

# GAS FURNACES



**Rheem**  
**Prestige**  
S E R I E S

## 90 PLUS COMMUNICATING MODULATING UPFLOW GAS FURNACES EQUIPPED WITH THE *COMFORT CONTROL*<sup>2</sup> SYSTEM AND *CONTOUR* *COMFORT CONTROL*<sup>®</sup>

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 RGFE- model can be used vertically to satisfy most applications that traditionally call for a horizontal furnace.**

The design is certified by CSA.

### RGFE- 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)

**Comfort Control<sup>2</sup> System<sup>™</sup>**

#### Equipped with *Comfort Control*<sup>2</sup> System<sup>™</sup>

- Serial communication enabled
- Increased system reliability and efficiency
- 28 on-board diagnostic and operating codes
- *Active Protection*<sup>™</sup> with homeowner "Call for Service" alert
- Dual 7-segment LED display

#### Modulating Furnace Thermostat



RHC-TST550CMMS

### Features

- The *Comfort Control*<sup>2</sup> System<sup>™</sup> provides over 28 on-board diagnostics and fault history codes by detecting system and electrical problems. "Call for Service" alert notification is sent to the thermostat to alert the homeowner of required service.
- Serial Communication Enhanced – When installed with a Serial Communicating Condensing Unit and user interface control (RHC-TST550CMMS) 500 Series thermostat this unit offers 4 or 2 wire installation, auto-configuration, and diagnostic messaging with full communicating capability.
- Heat exchanger is constructed of all stainless steel for maximum corrosion resistance and thermal fatigue reliability.
- Modulating Function: when used with a modulating or communicating 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.
- Optional indoor or outdoor combustion air.

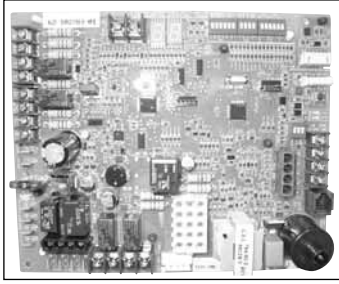
A variety of cooling coils and plenums designed to use with the *Prestige Series*<sup>™</sup> 90 Plus gas furnaces are available as optional accessories.

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



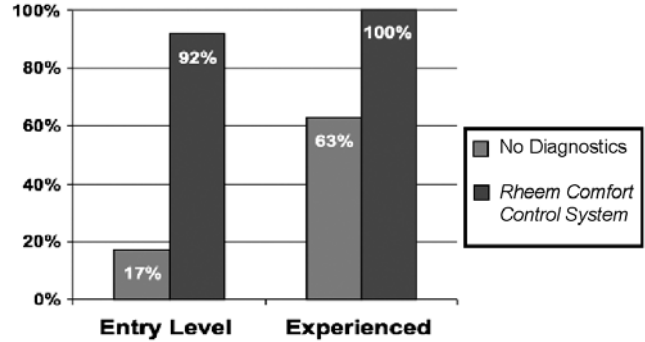
# FEATURES & BENEFITS OF THE *COMFORT CONTROL<sup>2</sup> SYSTEM*<sup>TM</sup>

- The Rheem Dual 7-Segment LED Display easily shows system operating status codes and diagnostic codes.
- The Status Indication System Diagnostics feature thermostat communication capability and built-in diagnostics. The thermostat communication capability and alerts the homeowner to any necessary service requirements. Faster, more accurate service is provided by the built-in diagnostics, by providing the HVAC professional with dependable information.



