

Ruud Ultra™ Series Communicating Two-Stage Variable Speed Upflow/Horizontal Gas Furnace



U802V- Upflow/Horizontal Series

80% A.F.U.E.†

Input Rates 50-125 kBTU



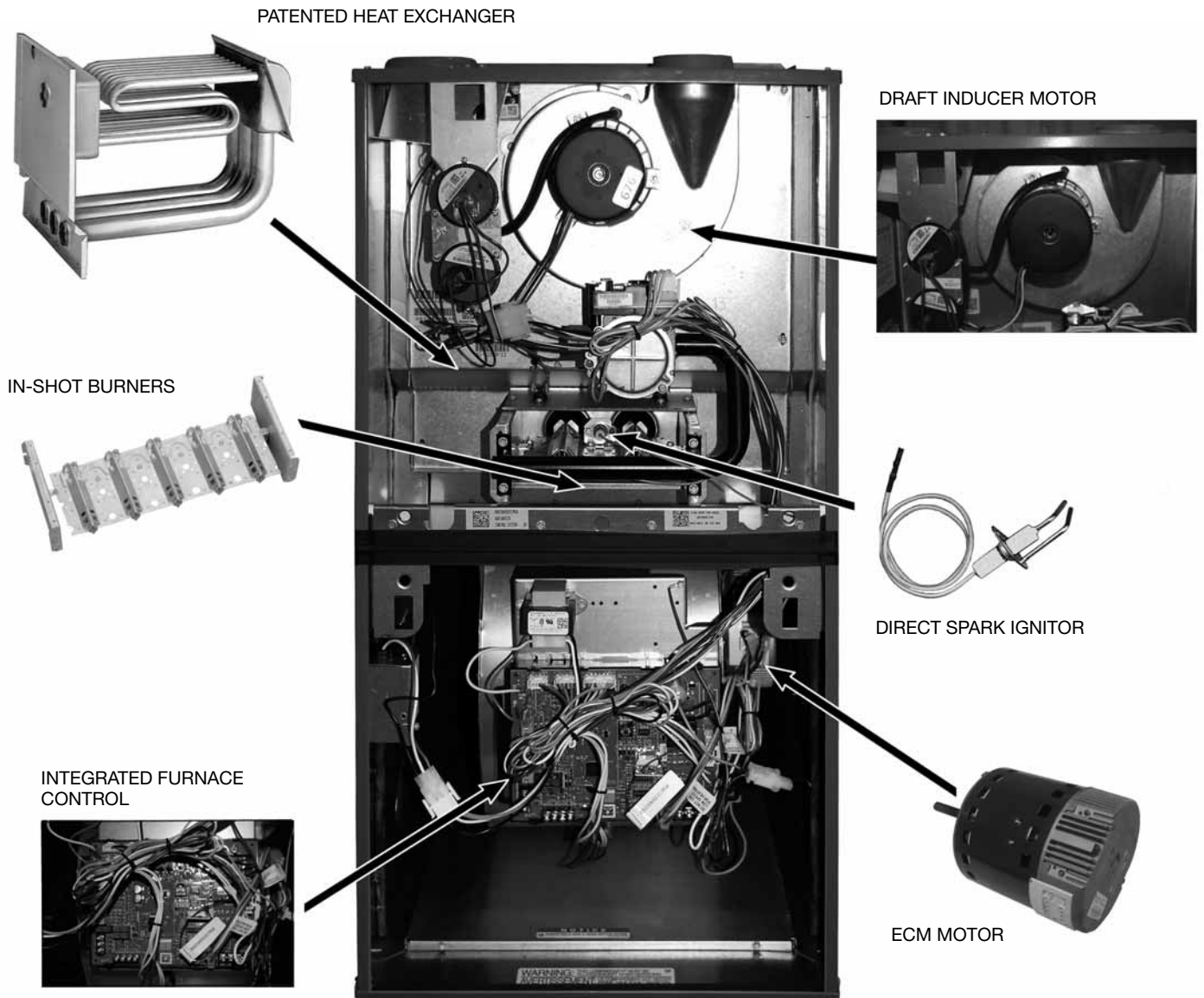
†A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.

- 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
- EcoNet enabled HVAC product
- 3 way multi poise design UF / HZ
- 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.
- Solid doors provide quiet operation
- Solid bottom

- Insulated blower compartment
- Low profile 34" cabinet ideal for space constrained installations
- Blower shelf design – serviceable in all furnace orientations
- Hemmed edges on cabinets and doors
- 1/4 turn door knobs for tool less access
- Integrated Control board features dip switches for easy system set up
- 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.

