

HEATING INPUT: 60,000–120,000 BTU/H

MODULATING, VARIABLE-SPEED
ECM GAS FURNACE
97% 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 stainless-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
- Can not be installed in California’s South Coast Air Quality Management District (SCAQMD) and San Joaquin Valley Air Pollution Control District (SJVAPCD).

Cabinet Features

- Designed for multi-position installation:
AMVM97: upflow, horizontal left or right
ACVM97: 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}) ≤ 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



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, the Lifetime Unit Replacement Limited Warranty (in both cases good for as long as you own your home), and the 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration is not required in California or Québec.

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

| | AMVM97 0603BNB | AMVM97 0803BNB | AMVM97 0804CNB | AMVM97 1005CNB | AMVM97 1205DNB | ACVM97 0603BNB | ACVM97 0803BNB | ACVM97 0804CNB | ACVM97 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 | 97 | 97 | 97 | 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)

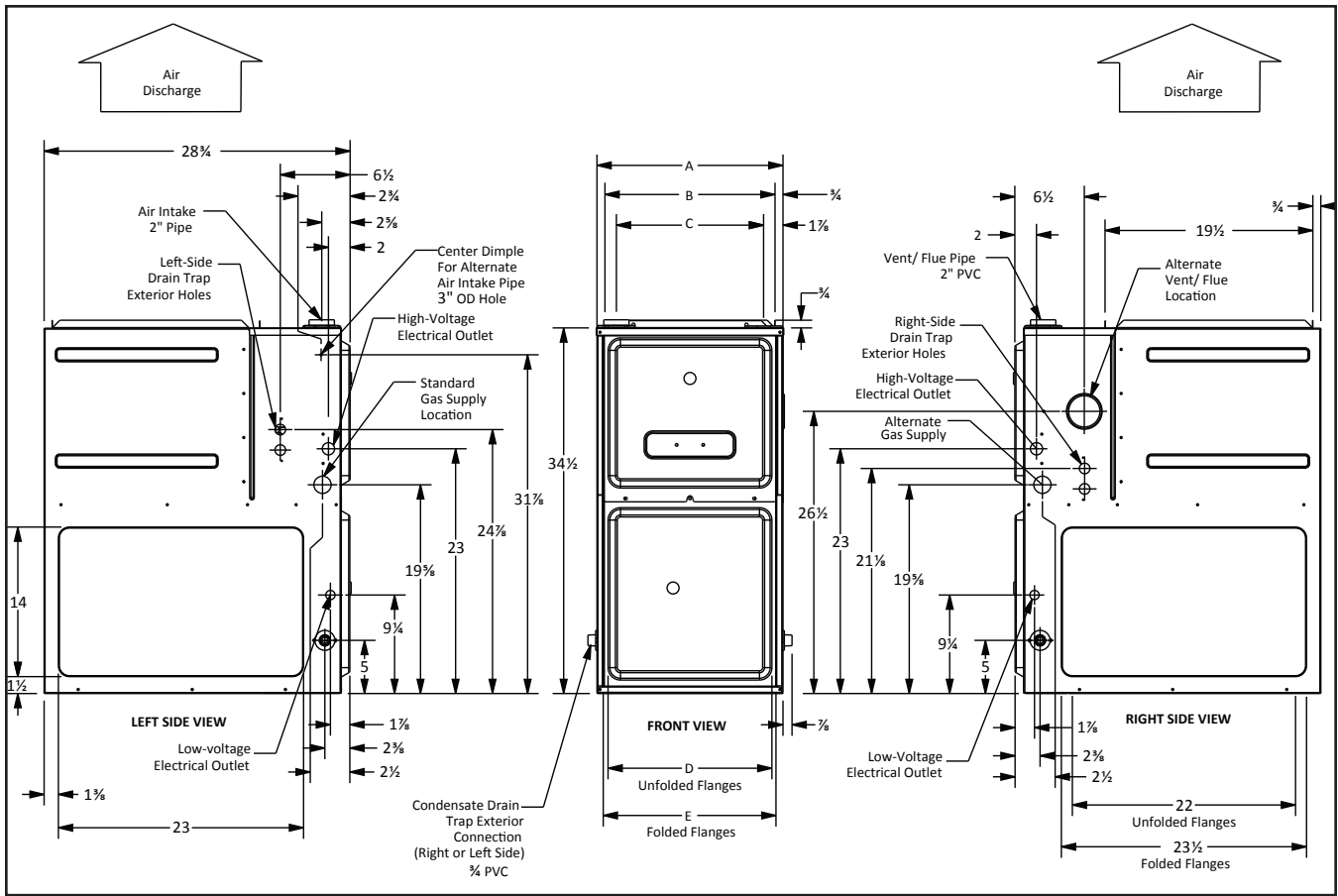
³ Installer must supply one or two PVC pipes: one for combustion air (optional) and one for the flue outlet (required). Vent pipe must be either 2" or 3" in diameter, depending upon furnace input, number of elbows, length of run and installation (1 or 2 pipes). The optional Combustion Air Pipe is dependent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



