849	3719	868	3875	885	4035	902	4198	919	4364	—	—							

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

Drive Package	L, R	M, S
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
RPM	<b>733</b>	701

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]	Resistance — Inches of Water [kPa]											
	4800 [2265]	5000 [2360]	5200 [2454]	5400 [2549]	5600 [2643]	5800 [2737]	6000 [2832]	6200 [2926]	6400 [3020]	6600 [3115]	6800 [3209]	7000 [3304]
<b>Wet Coil</b>	0.03 [.01]	0.04 [.01]	0.05 [.01]	0.06 [.01]	0.07 [.02]	0.08 [.02]	0.09 [.02]	0.10 [.02]	0.10 [.02]	0.11 [.03]	0.12 [.03]	0.13 [.03]
<b>Downflow</b>	0.05 [.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]	0.07 [.02]	0.08 [.02]	0.08 [.02]
<b>Downflow Economizer</b>	0.09 [.02]	0.10 [.02]	0.10 [.02]	0.11 [.03]	0.12 [.03]	0.13 [.03]	0.14 [.03]	0.15 [.04]	0.16 [.04]	0.17 [.04]	0.18 [.04]	0.18 [.04]
<b>R.A. Damper Open</b>	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]	0.06 [.01]	0.06 [.01]
<b>Horizontal Economizer</b>	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]	0.06 [.01]	0.06 [.01]
<b>R.A. Damper Open</b>	0.21 [.05]	0.25 [.06]	0.28 [.07]	0.32 [.08]	0.35 [.09]	0.39 [.10]	0.43 [.11]	0.46 [.11]	0.50 [.12]	0.54 [.13]	0.61 [.15]	0.64 [.16]
<b>Centrifugal Grill RXRN-AD80 or RXRN-AD81 &amp; Transition RXMC-CJ07</b>	0.068 [.02]	0.072 [.02]	0.076 [.02]	0.08 [.02]	0.084 [.02]	0.088 [.02]	0.092 [.02]	0.096 [.02]	0.104 [.02]	0.108 [.03]	0.112 [.03]	0.116 [.03]
<b>Pressure Drop MERV 8</b>	0.009 [.00]	0.015 [.00]	0.021 [.00]	0.028 [.01]	0.034 [.01]	0.04 [.01]	0.046 [.01]	0.052 [.01]	0.058 [.01]	0.065 [.02]	0.077 [.02]	0.083 [.02]
<b>Pressure Drop MERV 13</b>	0.009 [.00]	0.015 [.00]	0.021 [.00]	0.028 [.01]	0.034 [.01]	0.04 [.01]	0.046 [.01]	0.052 [.01]	0.058 [.01]	0.065 [.02]	0.077 [.02]	0.083 [.02]

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 [2360]	5200 [2454]	5400 [2549]	5600 [2643]	5800 [2737]	6000 [2832]	6200 [2926]	6400 [3020]	6600 [3115]	6800 [3209]	7000 [3304]	7200 [3398]
<b>TOTAL MBTUH</b>	0.97	0.97	0.98	0.98	0.99	0.99	1.00	1.00	1.01	1.02	1.02	1.03	1.04
<b>SENSIBLE MBTUH</b>	0.87	0.90	0.92	0.94	0.97	0.99	1.02	1.04	1.06	1.09	1.11	1.14	1.16
<b>POWER kW</b>	0.98	0.98	0.99	0.99	0.99	0.99	1.00	1.00	1.01	1.01	1.01	1.02	1.02

[ ] Designates Metric Conversions

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

## AIRFLOW PERFORMANCE – 17.5 TON [61.5 kW]-SIDECFLOW

## Indoor Airflow Performance **RLNL-C/H**

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

**NOTES:** 1. Factory sheave settings are shown in bold type.  
 2. Decrease blade angle to reduce airspeed at the fan exit.  
 3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure.

2. Do not set motor sheave below minimum turns open.

## COMPONENT AIR RESISTANCE – 17.5 TON [61.5 kW]

CFM [L/s]	5600 [2643]	5800 [2737]	6000 [2831]	6200 [2926]	6400 [3020]	6600 [3114]	6800 [3209]	7000 [3303]	7200 [3398]	7400 [3492]	7600 [3586]	7800 [3681]	8000 [3775]	8200 [3869]	8400 [3964]
<b>Resistance — Inches of Water [kPa]</b>															
<b>Wet Coil</b>	0.06 [.01]	0.07 [.02]	0.08 [.02]	0.09 [.02]	0.10 [.02]	0.11 [.03]	0.12 [.03]	0.13 [.03]	0.14 [.03]	0.14 [.03]	0.15 [.04]	0.16 [.04]	0.17 [.04]	0.17 [.04]	0.18 [.04]
<b>Downflow</b>	0.05 [.01]	0.05 [.01]	0.06 [.01]	0.06 [.01]	0.06 [.01]	0.07 [.02]	0.08 [.02]	0.09 [.02]	0.10 [.02]	0.11 [.02]	0.12 [.02]	0.13 [.03]	0.13 [.03]	0.14 [.03]	0.14 [.03]
<b>Downflow Economizer</b>	0.12 [.03]	0.13 [.03]	0.13 [.03]	0.14 [.03]	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]
<b>R.A. Damper Open</b>	0.02 [.00]	0.03 [.00]	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]	0.08 [.02]	0.09 [.02]	0.09 [.02]	0.10 [.02]
<b>Horizontal Economizer</b>	0.02 [.00]	0.03 [.00]	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]	0.08 [.02]	0.09 [.02]	0.09 [.02]	0.10 [.02]
<b>R.A. Damper Open</b>	0.00 [.00]	0.01 [.01]	0.02 [.02]	0.02 [.02]	0.02 [.02]	0.02 [.02]	0.02 [.02]	0.02 [.02]							
<b>Concentric Grill RXRN-AD80 or RXRN-AD81 &amp; Transition RXWC-CJ07</b>	0.35 [.09]	0.39 [.10]	0.43 [.11]	0.46 [.11]	0.50 [.13]	0.54 [.13]	0.57 [.14]	0.61 [.15]	0.64 [.16]	0.68 [.17]	0.72 [.18]	0.75 [.19]	0.79 [.20]	0.83 [.21]	0.86 [.21]
<b>Concentric Grill RXRN-AD86 &amp; Transition RXMC-CK08</b>	0.14 [.03]	0.17 [.04]	0.20 [.05]	0.23 [.06]	0.26 [.07]	0.29 [.07]	0.32 [.08]	0.35 [.09]	0.38 [.09]	0.41 [.10]	0.44 [.11]	0.47 [.12]	0.50 [.12]	0.53 [.13]	0.56 [.14]
<b>Pressure Drop MERV 8</b>	0.084 [.02]	0.088 [.02]	0.092 [.02]	0.096 [.02]	0.104 [.02]	0.108 [.02]	0.112 [.03]	0.116 [.03]	0.122 [.03]	0.124 [.03]	0.128 [.03]	0.132 [.03]	0.136 [.03]	0.14 [.03]	0.14 [.03]
<b>Pressure Drop MERV 13</b>	0.034 [.02]	0.04 [.02]	0.046 [.02]	0.052 [.02]	0.058 [.02]	0.065 [.02]	0.071 [.02]	0.077 [.02]	0.083 [.02]	0.089 [.02]	0.095 [.02]	0.102 [.02]	0.108 [.02]	0.114 [.02]	0.12 [.02]

## AIRFLOW CORRECTION FACTORS—17.5 TON [61.5 kW]

ACTUAL—CFM [L/s]	5600 [2643]	5800 [2737]	6000 [2831]	6200 [2926]	6400 [3020]	6600 [3114]	6800 [3209]	7000 [3303]	7200 [3398]	7400 [3492]	7600 [3586]	7800 [3681]	8000 [3775]	8200 [3869]	8400 [3964]
<b>TOTAL MBUH</b>	0.96	0.97	0.97	0.98	0.98	0.99	0.99	1.00	1.00	1.01	1.01	1.02	1.03	1.03	1.04
<b>SENSIBLE MBUH</b>	0.86	0.88	0.90	0.92	0.94	0.96	0.98	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.14
<b>POWER kW</b>	0.99	0.99	0.99	0.99	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

## AIRFLOW PERFORMANCE—20 TON [70.3 kW]-SIDEFLOW (C/H 240)

Air Flow CFM [l/s]	External Static Pressure -Inches of Water [kPa]												External Static Pressure -Inches of Water [kPa]						
	Capacity 20 Ton [70.3 kW]			Voltage 208/230, 460, 575 - 3 Phase			External Static Pressure -Inches of Water [kPa]												
0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.20]	0.9 [.22]	1.0 [.25]	1.1 [.27]	1.2 [.30]	1.3 [.32]	1.4 [.35]	1.5 [.37]	1.6 [.40]	1.7 [.42]	1.8 [.45]	1.9 [.47]	2.0 [.50]
RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W	RPM W
6400 [3020]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6600 [3115]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6800 [3209]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7000 [3304]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7200 [3398]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7400 [3492]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7600 [3587]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7800 [3681]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8000 [3776]	632	2475	674	2613	696	2754	718	2897	740	3043	761	3190	783	3341	805	3545	824	3699	843
8200 [3870]	644	2622	686	2767	707	2914	729	3064	751	3216	773	3370	795	3567	815	3773	834	3880	852
8400 [3964]	657	2805	724	2948	750	3021	772	3280	780	3427	797	3592	797	3750	825	3910	844	4070	862
8600 [4059]	670	2980	762	3146	764	2964	706	3241	763	3399	785	3559	806	3750	844	3931	880	4132	889
8800 [4153]	683	3166	705	3338	727	3512	749	3869	771	3868	771	3904	785	4089	805	4276	824	4449	842
9000 [4248]	697	3361	719	3540	741	3721	763	4089	785	4276	805	4449	842	4622	860	4796	877	4971	884
9200 [4342]	711	3557	733	3752	795	3939	777	4129	798	4327	817	4502	835	4787	853	4957	870	5137	887
9400 [4436]	725	3753	747	3975	799	4163	792	4381	811	4558	827	4736	847	4915	854	5145	871	5347	889
9600 [4531]	739	4010	762	4207	784	4407	805	4617	823	4798	842	4979	859	5161	877	5343	894	5526	910
9800 [4625]	753	4245	787	4442	799	4582	825	4798	842	4979	859	5161	877	5343	894	5526	910	5709	926

**NOTE:** I-Drive left of hold line M-Drive right of hold line

Drive Package	L, R	M, S	N (field installed Only), T
Motor H.P. [W]	5.0 [3728.5]	7.5 [5592.7]	7.5 [5592.7]
Blower Sheave	CK130H	CK130H	CK120H
Motor Sheave	1VP-56	1VP-71	1VP-71
Turns Open	1	2	3
RPM	756	734	709

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

i. Re-adjustment of sheave required to achieve rated airflow at AHR minimum External Static Pressure. Drive data shown is for horizontal airflow with dry coil. Add component resistance (halow) to duct

Drive data is stored in the non-volatile memory of the drive and will not be lost if power is removed.

instance to determine what External static pressure.

## COMPONENT AIRFLOW RESISTANCE—20 TON [70.3 kW] (C/H 240)

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]																
<b>Wet Coil</b>	0.00 [.00]	0.00 [.00]	0.00 [.00]	0.01 [.00]	0.01 [.00]	0.02 [.00]	0.02 [.00]	0.03 [.01]	0.04 [.01]	0.04 [.01]	0.05 [.01]	0.05 [.01]	0.05 [.01]	0.06 [.01]	0.06 [.01]	0.07 [.02]	
<b>Downdraft</b>	0.06 [.01]	0.06 [.02]	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 [.05]	0.19 [.05]	0.20 [.05]	
<b>Downdraft Economizer</b>	0.15 [.04]	0.16 [.04]	0.16 [.04]	0.17 [.04]	0.18 [.04]	0.19 [.04]	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]	0.28 [.07]	
<b>R.A. Damper Open</b>	0.04 [.01]	0.05 [.01]	0.05 [.01]	0.06 [.01]	0.06 [.01]	0.07 [.01]	0.07 [.02]	0.08 [.02]	0.09 [.02]	0.09 [.02]	0.10 [.02]	0.10 [.02]	0.11 [.02]	0.11 [.03]	0.12 [.03]	0.12 [.03]	
<b>Horizontal Economizer</b>	0.15 [.04]	0.16 [.04]	0.16 [.04]	0.17 [.04]	0.18 [.04]	0.19 [.04]	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]	
<b>R.A. Damper Open</b>	0.04 [.01]	0.05 [.01]	0.05 [.01]	0.06 [.01]	0.06 [.01]	0.07 [.01]	0.07 [.02]	0.08 [.02]	0.09 [.02]	0.09 [.02]	0.10 [.02]	0.10 [.02]	0.11 [.02]	0.11 [.03]	0.12 [.03]	0.12 [.03]	
<b>Centrifugal Grill RXFN-AD86 &amp; Transition RXMG-CR08</b>	0.26 [.06]	0.29 [.07]	0.32 [.08]	0.35 [.09]	0.38 [.09]	0.41 [.10]	0.44 [.10]	0.47 [.11]	0.50 [.11]	0.53 [.12]	0.56 [.12]	0.59 [.12]	0.62 [.13]	0.65 [.14]	0.69 [.15]	0.72 [.15]	
<b>Pressure Drop MERV 8</b>	0.1 [.02]	0.104 [.02]	0.108 [.03]	0.112 [.03]	0.116 [.03]	0.12 [.03]	0.124 [.03]	0.128 [.03]	0.132 [.03]	0.136 [.03]	0.14 [.03]	0.144 [.03]	0.148 [.03]	0.152 [.04]	0.156 [.04]	0.164 [.04]	
<b>Pressure Drop MERV 13</b>	0.058 [.01]	0.065 [.02]	0.071 [.02]	0.077 [.02]	0.083 [.02]	0.089 [.02]	0.095 [.02]	0.102 [.02]	0.108 [.02]	0.114 [.03]	0.12 [.03]	0.126 [.03]	0.132 [.03]	0.138 [.03]	0.145 [.04]	0.151 [.04]	

## AIRFLOW CORRECTION FACTORS—20 TON [70.3 kW] (C/H 240)

ACTUAL—CFW [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	1.00	1.00	1.01	1.01	1.02	1.02	1.03	1.03	1.04	1.04	
SENSIBLE MBH	0.88	0.90	0.92	0.94	0.96	0.97	0.99	1.01	1.03	1.05	1.07	1.09	1.10	1.12	1.14	1.16	
POWER kW	0.98	0.99	0.99	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.01	1.02	1.02	

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

[ ] Designates Metric Conversions

## AIRFLOW PERFORMANCE – 20 TON [70.3 kW] – 60 Hz – SIDEFLOW (C241)

Air Flow CFM [L/s]	Model RLRL-C240												Voltage 208/230, 460, 575 — 3 Phase 60 Hz													
	External Static Pressure—Inches of Water [kPa]												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			
6400 [3020]	—	—	—	—	—	—	—	685	251	707	2306	729	2461	750	2617	771	2774	792	2932	813	3090	853	3250	905		
6600 [3114]	—	—	—	—	—	—	—	698	2306	720	2462	741	2619	762	2777	783	2836	804	3095	824	3255	844	3415	863		
6800 [3209]	—	—	—	—	—	—	—	690	2313	712	2470	733	2528	754	2786	775	2946	795	3106	815	3266	835	3428	854		
7000 [3303]	—	—	—	—	—	—	—	682	2327	704	2484	725	2643	746	2802	766	2962	787	3123	807	3285	827	3447	846		
7200 [3336]	—	—	—	—	—	—	—	696	2505	717	2665	738	2825	779	3147	799	3309	819	3472	838	3656	857	3801	886		
7400 [3492]	—	—	689	2533	710	2693	731	2854	752	3015	772	3177	792	3341	812	3504	831	3669	850	3834	875	4000	887	4167	906	
7600 [3536]	682	2566	704	2727	724	2889	745	3051	765	3214	785	3378	805	3543	824	3708	843	3874	862	4041	880	4209	899	4377	917	
7800 [3681]	697	2768	718	2931	739	3094	759	3258	779	3423	798	3588	818	3754	837	3921	856	4089	874	4257	892	4426	910	4596	928	
8000 [3775]	712	2979	733	3143	753	3308	773	3473	793	3640	812	3806	831	3974	850	4142	868	4312	886	4481	904	4652	921	4823	939	
8200 [3889]	728	3119	748	3335	763	3531	787	3698	806	3865	825	4034	844	4203	862	4373	881	4543	898	4715	916	4887	933	5060	950	
8400 [3964]	743	3428	763	3595	782	3762	802	4100	839	4270	857	4441	875	4612	893	4784	911	4957	928	5131	945	5305	961	5480	978	
8600 [4058]	758	3665	778	3834	797	4003	816	4173	835	4434	853	4515	871	4687	889	4860	906	5034	923	5208	940	5383	956	5559	973	
8800 [4133]	774	3911	793	4081	812	4252	830	4423	850	4694	867	4769	884	4942	902	5117	919	5392	936	5564	958	5822	984	6000	1000	
9000 [4247]	790	4116	808	4338	827	4510	845	4683	863	4887	881	5031	898	5206	905	5382	932	5559	948	5736	964	5915	980	6093	996	
9200 [4341]	805	4430	824	4603	842	4777	860	4951	877	5127	895	5303	912	5479	929	5657	945	5835	961	6014	977	6194	992	6374	1008	6655
9400 [4436]	821	4703	839	4877	857	5052	875	5229	892	5405	909	5583	926	5761	942	5940	958	6120	974	6300	989	6481	1005	6663	—	—
9600 [4530]	837	4984	855	5160	872	5337	890	5514	907	5693	923	5872	940	6052	956	6232	971	6413	987	6595	1002	6778	—	—	—	—

NOTE: L-Drive left of bold line, M-Drive right of bold line, N-Drive right of double 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	BK120H	BK130H	BK120H
Motor Sheave	1VP-56	1VP-71	1VP-71
Turns Open	1	2	3
RPM	<b>822</b>	798	771

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 AHR minimum External Static Pressure.

