



Gas Furnaces  
U802V (DF) Series

## Ruud Ultra™ Series Communicating Two-Stage Variable Speed Downflow Gas Furnace

### U802V Downflow Series

80% A.F.U.E.†

Input Rates 75-125 kBTU



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



- 80% residential Gas Furnace CSA certified
- 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
- The Ultra™ Series U802V is part of a new line of Ruud smart heating, cooling and water heating products. Using the latest in sensor technology and a powerful EcoNet® monitoring system, Ruud provides homeowners with a new level of protection, control and energy savings. Ruud smart heating, cooling and water heating products will alert the homeowner if there is ever an issue via the EcoNet Smart Thermostat and the EcoNet Mobile app\*. The EcoNet Mobile App makes it easy for homeowners to manage their home comfort environment at home or on-the-go\*, while enjoying the convenience and savings benefits of a highly efficient system.
- PlusOne™ Diagnostics — 7 Segment LED all units
- PlusOne™ Ignition System – DSI for reliability and longevity
- Heat exchanger is removable for improved serviceability. Aluminized steel construction provides maximum corrosion resistance and thermal fatigue reliability.
- Low profile 34" cabinet ideal for space constrained installations
- Integrated Control board features dip switches for easy system set up
- Insulated blower compartment
- QR code for quick access to product information from your smart phone or tablet
- Compatible with single or two stage thermostats. For optimal performance a two stage thermostat is recommended.

\*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. WiFi broadband internet connection required.

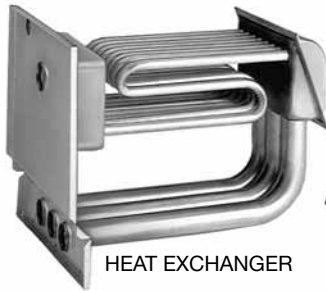
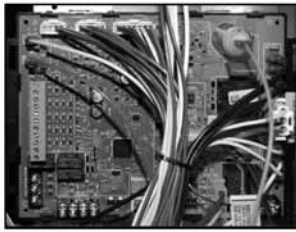
RELY ON RUUD.™

FORM NO. G22-551 REV. 5

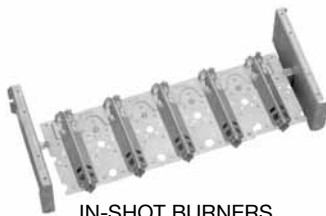
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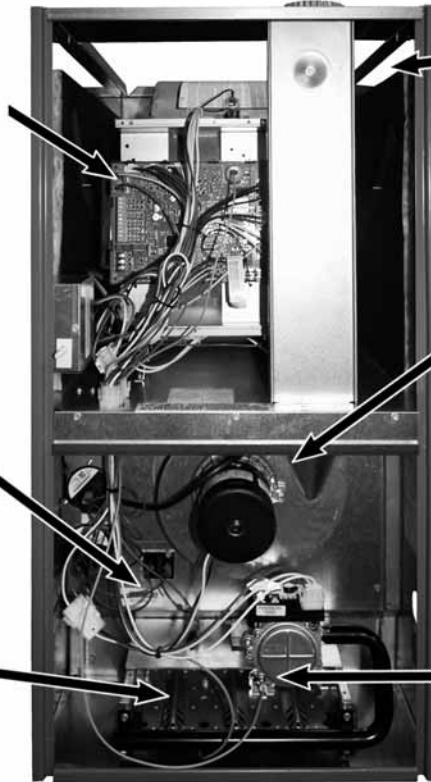
INTEGRATED  
FURNACE  
CONTROL



