

FG6RA Series with Variable Speed Blower

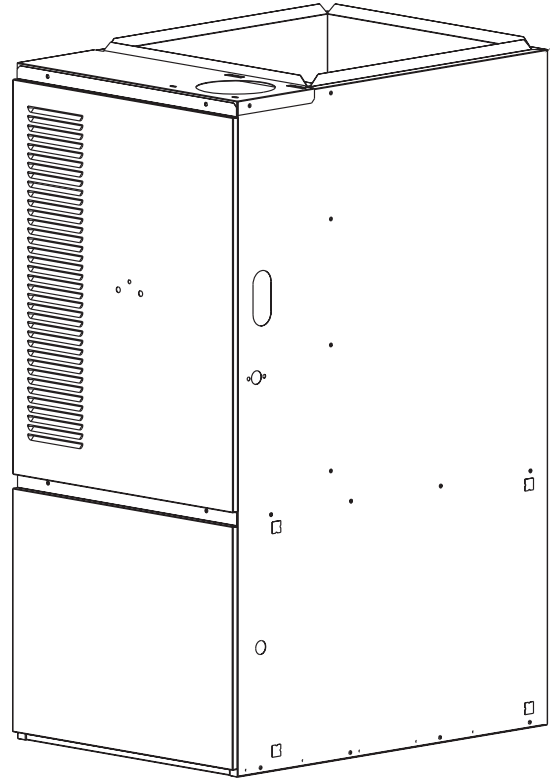
High Efficiency Upflow/Horizontal Gas Furnace

Induced Draft - 80+ AFUE
Input 72,000 - 144,000 Btuh

The heart of the FG6 series furnace with variable speed blower is the ECM motor (electronically commutated motor). The ECM consists of a brushless DC type motor with a microprocessor based variable speed drive. The drive continuously monitors RPM and torque output of the motor. This information is fed into pre-programmed algorithms in the microprocessor for correct motor output to maintain constant airflow regardless of external static pressure. The microprocessor stores delay profiles to optimize the efficiency and performance of the split system. The variable speed blower steps through intermediate airflows during the on and off profiles. This results in smoother, more efficient operation with quiet, gradual starts and stops. The furnace is design certified by CSA International (Canadian Standards Association).

FEATURES and BENEFITS

- **Best warranty in the business** —
 - A full 20 years on the heat exchanger
 - 8 Year Limited Parts and 5 Year Quality Pledge
- **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 and quiet operation** — Due to the unique design of in-shot burners, location of inducer, return air vents, and use of insulation.
- **Fixed 30 second blower delay** at burner start-up assures a warm duct temperature at furnace start-up.
- **Fixed 30 second 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.
- **Color coded wire harness** — Designed to fit the components, all with quick-connect fittings for ease of service and replacement.
- **Approved for categories I and III venting systems** — May be common, dedicated, or horizontal vented for maximum flexibility in installation.
- **Tubular primary heat exchanger** — Heavy gauge

