

UPFLOW/ HORIZONTAL ULTRA LOW NO_x GAS FURNACE



Features

- First certified unit to meet 14ng/j NO_x emission standard
- Environmentally friendly and responsible product that reduces NO_x emissions by 65%
- 80% residential Gas Furnace CSA certified
- 3 way multi poise design UF / HZ
- Diagnostics — 7 Segment LED all units
- Ignition System — DSI for reliability and longevity
- Heat exchanger is removable for improved serviceability. Stainless/Aluminized steel construction provides maximum corrosion resistance and thermal fatigue reliability.
- Solid doors provide quiet operation
- Solid bottom
- Insulated blower compartment
- Low profile 34" cabinet ideal for space constrained installations
- Blower shelf design — serviceable in all furnace orientations
- Hemmed edges on cabinets and doors
- 1/4 turn door knobs for tool less access
- 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

FF***TS80 UPFLOW/ HORIZONTAL SERIES

80% A.F.U.E.†

Input Rates 50-100 kBTU

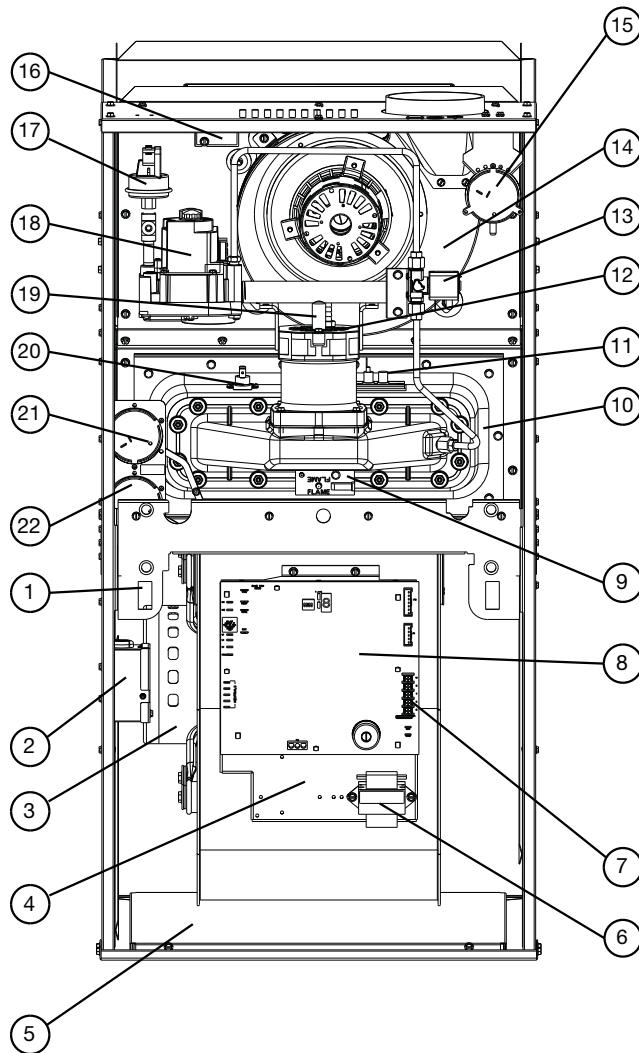
†A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.

Manufactured for
Fujitsu General America, Inc.
Fairfield, NJ



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ITEM NO.	DESCRIPTION
1.	DOOR SWITCH
2.	JUNCTION BOX
3.	BLOWER MOTOR
4.	CONTROL MOUNTING PLATE
5.	SOLID METAL BASE PAN
6.	TRANSFORMER
7.	LOW VOLTAGE TERMINALS
8.	FURNACE CONTROL
9.	FLAME LED BOARD
10.	BURNER ASSEMBLY
11.	IGNITOR/FLAME SENSE
12.	COMBUSTION AIR INLET
13.	PILOT SOLENOID
14.	INDUCED DRAFT BLOWER
15.	AIR INLET PRESSURE SWITCH
16.	MAIN LIMIT
17.	GAS PRESSURE SWITCH
18.	GAS VALVE
19.	ORIFICE
20.	OVER-TEMPERATURE SWITCH
21.	COMBUSTION PRESSURE SWITCH
22.	IGNITION PRESSURE SWITCH

ST-A1252-01-00

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 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.

