

# FUJITSU



## FF\*\*\*TT96 Series

96% A.F.U.E.†

Input Rates from 40 to 115 kBTU  
[11.72 to 33.71 kW]

Manufactured for

**Fujitsu General America, Inc.**

Fairfield, NJ

## TWO-STAGE MULTI-POSITION GAS FURNACES

### Features

- 96% residential gas furnace CSA certified
- 4 way multi-prise design
- Two stages of operation to save energy and maintain optimal comfort level.
- Diagnostics 7-Segment LED all units
- Ignition System – DSI for reliability and longevity
- Water Management System with patented Blocked Drain Sensor
- Heat exchanger is removable for improved serviceability. Aluminized steel primary and stainless steel secondary construction provide maximum corrosion resistance and thermal fatigue reliability.
- Low profile “34 inch” cabinet ideal for space constrained installations.
- Blower Shelf design – serviceable in all furnace orientations
- Pre marked hoses – insures proper system drainage
- Vent with 2" or 3" PVC
- Replaceable Collector box
- Hemmed edges on cabinet and doors
- Quarter turn fasteners for tool less access
- Integrated control boards feature dip switches for easy system set up
- Self priming condensate trap
- Solid bottom included
- Cabinet air leakage less than 2% at 1 inch H<sub>2</sub>O when tested in accordance with ASHRAE standard 193

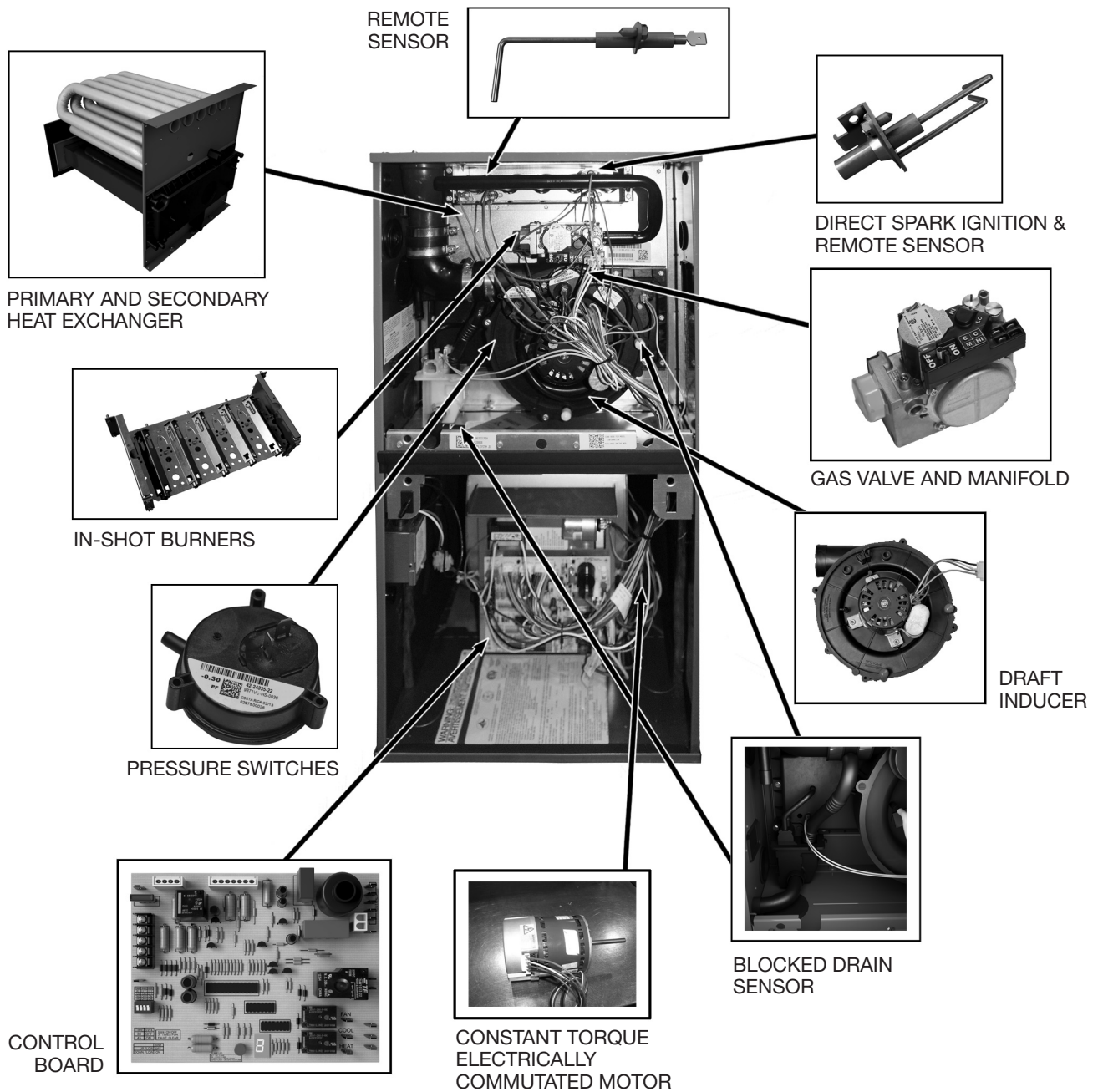
†A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.

