INSTALLATION INSTRUCTIONS

FOR CASED/UNCASED COILS FOR GAS FURNACES:

(-)CF: featuring Industry-Standard R-410A 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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Certificate Number: 30164

DO NOT DESTROY THIS MANUAL

PLEASE READ CAREFULLY AND KEEP IN A SAFE PLACE FOR FUTURE REFERENCE BY A SERVICEMAN

92-100105-13-08

SUPERSEDES 92-100105-13-07

TABLE OF CONTENTS

1.0 Safety Information 3
2.0 General Information 4
- 2.1 Inspection 4
- 2.2 Codes & Regulations 4
- 2.3 Replacement Parts 5
- 2.4 Model Number Explanation 5
- 2.5 Coil Specifications 6
  - 2.5A Coil Specifications: Dimensions & Weights 6
  - 2.5B Coil Specifications: Airflow Pressure Drop 7

3.0 Installation 8
- 3.1 Applications 8
- 3.2 Refrigerant Connections 10
- 3.3 TEV Sensing Bulb 10
- 3.4 Electronic Expansion 10
- 3.5 EXV Vapor Line Thermister 10
- 3.6 Factory Programmed Superheat 12
- 3.7 Superheat Offset Dip Switch Settings 12
- 3.8 EXV Step Dip Switch 12
- 3.9 Diagnostics 12
- 3.10 EXV Standalone Control Physical Interface 13
- 3.11 EXV Standalone Wiring 13
- 3.12 Flow Check Piston 14
- 3.13 Condensate Drain Tubing 15
- 3.14 Duct Flanges 16
- 3.15 Coil End Shields 16

4.0 Maintenance 16
- 4.1 Air Filter 16
- 4.2 Indoor Coil - Drain Pan - Drain Line 16

5.0 Accessories 17
- 5.1 Plenum Adapter Accessory 17
- 5.2 Horizontal Adapter Kit 18
- 5.3 RXBC- Indoor Coil Casing 18
- 5.4 Uncased Coil Adapter Kit 19
- 5.5 TXV Conversion Kits 20

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.*

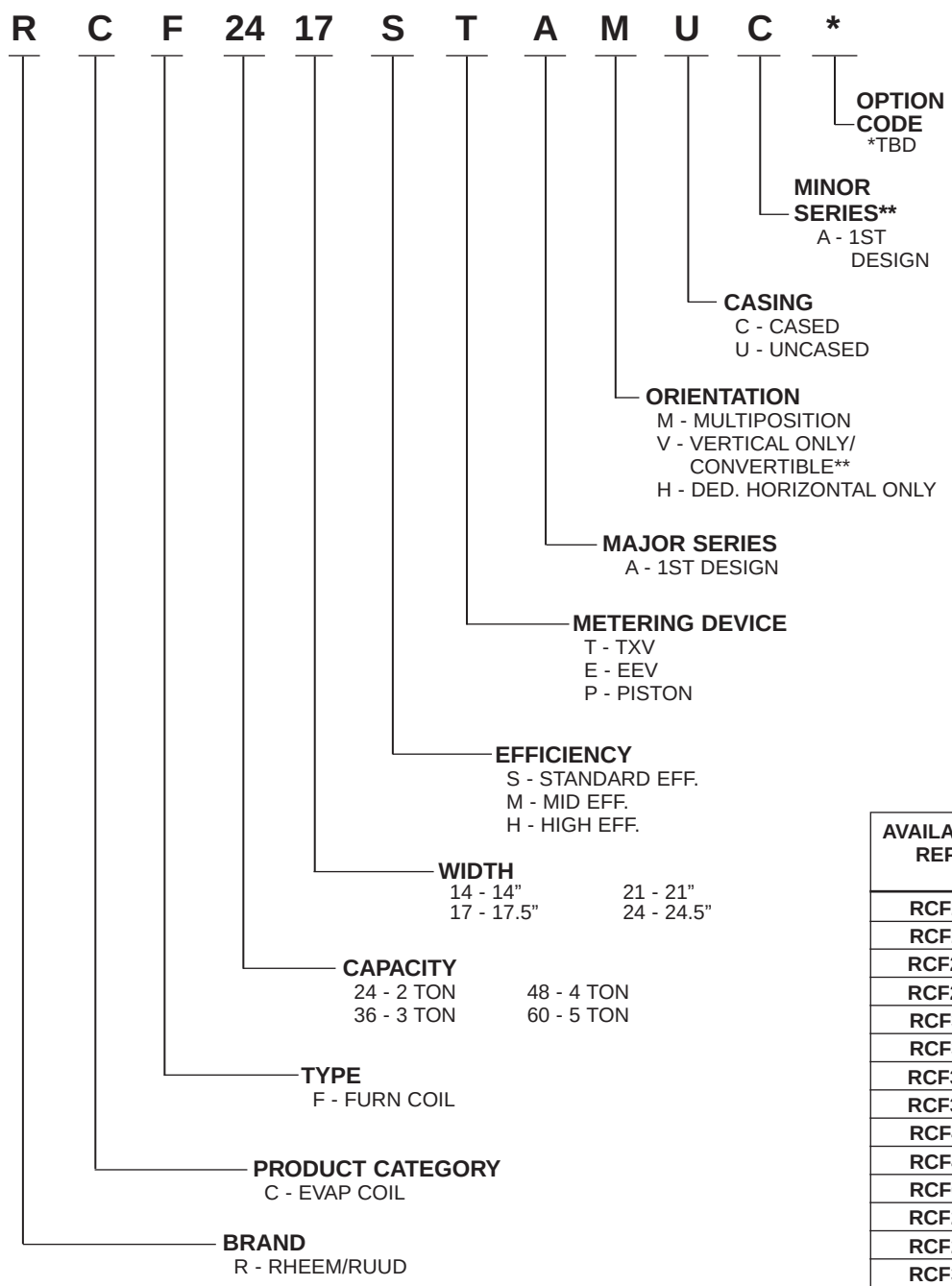
2.3. REPLACEMENT PARTS

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



AVAILABLE CASED COILS
RCF2414STAMCA
RCF2417SEAMCA
RCF2417STAMCA
RCF2417MTAMCA
RCF2421MEAMCA
RCF2421MTAMCA
RCF3617SEAMCA
RCF3617STAMCA
RCF3621HTAMCA
RCF3621MEAMCA
RCF3621STAMCA
RCF3621MTAMCA
RCF3624MTAMCA
RCF4821MTAMCA
RCF4821STAMCA
RCF4824STAMCA
RCF6024STAMCA
RCF2417HTAMCA
RCF2421HTAMCA
RCF3624HTAMCA
RCF4824HTAMCA
RCF6021STAMCA
RCF6021SEAMCA
RCF6024HTAMCA
RCF6024MEAMCA
RCF2417SPAMCA
RCF3617SPAMCA
RCF3621SPAMCA
RCF4821SPAMCA
RCF4824SPAMCA

AVAILABLE UNCASED REPLACEMENT COILS	ORIGINAL COILS
RCF2414STAVUA	RCFL-??2414??
RCF2417STAVUA	RCFL-??2417??
RCF2417MTAVUA	RCFL-??2617??
RCF2421MTAVUA	RCFL-??2621??
RCF3617STAVUA	RCFL-??3617??
RCF3621STAVUA	RCFL-??3621??
RCF3621MTAVUA	RCFL-??3821??
RCF3624MTAVUA	RCFL-??3824??
RCF4821STAVUA	RCFL-??4821??
RCF4824STAVUA	RCFL-??4824??
RCF6024STAVUA	RCFL-??6024??
RCF2417HTAVUA	RCFN-??2417??
RCF2421HTAVUA	RCFN-??2421??
RCF3624HTAVUA	RCFN-??3624??
RCF4824HTAVUA	RCFN-??4824??
RCF6024HTAVUA	RCFN-??6024??
RCF2417SPAVUA	RCFP-??2417??
RCF3617SPAVUA	RCFP-??3617??
RCF3621SPAVUA	RCFP-??3621??
RCF4821SPAVUA	RCFP-??4821??
RCF4824SPAVUA	RCFP-??4824??
RCF2417SEAVUA	—
RCF2421MEAVUA	—
RCF3621MEAVUA	—
RCF6021SEAVUA	—
RCF6024MEAVUA	—

