

TECHNICAL SPECIFICATIONS

FG7T (C and L Series)

iSEER[™], Smartlite[®]

**Two Stage, Fixed Speed,
Condensing Upflow/Horizontal
and Downflow Gas Furnaces**
Induced Draft - 95.1 AFUE
Input 60,000 - 120,000 Btuh

The high efficiency upflow gas furnace may be installed free standing in a utility room, basement, or enclosed in an alcove or closet. Upflow/horizontal units come ready for upflow or horizontal application. The extended flush jacket provides a pleasing "appliance appearance." Design certified by CSA for application in Canada and the United States.

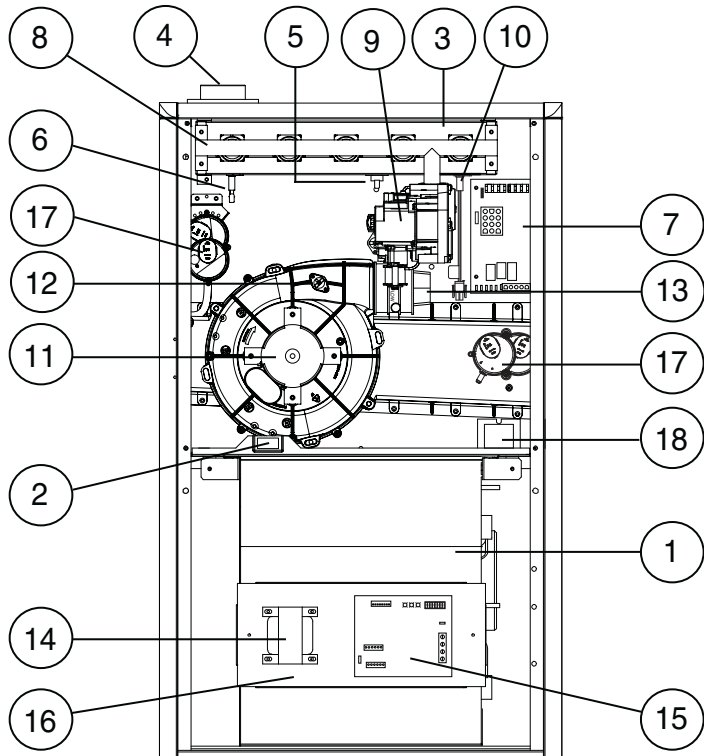


FEATURES and BENEFITS

- **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.
- **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 type 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.
- **Flexible category IV venting system:** May be vertically or horizontally vented using either a one-pipe or two-pipe system for maximum flexibility in installation.
- **High Static Blowers:** All models equipped with high static blowers.
- **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 and stainless steel secondary heat exchanger assures a long life.
- **90 second fixed cooling cycle blower-off delay (TDR):** Increases cooling performance when matched with a NORDYNE coil.
- **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.
- **Incorporates integrated control board:** With 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:** Sealed door to reduce air leakage and insulated for ultra quiet operation.
- **Sealed Vestibule:** Reduces burner and inducer sound levels.
- **2 Stage Inducer:** Optimizes efficiency on first stage heat and reduces sound levels.

