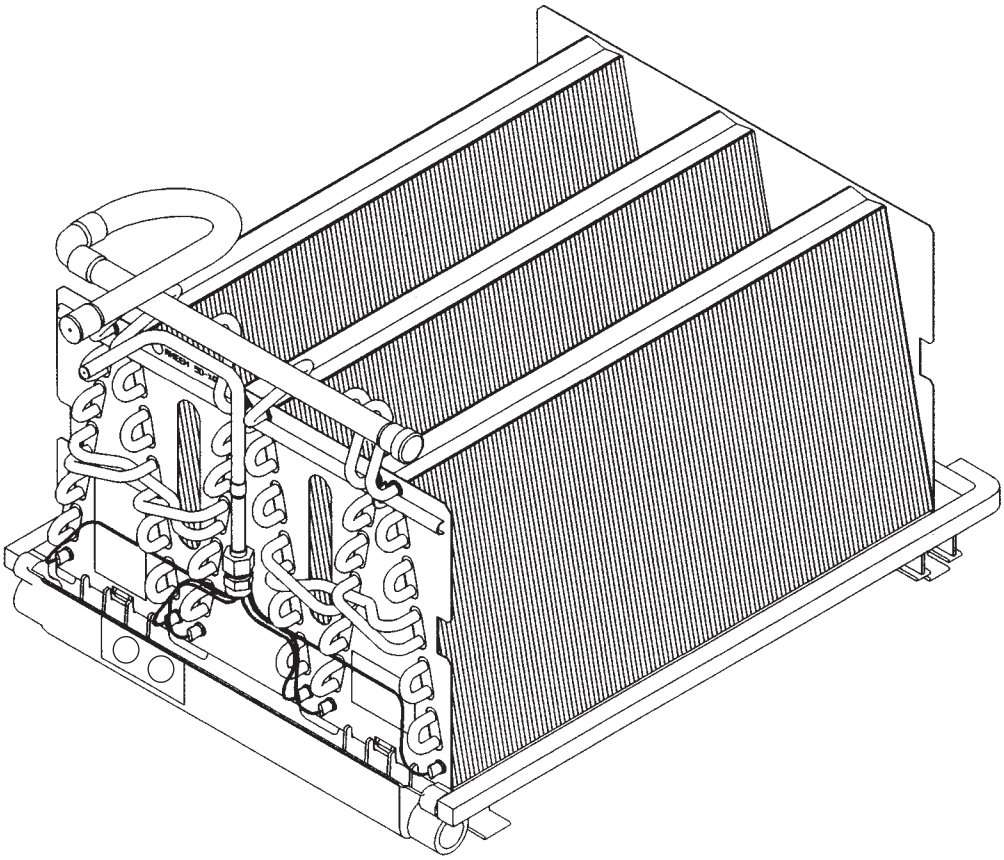
INSTALLATION AND OPERATING INSTRUCTIONS FOR MODELS:

RCBA/RCGA/RCHA/RCGJ/RCHJ/RCHL



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.

⚠WARNING

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

c UL us LISTED

Accredited by the RvA

ABS Quality Evaluations, Inc. Management System Certification

ANAB ACCREDITED

ISO 9001:2008

Certificate Number: 30164

DO NOT DESTROY THIS MANUAL

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

[ ] INDICATES METRIC CONVERSIONS

92-20707-17-14
SUPERSEDES 92-20707-17-13

TABLE OF CONTENTS

IMPORTANT: All Rheem 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.

INSPECTION

Immediately upon receipt, all cartons and contents should be inspected for transit damage. If damage is found, it should be noted on the delivery papers and a damage claim filed with the last carrier.

- After unit has been delivered to job sight, remove carton taking care not to damage unit.
- Check the unit rating plate to be sure equipment matches job specification.
- Read the entire instructions before starting the installation. Especially if this is the first installation for this specific model series.
- Many installation steps done prior to setting the unit in place can save time and simplify the installation. Note the knockouts for refrigerant lines and condensate drain(s)

⚠ CAUTION

Do not remove cabinet knockouts until it has been established which require removal. This is dependent on application and in some cases preference. Removal of knockouts which are not required can cause property damage.

GENERAL INFORMATION

CODES/REGULATIONS

Units should be installed in accordance with any applicable local code and national codes. Latest editions are available from: “National Fire Protection Association, Inc., Batterymarch Park, Quincy, MA 02269.” These publications are:

- ANSI/NFPA No. 70-1990 (NEC) National Electrical Code.
- NFPA90A Installation of Air conditioning and Ventilating Systems.
- NFPA90B Installation of Warm Air Heating and Air Conditioning Systems.

REPLACEMENT PARTS

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

The complete model and serial number is needed to order replacement parts from an authorized distributor.

U. V. LIGHTS

Follow the U.V. light manufacturer's installation and maintenance instructions. The effectiveness of U.V. lights has not been determined, but the coil or pan life will not be impacted when the U.V. lights are properly applied.

INSTALLATION

VERTICAL UPFLOW/DOWNFLOW

Units installed in the upflow position on gas or oil furnaces require the bottom flanges on the coil casing to be bent up with duct pliers. Units installed in the downflow position require the top flanges on the coil casing to be bent up with duct pliers.

FLOWCHECK PISTONS

- Indoor coil piston size is indicated by the two digits underscored in the indoor coil model number.

IMPORTANT: It is imperative that the proper piston sizes be used dependent on indoor coil, outdoor unit combination and application.

- Drain connections can be made from either the left or right side of the unit. (See unit dimensions).

CASED OR UNCASED INDOOR COILS

***NOTE!!** UNCASED COIL MODEL NUMBERS END AFTER 10TH POSITION (REF. ASTERISK)

R C (–) (–) – 36 ** A U 17 A OPT

OPTION CODE
031 = SIDE CONNECT CONDENSATE DRAIN OPTION FOR 14" AND 17" MODELS

VARIATION
BLANK = NONE
M = REVISED HORIZONTAL
I = REVISED HORIZONTAL W/INSULATION

VARIATION
BLANK = NONE
A = FILTER/FILTER RACK
B = ADAPTERS (78% FURNACE)
X = IF UNIT HAS INSULATION

COIL CASING
14 = 14" 21 = 21"
17 = 17½" 24 = 24½"

AIRFLOW/REFRIGERANT CONNECTION
"A" CONNECTION
U = UPFLOW, DOWNFLOW - LEFT (STD)
D = UPFLOW, DOWNFLOW - RIGHT
L = HORIZONTAL (LEFT) - TOP
R = HORIZONTAL (RIGHT) - TOP
S = UPFLOW/DOWNFLOW - LEFT OR RIGHT

"G" CONNECTION
G = UPFLOW/DOWNFLOW/FRONT
H = HORIZONTAL - (LEFT)/FRONT
Z = HORIZONTAL - (RIGHT)/FRONT

CONNECTION (REFRIGERANT)
A = SIDE
G = FRONT

METERING DEVICE (CODE)
** = TX VALVE
A1 or A2 = TX VALVE (e.g. A1) FLOWCHECK (e.g. 99 FOR .099 PISTON SIZE)

NOMINAL CAPACITY
24 = 18,000 TO 24,000 BTUH
36/37 = 30,000 TO 36,000 BTUH
48 = 42,000 TO 48,000 BTUH
60 = 60,000 BTUH
(ACTUAL CAPACITY IS DEPENDENT UPON METERING DEVICE AND SYSTEM COMBINATION. SEE OUTDOOR UNIT INSTRUCTIONS FOR SPECIFICATIONS.)

DESIGN SERIES
A = 1ST DESIGN
J = 14 SEER SYSTEM (1ST DESIGN)
L = R410A

TYPE OF COIL
B = FLOWCHECK (COOLING/HEAT PUMP)
G = EXPANSION VALVE (COOLING ONLY)
H = EXPANSION VALVE (HEAT PUMP ONLY)

COIL

TRADE NAME

RCGA COILS			
COIL SIZE	**TXV CODE**	**TXV SIZE**	**PISTON SIZE**
24	A1	1-1/2	0.099
24	A2	2	0.120
36	A2	3	0.157
37	A1	2 1/2	0.140
48	A1	3-1/2 & 4	0.157
60	A1	5	0.172
RCHA COILS			
24	A1	1-1/2	0.099
24	A2	2	0.120
36	A1	2-1/2	0.140
36	A2	3	0.140
48	A1	4	0.157
60	A1	5	0.157
RCGJ COILS			
24	A1	1-1/2	0.099
24	A2	2	0.120
36	A1	2-1/2	0.120
36	A2	3	0.140
48	A1	4	0.140
60	A1	5	0.157
60	A2	5	0.172
61	A1	COIL A=3	0.140
		COIL B=1-1/2	0.120
RCHJ COILS			
24	A1	1-1/2	0.099
24	A2	2	0.120
36	A1	2-1/2	0.140
36	A2	3	0.140
48	A1	4	0.140
48	A2	4	0.152
51	A1	COIL A = 3	0.120
		COIL B = 1.5	0.086
60	A1	4	0.140
61	A1	COIL A = 4	0.140
		COIL B = 1.5	0.086
RCHL COILS			
24	A2	1-1/2	0.099
36	A1	2	0.099
36	A2	3	0.120
48	A1	3	0.120
48	A2	3	0.120
51	A1	COIL A=3	0.120
		COIL B=1-1/2	0.086
60	A1	4	0.140
61	A1	COIL A=4	0.140
		COIL B=1.5	0.086

