Heating & Air Conditioning
Amana®

AMVM96/ACVM96

Modulating
Variable-Speed Gas Furnace
Up to 96% AFUE

Heating Input: 60,000–115,000 BTU/h

ComfortNet™ CONTROL SYSTEM

Standard Features

- ComfortNet™ Communicating Systems compatible
- Stainless-steel secondary heat exchanger
- Self-calibrating modulating gas valve auto-confiures for each installation
- Durable SureStart™ Silicon Nitride igniter
- Quiet variable-speed induced draft blower
- Utilizes ComfortNet™ communicating, two-stage or single-stage thermostats
- 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 and humidifier
- 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 Low NOx emissions standards

Cabinet Features

- Certified for direct vent (2-pipe) or non-direct vent (1-pipe)
- Easy-to-install top venting with optional side venting
- Designed for multi-position installation —
  AMVM96: upflow, horizontal left or right
  ACVM96: downflow, horizontal left or right
- Convenient left or right connection for gas and electrical service
- Cabinet air leakage (Q_{Leak}) ≤ 2%
- Heavy-gauge steel cabinet with durable baked-enamel 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

ENERGY STAR® and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency. ENERGY STAR products are third-party certified by an EPA-recognized Certification Body. Products that earn the ENERGY STAR prevent greenhouse gas emissions by meeting strict energy efficiency guidelines set by the U.S. Environmental Protection Agency.

LIFE TIME UNIT REPLACEMENT LIMITED WARRANTY* — 10 YEAR PARTS LIMITED WARRANTY*

* Complete warranty details available from your local dealer or at www.amana-hac.com. To receive the Lifetime Unit Replacement Limited Warranty (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.

ISO 9001 QUALITY MANAGEMENT SYSTEM GLOBAL QUALITY STANDARDS — ISO 14001 CERTIFIED ENVIRONMENTAL MANAGEMENT SYSTEM — AHRI CERTIFIED — ETL LISTED

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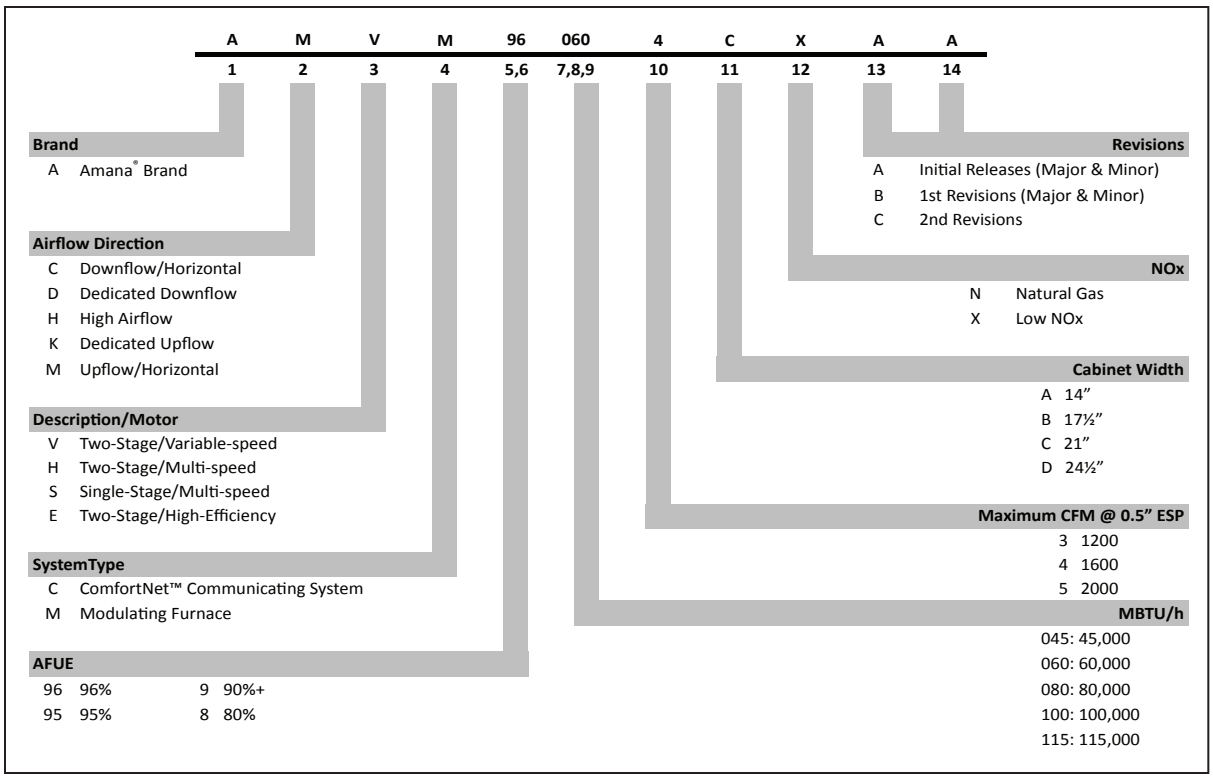
NOMENCLATURE



