

INSTALLATION INSTRUCTIONS

FOR AIR HANDLER REPLACEMENT COILS

RCHY: Featuring Industry-Standard R-454B Refrigerant



 **RECOGNIZE THIS SYMBOL AS AN INDICATION OF IMPORTANT SAFETY INFORMATION!**

⚠️ WARNING

These instructions are intended as an aid to qualified licensed service personnel for proper installation, adjustment and operation of this unit. Read these instructions thoroughly before attempting installation or operation. Failure to follow these instructions may result in improper installation, adjustment, service or maintenance possibly resulting in fire, electrical shock, property damage, personal injury or death.



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



R-454B BEST PRACTICES

- R-410A systems SHOULD NOT be retrofitted with R-454B. Reference Section 1.0 for more information.
- Only use indoor coils approved for use on R-454B systems. An R-410A or R-22 coil has not been evaluated for use with R-454B and may lack a refrigerant detection system necessary for safe operation of the system. Reference Section 1.0 for more information.
- R-454B is classified as safety group A2L, where the 2L flammability class indicates lower flammability. R-454B and air should never be mixed in tanks or supply lines or be allowed to accumulate in storage tanks due to its flammability. Reference Section 4.1.2 for more information.
- When using a torch during brazing, nitrogen must be flowed while brazing. Reference Section 4.4.1 for more information.
- Existing R-410A or R-22 unit's line sets be purged and flushed with nitrogen if being used as a replacement for a R-454B system. Reference Section 4.4.1 for more information.
- R-454B system refrigerants must be charged in liquid form. Reference Section 5.4 for more information.
- Lines must be cut when replacing R-410A or R-22 systems with a R-454B system.

SAFETY INFORMATION

⚠️ WARNINGS:

- **Do not use oxygen to purge lines or pressurize system for leak test. Oxygen reacts violently with oil and possibly with R-454B, which can cause an explosion resulting in severe personal injury or death.**
- **R-410A systems should not be retrofitted with R-454B. Such a retrofit violates the product listing and may result in severe personal injury or property damage.**
- These instructions are intended as an aid to qualified, licensed service personnel for proper installation, adjustment, and operation of this unit. Read these instructions thoroughly before attempting installation or operation. **Failure to follow these instructions may result in improper installation, adjustment, service, or maintenance possibly resulting in fire, electrical shock, property damage, personal injury, or death.**
- **The unit must be permanently grounded. Failure to do so can cause electrical shock resulting in severe personal injury or death.**
- **Turn off electric power at the fuse box or service panel before making any electrical connections.**
- **Complete the ground connection before making line voltage connections. Failure to do so can result in electrical shock, severe personal injury, or death.**
- **Disconnect all power to unit before starting maintenance. Failure to do so can cause electrical shock resulting in severe personal injury or death.**
- **Never assume the unit is properly wired and/or grounded. Always test the unit cabinet with a noncontact voltage detector available at most electrical supply houses or home centers before removing access panels or coming into contact with the unit cabinet.**
- **This unit is a PARTIAL UNIT AIR CONDITIONER, complying with PARTIAL UNIT requirements of this Standard, and must only be connected to other units that have been confirmed as complying to corresponding PARTIAL UNIT requirements of this Standard, UL 60335-2-40/CSA C22.2 No. 60335-2-40, or UL 1995/CSA C22.2 No 236.**
- Because of possible damage to equipment or personal injury, installation, service, and maintenance should be performed by a trained, qualified service personnel. Consumer service is recommended only for filter cleaning/replacement. Never operate the unit with access panels removed.
- The manufacturer's warranty does not cover any damage or defect to the unit 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 heat pump. **You should be aware that the use of unauthorized components, accessories, or devices may adversely affect the operation of the coil 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.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning 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.
- **Duct leaks can create an unbalanced system and draw pollutants such as dirt, dust, fumes and odors into the home causing property damage. Fumes and odors from toxic, volatile or flammable chemicals, as well as automobile exhaust and carbon monoxide (CO), can be drawn into the living space through leaking ducts and unbalanced duct systems causing personal injury or death (see Figure 1).**
 - If air-moving equipment or ductwork is located in garages or off-garage storage areas - all joints, seams, and openings in the equipment and duct must be sealed to limit the migration of toxic fumes and odors including carbon monoxide from migrating into the living space.
 - If air-moving equipment or ductwork is located in spaces containing fuel burning appliances such as water heaters or boilers - all joints, seams, and openings in the equipment and duct must also be sealed to prevent depressurization of the space and possible migration of combustion by products including carbon monoxide into the living space.
 - Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
 - 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).
 - Do not pierce or burn
 - Be aware that refrigerants may not contain an odor.
- **Proposition 65: This appliance contains fiberglass insulation. Respirable particles of fiberglass are known to the State of California to cause cancer. 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

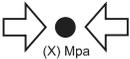
natural gas used with some of our products. Listed below are those chemicals and substances commonly associated with similar equipment in our industry and other manufacturers.

- 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.

- Single-pole contactors are used on all standard single-phase units through 5 tons. Caution must be exercised when servicing as only one leg of the power supply is broken by the contactor.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- 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).
- Do not pierce or burn.
- Be aware that refrigerants may not contain an odor.

Markings Reference

	[Symbol ISO 7000-1659 (2004-01)]	Service indicator: read technical manual
	A2L Symbol	Warning: low burning velocity material
	[Symbol ISO 7000-1701 (2004-01)]	Pressure
	[Symbol IEC 60417-6040 (2010-08)]	Ultraviolet radiation, instructional safeguard
	[Symbol ISO 7000-1641 (2004-01)]	Operator's manual: operating instructions
	[UN GHS (Globally Harmonized System of Classification and Labeling of Chemicals)]	Refrigerant Safety Group AXX, warning: flammable materials

CAUTIONS:

- Only use indoor coils approved for use on R-454B systems. An R-410A or R-22 coil has not been evaluated for use with R-454B and may lack a refrigerant

detection system necessary for safe operation of the system. The R-410A or R-22 coil could also contain PVE or POE oil which is incompatible with the POE oil used in R-454B systems and could result in reliability issues with the compressor and TXVs.

