

## TECHNICAL SPECIFICATIONS

# FG7T (E and N Series)

Smartlite®  ecoLogic®

iQDrive®

**Two Stage, Variable Speed,  
Condensing Upflow  
and Downflow 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.

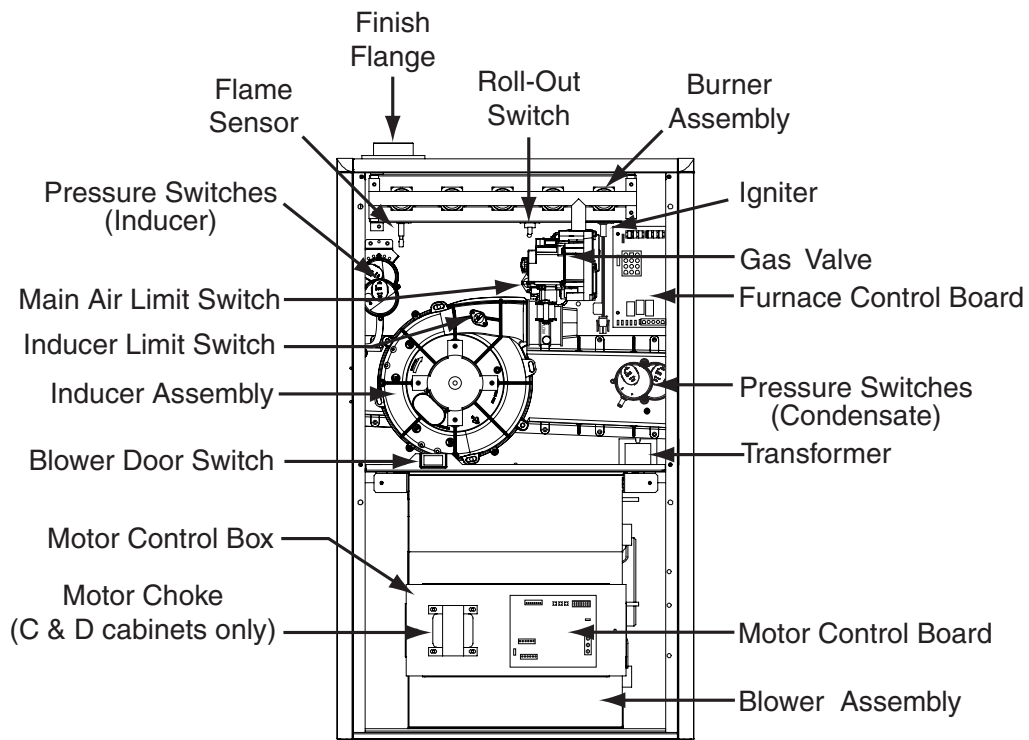


## FEATURES and BENEFITS

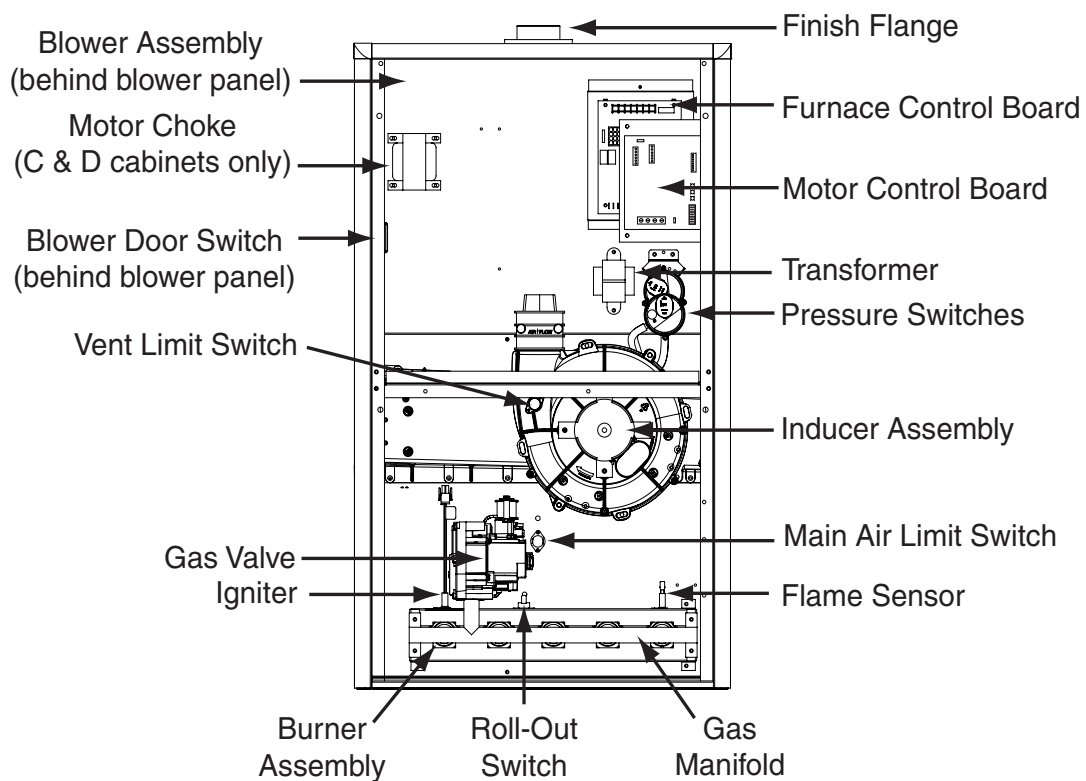
- **Variable Speed Direct Drive Blower:** Energy-efficient, brushless DC (ECM) motor controls airflow to provide better temperature control, humidity control and air distribution.
- **SmartLite® Technology:** Auto-adjusts igniter on time to extend igniter life.
- **Hot Surface Igniter:** Innovative application 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