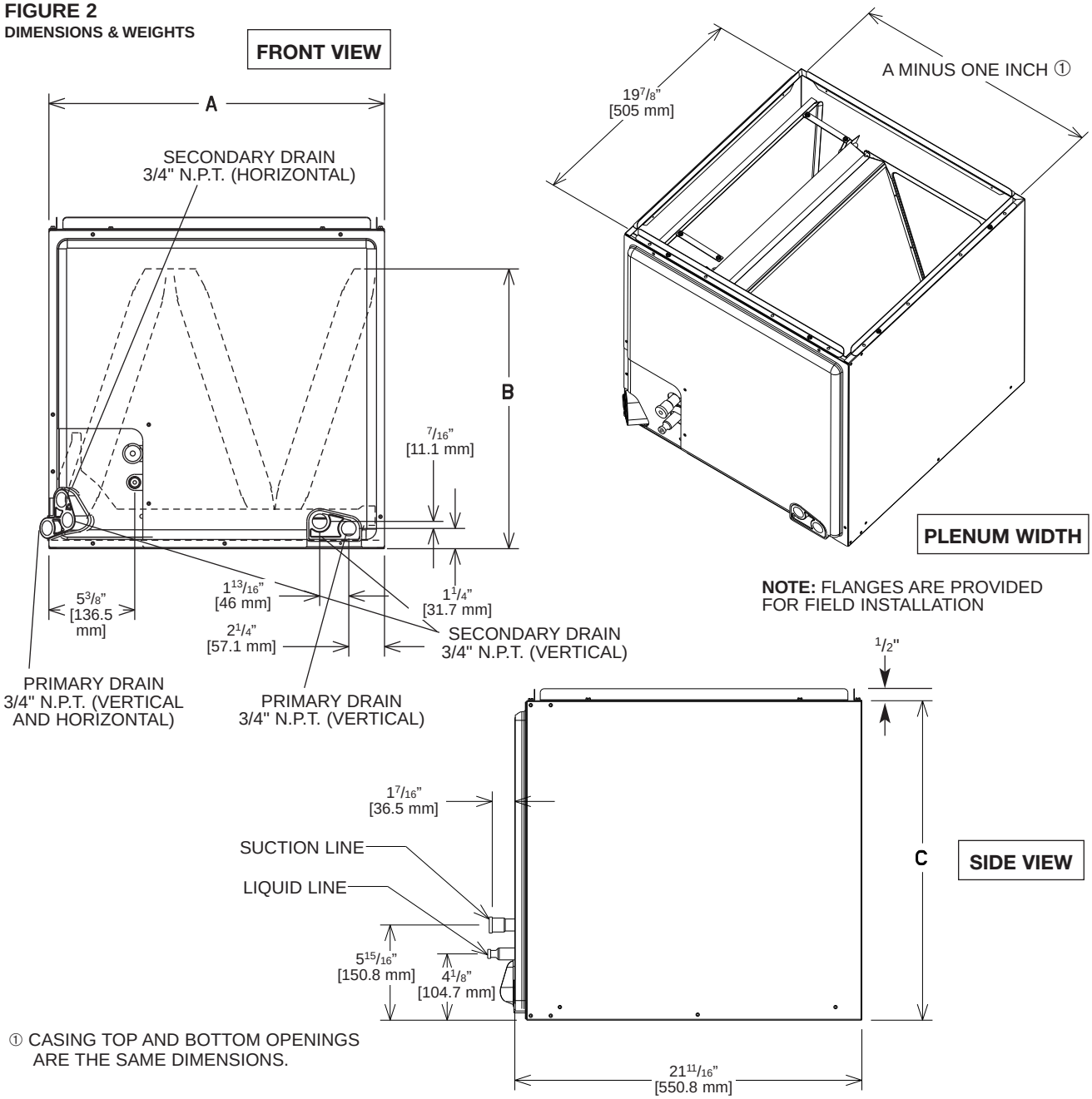
?? = ANY LETTER

**CONVERTIBLE TO HORIZONTAL USING PARTS FROM ORIGINAL COIL OR USING RXHH KIT.

2.5 COIL SPECIFICATIONS

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

FIGURE 2
DIMENSIONS & WEIGHTS



① CASING TOP AND BOTTOM OPENINGS ARE THE SAME DIMENSIONS.

DIMENSIONS AND WEIGHTS DATA

Coil Model	Connections I.D. Sweat (in) [mm]		Cased Coil Dimensions (in.) [mm]			Weight	
	Liquid	Suction	A	B	C	Coil Weight (lbs.) [Kg]	Shipping Weight (lbs.) [Kg]
2414S*	3/8 [9.53]	3/4 [19.05]	14 [356]	20 1/16 [535]	23 3/16 [584]	45 [20]	49 [22]
2417S	3/8 [9.53]	3/4 [19.05]	17 1/2 [445]	14 1/2 [368]	20 [508]	43 [19]	48 [21]
2417M 3617S 2417H	3/8 [9.53]	3/4 [19.05]	17 1/2 [445]	17 7/8 [454]	20 [508]	49 [22]	54 [24]
2421M 3621S 2417H	3/8 [9.53]	3/4 [19.05]	21 [533]	17 1/2 [445]	20 [508]	51 [23]	57 [25]
3621M 4821S	3/8 [9.53]	7/8 [22.23]	21 [533]	25 7/8 [657]	28 [711]	71 [32]	78 [35]
3624M 4824S	3/8 [9.53]	7/8 [22.23]	24 1/2 [622]	25 3/8 [645]	32 [812]	83 [38]	93 [42]
3624H 4824H 6024H 6024S	3/8 [9.53]	7/8 [22.23]	24 1/2 [622]	30 1/4 [768]	32 [812]	100 [45]	110 [50]
6021S/4821M/3621H*	3/8 [9.53]	7/8 [22.23]	21 [533]	33 [838]	34 1/2 [876]	76 [34]	86 [37]

*Coil is part of the "N" Design Series, even though the coil shape resembles an "A" design.

