

### GMV95/GCV9 SERIES

UP TO 95% AFUE

MULTI-POSITION,  
2-STAGE/VARIABLE-SPEED  
GAS FURNACE

HEATING CAPACITY:  
46,000–115,000 BTUH



- GMV95 Models Qualify for a \$200 Tax Credit
- GDV9 Models Qualify for a \$50 Tax Credit

#### Standard Features

- Corrosion-resistant, aluminized-steel tubular heat exchanger and stainless-steel recuperative coil
- Designed for multi-position installation (GMV95: upflow, horizontal right or left; GCV9: downflow, horizontal right or left)
- Energy-saving Hot Surface Ignition system with Norton® Mini-Igniter and patented adaptive learning algorithm
- Auto-Comfort mode to maintain a comfortable climate
- 2-stage gas valve
- Super-efficient, quiet variable-speed blower motor
- Quiet, 2-speed, induced-draft blower assembly
- Integrated furnace control with diagnostics
- Low-voltage terminal blocks
- Suitable for direct vent (2-pipe) or non-direct vent (1-pipe) applications
- Convenient left or right connection for gas/electric service
- All models comply with California NOx Standards

#### Cabinet Features

- Heavy-gauge, reinforced, fully insulated steel cabinet with durable, Architectural Gray baked-enamel finish
- Foil-faced insulation lines the heat exchanger compartment
- Top venting standard; alternate flue/vent located on right (GMV95)
- Bottom or side air inlet; removable, solid bottom (GMV95)