## UPFLOW FURNACE (\*TE SERIES)



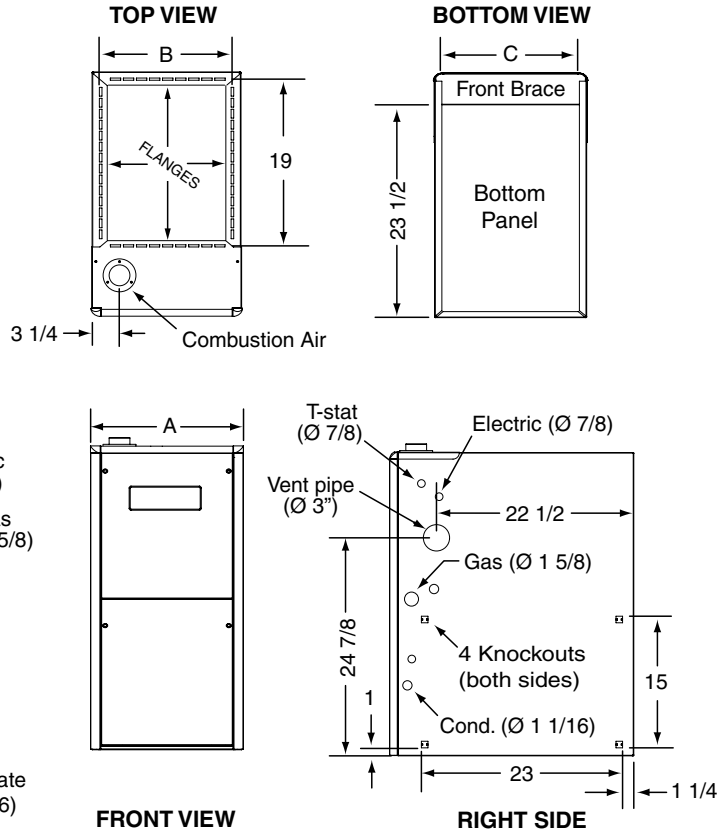
## DOWNFLOW FURNACE (\*TN SERIES)



# DIMENSIONS

*TE Model #'s	Dimension "A"	Dimension "B"	Dimension "C"
060D-VB1	17 1/2	15 7/8	16 1/8
080D-VC1	21	19 3/8	19 5/8
100D-VC1			
115D-VD1	24 1/2	22 7/8	23 1/8

