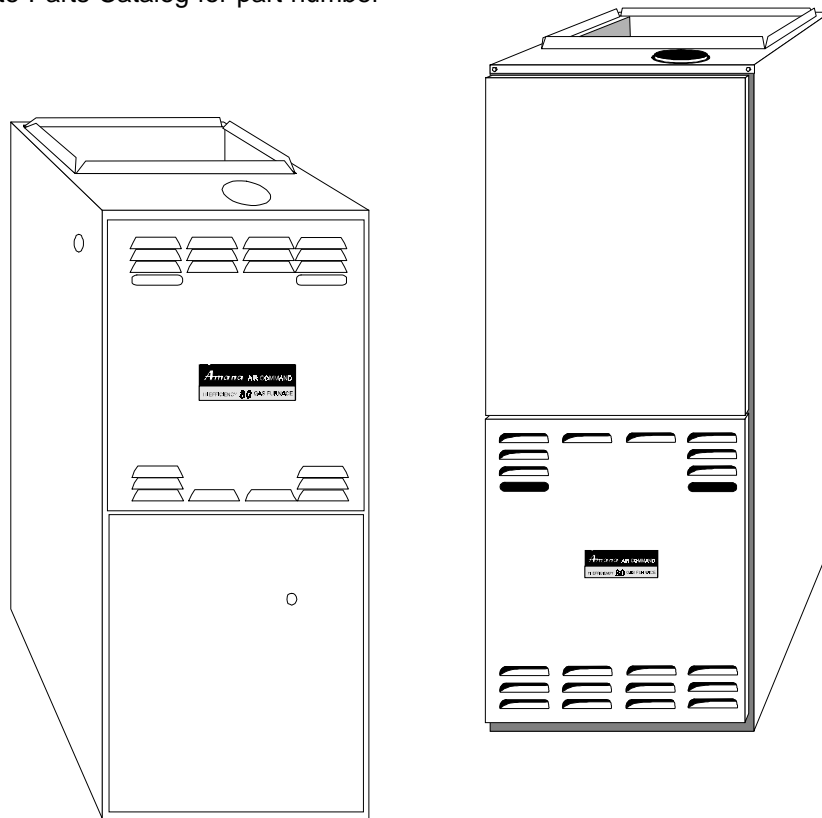


Technical Information

40" 80% Gas Furnaces GUIC, GCIC

- Refer to Service Manual RS6600001 Rev. 1 for installation, operation, and troubleshooting information.
- All safety information must be followed as provided in the Service Manual.
- Refer to the appropriate Parts Catalog for part number information.



This manual replaces RT6621003 Rev. 0 April 2000.

REV. 1 - Corrections made to manual, added the following two models:

GCIC045DX30 P1222701F

GCIC090DX50 P1222705F

Heating & Air Conditioning
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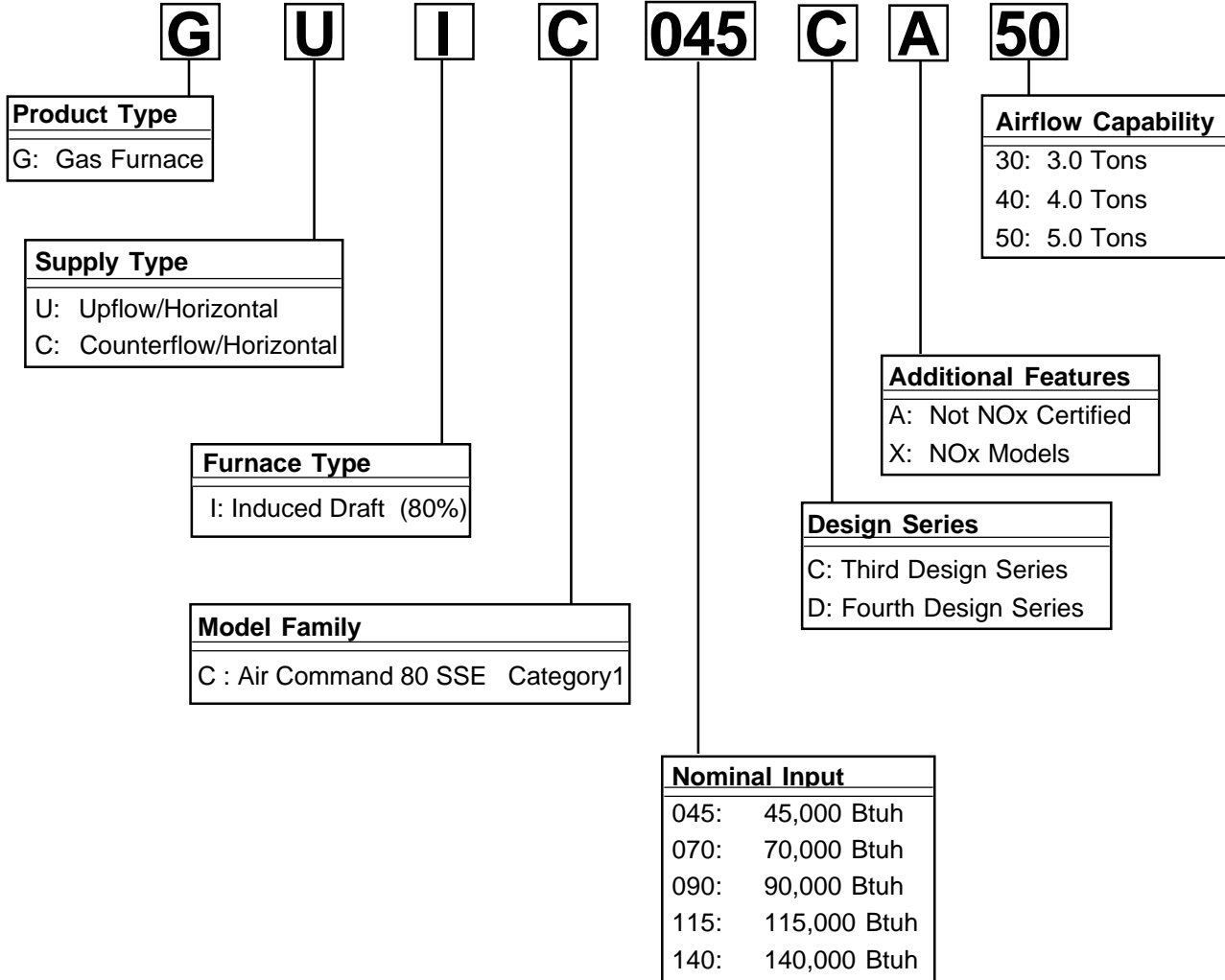
This manual is to be used by qualified HVAC technicians only. Amana does not assume any responsibility for property damage or personal injury due to improper service procedures performed by an unqualified person.


RT6621003
Revision 1
September 2000


PRODUCT IDENTIFICATION

The model and manufacturing number are used for positive identification of component parts used in manufacturing. When engineering and manufacturing changes take place where interchangeability of components are affected, the manufacturing number will change.

It is very important to use the model and manufacturing numbers at all times when requesting service or parts information.



 WARNING	IF REPAIRS ARE ATTEMPTED BY UNQUALIFIED PERSONS, DANGEROUS CONDITIONS (SUCH AS EXPOSURE TO ELECTRICAL SHOCK) MAY RESULT. THIS MAY CAUSE SERIOUS INJURY OR DEATH.
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 CAUTION	AMANA WILL NOT BE RESPONSIBLE FOR ANY INJURY OR PROPERTY DAMAGE ARISING FROM IMPROPER SERVICE OR SERVICE PROCEDURES. IF YOU PERFORM SERVICE ON YOUR OWN PRODUCT, YOU ASSUME RESPONSIBILITY FOR ANY PERSONAL INJURY OR PROPERTY DAMAGE WHICH MAY RESULT.
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PRODUCT IDENTIFICATION

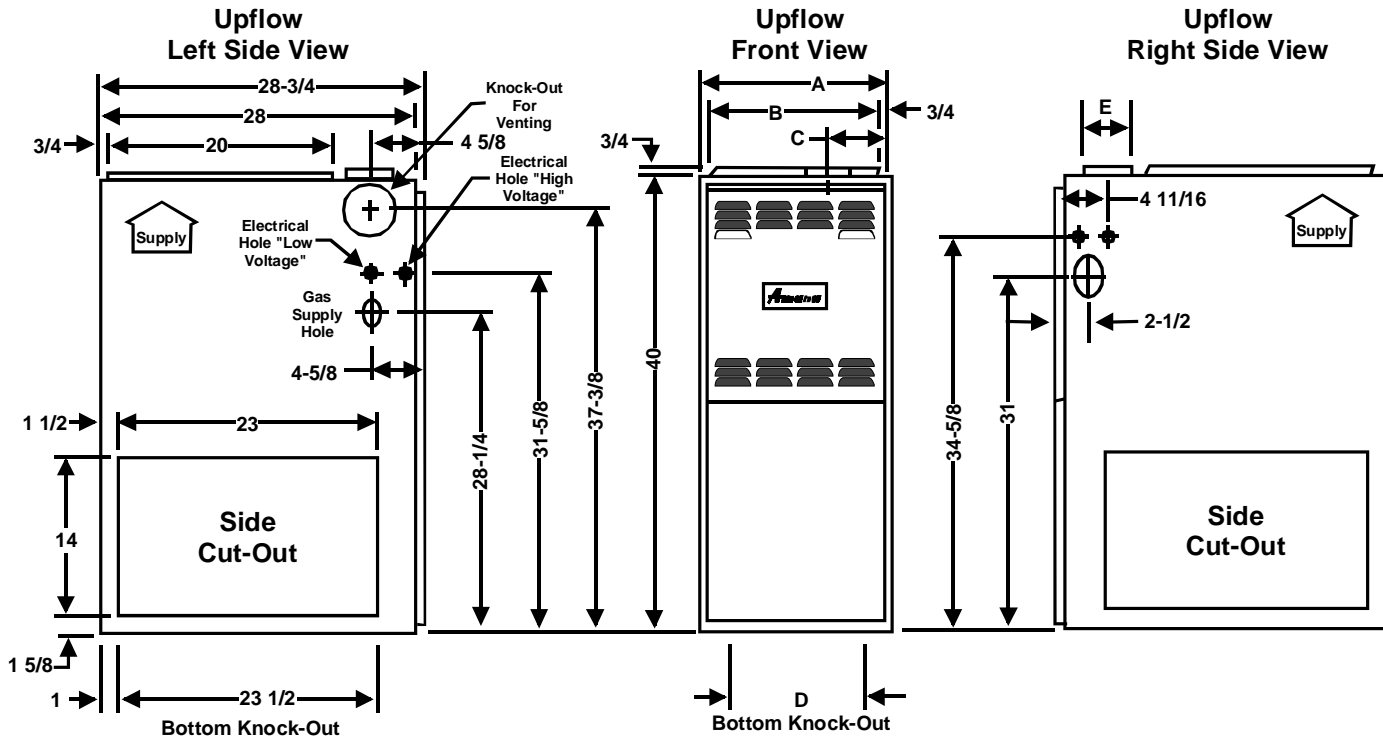
The model and manufacturing number are used for positive identification of component parts used in manufacturing. When engineering and manufacturing changes take place where interchangeability of components are affected, the manufacturing number will change.

