INSTALLATION INSTRUCTIONS

PACKAGED HEAT PUMPS FEATURING INDUSTRY STANDARD R-454B REFRIGERANT

RHPAYB (2, 2.5 TONS)
RHPXYB (3, 3.5, 4, 5 TONS)
RHPXYC (3, 4, 5 TONS)



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

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RECOGNIZE THIS SYMBOL AS AN INDICATION OF IMPORTANT SAFETY INFORMATION!

⚠WARNING

THESE INSTRUCTIONS ARE INTENDED AS AN AID TO QUALIFIED 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, CARBON MONOXIDE POISONING, EXPLOSION, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

⚠WARNING

PROPOSITION 65 WARNING: THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

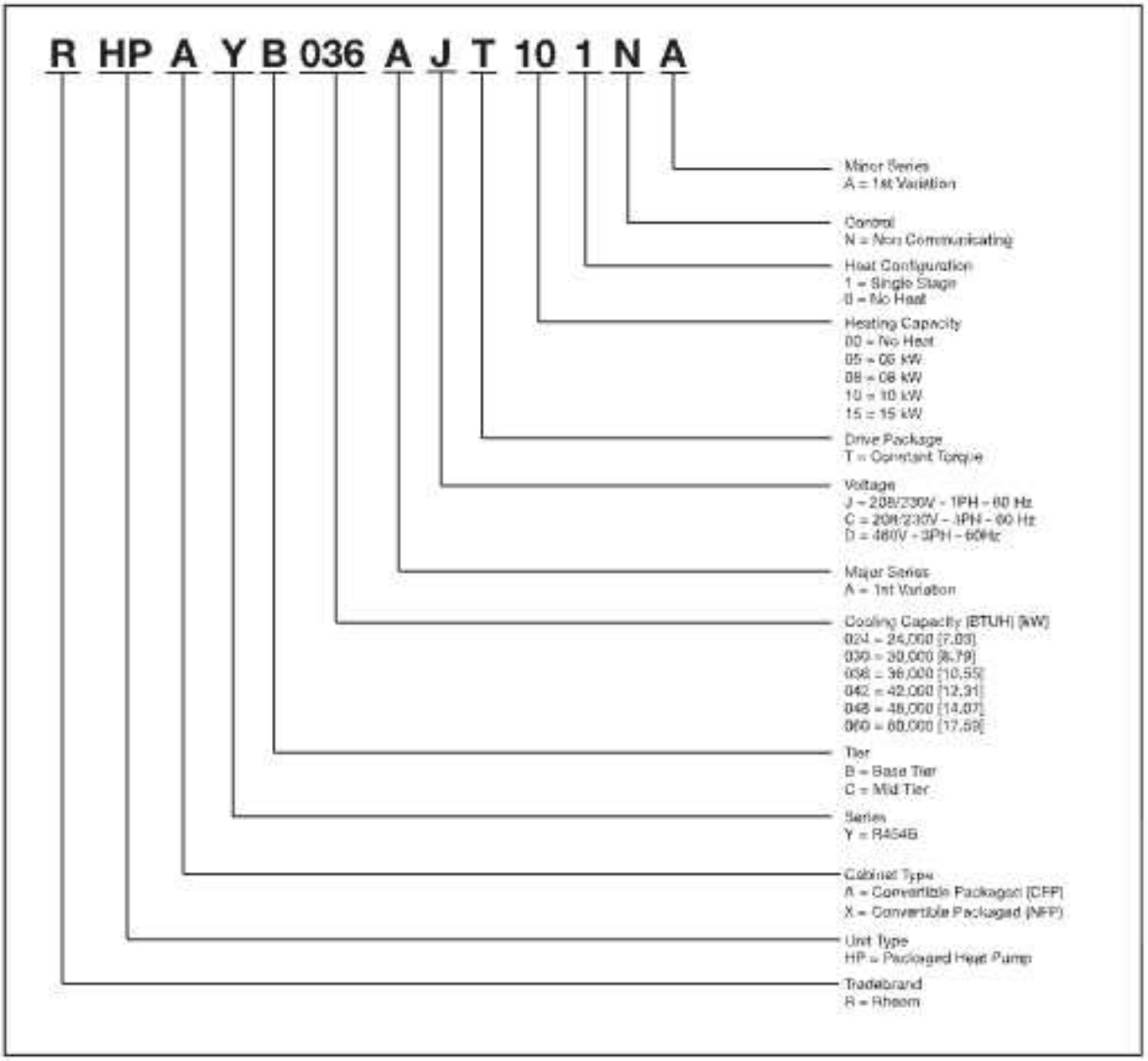
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IMPORTANT: *TO INSURE PROPER INSTALLATION AND OPERATION OF THIS PRODUCT, COMPLETELY READ ALL INSTRUCTIONS PRIOR TO ATTEMPTING TO ASSEMBLE, INSTALL, OPERATE, MAINTAIN OR REPAIR THIS PRODUCT. UPON UNPACKING OF THE FURNACE, INSPECT ALL PARTS FOR DAMAGE PRIOR TO INSTALLATION AND START-UP.*

I. MODEL NUMBER BREAKDOWN PAGE



II. IMPORTANT SAFETY AND GENERAL INFORMATION

A. Introduction

This booklet contains the installation and operating instructions for your packaged heat pump unit. There are some precautions that should be taken to ensure proper operation. 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.

The images contained within this document may not be an exact representation of every unit, accessory, installation, etc. All dimensions contained in this document are approximations. We reserve the right to change the content of this document at any time.

⚠WARNING: The manufacturer's warranty does not cover any damage or defect to the heat pump 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.

B. Rated performance

Scroll compressors require a break-in period (typically less than a week or two of of run time) to achieve maximum performance. This break-in can be accelerated. for agency testing purposes, by operating in high stage cooling for 20 hours at 115 deg F outdoor and 80 deg dry bulb / 75 deg wet bulb indoor.

SETUP

- ASHRAE 37 - 2009 (RA 2019)

PERFORMANCE:

- ANSI/ASHRAE 90.1 - 2022
- ANSI/ASHRAE 103 (2022)
- Standards for Unitary Small AC Equipment AHRI 210/240 (2023)

SAFETY

- UL 60335-2-40 4th edition

QUALITY

- ISO 9001: 2015

C. Importance of a Quality Installation

Optimal system performance and longevity depend upon a quality and proper installation. Failure to properly setup and commission this unit could result in undesirable operation and subsequent faults and potential failures.

Carefully follow all guidelines listed in the manual and industry best practices. Conform to all local code requirements. Contact your local technical representative with any questions or concerns.

If any hot work is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment must be on site. A dry power CO2 fire extinguisher must be near the charging area at all times during installation, commissioning, service, and decommissioning.

C.1. Working Personnel Qualifications

Every installation, maintenance, service, and repair working procedure must be conducted by qualified personnel who have been trained in operating and servicing units that employ flammable refrigerants such as R-454B.

Examples of working procedures include but are not limited to:

- Breaking into the refrigeration circuit
- Opening sealed components
- Opening ventilated enclosures

This appliance is not intended for use by persons (including children) when reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

D. Importance of Air Flow and Setup

Optimal system performance is also dependant upon having the ideal airflow across the condensing and evaporating coils, and upon matching the charge weight to the manufacturer's spec for the unit. Improper or restricted air flow, and incorrect charge weight, will hinder the performance of the unit. Please refer to the manufacturer's recommended clearances for setting the unit and the included guide for setting air flow. Refer to the rating plate for the charge weight.

II. IMPORTANT SAFETY AND GENERAL INFORMATION

E. Checking Product and Inspection

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. IMPORTANT: Check the unit model number, heating size, electrical characteristics, and accessories to determine if they are correct.

III. GENERAL SPECIFICATIONS

A. Safety Warnings

⚠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.

⚠WARNING: Disconnect all power to the unit before starting maintenance. Failure to do so can result in severe electrical shock or death

⚠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.

⚠WARNING: The unit must be permanently grounded. A grounding lug is provided in the electric heat 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.

⚠WARNING: Only electric heater kits supplied by this manufacturer as described in this publication have been designed, tested, and evaluated 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.

⚠DANGER: Risk of fire or explosion. Flammable refrigerant used. To be repaired only by trained service personnel. Do not puncture refrigerant tubing.

⚠WARNING: Risk of fire or explosion. Dispose of properly in accordance with Federal Or Local Regulations. Flammable refrigerant used.

⚠DANGER: Risk of fire or explosion. Flammable refrigerant used. Consult the repair manual/owner's guide before attempting to service this product. All safety precautions must be followed.

⚠DANGER: Risk of fire or explosion due to flammable refrigerant used. Follow handling instructions carefully in compliance with National Regulations.

⚠WARNING: Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

⚠WARNING: The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance, or an operating electric heater).

⚠WARNING: Do not pierce or burn.

⚠WARNING: Be aware that refrigerants may not contain an odor.

⚠WARNING: If this unit is connected via an air duct system to one or more rooms with an area less than the specified minimum area, that room shall be without continuously operating flames or other potential ignition sources. See ***Appendix F -A2L Refrigerant Installation Safety Data***.

⚠WARNING: Auxiliary devices which may be a potential ignition source shall not be installed in the ductwork.

⚠WARNING: If this unit is connected via a duct to one or more rooms, only auxiliary devices approved by the manufacturer that are declared suitable with A2L refrigerants shall be installed in the connecting ductwork.

III. GENERAL SPECIFICATIONS

⚠WARNING: Appliance shall be installed, operated, and stored in a room with a floor area larger than 'X' m^2. See ***Section XXVI –A2L Refrigerant Installation Safety Data.***

⚠WARNING: TURN OFF ELECTRIC POWER AT THE FUSE BOX OR SERVICE PANEL BEFORE MAKING ANY ELECTRICAL CONNECTIONS. ALSO, THE GROUND CONNECTION MUST BE COMPLETED BEFORE MAKING LINE VOLTAGE CONNECTIONS. FAILURE TO DO SO CAN RESULT IN ELECTRICAL SHOCK, SEVERE PERSONAL INJURY OR DEATH.

⚠WARNING: IMPORTANT: ALL MANUFACTURER PRODUCTS MEET CURRENT FEDERAL OSHA GUIDELINES FOR SAFETY. CALIFORNIA PROPOSITION 65 WARNINGS ARE REQUIRED FOR CERTAIN PRODUCTS, WHICH ARE NOT COVERED BY THE OSHA STANDARDS.
CALIFORNIA'S PROPOSITION 65 REQUIRES WARNINGS FOR PRODUCTS SOLD IN CALIFORNIA THAT CONTAIN, OR PRODUCE, ANY OF OVER 600 LISTED CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR BIRTH DEFECTS SUCH AS FIBERGLASS INSULATION, LEAD IN BRASS, AND COMBUSTION PRODUCTS FROM NATURAL GAS. ALL "NEW EQUIPMENT" SHIPPED FOR SALE IN CALIFORNIA WILL HAVE LABELS STATING THAT THE PRODUCT CONTAINS AND/OR PRODUCES PROPOSITION 65 CHEMICALS. ALTHOUGH WE HAVE NOT CHANGED OUR PROCESSES, HAVING THE SAME LABEL ON ALL OUR PRODUCTS FACILITATES MANUFACTURING AND SHIPPING. WE CANNOT ALWAYS KNOW "WHEN, OR IF" PRODUCTS WILL BE SOLD IN THE CALIFORNIA MARKET.

YOU MAY RECEIVE INQUIRIES FROM CUSTOMERS ABOUT CHEMICALS FOUND IN, OR PRODUCED BY, SOME OF OUR HEATING AND AIR-CONDITIONING EQUIPMENT, OR FOUND IN NATURAL GAS USED WITH SOME OF OUR PRODUCTS. LISTED BELOW ARE THOSE CHEMICALS AND SUBSTANCES COMMONLY ASSOCIATED WITH SIMILAR EQUIPMENT IN OUR INDUSTRY AND OTHER MANUFACTURERS.
- **GLASS WOOL (FIBERGLASS) INSULATION**
- **CARBON MONOXIDE (CO)**
- **FORMALDEHYDE**
- **BENZENE**

MORE DETAILS ARE AVAILABLE AT THE WEBSITES FOR OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION), AT WWW.OSHA.GOV AND THE STATE OF CALIFORNIA'S OEHHA (OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT), AT WWW.OEHHA.ORG. CONSUMER EDUCATION IS IMPORTANT SINCE THE CHEMICALS AND SUBSTANCES ON THE LIST ARE FOUND IN OUR DAILY LIVES. MOST CONSUMERS ARE AWARE THAT PRODUCTS PRESENT SAFETY AND HEALTH RISKS, WHEN IMPROPERLY USED, HANDLED AND MAINTAINED.

B. Major Components

The unit includes a hermetically-sealed refrigerating system consisting of a scroll compressor, condenser coil, evaporator coil, TXV(s), a reversing valve, a circulation air blower, a condenser fan, and all necessary internal electrical wiring. The refrigeration system of these units is factory evacuated, charged, and performance tested. Refrigerant amount and type are indicated on rating plate.

C. Product Data Information

C.1. Product Specifications

The packaged Heat pump rooftop unit is available both with and without auxiliary electric heat. 5, 8, 10 and 15 kW kits are available for field install, see spec sheets for factory installed electric heater kit options. Cooling / Heating capacities are: 2, 2.5, 3, 3.5, 4 and 5 nominal tons. Units are convertible from downflow supply/return to sideflow supply/return by relocation of supply/return cover panels. See section ***Section VII*** for more details.

The units are weatherized for mounting outside of the building.

C.2. Dimensional Information

IMPORTANT: This unit must be mounted level in both directions to allow water to drain from the condenser section and condensate pan.

⚠WARNING: Units are not design certified to be installed inside the structure. Doing so can cause inadequate unit performance as well as property damage.

FIGURE 1A
RHPA CABINET
UNIT DIMENSIONS AND ACCESS LOCATIONS

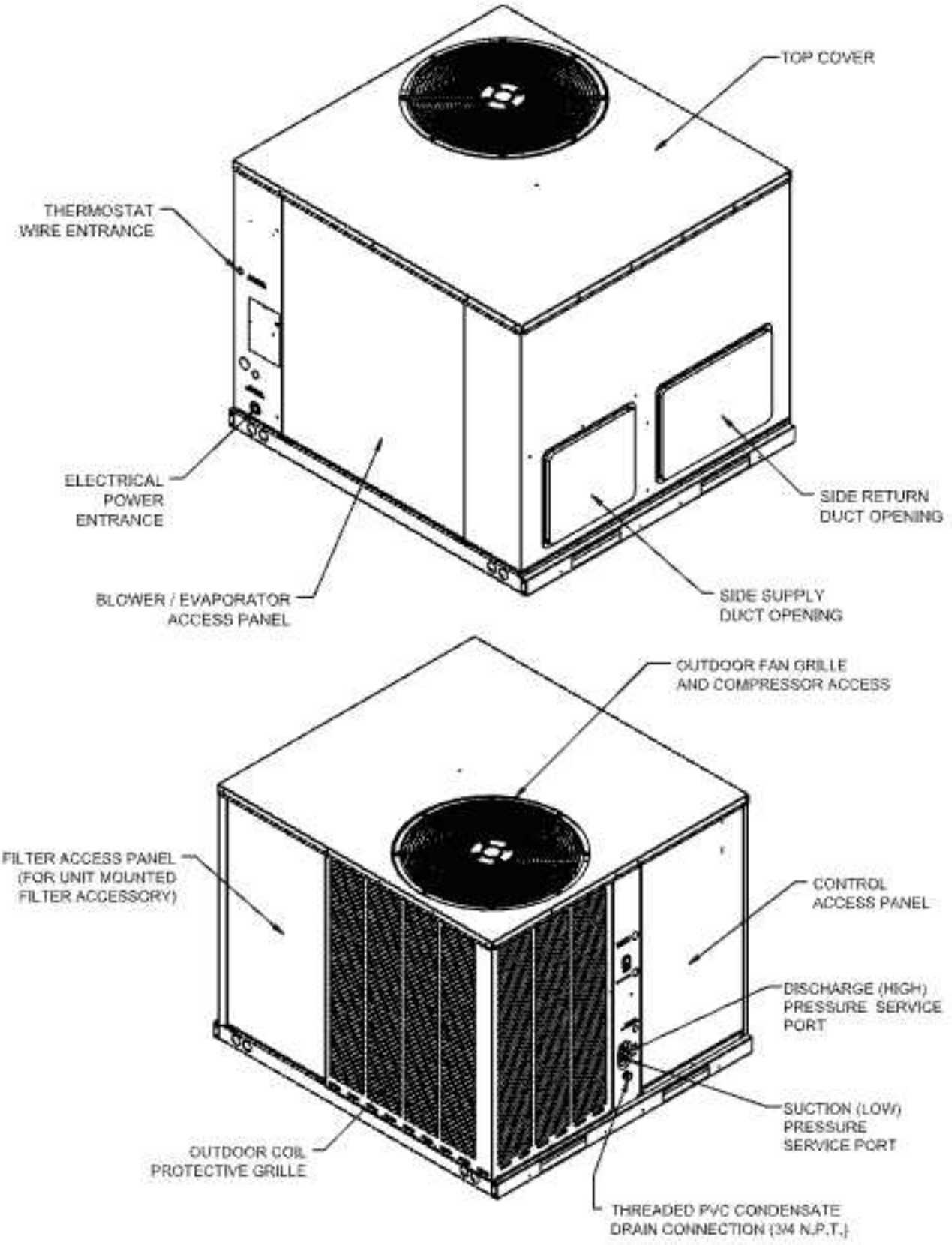
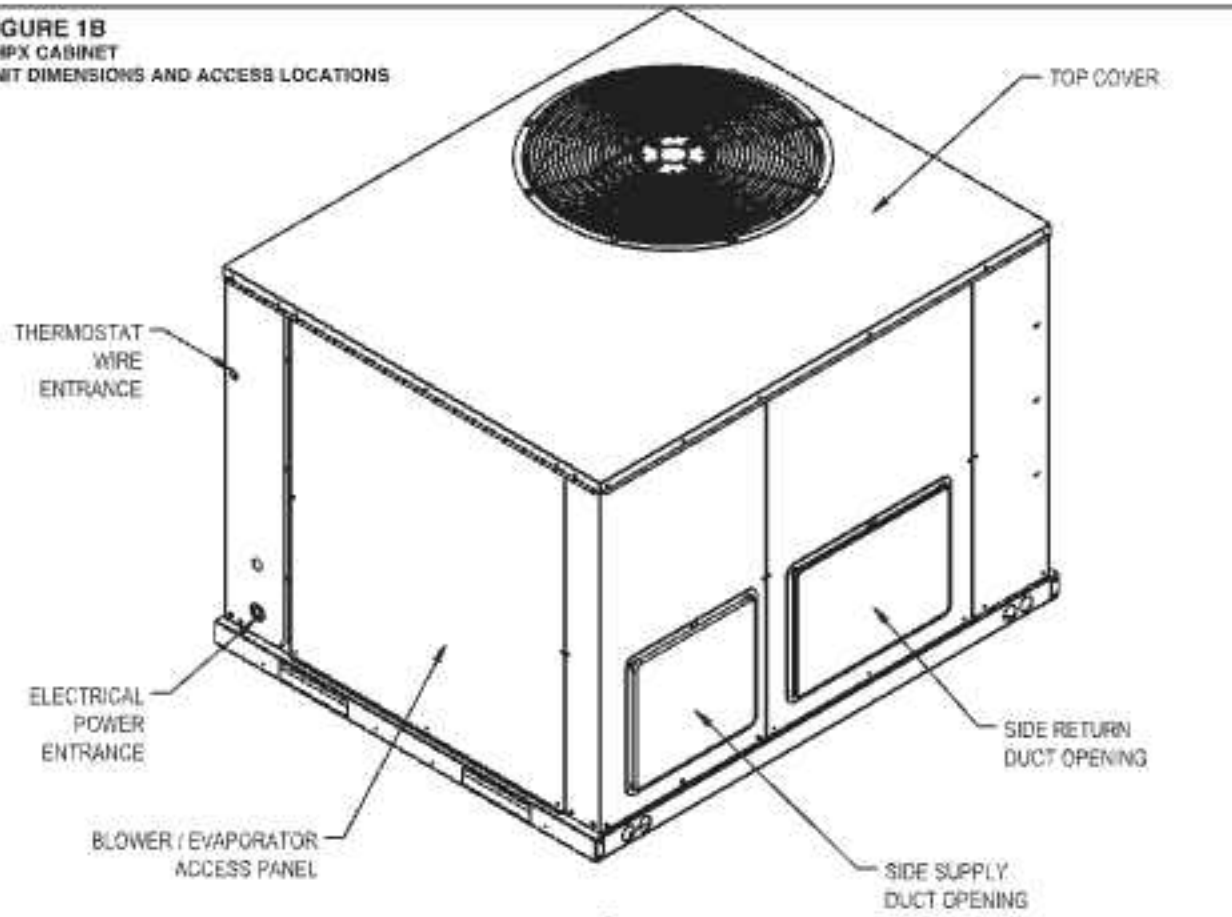
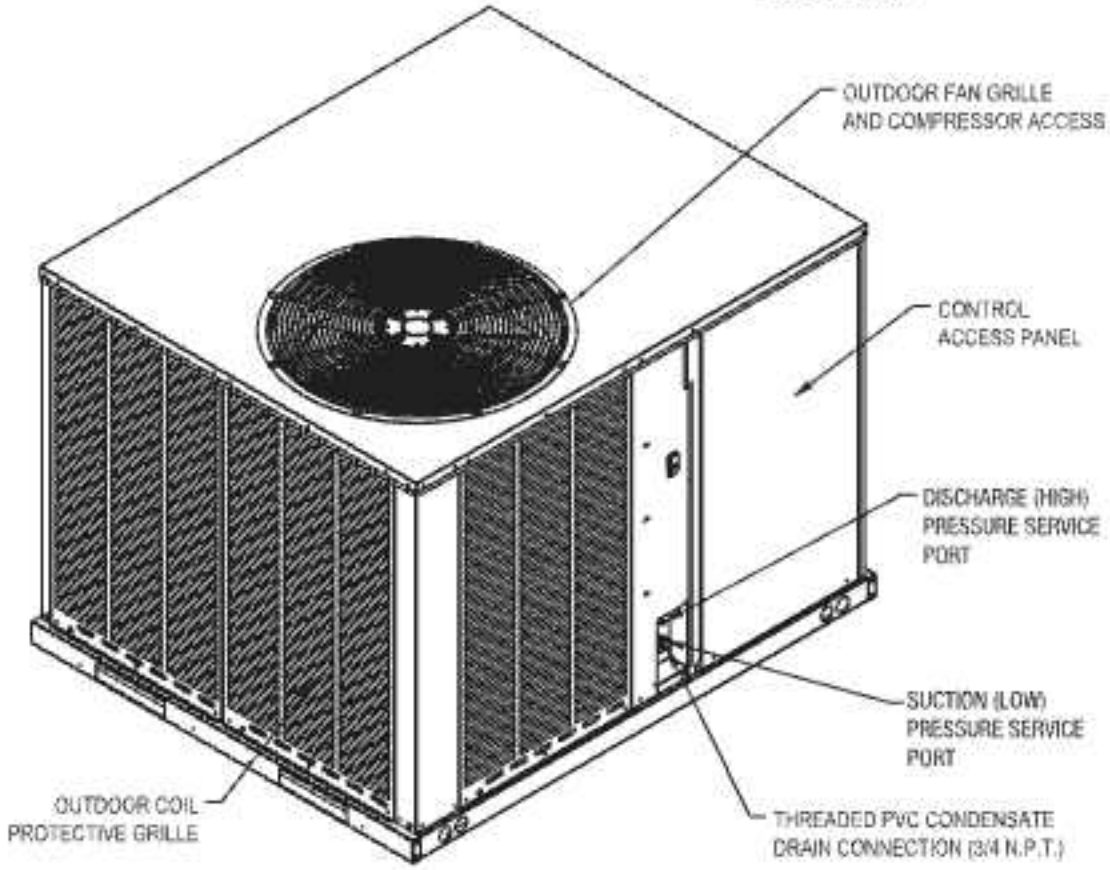


