FOR YOUR SAFETY

If you smell gas:
1. Open windows.
2. DO NOT try to light any appliance.
3. DO NOT use electrical switches.
4. DO NOT use any telephone in your house.
   Immediately call your local gas supplier
   from a neighbor's telephone. Follow the gas
   supplier's instructions.
5. If you cannot reach your gas supplier, call the
   Fire Department.

Models: CGTH-30
CGTH-40
CGTH-50

WARNING

Improper installation, adjustment, alteration, service or maintenance will result in death, injury or property damage. Read the installation, operation and service manual thoroughly before installing or servicing this equipment. For assistance or additional information, consult a qualified installer, service agency or your gas supplier.

FOR YOUR SAFETY:

Do not store or use gasoline or other flammable objects, liquids or vapors in the vicinity of this heater or any other appliance.

Installer

Please take the time to read and understand these instructions prior to any installation. Installer must give a copy of this manual to the owner.

Owner

Keep this manual in a safe place to provide your serviceman with information should it become necessary.

http://www.rg-inc.com

Copyright 1997 Roberts-Gordon, Inc.
BEFORE YOU BEGIN

Read this Manual

Read this manual carefully before installing or servicing this equipment. Improper installation, servicing or maintenance will cause death, injury or property damage. Check the minimum required safe distances from combustibles given on the outside of each burner to make sure that the product is suitable for your application. The minimum required safe distances from combustibles are also found on pages 14 and 15 of this manual. Installer must be a licensed contractor. After the installation is complete, check product operation as provided in these instructions.

Questions, Comments or Suggestions

Please direct any questions, comments or suggestions to:

In the United States:

Roberts-Gordon
1250 William Street
P.O. Box 44
Buffalo, New York 14240-0044

Telephone: 716.852.4400
Fax: 716.852.0854
Toll Free: 800.828.7450

In Canada:

Roberts-Gordon Canada Inc.
241 South Service Road West
Grimsby, Ontario L3M 1Y7

Telephone: 905.945.5403
Fax: 905.945.0511
Toll Free: 800.663.9025
Unpacking the Heater

Manpower Requirements

To prevent personal injury and damage to the heater, two persons will be required to remove the heater from the carton. Both ends of the heater should be lifted from the carton at the same time. The burner box should be lifted by gripping the bottom of the box. The reflector end of the heater should be lifted using the rear movable hanger.

Safety

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut Hazard</td>
</tr>
<tr>
<td>Do not touch edges of heater.</td>
</tr>
<tr>
<td>Edges are sharp.</td>
</tr>
<tr>
<td>Failure to follow these instructions will result in injury.</td>
</tr>
</tbody>
</table>

Thin sheet metal parts, such as the reflector portion of the heater and the various venting components, have sharp edges. To prevent injury, the use of work gloves is recommended. The use of gloves will also prevent the transfer of body oils from the hands to the surface of the reflector.

Contents of the Carton

The facing page contains illustrations of the major components included in the basic heater package.
Contents of Carton

Please check the carton. It should contain the items shown on this page. Contact your Independent Roberts-Gordon representative or distributor if any items are missing.

Heater Assembly:
CGTH-30
CGTH-40
CGTH-50

(1) Bird Screen
(P/N 08036000)

(1) Vent Termination
(P/N 08031000)

5' Balanced Flue Vent (P/N 08039000) includes:
(1) 5" Vent Pipe - 60" Long (P/N 90502800)
(1) 3" Flue Pipe - 66" Long (P/N 08035000)

(1) 3/8" Manual Shut-off Valve
(P/N 90100200)

(1) Vent Collar (P/N 91911702)

Grille (P/N 08050000)

Grille (P/N 08050001)

(*) Protective Grille Kits -
CGTH-30 Kit includes:
(1) Grille (P/N 08050000)
(1) Grille (P/N 08050001)

CGTH-40 and CGTH-50 Kits include:
(1) Grille (P/N 08050000)
(2) Grille (P/N 08050001)

(*) Included with select models; also available as an accessory. See accessories sheet for kit part numbers.

Accessories Bag:

(1) Thermostat Tag
(P/N 91037903)

(2) Female Terminals
(P/N 91317300)
(To Connect Wire to Thermostat)

(3) Vent Collar Mounting Screws (P/N 94118106)
(To Attach Vent Collar to Heater)

Documents:
(1) Installation Manual (P/N 180100NA)
(1) Use and Care Manual (P/N 180101NA)
(1) Owner Warranty Registration Card:
(P/N H.CGTH-R1) - USA
(P/N H.CGTH-R1C) - Canada
Available Accessories

Vent Terminal Extension (P/N 08037000)

Tjernlund Wall Vent (P/N 08033000)

5' Balanced Flue Vent (P/N 08039000) includes:
(1) 5" Vent Pipe - 60" Long (P/N 90502800)
(1) 3" Flue Pipe - 66" Long (P/N 08035000)

Grille (P/N 08050000)

End View

End View

Protective Grille Kits -

CGTH-30 Kit (P/N 08051000) includes:
(1) Grille (P/N 08050000)
(1) Grille (P/N 08050001)

CGTH-40 and CGTH-50 Kits (P/N 08050001) include:
(1) Grille (P/N 08050000)
(2) Grille (P/N 08050001)

Roof Vent Termination

Roof Venting Kit (P/N 08032100) includes:
(1) Roof Vent Termination (P/N 08032000)
(1) Vent Tee (P/N 08034000)

Vent Tee

5" Diameter Elbow

3" Diameter Elbow

Spring (1" Diameter)

90 Degree Elbow Kit (P/N 08038000) includes:
(1) 5" Dia. Elbow (P/N 90503000)
(1) 3" Dia. Elbow (P/N 90503100)
(1) Coil Spring Spacer (P/N 90503200)
Section 1

INTRODUCTION

About Roberts-Gordon

Roberts-Gordon pioneered low-intensity infrared heating systems in 1962 with the introduction of its revolutionary custom-engineered CO-RAY-VAC® system. After over 30 years of infrared expertise in commercial and industrial applications, Roberts-Gordon now offers the CARIBE® GTH heater for use in residential garages and light industrial/commercial applications.

About The Heater

The CARIBE® GTH is a factory-assembled, gas-fired, low-intensity heating system that incorporates a balanced flue. The system has been designed for easy installation and will provide years of economical operation and trouble-free service. Not only is infrared heat efficient, it also provides the most comfortable conditions in open areas, such as garages.

Gas-Fired means it uses clean-burning Natural or LP gas.

Low-Intensity means that the radiant surface of the heat exchanger tube does not glow red. Instead, it operates at a lower temperature (less than 1000°F) and radiates energy at a lower intensity per square foot of radiating surface. The lower temperature and intensity levels are within a range that is most effective in establishing and maintaining personal comfort levels. An aluminum reflector directs the radiant energy downward to the occupied area.

Balanced Flue means that the burner draws combustion air from outdoors and exhausts the products of combustion, also to the outdoors, through a shared opening. This is accomplished through two concentric tubes.

