

# User instructions

Wall hung RSF gas fired condensing regular appliance

## GREENSTAR Ri ErP +

For central heating systems



6720813340-00.1WG

These appliances are for use with : Natural Gas or L.P.G. (Cat. II 2H 3P type C13, C33 & C53)		
	Model	GC Number
Natural Gas	9Ri ErP +	41-406-74
	12Ri ErP +	41-406-75
	15Ri ErP +	41-406-76
	18Ri ErP +	41-406-77
	21Ri ErP +	41-406-78
	24Ri ErP +	41-406-79
L.P.G.	9Ri ErP +	41-406-68
	12Ri ErP +	41-406-69
	15Ri ErP +	41-406-70
	18Ri ErP +	41-406-71
	21Ri ErP +	41-406-72
	24Ri ErP +	41-406-73

If you smell gas:

- ▶ Keep well away from the building: call the National Gas Emergency Service on 0800 111 999.
- ▶ L.P.G. appliances: Call the supplier's number on the side of the gas tank.



  
**WORCESTER**  
Bosch Group

## Preface

### Dedicated to heating comfort

Thank you for purchasing a Worcester product. We pride ourselves on manufacturing appliances to the strictest quality control standards throughout every stage of production.

Worcester, Bosch group has led the field in innovative appliance design and performance for over 50 years. This heritage means all our products are of exceptional quality and proven reliability.

Our products employ the latest technologies and they are reliable, extremely energy efficient, offering you economical running costs and value for money. They are amongst the top energy rated appliances available.

There is also the reassurance of our parts and labour guarantee. Our Customer Service team is here to help you get the best from your Worcester product throughout its lifetime. Whatever your enquiry, our specially trained team is available at our Worcester based contact centre and online via the website. For contact details see the back cover.


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# 1 Key to symbols and safety instructions

## 1.1 Key to symbols


### Warnings

	<p>Safety instructions in this document are framed and identified by a warning triangle which is printed on a grey background.</p>
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The following keywords are defined and can be used in this document:

- **NOTICE** indicates a situation that could result in damage to property or equipment.
- **CAUTION** indicates a situation that could result in minor to medium injury.
- **WARNING** indicates a situation that could result in severe injury or death.
- **DANGER** indicates a situation that will result in severe injury or death.

### Important information

	<p>This symbol indicates important information where there is no risk to people or property.</p>
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### Additional symbols

Symbol	Meaning
1.	a numbered step in an action sequence
▶	a step in an action sequence
→	a reference to a related part in the document or to other related documents
1	a reference number to identify or refer to a part or item
•	a list entry
–	a list entry (second level)

Table 1

### Examples of additional symbols used

#### A numbered step in an action sequence

A sequence of numbered steps or actions carried out in a specific order to complete a task.

1. First action
2. Second action
3. Third action
- etc.

#### A step in an action sequence

A sequence of defined actions or steps carried out in order to complete a task.

- ▶ Action
- ▶ Next action
- ▶ etc

#### A reference to a related part in the document or to other related documents.

To refer the reader to a specific figure/table/section within the manual.

→ e.g. figure 1.

#### A reference number to identify or refer to a part or item.

In a related figure, items or parts identified by a sequential number.

#### List entries, first and second levels

- A single component/item
- A component/list, made up of multiple parts/items.
  - Sub component or sublist of main component/list.
  - etc.

## 1.2 Safety precautions

### Instructions for the target group:

These operating instructions are intended for the heating system user.

All instructions must be observed. Failure to comply with instructions may result in material damage and personal injury, including possible loss of life.

- ▶ Read and retain the operating instructions (heat source, heating controller, etc.) prior to operation.
- ▶ Observe the safety instructions and warnings.

### If you smell gas:

A gas leak could potentially cause an explosion. If you smell gas, observe the following rules.

- ▶ Prevent flames or sparks:
  - Do not smoke, use a lighter or strike matches.
  - Do not operate any electrical switches or unplug any equipment.
  - Do not use the telephone or ring doorbells.
- ▶ Turn off the gas at the meter or regulator.
- ▶ Open windows and doors.
- ▶ Warn your neighbours and leave the building.
- ▶ Prevent anyone from entering the building.
- ▶ Keep well away from the building: call the National Gas Emergency Service on 0800 111 999.
- ▶ L.P.G. appliances: Call the supplier's number on the side of the gas tank.

### Combustible and corrosive materials:

Chemically aggressive substances can corrode the appliance and invalidate any guarantee.

- Do not store or use any combustible materials (paper, thinners, paints, propellants, cleaning agents etc.) inside the cupboard containing the appliance or within the vicinity of the appliance.

