

TECHNICAL SPECIFICATIONS

FG7T (A and K Series)

iSEER, Smartlite®

**Two Stage, Fixed Speed,
High Efficiency Upflow/Horizontal
and Downflow Gas Furnaces**

**Induced Draft - 80 + AFUE
Input 60,000 - 140,000 Btuh**

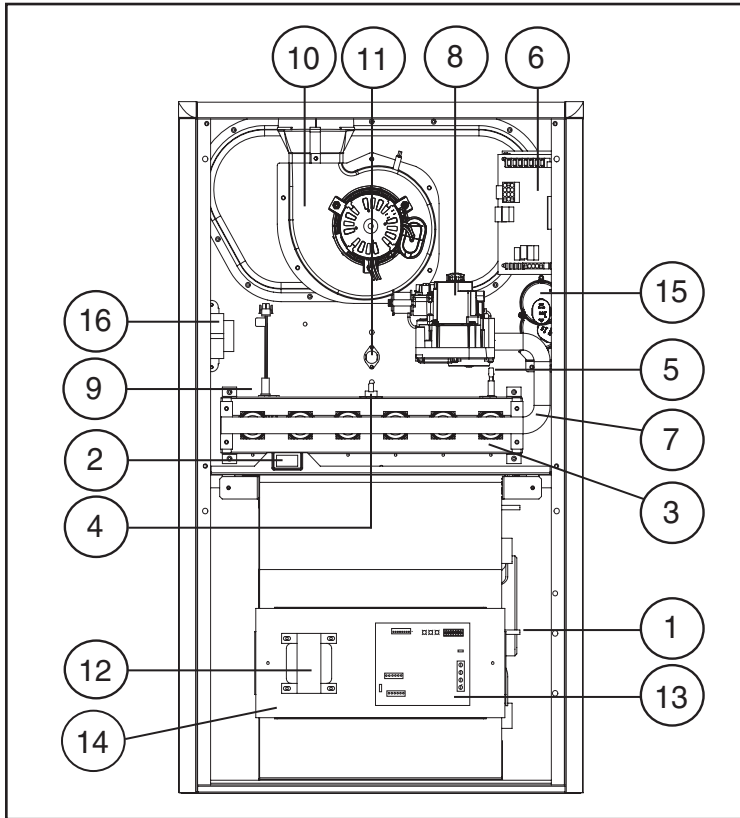
The high efficiency gas furnace may be installed free standing in a utility room, basement, or enclosed in an alcove or closet. The rounded corner jacket provides a pleasing "appliance appearance." Design certified by CSA for application in Canada and the United States.