SPECIFICATIONS

	AMVM96 0603BXB*	AMVM96 0805CXB*	AMVM96 1005DXB*	AMVM96 1155DXB*	ACVM96 0604CXB*	ACVM96 0805DXB*	ACVM96 1005DX
Heating Capacity							
High Fire Input (BTU/h)[1]	60,000	80,000	100,000	115,000	60,000	80,000	100,000
High Fire Output (BTU/h)[1]	57,600	76,800	96,000	109,250	57,600	76,800	95,000
Low-Fire Steady-State Input[1]	30,000	40,000	50,000	57,500	30,000	40,000	50,000
Low-Fire Steady-State Output[1]	28,800	38,400	48,000	54,625	28,800	38,400	47,500
AFUE[2]	96	96	96	95	96	96	95
Available AC @ 0.5" ESP	1.5-3.0	2.0-5.0	2.0-5.0	2.0-5.0	1.5-4.0	2.0-5.0	2.0-5.0
Temperature Rise Range (° F)	20-50	35-65	35-65	35-65	20-50	20-50	25-55
Circulator Blower							
Size (D x W)	10" X 8"	11" X 10"	11" X 10"	11" X 10"	10"X 10"	11" X 10"	11" X 10"
Horsepower @ 1050 RPM	3/4	1	1	1	3/4	1	1
Speed	Variable	Variable	Variable	Variable	Variable	Variable	Variable
Vent Diameter[3]	2"	3"	3"	3"	2"	2"	2"
No. of Burners	3	4	5	5	3	4	4
Disposable Filter (in^2)	576	960	960	972	641	854	1,056
Electrical Data							
Min. Circuit Ampacity[4]	10.6	14.2	14.2	14.2	6.0	14.2	14.2
Max. Overcurrent Device (amps)[5]	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Ship Weight (lbs)	132	150	165	165	139	160	165
ENERGY STAR Certified	ENERGY STAR	ENERGY STAR	ENERGY STAR	ENERGY STAR	No	No	No

[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.