- Refrigerant R-454B operates at pressures similar to R-410A. However, it is classified in safety group A2L. Ensure that servicing equipment is compatible with group A2L refrigerants and in particular with R-454B. Use appropriate care when using this refrigerant. Failure to exercise care may result in equipment damage or personal injury.
- Only match this indoor coil with a matched outdoor unit approved for use with this coil per the unit manufacturer's specification sheet. The use of unmatched coils or air handler will likely result in a charge imbalance between the cooling and heating modes which can cause unsatisfactory operation including a high-pressure switch lockout condition.
- When coil is installed over a finished ceiling and/or living area, it is required that a secondary sheet metal condensate pan be constructed and installed under the entire unit. Failure to do so can result in property damage.
- 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.
- Unit must be reconfigured for vertical down or horizontal right supply air discharge applications. The coil must be repositioned so the vertical drainpan is on the bottom for vertical down discharge applications or the horizontal drip pan is below coil for horizontal right discharge applications. Failure to reconfigure the unit for these applications can result in property damage and poor system performance.
- This unit is a PARTIAL UNIT AIR CONDITIONER, complying with PARTIAL UNIT requirements of this Standard, and must only be connected to other units that have been confirmed as complying to corresponding PARTIAL UNIT requirements of this Standard, UL 60335-2-40/CSA C22.2 No. 60335-2-40, or UL 1995/CSA C22.2 No 236.
- The indoor coil must be equipped with an electronically powered leak detection system. To be effective, the unit must be electrically powered at all times after installation, other than when servicing.
- In compliance with recognized codes, an auxiliary drain pan must be installed under all equipment containing evaporator coils that are located in any area of a structure where damage to the building or building contents may occur as a result of an overflow of the coil drain pan or a stoppage in the primary condensate drain piping. See Section 6.3 of this manual for auxiliary horizontal overflow pan accessory information (model RXBM).

NOTICE:

- When used in cooling applications, excessive sweating may occur when unit is installed in an unconditioned space. This can result in property damage.

GENERAL INFORMATION

WARNING:

Improper installation, or installation not made in accordance with these instructions, can result in unsatisfactory operation and/or dangerous conditions and can cause the related warranty not to apply.

Introduction

The information contained in this manual has been prepared to assist in the proper installation, operation, and maintenance of the air conditioning system. Read this manual and any instructions packaged with separate equipment required to make up the system prior to installation. Homeowner should retain this manual for future reference.

Importance of Quality Installation

A quality installation is critical to assure safety, reliability, comfort, and customer satisfaction. Strict adherence to applicable codes, the information in this installation manual, the outdoor unit installation manual, and the thermostat installation manual are key to a quality installation. Read the entire instruction manuals before starting the installation.

IMPORTANT: This product has been designed and manufactured to meet certified AHRI capacity and efficiency ratings with the appropriate outdoor units. However, proper refrigerant charge, proper airflow, and refrigerant line sizing are critical to achieve optimum capacity and efficiency and to assure reliable operation. Installation of this product should follow the manufacturer's refrigerant charging and airflow instructions located in this installation manual and the charging chart label affixed to the outdoor unit. Failure to confirm proper charge and airflow may reduce energy efficiency and shorten equipment life.

The equipment has been evaluated in accordance with the Code of Federal Regulations, Chapter XX, Part 3280.

Install the unit in accordance with applicable national, state, and local codes. Latest editions are available from: "National Fire Protection Association, Inc., Batterymarch Park, Quincy, MA 02269." These publications are:

- ANSI/NFPA No. 70-(Latest Edition) National Electrical Code.
- NFPA 90A Installation of Air Conditioning and Ventilating Systems.
- NFPA 90B Installation of Warm Air Heating and Air Conditioning Systems.

Install the indoor unit in such a way as to allow necessary access to the coil/filter rack and blower/control compartment.

System Sizing and Selection

Before specifying any heat pump equipment, a survey of the structure and a heat loss and heat gain calculation must be made. A heat loss calculation involves identifying all surfaces and openings that lose heat to the surrounding air and quantifying that heat loss. A cooling heat gain calculation makes similar measurements and determines the amount of heat needed to be removed. A heat gain calculation also calculates the extra heat load caused by sunlight and by humidity removal. These factors must be considered before selecting a heat pump system to provide year-round comfort. The Air Conditioning Contractors of America (ACCA) Manual J method of load calculation is one recognized procedure for determining the heating and cooling load.

After the proper equipment combination has been selected, satisfying both sensible and latent requirements, the system must be properly installed. Only then can the system provide the comfort it was designed to provide.

There are several factors that installers must consider.

- Outdoor unit location
- Indoor unit blower speed and airflow
- Proper equipment evacuation
- Supply and return air duct design and sizing
- Refrigerant charge
- System air balancing

- Diffuser and return air grille location and sizing

IMPORTANT: Excessive use of elbows in the refrigerant line set can produce excessive pressure drop. Follow industry best practices for installation. Installation and commissioning of this equipment is to be performed by trained and qualified HVAC professionals. For technical assistance, contact your Distributor Service Coordinator.

