Ruud *Ultra*™ Series EcoNet Enabled Modulating Downflow/Horizontal Gas Furnaces



U97V- Series

97% A.F.U.E.†
Input Rates from 60 to 115 kBTU
[11.57 to 33.71 kW]

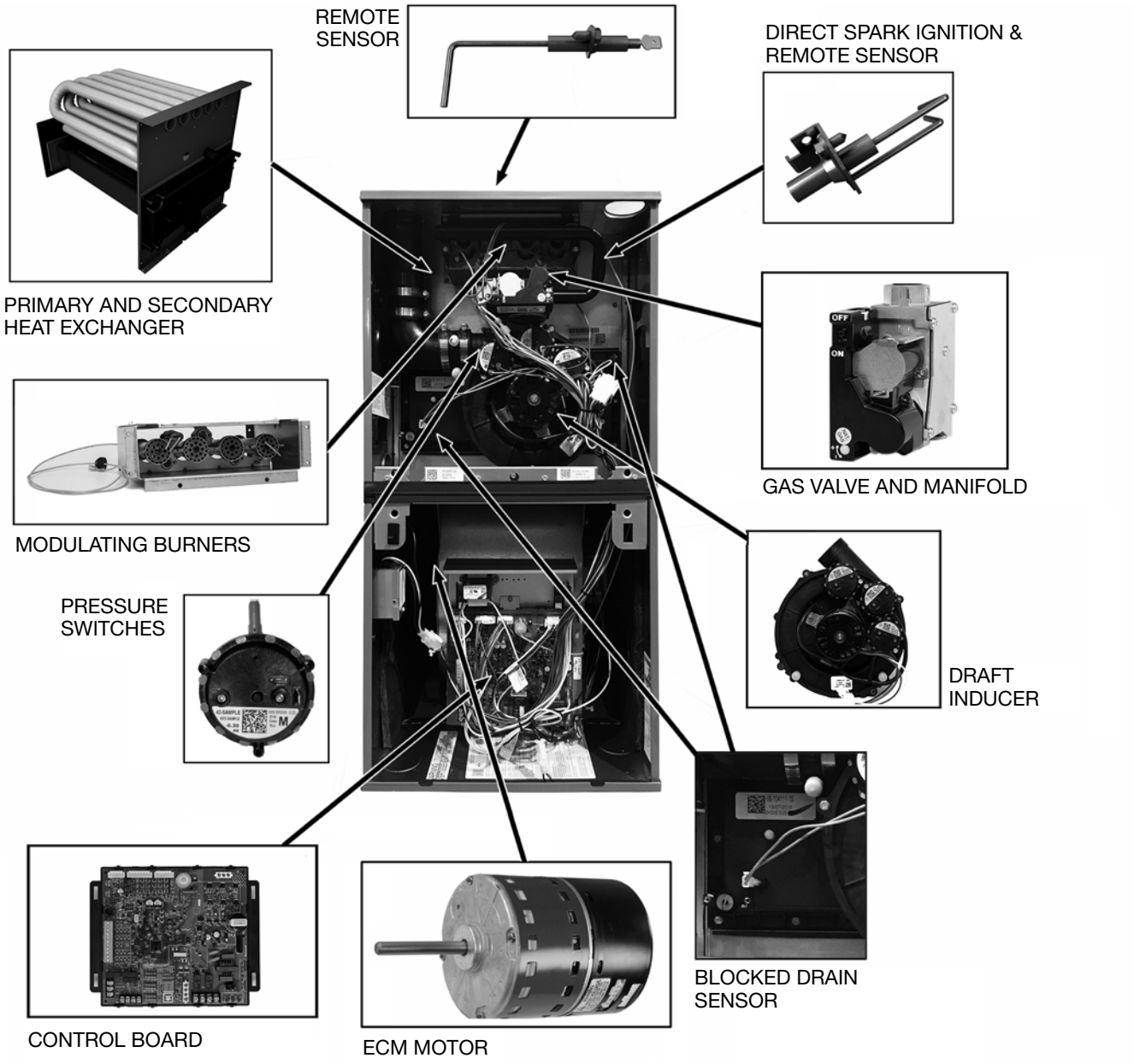
†A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.

