

HEATING INPUT: 60,000–100,000 BTU/H

TWO-STAGE CONVERTIBLE, MULTI-SPEED ECM GAS FURNACE 80% AFUE



Contents

Nomenclature	2
Product Specifications	3
Dimensions	4
Airflow Data	5
Wiring Diagrams	6
Accessories	8
Minimum Filter Sizes	8

Standard Features

- Energy-efficient, multi-speed ECM blower motor
- Heavy-duty aluminized steel dual-diameter, tubular heat exchanger
- Two-stage convertible gas valve automatically adjust to high or low stage
- Durable Silicon Nitride igniter
- Quiet single speed draft inducer
- Self-diagnostic control board with constant memory fault code
- Color-coded low-voltage terminals with provisions for electronic air cleaner and humidifier
- Multi-speed blower motor
- Low continuous fan speed options offer quiet air circulation
- California Low NOx emissions models available
- AHRI Certified; ETL Listed

Cabinet Features

- Multi-position installation: upflow, horizontal left or right with kit
- Cabinet air leakage (Q_{Leak}) $\leq 2\%$
- Convenient left or right connection for gas and electrical service
- Heavy-gauge steel cabinet with durable baked-enamel finish
- Fully insulated heat exchanger and blower section



COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV GL
= ISO 9001 =

COMPANY WITH
ENVIRONMENTAL SYSTEM
CERTIFIED BY DNV GL
= ISO 14001 =

* Complete warranty details available from your local dealer or at www.amana-hac.com. To receive the Lifetime Heat Exchanger Limited Warranty (good for as long as you own your home), 10-Year Unit Replacement Limited Warranty and 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration is not required in California or Québec.

	G	M	E	80	040	3	B	X	**		
	1	2	4	5,6	7,8,9	10	11	12	13,14		
BRAND	G - Amana® Distinctions® Brand										ENGINEERING
Major / Minor Revisions * Not used for inventory control.											
CONFIGURATION	M - Upflow/Horizontal C - Downflow/Horizontal										NOx
N - Natural Gas X - Low NOx											
GAS VALVE	H - Convertible Two-Stage, Single Phase S - Single Stage, Single Speed										CABINET WIDTH
A - 14" C - 21" B - 17½" D - 24½"											
AFUE	80 - 80% AFUE										MAXIMUM CFM
3 - 1200 CFM 4 - 1600 CFM 5 - 2000 CFM											
MBTU/H	040 - 40,000 BTU/h 100 - 100,000 BTU/h 060 - 60,000 BTU/h 120 - 120,000 BTU/h 080 - 80,000 BTU/h 140 - 140,000 BTU/h										

	GME8 0603B*B	GME8 0805C*B	GME8 0805D*A	GME8 1005C*B
PERFORMANCE DATA				
Input ¹	60,000	80,000	80,000	100,000
Output ¹	48,000	64,000	64,000	80,000
LP Output ¹	48,000	64,000	64,000	80,000
AFUE ²	80	80	80	80
Tons AC @ 0.5" ESP	3	5	5	5
Temperature Rise Range (°F)	20 - 50	35 - 65	30 - 60	35 - 65
CIRCULATOR BLOWER				
Size (D x W)	10 X 8	10 X 10	10 X 10	10 X 10
HP	1/2	1	1	1
Speed	5	5	5	5
Vent Diameter ³	4	4	4	4
No. of Burners	3	4	4	5
ELECTRICAL DATA				
Min. Circuit Ampacity ⁴	8.2	14.8	14.8	14.8
Max. Overcurrent Protection ⁵	15	15	15	15
SHIP WEIGHT (LBS)	98	116	123	120

¹ Low-fire rate is 75% of high-fire rate.

² DOE AFUE based upon Isolated Combustion System (ICS).

