



# NuTone FG7TE Series Fixed Speed High Efficiency Gas Furnace Owner's Manual

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# NuTone®

**NuTone FG7TE Series Fixed Speed High-Efficiency Gas Furnace**



## Technical Specifications

### FG7TE Series

Two Stage, Fixed Speed ECM, High-Efficiency Upflow Gas Furnaces Induced Draft – 96% AFUE Input 60,000 – 115,000 Btuh

### Features and Benefits

The high-efficiency upflow gas furnace may be installed free-standing in a utility room, or 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.

## Location of Furnace Components

- Flame Sensor
- Finish Flange
- Roll-Out Switch
- Pressure Switches (Inducer)
- Main Air Limit Switch
- Inducer Limit Switch
- Inducer Assembly
- Blower Door Switch
- Burner Assembly
- Igniter
- Gas Valve Furnace Control Board
- Pressure Switches (Condensate)
- Transformer
- Motor Control Box
- Motor Choke (C & D cabinets only)

- Motor Control Board
- Blower Assembly

## Air Flow

Upflow Gas Furnace Components:

- **Cabinet Size A:** Dim. B = 17 1/2, Dim. C = 16 1/8
- **Cabinet Size B:** Dim. B = 21, Dim. C = 19 5/8
- **Cabinet Size C:** Dim. B = 24 1/2, Dim. C = 23 1/8

## Dimensions

TE 96% Upflow Furnace Cabinet:

- **Size A:** Dim. A = 17 1/2, Dim. B = 15 7/8
- **Size B:** Dim. A = 21, Dim. B = 19 3/8
- **Size C:** Dim. A = 24 1/2, Dim. B = 22 7/8

## Model Identification Code

FG7TE Model Numbers:

- Model: FG7TE
- Design Series: E (96% Upflow)
- Input Heating Capacity: D (115,000 Btuh)
- Cabinet Width: E (24.50)
- Cooling Airflow: C1 (3-5 Tons)
- Motor Technology: T (5 Tap ECM)

## Specifications

Model Number	Input – Btuh (a)	Heating Capacity – Btu H	A F U E	Motor H.P.	Speed – Type	Motor F LA	Rated Ext. SP – In. W. C.	Temperature Rise Range – F	Shipping Weights	S K U
FG7TE-060D-E24B1	60,000 / 39,000	58,000 / 37,000	96.0	3/4 – BLD C	8.8	0.50	30-60	120 lb	1025958 F	
FG7TE-080D-E35C1	80,000 / 52,000	77,000 / 50,000	96.0	1 – BLD C	11.5	0.50	30-60	130 lb	1025959 F	
FG7TE-100D-E35C1	100,000 / 65,000	96,000 / 62,000	96.0	1 – BLD C	11.5	0.50	35-65	135 lb	1025960 F	
FG7TE-115D-E45D1	115,000 / 74,750	110,000 / 72,000	96.0	1 – BLD C	11.5	0.50	40-70	145 lb	1025961 F	

## Frequently Asked Questions

- **Q: Where can the high-efficiency upflow gas furnace be installed?**

A: The furnace can be installed free-standing in a utility room, or basement, or enclosed in an alcove or closet.

- **Q: What is the AFUE rating of the furnace?**

A: The furnace has an AFUE rating of 96%.

- **Q: What is the voltage and frequency of the gas furnace?**

A: All models are 115V, 60 Hz.

- **Q: What type of gas connections does the furnace have?**

A: The gas connections are 1/2 N.P.T.

- **Q: How does the motor technology work?**

A: The motor technology used is 5 Tap ECM, which provides efficient and variable speed control.

