INSTALLATION INSTRUCTIONS

FOR CASED MULTIPOSITION COILS FOR GAS AND OIL FURNACES:

(-)CFN: featuring Industry Standard R-410A Refrigerant
(convertible to R-22 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.

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Accredited by the RvA

ISO 9001:2000
Certificate Number: 30164

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

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1.0 SAFETY INFORMATION

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⚠ WARNING

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.

CAUTION

For horizontal applications, the horizontal drain pan must be located under the indoor coil. Failure to place the pan under the coil can result in property damage.

CAUTION

It is recommended that an auxiliary/secondary drain pan be installed under units 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.

2.0. GENERAL INFORMATION

2.1. INSPECTION

Immediately upon receipt, all cartons, and contents should be inspected for transit damage. Units with damaged cartons should be opened immediately. If damage is found, it should be noted on the delivery papers and a damage claim filed with the last carrier. Shipping damage is not covered by the warranty.

- After unit has been delivered to job site, remove carton taking care not to damage unit.
- Check the unit rating plate to be sure equipment matches what is required for the job specification.
- Read the entire instructions before starting the installation. This is particularly important if this is the first installation for this specific model series.
- Many installation steps done prior to installing the unit can save time and simplify the installation.

2.2. CODES/REGULATIONS

Units should be installed in accordance with any local or national codes which may apply. Latest editions are available from: “National Fire Protection Association, Inc., Batterymarch Park, Quincy, MA 02269.”

These publications are:

- *ANSI/NFPA Latest Edition (NEC) National Electrical Code.*
- *NFPA90A Installation of Air conditioning and Ventilating Systems.*
- *NFPA90B Installation of Warm Air Heating and Air Conditioning Systems.*