Piston Sizes (Part Number 61-25414-**)

NOTE: RCBA coils require a piston change

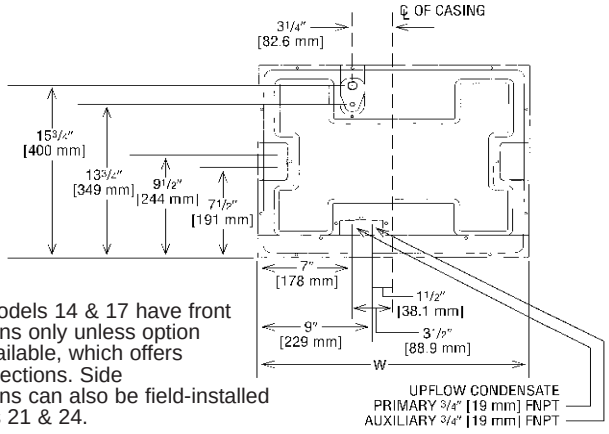
Model Size	(-)PKB Indoor Coil Piston Size	(-)AKB Evaporator Coil Piston Size	10AJB Piston Size
1.5 Ton [5.28 kW]	53	51	51
2.0 Ton [7.03 kW]	59	57	57
2.5 Ton [8.79kW]	65	65	65
3.0 Ton [10.55 kW]	65	65	73
3.5 Ton [12.30 kW]	78	73	78
4.0 Ton [14.06 kW]	82	82	82
5.0 Ton [17.58 kW]	89	89	89

UNIT DIMENSIONS & WEIGHTS — CASED AND UNCASED COILS

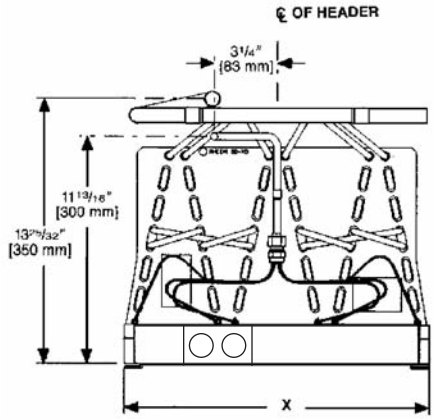
MODEL NUMBER	UNCASED COIL "X" IN. [mm]	STANDARD CASED COIL "W" IN. [mm]	CONNECTION SIZE (IN.) [mm] SWEAT		UNIT WEIGHT (LBS.) [Kg]					
					UNCASED COIL		STANDARD CASED COIL		CASED COIL WITH HORIZ. DRAIN PAN	
			LIQUID I.D.	SUCTION I.D.	WT.	SHIP WT.	WT.	SHIP WT.	WT.	SHIP WT.
RCBA-24	12 1/4 [311]	14 [356]	3/8 [10]	3/4 [19]	15 [6.80]	17 [7.11]	32 [14.51]	34 [15.42]	37 [16.78]	39 [17.69]
RCGA-24A1/A2 RCHA-24	12 1/4 [311]	14 [356]			16 [7.26]	18 [8.16]	35 [15.88]	37 [16.78]	38 [17.24]	40 [18.14]
RCBA-36/37	15 3/4 [400]	17 1/2 [445]			20 [9.07]	22 [9.98]	39 [17.69]	41 [18.60]	44 [19.96]	47 [21.31]
RCGA-36/37 RCGJ-24A2 RCGJ-24A1 RCHL-24A1 RCHA-36A1/A2 RCHJ-24A1 RCHJ-24A2	15 3/4 [400]	17 1/2 [445]			21 [9.53]	23 [10.43]	40 [18.14]	42 [19.05]	45 [20.41]	48 [21.77]
RCBA-48	19 1/4 [489]	21 [533]		7/8 [22]	26 [11.79]	29 [13.15]	46 [20.87]	49 [22.22]	52 [23.59]	55 [24.95]
RCGA-48 RCGJ-36A1 RCHL-36A1 RCGJ-36A2 RCHA-48 RCHJ-36A1 RCHJ-36A2 RCHL-36A2	19 1/4 [489]	21 [533]			27 [12.25]	30 [13.61]	47 [21.32]	50 [22.68]	53 [24.04]	56 [25.40]
RCBA-60	22 3/4 [578]	24 1/2 [622]			32 [14.51]	35 [15.88]	54 [24.49]	57 [25.85]	60 [27.22]	64 [29.03]
RCGA-60 RCGJ-48A1 RCHL-48A1 RCHJ-48A2 RCHL-48A2 RCHJ-60A1 RCGJ-60A1 RCHJ-48A1 RCHA-60 RCHL-60A1	22 3/4 [578]	24 1/2 [622]			33 [14.97]	36 [16.33]	55 [24.95]	58 [26.31]	61 [27.67]	65 [29.48]
RCHJ-51A1 RCHL-51A1 RCGJ-61A1 RCHJ-61A1 RCHL-61A1	N/A	24 1/2 [622]			N/A	N/A	110	116	122	130

[ ] Designates Metric Conversions

"G(-)" FRONT CONNECTION FOR RCBA-/RCGA-/RCGJ-/RCHA-/RCHJ-/RCHL-



NOTE: Models 14 & 17 have front connections only unless option 031 is available, which offers side connections. Side connections can also be field-installed to models 21 & 24.



SEE UNIT DIMENSION & WEIGHT CHART SEE PAGE 4 FOR "W" & "X"

[ ] Designates Metric Conversions

Front Connection Designated as (G) in model number.

PHYSICAL DATA

COIL MODEL NUMBER	APPROX. DESIGN AIRFLOW RANGE (CFM) [L/s]	FACE AREA (SQ. FT.) [m²]	FINS/IN.	NUMBER OF SLABS
RCBA-/RCGA-/RCHA-24**	600-800 [283.1-377.6]	5.07 [.471]	18	4
RCGJ-/RCHJ-/RCHL-24**	600-800 [283.1-377.6]	7.60 [.706]		6
RCBA-/RCGA-/RCHA-36/37**	1000-1200 [471.1-566.3]	7.60 [.706]		6
RCGJ-/RCHJ-/RCHL-36**	1000-1200 [471.1-566.3]	10.13 [.941]		8
RCBA-/RCGA-/RCHA-48**	1400-1600 [660.7-755.1]	10.13 [.941]		8
RCGJ-/RCHJ-/RCHL-48**	1400-1600 [660.7-755.1]	12.67 [1.18]		10
RCBA-/RCGA-/RCGJ-/RCHA-60**	2000 [943.9]	12.67 [1.18]		10
RCHJ-/RCHL-51**	1600 [755.1]	12.67 [1.18]		2-10 Slab Coils
RCGJ-/RCHJ-/RCHL-61**	1800-2000 [849.5-943.9]	12.67 [1.18]		2-10 Slab Coils

NOTES: **—Indicates piston size on RCBA coils and TX valve on RCGA-/RCHA-/RCGJ- and RCHJ-/RCHL- coils.

CASED COIL APPLICATION

Coil can be matched to heating products as listed in table below.

NO. OF COIL SLABS	COIL PLENUM WIDTH	GAS FURNACE 78/80% UPFLOW, DOWNFLOW & HORIZONTAL MODELS							GAS FURNACE 34″ 90 PLUS UPFLOW, DOWNFLOW & HORIZONTAL CONDENSING MODELS							OIL FURNACE 80 PLUS UPFLOW, DOWNFLOW & HORIZONTAL MODELS						
		05E	07E	10A	07G	10B	12	15	04EM	06EM	07EM	07EY	09EZ	10EZ	12ER	056	067	084	095	112	130	150
4	14	A																				
4	17.5		A&B	A&B	A&B				A&B	A&B	A&B											
4	21											A&C	A&C	A&C		A&C	A&C					
6	17.5	E	A	A	A				A	A	A											
6	21					A&B						A&B	A&B	A&B		A	A					
6	24.5						A&C	A&C							A&C			A	A	A		
8	21				E	A						A	A	A		A	A					
8	24.5						A&B	A&B							A&B			A&B	A&B	A&B		
10	24.5					E	A	A							A			A	A	A	D	D
FURNACE WIDTH IN. [mm]		14 [355.6]	17.5 [444.5]			21 [533.4]	24.5 [622.5]		17.5 [444.5]			21 [533.4]			24.5 [622.3]	21 [533.4]		24.5 [622.3]			28 [711.2]	

NOTES: SHADED AREAS INDICATE FLUSH FIT APPLICATIONS

A – Upflow/Downflow/Horizontal Application. Horizontal application requires factory installed horizontal drain pan or field installed horizontal drain pan accessory RXBD-DB or RXBD-DA for smaller coils in larger coil cases.