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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

Side and bottom filter frame assembly. 4" Flue Adapter

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% safety 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
- EcoNet enabled HVAC product
- 3 way multi poise design UF / HZ
- PlusOne™ Diagnostics – 7 Segment LED all units
- PlusOne™ Ignition System – DSI for reliability and longevity
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- Hemmed edges on cabinets and doors
- 1/4 turn door knobs for tool less access
- Integrated Controls board features dip switches for easy system set up
- 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

| MODEL NUMBERS U802V SERIES | U802VA050317M*A | U802VA075317M*A | U802VA075421M*A | U802VA100521M*A | U802VA125524M*A |
|---|-----------------------|-----------------------|-----------------------|------------------------|------------------------|
| High Input-BTU/Hr [kW] ② | 50,000 [15] | 75,000 [22] | 75,000 [22] | 100,000 [29] | 125,000 [37] |
| Heating Capacity BTU/Hr [kW] ① | 41,000 [12] | 61,000 [18] | 61,000 [18] | 81,000 [24] | 101,000 [30] |
| Low Input BTU/Hr [kW] ② | 35,000 [10] | 52,500 [15] | 52,500 [15] | 70,000 [20] | 87,500 [25] |
| Heating Capacity BTU/Hr [kW] ① | 28,000 [8] | 42,000 [12] | 42,000 [12] | 56,000 [16] | 70,000 [20] |
| Heat Ext. Static Pressure [kPa] | .18 [.045] | .20 [.050] | .20 [.050] | .28 [.070] | .28 [.070] |
| Blower (D x W) [mm] | 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] |
| Motor H.P. Type [W] | 1/2 ECM [373] | 1/2 ECM [373] | 3/4 ECM [560] | 3/4 ECM [560] | 3/4 ECM [560] |
| Min. Circuit Ampacity | 10 | 9 | 13 | 12 | 12 |
| Min. Overload Protection Device | 15 | 15 | 15 | 15 | 15 |
| Max. Overload Protection Device | 15 | 15 | 20 | 20 | 15 |
| Cooling CFM @ Rating Point [L/s] | 1200 [566] | 1200 [566] | 1600 [755] | 2000 [944] | 2000 [944] |
| Max. E.S.P. (In. W.C.) [kPa] | 1.0 [.249] | 1.0 [.249] | 1.0 [.249] | 1.0 [.249] | 1.0 [.249] |
| Temperature Rise Range °F [°C]–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] |
| Temperature Rise Range °F [°C]–Low Input | 20-50 [12.8-29.4] | 20-50 [12.8-29.4] | 20-50 [12.8-29.4] | 30-60 [18.3-35] | 30-60 [18.3-35] |
| Max. Outlet Air Temp. °F [°C] | 155 [68.3] | 155 [68.3] | 165 [73.8] | 180 [82.2] | 180 [82.2] |
| Approx. Shipping Weight (Lbs.) [kg] | 125 [57] | 125 [57] | 140 [64] | 140 [64] | 150 [68] |
| AFUE ① | 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.

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

② See Conversion Kit Index Form for high altitude derate.

* S = Standard, X = Low Nox

[] Designates Metric Conversions

Model Number Identification

| | | | | | | | | | | |
|----------|------------------|---------------|------------------------------|---------------------------------|--|--|--|-----------|---|---|
| <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>M</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] | 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" | M = Multi | X = Low NO _x S = Standard | Revision- Marketing (A – First Time Release) |
| | | | | | 050 = 50,000 [15] 075 = 75,000 [22] 100 = 100,000 [29] 125 = 125,000 [37] | | | | | |