\*Up to 96% A.F.U.E.



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## STANDARD EQUIPMENT

Completely assembled and wired; blocked drain sensor, 7 segment LED and marked hoses; heat exchanger; primary: aluminized steel, secondary: 29-4C stainless steel; 2 stage induced draft; pressure switches; redundant 2 stage 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; power and self-test diagnostics; flame sense current diagnostics; electronic air cleaner connections; twinning (built-in) features; humidifier connections; humidifier on/off delay; low speed continuous fan option; single speed option for heating and cooling applications; transformer; direct drive, multi-speed constant torque electrically commutated blower motor. Solid bottom. (Please note: a thermostat is not included as standard equipment.)

## OPTIONAL EQUIPMENT

Side and bottom filter racks; return air cabinet for all sizes.  
NOTE: Furnace is not listed for use with fuels other than natural or L.P. (propane) gas.  
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

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

MODEL NUMBERS	FF40173TT96M	FF60173TT96M	FF70173TT96M	FF70215TT96M	FF85215TT96M	FF100215TT96M	FF115245TT96M
HIGH FIRE INPUT BTU/HR [kW] ①	42,000 [12.31]	56,000 [16.41]	70,000 [20.50]	70,000 [20.50]	84,000 [24.61]	98,000 [28.72]	112,000 [32.82]
LOW FIRE INPUT BTU/HR [kW]	29,400 [8.61]	39,200 [11.49]	49,000 [14.36]	49,000 [14.36]	58,800 [17.23]	68,600 [20.11]	78,400 [22.97]
HEATING CAPACITY BTU/HR [kW]	41,000 [12.02]	55,000 [16.12]	68,000 [19.93]	68,000 [19.93]	82,000 [24.03]	95,000 [27.84]	109,000 [31.94]
HIGH ALTITUDE OUTPUT 10% DERATE [kW] ②	36,288 [10.64]	48,384 [14.18]	60,480 [17.72]	60,480 [17.72]	72,576 [21.28]	84,672 [24.81]	96,768 [28.36]
BLOWER (D x W) [mm]	11 x 7 [279 x 178]	11 x 8 [279 x 203]	11 x 8 [279 x 203]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 11 [279 x 279]
MOTOR H.P. [W]—SPEEDS TYPE	1/2 [373]-5-CT	1/2 [373]-5-CT	1/2 [373]-5-CT	1 [746]-5-CT	1 [746]-5-CT	1 [746]-5-CT	1 [746]-5-CT
MINIMUM CIRCUIT AMPACITY	8	8	8	12	12	11	11
MINIMUM OVERLOAD PROTECTION	15	15	15	15	15	15	15
MAXIMUM OVERLOAD PROTECTION	15	15	15	20	20	15	15
MOTOR FULL LOAD AMPS	6.4	6.4	6.4	10.6	10.6	10.6	10.6
HEATING SPEED—HIGH FIRE	MED	MED	MED	MED-LOW	MED-HIGH	MED	MED
HEATING SPEED—LOW FIRE	LOW	MED-LOW	LOW	LOW	MED-LOW	LOW	LOW
COOLING SPEED	MED-HIGH	MED-HIGH	MED-HIGH	HIGH	HIGH	HIGH	HIGH
MINIMUM EXT. STATIC PRESSURE (IN. W.C.) [kPa]	.18 [.045]	.20 [.050]	.23 [.057]	.23 [.057]	.28 [.070]	.28 [.070]	.28 [.070]
MAXIMUM EXT. STATIC PRESSURE (IN. W.C.) [kPa]	0.9 [0.22]	0.9 [0.22]	0.9 [0.22]	0.9 [0.22]	0.9 [0.22]	0.9 [0.22]	0.9 [0.22]
HEATING CFM @ .2" [.049 kPa] W.C. E.S.P. [L/s]	1117 [527]	1223 [577]	1198 [565]	1351 [638]	1706 [805]	1522 [718]	1574 [743]
COOLING CFM @ .7" [.17 kPa] W.C. E.S.P. [L/s]	1102 [520]	1253 [591]	1141 [538]	1750 [826]	1898 [896]	1745 [814]	1765 [833]
TEMPERATURE RISE-HIGH FIRE RANGE IN DEGREES °F [°C]	20 - 50 [11 - 28]	30 - 60 [17 - 33]	40 - 70 [22 - 39]	30 - 60 [17 - 33]	30 - 60 [17 - 33]	40 - 70 [22 - 39]	45 - 75 [25 - 42]
TEMPERATURE RISE-LOW FIRE RANGE IN DEGREES °F [°C]	15 - 45 [8 - 25]	20 - 50 [11 - 28]	30 - 60 [17 - 33]	20 - 50 [11 - 28]	20 - 50 [11 - 28]	30 - 60 [17 - 33]	35 - 65 [19 - 36]
APPROX. SHIPPING WEIGHT (LBS.) [kg]	123.5 [56]	128 [58]	132 [60]	139 [63]	147.5 [67]	152 [69]	165 [75]
AFUE ③	96.00%	96.00%	96.00%	96.00%	96.00%	96.00%	96.00%

