

FG6T(C,L) Series

High Efficiency / Direct Vent or Non Direct Vent 2-Stage Condensing Gas Furnace with Variable Speed Blower

92+ Upflow/Horizontal

90+ Downflow

The high efficiency 2-Stage gas furnace may be installed free standing in a utility room, basement, or enclosed in an alcove or closet. The upflow model converts easily to horizontal application. The extended flush jacket provides a pleasing “appliance appearance.” Design certified by CSA International (Canadian Standards Association).

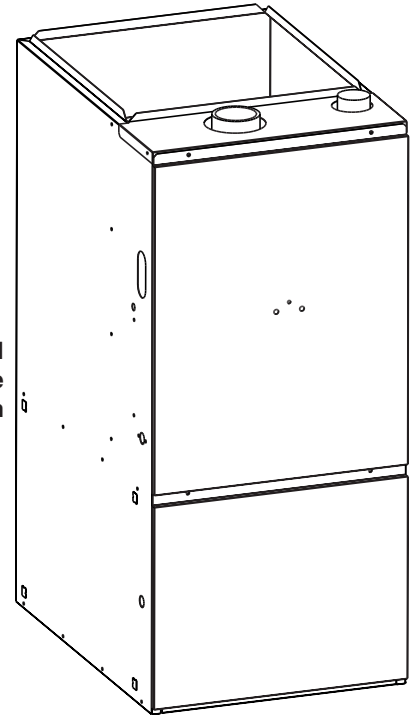
Features and Benefits

• Warranty

- This product offers a 10-year All-Parts Warranty.
- This product offers a 10 year Quality Pledge to replace the entire unit, if the unit's major component (heat exchanger or compressor) fails within the first 10 years of operation, to the original owner. All split system products must be installed with a matched indoor air handler or indoor coil to qualify.
- Consumer product registration required for both 10 year All Parts Warranty and Quality Pledge within a limited period of time after the installation. See current warranty document or visit our consumer web site listed on the back of this document for warranty details.
- Also when registered, this furnace upgrades to a limited lifetime heat exchanger warranty.

- **100% fired and tested** – All units and each component (both mechanical and electrical) are tested on the manufacturing line.
- **Best packaging in the industry** – Unique design assures product will arrive to the homeowner dent free.
- **Clean, quiet, and efficient operation** – Due to the unique design of in-shot burners, location of inducer, use of insulation, and operating at low fire using less fuel than single capacity furnaces.
- **Fixed 30 second blower delay** at burner start-up assures a warm duct temperature at furnace start-up.
- **Fixed 30-second inducer post purge** increases life of heat exchanger.
- **Dependable, hot surface ignitor** – Innovative application of an appliance type ignitor with a 20-year history of reliability, assures no call-backs because of handling.
- **Color coded wire harness** – Designed to fit the components, all with quick-connect fittings for ease of service and replacement.
- **Reliable heat exchanger** – Aluminized primary and stainless steel secondary heat exchanger assures long life.