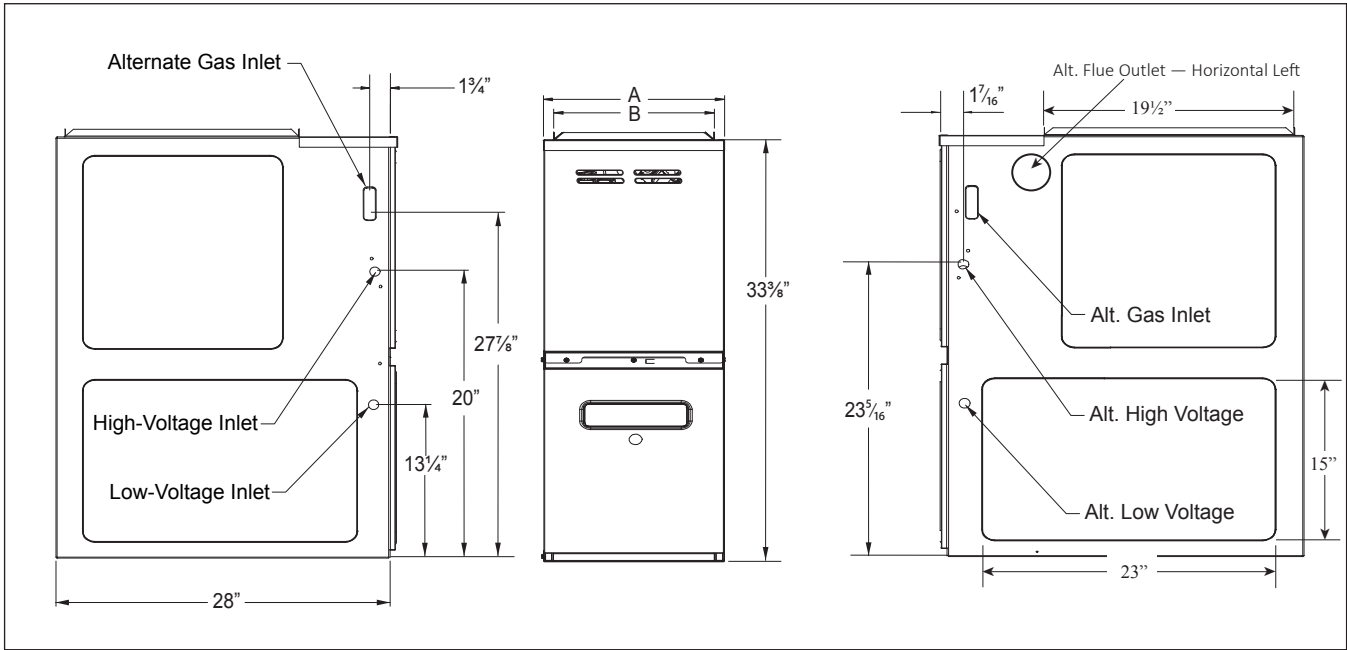
³ Vent diameter may vary depending upon vent length. Refer to the latest editions of the National Fuel Gas Code NFPA 54/ANSI Z223.1 (in the USA) and the Canada National Standard of Canada, CAN/CSA B149.1 and CAN/CSA B142.2 (in Canada).

⁴ Minimum Circuit Ampacity = (1.25 x Circulator Blower Amps) + ID Blower amps. Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

⁵ Refers to maximum recommended fuse or circuit breaker size; may use fuses or HACR-type circuit breakers of the same size as noted.

NOTES

- All furnaces are manufactured for use on 115 VAC, 60 Hz, single phase electrical supply.
- Gas Service Connection ½" FPT
- Important: It is required to size overcurrent protection device and wires properly and make electrical connections in accordance with the National Electrical Code and/or all existing local codes.



MODEL	A	B
GME80603B**	17 1/2"	16"
GME80805C**	21"	19 1/2"
GME80805D**	24 1/2"	23"
GME81005C**	21"	19 1/2"

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS

SIDES	REAR	FRONT	BOTTOM	VENT		TOP
				SW	B	
1	0	3	C	6	1	1

C = If placed on combustible floor, the floor MUST be wood ONLY.