B – Upflow/Downflow/Horizontal Application. Requires use of RXBA-AA internal coupler accessory designated by “B” (with adapter) in coil model number.

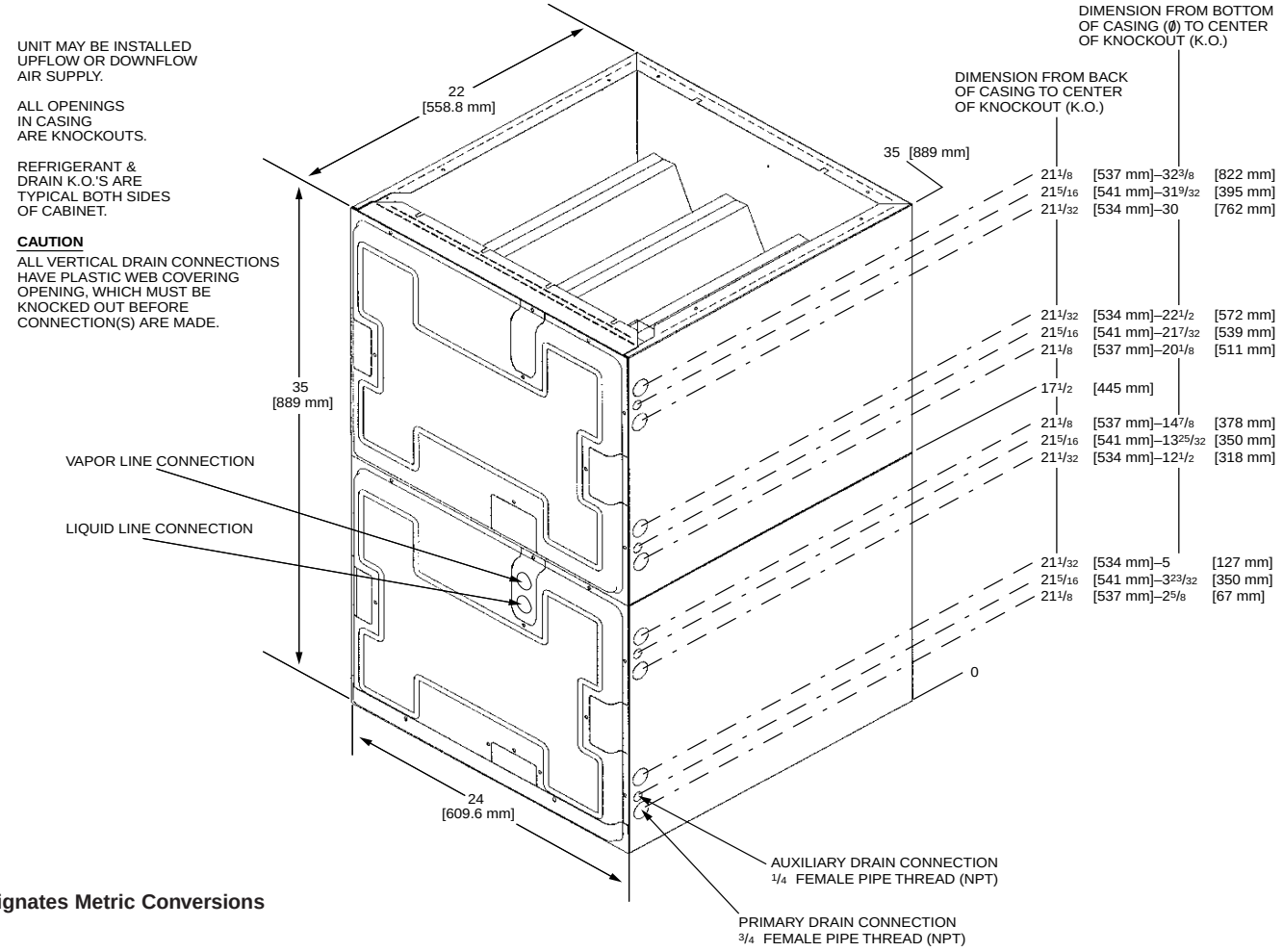
C – Upflow/Downflow/Horizontal Application. Requires use of RXBA-AB internal coupler accessory designated by “B” (with adapter) in coil model number.

D – Requires plenum adapter accessory RXBA-AE (Upflow application only).

E – Upflow, Upflow/Horizontal and Horizontal “Only” application requires external plenum adapter accessory RXBA-AC. Downflow/Horizontal application requires external plenum adapter accessory RXBA-AD.

[ ] Designates Metric Conversions

STACKED COILS
RCHJ-51A1, RCHL-51A1, RCGJ-61A1, RCHJ-61A1, RCHL-61A1



[ ] Designates Metric Conversions

UNCASED COIL APPLICATION

Coil can be matched to products as listed in table below.

COIL MODEL NUMBER	Electric Furnace Heat Pump Air Handler ①			
	14/15	17/18	21/22	24/26
RC(-)A-24**A	X			
RC(-)A-36/37**A		X		
RC(-)A-48**A			X	
RC(-)A-60**A				X
CABINET WIDTH	14"	17-1/2"	21"	24-1/2"

NOTES: Requires horizontal drain pan accessory (RXBD-CB) for horizontal applications. For air handlers using internal couplers, use drain pan accessory RXBD-CA.
① Requires coil code A (without coil - with plenum) in unit model number.

(-) = Coil Type
B = Flowcheck (Cooling/Heat Pump)
G = Expansion Valve (Cooling Only)
H = Expansion Valve (Heat Pump Only)

(-)BHC- COIL MODEL #		**(-)BHK- COIL MODEL #**	
14 14.0" [356]	RCBA-2457 RCGA-24A1 RCGA-24A2 RCHA-24A1 RCHA-24A2	17	RCGJ-24A1 RCGJ-24A2 RCHJ-24A1 RCHJ-24A2 RCHA-24A1 RCHA-24A2 RCHL-24A2
15 14.0" [356]			
17 17.5" [445]	RCBA-3765 RCGA-37A1 RCGA-36A2 RCHA-36A1 RCHA-36A2	21	RCGJ-36A1 RCGJ-36A2 RCHJ-36A1 RCHJ-36A2 RCHA-36A1 RCHA-36A2 RCHL-36A1 RCHL-36A2
18 17.5" [445]			
21 21.0" [533]	RCBA-4882 RCGA-48A1 RCHA-48A1	24	RCGJ-48A1 RCGJ-60A1 RCHJ-48A1 RCHJ-51A1* RCHJ-48A2 RCHA-48A1 RCHL-48A1 RCHL-48A2 RCHL-51A1*
22 21.0" [533]			
24 24.5" [622]	RCBA-6089 RCGA-60A1 RCHA-60A1	25	RCGJ-60A1 RCGJ-61A1* RCHJ-61A1* RCHJ-60A1 RCHA-60A1 RCHL-60A1 RCHL-61A1*
26 24.5" [622]			

INDOOR COIL AIRFLOW PRESSURE DROP

Cased Coil Width - Inches		14"		17½"		21"		24½"	
No. of Coil Slabs		4		6		8		10	
Coil Cooling Size		-018, -024		-018*, -024*, -030, -036		-030*, -036*, -042, -048		-042*, -048*, -060*, -060	
Coil Position (Airflow)		Up	Down	Up	Down	Up	Down	Up	Down
Static Pressure Drop Across Wet Cooling Coil in W.C.	∅P	Air Flow C.F.M.							
	.05"	578	521	752	673	895	764	1005	885
	.10"	889	827	1113	977	1299	1103	1559	1308
	.15"	1158	977	1416	1244	1641	1386	1939	1605
	.20"	1346	1149	1647	1413	1960	1637	2271	1883
	.25"	1546	1271	1876	1633	2187	1826	2552	2134
	.30"	1665	1401	2065	1784	2429	2013	2890	2365

Air pressure drop for horizontal airflow is the same as that shown for upflow.
* RCGJ Coils and RCHJ coils. For RCGJ-61, RCHJ-51 and RCHJ-61 double the static pressure drop shown for 10 slab coil.

