INSTALLATION INSTRUCTIONS

Package Air Conditioners Featuring Industry Standard R-410A Refrigerant R-410A with Clear Control and Refrigerant Reheat

RLNL-G 13 SEER (3-5 TONS) SERIES



ENERGY STAR
(14 SEER ONLY)

AHRI CERTIFIED™
www.ahridirectory.org
Unitary Small AC
AHRI Standard 210/240
Certification applies only when the complete system is listed with AHRI.

RECOGNIZE THIS SYMBOL AS AN INDICATION OF IMPORTANT SAFETY INFORMATION!

⚠ WARNING

THESE INSTRUCTIONS ARE INTENDED AS AN AID TO QUALIFIED, LICENSED SERVICE PERSONNEL FOR PROPER INSTALLATION, ADJUSTMENT AND OPERATION OF THIS UNIT. READ THESE INSTRUCTIONS THOROUGHLY BEFORE ATTEMPTING INSTALLATION OR OPERATION. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN IMPROPER INSTALLATION, ADJUSTMENT, SERVICE OR MAINTENANCE POSSIBLY RESULTING IN FIRE, ELECTRICAL SHOCK, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

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Accredited by the RvA
ABS Quality Evaluations, Inc. Management System Certification
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ISO 9001:2008
Certificate Number: 30164

DO NOT DESTROY THIS MANUAL
PLEASE READ CAREFULLY AND KEEP IN A SAFE PLACE FOR FUTURE REFERENCE BY A SERVICEMAN

[ ] INDICATES METRIC CONVERSION

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Recognize this symbol as an indication of Important Safety Information!

⚠ WARNING

PROPOSITION 65: THIS APPLIANCE CONTAINS FIBERGLASS INSULATION. RESPIRABLE PARTICLES OF FIBERGLASS ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER..

⚠ WARNING

THE MANUFACTURER'S WARRANTY DOES NOT COVER ANY DAMAGE OR DEFECT TO THE AIR CONDITIONER CAUSED BY THE ATTACHMENT OR USE OF ANY COMPONENTS, ACCESSORIES OR DEVICES (OTHER THAN THOSE AUTHORIZED BY THE MANUFACTURER) INTO, ONTO OR IN CONJUNCTION WITH THE AIR CONDITIONER. YOU SHOULD BE AWARE THAT THE USE OF UNAUTHORIZED COMPONENTS, ACCESSORIES OR DEVICES MAY ADVERSELY AFFECT THE OPERATION OF THE AIR CONDITIONER AND MAY ALSO ENDANGER LIFE AND PROPERTY. THE MANUFACTURER DISCLAIMS ANY RESPONSIBILITY FOR SUCH LOSS OR INJURY RESULTING FROM THE USE OF SUCH UNAUTHORIZED COMPONENTS, ACCESSORIES OR DEVICES.

II. INTRODUCTION

This booklet contains the installation and operating instructions for your package air conditioner with reheat. There are a few precautions that should be taken to derive maximum satisfaction from it. Improper installation can result in unsatisfactory operation or dangerous conditions.

Read this booklet and any instructions packaged with separate equipment required to make up the system prior to installation. Give this booklet to the owner and explain its provisions. The owner should retain this booklet for future reference.

III. CHECKING PRODUCT RECEIVED

Upon receiving the unit, inspect it for any damage from shipment. Claims for damage, either shipping or concealed, should be filed immediately with the shipping company. Check the unit model number, electrical characteristics, and accessories to determine if they are correct.

IV. SPECIFICATIONS

A. GENERAL

The Packaged Air Conditioner is available without heat or with 6, 10, 12, 15, 20 or 24 kW electric heat. Cooling capacities of 3, 4 and 5 nominal tons of cooling are available. Units are convertible from end supply and return to bottom supply and return by relocation of supply and return air access panels. See cover installation detail.

The units are weatherized for mounting outside of the building.

The information on the rating plate is in compliance with the FTC and DOE rating for single phase units. The following information is for three phase units which **are not** covered under the DOE certification program.

1. The efficiency rating of this unit is a product thermal efficiency rating determined under continuous operating conditions independent of any installed system.

B. MAJOR COMPONENTS

The unit includes a hermetically-sealed refrigerating system (consisting of a scroll compressor, condenser coil, evaporator coil with thermostatic expansion valve and re-heat coil with control solenoids) see Figure 1, a circulation air blower, a condenser fan, a heat exchanger assembly, gas burner and control assembly, combustion air motor and fan, and all necessary internal electrical wiring. The cooling system of these units is factory-evacuated, charged with R-410A refrigerant and performance tested. Refrigerant amount and type are indicated on rating plate.

C. R-410A REFRIGERANT

All units are factory charged with R-410A refrigerant.

1. Specification of R-410A:

Application: **R-410A is not a drop-in replacement for R-22;** equipment designs must accommodate its higher pressures. It cannot be retrofitted into R-22 units.

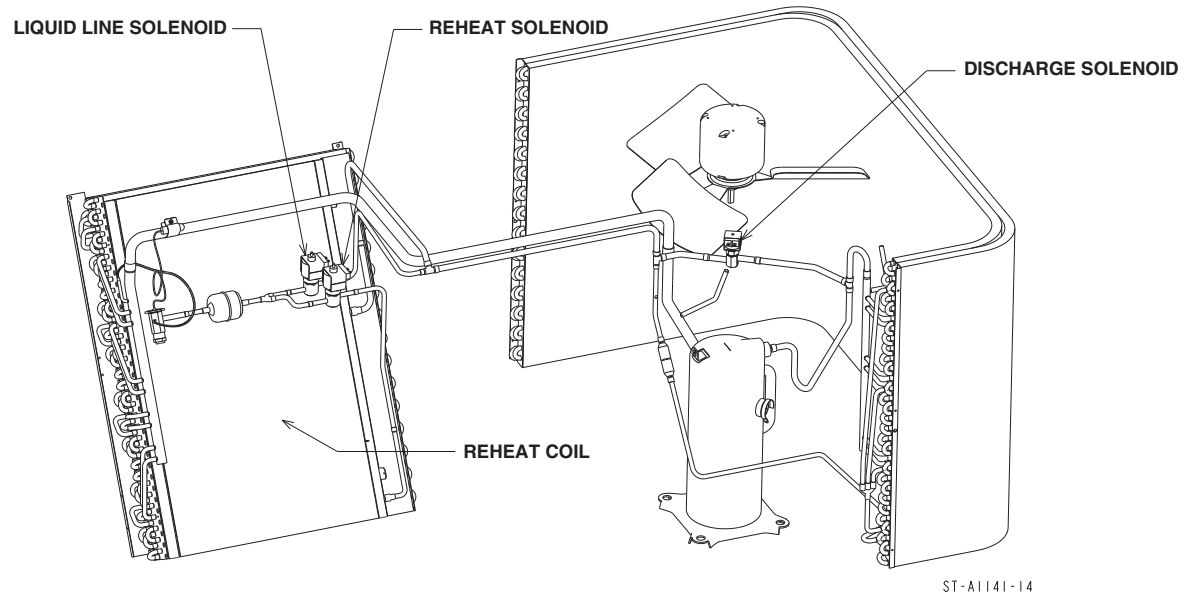
Pressure: The pressure of R-410A is approximately 60% (1.6 times) greater than R-22. Recovery and recycle equipment, pumps, hoses and the like need to have design pressure ratings appropriate for R-410A. *Manifold sets need to range up to 800 psig high-side and 250 psig low-side with a 550 psig low-side retard. Hoses need to have a service pressure rating of 800 psig. Recovery cylinders need to have a 400 psig service pressure rating.* DOT 4BA400 or DOT BW400.

Combustibility: At pressures above 1 atmosphere, mixture of R-410A and air can become combustible. **R-410A and air should never be mixed in tanks or supply lines, or be allowed to accumulate in storage tanks. Leak checking should never be done with a mixture of R-410A and air.** Leak checking can be performed safely with nitrogen or a mixture of R-410A and nitrogen.

2. Quick Reference Guide For R-410A

- R-410A refrigerant operates at approximately 60% higher pressure (1.6 times) than R-22. Ensure that servicing equipment is designed to operate with R-410A.
- R-410A refrigerant cylinders are pink.
- R-410A, as with other HFC's is only compatible with POE oils.

FIGURE 1



- Vacuum pumps will not remove moisture from POE oil.
- R-410A systems are to be charged with liquid refrigerants. Prior to March 1999, R-410A refrigerant cylinders had a dip tube. These cylinders should be kept upright for equipment charging. Post March 1999 cylinders do not have a dip tube and should be inverted to ensure liquid charging of the equipment.
- Do not install a suction line filter drier in the liquid line.
- A liquid line filter drier is standard on every unit.
- Desiccant (drying agent) must be compatible for POE oils and R-410A.

3. Evaporator Coil / TXV

The thermostatic expansion valve is specifically designed to operate with R-410A. **DO NOT use an R-22 TXV. The existing evaporator must be replaced with the factory specified TXV evaporator specifically designed for R-410A.**

4. Tools Required For Installing & Servicing R-410A Models

Manifold Sets:
-Up to 800 PSIG High side
-Up to 250 PSIG Low Side
-550 PSIG Low Side Retard

Manifold Hoses:
-Service Pressure Rating of 800 PSIG

Recovery Cylinders:
-400 PSIG Pressure Rating
-Dept. of Transportation 4BA400 or BW400

⚠ CAUTION

R-410A systems operate at higher pressures than R-22 systems. Do not use R-22 service equipment or components on R-410A equipment.

V. EQUIPMENT PROTECTION FROM THE ENVIRONMENT

The metal parts of this unit may be subject to rust or deterioration in adverse environmental conditions. This oxidation could shorten the equipment's useful life. Salt spray, fog or mist in seacoast areas, sulphur or chlorine from lawn watering systems, and various chemical contaminants from industries such as paper mills and petroleum refineries are especially corrosive.

