

GAS FURNACES



RGRC- SERIES
Model with Input Rates
from 45,000 to 105,000 BTU/HR
[13.19 to 30.77 kW]
(All Models 95% A.F.U.E.†)



"Visit www.Ruud.com
for complete details."

ACHIEVER® **95% A.F.U.E.** **HIGH EFFICIENCY** **UPFLOW** **GAS FURNACES**

The Ruud® 95% A.F.U.E. High Efficiency line of upflow gas furnaces are designed for utility rooms, closets or alcoves.

The design is certified by CSA.

Features

- Heat exchanger is constructed of all stainless steel for maximum corrosion resistance and thermal fatigue reliability.
- Low profile "34 inch" design is lighter and easier to handle and leaves room for optional accessories.
- Left or right side gas, electric, and condensate drainage connections on upflow models.
- Integrated control board manages all operational functions and provides hookups for humidifier and electronic air cleaner.
- An insulated blower compartment, a slow-opening gas valve and a specially designed inducer system make it one of the quietest furnaces on the market today.
- Pre-paint galvanized steel cabinet.
- Molded permanent filters.
- Optional indoor or outdoor combustion air. In addition, combustion air may be piped to either the top or side of the cabinet on all upflow models. A special molded fitting is provided to ease installation.
- Control fuse protection.
- Solid bottom is standard.
- Control board diagnostics.

A variety of cooling coils and plenums designed to use with the Achiever® 95% A.F.U.E. gas furnaces are available as optional accessories for air conditioning models.

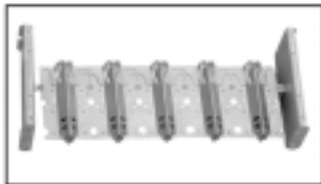
†A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.



ACHIEVER® 95% A.F.U.E. HIGH EFFICIENCY UPFLOW GAS FURNACE



PRIMARY AND SECONDARY HEAT EXCHANGER



IN-SHOT BURNERS



PRESSURE SWITCHES

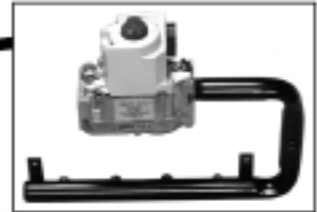


INTEGRATED FURNACE CONTROL

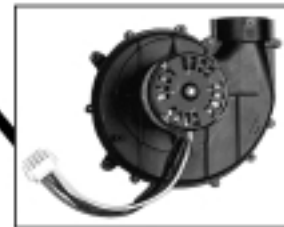
REMOTE SENSOR



DIRECT SPARK IGNITION & REMOTE SENSOR



GAS VALVE AND MANIFOLD



DRAFT INDUCER

STANDARD EQUIPMENT

Completely assembled and wired; heat exchanger; primary: 409 and aluminized 409 stainless steel, secondary: 29-4C stainless steel; induced draft; pressure switches; redundant main gas control; blower compartment door safety switch; solid state time on/off blower control; 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; humidifier on/off delay; low speed continuous fan option; single speed option for heating and cooling applications; pressure regulator for natural and L.P. (propane) gasses; transformer; direct drive, multi-speed blower motor. (Please note: a thermostat is not included as standard equipment.)

OPTIONAL EQUIPMENT

Side and bottom filter racks; return air cabinet for all sizes.

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

All models can be converted by a qualified 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 parts distributor.

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

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

BEFORE PURCHASING THIS APPLIANCE, READ IMPORTANT ENERGY COST AND EFFICIENCY INFORMATION AVAILABLE FROM YOUR RETAILER.