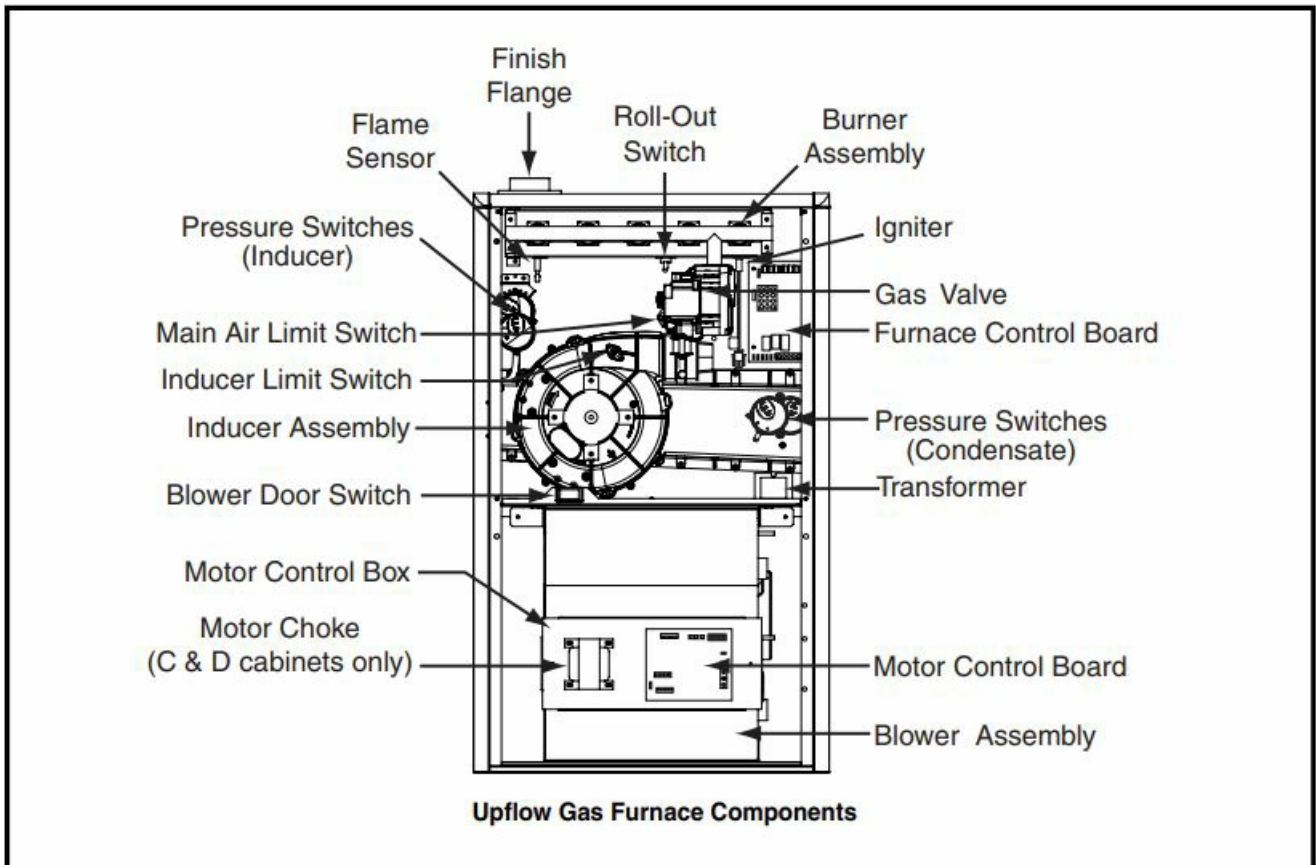
The high-efficiency upflow gas furnace may be installed free-standing in a utility room, basement, or enclosed in an alcove or closet. The extended flush jacket provides a pleasing “appliance appearance.” Design certified by CSA for application in Canada and the United States.

## 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 dehumidifiers. 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 installation flexibility.
- **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