It is very important to use the model and manufacturing numbers at all times when requesting service or parts information.

<u>MODEL</u>	<u>M/N</u>	<u>MODEL</u>	<u>M/N</u>	<u>MODEL</u>	<u>M/N</u>
GUIC045CX30	P1207401F	GUIC045CA30	P1229001F	GCIC045CX30	P1207501F
GUIC070CX30	P1207402F	GUIC070CA30	P1229002F	GCIC070CX30	P1207502F
GUIC070CX40	P1207403F	GUIC070CA40	P1229003F	GCIC070CX40	P1207503F
GUIC090CX30	P1207404F	GUIC090CA30	P1229004F	GCIC090CX30	P1207504F
GUIC090CX50	P1207405F	GUIC090CA50	P1229005F	GCIC090CX50	P1207505F
GUIC115CX40	P1207406F	GUIC115CA40	P1229006F	GCIC115CX40	P1207506F
GUIC115CX50	P1207407F	GUIC115CA50	P1229007F	GCIC115CX50	P1207507F
GUIC140CX50	P1207408F	GUIC140CA50	P1229008F	GCIC140CX50	P1207508F
GUIC045CA30	P1207601F	GUIC045CA30	P1229101F	GCIC045DX30	P1222701F
GUIC070CA30	P1207602F	GUIC070CA30	P1229102F	GCIC090DX50	P1222705F
GUIC070CA40	P1207603F	GUIC070CA40	P1229103F	GCIC045DX30	P1226801F
GUIC090CA30	P1207604F	GUIC090CA30	P1229104F	GCIC070DX30	P1226802F
GUIC090CA50	P1207605F	GUIC090CA50	P1229105F	GCIC070DX40	P1226803F
GUIC115CA40	P1207606F	GUIC115CA40	P1229106F	GCIC090DX30	P1226804F
GUIC115CA50	P1207607F	GUIC115CA50	P1229107F	GCIC090DX50	P1226805F
GUIC140CA50	P1207608F	GUIC140CA30	P1229108F	GCIC115DX40	P1226806F
GUIC045DA30	P1222501F	GUIC045CX30	P1229201F	GCIC115DX50	P1226807F
GUIC070DA30	P1222502F	GUIC070CX30	P1229202F	GCIC045CX30	P1230401F
GUIC090DA50	P1222505F	GUIC070CX40	P1229203F	GCIC070CX30	P1230402F
GUIC115DA50	P1222507F	GUIC090CX30	P1229204F	GCIC070CX40	P1230403F
GUIC045DA30	P1226601F	GUIC090CX50	P1229205F	GCIC090CX30	P1230404F
GUIC070DA30	P1226602F	GUIC115CX40	P1229206F	GCIC090CX50	P1230405F
GUIC070DA40	P1226603F	GUIC115CX50	P1229207F	GCIC115CX40	P1230406F
GUIC090DA30	P1226604F	GUIC140CX50	P1229208F	GCIC115CX50	P1230407F
GUIC090DA50	P1226605F	GUIC045CX30	P1229301F	GCIC140CX50	P1230408F
GUIC115DA40	P1226606F	GUIC070CX30	P1229302F	GCIC045CX30	P1230501F
GUIC115DA50	P1226607F	GUIC070CX40	P1229303F	GCIC070CX30	P1230502F
GUIC140DA50	P1226608F	GUIC090CX50	P1229305F	GCIC070CX40	P1230503F
GUIC045DX30	P1226701F	GUIC115CX40	P1229306F	GCIC090CX30	P1230504F
GUIC070DX30	P1226702F	GUIC115CX50	P1229307F	GCIC090CX50	P1230505F
GUIC070DX40	P1226703F	GUIC140CX50	P1229308F	GCIC115CX40	P1230506F
GUIC090DX30	P1226704F			GCIC115CX50	P1230507F
GUIC090DX50	P1226705F			GCIC140CX50	P1230508F
GUIC115DX50	P1226707F				

PRODUCT DIMENSIONS

GUIC 80% Upflow/Horizontal

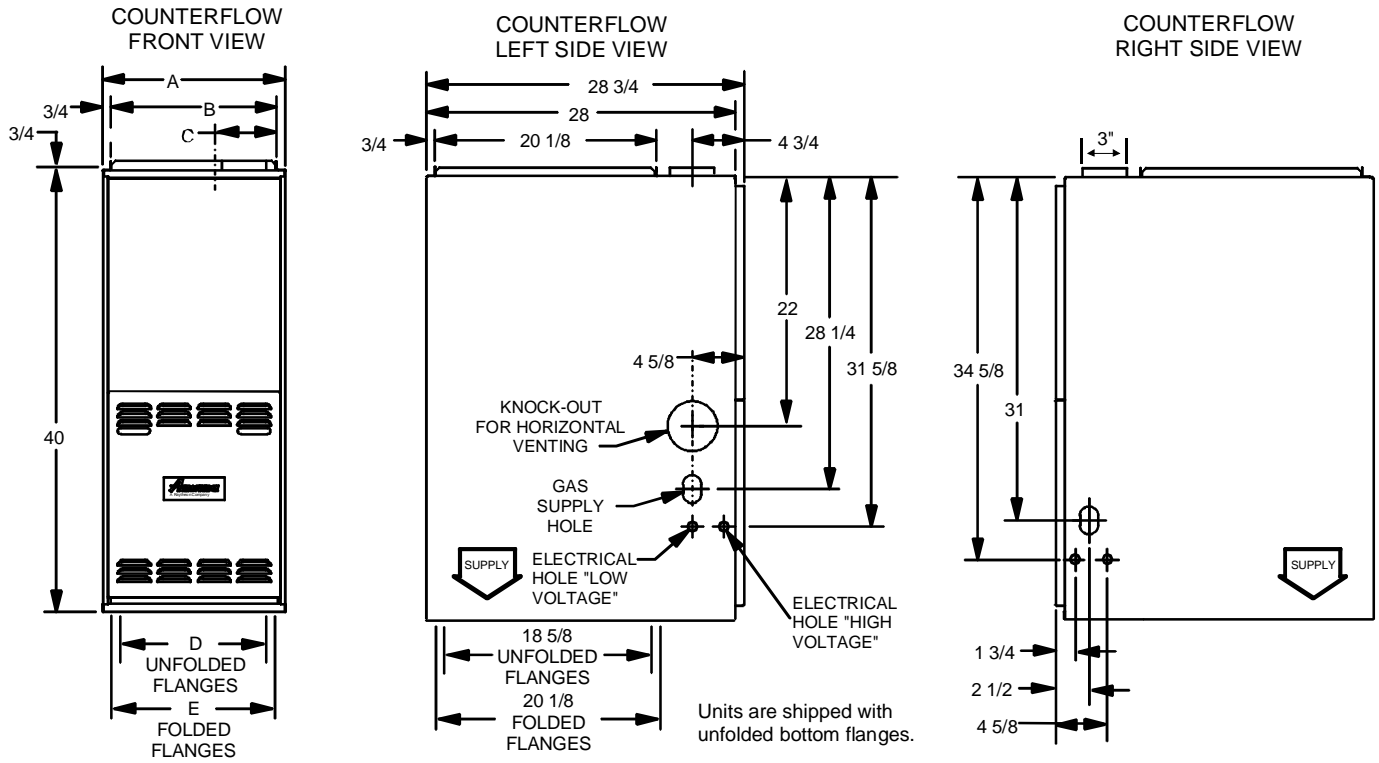


GUIC DIMENSIONS						
FURNACE MODEL	A	B	C	D	E	Minimum Vent Diameter
GUIC045 GUIC070	16-1/2	15	5-1/4	12-5/8	4	4
GUIC090	20-1/2	19	7-1/4	14-5/8	4	4
GUIC115 GUIC140	24-1/2	23	9-1/4	18-5/8	4	5

All dimensions are in inches.

PRODUCT DIMENSIONS

GCIC 80% Counterflow/Horizontal



GCIC DIMENSIONS						
FURNACE MODEL	A	B	C	D Unfolded	E Folded	Minimum Vent Diameter
GCIC045 GCIC070	16-1/2	15	5/3/8	13-1/2	15	4
GCIC090	20-1/2	19	7-3/8	17-1/2	19	4
GCIC115 GCIC140	24-1/2	23	9-3/8	21-1/2	23	5

All dimensions are in inches.

PRODUCT DESIGN

General Operation

This GUIC/GCIC furnace is equipped with an electronic ignition device to light the burners and an induced draft blower to exhaust combustion products.

An interlock switch prevents furnace operation if the blower door is not in place. Keep the blower access doors in place except for inspection and maintenance.

This furnace is also equipped with a self-diagnosing electronic control module. In the event a furnace component is not operating properly, the control module LED will flash on and off in a factory-programmed sequence, depending on the problem encountered. This light can be viewed through the observation window in the blower access door. Refer to the *Troubleshooting Chart* for further explanation of the LED codes and *Abnormal Operation - Integrated Ignition Control* section in the Service Instructions for an explanation of the possible problem.

The rated heating capacity of the furnace should be greater than or equal to the total heat loss of the area to be heated. The total heat loss should be calculated by an approved method or in accordance with "ASHRAE Guide" or "Manual J-Load Calculations" published by the Air Conditioning Contractors of America.

*Obtain from: American National Standards Institute 1430 Broadway New York, NY 10018

Location Considerations

- The furnace should be as centralized as is practical with respect to the air distribution system.
- Do not install the furnace directly on carpeting, tile, or combustible material other than wood flooring.
- When suspending the furnace from rafters or joists, use 3/8" threaded rod and 2" x 2" x 3/8" angle as shown in the Installation and Service Instructions. The length of the rod will depend on the application and clearance necessary.
- When installed in a residential garage, the furnace must be positioned so the burners and ignition source are located not less than 18 inches (457 mm) above the floor and protected from physical damage by vehicles.

