

GAS-FIRED WARM AIR FURNACE

SPECIFICATION SHEET

GUCA

Installer: Affix literature adjacent to the unit.

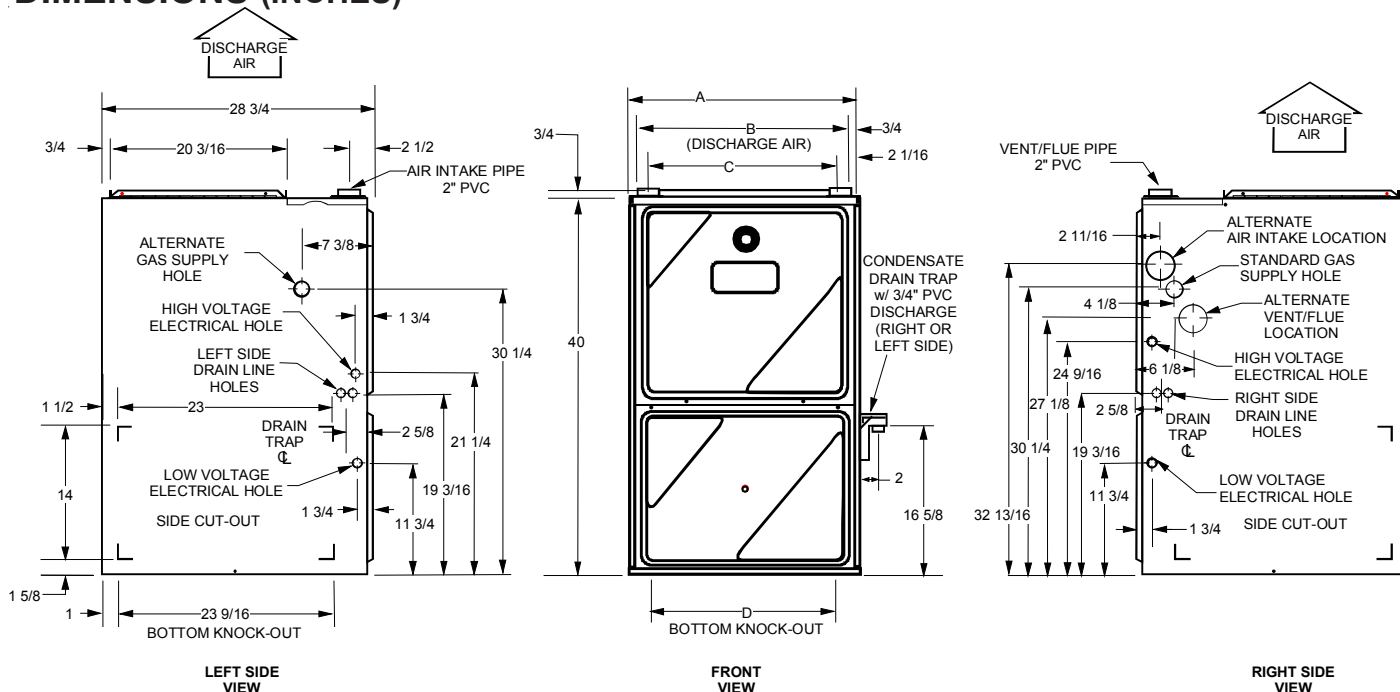
Model Number	Input (Btu/hr)	Output (Btu/hr)	Rated AFUE	Temp. Rise Range (°F)	Number of Burners	Minimum Circuit Ampacity (Amps)	Maximum ² Overcurrent Protection (Amps)	Circulator Blower			Tons AC at 0.5" ESP	Pressure Switch Settings ³ (inches w.c.)		Ship. Wt. (lbs)
								Size (D" x W")	HP	No. of Speeds		ID Blower	Front Cover	
045_30	46,000	42,800	92.1	35 - 65	2	9.0	15.0	11 X 6	1/3	4	1.5 - 3.0	-0.37	-0.37	131
070_30	69,000	64,400	92.1	35 - 65	3	9.8	15.0	11 X 7	1/2	4	2.0 - 3.5	-0.37	-0.37	144
070_40	69,000	63,900	92.1	35 - 65	3	8.9	15.0	11 X 9	1/2	4	2.5 - 4.0	-0.37	-0.37	152
090_40	92,000	86,000	92.1	35 - 65	4	8.9	15.0	11 X 9	1/2	4	2.5 - 4.0	-0.37	-0.37	166
090_50	92,000	85,300	92.1	35 - 65	4	12.2	15.0	11 X 9	3/4	4	3.0 - 5.0	-0.37	-0.37	175
115_50	115,000	106,500	92.1	35 - 65	5	10.9	15.0	11 X 10	1/2	4	3.0 - 5.0	-0.37	-0.37	187

