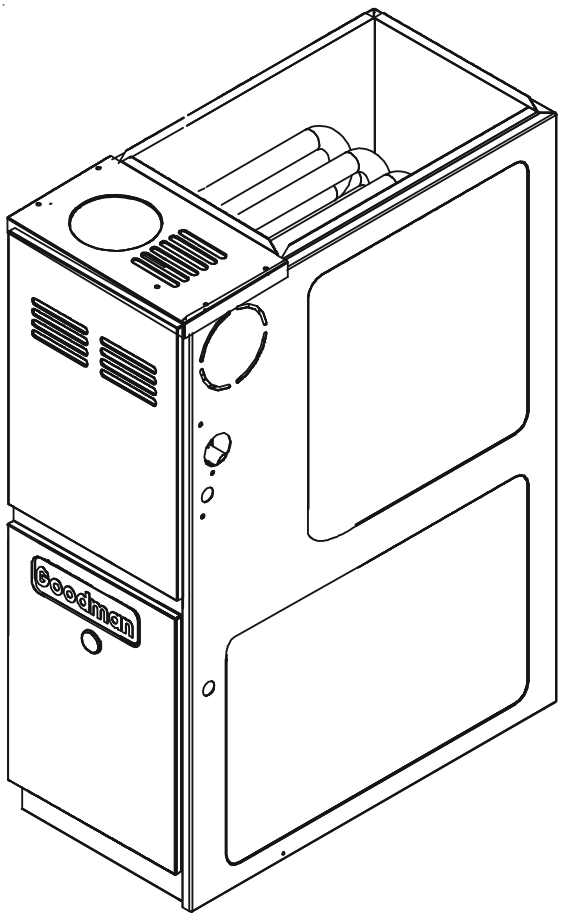
Goodman® TECHNICAL MANUAL

GMH8 39" 80% Gas Furnace
80% AFUE, 2-Stage (Convertible), Multi-Speed, Upflow/Horizontal

- Refer to Service Manual RS6610004 for installation, operation, and troubleshooting information.
- All safety information must be followed as provided in the Service Manual.
- Refer to the appropriate Parts Catalog for part number information.
- Model numbers listed on page 3.



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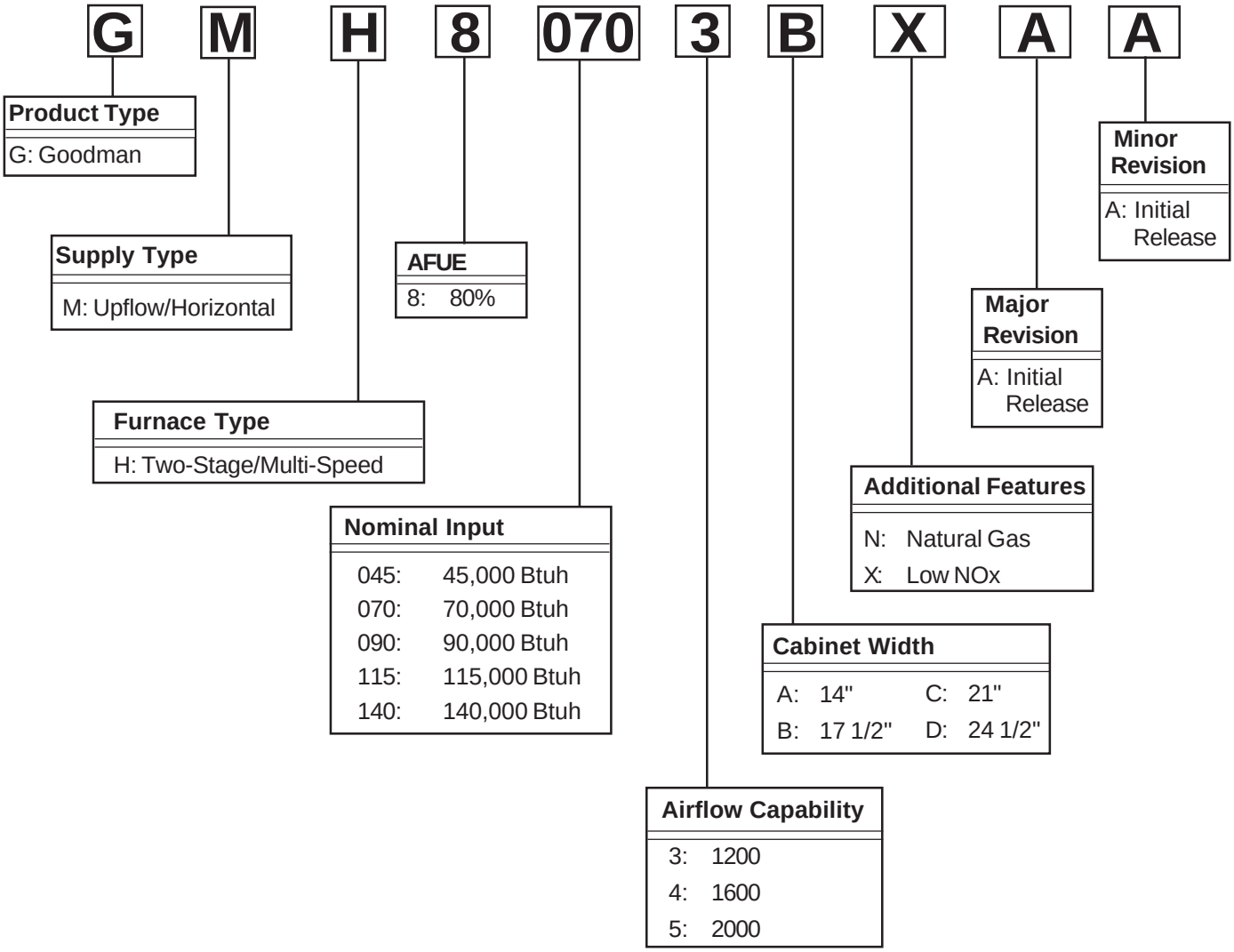
This manual is to be used by qualified, professionally trained HVAC technicians only. Goodman does not assume any responsibility for property damage or personal injury due to improper service procedures or services performed by an unqualified person.

RT6621014 Rev. 2
June 2009

PRODUCT IDENTIFICATION

The model and manufacturing number are used for positive identification of component parts used in manufacturing. Please use these numbers when requesting service or parts information.



⚠ WARNING

HIGH VOLTAGE!

Disconnect ALL power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury or death.

⚠ WARNING **Goodman will not be responsible for any injury or property damage arising from improper service or service procedures. If you install or perform service on this unit, you assume responsibility for any personal injury or property damage which may result. Many jurisdictions require a license to install or service heating and air conditioning equipment.**

⚠ WARNING **Installation and repair of this unit should be performed ONLY by individuals meeting the requirements of an "entry level technician" as specified by the Air-Conditioning, Heating, and Refrigeration Institute (AHRI). Attempting to install or repair this unit without such background may result in product damage, personal injury or death.**

PRODUCT IDENTIFICATION

The model and manufacturing number are used for positive identification of component parts used in manufacturing. Please use these numbers when requesting service or parts information.

