# GAS FURNACES



RGJD- SERIES Models with Input Rates from 60,000 to 120,000 BTU/HR [17.58 to 35.16 kW]



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# Prestige® s E R I E S

# 90 PLUS MODULATING HORIZONTAL GAS FURNACES WITH CONTOUR COMFORT CONTROL®

The Rheem *Prestige Series™* 90 Plus High Efficiency line of horizontal gas furnaces are designed for utility rooms, closets, or alcoves, attics or crawl spaces.

The design is certified by CSA.

## **Features**

- Heat exchanger is constructed of all stainless steel for maximum corrosion resistance and thermal fatigue reliability.
- Modulating Function: when used with a modulating thermostat, modulation rate between 40% and 100% of total capacity.
- Two-stage Function: when used with a two-stage thermostat, furnace operates at 40% on first stage, and stages up to 65%, then 100% for second stage.
- Multistage Function: when used with a single-stage thermostat, furnace functions as a three stage furnace operating at 40%, 65% and 100% of total capacity.
- Reduced firing rates, electrically efficient ECM2+ motor, and solid doors provide the ultimate in quiet operation.
- Low speed constant fan.
- Constant temperature rise for superior comfort.
- Seven segment LED for system diagnostics.
- Diagnostic history for troubleshooting.
- Two-speed induced draft motor.
- Direct spark ignition with remote sense.
- Top electrical connections.
- Optional indoor or outdoor combustion air.
- All models comply with Department of Energy test procedures for 2% or less electrical efficiency ratings.

A variety of cooling coils and plenums designed to use with the Rheem *Prestige Series*™ 90 Plus gas furnaces are available as optional accessories.

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

# Modulating Furnace Thermostat



RHC-TST412MDMS (See Accessory Section)

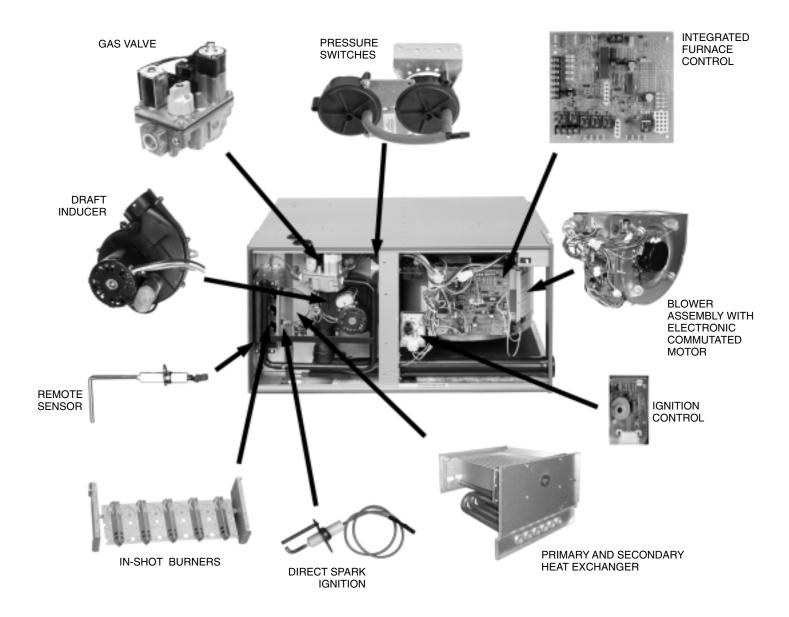












# STANDARD EQUIPMENT

Completely assembled and wired; heat exchanger; primary: 409 and aluminized 409 stainless steel, secondary: 29-4C stainless steel; induced draft; pressure switches; redundant modulating main gas control; blower compartment door safety switch; solid state time on/off blower control; limit controls; manual shutoff valve; 100% safety lock out; cool fan off delay; one hour automatic retry; power and self-test diagnostics; flame sense current diagnostics; electronic air cleaner connections; humidifier connections; humidifier on/off delay, dehumidification connection; low speed continuous fan option; transformer; direct drive, ECM variable speed blower motor. (Please note: a thermostat is not included as standard equipment. See "Accessories").