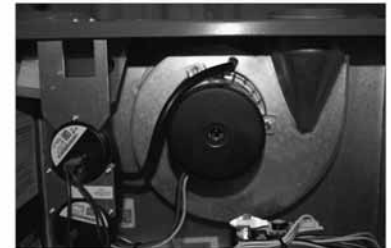
HEAT EXCHANGER



IN-SHOT BURNERS



VARIABLE SPEED ECM MOTOR



DRAFT INDUCER MOTOR



DIRECT SPARK IGNITOR  
WITH REMOTE SENSE

## STANDARD EQUIPMENT

Completely assembled and wired; 2 speed induced draft blower; high and low pressure switches; 2 stage redundant main gas control; blower compartment door safety switch; solid state time on/time off blower control; limit control; transformer; ECM blower motor. Furnaces are equipped with cooling/heating relay and transformer (50VA) ready for air conditioning applications. (Please note: a thermostat is not included as standard equipment.) Flame sensor diagnostics; fused-protection (secondary), **3rd speed option for continuous fan.**

## OPTIONAL EQUIPMENT

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

The complete terms of limited and other warranties are available at our sales office, or through local installer.

All models can be converted by a qualified Ruud 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 Ruud parts distributor.

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

NOTE: For natural and L.P. (propane) gas models, direct spark ignition is 100% lockout type.

## WARNING

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

## Model Features

- 80% residential Gas Furnace CSA certified
- 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
- The Ultra™ Series U802V is part of a new line of Ruud smart heating, cooling and water heating products. Using the latest in sensor technology and a powerful EcoNet® monitoring system, Ruud provides homeowners with a new level of protection, control and energy savings. Ruud smart heating, cooling and water heating products will alert the homeowner if there is ever an issue via the EcoNet Smart Thermostat and the EcoNet Mobile app\*. The EcoNet Mobile App makes it easy for homeowners to manage their home comfort environment at home or on-the-go\*, while enjoying the convenience and savings benefits of a highly efficient system.
- PlusOne™ Diagnostics — 7 Segment LED all units
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- Heat exchanger is removable for improved serviceability. Aluminized steel construction provides maximum corrosion resistance and thermal fatigue reliability.
- Low profile 34" cabinet ideal for space constrained installations
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- Insulated blower compartment
- QR code for quick access to product information from your smart phone or tablet
- Compatible with single or two stage thermostats. For optimal performance a two stage thermostat is recommended.

## Physical Data and Specifications—Downflow Models

MODEL NUMBERS U802V (DF) SERIES	U802VA075317Z*B	U802VA075421Z*B	U802VA100521Z*B	U802VA125524Z*B
100% High Input–BTU/Hr [kW] ②	75,000 [22]	75,000 [22]	100,000 [29]	125,000 [37]
High Heating Capacity–BTU/Hr [kW] ①	60,000 [18]	60,000 [18]	80,000 [23]	100,000 [29]
70% Low Input–BTU/Hr [kW]	52,500 [15]	52,500 [15]	70,000 [20]	87,500 [25]
Low Heating Capacity–BTU/Hr [kW]	42,000 [12]	42,000 [12]	56,000 [16]	70,000 [20]
Heating–Ext. Static Pressure [kPa]	.12 [.029]	.12 [.029]	.15 [.037]	.20 [.05]
Blower (D x W) [mm]	11 x 7 [279 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
ECM Motor H.P. [W]	1/2 [373]	3/4 [559]	1 [746]	1 [746]
Min. Circuit Ampacity	9	11	15	15
Min. Overload Protection Device	15	15	20	20
Max. Overload Protection Device	15	15	20	20
Factory Heating CFM [L/s]	1254 [592]	1305 [616]	1651 [779]	1830 [867]
Cooling CFM @ .5" [kPa] E.S.P. (Nominal) [L/s] (Range)	600-1200 [283]-[566]	1000-1600 [472]-[755]	1200-2000 [566]-[944]	1200-2000 [566]-[944]
Max. E.S.P. (In. W.C.) [kPa]	0.8 [0.2]	0.8 [0.2]	0.8 [0.2]	0.8 [0.2]
Temperature Rise Range °F [°C]	High Fire	30-60 [17-33]	25-55 [14-31]	30-60 [17-33]
	Low Fire	20-50 [11-28]	20-50 [11-28]	25-55 [14-31]
Max. Outlet Air Temp. °F [°C]	165 [73.9]	165 [73.9]	165 [73.9]	185 [85]
Approx. Shipping Weight (Lbs.) [kg]	115 [52]	115 [52]	120 [54]	140 [63]
AFUE ①	80%	80%	80%	80%

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

① In accordance with D.O.E. test procedures.