[1] GMH80453AN*
[1] GMH80703AN*
[1] GMH80704BN**
GMH80903BN**
[1] GMH80904BN**
[1] GMH80905CN**
[1] GMH81155CN**
[1] GMH81405DN**

[1] Units with low NOx models available.

WARNING

The United States Environmental Protection Agency ("EPA") has issued various regulations regarding the introduction and disposal of refrigerants introduced into this unit. Failure to follow these regulations may harm the environment and can lead to the imposition of substantial fines. These regulations may vary by jurisdiction. Should questions arise, contact your local EPA office.

WARNING

Do not connect or use any device that is not design certified by Goodman for use with this unit. Serious property damage, personal injury, reduced unit performance and/or hazardous conditions may result from the use of such non-approved devices.

WARNING

To prevent the risk of property damage, personal injury, or death, do not store combustible materials or use gasoline or other flammable liquids or vapors in the vicinity of this appliance.

PRODUCT DESIGN

General Operation

The GMH8 furnaces are equipped with an electronic ignition device used to light the burners and an induced draft blower to exhaust combustion products.

An interlock switch prevents furnace operation if the blower door is not in place. Keep the blower access door in place except for inspection and maintenance.

This furnace is also equipped with a self-diagnosing electronic control module. In the event a furnace component is not operating properly, the control module LED will flash on and off in a factory-programmed sequence, depending on the problem encountered. This light can be viewed through the observation window in the blower access door. Refer to the *Troubleshooting Chart* for further explanation of the LED codes and *Abnormal Operation - Integrated Ignition Control* section in the Service Instructions for an explanation of the possible problem.

The rated heating capacity of the furnace should be greater than or equal to the total heat loss of the area to be heated. The total heat loss should be calculated by an approved method or in accordance with "ASHRAE Guide" or "Manual J-Load Calculations" published by the Air Conditioning Contractors of America.

*Obtain from: American National Standards Institute 1430 Broadway New York, NY 10018

Location Considerations

- The furnace should be as centralized as is practical with respect to the air distribution system.
- Do not install the furnace directly on carpeting, tile, or combustible material other than wood flooring.
- When suspending the furnace from rafters or joists, use 3/8" threaded rod and 2" x 2" x 3/8" angle as shown in the Installation and Service Instructions. The length of the rod will depend on the application and clearance necessary.
- When installed in a residential garage, the furnace must be positioned so the burners and ignition source are located not less than 18 inches (457 mm) above the floor and protected from physical damage by vehicles.

⚠ WARNING

TO PREVENT POSSIBLE PERSONAL INJURY OR DEATH DUE TO ASPHYXIATION, THIS FURNACE MUST BE CATEGORY I VENTED. DO NOT VENT USING CATEGORY III VENTING.

1. Category I Venting is venting at a non-positive pressure. A furnace vented as Category I is considered a fan-assisted appliance and the vent system does not have to be "gas tight." **NOTE:** Single stage gas furnaces with induced draft blowers draw products of combustion through a heat exchanger allowing, in some instances, common venting with natural draft appliances (i.e. water heaters). All installations must be vented in accordance with National Fuel Gas Code NFPA 54/ANSI Z223.1 - latest edition. In Canada, the furnaces must be vented in accordance with the National Standard of Canada, CAN/CSA B149.1 and CAN/CSA B149.2 - latest editions and amendments.

NOTE: The vertical height of the Category I venting system must be at least as great as the horizontal length of the venting system.

2. Line voltage wiring can enter through the right or left side of the furnace. Low voltage wiring can enter through the right or left side of furnace.
3. Conversion kits for propane gas and high altitude natural and propane gas operation are available. See High Altitude Derate chart for details.
4. Installer must supply the following gas line fittings, depending on which entrance is used:

   Left -- Two 90° Elbows, one close nipple, straight pipe

   Right -- Straight pipe to reach gas valve.

PRODUCT DESIGN

Accessibility Clearances (Minimum)

Unobstructed front clearance of 24" **for servicing** is recommended.

MINIMUM CLEARANCE TO COMBUSTIBLE MATERIALS - INCHES

Sides	Rear	Front*	Vent		Top
			SW	B	
1	0	3	6	1	1

* 24" clearance for serviceability recommended.

** Single Wall Vent (SW) to be used only as a conncetor. Refer to the venting tables outlined in the Installation Manual for additional venting requirements.

Note: In all cases accessibility clearance shall take precedence over clearances from the enclosure where accessibility clearances are greater. All dimensions are given in inches.

High Altitude Derate

When this furnace is installed at high altitude, the appropriate High Altitude orifice kit must be installed. This is required due to the natural reduction in the density of both the gas fuel and combustion air as altitude increases. The kit will provide the proper design certified input rate within the specified altitude range.

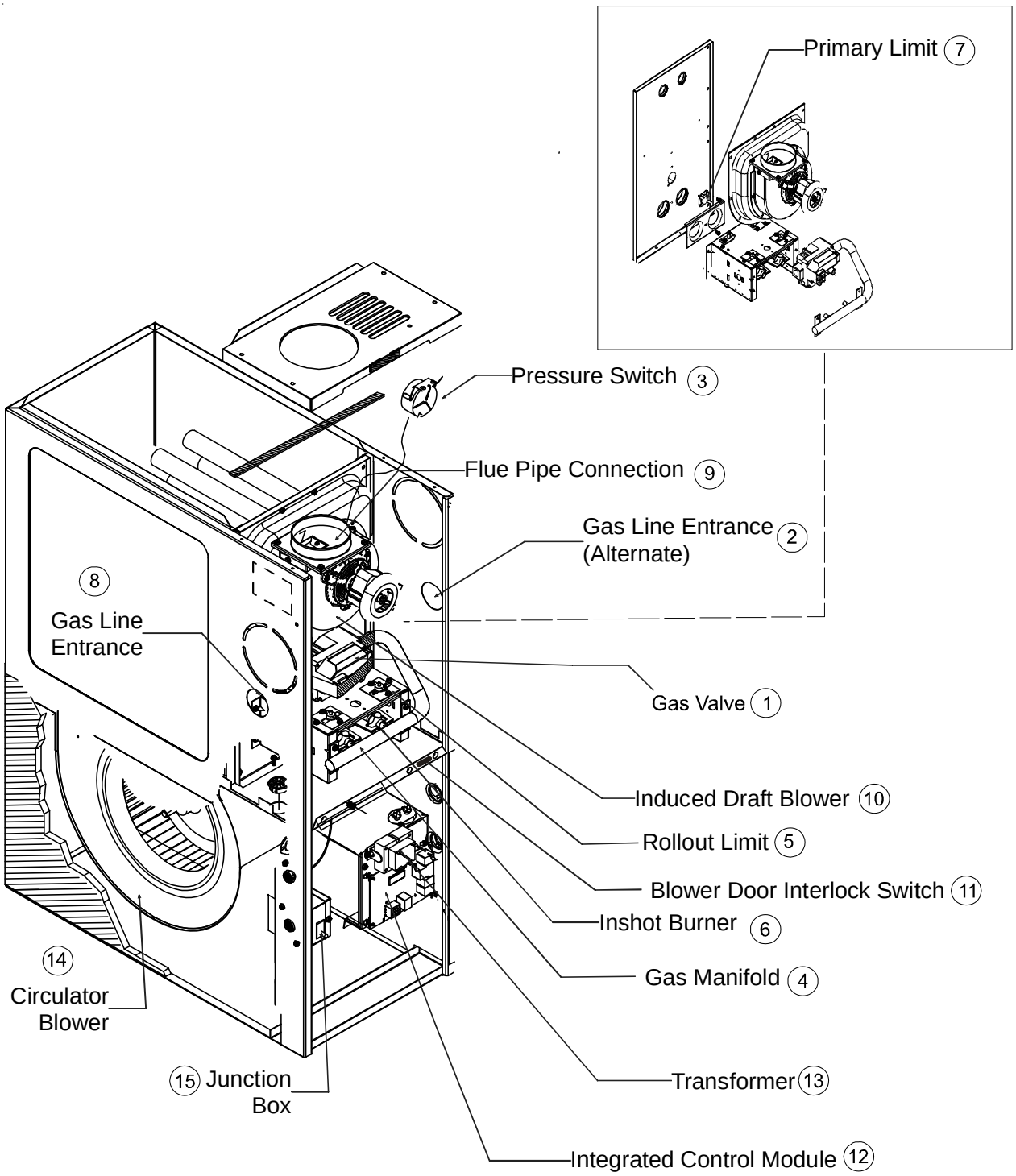
INPUT PER BURNER - 22,500 BTUH NATURAL GAS / 20,000 BTUH L.P.								
	ELEVATION ABOVE SEA-LEVEL (FEET)							
	2000	**3000**	**4000**	**4500**	**5000**	**6000**	**7000**	**8000**
US BURNER ORIFICE	44/55	44/55	45/56		45/56	46/57	47/58	47/58
CANADA BURNER ORIFICE	44/55			47/57				