Accessibility Clearances (Minimum)

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS (INCHES)				
	UPFLOW	COUNTERFLOW	HORIZONTAL LEFT	HORIZONTAL RIGHT
FRONT	6 ¹	6 ¹	Alcove	Alcove
RIGHT	0	0	6	12
LEFT	0	0	12	6
REAR	0	0	0	0
TOP	1	1	6	6
FLUE	6 ²	6 ²	6 ²	6 ²
FLOOR	C	NC	C	C

¹ = 3 inch when using Type B-1 vent is used.

² = 1 inch when Type B-1 vent is used.

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

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

Counterflow installations on a combustible floor only when installed on special base ASB01.

36" at front is required for servicing or cleaning.

Note: In all cases accessibility clearance shall take precedence over clearances from the enclosure where accessibility clearances are greater. All dimensions are given in inches.

High Altitude Derate

When this furnace is installed at high altitude, the appropriate High Altitude orifice kit must be installed. This is required due to the natural reduction in the density of both the gas fuel and combustion air as altitude increases. The kit will provide the proper design certified input rate within the specified altitude range.

PROPANE AND HIGH ALTITUDE KITS			
MODEL NUMBER	0 to 6000 ft.	6001 to 11000 ft.	6001 to 11000 ft.
GUIC GCIC	LPTK09 Propane Conversion Kit (#55 Orifice)	HANG07 High Altitude Natural Gas Kit (#45 Orifice)	HALP09 High Altitude Propane Gas Kit (#56 Orifices)

High altitude kits are purchased according to the installation altitude and usage of either natural or propane gas. Refer to the chart above for a tabular listing of appropriate altitude ranges and corresponding manufacturer's high altitude Natural Gas and Propane Gas kits. For a tabular listing of appropriate altitude ranges and corresponding manufacturer's High Altitude Pressure Switch kits, refer to either the *Pressure Switch Trip Points & Usage Chart* in this manual or the *Accessory Charts* in Service Instructions.

PRODUCT DESIGN

PRESSURE SWITCH TRIP POINTS AND USAGE CHART											
MODEL	MINIMUM NEGATIVE PRESSURE WITH FLUE NOT FIRING TYPICAL SEA LEVEL DATA	MINIMUM NEGATIVE PRESSURE WITH FLUE FIRING TYPICAL SEA LEVEL DATA	PRESSURE SWITCH TRIP POINTS AND USAGE								
			0 to 6000 ft.			6000 to 8500 ft.			8500 to 11000 ft.		
			TRIP POINT	PRESSURE SWITCH (Prod.)	LABEL COLOR	TRIP POINT	HIGH ALTITUDE KIT	LABEL COLOR	TRIP POINT	HIGH ALTITUDE KIT	LABEL COLOR
GCIC GUIC	-0.85	-0.60	-0.55	10727920	DK BLUE	-0.50	HAC1PS11 10727915	LT BLUE	-0.41	HAC1PS12 10727916	ORANGE

Note: Replacement pressure switch number is listed below High Altitude Pressure Switch Kit number.

Note: All negative pressure readings are in inches of water column (" w.c.).

T.O.D. PRIMARY LIMIT										
Part Number	10728304	10728319	10728322	10728324	10728325	10728326	10728331	10728332	10728334	10728338
Open Setting °F	190	170	230	135	170	220	160	150	180	215
Style	2	2	3	3	3	3	3	3	3	3
Sleeve Colors	Yellow	Blue	Orange	Green	Blue	Black	Brown	Green	Yellow	1 Green 1 Yellow
GUIC045**30			1							
GUIC070**30						1				
GUIC070**40					1					
GUIC070**40 (10x8 Blower)										1
GUIC090**30		1						*1		
GUIC090**50		1					*1			
GUIC115**40		1						*1		
GUIC115**50	1								*1	
GUIC140**50				1						

*1 = The GUIC090**30 furnaces can also use primary limit part #10728332 in place of limit part #10728319 but without limit baffle part #11094802.

*1 = The GUIC090**50 furnaces can also use primary limit part #10728331 in place of limit part #10728319 but without limit baffle part #11094802.

*1 = The GUIC115**40 furnaces can also use primary limit part #10728332 in place of limit part #10728319 but without limit baffle part #11094802.

*1 = The GUIC115**50 furnaces can also use primary limit part #10728334 in place of limit part #10728304 but without limit baffle part #11094802.

T.O.D. PRIMARY LIMIT									
Part Number	10728302	10728306	10728312	10728318	10728319	10728327	10728328	10728329	10728338
Open Setting °F	150	200	160	240	170	120	210	130	215
Style	2	2	2	2	2	2	2	2	3
Sleeve Colors	Green	Black	Red	Tan	Blue	Brown	Yellow	Orange	1 Green 1 Yellow
GCIC045**30				1					
GCIC070**30							1		
GCIC070**40		1							
GCIC070**40 (10x8 Blower)									1
GCIC090**30			1						
GCIC090**50					1				
GCIC115**40						1		*1	
GCIC115**50	1								
GCIC140**50								1	

*1 = The GCIC115**40 furnaces can also use primary limit part #10728329 (130°F) in place of limit part #10728327 (120°F).

PRODUCT DESIGN

ROLLOUT LIMIT SWITCHES						
Part Number	10123508 or 10123527	10123509 or 10123528	10123510 or 10123529	10123511 or 10123530	10123512 or 10123531	10123513 or 10123532
Open Setting °F	260	275	300	250	325	350
Color	BROWN	PINK	GREEN	LT BLUE	LT PURPLE	GRAY
GUIC045**30		1				
GUIC070**30/40			1			
GUIC090**30/50			1			
GUIC115**40/50						1
GUIC140**50					1	
GCIC045**30				1		
GCIC070**30		1				
GCIC070**40					1	
GCIC090**30/50					1	
GCIC115**40/50		1				
GCIC140**50		1				

AUXILIARY LIMIT SWITCHES	
Part Number	10123506 or 10123525
Open Setting °F	160
Color	Orange
GUIC045**30	1
GUIC070**30/40	1
GUIC090**30/50	1
GUIC115**40/50	1
GUIC140**50	1
GCIC045**30	1
GCIC070**30/40	1
GCIC090**30/50	1
GCIC115**40/50	1
GCIC140**50	1

PRODUCT DESIGN

Coil Matches:

A large array of Amana coils are available for use with the GUIC and GCIC furnaces, in either upflow, counterflow, or horizontal applications. These coils are available in both cased and uncased models, with or without a TXV expansion device. These 80% furnaces match up with the existing Amana coils as shown in the chart below.

Btuh Input	Cabinet Width	Air Flow (tons)	CAA_F°C Cased A-Coils	CCA_FSC Uncased A-Coils	CHA_TCC Cased TXV A-Coils	CHA_TSC Uncased TXV A-Coils	CCF_F°C Horiz. A-Coils	CHF_TCC Horiz. A-Coils
45,000	16 1/2"	1 1/2 - 3	CCA18FCC CCA24FCC CCA30FCC	CCA18FSC CCA24FSC CCA30FSC	CHA18TCC CHA24TCC CHA30TCC	CHA18TSC CHA24TSC CHA30TSC	CCF24FCC CCF30FCC CCF36FCC	CHF18TCC CHF24TCC CHF30TCC
70,000	16 1/2"	2 - 3 1/2	CCA36FCC CCA42FCC	CCA36FSC CCA42FSC	CHA36TCC	CHA36TSC		
90,000	20 1/2"	2 1/2 - 4	CCA30FDC CCA36FDC CCA42FDC CCA48FCC	CCA48FSC	CHA42TCC	CHA42TSC	CCF24FDC CCF36FDC CCF42FCC CCF48FCC	CHF36TCC CHF42TCC
115,000	24 1/2"	3 - 5	CCA36FKC CCA48FDC CCA54FCC	CCA54FSC CCA57FSC	CHA48TCC CHA54TCC CHA57TCC	CHA48TSC CHA54TSC CHA57TSC	CCF48FDC CCF60FCC	CHF48TCC
140,000	24 1/2"	3 - 5	CCA57FCC CCA60FCC	CCA60FSC	CHA60TCC	CHA60TSC		

Thermostats:

The following Amana Thermostats are suggested for use with the GUIC and GCIC Furnace Models:

Thermostats								
Thermostat	Man/Auto	Programmable	Cool	Heat	Batt. Powered	Batt. Bkup*	Shape	Color
1213401	Man. Changeover	Yes	1	1	Yes	No	Rectangular	White
1213402	Man. Changeover	No	1	1	Yes	No	Rectangular	White
1213408	Man. or Auto Changeover	Yes	1	1	No	Yes	Rectangular	White

FURNACE SPECIFICATIONS

MODEL	GUIC045CA30	GUIC070CA30	GUIC070CA40	GUIC090CA30	GUIC090CA50	GUIC115CA40	GUIC115CA50	GUIC140CA50
	GUIC045CX30	GUIC070CX30	GUIC070CX40	GUIC090CX30	GUIC090CX50	GUIC115CX40	GUIC115CX50	GUIC140CX50
	GUIC045DA30	GUIC070DA30	GUIC070DA40	GUIC090DA30	GUIC090DA50	GUIC115DA40	GUIC115DA50	GUIC140DA50
	GUIC045DX30	GUIC070DX30	GUIC070DX40	GUIC090DX30	GUIC090DX50		GUIC115DX50	
Btuh Input (US)	46,000	69,000	69,000	92,000	92,000	115,000	115,000	140,000
Output (US)	36,800	55,200	55,200	73,600	73,600	92,000	92,000	110,400
A.F.U.E.	80%	80%	80%	80%	80%	80%	80%	80%
Rated External Static (" w.c.)	.10 - .50	.12 - .50	.12 - .50	.15 - .50	.15 - .50	.20 - .50	.20 - .50	.20 - .50
Temperature Rise (°F)	35 - 65	35 - 65	35 - 65	40 - 70	40 - 70	40 - 70	40 - 70	45 - 75
Pressure Switch Trip Point (" w.c.)	-0.55	-0.55	-0.55	-0.55	-0.55	-0.55	-0.55	-0.55
Blower Wheel (D" x W")	9 x 8	9 x 8	10 x 6	10 x 8	10 x 8	10 x 7	10 x 9	10 x 9
Blower Horsepower	1/3	1/3	1/2	1/2	1/2	1/2	3/4	3/4
Blower Speeds	4	4	4	4	4	4	4	4
Max CFM @ 0.5 E.S.P.	1200	1290	1450	1380	1980	1590	1985	2050
Power Supply	115-60-1	115-60-1	115-60-1	115-60-1	115-60-1	115-60-1	115-60-1	115-60-1
Minimum Circuit Ampacity (MCA)	8.6	8.5	10.4	8.2	14.6	13.1	13.7	14.6
Maximum Overcurrent Device	15	15	15	15	15	15	15	15
Transformer (VA)	40	40	40	40	40	40	40	40
Heat Anticipator	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Primary Limit Setting (°F)	230	220	170	170 or *150	170 or *160	170 or *150	190 or *180	135
Auxiliary Limit Setting (°F)	160	160	160	160	160	160	160	160
Rollout Limit Setting (°F)	275	300	300	300	300	350	350	325
Fan Delay On	30 secs.	30 secs.	30 secs.	30 secs.	30 secs.	30 secs.	30 secs.	30 secs.
Off Heating *	90 secs.	90 secs.	90 secs.	90 secs.	90 secs.	90 secs.	90 secs.	90 secs.
Off Cooling	45 secs.	45 secs.	45 secs.	45 secs.	45 secs.	45 secs.	45 secs.	45 secs.
Gas Supply Pressure (Natural/Propane) ("w.c.)	7 / 11	7 / 11	7 / 11	7 / 11	7 / 11	7 / 11	7 / 11	7 / 11
Manifold Pressure (Natural/Propane) ("w.c.)	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10
Orifice Size (Natural/Propane)	#43 / #55	#43 / #55	#43 / #55	#43 / #55	#43 / #55	#43 / #55	#43 / #55	#43 / #55
Number of Burners	2	3	3	4	4	5	5	6
Vent Connector Diameter (inches)	4	4	4	4	4	4	4	4
Shipping Weight (lbs.)	140	151	152	169	178	190	194	198

* Off Heating - This fan delay timing is adjustable (60, 90, 120 or 180 seconds), 90 seconds as shipped.