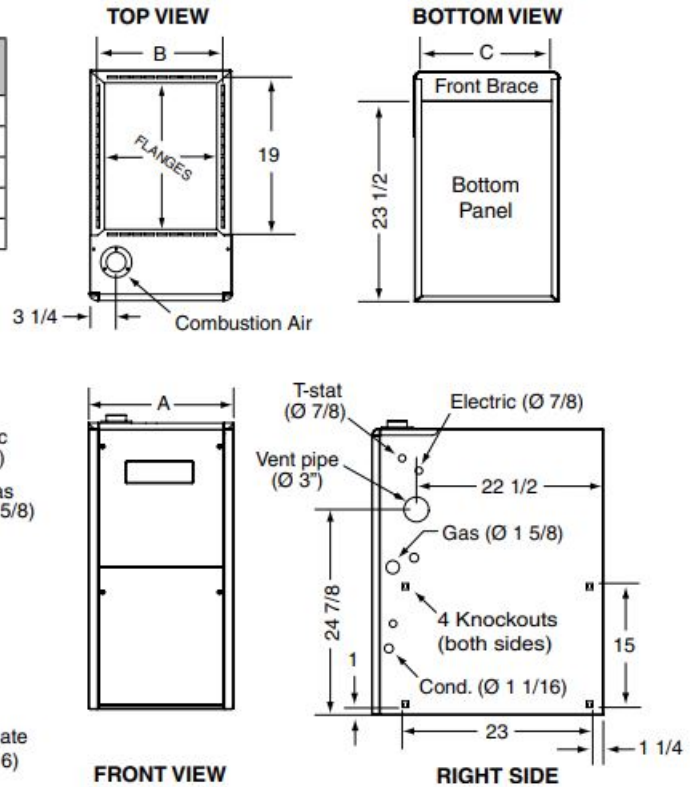


## DIMENSIONS

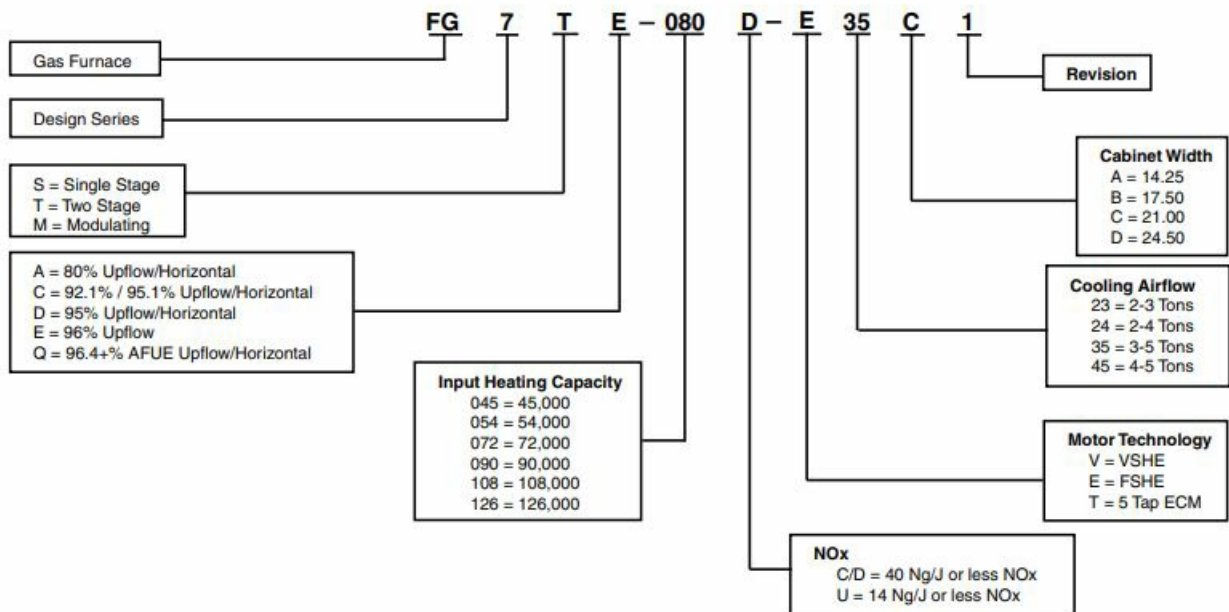
## \*TE 96% Upflow Furnace

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

<b>FG7TE MODEL NUMBERS</b>	<b>-060D-E24B1</b>	<b>-080D-E35C1</b>	<b>-100D-E35C1</b>	<b>-115D-E45D1</b>
Input – Btuh (a)	60000 / 39000	80000 / 52000	100000 / 65000	115000 / 74750
Heating Capacity – BtuH	58000 / 37000	77000 / 50000	96000 / 62000	110000 / 72000
<b>AFUE</b>	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)

[illegible]



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
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)

[illegible]

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. 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)

[illegible]

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-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)

[illegible]

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. For 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 table's high value (2-stage furnaces only).

#### VENTING

All models are approved for vertical non-direct (1 pipe) and direct (2 pipe) venting applications. See the 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 that fails in normal use and service within the terms and conditions of the warranty.

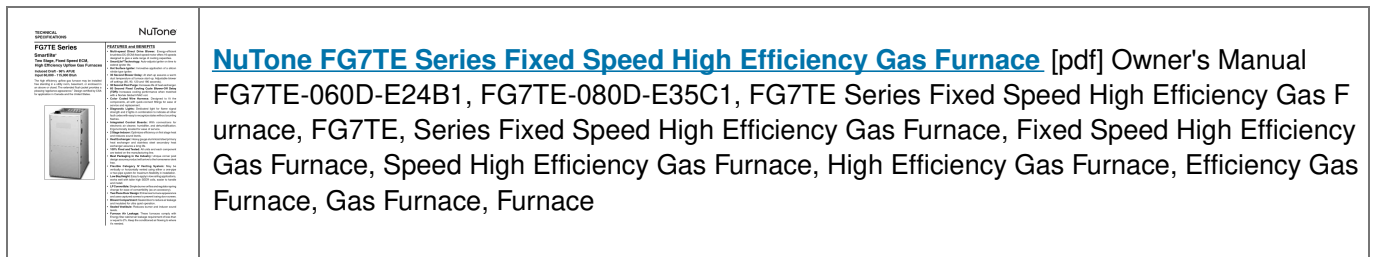
For complete details of the Limited Warranty, including applicable terms and conditions, see your local installer or contact the Nortek Global HVAC, LLC warranty department for a copy.

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)

[www.nutonehvac.com](http://www.nutonehvac.com)

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## References

-  TCPDF
- User Manual