FG7T (A and K Series)

iSEER, Smartlite®

Two Stage, Variable Speed, High Efficiency Upflow/Horizontal and Downflow Gas Furnaces

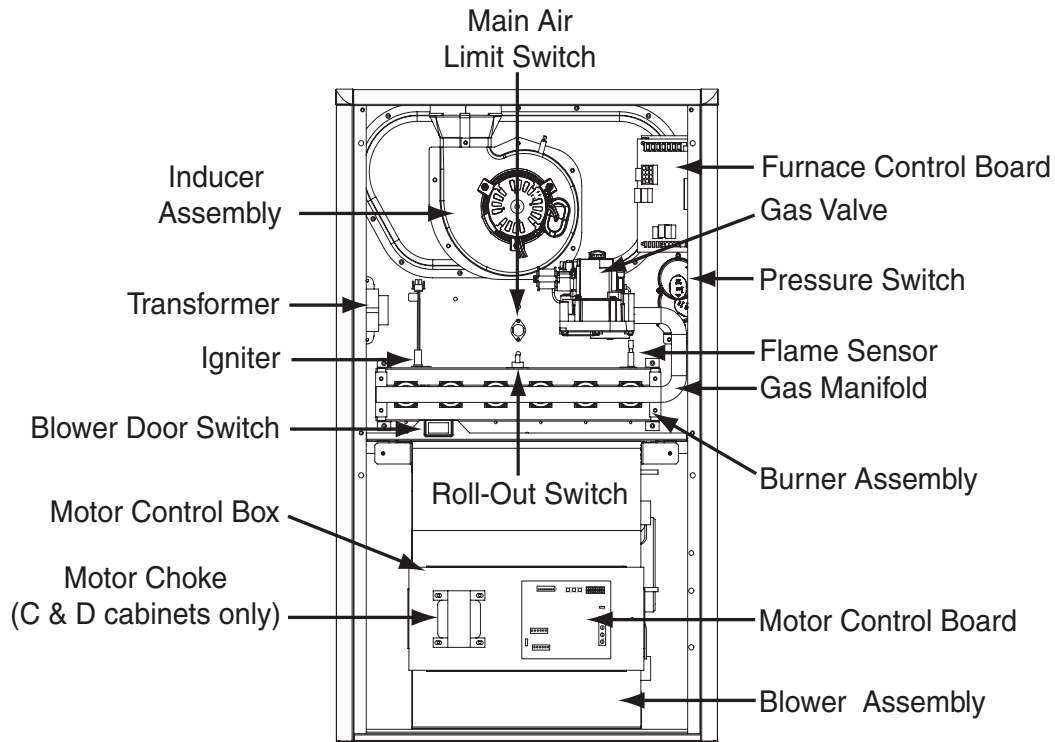**Induced Draft - 80 + AFUE
Input 60,000 - 140,000 Btuh**