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.

DIMENSIONS (INCHES)



	A	B	C	D
045_30	16-1/2	15	12-3/8	12-5/8
070_30				
070_40	20-1/2	19	16-3/8	14-5/8
090_40				
090_50	24-1/2	23	20-3/8	18-5/8
115_50				

All dimensions are in inches.

WARNING

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



BLOWER PERFORMANCE

MODEL Heating Speed As Shipped	Motor Speed	Tons AC at 0.5" ESP	EXTERNAL STATIC PRESSURE (inches w.c.)												
			0.1		0.2		0.3		0.4		0.5		0.6	0.7	0.8
			CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	CFM	CFM
045__30 (MED-LO)	HIGH	3.0	1322	---	1298	---	1278	---	1243	---	1196	---	1137	1074	1000
	MED	2.5	1131	35	1114	35	1097	36	1068	37	1019	39	968	907	827
	MED-LO	2.0	903	44	896	44	876	45	844	47	807	49	764	706	652
	LOW	1.5	762	51	740	53	719	54	684	57	646	61	607	554	508
070__30 (MED-LO)	HIGH	3.5	1621	37	1572	39	1521	40	1469	41	1407	43	1343	1276	1205
	MED	3.0	1402	43	1366	44	1329	46	1290	47	1243	49	1185	1133	1060
	MED-LO	2.5	1144	53	1122	54	1086	56	1063	57	1024	59	981	940	875
	LOW	2.0	868	---	831	---	805	---	782	---	745	---	703	667	619
070__40 (MED-LO)	HIGH	4.0	1861	---	1823	---	1778	---	1721	---	1643	36	1581	1500	1387
	MED	3.5	1620	37	1597	37	1565	38	1516	39	1462	41	1410	1318	1235
	MED-LO	3.0	1387	43	1369	43	1313	45	1284	46	1224	48	1167	1095	1024
	LOW	2.5	1193	50	1162	51	1118	53	1072	55	1012	59	961	894	836
090__40 (HIGH)	HIGH	4.0	1821	43	1768	45	1699	46	1624	49	1544	51	1439	1354	1227
	MED	3.5	1624	49	1561	51	1520	52	1461	54	1381	57	1297	1217	1109
	MED-LO	3.0	1395	57	1363	58	1311	60	1258	63	1201	66	1120	1045	957
	LOW	2.5	1212	65	1164	---	1126	---	1080	---	1014	---	957	882	815
090__50 (MED)	HIGH	5.0	2090	38	2076	38	2061	38	2054	39	2017	39	1963	1901	1820
	MED	4.0	1615	49	1610	49	1600	49	1591	50	1562	51	1523	1473	1410
	MED-LO	3.5	1367	58	1367	58	1356	58	1351	59	1345	59	1298	1252	1177
	LOW	3.0	1191	---	1182	---	1166	---	1141	---	1115	---	1061	1014	965
115__50 (HIGH)	HIGH	5.0	2181	46	2117	48	2073	49	2021	50	1976	51	1913	1831	1746
	MED	4.0	1693	60	1666	61	1647	61	1600	63	1562	65	1522	1471	1408
	MED-LO	3.5	1489	---	1454	---	1428	---	1397	---	1365	---	1328	1270	1214
	LOW	3.0	1299	---	1275	---	1250	---	1224	---	1188	---	1161	1105	1059

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.
- This chart is for furnaces installed at 0 - 4000 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 shaded area () indicates ranges in excess of maximum external static pressure allowable when heating. For satisfactory operation, external static pressure should not exceed 0.5" W.C. The data for 0.6" W.C. to 0.8" W.C. is shown for air conditioning purposes only.
- The dashed (---) areas indicate a temperature rise not recommended for this model.
- The installation must be adjusted to obtain a temperature rise within the range listed on the furnace nameplate.

