

Ruud Achiever Plus™ Series Downflow Gas Furnace



R801T Downflow Series

80% A.F.U.E.†

Input Rates 75-125 kBTU



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

- 80% residential Gas Furnace CSA certified
- PlusOne™ Diagnostics — 7 Segment LED all units
- PlusOne™ Ignition System – DSI for reliability and longevity
- Heat exchanger is removable for improved serviceability. Aluminized steel construction provides maximum corrosion resistance and thermal fatigue reliability.
- Low profile 34" cabinet ideal for space constrained installations

- Integrated Control board features dip switches for easy system set up
- QR code for quick access to product information from your smart phone or tablet
- Insulated blower compartment
- Constant Torque electrically commutated motor

TABLE OF CONTENTS

Standard & Optional Equipment3

Model Features/Physical Data & Specifications4

Model Number Identification5

Dimensional Data.....6

Blower Performance Data.....7

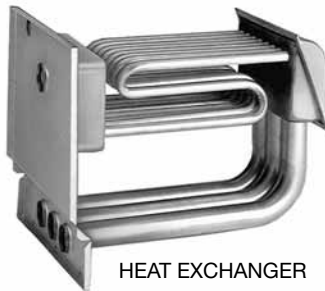
Accessories.....8

Limited Warranty9

CONSTANT TORQUE ECM MOTOR



INTEGRATED
FURNACE
CONTROL

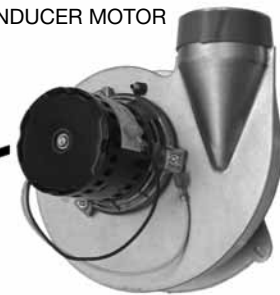


HEAT EXCHANGER

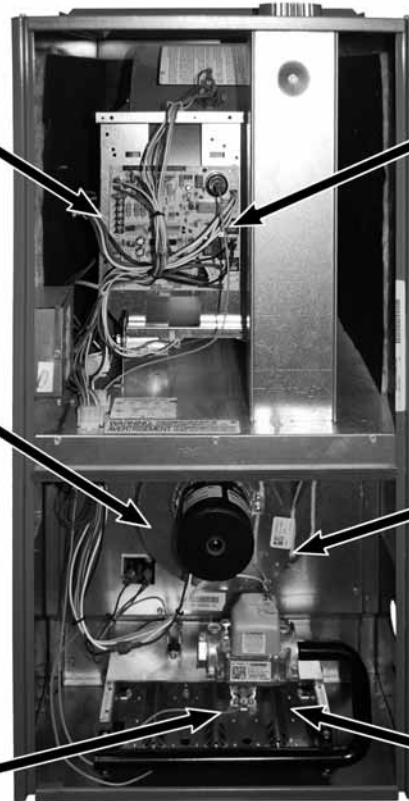
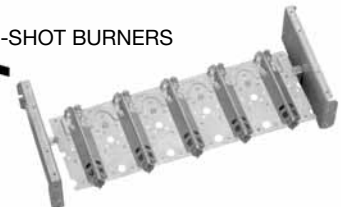
DIRECT SPARK IGNITOR
WITH REMOTE SENSE



DRAFT INDUCER MOTOR



IN-SHOT BURNERS



STANDARD EQUIPMENT

Completely assembled and wired; induced draft; pressure switch; redundant main gas control; blower compartment door safety switch; solid state time on/time off blower control; limit control; manual shut-off valve, pressure regulator for natural and L.P. (propane) gas; transformer; direct drive multi-speed blower motor. Furnaces are equipped with cooling/heating relay and transformer (40VA) ready for air conditioning applications. (Please note: a thermostat is not included as standard equipment.) Flame sensor diagnostics; on-board twinning; fused-protection (secondary), **3rd speed option for continuous fan; common heat/cool terminal.**

OPTIONAL EQUIPMENT

NOTE: Furnace is not listed for use with fuels other than natural or L.P. (propane) gas.

