



Air Conditioning & Heating

GMVM97 (B) / GCVM97 (B)

HEATING INPUT: 60,000–120,000 BTU/H

MODULATING, VARIABLE-SPEED

ECM GAS FURNACE

UP TO 98% AFUE



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Standard Features

- Integrated communicating ComfortBridge™ Technology
- Commissioning and diagnostics via on board Bluetooth with the CoolCloud phone and tablet application
- Heavy-duty aluminized-steel tubular heat exchanger
- Stainless-steel secondary heat exchanger
- Self-calibrating modulating gas valve auto-configure for each installation
- Durable Silicon Nitride igniter
- Quiet variable-speed induced draft blower
- Self-diagnostic control board with constant memory fault code history output to a dual 7-segment display
- Color-coded low-voltage terminals with provisions for electronic air cleaner
- Efficient and quiet variable-speed airflow system gently ramps up or down according to heating or cooling demand
- Multiple continuous fan speed options offer quiet air circulation
- Auto-Comfort and enhanced dehumidification modes available
- All models comply with California 40 ng/J Low NOx emissions standard
- For installation in California's South Coast Air Quality Management District (SCAQMD) only: This furnace does not meet the SCAQMD Rule 1111 14 ng/J NOx emission limit, and thus is subject to a mitigation fee of up to \$450. This furnace is not eligible for the SCAQMD Clean Air Furnace Rebate Program: www.CleanAirFurnaceRebate.com.
- AHRI Certified; ETL Listed

Cabinet Features

- Designed for multi-position installation — GMVM97: upflow, horizontal left or right GCVM97: downflow, horizontal left or right
- Certified for direct vent (2-pipe) or non-direct vent (1-pipe)
- Easy-to-install top venting with optional side venting
- Convenient left or right connection for gas and electrical service
- Cabinet air leakage ($Q_{Leak} \leq 2\%$)
- Heavy-gauge steel cabinet with durable finish
- Fully insulated heat exchanger and blower section
- Airtight solid bottom or side return with easy-cut tabs for effortless removal in bottom air-inlet applications

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. 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 | V | M | 97 | 060 | 3 | B | N | ** | |
|--------------------------------------|--------------------|---|---|---|-----|-------|----|----|----|-------|-----------------------------------|
| | 1 | 2 | 3 | 4 | 5,6 | 7,8,9 | 10 | 11 | 12 | 13,14 | |
| BRAND | | | | | | | | | | | ENGINEERING |
| G- Goodman® Brand | | | | | | | | | | | ENGINEERING |
| | | | | | | | | | | | Major / Minor Revisions |
| | | | | | | | | | | | * Not used for inventory control. |
| CONFIGURATION | | | | | | | | | | | NOx |
| M- Upflow/Horizontal | | | | | | | | | | | N- Low NOx |
| C- Downflow/Horizontal | | | | | | | | | | | |
| | | | | | | | | | | | CABINET WIDTH |
| MOTOR | | | | | | | | | | | B- 17½" |
| V- Variable Speed ECM/ComfortBridge™ | | | | | | | | | | | C- 21" |
| E- Multi-Speed ECM | D- 24½" | | | | | | | | | | |
| S- Single Speed | | | | | | | | | | | |
| | MAXIMUM CFM | | | | | | | | | | |
| GAS VALVE | 2- 800 CFM | | | | | | | | | | |
| M- Modulating | 4- 1600 CFM | | | | | | | | | | |
| C- Two- Stage | 3- 1200 CFM | | | | | | | | | | |
| S- Single Stage | 5- 2000 CFM | | | | | | | | | | |
| | MBTU/h | | | | | | | | | | |
| AFUE | 060- 60,000 BTU/h | | | | | | | | | | |
| 97- 97% AFUE | 080- 80,000 BTU/h | | | | | | | | | | |
| 96- 96% AFUE | 100- 100,000 BTU/h | | | | | | | | | | |
| 92- 92% AFUE | 120- 120,000 BTU/h | | | | | | | | | | |