OPTIONAL EQUIPMENT

Side and bottom filter frame assembly. Return air cabinet for all sizes.

NOTE: Furnace is not listed for use with fuel other than natural gas.

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

NOTE: For natural gas models, direct spark ignition is 100% safety lockout type.

WARNING

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

Model Features

- 80% residential Gas Furnace CSA certified
- 3 way multi poise design UF / HZ
- Diagnostics — 7 Segment LED all units
- 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.
- Solid doors provide quiet operation
- Solid bottom
- Insulated blower compartment
- Low profile 34" cabinet ideal for space constrained installations
- Blower shelf design serviceable in all furnace orientations
- Hemmed edges on cabinets and doors
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Physical Data and Specifications

MODEL NUMBERS FF***TS80 SERIES	FF50173TS80Z	FF70173TS80Z	FF100215TS80Z
Input-BTU/Hr [kW] ②	50,000 [14.6]	70,000 [20.5]	100,000 [29]
Heating Capacity BTU/Hr [kW] ①	40,000 [11.7]	56,000 [16.4]	80,000 [23.4]
Heat Ext. Static Pressure [kPa]	.18 [.05]	.20 [.05]	.28 [.07]
Blower (D x W) [mm]	11 x 7 [279 x 178]	11 x 7 [279 x 178]	11 x 10 [279 x 254]
Motor H.P.–Speed– PSC Type [W]	1/2-5 Spd Constant Torque [373]	1/2-5 Spd Constant Torque [373]	3/4-5 Spd Constant Torque [560]
Min. Circuit Ampacity	10	9	13
Min. Overload Protection Device	15	15	15
Max. Overload Protection Device	15	15	15
Heating Speed	Low	Med	Med
Cooling Speed	Med-High	Med-High	High
Cooling CFM @ Rating Point [L/s]	1138 [537]	1136 [536]	1714 [809]
Max. E.S.P. (In. W.C.) [kPa]	0.9 [.22]	0.9 [.22]	0.9 [.22]
Temperature Rise Range °F [°C]	35-65 [19.4-36.1]	35-65 [19.4-36.1]	35-65 [19.4-36.1]
Max. Outlet Air Temp. °F [°C]	180 [82.2]	180 [82.2]	180 [82.2]
Approx. Shipping Weight (Lbs.) [kg]	125 [57]	125 [57]	140 [64]
AFUE ①	80.0%	80.0%	80.0%

NOTES: All models are 115V, 60HZ, 1 Ph. Gas connection size for all models is 1/2" [12 mm] N.P.T.

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

② See Conversion Kit Index Form for high altitude derate.

* S = Standard, Z = Low NOx

This furnace meets air district requirements of 14 ng/J NOx emissions limit, and thus is eligible for the Clean Air Furnace Rebate Program:
www.CleanAirFurnaceRebate.com in SCAQMD.

[] Designates Metric Conversions

Model Number Identification

<u>FF</u>	<u>50</u>	<u>17</u>	<u>3</u>	<u>T</u>	<u>S</u>	<u>80</u>	<u>Z</u>
Type	Capacity	Width	Airflow	Motor	Speed	Efficiency	Orientation
Fujitsu	50 = 50,000 70 = 70,000 100 = 100,000	17" 21"	3 = 3 Ton 5 = 5 Ton	T = Constant Torque	S = Single Stage	80 = 80%	Z = Ultra Low NOx