## **OPTIONAL EQUIPMENT**

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. Fossil Fuel Kits for use with heat pumps.

# WARNING

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

# PHYSICAL DATA AND SPECIFICATIONS—HORIZONTAL MODELS

MODEL NUMBERS	RGJD-06EMCK	RGJD-07EMCK	RGJD-09EZCM	RGJD-10EZCM	RGJD-12ERCM
INPUT-MAXIMUM (BTU/HR) [kW]	60,000 [17.58]	75,000 [21.98]	90,000 [26.38]	105,000 [30.77]	120,000 [35.17]
HEATING CAPACITY-MAXIMUM [kW]	54,720 [16.03]	69,000 [20.22]	83,160 [24.37]	95,865 [28.09]	110,880 [32.49]
INPUT-MINIMUM (BTU/HR) [kW]	24,000 [7.03]	30,000 [8.79]	36,000 [10.55]	42,000 [12.31]	48,000 [14.07]
HEATING CAPACITY-MINIMUM [kW]	21,888 [6.41]	27,600 [8.09]	33,264 [9.75]	38,346 [11.24]	44,352 [12.99]
HEATING EXT. STATIC PRESSURE [kPa]	0.12 [.029]	0.12 [.029]	0.15 [.037]	0.20 [.049]	0.20 [.049]
BLOWER (D X W IN.) [mm]	11 x 7 [279 x 178]	11 x 7 [279 x 178]	12 x 11 [305 x 279]	12 x 11 [305 x 279]	11 x 10 [279 x 254]
ECM MOTOR HP [W]	1/2 [373]	1/2 [373]	1 [746]	1 [746]	1 [746]
UNIT AMPS	8.7	8.7	12.0	12.0	12.0
MAXIMUM OVERCURRENT PROTECTION	15	15	15	15	15
HEATING CFM-MAXIMUM [L/s]	795 [375]	995 [470]	1195 [564]	1395 [658]	1595 [753]
HEATING CFM-MINIMUM [L/s]	320 [151]	430 [203]	515 [243]	600 [283]	685 [323]
COOLING CFM-RANGE [L/s]	600-1200 [283-566]	600-1200 [283-566]	1200-2000 [566-944]	1200-2000 [566-944]	1200-2000 [566-944]
MAXIMUM EXT. STATIC PRESSURE [kPa]	0.80 [0.20]	0.80 [0.20]	0.80 [0.20]	0.80 [0.20]	0.80 [0.20]
TEMPERATURE RISE RANGE °F [°C]	40-70 [22.2-38.9]	40-70 [22.2-38.9]	40-70 [22.2-38.9]	40-70 [22.2-38.9]	40-70 [22.2-38.9]
MAX OUTLET AIR TEMPERATURE °F [°C]	180 [82.2]	180 [82.2]	180 [82.2]	190 [87.8]	195 [90.6]
RETURN AIR CABINETS-RXGR-	C17B	C17B	C21B	C21B	C24B
FILTER SIZE (IN.) [mm] BOTTOM	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	19 <sup>1</sup> / <sub>4</sub> x 25 [489 x 635]	19 <sup>1</sup> / <sub>4</sub> x 25 [489 x 635]	22 <sup>3</sup> / <sub>4</sub> x 25 [578 x 635]
FILTER SIZE (IN.) [mm] SIDE	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]
APPROX. SHIPPING WEIGHT (LBS.) [kg]	127 [57.6]	133 [60.3]	158 [71.7]	162 [73.5]	170 [77.1]
AFUE	94.8	93.1	90.2	90.4	91.6

