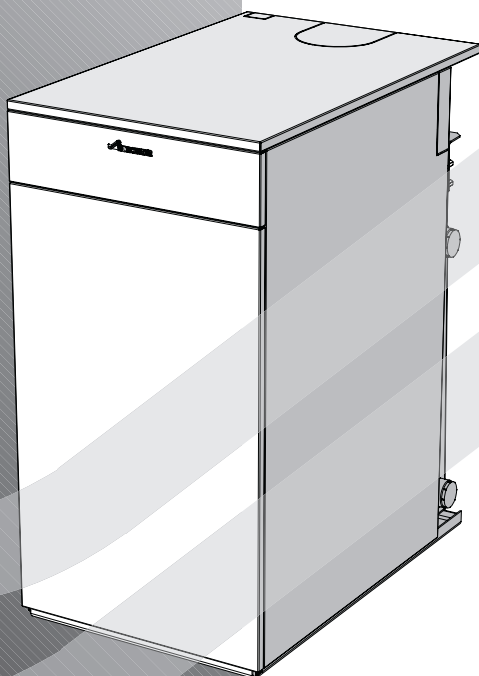


# GREENSTAR UTILITY 32/50kW & 50/70kW

FLOOR STANDING OIL-FIRED CONDENSING BOILER  
CONVENTIONAL FLUE & ROOM SEALED FLUE

FOR FULLY PUMPED OPEN VENT OR SEALED CENTRAL HEATING SYSTEMS AND HOT  
WATER CYLINDERS



THE APPLIANCE IS FOR USE WITH 28 SECOND  
KEROSENE ONLY

GB/IE

 **WORCESTER**  
Bosch Group

## USER INSTRUCTIONS & CUSTOMER CARE GUIDE

8-716-109-712a (04.05)

## CONTACT INFORMATION

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### WORCESTER BOSCH:

	TEL:	FAX:
<b>Contact centres:</b>		
UK:	08547 256206	757536
SCOTLAND ONLY:	01506 -	441687
EIRE:	01494 0099	
<b>Other enquiries:</b>		
MAIN RECEPTION:	01905 754624	754619
TECHNICAL:	08705 266241	
SPARES:	01905 752571	
LITERATURE:	01905 752556	
SALES:	01905 752640	
WEBSITE:	www.worcester-bosch.co.uk	

### WATER TREATMENT:

FERNOX 01799 550811  
[www.fernox.com](http://www.fernox.com)

SENTINEL 0151 420 9595  
[www.betzdearborn.com/sentinel](http://www.betzdearborn.com/sentinel)

### OIL FIRING TECHNICAL ASSOCIATION:

OFTEC 0845 6585080  
[www.oftec.org](http://www.oftec.org)

## USER INSTRUCTIONS & CUSTOMER CARE GUIDE

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### PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE OPERATING YOUR APPLIANCE.

THESE INSTRUCTIONS ARE APPLICABLE TO THE WORCESTER BOSCH APPLIANCE MODEL(S) STATED ON THE FRONT COVER OF THIS MANUAL ONLY AND MUST NOT BE USED WITH ANY OTHER MAKE OR MODEL OF APPLIANCE.

IF YOU ARE IN **ANY DOUBT** CONTACT THE WORCESTER BOSCH TECHNICAL HELPLINE.

PLEASE KEEP THESE INSTRUCTIONS WITH THE INSTALLATION AND SERVICING INSTRUCTIONS IN A SAFE PLACE OR WITH THE APPLIANCE AFTER INSTALLATION OR SERVICING.

### DO NOT INTERFERE WITH ANY SEALED COMPONENTS.

### ABBREVIATIONS USED IN THIS GUIDE:

Ø	Diameter
CH	Central Heating
DHW	Domestic Hot Water
TRV	Thermostatic Radiator Valve
IP	Ingress Protection
CF	Conventional flue
RS	Room sealed flue
N/A	Not allowed

SEDBUK Seasonal Efficiency for Domestic Boilers in the United Kingdom

OFTEC Oil Firing Technical Association for the Petroleum Industry

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INTRODUCTION

USING YOUR  
APPLIANCE

ENERGY  
SAVING

MAINTENANCE

GUARANTEE

**OIL SMELLS, LEAKS OR FUMES FROM THE APPLIANCE:**

- ▶ Extinguish any naked flames
- ▶ Open windows and doors
- ▶ Switch off the appliance electricity supply
- ▶ Isolate the fuel supply to the boiler
- ▶ Contact boiler engineer

**HEALTH & SAFETY:**

The appliance contains no asbestos and no substances have been used in the construction process that contravene the COSHH Regulations (Control of Substances Hazardous to Health Regulations 1988). Where applicable, the CE mark indicates compliance with relative EU Directives.

