



MODEL: RLPN-C/RLQN-C Package Air Conditioner

FORM NO. SSC-967 REV. 1

Sure Comfort® RLPN-C/RLQN-C Package Air Conditioner



RLPN-C 14 SEER RLQN-C 15 SEER

- With ClearControl™
- Nominal Sizes 3-5 Tons [10.6-17.6 kW]

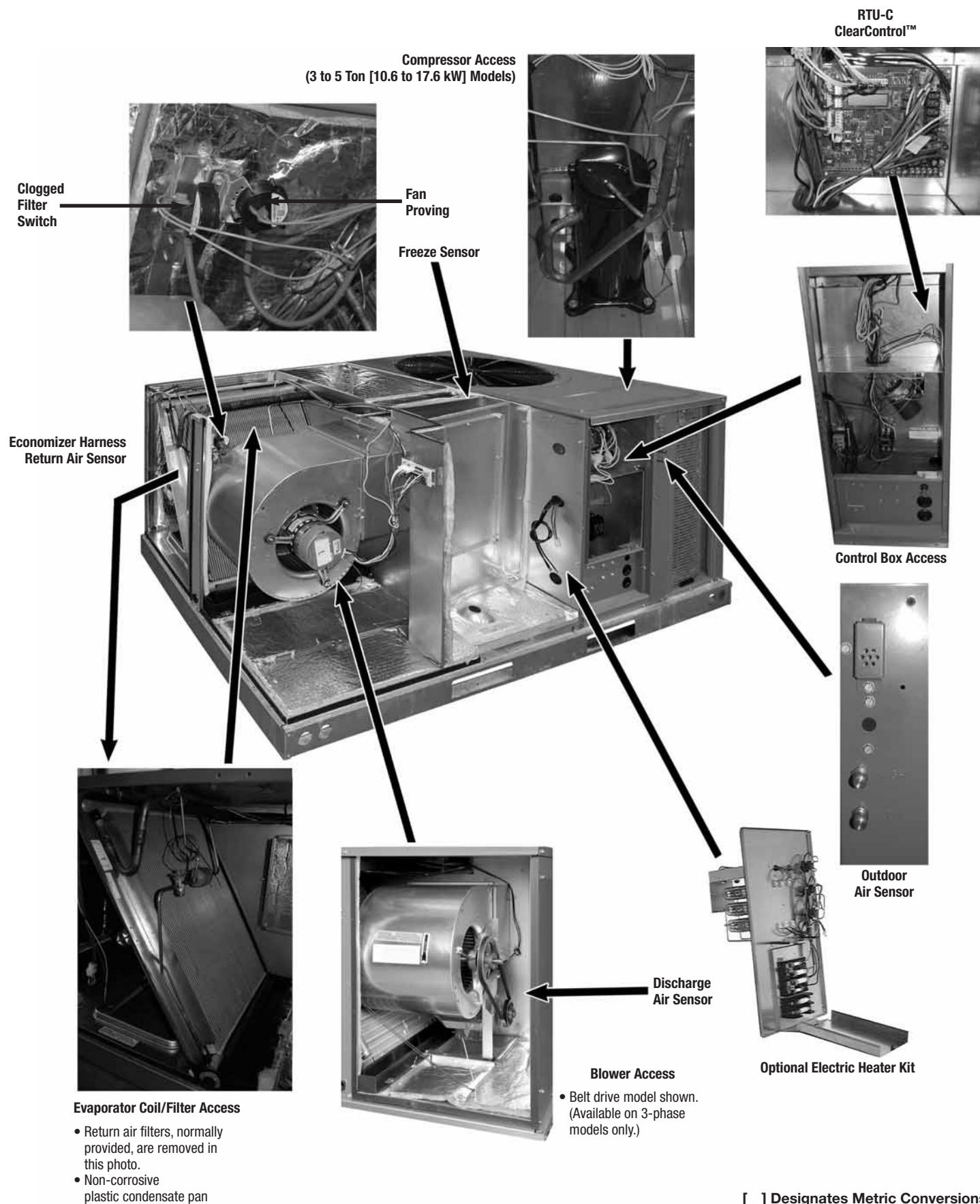


"Proper sizing and installation of equipment is critical to achieve optimal performance. Ask your Contractor for details or visit www.energystar.gov."

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Package Air Conditioner Features:





RLPN - C036, C048, C060
RLQN - C036, C048, C060

RLPN-C/RLQN-C 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.
- Single stage compressor on all models. (except RLQN-C060 which utilizes 2 stage Ultra tech)
- Convertible airflow.
- 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, Micro Channel designed evaporator coil facilitates easy cleaning for maintained high efficiencies.
- Cooling operation up to 125 degree F ambient.
- Hinge door available as a factory installed option.
- Easily removable filter, blower, electric heat, and control access panels permits prompt service.
- Paint Finish meets ASTM B117 for maximum protection. G90 galvanized steel.
- One piece top cover and one piece base pan with drawn supply and return opening for superior water management.
- Externally mounted refrigerant gauge ports for easy service diagnostics.
- Factory or field-installed electric heat kits available up to 24 kW.
- Easy to install plug-in; slip in, 100% fully modulating economizer.
- Forkable base rails for easy handling and lifting.
- Single point electrical connections.
- High performance belt drive motor with variable pitch pulleys and quick adjust belt system.
- Permanently lubricated evaporator, condenser motors.
- Condenser motors are internally protected, totally enclosed with shaft down design.
- 1 inch filter standard with slide out design.
- Colored and labeled wiring.
- Molded compressor plug.
- Factory Installed ClearControl™, a Direct Digital Control (DDC) and sensors which can connect to LonWorks™ or BACnet® BAS systems for remote monitoring and control.
- Micro Channel evaporator and condenser coils deliver superior performance with less refrigerant charge and less weight than conventional copper tube/aluminum fin coils. In addition the all aluminum construction has superior protection against formicary corrosion and aluminum tube rubbing potential. Its easier to clean and has a more robust surface.

As part of the ClearControl™ system which allows real time monitoring and communication between rooftop units, the RLPN-C 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. 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 RLPN-C Package air Conditioner with the RTU-C is specifically designed to be applied in four distinct applications:

The RLPN-C 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 the RTU-C 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 RLPN-C 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 the RTU-C 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 limits of 64 nodes per segment applies to this device.

The RLPN-C 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.

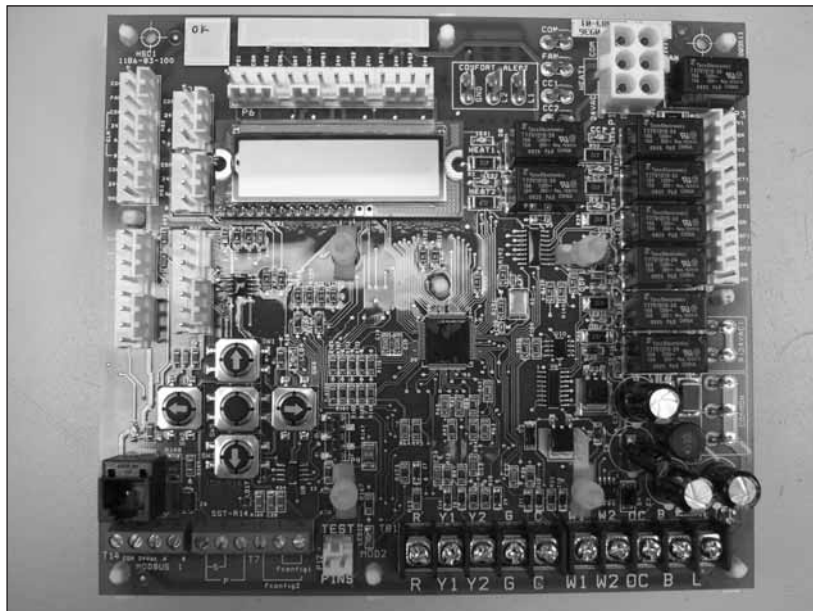
The RLPN-C is compatible with a zone sensor and mechanical or solid state time clock connected to the RTU-C. Extensive unit status and diagnostics are displayed on the LCD screen of the RTU-C.

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 RTU-C display or connected to the “L-Terminal” of a thermostat for notification.

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

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

RTU-C/ClearControl™



HUMIDIDRY™ DEHUMIDIFICATION SYSTEM

With the factory installed dehumidification option, in addition to a thermostat or space temperature sensor that is normally present, an indoor relative humidity sensor is installed in the occupied space and connected to the Rooftop Unit Controller (RTU-C) which then controls the capacity of the cooling coil to remove moisture from the supply air and maintain space relative humidity below an adjustable limit visible on the RTU-C display. The default value is the ASHRAE recommended limit of 60% RH.

With this option, a refrigerant reheat coil is installed downstream from the evaporator coil. When the space humidity is too high and reheat is energized, this coil uses some of the heat that is normally rejected to the outside by the condenser coil to instead reheat the cold air from the evaporator coil just enough to avoid overcooling the space. Providing "neutral air" to the occupied space.

Because the demand for dehumidification can be different from the cooling demand, the unit will first satisfy the demand for cooling and then if the space humidity is still too high, dehumidification mode is energized. When in dehumidification mode, the supply air leaving the unit will be near the entering air temperature, but at a much lower humidity. The unit will exit the dehumidification mode when the humidity setpoint is satisfied; or if the load is increased, it will return to normal cooling mode. Reheat is not available during the gas heating mode.

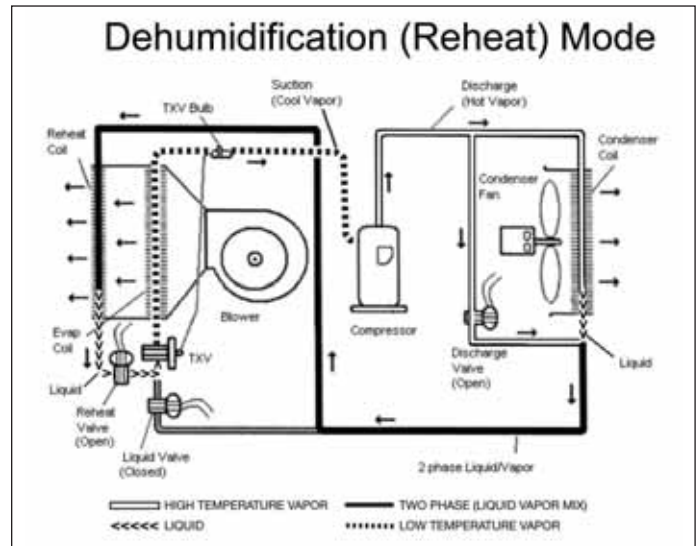


Figure 2 shows the refrigerant path during the dehumidification mode. When the reheat cycle is energized by the RTU-C, a solenoid valve downstream of the reheat coil opens, a solenoid valve ahead of the TXV closes, and a solenoid valve in the compressor discharge line opens. The liquid refrigerant leaves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

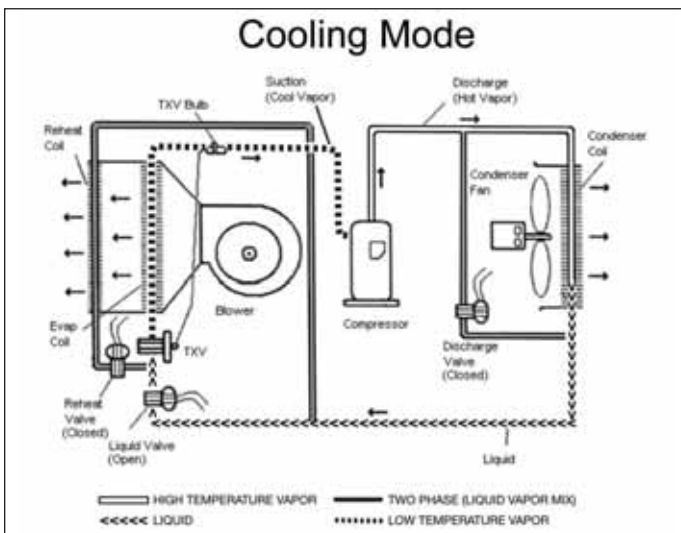


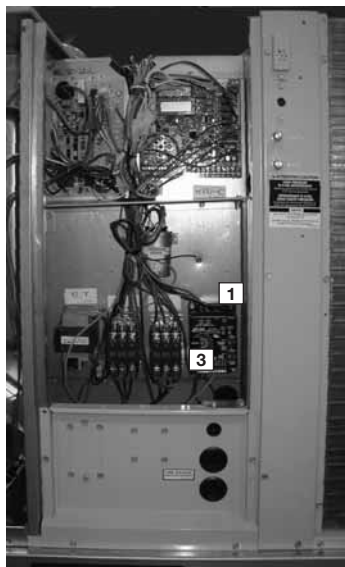
Figure 1 shows the refrigerant path during the normal cooling mode. The liquid refrigerant leaves the TXV with the sudden pressure drop causing the liquid to expand to a vapor and absorbing the heat from the supply air going through the evaporator coil. The refrigerant vapor then travels to the compressor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

HUMIDIDRY™ DEHUMIDIFICATION SYSTEM

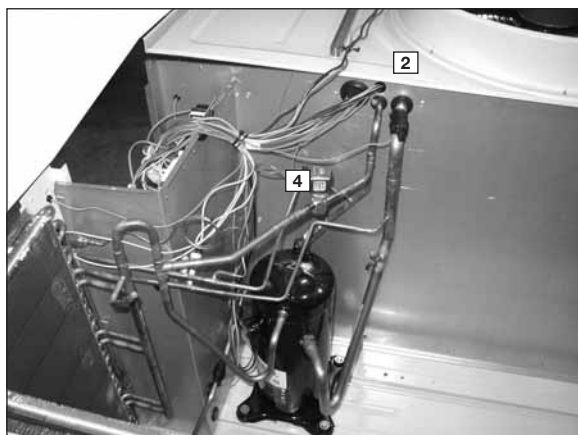
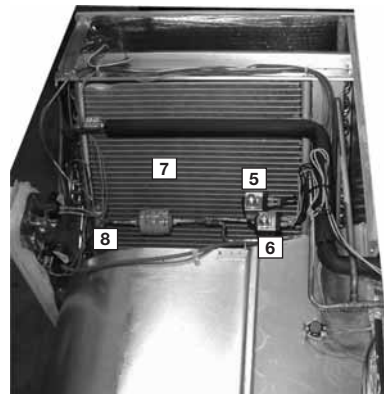
The factory installed dehumidification consist of the following components:

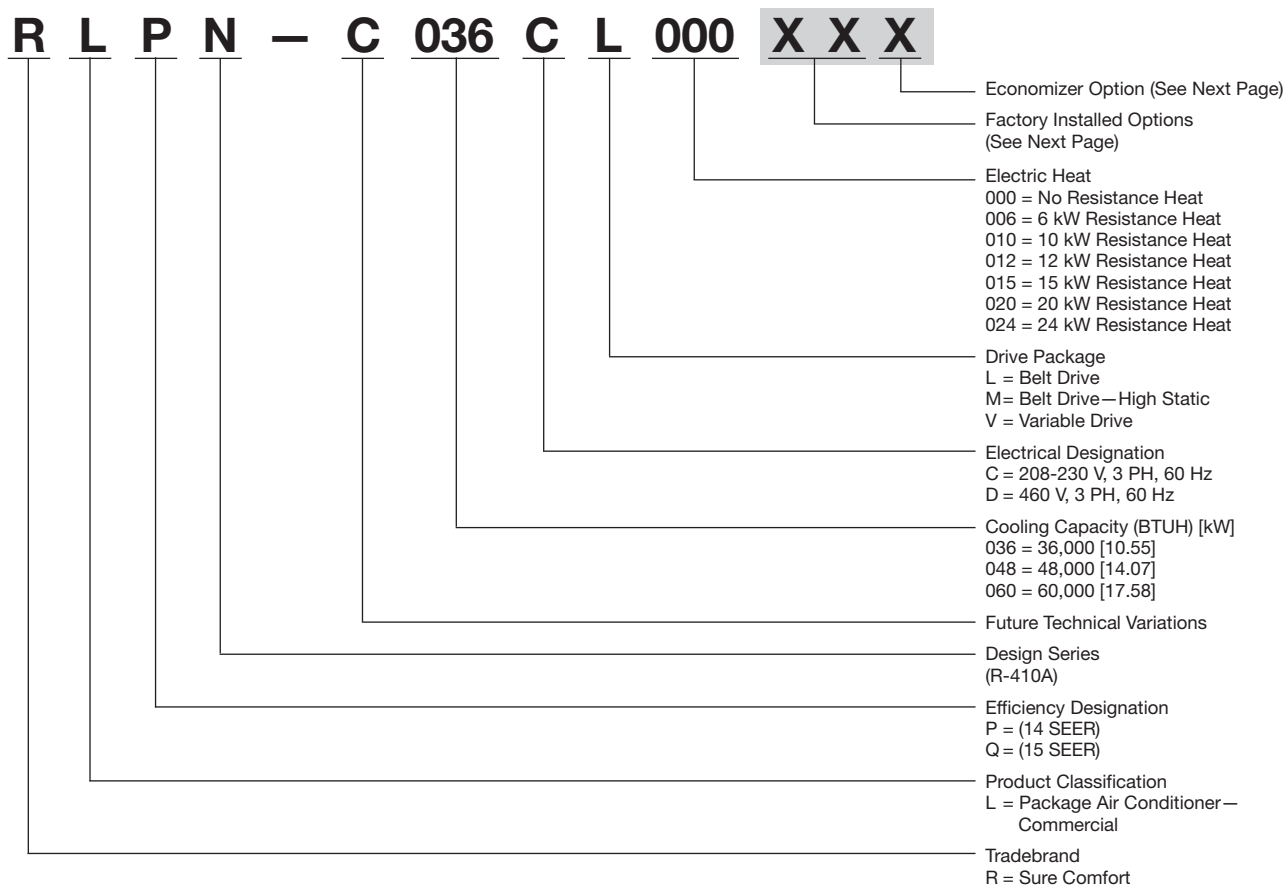
Outdoor Fan Motor Controller, Liquid Line Sensor, Discharge Line Solenoid Valve, Liquid Line Solenoid Valve, Reheat Solenoid Valve & Reheat coil.

During reheat mode the (1) outdoor fan motor controller (OFMC) slows the outdoor fan(s) to increase the liquid temperature to maintain an optimized amount of reheat required to provide neutral air to the occupied space. The OFMC uses a temperature sensor which is located on the liquid line (2) in the outdoor section to determine the temperature of the liquid line. The factory setting for the outdoor fan motor controller is 90° F which will provide neutral air +1 to -5°F from the entering air temperature (example if the entering or return air temperature is 75° F the leaving or supply air temperature will be 76° to 70°F during the reheat mode). If field adjustment is required to raise or lower the leaving air temperature this may be accomplished by turning the temperature control dial (3) on the outdoor fan motor controller (OFMC). Turning the dial to a higher temperature setting will raise the leaving or supply air temperature and turning the dial to a lower setting will reduce the leaving or supply temperature.



When the unit is in the dehumidification mode the discharge line solenoid valve (4) opens which injects discharge gas into the liquid line increasing the liquid line refrigerant temperature. In the reheat mode the liquid line solenoid (5) is closed and the reheat solenoid (6) is open. This forces the two phase refrigerant thru the reheat coil (7) where it is subcooled and then to the evaporator expansion valve (8).





[] Designates Metric Conversions

FACTORY INSTALLED OPTION CODES FOR RLPN-C/RLQN-C (3-5 Ton) [10.6-17.6 kW] (C036, C048, C060)

Option Code	Hail Guard	Non-Powered Convenience Outlet	Low Ambient/ Comfort Alert	Hinged Doors
AD	x			
AG		x		
AR			x	
AV				x
JD	x		x	
BJ	x	x		
CZ	x	x	x	
JE		x	x	
JK	x			x
JL		x		x
JQ			x	x
KH	x		x	x
KD	x	x		x
DT	x	x	x	x
KL		x	x	x

Example: RLPN-C060CL000XXX (where XX is factory installed option)

Example: No Options

RLPN-C060CL000

Example: No Options with Factory Installed Economizer

RLPN-C060CL000AAH

Example: Options with Hailguard with no Factory Installed Economizer

RLPN-C060CL000ADA

Example: Options same as above with Factory Installed Economizer

RLPN-C060CL000ADH

Re-Heat Code

555= Factory Installed Re-Heat

Example: RLPN-C060CL000XXX (where XXX is additional factory installed options)

Example: No Option

RLPN-C060CL000

Example: Re-Heat Option Only

RLPN-C060CL000555

Example: Re-Heat with factory installed economizer

RLPN-C060CL000555AAH

Example: Re-Heat with Hailguard and no factory installed economizer

RLPN-C060CL000555ADA

Example: Re-Heat Option same as above with factory installed economizer

RLPN-C060CL000555ADH

Note: "555" RE-HEAT AVAILABLE ON "C" TECHNICAL VARIATIONS; C/D VOLTAGES ONLY)

ECONOMIZER SELECTION FOR RLPN-C/RLQN-C (3-5 TON) [10.6-17.6 kW]

	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.

[] Designates Metric Conversions

RLPN-C SELECTION PROCEDURES

1. Determine cooling and heating requirements at design conditions.

Example:

Power supply208/230 - 3 Phase
 Total cooling capacity42,500 BTUH [12.44 kW]
 Sensible cooling capacity34,000 BTUH [9.96 kW]
 Heating capacityNone
 Condenser entering air95°F [35°C]
 Evaporator entering air.....63°F [17°C] wb/76°F [24°C] db
 Indoor air flow1600 CFM [755 L/s]
 External static pressure1.1 in wg
 Required efficiency13 SEER

2. Select unit to meet cooling requirements.

Since total cooling is within the range of 4 ton [14.07 kW] unit and requires 13 SEER efficiency level, enter cooling performance from the RLPN-C048 table, at 95°F [35°C] outdoor temperature, 63°F [17°C] wb entering indoor air, and 1600 CFM [755 L/s]:

Total capacity45,100 BTUH [13.21 kW]
 Power supply44,100 BTUH [12.91 kW]
 Power input3.6 kW

And also, at 76°F [24°C] db indoor entering air, and using the formula at the bottom of the page:

Sensible capacity38,327 BTUH [11.22 kW]

3. Determine blower speed and power to meet the system requirements.

At the given external static pressure of 1.1 in wg, the belt model must be selected. Enter the belt drive blower performance table at 1600 CFM [755 L/s] and 1.1 in wg ESP:

RPM1195
 Watts755
 DriveM

4. Calculate indoor blower BTUH heat effect.

BTUH = Watts x 3.413 = 2577

5. Calculate net cooling capacities.

Net total cooling = 45,100 – 2577 = 42,523 BTUH [12.45 kW]
 Net sensible cooling = 36,908 – 2577 = 35,750 BTUH [10.06 kW]

6. Select Model

RLPN-C048CM000

[] Designates Metric Conversions

NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLPN- Series	C036CL000	C036CM000	C036DL000	C036DM000
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	36,200 [10.61]	36,200 [10.61]	36,200 [10.61]	36,200 [10.61]
EER/SEER ²	11.6/14	11.6/14	11.6/14	11.6/14
Nominal CFM/AHRI Rated CFM [L/s]	1200/1250 [566/590]	1200/1250 [566/590]	1200/1250 [566/590]	1200/1250 [566/590]
AHRI Net Cooling Capacity Btu [kW]	34,600 [10.14]	34,600 [10.14]	34,600 [10.14]	34,600 [10.14]
Net Sensible Capacity Btu [kW]	25,300 [7.41]	25,300 [7.41]	25,300 [7.41]	25,300 [7.41]
Net Latent Capacity Btu [kW]	9,300 [2.72]	9,300 [2.72]	9,300 [2.72]	9,300 [2.72]
Net System Power kW	2.95	2.95	2.95	2.95
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)³	78	78	78	78
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	0.7 [18]	0.7 [18]	0.7 [18]	0.7 [18]
Face Area sq. ft. [sq. m]	13.9 [1.29]	13.9 [1.29]	13.9 [1.29]	13.9 [1.29]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	1 [25]	1 [25]	1 [25]	1 [25]
Face Area sq. ft. [sq. m]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	3680 [1737]	3680 [1737]	3680 [1737]	3680 [1737]
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single	Single	Single	Single
No. Motors	1	1	1	1
Motor HP	1/2	1/2	1/2	1/2
Motor RPM	1725	1725	1725	1725
Motor Frame Size	48	56	48	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]
	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]
Refrigerant Charge Oz. [g]	54 [1531]	54 [1531]	54 [1531]	54 [1531]
Weights				
Net Weight lbs. [kg]	485 [220]	485 [220]	485 [220]	485 [220]
Ship Weight lbs. [kg]	492 [223]	492 [223]	492 [223]	492 [223]

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 $\pm 20\%$ 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. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