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

① Installation instructions for high altitude derate.

② Canadian installations only.

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

\*S=Standard Models

NOTE: Standard model complies with California low NOx requirements.

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).

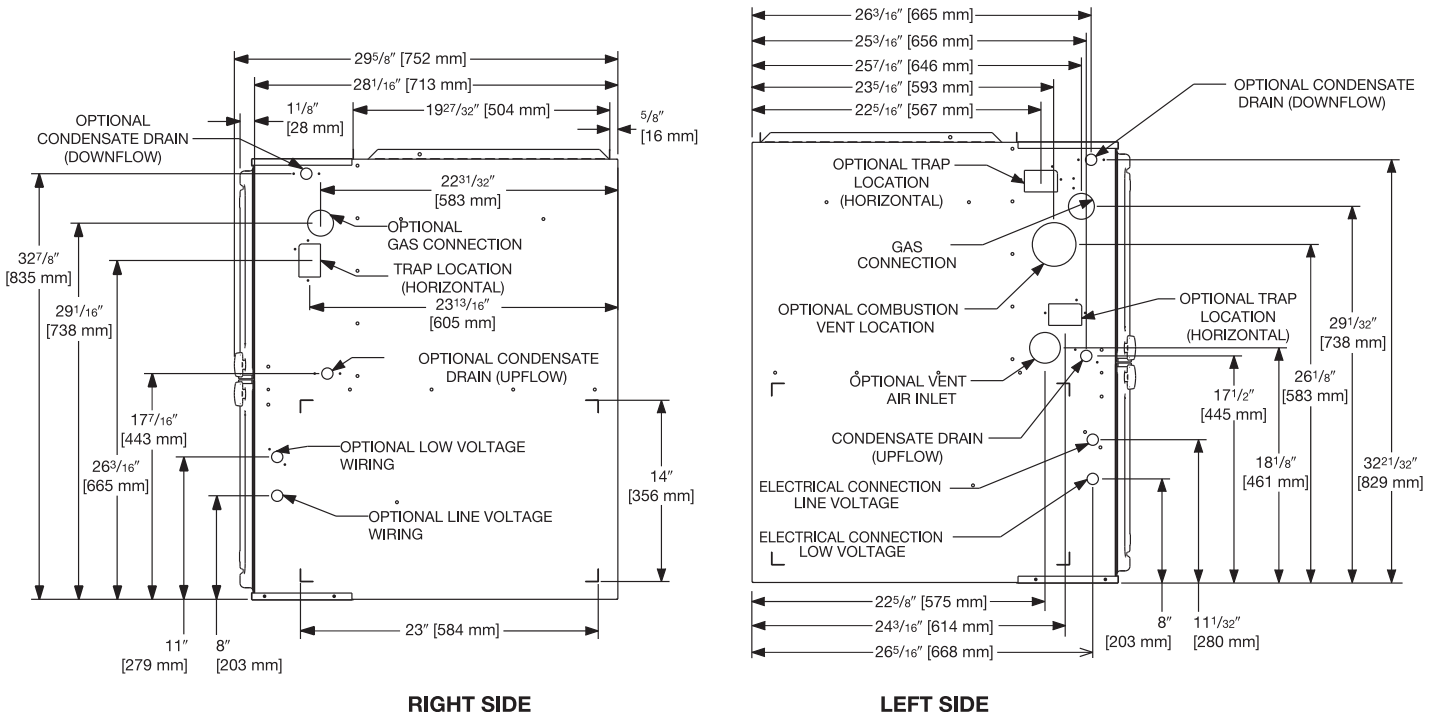
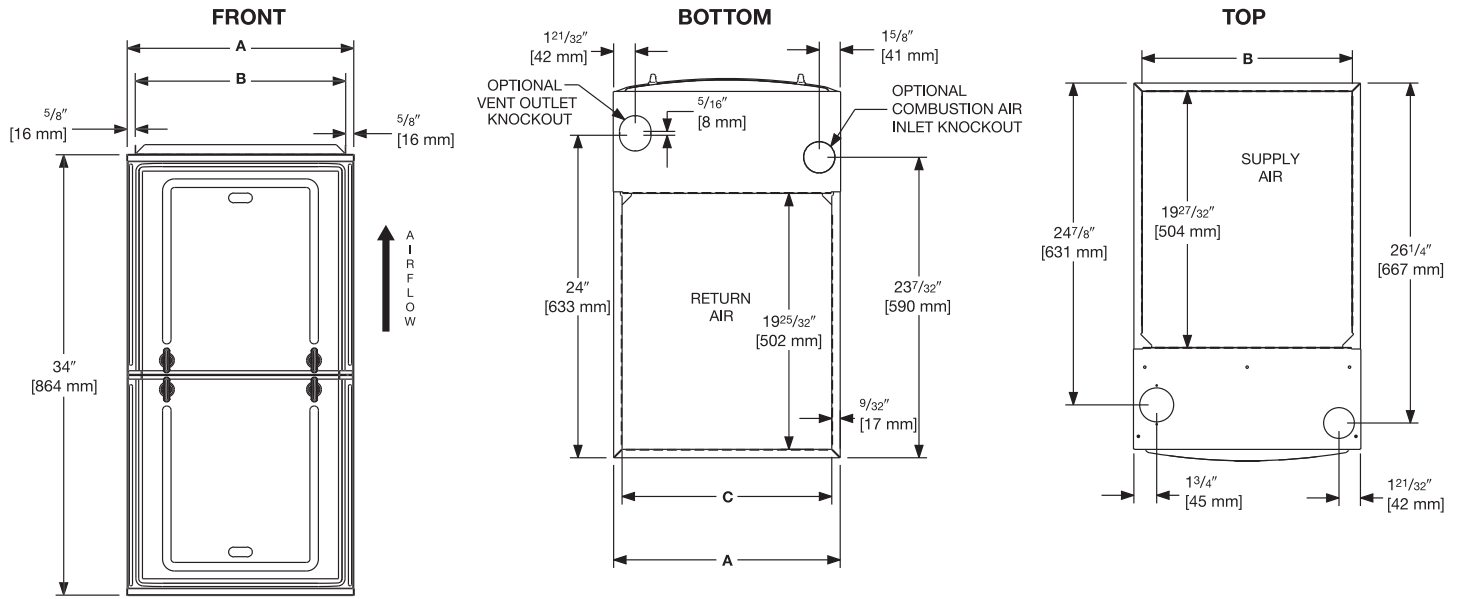
This furnace is to be installed for propane firing only in air districts requiring 14 ng/J NOx emission limits. Operating in natural gas mode is in violation of these Rules.