FIGURE 2
UNIT DIMENSIONS

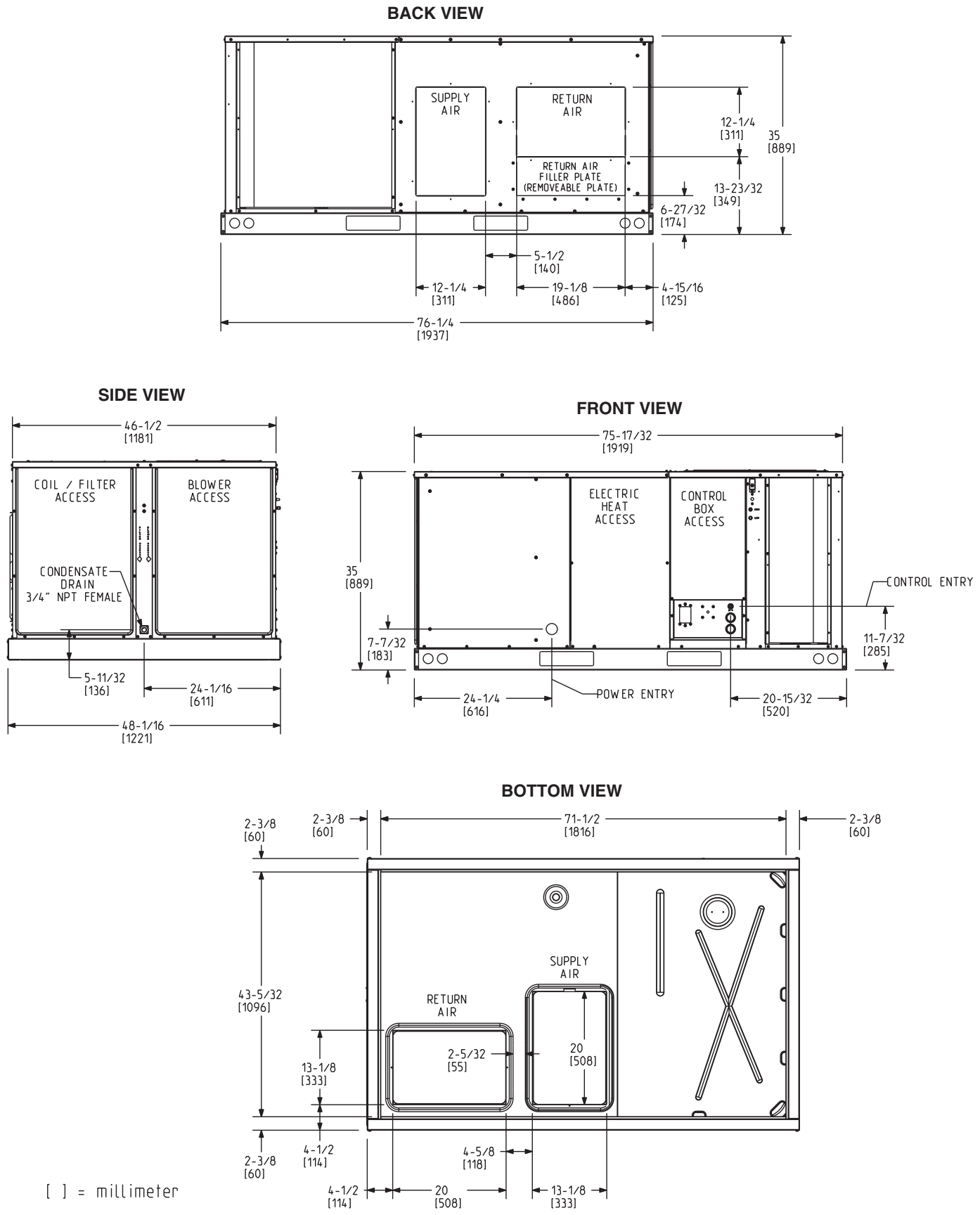
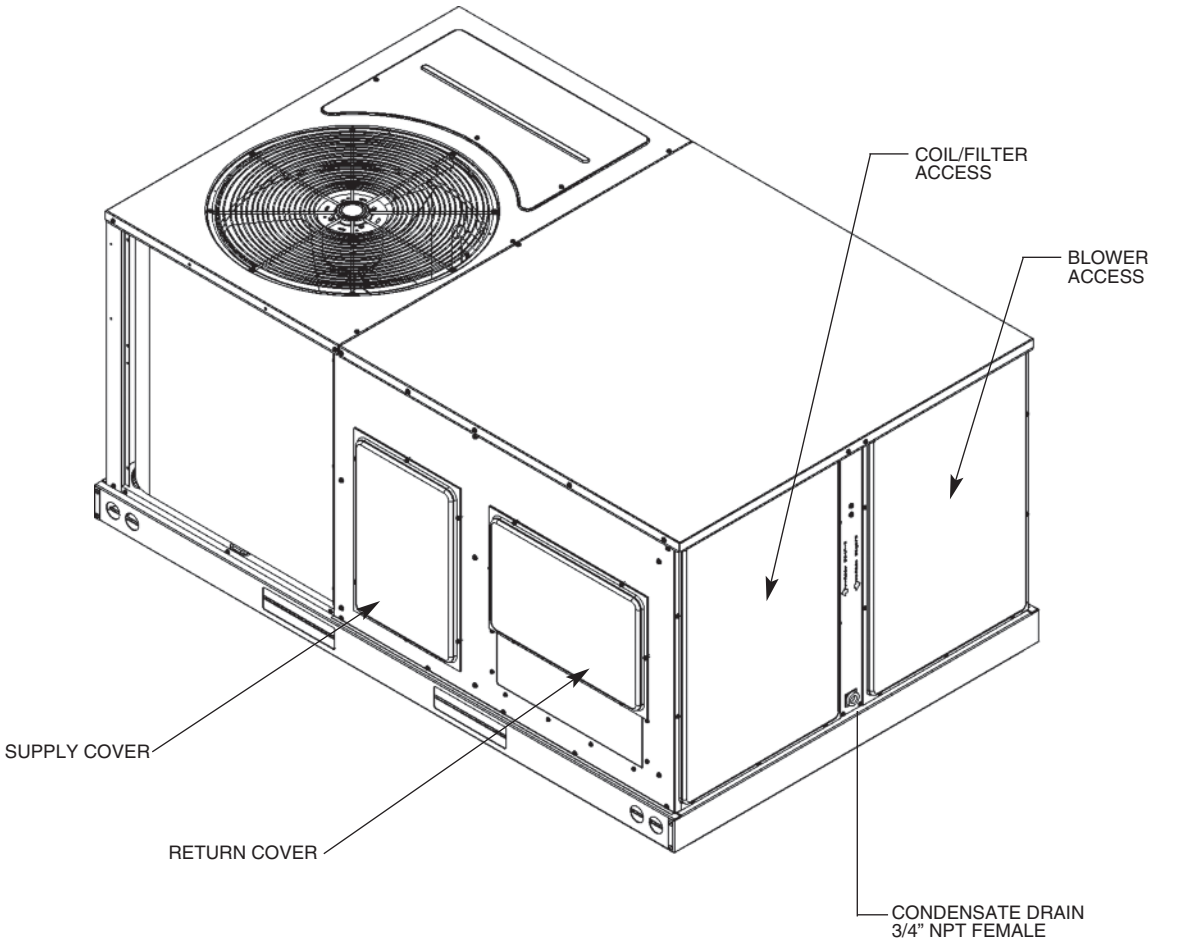
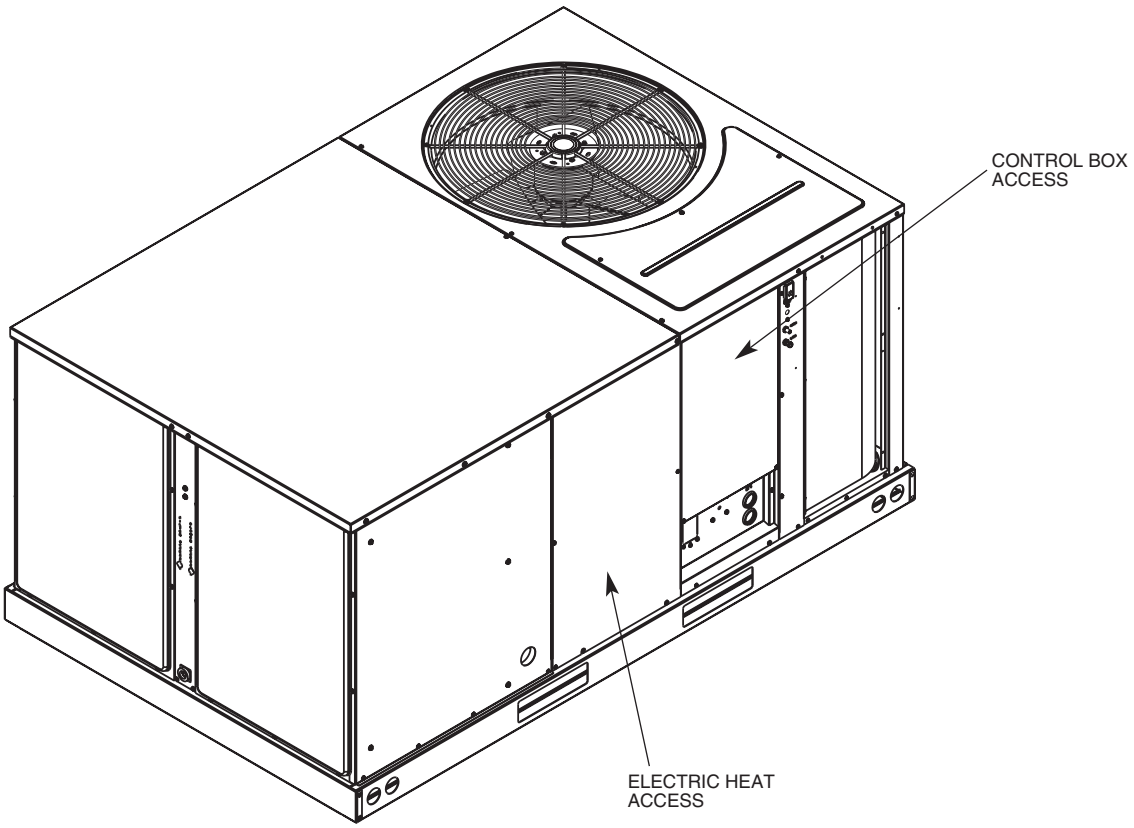


FIGURE 3
UNIT VIEWS





If the unit is to be installed in an area where contaminants are likely to be a problem, special attention should be given to the equipment location and exposure.

1. Avoid having lawn sprinkler heads spray direction on the unit cabinet.
2. In coastal areas, locate the unit on the side of the building away from the waterfront.
3. Shielding provided by a fence or shrubs may give some protection.

Regular maintenance will reduce the buildup of contaminents and help to protect the unit's finish.

1. Frequent washing of the cabinet, fan blade and coil with fresh water will remove most of the salt or other contaminants that build up on the unit.
2. Regular cleaning and waxing of the cabinet with a good automobile polish will provide some protection.
3. A good liquid cleaner may be used several times a year to remove matter that will not wash off with water.

Several different types of protective coatings are offered in some areas. These coatings may provide some benefit, but the effectiveness of such coating materials cannot be verified by the equipment manufacturer.

The best protection is frequent cleaning, maintenance and minimal exposure to contaminants.

VI. SUPPLY-AIR TEMPERING (REHEAT)

With the factory installed reheat 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. For more information on operation of RTU-C I/O manual 92-103249-01. Reheat operation is in Section 6.14. 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 extends the run-time of the unit to provide better dehumidification than an air conditioner without this option.

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, reheat mode is energized. When in reheat 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 reheat 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. For two-stage units with independent refrigerant circuits, reheat is only available on the first stage.

Figure 4 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 is then rejected and the refrigerant condenses into a subcooled liquid where the process repeats itself.

FIGURE 4

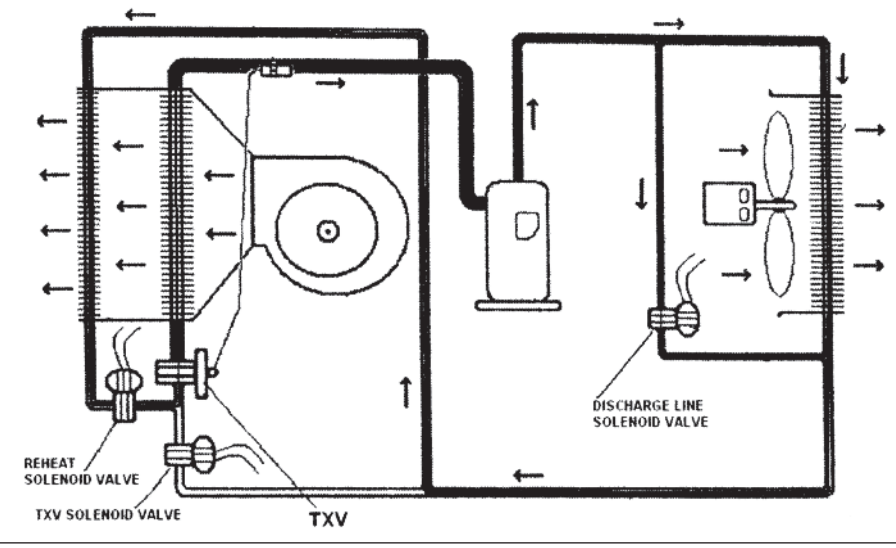


FIGURE 5

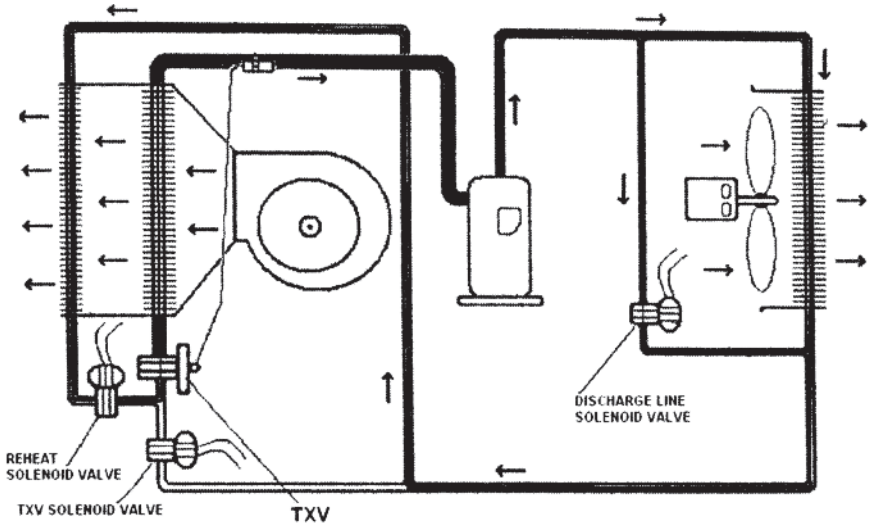
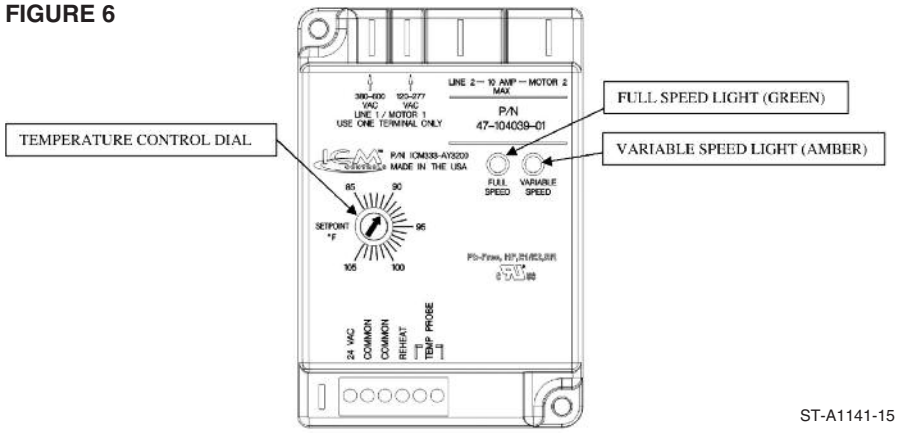


Figure 5 shows the refrigerant path during the reheat mode. When the reheat cycle is energized by the RTU-C, a solenoid valve downstream of the reheat coil opens, a solenoid valve ahead of the TXV closes, and a solenoid valve in the compressor discharge line opens. The liquid refrigerant leaves the TXV 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. 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.

During reheat mode the outdoor fan motor controller (OFMC) slows the outdoor fan(s) to increase the discharge pressure/temperature to maintain an optimized amount of reheat required to provide neutral air to the occupied space. 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 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.

FIGURE 6



⚠ WARNING

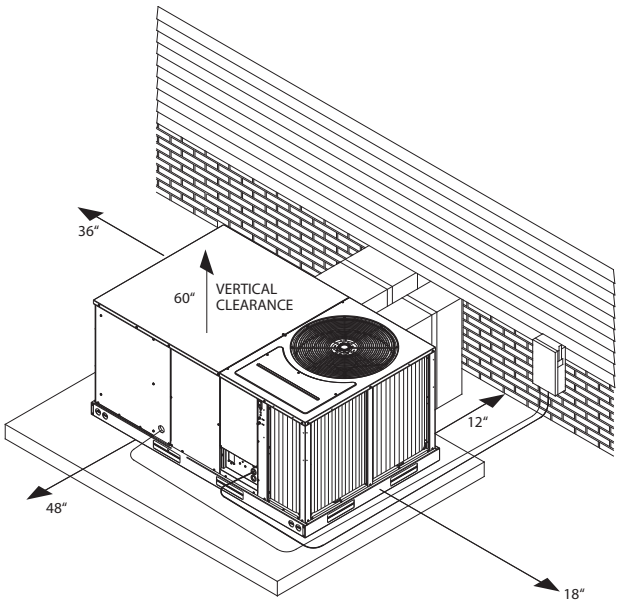
NEVER TEST FOR GAS LEAKS WITH AN OPEN FLAME. USE A COMMERCIALLY AVAILABLE SOAP SOLUTION MADE SPECIFICALLY FOR THE DETECTION OF LEAKS TO CHECK ALL CONNECTIONS, AS SPECIFIED IN GAS SUPPLY AND PIPING SECTION OF THESE INSTRUCTIONS.