[] Designates Metric Conversions

NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLPN- Series	C048CL000	C048CM000	C048DL000	C048DM000
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	48,000 [14.06]	48,000 [14.06]	48,000 [14.06]	48,000 [14.06]
EER/SEER ²	11.6/14	11.6/14	11.6/14	11.6/14
Nominal CFM/AHRI Rated CFM [L/s]	1600/1500 [755/708]	1600/1500 [755/708]	1600/1500 [755/708]	1600/1500 [755/708]
AHRI Net Cooling Capacity Btu [kW]	46,000 [13.48]	46,000 [13.48]	46,000 [13.48]	46,000 [13.48]
Net Sensible Capacity Btu [kW]	34,000 [9.96]	34,000 [9.96]	34,000 [9.96]	34,000 [9.96]
Net Latent Capacity Btu [kW]	12,000 [3.52]	12,000 [3.52]	12,000 [3.52]	12,000 [3.52]
Net System Power kW	3.93	3.93	3.93	3.93
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)³	78	78	78	78
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	0.7 [18]	0.7 [18]	0.7 [18]	0.7 [18]
Face Area sq. ft. [sq. m]	16.4 [1.52]	16.4 [1.52]	16.4 [1.52]	16.4 [1.52]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	1.3 [32]	1.3 [32]	1.3 [32]	1.3 [32]
Face Area sq. ft. [sq. m]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	3680 [1737]	3680 [1737]	3680 [1737]	3680 [1737]
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single	Single	Single	Single
No. Motors	1	1	1	1
Motor HP	1/2	3/4	1/2	3/4
Motor RPM	1725	1725	1725	1725
Motor Frame Size	48	56	48	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]
	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]
Refrigerant Charge Oz. [g]	68 [1928]	68 [1928]	68 [1928]	68 [1928]
Weights				
Net Weight lbs. [kg]	509 [231]	510 [231]	509 [231]	510 [231]
Ship Weight lbs. [kg]	516 [234]	517 [235]	516 [234]	517 [235]

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 $\pm 20\%$ 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. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

[] Designates Metric Conversions

NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLPN- Series	C060CL000	C060CM000	C060DL000	C060DM000
Cooling Performance¹				
Gross Cooling Capacity Btu [kW]	60,000 [17.58]	60,000 [17.58]	60,000 [17.58]	60,000 [17.58]
EER/SEER ²	11.6/14	11.6/14	11.6/14	11.6/14
Nominal CFM/AHRI Rated CFM [L/s]	2000/1800 [944/849]	2000/1800 [944/849]	2000/1800 [944/849]	2000/1800 [944/849]
AHRI Net Cooling Capacity Btu [kW]	58,500 [17.14]	58,500 [17.14]	58,500 [17.14]	58,500 [17.14]
Net Sensible Capacity Btu [kW]	41,700 [12.22]	41,700 [12.22]	41,700 [12.22]	41,700 [12.22]
Net Latent Capacity Btu [kW]	16,800 [4.92]	16,800 [4.92]	16,800 [4.92]	16,800 [4.92]
Net System Power kW	4.95	4.95	4.95	4.95
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)³				
	83	83	83	83
Outdoor Coil—Fin Type				
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	0.7 [18]	0.7 [18]	0.7 [18]	0.7 [18]
Face Area sq. ft. [sq. m]	16.4 [1.52]	16.4 [1.52]	16.4 [1.52]	16.4 [1.52]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type				
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	1.3 [32]	1.3 [32]	1.3 [32]	1.3 [32]
Face Area sq. ft. [sq. m]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]
Outdoor Fan—Type				
	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	3930 [1855]	3930 [1855]	3930 [1855]	3930 [1855]
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type				
	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single	Single	Single	Single
No. Motors	1	1	1	1
Motor HP	3/4	1	3/4	1
Motor RPM	1725	1725	1725	1725
Motor Frame Size	56	56	56	56
Filter—Type				
Furnished	Yes	Yes	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]
Refrigerant Charge Oz. [g]				
	63 [1786]	63 [1786]	63 [1786]	63 [1786]
Weights				
Net Weight lbs. [kg]	517 [235]	522 [237]	517 [235]	522 [237]
Ship Weight lbs. [kg]	524 [238]	529 [240]	524 [238]	529 [240]

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 $\pm 20\%$ 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. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

[] Designates Metric Conversions

NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLPN- Series	C036CL*555	C036CM*555	C036DL*555	C036DM*555
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	36,200 [10.61]	36,200 [10.61]	36,200 [10.61]	36,200 [10.61]
EER/SEER ²	11.6/14	11.6/14	11.6/14	11.6/14
Nominal CFM/AHRI Rated CFM [L/s]	1200/1250 [566/590]	1200/1250 [566/590]	1200/1250 [566/590]	1200/1250 [566/590]
AHRI Net Cooling Capacity Btu [kW]	34,600 [10.14]	34,600 [10.14]	34,600 [10.14]	34,600 [10.14]
Net Sensible Capacity Btu [kW]	25,300 [7.41]	25,300 [7.41]	25,300 [7.41]	25,300 [7.41]
Net Latent Capacity Btu [kW]	9,300 [2.72]	9,300 [2.72]	9,300 [2.72]	9,300 [2.72]
Net System Power kW	2.95	2.95	2.95	2.95
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)³	78	78	78	78
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	0.7 [18]	0.7 [18]	0.7 [18]	0.7 [18]
Face Area sq. ft. [sq. m]	13.9 [1.29]	13.9 [1.29]	13.9 [1.29]	13.9 [1.29]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	1 [25]	1 [25]	1 [25]	1 [25]
Face Area sq. ft. [sq. m]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	3680 [1737]	3680 [1737]	3680 [1737]	3680 [1737]
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single	Single	Single	Single
No. Motors	1	1	1	1
Motor HP	1/2	1/2	1/2	1/2
Motor RPM	1725	1725	1725	1725
Motor Frame Size	48	56	48	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]
Refrigerant Charge Oz. [g]	86 [2438]	86 [2438]	86 [2438]	86 [2438]
Weights				
Net Weight lbs. [kg]	485 [220]	485 [220]	485 [220]	485 [220]
Ship Weight lbs. [kg]	492 [223]	492 [223]	492 [223]	492 [223]

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 $\pm 20\%$ 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. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

[] Designates Metric Conversions

NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLPN- Series	C048CL*555	C048CM*555	C048DL*555	C048DM*555
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	48,000 [14.06]	48,000 [14.06]	48,000 [14.06]	48,000 [14.06]
EER/SEER ²	11.6/14	11.6/14	11.6/14	11.6/14
Nominal CFM/AHRI Rated CFM [L/s]	1600/1500 [755/708]	1600/1500 [755/708]	1600/1500 [755/708]	1600/1500 [755/708]
AHRI Net Cooling Capacity Btu [kW]	46,000 [13.48]	46,000 [13.48]	46,000 [13.48]	46,000 [13.48]
Net Sensible Capacity Btu [kW]	34,000 [9.96]	34,000 [9.96]	34,000 [9.96]	34,000 [9.96]
Net Latent Capacity Btu [kW]	12,000 [3.52]	12,000 [3.52]	12,000 [3.52]	12,000 [3.52]
Net System Power kW	3.93	3.93	3.93	3.93
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)³	78	78	78	78
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	0.7 [18]	0.7 [18]	0.7 [18]	0.7 [18]
Face Area sq. ft. [sq. m]	16.4 [1.52]	16.4 [1.52]	16.4 [1.52]	16.4 [1.52]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	1.3 [32]	1.3 [32]	1.3 [32]	1.3 [32]
Face Area sq. ft. [sq. m]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	3680 [1737]	3680 [1737]	3680 [1737]	3680 [1737]
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single	Single	Single	Single
No. Motors	1	1	1	1
Motor HP	1/2	3/4	1/2	3/4
Motor RPM	1725	1725	1725	1725
Motor Frame Size	48	56	48	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]
Refrigerant Charge Oz. [g]	97 [2750]	97 [2750]	97 [2750]	97 [2750]
Weights				
Net Weight lbs. [kg]	509 [231]	510 [231]	509 [231]	510 [231]
Ship Weight lbs. [kg]	516 [234]	517 [235]	516 [234]	517 [235]

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 $\pm 20\%$ 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. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

[] Designates Metric Conversions

NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLPN- Series	C060CL*555	C060CM*555	C060DL*555	C060DM*555
Cooling Performance¹				
Gross Cooling Capacity Btu [kW]	60,000 [17.58]	60,000 [17.58]	60,000 [17.58]	60,000 [17.58]
EER/SEER ²	11.6/14	11.6/14	11.6/14	11.6/14
Nominal CFM/AHRI Rated CFM [L/s]	2000/1800 [944/849]	2000/1800 [944/849]	2000/1800 [944/849]	2000/1800 [944/849]
AHRI Net Cooling Capacity Btu [kW]	58,500 [17.14]	58,500 [17.14]	58,500 [17.14]	58,500 [17.14]
Net Sensible Capacity Btu [kW]	41,700 [12.22]	41,700 [12.22]	41,700 [12.22]	41,700 [12.22]
Net Latent Capacity Btu [kW]	16,800 [4.92]	16,800 [4.92]	16,800 [4.92]	16,800 [4.92]
Net System Power kW	4.95	4.95	4.95	4.95
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)³				
	83	83	83	83
Outdoor Coil—Fin Type				
Tube Type	Louvered	Louvered	Louvered	Louvered
MicroChannel Depth in. [mm]	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Face Area sq. ft. [sq. m]	0.7 [18]	0.7 [18]	0.7 [18]	0.7 [18]
Rows / FPI [FPcm]	16.4 [1.52]	16.4 [1.52]	16.4 [1.52]	16.4 [1.52]
	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type				
Tube Type	Louvered	Louvered	Louvered	Louvered
MicroChannel Depth in. [mm]	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Face Area sq. ft. [sq. m]	1.3 [32]	1.3 [32]	1.3 [32]	1.3 [32]
Rows / FPI [FPcm]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]
	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]
Outdoor Fan—Type				
No. Used/Diameter in. [mm]	Propeller	Propeller	Propeller	Propeller
Drive Type/No. Speeds	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]
CFM [L/s]	Direct/1	Direct/1	Direct/1	Direct/1
No. Motors/HP	3930 [1855]	3930 [1855]	3930 [1855]	3930 [1855]
Motor RPM	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP
	1075	1075	1075	1075
Indoor Fan—Type				
No. Used/Diameter in. [mm]	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
Drive Type	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]
No. Speeds	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Motors	Single	Single	Single	Single
Motor HP	1	1	1	1
Motor RPM	3/4	1	3/4	1
Motor Frame Size	1725	1725	1725	1725
	56	56	56	56
Filter—Type				
Furnished	Disposable	Disposable	Disposable	Disposable
(NO.) Size Recommended in. [mm x mm x mm]	Yes	Yes	Yes	Yes
	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]
	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]
Refrigerant Charge Oz. [g]				
	97 [2750]	97 [2750]	97 [2750]	97 [2750]
Weights				
Net Weight lbs. [kg]	517 [235]	522 [237]	517 [235]	522 [237]
Ship Weight lbs. [kg]	524 [238]	529 [240]	524 [238]	529 [240]

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 $\pm 20\%$ 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. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

[] Designates Metric Conversions

NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLQN- Series	C036CL000	C036CM000	C036DL000	C036DM000
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	36,200 [10.61]	36,200 [10.61]	36,200 [10.61]	36,200 [10.61]
EER/SEER ²	12.5/15	12.5/15	12.5/15	12.5/15
Nominal CFM/AHRI Rated CFM [L/s]	1200/1250 [566/590]	1200/1250 [566/590]	1200/1250 [566/590]	1200/1250 [566/590]
AHRI Net Cooling Capacity Btu [kW]	35,400 [10.37]	35,400 [10.37]	35,400 [10.37]	35,400 [10.37]
Net Sensible Capacity Btu [kW]	26,200 [7.68]	26,200 [7.68]	26,200 [7.68]	26,200 [7.68]
Net Latent Capacity Btu [kW]	9,200 [2.7]	9,200 [2.7]	9,200 [2.7]	9,200 [2.7]
Net System Power kW	2.72	2.72	2.72	2.72
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)³	78	78	78	78
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	0.7 [18]	0.7 [18]	0.7 [18]	0.7 [18]
Face Area sq. ft. [sq. m]	13.9 [1.29]	13.9 [1.29]	13.9 [1.29]	13.9 [1.29]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	1 [25]	1 [25]	1 [25]	1 [25]
Face Area sq. ft. [sq. m]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	3680 [1737]	3680 [1737]	3680 [1737]	3680 [1737]
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds	Single	Single	Single	Single
No. Motors	1	1	1	1
Motor HP	1/2	1/2	1/2	1/2
Motor RPM	1725	1725	1725	1725
Motor Frame Size	48	56	48	56
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]
Refrigerant Charge Oz. [g]	54 [1531]	54 [1531]	54 [1531]	54 [1531]
Weights				
Net Weight lbs. [kg]	485 [220]	485 [220]	485 [220]	485 [220]
Ship Weight lbs. [kg]	492 [223]	492 [223]	492 [223]	492 [223]

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 $\pm 20\%$ 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. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

[] Designates Metric Conversions

NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLQN- Series	C048CL000	C048CM000	C048DL000	C048DM000
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	48,000 [14.06]	48,000 [14.06]	48,000 [14.06]	48,000 [14.06]
EER/SEER ²	12.5/15	12.5/15	12.5/15	12.5/15
Nominal CFM/AHRI Rated CFM [L/s]	1600/1600 [755/755]	1600/1600 [755/755]	1600/1600 [755/755]	1600/1600 [755/755]
AHRI Net Cooling Capacity Btu [kW]	46,500 [13.62]	46,500 [13.62]	46,500 [13.62]	46,500 [13.62]
Net Sensible Capacity Btu [kW]	35,700 [10.46]	35,700 [10.46]	35,700 [10.46]	35,700 [10.46]
Net Latent Capacity Btu [kW]	10,800 [3.16]	10,800 [3.16]	10,800 [3.16]	10,800 [3.16]
Net System Power kW	3.69	3.69	3.69	3.69
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)³				
	78	78	78	78
Outdoor Coil—Fin Type				
Tube Type	Louvered	Louvered	Louvered	Louvered
MicroChannel Depth in. [mm]	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Face Area sq. ft. [sq. m]	0.7 [18]	0.7 [18]	0.7 [18]	0.7 [18]
Rows / FPI [FPcm]	16.4 [1.52]	16.4 [1.52]	16.4 [1.52]	16.4 [1.52]
	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type				
Tube Type	Louvered	Louvered	Louvered	Louvered
MicroChannel Depth in. [mm]	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Face Area sq. ft. [sq. m]	1.3 [32]	1.3 [32]	1.3 [32]	1.3 [32]
Rows / FPI [FPcm]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]
	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]
Outdoor Fan—Type				
No. Used/Diameter in. [mm]	Propeller	Propeller	Propeller	Propeller
Drive Type/No. Speeds	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]
CFM [L/s]	Direct/1	Direct/1	Direct/1	Direct/1
No. Motors/HP	3680 [1737]	3680 [1737]	3680 [1737]	3680 [1737]
Motor RPM	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP
	1075	1075	1075	1075
Indoor Fan—Type				
No. Used/Diameter in. [mm]	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
Drive Type	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]
No. Speeds	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Motors	Single	Single	Single	Single
Motor HP	1	1	1	1
Motor RPM	1/2	3/4	1/2	3/4
Motor Frame Size	1725	1725	1725	1725
	48	56	48	56
Filter—Type				
Furnished	Disposable	Disposable	Disposable	Disposable
(NO.) Size Recommended in. [mm x mm x mm]	Yes	Yes	Yes	Yes
	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]
	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]
Refrigerant Charge Oz. [g]				
	68 [1928]	68 [1928]	68 [1928]	68 [1928]
Weights				
Net Weight lbs. [kg]	509 [231]	510 [231]	509 [231]	510 [231]
Ship Weight lbs. [kg]	516 [234]	517 [235]	516 [234]	517 [235]

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 $\pm 20\%$ 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. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

[] Designates Metric Conversions

NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLQN- Series	C060CV000	C060DV000
Cooling Performance¹		
Gross Cooling Capacity Btu [kW]	59,000 [17.29]	59,000 [17.29]
EER/SEER ²	15	15
EER (1st stage / 2nd stage)	19.9/11.6	19.9/11.6
AHRI Rated CFM (1st / 2nd stage) [L/s]	1375 / 1800 [649 / 849]	1375 / 1800 [649 / 849]
AHRI Net Cooling Capacity (1st / 2nd stage) Btu [kW]	49,000 / 57,000 [14.3/16.7]	49,000 / 57,000 [14.3/16.7]
Net Sensible Capacity (1st / 2nd stage) Btu [kW]	34,800 / 40,800 [10.2/12.0]	34,800 / 40,800 [10.2/12.0]
Net Latent Capacity (1st / 2nd stage) Btu [kW]	14,200 / 16,200 [4.2 / 4.8]	14,200 / 16,200 [4.2 / 4.8]
Net System Power (1st / 2nd stage) [kW]	2.1 / 4.8	2.1 / 4.8
Compressor		
No./Type	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)³		
	83	83
Outdoor Coil—Fin Type		
Tube Type	Louvered	Louvered
MicroChannel Depth in. [mm]	MicroChannel	MicroChannel
Face Area sq. ft. [sq. m]	0.7 [18]	0.7 [18]
Rows / FPI [FPcm]	16.4 [1.52]	16.4 [1.52]
	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type		
Tube Type	Louvered	Louvered
MicroChannel Depth in. [mm]	MicroChannel	MicroChannel
Face Area sq. ft. [sq. m]	1.3 [32]	1.3 [32]
Rows / FPI [FPcm]	4.8 [0.45]	4.8 [0.45]
	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/0.75 [19.05]	1/0.75 [19.05]
Outdoor Fan—Type		
	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24 [609.6]	1/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1
CFM [L/s]	3930 [1855]	3930 [1855]
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP
Motor RPM	1075	1075
Indoor Fan—Type		
	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/11x10 [279x254]	1/11x10 [279x254]
Drive Type	Direct	Direct
No. Speeds	Multiple	Multiple
No. Motors	1	1
Motor HP	1	1
Motor RPM	1050	1050
Motor Frame Size	48	48
Filter—Type		
Furnished	Disposable	Disposable
	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]
	(1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635]
Refrigerant Charge Oz. [g]		
	63 [1786]	63 [1786]
Weights		
Net Weight lbs. [kg]	513 [233]	569 [258]
Ship Weight lbs. [kg]	520 [236]	576 [261]

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 $\pm 20\%$ 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. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

[] Designates Metric Conversions

GROSS SYSTEMS PERFORMANCE DATA—RLPN-C036

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①											
wbE			71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]		
CFM [L/s]			1375 [649]	1250 [590]	1062 [501]	1375 [649]	1250 [590]	1062 [501]	1375 [649]	1250 [590]	1062 [501]
DR ①			0.2	0.18	0.15	0.2	0.18	0.15	0.2	0.18	0.15
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW] Sens BTUH [kW] Power	44.7 [13.1] 23.8 [7.0] 1.9	43.9 [12.9] 22.8 [6.7] 1.9	42.7 [12.5] 21.2 [6.2] 1.9	41.5 [12.2] 29.7 [8.7] 1.9	40.7 [11.9] 28.4 [8.3] 1.9	39.6 [11.6] 26.4 [7.7] 1.9	38.5 [11.3] 33.2 [9.7] 2.0	37.8 [11.1] 31.7 [9.3] 2.0	36.8 [10.8] 29.5 [8.6] 1.9
	80 [26.7]	Total BTUH [kW] Sens BTUH [kW] Power	43.6 [12.8] 23.7 [6.9] 2.0	42.9 [12.6] 22.6 [6.6] 2.0	41.7 [12.2] 21.0 [6.2] 2.0	40.4 [11.8] 29.5 [8.6] 2.1	39.7 [11.6] 28.2 [8.3] 2.0	38.6 [11.3] 26.2 [7.7] 2.0	37.4 [11.0] 33.0 [9.7] 2.1	36.7 [10.8] 31.6 [9.3] 2.1	35.7 [10.5] 29.4 [8.6] 2.0
	85 [29.4]	Total BTUH [kW] Sens BTUH [kW] Power	42.5 [12.5] 23.4 [6.8] 2.2	41.7 [12.2] 22.3 [6.5] 2.2	40.6 [11.9] 20.8 [6.1] 2.1	39.3 [11.5] 29.2 [8.6] 2.2	38.6 [11.3] 27.9 [8.2] 2.2	37.5 [11.0] 26.0 [7.6] 2.1	36.3 [10.6] 32.8 [9.6] 2.2	35.6 [10.4] 31.3 [9.2] 2.2	34.6 [10.2] 29.1 [8.5] 2.2
	90 [32.2]	Total BTUH [kW] Sens BTUH [kW] Power	41.4 [12.1] 22.9 [6.7] 2.3	40.6 [11.9] 21.9 [6.4] 2.3	39.5 [11.6] 20.4 [6.0] 2.3	38.1 [11.2] 28.8 [8.4] 2.3	37.4 [11.0] 27.5 [8.1] 2.3	36.4 [10.7] 25.6 [7.5] 2.3	35.1 [10.3] 32.3 [9.5] 2.4	34.5 [10.1] 30.9 [9.1] 2.3	33.5 [9.8] 28.7 [8.4] 2.3
	95 [35]	Total BTUH [kW] Sens BTUH [kW] Power	40.2 [11.8] 22.4 [6.6] 2.5	39.5 [11.6] 21.4 [6.3] 2.4	38.4 [11.2] 19.9 [5.8] 2.4	36.9 [10.8] 28.2 [8.3] 2.5	36.3 [10.6] 27.0 [7.9] 2.5	35.3 [10.3] 25.1 [7.3] 2.4	33.9 [9.9] 31.8 [9.3] 2.5	33.3 [9.8] 30.3 [8.9] 2.5	32.4 [9.5] 28.2 [8.3] 2.5
	100 [37.8]	Total BTUH [kW] Sens BTUH [kW] Power	39.0 [11.4] 21.7 [6.4] 2.6	38.3 [11.2] 20.7 [6.1] 2.6	37.2 [10.9] 19.3 [5.6] 2.6	35.7 [10.5] 27.5 [8.1] 2.6	35.1 [10.3] 26.3 [7.7] 2.6	34.1 [10.0] 24.5 [7.2] 2.6	32.7 [9.6] 31.1 [9.1] 2.7	32.2 [9.4] 29.7 [8.7] 2.6	31.3 [9.2] 27.6 [8.1] 2.6
	105 [40.6]	Total BTUH [kW] Sens BTUH [kW] Power	37.7 [11.1] 20.9 [6.1] 2.8	37.1 [10.9] 19.9 [5.8] 2.7	36.1 [10.6] 18.5 [5.4] 2.7	34.5 [10.1] 26.7 [7.8] 2.8	33.9 [9.9] 25.5 [7.5] 2.8	33.0 [9.7] 23.7 [7.0] 2.7	31.5 [9.2] 30.2 [8.9] 2.8	30.9 [9.1] 28.9 [8.5] 2.8	30.1 [8.8] 26.9 [7.9] 2.8
	110 [43.3]	Total BTUH [kW] Sens BTUH [kW] Power	36.5 [10.7] 19.9 [5.8] 2.9	35.8 [10.5] 19.0 [5.6] 2.9	34.9 [10.2] 17.7 [5.2] 2.9	33.2 [9.7] 25.7 [7.5] 3.0	32.7 [9.6] 24.6 [7.2] 2.9	31.8 [9.3] 22.9 [6.7] 2.9	30.3 [8.9] 29.3 [8.6] 3.0	29.7 [8.7] 28.0 [8.2] 3.0	28.9 [8.5] 26.0 [7.6] 2.9
	115 [46.1]	Total BTUH [kW] Sens BTUH [kW] Power	35.2 [10.3] 18.8 [5.5] 3.1	34.6 [10.1] 18.0 [5.3] 3.1	33.6 [9.9] 16.7 [4.9] 3.1	32.0 [9.4] 24.7 [7.2] 3.1	31.4 [9.2] 23.6 [6.9] 3.1	30.5 [8.9] 21.9 [6.4] 3.1	29.0 [8.5] 28.2 [8.3] 3.2	28.5 [8.3] 26.9 [7.9] 3.1	27.7 [8.1] 25.0 [7.3] 3.1
	120 [48.9]	Total BTUH [kW] Sens BTUH [kW] Power	33.9 [9.9] 17.6 [5.1] 3.3	33.3 [9.8] 16.8 [4.9] 3.3	32.4 [9.5] 15.6 [4.6] 3.2	30.7 [9.0] 23.4 [6.9] 3.3	30.1 [8.8] 22.4 [6.6] 3.3	29.3 [8.6] 20.8 [6.1] 3.3	27.7 [8.1] 27.0 [7.9] 3.4	27.2 [8.0] 25.8 [7.5] 3.3	26.4 [7.7] 24.0 [7.0] 3.3
	125 [51.7]	Total BTUH [kW] Sens BTUH [kW] Power	32.6 [9.5] 16.2 [4.8] 3.5	32.0 [9.4] 15.5 [4.5] 3.5	31.1 [9.1] 14.4 [4.2] 3.4	29.3 [8.6] 22.1 [6.5] 3.5	28.8 [8.4] 21.1 [6.2] 3.5	28.0 [8.2] 19.6 [5.7] 3.4	26.3 [7.7] 25.6 [7.5] 3.6	25.9 [7.6] 24.5 [7.2] 3.5	25.2 [7.4] 22.7 [6.7] 3.5