2.5B Coil Specifications: Airflow Pressure Drop

TABLE 1
AIRFLOW PRESSURE DROP

Wet Coil Static Pressure Drop (Inches W.C.) [kPa] CFM [L/s] - Coil-Only																			
Coil Model (-)CF	Approx. Design Cooling Airflow Range CFM/[L/s]	Face Area Ft.² [m²]	Fins Per Inch / Rows Deep	Width	Nominal Capacity	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]
RCF2414STAM	600/900 [283/425]	4.56 [0.42]	16/2	14	1.5 - 2	0.165	0.209	0.262	0.325	—	—	—	—	—	—	—	—	—	—
RCF2417STAM	600/900 [283/425]	4.56 [0.42]	16/2	17		0.120	0.157	0.199	0.246	—	—	—	—	—	—	—	—	—	—
RCF2417SEAM	400/900 [283/425]	4.56 [0.42]	16/2			0.120	0.157	0.199	0.246	—	—	—	—	—	—	—	—	—	—
RCF2417MTAM	600/900 [283/425]	5.70 [.052]	16/2			0.113	0.145	0.181	0.222	—	—	—	—	—	—	—	—	—	—
RCF3617STAM	700/1300 [330/614]	5.70 [0.52]	16/2		2.5 - 3	0.113	0.145	0.181	0.222	0.266	0.315	0.368	—	—	—	—	—	—	—
RCF3617SEAM	400/1300 [330/614]	5.70 [0.52]	16/2			0.113	0.145	0.181	0.222	0.266	0.315	0.368	—	—	—	—	—	—	—
RCF2421MTAM	600/900 [283/425]	5.70 [0.52]	16/2	21	1.5-2	0.113	0.145	0.181	0.222	—	—	—	—	—	—	—	—	—	—
RCF2421MEAM	300/900 [283/425]	5.70 [0.52]	16/2			0.113	0.145	0.181	0.222	—	—	—	—	—	—	—	—	—	—
RCF2421HTAM	600/900 [283/425]	5.70 [0.52]	16/2			0.113	0.145	0.181	0.222	—	—	—	—	—	—	—	—	—	—
RCF3621STAM	700/1300 [330/614]	5.70 [0.52]	16/2		2.5 - 3	0.113	0.145	0.181	0.222	0.266	0.315	0.368	—	—	—	—	—	—	—
RCF3621MTAM	700/1300 [330/614]	8.55 [0.79]	16/2			0.062	0.086	0.112	0.140	0.170	0.202	0.236	—	—	—	—	—	—	—
RCF3621MEAM	300/1300 [330/614]	8.55 [0.79]	16/2			0.062	0.086	0.112	0.140	0.170	0.202	0.236	—	—	—	—	—	—	—
RCF3621HTAM	700/1300 [330/614]	7.60 [0.70]	13/3			0.106	0.125	0.146	0.169	0.194	0.221	0.251	—	—	—	—	—	—	—
RCF4821MTAM	1100/1800 [519/850]	7.60 [0.70]	13/3		3.5 - 4	0.106	0.125	0.146	0.169	0.194	0.221	0.251	0.282	0.315	0.350	0.386	0.425	0.466	—
RCF4821STAM	1100/1800 [519/850]	8.55 [0.79]	16 / 2			0.062	0.086	0.112	0.140	0.170	0.202	0.236	0.272	0.309	0.349	0.391	0.434	0.480	0.527
RCF6021STAM	1400/1600 [661/755]	7.60 [0.70]	13/3		5	0.036	0.050	0.065	0.081	0.098	0.117	0.137	0.158	0.180	0.203	0.228	0.254	—	—
RCF6021SEAM	500/1600 [661/755]	7.60 [0.70]	13/3			0.036	0.050	0.065	0.081	0.098	0.117	0.137	0.158	0.180	0.203	0.228	0.254	—	—
RCF3624MTAM	700/1300 [330/614]	8.55 [0.79]	16/2	24	2.5 - 3	0.062	0.086	0.112	0.140	0.170	0.202	0.236	0.272	0.309	—	—	—	—	—
RCF3624HTAM	700/1300 [330/614]	9.98 [0.93]	14/3			0.036	0.050	0.065	0.081	0.098	0.117	0.137	0.158	0.180	—	—	—	—	—
RCF4824STAM	1100/1800 [519/850]	8.55 [0.79]	16/2		3.5 - 4	0.062	0.086	0.112	0.140	0.170	0.202	0.236	0.272	0.309	0.349	0.391	0.434	0.480	—
RCF4824HTAM	1100/1800 [519/850]	9.98 [0.93]	14/3			0.036	0.050	0.065	0.081	0.098	0.117	0.137	0.158	0.180	0.203	0.228	0.254	0.281	—
RCF6024STAM	1400/1800 [661/755]	9.98 [0.93]	14/3		5	0.036	0.050	0.065	0.081	0.098	0.117	0.137	0.158	0.180	0.203	0.228	0.254	0.281	—
RCF6024HTAM	1400/1800 [661/755]	9.98 [0.93]	14/3			0.036	0.050	0.065	0.081	0.098	0.117	0.137	0.158	0.180	0.203	0.228	0.254	0.281	—
RCF6024MEAM	500/1800 [661/755]	9.98 [0.93]	14/3			0.036	0.050	0.065	0.081	0.098	0.117	0.137	0.158	0.180	0.203	0.228	0.254	0.281	—

Dry Coil Static Pressure Drop (Inches W.C.) [kPa] CFM [L/s] - Coil-Only																			
Coil Model (-)CF	Approx. Design Cooling Airflow Range CFM/[L/s]	Face Area Ft.² [m²]	Fins Per Inch / Rows Deep	Width	Nominal Capacity	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]
RCF2414STAM	600/1600 [283/755]	4.56 [0.42]	16/2	14	1.5 - 2	0.118	0.118	0.145	0.176	0.210	0.247	0.288	0.332	0.379	0.429	0.483	—	—	—
RCF2417STAM	600/1500 [283/707]	4.56 [0.42]	16/2	17		0.116	0.116	0.151	0.190	0.235	0.284	0.338	0.397	0.461	0.530	—	—	—	—
RCF2417SEAM	400/1500 [283/707]	4.56 [0.42]	16/2			0.116	0.116	0.151	0.190	0.235	0.284	0.338	0.397	0.461	0.530	—	—	—	—
RCF2417MTAM	600/1600 [283/755]	5.70 [.052]	16/2			0.101	0.101	0.129	0.161	0.196	0.235	0.277	0.323	0.373	0.425	0.482	—	—	—
RCF3617STAM	600/1600 [283/755]	5.70 [0.52]	16/2		2.5 - 3	0.101	0.101	0.129	0.161	0.196	0.235	0.277	0.323	0.373	0.425	0.482	—	—	—
RCF3617SEAM	400/1600 [283/755]	5.70 [0.52]	16/2			0.101	0.101	0.129	0.161	0.196	0.235	0.277	0.323	0.373	0.425	0.482	—	—	—
RCF2421MTAM	600/1600 [283/755]	5.70 [0.52]	16/2	21	15.2	0.101	0.101	0.129	0.161	0.196	0.235	0.277	0.323	0.373	0.425	0.482	—	—	—
RCF2421MEAM	300/1600 [283/755]	5.70 [0.52]	16/2			0.101	0.101	0.129	0.161	0.196	0.235	0.277	0.323	0.373	0.425	0.482	—	—	—
RCF2421HTAM	600/1600 [283/755]	5.70 [0.52]	16/2			0.101	0.101	0.129	0.161	0.196	0.235	0.277	0.323	0.373	0.425	0.482	—	—	—
RCF3621STAM	600/1600 [283/755]	5.70 [0.52]	16/2		2.5 - 3	0.101	0.101	0.129	0.161	0.196	0.235	0.277	0.323	0.373	0.425	0.482	—	—	—
RCF3621MTAM	600/1900 [283/896]	8.55 [0.79]	16/2			0.039	0.039	0.056	0.075	0.095	0.117	0.141	0.166	0.193	0.222	0.252	0.284	0.318	0.353
RCF3621MEAM	300/1900 [283/896]	8.55 [0.79]	16/2			0.039	0.039	0.056	0.075	0.095	0.117	0.141	0.166	0.193	0.222	0.252	0.284	0.318	0.353
RCF3621HTAM	600/1900 [283/896]	7.60 [0.70]	13/3			0.043	0.043	0.053	0.066	0.080	0.096	0.115	0.135	0.158	0.182	0.208	0.237	0.267	0.299
RCF4821MTAM	600/1900 [283/896]	7.60 [0.70]	13/3		3.5 - 4	0.043	0.043	0.053	0.066	0.080	0.096	0.115	0.135	0.158	0.182	0.208	0.237	0.267	0.299
RCF4821STAM	600/1900 [283/896]	8.55 [0.79]	16/2			0.039	0.039	0.056	0.075	0.095	0.117	0.141	0.166	0.193	0.222	0.252	0.284	0.318	0.353
RCF6021STAM	600/1900 [283/896]	7.60 [0.70]	13/3		5	0.080	0.080	0.092	0.106	0.121	0.136	0.153	0.171	0.190	0.211	0.232	0.254	0.278	0.302
RCF6021SEAM	500/1900 [283/896]	7.60 [0.70]	13/3			0.080	0.080	0.092	0.106	0.121	0.136	0.153	0.171	0.190	0.211	0.232	0.254	0.278	0.302
RCF3624MTAM	600/1900 [283/896]	8.55 [0.79]	16/2	24	2.5 - 3	0.039	0.039	0.056	0.075	0.095	0.117	0.141	0.166	0.193	0.222	0.252	0.284	0.318	0.353
RCF3624HTAM	600/1900 [283/896]	9.98 [0.93]	14/3			0.023	0.023	0.038	0.055	0.074	0.095	0.119	0.144	0.171	0.200	0.231	0.264	0.300	0.337
RCF4824STAM	600/1900 [283/896]	8.55 [0.79]	16/2		3.5 - 4	0.039	0.039	0.056	0.075	0.095	0.117	0.141	0.166	0.193	0.222	0.252	0.284	0.318	0.353
RCF4824HTAM	600/1900 [283/896]	9.98 [0.93]	14/3			0.023	0.023	0.038	0.055	0.074	0.095	0.119	0.144	0.171	0.200	0.231	0.264	0.300	0.337
RCF6024STAM	600/1900 [283/896]	9.98 [0.93]	14/3		5	0.023	0.023	0.038	0.055	0.074	0.095	0.119	0.144	0.171	0.200	0.231	0.264	0.300	0.337
RCF6024HTAM	600/1900 [283/896]	9.98 [0.93]	14/3			0.023	0.023	0.038	0.055	0.074	0.095	0.119	0.144	0.171	0.200	0.231	0.264	0.300	0.337
RCF6024MEAM	500/1900 [283/896]	9.98 [0.93]	14/3			0.023	0.023	0.038	0.055	0.074	0.095	0.119	0.144	0.171	0.200	0.231	0.264	0.300	0.337

[ ] Designates Metric Conversion

IMPORTANT NOTE: Gas furnace heating CFM can exceed the design cooling CFM. Ductwork and coil selection must accommodate the higher of the cooling or gas heating CFM to prevent furnace limit tripping, excessive noise, and coil freeze-up.