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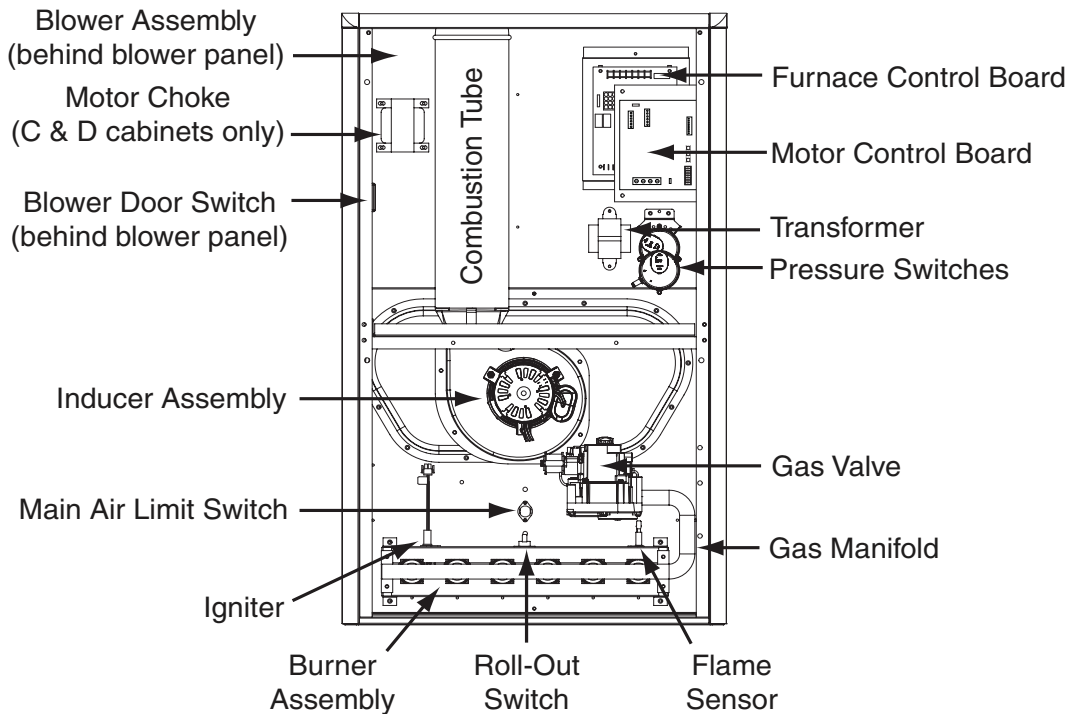

FEATURES and BENEFITS

- **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.
- **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 assures a long life.
- **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 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.
- **High static blowers:** All models equipped with high static blowers.
- **90 second cooling cycle blower-off delay (TDR):** increases cooling performance when matched with a NORDYNE coil.
- **Flexible category I venting system:** May be vented with dedicated venting system or common vented with other category one appliances.
- **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.
- **Integrated control board:** Incorporates connections for electronic air cleaner and humidifier.
- **Two piece door design:** Enhances furnace appearance and uses captured screws to prevent loosing door screws.
- **Blower Compartment:** Insulated for ultra quiet operation.

GAS FURNACE COMPONENTS

Main Air Limit Switch

Inducer Assembly

Transformer

Igniter

Blower Door Switch

Motor Control Box

Motor Choke (C & D cabinets only)

Furnace Control Board

Gas Valve

Pressure Switch

Flame Sensor

Gas Manifold

Burner Assembly

Roll-Out Switch

Motor Control Board

Blower Assembly

Upflow/Horizontal Gas Furnace

Blower Assembly (behind blower panel)

Motor Choke (C & D cabinets only)

Blower Door Switch (behind blower panel)

Combustion Tube

Inducer Assembly

Main Air Limit Switch

Igniter

Burner Assembly

Roll-Out Switch

Flame Sensor

Furnace Control Board

Motor Control Board

Transformer

Pressure Switches

Gas Valve

Gas Manifold

Downflow Gas Furnace

DIMENSIONS

*TA Model #'s	Dimension "A"	Dimension "B"	Dimension "C"	Dimension "D"
060-VA1	14 1/4	10 3/4	12 5/8	12 7/8
080-VB1	17 1/2	11 3/4	15 7/8	16 1/8
100-VC1				
120-VC1	21	14	19 3/8	19 5/8
140-VD1	24 1/2	15 1/4	22 7/8	23 1/8

TOP VIEW

C

23   FLANGES   19

B

Accepts 4" Type B Vent Pipe

BOTTOM VIEW

D

Front Brace

Bottom Panel

23 1/2

LEFT SIDE

25 3/8

Electric (Ø 7/8)

Gas (1 5/8 X 3 1/2)

4 Knockouts (both sides)

23

15

1 1/4

23

1

FRONT VIEW

A

RIGHT SIDE

T-stat (Ø 7/8)

Electric (Ø 7/8)

22 1/4

25

21 3/4

Gas (1 5/8 X 3 1/2 X 45°)

