Technical Information

40" 80% Gas Furnaces
GUIC___EA/EX___

- Refer to Service Manual RS6600001 Rev. 2 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 RT6621006 Rev. 0 November 2001.

REV. 1 - Corrections made to manual.

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.
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.

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**Product Type**
- G: Gas Furnace

**Supply Type**
- U: Upflow/Horizontal

**Furnace Type**
- I: Induced Draft (80%)

**Model Family**
- C: Air Command 80 SSE (Category1 Venting)

**Nominal Input**
- 045: 45,000 Btuh
- 070: 70,000 Btuh
- 090: 90,000 Btuh
- 115: 115,000 Btuh
- 140: 140,000 Btuh

**Airflow Capability**
- 30: 3.0 Tons
- 40: 4.0 Tons
- 50: 5.0 Tons

**Additional Features**
- A: Not NOx Certified
- X: NOx Models

**Design Series**
- E: Fifth Design Series

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**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.
PRODUCT DIMENSIONS

GUIC__EA/EX__ (Manufacturing Numbers P1234001-08F)
GUIC__EX__ (Manufacturing Numbers P1234101-08F)

Note: Access door inlet louvered vent configuration is dependent upon unit size. See drawings below.
COMPONENT IDENTIFICATION

1  Single Stage Gas Valve
2  Hot Surface Igniter
3  Burners
4  Gas Manifold
5  Blower Door Interlock Switch
6  Capacitor
7  PSC Multi-speed Circulator Blower
8  Single-Stage Integrated Control Module (with diagnostic LED)
9  Control Mounting Bracket
10 Transformer (40 VA)
11 24 Volt Thermostat Connections
12  Bottom Return Filter Retainer
13  Auxiliary Limit
14  Flame Sensor
15  Gas Line Entrance
16  Rollout Limit
17  Electrical Connection Inlets (Alternate)
18  Single-Speed Induced Draft Blower
19  Flue Pipe Connection
20  Pressure Switch
21  Junction Box
22  Electrical Connection Inlets
23  Primary Limit Control

GUIC_EA_ (Manufacturing Numbers P1234001-08F)
GUIC_EX_ (Manufacturing Numbers P1234101-08F)
**PRODUCT DESIGN**

**General Operation**

This GUIC 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)**

<table>
<thead>
<tr>
<th>POSITION*</th>
<th>FRONT</th>
<th>RIGHT</th>
<th>LEFT</th>
<th>REAR</th>
<th>TOP</th>
<th>FLUE</th>
<th>FLOOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upflow</td>
<td>6^1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6^2</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Horizontal Left</td>
<td>Alcove</td>
<td>6</td>
<td>12</td>
<td>0</td>
<td>1</td>
<td>6^2</td>
<td>C</td>
</tr>
<tr>
<td>Horizontal Right</td>
<td>Alcove</td>
<td>12</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>6^2</td>
<td>C</td>
</tr>
</tbody>
</table>