**COMBUSTIBLE AND CORROSIVE MATERIALS:**

Do **not** store or use any combustible materials (paper, thinners, paints etc.) inside or within the vicinity of the appliance.

The combustion air must be kept clear of chemically aggressive substances, which can corrode the appliance and invalidate any warranty.

**SAFETY PRECAUTIONS****FITTING & MODIFICATIONS:**

Fitting the appliance and any controls to the appliance may only be carried out by a competent engineer in accordance with the relevant Installation Regulations.

Flue systems must not be modified in any way other than as described in the fitting instructions.

Any misuse or unauthorised modifications to the appliance, flue or associated components and systems could invalidate the warranty. The manufacturer accepts no liability arising from any such actions, excluding statutory rights.

**SERVICING:**

The user must have the system regularly serviced by a competent, qualified OFTEC registered engineer using approved spares, to help maintain the economy, safety and reliability of the appliance.

The appliance should be serviced once each year after installation unless the installation conditions and usage demand more frequent services.

**DO NOT OPERATE THE APPLIANCE WHEN:**

- ▶ The appliance, flue or system is incorrectly fitted, faulty or damaged
- ▶ The flue terminal outlet fitted on the outside wall or roof is obstructed or damaged
- ▶ There are fumes, fuel leaks or fuel smells from the fuel supply, appliance or flue system
- ▶ The system is empty or frozen
- ▶ The condensate pipe is blocked or restricted
- ▶ The appliance clearances are inadequate
- ▶ The air supply is restricted or vents damaged.

## EXCELLENCE COMES AS STANDARD

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Thank you for purchasing a Greenstar oil-fired condensing boiler manufactured by Worcester Bosch. The company prides itself on manufacturing boilers to the strictest quality control standards throughout every stage of production.

Worcester Bosch has led the field in innovative appliance design and performance for more than 40 years. This heritage means all products are of exceptional quality and proven reliability.

The condensing range in particular, is extremely energy efficient, converting more of the fuel consumed into heat offering you economical running costs and value for money. It sits in SEDBUK band A, at the top of the energy rated appliances available.

There is also the assurance of our no-nonsense parts and labour guarantee - backed up by 'Worcester Total Cover', an optional complete maintenance scheme to keep your boiler operating at peak condition and efficiency.

To find out more about Worcester Bosch, use the 'Contact Information' shown on the inside front cover.

Read these instructions carefully to get the best from your appliance.

### **CENTRAL HEATING SYSTEMS:**

During the first few hours of operation of the central heating system, check that all radiators are being heated at an even rate.

If the top of a radiator is at a lower temperature than the bottom then it should be vented by releasing air through the venting screw at the top of the radiator. Ask your installer to show you how this is done.

When excessive venting or water leaks are found in the system you must contact a service engineer to inspect the installation and rectify any fault.

Only use additives compatible with the appliance and system. Use of incompatible additives can cause damage and will invalidate the appliance guarantee.

### **Sealed heating systems:**

Where the appliance is fitted to a sealed heating system your installer will inform you of the minimum and maximum pressure which must be indicated on the pressure gauge.

Regularly check the pressure is maintained and contact your installer or maintenance engineer if there is a noticeable, permanent drop in pressure. If the system loses pressure it should be repressurised and the cause of the fall investigated.

### **CONDENSATE:**

This is a high efficiency appliance using condensing technology which will under normal operation produce a regular discharge of condensate to drain and at times, give out a plume of water vapour from the flue terminal.

### **ROOM THERMOSTAT:**

A room temperature controller must be fitted to control the central heating. Refer to the instructions supplied with the thermostat for information on siting and setting.

## **GENERAL INFORMATION**

### **THERMOSTATIC RADIATOR VALVES:**

It is recommended that this type of valve is fitted to all but one of the radiators (or at least those in the sleeping accommodation). The remaining radiator, which must be where the room thermostat is located, should be un-controlled and must be left open.

### **SERIAL NUMBER:**

The boiler serial number and model number should always be quoted in any contact with Worcester.

The boiler serial number and model number are printed on a data label which is located on top of the Electrical Control Box. To access the data label you must first remove the top panel.