EcoNet™

- 97% residential gas furnace CSA certified
- Downflow/Horizontal
- Modulating 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 door fasteners for tool less access
- Integrated control boards feature dip switches for easy system set up
- Self priming condensate trap
- For optimal performance an EcoNet Control Center is recommended; must be paired with an EcoNet enabled heat pump or air conditioner, for a fully communicating HVAC system.
- Modulating Function: when used with an EcoNet Control Center modulating thermostat, modulation rate between 40% and 100% of total capacity.
- Two-stage Function: when used with a two-stage thermostat, furnace operates at 40% on first stage, and stages up to 65%, then 100% for second stage.
- Multistage Function: when used with a single-stage thermostat, furnace functions as a three stage furnace operating at 40%, 65% and 100% of total capacity.

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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; variable speed 3 phase induced draft motor; pressure switches; digitally controlled modulating gas valve with internal redundancy and manual shut off; blower compartment door safety switch; solid state time on/off blower control; limit controls; 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 CFM continuous fan option; transformer; direct drive, variable speed electrically commutated blower motor (ECM). (Please note: a thermostat is not included as standard equipment.)

OPTIONAL EQUIPMENT

Downflow and horizontal return air filter racks available for all cabinet widths.

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 Gas Conversion Kit Index Natural to LP Gas. The L.P. Conversion kit contains components unique to Modulating furnaces, the correct kit must be used.

WARNING

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

Physical Data and Specifications—Downflow Models

U.S. and Canadian Models

MODEL NUMBER	(-)97V(-)060M317K(--)	(-)97V(-)070M317K(--)	(-)97V(-)085M521K(-)	(-)97V(-)100M521K(--)	(-)97V(-)115M524K(--)
HIGH FIRE INPUT BTU/HR [kW]	56,000 [16.41]	70,000 [20.50]	84,000 [24.61]	98,000 [28.72]	112,000 [32.82]
LOW FIRE INPUT	22,400 [6.56]	28,000 [8.21]	33,600 [9.85]	39,000 [11.49]	44,800 [13.13]
HEATING CAPACITY BTU/HR [kW]	55,000 [16.12]	69,000 [20.22]	83,000 [24.32]	96,000 [28.13]	110,000 [32.24]
BLOWER (D x W) [mm]	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.	3/4 [559] E. C. M.	3/4 [559] E. C. M.	3/4 [559] E. C. M.
MIN. CIRCUIT AMPACITY	8.00	9.00	12.00	13.00	12.00
MIN. OVERLOAD PROTECTION DEVICE	15.00	15.00	15.00	15.00	15.00
MAX. OVERLOAD PROTECTION DEVICE	15.00	15.00	20.00	20.00	20.00
MINIMUM EXT. STATIC PRESSURE IN. W.C. [kPa]	.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]
MAXIMUM HEATING CFM [L/s]	954 [450]	1133 [535]	1050 [495]	1236 [583]	1779 [840]
COOLING CFM @ .50" W.C. [.124 kPa] E.S.P. [L/s]	1050 [496]	1050 [496]	1750 [825]	1750 [825]	1750 [825]
TEMPERATURE RISE- HIGH FIRE °F [°C]	40 - 70 [22 -39]	40 - 70 [22 -39]	50 - 80 [27 -44]	50 - 80 [27 -44]	40 - 70 [22 -39]
TEMPERATURE RISE- LOW FIRE °F [°C]	20 - 50 [11 - 28]	20 - 50 [11 - 28]	20 - 50 [11 - 28]	20 - 50 [11 - 28]	20 - 50 [11 - 28]
APPROX. SHIPPING WEIGHT (LBS) [kg]	128 [58]	132 [60]	147.5 [67]	152 [69]	165 [75]
AFUE ①	97.00%	97.00%	97.00%	97.00%	97.00%

