

GUVA

Two-Stage High Efficiency Gas-Fired Warm Air 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 ³ Switch Settings			Shipping Weight (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	
GUVA045AX30	46,000	44,300	32,000	30,800	96.0	30 - 60	2	10.4	15.0	11 X 7	1/2	1.5 - 3.0	-0.30	-0.75	-0.10	133
GUVA070AX40	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
GUVA090AX50	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
GUVA115AX50	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

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.

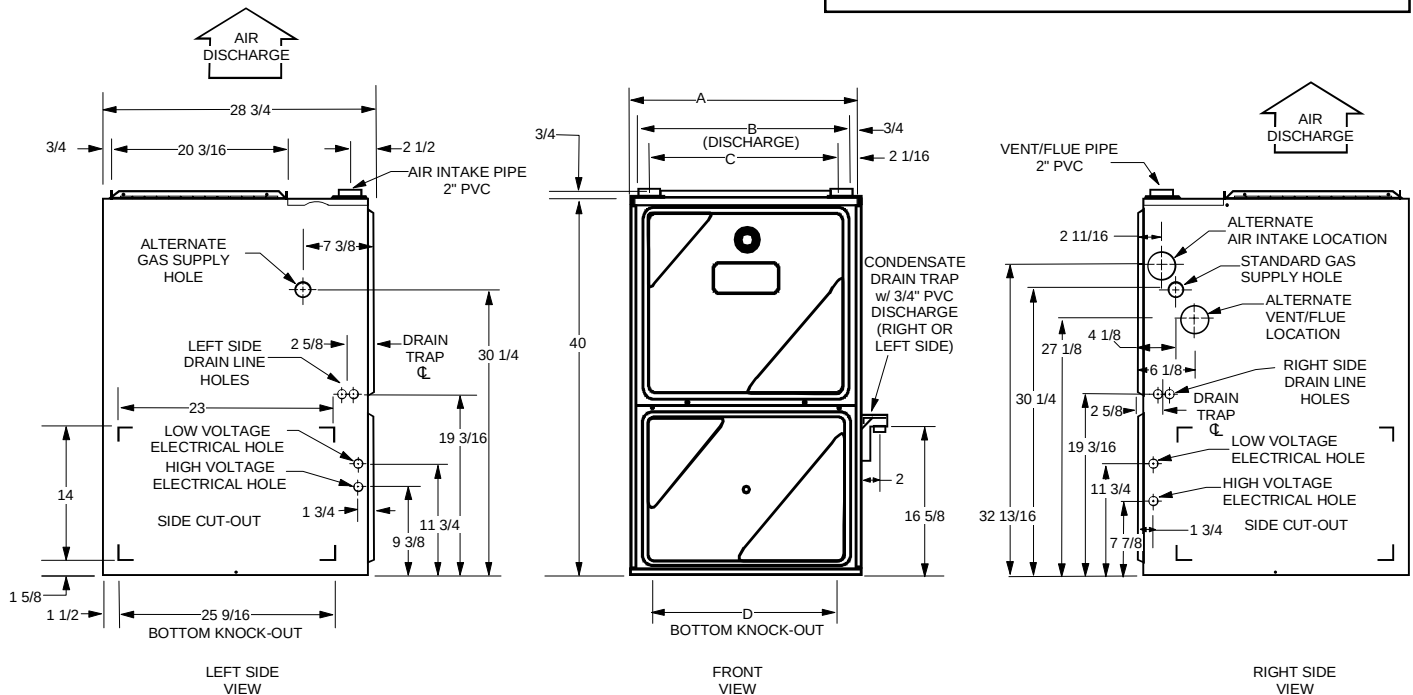
³ As shipped for installations below 7000 feet.



WARNING

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

Unit Dimensions (Inches)



Due to continuous engineering design and development, the information in this specification sheet is subject to change without notice.

All dimensions are in inches.

