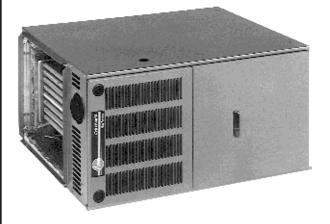
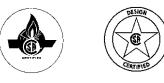
Click anywhere in this document to return to HVAC inspection, installation, diagnosis, & repair information at InspectApedia.com

FORM NO. G11-448 REV. 9 Supersedes Form No. G11-448 Rev. 8





RGPH- SERIES Models with Input Rates from 50,000 to 150,000 BTU/HR [13 to 44 kW] (U.S. & Canadian Models)







# CRITERION® II 80.0%-81.7% A.F.U.E.<sup>+</sup> UPFLOW/ HORIZONTAL GAS FURNACES

The Rheem<sup>®</sup> Criterion<sup>®</sup> II line of upflow/horizontal gas furnaces are designed for utility rooms, closets, alcoves, or attics. Because of the Criterion's low-profile 34 inch [864 mm] height, the upflow model can also be used to satisfy most applications that traditionally call for a horizontal furnace.

The design is certified by CSA.

#### **Features**

- Patented Heat Exchanger, constructed of both stainless and aluminized steel for the maximum in corrosion resistance.
- Low profile "34 inch" design is lighter and easier to handle, and leaves room for optional equipment.
- Convertible from upflow to horizontal left or right without field conversion.
- Left or right side gas and electric inlet connections with quick, simple change.
- Direct spark ignition models utilize remote sense and feature an integrated board with humidifier and electronic air cleaner hookups.
- Insulated blower compartment helps to reduce jacket loss and noise.
- Pre-paint galvanized steel cabinet.
- Molded permanent filter.
- Grab-holes in doors to aid in easy door removal and replacement.

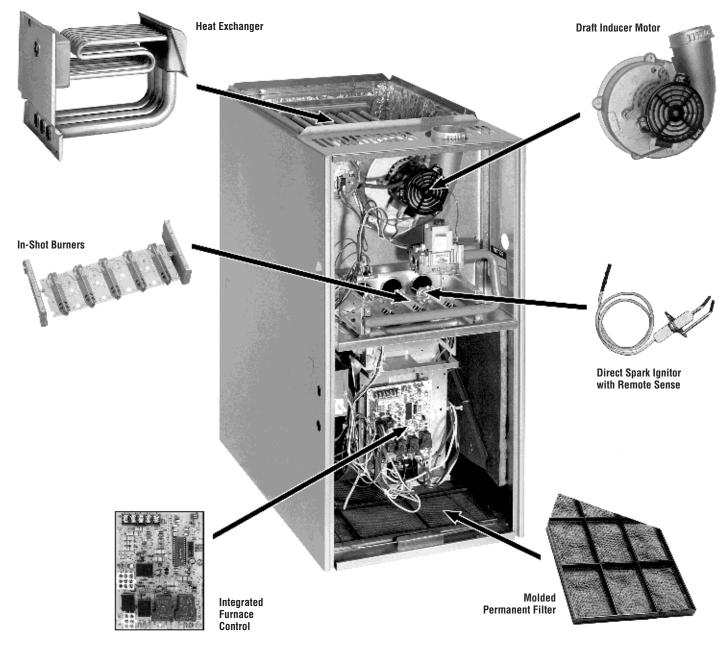
A variety of cooling coils and plenums designed to use with Rheem Criterion  ${\rm I\!I}$  gas furnaces are available as optional accessories.

These furnaces can be installed in an upflow position or laid on either side in a horizontal position. No field converting required.

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



# RHEEM CRITERION II 80% UPFLOW/HORIZONTAL GAS FURNACE



### **STANDARD EQUIPMENT**

Completely assembled and wired; induced draft blower; pressure switch; redundant main gas control; blower compartment door safety switch; solid state time on/time off blower control; limit control; manual shut-off valve, pressure regulator for natural and L.P. (propane) gas; transformer; direct drive multi-speed blower motor. Furnaces are equipped with cooling/heating relay and transformer (40VA) ready for air conditioning applications. (Please note: a thermostat is not included as standard equipment.) Flame sensor diagnostics; on-board twinning options; fused transformer (secondary), 3rd speed fan option for continuous fan; common heat/cool terminal.

### **OPTIONAL EQUIPMENT**

Side filter frame assembly. Return air cabinet for all sizes. (See Page 6) 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 Rheem 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 Rheem parts distributor.