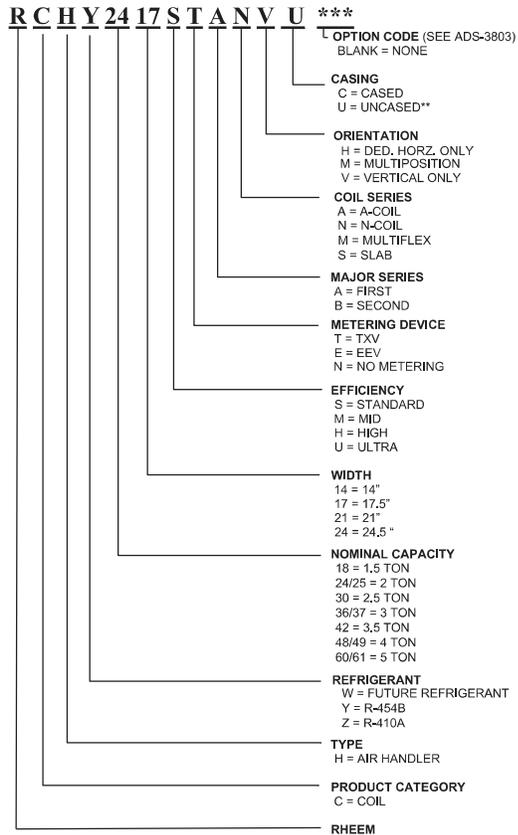
Checking Product Received

Upon receiving unit, inspect it for any shipping damage. Claims for damage, either apparent or concealed, should be filed immediately with the shipping company. Check model number, electrical characteristics, and accessories to determine if they are correct. Check system components (indoor coil, outdoor unit, air handler/furnace, etc.) to make sure they are properly matched.

Efficiency Testing Notice

For purposes of verifying or testing efficiency ratings, the test procedure in Title 10 APPENDIX M1 to Subpart B of Part 430 (Uniform Test Method for Measuring the Energy Consumption of Central Air Conditioners and Heat Pumps) and the clarifying provisions provided in the AHRI Operations Manual 210/240 that were applicable at the date of manufacture should be used for test set up and performance.

FIGURE 1
MODEL NUMBER EXPLANATION



**Convertible to horizontal using parts from original coil or using RXHH horizontal adapter kit.

GENERAL

WARNING

The indoor coil must be equipped with an electronically powered leak detection system. To be effective, the unit must be electrically powered at all times after installation, other than when servicing.

RCHY is a replacement-only uncased coil. RCHY replacement coils are only used in (-)H1PY, (-)H2TY, (-)H2VY, (-)H3VY, and (-)HMVY air handlers.

For horizontal applications, a horizontal drip shield and water management parts (see Figure 2) must be installed to manage condensate drainage. These parts may be transferred from the original coil to the replacement coil or an RXHH Horizontal Adapter Kit may be purchased if new parts are required. See Table 1 for RXHH model numbers.

COIL END SHIELD KITS

Replacement coils do not come equipped from the factory with sheet metal shields at the front and rear of the coil. The purpose of these shields is to isolate the aluminum tubing from copper residue left on the foil insulation by the original copper tube coil. Copper residue or copper oxide in contact with the aluminum tubing in the presence of moisture will result in galvanic corrosion and leaks in the aluminum tube at the contact point. The shields must be in place on the coil when replacing a copper tube coil to prevent the galvanic corrosion.

