

FG7TE Series

Smartlite®

Two Stage, Fixed Speed ECM, High Efficiency Upflow Gas Furnaces

Induced Draft - 96% AFUE
Input 60,000 - 115,000 Btuh

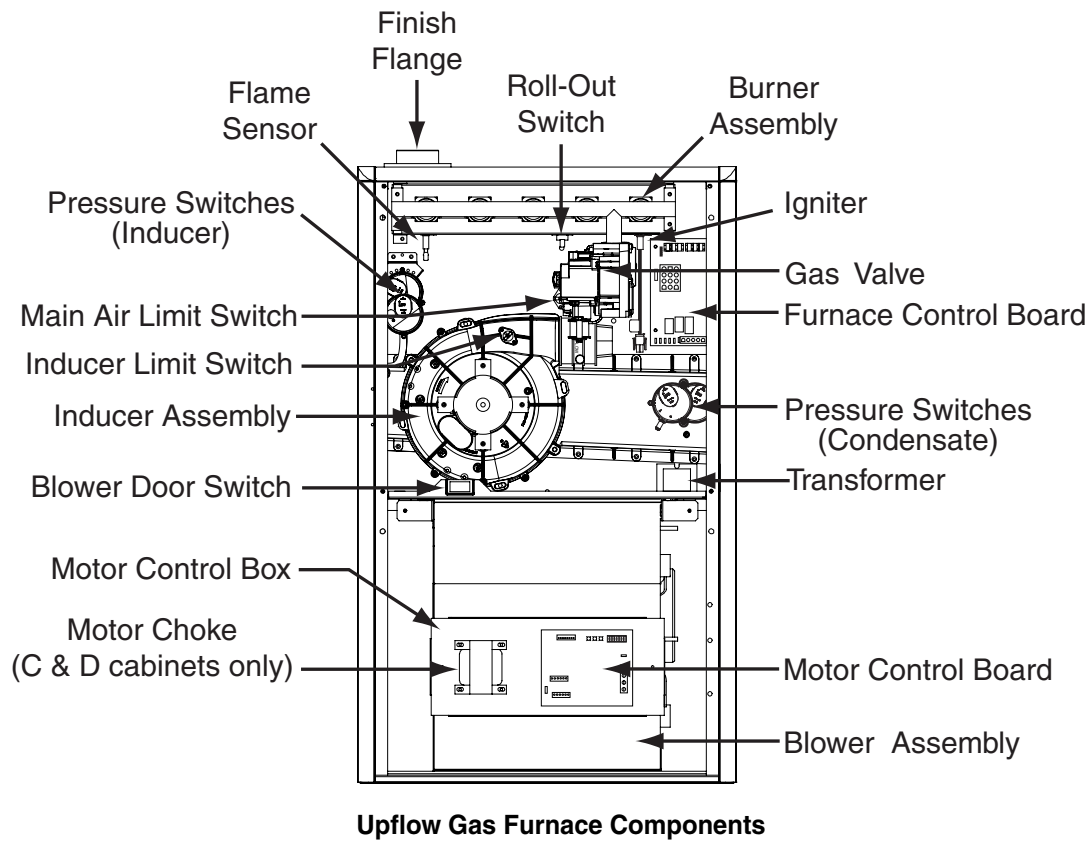
The high efficiency upflow gas furnace may be installed free standing in a utility room, basement, or enclosed in an alcove or closet. The extended flush jacket provides a pleasing "appliance appearance." Design certified by CSA for application in Canada and the United States.



FEATURES and BENEFITS

- **Multi-speed Direct Drive Blower:** Energy-efficient brushless DC (ECM) fixed-speed motor offers 16 speeds designed to give a wide range of cooling capacities.
- **SmartLite® Technology:** Auto-adjusts igniter on time to extend igniter life.
- **Hot Surface Igniter:** Innovative application of a silicon nitride type igniter.
- **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.
- **60 Second Fixed Cooling Cycle Blower-Off Delay (TDR):** Increases cooling performance when matched with a Nortek Global HVAC coil.
- **Color Coded Wire Harness:** Designed to fit the components, all with quick-connect fittings for ease of service and replacement.
- **Diagnostic Lights:** 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 Boards:** With connections for electronic air cleaner, humidifier, and dehumidification. Ergonomically located for ease of service.
- **2 Stage Inducer:** Optimizes efficiency on first stage heat and reduces sound levels.
- **Heat Exchanger:** Heavy gauge aluminized steel primary heat exchanger and stainless steel secondary heat exchanger assures a long life.
- **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.
- **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.
- **Low Boy Height:** Easy to apply in low ceiling applications, works well with taller high SEER coils, easier to handle and install.
- **LP Convertible:** Simple burner orifice and regulator spring change for ease of convertibility (as an accessory).
- **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.
- **Furnace Air Leakage:** These furnaces comply with Energy Star cabinet air leakage requirement of less than or equal to 2%. Keep the conditioned air flowing to where it's needed.