		Units	A	B	C	D
Cabinet Size	Small	045__30	16-1/2	15	12-3/8	12-5/8
	Medium	070__40	20-1/2	19	16-3/8	14-5/8
	Large	090__50 115__50	24-1/2	23	20-3/8	18-5/8

Circulator Motor

The GUA variable speed circulator motor runs at a constant airflow over a range of static pressures. The airflow is easily adjusted using the speed tap jumpers on the circulator blower interface board.

Using the speed adjustments on the interface 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.

Continuous fan operation may operate in one of three modes.

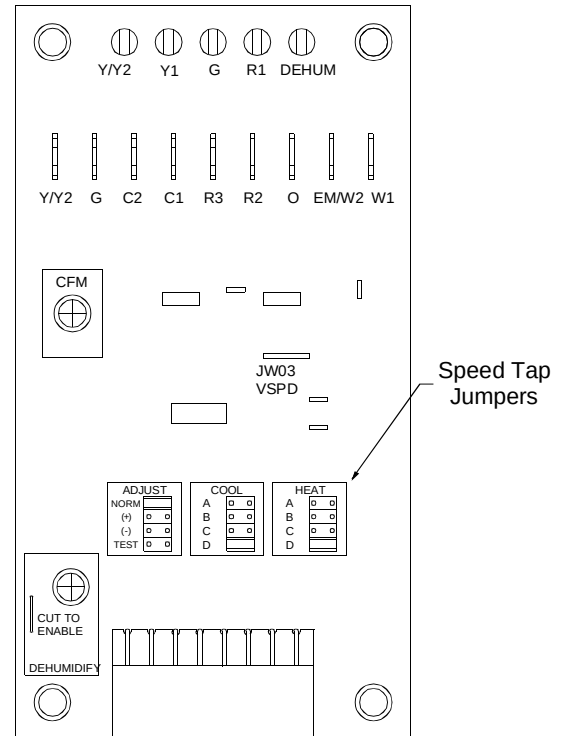
1. If "G" from the thermostat is connected to "G" on the *two stage integrated furnace control*, the continuous fan speed will be the same as the low stage heating speed.
2. If "G" is connected to "G" on the *circulator blower interface board*, the continuous fan speed will be 75% of the selected high stage cooling speed.

NOTE: With this connection, the EAC (Electronic Air Cleaner) terminals on the two-stage integrated control module are not energized. To energize the EAC terminals, the "G" wire from the thermostat must be connected directly to the "G" terminal on the two-stage integrated control module.

3. If "G" is connected to "Y1" on the *circulator blower interface board*, the continuous fan speed will be 65% of the selected high stage cooling speed.

NOTE: This final option is only applicable to installations which do not use low stage (Y1) cooling.

Consult airflow charts to determine the best continuous fan speed for the application.



Circulator Blower Interface Board

GUVA045AX30 (Rise Range: 30 - 60°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 (°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	1030	39
D	Minus (-)	630	907	45
	Normal	700	1008	40
	Plus (+)	770	1109	36

GUVA070AX40 (Rise Range: 30 - 60°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 (°F)
A	Minus (-)	756	1089	56
	Normal	840	1210	50
	Plus (+)	924	1331	46
B	Minus (-)	828	1192	51
	Normal	920	1325	46
	Plus (+)	1012	1457	42
C	Minus (-)	900	1296	47
	Normal	1000	1440	42
	Plus (+)	1100	1584	38
D	Minus (-)	972	1400	43
	Normal	1080	1555	39
	Plus (+)	1188	1711	35

GUVA090AX50 (Rise Range: 30 - 60°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 (°F)
A	Minus (-)	1013	1458	56
	Normal	1125	1620	50
	Plus (+)	1238	1782	45
B	Minus (-)	1076	1549	52
	Normal	1195	1721	47
	Plus (+)	1315	1893	43
C	Minus (-)	1139	1639	49
	Normal	1265	1822	44
	Plus (+)	1392	2004	40
D	Minus (-)	1202	1730	47
	Normal	1335	1922	42
	Plus (+)	1469	2115	38