FIGURE 2

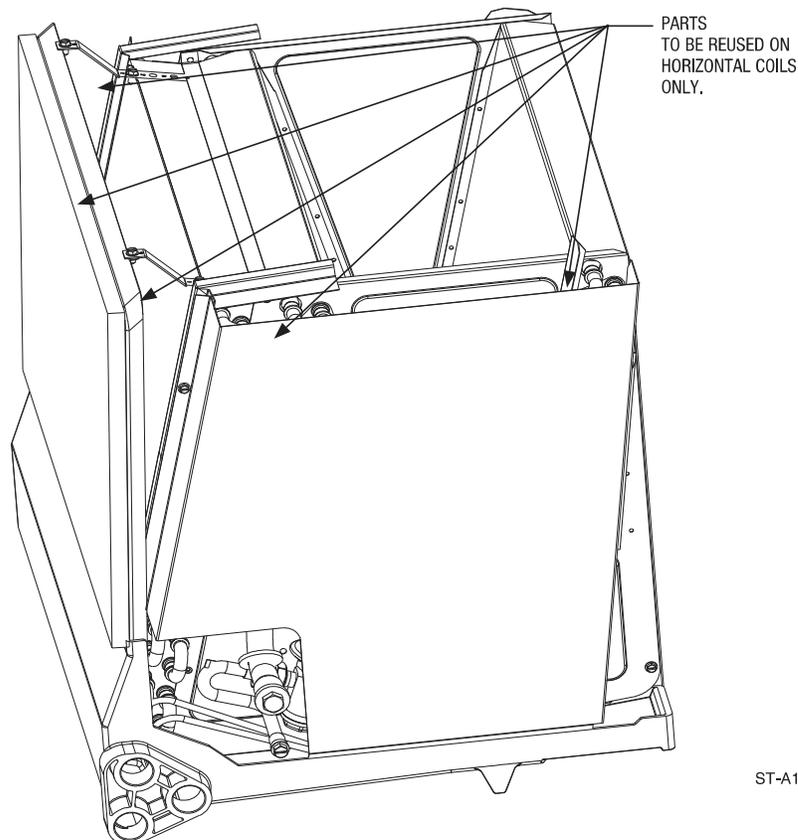


TABLE 1
R-454B UNCASSED AIR-HANDLER & COILS: ACCESSORY INFORMATION

REPLACEMENT R-454B UNCASSED AIR HANDLER COIL	PREVIOUS ALUMINUM COIL	HORIYONTAL ADAPTER KIT MODEL NUMBER
RCHY2417STANVU	RCHZ2417STANVU	RXHH-A02
RCHY3617STANVU	RCHZ3617STANVU	RXHH-A03
RCHY3621MTAAVU	RCHZ3621MTAAVU	RXHH-A06
RCHY3621MTANVU	RCHZ3621MTANVU	RXHH-A04
RCHY3621STANVU	RCHZ3621STANVU	RXHH-A03
RCHY4821STAAVU	RCHZ4821STAAVU	RXHH-A06
RCHY4821STANVU	RCHZ4821STANVU	RXHH-A04
RCHY4824STANVU	RCHZ4824STANVU	RXHH-A04
RCHY6021STAAVU	RCHZ6021STAAVU	RXHH-A06
RCHY6024STANVU	RCHZ6024STANVU	RXHH-A05
RCHY2417SEANVU	RCHZ2417SEANVU	RXHH-A02
RCHY2421MEANVU	RCHZ2421MEANVU	RXHH-A03
RCHY6021SEAAVU	RCHZ6021SEAAVU	RXHH-A06
RCHY6024SEANVU	RCHZ6024SEANVU	RXHH-A05
RCHY4824MTANVU	N/A	RXHH-A05
RCHY3621MEAAVU	N/A	RXHH-A06
RCHY4821SEAAVU	N/A	RXHH-A06

INSTALLATION

IMPORTANCE OF QUALITY INSTALLATION

A quality installation is critical to assure safety, reliability, comfort, and customer satisfaction. Strict adherence to applicable codes, the information in this installation manual, the outdoor unit installation manual, and the thermostat installation manual are key to a quality installation. Read the entire instruction manuals before starting the installation.

IMPORTANT: This product has been designed and manufactured to meet certified AHRI capacity and efficiency ratings with the appropriate outdoor units. However, proper refrigerant charge, proper air-flow, and refrigerant line sizing are critical to achieve optimum capacity and efficiency and to assure reliable operation. Installation of this product should follow the manufacturer's refrigerant charging and air-flow instructions located in the outdoor unit installation instructions and the charging chart label affixed to the outdoor unit. Failure to confirm proper charge and air-flow may reduce energy efficiency and shorten equipment life.

The equipment has been evaluated in accordance with the Code of Federal Regulations, Title 24, Chapter XX, Part 3280.

Install the unit in accordance with applicable national, state, and local codes. Latest editions are available from: "National Fire Protection Association, Inc., Batterymarch Park, Quincy, MA 02269." These publications are:

- ANSI/NFPA No. 70-(Latest Edition) National Electrical Code.
- NFPA 90A Installation of Air Conditioning and Ventilating Systems.
- NFPA 90B Installation of Warm Air Heating and Air-Conditioning Systems.

Install the unit in such a way as to allow necessary access to the coil/filter rack.

REFRIGERANT CONNECTIONS

Keep the coil connections sealed until refrigerant connections are to be made. See the Installation Instructions for the outdoor unit for details on line sizing, tubing installation, and charging information.

Coil is shipped with a low pressure (5 - 10 PSIG) charge of dry nitrogen. Evacuate the system before charging with refrigerant.

Install refrigerant tubing so that it does not block service access to the front of the unit. Nitrogen should flow through the refrigerant lines while brazing.

Use a brazing shield to protect the cabinet's paint from being damaged by torch

flames.

After the refrigerant connections are made, seal the gap around the connections with pressure sensitive gasket. If necessary, cut the gasket into two pieces for a better seal (See Figure 3.)

TOOLS REQUIRED FOR INSTALLING AND SERVICING R-454B MODELS

Manifold Sets:

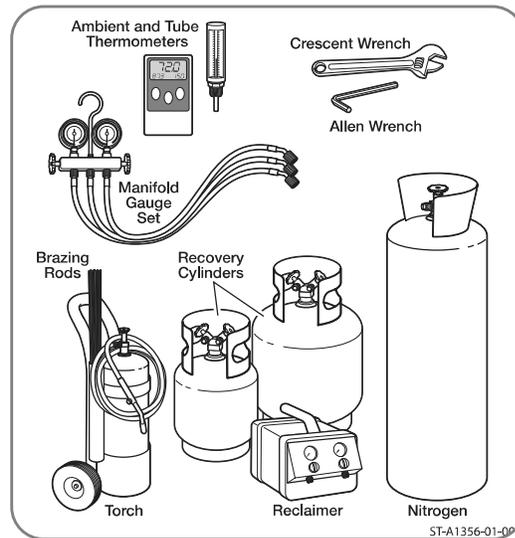
- Up to 800 PSIG [5,516 kPa] High-Side
- Up to 250 PSIG [1,724 kPa] Low-Side
- 550 PSIG [3,792 kPa] Low-Side Retard

Manifold Hoses:

- Service Pressure Rating of 800 PSIG [5,516 kPa]

Recovery Cylinders:

- 400 PSIG [2,758 kPa] Pressure Rating
- Dept. of Transportation 4BA400 or BW400



CAUTION: R-454B is classified as safety group A2L per ASHRAE Standard 34. Verify that service equipment and instruments are certified for use with group A2L refrigerants, and in particular with R-454B.

Specifications of R-454B

Application: R-454B is not a drop-in replacement for R-410A and R-22.

Equipment design must accommodate the safety group A2L of R-454B. It cannot be retrofitted into R-410A and R-22 heat pumps.

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].

Composition: R-454B is a non-azeotropic mixture of 68.9% by weight difluoromethane (HFC-32) and 31.1% by weight 2,3,3,3-tetrafluoro-1-propene.

Pressure: The pressure of R-454B is similar to that of R-410A. Recovery and recycle 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 4BW400.