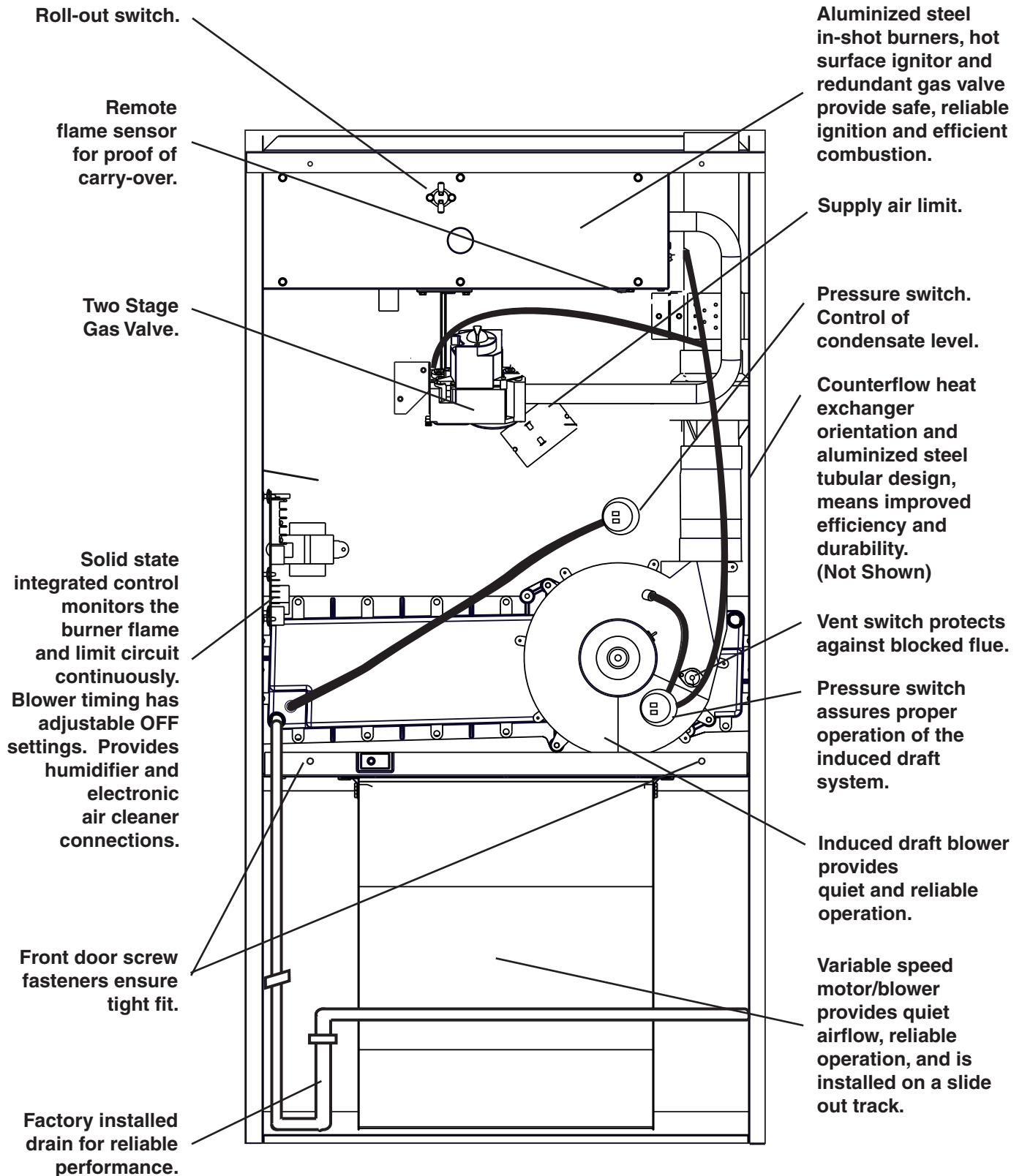
Upflow/Horizontal
Gas Furnace
Shown



- **40-second fixed cooling cycle blower-off delay (TDR)** increases cooling performance when matched with a NORDYNE coil.
- **Approved for direct vent and non direct vent furnace, category IV venting system** – May be vertically or horizontally vented using either a one-pipe or two-pipe system for maximum flexibility in installation.
- **Variable speed blower** included to maximize air conditioner and heat pump efficiencies. On selected units, SEER ratings up to 16 and HSPF ratings up to 8.5 are ARI listed.
- **LP convertible** – Simple burner orifice and regulator spring change for ease of convertibility.
- **Factory installed drain system** – for reliable performance.
- **Diagnostic light flashes identify limit failure, pressure switch failure and improper ground and polarization** – for easy troubleshooting.
- **Incorporates integrated control board** with connections for electronic air cleaner, humidifier and twinning.
- **Two piece door design** enhances furnace appearance and uses screw fasteners for great fit and accessibility.
- **3 amp fuse** protection against low voltage shorts; protects transformer and control board.
- **Low voltage terminal board** for easy field wiring.

FEATURES

High Efficiency Upflow 92+ Gas Furnace



FEATURES

High Efficiency Downflow 90+ Gas Furnace

Solid state integrated control monitors the burner flame and limit circuit continuously. Blower timing has adjustable OFF settings. Provides humidifier and electronic air cleaner connections.

