

# GAS FURNACES



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**Rheem**  
*Prestige*<sup>®</sup>  
S E R I E S

## 90 PLUS MODULATING UPFLOW GAS FURNACES WITH *CONTOUR* *COMFORT CONTROL*<sup>®</sup>

**RGFD- SERIES**  
**Models with Input Rates**  
**from 60,000 to 120,000 BTU/HR**  
**[17.58 to 35.16 kW]**  
(All Models 92% A.F.U.E.† or Above)

The Rheem *Prestige Series*<sup>™</sup> 90 Plus High Efficiency line of upflow gas furnaces are designed for utility rooms, closets, or alcoves. **Because of the low-profile 34 inch height, the RGFD- model can be used vertically to satisfy most applications that traditionally call for a horizontal furnace.**

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, left or right gas and condensate drainage connections on downflow models.
- 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 *Prestige Series*<sup>™</sup> 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

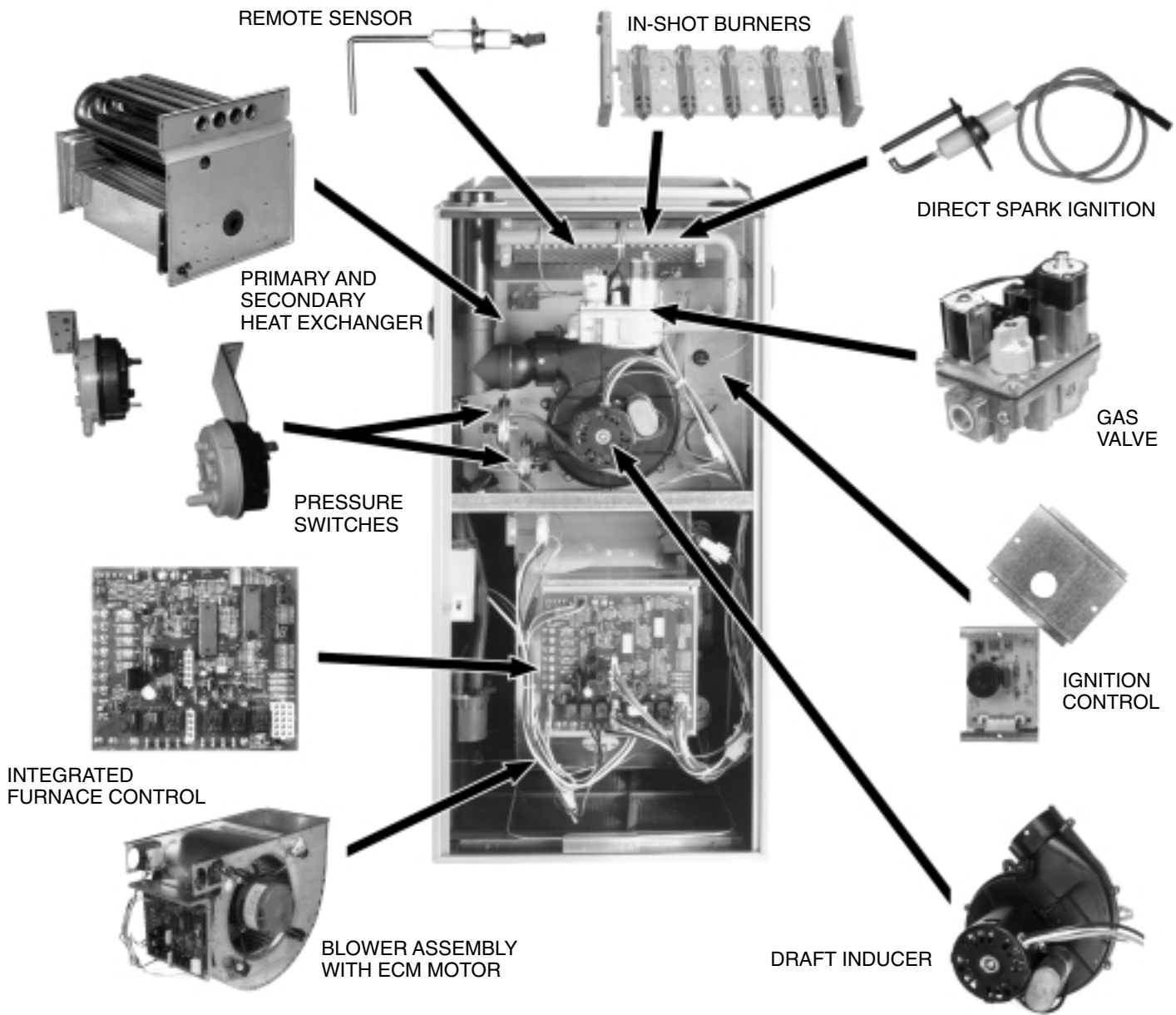


RHC-TST412MDMS





# PRESTIGE SERIES™ 90 PLUS HIGH EFFICIENCY MODULATING UPFLOW GAS FURNACE



## 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 shut-off 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; dehumidifier 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

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.

