



Air Conditioning & Heating

# GMV8 SERIES

80% AFUE

## Multi-Position, 2-Stage/Variable-Speed Gas Furnace

Heating Capacity:  
70,000–115,000 BTUH



*The GMV8 2-stage, variable-speed gas furnace offers installation versatility.*

### Standard Features

- Corrosion-resistant, aluminized-steel tubular heat exchanger
- Designed for multi-position installation—upflow, horizontal right or left
- Energy-saving, reliable hot surface ignition system with patented adaptive learning algorithm to maximize igniter life
- Auto-Comfort mode helps to efficiently create and maintain a comfortable climate by intuitively adjusting to the room's environment
- Aluminized-steel inshot burners
- 2-stage gas valve and super-efficient, quiet variable-speed blower motor
- Quiet, 2-speed induced draft blower assembly
- Integrated furnace control with improved diagnostics
- Low voltage terminal blocks
- Multiple flame roll-out switches, blower door safety switch, outlet air-limit switch and pressure switch for proof of combustion air
- 40VA transformer for heating and air conditioning control service
- Combination redundant 2-stage gas valve and regulator
- A rotating combustion air blower that provides the option of venting the furnace through the top, right-hand side or left-hand side
- Completely assembled, factory run-tested furnace for heating or combination heating/cooling application
- All models comply with California NO<sub>x</sub> Standards

### Cabinet Construction

- Heavy-gauge, reinforced, fully insulated steel cabinet with durable baked-enamel finish
- Attractive architectural gray paint finish
- Coil and furnace fit flush for easy installation
- Convenient left or right connection for gas and electric service
- Bottom or side air inlet
- Removable, solid-bottom block off