### Fittings and modifications:

Only a competent engineer can remove the appliance case and carry out any work, in accordance with the Gas Safety (Installation and Use) Regulations.

- Do not remove the appliance case.

Any misuse or unauthorised modifications to the appliance, flue or associated accessories and heating system will invalidate the guarantee.

- Do not modify the appliance or flue system in any way.

Worcester, Bosch Group accepts no liability arising from any such actions. This does not affect your statutory rights.

## Safety of electrical devices for domestic use and similar purposes:

The following requirements apply in accordance with EN 60335-1 in order to prevent hazards from occurring when using electrical appliances:

“This appliance can be used by children of 8 years and older, as well as by people with reduced physical, sensory or mental capabilities or lacking in experience and knowledge, if they are supervised and have been given instruction in the safe use of the appliance and understand the resulting dangers. Children shall not play with the appliance. Cleaning and user maintenance must not be performed by children without supervision.”

“If the power cable is damaged, it must be replaced by the manufacturer, its customer service department or a similarly qualified person, so that risks are avoided.”

### Please read these instructions carefully

- ▶ These instructions are applicable to the Worcester, Bosch Group appliance model stated on the front cover only.
- ▶ These instructions apply in the UK/IE only and must be followed except for any statutory obligation.

## 2 General information

### 2.1 Energy efficiency

Energy efficiency information is given in the Installation, Commissioning and Servicing Instructions supplied with the appliance.

### 2.2 Appliance identification and serial number

The data label [1] contains information of the appliance model and serial number. This is located in the indent on the bottom panel.

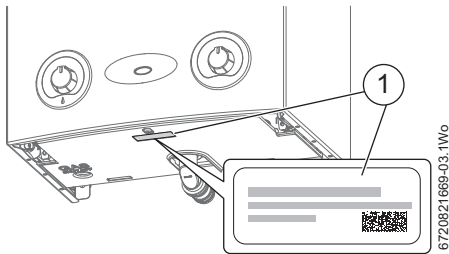


Fig. 1 Data label location

#### For your own records

Please ensure that the Commissioning Checklist has been completed by your installer or service engineer.

Model:	
Serial number:	
Date of installation:	

Table 2 Appliance details

## 2.3 Servicing



Ensure that the service engineer completes the Service Record in the Benchmark Checklist after each service.

The Service Record can be found at the rear of the appliance's Installation and Maintenance Instructions. It will be required in the event of any guarantee work and may be required by the local Building Control Inspector.

- ▶ The appliance must be serviced regularly by a competent, qualified person, such as a Worcester service engineer or other Gas Safe registered engineer.
- ▶ Ensure that the service engineer completes the Service Record, at the rear of the Installation and Maintenance Instructions manual, after each service.
- ▶ Have any work carried out only by a competent, Worcester service engineer or other Gas Safe registered engineer.
- ▶ Always use original spares, to help maintain the efficiency, safety and reliability of the appliance.

## 2.4 Maintaining your appliance

Your new appliance represents a long term investment in a reliable, high quality product.

Wipe the appliance casing with a soft clean cloth. Please do not use chemical cleaning products which may damage the paint finish.

In order to realise its maximum working life, and to ensure it continues to operate at peak efficiency and performance, it is essential that servicing and maintenance checks are performed at least once a year by an competent engineer in accordance with the current Gas Safe Regulations.

If you would like to know more about servicing options from Worcester, Bosch Group, please visit [worcester-bosch.co.uk](http://worcester-bosch.co.uk).

Please tick the appropriate box on your warranty registration card for further details of the Worcester, Bosch Group Service Contract.

When your appliance requires servicing please contact a Worcester, Bosch Group contact centre (see rear cover, appointments).

In addition to the service contract we are pleased to offer a one-off annual service or breakdown call out for your appliance.

## Maintenance tips

- Appliances on a sealed heating system:
  - Regularly check the system pressure.
- Do not obstruct the flue outlet or the air inlet.
- Use in hard water areas:
  - In exceptionally hard water areas a device to prevent scale formation may be fitted. Installation of a scale inhibitor assembly should be in accordance with the requirements of the local water company. An isolating valve should be fitted to allow for servicing.



Important note:

- ▶ If you have to add water regularly in your heating system, call a competent, qualified person.

## 2.5 Benchmark standard



The Benchmark initiative is a code of practice to encourage the correct installation, commissioning and servicing of domestic central heating appliances and system equipment.

A “checklist” is dispatched with every appliance and can be found towards the back of the Installation, Commissioning and Servicing Instructions. This is a vital document that needs to be completed by the installer at the time of installation. It confirms that the appliance has been installed and commissioned according to the manufacturer's instructions.