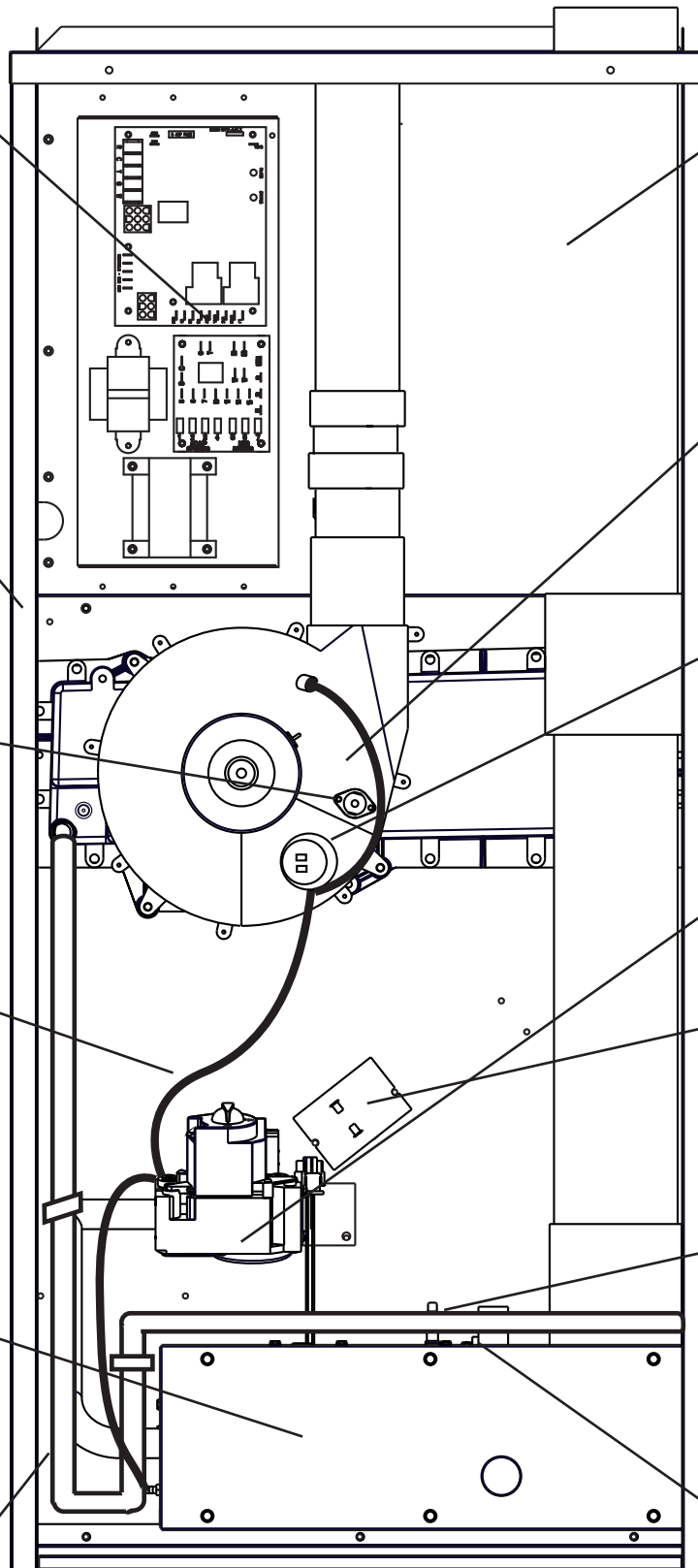
Electrical 2 x 4 junction box can be moved outside of cabinet for disconnect.

Vent switch protects against blocked flue.

Counterflow heat exchanger orientation and aluminized steel tubular design, means improved efficiency and durability. (Not Shown)

Aluminized steel in-shot burners, hot surface ignitor and redundant gas valve provide safe, reliable ignition and efficient combustion.

Factory installed drain for reliable performance.



Multi-speed PSC motor/blower provides quiet airflow, reliable operation, and is installed on a slide-out track. (Not Shown)

Induced draft blower provides quiet and reliable operation.

