



Ruud Ultra™ Series Communicating Two-Stage Variable Speed Multi- Position Gas Furnaces



U96V- Series

96% A.F.U.E.†

Input Rates from 40 to 115 kBtu
[11.72 to 33.71 kW]



†A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.

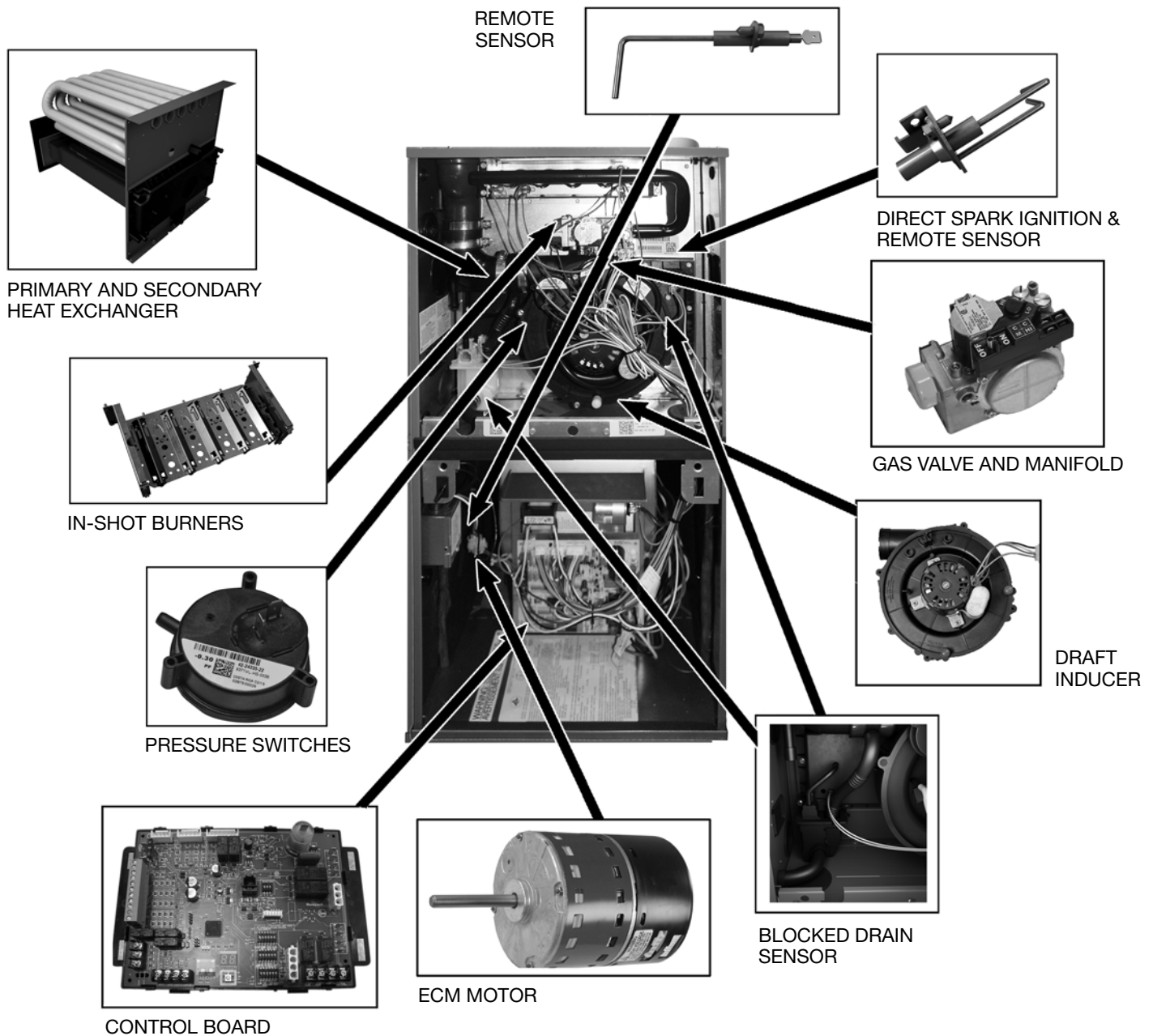
- 96% residential gas furnace CSA certified
- 4 way multi-poise design
- Two stages of operation to save energy and maintain optimal comfort level.
- Variable speed blower motor technology provides ultimate humidity control, quieter sound levels, and year round energy savings.
- EcoNet™ enabled HVAC Product
- PlusOne™ Diagnostics 7-Segment LED all units
- PlusOne™ Ignition System – DSI for reliability and longevity
- PlusOne™ Water Management System with patented Blocked Drain Sensor
- Heat exchanger is removable for improved serviceability. Aluminized steel primary and stainless steel secondary construction provide maximum corrosion resistance and thermal fatigue reliability.

- Low profile “34 inch” cabinet ideal for space constrained installations.
- Blower Shelf design – serviceable in all furnace orientations
- Pre marked hoses – insures proper system drainage
- Vent with 2" or 3" PVC
- Replaceable Collector box
- Hemmed edges on cabinet and doors
- Quarter turn fasteners for tool less access
- Integrated control boards feature dip switches for easy system set up
- Self priming condensate trap
- Solid bottom included
- Compatible with single or two stage thermostats. For optimal performance a two stage thermostat is recommended.



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STANDARD EQUIPMENT

Completely assembled and wired; blocked drain sensor, 7 segment LED and marked hoses; heat exchanger; primary: aluminized steel, secondary: 29-4C stainless steel; 2 stage induced draft; pressure switches; redundant 2 stage main gas control; blower compartment door safety switch; solid state time on/off blower control; limit controls; manual shut-off valve; 100% safety lock out; cool fan off delay; field selectable heat fan off delay; one hour automatic retry; power and self-test diagnostics; flame sense current diagnostics; electronic air cleaner connections; humidifier connections; humidifier on/off delay; low speed continuous fan option; single speed option for heating and cooling applications; transformer; direct drive, variable speed electrically commutated blower motor (ECM). Solid bottom. (Please note: a thermostat is not included as standard equipment.)

OPTIONAL EQUIPMENT

Side and bottom filter racks; return air cabinet for all sizes.

NOTE: Furnace is not listed for use with fuels other than natural or L.P. (propane) gas.

All models can be converted by a qualified distributor or local service dealer to use L.P. (propane) gas without changing burners. Factory approved kits must be used to convert from natural to L.P. (propane) gas and may be ordered as optional accessories from a parts distributor.

For L.P. (propane) operation, refer to Conversion Kit Index Form.

WARNING

THIS FURNACE IS NOT APPROVED
OR RECOMMENDED
FOR USE IN MOBILE HOMES

Physical Data and Specifications—Upflow Models U.S. and Canadian Models

MODEL NUMBERS	U96VA0402317MSA	U96VA0602317MSA	U96VA0702317MSA	U96VA0852521MSB	U96VA1002521MSA	U96VA1152524MSA
HIGH FIRE INPUT BTU/HR [kW] ①	42,000 [12.31]	56,000 [16.41]	70,000 [20.50]	84,000 [24.61]	98,000 [28.72]	112,000 [32.82]
LOW FIRE INPUT	29,400 [8.61]	39,200 [11.49]	49,000 [14.36]	58,800 [17.23]	68,600 [20.11]	78,400 [23.00]
HEATING CAPACITY BTU/HR [kW]	41,000 [12.02]	55,000 [16.12]	68,000 [19.93]	82,000 [24.03]	95,000 [27.84]	109,000 [31.94]
HIGH ALTITUDE OUTPUT 10% DERATE [kW] ②	36,288 [10.64]	48,384 [14.18]	60,480 [17.72]	72,756 [21.27]	84,672 [24.81]	96,768 [28.36]
BLOWER (D x W) [mm]	11 x 7 [279 x 178]	11 x 8 [279 x 203]	11 x 8 [279 x 203]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 11 [279 x 279]
MOTOR H.P. [W]— TYPE	1/2 [373] E.C.M.	1/2 [373] E.C.M.	1/2 [373] E.C.M.	3/4 [559] E.C.M.	3/4 [559] E.C.M.	3/4 [559] E.C.M.
MIN. CIRCUIT AMPACITY	8.00	7.00	9.00	12.00	12.00	12.00
MIN. OVERLOAD PROTECTION DEVICE	15.00	15.00	15.00	15.00	15.00	15.00
MAX. OVERLOAD PROTECTION DEVICE	15.00	15.00	15.00	20.00	20.00	15.00
MINIMUM EXT. STATIC PRESSURE (IN. W.C.) [kPa]	.18 [.045]	.20 [.050]	.23 [.057]	.28 [.070]	.28 [.070]	.28 [.070]
MAXIMUM EXT. STATIC PRESSURE (IN. W.C.) [kPa]	1.0 [0.249]	1.0 [0.249]	1.0 [0.249]	1.0 [0.249]	1.0 [0.249]	1.0 [0.249]
HEATING CFM @ MAX W.C. E.S.P. [L/s]	1050 [496]	1025 [484]	1015 [479]	1470 [694]	1710 [807]	1450 [684]
FACTORY SETTING HEATING CFM [L/s]	950 [448]	1025 [484]	1015 [479]	1470 [694]	1710 [807]	1450 [684]
COOLING CFM @ .5" [.124 kPa] W.C. E.S.P. [L/s]	1050 [496]	1050 [496]	1050 [496]	1750 [826]	1750 [826]	1750 [826]
TEMPERATURE RISE-HIGH FIRE RANGE IN DEGREES °F [°C]	20 - 50 [11 - 28]	30 - 60 [17 - 33]	40 - 70 [22 - 39]	30 - 60 [17 - 33]	40 - 70 [22 - 39]	45 - 75 [25 - 42]
TEMPERATURE RISE-LOW FIRE RANGE IN DEGREES °F [°C]	15 - 45 [8 - 25]	20 - 50 [11 - 28]	30 - 60 [17 - 33]	20 - 50 [11 - 28]	30 - 60 [17 - 33]	35 - 63 [19 - 36]
APPROX. SHIPPING WEIGHT (LBS.) [kg]	128 [58]	128 [58]	132 [60]	147.5 [67]	152 [69]	165 [75]
AFUE ③	96.00%	96.00%	96.00%	96.00%	96.00%	96.00%

NOTES: All models are 115V, 60HZ, 1 phase Gas connection size for all models is 1/2" [13 mm] N.P.T.