4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

### [ ] Designates Metric Conversions

## COMPONENT AIRFLOW RESISTANCE – 20 TON [70.3 kW] (C241)

Airflow CFM [l/s]	Airflow Correction Factors*		Component Airflow Resistance							
			Wet Coil	Downflow	Downflow Economizer RA Damper Open	Horizontal Economizer RA Damper Open	Concentric Grill RXRN-AD80 or RXRN-AD81 & Transition RXMC-CJ07	Concentric Grill RXRN-AD86 & Transition RXMC-CJ08	Concentric Grill RXRN-AD88 & Transition RXMC-CL09	Pressure Drop MERV 8
	Total MBH	Sensible MBH	Power kW	Resistance — Inches of Water [kPa]						Pressure Drop MERV 13
6400 [3020]	0.97	0.88	0.98	0.01 [.00]	0.06 [.01]	0.15 [.04]	0.04 [.01]	0.50 [.12]	—	0.100 [.02]
6600 [3114]	0.97	0.90	0.99	0.02 [.00]	0.06 [.01]	0.16 [.04]	0.05 [.01]	0.54 [.13]	—	0.104 [.02]
6800 [3209]	0.98	0.92	0.99	0.03 [.01]	0.07 [.02]	0.16 [.04]	0.05 [.01]	—	—	0.108 [.03]
7000 [3303]	0.98	0.94	0.99	0.03 [.01]	0.08 [.02]	0.17 [.04]	0.06 [.01]	—	—	0.112 [.03]
7200 [3398]	0.99	0.96	0.99	0.04 [.01]	0.08 [.02]	0.18 [.04]	0.06 [.01]	—	0.38 [.09]	—
7400 [3492]	0.99	0.97	1.00	0.05 [.01]	0.09 [.02]	0.19 [.05]	0.07 [.02]	—	0.41 [.10]	—
7600 [3586]	1.00	0.99	1.00	0.06 [.01]	0.10 [.02]	0.20 [.05]	0.07 [.02]	—	0.44 [.11]	—
7800 [3681]	1.00	1.01	1.00	0.06 [.01]	0.11 [.03]	0.21 [.05]	0.08 [.02]	—	0.47 [.12]	—
8000 [3775]	1.01	1.03	1.00	0.07 [.02]	0.12 [.03]	0.22 [.05]	0.09 [.02]	—	0.50 [.12]	—
8200 [3869]	1.01	1.05	1.01	0.08 [.02]	0.13 [.03]	0.23 [.06]	0.09 [.02]	—	0.53 [.13]	—
8400 [3964]	1.02	1.07	1.01	0.09 [.02]	0.14 [.03]	0.24 [.06]	0.10 [.02]	—	0.56 [.14]	—
8600 [4058]	1.02	1.09	1.01	0.09 [.02]	0.15 [.04]	0.25 [.06]	0.10 [.02]	—	0.59 [.15]	—
8800 [4153]	1.03	1.10	1.01	0.10 [.02]	0.16 [.04]	0.26 [.06]	0.11 [.03]	—	0.62 [.15]	—
9000 [4247]	1.03	1.12	1.01	0.11 [.03]	0.18 [.04]	0.27 [.07]	0.11 [.03]	—	—	0.152 [.04]
9200 [4341]	1.03	1.14	1.02	0.12 [.03]	0.19 [.05]	0.28 [.07]	0.12 [.03]	—	—	0.156 [.04]
9400 [4436]	1.04	1.16	1.02	0.12 [.03]	0.20 [.05]	0.29 [.07]	0.12 [.03]	—	—	0.160 [.04]
9600 [4530]	1.04	1.18	1.02	0.13 [.03]	0.22 [.05]	0.30 [.07]	0.13 [.03]	—	—	0.164 [.04]

[ ] Designates Metric Conversions

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

Air Flow CFM [l/s]	Capacity 25 Ton [87.9 kW]				Capacity 20 Ton [70.0 kW]				Capacity 15 Ton [57.5 kW]				Capacity 10 Ton [40.0 kW]				Capacity 7 Ton [30.0 kW]				Capacity 5 Ton [22.0 kW]				External Static Pressure—Inches of Water [kPa]									
	0.1 [0.02]	0.2 [0.05]	0.3 [0.07]	0.4 [0.10]	0.5 [0.12]	0.6 [0.15]	0.7 [0.17]	0.8 [0.20]	0.9 [0.22]	1.0 [0.25]	1.1 [0.27]	1.2 [0.30]	1.3 [0.32]	1.4 [0.35]	1.5 [0.37]	1.6 [0.40]	1.7 [0.42]	1.8 [0.45]	1.9 [0.47]	2.0 [0.50]	RPM	W	RPM	W	RPM	W	RPM	W						
RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W							
8000 [3775]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—							
8200 [3869]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—							
8400 [3964]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—							
8600 [4058]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—							
8800 [4153]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—							
9000 [4247]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—							
9200 [4341]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—							
9400 [4436]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—							
9600 [4530]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—							
9800 [4624]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—							
10000 [4719]	733	4714	813	4910	831	5110	849	5315	857	5523	884	5735	901	5951	917	6171	945	6446	960	6647	975	6849	990	7052	1005	7256	1019	7461	1034	7667	1050	7873	1065	8081
10200 [4813]	808	4973	827	5181	845	5389	863	5600	880	5816	897	6035	913	6259	941	6542	956	6748	971	6954	986	7162	1010	7370	1016	7579	1031	7789	1042	8000	1061	8212	—	—
10400 [4908]	822	5254	840	5465	858	5680	876	5889	893	6122	909	6339	926	6580	953	6852	967	7063	982	7275	997	7488	1012	7701	1027	7916	1042	8131	1057	8348	1072	8565	—	—
10600 [5002]	836	5543	854	5761	872	5984	889	6210	906	6441	922	6675	949	6961	964	7176	979	7383	983	7610	1008	7828	1023	8047	1038	8267	1053	8488	1068	8710	—	—		
10800 [5096]	850	5845	868	6071	885	6042	894	6242	912	6301	902	6534	918	6772	946	7074	961	7294	975	7514	990	7736	1005	7959	1020	8182	1035	8407	1050	8632	1065	8858	—	—
11000 [5191]	864	6160	882	6393	899	6630	915	6871	943	7191	958	7415	972	7640	987	7867	1002	8094	1017	8321	1032	8550	1046	8780	1061	9011	—	—	—	—	—	—	—	
11200 [5285]	878	6487	895	6728	912	6972	940	7313	955	7541	969	7771	984	8001	985	8233	1014	8465	1029	8698	1043	8933	1058	9168	—	—	—	—	—	—	—			
11400 [5379]	892	6627	909	7075	925	7329	952	7671	967	7905	981	8140	996	8376	1011	8613	1026	8851	1041	9089	1055	9329	1070	9570	—	—	—	—	—	—	—			
11600 [5474]	906	7180	922	7436	950	7806	964	8044	979	8283	994	8524	1008	8765	1023	9007	1038	9250	1053	9494	1068	9739	—	—	—	—	—	—	—					
11800 [5568]	920	7546	948	7944	962	8187	977	8431	991	8676	1006	8921	1021	9168	1035	9416	1050	9664	1065	9913	—	—	—	—	—	—	—							
12000 [5663]	946	8087	960	8334	975	8583	989	8832	1004	9032	1019	9333	1033	9585	1045	9833	1063	1002	—	—	—	—	—	—	—									

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

Drive Package	L, R	M, S
Motor H.P. [W]	7.5 [55.92.7]	10 [7457.0]
Blower Sheave	CK130H	CK120H
Motor Sheave	1VP-71	1VP-75
Turns Open	<b>1</b>	2    3    4    5    6
RPM	<b>919</b>	894    869    844    817    790

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 – 25 TON [87.9 kW]

CFM [L/s]	8000 [3775]	8400 [3964]	8800 [4153]	9200 [4341]	9600 [4530]	10000 [4719]	10400 [4908]	10800 [5096]	11200 [5285]	11600 [5474]	12000 [5663]
	Resistance — Inches of Water [kPa]										
<b>Wet Coil</b>	0.07 [.02]	0.09 [.02]	0.10 [.02]	0.12 [.03]	0.13 [.03]	0.15 [.04]	0.16 [.04]	0.18 [.04]	0.19 [.05]	0.21 [.05]	0.22 [.05]
<b>Downflow</b>	0.12 [.03]	0.14 [.03]	0.16 [.04]	0.19 [.05]	0.22 [.05]	0.25 [.06]	0.29 [.07]	0.33 [.08]	0.37 [.09]	0.42 [.10]	0.46 [.11]
<b>Downflow Economizer</b>	0.22 [.05]	0.24 [.06]	0.26 [.06]	0.28 [.07]	0.30 [.07]	0.32 [.08]	0.34 [.08]	0.37 [.09]	0.39 [.10]	0.41 [.10]	0.44 [.11]
<b>R.A. Damper Open</b>	0.09 [.02]	0.10 [.02]	0.11 [.03]	0.12 [.03]	0.13 [.03]	0.14 [.03]	0.15 [.03]	0.16 [.04]	0.17 [.04]	0.18 [.04]	0.19 [.05]
<b>Horizontal Economizer</b>	0.09 [.02]	0.10 [.02]	0.11 [.03]	0.12 [.03]	0.13 [.03]	0.14 [.03]	0.15 [.03]	0.16 [.04]	0.17 [.04]	0.18 [.04]	0.19 [.05]
<b>R.A. Damper Open</b>	0.17 [.04]	0.23 [.06]	0.30 [.07]	0.36 [.09]	0.43 [.11]	0.50 [.12]	0.56 [.14]	0.63 [.16]	0.69 [.17]	0.76 [.19]	0.82 [.20]
<b>Concentric Grill RXRN-AD88 &amp; Transition RXWC-CL09</b>	0.132 [.03]	0.14 [.03]	0.148 [.04]	0.156 [.04]	0.164 [.04]	0.172 [.04]	0.178 [.04]	0.188 [.04]	0.196 [.05]	0.204 [.05]	0.212 [.05]
<b>Pressure Drop MERV 8</b>	0.108 [.03]	0.12 [.03]	0.132 [.04]	0.145 [.04]	0.157 [.04]	0.169 [.04]	0.182 [.04]	0.194 [.04]	0.206 [.05]	0.219 [.05]	0.231 [.06]
<b>Pressure Drop MERV 13</b>	0.108 [.03]	0.12 [.03]	0.132 [.04]	0.145 [.04]	0.157 [.04]	0.169 [.04]	0.182 [.04]	0.194 [.04]	0.206 [.05]	0.219 [.05]	0.231 [.06]

## AIRFLOW CORRECTION FACTORS – 25 TON [87.9 kW]

ACTUAL—CFM [L/s]	8000 [3775]	8400 [3964]	8800 [4153]	9200 [4341]	9600 [4530]	10000 [4719]	10400 [4908]	10800 [5096]	11200 [5285]	11600 [5474]	12000 [5663]
<b>TOTAL MBTUH</b>	0.97	0.98	0.99	0.99	1.00	1.01	1.02	1.03	1.03	1.04	1.05
<b>SENSIBLE MBTUH</b>	0.89	0.92	0.95	0.98	1.01	1.04	1.08	1.11	1.14	1.17	1.20
<b>POWER kW</b>	0.99	0.99	1.00	1.00	1.00	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 – RLNL- SERIES										
		C180CL H180CR	C180CM H180CS	C180DL H180DR	C180DM H180DS	C180YL	C180YM	C210CL H210CR	C210CM H210CS	C210DL H210DR
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506	518-632	518-632	187-253	187-253	414-506
	Volts	208/230	208/230	460	460	575	575	208/230	208/230	460
	Minimum Circuit Ampacity	78/78	81/81	38	40	28	30	88/88	91/91	44
	Minimum Overcurrent Protection Device Size	90/90	90/90	45	45	30	35	100/100	100/100	50
	Maximum Overcurrent Protection Device Size	100/100	100/100	45	50	35	35	110/110	110/110	50
Compressor Motor	No.	2	2	2	2	2	2	2	2	2
	Volts	200/230	200/230	460	460	575	575	200/230	200/230	460
	Phase	3	3	3	3	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450	3450	3450	3450	3450
	HP, Compressor 1	7	7	7	7	7	7	7 1/2	7 1/2	7 1/2
	Amps (RLA), Comp. 1	25/25	25/25	12.2	12.2	9	9	29.5/29.5	29.5/29.5	14.7
	Amps (LRA), Comp. 1	164/164	164/164	100	100	78	78	195/195	195/195	95
	HP, Compressor 2	7	7	7	7	7	7	7 1/2	7 1/2	7 1/2
	Amps (RLA), Comp. 2	25/25	25/25	12.2	12.2	9	9	29.5/29.5	29.5/29.5	14.7
	Amps (LRA), Comp. 2	164/164	164/164	100	100	78	78	195/195	195/195	95
Condenser Motor	No.	4	4	4	4	4	4	4	4	4
	Volts	208/230	208/230	460	460	575	575	208/230	208/230	460
	Phase	1	1	1	1	1	1	1	1	1
	HP	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	2.4/2.4	2.4/2.4	1.4	1.4	1	1	2.4/2.4	2.4/2.4	1.4
Evaporator Fan	Amps (LRA, each)	4.7/4.7	4.7/4.7	2.4	2.4	1.8	1.8	4.7/4.7	4.7/4.7	2.4
	No.	1	1	1	1	1	1	1	1	1
	Volts	208/230	208/230	460	460	575	575	208/230	208/230	460
	Phase	3	3	3	3	3	3	3	3	3
	HP	3	5	3	5	3	5	3	5	3
	Amps (FLA, each)	11.5/11.5	14.9/14.9	4.6	6.6	3.5	5.3	11.5/11.5	14.9/14.9	4.6
	Amps (LRA, each)	74.5/74.5	82.6/82.6	38.1	46.3	20	39.4	74.5/74.5	82.6/82.6	38.1

ELECTRICAL DATA – RLNL- SERIES										
		C210DM H210DS	C210YL	C210YM	C240CL H240CR	C240CM H240CS	C240CN H240CT	C240DL H240DR	C240DM H240DS	C240DN H240DT
Unit Information	Unit Operating Voltage Range	414-506	518-632	518-632	187-253	187-253	187-253	414-506	414-506	414-506
	Volts	460	575	575	208/230	208/230	208/230	460	460	460
	Minimum Circuit Ampacity	46	35	37	101/101	109/109	109/109	52	56	56
	Minimum Overcurrent Protection Device Size	50	40	40	110/110	125/125	125/125	60	60	60
	Maximum Overcurrent Protection Device Size	50	45	45	125/125	125/125	125/125	60	70	70
Compressor Motor	No.	2	2	2	2	2	2	2	2	2
	Volts	460	575	575	200/230	200/230	200/230	460	460	460
	Phase	3	3	3	3	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450	3450	3450	3450	3450
	HP, Compressor 1	7 1/2	7 1/2	7 1/2	10	10	10	10	10	10
	Amps (RLA), Comp. 1	14.7	12.2	12.2	33.3/33.3	33.3/33.3	33.3/33.3	17.9	17.9	17.9
	Amps (LRA), Comp. 1	95	80	80	239/239	239/239	239/239	125	125	125
	HP, Compressor 2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2
	Amps (RLA), Comp. 2	14.7	12.2	12.2	29.5/29.5	29.5/29.5	29.5/29.5	14.7	14.7	14.7
	Amps (LRA), Comp. 2	95	80	80	195/195	195/195	195/195	95	95	95
Condenser Motor	No.	4	4	4	6	6	6	6	6	6
	Volts	460	575	575	208/230	208/230	208/230	460	460	460
	Phase	1	1	1	1	1	1	1	1	1
	HP	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	1.4	1	1	2.4/2.4	2.4/2.4	2.4/2.4	1.4	1.4	1.4
	Amps (LRA, each)	2.4	1.8	1.8	4.7/4.7	4.7/4.7	4.7/4.7	2.4	2.4	2.4
Evaporator Fan	No.	1	1	1	1	1	1	1	1	1
	Volts	460	575	575	208/230	208/230	208/230	460	460	460
	Phase	3	3	3	3	3	3	3	3	3
	HP	5	3	5	5	7 1/2	7 1/2	5	7 1/2	7 1/2
	Amps (FLA, each)	6.6	3.5	5.3	14.7/14.7	23.1/23.1	23.1/23.1	6.6	9.6	9.6
	Amps (LRA, each)	46.3	20	39.4	82.6/82.6	136/136	136/136	46.3	67	67

ELECTRICAL DATA - RLNL- SERIES										
		C240YL	C240YM	C240YN	C241CL	C241CM	C241DL	C241DM	C241YL	C241YM
Unit Information	Unit Operating Voltage Range	518-632	518-632	518-632	187-253	187-253	414-506	414-506	518-632	518-632
	Volts	575	575	575	208/230	208/230	460	460	575	575
	Minimum Circuit Ampacity	40	42	42	95/95	103/103	49	52	37	39
	Minimum Overcurrent Protection Device Size	45	50	50	110/110	125/125	60	60	40	45
	Maximum Overcurrent Protection Device Size	50	50	50	110/110	125/125	60	60	45	50
Compressor Motor	No.	2	2	2	2	2	2	2	2	2
	Volts	575	575	575	200/230	200/230	460	460	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	12.8	12.8	12.8	30.1/30.1	30.1/30.1	16.7	16.7	12.2	12.2
	Amps (LRA), Comp. 1	80	80	80	225/225	225/225	114	114	80	80
	HP, Compressor 2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2
	Amps (RLA), Comp. 2	12.2	12.2	12.2	27.6/27.6	27.6/27.6	12.8	12.8	9.6	9.6
	Amps (LRA), Comp. 2	80	80	80	191/191	191/191	100	100	78	78
Condenser Motor	No.	6	6	6	6	6	6	6	6	6
	Volts	575	575	575	208/230	208/230	460	460	575	575
	Phase	1	1	1	1	1	1	1	1	1
	HP	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	1	1	1	2.4/2.4	2.4/2.4	1.4	1.4	1	1
	Amps (LRA, each)	1.8	1.8	1.8	4.7/4.7	4.7/4.7	2.4	2.4	1.8	1.8
Evaporator Fan	No.	1	1	1	1	1	1	1	1	1
	Volts	575	575	575	208/230	208/230	460	460	575	575
	Phase	3	3	3	3	3	3	3	3	3
	HP	5	7 1/2	7 1/2	5	7 1/2	5	7 1/2	5	7 1/2
	Amps (FLA, each)	5.3	7.8	7.8	14.7/14.7	23.1/23.1	6.6	9.6	5.3	7.8
	Amps (LRA, each)	39.4	53.8	53.8	82.6/82.6	136/136	46.3	67	39.4	53.8

ELECTRICAL DATA – RLNL- SERIES					
		C300CL H300CR	C300CM H300CS	C300DL H300DR	C300DM H300DS
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506
	Volts	208/230	208/230	460	460
	Minimum Circuit Ampacity	147/147	149/149	60	63
	Minimum Overcurrent Protection Device Size	175/175	175/175	70	70
	Maximum Overcurrent Protection Device Size	175/175	175/175	70	80
Compressor Motor	No.	2	2	2	2
	Volts	200/240	200/240	460	460
	Phase	3	3	3	3
	RPM	3450	3450	3450	3450
	HP, Compressor 1	11 1/2	11 1/2	11 1/2	11 1/2
	Amps (RLA), Comp. 1	48.1/48.1	48.1/48.1	18.6	18.6
	Amps (LRA), Comp. 1	245/245	245/245	125	125
	HP, Compressor 2	11 1/2	11 1/2	11 1/2	11 1/2
	Amps (RLA), Comp. 2	48.1/48.1	48.1/48.1	18.6	18.6
	Amps (LRA), Comp. 2	245/245	245/245	125	125
Condenser Motor	No.	6	6	6	6
	Volts	208/230	208/230	460	460
	Phase	1	1	1	1
	HP	1/3	1/3	1/3	1/3
	Amps (FLA, each)	2.4/2.4	2/2	1.4	1.4
	Amps (LRA, each)	4.7/4.7	3.9/3.9	2.4	2.4
Evaporator Fan	No.	1	1	1	1
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	HP	7 1/2	10	7 1/2	10
	Amps (FLA, each)	24.2/24.2	28.5/28.5	9.6	12.5
	Amps (LRA, each)	136/136	178/178	67	74.6

### ELECTRICAL DATA – RLNL- SERIES

		C300YL	C300YM
Unit Information	Unit Operating Voltage Range	518-632	518-632
	Volts	575	575
	Minimum Circuit Ampacity	47	50
	Minimum Overcurrent Protection Device Size	60	60
	Maximum Overcurrent Protection Device Size	60	60
Compressor Motor	No.	2	2
	Volts	575	575
	Phase	3	3
	RPM	3450	3450
	HP, Compressor 1	11 1/2	11 1/2
	Amps (RLA), Comp. 1	14.7	14.7
	Amps (LRA), Comp. 1	100	100
	HP, Compressor 2	11 1/2	11 1/2
	Amps (RLA), Comp. 2	14.7	14.7
	Amps (LRA), Comp. 2	100	100
Condenser Motor	No.	6	6
	Volts	575	575
	Phase	1	1
	HP	1/3	1/3
	Amps (FLA, each)	1	1
Evaporator Fan	Amps (LRA, each)	1.8	1.8
	No.	1	1
	Volts	575	575
	Phase	3	3
	HP	7 1/2	10
	Amps (FLA, each)	7.8	10
	Amps (LRA, each)	53.8	59.2

