



## Endeavor™ Line Achiever Plus® Series Gas Furnaces



### **R802V**

80% A.F.U.E.†

EcoNet® Enabled

Heating Stages: Two-Stage

Motor Type: Constant CFM

Input Rates: Upflow/Horizontal: 50-150 kBTU [14.7-44.0 kW]

Configuration Options: Upflow/Horizontal



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

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## Features and Benefits

- **PlusOne® Diagnostics:** With the Ruud Contractor & EcoNet® Apps, built-in EcoNet® & Bluetooth technology makes monitoring, troubleshooting and repairing the product easier than ever before
- **Dip Switch Free Installation Commissioning via Bluetooth Technology:** Seamless final install step without DIP switch configuration using the Ruud Contractor App
- **PlusOne® Ignition System:** Proven Direct Spark Ignition (DSI) for reliability and longevity
- **Two-Stage Heating:** Furnace operation mainly stays at low capacity around 60-65%, but will switch to high capacity to deliver stable heat distribution
- **Constant CFM Motor:** Truly variable speed technology allows for ultimate humidity control, quieter sound levels and year-round energy savings
- **Quieter Operation<sup>1</sup>:** A fully insulated blower cabinet, solid bottom and truly variable speed airflow technology makes this furnace one of the quieter options available
- **EcoNet® Enabled Furnace:** The latest in sensor technology and the EcoNet® monitoring system provides a new level of protection, control and energy savings
- **Allows on-the-go control** and receipt of system alerts by the homeowner via the EcoNet® Smart Thermostat and EcoNet® App<sup>2</sup>

<sup>1</sup>Based on manufacturer's furnace offering, and the product's heating stages, motor type and cabinet insulation. Sound levels are also dependent on furnace location and installation.

<sup>2</sup>Wifi broadband internet connection required. Download the EcoNet® App from the App Store® or Google Play® to set up your EcoNet® Smart Thermostat. Receipt of notifications depend on home WiFi set up. Amazon, Alex and all related logos are trademarks of Amazon.com, Inc. or its affiliates.

# Gas Furnaces

<u>R</u>	<u>80</u>	<u>2</u>	<u>V</u>	<u>050</u>	<u>3</u>	<u>A</u>	<u>14</u>	<u>UH</u>	<u>S</u>	<u>C</u>	<u>A</u>	<u>P</u>
Brand	Furnace Efficiency	Stages of Heating	Motor Type	Heating Input	AC Max. Capacity	Major Series	Width	Position	NOx	Controls	Minor Series	Option Code
R - Ruud	80 - 80% AFUE	2 - Two-Stage	V - ECM Variable Speed	050 - 50,000 [14.7 kW] 075 - 75,000 [22.0 kW] 100 - 100,000 [29.3 kW] 125 - 125,000 [36.6 kW] 150 - 150,000 [44.0 kW]	3 - 3 ton drive 4 - 4 ton drive 5 - 5 ton drive	A - 1st Design Series	14 - 14" Width 17 - 17.5" Width 21 - 21" Width 24 - 24.5" Width	UH - Upflow Horizontal	S - Standard N - Low NOx	C - Communicating, EcoNet®	A - 1st Series	P - Premium Grade

[ ] Designates Metric Conversions

AVAILABLE MODELS
R802V0503A14UHSCAP
R802V0754A17UHSCAP
R802V0755A21UHSCAP
R802V1004A17UHSCAP
R802V1005A21UHSCAP
R802V1255A24UHSCAP
R802V1505A24UHSCAP
R802V0503A14UHNCP
R802V0754A17UHNCP
R802V0755A21UHNCP
R802V1004A17UHNCP
R802V1005A21UHNCP
R802V1255A24UHNCP
R802V1505A24UHNCP

