

# FUJITSU

## DOWNFLOW GAS FURNACE

### Features

- 80% residential Gas Furnace CSA certified
- 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.
- 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

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



### FF\*\*\*PS80 (Downflow)

80% A.F.U.E.†

Input Rates 50-150 kBTU

Manufactured for

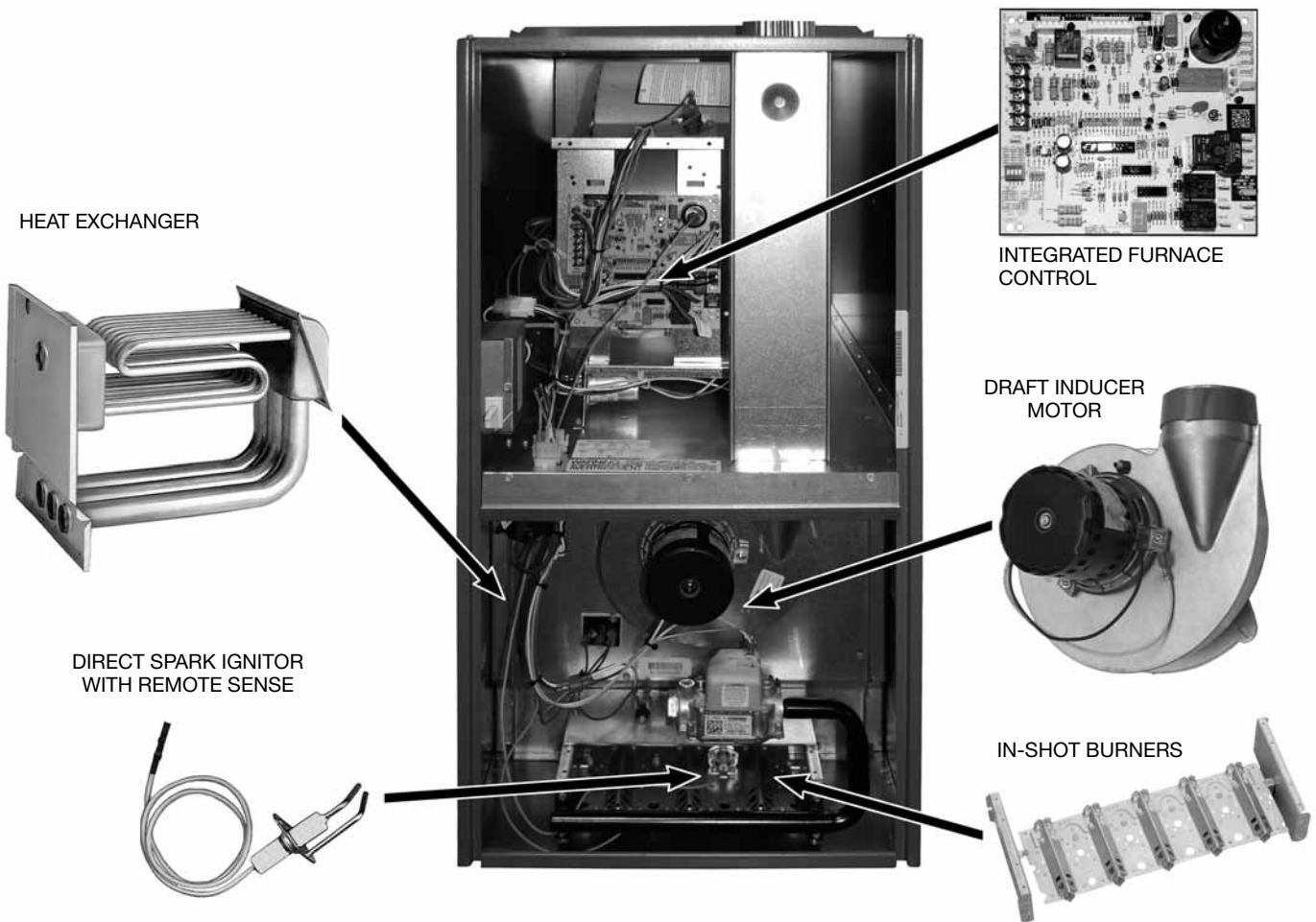
**Fujitsu General America, Inc.**

Fairfield, NJ



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## 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 Fujitsu 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 Fujitsu 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
- Diagnostics — 7 Segment LED all units
- Ignition System – DSI for reliability and longevity
- Heat exchanger is removable for improved serviceability. Aluminumized steel construction provides maximum corrosion resistance and thermal fatigue reliability.
- Low profile 34" cabinet ideal for space constrained installations
- Blower shelf design – serviceable in all furnace orientations
- 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