## **208/240 VOLTS, 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.	RXJJ-Heater Kit Nominal kW	Heater Kit			Air Conditioner			Heater Kit			Air Conditioner			Heater Kit			Air Conditioner	
		No. of Sequence Steps	Rated Heater kW @ 208/240V	Heater kBTU/Hr @ 208/240V	Unit Amps @ 208/240V	Min. Ckt. Ampacity @ 208/240V	Over Current Protective Device Size 208V	Min./Max. 240V	Min. Ckt. Ampacity @ 208/240V	Max. Fuse Size 208/240V	Min. Circuit Ampacity 208/240V	Over Current Protective Device Size 208V	Min./Max. 240V	Over Current Protective Device Size 208V	Min./Max. 240V	Air Conditioner		
																Air Conditioner		
No Heat	—	—	—	—	—	—	78/78	90/100	—	—	—	78/78	90/100	—	—	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	—	—	—	—	—	—	—	
CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	78/78	90/100	90/100	150/150	100/116	100/125	—	—	—	—	—	—	—	
CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	155/188	125/125	150/173	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE75C	2	54/71.9	184.22/245.29	149.8/172.8	202/231	225/225	250/250	188/217	200/225	200/225	—	—	—	—	—	—	—	
No Heat	—	—	—	—	—	—	88/88	100/110	100/110	—	—	88/88	100/110	—	—	100/110	100/110	
CE20C	1	14.4/19.2	49.13/65.5	40/46.2	88/88	100/110	100/110	125/125	100/116	100/125	—	—	—	—	—	—	—	
CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	88/88	100/110	100/110	150/150	100/116	100/125	—	—	—	—	—	—	—	
CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	165/188	125/125	150/173	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE75C	2	54/71.9	184.22/245.29	149.8/172.8	202/231	225/225	250/250	188/217	200/225	200/225	—	—	—	—	—	—	—	
No Heat	—	—	—	—	—	—	101/101	110/125	110/125	—	—	101/101	110/125	—	—	110/125	110/125	
CE20C	1	14.4/19.2	49.13/65.5	40/46.2	101/101	110/125	110/125	125/125	100/116	100/125	—	—	—	—	—	—	—	
CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	101/101	110/125	110/125	150/150	100/116	100/125	—	—	—	—	—	—	—	
CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	169/192	125/125	150/173	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE75C	2	54/71.9	184.22/245.29	149.8/172.8	206/235	225/225	250/250	188/217	200/225	200/225	—	—	—	—	—	—	—	
No Heat	—	—	—	—	—	—	147/147	175/175	175/175	—	—	147/147	175/175	—	—	175/175	175/175	
CE20C	1	14.4/19.2	49.13/65.5	40/46.2	147/147	175/175	175/175	175/175	100/116	100/125	—	—	—	—	—	—	—	
CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	147/147	175/175	175/175	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	181/204	200/200	225/225	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE75C	2	54/71.9	184.22/245.29	149.8/172.8	218/247	225/225	250/250	188/217	200/225	200/225	—	—	—	—	—	—	—	
No Heat	—	—	—	—	—	—	87/87	90/100	90/100	—	—	87/87	90/100	—	—	90/100	90/100	
CE20C	1	14.4/19.2	49.13/65.5	40/46.2	87/87	90/100	90/100	125/125	100/116	100/125	—	—	—	—	—	—	—	
CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	87/87	90/100	90/100	150/150	100/116	100/125	—	—	—	—	—	—	—	
CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	169/192	125/125	150/173	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE75C	2	54/71.9	184.22/245.29	149.8/172.8	206/235	225/225	250/250	188/217	200/225	200/225	—	—	—	—	—	—	—	
No Heat	—	—	—	—	—	—	91/91	100/110	100/110	—	—	91/91	100/110	—	—	100/110	100/110	
CE20C	1	14.4/19.2	49.13/65.5	40/46.2	91/91	100/110	100/110	125/125	100/116	100/125	—	—	—	—	—	—	—	
CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	91/91	100/110	100/110	150/150	100/116	100/125	—	—	—	—	—	—	—	
CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	169/192	125/125	150/173	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE75C	2	54/71.9	184.22/245.29	149.8/172.8	206/235	225/225	250/250	188/217	200/225	200/225	—	—	—	—	—	—	—	
No Heat	—	—	—	—	—	—	91/91	100/110	100/110	—	—	91/91	100/110	—	—	100/110	100/110	
CE20C	1	14.4/19.2	49.13/65.5	40/46.2	91/91	100/110	100/110	125/125	100/116	100/125	—	—	—	—	—	—	—	
CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	91/91	100/110	100/110	150/150	100/116	100/125	—	—	—	—	—	—	—	
CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	169/192	125/125	150/173	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE75C	2	54/71.9	184.22/245.29	149.8/172.8	217/245	225/225	250/250	188/217	200/225	200/225	—	—	—	—	—	—	—	
No Heat	—	—	—	—	—	—	109/109	125/125	125/125	—	—	109/109	125/125	—	—	125/125	125/125	
CE20C	1	14.4/19.2	49.13/65.5	40/46.2	109/109	125/125	125/125	125/125	100/116	100/125	—	—	—	—	—	—	—	
CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	109/109	125/125	125/125	150/150	100/116	100/125	—	—	—	—	—	—	—	
CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	169/192	125/125	150/173	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE75C	2	54/71.9	184.22/245.29	149.8/172.8	217/245	225/225	250/250	188/217	200/225	200/225	—	—	—	—	—	—	—	
C210CM	—	—	—	—	—	—	149/149	175/175	175/175	—	—	149/149	175/175	—	—	175/175	175/175	
CE20C	1	14.4/19.2	49.13/65.5	40/46.2	149/149	175/175	175/175	175/175	100/116	100/125	—	—	—	—	—	—	—	
CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	149/151	175/175	175/175	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	186/209	200/200	225/225	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE75C	2	54/71.9	184.22/245.29	149.8/172.8	223/252	225/225	250/250	188/217	200/225	200/225	—	—	—	—	—	—	—	
C240CM	—	—	—	—	—	—	149/149	175/175	175/175	—	—	149/149	175/175	—	—	175/175	175/175	
CE20C	1	14.4/19.2	49.13/65.5	40/46.2	149/149	175/175	175/175	175/175	100/116	100/125	—	—	—	—	—	—	—	
CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	149/151	175/175	175/175	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	179/202	200/200	225/225	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE75C	2	54/71.9	184.22/245.29	149.8/172.8	217/245	225/225	250/250	188/217	200/225	200/225	—	—	—	—	—	—	—	
C300CM	—	—	—	—	—	—	109/109	125/125	125/125	—	—	109/109	125/125	—	—	125/125	125/125	
CE20C	1	14.4/19.2	49.13/65.5	40/46.2	109/109	125/125	125/125	125/125	100/116	100/125	—	—	—	—	—	—	—	
CE40C	2	28.8/38.3	98.25/130.66	79.9/92.2	109/109	125/125	125/125	150/150	100/116	100/125	—	—	—	—	—	—	—	
CE60C	2	43.2/57.5	147.38/196.16	119.9/138.3	129/145	150/150	150/173	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE75C	2	54/71.9	184.22/245.29	149.8/172.8	217/245	225/225	250/250	188/217	200/225	200/225	—	—	—	—	—	—	—	
C240CN	—	—	—	—	—	—	149/149	175/175	175/175	—	—	149/149	175/175	—	—	175/175	175/175	
CE20CT	1	14.4/19.2	49.13/65.5	40/46.2	149/149	175/175	175/175	175/175	100/116	100/125	—	—	—	—	—	—	—	
CE40CT	2	28.8/38.3	98.25/130.66	79.9/92.2	149/151	175/175	175/175	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE60CT	2	43.2/57.5	147.38/196.16	119.9/138.3	179/202	200/200	225/225	200/200	150/173	150/175	—	—	—	—	—	—	—	
CE75CT	2	54/71.9	184.22/245.29	149.8/172.8	217/245	225/225	250/250	188/217	200/225	200/225	—	—	—	—	—	—	—	

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

**480 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION**

Model No. RLNL-	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	
	RXJ-J Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 480V	Heater kBTU/Hr @ 480V	Unit Min. Ckt. Ampacity @ 480V	Unit Max. Ckt. Ampacity @ 480V	Min. Ckt. Ampacity 480V	Max. Ckt. Ampacity 480V	Min. Circuit Ampacity 480V	Max. Fuse Size 480V	Min. Circuit Ampacity 480V	Max. Fuse Size 480V	Over Current Protective Device Size Min./Max. 480V	
No Heat CE20D CE40D CE60D CE75D	—	—	19.2 38.4 57.6 72	65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	38 64 93 114	45/45 45/45 70/70 100/100	— — — —	— 29 58 87	30 60 90 110	— 38 — —	38 — — —	45/45	
No Heat CE20D CE40D CE60D CE75D	—	—	19.2 38.4 57.6 72	65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	44 64 93 114	50/50 50/50 70/70 100/100	— — — —	— 29 58 87	30 60 90 110	— 44 — —	44 — — —	50/50	
C210DL H210DR	—	—	19.2 38.4 57.6 72	65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	44 64 93 117	50/50 50/50 70/70 100/100	— — — —	— 29 58 87	30 60 90 110	— 44 — —	— — — —	—	
C240DL H240DR	—	—	19.2 38.4 57.6 72	65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	52 67 95 117	60/60 60/60 70/70 100/100	— — — —	— 29 58 87	30 60 90 110	— 44 — —	— — — —	60/60	
C300DL H300DR	—	—	19.2 38.4 57.6 72	65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	60 67 70 121	70/70 70/70 70/70 125/125	— — — —	— 29 58 87	30 60 90 110	— 44 — —	— — — —	70/70	
C180DM H180DS	—	—	19.2 38.4 57.6 72	65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	40 46 95 117	45/50 45/50 70/70 100/100	— — — —	— 29 58 87	30 60 90 110	— 44 — —	— — — —	45/50	
C210DM H210DS	—	—	19.2 38.4 57.6 72	65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	46 46 95 117	50/50 50/50 70/70 100/100	— — — —	— 29 58 87	30 60 90 110	— 44 — —	— — — —	50/50	
C240DM H240DS	—	—	19.2 38.4 57.6 72	65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	56 67 95 117	60/70 70/70 100/100 125/125	— — — —	— 29 58 87	30 60 90 110	— 44 — —	— — — —	60/60	
C300DM H300DS	—	—	19.2 38.4 57.6 72	65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	63 70 99 121	60/70 70/70 100/100 125/125	— — — —	— 29 58 87	30 60 90 110	— 44 — —	— — — —	60/60	
No Heat CE20D CE40D CE60D CE75D	—	—	19.2 38.4 57.6 72	65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	63 70 99 121	70/80 80/80 110/110 125/125	— — — —	— 29 58 87	30 60 90 110	— 44 — —	— — — —	60/60	
C240DN H240DT	—	—	19.2 38.4 57.6 72	65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	56 67 99 121	60/70 70/70 100/100 125/125	— — — —	— 29 58 87	30 60 90 110	— 44 — —	— — — —	60/60	

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

600 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION										
Model No. RLNL-	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		
	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	Unit Max. Ckt. Ampacity @ 600V	Over Current Protective Device Size Min./Max. 600V	Over Current Protective Device Size Min./Max. 600V	Over Current Protective Device Size Min./Max. 600V
No Heat	—	—	—	—	—	28	30/35	—	—	—
CE20Y	1	19.2	65.5	18.5	28	30/35	—	24	25	28
CE40Y	2	38.4	131	37	51	60/60	—	47	50	—
CE60Y	2	57.6	196.5	55.4	74	80/80	—	70	70	—
CE75Y	2	72	245.63	69.3	92	100/100	—	87	90	—
No Heat	—	—	—	—	—	35	40/45	—	—	35
CE20Y	1	19.2	65.5	18.5	35	40/45	—	24	25	—
CE40Y	2	38.4	131	37	51	60/60	—	47	50	—
CE60Y	2	57.6	196.5	55.4	74	80/80	—	70	70	—
CE75Y	2	72	245.63	69.3	92	100/100	—	87	90	—
No Heat	—	—	—	—	40	45/50	—	—	—	40/45
CE20Y	1	19.2	65.5	18.5	40	45/50	—	24	25	—
CE40Y	2	38.4	131	37	53	60/60	—	47	50	—
CE60Y	2	57.6	196.5	55.4	76	80/80	—	70	70	—
CE75Y	2	72	245.63	69.3	94	100/100	—	87	90	—
No Heat	—	—	—	—	30	35/35	—	—	—	45/50
CE20Y	1	19.2	65.5	18.5	30	35/35	—	24	25	—
CE40Y	2	38.4	131	37	53	60/60	—	47	50	—
CE60Y	2	57.6	196.5	55.4	76	80/80	—	70	70	—
CE75Y	2	72	245.63	69.3	94	100/100	—	87	90	—
No Heat	—	—	—	—	37	40/45	—	—	—	40/45
CE20Y	1	19.2	65.5	18.5	37	40/45	—	24	25	—
CE40Y	2	38.4	131	37	53	60/60	—	47	50	—
CE60Y	2	57.6	196.5	55.4	76	80/80	—	70	70	—
CE75Y	2	72	245.63	69.3	94	100/100	—	87	90	—
No Heat	—	—	—	—	42	50/50	—	—	—	35/35
CE20Y	1	19.2	65.5	18.5	42	50/50	—	24	25	—
CE40Y	2	38.4	131	37	56	60/60	—	47	50	—
CE60Y	2	57.6	196.5	55.4	80	80/80	—	70	70	—
CE75Y	2	72	245.63	69.3	97	100/100	—	87	90	—
No Heat	—	—	—	—	42	50/50	—	—	—	40/45
CE20Y	1	19.2	65.5	18.5	42	50/50	—	24	25	—
CE40Y	2	38.4	131	37	56	60/60	—	47	50	—
CE60Y	2	57.6	196.5	55.4	80	80/80	—	70	70	—
CE75Y	2	72	245.63	69.3	97	100/100	—	87	90	—

\* = For Canadian use only. Uses "P" fuses for inductive circuit.  
+ = 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										
Model No. RLNL-	RXJJ- Heater Kit Nominal kW	Heater Kit			Air Conditioner			Separate Power Supply for Both Unit and Heater Kit		
		No. of Sequence Steps	Rated Heater kW @ 600V	Heater kBTU/Hr @ 600V	Unit Heater Amps @ 600V	Unit Min. Ckt. Ampacity @ 600V	Over Current Protective Device Size Min./Max. 600V	Min. Ckt. Ampacity 600V	Max. Fuse Size 600V	Min. Circuit Ampacity 600V
C300YL	No Heat	—	—	—	47	60/60	—	—	47	60/60
	CE20Y	1	19.2	65.5	47	60/60	—	24	—	—
	CE40Y	2	38.4	131	56	60/60	—	47	50	—
	CE60Y	2	57.6	196.5	80	80/80	—	70	70	—
	CE75Y	2	72	245.63	69.3	97	100/100	87	90	—
C300YM	No Heat	—	—	—	50	60/60	—	—	50	60/60
	CE20Y	1	19.2	65.5	50	60/60	—	24	—	—
	CE40Y	2	38.4	131	59	60/60	—	47	50	—
	CE60Y	2	57.6	196.5	82	90/90	—	70	70	—
	CE75Y	2	72	245.63	69.3	100	100/100	87	90	—

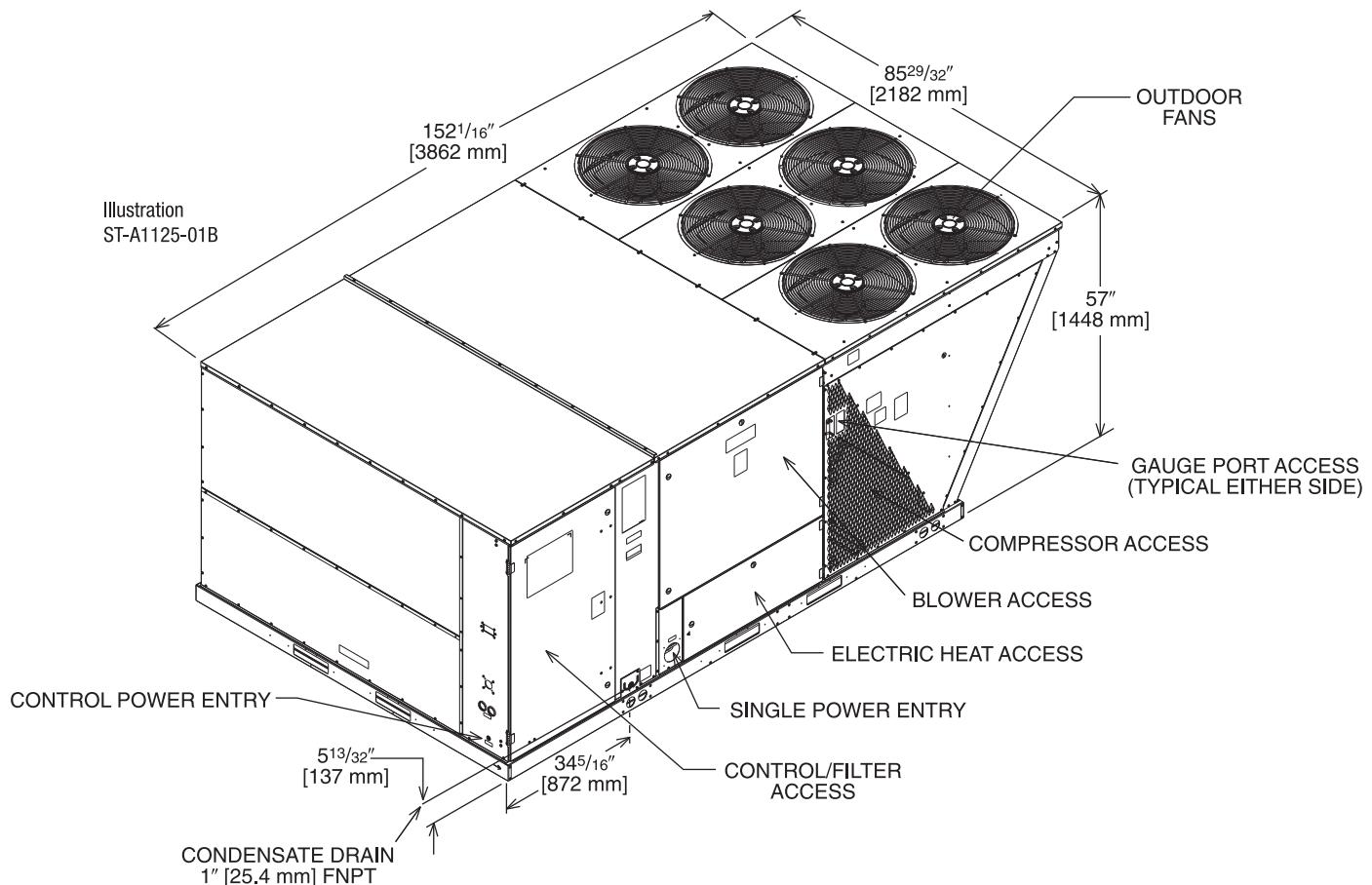
\* = For Canadian use only. Uses "P" fuses for inductive circuit.

+ = Field installed only.

