Ruud *Achiever®* Series Upflow Gas Furnace

RGRA-/RGRB- Series

Up to 93.5% A.F.U.E.†
Input Rates 45-120 kBTU

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

- The Ruud High Efficiency line of upflow gas furnaces are designed for utility rooms, closets or alcoves.
- The design is certified by CSA.
- Heat exchanger is constructed of aluminized 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.
- Transformer and control fuse protection.
- Solid bottom is standard.
- Control board diagnostics.
- A variety of cooling coils and plenums designed to use with the *Achiever®* gas furnaces are available as optional accessories for air conditioning models.

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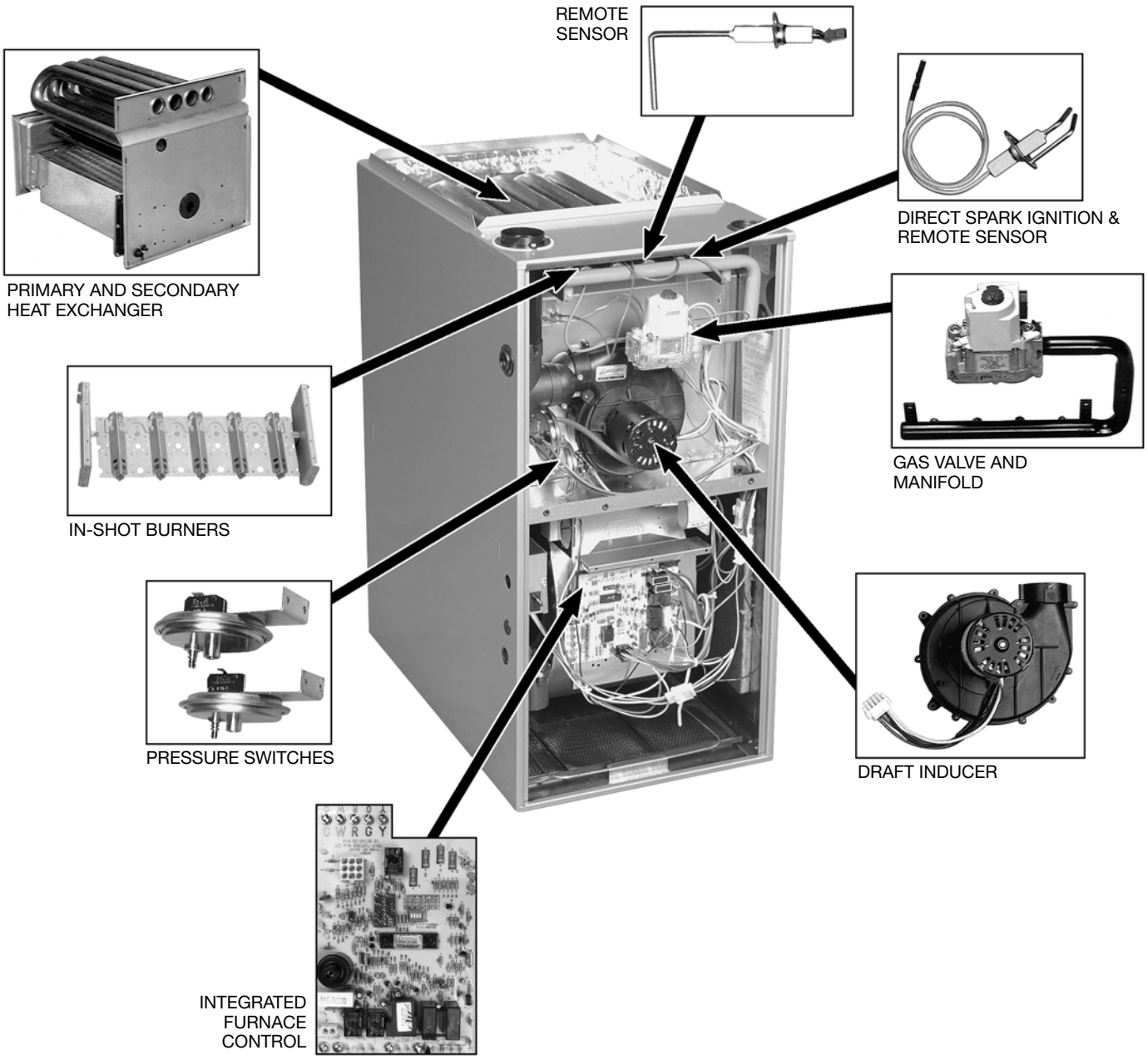


