

TECHNICAL SPECIFICATIONS

G6RA Series with Variable Speed Blower

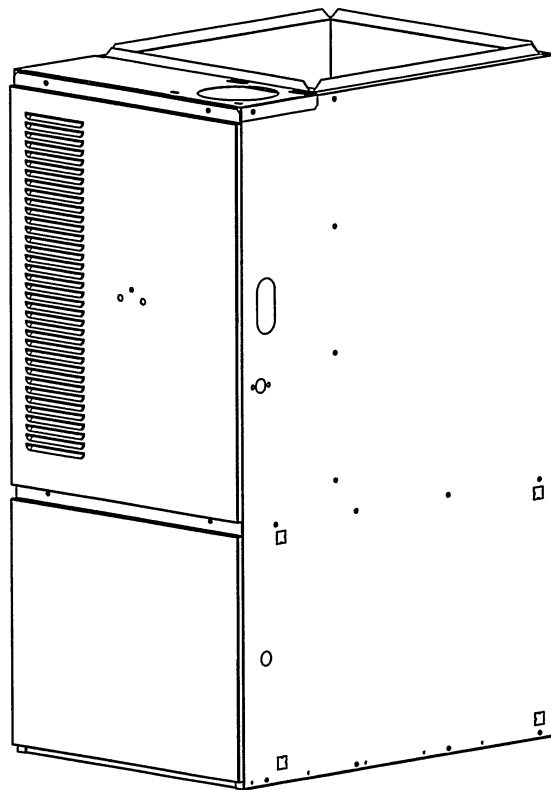
High Efficiency Upflow/Horizontal Gas Furnace

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

The heart of the G6 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 AGA (American Gas Association) and CGA (Canadian Gas Association).