[] Designates Metric Conversions

Upflow Application

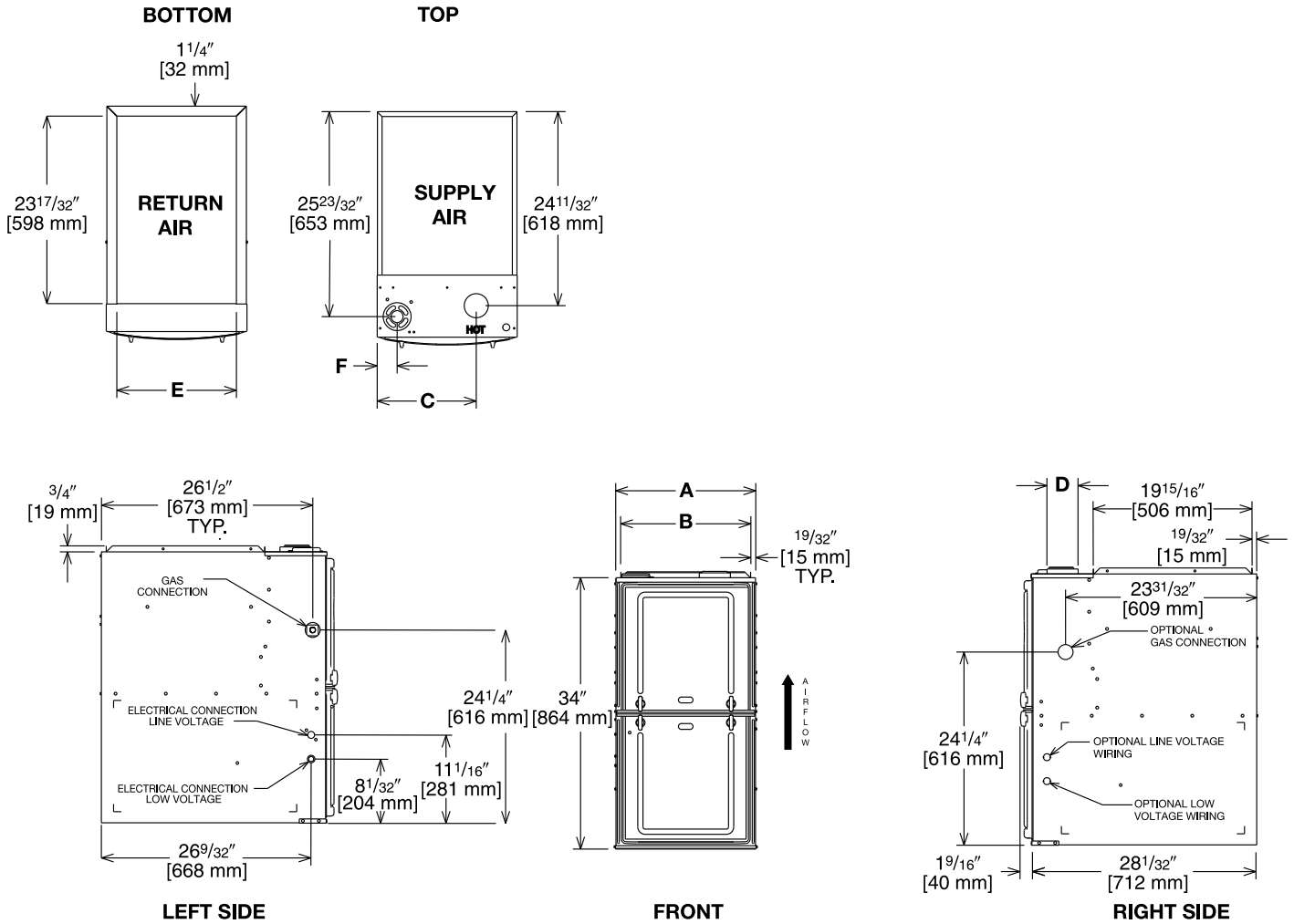


Illustration
ST-A1220-04-00
FIGURE 1

Dimensional Data: Upflow Model

| MODEL U802V- | A | B | C | D | E | F | MINIMUM CLEARANCE (IN.) [mm] | | | | | | SHIP WGTS. (LBS.) [kg] |
|-----------------|--------------|----------------|--------------|---|--------------|------------|------------------------------|---------------|------|--------|--------|-----------|------------------------------|
| | | | | | | | LEFT SIDE | RIGHT SIDE | BACK | TOP | FRONT | VENT | |
| 050, 075317 | 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] |
| 075421, 100 | 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 [593] | 15 7/8 [403] | ① | 22 [559] | 2 1/2 [64] | 0 | 0 | 0 | 1 [25] | 3 [76] | 6 [152] ③ | 150 [68] |

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 in accordance with local codes.