*150 = The GUIC090**30 furnaces can also use primary limit part #10728332 in place of limit part #10728319 but without limit baffle part #11094802.

*160 = The GUIC090**50 furnaces can also use primary limit part #10728331 in place of limit part #10728304 but without limit baffle part #11094802.

*150 = The GUIC115**40 furnaces can also use primary limit part #10728332 in place of limit part #10728319 but without limit baffle part #11094802.

*180 = The GUIC115**50 furnaces can also use primary limit part #10728334 in place of limit part #10728304 but without limit baffle part #11094802.

1. These furnaces are manufactured for natural gas operation. Optional kits are available for conversion to propane gas operation.
2. For elevations above 2000 feet the rating should be reduced by 4% for each 1000 feet above sea level. The furnace must not be derated, orifice changes should only be made if necessary for altitude.
3. The total heat loss from the structure as expressed in TOTAL BTU/HR must be calculated by the manufacturers method in accordance with the "A.S.H.R.A.E. GUIDE" or "MANUAL J-LOAD CALCULATIONS" published by the AIR CONDITIONING CONTRACTORS OF AMERICA. The total heat loss calculated should be equal to or less than the heating capacity. Output based on D.O.E. test procedures, steady state efficiency times output.
4. Minimum Circuit Ampacity calculated as: (1.25 x Circulator Blower Amps) + I.D. Blower Amps.

FURNACE SPECIFICATIONS

MODEL	GUIC070DA40	GUIC070DX40	GCIC070DX40
Btuh Input (US)	69,000	69,000	69,000
Output (US)	55,200	55,200	55,200
A.F.U.E.	80%	80%	80%
Rated External Static (" w.c.)	.12 - .50	.12 - .50	.12 - .50
Temperature Rise (°F)	35 - 65	35 - 65	45 - 75
Pressure Switch Trip Point (" w.c.)	-0.55	-0.55	-0.55
Blower Wheel (D" x W")	10 x 8	10 x 8	10 x 8
Blower Horsepower	1/2	1/2	1/2
Blower Speeds	4	4	4
Max CFM @ 0.5 E.S.P.	1529	1529	1571
Power Supply	115-60-1	115-60-1	115-60-1
Minimum Circuit Ampacity (MCA)	9.9	9.9	9.9
Maximum Overcurrent Device	15	15	15
Transformer (VA)	40	40	40
Heat Anticipator	0.7	0.7	0.7
Primary Limit Setting (°F)	215	215	215
Auxiliary Limit Setting (°F)	160	160	160
Rollout Limit Setting (°F)	300	300	300
Fan Delay On	30 secs.	30 secs.	30 secs.
Off Heating *	90 secs.	90 secs.	90 secs.
Off Cooling	45 secs.	45 secs.	45 secs.
Gas Supply Pressure (Natural/Propane) ("w.c.)	7 / 11	7 / 11	7 / 11
Manifold Pressure (Natural/Propane) ("w.c.)	3.5 / 10	3.5 / 10	3.5 / 10
Orifice Size (Natural/Propane)	#43 / #55	#43 / #55	#43 / #55
Number of Burners	3	3	3
Vent Connector Diameter (inches)	4	4	4
Shipping Weight (lbs.)	152	152	152

* Off Heating - This fan delay timing is adjustable (60, 90, 120 or 180 seconds), 90 seconds as shipped.

** Note: The three models above use 10x8 blower assembly instead of 10x6 to achieve a full 4 tons of airflow.

1. These furnaces are manufactured for natural gas operation. Optional kits are available for conversion to propane gas operation.
2. For elevations above 2000 feet the rating should be reduced by 4% for each 1000 feet above sea level. The furnace must not be derated, orifice changes should only be made if necessary for altitude.
3. The total heat loss from the structure as expressed in TOTAL BTU/HR must be calculated by the manufacturers method in accordance with the "A.S.H.R.A.E. GUIDE" or "MANUAL J-LOAD CALCULATIONS" published by the AIR CONDITIONING CONTRACTORS OF AMERICA. The total heat loss calculated should be equal to or less than the heating capacity. Output based on D.O.E. test procedures, steady state efficiency times output.
4. Minimum Circuit Ampacity calculated as: $(1.25 \times \text{Circulator Blower Amps}) + \text{I.D. Blower Amps}$.

FURNACE SPECIFICATIONS

MODEL	GCIC045CX30	GCIC070CX30	GCIC070CX40	GCIC090CX30	GCIC090CX50	GCIC115CX40	GCIC115CX50	GCIC140CX50
Btuh Input (US)	46,000	69,000	69,000	92,000	92,000	115,000	115,000	140,000
Output (US)	36,800	55,200	55,200	73,600	73,600	92,000	92,000	110,400
A.F.U.E.	80%	80%	80%	80%	80%	80%	80%	80%
Rated External Static (" w.c.)	.10 - .50	.12 - .50	.12 - .50	.15 - .50	.15 - .50	.20 - .50	.20 - .50	.20 - .50
Temperature Rise (°F)	35 - 65	45 - 75	45 - 75	45 - 75	45 - 75	45 - 75	45 - 75	45 - 75
Pressure Switch Trip Point (" w.c.)	-0.55	-0.55	-0.55	-0.55	-0.55	-0.55	-0.55	-0.55
Blower Wheel (D" x W")	9 x 8	9 x 8	10 x 6	10 X 8	10 x 8	10 x 7	10 x 9	10 x 9
Blower Horsepower	1/3	1/3	1/2	1/3	1/2	1/2	3/4	3/4
Blower Speeds	4	4	4	4	4	4	4	4
Max CFM @ 0.5 E.S.P.	1160	1150	1370	1270	1780	1660	1840	1850
Power Supply	115-60-1	115-60-1	115-60-1	115-60-1	115-60-1	115-60-1	115-60-1	115-60-1
Minimum Circuit Ampacity (MCA)	8.6	9.0	10.4	8.2	14.4	12.7	14.1	14.1
Maximum Overcurrent Device	15	15	15	15	15	15	15	15
Transformer (VA)	40	40	40	40	40	40	40	40
Heat Anticipator	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Primary Limit Setting (°F)	240	200	170	170	160	*130	130	140
Auxiliary Limit Setting (°F)	160	160	160	160	160	160	160	160
Rollout Limit Setting (°F)	250	275	275	325	325	275	275	275
Fan Delay On	30 secs.	30 secs.	30 secs.	30 secs.	30 secs.	30 secs.	30 secs.	30 secs.
Off Heating *	90 secs.	90 secs.	90 secs.	90 secs.	90 secs.	90 secs.	90 secs.	90 secs.
Off Cooling	45 secs.	45 secs.	45 secs.	45 secs.	45 secs.	45 secs.	45 secs.	45 secs.
Gas Supply Pressure (Natural/Propane) ("w.c.)	7 / 11	7 / 11	7 / 11	7 / 11	7 / 11	7 / 11	7 / 11	7 / 11
Manifold Pressure (Natural/Propane) ("w.c.)	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10
Orifice Size (Natural/Propane)	#43 / #55	#43 / #55	#43 / #55	#43 / #55	#43 / #55	#43 / #55	#43 / #55	#43 / #55
Number of Burners	2	3	3	4	4	5	5	6
Vent Connector Diameter (inches)	3	3	3	3	3	3	3	3
Shipping Weight (lbs.)	140	151	152	169	178	190	194	198

* Off Heating - This fan delay timing is adjustable (60, 90, 120 or 180 seconds), 90 seconds as shipped.

*130 = The GUIC115**40 furnaces were changed from primary limit part #10728327 (120°F) to limit part #10728329 (130°F) per ECN60643 effective April 7, 1999.

1. These furnaces are manufactured for natural gas operation. Optional kits are available for conversion to propane gas operation.
2. For elevations above 2000 feet the rating should be reduced by 4% for each 1000 feet above sea level. The furnace must not be derated, orifice changes should only be made if necessary for altitude.
3. The total heat loss from the structure as expressed in TOTAL BTU/HR must be calculated by the manufacturers method in accordance with the "A.S.H.R.A.E. GUIDE" or "MANUAL J-LOAD CALCULATIONS" published by the AIR CONDITIONING CONTRACTORS OF AMERICA. The total heat loss calculated should be equal to or less than the heating capacity. Output based on D.O.E. test procedures, steady state efficiency times output.
4. Minimum Circuit Ampacity calculated as: $(1.25 \times \text{Circulator Blower Amps}) + \text{I.D. Blower Amps}$.