STANDARD EQUIPMENT
Solid statetime on/off blower control
Limit controls
Manual shut-off valve
100% safety lock out
Adjustable cool fan off delay
One hour automatic retry
Power and self test diagnostics
Flame sense current diagnostics
Electronic air cleaner connections
Twinning (built-in) features
Humidifier connections
Adjustable humidifier on/off delay
Low speed continuous fan option
Single speed option for heating and cooling applications
Two speed heating
Two speed cooling
Direct drive motor
PWM Controlled Constant CFM electrically commutated blower motor
Solid bottom

NOTE: A thermostat is not included as standard equipment

**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 R802V 2 stg VS UP/HZ SERIES	R802V0503 A14UH*CAP	R802V0754 A17UH*CAP	R802V0755 A21UH*CAP	R802V1004 A17UH*CAP	R802V1005 A21UH*CAP	R802V1255 A24UH*CAP	R802V1505 A24UH*CAP
Input-BTU/Hr [kW]	50,000 [15]	75,000 [22]	75,000 [22]	100,000 [29]	100,000 [29]	125,000 [37]	150,000 [44]
Heating Capacity BTU/Hr [kW] ®	40,000 [12]	60,000 [18]	60,000 [18]	80,000 [23]	80,000 [23]	100,000 [29]	120,000 [35]
Low Input BTU/Hr	35,000 [10]	52,000 [15]	52,000 [15]	70,000 [21]	70,000 [21]	87,500 [26]	105,000 [31]
Low Heating Capacity BTU/Hr	28,000 [8]	42,000 [12]	42,000 [12]	56,000 [16]	56,000 [16]	70,000 [21]	84,000 [25]
Heat Ext. Static Pressure [kPa]	.18 [.05]	.20 [.05]	.20 [.05]	.28 [.07]	.28 [.07]	.28 [.07]	.28 [.07]
Blower (D x W) [mm]	11 x 6 [279 x 152]	11 x 7 [279 x 178]	11 x 7 [279 x 178]	11 x 7 [279 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
Motor H.P. [W] Type	1/2 [373] VS-CT(ECM)	3/4 [560] VS-CT(ECM)	1 [746] VS-CT(ECM)	3/4 [560] VS-CT(ECM)	3/4 [560] VS-CT(ECM)	3/4 [560] VS-CT(ECM)	1 [746] VS-CT(ECM)
Min. Circuit Ampacity	9	13	13	16	13	13	16
Min. Overload Protection Device	15	15	15	20	15	15	20
Max. Overload Protection Device	15	20	20	25	20	20	25
Motor Full Load Amps	5.8	5.8	11.1	8.8	8.8	8.8	11.1
High Heating CFM [L/s]	960 [453]	1450 [684]	1425 [673]	1375 [649]	1380 [651]	1900 [897]	1680 [793]
Low Heating CFM [L/s]	750 [354]	1150 [543]	1225 [578]	1150 [543]	1200 [566]	1480 [698]	1300 [614]
MAX Cooling CFM [L/s]	1240 [585]	1650 [779]	1980 [934]	1650 [779]	1980 [934]	1980 [934]	1980 [934]
MIN Cooling CFM [L/s]	300 [142]	500 [236]	500 [236]	500 [236]	500 [236]	500 [236]	500 [236]
Fan CFM [L/s]	600 [283]	800 [378]	1000 [472]	800 [378]	1000 [472]	1000 [472]	1000 [472]
Max. E.S.P. (In. W.C.) [kPa]	1.0 [0.25]	1.0 [0.25]	1.0 [0.25]	1.0 [0.25]	1.0 [0.25]	1.0 [0.25]	1.0 [0.25]
Temperature Rise Range °F – High Input	25-55 [13.9-30.6]	25-55 [13.9-30.6]	25-55 [13.9-30.6]	35-65 [19.4-36.1]	35-65 [19.4-36.1]	35-65 [19.4-36.1]	45-75 [25-41.7]
Temperature Rise Range °F – Low Input	20-50 [11.1-27.8]	20-50 [11.1-27.8]	20-50 [11.1-27.8]	25-55 [13.9-30.6]	25-55 [13.9-30.6]	30-60 [16.7-33.3]	35-65 [19.4-36.1]
Approx. Shipping Weight (Lbs.) [kg]	110 [50]	115 [52]	135 [61]	120 [55]	140 [64]	150 [68]	162 [74]
AFUE ©	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%

NOTES: All models are 115V, 60HZ, 1 Ph. Gas connection size for all models is 1/2" [12 mm] N.P.T.