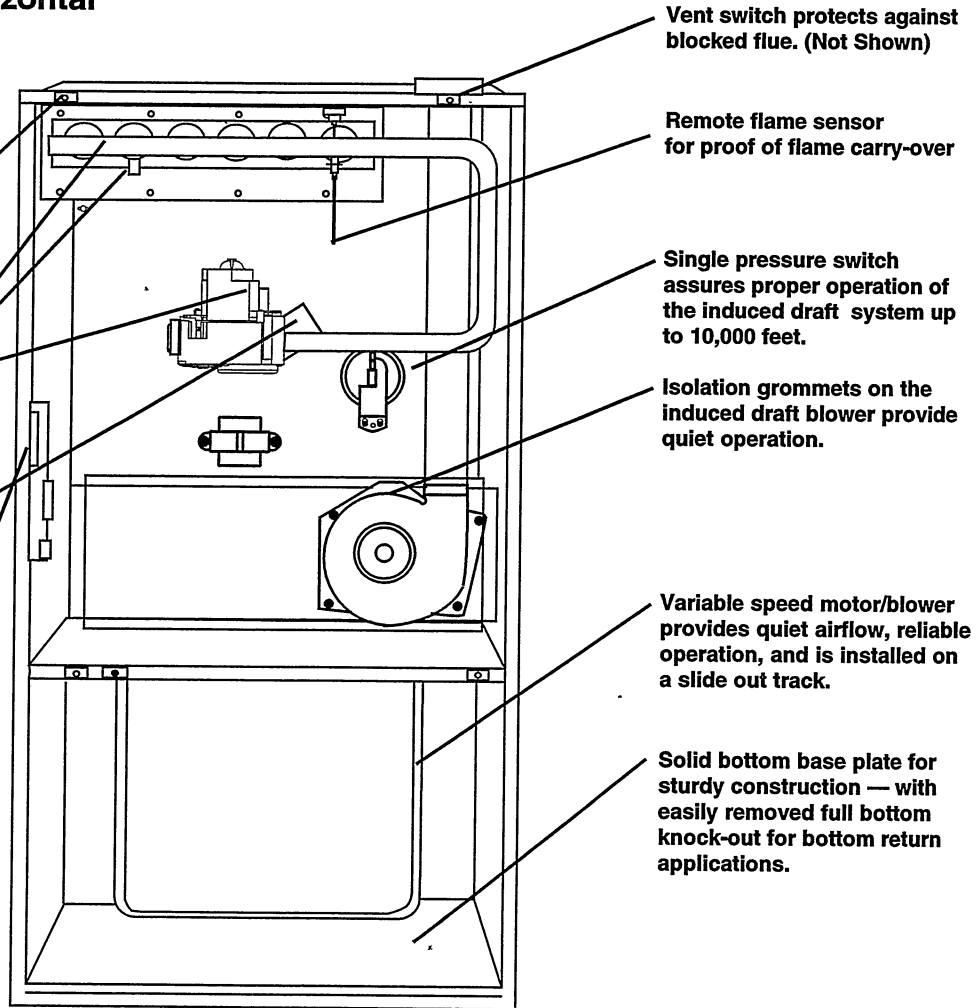
FEATURES and BENEFITS

- **Best warranty in the business** —
 - A full 20 years on the heat exchanger
 - 6 years on all parts
- **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.
- **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.

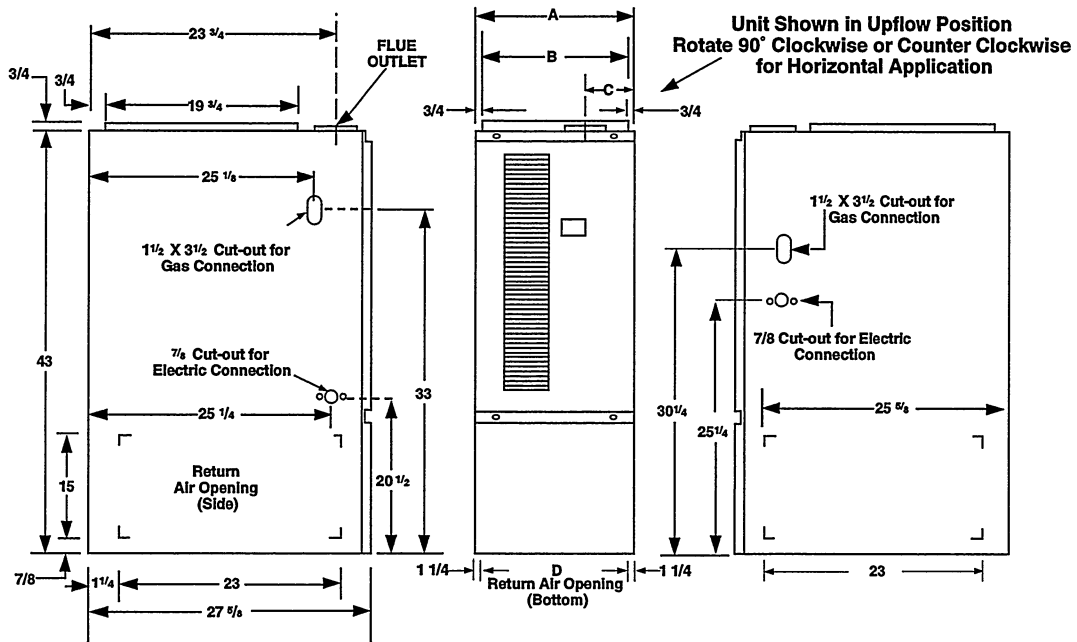
SPECIFICATIONS

G6RA 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	A (in.)	B (in.)	C (in.)	D (in.)	MODEL NUMBER	A (in.)	B (in.)	C (in.)	D (in.)
G6RA-072(-)VB	19 3/4	18 1/4	3 3/4	17 1/4	G6RA-120(-)VC	22 1/2	21	3 3/4	20
G6RA-096(-)VB	19 3/4	18 1/4	3 3/4	17 1/4	G6RA-144(-)VC	22 1/2	21	4 1/4	20

CAPACITIES – Furnace Airflow Data

CFM	Switch Number							Nomial A/C H/P Capacity
	1	2	3	4	5	6	7	
720	0	0	0	1				2 TON
800	0	0	0	0				
880	0	0	1	0				2.5 TON
990	1	0	0	1				
1100	1	0	0	0				3 TON
1210	1	0	1	0				
1305	0	1	0	1				3.5 TON
1450	0	1	0	0				
1530	1	1	0	1				4 TON
1595	0	1	1	0				
1700	1	1	0	0				5 TON
1870	1	1	1	0				

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

All Cooling/Heat Pump Airflow Settings
(Data is for operation with filters)