VII. INSTALLATION

A. GENERAL

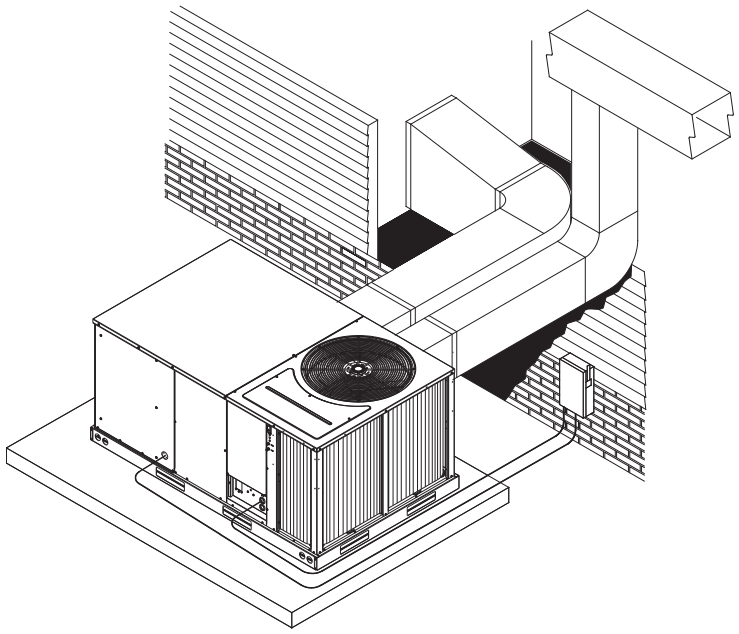
1. PRE-INSTALLATION CHECK-POINTS
   Before attempting any installation, the following points should be carefully considered:
   a. Structural strength of supporting members.
      (rooftop installation)

FIGURE 7
PACKAGE AIR CONDITIONER – OUTSIDE SLAB INSTALLATION, BASEMENT OR CRAWL SPACE DISTRIBUTION SYSTEM



*Allow 57" for economizer on duct side.

FIGURE 8
PACKAGE AIR CONDITIONER – OUTSIDE SLAB INSTALLATION, CLOSET DISTRIBUTION SYSTEM. SLAB FLOOR CONSTRUCTION



⚠ WARNING

ALWAYS INSTALL UNIT TO OPERATE WITHIN THE UNIT'S INTENDED TEMPERATURE-RISE RANGE WITH A DUCT SYSTEM WHICH HAS AN EXTERNAL STATIC PRESSURE WITHIN THE ALLOWABLE RANGE, AS SPECIFIED IN DUCTING SECTION OF THESE INSTRUCTIONS. SEE ALSO UNIT RATING PLATE.

b. Clearances and provision for servicing.
c. Power supply and wiring.
d. Air duct connections.
e. Drain facilities and connections.
f. Location for minimum noise.

2. LOCATION
These units are designed for outdoor installations. They can be mounted on a slab or rooftop. They are not to be installed within any part of a structure such as an attic, crawl space, closet, or any other place where condenser air flow is restricted or other than outdoor ambient conditions prevail. Since the application of the units is of the outdoor type, it is important to consult your local code authorities at the time the first installation is made.

B. OUTSIDE SLAB INSTALLATION (Typical outdoor slab installations are shown in Figures 7 and 8.)

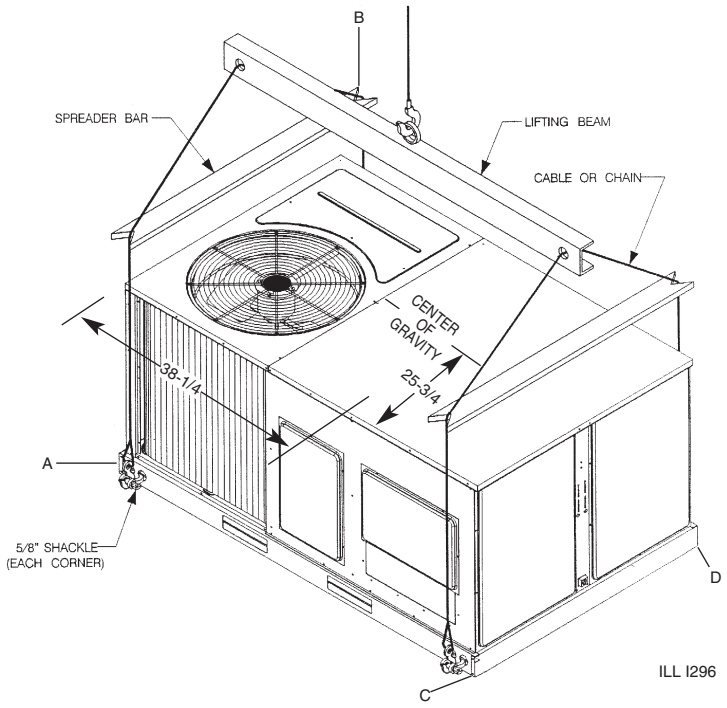
1. Select a location where external water drainage cannot collect around the unit.
2. Provide a level concrete slab extending 3" beyond all four sides of the unit. The slab should be sufficient above grade to prevent ground water from entering the unit. ***IMPORTANT:*** *To prevent transmission of noise or vibration, slab should not be connected to building structure.*
3. The location of the unit should be such as to provide proper access for inspection and servicing.
4. Locate unit where operating sounds will not disturb owner or neighbors.
5. Locate unit so roof runoff water does not pour directly on the unit. Provide gutter or other shielding at roof level. Do not locate unit in an area where excessive snow drifting may occur or accumulate.
6. Remove compressor shipping supports (if so equipped) after installation.

C. CLEARANCES

The following minimum clearances must be observed for proper unit performance and serviceability.

1. Provide 48" minimum clearance at the front of the unit. Provide 36" minimum clearance at the left and right side of the unit for service access.
2. Provide 60" minimum clearance between top of unit and maximum 3 foot overhang.
3. Unit is design certified for application on combustible flooring with 0" minimum clearance.
4. See Figure 3 for illustration of minimum installation-service clearances.

FIGURE 9
PACKAGE AIR CONDITIONER – RIGGING FOR LIFTING



CORNER WEIGHTS BY PERCENTAGE			
A	B	C	D
23%	27%	23%	27%

D. ROOFTOP INSTALLATION

1. Before locating the unit on the roof, make sure that the strength of the roof and beams is adequate at that point to support the weight involved. (See specification sheet for weight of unit.) This is very important and user's responsibility.
2. For rigging and roofcurb details, see Figures 9 and 10. Use field-furnished spreaders.
3. For roofcurb assembly, see Roofcurb Installation Instructions.
4. If the roofcurb is not used, provisions for disposing of condensate water runoff must be provided.
5. The unit should be placed on a solid and level roofcurb or platform of adequate strength. See Figure 11.
6. The location of the unit on the roof should be such as to provide proper access for inspection and servicing.
7. Remove compressor shipping supports (if so equipped) after installation.

IMPORTANT: *If unit will not be put into service immediately, cover supply and return openings to prevent excessive condensation.*

⚠ WARNING

DO NOT, UNDER ANY CIRCUMSTANCES, CONNECT RETURN DUCTWORK TO ANY OTHER HEAT PRODUCING DEVICE SUCH AS A FIREPLACE INSERT, STOVE, ETC. UNAUTHORIZED USE OF SUCH DEVICES MAY RESULT IN FIRE, CARBON MONOXIDE POISONING, EXPLOSION, PROPERTY DAMAGE, SEVERE PERSONAL INJURY OR DEATH.

VIII. DUCTWORK

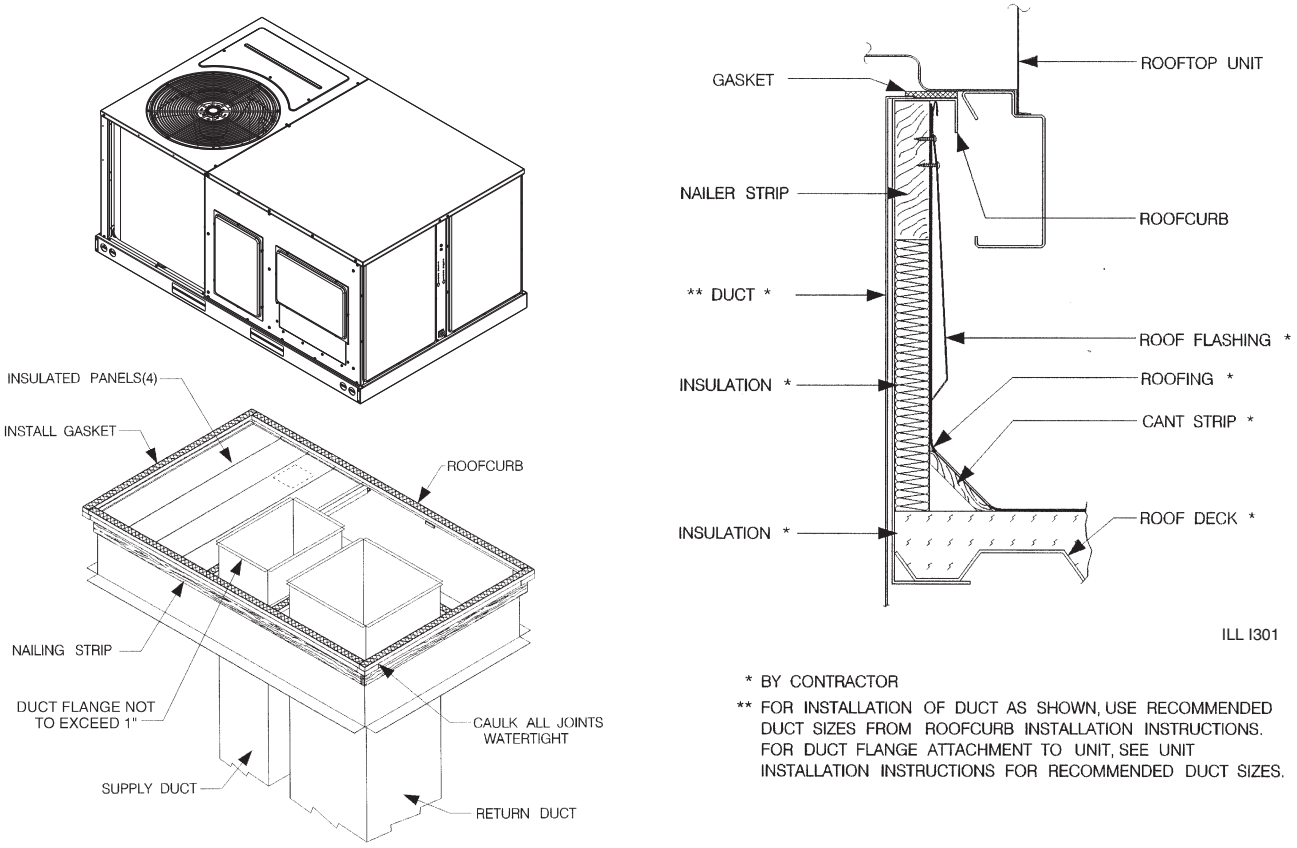
Ductwork should be fabricated by the installing contractor in accordance with local codes and NFPA90A. Industry manuals may be used as a guide when sizing and designing the duct system - contact Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, http://www.acca.org.

The unit should be placed as close to the space to be air conditioned as possible allowing clearance dimensions as indicated. Ducts should be run as directly as possible to supply and return outlets. Use of non-flammable waterproof flexible connectors on both supply and return connections at the unit to reduce noise transmission is recommended.

It is preferable to install the unit on the roof of the structure if the registers or diffusers are located on the wall or in the ceiling. A slab installation could be considered when the registers are low on a wall or in the floor.

On ductwork exposed to outside air conditions of temperature and humidity, use a minimum of 2" of insulation and a vapor barrier. Distribution system in attic, furred space or crawl space should be insulated with at least 2" of insulation with vapor barrier. One-half to 1" thickness of insulation is usually sufficient for ductwork inside the air conditioned space.

FIGURE 10
PACKAGE AIR CONDITIONER – ROOFCURB INSTALLATION



* BY CONTRACTOR

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

Balancing dampers should be provided for each branch duct in the supply system. Ductwork should be properly supported from the structure.

When installing ductwork, consider the following items:

1. Noncombustible flexible connectors should be used between ductwork and unit to reduce noise and vibration transmission into the ductwork.
2. When auxiliary heaters are installed, use noncombustible flexible connectors and clearance to combustible material of 0" for the first 3 feet of discharge duct. Clearance to unit top and side is 0".

IX. FILTERS

This unit is provided with 2 - 25" x 16" x 1" disposable filters. When replacing filters, ensure they are inserted fully to the back to prevent bypass.

X. CONVERSION PROCEDURE

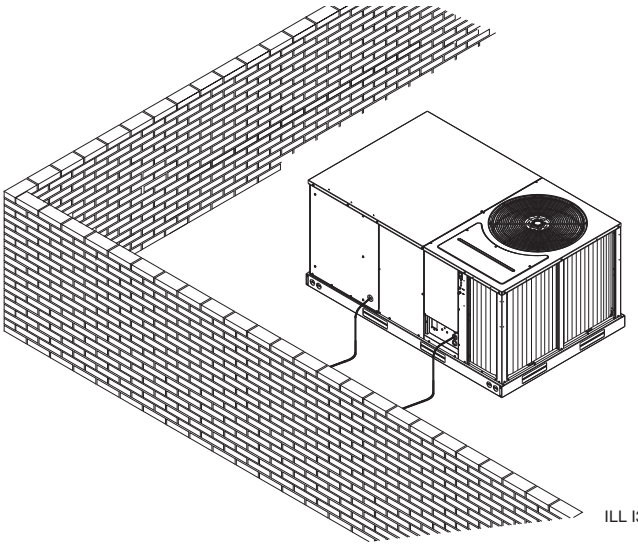
DOWNFLOW TO HORIZONTAL

1. Remove the screws and covers from the outside of the supply and return sections.
2. Install the covers in the bottom supply and return openings with the painted side up. See Figure 12. Use the existing gasket to seal the covers.
3. Secure the supply cover to the base of the unit with 1 screw, engaging prepunched tab in unit base.
4. Secure the return cover to the base of the unit with screws, engaging prepunched holes in the unit base.