29 1/2

22 1/2

22 3/4

34 1/2

28
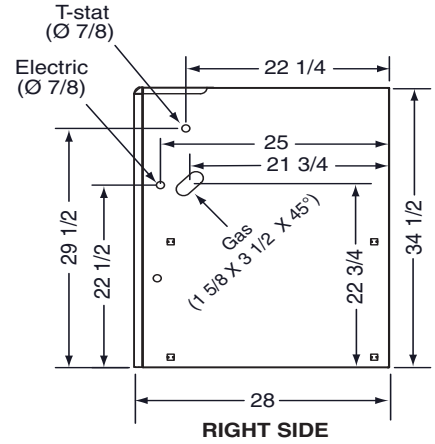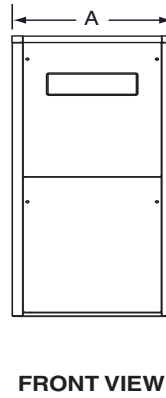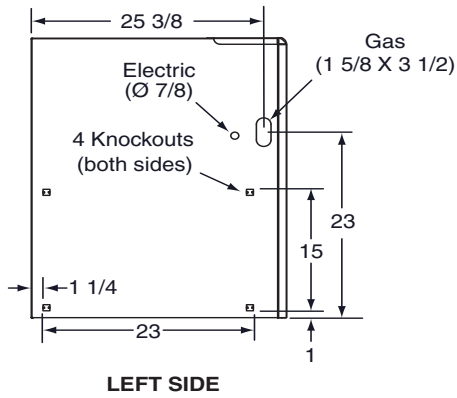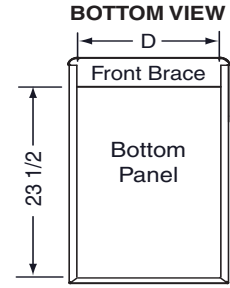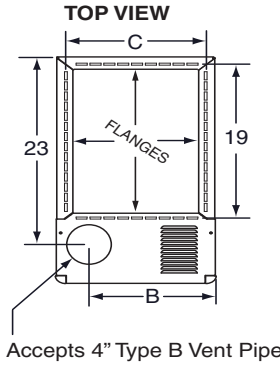
FG7TA 80+ High Efficiency Upflow/Horizontal Series

---

*TK Model #'s	Dimension "A"	Dimension "B"	Dimension "C"	Dimension "D"
060-VA1	14 1/4	10 3/4	12 5/8	12 7/8
080-VB1	17 1/2	11 3/4	15 7/8	16 1/8
100-VC1				
120-VC1	21	14	19 3/8	19 5/8

TOP VIEW

C

23   FLANGES   19

B

Accepts 4" Type B Vent Pipe

BOTTOM VIEW

D

Front Brace

18 5/8

LEFT SIDE

Electric (Ø 7/8)

Gas (1 5/8 X 3 1/2)

34 1/2

22 1/2

7

25 3/8

28

FRONT VIEW

A

RIGHT SIDE

T-stat (Ø 7/8)

Electric (Ø 7/8)

22 1/4

25

Gas (1 5/8 X 3 1/2 X 45°)

