



GUVA

Two-Stage Variable Speed High Efficiency Gas Furnace Specification Sheet

Affix this Specification Sheet, Installation Instructions and User Information manual adjacent to the unit.

Model Number	High Fire Rates		Low Fire Rates		Rated AFUE	Temp. Rise Range (°F)	Number of Burners	Minimum ¹ Circuit Ampacity (Amps)	Maximum ² Overcurrent Protection (Amps)	Circulator Blower		Tons AC at 0.5" ESP	Pressure Switch ³ Settings (inches w.c.)			Ship. Wt. (lbs)
	Input (Btu/hr)	Output (Btu/hr)	Input (Btu/hr)	Output (Btu/hr)						Size (D" x W")	HP		ID Blwr (Low)	ID Blwr (High)	Front Cover	
045_30	46,000	44,300	32,000	30,800	96	30 - 60	2	10.4	15.0	11 X 7	1/2	1.5 - 3.0	-0.30	-0.75	-0.10	133
070_40	69,000	66,900	48,000	46,400	95.5	30 - 60	3	12.8	15.0	11 X 9	3/4	1.5 - 4.0	-0.30	-0.75	-0.10	157
090_50	92,000	88,800	64,000	61,700	95.7	30 - 60	4	14.6	15.0	11 X 10	1	2.0 - 5.0	-0.50	-1.10	-0.10	172
115_50	115,000	111,100	80,000	77,400	95.8	35 - 65	5	14.6	15.0	11 X 10	1	2.0 - 5.0	-0.50	-1.10	-0.10	184

FLAME SENSOR OUTPUT IS 1 TO 4 MICROAMPS AT 115 VOLTS.

FILTERS ARE NOT INCLUDED WITH FURNACE AND MUST BE SUPPLIED BY THE INSTALLER.

¹ Minimum Circuit Ampacity = (1.25 x Circulator Blower Amps) + ID Blower Amps.

² Maximum Overcurrent Protection refers to maximum recommended fuse or circuit breaker size.

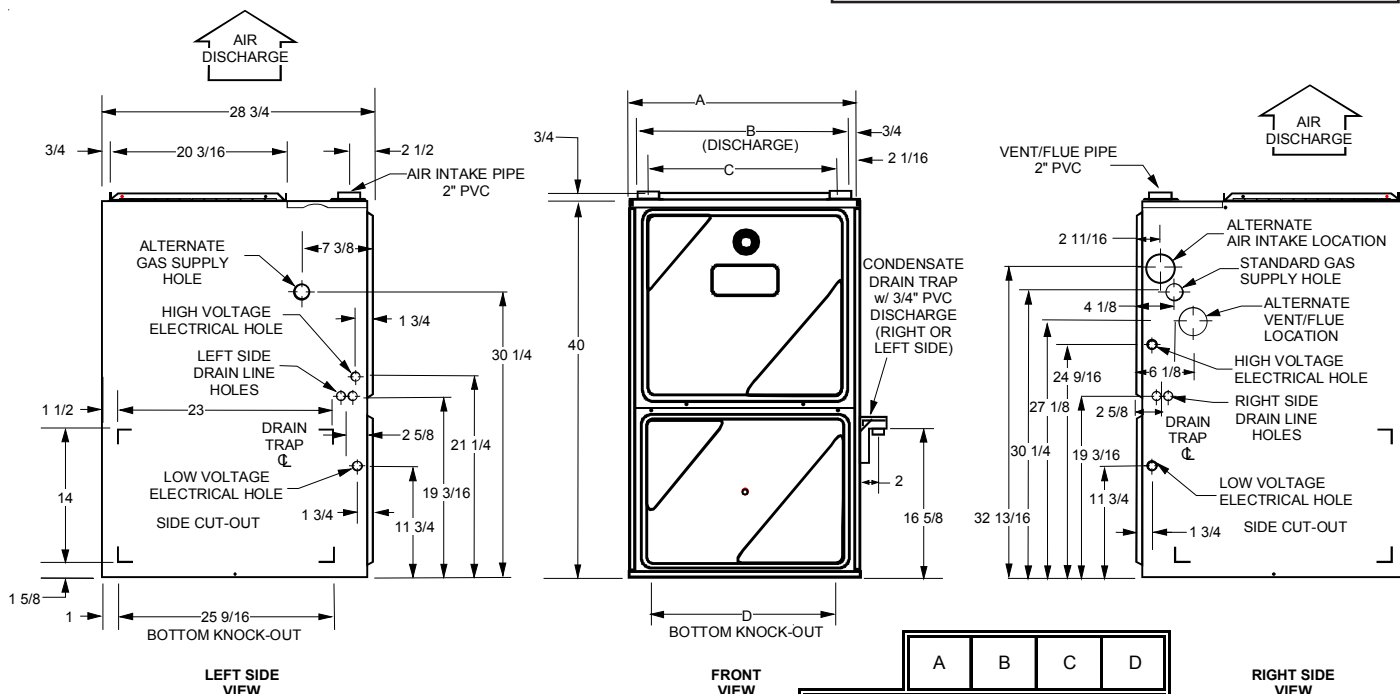
³ As shipped for installations below 4500 feet.