The service record provides space for the recording of regular servicing of the appliance/heating system and this can become a valuable document when, for example, you wish to sell the property. The service record will show a potential purchaser that the heating system has received regular professional maintenance and servicing during its lifetime.

The Benchmark initiative aims to:

- Raise standards among professional installers
- Build and maintain high safety standards in the industry
- Improve customer satisfaction levels
- Make a contribution to the nation's commitment to climate change

## 2.6 User caution

- It is forbidden for any interference with the appliance other than those actions allowed in this document.



**CAUTION:** Incorrect use

- ▶ Any incorrect use can result in danger to the householder.

### 3 Prepare for operation

#### 3.1 Open vented heating systems

Appliances that can be connected to open vented heating systems will have the pressure maintained automatically by the header tank feeding the system.

#### 3.2 Sealed heating systems

Appliances that can be connected to sealed heating systems are pre-pressurised before operation, this pressure must be maintained for safe use of the appliance.

Your installer will have fitted a pressure gauge and filling loop so that the system can be monitored and adjusted as necessary.

- ▶ Check regularly that the pressure is maintained.
- ▶ Re-charge the system if the pressure gauge reads less than 1 bar.
- ▶ If a permanent significant decrease or increase in pressure is indicated on the pressure gauge, contact your installer or maintenance engineer.

##### 3.2.1 Checking the system pressure

Your installer will advise you of the optimum operating pressure.

- ▶ Check the system pressure from the pressure gauge.
  - **Static pressure** is when appliance is cold and has not fired for heating or hot water. This will generally be 1 - 1.5 bar.
  - **Operating pressure** is when the appliance is firing for a heating or hot water demand. This will generally be 1 - 2 bar.
- ▶ Top up the heating water, if the pressure is too low.

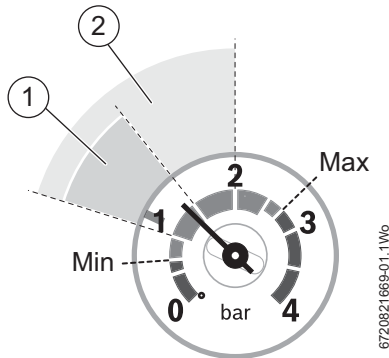


Fig. 2 Pressure gauge for checking the operating pressure

- [1] Static pressure range
- [2] Operating pressure range

##### 3.2.2 Constantly re-pressuring the system pressure

Constantly having to re-pressuring the heating system should be investigated as the concentration of inhibitor protection in the system will be reduced; this can result in corrosion within the heating system reducing the efficiency and increasing contaminants.

- ▶ Check for leaks on heating system (pipe work and radiator valves).
- ▶ Contact your installer or maintenance engineer if a permanent significant decrease or increase in pressure is indicated on the pressure gauge.

### 3.3 Topping up the system pressure



If the pressure gauge reads more than 1.5 bar as a result of over filling, Bleed one radiator until the pressure gauge returns to between 1 and 1.5 bar.



**NOTICE: System fill method**

Your installer should have informed you where to find the filling system and instructed you in its use.

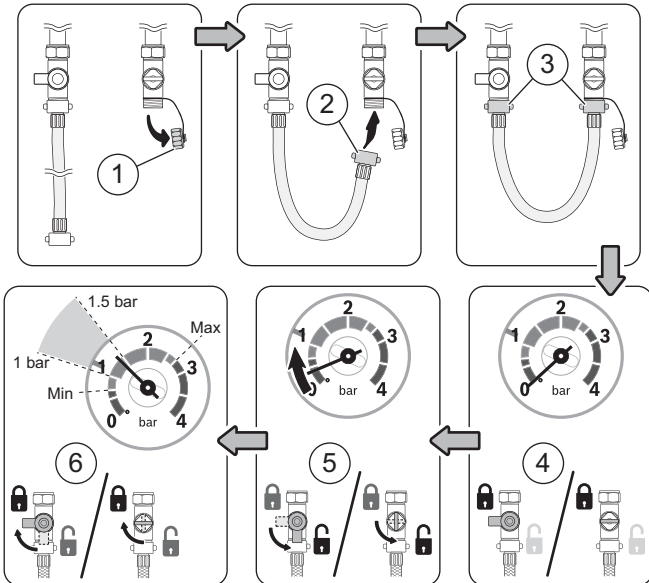
- ▶ To comply with the Water Authority regulations you must disconnect the external filling loop after re-pressurisation.

**External filling loop**

Once the external filling loop and pressure gauge has been located, follow the instructions for re-pressurising the system.