29 1/2

22 1/2

7
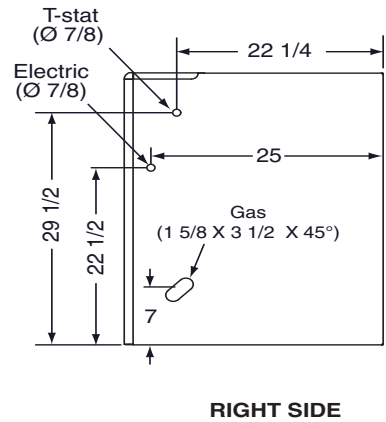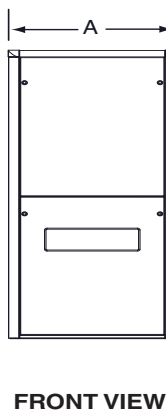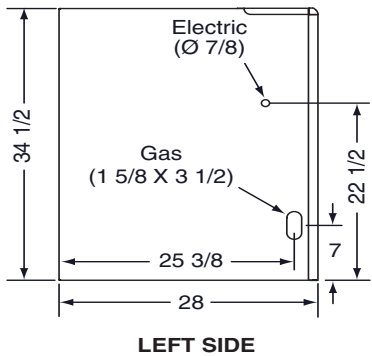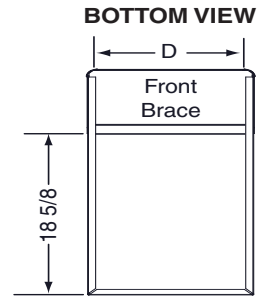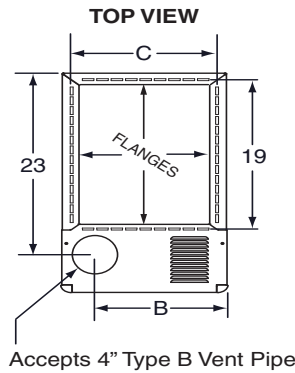
FG7TK 80+ High Efficiency Downflow Series

BLOWER PERFORMANCE - FG7TA/TK

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

A Cabinet				*TA/TK-060( )-VA1 Models	
Switch Settings HEAT				Input (BTU) 60000	
A/B	2	3	4	CFM	Temp Rise (°F)
0	0	0	0	640	69
0	0	0	1	720	62
0	0	1	0	800	56
0	0	1	1	880	51
0	1	0	0	960	46
0	1	0	1	1040	43
0	1	1	0	1120	40
0	1	1	1	1200	37

B Cabinet				*TA/TK-080( )-VB1 Models	
Switch Settings HEAT				Input (BTU) 80000	
A/B	2	3	4	CFM	Temp Rise (°F)
1	0	0	0	1000	59
1	0	0	1	1100	54
1	0	1	0	1200	49
1	0	1	1	1300	46
1	1	0	0	1400	42
1	1	0	1	1500	40
1	1	1	0	1600	37
1	1	1	1	1700	35

C Cabinet				*TA/TK-100( )-VC1 Models		*TA/TK-120( )-VC1 Models	
Switch Settings HEAT				Input (BTU) 100000		Input (BTU) 120000	
A/B	2	3	4	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)
#	0	0	0	1000	74	1000	89
#	0	0	1	1115	66	1115	80
#	0	1	0	1230	60	1230	72
#	0	1	1	1345	55	1345	66
#	1	0	0	1460	51	1460	61
#	1	0	1	1575	47	1575	56
#	1	1	0	1690	44	1690	53
#	1	1	1	1805	41	1805	49

D Cabinet				*TA-140( )-VD1 Model	
Switch Settings HEAT				Input (BTU) 140000	
A/B	2	3	4	CFM	Temp Rise (°F)
#	0	0	0	1500	69
#	0	0	1	1615	64
#	0	1	0	1730	60
#	0	1	1	1845	56
#	1	0	0	1960	53
#	1	0	1	2075	50
#	1	1	0	2190	47
#	1	1	1	2305	45

Switch not used - can be 0 or 1

Notes:
1. Two openings are required 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 AIRFLOWS

"A" CABINET

HEAT 1-4	COOL 5	COOL 6	COOL 7	COOL 8	CFM LOW	CFM HIGH	Nominal A/C & HP Capacity
0	0	0	0	0	350	525	
0	0	0	0	1	390	580	
0	0	0	1	0	425	635	1.5 TON
0	0	0	1	1	460	690	
0	0	1	0	0	500	745	
0	0	1	0	1	535	800	2 TON
0	0	1	1	0	575	855	
0	0	1	1	1	610	910	
0	1	0	0	0	645	965	2.5 TON
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