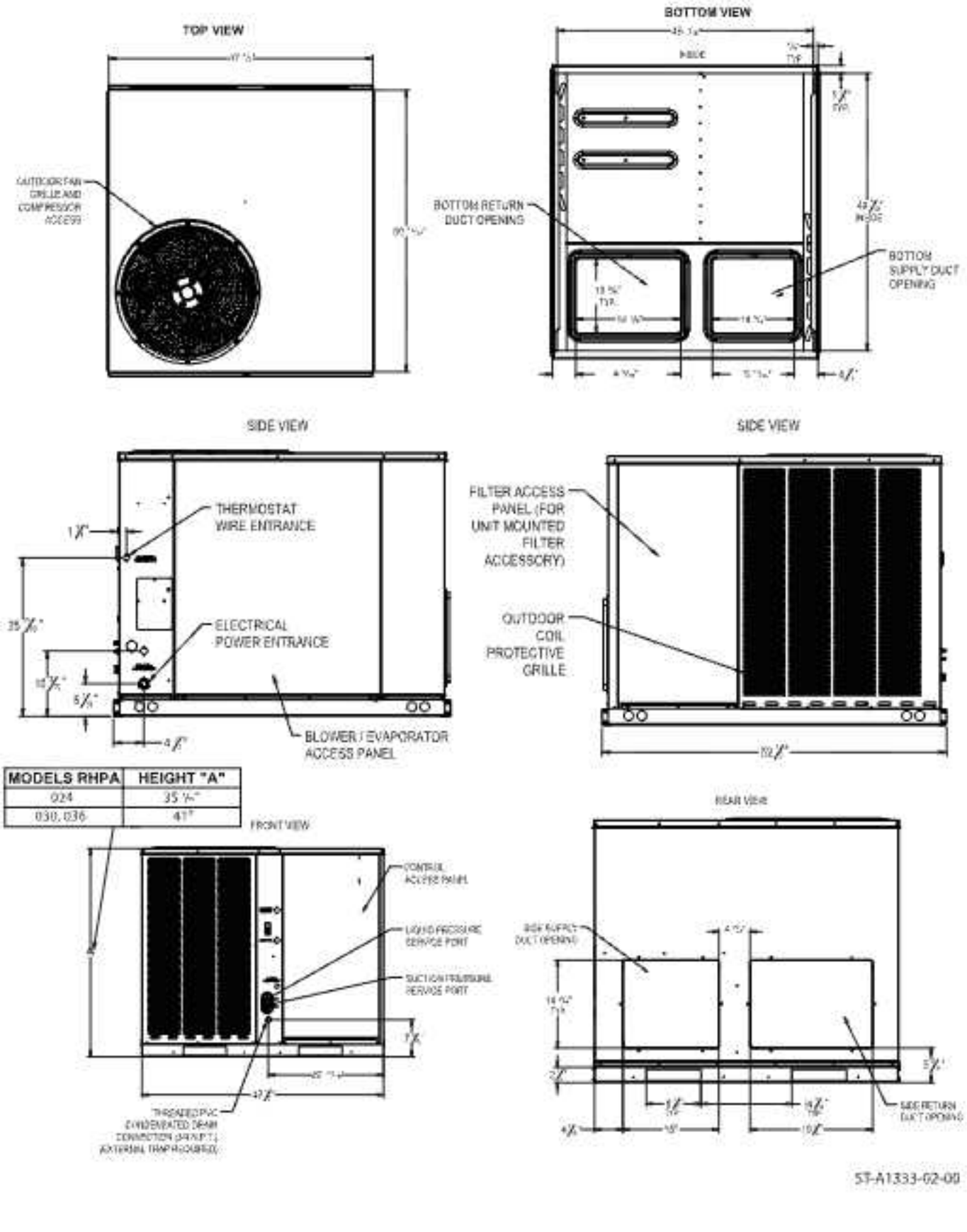
FIGURE 1B
RHPX CABINET
UNIT DIMENSIONS AND ACCESS LOCATIONS





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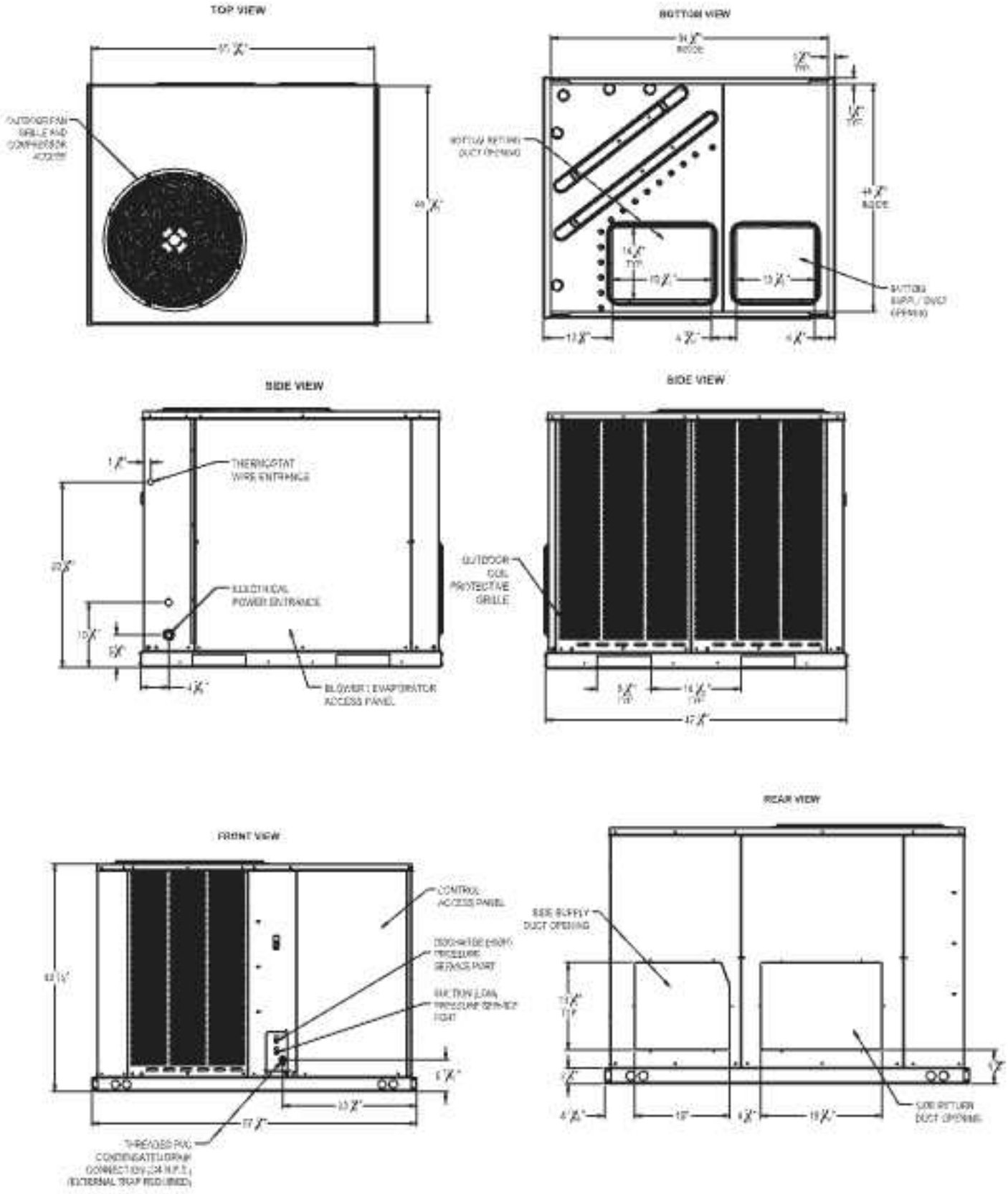
FIGURE 1C
RHPA - UNIT DIMENSIONS AND ACCESS LOCATIONS



MODELS RHPA	HEIGHT "A"
024	35 ⅜"
030, 036	41"

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FIGURE 1D
RHPX - UNIT DIMENSIONS AND ACCESS LOCATIONS



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IV. INSTALLATION OF THE UNIT

A. General

A.1. Installation

Install this unit in accordance with local and national standards. Any and all work must be done by authorized personnel.

A.2. Pre-Installation Checkpoints

Before attempting any installation, carefully consider the following points:

- Structural strength of supporting members (Rooftop Installation)
- Clearances and provision for servicing
- Power supply and wiring
- Air duct connections and sizing
- Drain facilities and connections
- Location for minimum noise and vibration – away from bedroom windows

B. Tool and Refrigerant

A leak detection system is installed in this unit. The unit must be powered at all times except during service.

This unit is equipped with electrically powered safety measures. To be effective, the unit must be electrically powered at all times after installation, other than when servicing.

B.1. Tools Required for Installing and Servicing R-454B 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
- Zero-loss fittings

Recovery Cylinders:

- 400 PSIG Pressure Rating

Dept. of Transportation

- 4BA400 or BW400

B.2. Specifications of R-454B

All units are factory charged with R-454B Refrigerant.

Application: R-454B is not a drop-in replacement for R-410A. Equipment designs must accommodate the safety group A2L of R-454B. It cannot be retrofitted into R-410A units.

Physical Properties: R-454B has an atmospheric bubble point of 59.6°F [50.9°C] and an atmospheric dew point of -58.0°F [-50.0°C]. Its bubble point saturation pressure at 77°F [25°C] is 213 psig [1469 kPa] and dew point saturation pressure at 77°F [25°C] is 205 psig [1415 kPa].

Pressure: The pressure of R-454B is similar to that of R-410A. Recovery and recycling equipment, pumps, hoses, and the like must have design pressure ratings appropriate for R-454B. Manifold sets need to range up to 800 psig [5,516 kPa] high-side and 250 psig [1,724 kPa] low-side with a 550 psig [3,792 kPa] low-side retard. Hoses need to have a service pressure rating of 800 psig [5,516 kPa]. Recovery cylinders need to have a 400 psig [2,758 kPa] service pressure rating, DOT 4BA400 or DOT BW400.

R-454B is classified as safety group A2L, where the 2L flammability class indicated flammability.

B.3. Quick Reference Guide for R-454B

Ensure that servicing equipment is designed to operate with R-454B.

- Refrigerant R-454B operates at pressure similar to R-410A. However, it is classified in safety group A2L. Ensure that servicing equipment is compatible with R-454B.
- Refrigerant cylinders are no longer color-coded. R-454B refrigerant cylinders are light green grey in color with a red band on the shoulder or top of the cylinder to indicate flammability.
- R-454B, as with other HFCs is only compatible with POE oils.
- Vacuum pumps will not remove moisture from POE oil
- R-454B systems are to be charged with liquid refrigerants.
- 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-454B.

B.4. Evaporator Coil/TXV

The thermostatic expansion valve is specifically designed to operate with R- 454B. If required, **the existing TXV and/or evaporator coil must be replaced with the factory specified components specifically designed for R-454B.**

⚠WARNING: Disconnect all power to the unit before starting service. Failure to do so can cause electrical shock resulting in personal injury or death.

B.5. Minimum Room Area

Because this unit uses refrigerant R-454B, UL requires a minimum room area for the total conditioned space (TAmin) that is supplied by this equipment.

IV. INSTALLATION OF THE UNIT

The UL Safety Standard defines an individual room area as the room area enclosed by floors, walls, partitions, and doors of the space where the unit is installed, also as the room area into which refrigerant can leak. Each room/conditioned space will need to be considered for the total area requirements.

The minimum room area of the total conditioned space for each base model is listed in ***Section XXVI – Refrigerant Installation Safety Data.***

B.6. No Ignition Sources

When performing work that involves exposing any pipework, no person working on or near the refrigerant system may use any ignition sources that could lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept far away from the site during installation, repair, removal, or disposal, during which refrigerant can possibly be released into surrounding space. Before work takes place, the area around the equipment must be surveyed to ensure that there are no flammable hazards or ignition risks. Additionally, "No Smoking" signs must be displayed.

C. Choosing a Location

C.1.Unit Location: Allowable Clearances and Operational Issues

The unit location must comply with the allowable clearances listed in ***Figure 2.*** Failure to comply with the recommended clearances may result in operational issues such as decreased capacity, restricted condenser airflow, and condenser motor fatigue.

C.2. Outside Installation

⚠WARNING: These units are designed certified for outdoor installation only. Installation inside any part of a structure can result in inadequate unit performance as well as property damage.

1. Select a location where external water drainage cannot collect around unit.

2. Provide a level slab sufficiently high enough above grade to prevent surface water from entering the unit.

Important: To prevent transmission of noise or vibration, slab should not be connected to building structure.

3. Locate the unit to provide proper access for inspection and servicing as shown in ***Figure 2.***

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. Where snowfall is anticipated, the height of the unit above the ground level must be considered. Mount unit high enough to be above anticipated maximum area snowfall.

7. Select an area which will keep the areas of the vent, air intake, and A/C condenser fins free and clear of obstructions such as weeds, shrubs, vines, snow, etc. Inform the user accordingly.

C.3. Rooftop Installation

1. Before locating the unit on the roof, make sure that the roof structure is adequate to support the weight involved. (See Electrical & Physical Tables in this manual.) **THIS IS VERY IMPORTANT AND IS THE INSTALLER'S RESPONSIBILITY.**

2. For rigging and roofcurb details, see ***Figures 6A and 6B.***

3. The location of the unit on the roof should be such as to provide proper access for inspection and servicing.

IMPORTANT: If unit will not be put into service immediately, block off supply and return air

openings to prevent internal damage.

C.4. Corrosive Environments

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, sulfur or chlorine from lawn watering systems, and various chemical contaminants from industries such as paper mills and petroleum refineries are especially corrosive.

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

1. Avoid having lawn sprinkler heads spray directly on the unit cabinet.

2. In coastal areas, install the unit on the side of the building away from the waterfront.

3. In some situations, fencing or shrubs may give some protection against contaminants. Be mindful of the allowable clearances.

4.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.

5. Regular cleaning and waxing of the cabinet with an automobile polish will provide some protection.

6. A good liquid cleaner may be used several times a year to remove matter that will not wash off with water.

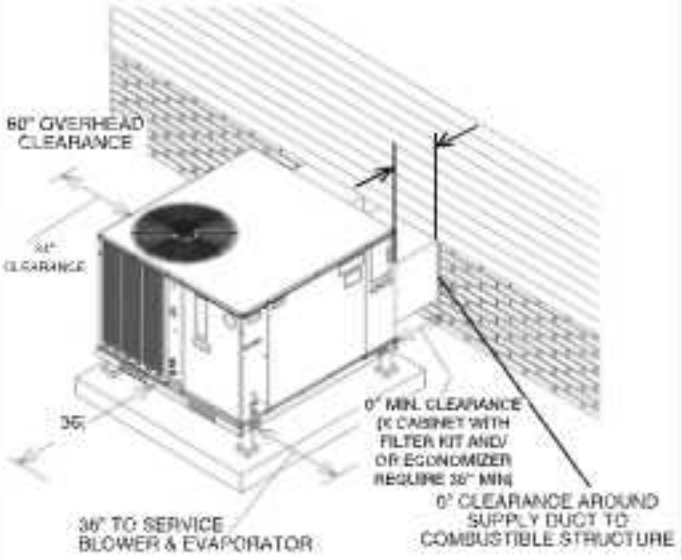
Several different types of protective coatings are offered in some areas. These coatings may provide some benefit, but the effectiveness of such coating materials cannot be verified by the equipment manufacturer. The best protection is frequent cleaning, maintenance and minimal exposure to contaminants.

IV. INSTALLATION OF THE UNIT

Regular cleaning will reduce the buildup of contaminants and help to protect the unit's finish.

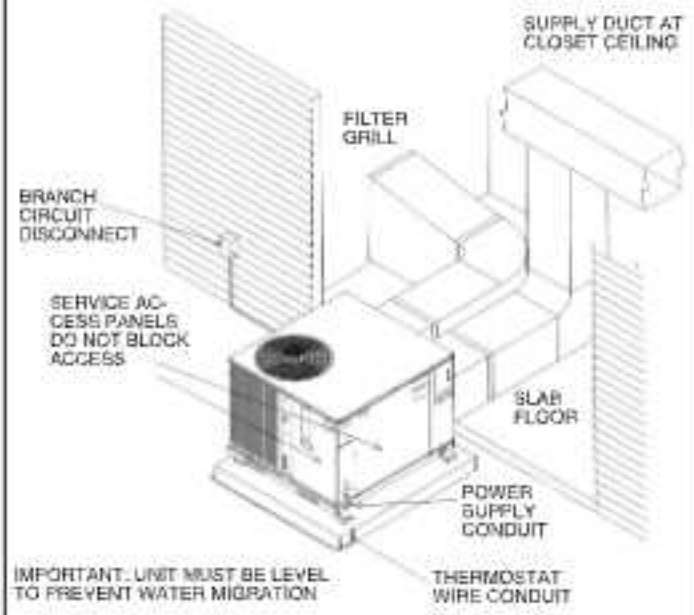
⚠WARNING: Disconnect all power to unit before starting maintenance. Failure to do so can cause electrical shock resulting in personal injury or death.

FIGURE 2
PACKAGED HEAT PUMP
OUTSIDE SLAB INSTALLATION, BASEMENT OR CRAWL SPACE DISTRIBUTION SYSTEM



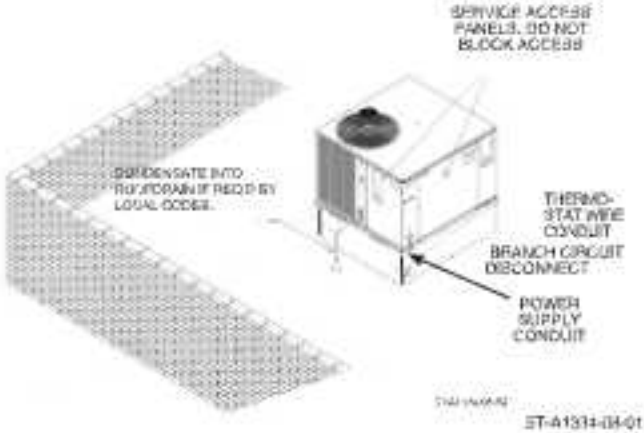
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FIGURE 3
PACKAGED HEAT PUMP
OUTSIDE SLAB INSTALLATION, CLOSET DISTRIBUTION SYSTEM, SLAB FLOOR CONSTRUCTION



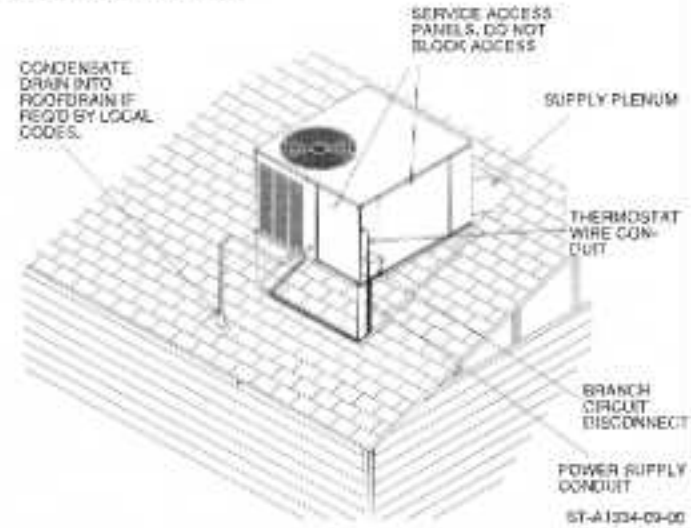
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FIGURE 4
PACKAGED AIR CONDITIONER FLAT ROOFTOP INSTALLATION, ATTIC OR DROP CEILING DISTRIBUTION SYSTEM. MOUNTED ON ROOFCURB. CURB MUST BE LEVEL.



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FIGURE 5
PACKAGED HEAT PUMP
PITCHED ROOFTOP INSTALLATION, ATTIC OR DROP CEILING DISTRIBUTING SYSTEM. MUST BE MOUNTED LEVEL.



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FIGURE 6A
RHPX CABINET- PACKAGED AIR CONDITIONER – LIFTING DETAIL

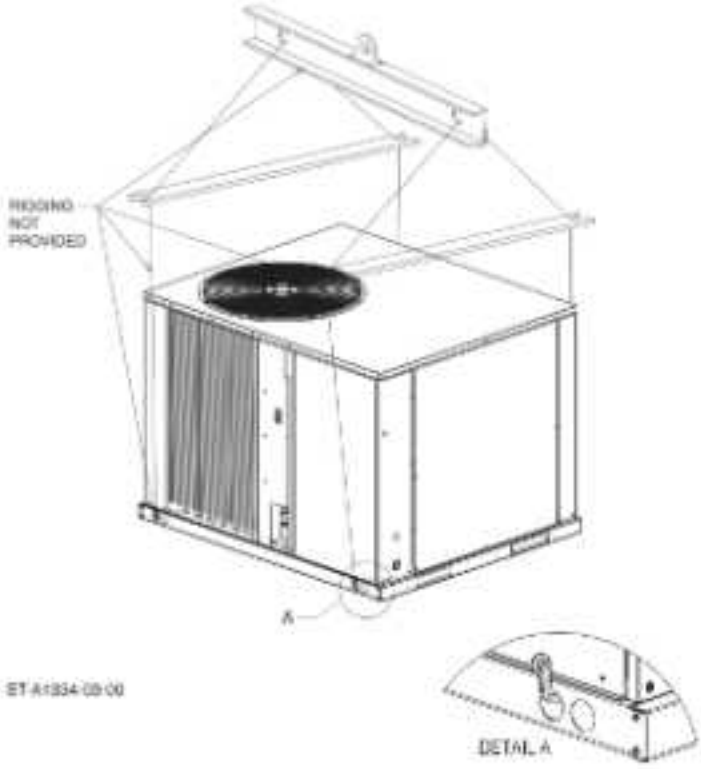


FIGURE 6B
RHPA CABINET- PACKAGED AIR CONDITIONER – LIFTING DETAIL

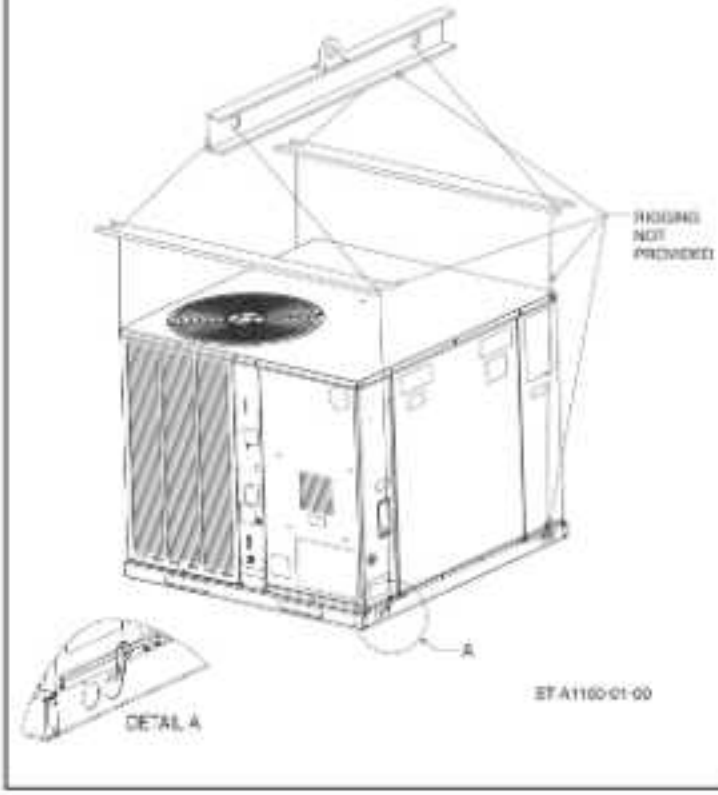


FIGURE 7
ROOFCURB

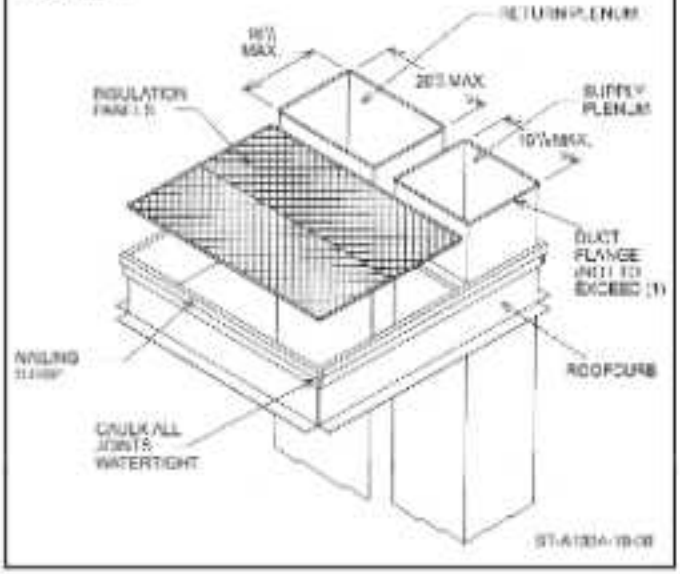
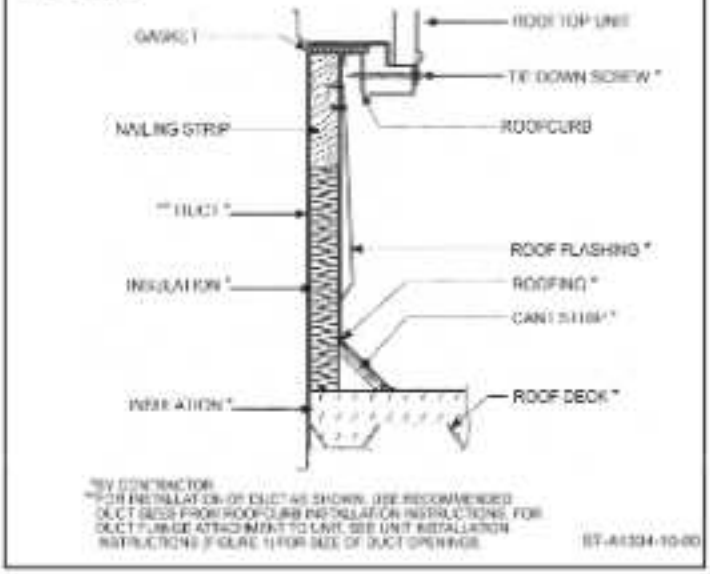


FIGURE 8
ROOFCURB



V. DUCTWORK

Ductwork should be fabricated by the installing contractor in accordance with local codes, state codes and NFPA90A. Industry manuals may be used as a guide when sizing and designing the duct system - contact Air Conditioning Contractors of America, 1513 16th St. N.W., Washington, D.C. 20036.