FEATURES and BENEFITS

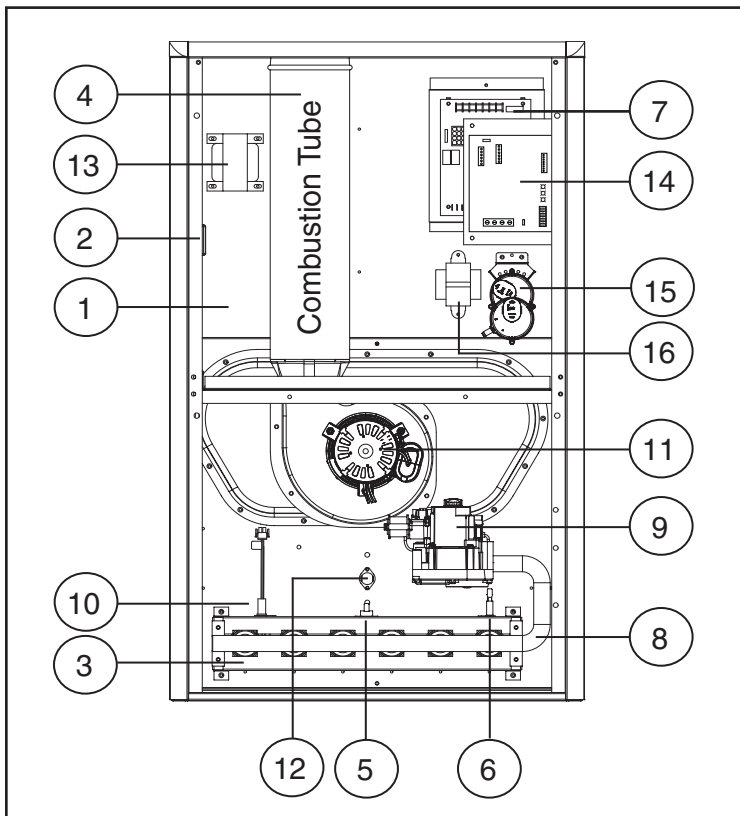
- **i SEER:** Energy efficient brushless DC (ECM) motor gives up to 1 SEER point efficiency gain in cooling.
- **100% fired and tested:** All units and each component are tested on the manufacturing line.
- **Best packaging in the industry:** Unique corner post design assures product will arrive to the homeowner dent free.
- **Low Boy Height:** Easy to apply in low ceiling applications, works well with taller high SEER coils, easier to handle and install.
- **Tubular primary heat exchanger:** Heavy gauge aluminized steel heat exchanger assures a long life.
- **30 second blower delay at start-up:** Assures a warm duct temperature at furnace start-up. Adjustable blower off settings (60, 90, 120 and 180 seconds).
- **30 second post purge:** Increases life of heat exchanger.
- **Hot surface igniter:** Innovative application of a silicon nitride igniter. Utilizes proven Smartlite® technology.
- **Color coded wire harness:** Designed to fit the components, all with quick-connect fittings for ease of service and replacement.
- **High static blowers:** All models equipped with high static blowers.
- **90 second cooling cycle blower-off delay (TDR):** Increases cooling performance when matched with a NORDYNE coil.
- **Flexible category I venting system:** May be vented with dedicated venting system or common vented with other category one appliances.
- **Variable speed blower kit:** Upgradable to full variable speed with kit.
- **LP convertible:** Simple burner orifice and regulator spring change for ease of convertibility.
- **Diagnostic lights for easy troubleshooting without counting flashes:** Dedicated light for flame signal strength and 2 lights in combination to indicate all other fault codes with easy to recognize states without counting flashes.
- **Integrated control board:** Incorporates connections for electronic air cleaner, humidifier and twinning.
- **Two piece door design:** Enhances furnace appearance and uses captured screws to prevent losing door screws.
- **Blower Compartment:** Insulated for ultra quiet operation.
- **2 Stage Inducer:** Optimizes efficiency on first stage heat and reduces sound levels.

GAS FURNACE COMPONENTS



Upflow/Horizontal Gas Furnace

1. Blower Assembly
2. Blower Door Switch
3. Burner Assembly
4. Flame Roll-Out Switch
5. Flame Sensor
6. Furnace Control Board
7. Gas Manifold
8. Gas Valve
9. Igniter
10. Inducer Assembly
11. Main Air Limit Switch
12. Motor Choke (3/4 and 1HP only)
13. Motor Control Board
14. Motor Control Box
15. Pressure Switch(s)
16. Transformer

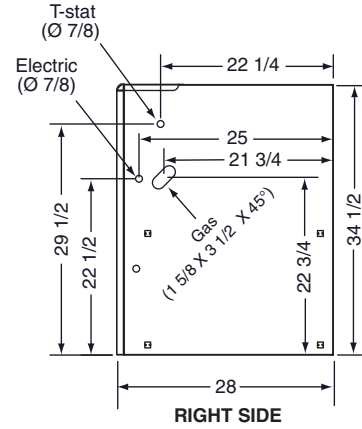
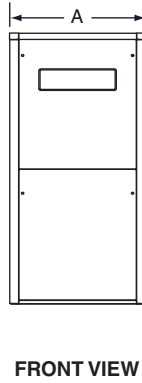
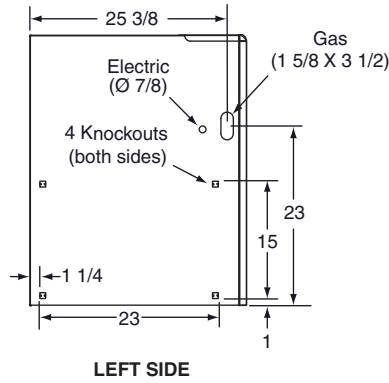
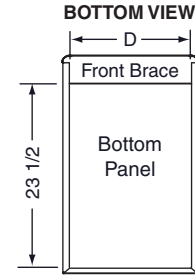
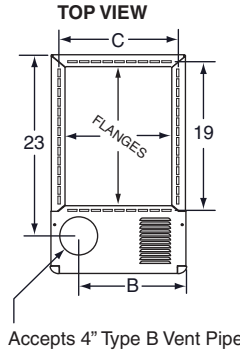