② See Conversion Kit Index Form for high altitude derate in U.S. applications.

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.

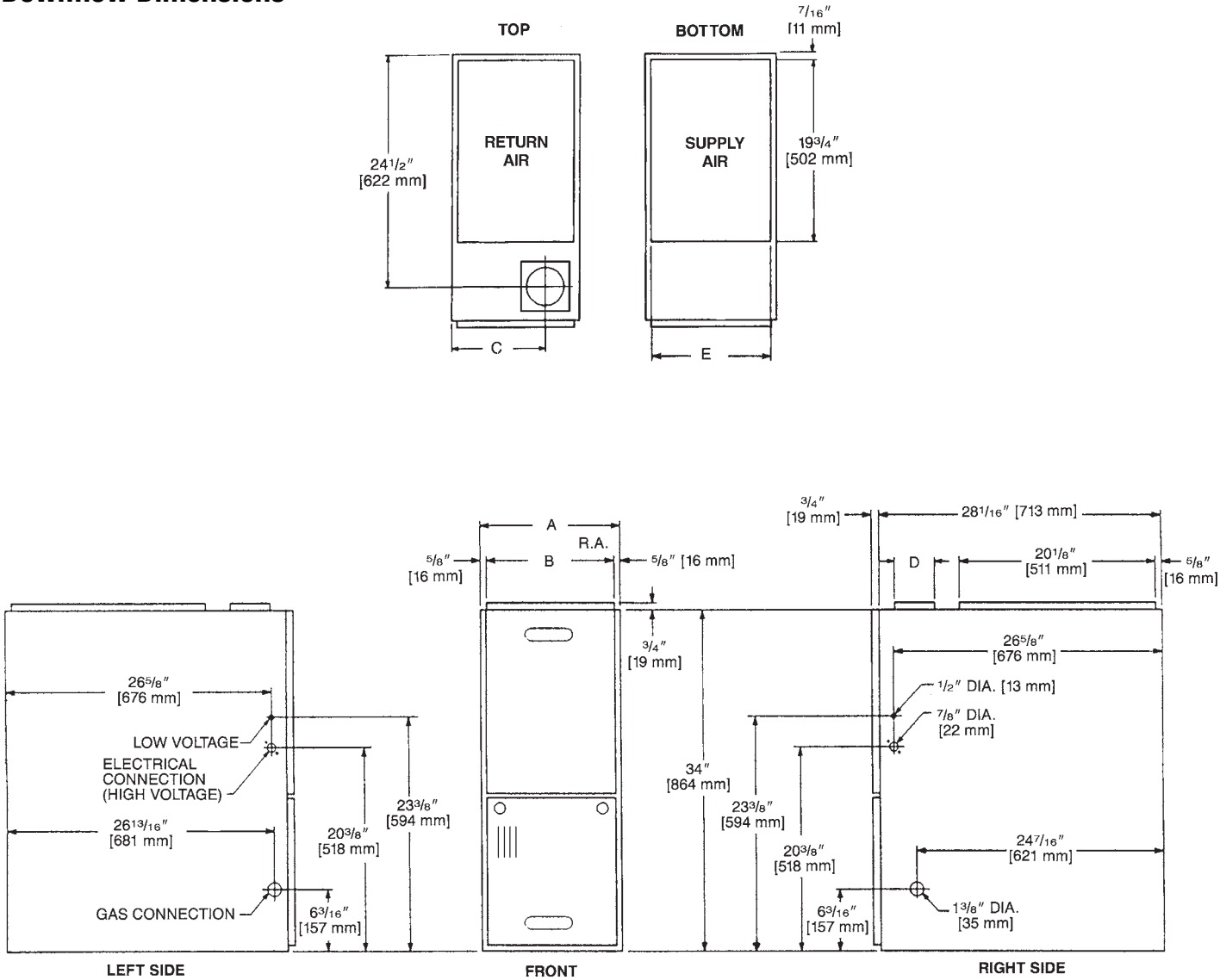
[ ] Designates Metric Conversions

Model Number Identification—Downflow Models

<u>U</u>	<u>80</u>	<u>2</u>	<u>V</u>	<u>A</u>	<u>075</u>	<u>4</u>	<u>17</u>	<u>Z</u>	<u>S</u>	<u>A</u>
Ruud	80 = 80% AFUE	2 = Two Stage	V = Variable Speed ECM	Design Series A = 1st Design	Input BTU/HR [kW] 075 = 75,000 [22] 100 = 100,000 [29] 125 = 125,000 [37]	3 = Up to 3 Ton 4 = 2½ to 4 Ton 5 = 3½ to 5 Ton	Cabinet Width 17 = 17.5" 21 = 21" 24 = 24.5"	Z = Down and Zero Clearance Downflow	X = Low NO <sub>x</sub> S = Standard	Revision- Marketing A – First Time Release B – 2nd Design Series

[ ] Designates Metric Conversions

Downflow Dimensions



Dimensions and Clearance to Combustible Material (inches) [mm]

MODEL U802V- SERIES	A	B	C	D	E	REDUCED CLEARANCES (IN.) [mm]						SHIP. WGTs. (LBS.) [kg]
						LEFT SIDE	RIGHT SIDE	BACK	TOP	FRONT	VENT	
075317	17 $\frac{1}{2}$ [445]	16 $\frac{11}{32}$ [415]	12 $\frac{1}{8}$ [308]	①	16 $\frac{5}{8}$ [422]	0	3 ②	0	1 [25]	3 [76]	6 [152] ③	110 [49.9]
075421	21 [533]	19 $\frac{27}{32}$ [504]	13 $\frac{7}{8}$ [352]	①	20 $\frac{1}{8}$ [511]	0	0	0	1 [25]	3 [76]	6 [152] ③	115 [52.2]