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).

HIGH ALTITUDE GAS ORIFICE CHART					
Altitude	Gas	Kit	Orifice	Manifold Pressure	Pressure Switch
0-7000	Natural	None	#43	3.5" w.c.	None
	Propane	LPTK09	#55	10.0" w.c.	

NOTE: In Canada, gas furnaces are 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.

		COOLING AIRFLOW REQUIREMENT (CFM)						
		600	800	1000	1200	1400	1600	2000
Input_Airflow	045__30	188*	192	240	288	---	---	---
	070__30	---	282*	282*	282*	336	---	---
	070__40	---	---	260*	260*	336	384	---
	090__40	---	---	376*	376*	376*	384	---
	090__50	---	---	---	376*	376*	384	480
	115__50	---	---	---	470*	470*	470*	480

*Minimum filter area dictated by heating airflow requirement.

Permanent Minimum Filter Area (sq. in)

[Based on a 600 ft/min filter face velocity]

FILTERS

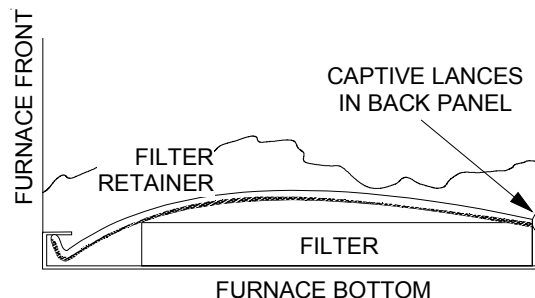
		COOLING AIRFLOW REQUIREMENT (CFM)						
		600	800	1000	1200	1400	1600	2000
Input_Airflow	045__30	376*	384	480	576	---	---	---
	070__30	---	564*	564*	564*	672	---	---
	070__40	---	---	564*	564*	672	768	
	090__40	---	---	752*	752*	752*	768	---
	090__50	---	---	---	752*	752*	768	800
	115__50	---	---	---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

*Minimum filter area dictated by heating airflow requirement.

Disposable Minimum Filter area (sq. in)

[Based on 300 ft/min filter face velocity]

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.

WARNING

Wiring Diagram Details:

- Gas Valve:** GY-34, M1, P3, C2, BR-13, GY-12, C, NO, OR -22, PRESSURE SWITCH.
- Pressure Switch:** OR -22, C, NO, GND.
- Limit Controls:** PK-17, RD-11, OR-15, BU-27, VT-28, WH-7, WH-33, WH-5, WH-32, WH-31, WH-30, WH-29, WH-28, WH-27, WH-26, WH-25, WH-24, WH-23, WH-22, WH-21, WH-20, WH-19, WH-18, WH-17, WH-16, WH-15, WH-14, WH-13, WH-12, WH-11, WH-10, WH-9, WH-8, WH-7, WH-6, WH-5, WH-4, WH-3, WH-2, WH-1.
- Rollout Limit:** RD-11, OR-15, BU-27, VT-28, WH-7, WH-33, WH-5, WH-32, WH-31, WH-30, WH-29, WH-28, WH-27, WH-26, WH-25, WH-24, WH-23, WH-22, WH-21, WH-20, WH-19, WH-18, WH-17, WH-16, WH-15, WH-14, WH-13, WH-12, WH-11, WH-10, WH-9, WH-8, WH-7, WH-6, WH-5, WH-4, WH-3, WH-2, WH-1.
- Draft Blower:** INDUCED DRAFT BLOWER, WH, BK, GND.
- Capacitors:** CAPACITOR, BR, BR, RD (LOW), OR (MED LOW), BU (MED), BK (HI), WH, GND.
- Integrated Control Module:** BLOWER HEAT OFF DELAY SELECTOR (SECONDS), DIP SWITCHES, PIN JUMPER, DIAGNOSTIC LED, 24V THERMOSTAT CONNECTIONS, 115 VAC, 24 VAC, 40 VA TRANSFORMER, GY-8, BU-27, RD-11, OR-22, YL-20, OR-15, BR-13, GY-12, GN, GY-8, OR-10, BU-14, PK-30, WH-5, WH-33, WH-32, WH-31, WH-30, WH-29, WH-28, WH-27, WH-26, WH-25, WH-24, WH-23, WH-22, WH-21, WH-20, WH-19, WH-18, WH-17, WH-16, WH-15, WH-14, WH-13, WH-12, WH-11, WH-10, WH-9, WH-8, WH-7, WH-6, WH-5, WH-4, WH-3, WH-2, WH-1.
- Transformers:** 24V TRANSFORMER, 40 VA TRANSFORMER.
- Wiring:** 115V HOT AND PAK TERMINALS, LINE-H, LINE-N, XFM-H, XFM-N, 115 VAC, 40 VA TRANSFORMER, 24V TRANSFORMER, 24V THERMOSTAT CONNECTIONS, 115 VAC, 24 VAC, 40 VA TRANSFORMER, GY-8, BU-27, RD-11, OR-22, YL-20, OR-15, BR-13, GY-12, GN, GY-8, OR-10, BU-14, PK-30, WH-5, WH-33, WH-32, WH-31, WH-30, WH-29, WH-28, WH-27, WH-26, WH-25, WH-24, WH-23, WH-22, WH-21, WH-20, WH-19, WH-18, WH-17, WH-16, WH-15, WH-14, WH-13, WH-12, WH-11, WH-10, WH-9, WH-8, WH-7, WH-6, WH-5, WH-4, WH-3, WH-2, WH-1.

STEADY ON = REPLACE CONTROL 1 FLASH = SYSTEM LOCKOUT (RETRIES/RECYCLES EXCEEDED) 2 FLASHES = PRESSURE SWITCH STUCK CLOSED 3 FLASHES = PRESSURE SWITCH STUCK OPEN 4 FLASHES = OPEN PRIMARY OR AUXILIARY LIMIT 5 FLASHES = OPEN ROLLOUT LIMIT 6 FLASHES = 115V AC POWER REVERSED OR POOR UNIT GROUND 7 FLASHES = LOW FLAME SENSE SIGNAL CONTINUOUS FLASHES = UNANTICIPATED FLAME PRESENT	LOW VOLTAGE (24V) ——— LOW VOLTAGE FIELD - - - HI VOLTAGE (115V) ——— HI VOLTAGE FIELD - - - JUNCTION —●— TERMINAL —○— INTERNAL TO INTEGRATED CONTROL ——— PLUG CONNECTION —□—	EQUIPMENT GND ——— FIELD GND ——— FIELD SPLICE ——— SWITCH (TEMP.) ——— IGNITER ——— SWITCH (PRESS.) ——— OVERCURRENT PROT. DEVICE ———
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NOTES:

- SET HEAT ANTICIPATOR ON ROOM THERMOSTAT AT 0.7 AMPS.
- MANUFACTURER'S SPECIFIED REPLACEMENT PARTS MUST BE USED WHEN SERVICING.
- 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.
- IF HEATING AND COOLING BLOWER SPEEDS ARE NOT THE SAME DISCARD JUMPER BEFORE CONNECTING BLOWER LEADS. UNUSED BLOWER LEADS MUST BE PLACED ON "PARK" TERMINALS OF INTEGRATED CONTROL OR TAPED.
- UNIT MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL CODES.

COLOR CODES:

PK PINK	BR BROWN
YL YELLOW	WH WHITE
OR ORANGE	BU BLUE
VT VIOLET	GY GRAY
GN GREEN	RD RED
BK BLACK	

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