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

Total —Total capacity x 1000 BTUH
Sens —Sensible capacity x 1000 BTUH
Power—KW input

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

[] Designates Metric Conversions

GROSS SYSTEMS PERFORMANCE DATA—RLPN-C048

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①											
wbE			71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]		
CFM [L/s]			1650 [779]	1500 [708]	1275 [602]	1650 [779]	1500 [708]	1275 [602]	1650 [779]	1500 [708]	1275 [602]
DR ①			0.1	0.08	0.05	0.1	0.08	0.05	0.1	0.08	0.05
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW]	60.3 [17.7]	59.3 [17.4]	57.6 [16.9]	56.1 [16.4]	55.1 [16.1]	53.6 [15.7]	51.1 [15.0]	50.2 [14.7]	48.8 [14.3]
		Sens BTUH [kW]	31.2 [9.2]	29.8 [8.7]	27.7 [8.1]	39.8 [11.7]	38.1 [11.2]	35.4 [10.4]	43.9 [12.9]	41.9 [12.3]	39.0 [11.4]
		Power	2.6	2.6	2.5	2.6	2.6	2.5	2.6	2.5	2.5
	80 [26.7]	Total BTUH [kW]	58.5 [17.1]	57.4 [16.8]	55.9 [16.4]	54.2 [15.9]	53.2 [15.6]	51.8 [15.2]	49.2 [14.4]	48.4 [14.2]	47.0 [13.8]
		Sens BTUH [kW]	31.0 [9.1]	29.6 [8.7]	27.5 [8.1]	39.6 [11.6]	37.8 [11.1]	35.2 [10.3]	43.6 [12.8]	41.7 [12.2]	38.8 [11.4]
		Power	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
	85 [29.4]	Total BTUH [kW]	56.7 [16.6]	55.7 [16.3]	54.2 [15.9]	52.4 [15.4]	51.5 [15.1]	50.1 [14.7]	47.5 [13.9]	46.6 [13.7]	45.3 [13.3]
		Sens BTUH [kW]	30.6 [9.0]	29.2 [8.6]	27.1 [8.0]	39.2 [11.5]	37.4 [11.0]	34.8 [10.2]	43.2 [12.7]	41.3 [12.1]	38.4 [11.3]
		Power	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
	90 [32.2]	Total BTUH [kW]	55.0 [16.1]	54.0 [15.8]	52.5 [15.4]	50.7 [14.9]	49.8 [14.6]	48.4 [14.2]	45.7 [13.4]	44.9 [13.2]	43.7 [12.8]
Sens BTUH [kW]		30.0 [8.8]	28.6 [8.4]	26.6 [7.8]	38.6 [11.3]	36.9 [10.8]	34.3 [10.0]	42.6 [12.5]	40.7 [11.9]	37.9 [11.1]	
Power		3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.0	
95 [35]	Total BTUH [kW]	53.3 [15.6]	52.3 [15.3]	50.9 [14.9]	49.0 [14.4]	48.1 [14.1]	46.8 [13.7]	44.1 [12.9]	43.3 [12.7]	42.1 [12.3]	
	Sens BTUH [kW]	29.2 [8.6]	27.9 [8.2]	26.0 [7.6]	37.8 [11.1]	36.1 [10.6]	33.6 [9.9]	41.9 [12.3]	40.0 [11.7]	37.2 [10.9]	
	Power	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	
100 [37.8]	Total BTUH [kW]	51.7 [15.2]	50.8 [14.9]	49.4 [14.5]	47.4 [13.9]	46.6 [13.7]	45.3 [13.3]	42.5 [12.4]	41.7 [12.2]	40.6 [11.9]	
	Sens BTUH [kW]	28.3 [8.3]	27.0 [7.9]	25.2 [7.4]	36.9 [10.8]	35.3 [10.3]	32.8 [9.6]	41.0 [12.0]	39.2 [11.5]	36.4 [10.7]	
	Power	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
105 [40.6]	Total BTUH [kW]	50.2 [14.7]	49.3 [14.4]	47.9 [14.0]	45.9 [13.5]	45.1 [13.2]	43.9 [12.9]	40.9 [12.0]	40.2 [11.8]	39.1 [11.5]	
	Sens BTUH [kW]	27.2 [8.0]	26.0 [7.6]	24.2 [7.1]	35.8 [10.5]	34.3 [10.0]	31.9 [9.3]	39.9 [11.7]	38.1 [11.2]	35.5 [10.4]	
	Power	3.8	3.8	3.7	3.8	3.7	3.7	3.8	3.7	3.7	
110 [43.3]	Total BTUH [kW]	48.7 [14.3]	47.8 [14.0]	46.5 [13.6]	44.4 [13.0]	43.6 [12.8]	42.5 [12.4]	39.5 [11.6]	38.8 [11.4]	37.7 [11.1]	
	Sens BTUH [kW]	26.0 [7.6]	24.8 [7.3]	23.1 [6.8]	34.6 [10.1]	33.1 [9.7]	30.8 [9.0]	38.7 [11.3]	36.9 [10.8]	34.4 [10.1]	
	Power	4.0	4.0	3.9	4.0	4.0	3.9	4.0	4.0	3.9	
115 [46.1]	Total BTUH [kW]	47.3 [13.9]	46.5 [13.6]	45.2 [13.2]	43.0 [12.6]	42.3 [12.4]	41.1 [12.0]	38.1 [11.2]	37.4 [11.0]	36.4 [10.7]	
	Sens BTUH [kW]	24.6 [7.2]	23.5 [6.9]	21.8 [6.4]	33.2 [9.7]	31.7 [9.3]	29.5 [8.6]	37.3 [10.9]	35.6 [10.4]	33.1 [9.7]	
	Power	4.3	4.2	4.2	4.3	4.2	4.2	4.3	4.2	4.2	
120 [48.9]	Total BTUH [kW]	46.0 [13.5]	45.2 [13.2]	43.9 [12.9]	41.7 [12.2]	41.0 [12.0]	39.8 [11.7]	36.7 [10.8]	36.1 [10.6]	35.1 [10.3]	
	Sens BTUH [kW]	23.0 [6.7]	22.0 [6.4]	20.5 [6.0]	31.6 [9.3]	30.2 [8.9]	28.1 [8.2]	35.7 [10.5]	34.1 [10.0]	31.7 [9.3]	
	Power	4.5	4.5	4.4	4.5	4.5	4.4	4.5	4.5	4.4	
125 [51.7]	Total BTUH [kW]	44.7 [13.1]	43.9 [12.9]	42.7 [12.5]	40.4 [11.8]	39.7 [11.6]	38.6 [11.3]	35.5 [10.4]	34.8 [10.2]	33.9 [9.9]	
	Sens BTUH [kW]	21.3 [6.2]	20.3 [6.0]	18.9 [5.5]	29.9 [8.8]	28.6 [8.4]	26.6 [7.8]	34.0 [10.0]	32.4 [9.5]	30.2 [8.8]	
	Power	4.8	4.8	4.7	4.8	4.8	4.7	4.8	4.7	4.7	

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 $[1.10 \times \text{CFM} \times (1 - \text{DR}) \times (\text{dbE} - 80)]$.

[] Designates Metric Conversions

GROSS SYSTEMS PERFORMANCE DATA—RLPN-C060

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①											
wbE			71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]		
CFM [L/s]			1980 [934]	1800 [850]	1530 [722]	1980 [934]	1800 [850]	1530 [722]	1980 [934]	1800 [850]	1530 [722]
DR ①			0.13	0.12	0.9	0.13	0.12	0.9	0.13	0.12	0.9
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW] Sens BTUH [kW] Power	75.4 [22.1] 42.4 [12.4] 3.6	74.0 [21.7] 40.5 [11.9] 3.6	72.0 [21.1] 37.7 [11.0] 3.5	69.7 [20.4] 49.5 [14.5] 3.6	68.4 [20.1] 47.3 [13.9] 3.5	66.6 [19.5] 44.0 [12.9] 3.5	67.8 [19.9] 56.8 [16.7] 3.5	66.6 [19.5] 54.3 [15.9] 3.5	64.7 [19.0] 50.5 [14.8] 3.4
	80 [26.7]	Total BTUH [kW] Sens BTUH [kW] Power	73.2 [21.5] 41.4 [12.1] 3.8	71.9 [21.1] 39.6 [11.6] 3.8	70.0 [20.5] 36.8 [10.8] 3.7	67.6 [19.8] 48.5 [14.2] 3.8	66.3 [19.4] 46.4 [13.6] 3.7	64.5 [18.9] 43.1 [12.6] 3.7	65.6 [19.2] 55.8 [16.4] 3.7	64.5 [18.9] 53.4 [15.6] 3.7	62.7 [18.4] 49.6 [14.5] 3.6
	85 [29.4]	Total BTUH [kW] Sens BTUH [kW] Power	71.1 [20.8] 40.4 [11.8] 4.1	69.8 [20.5] 38.6 [11.3] 4.0	67.9 [19.9] 35.9 [10.5] 4.0	65.4 [19.2] 47.5 [13.9] 4.0	64.3 [18.8] 45.4 [13.3] 4.0	62.5 [18.3] 42.2 [12.4] 3.9	63.5 [18.6] 54.8 [16.1] 4.0	62.4 [18.3] 52.4 [15.4] 3.9	60.7 [17.8] 48.7 [14.3] 3.9
	90 [32.2]	Total BTUH [kW] Sens BTUH [kW] Power	69.0 [20.2] 39.4 [11.5] 4.3	67.8 [19.9] 37.6 [11.0] 4.3	65.9 [19.3] 35.0 [10.3] 4.2	63.3 [18.6] 46.5 [13.6] 4.3	62.2 [18.2] 44.4 [13.0] 4.2	60.5 [17.7] 41.3 [12.1] 4.2	61.4 [18.0] 53.8 [15.8] 4.2	60.3 [17.7] 51.4 [15.1] 4.2	58.7 [17.2] 47.8 [14.0] 4.1
	95 [35]	Total BTUH [kW] Sens BTUH [kW] Power	66.9 [19.6] 38.3 [11.2] 4.6	65.7 [19.3] 36.6 [10.7] 4.5	63.9 [18.7] 34.0 [10.0] 4.5	61.2 [17.9] 45.4 [13.3] 4.5	60.1 [17.6] 43.3 [12.7] 4.5	58.5 [17.1] 40.3 [11.8] 4.4	59.3 [17.4] 52.7 [15.4] 4.5	58.3 [17.1] 50.3 [14.7] 4.4	56.7 [16.6] 46.8 [13.7] 4.4
	100 [37.8]	Total BTUH [kW] Sens BTUH [kW] Power	64.8 [19.0] 37.1 [10.9] 4.8	63.7 [18.7] 35.5 [10.4] 4.8	61.9 [18.1] 33.0 [9.7] 4.7	59.1 [17.3] 44.2 [13.0] 4.8	58.1 [17.0] 42.2 [12.4] 4.7	56.5 [16.6] 39.3 [11.5] 4.7	57.2 [16.8] 51.5 [15.1] 4.7	56.2 [16.5] 49.2 [14.4] 4.7	54.7 [16.0] 45.8 [13.4] 4.6
	105 [40.6]	Total BTUH [kW] Sens BTUH [kW] Power	62.7 [18.4] 36.0 [10.5] 5.1	61.6 [18.1] 34.3 [10.1] 5.1	59.9 [17.6] 31.9 [9.4] 5.0	57.1 [16.7] 43.0 [12.6] 5.1	56.1 [16.4] 41.1 [12.0] 5.0	54.5 [16.0] 38.2 [11.2] 5.0	55.2 [16.2] 50.4 [14.8] 5.0	54.2 [15.9] 48.1 [14.1] 5.0	52.7 [15.4] 44.7 [13.1] 4.9
	110 [43.3]	Total BTUH [kW] Sens BTUH [kW] Power	60.7 [17.8] 34.7 [10.2] 5.4	59.6 [17.5] 33.2 [9.7] 5.4	58.0 [17.0] 30.9 [9.0] 5.3	55.0 [16.1] 41.8 [12.3] 5.4	54.0 [15.8] 40.0 [11.7] 5.3	52.5 [15.4] 37.2 [10.9] 5.2	53.1 [15.6] 49.1 [14.4] 5.3	52.1 [15.3] 46.9 [13.8] 5.3	50.7 [14.9] 43.7 [12.8] 5.2
	115 [46.1]	Total BTUH [kW] Sens BTUH [kW] Power	58.6 [17.2] 33.5 [9.8] 5.7	57.6 [16.9] 32.0 [9.4] 5.7	56.0 [16.4] 29.7 [8.7] 5.6	52.9 [15.5] 40.6 [11.9] 5.7	52.0 [15.2] 38.7 [11.4] 5.6	50.6 [14.8] 36.0 [10.6] 5.6	51.0 [15.0] 47.9 [14.0] 5.6	50.1 [14.7] 45.7 [13.4] 5.6	48.8 [14.3] 42.5 [12.5] 5.5
	120 [48.9]	Total BTUH [kW] Sens BTUH [kW] Power	56.6 [16.6] 32.2 [9.4] 6.1	55.6 [16.3] 30.7 [9.0] 6.0	54.1 [15.8] 28.6 [8.4] 5.9	50.9 [14.9] 39.2 [11.5] 6.0	50.0 [14.7] 37.5 [11.0] 5.9	48.6 [14.3] 34.9 [10.2] 5.9	49.0 [14.4] 46.6 [13.6] 5.9	48.1 [14.1] 44.5 [13.0] 5.9	46.8 [13.7] 41.4 [12.1] 5.8
	125 [51.7]	Total BTUH [kW] Sens BTUH [kW] Power	54.5 [16.0] 30.8 [9.0] 6.4	53.6 [15.7] 29.4 [8.6] 6.3	52.1 [15.3] 27.4 [8.0] 6.3	48.9 [14.3] 37.9 [11.1] 6.3	48.0 [14.1] 36.2 [10.6] 6.3	46.7 [13.7] 33.7 [9.9] 6.2	47.0 [13.8] 45.2 [13.2] 6.3	46.1 [13.5] 43.2 [12.7] 6.2	44.9 [13.1] 40.2 [11.8] 6.2

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 $[1.10 \times \text{CFM} \times (1 - \text{DR}) \times (\text{dbE} - 80)]$.

[] Designates Metric Conversions

GROSS SYSTEMS PERFORMANCE DATA—RLQN-C036

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①											
wbE			71°F [21.7°C]			67°F [19.4°C] ①			63°F [17.2°C]		
CFM [L/s]			1375 [649]	1250 [590]	1062 [501]	1375 [649]	1250 [590]	1062 [501]	1375 [649]	1250 [590]	1062 [501]
DR ①			0.19	0.17	0.14	0.19	0.17	0.14	0.19	0.17	0.14
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW]	45.2 [13.3]	44.4 [13.0]	43.2 [12.7]	41.8 [12.2]	41.0 [12.0]	39.9 [11.7]	39.0 [11.4]	38.3 [11.2]	37.3 [10.9]
		Sens BTUH [kW]	24.2 [7.1]	23.1 [6.8]	21.5 [6.3]	29.9 [8.8]	28.6 [8.4]	26.6 [7.8]	33.7 [9.9]	32.2 [9.4]	29.9 [8.8]
		Power	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9
	80 [26.7]	Total BTUH [kW]	44.0 [12.9]	43.2 [12.7]	42.1 [12.3]	40.6 [11.9]	39.8 [11.7]	38.8 [11.4]	37.8 [11.1]	37.1 [10.9]	36.1 [10.6]
		Sens BTUH [kW]	24.0 [7.0]	22.9 [6.7]	21.3 [6.2]	29.7 [8.7]	28.4 [8.3]	26.4 [7.7]	33.5 [9.8]	32.0 [9.4]	29.8 [8.7]
		Power	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0
	85 [29.4]	Total BTUH [kW]	42.8 [12.5]	42.1 [12.3]	40.9 [12.0]	39.4 [11.5]	38.7 [11.3]	37.6 [11.0]	36.6 [10.7]	35.9 [10.5]	34.9 [10.2]
		Sens BTUH [kW]	23.7 [6.9]	22.6 [6.6]	21.0 [6.2]	29.4 [8.6]	28.1 [8.2]	26.1 [7.7]	33.2 [9.7]	31.7 [9.3]	29.5 [8.6]
		Power	2.2	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.2
	90 [32.2]	Total BTUH [kW]	41.6 [12.2]	40.9 [12.0]	39.8 [11.6]	38.1 [11.2]	37.5 [11.0]	36.4 [10.7]	35.4 [10.4]	34.7 [10.2]	33.8 [9.9]
Sens BTUH [kW]		23.2 [6.8]	22.2 [6.5]	20.6 [6.0]	28.9 [8.5]	27.6 [8.1]	25.7 [7.5]	32.7 [9.6]	31.2 [9.2]	29.1 [8.5]	
Power		2.3	2.3	2.2	2.3	2.3	2.3	2.4	2.3	2.3	
95 [35]	Total BTUH [kW]	40.4 [11.8]	39.7 [11.6]	38.6 [11.3]	36.9 [10.8]	36.3 [10.6]	35.3 [10.3]	34.2 [10.0]	33.6 [9.8]	32.6 [9.6]	
	Sens BTUH [kW]	22.6 [6.6]	21.6 [6.3]	20.1 [5.9]	28.4 [8.3]	27.1 [7.9]	25.2 [7.4]	32.1 [9.4]	30.7 [9.0]	28.5 [8.4]	
	Power	2.5	2.4	2.4	2.5	2.5	2.4	2.5	2.5	2.5	
100 [37.8]	Total BTUH [kW]	39.2 [11.5]	38.5 [11.3]	37.5 [11.0]	35.8 [10.5]	35.1 [10.3]	34.2 [10.0]	33.0 [9.7]	32.4 [9.5]	31.5 [9.2]	
	Sens BTUH [kW]	21.9 [6.4]	20.9 [6.1]	19.5 [5.7]	27.6 [8.1]	26.4 [7.7]	24.6 [7.2]	31.4 [9.2]	30.0 [8.8]	27.9 [8.2]	
	Power	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.6	2.6	
105 [40.6]	Total BTUH [kW]	38.0 [11.1]	37.3 [10.9]	36.3 [10.6]	34.6 [10.1]	33.9 [9.9]	33.0 [9.7]	31.8 [9.3]	31.2 [9.1]	30.4 [8.9]	
	Sens BTUH [kW]	21.1 [6.2]	20.1 [5.9]	18.7 [5.5]	26.8 [7.9]	25.6 [7.5]	23.8 [7.0]	30.6 [9.0]	29.2 [8.6]	27.2 [8.0]	
	Power	2.8	2.8	2.7	2.8	2.8	2.8	2.8	2.8	2.8	
110 [43.3]	Total BTUH [kW]	36.8 [10.8]	36.2 [10.6]	35.2 [10.3]	33.4 [9.8]	32.8 [9.6]	31.9 [9.3]	30.6 [9.0]	30.1 [8.8]	29.2 [8.6]	
	Sens BTUH [kW]	20.1 [5.9]	19.2 [5.6]	17.9 [5.2]	25.8 [7.6]	24.7 [7.2]	23.0 [6.7]	29.6 [8.7]	28.3 [8.3]	26.3 [7.7]	
	Power	3.0	2.9	2.9	3.0	3.0	2.9	3.0	3.0	3.0	
115 [46.1]	Total BTUH [kW]	35.7 [10.4]	35.0 [10.3]	34.1 [10.0]	32.2 [9.4]	31.6 [9.3]	30.8 [9.0]	29.4 [8.6]	28.9 [8.5]	28.1 [8.2]	
	Sens BTUH [kW]	19.0 [5.6]	18.2 [5.3]	16.9 [4.9]	24.7 [7.3]	23.6 [6.9]	22.0 [6.4]	28.5 [8.4]	27.2 [8.0]	25.3 [7.4]	
	Power	3.2	3.1	3.1	3.2	3.2	3.1	3.2	3.2	3.1	
120 [48.9]	Total BTUH [kW]	34.5 [10.1]	33.9 [9.9]	32.9 [9.7]	31.0 [9.1]	30.5 [8.9]	29.6 [8.7]	28.2 [8.3]	27.7 [8.1]	27.0 [7.9]	
	Sens BTUH [kW]	17.8 [5.2]	17.0 [5.0]	15.8 [4.6]	23.5 [6.9]	22.5 [6.6]	20.9 [6.1]	27.3 [8.0]	26.1 [7.6]	24.3 [7.1]	
	Power	3.4	3.3	3.3	3.4	3.4	3.3	3.4	3.4	3.3	
125 [51.7]	Total BTUH [kW]	33.3 [9.8]	32.7 [9.6]	31.8 [9.3]	29.8 [8.7]	29.3 [8.6]	28.5 [8.4]	27.1 [7.9]	26.6 [7.8]	25.9 [7.6]	
	Sens BTUH [kW]	16.4 [4.8]	15.7 [4.6]	14.6 [4.3]	22.2 [6.5]	21.2 [6.2]	19.7 [5.8]	26.0 [7.6]	24.8 [7.3]	23.1 [6.8]	
	Power	3.6	3.5	3.5	3.6	3.6	3.5	3.6	3.6	3.5	

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

Total —Total capacity x 1000 BTUH
Sens —Sensible capacity x 1000 BTUH
Power —KW input

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

[] Designates Metric Conversions

GROSS SYSTEMS PERFORMANCE DATA—RLQN-C048

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①											
wbE			71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]		
CFM [L/s]			1760 [831]	1600 [755]	1360 [642]	1760 [831]	1600 [755]	1360 [642]	1760 [831]	1600 [755]	1360 [642]
DR ①			0.11	0.09	0.05	0.11	0.09	0.05	0.11	0.09	0.05
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW] Sens BTUH [kW] Power	58.9 [17.3] 31.1 [9.1] 2.6	57.8 [16.9] 29.7 [8.7] 2.6	56.2 [16.5] 27.6 [8.1] 2.5	55.1 [16.1] 40.2 [11.8] 2.6	54.1 [15.9] 38.4 [11.3] 2.5	52.6 [15.4] 35.7 [10.5] 2.5	49.6 [14.5] 43.7 [12.8] 2.6	48.8 [14.3] 41.8 [12.2] 2.5	47.4 [13.9] 38.9 [11.4] 2.5
	80 [26.7]	Total BTUH [kW] Sens BTUH [kW] Power	57.3 [16.8] 31.1 [9.1] 2.7	56.3 [16.5] 29.7 [8.7] 2.7	54.7 [16.0] 27.6 [8.1] 2.7	53.5 [15.7] 40.2 [11.8] 2.7	52.6 [15.4] 38.4 [11.3] 2.7	51.1 [15.0] 35.7 [10.5] 2.7	48.1 [14.1] 43.7 [12.8] 2.7	47.2 [13.8] 41.8 [12.2] 2.7	45.9 [13.5] 38.9 [11.4] 2.7
	85 [29.4]	Total BTUH [kW] Sens BTUH [kW] Power	55.7 [16.3] 30.9 [9.0] 2.9	54.7 [16.0] 29.5 [8.6] 2.9	53.2 [15.6] 27.4 [8.0] 2.9	51.9 [15.2] 40.0 [11.7] 2.9	51.0 [15.0] 38.2 [11.2] 2.9	49.6 [14.5] 35.5 [10.4] 2.9	46.5 [13.6] 43.5 [12.7] 2.9	45.7 [13.4] 41.6 [12.2] 2.9	44.4 [13.0] 38.7 [11.3] 2.8
	90 [32.2]	Total BTUH [kW] Sens BTUH [kW] Power	54.1 [15.9] 30.4 [8.9] 3.1	53.2 [15.6] 29.1 [8.5] 3.1	51.7 [15.2] 27.0 [7.9] 3.0	50.4 [14.8] 39.5 [11.6] 3.1	49.5 [14.5] 37.7 [11.1] 3.1	48.1 [14.1] 35.1 [10.3] 3.0	44.9 [13.2] 43.1 [12.6] 3.1	44.1 [12.9] 41.1 [12.1] 3.1	42.9 [12.6] 38.3 [11.2] 3.0
	95 [35]	Total BTUH [kW] Sens BTUH [kW] Power	52.5 [15.4] 29.7 [8.7] 3.3	51.6 [15.1] 28.4 [8.3] 3.3	50.2 [14.7] 26.4 [7.7] 3.2	48.8 [14.3] 38.8 [11.4] 3.3	47.9 [14.0] 37.1 [10.9] 3.3	46.6 [13.7] 34.5 [10.1] 3.2	43.3 [12.7] 42.4 [12.4] 3.3	42.5 [12.5] 40.5 [11.9] 3.3	41.4 [12.1] 37.7 [11.0] 3.2
	100 [37.8]	Total BTUH [kW] Sens BTUH [kW] Power	50.9 [14.9] 28.8 [8.4] 3.5	50.0 [14.7] 27.5 [8.1] 3.5	48.7 [14.3] 25.6 [7.5] 3.5	47.2 [13.8] 37.9 [11.1] 3.5	46.3 [13.6] 36.2 [10.6] 3.5	45.1 [13.2] 33.7 [9.9] 3.4	41.7 [12.2] 41.5 [12.2] 3.5	41.0 [12.0] 39.6 [11.6] 3.5	39.9 [11.7] 36.8 [10.8] 3.4
	105 [40.6]	Total BTUH [kW] Sens BTUH [kW] Power	49.3 [14.5] 27.7 [8.1] 3.8	48.5 [14.2] 26.5 [7.8] 3.7	47.1 [13.8] 24.6 [7.2] 3.7	45.6 [13.4] 36.8 [10.8] 3.7	44.8 [13.1] 35.1 [10.3] 3.7	43.5 [12.8] 32.7 [9.6] 3.7	40.1 [11.8] 40.1 [11.8] 3.7	39.4 [11.5] 38.5 [11.3] 3.7	38.3 [11.2] 35.8 [10.5] 3.7
	110 [43.3]	Total BTUH [kW] Sens BTUH [kW] Power	47.7 [14.0] 26.3 [7.7] 4.0	46.9 [13.7] 25.2 [7.4] 4.0	45.6 [13.4] 23.4 [6.9] 3.9	44.0 [12.9] 35.4 [10.4] 4.0	43.2 [12.7] 33.8 [9.9] 3.9	42.0 [12.3] 31.5 [9.2] 3.9	38.5 [11.3] 38.5 [11.3] 4.0	37.8 [11.1] 37.2 [10.9] 3.9	36.8 [10.8] 34.6 [10.1] 3.9
	115 [46.1]	Total BTUH [kW] Sens BTUH [kW] Power	46.1 [13.5] 24.7 [7.2] 4.2	45.3 [13.3] 23.6 [6.9] 4.2	44.1 [12.9] 22.0 [6.4] 4.1	42.3 [12.4] 33.8 [9.9] 4.2	41.6 [12.2] 32.3 [9.5] 4.2	40.4 [11.9] 30.1 [8.8] 4.1	36.9 [10.8] 36.9 [10.8] 4.2	36.2 [10.6] 35.7 [10.5] 4.2	35.2 [10.3] 33.2 [9.7] 4.1
	120 [48.9]	Total BTUH [kW] Sens BTUH [kW] Power	44.5 [13.0] 22.9 [6.7] 4.5	43.7 [12.8] 21.9 [6.4] 4.5	42.5 [12.5] 20.4 [6.0] 4.4	40.7 [11.9] 32.0 [9.4] 4.5	40.0 [11.7] 30.6 [9.0] 4.4	38.9 [11.4] 28.4 [8.3] 4.4	35.3 [10.3] 35.3 [10.3] 4.5	34.6 [10.1] 34.0 [10.0] 4.4	33.7 [9.9] 31.6 [9.3] 4.4
	125 [51.7]	Total BTUH [kW] Sens BTUH [kW] Power	42.9 [12.6] 20.9 [6.1] 4.8	42.1 [12.3] 19.9 [5.8] 4.7	40.9 [12.0] 18.5 [5.4] 4.7	39.1 [11.5] 30.0 [8.8] 4.8	38.4 [11.2] 28.6 [8.4] 4.7	37.3 [10.9] 26.6 [7.8] 4.7	33.6 [9.9] 33.5 [9.8] 4.7	33.0 [9.7] 32.0 [9.4] 4.7	32.1 [9.4] 29.8 [8.7] 4.6