The complete terms of limited and other warranties are available at our sales office, or through local installer.

All models can be converted by a qualified Ruud 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 Ruud parts distributor.

For L.P. (propane) operation, refer to Conversion Kit Index Form.

NOTE: For natural and L.P. (propane) gas models, direct spark ignition is 100% lockout type.

WARNING

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

Model Features

- 80% residential Gas Furnace CSA certified
- PlusOne™ Diagnostics — 7 Segment LED all units
- PlusOne™ Ignition System – DSI for reliability and longevity
- Heat exchanger is removable for improved serviceability. Aluminized steel construction provides maximum corrosion resistance and thermal fatigue reliability.
- Low profile 34" cabinet ideal for space constrained installations
- Integrated Controls board features dip switches for easy system set up
- QR code for quick access to product information from your smart phone or tablet
- Insulated blower compartment
- Constant Torque electrically commutated motor

Physical Data and Specifications U.S. and Canadian Models

MODEL NUMBERS R801T (DF) SERIES	R801TA075317Z*B	R801TA075521Z*B	R801TA100521Z*B	R801TA125524Z*B
Input in BTU's/Hr [kW] ②	75,000 [22]	75,000 [22]	100,000 [29]	125,000 [37]
Heating Capacity in BTU's/Hr [kW] ①	61,000 [18]	62,000 [18]	82,000 [24]	103,000 [30]
High Altitude Input in BTU's/Hr [kW]*	67,500 [20]	67,500 [20]	90,000 [26]	112,500 [33]
High Altitude Output Capacity in BTU's/Hr [kW]*	53,500 [16]	53,500 [16]	72,500 [21]	89,000 [26.1]
Heat Ext. Static Pressure in "wc [kPa]	0.12 [0.029]	0.12 [0.029]	0.15 [0.037]	0.2 [0.05]
Blower (D x W) in inches [mm]	11 x 7 [279 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
Motor H.P.-Speeds - Type [W]	1/2hp, 5spd, X-13 [373]	1hp, 5spd, X-13 [746]	1hp, 5spd, X-13 [746]	1hp, 5spd, X-13 [746]
Min. Circuit Ampacity	9	13	12	15
Min. Overload Protection Device	15	15	15	20
Max. Overload Protection Device	15	20	15	25
Heating Speed (factory setting)	MED-HIGH	MED	MED-HIGH	MED-HIGH
Cooling Speed (factory setting)	HIGH	HIGH	HIGH	HIGH
Cooling in CFM [L/s] @ 0.5"wc [0.12 kPa] E.S.P. (nominal)	1200 [566]	2000 [944]	2000 [944]	2000 [944]
Rated E.S.P. in "wc [kPa]	0.5 [0.12]	0.5 [0.12]	0.5 [0.12]	0.5 [0.12]
Temperature Rise Range in °F [°C]	30-60 [17-33]	25-55 [13.9-30.6]	30-60 [17-33]	35-65 [19.4-36.1]
Max Outlet Air in °F [°C]	165 [73.8]	165 [73.8]	190 [87.7]	185 [85.0]
Approx. Shipping Weight in Lbs. [kg]	105 [48]	120 [54]	120 [54]	140 [63]
AFUE - Electronic Ignition Modules ①	80.0%	80.0%	80.0%	80.0%

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

① In accordance with D.O.E. test procedures.

② See Conversion Kit Index Form for high altitude derate in U.S. applications.

