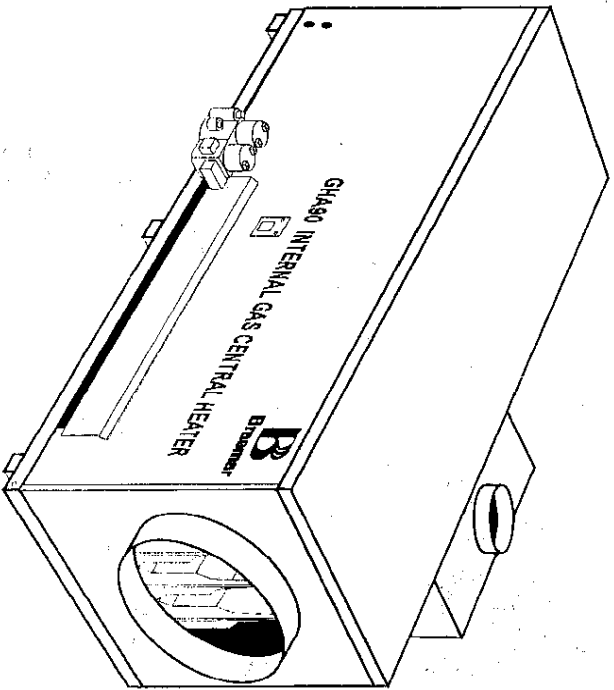




Operating & Installation Instructions

Internal Gas Central Heaters



Warming the Great indoors

Models

GHA65 GHA90 GHA120

OPERATING INSTRUCTIONS

SAFETY

Before operating the heater, please ensure that the following precautions are strictly adhered to:

1. Do not place articles on or against the appliance.
2. Do not store flammable materials near this appliance.
3. Do not spray aerosols in the vicinity of this appliance while it is in operation.

Your Braemar heater is fitted with fully automatic electronic ignition. This is an energy saving device and eliminates the need for lighting the pilot.

TO TURN THE HEATER ON, follow the instructions below.

1. Set the Room Thermostat to **BELOW** the room temperature.
2. Ensure the Gas Tap & Power are turned **ON**.
3. Set Room Thermostat to **ABOVE** room temperature.
4. The heater is now in automatic mode.
 - The sparkler operates to light the pilot and will continue sparking for up to 45 seconds.
 - When pilot lights, the sparkler will stop and the main burner will light.
 - After approximately one minute the fan will come on.
5. Set room temperature to the desired temperature.

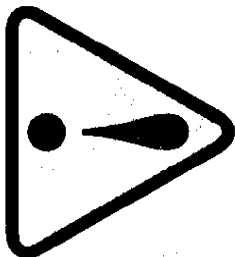
NOTE:

If Pilot does not light because the heater has been out of use for some time:

- Set the Room Thermostat to **OFF**.
- Wait three seconds and set the Room Thermostat to above room temperature.
- Wait for approximately one minute for fan to come on.
- Repeat if necessary.

If the heater does not operate satisfactorily contact your nearest Braemar Service Agent for instructions.
Phone numbers are listed on the rear cover.

IMPORTANT



DO NOT Operate this appliance before reading the instruction booklet.

DO NOT Place articles on or against this appliance.

DO NOT Store chemicals, flammable materials or spray aerosols near this appliance.

DO NOT Operate with panels, covers or guards removed from this appliance.

FOR INSTALLATION INDOORS ONLY.

TO BE INSTALLED BY AN AUTHORISED PERSON ONLY.

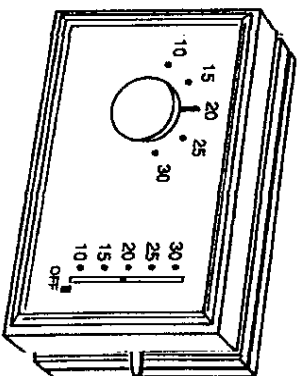
**THIS APPLIANCE MUST BE INSTALLED ON A
NON-COMBUSTIBLE BASE.**

THERMOSTATS

Operation of a Manual Thermostat

- * Use the manual thermostat to turn the heater on by simply setting the slide lever on the side of the thermostat to a temperature greater than the room temperature.
- * When the room temperature reaches the set temperature, the heater will cycle off.
- * When the room temperature has dropped a degree or so below the set temperature the heater will automatically turn itself back on.
- * When the heater is not in use, turn the thermostat to the OFF position. This thermostat does not require batteries.