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



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

## **PHYSICAL DATA AND SPECIFICATIONS** U.S. AND CANADA MODELS (UPFLOW/HORIZONTAL)

		-					
MODEL NUMBERS RGPH- SERIES	05EAUER 05NAUER	07EAUER 07NAUER	07EAMGR 07NAMGR	10EAMER 10NAMER	10EBRJR 10NBRJR	12EARJR 12NARJR	15EARJR 15NARJR
Input-BTU/Hr [kW] ②	50,000 [15]	75,000 [22]	75,000 [22]	100,000 [29]	100,000 [29]	125,000 [37]	150,000 [44]
Heating Capacity BTU/Hr [kW] ①	41,000 [12]	60,000 [18]	60,000 [18]	80,000 [23.4]	81,000 [23.7]	99,000 [29]	119,000 [35]
High Altitude Input [kW]*	45,000 [13]	67,500 [20]	67,500 [20]	90,000 [26]	90,000 [26]	112,500 [33]	135,000 [39.6]
High Altitude Output Capacity [kW]*	36,500 [11]	53,500 [16]	54,000 [16]	72,000 [21]	72,500 [21]	89,000 [26.1]	107,500 [31.5]
Heat Ext. Static Pressure [kPa]	.10 [.025]	.12 [.029]	.12 [.029]	.15 [.037]	.15 [.037]	.20 [.05]	.20 [.05]
Blower (D x W) [mm]	11 x 6 [279 x 152]	11 x 6 [279 x 152]	11 x 7 [279 x 178]	11 x 7 [279 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
Motor H.P.–Speeds– PSC Type [W]	<sup>1</sup> /2-4-PSC [373]	<sup>1</sup> /2-4-PSC [373]	<sup>3</sup> /4-4-PSC [559]	<sup>1</sup> /2-4-PSC [373]	<sup>3</sup> /4-4-PSC [559]	<sup>3</sup> /4-4-PSC [559]	<sup>3</sup> /4-4-PSC [559]
Motor Full Load Amps	6.8	7.1	9.5	7.1	9.5	9.5	9.5
Heating Speed	MED-LOW	MED-HIGH	MED-LOW	MED-HIGH	MED-LOW	MED-LOW	MED-LOW
Cooling Speed	HIGH	HIGH	MED-HIGH	HIGH	MED-HIGH	MED-HIGH	MED-HIGH
Cooling CFM @ .5" [kPa] E.S.P. (Nominal) [L/s]	1200 [566]	1200 [566]	1600 [755]	1200 [566]	2000 [944]	2000 [944]	2000 [944]
Rated E.S.P. (In. W.C.) [kPa]	.50 [.12]	.50 [.12]	.50 [.12]	.50 [.12]	.50 [.12]	.50 [.12]	.50 [.12]
Temperature Rise Range °F [°C]	25-55 [13.9-30.6]	40-70 [22.2-38.9]	25-55 [13.9-30.6]	50-80 [27.8-44.4]	40-70 [22.2-38.9]	35-65 [19.4-36.1]	50-80 [27.8-44.4]
Max. Outlet Air Temp. °F [°C]	155 [68.3]	165 [73.8]	155 [68.3]	190 [87.7]	170 [76.6]	180 [82.2]	190 [87.7]
Standard Filter–In. [mm]	15 <sup>3</sup> /4 x 25 [400 x 635]	19 <sup>1</sup> /4 x 25 [489 x 635]	22 <sup>3</sup> /4 x 25 [578 x 635]	22 <sup>3</sup> /4 x 25 [578 x 635]			
Approx. Shipping Weight (Lbs.) [kg]	85 [39]	105 [48]	105 [48]	115 [52]	120 [54]	140 [63]	150 [68]
Return Air Cabinets (Opt.) RXGR- Filter Size [mm]	C14B (2) 12 x 16 [305 x 406]	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) 20 x 16 [508 x 406]	C24B (2) 24 x 16 [610 x 406]	C24B (2) 24 x 16 [610 x 406]
AFUE-Electric Ignition Models ①	81.4%	80.6%	80.5%	80.0%	80.0%	80.0%	80.0%
California Seasonal Efficiency– Electric Ignition/No <sub>x</sub> Models	74.9/75.4	74.9/75.4	74.7/75.3	75.4/75.4	73.9/74.5	74.2/74.2	74.7/74.7

NOTES: All models are 115V, 60HZ, 1Ø. Gas connection size for all models is 1/2" [12.7 mm] N.P.T. ① In accordance with D.O.E. test procedures.