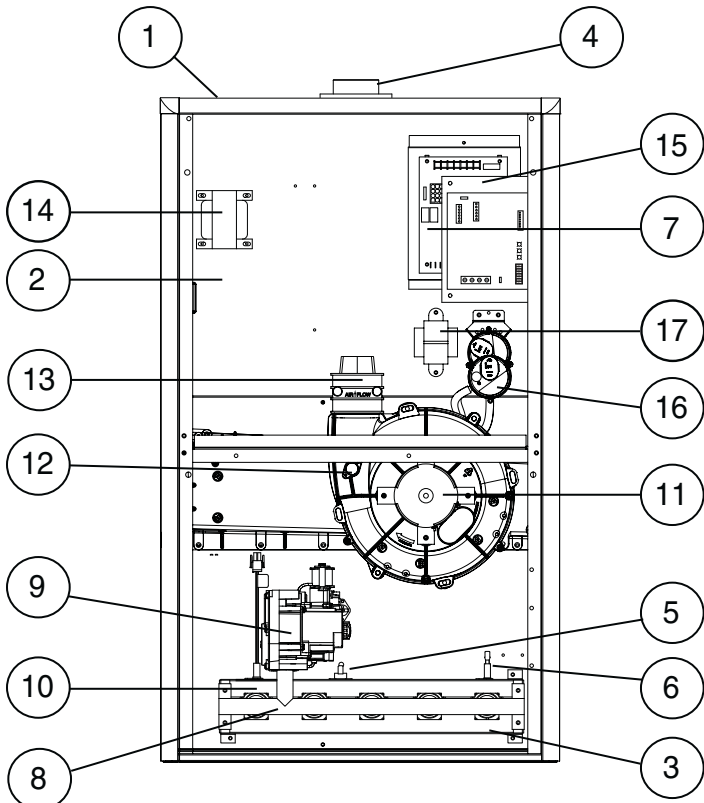
GAS FURNACE COMPONENTS

ITEM	COMPONENT NAME
1.	Blower Assembly
2.	Blower Door Switch
3.	Burner Assembly
4.	Finish Flange
5.	Flame Roll-Out Switch
6.	Flame Sensor
7.	Furnace Control Board
8.	Gas Manifold
9.	Gas Valve
10.	Igniter
11.	Inducer Assembly
12.	Inducer Limit Switch
13.	Inline Drain Assembly
14.	Motor Choke (C and D cabinets only)
15.	Motor Control Board
16.	Motor Control Box
17.	Pressure Switches
18.	Transformer



Upflow/Horizontal Gas Furnace

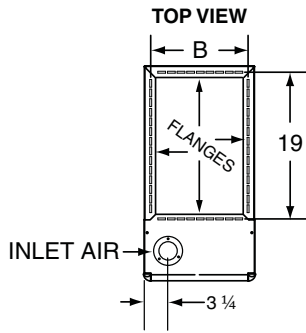
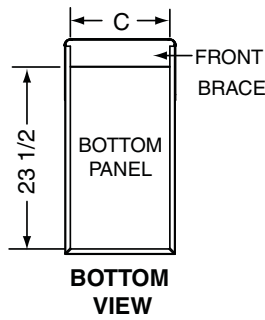
ITEM	COMPONENT NAME
1.	Blower Assembly
2.	Blower Door Switch (behind blower panel)
3.	Burner Assembly
4.	Finish Flanges
5.	Flame Roll-Out Switch
6.	Flame Sensor
7.	Furnace Control Board
8.	Gas Manifold
9.	Gas Valve
10.	Igniter
11.	Inducer Assembly
12.	Inducer Limit Switch
13.	Inline Drain Assembly
14.	Motor Choke (C and D cabinets only)
15.	Motor Control Board
16.	Pressure Switches
17.	Transformer



Downflow Gas Furnace

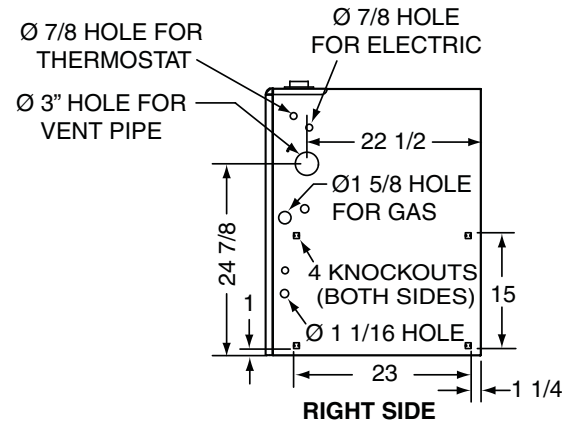
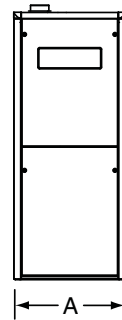
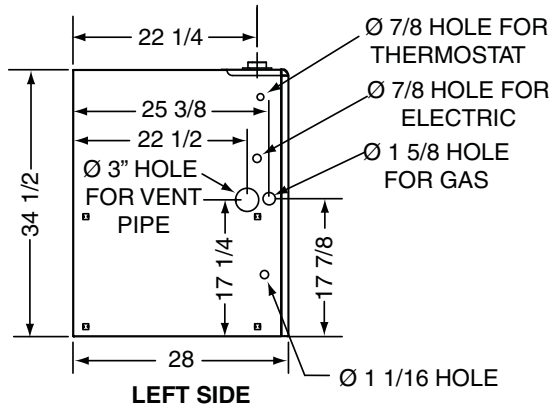
DIMENSIONS