		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	74	59	51					
	96,000		79	67	59	53			
	120,000				74	66	59	54	49
	144,000						71	64	59

Rise, °F (bold are recommended)**

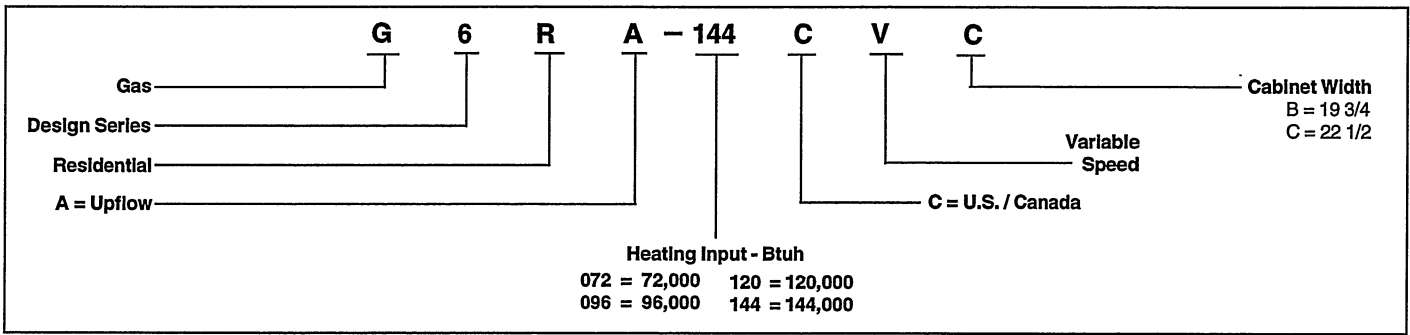
** Temperature rises are approximate and may vary.

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.

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:

Model Number G6RA-	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 G6RA144C-120.

- 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.

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.

High Efficiency 80+ with Honeywell VR Gas Valve		
Kit		Order Number
U.S. LP Conversion Kit (0 to 10,000 ft.)		903616
Canadian LP Gas Conversion Kit (0 to 4,500 ft.)		903617
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

GENERAL TERMS OF LIMITED WARRANTY **

NORDYNE will furnish a replacement for any part of this product which fails in normal use and service within the applicable periods stated below, in accordance with the terms of the warranty.

G6RA Models Warranty
 Gas Heat Exchanger 20-Year Limited Warranty
 Any Other Part 6-Year Limited Warranty

** For complete details of the Limited Warranty, including applicable terms and conditions, see your local installer or contact the factory for a copy.



TECHNICAL SPECIFICATIONS

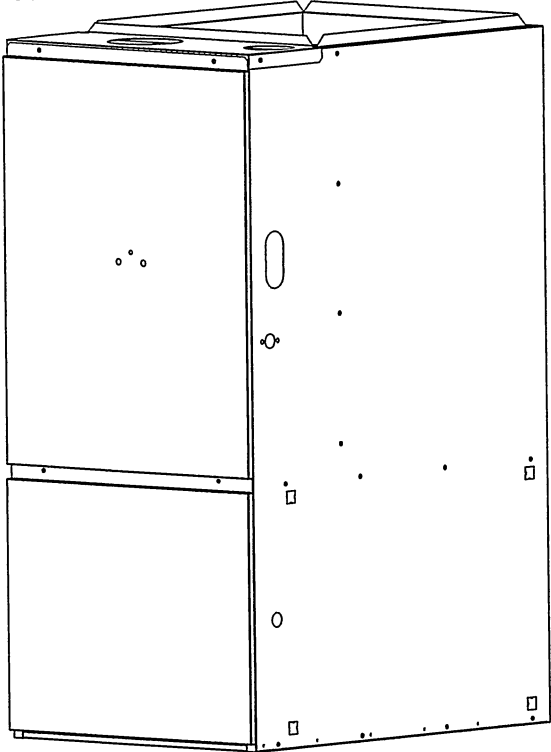
G6RC Series

High Efficiency / Direct Vent or Non Direct Vent Condensing Upflow/Horizontal Gas Furnace