3.0 INSTALLATION

3.1 APPLICATIONS

(-)CF cased coils can be applied in upflow, downflow, horizontal right and horizontal left applications without modifications. (-)CF uncased coils can only be applied in upflow and downflow applications as received (see Table 2 and Figure 3). For horizontal applications of uncased replacement coils, installation of a horizontal drip shield and water management parts from old coil (see Figure 3A) is required. (Also see Section 5.2: Horizontal Adapter Kit.)

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 5. 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 adapter kit (RXBA-AC). See Figure 6.

CAUTION

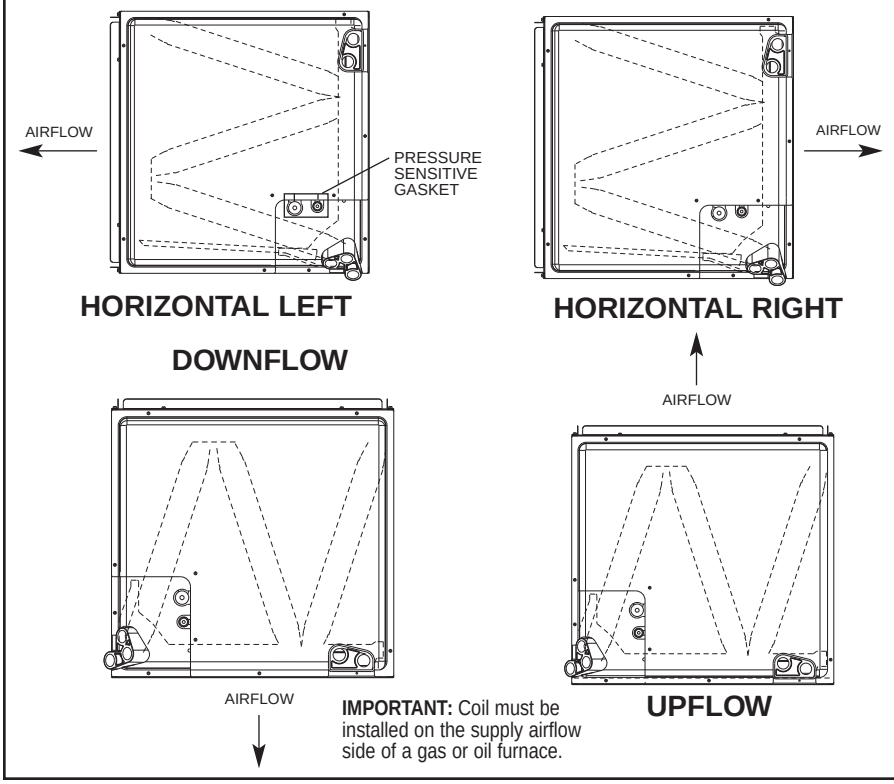
For horizontal applications, the horizontal drain pan must be located under the indoor coil. Failure to place the pan under the coil can result in property damage.

TABLE 2
COIL APPLICATION

Coil Model (-)CF	Furnace Width (In.) [mm]	
	Oil*	Gas
2414S 2417S 2417M 3617S 2417H	—	14 [356]
2417S 2417M 3617S 2417H	17 [431]	17½ [444]
		14 [356]
2421M 3621S 3621M 4821S 2421H 4821S 3621H 4821M 6021S	21 [533]	21 [533]
		17½ [444]
3624H 4824H 6024H 3624M 6024S 4824S	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.

FIGURE 3
COIL INSTALLATION OPTIONS



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

FIGURE 4

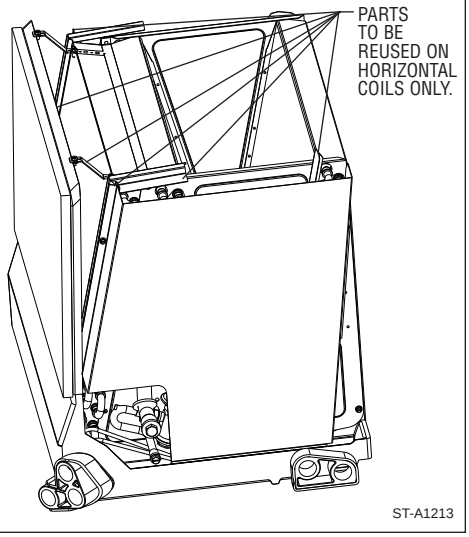


FIGURE 5A
INSTALLATION OF COIL MATCHED WITH A FURNACE TWO SIZES SMALLER

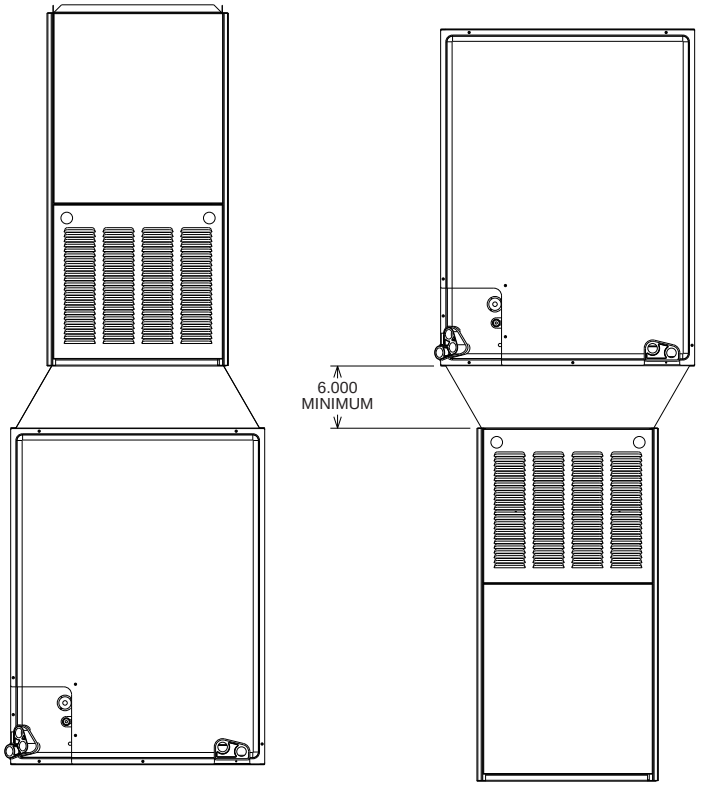


FIGURE 5B
INSTALLATION OF COIL MATCH WITH A FURNACE ONE SIZE SMALLER

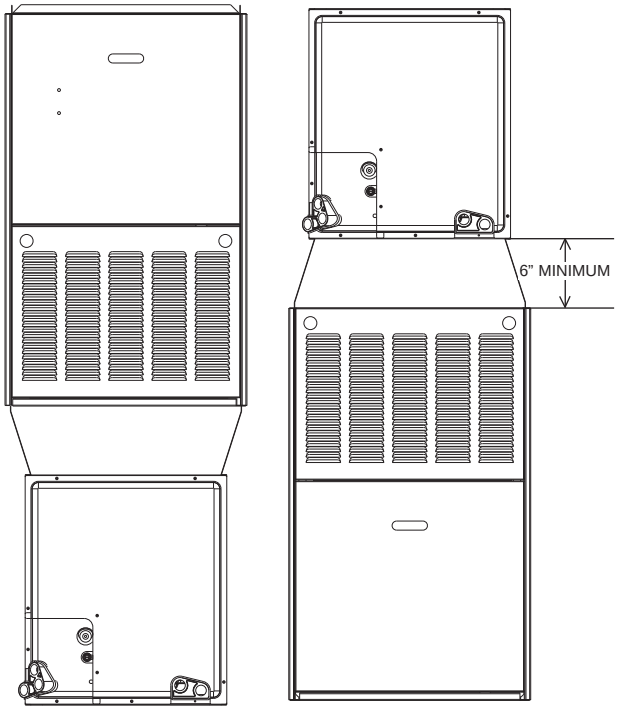
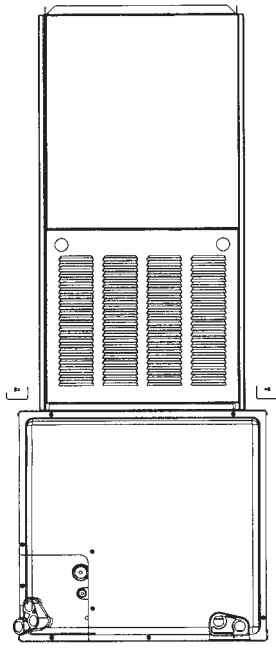
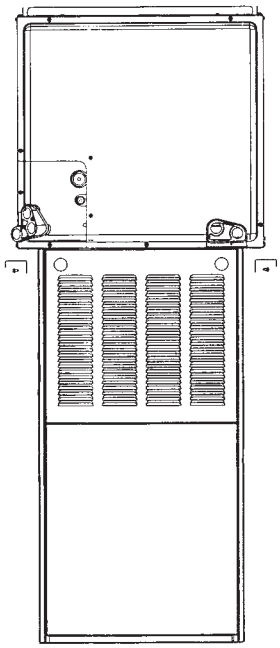


FIGURE 6
INSTALLATION OF COIL MATCHED WITH A FURNACE OF SMALLER SIZE

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).

