



The new degree of comfort.®

## Endeavor™ Line *Classic*® Series Gas Furnaces



### R801T

80% A.F.U.E.†

Heating Stages: Single Stage

Motor Type: Constant Torque

Input Rates: 50-125 kBTU [14.6-36.6 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:** Industry-first, 7-segment LED for quick & easy service
- **PlusOne® Ignition System:** Proven Direct Spark Ignition (DSI) for reliability and longevity
- **Low Profile, 34-inch Cabinet:** Makes our furnaces ideal for space-constrained installations
- **Hemmed Cabinet & Door Edges and Quarter-Turn Door Fasteners (Upflow/Horizontal only):** Allows for safe, tool-less access and serviceability
- **Removable Heat Exchanger:** Built with a primary aluminized steel and secondary stainless steel construction, provides maximum corrosion resistance, thermal fatigue reliability and improved serviceability
- **Pre-Marked Hoses:** Offers easier identification and installation
- **Blower Shelf Design:** Ensures serviceability in all furnace orientations
- **Replaceable Collector Box:** Enables replacement of only the collector box, and doesn't require replacement of the heat exchanger
- **Venting with 2 or 3-inch PVC:** Offers options that can be used on all furnace heating input sizes
- **Self-Priming Condensate Trap:** Allows for on-going water saturation within the trap to keep it primed, and eliminates the need for seasonal service on the condensate trap

# Gas Furnaces

| <u>R</u>  | <u>80</u>          | <u>1</u>          | <u>T</u>            | <u>050</u>   | <u>3</u>  | <u>A</u>              | <u>14</u>  | <u>UH</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 - Rheem | 80 - 80% AFUE      | 1 - Single-Stage  | T - Constant Torque | 050 - 50K BTUH [14.7 kW]<br>075 - 75K BTUH [22.0 kW]<br>100 - 100K BTUH [29.3 kW]<br>125 - 125K BTUH [36.6 kW] | 3 - 3 ton drive<br>4 - 4 ton drive<br>5 - 5 ton drive | A - 1st Design Series | 14 - 14" Width<br>17 - 17.5" Width<br>21 - 21" Width<br>24 - 24.5" Width | UH - Upflow<br>Horizontal | S - Standard<br>N - Low NOx | N - Non-Comm. | A - 1st Series | S - Standard Grade |

[ ] Designates Metric Conversions

| AVAILABLE MODELS   |
|--------------------|
| R801T0503A14UHSNAS |
| R801T0754A17UHSNAS |
| R801T0754A21UHSNAS |
| R801T1005A21UHSNAS |
| R801T1255A24UHSNAS |
| R801T0503A14UHNNAS |
| R801T0754A17UHNNAS |
| R801T0754A21UHNNAS |
| R801T1005A21UHNNAS |
| R801T1255A24UHNNAS |

| STANDARD EQUIPMENT                                       |
|--|
| Limit controls   |
| Manual shut-off valve                                    |
| 100% safety lock out                                     |
| Cool fan off delay                                       |
| Field selectable heat 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                                   |
| Low speed continuous fan option                          |
| Single speed option for heating and cooling applications |
| Transformer  |
| Direct drive motor                                       |
| Multi-speed constant torque blower motor                 |
| Solid bottom   |