BLOWER PERFORMANCE SPECIFICATIONS

GUIC Blower Performance (CFM & Temperature Rise vs. External Static Pressure)														
Model (Heating Speed As Shipped)	MOTOR SPEED	TONS AC @ 0.5" ESP	External Static Pressure (Inches Water Column)											
			0.1		0.2		0.3		0.4		0.5		0.6	
			CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise
GUIC045**30 (Low)	HIGH	3.0	1460	---	1400	---	1345	---	1280	---	1200	---	1110	---
	MED	2.5	1200	---	1150	---	1100	---	1050	---	980	35	900	38
	MED-LO	2.0	935	36	910	37	885	39	845	40	790	43	710	48
	LOW	1.5	700	49	685	50	665	51	635	54	575	59	425	---
GUIC070**30 (Med-Lo)	HIGH	3.0	1555	---	1505	---	1440	35	1365	37	1290	39	1180	43
	MED	3.0	1325	38	1305	39	1250	41	1200	42	1140	44	1060	48
	MED-LO	2.5	1090	47	1080	47	1055	48	1020	50	970	52	905	56
	LOW	2.0	760	---	750	---	750	---	735	---	700	---	645	---
GUIC070**40 (Low)	HIGH	3.5	1695	---	1625	---	1580	---	1520	---	1450	35	1365	37
	MED	3.0	1485	---	1450	35	1400	36	1350	38	1295	39	1235	41
	MED-LO	3.0	1235	41	1200	42	1180	43	1140	44	1115	45	1050	48
	LOW	2.5	1095	46	1070	47	1050	48	1025	49	975	52	950	53
GUIC090**30 (High)	HIGH	3.5	1630	42	1560	44	1550	44	1465	47	1380	49	1275	53
	MED	3.0	1360	50	1325	51	1290	53	1215	56	1155	59	1070	64
	MED-LO	2.0	920	---	920	---	900	---	890	---	850	---	800	---
	LOW	1.5	770	---	750	---	740	---	730	---	690	---	660	---
GUIC090**50 (Med-Lo)	HIGH	5.0	2250	---	2185	---	2120	---	2030	---	1975	---	1885	---
	MED	4.0	1775	---	1750	---	1735	---	1690	40	1650	41	1600	43
	MED-LO	3.5	1320	52	1315	52	1315	52	1315	52	1280	53	1240	55
	LOW	3.0	1180	58	1180	58	1175	58	1170	58	1140	60	1120	61
GUIC115**40 (High)	HIGH	4.0	1835	46	1780	48	1730	49	1660	51	1590	53	1530	55
	MED	3.5	1630	52	1595	53	1540	55	1490	57	1440	59	1375	62
	MED-LO	3.0	1320	64	1305	65	1290	66	1260	67	1200	---	1180	---
	LOW	2.5	1140	---	1145	---	1120	---	1100	---	1065	---	1030	---
GUIC115**50 (Med)	HIGH	5.0	2330	36	2245	38	2165	39	2065	41	1985	43	1885	45
	MED	5.0	2120	40	2070	41	2020	42	1940	44	1850	46	1775	48
	MED-LO	4.0	1875	45	1840	46	1800	47	1735	49	1685	50	1600	53
	LOW	3.0	1290	---	1275	---	1250	---	1235	---	1210	---	1170	---
GUIC140**50 (High)	HIGH	5.0	2455	---	2390	---	2290	---	2200	46	2050	49	1935	52
	MED	5.0	2050	49	2025	50	1965	52	1890	54	1810	56	1715	59
	MED-LO	4.0	1715	59	1700	60	1660	61	1615	63	1555	65	1470	69
	LOW	3.5	1450	70	1435	71	1415	72	1380	73	1340	---	1280	---

1. CFM in chart is without filters(s). Filters do not ship with this furnace, but must be provided by the installer. If the furnace requires two return filters, this chart assumes both filters are installed.
2. All furnaces ship as high speed cooling. Installer must adjust blower cooling speed as needed.
3. For most jobs, about 400 CFM per ton when cooling is desirable.
4. INSTALLATION IS TO BE ADJUSTED TO OBTAIN TEMPERATURE RISE WITHIN THE RANGE SPECIFIED ON THE RATING PLATE.
5. The chart is for information only. For satisfactory operation, external static pressure must not exceed value shown on rating plate. The shaded area indicates ranges in excess of maximum external static pressure allowed when heating.
- 6 The dashed (---) areas indicate a temperature rise not recommended for this model.
7. The above chart is for U.S. furnaces installed at 0-2000 feet. At higher altitudes, a properly derated unit will have approximately the same temperature rise at a particular CFM, while the ESP at that CFM will be lower.

BLOWER PERFORMANCE SPECIFICATIONS

GCIC Blower Performance (CFM & Temperature Rise vs. External Static Pressure)														
Model (Heating Speed As Shipped)	MOTOR SPEED	TONS AC @ 0.5" ESP	External Static Pressure (Inches Water Column)											
			0.1		0.2		0.3		0.4		0.5		0.6	
			CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise
GCIC045**30 (Low)	HIGH	3.0	1455	---	1430	---	1360	---	1255	---	1160	---	1040	---
	MED	2.5	1255	---	1200	---	1150	---	1075	---	990	---	890	38
	MED-LO	2.0	1010	---	980	35	940	36	880	39	810	42	700	49
	LOW	1.5	775	44	745	46	710	48	655	52	560	61	435	---
GCIC070**30 (Med-Lo)	HIGH	3.0	1455	---	1420	---	1365	---	1275	---	1145	---	1015	50
	MED	3.0	1110	46	1090	47	1050	48	1015	50	935	54	845	60
	MED-LO	2.5	910	56	905	56	895	57	860	59	810	63	745	68
	LOW	2.0	730	69	715	71	710	71	680	75	645	---	490	---
GCIC070**40 (Low)	HIGH	3.5	1655	---	1580	---	1500	---	1445	---	1366	---	1280	---
	MED	3.0	1530	---	1470	---	1400	---	1345	---	1280	---	1210	---
	MED-LO	3.0	1090	47	1075	47	1055	48	1015	50	975	52	915	55
	LOW	2.5	945	54	935	54	915	55	890	57	850	60	810	63
GCIC090**30 (High)	HIGH	3.5	1620	---	1550	---	1470	46	1385	49	1265	54	1165	59
	MED	3.0	1415	48	1355	50	1285	53	1215	56	1120	61	1015	67
	MED-LO	2.0	1025	67	1010	68	990	69	945	72	890	---	815	---
	LOW	1.5	850	---	840	---	810	---	790	---	750	---	675	---
GCIC090**50 (Med-Lo)	HIGH	5.0	2110	---	2030	---	1960	---	1870	---	1780	---	1680	---
	MED	4.0	1830	---	1765	---	1710	---	1640	---	1550	---	1470	46
	MED-LO	3.5	1260	54	1255	54	1230	55	1200	57	1170	58	1115	61
	LOW	3.0	1015	67	1000	68	980	70	964	71	930	73	875	---
GCIC115**40 (High)	HIGH	4.0	1960	---	1890	45	1825	46	1745	49	1660	51	1580	54
	MED	3.5	1725	49	1685	50	1640	52	1585	53	1515	56	1440	59
	MED-LO	3.0	1440	59	1425	60	1405	60	1380	61	1335	64	1275	67
	LOW	2.5	1035	---	1025	---	1015	---	1005	---	975	---	955	---
GCIC115**50 (Med)	HIGH	5.0	2100	---	2060	---	2000	---	1915	---	1840	46	1750	48
	MED	5.0	1915	---	1890	45	1840	46	1775	48	1710	50	1635	52
	MED-LO	4.0	1535	55	1516	56	1485	57	1455	58	1410	60	1355	63
	LOW	3.0	1175	72	115	73	1140	74	1120	---	1090	---	1060	---
GCIC140**50 (High)	HIGH	5.0	2255	45	2170	47	2065	49	1970	51	1845	55	1735	58
	MED	5.0	2170	47	2045	50	1945	52	1855	55	1750	58	1650	61
	MED-LO	4.0	1845	55	1790	57	1720	59	1620	63	1525	66	1445	70
	LOW	3.5	1425	71	1390	73	1370	74	1320	---	1265	---	1185	---

1. CFM in chart is without filters(s). Filters do not ship with this furnace, but must be provided by the installer. If the furnace requires two return filters, this chart assumes both filters are installed.
2. All furnaces ship as high speed cooling. Installer must adjust blower cooling speed as needed.
3. For most jobs, about 400 CFM per ton when cooling is desirable.
4. INSTALLATION IS TO BE ADJUSTED TO OBTAIN TEMPERATURE RISE WITHIN THE RANGE SPECIFIED ON THE RATING PLATE.
5. The chart is for information only. For satisfactory operation, external static pressure must not exceed value shown on rating plate. The shaded area indicates ranges in excess of maximum external static pressure allowed when heating.
6. The dashed (---) areas indicate a temperature rise not recommended for this model.
7. The above chart is for U.S. furnaces installed at 0-2000 feet. At higher altitudes, a properly derated unit will have approximately the same temperature rise at a particular CFM, while the ESP at that CFM will be lower.

BLOWER PERFORMANCE SPECIFICATIONS

GUIC/GCIC070**40 Blower Performance (CFM & Temperature Rise vs. External Static Pressure)													
Model (Heating Speed As Shipped)	MOTOR SPEED	TONS AC @ 0.5" ESP	External Static Pressure (Inches Water Column)										
			0.1		0.2		0.3		0.4		0.5		0.6
			CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM
GUIC070**40 (Med-Lo)	HIGH	4.0	1799	---	1742	---	1694	---	1622	---	1529	---	1444
	MED	3.5	1730	---	1590	---	1542	---	1483	---	1404	36	1330
	MED-LO	2.5	1113	46	1096	47	1078	47	1067	48	1018	50	967
	LOW	2.0	967	53	954	54	941	54	913	56	885	58	826
GCIC070**40 (Low)	HIGH	4.0	1882	---	1814	---	1743	---	1676	---	1571	---	1492
	MED	3.5	1746	---	1668	---	1603	---	1530	---	1432	---	1368
	MED-LO	2.5	1169	44	1141	45	1136	45	1102	46	1043	49	1006
	LOW	2.0	1006	51	993	51	980	52	954	54	921	55	871