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

® See Conversion Kit Index Form for high altitude derate.

\*S=Standard, N=Low NOx

This furnace does not meet air district requirements of 14 ng/J NOx emissions limit. This furnace is not eligible for the Clean Air Furnace Rebate Program: [www.CleanAirFurnaceRebate.com](http://www.CleanAirFurnaceRebate.com).

This furnace is to be installed for propane firing only in air districts requiring 14 ng/J NOx emission limits. Operating in natural gas mode is in violation of these Rules.

[ ] Designates Metric Conversions

## Upflow Application

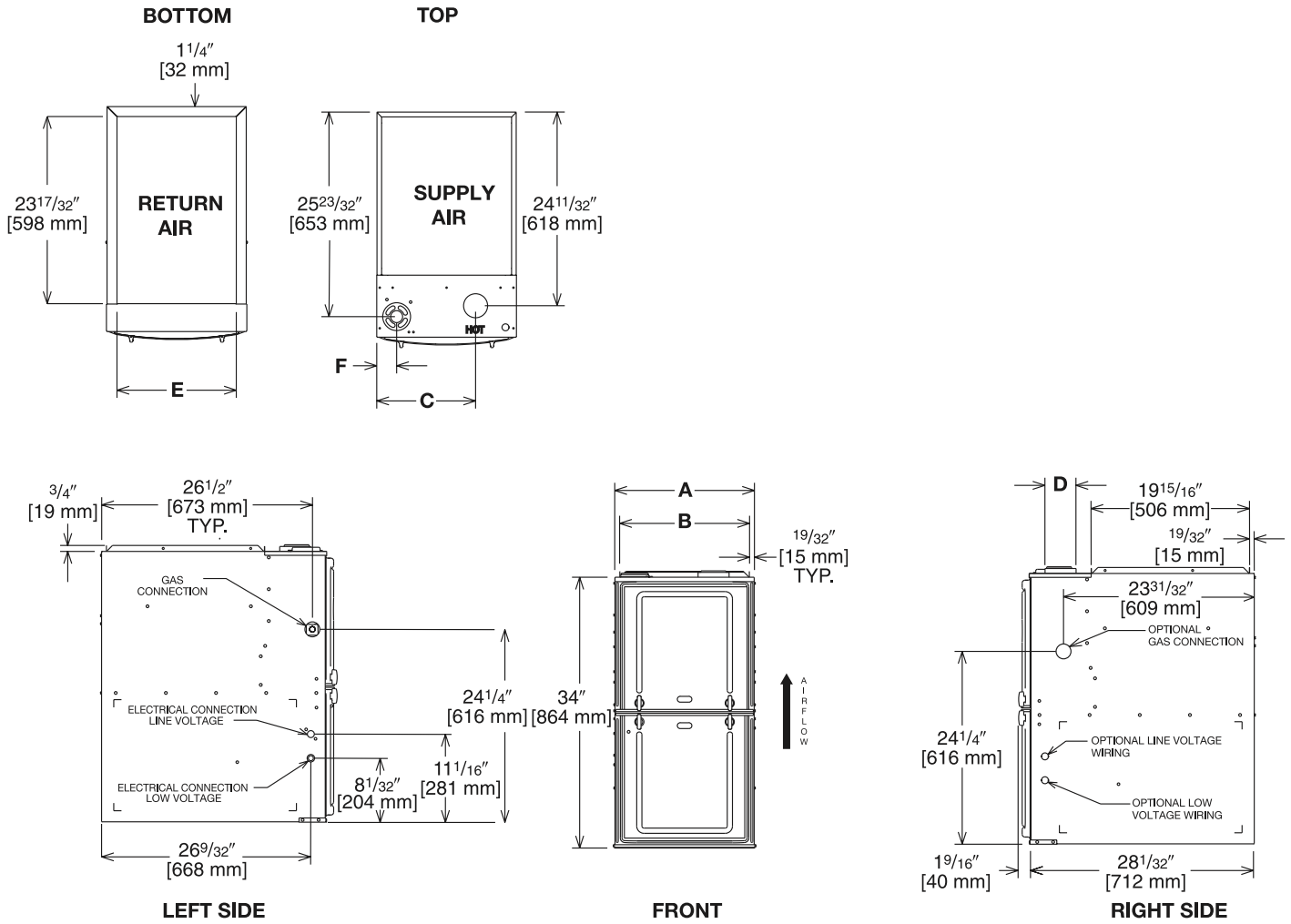


Illustration  
ST-A1220-04-00  
FIGURE 1

## Dimensional Data: Upflow Model

MODEL R802V-	A	B	C	D	E	F	MINIMUM CLEARANCE (IN.) [mm]						SHIP WGTS. (LBS.) [kg]
							LEFT SIDE	RIGHT SIDE	BACK	TOP	FRONT	VENT	
050	14 [356]	12 27/32 [326]	10 5/8 [270]	①	11 1/2 [292]	1 7/8 [48]	0	4 [102] ②	0	1 [25]	3 [76]	6 [152] ③	110 [50]
075/ 100417	17 1/2 [445]	16 11/32 [415]	12 3/8 [314]	①	15 [381]	2 1/2 [64]	0	3 [76] ②	0	1 [25]	3 [76]	6 [152] ③	125 [57]
100521	21 [533]	19 27/32 [504]	14 1/8 [359]	①	18 1/2 [470]	2 1/2 [64]	0	0	0	1 [25]	3 [76]	6 [152] ③	140 [64]
125	24 1/2 [622]	23 11/32 [592]	15 7/8 [397]	①	22 [559]	2 1/2 [64]	0	0	0	1 [25]	3 [76]	6 [152] ③	150 [68]
150	24 1/2 [622]	23 11/32 [592]	15 7/8 [397]	①	22 [559]	2 1/2 [64]	0	0	0	1 [25]	3 [76]	6 [152] ③	160 [73]

NOTES: ① May require a 3" [76 mm] to 4" [102 mm] or 3" [76 mm] to 5" [127 mm] adapter.

