

GAS FURNACES



ACHIEVER® 90 HIGH EFFICIENCY DOWNFLOW/ HORIZONTAL GAS FURNACES

The Ruud® Achiever® 90 High Efficiency line of downflow/horizontal gas furnaces are designed for utility rooms, closets, alcoves, attics or crawl spaces. The UGTJ is shipped in the downflow configuration and is easily converted for horizontal **left-hand** airflow applications.

The design is certified by CSA.

Features

- Low profile "34 inch" design is lighter and easier to handle and leaves room for optional accessories.
- Top electrical connections, left or right gas and condensate drainage connections on downflow models.
- Condensate drain for horizontal application provided standard.
- Integrated control board manages all operational functions and provides hookups for an electronic air cleaner.
- A slow-opening gas valve and a specially designed inducer system make it one of the quietest furnaces on the market today.
- Galvanized steel cabinet.
- Optional indoor or outdoor combustion air.
- Control board diagnostics.

A variety of cooling coils and plenums designed to use with the Achiever 90 gas furnaces are available as optional accessories for air conditioning models.

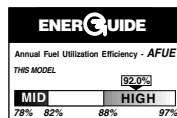
†A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.



UGTJ- SERIES

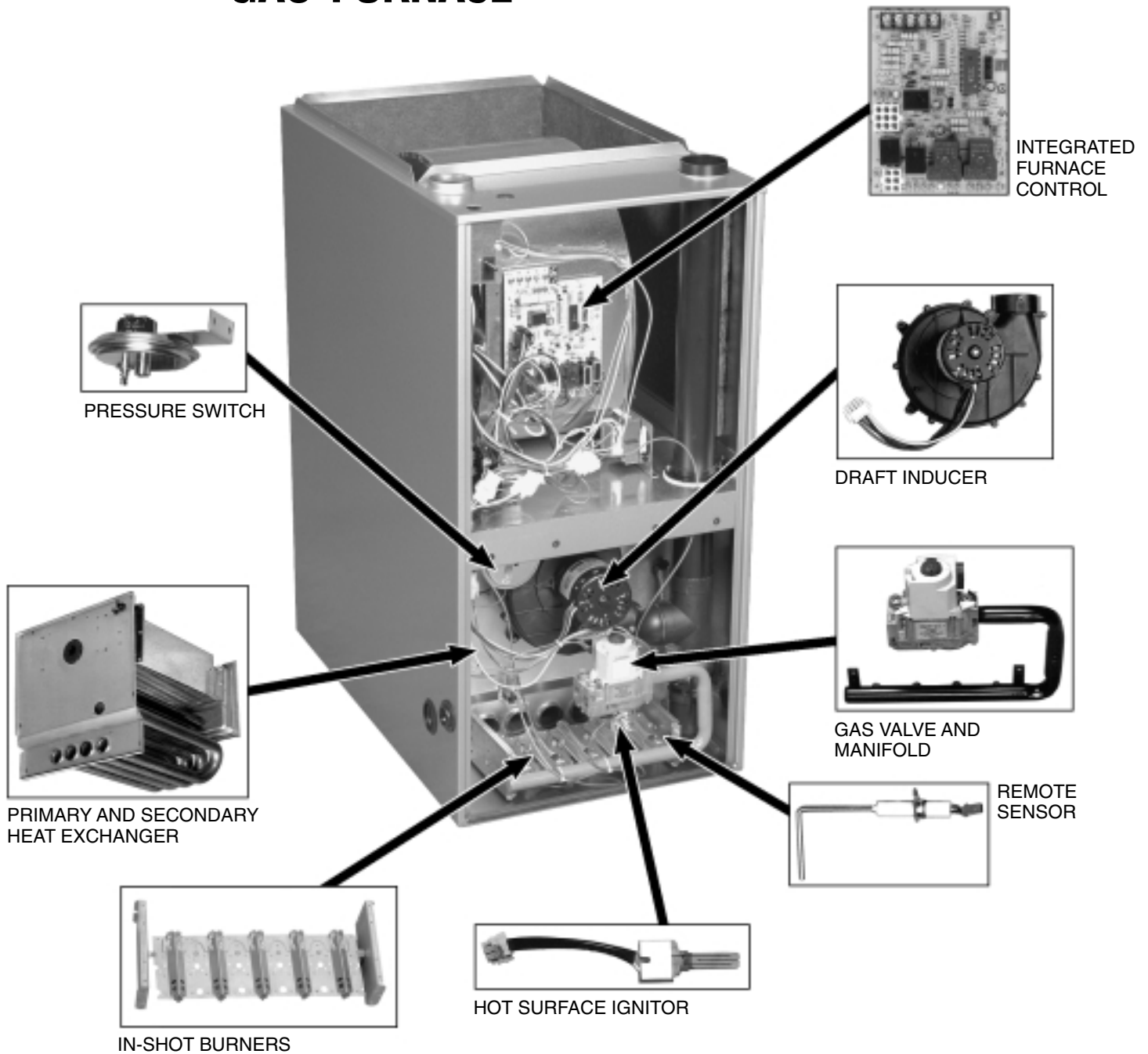
Models with Input Rates
from 45,000 to 120,000 BTU/HR
[13.19 to 35.17 kW]