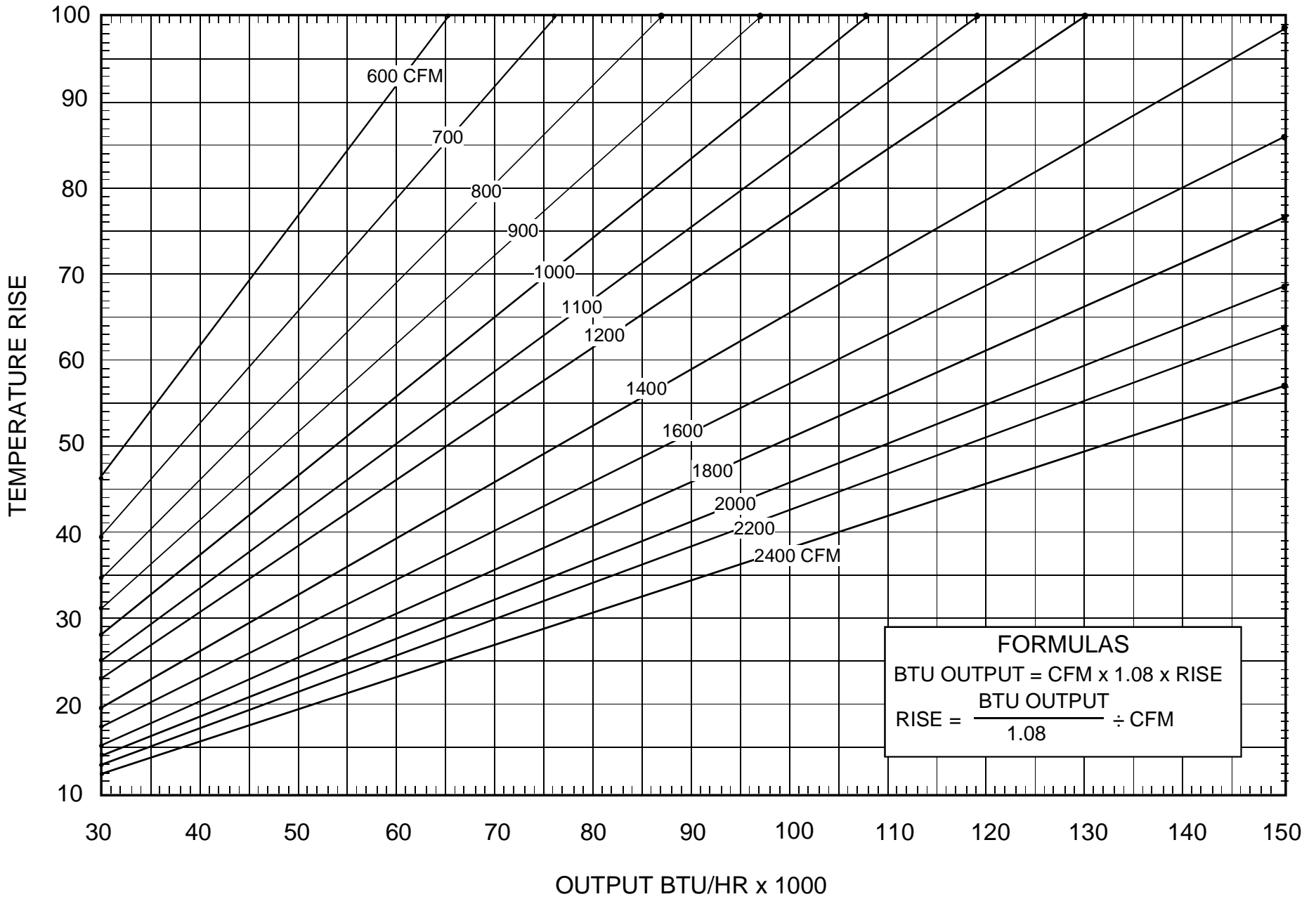
Note: The models listed in the above airflow table use 10x8 blower assembly instead of 10x6 to achieve a full 4 tons of airflow. Listed below are the model numbers along with the manufacturing numbers of the three units using the 10x8 blower assembly.

GUIC070DA40 P1226609F
 GUIC070DX40 P1226709F
 GCIC070DX40 P1226809F

1. CFM in chart is without filters(s). Filters do not ship with this furnace, but must be provided by the installer. If the furnace requires two return filters, this chart assumes both filters are installed.
2. All furnaces ship as high speed cooling. Installer must adjust blower cooling speed as needed.
3. For most jobs, about 400 CFM per ton when cooling is desirable.
4. INSTALLATION IS TO BE ADJUSTED TO OBTAIN TEMPERATURE RISE WITHIN THE RANGE SPECIFIED ON THE RATING PLATE.
5. The chart is for information only. For satisfactory operation, external static pressure must not exceed value shown on rating plate. The shaded area indicates ranges in excess of maximum external static pressure allowed when heating.
6. The dashed (---) areas indicate a temperature rise not recommended for this model.
7. The above chart is for U.S. furnaces installed at 0-2000 feet. At higher altitudes, a properly derated unit will have approximately the same temperature rise at a particular CFM, while the ESP at that CFM will be lower.

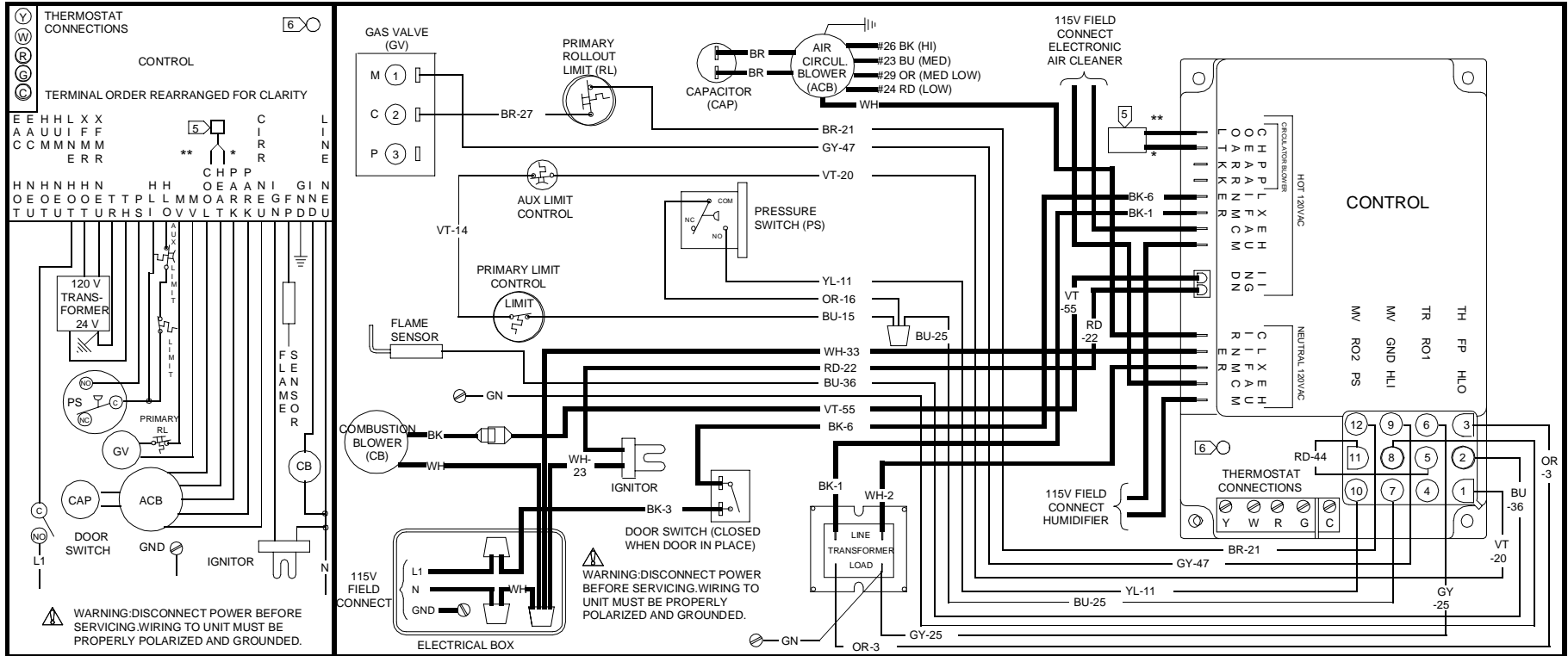
BTU OUTPUT vs TEMPERATURE RISE CHART

BLOWER PERFORMANCE SPECIFICATIONS



WIRING DIAGRAMS

GCIC and GCIC (See model numbers above)



FACTORY WIRED BLOWER MOTOR TO CONTROL CONNECTIONS

FURNACE MODEL * MANUFACTURER'S VARIABLE LETTER	* HEATING BLOWER SPEED		MOTOR SPEEDS	** COOLING BLOWER SPEED
	SPEED	MOTOR TO "HEAT"		
GU1, GC1: 045*30, 070*40	LOW	RD-24	4	SEE INSTALLATION INSTRUCTIONS TO DETERMINE PROPER COOLING BLOWER SPEED.
GU1, GC1: 070*30, 090*50	MED LOW	OR-29	4	
GU1, GC1: 115*50	MED	BU-23	4	
GU1, GC1: 090*30, 115*40, 140*50	HI	BK-26	4	

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

LOW VOLTAGE _____
 LOW VOLTAGE FIELD _____
 HI VOLTAGE _____
 HI VOLTAGE FIELD _____

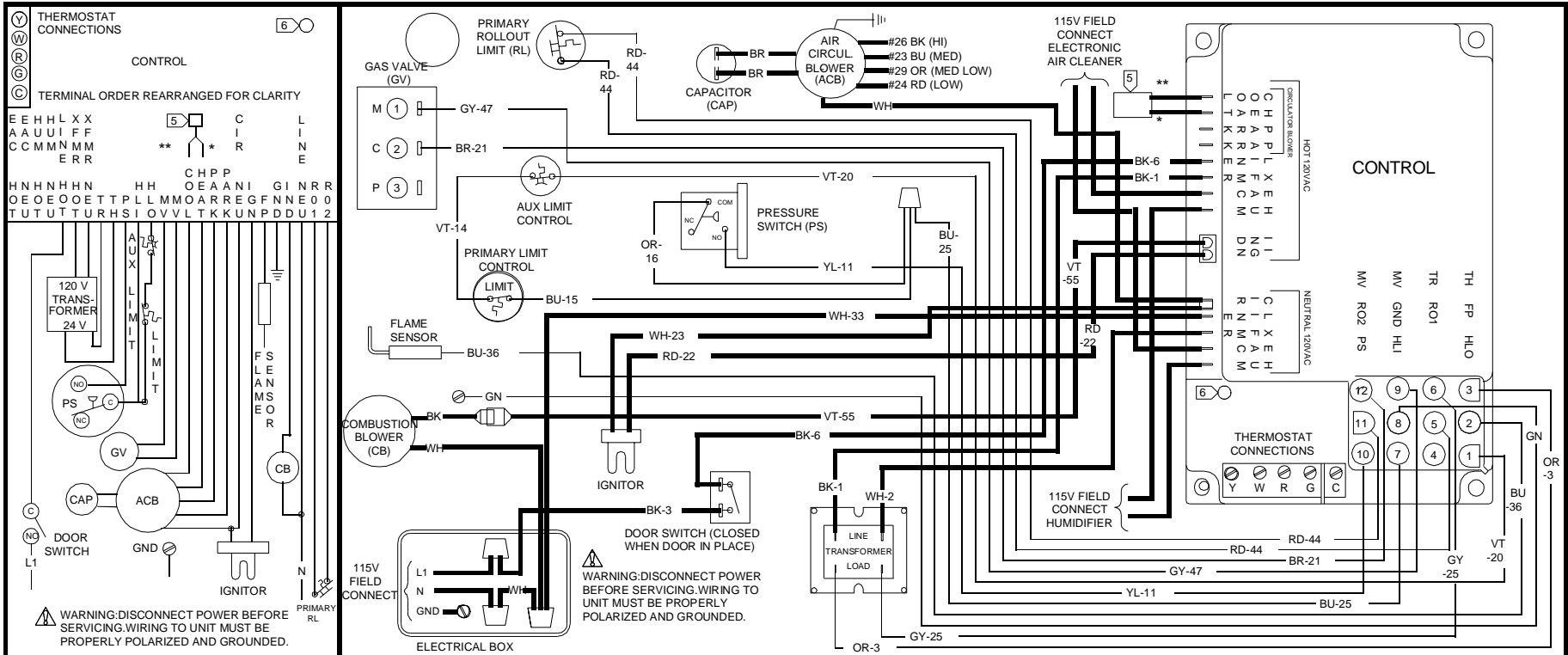
IMPORTANT:

- READ BEFORE OPERATING OR SERVICING THIS UNIT.
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. UNUSED BLOWER MOTOR LEADS MUST BE PLACED ON "PARK" TERMINALS OF CONTROL OR TAPED.
 5. IF HEATING AND COOLING BLOWER SPEEDS ARE NOT THE SAME DISCARD JUMPER BEFORE CONNECTING BLOWER LEADS.
 6. DIAGNOSTIC LIGHT: STEADY=REPLACE CONTROL; 1 FLASH=LOCKOUT; 2 FLASHES=PS STUCK CLOSE; 3 FLASHES=PS STUCK OPEN; 4 FLASHES=OPEN HIGH LIMIT SWITCH; 5 FLASHES=RED WIRE ON CONTROL CONNECTOR OPEN

11072901 REV. 0

WARNING TO AVOID POSSIBLE ELECTRICAL SHOCK, PERSONAL INJURY, OR DEATH, DISCONNECT THE POWER BEFORE SERVICING.

GCIC and GCIC (See model numbers above)



FACTORY WIRED BLOWER MOTOR TO CONTROL CONNECTIONS			
FURNACE MODEL * MANUFACTURER'S VARIABLE LETTER	* HEATING BLOWER SPEED		** COOLING BLOWER SPEED
	SPEED	MOTOR TO "HEAT"	MOTOR SPEEDS
GUI*, GC1*: 045*30, 070*40	LOW	RD-24	4
GUI*, GC1*: 070*30, 090*50	MED LOW	OR-29	4
GUI*, GC1*: 115*50	MED	BU-23	4
GUI*, GC1*: 090*30, 115*40, 140*50	HI	BK-26	4

SEE INSTALLATION INSTRUCTIONS TO DETERMINE PROPER COOLING BLOWER SPEED.

LOW VOLTAGE	—
LOW VOLTAGE FIELD	----
HI VOLTAGE	----
HI VOLTAGE FIELD	----

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

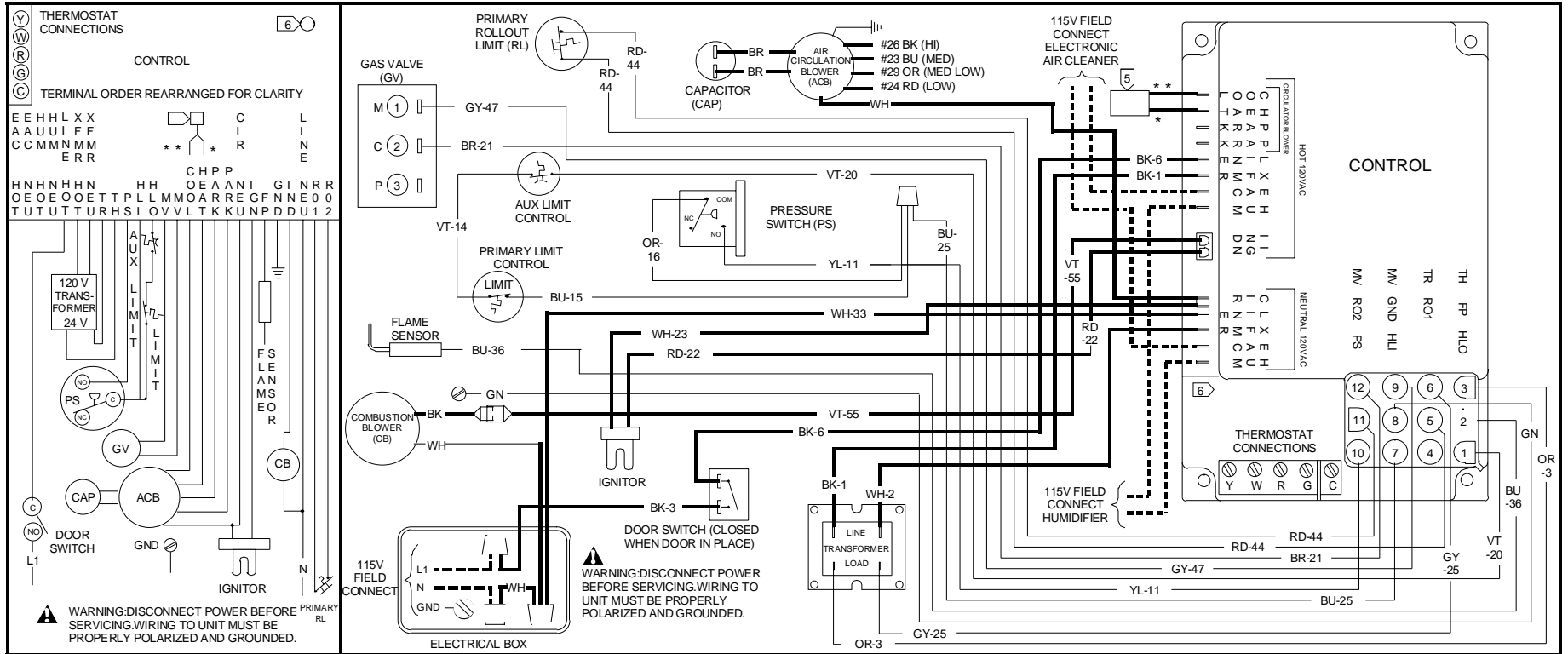
IMPORTANT:
 READ BEFORE OPERATING OR SERVICING THIS UNIT.

- 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.
- UNUSED BLOWER MOTOR LEADS MUST BE PLACED ON "PARK" TERMINALS OF CONTROL OR TAPED.
- IF HEATING AND COOLING BLOWER SPEEDS ARE NOT THE SAME DISCARD JUMPER BEFORE CONNECTING BLOWER LEADS.
- DIAGNOSTIC LIGHT: STEADY=REPLACE CONTROL; 1 FLASH=LOCKOUT; 2 FLASHES=PS STUCK CLOSED; 3 FLASHES=PS STUCK OPEN; 4 FLASHES=OPEN HIGH LIMIT SWITCH; 5 FLASHES=OPEN ROLLOUT CONTROL; CONTINUOUS FLASHING=FLAME-NO CALL FOR HEAT.

11094601 REV.03

WARNING TO AVOID POSSIBLE ELECTRICAL SHOCK, PERSONAL INJURY, OR DEATH, DISCONNECT THE POWER BEFORE SERVICING.

WIRING DIAGRAMS

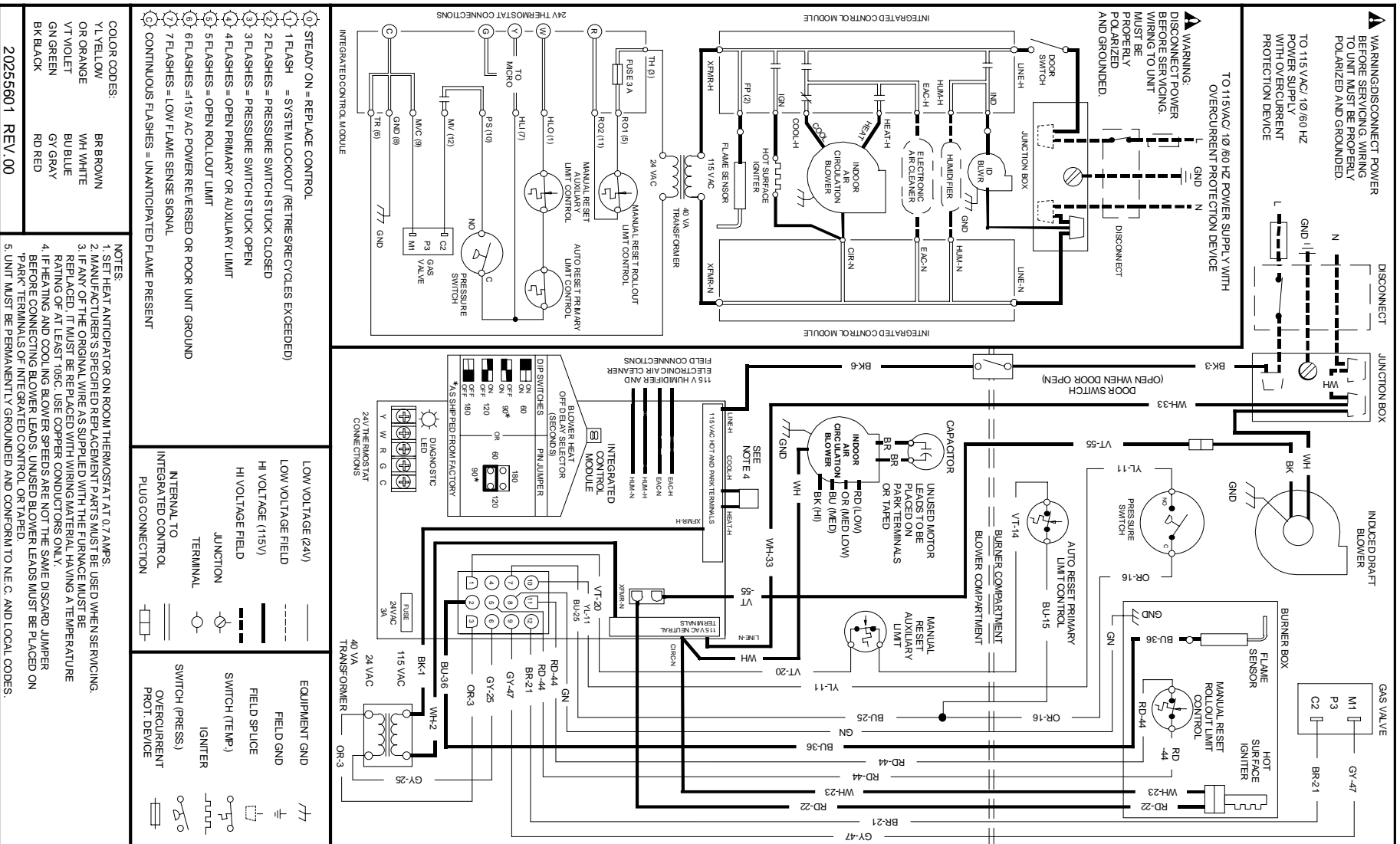


GCIC and GCIC (See model numbers above)

20242401 REV.0

WARNING TO AVOID POSSIBLE ELECTRICAL SHOCK, PERSONAL INJURY, OR DEATH, DISCONNECT THE POWER BEFORE SERVICING.