FIGURE 1
INDOOR COIL AND DRAIN PAN SET-UP
HORIZONTAL LEFT-HAND AIR SUPPLY

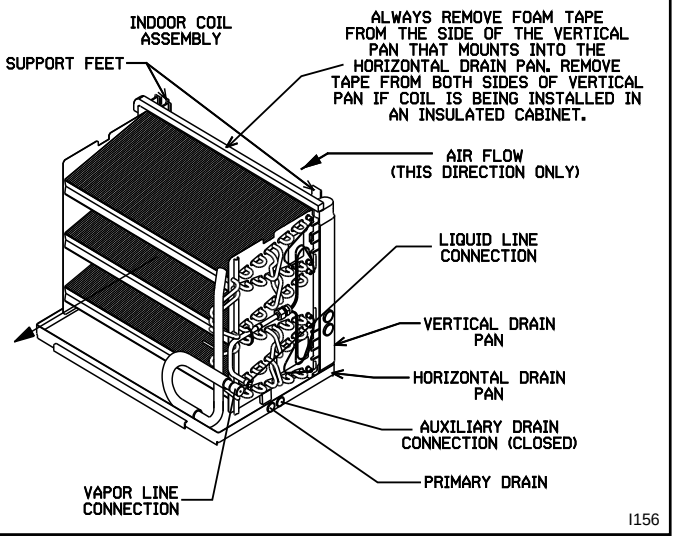
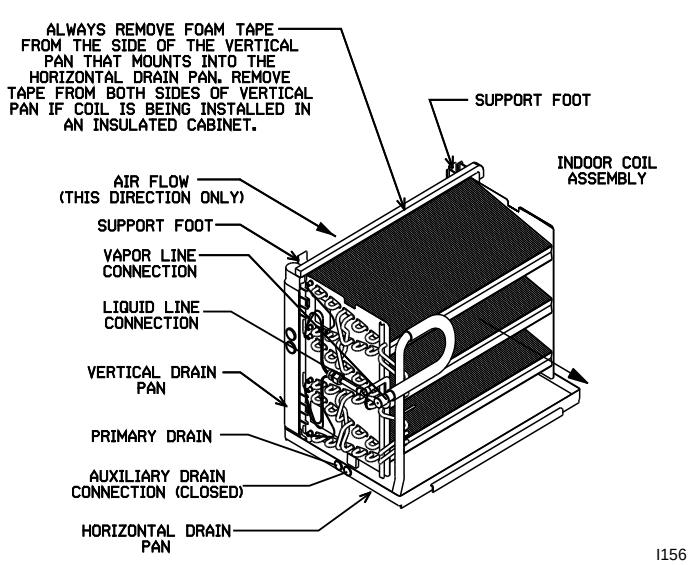


FIGURE 2
INDOOR COIL AND DRAIN PAN SET-UP
HORIZONTAL RIGHT-HAND AIR SUPPLY



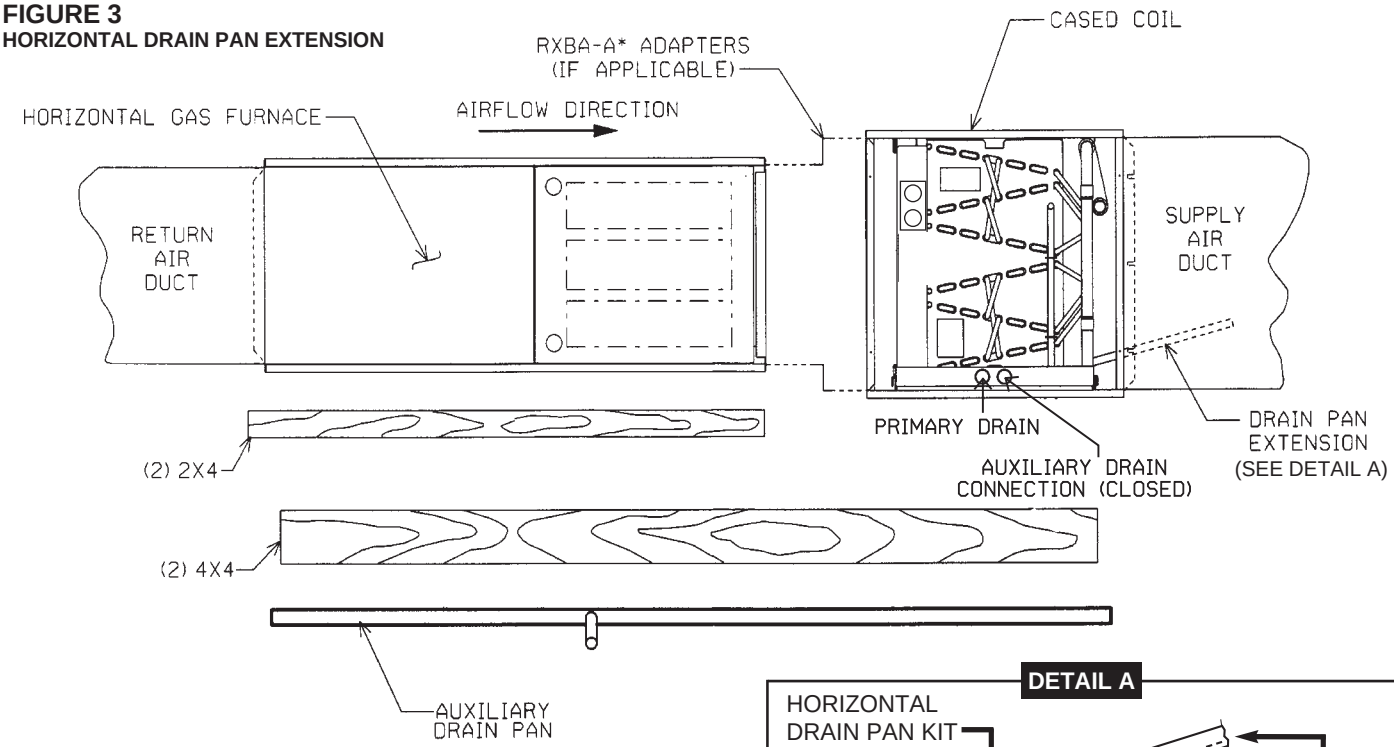
*** FOAM TAPE**

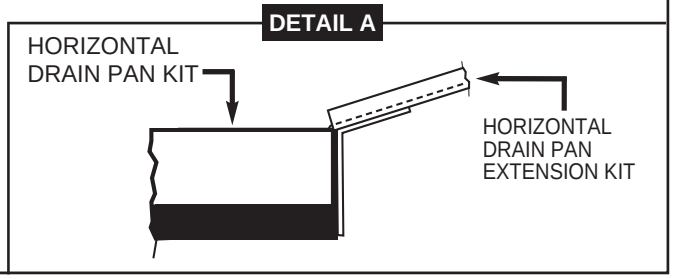
Foam tape is factory installed on the sides of the vertical drain pan if the coil is provided in a coil casing. Foam tape is shipped loose with uncased coils.

If uncased coil is installed vertical in a coil casing or air handler, install the foam tape on the sides of the vertical drain pan.

If installed horizontal, **DO NOT** install foam tape on the side of the vertical drain pan that fits into the horizontal drain pan. Remove foam tape, if already attached, from the side of the vertical drain pan that fits into the horizontal drain pan.

