

Ruud *Ultra Series*™ Modulating Upflow Gas Furnace equipped with the *Comfort Control*² System™



RGFG- Series

95% A.F.U.E. or Above
Input Rates 60 – 120 kBTU
With *Contour Comfort Control*®

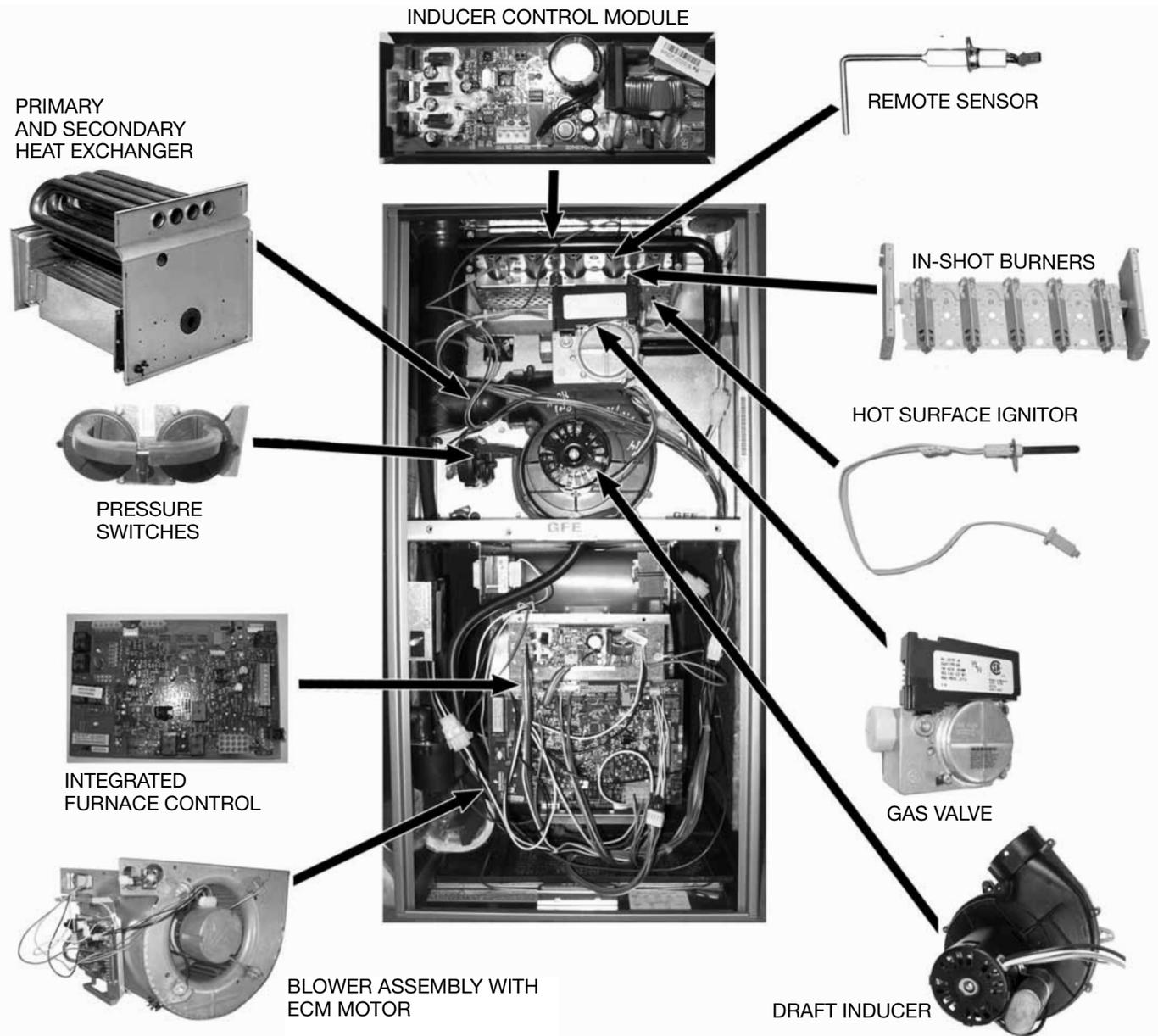


†A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.