HEAT 1-4	COOL 5	COOL 6	COOL 7	COOL 8	CFM LOW	CFM HIGH	Nominal A/C & HP Capacity
1	0	0	0	0	470	700	
1	0	0	0	1	510	760	2 TON
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

HEAT 1-4	COOL 5	COOL 6	COOL 7	COOL 8	CFM LOW	CFM HIGH	Nominal A/C & HP Capacity
#	0	0	0	0	685	1025	
#	0	0	0	1	730	1090	2.5 TON
#	0	0	1	0	775	1155	
#	0	0	1	1	815	1220	3 TON
#	0	1	0	0	860	1285	
#	0	1	0	1	905	1350	
#	0	1	1	0	950	1415	3.5 TON
#	0	1	1	1	990	1480	
#	1	0	0	0	1035	1545	
#	1	0	0	1	1080	1610	4 TON
#	1	0	1	0	1120	1675	
#	1	0	1	1	1165	1740	
#	1	1	0	0	1210	1805	
#	1	1	0	1	1255	1870	5 TON
#	1	1	1	0	1295	1935	
#	1	1	1	1	1340	2000	

Switch not used - can be 0 or 1

"D" CABINET

HEAT 1-4	COOL 5	COOL 6	COOL 7	COOL 8	CFM LOW	CFM HIGH	Nominal A/C & HP Capacity
#	0	0	0	0	940	1400	
#	0	0	0	1	965	1440	3.5 TON
#	0	0	1	0	990	1480	
#	0	0	1	1	1020	1520	
#	0	1	0	0	1045	1560	
#	0	1	0	1	1070	1600	4 TON
#	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	5 TON
#	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

MODEL IDENTIFICATION CODE

FG 7 T A – 090 C V B 1

- Gas Furnace
- Design Series
- S = Single Stage
  T = Two Stage
  M = Modulating
- A = 80% Upflow/Horizontal
  C = 92.1% / 95.1% Upflow/Horizontal
  K = 80% Downflow
  L = 92.1% / 95.1% Downflow
  Q = 96.4+% AFUE Upflow/Horizontal
- **Input Heating Capacity**
  060 = 60,000
  080 = 80,000
  100 = 100,000
  120 = 120,000
  140 = 140,000
- C = Low NOx
- Revision Level
- **Cabinet Width**
  A = 14.25
  B = 17.50
  C = 21.00
  D = 24.50
- **Cooling Airflow**
  23 = 2-3 Tons
  24 = 2-4 Tons
  35 = 3-5 Tons
  45 = 4-5 Tons
  V = VSB

SPECIFICATIONS

FG7TA/TK MODEL NUMBERS	060C-VA1	080C-VB1	100C-VC1	120C-VC1	140C-VD1
Input - Btuh (a)	60,000 / 39,000	80,000 / 52,000	100,000 / 65,000	120,000 / 78,000	140,000 / 91,000
Heating Capacity - Btuh	48,000 / 31,200	64,000 / 41,600	80,000 / 52,000	96,000 / 62,400	112,000 / 72,800
AFUE	80.0	80.0	80.0	80.0	80.0
Blower D x W	10 x 6	11 x 8	11 x 10	11 x 10	11 x 10
Motor H.P. - Speed - Type	1/2 - Variable	1/2 - Variable	3/4 - Variable	3/4 - Variable	1 - Variable
Motor FLA	6.2	6.2	8.7	8.7	11.7
Rated Ext. SP - In. W.C.	0.5	0.5	0.5	0.5	0.5
Temperature Rise Range - ºF	25-55	30-60	35-65	35-65	40-70
Shipping Weights	115lbs	110lbs	125lbs	135lbs	155lbs

All models are 115 V, 60 HZ. Gas connections are 1/2" N.P.T.
AFUE= Annual Fuel Utilization Efficiency

ACCESSORIES

FG7TA/TK KITS	
Description	**SKU**
"B", "C", "D" Cabinet downflow sub base kit	904911
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

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.