[] Designates Metric Conversions

Upflow Application

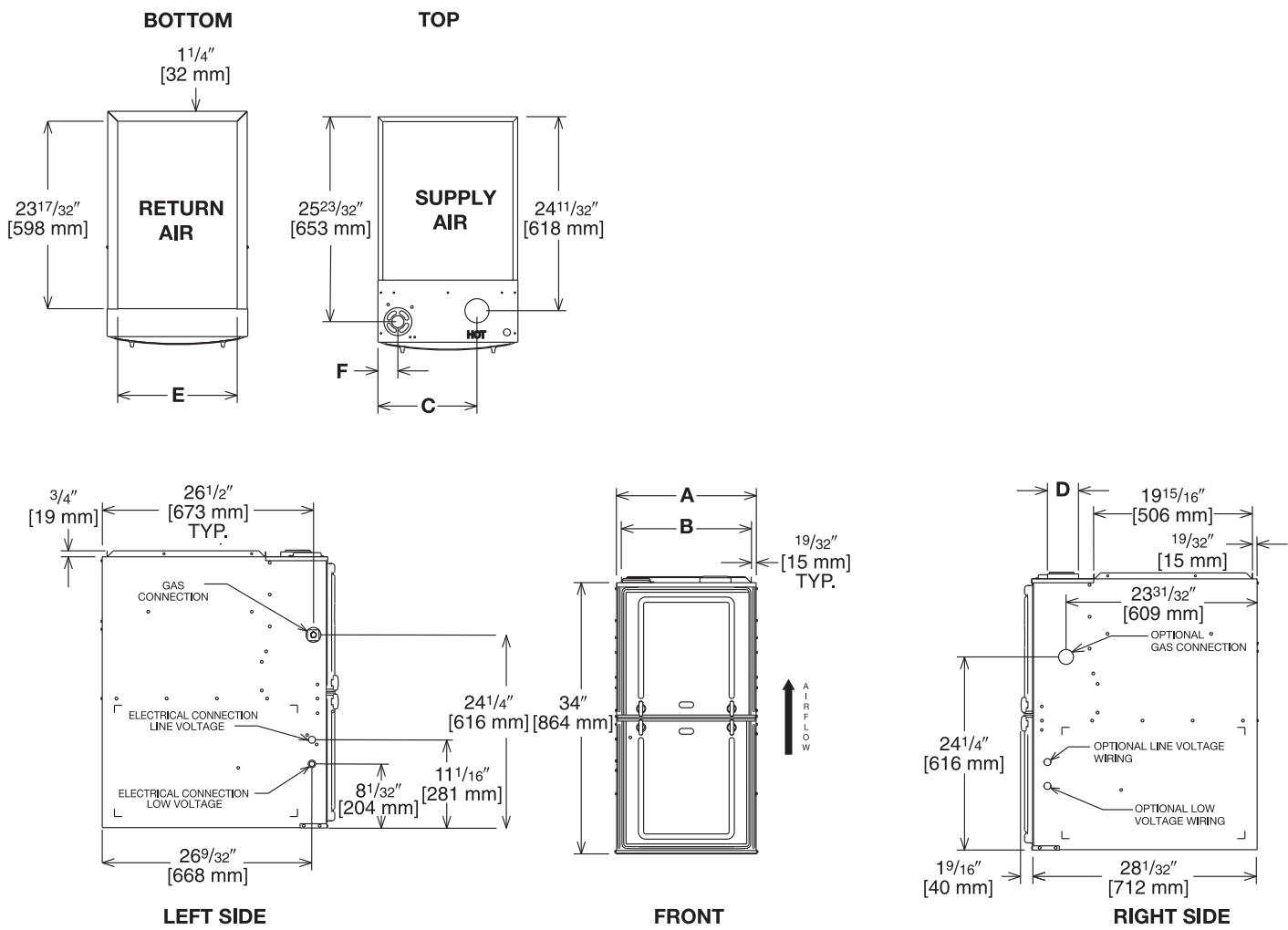


Illustration
ST-A1220-04-00
FIGURE 1

Dimensional Data: Upflow Model

MODEL FF***TS80	A	B	C	D	E	F	MINIMUM CLEARANCE (IN.) [mm]						SHIP WGTS. (LBS.) [kg]
							LEFT SIDE	RIGHT SIDE	BACK	TOP	FRONT	VENT	
050/070	17 1/2 [445]	16 11/32 [415]	12 3/8 [314]	①	15 [381]	2 1/2 [64]	0	3 [76] ②	0	1 [25]	3 [76]	6 [152] ③	125 [57]
100	21 [533]	19 27/32 [504]	14 1/8 [359]	①	18 1/2 [470]	2 1/2 [64]	0	0	0	1 [25]	3 [76]	6 [152] ③	140 [64]