| | GMVM97 0603BNB | GMVM97 0803BNB | GMVM97 0804CNB | GMVM97 1005CNB | GMVM97 1205DNB | GCVM97 0603BNB | GCVM97 0803BNB | GCVM97 0804CNB | GCVM97 1005CNB |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| HEATING DATA | | | | | | | | | |
| High Fire Input ¹ | 60,000 | 80,000 | 80,000 | 100,000 | 120,000 | 60,000 | 80,000 | 80,000 | 100,000 |
| High Fire Output ¹ | 58,800 | 77,600 | 78,400 | 97,000 | 116,400 | 58,200 | 77,600 | 77,600 | 97,000 |
| Low-Fire Steady-State Input ¹ | 30,000 | 40,000 | 40,000 | 50,000 | 60,000 | 30,000 | 40,000 | 40,000 | 50,000 |
| Low-Fire Steady-State Output ¹ | 29,400 | 38,800 | 39,200 | 48,500 | 58,200 | 29,100 | 38,800 | 38,800 | 48,500 |
| AFUE ² | 98 | 97 | 98 | 97 | 97 | 97 | 97 | 97 | 97 |
| Temperature Rise Range (°F) | 35- 65 | 30- 60 | 25- 55 | 35- 65 | 35- 65 | 35- 65 | 35- 65 | 35- 65 | 35- 65 |
| Vent Diameter ³ | 2"- 3" | 2"- 3" | 2"- 3" | 2"- 3" | 2"- 3" | 2"- 3" | 2"- 3" | 2"- 3" | 2"- 3" |
| No. of Burners | 3 | 4 | 4 | 5 | 6 | 3 | 4 | 4 | 5 |
| CIRCULATOR BLOWER | | | | | | | | | |
| Available AC @ 0.5" ESP | 1.5- 3 | 1.5- 3 | 1.5- 4 | 2- 5 | 2- 5 | 1.5- 3 | 1.5- 3 | 1.5- 4 | 2- 5 |
| Size (D x W) | 11" x 8" | 11" x 8" | 11" x 10" | 11" x 10" | 11" x 11" | 11" x 8" | 11" x 8" | 11" x 10" | 11" x 10" |
| Horsepower @ 1075 RPM | ½ | ½ | ¾ | 1 | 1 | ½ | ½ | ¾ | 1 |
| Speed | VS ECM | VS ECM | VS ECM | VS ECM | VS ECM | VS ECM | VS ECM | VS ECM | VS ECM |
| ELECTRICAL DATA | | | | | | | | | |
| Min. Circuit Ampacity ⁴ | 8.8 | 8.8 | 11.6 | 15.4 | 15.4 | 8.8 | 8.8 | 11.6 | 15.4 |
| Max. Overcurrent Device (amps) ⁵ | 15 | 15 | 15 | 20 | 20 | 15 | 15 | 15 | 20 |
| SHIPPING WEIGHT (LBS) | | | | | | | | | |
| | 118 | 121 | 142 | 144 | 157 | 117 | 122 | 144 | 146 |

¹ Natural Gas BTU/h

² DOE AFUE based upon Isolated Combustion System (ICS)

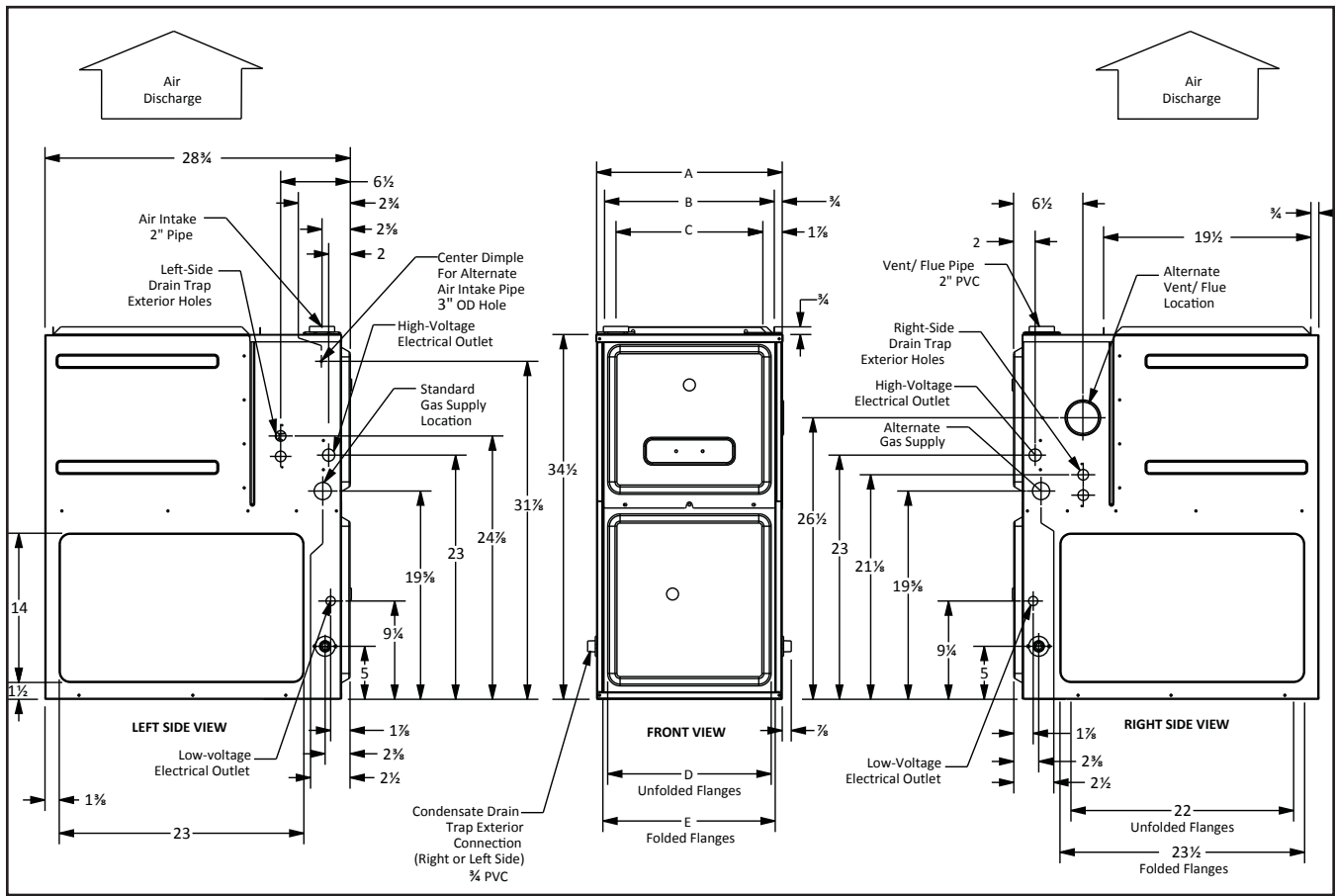
³ Installer must supply one or two PVC pipes: one for combustion air (optional) and one for the flue outlet (required). Vent pipe must be either 2" or 3" in diameter, depending upon furnace input, number of elbows, length of run and installation (1 or 2 pipes). The optional Combustion Air Pipe is dependent on installation/code requirements and must be 2" or 3" diameter PVC.