[] Designates Metric Conversions

Horizontal Application

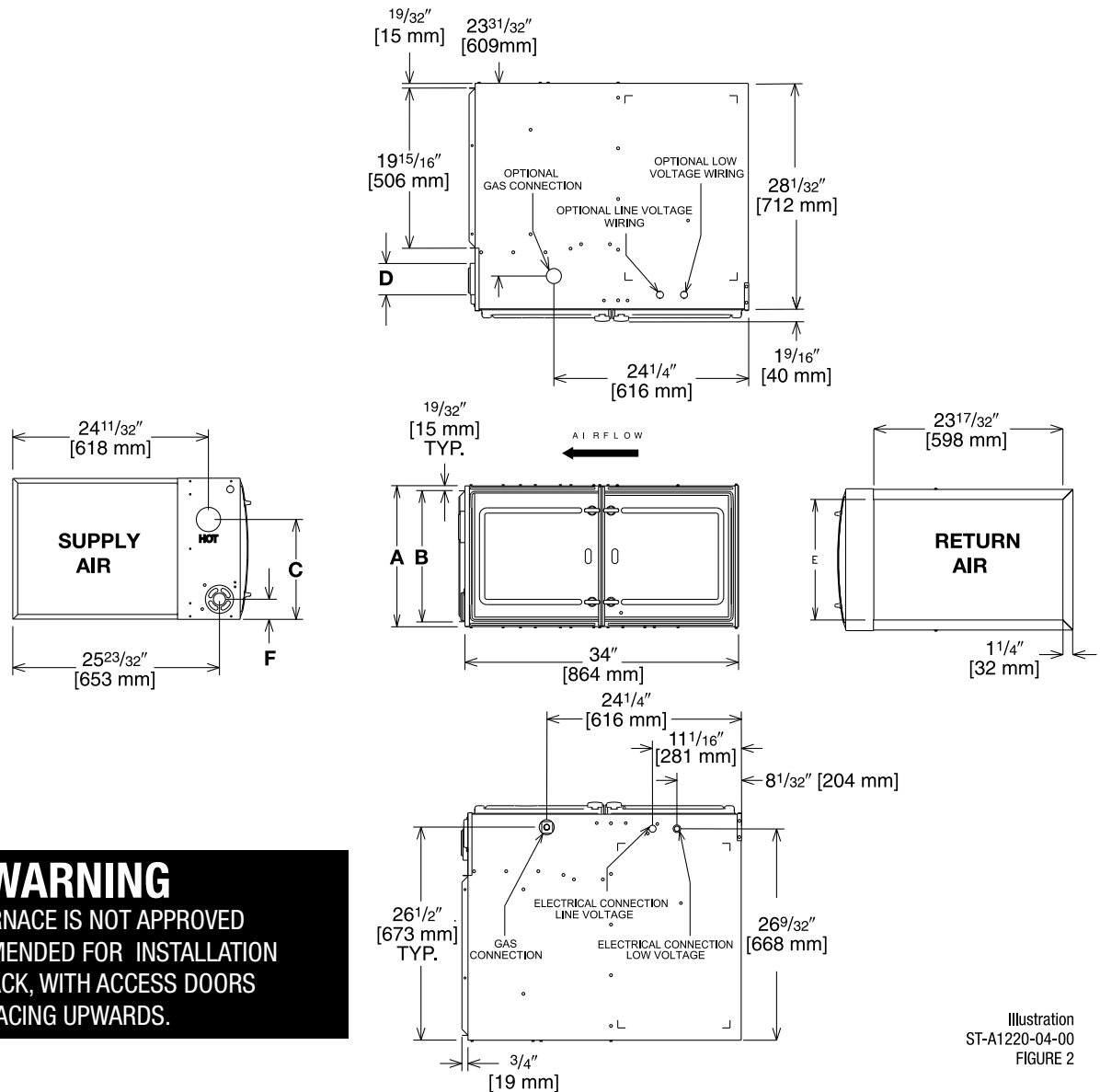


Illustration
ST-A1220-04-00
FIGURE 2

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

Dimensional Data: Horizontal Model

| MODEL U802V- | A | B | C | D | E | F | MINIMUM CLEARANCE (IN.) [mm] | | | | | SHIP WGTS. (LBS.) [kg] | |
|-----------------|--------------------------------------|--|--------------------------------------|---|--------------------------------------|------------------------------------|------------------------------|--------------------|------|--------|--------|------------------------------|----------|
| | | | | | | | SUPPLY AIR SIDE | RETURN AIR SIDE | BACK | TOP | FRONT | | VENT |
| 050, 075317 | 17 ¹ / ₂ [445] | 16 ¹¹ / ₃₂ [415] | 12 ³ / ₈ [314] | ① | 15 [381] | 2 ¹ / ₂ [64] | 3 [76] ② | 0 | 0 | 1 [25] | 3 [76] | 6 [152] ③ | 125 [57] |
| 075421, 100 | 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 [593] | 15 ⁷ / ₈ [403] | ① | 22 [559] | 2 ¹ / ₂ [64] | 0 | 0 | 0 | 1 [25] | 3 [76] | 6 [152] ③ | 150 [68] |

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 in accordance with local codes.