PHYSICAL DATA AND SPECIFICATIONS—UPFLOW MODELS

U.S. and Canadian Models

| MODEL NUMBERS | RGRC-04*MAES | RGRC-06*MAES | RGRC-07*MAES | RGRC-07*RBGS | RGRC-09*ZAJ5 | RGRC-10*ZAJ5 |
|-----------------------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
| HIGH FIRE INPUT BTU/HR [kW] ① | 45,000 [13.19] | 60,000 [17.58] | 75,000 [21.98] | 75,000 [21.98] | 90,000 [26.38] | 105,000 [30.77] |
| HEATING CAPACITY BTU/HR [kW] | 42,000 [12.31] | 56,000 [16.41] | 70,000 [20.51] | 70,000 [20.51] | 84,000 [24.62] | 100,000 [29.27] |
| HIGH ALTITUDE OUTPUT AT 8000' (HIGH FIRE) [kW] ② | 28,458 [8.34] | 37,944 [11.12] | 47,430 [13.90] | 47,430 [13.90] | 56,915 [16.69] | 66,402 [19.46] |
| BLOWER (D x W) [mm] | 11 x 7 [279 x 178] | 11 x 7 [279 x 178] | 11 x 7 [279 x 178] | 12 x 11 [305 x 279] | 12 x 11 [305 x 279] | 12 x 11 [305 x 279] |
| MOTOR H.P. [W]—TYPE | 1/2 [373]-4-PSC | 1/2 [373]-4-PSC | 1/2 [373]-4-PSC | 1/2 [373]-4-PSC | 3/4 [559]-4-PSC | 3/4 [559]-4-PSC |
| MOTOR FULL LOAD AMPS | 6.8 | 6.8 | 6.8 | 6.8 | 9.5 | 9.5 |
| HEATING SPEED | MED-LO | MED-HIGH | MED-HIGH | MED-HIGH | MED-HIGH | MED-HIGH |
| COOLING SPEED | HIGH | HIGH | HIGH | HIGH | HIGH | HIGH |
| MINIMUM EXT. STATIC PRESSURE (IN. W.C.) [kPa] | .10 [.025] | .12 [.029] | .12 [.029] | .12 [.029] | .15 [.037] | .20 [.049] |
| MAXIMUM EXT. STATIC PRESSURE (IN. W.C.) [kPa] | .50 [.124] | .50 [.124] | .50 [.124] | .50 [.124] | .50 [.124] | .50 [.124] |
| HEATING CFM @ .2" [.049 kPa] W.C. E.S.P. [L/s] | 885 [417] | 845 [398] | 1050 [495] | 1500 [708] | 1640 [774] | 1445 [682] |
| COOLING CFM @ .5" [.124 kPa] W.C. E.S.P. [L/s] | 1195 [564] | 1100 [519] | 1110 [524] | 1600 [755] | 1820 [859] | 1810 [854] |
| TEMPERATURE RISE-HIGH FIRE RANGE IN DEGREES °F [°C] | 30-60 [16.7-33.3] | 40-70 [22.2-38.9] | 40-70 [22.2-38.9] | 30-60 [16.7-33.3] | 35-65 [19.4-36.1] | 50-80 [27.8-44.4] |
| RETURN AIR CABINETS (OPT.) RXGR-FILTER SIZE [mm] | C17B (2) 12" x 16" [305 x 406] | C17B (2) 12" x 16" [305 x 406] | C17B (2) 12" x 16" [305 x 406] | C21B (2) 12" x 20" [305 x 508] | C21B (2) 12" x 20" [305 x 508] | C21B (2) 12" x 20" [305 x 508] |
| STANDARD, HIGH VELOCITY PERMANENT FILTER (IN.) | 15 ³ / ₄ x 25 x 1 | 15 ³ / ₄ x 25 x 1 | 15 ³ / ₄ x 25 x 1 | 19 ¹ / ₄ x 25 x 1 | 19 ¹ / ₄ x 25 x 1 | 19 ¹ / ₄ x 25 x 1 |
| APPROX. SHIPPING WEIGHT (LBS.) [kg] | 111 [50.3] | 117 [53.1] | 124 [56.2] | 137 [62.1] | 148 [67.1] | 152 [68.9] |
| AFUE ③ | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% | 95.0% |

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

① See Conversion Kit Index Form for high altitude derate.

② Canadian installations only.