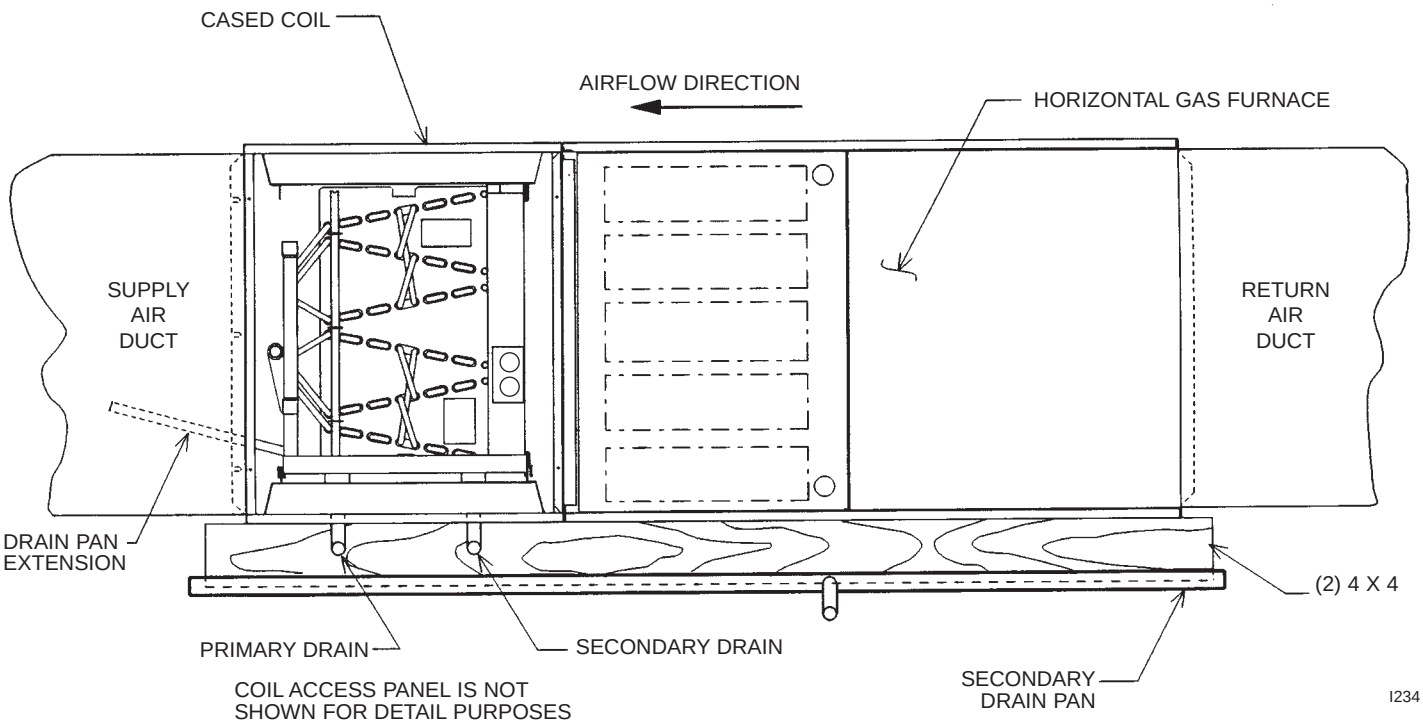
FIGURE 3
HORIZONTAL DRAIN PAN EXTENSION





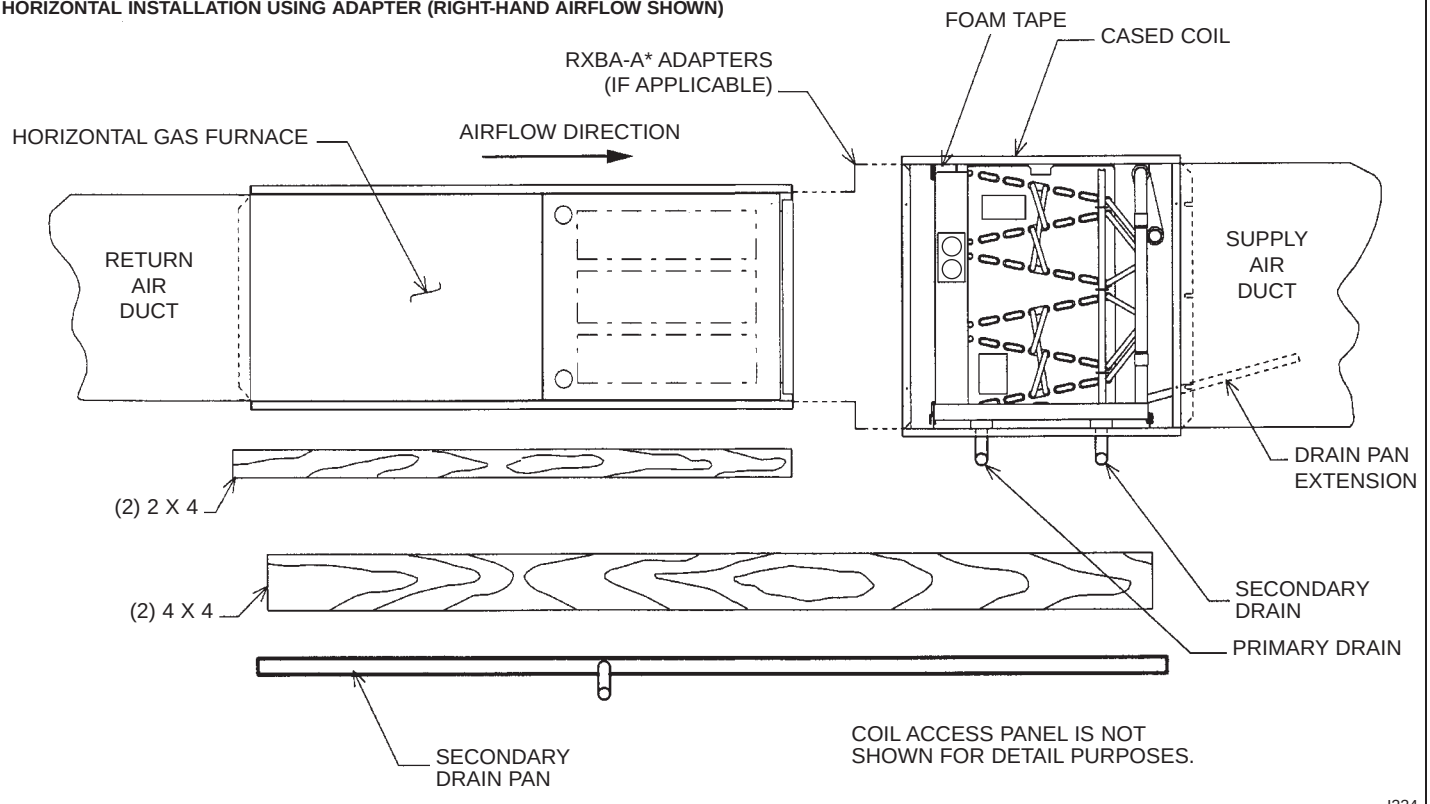
NOTE: UNIT SHOWN WITHOUT COIL DOOR FOR ILLUSTRATION PURPOSES.

FIGURE 4
HORIZONTAL INSTALLATION – FLUSH FIT (LEFT-HAND AIRFLOW SHOWN)



NOTE: Figures 4 & 5 show configurations with upflow/horizontal and horizontal "only" model gas furnaces. For specifics on configuring the coil casing with downflow/horizontal gas furnaces see Figure 5.

FIGURE 5
HORIZONTAL INSTALLATION USING ADAPTER (RIGHT-HAND AIRFLOW SHOWN)



***NOTE:** RXBA-AC adapters used with upflow/horizontal and horizontal only furnaces.
RXBA-AD adapters used with downflow/horizontal furnaces.

FIGURE 6
COIL SUPPORT FRAME

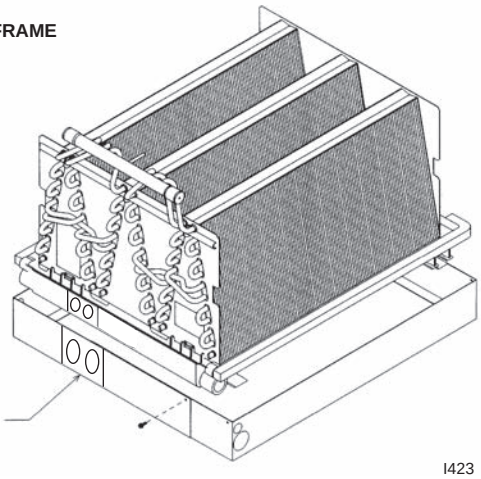
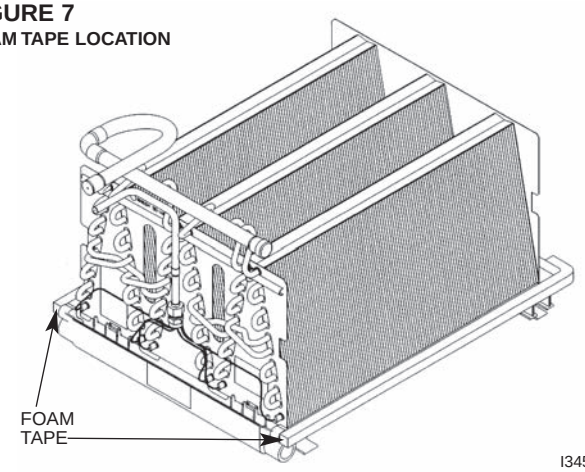


FIGURE 7
FOAM TAPE LOCATION



- Coil drain pan must be located under indoor coil.

IMPORTANT: INDOOR COILS WITH POLYMER, HEAT RESISTANT, DRAIN PANS HAVE BEEN TESTED ABOVE GAS AND OIL FURNACES IN COIL CASINGS ONLY AS SHOWN IN THE INSTALLATION INSTRUCTIONS. STANDARD COIL CASINGS PROVIDE 2**(** CLEARANCE BETWEEN THE TOP OF THE FURNACE AND THE BOTTOM OF THE MOUNTING FEET ON THE DRAIN PAN. CAUTION SHOULD BE USED IN APPLYING COILS WITH LESS CLEARANCE AND APPLICATIONS ON FURNACES NOT LISTED IN THIS MANUAL, DAMAGE TO THE DRAIN PAN COULD RESULT. HEAT DAMAGE TO THE DRAIN PAN CAN OCCUR IN ANY APPLICATION WITH FAILURE OF BOTH THE INDOOR BLOWER MOTOR AND SAFETY LIMIT CONTROL.

IMPORTANT: INSTALL THE FOAM TAPE, SHIPPED WITH THE COILS, ALONG THE EDGES OF THE DRAIN PAN ON BOTH SIDES AS SHOWN IN FIGURE 7. FOAM TAPE IS IN PLACE TO PREVENT AIR BYPASS.

HORIZONTAL

Units installed in the horizontal position with gas or oil furnaces require the top flanges on the coil casing to be bent up with duct pliers.

NOTE: In right-hand airflow installations that use internal couplers, with a 1.5 ton or smaller coil, the horizontal drain pan kit RXBP-CA, a condensate diverter kit may be required to keep condensate from falling into the secondary drain.

IMPORTANT: Primary and secondary drain connections exchange positions on opposite sides of cabinet for horizontal right vs. horizontal left air supply. Do not interchange connections.