[] Designates Metric Conversions

Blower Performance Data

| MODEL NUMBER | | | | U802VA050317MSA | U802VA075317MSA | U802VA075421MSA | U802VA100521MSA | U802VA125524MSA | |
|----------------------------------|------------------|------------|------------|-----------------|-----------------|-----------------|-----------------|-----------------|--|
| TARGET GAS HEATING AIRFLOW | HIGH HEATING CFM | SW15 = OFF | SW16 = OFF | 890 | 1425 | 1345 | 1400 | 1985 | |
| | | SW15 = ON | SW16 = OFF | 790 | 1200 | 1100 | 1250 | 1700 | |
| | | SW15 = OFF | SW16 = ON | DO NOT USE | | | | | |
| | | SW15 = ON | SW16 = ON | 735 | 1075 | 960 | 1150 | 1530 | |
| | LOW HEATING CFM | SW13 = OFF | SW14 = OFF | 835 | 1125 | 1045 | 1200 | 1500 | |
| | | SW13 = ON | SW14 = OFF | 590 | 950 | 865 | 1050 | 1275 | |
| | | SW13 = OFF | SW14 = ON | DO NOT USE | | | | | |
| | | SW13 = ON | SW14 = ON | 510 | 825 | 665 | 950 | 1150 | |
| TARGET COOLING/HEAT-PUMP AIRFLOW | HIGH COOLING CFM | SW4 = OFF | SW5 = OFF | 1200 | 1200 | 1600 | 2000 | 2000 | |
| | | SW4 = ON | SW5 = OFF | 1000 | 1000 | 1400 | 1600 | 1600 | |
| | | SW4 = OFF | SW5 = ON | 800 | 800 | 1200 | 1400 | 1400 | |
| | | SW4 = ON | SW5 = ON | 600 | 600 | 1000 | 1200 | 1200 | |
| | LOW COOLING CFM | SW4 = OFF | SW5 = OFF | 900 | 900 | 1200 | 1500 | 1500 | |
| | | SW4 = ON | SW5 = OFF | 750 | 750 | 1050 | 1200 | 1200 | |
| | | SW4 = OFF | SW5 = ON | 600 | 600 | 900 | 1050 | 1050 | |
| | | SW4 = ON | SW5 = ON | 450 | 450 | 750 | 900 | 900 | |

Table represents blower performance data without filters.

[] Designates Metric Conversions

SIDE RETURN FILTER RACK: RXGF-CD

BOTTOM RETURN FILTER RACK FOR UPFLOW APPLICATION: RXGF-CB

| FILTER RACK FILTER SIZES* INCHES [mm] | | |
|---------------------------------------|---|---|
| MODEL U802V | RXGF-CB (UPFLOW/HORIZONTAL) | RXGF-CD (UPFLOW) SIDE RETURN |
| 050 & 075317 | 15 ³ / ₄ x 25 [400 x 635] | 15 ³ / ₄ x 25 [400 x 635] |
| 075421 & 100 | 19 ¹ / ₄ x 25 [489 x 635] | 15 ³ / ₄ x 25 [400 x 635] |
| 125 | 22 ³ / ₄ x 25 [578 x 635] | 15 ³ / ₄ x 25 [400 x 635] |

INDOOR COIL CASINGS

| MODEL NUMBER |
|--------------|
| 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. [mm] | SOLID BOTTOM KIT NO. | BASE PLATE NO. | BASE PLATE SIZE IN. [mm] |
|--------------------------------------|----------------------|----------------|--|
| 17 ¹ / ₂ [445] | RXGB-D17 | AE-61874-02 | 15 ¹ / ₈ x 23 ⁹ / ₁₆ [384 x 598] |
| 21 [533] | RXGB-D21 | AE-61874-03 | 18 ⁵ / ₈ x 23 ⁹ / ₁₆ [473 x 598] |
| 24 ¹ / ₂ [622] | RXGB-D24 | AE-61874-04 | 25 ⁵ / ₈ x 23 ⁹ / ₁₆ [651 x 598] |

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.

[] Designates Metric Conversions

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 Control² System Condensing Units & Heat Pumps are compatible with EcoNet when matched with a U802V Gas Furnace and with an EcoNet Translator (RETRN620CC2) installed on the Comfort Control² System control board.

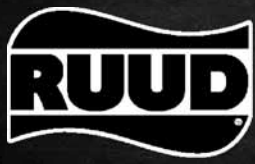
*Available through PROSTOCK®.

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 ExchangerLimited 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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