Place the unit as close to the space to be air conditioned as possible allowing clearance dimensions as indicated. Run ducts 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. Consider a slab installation 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.

Provide balancing dampers for each branch duct in the supply system. Properly support the ductwork from the structure.

When installing ductwork use noncombustible flexible connectors between ductwork and unit to reduce noise and vibration transmission into the ductwork.

⚠ 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.

VI. FILTERS

Filters are not provided with this unit. They may be supplied and installed in the return air duct by the installer. A field installed filter grille is recommended for easy and convenient access to the filters for periodic inspection and cleaning. Filters must have adequate face area for the rated air quantity of the unit. See Airflow Performance Table - or Electrical and Physical Data Table - for recommended filter size.

However, if an internal filter is required, an optional internal filter kit is available which will work for downflow or horizontal applications. For installation, see Filter Kit Installation Instruction.

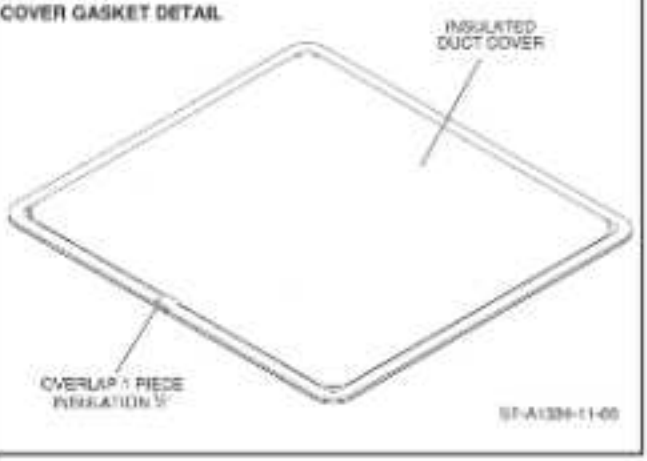
NOTE: Do not operate the system without filters.

VII. CONVERSION PROCEDURE

1. HORIZONTAL TO DOWNFLOW
   a. Remove screws and covers from the downflow supply and return sections. Both covers are accessible from the inside of the unit.

      NOTE: Supply cover must be rotated 90° before it can be removed.
   b. Install gasket (supplied with parts bag) around perimeter of cover on the insulated side. See Figure 9.
   c. Install covers on the outside of the unit over the horizontal supply and return opening using existing screws.

FIGURE 9
COVER GASKET DETAIL



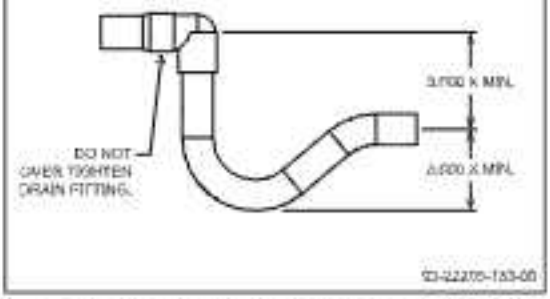
VIII. CONDENSATE DRAIN

IMPORTANT: DO NOT OPERATE THE UNIT WITHOUT A CONDENSATE DRAIN TRAP INSTALLED

1. The condensate drain tube has a threaded male 3/4" NPT connection.
2. Use a thin layer of Teflon tape or paste on drain pan connections and install only hand tight. It is recommended that PVC cement not be used so that the drain line can be easily cleaned in the future.
3. Drain line must be no smaller than the drain tube outlet and adequately sized to accommodate the condensate discharge from the unit.
4. Drain line must be routed to an acceptable drain or outdoors in accordance with local codes.
5. Do not connect the condensate drain line to a closed sewer pipe. Connection to a vented sewer line is allowed.
6. Drain line may need insulation or freeze protection in certain applications.
7. The drain line includes a 3/16" hole on top of the line near the bulkhead to relieve negative pressure and allow proper drainage in the event of a dried out trap.
8. If condensate is running out of this hole during cooling operation, check for obstruction in the drain line.

NOTICE

DO NOT OPERATE UNIT WITHOUT CONDENSATE DRAIN TRAP



IX. CONDENSATE DRAIN, OUTDOOR COIL

The outdoor coil during heating operation will sweat or run water off. The outdoor coil will also run water off during the defrost cycle. See Section VI, Installation, for mounting precautions.

X. ELECTRICAL WIRING

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

*C.E.C. in Canada

Refer to Section XXIV (Wiring Diagrams) for power and control wiring connection details for specific models.

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.
3. For branch circuit wiring (main power supply to unit disconnect), the minimum wire size can be determined from the circuit ampacity found on the unit nameplate or from Table F and the National Electrical Code or Canadian Electrical Code.
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 in the unit control box. Connect ground wire to ground lug.
   b. WITH ELECTRIC HEAT - Connect the field wires to the terminal block on the electric heater kit. Connect the ground wire to the ground lug on the heater kit.

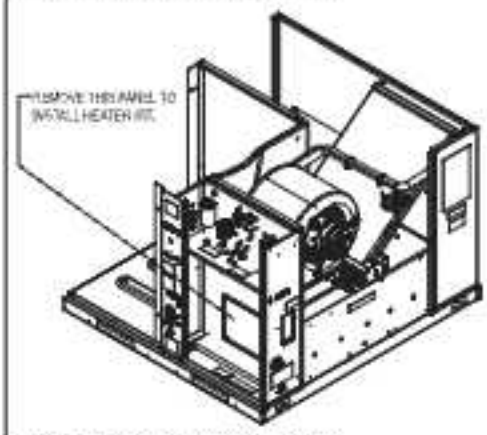
   NOTE: For installation of the heater kit, follow the instructions provided with the heater kit.
6. The pigtail wires in the electric heat box are factory wired to the contactor in the control box and are protected by internal fuses in the hinged fuse box mounted under the control box. See label on fuse box cover for fuse sizing.
7. DO NOT connect aluminum field wires to electric heat kit power input terminals.

B. CONTROL WIRING (Class II)

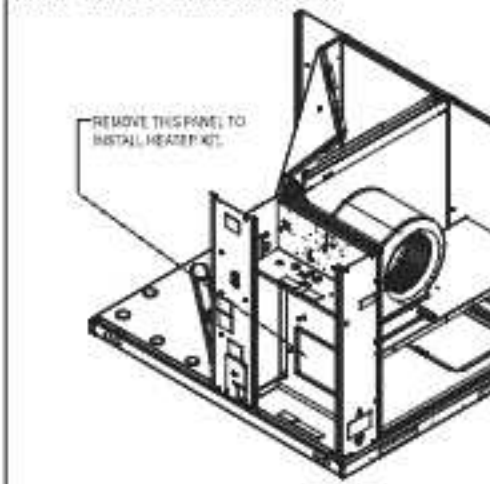
1. Do not run low voltage wiring in conduit with power wiring.
2. Control wiring is routed through the 7/8" hole approximately 11" from the unit top in the corner post adjacent to the control box. Use a minimum #18 AWG thermostat wire. For wire lengths exceeding 50', use #16 AWG thermostat wire. The low voltage wires are connected to the unit pigtails which are supplied with the unit control box. See Figure 10.
3. It is necessary that only heat pump thermostats be used. Please contact your distributor for part number information.
4. 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 10
RHPA - HEATER KIT INSTALLATION



RHPX - HEATER KIT INSTALLATION



C. INTERNAL WIRING

A diagram of the internal wiring of this unit is located on the electrical control 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.

D. GROUNDING

⚠ WARNING

THE UNIT MUST BE PERMANENTLY GROUNDED. A GROUNDING LUG IS PROVIDED IN THE ELECTRIC HEAT KIT FOR A GROUND WIRE. (SEE FIGURE 10.) FAILURE TO GROUND THIS UNIT CAN RESULT IN FIRE OR ELECTRICAL SHOCK CAUSING PROPERTY DAMAGE, SEVERE PERSONAL INJURY OR DEATH.

GROUNDING MAY ALSO BE ACCOMPLISHED BY GROUNDING THE POWER LINE CONDUIT TO THE UNIT. MAKE SURE THE CONDUIT NUT LOCKING TEETH HAVE PIERCED THE INSULATING PAINT FILM OF THE SIDE PANEL.

E. THERMOSTAT

Mount the thermostat 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 heat pump thermostat package CAREFULLY because each has some different wiring requirements.

XI. INDOOR AIR FLOW DATA

All 208/230 volt units are equipped with multi-speed indoor blower motors. Each unit is shipped factory wired for the proper speed at a normal external static. See the blower performance data in this manual.

XII. CRANKCASE HEAT(OPTIONAL)

At initial startup or after extended shutdown periods, make sure crankcase heat is energized for at least 12 hours before compressor is started (disconnect switch closed and wall thermostat "OFF" position).

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

XIII. 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 2.)
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. Has crankcase heat (if required) been on for at least 12 hours?
9. Is unit elevated to allow for outdoor coil condensate drainage during heating operation and defrost?

XIV. 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. Adjust discharge air grilles and balance system.
6. Turn fan switch to "AUTO." Turn system switch to "COOL" and turn temperature setting below room temperature. Unit should run in cooling mode.
7. Is outdoor fan operating correctly in the right direction?
8. Is compressor running correctly?
9. Turn thermostat system switch to "HEAT." Unit should stop. Wait 5 minutes, then raise temperature setting to above room temperature. Unit should run in heating mode and after about 30 to 50 seconds auxiliary heaters, if installed, should come on.
10. Check the refrigerant charge using the Refreigerant charge verification and adjustment process section. Replace service port caps. Service port cores are for system access only and will leak if not tightly capped.
11. 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. Vapor Line 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 _____
12. Check ducts for condensation and air leaks.
13. Check unit for tubing and sheet metal rattles.
14. Instruct the owner on operation and maintenance.
15. Leave "INSTALLATION" and "USE AND CARE" instructions with owner

XV. FINAL INSPECTION SECTION

A. FINAL INSPECTION

A.1. Check For Refrigerant Leaks

Before beginning any work on the system or conducting any hot work, ensure that the area is in the open or that is adequately ventilated. Ventilation must continue while the unit is being worked on. Ventilation is required to safety disperse any released refrigerant into the atmosphere.

Inspect the unit for any damage to the coils and tubing that could cause a leak.

Under no circumstances shall potential sources of ignition be used to search for or detect refrigerant leaks. A halide torch or any other detector using a naked flame must not be used

Electronic leak detectors may be used to detect refrigerant leaks, but the sensitivity may not be accurate and may need recalibration to accurately detect R454-B. Before use, ensure that the detector is not potential ignition source and is suitable for R-454B.

Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and must be calibrated to R-454B.

Leak detection fluids are also suitable but do not use detergents containing chlorine. Examples of leak detection fluids are the bubble method and fluorescent method agents.

If a leak is suspected, all naked flames must be extinguished.

If a refrigerant leak is found that requires brazing, all of the refrigerants must be removed from the system.

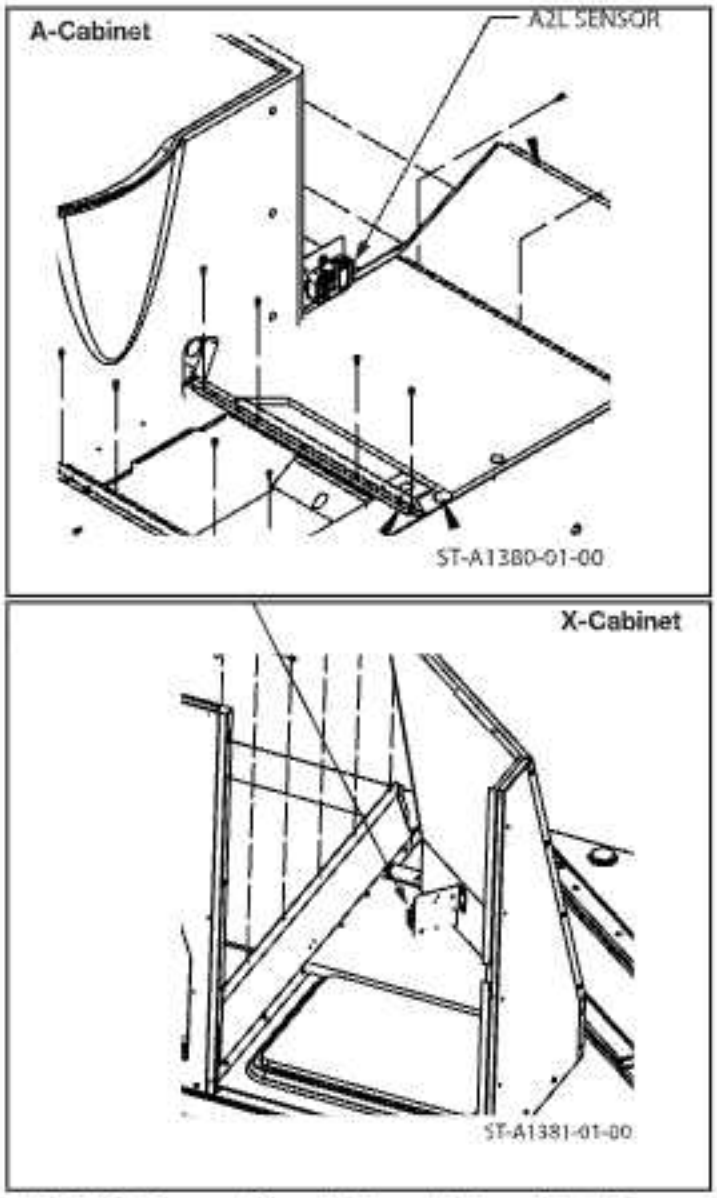
A.1.1. Refrigerant Leak Detection System

The refrigerant leak detection system will continuously monitor the air for a refrigerant leak. If the leak detection system detects a leak, the system will begin mitigation procedures: the blower will turn on and the compressors will shut down. Note: Gas or electric heat functions may continue during mitigation.

At the end of 15 years or if the refrigerant leak detection system becomes inoperable, the leak detection system must be replaced with components specified by the unit's manufacturer. Refer to the manufacturer's website for replacement components.

Figure 11 - A: A2L Sensor Location shows the location of the sensor on the bracket in the return section.

Figure 11: A2L Sensor Location



A.1.2. Operation When A Leak Is Detected

When the unit receives a signal from the A2L sensor, circulation airflow is activated. The following mitigation actions will also be activated:

a. Energize the fan(s) of the appliance to deliver indoor airflow at or above the minimum airflow. See ***Section XXVI—A2L Refrigerant Installation Safety Data.***
   i. The fans will be energized following the input signal to turn on the fan(s)
b. The system de-energizes thermostat and compressor operation.
c. Activate additional mechanical ventilation, if applicable.

The above-mentioned actions will continue for at least 5 minutes after the leak detection system begins mitigation. If the leak is no longer detected, the leak

detection system will reset. If the leak is still present, mitigation actions will continue for another 5 minutes. This cycle will repeat until no leak is detected.

XVI. REFRIGERANT CHARGE VERIFICATION AND ADJUSTMENT PROCESS

This unitary packaged system comes fully charged and tested with R-454B refrigerant from the factory. Adjustment of the refrigerant charge is not required unless the unit is suspected of not having the proper refrigerant charge. Any adjustment must not exceed 2% of the total refrigerant weight listed on the rating plate of the unit and should not supersede correctly weighed-in refrigerant.

Note: Factory charge chart and/or design target subcooling are for gross charge verification.

Charge verification instructions:

1. Allow the unit to operate for 15 minutes before checking or adjusting the charge.
2. Return air temperature must be within comfort conditions (72°F - 82°F).
3. Remove caps from the high-side and low-side pressure service fittings.
4. Record the following measurements:

a. High-side pressure at service fitting

b. Low-side pressure at service fitting

c. Outdoor ambient (air temperature) near the condenser coil

5. Place an "X" on the chart where the high-side and low-side pressures intersect.
6. If the "X" is above the outdoor ambient line by more than 20 PSI, verify the airflow and check for component issues. If no issues are found, reclaim the refrigerant, evacuate the system, and weigh in the refrigerant quantity listed on the rating plate.
7. If the "X" is above the outdoor ambient line by less than 20 PSI, the system can be considered properly charged and no adjustment is necessary.
8. If the "X" is below the outdoor ambient line by more than 20 PSI, inspect the unit for potential loss of refrigerant. Recover the refrigerant and perform a leak check using nitrogen to pressurize the system. If necessary, make repairs and perform a leak check again. Then, evacuate nitrogen from the system, and weigh in the refrigerant quantity listed on the rating plate.
9. If the "X" is below the outdoor ambient line by less than 20 PSI, the refrigerant charge can be increased. If the unit requires an adjustment greater than 2% of the refrigerant quantity listed on the rating plate; follow inspection, repair, and recharge procedures in step 8.

XVII. OPERATION

Most single phase units are operated PSC (no start relay or start capacitor). It is important that such systems be off for a minimum of 5 minutes before restarting to allow equalization of pressures. Do not move the thermostat to cycle unit without waiting five minutes. To do so may cause the compressor to stop on an automatic open overload device or blow a fuse. Poor electrical service can cause nuisance tripping in overloads or blow fuses.

⚠ 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.

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

The amount of auxiliary heat required depends on the heat loss of the structure to be heated and the capacity of the heat pump. It is good practice to install strip heat to maintain at least 60°F indoor temperatures in case of compressor failure. The auxiliary heat is energized by the second stage of the thermostat. The amount of electric heat that is allowed to come on, as determined by the output of the heat pump, may be controlled by an outdoor thermostat.

A. CONTROL SYSTEM OPERATION

1. In the cooling mode, the thermostat will, on a call for cooling, energize the compressor contactor and the indoor blower. The indoor blower can be operated continuously by setting the thermostat fan switch at the "ON" position.
2. In the heating mode, the first heat stage of the thermostat will energize the compressor contactor and the indoor blower relay. The second heat stage will turn on one or more supplementary resistance heaters. The reversing valve is energized except in defrost. If required or considered desirable, the resistance heat may also be controlled by outdoor thermostats.

XIX. DEMAND DEFROST CONTROL AND HIGH/LOW PRESSURE CONTROLS

The demand defrost control monitors the outdoor ambient temperature, outdoor coil temperature and the compressor run time to determine when a defrost cycle is required.

Enhanced Feature Demand Defrost Control: This defrost control has high and low pressure control inputs with unique pressure switch logic built into the microprocessor to provide compressor and system protection without nuisance lockouts. The control cycles the compressor off for 30 seconds at the beginning and the end of the defrost cycle to eliminate the increased compressor noise caused by rapidly changing system pressures when the reversing valve switches. See next page for diagnostic flash codes and sensor resistance values at various temperatures.

DEFROST INITIATION

A defrost will be initiated when the three conditions below are satisfied:

1. The outdoor coil temperature is below 35°F as measured by a good coil sensor,
2. The compressor has operated for at least 34 minutes with the outdoor coil temperature below 35°F and
3. The measured difference between the ambient temperature and the outdoor coil temperature is greater than the calculated difference determined by the defrost control microprocessor.

DEFROST TERMINATION

Once a defrost is initiated, the defrost will continue until fourteen minutes has elapsed or the coil temperature has reached the selected termination temperature. The factory setting is 70°F but can be changed to 50°F, 60°F, or 80°F by relocating the jumper on the control board.

TEMPERATURE SENSORS

The coil sensor is located on the outdoor coil or the liquid line leaving the outdoor coil.

The ambient air sensor is located outside the control box so it can sense outdoor temperatures.

If the ambient sensor fails, the defrost control will initiate a defrost every 34 minutes of compressor run time with the coil temperature below 35°F.

If the coil sensor fails, the defrost control will not initiate a defrost.

TEST MODE

The test mode is initiated by shorting the TEST pins. The unit must have an active heat pump heating call to enter the test mode. In this mode of operation, the enable temperature is ignored and all timers are sped up. To initiate a manual defrost, short and hold the TEST pins. Remove the short when the system switches to defrost mode after the compressor noise abatement delay. The defrost will terminate on time (14 minutes) or when the termination temperature has been reached.

Test Sequence of Operation:

1. Provide a heating call to the heat pump.
2. Short test pins to bypass anti-short cycle timer. (If unit is running, this step is not necessary.)
3. Short test pins and hold them shorted to enter defrost mode.
4. Release test pins once control exits noise abatement delay.
5. Monitor coil temperature when control exits defrost.
6. Unit should return to heating mode.

TROUBLESHOOTING DEMAND DEFROST

During the test mode the coil temperature should be monitored. If the system exits defrost at approximately the termination temperature, the control is operating normally. If not, check the coil and ambient temperature sensor resistances, using the sensor temperature vs. resistance table at the end of this section.

Immerse the sensor in water and measure the resistance of the sensor. At 35°F the resistance of the sensor should be approximately 30,000 ohms.

Ensure that the coil sensor is properly installed that is not loose or touching the cabinet.

HIGH/LOW PRESSURE CONTROL MONITORING - ENHANCED DEFROST CONTROL

Status of high and low pressure controls is monitored by the enhanced feature demand defrost control and the following actions are taken.

High Pressure Control – Provides active protection in both cooling and heating modes at all outdoor ambient temperatures. The high pressure control is an automatic reset type and opens at approximately 610 psig and closes at approximately 420 psig. The compressor and fan motor will stop when the high pressure control opens and will start again if the high side pressure drops to approximately 420 psig where the automatic reset high pressure control resets. If the high pressure control opens 3 times within a particular call for heating or cooling operation, the defrost control will lock out compressor and outdoor fan operation.

Low Pressure Control – Provides active protection in both heating and cooling modes at all outdoor ambient temperatures. The low pressure control is an automatic reset type and opens at approximately 15 psig and closes at approximately 40 psig. Operation is slightly different between cooling and heating modes.

Cooling Mode: The compressor and fan motor will stop when the low pressure control opens and will start again when the low side pressure rises to approximately 40 psig after the low pressure control automatically resets. If the low pressure switch opens 3 times within a particular call for cooling operation, the defrost control will lock out compressor and outdoor fan operation.

Heating Mode: The compressor and outdoor fan motor will stop when the low pressure control opens and

will start again when the low side pressure rises to approximately 40 psig when the low pressure control automatically resets. If the low pressure switch trips 3 times within 120 minutes of operation during a particular call for heating operation, the defrost control will lock out compressor and outdoor fan operation. If the lock-out due to low pressure occurs at an outdoor ambient temperature below 5°F, the defrost control will automatically exit the lock-out mode when the outdoor ambient temperature rises to 5°F. This feature is necessary since the low pressure control could possibly have opened due to the outdoor ambient being very low rather than an actual system fault.

Exiting Lock-Out Mode: To exit the lock-out mode, remove 24 volts to the defrost control by removing power to the unit or by shorting the two defrost control pins together.