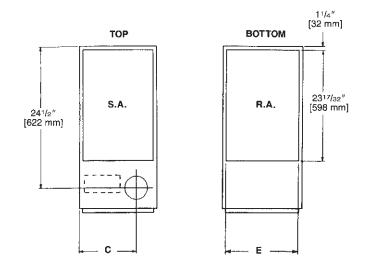
② See Conversion Kit Index Form No. 92-21519-52 for U.S. models and Form No. 92-21519-53 for Canadian models for high altitude derate.

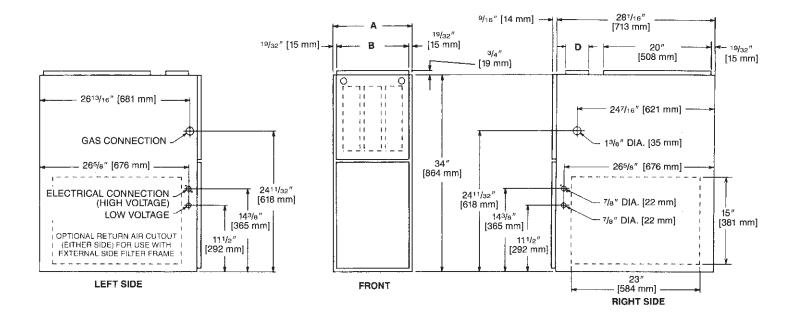
\* Data references Canadian Models only.

## **MODEL IDENTIFICATION—UPFLOW MODELS**

R	G	P	<u> </u>		07	7E	A	U	E	R
Rheem	Gas Furnace	Upflow/ Horizontal	Design Series	Elec: Ignit 05 07 10 12 15	tric NO <sub>X</sub> ion Model E 05N E 07N E 10N E 12N	t Designation Input BTU/HR 50,000 [15 kW] 75,000 [22 kW] 100,000 [29 kW] 125,000 [37 kW] 150,000 [44 kW]	Variations A = Std. Cabinet B = Wide Cabinet	Blower Designation $U = 11 \times 6$ [279 x 152 mm] $M = 11 \times 7$ [279 x 178 mm] $R = 11 \times 10$ [279 x 254 mm]	Heating & Cooling Designation S = 500-1200 CFM [236-566 L/s] E = 1100-1330 CFM [519-628 L/s] G = 1450-1750 CFM [684-826 L/s] J = 1800-2075 CFM [850-979 L/s]	Fuel Type <b>R</b> = Natural Gas, U.S. and Canadian Standard Furnace