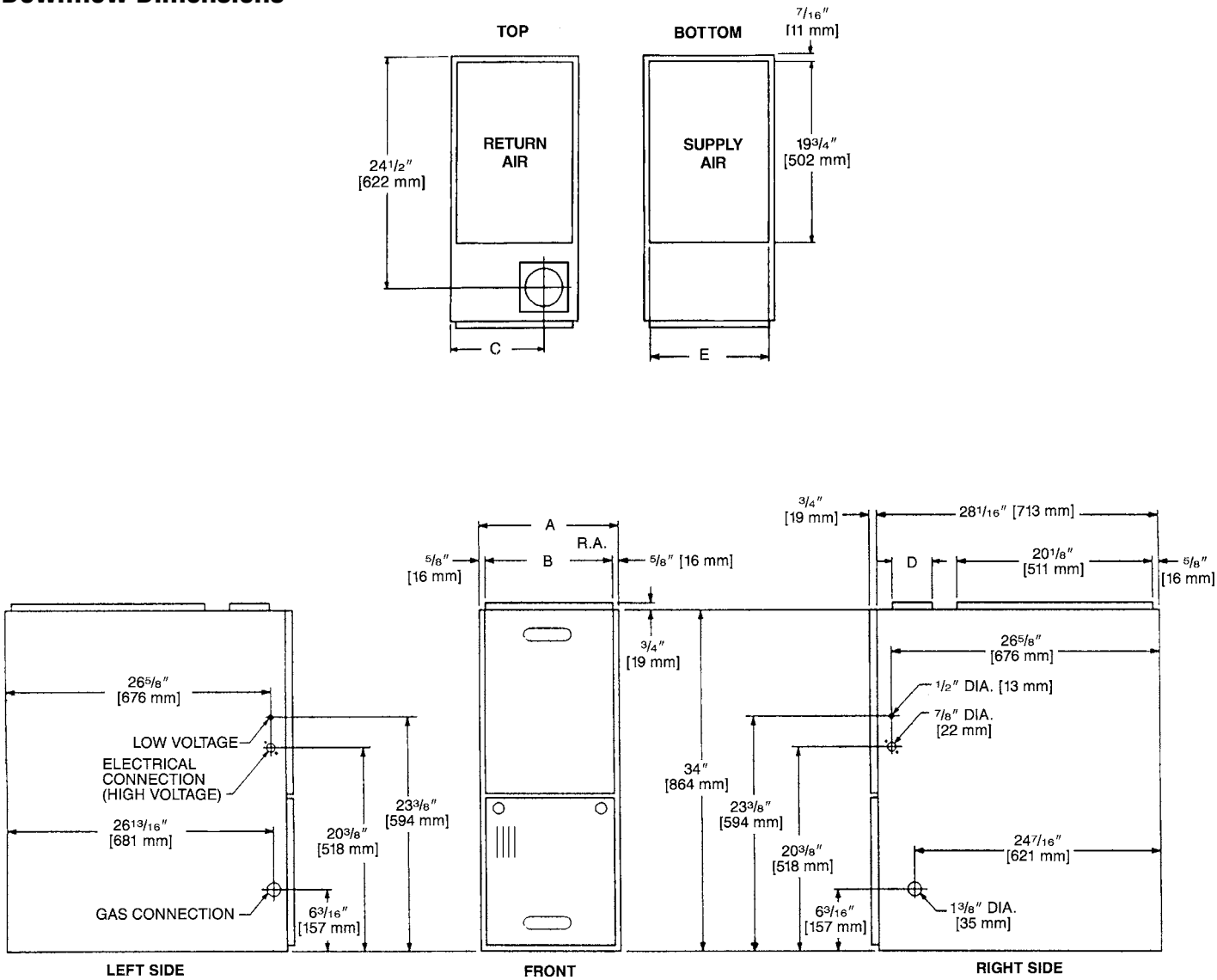
[] Designates Metric Conversions

Model Number Identification—Downflow Models

<u>R</u>	<u>80</u>	<u>1</u>	<u>T</u>	<u>A</u>	<u>075</u>	<u>4</u>	<u>17</u>	<u>Z</u>	<u>S</u>	<u>A</u>
Ruud	80 = 80% AFUE	1 = Single Stage	T = Constant Torque	Design Series A = 1st Design	Input BTU/HR [kW] 075 = 75,000 [22] 100 = 100,000 [29] 125 = 125,000 [37]	3 = Up to 3 Ton 4 = 2½ to 4 Ton 5 = 3½ to 5 Ton	Cabinet Width 17 = 17.5" 21 = 21" 24 = 24.5"	Z = Down and Zero Clearance Downflow	X = Low NO _x S = Standard	Revision- Marketing A – First Time Release B – 2nd Design Series