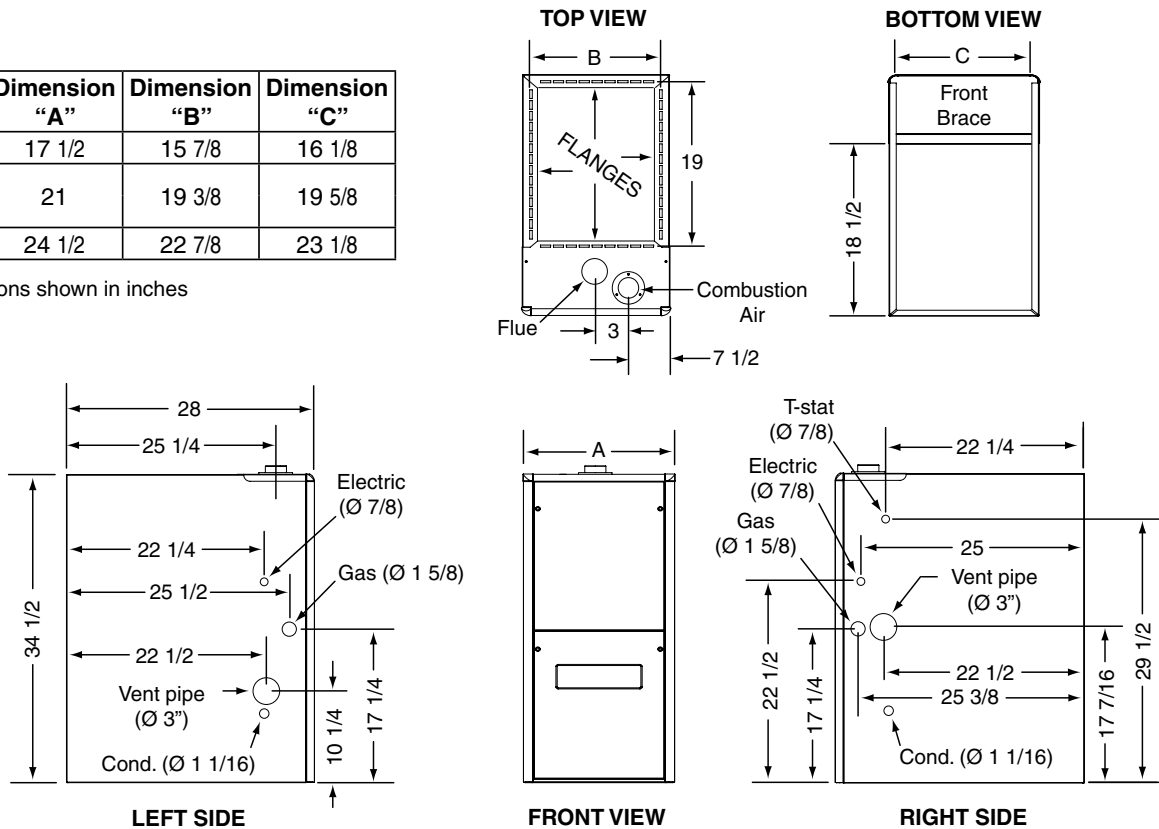
NOTE: Dimensions shown in inches



**FG7TE 96% High Efficiency Upflow Series**

*TN Model #'s	Dimension "A"	Dimension "B"	Dimension "C"
060D-VB1	17 1/2	15 7/8	16 1/8
080D-VC1	21	19 3/8	19 5/8
100D-VC1			
115D-VD1	24 1/2	22 7/8	23 1/8

NOTE: Dimensions shown in inches



**FG7TN 96% High Efficiency Downflow Series**

## G7TE-080D-V35C1, VSHE (C CABINET)

HEATING AIRFLOW (CFM) & TEMPERATURE RISE (°F)						
MODEL NAME/ HEATING INPUT	MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				CFM	RISE
	1	2	3	4		
G7TE-080D-V35C1 80,000 BTU/hr	#	0	0	0		
	#	0	0	1	1,115	63
	#	0	1	0	1,230	57
	#	0	1	1	1,345	52
	#	1	0	0	1,460	48
	#	1	0	1	1,575	45
	#	1	1	0	1,690	42
	#	1	1	1		

COOLING AIRFLOW (CFM)							
MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				CFM		NOMINAL AC / HP CAPACITY	
1	5	6	7	8	LOW		
#	0	0	0	0	685	1,025	
#	0	0	0	1	730	1,090	
#	0	0	1	0	775	1,155	
#	0	0	1	1	815	1,220	
#	0	1	0	0	860	1,285	
#	0	1	0	1	905	1,350	
#	0	1	1	0	950	1,415	
#	0	1	1	1	990	1,480	
#	1	0	0	0	1,035	1,545	
#	1	0	0	1	1,080	1,610	
#	1	0	1	0	1,120	1,675	
#	1	0	1	1	1,165	1,740	
#	1	1	0	0	1,210	1,805	
#	1	1	0	1	1,255	1,870	
#	1	1	1	0	1,295	1,935	
#	1	1	1	1	1,340	2,000	

**NOTES:**

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

## G7TN-060D-V24B1, VSHE (B CABINET)

HEATING AIRFLOW (CFM) & TEMPERATURE RISE (°F)						
MODEL NUMBER/ HEATING INPUT	MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				CFM	RISE
	1	2	3	4		
G7TN-060D-V24B1 60,000 BTU/hr	1	0	0	0	1,000	53
	1	0	0	1	1,100	48
	1	0	1	0	1,200	44
	1	0	1	1	1,300	41
	1	1	0	0	1,400	38
	1	1	0	1		
	1	1	1	0		
	1	1	1	1		