Radiant refers to the energy radiated by the CARIBE® GTH heater. Because the energy is in the form of infrared rays, it does not directly heat the air. Instead, the rays heat objects such as the floor, cars, machines and people. The warm objects, in turn, heat the air.

These combined features are the key to the exceptional comfort and fuel efficiency provided by the CARIBE® GTH heater.
### Parts Identification

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burner Box</td>
<td>Contains the electrical components (i.e. blower motor, power transformer, etc.) and gas distribution components (i.e. gas valve, etc.) that make the heater work. There are no owner serviceable items contained in this box.</td>
</tr>
<tr>
<td>Front Fixed Hanger</td>
<td>Provides rigid support and mounting surface for the reflector. Holes are provided in the upper corners of the bulkhead to accommodate suspension hardware required for installation of the heater.</td>
</tr>
<tr>
<td>Reflector</td>
<td>The reflector is made from formed aluminum and reflects the radiant energy downward to the space to be heated.</td>
</tr>
<tr>
<td>Heat Exchanger</td>
<td>A U-shaped tube through which the heated products of combustion pass.</td>
</tr>
<tr>
<td>Rear Movable Hanger</td>
<td>Provides support for the heat exchanger and reflector at the end that is furthest from the burner box. The support may be moved (within limits) to accommodate hanging of the unit.</td>
</tr>
<tr>
<td>Service Door</td>
<td>To be removed only by a licensed contractor. Removal of this service door provides access to the electrical and gas distribution components.</td>
</tr>
<tr>
<td>Vent Collar</td>
<td>Accommodates a 5&quot; diameter combustion air inlet duct that delivers fresh air to the burner. The fresh air enters the burner box through the twelve equally spaced holes shown above. The 3&quot; diameter hole in the center of the flue collar accommodates the air venting duct that carries the products of combustion to be vented outdoors.</td>
</tr>
<tr>
<td>Nipple-3/8&quot; NPT</td>
<td>Point at which the gas supply is connected to the heater.</td>
</tr>
<tr>
<td>Thermostat Connection</td>
<td>Two terminals to which the thermostat wires will be connected.</td>
</tr>
<tr>
<td>Power Cord</td>
<td>Includes a three-prong plug that must be connected to a dedicated and properly grounded three-prong ceiling outlet.</td>
</tr>
</tbody>
</table>
Technical Specifications

- Side View -

- Rear View -

- End View -

<table>
<thead>
<tr>
<th>Model No.</th>
<th>BTU/hr</th>
<th>Weight</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>CGTH-30</td>
<td>30,000</td>
<td>85 lbs.</td>
<td>8'0&quot;</td>
</tr>
<tr>
<td>CGTH-40</td>
<td>40,000</td>
<td>96 lbs.</td>
<td>11'6&quot;</td>
</tr>
<tr>
<td>CGTH-50</td>
<td>50,000</td>
<td>96 lbs.</td>
<td>11'6&quot;</td>
</tr>
</tbody>
</table>

HEATER SPECIFICATIONS

**Electrical**
Rating: 120VAC, 60 Hz, single phase, 1 amp
Connection: 3 pin moulded plug

**Gas Inlet Connection**
Connection: 3/8" Male NPT

**Gas Inlet Pressure**
Natural Gas:
Minimum - Inlet 5.0" w.c.
Maximum - Inlet 14.0" w.c.
LP Gas (propane):
Minimum - Inlet 11.0" w.c.
Maximum - Inlet 14.0" w.c.

**Manifold Pressure**
Natural Gas: 3.5" w.c.
LP Gas (propane): 10.5" w.c.

VENTING SPECIFICATIONS

**Vent/Flue**
Length - 10 feet (Maximum)
2 feet - 6 inches (Minimum)
Flue Pipe - 3.0" diameter
Vent Pipe - 5.0" diameter
**INTRODUCTION**

Where can the heater be installed?

The CARIBE® GTH heater is intended for installation in the following areas:

- Residential applications, such as:
  - garages
  - hobby greenhouses
  - workshops
- Light industrial/commercial applications, such as:
  - entrancesways
  - lobby areas
  - lunch rooms
  - aircraft hangars (see Section 2 for restrictions)
  - public garages (see Section 2 for restrictions)

Where can't the heater be installed?

The CARIBE® GTH heater is **not intended** for installation in the following areas:

- Residential living or sleeping areas
- Basements

Installer's responsibility

The CARIBE® GTH heater, the gas and electrical supplies, as well as the venting, must be installed in accordance with applicable specifications and codes. Only firms (or individuals) well qualified in this type of work should install the system. Consult local Building Inspectors, Fire Marshals or your local Roberts-Gordon Independent Representative for guidance.

Use the information given in this manual together with the cited codes and regulations to perform the installation. **If any aspects of the installation are unclear**, consult your Roberts-Gordon Independent Representative for clarification. The installer must furnish all needed materials that are not furnished as standard equipment. It is also the installer's responsibility to see that the materials and installation methods used, result in a job that is workmanlike in appearance and is in compliance with the requirements of this manual. The installer must give this manual and the Use and Care Manual to the owner.
Section 2
PLANNING

General
This section provides the following information:
• Defines the gas, electric and venting requirements for the CARIBE® GTH heater.
• Specifies the national standards and applicable codes that apply to the gas, electric and venting requirements.
• Specifies the national standards and applicable codes that apply to non-residential installations.

Gas Service Requirements:

System Requirements

Inlet Connection
Connection: 3/8" Male NPT

Inlet Pressure
Natural Gas:
Minimum - Inlet 5.0" w.c.
Maximum - Inlet 14.0" w.c.

LP Gas (propane):
Minimum - Inlet 11.0" w.c.
Maximum - Inlet 14.0" w.c.

Manifold Pressure
Natural Gas: 3.5" w.c.
LP Gas (propane): 10.5" w.c.

Type of Gas
The type of gas appearing on the nameplate must be the type of gas used. Installation must comply with local codes and recommendations of the local gas company. United States: Refer to National Fuel Gas Code, ANSI Z223.1 - latest revision, (same as NFPA Bulletin 54). Canada: Refer to Can 1-B149.1 and B149.2: Installation Codes for Gas Burning Appliances.
Gas Service Requirements (Continued)

Gas Supply Lines

The size of the gas supply lines must comply with local codes and recommendations of the local gas company. **United States:** Refer to National Fuel Gas Code, ANSI Z223.1 - latest revision, (same as NFPA Bulletin 54). **Canada:** Refer to Can 1-B149.1 and B149.2: Installation Codes for Gas Burning Appliances.

A 1/8" NPT plugged tap must be installed in the gas line connection immediately upstream of the burner that is farthest from the gas supply meter. The tap is required for checking system gas pressure.

Meter and Service

Meter and service must be large enough to handle all the heaters being installed plus any other connected load. The gas line which feeds the system must be large enough to supply the required gas with a maximum pressure drop of 1/2" w.c. When gas piping is not included in the layout drawing, the local gas supplier will usually help in planning the gas piping.
Electrical Service Requirements

System Requirements

The CARIBE® GTH heater requires a grounded three-prong electrical outlet to be installed within 18 inches of the rear surface of the heater's burner box. It is recommended that the outlet for the heater be ceiling-mounted and should be on a dedicated circuit. **DO NOT** use an electrical extension cord to operate the heater.