*TC 95.1% Upflow/Horizontal Furnace

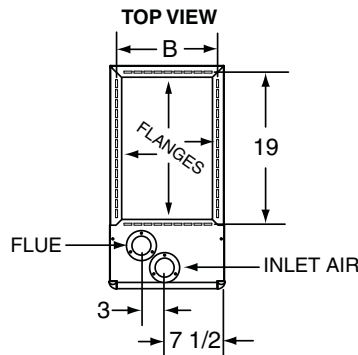
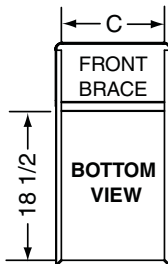


Upflow/Horz. Cabinets	Dim. "A"	Dim. "B"	Dim. "C"
'B' Cabinet	17 1/2	15 7/8	16 1/8
'C' Cabinet	21	19 3/8	19 5/8
'D' Cabinet	24 1/2	22 7/8	23 1/8

NOTES:
Dimensions shown in inches.

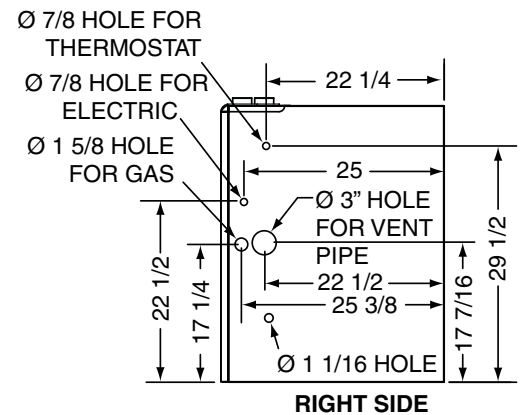
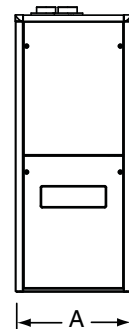
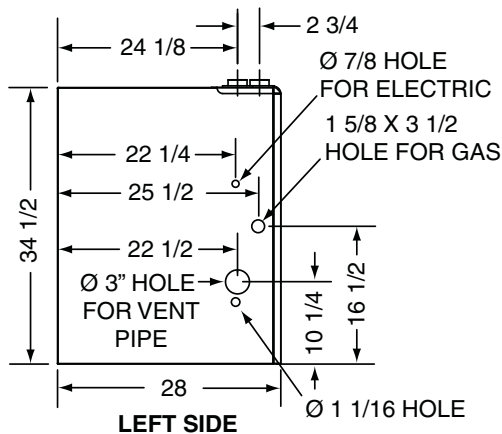