100	21 [533]	19 $\frac{27}{32}$ [504]	13 $\frac{7}{8}$ [352]	①	20 $\frac{1}{8}$ [511]	0	0	0	1 [25]	3 [76]	6 [152] ③	120 [54.4]
125	24 $\frac{1}{2}$ [622]	23 $\frac{11}{32}$ [593]	15 $\frac{5}{8}$ [397]	①	23 $\frac{5}{8}$ [600]	0	0	0	1 [25]	3 [76]	6 [152] ③	140 [63.5]

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/or Can/CGA-B149 Installation Codes and in accordance with local codes.

[ ] Designates Metric Conversions

## Blower Performance Data—Downflow Models

MODEL NUMBER				U802VA075317ZSA	U802VA075421ZSA	U802VA100521ZSA	U802VA125524ZSA
TARGET GAS HEATING AIRFLOW	HIGH HEATING CFM	SW15 = OFF	SW16 = OFF	1254	1305	1651	1830
		SW15 = ON	SW16 = OFF	1054	1173	1398	1600
		SW15 = OFF	SW16 = ON	DO NOT USE			
		SW15 = ON	SW16 = ON	953	1001	1251	1550
	LOW HEATING CFM	SW13 = OFF	SW14 = OFF	980	1125	1300	1300
		SW13 = ON	SW14 = OFF	850	850	1075	1250
		SW13 = OFF	SW14 = ON	DO NOT USE			
		SW13 = ON	SW14 = ON	750	700	875	1100
TARGET COOLING/ HEAT-PUMP AIRFLOW	HIGH COOLING CFM	SW4 = OFF	SW5 = OFF	1200	1600	2000	2000
		SW4 = ON	SW5 = OFF	1000	1400	1600	1600
		SW4 = OFF	SW5 = ON	800	1200	1400	1400
		SW4 = ON	SW5 = ON	600	1000	1200	1200
	LOW COOLING CFM	SW4 = OFF	SW5 = OFF	900	1200	1500	1500
		SW4 = ON	SW5 = OFF	750	1050	1200	1200
		SW4 = OFF	SW5 = ON	600	900	1050	1050
		SW4 = ON	SW5 = ON	450	750	900	900

