

Ruud Achiever[®] Series Two-Stage Downflow/Horizontal Gas Furnace



RGTK- Series

92% A.F.U.E.† or Above 60-120 kBTU with Dual Comfort Control™



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

- The Ruud Achiever[®] Series with Dual Comfort Control[™] line of downflow/horizontal gas furnaces are designed for utility rooms, closets, alcoves, or attics. The RGTK is shipped in the downflow configuration and is easily converted for horizontal left-hand airflow applications.
- The design is certified by CSA.
- Two stages of operation to save energy and maintain optimal comfort level.
- Furnace operates at 70% capacity for low-heat and 100% capacity for high-heat.
- Compatible with single or two-stage thermostat. (For optimal performance two-stage thermostat recommended.)
- Heat exchanger tubular construction is stainless steel for maximum corrosion resistance and thermal fatigue reliability.
- Low profile "34 inch" design is lighter and easier to handle and leaves room for optional accessories.
- Top electrical connections, left or right side gas, and condensate drainage connections on downflow/horizontal models.

- Integrated control board manages all operational functions and provides hookups for humidifier and electronic air cleaner.
- An insulated blower compartment, a slow-opening gas valve and a specially designed inducer system make it one of the quietest furnaces on the market today.
- Pre-paint galvanized steel cabinet.
- Molded permanent filters.
- Optional indoor or outdoor combustion air.
- Transformer and control fuse protection.
- Control board diagnostics.
- Condensate drain trap for horizontal/downflow application provided standard.
- A variety of cooling coils and plenums designed to use with the Ruud Achiever[®] Series gas furnaces are available as optional accessories for air conditioning models.

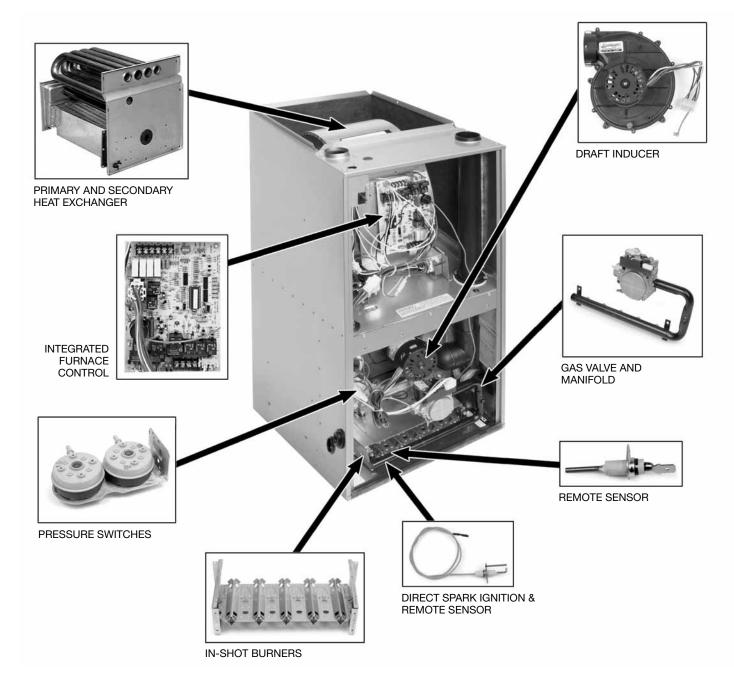


TABLE OF CONTENTS

Ø

Standard & Optional Equipment	3
Model Features/Physical Data & Specifications	4
Model Number Identification	5
Dimensional Data	6-7
Blower Performance Data	8
Accessories	9
Limited Warranty	10





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 main gas control manual shut-off; blower compartment door safety switch; solid state time on/off blower control; limit controls; 100% safety lock out; cool fan off delay; field selectable heat fan off delay; one hour automatic retry; power and self-test diagnostics; flame sense current diagnostics; electronic air cleaner connections; twinning (built-in) features; humidifier connections; humidifier on/off delay; low speed continuous fan option; single speed option for heating and cooling applications; pressure regulator for natural and L.P. (propane) gasses; transformer; direct drive, multi-speed blower motor. (Please note: a thermostat is not included as standard equipment.)