WARNING

To avoid death, personal injury or property damage due to fire, do not exceed maximum recommended fuse or circuit breaker size.

DIMENSIONS (Inches)



Due to policy of continual product improvement, the right is reserved to change specifications and design without notice.

All dimensions are in inches.



CIRCULATOR MOTOR / AIRFLOW

The GUVA variable speed circulator motor runs at a constant airflow over a range of static pressures. The airflow is easily adjusted using the speed tap DIP switches on the integrated control module.

Using the speed adjustments on the integrated control board, twelve different heating speeds and twelve different cooling speeds may be attained. In addition to the four main speeds for heating (A, B, C, and D) and the four main speeds for cooling (A, B, C, and D), the ADJUST tap allows for a PLUS or MINUS adjust for each of the four speeds. The ADJUST tap affects both the HEAT and COOL speeds.

The heating speeds have been programmed to provide the same rise on low stage as on high stage heating. The high stage heating speed and low stage heating speed cannot be independently selected.

Low stage cooling speed has been programmed to provide 65% of the high stage cooling speed. The high stage cooling speed and low stage cooling speed cannot be independently selected.

Continuous fan speed has been programmed to provide 56% of the high stage cooling speed. The continuous fan airflow will therefore depend on the speed selected for high stage cooling.

Heating Speed Charts

045_30 (Rise Range: 30 - 60°F)					070_40 (Rise Range: 30 - 60°F)				
Heating Speed Tap	Adjust Tap	Low Stage CFM at .1" - .5" w.c. ESP	High Stage CFM at .1" - .5" w.c. ESP	Rise (°F)	Heating Speed Tap	Adjust Tap	Low Stage CFM at .1" - .5" w.c. ESP	High Stage CFM at .1" - .5" w.c. ESP	Rise (°F)
A	Minus(-)	495	713	57	A	Minus(-)	756	1089	56
	Normal	550	792	51		Normal	840	1210	50
	Plus (+)	605	871	46		Plus (+)	924	1331	46
B	Minus(-)	540	778	52	B	Minus(-)	828	1192	51
	Normal	600	864	47		Normal	920	1325	46
	Plus (+)	660	950	43		Plus (+)	1012	1457	42
C	Minus(-)	585	842	48	C	Minus(-)	900	1296	47
	Normal	650	936	43		Normal	1000	1440	42
	Plus (+)	715	1030	39		Plus (+)	1100	1584	38
D	Minus(-)	630	907	45	D	Minus(-)	972	1400	43
	Normal	700	1008	40		Normal	1080	1555	39
	Plus (+)	770	1109	36		Plus (+)	1188	1711	35

