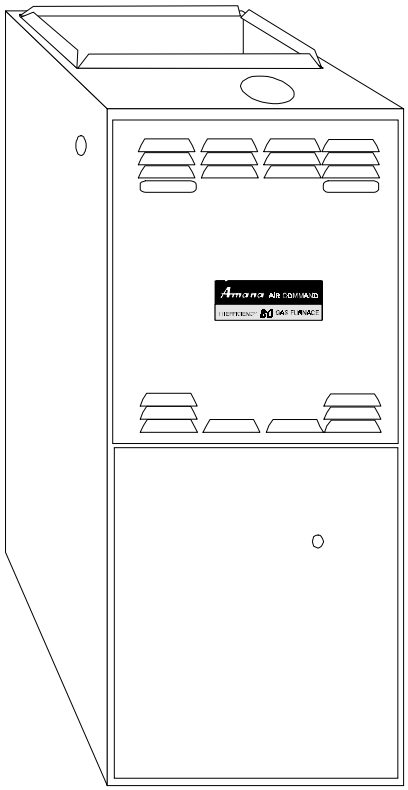
Model and Manufacturing numbers listed on page 3.

# Technical Information

## 40" 80% Gas Furnaces
## GUID

- 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 RT6621004 Rev. 0 April 2000.

**REV. 1 -** Corrections made to manual, no new models added.

Heating & Air Conditioning
Amana®
Built Better Than It Has To Be

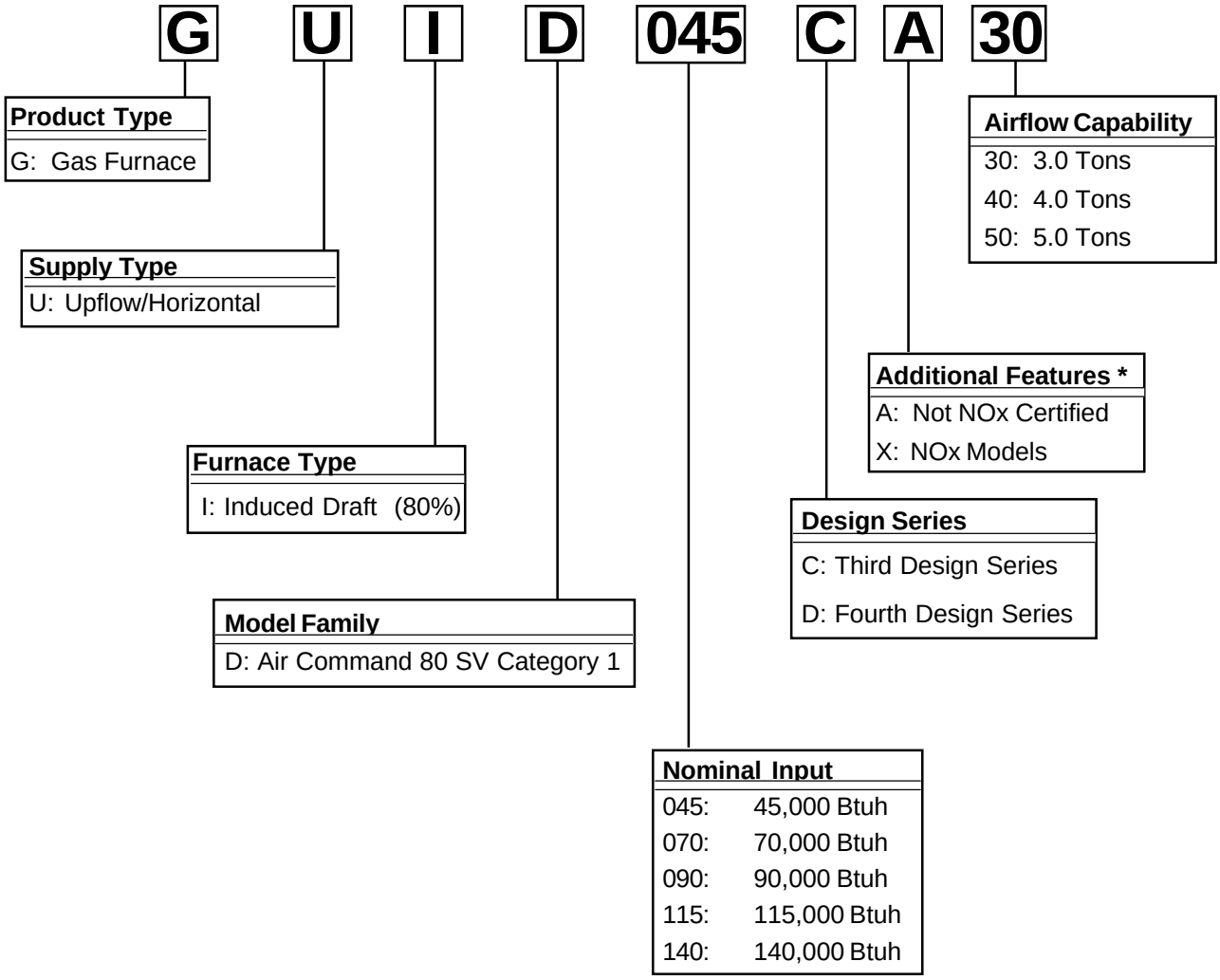


RT6621004
Revision 1
September 2000

# 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.**

**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.**

# 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.

| MODEL | M/N |
|---|---|
| GUID045CA30 | P1212401F |
| GUID070CA30 | P1212402F |
| GUID070CA40 | P1212403F |
| GUID090CA30 | P1212404F |
| GUID090CA50 | P1212405F |
| GUID115CA50 | P1212407F |
| GUID045CX30 | P1212501F |
| GUID070CX30 | P1212502F |
| GUID070CX40 | P1212503F |
| GUID090CX30 | P1212504F |
| GUID090CX50 | P1212505F |
| GUID115CX50 | P1212507F |
| GUID045CX30 | P1220501F |
| GUID070CX30 | P1220502F |
| GUID070CX40 | P1220503F |
| GUID090CX30 | P1220504F |
| GUID090CX50 | P1220505F |
| GUID115CX50 | P1220507F |
| GUID045CA30 | P1220601F |
| GUID070CA30 | P1220602F |
| GUID070CA40 | P1220603F |
| GUID090CA30 | P1220604F |
| GUID090CA50 | P1220605F |
| GUID115CA50 | P1220607F |
| GUID045DA30 | P1226901F |
| GUID070DA30 | P1226902F |
| GUID070DA40 | P1226903F |
| GUID090DA30 | P1226904F |
| GUID090DA50 | P1226905F |
| GUID115DA50 | P1226907F |
| GUID090DA50 | P1226910F |