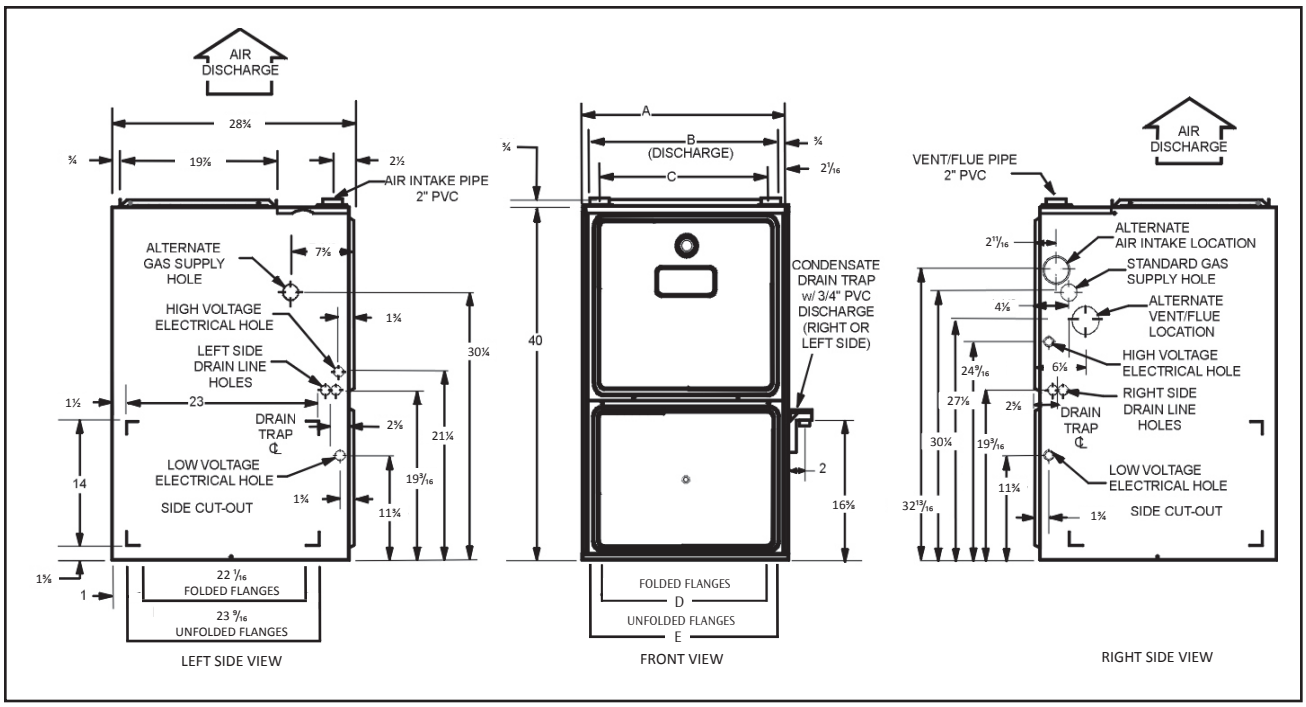
[4] Minimum Circuit Ampacity = (1.25 x Circulator Blower Amps) + ID Blower amps. Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

[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.

AMVM96 DIMENSIONS



MODEL	W	D	H
AMVM960603BXB*	17½”	28¾"	40¾"
AMVM960805CXB*	21"	28¾"	40¾"
AMVM961005DXB*	24½”	28¾"	40¾"
AMVM961155DXB*	24½”	28¾"	40¾"

A	B	C	D	E
17½”	16"	13⅛"	12⅛"	13⅜"
21"	19½”	16⅛"	16"	17½”
24½”	23"	20⅝"	19⅜"	20⅞"
24½”	23"	20⅝"	19⅜"	20⅞"

NOTES:

- 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.
- 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.
- Conversion kits for high-altitude natural gas operation are available. Contact your Goodman distributor or dealer for details.
- Installer must supply following gas line fittings, according to which entrance is used:
  Left—Two 90º elbows, one close nipple, straight pipe
  Right—Straight pipe to reach gas valve
- For bottom return: Failure to unfold flanges may reduce airflow by up to 18%. This could result in performance and noise issues.