Pressure switch assures proper operation of the induced draft system.

Two Stage Gas Valve.

Supply air limit.

Remote flame sensor for proof of flame carry-over. (Not Shown)

Roll-out switch.

STANDARD EQUIPMENT

Direct vent; draft inducer; pressure switch; redundant main gas control; hot-surface ignition; timed ON/OFF blower controls (TDR); 40VA transformer for air conditioner application; limit controls; direct drive motor; all models can be converted to use L.P. (propane) gas. Factory approved kits *only* must be used and are available as an optional accessory from your NORDYNE distributor.

SPECIFICATIONS

MODEL NUMBER *TC	060(C,N)-VA	080(C,N)-VB	100(C,N)-VB	120(C,N)-VC
High Fire Rated Input(Btu/h) (a)	60,000	80,000	100,000	120,000
High Fire Heating Capacity(Btu/h)	55,000	74,000	92,000	110,400
Low Fire Rated Input(Btu/h) (a)	42,000	56,000	70,000	84,000
Low Fire Heating Capacity(Btu/h)	38,000	50,400	63,000	76,000
AFUE	92+	92+	92+	92+
Maximum Heating Ext. St. Press.(in WC)	0.5	0.5	0.5	0.5
Blower Wheel D x W	10 x 6	11 x 10	11 x 10	11 x 10
Motor H.P. -Type	1/2 - Variable	3/4 - Variable	3/4 - Variable	3/4 - Variable
Motor FLA	7.7	9.6	9.6	9.6
High Fire Temperature Rise Range(F)	35-65	35-65	35-65	45-75
Low Fire Temperature Rise Range(F)	35-65	35-65	35-65	40-70

MODEL NUMBER *TL	060(C,N)-VA	080(C,N)-VB	100(C,N)-VB	120(C,N)-VC
High Fire Rated Input(Btu/h) (a)	60,000	80,000	100,000	120,000
High Fire Heating Capacity(Btu/h)	54,000	72,000	90,000	110,000
Low Fire Rated Input(Btu/h) (a)	42,000	56,000	70,000	84,000
Low Fire Heating Capacity(Btu/h)	38,000	50,000	63,000	76,000
AFUE	90+	90+	90+	90+
Maximum Heating Ext. St. Press.(in WC)	0.5	0.5	0.5	0.5
Blower Wheel D x W	10 x 6	11 x 10	11 x 10	11 x 10
Motor H.P. -Type	1/2 - Variable	3/4 - Variable	3/4 - Variable	3/4 - Variable
Motor FLA	7.7	9.6	9.6	9.6
High Fire Temperature Rise Range(F)	35-65	30-60	35-65	45-75
Low Fire Temperature Rise Range(F)	35 - 65	30-60	35-65	45-75