① Installation instructions for high altitude derate.

② Canadian installations only.

③ In accordance with D.O.E. test procedures.

*S=Standard Models

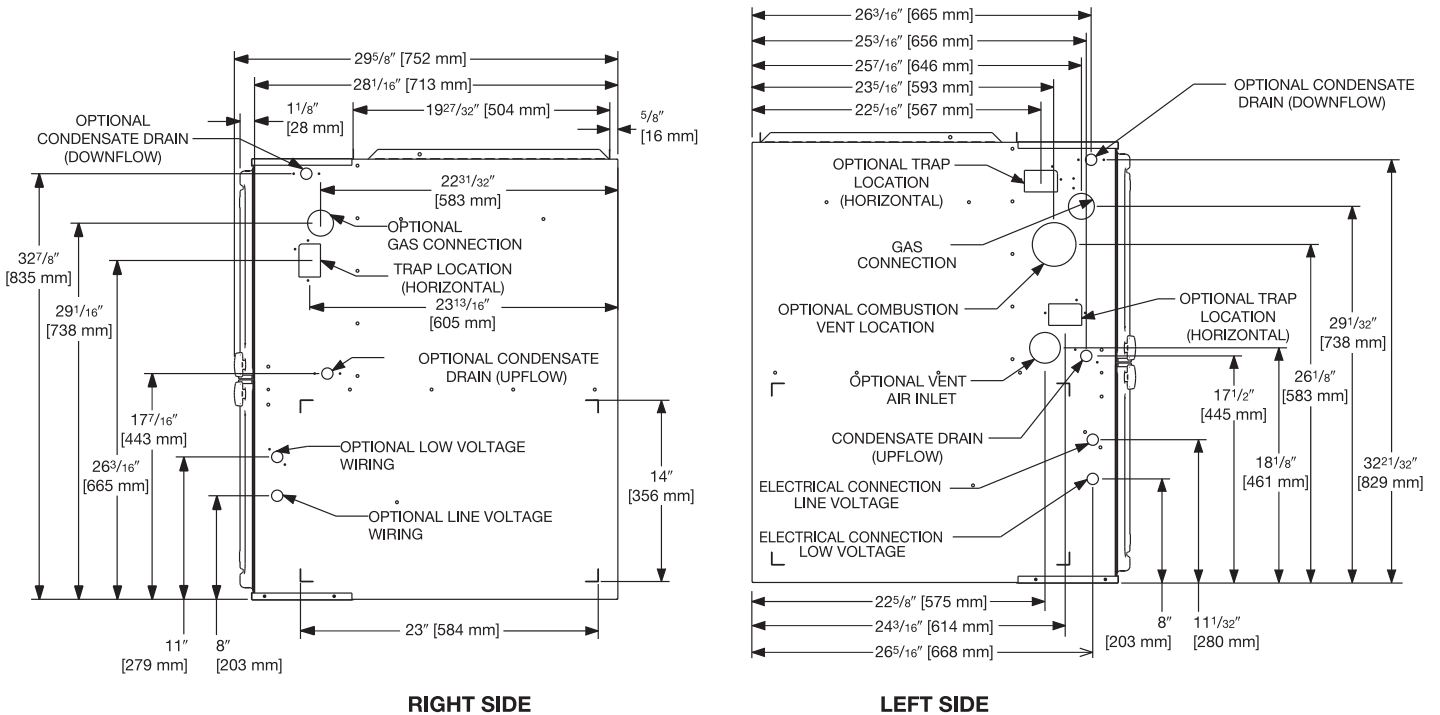
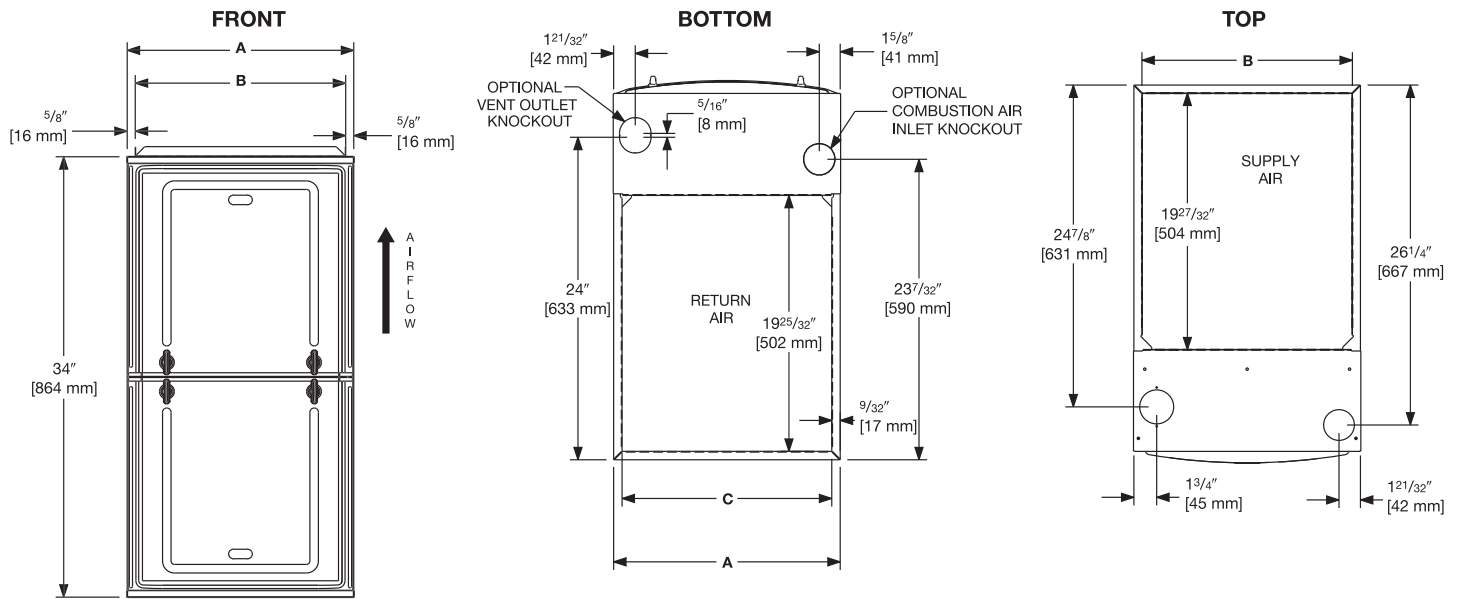
NOTE: Standard model complies with California low nox requirements.

[] Designates Metric Conversions

Model Number Identification

<u>U</u>	<u>96</u>	<u>V</u>	<u>A</u>	—	<u>040</u>	<u>2</u>	<u>3</u>	<u>17</u>	<u>M</u>	<u>S</u>	<u>A</u>
Ruud	96% Efficient	Motor - ECM	Design Series A = 1st Design		Input BTU/HR	Stage - Two	Airflow 3 - Up to 3 Tons 5 - Up to 5 Tons	Cabinet Width 17 = 17.5" 21 = 21.0" 24 = 24.5"	Configuration - Multi-Position	S = Standard	Revision - Marketing (A - First Time Release) (B - First Revision)
					040 = 42,000 [12.31 kW]						
					060 = 56,000 [16.41 kW]						
					070 = 70,000 [20.51 kW]						
					085 = 84,000 [24.62 kW]						
					100 = 98,000 [28.72 kW]						
					115 = 112,000 [32.82 kW]						

[] Designates Metric Conversions



**UNIT DIMENSIONS
(CLEARANCE TO COMBUSTIBLES)**

MODEL U96V	LEFT SIDE	MINIMUM CLEARANCE (IN.) [mm]					SHIP WGTs.	FLANGE DIMENSIONS		
		RIGHT SIDE	BACK	TOP	FRONT	VENT		A	B	C
040	0	0	0	1 [25]	2 [51]	0	123.5 [56]	17 1/2 [445]	16 17/64 [413]	16 13/64 [412]
060	0	0	0	1 [25]	2 [51]	0	128 [58]	17 1/2 [445]	16 17/64 [413]	16 13/64 [412]
070	0	0	0	1 [25]	2 [51]	0	132 [60]	17 1/2 [445]	16 17/64 [413]	16 13/64 [412]
085	0	0	0	1 [25]	2 [51]	0	147.5 [67]	21 [533]	19 49/64 [502]	19 45/64 [500]
100	0	0	0	1 [25]	2 [51]	0	152 [69]	21 [533]	19 49/64 [502]	19 45/64 [500]
115	0	0	0	1 [25]	2 [51]	0	165 [75]	24 1/2 [662]	23 17/64 [591]	23 13/64 [589]

*A service clearance of at least 24" is recommended in front of all furnaces
 Supply and return depicted as upflow configuration.
 Flange configuration will vary depending on installation orientation.