- ▶ Unscrew the blanking cap [1].
  - ▶ Attach the hose [2] to the valve.
    - Usually one end of the hose is already connected to one of the system fill isolation valves.
  - ▶ Ensure both ends [3] of the hose are screwed on hand tight.
  - ▶ Monitor the pressure gauge.
    - The system fill isolation valves [4] are in a closed position (the handle/screwdriver slot is across the valve).
  - ▶ Turn the handle/screwdriver slot through 90° to open valves and slowly fill the system.
    - The system fill isolation valves [5] are opened (the handle/screwdriver slot is in-line with the valve).
    - The needle on the pressure gauge will start to rise.
  - ▶ Set the pressure between 1 and 1.5 bar pressure.
  - ▶ Turn the handles/screwdriver slots back, through 90°, to close the valves.
    - The system fill isolation valves [6] are in a closed position (the handle/screwdriver slot is across the valve).
- If the pressure drops off, below 1 bar as a result of the air bleeding:

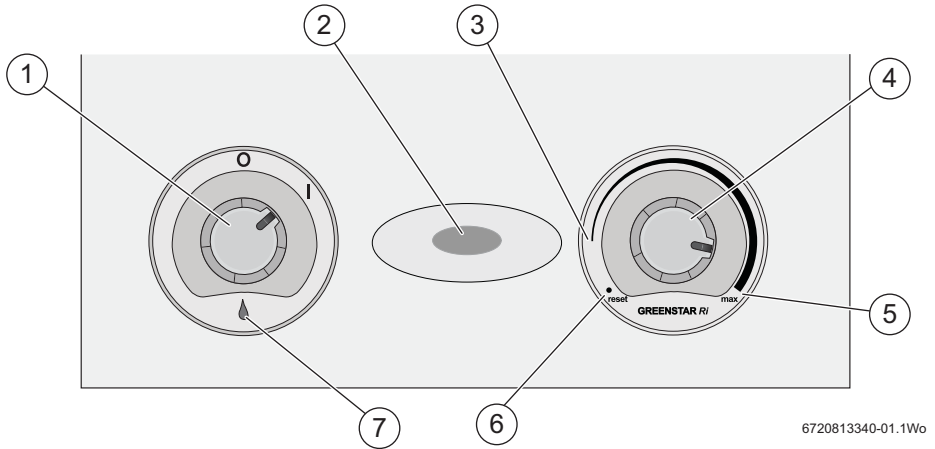
- ▶ Top up the system pressure. Once the pressure has settled between 1 and 1.5 bar.
- ▶ Remove the hose [2] and replace the blanking cap [1].



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## 4 Controls



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Fig. 3 Controls

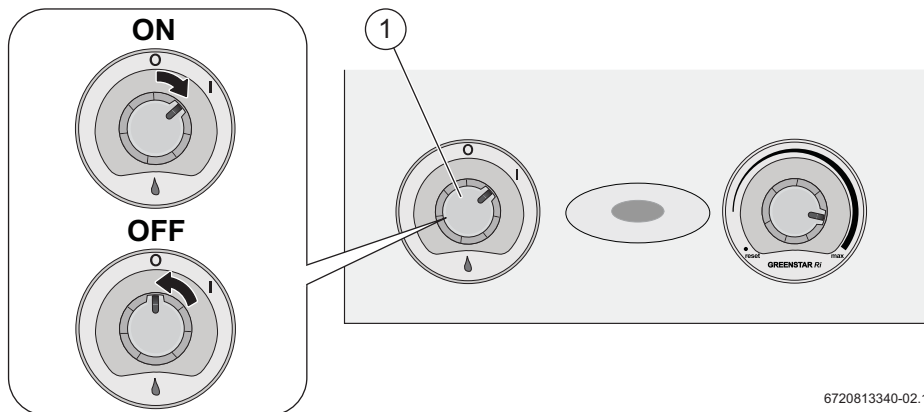
1 Mains power ON/OFF knob	5 Maximum flow temperature position
2 Indicator/Diagnostic light "MAINS ON/OFF" (Blue)	6 Appliance reset position
3 Minimum flow temperature position	7 Burner ON indicator light (Green)
4 Flow temperature control knob	

Table 3

## 4.1 Operating the appliance

### 4.1.1 Switching the appliance ON/Off

- ▶ Turn the "MAINS POWER" knob to 1 to switch ON the appliance.
- ▶ Turn the "MAINS POWER" knob to 0 to switch OFF the appliance.



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Fig. 4 Switch ON/OFF appliance.

