



## Endeavor™ Line *Ultra*™ Series Gas Furnaces



*This product meets a stringent set of our internally defined sustainability standards*



### U98MV

98% A.F.U.E.†

EcoNet® Enabled

Heating Stages: Modulating

Motor Type: Constant CFM

Input Rates: 60 to 115 kBTU [11.6 to 33.7 kW]

Configuration Options: Upflow



† 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® Energy Efficiency:** ENERGY STAR® certified, featuring 98% AFUE across all model sizes
- **PlusOne® Diagnostics:** Industry first, 7-Segment LED Display makes service calls quick and easy
- **PlusOne® Ignition System:** Proven Direct Spart Ignition (DSI) for reliability and longevity
- **PlusOne® Water Management System:** Exclusive patented block drain sensor that automatically shuts off the furnace when the drain is blocked and alerts the contractor via diagnostic code
- **Modulating Heating Stage:** Gradual auto-adjustment from low to 100% of capacity to meet precise comfort requirements
- **Constant CFM Motor:** Truly variable speed technology allows for ultimate humidity control, quieter sounds levels and year-round energy savings
- **Quietest Operation<sup>1</sup>:** A fully insulated blower cabinet, solid bottom and truly variable speed airflow technology makes this furnace of the quietest 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>U</u> | <u>98</u>          | <u>M</u>          | <u>V</u>               | <u>060</u>   | <u>3</u>                           | <u>A</u>              | <u>17</u>  | <u>M4</u>        | <u>S</u>     | <u>G</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       |
| U - Ruud | 98 - 98% AFUE      | M - Modulating    | V - ECM Variable Speed | 060 - 76,000 [17.6 kW]<br>070 - 70,000 [20.5 kW]<br>085 - 85,000 [24.9 kW]<br>100 - 100,000 [29.3 kW]<br>115 - 115,000 [33.7 kW] | 3 - 3 ton drive<br>5 - 5 ton drive | A - 1st Design Series | 17 - 17.5" Width<br>21 - 21" Width<br>24 - 24.5" Width | M4 - Multi-4 Way | S - Standard | G - Communicating, EcoNet® | A - 1st Series | P - Premium Grade |

[ ] Designates Metric Conversions

| AVAILABLE MODELS   |
|--------------------|
| U98MV0603A17UPSGAP |
| U98MV0703A17UPSGAP |
| U98MV0855A21UPSGAP |
| U98MV1005A21UPSGAP |
| U98MV1155A24UPSGAP |

| STANDARD EQUIPMENT                                     |
|--|
| Multi-speed Constant CFM motor                         |
| Complete assembly and wiring                           |
| Blocked Drain Sensor                                   |
| 7 Segment LED & marked hoses                           |
| Primary aluminized steel heat exchanger                |
| 29-4C stainless steel secondary heat exchanger         |
| Induced Draft Blower                                   |
| Pressure switches                                      |
| Redundant main gas control                             |
| Limit controls   |
| Manual shut-off valve                                  |
| 100% safety lock out                                   |
| Blower compartment door safety switch                  |
| Solid State Time on/off blower control                 |
| Cool fan off delay                                     |
| Field Selectable Heat Fan Off Delay                    |
| Low speed continuous fan option                        |
| Single Speed Option for Heating & Cooling Applications |
| One-hour automatic retry                               |
| Power and self-test diagnostics                        |
| Flame sense current diagnostics                        |
| Electronic air cleaner connections                     |
| Twinning (built-in) features                           |
| Humidifier connections                                 |
| Humidifier on/off delay                                |
| Transformer  |
| Direct drive   |
| Solid bottom   |