## Physical Data and Specifications U.S. and Canadian Models

MODEL NUMBERS FF***PS80 (DOWNFLOW)	FF50143 PS80*	FF75173 PS80*	FF75174 PS80*	FF10073 PS80*	FF100214 PS80*	FF100215 PS80*	FF125245 PS80*	FF105245 PS80*
Input–BTU/Hr [kW] ②	50,000 [15]	75,000 [22]	75,000 [22]	100,000 [29.3]	100,000 [29.3]	100,000 [29.3]	125,000 [36.6]	150,000 [44]
Heating Capacity BTU/Hr [kW] ①	40,000 [12]	60,000 [18]	60,000 [18]	80,000 [23]	80,000 [23]	80,000 [23]	100,000 [29.3]	120,000 [35]
High Altitude Input [kW]	45,000 [13]	67,500 [19.8]	67,500 [19.8]	90,000 [26.4]	90,000 [26.4]	90,000 [26.4]	112,500 [33]	135,000 [39.6]
High Altitude Output Capacity [kW]	36,500 [10.7]	54,000 [15.8]	54,000 [15.8]	72,000 [21.1]	72,000 [21.1]	72,500 [21.2]	89,000 [26.1]	107,500 [31.5]
Heat Ext. Static Pressure [kPa]	.10 [.025]	.12 [.029]	.12 [.029]	.15 [.037]	.15 [.037]	.15 [.037]	.20 [.05]	.20 [.05]
Blower (D x W) [mm]	11 x 6 [279 x 152]	11 x 6 [279 x 152]	11 x 7 [279 x 178]	11 x 7 = 10*AM [279 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
Motor H.P. [W]–Speeds [W]–PSC Type	1/2-4-PSC [373]	1/2-3-PSC [373]	3/4-3-PSC [559]	1/2-3-PSC [373]	1/2-3-PSC [373]	3/4-3-PSC [559]	3/4-3-PSC [559]	3/4-3-PSC [559]
Min. Circuit Ampacity	9	9	11	9	11	13	13	13
Min. Overload Protection Device	15	15	15	15	15	20	20	20
Max. Overload Protection Device	15	15	15	15	15	20	20	20
Heating Speed	LOW	MEDIUM	LOW	MED	MED	LOW	LOW	LOW
Cooling Speed	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Cooling CFM @ .5" [kPa] E.S.P. (Nominal) [L/s]	1200 [566]	1200 [566]	1600 [755]	1200 [566]	2000 [944]	2000 [944]	2000 [944]	2000 [944]
Rated E.S.P. (In. W.C.) [kPa]	0.5 [.12]	0.5 [.12]	0.5 [.12]	0.5 [.12]	0.5 [.12]	0.5 [.12]	0.5 [.12]	0.5 [.12]
Temperature Rise Range °F [°C]	25-55 [13.9-30.6]	30-60 [16.7-33.3]	25-55 [13.9-30.6]	45-75 [25-41.7]	40-70 [22.2-38.9]	40-70 [22.2-38.9]	40-70 [22.2-38.9]	50-80 [27.8-44.4]
Max. Outlet Air Temp. °F [°C]	155 [68.3]	165 [73.9]	155 [68.3]	190 [87.8]	190 [87.8]	170 [76.7]	180 [82.2]	170 [76.7]
Approx. Shipping Weight (Lbs.) [kg]	85 [38.6]	105 [47.6]	105 [47.6]	115 [52.2]	120 [54.4]	120 [54.4]	140 [63.5]	150 [68.0]
AFUE–Electric Ignition Models ①	80%	80%	80%	80%	80%	80%	80%	80%

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.

This furnace does not meet air district requirements of 14 ng/J NOx emissions limit, and thus is subject to a mitigation fee of up to \$450. This furnace is not eligible for the Clean Air Furnace Rebate Program: [www.CleanAirFurnaceRebate.com](http://www.CleanAirFurnaceRebate.com).

This furnace is to be installed for propane firing only in air districts requiring 14 ng/J NOx emission limits. Operating in natural gas mode is in violation of these Rules.