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

GROSS SYSTEMS PERFORMANCE DATA—RLQN-C060

ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①											
wbE			71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]		
CFM [L/s]			2310 [1090]	1850 [873]	1380 [651]	2310 [1090]	1850 [873]	1380 [651]	2310 [1090]	1850 [873]	1380 [651]
DR ①			0.17	0.13	0.08	0.17	0.13	0.08	0.17	0.13	0.08
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW] Sens BTUH [kW] Power	77.5 [22.7] 40.4 [11.8] 3.6	74.1 [21.7] 36.2 [10.6] 3.5	70.7 [20.7] 31.9 [9.3] 3.5	71.1 [20.8] 50.3 [14.7] 3.6	68.0 [19.9] 45.0 [13.2] 3.5	64.9 [19.0] 39.7 [11.6] 3.4	65.8 [19.3] 56.8 [16.6] 3.6	62.9 [18.4] 50.9 [14.9] 3.5	60.0 [17.6] 44.8 [13.1] 3.4
	80 [26.7]	Total BTUH [kW] Sens BTUH [kW] Power	76.0 [22.3] 40.7 [11.9] 3.8	72.7 [21.3] 36.4 [10.7] 3.7	69.4 [20.3] 32.1 [9.4] 3.7	69.7 [20.4] 50.6 [14.8] 3.8	66.6 [19.5] 45.3 [13.3] 3.7	63.6 [18.6] 39.9 [11.7] 3.6	64.3 [18.8] 57.1 [16.7] 3.8	61.5 [18.0] 51.1 [15.0] 3.7	58.7 [17.2] 45.1 [13.2] 3.6
	85 [29.4]	Total BTUH [kW] Sens BTUH [kW] Power	74.4 [21.8] 40.6 [11.9] 4.0	71.2 [20.9] 36.4 [10.7] 4.0	67.9 [19.9] 32.1 [9.4] 3.9	68.1 [19.9] 50.5 [14.8] 4.0	65.1 [19.1] 45.2 [13.3] 3.9	62.1 [18.2] 39.9 [11.7] 3.8	62.7 [18.4] 57.0 [16.7] 4.0	60.0 [17.6] 51.1 [15.0] 3.9	57.2 [16.8] 45.0 [13.2] 3.8
	90 [32.2]	Total BTUH [kW] Sens BTUH [kW] Power	72.7 [21.3] 40.2 [11.8] 4.3	69.5 [20.4] 36.0 [10.6] 4.2	66.3 [19.4] 31.8 [9.3] 4.1	66.3 [19.4] 50.1 [14.7] 4.3	63.5 [18.6] 44.9 [13.2] 4.2	60.5 [17.7] 39.6 [11.6] 4.1	61.0 [17.9] 56.6 [16.6] 4.2	58.4 [17.1] 50.7 [14.9] 4.1	55.7 [16.3] 44.7 [13.1] 4.0
	95 [35]	Total BTUH [kW] Sens BTUH [kW] Power	70.8 [20.8] 39.5 [11.6] 4.5	67.8 [19.9] 35.3 [10.4] 4.4	64.6 [18.9] 31.2 [9.1] 4.3	64.5 [18.9] 49.3 [14.5] 4.5	61.7 [18.1] 44.2 [13.0] 4.4	58.8 [17.2] 39.0 [11.4] 4.3	59.1 [17.3] 55.8 [16.4] 4.5	56.6 [16.6] 50.0 [14.7] 4.4	54.0 [15.8] 44.1 [12.9] 4.3
	100 [37.8]	Total BTUH [kW] Sens BTUH [kW] Power	68.8 [20.2] 38.3 [11.2] 4.8	65.9 [19.3] 34.4 [10.1] 4.7	62.8 [18.4] 30.3 [8.9] 4.6	62.5 [18.3] 48.2 [14.1] 4.8	59.8 [17.5] 43.2 [12.7] 4.7	57.0 [16.7] 38.1 [11.2] 4.6	57.2 [16.7] 54.7 [16.0] 4.7	54.7 [16.0] 49.0 [14.4] 4.6	52.2 [15.3] 43.2 [12.7] 4.5
	105 [40.6]	Total BTUH [kW] Sens BTUH [kW] Power	66.7 [19.6] 36.9 [10.8] 5.1	63.8 [18.7] 33.0 [9.7] 5.0	60.9 [17.8] 29.1 [8.5] 4.8	60.4 [17.7] 46.8 [13.7] 5.0	57.8 [16.9] 41.9 [12.3] 4.9	55.1 [16.1] 36.9 [10.8] 4.8	55.0 [16.1] 53.3 [15.6] 5.0	52.6 [15.4] 47.7 [14.0] 4.9	50.2 [14.7] 42.1 [12.3] 4.8
	110 [43.3]	Total BTUH [kW] Sens BTUH [kW] Power	64.5 [18.9] 35.1 [10.3] 5.3	61.7 [18.1] 31.4 [9.2] 5.2	58.8 [17.2] 27.7 [8.1] 5.1	58.1 [17.0] 44.9 [13.2] 5.3	55.6 [16.3] 40.3 [11.8] 5.2	53.0 [15.5] 35.5 [10.4] 5.1	52.8 [15.5] 51.4 [15.1] 5.3	50.5 [14.8] 46.1 [13.5] 5.2	48.2 [14.1] 40.6 [11.9] 5.1
	115 [46.1]	Total BTUH [kW] Sens BTUH [kW] Power	62.1 [18.2] 32.9 [9.6] 5.6	59.4 [17.4] 29.5 [8.6] 5.5	56.6 [16.6] 26.0 [7.6] 5.4	55.7 [16.3] 42.8 [12.5] 5.6	53.3 [15.6] 38.3 [11.2] 5.5	50.8 [14.9] 33.8 [9.9] 5.4	50.4 [14.8] 49.3 [14.4] 5.6	48.2 [14.1] 44.2 [12.9] 5.5	46.0 [13.5] 38.9 [11.4] 5.3
	120 [48.9]	Total BTUH [kW] Sens BTUH [kW] Power	59.5 [17.4] 30.4 [8.9] 6.0	57.0 [16.7] 27.2 [8.0] 5.8	54.3 [15.9] 24.0 [7.0] 5.7	53.2 [15.6] 40.3 [11.8] 5.9	50.9 [14.9] 36.1 [10.6] 5.8	48.5 [14.2] 31.8 [9.3] 5.7	47.8 [14.0] 46.8 [13.7] 5.9	45.8 [13.4] 41.9 [12.3] 5.8	43.7 [12.8] 36.9 [10.8] 5.6
125 [51.7]	Total BTUH [kW] Sens BTUH [kW] Power	56.9 [16.7] 27.5 [8.1] 6.3	54.4 [15.9] 24.7 [7.2] 6.1	51.9 [15.2] 21.7 [6.4] 6.0	50.5 [14.8] 37.4 [11.0] 6.3	48.3 [14.2] 33.5 [9.8] 6.1	46.1 [13.5] 29.5 [8.7] 6.0	45.2 [13.2] 43.9 [12.9] 6.2	43.2 [12.7] 39.3 [11.5] 6.1	41.2 [12.1] 34.7 [10.2] 6.0	

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 $[1.10 \times \text{CFM} \times (1 - \text{DR}) \times (\text{dbE} - 80)]$.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE—3 TON [10.55 kW] 3 PHASE BELT DRIVE

Air Flow CFM [L/s]	Capacity 3 Ton [10.55 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]			
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W		
900 [425]	—	—	—	—	699	223	765	261	827	292	886	318	941	338	993	352	1042	360	1087	362	1129	358	1168	348	1203	332	1235	310	1264	282		
1000 [472]	—	—	662	228	717	258	781	293	842	323	899	346	952	364	1002	376	1049	381	1093	381	1133	374	1170	362	1203	344	1233	320	1260	289		
1100 [519]	—	—	667	275	737	295	798	328	857	355	912	377	964	392	1012	401	1057	404	1099	402	1137	393	1172	378	1204	358	1232	331	1257	298		
1200 [566]	643	278	693	298	756	334	817	365	873	390	927	409	976	422	1023	428	1066	429	1106	424	1143	413	1176	396	1205	373	1232	344	1255	309		
1300 [614]	661	316	716	341	777	376	835	404	890	426	942	443	990	453	1035	458	1076	456	1114	449	1149	435	1180	416	1208	391	1232	359	1254	322		
1400 [661]	669	352	739	387	799	419	855	445	908	465	958	479	1004	487	1047	489	1087	485	1123	475	1156	460	1185	438	1211	410	1234	377	1253	337		
1500 [708]	702	399	763	434	821	464	876	487	927	505	975	517	1019	523	1060	522	1098	516	1132	504	1163	486	1191	462	1215	432	1236	396	1254	354		

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

Drive Package	L						M					
Motor H.P. [W]	1/2 [373]						1/2 [373]					
Blower Sheave	6.9" Pitch Diameter						6.4" Pitch Diameter					
Motor Sheave	2.4" - 3.4" Pitch Diameter						3.4" - 4.4" Pitch Diameter					
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5
RPM	910	869	818	775	728	682	1176	1145	1108	1060	996	968

COMPONENT AIR RESISTANCE

CFM [L/s]	Standard Indoor Airflow—CFM [L/s]					
	1000 [472]	1200 [566]	1400 [661]	1600 [755]	1800 [850]	2000 [944]
	Resistance—Inches Water [kPa]					
Wet Coil	0.035	0.040	0.060	0.070	0.085	0.100
Downflow	0.055	0.060	0.066	0.072	0.080	0.086
R.S.I. Economizer R.A. Damper	0.05	0.06	0.07	0.08	0.09	0.10

NOTES:

- Performance shown with dry coil & standard 2" [50.8 mm] filters.
- Standard CFM @ .075 lbs./cu. ft.
- Motor efficiency = 80%
- BHP = $\frac{\text{Watts} \times \text{Motor Eff.}}{746}$
- Add component resistance to duct static to determine E.S.P. as shown on charts.

[] Designates Metric Conversions

Air Flow CFM [L/s]	Capacity 4 Ton [14.07 kW]			Voltage 208/230/460/575, 3-Phase			External Static Pressure—Inches of Water [kPa]																								
	0.1 [0.02]		0.2 [0.05]		0.3 [0.07]		0.4 [0.10]		0.5 [0.12]		0.6 [0.15]		0.7 [0.17]		0.8 [0.20]		0.9 [0.22]		1.0 [0.25]		1.1 [0.27]		1.2 [0.30]		1.3 [0.32]		1.4 [0.35]		1.5 [0.37]		
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	
1200 [566]	—	—	—	—	—	—	817	425	879	440	940	456	999	475	1057	496	1113	519	1168	545	1221	572	1272	602	1322	634	1371	669	1420	704	
1300 [614]	—	—	—	—	—	—	838	437	899	457	958	479	1015	503	1071	529	1126	558	1178	589	1230	622	1279	657	1327	695	1374	734	1421	773	
1400 [661]	—	—	—	—	—	806	418	457	919	482	976	510	1032	539	1086	571	1138	605	1189	641	1239	680	1286	720	1333	763	1377	808	1421	853	
1500 [708]	—	—	—	—	—	825	458	486	940	517	995	549	1048	584	1101	622	1151	661	1200	703	1248	746	1294	792	1338	841	1382	890	1426	939	
1600 [755]	—	—	798	449	490	523	960	559	1013	598	1065	638	1115	681	1164	725	1211	772	1257	821	1301	873	1343	926	1385	979	1427	1032	1139	—	—
1700 [802]	—	—	817	493	873	530	928	569	981	611	1032	654	1082	700	1130	748	1177	798	1222	851	1266	905	1308	962	1349	1021	1390	1080	1431	1139	—
1800 [850]	791	490	844	537	898	579	950	624	1002	670	1051	719	1099	771	1146	824	1190	880	1234	937	1276	997	1316	1059	1355	1124	1394	1189	—	—	
1900 [897]	816	543	870	589	923	637	973	687	1023	739	1071	793	1116	850	1161	908	1204	969	1245	1033	1285	1098	1324	1166	1361	1235	1398	1304	—	—	
2000 [944]	845	599	897	650	947	703	996	758	1044	816	1089	875	1134	937	1176	1002	1217	1068	1257	1137	1295	1207	1332	1280	1361	1355	—	—	—	—	

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

Drive Package	L					M					N Drive (Field Supplied)		
Motor H.P. [W]	1/2 [373]					3/4 [559]					3/4 [559]		
Blower Sheave	6.9" Pitch Diameter					6.4" Pitch Diameter					6.4" Pitch Diameter		
Motor Sheave	2.8" - 3.8" Pitch Diameter					3.4" - 4.4" Pitch Diameter					4.0" - 5.0" Pitch Diameter		
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	
RPM	1029	984	950	915	855	816	1281	1207	1174	1141	1111	1071	

COMPONENT AIR RESISTANCE

	CFM [L/s]	Standard Indoor Airflow—CFM [L/s]					
		1000 [472]	1200 [566]	1400 [661]	1600 [755]	1800 [850]	2000 [944]
		Resistance—Inches Water [kPa]					
Wet Coil		0.035	0.040	0.060	0.070	0.085	0.100
Downflow		0.055	0.060	0.066	0.072	0.080	0.086
R.S.I. Economizer R.A. Damper		0.05	0.06	0.07	0.08	0.09	0.10

NOTES:

1. Performance shown with dry coil & standard 2" [50.8 mm] filters.
2. Standard CFM @ .075 lbs./cu. ft.
3. Motor efficiency = 80%
4. BHP = $\frac{\text{Watts} \times \text{Motor Eff.}}{746}$
5. Add component resistance to duct static to determine E.S.P. as shown on charts.

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[] Designates Metric Conversions

AIRFLOW PERFORMANCE— 5 TON [17.6 kW] 14 SEER Voltage 208/230/460/575, 3-Phase

Air Flow CFM [L/s]	Capacity 5 Ton [17.6 kW] 14 SEER Voltage 208/230/460/575, 3-Phase																	
	External Static Pressure—Inches of Water [kPa]																	
	0.1 [0.2]	0.2 [0.05]	0.3 [0.07]	0.4 [0.10]	0.5 [0.12]	0.6 [0.15]	0.7 [0.17]	0.8 [0.20]	0.9 [0.22]	1.0 [0.25]	1.1 [0.27]	1.2 [0.30]	1.3 [0.32]	1.4 [0.35]	1.5 [0.37]			
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
1400 [661]	—	—	—	784	466	835	497	886	533	935	574	983	621	1030	674	1077	732	795
1500 [708]	—	—	—	800	484	850	519	899	558	947	604	994	655	1040	711	1085	773	841
1600 [755]	—	—	—	766	478	816	511	865	549	913	593	960	643	1006	698	1051	758	824
1700 [802]	—	—	—	785	509	833	546	881	589	928	637	974	690	1018	749	1062	813	883
1800 [850]	—	—	755	505	804	550	851	591	898	943	689	988	747	1031	810	1074	878	952
1900 [897]	716	491	776	560	823	600	869	645	915	695	959	751	1003	812	1045	879	951	1029
2000 [944]	745	562	797	615	843	658	889	707	933	762	976	821	1018	887	1059	958	1034	1139
2100 [991]	773	637	819	679	864	726	908	779	951	837	993	901	1034	970	1074	1045	1113	1211
2200 [1038]	797	706	842	751	886	803	929	860	971	922	1011	990	1051	1063	1090	1142	1128	1226
2300 [1085]	822	783	865	833	908	888	950	949	990	1015	1030	1087	1069	1164	1106	1247	1143	1335
2400 [1133]	847	870	889	924	931	983	971	1048	1011	1118	1049	1194	1087	1275	1123	1362	1159	1454
2500 [1179]	873	966	914	1023	954	1087	994	1155	1032	1229	1069	1309	1106	1394	1141	1485	1175	1581

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

Drive Package	L						M						N Drive (Field Supplied)
Motor H.P. [W]	3/4 [559]						1 [746]						1 [746]
Blower Sheave	6.9" Pitch Diameter						6.9" Pitch Diameter						6.4" Pitch Diameter
Motor Sheave	2.8" - 3.8" Pitch Diameter						4.0" - 5.0" Pitch Diameter						4.0" - 5.0" Pitch Diameter
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	RPM Range - 1080-1348
RPM	967	936	900	855	816	769	1248	1203	1163	1123	1078	1042	

COMPONENT AIR RESISTANCE

CFM [L/s]	Standard Indoor Airflow—CFM [L/s]					
	1600 [755]	1800 [850]	2000 [944]	2200 [1038]	2400 [1133]	2600 [1227]
	Resistance—Inches Water [kPa]					
Wet Coil	0.070	0.085	0.100	0.110	0.120	0.125
Downflow	0.072	0.080	0.086	0.093	0.100	0.107
R.S.I. Economizer R.A. Damper	0.08	0.09	0.10	0.11	0.12	0.13

NOTES:

- Performance shown with dry coil & standard 2" [50.8 mm] filters.
- Standard CFM @ .075 lbs./cu. ft.
- Motor efficiency = 80%
- BHP = $\frac{\text{Watts} \times \text{Motor Eff.}}{746}$
- Add component resistance to duct static to determine E.S.P. as shown on charts.

[] Designates Metric Conversions

DIRECT-DRIVE 208 AIRFLOW PERFORMANCE

5-TON 15 SEER 2-STAGE CV & DV MODELS		CFM Setting	CFM [L/s] Air Delivery/RPM/Watts-230/460 Volts															
			External Static Pressure—Inches W.C. [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]	
1st Stage Cooling	FACTORY SETTING	CFM	1393	1418	1443	1463	1470	1448	1456	1463	1415	1403	1376	1341	1289	1265	1229	
		RPM	610	688	754	800	873	940	992	1026	1080	1130	1160	1186	1213	1254	1292	
		Watts	215	266	314	350	409	466	515	550	599	653	683	710	742	791	835	
	OPTIONAL	CFM	1579	1599	1626	1642	1647	1642	1651	1648	1644	1633	1616	1570	1523	1499	1397	
		RPM	676	734	793	850	903	952	1004	1054	1095	1139	1186	1225	1265	1297	1321	
		Watts	302	349	404	454	508	560	614	670	717	772	836	885	942	988	989	
2nd Stage Cooling	FACTORY SETTING	CFM	1758	1784	1796	1801	1820	1825	1834	1826	1832	1830	1814	1817	1795	1682	1561	
		RPM	722	782	836	874	932	971	1022	1065	1114	1150	1189	1231	1273	1319	1348	
		Watts	392	451	508	547	615	664	728	786	854	908	968	1036	1106	1147	1127	
	OPTIONAL	CFM	2075	2087	2088	2085	2090	2101	2114	2106	2105	2101	2034	2001	1943	1855	1628	
		RPM	798	843	897	936	981	1018	1057	1096	1136	1170	1203	1241	1272	1309	1349	
		Watts	590	646	714	769	835	890	953	1014	1082	1137	1167	1193	1220	1241	1186	
OPTIONAL	CFM	2222	2220	2239	2244	2261	2236	2216	2180	2146	2110	2051	2010	1958	1863	1636		
	RPM	841	883	933	971	1008	1046	1075	1106	1141	1173	1207	1238	1273	1312	1351		
	Watts	717	777	856	921	984	1037	1054	1083	1115	1143	1176	1201	1233	1250	1195		

[] Designates Metric Conversions

ELECTRICAL DATA – RLPN SERIES

		C036CL000	C036CM000	C036DL000	C036DM000	C048CL000	C048CM000
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506	187-253	187-253
	Volts	208/230	208/230	460	460	208/230	208/230
	Minimum Circuit Ampacity	16/16	16/16	10	10	21/21	22/22
	Minimum Overcurrent Protection Device Size	20/20	20/20	15	15	25/25	25/25
	Maximum Overcurrent Protection Device Size	20/20	20/20	15	15	30/30	30/30
Compressor Motor	No.	1	1	1	1	1	1
	Volts	208/230	208/230	460	460	208/230	208/230
	Phase	3	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450	3450
	HP, Compressor 1	3	3	3	3	4	4
	Amps (RLA), Comp. 1	9/9	9/9	5.6	5.6	13.1/13.1	13.1/13.1
	Amps (LRA), Comp. 1	71/71	71/71	38	38	83.1/83.1	83.1/83.1
Condenser Motor	No.	1	1	1	1	1	1
	Volts	208/230	208/230	460	460	208/230	208/230
	Phase	1	1	1	1	1	1
	HP	1/3	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	1.5/1.5	1.5/1.5	1	1	1.5/1.5	1.5/1.5
	Amps (LRA, each)	3/3	3/3	1.9	1.9	3/3	3/3
Evaporator Fan	No.	1	1	1	1	1	1
	Volts	208/230	208/230	460	460	208/230	208/230
	Phase	3	3	3	3	3	3
	HP	1/2	1/2	1/2	1/2	1/2	3/4
	Amps (FLA, each)	2.8/2.8	2.8/2.8	1.4	1.4	2.8/2.8	3.4/3.4
	Amps (LRA, each)	11.3/11.3	16.8/16.8	6.2	8.4	11.3/11.3	16.8/16.8

