



## Endeavor® Line Achiever® Series Gas Furnaces



### R921T

92% A.F.U.E.†

Heating Stages: Single Stage

Motor Type: Constant Torque

Input Rates: 40 to 115 kBTU [11.7 to 33.7 kW]

Configuration Options: 4-Way Multi-Position



1

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

<sup>1</sup>Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and heat pumps must be matched with appropriate coil components to meet ENERGY STAR®. Ask your Contractor for details or visit [www.energystar.gov](http://www.energystar.gov).

Table of Contents

Features and Benefits .....3

Model Number Identification .....4

Physical Data and Specifications .....5

Dimensional Data .....6

Blower Performance Data .....7

Accessories .....8

Limited Warranty .....9

## Features and Benefits

- **PlusOne® Energy Efficiency:** ENERGY STAR® (South) certified, featuring 92% AFUE across all model sizes
- **PlusOne® Diagnostics:** Industry-first, 7-Segment LED for quick and easy service
- **PlusOne® Ignition System:** Proven Direct Spark Ignition (DSI) for reliability and longevity
- **PlusOne® Water Management System:** Ruud-exclusive patented block drain sensor that automatically shuts off the furnace when the drain is blocked and alerts the contractor via diagnostic code

Gas Furnaces

| <u>R</u> | <u>92</u>          | <u>1</u>          | <u>T</u>            | <u>040</u>                                                                                                                                                 | <u>3</u>                           | <u>A</u>              | <u>17</u>                                              | <u>M4</u>        | <u>S</u>     | <u>N</u>              | <u>A</u>       | <u>S</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 | 92 - 92% AFUE      | 1 - Single-Stage  | T - Constant Torque | 040 - 40,000 [11.7 kW]<br>060 - 60,000 [17.6 kW]<br>070 - 70,000 [21.5 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 | N - Non-Communicating | A - 1st Series | S - Standard Grade |

[ ] Designates Metric Conversions

| AVAILABLE MODELS   |
|--------------------|
| R921T0403A17M4SNAS |
| R921T0603A17M4SNAS |
| R921T0703A17M4SNAS |
| R921T0705A21M4SNAS |
| R921T0855A21M4SNAS |
| R921T1005A21M4SNAS |
| R921T1155A24M4SNAS |

| STANDARD EQUIPMENT                                       |
|----------------------------------------------------------|
| 100% Safety Lock Out                                     |
| 29-4c Stainless Steel Secondary Heat Exchanger Design    |
| 7 Segment Led                                            |
| Aluminized Steel Primary Heat Exchanger Design           |
| Blocked Drain Sensor                                     |
| Blower Compartment Door Safety Switch                    |
| Completely Assembled and Wired                           |
| Cool Fan Off Delay                                       |
| Direct Drive Motor                                       |
| Electronic Air Cleaner Connections                       |
| Field Selectable Heat Fan Off Delay                      |
| Flame Sense Current Diagnostics                          |
| Fully Insulated Heat Exchanger Cabinet                   |
| Humidifier Connections                                   |
| Induced Draft Motor                                      |
| Limit Controls                                           |
| Low Speed Continuous Fan Option                          |
| Manual Shut-Off Valve                                    |
| Marked Condensate Hoses                                  |
| Multi-Speed Constant Torque Blower Motor                 |
| One Hour Automatic Retry                                 |
| Power and Self-Test Diagnostics                          |
| Pressure Switch                                          |
| Redundant Main Gas Control                               |
| Single Speed Option for Heating and Cooling Applications |
| Solid Bottom                                             |
| Blower Insulation                                        |
| Solid State Time On/Off Blower Control                   |
| Transformer                                              |
| Twinning (Built-In) Features                             |