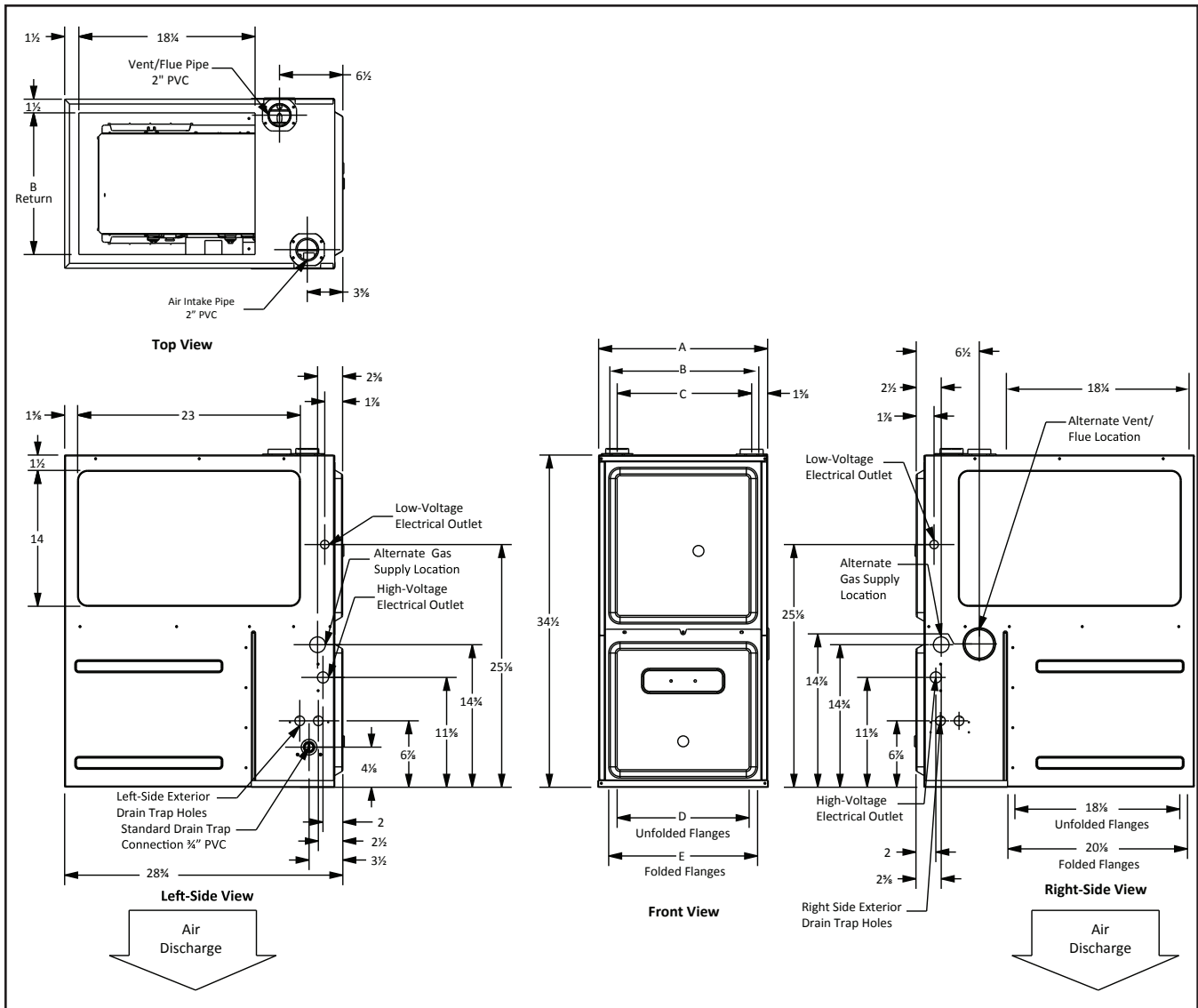
| MODEL | W | D | H |
|---------------|---------|---------|---------|
| AMVM970603BNB | 17 1/2" | 28 3/8" | 34 1/2" |
| AMVM970803BNB | 17 1/2" | 28 3/8" | 34 1/2" |
| AMVM970804CNB | 21" | 28 3/8" | 34 1/2" |
| AMVM971005CNB | 21" | 28 3/8" | 34 1/2" |
| AMVM971205DNB | 24 1/2" | 28 3/8" | 34 1/2" |