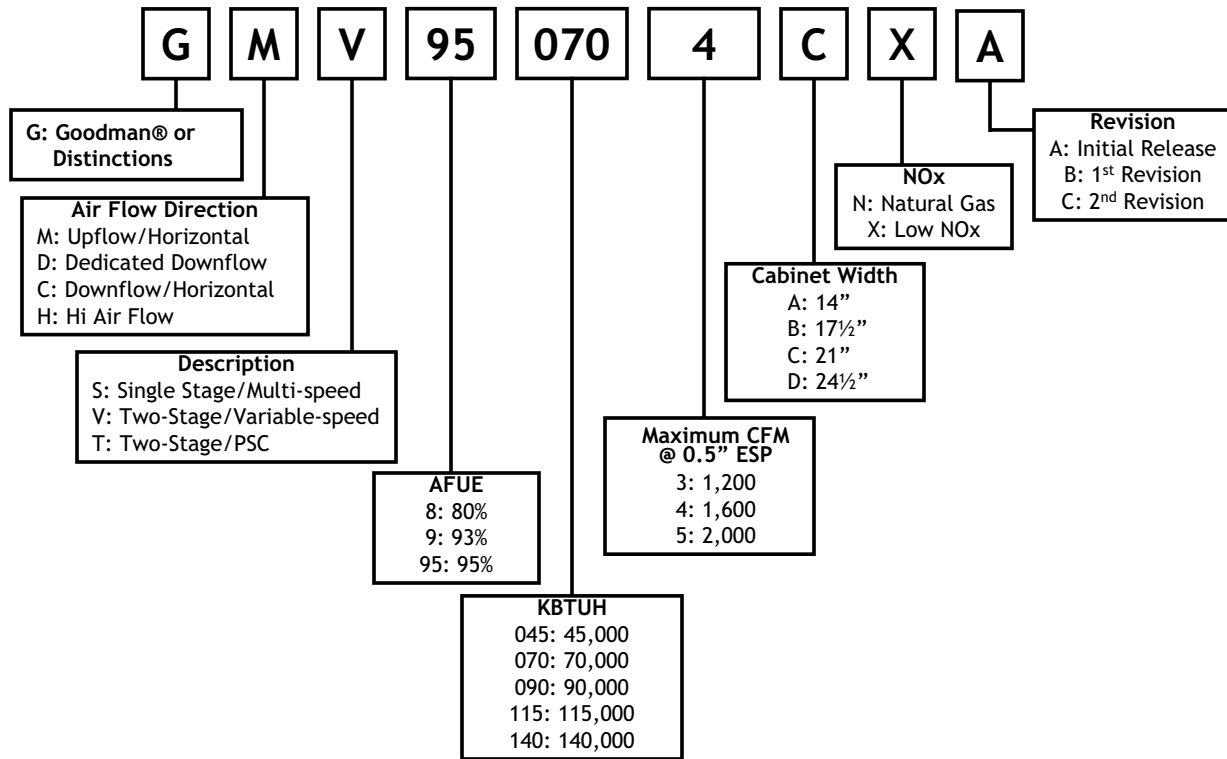
#### Accessories

- LP Conversion Kit
- LP Gas Low Pressure Kit
- Electronic Air Cleaner (GSAS)
- Media Air Cleaner (GMU)
- Dehumidistat
- High-Altitude Natural Gas/L.P. Kits
- High-Altitude Pressure Switch Kit
- Horizontal/ Vertical Concentric Vent Kit
- Flush-mount Vent Kit
- Internal Filter Retention Kit—upflow, horizontal
- External Filter Rack
- Thermostats



# PRODUCT SPECIFICATIONS

## NOMENCLATURE



# PRODUCT SPECIFICATIONS

## SPECIFICATIONS

Model	Circulator Blower			Min. Vent Diameter <sup>1</sup>	No. of Burners	Filter Size (in <sup>2</sup> )		Minimum Circuit Ampacity <sup>2</sup>	Maximum Overcurrent Protection <sup>3</sup>	Ship Weight (lbs)
	Size (D x W)	HP	Speed			Perma- nent	Dispos- able			
GMV950453BXA	10" X 7"	½	Var.	2"	2	288	576	10.4	15 amps	133
GMV950704CXA	10" X 10"	¾	Var.	2"	3	384	768	12.8	15 amps	135
GMV950905DXA	11" X 10"	1	Var.	3"	4	480	960	14.6	15 amps	172
GMV951155DXA	11" X 10"	1	Var.	3"	5	486	972	14.6	15 amps	175
GCV90704CXA	10" x 10"	3/4	Var.	2"	3	384	768	12.8	15 amps	135
GCV90905DXA	11" X 10"	1	Var.	3"	4	480	960	14.6	15 amps	172

- <sup>1</sup> 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.
- <sup>2</sup> Minimum Circuit Ampacity = (1.25 x Circulator Blower Amps) + ID Blower amps.
- <sup>3</sup> Maximum Overcurrent Protection refers to maximum recommended fuse or circuit breaker size.