Downflow Gas Furnace

1. Blower Assembly
2. Blower Door Switch
3. Burner Assembly
4. Combustion Tube
5. Flame Roll-Out Switch
6. Flame Sensor
7. Furnace Control Board
8. Gas Manifold
9. Gas Valve
10. Igniter
11. Inducer Assembly
12. Main Air Limit Switch
13. Motor Choke (3/4 and 1HP only)
14. Motor Control Board
15. Pressure Switch(s)
16. Transformer

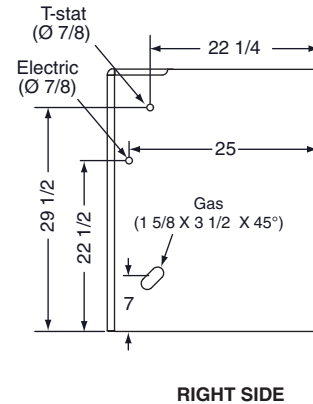
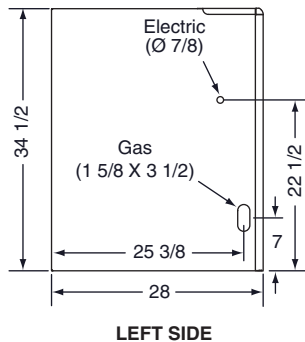
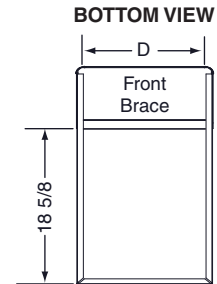
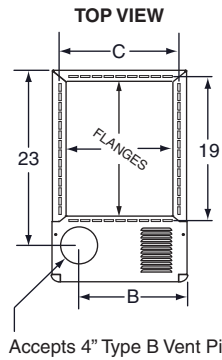
DIMENSIONS

*TA Model #s	Dimension "A"	Dimension "B"	Dimension "C"	Dimension "D"
060-23A1	14 1/4	10 3/4	12 5/8	12 7/8
080-24B1				
100-24B1	17 1/2	11 3/4	15 7/8	16 1/8
100-35C1				
120-35C1	21	14	19 3/8	19 5/8
140-45D1	24 1/2	15 1/4	22 7/8	23 1/8



FG7TA 80+ High Efficiency Upflow/Horizontal Series

*TK Model #s	Dimension "A"	Dimension "B"	Dimension "C"	Dimension "D"
060-23A1	14 1/4	10 3/4	12 5/8	12 7/8
080-24B1				
100-24B1	17 1/2	11 3/4	15 7/8	16 1/8
100-35C1				
120-35C1	21	14	19 3/8	19 5/8
140-45D1	24 1/2	15 1/4	22 7/8	23 1/8