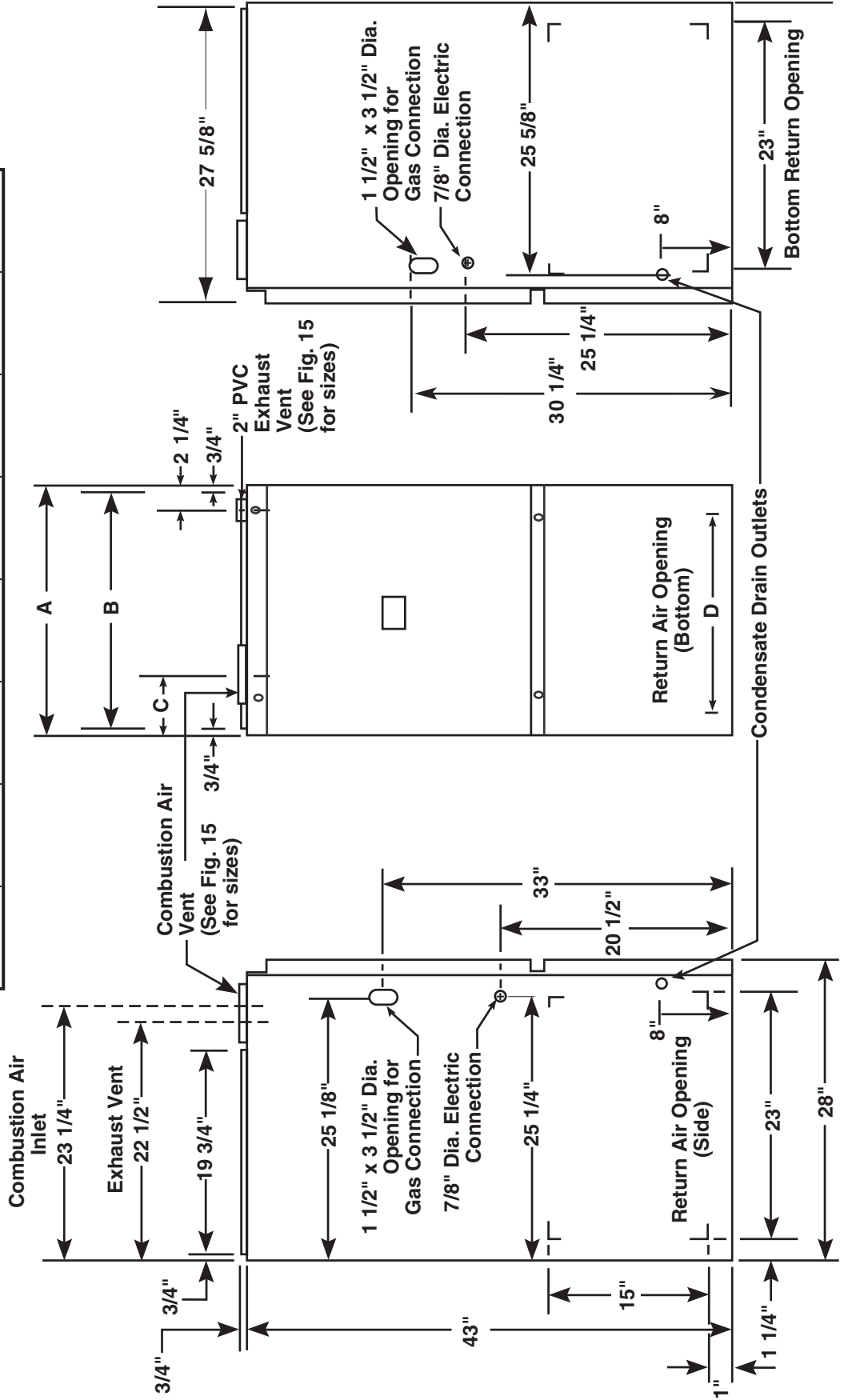
Note: All models are 115V, 60 Hz. Gas Connections are 1/2" N.P.T. AFUE = Annual Fuel Utilization Efficiency.

(a) Ratings to 2,000 feet. Over 2,000 feet, reduce 4% for each 1,000 ft. above sea level.