## GENERAL INFORMATION

### BOILER LOCATION:

This boiler is only suitable for installing internally within a property at a suitable location onto a fixed rigid non-combustible surface at least the same size as the boiler and capable of supporting the boiler weight.

The boiler is not suitable for external installation unless a suitable enclosure is provided.

**THIS BOILER IS NOT SUITABLE FOR ROOF SPACE INSTALLATION.**

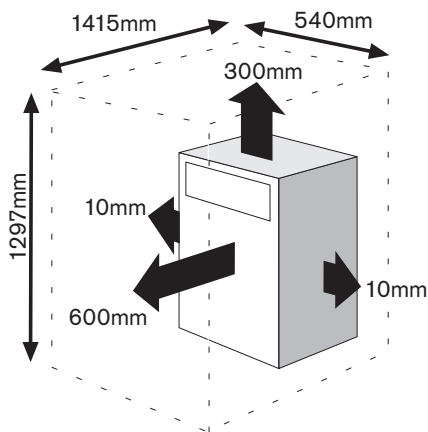
### VENTILATION:

Air vents must be functional at all times and the air supply must not be restricted or contaminated.

The appliance clearances must meet the minimum shown opposite for servicing and venting purposes.

Do not place clothes or objects to hinder the air circulation required by the appliance.

Conventional flue appliances require an adequate supply of fresh air which must be delivered to the boiler for combustion purposes through a permanent inlet, such as an air brick, into the area where the boiler is situated.



### Conventional flue appliances:

Minimum area of air inlet for combustion:

248cm<sup>2</sup> for 32/50kW appliances

358cm<sup>2</sup> for 50/70kW appliances.

## GENERAL INFORMATION

If a cupboard or compartment which is to be used for storage or airing is built around the appliance after installation there must be a perforated non-combustible partition e.g. metal mesh around the boiler. Further information can be found in BS 5410 which also describes venting requirements.

### Venting compartments:

- ▶ Ventilation must be provided for boilers fitted into compartments as described in BS 5410
- ▶ A minimum of 2 air vents must be fitted, one at low level and another at high level onto the same wall using the same air for circulation.
- ▶ Free air must not be taken from a room or internal space containing a bath or shower and must not communicate with a protected area such as a hall, stairway, landing, corridor, lobby, shaft etc.
- ▶ Air vents must allow access for clean fresh air and must be sited to comply with the flue terminal position requirements.
- ▶ Air ducting runs must not exceed 3m.
- ▶ Low level air vents must be less than 450mm from the floor.
- ▶ A warning label must be added to the vents with a statement to the effect: 'Do not block this vent. Do not use for storage'.

### MINIMUM AIR VENT AREA (cm<sup>2</sup>) FOR APPLIANCES INSTALLED IN A COMPARTMENT:

*\*Internal air to and from a space/room inside the building*

*\*\*External air to and from directly outside the building*

#### Conventional flue:

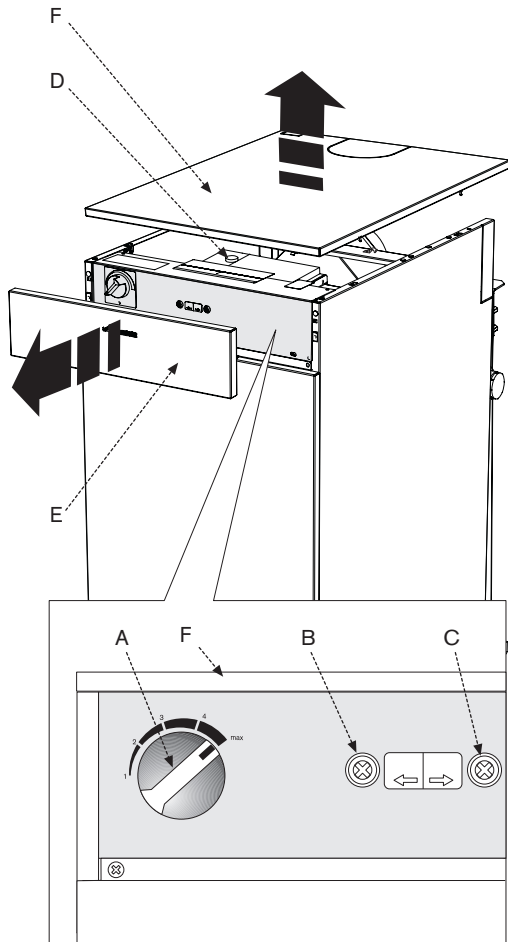
kW	Internal* ventilation		External** ventilation	
	High Level	Low Level	High Level	Low Level
32/50	495	743	248	495
50/70	715	1073	358	715