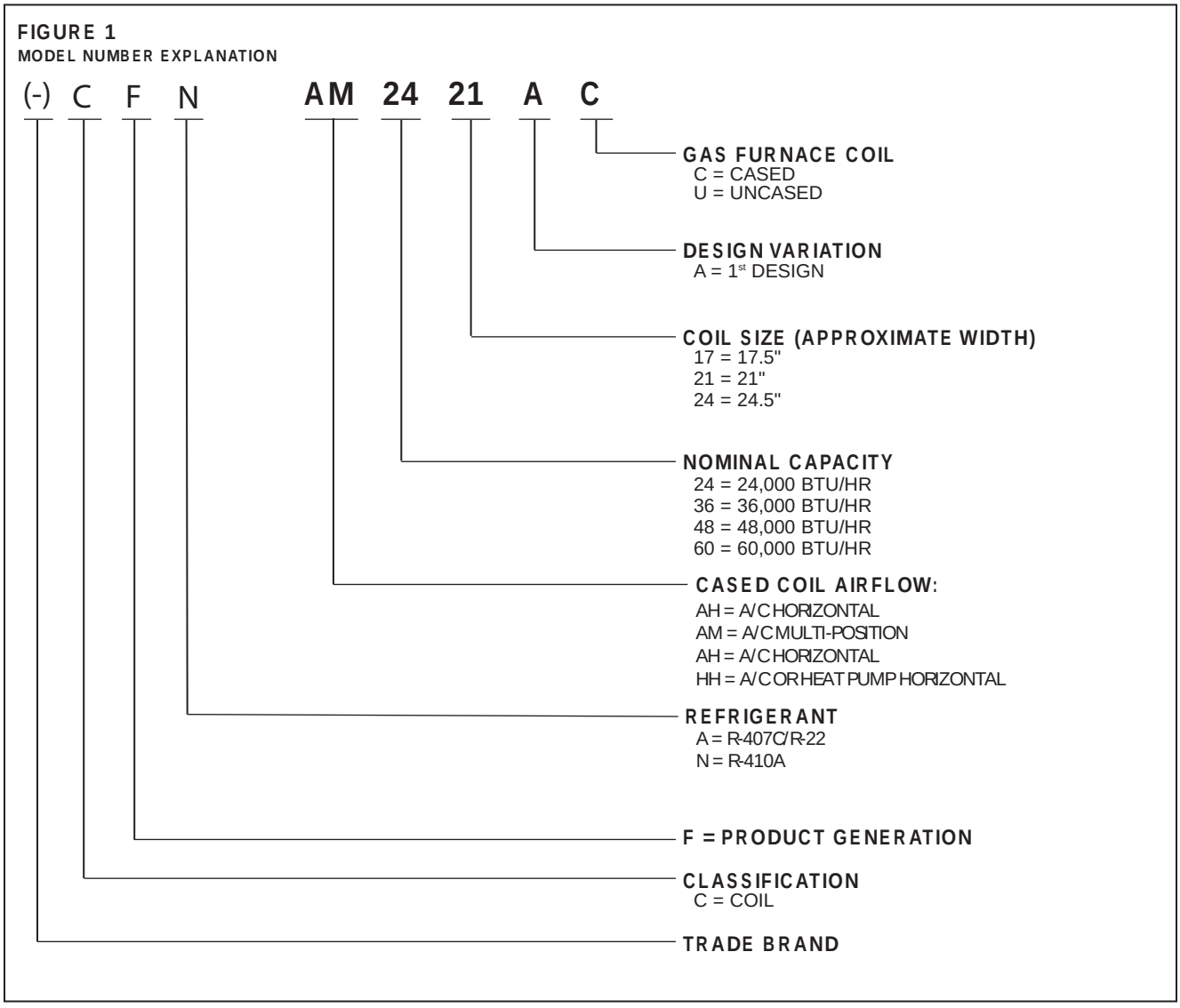
2.3. REPLACEMENT PARTS

Any replacement part must be the same as or an approved alternate to the original part supplied. The manufacturer will not be responsible for replacement parts not designed to physically fit or operate within the design parameters the original parts were selected for.

When ordering replacement parts, it is necessary to order by part number and include the complete model number and serial number from the coil rating plate. (See parts list for unit component part numbers. Parts are available through the local distributor.)