[] Designates Metric Conversions

Downflow Dimensions



Dimensional Data

MODEL R801T (DOWNFLOW) SERIES	A	B	C	D	E	REDUCED CLEARANCES (IN.) [mm]						
						LEFT SIDE	RIGHT SIDE	BACK	TOP	FRONT	VENT	SHIP. WGTS. (LBS.) [kg]
075317	17 $\frac{1}{2}$ [445]	16 $\frac{11}{32}$ [415]	12 $\frac{1}{8}$ [308]	①	16 $\frac{5}{8}$ [422]	0	3 ②	0	1 [25]	3 [76]	6 [152] ③	105 [47.6]
075521	21 [533]	19 $\frac{27}{32}$ [504]	13 $\frac{7}{8}$ [352]	①	20 $\frac{1}{8}$ [511]	0	0	0	1 [25]	3 [76]	6 [152] ③	120 [54.4]
100	21 [533]	19 $\frac{27}{32}$ [504]	13 $\frac{7}{8}$ [352]	①	20 $\frac{1}{8}$ [511]	0	0	0	1 [25]	3 [76]	6 [152] ③	120 [54.4]
125	24 $\frac{1}{2}$ [622]	23 $\frac{11}{32}$ [593]	15 $\frac{5}{8}$ [397]	①	23 $\frac{5}{8}$ [600]	0	0	0	1 [25]	3 [76]	6 [152] ③	140 [63.5]

NOTES: ① May require a 3" [76 mm] to 4" [102 mm] or 3" [76 mm] to 5" [127 mm] adapter.
② May be 0" [0 mm] with type B vent.
③ May be 1" [25 mm] with type B vent.
Furnaces must be vented in accordance with the National Fuel Gas Code, ANSI Z223.1 and in accordance with local codes.

[] Designates Metric Conversions

Blower Performance Data—Downflow Models

AIR FLOW PERFORMANCE - (-)801T SERIES (Downflow) MODELS								
MODEL	MOTOR H.P. [W] BLOWER SIZE IN [mm]	SPEED TAP	CFM [L/s] AIR DELIVERY EXTERNAL STATIC PRESSURE INCHES WATER COLUMN [kPa]					
			0.1 [.02]	0.2 [.05]	0.3 [.07]	0.5 [.12]	0.6 [.15]	0.8 [.19]
(-)801TA075317ZSA	1/2 [373] 11 x 7 [279 x 178]	Low	916	803	669	561	504	421
		Med. Lo	993	952	910	827	793	706
		Med	1205	1158	1124	1056	1024	950
		Med. Hi	1367	1333	1300	1236	1203	1140
		High	1475	1444	1416	1354	1329	1264
(-)801TA075521ZSA	1 [748] 11 x 10 [279 x 254]	Low	1198	1105	1093	931	901	791
		Med. Lo	1411	1358	1317	1227	1196	1093
		Med	1608	1564	1529	1451	1416	1340
		Med. Hi	1918	1877	1840	1767	1706	1636
		High	2122	2083	2054	1977	1945	1874
(-)801TA100521ZSA	1 [748] 11 x 10 [279 x 254]	Low	1240	1120	1073	974	917	799
		Med. Lo	1405	1364	1317	1232	1181	1083
		Med	1600	1561	1526	1445	1403	1325
		Med. Hi	1903	1877	1833	1766	1711	1631
		High	2072	2028	2006	1940	1908	1840
(-)801TA125524ZSA	1 [748] 11 x 10 [279 x 254]	Low	1225	1073	988	864	795	697
		Med. Lo	1302	1240	1191	1074	1027	932
		Med	1553	1503	1455	1370	1313	1237
		Med. Hi	1902	1859	1822	1722	1686	1602
		High	2403	2369	2332	2246	2190	2059