FIGURE 7
BULB LOCATION

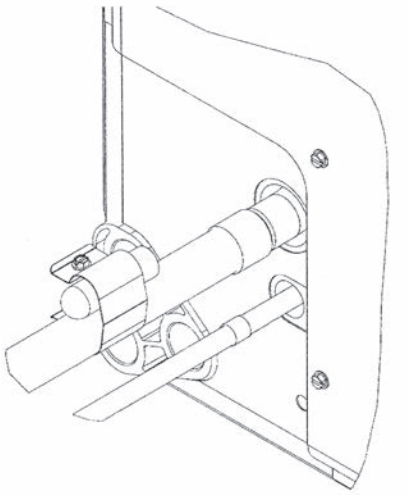
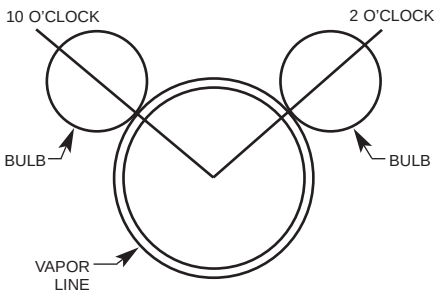


FIGURE 8
BULB LOCATION



3.2 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 (5 - 10 PSIG) pressure 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.)

3.3 TEV SENSING BULB

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

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 copper suction line, just outside of coil box. 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.

3.4 ELECTRONIC EXPANSION

The RCF EXV equipped coils, cased and uncased, are the first Rheem indoor products to be produced with the noncommunicating, stand-alone EXV control. One of the biggest advantages of an EXV is the control can intelligently change the EXV position based on system demands other than just suction line temperature. By the measurement of the suction pressure via the vapor line pressure transducer (factory installed) and the vapor line thermister (field connected to the vapor line, but factory provided within the air handler) the EcoNet™ enabled air handler control calculates the suction superheat at the indoor coil. This calculation permits the air handler control to make decisions for when to open and close the electronic expansion valve for the purpose of maintaining a predetermined suction superheat. The electronic valve is equipped with a 4-pole removable external stator, and inlet and outlet Chatleff fittings for optimal serviceability. These valves also have an internal check valve to provide heat pump compatibility. When operating in heating mode, the air handler control will open the electronic valve completely to permit the check valve to operate and maximize reverse refrigerant flow.

3.5 EXV VAPOR LINE THERMISTER

IMPORTANT: DO NOT perform any brazing with the vapor line thermister attached to any line. After brazing operations have been completed, clamp the vapor line thermister securely on the vapor line at the 10 to 2 o'clock position with the clip provided on the thermister. Insulate the vapor line thermister and vapor line with the provided pressure sensitive insulation (size 4" x 7") and secure with provided wire ties.

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

IMPORTANT: Vapor line thermister should be located on a horizontal section of vapor line, just outside of coil box. The copper thermister 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 thermister on the heat effected zone near the braze connection, but it should be located within 6" of the indoor unit.

FIGURE 9
THERMISTER LOCATION

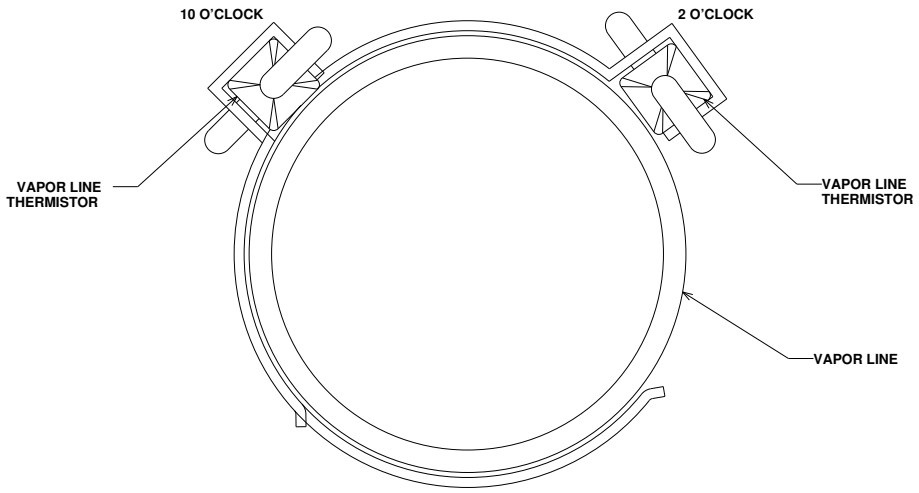
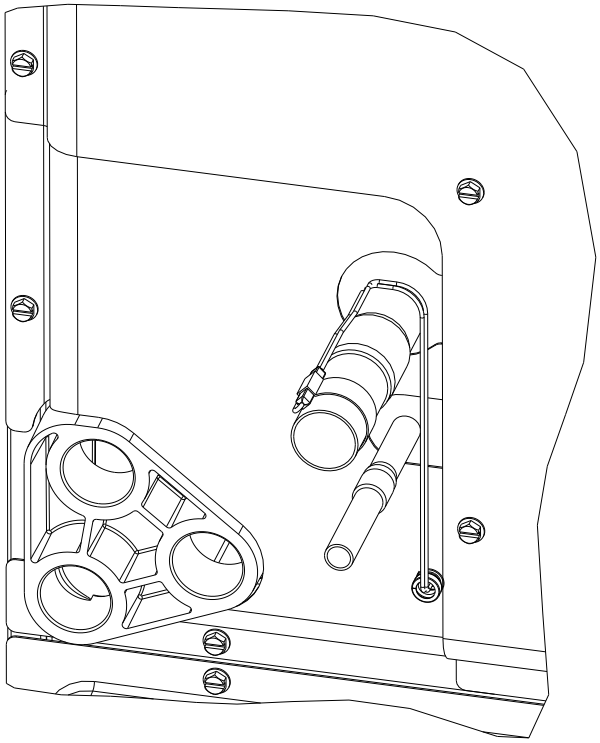


FIGURE 10
THERMISTER LOCATION



3.6 FACTORY PROGRAMMED SUPERHEAT

The stand alone EXV control is pre-programmed for 10°F superheat. The following dip switch settings must be set at the time of coil installation.

Air Handler	Outdoor Unit	Superheat (°F)	Dipswitch Settings	
			1	2
RCF2417SE	RP1724	6	ON	OFF
RCF2421ME	RA1724, RA2024, RP2024	6	ON	OFF
RCF3617SE	RP1736	6	ON	OFF
RCF3621ME	RA1736	8	OFF	ON
RCF6021SE	RA1748 RA2036, RA2048, RA2060 RP2036, RP2048, RP2060	6	ON	OFF
RCF6024ME	RA1660	6	ON	OFF

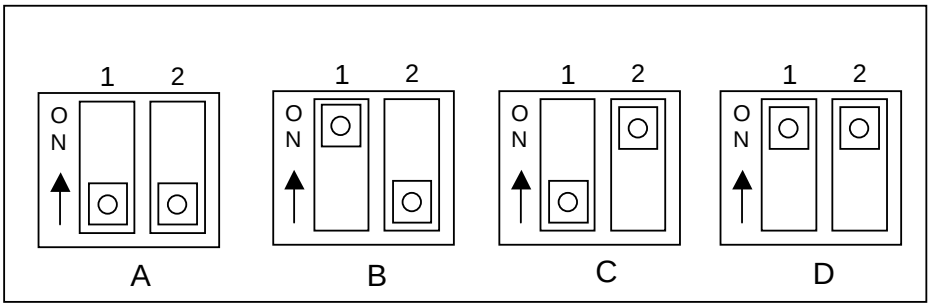
3.7 SUPERHEAT OFFSET DIP SWITCH SETTINGS

Although the above superheat set point is considered to be the most efficient set point for each air handler, installation conditions can drastically effect the measurement of superheat by the air handler control. For this reason the following dip switch settings have been provided to enable flexibility for various installation conditions.