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

## Physical Data and Specifications

| MODEL NUMBERS                                              | R921T0403A<br>17M4SNAS                | R921T0603A<br>17M4SNAS                | R921T0703A<br>17M4SNAS                | R921T0705A<br>21M4SNAS              | R921T0855A<br>21M4SNAS              | R921T1005A<br>21M4SNAS              | R921T1155A<br>24M4SNAS              |
|------------------------------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| HIGH FIRE INPUT<br>BTU/HR [kW] ①                           | 42,000 [12.30]                        | 56,000 [16.41]                        | 70,000 [20.51]                        | 70,000 [20.51]                      | 84,000 [24.61]                      | 98,000 [28.72]                      | 112,000 [32.82]                     |
| HEATING CAPACITY<br>BTU/HR [kW]                            | 39,900 [11.69]                        | 53,200 [15.59]                        | 66,500 [19.49]                        | 66,500 [19.49]                      | 79,800 [23.39]                      | 93,100 [27.28]                      | 106,400 [31.18]                     |
| HIGH ALTITUDE OUTPUT<br>10% DERATE [kW] ②                  | 35,910 [10.52]                        | 47,880 [14.03]                        | 59,850 [17.54]                        | 59,850 [17.54]                      | 71,820 [21.05]                      | 83,790 [24.56]                      | 95,760 [28.06]                      |
| BLOWER (D x W) [mm]                                        | 11 x 7<br>[279 x 178]                 | 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 10<br>[279 x 254]              | 11 x 11<br>[279 x 279]              |
| MOTOR H.P. [W]—TYPE                                        | 1/2 [373]<br>5 Spd Constant<br>Torque | 1/2 [373]<br>5 Spd Constant<br>Torque | 1/2 [373]<br>5 Spd Constant<br>Torque | 1 [746]<br>5 Spd Constant<br>Torque | 1 [746]<br>5 Spd Constant<br>Torque | 1 [746]<br>5 Spd Constant<br>Torque | 1 [746]<br>5 Spd Constant<br>Torque |
| MIN. CIRCUIT AMPACITY                                      | 10.00                                 | 10.00                                 | 10.00                                 | 17.00                               | 17.00                               | 17.00                               | 17.00                               |
| MIN. OVERLOAD<br>PROTECTION DEVICE                         | 15.00                                 | 15.00                                 | 15.00                                 | 15.00                               | 20.00                               | 20.00                               | 20.00                               |
| MAX. OVERLOAD<br>PROTECTION DEVICE                         | 15.00                                 | 15.00                                 | 15.00                                 | 20.00                               | 20.00                               | 20.00                               | 20.00                               |
| MOTOR FULL LOAD AMPS                                       | 6.1                                   | 6.1                                   | 6.1                                   | 12.4                                | 12.4                                | 12.4                                | 12.4                                |
| MAXIMUM EXT. STATIC<br>PRESSURE (IN. W.C.) [kPa]           | .9 [0.224]                            | .9 [0.224]                            | .9 [0.224]                            | .9 [0.224]                          | .9 [0.224]                          | .9 [0.224]                          | .9 [0.224]                          |
| HEATING SPEED                                              | MED-LOW                               | MED-LOW                               | MED                                   | MED-LOW                             | MED-LOW                             | MED-LOW                             | MED                                 |
| COOLING SPEED                                              | HIGH                                  | HIGH                                  | HIGH                                  | HIGH                                | HIGH                                | HIGH                                | HIGH                                |
| TEMPERATURE RISE-<br>HIGH FIRE RANGE IN<br>DEGREES °F [°C] | 25 - 55<br>[14 - 31]                  | 35 - 65<br>[19 - 36]                  | 40 - 70<br>[22 - 39]                  | 30 - 60<br>[17 - 33]                | 35 - 65<br>[19 - 36]                | 40 - 70<br>[22 - 39]                | 45 - 75<br>[25 - 42]                |
| APPROX. SHIPPING WEIGHT<br>(LBS.) [kg]                     | 123<br>[56]                           | 128<br>[58]                           | 133.5<br>[61]                         | 146.5<br>[66]                       | 150<br>[68]                         | 155<br>[70]                         | 190<br>[86.2]                       |
| AFUE ③                                                     | 92.00%                                | 92.00%                                | 92.00%                                | 92.00%                              | 92.00%                              | 92.00%                              | 92.00%                              |

NOTES: All models are 115V, 60HZ, 1 Phase Gas connection size for all models is 1/2" [13 mm] N.P.T.

① Installation instructions for high altitude derate.

② Canadian installations only.