### NOTES:

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

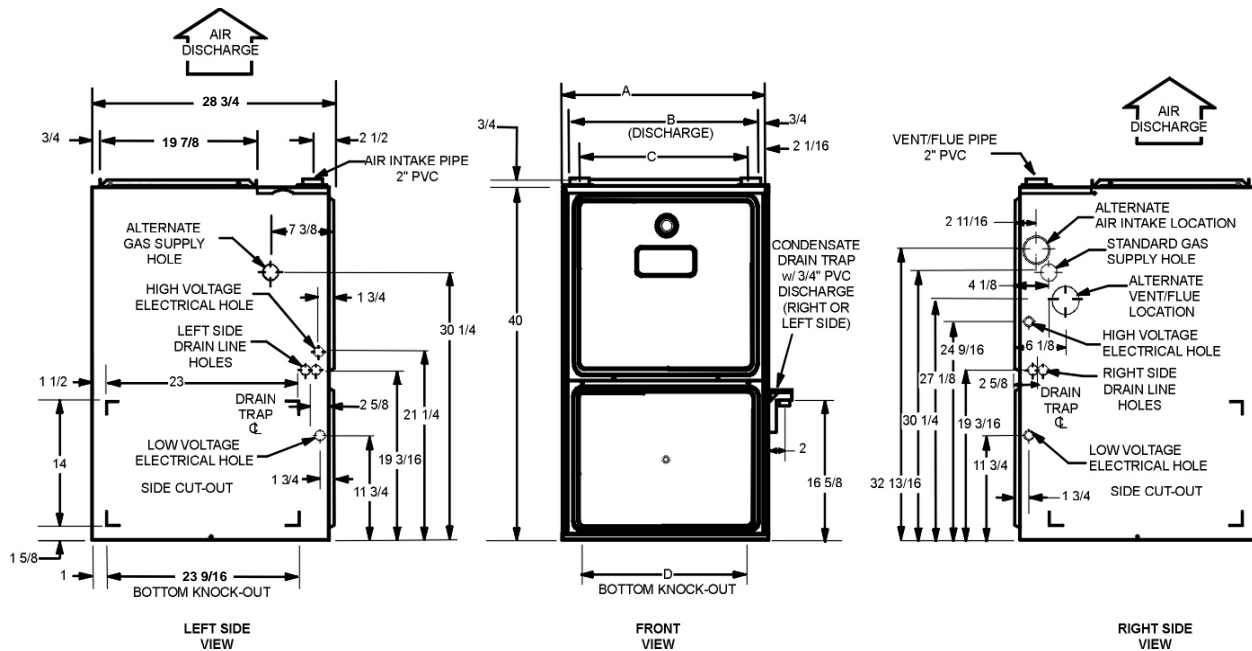
## PERFORMANCE RATINGS

Model	High Fire Rates (BTUH)		Low Fire Rates (BTUH)		AFUE <sup>†</sup>	Tons AC @ 0.5" ESP	Temperature Rise Range (° F)
	Natural Gas		Natural Gas				
	Input	Output	Input	Output			
GMV950453BXA	46,000	45,000	32,000	30,800	95.0	1.5 - 3.0	30 - 60
GMV950704CXA	69,000	67,000	48,000	46,400	95.0	1.5 - 4.0	30 - 60
GMV950905DXA	92,000	90,000	64,000	61,700	95.0	2.0 - 5.0	30 - 60
GMV951155DXA	115,000	109,000	80,000	77,400	95.0	2.0 - 5.0	35 - 65
GCV90704CXA	69,000	65,000	48,000	45,000	93.0	1.5 - 4.0	30 - 60
GCV90905DXA	92,000	87,000	64,000	60,100	93.0	2.0 - 5.0	30 - 60

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

# PRODUCT SPECIFICATIONS

## GMV95 DIMENSIONS



Model	A	B	C	D
GMV950453BXA	17 1/2"	16"	13 1/8"	13 5/8"
GMV950704CXA	21"	19 1/2"	16 1/8"	17 1/2"
GMV950905DXA	24 1/2"	23"	20 5/8"	20 7/8"
GMV951155DXA	24 1/2"	23"	20 5/8"	20 7/8"

### NOTES:

1. 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.
2. 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.
3. Conversion kits for high altitude natural gas operation are available. Contact your Goodman distributor or dealer for details.
4. Installer must supply following gas line fittings, according to which entrance is used:  
**Left**—Two 90° elbows, one close nipple, straight pipe  
**Right**—Straight pipe to reach gas valve

## Minimum Clearances to Combustible Materials

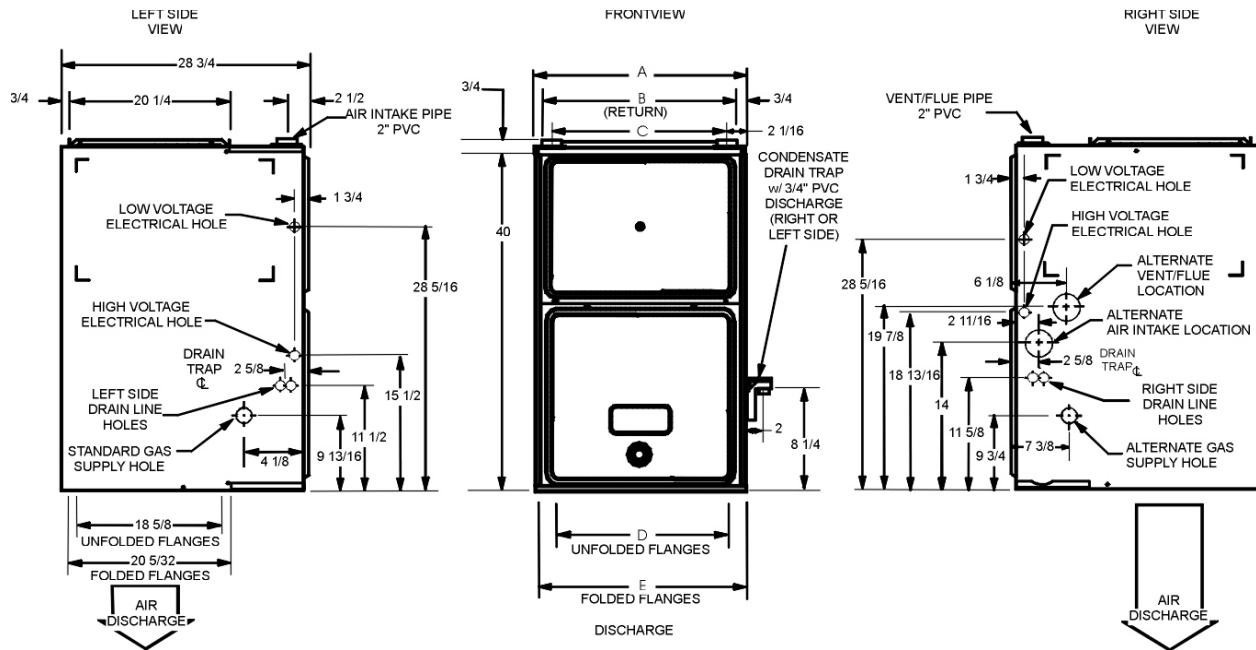
Position	Sides	Rear	Front	Bottom	Flue	Top
Upflow	0"	0"	3"	C	0"	1"
Horizontal	6"	0"	3"	C	0"	6"