| MODEL | M/N |
|---|---|
| GUID045DX30 | P1227001F |
| GUID070DX30 | P1227002F |
| GUID070DX40 | P1227003F |
| GUID090DX50 | P1227005F |
| GUID115DX50 | P1227007F |
| GUID070DX40 | P1227009F |
| GUID045CA30 | P1229401F |
| GUID070CA30 | P1229402F |
| GUID070CA40 | P1229403F |
| GUID090CA30 | P1229404F |
| GUID090CA50 | P1229405F |
| GUID115CA50 | P1229407F |
| GUID045CA30 | P1229501F |
| GUID070CA30 | P1229502F |
| GUID070CA40 | P1229503F |
| GUID090CA30 | P1229504F |
| GUID090CA50 | P1229505F |
| GUID115CA50 | P1229507F |
| GUID045CX30 | P1229601F |
| GUID070CX30 | P1229602F |
| GUID070CX40 | P1229603F |
| GUID090CX30 | P1229604F |
| GUID090CX50 | P1229605F |
| GUID115CX50 | P1229607F |
| GUID045CX30 | P1229701F |
| GUID070CX30 | P1229702F |
| GUID070CX40 | P1229703F |
| GUID090CX50 | P1229705F |

# PRODUCT DESIGN

### *General Operation*

This GUID 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 | HORIZONTAL LEFT | HORIZONTAL RIGHT |
| FRONT | 6[1] | Alcove | Alcove |
| RIGHT | 0 | 6 | 12 |
| LEFT | 0 | 12 | 6 |
| REAR | 0 | 0 | 0 |
| TOP | 1 | 6 | 6 |
| FLUE | 6[2] | 6[2] | 6[2] |
| FLOOR | C | 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.

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.

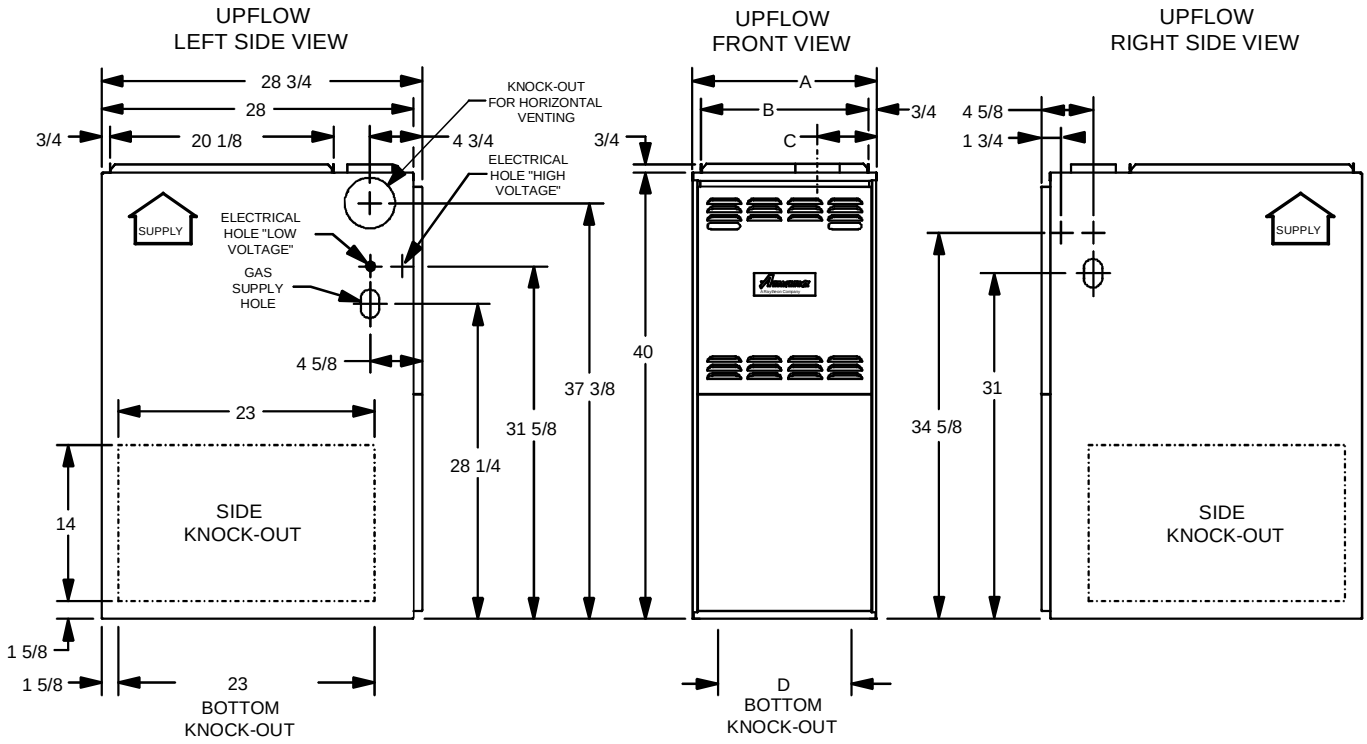
### *High Altitude Derate*

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. |
| GUID | 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 DIMENSIONS




| GUID DIMENSIONS | | | | | | |
|---|---|---|---|---|---|---|
| **FURNACE MODEL** | **A** | **B** | **C** | **D** | **E** | **Minimum Vent Diameter** |
| **GUID045 GUID070** | 16-1/2 | 15 | 5-1/4 | 12-5/8 | 4 | 4 |
| **GUID090** | 20-1/2 | 19 | 7-1/4 | 14-5/8 | 4 | 4 |
| **GUID115** | 24-1/2 | 23 | 9-1/4 | 18-5/8 | 4 | 5 |

All dimensions are in inches.

# 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 |
| GUID | -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 | 10728322 | 10728325 | 10728326 | 10728331 | 10728332 | 10728338 |
| Open Setting °F | 190 | 230 | 170 | 220 | 160 | 150 | 215 |
| Style | 2 | 3 | 3 | 3 | 3 | 3 | 3 |
| Sleeve Colors | Yellow | Orange | Blue | Black | Tan | Green | 1 Green 1 Yellow |
| GUID045**30 | | **1** | | | | | |
| GUID070**30 | | | | **1** | | | |
| GUID070**40 | | | **1** | | | | |
| GUID070**40 (10x8 Blower) | | | | | | | **1** |
| GUID090**30 | | | | | **1** | ***1** | |
| GUID090**50 | | | | | **1** | | |
| GUID115**50 | **1** | | | | | | |

*1 = The GUID090**30 furnaces can also use primary limit part #10728332 (150°F) in place of limit part #10728331 (160°F).

| ROLLOUT LIMIT SWITCHES | | | |
|---|---|---|---|
| Part Number | 10123509 or 10123528 | 10123510 or 10123529 | 10123511 or 10123530 |
| Open Setting °F | 275 | 300 | 250 |
| Color | PINK | GREEN | LT PURPLE |
| GUID045**30 | | | **1** |
| GUID070**30/40 | | **1** | |
| GUID090**30/50 | | **1** | |
| GUID115**50 | **1** | | |

| AUXILIARY LIMIT SWITCHES | |
|---|---|
| Part Number | 10123506 or 10123525 |
| Open Setting °F | 160 |
| Color | Orange |
| GUID045**30 | **1** |
| GUID070**30/40 | **1** |
| GUID090**30/50 | **1** |
| GUID115**50 | **1** |