Induced Draft - 92+ AFUE Input 40,000 - 120,000 Btuh

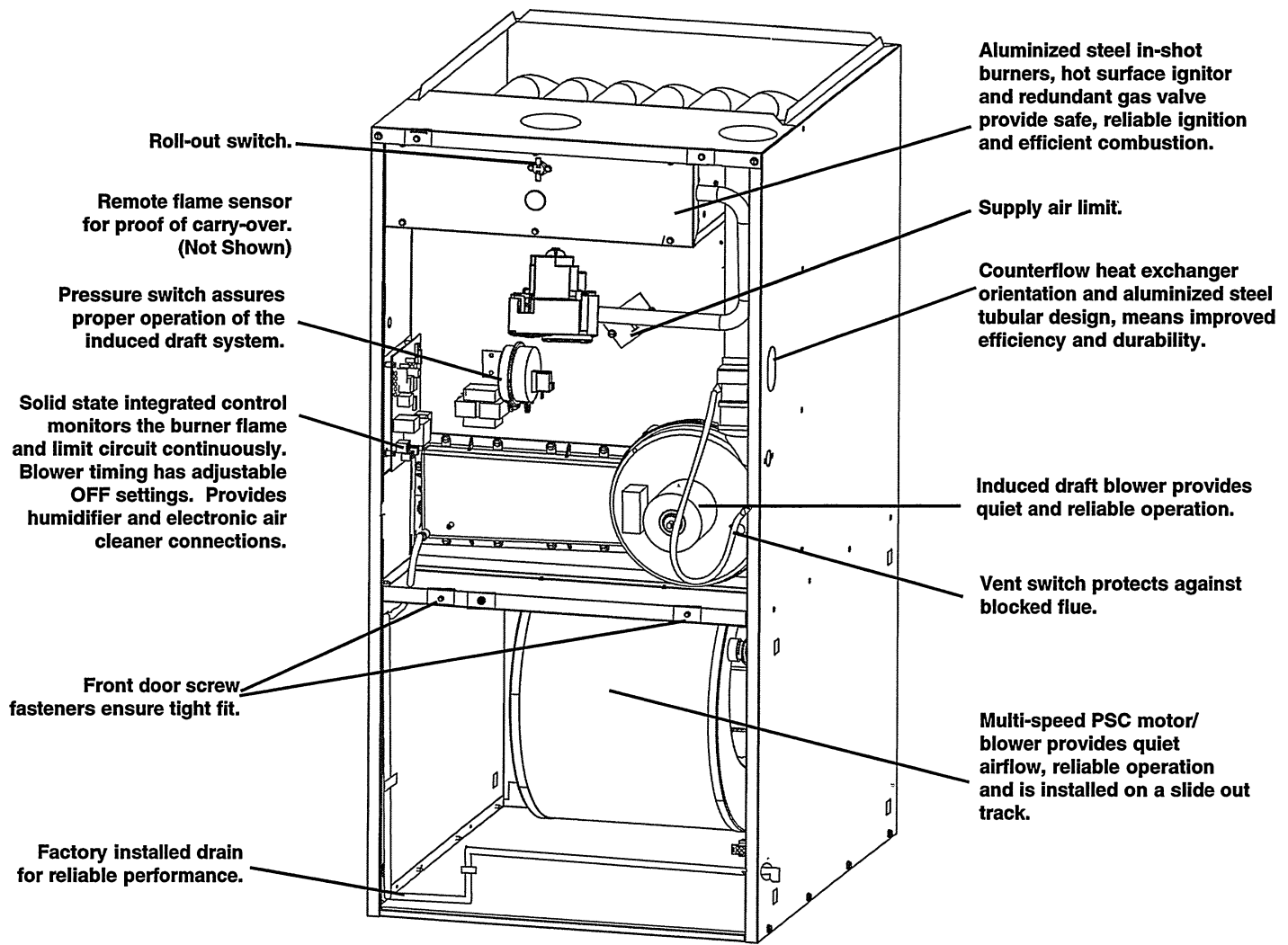
The high efficiency upflow gas furnace may be installed free standing in a utility room, basement, or enclosed in an alcove or closet. With kit, it converts easily to horizontal application. The extended flush jacket provides a pleasing "appliance appearance." Design certified by the American Gas Association (AGA) Laboratories and the Canadian Gas Association (CGA) Laboratories. The product is truly designed with the contractor and the consumer in mind.