[] Designates Metric Conversions

MODEL NUMBER		U96VA0402317MSA	U96VA0602317MSA	U96VA0702317MSA	U96VA0852521MSB	U96VA1002521MSB	U96VA115524MSB	
TARGET GAS HEATING AIRFLOW	HIGH HEATING CFM [L/s]	SW 15 = OFF SW 16 = OFF	950 [448]	1025 [484]	1015 [479]	1470 [694]	1710 [807]	1450 [684]
		SW 15 = ON SW 16 = OFF	825 [389]	880 [415]	950 [448]	1235 [583]	1490 [703]	1300 [614]
		SW 15 = OFF SW 16 = ON	1250 [590]	1250 [590]	1190 [562]	1850 [873]	1965 [927]	1700 [802]
		SW 15 = ON SW 16 = ON	685 [323]	780 [368]	900 [425]	1120 [529]	1400 [661]	1225 [578]
	LOW HEATING CFM [L/s]	SW 13 = OFF SW 14 = OFF	790 [373]	925 [437]	900 [425]	1300 [614]	1500 [708]	1250 [590]
		SW 13 = ON SW 14 = OFF	620 [293]	750 [354]	770 [363]	1065 [503]	1335 [630]	1060 [500]
		SW 13 = OFF SW 14 = ON	1000 [472]	1210 [571]	1050 [496]	1775 [838]	1800 [850]	1400 [661]
		SW 13 = ON SW 14 = ON	550 [260]	660 [311]	700 [330]	925 [437]	1210 [571]	960 [453]
TARGET COOLING/HEAT-PUMP AIRFLOW	HIGH COOLING CFM [L/s]	SW 4 = OFF SW 5 = OFF	1050 [496]	1050 [496]	1050 [496]	1750 [826]	1750 [826]	1750 [826]
		SW 4 = ON SW 5 = OFF	875 [413]	875 [413]	875 [413]	1400 [661]	1400 [661]	1400 [661]
		SW 4 = OFF SW 5 = ON	700 [330]	700 [330]	700 [330]	1225 [578]	1225 [578]	1225 [578]
		SW 4 = ON SW 5 = ON	525 [248]	525 [248]	525 [248]	1050 [496]	1050 [496]	1050 [496]
	LOW COOLING CFM [L/s]	SW 4 = OFF SW 5 = OFF	788 [372]	788 [371]	788 [371]	1313 [618]	1313 [618]	1313 [618]
		SW 4 = ON SW 5 = OFF	656 [309]	656 [309]	656 [309]	1050 [495]	1050 [495]	1050 [495]
		SW 4 = OFF SW 5 = ON	525 [247]	525 [247]	525 [247]	919 [433]	919 [433]	919 [433]
		SW 4 = ON SW 5 = ON	394 [186]	394 [186]	394 [186]	788 [371]	788 [371]	788 [371]

*S = Standard Models

NOTE Standard model complies with California low NOx requirements.

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VENT TERMINATION KITS: =

RXGY-E02: Vertical/Horizontal Concentric Vent Termination Kit 2" Pipe (US Only)

RXGY-E02A: Vertical/Horizontal Concentric Vent Termination Kit 2" Pipe (US & Canadian)

RXGY-E03: Vertical/Horizontal Concentric Vent Termination Kit 3" Pipe (US Only)

RXGY-E03A: Vertical/Horizontal Concentric Vent Termination Kit 3" Pipe (US & Canadian)

RXGY-G02: Direct Vent Furnace Side Wall Vent 2" or 3" (US Only)

RXGY-D05: Combustion Air Drain Kit 2"

RXGY-D06: Combustion Air Drain Kit 3"

NEUTRALIZER KIT: RXGY-A01
(Replacement Cartridge 54-22120-01)

EXTERNAL BOTTOM FILTER (UPFLOW/HORIZONTAL) RACK:
RXGF-CB

EXTERNAL SIDE (UPFLOW) FILTER RACK: RXGF-CD

EXTERNAL (DOWNFLOW) FILTER RACK: RXGF-CC

FILTER RACK FILTER SIZES* INCHES [mm]			
MODEL	RXGF-CB (UPFLOW/ HORIZONTAL)	RXGF-CD (UPFLOW)	RXGF-CC (DOWNFLOW)
U96VA040	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]	12 x 20 [305 x 508]
U96VA060	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]	12 x 20 [305 x 508]
U96VA070	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]	12 x 20 [305 x 508]
U96VA085	19 ¹ / ₄ x 25 [489 x 635]	15 ³ / ₄ x 25 [400 x 635]	12 x 20 [305 x 508]
U96VA100	19 ¹ / ₄ x 25 [489 x 635]	15 ³ / ₄ x 25 [400 x 635]	12 x 20 [305 x 508]
U96VA115	22 ³ / ₄ x 25 [578 x 635]	15 ³ / ₄ x 25 [400 x 635]	14 x 20 [356 x 508]

*Filter racks are shipped without filters.
Filters shipped with furnace may be used or a suitable 1" [25.4 mm] filter.

[] Designates Metric Conversions

INDOOR COIL CASINGS

MODEL NUMBER
RXBC-D17A1
RXBC-D21A1
RXBC-D21B1
RXBC-D24A1

FOR HIGH ALTITUDES:

NOTE: For Canadian installations only, an optional derate (manifold gas pressure reduction) method may be used to adjust the furnace for altitude. See Installation Instructions for more information. This optional method may **NOT** be used for U.S. installations. See installation instructions as appropriate orifice change is required.

OPTIONAL HIGH ALTITUDE HEATING AIRFLOW ADJUSTMENT KITS			
KIT NUMBER	SEA LEVEL INPUT (BTU)	MINIMUM ELEVATION KIT RECOMMENDED	MAXIMUM ELEVATION KIT RECOMMENDED
RXGY-58	42000	6000	10000
RXGY-59	56000		
RXGY-60	70000		
RXGY-61	84000		
RXGY-62	98000		
RXGY-63	112000		

L.P. CONVERSION KIT: RXGJ-FP34

CONDENSATE PUMP KIT: PROSTOCK & 1PCB151TUL

DOWNFLOW/HORIZONTAL CONVERSION KIT: RXGY-CK

DOWNFLOW/HORIZONTAL LEFT ZERO CLEARANCE CONVERSION KIT: RXGY-ZK

COMBUSTIBLE FLOOR BASE: RXGC-B17
RXGC-B21
RXGC-B24

ECONET CONTROL RECOMMENDED COMMUNICATING FURNACE CONTROL



UETST600SYS

CONTRACTOR BENEFITS:

- Auto/Self Configuration
- Day-at-a-glance scheduling, with programmable fan
- Intuitive wiring connections
- Dual fuel ready
- Automatically optimizes airflow
- System status & mode information
- Complete diagnostic information on display

HOMEOWNER BENEFITS:

- Large, easy to read icons and characters
- Auto-mode control
- Smart recovery
- Continuous Fan Mode (5 speeds)
- Humidity Control
- Water heater, pool heater integration* (check model compatibility)

***ECONET CONTROL ACCESSORIES:**

Wall Plate = RCPN-AMC08

Face Plate = UETSTFPL

IMPORTANT: Existing Comfort Control[®] System Condensing Units & Heat Pumps are compatible with EcoNet when matched with a U96V Gas Furnace and with an EcoNet Translator (RETRN620CC2) installed on the Comfort Control[®] System control board.

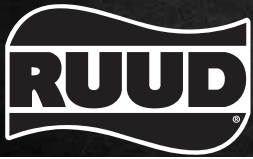
*Available through PROSTOCK[®].

GENERAL TERMS OF LIMITED WARRANTY*

Ruud will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

***For complete details of the Limited and Conditional Warranties, including applicable terms and conditions, contact your local contractor or the Manufacturer for a copy of the product warranty certificate.**

Parts.....Ten (10) Years
Heat ExchangerLimited Lifetime
 Limited Lifetime
Conditional Unit Replacement
 (Registration Required)Ten (10) Years



In keeping with its policy of continuous progress and product improvement, Ruud reserves the right to make changes without notice.

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RELY ON RUUD.™

CONDENSING UNITS

PRELIMINARY
NOT FOR DISTRIBUTION

RUUD
ULTRA
Series

R-410A
earth friendly refrigerant

UARL- SERIES

16 SEER Models
With efficiencies up to 17.00 SEER
in certain matched systems.
Nominal Sizes 2 to 4 Tons
[7.03 kW] to [14.07 kW]



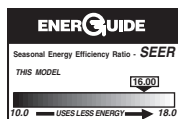
Three Models

Cooling Capacities
24,600 to 48,000 BTU/HR
[7.21 kW] to [14.07 kW]

The *Ruud Ultra Series*® High Efficiency UARL- Condensing Unit was designed with performance in mind. These units offer comfort, energy conservation and dependability for single, multi-family and light commercial applications.