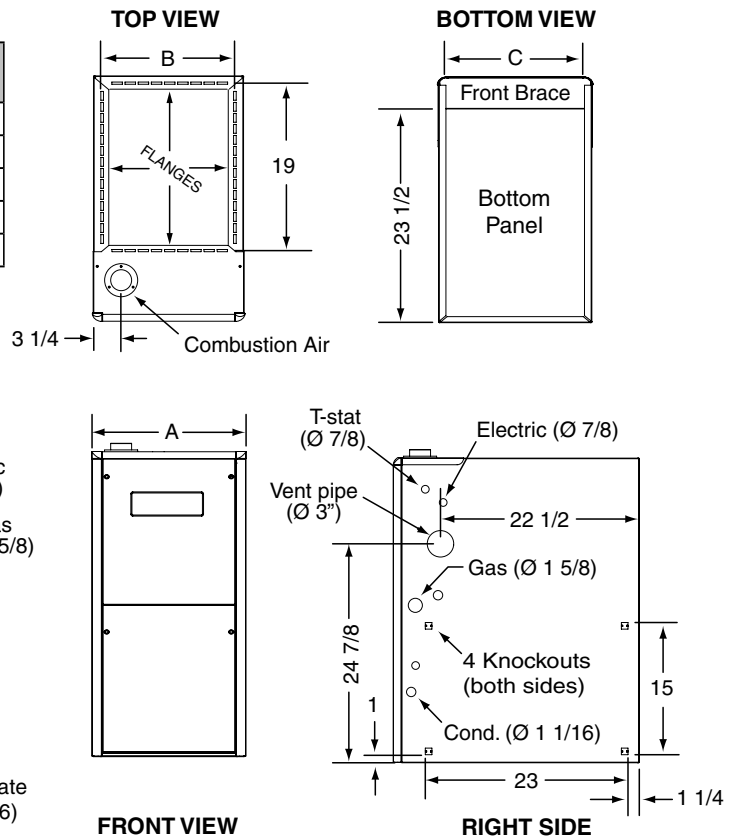
LOCATION OF FURNACE COMPONENTS



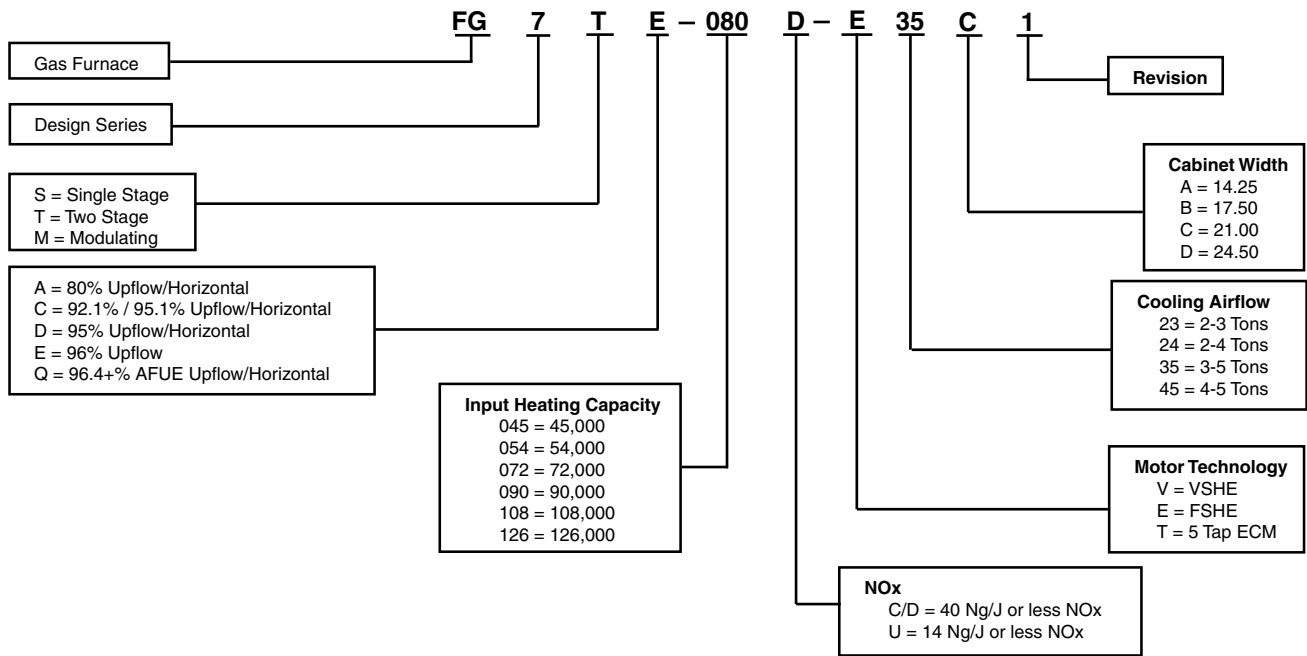
DIMENSIONS

*TE 96% Upflow Furnace

Cabinet Size	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

FG7TE MODEL NUMBERS	-060D-E24B1	-080D-E35C1	-100D-E35C1	-115D-E45D1
Input - Btuh (a)	60000 / 39000	80000 / 52000	100000 / 65000	115000 / 74750
Heating Capacity - BtuH	58000 / 37000	77000 / 50000	96000 / 62000	110000 / 72000
AFUE	96.0	96.0	96.0	96.0
Motor H.P. - Speed - Type	3/4 - BLDC	1 - BLDC	1 - BLDC	1 - BLDC
Motor FLA	8.8	11.5	11.5	11.5
Rated Ext. SP - In. W.C.	0.50	0.50	0.50	0.50
Temperature Rise Range - F	30-60	30-60	35-65	40-70
Shipping Weights	120 lb	130 lb	135 lb	145 lb
SKU	1025958F	1025959F	1025960F	1025961F

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.

G7TE-060D-E24B1 (FSHE)

HEATING AIRFLOW (CFM) & TEMPERATURE RISE (°F)														
Model Number/ Heating Input	MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				External Static Pressure (in.w.c.)									
					0.1		0.2		0.3		0.4		0.5	
	1	2	3	4	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE
G7TE-060D-E24B1 60,000 BTU/hr	0	0	0	0										
	1	0	0	0										
	0	1	0	0										
	1	1	0	0										
	0	0	1	0										
	1	0	1	0	940	57	890	60						
	0	1	1	0	990	54	945	56	905	59				
	1	1	1	0	1,055	51	1,015	53	970	55	930	57	890	60