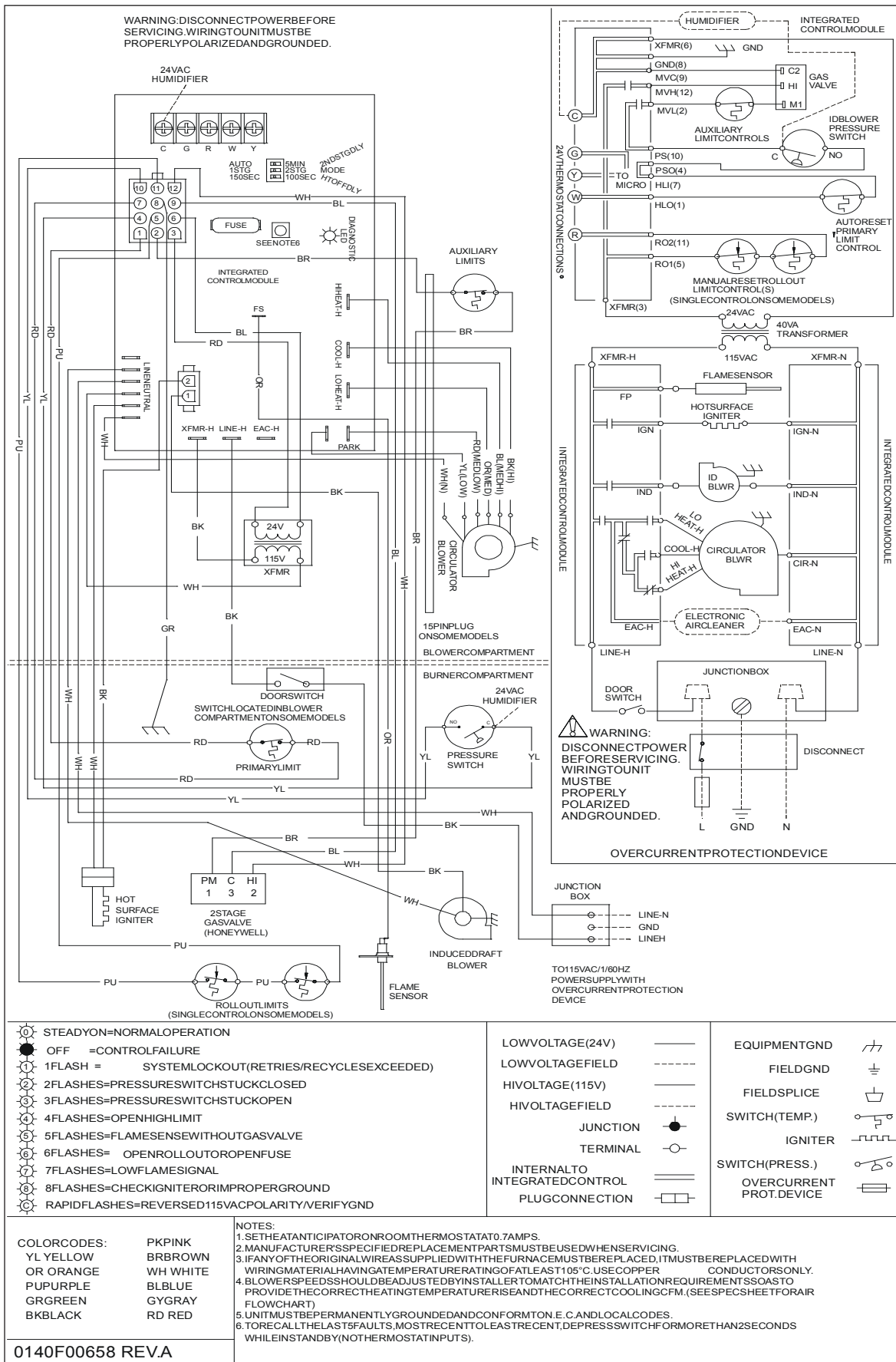
NOTES:

- For servicing or cleaning, a 24" front clearance is recommended.
- Unit connections (electrical, flue, and drain) may necessitate greater clearances than the minimum clearances listed above.
- In all cases, accessibility clearance must take precedence over clearances from the enclosure where accessibility clearances are greater.
- Refer to the appropriate USA and Canadian codes:
 - ◊ In the USA: the National Fuel Gas Code NFPA 54 / ANSI Z223.1
 - ◊ In Canada: the Canada National Standard of Canada, CAN/CSA B149.1 and CAN/CSA B142.2