1. Horsepower Per Compressor.

2. Amp Draw Per Motor. Multiply Value By Number of Motors to Determine Total Amps.

ELECTRICAL DATA – RLPN SERIES							
		C048DL000	C048DM000	C060CL000	C060CM000	C060DL000	C060DM000
Unit Information	Unit Operating Voltage Range	414-506	414-506	187-253	187-253	414-506	414-506
	Volts	460	460	208/230	208/230	460	460
	Minimum Circuit Ampacity	11	11	26/26	27/27	13	13
	Minimum Overcurrent Protection Device Size	15	15	30/30	35/35	15	15
	Maximum Overcurrent Protection Device Size	15	15	40/40	40/40	20	20
Compressor Motor	No.	1	1	1	1	1	1
	Volts	460	460	208/230	208/230	460	460
	Phase	3	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450	3450
	HP, Compressor 1	4	4	5	5	5	5
	Amps (RLA), Comp. 1	6.1	6.1	16/16	16/16	7.8	7.8
	Amps (LRA), Comp. 1	41	41	110/110	110/110	52	52
Condenser Motor	No.	1	1	1	1	1	1
	Volts	460	460	208/230	208/230	460	460
	Phase	1	1	1	1	1	1
	HP	1/3	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	1	1	2.2/2.2	2.2/2.2	1	1
	Amps (LRA, each)	1.9	1.9	4.9/4.9	4.9/4.9	1.9	1.9
Evaporator Fan	No.	1	1	1	1	1	1
	Volts	460	460	208/230	208/230	460	460
	Phase	3	3	3	3	3	3
	HP	1/2	3/4	3/4	1	3/4	1
	Amps (FLA, each)	1.4	1.6	3.4/3.4	4.1/4.1	1.6	2
	Amps (LRA, each)	6.2	8.4	16.8/16.8	24/24	8.4	12

1. Horsepower Per Compressor.

2. Amp Draw Per Motor. Multiply Value By Number of Motors to Determine Total Amps.

ELECTRICAL DATA – RLQN SERIES

		C036CL000	C036CM000	C036DL000	C036DM000	C048CL000
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506	187-253
	Volts	208/230	208/230	460	460	208/230
	Minimum Circuit Ampacity	16/16	16/16	10	10	21/21
	Minimum Overcurrent Protection Device Size	20/20	20/20	15	15	25/25
	Maximum Overcurrent Protection Device Size	20/20	20/20	15	15	30/30
Compressor Motor	No.	1	1	1	1	1
	Volts	208/230	208/230	460	460	208/230
	Phase	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450
	HP, Compressor 1	3	3	3	3	4
	Amps (RLA), Comp. 1	9/9	9/9	5.6	5.6	13.1/13.1
	Amps (LRA), Comp. 1	71/71	71/71	38	38	83.1/83.1
Condenser Motor	No.	1	1	1	1	1
	Volts	208/230	208/230	460	460	208/230
	Phase	1	1	1	1	1
	HP	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	1.5/1.5	1.5/1.5	1	1	1.5/1.5
	Amps (LRA, each)	3/3	3/3	1.9	1.9	3/3
Evaporator Fan	No.	1	1	1	1	1
	Volts	208/230	208/230	460	460	208/230
	Phase	3	3	3	3	3
	HP	1/2	1/2	1/2	1/2	1/2
	Amps (FLA, each)	2.8/2.8	2.8/2.8	1.4	1.4	2.8/2.8
	Amps (LRA, each)	11.3/11.3	16.8/16.8	6.2	8.4	11.3/11.3

1. Horsepower Per Compressor.

2. Amp Draw Per Motor. Multiply Value By Number of Motors to Determine Total Amps.

ELECTRICAL DATA – RLQN SERIES						
		C048CM000	C048DL000	C048DM000	C060CV000	C060DV000
Unit Information	Unit Operating Voltage Range	187-253	414-506	414-506	187-253	414-506
	Volts	208/230	460	460	208/230	460
	Minimum Circuit Ampacity	22/22	11	11	32/32	16
	Minimum Overcurrent Protection Device Size	25/25	15	15	40/40	20
	Maximum Overcurrent Protection Device Size	30/30	15	15	45/45	20
Compressor Motor	No.	1	1	1	1	1
	Volts	208/230	460	460	208/230	460
	Phase	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450
	HP, Compressor 1	4	4	4	5	5
	Amps (RLA), Comp. 1	13.1/13.1	6.1	6.1	16.2/16.2	7.6
	Amps (LRA), Comp. 1	83.1/83.1	41	41	110/110	52
Condenser Motor	No.	1	1	1	1	1
	Volts	208/230	460	460	208/230	460
	Phase	1	1	1	1	1
	HP	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	1.5/1.5	1	1	2.2/2.2	1
	Amps (LRA, each)	3/3	1.9	1.9	4.9/4.9	1.9
Evaporator Fan	No.	1	1	1	1	1
	Volts	208/230	460	460	208/230	460
	Phase	3	3	3	3	3
	HP	3/4	1/2	3/4	1	1
	Amps (FLA, each)	3.4/3.4	1.4	1.6	9.1/9.1	4.6
	Amps (LRA, each)	16.8/16.8	6.2	8.4	0/0	0

1. Horsepower Per Compressor.

2. Amp Draw Per Motor. Multiply Value By Number of Motors to Determine Total Amps.

Unit Model No. RLPN-	Heater Kit Model No. RXJJ-	Heater kW @ 208/240 V	Heater Kit FLA	Unit Min. Ckt. Ampacity	Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)	Heater Kit Min. Ckt. Ampacity	Heater Kit Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)	Air Conditioner Min. Ckt. Ampacity	Air Conditioner Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)
C036CL	NONE	—	—	16/16	20/20	—	—	16/16	20/20
	A06C	4.2/5.6	11.7/13.5	19/21	20/25	15/17	15/20	16/16	20/20
	A10C	7.2/9.6	20/23.1	29/33	30/35	25/29	25/30	16/16	20/20
	A12C	8.4/11.2	23.4/27	33/38	35/40	30/34	30/35	16/16	20/20
	A15C	10.8/14.4	30.1/34.7	42/47	45/50	38/44	40/45	16/16	20/20
	A20C	14.4/19.2	40/46.3	54/62	60/70	50/58	50/60	16/16	20/20
C036CM	NONE	—	—	16/16	20/20	—	—	16/16	20/20
	A06C	4.2/5.6	11.7/13.5	19/21	20/25	15/17	15/20	16/16	20/20
	A10C	7.2/9.6	20/23.1	29/33	30/35	25/29	25/30	16/16	20/20
	A12C	8.4/11.2	23.4/27	33/38	35/40	30/34	30/35	16/16	20/20
	A15C	10.8/14.4	30.1/34.7	42/47	45/50	38/44	40/45	16/16	20/20
	A20C	14.4/19.2	40/46.3	54/62	60/70	50/58	50/60	16/16	20/20
C048CL	NONE	—	—	21/21	30/30	—	—	21/21	30/30
	A06C	4.2/5.6	11.7/13.5	21/21	30/30	15/17	15/20	21/21	30/30
	A10C	7.2/9.6	20/23.1	29/33	30/35	25/29	25/30	21/21	30/30
	A12C	8.4/11.2	23.4/27	33/38	35/40	30/34	30/35	21/21	30/30
	A15C	10.8/14.4	30.1/34.7	42/47	45/50	38/44	40/45	21/21	30/30
	A20C	14.4/19.2	40/46.3	54/62	60/70	50/58	50/60	21/21	30/30
C048CM	NONE	—	—	22/22	30/30	—	—	22/22	30/30
	A06C	4.2/5.6	11.7/13.5	22/22	30/30	15/17	15/20	22/22	30/30
	A10C	7.2/9.6	20/23.1	30/34	30/35	25/29	25/30	22/22	30/30
	A12C	8.4/11.2	23.4/27	34/39	35/40	30/34	30/35	22/22	30/30
	A15C	10.8/14.4	30.1/34.7	42/48	45/50	38/44	40/45	22/22	30/30
	A20C	14.4/19.2	40/46.3	55/63	60/70	50/58	50/60	22/22	30/30
C060CL	NONE	—	—	26/26	40/40	—	—	26/26	40/40
	A06C	4.2/5.6	11.7/13.5	26/26	40/40	15/17	15/20	26/26	40/40
	A10C	7.2/9.6	20/23.1	30/34	40/40	25/29	25/30	26/26	40/40
	A12C	8.4/11.2	23.4/27	34/39	40/40	30/34	30/35	26/26	40/40
	A15C	10.8/14.4	30.1/34.7	42/48	45/50	38/44	40/45	26/26	40/40
	A20C	14.4/19.2	40/46.3	55/63	60/70	50/58	50/60	26/26	40/40
	A24C	18/24	50/57.7	67/77	70/80	63/73	70/80	26/26	40/40
C060CM	NONE	—	—	27/27	40/40	—	—	27/27	40/40
	A06C	4.2/5.6	11.7/13.5	27/27	40/40	15/17	15/20	27/27	40/40
	A10C	7.2/9.6	20/23.1	31/35	40/40	25/29	25/30	27/27	40/40
	A12C	8.4/11.2	23.4/27	35/39	40/40	30/34	30/35	27/27	40/40
	A15C	10.8/14.4	30.1/34.7	43/49	45/50	38/44	40/45	27/27	40/40
	A20C	14.4/19.2	40/46.3	56/63	60/70	50/58	50/60	27/27	40/40
	A24C	18/24	50/57.7	68/78	70/80	63/73	70/80	27/27	40/40

Unit Model No. RLPN-	Heater Kit Model No. RXJJ-	Heater kW @ 480 V	Heater Kit FLA	Unit Min. Ckt. Ampacity	Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)	Heater Kit Min. Ckt. Ampacity	Heater Kit Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)	Air Conditioner Min. Ckt. Ampacity	Air Conditioner Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)
C036DL	NONE	—	—	10	15	—	—	10	15
	A06D	5.6	6.7	11	15	9	15	10	15
	A10D	9.6	11.6	17	20	15	15	10	15
	A12D	11.2	13.5	19	20	17	20	10	15
	A15D	14.4	17.4	24	25	22	25	10	15
	A20D	19.2	23.3	31	35	30	30	10	15
C036DM	NONE	—	—	10	15	—	—	10	15
	A06D	5.6	6.7	11	15	9	15	10	15
	A10D	9.6	11.6	17	20	15	15	10	15
	A12D	11.2	13.5	19	20	17	20	10	15
	A15D	14.4	17.4	24	25	22	25	10	15
	A20D	19.2	23.3	31	35	30	30	10	15
C048DL	NONE	—	—	11	15	—	—	11	15
	A06D	5.6	6.7	11	15	9	15	11	15
	A10D	9.6	11.6	17	20	15	15	11	15
	A12D	11.2	13.5	19	20	17	20	11	15
	A15D	14.4	17.4	24	25	22	25	11	15
	A20D	19.2	23.3	31	35	30	30	11	15
C048DM	NONE	—	—	11	15	—	—	11	15
	A06D	5.6	6.7	11	15	9	15	11	15
	A10D	9.6	11.6	17	20	15	15	11	15
	A12D	11.2	13.5	19	20	17	20	11	15
	A15D	14.4	17.4	24	25	22	25	11	15
	A20D	19.2	23.3	32	35	30	30	11	15
C060DL	NONE	—	—	13	20	—	—	13	20
	A06D	5.6	6.7	13	20	9	15	13	20
	A10D	9.6	11.6	17	20	15	15	13	20
	A12D	11.2	13.5	19	20	17	20	13	20
	A15D	14.4	17.4	24	25	22	25	13	20
	A20D	19.2	23.3	32	35	30	30	13	20
	A24D	24	28.9	39	40	37	40	13	20
C060DM	NONE	—	—	13	20	—	—	13	20
	A06D	5.6	6.7	13	20	9	15	13	20
	A10D	9.6	11.6	18	20	15	15	13	20
	A12D	11.2	13.5	20	20	17	20	13	20
	A15D	14.4	17.4	25	25	22	25	13	20
	A20D	19.2	23.3	32	35	30	30	13	20
	A24D	24	28.9	39	40	37	40	13	20

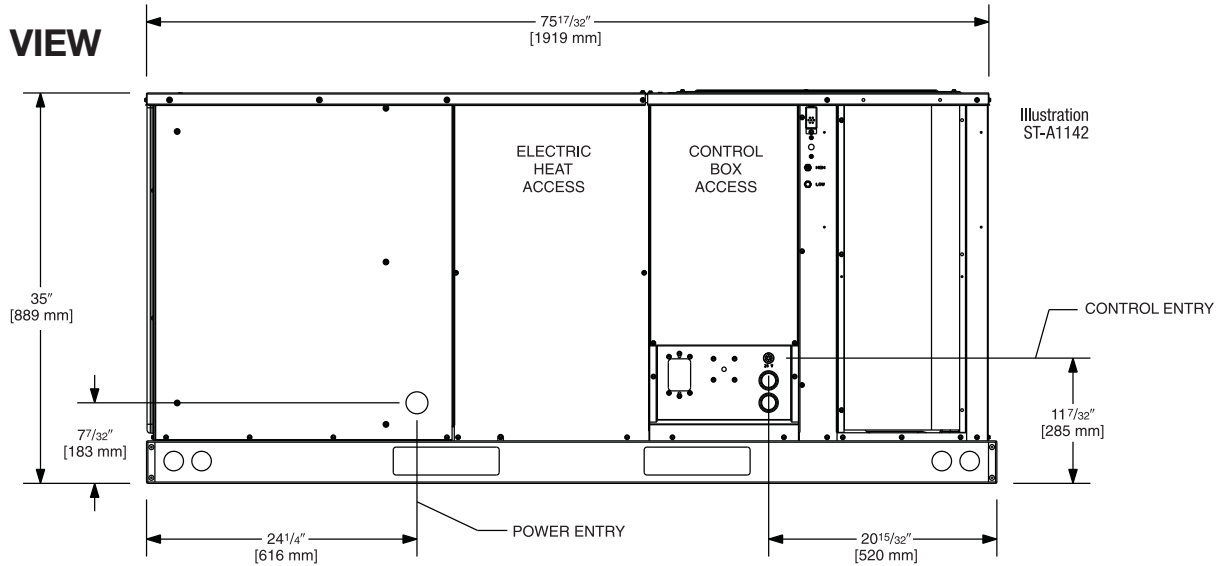
Unit Model No. RLPN-	Heater Kit Model No. RXJJ-	Heater kW @ 600 V	Heater Kit FLA	Unit Min. Ckt. Ampacity	Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)	Heater Kit Min. Ckt. Ampacity	Heater Kit Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)	Air Conditioner Min. Ckt. Ampacity	Air Conditioner Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)
C036YL	NONE	—	—	7	15	—	—	7	15
	A15Y	14.4	13.9	19	20	18	20	7	15
	A20Y	19.2	18.8	26	30	24	25	7	15
C036YM	NONE	—	—	7	15	—	—	7	15
	A15Y	14.4	13.9	19	20	18	20	7	15
	A20Y	19.2	18.8	26	30	24	25	7	15
C048YL	NONE	—	—	8	15	—	—	8	15
	A15Y	14.4	13.9	19	20	18	20	8	15
	A20Y	19.2	18.8	26	30	24	25	8	15
C048YM	NONE	—	—	8	15	—	—	8	15
	A15Y	14.4	13.9	19	20	18	20	8	15
	A20Y	19.2	18.8	26	30	24	25	8	15
C060YL	NONE	—	—	10	15	—	—	10	15
	A15Y	14.4	13.9	19	20	18	20	10	15
	A20Y	19.2	18.8	26	30	24	25	10	15
C060YM	NONE	—	—	10	15	—	—	10	15
	A15Y	14.4	13.9	20	20	18	20	10	15
	A20Y	19.2	18.8	26	30	24	25	10	15

Unit Model No. RLQN-	Heater Kit Model No. RXJJ-	Heater kW @ 208/240 V	Heater Kit FLA	Unit Min. Ckt. Ampacity	Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)	Heater Kit Min. Ckt. Ampacity	Heater Kit Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)	Air Conditioner Min. Ckt. Ampacity	Air Conditioner Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)
C036CL	NONE	—	—	16/16	20/20	—	—	16/16	20/20
	A06C	4.2/5.6	11.7/13.5	19/21	20/25	15/17	15/20	16/16	20/20
	A10C	7.2/9.6	20/23.1	29/33	30/35	25/29	25/30	16/16	20/20
	A12C	8.4/11.2	23.4/27	33/38	35/40	30/34	30/35	16/16	20/20
	A15C	10.8/14.4	30.1/34.7	42/47	45/50	38/44	40/45	16/16	20/20
C036CM	A20C	14.4/19.2	40/46.3	54/62	60/70	50/58	50/60	16/16	20/20
	NONE	—	—	16/16	20/20	—	—	16/16	20/20
	A06C	4.2/5.6	11.7/13.5	19/21	20/25	15/17	15/20	16/16	20/20
	A10C	7.2/9.6	20/23.1	29/33	30/35	25/29	25/30	16/16	20/20
	A12C	8.4/11.2	23.4/27	33/38	35/40	30/34	30/35	16/16	20/20
C048CL	A15C	10.8/14.4	30.1/34.7	42/47	45/50	38/44	40/45	16/16	20/20
	A20C	14.4/19.2	40/46.3	54/62	60/70	50/58	50/60	16/16	20/20
	NONE	—	—	21/21	30/30	—	—	21/21	30/30
	A06C	4.2/5.6	11.7/13.5	21/21	30/30	15/17	15/20	21/21	30/30
	A10C	7.2/9.6	20/23.1	29/33	30/35	25/29	25/30	21/21	30/30
C048CM	A12C	8.4/11.2	23.4/27	33/38	35/40	30/34	30/35	21/21	30/30
	A15C	10.8/14.4	30.1/34.7	42/47	45/50	38/44	40/45	21/21	30/30
	A20C	14.4/19.2	40/46.3	54/62	60/70	50/58	50/60	21/21	30/30
	NONE	—	—	22/22	30/30	—	—	22/22	30/30
	A06C	4.2/5.6	11.7/13.5	22/22	30/30	15/17	15/20	22/22	30/30
C060CV	A10C	7.2/9.6	20/23.1	30/34	30/35	25/29	25/30	22/22	30/30
	A12C	8.4/11.2	23.4/27	34/39	35/40	30/34	30/35	22/22	30/30
	A15C	10.8/14.4	30.1/34.7	42/48	45/50	38/44	40/45	22/22	30/30
	A20C	14.4/19.2	40/46.3	55/63	60/70	50/58	50/60	22/22	30/30
	NONE	—	—	32/32	45/45	—	—	32/32	45/45
C060CM	A06C	4.2/5.6	11.7/13.5	32/32	45/45	15/17	15/20	32/32	45/45
	A10C	7.2/9.6	20/23.1	37/41	45/45	25/29	25/30	32/32	45/45
	A12C	8.4/11.2	23.4/27	41/46	45/50	30/34	30/35	32/32	45/45
	A15C	10.8/14.4	30.1/34.7	50/55	50/60	38/44	40/45	32/32	45/45
	A20C	14.4/19.2	40/46.3	62/70	70/70	50/58	50/60	32/32	45/45
C060CV	A24C	18/24	50/57.7	74/84	80/90	63/73	70/80	32/32	45/45

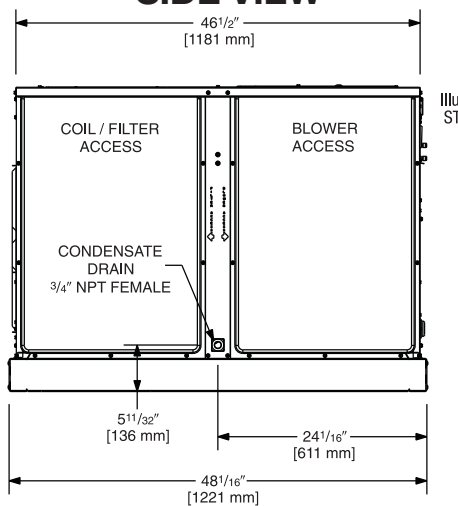
Unit Model No. RLQN-	Heater Kit Model No. RXJJ-	Heater kW @ 480 V	Heater Kit FLA	Unit Min. Ckt. Ampacity	Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)	Heater Kit Min. Ckt. Ampacity	Heater Kit Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)	Air Conditioner Min. Ckt. Ampacity	Air Conditioner Max. Fuse or Ckt. Bkr. Size (Ckt. Bkr. Must be HACR Type for USA)
C036DL	NONE	—	—	10	15	—	—	10	15
	A06D	5.6	6.7	11	15	9	15	10	15
	A10D	9.6	11.6	17	20	15	15	10	15
	A12D	11.2	13.5	19	20	17	20	10	15
	A15D	14.4	17.4	24	25	22	25	10	15
	A20D	19.2	23.3	31	35	30	30	10	15
C036DM	NONE	—	—	10	15	—	—	10	15
	A06D	5.6	6.7	11	15	9	15	10	15
	A10D	9.6	11.6	17	20	15	15	10	15
	A12D	11.2	13.5	19	20	17	20	10	15
	A15D	14.4	17.4	24	25	22	25	10	15
	A20D	19.2	23.3	31	35	30	30	10	15
C048DL	NONE	—	—	11	15	—	—	11	15
	A06D	5.6	6.7	11	15	9	15	11	15
	A10D	9.6	11.6	17	20	15	15	11	15
	A12D	11.2	13.5	19	20	17	20	11	15
	A15D	14.4	17.4	24	25	22	25	11	15
	A20D	19.2	23.3	31	35	30	30	11	15
C048DM	NONE	—	—	11	15	—	—	11	15
	A06D	5.6	6.7	11	15	9	15	11	15
	A10D	9.6	11.6	17	20	15	15	11	15
	A12D	11.2	13.5	19	20	17	20	11	15
	A15D	14.4	17.4	24	25	22	25	11	15
	A20D	19.2	23.3	32	35	30	30	11	15
C060DV	NONE	—	—	16	20	—	—	16	20
	A06D	5.6	6.7	16	20	9	15	16	20
	A10D	9.6	11.6	21	25	15	15	16	20
	A12D	11.2	13.5	23	25	17	20	16	20
	A15D	14.4	17.4	28	30	22	25	16	20
	A20D	19.2	23.3	35	35	30	30	16	20
	A24D	24	28.9	42	45	37	40	16	20