	0	0	0	1	1,135	47	1,095	49	1,055	51	1,010	53	960	56
	1	0	0	1	1,185	45	1,145	47	1,105	48	1,065	50	1,030	52
	0	1	0	1	1,250	43	1,210	44	1,170	46	1,135	47	1,095	49
	1	1	0	1	1,290	41	1,255	42	1,220	44	1,180	45	1,145	47
	0	0	1	1	1,315	41	1,275	42	1,240	43	1,200	44	1,160	46
	1	0	1	1	1,350	40	1,315	41	1,280	42	1,245	43	1,205	44
	0	1	1	1	1,390	38	1,350	40	1,315	41	1,275	42	1,240	43
1	1	1	1											

COOLING AIRFLOW (CFM)													
Model Number/ Heating Input	MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				External Static Pressure (in.w.c.)								
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	
	5	6	7	8	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
G7TE-060D-E24B1 60,000 BTU/hr	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	890	845	795	750	700			
	0	1	1	0	990	945	905	860	820	775	735	690	
	1	1	1	0	1,055	1,015	970	930	890	845	805	760	
	0	0	0	1	1,135	1,095	1,055	1,010	960	930	890	850	
	1	0	0	1	1,185	1,145	1,105	1,065	1,030	990	950	910	
	0	1	0	1	1,250	1,210	1,170	1,135	1,095	1,055	1,020	980	
	1	1	0	1	1,290	1,255	1,220	1,180	1,145	1,110	1,075	1,040	
	0	0	1	1	1,315	1,275	1,240	1,200	1,160	1,120	1,085	1,045	
	1	0	1	1	1,350	1,315	1,280	1,245	1,205	1,170	1,135	1,100	
	0	1	1	1	1,390	1,350	1,315	1,275	1,240	1,200	1,160	1,125	
1	1	1	1	1,420	1,380	1,345	1,310	1,270	1,235	1,200	1,160		