FG7TK 80+ High Efficiency Downflow Series

BLOWER PERFORMANCE - FG7TA/TK

FG7TA/TK - 80% AFUE, Two Stage Gas Furnace																					
Model Number	Heating Input (Btuh)	Motor Switch Setting				External Static Pressure (in.w.c.)															
						0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8	
		1/5	2/6	3/7	4/8	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise
*TA/TK-060(C)-*A1	60000	0	0	0	0																
		1	0	0	0																
		0	1	0	0	600	—	555	—	510											
		1	1	0	0	705	—	670	—	635	—	600	—								
		0	0	1	0	775	57	740	60	705	—	665	—								
		1	0	1	0	900	49	870	51	835	53	800	56	765	58	730	61	695	64	660	67
		0	1	1	0	950	47	920	48	890	50	855	52	825	54	795	56	765	58	730	61
		1	1	1	0	1000	44	970	46	940	47	910	49	880	51	850	52	820	54	790	56
		0	0	0	1	1075	41	1045	43	1015	44	985	45	960	46	925	48	900	49	870	51
		1	0	0	1	1110	40	1080	41	1055	42	1025	43	1000	44	975	46	945	47	920	48
		0	1	0	1	1170	38	1140	39	1115	40	1090	41	1060	42	1035	43	1010	44	985	45
		1	1	0	1	1210	37	1185	38	1160	38	1130	39	1105	40	1080	41	1055	42	1025	43
		0	0	1	1	1520	29	1225	36	1200	37	1175	38	1150	39	1120	40	1095	41	1070	42
		1	0	1	1	1305	34	1280	35	1255	35	1230	36	1205	37	1180	38	1155	38	1130	39
		0	1	1	1	1350	33	1230	36	1305	34	1285	35	1260	35	1240	36	1215	37	1195	37
		1	1	1	1	1440	31	1400	32	1365	33	1230	36	1295	36	1255	35	1220	36	1185	38
*TA/TK-080(C)-*B1	80000	0	0	0	0																
		1	0	0	0																
		0	1	0	0																
		1	1	0	0	725	—														
		0	0	1	0	810	—														
		1	0	1	0	940	63	890	—	845	—	795	—	750	—	700	—				
		0	1	1	0	990	60	945	63	905	65	860	—	820	—	775	—	735	—	690	—
		1	1	1	0	1055	56	1015	58	970	61	930	64	890	—	845	—	805	—	760	—
		0	0	0	1	1135	52	1095	54	1055	56	1010	59	960	62	930	64	890	—	850	—
		1	0	0	1	1185	50	1145	52	1105	54	1065	56	1030	58	990	60	950	62	910	65
		0	1	0	1	1250	47	1210	49	1170	51	1135	52	1095	54	1055	56	1020	58	980	60
		1	1	0	1	1290	46	1255	47	1220	49	1180	50	1145	52	1110	53	1075	55	1040	57
		0	0	1	1	1315	45	1275	46	1240	48	1200	49	1160	51	1120	53	1085	55	1045	57
		1	0	1	1	1350	44	1315	45	1280	46	1245	48	1205	49	1170	51	1135	52	1100	54
		0	1	1	1	1390	43	1350	44	1315	45	1275	46	1240	48	1200	49	1160	51	1125	53
		1	1	1	1	1420	42	1380	43	1345	44	1310	45	1270	47	1235	48	1200	49	1160	51

Notes:

1. Motor Switch Settings are for heating speeds using HEAT switches 1, 2, 3, & 4 and cooling speeds using COOL switches 5, 6, 7, & 8.
2. Two openings are required for airflows above 1600 CFM if the filter(s) is (are) adjacent to the furnace.
3. Data is shown without filter.
4. Temperature rises in the table are approximate. Actual temperature rises may vary.
5. Temperature rises that are shaded in grey are not recommended.