HA-02 HIGH ALTITUDE CONVERSION KIT REQUIRED

Tabled data is based upon the furnace input being reduced for altitudes above sea level. U.S. 4% per 1,000 feet. Canada 10% derate for 2,000-4,000 feet.

High altitude kits are purchased according to the installation altitude and usage of either natural or propane gas. Refer to the chart above for a tabular listing of appropriate altitude ranges and corresponding manufacturer's high altitude Natural Gas and Propane Gas kits. For a tabular listing of appropriate altitude ranges and corresponding manufacturer's High Altitude Pressure Switch kits, refer to either the *Pressure Switch Trip Points & Usage Chart* in this manual or the *Accessory Charts* in Service Instructions.

COMPONENT IDENTIFICATION

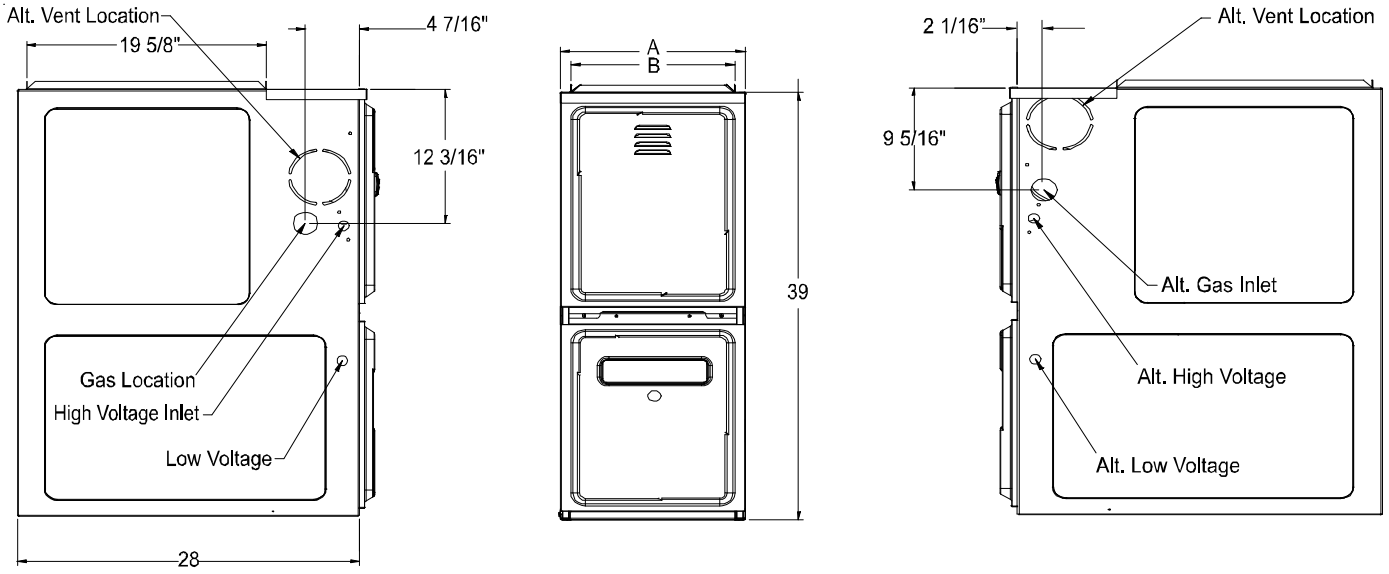


Upflow/Horizontal

1 Gas Valve
2 Gas Line Entrance (Alternate)
3 Pressure Switch(es)
4 Gas Manifold
5 Rollout Limit
7 Primary Limit
8 Gas Line Entrance
9 Flue Pipe Connection (Alternate)
10 Induced Draft Blower
11 Blower Door Interlock Switch
12 Integrated Control Module (with fuse and diagnostic LED)
13 Transformer (40 VA)
14 Circulator Blower
15 Junction Box

PRODUCT DIMENSIONS

GMH8



UNITS	A	B
GMH80453AN** GMH80703AN**	14	12.5
GMH80704BN** GMH80903BN** GMH80904BN**	17.5	16
GMH80905CN** GMH81155CN**	21	19.5
GMH81405DN**	24.5	23

All dimensions are in inches.

PRODUCT DESIGN

PRESSURE SWITCH TRIP POINTS AND USAGE CHART SQUARE NOSE		
MODEL	**TRIP POINT ID BLOWER PRESSURE SWITCH**	**ID BLOWER PRESSURE SWITCH PART #**
GMH80453AN**	-0.60	B1370142
GMH80703AN**	-0.60	B1370142
GMH80704BN**	-0.60	B1370142
GMH80903BN**	-0.60	B1370142
GMH80904BN**	-0.60	B1370142
GMH80905CN**	-0.70	B1370158
GMH81155CN**	-0.70	B1370158
GMH81405DN**	-0.75	013070159

PRESSURE SWITCH TRIP POINTS AND USAGE CHART ROUND NOSE		
MODEL	**TRIP POINT ID BLOWER PRESSURE SWITCH**	**ID BLOWER PRESSURE SWITCH PART #**
GMH80453AN**	-0.60	B1370142
GMH80703AN**	-0.60	B1370142
GMH80704BN**	-0.47	B1370176
GMH80903BN**	-0.75	B1370179
GMH80904BN**	-0.75	B1370179
GMH80905CN**	-0.60	B1370142
GMH81155CN**	-0.70	B1370158
GMH81405DN**	-0.60	013070142

For installaions in Canada, the GMH8 furnace is certified only to 4,500 ft.