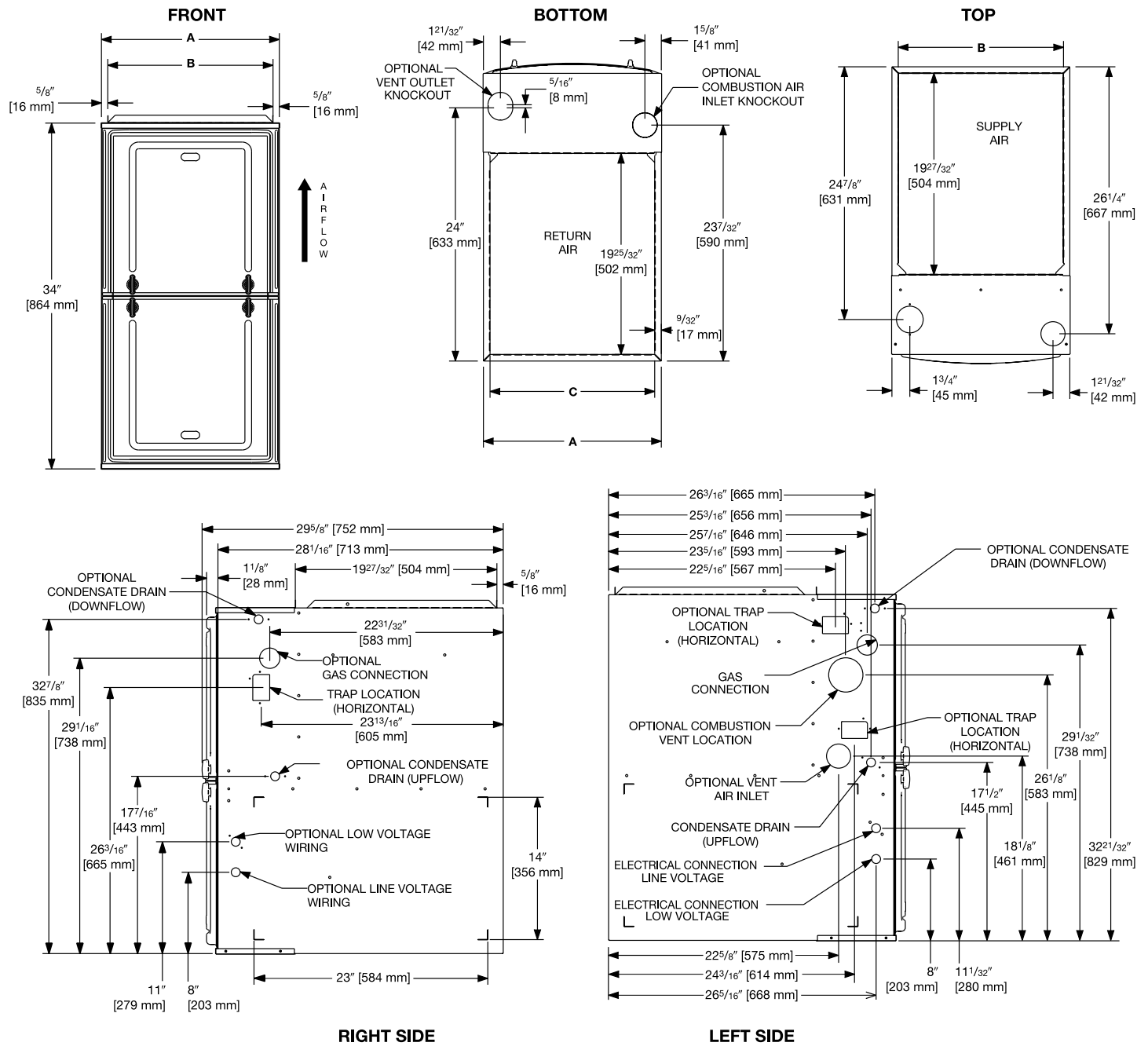
③ In accordance with D.O.E. test procedures.

NOTE: Standard model complies with California low NOx requirements up to 40ng/J.