The *Ruud Ultra Series*® UARL- Condensing Units are the result of an ongoing development program for improved efficiencies. With system SEER's ranging to 17.00, these units continue a tradition of high efficiency.

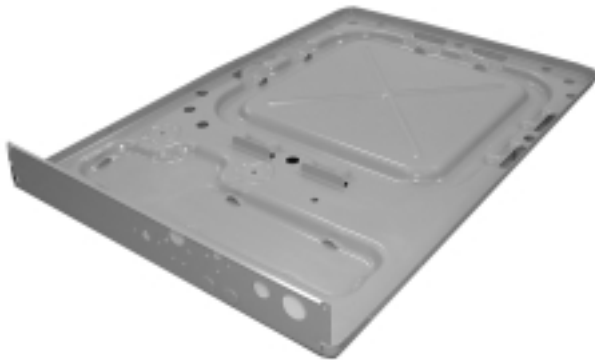
- Comfort Alert™ Diagnostics comes installed in each Ruud Ultra Series model.
- All controls are accessible by removing one service panel. Removable top grille provides access to the condenser fan motor and condenser coil.
- Attractive, louvered wrap-around jacket protects the coil from yard hazards and weather extremes. Top grille is steel reinforced for extra strength. Cabinet is powder painted for all-weather protection.
- Air is discharged upward away from bushes and shrubs. The discharge pattern of the top grille provides minimum air restriction, resulting in quiet fan operation.
- Exclusive Combination Grille/Motor Mount secures the motor to the underside of the discharge grille. The grille protects the motor windings and bearings from rain and snow.
- For quiet operation and improved efficiency, the 2, 3, and 4 ton models feature an 8-pole motor with a 3-blade outdoor fan.
- All models feature an outdoor low-voltage transformer, making retrofit applications easier by eliminating the need to run additional thermostat wiring.
- All models meet or exceed a 1000-hour salt spray test per ASTM B117 Standard Practice for Operating Salt Spray Testing Apparatus.



"CERTIFIED UNDER THE
A.R.I. CERTIFICATION
PROGRAM—A.R.I.
STANDARD 210/240"



All controls and compressor are accessible for servicing by removal of the service panel.



Drawn Painted Base Pan.

Engineering Features

UARL- Series Condensing Units

1. Scroll compressor is hermetically sealed and incorporates internal high temperature motor overload protection, and durable insulation on the motor windings. It is externally mounted on rubber grommets to reduce vibration and noise.
2. Compressors have an internal pressure relief assembly to protect against excessive pressure differential.
3. All refrigerant connections are on the exterior of the unit, located close to the ground for neat appearing installations.
4. Cabinet is constructed of powder painted galvanized steel. The full wraparound louvered grille protects the coil from damage.
5. Copper Tube—Aluminum Fin coils are used on all models.
6. The control box is located in the top corner of the cabinet providing for easy access through a service panel.
7. Service valves are standard on all models.
8. Power and control wiring are kept separate.
9. Every unit is factory charged and tested.
10. Separate compressor compartment for easy service access.
11. Drawn, painted base pan for extra corrosion resistance and sound reduction.
12. **UARL** has a **10 year compressor limited warranty** and a liquid line filter drier. The UARL Series also has factory installed low pressure control, high pressure control, time delay control.
13. **Hard Start Kits**—Standard on all models.
14. Compressor sound wrap is standard
15. The 2, 3, and 4 ton models feature an 8-pole motor with a 3-blade outdoor fan.
16. All models feature an outdoor low-voltage transformer, making retrofit applications easier by eliminating the need to run additional thermostat wiring.

COPELAND® SCROLL® COMPRESSOR

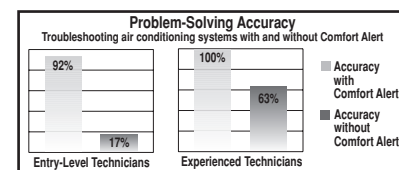
The Copeland scroll compressor is the key to efficiency for this Ruud model. It's the latest in high-efficiency compressor technology. The advanced scroll compressor offers low noise and vibration characteristics and features tolerance to liquid refrigerant and system contamination. The Copeland Scroll also has low start torque, eliminating start problems in the field. And its unique design enables the UARL- condensing unit to perform efficiently, quietly and reliably.



Comfort Alert™ Diagnostics

- In operation, Comfort Alert Diagnostics monitors vital data from the Copeland Scroll® compressor and thermostat, quickly pinpointing the root cause(s) of any cooling system malfunction—including common electrical problems, compressor defects and road system faults.

[] Designates Metric Conversions



Accessories

Low Ambient Control—Cycles outdoor fan to maintain adequate condensing pressures assuring liquid refrigerant flow to the coil. Allows indoor cooling with outdoor temperatures down to 0°F [-17.8°C]. (Model No. RXAD-A07). It is recommended that this control be installed in units to be operated at outdoor ambient temperatures under 70°F [21°C].

Compressor Crankcase Heater (Model No. 44-17402-44CCH) Add to minimize refrigeration migration and to help eliminate any startup noise or bearing “wash out”.

Dual Function White Rodgers Thermostat (Model No. 41-1F95CA-391) Humidity & Temperature Control

Model Number Identification

<u>U</u>	<u>A</u>	<u>R</u>	<u>L</u>	—	<u>024</u>	<u>J</u>	<u>A</u>	<u>Z</u>
RUUD	REMOTE CONDENSING UNIT	16-SEER	DESIGN SERIES		COOLING CAPACITY	ELECTRICAL DESIGNATION	VARIATIONS A = STANDARD	COOLING CONNECTION FITTING
					024 = 24,000 BTU/HR [7.03 kW] 036 = 36,000 BTU/HR [10.55 kW] 048 = 48,000 BTU/HR [14.07 kW]	J = 208/230V-1-60		Z = SWEAT W/SCROLL

Performance Data @ ARI Standard Conditions—Cooling

Outdoor Unit UARL-	Model Numbers		Stage	Net Sensible BTU/H [kW]	Net Latent BTU/H [kW]	Indoor Airflow		EER	ARI Rating		
	ID Coil	ID Air Mover				1st Stage CFM [L/s]	2nd Stage CFM [L/s]		Total Capacity BTU/H [kW]	SEER	
024J	RCQD-2417A	-BHM-17J ①	1	14,000 [4.1]	4,600 [1.4]	600 [283]		13.33	25,200 [7.4]	16.60	
			2	18,800 [5.5]	6,400 [1.9]		825 [389]	12.43			
			1 - dehumid	13,050 [3.8]	5,250 [1.5]	525 [248]		13.17			
			2 - dehumid	17,700 [5.2]	7,000 [2.1]		675 [319]	12.60			
	RCQD-2417A				18,200 [5.3]	6,400 [1.9]	600 [283]	825 [389]	11.46	24,600 [7.2]	14.60
	RCQD-2417A	-GFD-06?MCK?			18,750 [5.5]	6,450 [1.9]	600 [283]	800 [378]	12.45	25,200 [7.4]	16.60
RCQD-2417A	-GFD-07?MCK?			18,800 [5.5]	6,400 [1.9]	600 [283]	800 [378]	12.55	25,200 [7.4]	16.65	
036J	RCQD-3624A	-BHM-24J ①	1	20,450 [6.0]	6,050 [1.8]	900 [425]		14.45	37,400 [11.0]	17.00	
			2	28,050 [8.2]	9,350 [2.8]		1175 [555]	13.31			
			1 - dehumid	19,300 [5.7]	6,800 [2.0]	750 [354]		14.50			
			2 - dehumid	25,700 [7.5]	11,000 [3.2]		950 [448]	13.59			
	RCQD-3624A				27,250 [8.0]	9,350 [2.7]	875 [413]	1175 [555]	12.05	36,600 [10.7]	14.65
	RCQD-3624A	-GFD-09?ZCM?			28,000 [8.2]	9,400 [2.8]	850 [401]	1150 [543]	13.08	37,400 [11.0]	16.75
	RCQD-3624A	-GFD-10?ZCM?			27,900 [8.2]	9,300 [2.7]	850 [401]	1175 [555]	12.90	37,200 [10.9]	16.65
	RCQD-3624A	-GFD-12?ZCM?			27,950 [8.2]	9,250 [2.7]	900 [425]	1225 [578]	12.97	37,200 [10.9]	16.70
	RCQD-3621A				27,250 [8.0]	9,350 [2.7]	875 [413]	1175 [555]	12.05	36,600 [10.7]	14.65
	RCQD-3621A	-GFD-06?MCK?			27,500 [8.1]	9,100 [2.7]	875 [413]	1175 [555]	12.09	36,600 [10.7]	15.70
	RCQD-3621A	-GFD-07?MCK?			27,500 [8.1]	9,100 [2.7]	900 [425]	1200 [566]	12.03	36,600 [10.7]	15.80
	RCQD-3621A	-GFD-09?ZCM?			27,950 [8.2]	9,250 [2.7]	850 [401]	1150 [543]	12.99	37,200 [10.9]	16.70
RCQD-3621A	-GFD-10?ZCM?			27,850 [8.2]	9,350 [2.7]	850 [401]	1175 [555]	12.81	37,200 [10.9]	16.60	
048J	RCQD-4824A	-BHM-24J ①	1	27,650 [8.1]	7,850 [2.3]	1200 [566]		13.75	48,000 [14.1]	16.00	
			2	36,750 [10.8]	11,250 [3.3]		1600 [755]	12.69			
			1 - dehumid	25,650 [7.5]	9,150 [2.7]	1000 [472]		13.81			
			2 - dehumid	33,300 [9.8]	13,700 [4.0]		1250 [590]	12.95			
	RCQD-4824A				36,250 [10.6]	11,250 [3.3]	1200 [566]	1600 [755]	11.68	47,500 [13.9]	13.90
	RCQD-4824A	-GFD-09?ZCM?			36,250 [10.6]	11,250 [3.3]	1150 [543]	1600 [755]	11.73	47,500 [13.9]	15.15
	RCQD-4824A	-GFD-10?ZCM?			36,000 [10.6]	11,000 [3.2]	1175 [555]	1625 [767]	11.41	47,000 [13.8]	14.90
	RCQD-4824A	-GFD-12?ZCM?			36,350 [10.7]	11,150 [3.3]	1225 [578]	1650 [779]	11.90	47,500 [13.9]	15.05
	RCQD-4821A				36,250 [10.6]	11,250 [3.3]	1200 [566]	1600 [755]	11.68	47,500 [13.9]	13.90
	RCQD-4821A	-GFD-09?ZCM?			36,150 [10.6]	10,850 [3.2]	1150 [543]	1600 [755]	11.62	47,000 [13.8]	15.05
RCQD-4821A	-GFD-10?ZCM?			35,950 [10.5]	11,050 [3.2]	1175 [555]	1625 [767]	11.30	47,000 [13.8]	14.75	

