

HEATING INPUT: 60,000–100,000 BTU/H

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



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### 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
- Can no longer be installed in California's South Coast Air Quality Management District (SCAQMD) on or after October 1, 2019.
- AHRI Certified; ETL Listed

### Cabinet Features

- Multi-position installation: upflow, horizontal left or right
- 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

**LIFETIME**  
HEAT EXCHANGER  
LIMITED WARRANTY\*

**10 YEAR**  
UNIT REPLACEMENT  
LIMITED WARRANTY\*

**10 YEAR**  
PARTS LIMITED  
WARRANTY\*



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.goodmanmfg.com](http://www.goodmanmfg.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.

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

|                                          | GME8<br>0603B*B | GME8<br>0805C*B | GME8<br>0805D*A | GME8<br>1005C*B |
|------------------------------------------|-----------------|-----------------|-----------------|-----------------|
| <b>PERFORMANCE DATA</b>                  |                 |                 |                 |                 |
| Input <sup>1</sup>                       | 60,000          | 80,000          | 80,000          | 100,000         |
| Output <sup>1</sup>                      | 48,000          | 64,000          | 64,000          | 80,000          |
| LP Output <sup>1</sup>                   | 48,000          | 64,000          | 64,000          | 80,000          |
| AFUE <sup>2</sup>                        | 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          |
| <b>CIRCULATOR BLOWER</b>                 |                 |                 |                 |                 |
| 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 <sup>3</sup>               | 4               | 4               | 4               | 4               |
| No. of Burners                           | 3               | 4               | 4               | 5               |
| Disposable Filter (in <sup>2</sup> )     | 290             | 480             | 480             | 480             |
| <b>ELECTRICAL DATA</b>                   |                 |                 |                 |                 |
| Min. Circuit Ampacity <sup>4</sup>       | 8.2             | 14.8            | 14.8            | 14.8            |
| Max. Overcurrent Protection <sup>5</sup> | 15              | 15              | 15              | 15              |
| <b>SHIP WEIGHT (LBS)</b>                 | 98              | 116             | 123             | 120             |

<sup>1</sup> Low-fire rate is 75% of high-fire rate.

<sup>2</sup> DOE AFUE based upon Isolated Combustion System (ICS).

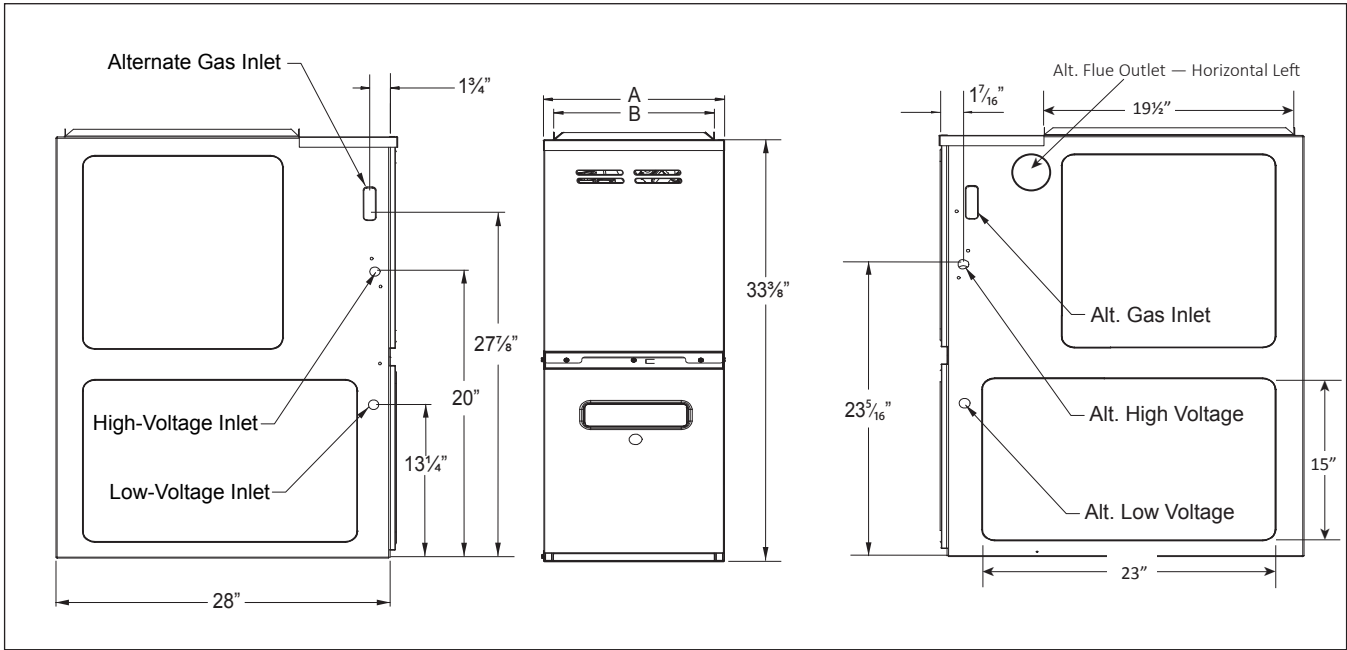
<sup>3</sup> Vent diameter may vary depending upon vent length. Refer to the latest editions of the National Fuel Gas Code NFPA 54/ANSI Z223.1 (in the USA) and the Canada National Standard of Canada, CAN/CSA B149.1 and CAN/CSA B142.2 (in Canada).