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS

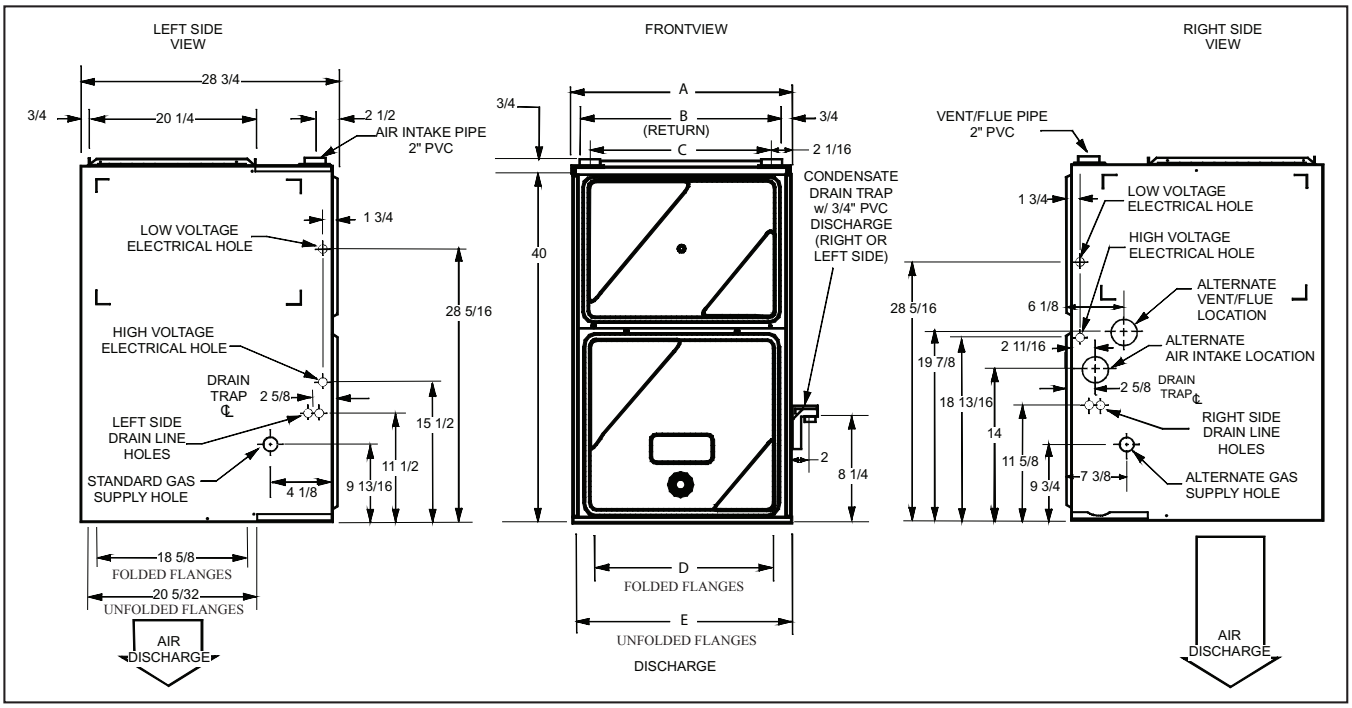
POSITION	SIDES	REAR	FRONT	BOTTOM	FLUE	TOP
Upflow	0”	0”	3”	C	0”	1”
Horizontal	6”	0”	3”	C	0”	6”

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

NOTES:

- 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.**

ACVM96 Dimensions



Model	W	D	H
ACMV960604CXB*	21"	28¾"	40¾"
ACVM960805DXB*	24½"	28¾"	40¾"
ACVM961005DX	24½"	28¾"	40¾"

A	B	C	D	E
21"	19½"	16⅛"	18"	19½"
24½"	23"	20⅝"	21½"	23"
24½"	23"	20⅝"	21½"	23"

Notes:

- 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.
- 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.
- Conversion kits for high-altitude natural gas operation are available. Contact your Goodman distributor or dealer for details.
- Installer must supply following gas line fittings, according to which entrance is used:
  Left—Two 90º elbows, one close nipple, straight pipe
  Right—Straight pipe to reach gas valve
- For bottom return: Failure to unfold flanges may reduce airflow by up to 18%. This could result in performance and noise issues.

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.

Notes

- 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.

AMVM96 Airflow Data

AMVM960603BX
Cooling Speed
(@ .1″ - .8″ w.c. ESP)

Tap	Adjust	High-Stage CFM	Low-Stage CFM
A	Minus 10%	567	351
	Normal	630	390
	Plus 10%	693	429
B	Minus 10%	720	495
	Normal	800	550
	Plus 10%	880	605
C	Minus 10%	900	612
	Normal	1000	680
	Plus 10%	1100	748
D	Minus 10%	1089	720
	Normal	1210	800
	Plus 10%	1331	880

AMVM960603BX
Heating Speed
(@ .1″ - .5″ w.c. ESP; Rise Range: 20 - 50°F)

Tap	Adjust	High-Stage CFM	Rise (°F)
A	Minus 10%	855	62
	Normal	950	56
	Plus 10%	1,045	51
C	Minus 10%	945	56
	Normal	1,050	51
	Plus 10%	1,155	46
D	Minus 10%	1,053	50
	Normal	1,170	45
	Plus 10%	1,287	41
D	Minus 10%	1,143	46
	Normal	1,270	42
	Plus 10%	1,397	38

AVMV960805CX
Cooling Speed
(@ .1″ - .8″ w.c. ESP)

Tap	Adjust	High-Stage CFM	Low-Stage CFM
A	Minus 10%	747	486
	Normal	830	540
	Plus 10%	913	594
B	Minus 10%	981	675
	Normal	1090	750
	Plus 10%	1199	825
C	Minus 10%	1314	882
	Normal	1460	980
	Plus 10%	1606	1078
D	Minus 10%	1620	1089
	Normal	1800	1210
	Plus 10%	1980	1331