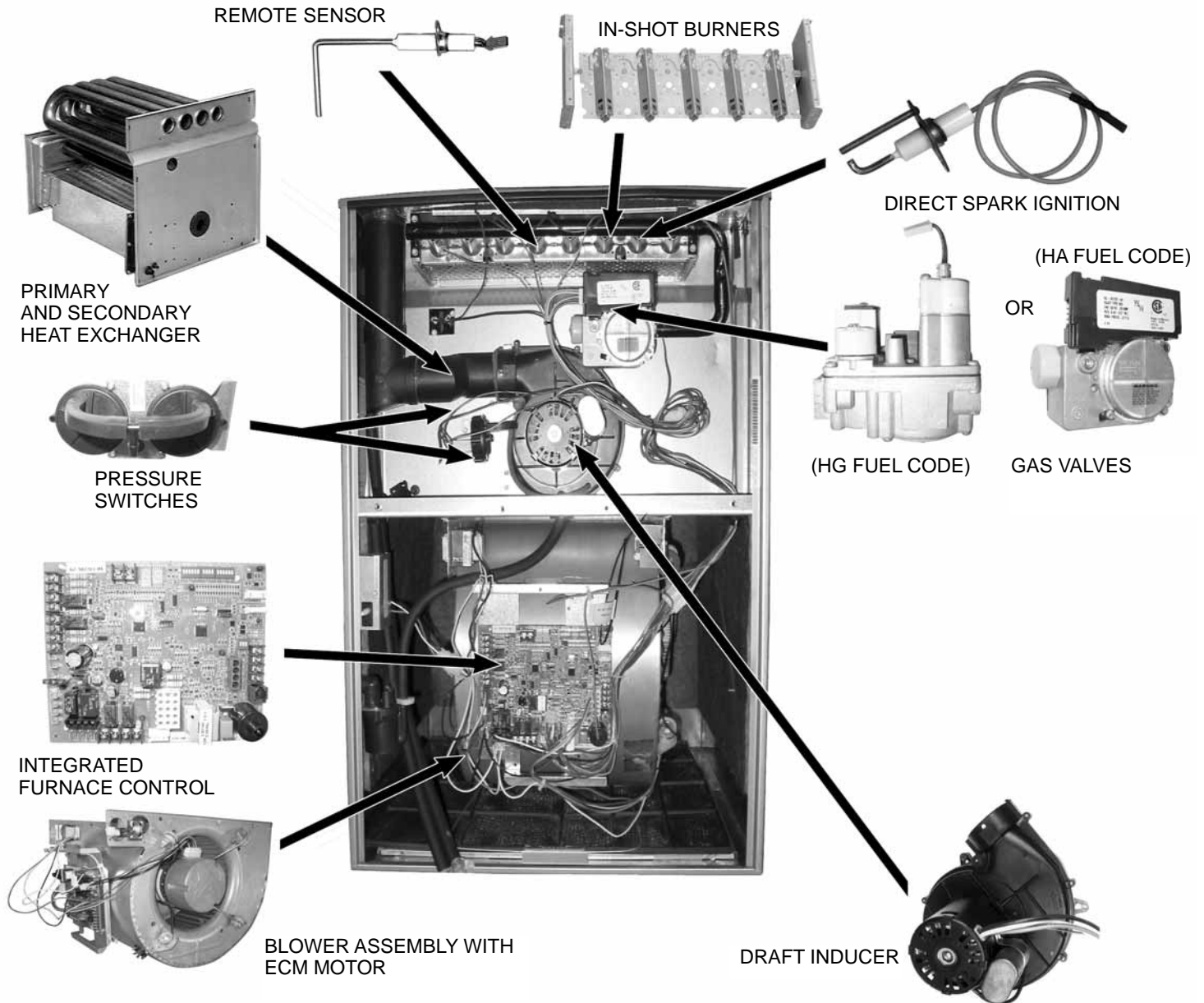
- The fault recall feature will allow for the last six fault-codes to be displayed, and will retain these codes even if power failure occurs.
- In order to save time and money, replacement automotive style fuses can be utilized instead of replacing the entire control board.