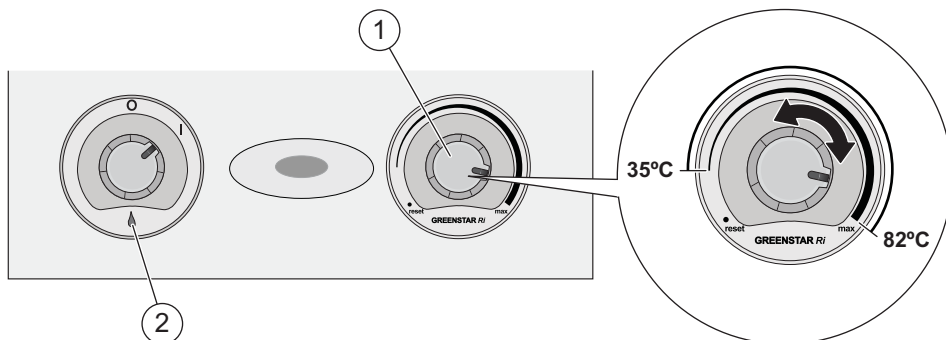


Appliance frost protection function

- ▶ The appliance frost protection function will not work if the mains power knob is switch to OFF.

### 4.1.2 Setting the appliance flow temperature

1. Turn the central heating temperature control knob [1] to the desired level.  
The temperatures range available is between approximately 35 to 82°C. This is not the room temperature but the flow temperature through to the system (radiators and/or hot water cylinder).
2. When there is a demand for heat, the appliance burner indicator [2] will illuminate to indicate that the appliance is firing.



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Fig. 5 Central heating temperature control

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### 4.1.3 Turning the central heating off during the summer

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Do not switch the appliance off at the mains power switch or mains fused spur.

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- ▶ To turn your central heating off during warm periods:
- ▶ Set the programmer to OFF
  - Please refer to the programmer manufacturer's instructions.

-or-

- ▶ Turn the room thermostat temperature down to minimum.

### 4.1.4 Appliance frost protection

If you are leaving your property unoccupied during cold weather, please leave your programmer on constant and your room thermostat set to 15°C.

- ▶ If the temperature within the appliance falls below 8°C the pump will run to circulate water and prevent the system freezing.
  - If the temperature does not rise to 9°C within 30 minutes of the pump operating, the appliance will fire up to provide heat to bring the temperature up.
- ▶ If the temperature within the appliance falls below 5°C the appliance will fire, bringing the appliance temperature up to 25°C to avoid the possibility of the system freezing.
- ▶ This process will be repeated until such time that the appliance temperature does not drop below 5°C.

## 5 Clearances and ventilation information

### 5.1 Appliance clearances

Your installer will have provided adequate space around the appliance for operation, safety and servicing/maintenance access.

- The following details covering the clearances service and maintenance for the appliance.



**CAUTION:** Risk of damage to appliance or property

The appliance will overheat if the clearance space around the appliance is restricted by objects.

- ▶ Do not restrict this space with the addition of cupboards, shelves etc. next to or around the appliance.
- ▶ Do not store any combustible materials on or next to the appliance, such as clothes, towels, paper or plastic bags.

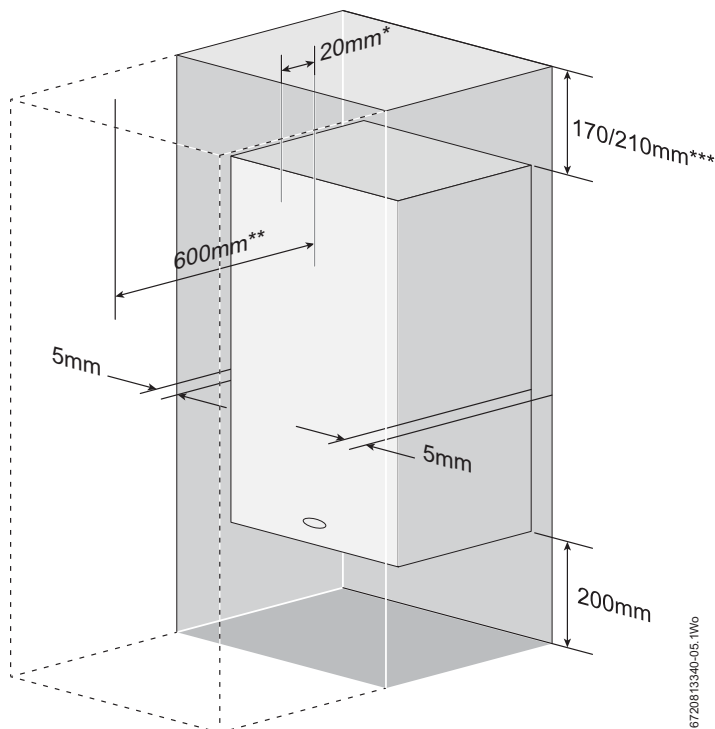


Fig. 6 Service clearances

[\*] Minimum clearances to removable door

[\*\*] Minimum clearances required for servicing

[\*\*\*] Height for either 60/100 flue or 80/125 flue above the appliance

### 5.2 Ventilation information



**Ventilation considerations**

- ▶ Do not place objects to hinder the air circulation required by the appliance.
- ▶ The installation premises may require ventilation to be fitted according to its features or use.