GUVA0115AX50 (Rise Range: 35 - 65°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 (°F)
A	Minus (-)	1107	1594	63
	Normal	1230	1771	57
	Plus (+)	1353	1948	52
B	Minus (-)	1139	1639	62
	Normal	1265	1822	56
	Plus (+)	1392	2004	50
C	Minus (-)	1170	1685	60
	Normal	1300	1872	54
	Plus (+)	1430	2059	49
D	Minus (-)	1202	1730	58
	Normal	1335	1922	53
	Plus (+)	1469	2115	48

NOTES:

- This chart is 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.

High (Single) Stage Cooling Speed Charts

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

Two-Stage Cooling: "Y2" From T-Stat to "Y/Y2" on Circulator Blower Interface Board

GUVA045AX30		
Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP
A	Minus (-)	540
	Normal	600
	Plus (+)	660
B	Minus (-)	720
	Normal	800
	Plus (+)	880
C	Minus (-)	900
	Normal	1000
	Plus (+)	1100
D	Minus (-)	1080
	Normal	1200
	Plus (+)	1320

GUVA070AX40		
Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP
A	Minus (-)	540
	Normal	600
	Plus (+)	660
B	Minus (-)	720
	Normal	800
	Plus (+)	880
C	Minus (-)	990
	Normal	1100
	Plus (+)	1210
D	Minus (-)	1286
	Normal	1429
	Plus (+)	1572

GUVA090AX50		
Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP
A	Minus (-)	720
	Normal	800
	Plus (+)	880
B	Minus (-)	990
	Normal	1100
	Plus (+)	1210
C	Minus (-)	1260
	Normal	1400
	Plus (+)	1540
D	Minus (-)	1620
	Normal	1800
	Plus (+)	1980

GUVA115AX50		
Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP
A	Minus (-)	720
	Normal	800
	Plus (+)	880
B	Minus (-)	990
	Normal	1100
	Plus (+)	1210
C	Minus (-)	1260
	Normal	1400
	Plus (+)	1540
D	Minus (-)	1620
	Normal	1800
	Plus (+)	1980

Low Stage Cooling Speed Charts

"Y1" From T-Stat to "Y1" on Circulator Blower Interface Board

GUVA045AX30		
Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP
A	Minus (-)	380*
	Normal	390
	Plus (+)	429
B	Minus (-)	468
	Normal	520
	Plus (+)	572
C	Minus (-)	585
	Normal	650
	Plus (+)	715
D	Minus (-)	702
	Normal	780
	Plus (+)	858

GUVA070AX40		
Cooling Speed Tap	Adjust Tap	CFM at .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 (+)	1022

GUVA090AX50		
Cooling Speed Tap	Adjust Tap	CFM at .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 (+)	1001
D	Minus (-)	1053
	Normal	1170
	Plus (+)	1287

GUVA115AX50		
Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP
A	Minus (-)	514*
	Normal	520
	Plus (+)	572
B	Minus (-)	644
	Normal	715
	Plus (+)	787
C	Minus (-)	819
	Normal	910
	Plus (+)	1001
D	Minus (-)	1053
	Normal	1170
	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 floor.

Heating-Based Continuous Fan Chart

“G” From T-Stat to “G” on Two-Stage Integrated Control Module

GUVA045AX30			GUVA070AX40			GUVA090AX50			GUVA115AX50		
Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP
A	Minus (-)	495	A	Minus (-)	756	A	Minus (-)	1013	A	Minus (-)	1170
	Normal	550		Normal	840		Normal	1125		Normal	1300
	Plus (+)	605		Plus (+)	924		Plus (+)	1238		Plus (+)	1430
B	Minus (-)	540	B	Minus (-)	828	B	Minus (-)	1076	B	Minus (-)	1180
	Normal	600		Normal	920		Normal	1195		Normal	1311
	Plus (+)	660		Plus (+)	1012		Plus (+)	1315		Plus (+)	1442
C	Minus (-)	585	C	Minus (-)	900	C	Minus (-)	1139	C	Minus (-)	1191
	Normal	650		Normal	1000		Normal	1265		Normal	1323
	Plus (+)	715		Plus (+)	1100		Plus (+)	1392		Plus (+)	1455
D	Minus (-)	630	D	Minus (-)	972	D	Minus (-)	1202	D	Minus (-)	1202
	Normal	700		Normal	1080		Normal	1335		Normal	1335
	Plus (+)	770		Plus (+)	1188		Plus (+)	1469		Plus (+)	1469