(All Models 90% A.F.U.E.† or Above)





90 HIGH EFFICIENCY DOWNFLOW/HORIZONTAL GAS FURNACE



STANDARD EQUIPMENT

Completely assembled and wired; heat exchanger; primary: 409 stainless steel, secondary: 29-4C stainless steel; induced draft; pressure switch; redundant 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; field selectable heat fan off delay; one hour automatic retry; self-test diagnostics; control diagnostics; electronic air cleaner connections; pressure regulator for natural and L.P. (propane) gases; transformer; direct drive, multi-speed blower motor.
(Please note: a thermostat is not included as standard equipment.)

OPTIONAL EQUIPMENT

(See Accessory Page)

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.

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

DOWNFLOW/HORIZONTAL MODELS U.S. and Canadian Models

MODEL NUMBERS UGTJ- SERIES	04EMAES	06EMAES	07EMAES	07EYBES	07EYBGS	09EZAGS	09EZAJS	10EZAGS	10EZAJS	12ERAGS	12ERAJS
INPUT-BTU/HR [kW] ①	45,000 [13.19]	60,000 [17.58]	75,000 [21.98]	75,000 [21.98]	75,000 [21.98]	90,000 [26.37]	90,000 [26.37]	105,000 [30.77]	105,000 [30.77]	120,000 [35.17]	120,000 [35.17]
HEATING CAPACITY BTU/HR [kW]	42,000 [12.31]	56,000 [16.41]	70,000 [20.51]	70,000 [20.51]	70,000 [20.51]	84,000 [24.61]	84,000 [24.61]	97,000 [28.43]	97,000 [28.43]	113,000 [33.12]	113,000 [33.12]
HIGH ALTITUDE INPUT [kW] ②	40,500 [11.87]	54,000 [15.83]	67,500 [19.78]	67,500 [19.78]	67,500 [19.78]	81,000 [23.73]	81,000 [23.73]	94,500 [27.70]	94,500 [27.70]	108,000 [31.65]	108,000 [31.65]
HIGH ALTITUDE OUTPUT CAPACITY [kW] ②	37,800 [11.07]	50,400 [14.77]	63,000 [18.46]	63,000 [18.46]	63,000 [18.46]	76,000 [22.27]	76,000 [22.27]	87,500 [25.64]	87,500 [25.64]	100,000 [29.31]	100,000 [29.31]
BLOWER (D x W) [mm]	11 x 7 [279 x 178]	11 x 7 [279 x 178]	11 x 7 [279 x 178]	12 x 7 [305 x 178]	12 x 7 [305 x 178]	12 x 11 [305 x 279]	12 x 11 [305 x 279]	12 x 11 [305 x 279]	12 x 11 [305 x 279]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
MOTOR H.P. [W] SPEEDS-TYPE	1/2 [373] 4-PSC	1/2 [373] 3-PSC	1/2 [373] 3-PSC	1/2 [373] 3-PSC	3/4 [559] 3-PSC	1/2 [373] 3-PSC	3/4 [559] 3-PSC	1/2 [373] 3-PSC	3/4 [559] 3-PSC	1/2 [373] 3-PSC	3/4 [559] 3-PSC
MOTOR FULL LOAD AMPS	6.8	6.8	6.8	8.0	9.5	8.0	9.5	8.0	9.5	8.0	9.5
HEATING SPEED	Med-Low	Low	Med	Med	Low	Med	Low	Med	Low	Med	Low
