



BROAN FG7T C L Two Stage Variable Speed Condensing Gas Furnace Owner's Manual

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BROAN FG7T C L Two Stage Variable Speed Condensing Gas Furnace



Technical Specifications

- **Model:** FG7T (C and L Series)
- **Type:** Two Stage, Variable Speed, Condensing Upflow/Horizontal and Downflow Gas Furnaces Induced Draft – 95.1 AFUE
- **Input:** 60,000 – 120,000 Btuh

TECHNICAL SPECIFICATIONS

FG7T (E and N Series) Smartlite®

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.

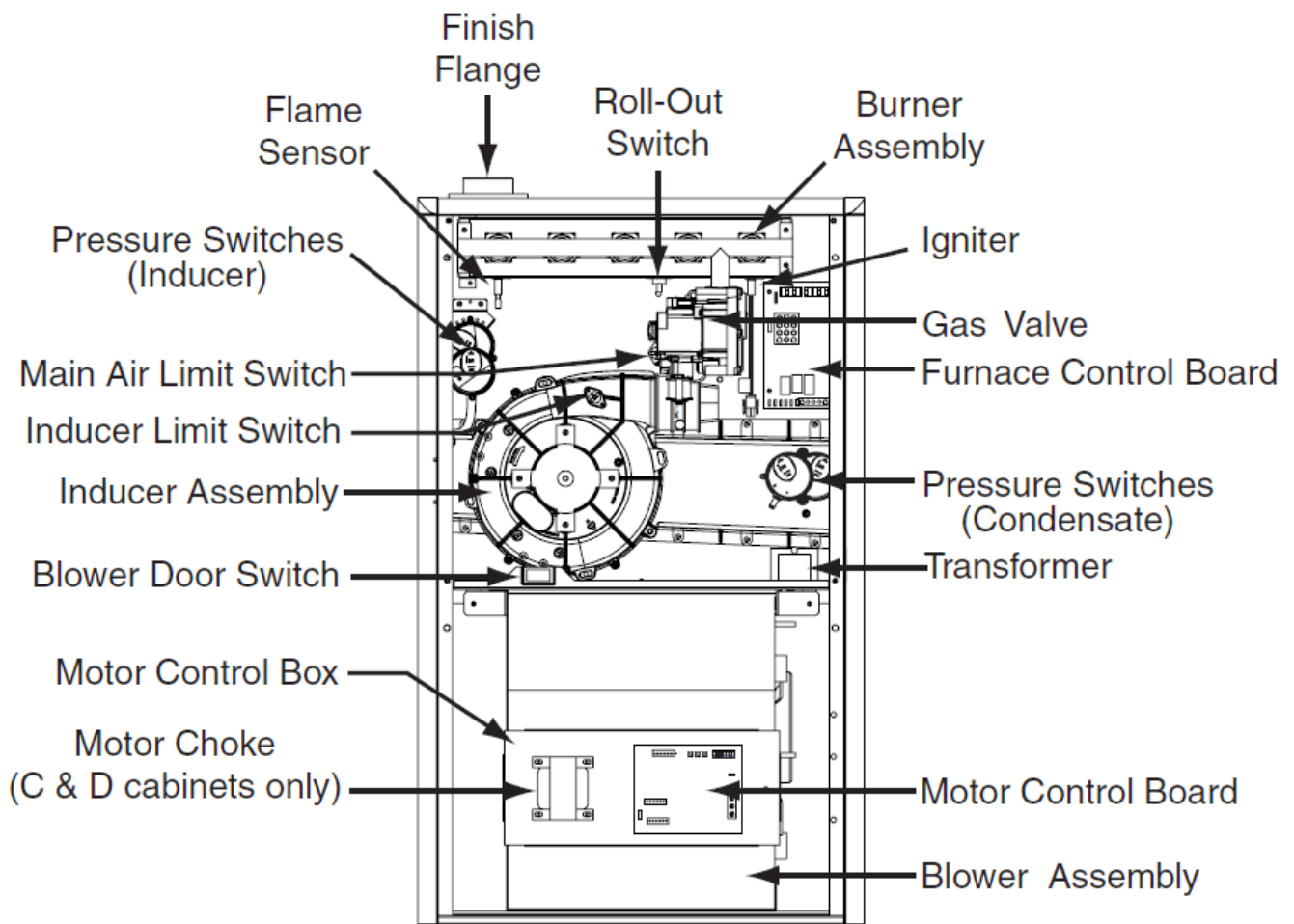


FEATURES and BENEFITS

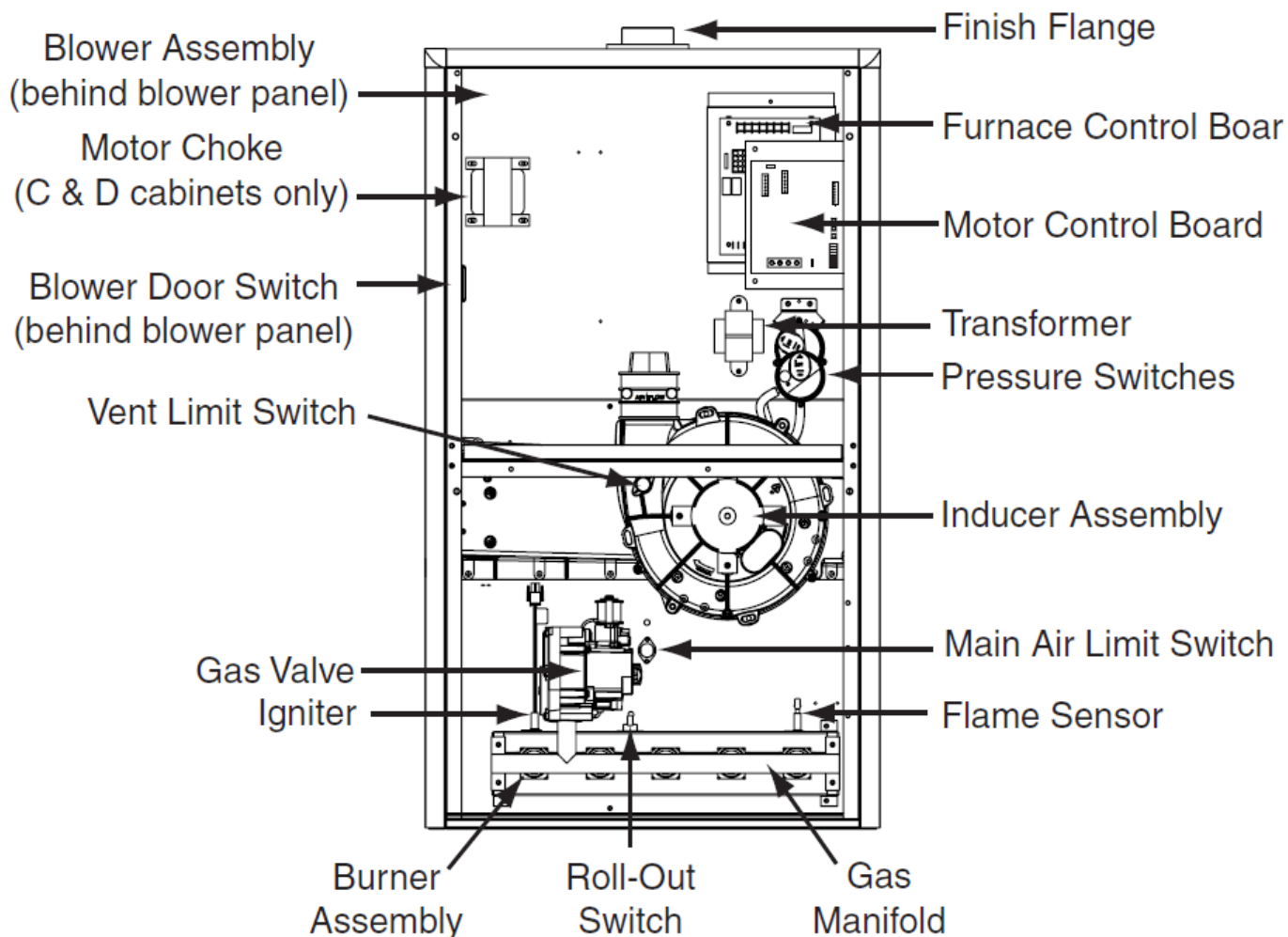
- **iSEER:** Energy efficient brushless DC (ECM) motor gives up to 1 SEER point efficiency gain in cooling. 100% fired and tested:
- All units and each component are tested on the manufacturing line.
- **Best packaging in the industry:** Unique corner post design assures product will arrive to the homeowner 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.
- **Two Stage Inducer:** Optimizes efficiency on first stage heat and reduces sound levels.
- **Hot surface igniter:** Innovative application of a silicon nitride type igniter. Utilizes proven Smaltite® 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.
- **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 and humidifier.
- **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.