#### Room Sealed flue:

kW	Internal* ventilation		External** ventilation	
	High Level	Low Level	High Level	Low Level
32/50	495	495	248	248
50/70	715	715	358	358



## CONTROLS



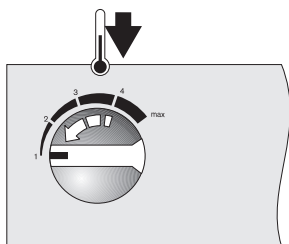
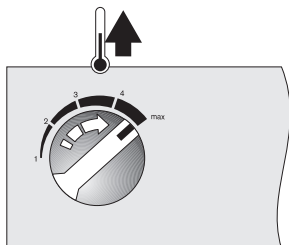
- A Temperature control  
*(behind upper front panel)*
- B Reset button - boiler overheat thermostat  
*(behind upper front panel)*
- C Reset button - flue overheat thermostat  
*(behind upper front panel)*
- D Reset button - burner lockout  
*(top of burner under top panel)*
- E Upper front panel  
*(pull squarely away from the boiler to remove)*
- F Top panel  
*(lift squarely up from boiler to remove)*

USING YOUR  
APPLIANCE

## OPERATING THE APPLIANCE

### TEMPERATURE CONTROL:

USING YOUR  
APPLIANCE



### SWITCHING THE BOILER ON/OFF:

- ▶ To switch on the boiler; turn ON the oil and electricity supply to the boiler
- ▶ Check the programmer/timer is correct and it is set to ON
- ▶ Set the room thermostat to the desired setting
- ▶ Open and set thermostatic radiator valves as required
- ▶ Turn the temperature control knob to the required setting
- ▶ To switch off the boiler; turn the programmer/timer to OFF for heating and hot water. *If the appliance is left unused and exposed to freezing conditions; shut off all the mains supplies, isolate the boiler and drain the system and boiler.*

### SETTING TEMPERATURE:

- ▶ Turn the control clockwise to increase the water temperature
- ▶ Turn the control anti-clockwise to reduce the water temperature

The minimum and maximum ranges of the heating control positions are approx. 60°C to 82°C.

### CONTROLLING CENTRAL HEATING:

- ▶ Set the programmer/timer (if fitted) to the correct time with the required ON/OFF periods
- ▶ Turn the room thermostat to the temperature required
- ▶ Set thermostatic radiator valves to the required temperature for each room.

## OPERATING THE APPLIANCE

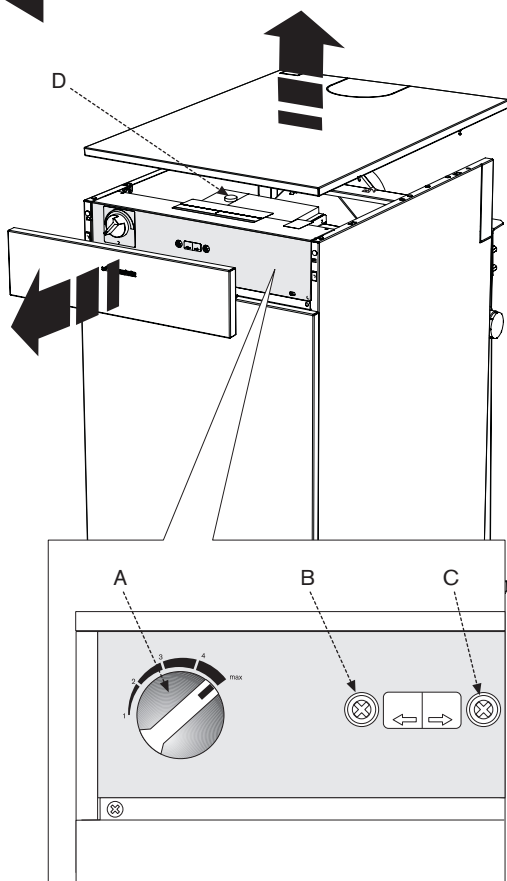
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### **FROST PROTECTION:**

- ▶ Use a suitable anti-freeze/inhibitor at the correct strength to protect against freezing
- ▶ A frost thermostat should be fitted to the system where the system is most exposed and at risk of freezing.