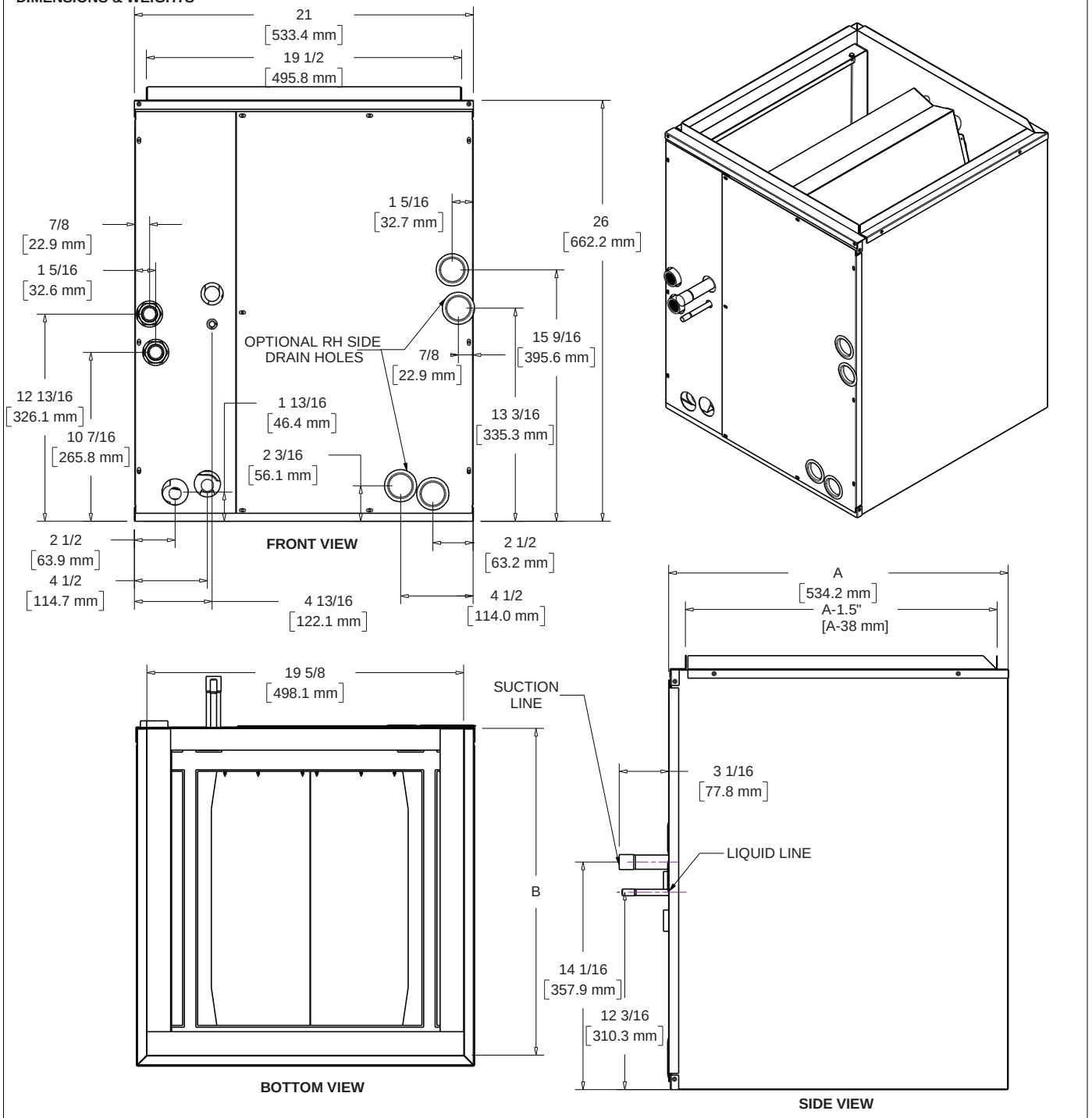
2.4 MODEL NUMBER EXPLANATION

FIGURE 1
MODEL NUMBER EXPLANATION



2.5 COIL SPECIFICATIONS
2.5A Coil Specifications: Dimensions & Weights (See Figure 2)

FIGURE 2
DIMENSIONS & WEIGHTS



CASED COIL MODEL	CONNECTIONS I.D.		COIL DIMINSIONS (IN) [MM]		WEIGHT	
	SWEAT (IN) [MM]		A	B	COIL WEIGHT (LBS.) [KG]	SHIPPING WEIGHT (LBS.) [KG]
	LIQUID	SUCTION				
RCFN-AM4821AC	3/8 [9.53]	7/8 [22.23]	21 [533]	20 1/8 [511]	60 [27]	64 [29]
RCFN-AM6021AC	3/8 [9.53]	7/8 [22.23]	21 1/2 [546]	20 5/8 [524]	66 [29.5]	70 [31]

2.5B Coil Specification: Airflow Pressure Drop

TABLE 1
AIRFLOW PRESSURE DROP

Coil Model	Approx. Design Airflow CFM [L/s] Range	Face Area Sq. Ft. [m²]	Fins-In./ Rows Deep	Static Pressure Drop Through Wet Cooling Coil [kPa] (Inches W.C.) CFM [L/s]													
				600 [283]	700 [330]	800 [378]	900 [425]	1000 [472]	1100 [519]	1200 [566]	1300 [614]	1400 [661]	1500 [708]	1600 [755]	1700 [802]	1800 [850]	1900 [897]
HIGH EFFICIENCY COOLING COILS																	
RCFN-AM4821AC	1200/1800 [566/850]	5.33 [0.50]	14/4							0.21 [.053]	0.23 [.059]	0.25 [.063]	0.30 [.076]	0.32 [.081]	0.37 [.094]		
RCFN-AM6021AC	1400/1900 [660/897]	5.83 [0.55]	15/4									0.26 [.066]	0.30 [.076]	0.32 [.081]	0.36 [.092]	0.40 [.100]	0.44 [.112]