Superheat Offset Selection Profile	Superheat Setting (°F)
A	10
B	6
C	8
D	12

3.8 EXV STEP DIP SWITCH

The EXV dip switch has an optional 500 or 1600 steps setting. This dipswitch should currently be in the 500 step position only. Rheem does not currently supply 1600 step EXV's. The dipswitch makes the control forward compatible with a 1600 step EXV for possible future use.



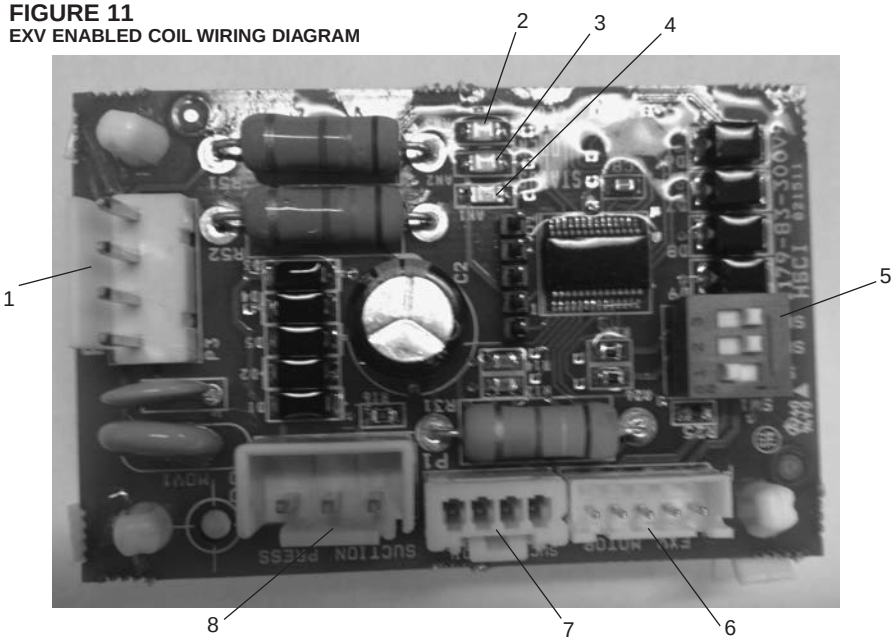
3.9 DIAGNOSTICS

There are 2 LEDs (green/yellow) on the standalone EXV control which indicate valve movement. When the green LED is illuminated, the control is moving the valve in the open direction. When the yellow LED is illuminated, the control is moving the valve in the closed direction. When neither LED is illuminated, the valve is not being moved by the control. In addition to the diagnostic lights on the control, it is possible to feel the coil on the EXV pulse when the control is attempting to change the EXV position.

Status LED	**Board Fault**
1	Only suction temperature valid – suction pressure nor coil temperature are valid
2	No Valid Suction Temperature
3	Valve near open position
4	Suction pressure out of range

3.10 "EXV STANDALONE CONTROL" PHYSICAL INTERFACE

FIGURE 11
EXV ENABLED COIL WIRING DIAGRAM

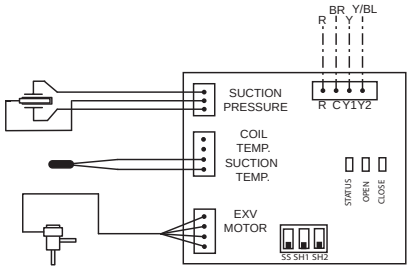


1. Thermostat Connection
2. Yellow LED (close)
3. Green LED (open)
4. Red LED (status)
5. Dip Switch (EXV steps, 2 & 3 SH adjustment dip switch)
6. Electronic Expansion Valve Connection
7. Suction and Coil Thermistor Connection
8. Suction Pressure Transducer Connection

3.11 EXV STANDALONE WIRING

For proper operation the standalone EXV control requires 24VAC power and staged operation thermostat signals. The following diagram should be used to connect the flying leads provided with the cased coil to the thermostat wiring. When employed with the Econet™ Communicating System attach the flying leads provided with the cased coil to the legacy thermostat outputs on the Econet™ compatible IFC.

WIRING DIAGRAM



NOTES

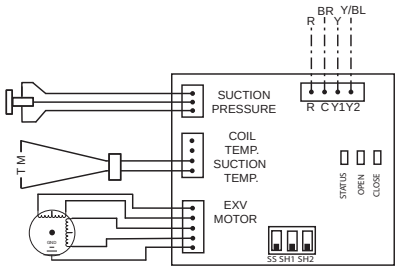
1..... CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2..... LOW VOLTAGE CIRCUIT TO BE N.E.C. CLASS 2 WITH A CLASS 2 TRANSFORMAER 24 VOLT, 50 OR 60 HZ. MIN 18 AWG.
3..... TO THERMOSTAT, REFER TO SYSTEM SCHEMATICS OR SCHEMATICS ON FURNACE FOR LOW VOLTAGE CONTROL WIRING.

WIRING INFORMATION

LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
LOW VOLTAGE
-FACTORY STANDARD
-FIELD INSTALLED
REPLACEMENT WIRE
-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105C. MIN.)

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

SCHEMATIC DIAGRAM



COMPONENT CODES

CLOSE.....YELLOW LED
COIL TEMP.....COIL INLET THERMISTER CONNECTION
COMP.....COMPRESSOR
EXV (5 PIN).....ELEC. TX VALVE
ODF.....OUTDOOR FAN CONNECTION
OPEN.....GREEN LED
SH1.....SUPERHEAT OFFSET SWITCH 1
SH2.....SUPERHEAT OFFSET SWITCH 2
SS.....EXV STEP SELECTION (MUST REMAIN OFF)
STATUS.....RED LED
SUCTION PRESSURE.....SUCTION PRESS. TRANSDUCER CONN.
SUCTION TEMP. .....VAPOR LINE THERMISTOR CONN.
TM .....THERMISTOR
RVS.....REVERSING VALVE CONN.

WIRE COLOR CODE

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

ELECTRICAL WIRING DIAGRAM

NON-COMMUNICATING STANDALONE EXV CONTROL W/ PRESSURE TRANSDUCER

PART NO.:	REV:
90-101897-09	00

3.12 FLOW CHECK PISTON

⚠ NOTICE

FOR PROPER SYSTEM OPERATION, IT MAY BE NECESSARY TO REPLACE THE PISTON INSTALLED IN THE INDOOR COIL. CHECK THE SERVICE VALVES ON THIS UNIT TO SEE IF A NOTICE TAG ALONG WITH A PLASTIC BAG CONTAINING A PISTON IS ATTACHED. IF ONE IS PRESENT A CHANGE OF THE PISTON IS REQUIRED. FAILURE TO CHANGE THE PISTON CAN RESULT IN IMPROPER PERFORMANCE OF THE SYSTEM.

The flow check piston is a multi-purpose device. With flow into the compression nut end from the liquid line, the piston is in a check position and acts as the expansion device with flow through the metering orifice in the center of the piston. The “O” ring on the end of the piston prevents refrigerant from bypassing the metering orifice. Flow from the metering orifice is centered into a distributor which serves to evenly distribute refrigerant to the evaporator circuits. With flow in the reverse direction (direction of arrows on the distributor body), the piston is forced off the seat and liquid from the condenser is allowed to free flow around the piston.