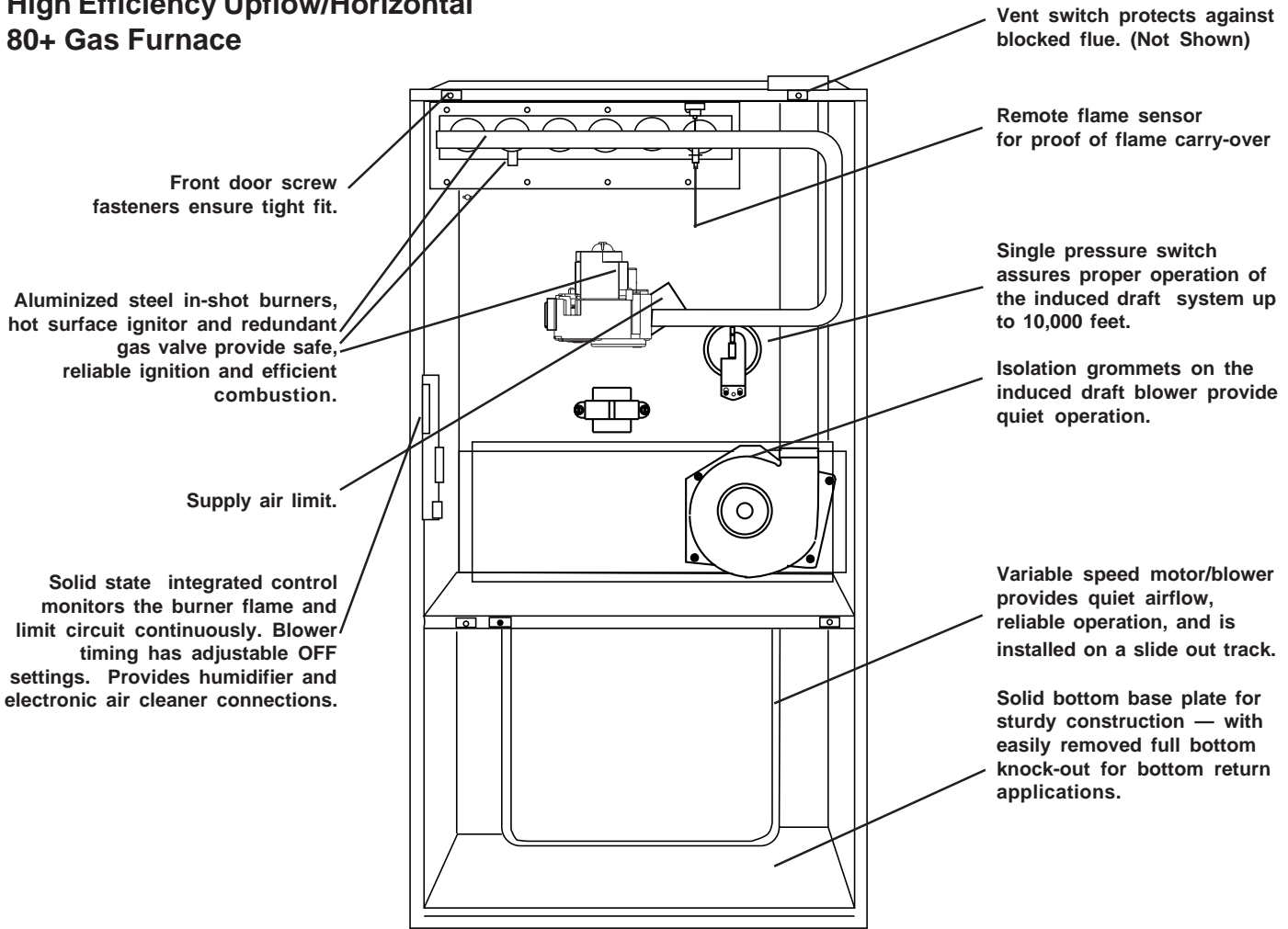


aluminized steel heat exchanger assures a long life.

- **90 second fixed cooling cycle blower-off delay (TDR)** increases cooling performance when matched with a NORDYNE coil.
- **Fully insulated blower cabinet** for quiet operation.
- **Variable speed blower** included to maximize air conditioner and heat pump efficiencies. On selected units, SEER ratings up to 14 and HSPF ratings up to 8.5 are ARI listed.
- **LP convertible** — Simple burner orifice and regulator spring change for ease of convertibility.
- **Diagnostic lights flash to identify limit failure, pressure switch failure, improper ground and polarization, and low flame signal** — 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 easier accessibility.
- **3 amp fuse** protection against low voltage shorts; protects transformer and control board.
- **Low voltage terminal board** for easy field wiring.
- **Components and Controls** — Designing quality into our products means selecting manufacturers that have a reputation for delivering high quality, dependable products.

FEATURES

High Efficiency Upflow/Horizontal 80+ Gas Furnace



STANDARD EQUIPMENT

Draft inducer; pressure switch; redundant main gas control; hot-surface ignition; 40VA transformer for air conditioner application; limit controls; solid base plate with knock-out for easy removal; 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 distributor.