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

**PROPA. AND HIGH ALTITUDE KITS**

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>0 to 7,500 ft.</th>
<th>7,501 to 11,000 ft.</th>
<th>7,501 to 11,000 ft.</th>
<th>4,501 to 11,000 ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GUIC*<strong>EA/EX</strong></td>
<td>LPTK09 Propane Conversion Kit (45 Orifice)</td>
<td>HANG15 High Altitude Natural Gas Kit (45 Orifice)</td>
<td>HALP12 High Altitude Propane Gas Kit (45 Orifice)</td>
<td>HAC1PS15 High Altitude Pressure Switch Kit (10727920)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>MINIMUM NEGATIVE PRESSURE WITH FLUE NOT FIRING TYPICAL SEA LEVEL DATA</th>
<th>MINIMUM NEGATIVE PRESSURE WITH FLUE FIRING TYPICAL SEA LEVEL DATA</th>
<th>PRESSURE SWITCH TRIP POINTS AND USAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 to 4,500 ft.</td>
<td>4,501 to 11,000 ft.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TRIP POINT</td>
<td>PRESSURE SWITCH (Prod.)</td>
<td>LABEL COLOR</td>
</tr>
<tr>
<td>GUIC045E*30</td>
<td>-0.90</td>
<td>-0.80</td>
<td>-0.75</td>
</tr>
<tr>
<td>GUIC070E*30</td>
<td>-0.85</td>
<td>-0.75</td>
<td>-0.70</td>
</tr>
<tr>
<td>GUIC090E*40</td>
<td>-0.85</td>
<td>-0.75</td>
<td>-0.70</td>
</tr>
<tr>
<td>GUIC115E*40</td>
<td>-0.85</td>
<td>-0.75</td>
<td>-0.70</td>
</tr>
<tr>
<td>GUIC140E*50</td>
<td>-0.85</td>
<td>-0.75</td>
<td>-0.70</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>T.O.D. PRIMARY LIMIT</th>
<th>Part Number</th>
<th>10728324</th>
<th>10728330</th>
<th>10728339</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Setting °F</td>
<td>135</td>
<td>200</td>
<td>190</td>
<td></td>
</tr>
<tr>
<td>Style</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Sleeve Color</td>
<td>Green</td>
<td>Tan</td>
<td>Red</td>
<td></td>
</tr>
<tr>
<td>GUIC045E*30</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GUIC070E*30</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GUIC090E*40</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GUIC115E*40</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GUIC140E*50</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ROLLOUT LIMIT SWITCHES

<table>
<thead>
<tr>
<th>ROLLOUT LIMIT SWITCHES</th>
<th>Part Number</th>
<th>10123527</th>
<th>10123528</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Setting °F</td>
<td>260</td>
<td>275</td>
<td></td>
</tr>
<tr>
<td>Dot Color</td>
<td>Brown</td>
<td>Pink</td>
<td></td>
</tr>
<tr>
<td>GUIC045E*30</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GUIC070E*30</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GUIC090E*40</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GUIC115E*40</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GUIC140E*50</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### AUXILIARY LIMIT SWITCHES

<table>
<thead>
<tr>
<th>AUXILIARY LIMIT SWITCHES</th>
<th>Part Number</th>
<th>10123519</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Setting °F</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>Dot Color</td>
<td>Pink</td>
<td></td>
</tr>
<tr>
<td>GUIC045E*30</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>GUIC070E*30</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>GUIC090E*40</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>GUIC115E*40</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>GUIC140E*50</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Coil Matches:
A large array of Amana coils are available for use with the GUIC furnace, 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.

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**Coil Matches (for the Amana RSD units using R-410A):**

<table>
<thead>
<tr>
<th>Btu Input</th>
<th>Cabinet Width</th>
<th>Air Flow (tons)</th>
<th>CA_FCA Cased A-Coils</th>
<th>CF_FCA Horizontal A-Coils</th>
</tr>
</thead>
<tbody>
<tr>
<td>GUIC045E^*30</td>
<td>16 1/2&quot;</td>
<td>1 1/2 - 3</td>
<td>CA36FCA</td>
<td>CF30FCA</td>
</tr>
<tr>
<td>GUIC070E^*30 GUIC070E^*40</td>
<td>16 1/2&quot;</td>
<td>1 1/2 - 3 2 1/2 - 4</td>
<td>CA42FCA</td>
<td>CF36FCA</td>
</tr>
<tr>
<td>GUIC090E^*30 GUIC090E^*50</td>
<td>20 1/2&quot;</td>
<td>1 1/2 - 3 3 - 5</td>
<td>CA42FCA</td>
<td>CF36FCA</td>
</tr>
<tr>
<td>GUIC115E^*40 GUIC115E^*50</td>
<td>24 1/2&quot;</td>
<td>2 1/2 - 4 3 - 5</td>
<td>CA42FCA</td>
<td>CF36FCA</td>
</tr>
<tr>
<td>GUIC140E^*50</td>
<td>24 1/2&quot;</td>
<td>3 - 5</td>
<td>CA57FCA</td>
<td>CF57FCA</td>
</tr>
</tbody>
</table>
PRODUCT DESIGN