XI. CONDENSATE DRAIN

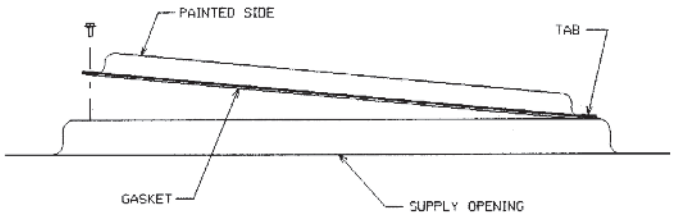
The condensate drain connection of the evaporator is 3/4" nominal female pipe thread. **IMPORTANT:** Install a condensate trap to ensure proper condensate drainage. See Figure 13.

FIGURE 11
PACKAGE AIR CONDITIONER – FLAT ROOFTOP INSTALLATION, ATTIC OR DROP CEILING DISTRIBUTION SYSTEM. MOUNTED ON ROOFCURB. CURB MUST BE LEVEL



ILL I310

FIGURE 12
COVER GASKET DETAIL



ILL I631

XII. ELECTRICAL WIRING

Field wiring must comply with the National Electrical Code* and local ordinances that may apply.

*C.E.C. in Canada

A. POWER WIRING

1. It is important that proper electrical power is available at the unit. Voltage should not vary more than 10% from that stamped on the unit rating plate. On three phase units, phases must be balanced within 3%.
2. Install a branch circuit disconnect within sight of the unit and of adequate size to handle the starting current. Reference Figure 14 for proper location.
3. For branch circuit wiring (main power supply to unit disconnect), the minimum wire size can be determined from Table A using the circuit ampacity found on the unit nameplate.

TABLE A

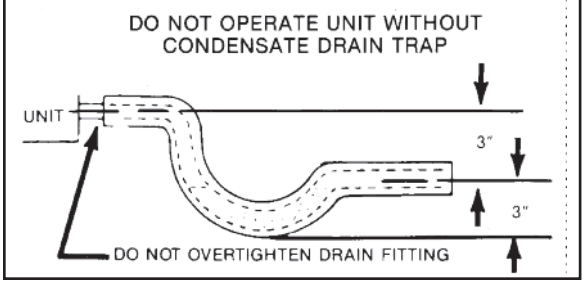
COPPER WIRE SIZE — AWG (1% VOLTAGE DROP)

Supply Wire Length Feet	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155
300	4	3	2	2	1	1/0	1/0	2/0	2/0	3/0	3/0	3/0	4/0	4/0	4/0	4/0	250	250	250	250	300	300	300	300	300	350	350	350	350
250	4	4	3	3	2	1	1	1/0	1/0	2/0	2/0	2/0	3/0	3/0	3/0	4/0	4/0	4/0	4/0	4/0	250	250	250	250	250	350	350	350	350
200	6	4	4	4	3	2	2	1	1	1/0	1/0	1/0	2/0	2/0	2/0	3/0	3/0	3/0	3/0	3/0	4/0	4/0	4/0	4/0	4/0	300	300	300	300
150	8	6	6	4	4	4	3	3	2	2	1	1	1/0	1/0	1/0	1/0	2/0	2/0	2/0	2/0	2/0	3/0	3/0	3/0	3/0	4/0	4/0	4/0	4/0
100	10	8	8	6	6	6	4	4	4	3	3	2	2	2	1	1	1	1	1	1/0	1/0	1/0	1/0	1/0	1/0	1/0	2/0	2/0	2/0
50	14	12	10	10	8	8	6	6	6	4	4	4	3	3	3	2	2	2	2	2	1	1	1	1	1/0	1/0	1/0	1/0	2/0

Circuit Ampacity

NOTE:
1. Wire size based on 60ºC type copper conductors below 100 ampacity.
2. Wire size based on 75ºC type copper conductors for 100 ampacity and above.

FIGURE 13
CONDENSATE DRAIN



4. This unit incorporates single point electrical connection for unit and electric heat accessory.
5. Power wiring must be run in grounded rain-tight conduit. Connect the power field wiring as follows:
   a. NO ELECTRIC HEAT - Connect the field wires directly to the contactor pigtail in the electric heat access area. Connect ground wire to ground lug.
   b. WITH ELECTRIC HEAT - Connect the field wires to the terminal block on the electric heater kit in the electric heat access area. Connect the ground wire to the ground lug on the heater kit.

NOTE: For field installation of a heater kit, follow the instructions provided with the heater kit.

6. The pigtail wires in the electric heat access area are factory wired to the contactor in the control box.
7. DO NOT connect aluminum field wires to electric heat kit power input terminals.

B. SPECIAL INSTRUCTIONS FOR POWER WIRING WITH ALUMINUM CONDUCTORS

1. Select the equivalent aluminum wire size from the tabulation below:

TABLE B. WIRE SIZES

AWG Copper Wire Size	AWG Aluminum Wire Size	Connector Type and Size (or equivalent)	
#12	#10	T&B Wire Nut	PT2
#10	#8	T&B Wire Nut	PT3
#8	#6	Ilsco Split Bolt	AK-6
#6	#4	Ilsco Split Bolt	AK-4
#4	#2	Ilsco Split Bolt	AK-2
#3	#1	Ilsco Split Bolt	AK-1/0
#2	#0	Ilsco Split Bolt	AK-1/0
#1	#00	Ilsco Split Bolt	AK-2/0
#0	#000	Ilsco Split Bolt	AK-4/0

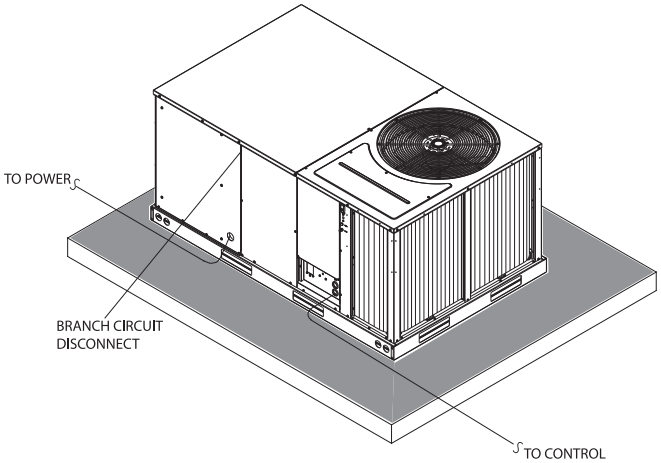
2. Attach a length (6" or more) of recommended size copper wire to the unit terminals L1 and L3 for single phase, L1, L2, L3 for three phase.
3. Splice copper wire pigtails to aluminum wire with U.L. recognized connectors for copper-aluminum splices. Follow these instructions very carefully to make a positive and lasting connection;
   a. Strip insulation from aluminum conductor.
   b. Coat the stripped end of the aluminum wire with the recommended inhibitor and wire brush aluminum surface through inhibitor. Inhibitors: Brundy, Pentex “A”; Alcoa, No. 2EJC; T&B KPOR Shield.
   c. Clean and recoat aluminum conductor with inhibitor.
   d. Make the splice using the above listed wire nuts or split bolt connectors.
   e. Coat the entire connection with inhibitor and wrap with electrical insulating tape.

WARRANTY MAY NOT APPLY IF CONNECTIONS ARE NOT MADE PER INSTRUCTIONS

C. CONTROL WIRING (Class II)

1. Low voltage wiring should not be run in conduit with power wiring.
2. Control wiring is routed through the 7/8" hole adjacent to the compressor access panel. Use a minimum #18 AWG thermostat wire. For wire lengths exceeding 50', use #16 AWG thermostat wire. The low voltage wires are connected to the unit pigtails which are supplied with the unit in the low voltage connection box located below the unit control box.
3. Figure 16 shows representative low voltage connection diagrams. Read your thermostat installation instructions for any special requirements for your specific thermostat.
   NOTE — Units installed in Canada require that an outdoor thermostat (30,000 min. cycles of endurance) be installed and be wired with C.E.C. Class I wiring.

FIGURE 14
RECOMMENDED LOCATION OF BRANCH CIRCUIT DISCONNECT



D. INTERNAL WIRING

IMPORTANT: *Some single phase models are equipped with a single pole contactor. Caution must be exercised when servicing as only one leg of the power supply is broken with the contactor.*

Some models are equipped with electronically commutated blower motors which are constantly energized unless the main unit disconnect is in the off position.

1. A diagram of the internal wiring of this unit is located on the inside of the compressor access panel. If any of the original wire as supplied with the appliance must be replaced, the wire gauge and insulation must be the same as original wiring.

E. GROUNDING

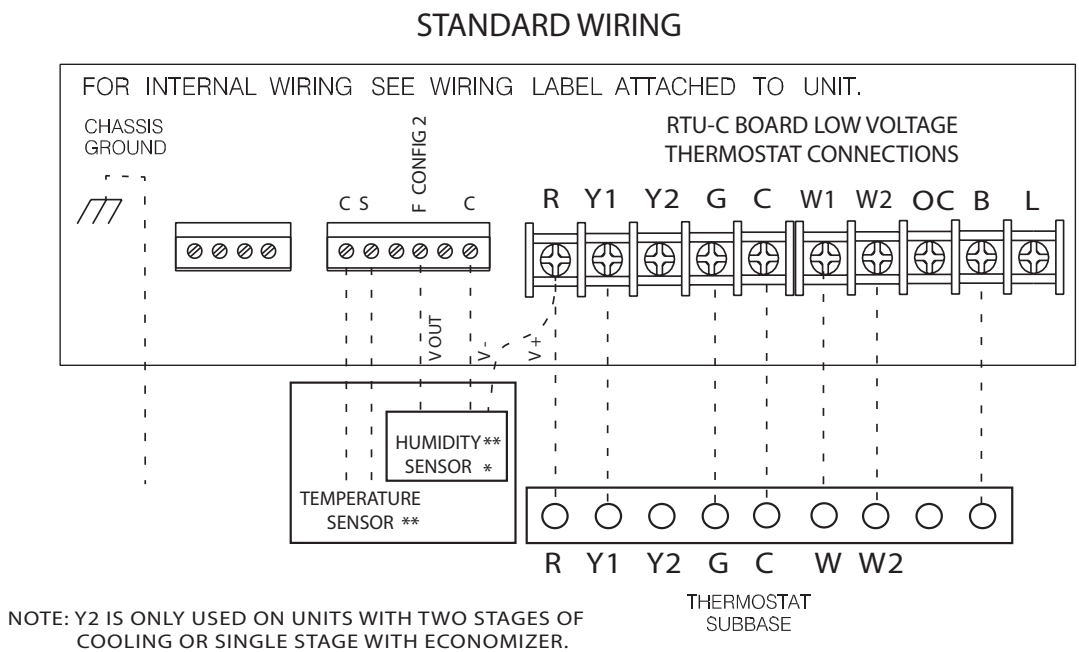
⚠ WARNING

THE UNIT MUST BE PERMANENTLY GROUNDED. A GROUNDING LUG IS PROVIDED IN THE ELECTRIC HEAT KIT ACCESS AREA FOR A GROUND WIRE. FAILURE TO GROUND THIS UNIT CAN RESULT IN FIRE OR ELECTRICAL SHOCK CAUSING PROPERTY DAMAGE, SEVERE PERSONAL INJURY OR DEATH.

FIGURE 15
HEATER KIT INSTALLATION



FIGURE 16
LOW VOLTAGE CONNECTIONS DIAGRAMS



F. THERMOSTAT

The thermostat should be mounted on an inside wall about five feet above the floor in a location where it will not be affected by unconditioned air, sun, or drafts from open doors or other sources. READ installation instructions in thermostat package CAREFULLY because each has some different wiring requirements.

XIII. INDOOR AIR FLOW DATA

Direct-drive blower models are shipped factory wired for the proper speed at a typical external static. See Blower Performance Data. Belt-drive blower models have motor sheaves set for proper CFM at a typical external static.

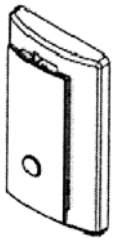
XIV. CRANKCASE HEAT (OPTIONAL)

Crankcase heat is not required on scroll type compressors, but may be necessary for difficult starting situations.

XV. PRE-START CHECK

1. Is unit properly located and slightly slanted toward indoor condensate drain?
2. Is ductwork insulated, weatherproofed, with proper spacing to combustible materials?
3. Is air free to travel to and from outdoor coil? (See Figure 3.)
4. Is the wiring correct, tight, and according to unit wiring diagram?
5. Is unit grounded?
6. Are field supplied air filters in place and clean?
7. Do the outdoor fan and indoor blower turn freely without rubbing, and are they tight on the motor shafts?
8. Are the compressor shipping supports removed (if so equipped)?

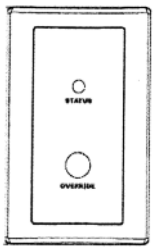
FIGURE 17
FLUSH MOUNT ROOM TEMPERATURE SENSOR FOR NETWORKED DDC APPLICATIONS (REPLACES THERMOSTAT)



ROOM TEMPERATURE SENSOR WITH TIMED OVERRIDE BUTTON

ZNS-101

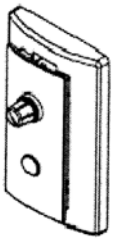
←10kΩ room temperature sensor transmits room temperature to DDC system. Times override buttons allows tenant to change from unoccupied temperature setpoint to occupied temperature setpoint for a preset time.



ROOM TEMPERATURE SENSOR WITH TIMED OVERRIDE BUTTON AND STATUS INDICATOR

ZNS-102

←10kΩ room temperature sensor transmits room temperature to DDC system. Times 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.

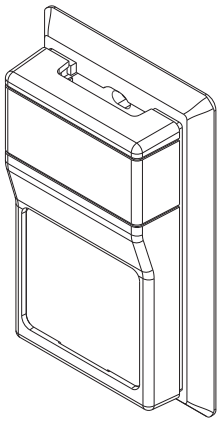


ROOM TEMPERATURE SENSOR WITH SETPOINT ADJUSTMENT AND TIMED OVERRIDE BUTTON

ZNS-103

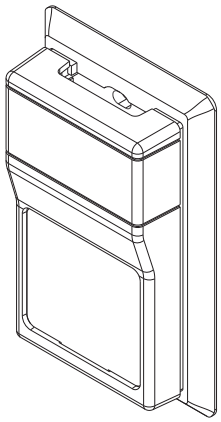
←10kΩ room temperature sensor with setpoint adjustment transmits room temperature to DDC system along with desired occupied room temperature setpoint. Timed override button allows tenant to change from unoccupied temperature setpoint to occupied temperature setpoint for a preset time.