[ ] Designates Metric Conversions

## Model Number Identification

<u>FF</u>	<u>40</u>	<u>17</u>	<u>3</u>	<u>T</u>	<u>T</u>	<u>96</u>	<u>M</u>
Type	Capacity	Width	Airflow	Motor	Speed	Efficiency	Orientation
Furnace	040 = 40,000 [11.72 kW] 060 = 60,000 [17.58 kW] 070 = 70,000 [20.51 kW] 085 = 85,000 [24.91 kW] 100 = 100,000 [29.30 kW] 115 = 115,000 [33.70 kW]	17" 21" 24"	3 = 3 Tons 5 = 5 Tons	T = Constant Torque	T = Two-Stage	96 = 96%	M = Multipoise

[ ] Designates Metric Conversions



**UNIT DIMENSIONS  
(CLEARANCE TO COMBUSTIBLES)**

MODEL FF***TT96	LEFT SIDE	MINIMUM CLEARANCE (IN.) [mm]					SHIP WGTS.	FLANGE DIMENSIONS		
		RIGHT SIDE	BACK	TOP	FRONT	VENT		A	B	C
040	0	0	0	1 [25]	2 [51]	0	123.5 [56]	17 1/2 [445]	16 17/64 [413]	16 13/64 [412]
060	0	0	0	1 [25]	2 [51]	0	128 [58]	17 1/2 [445]	16 17/64 [413]	16 13/64 [412]
070	0	0	0	1 [25]	2 [51]	0	132 [60]	17 1/2 [445]	16 17/64 [413]	16 13/64 [412]
070 (wide)	0	0	0	1 [25]	2 [51]	0	147.5 [67]	21 [533]	19 9/64 [502]	19 45/64 [500]
085	0	0	0	1 [25]	2 [51]	0	147.5 [67]	21 [533]	19 9/64 [502]	19 45/64 [500]
100	0	0	0	1 [25]	2 [51]	0	152 [69]	21 [533]	19 9/64 [502]	19 45/64 [500]
115	0	0	0	1 [25]	2 [51]	0	165 [75]	24 1/2 [662]	23 17/64 [591]	23 13/64 [589]

\*A service clearance of at least 24" is recommended in front of all furnaces  
 Supply and return depicted as upflow configuration.  
 Flange configuration will vary depending on installation orientation.

[ ] Designates Metric Conversions

MODEL	BLOWER SIZE IN. [mm]	MOTOR H.P. [W]	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]
				40173	11 x 7 [279 x 178]	1/2 [373]	Low** Med. Lo Med.* Med. Hi High	893 1021 1155 1331 1423	840 976 1117 1291 1387	788 931 1075 1255 1355	737 884 1039 1216 1320	683 838 999 1176 1285
60173	11 x 8 [279 x 203]	1/2 [373]	Low Med. Lo** Med.* Med. Hi High	767 1137 1265 1395 1445	711 1100 1223 1364 1412	651 1057 1189 1335 1379	577 1018 1154 1301 1347	506 984 1125 1272 1318	466 944 1088 1240 1287	411 891 1057 1215 1253	367 834 1023 1186 1226	326 786 980 1161 1195
70173	11 x 8 [279 x 203]	1/2 [373]	Low** Med. Lo Med.* Med. Hi High	969 1105 1239 1383 1482	916 1054 1198 1332 1444	826 1010 1147 1299 1409	798 961 1101 1263 1379	736 910 1060 1223 1343	666 840 1011 1182 1294	614 791 951 1141 1266	554 735 887 1090 1226	507 686 838 1034 1182
70215 (wide)	11 x 10 [279 x 254]	1 [746]	LOW* MED-LOW** MED MED-HIGH HIGH	1155 1453 1582 1744 1976	1095 1397 1532 1702 1934	1044 1349 1481 1660 1895	968 1300 1441 1624 1860	906 1255 1400 1590 1826	846 1208 1358 1550 1794	766 1134 1309 1516 1752	702 1082 1247 1475 1659	643 1033 1187 1435 1553
85215	11 x 10 [279 x 254]	1 [746]	Low Med. Lo** Med. Med. Hi* High	1171 1480 1619 1743 2131	1121 1433 1577 1706 2099	1054 1390 1534 1663 2065	962 1322 1486 1627 2031	890 1266 1447 1588 2004	827 1195 1397 1545 1966	752 1132 1326 1505 1898	686 1085 1283 1444 1795	630 1032 1232 1386 1683
100215	11 x 10 [279 x 254]	1 [746]	Low** Med. Lo Med.* Med. Hi High	1281 1431 1561 1733 1956	1232 1367 1522 1694 1916	1180 1316 1482 1654 1880	1131 1274 1436 1615 1845	1081 1227 1394 1578 1812	1031 1181 1354 1535 1777	944 1117 1306 1500 1745	903 1072 1265 1461 1710	845 1019 1186 1411 1619
115245	11 x 11 [279 x 279]	1 [746]	Low** Med. Lo Med.* Med. Hi High	1333 1480 1627 1828 2030	1273 1426 1574 1781 1987	1208 1373 1522 1728 1942	1141 1310 1472 1682 1898	1074 1241 1417 1635 1857	1016 1190 1355 1578 1811	955 1131 1308 1525 1765	898 1077 1250 1478 1720	842 1024 1199 1420 1673