This dial shows the room temperature



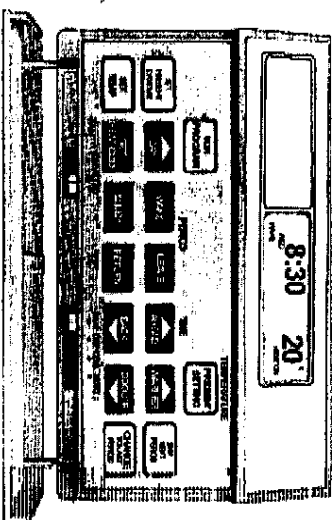
This lever is used to set the desired temperature

Additional information on the operation and set-up of this thermostat is available on the leaflet supplied with the thermostat.

THERMOSTATS

Operation of an Electronic Programmable Thermostat

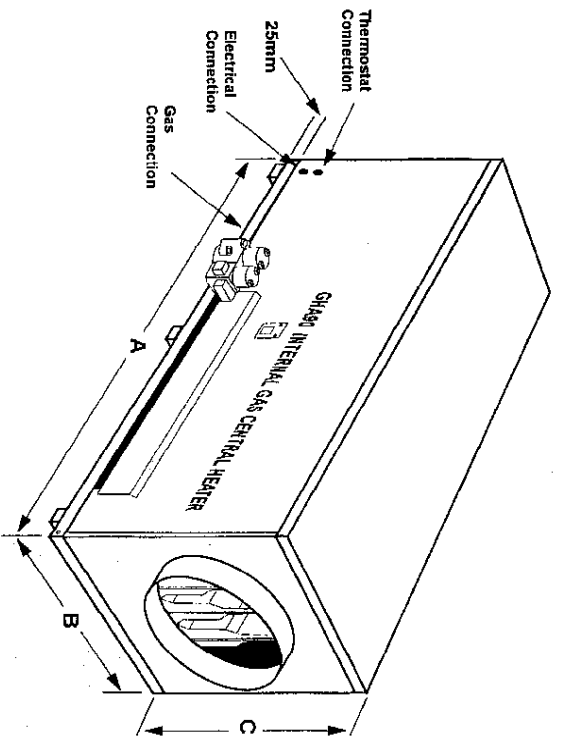
- * Set the slide switches on the bottom of the thermostat to AUTO & HEAT.
- * Press the WARMER button, the temperature display changes to show the Heater On temperature.
- * Hold the button down to increase the ON temperature.
- * The heater will start automatically when "HEAT ON" is displayed.
- * When the heater is not in use, turn the thermostat to the OFF position.



This thermostat requires 3xAAA batteries, these batteries should be replaced yearly.

Refer to the Thermostat Operation Manual supplied with the Thermostat for all of the programming functions.

GHA Series Horizontal Furnace



Model No.	GHA65	GHA90	GHA120
Heat Input (MJ)	65	84	120
Heat Output (Kw)	14	18	25
Length (A)	1050	1050	1050
Length (B)	420	420	500
Length (C)	570	570	570
Duct Connections (mm)	250	300	350
Number of Burners	3	4	5
Injector Size (N/Gas)	2.2mm		
Pilot Injector (N/Gas)	0.021		
Motor (watts)	315	315	600
Motor Capacitor	4µf	10µf	8µf
Fan Size	9x7	9x7	9x9
Electrical Specification	240 Volt/50HZ/1 Phase 3 pin Plug/1.8m lead		
Electronic Board	TEK312		
Gas Pressure (N/Gas)	0.875KPa		
Motor Amps	3.3	3.3	4.0
Furnace Weight (Kg)	70	70	85

INSTALLATION INSTRUCTIONS

General

The heater should be installed in accordance with these instructions, local gas fitting regulations, municipal building codes, electrical wiring regulations, Australian Gas Association Installation Code AG601 and any other relevant statutory requirements.

A data plate on the side of the heater details both the model no. and the gas type.

This heater is to be installed only by an authorised tradesperson.

Braemar GHA heaters are designed for indoor installation only and can be located in the ceiling space or under the floor.