| | AIR DISCHARGE | | | AIR RETURN | |
|--|---------------|---------|---------|------------|---------|
| | A | B | C | D | E |
| | 17 1/2" | 16" | 13 3/8" | 12 1/8" | 13 3/8" |
| | 17 1/2" | 16" | 13 3/8" | 12 1/8" | 13 3/8" |
| | 21" | 19 1/2" | 17 3/8" | 16" | 17 1/2" |
| | 21" | 19 1/2" | 17 3/8" | 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 |
|---------------|---------|---------|---------|
| ACVM970603BNB | 17 1/2" | 28 7/8" | 34 1/2" |
| ACVM970803BNB | 17 1/2" | 28 7/8" | 34 1/2" |
| ACVM970804CNB | 21" | 28 7/8" | 34 1/2" |
| ACVM971005CNB | 21" | 28 7/8" | 34 1/2" |

| A | AIR RETURN | | AIR DISCHARGE | |
|---------|------------|---------|---------------|---------|
| | 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 7/8" | 17 1/2" | 18" | 19 1/2" |
| 21" | 18 7/8" | 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) | AMVM97 0603BNB* 35-65 (40) | | AMVM97 0803BNB* 30-60 (45) | | AMVM97 0804CNB* 25-55 (40) | | AMVM97 1005CNB* 35-65 (50) | | AMVM97 1205DNB* 35-65 (50) | |
|---|----------------------------------|------|----------------------------------|------|----------------------------------|------|----------------------------------|------|----------------------------------|------|
| | CFM | RISE | CFM | RISE | CFM | RISE | CFM | RISE | CFM | RISE |
| Recommended cfm for 100% firing rate & expected temperature rise | 1072 | 50 | 1440 | 50 | 1760 | 41 | 1780 | 50 | 1950 | 55 |
| Lowest recommended cfm for 100% firing rate & expected temperature rise | 820 | 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

AMVM970603BNB*
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 | |

AMVM970803BNB*
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 | |

AMVM970804CNB*
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 | |

AMVM971005CNB*
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 | |

AMVM971205DNB*
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

| | AMVM97 0603BNB | AMVM97 0803BNB | AMVM97 0804CNB | AMVM97 1005CNB | AMVM97 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) | ACVM97 0603BNB* 35-65 (40) | | ACVM97 0803BNB* 35-65 (50) | | ACVM97 0804CNB* 35-65 (50) | | ACVM97 1005CNB* 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

ACVM970603BNB*
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 | |

ACVM970803BNB*
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 | |

ACVM970804CNB*
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 | |

ACVM971005CNB*
COOLING SPEED
(@ .1" - .8" w.c. ESP)