*TL 95.1% Downflow Furnace

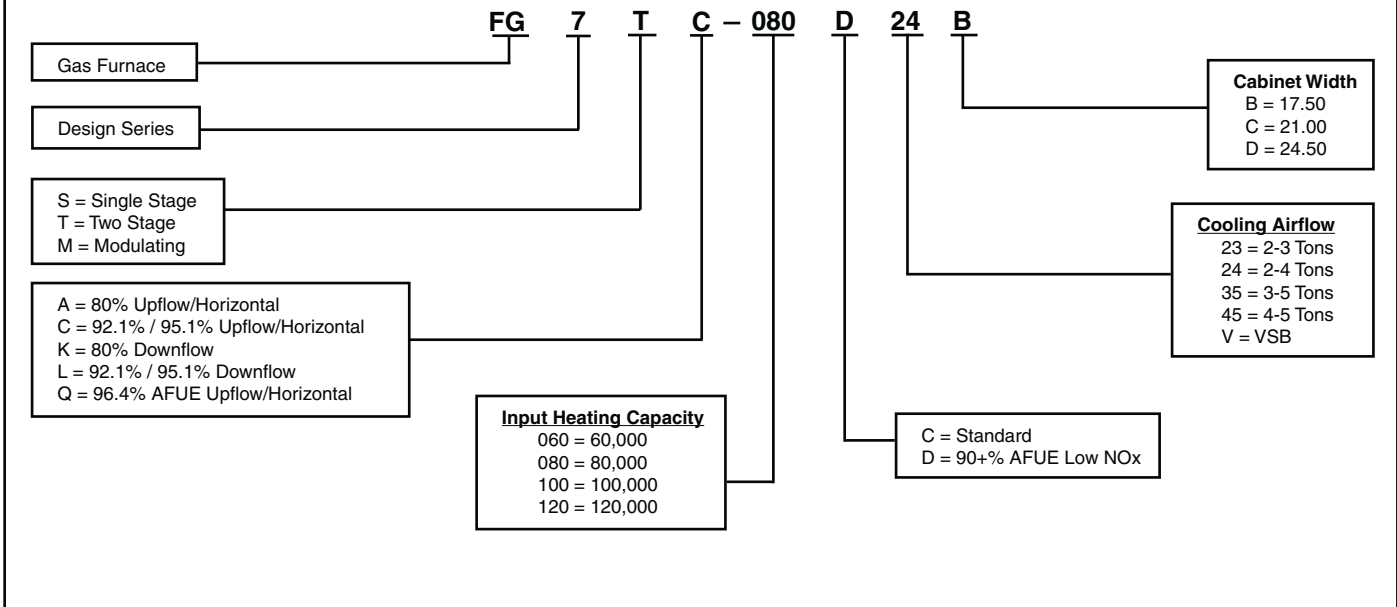


Downflow Cabinets	Dim. "A"	Dim. "B"	Dim. "C"
'B' Cabinet	17 1/2	15 7/8	16 1/8
'C' Cabinet	21	19 3/8	19 5/8
'D' Cabinet	24 1/2	22 7/8	23 1/8

NOTES:
Dimensions shown in inches.



MODEL IDENTIFICATION CODE



SPECIFICATIONS

FG7TC/TL MODELS NUMBERS:	-060D-23B	-080D-35C	-100D-35C	-120D-45D
Input - Btuh (a)	60,000 / 39,000	80,000 / 52,000	100,000 / 65,000	120,000 / 78,000
Heating Capacity - Btuh	57,000 / 37,050	76,000 / 49,400	95,000 / 61,750	114,000 / 74,100
AFUE	95.1	95.1	95.1	95.1*
Blower D x W	11 x 8	11 x 10	11 x 10	11 x 10
Motor H.P. - Speed - Type	1/2 - BLDC	3/4 - BLDC	3/4 - BLDC	1 - BLDC
Motor FLA	6.2	8.7	8.7	11.7
Rated Ext. SP - In. W.C.	0.5	0.5	0.5	0.5
Temperature Rise Range - °F	30-60	35-65	35-65	40-70
Shipping Weights	125lbs	135lbs	145lbs	160lbs

* TL 120 is 94.8% AFUE

Note:
All models are 115V, 60 Hz. Gas Connections are 1/2" N.P.T. AFUE = Annual Fuel Utilization Efficiency
(a) Ratings to 2,000 ft. Over 2,000 ft. reduce 4% for each 1,000 ft. above sea level.