ENHANCED FEATURE DEFROST CONTROL DIAGNOSTIC CODES

LED 1	LED 2	Control Board Status
OFF	OFF	No Power
ON	ON	Coil Sensor Failure
OFF	ON	Ambient Sensor Failure
FLASH	FLASH	Normal
OFF	FLASH	Low Pressure Lockout (short test pins to reset)
FLASH	OFF	High Pressure Lockout (short test pins to reset)
ON	FLASH	Low Pressure Control Open
FLASH	ON	High Pressure Control Open
Alternate	Flashing	5 Minute Time Delay

SENSOR TEMPERATURE VS. RESISTANCE TABLE

Degrees C	Degrees F	Ohms
-20	-4	96,974
-10	14	55,298
0	32	32,650
10	50	19,903
20	68	12,493
25	77	10,000
30	86	8,056
40	104	5,324

XX. GENERAL DATA - RHPA- MODELS
NOMINAL SIZES 2-2.5 TONS [7.1-8.8 kW]

Model RHPAYB Series	RHPAYB024AJT	RHPAYB030ACT	RHPAYB030AJT
Cooling Performance[1]			
Nominal Cooling Capacity Btu [kW]	24,000 [7.03]	30,000 [8.79]	30,000 [8.79]
EER2/SEER2[2]	10.6/13.4	10.6/13.4	10.6/13.4
Nominal CFM/AHRI Rated CFM [L/s]	800/970 [378/411]	1000/1030 [472/486]	1000/1030 [472/486]
AHRI Net Cooling Capacity Btu [kW]	22800 [6.68]	28600 [8.38]	28600 [8.38]
Net Sensible Capacity Btu [kW]	17100 [5.01]	21400 [6.27]	21400 [6.27]
Net Latent Capacity Btu [kW]	5700 [1.67]	7200 [2.11]	7200 [2.11]
Net System Power [kW]	2.15	2.7	2.7
Heating Performance (Heat Pumps)			
High Temp. Btuh [kW] Rating	22600 [6.62]	27400 [8.03]	27400 [8.03]
High Temp System Power kW/COP	1.79 / 3.7	2.27 / 3.54	2.27 / 3.54
Low Temp. Btuh [kW] Rating	12800 [3.75]	16000 [4.69]	16000 [4.69]
Low Temp System Power kW/COP	1.71 / 2.2	2.23 / 2.1	2.23 / 2.1
HSPF2[2] (Btu/Watts-hr)	6.7	6.7	6.7
Compressor			
No./Stg/Type	1/1/1/scroll	1/1/1/scroll	1/1/1/scroll
Outdoor Sound Rating (dB)[3]	74	77	77
Outdoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel
Rifled: Tube Size OD or MicroChannel: Depth in. [mm]	0.63 [16.00]	0.63 [16.00]	0.63 [16.00]
Face Area sq. ft. [sq. m]	8.41 [0.78]	9.87 [0.92]	9.87 [0.92]
Rows / FPI [FPcm]	1 / 16 [6]	1 / 16 [6]	1 / 16 [6]
Indoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel
Rifled: Tube Size OD or MicroChannel: Depth in. [mm]	1.00 [25.40]	1.00 [25.40]	1.00 [25.40]
Face Area sq. ft. [sq. m]	3.9 [0.36]	4.3 [0.40]	4.3 [0.40]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TXV	TXV	TXV
Drain Connection No./Size in. [mm]	1 / 0.75 [19]	1 / 0.75 [19]	1 / 0.75 [19]
Outdoor Fan - Type	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/22.0 [559]	1/22.0 [559]	1/22.0 [559]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1
CFM [L/s]	3400 [1605]	4200 [1982]	4200 [1982]
No. Motors/HP	1 at 1/3	1 at 1/3	1 at 1/3
Motor RPM	825	1050	1050
Indoor Fan - Type	Constant Torque	Constant Torque	Constant Torque
No. Used/Diameter in. [mm]	1/10x9 [254x229]	1/11x9 [279x229]	1/11x9 [279x229]
Drive Type	Direct	Direct	Direct
No. Speeds	Multiple Speed	Multiple Speed	Multiple Speed
No. Motors	1	1	1
Motor HP	1/3	1/2	1/2
Motor RPM	1200	1200	1200
Motor Frame Size	48	48	48
Filter - Type	Field Supplied	Field Supplied	Field Supplied
Furnished	No	No	No
(NO.) Size Recommended in. [mm x mm x mm]	(1) 1x24x24 [25x609x609]	(1) 1x24x24 [25x609x609]	(1) 1x24x24 [25x609x609]
Refrigerant Charge Oz. [g]	58 [1644.2]	56 [1587.5]	56 [1587.5]
Weights			
Net Weight lbs. [kg]	360 [163]	410 [186]	410 [186]
Ship Weight lbs. [kg]	370 [168]	420 [191]	420 [191]

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.
2. EER2, SEER2 and HSPF2 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 - RHPX-MODELS
NOMINAL SIZES 3 TO 5 TONS [10.6-17.6 kW]

Model RHPXY8 Series	RHPXYB036ACT	RHPXYB036ADT	RHPXYB036AJT	RHPXYB042ACT
Cooling Performance[1]				
Nominal Cooling Capacity Btu [kW]	36,000 [10.55]	36,000 [10.55]	36,000 [10.55]	42,000 [12.31]
EER2/SEER2[2]	10.6/13.4	10.6/13.4	10.6/13.4	10.6/13.4
Nominal CFM/AHRI Rated CFM [L/s]	1200/1245 [566/588]	1200/1245 [566/588]	1200/1245 [566/588]	1400/1475 [661/696]
AHRI Net Cooling Capacity Btu [kW]	34200 [10.02]	34200 [10.02]	34200 [10.02]	40000 [11.72]
Net Sensible Capacity Btu [kW]	25600 [7.5]	25600 [7.5]	25600 [7.5]	30000 [8.79]
Net Latent Capacity Btu [kW]	8600 [2.52]	8600 [2.52]	8600 [2.52]	10000 [2.93]
Net System Power [kW]	3.23	3.23	3.23	3.77
Heating Performance (Heat Pumps)				
High Temp. Btuh [kW] Rating	34000 [9.96]	34000 [9.96]	34000 [9.96]	40000 [11.72]
High Temp System Power kW/COP	2.77 / 3.6	2.77 / 3.6	2.77 / 3.6	3.26 / 3.6
Low Temp. Btuh [kW] Rating	18200 [5.33]	18200 [5.33]	18200 [5.33]	23000 [6.74]
Low Temp System Power kW/COP	2.6 / 2.05	2.6 / 2.05	2.6 / 2.05	3.06 / 2.2
HSPF2[2] (Btu/Watts-hr)	6.7	6.7	6.7	6.7
Compressor				
No./Stg/Type	1/1/scroll	1/1/scroll	1/1/scroll	1/1/scroll
Outdoor Sound Rating (dB)[3]	78	78	78	80
Outdoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Rifled: Tube Size OD or MicroChannel: Depth in. [mm]	0.63 [16.00]	0.63 [16.00]	0.63 [16.00]	0.63 [16.00]
Face Area sq. ft. [sq. m]	16.48 [1.53]	16.48 [1.53]	16.48 [1.53]	16.48 [1.53]
Rows / FPI [FPcm]	1 / 16 [6]	1 / 16 [6]	1 / 16 [6]	1 / 16 [6]
Indoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Rifled: Tube Size OD or MicroChannel: Depth in. [mm]	1.00 [25.40]	1.00 [25.40]	1.00 [25.40]	1.00 [25.40]
Face Area sq. ft. [sq. m]	7.4 [0.68]	7.4 [0.68]	7.4 [0.68]	7.4 [0.68]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TXV	TXV	TXV	TXV
Drain Connection No./Size in. [mm]	1 / 0.75 [19]	1 / 0.75 [19]	1 / 0.75 [19]	1 / 0.75 [19]
Outdoor Fan - Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24.0 [610]	1/24.0 [610]	1/24.0 [610]	1/24.0 [610]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	4300 [2029]	4300 [2029]	4300 [2029]	4300 [2029]
No. Motors/HP	1 at 1/3	1 at 1/3	1 at 1/3	1 at 1/3
Motor RPM	825	825	825	1050
Indoor Fan - Type	Constant Torque	Constant Torque	Constant Torque	Constant Torque
No. Used/Diameter in. [mm]	1/11x9 [279x229]	1/11x9 [279x229]	1/11x9 [279x229]	1/11x9 [279x229]
Drive Type	Direct	Direct	Direct	Direct
No. Speeds	Multiple Speed	Multiple Speed	Multiple Speed	Multiple Speed
No. Motors	1	1	1	1
Motor HP	1/2	3/4	1/2	3/4
Motor RPM	1200	1200	1200	1200
Motor Frame Size	48	48	48	48
Filter - Type	Field Supplied	Field Supplied	Field Supplied	Field Supplied
Furnished	No	No	No	No
(NO.) Size Recommended in. [mm x mm x mm]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]
Refrigerant Charge Oz. (g)	77 [2183]	77 [2183]	77 [2183]	76 [2154.5]
Weights				
Net Weight lbs. [kg]	439 [199]	439 [199]	439 [199]	439 [199]
Ship Weight lbs. [kg]	449 [204]	449 [204]	449 [204]	449 [204]

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 included 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.
2. EER2, SEER2 and HSPF2 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 - RHPX-MODELS
NOMINAL SIZES 3 TO 5 TONS [10.6-17.6 kW]

Model RHPXYB Series	RHPXYB042AJT	RHPXYB048ACT	RHPXYB048ADT	RHPXYB048AJT
Cooling Performance[1]				
Nominal Cooling Capacity Btu [kW]	42,000 [12.31]	48,000 [14.06]	48,000 [14.06]	48,000 [14.06]
EER2/SEER2[2]	10.6/13.4	10.6/13.4	10.6/13.4	10.6/13.4
Nominal CFM/AHRI Rated CFM [L/s]	1400/1475 [661/696]	1600/1650 [755/779]	1600/1650 [755/779]	1600/1650 [755/779]
AHRI Net Cooling Capacity Btu [kW]	40000 [11.72]	45500 [13.34]	45500 [13.34]	45500 [13.34]
Net Sensible Capacity Btu [kW]	30000 [8.79]	34200 [10.02]	34200 [10.02]	34200 [10.02]
Net Latent Capacity Btu [kW]	10000 [2.93]	11300 [3.31]	11300 [3.31]	11300 [3.31]
Net System Power [kW]	3.77	4.29	4.29	4.29
Heating Performance (Heat Pumps)				
High Temp. Btuh [kW] Rating	40000 [11.72]	45500 [13.34]	45500 [13.34]	45500 [13.34]
High Temp System Power kW/COP	3.26 / 3.6	3.81 / 3.5	3.81 / 3.5	3.81 / 3.5
Low Temp. Btuh [kW] Rating	23000 [6.74]	26000 [7.62]	26000 [7.62]	26000 [7.62]
Low Temp System Power kW/COP	3.06 / 2.2	3.59 / 2.12	3.59 / 2.12	3.59 / 2.12
HSPF2[2] (Btu/Watts-hr)	6.7	6.7	6.7	6.7
Compressor				
No./Stg/Type	1/1/scroll	1/1/scroll	1/1/scroll	1/1/scroll
Outdoor Sound Rating (dB)[3]	80	80	80	80
Outdoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Rifled: Tube Size OD or MicroChannel: Depth in. [mm]	0.83 [16.00]	1.00 [25.40]	1.00 [25.40]	1.00 [25.40]
Face Area sq. ft. [sq. m]	16.48 [1.53]	16.29 [1.51]	16.29 [1.51]	16.29 [1.51]
Rows / FPI [FPcm]	1 / 16 [6]	1 / 16 [6]	1 / 16 [6]	1 / 16 [6]
Indoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
Rifled: Tube Size OD or MicroChannel: Depth in. [mm]	1.00 [25.40]	1.00 [25.40]	1.00 [25.40]	1.00 [25.40]
Face Area sq. ft. [sq. m]	7.4 [0.68]	7.4 [0.68]	7.4 [0.68]	7.4 [0.68]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TXV	TXV	TXV	TXV
Drain Connection No./Size in. [mm]	1 / 0.75 [19]	1 / 0.75 [19]	1 / 0.75 [19]	1 / 0.75 [19]
Outdoor Fan - Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24.0 [610]	1/24.0 [610]	1/24.0 [610]	1/24.0 [610]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	4300 [2029]	4100 [1935]	4100 [1935]	4100 [1935]
No. Motors/HP	1 at 1/3	1 at 1/3	1 at 1/3	1 at 1/3
Motor RPM	1050	1050	1050	1050
Indoor Fan - Type	Constant Torque	Constant Torque	Constant Torque	Constant Torque
No. Used/Diameter in. [mm]	1/11x9 [279x229]	1/11x9 [279x229]	1/11x9 [279x229]	1/11x9 [279x229]
Drive Type	Direct	Direct	Direct	Direct
No. Speeds	Multiple Speed	Multiple Speed	Multiple Speed	Multiple Speed
No. Motors	1	1	1	1
Motor HP	3/4	3/4	3/4	3/4
Motor RPM	1200	1200	1200	1200
Motor Frame Size	48	48	48	48
Filter - Type	Field Supplied	Field Supplied	Field Supplied	Field Supplied
Furnished	No	No	No	No
(NO.) Size Recommended in. [mm x mm x mm]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]
Refrigerant Charge Oz. [g]	76 [2154.5]	112 [3175.1]	112 [3175.1]	112 [3175.1]
Weights				
Net Weight lbs. [kg]	439 [199]	465 [211]	465 [211]	465 [211]
Ship Weight lbs. [kg]	449 [204]	475 [215]	475 [215]	475 [215]

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.

2. EER2, SEER2 and HSPF2 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 - RHPX-MODELS
NOMINAL SIZES 3 TO 5 TONS [10.6-17.6 kW]

Model RHPXYB Series	RHPXYB060ACT	RHPXYB060ADT	RHPXYB060AJT
Cooling Performance[1]			
Nominal Cooling Capacity Btu [kW]	60,000 [17.58]	60,000 [17.58]	60,000 [17.58]
EER2/SEER2[2]	10.6/13.4	10.6/13.4	10.6/13.4
Nominal CFM/AHRI Rated CFM [L/s]	2000/1900 [944/897]	2000/1900 [944/897]	2000/1900 [944/897]
AHRI Net Cooling Capacity Btu [kW]	57000 [16.71]	57000 [16.71]	57000 [16.71]
Net Sensible Capacity Btu [kW]	43000 [12.6]	43000 [12.6]	43000 [12.6]
Net Latent Capacity Btu [kW]	14000 [4.1]	14000 [4.1]	14000 [4.1]
Net System Power [kW]	5.38	5.38	5.38
Heating Performance (Heat Pumps)			
High Temp. Btuh [kW] Rating	56500 [16.56]	56500 [16.56]	56500 [16.56]
High Temp System Power kW/COP	4.54 / 3.65	4.54 / 3.65	4.54 / 3.65
Low Temp. Btuh [kW] Rating	28200 [8.26]	28200 [8.26]	28200 [8.26]
Low Temp System Power kW/COP	3.67 / 2.25	3.67 / 2.25	3.67 / 2.25
HSPF2[2] (Btu/Watts-hr)	6.7	6.7	6.7
Compressor			
No./Stg/Type	1/2/scroll	1/2/scroll	1/2/scroll
Outdoor Sound Rating (dB)[3]	81	81	81
Outdoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel
Rifled; Tube Size OD or MicroChannel; Depth in. [mm]	1.26 [32.00]	1.26 [32.00]	1.26 [32.00]
Face Area sq. ft. [sq. m]	16.19 [1.50]	16.19 [1.50]	16.19 [1.50]
Rows / FPI [FPcm]	1 / 16 [6]	1 / 16 [6]	1 / 16 [6]
Indoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel
Rifled; Tube Size OD or MicroChannel; Depth in. [mm]	1.26 [32.00]	1.26 [32.00]	1.26 [32.00]
Face Area sq. ft. [sq. m]	7.6 [0.71]]	7.6 [0.71]]	7.6 [0.71]]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TXV	TXV	TXV
Drain Connection No./Size in. [mm]	1 / 0.75 [19]	1 / 0.75 [19]	1 / 0.75 [19]
Outdoor Fan - Type	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24.0 [610]	1/24.0 [610]	1/24.0 [610]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1
CFM [L/s]	4300 [2029]	4300 [2029]	4300 [2029]
No. Motors/HP	1 at 1/2	1 at 1/2	1 at 1/2
Motor RPM	1075	1075	1075
Indoor Fan - Type	Constant Torque	Constant Torque	Constant Torque
No. Used/Diameter in. [mm]	1/11x9 [279x229]	1/11x9 [279x229]	1/11x9 [279x229]
Drive Type	Direct	Direct	Direct
No. Speeds	Multiple Speed	Multiple Speed	Multiple Speed
No. Motors	1	1	1
Motor HP	1	1	1
Motor RPM	1200	1200	1200
Motor Frame Size	48	48	48
Filter - Type	Field Supplied	Field Supplied	Field Supplied
Furnished	No	No	No
(NO.) Size Recommended in. [mm x mm x mm]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]
Refrigerant Charge Oz. [g]	144.0 [4082.3]	144.0 [4082.3]	144.0 [4082.3]
Weights			
Net Weight lbs. [kg]	518 [235]	518 [235]	518 [235]
Ship Weight lbs. [kg]	528 [239]	528 [239]	528 [239]

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 included 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.
2. EER2, SEER2 and HSPF2 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 - RHPX-MODELS
NOMINAL SIZES 3 TO 5 TONS [10.6-17.6 kW]

Model RHPXYC Series	RHPXYC036ACT	RHPXYC036ADT	RHPXYC036AJT
Cooling Performance[1]			
Nominal Cooling Capacity Btu [kW]	36000 [10.55]	36000 [10.55]	36000 [10.55]
EER2/SEER2[2]	11.5/15.2	11.5/15.2	11.5/15.2
Nominal CFM/AHRI Rated CFM [L/s]	1200/1230 [566/580]	1200/1230 [566/580]	1200/1230 [566/580]
AHRI Net Cooling Capacity Btu [kW]	35200 [10.32]	35200 [10.32]	35200 [10.32]
Net Sensible Capacity Btu [kW]	26400 [7.74]	26400 [7.74]	26400 [7.74]
Net Latent Capacity Btu [kW]	8800 [2.58]	8800 [2.58]	8800 [2.58]
Net System Power [kW]	3.32	3.32	3.32
Heating Performance (Heat Pumps)			
High Temp. Btuh [kW] Rating	34200 [10.02]	34200 [10.02]	34200 [10.02]
High Temp System Power kW/COP	2.64 / 3.8	2.64 / 3.8	2.64 / 3.8
Low Temp. Btuh [kW] Rating	19400 [5.69]	19400 [5.69]	19400 [5.69]
Low Temp System Power kW/COP	2.47 / 2.3	2.47 / 2.3	2.47 / 2.3
HSPF2[2] (Btu/Watts-hr)	7.2	7.2	7.2
Compressor			
No./Stg/Type	1/2/scroll	1/2/scroll	1/2/scroll
Outdoor Sound Rating (dB)[3]	78	78	78
Outdoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel
Rifled: Tube Size OD or MicroChannel: Depth in. [mm]	0.63 [16.00]	0.63 [16.00]	0.63 [16.00]
Face Area sq. ft. [sq. m]	16.48 [1.53]	16.48 [1.53]	16.48 [1.53]
Rows / FPI [FPcm]	1 / 16 [6]	1 / 16 [6]	1 / 16 [6]
Indoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel
Rifled: Tube Size OD or MicroChannel: Depth in. [mm]	1.00 [25.40]	1.00 [25.40]	1.00 [25.40]
Face Area sq. ft. [sq. m]	7.6 [0.71]	7.6 [0.71]	7.6 [0.71]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TXV	TXV	TXV
Drain Connection No./Size in. [mm]	1 / 0.75 [19]	1 / 0.75 [19]	1 / 0.75 [19]
Outdoor Fan - Type	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24.0 [610]	1/24.0 [610]	1/24.0 [610]
Drive Type/No. Speeds	Direct/Single Speed	Direct/Single Speed	Direct/Single Speed
CFM [L/s]	4300 [2029]	4300 [2029]	4300 [2029]
No. Motors/HP	1 at 1/3	1 at 1/3	1 at 1/3
Motor RPM	825	825	825
Indoor Fan - Type	Constant Torque	Constant Torque	Constant Torque
No. Used/Diameter in. [mm]	1/11x9 [279x229]	1/11x9 [279x229]	1/11x9 [279x229]
Drive Type	Direct	Direct	Direct
No. Speeds	Multiple Speed	Multiple Speed	Multiple Speed
No. Motors	1	1	1
Motor HP	1/2	3/4	1/2
Motor RPM	1200	1200	1200
Motor Frame Size	48	48Y	48
Filter - Type	Field Supplied	Field Supplied	Field Supplied
Furnished	No	No	No
(NO.) Size Recommended in. [mm x mm x mm]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]
Refrigerant Charge Oz. [g]	80.0 [2268.0]	80.0 [2268.0]	80.0 [2268.0]
Weights			
Net Weight lbs. [kg]	439 [199]	439 [199]	439 [199]
Ship Weight lbs. [kg]	449 [204]	449 [204]	449 [204]

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.
2. EER2, SEER2 and HSPF2 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 - RHPX-MODELS
NOMINAL SIZES 3 TO 5 TONS [10.6-17.6 kW]

Model RHPXYC Series	RHPXYC048ACT	RHPXYC048ADT	RHPXYC048AJT
Cooling Performance[1]			
Nominal Cooling Capacity Btu [kW]	48000 [14.07]	48000 [14.07]	48000 [14.07]
EER2/SEER2[2]	11.5/15.2	11.5/15.2	11.5/15.2
Nominal CFM/AHRI Rated CFM [L/s]	1600/1430 [755/675]	1600/1430 [755/675]	1600/1430 [755/675]
AHRI Net Cooling Capacity Btu [kW]	47000 [13.77]	47000 [13.77]	47000 [13.77]
Net Sensible Capacity Btu [kW]	35200 [10.32]	35200 [10.32]	35200 [10.32]
Net Latent Capacity Btu [kW]	11800 [3.46]	11800 [3.46]	11800 [3.46]
Net System Power [kW]	4.43	4.43	4.43
Heating Performance (Heat Pumps)			
High Temp. Btuh [kW] Rating	46500 [13.34]	46500 [13.34]	46500 [13.34]
High Temp System Power kW/COP	3.65 / 3.65	3.65 / 3.65	3.65 / 3.65
Low Temp. Btuh [kW] Rating	24600 [7.21]	24600 [7.21]	24600 [7.21]
Low Temp System Power kW/COP	3.11 / 2.32	3.11 / 2.32	3.11 / 2.32
HSPF2[2] (Btu/Watts-hr)	7.2	7.2	7.2
Compressor			
No./Stg/Type	1/2/scroll	1/2/scroll	1/2/scroll
Outdoor Sound Rating (dB)[3]	80	80	80
Outdoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel
Rifled: Tube Size OD or MicroChannel: Depth in. [mm]	1.00 [25.40]	1.00 [25.40]	1.00 [25.40]
Face Area sq. ft. [sq. m]	16.29 [1.51]	16.29 [1.51]	16.29 [1.51]
Rows / FPI [FPcm]	1 / 16 [6]	1 / 16 [6]	1 / 16 [6]
Indoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel
Rifled: Tube Size OD or MicroChannel: Depth in. [mm]	1.00 [25.40]	1.00 [25.40]	1.00 [25.40]
Face Area sq. ft. [sq. m]	7.6 [0.71]]	7.6 [0.71]]	7.6 [0.71]]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TXV	TXV	TXV
Drain Connection No./Size in. [mm]	1 / 0.75 [19]	1 / 0.75 [19]	1 / 0.75 [19]
Outdoor Fan - Type	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24.0 [610]	1/24.0 [610]	1/24.0 [610]
Drive Type/No. Speeds	Direct/Single Speed	Direct/Single Speed	Direct/Single Speed
CFM [L/s]	4100 [1935]	4100 [1935]	4100 [1935]
No. Motors/HP	1 at 1/3	1 at 1/3	1 at 1/3
Motor RPM	825	825	825
Indoor Fan - Type	Constant Torque	Constant Torque	Constant Torque
No. Used/Diameter in. [mm]	1/11x9 [279x229]	1/11x9 [279x229]	1/11x9 [279x229]
Drive Type	Direct	Direct	Direct
No. Speeds	Multiple Speed	Multiple Speed	Multiple Speed
No. Motors	1	1	1
Motor HP	3/4	3/4	3/4
Motor RPM	1200	1200	1200
Motor Frame Size	48	48	48
Filter - Type	Field Supplied	Field Supplied	Field Supplied
Furnished	No	No	No
(NO.) Size Recommended in. [mm x mm x mm]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]
Refrigerant Charge Oz. [g]	128.0 [3628.7]	128.0 [3628.7]	128.0 [3628.7]
Weights			
Net Weight lbs. [kg]	465 [211]	465 [211]	465 [211]
Ship Weight lbs. [kg]	475 [215]	475 [215]	475 [215]

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.
2. EER2, SEER2 and HSPF2 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 - RHPX-MODELS
NOMINAL SIZES 3 TO 5 TONS [10.6-17.6 kW]

Model RHPXYC Series	RHPXYC060ACT	RHPXYC060ADT	RHPXYC060AJT
Cooling Performance[1]			
Nominal Cooling Capacity Btu [kW]	60000 [17.58]	60000 [17.58]	60000 [17.58]
EER2/SEER2[2]	11/15.2	11/15.2	11/15.2
Nominal CFM/AHRI Rated CFM [L/s]	2000/1620 [944/859]	2000/1620 [944/859]	2000/1620 [944/859]
AHRI Net Cooling Capacity Btu [kW]	58000 [17]	58000 [17]	58000 [17]
Net Sensible Capacity Btu [kW]	43500 [12.75]	43500 [12.75]	43500 [12.75]
Net Latent Capacity Btu [kW]	14500 [4.25]	14500 [4.25]	14500 [4.25]
Net System Power [kW]	5.47	5.47	5.47
Heating Performance (Heat Pumps)			
High Temp. Btuh [kW] Rating	55500 [16.27]	55500 [16.27]	55500 [16.27]
High Temp System Power kW/COP	4.46 / 3.65	4.46 / 3.65	4.46 / 3.65
Low Temp. Btuh [kW] Rating	30200 [8.85]	30200 [8.85]	30200 [8.85]
Low Temp System Power kW/COP	3.93 / 2.25	3.93 / 2.25	3.93 / 2.25
HSPF2[2] (Btu/Watts-hr)	7.2	7.2	7.2
Compressor			
No./Stg/Type	1/2/scroll	1/2/scroll	1/2/scroll
Outdoor Sound Rating (dB)[3]	81	81	81
Outdoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel
Rifled: Tube Size OD or MicroChannel: Depth in. [mm]	1.26 [32.00]	1.26 [32.00]	1.26 [32.00]
Face Area sq. ft. [sq. m]	16.19 [1.50]	16.19 [1.50]	16.19 [1.50]
Rows / FPI [FPcm]	1 / 16 [6]	1 / 16 [6]	1 / 16 [6]
Indoor Coil - Fin Type	MicroChannel	MicroChannel	MicroChannel
Tube Type	MicroChannel	MicroChannel	MicroChannel
Rifled: Tube Size OD or MicroChannel: Depth in. [mm]	1.26 [32.00]	1.26 [32.00]	1.26 [32.00]
Face Area sq. ft. [sq. m]	7.6 [0.71]]	7.6 [0.71]]	7.6 [0.71]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TXV	TXV	TXV
Drain Connection No./Size in. [mm]	1 / 0.75 [19]	1 / 0.75 [19]	1 / 0.75 [19]
Outdoor Fan - Type	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24.0 [610]	1/24.0 [610]	1/24.0 [610]
Drive Type/No. Speeds	Direct/Dual Speed	Direct/Dual Speed	Direct/Dual Speed
CFM [L/s]	4300 [2029]	4300 [2029]	4300 [2029]
No. Motors/HP	1 at 1/2	1 at 1/2	1 at 1/2
Motor RPM	740/935	740/935	740/935
Indoor Fan - Type	Constant Torque	Constant Torque	Constant Torque
No. Used/Diameter in. [mm]	1/11x9 [279x229]	1/11x9 [279x229]	1/11x9 [279x229]
Drive Type	Direct	Direct	Direct
No. Speeds	Multiple Speed	Multiple Speed	Multiple Speed
No. Motors	1	1	1
Motor HP	1	1	1
Motor RPM	1200	1200	1200
Motor Frame Size	48	48	48
Filter - Type	Field Supplied	Field Supplied	Field Supplied
Furnished	No	No	No
(NO.) Size Recommended in. [mm x mm x mm]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]	(2) 1x16x30 [25x406x762]
Refrigerant Charge Oz. [g]	139.0 [3940.6]	139.0 [3940.6]	139.0 [3940.6]
Weights			
Net Weight lbs. [kg]	518 [235]	518 [235]	518 [235]
Ship Weight lbs. [kg]	528 [239]	528 [239]	528 [239]

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.
2. EER2, SEER2 and HSPF2 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.