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

*E=Standard

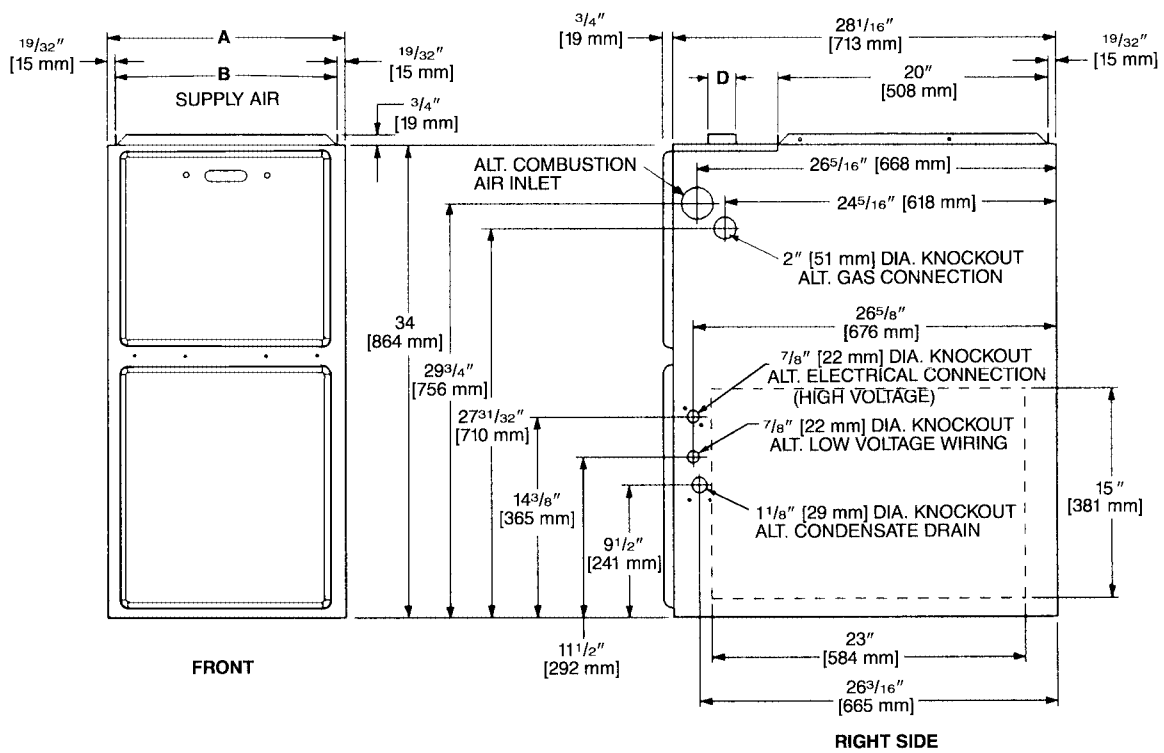
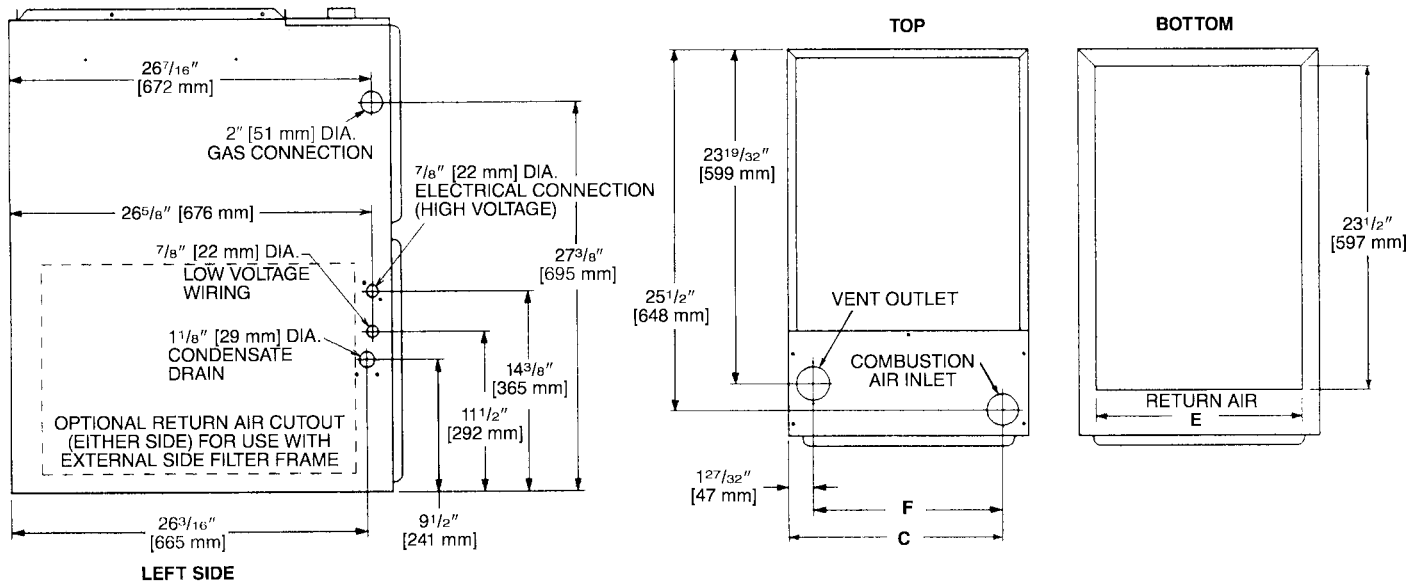
*N=NOx Models