This heater is not suitable for installation downstream of an Evaporative Cooler. This heater is not suitable for installation in a marine environment.

Ceiling Installation.

1. Inspect the roof space and check that it is strong enough to support the extra load. The heater should be mounted over a wall so that the ceiling joists alone are not supporting it.
2. A service platform should be provided adjacent to the heater (chipboard or similar). A permanent walkway to the ceiling access point should be provided.
3. The heater can be mounted on a permanent platform (19mm particleboard or equivalent) covered with a fire resistant base at least equal in fire resistance to 6 mm millboard. A 25 mm air gap is provided between the base of the heater and the non-combustible base to provide air circulation under the heater. The heater can also be mounted on a permanent platform covered with corrosion resistant sheet metal (0.6 mm thick). An air gap of 100 mm is required using metallic or concrete spacers. Alternatively the heater may where practical be suspended on threaded rods to provide a 100 mm air space underneath the heater. The platform and corrosion resistant base must extend to the full perimeter of the heater and 300 mm beyond the front and rear of the heater.
4. Permanent artificial lighting should be provided to assist servicing of the heater. The switch for the light should be at the ceiling access point.
5. REMOVAL OF THE BURNER TRAY. The burner tray on all units is removable as a complete unit. A minimum clearance of 600 mm should be provided for easy removal.
6. REMOVAL OF THE FAN. The fan is removable through the end of the heater. To remove the fan a minimum clearance of 500 mm is required.

INSTALLATION INSTRUCTIONS

Under floor installations

When installing the Braemar Heater under the floor, it is important that all aspects of safety are considered and that provision is made for easy service of the heater.

1. The **MINIMUM CLEARANCE** required to locate an appliance is 850mm between the underside of the floor joists and the ground level. At all times a clearance of at least 200mm should be provided between the underside of the floor joists and any portion of the appliance or its components to allow for minimum flue rise.
2. Where the **CLEARANCE** between the underside of the floor joists and ground level is 1200 mm or less, then the heater should be installed within 2000 mm of the access door to provide easy access.
3. Where **CLEARANCE** between the underside of the floor and ground level exceeds 1200 mm, the heater may be installed at any distance from the access door.
4. The heater should be mounted on a level 50 mm thick concrete base over the whole area of the base of the appliance and provision made to drain any seepage or ground water away so that water cannot come into contact with the heater.
5. Artificial lighting should be provided to assist servicing. The switch for the service light should be at the access door.
6. **REMOVAL OF THE BURNER TRAY.** The burner tray on all units is removable as a complete unit. A minimum clearance of 600 mm should be provided for easy removal.
7. **REMOVAL OF THE FAN.** The fan is removable through the return air panel at the rear of the heater. To remove the fan a minimum clearance of 500 mm is required.
8. **LATERAL FLUES** from appliances shall not exceed 2000 mm in length with a minimum rise of 20 mm per metre run. If the location does not permit this, provision should be made for a duct to carry the flow vertically off the heater through the building to terminate in open atmosphere.

INSTALLATION INSTRUCTIONS

Flueing the Internal Heater.

The Braemar GHA Internal Heaters are fitted with a steel flue terminal, and must be flued to terminate in open atmosphere. The metal flue should be terminated with an Australian Gas Association approved cowl.

Flue Size. All Models – 125mm (5 inch)

The standard flue terminal fitted to the heater is designed to discharge the flue gas vertically.

Maximum Vertical Flue Length. 6.0 Metres, including 2, 90 degree bends. Refer to Gas Installation Code AG60'1, Section 5.13 for full flueing requirements.

CAUTION.

WHEN THE BRAEMAR GHA HEATERS ARE OPERATING, THE FLUE AND SURROUNDING METAL PANELS CAN GET HOT. EXERCISE EXTREME CARE.

Electrical Connection.

The heater comes pre-wired with a 1.8 metre long lead and 3-pin plug. This will plug into a conventional 10 amp power outlet.

Thermostat Location.

The room thermostat should be located approximately 1.5 metres above the floor level. Avoid placing the thermostat in draughty areas, or where hot spots could occur due to the radiation from the suns rays, television sets, refrigerators or warm air outlets. Central hallways generally have no windows and retain the heat longer than surrounding rooms, this may mean that the thermostat does not sense the true temperature of the living area. Check with the end user, the rooms that will be lived in most, this area will need to have the thermostat located central to it. Consideration should be given to all factors before deciding on the final location.