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

## Physical Data and Specifications U.S. and Canadian Models

| MODEL NUMBER                                       | (-)98V(-)060A317U(--) | (-)98V(-)070A317U(--) | (-)98V(-)085A521U(-)   | (-)98V(-)100A521U(--)  | (-)98V(-)115A524U(--)  |
|--|-----------------------|-----------------------|------------------------|------------------------|------------------------|
| 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]         | 97,000 [28.43]         | 110,000 [32.24]        |
| BLOWER (D x W) [mm]                                | 11 x 8<br>[279 x 203] | 11 x 8<br>[279 x 203] | 11 x 10<br>[279 x 254] | 11 x 10<br>[279 x 254] | 11 x 11<br>[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                              | 10.00                 | 10.00                 | 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<br>IN. W.C. [kPa]     | .20<br>[.050]         | .23<br>[.057]         | .28<br>[.070]          | .28<br>[.070]          | .28<br>[.070]          |
| MAXIMUM EXT. STATIC PRESSURE<br>IN. W.C. [kPa]     | 1.0<br>[0.249]        | 1.0<br>[0.249]        | 1.0<br>[0.249]         | 1.0<br>[0.249]         | 1.0<br>[0.249]         |
| MAXIMUM HEATING CFM<br>[L/s]                       | 954<br>[450]          | 1109<br>[524]         | 1294<br>[611]          | 1644<br>[776]          | 1629<br>[769]          |
| COOLING CFM @ .50" W.C. [.124 kPa]<br>E.S.P. [L/s] | 1050<br>[496]         | 1050<br>[496]         | 1750<br>[825]          | 1750<br>[825]          | 1750<br>[825]          |
| TEMPERATURE RISE- HIGH FIRE °F<br>[°C]             | 40 - 70<br>[22 - 39]  | 40 - 70<br>[22 - 39]  | 40 - 70<br>[22 - 39]   | 40 - 70<br>[22 - 39]   | 45 - 75<br>[25 - 41]   |
| TEMPERATURE RISE- LOW FIRE °F<br>[°C]              | 20 - 50<br>[11 - 28]  | 20 - 50<br>[11 - 28]  | 20 - 50<br>[11 - 28]   | 25 - 55<br>[13 - 30]   | 20 - 50<br>[11 - 28]   |
| APPROX. SHIPPING WEIGHT (LBS)<br>[kg]              | 128<br>[58]           | 132<br>[60]           | 147.5<br>[67]          | 152<br>[69]            | 165<br>[75]            |
| AFUE ①   | 98.7%                 | 98.3%                 | 98.1%                  | 98.1%                  | 98.6%                  |