## 6 Malfunction or failure

If you believe there is a problem with your central heating or hot water supply, in the first instance it is advised to carry out the following basic checks before you contact your installer/maintenance engineer and report the error and appliance type.

### Basic checks

Some items to check before placing a call are:

- Is the electrical power switched on to the appliance?
- Is the programmer/timer set to ON or in an ON period?
- Is the room thermostat set too high/low?
- Is the cylinder thermostat set too high/low?
- Is the cold water main turned on?
- Appliances on a sealed heating system.
  - Is the static system pressure (when appliance is cold) between 1 - 1.5 bar?
- Do you have gas?
  - Are other gas appliances working, gas cooker/hob for example?
  - Has your credit run out on your gas pre-payment meter?

Details of your installer should be available in the Commissioning Checklist or can be recorded in the following section.

### Installer/maintenance engineer

Installer/maintenance engineer details	
Engineer name:	
Company name:	
Company address:	
Telephone:	
Email:	

### Worcester, Bosch Group

The appliance is supported in the UK and Eire by Worcester, Bosch Group.

Specialist service engineers are available to attend a breakdown occurring on this appliance.

Contact details can be found at the rear of this manual or via the Worcester Bosch website [www.worcester-bosch.co.uk](http://www.worcester-bosch.co.uk).



Invoices for attendance and repair work carried out on this appliance by any third party will not be accepted.

- No charge will be made for parts and/or labour providing:
  - The appliance fault is found and the appliance is within the guarantee period. Reasonable evidence of this must be supplied on request. i.e. the Commissioning Checklist.
- A call-out charge will be made where:
  - The appliance is outside the guarantee period.
  - Our Field Service Engineer finds no fault with the appliance.
  - The cause of breakdown is misuse or with other parts of your plumbing/heating system, or with equipment not supplied by Worcester, Bosch Group.



No appliance fault is found on over 30% of all service calls.

- ▶ In the case of a suspected fault, refer to the basic checks earlier in this section.

In the event of a appliance fault or breakdown please contact Worcester, Bosch Group appointments team on 0330 123 9339. Your advisor will arrange for an engineer to call with the minimum of delay; under normal circumstances this will be from 1 - 3 working days (excluding weekends and bank holidays) for priority breakdown situations (no hot water and/ or heating).

## 6.1 Fault finding

Problem	Cause	Remedy
Operation/fault light (blue) flashing	No gas supply/low gas supply pressure	▶ Contact your gas supplier.
	Condensate outlet blocked	▶ If it is safe to do so, check your condensate pipe outlet for blockages, such as ice or foreign objects.
	Flue blocked	▶ If it is safe to do so, check your flue outlet for damage or blockages.
Desired room temperature is not reached	Thermostatic radiator valve(s) set too low	▶ Increase thermostatic radiator valve setting(s).
	Temperature control for central heating flow on appliance set too low	▶ Increase central heating flow temperature control setting
	Low temperature setting on the room thermostat	▶ Increase settings on room thermostat
Radiators are too hot	Temperature control for central heating flow on appliance set too high	▶ Reduce central heating temperature by turning down the Central Heating control on appliance. Note: This could prevent your property reaching the desired temperature during cold weather periods.
Desired room temperature is too high	Thermostatic radiator valve(s) are set too high	▶ Turn down thermostatic radiator valves/room thermostat
	Room thermostat is set too high	▶ Turn down room thermostat.
Heating stays on for too long	Clock is incorrectly set	▶ Check setting and adjust
No blue Operation/Fault Indicator	Momentary power failure	▶ Disconnect appliance supply, wait a few seconds then reconnect.
Hot water temperature too low	Temperature set too low on cylinder thermostat control.	▶ Check setting and adjust
Hot water temperature too high	Temperature set too high on cylinder thermostat control.	▶ Check setting and adjust

Table 4 Fault finding

## 6.2 Appliance reset

In the event of a fault, the blue mains indicator light will flash if there is a fault.