NOTE: Bold data is factory heating tap

[] Designates Metric Conversions

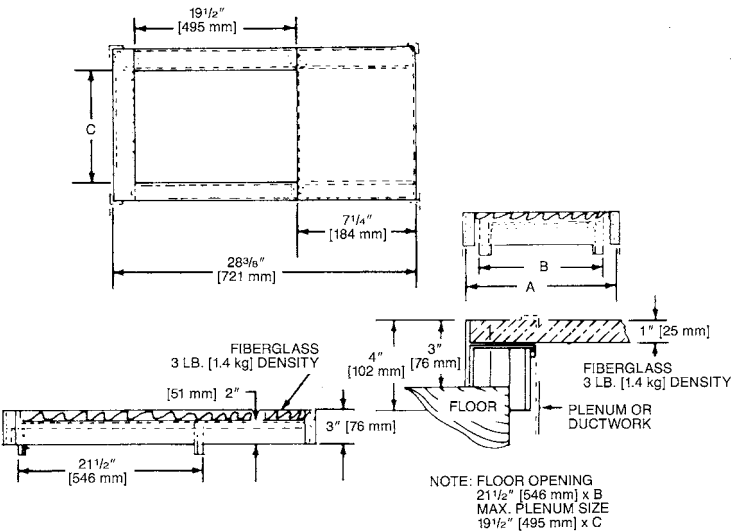
DOWNFLOW ACCESSORIES

DOWNFLOW WARNING: Unit design is certified for installation on non-combustible floor. A special factory supplied combustible floor sub-base is required when installing on a combustible floor. Failure to install the sub-base may result in fire, property damage and personal injury.

COMBUSTIBLE FLOOR BASE DIMENSIONS

COMBUSTIBLE FLOOR BASE	USE WITH FURNACE SIZES	A IN. [mm]	B IN. [mm]	C IN. [mm]
RXGC-B17	R801T075317	18 [457]	16¾ [425]	14¾ [451]
RXGC-B21	R801T100521, R801T075521	21½ [546]	20¼ [514]	18¼ [464]
RXGC-B24	R801T125	25 [635]	23¾ [603]	21¾ [552]

[] Designates Metric Conversions



RXGF-CC*

FILTER RACK—Downflow top return mount. Requires (2) 14 x 20 Filters.

NOTE: Filter racks are shipped without filters.

*Filters available through PROSTOCK ®.

FOR HIGH ALTITUDES:

HIGH ALTITUDE OPTION CODE: U.S. & Canada –
None required for high altitudes.

HIGH ALTITUDE CONVERSION KITS: U.S. & Canada –
None required for high altitudes.

80+ HIGH ALTITUDE INSTRUCTIONS

Caution: Always follow National Fuel Gas Code (NFGC) guidelines when converting for high altitudes.

High altitude option codes are not required for these models. However, the burner orifice size needs to be recalculated and verified at elevations above 2000 ft. See Installation Instructions for more information.

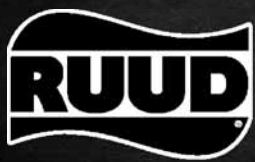
NOTE: For Canadian installations only, an optional derate (manifold gas pressure reduction) method may be used to adjust the furnace for altitude. See Installation Instructions for more information. This optional method may **NOT** be used for U.S. installations.

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.**

Heat Exchanger.....Twenty (20 Years)
Conditional Parts (Registration Required)Ten (10) Years



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.™

PRINTED IN U.S.A. 2/17 QG FORM NO. G22-549 REV. 1