[ ] Designates Metric Conversions

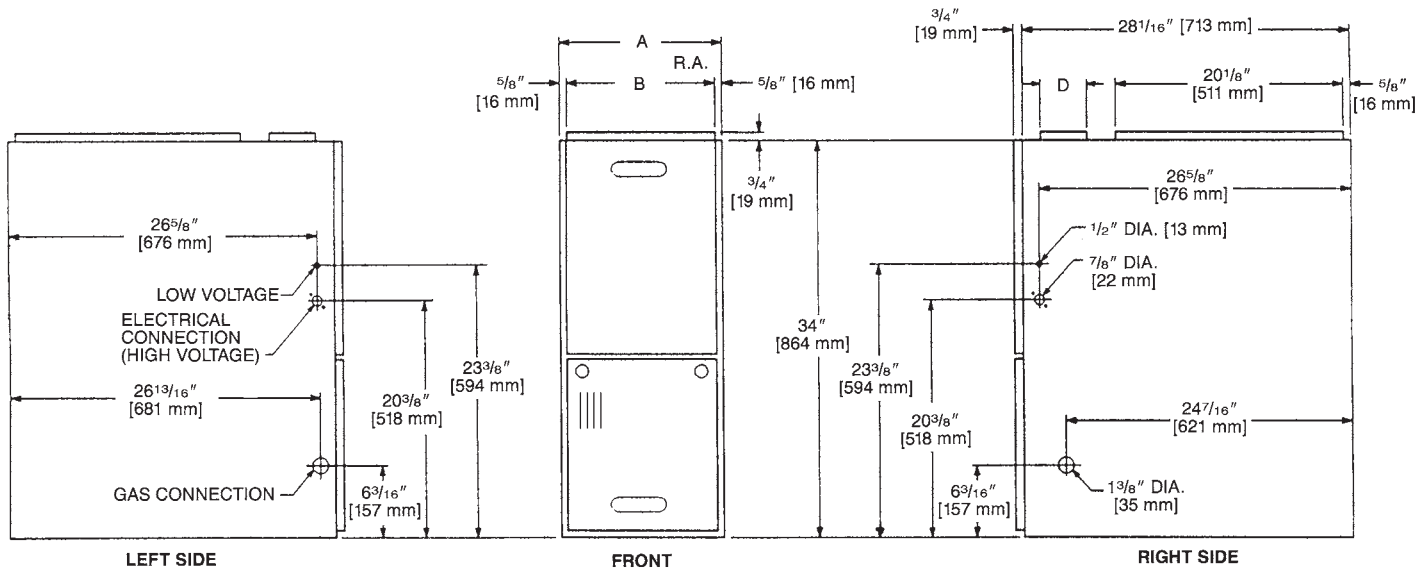
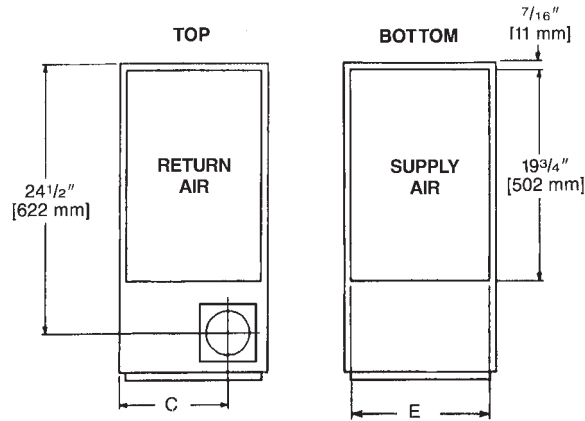
## Model Number Identification—Downflow Models

<b>FF</b>	<b>50</b>	<b>14</b>	<b>3</b>	<b>P</b>	<b>S</b>	<b>80</b>	<b>D</b>
<b>Brand</b>	<b>Input</b>	<b>Cabinet Width</b>	<b>Airflow</b>	<b>Motor</b>	<b>Stage</b>	<b>Efficiency</b>	<b>Configuration</b>
Fujitsu	050 = 50,000 075 = 75,000 100 = 100,000 125 = 125,000 150 = 150,000	14 = 14.0" 17 = 17.5" 21 = 21.0" 24 = 24.5"	3 = Up to 3 Tons 4 = Up to 4 Tons 5 = Up to 5 Tons	PSC = PSC Standard	S = Stage	80 = 80%	D = Downflow Standard Y = Downflow Low NOx

[ ] Designates Metric Conversions

<b>Available Models</b>
FF50143PS80D
FF75173PS80D
FF75174PS80D
FF100173PS80D
FF100214PS80D
FF100215PS80D
FF125245PS80D
FF150245PS80D
FF50143PS80Y
FF75173PS80Y
FF75174PS80Y
FF100173PS80Y
FF100214PS80Y
FF100215PS80Y
FF125245PS80Y
FF150245PS80Y