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

Horizontal Application

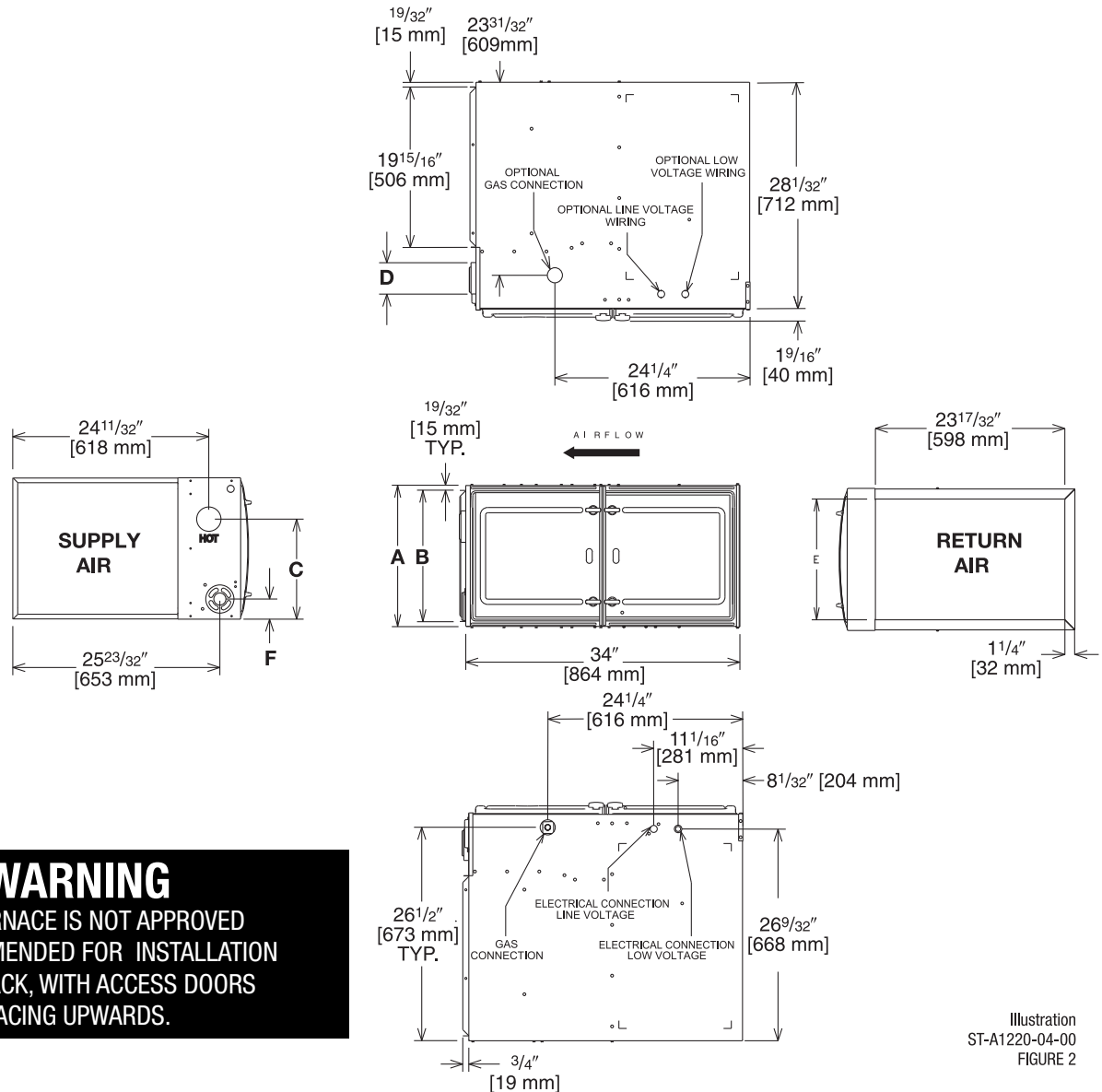


Illustration
ST-A1220-04-00
FIGURE 2

WARNING
THIS FURNACE IS NOT APPROVED
OR RECOMMENDED FOR INSTALLATION
ON ITS BACK, WITH ACCESS DOORS
FACING UPWARDS.