BLOWER PERFORMANCE - FG7TA/TK Continued

G7TA/TK - 80% AFUE, Two Stage Gas Furnace																					
Model Number	Heating Input (Btuh)	Motor Switch Setting				External Static Pressure (in.w.c.)															
						0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8	
		1/5	2/6	3/7	4/8	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise
*TA100(C)-*B1	100000	0	0	0	0	905	—	890	—	805	—	780	—								
		1	0	0	0	980	—	930	—	900	—	835	—	820	—	800	—	715	—	670	—
		0	1	0	0	1095	—	1015	—	980	—	915	—	895	—	870	—	810	—	765	—
		1	1	0	0	1160	64	1100	—	1065	—	1035	—	995	—	940	—	895	—	865	—
		0	0	1	0	1230	60	1195	62	1170	—	1110	—	1075	—	1060	—	995	—	970	—
		1	0	1	0	1315	56	1275	58	1240	60	1195	62	1160	64	1140	65	1115	—	1075	—
		0	1	1	0	1345	55	1310	57	1280	58	1250	59	1220	61	1190	62	1140	65	1115	—
		1	1	1	0	1445	51	1390	53	1350	55	1315	56	1280	58	1250	59	1230	60	1185	63
		0	0	0	1	1490	50	1430	52	1420	52	1380	54	1340	55	1310	57	1280	58	1275	58
		1	0	0	1	1550	48	1510	49	1475	50	1450	51	1420	52	1375	54	1340	55	1325	56
		0	1	0	1	1600	46	1270	58	1540	48	1500	49	1475	50	1445	51	1425	52	1385	53
		1	1	0	1	1640	45	1605	46	1570	47	1550	48	1525	49	1490	50	1460	51	1430	52
		0	0	1	1	1690	44	1665	44	1630	45	1600	46	1570	47	1550	48	1515	49	1490	50
		1	0	1	1	1755	42	1730	43	1680	44	1660	45	1640	45	1610	46	1575	47	1550	48
		0	1	1	1	1805	41	1770	42	1740	43	1715	43	1690	44	1655	45	1645	45	1605	46
		1	1	1	1	1860	40	1825	41	1790	41	1765	42	1745	42	1710	43	1695	44	1660	45
*TA/TK-100(C)-*C1	100000	0	0	0	0	1125	66	1040	—	960	—										
		1	0	0	0	1205	61	1120	—	1040	—	960	—								
		0	1	0	0	1305	57	1225	60	1150	64	1070	—	995	—	915	—				
		1	1	0	0	1430	52	1350	55	1270	58	1190	62	1110	—	1030	—	950	—	865	—
		0	0	1	0	1525	49	1450	51	1375	54	1300	57	1225	60	1150	64	1075	—	1000	—
		1	0	1	0	1620	46	1540	48	1465	51	1390	53	1315	56	1240	60	1165	64	1090	—
		0	1	1	0	1695	44	1620	46	1545	48	1465	51	1390	53	1315	56	1235	60	1160	64
		1	1	1	0	1770	42	1700	44	1630	45	1555	48	1485	50	1410	53	1340	55	1265	59
		0	0	0	1	1875	40	1805	41	1730	43	1655	45	1580	47	1510	49	1435	52	1340	55
		1	0	0	1	1905	39	1840	40	1775	42	1710	43	1640	45	1575	47	1510	49	1445	51
		0	1	0	1	1980	37	1910	39	1845	40	1780	42	1715	43	1650	45	1580	47	1515	49
		1	1	0	1	2025	37	1960	38	1895	39	1830	40	1765	42	1700	44	1635	45	1570	47
		0	0	1	1	2085	36	2025	37	1960	38	1900	39	1840	40	1775	42	1715	43	1655	45
		1	0	1	1	2135	35	2070	36	2010	37	1945	38	1880	39	1815	41	1750	42	1685	44
		0	1	1	1	2200	34	2145	35	2090	35	2035	36	1980	37	1925	38	1870	40	1820	41
		1	1	1	1	2280	32	2225	27	2170	34	2115	35	2065	22	2010	37	1955	38	1900	39

Notes:

1. Motor Switch Settings are for heating speeds using HEAT switches 1, 2, 3, & 4 and cooling speeds using COOL switches 5, 6, 7, & 8.
2. Two openings are required for airflows above 1600 CFM if the filter(s) is (are) adjacent to the furnace.
3. Data is shown without filter.
4. Temperature rises in the table are approximate. Actual temperature rises may vary.
5. Temperature rises that are shaded in grey are not recommended.