LOCATION OF FURNACE COMPONENTS

UPFLOW / HORIZONTAL FURNACE (*TC SERIES)

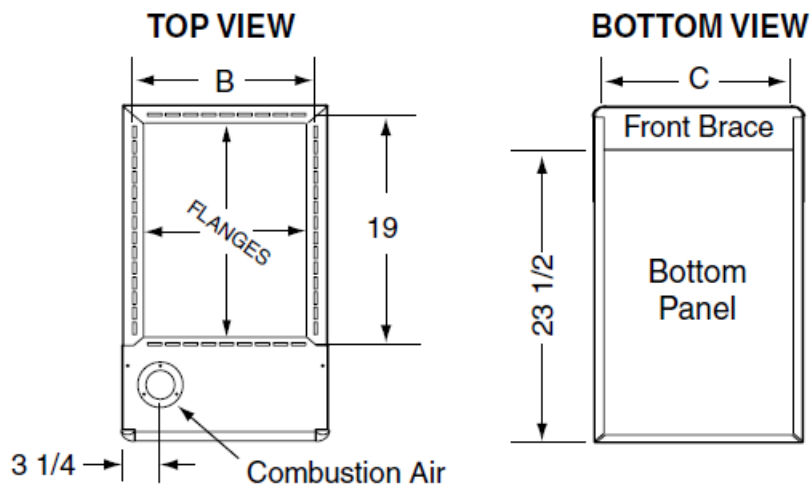


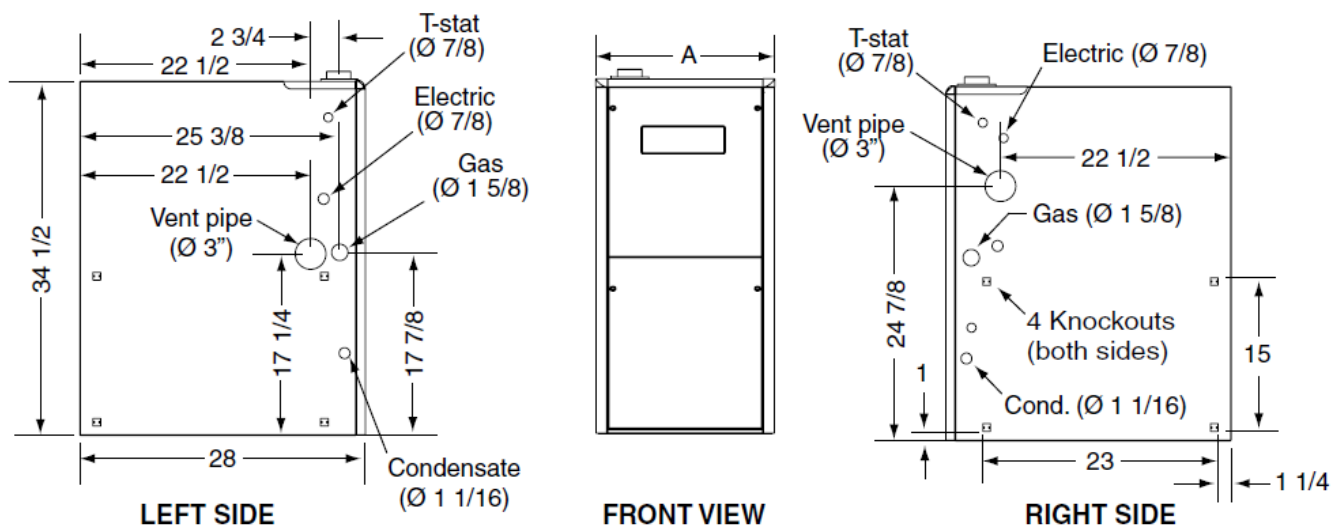
DOWNFLOW FURNACE (*TL SERIES)