Note: Represents Coil-Only Airflow Ratings.
[ ] Designates Metric Conversion

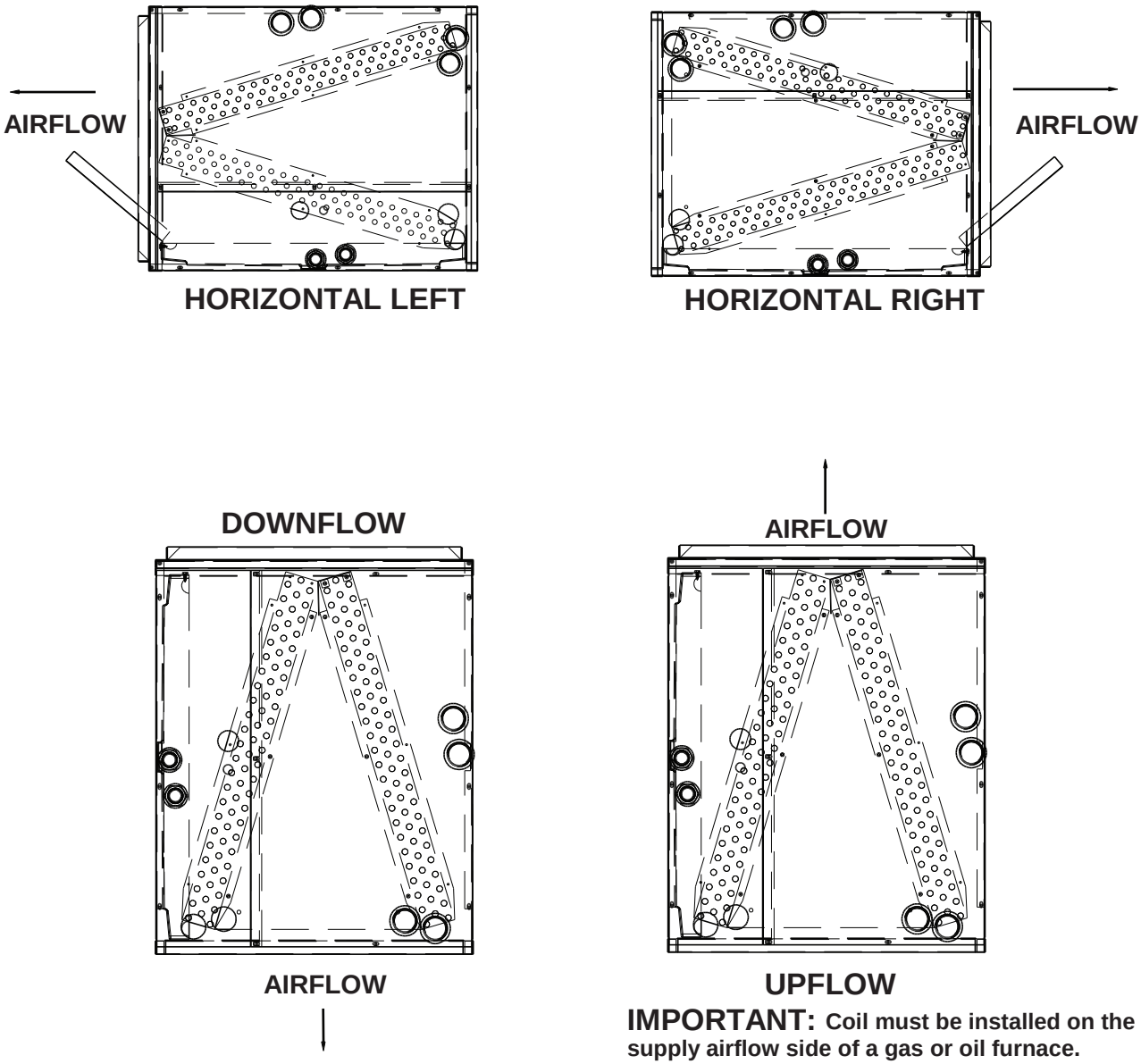
3.0 INSTALLATION

3.1 APPLICATIONS

(-)CFN coils can be applied in upflow, downflow, and horizontal left applications without modifications. (See Table 2 and Figure 3). For horizontal applications, installation of a horizontal drip shield is required. (See Section 5.2: Horizontal Adapter Kit.) Horizontal right installations require repositioning of the horizontal pan and coil top cap. (see instructions.)

For coils that are **two** sizes larger than the furnace, for example, a 21″ wide coil on a 14″ furnace, a tapered adaptor with a minimum height of 6″ is required to evenly distribute airflow. See Figure 4. For coils that are **one** size larger than the furnace; for example a 21″ wide coil on a 17½″ furnace, seal the gap between the two units with sheet metal, or use the specified aapter kit (RXBA-AC). See Figure 5.

FIGURE 3
COIL INSTALLATION OPTIONS



IMPORTANT: Coil must be installed on the supply airflow side of a gas or oil furnace.