AVMV960805CX
Heating Speed
(@ .1″ - .5″ w.c. ESP; Rise Range: 35 - 65°F)

Tap	Adjust	High-Stage CFM	Rise (°F)
A	Minus 10%	1,440	49
	Normal	1,600	44
	Plus 10%	1,760	40
B	Minus 10%	1,521	47
	Normal	1,690	42
	Plus 10%	1,859	38
C	Minus 10%	1,620	44
	Normal	1,800	39
	Plus 10%	1,980	36
D	Minus 10%	1,701	42
	Normal	1,890	37
	Plus 10%	2,079	34

Notes:

- 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.

AMVM96 Airflow Data (cont.)

AMVM961005DX
Cooling Speed
(@ .1″ - .8″ w.c. ESP)

Tap	Adjust	High-Stage CFM	Low-Stage CFM
A	Minus 10%	711	459
	Normal	790	510
	Plus 10%	869	561
B	Minus 10%	990	639
	Normal	1100	710
	Plus 10%	1210	781
C	Minus 10%	1269	819
	Normal	1410	910
	Plus 10%	1551	1001
D	Minus 10%	1647	1044
	Normal	1830	1160
	Plus 10%	2013	1276

AMVM961005DX
Heating Speed
(@ .1″ - .5″ w.c. ESP; Rise Range: 25 - 65°F)

Tap	Adjust	High-Stage CFM	Rise (°F)
A	Minus 10%	1,629	54
	Normal	1,810	49
	Plus 10%	1,991	44
C	Minus 10%	1,665	53
	Normal	1,850	48
	Plus 10%	2,035	43
D	Minus 10%	1,701	52
	Normal	1,890	47
	Plus 10%	2,079	43
D	Minus 10%	1,746	51
	Normal	1,940	46
	Plus 10%	2,134	41

AMVM961155DX
Cooling Speed
(@ .1″ - .8″ w.c. ESP)

Tap	Adjust	High-Stage CFM	Low-Stage CFM
A	Minus 10%	711	459
	Normal	790	510
	Plus 10%	869	561
B	Minus 10%	990	639
	Normal	1100	710
	Plus 10%	1210	781
C	Minus 10%	1269	819
	Normal	1410	910
	Plus 10%	1551	1001
D	Minus 10%	1647	1044
	Normal	1830	1160
	Plus 10%	2013	1276

AMVM961155DX
Heating Speed
(@ .1″ - .5″ w.c. ESP; Rise Range: 35 - 65°F)

Tap	Adjust	High-Stage CFM	Rise (°F)
A	Minus 10%	1,629	62
	Normal	1,810	56
	Plus 10%	1,991	51
B	Minus 10%	1,665	60
	Normal	1,850	54
	Plus 10%	2,035	49
C	Minus 10%	1,701	59
	Normal	1,890	53
	Plus 10%	2,079	48
D	Minus 10%	1,746	58
	Normal	1,940	52
	Plus 10%	2,134	47

Notes

- 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.
- Operation is recommended below .5″ w.c. ESP in heating mode. Operating CFM between .5″ and .8″ w.c. is tabulated for cooling purposes only.
- 100% CFM shown. CFM will vary proportionally with the gas valve BTU/H input.

ACVM96 Airflow Data

ACVM960604CX
Cooling Speed
(@ .1″ - .8″ w.c. ESP)

Tap	Adjust	High-Stage CFM	Low-Stage CFM
A	Minus 10%	594	333
	Normal	660	370
	Plus 10%	726	407
B	Minus 10%	774	486
	Normal	860	540
	Plus 10%	946	594
C	Minus 10%	1035	711
	Normal	1150	790
	Plus 10%	1265	869
D	Minus 10%	1323	882
	Normal	1470	980
	Plus 10%	1617	1078

ACVM960604CX
Heating Speed
(@ .1″ - .5″ w.c. ESP; Rise Range: 20 - 50°F)