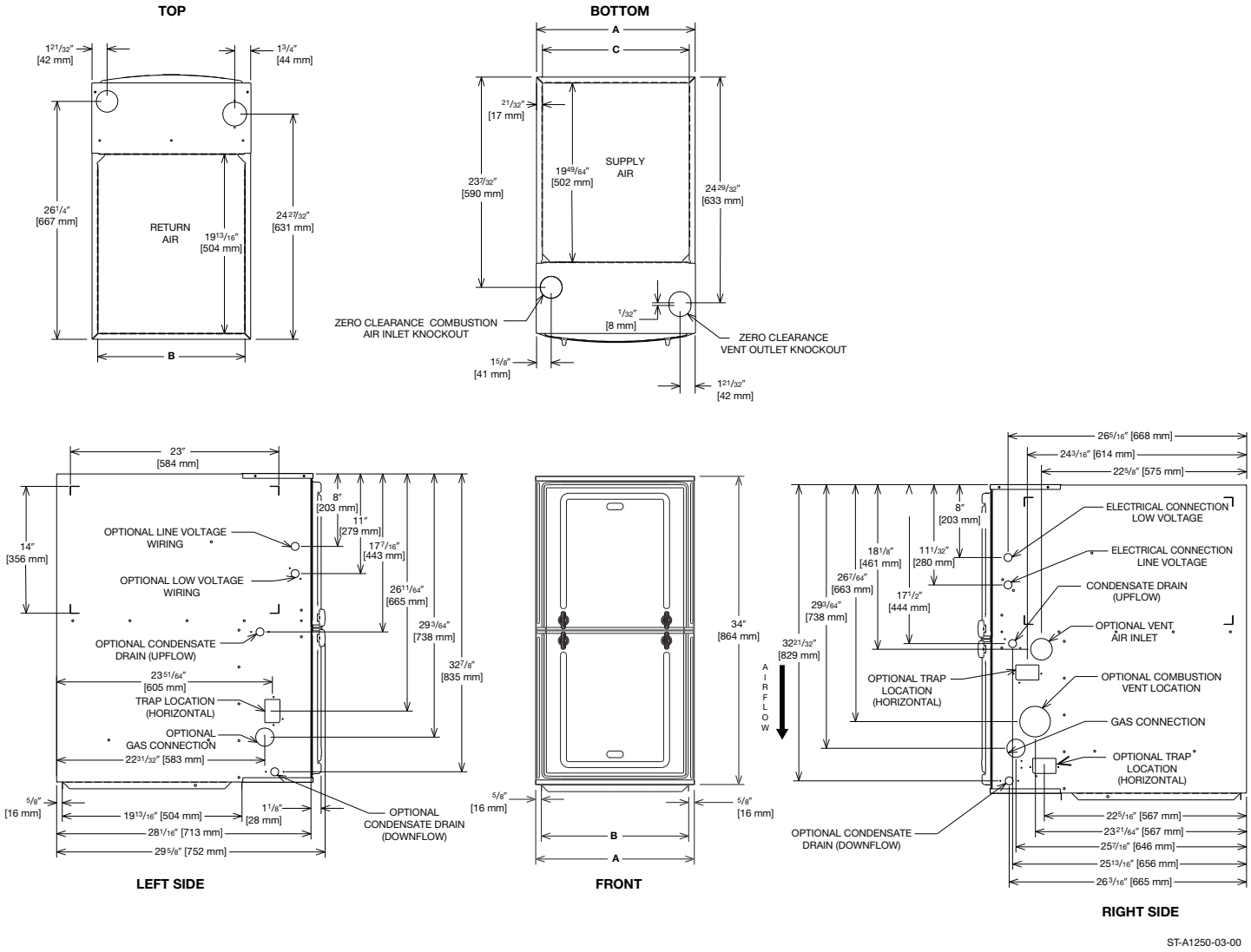
NOTES: All models are 115V, 60HZ, 1 phase Gas connection size for all models is 1/2" [13 mm] N.P.T.
① In accordance with D.O.E. test procedures.
*S=Standard Models
NOTE: Standard model complies with California low nox requirements.