(CFM & TEMPERATURE RISE VS. EXTERNAL STATIC PRESSURE)															
MODEL	MOTOR SPEED	TONS AC ¹	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
GME8 0603B*B	T1 - Yellow	1.5	875	----	793	----	736	----	674	----	592	----	556	509	460
	T2 - Red	2.0	1,032	43	965	46	914	49	861	----	810	----	756	712	659
	T3 - Orange	2.5	1,217	37	1,153	39	1,098	40	1,051	42	1,009	44	964	918	877
	T4 - Blue	3.0	1,365	33	1,313	34	1,268	35	1,221	36	1,172	38	1,129	1,086	1,054
	T5 - Black	3.5	1,549	29	1,505	30	1,460	30	1,420	31	1,378	32	1,350	1,305	1,268
GME8 0805C*B	T1 - Yellow	2.5	1,176	50	1,115	53	1,044	57	983	60	929	64	863	810	750
	T2 - Red	3.0	1,319	45	1,262	47	1,195	50	1,143	52	1,093	54	1,035	976	912
	T3 - Orange	3.5	1,562	38	1,506	39	1,444	41	1,396	42	1,340	44	1,296	1,254	1,197
	T4 - Blue	4.0	1,713	35	1,647	36	1,597	37	1,554	38	1,505	39	1,464	1,412	1,368
	T5 - Black	5.0	1,919	---	1,870	---	1,837	---	1,783	---	1,727	---	1,679	1,642	1,608
GME8 0805D*A (Med-Hi)	T1 - Yellow	3.5	1,524	39	1,479	40	1,439	41	1,388	43	1,343	44	1,281	1,243	1,190
	T2 - Red	4.0	1,683	35	1,646	36	1,607	37	1,569	38	1,531	39	1,488	1,441	1,395
	T3 - Orange	4.0	1,884	31	1,832	32	1,849	32	1,765	34	1,724	34	1,692	1,661	1,626
	T4 - Blue	4.0	1,951	30	1,904	31	1,879	32	1,842	32	1,803	33	1,768	1,734	1,687
	T5 - Black	5.0	2,036	29	2,010	29	1,977	30	1,947	30	1,923	31	1,888	1,844	1,816
GME8 1005C*B	T1 - Yellow	3.0	1,304	57	1,256	59	1,213	61	1,166	64	1,117	---	1,042	994	948
	T2 - Red	3.5	1,403	53	1,381	54	1,340	55	1,298	57	1,244	60	1,193	1,134	1,084
	T3 - Orange	4.0	1,515	49	1,487	50	1,443	51	1,405	53	1,369	54	1,320	1,282	1,223
	T4 - Blue	4.0	1,663	45	1,621	46	1,598	46	1,563	47	1,527	49	1,482	1,443	1,396
	T5 - Black	5.0	1,795	41	1,749	42	1,728	43	1,694	44	1,669	44	1,632	1,605	1,554