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

### NOTES:

- For servicing or cleaning, a 36" 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.**

## GCV9 DIMENSIONS



Model	A	B	C	D	E
GCV90704CXA	21"	19 1/2"	16 1/8"	18"	19 1/2"
GCV90905DXA	24 1/2"	23"	20 5/8"	21 1/2"	23"

### NOTES:

1. 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.
2. 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.
3. Conversion kits for high altitude natural gas operation are available. Contact your Goodman distributor or dealer for details.
4. Installer must supply following gas line fittings, according to which entrance is used:  
**Left**—Two 90° Elbows, one close nipple, straight pipe  
**Right**—Straight pipe to reach gas valve

## Minimum Clearances to Combustible Materials

Position	Sides	Rear	Front	Bottom	Flue	Top
Downflow	0"	0"	3"	NC	0"	0"
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 subbase must be used for installations on combustible flooring.

### NOTES:

- For servicing or cleaning, a 36" 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.

# PRODUCT SPECIFICATIONS

## GMV95 HIGH- OR SINGLE-STAGE COOLING SPEEDS

GMV950453BXA			GMV950704CXA			GMV950905DXA			GMV951155DXA		
Cooling Speed Tap	Adjust Tap	CFM @ .1" to .8" W.C. ESP	Cooling Speed Tap	Adjust Tap	CFM @ .1" to .8" W.C. ESP	Cooling Speed Tap	Adjust Tap	CFM @ .1" to .8" W.C. ESP	Cooling Speed Tap	Adjust Tap	CFM @ .1" to .8" W.C. ESP
A	Minus (-)	540	A	Minus (-)	540	A	Minus (-)	720	A	Minus (-)	720
	Normal	600		Normal	600		Normal	800		Normal	800
	Plus (+)	660		Plus (+)	660		Plus (+)	880		Plus (+)	880
B	Minus (-)	720	B	Minus (-)	720	B	Minus (-)	990	B	Minus (-)	990
	Normal	800		Normal	800		Normal	1,100		Normal	1,100
	Plus (+)	880		Plus (+)	880		Plus (+)	1,210		Plus (+)	1,210
C	Minus (-)	900	C	Minus (-)	990	C	Minus (-)	1,260	C	Minus (-)	1,260
	Normal	1,000		Normal	1,100		Normal	1,400		Normal	1,400
	Plus (+)	1,100		Plus (+)	1,210		Plus (+)	1,540		Plus (+)	1,540
D	Minus (-)	1,080	D	Minus (-)	1,286	D	Minus (-)	1,620	D	Minus (-)	1,620
	Normal	1,200		Normal	1,429		Normal	1,800		Normal	1,800
	Plus (+)	1,320		Plus (+)	1,572		Plus (+)	1,980		Plus (+)	1,980

- 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.
- Constant Fan mode is 50% of above values