* Negative pressure readings are in inches of water column (*w.c.)

T.O.D. PRIMARY LIMIT					
Part Number	**B1370190**	**B1370187**	**B1370188**	**B1370198**	**B1370189**
Open Setting (°F)	210	160	170	150	200
GMH80453AN**	1	---	---	---	---
GMH80703AN**	---	1	---	---	---
GMH80704BN**	---	---	1	---	---
GMH80903BN**	---	---	---	1	---
GMH80904BN**	---	---	1	---	---
GMH80905CN**	---	---	---	---	1
GMH81155CN**	---	---	---	1	---
GMH81405DN**	---	---	---	1	---

ROLLOUT LIMIT SWITCHES	
Part Number	**B1370145**
Open Setting (°F)	300
GMH80453AN**	2
GMH80703AN**	2
GMH80704BN**	2
GMH80903BN**	2
GMH80904BN**	2
GMH80905CN**	2
GMH81155CN**	2
GMH81405DN**	2

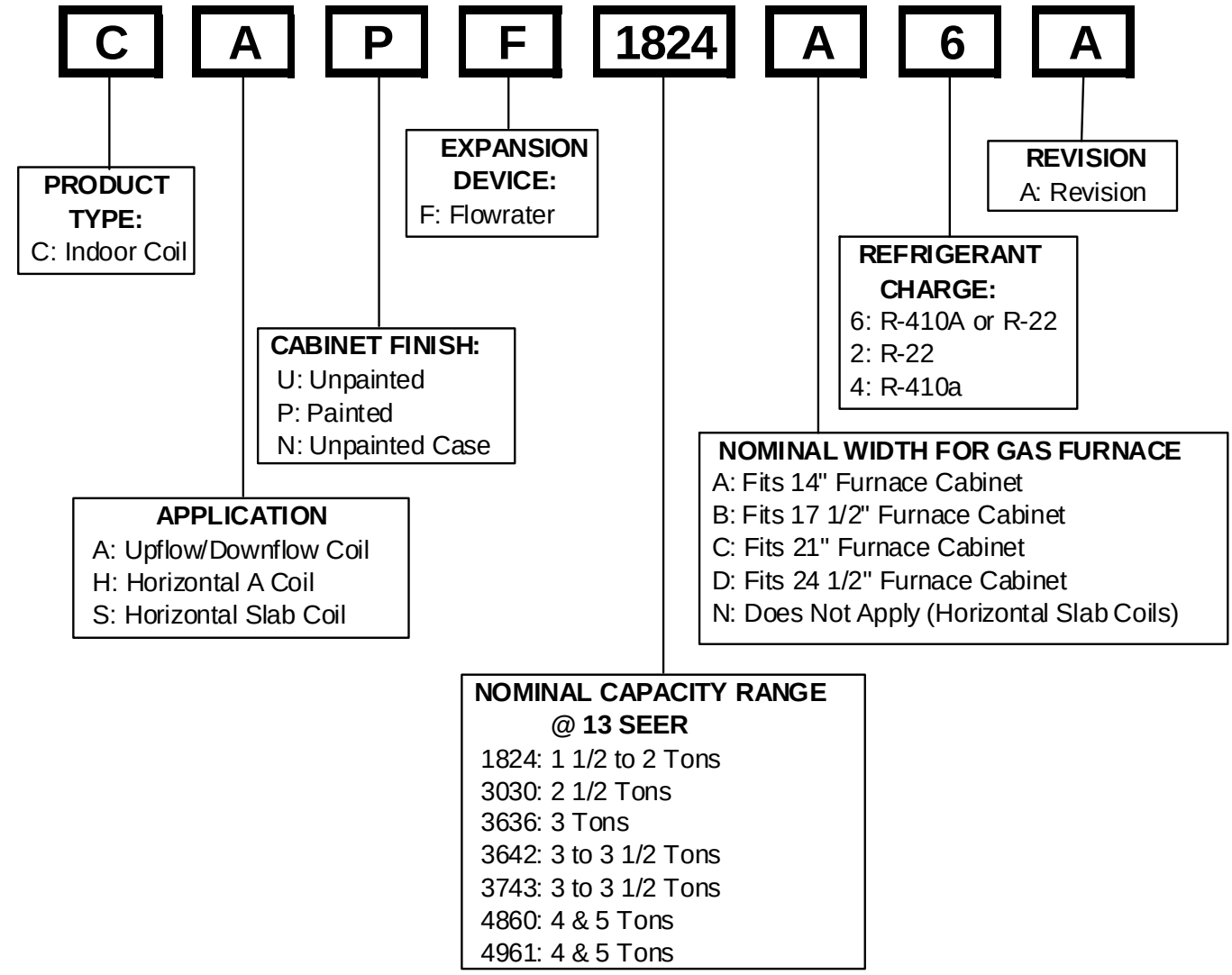
AUXILIARY LIMIT SWITCHES	
Part Number	**B1370155**
Open Setting (°F)	120
GMH80453AN**	1
GMH80703AN**	1
GMH80704BN**	1
GMH80903BN**	1
GMH80904BN**	1
GMH80905CN**	1
GMH81155CN**	1
GMH81405DN**	1

PRODUCT DESIGN

Coil Matches:

A large array of Goodman® brand coils are available for use with the GDH8 furnaces, in dedicated downflow applications. These coils are available in both cased and uncased models (with the option of a field installed TXV expansion device). These 80% furnaces match up with the existing Goodman® brand coils as shown in the chart below.

Coil Matches (Goodman® units using R22 and R-410A):



- All CAPF coils in B, C, & D widths have insulated blank off plates for use with one size smaller furnaces.
- All CAPF coils have a CAUF equivalent.
- All CHPF coils in B, C & D heights have an insulated Z bracket for use with one size smaller furnace.
- All proper coil combinations are subject to being AHRI rated with a matched outdoor unit.

PRODUCT DESIGN

Thermostats:

NOTE: *Complete lineup of thermostats can be found in the Thermostat Specification Sheets.*

Filters:

Filters are required with this furnace and must be provided by the installer. The filters used must comply with UL900 or CAN/ULCS111 standards. Installing this furnace without filters will void the unit warranty.

Upflow Filters

This furnace has provisions for the installation of return air filters at the side and/or bottom return. The furnace will accommodate the following filter sizes depending on cabinet size:

Side Return(s)		
Cabinet Width (in.)	Nominal Filter Size (in.)	Approx. Flow Area (in^2)
All	16 x 25 x 1	400

Bottom Return		
Cabinet Width (in.)	Nominal Filter Size (in.)	Approx. Flow Area (in^2)
14	12 x 25 x 1	300
17-1/2	14 x 25 x 1	350
21	16 x 25 x 1	400
24-1/2	20 x 25 x 1	500

Refer to Minimum Filter Area tables to determine filter area requirement. **NOTE:** Filters can also be installed elsewhere in the duct system such as a central return.