## Problem-Solving Accuracy





# 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.

Communicating Thermostat System

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

# PHYSICAL DATA AND SPECIFICATIONS—UPFLOW MODELS

## U.S. and Canadian Models

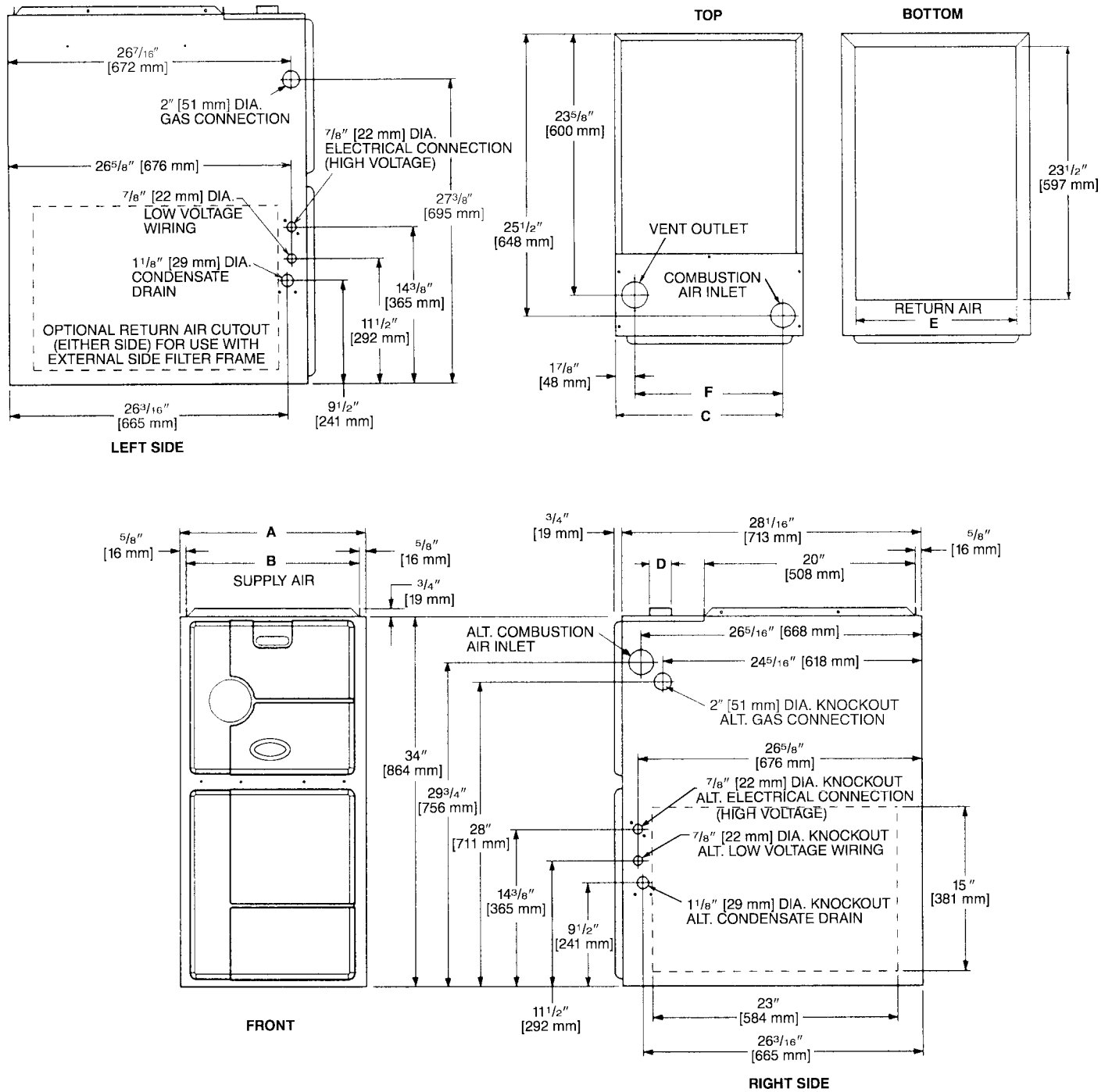
MODEL NUMBERS	RGFE-06EMCK	RGFE-07EMCK	RGFE-09EZCM	RGFE-10EZCM	RGFE-12ERCM
INPUT—MAXIMUM (BTU/HR) [kW]	60,000 [17.58]	75,000 [21.98]	90,000 [26.38]	105,000 [30.77]	120,000 [35.17]
HEATING CAPACITY—MAXIMUM [kW]	55,800 [16.35]	72,000 [21.10]	86,000 [25.20]	100,000 [29.31]	115,000 [33.70]
INPUT—MINIMUM (BTU/HR) [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%	93.2%