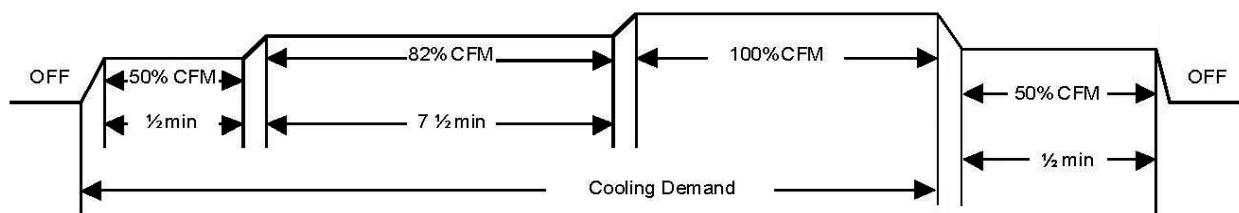
## GMV95 LOW-STAGE COOLING SPEEDS

GMV950453BXA			GMV950704CXA			GMV950905DXA			GMV951155DXA		
Cooling Speed Tap	Adjust Tap	CFM @ .1" to .8" W.C. ESP	Cooling Speed Tap	Adjust Tap	CFM @ .1" to .8" W.C. ESP	Cooling Speed Tap	Adjust Tap	CFM @ .1" to .8" W.C. ESP	Cooling Speed Tap	Adjust Tap	CFM @ .1" to .8" W.C. ESP
A	Minus (-)	380*	A	Minus (-)	378*	A	Minus (-)	513*	A	Minus (-)	514*
	Normal	390		Normal	390		Normal	520		Normal	520
	Plus (+)	429		Plus (+)	429		Plus (+)	572		Plus (+)	572
B	Minus (-)	468	B	Minus (-)	468	B	Minus (-)	644	B	Minus (-)	644
	Normal	520		Normal	520		Normal	715		Normal	715
	Plus (+)	572		Plus (+)	572		Plus (+)	787		Plus (+)	787
C	Minus (-)	585	C	Minus (-)	644	C	Minus (-)	819	C	Minus (-)	819
	Normal	650		Normal	715		Normal	910		Normal	910
	Plus (+)	715		Plus (+)	787		Plus (+)	1,001		Plus (+)	1,001
D	Minus (-)	702	D	Minus (-)	836	D	Minus (-)	1,053	D	Minus (-)	1,053
	Normal	780		Normal	929		Normal	1,170		Normal	1,170
	Plus (+)	858		Plus (+)	1,022		Plus (+)	1,287		Plus (+)	1,287

- 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.

## Auto-Comfort Mode

During Auto-Comfort mode, the furnace ramps up to 50% of the demand for half a minute. It then ramps to 82% of the full cooling demand air flow and operates there for approximately 7½ minutes. The motor then steps up to the full demand airflow. This mode spends a half minute at 50% airflow OFF delay.



## GMV95 Heating Speeds

GMV950453BXA (Rise Range: 30 - 60°F)				
Heating Speed Tap	Adjust Tap	Low Stage CFM @ .1" to .5" W.C. ESP	High Stage CFM @ .1" to .5" W.C. ESP	Rise (°F)
A	Minus (-)	495	713	57
	Normal	550	792	51
	Plus (+)	605	871	46
B	Minus (-)	540	778	52
	Normal	600	864	47
	Plus (+)	660	950	43
C	Minus (-)	585	842	48
	Normal	650	936	43
	Plus (+)	715	1,030	39
D	Minus (-)	630	907	45
	Normal	700	1,008	40
	Plus (+)	770	1,109	36

GMV950704CXA (Rise Range: 30 - 60°F)				
Heating Speed Tap	Adjust Tap	Low Stage CFM @ .1" to .5" W.C. ESP	High Stage CFM @ .1" to .5" W.C. ESP	Rise (°F)
A	Minus (-)	756	1,089	56
	Normal	840	1,210	50
	Plus (+)	924	1,331	46
B	Minus (-)	828	1,192	51
	Normal	920	1,325	46
	Plus (+)	1,012	1,457	42
C	Minus (-)	900	1,296	47
	Normal	1,000	1,440	42
	Plus (+)	1,100	1,584	38
D	Minus (-)	972	1,400	43
	Normal	1,080	1,555	39
	Plus (+)	1,188	1,711	35

GMV950905DXA (Rise Range: 30 - 60°F)				
Heating Speed Tap	Adjust Tap	Low Stage CFM @ .1" to .5" W.C. ESP	High Stage CFM @ .1" to .5" W.C. ESP	Rise (°F)
A	Minus (-)	1,013	1,458	56
	Normal	1,125	1,620	50
	Plus (+)	1,238	1,782	45
B	Minus (-)	1,076	1,549	52
	Normal	1,195	1,721	47
	Plus (+)	1,315	1,893	43
C	Minus (-)	1,139	1,639	49
	Normal	1,265	1,822	44
	Plus (+)	1,392	2,004	40
D	Minus (-)	1,202	1,730	47
	Normal	1,335	1,922	42
	Plus (+)	1,469	2,115	38