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

## Physical Data and Specifications—Upflow Models

| MODEL NUMBERS R801T                    | R801T0503A14UH*NAS                 | R801T0754A17UH*NAS                 | R801T0754A21UH*NAS                 | R801T1005A21UH*NAS                 | R801T1255A24UH*NAS                 |
|--|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Constant Tq-UH Series                  |                                    |                                    |                                    |                                    |                                    |
| Input-BTU/Hr [kW]                      | 50,000 [15]                        | 75,000 [22]                        | 75,000 [22]                        | 100,000 [29]                       | 125,000 [37]                       |
| Heating Capacity<br>BTU/Hr [kW] ©      | 40,000 [12]                        | 60,000 [18]                        | 60,000 [18]                        | 80,000 [23]                        | 100,000 [29]                       |
| Heat Ext. Static<br>Pressure [kPa]     | .18 [.05]                          | .20 [.05]                          | .20 [.05]                          | .28 [.07]                          | .28 [.07]                          |
| Blower (D x W) [mm]                    | 11 x 6<br>[279 x 152]              | 11 x 7<br>[279 x 178]              | 11 x 7<br>[279 x 178]              | 11 x 10<br>[279 x 254]             | 11 x 10<br>[279 x 254]             |
| Motor H.P. [W] Type                    | 1/2 [373]<br>5 Spd Constant Torque | 1/2 [373]<br>5 Spd Constant Torque | 3/4 [560]<br>5 Spd Constant Torque | 3/4 [560]<br>5 Spd Constant Torque | 3/4 [560]<br>5 Spd Constant Torque |
| Min. Circuit Ampacity                  | 8                                  | 8                                  | 9                                  | 10                                 | 11                                 |
| Min. Overload<br>Protection Device     | 15                                 | 15                                 | 15                                 | 15                                 | 15                                 |
| Max. Overload<br>Protection Device     | 15                                 | 15                                 | 15                                 | 15                                 | 15                                 |
| Heating Speed                          | Med                                | Med                                | Med-High                           | Med                                | Med-High                           |
| Cooling Speed                          | High                               | High                               | High                               | High                               | High                               |
| Cooling CFM @ Rating<br>Point [L/s]    | 1305<br>[616]                      | 1402<br>[662]                      | 1608<br>[759]                      | 1840<br>[868]                      | 1934<br>[913]                      |
| Max. E.S.P. (In. W.C.) [kPa]           | 0.9 [.22]                          | 0.9 [.22]                          | 0.9 [.22]                          | 0.9 [.22]                          | 0.9 [.22]                          |
| Temperature Rise<br>Range °F [°C]      | 25-55<br>[13.9-30.6]               | 25-55<br>[13.9-30.6]               | 25-55<br>[13.9-30.6]               | 40-70<br>[22-39]                   | 35-65<br>[19.4-36.1]               |
| Max. Outlet Air<br>Temp. °F [°C]       | 155<br>[68.3]                      | 155<br>[68.3]                      | 160<br>[71.1]                      | 180<br>[82.2]                      | 165<br>[73.8]                      |
| Approx. Shipping<br>Weight (Lbs.) [kg] | 110<br>[50]                        | 125<br>[57]                        | 140<br>[64]                        | 140<br>[64]                        | 150<br>[68]                        |
| AFUE ©                                 | 80.00%                             | 80.00%                             | 80.00%                             | 80.00%                             | 80.00%                             |