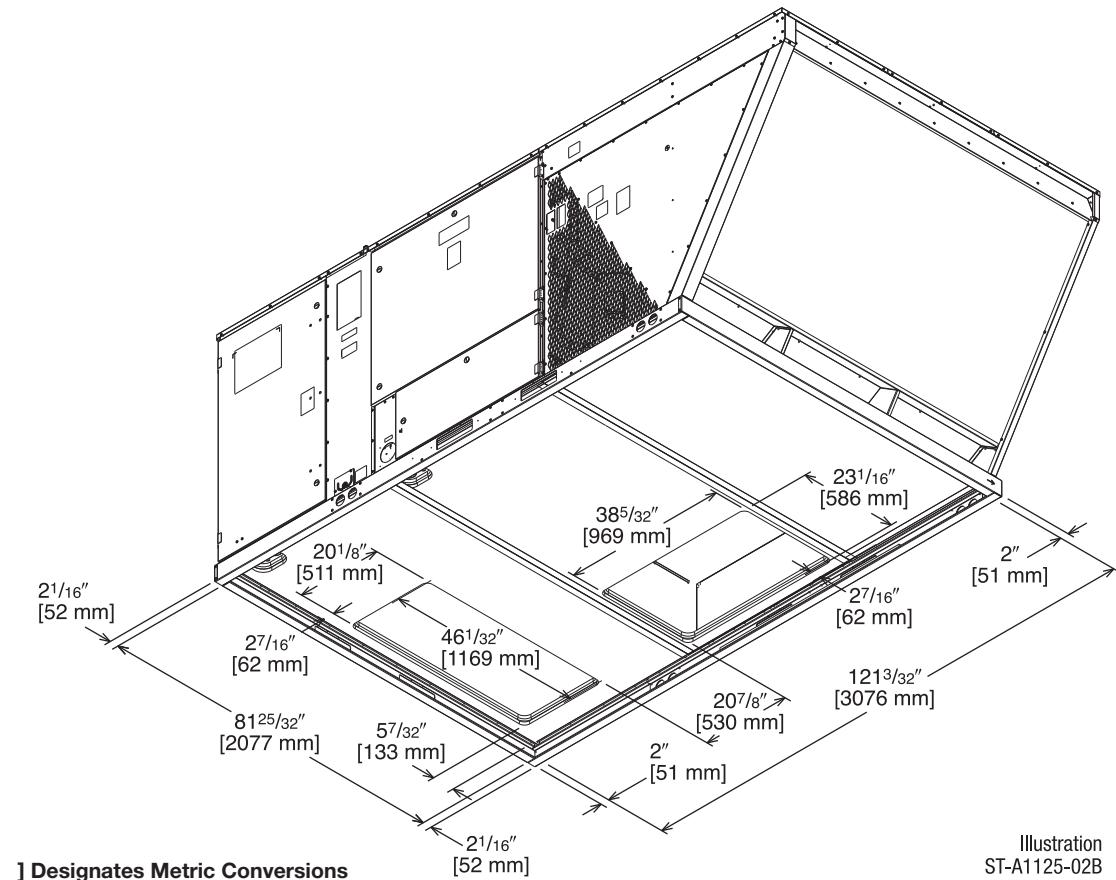
208/240 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION										
Single Power Supply for Both Unit and Heater Kit										
Model No. RLNL-	RXJJ- Heater Kit Nominal kW	Heater Kit		Air Conditioner		Separate Power Supply for Both Unit and Heater Kit				
		No. of Sequence Steps	Rated Heater kW @ 208/240V	Heater kBTU/Hr @ 208/240V	Unit Min. Ckt. Ampacity @ 208/240V	Over Current Protective Device Size Min./Max 208V	Min. Ckt. Ampacity 208/240V	Max. Fuse Size 208/240V	Air Conditioner	
C241CL-	No Heat CE20C CE40C CE60C CE75C	— 1 2 2 2	— 14.4/19.2 28.8/38.3 43.2/57.5 54/71.9	— 49.13/65.5 98.25/130.66 147.38/196.16 184.22/245.29	40/46.2 79.9/92.2 119.9/138.3 149.8/172.8	95/95 95/95 119/134 169/192	110/110 110/110 125/125 175/175	50/58 100/116 150/150 200/200	— 50/60 100/125 150/175	95/95 95/95 95/95 95/95
C241CM	No Heat CE20C CE40C CE60C CE75C	— 1 2 2 2	— 14.4/19.2 28.8/38.3 43.2/57.5 54/71.9	— 49.13/65.5 98.25/130.66 147.38/196.16 184.22/245.29	40/46.2 79.9/92.2 119.9/138.3 149.8/172.8	103/103 103/103 129/145 179/202	125/125 125/125 150/150 200/200	50/58 50/60 100/116 150/175	— 103/103 103/103 103/103	125/125 125/125 125/125 125/125
					206/235	250/250	188/217	200/225	95/95	110/110
					217/245	250/250	188/217	200/225	95/95	110/110

480 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION										
Single Power Supply for Both Unit and Heater Kit										
Model No. RLRL-	RXJJ- Heater Kit Nominal kW	Heater Kit		Air Conditioner		Separate Power Supply for Both Unit and Heater Kit				
		No. of Sequence Steps	Rated Heater kW @ 480V	Heater kBTU/Hr @ 480V	Unit Min. Ckt. Ampacity @ 480V	Over Current Protective Device Size Min./Max 480V	Min. Ckt. Ampacity 480V	Max. Fuse Size 480V	Air Conditioner	
C241DL	No Heat CE20D CE40D CE60D CE75D	— 1 2 2 2	— 19.2 38.4 57.6 72	— 65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	49 67 95 117	60/60 60/60 70/70 100/100	— 29 58 87	— 30 60 90	49 — — —
C241DM	No Heat CE20D CE40D CE60D CE75D	— 1 2 2 2	— 19.2 38.4 57.6 72	— 65.5 131 196.5 245.63	23.1 46.2 69.3 86.6	52 70 99 121	60/60 60/60 100/100 125/125	— 29 58 87	— 30 60 90	52 — — —
					217/245	250/250	188/217	200/225	95/95	110/110
					217/245	250/250	188/217	200/225	95/95	110/110

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. RLRL-	RXJJ Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 600V	Heater kBtu/Hr @ 600V	Unit Min. Ckt. Ampacity @ 600V	Unit Min. Ckt. Ampacity @ 600V	Over Current Protective Device Size Min./Max. 600V	Min. Ckt. Ampacity 600V	Max. Fuse Size 600V	Min. Circuit Ampacity 600V
C241YL	No Heat CE20Y CE40Y CE60Y CE75Y	— 1 2 2 2	— 19.2 38.4 57.6 72	— 65.5 131 196.5 245.63	— 18.5 37 55.4 69.3	37 37 53 76 94	40/45 40/45 60/60 80/80 100/100	— — — — —	— 24 47 70 87	— 25 50 70 90
C241YM	No Heat CE20Y CE40Y CE60Y CE75Y	— 1 2 2 2	— 19.2 38.4 57.6 72	— 65.5 131 196.5 245.63	— 18.5 37 55.4 69.3	39 39 57 80 97	45/50 45/50 60/60 80/80 100/100	— — — — —	— 24 47 70 87	— 25 50 70 90



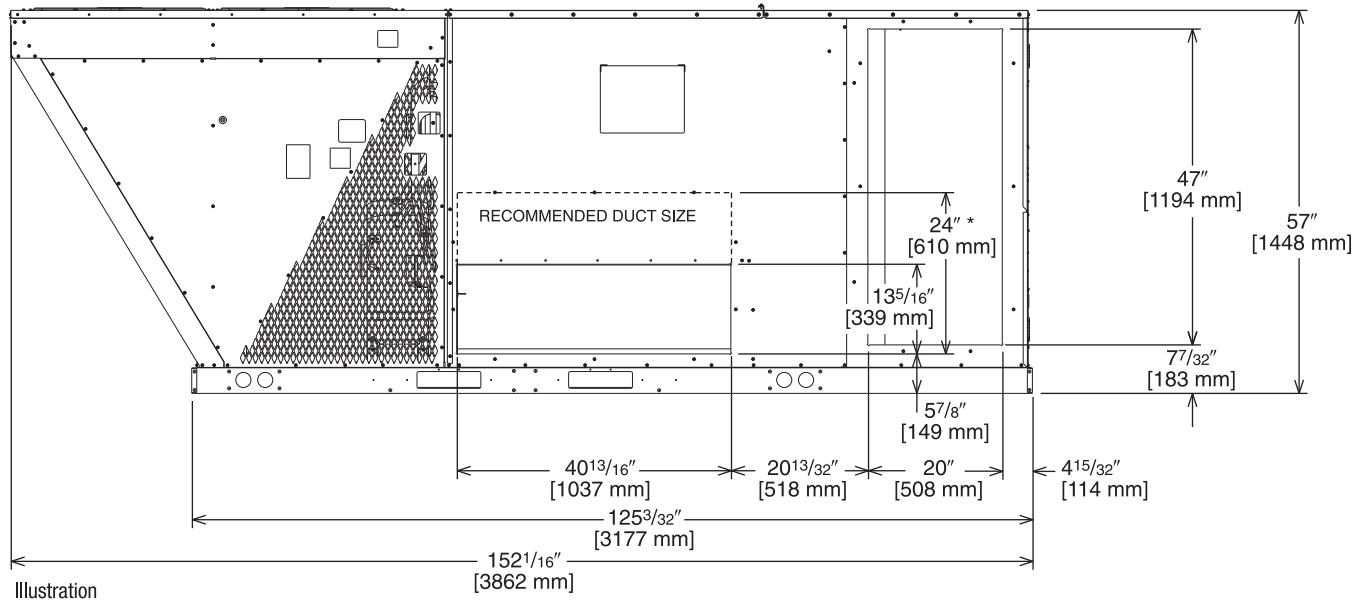
## BOTTOM VIEW



[ ] Designates Metric Conversions

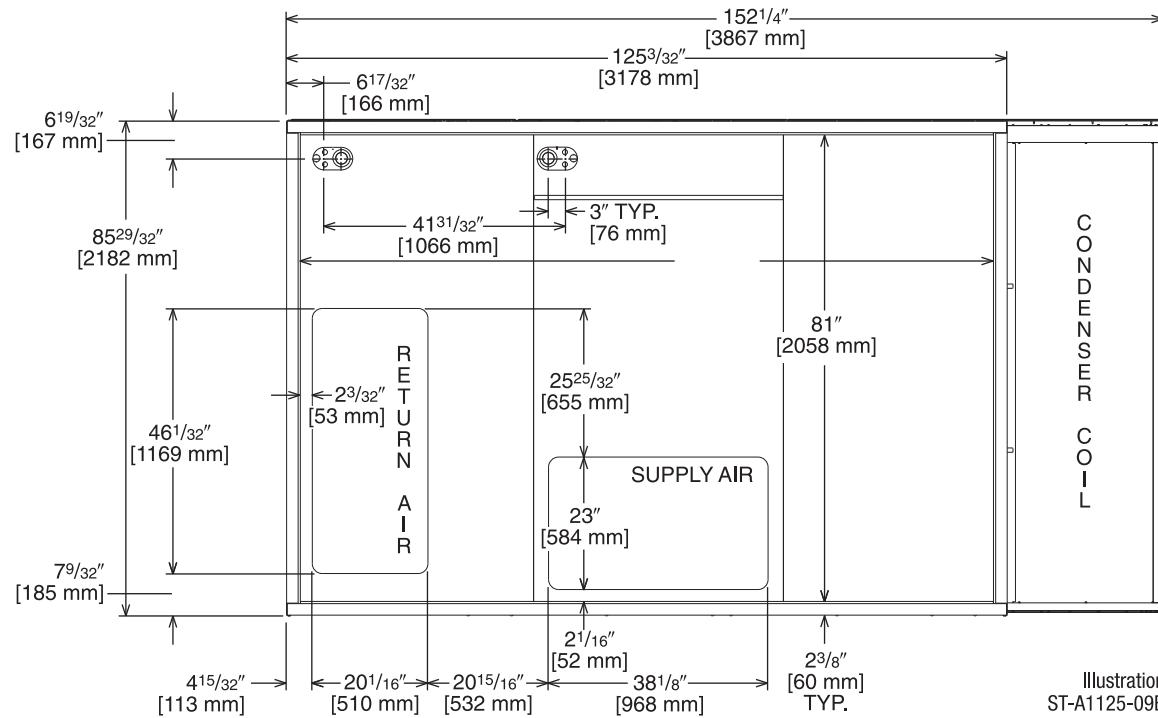
Illustration  
ST-A1125-02B

**SUPPLY AND RETURN DIMENSIONS FOR HORIZONTAL APPLICATIONS**



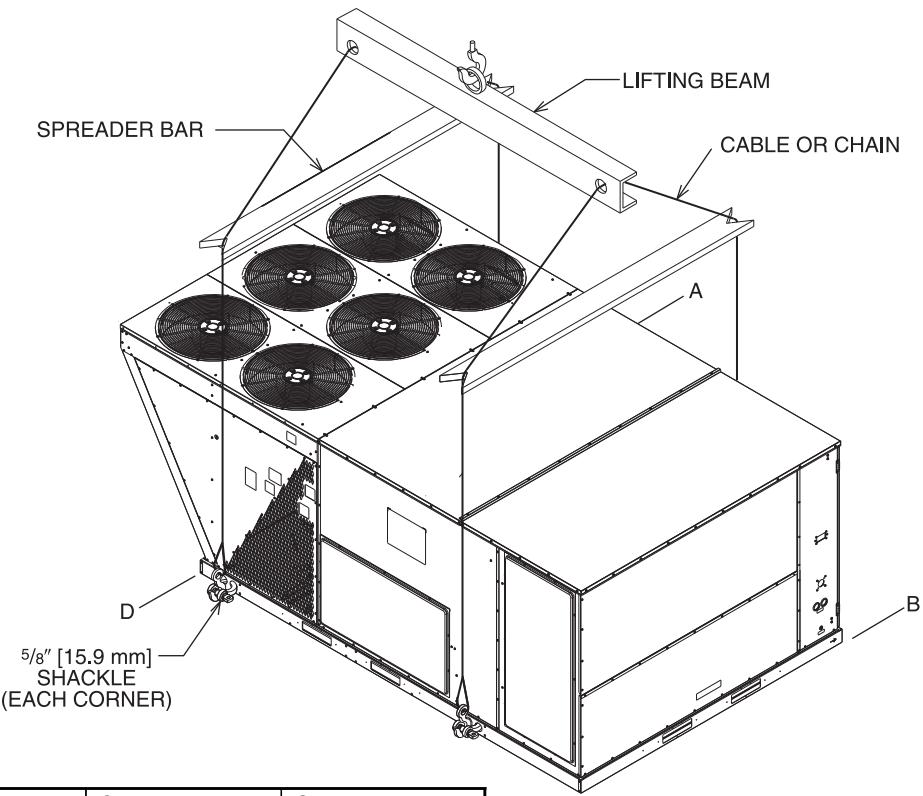
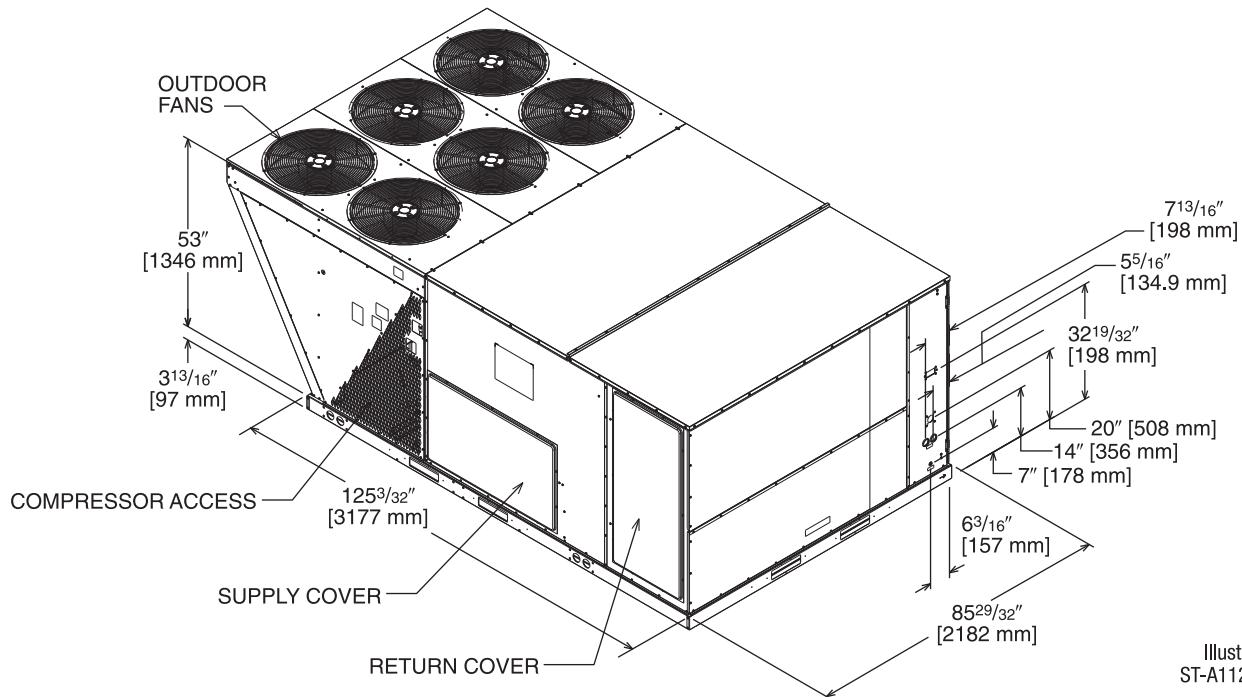
**DUCT SIDE VIEW (REAR)**

**SUPPLY AND RETURN DIMENSIONS FOR DOWNFLOW APPLICATIONS**



**BOTTOM VIEW**

[ ] Designates Metric Conversions



## WEIGHTS\*

Accessory	Shipping—lbs [kg]	Operating—lbs [kg]
Downflow Economizer w/DDC Single Enthalpy	324 [146.96]	184 [83.46]
Downflow Economizer w/DDC Smoke Detector	328 [148.77]	188 [85.27]
Horizontal Economizer w/DDC Single Enthalpy	367 [166.46]	258 [117.02]
Power Exhaust	44 [19.96]	42 [19.05]
Fresh Air Damper (Manual)	51 [23.13]	40 [18.14]
Fresh Air Damper (Motorized)	46 [20.87]	35 [15.88]
Roof Curb 14"	170 [77.11]	164 [74.39]

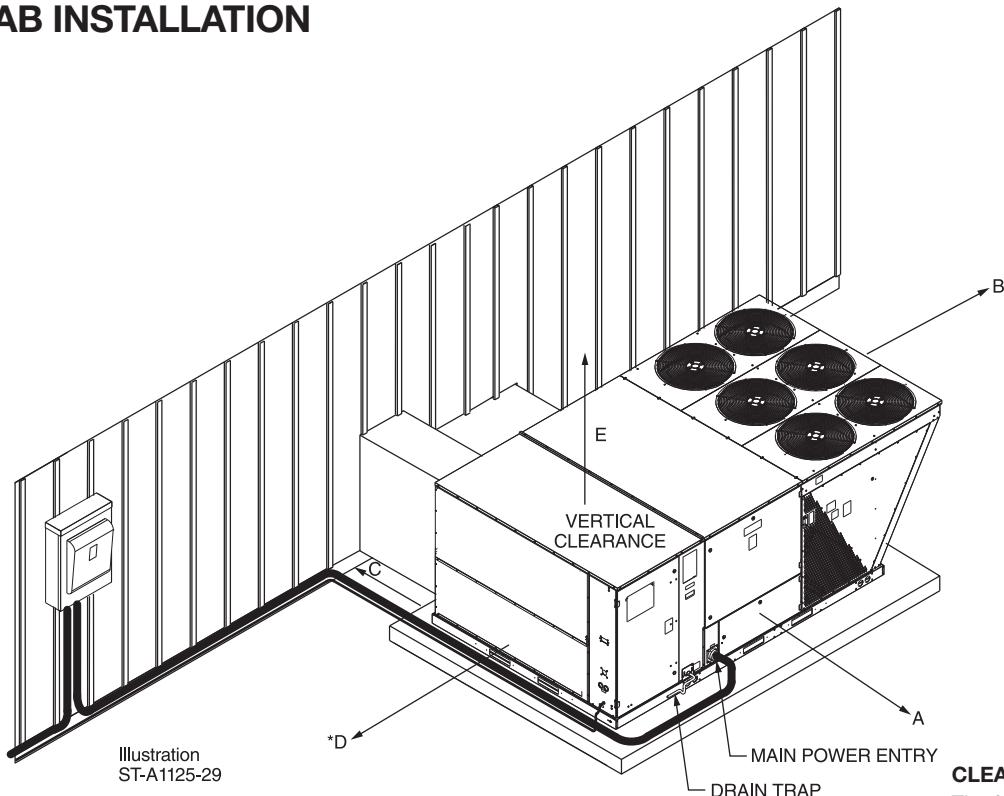
\*Include options from accessory table page to obtain total unit weight.