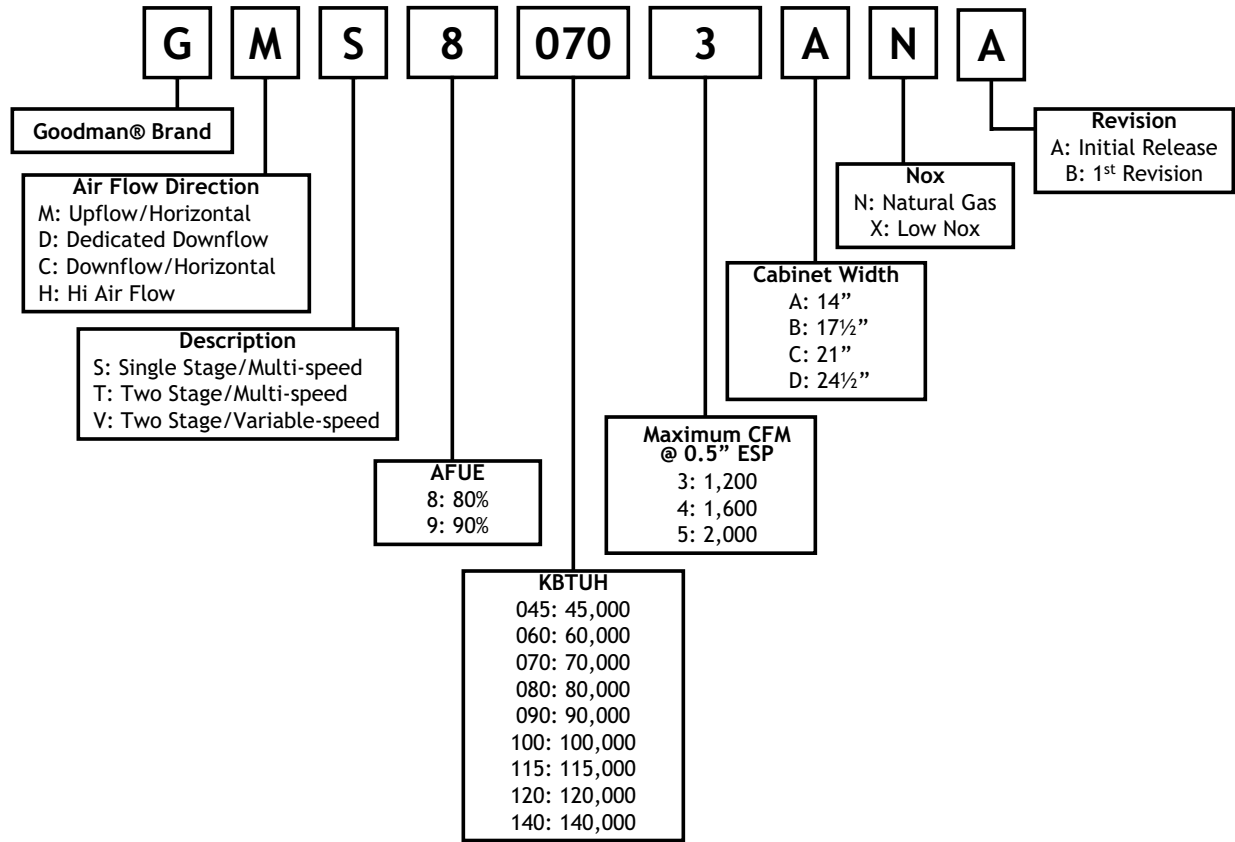
### Accessories

- L.P. Conversion Kit (LPM-03)
- Fossil Fuel Kit (FFK03A)
- Electronic Air Cleaners (GSAS-10, GSAS-11, GSAS-12, GSAS-18)
- Media Air Cleaners (GMU1620, GMU2020, GMU1625, GMU2025)
- Thermostats (CHT18-60, CH70TG, CHSATG, H20TWR)



# PRODUCT SPECIFICATIONS

## Nomenclature



# PRODUCT SPECIFICATIONS

## Performance Ratings

Model	High Fire Rates (BTUH)			Low Fire Rates (BTUH)			AFUE	Tons AC @ 0.5" ESP	Temperature Rise Range (° F)
	Natural Gas Input	Output		Natural Gas Input	Output				
		Natural	LP		Natural	LP			
GMV80703BXA	70,000	57,400	49,252	52,500	42,000	43,096	80	1.5 - 3.0	20 - 50
GMV80905CXA	90,000	73,600	64,246	67,500	54,000	55,409	80	2.0 - 5.0	20 - 50
GMV81155CXA	115,000	92,000	85,961	86,000	69,000	70,595	80	2.0 - 5.0	25 - 55

\* For altitudes above 2,000', reduce input rating 4% for each 1,000' above sea level.

\*\*DOE AFUE based upon Isolated Combustion System (ICS).

## Specifications

Model	Circulator Blower			Vent Diameter <sup>1</sup>	No. of Burners	Filter Size (in <sup>2</sup> )		Minimum Circuit Ampacity <sup>2</sup> (amps)	Maximum Overcurrent Protection <sup>3</sup> (amps)	Shipping Weight (pounds)
	Size (D x W)	HP	Speed			Permanent	Disposable			
GMV80703BXA	10" x 8"	3/4	Var.	4"	3	288	576	11.7	15	152
GMV80905CXA	10" x 10"	3/4	Var.	4"	4	480	460	11.7	15	178
GMV81155CXA	10" x 10"	3/4	Var.	4"	5	480	460	11.7	15	194

<sup>1</sup> Vent and combustion air diameters 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>2</sup> Minimum Circuit Ampacity = (1.25 x Circulator Blower Amps) + ID Blower amps.

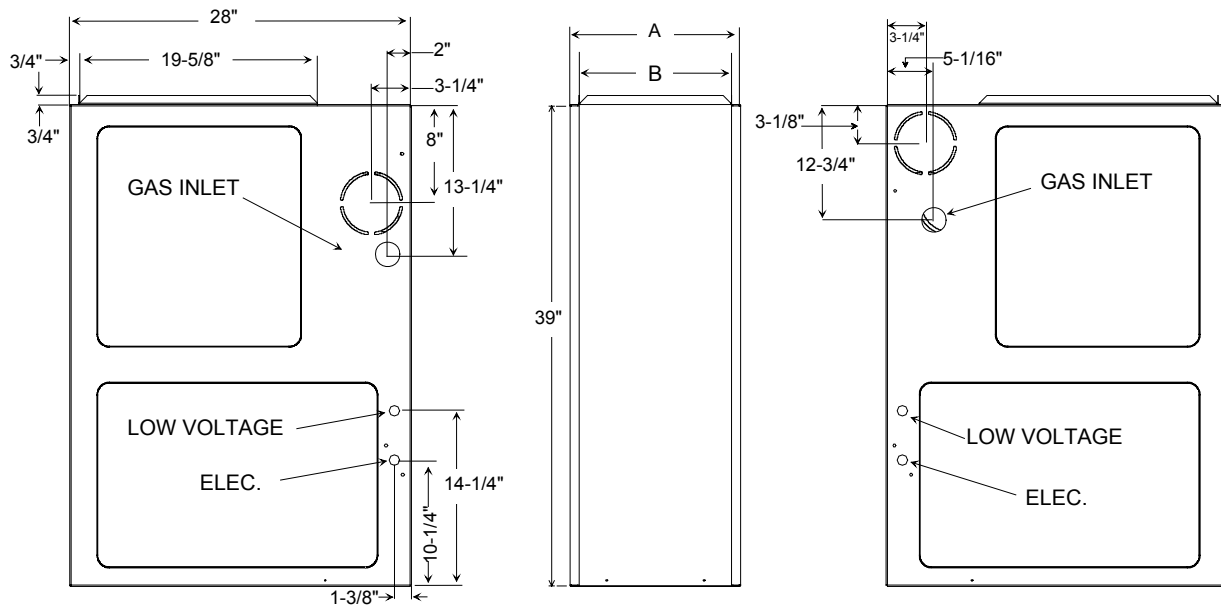
<sup>3</sup> Maximum Overcurrent Protection refers to maximum recommended fuse or circuit breaker size.