SPECIFICATIONS

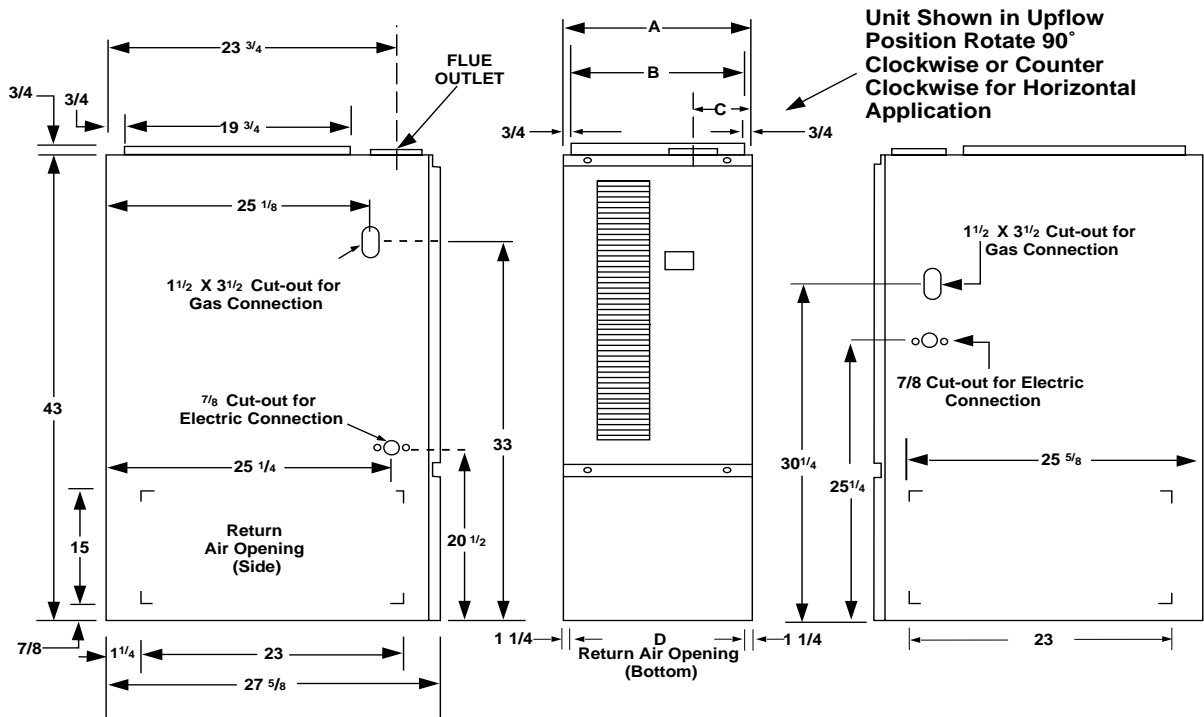
| FG6RA MODEL NUMBERS | -072C-VB | -096C-VB | -120C-VC | -144C-VC |
|-----------------------------------|------------|------------|------------|------------|
| Input-Btuh (a) | 72,000 | 96,000 | 120,000 | 144,000 |
| Heating Capacity - Btuh | 58,000 | 77,000 | 96,000 | 115,000 |
| AFUE | 80+ | 80+ | 80+ | 80+ |
| Max. Htg. Ext. St. Press. In W.C. | .5 | .5 | .5 | .5 |
| Blower Wheel D x W | 11 x 10 | 11 x 10 | 11 x 10 | 11 x 10 |
| Motor H.P. -Speed -Type | Variable | Variable | Variable | Variable |
| Motor FLA | 7.9 | 7.9 | 11.1 | 11.1 |
| Temperature Rise Range - °F | 40 - 70 | 50 - 80 | 45 - 75 | 45 - 75 |
| Approximate Shipping Wt. - lbs. | 152 | 163 | 182 | 194 |

All models are 115 V, 60 HZ. Gas connections are 1/2" N.P.T.

AFUE= Annual Fuel Utilization Efficiency

(a) Ratings to 2000 ft. Over 2000 ft. reduce 4% for each 1000 ft. above sea level

DIMENSIONS



| MODEL NUMBER FG6RA- | A (in.) | B (in.) | C (in.) | D (in.) | MODEL NUMBER FG6RA- | A (in.) | B (in.) | C (in.) | D (in.) |
|------------------------|------------|------------|------------|------------|------------------------|------------|------------|------------|------------|
| 072(-)VB | 19 3/4 | 18 1/4 | 3 3/4 | 17 1/4 | 120(-)VC | 22 1/2 | 21 | 3 3/4 | 20 |
| 096(-)VB | 19 3/4 | 18 1/4 | 3 3/4 | 17 1/4 | 144(-)VC | 22 1/2 | 21 | 4 1/4 | 20 |

CAPACITIES – Furnace Airflow Data

| 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 | | | | |

| | | Nominal Air-Flow | | | | | | | |
|----------|---------|------------------|-----|------|------|------|------|------|------|
| | | 720 | 900 | 1056 | 1200 | 1350 | 1500 | 1656 | 1800 |
| Switches | 7 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| | 6 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| | 5 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| 80+% | 72,000 | | 59 | 51 | 44 | | | | |
| | 90,000 | | | 63 | 55 | 49 | 44 | | |
| | 96,000 | | | 67 | 59 | 53 | 47 | | |
| | 108,000 | | | | 67 | 59 | 53 | 48 | |
| | 120,000 | | | | | 66 | 59 | 54 | 49 |
| | 126,000 | | | | | 69 | 62 | 56 | 51 |
| 92+% | 144,000 | | | | | | 71 | 64 | 59 |
| | 80,000 | | | 67 | 59 | 52 | 47 | | |
| | 100,000 | | | | 73 | 65 | 59 | 53 | 49 |
| | 120,000 | | | | | | 71 | 64 | 59 |