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 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



## Unit Dimensions Clearance to Combustibles

| MODEL<br>R921T | LEFT<br>SIDE | MINIMUM CLEARANCE (IN.) [mm] |      |        |        |      | FLANGE DIMENSIONS |                |                |
|----------------|--------------|------------------------------|------|--------|--------|------|-------------------|----------------|----------------|
|                |              | RIGHT<br>SIDE                | BACK | TOP    | FRONT  | VENT | A                 | B              | C              |
| 040            | 0            | 0                            | 0    | 1 [25] | 2 [51] | 0    | 17 1/2 [445]      | 16 17/64 [413] | 16 13/64 [412] |
| 060            | 0            | 0                            | 0    | 1 [25] | 2 [51] | 0    | 17 1/2 [445]      | 16 17/64 [413] | 16 13/64 [412] |
| 070            | 0            | 0                            | 0    | 1 [25] | 2 [51] | 0    | 17 1/2 [445]      | 16 17/64 [413] | 16 13/64 [412] |
| 070 (wide)     | 0            | 0                            | 0    | 1 [25] | 2 [51] | 0    | 21 [533]          | 19 49/64 [502] | 19 45/64 [500] |
| 085            | 0            | 0                            | 0    | 1 [25] | 2 [51] | 0    | 21 [533]          | 19 49/64 [502] | 19 45/64 [500] |
| 100            | 0            | 0                            | 0    | 1 [25] | 2 [51] | 0    | 21 [533]          | 19 49/64 [502] | 19 45/64 [500] |
| 115            | 0            | 0                            | 0    | 1 [25] | 2 [51] | 0    | 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