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 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

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

Model Features

- The design is certified by CSA.
- Two stages of operation to save energy and maintain optimal comfort level.
- Furnace operates at 70% capacity for low-heat and 100% capacity for high-heat.
- Compatible with single or two-stage thermostat. (For optimal performance two-stage thermostat recommended.)
- Heat exchanger tubular construction is stainless steel for maximum corrosion resistance and thermal fatigue reliability.
- Low profile "34 inch" design is lighter and easier to handle and leaves room for optional accessories.
- Top electrical connections, left or right side gas, and condensate drainage connections on downflow/horizontal models.

- Integrated control board manages all operational functions and provides hookups for humidifier and electronic air cleaner.
- An insulated blower compartment, a slow-opening gas valve and a specially designed inducer system make it one of the quietest furnaces on the market today.
- Pre-paint galvanized steel cabinet.
- Molded permanent filters.
- Optional indoor or outdoor combustion air.
- Transformer and control fuse protection.
- Control board diagnostics.
- Condensate drain trap for horizontal/downflow application provided standard.

Physical Data and Specifications—Downflow/Horizontal Models U.S. and Canadian Models

MODEL NUMBERS	RGTK-06*MAES	RGTK-07*MAES	RGTK-07*YBGS	RGTK-09*ZAJS	RGTK-10*ZAJS	RGTK-12*RAJS
HIGH FIRE INPUT BTU/HR [kW] 1	60,000 [17.58]	75,000 [21.98]	75,000 [21.98]	90,000 [26.38]	105,000 [30.77]	120,000 [35.17]
LOW FIRE INPUT BTU/HR [kW]	42,000 [12.31]	52,500 [15.39]	52,500 [15.39]	63,000 [18.46]	73,500 [21.54]	84,000 [24.62]
HIGH FIRE HEATING CAPACITY BTU/HR [kW]	56,000 [16.41]	70,000 [20.51]	70,000 [20.51]	84,000 [24.62]	97,000 [28.43]	113,000 [33.12]
HIGH FIRE HIGH ALTITUDE INPUT 8000	40,800 [11.96]	51,000 [14.95]	51,000 [14.95]	61,200 [17.94]	71,400 [20.93]	81,600 [23.91]
HIGH FIRE HIGH ALTITUDE OUTPUT AT 8000' (HIGH FIRE) [kW]	37,944 [11.12]	47,430 [13.90]	47,430 [13.90]	56,916 [16.69]	66,402 [19.46]	75,888 [22.24]
BLOWER (D x W) [mm]	11 x 7 [279 x 178]	11 x 7 [279 x 178]	12 x 7 [305 x 178]	12 x 11 [305 x 279]	12 x 11 [305 x 279]	11 x 10 [279 x 254]
MOTOR H.P. [W]-SPEEDS-TYPE	1/2 [373]-4-PSC	1/2 [373]-4-PSC	³ /4 [559]-4-PSC	³ /4 [559]-4-PSC	^{3/4} [559]-4-PSC	³ /4 [559]-4-PSC
MOTOR FULL LOAD AMPS	6.8	6.8	9.5	9.5	9.5	9.5
HEATING SPEED-HIGH FIRE	MED-LO	MED-HI	MED-LO	MED-LO	MED-LO	MED-HI
HEATING SPEED-LOW FIRE	LOW	LOW	LOW	LOW	LOW	LOW
COOLING SPEED	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
MINIMUM EXT. STATIC PRESSURE (IN. W.C.) [kPa]	.12 [.029]	.12 [.029]	.12 [.029]	.15 [.037]	.20 [.049]	.20 [.049]
MAXIMUM EXT. STATIC PRESSURE (IN. W.C.) [kPa]	.50 [.124]	.50 [.124]	.50 [.124]	.50 [.124]	.50 [.124]	.50 [.124]
HEATING CFM @ .2" [.049 kPa] W.C. E.S.P. [L/s]	885 [418]	1060 [500]	1375 [649]	1400 [661]	1425 [673]	1565 [739]
COOLING CFM @ .5" [.124 kPa] W.C. E.S.P. [L/s]	1180 [557]	1150 [543]	1625 [767]	1850 [873]	1820 [859]	2040 [963]
TEMPERATURE RISE-HIGH FIRE RANGE °F [°C]	40-70 [22.2-38.9]	45-75 [25-41.7]	35-65 [19.4-36.1]	45-75 [25-41.7]	50-80 [27.8-44.4]	50-80 [27.8-44.4]
TEMPERATURE RISE-LOW FIRE RANGE °F [°C]	30-60 [16.7-33.3]	45-75 [25-41.7]	25-55 [13.9-30.6]	35-65 [19.4-36.1]	35-65 [19.4-36.1]	45-75 [25-41.7]
RETURN AIR CABINETS (OPT.) RXGR- FILTER SIZE [mm]	C17B (2) 12" x 20" [305 x 508]	C17B (2) 12" x 20" [305 x 508]	C21B (2) 12" x 20" [305 x 508]	C21B (2) 20" x 20" [508 x 508]	C21B (2) 20" x 20" [508 x 508]	C24B (2) 24" x 20" [609 x 508]
STANDARD, HIGH VELOCITY PERMANENT FILTER (IN.)	15 ³ /4 x 25 x 1	15 ³ /4 x 25 x 1	15 ³ /4 x 25 x 1	19 ¹ /4 x 25 x 1	19 ¹ /4 x 25 x 1	22 ³ /4 x 25 x 1
APPROX. SHIPPING WEIGHT (LBS.) [kg]	117 [53.1]	123 [55.8]	123 [55.8]	148 [67.1]	152 [68.9]	160 [72.6]
AFUE @	93.8	92.5	93.0	93.2	92.2	92.4