Temperature Rise °F (Recommended settings are **Bold**)

Note: 1 = on (up), 0 = off (down)

All Cooling/Heat Pump Airflow Settings

(Data is for operation with filters)

SPECIFICATIONS

| | |
|-----------------------------|----------------------------|
| Nominal Blower Size | 11 x 10 |
| Maximum Motor HP | 3/4 |
| Motor Type | Programable Variable Speed |
| RPM Range | 300-1300 |
| Cooling CFM Range* | 720-1870 |
| Heating Airflow Range* | 720-1800 |
| Approximate Shipping Weight | 45 lbs |

* Airflow is held constant regardless of external static pressure within the HP and RPM limits of the motor.

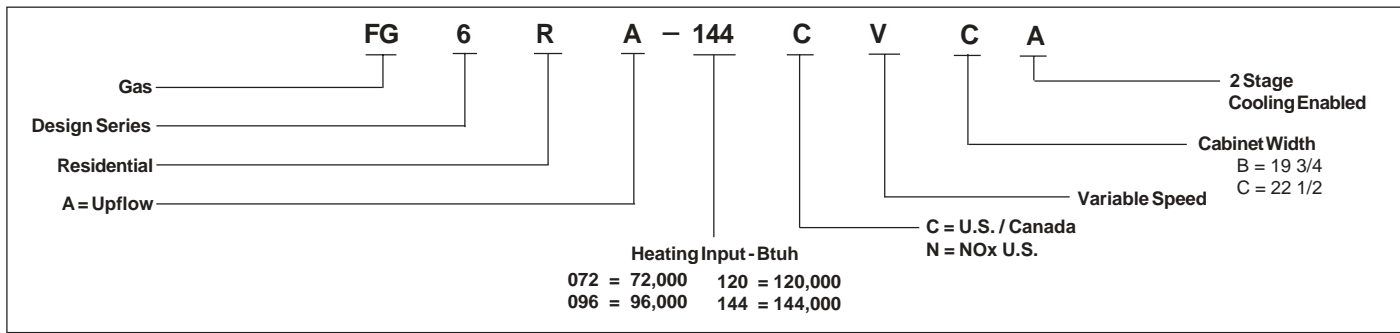
Airflows of 1800 CFM or more require two return air connections.

Temperature rises are approximate and may vary.

Notes:

1. Recommended temperature rises 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.

MODEL IDENTIFICATION CODE



Through-the-Wall VENTING Venting Requirements

These furnaces are approved to use with 3" single wall AL29-4C stainless steel vent pipe in horizontal vent applications, and with the required horizontal vent kit listed below. The pipe is available from the following manufacturers:

- Z-Flex Inc.** - vent brand name (**Z-VENT**)
- Heat-fab Inc.** - vent brand name (**Saf-T Vent**)
- Flex-L International** - vent brand name (**STAR-34 Vent**)

When venting horizontal, this is a Category III furnace, the vent pressure is positive, and the venting system must be sealed in both horizontal and vertical runs.

| High Efficiency 80+ with Honeywell VR Gas Valve | | |
|--|-----------|--------------|
| Kit | | Order Number |
| U.S. LP Conversion Kit (0 to 10,000 ft.) | | 904090 |
| Canadian LP Gas Conversion Kit (0 to 4,500 ft.) | | 904091 |
| Fossil Fuel Kit | | 914762 |
| Side Return Filter Kit | | 541036 |
| Bottom Return Filter (20/Box) | A Cabinet | 903088 |
| | B Cabinet | 903089 |
| | C Cabinet | 903090 |
| Horizontal Vent Kit | | 903196 |
| Internal Side Return Filter Wire | | 903152 |

| Model Number FG6RA- | Pipe Size | Reducer Needed* | Flue Outlet (in.) | Max. # Elbows | Max. Ft. Vent Pipe |
|------------------------|-----------|-----------------|-------------------|---------------|--------------------|
| 072()-VB | 3" | 4" to 3" | 4 | 4 | 35 |
| 096()-VB | 3" | 4" to 3" | 4 | 4 | 35 |
| 120()-VC | 3" | 4" to 3" | 4 | 4 | 35 |
| 144()-VC* | 3" | 4" to 3" | 5 | 3 | 30 |

* NOTE: Field supplied special 5" to 4" Reducer Kit required for model FG6RA144(C,N)-120.

VENTING

All models, with the exception of the reduced NOx models, are approved for vertical and horizontal venting applications (see table above). All models may be common vented with a gas water heater. Type B gas vent materials may be used when connected to a vertical vent system. The installation must be in accordance with the venting instructions supplied with the furnace.