[ ] Designates Metric Conversions

Model Number Identification

U	97	V	A	—	060	M	3	17	K	S	A
Ruud	97% Efficient	Motor - ECM	Design Series A = 1st Design		Input BTU/HR 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]	Modulating	Airflow 3 - Up to 3 Tons 5 - Up to 5 Tons	Cabinet Width 17 = 17.5" 21 = 21.0" 24 = 24.5"	Configuration - Downflow/ Horizontal	S = Standard N = NO_x	Revision - Marketing (A - First Time Release) (B - First Revision)

[ ] Designates Metric Conversions



ST-A1250-03-00

UNIT DIMENSIONS (CLEARANCE TO COMBUSTIBLES)

MODEL	LEFT SIDE	MINIMUM CLEARANCE (IN.) [mm]					SHIPPING WEIGHTS
		RIGHT SIDE	BACK	TOP	FRONT	VENT	
(-)97VA060	0	0	0	1 [25]	2 [51]	0	
(-)97VA070	0	0	0	1 [25]	2 [51]	0	
(-)97VA085	0	0	0	1 [25]	2 [51]	0	
(-)97VA100	0	0	0	1 [25]	2 [51]	0	
(-)97VA115	0	0	0	1 [25]	2 [51]	0	

*A service clearance of at least 24" is recommended in front of all furnaces

FLANGE DIMENSIONS		
A	B	C
17 1/2 [445]	16 17/64 [413]	16 13/64 [412]
21 [533]	19 49/64 [502]	19 45/64 [500]
24 1/2 [662]	23 17/64 [591]	23 13/64 [589]

Supply and return depicted as downflow configuration.
Flange configuration will vary depending on installation orientation.

[ ] Designates Metric Conversions

Comfort Select – CFM Options (factory setting)						
Model Number		**(-)97V(-)060M317K(--)**	**(-)97V(-)070M317K(--)**	**(-)97V(-)085M521K(-)**	**(-)97V(-)100M521K(--)**	**(-)97V(-)115M524K(--)**
HEATING CFM [L/s]	LOW HEAT (40%)	428 [202]	559 [264]	579 [276]	708 [334]	778 [367]
	MEDIUM HEAT (65%)	562 [265]	697 [329]	649 [306]	832 [393]	1035 [489]
	HIGH HEAT (100%)	749 [353]	889 [420]	845 [399]	1005 [474]	1396 [659]
Efficiency Select – CFM Options						
HEATING CFM [L/s]	LOW HEAT (40%)	550 [260]	719 [339]	745 [352]	910 [429]	1000 [472]
	MEDIUM HEAT (65%)	690 [325]	857 [405]	845 [399]	1014 [479]	1271 [600]
	HIGH HEAT (100%)	885 [418]	1051 [496]	985 [465]	1160 [547]	1650 [779]
	MAX HEAT (-4°F)	954 [450]	1133 [535]	1050 [495]	1236 [583]	1779 [840]

*S = Standard Models
NOTES Standard model complies with California low NOx requirements.
Refer to Installation Manual for complete heating dip switch options.