NOTES: ① Highest sales volume tested combination required by D.O.E. test procedures.

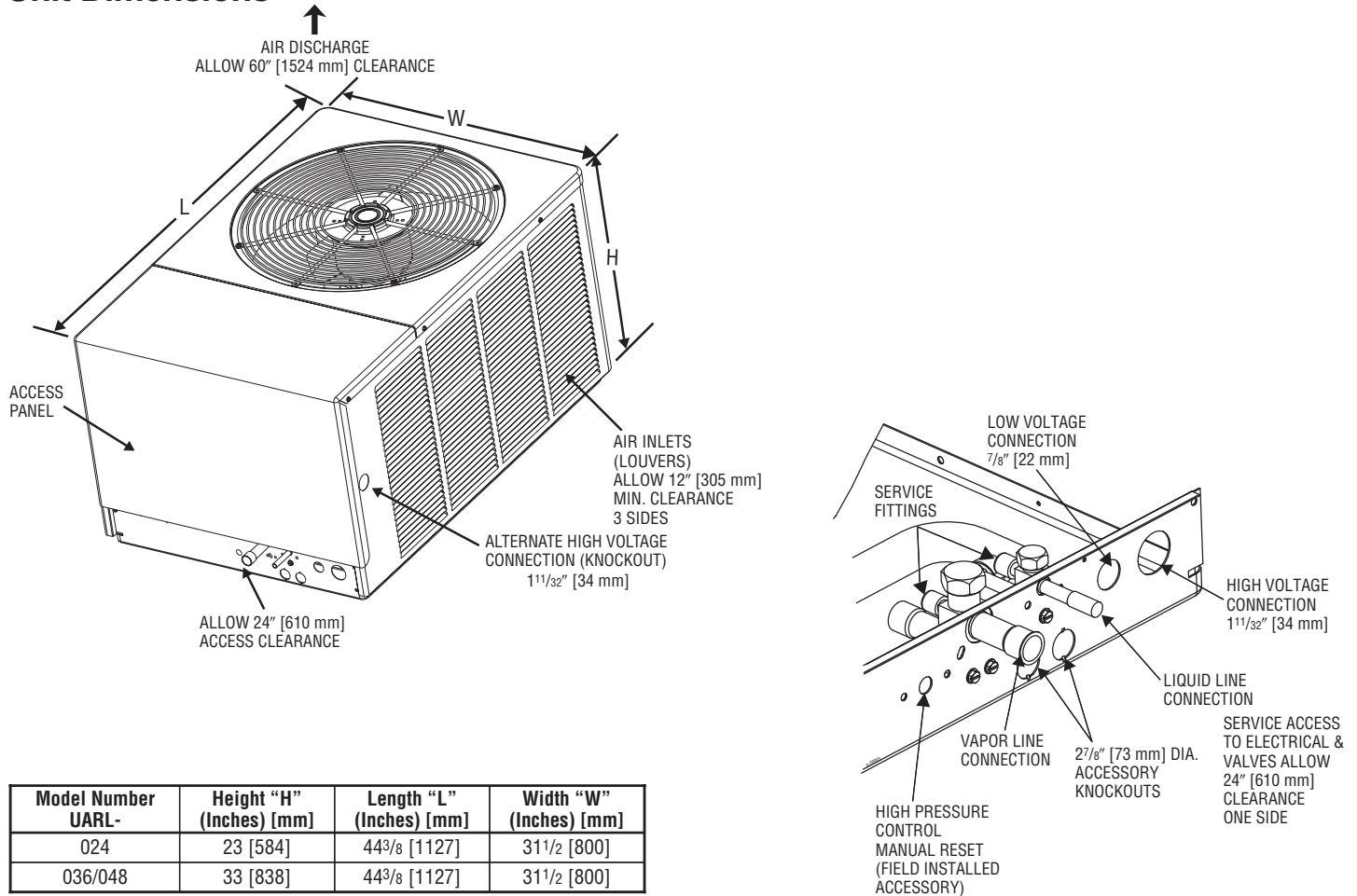
[] Designates Metric Conversions

Electrical and Physical Data

Model Number UARL-	ELECTRICAL						PHYSICAL						
	Phase Frequency (Hz) Voltage (Volts)	Compressor		Fan Motor Full Load Amperes (FLA)	Min. Circuit Ampacity Amperes	Fuse or HACR Circuit Breaker		Outdoor Coil			R-410a Oz. [g]	Weight	
		Rated Load Amperes (RLA)	Locked Rotor Amperes (LRA)			Min. Amperes	Max. Amperes	Face Area Sq. Ft. [m ²]	No. Rows	CFM [L/s]		Net Lbs. [kg]	Shipping Lbs. [kg]
024JAZ	1-60-208/230	10.3/10.3	52	0.8	14/14	20/20	20/20	15.8 [1.47]	1	2285 [1078]	117 [3311]	190 [86.2]	200 [90.7]
036JAZ	1-60-208/230	16.7/16.7	82	1.0	22/22	30/30	35/35	15.8 [1.47]	1	3900 [1841]	157 [4445]	236 [107]	246 [111.6]
042JAZ	1-60-208/230	21.2/21.2	96	1.0	28/28	35/35	45/45	15.8 [1.47]	1	3900 [1841]	154 [4354]	236 [107]	246 [111.6]

*HS = high speed
*LS = low speed

Unit Dimensions



Model Number UARL-	Height "H" (Inches) [mm]	Length "L" (Inches) [mm]	Width "W" (Inches) [mm]
024	23 [584]	44 ³ / ₈ [1127]	31 ¹ / ₂ [800]
036/048	33 [838]	44 ³ / ₈ [1127]	31 ¹ / ₂ [800]

[] Designates Metric Conversions

GENERAL TERMS OF LIMITED WARRANTY

Ruud will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

For Complete Details of the Limited Warranty, Including Applicable Terms and Conditions, See Your Local Installer or Contact the Manufacturer for a Copy.

Ruud Ultra Series equipment features a 10-year limited parts warranty.*

*This ten-year limited warranty is applicable only to single-phase products installed in residential applications.

BEFORE PURCHASING THIS APPLIANCE, READ IMPORTANT ENERGY COST AND EFFICIENCY INFORMATION AVAILABLE FROM YOUR RETAILER.

Condensing Unit Refrigerant Line Size Information

System Capacity Model	Line Size (Inch O.D.) [mm]	Standard Refrigerant Charge: Liquid Line Size UARL- Series Below Indoor Coil						System Capacity Model	Line Size (Inch O.D.) [mm]	Extended Line Lengths for use with Supplemental Refrigerant Charge: Liquid Line Size UARL- Series Below Indoor Coil					
		Total Length—Feet [m]								Total Length—Feet [m]					
		25 [7.62]	50 [15.24]	75 [22.86]	100 [30.48]	125 [38.10]				25 [7.62]	50 [15.24]	75 [22.86]	100 [30.48]	125 [38.10]	
		Vertical Separation—Feet [m]								Vertical Separation—Feet [m]					
024	1/4* [6.35]	14 [4.27]						024	1/4* [6.35]	25 [7.62]	21 [6.40]	8 [2.44]			
	5/16 [7.94]	23 [7.01]	18 [5.48]	13 [3.96]	8 [2.44]	3 [0.91]	5/16 [7.94]		25 [7.62]	39 [11.8]	33 [10.0]	28 [8.53]	23 [7.01]		
	3/8 [9.53]	25 [7.62]	24 [7.31]	22 [6.70]	20 [6.09]	18 [5.48]	3/8 [9.53]		25 [7.62]	45 [13.7]	43 [13.1]	41 [12.4]	39 [11.8]		
036	5/16 [7.94]	25 [7.62]	18 [5.48]	11 [3.35]				036	5/16 [7.94]	25 [7.62]	38 [11.5]	29 [8.83]	15 [4.50]		
	3/8* [9.53]	25 [7.62]	27 [8.22]	24 [7.31]	21 [6.40]	18 [5.48]	3/8* [9.53]		25 [7.62]	48 [14.6]	45 [13.7]	41 [12.4]	38 [11.5]		
	5/16 [7.94]	19 [5.79]	5 [1.52]				5/16 [7.94]		25 [7.62]	26 [7.92]	12 [3.65]				
048	3/8* [9.53]	25 [7.62]	21 [6.40]	16 [4.87]	11 [3.35]	5 [1.52]		048	3/8* [9.53]	25 [7.62]	42 [12.8]	37 [11.2]	31 [9.40]	26 [7.92]	
	1/2 [12.7]	25 [7.62]	30 [9.14]	29 [8.83]	29 [8.83]	28 [8.53]	1/2 [12.7]		25 [7.62]	50 [15.2]	51 [15.5]	50 [15.2]	49 [14.9]		