COOLING SPEED	High	High	High	High	High	High	High	High	High	High	High
HEAT EXT. STATIC PRESSURE (IN. W.C.) [kPA]	.10 [.025]	.12 [.029]	.12 [.029]	.12 [.029]	.12 [.029]	.15 [.037]	.15 [.037]	.20 [.049]	.20 [.049]	.20 [.049]	.20 [.049]
RATED EXT. STATIC PRESSURE (IN. W.C.) [kPA]	.50 [.12]	.50 [.12]	.50 [.12]	.50 [.12]	.50 [.12]	.50 [.12]	.50 [.12]	.50 [.12]	.50 [.12]	.50 [.12]	.50 [.12]
HEATING C.F.M. @ .2" W.C. E.S.P. [L/s]	890 [420]	885 [418]	1060 [500]	1275 [602]	1275 [602]	1400 [661]	1400 [661]	1425 [673]	1425 [673]	1565 [739]	1565 [739]
COOLING C.F.M. @ .5" W.C. E.S.P. [L/s]	1220 [576]	1180 [557]	1150 [543]	1370 [647]	1625 [767]	1570 [740]	1850 [873]	1560 [736]	1820 [859]	1700 [802]	2040 [963]
TEMPERATURE RISE RANGE °F [°C]	30-60 [16.7-33.3]	40-70 [22.2-38.9]	45-75 [25-41.7]	35-65 [19.4-36.1]	35-65 [19.4-36.1]	35-65 [19.4-36.1]	35-65 [19.4-36.1]	50-80 [27.8-44.4]	50-80 [27.8-44.4]	50-80 [27.8-44.4]	50-80 [27.8-44.4]
STANDARD FILTER [mm]	(2) 12" x 20" [305 x 508]	(2) 12" x 20" [305 x 508]	(2) 12" x 20" [305 x 508]	(2) 12" x 20" [305 x 508]	(2) 12" x 20" [305 x 508]	(2) 12" x 20" [305 x 508]	(2) 12" x 20" [305 x 508]	(2) 12" x 20" [305 x 508]	(2) 12" x 20" [305 x 508]	(2) 14" x 20" [609 x 508]	(2) 14" x 20" [609 x 508]
APPROX. SHIPPING WEIGHT (LBS.) [kg]	111 [50.3]	117 [53.1]	123 [55.8]	123 [55.8]	123 [55.8]	148 [67.1]	148 [67.1]	152 [68.9]	152 [68.9]	160 [72.6]	160 [72.6]
AFUE ③	92.0%	92.4%	92.0%	92.3%	92.3%	92.4%	92.4%	92.0%	92.0%	92.1%	92.1%
CALIFORNIA SEASONAL EFFICIENCY ③	84.35%	86.46%	89.96%	85.00%	85.00%	86.40%	86.40%	87.02%	87.02%	87.37%	87.37%

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

① See Conversion Kit Index Form for high altitude derate.

② Canadian installations only.

③ In accordance with D.O.E. test procedures.

MODEL IDENTIFICATION

U	G	T	J	—	07E	M	A	E	S
Ruud	Gas Furnace	Downflow/ Horizontal Condensing Gas Furnace	Design Series		Heating Input Designation	Blower Size	Variations	Heat/Cool Designation	Fuel Code
					Hot Surface Ignition	M = 11 x 7 [279 x 178 mm] R = 11 x 10 [279 x 254 mm] Z = 12 x 11 [305 x 279 mm] Y = 12 x 7 [305 x 178 mm]	A = Std. B = Wide Cabinet	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]	S = U.S. and Canadian Natural Gas
					Input BTU/HR				
					04E 45,000 [13 kW] 06E 60,000 [17.6 kW] 07E 75,000 [20.5 kW] 09E 90,000 [26.4 kW] 10E 105,000 [30.7 kW] 12E 120,000 [35.2 kW]				