FIGURE 4
INSTALATION OF COIL MATCHED WITH
A FURNACE TWO SIZES SMALLER

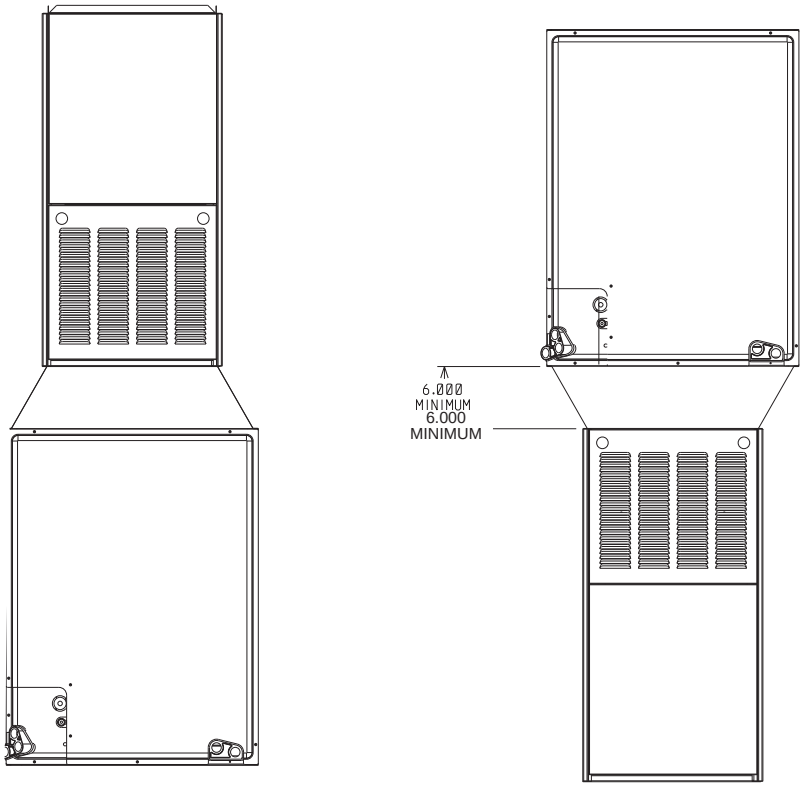
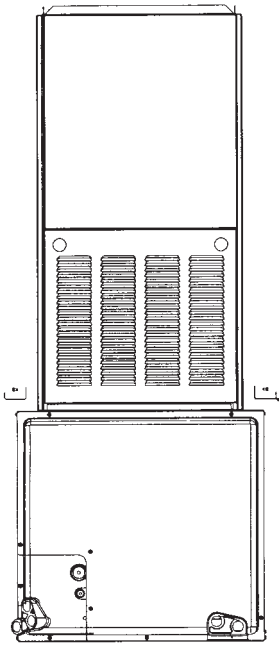
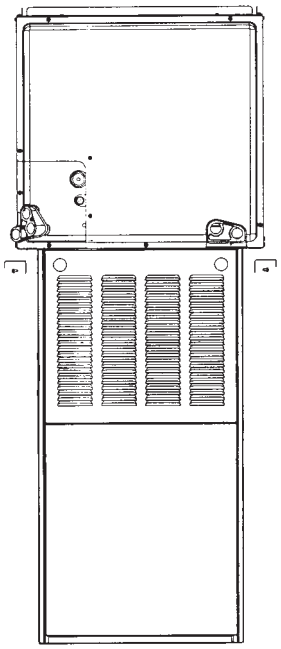


FIGURE 5
INSTALLATION OF COIL MATCHED WITH A FURNACE OF SMALLER SIZE

DOWNFLOW OR
HORIZONTAL
RIGHT APPLICATION





UPFLOW OR HORIZONTAL
LEFT APPLICATION

When a cooling coil is matched with a gas furnace of one smaller size, always center coil over the furnace.

IMPORTANT: Seal the gap between the two units with appropriate sheet metal parts, or use the adapter kit RXBA-AC (Upflow/Horizontal).

3.2 REFRIGERANT CONNECTIONS

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

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 instalation, and charging information.
Coil is shipped with a low (5-10 PSIG) pressure charge of dry nitrogen. Cut the suction and liquid lines with a tubing cutter and clean the cut ends. Evacuate the system before charging the unit 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 into two pieces for a better seal.

3.3 TEV SENSING BULB

After soldering operations have been completed, clamp the TEV bulb securely on the suction line at the 10 to 2 o'clock position with the strap provided in the parts bag.

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

IMPORTANT: TEV sensing bulb should be located on a horizontal section of suction line, just outside of coil box.