Flammability: R-454B is classified as safety group A2L, where the 2L flammability class indicates lower flammability. **R-454B and air should never be mixed in tanks or supply lines or be allowed to accumulate in storage tanks. Leak checking should never be done with a mixture of R-454B and air.**

Quick-Reference Guide for R-454B

- Refrigerant R-454B operates at pressures 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 cylinders are light green gray in color with a red band on the shoulder or top of the cylinder to indicate flammability.
- R-454B, is only compatible with POE oils.
- Vacuum pumps will not remove moisture from POE oil used in R-454B systems.
- R-454B systems should be charged with liquid refrigerants in liquid phase. R-454B cylinders should be inverted to ensure liquid charging of the equipment.
- Do not install a suction line filter drier in the liquid line.
- A factory-approved bi-flow liquid line filter drier is shipped with every unit and must be installed in the liquid line at the time of installation. Only manufacturer-approved liquid line filter driers should be used. Filter driers must have a working pressure rating of at least 600 psig [4,137 kPa]. The filter drier will only have adequate moisture-holding capacity if the system is properly evacuated.
- Desiccant (drying agent) must be compatible for POE oils and R-454B refrigerant.
- R-454B cylinders containing less than 50 lbs of refrigerant require a CGA 164 fitting. R-454B cylinders containing more than 50 lbs of refrigerant require a CGA 670 fitting.

Pipe-work including piping material, pipe routing, and installation shall include protection from physical damage in operation and service, and be in compliance with national and local codes and standards, such as ASHRAE 15, ASHRAE 15.2, IAPMO Uniform Mechanical Code, ICC International Mechanical Code, or CSA B52. All field joints shall be accessible for inspection prior to being covered or enclosed.

After completion of field piping for split systems, the field pipework shall be pressure tested with an inert gas and then vacuum tested prior to refrigerant charging, according to the following requirements:

- The minimum test pressure for the low side of the system shall be the low side design pressure and the minimum test pressure for the high side of the system shall be the high side design pressure, unless the high side of the system, cannot be isolated from the low side of the system in which case the entire system shall be pressure tested to the low side design pressure.
- Field-made refrigerant joints indoors shall be tightness tested. The test method shall have a sensitivity of 5 grams per year of refrigerant or better under a pressure of at least 0,25 times the maximum allowable pressure.
- No leak shall be detected; where addition of charge is required to complete installation, refer to the Outdoor I&O System start-up and refrigerant charging details for instructions on how to determine the additional REFRIGERANT CHARGE and how to complete the REFRIGERANT CHARGE on the label provided by the manufacturer. Interconnecting refrigerant piping length and diameter shall be taken into consideration as listed in the Line Set Selection.

REFRIGERANT DETECTION SYSTEM (RDS) INSTALLATION INSTRUCTIONS

The RDS is used to mitigate any leaked refrigerant that may occur in the indoor portion of the system.

When a refrigerant leak is detected, the compressor shuts off and blower is energized to perform mitigation for a minimum of 5 minutes after RDS has reset. RDS resets after it no longer detects refrigerant.

Life expectancy of the RDS is 15 years and should be replaced at the end of life.

Contact Rheem Parts Department for RDS replacement.

WARNINGS:

Failure to install the refrigerant detection system properly may result in leak detection failure and risk potential fire hazards.

IMPORTANT: The installation process for the RDS varies depending on the flow configuration of the unit. It is crucial to adhere to the following instructions. The RDS is initially configured for upflow and downflow installation during manufacturing and can be adjusted for horizontal flow configurations.

The RDS must be installed at the location respective to the flow configuration that the unit is installed. Installation locations are defined for each flow configuration in the below illustration.

Instructions for installation of the critical-to-safety wiring connection of the leak detection sensor or leak detection system to the furnace assembly. Typical wire connections for the sensor installation on a gas furnace O/ BK to E2, O to E1, BK to Hi heat (Blower tap), Y/BL- YID to (Y to Indoor), Y -YTS (Y to stat), BR to 24VAC Common, R/BK to 24VAC.. All wires must be 18 AWG with a Min. insulation thickness of 1.58 mm or protected from damage. Critical-to-safety wiring is any field installed wiring necessary to fulfill the requirements of Annex GG in the event of detection of a leak.

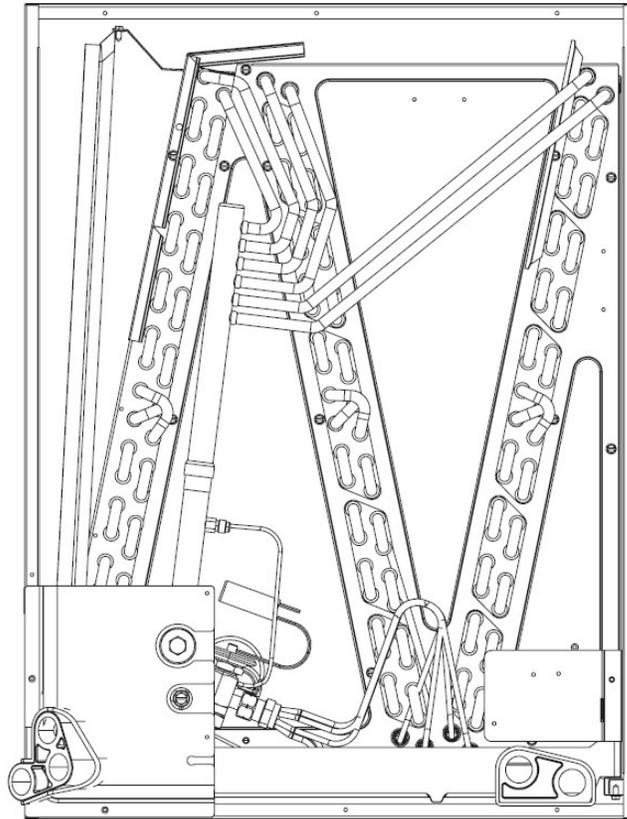
It shall not be installed on furnaces with an inductive electrical greater than 4.77kva as calculated in Clause 22.116 and detection of a leak shall turn on the indoor fan at the highest speed or turn it on to not less than Qmin determined in Annex GG