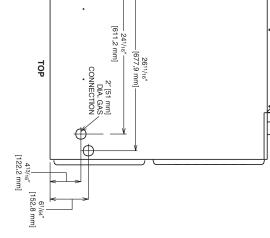
# **MODEL IDENTIFICATION**

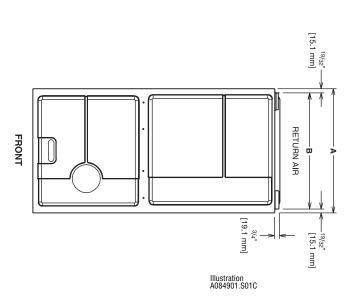
<u>R</u>	<u>G</u>	<u>J</u>	<u>D</u>	-	– <u>07</u> E	<u>M</u>		<u>c</u>	<u>K</u>	<u>s</u>	Option 278
Rheem	Gas Furnace	Horizontal Modulating Prestige Series™ 90 Plus Gas Furnace	Design Series	Electric Ignition 06E 07E 09E 10E 12E	Heating Designa Electric Ignition— NOx Models 06N 07N 09N 10N 12N	$\mathbf{R} = 11 \times 10$ [279 x 2 $\mathbf{Z} = 12 \times 11$	Size 178 mm] 254 mm] 279 mm]	Variations C = Single/ Multi Zone	Heat/Cool Designation K = 600-1200 CFM [283-566 L/s] M = 1200-2000 CFM [566-944 L/s]		278 = Factory- Supplied High Altitude Conversion Kit (Not Required on 60K BTU Model)

[ ] Designates Metric Conversions

# HORIZONTAL MODELS

Illustration A084901.S01B





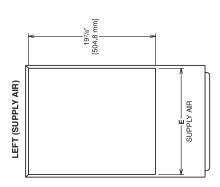
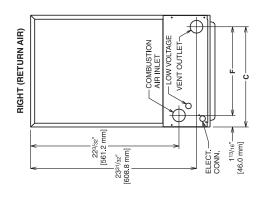
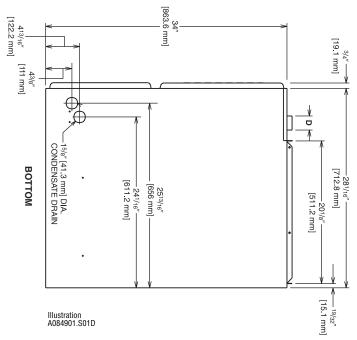


Illustration A084901.S01A





MODEL							LEFT	MINIMUM CLEARANCE (IN.) [mm]				
RGJD-	A	В	С	D	E	F	SIDE	RIGHT SIDE	BACK	ТОР	FRONT	VENT
06	171/2 [445]	16 <sup>11</sup> /32 [415]	155/8 [397]	2 [51]	165/8 [422]	137/8 [352]	0	0	0	1 [25]	2 [51]	0
07	171/2 [445]	16 <sup>11</sup> /32 [415]	155/8 [397]	2 [51]	165/8 [422]	137/8 [352]	0	0	0	1 [25]	2 [51]	0
09	21 [533]	1927/32 [504]	193/16 [487]	2 [51]	201/8 [511]	173/8 [441]	0	0	0	1 [25]	2 [51]	0
10	21 [533]	1927/32 [504]	193/16 [487]	2 [51]	201/8 [511]	173/8 [441]	0	0	0	1 [25]	2 [51]	0
12	241/2 [622]	2311/32 [593]	225/8 [575]	2 [51]	235/8 [600]	207/8 [530]	0	0	0	1 [25]	2 [51]	0

#### [ ] Designates Metric Conversions

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# **BLOWER PERFORMANCE DATA—RGJD MODELS**

MODEL RGJD-	BLOWER SIZE (D x W) IN. [mm]	ICM Motor H.P. [W]	BLOWER SPEED	CFM [L/s] AIR DELIVERY External Static Pressure Inches Water Column [kPa]			
				0.1 [.02]-0.8 [.20]			
06	11 x 7 [279 x 178]	1/2 [373]	HIGH MED-HI MED LOW	1200 [566] 1000 [472] 800 [378] 600 [283]			
07	11 x 7 [279 x 178]	1/2 [373]	HIGH MED-HI MED LOW	1200 [566] 1000 [472] 800 [378] 600 [283]			
09	12 x 11 [305 x 279]	1 [746]	HIGH MED-HI MED LOW	2000 [944] 1600 [755] 1400 [661] 1200 [566]			
10	12 x 11 [305 x 279]	1 [746]	HIGH MED-HI MED LOW	2000 [944] 1600 [755] 1400 [661] 1200 [566]			
12	11 x 10 [279 x 254]	1 [746]	HIGH MED-HI MED LOW	2000 [944] 1600 [755] 1400 [661] 1200 [566]			

[ ] 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.