***NOTES:**

1. Motor switch settings for heating speeds use HEAT switches 1, 2, 3, & 4 and for cooling speeds use COOL switches 5, 6, 7, & 8.
2. To comply with government mandated efficiency standards, two openings are required for airflows above 1,600 CFM.
3. Data is shown without filter.
4. Temperature rises in the table are approximate. Actual temperature rises may vary.
5. Individual cells shaded in gray indicate a temperature rise outside of the recommended range.
6. To comply with government mandated efficiency standards, speed settings shaded in gray are not allowed in HEAT mode.
7. When in low stage heat, the airflow is approximately 70% of the tables high value (2-stage furnaces only).

FG7TE-080D-E35C1 (FSHE)

HEATING AIRFLOW (CFM) & TEMPERATURE RISE (°F)														
Model Number/ Heating Input	MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				External Static Pressure (in.w.c.)									
					0.1		0.2		0.3		0.4		0.5	
	1	2	3	4	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE
FG7TE-080D-E35C1 80,000 BTU/hr	0	0	0	0	1,125	63								
	1	0	0	0	1,205	59	1,120	63						
	0	1	0	0	1,305	54	1,225	58	1,150	62				
	1	1	0	0	1,430	50	1,350	53	1,270	56	1,190	60	1,110	63
	0	0	1	0	1,525	47	1,450	49	1,375	52	1,300	55	1,225	57
	1	0	1	0	1,620	44	1,540	46	1,465	49	1,390	51	1,315	54
	0	1	1	0	1,695	42	1,620	44	1,545	46	1,465	49	1,390	51
	1	1	1	0	1,770	40	1,700	42	1,630	44	1,555	46	1,485	47
	0	0	0	1	1,875	38	1,805	39	1,730	41	1,655	43	1,580	45
	1	0	0	1	1,905	37	1,840	39	1,775	40	1,710	42	1,640	43
	0	1	0	1	1,980	36	1,910	37	1,845	39	1,780	40	1,715	41
	1	1	0	1	2,025	35	1,960	36	1,895	38	1,830	39	1,765	40
	0	0	1	1			2,025	35	1,960	36	1,900	37	1,840	38
	1	0	1	1					2,010	35	1,945	37	1,880	37
	0	1	1	1							2,035	35	1,980	36
	1	1	1	1										

COOLING AIRFLOW (CFM)												
Model Number/ Heating Input	MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				External Static Pressure (in.w.c.)							
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
	5	6	7	8	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
FG7TE-080D-E35C1 80,000 BTU/hr	0	0	0	0	1,125	1,040	960	880	795			
	1	0	0	0	1,205	1,120	1,040	960	875	795		
	0	1	0	0	1,305	1,225	1,150	1,070	995	915	840	
	1	1	0	0	1,430	1,350	1,270	1,190	1,110	1,030	950	865
	0	0	1	0	1,525	1,450	1,375	1,300	1,225	1,150	1,075	1,000
	1	0	1	0	1,620	1,540	1,465	1,390	1,315	1,240	1,165	1,090
	0	1	1	0	1,695	1,620	1,545	1,465	1,390	1,315	1,235	1,160
	1	1	1	0	1,770	1,700	1,630	1,555	1,485	1,410	1,340	1,265
	0	0	0	1	1,875	1,805	1,730	1,655	1,580	1,510	1,435	1,340
	1	0	0	1	1,905	1,840	1,775	1,710	1,640	1,575	1,510	1,445
	0	1	0	1	1,980	1,910	1,845	1,780	1,715	1,650	1,580	1,515
	1	1	0	1	2,025	1,960	1,895	1,830	1,765	1,700	1,635	1,570
	0	0	1	1	2,085	2,025	1,960	1,900	1,840	1,775	1,715	1,655
	1	0	1	1	2,135	2,070	2,010	1,945	1,880	1,815	1,750	1,685
	0	1	1	1	2,200	2,145	2,090	2,035	1,980	1,925	1,870	1,820
	1	1	1	1	2,280	2,225	2,170	2,115	2,065	2,010	1,955	1,900

***NOTES:**

1. Motor switch settings for heating speeds use HEAT switches 1, 2, 3, & 4 and for cooling speeds use COOL switches 5, 6, 7, & 8.
2. To comply with government mandated efficiency standards, two openings are required for airflows above 1,600 CFM.
3. Data is shown without filter.
4. Temperature rises in the table are approximate. Actual temperature rises may vary.
5. Individual cells shaded in gray indicate a temperature rise outside of the recommended range.
6. To comply with government mandated efficiency standards, speed settings shaded in gray are not allowed in HEAT mode.
7. When in low stage heat, the airflow is approximately 70% of the tables high value (2-stage furnaces only).