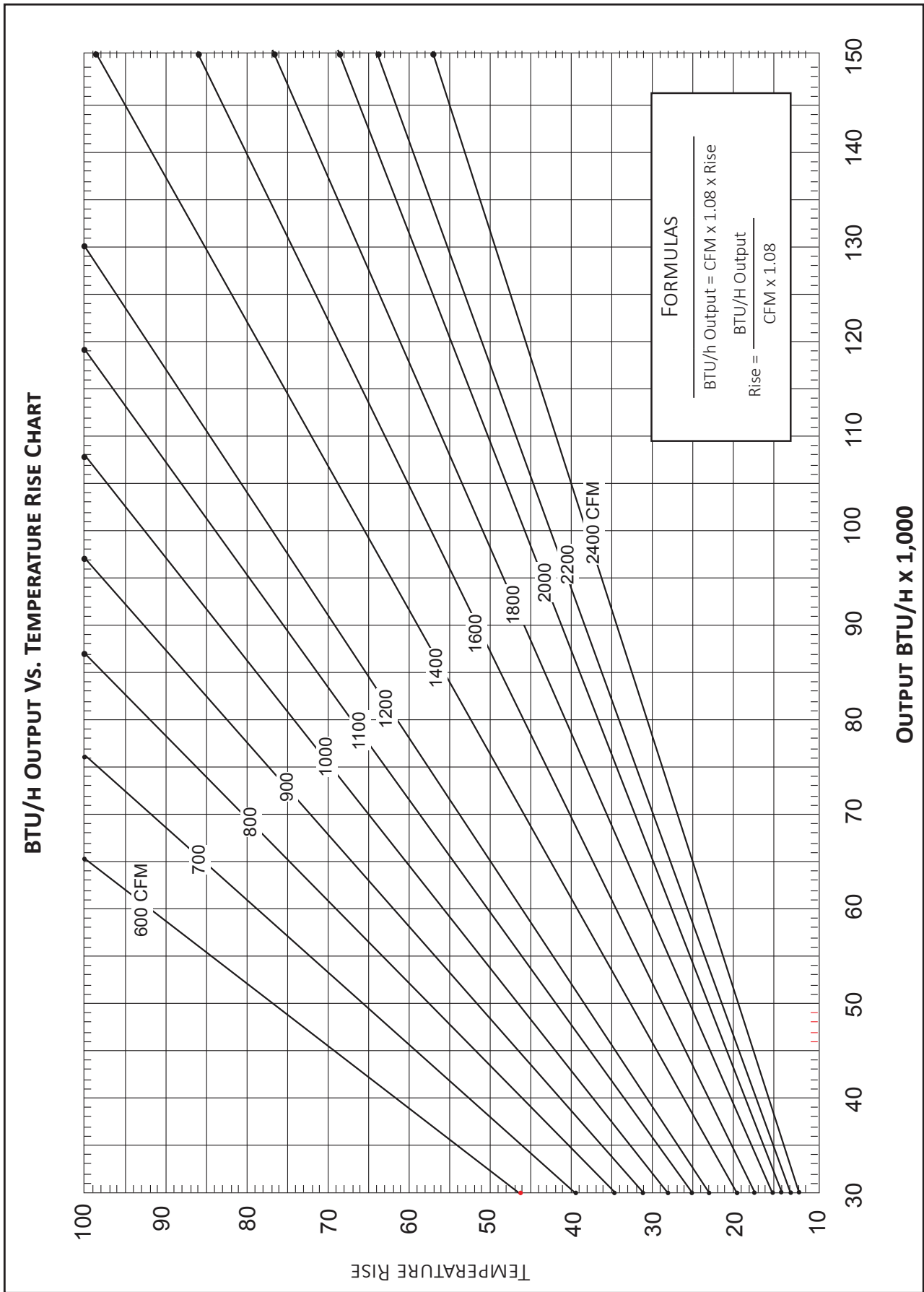
| TONS | HIGH-STAGE | LOW-STAGE CFM |
|------|------------|------------------|
| 2 | 800 | 560 |
| 3 | 1200 | 840 |
| 4 | 1600 | 1120 |
| 5 | 2000 | 1400 |
| MAX | 2,200 | |