COOLING AIRFLOW (CFM)							
MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				CFM		NOMINAL AC / HP CAPACITY	
1	5	6	7	8	LOW		
1	0	0	0	0	470	700	
1	0	0	0	1	510	760	
1	0	0	1	0	550	820	
1	0	0	1	1	590	880	
1	0	1	0	0	630	940	
1	0	1	0	1	670	1,000	
1	0	1	1	0	710	1,060	
1	0	1	1	1	750	1,120	
1	1	0	0	0	790	1,180	
1	1	0	0	1	830	1,240	
1	1	0	1	0	870	1,300	
1	1	0	1	1	910	1,360	
1	1	1	0	0	950	1,420	
1	1	1	0	1	990	1,480	
1	1	1	1	0	1,030	1,540	
1	1	1	1	1	1,070	1,600	

**NOTES:**

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

### G7TN-080D-V35C1, VSHE (C CABINET)

HEATING AIRFLOW (CFM) & TEMPERATURE RISE (°F)						
MODEL NUMBER/ HEATING INPUT	MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				CFM	RISE
	1	2	3	4		
G7TN-080D-V35C1 80,000 BTU/hr	#	0	0	0		
	#	0	0	1	1,115	63
	#	0	1	0	1,230	57
	#	0	1	1	1,345	52
	#	1	0	0	1,460	48
	#	1	0	1	1,575	45
	#	1	1	0	1,690	42
	#	1	1	1		

COOLING AIRFLOW (CFM)								
MOTOR SWITCH SETTINGS (0=OFF, 1=ON)						CFM		NOMINAL AC / HP CAPACITY
	1	5	6	7	8	LOW	HIGH	
#	0	0	0	0		685	1,025	
#	0	0	0	1		730	1,090	
#	0	0	1	0		775	1,155	
#	0	0	1	1		815	1,220	
#	0	1	0	0		860	1,285	
#	0	1	0	1		905	1,350	
#	0	1	1	0		950	1,415	
#	0	1	1	1		990	1,480	
#	1	0	0	0		1,035	1,545	
#	1	0	0	1		1,080	1,610	
#	1	0	1	0		1,120	1,675	
#	1	0	1	1		1,165	1,740	
#	1	1	0	0		1,210	1,805	
#	1	1	0	1		1,255	1,870	
#	1	1	1	0		1,295	1,935	
#	1	1	1	1		1,340	2,000	

**NOTES:**

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

### G7TN-115D-V45D1, VSHE (D CABINET)

HEATING AIRFLOW (CFM) & TEMPERATURE RISE (°F)						
MODEL NUMBER/ HEATING INPUT	MOTOR SWITCH SETTINGS (0=OFF, 1=ON)				CFM	RISE
	1	2	3	4		
G7TN-115D-V45D1 115,000 BTU/hr	#	0	0	0	1,500	68
	#	0	0	1	1,615	63
	#	0	1	0	1,730	59
	#	0	1	1	1,845	55
	#	1	0	0	1,960	52
	#	1	0	1		
	#	1	1	0		
	#	1	1	1		

COOLING AIRFLOW (CFM)								
MOTOR SWITCH SETTINGS (0=OFF, 1=ON)						CFM		NOMINAL AC / HP CAPACITY
	1	5	6	7	8	LOW	HIGH	
#	0	0	0	0		940	1,400	
#	0	0	0	1		965	1,440	
#	0	0	1	0		990	1,480	
#	0	0	1	1		1,020	1,520	
#	0	1	0	0		1,045	1,560	
#	0	1	0	1		1,070	1,600	
#	0	1	1	0		1,100	1,640	
#	0	1	1	1		1,125	1,680	
#	1	0	0	0		1,150	1,720	
#	1	0	0	1		1,180	1,760	
#	1	0	1	0		1,205	1,800	
#	1	0	1	1		1,235	1,840	
#	1	1	0	0		1,260	1,880	
#	1	1	0	1		1,285	1,920	
#	1	1	1	0		1,315	1,960	
#	1	1	1	1		1,340	2,000	

**NOTES:**

- Motor switch settings for heating speeds use HEAT switches 1, 2, 3, & 4 and for cooling speeds use COOL switches 5, 6, 7, & 8.
- To comply with government mandated efficiency standards, two openings are required for airflows above 1,600 CFM.
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## VENTING