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 Maximum Overcurrent Protection Device 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: Size fuses and wires properly and make electrical connections in accordance with the National Electrical Code and/or all existing local codes.
- For bottom return: Failure to unfold flanges may reduce airflow by up to 18%. This could result in performance and noise issues.
- For servicing or cleaning, a 24" front clearance is required. 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.



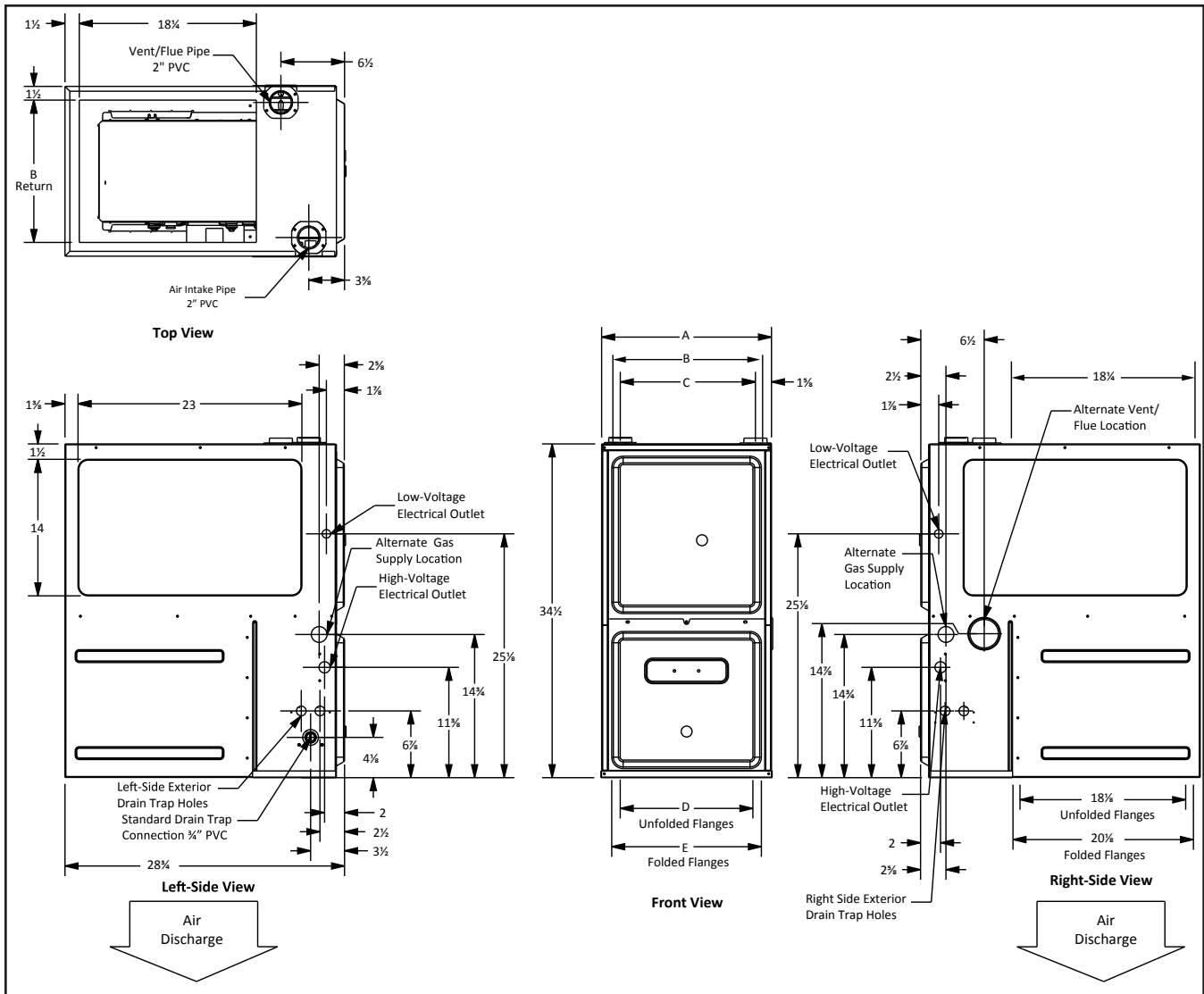
| MODEL | W | D | H |
|---------------|---------|---------|---------|
| GMVM970603BNB | 17 1/2" | 28 7/8" | 34 1/2" |
| GMVM970803BNB | 17 1/2" | 28 7/8" | 34 1/2" |
| GMVM970804CNB | 21" | 28 7/8" | 34 1/2" |
| GMVM971005CNB | 21" | 28 7/8" | 34 1/2" |
| GMVM971205DNB | 24 1/2" | 28 7/8" | 34 1/2" |