## **UPFLOW DIMENSIONS**





#### TABLE 1. DIMENSIONS AND CLEARANCE TO COMBUSTIBLE MATERIAL (INCHES) [mm]

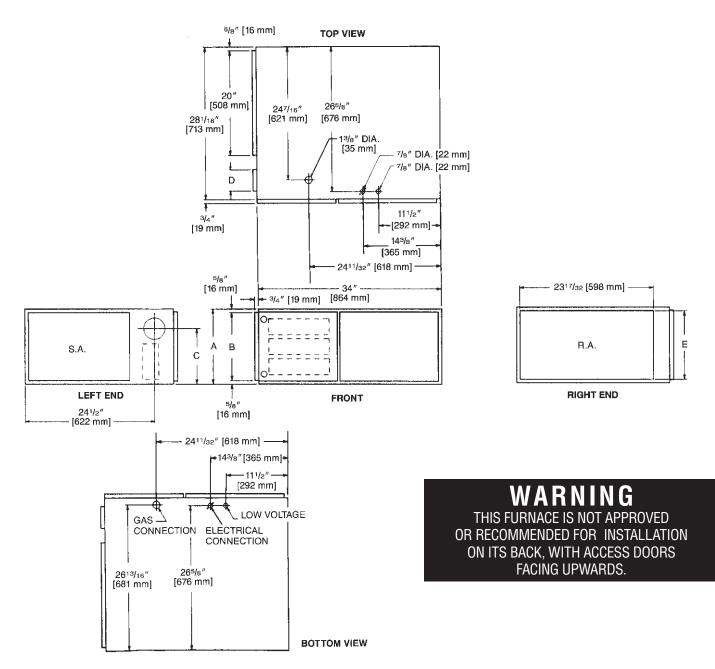
MODEL						REDUCED CLEARANCES (IN.) [mm]						
RGPH- A		В	C	D	E	LEFT SIDE	RIGHT SIDE	BACK	ТОР	FRONT	VENT	SHIP. WGTS. (LBS.) [kg]
05	14 [356]	12 <sup>27</sup> /32 [326]	10 <sup>3</sup> /8 [263]	1	11 <sup>1</sup> /2 [292]	0	4 [102] ②	0	1 [25]	3 [76]	6 [152] ③	85 [38.6]
07	17 <sup>1</sup> /2 [445]	16 <sup>11</sup> /32 [415]	12 <sup>1</sup> /8 [308]	1	15 [381]	0	3 [76] 2	0	1 [25]	3 [76]	6 [152] ③	105 [47.6]
10 (A)	17 <sup>1</sup> /2 [445]	16 <sup>11</sup> /32 [415]	12 <sup>1</sup> /8 [308]	1	15 [381]	0	3 [76] 2	0	1 [25]	3 [76]	6 [152] ③	115 [52.2]
10 (B)	21 [533]	19 <sup>27</sup> /32 [504]	13 <sup>7</sup> /8 [352]	1	18 <sup>1</sup> /2 [470]	0	0	0	1 [25]	3 [76]	6 [152] ③	120 [54.4]
12	241/2 [622]	2311/32 [593]	155/8 [397]	1	22 [559]	0	0	0	1 [25]	3 [76]	6 [152] ③	140 [63.5]
15	241/2 [622]	2311/32 [593]	155/8 [397]	1	22 [559]	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 ANSI Z21.47-1993 • CAN/CGA-2.3-M93 venting table guidelines and in accordance with local codes.

## **HORIZONTAL DIMENSIONS**





MODEL						REDUCED CLEARANCES (IN.) [mm]						
RGPH-	A	В	C	D	E	LEFT Side	RIGHT SIDE	BACK	ТОР	FRONT	VENT	SHIP. WGTS. (LBS.) [kg]
05	14 [356]	12 <sup>27</sup> /32 [326]	10 <sup>3</sup> /8 [263]	1	11 <sup>1</sup> /2 [292]	0	4 [102] ②	0	1 [25]	3 [76]	6 [152] ③	85 [38.6]
07	17 <sup>1</sup> /2 [445]	16 <sup>11</sup> /32 [415]	12 <sup>1</sup> /8 [308]	1	15 [381]	0	3 [76] 2	0	1 [25]	3 [76]	6 [152] ③	105 [47.6]
10 (A)	17 <sup>1</sup> /2 [445]	16 <sup>11</sup> /32 [415]	12 <sup>1</sup> /8 [308]	1	15 [381]	0	3 [76] 2	0	1 [25]	3 [76]	6 [152] ③	115 [52.2]
10 (B)	21 [533]	19 <sup>27</sup> /32 [504]	137/8 [352]	1	181/2 [470]	0	0	0	1 [25]	3 [76]	6 [152] ③	120 [54.4]
12	241/2 [622]	2311/32 [593]	155/8 [397]	1	22 [559]	0	0	0	1 [25]	3 [76]	6 [152] ③	140 [63.5]
15	241/2 [622]	23 <sup>11</sup> /32 [593]	15 <sup>5</sup> /8 [397]	1	22 [559]	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.

<sup>(2)</sup> 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 ANSI Z21.47-1993 • CAN/CGA-2.3-M93 venting table guidelines and in accordance with local codes.

# ACCESSORIES—UPFLOW

### 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 <sup>1</sup> /4 [413]	RXAA-C171	RXAL-B16BU
14 [356]	201/4 [514]	RXAA-C172	RXAL-B20BU
171/2 [445]	16 <sup>1</sup> /4 [413]	RXAA-C185	RXAL-B16BU
171/2 [445]	201/4 [514]	RXAA-C173	RXAL-B20BU
171/2 [445]	215/8 [549]	RXAA-C187	RXAL-B21BU
171/2 [445]	25 <sup>1</sup> /4 [641]	RXAA-C174	RXAL-B25BU
21 [533]	25 <sup>1</sup> /4 [641]	RXAA-C175	RXAL-B25BU
21 [533]	221/4 [565]	RXAA-C176	RXAL-B22BU
21 [533]	215/8 [549]	RXAA-C188	RXAL-B21BU
241/2 [622]	25 <sup>1</sup> /4 [641]	RXAA-C177	RXAL-B25BU
241/2 [622]	215/8 [549]	RXAA-C187	RXAL-B21BU

Note: See Form Number C11-206 for MultiFlex coil data.