| AIR FLOW PERFORMANCE - 92% SINGLE STAGE CONSTANT TORQUE |                             |                           |                                                                  |      |       |      |      |      |      |      |      |      |
|---------------------------------------------------------|-----------------------------|---------------------------|------------------------------------------------------------------|------|-------|------|------|------|------|------|------|------|
| INPUT [BTU]<br>CABINET<br>WIDTH [IN]                    | AIRFLOW<br>CONTROL SETTINGS | SPEED TAP/<br>WIRE COLORS | CFM AIR DELIVERY<br>EXTERNAL STATIC PRESSURE INCHES WATER COLUMN |      |       |      |      |      |      |      |      |      |
|                                                         |                             |                           | 0.1                                                              | 0.2  | 0.3   | 0.4  | 0.5  | 0.6  | 0.7  | 0.8  | 0.9  | 1    |
| 40K<br>17"                                              | Factory Setting Fan         | Low/Red                   | 807                                                              | 765  | 717   | 666  | 612  | 557  | 502  | 448  | 396  | 349  |
|                                                         | Heat or Heat/Cool           | Medium Low/ Yellow        | 965                                                              | 921  | 874   | 824  | 771  | 716  | 659  | 601  | 543  | 484  |
|                                                         | Cool                        | Medium/ Purple            | 1076                                                             | 1035 | 994   | 953  | 910  | 864  | 813  | 758  | 697  | 630  |
|                                                         | Cool                        | Medium High/ Blue         | 1150                                                             | 1108 | 1068  | 1030 | 991  | 951  | 908  | 860  | 806  | 745  |
|                                                         | Factory Setting Cooling     | High/Black                | 1298                                                             | 1259 | 1220  | 1182 | 1144 | 1106 | 1067 | 1028 | 987  | 945  |
| 60K<br>17"                                              | Factory Setting Fan         | Low/Red                   | 998                                                              | 950  | 906   | 853  | 791  | 728  | 676  | 634  | 584  | 542  |
|                                                         | Heat or Heat/Cool           | Medium Low/ Yellow        | 1060                                                             | 1016 | 963   | 924  | 862  | 802  | 753  | 706  | 663  | 616  |
|                                                         | Cool                        | Medium/ Purple            | 1143                                                             | 1104 | 1060  | 1016 | 970  | 930  | 873  | 820  | 769  | 725  |
|                                                         | Cool                        | Medium High/ Blue         | 1328                                                             | 1293 | 1258  | 1220 | 1183 | 1142 | 1107 | 1069 | 1016 | 960  |
|                                                         | Factory Setting Cooling     | High/Black                | 1473                                                             | 1441 | 1403  | 1366 | 1331 | 1295 | 1265 | 1236 | 1200 | 1159 |
| 70K<br>17"                                              | Factory Setting Fan         | Low/Red                   | 635                                                              | 602  | 564   | 524  | 482  | 440  | 399  | 362  | 329  | 302  |
|                                                         | Cool                        | Medium Low/ Yellow        | 1080                                                             | 1035 | 985   | 931  | 874  | 816  | 759  | 704  | 654  | 610  |
|                                                         | Heat or Heat/Cool           | Medium/ Purple            | 1222                                                             | 1183 | 1138  | 1090 | 1039 | 985  | 931  | 877  | 824  | 774  |
|                                                         | Cool                        | Medium High/ Blue         | 1371                                                             | 1330 | 1290  | 1251 | 1210 | 1169 | 1125 | 1078 | 1028 | 972  |
|                                                         | Factory Setting Cooling     | High/Black                | 1458                                                             | 1421 | 1385  | 1349 | 1312 | 1274 | 1235 | 1193 | 1148 | 1101 |
| 70K<br>21"                                              | Factory Setting Fan         | Low/Red                   | 1154                                                             | 1105 | 1046  | 980  | 911  | 841  | 773  | 709  | 653  | 608  |
|                                                         | Heat or Heat/Cool           | Medium Low/ Yellow        | 1450                                                             | 1405 | 1357  | 1307 | 1255 | 1202 | 1147 | 1091 | 1036 | 981  |
|                                                         | Cool                        | Medium/ Purple            | 1583                                                             | 1536 | 1490  | 1446 | 1401 | 1356 | 1308 | 1257 | 1203 | 1144 |
|                                                         | Cool                        | Medium High/ Blue         | 1750                                                             | 1703 | 1662  | 1626 | 1591 | 1556 | 1520 | 1479 | 1432 | 1377 |
|                                                         | Factory Setting Cooling     | High/Black                | 1981                                                             | 1931 | 1894  | 1865 | 1835 | 1797 | 1745 | 1671 | 1568 | 1428 |
| 85K<br>21"                                              | Factory Setting Fan         | Low/Red                   | 1086                                                             | 1022 | 931   | 855  | 812  | 734  | 679  | 606  | 559  | 526  |
|                                                         | Heat or Heat/Cool           | Medium Low/ Yellow        | 1651                                                             | 1611 | 1571  | 1518 | 1476 | 1434 | 1383 | 1311 | 1271 | 1208 |
|                                                         | Cool                        | Medium / Purple           | 1755                                                             | 1712 | 1670  | 1626 | 1596 | 1531 | 1490 | 1445 | 1421 | 1337 |
|                                                         | Cool                        | Medium High/ Blue         | 2042                                                             | 1996 | 1971  | 1944 | 1901 | 1872 | 1849 | 1812 | 1767 | 1738 |
|                                                         | Factory Setting Cooling     | High/Black                | 2114                                                             | 2082 | 2049  | 2009 | 1974 | 1940 | 1903 | 1821 | 1752 | 1633 |
| 100K<br>21"                                             | Factory Setting Fan         | Low/Red                   | 1336                                                             | 1274 | 1200  | 1156 | 1090 | 1019 | 965  | 916  | 852  | 796  |
|                                                         | Heat or Heat/Cool           | Medium Low/ Yellow        | 1574                                                             | 1521 | 14881 | 1423 | 1376 | 1327 | 1272 | 1218 | 1170 | 1114 |
|                                                         | Cool                        | Medium/Purple             | 1683                                                             | 1644 | 1609  | 1559 | 1521 | 1464 | 1427 | 1366 | 1313 | 1280 |
|                                                         | Cool                        | Medium High/ Blue         | 1843                                                             | 1801 | 1771  | 1732 | 1696 | 1661 | 1611 | 1533 | 1531 | 1461 |
|                                                         | Factory Setting Cooling     | High/Black                | 2063                                                             | 2018 | 1992  | 1943 | 1914 | 1875 | 1837 | 1807 | 1768 | 1726 |
| 115K<br>24"                                             | Factory Setting Fan         | Low/Red                   | 1406                                                             | 1336 | 1268  | 1196 | 1125 | 1078 | 1003 | 942  | 869  | 808  |
|                                                         | Cool                        | Medium Low/ Yellow        | 1561                                                             | 1491 | 1423  | 1359 | 1304 | 1227 | 1171 | 1123 | 1071 | 1018 |
|                                                         | Heat or Heat/Cool           | Medium/ Purple            | 1696                                                             | 1645 | 1586  | 1533 | 1480 | 1407 | 1370 | 1305 | 1254 | 1220 |
|                                                         | Cool                        | Medium High/ Blue         | 1852                                                             | 1801 | 1761  | 1701 | 1630 | 1591 | 1523 | 1466 | 1427 | 1362 |
|                                                         | Factory Setting Cooling     | High/Black                | 1996                                                             | 1951 | 1890  | 1840 | 1799 | 1741 | 1666 | 1612 | 1602 | 1534 |