To reset the appliance:

- ▶ Turn the Central heating temperature knob [1] anticlockwise to the “RESET” position [2] and hold for approximately five seconds and then turn the knob back to the original temperature setting.
- ▶ When the appliance resets the mains indicator [3] will no longer be flashing and the appliance will function normally, dependant on the programmer and room thermostat settings.

A reset fault condition will exist if the electrical power to the appliance has been interrupted. Reset the appliance as described above.

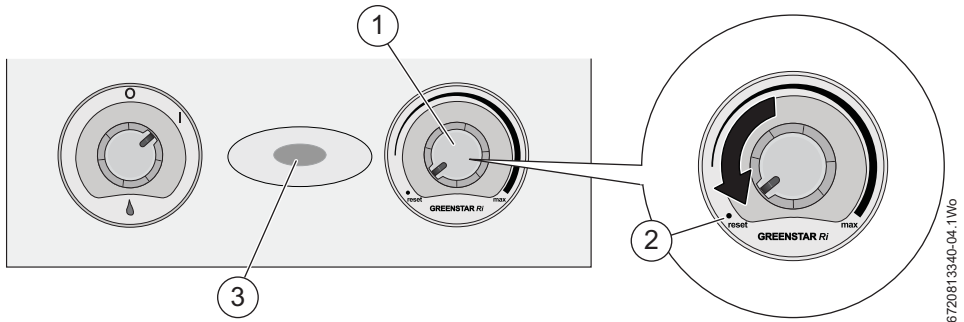


Fig. 7 Reset button and mains light



If the fault remains and cannot be cleared by resetting the appliance, contact Worcester, Bosch Group for assistance.

### 6.3 Extreme cold weather

In certain instances where the condensate pipe work is run externally or in an unheated area, such as a garage, the condensate pipe work can be at risk of freezing, even if well insulated.

A frozen/blocked condensate pipe will cause the appliance to shut down. Worcester, Bosch Group have helpful videos available on our website in the Customer service section.



**WARNING:** Falling hazard!

Failure to follow this guidance may result in personal injury.

- ▶ Only attempt to thaw a condense pipe that can be reached from ground level, and that is easily accessible.
- ▶ Never attempt to thaw a condense pipe that is at height.



**CAUTION:** Risk of damage to pipe work!

Thermal shock damage to plastic from frozen condensate pipe and boiled water used to thaw the pipe.

- ▶ **DO NOT** use boiling water to thaw the condensate pipe!

If the condensate pipe has frozen:

- ▶ Locate the blockage.
  - It is likely that the pipe is frozen at the most exposed point outside the building or where there is an obstruction to flow. This could be the open end of the pipe, at a bend or elbow, or where there is a sag in the pipe in which condensate can collect.
  - The location of the blockage should be identified as closely as possible before taking further action.
- ▶ Thaw the frozen pipe.
  - The pipe can be thawed by applying a hot water bottle, a microwaveable heating pack (the sort used for muscular aches and pains) or a cloth soaked in hot water to the exterior of the pipe, close to the point of blockage.
  - Hot water, but not boiling, can also be poured onto the pipe from a watering can or similar container.
  - Care must be taken at pedestrian areas where this water may freeze and create a slip hazard.
- ▶ Worcester, Bosch Group have available on our website helpful videos in the Customer service section to aid in thawing a frozen pipe.
- ▶ Once the pipe has been thawed the appliance must be reset, press the reset button for five seconds and wait two to three minutes for the appliance to restart.
- ▶ If the appliance does not restart, contact Worcester, Bosch Group Appointments Team on: 0330 123 9339.
- ▶ Contact your installer in order to find a permanent solution to the problem.

## 7 Environment protection/ disposal

Environmental protection is a fundamental corporate strategy of the Bosch Group.

The quality of our products, their economy and environmental safety are all of equal importance to us and all environmental protection legislation and regulations are strictly observed.

We use the best possible technology and materials for protecting the environment taking account of economic considerations.

### Packaging

Where packaging is concerned, we participate in country-specific recycling processes that ensure optimum recycling.

All of our packaging materials are environmentally compatible and can be recycled.

### Used appliances

Used appliances contain valuable materials that can be recycled. The various assemblies can be easily dismantled. Synthetic materials are marked accordingly. Assemblies can therefore be sorted by composition and passed on for recycling or disposal.



## 8 Tips on energy saving

### Heating economically

The appliance provides a high level of comfort whilst keeping fuel consumption and the environment effects as low as possible.

The appliance is controlled in such a way that it delivers heat at the correct rate and only if there is a clear demand from the system.

### Central heating systems with room thermostat/thermostatic radiator valves

With modern heating systems set around a 20 °C heat loss, the optimum setting for a condensing appliance will be approximately 73 °C for the central heating temperature. This is to ensure a return temperature of less than 52 °C.