WIRING DIAGRAMS



WARNING TO AVOID POSSIBLE ELECTRICAL SHOCK, PERSONAL INJURY, OR DEATH, DISCONNECT THE POWER BEFORE SERVICING.

GUIC (Models using WR50A55 Ignition Control)

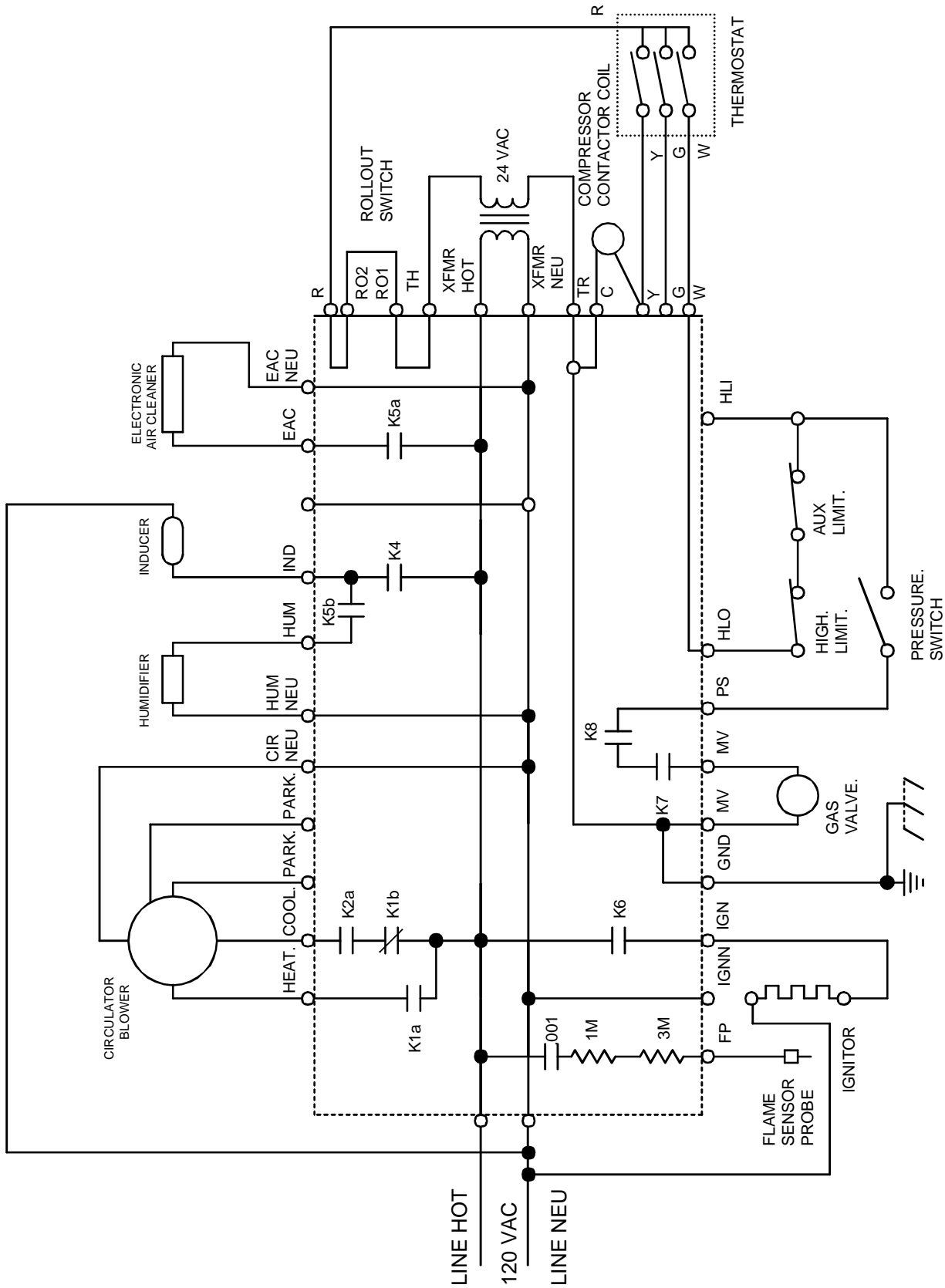
- ① STEADY ON = REPLACE CONTROL.
- ① FLASH = SYSTEM LOCKOUT (RETRIEVE RECYCLES EXCEEDED)
- ② FLASHES = PRESSURE SWITCH STUCK CLOSED
- ③ FLASHES = PRESSURE SWITCH STUCK OPEN
- ④ FLASHES = OPEN PRIMARY OR AUXILIARY LIMIT
- ⑤ FLASHES = OPEN ROLL-OUT LIMIT
- ⑥ FLASHES = 115V AC POWER REVERSED OR POOR UNIT GROUND
- ⑦ FLASHES = LOW FLAME SENSE SIGNAL
- ⑧ CONTINUOUS FLASHES = UNANTICIPATED FLAME PRESENT

COLOR CODES:

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

20255601 REV.00

SCHEMATICS



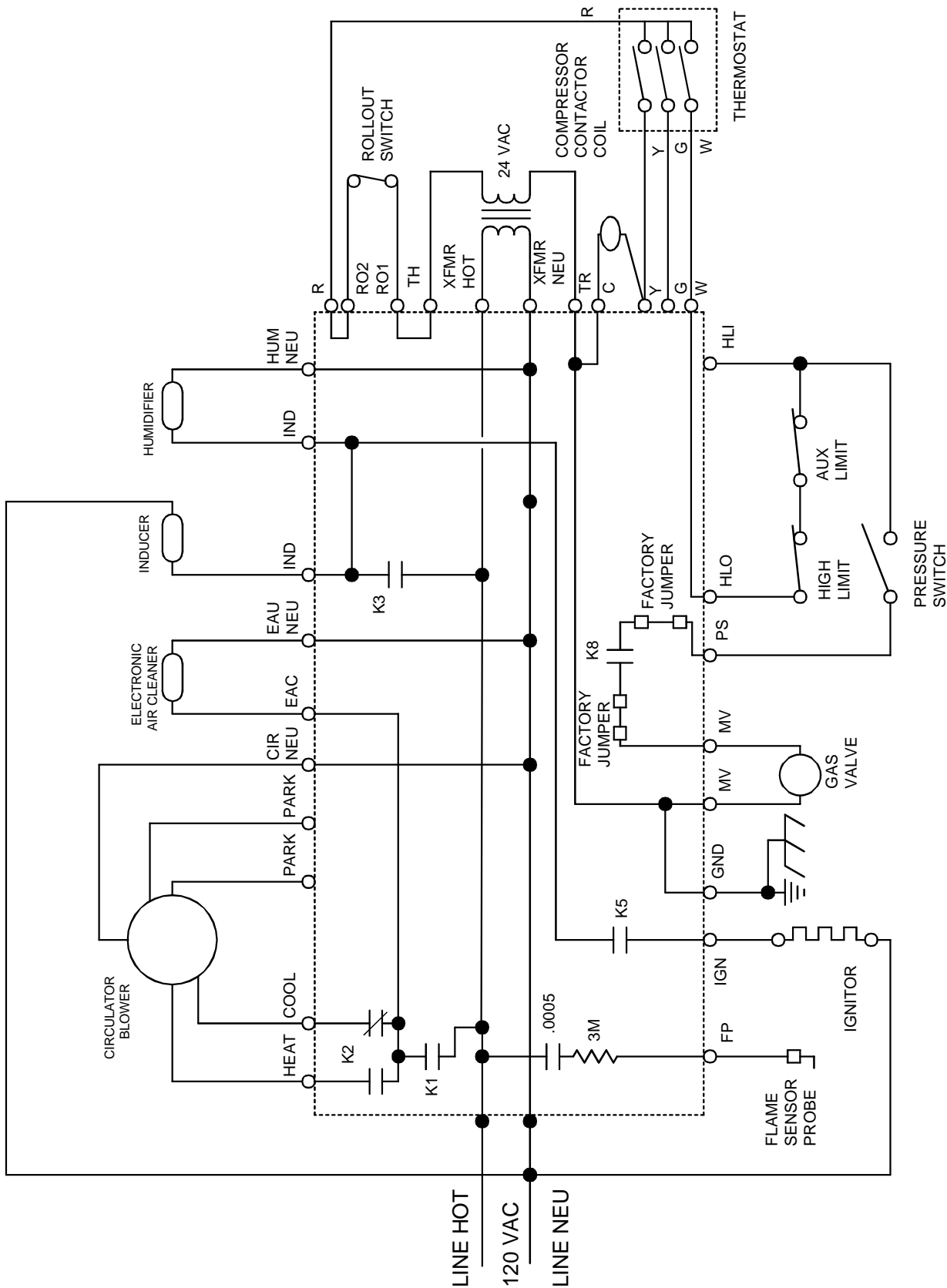
GUIC and GCIC

WR50A50 INTEGRATED IGNITION CONTROL

This schematic is for reference only. Not all wiring is as shown above, refer to the appropriate wiring diagram for the unit being serviced.

WARNING
 TO AVOID POSSIBLE ELECTRICAL SHOCK, PERSONAL INJURY, OR DEATH, DISCONNECT THE POWER BEFORE SERVICING.

WIRING DIAGRAMS



GUIC and GCIC

WR50A55 INTEGRATED IGNITION CONTROL

This schematic is for reference only. Not all wiring is as shown above, refer to the appropriate wiring diagram for the unit being serviced.

WARNING
 TO AVOID POSSIBLE ELECTRICAL SHOCK, PERSONAL INJURY, OR DEATH, DISCONNECT THE POWER BEFORE SERVICING.