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

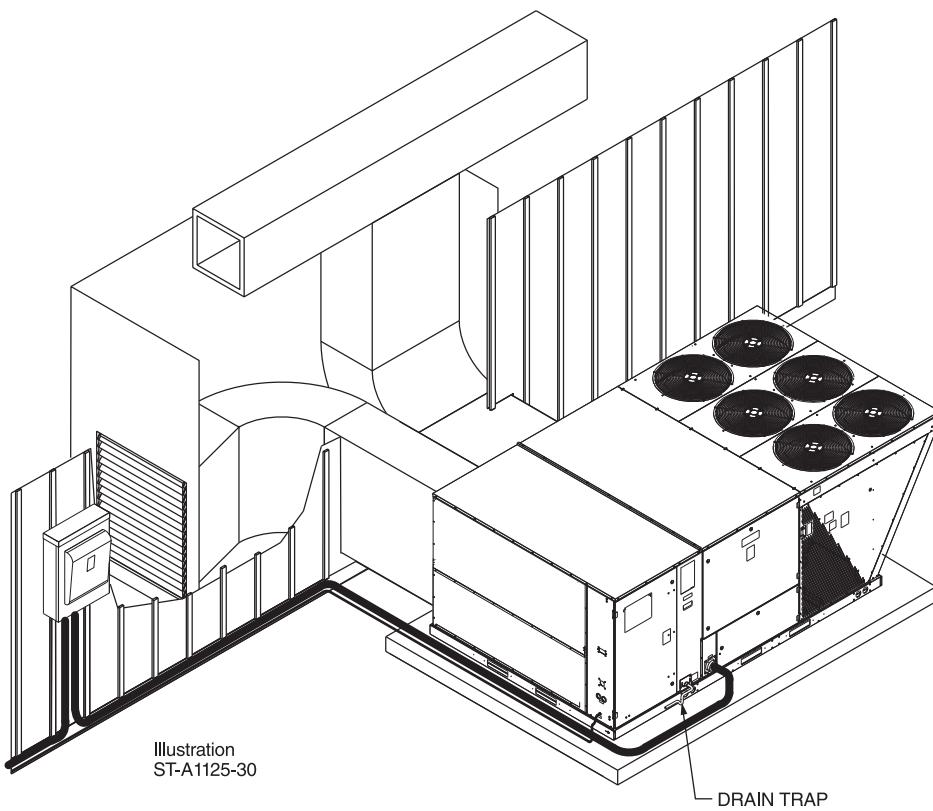


### CLEARANCES

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

Recommended Clearance In. [mm]	Location
80 [2032]	A - Front
18 [457]	B - Condenser Coil
18 [457]	+C - Duct Side
18 [457]	*D - Evaporator End
60 [1524]	E - Above

\*Without Economizer 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

New Descriptions	Model Number	Shipping Weight Lbs. [kg]	Installed Weight Lbs. [kg]	Factory Installation Available?
	RLNL-C180 thru C300			
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 [20.8]	36 [16.3]	Yes
Downflow Economizer w/Single Enthalpy	AXRD-01RMDCM3	324 [149.6]	184 [83.4]	Yes
Downflow Economizer w/Smoke Detector	AXRD-01RMDDM3	328 [148.7]	188 [85.2]	Yes
Dual Enthalpy Kit	RXRX-AV03	1 [.5]	.5 [.2]	No
Horizontal Economizer w/Single Enthalpy	AXRD-01RMHCM3	367 [166.4]	258 [117.0]	No
Carbon Dioxide Sensor (Wall Mount)	RXRX-AR02	3 [1.4]	2 [1.0]	No
Power Exhaust (208/230V)	RXRX-BGF05C	119 [53.9]	59 [26.7]	No
Power Exhaust (460V)	RXRX-BGF05D	119 [53.9]	59 [26.7]	No
Power Exhaust (575V)	RXRX-BGF05Y	119 [53.9]	59 [26.7]	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
Modulating Motor Kit w/position feedback for RXRF-KFA1*	RXRX-AW05	45 [20.4]	38 [17.2]	No
Roofcurb, 14"	RXKG-CBH14	184 [83.5]	176 [79.8]	No
Roofcurb Adapter to RXRK-E56	RXRX-CJCE56	465 [210.9]	415 [88.2]	No
Roofcurb Adapter to RXKG-CAF14	RXRX-CJCF14	555 [251.7]	505 [29.1]	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 [166.4]	212 [96.1]	No
Concentric Diffuser (Step-Down, 28" x 60")	RXRN-AD88	410 [186.0]	370 [67.8]	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	81 [36.7]	74 [33.6]	No
Downflow Transition (Rect. to Rect., 24" x 48")	RXMC-CK08	81 [36.7]	74 [33.6]	No
Downflow Transition (Rect. to Rect., 28" x 60")	RXMC-CL09	81 [36.7]	74 [33.6]	No
Low-Ambient Control Kit (1 Per Compressor)	RXRZ-C02	3 [1.4]	2 [1.0]	Yes
Unwired Convenience Outlet	RXRX-AN01	2 [1.0]	1.5 [.7]	Yes
Comfort Alert (1 Per Compressor)	RXRX-AZ01	3 [1.4]	2 [1.0]	Yes
BACnet Communication Card	RXRX-AY01	1 [0.5]	1 [0.5]	No
LonWorks Communication Card	RXRX-AY02	1 [0.5]	1 [0.5]	No
Hail Guard Louvers	AXRX-AAD01L	55 [24.8]	45 [20.3]	Yes
MERV 8 Filter	RXMF-M08A22520	2 [0.9]	1 [0.45]	No
MERV 13 Filter	RXMF-M13A22520	2 [0.9]	1 [0.45]	No

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

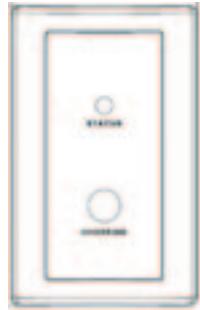
[ ] Designates Metric Conversions

## FLUSH MOUNT ROOM TEMPERATURE SENSORS FOR NETWORKED DDC APPLICATIONS



**ROOM TEMPERATURE SENSOR      RHC-ZNS1**  
**with TIMED OVERRIDE BUTTON**

10kΩ room temperature sensor transmits room temperature to DDC system. Timed override button allows tenant to change from unoccupied temperature setpoint to occupied temperature setpoint for a preset time.



**ROOM TEMPERATURE SENSOR      RHC-ZNS2**  
**with TIMED OVERRIDE BUTTON and STATUS INDICATOR**

10kΩ room temperature sensor transmits room temperature to DDC system. Timed override button allows tenant to change from unoccupied temperature setpoint to occupied temperature setpoint for a preset time. Status Indicator Light transmits ALARM flash code to occupied space.



**ROOM TEMPERATURE SENSOR      RHC-ZNS3**  
**with SETPOINT ADJUSTMENT and TIMED OVERRIDE BUTTON**

10kΩ room temperature sensor with setpoint adjustment transmits room temperature to DDC system along with desired occupied room temperature setpoint. Timed override button allows tenant to change from unoccupied temperature setpoint to occupied temperature setpoint for a preset time.

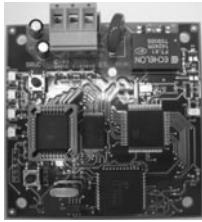
## COMMUNICATION CARDS

### Field Installed



#### BACnet® COMMUNICATION CARD RXRX-AY01

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



#### LonWorks® COMMUNICATION CARD RXRX-AY02

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

## ECONOMIZERS—DOWNGLOW ONLY

### Use to Select Field Installed Options Only

AXRD-01RMDCM3—Single Enthalpy (Outdoor) with DDC

AXRD-01RMDDM3—Single Enthalpy (Outdoor) w/Smoke Detector and DDC

RXRX-AR03—Optional Wall-Mounted CO<sub>2</sub> 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%)
- Ultra Low Leak Dampers meet California Title 24 requirements
- Slip-In Design for Easy Installation
- Plug-In Polarized 12-pin & 4-pin Electrical Connections
- Pre-Configured—No Field Adjustments Necessary
- Standard Barometric Relief Damper
- Single Enthalpy with Dual Enthalpy Upgrade Kit Available
- CO<sub>2</sub> Input Sensor Available
- Field Assembled Hood Ships with Economizer
- Economizer Ships Complete for Downflow Duct Application.
- Optional Remote Minimum Position Potentiometer (270 ohm) (Honeywell #S963B1136) is Available from Prostock.
- Field Installed Power Exhaust Available
- If connected to a Building Automation System (BAS), all economizer functions can be viewed on the (BAS).

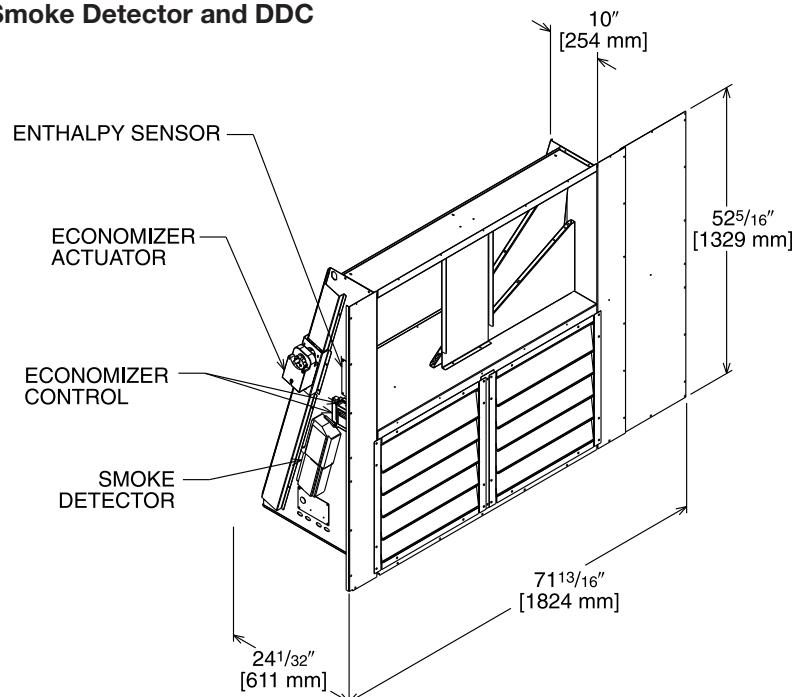
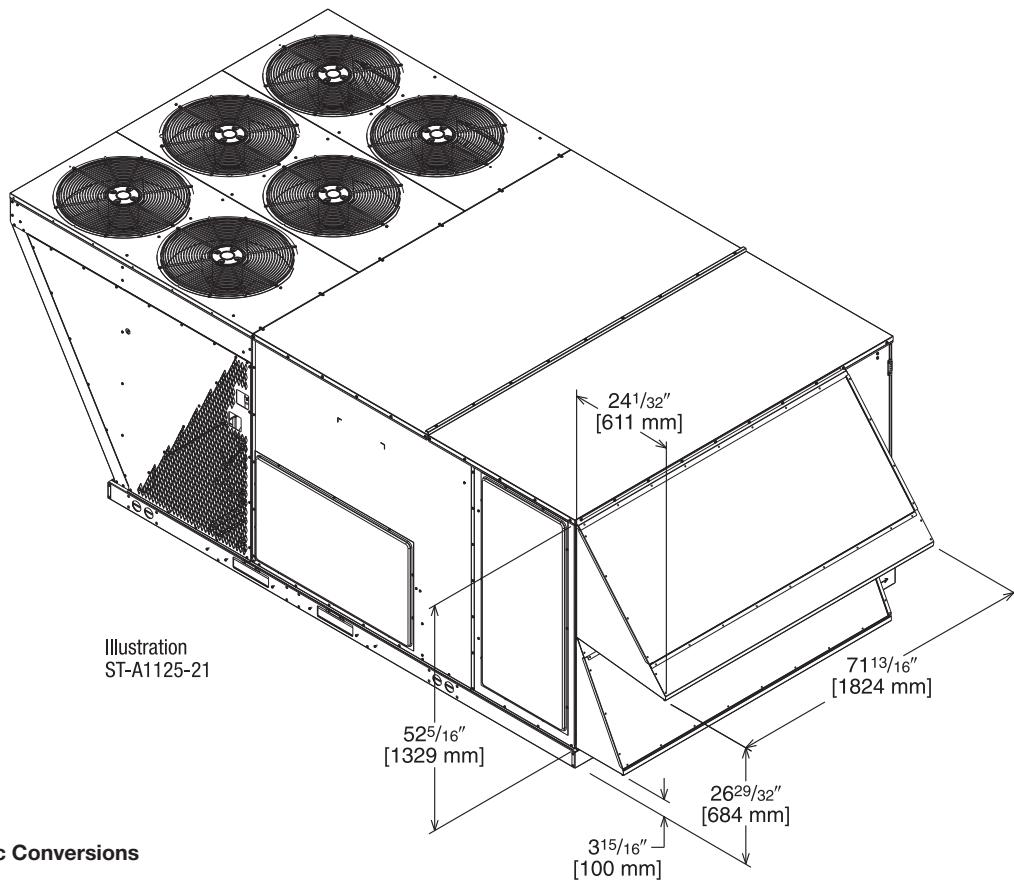


Illustration  
ST-A00566-58

TOLERANCE ±.125



[ ] Designates Metric Conversions

## ECONOMIZER FOR HORIZONTAL DUCT INSTALLATION

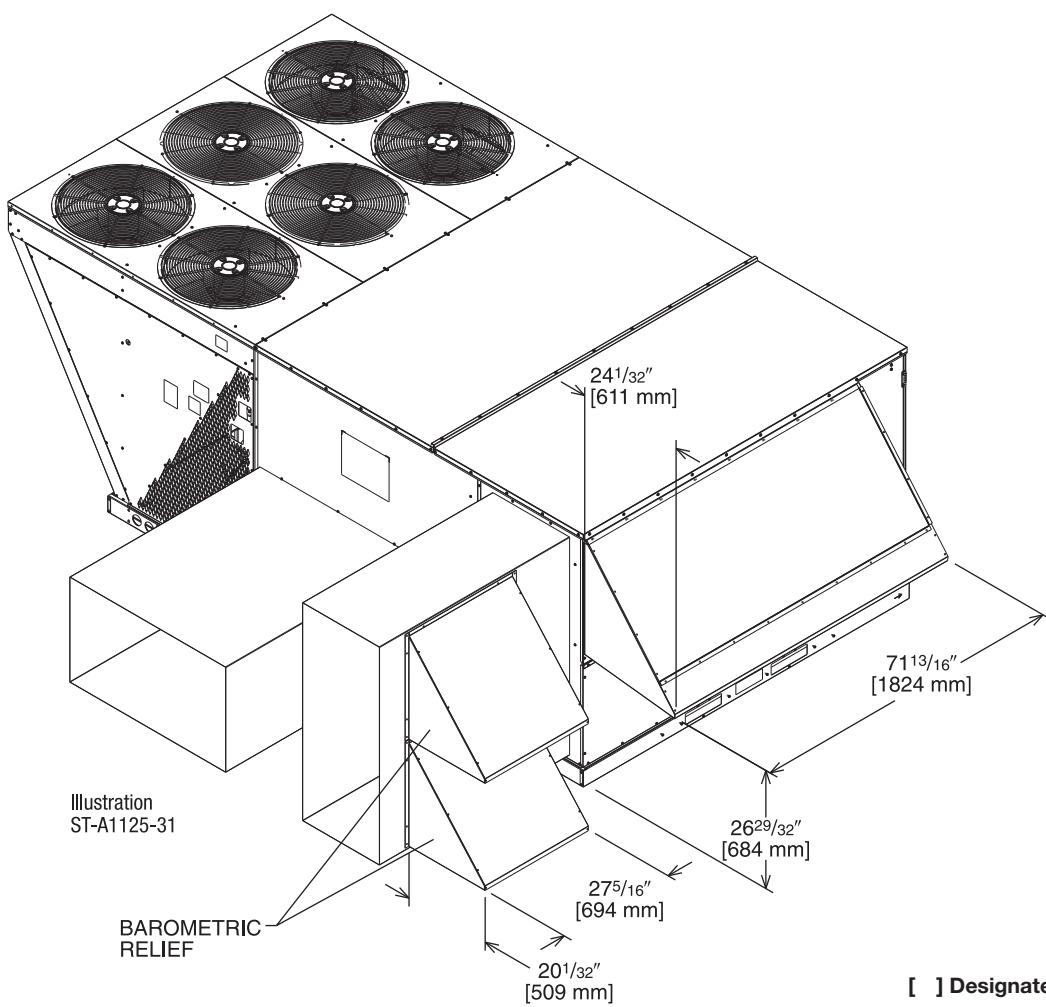
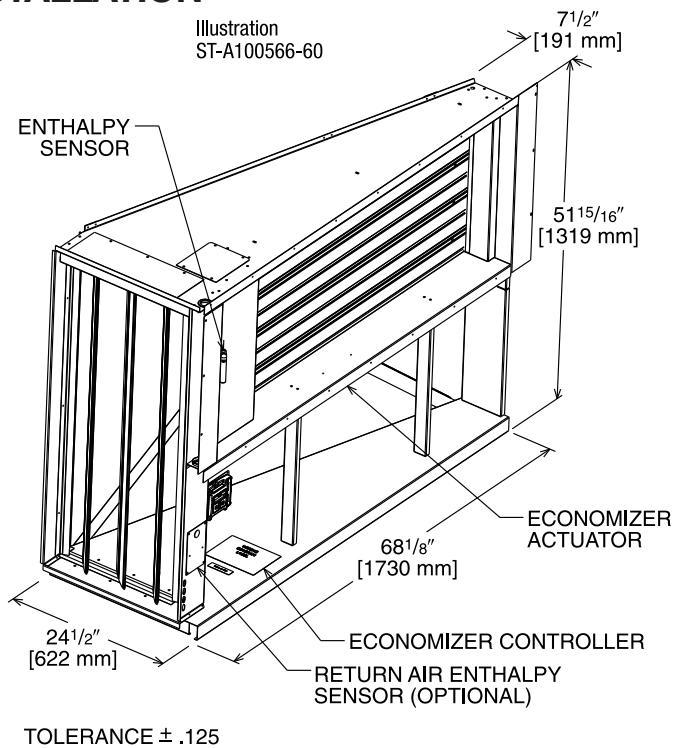
### Field Installed Only