3.4 CONDENSATE DRAIN TUBING

Consult local codes or ordinances for specific requirements.

IMPORTANT: When making drain fitting connections to the drain pan, use a thin layer of Teflon paste, silicone or Teflon tape and install hand tight.

IMPORTANT: When making drain fitting connections to drain pan, do not overtighten. Overtightening fittings can split pipe connetions on the drain pan.

- Install drain lines so they do not block service access to front of the unit. Minimum clearance of 24 inches is required for filter, coil or blower removal and service access.
- Make sure unit is level or pitched slightly toward primary drain connection so that water will drain completely from the pan. (See Figure 6.)
- Do not reduce drain line size less than connection size provided on condensate drain pan.
- All drain lines must be pitched downward away from the unit a minimum of 1/8" per foot of line to ensure proper drainage.
- Do not connect condensate drain line to a closed or open sewer pipe. Run condensate to an open drain or outdoors.
- The drain line should be insulated where necessary to prevent sweating and damage due to condensate forming on the outside surface of the line.

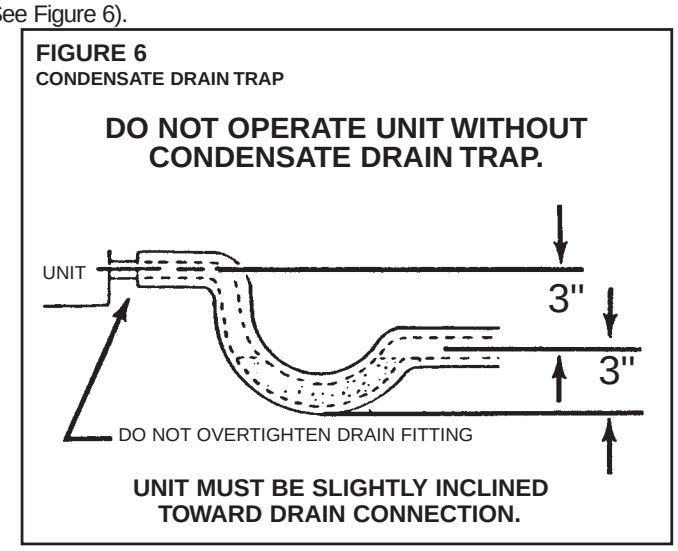
TABLE 2
COIL APPLICATION

Coil Model	Furnace Width (In.) [mm]	
	Oil*	Gas
2414 , 2417 , 3617	———	14 [356]
2417, 2617, 3617	21 [533]	17½ [445]
		14 [356]
3621 , 4821	21 [533]	21 [533]
		17½ [445]
4824 , 6024	24½ [622]	24½ [622]
		21 [533]

*Due to the proximity of the drain pan to the high temperature oil furnace drum, **horizontal left** application is **NOT** permitted on all oil furnaces.

- Make provisions for disconnecting and cleaning of the primary drain line should it become necessary. Install a 3 in. trap in the primary drain line as close to the unit as possible. Make sure that the top of the trap is below connection to the drain pan to allow complete drainage of pan (See Figure 6).

FIGURE 6
CONDENSATE DRAIN TRAP



- Auxiliary drain line should be run to a place where it will be noticeable if it becomes operational. Occupant should be warned that a problem exists if water should begin running from the auxiliary drain line.
- Plug the unused drain connection with the plugs provided in the parts bag, using a thin layer of teflon paste, silicone or teflon tape to form a water tight seal.
- Test condensate drain pan and drain line after installation is complete. Pour water into drain pan, enough to fill drain trap and line. Check to make sure drain pan is drainin completely, no leaks are found in drain line fittings, and water is draining from the termination of the primary drain line.

CAUTION

It is recommended that an auxiliary/secondary drain pan be installed under units 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.

4.0 MAINTENANCE

⚠ 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.

For continuing high performance and to minimize possible equipment failure, it is essential that annual maintenance be performed on this equipment. Consult your local dealer as to the availability of a maintenance contract.

4.1 AIR FILTER

Check the system filter every ninety days or as often as found to be necessary and if obstructed, clean or replace at once.

IMPORTANT: Do not operate the system without a filter in place.

4.2 INDOOR COIL - DRAIN PAN - DRAIN LINE

Inspect the indoor coil once each year for cleanliness and clean as necessary. In some cases, it may be necessary to remove the filter and check the return side of the coil with a mirror and flashlight.