Fossil Fuel Kits for use with Heat Pumps.

**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	RGFD-06EMCK	RGFD-07EMCK	RGFD-09EZCM	RGFD-10EZCM	RGFD-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]	55,800 [16.35]	72,000 [21.10]	86,000 [25.20]	100,000 [29.31]	115,000 [33.70]
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]	22,560 [6.61]	28,200 [8.26]	33,840 [9.92]	39,000 [11.57]	45,120 [13.22]
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]	170 [76.7]	180 [82.2]	180 [82.2]	180 [82.2]	180 [82.2]
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	93.4%	92.8%	94.1%	92.4%	92.5%

## MODEL IDENTIFICATION

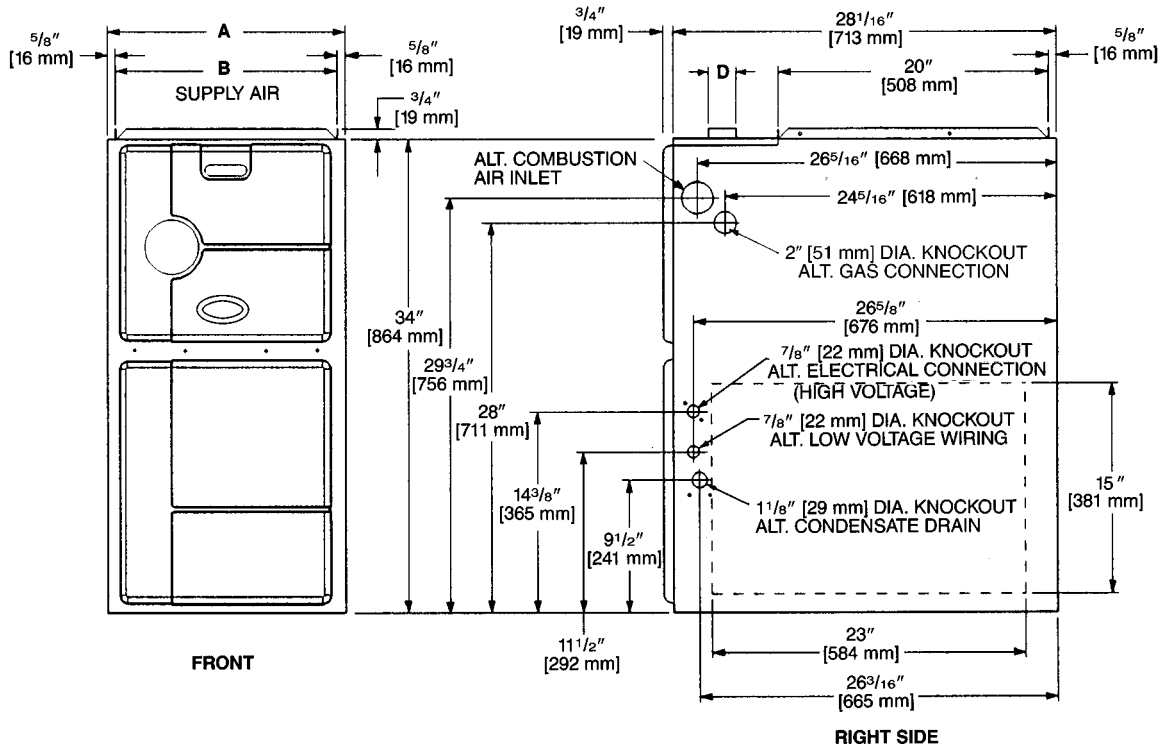
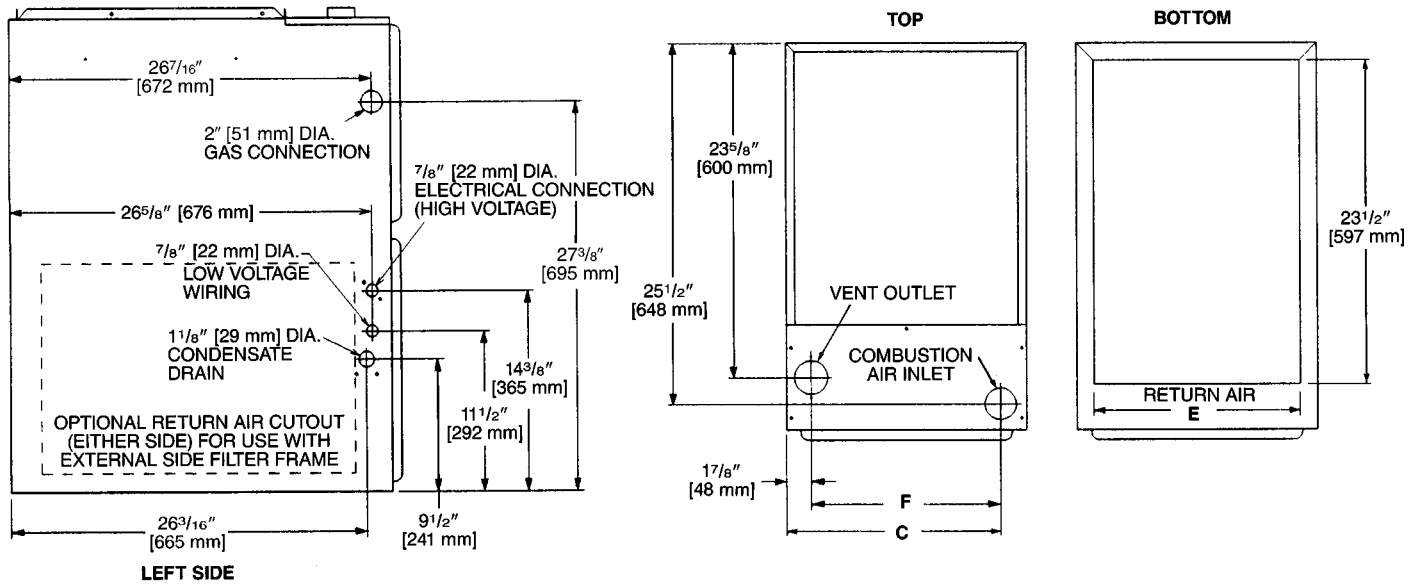
R	G	F	D	—	07E	M	C	K	S
Rheem	Gas Furnace	Modulating <i>Prestige Series™</i> 90 Plus Gas Furnace	Design Series		Heating Input Designation	Blower Size M = 11 x 7 [279 x 178 mm] R = 11 x 10 [279 x 254 mm] Z = 12 x 11 [305 x 279 mm]	Variations C = Single/Multi Zone	Heat/Cool Designation K = 600-1200 CFM [283-566 L/s] M = 1200-2000 CFM [566-944 L/s]	Fuel Code S = U.S. and Canadian Natural Gas