| | AIR DISCHARGE | | | AIR RETURN | |
|--|---------------|---------|---------|------------|---------|
| | A | B | C | D | E |
| | 17 1/2" | 16" | 13 3/8" | 12 1/8" | 13 5/8" |
| | 17 1/2" | 16" | 13 3/8" | 12 1/8" | 13 5/8" |
| | 21" | 19 1/2" | 17 7/8" | 16" | 17 1/2" |
| | 21" | 19 1/2" | 17 7/8" | 16" | 17 1/2" |
| | 24 1/2" | 23" | 20 3/8" | 19 3/8" | 20 3/8" |

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS

| POSITION | SIDES | REAR | FRONT | BOTTOM | FLUE | TOP |
|------------|-------|------|-------|--------|------|-----|
| Upflow | 0" | 0" | 3" | C | 0" | 1" |
| Horizontal | 6" | 0" | 3" | C | 0" | 6" |

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



| MODEL | W | D | H |
|---------------|---------|---------|---------|
| GCVM970603BNB | 17 1/2" | 28 7/8" | 34 1/2" |
| GCVM970803BNB | 17 1/2" | 28 7/8" | 34 1/2" |
| GCVM970804CNB | 21" | 28 7/8" | 34 1/2" |
| GCVM971005CNB | 21" | 28 7/8" | 34 1/2" |

| | AIR RETURN | | | AIR DISCHARGE | |
|--|------------|---------|---------|---------------|---------|
| | A | B | C | D | E |
| | 17 1/2" | 14 5/8" | 14" | 14 1/2" | 13 5/8" |
| | 17 1/2" | 14 5/8" | 14" | 14 1/2" | 13 5/8" |
| | 21" | 18 5/8" | 17 1/2" | 18" | 19 1/2" |
| | 21" | 18 5/8" | 17 1/2" | 18" | 19 1/2" |

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS

| POSITION | SIDES | REAR | FRONT | BOTTOM | FLUE | TOP |
|------------|-------|------|-------|--------|------|-----|
| Downflow | 0" | 0" | 3" | NC | 0" | 1" |
| Horizontal | 6" | 0" | 3" | C | 0" | 6" |

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

NC = For installation on non-combustible floors only. A combustible floor sub-base must be used for installations on combustible flooring.

| MODEL/TEMP RISE RANGE (MID RISE) | GMVM97 0603BNB* 35-65 (50) | | GMVM97 0803BNB* 30-60 (45) | | GMVM97 0804CNB* 25-55 (40) | | GMVM97 1005CNB* 35-65 (50) | | GMVM97 1205DNB* 35-65 (50) | |
|---|----------------------------------|------|----------------------------------|------|----------------------------------|------|----------------------------------|------|----------------------------------|------|
| | CFM | RISE | CFM | RISE | CFM | RISE | CFM | RISE | CFM | RISE |
| Recommended cfm for 100% firing rate & expected temperature rise | 1080 | 50 | 1440 | 50 | 1760 | 41 | 1780 | 50 | 1950 | 55 |
| Lowest recommended cfm for 100% firing rate & expected temperature rise | 840 | 65 | 1200 | 60 | 1320 | 55 | 1380 | 65 | 1670 | 65 |
| Maximum cfm for 100% firing rate & expected temperature rise | 1400 | 39 | 1650 | 44 | 1760 | 41 | 2200 | 41 | 2200 | 49 |