FIGURE 18
HUMIDISTATS



RHC-ZNS4

TRANSMITS ROOM RELATIVE HUMIDITY TO DDC SYSTEM



RHC-ZNS5

TRANSMITS ROOM TEMPERATURE AND RELATIVE HUMIDITY TO DDC SYSTEM

XVI. STARTUP

1. Turn thermostat to “OFF,” turn “on” power supply at disconnect switch.
2. Turn temperature setting as high as it will go.
3. Turn fan switch to “ON.”
4. Indoor blower should run. Be sure it is running in the right direction.
5. Turn fan switch to “AUTO.” Turn system switch to “COOL” and turn temperature setting below room temperature. Unit should run in cooling mode.
6. Is outdoor fan operating correctly in the right direction?
7. Is compressor running correctly.
8. Check the refrigerant charge using the instructions located on compressor access panel. Replace service port caps. Service port cores are for system access only and will leak if not tightly capped.
9. Turn thermostat system switch to proper mode “HEAT” or “COOl” and set thermostat to proper temperature setting. Record the following after the unit has run some time.
   A. Operating Mode _____
   B. Discharge Pressure (High)_PSIG
   C. Vapor Pressure at Compressor (Low) _____PSIG
   D. VaporLine Temperature at Compressor_____°F.
   E. Indoor Dry Bulb_____°F.
   F. Indoor Wet Bulb _____°F.

G. Outdoor Dry Bulb _____°F.
H. Outdoor Wet Bulb _____°F.
I. Voltage at Contactor _____Volts
J. Current at Contactor _____Amps
K. Model Number_____
L. Serial Number _____
M. Location_____
N. Owner _____
O. Date_____

10. Adjust discharge air grilles and balance system.
11. Check ducts for condensation and air leaks.
12. Check unit for tubing and sheet metal rattles.
13. Instruct the owner on operation and maintenance.
14. Leave “INSTALLATION” and ”USE AND CARE“ instructions with owner.

XVII. OPERATION

IMPORTANT: *The compressor has an internal overload protector. Under some conditions, it can take up to 2 hours for this overload to reset. Make sure overload has had time to reset before condemning the compressor.*

XVIII. AUXILIARY HEAT

⚠ WARNING

ONLY ELECTRIC HEATER KITS SUPPLIED BY THIS MANUFACTURER AS DESCRIBED IN THIS PUBLICATION HAVE BEEN DESIGNED, TESTED, AND EVALUATED BY A NATIONALLY RECOGNIZED SAFETY TESTING AGENCY FOR USE WITH THIS UNIT. USE OF ANY OTHER MANUFACTURED ELECTRIC HEATERS INSTALLED WITHIN THIS UNIT MAY CAUSE HAZARDOUS CONDITIONS RESULTING IN PROPERTY DAMAGE, FIRE, BODILY INJURY OR DEATH.

CONTROL SYSTEM OPERATION

1. In the cooling mode, the thermostat will, on a call for cooling, energize the compressor contactor and the indoor blower relay. The indoor blower can be operated continuously by setting the thermostat fan switch at the “ON” position.
2. In the heating mode, the thermostat will energize one or more supplementary resistance heaters.

XIX. GENERAL DATA - RLNL MODELS
NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLNL - Series	G036CL	G036CM	G036DL	G036DM
Cooling performance[1]				**Continued ->**
Gross Cooling Capacity Btu [kW]	36,400 [10.67]	36,400 [10.67]	36,400 [10.67]	36,400 [10.67]
EER, SEER[2]	11/13	11/13	11/13	11/13
Nominal CFM/AHRI Rated CFM [L/s]	1200/1200 [566/566]	1200/1200 [566/566]	1200/1200 [566/566]	1200/1200 [566/566]
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]	25,600 [7.5]	25,600 [7.5]	25,600 [7.5]	25,600 [7.5]
Net Latent Capacity Btu [kW]	9,800 [2.87]	9,800 [2.87]	9,800 [2.87]	9,800 [2.87]
Net System Power kW	2.84	2.84	2.84	2.84
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)[5]	78	78	78	78
Outdoor Coil - Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	16.91 [1.57]	16.91 [1.57]	16.91 [1.57]	16.91 [1.57]
Rows / FPI [FPcm]	1 / 22 [9]	1 / 22 [9]	1 / 22 [9]	1 / 22 [9]
Indoor Coil - Fin Type	Corrugated	Corrugated	Corrugated	Corrugated
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	5.17 [0.48]	5.17 [0.48]	5.17 [0.48]	5.17 [0.48]
Rows / FPI [FPcm]	2 / 17 [7]	2 / 17 [7]	2 / 17 [7]	2 / 17 [7]
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]
Re-Heat Coil - Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	0.709 [18]	0.709 [18]	0.709 [18]	0.709 [18]
Face Area sq. ft. [sq. m]	4.5 [0.42]	4.5 [0.42]	4.5 [0.42]	4.5 [0.42]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
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/No. Speeds	Belt/Variable	Belt/Variable	Belt/Variable	Belt/Variable
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]	131 [3714]	131 [3714]	131 [3714]	131 [3714]
Weights				
Net Weight lbs. [kg]	561 [255]	561 [255]	561 [255]	561 [255]
Ship Weight lbs. [kg]	568 [258]	568 [258]	568 [258]	568 [258]

NOTES:

1. Cooling Performance is rated at 95° F ambient, 80° F entering dry bulb, 67° F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to ±20% of nominal cfm. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 210/240 or 360.
2. EER and/or SEER are rated at AHRI conditions and in accordance with DOE test procedures.
3. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

GENERAL DATA - RLNL MODELS
NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLNL - Series	G048CL	G048CM	G048DL	G048DM
Cooling performance[1]				**Continued ->**
Gross Cooling Capacity Btu [kW]	49,000 [14.36]	49,000 [14.36]	49,000 [14.36]	49,000 [14.36]
EER, SEER[2]	11/13	11/13	11/13	11/13
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]	47,000 [13.77]	47,000 [13.77]	47,000 [13.77]	47,000 [13.77]
Net Sensible Capacity Btu [kW]	34,300 [10.05]	34,300 [10.05]	34,300 [10.05]	34,300 [10.05]
Net Latent Capacity Btu [kW]	12,700 [3.72]	12,700 [3.72]	12,700 [3.72]	12,700 [3.72]
Net System Power kW	4.03	4.03	4.03	4.03
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)[5]	78	78	78	78
Outdoor Coil - Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	16.56 [1.54]	16.56 [1.54]	16.56 [1.54]	16.56 [1.54]
Rows / FPI [FPcm]	2 / 22 [9]	2 / 22 [9]	2 / 22 [9]	2 / 22 [9]
Indoor Coil - Fin Type	Corrugated	Corrugated	Corrugated	Corrugated
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	5.17 [0.48]	5.17 [0.48]	5.17 [0.48]	5.17 [0.48]
Rows / FPI [FPcm]	3 / 15 [6]	3 / 15 [6]	3 / 15 [6]	3 / 15 [6]
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]
Re-Heat Coil - Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	0.709 [18]	0.709 [18]	0.709 [18]	0.709 [18]
Face Area sq. ft. [sq. m]	4.5 [0.42]	4.5 [0.42]	4.5 [0.42]	4.5 [0.42]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
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/No. Speeds	Belt/Variable	Belt/Variable	Belt/Variable	Belt/Variable
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]	197 [5585]	197 [5585]	197 [5585]	197 [5585]
Weights				
Net Weight lbs. [kg]	598 [271]	598 [271]	598 [271]	598 [271]
Ship Weight lbs. [kg]	605 [274]	605 [274]	605 [274]	605 [274]

NOTES:

1. Cooling Performance is rated at 95° F ambient, 80° F entering dry bulb, 67° F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to ±20% of nominal cfm. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 210/240 or 360.
2. EER and/or SEER are rated at AHRI conditions and in accordance with DOE test procedures.
3. Heating Performance limit settings and rating data were established and approved under laboratory test conditions using American National Standard Institute standards. Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

GENERAL DATA - RLNL MODELS
NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLNL - Series	G060CL	G060CM	G060DL	G060DM
Cooling performance[1]				
Gross Cooling Capacity Btu [kW]	59,000 [17.29]	59,000 [17.29]	59,000 [17.29]	59,000 [17.29]
EER, SEER[2]	11/13	11/13	11/13	11/13
Nominal CFM/AHRI Rated CFM [L/s]	2000/1850 [944/873]	2000/1850 [944/873]	2000/1850 [944/873]	2000/1850 [944/873]
AHRI Net Cooling Capacity Btu [kW]	57,000 [16.7]	57,000 [16.7]	57,000 [16.7]	57,000 [16.7]
Net Sensible Capacity Btu [kW]	41,600 [12.19]	41,600 [12.19]	41,600 [12.19]	41,600 [12.19]
Net Latent Capacity Btu [kW]	15,400 [4.51]	15,400 [4.51]	15,400 [4.51]	15,400 [4.51]
Net System Power kW	5.19	5.19	5.19	5.19
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)[5]	83	83	83	83
Outdoor Coil - Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	16.56 [1.54]	16.56 [1.54]	16.56 [1.54]	16.56 [1.54]
Rows / FPI [FPcm]	2 / 22 [9]	2 / 22 [9]	2 / 22 [9]	2 / 22 [9]
Indoor Coil - Fin Type	Corrugated	Corrugated	Corrugated	Corrugated
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	5.17 [0.48]	5.17 [0.48]	5.17 [0.48]	5.17 [0.48]
Rows / FPI [FPcm]	3 / 15 [6]	3 / 15 [6]	3 / 15 [6]	3 / 15 [6]
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]
Re-Heat Coil - Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	0.709 [18]	0.709 [18]	0.709 [18]	0.709 [18]
Face Area sq. ft. [sq. m]	4.5 [0.42]	4.5 [0.42]	4.5 [0.42]	4.5 [0.42]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
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/No. Speeds	Belt/Variable	Belt/Variable	Belt/Variable	Belt/Variable
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	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]	196 [5557]	196 [5557]	196 [5557]	196 [5557]
Weights				
Net Weight lbs. [kg]	608 [276]	608 [276]	608 [276]	608 [276]
Ship Weight lbs. [kg]	615 [279]	615 [279]	615 [279]	615 [279]

NOTES:

1. Cooling Performance is rated at 95° F ambient, 80° F entering dry bulb, 67° F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to ±20% of nominal cfm. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 210/240 or 360.
2. EER and/or SEER are rated at AHRI conditions and in accordance with DOE test procedures.
3. Heating Performance limit settings and rating data were established and approved under laboratory test conditions using American National Standard Institute standards. Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.

XX. MISCELLANEOUS

ELECTRICAL DATA – RLNL-SERIES									
		G036CL	G036CM	G036DL	G036DM	G048CL	G048CM	G048DL	G048DM
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506	187-253	187-253	414-506	414-506
	Volts	208/230	208/230	460	460	208/230	208/230	460	460
	Minimum Circuit Ampacity	18/18	18/18	10	10	22/22	23/23	11	11
	Minimum Overcurrent Protection Device Size	20/20	25/25	15	15	25/25	30/30	15	15
	Maximum Overcurrent Protection Device Size	25/25	25/25	15	15	35/35	35/35	15	15
Compressor Motor	No.	1	1	1	1	1	1	0	0
	Volts	208/230	208/230	460	460	208/230	208/230	460	460
	Phase	3	3	3	3	3	3	3	3
	RPM	3450	3450	3450	3450	3450	3450	3450	3450
	HP, Compressor 1	3	3	3	3	4	4	4	4
	Amps (RLA), Comp. 1	10.4/10.4	10.4/10.4	5.8	5.8	13.7/13.7	13.7/13.7	6.2	6.2
	Amps (LRA), Comp. 1	88/88	88/88	38	38	83.1/83.1	83.1/83.1	41	41
Condenser Motor	No.	1	1	1	1	1	1	0	0
	Volts	208/230	208/230	460	460	208/230	208/230	460	460
	Phase	1	1	1	1	1	1	1	1
	HP	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	1.5/1.5	1.5/1.5	1	1	1.5/1.5	1.5/1.5	1	1
	Amps (LRA, each)	3/3	3/3	1.9	1.9	3/3	3/3	1.9	1.9
Evaporator Fan	No.	1	1	1	1	1	1	1	1
	Volts	208/230	208/230	460	460	208/230	208/230	460	460
	Phase	3	3	3	3	3	3	3	3
	HP	1/2	3/4	1/2	3/4	1/2	3/4	1/2	3/4
	Amps (FLA, each)	2.8/2.8	3.4/3.4	1.4	1.6	2.8/2.8	3.4/3.4	1.4	1.6
	Amps (LRA, each)	11.3/11.3	16.8/16.8	6.2	8.4	11.3/11.3	16.8/16.8	6.2	8.4

ELECTRICAL DATA – RLNL SERIES

		G060CL	G060CM	G060DL	G060DM
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	414-506
	Volts	208/230	208/230	460	460
	Minimum Circuit Ampacity	26/26	26/26	13	13
	Minimum Overcurrent Protection Device Size	30/30	30/30	15	15
	Maximum Overcurrent Protection Device Size	40/40	40/40	20	20
Compressor Motor	No.	1	1	1	1
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	RPM	3450	3450	3450	3450
	HP, Compressor 1	5	5	5	5
	Amps (RLA), Comp. 1	15.6/15.6	15.6/15.6	7.8	7.8
	Amps (LRA), Comp. 1	110/110	110/110	52	52
Condenser Motor	No.	1	1	1	1
	Volts	208/230	208/230	460	460
	Phase	1	1	1	1
	HP	1/3	1/3	1/3	1/3
	Amps (FLA, each)	2.2/2.2	2.2/2.2	1	1
	Amps (LRA, each)	4.9/4.9	4.9/4.9	1.9	1.9
Evaporator Fan	No.	1	1	1	1
	Volts	208/230	208/230	460	460
	Phase	3	3	3	3
	HP	3/4	1	3/4	1
	Amps (FLA, each)	3.4/3.4	3.8/3.8	1.6	1.9
	Amps (LRA, each)	16.8/16.8	24/24	8.4	12