## Downflow Dimensions



## Dimensions and Clearance to Combustible Material (inches) [mm]

MODEL FF***PS80 (DOWNFLOW) SERIES	A	B	C	D	E	REDUCED CLEARANCES (IN.) [mm]						
						LEFT SIDE	RIGHT SIDE	BACK	TOP	FRONT	VENT	SHIP. WGTS. (LBS.) [kg]
050	14 [356]	12 <sup>27/32</sup> [326]	10 <sup>3/8</sup> [264]	①	13 <sup>1/8</sup> [333]	0	4 ②	0	1 [25]	3 [76]	6 [152] ③	85 [38.6]
075	17 <sup>1/2</sup> [445]	16 <sup>11/32</sup> [415]	12 <sup>1/8</sup> [308]	①	16 <sup>5/8</sup> [422]	0	3 ②	0	1 [25]	3 [76]	6 [152] ③	105 [47.6]
100173	17 <sup>1/2</sup> [445]	16 <sup>11/32</sup> [415]	12 <sup>1/8</sup> [308]	①	16 <sup>5/8</sup> [422]	0	3 ②	0	1 [25]	3 [76]	6 [152] ③	115 [52.2]
100214 100215	21 [533]	19 <sup>27/32</sup> [504]	13 <sup>7/8</sup> [352]	①	20 <sup>1/8</sup> [511]	0	0	0	1 [25]	3 [76]	6 [152] ③	120 [54.4]
125	24 <sup>1/2</sup> [622]	23 <sup>11/32</sup> [593]	15 <sup>5/8</sup> [397]	①	23 <sup>5/8</sup> [600]	0	0	0	1 [25]	3 [76]	6 [152] ③	140 [63.5]
150	24 <sup>1/2</sup> [622]	23 <sup>11/32</sup> [593]	15 <sup>5/8</sup> [397]	①	23 <sup>5/8</sup> [600]	0	0	0	1 [25]	3 [76]	6 [152] ③	150 [68]

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

MODEL FF***PS80 (DOWNFLOW) SERIES	BLOWER SIZE [mm]	MOTOR H.P. [W]	BLOWER SPEED	CFM [L/s] AIR DELIVERY EXTERNAL STATIC PRESSURE INCHES [kPa] WATER COLUMN						
				.1 [.02]	.2 [.05]	.3 [.07]	.4 [.10]	.5 [.12]	.6 [.15]	.7 [.17]
50	11 x 6 [279 x 152]	1/2 [373]	LOW	735 [347]	715 [337]	690 [326]	660 [311]	635 [300]	605 [286]	575 [271]
			<b>MED-LO</b>	<b>1025 [484]</b>	<b>1015 [479]</b>	<b>995 [470]</b>	<b>975 [460]</b>	<b>955 [451]</b>	<b>930 [439]</b>	<b>905 [427]</b>
			MED-HI	1185 [559]	1165 [550]	1150 [543]	1130 [533]	1100 [519]	1075 [507]	1040 [491]
75173	11 x 6 [279 x 152]	1/2 [373]	LOW	1104 [529]	1081 [510]	1050 [496]	1025 [484]	999 [471]	971 [458]	940 [444]
			<b>MED</b>	<b>1284 [606]</b>	<b>1269 [599]</b>	<b>1236 [583]</b>	<b>1206 [569]</b>	<b>1179 [556]</b>	<b>1139 [538]</b>	<b>1102 [520]</b>
			HIGH	1478 [698]	1438 [679]	1397 [659]	1362 [643]	1392 [657]	1282 [605]	1242 [586]
75174	11 x 7 [279 x 178]	1/2 [373]	LOW	1210 [571]	1205 [569]	1195 [564]	1180 [557]	1165 [550]	1155 [545]	1130 [533]
			<b>MED</b>	<b>1580 [746]</b>	<b>1560 [736]</b>	<b>1550 [732]</b>	<b>1530 [722]</b>	<b>1495 [706]</b>	<b>1465 [691]</b>	<b>1430 [675]</b>
			HIGH	1915 [904]	1880 [887]	1825 [861]	1790 [845]	1740 [821]	1675 [791]	1600 [755]
100173	11 x 7 [279 x 178]	1/2 [373]	LOW	1070 [505]	1055 [498]	1040 [491]	1010 [477]	980 [463]	945 [446]	905 [427]
			<b>MED</b>	<b>1240 [585]</b>	<b>1210 [571]</b>	<b>1190 [562]</b>	<b>1165 [550]</b>	<b>1135 [536]</b>	<b>1095 [517]</b>	<b>1055 [498]</b>
			HIGH	1420 [670]	1395 [658]	1370 [647]	1340 [632]	1305 [616]	1265 [597]	1220 [576]
100214	11 x 10 [279 x 254]	1/2 [373]	LOW	1303 [615]	1304 [615]	1280 [604]	1250 [590]	1222 [577]	1188 [557]	1160 [547]
			<b>MED</b>	<b>1697 [801]</b>	<b>1674 [790]</b>	<b>1655 [781]</b>	<b>1638 [773]</b>	<b>1621 [765]</b>	<b>1581 [746]</b>	<b>1542 [728]</b>
			HIGH	2078 [981]	2068 [976]	2037 [961]	2010 [949]	1988 [938]	1938 [915]	1898 [896]
100215	11 x 10 [279 x 254]	3/4 [559]	LOW	<b>1690 [798]</b>	<b>1670 [788]</b>	<b>1655 [781]</b>	<b>1615 [762]</b>	<b>1585 [748]</b>	<b>1565 [739]</b>	<b>1525 [720]</b>
			MED	—	2085 [984]	2055 [970]	2005 [946]	1970 [930]	1945 [918]	1880 [887]
			HIGH	—	2410 [1137]	2355 [1111]	2305 [1088]	2240 [1057]	2165 [1022]	2100 [991]
125245	11 x 10 [279 x 254]	3/4 [559]	LOW	—	<b>1690 [798]</b>	<b>1660 [783]</b>	<b>1635 [772]</b>	<b>1580 [746]</b>	<b>1535 [724]</b>	<b>1480 [698]</b>
			MED	—	2090 [986]	2035 [960]	1985 [937]	1930 [911]	1850 [873]	1785 [842]
			HIGH	—	2395 [1130]	2335 [1102]	2260 [1067]	2185 [1031]	2080 [982]	1965 [927]
150245	11 x 10 [279 x 254]	3/4 [559]	LOW	<b>1675 [791]</b>	<b>1650 [779]</b>	<b>1620 [765]</b>	<b>1570 [741]</b>	<b>1545 [729]</b>	<b>1485 [701]</b>	<b>1425 [673]</b>
			MED	2105 [993]	2075 [979]	2035 [960]	1990 [939]	1955 [923]	1900 [897]	1815 [857]
			HIGH	—	—	—	—	—	—	—