IMPORTANT: Coils cannot be installed horizontally laying on or suspended from the back of the unit. Horizontal units must be supported or suspended from one side or the other when in the horizontal position.

REFRIGERANT CONNECTIONS

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

IMPORTANT: Install refrigerant tubing such that it does not block service access to front of unit. Filter (if installed), or coil removal and access require 24 in. clearances.

FRONT CONNECTION COILS

- Refrigerant connections can be made from the front of the coil.
- Use a brazing shield to protect cabinet paint from being damaged from torch flame.

REFRIGERANT CONNECTIONS

To install the refrigerant connections, first install the refrigerant block-off plate (located in the Parts Bag, see Figure 8) around the refrigerant connections, as shown in Figure 9. Braze all fittings. When refrigerant lines have cooled, insert the foam gasket (located in the parts bag, see Figure 8) around the refrigerant lines, between the coil and the refrigerant block-off plate (see Figure 9).

IMPORTANT: The refrigerant block-off plate MUST be installed around the refrigerant connections before brazing.

FIGURE 8
REFRIGERANT BLOCK-OFF PLATE AND FOAM GASKET

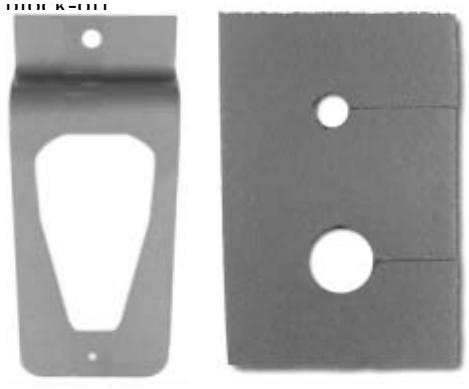
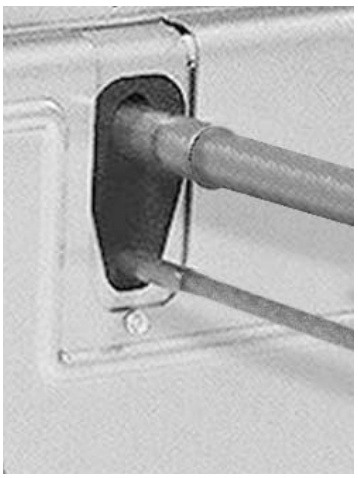


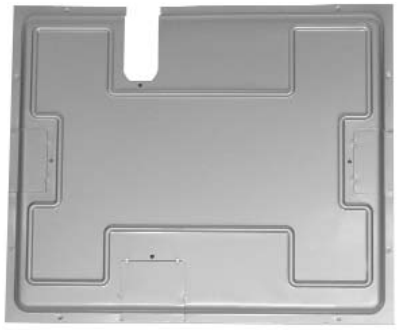
FIGURE 9
COMPLETED REFRIGERANT CONNECTION ASSEMBLY



CONDENSATE DRAIN TUBING

Consult local codes or ordinances for specific requirements that may apply.

FIGURE 10
COIL DOOR



⚠ CAUTION

Side drain connections on vertical drain pans have a plastic web covering opening which must be knocked out before connection(s) are made. Knock out only connections(s) to be used. Knocking out plastic webs on unused drain connections can cause condensate to flow out the holes resulting in property damage. Front drain connections have removable threaded plastic plugs factory installed. Plugs must be removed before connections are made; do not remove plugs if these connections are not used.

CONDENSATE DRAIN CONNECTIONS

The coil door is shipped from the factory with the condensate drain knockout attached (see Figure 10). Knockout must be removed (see Figure 11) and the condensate block-off plate (included in parts bag, see Figure 12) must be installed (see Figure 13) to access the front drain.

FIGURE 11
REMOVING CONDENSATE KNOCKOUT

FIGURE 12
CONDENSATE BLOCK-OFF PLATE

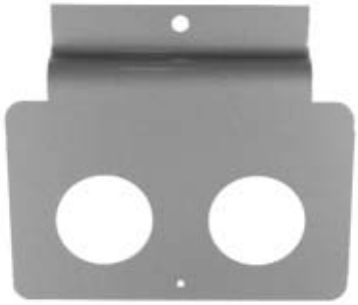
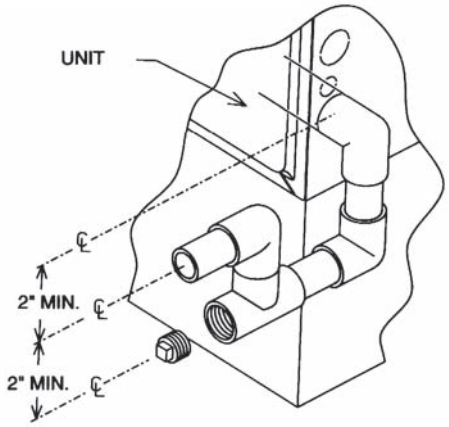


FIGURE 13
INSTALLING BLOCK-OFF PLATE

- **For Option 031 Models Only:** Vertical coils are supplied with a 3/4” female pipe specialty thread primary drain connection and a 1/4” female pipe thread secondary drain connection. Connections can be made to either side of unit. (See unit dimensions and position figures for drain locations).
- Horizontal coils are supplied with a 3/4” female pipe thread primary drain connection and a 3/4” female pipe special thread secondary drain connection. Connections must be made on the bottom (horizontal position) of the unit. (See unit dimensions and position figures for drain locations).

FIGURE 14
VERTICAL FRONT ILLUSTRATION



IMPORTANT: On horizontal units, primary drain connection is open (no web) 3/4" connection flush with bottom inside of pan. Secondary connection is raised 1/4" above bottom of inside of pan. Plastic web covering 3/4" secondary connection must be knocked out if used. Do not get primary and secondary connections interchanged.

- Removal of cabinet knockouts required for drain connections can be made much easier with the indoor coil assembly removed from the cabinet.
- Install drain lines so they do not block service access to front of unit. Filter (if installed), or coil removal and service access require 24 in. clearance.
- Make sure unit is level or pitched slightly toward primary drain connection so that drain pan will drain completely without water standing in pan.

Two 6” long straight PVC fittings are provided for making drain connections. Cut these fittings to desired length. When making drain fitting connections to drain pan, use a thin layer of teflon paste, silicone or teflon tape and install hand tight only.

IMPORTANT: If PVC condensate fittings are used, local codes may require that the fittings be shielded from radiant heat from flue pipe. Install provided foil back insulation around condensate fittings and secure with foil tape provided in parts bag.

IMPORTANT: When making drain fitting connections to drain pan, DO NOT OVERTIGHTEN. Overtightening fittings can split pipe connections on drain pan.

- Do not reduce drain line size less than connections 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 2 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 14.)

IMPORTANT: When installing indoor coil with an electric furnace or heat pump air handler, do not operate unit without a drain trap. The condensate drain is on the negative side of the blower, therefore, air being pulled in through the condensate line will prevent positive drainage without a proper trap.

- Secondary drain if used 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 secondary drain line.

- Test condensate drain pan and drain line after installation is complete. Pour several quarts of 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.

IMPORTANT: In compliance with recognized codes, it is recommended that an auxiliary drain pan be installed under all evaporator coils or 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.

STACKED-COIL APPLICATIONS

SIDE CONNECTION COILS

IMPORTANT: When brazing refrigerant connections inside the coil casing, use extreme care to protect plastic drain pan(s) from torch flame and dripping braze material. Use a sheet metal baffle to protect drain pan(s) during brazing.