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

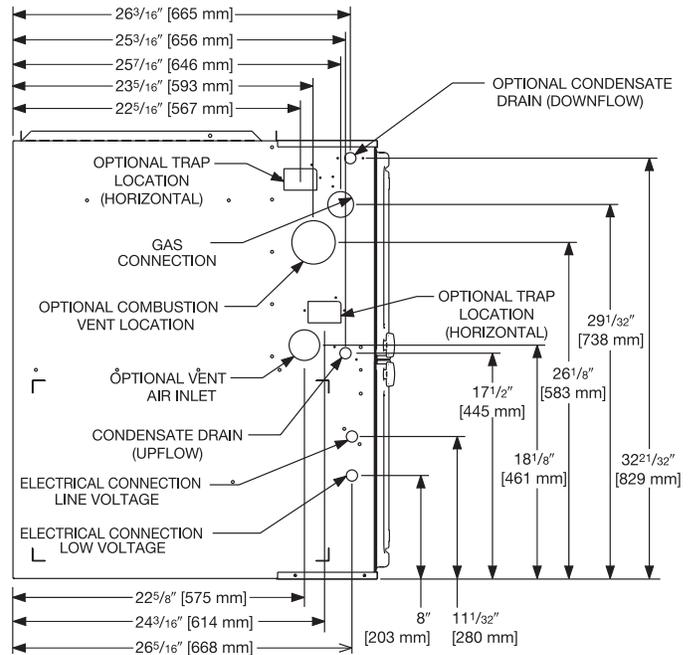
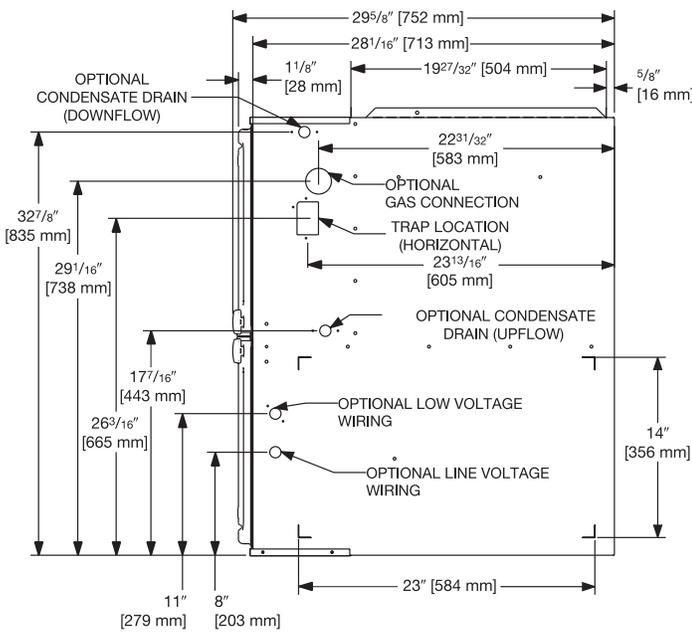
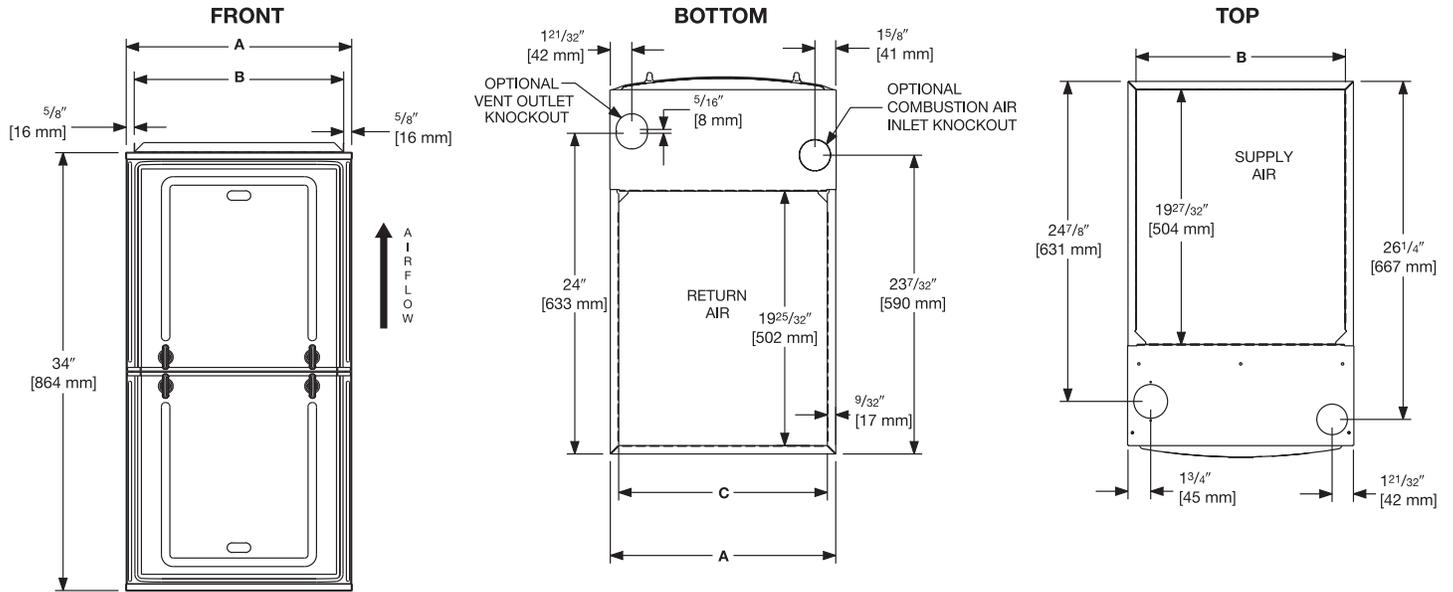
NOTE: Standard model complies with California low NOx requirements.

This furnace does not meet air district requirements of 14 ng/J NOx emissions limit, and thus is subject to a mitigation fee of up to \$450. 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



## Dimensional Data: Upflow Model

| MODEL U98MV | LEFT SIDE | MINIMUM CLEARANCE (IN.) [mm] |      |        |        |      | SHIP WGTs. | FLANGE DIMENSIONS |                |                |
|-------------|-----------|------------------------------|------|--------|--------|------|------------|-------------------|----------------|----------------|
|             |           | RIGHT SIDE                   | BACK | TOP    | FRONT  | VENT |            | A                 | B              | C              |
| 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