**AXRD-01RMHCM3—Single Enthalpy (Outdoor) with DDC**

**RXRX-AV03—Dual Enthalpy Upgrade Kit**

**RXRX-AR02—Optional Wall-Mounted CO<sub>2</sub> Sensor**

- Features **Honeywell** Controls
- Available as a Field Installed Accessory Only
- Gear Driven Direct Drive Actuator
- Fully Modulating (0-100%)
- Ultra Low Leak Dampers meet California Title 24 requirements
- Slip-In Design for Easy Installation
- Plug-In Polarized 12-pin and 4-pin Electrical Connections
- Pre-Configured—No Field Adjustments Necessary
- Standard Barometric Relief Damper
- Single Enthalpy with Dual Enthalpy Upgrade Kit Available
- CO<sub>2</sub> Input Sensor Available
- Field Assembled Hood Ships with Economizer
- Economizer Ships Complete for Horizontal Duct Application
- Optional Remote Minimum Position Potentiometer (270 ohm) (Honeywell #S963B1136) is available from Prostock
- Field Installed Power Exhaust Available
- If connected to a Building Automation System (BAS), all economizer functions can be viewed on the (BAS) or 16 x 2 LCD screen
- If connected to thermostat, all economizer functions can be viewed on 16 x 2 character LCD screen

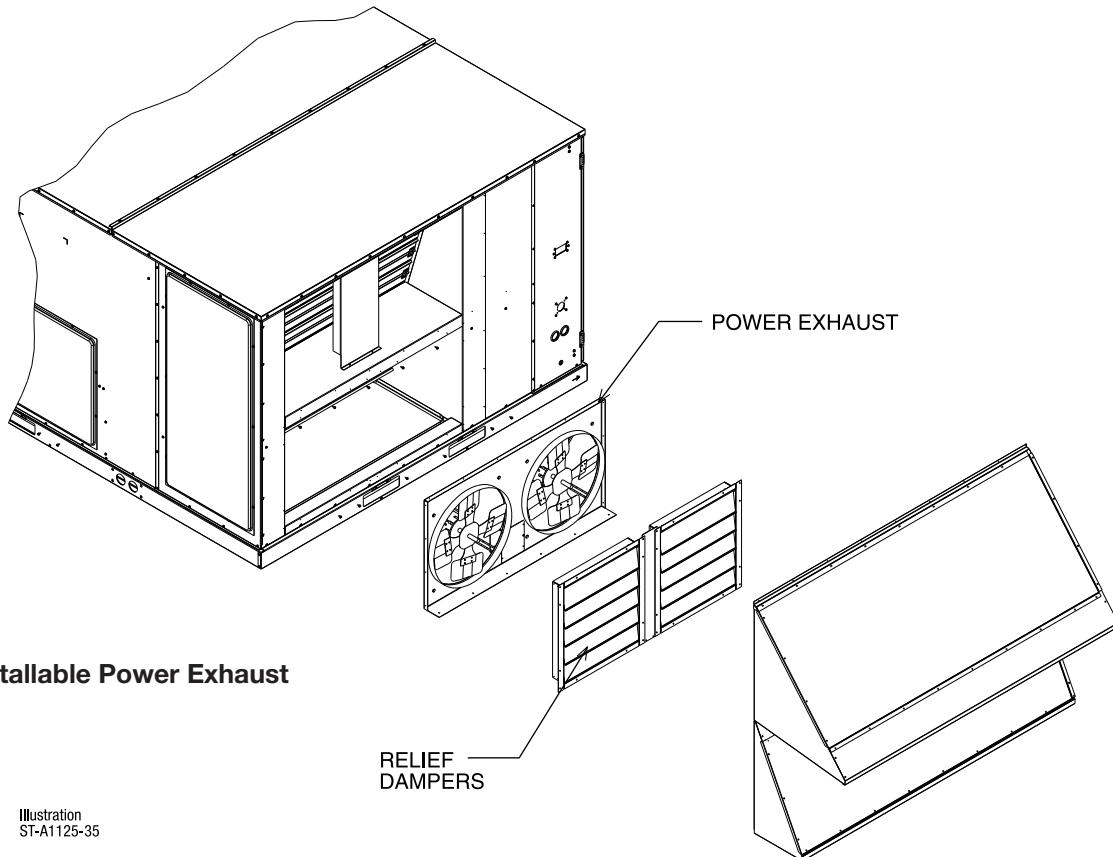


[ ] Designates Metric Conversions

## INTEGRAL POWER EXHAUST KIT FOR AXRD-PMCM3 OR SMCM3 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

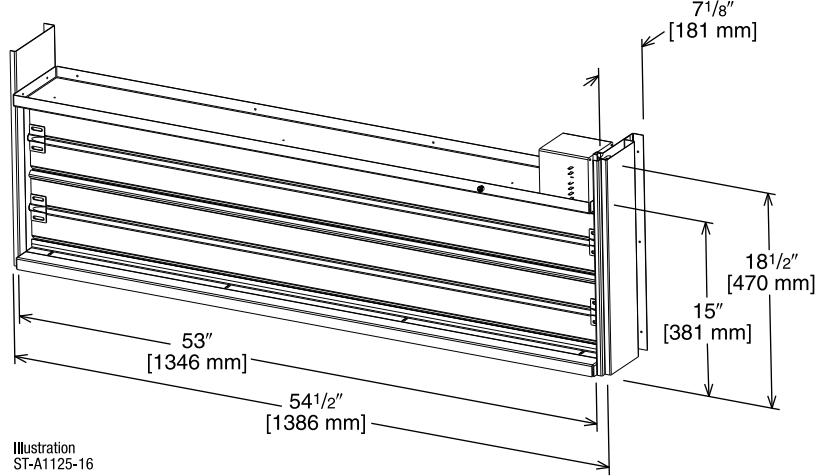
RXRX-AW03

(Motor Kit for AXRF-KFA1)

### RXRX-AW05

(Modulating Motor Kit with position feedback for AXRF-KFA1)

- Features Honeywell Controls
- Gear Driven Direct Drive Actuator
- Fully Modulating (0-100%)
- Low Leakage Dampers
- Slip-In Design for Easy Installation
- Plug-In Polarized 12-pin and 4-pin Electrical Connections
- Pre-Configured—No Field Adjustments Necessary
- Addition of Dual Enthalpy Upgrade Kit allows limited economizer function
- CO<sub>2</sub> Sensor Input Available for Demand Control Ventilation (DCV)
- Optional Remote Minimum Position Potentiometer (270 ohm) (Honeywell #S963B1136) is available from Prostock
- All fresh air damper functions can be viewed at the RTU-C unit controller display
- If connected to a Building Automation System (BAS), all fresh air damper functions can be viewed on the (BAS), on 16 x 2 LCD screen
- If connected to thermostat, all fresh air damper functions can be viewed on 16 x 2 LCD screen

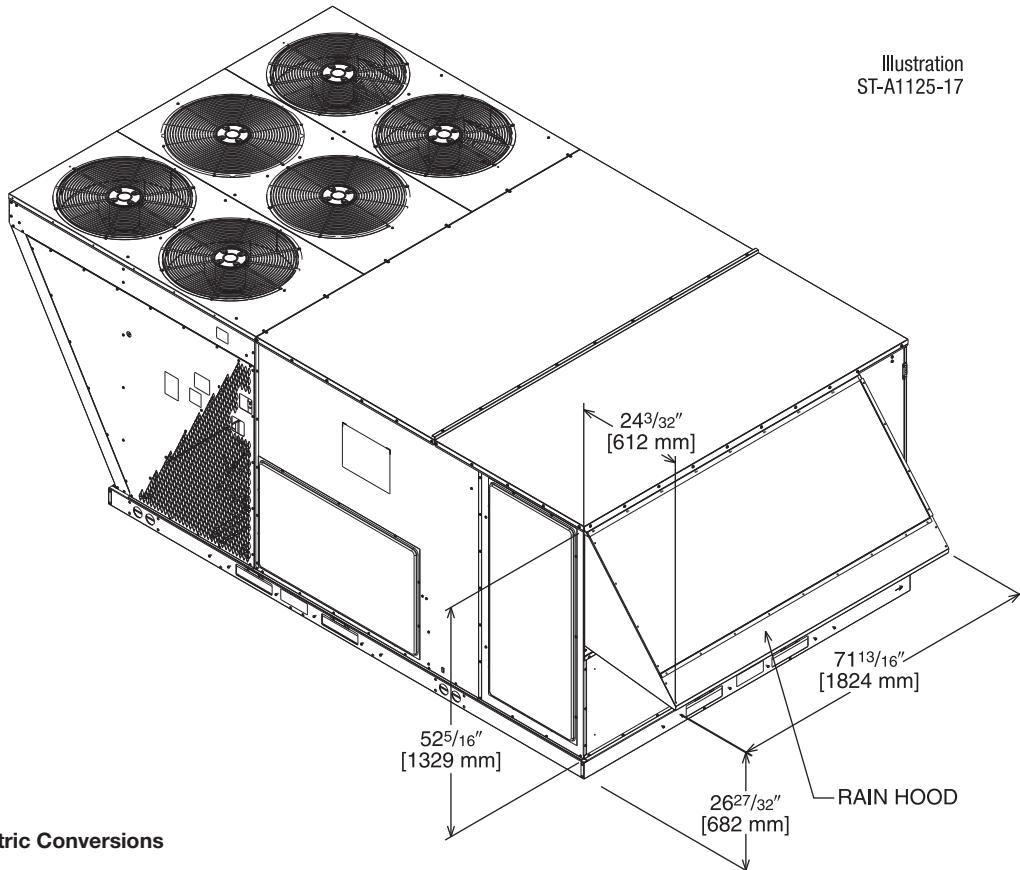


### AXRF-KFA1 (Manual)

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

### RXRX-AW05 (Modulating Motor Kit with position feedback for AXRF-KFA1)

Illustration  
ST-A1125-17

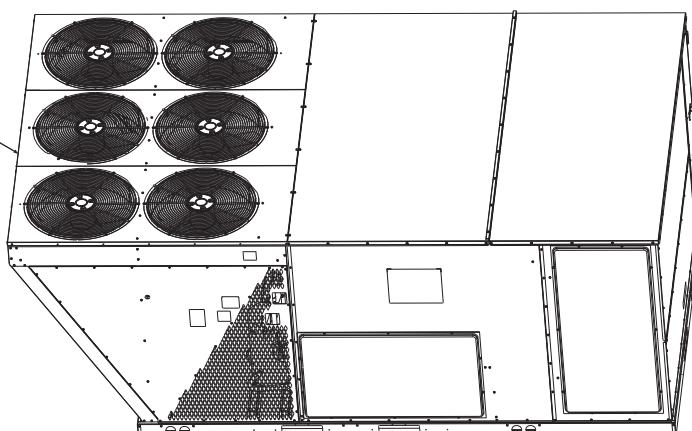


[ ] Designates Metric Conversions

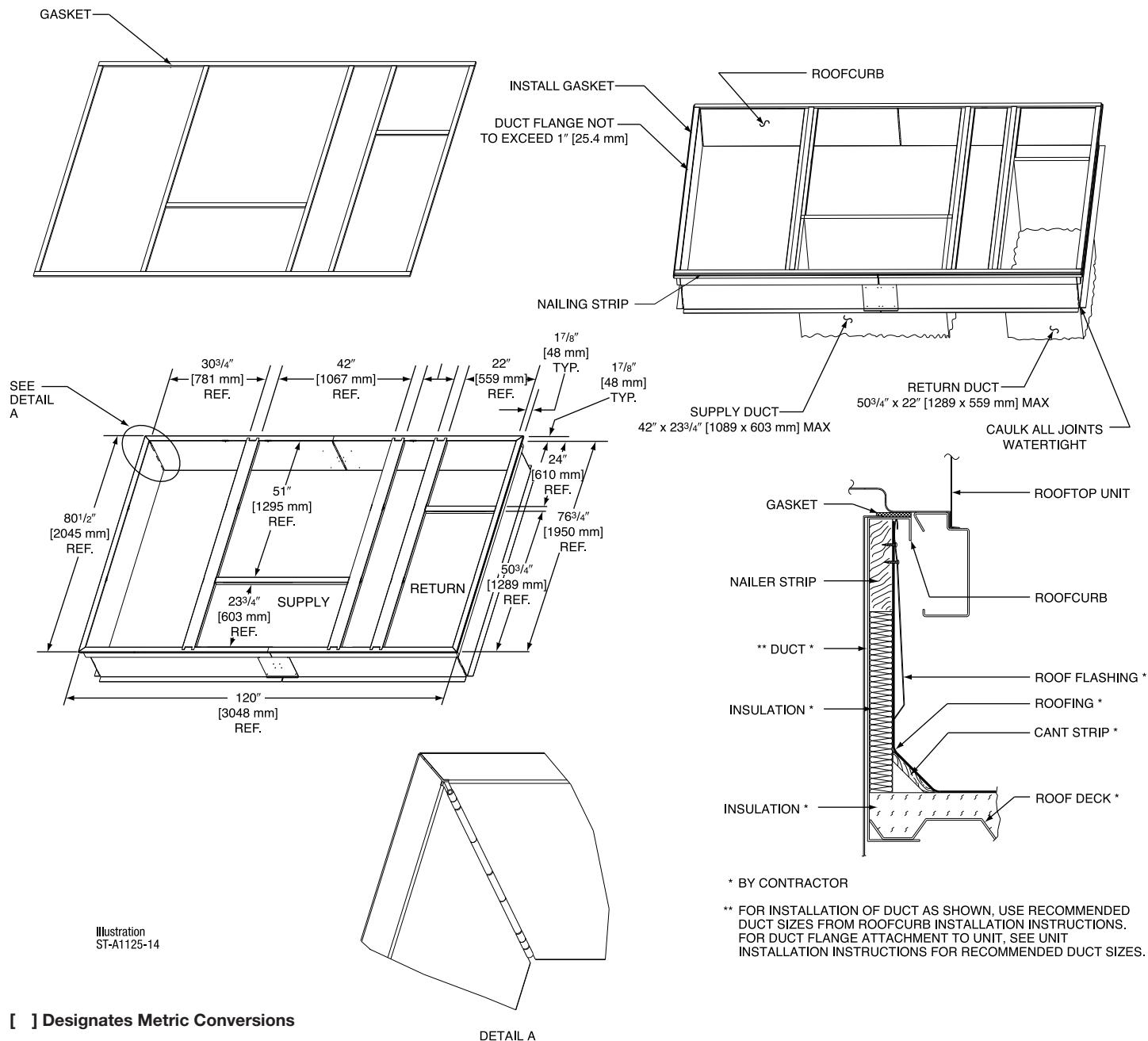
## ROOFCURBS (Full Perimeter)

- Mainline's roofcurb design can be utilized on 15, 17.5, 20 and 25 ton [52.8, 61.5, 70.3 and 87.9 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