***Standard line size**

NOTES:

- Example 1:** A 2-ton condensing unit with a total line length of 75 feet with a vertical separation of 15 feet requires a liquid line size of 3/8".
- This chart may also be used to size horizontal runs. **Example 2:** A 3-ton condensing unit may have a total horizontal run of 100 feet if using a 3/8" liquid line.
- If vertical separation exceeds this chart, use the extended line lengths chart.
- Always use the smallest liquid line possible to minimum system charge.

***Standard Line Size**

IMPORTANT: Line sizing by this chart requires a supplemental refrigerant charge. Refer to charging chart on unit for proper charging with extended line sets.

NOTES:

- Example 1:** A 2-ton condensing unit with a total line length of 75 feet with a vertical separation of 15 feet requires a minimum liquid line size of 5/16".
- This chart may also be used to size horizontal runs. **Example 2:** A 3-ton condensing unit may have a total horizontal run of 100 feet if using a 5/16" liquid line.
- The vertical separation indicated on this chart **CANNOT** be exceeded.
- Always use the smallest liquid line possible to minimum system charge.

Vapor Line Length Size and Capacity Multiplier					
UARL-		024		036/048	
Unit Vapor Line Connection Size		3/4" [19.05 mm] I.D. Sweat		7/8" [22.23 mm] I.D. Sweat	
Vapor Line Run Feet [m]		5/8" [15.88 mm] O.D. Opt. 3/4" [19.05 mm] O.D. Std. 7/8" [22.23 mm] O.D. Opt.		3/4" [19.05 mm] O.D. Opt. 7/8" [22.23 mm] O.D. Std. 1 1/8" [28.58 mm] O.D. Opt.	
25' [7.62]	Optional	.98	—	—	—
	Standard	1.00	1.00	1.00	1.00
	Optional	1.01	1.01	1.01	1.01
50' [15.24]	Optional	.96	—	—	—
	Standard	.99	.99	.99	.98
	Optional	1.00	1.00	1.00	1.00
100' [30.48]	Optional	.93	—	—	—
	Standard	.98	.97	.96	.96
	Optional	.99	.99	.99	.99
150' [45.72]	Optional	—	—	—	—
	Standard	.97	.95	.94	.94
	Optional	.98	.97	.97	.98

NOTES:

- Capacity Multiplier x Rated Capacity = Actual Capacity.
- Additional compressor oil is not required for runs up to 150 feet [45.72 m].
- Oil traps in vertical runs are not required for any height up to 120 feet [36.58 m]. See Liquid Line chart for Vertical Separation Requirements and Limitations.
- *Adapter to 1 1/8" [28.58 mm] factory supplied.
- For installations with lines more than 50 feet long, a crank case heater must be used on the compressor.

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NOTES

NOTES

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.

**RUUD
AIR CONDITIONING
DIVISION**

5600 Old Greenwood Road, Fort Smith, Arkansas 72908



"In keeping with its policy of continuous progress and product improvement, Ruud reserves the right to make changes without notice."



Cased/Uncased Coils For Gas And Oil Furnaces



RCFN- Series

featuring Industry Standard R-410A
Refrigerant
Airflow Capacity
600-1,900 CFM [283-897 L/s]



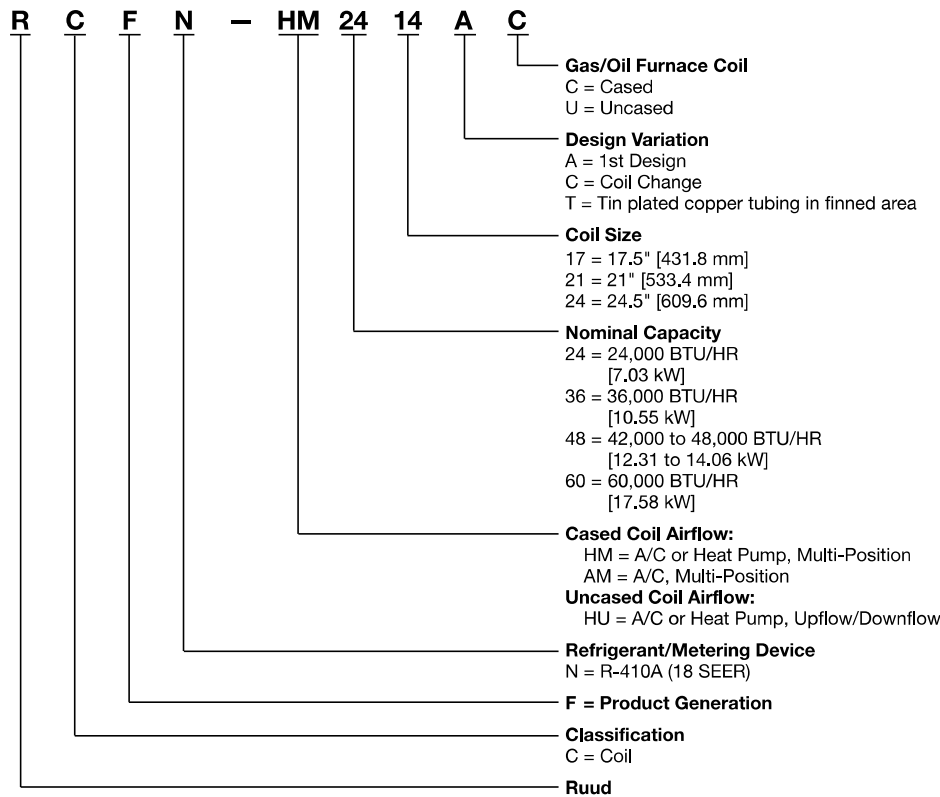
- Ruud® Indoor Coils are designed for use with Ruud outdoor units and are available for vertical upflow or downflow, and horizontal left or horizontal right airflow. When matched with Ruud outdoor units, the coils provide a nominal capacity range from 18,000 BTU/HR [5.24 kW] to 48,000 BTU/HR [14.06 kW].
- Constructed of aluminum fins bonded to internally grooved copper tubing.
- Tin plated copper tubing in the finned area for superior corrosion resistance in harsh environments.
- Coils are tested at the factory with an extensive refrigerant leak check.
- Coils have sweat refrigerant connections.
- Ideally suited for new installations or add on air conditioning.
- Feature two sets of 3/4" [14.1 mm] N.P.T. Condensate drain connections for ease of connection.
- Coils are AHRI certified for system application with variety of Ruud outdoor units.
- Condensate drain pan is constructed of high grade, heat resistant, corrosion free thermal-set material.
- Compatible with Germicidal Light System (UV resistant)
- Bi-Directional airflow eliminates the need to switch any internal components from horizontal left to right.
- Unique drain pan design maximizes application flexibility and condensate removal.
- Universal Duct Flanges are included with all coil models.



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Model Number Identification



Available Models of RCFN Coils	
RCFN-HU2417AU	RCFN-HU6024TU
RCFN-HU2421AU	RCFN-HM2417AC
RCFN-HU3624AU	RCFN-HM2421AC
RCFN-HU4824AU	RCFN-HM3624AC
RCFN-HU6024AU	RCFN-HM4824AC
RCFN-HU2417CU	RCFN-HM6024AC
RCFN-HU2421CU	RCFN-HM2417CC
RCFN-HU3624CU	RCFN-HM2421CC
RCFN-HU4824CU	RCFN-HM3624CC
RCFN-HU6024CU	RCFN-HM4824CC
RCFN-HU2417TU	RCFN-HM6024CC
RCFN-HU2421TU	RCFN-AM4821AC
RCFN-HU3624TU	RCFN-AM6021AC
RCFN-HU4824TU	