**Heater Rating:** 120 VAC, 60 Hz, Single Phase, 1 Amp

![Attention and Warning Symbols]

**ATTENTION**
- Risque d'électrocution
- Brancher le cordon du radiateur sur un socle à 3 broches et à la masse, situé au plafond.
- Ne pas sectionner ou retirer la broche de masse de cette prise.
- N'utiliser aucun câble de rallonge.
- Le non-respect de ces consignes peut entraîner mort ou électrocution.

**WARNING**
- Electrical Shock Hazard
- Plug heater into grounded three-prong ceiling receptacle.
- Do not cut or remove the grounding prong from this plug.
- Do not use with an extension cord.
- Failure to follow these instructions will result in death or electrical shock.

Grounding

The heater must be electrically grounded in accordance with the following codes: **United States:** Refer to National Electrical Code, ANSI/NFPA-70 - latest revision. Wiring must conform to the most current National Electrical Code and local ordinances. **Canada:** Refer to Canadian Electrical Code, CSA C22.1 Part 1 - latest revision.

Thermostat

It is important to note that the CARIBE® GTH heater is controlled by a low voltage (24 VAC) thermostat supplied with the heater. The control transformer located inside the burner box supplies the necessary electrical power to operate the thermostat. No other electrical power to the thermostat is required.
### Venting Requirements

**System Requirements**

The CARIBE® GTH heater must be installed with the venting system supplied, or with one of the optional venting kits available from Roberts-Gordon. **DO NOT** connect this heater to a separate chimney, and **DO NOT** common vent with any other fuel burning appliance.

The CARIBE® GTH heater employs a balanced flue/air venting duct system and must conform to the following length requirements:

- **Maximum Length:** 10 feet
- **Minimum Length:** 2 feet - 6 inches

#### WARNING

Carbon Monoxide Hazard
Heater must be exhausted outside.
Use materials supplied.
Failure to follow these instructions will result in death or injury.

### Venting Codes

The location, size, installation and termination of vents, as well as the minimum required safe distances from combustibles when penetrating combustible walls, must comply with local codes and recommendations of the local gas company. **United States:** Refer to National Fuel Gas Code, ANSI Z223.1 - latest revision, (same as NFPA Bulletin 54). **Canada:** Refer to Can 1-B149.1 and B149.2: Installation Codes for Gas Burning Appliances.

### Balanced Flue Construction

The balanced flue consists of a 3" diameter flue which is concentrically positioned inside a 5" diameter vent pipe (see below). The 5" diameter vent supplies outside air that is necessary for combustion while the 3" diameter flue carries the products of combustion from the heater.

The balanced flue is applicable for both horizontal and vertical venting arrangements. Vertical venting will require the optional roof venting kit available from Roberts-Gordon.

---

### Diagram

- **Outside Air**
- **Exhaust Gases**
- **Exhaust**
- **Heater**
- **Exterior Wall**
Non-Residential Installations

Aircraft Hangars

The CARIBE® GTH heater may be used in certain areas of aircraft hangars. Installation in aircraft hangars must be in accordance with the following codes: United States: Refer to Standard for Aircraft Hangars, ANSI/NFPA-409 - latest revision. Canada: Refer to Standard CGA B149-1-M91 and B149.2.

• Heaters in aircraft storage or service areas must be installed a minimum of 10 feet above the upper surface of wings or engine enclosures of the highest aircraft which may be housed in the hangar. (This should be measured from the bottom of the heater to the top of the wing, or engine enclosure, whichever is highest from the floor).

• In other sections of aircraft hangars, such as shops or offices, heaters must be installed a minimum of 8 feet above the floor.

• Heaters installed in aircraft hangars shall be located so as not to be subject to damage by aircraft, cranes, movable scaffolding or other objects.

• When installed over hoists, the minimum required safe distances from combustibles must be maintained from the uppermost point of the combustible materials placed on the hoist.

Public Garages

The CARIBE® GTH heater may be used in public garages. Installation in public garages must be in accordance with the following codes: United States: Standard for Parking Structures NFPA-88A - latest revision or the Standard for Repair Garages, NFPA-88B - latest revision. Canada: Refer to Can 1-B149.1 and B149.2: Installation Codes for Gas Burning Appliances.

• Heaters must be installed a minimum of eight feet above the floor. Minimum required safe distances to combustibles must be maintained from vehicles parked below the heater.

• When installed over hoists, the minimum required safe distances from combustibles must be maintained from the uppermost point of the combustible materials placed on the hoist.

Hazardous Locations

Where there is the possibility of exposure to combustible airborne material or vapor, consult the local Fire Marshal, the Fire Insurance Carrier or other authorities for approval of the proposed installation.
Section 3

INSTALLATION

⚠️ WARNING

Several steps are involved in the installation of the heater. Do not attempt to operate the heater until all steps of the installation have been accomplished. Failure to follow these instructions will result in death, injury or property damage.

Safety Equipment

Use of the following safety equipment is recommended for installation of the CARIBE® GTH heater:

- Work gloves
- Safety glasses

Installation Tools

Tools required for the installation of the CARIBE® GTH heater include at a minimum the following:

- Tape measure
- Electric drill (with an assortment of drill bits)
- Pipe wrenches - 2 required
- Screwdriver
- Tin snips
- Hacksaw
- Wire strippers
- Staple gun
- Level
- Pliers
- Crimping tool

Installation Materials

Materials required for the installation of the CARIBE® GTH heater include at a minimum the following:

- High temperature silicone sealant (such as General Electric RTV106 or Permatex Form-A-Gasket Red)
- Suspension hooks (capable of supporting 150 pounds each)
- Sheetmetal screws

The following items may be required for your particular installation:

- Plastic drain hose
- Additional vent pipe
- Roof flashing
- Rain collar
- Chain - 2/0, or equivalent
- S-hooks (as required)
Choose Location for Heater

When selecting a suitable mounting location for the CARIBE® GTH heater it is important to consider the following:

1. The heater must meet the minimum mounting height requirement of 7 feet above the floor. *For aircraft hangars and public garages, the heater must meet the minimum mounting height requirement of 8 feet above the floor.*

2. The proposed mounting location allows for the minimum required safe distances from combustibles (*combustibles include vehicles, wood, gasoline and flammable objects, liquids and vapors*).

3. The proposed location of the heater will not restrict motion of passageway doors or windows.

4. The proposed location will not interfere with operation of the overhead garage door, or allow the door to enter the minimum required safe distances from combustibles.

5. The proposed location will provide the best coverage of the total area to be heated.

6. Consideration be given to the types of vehicles that will be parked in the garage (cars, vans, boats, RV's, etc.).

7. The proposed location will allow for the minimum required safe distances from combustibles with respect to the vehicles parked in the garage.

8. The proposed location will allow the required utilities (i.e.: gas and electric) and venting to be installed (maximum vent length is 10 feet).