Dimensional Data: Horizontal Model

MODEL FF***TS80	A	B	C	D	E	F	MINIMUM CLEARANCE (IN.) [mm]						SHIP WGTS. (LBS.) [kg]
							SUPPLY AIR SIDE	RETURN AIR SIDE	BACK	TOP	FRONT	VENT	
050/070	17 1/2 [445]	16 11/32 [415]	12 3/8 [314]	①	15 [381]	2 1/2 [64]	3 [76] ②	3 [76] ②	0	1 [25]	3 [76]	6 [152] ③	125 [57]
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Blower Performance Data

AIR FLOW PERFORMANCE - FF***TS80 SERIES 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]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.19]	0.9 [.22]
FF50173TS80Z	1/2 [373] 11 x 6 [279 x 152]	Low*	822	713	642	578	542	494	474	424	386
		Med. Lo	950	911	888	855	829	792	756	702	680
		Med.	1125	1091	1066	1034	1003	979	933	895	858
		Med. Hi	1292	1270	1249	1215	1191	1166	1138	1103	1068
		High	1443	1407	1389	1356	1326	1303	1281	1240	1198
FF70173TS80Z	1/2 [373] 11 x 7 [279 x 178]	Low	927	822	769	723	660	615	564	524	484
		Med. Lo	1025	984	944	902	863	815	765	719	680
		Med.*	1147	1115	1069	1032	981	935	896	844	809
		Med. Hi	1359	1330	1292	1260	1209	1175	1136	1100	1062
		High	1521	1487	1445	1413	1386	1349	1312	1275	1237
FF100215TS80Z	3/4 [559] 11 x 10 [279 x 254]	Low	1098	1064	1017	975	922	861	806	767	698
		Med. Lo	1373	1331	1297	1267	1228	1182	1131	1076	1023
		Med.*	1499	1474	1443	1419	1389	1353	1310	1272	1226
		Med. Hi	1668	1644	1612	1595	1570	1536	1509	1466	1427
		High	1870	1849	1815	1785	1771	1736	1714	1681	1607

* = Factory tap for heating

[] Designates Metric Conversions

**BOTTOM RETURN FILTER RACK FOR
UPFLOW APPLICATION: RXGF-CB**

SIDE RETURN FILTER RACK: RXGF-CD

FILTER RACK FILTER SIZES* INCHES [mm]		
MODEL	RXGF-CB (UPFLOW/ HORIZONTAL)	RXGF-CD (UPFLOW) SIDE RETURN
050/070	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]
100	19 ¹ / ₄ x 25 [489 x 635]	15 ³ / ₄ x 25 [400 x 635]

4" FLUE ADAPTER: RXGW-C01

INDOOR COIL CASINGS

MODEL NUMBER
RXBC-D17AI
RXBC-D21AI
RXBC-D21BI

WARNING: IMPORTANT NOTICE

A SOLID METAL BASE PLATE (SEE TABLE) MUST BE IN PLACE WHEN THE FURNACE IS INSTALLED WITH SIDE AIR RETURN DUCTS. FAILURE TO INSTALL A BASE PLATE COULD CAUSE PRODUCTS OF COMBUSTION TO BE CIRCULATED INTO THE LIVING SPACE AND CREATE POTENTIALLY HAZARDOUS CONDITIONS.

FURNACE WIDTH IN. [mm]	SOLID BOTTOM KIT NO.	BASE PLATE NO.	BASE PLATE SIZE IN. [mm]
17 ¹ / ₂ [445]	RXGB-D17	AE-61874-02	15 ¹ / ₈ x 23 ⁹ / ₁₆ [384 x 598]
21 [533]	RXGB-D21	AE-61874-03	18 ⁵ / ₈ x 23 ⁹ / ₁₆ [473 x 598]

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GENERAL TERMS OF LIMITED WARRANTY*

Fujitsu General America, Inc. 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 ExchangerTwenty (20) Years

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.

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