XXI. ELECTRICAL DATA

ELECTRICAL DATA - RHP(A/X)YB SERIES						
		RHPAYB024AJT	RHPAYB030ACT	RHPAYB030AJT	RHPXYB036ACT	RHPXYB036ADT
Unit Information	Unit Operating Voltage Range	187-253	187-253	187-253	187-253	414-506
	Volts	208/230	208/230	208/230	208/230	460
	Phase	1	3	1	3	3
	Hz	60	60	60	60	60
	Minimum Cirult Ampacity	16	16	22	13	9
	Minimum Overcurrent Protection Device Size	20	20	25	20	15
	Maximum Overcurrent Protection Device Size	20	20	30	25	15
Compressor Motor	No.	1	1	1	1	1
	Volts	208-230	208-230	208-230	208-230	460
	Phase	1	3	1	3	3
	Amps (RLA), Comp. 1	9	7.8	12.5	9	4.1
	Amps (LRA), Comp. 1	63	70	87	70	39
	Amps (RLA), Comp. 2					
	Amps (LRA), Comp. 2					
Condenser Motor	No.	1	1	1	1	1
	Volts	208-230	208-230	208-230	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	2	2	2	0.8
	Amps (LRA, each)	3	3.9	3.9	3	1.6
Evaporator Fan	No.	1	1	1	1	1
	Volts	208-230	208-230	208-230	208-230	460
	Phase	1	1	1	1	1
	HP	1/3	1/2	1/2	1/2	3/4
	Amps (FLA, each)	2.8	4.1	4.1	4.1	2.7
	Amps (LRA, each)	0	0	0	0	0

ELECTRICAL DATA

ELECTRICAL DATA - RHPXYB SERIES						
		RHPXYB036AJT	RHPXYB042ACT	RHPXYB042AJT	RHPXYB048ACT	RHPXYB048ADT
Unit Information	Unit Operating Voltage Range	187-253	187-253	187-253	187-253	414-506
	Volts	208/230	208/230	208/230	208/230	460
	Phase	1	3	1	3	3
	Hz	60	60	60	60	60
	Minimum Ciruit Ampacity	25	20	28	23	12
	Minimum Overcurrent Protection Device Size	30	25	35	30	15
	Maximum Overcurrent Protection Device Size	35	25	40	30	15
Compressor Motor	No.	1	1	1	1	1
	Volts	208-230	208-230	208-230	208-230	460
	Phase	1	3	1	3	3
	Amps (RLA), Comp. 1	14.4	9.8	15.8	12	5.3
	Amps (LRA), Comp. 1	86	60	96	123	60
	Amps (RLA), Comp. 2					
	Amps (LRA), Comp. 2					
Condenser Motor	No.	1	1	1	1	1
	Volts	208-230	208-230	208-230	208-230	460
	Phase	1	1	1	1	3
	HP	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	2	2	2	2	1
	Amps (LRA, each)	3	3.9	3.9	3.9	2.2
Evaporator Fan	No.	1	1	1	1	1
	Volts	208-230	208-230	208-230	208-230	460
	Phase	1	1	1	1	1
	HP	1/2	3/4	3/4	3/4	3/4
	Amps (FLA, each)	4.1	6	6	6	2.7
	Amps (LRA, each)	0	0	0	0	0

ELECTRICAL DATA

ELECTRICAL DATA - RHPXYB SERIES					
		RHPXYB048AJT	RHPXYB060ACT	RHPXYB060ADT	RHPXYB060AJT
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	187-253
	Volts	208/230	208/230	460	208/230
	Phase	1	3	3	1
	Hz	60	60	60	60
	Minimum Circuit Ampacity	35	26	13	40
	Minimum Overcurrent Protection Device Size	45	30	15	50
	Maximum Overcurrent Protection Device Size	50	35	15	60
Compressor Motor	No.	1	1	1	1
	Volts	208-230	208-230	460	208-230
	Phase	1	3	3	1
	Amps (RLA), Comp. 1	21.5	12.4	6.5	23.7
	Amps (LRA), Comp. 1	102	93	60	123
	Amps (RLA), Comp. 2				
	Amps (LRA), Comp. 2				
Condenser Motor	No.	1	1	1	1
	Volts	208-230	208-230	460	208-230
	Phase	1	1	1	1
	HP	1/3	1/2	1/2	1/2
	Amps (FLA, each)	2	2.4	1.2	2.4
	Amps (LRA, each)	3.9	5.5	3	5.5
Evaporator Fan	No.	1	1	1	1
	Volts	208-230	208-230	460	208-230
	Phase	1	1	1	1
	HP	3/4	1	1	1
	Amps (FLA, each)	6	7.6	3.5	7.6
	Amps (LRA, each)	0	0	0	0

ELECTRICAL DATA

ELECTRICAL DATA - RHPXYC SERIES						
		RHPXYC036ACT	RHPXYC036ADT	RHPXYC036AJT	RHPXYC048ACT	RHPXYC048ADT
Unit Information	Unit Operating Voltage Range	187-253	414-506	187-253	187-253	414-506
	Volts	208/230	460	208/230	208/230	460
	Phase	3	3	1	3	3
	Hz	60	60	60	60	60
	Minimum Circuit Ampacity	17	9	24	21	11
	Minimum Overcurrent Protection Device Size	20	15	30	25	15
	Maximum Overcurrent Protection Device Size	20	15	35	30	15
Compressor Motor	No.	1	1	1	1	1
	Volts	208/230	460	208-230	208/230	460
	Phase	3	3	1	3	3
	Amps (RLA), Comp. 1	8.6	4	14.6	10.8	5.9
	Amps (LRA), Comp. 1	70	39	76	123	60
	Amps (RLA), Comp. 2	N/A	N/A	N/A	N/A	N/A
	Amps (LRA), Comp. 2	N/A	N/A	N/A	N/A	N/A
Condenser Motor	No.	1	1	1	1	1
	Volts	208-230	460	208-230	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	0.8	1.5	1.5	0.8
	Amps (LRA, each)	3	1.6	3	3	1.6
Evaporator Fan	No.	1	1	1	1	1
	Volts	208-230	460	208-230	208-230	460
	Phase	1	1	1	1	1
	HP	1/2	1/2	1/2	3/4	3/4
	Amps (FLA, each)	4.1	2.1	4.1	6	2.7
	Amps (LRA, each)	0	0	0	0	0

ELECTRICAL DATA

ELECTRICAL DATA - RHPXYC SERIES					
		RHPXYC048AJT	RHPXYC060ACT	RHPXYC060ADT	RHPXYC060AJT
Unit Information	Unit Operating Voltage Range	187-253	187-253	414-506	187-253
	Volts	208/230	208/230	460	208/230
	Phase	1	3	3	1
	Hz	60	60	60	60
	Minimum Ckt Ampacity	35	29	14	43
	Minimum Overcurrent Protection Device Size	40	35	20	50
	Maximum Overcurrent Protection Device Size	50	40	20	60
Compressor Motor	No.	1	1	1	1
	Volts	208-230	208-230	460	208-230
	Phase	1	3	3	1
	Amps (RLA), Comp. 1	21.5	12.4	6.5	23.7
	Amps (LRA), Comp. 1	102	93	60	123
	Amps (RLA), Comp. 2	N/A	N/A	N/A	N/A
	Amps (LRA), Comp. 2	N/A	N/A	N/A	N/A
Condenser Motor	No.	1	1	1	1
	Volts	208-230	208-230	460	208-230
	Phase	1	1	1	1
	HP	1/3	1/2	1/2	1/2
	Amps (FLA, each)	1.5	5.3	2.3	5.3
	Amps (LRA, each)	3	0	0	0
Evaporator Fan	No.	1	1	1	1
	Volts	208-230	208-230	460	208-230
	Phase	1	1	1	1
	HP	3/4	1	1	1
	Amps (FLA, each)	6	7.6	3.5	7.6
	Amps (LRA, each)	0	0	0	0

RHP(A/X)YB Indoor Airflow Performance - 208/230 Volts

Nominal Cooling Capacity Tons [kW]	Manufacturer Recommended Heat Pump Airflow (Min/Max)	Blower Size/ Motor HP [W] & # of Speeds	Motor Speed		External Static Pressure - Inches W.C. [kPa] (Side Discharge-Dry Coil)									
					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	1
2.5 [7.03]	750 CFM / 900 CFM	10 x 8 Blower 1/3 HP [249W] 5-Volts Air	Tap 1 Fan only	CFM [l/s]	1003 [473]	942 [445]	880 [415]	820 [387]	764 [361]	702 [345]	678 [320]	618 [292]	579 [273]	526 [248]
				RPM	722	719	628	670	926	974	1030	1059	1087	1119
				Watts	134	143	150	159	164	172	179	185	190	194
			Tap 2 Heater kit	CFM [l/s]	1021 [482]	975 [460]	911 [430]	850 [401]	803 [379]	759 [358]	714 [337]	667 [315]	600 [283]	548 [259]
				RPM	756	734	641	800	936	970	1032	1060	1093	1125
				Watts	141	148	156	168	174	182	187	194	198	204
			Tap 3 HP Medium	CFM [l/s]	1119 [528]	1076 [508]	1028 [485]	981 [463]	929 [437]	879 [415]	818 [387]	792 [374]	759 [358]	681 [312]
				RPM	785	822	856	914	957	1004	1046	1081	1114	1136
				Watts	178	185	194	202	210	218	227	233	238	232
			Tap 4 HP Low	CFM [l/s]	921 [436]	870 [411]	817 [386]	765 [361]	708 [334]	649 [306]	586 [277]	530 [250]	494 [233]	453 [214]
				RPM	701	756	797	845	898	947	988	1029	1059	1081
				Watts	117	123	130	138	143	150	158	160	166	162
			Tap 5 HP High	CFM [l/s]	1344 [634]	1305 [616]	1267 [598]	1229 [580]	1178 [556]	1121 [529]	1054 [497]	921 [435]	824 [389]	692 [327]
				RPM	958	993	976	1005	1040	1087	1111	1132	1144	1155
				Watts	280	294	305	313	322	328	318	302	287	247
2.5 [8.79]	875 CFM / 1125 CFM	12 x 9T Blower 1/2 HP [373W] 5-Volts Air	Tap 1 Fan only	CFM [l/s]	661 [464]	921 [435]	863 [407]	757 [357]	674 [318]	590 [278]	505 [238]	586 [182]	347 [164]	302 [143]
				RPM	675	813	656	702	748	805	842	877	889	934
				Watts	102	109	115	120	129	137	140	149	150	157
			Tap 2 Heater kit	CFM [l/s]	1224 [580]	1177 [557]	1124 [530]	1060 [510]	999 [471]	953 [449]	895 [404]	784 [370]	725 [342]	670 [316]
				RPM	870	715	761	760	825	868	897	932	976	1007
				Watts	179	197	195	202	212	219	229	236	240	252
			Tap 3 HP Medium	CFM [l/s]	1322 [624]	1276 [602]	1228 [580]	1185 [559]	1145 [540]	1076 [508]	996 [470]	926 [437]	863 [407]	801 [378]
				RPM	870	715	761	760	825	868	897	932	976	1007
				Watts	179	197	195	202	212	219	229	236	240	252
			Tap 4 HP Low	CFM [l/s]	1146 [541]	1092 [515]	1037 [489]	972 [460]	891 [421]	819 [387]	736 [348]	651 [307]	599 [283]	550 [260]
				RPM	644	681	720	758	800	840	870	914	946	963
				Watts	153	161	168	178	184	192	200	207	214	220
			Tap 5 HP High	CFM [l/s]	1427 [673]	1385 [654]	1342 [633]	1299 [613]	1258 [594]	1215 [573]	1170 [552]	1070 [505]	1001 [472]	940 [444]
				RPM	772	802	833	862	886	918	942	967	1021	1053
				Watts	272	281	289	298	308	315	322	335	345	354
3.0 [10.56]	1050 CFM / 1350 CFM	12 x 9T Blower 1/2 HP [373W] 5-Volts Air	Tap 1 Fan only	CFM [l/s]	974 [460]	920 [434]	856 [404]	794 [375]	626 [295]	559 [264]	485 [210]	546 [183]	314 [148]	263 [118]
				RPM	450	502	561	613	711	748	812	882	874	959
				Watts	87	94	109	110	126	131	141	146	149	164
			Tap 2 Heater kit	CFM [l/s]	1157 [546]	1126 [531]	1066 [503]	1014 [479]	968 [457]	930 [439]	733 [346]	682 [322]	622 [294]	535 [252]
				RPM	515	540	589	647	690	775	838	860	901	953
				Watts	133	140	150	160	170	187	200	204	217	225
			Tap 3 HP Low	CFM [l/s]	1447 [683]	1412 [667]	1384 [653]	1341 [633]	1294 [611]	1250 [590]	1209 [571]	1163 [549]	1119 [528]	973 [459]
				RPM	614	645	668	709	750	790	839	869	906	1001
				Watts	248	256	269	274	287	300	309	323	336	309
			Tap 4 HP Medium	CFM [l/s]	1581 [746]	1548 [729]	1497 [707]	1468 [693]	1426 [673]	1382 [652]	1341 [633]	1305 [616]	1262 [596]	1227 [579]
				RPM	640	677	703	740	770	815	854	887	925	959
				Watts	307	317	327	340	352	366	380	390	405	418
			Tap 5 HP High	CFM [l/s]	1803 [771]	1636 [772]	1590 [750]	1553 [733]	1505 [710]	1464 [691]	1410 [666]	1372 [648]	1336 [630]	1301 [614]
				RPM	661	696	730	766	804	847	888	919	946	974
				Watts	326	333	346	361	375	392	407	419	431	446

Notes:
Italic type indicates airflow outside of manufacturers recommendation.
Do not connect wiring to unspecified speed taps.

Steam Discharge Pressure Drop (Add to External Static Pressure)								
CFM [l/s]	600 [283]	800 [378]	1000 [472]	1200 [566]	1400 [661]	1600 [755]	1800 [849]	2000 [944]
Pressure Drop – inches W.C. [kPa]	0	.02 [.005]	.05 [.012]	.07 [.017]	.1 [.025]	.12 [.030]	.15 [.037]	.17 [.042]

RHPXYB Indoor Airflow Performance - 208/230 Volts

Nominal Cooling Capacity Tons [kW]	Manufacturer Recommended Heat Pump Airflow (Min/Max)	Blower Size/ Motor HP [kW] & # of Speeds	Motor Speed		External Static Pressure - Inches W.C. [kPa] (Side Discharge-Dry Coil)									
					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	1
3.5 [12.31]	1225 CFM / 1575 CFM	12 x 9T Blower 3/4 HP [559W] 5-Volts Air	Tap 1 Fan only	CFM [l/s]	1400 [661]	1322 [567]	1057 [499]	1013 [478]	900 [425]	787 [380]	721 [340]	673 [318]	577 [272]	513 [242]
				RPM	570	535	623	662	737	812	835	895	920	955
				Watts	104	103	154	162	177	193	199	205	215	224
			Tap 2 Heater kit	CFM [l/s]	1400 [661]	1322 [567]	1057 [499]	1013 [478]	900 [425]	787 [380]	721 [340]	673 [318]	577 [272]	513 [242]
				RPM	570	535	623	662	737	812	835	895	920	955
				Watts	104	103	154	162	177	193	199	205	215	224
			Tap 3 HP Medium	CFM [l/s]	1712 [808]	1592 [751]	1436 [678]	1396 [659]	1345 [635]	1280 [604]	1444 [681]	1405 [663]	1371 [647]	1258 [594]
				RPM	667	627	741	777	813	883	959	985	991	982
				Watts	327	329	356	371	390	405	420	433	444	451
			Tap 4 HP Low	CFM [l/s]	1450 [705]	1465 [688]	1413 [667]	1342 [633]	1294 [611]	1246 [588]	1201 [567]	1104 [521]	970 [458]	826 [390]
				RPM	802	843	832	732	779	815	859	918	903	1018
				Watts	329	242	253	271	284	296	308	327	352	368
			Tap 5 HP High	CFM [l/s]	1750 [827]	1717 [810]	1679 [792]	1638 [773]	1590 [750]	1543 [728]	1492 [704]	1466 [692]	1417 [669]	1350 [636]
				RPM	884	710	782	780	824	887	954	940	989	988
				Watts	350	364	380	395	410	427	440	455	460	479
4.0 [14.07]	1400 CFM / 1800 CFM	12 x 9T Blower 3/4 HP [559W] 5-Volts Air	Tap 1 Fan only	CFM [l/s]	1400 [661]	1322 [567]	1057 [499]	1013 [478]	900 [425]	787 [362]	721 [340]	673 [318]	577 [272]	513 [242]
				RPM	570	585	623	662	737	812	835	895	920	955
				Watts	104	103	154	162	177	193	199	205	215	224
			Tap 2 Heater kit	CFM [l/s]	1400 [661]	1322 [567]	1057 [499]	1013 [478]	900 [425]	787 [362]	721 [340]	673 [318]	577 [272]	513 [242]
				RPM	570	585	623	662	737	812	835	895	920	955
				Watts	104	103	154	162	177	193	199	205	215	224
			Tap 3 HP Medium	CFM [l/s]	1871 [884]	1845 [871]	1816 [857]	1764 [833]	1717 [810]	1672 [790]	1651 [779]	1590 [755]	1555 [734]	1502 [709]
				RPM	875	885	923	962	737	812	838	895	920	955
				Watts	104	103	154	162	177	193	199	205	215	224
			Tap 4 HP Low	CFM [l/s]	1751 [827]	1717 [810]	1679 [792]	1638 [773]	1590 [750]	1543 [728]	1492 [704]	1466 [692]	1417 [669]	1350 [636]
				RPM	884	710	782	781	824	887	954	940	989	988
				Watts	350	364	380	395	410	427	440	455	460	479
			Tap 5 HP High	CFM [l/s]	1862 [826]	1825 [810]	1888 [890]	1850 [873]	1814 [856]	1783 [841]	1752 [827]	1702 [803]	1674 [790]	1629 [768]
				RPM	756	775	809	859	887	902	953	990	1009	1048
				Watts	487	498	512	529	544	561	579	604	619	644
5.0 [17.58]	1750 CFM / 2250 CFM	12 x 9T Blower 1 HP [746W] 5-Volts Air	Tap 1 Fan only	CFM [l/s]	1358 [458]	1360 [590]	1199 [566]	1146 [541]	1085 [517]	1037 [495]	857 [404]	785 [370]	746 [352]	698 [329]
				RPM	565	582	634	676	722	759	869	904	929	969
				Watts	158	163	173	182	199	201	227	235	241	250
			Tap 2 Heater kit	CFM [l/s]	1398 [659]	1360 [590]	1199 [566]	1146 [541]	1085 [517]	1037 [495]	857 [404]	785 [370]	746 [352]	698 [329]
				RPM	565	582	634	676	722	759	868	904	929	969
				Watts	158	163	173	182	199	201	227	235	241	250
			Tap 3 HP Low	CFM [l/s]	1464 [691]	1443 [681]	1388 [655]	1344 [634]	1281 [605]	1251 [590]	1205 [569]	1086 [513]	976 [460]	815 [385]
				RPM	609	635	649	722	767	789	851	913	977	1009
				Watts	213	223	235	248	260	265	279	302	323	332
			Tap 4 HP Medium	CFM [l/s]	2056 [484]	2071 [977]	2043 [964]	2018 [952]	1961 [926]	1945 [918]	1913 [903]	1870 [883]	1836 [866]	1800 [850]
				RPM	909	929	956	977	911	935	970	1002	1029	1059
				Watts	571	581	599	622	628	641	663	675	700	723
			Tap 5 HP High	CFM [l/s]	2262 [1068]	2245 [1060]	2218 [1047]	2180 [1034]	2136 [1008]	2136 [1008]	2100 [991]	2068 [976]	2002 [945]	1940 [916]
				RPM	867	880	907	928	966	986	1017	1043	1076	1094
					758	745	769	764	797	815	841	858	885	848

Notes:
Grey cells indicate airflow outside of manufacturers recommendation.

Do not connect wiring to unspecified speed taps.

Down Discharge Pressure Drop (Add to External Static Pressure)								
CFM [L/s]	800 [378]	1000 [472]	1200 [566]	1400 [661]	1600 [755]	1800 [850]	2000 [944]	2200 [1038]
Pressure Drop - Inches W.C. [kPa]	.02 [.005]	.05 [.012]	.07 [.017]	.1 [.025]	.12 [.030]	.15 [.037]	.17 [.042]	.2 [.05]

RHPXYC Indoor Airflow Performance - 208/230 Volts

Nominal Cooling Capacity Tons [kW]	Manufacturer Recommended Heat Pump Airflow (Min/Max)	Blower Size/ Motor HP [W] & # of Speeds	Motor Speed		External Static Pressure - Inches W.C. [kPa] (Side Discharge-Dry Coil)									
					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	1
3.0 [10.55]	1050 CFM / 1350 CFM	12 x 9T Blower 1/2 HP [373W] Enviro Air	Tap1 Fan only	CFM [l/s]	974 [460]	930 [439]	859 [405]	794 [375]	678 [320]	552 [260]	445 [210]	349 [165]	314 [148]	753 [119]
				RPM	450	502	561	619	711	745	812	852	874	932
				Watts	87	94	100	110	125	131	141	146	149	154
			Tap 2 Heater kit	CFM [l/s]	1157 [546]	1125 [531]	1086 [513]	1014 [479]	866 [409]	850 [401]	733 [346]	602 [727]	622 [294]	535 [252]
				RPM	515	546	596	647	695	776	838	863	901	960
				Watts	130	140	150	160	170	187	200	204	217	220
			Tap 3 HP Medium	CFM [l/s]	974 [460]	930 [439]	858 [405]	794 [375]	678 [320]	552 [260]	445 [210]	349 [165]	314 [148]	753 [119]
				RPM	450	502	561	619	711	745	812	852	874	932
				Watts	87	94	103	110	125	131	141	146	149	154
			Tap 4 HP Low	CFM [l/s]	1147 [553]	1113 [567]	1054 [553]	1041 [553]	1294 [611]	1250 [590]	1200 [571]	1162 [549]	1113 [525]	979 [550]
				RPM	614	643	686	722	790	798	829	869	905	1001
				Watts	248	255	263	274	287	300	309	323	336	360
			Tap 5 HP High	CFM [l/s]	1561 [746]	1544 [728]	1497 [707]	1469 [693]	1426 [673]	1332 [652]	1341 [633]	1305 [616]	1262 [596]	1227 [579]
				RPM	649	677	707	740	776	819	853	887	925	953
					307	317	321	340	352	366	380	390	405	419

Notes:
Grey cells indicate airflow outside of manufacturers recommendation.