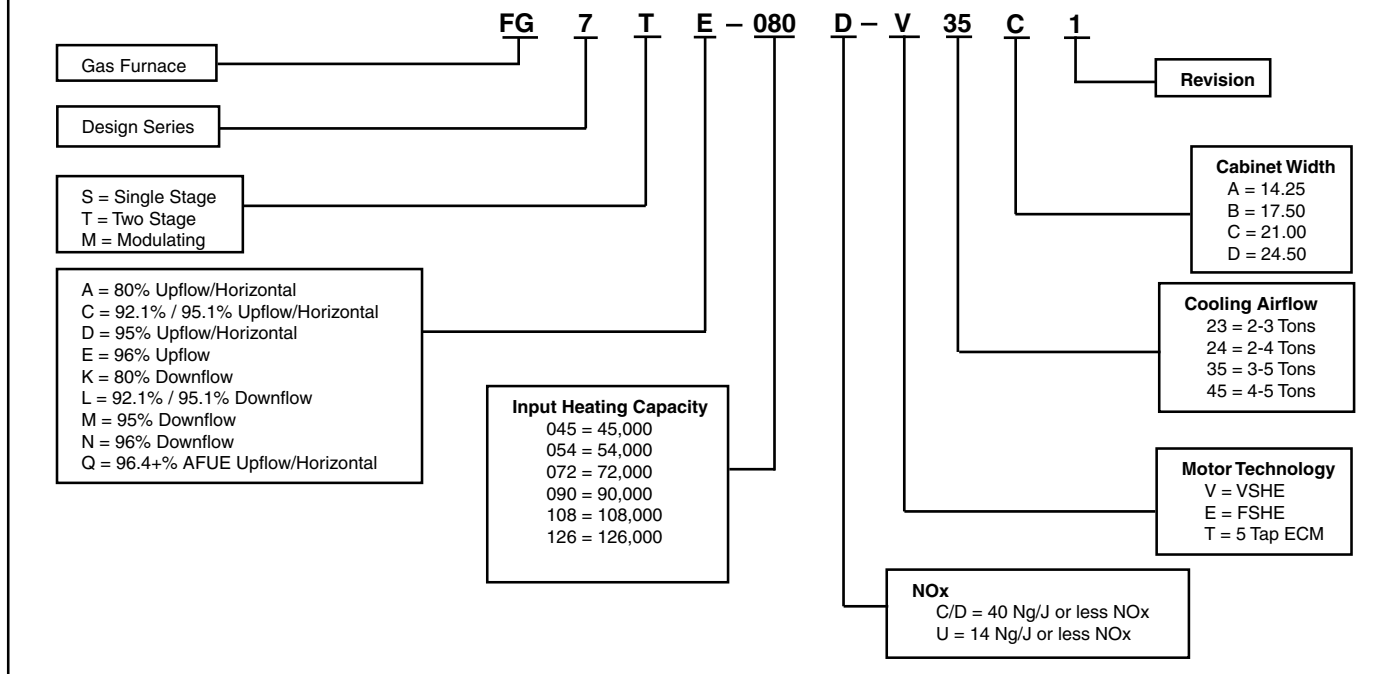
All models are approved for vertical non direct (1 pipe) and direct (2 pipe) venting applications. See Vent Table below for specified sizes and allowable lengths.

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
	Downflow	30	90	30	90
80,000	Upflow	40	90	40	90
	Downflow	30	90	30	90
100,000	Upflow	30	90	30	90
	Downflow	30	90	25	90
115,000	Upflow	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.

## MODEL IDENTIFICATION CODE



## SPECIFICATIONS

FG7TE MODEL NUMBERS	-080D-V35C1
Input - Btuh (a)	80000 / 52000
Heating Capacity - BtuH	77000 / 50000
<b>AFUE</b>	96.0
Motor H.P. - Speed - Type	1 - Variable
Motor FLA	11.5
Rated Ext. SP - In. W.C.	0.50
Temperature Rise Range - F	35-65
Shipping Weights	130 lb
SKU	1025967F

FG7TN MODEL NUMBERS	-060D-V24B1	-080D-V35C1	-100D-V35C1
Input - Btuh (a)	60000 / 39000	80000 / 52000	100000 / 65000
Heating Capacity - BtuH	57000 / 37000	76000 / 49000	95000 / 62000
<b>AFUE</b>	96.0	96.0	96.0
Motor H.P. - Speed - Type	3/4 - Variable	1 - Variable	1 - Variable
Motor FLA	8.8	11.5	11.5
Rated Ext. SP - In. W.C.	0.50	0.50	0.50
Temperature Rise Range - F	30-60	35-65	35-65
Shipping Weights	120 lb	140 lb	145 lb
SKU	1025970F	1025971F	1025972F

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.

# ACCESSORIES

FG7TE/TN 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
"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.)	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)