Total System Charge (oz)	Minimum Indoor Airflow (CFM)	Without Refrigerant Leak Detection Sensor Area of Smallest Conditioned Room Or Space Where Indoor Unit is Installed (sqft)			With Refrigerant Leak Detection Sensor *Minimum Required Total Conditioned Room Area (sqft) Any configuration
		Distance From Floor to Bottom Edge of Lowest Inlet or Outlet Vent Opening or Bottom Edge of Indoor Unit			
		≤2 FT	6 FT	≥9 FT	
50	166	338	113	75	94
100	333	781	225	150	187
150	499	1758	338	225	281
200	665	3126	451	301	375
250	831	4884	564	376	469
300	998	7032	781	451	562
350	1164	9572	1064	526	656
400	1330	12502	1389	617	750
450	1497	15823	1758	781	843
500	1663	19534	2170	965	937
550	1829	not permitted - sensor required			1031
600	1996				1125

Installed Altitude (ft) Halt	Altitude Adjustment Factor (AF)
1000	1.050
1500	1.110
2000	1.180
2500	1.265
3000	1.360
3500	1.423
4000	1.528
4500	1.643
5000	1.768
5500	1.903
6000	2.048
6500	2.203

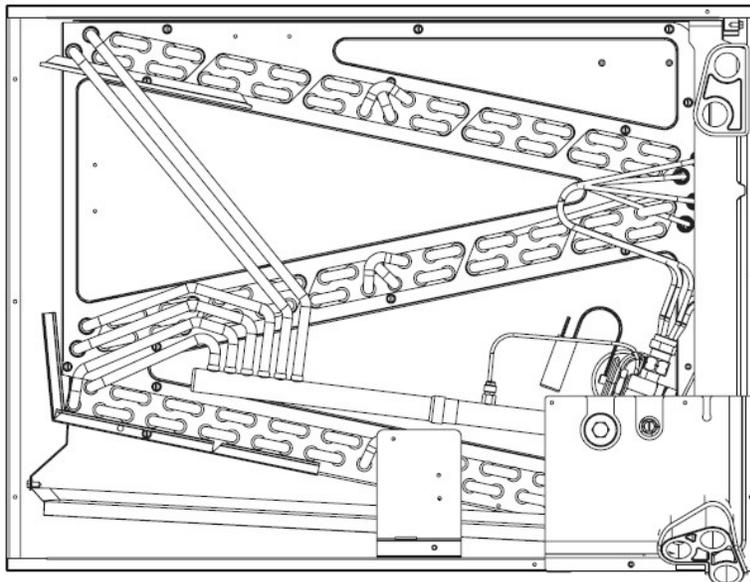
Note : Installing technician to correct the minimum room area of the space Amin or the minimum room area of conditioned space T Amin by multiplying by the altitude adjustment factor (AF) based on the building site ground level altitude (Halt). If the altitude is between each specified range in the table, the technician may interpolate the altitude adjustment factor or round up the altitude to the next interval and use the adjustment factor.

UPFLOW AND DOWNFLOW



ST-A1366-01-00

HORIZONTAL LEFT AND HORIZONTAL RIGHT



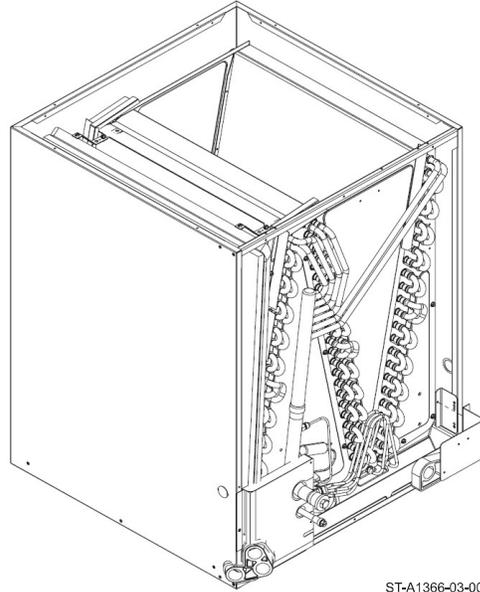
ST-A1366-02-00

PART LIST:

ITEM DESCRIPTION	PART NUMBER	QUANTITY
Primary Bracket	AE-109597-01	1
Flange	AE-109596-01	2
Screw	63-22153-05	5
Cup Point Screw	63-24368-01	3

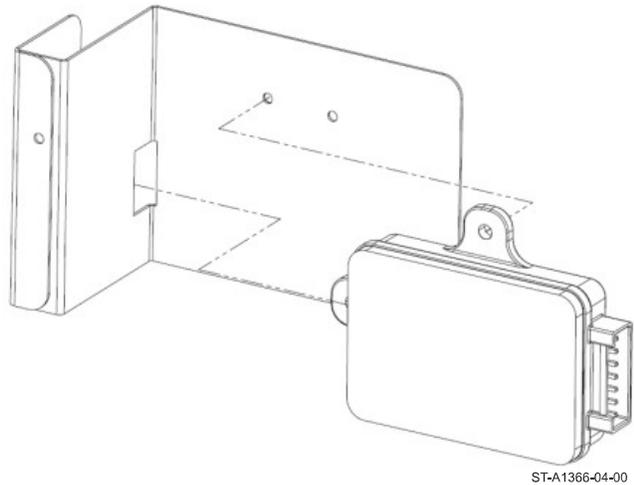
Step 1: Primary Bracket Removal

- Unscrew and remove the primary bracket from the flange. Ensure the RDS wiring harness is not under tension throughout this process.