Tap	Adjust	High-Stage CFM	Rise (°F)
A	Minus 10%	1,098	48
	Normal	1,220	44
	Plus 10%	1,342	40
C	Minus 10%	1,206	44
	Normal	1,340	40
	Plus 10%	1,474	36
D	Minus 10%	1,314	40
	Normal	1,460	36
	Plus 10%	1,606	33
D	Minus 10%	1,431	37
	Normal	1,590	33
	Plus 10%	1,749	30

ACVM960805DX
Cooling Speed
(@ .1″ - .8″ w.c. ESP)

Tap	Adjust	High-Stage CFM	Low-Stage CFM
A	Minus 10%	810	477
	Normal	900	530
	Plus 10%	990	583
B	Minus 10%	990	657
	Normal	1100	730
	Plus 10%	1210	803
C	Minus 10%	1287	837
	Normal	1430	930
	Plus 10%	1573	1023
D	Minus 10%	1692	1098
	Normal	1880	1220
	Plus 10%	2068	1342

DC96MC0805DX
Heating Speed
(@ .1″ - .5″ w.c. ESP; Rise Range: 20 - 50°F)

Tap	Adjust	High-Stage CFM	Rise (°F)
A	Minus 10%	1,440	49
	Normal	1,600	44
	Plus 10%	1,760	40
B	Minus 10%	1,539	46
	Normal	1,710	41
	Plus 10%	1,881	38
C	Minus 10%	1,620	44
	Normal	1,800	39
	Plus 10%	1,980	36
D	Minus 10%	1,719	41
	Normal	1,910	37
	Plus 10%	2,101	34

Notes:

- 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.
- Operation is recommended below .5” w.c. ESP in heating mode.
  Operating CFM between .5” and .8” w.c. is tabulated for cooling purposes only.

ACVM96 Airflow Data (cont.)

ACVM961005DX
Cooling Speed
(@ .1″ - .8″ w.c. ESP)

Tap	Adjust	High-Stage CFM	Low-Stage CFM
A	Minus 10%	702	450
	Normal	780	500
	Plus 10%	858	550
B	Minus 10%	963	666
	Normal	1070	740
	Plus 10%	1177	814
C	Minus 10%	1242	828
	Normal	1380	920
	Plus 10%	1518	1012
D	Minus 10%	1602	1044
	Normal	1780	1160
	Plus 10%	1958	1276

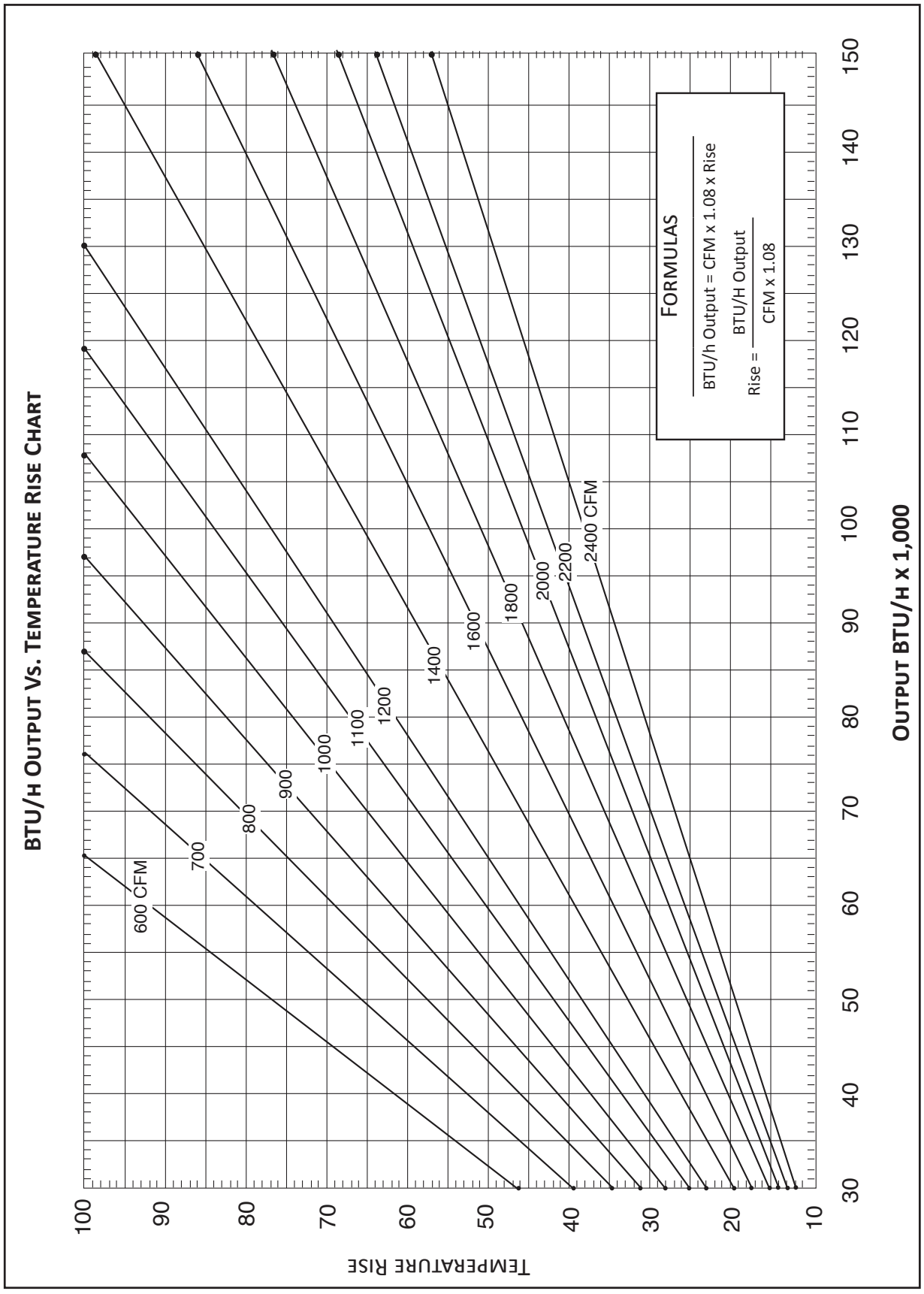
ACVM961005DX
Heating Speed
(@ .1″ - .5″ w.c. ESP; Rise Range: 25 - 55°F)