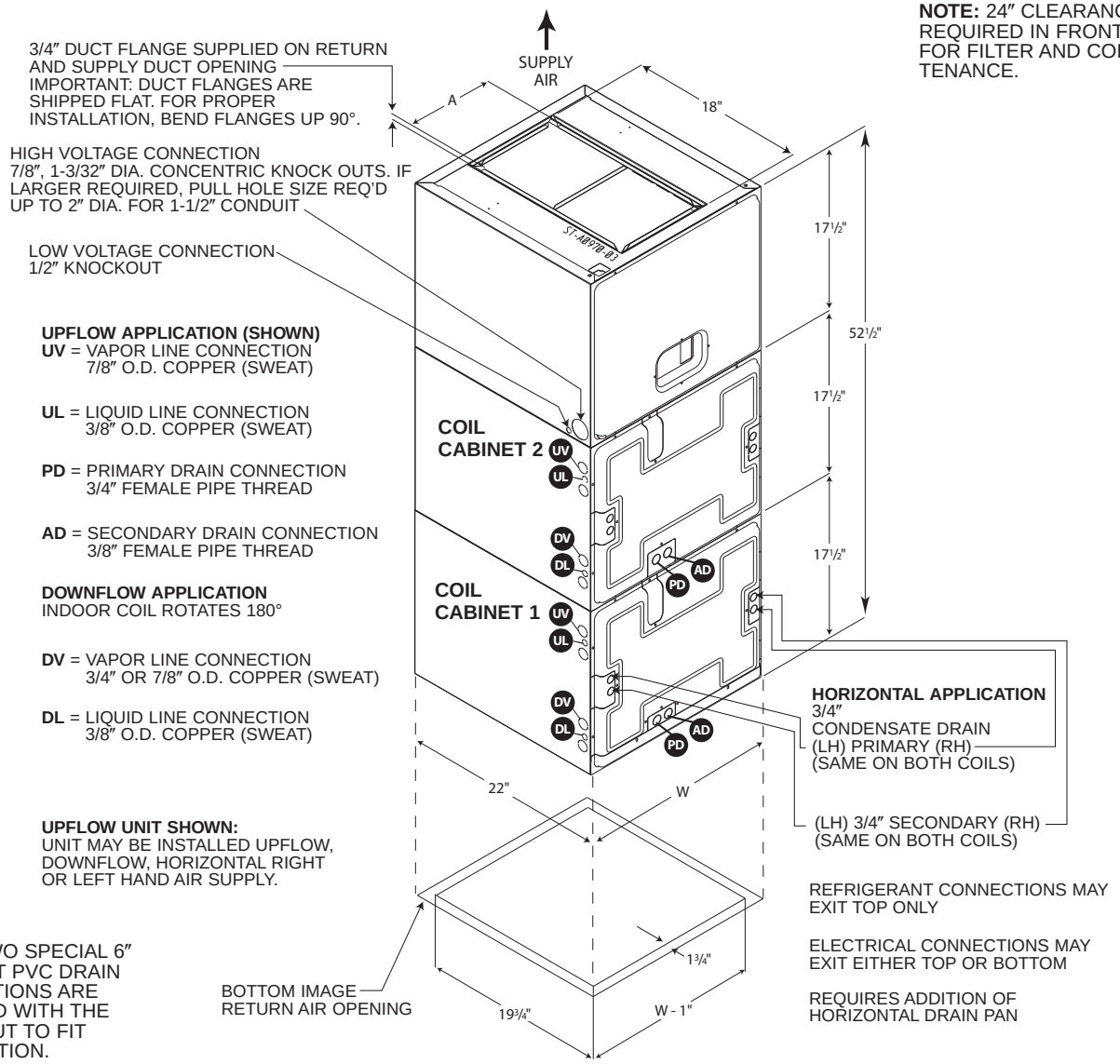
- When brazing connections near the cabinet, use a brazing shield to protect cabinet paint from flame damage.
- Removal of cabinet knockouts required for liquid and vapor line connections may be made easier with the indoor coil assembly removed from the casing.
- On vertical units, refrigerant connections can be made from either side of unit. On horizontal units, refrigerant connections must be made on top (horizontal position) of unit. See unit dimensions and unit position figures.
- The vapor header is open on one or both ends depending upon model. Install a copper street elbow (provided) in the appropriate end (if not factory installed). Use the following guidelines and Figure 14 when installing street elbow:
- If horizontal coil airflow direction is changed in the field, or a horizontal pan is added to convert vertical units to horizontal, it is necessary to change closed end extension tube on header or install closed end extension tube on the unused end of header. This must be done before reinstalling or installing horizontal drain pan. This is important to prevent damage to the pan while soldering closed end extension tube.
- To change the liquid line connection to the opposite side, if required, use backup wrench to hold flowcheck distributor body while loosening tubing nut holding 3/8" line with a second wrench. Loosen enough to turn liquid line assembly to opposite side of unit. Tighten nut to distributor body with liquid line assembly in a new location (lined up with the cabinet knockout).
- The indoor coil must be installed in the casing before vapor street elbow and liquid line connections can be brazed to the indoor coil. Street elbow should be brazed to header with connection pointed in the most convenient direction to make vapor line connection.
- If the installation is in a tight location, it might be convenient to make some external tubing connections before setting cased coil in place.

TABLE 1
AIRFLOW FOR STACKED COILS

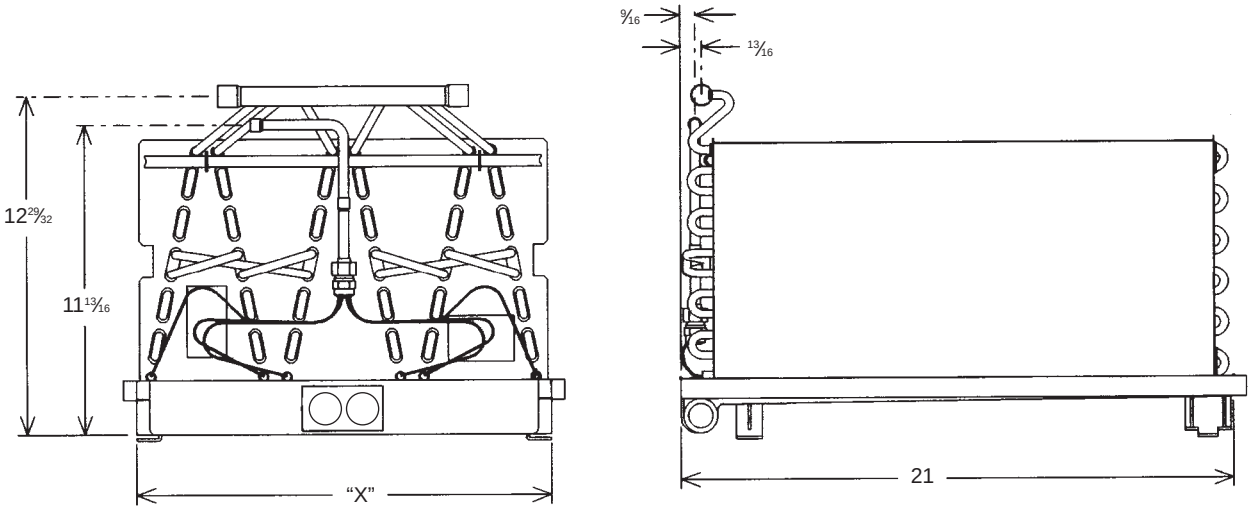
Cased Coil Size In..		24½	
No. Of Coil Slabs		20	
Coil Cooling Size		-51 or -61	
Coil Position (Airflow)		UP	DOWN
Static Pressure Drop Thru Wet Cooling Coil In. W.C.	Airflow		
	.05	1005	885
	.10	1559	1308
	.15	1939	1605
	.20	2271	1883
	.25	2552	2134
	.30	2890	2365

RC*J 51A1 & 61A1 COILS

NOTE: 24″ CLEARANCE REQUIRED IN FRONT OF UNIT FOR FILTER AND COIL MAINTENANCE.



NOTE: TWO SPECIAL 6″ STRAIGHT PVC DRAIN CONNECTIONS ARE INCLUDED WITH THE COILS. CUT TO FIT INSTALLATION.



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SEE UNIT DIMENSIONS & WEIGHT CHART SHEET 3 FOR "W" & "X"

FIGURE 15
STACKED COIL LOCATIONS

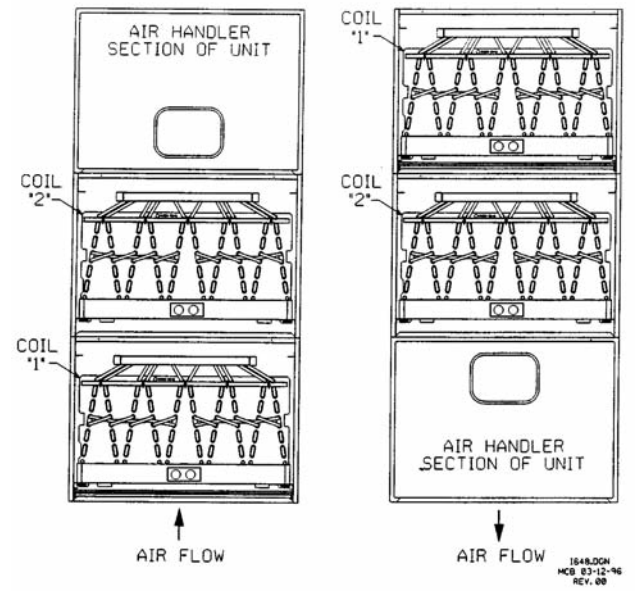
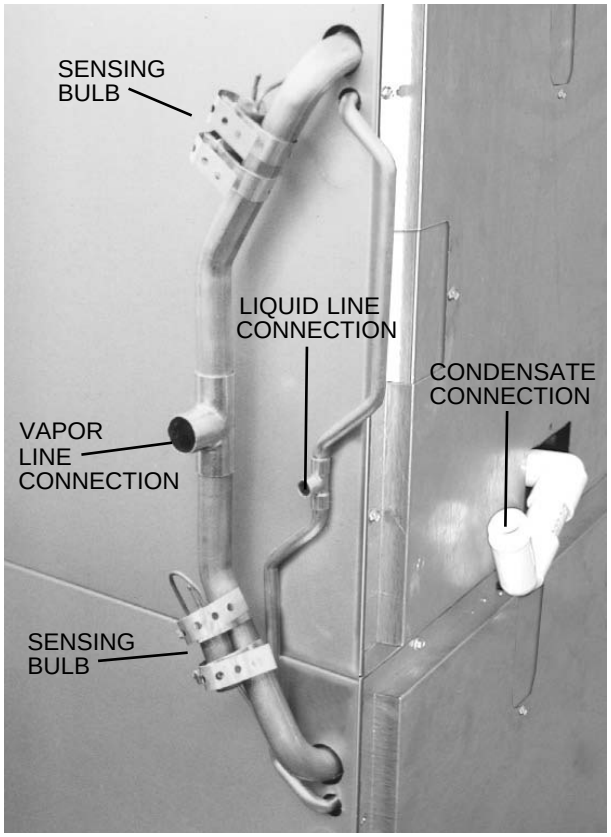


FIGURE 16
STACKED COIL CONNECTIONS



REFRIGERANT CONNECTIONS

All refrigerant connections required to manifold the coils together are shipped loose from the factory. This allows the installer to route the common suction and liquid lines in the direction most suitable to the outdoor unit. See Figure 14.