## ROOFCURB ASSEMBLY



## ROOFCURB ADAPTERS

### OLD MODELS

**COMMERCIAL CABINET**  
(12.5, 15 & 20 TON)  
([44, 52.8 & 70.3 kW])  
(-)RCF, (-)RGF, (-)REF

### OLD CURB MODEL

RXRK-E56

### ROOFCURB ADAPTER

RXRX-CJCE56

### NEW MODEL

**RLNL-C/H**  
(15, 17.5, 20 & 25 TON)  
([52.8, 61.5, 70.3 & 87.9 kW])

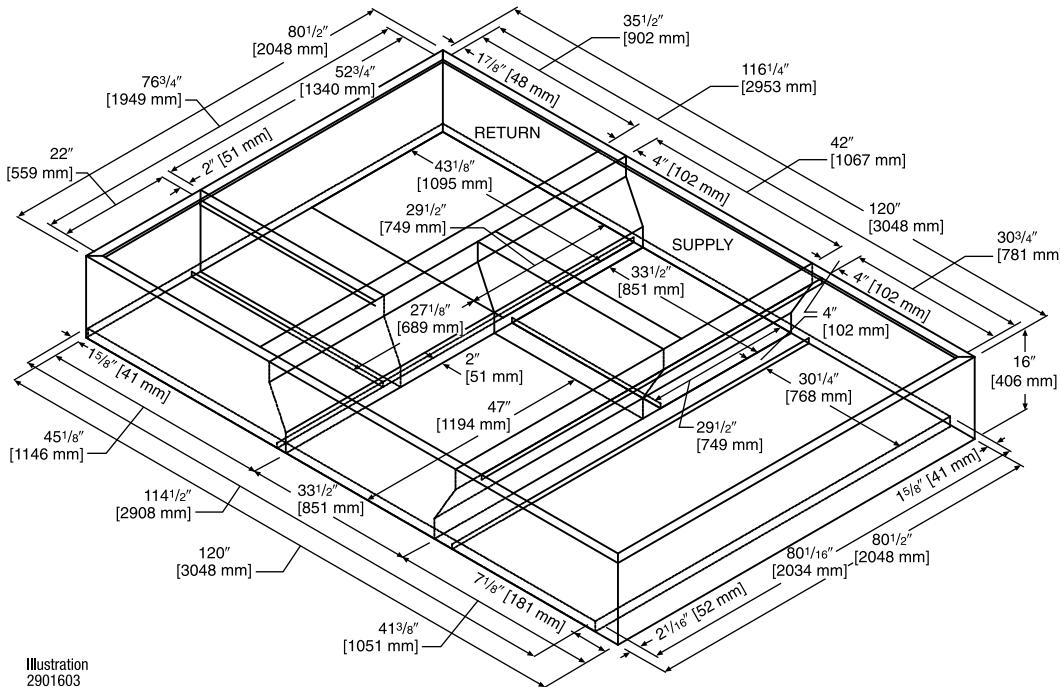


Illustration  
2901603

**COMMERCIAL CABINET**  
(15, 20 & 25 TON)  
([52.8, 70.3 & 87.9 kW])  
(-)LKB, LMB, LNB

RXKG-CAF14

RXRX-CJCF14

**RLNL-C/H**  
(15, 17.5, 20 & 25 TON)  
([52.8, 61.5, 70.3 & 87.9 kW])

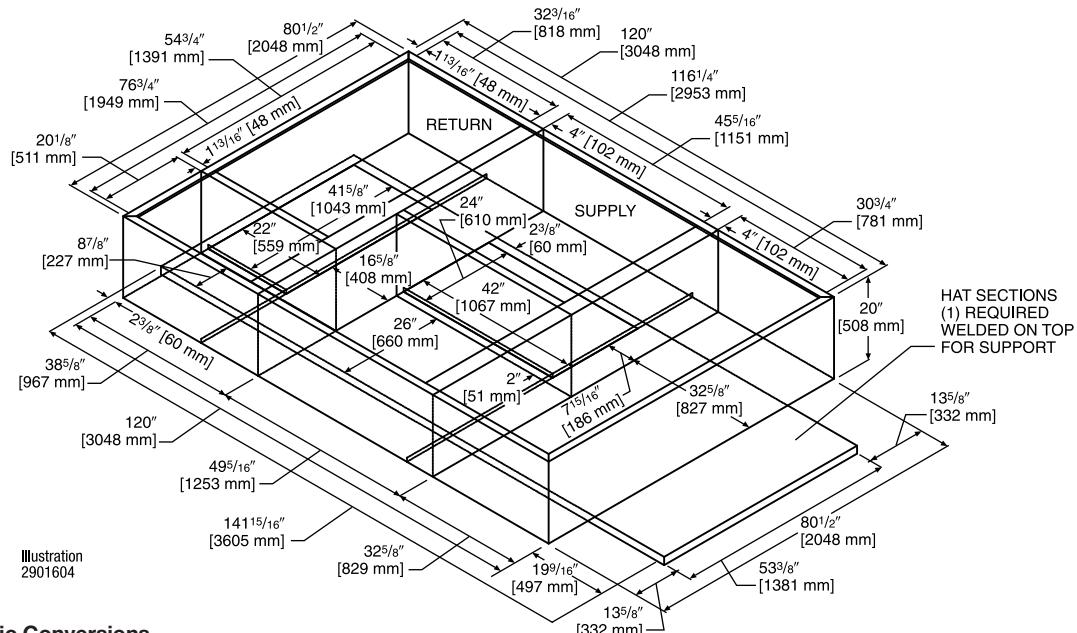
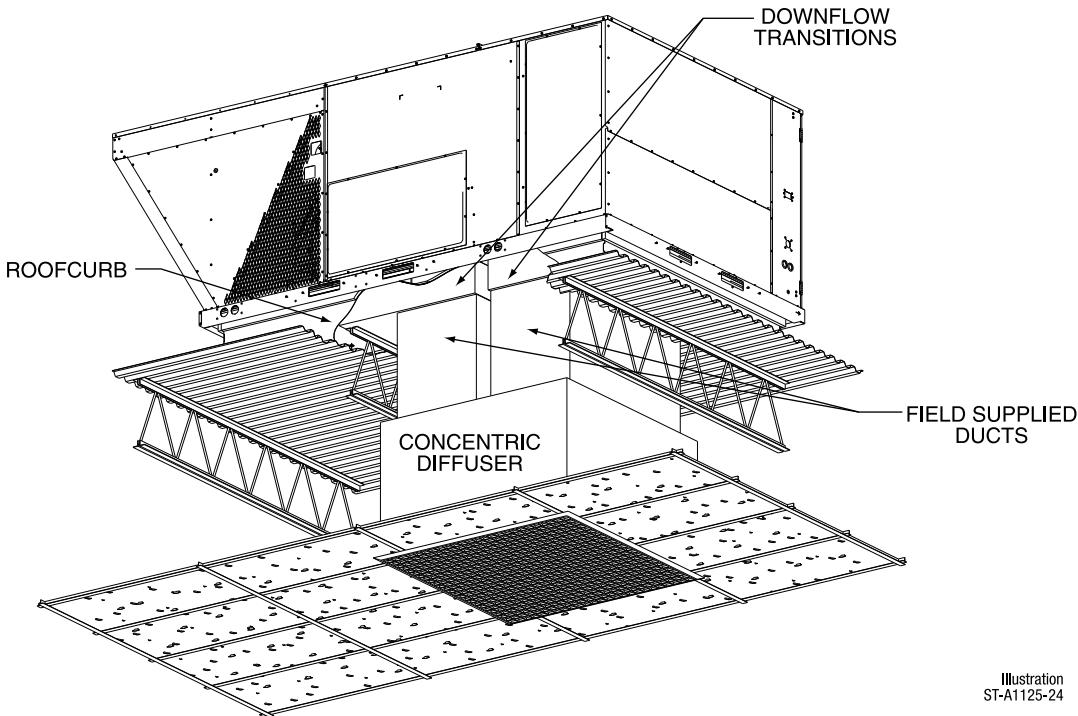


Illustration  
2901604

[ ] Designates Metric Conversions

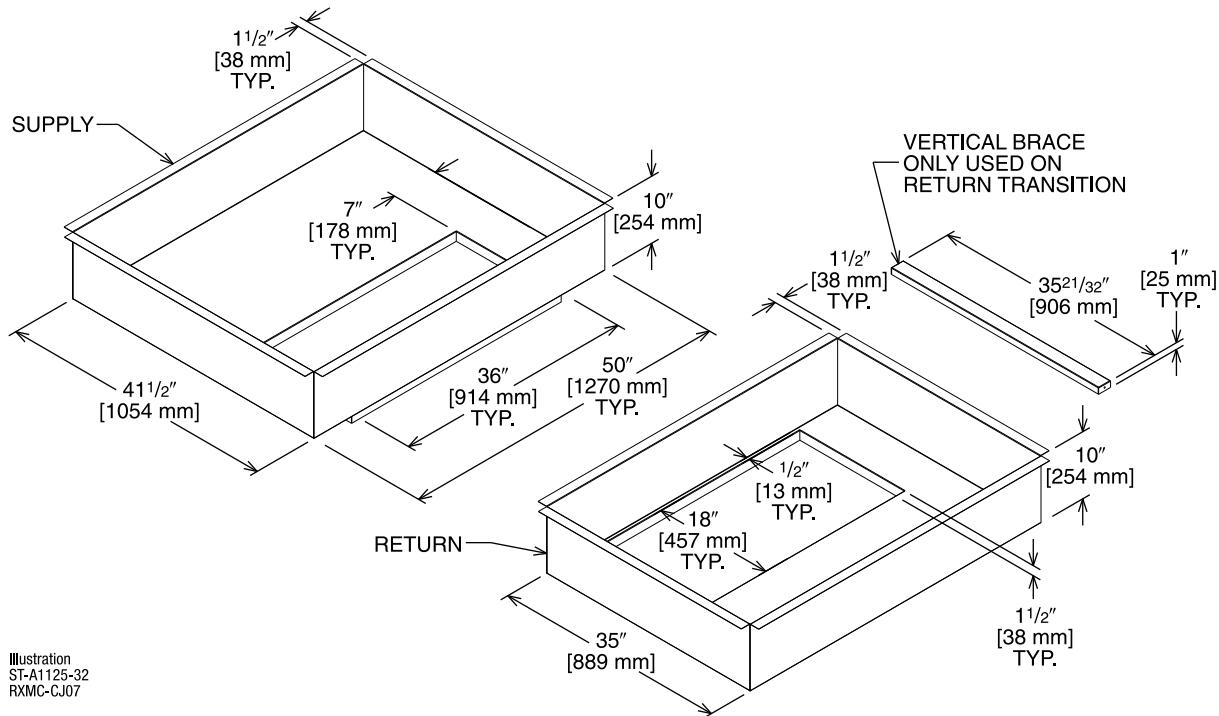
# CONCENTRIC DIFFUSER APPLICATION



# **DOWNFLOW TRANSITION DRAWINGS**

## **RXMC-CJ07 (15 Ton) [52.8 kW]**

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

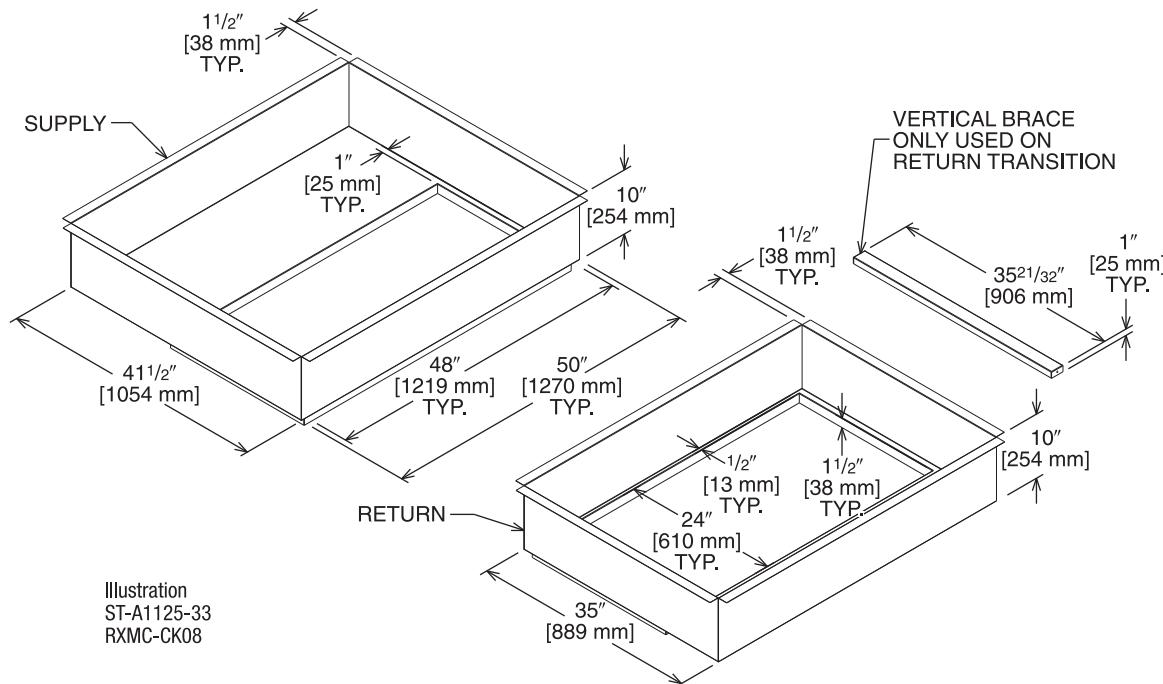


Designates Metric Conversions

## DOWNFLOW TRANSITION DRAWINGS (Cont.)

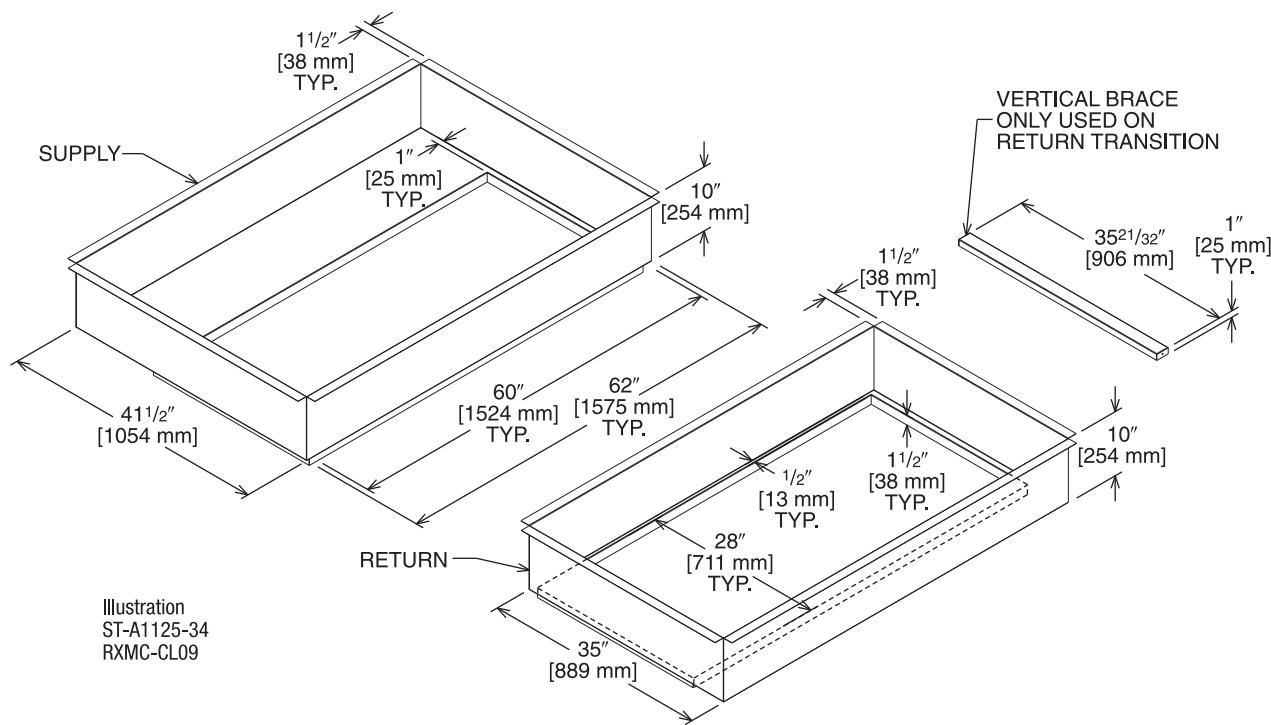
### RXMC-CK08 (20 Ton) [70.3 kW]

- Used with RXRN-AD86 Concentric Diffusers.



### RXMC-CL09 (25 Ton) [87.9 kW]

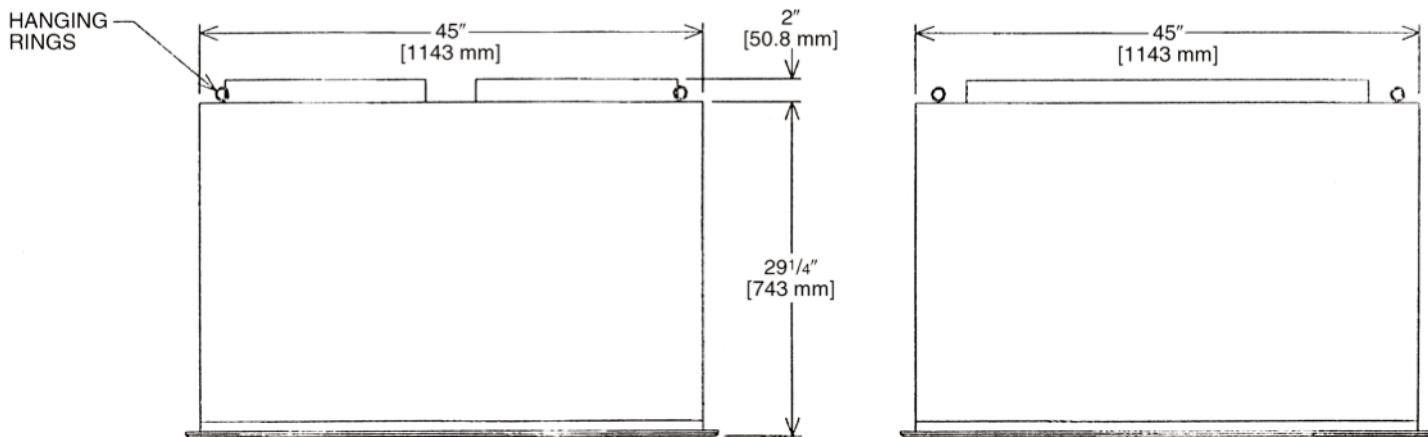
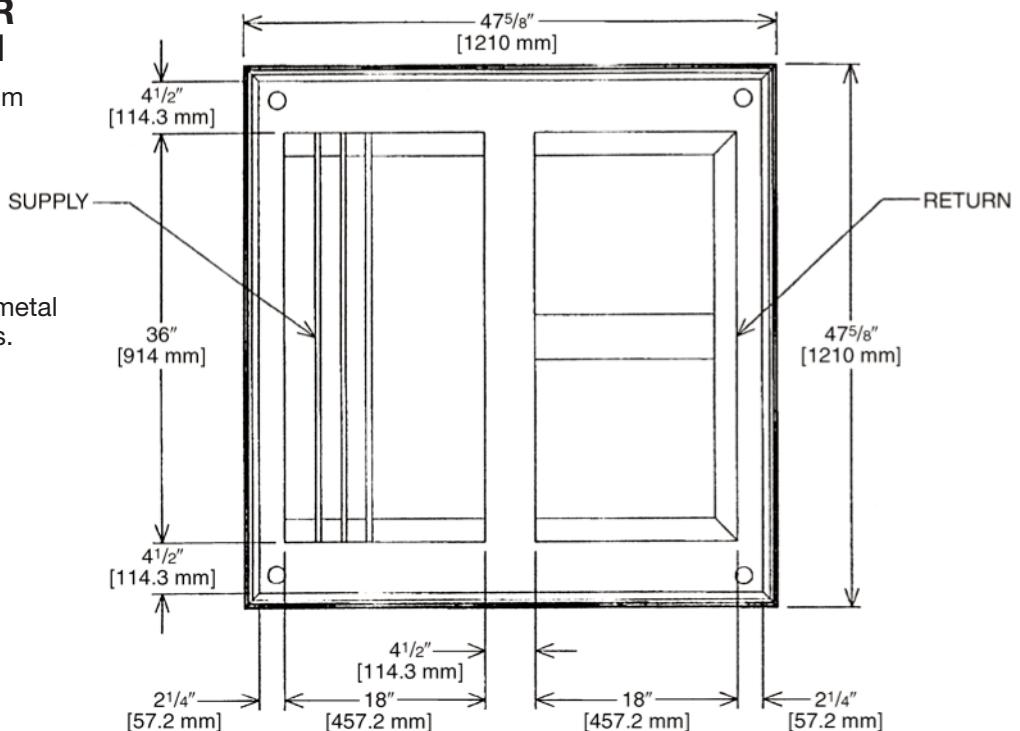
- Used with RXRN-AD88 Concentric Diffusers.



[ ] 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.



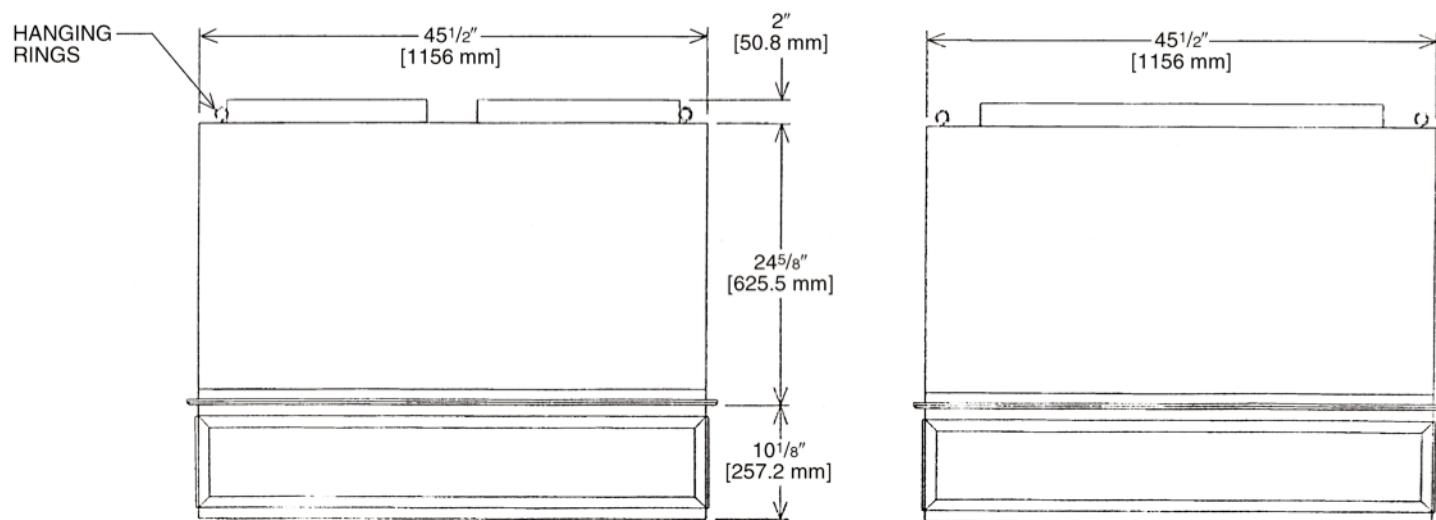
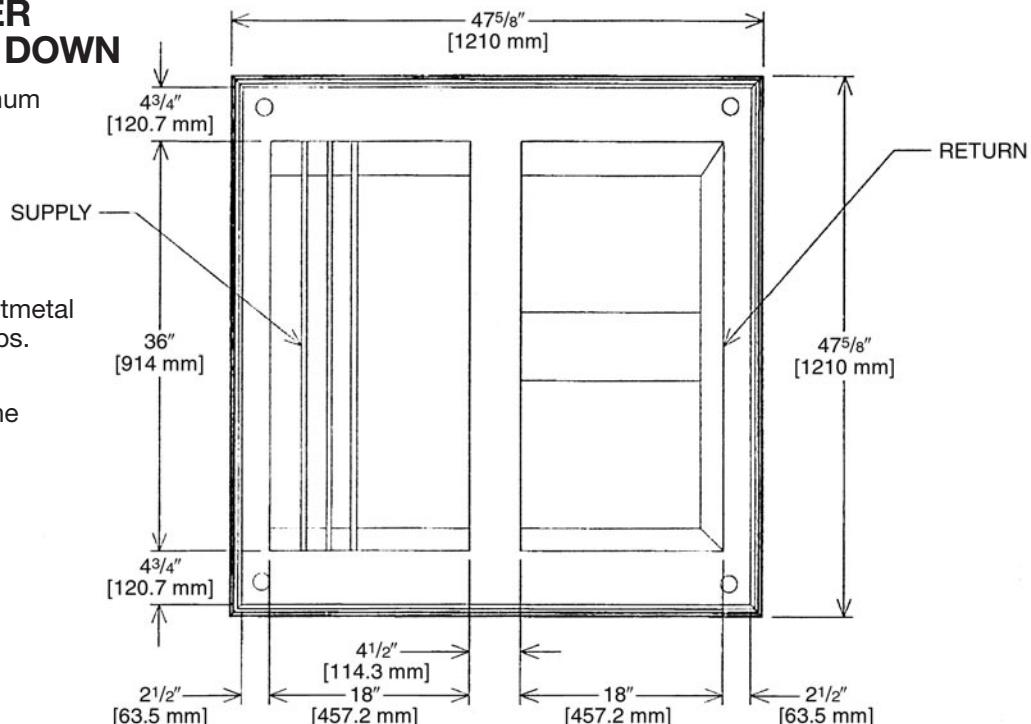
## CONCENTRIC DIFFUSER SPECIFICATIONS

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.