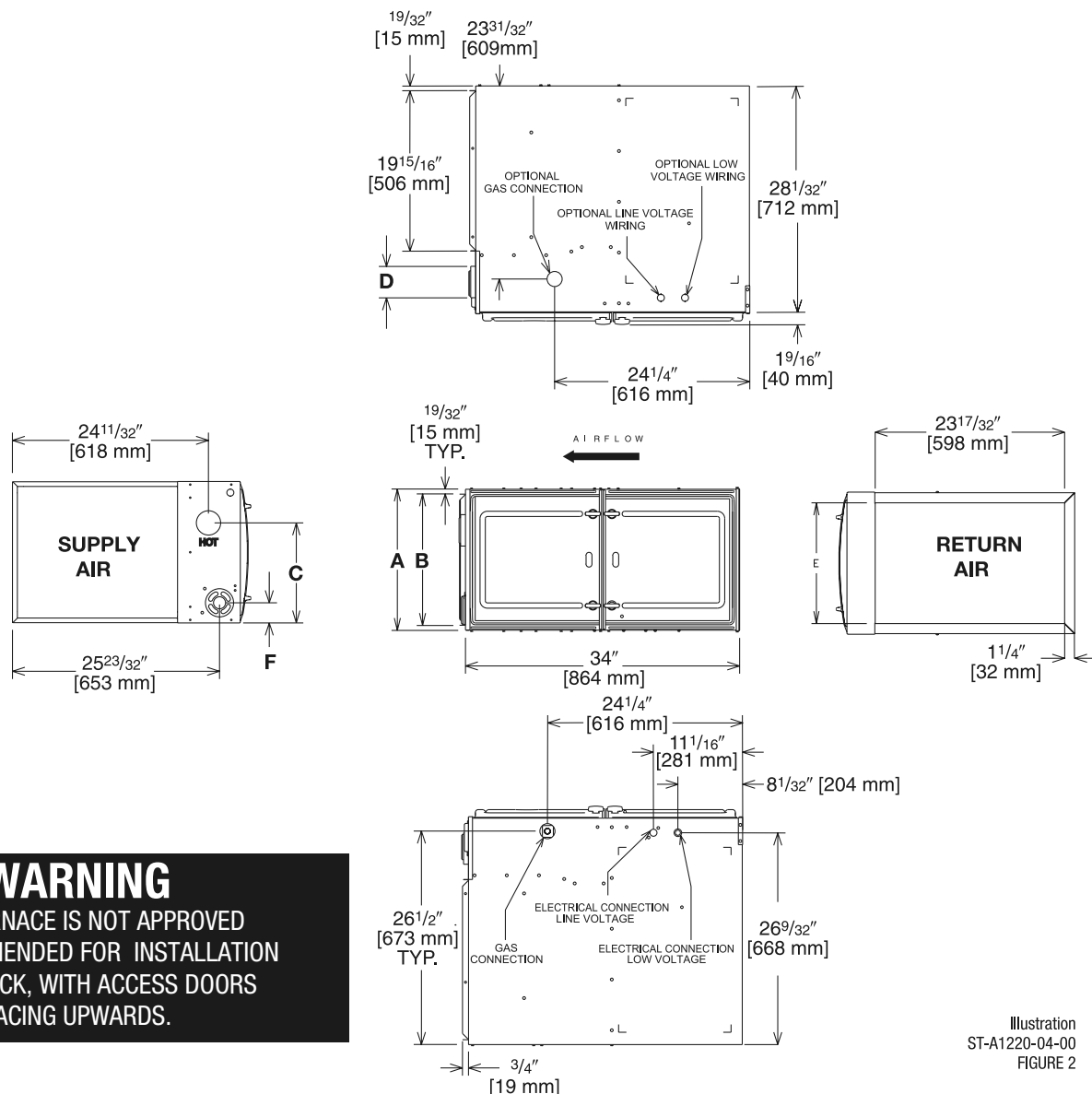
② May be 0" [0 mm] with type B vent.

③ May be 1" [25 mm] with type B vent.

Furnaces must be vented in accordance with the National Fuel Gas Code, ANSI Z223.1 and in accordance with local codes.

[ ] Designates Metric Conversions

## Horizontal Application



**WARNING**  
THIS FURNACE IS NOT APPROVED  
OR RECOMMENDED FOR INSTALLATION  
ON ITS BACK, WITH ACCESS DOORS  
FACING UPWARDS.

Illustration  
ST-A1220-04-00  
FIGURE 2

## Dimensional Data: Horizontal Model

MODEL R802V	A	B	C	D	E	F	MINIMUM CLEARANCE (IN.)						SHIP WGTS. (LBS.)
							SUPPLY AIR SIDE	RETURN AIR SIDE	BACK	TOP	FRONT	VENT	
050	14	12 <sup>27</sup> / <sub>32</sub>	10 <sup>5</sup> / <sub>8</sub>	①	11 <sup>1</sup> / <sub>2</sub>	17 <sup>7</sup> / <sub>8</sub>	4 ②	0	0	1	3	6 ③	110
075/ 100417	17 <sup>1</sup> / <sub>2</sub>	16 <sup>11</sup> / <sub>32</sub>	12 <sup>3</sup> / <sub>8</sub>	①	15	2 <sup>1</sup> / <sub>2</sub>	3 ②	0	0	1	3	6 ③	125
100521	21	19 <sup>27</sup> / <sub>32</sub>	14 <sup>1</sup> / <sub>8</sub>	①	18 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	0	0	0	1	3	6 ③	140
125	24 <sup>1</sup> / <sub>2</sub>	23 <sup>11</sup> / <sub>32</sub>	15 <sup>7</sup> / <sub>8</sub>	①	22	2 <sup>1</sup> / <sub>2</sub>	0	0	0	1	3	6 ③	150
150	24 <sup>1</sup> / <sub>2</sub>	23 <sup>11</sup> / <sub>32</sub>	15 <sup>7</sup> / <sub>8</sub>	①	22	2 <sup>1</sup> / <sub>2</sub>	0	0	0	1	3	6 ③	160

NOTES: ① May require a 3" [76 mm] to 4" [102 mm] or 3" [76 mm] to 5" [127 mm] adapter.