Primary and Secondary Heat Exchanger .....Limited Lifetime Conditional Unit Replacement Warranty

(Registration Required) .....Limited Lifetime

Conditional Parts Warranty
(Registration Required).....Ten (10) Years

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

# ACCESSORIES—HORIZONTAL

#### 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)

**FUEL KIT:** Use Modulating Programmable Thermostat

(see below) for Dual Fuel/Fossil Fuel Kits.

HORIZONTAL: RXGY-G02 NEUTRALIZER KIT: RXGY-A01

# PLENUM DATA FOR "A" COILS

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

FURNACE WIDTH In. [mm]	PLENUM WIDTH IN. [mm]	PLENUM ADAPTER UPFLOW	COIL Plenum		
17 <sup>1</sup> / <sub>2</sub> [445]	16 <sup>1</sup> / <sub>4</sub> [413]	RXAA-C186	RXAL-B16BU		
17 <sup>1</sup> /2 [445]	20 <sup>1</sup> / <sub>4</sub> [514]	RXAA-C173	RXAL-B20BU		
17 <sup>1</sup> / <sub>2</sub> [445]	215/8 [549]	RXAA-C187	RXAL-B21BU		
17 <sup>1</sup> /2 [445]	25 <sup>1</sup> / <sub>4</sub> [641]	RXAA-C174	RXAL-B25BU		
21 [533]	251/4 [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]	251/4 [641]	RXAA-C177	RXAL-B25BU		
24 <sup>1</sup> / <sub>2</sub> [622]	215/8 [549]	RXAA-C187	RXAL-B21BU		

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

LP KIT: (Available through PROSTOCK®)

U.S./Canadian = RXGJ-FP07

#### **THERMOSTATS**

#### RECOMMENDED MODULATING FURNACE THERMOSTAT



#### RHC-TST412MDMS

- 7 Day 5/1/1 Programmable Modulating/Two Cool Hardwired
- Works in Modulating Furnace and Modulating Furnace Dual Fuel applications (requires optional external sensor)
- Bright, 12 sq. inch touchscreen display
- Keypad lockout option
- Hardwired
- Easy, menu-driven programming
- Audio prompting to ensure program change confirmation
- Intuitive red/blue temperature keys
- · Large, easy-to-see characters
- · Available only through professional contractors

#### \*PROGRAMMABLE THERMOSTAT ACCESSORIES:

Adapter Plate = F61-2600

Remote F1451328 and F1451378 Sensor

# **FOR HIGH ALTITUDES:**

#### **RGJD HIGH ALTITUDE FIELD CONVERSION KITS:**

MODEL	INPUT	HIGH ALTITUDE FIELD CONVERSION KIT NO.				
RGJD-06	60,000	None Needed				
RGJD-07	75,000	RXGY-F23 (8000 ft. and above only)				
RGJD-09*	90,000	RXGY-F24				
RGJD-10*	105,000	RXGY-F25				
RGJD-12*	120,000	RXGY-F26				

<sup>\*5000</sup> ft. & above only (except where noted).

#### **OPTION CODE FOR HIGH ALTITUDE:** U.S. & 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.

Option -278 furnaces are shipped with #51 DMS orifices installed. This is one drill size smaller than standard furnaces to account for expected average elevations and heating values typically seen in these areas.

**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 must be recalculated and verified. A burner orifice change may still be required. See Installation Instructions for more information.

Manifold gas pressure reduction methods may **NOT** be used on these models. The only method permitted on modulating furnace models is to recalculate the burner orifice size. See Installation Instructions for more information.

### [ ] Designates Metric Conversions

<sup>\*</sup>Available through PROSTOCK®.

# **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.

Rheem Heating, Cooling and Water Heating

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