

## Ruud Achiever Plus™ Series Downflow Gas Furnaces



### 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.

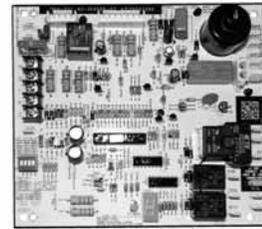
- 80% residential Gas Furnace CSA certified
- PlusOne™ Diagnostics — 7 Segment LED all units
- PlusOne™ Ignition System – DSI for reliability and longevity
- Heat exchanger is removable for improved serviceability. Aluminized steel construction provides maximum corrosion resistance and thermal fatigue 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
- Constant Torque electrically commutated motor

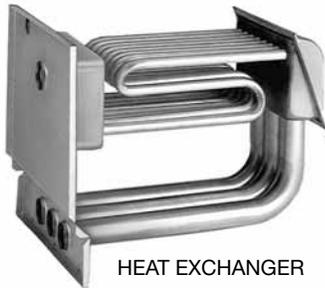
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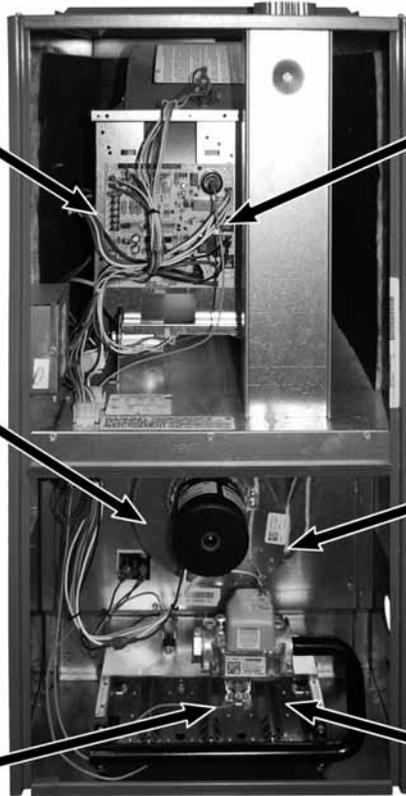
CONSTANT TORQUE ECM MOTOR



INTEGRATED  
FURNACE  
CONTROL



HEAT EXCHANGER



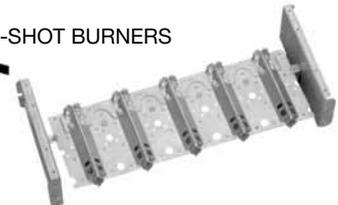
DRAFT INDUCER MOTOR



DIRECT SPARK IGNITOR  
WITH REMOTE SENSE



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
- Constant Torque electrically commutated motor

## Physical Data and Specifications

### U.S. and Canadian Models

MODEL NUMBERS R801T (DF) SERIES	R801TA075317Z*A	R801TA075521Z*A	R801TA100521Z*A	R801TA125524Z*A
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	60,000 [18]	60,000 [18]	81,000 [24]	99,000 [29]
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]
Motor Full Load Amps	6.8	10.9	10.9	10.9
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.

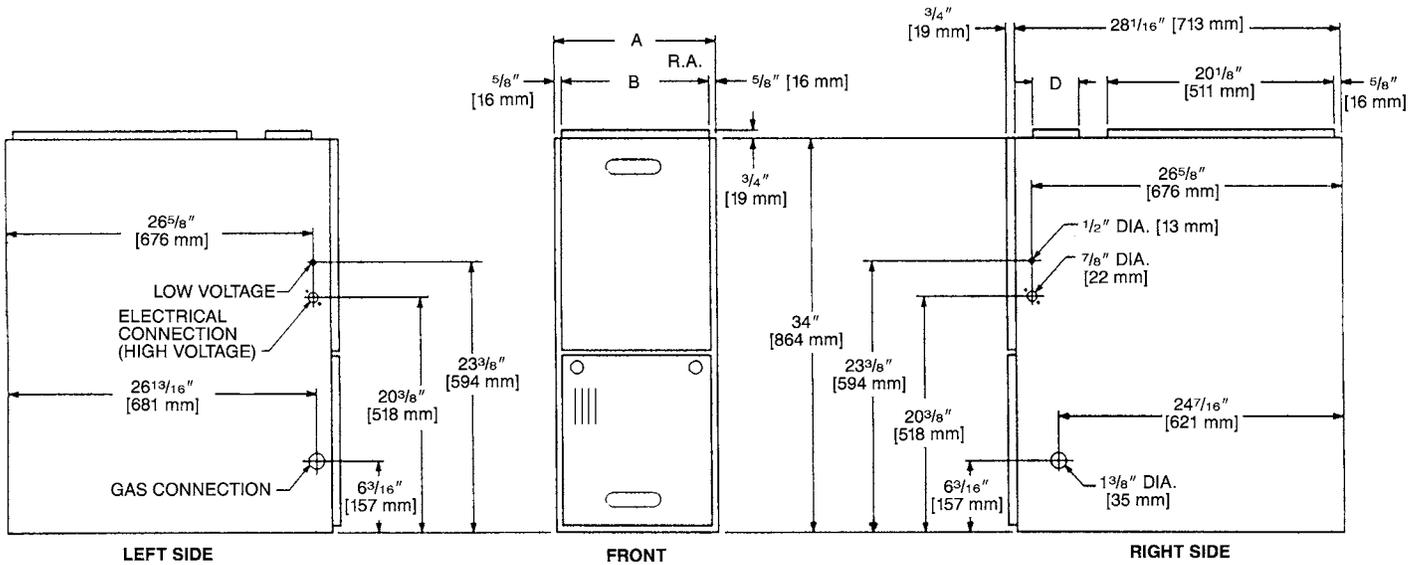
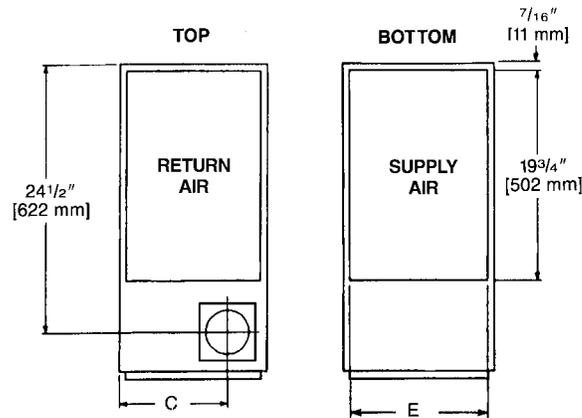
[ ] Designates Metric Conversions