Do not connect wiring to unspecified speed taps.

Down Discharge Pressure Drop (Add to External Static Pressure)								
CFM [L/s]	800 [378]	1000 [472]	1200 [566]	1400 [661]	1600 [755]	1800 [849]	2000 [944]	2200 [1038]
Pressure Drop - Inches W.C. [kPa]	.03 [.007]	.05 [.012]	.07 [.017]	.1 [.025]	.12 [.030]	.15 [.037]	.17 [.042]	.2 [.05]

RHPXYC Indoor Airflow Performance - 208/230 Volts

Nominal Cooling Capacity Tons [kW]	Manufacturer Recommended Heat Pump Airflow (Min/Max)	Blower Size/ Motor HP [W] & # of Speeds	Motor Speed		External Static Pressure - Inches W.C. [kPa] (Side Discharge-Dry Coil)									
					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	1
4.0 [14.07]	1400 CFM / 1600 CFM	12 x 9T Blower 3/4 HP [560W] 5-Helix Air	Tap 1 Fan only	CFM [l/s]	1400 [661]	1202 [567]	1057 [499]	1013 [478]	900 [425]	787 [372]	721 [340]	673 [318]	577 [272]	513 [242]
				RPM	570	535	623	662	737	812	835	895	920	955
				Watts	104	103	154	162	177	193	199	205	215	224
			Tap 2 Heater kit	CFM [l/s]	1400 [661]	1202 [567]	1057 [499]	1013 [478]	900 [425]	787 [372]	721 [340]	673 [318]	577 [272]	513 [242]
				RPM	570	535	623	662	737	812	835	895	920	955
				Watts	104	103	154	162	177	193	199	205	215	224
			Tap 3 HP Medium	CFM [l/s]	1400 [661]	1202 [567]	1057 [499]	1013 [478]	900 [425]	787 [372]	721 [340]	673 [318]	577 [272]	513 [242]
				RPM	570	535	623	662	737	812	835	895	920	955
				Watts	104	103	154	162	177	193	199	205	215	224
			Tap 4 HP Low	CFM [l/s]	1712 [808]	1642 [794]	1636 [772]	1556 [735]	1545 [729]	1480 [705]	1444 [681]	1405 [663]	1371 [647]	1358 [641]
				RPM	667	627	741	727	818	883	959	935	981	982
				Watts	327	339	356	371	392	405	420	433	444	451
			Tap 5 HP High	CFM [l/s]	1962 [926]	1945 [918]	1896 [895]	1850 [873]	1814 [856]	1743 [841]	1752 [827]	1722 [813]	1674 [790]	1629 [769]
				RPM	758	776	808	832	867	902	919	980	1009	1048
				Watts	467	488	512	529	544	561	579	604	619	634
5.0 [17.58]	1750 CFM / 2250 CFM	12 x 9T Blower 1 HP [746W] 5-Helix Air	Tap 1 Fan only	CFM [l/s]	1396 [659]	1260 [595]	1139 [566]	1146 [541]	1096 [517]	1037 [489]	867 [404]	795 [370]	746 [352]	698 [329]
				RPM	585	622	634	678	722	759	808	904	925	959
				Watts	160	163	173	182	193	201	227	235	241	250
			Tap 2 Heater kit	CFM [l/s]	1396 [659]	1260 [595]	1139 [566]	1146 [541]	1096 [517]	1037 [489]	867 [404]	795 [370]	746 [352]	698 [329]
				RPM	585	622	634	678	722	759	808	904	925	959
				Watts	160	163	173	182	193	201	227	235	241	250
			Tap 3 HP Medium	CFM [l/s]	1484 [693]	1445 [681]	1349 [636]	1344 [634]	1291 [609]	1261 [595]	1206 [569]	1095 [513]	976 [460]	915 [432]
				RPM	600	635	683	722	767	796	811	913	977	1009
				Watts	210	223	235	248	260	268	279	323	323	332
			Tap 4 HP Low	CFM [l/s]	2098 [989]	2071 [977]	2043 [964]	2018 [952]	1981 [935]	1945 [918]	1913 [902]	1870 [882]	1835 [866]	1800 [850]
				RPM	808	829	856	877	911	935	970	1002	1029	1049
				Watts	571	591	598	609	633	641	660	673	700	723
			Tap 5 HP High	CFM [l/s]	2282 [1066]	2245 [1060]	2218 [1047]	2180 [1034]	2158 [1018]	2136 [1008]	2100 [991]	2065 [974]	2002 [945]	1940 [916]
				RPM	887	895	917	938	990	995	1017	1043	1075	1094
					736	748	760	764	797	815	841	858	885	948

Notes:
Grey cells indicate airflow outside of manufacturers recommendation.

Do not connect wiring to unspecified speed taps.

Down Discharge Pressure Drop (Add to External Static Pressure)								
CFM [L/s]	800 [378]	1000 [472]	1200 [566]	1400 [661]	1600 [755]	1800 [849]	2000 [944]	2200 [1038]
Pressure Drop - Inches W.C. [kPa]	.02 [.005]	.05 [.012]	.07 [.017]	.1 [.025]	.12 [.030]	.15 [.037]	.17 [.042]	0.2 [.05]

XXIII. HEATER KIT CHARACTERISTICS

208/230V THREE PHASE, 60 Hz, AUXILIARY ELECTRIC HEATER KIT CHARACTERISTICS AND APPLICATION									
Single Power Supply for Both Unit and Heater Kit						Separate Power Supply for Both Unit and Heater Kit			
UNIT MODEL NUMBER RHP(A/X)18	Heater Kit			Air Conditioner		HEATER KIT		Air Conditioner	
	MODEL NO. RXQJ-	Rated Heater KW @ 208/230V	FLA	UNIT MIN. CKT. AMPACITY	MAX FUSE OR CKT. BKR. SIZE	HEATER KIT MIN. CKT. AMPACITY	HEATER KIT MAX FUSE OR CKT. BKR. SIZE	AIR COND. MIN. CKT. AMPACITY	AIR COND. MAX. FUSE OR CKT. BKR. SIZE
RHPA18G30ACT	NONE	———	———	16/16	20/20	———	———	16/16	20/20
	A05C	3.8/5	10.4/12	29/31	30/30	13/15	15/15	16/16	20/20
	A08C	5.7/7.6	15.8/18.3	36/39	40/40	20/21	20/25	16/16	20/20
	A10C	7.2/9.6	20/23.1	41/46	45/45	25/29	25/30	16/16	20/20
RHPX18G36ACT	NONE	———	———	18/18	25/25	———	———	18/18	25/25
	A05C	3.8/5	10.4/12	31/33	35/35	13/15	15/15	18/18	25/25
	A08C	5.7/7.6	15.8/18.3	38/41	40/45	20/21	20/25	18/18	25/25
	A10C	7.2/9.6	20/23.1	43/47	45/50	25/29	25/30	18/18	25/25
	A15C	10.8/14.4	30.1/34.7	55/61	60/70	36/44	40/45	18/18	25/25
RHPX18G42ACT	NONE	———	———	20/20	25/25	———	———	20/20	25/25
	A05C	3.8/5	10.4/12	33/35	40/40	13/15	15/15	20/20	25/25
	A08C	5.7/7.6	15.8/18.3	40/43	45/45	20/21	20/25	20/20	25/25
	A10C	7.2/9.6	20/23.1	45/49	45/50	25/29	25/30	20/20	25/25
	A15C	10.8/14.4	30.1/34.7	58/64	60/70	36/44	40/45	20/20	25/25
RHPX18G48ACT	NONE	———	———	23/23	30/30	———	———	23/23	30/30
	A05C	3.8/5	10.4/12	36/38	40/40	13/15	15/15	23/23	30/30
	A08C	5.7/7.6	15.8/18.3	43/46	45/50	20/21	20/25	23/23	30/30
	A10C	7.2/9.6	20/23.1	48/52	50/60	25/29	25/30	23/23	30/30
	A15C	10.8/14.4	30.1/34.7	61/67	70/70	36/44	40/45	23/23	30/30
RHPX18G60ACT	NONE	———	———	26/26	35/35	———	———	26/26	35/35
	A05C	3.8/5	10.4/12	39/41	45/45	13/15	15/15	26/26	35/35
	A08C	5.7/7.6	15.8/18.3	46/49	50/50	20/21	20/25	26/26	35/35
	A10C	7.2/9.6	20/23.1	51/55	60/60	25/29	25/30	26/26	35/35
	A15C	10.8/14.4	30.1/34.7	64/70	70/70	36/44	40/45	26/26	35/35

460V THREE PHASE, 60 Hz, AUXILIARY ELECTRIC HEATER KIT CHARACTERISTICS AND APPLICATION									
Single Power Supply for Both Unit and Heater Kit						Separate Power Supply for Both Unit and Heater Kit			
UNIT MODEL NUMBER RHP18	Heater Kit			Air Conditioner		HEATER KIT		Air Conditioner	
	MODEL NO. RXQJ-	Rated Heater KW @ 460V	FLA	UNIT MIN. CKT. AMPACITY	MAX FUSE OR CKT. BKR. SIZE	HEATER KIT MIN. CKT. AMPACITY	HEATER KIT MAX FUSE OR CKT. BKR. SIZE	AIR COND. MIN. CKT. AMPACITY	AIR COND. MAX. FUSE OR CKT. BKR. SIZE
RHPX18G30ADT	NONE	———	———	8	15	———	———	8	15
	A05D	4.6	5.8	16	20	8	15	8	15
	A08D	7.6	9.1	20	20	12	15	8	15
	A10D	9.6	11.6	24	25	15	15	8	15
	A15D	14.4	17.3	31	35	22	25	8	15
RHPX18G48ADT	NONE	———	———	12	15	———	———	12	15
	A05D	4.6	5.8	16	20	8	15	12	15
	A08D	7.6	9.1	22	25	12	15	12	15
	A10D	9.6	11.6	27	30	15	15	12	15
	A15D	14.4	17.3	34	35	22	25	12	15
RHPX18G60ADT	NONE	———	———	13	15	———	———	13	15
	A05D	4.6	5.8	21	25	8	15	13	15
	A08D	7.6	9.1	25	30	12	15	13	15
	A10D	9.6	11.6	28	30	15	15	13	15
	A15D	14.4	17.3	35	35	22	25	13	15

HEATER KIT CHARACTERISTICS

208/230V SINGLE PHASE, 60 Hz, AUXILIARY ELECTRIC HEATER KIT CHARACTERISTICS AND APPLICATION										
Single Power Supply for Both Unit and Heater Kit						Separate Power Supply for Both Unit and Heater Kit				
UNIT MODEL NUMBER RHPX-	Heater Kit			Air Conditioner		HEATER KIT		Air Conditioner		
	MODEL NO. EHXU-	Rated Heater KW @ 460V	FLA	UNIT MIN. CKT. AMPACITY	MAX FUSE OR CKT. BKR. SIZE	HEATER KIT MIN. CKT. AMPACITY	HEATER KIT MAX FUSE OR CKT. BKR. SIZE	AIR COND. MIN. CKT. AMPACITY	AIR COND. MAX. FUSE OR CKT. BKR. SIZE
RHP(E/Y)(0)24AJT	NONE	------	------	16/16	20/20	------	------	16/16	20/20
	A05J	3.6/4.8	17.3/20	39/41	40/45	27/25	25/25	16/16	20/20
	A08J	5.7/7.6	27.4/31.6	58/58	60/60	35/40	35/40	16/16	20/20
	A10J	7.2/9.6	34.6/40	69/66	80/70	45/50	45/50	16/16	20/20
RHP(E/Y)(0)30AJT	NONE	------	------	22/22	30/30	------	------	22/22	30/30
	A05J	3.6/4.8	17.3/20	44/47	50/50	22/25	25/25	22/22	30/30
	A08J	5.7/7.6	27.4/31.6	56/60	60/70	35/40	35/40	22/22	30/70
	A10J	7.2/9.6	34.6/40	67/72	70/80	44/50	45/50	22/22	30/30
RHP(E/Y)(0)36AJT	NONE	------	------	25/25	35/35	------	------	25/25	35/35
	A05J	3.6/4.8	17.3/20	46/50	50/50	22/25	25/25	25/25	35/35
	A08J	5.7/7.6	27.4/31.6	59/64	60/75	35/40	35/40	25/25	35/35
	A10J	7.2/9.6	34.6/40	69/75	70/90	44/50	45/50	25/25	35/35
	A15J	10.8/14.4	51.9/60	89/100	90/100	65/75	70/80	25/25	35/35
RHP(E/Y)(0)42AJT	NONE	------	------	28/28	40/40	------	------	28/28	40/40
	A05J	3.6/4.8	17.3/20	50/53	60/60	22/25	25/25	28/28	40/40
	A08J	5.7/7.6	27.4/31.6	62/64	70/70	35/40	35/40	28/28	40/40
	A10J	7.2/9.6	34.6/40	71/78	80/80	44/50	45/50	28/28	40/40
	A15J	10.8/14.4	51.9/60	90/102	100/110	65/75	70/80	28/28	40/40
RHP(E/Y)(0)48AJT	NONE	------	------	35/35	35/50	------	------	35/35	50/50
	A05J	3.6/4.8	17.3/20	57/60	70/70	22/25	25/25	35/35	50/50
	A08J	5.7/7.6	27.4/31.6	69/75	80/80	35/40	35/40	35/35	50/50
	A10J	7.2/9.6	34.6/40	78/85	90/90	44/50	45/50	35/35	50/50
	A15J	10.8/14.4	51.9/60	100/110	100/110	65/75	70/80	35/35	50/50
RHP(E/Y)(0)60AJT	NONE	------	------	39/43	60/60	------	------	43/43	60/60
	A05J	3.6/4.8	17.3/20	60/66	60/80	22/25	25/25	43/43	60/60
	A08J	5.7/7.6	27.4/31.6	74/80	80/90	35/40	35/40	43/43	60/60
	A10J	7.2/9.6	34.6/40	83/89	90/100	44/50	45/50	43/43	60/60
	A15J	10.8/14.4	51.9/60	105/113	110/125	65/75	70/80	43/43	60/60

208/230V THREE PHASE, 60 Hz, AUXILIARY ELECTRIC HEATER KIT CHARACTERISTICS AND APPLICATION									
Single Power Supply for Both Unit and Heater Kit						Separate Power Supply for Both Unit and Heater Kit			
UNIT MODEL NUMBER RHPX(Y)C	Heater Kit			Air Conditioner		HEATER KIT		Air Conditioner	
	MODEL NO. EHXU-	Rated Heater KW @ 208/230V	FLA	UNIT MIN. CKT. AMPACITY	MAX FUSE OR CKT. BKR. SIZE	HEATER KIT MIN. CKT. AMPACITY	HEATER KIT MAX FUSE OR CKT. BKR. SIZE	AIR COND. MIN. CKT. AMPACITY	AIR COND. MAX. FUSE OR CKT. BKR. SIZE
RHP(X/Y)C(0)24AJT	NONE	------	------	17/17	20/20	------	------	17/17	20/20
	A05C	3.8/5	10.4/12	20/21	20/25	13/15	15/15	17/17	20/20
	A08C	5.7/7.6	15.6/18.3	25/30	30/30	20/22	20/25	17/17	20/20
	A10C	7.2/9.6	20/23.1	32/39	35/40	25/28	25/30	17/17	20/30
	A15C	10.8/14.4	30.1/34.7	46/50	50/60	38/44	40/45	17/17	20/30
RHP(X/Y)C(0)30AJT	NONE	------	------	21/21	30/30	------	------	21/21	30/30
	A05C	3.8/5	10.4/12	34/36	40/40	13/15	15/15	21/21	30/30
	A08C	5.7/7.6	15.6/18.3	41/44	45/50	20/22	20/25	21/21	30/50
	A10C	7.2/9.6	20/23.1	48/53	50/60	25/28	25/30	21/21	30/50
	A15C	10.8/14.4	30.1/34.7	63/68	70/70	38/44	40/45	21/21	30/50
RHP(X/Y)C(0)36AJT	NONE	------	------	23/23	40/40	------	------	23/23	40/40
	A05C	3.8/5	10.4/12	40/44	50/50	13/15	15/15	24/24	40/40
	A08C	5.7/7.6	15.6/18.3	48/52	50/60	20/22	20/25	24/24	40/40
	A10C	7.2/9.6	20/23.1	56/58	60/70	25/28	25/30	24/24	40/40
	A15C	10.8/14.4	30.1/34.7	68/72	70/80	38/44	40/45	24/24	40/40

460V THREE PHASE, 60 Hz, AUXILIARY ELECTRIC HEATER KIT CHARACTERISTICS AND APPLICATION									
Single Power Supply for Both Unit and Heater Kit						Separate Power Supply for Both Unit and Heater Kit			
UNIT MODEL NUMBER RHPX(Y)C	Heater Kit			Air Conditioner		HEATER KIT		Air Conditioner	
	MODEL NO. EHXU-	Rated Heater KW @ 208/230V	FLA	UNIT MIN. CKT. AMPACITY	MAX FUSE OR CKT. BKR. SIZE	HEATER KIT MIN. CKT. AMPACITY	HEATER KIT MAX FUSE OR CKT. BKR. SIZE	AIR COND. MIN. CKT. AMPACITY	AIR COND. MAX. FUSE OR CKT. BKR. SIZE
RHP(X/Y)C(0)24AJT	NONE	------	------	9	15	------	------	9	15
	A05D	4.8	5.8	16	20	8	15	9	15
	A08D	7.6	9.1	20	20	12	15	9	15
	A10D	9.6	11.6	24	25	15	15	9	15
	A15D	14.4	17.3	31	35	20	25	9	15
RHP(X/Y)C(0)30AJT	NONE	------	------	11	15	------	------	11	15
	A05D	4.8	5.8	19	20	8	15	11	15
	A08D	7.6	9.1	23	25	12	15	11	15
	A10D	9.6	11.6	28	30	15	15	11	15
	A15D	14.4	17.3	35	35	20	25	11	15
RHP(X/Y)C(0)36AJT	NONE	------	------	14	20	------	------	14	20
	A05D	4.8	5.8	22	25	8	15	14	20
	A08D	7.6	9.1	26	30	12	15	14	20
	A10D	9.6	11.6	29	30	15	15	14	20
	A15D	14.4	17.3	36	40	20	20	14	20

HEATER KIT CHARACTERISTICS

[illegible] SINGLE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KIT CHARACTERISTICS AND APPLICATION									
Single Power Supply for Both Unit and Heater Kit						Separate Power Supply for Outdoor Unit and Heater Kit			
UNIT MODEL NUMBER RXFXYC	Heater Kit			Air Conditioner		HEATER KIT		Air Conditioner	
	MODEL NO. RXQ-	Rated Heater kW @ 208/230V	FLA	UNIT MBH, CKT. AMPACITY	MAX FUSE OR CKT. BKR. SIZE	HEATER KIT MIN. CKT. AMPACITY	HEATER KIT MAX FUSE OR CKT. BKR. SIZE	AIR COND. MIN. CKT. AMPACITY	AIR COND. MAX. FUSE OR CKT. BKR. SIZE
RXFYQ36AJT	NONE	------	------	24/24	30/25	------	------	24/24	30/25
	A07J	3.6-4.8	11.3/20	46/49	50/50	22/25	35/35	24/24	30/25
	A09J	5.7-7.6	27.4-33.8	59/64	60/70	35/40	35/40	24/24	30/25
	B10J	7.2-9.6	34.8/40	69/74	70/80	44/50	45/50	24/24	30/25
	B15J	10.8/14.4	51.9/60	98/99	99/100	66/75	70/80	24/24	30/25
RXFQ48AJT	NONE	------	------	39/39	50/50	------	------	39/39	50/50
	A09J	3.6-4.8	17.3/20	59/59	70/70	22/25	25/25	39/39	50/50
	A09J	5.7-7.6	27.4-33.8	69/74	80/80	35/40	35/40	39/39	50/50
	B10J	7.2-9.6	34.8/40	78/83	80/90	44/50	45/50	39/39	50/50
	B15J	10.8-14.4	51.9/60	108/110	100/110	66/75	70/80	39/39	50/50
RXFSQ60AJT	NONE	------	------	49/49	60/60	------	------	49/49	60/60
	A09J	3.6-4.8	17.3/20	66/68	80/80	22/25	25/25	49/49	60/60
	A09J	5.7-7.6	27.4-33.8	77/81	90/90	35/40	35/40	49/49	60/60
	B10J	7.2-9.6	34.8/40	86/90	100/100	44/50	45/50	49/49	60/60
	B15J	10.8-14.4	51.9/60	105/110	110/125	66/75	70/80	49/49	60/60