### 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.

# PRODUCT SPECIFICATIONS

## Dimensions



Model	A	B
GMV80703BXA	17½"	16"
GMV80905CXA	21"	19½"
GMV81155CXA	21"	19½"

## Minimum Clearances to Combustible Materials

Sides	Rear	Front*	Vent**		Top
			SW	B	
1	0	3	6	1	1

Approved for line contact in the horizontal position.

\*36" clearance for serviceability recommended.

\*\*Single Wall Vent (SW) to be used only as a connector. Refer to the venting tables outlined in the Installation Manual for additional venting requirements.

# PRODUCT SPECIFICATIONS

## High- or Single-Stage Cooling Speeds

Single-Stage Cooling: “Y” From T-Stat to “Y” on Two-Stage Integrated Control Module

Two-Stage Cooling (High Stage): “Y2” From T-Stat to “Y/Y2” on Integrated Control Module

GMV80703BXA		
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 (-)	1,260
	Normal	1,400
	Plus (+)	1,540

GMV80905CXA		
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

GMV81155CXA		
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

## Low-Stage Cooling Speeds

GMV80703BXA		
Cooling Speed Tap	Adjust Tap	CFM @ .1” to .8” W.C. ESP
A	Minus (-)	361†
	Normal	390
	Plus (+)	429
B	Minus (-)	468
	Normal	520
	Plus (+)	572
C	Minus (-)	644
	Normal	715
	Plus (+)	787
D	Minus (-)	819
	Normal	910
	Plus (+)	1,001

GMV80905CXA		
Cooling Speed Tap	Adjust Tap	CFM @ .1” to .8” W.C. ESP
A	Minus (-)	563†
	Normal	563†
	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

GMV81155CXA		
Cooling Speed Tap	Adjust Tap	CFM @ .1” to .8” W.C. ESP
A	Minus (-)	563†
	Normal	563†
	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

## Cooling-Based Continuous Fan

### Option B: “G” From T-Stat to “Y1” on Circulator Blower Interface Board

(NOTE: Only applicable for installations with single-stage cooling only, or no cooling.)

GMV80703BXA		
Cooling Speed Tap	Adjust Tap	CFM @ .1” to .8” W.C. ESP
A	Minus (-)	361†
	Normal	361†
	Plus (+)	370
B	Minus (-)	403
	Normal	448
	Plus (+)	493
C	Minus (-)	554
	Normal	616
	Plus (+)	678
D	Minus (-)	706
	Normal	784
	Plus (+)	862

GMV80905CXA		
Cooling Speed Tap	Adjust Tap	CFM @ .1” to .8” W.C. ESP
A	Minus (-)	563†
	Normal	563†
	Plus (+)	563†
B	Minus (-)	563†
	Normal	616
	Plus (+)	678
C	Minus (-)	706
	Normal	784
	Plus (+)	862
D	Minus (-)	907
	Normal	1,008
	Plus (+)	1,109

GMV81155CXA		
Cooling Speed Tap	Adjust Tap	CFM @ .1” to .8” W.C. ESP
A	Minus (-)	563†
	Normal	563†
	Plus (+)	563†
B	Minus (-)	563†
	Normal	616
	Plus (+)	678
C	Minus (-)	706
	Normal	784
	Plus (+)	862
D	Minus (-)	907
	Normal	1,008
	Plus (+)	1,109