GMV951155DXA (Rise Range: 35 - 65°F)				
Heating Speed Tap	Adjust Tap	Low Stage CFM @ .1" to .5" W.C. ESP	High Stage CFM @ .1" to .5" W.C. ESP	Rise (°F)
A	Minus (-)	1,107	1,594	63
	Normal	1,230	1,771	57
	Plus (+)	1,353	1,948	52
B	Minus (-)	1,139	1,639	62
	Normal	1,265	1,822	56
	Plus (+)	1,392	2,004	50
C	Minus (-)	1,170	1,685	60
	Normal	1,300	1,872	54
	Plus (+)	1,430	2,059	49
D	Minus (-)	1,202	1,730	58
	Normal	1,335	1,922	53
	Plus (+)	1,469	2,115	48

# PRODUCT SPECIFICATIONS

## GCV9 HIGH- OR SINGLE-STAGE COOLING SPEEDS

GCV90704CXA		
Cooling Speed Tap	Adjust Tap	CFM @ .1" to .8" W.C. ESP
A	Minus (-)	540
	Normal	600
	Plus (+)	660
B	Minus (-)	720
	Normal	800
	Plus (+)	880
C	Minus (-)	990
	Normal	1,100
	Plus (+)	1,210
D	Minus (-)	1,286
	Normal	1,429
	Plus (+)	1,572

GCV90905DXA		
Cooling Speed Tap	Adjust Tap	CFM @ .1" to .8" W.C. ESP
A	Minus (-)	720
	Normal	800
	Plus (+)	880
B	Minus (-)	990
	Normal	1,100
	Plus (+)	1,210
C	Minus (-)	1,260
	Normal	1,400
	Plus (+)	1,540
D	Minus (-)	1,620
	Normal	1,800
	Plus (+)	1,980

- 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.
- Constant fan mode is 50% of above values.

\*Motor CFM minimum

## GCV9 LOW-STAGE COOLING SPEEDS

GCV90704CXA		
Cooling Speed Tap	Adjust Tap	CFM @ .1" to .8" W.C. ESP
A	Minus (-)	378*
	Normal	390
	Plus (+)	429
B	Minus (-)	468
	Normal	520
	Plus (+)	572
C	Minus (-)	644
	Normal	715
	Plus (+)	787
D	Minus (-)	836
	Normal	929
	Plus (+)	1,022

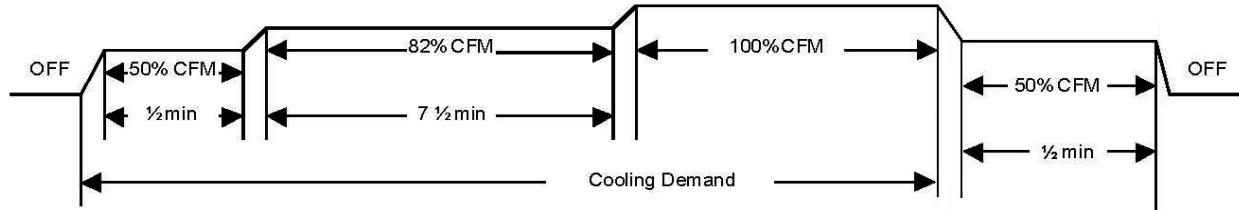
GCV90905DXA		
Cooling Speed Tap	Adjust Tap	CFM @ .1" to .8" W.C. ESP
A	Minus (-)	513*
	Normal	520
	Plus (+)	572
B	Minus (-)	644
	Normal	715
	Plus (+)	787
C	Minus (-)	819
	Normal	910
	Plus (+)	1,001
D	Minus (-)	1,053
	Normal	1,170
	Plus (+)	1,287

- 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.

\* Motor CFM minimum

### Auto-Comfort Mode

During Auto-Comfort mode, the furnace ramps up to 50% of the demand for half a minute. It then ramps to 82% of the full cooling demand air flow and operates there for approximately 7½ minutes. The motor then steps up to the full demand airflow. This mode spends a half minute at 50% airflow OFF delay.