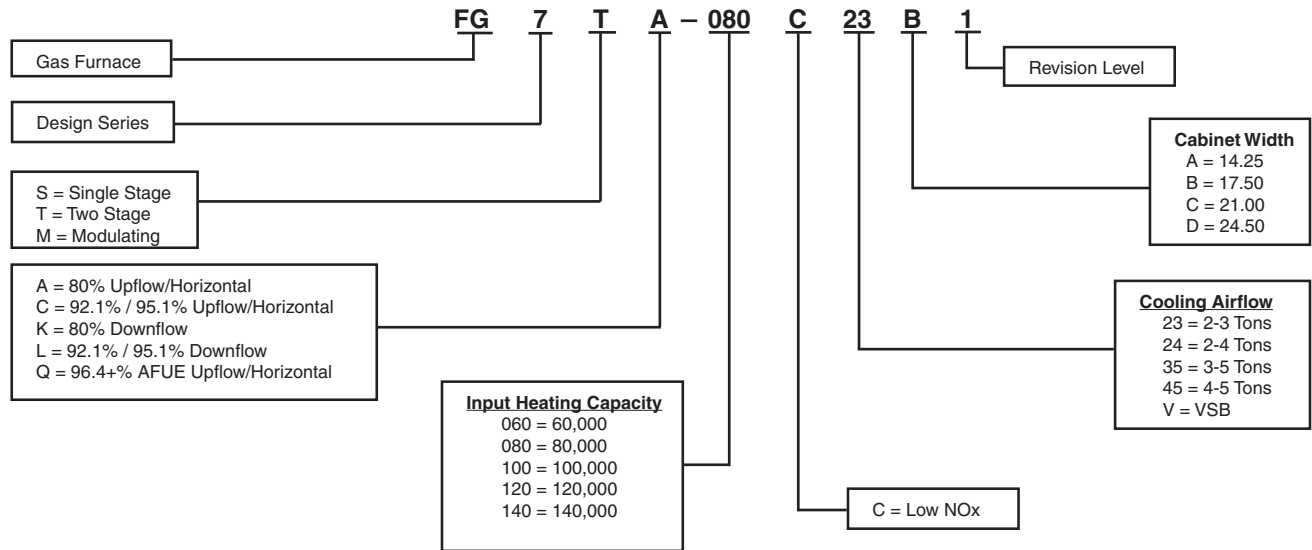
BLOWER PERFORMANCE - FG7TA/TK Continued

FG7TA/TK - 80% AFUE, Two Stage Gas Furnace																					
Model Number	Heating Input (Btuh)	Motor Switch Setting				External Static Pressure (in.w.c.)															
						0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8	
		1/5	2/6	3/7	4/8	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise
*TA/TK-120(C) -*C1	120000	0	0	0	0	1125	—	1040													
		1	0	0	0	1205	—	1120	—	1040	—										
		0	1	0	0	1305	—	1225	—	1150	—	1070	—								
		1	1	0	0	1430	62	1350	—	1270	—	1190	—	1110	—	1030	—				
		0	0	1	0	1525	58	1450	61	1375	65	1300	—	1225	—	1150	—	1075	—	1000	—
		1	0	1	0	1620	55	1540	58	1465	61	1390	64	1315	—	1240	—	1165	—	1090	—
		0	1	1	0	1695	52	1620	55	1545	58	1465	61	1390	64	1315	—	1235	—	1160	—
		1	1	1	0	1770	50	1700	52	1630	55	1555	57	1485	60	1410	63	1340	66	1265	—
		0	0	0	1	1875	47	1805	49	1730	51	1655	54	1580	56	1510	59	1435	62	1340	66
		1	0	0	1	1905	47	1840	48	1775	50	1710	52	1640	54	1575	56	1510	59	1445	62
		0	1	0	1	1980	45	1910	47	1845	48	1780	50	1715	52	1650	54	1580	56	1515	59
		1	1	0	1	2025	44	1960	45	1895	47	1830	49	1765	50	1700	52	1635	54	1570	57
		0	0	1	1	2085	43	2025	44	1960	45	1900	47	1840	48	1775	50	1715	52	1655	54
		1	0	1	1	2135	42	2070	43	2010	44	1945	46	1880	47	1815	49	1750	51	1685	53
		0	1	1	1	2200	40	2145	41	2090	43	2035	44	1980	45	1925	46	1870	48	1820	49
		1	1	1	1	2280	39	2225	40	2170	41	2115	42	2065	43	2010	44	1955	45	1900	47
*TA/TK-140(C) -*D1	140000	0	0	0	0	1395	—	1350	—	1305	—	1260	—	1210	—	1165	—				
		1	0	0	0	1465	—	1420	—	1375	—	1330	—	1290	—	1245	—	1200	—		
		0	1	0	0	1555	67	1510	69	1470	—	1425	—	1380	—	1340	—	1295	—	1250	—
		1	1	0	0	1625	64	1585	65	1540	67	1500	69	1460	—	1415	—	1375	—	1335	—
		0	0	1	0	1690	61	1650	63	1610	64	1570	66	1530	68	1485	70	1445	—	1405	—
		1	0	1	0	1760	59	1715	60	1670	62	1625	64	1575	66	1530	68	1485	70	1440	—
		0	1	1	0	1835	57	1790	58	1745	59	1695	61	1650	63	1605	65	1555	67	1510	69
		1	1	1	0	1885	55	1840	56	1790	58	1745	59	1700	61	1655	63	1610	64	1565	66
		0	0	0	1	1945	53	1900	55	1850	56	1805	57	1760	59	1710	61	1665	62	1620	64
		1	0	0	1	1950	53	1905	54	1860	56	1820	57	1775	58	1735	60	1690	61	1650	63
		0	1	0	1	2075	50	2030	51	1990	52	1945	53	1900	55	1855	56	1810	57	1770	59
		1	1	0	1	2125	49	2085	50	2040	51	2000	52	1955	53	1910	54	1870	55	1825	57
		0	0	1	1	2170	48	2130	49	2090	50	2045	51	2005	52	1965	53	1925	54	1880	55
		1	0	1	1	2215	47	2180	48	2140	48	2105	49	2070	50	2035	51	2000	52	1965	53
		0	1	1	1									2225	47	2165	48	2100	49	2040	51
		1	1	1	1											2170	48	2120	49	2065	50