#### NOTES:

\* Motor CFM maximum

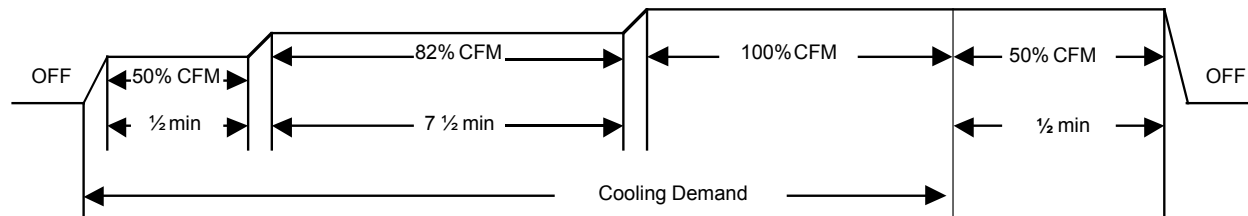
† Motor CFM minimum

- These charts are for furnaces installed at 0' - 2,000'. At higher altitudes, a properly derated unit will have the same temperature rise at a particular CFM, while the ESP at that CFM will be lower.
- The installation must be adjusted to obtain a temperature rise within the range listed on the furnace nameplate.
- Do not operate above .5” w.c. ESP in heating mode.
- Propane gas installations will have a High Stage rise approximately 4° lower than shown in above table.

# PRODUCT SPECIFICATIONS

## 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.



## Heating Speeds

GMV80703BXA (Rise Range: 25 - 55 °F)				
Heating Speed Tap	Adjust Tap	Low Stage CFM at .1" to .5" w.c. ESP	High Stage CFM at .1" to .5" w.c. ESP	Rise
A	Minus (-)	810	1,077	48
	Normal	900	1,197	43
	Plus(+)	990	1,317	39
B	Minus (-)	900	1,197	43
	Normal	1,000	1,330	39
	Plus(+)	1,100	1,463	35
C	Minus (-)	990	1,317	39
	Normal	1,100	1,463	35
	Plus(+)	1,210	1,609	32
D	Minus (-)	1,080	1,436	36
	Normal	1,200	1,596	32
	Plus(+)	1,320	1650*	29

GMV80905CXA (Rise Range: 20 - 50 °F)				
Heating Speed Tap	Adjust Tap	Low Stage CFM at .1" to .5" w.c. ESP	High Stage CFM at .1" to .5" w.c. ESP	Rise
A	Minus (-)	945	1,257	53
	Normal	1,050	1,397	48
	Plus(+)	1,155	1,536	43
B	Minus (-)	1,035	1,377	48
	Normal	1,150	1,530	43
	Plus(+)	1,265	1,682	40
C	Minus (-)	1,125	1,496	44
	Normal	1,250	1,663	40
	Plus(+)	1,375	1,829	36
D	Minus (-)	1,215	1,616	41
	Normal	1,350	1,796	37
	Plus(+)	1,485	1,975	34

GMV81155CXA (Rise Range: 20 - 50 °F)				
Heating Speed Tap	Adjust Tap	Low Stage CFM at .1" to .5" w.c. ESP	High Stage CFM at .1" to .5" w.c. ESP	Rise
A	Minus (-)	1,170	1,556	55
	Normal	1,300	1,729	49
	Plus(+)	1,430	1,902	45
B	Minus (-)	1,215	1,616	53
	Normal	1,350	1,796	47
	Plus(+)	1,485	1,975	43
C	Minus (-)	1,260	1,676	51
	Normal	1,400	1,862	46
	Plus(+)	1,540	2000*	41
D	Minus (-)	1,373	1,825	47
	Normal	1,525	2000*	42
	Plus(+)	1,678	2000*	38

### NOTES:

\* Motor CFM maximum

† Motor CFM minimum

- These charts are for furnaces installed at 0' - 2,000'. At higher altitudes, a properly derated unit will have the same temperature rise at a particular CFM, while the ESP at that CFM will be lower.
- The installation must be adjusted to obtain a temperature rise within the range listed on the furnace nameplate.
- Do not operate above .5" w.c. ESP in heating mode.
- Propane gas installations will have a High Stage rise approximately 4° lower than shown in above table.

## PRODUCT SPECIFICATIONS

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### Accessories

Model	Description	GMV80703BXA	GMV80905CXA	GMV81155CXA
LPM-03	Propane (LP) Conversion Kit	✓	✓	✓
FFK03A	Fossil Fuel Kit (must be used in a dual fuel application with a compatible thermostat)	✓	✓	✓
GSAS*	Electronic Air Cleaners (* = -10, -11, -12 or -18)	✓	✓	✓
GMU*	Media Air Cleaners (* = 1620, 2020, 1625 or 2025)	✓	✓	✓

### Thermostats

A 2-stage thermostat should be used with the GMV8 furnace. 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
CHT18-60	Cooling/Heating, Mechanical
CH70TG	Cooling/Heating, Digital, Non-programmable
CHSATG	Cooling/Heating, Mechanical
H20TWR	Heating Only, Mechanical



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