XXIV. WIRING DIAGRAMS

FIGURE 11
WIRING DIAGRAM

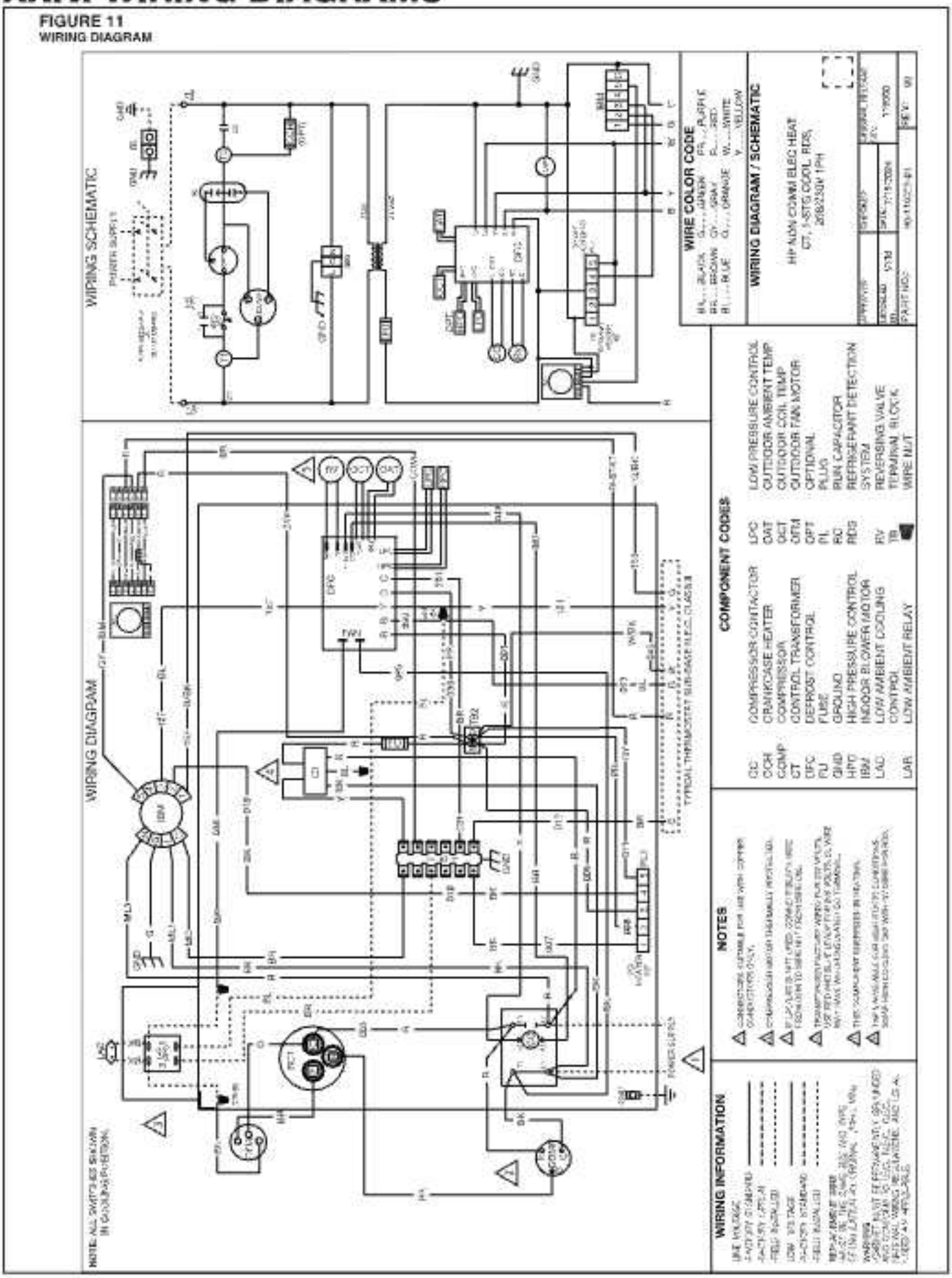
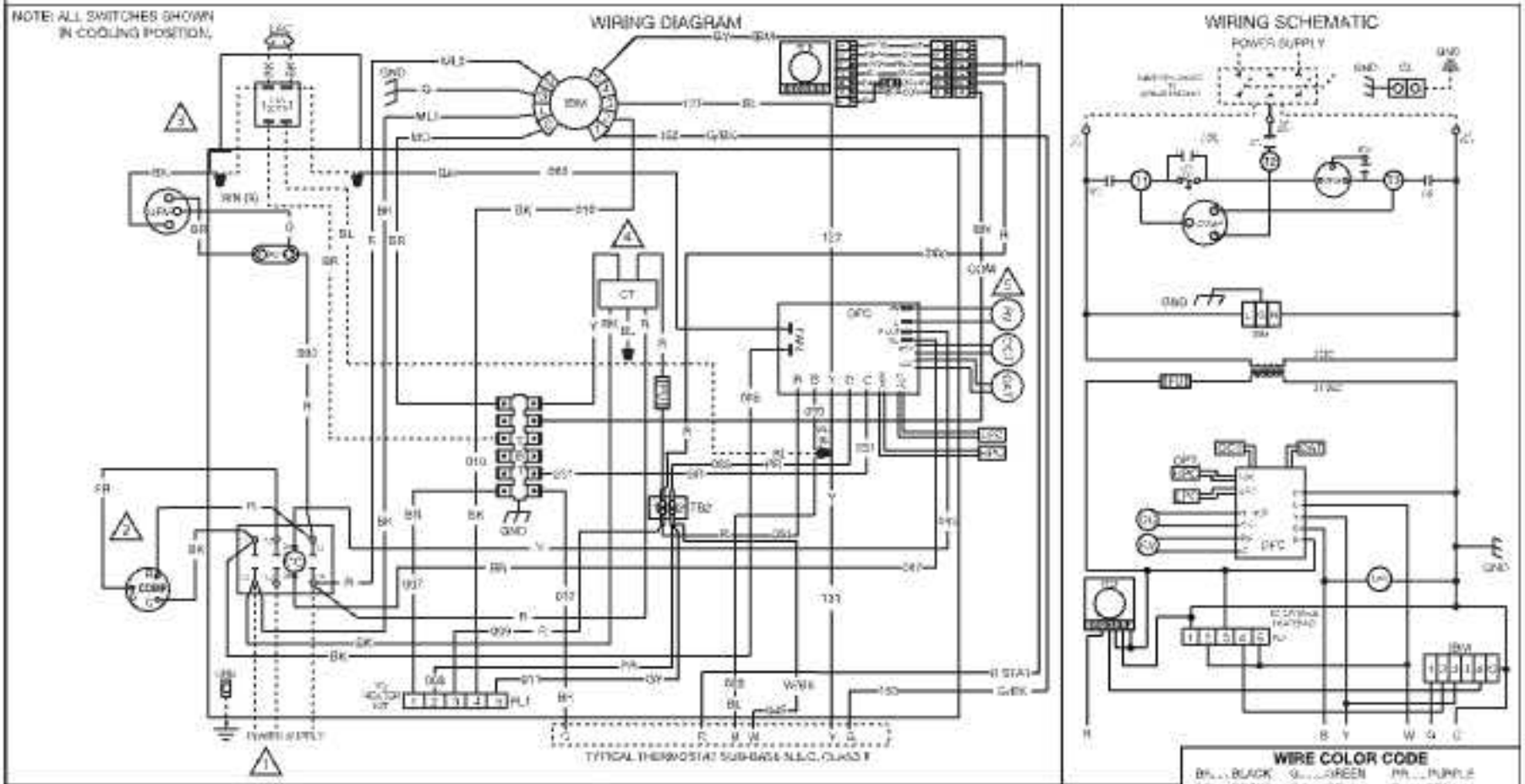


FIGURE 12
WIRING DIAGRAM



WIRING INFORMATION

LINE VOLTAGE
FACTORY STANDARD
FACTORY OPTION
FIELD INSTALLED

LOW VOLTAGE
FACTORY STANDARD
FACTORY OPTION
FIELD INSTALLED

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

WIRING
CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO LOCAL N.E.C. CODES AND ANY OTHER REGULATORY BODY AND LOCAL CODES AS APPLICABLE.

NOTES

1. CONDUCTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. COMPRESSOR MOTOR THERMALLY PROTECTED.
3. IF LAC/LAR IS NOT USED, CONNECT BLACK WIRE FROM CBM TO WIRE NUT FROM WIRE 084.
4. TRANSFORMER FACTORY WIRED FOR 230 VOLTS. UNWIRED AND BLUE LEADS FOR 208 VOLTS. BL WIRE MAY HAVE WHITE OR INSULATED BL TERMINAL.
5. THIS COMPONENT ENERGIZED IN HEATING.
6. TAP 3 AVAILABLE FOR HIGH STATIC CONDITIONS. SWAP HIGH COOLING TAP WITH 01 WIRE FOR HIGH.

COMPONENT CODES

CC	COMPRESSOR CONTACTOR	LAR	LOW AMBIENT RELAY
COMP	COMPRESSOR	LPC	LOW PRESSURE CONTROL
CT	CONTROL TRANSFORMER	OAT	OUTDOOR AMBIENT TEMP
DFC	DEFROST CONTROL	OCT	OUTDOOR COIL TEMP
FU	FUSE	OFM	OUTDOOR FAN MOTOR
GND	GROUND	OPT	OPTIONAL
HPC	HIGH PRESSURE CONTROL	PL	PLUG
IBM	INDOOR BLOWER MOTOR	RC	RUN CAPACITOR
LAC	LOW AMBIENT COOLING CONTROL	RDS	REFRIGERANT DETECTION SYSTEM
		RV	REVERSING VALVE
		TB	TERMINAL BLOCK
			WIRE NUT

WIRE COLOR CODE

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

WIRING DIAGRAM/SCHEMATIC

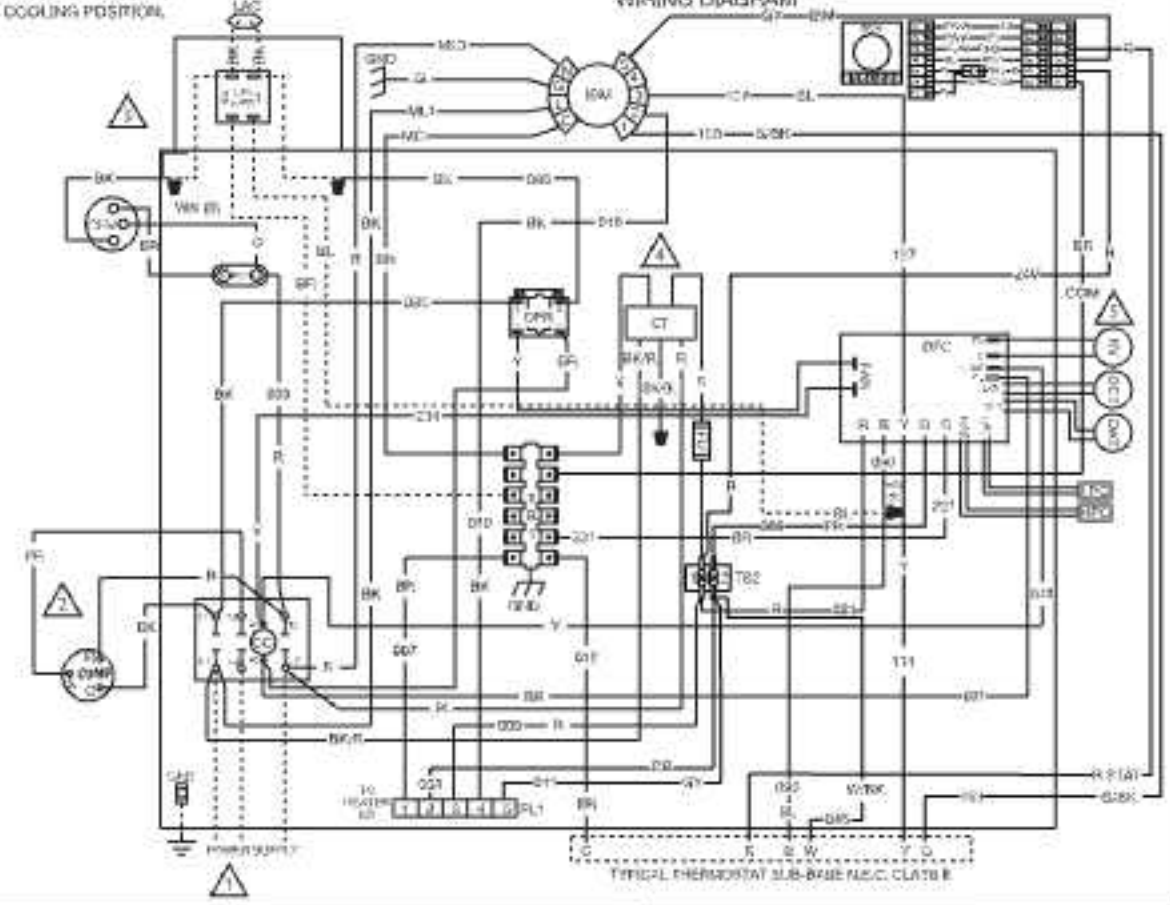
HP NON CDVM ELEC HEAT
CT, 1-STG COOL, RDS,
208/230V 3PH

APPROVED	CHECKED	ORIGINAL RELEASE NO.	
DRAWN BY: AGM	DATE: 7/13/2004	118075	
PART NO.:	90-118075-03	REV.	00

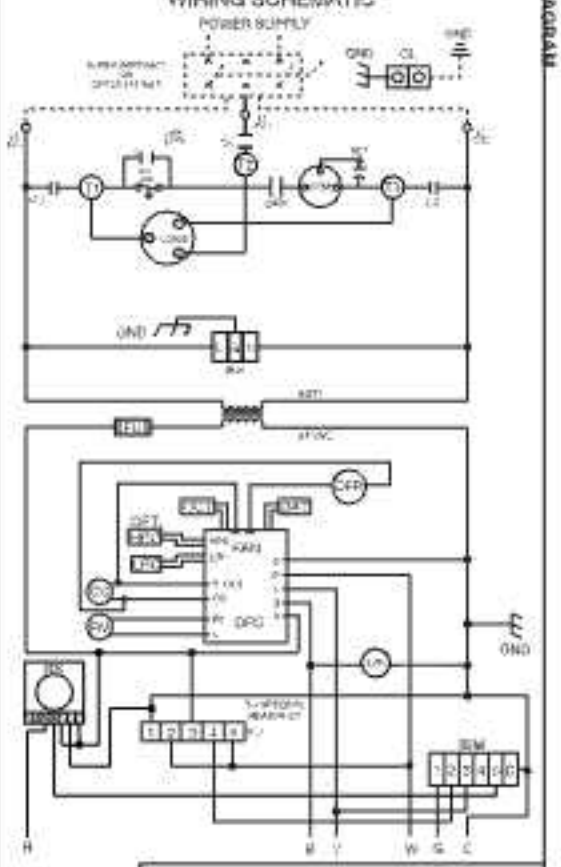
FIGURE 13
WIRING DIAGRAM

NOTE: ALL SWITCHES SHOWN IN COOLING POSITION.

WIRING DIAGRAM



WIRING SCHEMATIC



WIRE COLOR CODE

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

WIRING INFORMATION

LINE VOLTAGE
FACTORY STANDARD: ——————
FACTORY OPTION: - - - - - - -
FIELD INSTALLED: . . . . . .

LOW VOLTAGE
FACTORY STANDARD: ——————
FACTORY OPTION: - - - - - - -
FIELD INSTALLED: . . . . . .

REPLACEMENT WIRE
MUST BE THE WIRE SIZE AND TYPE OF INSULATION AS ORIGINAL FIELD WIRE.

WARNING
CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. NFPA 70 LATEST EDITION. WIRING MUST BE DONE PER LOCAL CODES AS APPLICABLE.

NOTES

1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. COMPRESSOR MOTOR THERMALLY PROTECTED.
3. IF LAC/LAR IS NOT USED, CONNECT BLACK WIRE FROM DFM TO WIRE NUT FROM WIRE 986.
4. TRANSFORMER PRIMARY LEADS: 46 HC
   RED CONNECTS TO BLACK(PAR)-230V
   BLACK/BLUE-575V
5. THIS COMPONENT ENERGIZED IN HEATING.
6. TAP 1 AVAILABLE FOR HIGH STATIC DUCTWORK. CRIMP HIGH COOLING TAP WITH GY WIRE FOR RDS.

COMPONENT CODES

CC	COMPRESSOR CONTACTOR	LAR	LOW AMBIENT RELAY
COMP	COMPRESSOR	LPC	LOW PRESSURE CONTROL
CT	CONTROL TRANSFORMER	OAT	OUTDOOR AMBIENT TEMP
DFC	DEFROST CONTROL	OCT	OUTDOOR COIL TEMP
FU	FUSE	OFR	OUTDOOR FAN RELAY
GND	GROUND	OPT	OPTIONAL
HPC	HIGH PRESSURE CONTROL	PL	PLUG
IBM	INDOOR BLOWER MOTOR	RC	RUN CAPACITOR
LAC	LOW AMBIENT COOLING CONTROL	RDS	REFRIGERANT DETECTION SYSTEM
		RV	REVERSING VALVE
		TB	TERMINAL BLOCK
		◀	WIRE NUT