DIMENSIONS

Upflow/Horizontal Furnace

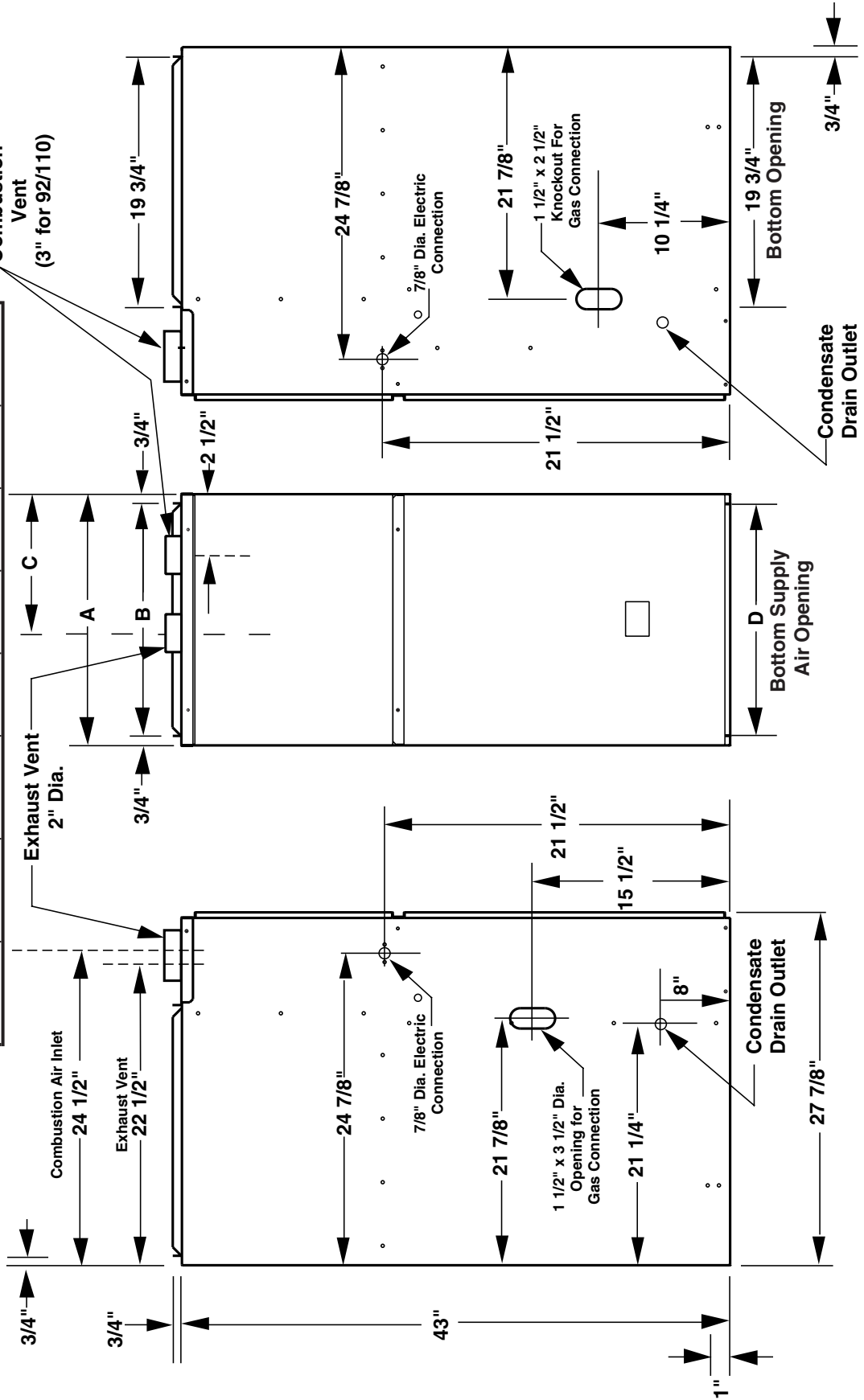
Model Number FG6TC-	High Fire Furnace Btuh	Low Fire Furnace Input	Dimensions (inches)				Shipping Weight (lbs)
			A	B	C	D	
060	60,000	42,000	14 1/2	12 3/4	5 1/8	11 3/4	155
080	80,000	56,000	19 3/4	18 1/4	7 7/8	17 1/4	195
100	100,000	70,000	19 3/4	18 1/4	7 7/8	17 1/4	200
120	120,000	84,000	22 1/2	21	9 1/4	20	220