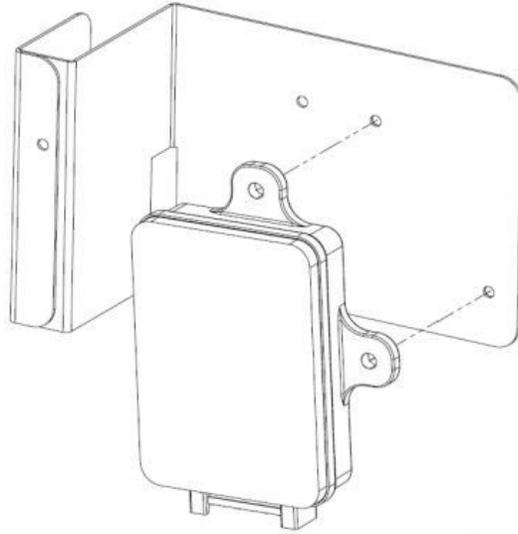


Step 2: RDS Orientation and Relocation

1. Remove the RDS from the upflow or downflow mounting orientation on the primary bracket by removing the single screw (Part Number: 63-24368-01) and sliding the RDS out of the slot.

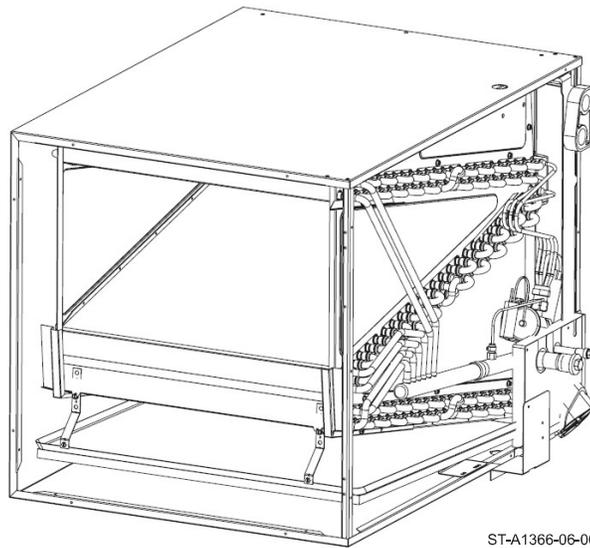


2. Secure the RDS to the primary bracket using the screw provided in the parts bag (Part Number: 63-24368-01) and the screw removed in the previous step, following the hole positions shown in the below illustration.



ST-A1366-05-00

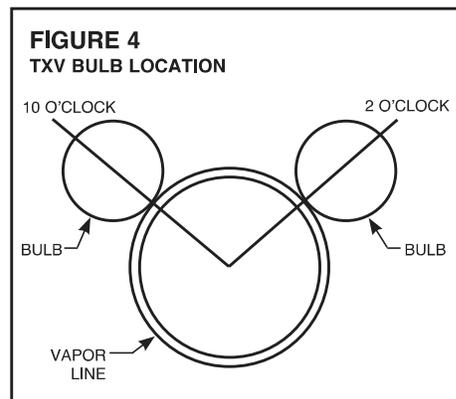
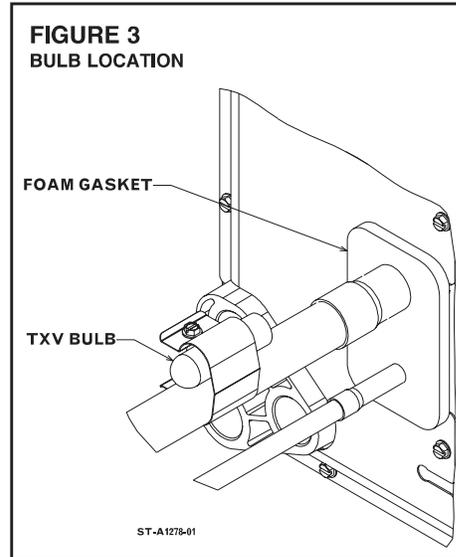
3. Secure the RDS to the primary bracket using the screw provided in the parts bag (Part Number: 63-24368-01) and the screw removed in the previous step, following the hole positions shown in the below illustration.



ST-A1366-06-00

Note: For air-handler unit models without a RDS installed in manufacturing, consult applicable tables in outdoor unit installation instructions to determine if your unit requires RDS installation. Additional instructions will be provided in the RDS installation kit.

TXV SENSING BULB (TXV COILS ONLY)



IMPORTANT: DO NOT perform any soldering with the TXV bulb attached to any line.

After soldering operations have been completed, clamp the TXV bulb securely on the vapor line anywhere between the 10 o'clock and 2 o'clock positions with the strap provided in the parts bag. (See Figures 3 & 4)

Insulate the TXV sensing bulb and suction line with the provided pressure sensitive insulation (size 4" x 7") and secure with provided wire ties.

IMPORTANT: The TXV sensing bulb should be located on a horizontal section of copper suction line, just outside of coil box and past the braze joint. The copper sensing bulb must never be placed on any aluminum tube as this will result in galvanic corrosion and eventual failure of the aluminum tube.

EXV VAPOR LINE THERMISTOR (EXV COILS ONLY)

⚠ NOTICE

THE VAPOR LINE THERMISTOR DOES NOT COME WITH THE REPLACEMENT COIL. REMOVE THE THERMISTOR FROM THE ORIGINAL COIL AND INSTALL ON THE NEW COIL.

IMPORTANT: DO NOT perform any brazing with the vapor line thermistor attached to any line. After brazing operations have been completed, clamp

the vapor line thermistor securely on the vapor line anywhere between the 10 o'clock and 2 o'clock positions with the clip provided on the thermistor. (See Figures 5 & 6) Insulate the vapor line thermistor and vapor line with the provided pressure sensitive insulation (size 4" x 7") and secure with provided wire ties, or simply slide the vapor line insulation over the thermistor until it contacts the air-handler cabinet and secure with a wire tie to keep it in place.