② May be 0" [0 mm] with type B vent.

③ May be 1" [25 mm] with type B vent.

Furnaces must be vented in accordance with the National Fuel Gas Code, ANSI Z223.1 and in accordance with local codes.

[ ] Designates Metric Conversions

## Blower Performance Data

GAS HEATING TARGET CFM [L/s]							
	<b>R802V0503 A14UH*CAP</b>	<b>R802V0754 A17UH*CAP</b>	<b>R802V0755 A21UH*CAP</b>	<b>R802V1004 A17UH*CAP</b>	<b>R802V1005 A21UH*CAP</b>	<b>R802V1255 A24UH*CAP</b>	<b>R802V1505 A24UH*CAP</b>
Factory Low Heating CFM [L/s]	750 [354]	1150 [543]	1225 [578]	1150 [543]	1200 [566]	1480 [698]	1300 [614]
Low Heat Side Return CFM [L/s]	750 [354]	1150 [543]	1225 [578]	1150 [543]	1200 [566]	1480 [698]	1300 [614]
Low Heat Approx. $\pm 7^{\circ}\text{F}$ CFM [L/s]	660 [311]	1012 [478]	1078 [509]	1012 [478]	1056 [498]	1302.4 [615]	1144 [540]
Low Heat Approx. $\pm 12^{\circ}\text{F}$ CFM [L/s]	607 [287]	931 [440]	992.25 [468]	931.5 [440]	972 [459]	1198.8 [566]	1053 [497]
Factory High Heating CFM [L/s]	960 [453]	1450 [684]	1425 [673]	1375 [649]	1380 [651]	1900 [897]	1680 [793]
High Heat Side Return CFM [L/s]	960 [453]	1450 [684]	1425 [673]	1375 [649]	1380 [651]	1900 [897]	1680 [793]
High Heat Approx. $\pm 7^{\circ}\text{F}$ CFM [L/s]	864 [408]	1305 [616]	1282.5 [605]	1237.5 [584]	1242 [586]	1710 [807]	1512 [714]
High Heat Approx. $\pm 12^{\circ}\text{F}$ CFM [L/s]	796 [376]	1203 [568]	1182.75 [558]	1141.25 [539]	1145.4 [541]	1577 [744]	1394.4 [658]

[ ] Designates Metric Conversions



**SIDE RETURN FILTER RACK: RXGF-CD**  
**BOTTOM RETURN FILTER RACK FOR**  
**UPFLOW APPLICATION: RXGF-CB**

FILTER RACK FILTER SIZES* INCHES		
MODEL	RXGF-CB (UPFLOW/ HORIZONTAL)	RXGF-CD (UPFLOW) SIDE RETURN
R802V050	12 <sup>1</sup> / <sub>4</sub> x 25	15 <sup>3</sup> / <sub>4</sub> x 25
R802V075/ R802V0755A21	15 <sup>3</sup> / <sub>4</sub> x 25	15 <sup>3</sup> / <sub>4</sub> x 25
R802V1004A1	19 <sup>1</sup> / <sub>4</sub> x 25	15 <sup>3</sup> / <sub>4</sub> x 25
R802V125	22 <sup>3</sup> / <sub>4</sub> x 25	15 <sup>3</sup> / <sub>4</sub> x 25
R802V150	22 <sup>3</sup> / <sub>4</sub> x 25	15 <sup>3</sup> / <sub>4</sub> x 25