Tap	Adjust	High-Stage CFM	Rise (°F)
A	Minus 10%	1,557	56
	Normal	1,730	51
	Plus 10%	1,903	46
B	Minus 10%	1,593	55
	Normal	1,770	49
	Plus 10%	1,947	45
C	Minus 10%	1,656	53
	Normal	1,840	48
	Plus 10%	2,024	43
D	Minus 10%	1,683	52
	Normal	1,870	47
	Plus 10%	2,057	43

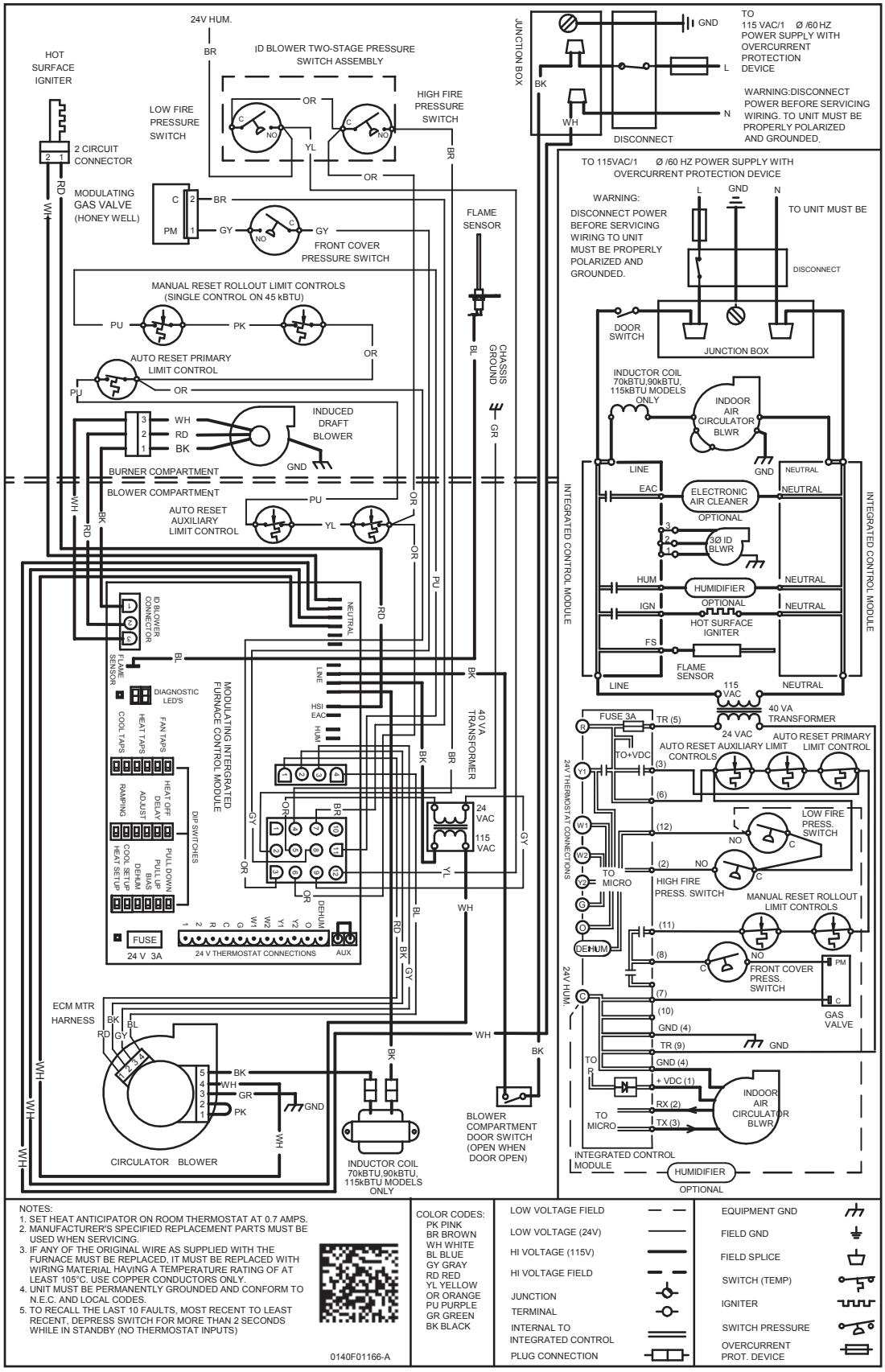
Notes

- 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.
- Operation is recommended below .5” w.c. ESP in heating mode. Operating CFM between .5” and .8” w.c. is tabulated for cooling purposes only.
- 100% CFM shown. CFM will vary proportionally with the gas valve BTU/H input.

Temperature Rise Range Chart



WIRING DIAGRAM



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. UNIT MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL CODES.
5. TO RECALL THE LAST 10 FAULTS, MOST RECENT TO LEAST RECENT, DEPRESS SWITCH FOR MORE THAN 2 SECONDS WHILE IN STANDBY (NO THERMOSTAT INPUTS)

0140F01166-A

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

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

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