3 TO 5 TON [10.6 TO 17.6 kW] MODELS

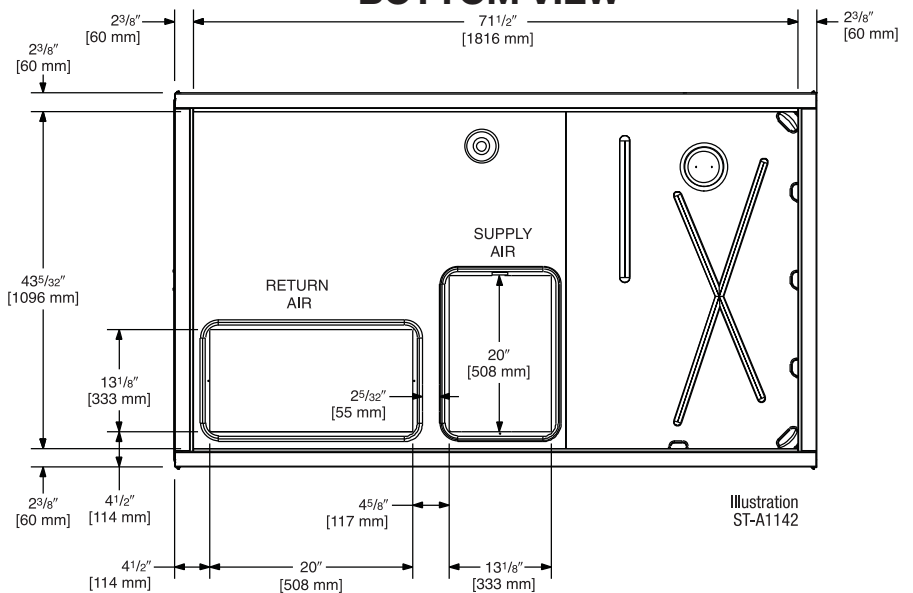
FRONT VIEW



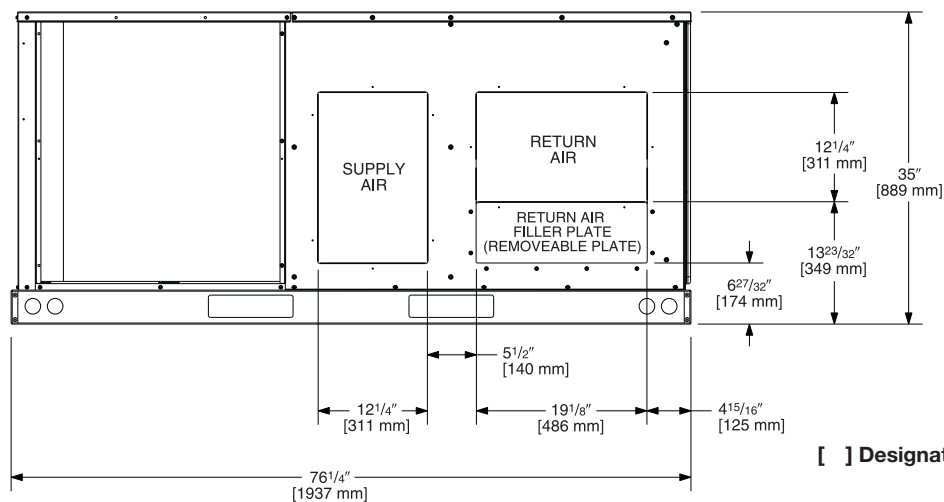
SIDE VIEW



BOTTOM VIEW

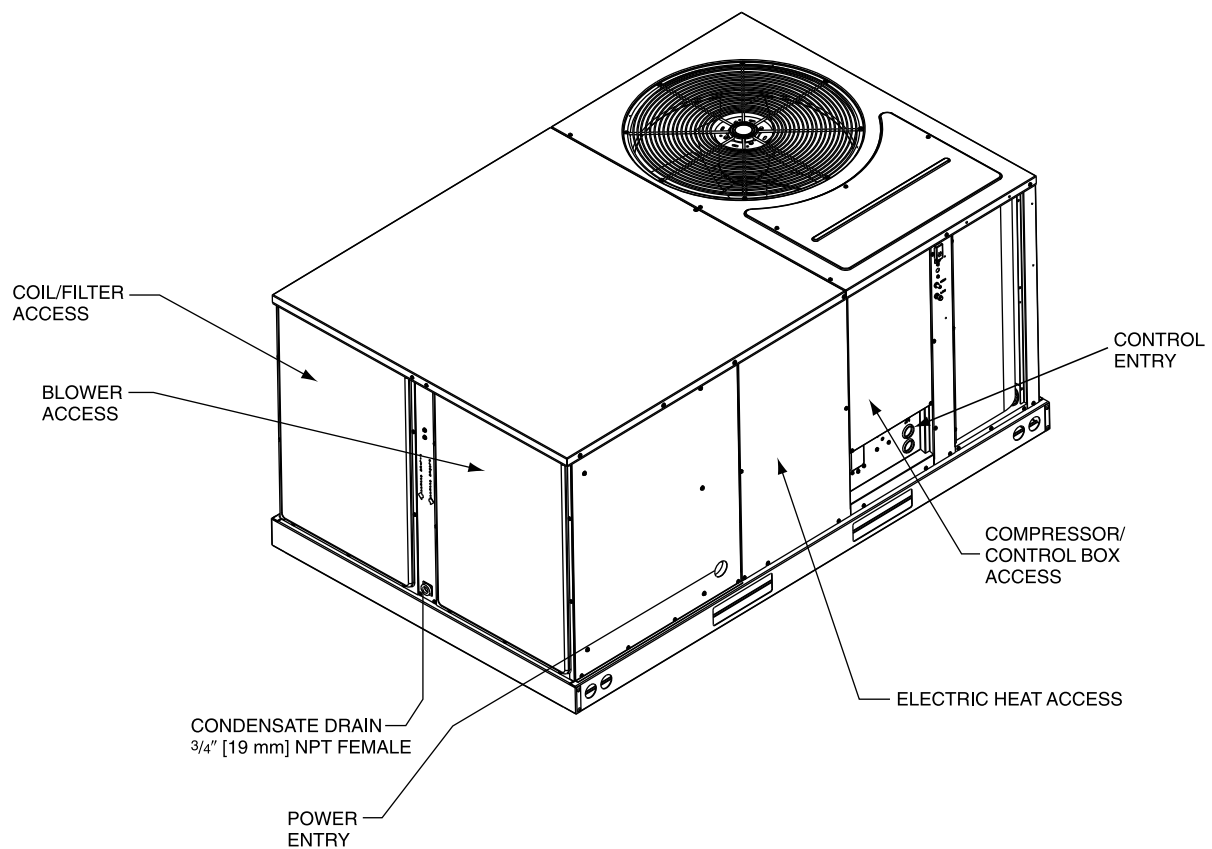
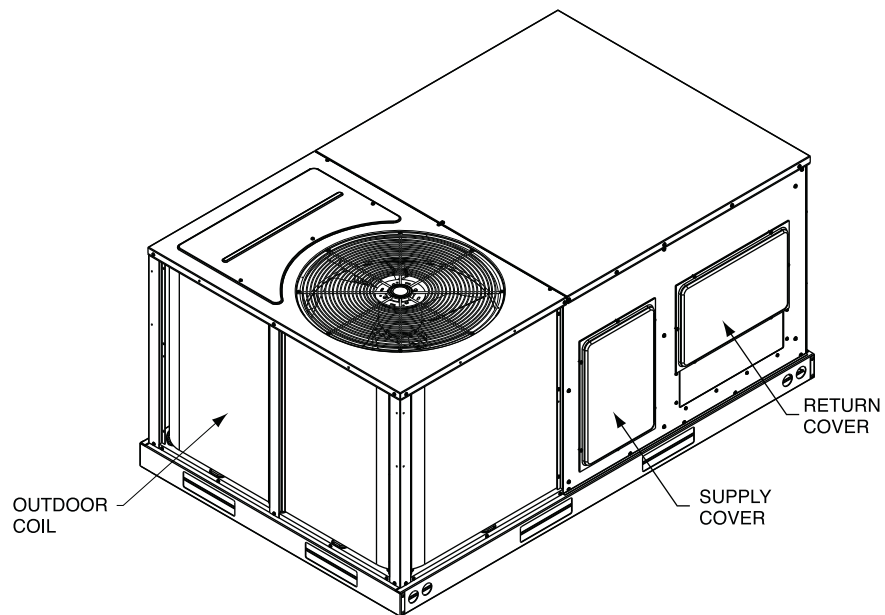


BACK VIEW



[] Designates Metric Conversions

3 TO 5 TON [10.6 TO 17.6 kW] MODELS



WEIGHTS

Accessory	Shipping	Operating
	lbs [kg]	lbs [kg]
Economizer with Single Enthalpy	71 [31.75]	70 [32]
Economizer with Single Enthalpy and Smoke Detector	74 [33.50]	73 [33]
Power Exhaust	70 [32.00]	67 [30]
Fresh Air Damper (Manual)	11 [5.00]	9 [4]
Fresh Air Damper (Motorized)	13 [6.00]	11 [5]
Roof Curb 14"	92 [42.00]	88 [40]
Roof Curb 24"	108 [49.00]	104 [47]
Concentric Diffuser 18" Flush	37 [17.00]	26 [12]
Concentric Diffuser 20" Flush	54 [24.00]	42 [19]
Side Discharge Concentric Diffuser RXRN-FA60	35 [16.00]	20 [9]
Side Discharge Concentric Diffuser RXRN-FA65	55 [25.00]	40 [18]

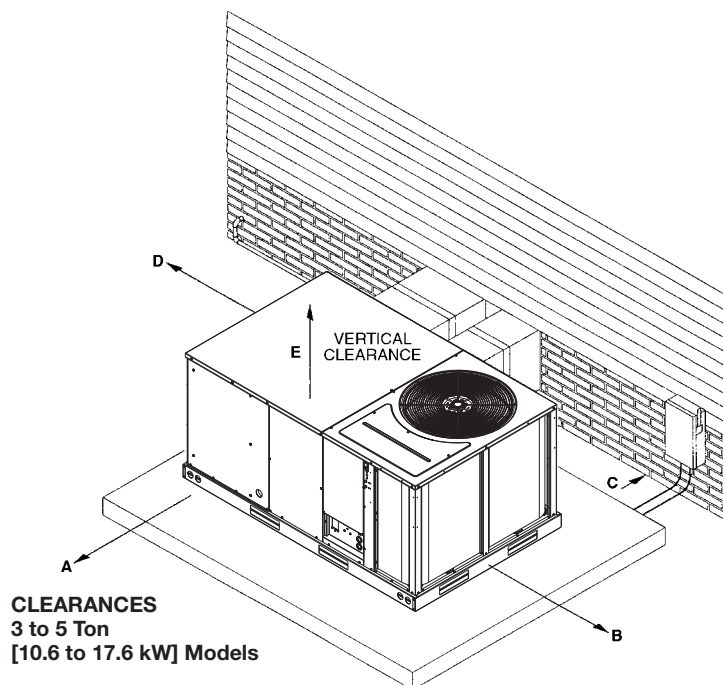
CLEARANCES

(3 to 5 Ton [10.6 to 17.6 kW] Models)

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

Recommended Clearance in. [mm]	Location
48 [1219]	A - Front
18 [457]	B - Condenser Coil
*12 [305]	C - Duct Side
36 [914]	D - Evaporator End
60 [1524]	E - Above
*57" [1448 mm] With Economizer	

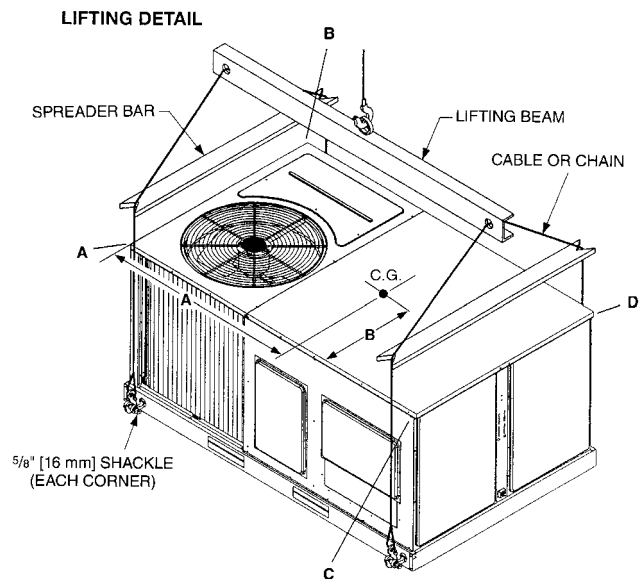
NOTE: Supply duct may be installed with "0" inch clearance to combustible materials, provided 1" [25.4 mm] minimum. Fiberglass insulation is applied either inside or on the outside of the duct.



CENTER OF GRAVITY (C.G.)

Capacity Tons [kW]	A in. [mm]	B in. [mm]
3-5 [10.6-17.6]	38 1/4 [972]	25 3/4 [654]

Capacity Tons [kW]	Corner Weights by Percentage			
	A	B	C	D
3-5 [10.6-17.6]	22%	27%	23%	28%



[] Designates Metric Conversions

ACCESSORY EQUIPMENT

Accessory Description	Model Application 3 to 5 Ton [10.6 to 17.6 kW]	Accessory Model No. 3 to 5 Ton [10.6 to 17.6 kW]	Factory Installed 3 to 5 Ton [10.6 to 17.6 kW]
Electric Heater Kits	RLPN-C/RLQN-C	RXJJ-A06 (C,D) RXJJ-A10 (C,D) RXJJ-A12 (C,D) RXJJ-A15 (C,D) RXJJ-A20 (C,D) RXJJ-A24 (C,D)	See Heater Kit Electric Table
Roofcurb 14"	RLPN-C/RLQN-C	RXKG-CAD14	No
Roofcurb 24"	RLPN-C/RLQN-C	RXKG-CAD24	No
Roofcurb Adapters	RLPN-C/RLQN-C	RXR-BCDB21 RXRB-BCDB22 RXRB-BCDB23	No
DDC Economizer with Single Enthalpy and Barometric Relief ①	RLPN-C/RLQN-C	AXRD-01RKCCM3	Yes
DDC Economizer with Single Enthalpy, Smoke Detector and Barometric Relief	RLPN-C/RLQN-C	AXRD-01RKCDM3	Yes
Non-powered Convenience Outlet	RLPN-C/RLQN-C	RXR-AN02	Yes
Dual Enthalpy Kit	RLPN-C/RLQN-C	RXR-AV03	No
CO ₂ Sensor	RLPN-C/RLQN-C	RXR-AR02	No
Power Exhaust	RLPN-C/RLQN-C	AXR-BGF04 (C, D)	No
Fresh Air Damper Manual	RLPN-C/RLQN-C	AXRF-FBA1	No
Fresh Air Damper Motorized	RLPN-C/RLQN-C	AXRF-FBB1	No
Rectangular to Round 18" Duct Adapters for Concentric Diffuser	RLPN-C/RLQN-C	RXMC-CB03	No
Rectangular to Round 20" Duct Adapters for Concentric Diffuser	RLPN-C/RLQN-C	RXMC-CB04	No
Concentric Diffuser 18" Step	RLPN-C/RLQN-C	RXRN-FA60, RXRN-FA65	No
Concentric Diffuser 18" Flush	RLPN-C/RLQN-C	RXRN-FA70, RXRN-FA75	No
Rectangular to Round 16" Side	RLPN-C/RLQN-C	RXMC-BB01	No
Louver Kit (2 Sides) 3-Ton	RLPN-C/RLQN-C	AXR-AAD02B	Yes
Louver Kit (3 Sides) 4 & 5-Ton	RLPN-C/RLQN-C	AXR-AAD01B	Yes
Low Ambient Control to 0°F [-18°C]	RLPN-C/RLQN-C	RXRZ-A04	Yes
Unwired Convenience Outlet	RLPN-C/RLQN-C	RXR-AN02	Yes
Comfort Alert (1 per compressor)	RLPN-C/RLQN-C	RXR-AZ01	Yes
BACnet Communication Card	RLPN-C/RLQN-C	RXR-AY01	No
LonWorks Communication Card	RLPN-C/RLQN-C	RXR-AY02	No
1 Freeze Stat	RLPN-C/RLQN-C	RXR-AM04	Yes
Room Humidity Sensor	RLPN-C Reheat Option	RHC-ZNS4	No
Room Temperature & Relative Humidity Sensor	RLPN-C Reheat Option	RHC-ZNS5	No

*Voltage
C = 208-230 VAC-3PH-60HZ D = 460 VAC-3PH-60HZ

NOTES: ① Economizer is designed for downflow or horizontal applications.

[] Designates Metric Conversions

FLUSH MOUNT ROOM TEMPERATURE SENSORS FOR NETWORKED DDC APPLICATIONS



ROOM TEMPERATURE SENSOR with TIMED OVERRIDE BUTTON

RHC-ZNS1

10k Ω 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 with TIMED OVERRIDE BUTTON and STATUS INDICATOR

RHC-ZNS2

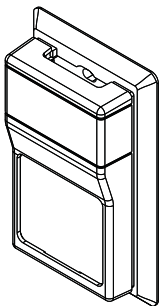
10k Ω room temperature sensor transmits room temperature to DDC system. Timed override button allows tenant to change from unoccupied temperature setpoint to occupied temperature setpoint for a preset time. Status Indicator Light transmits ALARM flash code to occupied space.



ROOM TEMPERATURE SENSOR with SETPOINT ADJUSTMENT and TIMED OVERRIDE BUTTON

RHC-ZNS3

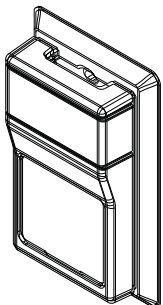
10k Ω room temperature sensor with setpoint adjustment transmits room temperature to DDC system along with desired occupied room temperature setpoint. Timed override button allows tenant to change from unoccupied temperature setpoint to occupied temperature setpoint for a preset time.



ROOM HUMIDITY SENSOR

RHC-ZNS4

Transmits room relative humidity to DDC System.



ROOM TEMPERATURE AND RELATIVE HUMIDITY SENSOR

RHC-ZNS5

Transmits room temperature and relative humidity to DDC System.

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.



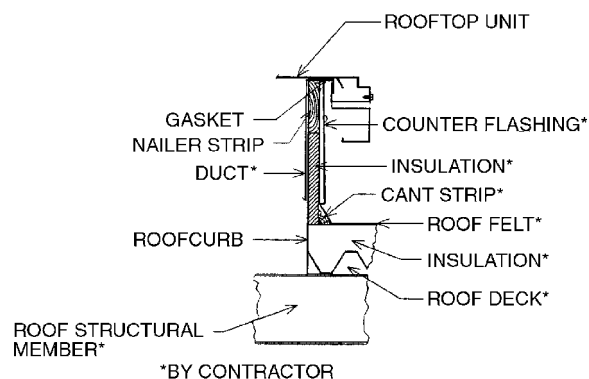
LonWorks® COMMUNICATION CARD RXRX-AY02

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.

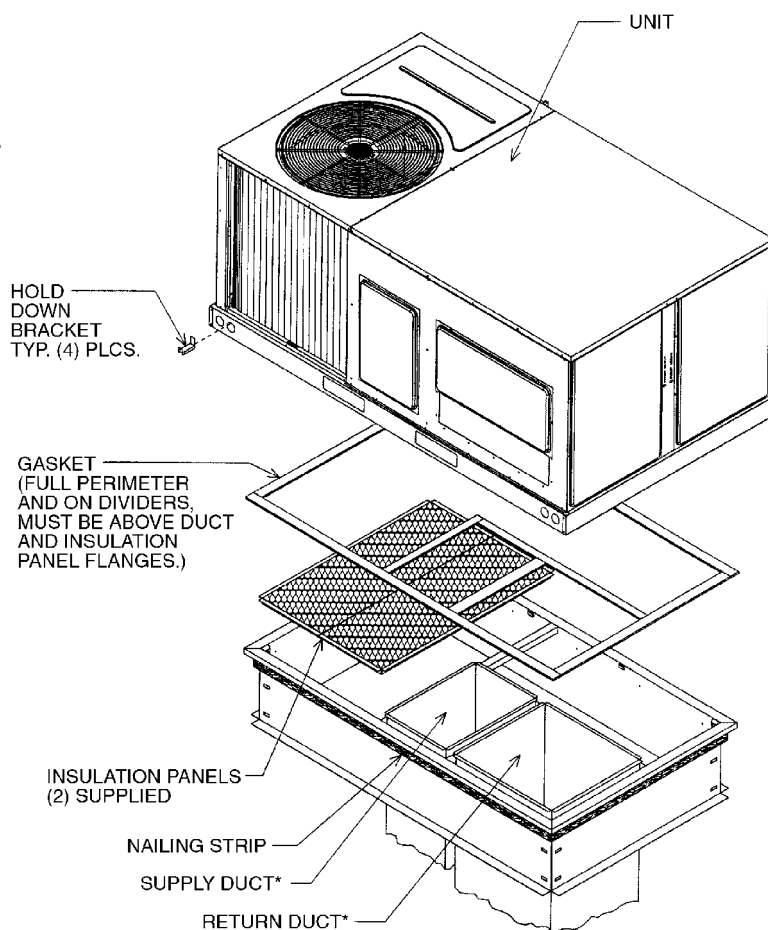
ROOFCURBS (Full Perimeter)

- Sure Comfort's new roofcurb design can be utilized on 3 through 5 ton [10.6-17.6 kW] models.
- Two available heights (14" [356 mm] and 24" [610 mm]) for ALL models.
- Quick assembly corners for simple and fast assembly.
- Opening provided in bottom pan to match the "Thru the Curb" electrical connection opening provided on the unit base pan.
- 2" [51 mm] x 4" [102 mm] Nailer provided.
- Insulating panels provided.
- Sealing gasket (28" [711 mm]) provided with Roofcurb.
- Packaged for easy field assembly.

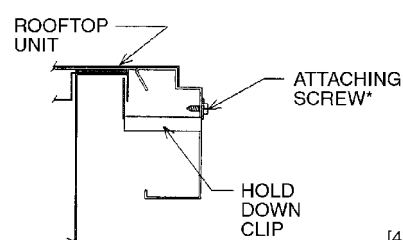
Roofcurb Model	Height of Curb
RXKG-CAD14	14" [356 mm]
RXKG-CAD24	24" [610 mm]



TYPICAL INSTALLATION



ROOFCURB FOR RLPN 3-5 TON [10.6-17.6 kW] MODELS RLQN 3-5 TON [10.6-17.6 kW] MODELS



[] Designates Metric Conversions

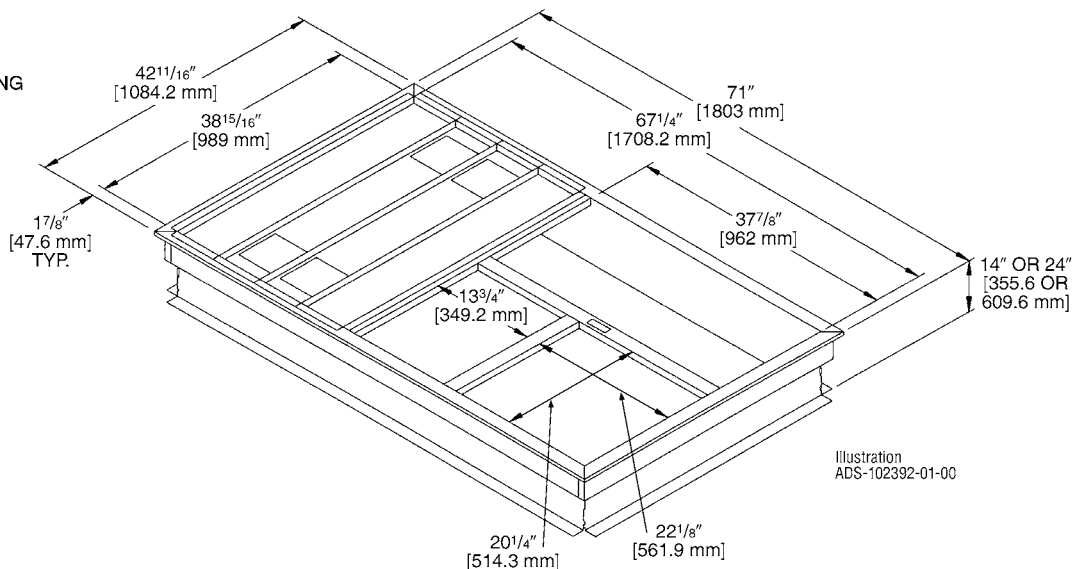


Illustration
ADS-102392-01-00

ROOFCURB ADAPTERS

Old Models

MEDIUM CABINET (3 TON [11 kW])

(-)SNC, (-)SND, (-)SNE
(-)RGE, (-)RGF, (-)RGG
(-)PNC, (-)PND

LARGE CABINET

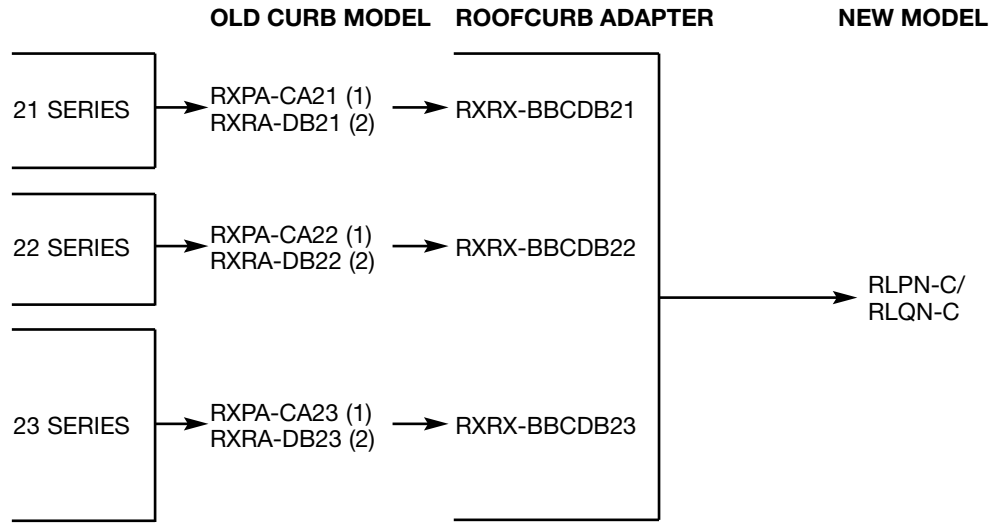
(3-3.5 TON [11-12 kW])

(-)RGE, (-)RGF, (-)RGG,
(-)RGH (3 TON [11 kW])

EXTRA LARGE CABINET

(3.5-5 TON [12-18 kW])

(-)SNC, (-)SND, (-)SNE
(-)RGE, (-)RGF,
(-)RGG (4-5 TON [14-18 kW])
(-)PNC, (-)PND, (-)RGH
(3.5, 4 TON [12-14 kW])

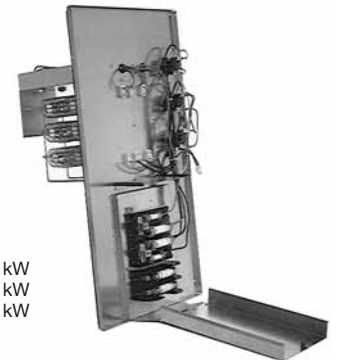
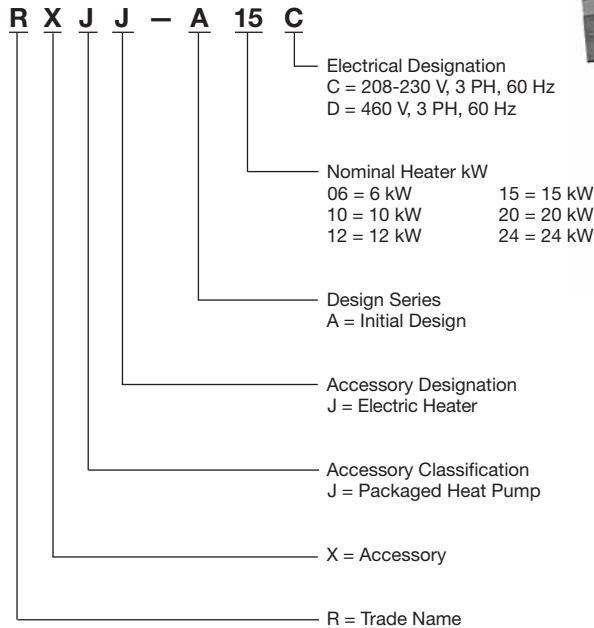


FIELD INSTALLED RESISTANCE HEATER KITS

Electric Heater Kits are designed for field installation using either single-point power wiring or dual circuit wiring. Low voltage plugs are provided to allow for quick connection to the unit. Removing a block-off panel on the unit allows the heater elements to be inserted into the supply air down stream from the indoor coil and supply air blower.