# PRODUCT DESIGN

## Coil Matches:

A large array of Amana coils are available for use with the GUID furnaces, in either upflow 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<br>CCA24FCC<br>CCA30FCC<br>CCA36FCC<br>CCA42FCC | CCA18FSC<br>CCA24FSC<br>CCA30FSC<br>CCA36FSC<br>CCA42FSC | CHA18TCC<br>CHA24TCC<br>CHA30TCC<br>CHA36TCC | CHA18TSC<br>CHA24TSC<br>CHA30TSC<br>CHA36TSC | CCF24FCC<br>CCF30FCC<br>CCF36FCC | CHF18TCC<br>CHF24TCC<br>CHF30TCC |
| 70,000 | 16 1/2" | 2 - 3 1/2 | | | | | | |
| 90,000 | 20 1/2" | 2 1/2 - 4 | CCA30FDC<br>CCA36FDC<br>CCA42FDC<br>CCA48FCC | CCA48FSC | CHA42TCC | CHA42TSC | CCF24FDC<br>CCF36FDC<br>CCF42FCC<br>CCF48FCC | CHF36TCC<br>CHF42TCC |
| 115,000 | 24 1/2" | 3 - 5 | CCA36FKC<br>CCA48FDC<br>CCA54FCC<br>CCA57FCC<br>CCA60FCC | CCA54FSC<br>CCA57FSC<br>CCA60FSC | CHA48TCC<br>CHA54TCC<br>CHA57TCC<br>CHA60TCC | CHA48TSC<br>CHA54TSC<br>CHA57TSC<br>CHA60TSC | CCF48FDC<br>CCF60FCC | CHF48TCC |

## Thermostats:

The following Amana Thermostats are suggested for use with the GUID 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 | GUID045CA30<br>GUID045CX30<br>GUID045DA30<br>GUID045DX30 | GUID070CA30<br>GUID070CX30<br>GUID070DA30<br>GUID070DX30 | GUID070CA40<br>GUID070CX40<br>GUID070DA40<br>GUID070DX40 | GUID090CA30<br>GUID090CX30<br>GUID090DA30 | GUID090CA50<br>GUID090CX50<br>GUID090DA50<br>GUID090DX50 | GUID115CA50<br>GUID115CX50<br>GUID115DA50<br>GUID115DX50 |
|---|---|---|---|---|---|---|
| Btuh Input (US) | 46,000 | 69,000 | 69,000 | 92,000 | 92,000 | 115,000 |
| Output (US) | 36,800 | 55,200 | 55,200 | 73,600 | 73,600 | 92,000 |
| A.F.U.E. | 80% | 80% | 80% | 80% | 80% | 80% |
| Rated External Static (" w.c.) | .10 - .50 | .12 - .50 | .12 - .50 | .15 - .50 | .15 - .50 | .20 - .50 |
| Temperature Rise (°F) | 35 - 65 | 35 - 65 | 35 - 65 | 40 - 70 | 40 - 70 | 40 - 70 |
| Pressure Switch Trip Point (" w.c.) | -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 9 |
| Blower Horsepower | 1/3 | 1/3 | 1/2 | 1/2 | 3/4 | 3/4 |
| Blower Speeds | 4 | 4 | 4 | 4 | 4 | 4 |
| Max CFM @ 0.5 E.S.P. | 1200 | 1290 | 1529 | 1380 | 1975 | 1985 |
| Power Supply | 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 |
| Maximum Overcurrent Device | 15 | 15 | 15 | 15 | 15 | 15 |
| Transformer (VA) | 40 | 40 | 40 | 40 | 40 | 40 |
| Heat Anticipator | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Primary Limit Setting (°F) | 230 | 220 | 170 | *150 | 160 | 190 |
| Auxiliary Limit Setting (°F) | 160 | 160 | 160 | 160 | 160 | 160 |
| Rollout Limit Setting (°F) | 250 | 300 | 300 | 300 | 300 | 275 |
| Fan Delay On | 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. |
| Off Cooling | 45 secs. | 45 secs. | 45 secs. | 45 secs. | 45 secs. | 45 secs. |
| Gas Supply Pressure (Natural/Propane) ("w.c.) | 11-Jul | 11-Jul | 11-Jul | 11-Jul | 11-Jul | 11-Jul |
| Manifold Pressure (Natural/Propane) ("w.c.) | 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 |
| Number of Burners | 2 | 3 | 3 | 4 | 4 | 5 |
| Vent Connector Diameter (inches) | 4 | 4 | 4 | 4 | 4 | 4 |
| Shipping Weight (lbs.) | 140 | 151 | 152 | 169 | 178 | 194 |

* Off Heating - This fan delay timing is adjustable (60, 90, 120 or 180 seconds), 90 seconds as shipped.
*150 = The GUID090**30 furnaces were changed from primary limit part #10728331 (160°F) to limit part #10728332 (150°F) per ECN60850 effective June 6, 2000.

1. These furnaces are manufactured for natural gas operation. Optional kits are available for conversion to propane operation.
2. For elevations above 2000 ft. the rating should be reduced by 4% for each 1000 ft. 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 or 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 | GUID070DA40 | GUID070DX40 |
|---|---|---|
| Btuh Input (US) | 69,000 | 69,000 |
| Output (US) | 55,200 | 55,200 |
| A.F.U.E. | 80% | 80% |
| Rated External Static (" w.c.) | .12 - .50 | .12 - .50 |
| Temperature Rise (°F) | 35 - 65 | 35 - 65 |
| Pressure Switch Trip Point (" w.c.) | -0.55 | -0.55 |
| Blower Wheel (D" x W") | 10 x 8 | 10 x 8 |
| Blower Horsepower | 1/2 | 1/2 |
| Blower Speeds | 4 | 4 |
| Max CFM @ 0.5 E.S.P. | 1529 | 1529 |
| Power Supply | 115-60-1 | 115-60-1 |
| Minimum Circuit Ampacity (MCA) | 9.9 | 9.9 |
| Maximum Overcurrent Device | 15 | 15 |
| Transformer (VA) | 40 | 40 |
| Heat Anticipator | 0.7 | 0.7 |
| Primary Limit Setting (°F) | 215 | 215 |
| Auxiliary Limit Setting (°F) | 160 | 160 |
| Rollout Limit Setting (°F) | 250 | 250 |
| Fan Delay On | 30 secs. | 30 secs. |
| Off Heating * | 90 secs. | 90 secs. |
| Off Cooling | 45 secs. | 45 secs. |
| Gas Supply Pressure (Natural/Propane) (" w.c.) | 7 / 11 | 7 / 11 |
| Manifold Pressure (Natural/Propane) (" w.c.) | 3.5 / 10 | 3.5 / 10 |
| Orifice Size (Natural/Propane) | #43 / #55 | #43 / #55 |
| Number of Burners | 3 | 3 |
| Vent Connector Diameter (inches) | 4 | 4 |
| Shipping Weight (lbs.) | 152 | 152 |

* Off Heating - This fan delay timing is adjustable (60, 90, 120 or 180 seconds), 90 seconds as shipped.
** Note: The two 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 operation.
2. For elevations above 2000 ft. the rating should be reduced by 4% for each 1000 ft. 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 or 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.