NOTES: Recommended blower speeds are in bold.

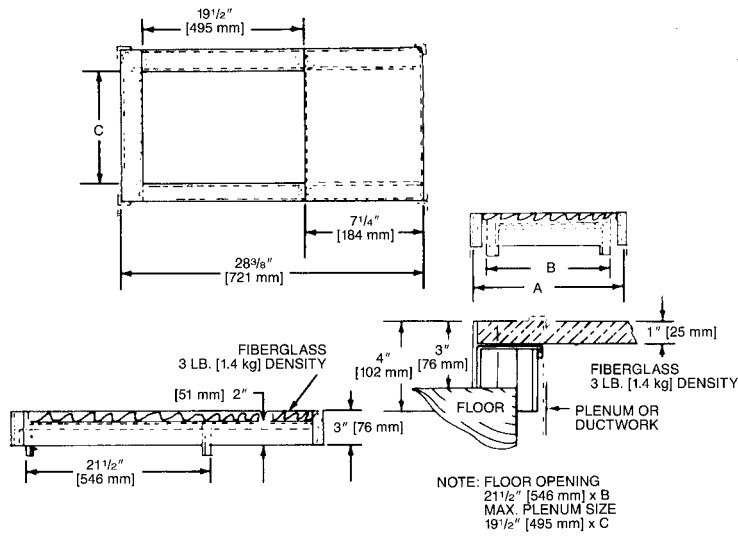
[ ] Designates Metric Conversions

## 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-B14	801S050	14 <sup>1</sup> / <sub>2</sub> [368]	13 <sup>1</sup> / <sub>4</sub> [337]	11 <sup>1</sup> / <sub>4</sub> [286]
RXGC-B17	801S075, 801SA100317	18 [457]	16 <sup>3</sup> / <sub>4</sub> [425]	14 <sup>3</sup> / <sub>4</sub> [451]
RXGC-B21	801SA100421, 801SA100521	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	801S125, 801S150	25 [635]	23 <sup>3</sup> / <sub>4</sub> [603]	21 <sup>3</sup> / <sub>4</sub> [552]



## GXGP-F03

**PARALLEL FURNACE KITS**—are for parallel operation requirements.

## 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®.

## RXGF-DB\*

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

\*Filters available through PROSTOCK®.

## FOR HIGH ALTITUDES:

**HIGH ALTITUDE OPTION CODE:** U.S. –

None required for high altitudes.

**HIGH ALTITUDE CONVERSION KITS:** U.S. –

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.

[ ] Designates Metric Conversions



**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.

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

**\*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.**





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**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."*