MODEL IDENTIFICATION

| <u>R</u> | <u>G</u> | <u>R</u> | <u>C</u> | <u>04E</u> | <u>M</u> | <u>A</u> | <u>E</u> | <u>S</u> |
|----------|----------------|--------------------------------------|------------------|------------------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Ruud | Gas Furnace | Upflow/ Condensing Gas Furnace | Design Series | Heating Input Designation | Blower Size M = 11 x 7 [279 x 178 mm] R = 11 x 10 [279 x 254 mm] Z = 12 x 11 [305 x 279 mm] | Variations A = Std. Cabinet B = Wide Cabinet | Heat/Cool Designation E = 1100-1300 CFM [519-613.5 L/s] G = 1500-1700 CFM [707.9-802.3 L/s] J = 1900-2100 CFM [896.7-991.1 L/s] | Fuel Code S = U.S. and Canadian Natural Gas |

[] Designates Metric Conversions

UPFLOW MODELS



| MODEL RGRC- | A | B | C | D | E | F | LEFT SIDE | MINIMUM CLEARANCE (IN.) [mm] | | | | | SHIP WGTS. [kg] |
|----------------|--------------------------------------|----------------------------------------|--------------------------------------|--------|--------------------------------------|----------------------------------------|--------------|------------------------------|------|--------|--------|------|-----------------------|
| | | | | | | | | RIGHT SIDE | BACK | TOP | FRONT | VENT | |
| 04EM | 17 ¹ / ₂ [445] | 16 ¹¹ / ₃₂ [415] | 15 ⁵ / ₈ [397] | 2 [51] | 15 [422] | 13 ²⁵ / ₃₂ [352] | 0 | 0 | 0 | 1 [25] | 2 [51] | 0 | 111 [50] |
| 06EM | 17 ¹ / ₂ [445] | 16 ¹¹ / ₃₂ [415] | 15 ⁵ / ₈ [397] | 2 [51] | 15 [422] | 13 ²⁵ / ₃₂ [352] | 0 | 0 | 0 | 1 [25] | 2 [51] | 0 | 117 [53] |
| 07EM | 17 ¹ / ₂ [445] | 16 ¹¹ / ₃₂ [415] | 15 ⁵ / ₈ [397] | 2 [51] | 15 [422] | 13 ²⁵ / ₃₂ [352] | 0 | 0 | 0 | 1 [25] | 2 [51] | 0 | 124 [56] |
| 07ER | 21 [533] | 19 ²⁷ / ₃₂ [504] | 19 ¹ / ₈ [487] | 2 [51] | 18 ¹ / ₂ [511] | 17 ⁹ / ₃₂ [441] | 0 | 0 | 0 | 1 [25] | 2 [51] | 0 | 137 [62] |
| 09EZ | 21 [533] | 19 ²⁷ / ₃₂ [504] | 19 ¹ / ₈ [487] | 2 [51] | 18 ¹ / ₂ [511] | 17 ⁹ / ₃₂ [441] | 0 | 0 | 0 | 1 [25] | 2 [51] | 0 | 148 [67] |
| 10EZ | 21 [533] | 19 ²⁷ / ₃₂ [504] | 19 ¹ / ₈ [487] | 2 [51] | 18 ¹ / ₂ [511] | 17 ⁹ / ₃₂ [441] | 0 | 0 | 0 | 1 [25] | 2 [51] | 0 | 152 [69] |