# BLOWER PERFORMANCE SPECIFICATIONS

| GUID 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 |
| GUID045**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 | --- |
| GUID070**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 | --- |
| GUID070**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 |
| GUID090**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 | --- |
| GUID090**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 |
| GUID115**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 | --- |

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

| GUID070**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 |
| GUID070**40 (Med-Lo) | HIGH | 4.0 | 1799 | --- | 1742 | --- | 1694 | --- | 1622 | --- | 1529 | --- | 1444 |
| | MED | 3.5 | 1720 | --- | 1590 | --- | 1542 | --- | 1483 | --- | 1404 | 36 | 1330 |
| | MED-LO | 2.5 | 1113 | 46 | 1096 | 47 | 1078 | 47 | 1067 | 48 | 1018 | 50 | 967 |
| | LOW | 2 | 967 | 53 | 954 | 54 | 941 | 54 | 913 | 56 | 885 | 58 | 826 |

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 two units using the 10x8 blower assembly.

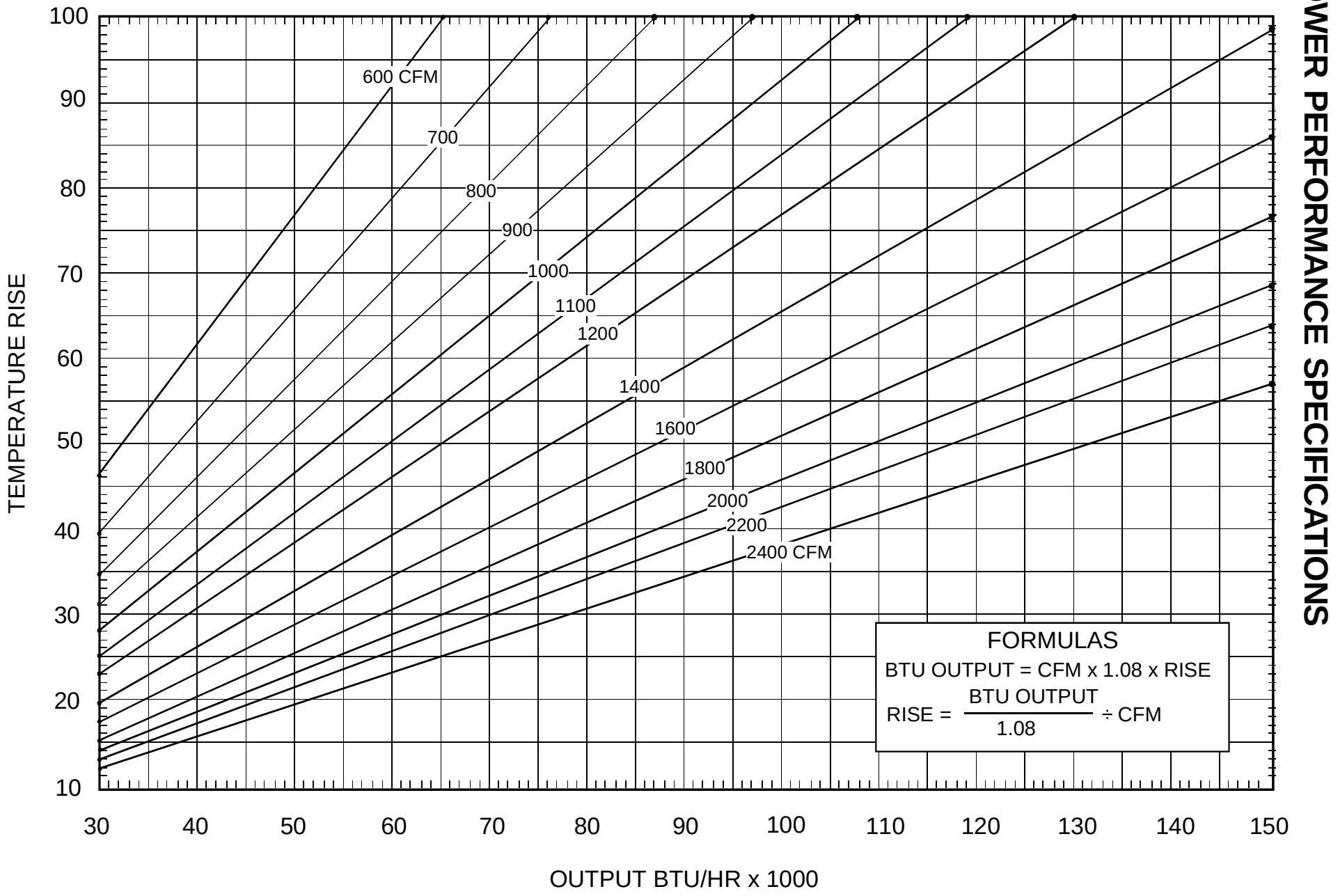
GUID070DA40 P1226909F

GUID070DX40 P1227009F

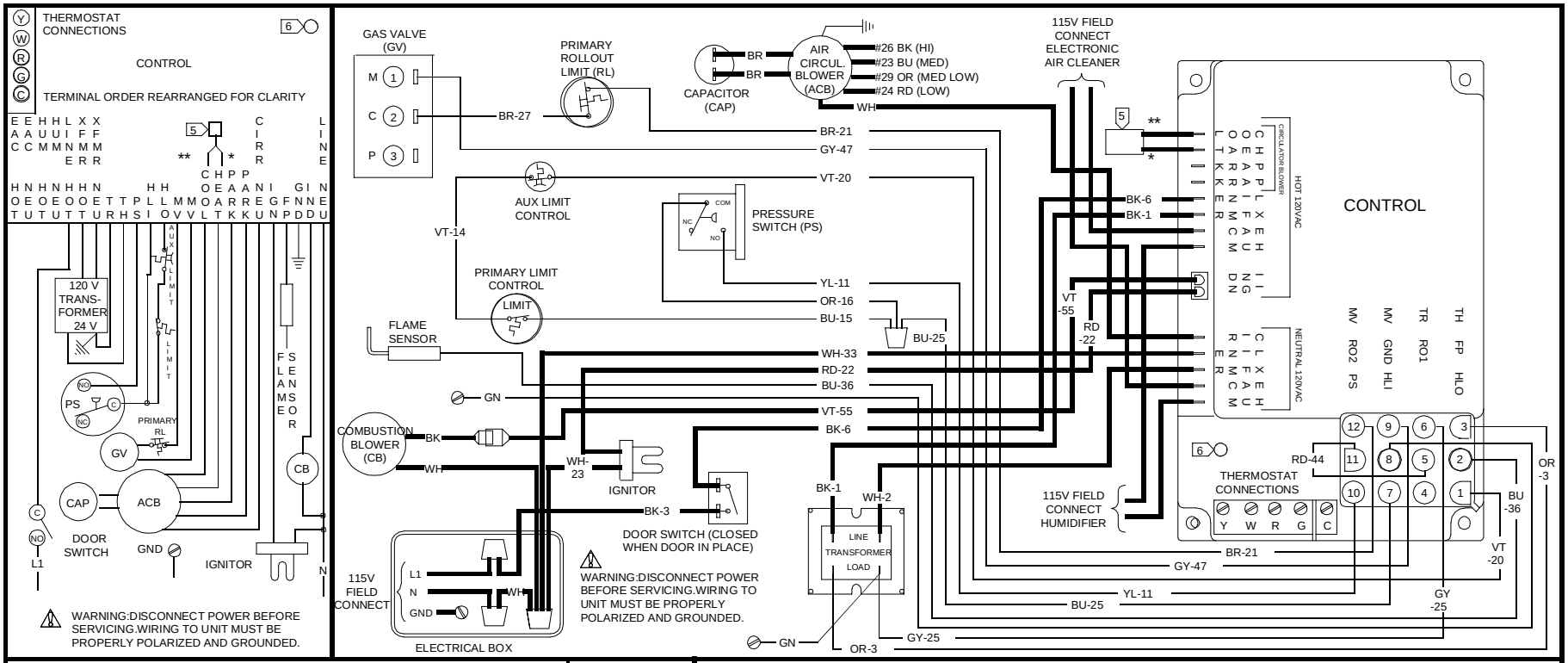
1. CFM in chart is without filters(s). Filters do not ship with this furnace, but must be provided by the installer. If the furnace requires two return filters, this chart assumes both filters are installed.
2. All furnaces ship as high speed cooling. Installer must adjust blower cooling speed as needed.
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

## BTU OUTPUT vs TEMPERATURE RISE CHART



GUID (See specific models above)




## FACTORY WIRED BLOWER MOTOR TO CONTROL CONNECTIONS

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

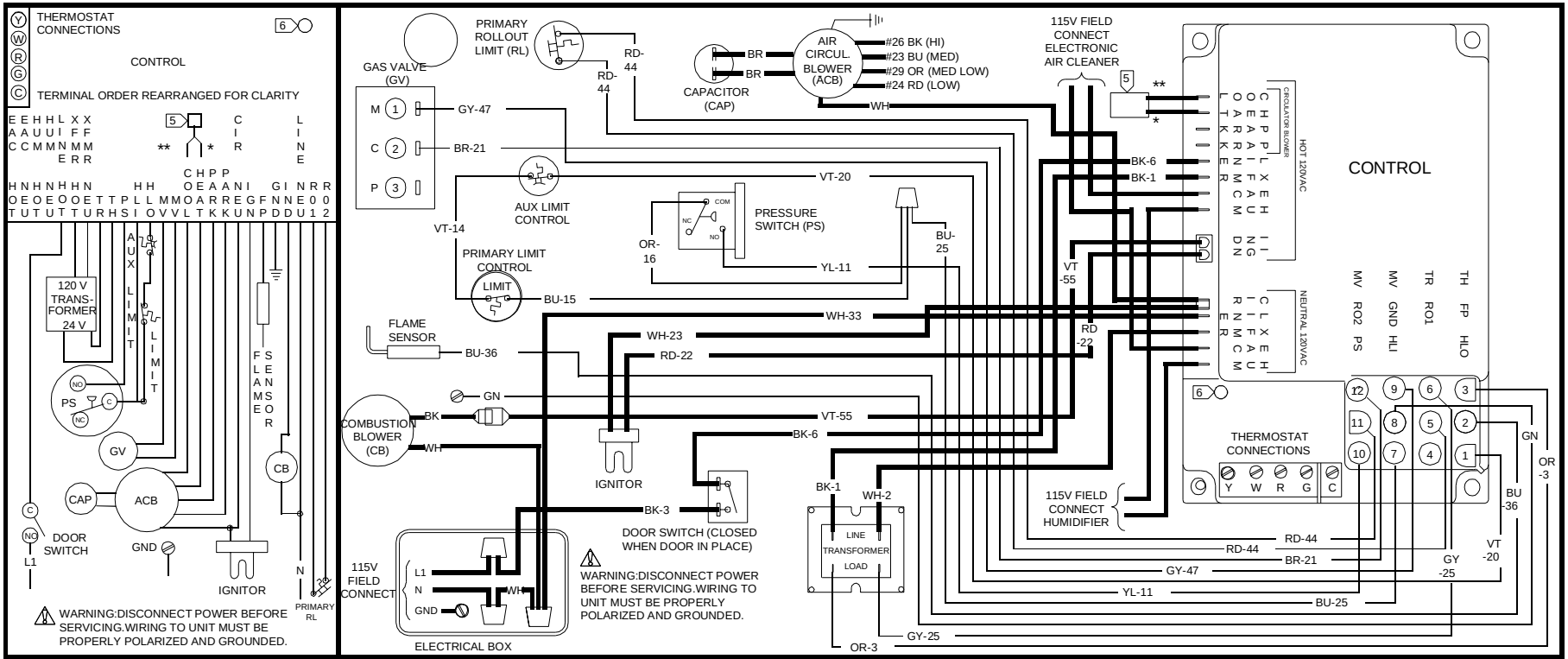
5 IF HEATING AND COOLING BLOWER SPEEDS ARE NOT THE SAME DISCARD JUMPER BEFORE CONNECTING BLOWER LEADS.

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.