090_50 (Rise Range: 30 - 60°F)					115_50 (Rise Range: 30 - 60°F)				
Heating Speed Tap	Adjust Tap	Low Stage CFM at .1" - .5" w.c. ESP	High Stage CFM at .1" - .5" w.c. ESP	Rise (°F)	Heating Speed Tap	Adjust Tap	Low Stage CFM at .1" - .5" w.c. ESP	High Stage CFM at .1" - .5" w.c. ESP	Rise (°F)
A	Minus(-)	1013	1458	56	A	Minus(-)	1107	1594	63
	Normal	1125	1620	50		Normal	1230	1771	57
	Plus (+)	1238	1782	45		Plus (+)	1353	1948	52
B	Minus(-)	1076	1549	52	B	Minus(-)	1139	1639	62
	Normal	1195	1721	47		Normal	1265	1822	56
	Plus (+)	1315	1893	43		Plus (+)	1392	2004	50
C	Minus(-)	1139	1639	49	C	Minus(-)	1170	1685	60
	Normal	1265	1822	44		Normal	1300	1872	54
	Plus (+)	1392	2004	40		Plus (+)	1430	2059	49
D	Minus(-)	1202	1730	47	D	Minus(-)	1202	1730	58
	Normal	1335	1922	42		Normal	1335	1922	53
	Plus (+)	1469	2115	38		Plus (+)	1469	2115	48

NOTES:

- These charts are for furnaces installed at 0 - 2000 feet. 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°F lower than shown in above tables.

CIRCULATOR MOTOR / AIRFLOW

High or Single-Stage Cooling Speed Charts

045__30			070__40			090__50			115__50		
Cooling Speed Tap	Adjust Tap	CFM at .1" - .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" - .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" - .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" - .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	1100		Normal	1100
	Plus (+)	880		Plus (+)	880		Plus (+)	1210		Plus (+)	1210
C	Minus(-)	900	C	Minus(-)	990	C	Minus(-)	1260	C	Minus(-)	1260
	Normal	1000		Normal	1100		Normal	1400		Normal	1400
	Plus (+)	1100		Plus (+)	1210		Plus (+)	1540		Plus (+)	1540
D	Minus(-)	1080	D	Minus(-)	1286	D	Minus(-)	1620	D	Minus(-)	1620
	Normal	1200		Normal	1429		Normal	1800		Normal	1800
	Plus (+)	1320		Plus (+)	1572		Plus (+)	1980		Plus (+)	1980

Low Stage Cooling Speed Charts

045__30			070__40			090__50			115__50		
Cooling Speed Tap	Adjust Tap	CFM at .1" - .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" - .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" - .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" - .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 (+)	1001		Plus (+)	1001
D	Minus(-)	702	D	Minus(-)	836	D	Minus(-)	1053	D	Minus(-)	1053
	Normal	780		Normal	929		Normal	1170		Normal	1170
	Plus (+)	858		Plus (+)	1022		Plus (+)	1287		Plus (+)	1287

NOTES:

- Installer must adjust blower speed(s) as required.
- For most cooling applications, about 400 CFM per ton 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.

CIRCULATOR MOTOR / AIRFLOW

Continuous Fan Speed Charts

045__30			070__40			090__50			115__50		
Cooling Speed Tap	Adjust Tap	CFM at .1" - .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" - .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" - .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" - .8" w.c. ESP
A	Minus(-)	380*	A	Minus(-)	380*	A	Minus(-)	513*	A	Minus(-)	514*
	Normal	380*		Normal	380*		Normal	513*		Normal	514*
	Plus (+)	380*		Plus (+)	380*		Plus (+)	513*		Plus (+)	514*
B	Minus(-)	403	B	Minus(-)	403	B	Minus(-)	554	B	Minus(-)	554
	Normal	448		Normal	448		Normal	616		Normal	616
	Plus (+)	493		Plus (+)	493		Plus (+)	678		Plus (+)	678
C	Minus(-)	504	C	Minus(-)	554	C	Minus(-)	706	C	Minus(-)	706
	Normal	560		Normal	616		Normal	784		Normal	784
	Plus (+)	616		Plus (+)	678		Plus (+)	862		Plus (+)	862
D	Minus(-)	505	D	Minus(-)	720	D	Minus(-)	907	D	Minus(-)	907
	Normal	672		Normal	800		Normal	1008		Normal	1008
	Plus (+)	739		Plus (+)	880		Plus (+)	1109		Plus (+)	1109

- Do not operate above .5" W.C. ESP in heating mode.
- *Motor CFM minimum.

MINIMUM CLEARANCES



WARNING

To avoid death, personal injury or property damage due to fire, clearances to combustible surfaces listed as below must be observed.

Service Accessibility and Unit Connections

- 36 inches front clearance is required for servicing or cleaning.
- Unit connections (electrical, flue, and drain) may necessitate greater clearances than the minimum clearances listed below.