COOLING CFM								
Model Number				**(-)97V(-)060M317K(--)**	**(-)97V(-)070M317K(--)**	**(-)97V(-)085M521K(-)**	**(-)97V(-)100M521K(--)**	**(-)97V(-)115M524K(--)**
TARGET COOLING/ HEAT PUMP AIRFLOW	HIGH COOLING CFM [L/s]	SW 4 = OFF	SW 5 = OFF	1050 [496]	1050 [496]	1750 [825]	1750 [825]	1750 [825]
		SW 4 = ON	SW 5 = OFF	875 [413]	875 [413]	1400 [661]	1400 [661]	1400 [661]
		SW 4 = OFF	SW 5 = ON	700 [330]	700 [330]	1225 [578]	1225 [578]	1225 [578]
		SW 4 = ON	SW 5 = ON	525 [248]	525 [248]	1050 [496]	1050 [496]	1050 [496]
	LOW COOLING CFM [L/s]	SW 4 = OFF	SW 5 = OFF	788 [372]	788 [372]	1313 [619]	1313 [619]	1313 [619]
		SW 4 = ON	SW 5 = OFF	656 [310]	656 [310]	1050 [496]	1050 [496]	1050 [496]
		SW 4 = OFF	SW 5 = ON	525 [248]	525 [248]	919 [434]	919 [434]	919 [434]
		SW 4 = ON	SW 5 = ON	394 [185]	394 [185]	788 [372]	788 [372]	788 [372]

[ ] Designates Metric Conversions

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 (HORIZONTAL) RACK: RXGF-CB

EXTERNAL (DOWNFLOW) FILTER RACK: RXGF-CC

FILTER RACK FILTER SIZES* INCHES [mm]		
MODEL	**RXGF-CB (HORIZONTAL)**	**RXGF-CC (DOWNFLOW)**
(-)97(-)060	16 x 24 [40 x 61]	(2) 14 x 20 [36 x 51]
(-)97(-)070	16 x 24 [40 x 61]	(2) 14 x 20 [36 x 51]
(-)97(-)085	20 x 24 [51 x 61]	(2) 14 x 20 [36 x 51]
(-)97(-)100	20 x 24 [51 x 61]	(2) 14 x 20 [36 x 51]
(-)97(-)115	24 x 24 [61 x 61]	(2) 14 x 20 [36 x 51]

*Filter racks are shipped without filters.
A suitable 1" [25.4 mm] filter may be used

[ ] Designates Metric Conversions

INDOOR COIL CASINGS

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

FOR HIGH ALTITUDES:

NOTE: Modulating furnaces require a unique 2% derate at altitudes above 2,000 feet. See Installation Instructions for details.

HIGH ALTITUDE KITS

(-)97V(-)060M317K(--) RXGY-F48
(-)97V(-)070M317K(--) RXGY-F49
(-)97V(-)085M521K(--) RXGY-F50
(-)97V(-)100M521K(--) RXGY-F51
(-)97V(-)115M524K(--) RXGY-F52

L.P. CONVERSION KIT: RXGJ-FP37

CONDENSATE PUMP KIT: PROSTOCK & 1PCB151TUL

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

ECONET CONTROL

RECOMMENDED COMMUNICATING FURNACE CONTROL



UETST601SYS

The EcoNet Control Center serves as the hub of communication for a home's Heating, Cooling and Water Heating systems, and is required to operate an EcoNet Enabled Heating & Cooling system in a fully communicating mode.

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)

WIFI KIT FOR HEATING & COOLING SYSTEMS



The WiFi kit is required to remotely operate EcoNet Enabled Heating and Cooling Systems from the EcoNet Web portal and mobile apps.

REWRA630SYS

***ECONET CONTROL ACCESSORIES:**
Wall Plate = RCPN-AMC08
Face Plate = UETSTFPL

IMPORTANT: *Existing Comfort Control² System Condensing Units & Heat Pumps are compatible with EcoNet when matched with a U97V Gas Furnace and with an EcoNet Translator (RETRN620CC2) installed on the Comfort Control² 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 Exchanger .....Limited Lifetime
Limited Lifetime
Conditional Unit Replacement
(Registration Required) .....Limited Lifetime

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

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