MINIMUM FILTER SIZES		
FURNACE INPUT	**FILTER SIZE**	**TYPE**
45M	160 in^2	permanent
70M	241 in^2	permanent
90M	320 in^2	permanent
115M	400 in^2	permanent
140M	370 in^2	permanent
45M	320 in^2	disposable
70M	483 in^2	disposable
90M	640 in^2	disposable
115M	800 in^2	disposable
140M	738 in^2	disposable

PERMANENT NOMINAL 600 F.M. FACE VELOCITY
DISPOSABLE NOMINAL 300 F.M. FACE VELOCITY

PRODUCT DESIGN

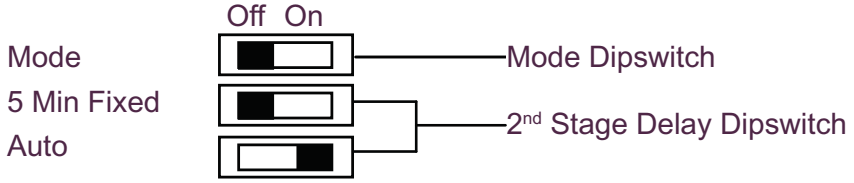
Dual $aver Configuration & Operation

Dual$aver

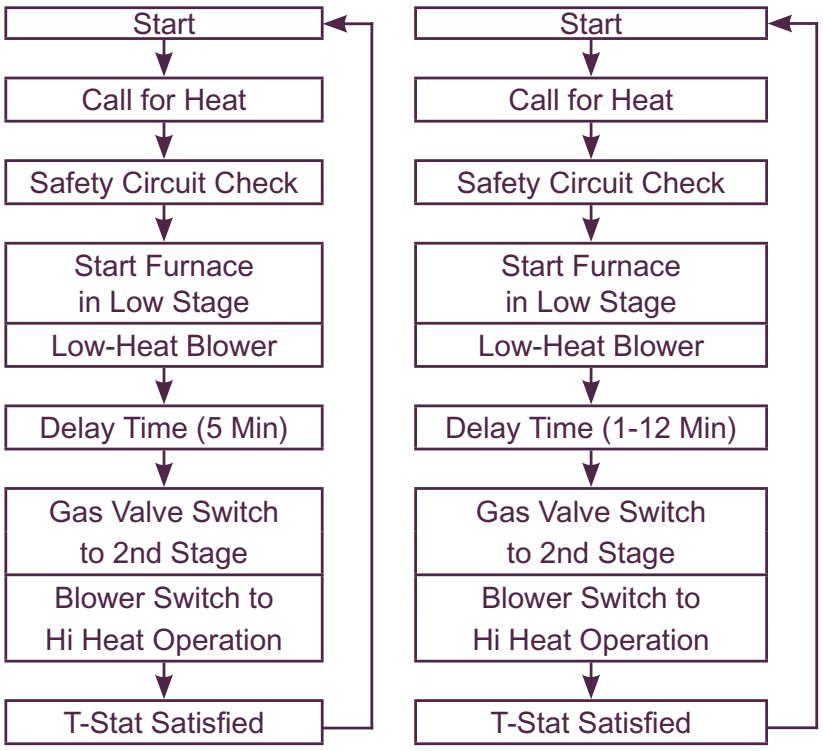
This furnace is capable of the following heating modes:

- Single Stage (Factory Setting)
- Modified Two-Stage
  - » Fixed 5-Min Low Stage
  - » Auto Time (1-12 Min) Low Stage

To change from the factory single-stage operation, adjust the dipswitches on the ignition control as follows:



Note: This furnace is designed to be used with a single-stage room thermostat.



FURNACE SPECIFICATIONS

MODEL	GMH80453AN*	GMH80703AN*	GMH80704BN*	GMH80903BA	GMH80904BN*	GMH80905CN*	GMH81155CN*	GMH81405DN*
Input, Natural Gas (BTUH)	45,000	70,000	70,000	90,000	90,000	90,000	115,000	140,000
Output, Natural Gas (BTUH) [1]	36,000	56,000	56,000	72,000	72,000	72,000	92,000	112,000
Output, LP (BTUH)	32,000	48,000	48,000	64,000	64,000	64,000	80,000	96,000
A.F.U.E.	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
Rated External Static (" w.c.)	0.20 - 0.50	0.20 - 0.50	0.20 - 0.50	0.20 - 0.50	0.20 - 0.50	0.20 - 0.50	0.20 - 0.50	0.20 - 0.50
Temperature Rise (°F)	25 - 55	25 -55	20 - 50	30 - 60	35 - 65	35 - 65	35 - 65	40 - 70
Pressure Switch Trip Point (" w.c.)	-0.60	-0.60	-0.60	-0.60	-0.60	-0.70	-0.70	-1.35
Blower Wheel (D" x W")	10x6	10x6	10x8	10x8	10x8	10x10	10x10	10x10
Blower Horsepower	1/3	1/3	1/2	1/3	1/2	1/2	1/2	3/4
Blower Speeds	4	4	4	4	4	4	4	4
Max CFM @ 0.5 E.S.P.	1344	1273	1897	1493	1895	2051	2076	2152
Power Supply (Volts/Hz/Ph)	115/60/1	115/60/1	115/60/1	115/60/1	115/60/1	115/60/1	115/60/1	115/60/1
Minimum Circuit Ampacity (MCA) [2]	8.1	8.1	12.5	8.1	12.5	12.5	12.5	14.7
Maximum Overcurrent Device [3]	15	15	15	15	15	15	15	15
Transformer (VA)	40	40	40	40	40	40	40	40
ID Blower Pressure Switch Trip Point (" w.c.) Square Nose Blowers	-.60	-.60	-.60	-.60	-.60	-.70	-.70	-.75
ID Blower Pressure Switch Trip Point (" w.c.) Round Nose Blowers	-.60	-.60	-.47	-.75	-.75	-.60	-.70	-.60
Primary Limit Setting (°F)	210	160	170	150	170	200	150	150
Auxiliary Limit Setting (°F)	120	120	120	120	120	120	120	120
Rollout Limit Setting (°F)	300	300	300	300	300	300	300	300
Fan Delay On Heating	30	30	30	30	30	30	30	30
Off Heating *	150	150	150	150	150	150	150	150
Fan Delay On Cooling	5	5	5	5	5	5	5	5
Off Cooling	45	45	45	45	45	45	45	45
Fan Delay On - Fan Only	5	5	5	5	5	5	5	5
Gas Supply Pressure (Natural/Propane) (" w.c.)	7 / 11	7 / 11	7 / 11	7 / 11	7 / 11	7 / 11	7 / 11	7 / 11
Manifold Pressure (Natural/Propane) (" w.c.)	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10
Orifice Size (Natural/Propane)	43 / 55	43 / 55	43 / 55	43 / 55	43 / 55	43 / 55	43 / 55	43 / 55
Number of Burners	2	3	3	4	4	4	5	6
Vent Connector Diameter (inches)	4	4	4	4	4	4	4	4
Shipping Weight (lbs.)	120	130	143	153	153	163	163	183

* Low NOx model available

1. These furnaces are manufactured for natural gas operation. Optional kits are available for conversion to propane operation.
2. Minimum Circuit Ampacity calculated as: (1.25 x Circulator Blower Amps) + I.D. Blower Amps. Wire sizes should be determined in accordance with National Electrical Codes.Extensive wire runs will require larger wire sizes.
3 Maximum Overcurrent protections Device refers to maximumrecommended fuse or circuit breaker size. May use time delay fuses or HACR-type circuit breakers of the same sizes as noted.