NOTES: All models are 115V, 60HZ, 1 \emptyset . Gas connection size for all models is 1/2" [13 mm] N.P.T.

① See Index Form for LP Conversion Kits.

② In accordance with D.O.E. test procedures.

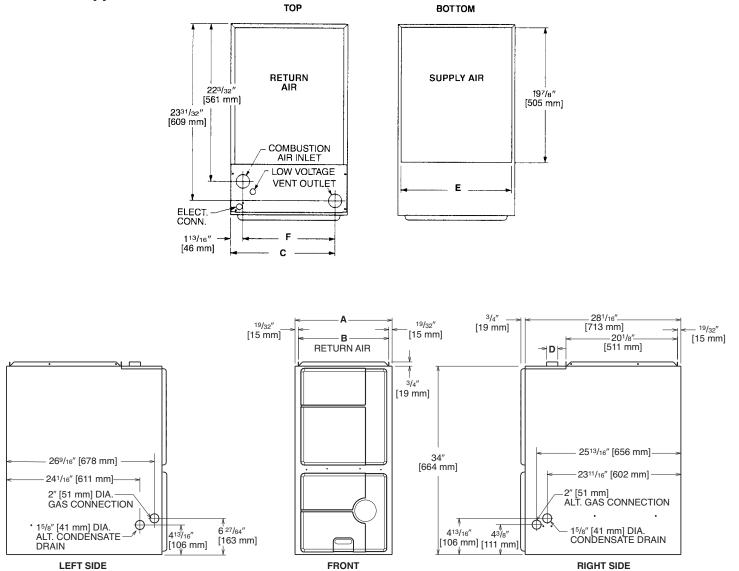
* E = Standard

* N = NOx Models

Model Number Identification

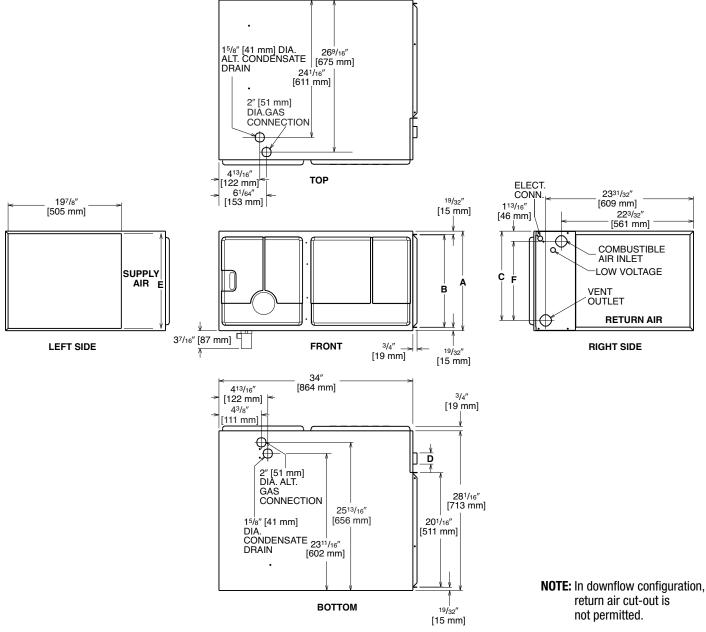
<u>R</u>	<u>G</u>	Ţ	ĸ	<u> </u>	M	<u>A</u>	Ē	<u>s</u>
Ruud	Gas Furnace	Downflow/ Horizontal Condensing Gas Furnace	Design Series	Heating Input Designation Electric Ignition Input BTU/HR 06* 60,000 [17.6 kW] 07* 75,000 [22 kW] 09* 90,000 [26.4 kW] 10* 105,000 [30.7 kW] 12* 120,000 [35.2 kW] NOTES: *E = Standard *N = NOx Models	Blower Size $M = 11 \times 7$ [279 x 178 mm] $R = 11 \times 10$ [279 x 254 mm] $Z = 12 \times 11$ [305 x 279 mm] $Y = 12 \times 7$ [305 x 178 mm]	Variations A = Std. B = Wide Cabinet	Heat/Cool Designation E = 1100-1300 CFM [519-613.5 L/s] G = 1500-1700 CFM [707.9-802.3 L/s] J = 1900-2100 CFM [896.7-991.1 L/s]	Fuel Code S = U.S. and Canadian Natural Gas