IMPORTANT: Do not use caustic household drain cleaners or bleach in the condensate pan or near the indoor coil. Drain cleaners will quickly damage the indoor coil.

Limited Warranty - Parts

EVAPORATOR COIL

GENERAL: The manufacturer will furnish a replacement evaporator coil for any evaporator coil which fails in normal use and service within the applicable periods specified below, in accordance with the terms of this Warranty. The exchanged part will be warranted for only the unexpired portion of the original warranty.

EFFECTIVE DATE: The effective date of warranty coverage is the date of original installation, if properly documented; otherwise the date of manufacture, plus six (6) months.

COIL: If the evaporator coil develops a refrigerant leak, determined to be a factory defect, within Five (5) years after the effective date, a replacement coil will be furnished.

THIS WARRANTY WILL NOT APPLY: a) to defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with the printed instructions provided; b) to damage from abuse, accident, fire, flood and the like; c) to parts used in connection with normal maintenance, such as cleaning or replacing air filters; d) to units which are not installed in the United States of America or Canada; e) to units which are not installed in accordance with applicable local codes, ordinances and good trade practices; or f) to defects or damage caused by the use of any attachment, accessory or component not authorized by the manufacturer.

SHIPPING COSTS: You will be responsible for the cost of shipping warranty replacement parts from our factory to our distributor and from the distributor to the location of your product. You also are responsible for any shipping cost of returning the failed part to the distributor and for incidental costs incurred locally, including handling charges. (If in Alaska, Hawaii or Canada, you also must pay the shipping cost of returning the failed part to the port of entry into the continental United States.)

SERVICE LABOR RESPONSIBILITY: This Warranty does not cover any labor expenses for service, nor for removing or reinstalling parts. All such expenses are your responsibility unless a service labor agreement exists between you and your contractor.

HOW TO OBTAIN WARRANTY PERFORMANCE: You must promptly report any failure covered by this warranty to the installing contractor or the distributor. Normally, the installing contractor from whom the unit was purchased will be able to take the necessary corrective action by obtaining through his air conditioning distributor any replacement parts. If the contractor is not available, simply contact any other local contractor handling the manufacturer's air conditioning products. The name and location of a local contractor can usually be found in your telephone directory or by contacting an air conditioning distributor which carries the manufacturer's product. If necessary, the following office can advise you of the nearest distributor.

P.O. Box 17010
5600 Old Greenwood Road
Fort Smith, Arkansas 72917-7010
479-646-4311

(FOR CALIFORNIA ONLY)
14300 Alondra Boulevard
LaMirada, California 90638
310-860-7761

HOWEVER, ANY REPLACEMENTS ARE MADE SUBJECT TO VALIDATION OF IN-WARRANTY COVERAGE. An item to be replaced must be made available in exchange for the replacement.

MISCELLANEOUS: No one is authorized to make any warranties on behalf of the manufacturer. ANY IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE WARRANTY PERIODS SPECIFIED ABOVE. SOLE LIABILITY WITH RESPECT TO DEFECTIVE PARTS SHALL BE AS SET FORTH IN THIS WARRANTY, AND ANY CLAIMS FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARE EXPRESSLY EXCLUDED. Some states do not allow limitations on how long an implied warranty lasts, or for the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

The manufacturer suggests that you immediately complete the information on *the reverse side* and retain this Warranty Certificate in the event warranty service is needed (e.g. a dated receipt). This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

92-22897-21-03
SUPERSEDES 92-22897-21-02

Please become familiar with all the provisions of the Warranty. We suggest that your installing contractor either complete the data listed below, or furnish you with the necessary information so that you can enter this data below. If necessary, you may obtain the model and serial numbers from the data plate which is affixed to the side of the outdoor unit.

Name of Owner_____

Address_____

City/State/Zip Code_____

Model Number_____

Date of Original Installation _____

Name of Contractor_____

Address_____

City/State/Zip Code_____

Serial Number_____

KEEP THIS WARRANTY FOR YOUR RECORDS.
DO NOT MAIL.

AIR CONDITIONING DIVISION

A Division of Rheem Manufacturing Company

P.O. Box 17010, 5600 Old Greenwood Road, Fort Smith, Arkansas 72917-7010