NOTES:

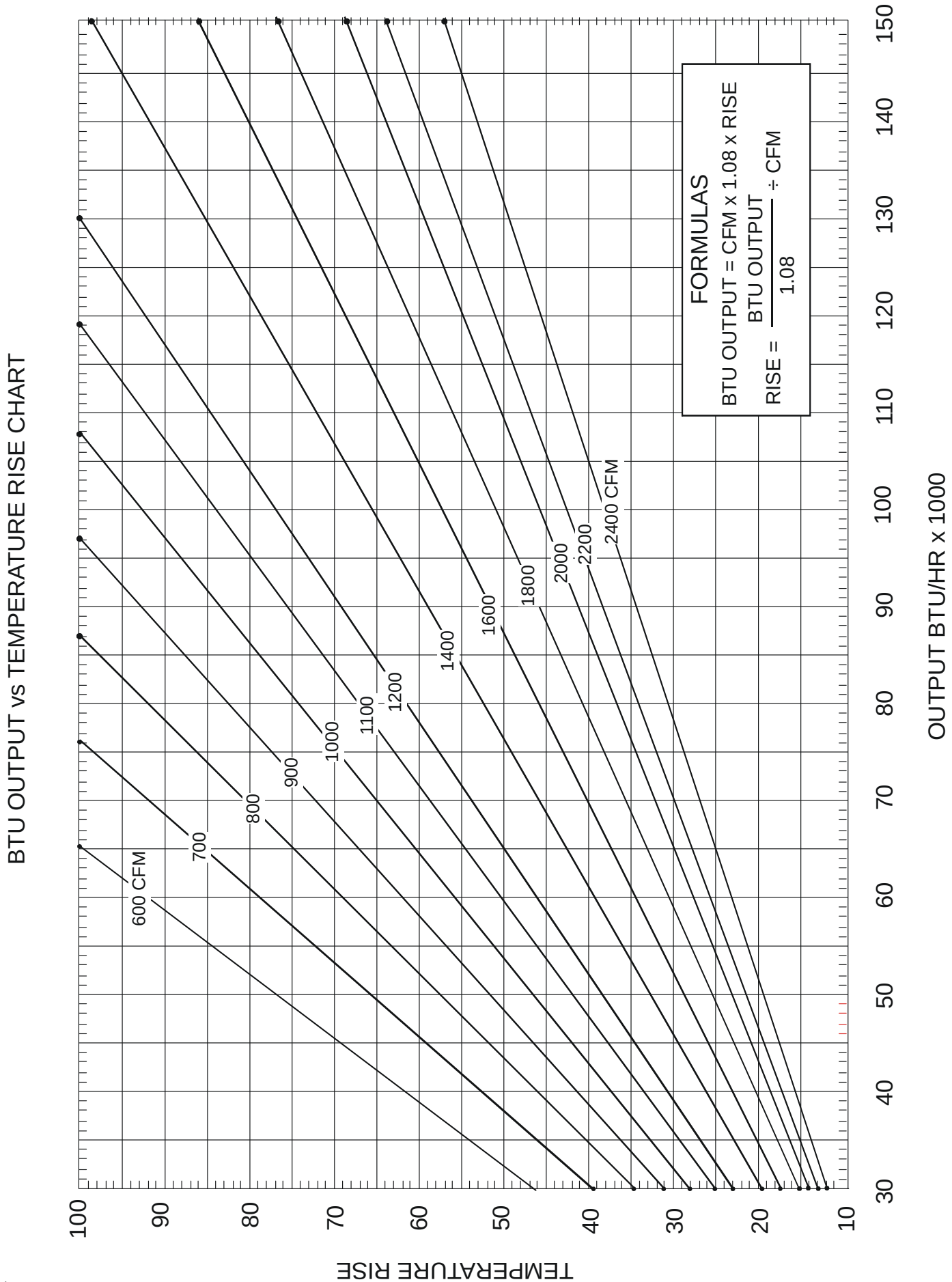
1. For elevations above 2000 feet the rating should be reduced by 4% for each 1000 feet above sea level. The furnace must not be derated, orifice changes should only be made if necessary for altitude.
2. The total heat loss from the structure as expressed in TOTAL BTU/HR must be calculated by the manufacturers method or in accordance with the "A.S.H.R.A.E. GUIDE" or "MANUAL J-LOAD CALCULATIONS" published by the AIR CONDITIONING CONTRACTORS OF AMERICA. The total heat loss calculated should be equal to or less than the heating capacity. Output based on D.O.E. test procedures, steady state efficiency times output.