BLOWER PERFORMANCE DATA—RGRC- MODELS

| MODEL | BLOWER SIZE [mm] | MOTOR H.P. [W] | BLOWER SPEED | CFM [L/s] AIR DELIVERY | | | | | | |
|------------------|------------------------|-------------------|--------------|----------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | | | | EXTERNAL STATIC PRESSURE INCHES WATER COLUMN [kPa] | | | | | | |
| | | | | 0.1 [.02] | 0.2 [.05] | 0.3 [.07] | 0.4 [.10] | 0.5 [.12] | 0.6 [.15] | 0.7 [.17] |
| RGRC-04 EMAES | 11 x 7 [279 x 178] | 1/2 [373] | LOW | 805 [380] | 780 [368] | 760 [358] | 720 [340] | 685 [323] | 645 [304] | 605 [285] |
| | | | MED-LO | 920 [434] | 885 [417] | 850 [401] | 810 [382] | 775 [365] | 730 [344] | 690 [325] |
| | | | MED-HI | 1140 [538] | 1110 [524] | 1085 [512] | 1045 [493] | 1010 [476] | 950 [448] | 890 [420] |
| | | | HIGH | 1360 [642] | 1320 [623] | 1280 [604] | 1235 [583] | 1195 [564] | 1140 [538] | 1080 [500] |
| RGRC-06 EMAES | 11 x 7 [279 x 178] | 1/2 [373] | <i>LOW*</i> | 770 [363] | 740 [349] | 710 [335] | 675 [318] | 645 [304] | 605 [285] | 570 [269] |
| | | | MED-LO | 880 [415] | 845 [398] | 815 [384] | 790 [373] | 760 [358] | 715 [337] | 670 [316] |
| | | | MED-HI | 1060 [500] | 1025 [483] | 990 [467] | 960 [453] | 925 [436] | 880 [415] | 835 [394] |
| | | | HIGH | 1260 [594] | 1215 [573] | 1175 [554] | 1135 [535] | 1100 [519] | 1040 [491] | 985 [465] |
| RGRC-07 EMAES | 11 x 7 [279 x 178] | 1/2 [373] | <i>LOW*</i> | 780 [368] | 745 [351] | 710 [335] | 675 [318] | 640 [302] | 595 [281] | 555 [261] |
| | | | MED-LO | 880 [415] | 850 [401] | 825 [389] | 785 [370] | 750 [354] | 702 [331] | 655 [309] |
| | | | MED-HI | 1090 [514] | 1050 [495] | 1010 [477] | 970 [458] | 925 [436] | 875 [413] | 825 [389] |
| | | | HIGH | 1300 [613] | 1255 [592] | 1210 [571] | 1160 [547] | 1110 [524] | 1055 [498] | 1005 [474] |
| RGRC-07 ERBGS | 11 x 10 [279 x 254] | 1/2 [373] | <i>LOW*</i> | 1115 [526] | 1091 [515] | 1067 [504] | 1044 [493] | 1020 [481] | 984 [464] | 948 [447] |
| | | | MED-LO | 1326 [626] | 1315 [621] | 1304 [615] | 1270 [599] | 1236 [583] | 1197 [565] | 1157 [546] |
| | | | MED-HI | 1535 [724] | 1512 [714] | 1488 [702] | 1453 [686] | 1418 [669] | 1373 [648] | 1327 [626] |
| | | | HIGH | 1765 [833] | 1723 [813] | 1681 [793] | 1639 [774] | 1596 [753] | 1544 [729] | 1492 [704] |
| RGRC-09 EZAJS | 12 x 11 [305 x 279] | 3/4 [559] | <i>LOW*</i> | 1199 [566] | 1183 [558] | 1167 [551] | 1132 [534] | 1097 [518] | 1062 [501] | 1026 [484] |
| | | | MED-LO | 1442 [681] | 1416 [668] | 1390 [656] | 1360 [642] | 1329 [627] | 1288 [608] | 1247 [589] |
| | | | MED-HI | 1666 [786] | 1637 [773] | 1606 [758] | 1554 [733] | 1501 [708] | 1456 [687] | 1407 [664] |
| | | | HIGH | 2040 [963] | 1993 [941] | 1946 [918] | 1888 [891] | 1829 [863] | 1758 [830] | 1686 [796] |
| RGRC-10 EZAJS | 12 x 11 [305 x 279] | 3/4 [559] | <i>LOW*</i> | 1230 [580] | 1205 [569] | 1160 [547] | 1155 [545] | 1130 [533] | 1090 [514] | 1050 [496] |
| | | | MED-LO | 1490 [703] | 1445 [682] | 1405 [663] | 1375 [649] | 1350 [637] | 1295 [611] | 1240 [585] |
| | | | MED-HI | 1710 [807] | 1665 [786] | 1620 [765] | 1570 [741] | 1540 [727] | 1475 [696] | 1410 [665] |
| | | | HIGH | 2010 [949] | 1955 [923] | 1900 [897] | 1855 [875] | 1810 [854] | 1710 [807] | 1610 [760] |

*Not applicable to heating speed.