IMPORTANT: Locate the sensing bulbs outside the cabinet on the suction lines in the locations shown in Figure 14. Mount the TXV sensing bulbs with tubing exiting top of the bulb, as shown in Figure 14.

1. Flow nitrogen through system when brazing.
2. When brazing, protect the cabinet, remove the expansion valve bulb, and protect the TXV body with proper heat-sync materials.
3. Remove TXV bulb from the copper street elbow.
4. Place the expansion valve bulb through the knockout in the cabinet.
5. Solder the street elbow in desired side of the vapor header.
6. Securely clamp the TXV bulb to the vapor line.
7. Insulate the TXV bulb and vapor line with the black mastic provided in the parts bag.

CONDENSATE TUBING

IMPORTANT: Trap each of the evaporator coils separately. Refer to Figure 11 for proper trapping method.

AIRFLOW PERFORMANCE

To determine airflow performance, add static shown in Table 1 for each coil to the external duct static. The external static pressure, indicated in inches of Water Column (″ W.C.) available for field duct system will be less than shown in the airflow performance data tables by the amount shown in Table 1.

NOTE: This table shows the static pressure drop through one 24.5″ wide indoor coil. Units with two coils require adjustment for the additional indoor coil.

MAINTENANCE

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

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.

OUTDOOR UNIT INSTALLED ABOVE INDOOR COIL

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.

- Generally, the coil can be easily cleaned when it is dry. If the coil is coated with dirt or lint, blow compressed air or nitrogen through the supply air side of the coil fins blowing dirt or lint from the return air side of the coil onto the filter or cardboard placed between filter and coil. Be sure lint and dirt is removed from the filter and return air system.
- If the coil is coated with oil or grease, clean it with a mild automatic dishwasher detergent and water solution. Rinse the coil thoroughly with clear water. Be careful not to splash water excessively into unit and system.
- Inspect the drain pan and condensate drain at the same time the cooling coil is checked. Clean the drain pan and condensate drain by removing any foreign matter from the pan. Flush the pan and drain tube with clear water.
- If the drain tube is restricted, it can generally be cleaned with high pressure water. Remove the drain line from the unit away from the pan and coil to clear the drain line.

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

ACCESSORIES

INTERNAL COUPLER ACCESSORY RXBA-AA AND RXBA-AB

This Internal Coupler Accessory is for installation in cased indoor cooling and heat pump coils. This allows a nominal size coil to be installed in the next larger size casing to be used on a gas or oil furnace. Example: The RXBA-AA installed in the 17.5″ wide casing will allow a 1.5/2.0 ton coil to be installed in this wider casing. This 1.5/2.0 ton unit will now fit the 17.5″ wide gas or oil furnace. **NOTE:** This accessory is for installation in 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. This accessory can be ordered factory installed by designation of casing width in the coil model number.

PLENUM ADAPTER ACCESSORY RXBA-AC AND RXBA-AD

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. The RXBA-AC (upflow) can be ordered factory installed by designation as “with adapters” in the coil model number.

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.

COIL SUPPORT FRAME
RXCS-AA

Coil support frame kits are available to prevent air bypass around the coil drainpan.

IMPORTANT: Use the coil support frames in applications WITHOUT standard coil casings only. DO NOT USE the frames when coils are installed in standard coil casings.

HORIZONTAL DRAIN PAN KIT

Vertical upflow/downflow coils can be converted to use in the horizontal application with the installation of the appropriate accessory as shown below. Consult the installation instructions packaged with the accessory for proper installation.

Conversion to Horizontal: A vertical upflow or vertical downflow unit may be converted to horizontal by removing the indoor coil and installing horizontal drain pan accessory as shown for left hand (Figure 1) or right hand air supply (Figure 2). **NOTE:** The foam tape on the side of the vertical pan to which the horizontal pan is connected must be removed. Remove the tape on this side only. See Figures 1 and 2. Reinstall coil in unit as shown in Figures 1 and 2.

Conversion in Horizontal Direction: Horizontal right hand supply can be changed to horizontal left hand supply or vice versa by removing the indoor coil and installing the drain pan accessory as shown in Figure 1 or 2 for appropriate air supply direction. Foam tape must be moved to the appropriate side. See Figures 1 and 2.

⚠ CAUTION

Horizontal applications must be configured for right hand air supply or left hand air supply. Horizontal pan must be located under indoor coil. Failure to place a pan under the coil can result in property damage.

- Install horizontal drain pan accessory as shown in Figure 1 or 2 for right hand or left hand supply. Drain pan connections must be toward the front of the coil (header connection end). Install coil assembly into horizontal drain pan as shown with coil endplates fitting into “V” shaped supports in the front and back of the horizontal pan. Mounting tabs on vertical drain pan fit over the air inlet side of the horizontal pan with vertical pan inside horizontal drain pan. Horizontal pan must be under indoor coil when in the installed position. Note primary and secondary drain pan connections for horizontal right vs. horizontal left. Drain connection flush with inside bottom of pan must be connected to primary drain. Connection raised above inside bottom of pan is the secondary drain connection.

RXBD-CB

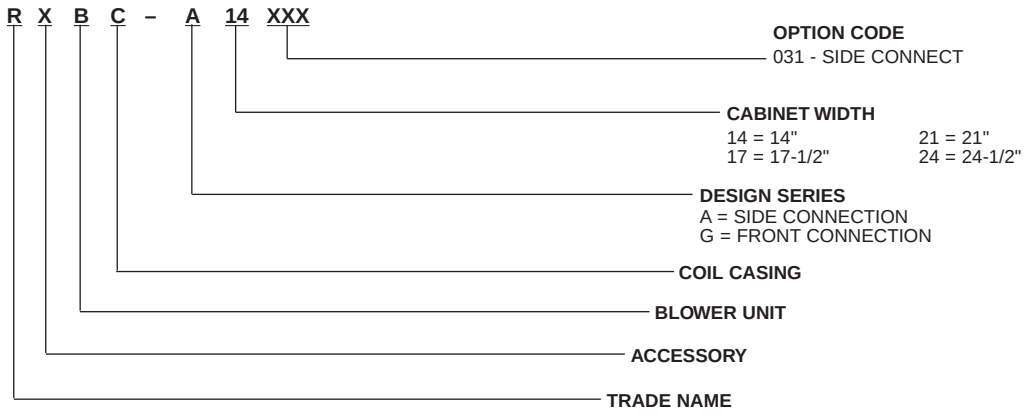
This accessory is for installation in cased indoor cooling and heat pump coils to convert them for horizontal application when installed with an electric furnace or heat pump air handler only. This kit must not be used on gas or oil furnaces.

RXBD-DB

This accessory is for installation in cased indoor cooling and heat pump coils to convert them for horizontal application when installed with a gas or oil furnace. **DO NOT USE this kit on electric furnaces or air handlers.**

CASED COIL APPLICATIONS

INDOOR COIL CASING



⚠ WARNING

PROPOSITION 65: THE COIL CASING CONTAINS FIBERGLASS INSULATION. RESPIRABLE PARTICLES OF FIBERGLASS ARE KNOWN TO THE STATE OF CALIFORNIA AND TO THE COMMONWEALTH OF MASSACHUSETTS TO CAUSE CANCER.

UNIT DIMENSIONS & WEIGHTS — RXBC INDOOR COIL CASINGS

MODEL NUMBER	WIDTH "W" in.	HEIGHT in.	DEPTH in.	UNIT WEIGHT		SUPPLY①		RETURN ②	
				WT.	SHIP WT.	WIDTH"	DEPTH"	WIDTH"	DEPTH"
RXBC-*14	14	17-1/2	22	17	19	13	19-5/8	13	19-7/8
RXBC-*17	17-1/2			19	21	16-1/2		16-1/2	
RXBC-*21	21			20	23	20		20	
RXBC-*24	24-1/2			22	25	23-1/2		23-1/2	

① Supply dimensions for upflow & horizontal units. This is return dimensions for downflow units.
② Return dimensions for upflow & horizontal units. This is supply dimensions for downflow units.
* A = Side Connection; C = Front Connection