Features and Benefits

- Best warranty in the business —
 - A lifetime warranty on the heat exchanger
 - 6-year limited warranty on all parts
 - 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 and use of insulation.
 - Fixed 30 second blower delay at burner start-up assures a warm duct temperature at furnace start-up. Adjustable blower off settings (60, 120, 160 and 180 seconds).
 - 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, 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.
 - Tubular primary heat exchanger — Heavy gauge aluminized steel heat exchanger assures a long life.
 - 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.
 - Approved for 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 kit is available 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.
 - Multi-speed direct drive blower — Designed to give a wide range of cooling capacities. 40VA transformer included.
 - 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.
 - 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 92+ Gas Furnace



STANDARD EQUIPMENT

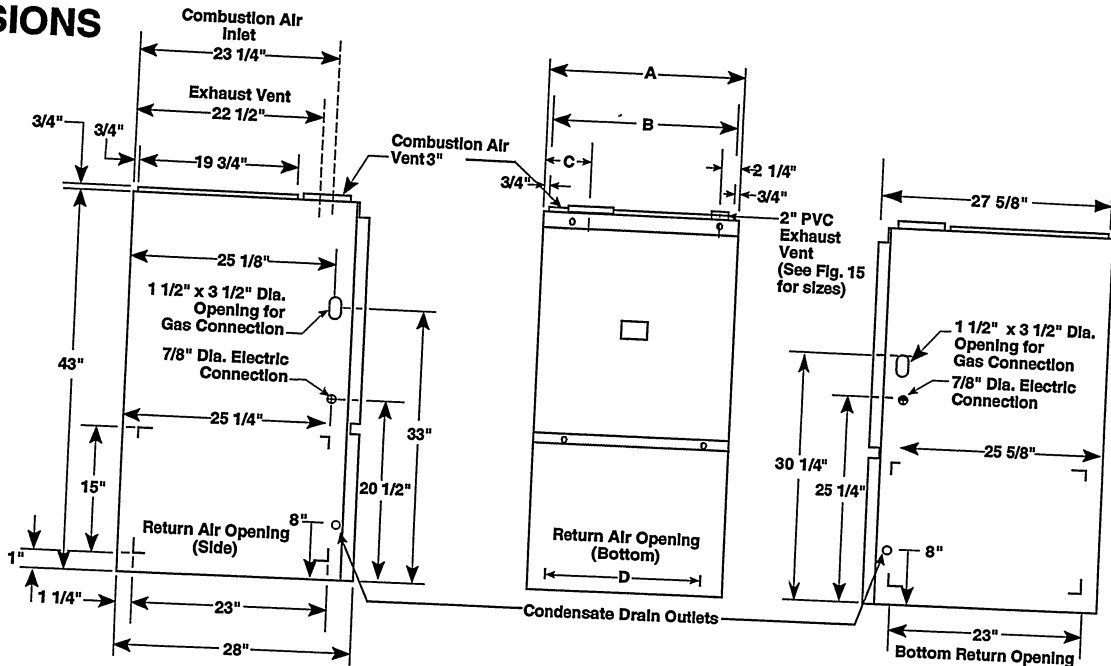
Direct vent; draft inducer; pressure switch; redundant main gas control; hot-surface ignition; timed ON/OFF blower controls (TDR); 40VA transformer for air conditioner application; limit controls; direct drive motor; all models can be converted to use L.P. (propane) gas. Factory approved kits *only*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

SPECIFICATIONS

G6RC MODEL NUMBERS:	-040C-08	-040C-12	-060C-12	-080C-12	-080C-16	-100C-16	-120C-16	-120C-20
Input-Btuh (a)	40,000	40,000	60,000	80,000	80,000	100,000	120,000	120,000
Heating Capacity - Btuh	37,000	37,000	55,000	73,000	73,000	92,000	110,000	110,000
AFUE	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1
Blower D x W	10 x 6	10 x 6	10 x 6	10 x 8	10 x 10	10 x 10	10 x 10	11 x 10
Motor H.P. -Speed -Type	1/5 - 3 - PSC	1/3 - 3 - PSC	1/3 - 3 - PSC	1/3 - 3 - PSC	1/2 - 4 - PSC	1/2 - 4 - PSC	1/2 - 4 - PSC	3/4 - 4 - PSC
Motor FLA	3.0	6.0	6.0	6.0	7.9	7.9	7.9	11.1
Maximum Ext. SP - In. W.C.	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Temperature Rise Range - °F	35 - 65	35 - 65	45 - 75	40 - 70	40 - 70	45 - 75	55 - 85	55 - 85

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.