					Electric Ignition— Nox Models	Input BTU/HR			
					06E	06N	60,000 [17.6 kW]		
					07E	07N	75,000 [20.5 kW]		
					09E	09N	90,000 [26.4 kW]		
					10E	10N	105,000 [30.7 kW]		
					12E	—	120,000 [35.2 kW]		

### Option 278

278 = Factory Supplied High Altitude Conversion Kit

[ ] Designates Metric Conversions

# UPFLOW MODELS



MODEL RGFD-	A	B	C	D	E	F	LEFT SIDE	MINIMUM CLEARANCE (IN.) [mm]				
								RIGHT SIDE	BACK	TOP	FRONT	VENT
06	17 1/2 [445]	16 3/8 [416]	15 5/8 [397]	2 [51]	15 [422]	13 13/16 [351]	0	0	0	1 [25]	2 [51]	0
07	17 1/2 [445]	16 3/8 [416]	15 5/8 [397]	2 [51]	15 [422]	13 13/16 [351]	0	0	0	1 [25]	2 [51]	0
09	21 [533]	19 7/8 [505]	19 1/8 [487]	2 [51]	18 1/2 [511]	17 5/16 [440]	0	0	0	1 [25]	2 [51]	0
10	21 [533]	19 7/8 [505]	19 1/8 [487]	2 [51]	18 1/2 [511]	17 5/16 [440]	0	0	0	1 [25]	2 [51]	0
12	24 1/2 [622]	23 3/8 [594]	22 5/8 [575]	2 [51]	22 [600]	20 13/16 [529]	0	0	0	1 [25]	2 [51]	0