[] Designates Metric Conversions

GENERAL TERMS OF LIMITED WARRANTY

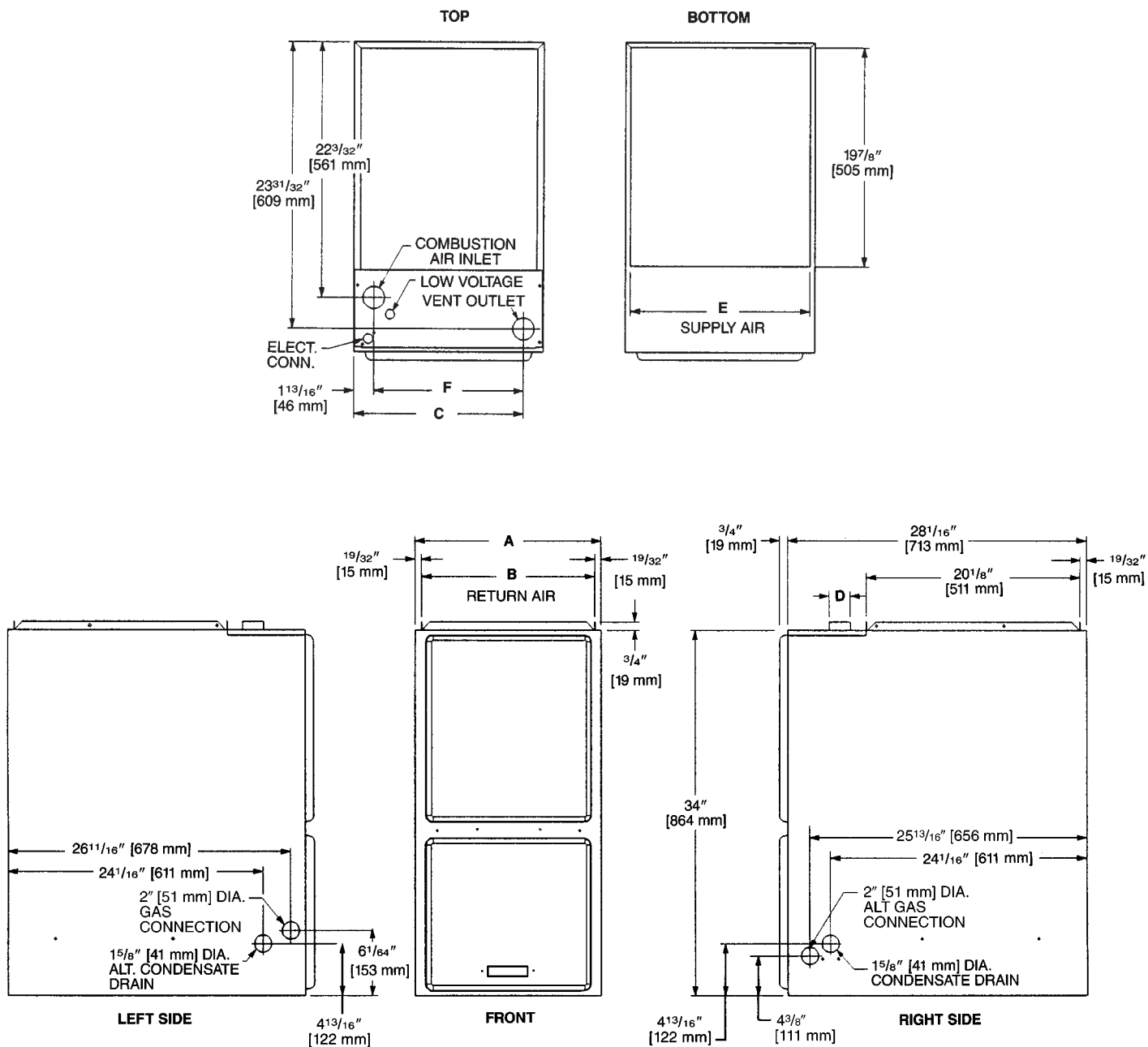
Ruud will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

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

Primary and Secondary Heat Exchanger ...Twenty (20) Years
*Any Other Part.....Five (5) Years

*This five year limited warranty is applicable only to single-phase products installed in residential applications on or after January 1, 2001.