## Model Number Identification—Downflow Models

<u>U</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 <sub>x</sub> S = Standard	Revision- Marketing (A – First Time Release)

[ ] 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 1/2 [445]	16 11/32 [415]	12 1/8 [308]	①	16 5/8 [422]	0	3 ②	0	1 [25]	3 [76]	6 [152] ③	105 [47.6]
075521	21 [533]	19 27/32 [504]	13 7/8 [352]	①	20 1/8 [511]	0	0	0	1 [25]	3 [76]	6 [152] ③	120 [54.4]
100	21 [533]	19 27/32 [504]	13 7/8 [352]	①	20 1/8 [511]	0	0	0	1 [25]	3 [76]	6 [152] ③	120 [54.4]
125	24 1/2 [622]	23 11/32 [593]	15 5/8 [397]	①	23 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
Med. Lo	993	952			910	827	793	706
Med	1205	1158			1124	1056	1024	950
<b>Med. Hi</b>	<b>1367</b>	<b>1333</b>			<b>1300</b>	<b>1236</b>	<b>1203</b>	<b>1140</b>
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
		<b>Med</b>	<b>1608</b>	<b>1564</b>	<b>1529</b>	<b>1451</b>	<b>1416</b>	<b>1340</b>
		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
		<b>Med. Hi</b>	<b>1903</b>	<b>1877</b>	<b>1833</b>	<b>1766</b>	<b>1711</b>	<b>1631</b>
		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
		<b>Med. Hi</b>	<b>1902</b>	<b>1859</b>	<b>1822</b>	<b>1722</b>	<b>1686</b>	<b>1602</b>
		High	2403	2369	2332	2246	2190	2059

NOTE: Bold data is factory heating tap

[ ] Designates Metric Conversions

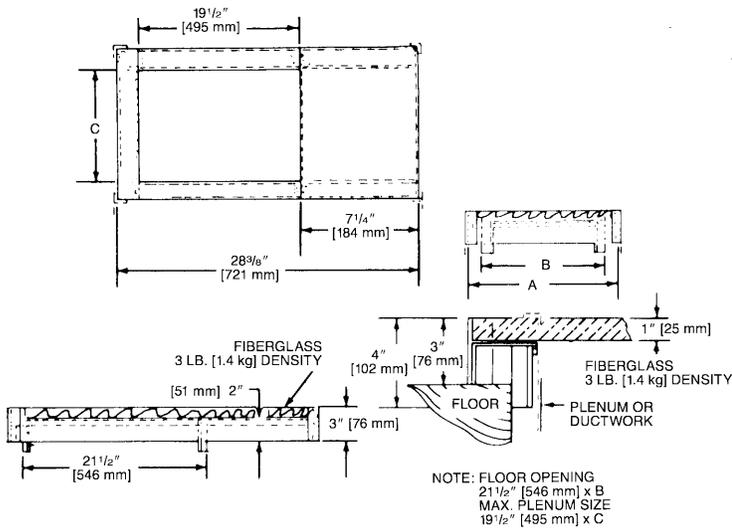
## DOWNFLOW ACCESSORIES

**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]	16 <sup>3</sup> / <sub>4</sub> [425]	14 <sup>3</sup> / <sub>4</sub> [451]
RXGC-B21	R801T100521, R801T075521	21 <sup>1</sup> / <sub>2</sub> [546]	20 <sup>1</sup> / <sub>4</sub> [514]	18 <sup>1</sup> / <sub>4</sub> [464]
RXGC-B24	R801T125	25 [635]	23 <sup>3</sup> / <sub>4</sub> [603]	21 <sup>3</sup> / <sub>4</sub> [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\***

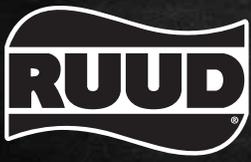
Ruud will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

**\*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.*

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PRINTED IN U.S.A 7/14 QG FORM NO. G22-549