<sup>4</sup> 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.

<sup>5</sup> 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.

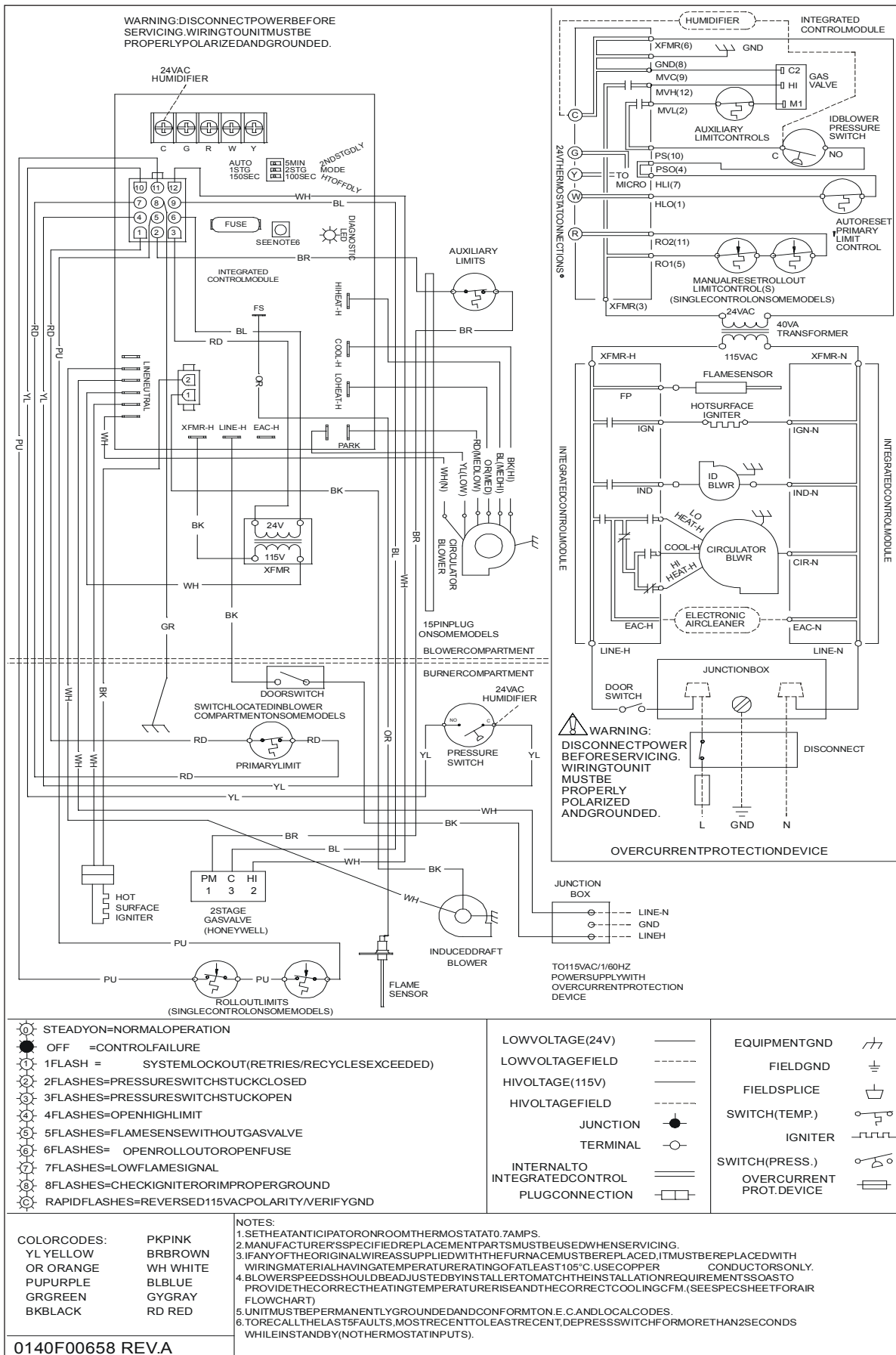
NOTES:

- 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 <sup>1</sup> | 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<br>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<br>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<br>0805D*A<br>(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<br>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 |