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

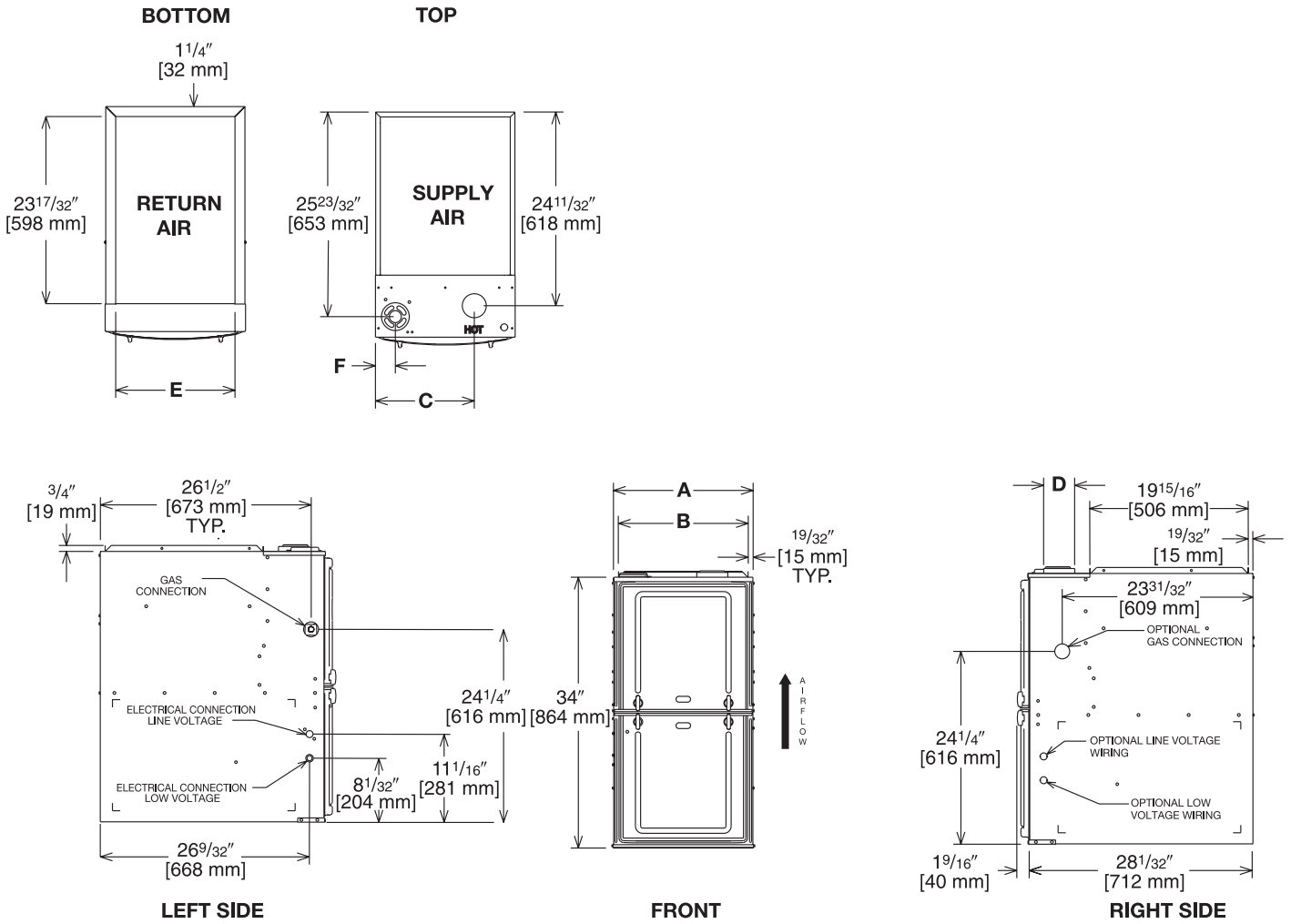


Illustration  
ST-A1220-04-00  
FIGURE 1

## Dimensional Data: Upflow Model

| MODEL<br>R801T- | A                                    | B                                      | C                                    | D | E                                    | F                                  | MINIMUM CLEARANCE (IN.) [mm] |               |      |        |        | SHIP<br>WGTS.<br>(LBS.) [kg] |          |
|-----------------|--------------------------------------|--|--------------------------------------|---|--------------------------------------|------------------------------------|------------------------------|---------------|------|--------|--------|------------------------------|----------|
|                 |                                      |  |                                      |   |                                      |                                    | LEFT<br>SIDE                 | RIGHT<br>SIDE | BACK | TOP    | FRONT  |                              | VENT     |
| 050             | 14 [356]                             | 12 <sup>27</sup> / <sub>32</sub> [326] | 10 <sup>5</sup> / <sub>8</sub> [270] | ① | 11 <sup>1</sup> / <sub>2</sub> [292] | 1 <sup>7</sup> / <sub>8</sub> [48] | 0                            | 4 [102] ②     | 0    | 1 [25] | 3 [76] | 6 [152] ③                    | 110 [50] |
| 075417          | 17 <sup>1</sup> / <sub>2</sub> [445] | 16 <sup>11</sup> / <sub>32</sub> [415] | 12 <sup>3</sup> / <sub>8</sub> [314] | ① | 15 [381]                             | 2 <sup>1</sup> / <sub>2</sub> [64] | 0                            | 3 [76] ②      | 0    | 1 [25] | 3 [76] | 6 [152] ③                    | 125 [57] |
| 075421/100      | 21 [533]                             | 19 <sup>27</sup> / <sub>32</sub> [504] | 14 <sup>1</sup> / <sub>8</sub> [359] | ① | 18 <sup>1</sup> / <sub>2</sub> [470] | 2 <sup>1</sup> / <sub>2</sub> [64] | 0                            | 0             | 0    | 1 [25] | 3 [76] | 6 [152] ③                    | 140 [64] |
| 125             | 24 <sup>1</sup> / <sub>2</sub> [622] | 23 <sup>11</sup> / <sub>32</sub> [593] | 15 <sup>7</sup> / <sub>8</sub> [403] | ① | 22 [559]                             | 2 <sup>1</sup> / <sub>2</sub> [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.