NOTE: Unit tested without filters

NOTE: CFM values represent furnace-only airflow ratings

[] Designates Metric Conversions

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.

Primary and Secondary Heat Exchanger.....Limited Lifetime
 Conditional Parts (Registration Required)Ten (10) Years
 Parts.....Five (5) Years

For Complete Details of the Limited Warranty, Including Applicable Terms and Conditions, See Your Local Installer or Contact the Manufacturer for a Copy.

ACCESSORIES—UPFLOW

VENT TERMINATION KITS CONCENTRIC: HORIZONTAL/ VERTICAL =

RXGY-E03A (US & Canadian Installations)

HORIZONTAL TWO PIPE: RXGY-D02, RXGY-D03, RXGY-D04
(US Installations)

RXGY-D02A, RXGY-D03A, RXGY-D04A (Canadian Installations)

RXGY-G02 (US Only)

NEUTRALIZER KIT: RXGY-A01

FOSSIL FUEL KIT: RXPF-F01, RXPF-F02 (TVA)

RETURN AIR PLENUM: RXGR-C17B
RXGR-C21B
RXGR-C24B

EXTERNAL BOTTOM FILTER RACK: RXGF-CB

EXTERNAL SIDE FILTER RACK: RXGF-CA

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.

[] Designates Metric Conversions

| FILTER RACK FILTER SIZES* INCHES [mm] | | |
|---------------------------------------|----------------------------------------------------|----------------------------------------------------|
| MODEL | RXGF-CB (BOTTOM) | RXGF-CA (SIDE) |
| RGRC-04 | 15 ³ / ₄ x 25 [400 x 635] | 15 ³ / ₄ x 25 [400 x 635] |
| RGRC-06 | 15 ³ / ₄ x 25 [400 x 635] | 15 ³ / ₄ x 25 [400 x 635] |
| RGRC-07EM | 15 ³ / ₄ x 25 [400 x 635] | 15 ³ / ₄ x 25 [400 x 635] |
| RGRC-07ER | 19 ¹ / ₄ x 25 [489 x 635] | 15 ³ / ₄ x 25 [400 x 635] |
| RGRC-09 | 19 ¹ / ₄ x 25 [489 x 635] | 15 ³ / ₄ x 25 [400 x 635] |
| RGRC-10 | 19 ¹ / ₄ x 25 [489 x 635] | 15 ³ / ₄ x 25 [400 x 635] |

*Filter racks are shipped without filters.

Filters shipped with furnace may be used or a suitable 1" [25.4 mm] filter.

PLENUM DATA FOR "A" COILS

Plenum adapters are required in some instances for use on upflow applications when plenum and furnace size do not match.

| FURNACE WIDTH IN. [mm] | PLENUM WIDTH IN. [mm] | PLENUM ADAPTER UPFLOW | COIL PLENUM |
|--------------------------------------|--------------------------------------|--------------------------|----------------|
| 14 [356] | 16 ¹ / ₄ [413] | RXAA-C171 | RXAL-B16BU |
| 14 [356] | 20 ¹ / ₄ [514] | RXAA-C172 | RXAL-B20BU |
| 17 ¹ / ₂ [445] | 16 ¹ / ₄ [413] | RXAA-C185 | RXAL-B16BU |
| 17 ¹ / ₂ [445] | 20 ¹ / ₄ [514] | RXAA-C173 | RXAL-B20BU |
| 17 ¹ / ₂ [445] | 21 ⁵ / ₈ [549] | RXAA-C187 | RXAL-B21BU |
| 17 ¹ / ₂ [445] | 25 ¹ / ₄ [641] | RXAA-C174 | RXAL-B25BU |
| 21 [533] | 25 ¹ / ₄ [641] | RXAA-C175 | RXAL-B25BU |
| 21 [533] | 22 ¹ / ₄ [565] | RXAA-C176 | RXAL-B22BU |
| 21 [533] | 21 ⁵ / ₈ [549] | RXAA-C188 | RXAL-B21BU |

Note: See Form Number C22-206 for MultiFlex® coil data.

NOTES

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.

**Ruud Heating,
Cooling and
Water Heating**

P.O. Box 17010, Fort Smith, AR 72917



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