9. Sufficient clearances will exist to allow for easy access to the service door.

10. Overhead structural members (rafters, beams, etc.) are accessible for attaching the heater.
Venting
General Guidelines

Regardless of the venting arrangement that will be connected to the heater, the following general guidelines for venting must be followed:

1. The 3" flue pipe must be centered inside the 5" air supply pipe.

2. All horizontal venting sections must slope away from the heater at a rate of 1/4" per foot.

3. The total length of vent pipe (horizontal and vertical runs combined, plus the length of the exterior termination) must not exceed 10 feet, and must not be less than 2 feet 6 inches. A maximum of two elbows is allowed.

4. The vent terminal, mounted outside of the building, should not be located above walkways. Condensate produced during operation of the heater could drip onto the walkway and could form ice during cold weather.

5. Be sure that the venting installation is in accordance with all applicable local codes and recommendations of the local gas company.

6. DO NOT connect this heater to a separate chimney, and DO NOT common vent with any other fuel burning appliance.

7. Maintain a minimum of 1-inch clearance from combustibles around all vent pipes.

8. Seal all vent pipe connections with high temperature silicone sealant. Where required, drill holes and secure each connection with three sheetmetal screws.
Install Vent Collar

The vent collar is shipped loose in the carton. For ease of installation, the vent collar should be installed on the rear surface of the burner box before the heater is suspended. Install the vent collar as follows:

1. Apply a bead of high temperature silicone sealant to the mating surface of the vent collar mounting flange.

2. Align the three mounting holes of the vent collar with the three vent collar mounting holes on the rear surface of the burner box.

3. Using a #2 phillips head screwdriver, or 1/4" nut driver, secure the vent collar to the rear surface of the burner box with the three screws (#8 x 3/8" long) provided in the accessories bag supplied with the heater.
In all situations, the minimum required safe distances from combustibles must be maintained. Combustibles are materials which may catch on fire and include many common items such as wood, paper, rubber, fabrics, etc. Combustible materials such as those noted, and any other combustible materials, must not be placed closer to any base or side of the CARIBE® GTH heater than the distances noted in the diagrams on the following page. If you have any questions about the minimum required safe distances from combustibles, or the associated diagrams, please contact your installer, Roberts-Gordon representative or distributor, or Roberts-Gordon during normal business hours which are Monday through Friday, 8:15 a.m. to 4:45 p.m., Eastern Time.

In USA: 716.852.4400
In Canada: 905.945.5403

For owner safety, a thermostat tag is supplied with the Caribe® GTH as a permanent reminder of the importance of maintaining the minimum required safe distances from combustibles. Instructions for installing the tag are located on page 29. Immediately contact your Roberts-Gordon representative or Roberts-Gordon if the tag is missing.

It is important to keep the minimum required safe distances from combustibles at all times to avoid death, personal injury or property damage. Clearances from vehicles parked beneath heaters must be maintained. The thermostat tag (included with the heater) should be posted to identify any possible violation of the clearance distances from the heater in vehicle areas. Maximum allowable stacking height in storage areas should be identified with signs or appropriate markings. The Illustrations and Table on the adjoining page specify the minimum required safe distances from combustibles.
Horizontal Installations

NOTE: Dimension "C" indicates the minimum required safe distances from combustibles, it DOES NOT indicate the required mounting height. The minimum mounting height is 7 feet, except for aircraft hangars and public garages (see page 9).

45° Tilted Installations

NOTE: Dimension "E" indicates the minimum required safe distances from combustibles, it DOES NOT indicate the required mounting height. The minimum mounting height is 7 feet, except for aircraft hangars and public garages (see page 9).

<table>
<thead>
<tr>
<th>Model</th>
<th>BTU/Hr</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>CGTH-30</td>
<td>30,000</td>
<td>4&quot;</td>
<td>16&quot;</td>
<td>36&quot;</td>
<td>28&quot;</td>
<td>34&quot;</td>
<td>6&quot;</td>
</tr>
<tr>
<td>CGTH-40</td>
<td>40,000</td>
<td>4&quot;</td>
<td>18&quot;</td>
<td>48&quot;</td>
<td>30&quot;</td>
<td>34&quot;</td>
<td>6&quot;</td>
</tr>
<tr>
<td>CGTH-50</td>
<td>50,000</td>
<td>4&quot;</td>
<td>20&quot;</td>
<td>48&quot;</td>
<td>32&quot;</td>
<td>36&quot;</td>
<td>6&quot;</td>
</tr>
</tbody>
</table>
Residential garages come in a variety of sizes, shapes, styles and methods of construction. Because of all these variables, it is not possible to include mounting hardware with the CARIBE® GTH heater. Although wooden rafters and joists are the most common overhead structural members in residential garage applications, other structural configurations are also illustrated below.

In the typical suspension methods shown below, lengths of chain are shown as a means of lowering the heater. However, for most residential applications it may not be necessary to lower the heater. Instead, it may be possible to screw hook-type hardware into the underside of a beam. The exposed hook could directly engage one of the two mounting holes in the front fixed hanger, while another hook could engage in one of the three suspension loops of the rear movable hanger.

Whichever method of suspension is selected, the two required suspension points must be capable of supporting a minimum of 150 pounds each.
**Heater Orientation**

The CARIBE® GTH heater may be installed in any of the three orientations indicated below. Select the heater orientation that is best suited for the location that you have chosen for your heater.

- Horizontal
- Tilted 45° Right
- Tilted 45° Left

**NOTE:** If the heater is going to be vented through the roof, be sure to carefully review the roof option installation portion of this section. Ensure that the selected mounting site will satisfy the measurement parameters (vent length not to exceed 10 feet) described in that section.

**Horizontal Installation**

1. Using S-hooks, attach two equal lengths of 2/0 chain, or equivalent, to the two uppermost holes in the front fixed hanger.

2. Slip the free end of both chains onto another S-hook, as shown.

3. The uppermost S-hook can now be installed on the suspension hardware that you have installed for suspension of the unit. An additional length of chain may also now be installed, if required, to lower the heater.

**NOTE:** The hook portion of hook-type suspension hardware may directly engage the two holes in the front fixed hanger and the center loop of the rear movable hanger.

![Diagram of Horizontal Installation](image-url)
45° Tilted Installation

For tilted installations:

1. Determine if the heater is going to be tilted left, or tilted right. The front and rear suspension points selected must be on the same side (left or right) of the heater as shown below.

2. Attach suspension hooks and/or chains to the selected suspension points of the heater.

Use these two suspension points for Tilted 45° Right Installation

Tilted Right

Use these two suspension points for Tilted 45° Left Installation

Tilted Left
Typical Installation

The illustration below shows a typical installation of the CARIBE® GTH heater. The installation drawing shown has a straight horizontal venting arrangement and specifies the minimum space required for maintenance, as well as the allowable range of distances between the two suspension points.

Detailed venting arrangements are illustrated in following portions of this section.