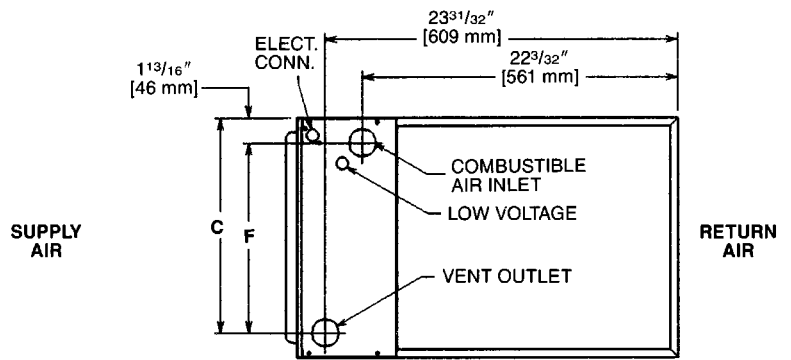
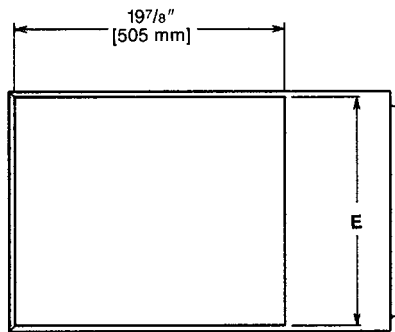
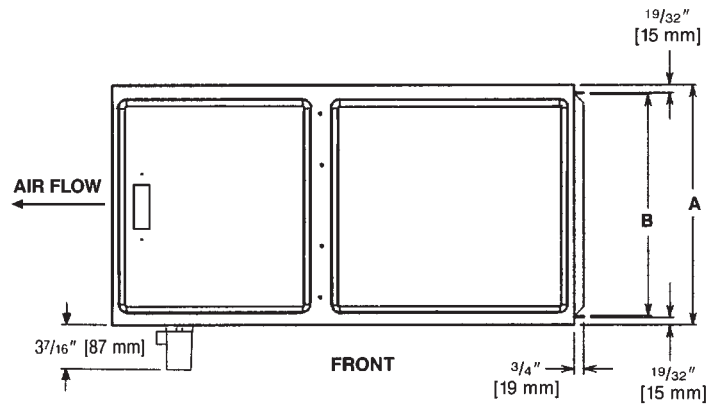
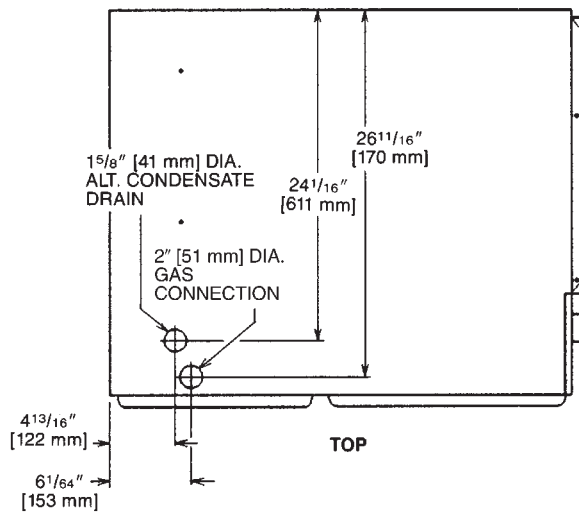
DOWNFLOW MODELS