BLOWER PERFORMANCE SPECIFICATIONS

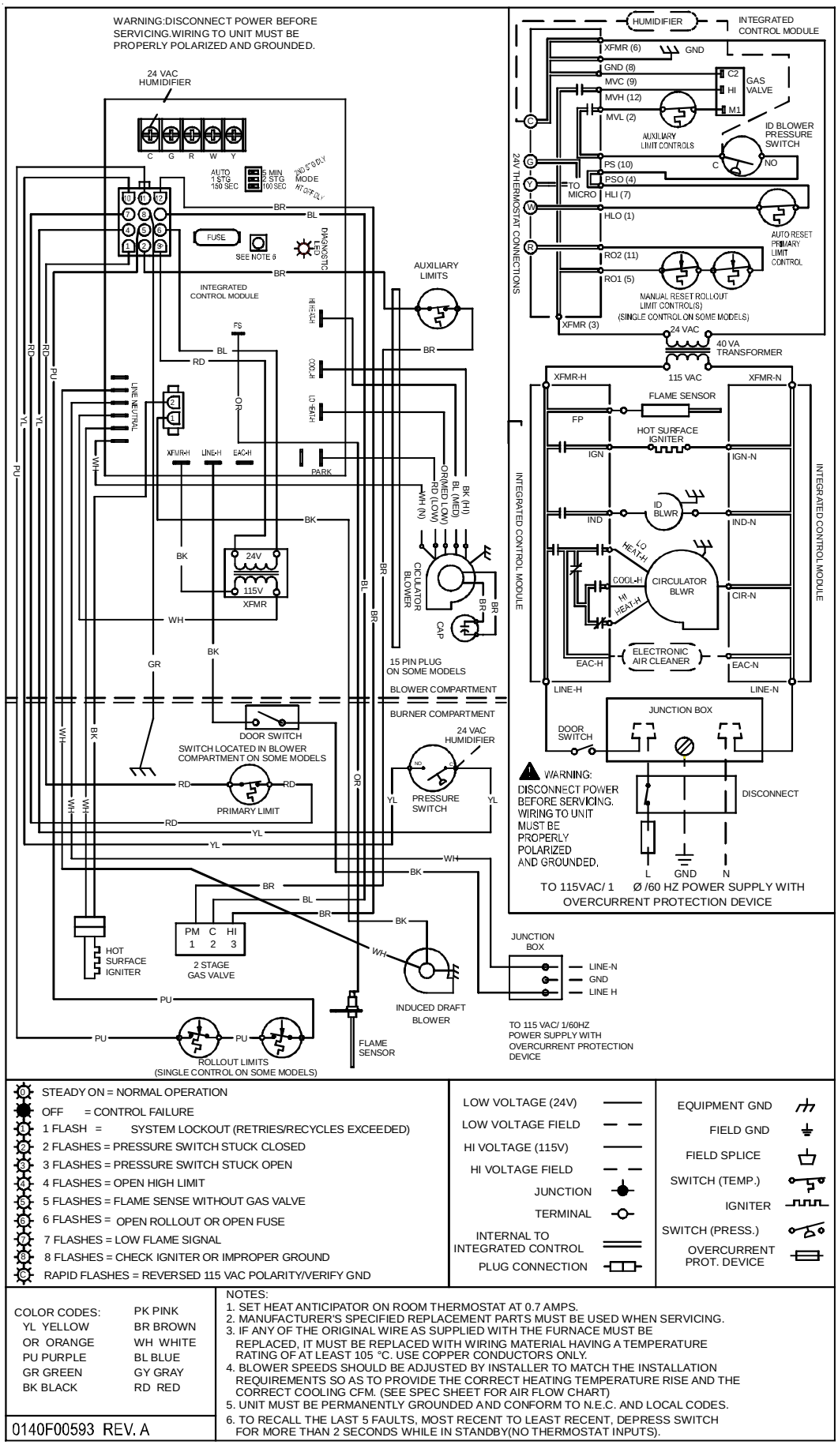
BLOWER PERFORMANCE (CFM & Temperature Rise vs. External Static Pressure)															
Model (Heating Speed As Shipped)	Motor Speed	Tons AC at 0.5" ESP	EXTERNAL STATIC PRESSURE (Inches Water Column)												
			0.1		0.2		0.3		0.4		0.5		0.6	0.7	0.8
			CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	CFM	CFM
GMH80453AN** (MEDIUM)	HIGH	3.0	1555	---	1511	---	1459	---	1392	---	1344	25	1279	1201	1120
	MED	2.5	1165	28	1123	30	1100	30	1090	30	1048	32	1017	970	903
	MED-LO	2.0	927	36	907	37	889	37	863	38	853	39	822	800	746
	LOW	1.5	699	47	694	48	668	50	645	51	636	52	592	566	524
GMH80703AN** (MEDIUM)	HIGH	3.0	1437	36	1310	39	1295	40	1310	39	1273	41	1202	1129	1039
	MED	2.5	1127	46	1100	47	1095	47	1075	48	1050	49	1018	967	904
	MED-LO	2.0	895	---	917	---	878	---	867	---	853	---	830	786	743
	LOW	1.5	694	---	681	---	663	---	640	---	625	---	591	562	522
GMH80704BN** (MEDIUM)	HIGH	4.0	2234	23	2151	24	2076	25	1990	26	1897	27	1803	1710	1569
	MED	3.5	1676	31	1653	31	1648	31	1581	33	1555	33	1492	1414	1.35
	MED-LO	3.0	1342	38	1335	39	1321	39	1313	39	1291	40	1261	1215	1149
	LOW	2.5	1089	47	1085	48	1078	48	1071	48	1057	49	1040	986	932
GMH80903BN** (MEDIUM)	HIGH	3.0	1593	42	1561	43	1567	42	1543	43	1493	44	1420	1343	1230
	MED	2.5	118/6	56	1160	57	1160	57	1135	58	1118	59	1089	1045	983
	MED-LO	2.0	957	---	940	---	937	---	921	---	895	---	861	826	778
	LOW	1.5	742	---	710	---	684	---	663	---	635	---	611	578	476
GMH80904BN** (MEDIUM)	HIGH	4.0	2182	---	2127	31	2056	32	1974	33	1895	35	1809	1715	1588
	MED	3.5	1645	40	1628	40	1615	40	1597	41	1541	43	1491	1440	1350
	MED-LO	3.0	1320	49	1305	49	1310	49	1310	50	1295	51	1267	1217	1139
	LOW	2.5	1063	60	1061	60	1057	61	1056	61	1039	61	1025	1005	948
GMH80905CN** (MEDIUM)	HIGH	5.0	2334	---	2334	---	2284	---	2135	---	2051	35	1910	1748	1605
	MED	4.0	1754	39	1735	39	1728	40	1685	40	1628	42	1551	1469	1346
	MED-LO	3.5	1367	47	1380	47	1371	47	1374	48	1335	50	1293	1246	1165
	LOW	3.0	1098	58	1109	59	1109	59	1088	60	1066	62	1050	998	916
GMH81155CN** (MEDIUM)	HIGH	5.0	2481	---	2395	35	2288	37	2217	38	2076	41	1999	1858	1732
	MED	4.0	1738	49	1732	49	1709	50	1686	50	1639	52	1585	1492	1385
	MED-LO	3.5	1364	62	1378	62	1372	62	1372	62	1350	63	1313	1261	1128
	LOW	3.0	1137	---	1142	---	1140	---	1114	---	1090	---	1056	954	860
GMH81405DN** (MEDIUM)	HIGH	5.0	2554	41	2435	43	2375	44	2240	47	2152	49	2002	1883	1744
	MED	4.0	1846	57	1773	59	1762	60	1712	61	1672	63	1583	1526	1442
	MED-LO	3.5	1520	69	1500	70	1483	---	1470	---	1435	---	1373	1308	1245
	LOW	3.0	1301	---	1274	---	1260	---	1231	---	1207	---	1177	1093	931

1. CFM in chart is without filters(s). Filters do not ship with this furnace, but must be provided by the installer.
2. All furnaces ship as high speed cooling. Installer must adjust blower cooling speed as needed.
3. For most jobs, about 400 CFM per ton when cooling is desirable.
4. INSTALLATION IS TO BE ADJUSTED TO OBTAIN TEMPERATURE RISE WITHIN THE RANGE SPECIFIED ON THE RATING PLATE.
5. The chart is for information only. For satisfactory operation, external static pressure must not exceed value shown on rating plate. The shaded area indicates ranges in excess of maximum external static pressure allowed when heating. The data for 0.6" w.c. to 0.8" w.c. is shown for air conditioning purposes only.
6. The dashed (---) areas indicate a temperature rise not recommended for this model.
7. The above chart is for U.S. furnaces installed at 0-4000 feet. At higher altitudes, a properly derated unit will have approximately the same temperature rise at a particular CFM, while the ESP at that CFM will be lower.