NOTE: Low Heat CFM = High Heat CFM X .7. Low Heat Temperature Rise Is Expected to Equal High Heat Temperature Rise ± 5% 0140F02402-A

GMVM970603BNB*
COOLING SPEED
(@ .1" - .8" w.c. ESP)

| TONS | HIGH-STAGE | LOW-STAGE CFM |
|------|------------|------------------|
| 1.5 | 600 | 420 |
| 2 | 800 | 560 |
| 2.5 | 1000 | 700 |
| 3 | 1200 | 840 |
| MAX | 1,400 | |

GMVM970803BNB*
COOLING SPEED
(@ .1" - .8" w.c. ESP)

| TONS | HIGH-STAGE | LOW-STAGE CFM |
|------|------------|------------------|
| 1.5 | 600 | 420 |
| 2 | 800 | 560 |
| 2.5 | 1000 | 700 |
| 3 | 1200 | 840 |
| MAX | 1,650 | |

GMVM970804CNB*
COOLING SPEED
(@ .1" - .8" w.c. ESP)

| TONS | HIGH-STAGE | LOW-STAGE CFM |
|------|------------|------------------|
| 2 | 800 | 560 |
| 2.5 | 1000 | 700 |
| 3 | 1200 | 840 |
| 4 | 1600 | 1120 |
| MAX | 1,760 | |

GMVM971005CNB*
COOLING SPEED
(@ .1" - .8" w.c. ESP)

| TONS | HIGH-STAGE | LOW-STAGE CFM |
|------|------------|------------------|
| 2 | 800 | 560 |
| 3 | 1200 | 840 |
| 4 | 1600 | 1120 |
| 5 | 2000 | 1400 |
| MAX | 2,200 | |

GMVM971205DNB*
COOLING SPEED
(@ .1" - .8" w.c. ESP)

| TONS | HIGH-STAGE | LOW-STAGE CFM |
|------|------------|------------------|
| 2 | 800 | 560 |
| 3 | 1200 | 840 |
| 4 | 1600 | 1120 |
| 5 | 2000 | 1400 |
| MAX | 2,200 | |

All furnaces ship as high speed for cooling. Installer must adjust blower speed as needed.
For most jobs, about 400 CFM per ton when cooling is desirable.
Do not operate above .5" w.c. ESP in heating mode. Operating CFM between .5" and .8" w.c. is tabulated for cooling purposes only.

MINIMUM FILTER SIZES

| | GMVM97 0603BNB | GMVM97 0803BNB | GMVM97 0804CNB | GMVM97 1005CNB | GMVM97 1205DNB |
|---------------------------------------|------------------------------|-------------------|-------------------|---|-------------------|
| Filter Sizes (in ²) (Qty) | (1) 16 x 25 (side or bottom) | | | (1) 20 x 25 (bottom) or (2) 16 x 25 (side) | |

Note: Other size filters of equal or greater dimensions may be used. Filters may also be centrally located.

| MODEL/TEMP RISE RANGE (MID RISE) | GCEM97 0603BNE* 35-65 (50) | | GCEM97 0803BNE* 35-65 (50) | | GCEM97 0804CNE* 35-65 (50) | | GCEM97 1005CNE* 35-65 (50) | |
|---|----------------------------------|------|----------------------------------|------|----------------------------------|------|----------------------------------|------|
| | CFM | RISE | CFM | RISE | CFM | RISE | CFM | RISE |
| Recommended cfm for 100% firing rate & expected temperature rise | 1080 | 50 | 1440 | 50 | 1430 | 50 | 1800 | 50 |
| Lowest recommended cfm for 100% firing rate & expected temperature rise | 830 | 65 | 1100 | 65 | 1100 | 65 | 1380 | 65 |
| Maximum cfm for 100% firing rate & expected temperature rise | 1400 | 38 | 1550 | 46 | 1760 | 41 | 2200 | 41 |

NOTE: Low Heat CFM = High Heat CFM X .7. Low Heat Temperature Rise Is Expected to Equal High Heat Temperature Rise ± 5% 0140F02402-A

GCEM970603BNE*
COOLING SPEED
(@ .1" - .8" w.c. ESP)

| TONS | HIGH-STAGE | LOW-STAGE CFM |
|------|------------|------------------|
| 1.5 | 600 | 420 |
| 2 | 800 | 560 |
| 2.5 | 1000 | 700 |
| 3 | 1200 | 840 |
| MAX | 1,400 | |