BLOWER PERFORMANCE - FG7TC/TL

FG7TC/TL - 95.1% 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	
*TC/TL-060D-*B	60000	0	0	0	0																	
		1	0	0	0																	
		0	1	0	0																	
		1	1	0	0	725	73															
		0	0	1	0	810	65															
		1	0	1	0	940	56	890	59	845	62	795	66	750	70	700	75					
		0	1	1	0	990	53	945	56	905	58	860	61	820	64	775	68	735	72	690	76	
		1	1	1	0	1055	50	1015	52	970	54	930	57	890	59	845	62	805	66	760	69	
		0	0	0	1	1135	47	1095	48	1055	50	1010	52	960	55	930	57	890	59	850	62	
		1	0	0	1	1185	45	1145	46	1105	48	1065	50	1030	51	990	53	950	56	910	58	
		0	1	0	1	1250	42	1210	44	1170	45	1135	47	1095	48	1055	50	1020	52	980	54	
		1	1	0	1	1290	41	1255	42	1220	43	1180	45	1145	46	1110	48	1075	49	1040	51	
		0	0	1	1	1315	40	1275	41	1240	43	1200	44	1160	45	1120	47	1085	49	1045	51	
		1	0	1	1	1350	39	1315	40	1280	41	1245	42	1205	44	1170	45	1135	47	1100	48	
		0	1	1	1	1390	38	1350	39	1315	40	1275	41	1240	43	1200	44	1160	45	1125	47	
1	1	1	1	1420	37	1380	38	1345	39	1310	40	1270	42	1235	43	1200	44	1160	45			
*TC/TL-080D-*C	80000	0	0	0	0	1125	55	1040	68	960	73	880	80	795	89							
		1	0	0	0	1205	58	1120	63	1040	68	960	73	875	80	795	89					
		0	1	0	0	1305	54	1225	57	1150	61	1070	66	995	71	915	77	840	84			
		1	1	0	0	1430	49	1350	52	1270	55	1190	59	1110	63	1030	68	950	74	865	81	
		0	0	1	0	1525	46	1450	49	1375	51	1300	54	1225	57	1150	61	1075	65	1000	70	
		1	0	1	0	1620	43	1540	46	1465	48	1390	51	1315	54	1240	57	1165	60	1090	65	
		0	1	1	0	1695	42	1620	43	1545	46	1465	48	1390	51	1315	54	1235	57	1160	61	
		1	1	1	0	1770	40	1700	41	1630	43	1555	45	1485	47	1410	50	1340	53	1265	56	
		0	0	0	1	1875	38	1805	39	1730	41	1655	43	1580	45	1510	47	1435	49	1340	53	
		1	0	0	1	1905	37	1840	38	1775	40	1710	41	1640	43	1575	45	1510	47	1445	49	
		0	1	0	1	1980	36	1910	37	1845	38	1780	40	1715	41	1650	43	1580	45	1515	46	
		1	1	0	1	2025	35	1960	36	1895	37	1830	38	1765	40	1700	41	1635	43	1570	45	
		0	0	1	1	2085	34	2025	35	1960	36	1900	37	1840	38	1775	40	1715	41	1655	43	
		1	0	1	1	2135	33	2070	34	2010	35	1945	36	1880	37	1815	39	1750	40	1685	42	
		0	1	1	1	2200	32	2145	33	2090	34	2035	35	1980	36	1925	37	1870	38	1820	39	
1	1	1	1	2280	31	2225	32	2170	32	2115	33	2065	34	2010	35	1955	36	1900	37			

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 recommended 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 for reference only. These conditions are not recommended.