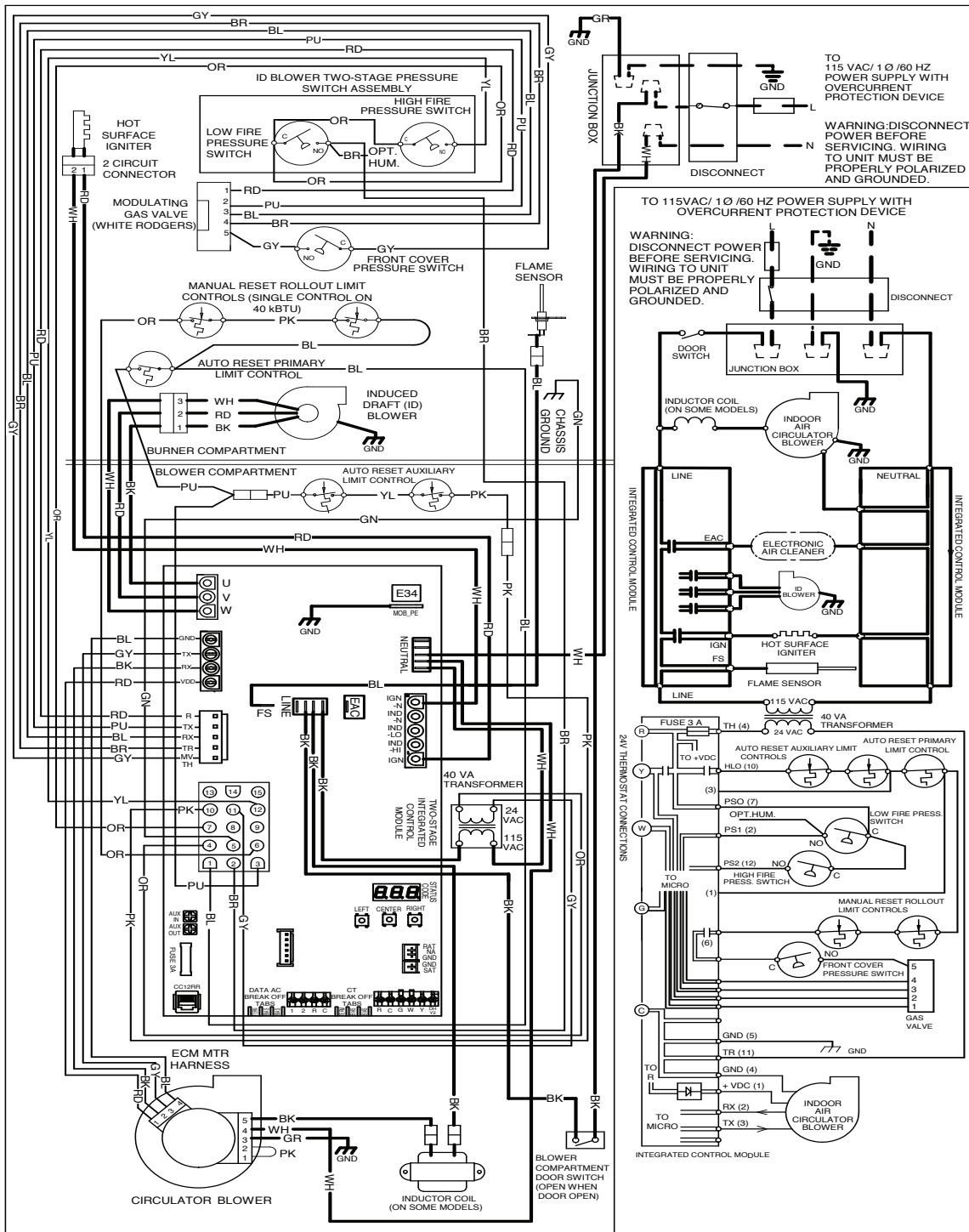
All furnaces ship as high speed for cooling. Installer must adjust blower speed as needed.
For most jobs, about 400 CFM per ton when cooling is desirable.
Do not operate above .5" w.c. ESP in heating mode. Operating CFM between .5" and .8" w.c. is tabulated for cooling purposes only.