BELT-DRIVE AIRFLOW PERFORMANCE–RLNL-G

AIR FLOW CFM	CAPACITY 3 TON PACKAGED AIR CONDITIONER (13 SEER) VOLTAGE 208-230, 460 - 3 PHASE																														AIR FLOW CFM
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0		1.1		1.2		1.3		1.4		1.5		
	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	
900	—	—	—	—	665	290	730	300	780	315	830	330	875	360	920	375	960	390	990	410	1040	445	1080	470	1140	510	1190	540	1235	590	**900**
1000	—	—	625	275	680	295	750	310	805	325	850	345	895	375	935	390	970	410	1015	435	1065	465	1100	500	1160	530	1210	560	1255	610	**1000**
1100	—	—	640	300	710	315	780	325	830	340	875	365	915	390	955	405	990	430	1040	450	1080	485	1115	540	1180	540	1230	600	1270	630	**1100**
1200	—	—	670	315	735	330	800	345	850	365	890	385	935	410	975	430	1010	450	1060	475	1100	520	1145	560	1200	600	1250	630	1285	660	**1200**
1300	625	315	700	330	770	350	830	370	875	400	915	415	955	440	990	450	1040	495	1085	530	1125	565	1165	590	1220	645	1260	675	1305	710	**1300**
1400	655	340	730	365	795	385	850	400	890	430	935	445	975	470	1010	500	1070	540	1110	575	1150	615	1195	645	1230	685	1280	725	1325	760	**1400**
1500	685	380	755	390	825	415	870	435	915	450	955	480	990	505	1040	545	1090	590	1135	630	1180	660	1220	720	1255	740	1295	785	1350	820	**1500**
1600	730	420	790	435	850	455	890	490	935	505	970	525	1005	550	1075	605	1110	640	1160	680	1200	730	1245	780	1280	800	1325	840	1365	885	**1600**
1700	755	465	825	475	875	505	915	535	955	550	985	570	1040	630	1100	685	1135	710	1185	750	1225	800	1265	830	1295	875	1350	910	—	—	**1700**
1800	790	500	850	530	890	550	935	570	975	600	1020	650	1080	690	1125	740	1165	770	1210	830	1245	870	1290	910	1310	930	—	—	—	—	**1800**

NOTE: Bold lines separate L, M and N drives respectively.

DRIVE PACKAGE	L							M							N (FIELD-SUPPLIED)
MOTOR H.P.	1/2 (3/4 - 575V)							3/4							3/4
BLOWER SHEAVE	6.9 PITCH DIAMETER							6.4 PITCH DIAMETER							6.4 PITCH DIAMETER
MOTOR SHEAVE	ADJUSTABLE 2.4 - 3.4 PITCH DIAMETER							ADJUSTABLE 3.4 - 4.4 PITCH DIAMETER							ADJUSTABLE 4.0 - 5.0 PITCH DIAMETER
TURNS OPEN	0	**1**	2	3	4	5	6	0	1	2	3	**4**	5	6	
RPM	935	**875**	830	780	730	680	625	1295	1230	1185	1135	**1085**	1000	955	RPM RANGE 1090 - 1365

NOTE: Factory sheave settings are shown in bold print.

BELT-DRIVE AIRFLOW PERFORMANCE–RLNL-G

AIR FLOW CFM	CAPACITY 4 TON PACKAGED AIR CONDITIONER (13 SEER) VOLTAGE 208-230, 460 - 3 PHASE																														AIR FLOW CFM
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0		1.1		1.2		1.3		1.4		1.5		
	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	
1200	—	—	—	—	745	340	810	375	865	390	900	400	945	420	1000	440	1040	460	1075	490	1115	540	1170	580	1215	620	1260	650	1300	685	1200
1300	—	—	695	330	770	365	835	395	880	415	920	435	975	455	1010	470	1060	490	1100	530	1140	570	1190	600	1235	640	1270	685	1315	740	1300
1400	—	—	725	350	795	395	855	420	895	435	945	455	995	470	1030	500	1070	520	1115	560	1160	600	1205	640	1250	685	1290	745	1335	810	1400
1500	690	360	750	390	820	425	875	450	920	465	970	480	1010	500	1055	560	1100	580	1140	630	1180	660	1230	700	1270	760	1315	815	1350	865	1500
1600	720	390	780	430	850	460	895	480	945	500	990	530	1035	565	1075	590	1115	635	1160	680	1205	725	1250	770	1290	830	1335	890	1365	935	1600
1700	750	430	810	465	870	485	920	500	970	530	1015	570	1055	600	1090	645	1140	695	1180	735	1225	790	1270	845	1315	910	1350	960	—	—	1700
1800	780	475	840	515	895	540	945	555	990	600	1035	625	1080	660	1115	710	1155	740	1205	800	1250	860	1295	930	1340	995	1365	1030	—	—	1800
1900	820	520	870	560	925	580	970	600	1015	640	1060	690	1115	750	1145	790	1185	835	1225	880	1275	900	1315	1010	1355	1060	—	—	—	—	1900
2000	850	585	900	610	950	630	1000	665	1045	715	1090	760	1130	810	1170	865	1205	900	1255	965	1300	1050	1340	1100	1365	1140	—	—	—	—	2000

NOTE: Bold lines separate L, M and N drives respectively.

DRIVE PACKAGE	L							M							N (FIELD-SUPPLIED)
MOTOR H.P.	1/2 (3/4 - 575V)							3/4							3/4
BLOWER SHEAVE	6.9 PITCH DIAMETER							6.4 PITCH DIAMETER							6.4 PITCH DIAMETER
MOTOR SHEAVE	ADJUSTABLE 2.8 - 3.8 PITCH DIAMETER							ADJUSTABLE 3.4 - 4.4 PITCH DIAMETER							ADJUSTABLE 4.0 - 5.0 PITCH DIAMETER
TURNS OPEN	0	**1**	2	3	4	5	6	0	1	**2**	3	4	5	6	
RPM	990	**945**	895	850	800	750	695	1270	1225	**1170**	1115	1065	1015	965	RPM RANGE 1090 - 1365

NOTE: Factory sheave settings are shown in bold print.

BELT DRIVE AIRFLOW PERFORMANCE–RLNL-G

AIR FLOW CFM	CAPACITY 5 TON PACKAGED AIR CONDITIONER (13 SEER) VOLTAGE 208-230, 460 - 3 PHASE EXTERNAL STATIC PRESSURE–INCHES OF WATER																													
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0		1.10		1.20		1.30		1.40		1.50	
	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS	RPM	WATTS
1400	—	—	—	—	780	370	815	385	875	425	930	460	970	490	1030	540	1065	570	1105	595	1150	615	1195	645	1235	660	1300	705	1340	745
1500	—	—	—	—	795	405	840	415	895	440	945	500	995	540	1045	595	1080	615	1135	650	1165	675	1215	700	1255	735	1320	775	1355	805
1600	—	—	780	390	805	425	870	470	915	510	965	560	1015	600	1060	640	1105	680	1145	705	1180	730	1225	750	1275	790	1340	840	1365	880
1700	—	—	795	450	840	490	895	530	940	570	990	605	1035	640	1075	680	1120	725	1160	755	1200	790	1245	815	1300	855	1355	905	1375	940
1800	780	455	815	470	870	540	915	540	965	675	1010	660	1055	710	1100	760	1140	785	1175	810	1225	850	1260	880	1320	930	1365	985	1390	1020
1900	800	485	850	530	895	590	945	640	995	675	1035	720	1070	775	1120	810	1160	850	1200	890	1245	915	1290	960	1335	1000	1375	1050	1405	1100
2000	830	550	880	605	930	655	970	700	1015	730	1055	790	1105	830	1145	875	1180	910	1225	950	1260	980	1320	1035	1350	1075	1385	1120	—	—
2100	860	615	915	655	955	705	1005	760	1040	820	1090	870	1130	910	1170	950	1210	995	1250	1020	1290	1060	1335	1100	1370	1150	1400	1200	—	—
2200	895	680	945	735	995	780	1030	830	1060	880	1120	940	1155	980	1195	1020	1240	1055	1275	1100	1320	1140	1360	1180	1385	1225	—	—	—	—
2300	940	755	975	795	1015	830	1065	910	1100	965	1150	1025	1180	1050	1225	1095	1265	1125	1310	1175	1350	1230	1375	1260	1405	1320	—	—	—	—
2400	970	825	1015	880	1040	925	1100	1005	1145	1055	1175	1085	1225	1140	1260	1175	1300	1210	1340	1255	1370	1315	1400	1375	—	—	—	—	—	—

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

DRIVE PACKAGE	"L"							"M"						
MOTOR H.P.	3/4							1						
BLOWER SHEAVE	6.4 PITCH DIAMETER							6.4 PITCH DIAMETER						
MOTOR SHEAVE	2.8-3.8 PITCH DIAMETER - ADJ.							4.0 - 5.0						
TURNS OPEN	0	1	**2**	3	4	5	6	0	1	2	**3**	4	5	6
RPM	1095	1040	**995**	940	890	835	780	1405	1360	1305	**1250**	1195	1145	1095

NOTE: Factory sheave settings are shown in bold print.

208-240 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION

Single Power Supply For Both Unit And Heater Kit									Separate Power Supply For Unit And Heater Kit				
Heater Kit						Air Conditioner			Heater Kit		Air Conditioner		
RHEEM Model Number	RXJJ- Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 208/240 V	Heater KBTU/Hr @ 208/240 V	Heater Amp. @ 208/240 V	Unit Min. Ckt Ampacity @ 208/240V	Over Current Protective Device Size		Min. Ckt. Ampacity 208/240 V	Max. Fuse Size 208/240 V	Min. Ckt. Ampacity 208/240 V	Over Current Protective Device Size	
							Min/Max @ 208 V	Min/Max @ 240 V				Min/Max @ 208 V	Min/Max @ 240 V
RLNL-G036CL	No Heat	—	—	—	—	18/18	20/25	20/25	—	—	18/18	20/25	20/25
	A06C	1	4.2/5.6	14.33/19.1	11.7/13.5	19/21	20/25	25/25	15/17	15/20	18/18	20/25	20/25
	A10C	1	7.2/9.6	24.56/32.75	20/23.1	29/33	30/30	35/35	25/29	25/30	18/18	20/25	20/25
	A12C	1	8.4/11.2	28.66/38.21	23.4/27	33/38	35/35	40/40	30/34	30/35	18/18	20/25	20/25
	A15C	1	10.8/14.4	36.84/49.13	30.1/34.7	42/47	45/45	50/50	38/44	40/45	18/18	20/25	20/25
	A20C	1	14.4/19.2	49.13/65.5	40/46.3	54/62	60/60	70/70	50/58	50/60	18/18	20/25	20/25
RLNL-G048CL	No Heat	—	—	—	—	22/22	25/35	25/35	—	—	22/22	25/35	25/35
	A06C	1	4.2/5.6	14.33/19.1	11.7/13.5	22/22	25/35	25/35	15/17	15/20	22/22	25/35	25/35
	A10C	1	7.2/9.6	24.56/32.75	20/23.1	29/33	30/35	35/35	25/29	25/30	22/22	25/35	25/35
	A12C	1	8.4/11.2	28.66/38.21	23.4/27	33/38	35/35	40/40	30/34	30/35	22/22	25/35	25/35
	A15C	1	10.8/14.4	36.84/49.13	30.1/34.7	42/47	45/45	50/50	38/44	40/45	22/22	25/35	25/35
	A20C	1	14.4/19.2	49.13/65.5	40/46.3	54/62	60/60	70/70	50/58	50/60	22/22	25/35	25/35
RLNL-G060CL	No Heat	—	—	—	—	26/26	30/40	30/40	—	—	26/26	30/40	30/40
	A06C	1	4.2/5.6	14.33/19.1	11.7/13.5	26/26	30/40	30/40	15/17	15/20	26/26	30/40	30/40
	A10C	1	7.2/9.6	24.56/32.75	20/23.1	30/34	30/40	35/40	25/29	25/30	26/26	30/40	30/40
	A12C	1	8.4/11.2	28.66/38.21	23.4/27	34/39	35/40	40/40	30/34	30/35	26/26	30/40	30/40
	A15C	1	10.8/14.4	36.84/49.13	30.1/34.7	42/48	45/45	50/50	38/44	40/45	26/26	30/40	30/40
	A20C	1	14.4/19.2	49.13/65.5	40/46.3	55/63	60/60	70/70	50/58	50/60	26/26	30/40	30/40
	A24C	1	18/24	61.41/81.88	50/57.7	67/77	70/70	80/80	63/73	70/80	26/26	30/40	30/40