## Blower Performance Data

| Comfort Select – CFM Options                      |                      |                       |                       |                      |                       |                       |
|---|----------------------|-----------------------|-----------------------|----------------------|-----------------------|-----------------------|
| Model Number                                      |                      | (-)98V(-)060A317U(--) | (-)98V(-)070A317U(--) | (-)98V(-)085A521U(-) | (-)98V(-)100A521U(--) | (-)98V(-)115A524U(--) |
| HEATING<br>CFM [L/s]                              | LOW HEAT<br>(40%)    | 428 [202]             | 466 [220]             | 568 [268]            | 544 [257]             | 778 [367]             |
|   | MEDIUM<br>HEAT (65%) | 562 [265]             | 635 [300]             | 754 [356]            | 855 [404]             | 990 [467]             |
|   | HIGH HEAT<br>(100%)  | 749 [353]             | 871 [411]             | 1015 [479]           | 1290 [609]            | 1286 [607]            |
| Efficiency Select – CFM Options (factory setting) |                      |                       |                       |                      |                       |                       |
| HEATING<br>CFM [L/s]                              | LOW HEAT<br>(40%)    | 550 [260]             | 599 [283]             | 730 [345]            | 725 [342]             | 1000 [472]            |
|   | MEDIUM<br>HEAT (65%) | 690 [325]             | 778 [367]             | 926 [437]            | 1058 [499]            | 1271 [600]            |
|   | HIGH HEAT<br>(100%)  | 885 [418]             | 1029 [486]            | 1200 [566]           | 1525 [720]            | 1520 [717]            |
|   | MAX HEAT<br>(-4°F)   | 954 [450]             | 1109 [524]            | 1294 [611]           | 1645 [776]            | 1629 [769]            |

\*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                                  |                              |               | (-)98V(-)060A317U(--) | (-)98V(-)070A317U(--) | (-)98V(-)085A521U(-) | (-)98V(-)100A521U(--) | (-)98V(-)115A524U(--) |               |
| TARGET<br>COOLING/<br>HEAT<br>PUMP<br>AIRFLOW | HIGH<br>COOLING<br>CFM [L/s] | SW 4 =<br>OFF | SW 5 =<br>OFF         | 1050<br>[496]         | 1050<br>[496]        | 1750<br>[825]         | 1750<br>[825]         | 1750<br>[825] |
|   |                              | SW 4 =<br>ON  | SW 5 =<br>OFF         | 875<br>[413]          | 875<br>[413]         | 1400<br>[661]         | 1400<br>[661]         | 1400<br>[661] |
|   |                              | SW 4 =<br>OFF | SW 5 =<br>ON          | 700<br>[330]          | 700<br>[330]         | 1225<br>[578]         | 1225<br>[578]         | 1225<br>[578] |
|   |                              | SW 4 =<br>ON  | SW 5 =<br>ON          | 525<br>[248]          | 525<br>[248]         | 1050<br>[496]         | 1050<br>[496]         | 1050<br>[496] |
|   | LOW<br>COOLING<br>CFM [L/s]  | SW 4 =<br>OFF | SW 5 =<br>OFF         | 788<br>[372]          | 788<br>[372]         | 1313<br>[619]         | 1313<br>[619]         | 1313<br>[619] |
|   |                              | SW 4 =<br>ON  | SW 5 =<br>OFF         | 656<br>[310]          | 656<br>[310]         | 1050<br>[496]         | 1050<br>[496]         | 1050<br>[496] |
|   |                              | SW 4 =<br>OFF | SW 5 =<br>ON          | 525<br>[248]          | 525<br>[248]         | 919<br>[434]          | 919<br>[434]          | 919<br>[434]  |
|   |                              | SW 4 =<br>ON  | SW 5 =<br>ON          | 394<br>[185]          | 394<br>[185]         | 788<br>[372]          | 788<br>[372]          | 788<br>[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 (UPFLOW) RACK:** RXGF-CB

**EXTERNAL SIDE (UPFLOW) FILTER RACK:** RXGF-CD

| FILTER RACK FILTER SIZES* INCHES [mm] |                   |
|---------------------------------------|-------------------|
| MODEL                                 | RXGF-CD (UPFLOW)  |
| (-)98V(-)060                          | 16 x 24 [40 x 61] |
| (-)98V(-)070                          | 16 x 24 [40 x 61] |
| (-)98V(-)085                          | 20 x 24 [51 x 61] |
| (-)98V(-)100                          | 20 x 24 [51 x 61] |
| (-)98V(-)115                          | 24 x 24 [61 x 61] |

\*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

(-)98V(-)060A317U(-) RXGY-F53  
 (-)98V(-)070A317U(-) RXGY-F54  
 (-)98V(-)085A521U(-) RXGY-F55  
 (-)98V(-)100A521U(-) RXGY-F56  
 (-)98V(-)115A524U(-) RXGY-F57

**L.P. CONVERSION KIT:** RXGJ-FP37

**CONDENSATE PUMP KIT:** PROSTOCK & 1PCB151TUL

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



## 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



**UETST800SYS**

## 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.**

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

**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.**

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

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