# WIRING DIAGRAMS




## FACTORY WIRED BLOWER MOTOR TO CONTROL CONNECTIONS

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

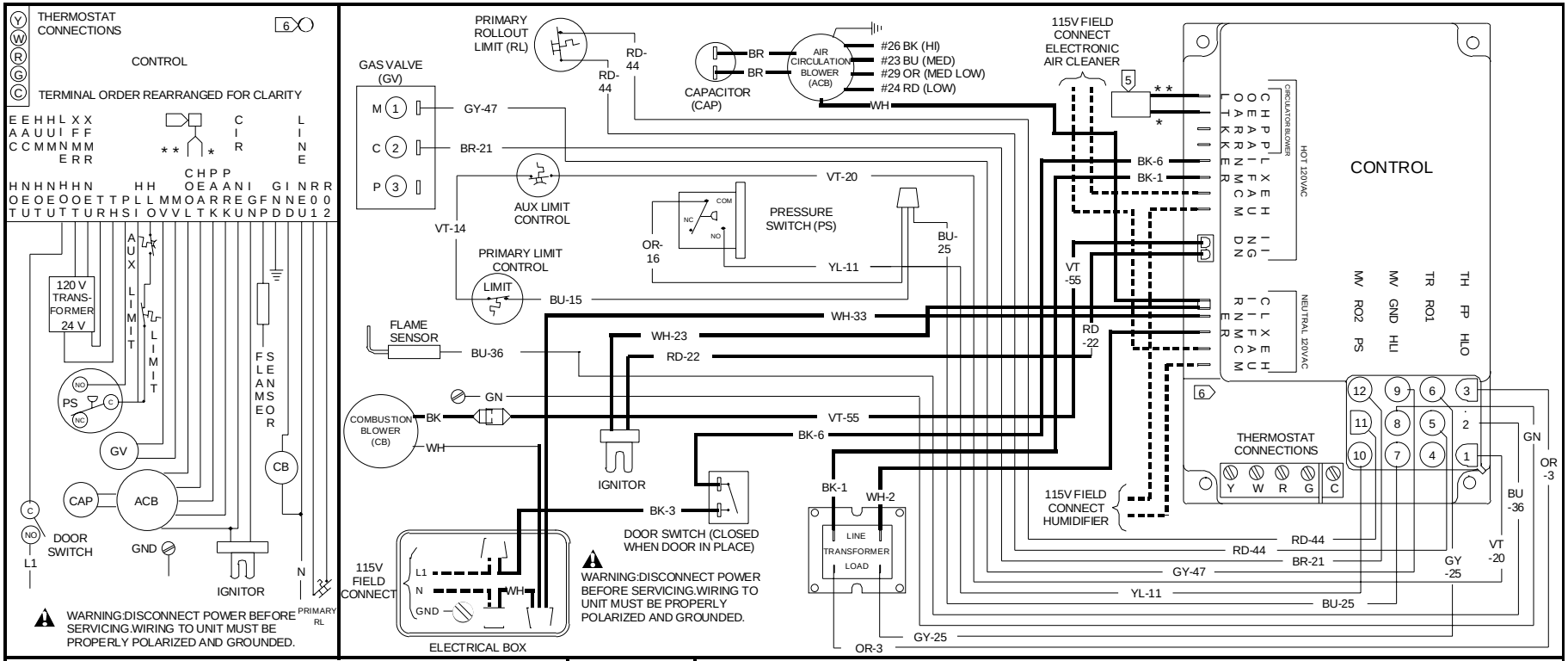
READ BEFORE OPERATING OR SERVICING THIS UNIT.

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 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

**GUID (See specific models above)**

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




## FACTORY WIRED BLOWER MOTOR TO CONTROL CONNECTIONS

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

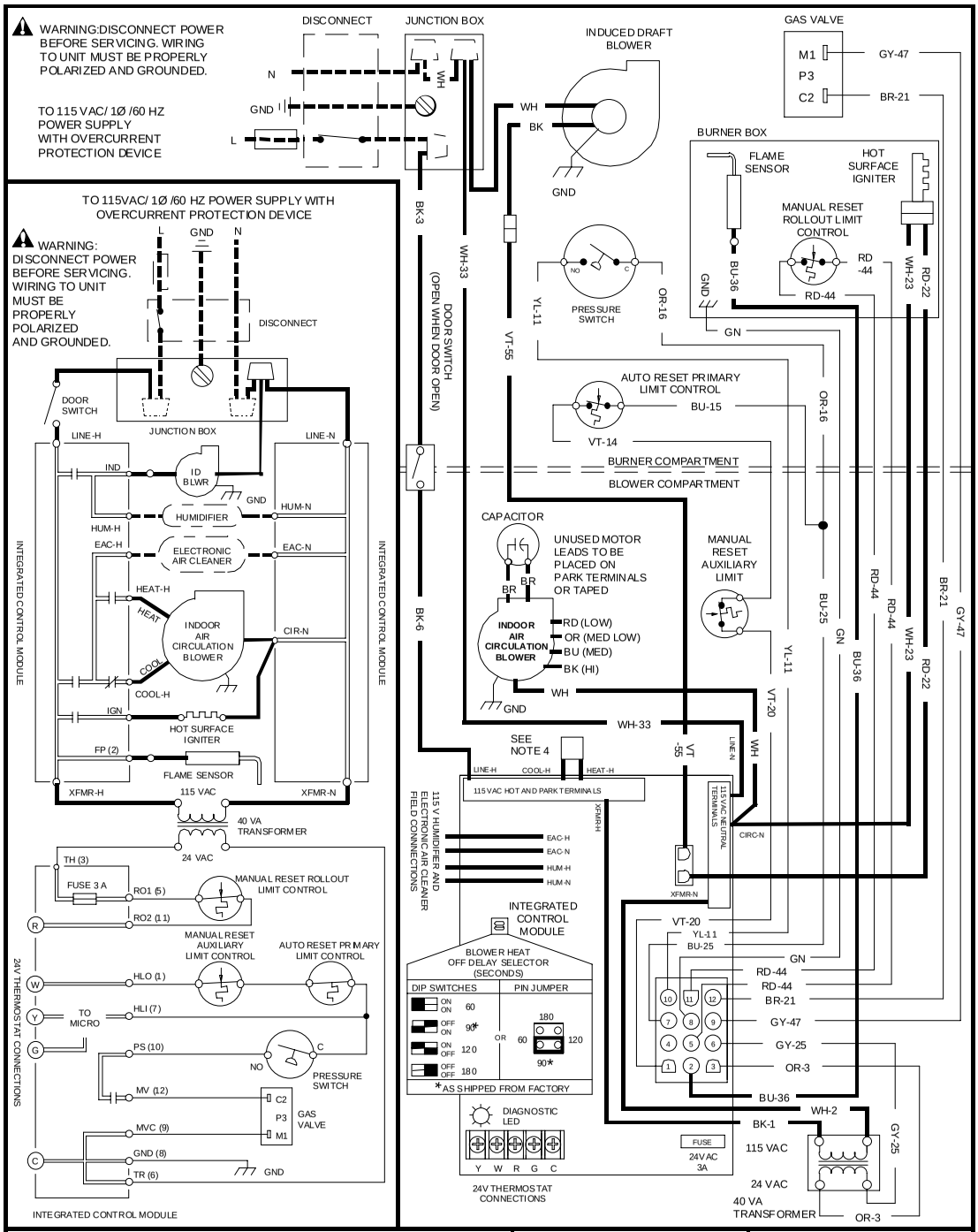
1. SET HEAT ANTICIPATOR ON ROOM THERMOSTAT AT 0.7 AMPS.
2. MANUFACTURER'S SPECIFIED REPLACEMENT PARTS MUST BE USED WHEN SERVICING.
3. IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE FURNACE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105C. USE COPPER 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 CLOSED; 3 FLASHES=PS STUCK OPEN;4 FLASHES=OPEN HIGH LIMIT SWITCH;5 FLASHES=OPEN ROLLOUT CONTROL; CONTINUOUS FLASHING=FLAME-NO CALL FOR HEAT.