[ ] Designates Metric Conversions

# BLOWER PERFORMANCE DATA—RGFD MODELS

MODEL RGFD-	BLOWER SIZE (D x W) IN. [mm]	ECM 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	1200 [566]
			MED-HI	1000 [472]
			MED	800 [378]
			LOW	600 [283]
07	11 x 7 [279 x 178]	1/2 [373]	HIGH	1200 [566]
			MED-HI	1000 [472]
			MED	800 [378]
			LOW	600 [283]
09	12 x 11 [305 x 279]	1 [746]	HIGH	2000 [944]
			MED-HI	1600 [755]
			MED	1400 [661]
			LOW	1200 [566]
10	12 x 11 [305 x 279]	1 [746]	HIGH	2000 [944]
			MED-HI	1600 [755]
			MED	1400 [661]
			LOW	1200 [566]
12	11 x 10 [279 x 254]	1 [746]	HIGH	2000 [944]
			MED-HI	1600 [755]
			MED	1400 [661]
			LOW	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—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)

**CONDENSATE PUMP KIT:** RXGY-B01

**NEUTRALIZER KIT:** RXGY-A01

**RETURN AIR PLENUM:** RXGR-C17B  
RXGR-C21B  
RXGR-B24B

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

**EXTERNAL SIDE FILTER RACK:** RXGF-CA

FILTER RACK FILTER SIZES* INCHES [mm]		
MODEL RGFD-	RXGF-CB (BOTTOM)	RXGF-CA (SIDE)
06	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]
07	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]
09	19 <sup>1</sup> / <sub>4</sub> x 25 [489 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]
10	19 <sup>1</sup> / <sub>4</sub> x 25 [489 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]
12	22 <sup>3</sup> / <sub>4</sub> x 25 [578 x 635]	15 <sup>3</sup> / <sub>4</sub> 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
17 <sup>1</sup> / <sub>2</sub> [445]	16 <sup>1</sup> / <sub>4</sub> [413]	RXAA-C185	RXAL-B16BU
17 <sup>1</sup> / <sub>2</sub> [445]	20 <sup>1</sup> / <sub>4</sub> [514]	RXAA-C173	RXAL-B20BU
17 <sup>1</sup> / <sub>2</sub> [445]	21 <sup>5</sup> / <sub>8</sub> [549]	RXAA-C187	RXAL-B21BU
17 <sup>1</sup> / <sub>2</sub> [445]	25 <sup>1</sup> / <sub>4</sub> [641]	RXAA-C174	RXAL-B25BU
21 [533]	25 <sup>1</sup> / <sub>4</sub> [641]	RXAA-C175	RXAL-B25BU
21 [533]	22 <sup>1</sup> / <sub>4</sub> [565]	RXAA-C176	RXAL-B22BU
21 [533]	21 <sup>5</sup> / <sub>8</sub> [549]	RXAA-C188	RXAL-B21BU
24 <sup>1</sup> / <sub>2</sub> [622]	25 <sup>1</sup> / <sub>4</sub> [641]	RXAA-C177	RXAL-B25BU
24 <sup>1</sup> / <sub>2</sub> [622]	21 <sup>5</sup> / <sub>8</sub> [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

### FOSSIL FUEL KIT

RXPF-F02

### \*PROGRAMMABLE THERMOSTAT ACCESSORIES:

Adapter Plate = F61-2600

Remote F1451328 and F1451378 Sensor

\*Available through PROSTOCK®.

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# ACCESSORIES—UPFLOW (con't.)

## FOR HIGH ALTITUDES:

RGFD HIGH ALTITUDE CONVERSION KITS		
MODEL -GFD	INPUT (BTU)	KIT NO.
06	60,000 [17.58]	RXGY-F06
07	75,000 [21.98]	RXGY-F07
09	90,000 [26.37]	RXGY-F06
10	105,000 [30.77]	RXGY-F05
12	120,000 [35.16]	RXGY-F05

\*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.

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 needs to be recalculated and verified at elevations above 2000 ft. A burner orifice change may still be required. See Installation Instructions for more information.

Manifold gas pressure reduction methods to adjust for altitude 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.

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**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**

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



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