## MODEL IDENTIFICATION

<u>R</u>	<u>G</u>	<u>F</u>	<u>E</u>	—	<u>07E</u>	<u>M</u>	<u>C</u>	<u>K</u>	<u>S</u>
Rheem	Gas Furnace	Modulating <i>Prestige Series™</i> 90 Plus Gas Furnace	Design Series Communicating		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	Electric Ignition—NOx Models	Input BTU/HR			
				06E	06N	60,000 [17.6 kW]			
				07E	07N	75,000 [22.0 kW]			
				09E	09N	90,000 [26.4 kW]			
				10E	10N	105,000 [30.7 kW]			
				12E	—	120,000 [35.2 kW]			

[ ] Designates Metric Conversions

# UPFLOW MODELS



MODEL RGFE-	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—RGFE MODELS

MODEL RGFE-	BLOWER SIZE (D x W) IN. [mm]	ECM MOTOR H.P. [W]	BLOWER SPEED (SELECTED W/DIP SWITCHES)	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

# 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 RGFE-	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 (HG & HB Fuel codes only).

U.S./Canadian = RXGJ-FP27 (HA & HH Fuel codes only).

## THERMOSTATS

### RECOMMENDED MODULATING FURNACE THERMOSTAT



RHC-TST550CMMS

#### CONTRACTOR BENEFITS:

- Multi-Purpose Thermostat-Setup, Control & Diagnostics
- Auto-Configuration – No Manual Settings Required in the Field
- System History – More Accurate Diagnostics
- Easy Installation – Requires only 4 wires
- Diagnostic Messages (Service Access to Fault Codes)
- Blower Adjustment in Heat and Cool
- Programmable Fan
- USB Interface for contractor contact information and thermostat programming

#### HOMEOWNER BENEFITS:

- Scrolling System Status
- De-Humidification Control
- Humidification Control
- Heat/Cool/Auto Change-over
- Outdoor Temperature Display
- Backlight On/Off
- Intelligent Scheduling Ramp-Up/Program Anticipation
- Audio Notifications On/Off
- Air Filter, UV Lights & Humidifier Maintenance Reminder
- Temperature Offset
- Continuous Fan (Hi, Med, Lo)

#### FOSSIL FUEL KIT

RXPF-F02

#### \*PROGRAMMABLE THERMOSTAT ACCESSORIES:

Adapter Plate = F61-2600

Remote F1451328 and F1451378 Sensor

\*Available through PROSTOCK®.

[ ] Designates Metric Conversions



# ACCESSORIES—UPFLOW (con't.)

## FOR HIGH ALTITUDES:

RGFE HIGH ALTITUDE CONVERSION KITS		
MODEL RGFE	INPUT (BTU)	KIT NO.
06	60,000 [17.58]	RXGY-F34
07	75,000 [21.98]	RXGY-F35
09	90,000 [26.37]	RXGY-F36
10	105,000 [30.77]	RXGY-F37
12	120,000 [35.16]	RXGY-F37

\*For installations over 5000 ft.

**OPTION CODE FOR HIGH ALTITUDE:** US & Canada – none available – kit must be purchased

**NOTE:** High altitude kits 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. 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.

[ ] 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  
 Parts .....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.

**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."*