[] Designates Metric Conversions

Model Number Identifier:

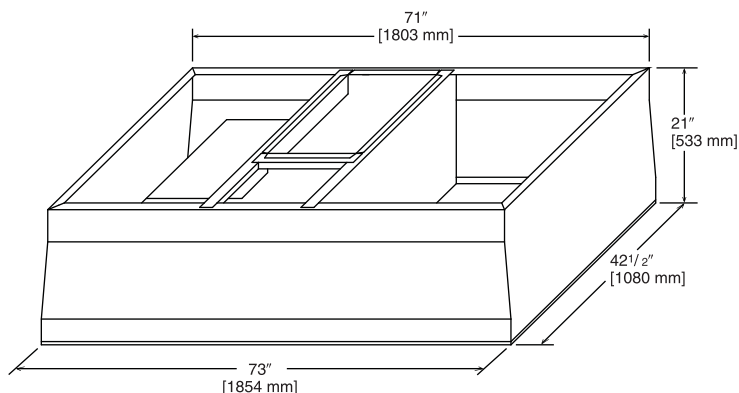


Roofcurb Adapters

Carrier to Sure Comfort Roofcurb Adapter - RXRX-EACC35*

Replaces Carrier/Bryant/ICP Models:

Carrier Models		
Packaged G/E	Packaged AC	Packaged HP
48DJ*004 - 007	50DJ004 - 007	50QJ004-006
48GJ*006	50GJ006	
48HE*003 - 006	50HE003 - 006	50HEQ003 - 006
48HJ*004 - 007	50HJ004 - 007	50HJQ004 - 007
48HM*007	50HM007	
48LJ*004 - 007	50LJ004 - 007	50LJQ004 - 006
48TC*004 - 007	50TC004 - 007	50TCQ004 - 007
48TF-004 - 007	50TFF004 - 007	50TFQ004 - 007
48TJ*004 - 007	50TJ004 - 007	50TJQ004 - 007
48TM*004 - 007	50TM004 - 007	



Bryant Models		
Packaged G/E	Packaged AC	Packaged HP
581A*V036 - 072	551A*X036 - 072	549B*X036 - 072
581B*V036 - 072	551B*X036 - 072	
580C*V036 - 072	558C*X036 - 072	548C*X036 - 060
580D*V036 - 072	558D*X036 - 072	548D*X036 - 072
580F*V036 - 072	558F*X036 - 072	548F*X036 - 072
580J*04 - 07	558J*04 - 07	548J*04 - 07

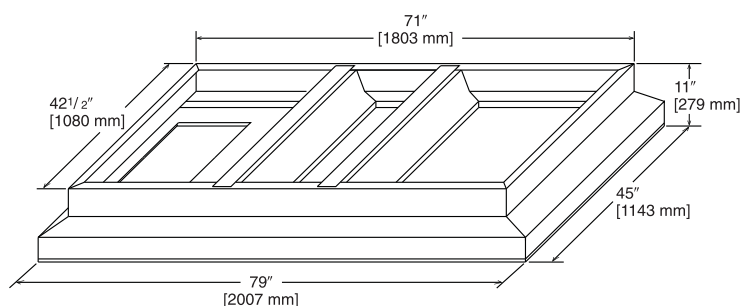
Model #	CFM	Static Pressure
RXRX-EACC35	1000	.20
	1200	.25
	1400	.30
	1600	.35
	1800	.40
	2000	.45
	2200	.50

ICP Models		
Packaged G/E	Packaged AC	Packaged HP
PGE036 - 072	PAE036 - 072	PHE072
PGH036 - 072	PAH036 - 072	PHH036 - 072
PGS072	PAS072	PHS072
RGS036 - 072	RAS036 - 072	RHS036 - 072

*RXRX-EACC35 Carrier to Rheem roofcurb adapter requires high static "M" drive for all tonnages.

Trane to Sure Comfort Roofcurb Adapter - RXRX-EACT35
Replaces Trane Models:

Trane Models		
Packaged G/E	Packaged AC	Packaged HP
YCD-036,037, 048,049,060	TCD-036,037, 048,049,060	WCD-036,037, 048,049,060



Model #	CFM	Static Pressure
RXRX-EACT35	1000	.08
	1200	.10
	1400	.15
	1600	.18
	1800	.21
	2000	.25
	2200	.30

[] Designates Metric Conversions

ECONOMIZERS

AXRD-01RKCCM3—3-5 Ton [10.6-17.6 kW] Models

DDC Economizer w/Single Enthalpy and Barometric Relief

AXRD-01RKCDM3—3-5 Ton [10.6-17.6 kW] Models

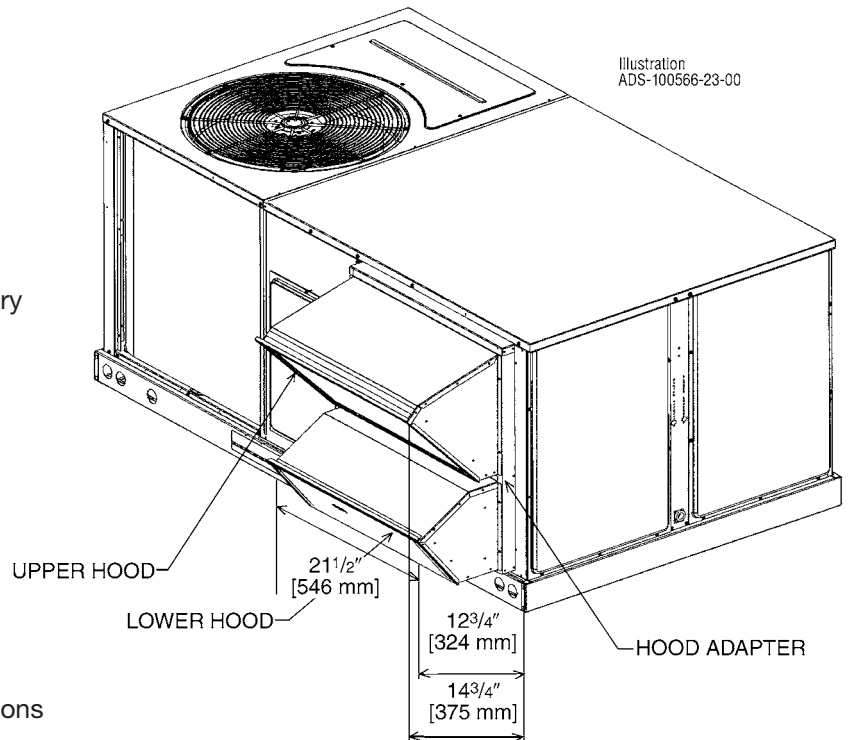
DDC Economizer w/Single Enthalpy, Barometric Relief and Smoke Detector

RXXR-AV03—3-5 Ton [10.6-17.6 kW] Models

Dual Enthalpy Kit
Optional CO₂ Sensor

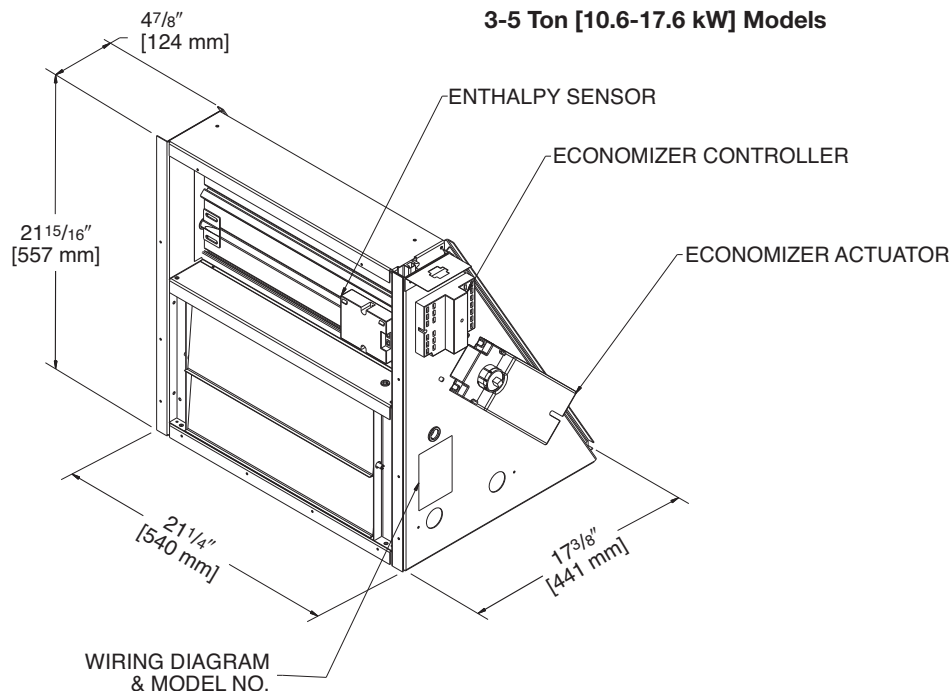
RXXR-AR02—3-5 Ton [10.6-17.6 kW] Models

- Features **Honeywell** Controls
- Available factory installed or field accessory
- Gear Driven Direct Drive Actuator
- Fully Modulating (0-100%)
- Extra Low Leakage Dampers California Title 24 Compliant
- Horizontal or Downflow Applications
- Slip-In Design for Easy Installations
- Plug-In Polarized 12-pin Electrical Connections
- Pre-configuring—No Field Adjustments Necessary
- Standard Barometric Relief Damper Provided
- Single Enthalpy with Dual Enthalpy upgrade kit
- CO₂ Input Sensor Available (field installed)
- Economizer slips in complete for downflow or horizontal duct applications
- Field assembled hood ships with Economizer
- Optional Remote minimum position (Honeywell #S963B1128) 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 LCD screen



[] Designates Metric Conversions

3-5 Ton [10.6-17.6 kW] Models

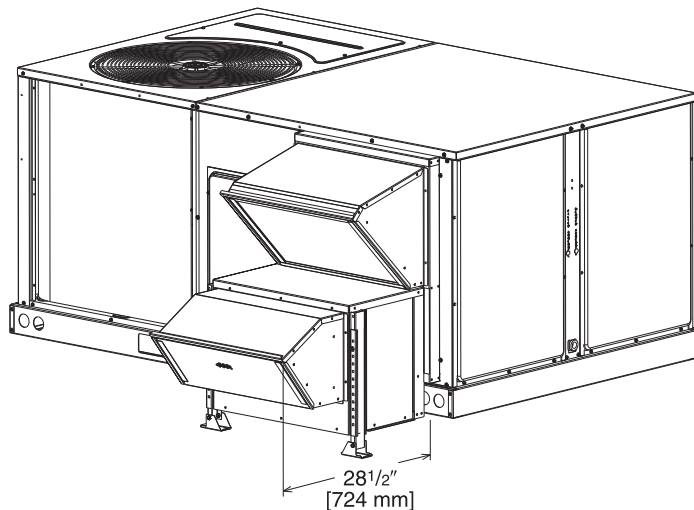


INTEGRAL POWER EXHAUST FOR ECONOMIZER (FIELD INSTALLED ONLY)

AXRX-BGF04C – 3-5 Ton [10.6-17.6 kW] Models & 3-5 Ton [10.6-17.6 kW] Models
208-230V, 1 PH and 3 PH, 60 Hz

AXRX-BGF04D – 3-5 Ton [10.6-17.6 kW] Models & 3-5 Ton [10.6-17.6 kW] Models
460V, 3 PH, 60 Hz

- For **Honeywell** Economizer
- Downflow or horizontal applications
- Requires separate 208-230 Volt – 1 PH power supply with disconnect or requires separate 460V – 3 PH power supply with disconnect
- Adjustable switch on economizer, factory preset to energize power exhaust at 95% outside air position
- Polarized plug connects power exhaust relay to economizer



POWER EXHAUST KIT FOR AXRD-01RKCCM3, AXRD-01RKCDM3 ECONOMIZERS

Model No.	No. of Fans	Volts	Phase	Watts (ea.)	High Speed		FLA (ea.)	LRA (ea.)
					CFM ①	RPM		
AXRX-BGF04C	1	208/230	1	1000	2350	1725	4.8	25.6
AXRX-BGF04D	1	460	1	800	2350	1625	1.6	14.3

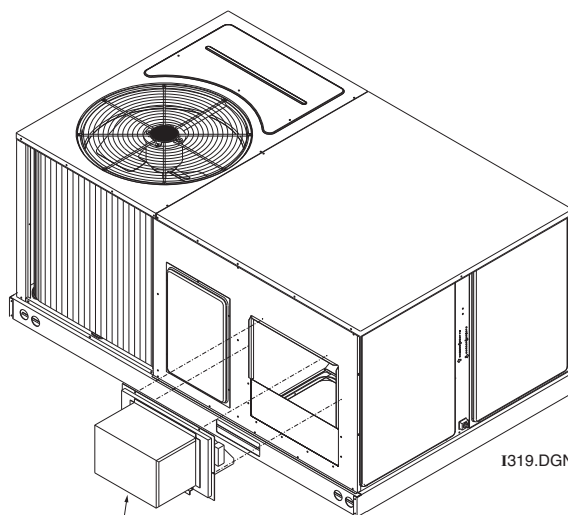
AXRX-BGF04C – 3-5 Ton [10.6-17.6 kW] Models
 AXRX-BGF04D – 3-5 Ton [10.6-17.6 kW] Models

FRESH AIR DAMPER

3-5 Ton [10.6-17.6 kW] Models

AXRF-FBA1 (Manual)

AXRF-FBB1 (Motorized)



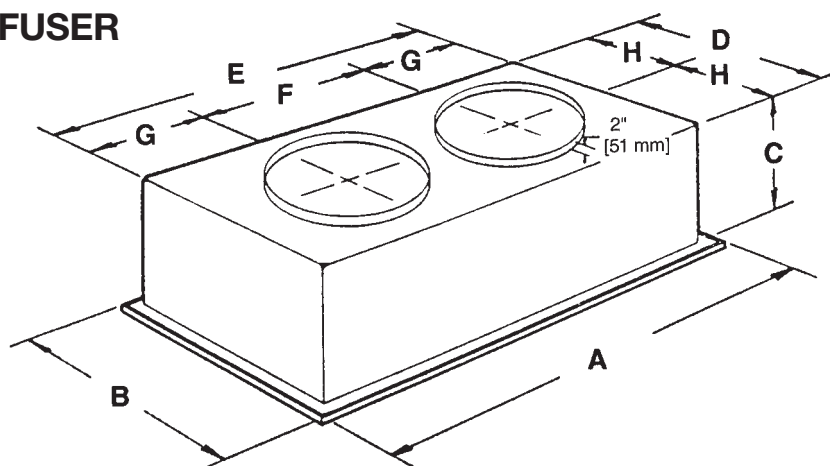
[] Designates Metric Conversions

FRESH AIR DAMPER

FLUSH MOUNT CONCENTRIC DIFFUSER

RXRN-FA70 (3 to 5 Ton [10.6 to 17.6 kW] Models)

For Use With Duct Adapter (RXMC)



DIMENSIONAL DATA

Model No.	A	B	C	D	E	F	G	H	Duct Size
RXRN-FA70	47 ⁵ / ₈ " [1210 mm]	23 ⁵ / ₈ " [600 mm]	13 ¹ / ₂ " [343 mm]	21" [533 mm]	45" [1143 mm]	22 ¹ / ₂ " [572 mm]	11 ¹ / ₄ " [286 mm]	10 ¹ / ₂ " [267 mm]	18RD
RXRN-FA75	47 ⁵ / ₈ " [1210 mm]	29 ⁵ / ₈ " [752 mm]	16 ⁵ / ₈ " [442 mm]	27" [666 mm]	45" [1143 mm]	22 ¹ / ₂ " [572 mm]	11 ¹ / ₄ " [286 mm]	13 ¹ / ₂ " [343 mm]	20RD

ENGINEERING DATA

Model No.	CFM [L/s]	Static Pressure	Throw Feet	Neck Vel.	Jet Vel.	Noise Level
RXRN-FA70	1000 [472]	.14	15-20	391	694	20
	1200 [566]	.17	16-22	469	833	25
	1400 [661]	.20	17-24	547	972	30
	1600 [755]	.24	18-25	625	1111	30
	1800 [850]	.30	20-28	703	1250	35
	2000 [944]	.36	21-29	781	1389	40
	2200 [1038]	.40	22-30	859	1528	40
RXRN-FA75	2600 [1227]	.17	19-24	663	1294	30
	2800 [1321]	.20	20-28	714	1393	35
	3000 [1416]	.25	21-29	765	1492	35
	3200 [1510]	.31	22-29	616	1592	40
	3400 [1605]	.37	22-30	667	1692	40

[] Designates Metric Conversions

DUCT ADAPTERS (3 TO 5 TON [10.6 TO 17.6 kW] MODELS)

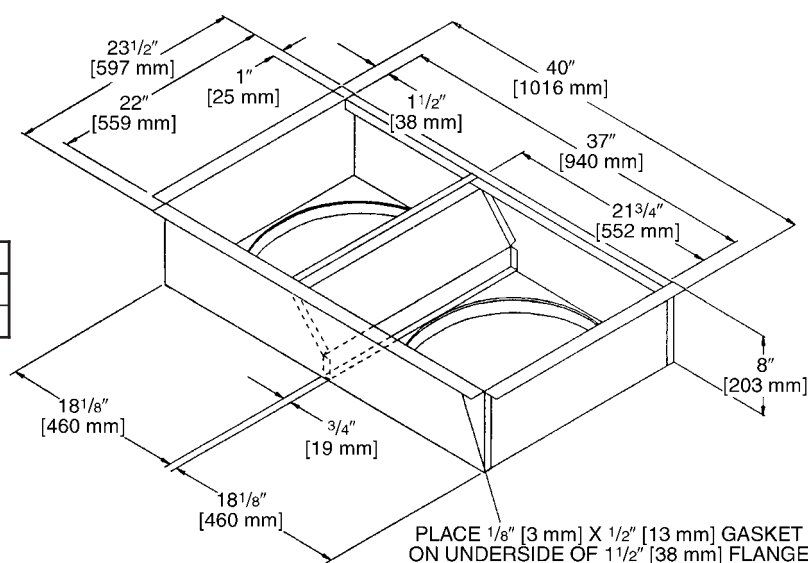
Rectangular to Round Transitions (Downflow)

Two sizes available (18" [457 mm] and 20" [508 mm] round) fit all units. Drops into and secures to RXKG- Series Roofcurbs.

For use with Concentric Diffusers.

Accessory Model No.	Model Application Tons [kW]	Size in. [mm]
RXMC-CB03	3-5 [10.6-17.6]	18 [457] Round
RXMC-CB04	3-5 [10.6-17.6]	20 [508] Round

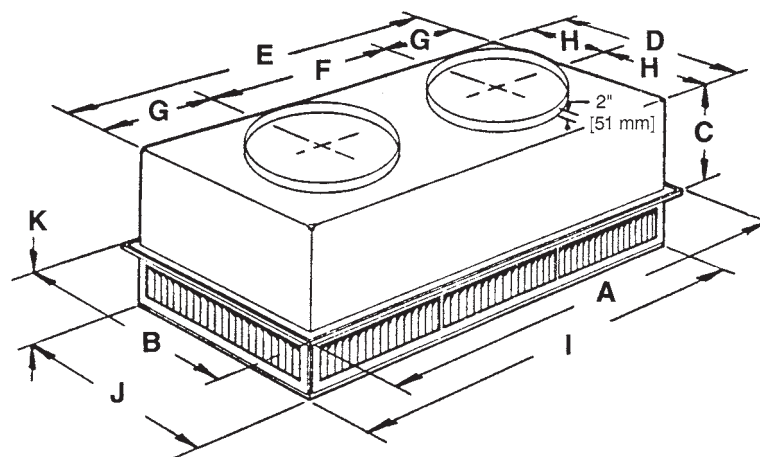
[] Designates Metric Conversions



SIDE DISCHARGE CONCENTRIC DIFFUSER

RXRN-FA60 (3 to 5 Ton [10.6 to 17.6 kW] Models)
RXRN-FA65 (3 to 7.5 Ton [10.6 to 26.4 kW] Models)

For Use With Duct Adapter (RXMC)



DIMENSIONAL DATA

Model No.	A	B	C	D	E	F	G	H	I	J	K	Duct Size
RXRN-FA60	47 ⁵ / ₈ " [1210 mm]	23 ⁵ / ₈ " [600 mm]	11 ³ / ₈ " [289 mm]	21 ¹ / ₂ " [546 mm]	45 ¹ / ₂ " [1156 mm]	22 ¹ / ₂ " [572 mm]	11 ¹ / ₂ " [292 mm]	10 ³ / ₄ " [273 mm]	45 ¹ / ₂ " [1156 mm]	21 ¹ / ₂ " [546 mm]	7 ¹ / ₈ " [181 mm]	18RD
RXRN-FA65	47 ⁵ / ₈ " [1210 mm]	29 ⁵ / ₈ " [752 mm]	14 ³ / ₈ " [365 mm]	27 ¹ / ₂ " [699 mm]	45 ¹ / ₂ " [1156 mm]	22 ¹ / ₂ " [572 mm]	11 ¹ / ₂ " [292 mm]	13 ³ / ₄ " [349 mm]	45 ¹ / ₂ " [1156 mm]	27 ¹ / ₂ " [699 mm]	8 ¹ / ₈ " [206 mm]	20RD

ENGINEERING DATA

Model No.	CFM [L/s]	Static Pressure	Throw Feet	Neck Vel.	Jet Vel.	Noise Level
RXRN-FA60	1000 [472]	.14	10-17	351	351	20
	1200 [566]	.17	11-18	421	421	20
	1400 [661]	.20	12-19	491	491	20
	1600 [755]	.24	12-20	561	561	20
	1800 [850]	.30	13-21	632	632	20
	2000 [944]	.36	14-23	702	702	20
	2200 [1038]	.40	16-25	772	772	20
RXRN-FA65	2600 [1227]	.17	24-29	669	669	20
	2800 [1321]	.20	25-30	720	720	25
	3000 [1416]	.25	27-33	772	772	25
	3200 [1510]	.31	28-35	623	623	25
	3400 [1605]	.37	30-37	874	874	30

GUIDE SPECIFICATIONS – RLPN/RLQN-C036 thru C060

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

ELECTRIC HEAT PACKAGED ROOFTOP

HVAC Guide Specifications

Size Range: 3 to 5 Nominal Tons

Section	Description
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23 06 80	Schedules for Decentralized HVAC Equipment
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23 06 80.13	Decentralized Unitary HVAC Equipment Schedule
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23 06 80.13.A.	Rooftop unit schedule
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1. Schedule is per the project specification requirements.

23 07 16	HVAC Equipment Insulation
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23 07 16.13	Decentralized, Rooftop Units:
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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
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23 09 13.23	Sensors and Transmitters:
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23 09 13.23.A.	Thermostats
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1. Thermostat must
 - a. have capability to energize 2 different stages of cooling, and 1 stage of heating.
 - b. must include capability for occupancy scheduling.
 - c. energize both “W” and “G” when calling for heat.

23 09 23	Direct-digital Control system for HVAC
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23 09 23.13	Decentralized, Rooftop Units:
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23 09 23.13.A.	RTU-C controller
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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 CO₂ 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, heat stage 3/ 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:
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1. Shall be ASHRAE 62-2001 compliant.
2. Shall accept 18-30VAC, 50-60Hz, and consume 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, heat stage 3/ 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 replaceable fuse on the 24-v transformer side. Transformer size is 40VA.
2. Shall utilize color-coded wiring.
3. Unit shall provide a minimum of one 10-pin screw terminal connection board for connection of control wiring.
4. 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.

23 09 33.13.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. Automatic reset, motor thermal overload protector.
5. Freeze protection sensor, evaporator coil.

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

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

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 hermetic scroll compressor for cooling duty and electric resistance heat for heating duty.
2. Factory assembled, single-piece heating and cooling rooftop unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, and special features required prior to field start-up.
3. Unit shall use environmentally safe, 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 90.1-2010 minimum efficiency requirements.
2. Unit shall be rated in accordance with AHRI Standards 210/240.
3. Unit shall be designed to conform to ASHRAE 15-2010.
4. 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.
5. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
6. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
7. Unit casing shall be capable of withstanding Federal Test Method Standard No. 141 (Method 6061) 5000-hour salt spray.