208-240 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION

Single Power Supply For Both Unit And Heater Kit									Separate Power Supply For Unit And Heater Kit				
Heater Kit						Air Conditioner			Heater Kit		Air Conditioner		
RHEEM Model Number	RXJJ- Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 208/240 V	Heater KBTU/Hr @ 208/240 V	Heater Amp. @ 208/240 V	Unit Min. Ckt Ampacity @ 208/240V	Over Current Protective Device Size		Min. Ckt. Ampacity 208/240 V	Max. Fuse Size 208/240 V	Min. Ckt. Ampacity 208/240 V	Over Current Protective Device Size	
							Min/Max @ 208 V	Min/Max @ 240 V				Min/Max @ 208 V	Min/Max @ 240 V
RLNL-G036CM	No Heat	—	—	—	—	18/18	25/25	25/25	—	—	18/18	25/25	25/25
	A06C	1	4.2/5.6	14.33/19.1	11.7/13.5	19/22	25/25	25/25	15/17	15/20	18/18	25/25	25/25
	A10C	1	7.2/9.6	24.56/32.75	20/23.1	30/34	30/30	35/35	25/29	25/30	18/18	25/25	25/25
	A12C	1	8.4/11.2	28.66/38.21	23.4/27	34/39	35/35	40/40	30/34	30/35	18/18	25/25	25/25
	A15C	1	10.8/14.4	36.84/49.13	30.1/34.7	42/48	45/45	50/50	38/44	40/45	18/18	25/25	25/25
	A20C	1	14.4/19.2	49.13/65.5	40/46.3	55/63	60/60	70/70	50/58	50/60	18/18	25/25	25/25
RLNL-G048CM	No Heat	—	—	—	—	23/23	30/35	30/35	—	—	23/23	30/35	30/35
	A06C	1	4.2/5.6	14.33/19.1	11.7/13.5	23/23	30/35	30/35	15/17	15/20	23/23	30/35	30/35
	A10C	1	7.2/9.6	24.56/32.75	20/23.1	30/34	30/35	35/35	25/29	25/30	23/23	30/35	30/35
	A12C	1	8.4/11.2	28.66/38.21	23.4/27	34/39	35/35	40/40	30/34	30/35	23/23	30/35	30/35
	A15C	1	10.8/14.4	36.84/49.13	30.1/34.7	42/48	45/45	50/50	38/44	40/45	23/23	30/35	30/35
	A20C	1	14.4/19.2	49.13/65.5	40/46.3	55/63	60/60	70/70	50/58	50/60	23/23	30/35	30/35
RLNL-G060CM	No Heat	—	—	—	—	26/26	30/40	30/40	—	—	26/26	30/40	30/40
	A06C	1	4.2/5.6	14.33/19.1	11.7/13.5	26/26	30/40	30/40	15/17	15/20	26/26	30/40	30/40
	A10C	1	7.2/9.6	24.56/32.75	20/23.1	30/34	30/40	35/40	25/29	25/30	26/26	30/40	30/40
	A12C	1	8.4/11.2	28.66/38.21	23.4/27	34/39	35/40	40/40	30/34	30/35	26/26	30/40	30/40
	A15C	1	10.8/14.4	36.84/49.13	30.1/34.7	42/49	45/45	50/50	38/44	40/45	26/26	30/40	30/40
	A20C	1	14.4/19.2	49.13/65.5	40/46.3	55/63	60/60	70/70	50/58	50/60	26/26	30/40	30/40
	A24C	1	18/24	61.41/81.88	50/57.7	68/77	70/70	80/80	63/73	70/80	26/26	30/40	30/40

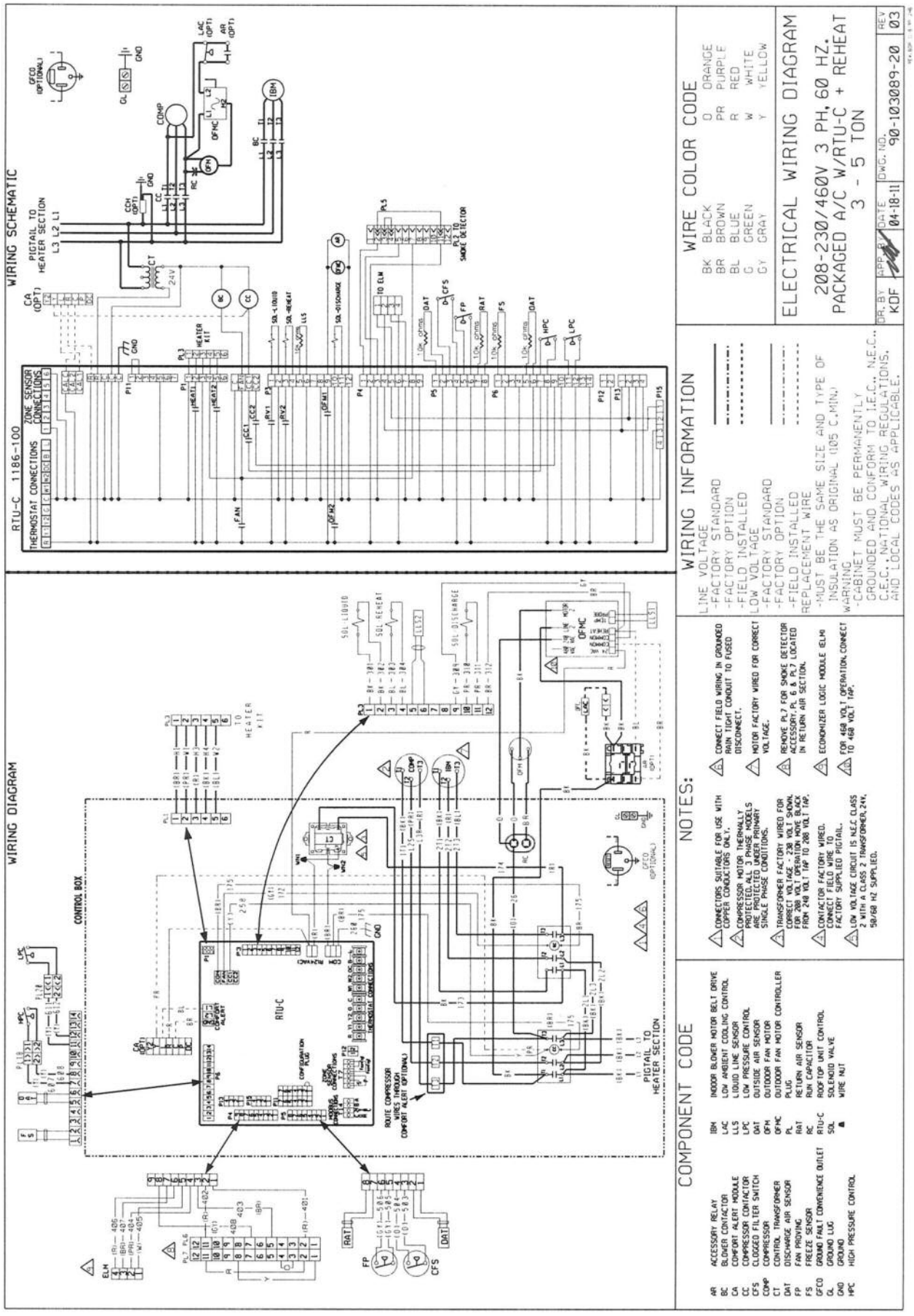
480 VOLT, THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION

Single Power Supply For Both Unit And Heater Kit									Separate Power Supply For Unit And Heater Kit				
Heater Kit						Air Conditioner			Heater Kit		Air Conditioner		
RHEEM Model Number	RXJJ- Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 208/240 V	Heater KBTU/Hr @ 208/240 V	Heater Amp. @ 208/240 V	Unit Min. Ckt Ampacity @ 208/240V	Over Current Protective Device Size		Min. Ckt. Ampacity 208/240 V	Max. Fuse Size 208/240 V	Min. Ckt. Ampacity 208/240 V	Over Current Protective Device Size	
							Min/Max @ 208 V	Min/Max @ 240 V				Min/Max @ 208 V	Min/Max @ 240 V
RLNL-G036DL	No Heat	—	—	—	—	10	15/15	—	—	—	10	15/15	—
	A06D	1	5.6	19.1	6.7	11	15/15	—	9	15	10/0	15/15	0/0
	A10D	1	9.6	32.75	11.6	17	20/20	—	15	15	10/0	15/15	0/0
	A12D	1	11.2	38.21	13.5	19	20/20	—	17	20	10/0	15/15	0/0
	A15D	1	14.4	49.13	17.4	24	25/25	—	22	25	10/0	15/15	0/0
	A20D	1	19.2	65.5	23.3	31	35/35	—	30	30	10/0	15/15	0/0
RLNL-G048DL	No Heat	—	—	—	—	11	15/15	—	—	—	11	15/15	—
	A06D	1	5.6	19.1	6.7	11	15/15	—	9	15	11/0	15/15	0/0
	A10D	1	9.6	32.75	11.6	17	20/20	—	15	15	11/0	15/15	0/0
	A12D	1	11.2	38.21	13.5	19	20/20	—	17	20	11/0	15/15	0/0
	A15D	1	14.4	49.13	17.4	24	25/25	—	22	25	11/0	15/15	0/0
	A20D	1	19.2	65.5	23.3	31	35/35	—	30	30	11/0	15/15	0/0
RLNL-G060DL	No Heat	—	—	—	—	13	15/20	—	—	—	13	15/20	—
	A06D	1	5.6	19.1	6.7	13	15/20	—	9	15	13/0	15/20	0/0
	A10D	1	9.6	32.75	11.6	17	20/20	—	15	15	13/0	15/20	0/0
	A12D	1	11.2	38.21	13.5	19	20/20	—	17	20	13/0	15/20	0/0
	A15D	1	14.4	49.13	17.4	24	25/25	—	22	25	13/0	15/20	0/0
	A20D	1	19.2	65.5	23.3	32	35/35	—	30	30	13/0	15/20	0/0
	A24D	1	24	81.88	28.9	39	40/40	—	37	40	13/0	15/20	0/0

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

Single Power Supply For Both Unit And Heater Kit									Separate Power Supply For Unit And Heater Kit				
Heater Kit						Air Conditioner			Heater Kit		Air Conditioner		
RHEEM Model Number	RXJJ- Heater Kit Nominal kW	No. of Sequence Steps	Rated Heater kW @ 208/240 V	Heater KBTU/Hr @ 208/240 V	Heater Amp. @ 208/240 V	Unit Min. Ckt Ampacity @ 208/240V	Over Current Protective Device Size		Min. Ckt. Ampacity 208/240 V	Max. Fuse Size 208/240 V	Min. Ckt. Ampacity 208/240 V	Over Current Protective Device Size	
							Min/Max @ 208 V	Min/Max @ 240 V				Min/Max @ 208 V	Min/Max @ 240 V
RLNL-G036DM	No Heat	—	—	—	—	10	15/15	—	—	—	10	15/15	—
	A06D	1	5.6	19.1	6.7	11	15/15	—	9	15	10/0	15/15	0/0
	A10D	1	9.6	32.75	11.6	17	20/20	—	15	15	10/0	15/15	0/0
	A12D	1	11.2	38.21	13.5	19	20/20	—	17	20	10/0	15/15	0/0
	A15D	1	14.4	49.13	17.4	24	25/25	—	22	25	10/0	15/15	0/0
	A20D	1	19.2	65.5	23.3	32	35/35	—	30	30	10/0	15/15	0/0
RLNL-G048DM	No Heat	—	—	—	—	11	15/15	—	—	—	11	15/15	—
	A06D	1	5.6	19.1	6.7	11	15/15	—	9	15	11/0	15/15	0/0
	A10D	1	9.6	32.75	11.6	17	20/20	—	15	15	10/0	15/15	0/0
	A12D	1	11.2	38.21	13.5	19	20/20	—	17	20	10/0	15/15	0/0
	A15D	1	14.4	49.13	17.4	24	25/25	—	22	25	10/0	15/15	0/0
	A20D	1	19.2	65.5	23.3	32	35/35	—	30	30	10/0	15/15	0/0
RLNL-G060DM	No Heat	—	—	—	—	13	15/20	—	—	—	13	15/20	—
	A06D	1	5.6	19.1	6.7	13	15/20	—	9	15	13/0	15/20	0/0
	A10D	1	9.6	32.75	11.6	17	20/20	—	15	15	13/0	15/20	0/0
	A12D	1	11.2	38.21	13.5	20	20/20	—	17	20	13/0	15/20	0/0
	A15D	1	14.4	49.13	17.4	25	25/25	—	22	25	13/0	15/20	0/0
	A20D	1	19.2	65.5	23.3	32	35/35	—	30	30	13/0	15/20	0/0
	A24D	1	24	81.88	28.9	39	40/40	—	37	40	13/0	15/20	0/0

FIGURE 19
WIRING DIAGRAM



3 TON AIR CONDITIONER - 13 SEER

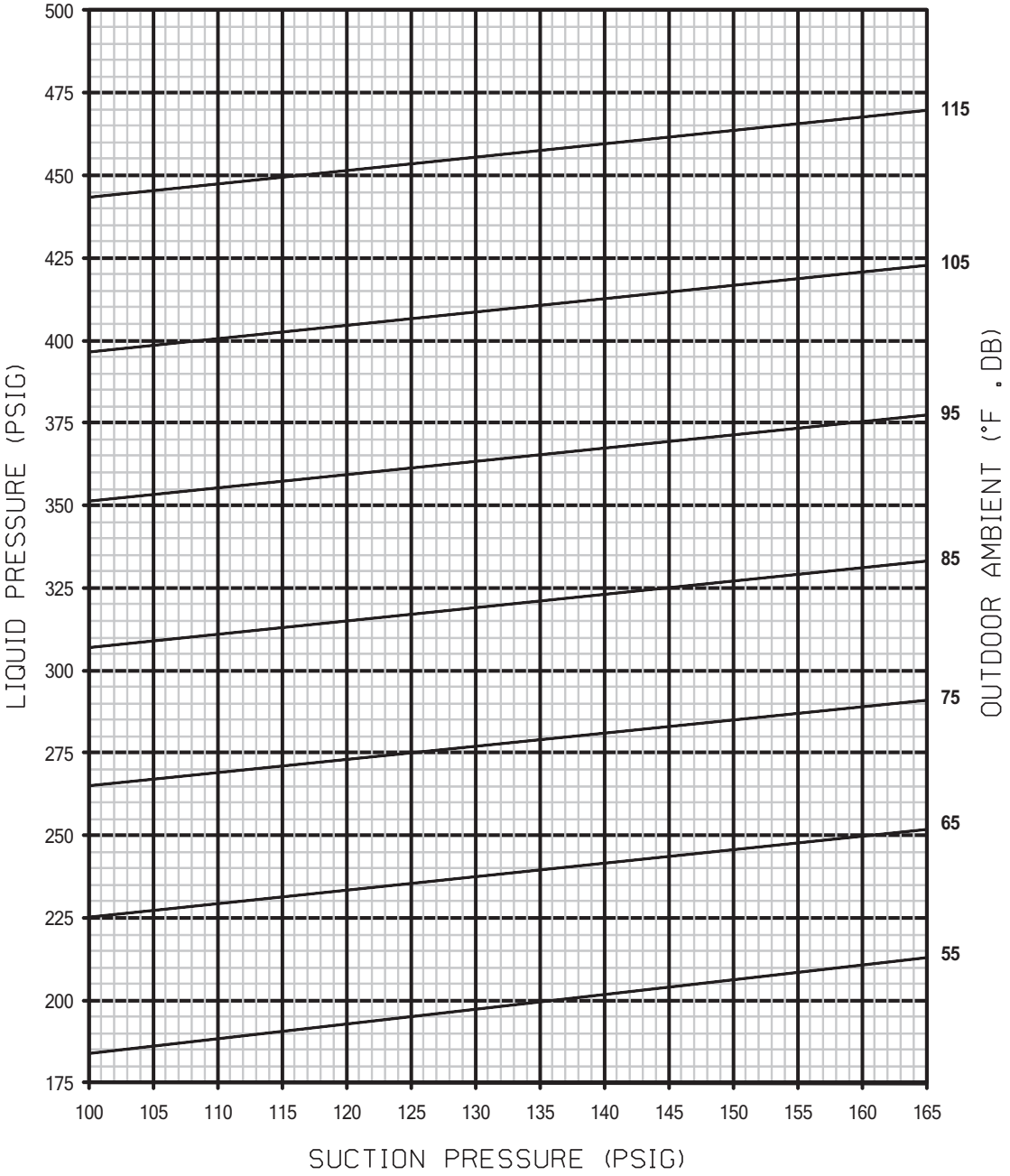
SYSTEM CHARGE CHART - REFRIGERANT 410A
3 TON, 13 SEER

CAUTION:

1. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!