DIMENSIONS

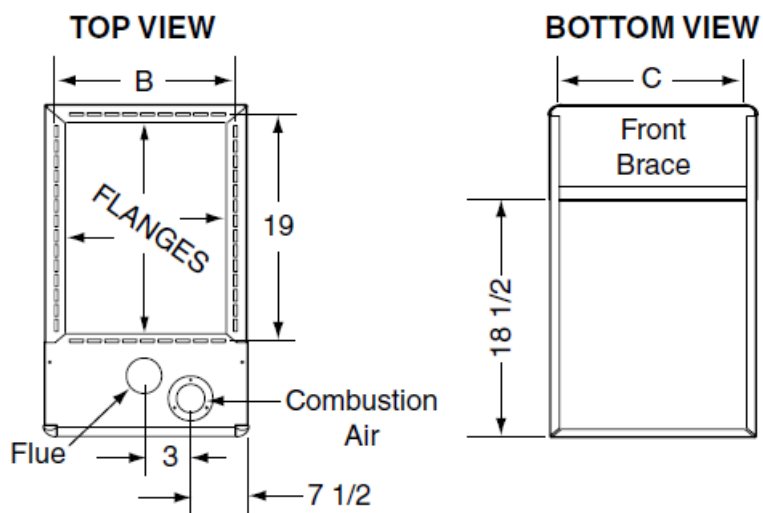
*TE Model #'s	Dimension "A"	Dimension "B"	Dimension "C"
060D-VB1	17 1/2	15 7/8	16 1/8
080D-VC1	21	19 3/8	19 5/8
100D-VC1			
115D-VD1	24 1/2	22 7/8	23 1/8