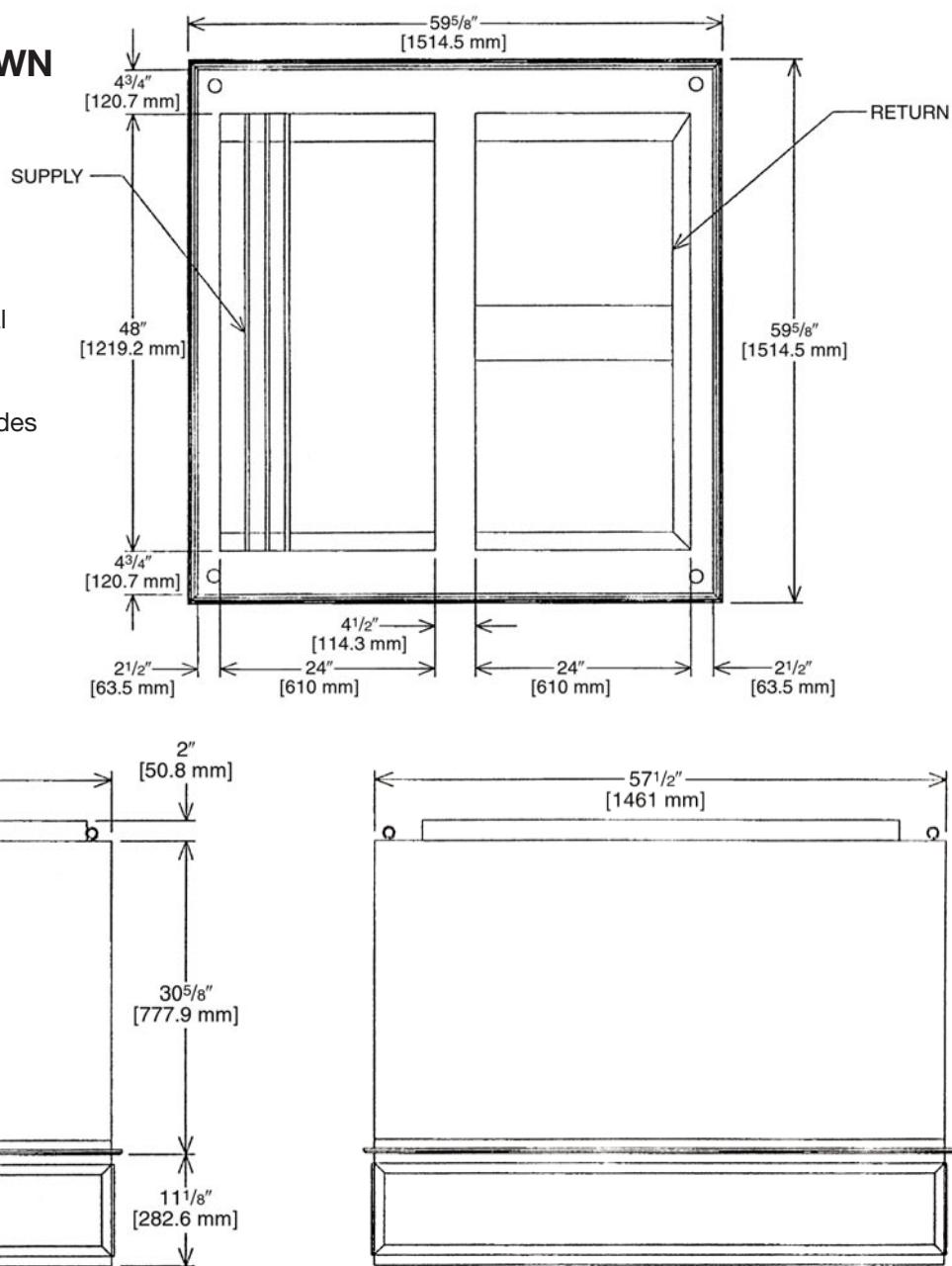
## CONCENTRIC DIFFUSER SPECIFICATIONS

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.



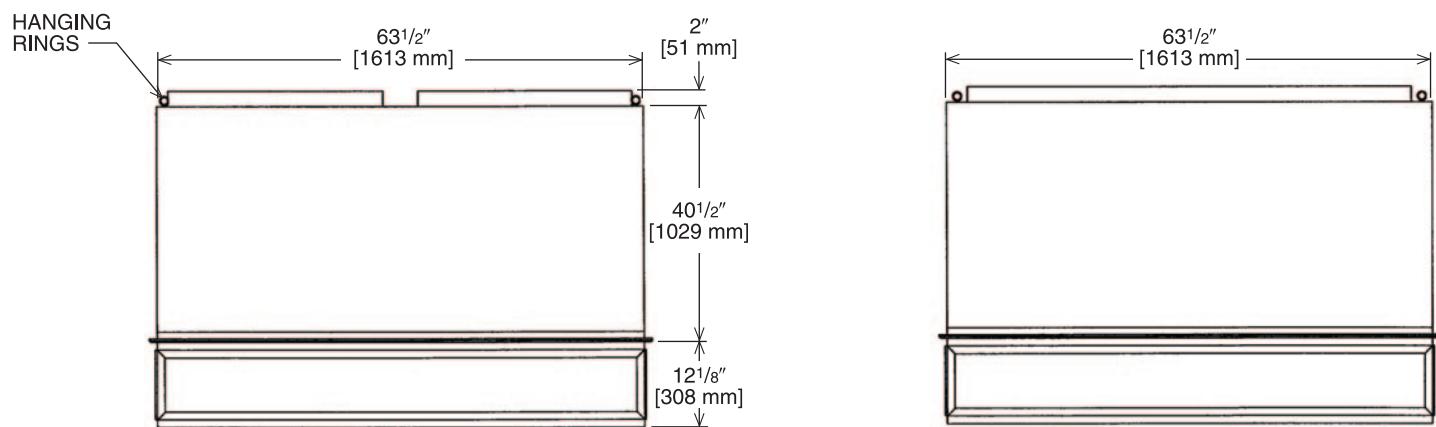
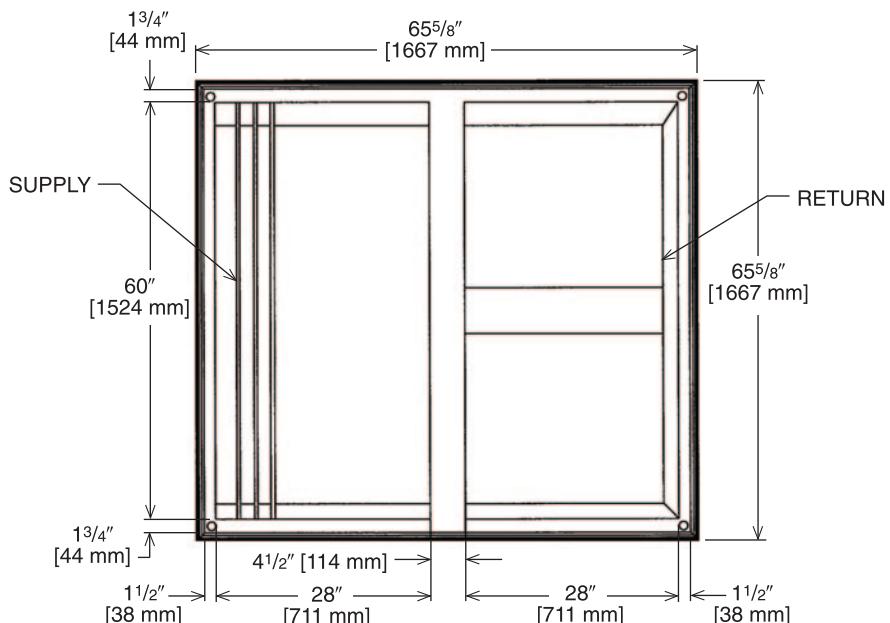
## CONCENTRIC DIFFUSER SPECIFICATIONS

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

## CONCENTRIC DIFFUSER RXRN-AD88 SERIES 25 TON [87.9 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-AD88	10000 [4719]	0.51	46-54	907	907
	10500 [4955]	0.58	50-58	953	953
	11000 [5191]	0.65	53-61	998	998
	11500 [5427]	0.73	55-64	1043	1043
	12000 [5663]	0.82	58-67	1089	1089
	12500 [5898]	0.91	61-71	1134	1134
	13000 [6134]	1.00	64-74	1179	1179

[ ] Designates Metric Conversions

## Guide Specifications – RLNL-C/H180 thru C/H300

You may copy this document directly into your building specification. This specification is written to comply with the 2004 version of the "master format" as published by the Construction Specification Institute. [www.csinet.org](http://www.csinet.org).

### ELECTRIC HEAT PACKAGED ROOFTOP

#### HVAC Guide Specifications

Size Range: 15 to 25 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

1. Thermostat must
  - a. have capability to energize 2 different stages of cooling, and 2 different stages of heating.
  - b. must include capability for occupancy scheduling.

##### **23 09 23 Direct-digital Control system for HVAC**

23 09 23.13 Decentralized, Rooftop Units:

23 09 23.13.A. RTU-C controller

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

23 09 23.13.B. Open protocol, direct digital controller:

1. Shall be ASHRAE 62-2001 compliant.
2. Shall accept 18-30VAC, 50-60Hz, and consumer 15VA or less power.
3. Shall have an operating temperature range from -40°F (-40°C) to 130°F (54°C), 10% - 90% RH (non-condensing).
4. Shall have either a field installed BACnet® plug-in communication card which includes an EIA-485 protocol communication port, or a field installed LonWorks™ plug-in communications card.
5. The BACnet® plug in communication card shall include built-in protocol for BACNET (MS/TP and PTP modes)
6. The LonWorks™ plug in communication card shall include the Echelon processor required for all Lon applications.
7. Shall allow access of up to 62 network variables (SNVT). Shall be compatible with all open controllers
8. Baud rate Controller shall be selectable through the EIA-485 protocol communication port.
9. Shall have an LED display independently showing the status of serial communication, running, errors, power, all digital outputs, and all analog inputs.
10. Shall accept the following inputs: space temperature, setpoint adjustment, outdoor air temperature, indoor air quality, outdoor air enthalpy, compressor lock-out, fire shutdown, enthalpy switch, and fan status/filter status/ humidity/ remote occupancy.
11. Shall provide the following outputs: economizer, fan, cooling stage 1, cooling stage 2, heat stage 1, heat stage 2, exhaust.
12. Software upgrades will be accomplished by either local or remote download. No software upgrades through chip replacements are allowed.

### 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. Transformer shall have 100VA capabilities.
2. Shall utilize color-coded wiring.
3. Shall include a central control terminal board to conveniently and safely provide connection points for vital control functions such as: smoke detectors, phase monitor, economizer, thermostat, DDC control options, loss of charge, freeze sensor, high pressure switches.
4. Unit shall include a minimum of one 10-pin screw terminal connection board for connection of control wiring.

23 09 33.23.B. Safeties:

1. Compressor over-temperature, over current.
2. Loss of charge switch.
  - a. Units with 2 compressors shall have different colored wires for the circuit 1 and circuit 2 low and high pressure switches.
  - b. Loss of charge switch shall use different color wire than the high pressure switch. The purpose is to assist the installer and service technician to correctly wire and or troubleshoot the rooftop unit.
  - c. Loss of charge switch shall have a different sized connector than the high pressure switch. They shall physically prevent the cross-wiring of the safety switches between the high and low pressure side of the system.
3. High-pressure switch.
  - a. Units with 2 compressors shall have different colored wires for the circuit 1 and circuit 2 low and high pressure switches.
  - b. High pressure switch shall use different color wire than the low pressure switch. The purpose is to assist the installer and service person to correctly wire and or troubleshoot the rooftop unit.
  - c. High pressure switch shall have a different sized connector than the loss of charge switch. They shall physically prevent the cross-wiring of the safety switches between the high and low pressure side of the system.
4. Freeze protection sensor, evaporator coil.
5. 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. Filters shall be accessible through an access panel as described in the unit cabinet section of this 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 heat pump 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 sound R-410a refrigerant.
4. Unit shall be installed in accordance with the manufacturer's instructions.
5. Unit must be selected and installed in compliance with local, state, and federal codes.

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 210/240 and 340/360.
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 340/360 at ± 10% voltage.
2. Compressor with standard controls shall be capable of operation from 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): 60, Hardness: H-2H Pencil hardness.
3. Evaporator fan compartment interior cabinet insulation shall conform to AHRI Standards 210/240 or 340/360 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum 3/4-in. thick, 1 lb density, flexible fiberglass insulation, aluminum foil-faced on the air side.
4. Base of unit shall have locations for thru-the-base 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" -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
    - (1.) Standard unit shall have a thru-the-base electrical location(s) using a raised, embossed portion of the unit basepan.
    - (2.) 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.
  - c. Panels covering control box, indoor fan, indoor fan motor, and electric or gas heater components (where applicable), shall have 1/4 turn latches.

23 81 19.13.J. Coils

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

23 81 19.13.K. Refrigerant Components

1. Refrigerant circuit shall include the following control, safety, and maintenance features:
  - a. Thermal Expansion Valve (TXV) with orifice type distributor
  - b. Refrigerant filter drier.
  - c. External service gauge connections to unit 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 240-300 sizes.

- e. Compressors shall be protected from an over-temperature and over-amperage conditions by an internal, motor overload device.
- f. Compressor shall be factory mounted on rubber grommets.
- g. Compressor motors shall have internal line break thermal, current overload and high pressure differential protection.
- h. Crankcase heaters shall 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 a sliding filter tray, facilitating easy removal and installation.
- 3. Shall consist of factory-installed, low velocity, throw-away 2-in. thick fiberglass filters.
- 4. Filters shall be standard, commercially available sizes.
- 5. Filter face velocity shall not exceed 365 fpm at nominal airflows.

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 or circuit breaker.
  - c. Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating shall be required.
- 2. 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:
  - 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, Options and Accessories

- 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 sensor setpoint 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 setpoint.
  - l. Dampers shall be completely closed when the unit is in the unoccupied mode.
  - m. Economizer controller shall accept a 2-10Vdc CO<sub>2</sub> sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor-air damper to provide ventilation based on the sensor input.
  - n. Compressor lockout sensor on the unit controller is factory set at 35°F and is adjustable from 30°F (-1°C) to 50°F (10°C) and resets the cooling lockout at 5°F (+2.7°C) above the set point.
  - o. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
  - p. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
  - q. Economizer wire harness will have provision for smoke detector.

2. Two-Position Motorized Damper
  - a. Damper shall be a Two-Position Motorized 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 dampers and actuator motor.
  - d. Actuator shall be direct coupled to damper gear. No linkage arms or control rods shall be acceptable.
  - e. Damper will admit up to 100% outdoor air for applicable rooftop units.
  - f. Damper shall close upon indoor (evaporator) fan shutoff and/or loss of power.
  - g. The damper actuator shall plug into the rooftop unit's wiring harness plug. No hard wiring shall be required.
  - h. Outside air hood shall include aluminum water entrainment filter
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. Condenser Coil Hail Guard Assembly
  - a. Shall protect against damage from hail.
  - b. Shall be louvered design.
6. Convenience Outlet:
  - a. Non-Powered convenience outlet.
    - (1.) Outlet shall be powered from a separate 115-120v power source.
    - (2.) A transformer shall not be included.
    - (3.) Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
    - (4.) Outlet shall include 15 amp GFI receptacles.
    - (5.) Outlet shall be accessible from outside the unit.
7. Fan/Filter Status Switch:
  - a. Switch shall provide status of indoor evaporator fan (ON/OFF) or filter (CLEAN/DIRTY).
  - b. Status shall be displayed either over communication bus (when used with direct digital controls) or through the controller LCD display inside the unit control box.
8. 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.
9. Roof Curbs (Vertical):
  - a. Full perimeter roof curb with exhaust capability providing separate air streams for energy recovery from the exhaust air without supply air contamination.
  - b. Formed galvanized steel with wood nailing 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.
10. High-Static Indoor Fan Motor(s) and Drive(s):
  - a. High-static motor(s) and drive(s) shall be factory-installed to provide additional performance range.
11. 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.
13. 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.
14. Indoor Air Quality (CO<sub>2</sub>) 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 setpoint shall have adjustment capability.
15. 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 a recessed momentary switch for testing and resetting the detector.
  - e. Controller shall include:

- (1.) One set of normally open alarm initiation contacts for connection to an initiating device circuit on a fire alarm control panel.
- (2.) Two Form-C auxiliary alarm relays for interface with rooftop unit or other equipment.
- (3.) One Form-C supervision (trouble) relay to control the operation of the Trouble LED on a remote test/reset station.
- (4.) Capable of direct connection to two individual detector modules.
- (5.) Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications.

16. Electric Heat:

a. Heating Section

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

**26 29 23.12 Adjustable Frequency Drive**

1. Unit shall be supplied with an electronic variable frequency drive for the supply air fan.
2. Drive shall be factory installed in an enclosed cabinet.
3. Drive shall meet UL Standard 95-5V.
4. The completed unit assembly shall be UL listed.
5. Drives are to be accessible through a toolled access hinged door assembly.
6. The unit manufacturer shall install all power and control wiring.
7. The supply air fan drive output shall be controlled by the factory installed main unit control system and drive status and operating speed shall be monitored and displayed at the main unit control panel.
8. Drive shall be programmed and factory run tested in the unit.

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

## **GENERAL TERMS OF LIMITED WARRANTY\***

*Mainline*<sup>®</sup> 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**

3 Phase, Commercial Applications .....Five (5) Years

### **Parts**

3 Phase, Commercial Applications .....One (1) Year



---

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

www.MainlineCollection.com

---

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

PRINTED IN U.S.A.

1-22 QG

FORM NO. SML-954 REV. 4