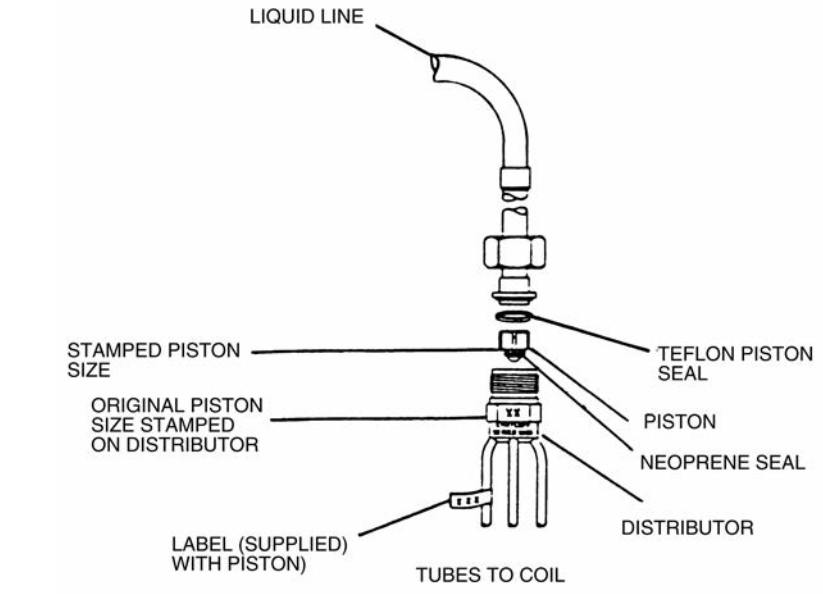
It is essential that the heat pump indoor and outdoor sections be properly matched. Use only matched components as shown in sales specification sheets.

A piston size that is too small will cause starving and one that is too large will cause flooding. In either case, system performance, reliability and charge balance (heating and cooling) will be unacceptable.

Change the piston in the distributor on the indoor coil before installing the coil and charging the system following the procedure below:

- Using a back-up wrench on the distributor body, loosen the compression nut to gain access to the piston.
- Using the wire provided with replacement pistons, run (hooked end) through hole in piston.
- Hook nose end of piston and lift gently from distributor body.
- Replace piston with one of proper size (see Table 4), install piston with gasket end of piston in distributor. Do not force piston into distributor.
- **NOTE:** With piston in distributor, seal end should be down and should not be seen looking in end of distributor. Piston must be free to rotate and move up and down. Make sure piston is free to move in distributor body.
- Insure distributor gasket is located properly in the distributor body.
- Replace compression nut using back-up wrench on distributor body. Torque compression nut end with 8 to 10 ft. lbs.

FIGURE 12
PISTON AND DISTRIBUTOR ASSEMBLY



- Original piston size is stamped on outside of distributor body. Remove new piston size label from poly bag new piston came in and install new size label on outside of distributor tube.
- Check fittings for leaks after installation, evacuation and charging is complete.

IMPORTANT: *Do not attempt to drill pistons to size in the field. Metering holes have a special chamfered inlet and cannot be modified*.

IMPORTANT: *Do not replace the neoprene "O" ring on the piston with any type of seal. Contact the parts department for the exactly replacement of "O" ring.*

3.13 CONDENSATE DRAIN TUBING

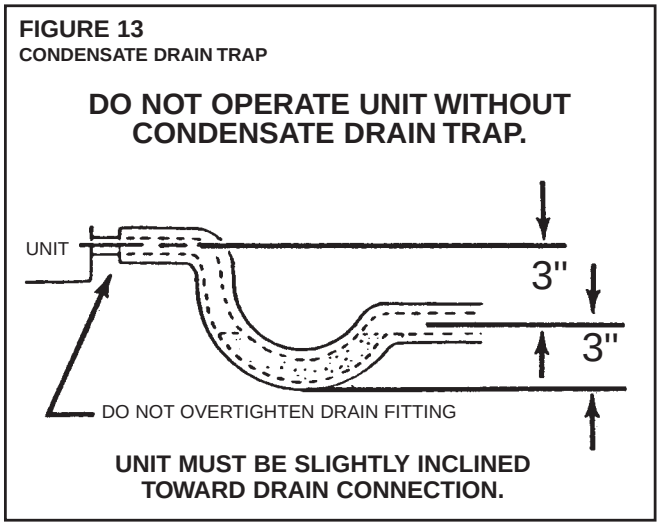
Consult local codes or ordinances for specific requirements.

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 connections 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 13.)
- 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.
- 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 12).
- 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 draining completely, no leaks are found in drain line fittings, and water is draining from the termination of the primary drain line.

FIGURE 13
CONDENSATE DRAIN TRAP



3.14 DUCT FLANGES

Field-installed duct flanges (4 pieces) are shipped with units. Install duct flanges as needed on top or bottom of the coil casing. (See Figure 14.)

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.

3.15 COIL END SHIELDS

All uncased replacement coils 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.

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

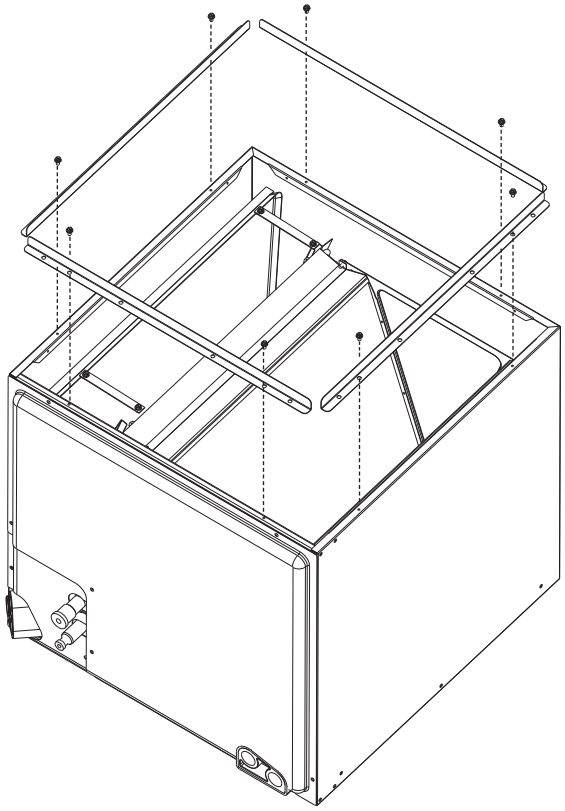
Inspect the indoor coil once each year for cleanliness and clean as necessary. In some cases, it may be necessary to remove the filter and check the return side of the coil with a mirror and flashlight.

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.

TABLE 3
HORIZONTAL ADAPTER KIT

Coil Model	Horizontal Adapter Kit Model No.
RCF2414STAVUA	RXHH-A01
RCF2417STAVUA	RXHH-A02
RCF2417SEAVUA	RXHH-A03
RCF2417STAVUA	RXHH-A03
RCF2421SEAVUA	RXHH-A03
RCF2421STAVUA	RXHH-A03
RCF3617SEAVUA	RXHH-A03
RCF3617STAVUA	RXHH-A03
RCF3621HTAVUA	RXHH-A06
RCF3621MEAVUA	RXHH-A04
RCF3621STAVUA	RXHH-A03
RCF3621STAVUA	RXHH-A04
RCF3624STAVUA	RXHH-A04
RCF4821STAVUA	RXHH-A04
RCF4824STAVUA	RXHH-A04
RCF6024STAVUA	RXHH-A05
RCF2417HTAVUA	RXHH-A03
RCF2421HTAVUA	RXHH-A03
RCF3624HTAVUA	RXHH-A05
RCF4821MTAVUA	RXHH-A06
RCF4824HTAVUA	RXHH-A05
RCF6021SEAVUA	RXHH-A06
RCF6021STAVUA	RXHH-A06
RCF6024MEAVUA	RXHH-A05
RCF6024HTAVUA	RXHH-A05
RCF2417SPAVUA	RXHH-A02
RCF3617SPAVUA	RXHH-A03
RCF3621SPAVUA	RXHH-A03
RCF4821SPAVUA	RXHH-A04
RCF4824SPAVUA	RXHH-A04

FIGURE 14
FIELD-INSTALLED DUCT FLANGES



5.0 ACCESSORIES

5.1 PLENUM ADAPTER ACCESSORY

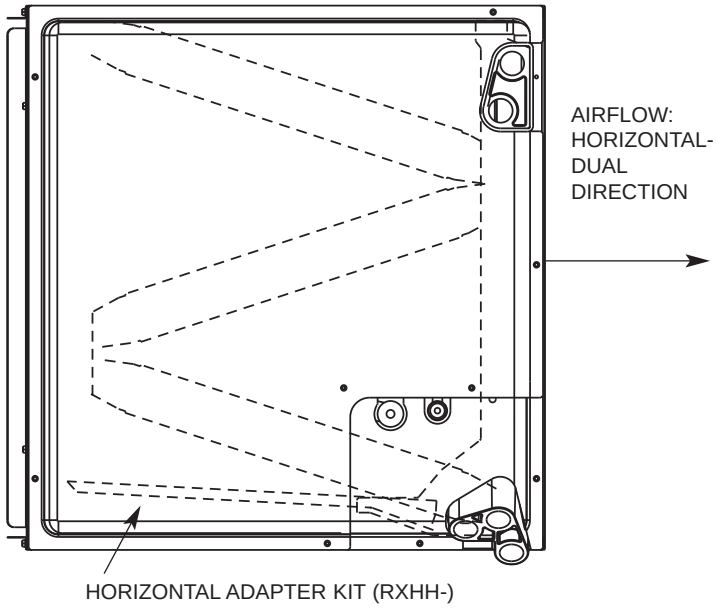
RXBA-AE

This plenum adapter accessory is for use with the 24-1/2” wide cased indoor cooling and heat pump coils. This allows a 24-1/2 wide cased coil to be installed on a 28” wide oil furnace. This is a field-installed accessory only.