Table 1: Coil Specifications/Airflow Pressure Drop

Coil Model Number	Approx. Design Air Flow CFM [L/s] Range	Face Area Sq. Ft. [m ²]	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 [756]	1700 [802]	1800 [850]	1900 [897]
HIGH EFFICIENCY COOLING COILS																	
2417	600/800 [283/378]	5.70 [0.53]	16/2	0.07 [0.02]	0.12 [0.03]	0.17 [0.04]	0.21 [0.05]	—	—	—	—	—	—	—	—	—	—
2421	600/800 [283/378]	5.70 [0.53]	16/2	0.05 [0.01]	0.10 [0.02]	0.15 [0.04]	0.18 [0.04]	—	—	—	—	—	—	—	—	—	—
3624	825/1175 [389/555]	9.98 [0.93]	14/3	—	—	0.07 [0.02]	0.09 [0.02]	0.11 [0.03]	0.14 [0.03]	0.16 [0.04]	—	—	—	—	—	—	—
4821	1200/1800 [566/850]	5.33 [0.50]	14/4	—	—	—	—	—	—	0.21 [0.05]	0.23 [0.059]	0.25 [0.063]	0.30 [0.076]	0.32 [0.081]	0.37 [0.094]	—	—
4824	1000/1600 [472/755]	9.98 [0.93]	14/3	—	—	—	—	0.11 [0.03]	0.14 [0.03]	0.16 [0.04]	0.19 [0.05]	0.21 [0.05]	0.24 [0.06]	0.27 [0.07]	—	—	—
6021	1400/1900 [660/897]	5.83 [0.55]	15/4	—	—	—	—	—	—	—	—	0.26 [0.066]	0.30 [0.076]	0.32 [0.081]	0.36 [0.092]	0.40 [0.100]	0.44 [0.112]
6024	1050/1700 [496/802]	9.98 [0.93]	14/3	—	—	—	—	0.11 [0.03]	0.14 [0.03]	0.16 [0.04]	0.19 [0.05]	0.21 [0.05]	0.24 [0.06]	0.27 [0.07]	0.31 [0.08]	—	—

NOTE: Represents Coil-Only Airflow Ratings

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Table 2: Coil Dimensions and Weights — RCFN-HM/HU MODELS

Coil Model Number	Connections		Cased Coil Dimensions (in) [mm]			Weight	
	Sweat (in.) [mm]		A	B	C	Coil Weight (lbs.) [Kg.]	Shipping Weight (lbs.) [Kg.]
	Liquid I.D.	Suction I.D.					
2417	3/8 [9.53]	3/4 [19.05]	17 1/2 [445]	17 7/8 [454]	20 [508]	52 [24]	57 [26]
2421	3/8 [9.53]	3/4 [19.05]	21 1/2 [533]	17 1/2 [445]	20 [508]	52 [24]	60 [27]
3624	3/8 [9.53]	7/8 [22.23]	24 1/2 [622]	30 1/4 [768]	32 [813]	108 [49]	118 [54]
4824	3/8 [9.53]	7/8 [22.23]	24 1/2 [622]	30 1/4 [768]	32 [813]	108 [49]	118 [54]
6024	3/8 [9.53]	7/8 [22.23]	24 1/2 [622]	30 1/4 [768]	32 [813]	108 [49]	118 [54]
4821	3/8 [9.53]	7/8 [22.23]	21 [533]	20 1/8 [511]	26 [662]		64 [29]
6021	3/8 [9.53]	7/8 [22.23]	21 1/2 [533]	20 1/2 [524]	26 [662]		70 [32]

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FIGURE 1: DIMENSIONS — RCFN-HM/HU MODELS

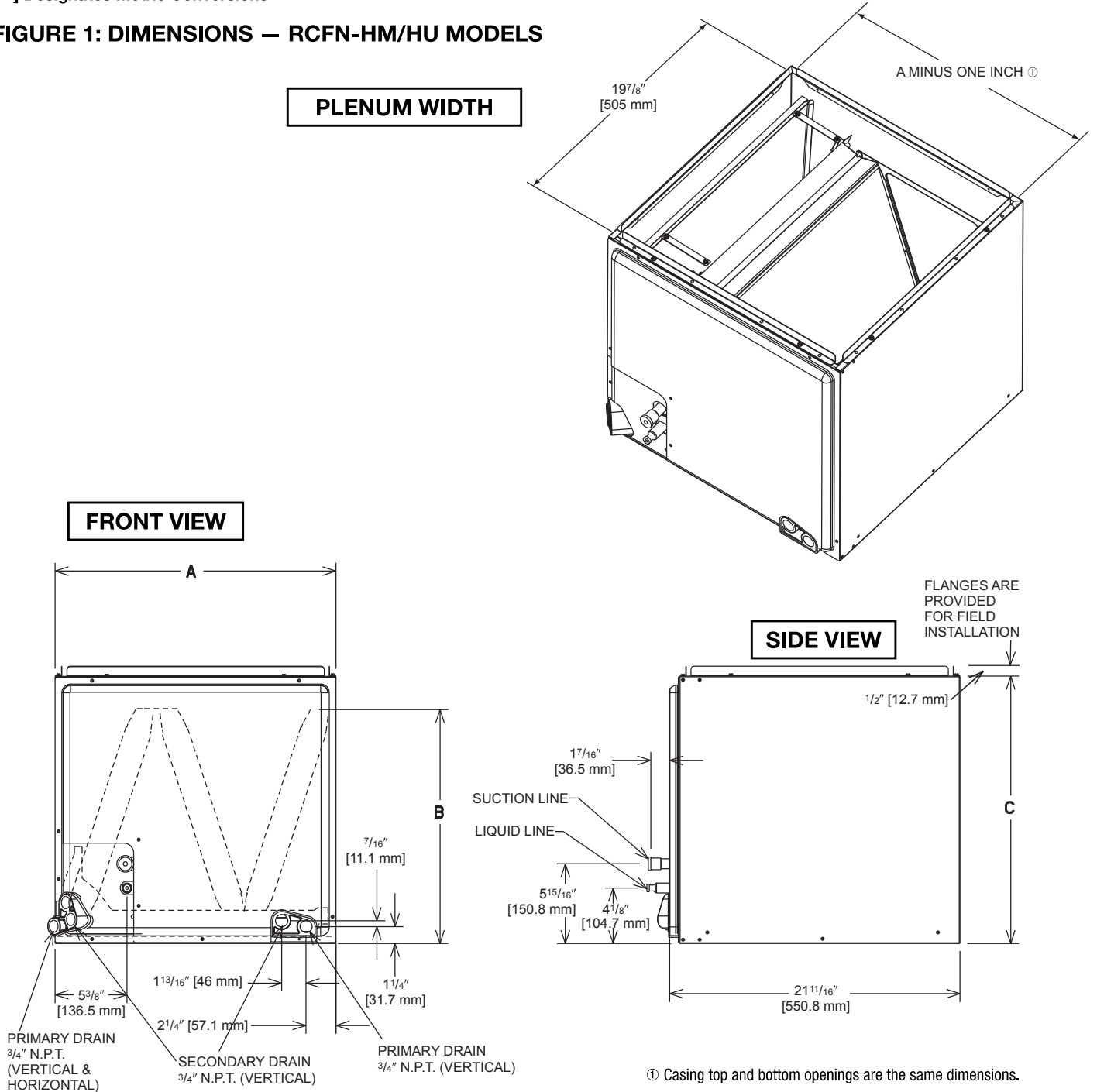
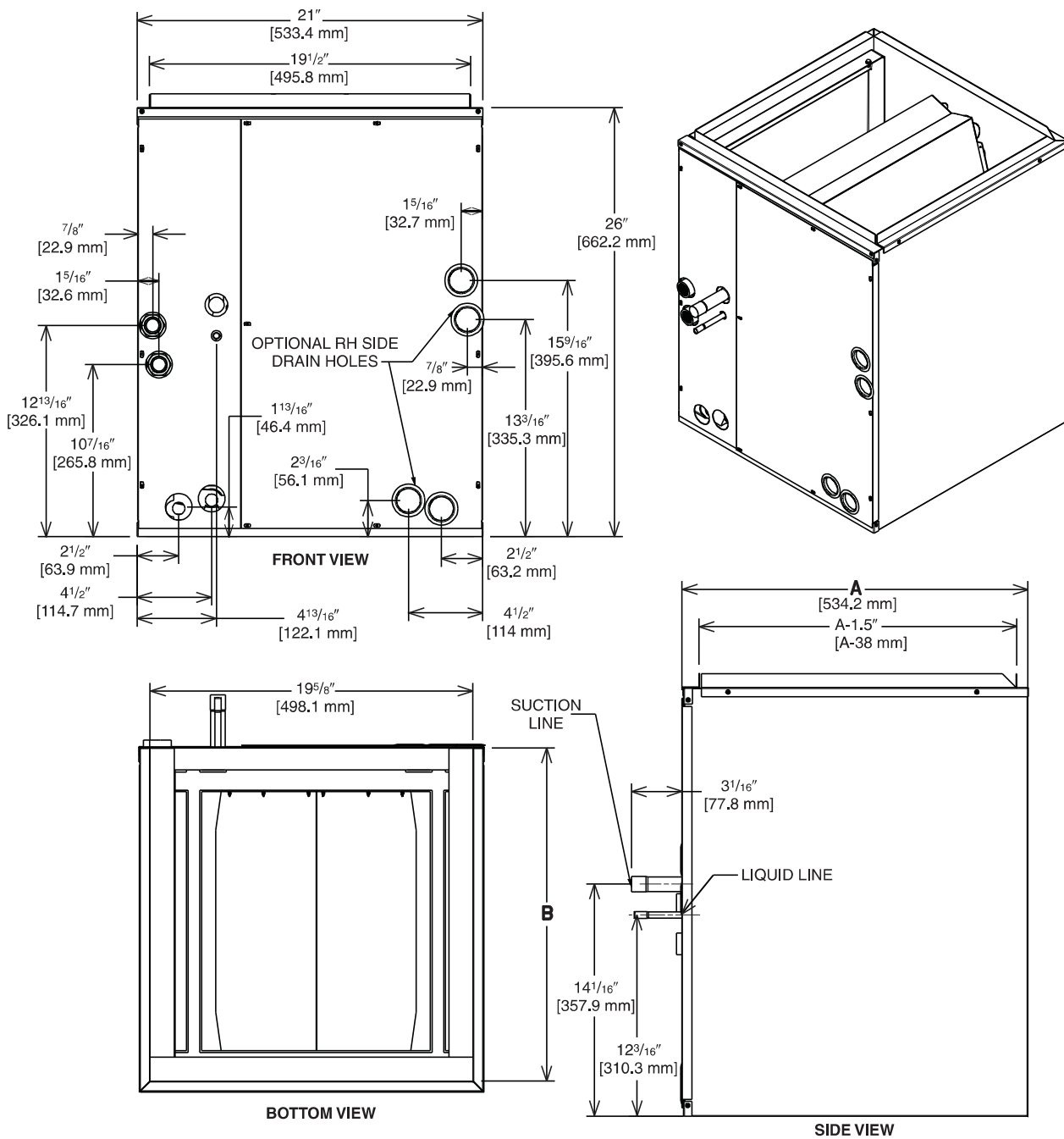