MODEL UGTJ-	A	B	C	D	E	F	LEFT SIDE	MINIMUM CLEARANCE (IN.) [mm]					SHIP WGTS. [kg]
								RIGHT SIDE	BACK	TOP	FRONT	VENT	
04	17 $\frac{1}{2}$ [445]	16 $\frac{11}{32}$ [415]	15 $\frac{5}{8}$ [397]	2 [51]	16 $\frac{5}{8}$ [422]	13 $\frac{7}{8}$ [352]	0	0	0	1 [25]	2 [51]	0	111 [50]
06	17 $\frac{1}{2}$ [445]	16 $\frac{11}{32}$ [415]	15 $\frac{5}{8}$ [397]	2 [51]	16 $\frac{5}{8}$ [422]	13 $\frac{7}{8}$ [352]	0	0	0	1 [25]	2 [51]	0	117 [53]
07EM	17 $\frac{1}{2}$ [445]	16 $\frac{11}{32}$ [415]	15 $\frac{5}{8}$ [397]	2 [51]	16 $\frac{5}{8}$ [422]	13 $\frac{7}{8}$ [352]	0	0	0	1 [25]	2 [51]	0	123 [56]
07EY	21 [533]	19 $\frac{27}{32}$ [504]	19 $\frac{3}{16}$ [486]	2 [51]	20 $\frac{1}{8}$ [511]	17 $\frac{3}{8}$ [441]	0	0	0	1 [25]	2 [51]	0	123 [56]
09	21 [533]	19 $\frac{27}{32}$ [504]	19 $\frac{3}{16}$ [486]	2 [51]	20 $\frac{1}{8}$ [511]	17 $\frac{3}{8}$ [441]	0	0	0	1 [25]	2 [51]	0	148 [67]
10	21 [533]	19 $\frac{27}{32}$ [504]	19 $\frac{3}{16}$ [486]	2 [51]	20 $\frac{1}{8}$ [511]	17 $\frac{3}{8}$ [441]	0	0	0	1 [25]	2 [51]	0	152 [69]
12	24 $\frac{1}{2}$ [622]	23 $\frac{11}{32}$ [593]	22 $\frac{5}{8}$ [575]	2 [51]	23 $\frac{5}{8}$ [600]	20 $\frac{7}{8}$ [530]	0	0	0	1 [25]	2 [51]	0	160 [73]

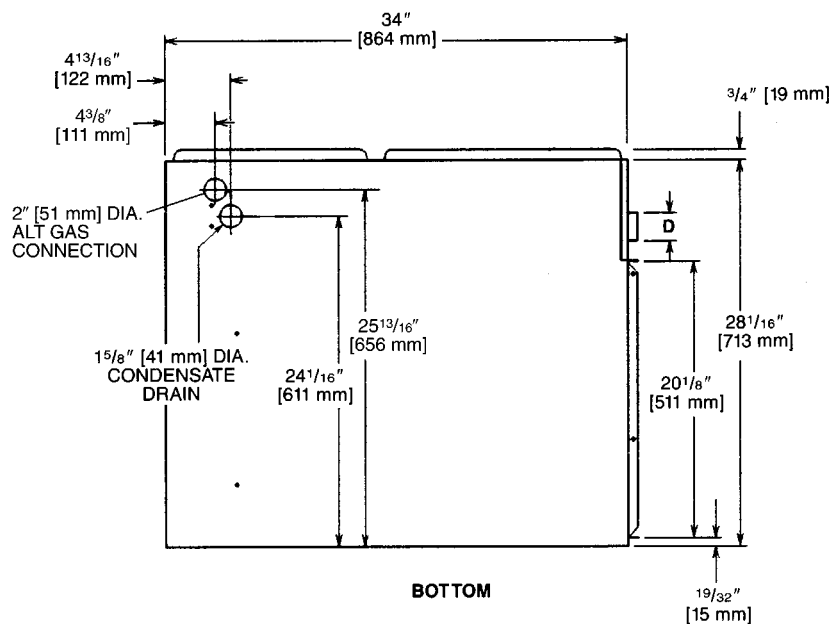
IMPORTANT NOTE: Horizontal furnace may be installed for horizontal left hand air supply **ONLY**. The condensate trap provided for horizontal application must be installed in the field beneath the unit as directed in the furnace Installation & Operating Instructions.

HORIZONTAL MODELS



LEFT SIDE

RIGHT SIDE



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.