GCEM970803BNE*
COOLING SPEED
(@ .1" - .8" w.c. ESP)

| TONS | HIGH-STAGE | LOW-STAGE CFM |
|------|------------|------------------|
| 1.5 | 600 | 420 |
| 2 | 800 | 560 |
| 2.5 | 1000 | 700 |
| 3 | 1200 | 840 |
| MAX | 1,650 | |

GCEM970804CNE*
COOLING SPEED
(@ .1" - .8" w.c. ESP)

| TONS | HIGH-STAGE | LOW-STAGE CFM |
|------|------------|------------------|
| 2 | 800 | 560 |
| 2.5 | 1000 | 700 |
| 3 | 1200 | 840 |
| 4 | 1600 | 1120 |
| MAX | 1,760 | |

GCEM971005CNE*
COOLING SPEED
(@ .1" - .8" w.c. ESP)

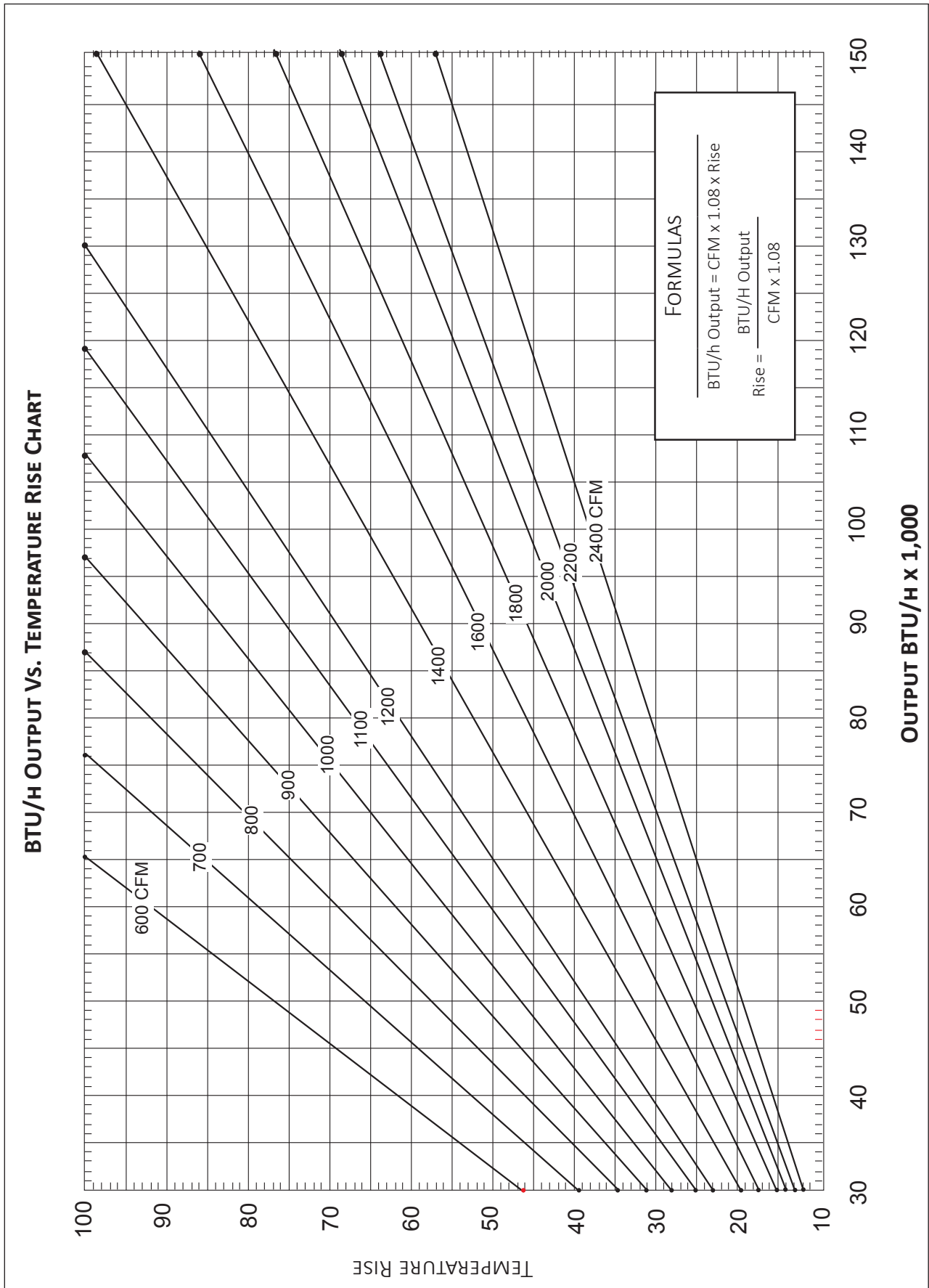
| TONS | HIGH-STAGE | LOW-STAGE CFM |
|------|------------|------------------|
| 2 | 800 | 560 |
| 3 | 1200 | 840 |
| 4 | 1600 | 1120 |
| 5 | 2000 | 1400 |
| MAX | 2,200 | |