- The Ruud *Ultra Series*™ 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 RGFG- model can be used vertically to satisfy most applications that traditionally call for a horizontal furnace. The design is certified by CSA.
- The *Comfort Control*² System™ provides 28 on-board diagnostic codes 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 (UHC-TST550CMMS) 500 Series thermostat this unit offers 4 or 2 wire installation, auto-configuration, and diagnostic messaging with full communicating capability.
- 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.
- Primary heat exchanger is constructed of all aluminized steel for maximum corrosion resistance and thermal fatigue reliability.
- Reduced firing rates, electrically efficient ECM 3.0 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.
- Variable speed induced draft motor.
- Hot surface ignition with remote sense.
- Optional indoor or outdoor combustion air.
- A variety of cooling coils and plenums designed to use with the *Ultra Series*™ 90 Plus gas furnaces are available as optional accessories.

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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 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.

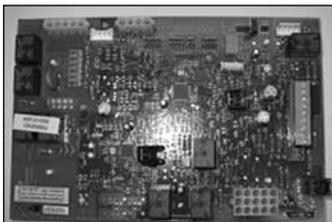
For L.P. (propane) operation, refer to Conversion Kit Index Form. Fossil Fuel Kits for use with Heat Pumps. Communicating Thermostat System

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

The *Comfort Control² System[™]* Features:

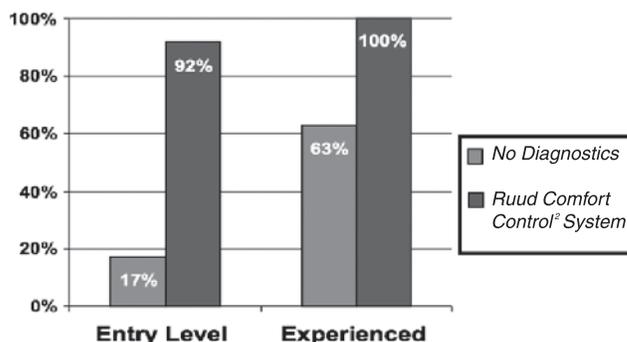
- The Ruud Dual 7-Segment LED Display easily shows system operating status codes and diagnostic codes.

- 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



Features of RGFG Series:

- Serial Communication Enhanced: when installed with a Serial Communicating Condensing Unit and user interface control (UHC-TST550CMMS) 500 Series thermostat this unit offers 4 or 2 wire installation, auto-configuration, and diagnostic messaging with full communicating capability.
- 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.
- Heat exchanger is constructed of all aluminized steel for maximum corrosion resistance and thermal fatigue reliability.

- Reduced firing rates, electrically efficient ECM 3.0 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.
- Variable speed induced draft motor.
- Hot surface ignition with remote sense.
- Optional indoor or outdoor combustion air.
- A variety of cooling coils and plenums designed to use with the *Ultra Series[™]* 90 Plus gas furnaces are available as optional accessories.