BLOWER PERFORMANCE SPECIFICATIONS



WIRING DIAGRAMS GMH8



HIGH VOLTAGE!
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

WARNING

- STEADY ON = NORMAL OPERATION
- OFF = CONTROL FAILURE
- 1 FLASH = SYSTEM LOCKOUT (RETRIES/RECYCLES EXCEEDED)
- 2 FLASHES = PRESSURE SWITCH STUCK CLOSED
- 3 FLASHES = PRESSURE SWITCH STUCK OPEN
- 4 FLASHES = OPEN HIGH LIMIT
- 5 FLASHES = FLAME SENSE WITHOUT GAS VALVE
- 6 FLASHES = OPEN ROLLOUT OR OPEN FUSE
- 7 FLASHES = LOW FLAME SIGNAL
- 8 FLASHES = CHECK IGNITER OR IMPROPER GROUND
- RAPID FLASHES = REVERSED 115 VAC POLARITY/VERIFY GND

- LOW VOLTAGE (24V)
- LOW VOLTAGE FIELD
- HI VOLTAGE (115V)
- HI VOLTAGE FIELD
- JUNCTION
- TERMINAL
- INTERNAL TO INTEGRATED CONTROL
- PLUG CONNECTION

- EQUIPMENT GND
- FIELD GND
- FIELD SPLICE
- SWITCH (TEMP.)
- IGNITER
- SWITCH (PRESS.)
- OVERCURRENT PROT. DEVICE

COLOR CODES:

YL YELLOW	PK PINK
OR ORANGE	BR BROWN
PU PURPLE	WH WHITE
GR GREEN	BL BLUE
BK BLACK	GY GRAY
	RD RED

0140F00593 REV. A

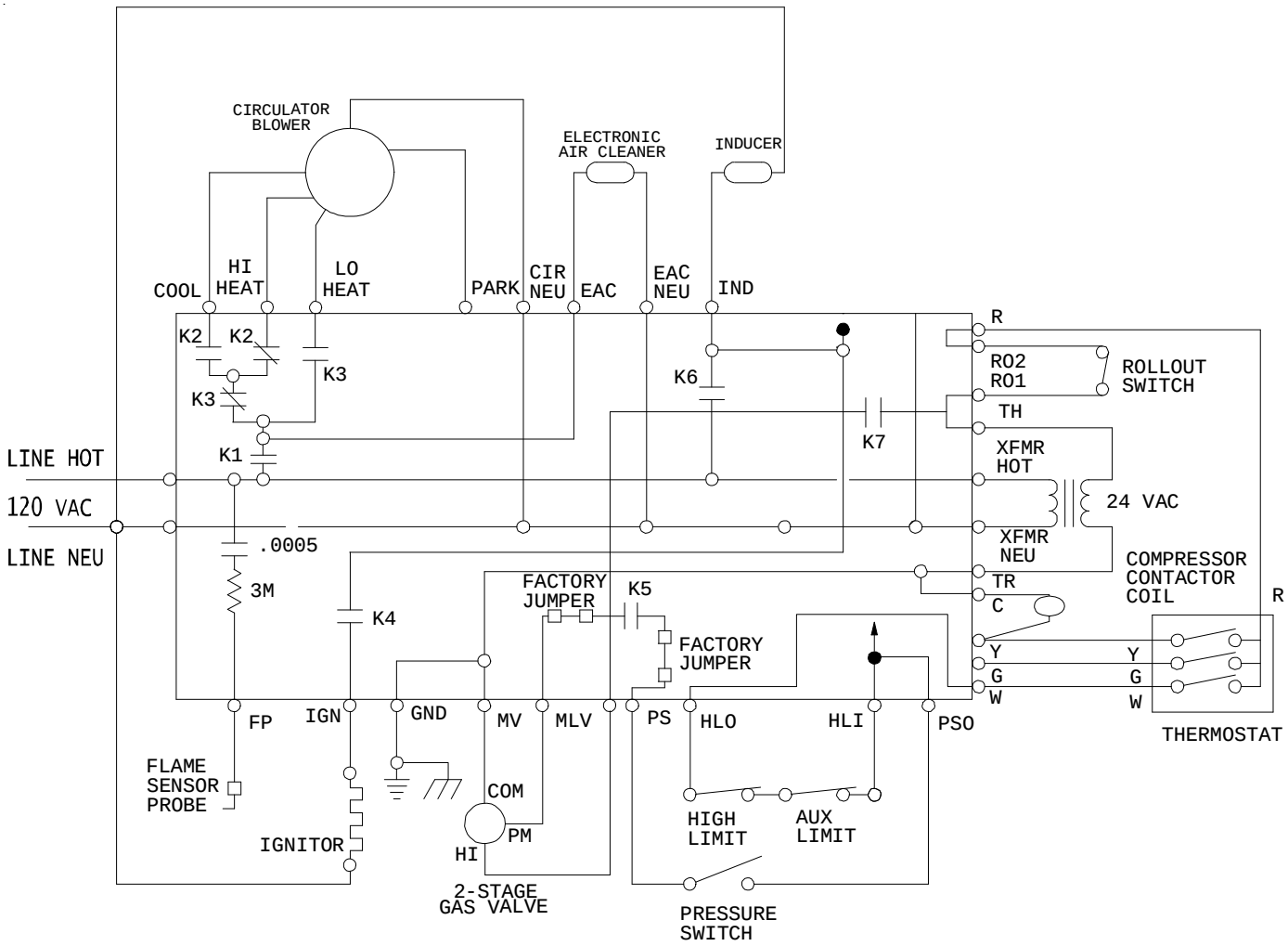
NOTES:
1. SET HEAT ANTICIPATOR ON ROOM THERMOSTAT AT 0.7 AMPS.
2. MANUFACTURER'S SPECIFIED REPLACEMENT PARTS MUST BE USED WHEN SERVICING.
3. IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE FURNACE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105 °C. USE COPPER CONDUCTORS ONLY.
4. BLOWER SPEEDS SHOULD BE ADJUSTED BY INSTALLER TO MATCH THE INSTALLATION REQUIREMENTS SO AS TO PROVIDE THE CORRECT HEATING TEMPERATURE RISE AND THE CORRECT COOLING CFM. (SEE SPEC SHEET FOR AIR FLOW CHART)
5. UNIT MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL CODES.
6. TO RECALL THE LAST 5 FAULTS, MOST RECENT TO LEAST RECENT, DEPRESS SWITCH FOR MORE THAN 2 SECONDS WHILE IN STANDBY(NO THERMOSTAT INPUTS).

Wiring is subject to change. Always refer to the wiring diagram on the unit for the most up-to-date wiring.

SCHEMATICS

WARNING

HIGH VOLTAGE!
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



TYPICAL SCHEMATIC
GMH8 ____ MODEL FURNACES**
WR 50M56-289 INTEGRATED IGNITION CONTROL

This schematic is for reference only. Not all wiring is as shown above. Always refer to the appropriate wiring diagram for the unit being serviced.