INSTALLATION INSTRUCTIONS

Thermostat Wiring.

The thermostat wiring is 24 Volt AC.

Gas Connection.

Your Braemar heater is provided with a 20mm (3/4" BSP) Female socket for connection to the gas line. A gas cock must be provided adjacent to the heater for servicing.

Before connecting the gas to the heater, **the gas line should be carefully purged** to remove any air and debris from the line.

Gas Pressure

Natural Gas

The gas pressure is factory set at 0.87 KPa (3.5 " WG) for Natural Gas. Should the pressure require field adjustment, remove the cover screw from the gas valve regulator, to expose the adjusting screw. Tightening the screw will increase the gas pressure, a small blade screwdriver is required to make this adjustment.

IMPORTANT

Adjustments to the gas pressure should not be made unless proper measuring equipment is available. Incorrect adjustment to the gas pressure could cause premature failure of the burner or the heat exchanger.

POWER FAILURE

In the event of a power failure during the operating cycle, the heater will automatically shut down. When power is restored, the room fan will come on and run for about 2 minutes to cool the heat exchanger down. If the thermostat is still calling for heat, the heater will go through a normal start-up procedure.

INSTALLATION INSTRUCTIONS

Ductwork Connection.

Starter spigots are provided with the heater for direct connection of flexible duct. Outlet Registers must be provided in all areas to be heated. It is recommended that a register be provided for ever 14 m² of floor space. Where this is not possible, larger outlets may be provided. Care should be taken to prevent cold spots being created by too much draught, or inadequate outlets.

Ductwork should be fully supported and free from air leaks.

Volume dampers should be provided for proper balancing of the system.

Ductwork should be of adequate size to prevent excessive back pressure on the heater. In adequate ductwork may cause premature failure of the fan motor, or the heat exchanger.

Return Air Ducting.

Return air should be drawn from a suitably heated area. The return air duct should never be terminated in such a manner that it can be accidentally locked by placing clothing, carpet or the like over it.

Filters.

The provision of filters in return air grilles may generate some noise. If a filter is fitted to the return air grille it should be cleaned fortnightly and replaced yearly. If a filter is fitted, the return air grille size must be increased by at least 30 %.

Suggested Sizing.

Model	W/O Filter	With Filter
GHA65	500 x 400	650 x 550
GHA90	600 x 400	800 x 550
GHA120	750 x 400	1000 x 550

ADD-ON COOLING

A refrigerated cooling coil may be added to the system provided that the following points are observed.

Ductwork should be enlarged to provide for greater air flow.

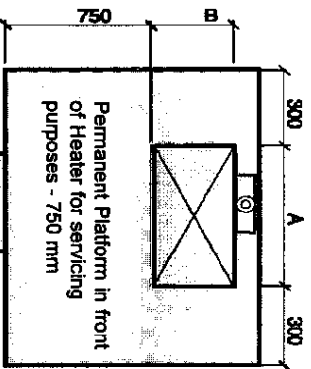
The fan must be connected to high speed.

The coil must be fitted to the supply air duct.

NOTE:

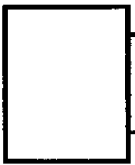
Connection of the coil to the return air duct will cause condensation on the fan and heat exchanger and may lead to premature failure.

Ceiling Installation Diagram

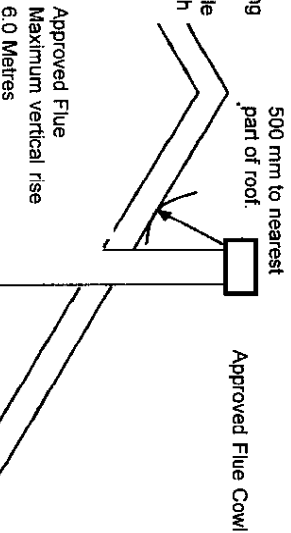


- Permanent Platform to extend:
- to the full perimeter of the heater; and,
 - 300 mm beyond the front of the heater; and,
 - 300 mm beyond the rear of the heater