FG7TE-100D-E35C1 (FSHE)

HEATING AIRFLOW (CFM) & TEMPERATURE RISE (°F)														
Model Number/ Heating Input	MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				External Static Pressure (in.w.c.)									
					0.1		0.2		0.3		0.4		0.5	
	1	2	3	4	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE
FG7TE-100D-E35C1 100,000 BTU/hr	0	0	0	0										
	1	0	0	0										
	0	1	0	0										
	1	1	0	0										
	0	0	1	0										
	1	0	1	0	1,620	55	1,540	58						
	0	1	1	0	1,695	52	1,620	55	1,545	58				
	1	1	1	0	1,770	50	1,700	52	1,630	55	1,555	57	1,485	60
	0	0	0	1	1,875	47	1,805	49	1,730	51	1,655	54	1,580	56
	1	0	0	1	1,905	47	1,840	48	1,775	50	1,710	52	1,640	54
	0	1	0	1	1,980	45	1,910	47	1,845	48	1,780	50	1,715	52
	1	1	0	1	2,025	44	1,960	45	1,895	47	1,830	49	1,765	50
	0	0	1	1	2,085	43	2,025	44	1,960	45	1,900	47	1,840	48
	1	0	1	1	2,135	42	2,070	43	2,010	44	1,945	46	1,880	47
	0	1	1	1										
1	1	1	1											

COOLING AIRFLOW (CFM)													
Model Number/ Heating Input	MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				External Static Pressure (in.w.c.)								
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	
	5	6	7	8	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
FG7TE-100D-E35C1 100,000 BTU/hr	0	0	0	0	1,125	1,040							
	1	0	0	0	1,205	1,120	1,040						
	0	1	0	0	1,305	1,225	1,150	1,070	995				
	1	1	0	0	1,430	1,350	1,270	1,190	1,110	1,030			
	0	0	1	0	1,525	1,450	1,375	1,300	1,225	1,150	1,075	1,000	
	1	0	1	0	1,620	1,540	1,465	1,390	1,315	1,240	1,165	1,090	
	0	1	1	0	1,695	1,620	1,545	1,465	1,390	1,315	1,235	1,160	
	1	1	1	0	1,770	1,700	1,630	1,555	1,485	1,410	1,340	1,265	
	0	0	0	1	1,875	1,805	1,730	1,655	1,580	1,510	1,435	1,340	
	1	0	0	1	1,905	1,840	1,775	1,710	1,640	1,575	1,510	1,445	
	0	1	0	1	1,980	1,910	1,845	1,780	1,715	1,650	1,580	1,515	
	1	1	0	1	2,025	1,960	1,895	1,830	1,765	1,700	1,635	1,570	
	0	0	1	1	2,085	2,025	1,960	1,900	1,840	1,775	1,715	1,655	
	1	0	1	1	2,135	2,070	2,010	1,945	1,880	1,815	1,750	1,685	
	0	1	1	1	2,200	2,145	2,090	2,035	1,980	1,925	1,870	1,820	
1	1	1	1	2,280	2,225	2,170	2,115	2,065	2,010	1,955	1,900		

***NOTES:**

1. Motor switch settings for heating speeds use HEAT switches 1, 2, 3, & 4 and for cooling speeds use COOL switches 5, 6, 7, & 8.
2. To comply with government mandated efficiency standards, two openings are required for airflows above 1,600 CFM.
3. Data is shown without filter.
4. Temperature rises in the table are approximate. Actual temperature rises may vary.
5. Individual cells shaded in gray indicate a temperature rise outside of the recommended range.
6. To comply with government mandated efficiency standards, speed settings shaded in gray are not allowed in HEAT mode.
7. When in low stage heat, the airflow is approximately 70% of the tables high value (2-stage furnaces only).