BLOWER PERFORMANCE - FG7TC/TL Continued

FG7TC/TL - 95.1% 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
*TC/TL-100D-*C	100000	0	0	0	0	1125	78	1040	85												
		1	0	0	0	1205	73	1120	79	1040	85										
		0	1	0	0	1305	67	1225	72	1150	76	1070	82	995	88						
		1	1	0	0	1430	62	1350	65	1270	69	1190	74	1110	79	1030	85				
		0	0	1	0	1525	58	1450	61	1375	64	1300	68	1225	72	1150	76	1075	82	1000	88
		1	0	1	0	1620	54	1540	57	1465	60	1390	63	1315	67	1240	71	1165	76	1090	81
		0	1	1	0	1695	52	1620	54	1545	57	1465	60	1390	63	1315	67	1235	71	1160	76
		1	1	1	0	1770	50	1700	52	1630	54	1555	57	1485	59	1410	62	1340	66	1265	70
		0	0	0	1	1875	47	1805	49	1730	51	1655	53	1580	56	1510	58	1435	61	1340	66
		1	0	0	1	1905	46	1840	48	1775	50	1710	51	1640	54	1575	56	1510	58	1445	61
		0	1	0	1	1980	44	1910	46	1845	48	1780	49	1715	51	1650	53	1580	56	1515	58
		1	1	0	1	2025	43	1960	45	1895	46	1830	48	1765	50	1700	52	1635	54	1570	56
		0	0	1	1	2085	42	2025	43	1960	45	1900	46	1840	48	1775	50	1715	51	1655	53
		1	0	1	1	2135	41	2070	42	2010	44	1945	45	1880	47	1815	48	1750	50	1685	52
		0	1	1	1	2200	40	2145	41	2090	42	2035	43	1980	44	1925	46	1870	47	1820	48
1	1	1	1	2280	39	2225	40	2170	41	2115	42	2065	43	2010	44	1955	45	1900	46		
*TC/TL-120D-*D	120000	0	0	0	0	1395	76	1350	78	1305	81	1260	84	1210	87	1165	91	1120	94		
		1	0	0	0	1465	72	1420	74	1375	77	1330	79	1290	82	1245	85	1200	88	1155	91
		0	1	0	0	1555	68	1510	70	1470	72	1425	74	1380	76	1340	79	1295	82	1250	84
		1	1	0	0	1625	65	1585	67	1540	69	1500	70	1460	72	1415	75	1375	77	1335	79
		0	0	1	0	1690	62	1650	64	1610	66	1570	67	1530	69	1485	71	1445	73	1405	75
		1	0	1	0	1760	60	1715	62	1670	63	1625	65	1575	67	1530	69	1485	71	1440	73
		0	1	1	0	1835	58	1790	59	1745	60	1695	62	1650	64	1605	66	1555	68	1510	70
		1	1	1	0	1885	56	1840	57	1790	59	1745	60	1700	62	1655	64	1610	66	1565	67
		0	0	0	1	1945	54	1900	56	1850	57	1805	58	1760	60	1710	62	1665	63	1620	65
		1	0	0	1	1950	54	1905	55	1860	57	1820	58	1775	59	1735	61	1690	62	1650	64
		0	1	0	1	2075	51	2030	52	1990	53	1945	54	1900	56	1855	57	1810	58	1770	60
		1	1	0	1	2125	50	2085	51	2040	52	2000	53	1955	54	1910	55	1870	56	1825	58
		0	0	1	1	2170	49	2130	50	2090	51	2045	52	2005	53	1965	54	1925	55	1880	56
		1	0	1	1	2215	48	2180	48	2140	49	2105	50	2070	51	2035	52	2000	53	1965	54
		0	1	1	1									2225	47	2165	49	2100	50	2040	52
1	1	1	1											2170	49	2120	50	2065	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 recommended 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 for reference only. These conditions are not recommended.

VENTING

All models are approved for vertical non direct (1 pipe) and direct (2 pipe) venting applications. See Vent Table below for specified sizes and allowable lengths.

VENT TABLE

FURNACE MODELS (BTU)	FURNACE INSTALLATION	SINGLE PIPE LENGTH (FT.) with 1 long radius elbow**		DIRECT VENT, DUAL PIPE LENGTH (ft.) WITH 1 long radius elbow on each pipe**	
		OUTLET	OUTLET	INLET/OUTLET	INLET/OUTLET
		2" Diameter	3" Diameter	2" Diameter	3" Diameter
60,000	Upflow	90	90	90	90
	Horizontal	50	90	50	90
	Downflow	30	90	30	90
80,000	Upflow	90	90	90	90
	Horizontal	30	90	30	90
	Downflow	30	90	30	90
100,000	Upflow	60	90	60	90
	Horizontal	30	90	30	90
	Downflow	30	90	25	90
120,000	Upflow	N/A	90	N/A	90
	Horizontal	N/A	90	N/A	90
	Downflow	N/A	90	N/A	90

***NOTES:**

1. Subtract 2.5 ft. for each additional 2 inch long radius elbow, 5 ft. for each additional 2 inch short radius elbow, 3.5 ft. for each additional 3 inch long radius elbow, and 7 ft. for each additional 3 inch short radius elbow. Subtract 5ft for each 2" tee and 8ft for each 3" tee.
2. Two 45 degree elbows are equivalent to one 90 degree elbow.
3. This table applies for elevations from sea level to 2,000 ft. For higher elevations, decrease pipe lengths by 8% per 1,000 ft of altitude.

ACCESSORIES

FG7TC/TL KITS	
Description	SKU
Fixed speed -to- variable speed	904880
2" Concentric vent kit	904177
3" Concentric vent kit	904176
"A" Cabinet downflow sub base kit	902974
"B", "C", "D" Cabinet downflow sub base kit	904911
2" Side wall vent kit	904617
3" Side wall vent kit	904347
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
Neutralizer kit	902377



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 (01/2015)