STANDARD EQUIPMENT

Completely assembled and wired; heat exchanger; primary: aluminized 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

Model Features

- The design is certified by CSA.
- Heat exchanger is constructed of aluminized 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.
- Transformer and control fuse protection.
- Solid bottom is standard.
- Control board diagnostics.

Physical Data and Specifications—Upflow Models

U.S. and Canadian Models

MODEL NUMBERS	RGRA-04EMAES	RGRA-06EMAES	RGRB-07EMAES	RGRB-07EYBGS	RGRA-09EZAJS	RGRA-10EZAJS	RGRA-12ERAJS
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]	120,000 [35.17]
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]	97,000 [28.43]	113,000 [33.12]
HIGH ALTITUDE INPUT [kW] ②	40,500 [11.87]	54,000 [15.83]	67,500 [19.78]	67,500 [19.78]	81,000 [23.74]	94,500 [27.70]	108,000 [31.65]
HIGH ALTITUDE OUTPUT CAPACITY [kW] ②	37,800 [11.07]	50,400 [14.77]	63,000 [18.46]	63,000 [18.46]	76,000 [22.27]	87,500 [25.64]	100,000 [29.31]
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 7 [305 x 178]	12 x 11 [305 x 279]	12 x 11 [305 x 279]	11 x 10 [279 x 254]
MOTOR H.P. [W]–SPEEDS–TYPE	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	3/4 [559]-4-PSC	3/4 [559]-4-PSC
MOTOR FULL LOAD AMPS	6.8	6.8	6.8	9.5	9.5	9.5	9.5
HEATING SPEED	MED-LO	MED-LO	MED-HI	MED-LO	MED-LO	MED-LO	MED-LO
COOLING SPEED	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
HEAT EXT. STATIC PRESSURE (IN. W.C.) [kPa]	.10 [.025]	.12 [.029]	.12 [.029]	.12 [.029]	.15 [.037]	.20 [.049]	.20 [.049]
RATED EXT. STATIC PRESSURE (IN. W.C.) [kPa]	.50 [.124]	.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]	1275 [600]	1465 [691]	1445 [682]	1580 [745]
COOLING CFM @ .5" [.124 kPa] W.C. E.S.P. [L/s]	1195 [564]	1100 [519]	1110 [524]	1540 [725]	1910 [901]	1810 [854]	1900 [897]
TEMPERATURE RISE RANGE °F [°C]	30-60 [16.7-33.3]	40-70 [22.2-38.9]	45-75 [25-41.7]	40-70 [22.2-38.9]	35-65 [19.4-36.1]	50-80 [27.8-44.4]	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) 20" x 16" [508 x 406]	C21B (2) 20" x 16" [508 x 406]	C24B (2) 24" x 16" [609 x 406]
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	15 3/4 x 25 x 1	19 1/4 x 25 x 1	19 1/4 x 25 x 1	22 3/4 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]	160 [72.6]
AFUE ③	93.5%	92.5%	92.8%	92.0%	93.5%	92.0%	93.5%
CALIFORNIA SEASONAL EFFICIENCY ③	86.7%	87.6%	87.9%	85.8%	87.3%	86.9%	89.6%

NOTES: All models are 115V, 60HZ, 1Ø. 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.