DIMENSIONS



MODEL NUMBER G6RC	Dimensions				Shipping Weights (lbs)
	A (in.)	B (in.)	C (in.)	D (in.)	
40,000	14 1/4	12 3/4	5 1/8	11 3/4	133
60,000	14 1/4	12 3/4	5 1/8	11 3/4	140
80,000	19 3/4	18 1/4	7 7/8	17 1/4	172
100,000	19 3/4	18 1/4	7 7/8	17 1/4	180
120,000	22 1/2	21	9 1/4	20	204

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 elbows*		DIRECT VENT, DUAL PIPE LENGTH (ft.) with 1 long radius elbows on each pipe.*					
	Outlet	Outlet	Inlet/Outlet		Inlet/Outlet		Inlet/Outlet	
	2"	3"	2"	2"	3"	2"	3"	3"
Models G6RC, D, L 040	80	150	40	40	50	50	90	90
Models G6RC, D, L 060 & 080	60	150	30	30	35	35	90	90
Models G6RC, D, L 100 & 120	30	150	15	15	25	25	90	90

*** NOTE:**

1. Subtract 2.5 ft. for each additional 2" elbow and 3.5 ft. for each additional 3" elbow.
2. Two 45 degree elbows are equivalent to one 90 degree elbow.
3. One short radius elbow is equivalent to two long radius elbows.
4. Do not include termination elbows in calculation of vent length.
5. 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.
6. Only the listed pipe materials are approved for use with *G6 Condensing Furnaces.

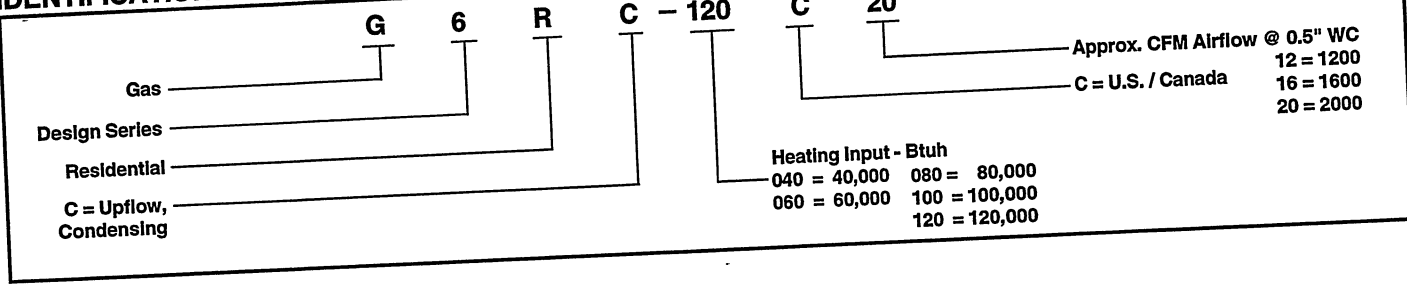
ACCESSORIES

Kit	Order Number
U.S. LP Conversion Kit (0 to 10,000 ft.)	903616
Canadian LP Gas Conversion Kit (0 to 4,500 ft.)	903617
Fossil Fuel Kit	914762
Side Return Filter Kit	541036
Bottom Return A Cabinet	903088
Filter Kits B Cabinet	903089
C Cabinet	903090
Internal Side Return Filter Wire	903152
Horizontal Installation Kit	903568
Variable Speed Blower Kit	903756

VENT KITS

Kit Description	2" PVC	3" PVC
Horizontal Exterior Vent Mounting Kit	902373	902375
Concentric Vent Kit	903578	
Neutralizer Kit (all models)	902377	