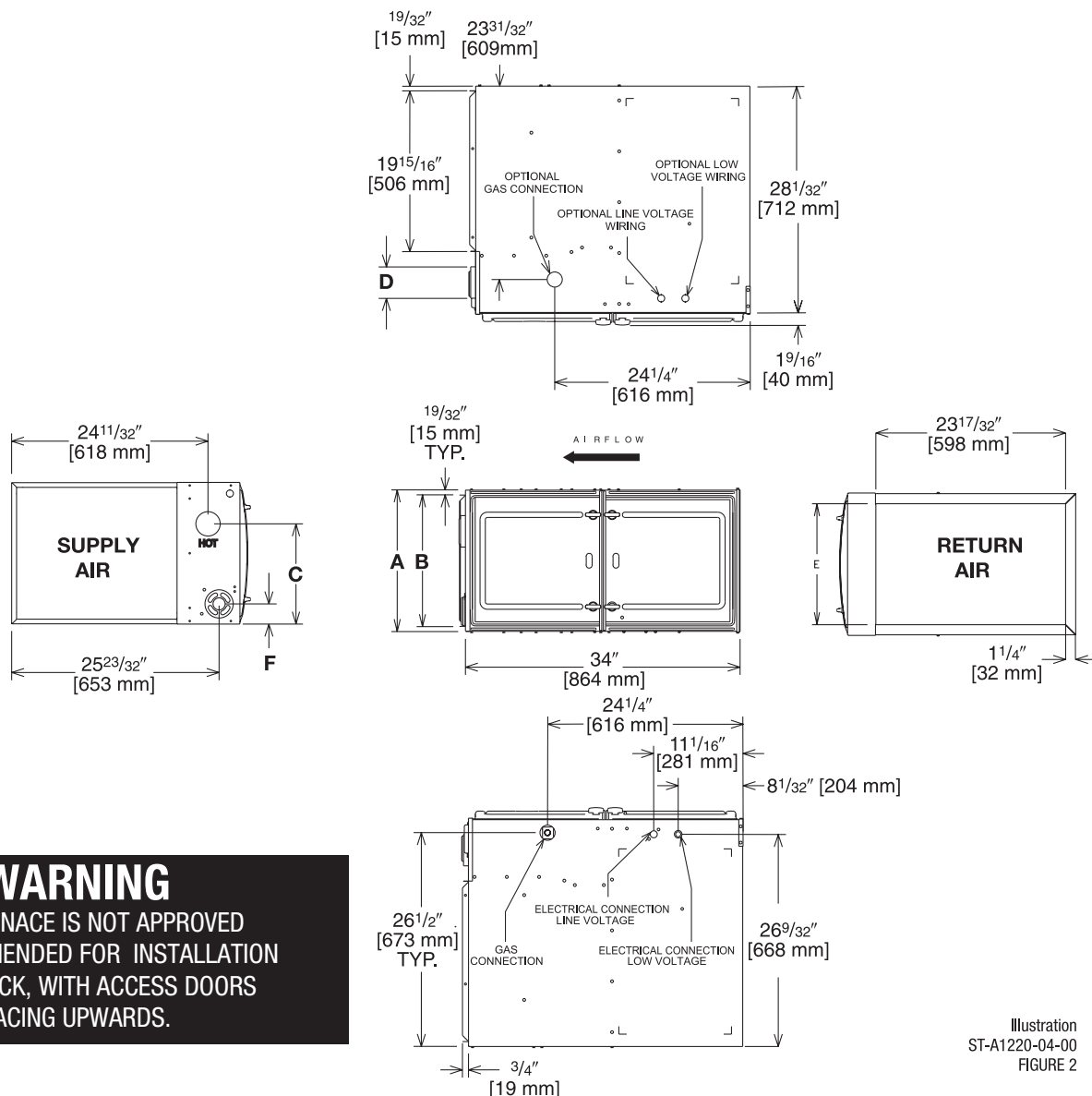
② May be 0" [0 mm] with type B vent.