\*\* = Factory tap for Low Fire

\* = Factory tap for Hi Fire

NOTE: The Technician/Installer must verify that the furnace is operating within the published rise range before completing the installation

[ ] Designates Metric Conversions.

## VENT TERMINATION KITS: =

**RXGY-E02:** Vertical/Horizontal Concentric Vent Termination Kit  
2" Pipe (US Only)

**RXGY-E02A:** Vertical/Horizontal Concentric Vent Termination Kit  
2" Pipe (US & Canadian)

**RXGY-E03:** Vertical/Horizontal Concentric Vent Termination Kit  
3" Pipe (US Only)

**RXGY-E03A:** Vertical/Horizontal Concentric Vent Termination Kit  
3" Pipe (US & Canadian)

**RXGY-G02:** Direct Vent Furnace Side Wall Vent 2" or 3" (US Only)

**RXGY-D05:** Combustion Air Drain Kit 2"

**RXGY-D06:** Combustion Air Drain Kit 3"

**NEUTRALIZER KIT:** RXGY-A01  
(Replacement Cartridge 54-22120-01)

**FOSSIL FUEL KIT:** RXPf-F01, RXPf-F02 (TVA)

**EXTERNAL BOTTOM FILTER (UPFLOW/HORIZONTAL) RACK:**  
RXGF-CB

**EXTERNAL SIDE (UPFLOW) FILTER RACK:** RXGF-CD

**EXTERNAL (DOWNFLOW) FILTER RACK:** RXGF-CC

## FOR HIGH ALTITUDES:

**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. See installation instructions as appropriate orifice change is required.

**L.P. CONVERSION KIT:** RXGJ-FP34

**CONDENSATE PUMP KIT:** PROSTOCK & 1PCB151TUL

**DOWNFLOW/HORIZONTAL CONVERSION KIT:** RXGY-CK

**DOWNFLOW/HORIZONTAL LEFT ZERO CLEARANCE  
CONVERSION KIT:** RXGY-ZK

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

[ ] Designates Metric Conversions

FILTER RACK FILTER SIZES* INCHES [mm]			
MODEL	RXGF-CB (UPFLOW/ HORIZONTAL)	RXGF-CD (UPFLOW)	RXGF-CC (DOWNFLOW)
040	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	12 x 20 [305 x 508]
060	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	12 x 20 [305 x 508]
070	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	12 x 20 [305 x 508]
070 (wide)	19 <sup>1</sup> / <sub>4</sub> x 25 [489 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	12 x 20 [305 x 508]
085	19 <sup>1</sup> / <sub>4</sub> x 25 [489 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	12 x 20 [305 x 508]
100	19 <sup>1</sup> / <sub>4</sub> x 25 [489 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	12 x 20 [305 x 508]
115	22 <sup>3</sup> / <sub>4</sub> x 25 [578 x 635]	15 <sup>3</sup> / <sub>4</sub> x 25 [400 x 635]	14 x 20 [356 x 508]

\*Filter racks are shipped without filters.  
Filters shipped with furnace may be used or a suitable 1" [25.4 mm] filter.

## INDOOR COIL CASINGS

MODEL NUMBER
RXBC-D17A1
RXBC-D21A1
RXBC-D21B1
RXBC-D24A1



**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.

Conditional Parts  
(Registration Required) .....Ten (10) Years  
Heat Exchanger .....Limited Lifetime

**\*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."*