Cooling-Based Continuous Fan Chart (Option A)

“G” From T-Stat to “G” on Circulator Blower Interface Board

(NOTE: EAC terminals on the Two-Stage Integrated Control Module will not energize with this method.)

GUVA045AX30			GUVA070AX40			GUVA090AX50			GUVA115AX50		
Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP
A	Minus (-)	405	A	Minus (-)	405	A	Minus (-)	540	A	Minus (-)	540
	Normal	450		Normal	450		Normal	600		Normal	600
	Plus (+)	495		Plus (+)	495		Plus (+)	660		Plus (+)	660
B	Minus (-)	540	B	Minus (-)	540	B	Minus (-)	743	B	Minus (-)	743
	Normal	600		Normal	600		Normal	825		Normal	825
	Plus (+)	660		Plus (+)	660		Plus (+)	908		Plus (+)	908
C	Minus (-)	675	C	Minus (-)	743	C	Minus (-)	945	C	Minus (-)	945
	Normal	750		Normal	825		Normal	1050		Normal	1050
	Plus (+)	825		Plus (+)	908		Plus (+)	1155		Plus (+)	1155
D	Minus (-)	810	D	Minus (-)	965	D	Minus (-)	1215	D	Minus (-)	1215
	Normal	900		Normal	1072		Normal	1350		Normal	1350
	Plus (+)	990		Plus (+)	1179		Plus (+)	1485		Plus (+)	1485

Cooling-Based Continuous Fan Chart (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. EAC terminals on the Two-Stage Integrated Control Module will not energize with this method.]

GUVA045AX30			GUVA070AX40			GUVA090AX50			GUVA115AX50		
Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .1" to .8" w.c. ESP	Cooling Speed Tap	Adjust Tap	CFM at .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 (+)	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

- 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 floor.

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

* = All 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 ft.	None	#43	3.5" w.c.	1.9" w.c.	None
Propane	0-7000 ft.	LPTK09	#55	10.0" w.c.	6.0" w.c.	None

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

Flame Sensor

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

Filters

Filters must be used with this furnace. Filters do not ship with this furnace but must be provided by the installer. Filters must comply with UL900 or CAN/ULCS111 standards. If the furnace is installed without filters, the warranty will be voided.

For air delivery of less than 1800 CFM:

Use one side return or one bottom return ductwork connection.

For air delivery of 1800 CFM or higher:

Use two side returns or one side and one bottom return connection.

Side Return Filters Minimum Recommended Size For Maximum CFM

Model		Disposable*			Permanent*		
Input Air Flow	Max CFM	Qty	Nom. Size	Area (in ²)	Qty	Nom. Size	Area (in ²)
045 30	1200	1	24x24x1	576	1	16x25x1	400
070 40	1600	1	25x30x1	800	1	16x25x1	400
		2	16x25x1	800			
090 50	2000	2	20x25x1	1000	2	16x25x1	800
115 50	2000	2	20x25x1	1000	2	16x25x1	800