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

<table>
<thead>
<tr>
<th>Thermostat</th>
<th>Man/Auto</th>
<th>Programmable</th>
<th>Cool</th>
<th>Heat</th>
<th>Batt. Powered</th>
<th>Batt. Bkup*</th>
<th>Shape</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1213401</td>
<td>Man. Changeover</td>
<td>Yes</td>
<td>1</td>
<td>1</td>
<td>Yes</td>
<td>No</td>
<td>Rectangular</td>
<td>White</td>
</tr>
<tr>
<td>1213402</td>
<td>Man. Changeover</td>
<td>No</td>
<td>1</td>
<td>1</td>
<td>Yes</td>
<td>No</td>
<td>Rectangular</td>
<td>White</td>
</tr>
<tr>
<td>1213408</td>
<td>Man. or Auto Changeover</td>
<td>Yes</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>Yes</td>
<td>Rectangular</td>
<td>White</td>
</tr>
</tbody>
</table>

Filters:
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:

<table>
<thead>
<tr>
<th>Side Return(s)</th>
<th>Bottom Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>All 16 x 25 x 1</td>
<td>400</td>
</tr>
<tr>
<td>20-1/2</td>
<td>16 x 25 x 1</td>
</tr>
<tr>
<td>24-1/2</td>
<td>20 x 25 x 1</td>
</tr>
</tbody>
</table>

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.

Disposable Minimum Filter Area (in²)
[Based on a 300 ft/min filter face velocity]

Permanent Minimum Filter Area (in²)
[Based on 600 ft/min filter face velocity]
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: \((1.25 \times \text{Circulator Blower Amps}) + \text{I.D. Blower Amps}\).