### **OPTION CODE FOR HIGH ALTITUDE:** US-277

Canada-298 (U.S. Models—Kit packaged with furnace. Requires field installation.)

#### EXTERNAL BOTTOM FILTER RACK: RXGF-CB

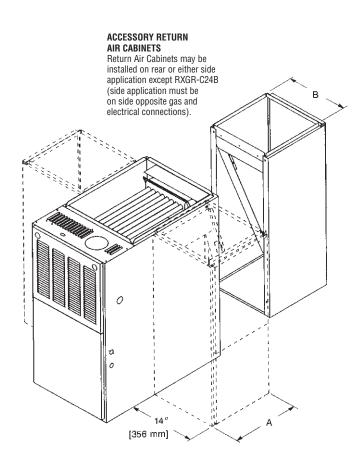
FILTER RACK FILTER SIZES† INCHES [mm]							
MODEL RGPH-	RXGF-CA (SIDE)						
05, 07, 10*A	15 <sup>3</sup> /4 x 25 [400 x 635]						
10*BRJ	15 <sup>3</sup> /4 x 25 [400 x 635]						
12, 15	15 <sup>3</sup> /4 x 25 [400 x 635]						

† Filter racks are shipped without filters.

Filters shipped with furnace may be used or a suitable 1" [25.4 mm] filter. \*Designates "E" or "N".

### **RXPF-F01** and F02

**FOSSIL FUEL KITS** are for use with Rheem Heat Pumps and Criterion II warm air furnaces. The RXPF-F02 meets TVA requirements.



THE RXGR-C24B MAY ONLY BE INSTALLED ON REAR AND LEFT SIDES.

RETURN AIR CABINETS	A IN. [mm]	B IN. [mm]	FILTER SIZE IN. [mm]		
RXGR-C14B	14 [356]	12 <sup>27</sup> /32 [326]	(2) 12 x 16 [305 x 406]		
RXGR-C17B	171/2 [445]	16 <sup>11/32</sup> [415]	(2) 12 x 16 [305 x 406]		
RXGR-C21B	21 [533]	19 <sup>27</sup> /32 [504]	(2) 20 x 16 [508 x 406]		
RXGR-C24B	241/2 [622]	23 <sup>11</sup> / <sub>32</sub> [593]	(2) 24 x 16 [610 x 406]		

#### WARNING: IMPORTANT NOTICE

A SOLID METAL BASE PLATE (SEE TABLE) MUST BE IN PLACE WHEN THE FURNACE IS INSTALLED WITH SIDE OR REAR 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. SOLID BOTTOM IS AVAILABLE FACTORY INSTALLED WITH OPTION CODE **263**.

FURNACE WIDTH IN. [mm]	SOLID BOTTOM Kit no.	BASE Plate No.	BASE PLATE SIZE IN. [mm]
14 [356]	RXGB-D14	AE-61874-01	115/8 x 239/16 [295 x 598]
171/2 445	RXGB-D17	AE-61874-02	15 <sup>1</sup> /8 x 23 <sup>9</sup> /16 384 x 598
21 [533]	RXGB-D21	AE-61874-03	185/8 x 239/16 473 x 598
241/2 [622]	RXGB-D24	AE-61874-04	255/8 x 239/16 [651 x 598]