RXBA-AC

This plenum adapter accessory is for installation on cased indoor cooling and heat pump coils. This allows a nominal size cased coil to be installed on the next smaller size gas or oil furnace. **NOTE: This accessory is for installation on coil casings to fit gas or oil furnaces only - this accessory must not be used on electric furnaces or heat pump air handlers.** Consult the installation instructions packaged with the accessory for proper installation.

FIGURE 15
HORIZONTAL ADAPTER KIT ILLUSTRATION



5.2 HORIZONTAL ADAPTER KIT RXHH- (See Figure 15)

This horizontal adapter kit is used to convert an upflow or downflow coil for a horizontal application. See Table 3 to order the proper horizontal adapter kit.

5.3 INDOOR COIL CASING RXBC - (See Figure 16 & Table 4)

FIGURE 16
MODEL NUMBER EXPLANATION

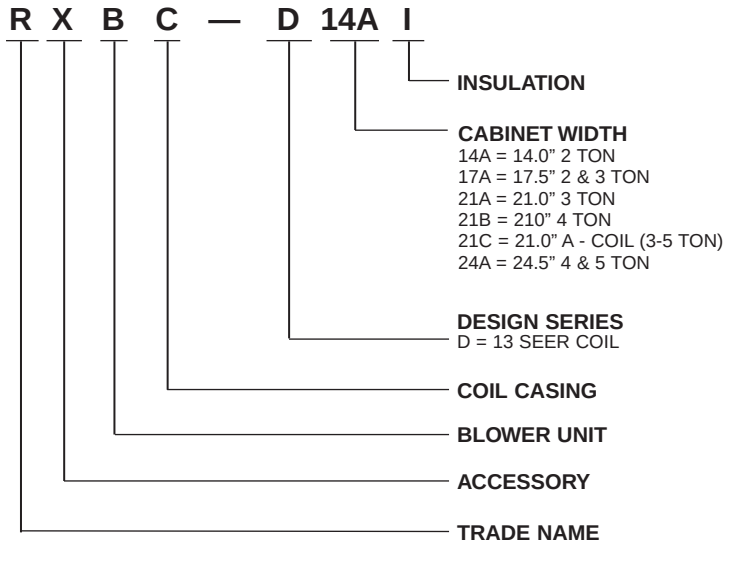


TABLE 4
UNIT DIMENSIONS & WEIGHTS — RXBC- INDOOR COIL CASINGS

Model Number	Width (in) [mm]	Height (in) [mm]	Depth (in) [mm]	Unit Weight		Supply Air / Return Air Openings	
				Weight (lbs) [kg]	Ship Wt (lbs) [kg]	Width (in) [mm]	Depth (in) [mm]
RXBC-D17AI	(17 1/2) [445]	(20) [508]	(21 5/8) [549]	(18) [8]	(23) [10]	(16 1/2) [419]	(19 31/32) [507]
RXBC-D21AI	(21) [533]	(20) [508]		(20) [9]	(26) [12]	20 [508]	
RXBC-D21BI	(21) [533]	(28) [711]		(28) [64]	(34) [77]		
RXBC-D21CI	(21) [533]	(34 1/2) [876]		(33) [75]	(39) [88]		
RXBC-D21AI	(24 1/2) [622]	(32 1/2) [826]		(34) [15]	(44) [20]	(23 1/2) [597]	

5.4 UNCASED COIL ADAPTER KIT RXBA- (See Figure 17 & 18)

This uncased coil adapter kit is used to adapt the coil to a furnace or ductwork. See Table 5 to order the proper adapter kit. Each kit contains a quantity of 20 adapters.

FIGURE 17
UNCASED COIL ADAPTER KIT ILLUSTRATION

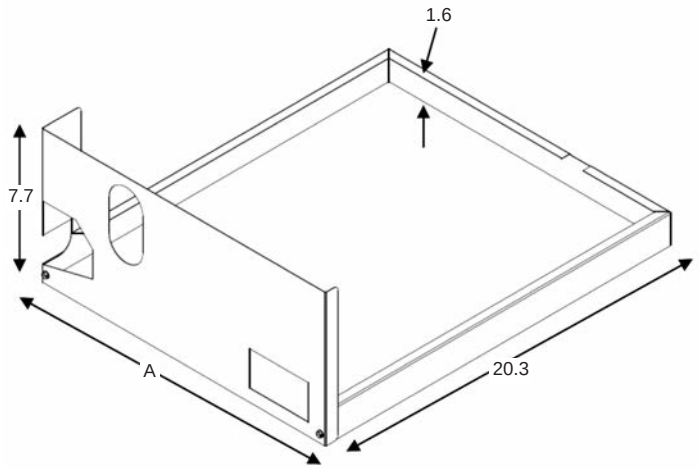
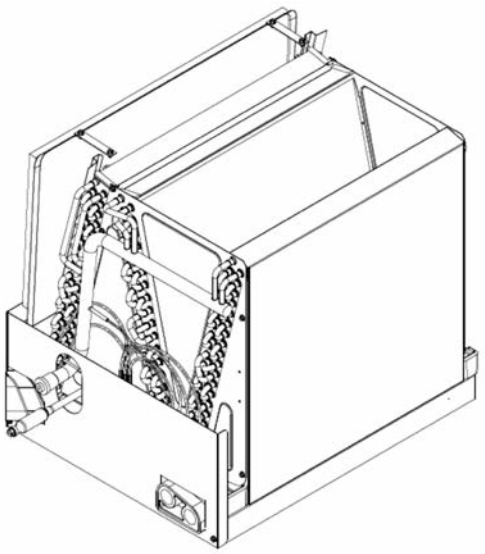


TABLE 5
UNCASED COIL ADAPTER KIT

Uncased Coil Adapter Model Number RXBA	A Width In.	Uncased Coil Model (-)CF
B14x20	13.1	**14
B17x20	16.6	**17
B21x20	20.1	**21
B24x20	23.6	**24

FIGURE 18
UNCASED COIL ADAPTER KIT ASSEMBLED



NOTE: Sliding the coil into the coil rail before attaching coil rack front.

5.5 R-22 TXV CONVERSION KITS

To be used to convert R-410A coil to operate with R-22

FURNACE COIL CROSS REFERENCE CHART		
ORIGINAL COIL	**RECOMMENDED ALUMINUM TUBE REPLACEMENT COIL**	**R-22 TXV CONVERSION KIT MODEL NO.**
RCFA-**2414	RCF2414STA	RXCT-HBA
RCFA-**2417	RCF2417STA	RXCT-HBA
RCFA-**3617	RCF3617STA, RCF2417MTA, or RCF2417HTA/RCF3621H	RXCT-HBB
RCFA-**3621	RCF3621STA, RCF2421MTA, or RCF2421HTA/RCF3621H	RXCT-HBB
RCFA-**4821	RCF4821STA or RCF3621MTA/RCF4821M	RXCT-HBC
RCFA-**4824	RCF4824STA or RCF3624MTA/RCF4821M	RXCT-HBC
RCFA-**6024	RCF6024STA, RCF6024HTA, RCF4824HTA, or RCF3624HTA/RCF6021S	RXCT-HBD

**= AU, HM, OR HU