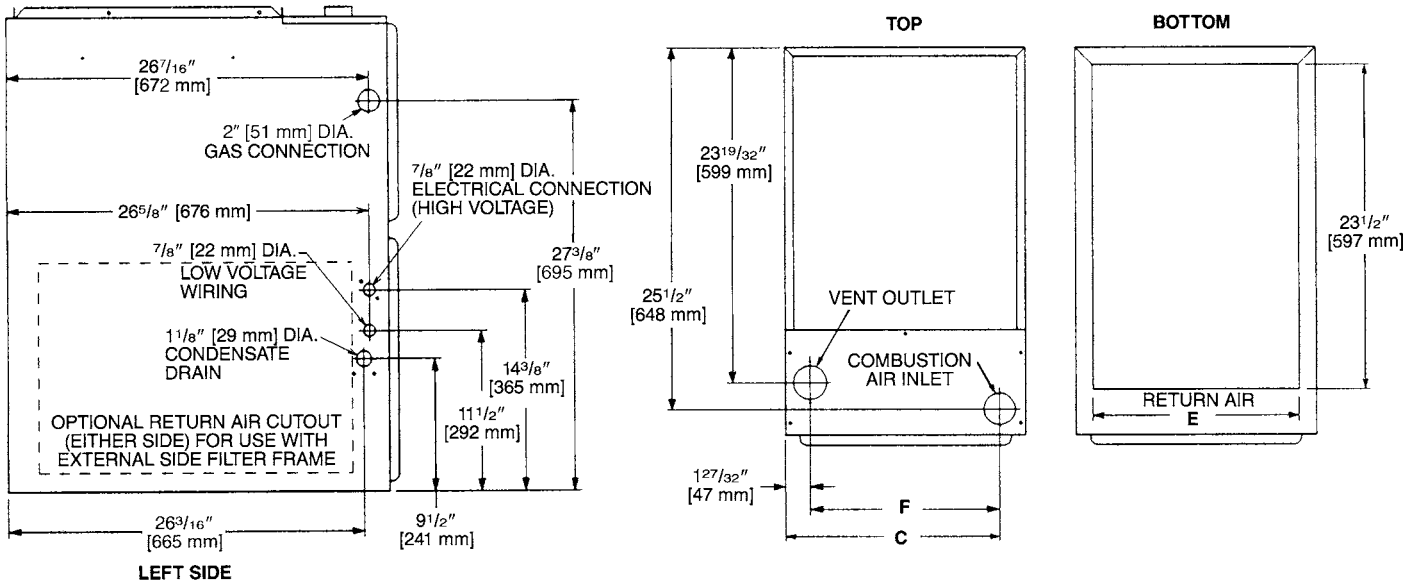
[ ] Designates Metric Conversions

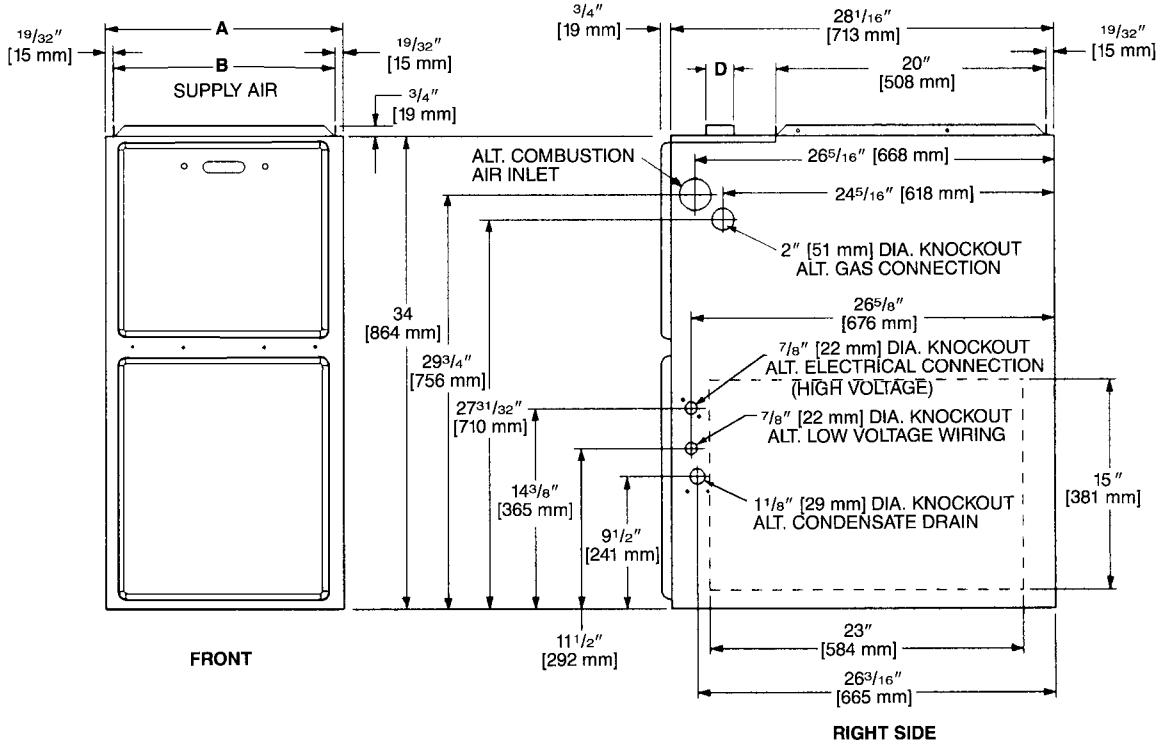
Model Number Identification

R	G	R	A	04E	M	A	E	S
Ruud	Gas Furnace	Upflow/ Condensing Gas Furnace	Design Series A = 1st Design Series B = 2nd Design Series	Heating Input Designation Electric Ignition / Input BTU/HR 04E — 45,000 [13 kW] 06E — 60,000 [17.6 kW] 07E — 75,000 [22 kW] (RGRB Models Only) 09E — 90,000 [26.4 kW] 10E — 105,000 [30.7 kW] 12E — 120,000 [35.2 kW]	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] **Y** = 12 x 7 [305 x 178 mm]	Variations **A** = Std. **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 RGRA-/ RGRB-	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]
07EY	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]
12ER	24 1/2 [622]	23 11/32 [593]	22 5/8 [575]	2 [51]	22 [600]	20 25/32 [530]	0	0	0	1 [25]	2 [51]	0	160 [73]