<table>
<thead>
<tr>
<th>X Dimension</th>
<th>Model</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CGTH-30</td>
<td>60&quot;</td>
<td>72&quot;</td>
</tr>
<tr>
<td></td>
<td>CGTH-40</td>
<td>102&quot;</td>
<td>114&quot;</td>
</tr>
<tr>
<td></td>
<td>CGTH-50</td>
<td>102&quot;</td>
<td>114&quot;</td>
</tr>
</tbody>
</table>

(*) For minimum mounting height in aircraft hangars and public garages, see page 9.
Installing Horizontal Venting:

After the heater has been properly suspended in accordance with the preceding headings of this section, proceed to install the venting as described below:

1. Using a tape measure, measure the distance from the floor to the center of the vent collar on the rear surface of the burner box. Note this dimension here ________.

2. Using the tape measure, transfer this measurement to the inside surface of the exterior wall that the vent will penetrate; make a reference mark.

3. Using the tape measure, measure the distance between the rear surface of the heater and the exterior wall. Note this dimension here ________.

   NOTE: If the distance between the rear surface of heater and the exterior wall is greater than 5 feet, a 5’ balanced flue vent extension kit, P/N 08039000, will be required.

4. For each linear foot of the measured distance between the rear of the heater and the exterior wall, measure down vertically 1/4” from the reference mark made in step 2. Make another reference mark on the wall; this mark is the center line for the clearance hole that must be cut in the exterior wall to accommodate the sleeve portion of the vent terminal. Cut vent terminal clearance hole as required.

5. Install 3” flue pipe from the vent collar, on the rear surface of the burner box, and through the exterior wall. Be sure to seal any joints in the 3” flue pipe with high temperature silicone sealant and secure them with three sheetmetal screws.

   NOTE: The 3” flue pipe must extend a minimum of 6” beyond the exterior surface of wall.
Installing Horizontal Venting (Continued):

6. Assemble or cut the 5" air supply pipe to run between the vent collar on the rear surface of the burner box and the outside surface of the exterior wall. Be sure to seal any joints in the 5" air supply pipe with high temperature silicone sealant and secure them with three sheetmetal screws.

7. From the exterior of the building, slip the 5" air supply pipe over the installed 3" flue pipe. Connect the 5" pipe to the vent collar on the rear surface of the burner box with high temperature silicone sealant and secure the connection with three sheetmetal screws.

8. From the exterior of the building, slip the vent terminal onto the 3" flue pipe and guide the sleeve portion of the vent terminal into the 5" air supply pipe that is connected to the rear of the burner box. Secure air vent pipe to the vent terminal collar with silicone sealant.

9. Secure the vent terminal to the exterior surface of the wall.

NOTE: If the protruding 3" flue pipe is directly below and within 24" of the building soffit, the optional vent extension should be used.
**Vent Elbow Configuration**

**Installing Horizontal Venting with an Elbow:**

After the heater has been properly suspended in accordance with the preceding headings of this section, proceed to install the venting as described below:

**NOTE:** The 90° elbow kit, P/N 08038000, will be required for this installation.

1. Using a tape measure, measure the distance from the floor to the center of the vent collar on the rear surface of the burner box. Note this dimension here ________.

2. Using the tape measure, transfer this measurement to the appropriate location on the inside surface of the exterior wall that the vent will penetrate; make a reference mark.

3. Using a tape measure, measure distances ‘A’ and ‘B’ as shown on the next page. Note these dimensions here (A=______, B=______) and add them together.

**NOTE:** If the distance (the total of dimensions ‘A’ plus ‘B’) between the rear surface of heater and the exterior wall is greater than 5 feet, a 5’ balanced flue vent extension kit, P/N 08039000, will be required.

4. For each linear foot of the measured distance (the total of dimensions ‘A’ and ‘B’), measure down vertically 1/4” from the reference mark made in step 2. Make another reference mark on the wall; this mark will be the center line for the clearance hole that must be cut in the exterior wall. Cut the vent terminal clearance hole as required.

5. Assemble the balanced flue between the rear surface of the burner box and the exterior wall as follows:

   A. Attach 3” elbow portion of 90° elbow kit to the 3” flue pipe (length ‘A’). Use silicone sealant and 3 sheet-metal screws.

   B. Slip 5” air supply pipe over plain end (without elbow) of assembled 3” flue pipe and elbow.
Installing Horizontal Venting with an Elbow (Continued):

C. Attach plain end of the 3” flue pipe to the rear of the burner box using silicone sealant and 3 sheetmetal screws.

D. Attach 5” air supply pipe (length ‘A’) to the vent collar on the rear of the burner box using silicone sealant and 3 sheetmetal screws.

E. Assemble the 90° elbow in accordance with instructions provided on page 27 of this manual. Secure length ‘A’ of 5” air supply pipe to the elbow assembly using silicone sealant and 3 sheetmetal screws.

F. Attach length ‘B’ of the 3” flue pipe to the 3” elbow of the elbow assembly using silicore sealant and 3 sheetmetal screws.

NOTE: The 3” flue pipe must extend a minimum of 6” beyond the exterior surface of wall.

G. From the exterior of the building, slip the 5” air supply pipe over the installed 3” flue pipe. Connect the 5” pipe to 90° elbow assembly using silicone sealant and 3 sheetmetal screws.

Installing Horizontal Venting with an Elbow (Continued):
Installing Horizontal Venting with an Elbow (Continued):

H. From the exterior of the building, slip the vent terminal onto the 3" flue pipe and guide the sleeve portion of the vent terminal into the 5" air supply pipe that is connected to the rear of the burner box. Secure air vent pipe to the vent terminal collar with silicone sealant.

6. Secure the vent terminal to the exterior surface of the wall.

NOTE: If the protruding 3" flue pipe is directly below and within 24" of the building soffit, the optional vent extension should be used and secured with three sheetmetal screws.

---

**WARNING**

Carbon Monoxide Hazard
Heater must be exhausted outside.
Use materials supplied.
Failure to follow these instructions will result in death or injury.

---

**ATTENTION**

Risque de monoxide de carbone
L'échappement du radiateur doit s'effectuer à l'extérieur.
Utilisez le matériel fourni.
Le non-respect de ces consignes peut entraîner mort ou blessures.

---

**Roof Vent Option**

Installing Roof Venting:

After the heater has been properly suspended in accordance with the preceeding headings of this section, proceed to install the venting as described below. Be sure to observe the General Guidelines at the beginning of the vent installation section.

**NOTE:** Using the roof vent option will cause condensate to form in the vent piping. This condensate must be allowed to drain to a pail, bucket or preferably to a plumbing drain where one is available. The bottom of the condensate "T", supplied with the roof vent option, will accept 3/8" inside diameter tubing. This "T" must be used to connect the horizontal and vertical runs of vent pipe.

1. Using a saw, cut an appropriate size clearance hole in the roof to accommodate the vertical run of vent pipe and the vent termination.

2. Assemble the balanced flue between the rear surface of the burner box and the exterior vent termination as follows:

   A. Attach 3" flue pipe to the rear of the burner box using silicone sealant and 3 sheetmetal screws.

   B. Slip 5" air supply pipe over the installed 3" flue pipe; attach 5" air supply pipe to the vent collar on the rear of the burner box using silicone sealant and 3 sheetmetal screws.
Roof Vent
(Continued)

NOTES:
1. The total of dimensions ‘A’ plus ‘B’ must not exceed 10 feet.
2. If required, vent tee may be connected directly to the vent collar on the rear surface of the heater.