Notes:

1. Motor Switch Settings are for heating speeds using HEAT switches 1, 2, 3, & 4 and cooling speeds using COOL switches 5, 6, 7, & 8.
2. Two openings are required for airflows above 1600 CFM if the filter(s) is (are) adjacent to the furnace.
3. Data is shown without filter.
4. Temperature rises in the table are approximate. Actual temperature rises may vary.
5. Temperature rises that are shaded in grey are not recommended.

MODEL IDENTIFICATION CODE



SPECIFICATIONS

FG7TA/TK MODEL NUMBERS	060C-23A1	080C-24B1	100C-24B1	100C-35C1	120C-35C1	140C-45D1
Input - Btuh (a)	60,000 / 39,000	80,000 / 52,000	100,000 / 65,000	100,000 / 65,000	120,000 / 78,000	140,000 / 91,000
Heating Capacity - Btuh	48,000 / 31,200	64,000 / 41,600	80,000 / 52,000	80,000 / 52,000	96,000 / 62,400	112,000 / 72,800
AFUE	80.0	80.0	80.0	80.0	80.0	80.0
Blower D x W	10 x 6	11 x 8	11 x 8	11 x 10	11 x 10	11 x 10
Motor H.P. - Speed - Type	1/2 - BLDC	1/2 - BLDC	3/4 - BLDC	3/4 - BLDC	3/4 - BLDC	1 - BLDC
Motor FLA	6.2	6.2	8.7	8.7	8.7	11.7
Rated Ext. SP - In. W.C.	0.5	0.5	0.5	0.5	0.5	0.5
Temperature Rise Range - °F	25-55	30-60	30-60	35-65	35-65	40-70
Shipping Weights	115lbs	110lbs	120lbs	125lbs	135lbs	155lbs

All models are 115 V, 60 HZ. Gas connections are 1/2" N.P.T.

AFUE= Annual Fuel Utilization Efficiency

ACCESSORIES

FG7TA/TK KITS	
Description	SKU
Fixed speed -to- variable speed	904880
"A" Cabinet downflow sub base kit	902974
"B", "C", "D" Cabinet downflow sub base kit	904911
U.S. LP Conversion kit (0 to 10,000 ft.)	904914
Canada LP Conversion kit (0 to 4,500 ft.)	904915
Bottom return filter 20 per box, "A" cabinet	903088
Bottom return filter 20 per box, "B" cabinet	904916
Bottom return filter 20 per box, "C" cabinet	904917
Bottom return filter 20 per box, "D" cabinet	904918
Side return filter kit	541036



GENERAL TERMS OF LIMITED WARRANTY

Nortek Global HVAC, LLC will furnish a replacement for any part of this product which fails in normal use and service within the terms and conditions of the warranty.

For complete details of the Limited Warranty, including applicable terms and conditions, see your local installer or contact the Nortek Global HVAC, LLC warranty department for a copy.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer. Specifications and illustrations subject to change without notice and without incurring obligations. Printed in U.S.A (10/2015)

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