[ ] Designates Metric Conversions

Blower Performance Data*—RGRA-/RGRB- 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]
RGRA-04EM	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]
RGRA-06EM	11 x 7 [279 x 178]	1/2 [373]	LOW	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]
RGRB-07EM	11 x 7 [279 x 178]	1/2 [373]	LOW	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]
RGRB-07EY	12 x 7 [305 x 178]	3/4 [559]	LOW	1105 [522]	1095 [517]	1080 [510]	1050 [496]	1030 [486]	1010 [477]	990 [467]
			MED-LO	1290 [609]	1275 [602]	1260 [595]	1220 [576]	1195 [564]	1170 [552]	1140 [538]
			MED-HI	1480 [698]	1435 [677]	1415 [668]	1390 [656]	1370 [647]	1300 [614]	1255 [592]
			HIGH	1705 [805]	1665 [786]	1615 [762]	1570 [741]	1540 [727]	1475 [696]	1400 [661]
RGRA-09EZ	12 x 11 [305 x 279]	3/4 [559]	LOW	1235 [582]	1210 [571]	1185 [559]	1150 [543]	1120 [528]	1075 [507]	1035 [488]
			MED-LO	1490 [703]	1465 [691]	1440 [679]	1405 [663]	1375 [649]	1315 [620]	1255 [592]
			MED-HI	1720 [811]	1670 [788]	1620 [764]	1600 [755]	1580 [746]	1520 [717]	1460 [689]
			HIGH	2100 [991]	2050 [967]	2000 [944]	1955 [923]	1910 [901]	1825 [861]	1745 [823]
RGRA-10EZ	12 x 11 [305 x 279]	3/4 [559]	LOW	1230 [580]	1205 [567]	1180 [557]	1155 [545]	1130 [533]	1090 [514]	1050 [495]
			MED-LO	1490 [703]	1445 [682]	1405 [663]	1375 [649]	1350 [637]	1295 [611]	1240 [585]
			MED-HI	1710 [807]	1665 [786]	1620 [764]	1580 [746]	1540 [727]	1475 [696]	1410 [665]
			HIGH	2010 [949]	1955 [923]	1900 [897]	1855 [875]	1810 [854]	1710 [807]	1610 [759]
RGRA-12ER	11 x 10 [279 x 254]	3/4 [559]	LOW	1320 [623]	1305 [616]	1290 [608]	1260 [596]	1230 [580]	1185 [559]	1140 [538]
			MED-LO	1610 [760]	1580 [746]	1555 [734]	1515 [715]	1475 [696]	1415 [668]	1355 [639]
			MED-HI	1870 [882]	1820 [860]	1775 [838]	1715 [809]	1660 [783]	1590 [750]	1520 [717]
			HIGH	2115 [998]	2050 [967]	1990 [939]	1945 [917]	1900 [897]	1795 [847]	1690 [795]

*Blower performance measured with filter in place.

[ ] Designates Metric Conversions

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

FILTER RACK FILTER SIZES* INCHES [mm]		
MODEL	RXGF-CB (BOTTOM)	RXGF-CA (SIDE)
RGRA-04	15 3/4 x 25 [400 x 635]	15 3/4 x 25 [400 x 635]
RGRA-06	15 3/4 x 25 [400 x 635]	15 3/4 x 25 [400 x 635]
RGRB-07EM	15 3/4 x 25 [400 x 635]	15 3/4 x 25 [400 x 635]
RGRB-07EY	19 1/4 x 25 [489 x 635]	15 3/4 x 25 [400 x 635]
RGRA-09	19 1/4 x 25 [489 x 635]	15 3/4 x 25 [400 x 635]
RGRA-10	19 1/4 x 25 [489 x 635]	15 3/4 x 25 [400 x 635]
RGRA-12	22 3/4 x 25 [578 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
24 1/2 [622]	25 1/4 [641]	RXAA-C177	RXAL-B25BU
24 1/2 [622]	21 5/8 [549]	RXAA-C187	RXAL-B21BU

FOR HIGH ALTITUDES:

***HIGH ALTITUDE KIT:** RXGY-F04 (105 KBTU/H)
RXGY-F05 (120 KBTU/H)
RXGY-F06 (45 KBTU/H/60 KBTU/H/ 90 KBTU/H)
RXGY-F07 (75 KBTU/H)

***For installations over 5000 ft.**

OPTION CODE FOR HIGH ALTITUDE: US & Canada – 278

NOTE: High altitude kits and options do **NOT** include additional burner orifices. If a burner orifice change is necessary, they must be ordered through PROSTOCK®. See Installation Instructions for more information.

CAUTION: Always follow National Fuel Gas Code (NFGC) guidelines when converting furnaces for high altitudes.

For all installations above 2000 ft. (including all option – 278 models), the burner orifice size needs to be recalculated and verified. A burner orifice change may still be required. See Installation Instructions for more information.

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.

(U.S. Models—Kit packaged with furnace.
Requires field installation).

EXTERNAL BOTTOM FILTER RACK: RXGF-CB

EXTERNAL SIDE FILTER RACK: RXGF-CA

[ ] 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.

***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.**

Heat Exchanger .....Limited Lifetime
Conditional Parts (Registration Required) .....Ten (10) Years

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