20242401 REV.0

**GUID (See specific models above)**

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

# WIRING DIAGRAMS




0 STEADY ON = REPLACE CONTROL
1 1 FLASH = SYSTEM LOCKOUT (RETRIES/RECYCLES EXCEEDED)
2 2 FLASHES = PRESSURE SWITCH STUCK CLOSED
3 3 FLASHES = PRESSURE SWITCH STUCK OPEN
4 4 FLASHES = OPEN PRIMARY OR AUXILIARY LIMIT
5 5 FLASHES = OPEN ROLLOUT LIMIT
6 6 FLASHES =115V AC POWER REVERSED OR POOR UNIT GROUND
7 7 FLASHES = LOW FLAME SENSE SIGNAL
C 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

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

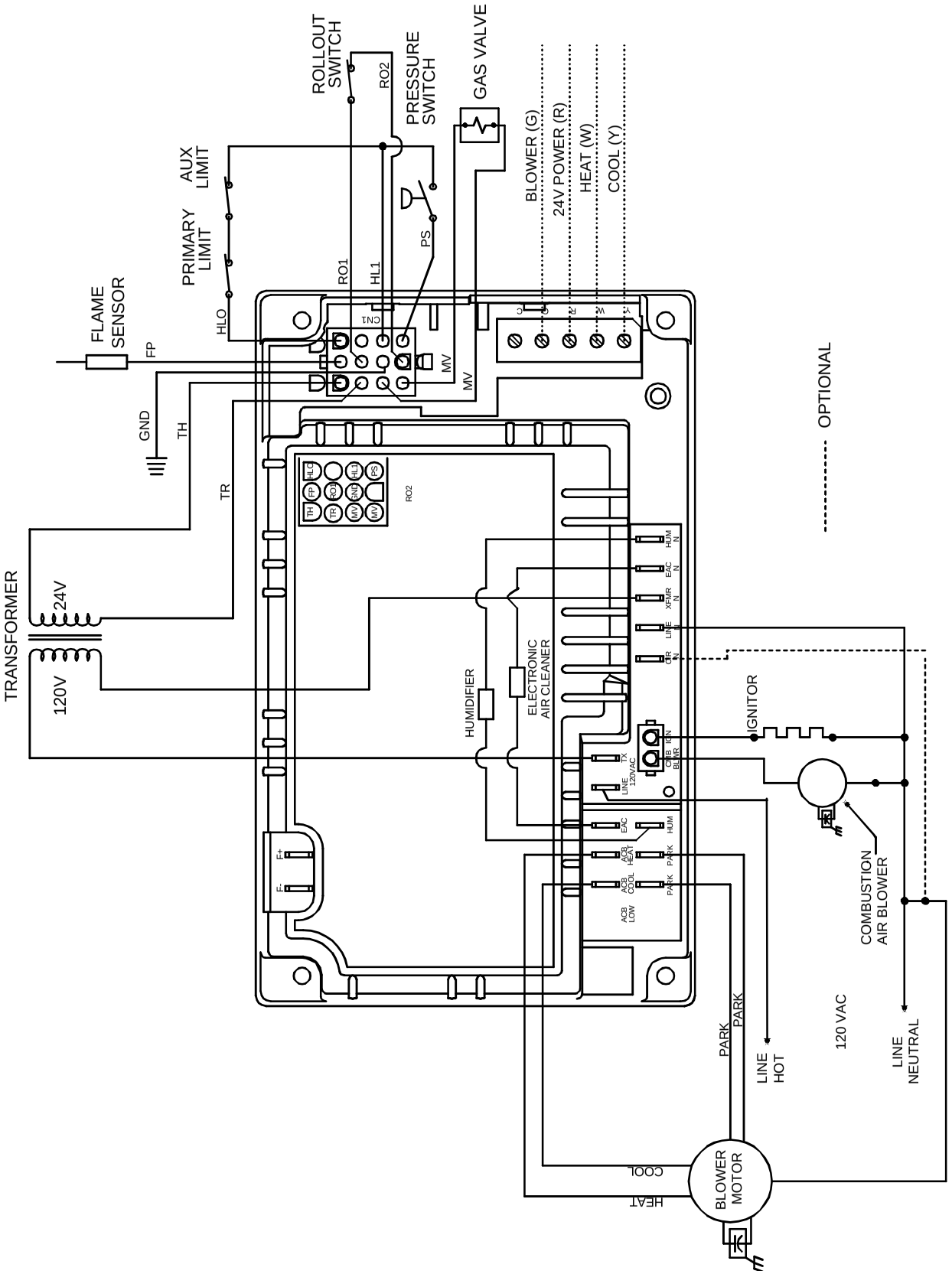
NOTES:
1. SET HEAT ANTICIPATOR ON ROOM THERMOSTAT AT 0.7 AMPS.
2. MANUFACTURER'S SPECIFIED REPLACEMENT PARTS MUST BE USED WHEN SERVICING.
3. IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE FURNACE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105C. USE COPPER CONDUCTORS ONLY.
4. 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.
5. UNIT MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL CODES.