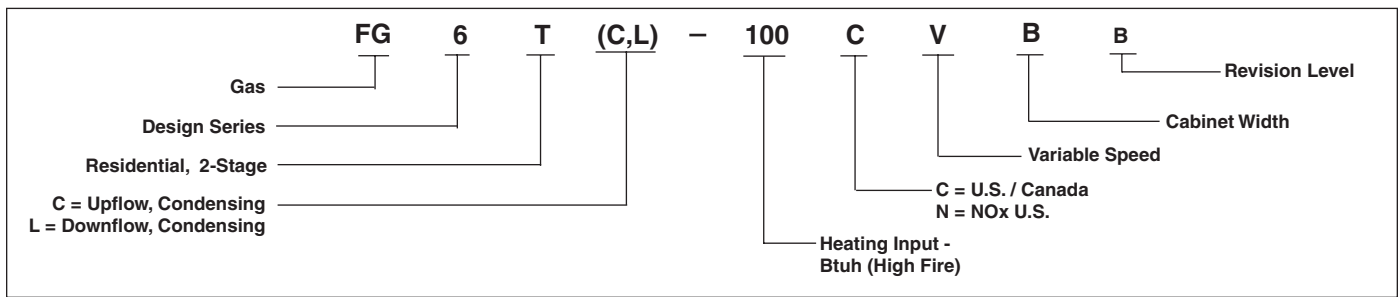
DIMENSIONS Continued

Downflow Furnace

Model Number FG6TL-	High Fire Furnace Btuh	Low Fire Furnace Input	Dimensions (inches)				Shipping Weight (lbs)
			A	B	C	D	
060	60,000	42,000	14 1/2	12 3/4	5 1/8	11 3/4	165
080	80,000	56,000	19 3/4	18 1/4	7 7/8	17 1/4	215
100	100,000	70,000	19 3/4	18 1/4	7 7/8	17 1/4	215
120	120,000	84,000	22 1/2	21	9 1/4	20	225



MODEL IDENTIFICATION CODE



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

APPLICATION PVC, CPVC or ABS SCH. 40 Pipe Size	SINGLE PIPE LENGTH (ft.) with 1 long radius elbow**		DIRECT VENT, DUAL PIPE LENGTH (ft.) with 1 long radius elbow on each pipe**					
	Outlet 2"	Outlet 3"	Inlet/Outlet 2"	Inlet/Outlet 2"	Inlet/Outlet 3"	Inlet/Outlet 2"	Inlet/Outlet 3"	Inlet/Outlet 3"
Models *T(C,L) 060	65	200	40	40	40	40	110	110
Models *T(C,L) 080	45	200	35	35	40	40	110	110
Models *T(C,L) 100	40	200	25	25	40	40	110	110
Models *T(C,L) 120	40	200	20	20	40	40	110	110

** NOTES

- 3.5' for each additional 3" **long** radius elbow, and 7' for each additional 3" **short** radius elbow.
- Two 45 degree elbows are equivalent to one 90 degree elbow.
- Do not include termination elbows in calculation of vent length.
- This table is applicable for elevations from sea level to 2000 ft. For higher elevations decrease vent pipe lengths by 8% per 1000 ft. of altitude.
- Only the above pipe materials are approved for use with these condensing furnaces.

ACCESSORIES

Kit	Order Number
U.S. LP Conversion Kit (0 to 10,000 ft.)	904404
Canadian LP Gas Conversion Kit (0 to 4,500 ft.)	904405
Fossil Fuel Kit	914762
Side Return Filter Kit	541036
Bottom Return Horizontal Installation	B Cabinet C Cabinet 903089 903090
Internal Side Return Filter Wire	903152
Horizontal Installation Kit	903568
Downflow "A" Combustion Floor Base	902974
Downflow "B" Combustion Floor Base	902677
Downflow "C" Combustion Floor Base	904108
High Altitude Pressure Switch Kit (5,000 ft. to 10,000 ft. above sea level)	903852

VENT KITS

Kit Description	Order Number
2" Concentric Vent Kit	904177
3" Concentric Vent Kit	904176
Neutralizer Kit (all models)	902377
Side Wall Vent Kit	904347

ELECTRICAL DATA

Furnace Input (Btuh)	Cabinet Width (in.)	Nominal Electrical Supply	Maximum Operating Voltage	Minimum Operating Voltage	Maximum Furnace Amperes	Minimum Wire Gauge	Maximum Fuse or Circuit Breaker Amps*
60,000	14.50	115-60-1	127	103	12	14	15
80,000	19.75	115-60-1	127	103	12	14	15
100,000	19.75	115-60-1	127	103	12	14	15
120,000	22.50	115-60-1	127	103	12	14	15

Thermostat Wire Gauge	Recommended Thermostat Wire Length	
	2-wire (heating)	4 or 5-wire (cooling)
24	55 ft.	25 ft.
22	90 ft.	45 ft.
20	140 ft.	70 ft.
18	225 ft.	110 ft.

* Time-delay fuses or HACR-type circuit breakers are required.