BLOWER PERFORMANCE DATA—UGTJ MODELS

MODEL UGTJ-	BLOWER SIZE IN. [mm]	MOTOR H.P. [W]	BLOWER SPEED	CFM [L/s] AIR DELIVERY EXTERNAL STATIC PRESSURE INCHES WATER COLUMN [kPa]						
				0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]
04EMAES	11 x 7 [279 x 178]	1/2 [373]	LOW	820 [387]	790 [373]	760 [359]	725 [342]	690 [326]	650 [306]	610 [288]
			MED-LO	930 [439]	890 [420]	850 [401]	815 [384]	785 [370]	750 [354]	720 [340]
			MED-HI	1150 [543]	1120 [528]	1090 [514]	1045 [493]	1002 [473]	950 [448]	900 [425]
06EMAES	11 x 7 [279 x 178]	1/2 [373]	LOW	910 [429]	885 [418]	860 [406]	815 [384]	770 [363]	725 [342]	680 [321]
			MED	1115 [526]	1080 [510]	1045 [493]	1005 [474]	965 [455]	920 [434]	875 [413]
			HIGH	1365 [644]	1315 [620]	1270 [600]	1225 [578]	1180 [557]	1125 [491]	1070 [505]
07EMAES	11 x 7 [279 x 178]	1/2 [373]	LOW	890 [420]	860 [406]	835 [394]	790 [373]	750 [354]	705 [332]	660 [311]
			MED	1100 [519]	1060 [500]	1025 [484]	980 [462]	940 [443]	890 [420]	845 [399]
			HIGH	1340 [632]	1295 [611]	1250 [590]	1200 [566]	1150 [543]	1090 [514]	1025 [484]
07EYBES	12 x 7 [305 x 178]	1/2 [373]	LOW	1105 [522]	1095 [517]	1080 [510]	1050 [496]	1030 [486]	1010 [477]	990 [467]
			MED	1290 [609]	1275 [602]	1260 [595]	1220 [576]	1195 [564]	1170 [552]	1140 [538]
			HIGH	1480 [698]	1435 [677]	1415 [668]	1390 [656]	1370 [647]	1300 [614]	1255 [592]
07EYBGS	12 x 7 [305 x 178]	3/4 [559]	LOW	1290 [609]	1275 [602]	1260 [595]	1220 [576]	1195 [564]	1170 [552]	1140 [538]
			MED	1480 [698]	1435 [677]	1415 [668]	1390 [656]	1370 [647]	1300 [614]	1255 [592]
			HIGH	1705 [805]	1665 [786]	1615 [762]	1570 [741]	1540 [727]	1475 [696]	1400 [661]
09EZAGS	12 x 11 [305 x 279]	1/2 [373]	LOW	1155 [545]	1125 [531]	1100 [519]	1080 [510]	1060 [500]	1000 [472]	940 [443]
			MED	1420 [670]	1400 [661]	1380 [651]	1365 [644]	1350 [637]	1260 [594]	1175 [554]
			HIGH	1605 [757]	1575 [743]	1550 [732]	1560 [736]	1570 [740]	1480 [698]	1395 [656]
09EZAJS	12 x 11 [305 x 279]	3/4 [559]	LOW	1420 [670]	1400 [661]	1380 [651]	1365 [644]	1350 [637]	1260 [594]	1175 [554]
			MED	1605 [757]	1575 [743]	1550 [732]	1560 [736]	1570 [740]	1480 [698]	1395 [656]
			HIGH	2005 [946]	1965 [927]	1930 [910]	1890 [892]	1850 [873]	1765 [833]	1680 [793]
10EZAGS	12 x 11 [305 x 279]	1/2 [373]	LOW	1180 [557]	1150 [543]	1120 [528]	1100 [519]	1080 [510]	1025 [484]	970 [458]
			MED	1460 [689]	1425 [672]	1390 [656]	1375 [649]	1360 [642]	1280 [604]	1200 [566]
			HIGH	1680 [793]	1645 [776]	1615 [762]	1585 [748]	1560 [736]	1490 [703]	1420 [670]
10EZAJS	12 x 11 [305 x 279]	3/4 [559]	LOW	1460 [689]	1425 [672]	1390 [656]	1375 [649]	1360 [642]	1280 [604]	1200 [566]
			MED	1680 [793]	1645 [776]	1615 [762]	1585 [748]	1560 [736]	1490 [703]	1420 [670]
			HIGH	2055 [970]	2000 [944]	1940 [915]	1880 [887]	1820 [859]	1745 [823]	1675 [790]
12ERAGS	11 x 10 [279 x 245]	1/2 [373]	LOW	1285 [606]	1250 [590]	1215 [573]	1235 [582]	1260 [595]	1230 [580]	1200 [566]
			MED	1590 [750]	1565 [738]	1540 [727]	1505 [710]	1475 [696]	1425 [672]	1375 [649]
			HIGH	1840 [868]	1820 [860]	1800 [850]	1750 [826]	1700 [802]	1645 [776]	1590 [750]
12ERAJS	11 x 10 [279 x 245]	3/4 [559]	LOW	1590 [750]	1565 [738]	1540 [727]	1505 [710]	1475 [696]	1425 [672]	1375 [649]
			MED	1840 [868]	1820 [860]	1800 [850]	1750 [826]	1700 [802]	1645 [776]	1590 [750]
			HIGH	2315 [1093]	2250 [1062]	2185 [1031]	2110 [996]	2040 [963]	1965 [927]	1890 [892]