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### Furnace Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>GUIC045E*30</th>
<th>GUIC070E*30</th>
<th>GUIC070E*40</th>
<th>GUIC090E*30</th>
<th>GUIC090E*50</th>
<th>GUIC115E*40</th>
<th>GUIC115E*50</th>
<th>GUIC140E*50</th>
</tr>
</thead>
<tbody>
<tr>
<td>BtuH Input (US)</td>
<td>46,000</td>
<td>69,000</td>
<td>69,000</td>
<td>92,000</td>
<td>92,000</td>
<td>115,000</td>
<td>115,000</td>
<td>140,000</td>
</tr>
<tr>
<td>Output (US)</td>
<td>36,800</td>
<td>55,200</td>
<td>55,200</td>
<td>73,600</td>
<td>73,600</td>
<td>92,000</td>
<td>92,000</td>
<td>110,400</td>
</tr>
<tr>
<td>A.F.U.E.</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Rated External Static (* w.c.)</td>
<td>.10 - .50</td>
<td>.12 - .50</td>
<td>.12 - .50</td>
<td>.15 - .50</td>
<td>.15 - .50</td>
<td>.20 - .50</td>
<td>.20 - .50</td>
<td>.20 - .50</td>
</tr>
<tr>
<td>Pressure Switch Trip Point (* w.c.)</td>
<td>-0.75</td>
<td>-0.70</td>
<td>-0.70</td>
<td>-0.70</td>
<td>-0.70</td>
<td>-0.70</td>
<td>-0.70</td>
<td>-0.70</td>
</tr>
<tr>
<td>Blower Wheel (D” x W”)</td>
<td>10 x 7</td>
<td>10 x 7</td>
<td>10 x 7</td>
<td>10 x 9</td>
<td>10 x 9</td>
<td>10 x 9</td>
<td>10 x 9</td>
<td>10 x 10</td>
</tr>
<tr>
<td>Blower Horsepower</td>
<td>1/3</td>
<td>1/2</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>Blower Speeds</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Max CFM @ 0.5 E.S.P.</td>
<td>1215</td>
<td>1154</td>
<td>1500</td>
<td>1258</td>
<td>1998</td>
<td>1596</td>
<td>2007</td>
<td>2181</td>
</tr>
<tr>
<td>Power Supply</td>
<td>115-60-1</td>
<td>115-60-1</td>
<td>115-60-1</td>
<td>115-60-1</td>
<td>115-60-1</td>
<td>115-60-1</td>
<td>115-60-1</td>
<td>115-60-1</td>
</tr>
<tr>
<td>Minimum Circuit Ampacity (MCA)</td>
<td>6.4</td>
<td>6.4</td>
<td>13.4</td>
<td>13.4</td>
<td>11.2</td>
<td>11.2</td>
<td>11.9</td>
<td>14.3</td>
</tr>
<tr>
<td>Maximum Overcurrent Device</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Transformer (VA)</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Heat Anticipator</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Primary Limit Setting (*F)</td>
<td>200</td>
<td>190</td>
<td>190</td>
<td>200</td>
<td>200</td>
<td>190</td>
<td>190</td>
<td>135</td>
</tr>
<tr>
<td>Auxiliary Limit Setting (*F)</td>
<td>160</td>
<td>160</td>
<td>160</td>
<td>160</td>
<td>160</td>
<td>160</td>
<td>160</td>
<td>160</td>
</tr>
<tr>
<td>Rollout Limit Setting (*F)</td>
<td>275</td>
<td>275</td>
<td>275</td>
<td>275</td>
<td>275</td>
<td>275</td>
<td>275</td>
<td>275</td>
</tr>
<tr>
<td>Fan Delay On</td>
<td>30 secs.</td>
<td>30 secs.</td>
<td>30 secs.</td>
<td>30 secs.</td>
<td>30 secs.</td>
<td>30 secs.</td>
<td>30 secs.</td>
<td>30 secs.</td>
</tr>
<tr>
<td>Off Heating *</td>
<td>90 secs.</td>
<td>90 secs.</td>
<td>90 secs.</td>
<td>90 secs.</td>
<td>90 secs.</td>
<td>90 secs.</td>
<td>90 secs.</td>
<td>90 secs.</td>
</tr>
<tr>
<td>Off Cooling</td>
<td>45 secs.</td>
<td>45 secs.</td>
<td>45 secs.</td>
<td>45 secs.</td>
<td>45 secs.</td>
<td>45 secs.</td>
<td>45 secs.</td>
<td>45 secs.</td>
</tr>
<tr>
<td>Gas Supply Pressure (Natural/Propane) (*w.c.)</td>
<td>7 / 11</td>
<td>7 / 11</td>
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<tr>
<td>Manifold Pressure (Natural/Propane) (*w.c.)</td>
<td>3.5 / 10</td>
<td>3.5 / 10</td>
<td>3.5 / 10</td>
<td>3.5 / 10</td>
<td>3.5 / 10</td>
<td>3.5 / 10</td>
<td>3.5 / 10</td>
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<tr>
<td>Orifice Size (Natural/Propane)</td>
<td>#43 / #55</td>
<td>#43 / #55</td>
<td>#43 / #55</td>
<td>#43 / #55</td>
<td>#43 / #55</td>
<td>#43 / #55</td>
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<tr>
<td>Number of Burners</td>
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<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Vent Connector Diameter (inches)</td>
<td>4</td>
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<tr>
<td>Shipping Weight (lbs.)</td>
<td>140</td>
<td>151</td>
<td>152</td>
<td>169</td>
<td>178</td>
<td>190</td>
<td>194</td>
<td>198</td>
</tr>
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</table>

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

### GUIC***EA/EX** Blower Performance

**CFM & Temperature Rise vs. External Static Pressure**

<table>
<thead>
<tr>
<th>Model</th>
<th>Heating Speed</th>
<th>MOTOR SPEED</th>
<th>0.1</th>
<th>0.2</th>
<th>0.3</th>
<th>0.4</th>
<th>0.5</th>
<th>0.6</th>
<th>0.7</th>
<th>0.8</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>AS SHIPPED</td>
<td>0.1</td>
<td>0.2</td>
<td>0.3</td>
<td>0.4</td>
<td>0.5</td>
<td>0.6</td>
<td>0.7</td>
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</tbody>
</table>

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. The data for 0.6” w.c. to 0.8” w.c. is shown for air conditioning purposes only.
6. The dashed (---) areas indicate a temperature rise not recommended for this model.
7. The above chart is for U.S. furnaces installed at 0-4000 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

FORMULAS

BTU OUTPUT = CFM x 1.08 x RISE
RISE = \frac{BTU OUTPUT}{1.08} \div CFM
To avoid possible electrical shock, personal injury, or death, disconnect the power before servicing.