Downflow Applications



NOTE: In downflow configuration, return air cut-out is not permitted.

Horizontal Applications



Dimensional Data

MODEL							LEFT	MI	SHIP				
RGTK-	A	В	C	D	E	F	SIDE	RIGHT SIDE	BACK	TOP	FRONT	VENT	WGTS. [kg]
06	171/2 [445]	1611/32 [415]	155/8 [397]	2 [51]	165/8 [422]	137/8 [352]	0	0	0	1 [25]	2 [51]	0	117 [53]
07EM	171/2 [445]	1611/32 [415]	155/8 [397]	2 [51]	165/8 [422]	137/8 [352]	0	0	0	1 [25]	2 [51]	0	123 [56]
07EY	21 [533]	19 ^{27/32} [504]	19 ³ /16 [486]	2 [51]	201/8 [511]	173/8 [441]	0	0	0	1 [25]	2 [51]	0	123 [56]
09	21 [533]	19 ^{27/32} [504]	193/16 [486]	2 [51]	201/8 [511]	173/8 [441]	0	0	0	1 [25]	2 [51]	0	148 [67]
10	21 [533]	19 ²⁷ /32 [504]	193/16 [486]	2 [51]	201/8 [511]	173/8 [441]	0	0	0	1 [25]	2 [51]	0	152 [69]
12	241/2 [622]	2311/32 [593]	22 ⁵ /8 [575]	2 [51]	235/8 [600]	207/8 [530]	0	0	0	1 [25]	2 [51]	0	160 [73]

IMPORTANT NOTE: Horizontal furnace may be installed for horizontal left hand air supply ONLY. The condensate trap provided for horizontal application must be installed in the field beneath the unit as directed in the furnace Installation & Operating Instructions.