NOTE: Recommended blower speeds are in bold.

[] Designates Metric Conversions

ACCESSORIES—DOWNFLOW

VENT TERMINATION KITS CONCENTRIC: Horizontal/Vertical = RXGY-E03

HORIZONTAL TWO PIPE: RXGY-D02, RXGY-D03, RXGY-D04

CONDENSATE PUMP KIT: RXGY-B01

NEUTRALIZER KIT: RXGY-A01

FOSSIL FUEL KIT: RXPFF-F01, RXPFF-F02 (TVA)

PLENUM DATA FOR “A” COILS

Plenum adapters are required in some applications when plenum and furnace size do not match.

FURNACE WIDTH IN. [mm]	PLENUM WIDTH IN. [mm]	PLENUM ADAPTER DOWNFLOW	COIL PLENUM
17½ [445]	16¼ [413]	RXAA-C186	RXAL-B16BU
17½ [445]	20¼ [514]	RXAA-C173	RXAL-B20BU
17½ [445]	21⅝ [549]	RXAA-C187	RXAL-B21BU
17½ [445]	25¼ [641]	RXAA-C174	RXAL-B25BU
21 [533]	25¼ [641]	RXAA-C175	RXAL-B25BU
21 [533]	22¼ [565]	RXAA-C176	RXAL-B22BU
21 [533]	21⅝ [549]	RXAA-C188	RXAL-B21BU
24½ [622]	25¼ [641]	RXAA-C177	RXAL-B25BU
24½ [622]	21⅝ [549]	RXAA-C187	RXAL-B21BU

Note: See Form Number C22-206 for MultiFlex® coil data.

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

EXTERNAL TOP MOUNT FILTER RACK: RXGF-CC

INTERNAL FILTER RACK FOR AIR RETURN DUCT: RXGF-DB*

Each order contains (1) one box of 10 filter racks supplied without filters.

*Filters available through PROSTOCK®.

FILTER RACK FILTER SIZES® INCHES [mm]	
MODEL UGTJ-	RXGF-CC
04	(2) 12 x 20 [305 x 508]
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.

RXGP-F03

TWINNING KIT—is for use with Ruud Achiever 90 Gas Furnaces for parallel operation requirements (not needed with UGTA downflow/horizontal gas furnaces).

FOR HIGH ALTITUDES:

*HIGH ALTITUDE KIT:
F04-105 KBTU/H
F06-45/60/90 KBTU/H
F05-120 KBTU/H
F07-75 KBTU/H

*For installations over 5000 ft.

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 needs to be recalculated and verified. A burner orifice change may still be required. 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.

[] Designates Metric Conversions

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.

**RUUD
AIR CONDITIONING
DIVISION**

5600 Old Greenwood Road, Fort Smith, Arkansas 72908



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