INSTRUCTIONS:

1. MEASURE PRESSURE AT COMPRESSOR SUCTION AND LIQUID.
2. MEASURE OUTDOOR AMBIENT TO UNIT.
3. PLACE (X) ON CHART WHERE SUCTION AND LIQUID INTERSECT.
4. IF (X) IS BELOW OUTDOOR AMBIENT LINE, ADD CHARGE AND REPEAT STEPS 1-3.
5. IF (X) IS ABOVE OUTDOOR AMBIENT LINE, RECOVER EXCESS CHARGE AND REPEAT STEPS 1-3.



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4.0 TON AIR CONDITIONER - 13 SEER

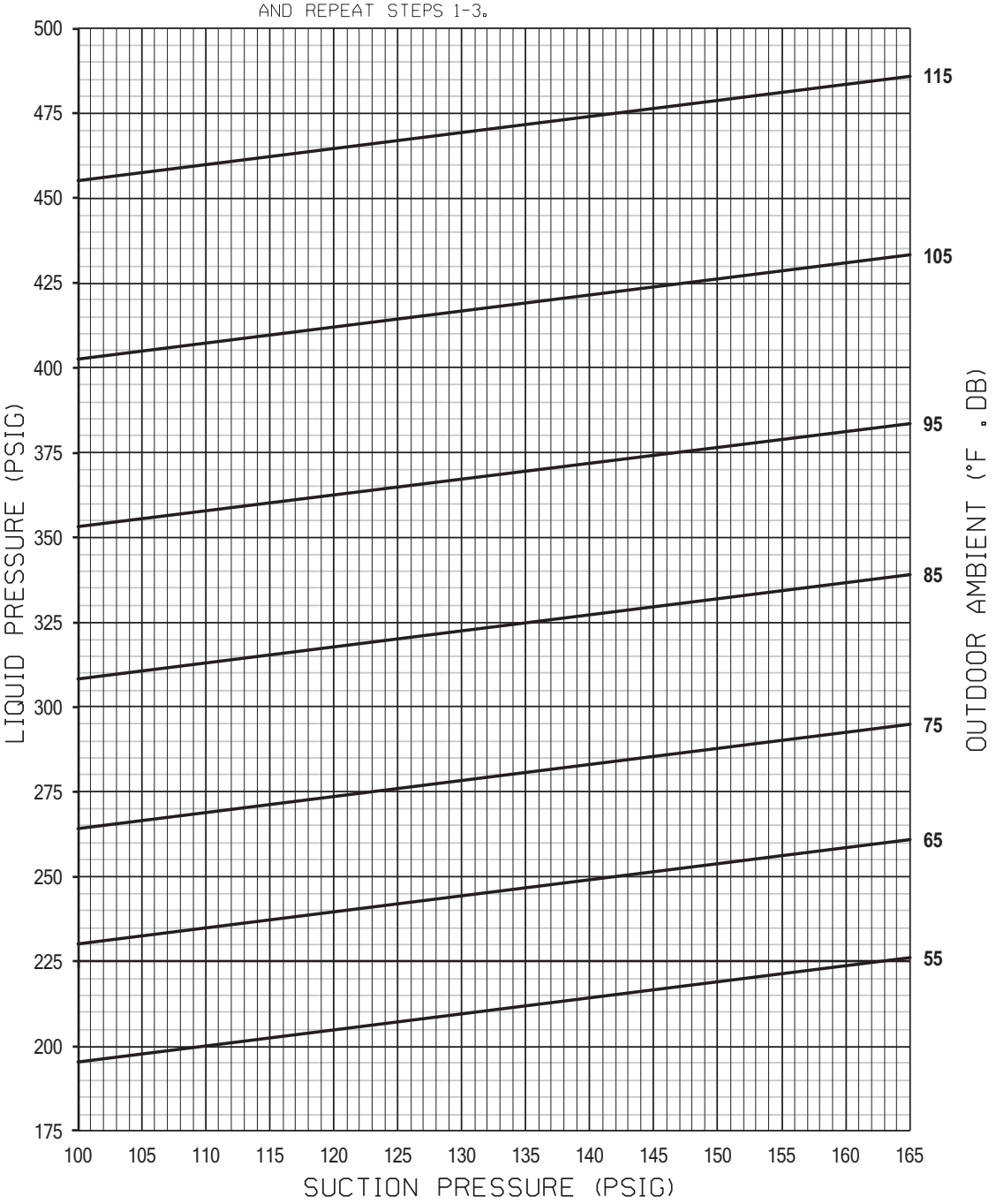
SYSTEM CHARGE CHART - REFRIGERANT 410A
4 TON, 13 SEER

CAUTION:

1. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!

INSTRUCTIONS:

1. MEASURE PRESSURE AT COMPRESSOR SUCTION AND LIQUID.
2. MEASURE OUTDOOR AMBIENT TO UNIT.
3. PLACE (X) ON CHART WHERE SUCTION AND LIQUID INTERSECT.
4. IF (X) IS BELOW OUTDOOR AMBIENT LINE, ADD CHARGE AND REPEAT STEPS 1-3.
5. IF (X) IS ABOVE OUTDOOR AMBIENT LINE, RECOVER EXCESS CHARGE AND REPEAT STEPS 1-3.



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5 TON AIR CONDITIONER - 13 SEER

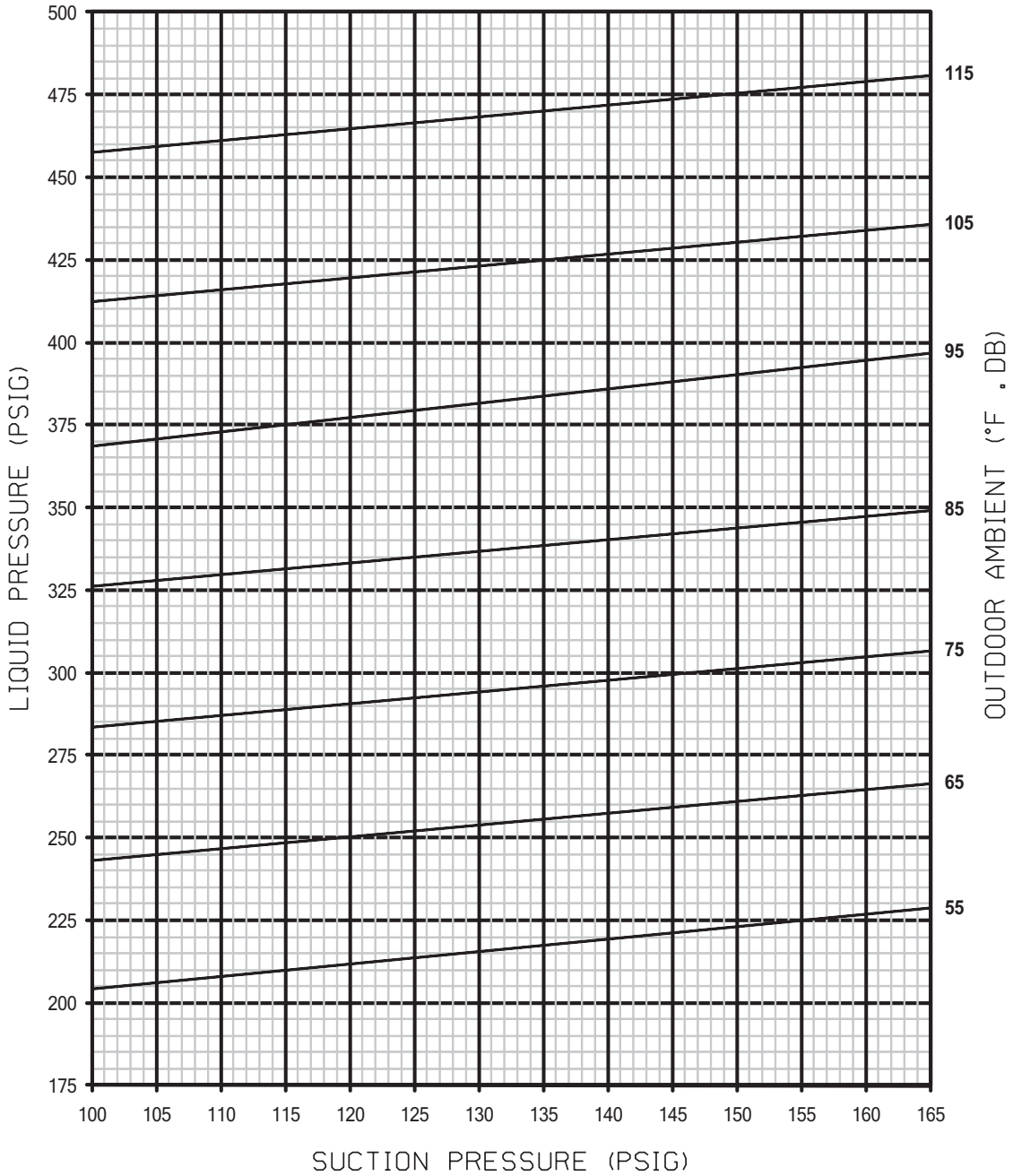
SYSTEM CHARGE CHART - REFRIGERANT 410A
5 TON, 13 SEER

CAUTION:

1. RETURN AIR TEMPERATURE MUST BE WITHIN COMFORT CONDITIONS BEFORE FINAL REFRIGERANT CHECK!

INSTRUCTIONS:

1. MEASURE PRESSURE AT COMPRESSOR SUCTION AND LIQUID.
2. MEASURE OUTDOOR AMBIENT TO UNIT.
3. PLACE (X) ON CHART WHERE SUCTION AND LIQUID INTERSECT.
4. IF (X) IS BELOW OUTDOOR AMBIENT LINE, ADD CHARGE AND REPEAT STEPS 1-3.
5. IF (X) IS ABOVE OUTDOOR AMBIENT LINE, RECOVER EXCESS CHARGE AND REPEAT STEPS 1-3.



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TROUBLESHOOTING CHART

⚠ WARNING

DISCONNECT ALL POWER TO UNIT BEFORE SERVICING. CONTACTOR MAY BREAK ONLY ONE SIDE. FAILURE TO SHUT OFF POWER CAN CAUSE ELECTRICAL SHOCK RESULTING IN PERSONAL INJURY OR DEATH.

SYMPTOM	POSSIBLE CAUSE	REMEDY
Unit will not run	• Power off or loose electrical connection • Thermostat out of calibration-set too high • Defective contactor • Blown fuses • Transformer defective • High pressure control open (if provided) • Interconnecting low voltage wiring damaged	• Check for correct voltage at compressor contactor in control box • Reset • Check for 24 volts at contactor coil - replace if contacts are open • Replace fuses • Check wiring-replace transformer • Reset-also see high head pressure remedy-The high pressure control opens at 610 PSIG • Replace thermostat wiring
Condenser fan runs, compressor doesn't	• Run capacitor defective (single phase only) • Start relay defective (single phase on;y) • Loose connection • Compressor stuck, grounded or open motor winding, open internal overload. • Low voltage condition • Low voltage condition	• Replace • Replace • Check for correct voltage at compressor - check & tighten all connections • Wait at least 2 hours for overload to reset. If still open, replace the compressor. • At compressor terminals, voltage must be within 10% of rating plate volts when unit is operating • Add start kit components
Insufficient cooling	• Improperly sized unit • Improper airflow • Incorrect refrigerant charge • Air, non-condensibles or moisture in system • Incorrect voltage	• Recalculate load • Check - should be approximately 400 CFM per ton. • Charge per procedure attached to unit service panel • Recover refrigerant, evacuate & recharge, add filter drier • At compressor terminals, voltage must be within 10% of rating plate volts when unit is operating.
Compressor short cycles	• Incorrect voltage • Defective overload protector • Refrigerant undercharge	• At compressor terminals, voltage must be ±10% of nameplate marking when unit is operating. • Replace - check for correct voltage • Add refrigerant
Registers sweat	• Low evaporator airflow	• Increase speed of blower or reduce restriction - replace air filter
High head-low vapor pressures	• Restriction in liquid line, expansion device or filter drier • Flow check piston size too small • Incorrect capillary tubes • TXV does not open	• Remove or replace defective component • Change to correct size piston • Change coil assembly • Replace TXV
High head-high or normal vapor pressure - Cooling mode	• Dirty condenser coil • Refrigerant overcharge • Condenser fan not running • Air or non-condensibles in system	• Clean coil • Correct system charge • Repair or replace • Recover refrigerant, evacuate & recharge
Low head-high vapor pressures	• Flow check piston size too large • Defective Compressor valves • Incorrect capillary tubes	• Change to correct size piston • Replace compressor • Replace coil assembly
Low vapor - cool compressor - iced evaporator coil	• Low evaporator airflow • Operating below 65°F outdoors • Moisture in system • TXV limiting refrigerant flow	• Increase speed of blower or reduce restriction - replace air filter • Add Low Ambient Kit • Recover refrigerant - evacuate & recharge - add filter drier • Replace TXV
High vapor pressure	• Excessive load • Defective compressor	• Recheck load calculation • Replace
Fluctuating head & vapor pressures	• TXV hunting • Air or non-condensate in system	• Check TXV bulb clamp - check air distribution on coil - replace TXV • Recover refrigerant, evacuate & recharge
Gurgle or pulsing noise at expansion device or liquid line	• Air or non-condensibles in system	• Recover refrigerant, evacuate & recharge