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

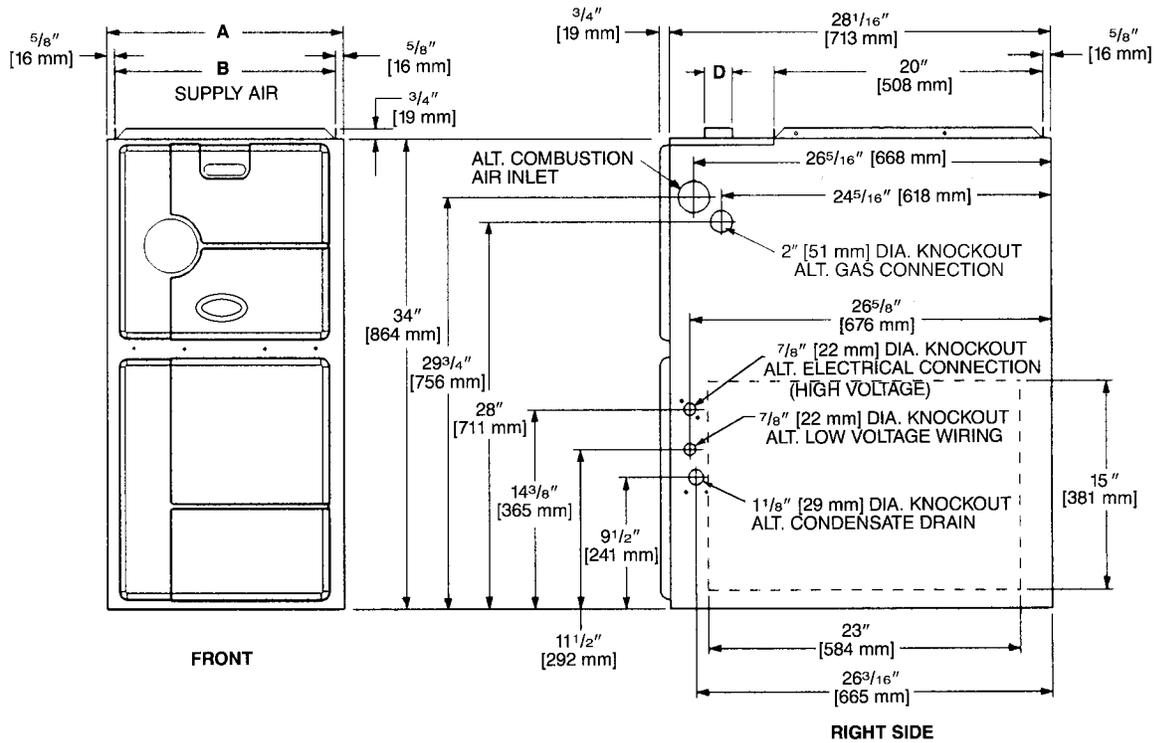
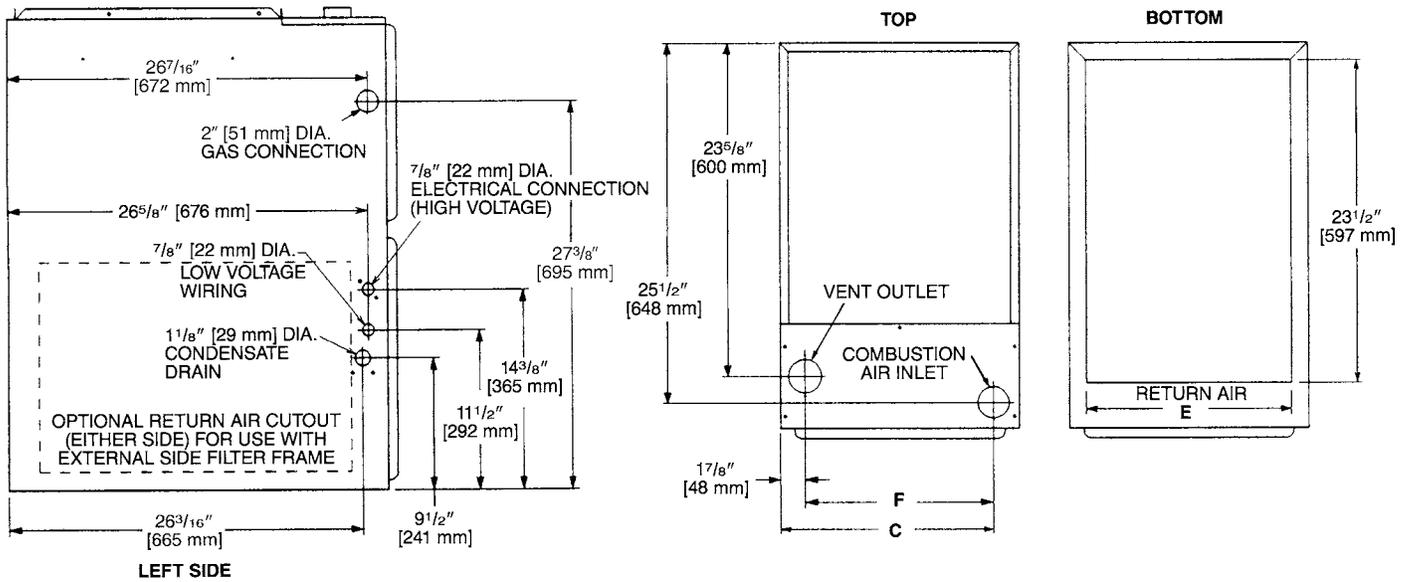
General Data U.S. and Canadian Models