FIGURE 2: DIMENSIONS & WEIGHTS — RCFN-AM MODELS



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Accessories

- RXBA-AC (Upflow/Horizontal) (All RCFN Models)
- RXBA-AD (Downflow/Horizontal)

These plenum adapter accessories are for use when a cooling coil is matched with a gas furnace of one smaller size.

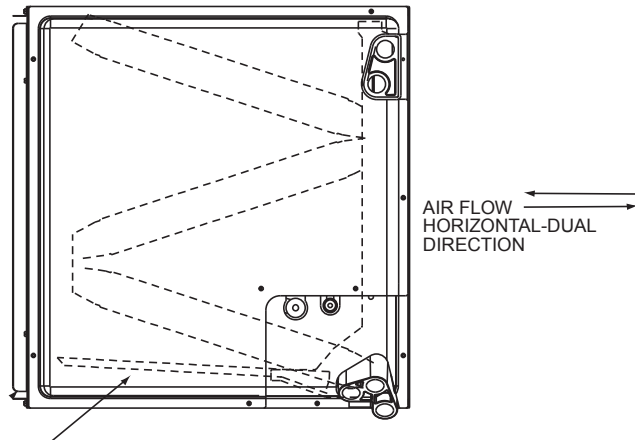
- HORIZONTAL ADAPTER KIT RXHH (RCFN-HM/HU Models Only) (See Figure 2)

This horizontal adapter kit is used to convert a upflow or downflow coil for a horizontal application. See Table 4 to order the proper horizontal adapter kit.

Table 4: Horizontal Adapter Kit Model No. (RCFN-HM/HU Models Only)

Coil Model	Horizontal Adapter Kit Model No.
2417/2421	RXHH-A03
3624/4824/6024	RXHH-A05

FIGURE 2: HORIZONTAL ADAPTER KIT ILLUSTRATION



HORIZONTAL ADAPTER KIT (RXHH-)

- INDOOR COIL CASING- RXBC (See Table 5) (RCFN-HM/HU Models Only)

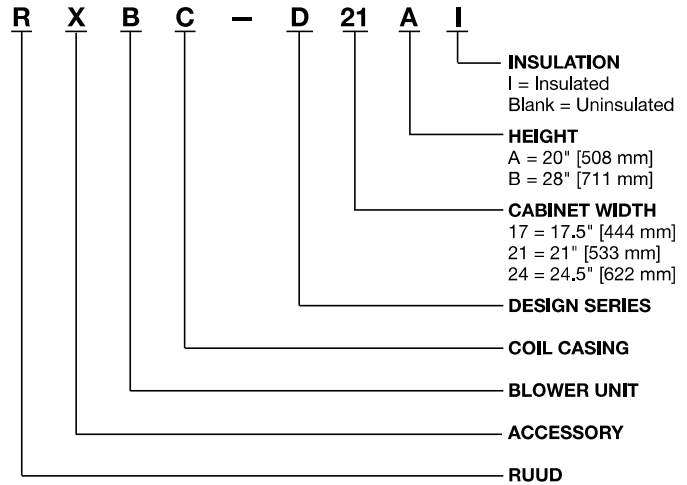


Table 5: Unit Dimensions and Weights- RXBC Indoor Coil Casings (RCFN-HM/HU Models Only)

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-D17A1	17 1/2 [445]	20 [508]	21 5/8 [549]	18 [8]	23 [10]	16 1/2 [419]	19 31/32 [507]
RXBC-D21A1	21 [533]	20 [508]		20 [9]	26 [12]	20 [508]	
RXBC-D21B1	21 [533]	28 [711]		27 [12]	36 [16]	20 [508]	
RXBC-D24A1	24 1/2 [622]	32 1/2 [826]		34 [15]	44 [20]	23 1/2 [597]	

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Accessories (cont.)

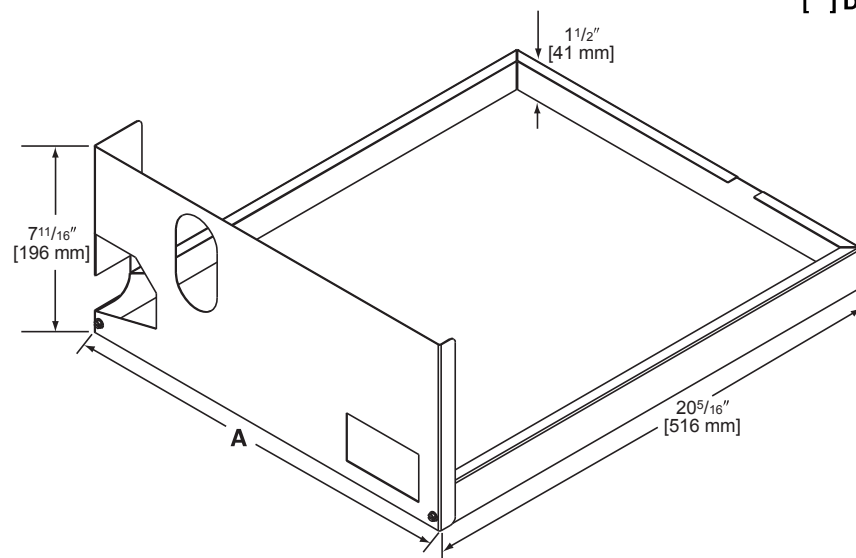
• UNCASSED COIL ADAPTER KITS (RCFN-HM/HU Models Only) RXBA- (See Figure 3 & 4)

This uncased coil adapter kit is used to adapt the coil to a furnace or ductwork. See Table 6 to order the proper adapter kit. Each kit contains a quantity of 20 adapters.

Table 6: Uncased Coil Adapter Kit

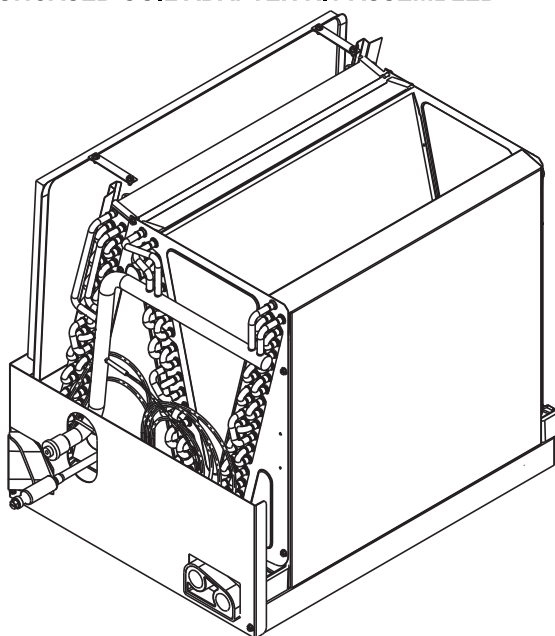
Uncased Coil Adapter Model Number RXBA	A Width (in.) [mm]	Uncased Coil Model RCFN
B17x20	16 ⁵ / ₈ [422]	-HUxx17
B21x20	20 ¹ / ₈ [511]	-HUxx21
B24x20	23 ⁵ / ₈ [599]	-HUxx24

FIGURE 3: UNCASSED COIL ADAPTER KIT ILLUSTRATION



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FIGURE 4: UNCASSED COIL ADAPTER KIT ASSEMBLED



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

BEFORE PURCHASING THIS APPLIANCE, READ IMPORTANT ENERGY COST AND EFFICIENCY INFORMATION AVAILABLE FROM YOUR RETAILER.

GENERAL TERMS OF LIMITED WARRANTY*

Ruud will furnish a replacement for any part of this product which fails in normal use and service within the applicable periods stated, in accordance with the terms of the limited warranty.

Parts.....Five (5) Years
Conditional Parts (Registration Required).....Ten (10) Years

***For complete details of the Limited and Conditional Warranties, including applicable terms and conditions, contact your local contractor or the Manufacturer for a copy of the product warranty certificate.**



In keeping with its policy of continuous progress and product improvement, Ruud reserves the right to make changes without notice.

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