[ ] Designates Metric Conversions

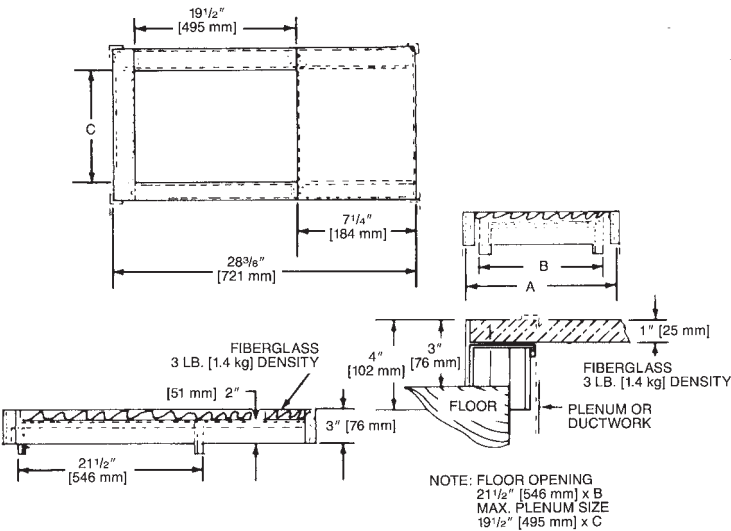
DOWNFLOW ACCESSORIES

**DOWNFLOW WARNING:** Unit design is certified for installation on non-combustible floor. A special factory supplied combustible floor sub-base is required when installing on a combustible floor. Failure to install the sub-base may result in fire, property damage and personal injury.

COMBUSTIBLE FLOOR BASE DIMENSIONS

COMBUSTIBLE FLOOR BASE	USE WITH FURNACE SIZES	A IN. [mm]	B IN. [mm]	C IN. [mm]
RXGC-B17	R802VA075317	18 [457]	16 <sup>3</sup> / <sub>4</sub> [425]	14 <sup>3</sup> / <sub>4</sub> [451]
RXGC-B21	R802VA075421, R802V100	21 <sup>1</sup> / <sub>2</sub> [546]	20 <sup>1</sup> / <sub>4</sub> [514]	18 <sup>1</sup> / <sub>4</sub> [464]
RXGC-B24	R802V125	25 [635]	23 <sup>3</sup> / <sub>4</sub> [603]	21 <sup>3</sup> / <sub>4</sub> [552]

[ ] Designates Metric Conversions



RXGF-CC\*

**FILTER RACK**—Downflow top return mount. Requires (2) 14 x 20 Filters.

**NOTE:** Filter racks are shipped without filters.

\*Filters available through PROSTOCK ®.

FOR HIGH ALTITUDES:

**HIGH ALTITUDE OPTION CODE:** 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

**MOTION SENSOR** – Automatically wakes the screen as you approach

**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

## ECONET SMART THERMOSTAT COMPATIBILITY

Models	Heating & Cooling							
	Gas Furnaces				Air Handlers		Air Conditioners	
	U802V	U96V	U97V	U98V	RH2T	RH2T	UA20	UA17*
UETST700SYS	✓	✓	✓	✓	✓	✓	✓	✓

\*Models not EcoNet Enabled: RA1724AJ2NB, RA1736AJ2NB, RA1748AJ2NB, RA1760AJ2NB

**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.*

Ruud Heating, Cooling & Water Heating • 5600 Old Greenwood Road  
Fort Smith, Arkansas 72908 • [www.ruud.com](http://www.ruud.com)

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