<sup>1</sup> @ 0.5" ESP**NOTES**

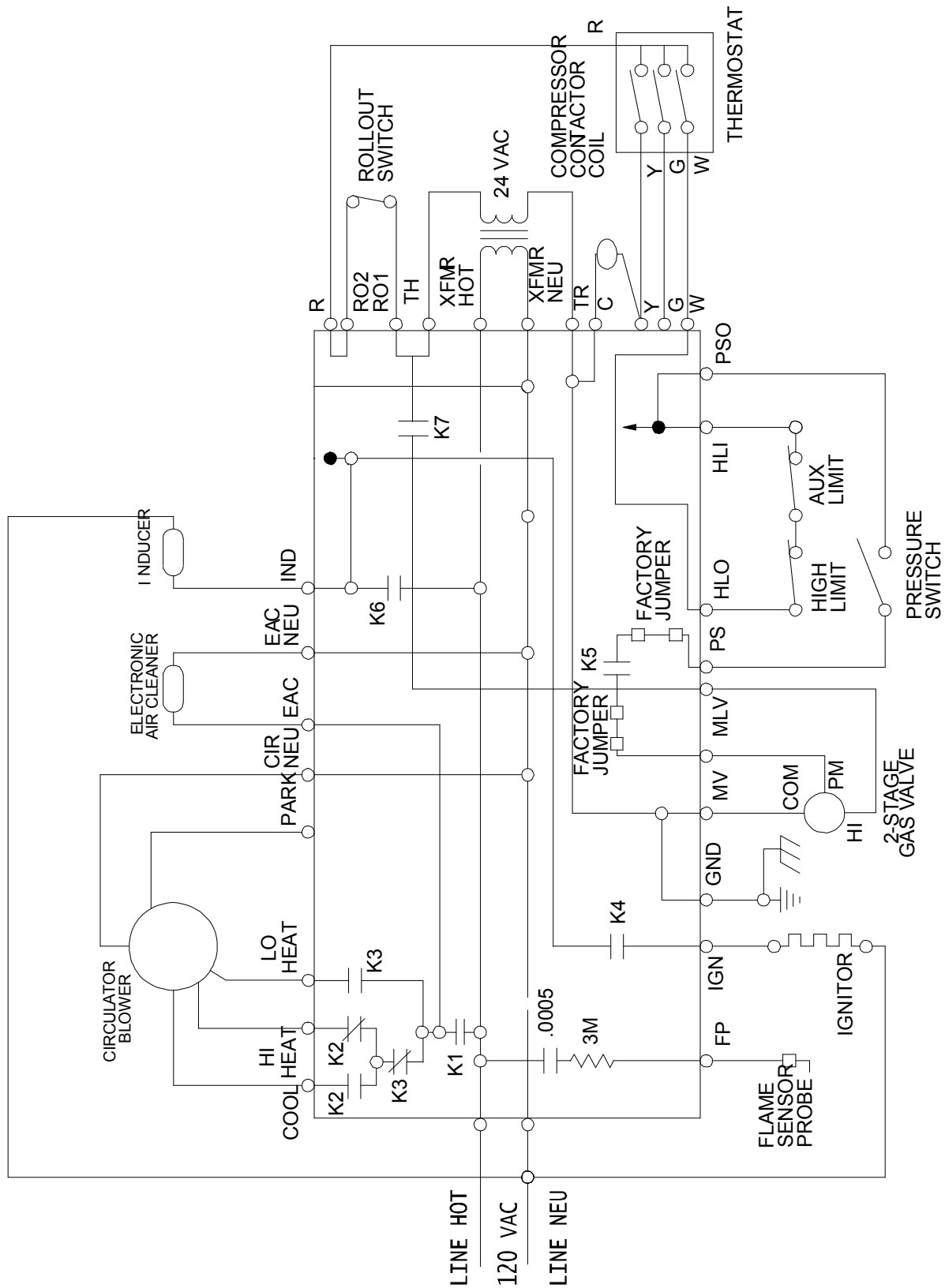
- CFM in chart is without filter(s). Filters do not ship with this furnace, but must be provided by the installer. If the furnace requires two return filters, this chart assumes both filters are installed.
- All furnaces ship as high-speed cooling and medium-speed heating. Installer must adjust blower 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 <sup>1</sup> | LP Conversion Kit (Springs & Orifice)     |
| HANG20              | High-Altitude Natural Gas Kit (4500+ Ft.) |
| AFE18-60A           | Fossil Fuel Kit                           |

<sup>1</sup> Honeywell or White-Rodgers valves

### MINIMUM FILTER SIZES

| MODEL #                        | GME80603B**                                   | GME80805C**                               | GME80805D**                                | GME81005C** |
|--------------------------------|-----------------------------------------------|-------------------------------------------|--------------------------------------------|-------------|
| Filter Size (in <sup>2</sup> ) | (1) 16 x 25 (Side) or<br>(1) 14 x 24 (Bottom) | (1) 16 x 25 (Side or Bottom) <sup>1</sup> | (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.

<sup>1</sup> 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.