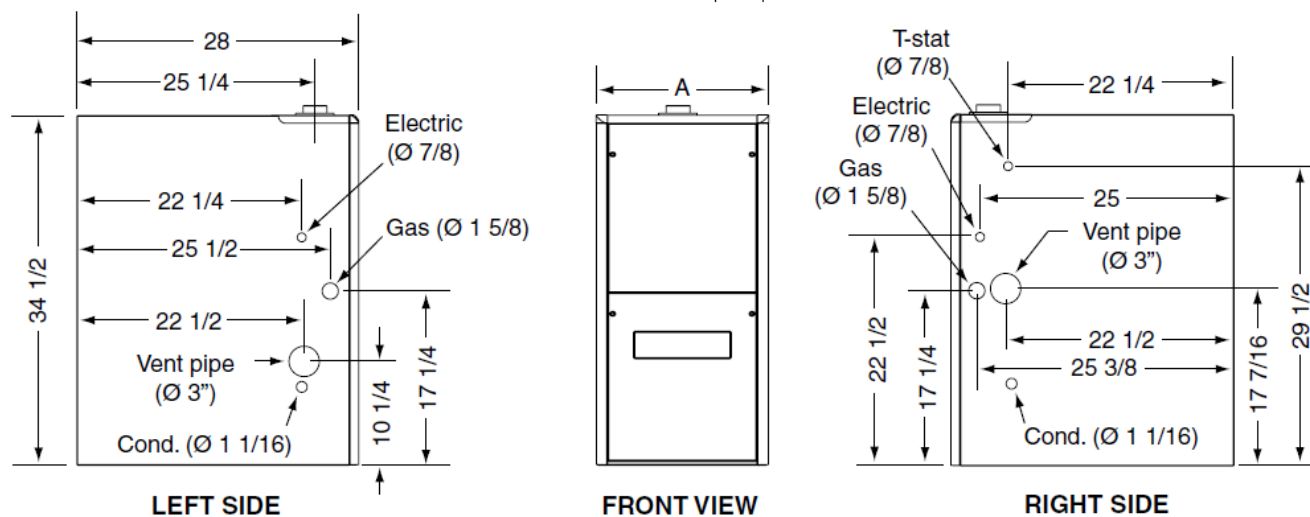




FG7TC 95.1+ High Efficiency Upflow/Horizontal Series

*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





FG7TL 95.1+ High Efficiency Downflow Series

BLOWER PERFORMANCE – FG7TC/TL

Nominal Heating Airflows (CFM) and Temperature Rise (°F)

B Cabinet				*TC/TL-060D-VB Models	
Switch Settings HEAT				Input (BTU) 60000	
1/"	2	3	4	#&-	4EMP 2ISE (&)
1	0	0	0	1000	53
1	0	0	1	1100	48
1	0	1	0	1200	44
1	0	1	1	1300	41
1	1	0	0	1400	38
1	1	0	1	1500	35
1	1	1	0	1600	33
1	1	1	1	1700	31

C Cabinet				*TC/TL-080D-VC Models		*TC/TL-100D-VC Models	
Switch Settings HEAT				Input (BTU) 80000		Input (BTU) 100000	
1/”	2	3	4	#&-	4EMP 2ISE (&)	#&-	4EMP 2ISE (&)
#	0	0	0	1000	70	1000	88
#	0	0	1	1115	63	1115	79
#	0	1	0	1230	57	1230	72
#	0	1	1	1345	52	1345	65
#	1	0	0	1460	48	1460	60
#	1	0	1	1575	45	1575	56
#	1	1	0	1690	42	1690	52
#	1	1	1	1805	39	1805	49

D Cabinet				*TC/TL-120D-VD Models	
Switch Settings HEAT				Input (BTU) 120000	
1/”	2	3	4	#&-	4EMP 2ISE (&)
#	0	0	0	1500	70
#	0	0	1	1615	65
#	0	1	0	1730	61
#	0	1	1	1845	57
#	1	0	0	1960	54
#	1	0	1	2075	51
#	1	1	0	2190	48
#	1	1	1	2305	46

Switch not used – can be 0 or 1

Notes

1. Two openings are recommended for airflows above 1600 CFM if the filter(s) is (are) adjacent to the furnace.
2. Temperature rises in the table are approximate. Actual temperature rises may vary.
3. Temperature rises that are shaded in grey are for reference only. These conditions are not recommended.

4. The blower operating range is .1" to .8" ESP in wc.

COOLING AIRFLOW

“A” CABINET										
Switch Settings (0 = OFF, 1 = ON)					CFM		Nominal A/C & HP Capacity			
HEAT	COOL									
1-4	5	6	7	8	LOW	HIGH				
0	0	0	0	0	350	525				1.5 TO N
0	0	0	0	1	390	580				
0	0	0	1	0	425	635				
0	0	0	1	1	460	690				
0	0	1	0	0	500	745		2 TON		
0	0	1	0	1	535	800				
0	0	1	1	0	575	855				
0	0	1	1	1	610	910				
0	1	0	0	0	645	965		2.5 TO N		
0	1	0	0	1	685	1020				
0	1	0	1	0	720	1075				
0	1	0	1	1	755	1130				
0	1	1	0	0	795	1185		3 TON		
0	1	1	0	1	830	1240				
0	1	1	1	0	870	1295				
0	1	1	1	1	905	1350				