The system must be balanced correctly and the radiators may need upgrading. This allows the appliance to condense as much as possible for the central heating system.

The temperature of each room can be set individually (except primary room with the room thermostat) using the thermostatic radiator valves.

### Room thermostats

Reducing the setting of the room thermostat by 1 °C can reduce fuel consumption by up to 10%.

### New control systems

Upgrade your heating control system if necessary with the latest equipment available.

### Roof insulation

Around 30% of the heat loss from a property is through the roof. Replace any old insulation with new insulation, preferably of around 200mm thickness or more.

### Window frames

Single glazed windows, particularly those with steel frames, can lose a great deal of heat. Consideration should be given to replacement with PVCu or wooden framed double glazed units.

### Radiators

If a radiator is sited underneath a window, its performance will be affected if the curtains are allowed to drape over the radiator. Shelves fitted above or in front of the radiator should also be avoided.

It is advisable to manually adjust all thermostatic radiator valves every 2 - 3 months to prevent them sticking. Ensure radiator valves are correctly set and not damaged.

### Draughts

Try to ensure that draughts around doors, windows, letter boxes and keyholes etc. are reduced by using a suitable draught excluder.

**WARNING:** Air vents

- ▶ Do not block or seal any air vents that are installed to ensure that the central heating appliance operates safely.

### Curtains

Lined curtains, or heavier full length curtains can provide excellent insulation. However, always ensure that the curtains do not drape over radiators.

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## 9 Your guarantee

This appliance has a guarantee against faulty materials or workmanship from the date of installation subject to the following terms and conditions:

- During the period of this guarantee any components of the appliance which are proven to be faulty or defective in manufacture will be exchanged or repaired free of charge by Bosch Thermotechnology Ltd.
- The householder may be asked to prove the date of installation, that the appliance was correctly commissioned and, where appropriate, the first year's service has been carried out to the satisfaction of Bosch Thermotechnology Ltd., when requested. These should be documented as a part of the Commissioning Checklist.
- The appliance has been used only for the normal domestic purposes for which it was designed.

This guarantee does not affect your statutory rights.

### 9.1 Guarantee registration

Your appliance carries a guarantee against faulty material or manufacture subject to Terms and Conditions.

Guarantee Registration can be completed:

- On-line:
  - You can register on our website:  
[www.worcester-bosch.co.uk/guarantee](http://www.worcester-bosch.co.uk/guarantee)
- By phone:
  - You can register by ringing 0330 123 2552.
- By post:
  - Please send your completed form to:  
Worcester, Bosch Group, Cotswold Way, Warndon, Worcester, WR4 9SW.

To read full terms & Conditions please visit us on-line at [www.worcester-bosch.co.uk/guarantee](http://www.worcester-bosch.co.uk/guarantee).

Your statutory rights are not affected by the manufacturer's guarantee.

## 10 Glossary

### Central heating systems

All radiators must be heated at an even rate. If the top of a radiator is at a lower temperature than the bottom then it should be bled by releasing air through the bleed screw at the top of the radiator.

Ask your installer to show you how this is done.

If this appliance is fitted to a sealed system and water leaks are found or if excessive bleeding is required, then a service engineer must be contacted to inspect the installation and rectify any fault.

Only additives that are compatible with aluminium may be used in the system. Any incompatible additive used will invalidate the warranty.

### Plumbing and condensate drain

This is a condensing appliance and the flue terminal will, at times give out a plume of water vapour. This is quite normal.

The appliance produces condensate which is discharged regularly by a syphon within the appliance via a plastic pipe to a drain. This pipe must not be blocked or altered in any way.

### Room thermostat / programmer

A room thermostat / programmer must be fitted to control the central heating. This controls the times and temperatures of the central heating, preventing the appliance from firing unnecessarily. Refer to the instructions supplied with the thermostat and programmer for further information.

### Thermostatic radiator valves

Thermostatic radiator valves must be fitted in sleeping accommodation. It is recommended that this type of valve is fitted to all but one of the radiators. The remaining radiator, where the room thermostat is located, must be uncontrolled and left open.

### Pump over run function

After the appliance has finished a demand for central heating or hot water, the pump may continue to run for a short while to dissipate the heat from within the appliance.

### Pump anti-seizure

If there has been no heating demand for 24 hours the appliance will run the system pump for a few seconds to reduce the possibility of pump seizure during long periods of inactivity.

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Worcester, Bosch Group is a brand name of  
Bosch Thermotechnology Ltd.

[worcester-bosch.co.uk](http://worcester-bosch.co.uk)

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