## 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/HORIZONTAL) RACK:**  
RXGF-CB

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

**EXTERNAL (DOWNFLOW) FILTER RACK:** RXGF-CC

| FILTER RACK FILTER SIZES* INCHES [mm] |                                                    |                                                    |                        |
|---------------------------------------|----------------------------------------------------|----------------------------------------------------|------------------------|
| MODEL                                 | RXGF-CB<br>(UPFLOW/<br>HORIZONTAL)                 | RXGF-CD<br>(UPFLOW)                                | RXGF-CC<br>(DOWNFLOW)  |
| R921T(-)040                           | 15 <sup>3</sup> / <sub>4</sub> x 25<br>[400 x 635] | 15 <sup>3</sup> / <sub>4</sub> x 25<br>[400 x 635] | 14 x 20<br>[356 x 508] |
| R921T(-)060                           | 15 <sup>3</sup> / <sub>4</sub> x 25<br>[400 x 635] | 15 <sup>3</sup> / <sub>4</sub> x 25<br>[400 x 635] | 14 x 20<br>[356 x 508] |
| R921T(-)070                           | 15 <sup>3</sup> / <sub>4</sub> x 25<br>[400 x 635] | 15 <sup>3</sup> / <sub>4</sub> x 25<br>[400 x 635] | 14 x 20<br>[356 x 508] |
| R921T(-)070<br>(wide)                 | 19 <sup>1</sup> / <sub>4</sub> x 25<br>[489 x 635] | 15 <sup>3</sup> / <sub>4</sub> x 25<br>[400 x 635] | 12 x 20<br>[305 x 508] |
| R921T(-)085                           | 19 <sup>1</sup> / <sub>4</sub> x 25<br>[489 x 635] | 15 <sup>3</sup> / <sub>4</sub> x 25<br>[400 x 635] | 14 x 20<br>[356 x 508] |
| R921T(-)100                           | 19 <sup>1</sup> / <sub>4</sub> x 25<br>[489 x 635] | 15 <sup>3</sup> / <sub>4</sub> x 25<br>[400 x 635] | 14 x 20<br>[356 x 508] |
| R921T(-)115                           | 22 <sup>3</sup> / <sub>4</sub> x 25<br>[578 x 635] | 15 <sup>3</sup> / <sub>4</sub> x 25<br>[400 x 635] | 14 x 20<br>[356 x 508] |

[ ] Designates Metric Conversions

## Indoor Coil Casings

| MODEL<br>NUMBER |
|-----------------|
| RXBC-D17A1      |
| RXBC-D21A1      |
| RXBC-D21B1      |
| RXBC-D24A1      |

## For High Altitudes:

**NOTE:** For Canadian installations only, an optional derate (manifold gas pressure reduction) method may be used to adjust the furnace for altitude. See Installation Instructions for more information. This optional method may **NOT** be used for U.S. installations. See installation instructions as appropriate orifice change is required.

**L.P. CONVERSION KIT:** RXGJ-FP38

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

**DOWNFLOW/HORIZONTAL CONVERSION KIT:** RXGY-CK

**DOWNFLOW/HORIZONTAL LEFT ZERO CLEARANCE  
CONVERSION KIT:** RXGY-ZK

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



## 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 Parts<br>(Registration Required)..... | Ten (10) Years   |
| Heat Exchanger .....                              | Limited Lifetime |

**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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