MINIMUM FILTER SIZES

| | ACVM97 0603BNB | ACVM97 0803BNB | ACVM97 0804CNB | ACVM97 1005CNB |
|---------------------------------------|--|-------------------|--|-------------------|
| 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 GROUNDING 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)

| | | |
|--|---|---|
| <p>COLOR CODES:</p> <p>BK BLACK BL BLUE BR BROWN GR GREEN OR ORANGE PK PINK PU PURPLE RD RED WH WHITE YL YELLOW</p> | <p>LOW VOLTAGE (24V) ———</p> <p>LOW VOLTAGE FIELD — — —</p> <p>HI VOLTAGE (115V) ———</p> <p>HI VOLTAGE FIELD — — —</p> <p>JUNCTION ———</p> <p>TERMINAL ———</p> <p>INTERNAL TO INTEGRATED CONTROL ———</p> <p>PLUG CONNECTION ———</p> | <p>EQUIPMENT GND ———</p> <p>FIELD GND ———</p> <p>FIELD SPLICE ———</p> <p>SWITCH (TEMPERATURE) ———</p> <p>IGNITER ———</p> <p>SWITCH (PRESSURE) ———</p> <p>OVERCURRENT PROT. DEVICE ———</p> |
| | <p>0140F02651-A</p> | |

ACCESSORIES

| MODEL | DESCRIPTION | AMVM97 0603BNB | AMVM97 0803BNB | AMVM97 0804CNB | AMVM97 1005CNB | AMVM97 1205DNB |
|-------------|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| 72950 | Concentric Vent Kit (2") | √ | √ | √ | √ | — |
| 72951 | Concentric Vent Kit (3") | √ | √ | √ | √ | √ |
| RF000142 | Drain Kit Horizontal Left Vertical Flue | √ | √ | √ | √ | √ |
| EFRO2 | External Filter Rack with 16"x25" Permanent Filter | √ | √ | √ | √ | √ |
| 0170K00000S | Flush Mount Vent Kit- 3" or 2" | √ | √ | √ | √ | √ |
| 0170K00001S | Flush Mount Vent Kit- 2" | √ | √ | √ | √ | — |
| AFE18-60A | Fossil Fuel (Dual Fuel) Kit | √ | √ | √ | √ | √ |
| HAMFK-01 | High-Altitude Kit | √ | √ | √ | √ | √ |
| O270F05404 | Horizontal Drain Tubing Kit | √ | √ | √ | √ | √ |
| LPLP04 | Low LP Gas Pressure Switch | √ | √ | √ | √ | √ |
| LPM-10 | LP Conversion Kits | √ | √ | √ | √ | √ |

NOTES

- √ Indicates available for this model
- For installation in Canada, gas furnaces are certified only to 4,500'.

| MODEL | DESCRIPTION | ACVM97 0603BNB | ACVM97 0803BNB | ACVM97 0804CNB | ACVM97 1005CNB |
|-------------|--------------------------------|-------------------|-------------------|-------------------|-------------------|
| 72950 | Concentric Vent Kit (2") | √ | √ | √ | √ |
| 72951 | 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 | √ | √ | √ | √ |
| HAMFK-01 | High-Altitude Kit | √ | √ | √ | √ |
| O270F05405 | Horizontal Drain Tubing Kit | √ | √ | √ | √ |
| LPLP04 | Low LP Gas Pressure Switch | √ | √ | √ | √ |
| LPM-10 | LP Conversion Kits | √ | √ | √ | √ |

NOTES

- √ Indicates available for this model
- For installation in Canada, gas furnaces are certified only to 4,500'.

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