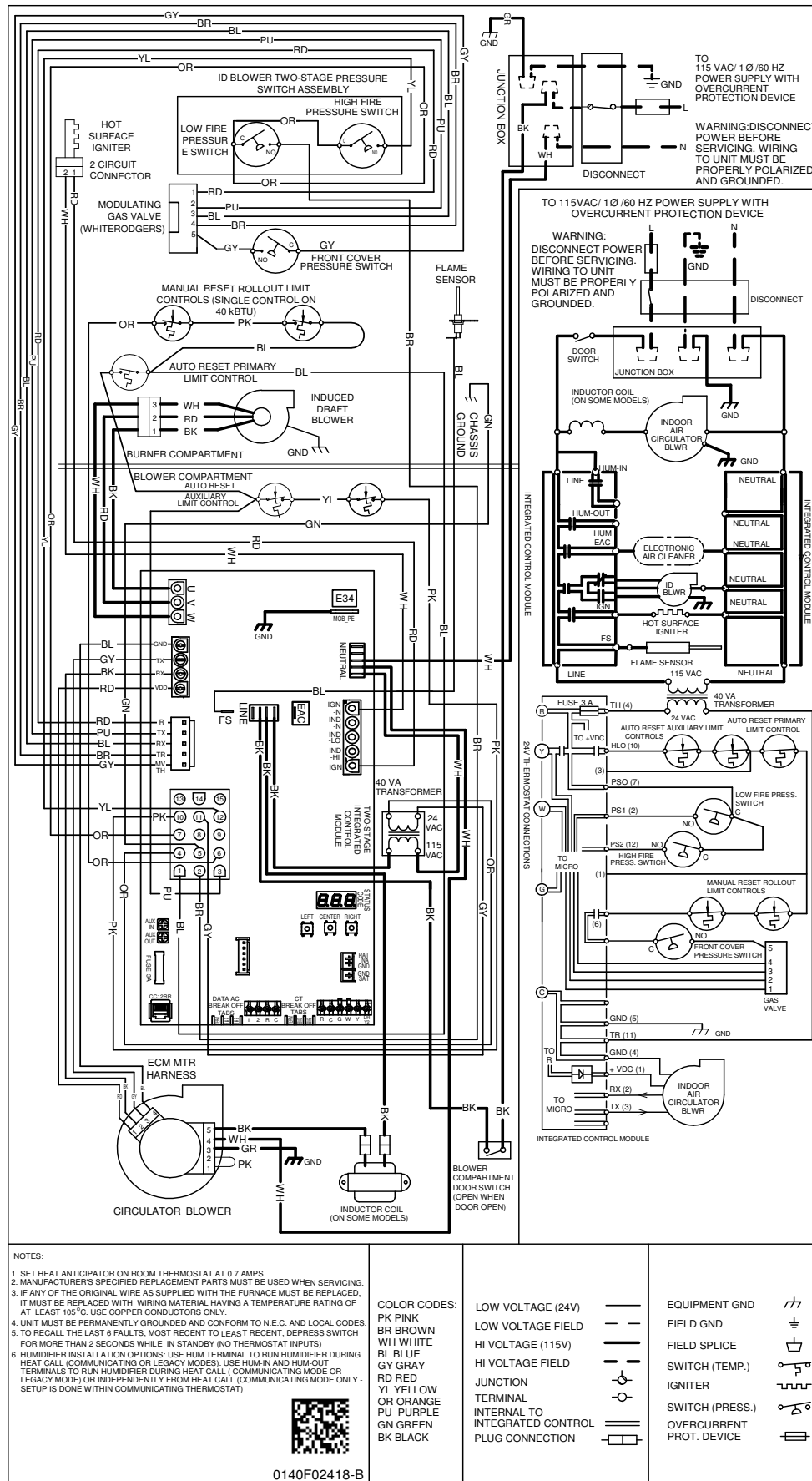
All furnaces ship as high speed for cooling. Installer must adjust blower speed as needed.
For most jobs, about 400 CFM per ton when cooling is desirable.
Do not operate above .5" w.c. ESP in heating mode. Operating CFM between .5" and .8" w.c. is tabulated for cooling purposes only.