IDENTIFICATION CODE



BLOWER PERFORMANCE

Model Number	Heating Input (Btuh)	Motor Speed	Motor HP	External Static Pressure (Inches Water Column)															
				0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8	
				CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise
040C-08	40,000	High*	1/5	950	36	920	38	890	39	850	41	800	43	750	46	690	50	630	55
		Medium		740	47	710	49	680	51	650	53	600	58	550	63	490	-	430	-
		Low**		620	56	590	59	560	62	520	-	470	-	410	-	350	-	290	-
040C-12	40,000	High*	1/3	1330	-	1280	-	1230	-	1170	-	1120	-	1030	-	940	37	850	41
		Medium		1190	-	1160	-	1110	-	1060	-	1010	-	910	38	820	42	720	48
		Low**		830	42	810	43	780	44	760	46	720	48	670	52	610	57	550	63
060C-12	60,000	High*	1/3	1310	-	1260	-	1210	-	1160	45	1100	47	1040	50	980	53	920	56
		Medium		1160	45	1120	46	1080	48	1050	49	990	52	940	55	890	58	830	63
		Low**		800	65	780	67	760	68	740	70	710	73	680	-	650	-	620	-
080C-12	80,000	High*	1/3	1490	46	1450	48	1390	50	1310	53	1210	57	1100	63	980	-	830	-
		Medium		1230	56	1200	58	1150	60	1080	64	1010	69	910	-	810	-	680	-
		Low**		780	-	750	-	720	-	680	-	630	-	570	-	510	-	440	-
080C-16	80,000	High*	1/2	1840	-	1780	-	1700	41	1630	42	1550	45	1470	47	1380	50	1290	54
		Med-High		1600	43	1560	44	1470	47	1400	49	1350	51	1280	54	1210	57	1150	60
		Med-Low**		1380	50	1350	51	1300	53	1250	55	1190	58	1120	62	1040	67	960	-
		Low		1100	63	1050	66	1000	69	950	-	900	-	850	-	800	-	750	-
100C-16	100,000	High*	1/2	1910	45	1860	47	1780	49	1700	51	1620	53	1520	57	1420	61	1310	66
		Med-High**		1640	53	1620	53	1540	56	1480	58	1420	61	1340	65	1250	69	1150	75
		Med-Low		1440	60	1410	61	1370	63	1320	66	1270	68	1210	72	1140	-	1060	-
		Low		1230	70	1210	72	1180	73	1140	-	1090	-	1030	-	960	-	880	-
120C-16	120,000	High*	1/2	1860	56	1800	58	1730	60	1650	63	1570	66	1480	70	1380	75	1270	82
		Med-High**		1650	63	1610	65	1550	67	1480	70	1410	74	1320	79	1230	84	1120	-
		Med-Low		1440	72	1410	74	1380	75	1320	79	1280	81	1220	85	1150	-	1080	-
		Low		1230	84	1210	-	1180	-	1140	-	1090	-	1030	-	960	-	880	-
120C-20	120,000	High*	3/4	2260	-	2200	-	2140	-	2070	-	1990	-	1910	-	1810	57	1710	61
		Med-High		1870	56	1840	56	1790	58	1760	59	1710	61	1660	63	1610	65	1560	67
		Med-Low**		1540	67	1530	68	1510	69	1470	71	1430	73	1370	76	1300	80	1220	85
		Low		1360	76	1330	78	1310	79	1280	81	1250	83	1220	85	1190	-	1150	-

- * Factory Set Cooling Speed
- ** Factory Set Heating Speed
- Not Recommended

Notes:

1. Airflow rates of 1800 CFM or more require two return air connections. Data is for operation with filter(s).
2. Temperature rises in the table are approximate. Actual temperature rises may vary.
3. Temperature rises and airflows for external static pressures greater than 0.5 are for reference only. These conditions are not recommended.

GENERAL TERMS OF LIMITED WARRANTY**

NORDYNE will furnish a replacement for any part of this product which fails in normal use and service within the first five years of installation, in accordance with the terms of the warranty.

G6RC Models Warranty:
 Gas Heat Exchanger Lifetime Limited Warranty*
 Any Other Part 6 Year Limited Warranty

*For original owner only - not transferable
 **For complete details of the Limited Warranty, including applicable terms and conditions, see your local installer or contact the factory for a copy.



As an Energy Star Partner, NORDYNE has determined that this product meets the Energy Star guidelines for energy efficiency.