Floored passageway between roof space opening and heater
Minimum width - 600 mm

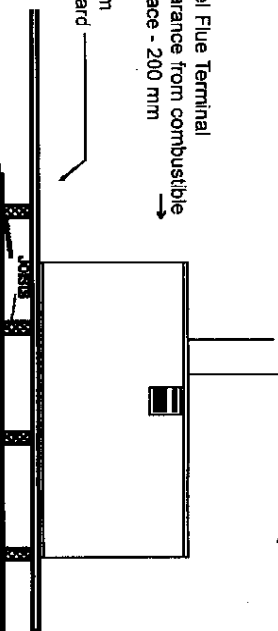


Roof Access Opening
Switch for artificial light, should be visible and within easy reach of the roof space access.



Steel Flue Terminal
Clearance from combustible surface - 200 mm

Permanent Platform
19 mm Particle Board
or equivalent.
Fire resistant base
required.



INSTALLATION INSTRUCTIONS

Electrical Connection.

The heater comes pre-wired with a 1.8 metre long lead and 3-pin plug. This will plug into a conventional 10 amp power outlet.

Thermostat Location.

The room thermostat should be located approximately 1.5 metres above the floor level. Avoid placing the thermostat in draughty areas, or where hot spots could occur due to the radiation from the suns rays, television sets, refrigerators or warm air outlets. Central hallways generally have no windows and retain the heat longer than surrounding rooms, this may mean that the thermostat does not sense the true temperature of the living area. Check with the end user, the room/s that will be lived in most, this area will need to have the thermostat located central to it.
Consideration should be given to all factors before deciding on the final location.

COMMISSIONING

Pre-start check list

Furnace checks.

- No Leaks in gas lines.
- Do not use a flame to locate leaks, use a soap solution.
- Blower correctly wired.
- Controls wired and adjusted correctly.
- Filters are clean and in place.
- Check that registers and return air grille are open.
- Duckwork adequate.

Thermostat Check.

- In suitable location.
- Correctly wired.
- Level.
- Heat anticipator set to 0.7 amps.

INSTRUCT THE USER

To avoid service calls at a later date, ensure that the home owner is aware that a minimum number of outlets must always be open.

GHA65 - 4 outlets

GHA90 - 6 outlets

GHA120 - 8 outlets

Instruction should also be given on the requirement for regular service of the heater and the cleaning of any filters.

BRAEMAR WARRANTY

The manufacturer warrants that the product is free from defects in material and factory workmanship. Subject to the terms of the warranty, the manufacturer will repair or replace at its option, the product or any part thereof, which examination shows to be defective, for a period of THREE (3) years from the date of purchase.

Ten (10) years warranty is available on the following components.

1. BURNER
2. HEAT EXCHANGER

Warranty on any replacement parts is limited to the balance of their original warranty period.

This is the sole warranty of the manufacturer, who is not responsible for any obligation, assumed or expressed by any other person or persons.

Conditions

The warranty is available to the first purchaser only, being the purchaser who purchases without the intent of reselling for profit.

The structural warranty covers any metal structural components which fail to perform their intended function due to faulty manufacture or deterioration, within the warranty period.

The warranty does not cover any component parts or equipment used in conjunction with the heater, which were not supplied by the manufacturer. The warranty does not cover faulty installation, maintenance or abnormal conditions of service.

The warranty does not cover damage to the heater or other, resulting from acts of god.

The warranty shall not apply to the heater or any part thereof, which in the opinion of the manufacturer has been subject to accident, alteration, abuse, misuse or unauthorised repair.

This warranty shall not be extended to any loss suffered by or resulting from the non operation of the heater or part thereof.

Travelling costs incurred for work beyond a 25km radius of an Authorised Braemar service agent must be met by the purchaser.

The Manufacturer and its Agents reserve the right to refuse service unless safety and accessibility to the unit can be guaranteed.

The cost of any extra equipment required to provide access to the unit for servicing is the responsibility of the owner.

NOTE. Should you require warranty work on your Braemar heater, we recommend that you first contact your local Braemar Dealer, they are best placed to attend to any problem, no matter how small.

If however a service call reveals no fault with your Braemar heater, you may well be charged for the call, even during the warranty period.



WARRANTY & SERVICE
1 800 882 644