Installing Roof Venting (Continued):

C. Connect vent tee to the 3” and 5” pipes attached to the rear of the heater. Secure all connections using silicone sealant and 3 sheetmetal screws.

D. Install vertical run (length ‘A’) as shown above. A section of both the 3” flue pipe and the 5” vent pipe is required to connect the vent tee to the roof vent termination. Secure all connections using silicone sealant and 3 sheetmetal screws.

NOTE: Roof flashing and a rain collar will be required to complete the installation of the balanced flue. These items are available from a heating/sheetmetal distributor.

3. Attach the condensate drain to the connection on the underside of the vent tee; route hose to an appropriate container or to a drain.

Where:
A = Total Vertical Run
B = Total Horizontal Run
* = By Others
Bird Screen Installation

The bird screen supplied with the heater must always be installed. The screen is to be installed directly in the end of the 3" flue pipe or in the vent terminal extension available as an option. Both screen installations are described below.

Installing bird screen in 3" flue pipe:
1. Orient the flat surface of the bird screen as shown below.
2. Insert the screen into the inside diameter of the 3" flue pipe.
3. Secure the bird screen in position with a sheetmetal screw.

Installing bird screen in optional vent terminal extension:
1. Orient the flat surface of the bird screen as shown below.
2. Insert the screen into the inside diameter of the vent terminal extension as shown.
3. Using the handle from a hammer, or other similar device, push the bird screen into the vent extension as far as possible.
4. Orient the vent extension as shown below. Slip the extension onto 3" flue pipe as far as possible; secure the vent extension to the flue pipe with 3 sheetmetal screws.
Elbow Assembly

Assemble the balanced flue elbow assembly in accordance with the illustrations below and the following instructions:

1. Wrap the 1" diameter spring around the outside diameter of the 3" elbow as shown.

2. Interlock the loops at each end of the spring coils together as shown. The loops will lock together to produce a continuous coil spring spacer around the outside diameter of the 3" elbow.

3. Insert the 3" elbow, with the attached spring, into the inside diameter of the 5" elbow.

See Steps 1 & 2 Above

Interlock Loops as shown

1" Diameter Spring

3" Elbow

- End View -

See Step 3 Above

5" Diameter Elbow

Spring (1" Diameter)

3" Diameter Elbow

- Cross Section View -
**Electrical Service Installation**

**System Requirements**

The CARIBE® GTH heater requires a grounded three-prong electrical outlet to be installed within 18" of the rear surface of the heater's burner box. It is recommended that the outlet for the heater be ceiling-mounted and should be on a dedicated circuit. **DO NOT** use an electrical extension cord to operate the heater.

Heater Rating: 120 VAC, 60 Hz, Single Phase, 1 Amp

---

**Danger**

Risque d'électrocution
Brancher le cordon du radiateur sur un socle à 3 broches et à la masse, situé au plafond.
Ne pas sectionner ou retirer la broche de masse de cette prise.
N'utiliser aucun câble de rallonge.
Le non-respect de ces consignes peut entraîner mort ou électrocution.

**Attention**

Electrical Shock Hazard
Plug heater into grounded three-prong ceiling receptacle.
Do not cut or remove the grounding prong from this plug.
Do not use with an extension cord.
Failure to follow these instructions will result in death or electrical shock.

---

**Grounding**

The heater must be electrically grounded in accordance with the following codes: **United States**: Refer to National Electrical Code, ANSI/NFPA-70 - latest revision. Wiring must conform to the most current National Electrical Code and local ordinances. **Canada**: Refer to Canadian Electrical Code, CSA C22.1 Part 1 - latest revision.
Important Notes

1. The CARIBE® GTH heater is controlled by a low voltage (24 VAC) thermostat supplied with the heater. The control transformer located inside the burner box supplies the necessary electrical power to operate the thermostat. No other electrical power to the thermostat is required.

2. The wire for connecting the thermostat to the heater is **not** supplied. Purchase 18 to 22 AWG double strand wire for this purpose.

3. The thermostat connections are not polarity sensitive and therefore do not require color-coded wiring.

Thermostat Placement

For best results, locate the thermostat as follows:

- Mount the thermostat on an interior wall whenever possible.
- Mount the thermostat approximately 60" from the floor.
- Mount the thermostat so that it is shielded from the heat that is radiated from the heater.
- Mount the thermostat over the thermostat tag that is provided in the accessories bag. The thermostat tag contains important safety information and must be used.

Thermostat Installation

1. Connect thermostat wiring to the thermostat as follows:
   
   A. Attach one wire of the double strand thermostat wire to the **brass** connection on the rear of the thermostat; attach the remaining wire to the **silver** connection (see below).
   
   B. Peel off backing of adhesive strips on the rear surface of the thermostat tag and position the tag against the wall; secure thermostat over tag using two screws.
2. Route thermostat wiring between the thermostat and the rear of the heater. **CAREFULLY** staple the wires so as not to damage them and to produce a professional appearing installation.

3. Connect thermostat wires to the "THERMOSTAT CONNECTION" (see Figure) on the rear surface of the burner box as follows:

   A. Using an appropriate crimping tool, install the female terminals (included in accessories bag) on the two wires from the thermostat.

   B. Push the female terminals on the male terminals. The thermostat terminals are not polarity sensitive; either of the two female terminals can be installed on either of the male terminals.
Gas Service Installation

Install Gas Supply Lines

A 3/8" gas supply connection is required as shown below. To check system pressure, a plugged 1/8" NPT tapping is required upstream of the manual gas shut-off valve supplied with the heater.

Before connecting the heater to the supply system, verify that all high pressure testing of the gas piping has been completed.

**WARNING**

Explosion Hazard

Do not high pressure test the gas piping with the burner connected.

Failure to follow these instructions will result in death, injury or property damage.

Follow these instructions to ensure a safe gas supply system installation:

1. Support all gas piping with suitable pipe hanging materials.

2. Use wrought iron or wrought steel pipe and malleable iron fittings. The use of copper tube and brass fittings is acceptable when such use is in compliance with local codes. All pipe, tube, and fittings should be new and free from defects. Carefully ream the pipe and tube ends to remove obstructions and burrs.

3. Use LP-resistant joint compound on all threads.

4. Check the pipe and tube connections for leaks before placing heating equipment into service. When checking for gas leaks, use a soap and water solution; never use an open flame.

**NOTE:** A plugged 1/8" NPT tapping must be provided upstream of the gas supply to the heater.
Roberts-Gordon recommends using the grille at all times. A protective grille is included with select models of the CARIBE® GTH heater. This grille is supplied in sections and must be installed on the underside of the reflector prior to operation.

Grille sections are held in position by a channel formed by the rolled edge of the reflector. The shorter length (8 feet) heater requires installation of two protective grille sections, while the longer heater (11 feet 6 inches) requires three protective grille sections.