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.

THERMOSTATS

CTK03 ComfortNet-compatible Control
(See ComfortNet website (www.comfortnet1.com) for details.)

CTK02 ComfortNet-compatible Control
(See ComfortNet website (www.comfortnet1.com) for details.)

CTK01 ComfortNet-compatible Control
(See ComfortNet website (www.comfortnet1.com) for details.)

ACCESSORIES

MODEL	DESCRIPTION	AMVM96 0603BX	AMVM96 0805CX	AMVM96 1005DX	AMVM96 1155DX	ACVM96 0604CX	ACVM96 0805DX
LPKM0D060UF	LP Conversion Kits	√	---	---	---	---	---
LPKM0D080UF		---	√	---	---	---	---
LPKM0D100UF		---	---	√	---	---	---
LPKM0D115UF		---	---	---	√	---	---
LPKM0D060CF		---	---	---	---	√	---
LPKM0D080CF		---	---	---	---	---	√
EFR01	External Filter Rack	√	√	√	√	√	√
DCVK-20	Horizontal/Vertical Concentric Vent Kit (2”)	√	√	√	---	√	---
DCVK-30	Horizontal/Vertical Concentric Vent Kit (3”)	√	√	√	√	√	√
CFB21	Downflow Floor Base	---	---	---	---	√	---
CFB24	Downflow Floor Base	---	---	---	---	---	√
0170K00000S	Flush-mount vent kit	√	√	√	√	√	√

NOTES

√ Indicates available for this model

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