MODEL NUMBERS	RGFG-06EMCK	RGFG-07EMCK	RGFG-09EZCM	RGFG-10EZCM	RGFG-12ERC M
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 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]	19 ¹ / ₄ x 25 [489 x 635]	19 ¹ / ₄ x 25 [489 x 635]	22 ³ / ₄ x 25 [578 x 635]
FILTER SIZE (IN.) [mm] SIDE	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ 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	96.0%	95.3%	95.1%	95.3%	95.6%

Model Number Identification

<u>R</u>	<u>G</u>	<u>F</u>	<u>G</u>	—	<u>07E</u>	<u>M</u>	<u>C</u>	<u>K</u>	<u>S</u>
Ruud	Gas Furnace	Modulating Ultra Series™ 90 Plus Gas Furnace	Design Series Communicating		Heating Input Designation	Blower Size	Variations	Heat/Cool Designation	Fuel Code
				Electric Ignition	Electric Ignition-NOx Models	Input BTU/HR	C = Single/Multi Zone	K = 600-1200 CFM [283-566 L/s] M = 1200-2000 CFM [566-944 L/s]	S = U.S. and Canadian Natural Gas
				06E	06N	60,000 [17.6 kW]	M = 11 x 7 [279 x 178 mm]		
				07E	07N	75,000 [22.0 kW]	R = 11 x 10 [279 x 254 mm]		
				09E	09N	90,000 [26.4 kW]	Z = 12 x 11 [305 x 279 mm]		
				10E	10N	105,000 [30.7 kW]			
				12E	—	120,000 [35.2 kW]			

[] Designates Metric Conversions



MODEL RGFG-	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

MODEL RGFG-	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

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 RGFG-	RXGF-CB (BOTTOM)	RXGF-CA (SIDE)
06	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]
07	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]
09	19 ¹ / ₄ x 25 [489 x 635]	15 ³ / ₄ x 25 [400 x 635]
10	19 ¹ / ₄ x 25 [489 x 635]	15 ³ / ₄ x 25 [400 x 635]
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
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

LP KIT: (Available through PROSTOCK®)

U.S./Canadian = RXGJ-FP27 (HU Fuel codes).

FOSSIL FUEL KIT

RXPF-F02

[] Designates Metric Conversions

THERMOSTATS

RECOMMENDED MODULATING COMMUNICATING FURNACE THERMOSTAT



UHC-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)

IMPORTANT:

Non-Communicating Modulating Thermostat:
UHC-TST412MDMS (T-Stat Only)

*PROGRAMMABLE THERMOSTAT ACCESSORIES:

Adapter Plate = F61-2600

Remote F1451328 and F1451378 Sensor

*Available through PROSTOCK®.

FOR HIGH ALTITUDES:

Installations up to 8,000 ft. do not require a special kit or option. However, an orifice change may be required based on heating value and elevation. 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.

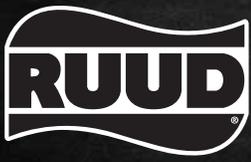
Manifold gas pressure reduction methods to adjust for altitude may **NOT** be used on these models. The only method permitted on modulating furnace models is to recalculate the burner orifice size. See Installation Instructions for more information.

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.**

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



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

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