**WARNING**

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

**GUID (Models using WR50A55 Ignition Control)**

# SCHEMATICS




**GUID**

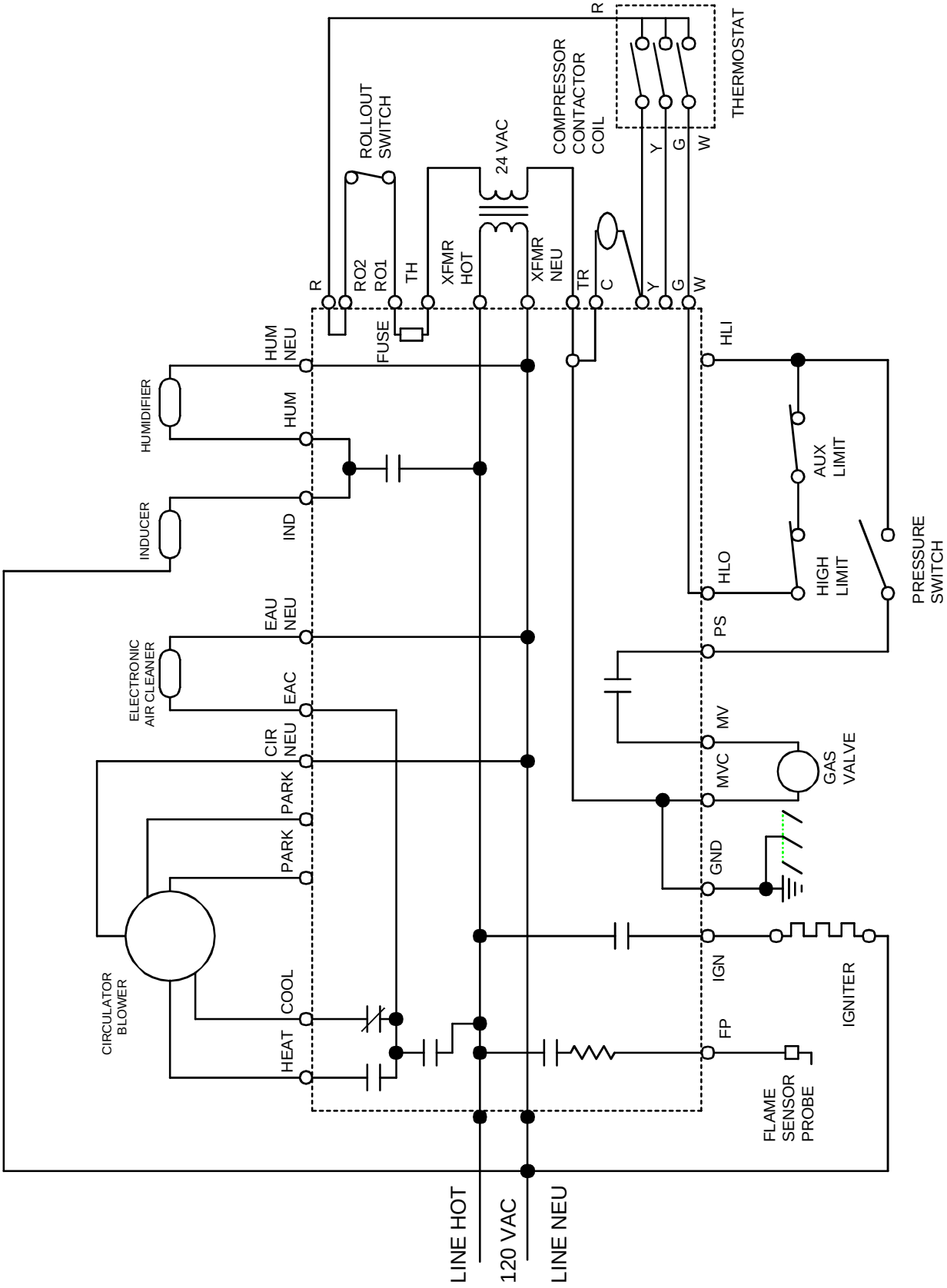
**HSI 1-1A INTEGRATED IGNITION CONTROL**

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.**

# SCHEMATICS




**GUID**

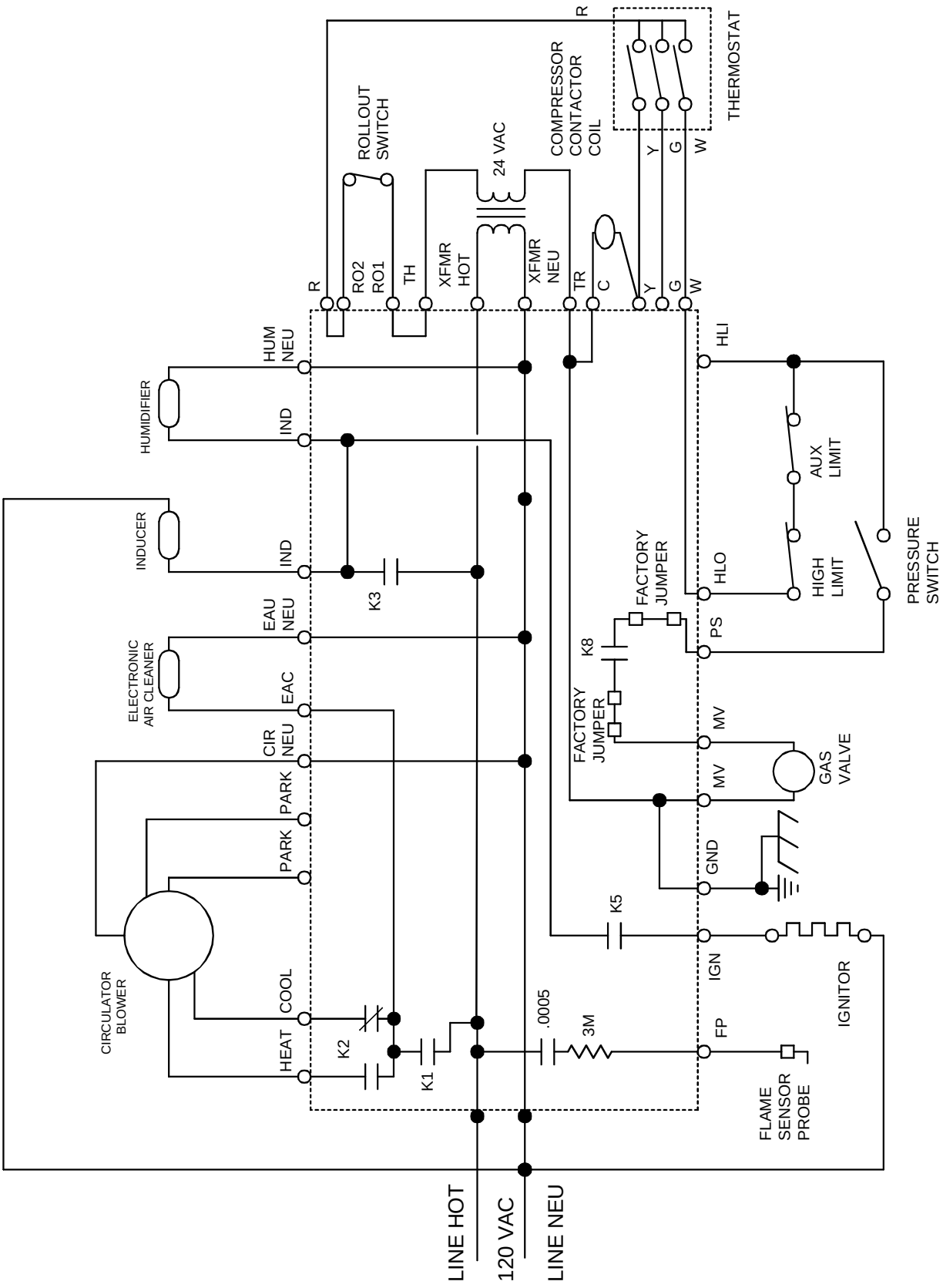
**HSI-2 INTEGRATED IGNITION CONTROL**

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.**

# SCHEMATICS




**GUID**

**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.**