Grille, P/N 08050000, has a formed end panel and is installed at the end of the reflector that is furthest from the burner box. Grille, P/N 08050001, has an open-end and is installed closest to the burner box.
Grille Installation (continued)

Step 1

Install first grille section as follows:

A. Attach grille, P/N 08050001 (with open ends), to underside of reflector as shown above. The wires of the grille will rest in the channel formed by the rolled edge of the reflector.

B. Slide grille toward the front fixed hanger that is adjacent to the burner box as shown below.
Grille
Installation
(continued)

**Step 2**

Install second grille section as follows:

NOTE: Installation of a second open-ended grille section, P/N 08050001, is only required for the long heater (11 feet 6 inches). For short heaters (8 feet) proceed to Step 3.

A. Attach second grille section, P/N 08050001 (with open ends), to underside of reflector. The wires of the grille will rest in the channel formed by the rolled edge of the reflector.

B. Slide grille toward the previously installed grille section.

**Step 3**

Install final grille section as follows:

A. Attach grille, P/N 08050000 (with formed end) to underside of reflector. The wires of the grille will rest in the channel formed by the rolled edge of the reflector.

B. Slide grille toward the previously installed grille section as shown below.
Operation of the Heater

1. Turn the thermostat up. When the thermostat calls for heat, the blower motor will energize.

2. When the motor approaches nominal running speed, the air proving switch closes and activates the ignition module which in turn initiates the purge.

3. The ignition module then energizes the spark ignitor.

4. When sparking begins, the gas valve is energized.

5. If a flame is detected, the gas valve remains open. When the call for heat is satisfied, the system control mechanism de-energizes and the gas valve is turned off.

6. If no flame is detected, the gas valve is closed, and a purge period begins. After the purge period, the ignition module energizes the spark igniter and the gas valve. If a flame is still not established, a third and final purge/ignition sequence is begun. After three failed attempts, the system control mechanism will lock out for a period of one hour, or until the unit is reset. Reset is accomplished by removing power from the heater for at least five seconds.

7. With a three-try module, when the flame is established and then lost on the first or second trial, the gas valve will automatically turn off. A purge and trial for ignition will then occur.
Section 5
MAINTENANCE

Pre-Season Maintenance

For best performance, the following maintenance procedures should be performed by a qualified service agency before each heating season:

1. A qualified service agency should be contacted for service other than routine maintenance.

⚠️ WARNING

Turn off the gas and electrical supplies to the heater before performing any service or maintenance.
Failure to follow these instructions will result in death, injury or property damage.

2. Check condition of burner. Carefully remove any dust or debris from inside the burner box.

3. Inspect the igniter. Replace igniter if there is excessive carbon residue, erosion of electrodes or other defects.

4. Check to see that the burner observation window is clean and free of cracks or holes. Clean or replace as required.

5. Check the flue pipe for soot or dirt. After cleaning as necessary, re-attach the flue pipe to the heater.

6. Outside surfaces of heater reflector may be cleaned by wiping with a damp cloth.

7. Check vent terminal and outside air inlet to see that they have not become blocked during the non-heating season. If either pipe is restricted, the air switch won’t close, resulting in a no-heat situation.
This troubleshooting guide has been designed to assist you in locating and correcting minor problems that may occur with the CARIBE® GTH heater.

### General

BLOWER DOES NOT COME ON

<table>
<thead>
<tr>
<th>Possible Cause</th>
<th>Try this ........</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power cord is not plugged in.</td>
<td>Plug power cord into a grounded three prong outlet.</td>
</tr>
<tr>
<td>Thermostat setting is too low.</td>
<td>Increase thermostat temperature setting.</td>
</tr>
<tr>
<td>DSI module needs to be reset.</td>
<td>Unplug heater power cord from the electrical outlet; wait for a minimum of five seconds. Plug heater cord back into outlet.</td>
</tr>
<tr>
<td>No power at electrical outlet.</td>
<td>Replace fuse or reset circuit breaker.</td>
</tr>
<tr>
<td>Faulty thermostat wiring or faulty thermostat.</td>
<td>Install jumper wire across THERMOSTAT CONNECTION wires on the rear of the burner box. If blower starts, remove jumper wire and proceed as follows:</td>
</tr>
<tr>
<td></td>
<td>• Check wiring between thermostat and heater. If wiring is OK, then,</td>
</tr>
<tr>
<td></td>
<td>• Replace thermostat</td>
</tr>
<tr>
<td>Faulty blower motor.</td>
<td>Replace blower motor.</td>
</tr>
</tbody>
</table>
## IGNITOR DOES NOT SPARK

<table>
<thead>
<tr>
<th>Possible Cause</th>
<th>Try this ......</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSI module needs to be reset.</td>
<td>Unplug heater power cord from the electrical outlet; wait for a minimum of five seconds. Plug heater cord back into outlet.</td>
</tr>
<tr>
<td>Faulty ignitor or ignition wire.</td>
<td>Unplug heater power cord from the electrical outlet; check ignitor and ignition wire for damage. If damaged, replace igniter and/or ignition cable.</td>
</tr>
<tr>
<td>Air switch does not operate.</td>
<td>Check flue/air supply duct for obstructions; remove obstructions as required.</td>
</tr>
<tr>
<td></td>
<td>Check for loose/leaky air hoses to the air switch; repair/replace/tighten hoses as required.</td>
</tr>
<tr>
<td></td>
<td>Check for 24V across the secondary terminals 4 and 5 (red and yellow wires) of the transformer.</td>
</tr>
<tr>
<td><strong>IF NO:</strong> Check for 120V across the primary terminals 1 and 3 (black and white wires) of the transformer.</td>
<td>If 120V is present, replace transformer.</td>
</tr>
<tr>
<td></td>
<td>If 120V is not present, check wiring between power cord, blower motor and transformer.</td>
</tr>
<tr>
<td><strong>IF YES:</strong> Connect a jumper wire across air switch terminals; if jumper wire allows blower to operate, replace pressure switch (see replacement parts list for part number that applies to your unit rating).</td>
<td>Reset spark gap to 1/8” (0.125”).</td>
</tr>
<tr>
<td>Ignitor spark gap incorrect.</td>
<td></td>
</tr>
</tbody>
</table>
## BURNER DOES NOT LIGHT