“B” CABINET										
Switch Settings (0 = OFF, 1 = ON)					CFM		Nominal A/C & HP Capacity			
HEAT	COOL									
1-4	5	6	7	8	LOW	HIGH				
1	0	0	0	0	470	700				2 TON
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		2.5 TON		
1	0	1	0	1	670	1000				
1	0	1	1	0	710	1060				
1	0	1	1	1	750	1120				
1	1	0	0	0	790	1180		3 TON		
1	1	0	0	1	830	1240				
1	1	0	1	0	870	1300				
1	1	0	1	1	910	1360				
1	1	1	0	0	950	1420		3.5 TON		
1	1	1	0	1	990	1480				
1	1	1	1	0	1030	1540				
1	1	1	1	1	1070	1600				

“C” CABINET												
Switch Settings (0 = OFF, 1 = ON)					CFM		Nominal A/C & HP Capacity					
HEAT	COOL											
1-4	5	6	7	8	LOW	HIGH						
#	0	0	0	0	685	1025					2.5 T ON	
#	0	0	0	1	730	1090				3 TO N		
#	0	0	1	0	775	1155						
#	0	0	1	1	815	1220						
#	0	1	0	0	860	1285				3.5 T ON		
#	0	1	0	1	905	1350						
#	0	1	1	0	950	1415				4 TO N		
#	0	1	1	1	990	1480						
#	1	0	0	0	1035	1545				5 TO N		
#	1	0	0	1	1080	1610						
#	1	0	1	0	1120	1675						
#	1	0	1	1	1165	1740						
#	1	1	0	0	1210	1805						
#	1	1	0	1	1255	1870						
#	1	1	1	0	1295	1935						
#	1	1	1	1	1340	2000						

Switch not used – can be 0 or 1

“D” CABINET									
Switch Settings (0 = OFF, 1 = ON)					CFM		Nominal A/C & HP Capacity		
HEAT	COOL								
1-4	5	6	7	8	LOW	HIGH			
#	0	0	0	0	940	1400			3.5 TON
#	0	0	0	1	965	1440			
#	0	0	1	0	990	1480			4 TON
#	0	0	1	1	1020	1520			
#	0	1	0	0	1045	1560			
#	0	1	0	1	1070	1600			
#	0	1	1	0	1100	1640			
#	0	1	1	1	1125	1680			
#	1	0	0	0	1150	1720			
#	1	0	0	1	1180	1760			
#	1	0	1	0	1205	1800			
#	1	0	1	1	1235	1840			
#	1	1	0	0	1260	1880			
#	1	1	0	1	1285	1920			
#	1	1	1	0	1315	1960			
#	1	1	1	1	1340	2000			