### GCV9 HEATING SPEEDS

GCV90704CXA (Rise Range: 30 - 60°F)				
Heating Speed Tap	Adjust Tap	Low Stage CFM <sup>1</sup>	High Stage CFM <sup>1</sup>	Rise (°F)
A	Minus (-)	747	1,076	56
	Normal	830	1,195	50
	Plus (+)	913	1,315	46
B	Minus (-)	824	1,186	51
	Normal	915	1,318	46
	Plus (+)	1,007	1,449	42
C	Minus (-)	900	1,296	47
	Normal	1,000	1,440	42
	Plus (+)	1,100	1,584	38
D	Minus (-)	978	1,408	43
	Normal	1,085	1,562	39
	Plus (+)	1,194	1,719	35

<sup>1</sup> CFM @ .1" to .5" W.C. ESP

GCV90905DXA (Rise Range: 30 - 60°F)				
Heating Speed Tap	Adjust Tap	Low Stage CFM <sup>1</sup>	High Stage CFM <sup>1</sup>	Rise (°F)
A	Minus (-)	999	1,439	56
	Normal	1,110	1,598	50
	Plus (+)	1,221	1,758	46
B	Minus (-)	1,067	1,536	52
	Normal	1,185	1,706	47
	Plus (+)	1,303	1,876	43
C	Minus (-)	1,134	1,633	49
	Normal	1,260	1,814	44
	Plus (+)	1,386	1,996	40
D	Minus (-)	1,202	1,730	46
	Normal	1,335	1,922	42
	Plus (+)	1,469	2,115	38

<sup>1</sup> CFM @ .1" to .5" W.C. ESP

# PRODUCT SPECIFICATIONS

## ACCESSORIES

Model	Description	GMV950453BXA	GMV950704CXA	GMV950905DXA	GMV951155DXA	GCV90704CXA	GCV90905DXA
LPM-03B	LP Conversion Kit	1	1	1	1	1	1
LPM-05	LP Conversion Kit	1	1	1	1	1	1
GSAS	Electronic Air Cleaners (-10, -11, -12 or -18)	√	√	√	√	√	√
GMU	Media Air Cleaners (1620, 2020, 1625 or 2025)	√	√	√	√	√	√
DEHUM1	Dehumidistat	√	√	√	√	√	√
HAPS28	High-Altitude Pressure Switch Kit	2	2				
HAPS29	High-Altitude Pressure Switch Kit			2	2		
HAPS 31	High-Altitude Pressure Switch Kit					2	2
HALP11	High-Altitude Propane Gas Kit	2	2	2	2		
HALP 13	High-Altitude Propane Gas Kit					2	2
HANG 13	High-Altitude Natural Gas Kit	3	3	3	3		
HANG 14	High-Altitude Natural Gas Kit	4	4	4	4		
HANG 16	High-Altitude Natural Gas Kit					2	2
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						√
017K00000S	Flush-mount vent kit	√	√	√	√	√	√

1) All Models up to 7,000'

2) 7,001' to 11,000'

3) 7,001' to 9,000'

4) 9,001' to 11,000'

NOTE: All installations above 7,000' require a pressure switch change. For installation in Canada, gas furnaces are certified only to 4,500'.

## THERMOSTATS

A 2-stage thermostat should be used with the GMV95/GCV9 furnaces. A 2-stage thermostat controls which firing rate is used depending on the temperature difference between the set point and the room temperature. A properly used 2-stage thermostat and furnace will maintain a much tighter control of temperature than a conventional single-stage thermostat and furnace. A 2-stage furnace has both “W1” and “W2” terminals. If the thermostat has “Y1” and “Y2” cooling connections and a single-stage cooling system is used, connect “Y” on the furnace control to “Y1” on the thermostat. The table below describes 2-stage thermostats which have been set up for use with this furnace.

Model	Description
CHT90-120	Cooling/Heating, Mechanical
CH70TG	Cooling/Heating, Digital, Non-programmable
CHSATG	Cooling/Heating, Mechanical
H20TWR	Heating Only, Mechanical

## STANDARD ALTITUDE INSTALLATIONS

Gas	Altitude	Kit	Orifice	Manifold Pressure		Pressure Switch Change
				High Stage	Low Stage	
Natural	0-7000 Changeover	None	#43	3.5" W.C.	1.9" W.C.	None
Propane	0-7000	LPM-03B & LPM-05	#55	10.0: W.C.	6.0" W.C.	None

For installation in Canada, gas furnaces are certified only to 4,500 ft.  
 For GCVA installations above 7,000 ft., please refer to your Amana distributor for required kit(s).  
 Shading indicates for GCVA only

# PRODUCT SPECIFICATIONS

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**Air Conditioning & Heating**

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