MINIMUM FILTER SIZES

| | GCEM97 0603BNE | GCEM97 0803BNE | GCEM97 0804CNE | GCEM97 1005CNE |
|---------------------------------------|--|-------------------|--|-------------------|
| Filter Sizes (in ²) (Qty) | (2) 10 x 20 or (1) 16 x 25 (top return) | | (2) 14 x 20 or (1) 20 x 25 (top return) | |

Note: Other size filters of equal or greater dimensions may be used. Filters may also be centrally located.





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.

NOTES:

- SET HEAT ANTICIPATOR ON ROOM THERMOSTAT AT 0.7 AMPS.
- MANUFACTURER'S SPECIFIED REPLACEMENT PARTS MUST BE USED WHEN SERVICING.
- 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.
- UNIT MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL CODES.
- TO RECALL THE LAST 6 FAULTS, MOST RECENT TO LEAST RECENT, DEPRESS SWITCH FOR MORE THAN 2 SECONDS WHILE IN STANDBY (NO THERMOSTAT INPUTS).
- HUMIDIFIER INSTALLATION OPTIONS: USE HUM TERMINAL TO RUN HUMIDIFIER DURING HEAT CALL (COMMUNICATING OR LEGACY MODES). USE HUM-IN AND HUM-OUT TERMINALS TO RUN HUMIDIFIER DURING HEAT CALL (COMMUNICATING MODE OR LEGACY MODE) OR INDEPENDENTLY FROM HEAT CALL (COMMUNICATING MODE ONLY - SETUP IS DONE WITHIN COMMUNICATING THERMOSTAT)

0140F02418-B

COLOR CODES:

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

| | | | |
|--------------------------------|--|--------------------------|--|
| LOW VOLTAGE (24V) | | EQUIPMENT GND | |
| LOW VOLTAGE FIELD | | FIELD GND | |
| HI VOLTAGE (115V) | | FIELD SPLICE | |
| HI VOLTAGE FIELD | | SWITCH (TEMP.) | |
| JUNCTION | | IGNITER | |
| TERMINAL | | SWITCH (PRESS.) | |
| INTERNAL TO INTEGRATED CONTROL | | OVERCURRENT PROT. DEVICE | |
| PLUG CONNECTION | | | |

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

ACCESSORIES

| MODEL | DESCRIPTION | GMVM97 0603BNB | GMVM97 0803BNB | GMVM97 0804CNB | GMVM97 1005CNB | GMVM97 1205DNB |
|-------------|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| CVENT-2 | Concentric Vent Kit (2") | √ | √ | √ | √ | √ |
| CVENT-3 | Concentric Vent Kit (3") | √ | √ | √ | √ | √ |
| RF000142 | Drain Kit-Horizontal Left Vertical Flue | √ | √ | √ | √ | √ |
| EFRO2 | External Filter Rack with 16" x 25" Permanent Filter | √ | √ | √ | √ | √ |
| 0170K00000S | Flush Mount Vent Kit- 3" or 2" | √ | √ | √ | √ | √ |
| 0170K00001S | Flush Mount Vent Kit- 2" | √ | √ | √ | √ | √ |
| AFE18-60A | Fossil Fuel (Dual Fuel) Kit | √ | √ | √ | √ | √ |
| LPLP03 | Low LP Gas Pressure Switch | √ | √ | √ | √ | √ |
| LPM-10 | LP Conversion Kits | √ | √ | √ | √ | √ |
| HAMFK-01 | High Altitude Kit | √ | √ | √ | √ | √ |

NOTES

√ Indicates available for this model

- For installation in Canada, gas furnaces are certified only to 4,500'.

| MODEL | DESCRIPTION | GCVM97 0603BNB | GCVM97 0803BNB | GCVM97 0804CNB | GCVM97 1005CNB |
|-------------|--------------------------------|-------------------|-------------------|-------------------|-------------------|
| CVENT-2 | Concentric Vent Kit (2") | √ | √ | √ | √ |
| CVENT-3 | Concentric Vent Kit (3") | √ | √ | √ | √ |
| CFSB17 | Downflow Sub-Base 17.5" | √ | √ | --- | --- |
| CFSB21 | Downflow Sub-Base 21" | --- | --- | √ | √ |
| 0170K00000S | Flush Mount Vent Kit- 3" or 2" | √ | √ | √ | √ |
| 0170K00001S | Flush Mount Vent Kit- 2" | √ | √ | √ | √ |
| AFE18-60A | Fossil Fuel (Dual Fuel) Kit | √ | √ | √ | √ |
| LPLP03 | Low LP Gas Pressure Switch | √ | √ | √ | √ |
| LPM10 | LP Conversion Kits | √ | √ | √ | √ |
| HAMFK-01 | High Altitude Kit | √ | √ | √ | √ |

NOTES

√ Indicates available for this model

- For installation in Canada, gas furnaces are certified only to 4,500'.