Bottom Return Filters Minimum Recommended Size For Maximum CFM

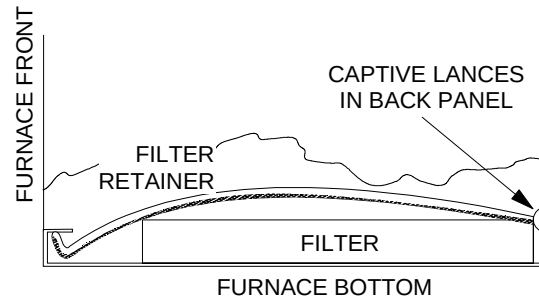
Model		Permanent*		
Input Air Flow	Max CFM	Qty	Nom. Size	Area (in ²)
045 30	1200	1	14x25x1	350
070 40	1600	1	16x25x1	400
090 50	2000	1	20x25x1	500
115 50	2000	1	20x25x1	500

* Maximum Filter Face Velocities:

Disposable-300 ft/min

Permanent-600 ft/min

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



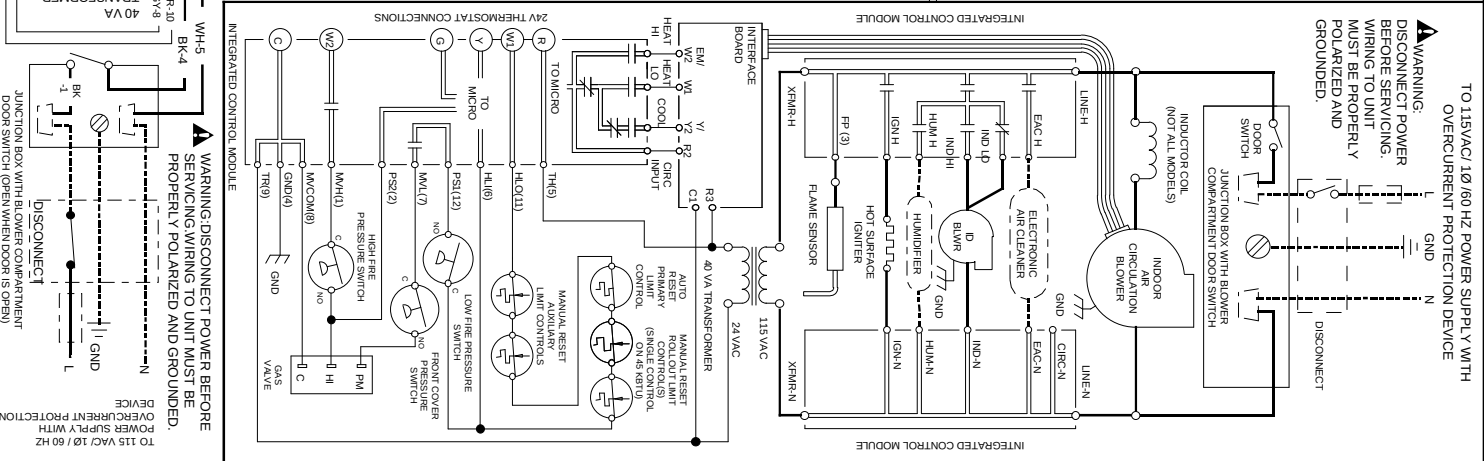
Cut Away Side View of Bottom Return Wire Filter Retainer

IMPORTANT NOTES:

- All furnaces have a redundant gas valve and blower door interlock switch.
- All furnaces are manufactured for use on 115 VAC, 60 Hz, single phase electrical supply.
- 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.
- Performance figures are based on Department of Energy information and requirements under continuous operating conditions. Performance will vary with weather conditions and use.
- Drain connections must conform to local codes.



00726101 REV 000



	STEADY ON = REPLACE CONTROL
	1 FLASH = SYSTEM LOCK OUT (REB)
	2 FLASHES = PRESSURE SWITCH ST
	3 FLASHES = PRESSURE SWITCH ST
	4 FLASHES = THERMAL PROTECTIVE
	CONTINUOUS FLASHES = UNANTICH
COLOR CODES:	
YL YELLOW	PK PINK
OR ORANGE	BR BROWN
VT VIOLET	WH WHITE
GN GREEN	BU BLUE
BK BLACK	GY GRAY
	RD RED

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 GROUNDING AND CONFORM TO N.E.C. AND LOCAL CODES.