FG7TE-115D-E45D1 (FSHE)

HEATING AIRFLOW (CFM) & TEMPERATURE RISE (°F)														
Model Number/ Heating Input	MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				External Static Pressure (in.w.c.)									
					0.1		0.2		0.3		0.4		0.5	
	1	2	3	4	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE
FG7TE-115D-E45D1 115,000 BTU/hr	0	0	0	0										
	1	0	0	0										
	0	1	0	0										
	1	1	0	0										
	0	0	1	0										
	1	0	1	0	1,760	58	1,715	60						
	0	1	1	0	1,835	56	1,790	57	1,745	59				
	1	1	1	0	1,885	54	1,840	56	1,790	57	1,745	59	1,700	60
	0	0	0	1	1,945	53	1,900	54	1,850	55	1,805	57	1,760	58
	1	0	0	1	1,950	52	1,905	54	1,860	55	1,820	56	1,775	58
	0	1	0	1	2,075	49	2,030	50	1,990	51	1,945	53	1,900	54
	1	1	0	1	2,125	48	2,085	49	2,040	50	2,000	51	1,955	52
	0	0	1	1	2,170	47	2,130	48	2,090	49	2,045	50	2,005	51
	1	0	1	1	2,215	46	2,180	47	2,140	48	2,105	49	2,070	49
	0	1	1	1										
1	1	1	1											

COOLING AIRFLOW (CFM)												
Model Number/ Heating Input	MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				External Static Pressure (in.w.c.)							
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
	5	6	7	8	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
FG7TE-115D-E45D1 115,000 BTU/hr	0	0	0	0	1,395	1,350	1,305	1,260	1,210	1,165	1,120	
	1	0	0	0	1,465	1,420	1,375	1,330	1,290	1,245	1,200	1,155
	0	1	0	0	1,555	1,510	1,470	1,425	1,380	1,340	1,295	1,250
	1	1	0	0	1,625	1,585	1,540	1,500	1,460	1,415	1,375	1,335
	0	0	1	0	1,690	1,650	1,610	1,570	1,530	1,485	1,445	1,405
	1	0	1	0	1,760	1,715	1,670	1,625	1,575	1,530	1,485	1,440
	0	1	1	0	1,835	1,790	1,745	1,695	1,650	1,605	1,555	1,510
	1	1	1	0	1,885	1,840	1,790	1,745	1,700	1,655	1,610	1,565
	0	0	0	1	1,945	1,900	1,850	1,805	1,760	1,710	1,665	1,620
	1	0	0	1	1,950	1,905	1,860	1,820	1,775	1,735	1,690	1,650
	0	1	0	1	2,075	2,030	1,990	1,945	1,900	1,855	1,810	1,770
	1	1	0	1	2,125	2,085	2,040	2,000	1,955	1,910	1,870	1,825
	0	0	1	1	2,170	2,130	2,090	2,045	2,005	1,965	1,925	1,880
	1	0	1	1	2,215	2,180	2,140	2,105	2,070	2,035	2,000	1,965
	0	1	1	1					2,225	2,165	2,100	2,040
1	1	1	1						2,170	2,120	2,065	

***NOTES:**

1. Motor switch settings for heating speeds use HEAT switches 1, 2, 3, & 4 and for cooling speeds use COOL switches 5, 6, 7, & 8.
2. To comply with government mandated efficiency standards, two openings are required for airflows above 1,600 CFM.
3. Data is shown without filter.
4. Temperature rises in the table are approximate. Actual temperature rises may vary.
5. Individual cells shaded in gray indicate a temperature rise outside of the recommended range.
6. To comply with government mandated efficiency standards, speed settings shaded in gray are not allowed in HEAT mode.
7. When in low stage heat, the airflow is approximately 70% of the tables high value (2-stage furnaces only).

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.

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	60	90
80,000	Upflow	40	90	40	90
100,000	Upflow	30	90	30	90
115,000	Upflow	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

FG7TE KITS	
Description	SKU
2" Concentric Vent Kit	904177
3" Concentric Vent Kit	904176
2" Concentric Vent Kit (Canadian Approved)	904952
3" Concentric Vent Kit (Canadian Approved)	904953
2" Side Wall Vent Kit	904617
3" Side Wall Vent Kit	904347
U.S. LP Conversion Kit (0 to 10,000 ft.)	905028
Canada LP Conversion Kit (0 to 4,500 ft.)	905029
Bottom Return Filter 20 per Box, "B" Cabinet	904916
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 (06/2019)