**Indoor Coil Casings**

MODEL NUMBER
RXBC-D14AI
RXBC-D17AI
RXBC-D21AI
RXBC-D21BI
RXBC-D24AI

**4" FLUE ADAPTER: RXGW-C01**

**WARNING: IMPORTANT NOTICE**

A SOLID METAL BASE PLATE (SEE TABLE) MUST BE IN PLACE WHEN THE FURNACE IS INSTALLED WITH SIDE AIR RETURN DUCTS. FAILURE TO INSTALL A BASE PLATE COULD CAUSE PRODUCTS OF COMBUSTION TO BE CIRCULATED INTO THE LIVING SPACE AND CREATE POTENTIALLY HAZARDOUS CONDITIONS.

FURNACE WIDTH IN.	SOLID BOTTOM KIT NO.	BASE PLATE NO.	BASE PLATE SIZE IN.
14	RXGB-D14	AE-61874-01	11 <sup>5</sup> / <sub>8</sub> x 23 <sup>9</sup> / <sub>16</sub>
17 <sup>1</sup> / <sub>2</sub>	RXGB-D17	AE-61874-02	15 <sup>1</sup> / <sub>8</sub> x 23 <sup>9</sup> / <sub>16</sub>
21	RXGB-D21	AE-61874-03	18 <sup>5</sup> / <sub>8</sub> x 23 <sup>9</sup> / <sub>16</sub>
24 <sup>1</sup> / <sub>2</sub>	RXGB-D24	AE-61874-04	25 <sup>5</sup> / <sub>8</sub> x 23 <sup>9</sup> / <sub>16</sub>

**For High Altitudes:**

**OPTION CODE FOR HIGH ALTITUDE: U.S.**  
None required for high altitudes.

**HIGH ALTITUDE CONVERSION KITS: U.S.**  
None required for high altitudes.

**80+ HIGH ALTITUDE INSTRUCTIONS**

**CAUTION:** Always follow National Fuel Gas Code (NFGC) guidelines when converting for high altitudes.

High altitude option codes are not required for these models. However, the burner orifice size needs to be recalculated and verified at elevations above 2000 ft. See Installation Instructions for more information.



## THE ECONET® SMART THERMOSTAT

### BUILT-IN WIFI

### 4.3" LCD TOUCH SCREEN

**LOCAL WEATHER** – Current conditions plus 6-day forecast

**5 OPERATING MODES** – Heat, Cool, Auto, Emergency Heat and Fan Only

**7-DAY PROGRAMMABLE SCHEDULE** – Offers comfort without thought

**ONE-TOUCH AWAY** – Quickly switch to your energy-saving away preferences

**VACATION SCHEDULING** – Allows you to save while you're away and come home to comfort

**STANDBY SCREEN** – Displays indoor temperature and current weather



**UETST700SYS**

## OPERATIONAL FEATURES

**AUTOMATIC CHANGEOVER** – Transitions between heating and cooling automatically to keep the house comfortable

**INTEGRATED WATER CONTROL** – Enables easy water heater management

**SMOOTH ARRIVAL** – Prompts the system to start ahead of schedule to ensure the home is at the desired temperature at the scheduled time

**HUMIDITY CONTROL** – Supports humidifier accessories or over-cool based dehumidification

**DETAILED OPERATING STATUS** – View pertinent equipment status information and run times

**CONTINUOUS FAN** – Offers 5 speeds (Low, Medium Low, Medium, Medium High, High)

**SHORT-CYCLE PROTECTION** – Avoids damage to equipment from short run cycles

## MONITORING & REMOTE CONTROL FEATURES

**ACTIVE MONITORING** – Alerts to problems that need immediate attention

**REMOTE CONTROL** – Allows adjusting of comfort and settings from anywhere using a mobile device

**SERVICE ALERTS** – Sends routine maintenance reminders

**AIR FILTER MONITORING** – Detects when it's time to replace the air filter

**ALARM HISTORY** – Displays time-stamped alarm codes with clear descriptions





**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

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

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