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 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<br>R801T | A                                    | B                                      | C                                    | D | E                                    | F                                   | MINIMUM CLEARANCE (IN.) [mm] |                    |      |        |        |           | SHIP<br>WGTS.<br>(LBS.) [kg] |
|----------------|--------------------------------------|--|--------------------------------------|---|--------------------------------------|-------------------------------------|------------------------------|--------------------|------|--------|--------|-----------|------------------------------|
|                |                                      |  |                                      |   |                                      |                                     | SUPPLY<br>AIR SIDE           | RETURN<br>AIR SIDE | BACK | TOP    | FRONT  | VENT      |                              |
| 050            | 14 [356]                             | 12 <sup>27</sup> / <sub>32</sub> [326] | 10 <sup>5</sup> / <sub>8</sub> [270] | ① | 11 <sup>1</sup> / <sub>2</sub> [292] | 17 <sup>8</sup> / <sub>8</sub> [48] | 4 [102] ②                    | 4 [102] ②          | 0    | 1 [25] | 3 [76] | 6 [152] ③ | 110 [50]                     |
| 075417         | 17 <sup>1</sup> / <sub>2</sub> [445] | 16 <sup>11</sup> / <sub>32</sub> [415] | 12 <sup>3</sup> / <sub>8</sub> [314] | ① | 15 [381]                             | 2 <sup>1</sup> / <sub>2</sub> [64]  | 3 [76] ②                     | 3 [76] ②           | 0    | 1 [25] | 3 [76] | 6 [152] ③ | 125 [57]                     |
| 075421/100     | 21 [533]                             | 19 <sup>27</sup> / <sub>32</sub> [504] | 14 <sup>1</sup> / <sub>8</sub> [359] | ① | 18 <sup>1</sup> / <sub>2</sub> [470] | 2 <sup>1</sup> / <sub>2</sub> [64]  | 0                            | 0                  | 0    | 1 [25] | 3 [76] | 6 [152] ③ | 140 [64]                     |
| 125            | 24 <sup>1</sup> / <sub>2</sub> [622] | 23 <sup>11</sup> / <sub>32</sub> [593] | 15 <sup>7</sup> / <sub>8</sub> [403] | ① | 22 [559]                             | 2 <sup>1</sup> / <sub>2</sub> [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 and in accordance with local codes.

[ ] Designates Metric Conversions

## Air Flow Performance - 80% Single Stage Upflow/ Horizontal Constant Torque

| AIR FLOW PERFORMANCE - 80% SINGLE STAGE DOWNFLOW CONSTANT TORQUE |                                |                              |  |      |      |      |      |      |      |      |      |      |
|--|--------------------------------|------------------------------|--|------|------|------|------|------|------|------|------|------|
| INPUT [BTU]<br>CABINET<br>WIDTH [IN]                             | AIRFLOW<br>CONTROL<br>SETTINGS | SPEED TAP/<br>WIRE<br>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  | 1.0  |
| 50K<br>14"   | Factory Setting Fan            | Low/Red                      | 915  | 777  | 674  | 598  | 541  | 498  | 460  | 419  | 370  | 304  |
|  | Cool                           | Medium Low/ Yellow           | 963  | 894  | 834  | 781  | 733  | 689  | 646  | 602  | 555  | 504  |
|  | Heat or Heat/Cool              | Medium/ Purple               | 997  | 976  | 947  | 911  | 870  | 825  | 779  | 732  | 687  | 646  |
|  | Cool                           | Medium High/ Blue            | 1123   | 1130 | 1121 | 1101 | 1071 | 1036 | 997  | 957  | 920  | 888  |
|  | Factory Setting Cooling        | High/Black                   | 1246   | 1244 | 1232 | 1211 | 1185 | 1154 | 1121 | 1087 | 1054 | 1024 |
| 75K<br>17"   | Factory Setting Fan            | Low/Red                      | 967  | 916  | 865  | 814  | 763  | 712  | 661  | 610  | 558  | 505  |
|  | Cool                           | Medium Low/ Yellow           | 1206   | 1147 | 1087 | 1027 | 966  | 905  | 843  | 783  | 722  | 662  |
|  | Cool                           | Medium/ Purple               | 1301   | 1260 | 1214 | 1164 | 1111 | 1058 | 1005 | 955  | 910  | 870  |
|  | Heat or Heat/Cool              | Medium High/ Blue            | 1413   | 1369 | 1324 | 1277 | 1229 | 1181 | 1130 | 1079 | 1026 | 972  |
|  | Factory Setting Cooling        | High/Black                   | 1590   | 1556 | 1530 | 1486 | 1437 | 1387 | 1342 | 1303 | 1276 | 1265 |
| 75K<br>21"   | Factory Setting Fan            | Low/Red                      | 1216   | 1174 | 1132 | 1088 | 1043 | 998  | 952  | 905  | 858  | 811  |
|  | Cool                           | Medium Low/ Yellow           | 1314   | 1271 | 1229 | 1188 | 1147 | 1105 | 1063 | 1019 | 974  | 926  |
|  | Heat or Heat/Cool              | Medium/ Purple               | 1400   | 1356 | 1315 | 1276 | 1239 | 1200 | 1161 | 1120 | 1076 | 1027 |
|  | Cool                           | Medium High/ Blue            | 1605   | 1576 | 1544 | 1509 | 1473 | 1436 | 1400 | 1365 | 1333 | 1303 |
|  | Factory Setting Cooling        | High/Black                   | 1686   | 1659 | 1628 | 1595 | 1559 | 1524 | 1489 | 1455 | 1426 | 1400 |
| 100K<br>21"  | Factory Setting Fan            | Low/Red                      | 1304   | 1233 | 1162 | 1091 | 1018 | 944  | 869  | 793  | 716  | 637  |
|  | Cool                           | Medium Low/ Yellow           | 1406   | 1348 | 1289 | 1229 | 1168 | 1106 | 1044 | 982  | 920  | 859  |
|  | Heat or Heat/Cool              | Medium/ Purple               | 1520   | 1465 | 1409 | 1353 | 1296 | 1239 | 1183 | 1128 | 1073 | 1019 |
|  | Cool                           | Medium High/ Blue            | 1709   | 1658 | 1607 | 1557 | 1507 | 1457 | 1407 | 1358 | 1308 | 1260 |
|  | Factory Setting Cooling        | High/Black                   | 1807   | 1758 | 1710 | 1663 | 1616 | 1569 | 1522 | 1475 | 1428 | 1380 |
| 125K<br>24"  | Factory Setting Fan            | Low/Red                      | 1295   | 1216 | 1138 | 1061 | 986  | 914  | 844  | 778  | 715  | 657  |
|  | Cool                           | Medium Low/ Yellow           | 1649   | 1598 | 1548 | 1499 | 1449 | 1400 | 1351 | 1302 | 1252 | 1201 |
|  | Cool                           | Medium/ Purple               | 1796   | 1746 | 1698 | 1652 | 1606 | 1561 | 1515 | 1469 | 1422 | 1374 |
|  | Heat or Heat/Cool              | Medium High/ Blue            | 1878   | 1828 | 1781 | 1735 | 1691 | 1647 | 1604 | 1560 | 1516 | 1470 |
|  | Factory Setting Cooling        | High/Black                   | 1943   | 1893 | 1846 | 1801 | 1757 | 1714 | 1673 | 1631 | 1589 | 1547 |