NOTE: In all cases, accessibility clearance must take precedence over clearances from the enclosure where accessibility clearances are greater.

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS (INCHES)						
POSITION ¹	SIDES	FRONT	REAR	TOP	BOTTOM	FLUE
Upflow	0	1	0	1	C	0
Horizontal	6	Alcove	0	4	C	0

¹All positioning is determined as installed unit is viewed from the front.

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

STANDARD ALTITUDE INSTALLATIONS

For installations above 7000 feet, please refer to your Amana distributor for required kit(s).

Gas	Altitude	Kit	Orifice	Manifold Pressure		Pressure Switch Change
				High Stage	Low Stage	
Natural	0-7000	None	#43	3.5" w.c.	1.9" w.c.	None
Propane		LPTK09	#55	10.0" w.c.	6.0" w.c.	None

NOTE: In Canada, gas furnaces are only certified to 4500 feet.

FLAME SENSOR

Flame sensor output is 1 to 4 microamps at 115 volts.

FILTERS

NOTE: Filters are required with this furnace and must be provided by the installer. The filters used must comply with UL900 or CAN/ULCS111 standards. Installing this furnace without filters will void the unit warranty.

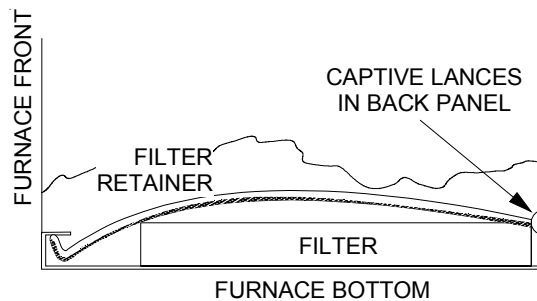
This furnace has provisions for the installation of return air filters at the side and/or bottom return. The furnace will accommodate the following filter sizes depending on cabinet size:

Side Return(s)		
Cabinet Width (in.)	Nominal Filter Size (in.)	Approx. Flow Area (in ²)
All	16 x 25 x 1	400

Bottom Return		
Cabinet Width (in.)	Nominal Filter Size (in.)	Approx. Flow Area (in ²)
16-1/2	14 x 25 x 1	350
20-1/2	16 x 25 x 1	400
24-1/2	20 x 25 x 1	500

Refer to Minimum Filter Area tables to determine filter area requirement. **NOTE:** Filters can also be installed elsewhere in the duct system such as a central return.

The figure below shows how the filter is retained over the bottom return air opening.



Cut Away Side View of Bottom Return Wire Filter Retainer

IMPORTANT NOTES:

1. All furnaces have a redundant gas valve and blower door interlock switch.
2. All furnaces are manufactured for use on 115 VAC, 60 Hz, single phase electrical supply.
3. **IMPORTANT:** While the data is presented as a guide, it is required to properly size fuses and wires and make electrical connections in accordance with the National Electrical Code and/or all existing local codes.
4. Performance figures are based on Department of Energy information and requirements under continuous operating conditions. Performance will vary with weather conditions and use.
5. Drain connections must conform to local codes.

FILTERS

Permanent Minimum Filter Area (in²)

[Based on 600 ft/min filter face velocity]

		COOLING AIRFLOW REQUIREMENT (CFM)						
		600	800	1000	1200	1400	1600	2000
Input_Airflow	045__30	376*	384	480	576	---	---	---
	070__40	---	---	627*	627*	672	768	---
	090__50	---	---	---	836*	836*	836*	960
	115__50	---	---	---	940*	940*	940*	960

*Minimum filter area dictated by heating airflow requirement.

Disposable Minimum Filter Area (in²)

[Based on a 300 ft/min filter face velocity]

		COOLING AIRFLOW REQUIREMENT (CFM)						
		600	800	1000	1200	1400	1600	2000
Input_Airflow	045__30	376*	384	480	576	---	---	---
	070__30	---	564*	564*	564*	672	---	---
	070__40	---	---	564*	564*	672	768	
	090__40	---	---	752*	752*	752*	768	---
	090__50	---	---	---	752*	752*	768	960
	115__50	---	---	---	940*	940*	940*	960

*Minimum filter area dictated by heating airflow requirement.

[illegible]