# **BLOWER PERFORMANCE DATA—UPFLOW/HORIZONTAL MODELS**

MODEL NUMBER RGPH-	BLOWER SIZE	MOTOR H.P.	BLOWER SPEED	CFM [L/s] AIR DELIVERY EXTERNAL STATIC PRESSURE INCHES [kPa] WATER COLUMN							
SERIES	[mm]	[W]		.1 [.02]	.2 [.05]	.3 [.07]	.4 [.10]	.5 [.12]	.6 [.15]	.7 [.17]	
05EAUE 05NAUER	11 x 6 [279 x 152]	1/2 [373]	LOW MED-LO MED-HI HIGH	675 [319] 950 [448] 1115 [526] 1270 [599]	655 [309] 930 [439] 1090 [514] 1250 [590]	635 [300] 905 [427] 1070 [505] 1225 [578]	610 [288] 880 [415] 1040 [491] 1200 [566]	585 [276] 860 [406] 1015 [479] 1165 [550]	555 [262] 830 [392] 985 [465] 1130 [533]	520 [245] 800 [378] 945 [446] 1085 [512]	
07EAUER 07NAUER	11 x 6 [279 x 152]	1/2 [373]	MED-HI HIGH	1110 [524] 1265 [597]	1090 [514] 1240 [585]	1070 [505] 1210 [571]	1040 [491] 1175 [555]	1010 [477] 1140 [538]	975 [460] 1100 [519]	935 [441] 1055 [498]	
07EAMGR 07NAMGR	11 x 7 [279 x 178]	3/4 [559]	LOW MED-LO MED-HI HIGH	1245 [588] 1555 [734] 1810 [854] 2050 [967]	1220 [576] 1515 [715] 1755 [828] 1985 [937]	1195 [564] 1475 [696] 1705 [805] 1915 [904]	1165 [550] 1435 [677] 1645 [776] 1845 [871]	1135 [536] 1395 [658] 1585 [748] 1785 [842]	1105 [522] 1350 [637] 1530 [722] 1715 [809]	1065 [503] 1300 [614] 1470 [694] 1655 [781]	
* 10EAMER 10NAMR	* 11 x 7 [279 x 178]	* 1/2 [373]	LOW MED-LO MED-HI HIGH	925 [437]* 1050 [496] 1220 [576] 1410 [665]	890 [420]* 1040 [491] 1195 [564] 1380 [651]	865 [408]* 1030 [486] 1160 [547] 1345 [635]	835 [394]* 990 [467] 1140 [538] 1300 [614]	810 [382]* 960 [453] 1105 [522] 1255 [592]	775 [366]* 920 [434] 1065 [503] 1205 [569]	745 [352]* 890 [420] 1020 [481] 1150 [543]	
10EBRJR 10NBRJR	11 x 10 [279 x 254]	3/4 [559]	LOW MED-LO MED-HI HIGH	1295 [611] 1645 [776] 2045 [965] 2320 [1095]	1275 [602] 1615 [762] 2000 [944] 2260 [1067]	1250 [590] 1580 [746] 1955 [923] 2200 [1038]	1225 [578] 1550 [732] 1905 [899] 2130 [1005]	1195 [564] 1510 [713] 1845 [871] 2060 [972]	1165 [550] 1465 [691] 1785 [842] 1985 [937]	1135 [536] 1425 [673] 1720 [812] 1910 [901]	
12EARJR 12NARJR	11 x 10 [279 x 254]	3/4 [559]	LOW MED-LO MED-HI HIGH	1280 [604] 1645 [776] 2050 [967] 2365 [1116]	1275 [602] 1635 [772] 2015 [951] 2310 [1090]	1265 [597] 1615 [762] 1960 [925] 2250 [1062]	1245 [588] 1590 [750] 1935 [913] 2185 [1031]	1215 [573] 1560 [736] 1885 [890] 2115 [998]	1185 [559] 1520 [717] 1835 [866] 2035 [960]	1145 [540] 1470 [694] 1775 [838] 1950 [920]	
15EARJR 15NARJR	11 x 10 [279 x 254]	3/4 [559]	LOW MED-LO MED-HI HIGH	1270 [599] 1620 [765] 2010 [949] 2340 [1104]	1250 [590] 1595 [753] 1985 [937] 2275 [1074]	1220 [576] 1570 [741] 1960 [925] 2215 [1045]	1195 [564] 1545 [729] 1915 [904] 2145 [1012]	1165 [550] 1515 [715] 1850 [873] 2080 [982]	1135 [536] 1480 [698] 1800 [850] 2010 [949]	1105 [522] 1440 [680] 1730 [816] 1940 [916]	

NOTES: \*Not to be used as a heating speed.

Data compiled with factory filters installed.

#### [ ] Designates Metric Conversions

## **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 Warranty, Including Applicable Terms and Conditions, See Your Local Installer or Contact the Manufacturer for a Copy.

Gas Heat Exchanger Limited Warranty ......Twenty (20) Years

\*Any Other Part.....Five (5) Years

\*This five year limited warranty is applicable only to single-phase products installed in residential applications on or after January 1, 2001.

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.

RHEEM **AIR CONDITIONING** DIVISION

5600 Old Greenwood Road, Fort Smith, Arkansas 72908



"In keeping with its policy of continuous progress and product improvement, Rheem reserves the right to make changes without notice." PRINTED IN U.S.A. 9-01 DC