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

**SIDE RETURN FILTER RACK: RXGF-CD**

| FILTER RACK FILTER SIZES* INCHES [mm] |  |  |
|---------------------------------------|--|--|
| MODEL                                 | RXGF-CB<br>(UPFLOW/<br>HORIZONTAL)                 | RXGF-CD<br>(UPFLOW)<br>SIDE RETURN                 |
| R801TA050                             | 12 <sup>1</sup> / <sub>4</sub> x 25<br>[311 x 635] | 15 <sup>3</sup> / <sub>4</sub> x 25<br>[400 x 635] |
| R801TA075417                          | 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] |
| R801TA075421/<br>R801TA100            | 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] |
| R801TA125                             | 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] |

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

**Indoor Coil Casings**

| MODEL<br>NUMBER |
|-----------------|
| RXBC-D14AI      |
| RXBC-D17AI      |
| RXBC-D21AI      |
| RXBC-D21BI      |
| RXBC-D24AI      |

**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<br>WIDTH<br>IN. [mm]         | SOLID<br>BOTTOM<br>KIT NO. | BASE<br>PLATE NO. | BASE<br>PLATE SIZE<br>IN. [mm]   |
|--------------------------------------|----------------------------|-------------------|--|
| 14 [356]                             | RXGB-D14                   | AE-61874-01       | 11 <sup>5</sup> / <sub>8</sub> x 23 <sup>9</sup> / <sub>16</sub> [295 x 598] |
| 17 <sup>1</sup> / <sub>2</sub> [445] | RXGB-D17                   | AE-61874-02       | 15 <sup>1</sup> / <sub>8</sub> x 23 <sup>9</sup> / <sub>16</sub> [384 x 598] |
| 21 [533]                             | RXGB-D21                   | AE-61874-03       | 18 <sup>5</sup> / <sub>8</sub> x 23 <sup>9</sup> / <sub>16</sub> [473 x 598] |
| 24 <sup>1</sup> / <sub>2</sub> [622] | RXGB-D24                   | AE-61874-04       | 25 <sup>5</sup> / <sub>8</sub> x 23 <sup>9</sup> / <sub>16</sub> [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







The new degree of comfort®

**GENERAL TERMS OF LIMITED WARRANTY\***

Rheem 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  
(Registration Required) ..... Ten (10) Years  
Heat Exchanger ..... Twenty (20) 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, Rheem reserves the right to make changes without notice.*

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