Switch not used – can be 0 or 1

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

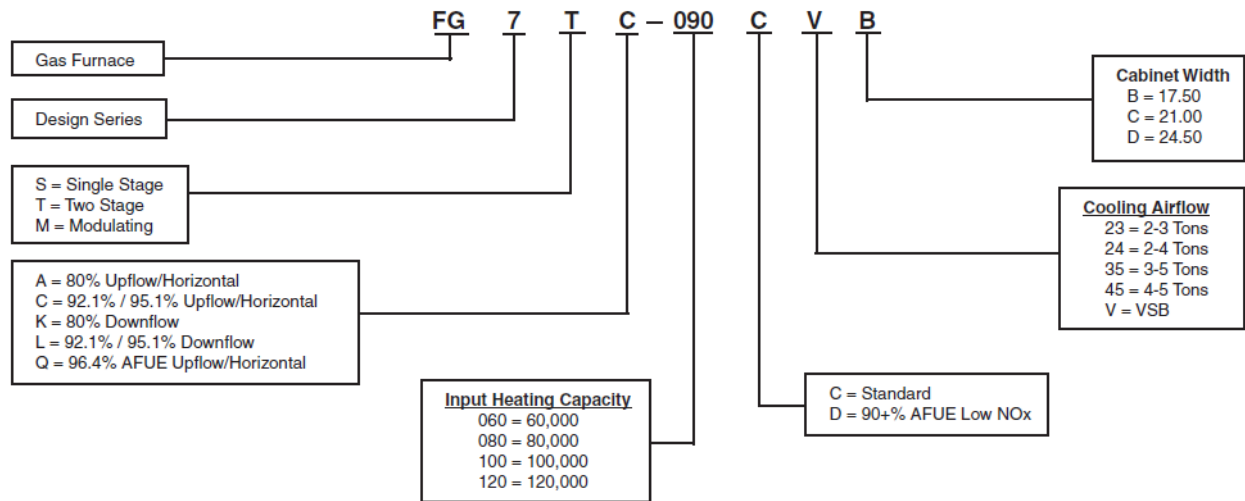
FURNACE MODEL S (BTU)	FURNACE INSTALLATION	SINGLE PIPE LENGTH (FT.) with 1 long radius elbow**		DIRECT VENT, DUAL PIPE LENGTH (ft.) WITH 1 long radius elbow on each pipe**	
		OUTLET	OUTLET	INLET/OUTLET	INLET/OUTLET
		2" Diameter	3" Diameter	2" Diameter	3" Diameter
60,000	5PmOW	90	90	90	90
	(ORIZONTAL	50	90	50	90
	\$OWNmOW	30	90	30	90
80,000	5PmOW	40	90	40	90
	(ORIZONTAL	30	90	30	90
	\$OWNmOW	30	90	30	90
100,000	5PmOW	30	90	30	90
	(ORIZONTAL	30	90	30	90
	\$OWNmOW	30	90	25	90
120,000	5PmOW	./!	90	./!	90
	(ORIZONTAL	./!	90	./!	90
	\$OWNmOW	./!	90	./!	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

MODEL IDENTIFICATION CODE



SPECIFICATIONS

FG7TC/TL MODELS NUMBERS:	-060D-VB	-080D-VC	-100D-VC	-120D-VD
INPUT – "TUH (A)	60,000 / 39,000	80,000 / 52,000	100,000 / 65,000	120,000 / 78,000
EATING #APACITY – "TUH	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*
"LOWER \$ X 7	11 X 8	11 X 10	11 X 10	11 X 10
-OTOR (.0. – 3SPEED – 4TYPE	1/2 – 6VARIABLE	3/4 – 6VARIABLE	3/4 – 6VARIABLE	1 – 6VARIABLE
-OTOR &!	6.2	8.7	8.7	11.70
2ATED %XT. 30 –)N. 7.#.	0.5	0.5	0.5	0.5
4TEMPERATURE 2ISE 2ANGE -&	30-60	35-65	35-65	40-70
3SHIPPING 7EIGHTS	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.

ACCESSORIES

FG7TC/TL KITS	
Description	SKU
2" #ONCENTRIC VENT KIT	904952
3" #ONCENTRIC VENT KIT	904953
"!" #ABINET DOWNmOW SUB BASE KIT	902974
""", "#", "\$" #ABINET DOWNmOW SUB BASE KIT	904911
2" 3IDE WALL VENT KIT	904617
3" 3IDE WALL VENT KIT	904347
5.3. ,0 #ONVERSION KIT (0 TO 10,000 FT.)	904914
#ANADA ,0 #ONVERSION KIT (0 TO 4,500 FT.)	904915
"OTTOM RETURN ILTER 20 PER BOX, "!" CABINET	903088
"OTTOM RETURN ILTER 20 PER BOX, """" CABINET	904916
"OTTOM RETURN ILTER 20 PER BOX, "#" CABINET	904917
"OTTOM RETURN ILTER 20 PER BOX, "\$" CABINET	904918
3IDE RETURN ILTER KIT	541036
.EUTRALIZER 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.

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Documents / Resources

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