8. Unit shall be designed in accordance with ISO 9001:2008, and shall be manufactured in a facility registered by ISO 9001:2008.
9. Roof curb shall be designed to conform to NRCA Standards.
10. 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.
11. Unit shall be designed in accordance with UL Standard 1995, including tested to withstand rain.
12. 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 at $\pm 10\%$ voltage.
 2. Compressor with standard controls shall be capable of operation down to 40°F (4°C), ambient outdoor temperatures. Accessory low ambient kit is necessary if mechanically cooling at ambient temperatures below 40°F (4°C).
 3. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.
 4. Unit shall be factory configured for vertical supply & return configurations.
 5. Unit shall be field convertible from vertical to horizontal configuration.
- 23 81 19.13.G. Electrical Requirements
 1. Main power supply voltage, phase, and frequency must match those required by the manufacturer.
- 23 81 19.13.H. Unit Cabinet
 1. Unit cabinet shall be constructed of galvanized steel, and shall be bonderized and coated with a Pre-paint baked enamel finish on all externally exposed surfaces.
 2. Unit cabinet exterior paint shall be: film thickness, (dry) 0.003 inches minimum, gloss (per ASTM D523, 60°F / 16°C): 60, Hardness: H-2H Pencil hardness.
 3. Evaporator fan compartment interior cabinet insulation shall conform to AHRI Standards 210/240 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum 3/4-in. thick, 1 lb. density, flexible fiberglass insulation, aluminum foil-face coated 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 condensate drain pan made of a non-corrosive material. Unit must be installed at a slight angle to allow for complete drainage.
 - b. Shall comply with ASHRAE Standard 62.
 - c. Shall use a 3/4" x 14 NPT drain connection through the side of the drain pan. Connection shall be made per manufacturer's recommendations..
 7. Electrical Connections
 - a. All unit power wiring shall enter unit cabinet at a single, factory-prepared, knockout location.
 - b. Thru-the-base capability
 - i. Standard unit shall have a thru-the-base electrical location(s) using a raised, embossed portion of the unit basepan.
 - ii. No basepan penetration, other than those authorized by the manufacturer, is permitted.
 8. Component access panels (standard)
 - a. Cabinet panels shall be easily removable for servicing.
 9. Component access panels (optional)
 - a. Panels covering control box, indoor blower assembly, indoor blower motor and air filters shall have metal hinges and quarter (1/4) turn latches factory installed only.
- 23 81 19.13.J. Coils
 1. Aluminum MicroChannel evaporator and condenser coils on all models.
 - a. Shall have aluminum lanced fins thermally bonded to aluminum multi-port flat tube design (microchannel) tubes. Coils shall be furnace brazed and contain epoxy lined shrink wrap on all aluminum to copper connections.
 - b. Shall be leak tested using helium mass spectrometry. The leak rate shall not exceed 6.5×10^{-5} sccs of 100% helium at 200 psig, and qualified to UL 1995 burst test at 1950 psig.
 - c. Evaporator coil includes internal distributor plate to prevent mal-distribution of two-phase refrigerant.

23 81 19.13.K. Refrigerant Components

1. Refrigerant circuit shall include the following control, safety, and maintenance features:
 - a. Thermal Expansion Valves (TXV).
 - b. Refrigerant filter drier.
 - c. Service gauge connections on suction and liquid lines.
 - d. External pressure gauge ports access shall be located in front exterior of cabinet.
2. Compressors
 - a. Unit shall use one fully hermetic, scroll compressor.
 - b. Compressor motors shall be cooled by refrigerant gas passing through motor windings.
 - c. Compressors shall be internally protected from high discharge temperature conditions.
 - d. Compressors shall be protected from an over-temperature and over-ampere conditions by an internal, motor overload device.
 - e. Compressor shall be factory mounted on rubber grommets.
 - f. Compressor motors shall have internal line break thermal and current overload protection along with high pressure differential protection.
 - g. Crankcase heaters shall not be required for normal operating range.

23 81 19.13.L. Filter Section

1. Filters access is specified in the unit cabinet section of this specification.
2. Shall consist of factory-installed, low velocity, throw-away 1-in. thick fiberglass filters.
3. Filter face velocity shall not exceed 365 fpm at nominal airflows.
4. Filters shall be standard, commercially available sizes.
5. Only one size filter per unit is allowed.
6. Filter rack will also accept 2-in thick fiberglass filters of commercially available sizes by removal of a tab.

23 81 19.13.M. Evaporator Fan and Motor

1. Evaporator fan motor:
 - a. Shall have permanently lubricated bearings.
 - b. Shall have inherent automatic-reset thermal overload protection.
 - c. Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating shall be required.
2. Belt-driven Evaporator Fan:
 - a. Belt drive shall include an adjustable-pitch motor pulley.
 - b. Shall use sealed, permanently lubricated ball-bearing type.
 - c. Blower fan shall be double-inlet type with forward-curved blades.
 - d. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.
3. High-Static Belt-driven Evaporator Fan Motor(s) and Drive(s):
 - a. High-static motor(s) and drive(s) shall be factory-installed to provide additional performance range.

23 81 19.13.N. Condenser Fans and Motors

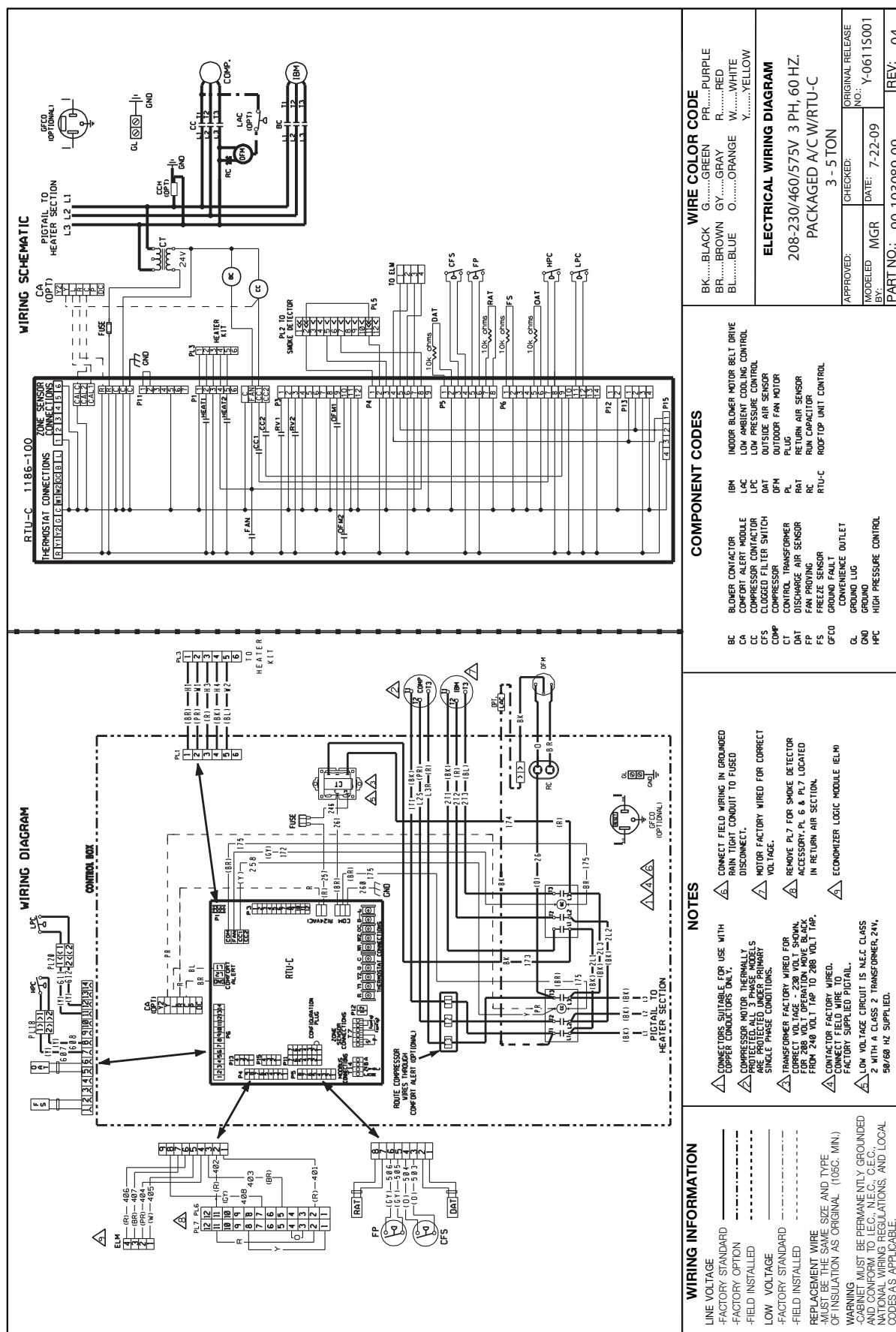
1. Condenser fan motors:
 - a. Shall be a totally enclosed motor.
 - b. Shall use permanently lubricated bearings.
 - c. Shall have inherent thermal overload protection with an automatic reset feature.
 - d. Shall use a shaft-down design. Shaft-up designs including those with "rain-slinger devices" shall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

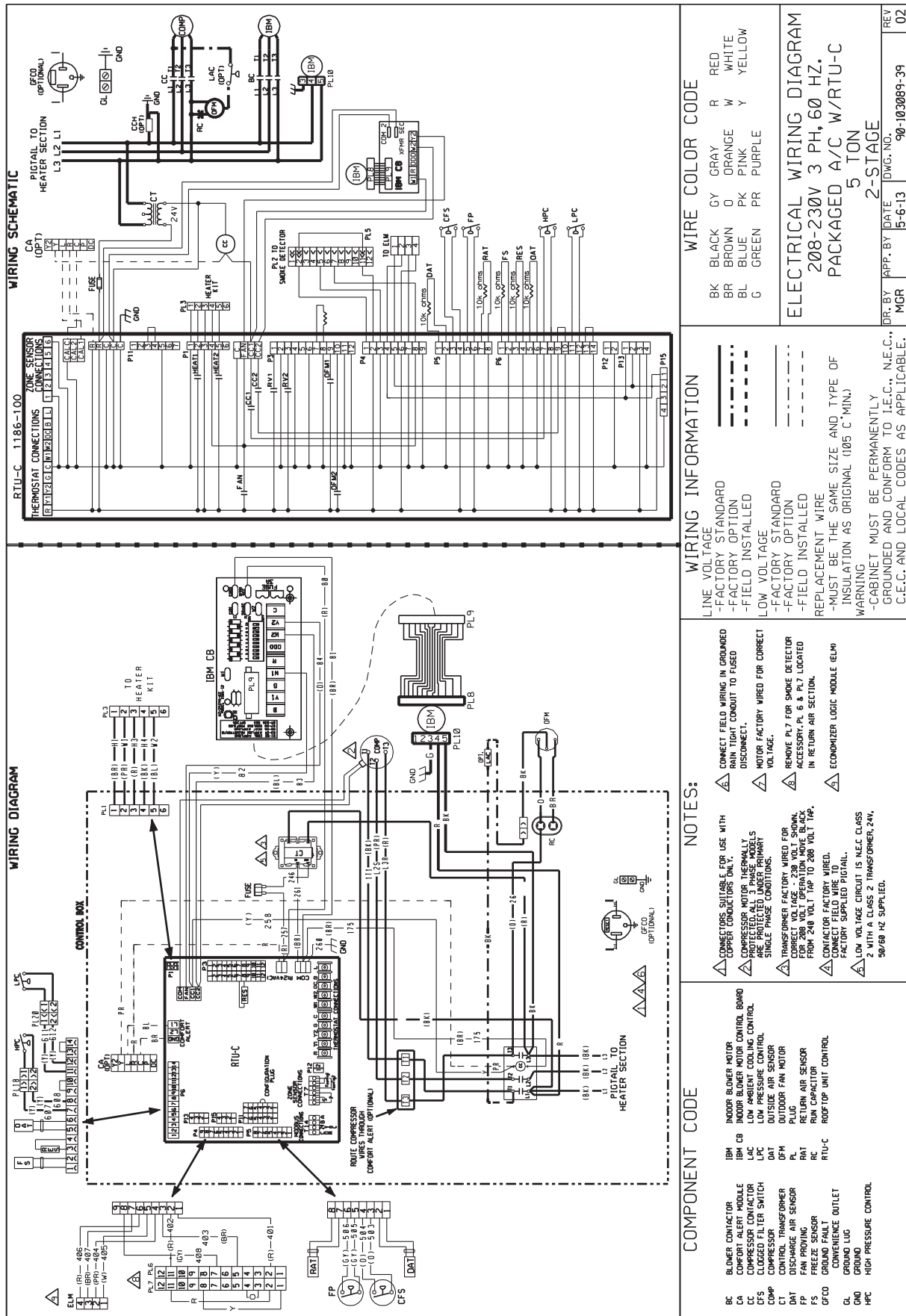
23 81 19.13.O. Special Features

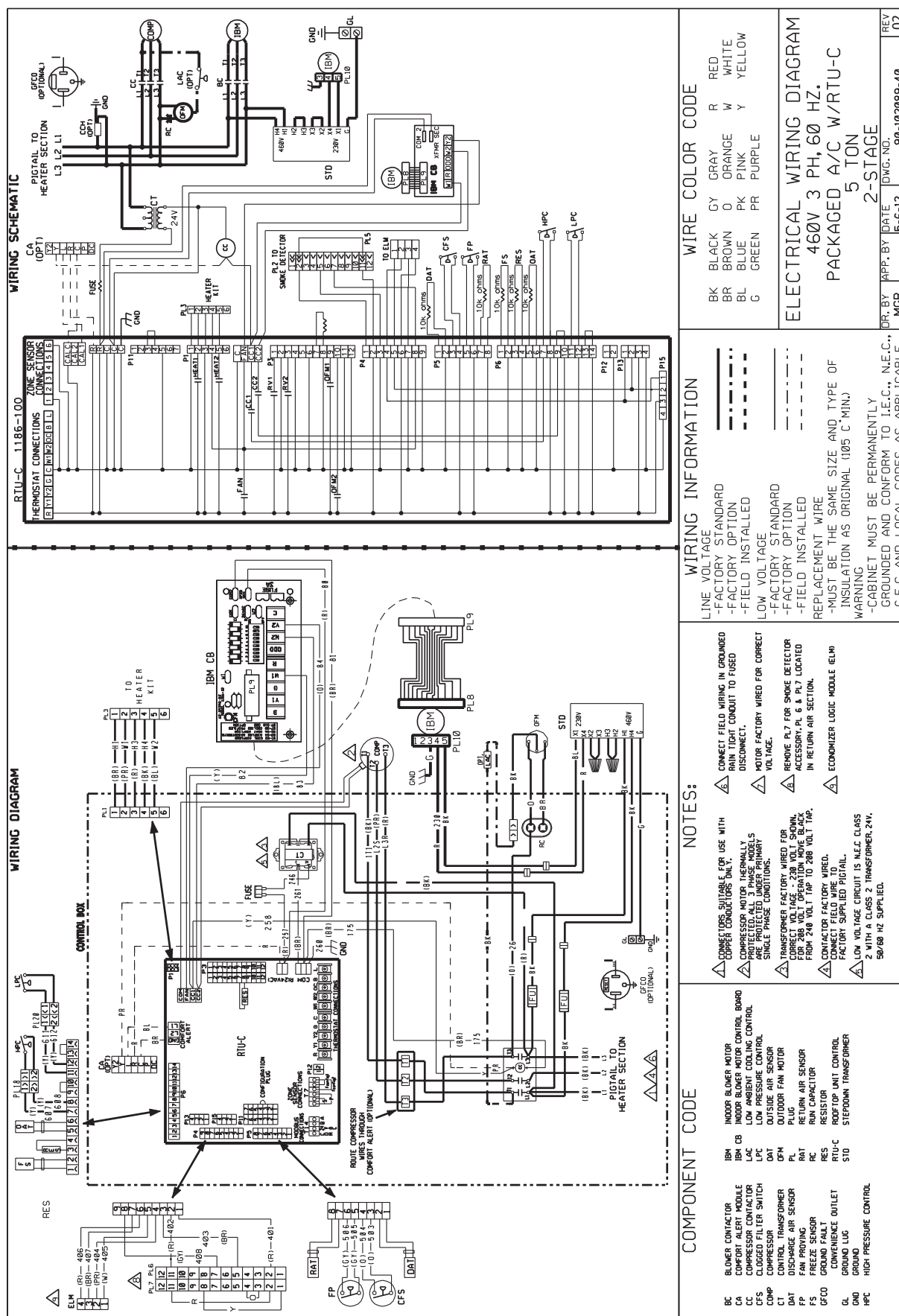
1. Integrated Economizers:
 - a. Integrated, gear-driven parallel modulating blade design type capable of simultaneous economizer and compressor operation.
 - b. Module designed for vertical or horizontal return configurations. Vertical return configuration shall be available as a factory installed option.
 - 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. The barometric relief damper shall include seals, hardware and hoods to relieve building pressure. Damper shall gravity close upon unit shut down.
 - h. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.

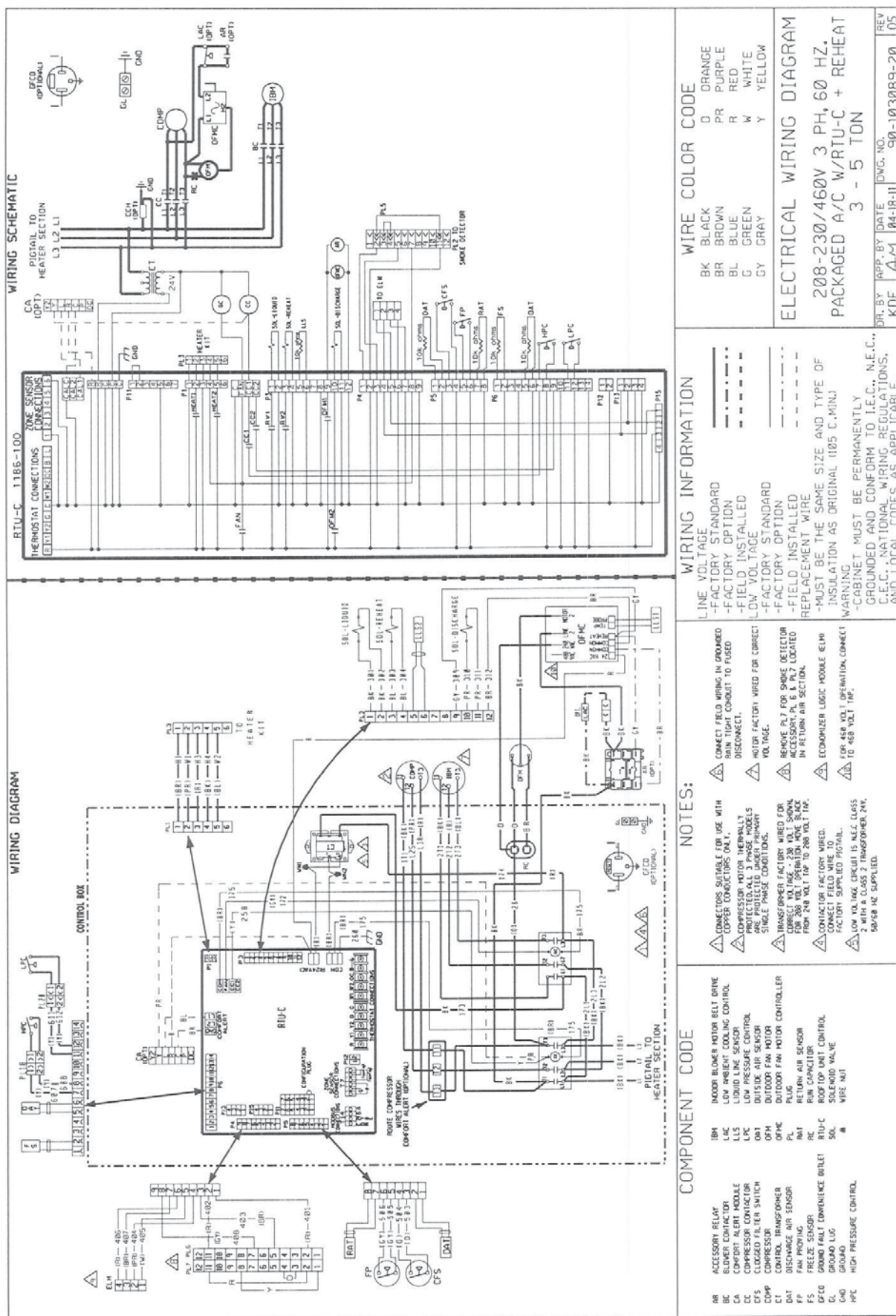
- i. An outdoor single-enthalpy sensor shall be provided as standard. Outdoor air enthalpy set point shall be adjustable and shall range from the enthalpy equivalent of 63°F @ 50% rh to 73°F @ 50% rh. Additional sensor options shall be available as accessories.
- j. The economizer controller shall also provide control of an accessory power exhaust unit function. Factory set at 70%, with a range of 0% to 100%.
- k. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.
- l. Economizer controller shall accept a 0-10Vdc CO₂ sensor input over a CO₂ range of 0-2000 ppm for IAQ/DCV control. In this mode, dampers shall modulate the outdoor-air damper to provide ventilation based on the sensor input.
- m. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
- n. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
- o. Ultra Low Leak Dampers shall meet California Title 24 requirements.
- p. Economizer controller shall meet California Title 24 FDD (Fault Detection and Diagnostics) requirements.
- 2. Two-Position Damper
 - a. Damper shall be a Two-Position Damper. Damper travel shall be from the full closed position to the field adjustable %-open setpoint.
 - b. Damper shall include adjustable damper travel from 25% to 100% (full open).
 - c. Damper shall include single or dual blade, gear driven damper and actuator motor.
 - d. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
 - e. Damper will admit up to 100% outdoor air for applicable rooftop units.
 - f. Damper shall close upon indoor (evaporator) fan shutoff and/or loss of power.
 - g. The damper actuator shall plug into the rooftop unit's wiring harness plug. No hard wiring shall be required.
 - h. Outside air hood shall include aluminum water entrainment filter.
- 3. Manual damper
 - a. Manual damper package shall consist of damper, air inlet screen, and rain hood which can be preset to admit up to 50% outdoor air for year round ventilation.
- 4. Head Pressure Control Package
 - a. Controller shall control coil head pressure by condenser-fan cycling.
- 5. Condenser Coil Hail Guard Assembly
 - a. Shall protect against damage from hail.
 - b. Shall be louvered design.
- 6. Thru-the-Base Connectors:
 - a. Kits shall provide connectors to permit electrical connections to be brought to the unit through the unit basepan.
- 7. Propeller Power Exhaust:
 - a. Power exhaust shall be used in conjunction with an integrated economizer.
 - b. Independent modules for vertical or horizontal return configurations shall be available.
 - c. Horizontal power exhaust shall be mounted in return ductwork.
 - d. Power exhaust shall be controlled by economizer controller operation. Exhaust fans shall be energized when dampers open past the 0-100% adjustable setpoint on the economizer control.
- 8. Roof Curbs (Vertical):
 - a. Full perimeter roof curb with exhaust capability providing separate airstreams for energy recovery from the exhaust air without supply air contamination.
 - b. Formed galvanized steel with wood nailer strip and shall be capable of supporting entire unit weight.
 - c. Permits installation and securing of ductwork to curb prior to mounting unit on the curb.
- 9. Outdoor Air Enthalpy Sensor:
 - a. The outdoor air enthalpy sensor shall be used to provide single enthalpy control. When used in conjunction with a return air enthalpy sensor, the unit will provide differential enthalpy control. The sensor allows the unit to determine if outside air is suitable for free cooling.
- 10. Return Air Enthalpy Sensor:
 - a. The return air enthalpy sensor shall be used in conjunction with an outdoor air enthalpy sensor to provide differential enthalpy control.
- 11. Indoor Air Quality (CO₂) Sensor:
 - a. Shall be able to provide demand ventilation indoor air quality (IAQ) control.
 - b. The IAQ sensor shall be available in wall mount with LED display. The set point shall have adjustment capability.
 - c. The sensor shall provide a 0-10Vdc output for a CO₂ input range of 0-2000 ppm.
- 12. Smoke detectors:
 - a. Shall be a Four-Wire Controller and Detector.
 - b. Shall be environmental compensated with differential sensing for reliable, stable, and drift-free sensitivity.
 - c. Shall use magnet-activated test/reset sensor switches.

- d. Shall have a recessed momentary switch for testing and resetting the detector.
- e. Controller shall include:
 - i. One set of normally open alarm initiation contacts for connection to an initiating device circuit on a fire alarm control panel
 - ii. Two Form-C auxiliary alarm relays for interface with rooftop unit or other equipment.
 - iii. One Form-C supervision (trouble) relay to control the operation of the Trouble LED on a remote test/reset station.
 - iv. Capable of direct connection to two individual detector modules.
 - v. Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications.
- 13. Non-Powered convenience outlet.
 - a. Outlet shall be powered from a separate 115-120v power source.
 - b. A transformer shall not be included.
 - c. Outlet shall be field-installed and internally mounted with easily accessible 115-v female receptacle.
 - d. Outlet shall include 15 amp GFI receptacle.
 - e. Outlet shall be accessible from outside the unit.
 - f. Outlet shall have a wet location, while in use cover.
- 14. 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.
- 15. Electric Heat:
 - a. Heating Section
 - i. 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.
 - ii. 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.









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

GENERAL TERMS OF LIMITED WARRANTY*

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

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

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



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

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.