WIRING DIAGRAM/SCHEMATIC

HP NON COMM ELEC HEAT
CT, 1-STG COOL,
RDS, 460V 3PH

APPROVED	CHECKED	ORIGINAL RELEASE DATE
RELEASED BY: VVM	DATE: 8/14/2024	119768
PART NO.:	50-110322-03	REV: 00

FIGURE 14
WIRING DIAGRAM

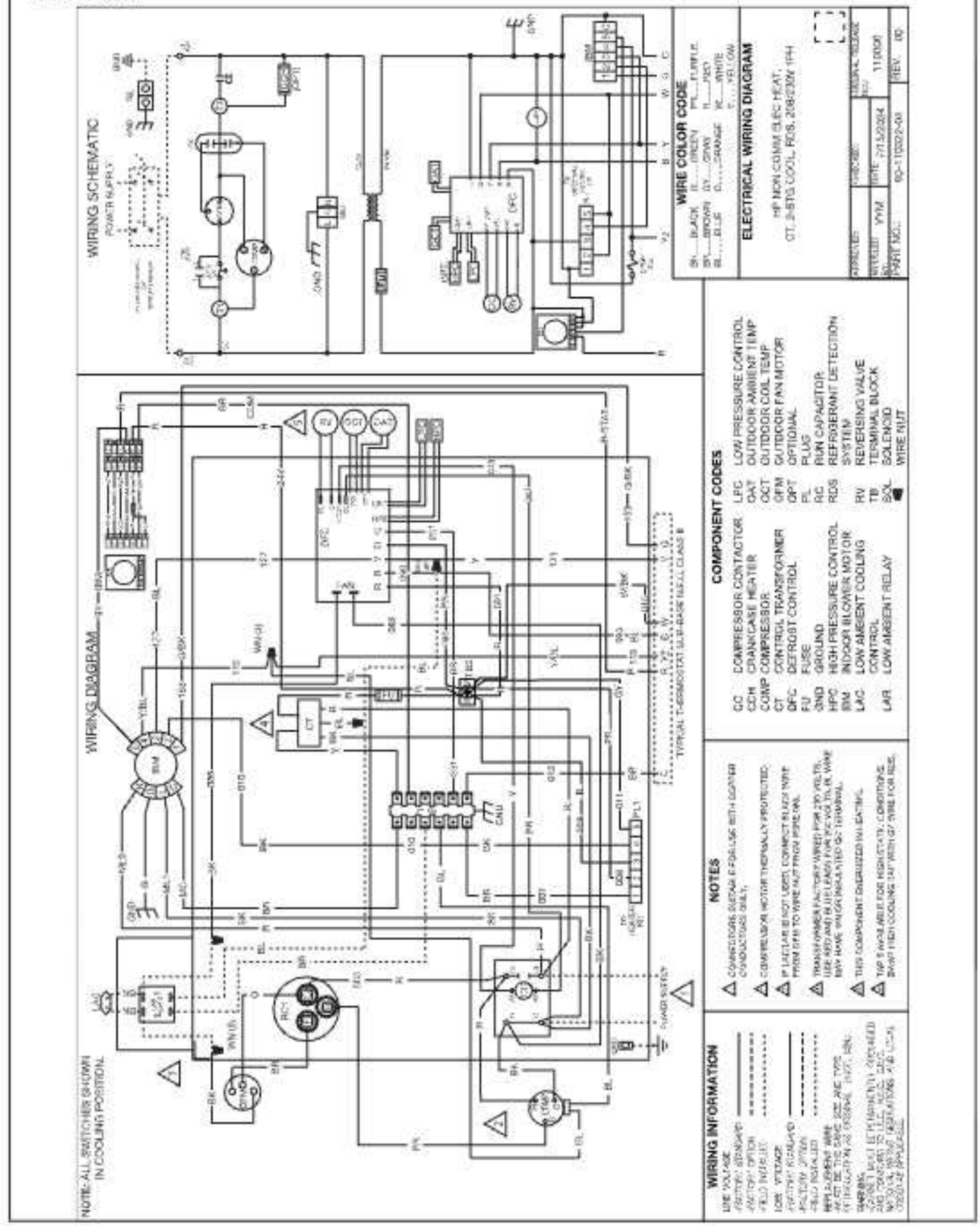


FIGURE 15
WIRING DIAGRAM

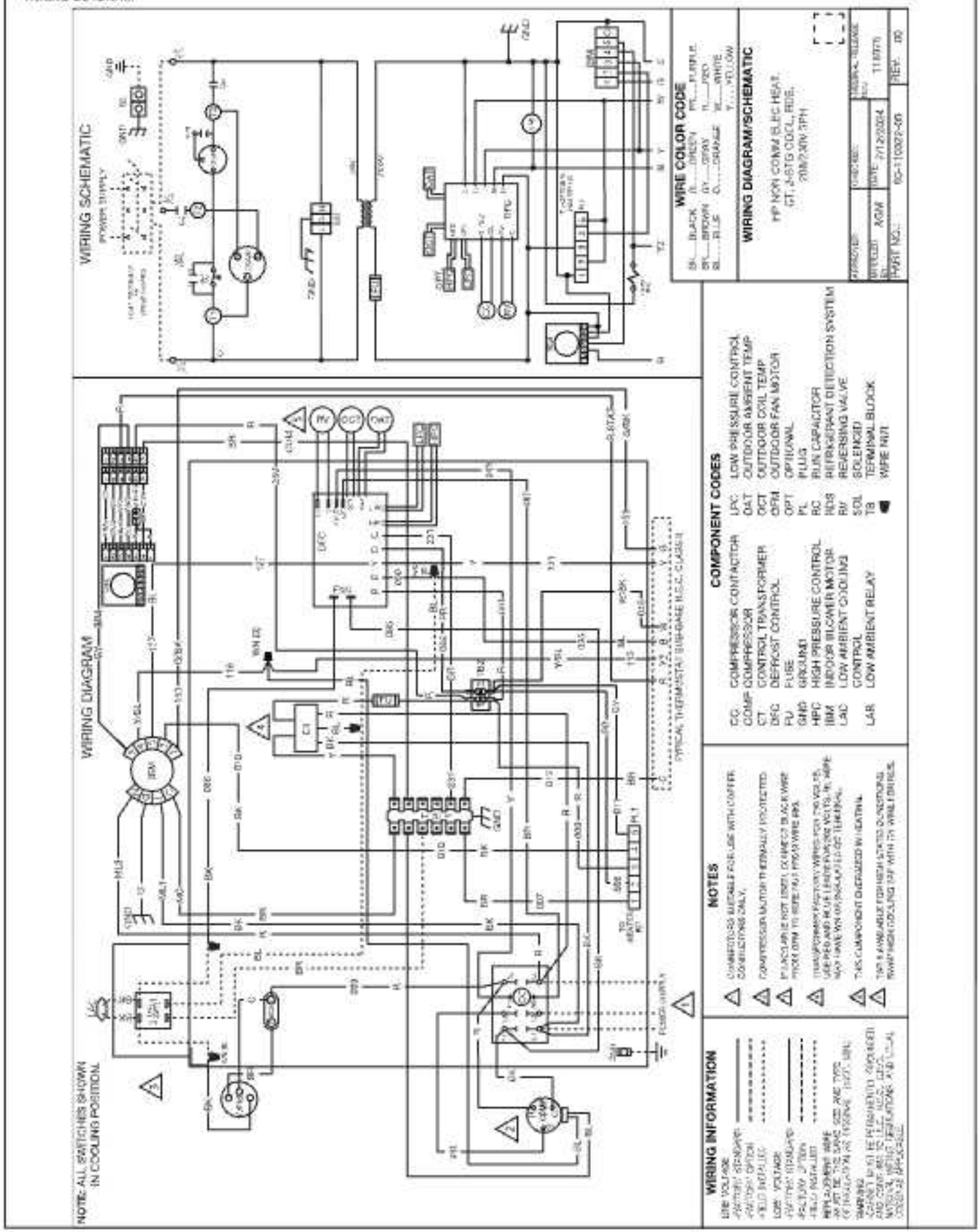


FIGURE 16
WIRING DIAGRAM

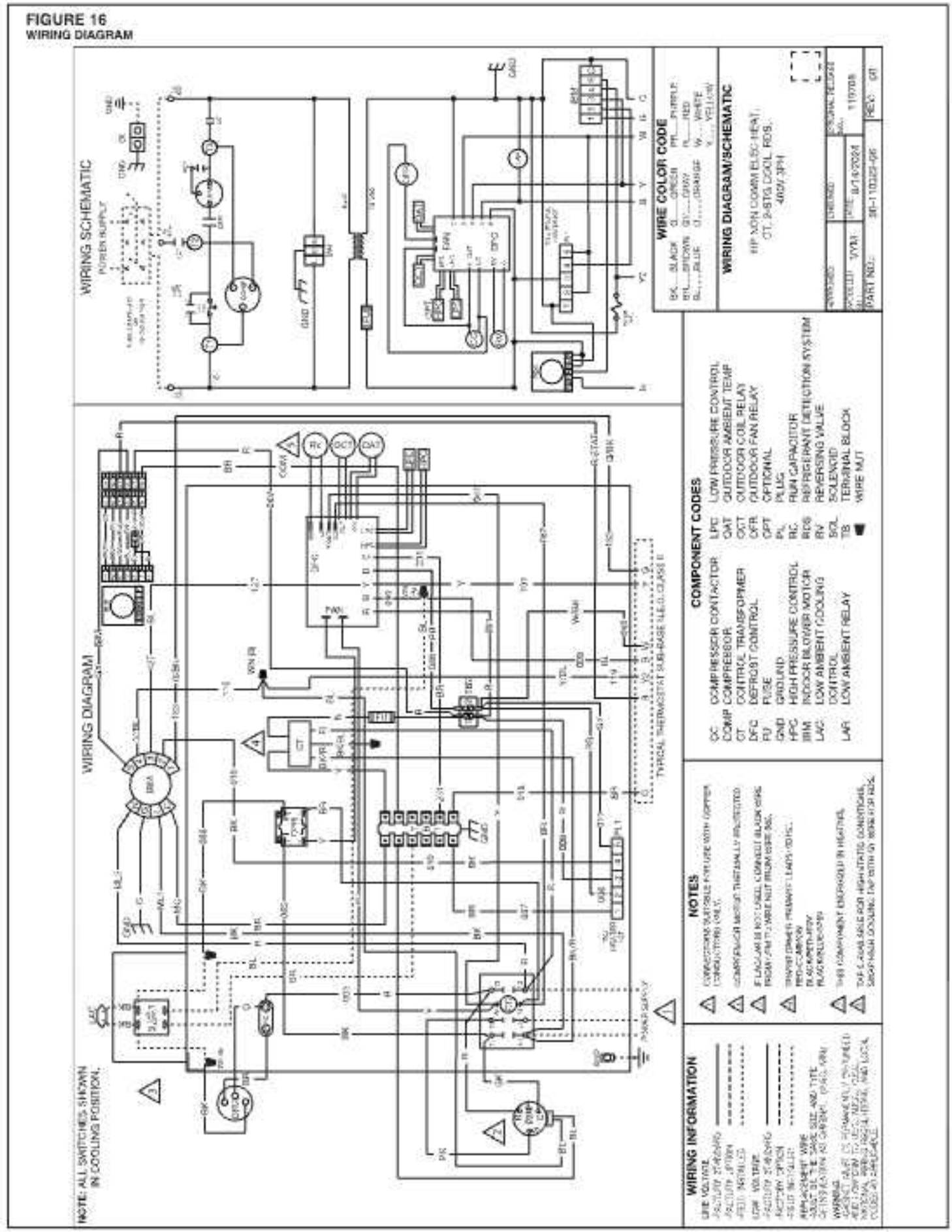
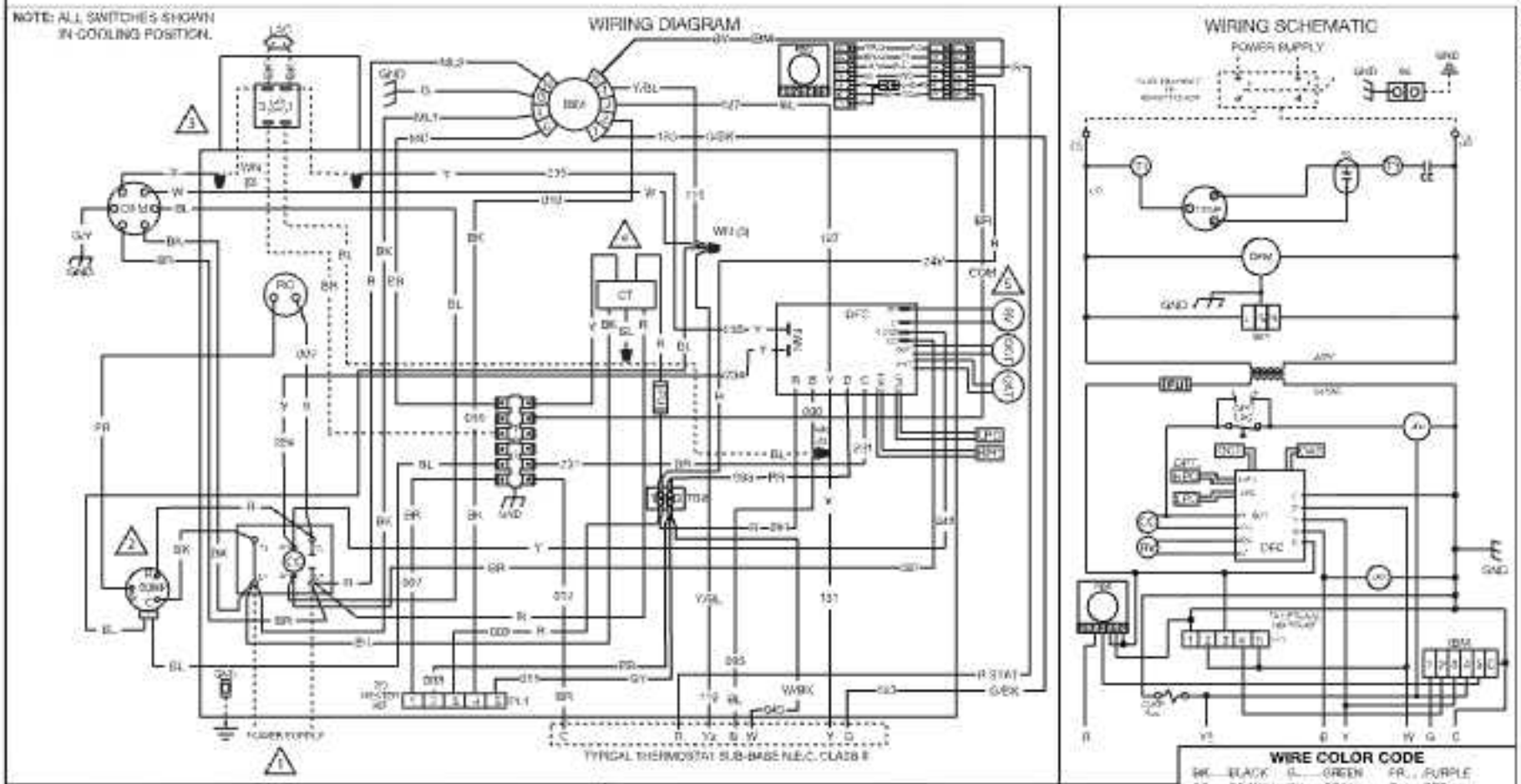


FIGURE 17
WIRING DIAGRAM



WIRE COLOR CODE

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

WIRING INFORMATION

LINE VOLTAGE
-FACTORY (STANDARD) ——————
-CAUTION (OPTION) - - - - - -
-FIELD INSTALLED · · · · · · ·

LOW VOLTAGE
-FACTORY (STANDARD) ——————
-FACTORY (OPTION) - - - - - -
-FIELD INSTALLED · · · · · · ·

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

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

NOTES

1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. COMPRESSOR MOTOR THERMALLY PROTECTED.
3. IF FACTORY WIRE IS NOT USED, CONNECT YELLOW WIRE FROM DFM TO WIRE NUT FROM WIRE 225.
4. TRANSFORMER FACTORY WIRED FOR 208 VOLTS. USE RED AND BLUE LEADS FOR 230 VOLTS. BLUE WIRE MAY HAVE WIRE NUT WITH INSULATED DIC TERMINAL.
5. THIS COMPONENT IS ENERGIZED IN HEATING.
6. TAPS AVAILABLE FOR HIGH STATIC CONDITIONS. DRAW HIGH COOLING TAP WITH 1P WIRE FOR RDS.

COMPONENT CODES

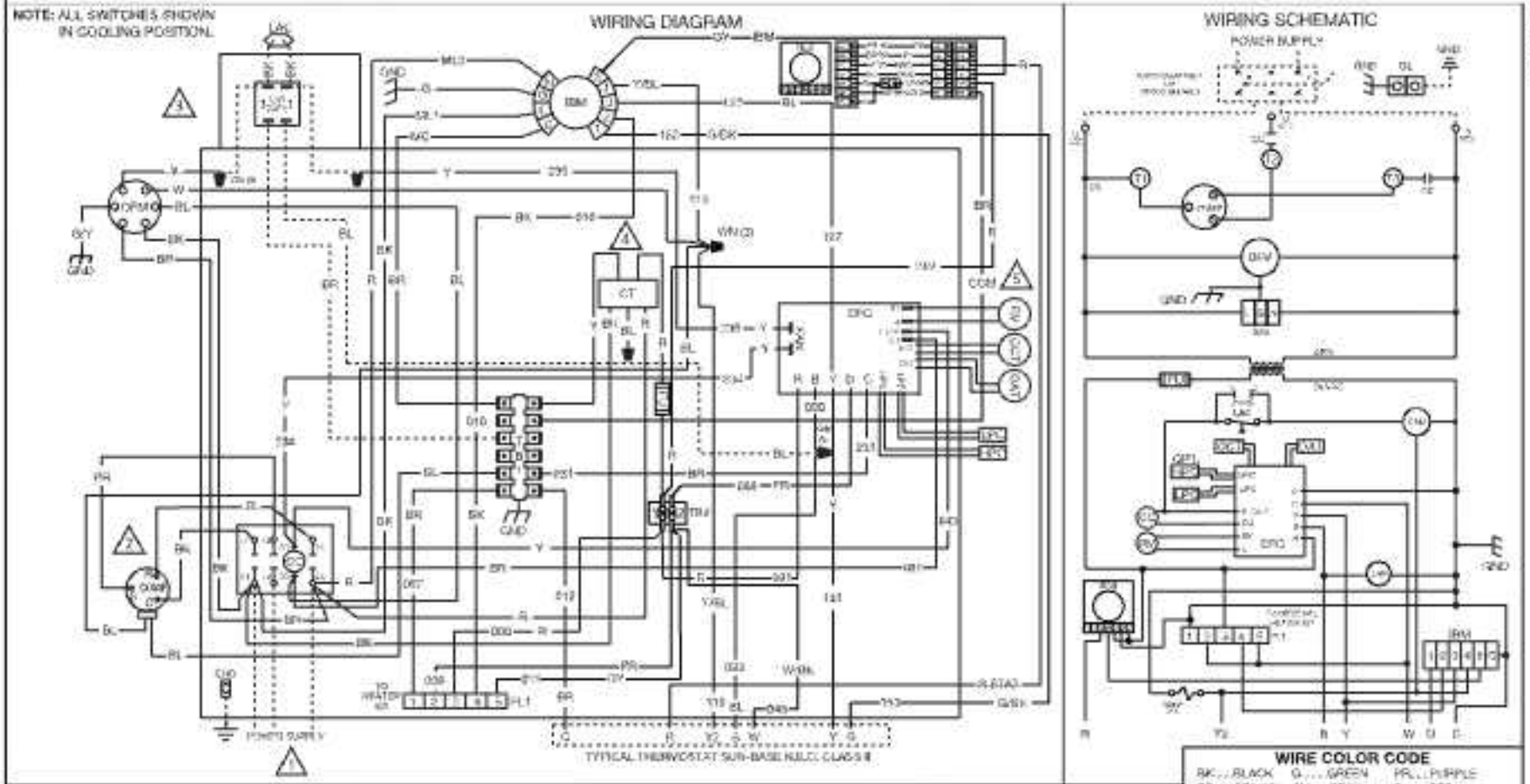
CC	COMPRESSOR CONTACTOR	LPC	LOW PRESSURE CONTROL
COMP	COMPRESSOR	OAT	OUTDOOR AMBIENT TEMP
CT	CONTROL TRANSFORMER	OCT	OUTDOOR COIL TEMP
DFC	DEFROST CONTROL	OFM	OUTDOOR FAN MOTOR
FU	FUSE	OPT	OPTIONAL
GND	GROUND	PL	PLUG
HPC	HIGH PRESSURE CONTROL	RC	RUN CAPACITOR
IBM	INDOOR BLOWER MOTOR	RDS	REFRIGERANT DETECTION SYSTEM
LAC	LOW AMBIENT COOLING CONTROL	RV	REVERSING VALVE
		SOL	SOLENOID
LAR	LOW AMBIENT RELAY	TB	TERMINAL BLOCK
		◀	WIRE NUT

WIRING DIAGRAM/SCHEMATIC

HP NON COMM ELEC HEAT, CT, 2-STG COOL, ECM, RDS, 208/230V 1PH

APPROVED:	CHECKED:	ORIGINAL RELEASE NO.:	
WORKED BY: AOM	DATE: 7/12/2024	114875	
PART NO.: 90-110523-07		REV: 00	

FIGURE 18
WIRING DIAGRAM



WIRING INFORMATION

LINE VOLTAGE
FACTORY STANDARD
FACTORY OPTION
FIELD INSTALLED

LOW VOLTAGE
FACTORY STANDARD
FACTORY OPTION
FIELD INSTALLED

REPLACEMENT WIRE
MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (TYP) MFG

WARNING
CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO LOCAL AND NATIONAL WIRING REGULATIONS AND LOCAL CODES AS APPLICABLE.

NOTES

1. CONNECTIONS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. COMPRESSOR MOTOR THERMALLY PROTECTED.
3. IF LAC/LAR SWITCH USED, CONNECT YELLOW WIRE FROM VAR TO RED WIRE ON BOTH WIRE 23's.
4. TRANSFORMER FACTORY WIRED FOR 240 VOLTS. USE RED AND BLUE LEADS FOR 208 VOLTS. BL WIRE MAY HAVE WH OR BR PUPLITED OC TERMINAL.
5. THIS COMPONENT OVERSIZED IN HEATING.
6. TAP 1 AVAILABLE FOR HIGH STATIC CONDITIONS. SWAP HIGH COOLING TAP WITH TAP WIRE FOR HOIL.

COMPONENT CODES

CC	COMPRESSOR CONTACTOR	LAR	LOW AMBIENT RELAY
COMP	COMPRESSOR	LPC	LOW PRESSURE CONTROL
CT	CONTROL TRANSFORMER	OAT	OUTDOOR AMBIENT TEMP
DFC	DEFROST CONTROL	OCT	OUTDOOR COIL TEMP
FU	FUSE	OFM	OUTDOOR FAN MOTOR
GND	GROUND	OPT	OPTIONAL
HPC	HIGH PRESSURE CONTROL	PL	PLUG
IBM	INDOOR BLOWER MOTOR	RC	RUN CAPACITOR
LAC	LOW AMBIENT COOLING CONTROL	RDS	REFRIGERANT DETECTION SYSTEM
		RV	REVERSING VALVE
		SOL	SOLENOID
		TB	TERMINAL BLOCK
			WIRE NUT

WIRE COLOR CODE

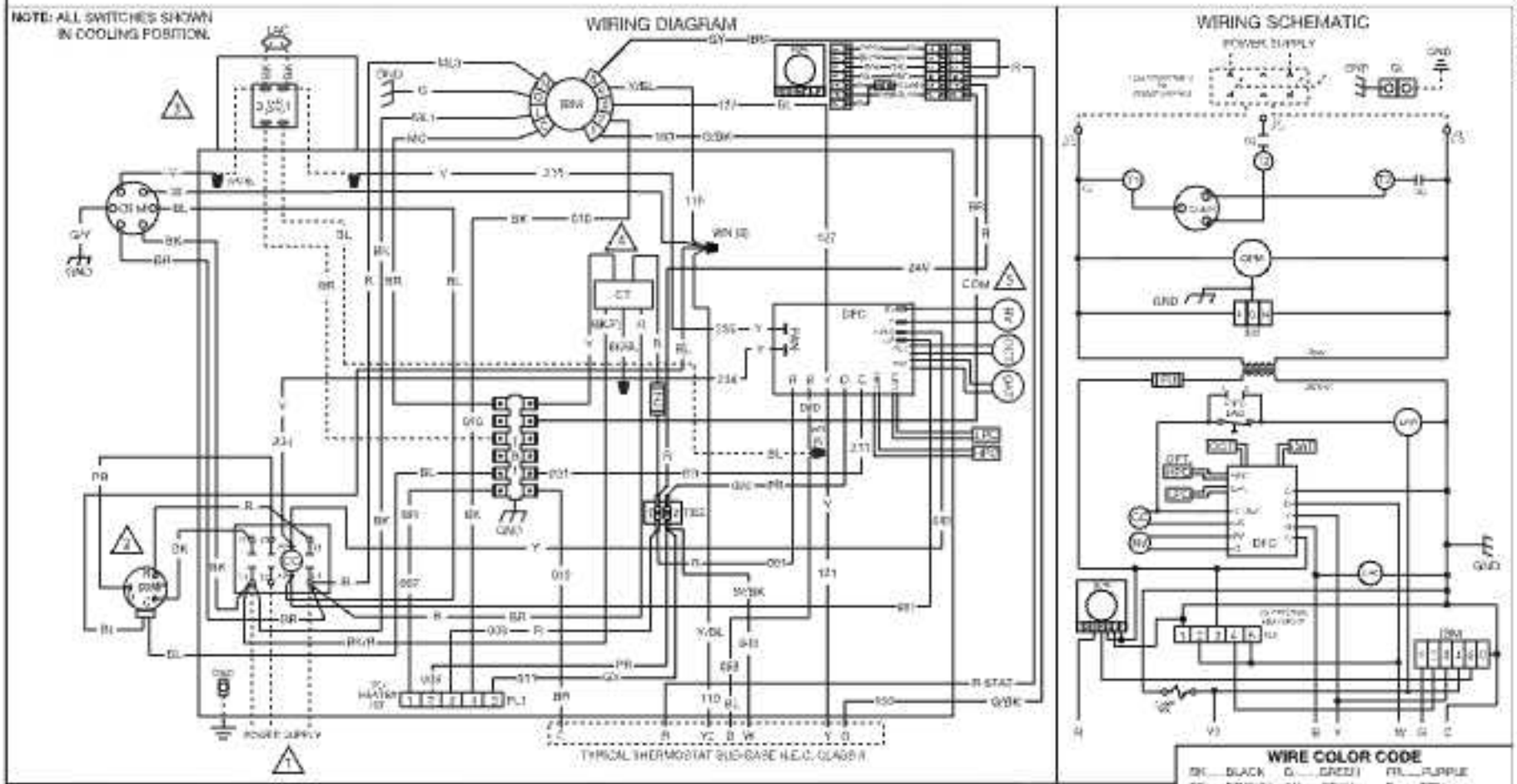
BK . . . BLACK	G . . . . GREEN	PR . . . PURPLE	
BR . . . BROWN	GY . . . GRAY	R . . . . RED	
BL . . . . BLUE	O . . . . ORANGE	W . . . WHITE	
		Y . . . . YELLOW	

WIRING DIAGRAM/SCHEMATIC

HP NON COMM ELEC HEAT,
CT, 2-STG COOL, ECM, RDS,
208/230V, 1PH

DRAWN BY: AGM	DATE: 7/12/2024	ORIGINAL RELEASE NO.: 115870	
PART NO.: 90-110322-04		REV: 00	

FIGURE 19
WIRING DIAGRAM



WIRING INFORMATION

LINE VOLTAGE
FACTORY (ON UNIT) ———
FACTORY OPTION - - - - - -
FIELD INSTALLED · · · · · ·

LOW VOLTAGE
FACTORY (ON UNIT) ———
FACTORY OPTION - - - - - -
FIELD INSTALLED · · · · · ·

REPLACEMENT WIRE
MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (TEMP, VAC)

WARNING
CABINET MUST BE PROPERLY GROUNDED PER CURRENT NEC, CEC/CSA C22.1 AND LOCAL CODES. DISCONNECT ALL POWER BEFORE SERVICING UNIT. WIRES MAY BE ENERGIZED EVEN WHEN CONTROL IS OFF.

NOTES

1. CONDUCTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2. COMPRESSOR MOTOR THERMALLY PROTECTED.
3. IF LAG LEAD IS NOT USED, CONNECT YELLOW WIRE FROM CPR TO WIRE NUT FROM WIRE 33L.
4. FOR 3 PHASE CRMEN PRIMARY LEADS, WIRE RED=BROWN BLACK=BLACK BLACK/BLUE=BLUE
5. THIS COMPONENT IS ENERGIZED IN HEATING.
6. TAP IS AVAILABLE FOR HIGH STATIC CONDITIONS. WHSP HIGH COOLING TAP WITH GY WIRE FOR RDS.

COMPONENT CODES

CC	COMPRESSOR CONTACTOR	LAR	LOW AMBIENT RELAY
COMP	COMPRESSOR	LPC	LOW PRESSURE CONTROL
CT	CONTROL TRANSFORMER	OAT	OUTDOOR AMBIENT TEMP
DFC	DEFROST CONTROL	OCT	OUTDOOR COIL TEMP
FU	FUSE	OFM	OUTDOOR FAN MOTOR
GND	GROUND	OPT	OPTIONAL
HPC	HIGH PRESSURE CONTROL	PL	PLUG
IBM	INDOOR BLOWER MOTOR	RD	RUN CAPACITOR
LAC	LOW AMBIENT COOLING CONTROL	RDS	REFRIGERANT DETECTION SYSTEM
		RV	REVERSING VALVE
		SOL	SOLENOID
		TB	TERMINAL BLOCK
		■	WIRE NUT

WIRE COLOR CODE

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

WIRING DIAGRAM/SCHEMATIC

HP NON COMM ELEC HEAT, CT, 2-STG COOL, ECM, RDS, 208V 3PH

DRAWN BY:	VVM	CHECKED BY:	ORIGINAL RELEASE NO: 119768
DESIGN BY:	VVM	DATE: 8/14/2024	
PART NO.:	90-119322-09	REV:	00

XXV. TROUBLESHOOTING

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	· Check for correct voltage at compressor contactor in control box
	· Thermostat out of calibration-set too high	· Reset
	· Defective contactor	· Check for 24 volts at contactor coil - replace if contacts are open
	· Blown fuses	· Replace fuses
	· Transformer defective	· Check wiring-replace transformer
	· High pressure control open (if provided)	· Reset-also see high head pressure remedy-
	· Interconnecting low voltage wiring damaged	· Replace thermostat wiring
Condenser fan runs, compressor doesn't	· Run capacitor defective (single phase only)	· Replace
	· Loose connection	· Check for correct voltage at compressor - check & tighten all connections
	· Compressor stuck, grounded or open motor winding, open internal overload.	· Wait at least 2 hours for overload to reset. If still open, replace the compressor.
	· Low voltage condition	At compressor terminals, voltage must be within 10% of rating
	· Low voltage condition	· Add start kit components
Insufficient cooling	· Improperly sized unit	· Recalculate load
	· Improper airflow	· Check - should be approximately 400 CFM per ton.
	· Incorrect refrigerant charge	· Charge per procedure attached to unit service panel
	· Air, non-condensibles or moisture in system	· Recover refrigerant, evacuate & recharge, add filter drier
	· Incorrect voltage	· At compressor terminals, voltage must be within 10% of rating plate volts when unit is operating.
Compresaor short cycles	· Incorrect voltage	· At compressor terminals, voltage must be ±10% of nameplate marking when unit is operating.
	· Defective overload protector	· Replace - check for correct voltage
	· Refrigerant undercharge	· 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	· Remove or replace defective component
	· Flow check piston size too small	· Change to correct size piston
	· Incorrect capillary tubes	· Change coil assembly
	· TXV does not open	· Replace TXV
High head-high or normal vapor pressure - Cooling mode	· Dirty condenser coil	· Clean coil
	· Refrigerant overcharge	· Correct system charge
	· Condenser fan not running	· Repair or replace
	· Air or non-condensibles in system	· Recover refrigerant, evacuate & recharge
High head-high or normal vapor pressure - Heating mode	· Low air flow - condenser coil	· Check filters - correct to speed
	· Refrigerant overcharge	· Correct system charge
	· Air or non-condensibles in system	· Recover refrigerant, evacuate & recharge
	· Dirty condenser coil	· Check filter - clean coil
Low head-high vapor pressures	· Defective Compressor valves	· Replace compressor
Low vapor - cool compressor - iced evaporator coil	· Low evaporator airflow	· Increase speed of blower or reduce restriction - replace air filter
	· Operating below 65°F outdoors	· Add Low Ambient Kit
	· Moisture in system	· Recover refrigerant - evacuate & recharge - add filter drier
	· TXV limiting refrigerant flow	· Replace TXV
High vapor pressure	· Excessive load	· Recheck load calculation
	· Defective compressor	· Replace
Fluctuating head & vapor pressures	· TXV hunting	· Check TXV bulb clamp - check air distribution on coil - replace TXV
	· Air or non-condensate in system	· Recover refrigerant, evacuate & recharge
Gurgle or pulsing noise at expansion device or liquid line	· Air or non-condensibles in system	· Recover refrigerant, evacuate & recharge
Indoor blower constantly running no compresaor (Not fan only mode)	· Mitigation mode due to refrigerant leak	· Check for leaks
	· No power to/from thermostat	· Check 24V at thermostat
	· Faulty refrigerant detection sensor	· Replace sensor

XXVI. A2L REFRIGERANT INSTALLATION SAFETY DATA

Model		RHPAYB024	RHPAYB030	RHPXYB036	RHPXYB042	RHPXYB048	RHPXYB060
Refrigerant Charge Weight (oz)		58	56	77	76	112	144
Minimum circulation airflow, Qmin (cfm)		98	95	130	129	189	244
Altitude above Sea Level (ft)	**Altitude Adjustment Factor**	**Minimum total space area, TAmin (sq-ft)**					
0	1.000	109	105	144	142	210	270
1000	1.025	111	108	148	146	215	277
2000	1.051	114	110	152	150	221	284
3000	1.078	117	113	156	154	226	291
4000	1.107	120	116	160	158	232	299
5000	1.138	124	119	164	162	239	307
6000	1.170	127	123	169	167	246	316
6500	1.187	129	125	171	169	249	320

Model		RHPXYC036	RHPXYC048	RHPXYC060
Refrigerant Charge Weight (oz)		80	128	140
Minimum circulation airflow, Qmin (cfm)		135	216	237
Altitude above Sea Level (ft)	**Altitude Adjustment Factor**	**Minimum total space area, TAmin (sq-ft)**		
0	1.000	150	240	282
1000	1.025	154	246	289
2000	1.051	158	252	296
3000	1.078	162	259	303
4000	1.107	166	266	290
5000	1.138	171	273	299
6000	1.170	175	281	307
6500	1.187	178	285	311