<table>
<thead>
<tr>
<th>Possible Cause</th>
<th>Try this ........</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air in the gas line.</td>
<td>Purge gas lines.</td>
</tr>
<tr>
<td>Improper gas inlet pressure.</td>
<td>Check gas inlet pressure at the 1/8” NPT plugged tap. Gas inlet pressure should be as follows:</td>
</tr>
<tr>
<td></td>
<td><strong>Natural Gas:</strong> 5.0” w.c. min.; 14.0” max.</td>
</tr>
<tr>
<td></td>
<td><strong>LP Gas:</strong> 11.0” w.c. min.; 14.0” max.</td>
</tr>
<tr>
<td></td>
<td>If gas inlet pressure does not meet inlet pressure requirements contact the gas company.</td>
</tr>
<tr>
<td>Gas valve does not open.</td>
<td>Check for 24V across valve terminals.</td>
</tr>
<tr>
<td>IF NO: Check wiring between the ignition module and the valve. Repair/replace wires as required. If wiring is OK, replace ignition module.</td>
<td></td>
</tr>
<tr>
<td>IF YES: Replace gas valve.</td>
<td></td>
</tr>
<tr>
<td>Low gas outlet pressure.</td>
<td>Check gas manifold pressure. Measure manifold pressure at the pressure tap on the gas valve. Refer to the illustration on the following page.</td>
</tr>
<tr>
<td></td>
<td><strong>Natural Gas:</strong> 3.5” w.c.</td>
</tr>
<tr>
<td></td>
<td><strong>LP Gas:</strong> 10.5” w.c.</td>
</tr>
<tr>
<td></td>
<td>If manifold pressure does not meet requirements, adjust valve outlet pressure with the adjustment screw on the valve.</td>
</tr>
<tr>
<td></td>
<td><strong>NOTE:</strong> Proper inlet gas pressure must be verified before performing outlet pressure testing.</td>
</tr>
</tbody>
</table>
## BURNER DOES NOT stay LIT

<table>
<thead>
<tr>
<th>Possible Cause</th>
<th>Try this ..........</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damaged wires between DSI module and electrode.</td>
<td>Replace wires as required.</td>
</tr>
<tr>
<td>Faulty DSI module.</td>
<td>Replace DSI module.</td>
</tr>
</tbody>
</table>
Connection Diagram

**WARNING**
If any of the original wire as supplied with the heater must be replaced, it must be replaced with wiring material having a temperature rating of at least 105°C and 600 volts.

**ATTENTION**
Si une partie du câblage d'origine fourni avec le radiateur doit être remplacée, elle doit être par du matériel de câblage tolérant une température d'au moins 105°C et 600 volts.

Ladder Diagram

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42
Parts

⚠️ WARNING

Use only genuine Roberts-Gordon replacement parts.
Failure to follow these instructions will result in death, injury or property damage.

This section contains the part numbers and pictorials for components of the CARIBE® GTH heater.

Callout letters on the illustrations are keyed directly to the associated parts list.
ILLUSTRATED PARTS LIST

CARIBE® GTH SERIES HEATER

Burner

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Burner Cup Assembly</td>
</tr>
<tr>
<td>B</td>
<td>Sensor</td>
</tr>
<tr>
<td>C</td>
<td>Ignitor, Primary</td>
</tr>
<tr>
<td>D</td>
<td>Orifice</td>
</tr>
<tr>
<td>E</td>
<td>Mica Window Assembly</td>
</tr>
<tr>
<td>F</td>
<td>Air Plate</td>
</tr>
<tr>
<td>G</td>
<td>Adapter, Orifice Holder</td>
</tr>
<tr>
<td>H</td>
<td>Motor/Blower</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>I</td>
<td>Ignition Module</td>
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<tr>
<td>J</td>
<td>Transformer</td>
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<tr>
<td>K</td>
<td>Pressure Switch</td>
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<td>L</td>
<td>Gas Valve</td>
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<tr>
<td>M</td>
<td>Pipe Nipple</td>
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<td>N</td>
<td>Flue Collar (5&quot;)</td>
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<td>O</td>
<td>Door Gasket</td>
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<td>P</td>
<td>Burner Cup Screen</td>
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ILLUSTRATED PARTS LIST
CARIBE® GTH SERIES HEATER

Heat Exchanger & Reflector

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>Heat Exchanger</td>
</tr>
<tr>
<td>B</td>
<td>Hex Head Bolt (5/16-18 x 3/4&quot;)</td>
</tr>
<tr>
<td>C</td>
<td>Lockwasher</td>
</tr>
<tr>
<td>D</td>
<td>Tubing Support Plate</td>
</tr>
<tr>
<td>E</td>
<td>Burner Tube Gasket</td>
</tr>
<tr>
<td>F</td>
<td>Screw (#8x3/8&quot;)</td>
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<tr>
<td>G</td>
<td>Reflector</td>
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<tr>
<td>H</td>
<td>End Cap</td>
</tr>
<tr>
<td>I</td>
<td>U-Clips</td>
</tr>
<tr>
<td>J</td>
<td>Rear Reflector Hanger</td>
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# REPLACEMENT PARTS LIST

## Heat Exchanger & Reflector

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<tr>
<th>Item</th>
<th>Part Number</th>
<th>Description</th>
<th>CGTH-30</th>
<th>CGTH-40</th>
<th>CGTH-50</th>
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<tbody>
<tr>
<td>A</td>
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<td>Heat Exchanger Assembly (8&quot;)</td>
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<td>08090000</td>
<td>Reflector (79&quot;)</td>
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</tbody>
</table>

(*) Part number shown is for reorder purposes and represents a package of 20 pieces.
**ROBERTS-GORDON Caribe® GTH 36 MONTH LIMITED WARRANTY**

**ROBERTS-GORDON WILL PAY FOR:**
For 36 months from the date of purchase by the original consumer, we will provide, free of charge, Replacement Parts for any part of the CARIBE® GTH that fails because of a manufacturing or material defect.
Roberts-Gordon Replacement Parts are warranted for the period of the original heater Warranty.

**ROBERTS-GORDON WILL NOT PAY FOR:**
Service trips, calls and labor charges.
Shipment of Replacement Parts.
Damage due to:
- Failure to install, operate or maintain heater as directed in Use and Care Manual. You must follow requirements as stated in the Use and Care Manual.
- Misuse, abuse, neglect or modification of heater in any way.
- Improper service, use of replacement parts or accessories that are not specified by Roberts-Gordon.
- Improper installation or relocation of heater after initial installation.
- Incorrect gas or electrical supply, accident, fire, flood, acts of God or other casualty.
- Use of heater for other than its intended purpose.
- Use of heater in a corrosive atmosphere.
- Shipping. Claim must be filed with carrier.

**WARRANTY IS VOID IF:**
Heater is not installed by a licensed/qualified gas fitter or contractor.
You cannot prove original purchase date and required annual maintenance history.
The enclosed Warranty Registration Card is not returned.
The data plate and/or serial number are removed, defaced or modified.
The heater is transferred. This Warranty is non-transferable.
Roberts-Gordon is not permitted to inspect the damaged heater and/or component parts.

**READ YOUR USE AND CARE MANUAL**

If you have questions about your heater, contact your installing professional. Should you need Replacement Parts or have additional questions, call or write Roberts-Gordon:

**Canada**
241 South Service Road, West
Grimsby, Ontario L3M 1Y7
905.945.5403

**U.S.A.**
1250 William Street
P.O. Box 44
Buffalo, New York 14240-0044
716.852.4400

Roberts-Gordon’s liability, and your exclusive remedy, under this Warranty or any implied warranty (including the implied warranties of merchantability and fitness for a particular purpose) is limited to providing Replacement Parts during the term of this Warranty. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you. There are no rights, warranties or conditions, express or implied, statutory or otherwise, other than those contained in this Warranty.

Roberts-Gordon shall in no event be responsible for incidental or consequential damages or incur liability for damages in excess of the amount paid by you for the heater. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from jurisdic-