Make sure to protect the EXV pressure transducer, copper to aluminum joint, and service valves from overheating by use of wet rag or some type of heat sink and shielding. Double tip torches are not recommended.

IMPORTANT: The vapor line thermistor should be located on a horizontal section of vapor line, just outside of coil box and past the braze joint. The copper thermistor must never be placed on any aluminum tube as this will result in galvanic corrosion and eventual failure of the aluminum tube.

IMPORTANT: Never place the thermistor on the heat effected zone near the braze connection, but it should be located within 6" of the indoor unit.

FIGURE 5
VAPOR LINE THERMISTOR LOCATION

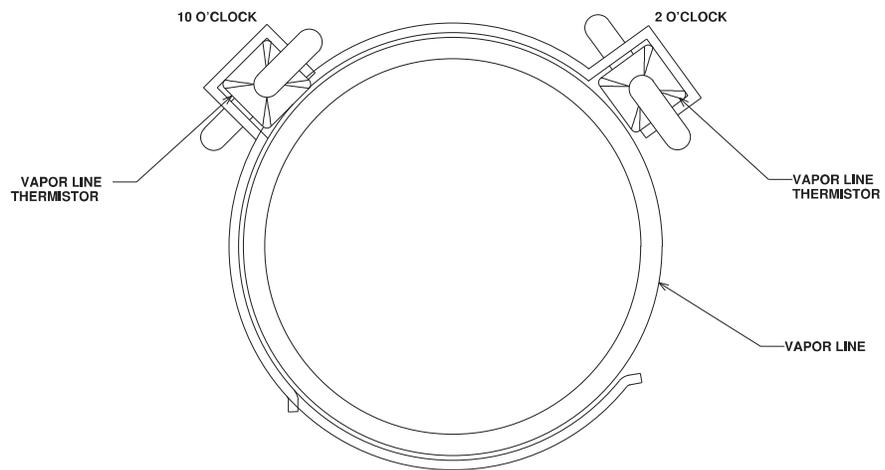


FIGURE 6
VAPOR LINE THERMISTOR LOCATION

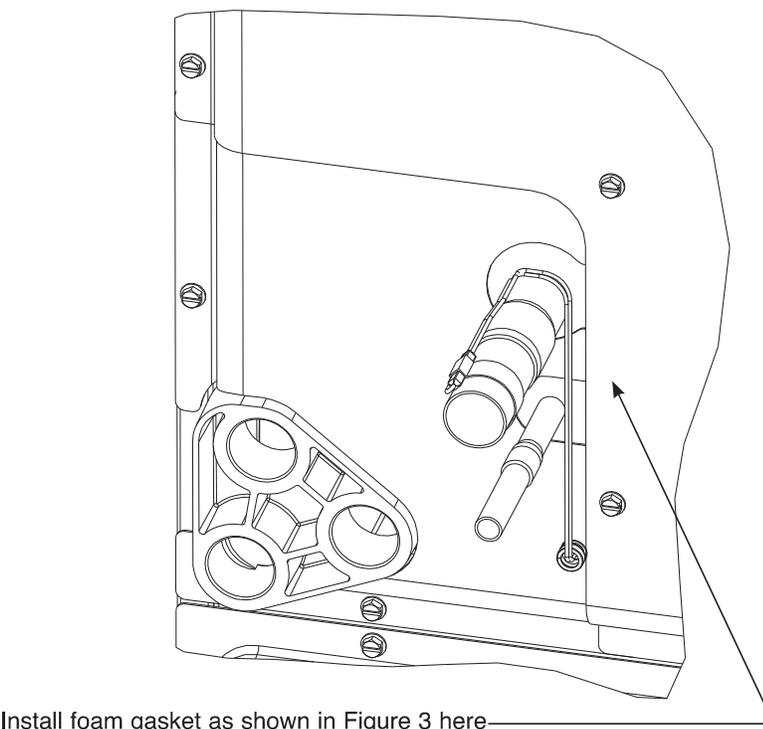


TABLE 2**R-22 TXV CONVERSION KITS (TO BE USED TO CONVERT R-454B COIL TO OPERATE WITH R-22)**

AIR HANDLER CROSS REFERENCE CHART			
ORIGINAL AIR HANDLER	ORIGINAL AIR HANDLER COIL	RECOMMENDED ALUMINUM TUBE REPLACEMENT COIL (R-454B)	R-22 TXV CONVERSION KIT MODEL NO.
RHSA-**1817	RCSA-**2417	RCHY2417STAN	RXCT-HBA
RHSA-**2417	RCSA-**2417	RCHY2417STAN	RXCT-HBA
RHLA-**2417	RCSA-**2417	RCHY2417STAN	RXCT-HBA
RHSA-**3017	RCSA-**3617	RCHY3617STAN	RXCT-HBB
RHSA-**3617	RCSA-**3617	RCHY3617STAN	RXCT-HBB
RHLA-**3617	RCSA-**3617	RCHY3617STAN	RXCT-HBB
RHSA-**3621	RCSA-**3621	RCHY3621STAN	RXCT-HBB
RHSA-**4221	RCSA-**4821	RCHY4821STAN or RCHY3621MTAN	RXCT-HBC
RHSA-**4821	RCSA-**4821	RCHY4821STAN or RCHY3621MTAN	RXCT-HBC
RHLA-**4821	RCSA-**4821	RCHY4821STAN or RCHY3621MTAN	RXCT-HBC
RHSA-**4824	RCSA-**4824	RCHY4824STAN	RXCT-HBC
RHLA-**4824	RCSA-**4824	RCHY4824STAN	RXCT-HBC
RHSA-**6024	RCSA-**6024	RCHY6024STAN	RXCT-HBD
RHLA-**6024	RCSA-**6024	RCHY6024STAN	RXCT-HBD

**= AU, HM, OR HU