CAPACITIES – Furnace Airflow Data

CFM	SWITCH NUMBER							Nominal A/C and HP Capacity		
	LOW	HIGH	1	2	3	4	5		6	7
300	400	0	0	0	1					
330	480	0	0	0	0					
390	550	0	0	1	0					
420	600	1	0	0	1					
500	720	1	0	0	0					
550	800	1	0	1	0					
580	830	0	1	0	1					
640	930	0	1	0	0					
700	1010	1	1	0	1					
730	1070	0	1	1	0					
780	1140	1	1	0	0					
850	1230	1	1	1	0					

Note: 0 - Off 1 = On

*TC/L 060 (1/2 HP)
Cooling/Heat Pump Airflow Settings

CFM	SWITCH NUMBER							Nominal A/C and HP Capacity		
	LOW	HIGH	1	2	3	4	5		6	7
500	720	0	0	0	1					
550	800	0	0	0	0					
610	880	0	0	1	0					
650	945	1	0	0	1					
720	1050	1	0	0	0					
800	1155	1	0	1	0					
900	1305	0	1	0	1					
1000	1450	0	1	0	0					
1060	1530	1	1	0	1					
1100	1595	0	1	1	0					
1170	1700	1	1	0	0					
1290	1870	1	1	1	0					

Note: 0 - Off 1 = On

*TC/L 080/100/120 (3/4 HP)
Cooling/Heat Pump Airflow Settings

Delay Settings

Delay Description	Switch Number									
	1	2	3	4	5	6	7	8	9	
Delay A									0	0
Delay B									0	1
No Delay									1	0
De - Hum									1	1

Note: 0=Off, 1=On

- "Delay A" has a 2-step "on" profile operating the blower at 31% of the selected airflow for 30 seconds, then 75% of the selected airflow for 30 seconds. It will then operate at the selected airflow until the thermostat is satisfied, followed by an "off-cycle" profile running at 50% of the selected airflow for 60 seconds.
- "Delay B" has a single "on" profile operating the blower at 50% of the selected airflow for 30 seconds. It will then operate at the selected airflow until the thermostat is satisfied, followed by an "off-cycle" profile running at 50% of the selected airflow for 90 seconds.
- The "De-Hum" profile will operate the blower at 31% of the selected airflow for 30 seconds, followed by 75% of the selected airflow for 10 minutes. It will then operate at the selected airflow until the thermostat is satisfied.
- The "No Delay" option will ramp the blower up to the selected airflow. When the thermostat is satisfied, it will then ramp the blower off.

Nominal Airflow (CFM) and Temperature Rises (degree F)

Switches	Nominal Airflow (CFM) and Temperature Rises (degree F)															
	*T(C,L)-060(CN)-VA Models				*T(C,L)-080(CN)-VB Models				*T(C,L)-100 (CN)-VB Models				*T(C,L)-120(CN)-VA Models			
	Low Fire Input	High Fire Input	Low Fire Input	High Fire Input	Low Fire Input	High Fire Input	Low Fire Input	High Fire Input	Low Fire Input	High Fire Input	Low Fire Input	High Fire Input	Low Fire Input	High Fire Input		
5 6 7	43,000	60,000	56,000	80,000	70,000	100,000	84,000	120,000	60,000	80,000	100,000	84,000	120,000	60,000	80,000	
0 0 #	600	700	660	750	660	720	660	720	660	720	660	720	660	720	660	
1 0 #	660	800	750	850	750	850	750	850	750	850	750	850	750	850	750	
0 1 #	800	1048	1220	1680	1220	1680	1220	1680	1220	1680	1220	1680	1220	1680	1220	
1 1 #	900	1296	1300	1880	1300	1880	1300	1880	1300	1880	1300	1880	1300	1880	1300	

Switch not used - Can be 0 or 1.

Notes:

1. Recommended blower speed settings are highlighted in bold.
2. Airflow rates of 1800 CFM or more require two return air connections. Data is for operation with filter(s).
3. Temperature rises in the table are approximate. Actual temperature rises may vary.
4. Temperature rises that are shaded grey are for reference only. These conditions are not recommended.
5. For single stage cooling, the indoor blower will operate at the CFM listed in the "High" column.