[] Designates Metric Conversions

Blower Performance Data

MODEL RGTK-	BLOWER SIZE	MOTOR H.P.	BLOWER SPEED	CFM [L/s] AIR DELIVERY External static pressure inches water column [kPa]						
nurk-	IN. [mm]	[W]	51 LLD	0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]
06	11 x 7 [279 x 178]	1/2 [373]	LOW MED-LO MED-HI HIGH	795 [375] 910 [429] 1115 [526] 1365 [644]	760 [359] 885 [418] 1080 [510] 1315 [620]	730 [344] 860 [406] 1045 [493] 1270 [600]	695 [328] 815 [384] 1005 [474] 1225 [578]	660 [311] 770 [363] 965 [455] 1180 [557]	615 [290] 725 [342] 920 [434] 1125 [531]	570 [269] 680 [321] 875 [413] 1070 [505]
07EM	11 x 7 [279 x 178]	1/2 [373]	LOW MED-LO MED-HI HIGH	780 [368] 890 [420] 1100 [519] 1340 [632]	750 [354] 860 [406] 1060 [500] 1295 [611]	720 [339] 835 [394] 1025 [484] 1250 [590]	675 [318] 790 [373] 980 [462] 1200 [566]	635 [300] 750 [354] 940 [443] 1150 [543]	595 [281] 705 [332] 890 [420] 1090 [514]	555 [262] 660 [311] 845 [399] 1025 [484]
07EY	12 x 7 [305 x 178]	3/4 [559]	LOW MED-LO MED-HI HIGH	1185 [559] 1405 [663] 1595 [753] 1835 [666]	1160 [547] 1375 [649] 1560 [738] 1780 [840]	1140 [538] 1350 [637] 1525 [720] 1730 [816]	1115 [626] 1310 [618] 1480 [698] 1675 [791]	1095 [517] 1270 [599] 1440 [679] 1625 [767]	1065 [503] 1235 [583] 1380 [651] 1555 [734]	1040 [491] 1195 [564] 1325 [625] 1480 [698]
09	12 x 11 [305 x 279]	3/4 [559]	LOW MED-LO MED-HI HIGH	1155 [545] 1420 [670] 1605 [757] 2005 [946]	1125 [531] 1400 [661] 1575 [743] 1965 [927]	1100[519] 1380 [651]1550[732]1930[910]	1080 [510] 1365 [644] 1560 [736] 1890 [892]	1060 [500] 1350 [637] 1570 [740] 1850 [873]	1000 [472] 1260 [594] 1480 [698] 1765 [833]	940 [443] 1175 [554] 1390 [656] 1680 [793]
10	12 x 11 [305 x 279]	3/4 [559]	LOW MED-LO MED-HI HIGH	1180 [557] 1460 [689] 1680 [793] 2055 [970]	1150 [543] 1425 [672] 1645 [776] 2000 [944]	1120 [528] 1390 [656] 1615 [762] 1940 [915]	1100 [519] 1375 [649] 1585 [748] 1880 [887]	1080 [510] 1360 [642] 1560 [736] 1820 [859]	1025 [484] 1280 [604] 1490 [703] 1745 [823]	970 [458] 1200 [566] 1420 [670] 1675 [790]
12	11 x 10 [279 x 254]	3/4 [559]	LOW MED-LO MED-HI HIGH	1285 [606] 1590 [750] 1840 [868] 2315 [1093]	1250 [590] 1565 [738] 1820 [860] 2250 [1062]	1215 [573] 1540 [727] 1800 [850] 2185 [1031]	1235 [582] 1505 [710] 1750 [826] 2110 [996]	1260 [595] 1475 [696] 1700 [802] 2040 [963]	1230 [580] 1425 [672] 1645 [776] 1965 [927]	1200 [566] 1375 [649] 1590 [750] 1890 [892]

NOTE: Recommended blower speeds are in bold. NOTE: CFM values represent furnace only airflow ratings.

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

FOSSIL FUEL KIT: RXPF-F01 RXPF-F02 (TVA)

NON-COMBUSTIBLE FLOOR BASE: RXGC-B17 RXGC-B21 RXGC-B24

FOR HIGH ALTITUDES

HIGH ALTITUDE KIT*:

INPUT BTU/HR [kW]	HIGH ALTITUDE KIT NO.
60,000 [18]	RXGY-F29
75,000 N [22]	RXGY-F30
75,000 W [22]	RXGY-F30
90,000 [26]	RXGY-F31
105,000 [31]	RXGY-F32
120,000 [35]	RXGY-F33

*For installations over 5000 ft.

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. See Installation Instructions for more information.

NOTE: For Canadian installations only, an optional derate (manifold gas pressure reduction) method may be used to adjust the furnace for altitude. See Installation Instructions for more information. This optional method may **NOT** be used for U.S. installations.

LP CONVERSION KITS:

U.S./Canadian: RXGJ-FP21 or RXGJ-FP19

EXTERNAL FILTER RACK: RXGF-CC

FILTER RACK FILTER SIZES* INCHES [mm]						
MODEL RGTK-	RXGF-CC					
06	(2) 12 x 20 [305 x 508]					
07	(2) 12 x 20 [305 x 508]					
09	(2) 12 x 20 [305 x 508]					
10	(2) 12 x 20 [305 x 508]					
12	(2) 14 x 20 [305 x 508]					

*Filter racks are shipped without filters.

Filters shipped with furnace may be used or a suitable 1" [25.4 mm] filter.

PLENUM DATA FOR COILS

Refer to Coil Specification Sheets for Plenum Data.

FOR LEFT SIDE (ALTERNATE) CONDENSATE DRAIN KIT: RXGY-H01 (All Models)

LIMITED WARRANTY RGTK SERIES

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 Parts (Registration Required).......Ten (10) Years Heat ExchangerLimited Lifetime

Notes RGTK Series



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

Ruud Heating, Cooling & Water Heating • P.O. Box 17010 Fort Smith, Arkansas 72917 • www.ruud.com Ruud Canada • 125 Edgeware Road, Unit 1 Brampton, Ontario • L6Y 0P5

RELY ON RUUD.™