¹ @ 0.5" ESP**NOTES**

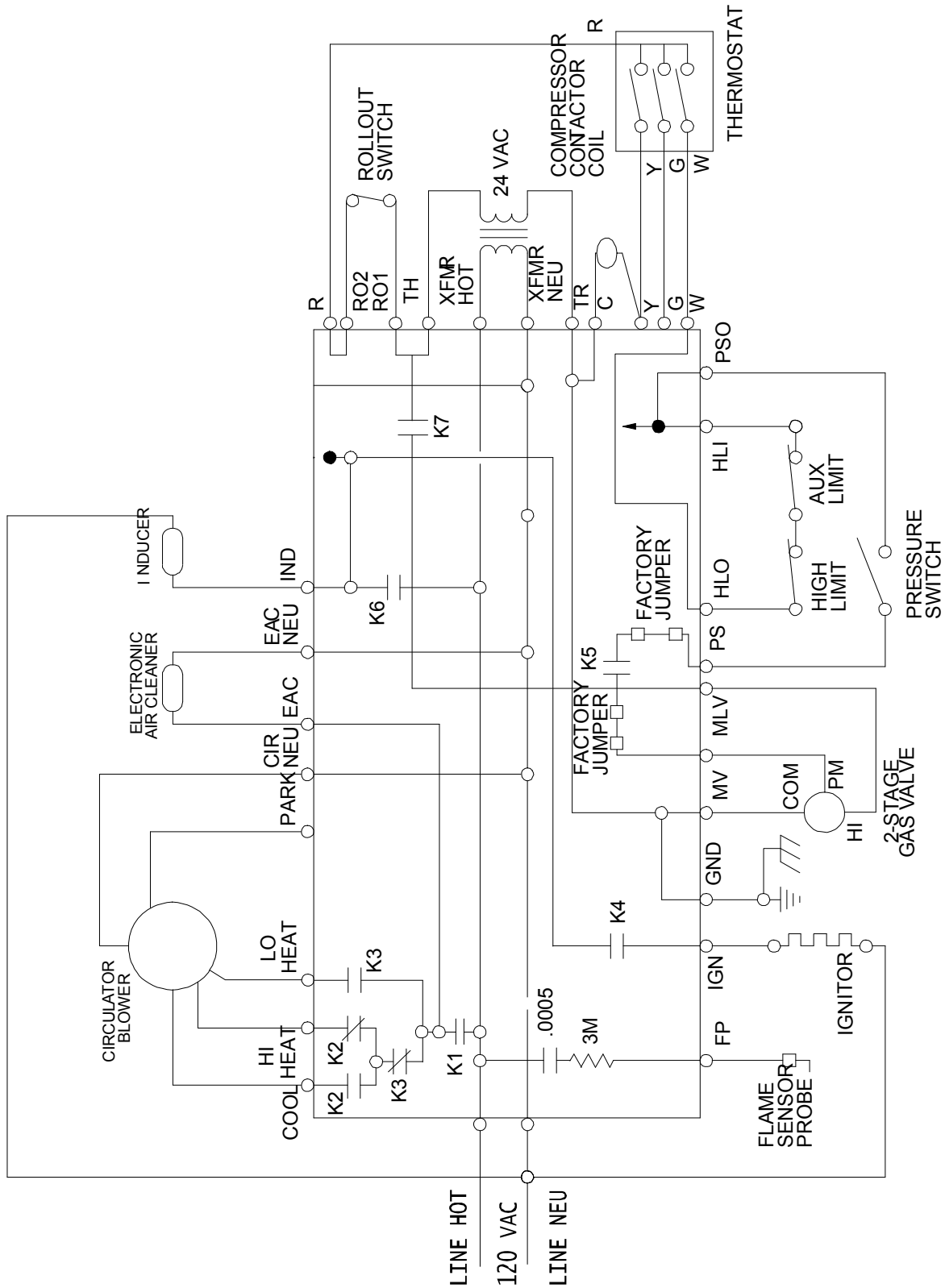
- CFM in chart is without filter(s). Filters do not ship with this furnace, but must be provided by the installer. If the furnace requires two return filters, this chart assumes both filters are installed.
- All furnaces ship as high-speed cooling and medium-speed heating. Installer must adjust blower cooling and heating speed as needed.
- For most jobs, about 350 - 400 CFM per ton when cooling is desirable.
- INSTALLATION IS TO BE ADJUSTED TO OBTAIN TEMPERATURE RISE WITHIN THE RANGE SPECIFIED ON THE RATING PLATE.
- This chart is for information only. For satisfactory operation, external static pressure should not exceed value shown on the rating plate.
- At higher altitudes, a properly derated unit will have approximately the same temperature rise at a particular CFM, while ESP at the CFM will be lower.
- Factory Motor Speed Setting: T1 = 1st Stage Ht, T2 = 2nd Stage Ht, T5 = Cooling
- Temperature rise data is based on second-stage heat. First-stage heat is 75% of rise indicated above.



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

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



Typical Schematic
 GME8 ** Model Furnaces
 WR 50M56-289 Integrated Ignition Control

MODEL	DESCRIPTION
LPM-06 ¹	LP Conversion Kit (Springs & Orifice)
HANG20	High-Altitude Natural Gas Kit (4500+ Ft.)
AFE18-60A	Fossil Fuel Kit

¹ Honeywell or White-Rodgers valves

MINIMUM FILTER SIZES

MODEL #	GME80603B**	GME80805C**	GME80805D**	GME81005C**
Filter Size (in ²)	(1) 16 x 25 (Side) or (1) 14 x 24 (Bottom)	(1) 16 x 25 (Side or Bottom) ¹	(2) 16 x 25 (Side) or (1) 20 x 25 (Bottom)	

Note: Other size filters of equal or greater surface area may be used; filters may also be centrally located.

¹ Use 2 - 16 X 25 filters on side returns or 20 X 25 filter on bottom return if furnace is connected to a cooling unit over 4 tons nominal capacity.