**ACCESSING RESET BUTTONS:**

- B Boiler overheating reset (remove upper front panel)
- C Flue overheating reset (remove upper front panel)
- D Burner lockout indicator/reset (remove top panel, located on the top of the burner control box)



**OPERATING THE APPLIANCE**

**FAULT CONDITIONS:**

If the boiler fails to operate:

- ▶ Check the oil level in the oil storage tank
- ▶ Check there is not a power cut and the power supply to the boiler is switched on
- ▶ Check the programmer is set to on
- ▶ Check the room thermostat and where fitted, the radiator thermostats are set correctly
- ▶ Remove upper front panel and check the thermostat control knob (A) is turned on

*If the above checks prove satisfactory and the boiler remains off, then a safety device in the boiler control system may have been activated to prevent the boiler from operating:*

**Automatic reset:**

- ▶ An excessive boiler operating temperature can activate a thermostat to switch off the boiler. This thermostat automatically resets when the boiler has cooled down sufficiently.

**Do not attempt to repeatedly start the boiler using the manual reset buttons as persistent failure indicates a fault requiring the attention of a service engineer.**

**Boiler overheating (manual reset):**

- ▶ Should the boiler temperature rise beyond the automatic reset level, a high limit thermostat will switch the boiler off, indicated by button (B) standing proud. When the boiler has cooled down, press and release button (B) to reset the thermostat.

**Flue overheating (manual reset):**

- ▶ Excessive combustion gas temperatures can activate a thermostat to switch off the boiler, indicated by button (C) standing proud. Press and release button (C) to reset the thermostat.

**Burner lockout (manual reset):**

- ▶ A flame failure safety device can switch the boiler off and cause a lockout condition if the ignition fails to make a satisfactory start or the flame fails for any reason.

Remove the boiler top panel. Check the lockout button (D), if this is illuminated it indicates a 'lockout' condition. To cancel lockout, wait 2 minutes, then press and release button (D).

## TIPS ON ENERGY SAVING

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### **Heating economically:**

The boiler is designed to provide a high level of comfort while keeping oil consumption and the resulting environmental effect as low as possible.

The central heating control on the boiler should be set as low as possible while still maintaining a comfortable room temperature.

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

### **Roof insulation:**

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

### **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.

### **Curtains:**

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

### **Draughts:**

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

**Warning: do not block or seal any air vents that are installed to ensure the central heating boiler (or other appliance) operate safely.**

## TIPS ON ENERGY SAVING

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### **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 with the latest equipment available. The minimum level of control for a heating system is a programmer, room thermostat and thermostatic radiator valves.

### **Radiators:**

More often than not radiators will be sited underneath a window, so the warm air from the radiator heats the colder incoming air from the window.

The performance of the radiator will be affected if the curtains are allowed to drape over the radiator or shelves are fitted above it.

The positioning of furniture and tables in front of the radiator should also be avoided.

It is advisable to manually adjust all radiator valves every 2-3 months to prevent them from sticking. To help prevent accidents, it is also important that the plastic tops of all valves are always in position and not cracked or damaged.

Care should be taken when vacuum cleaning carpets to avoid damage to valves and pipework.

The heating system and the outputs of the radiators have been carefully selected by your installer. The temperature obtainable in any given room is dependent on all radiators being operated at the same time. If you decide to turn off radiators in unused rooms, spare bedrooms etc., you may experience slightly lower room temperatures in rooms adjacent to unheated rooms.

## MAINTAINING YOUR APPLIANCE

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

In order to realise its maximum working life and to ensure it continues to operate at peak efficiency and performance, it is essential that your boiler receives regular, servicing and maintenance checks from a competent person beyond the initial guarantee period.

If you would like to know more about a Worcester Bosch service contract, please tick the appropriate box on your warranty registration card.

If your appliance requires servicing please contact a Worcester Bosch contact centre (see inside front cover for details).

PROBLEM	CAUSE	REMEDY
Desired room temperature is not reached	Thermostatic radiator valve(s) set too low	Increase thermostatic radiator valve setting(s)
	Temperature control on boiler set too low	Increase flow temperature control setting
	Air trapped in heating system	Bleed radiators and if necessary, recharge heating system
Desired room temperature exceeded by large amount	Radiators are too hot	Turn down thermostatic radiator valves / room stat
Temperature rises instead of falling	Clock is incorrectly set	Check setting



## FAULT OR BREAKDOWN

This appliance is supported in the UK by Worcester Bosch, part of BBT Themotechnology UK Ltd.

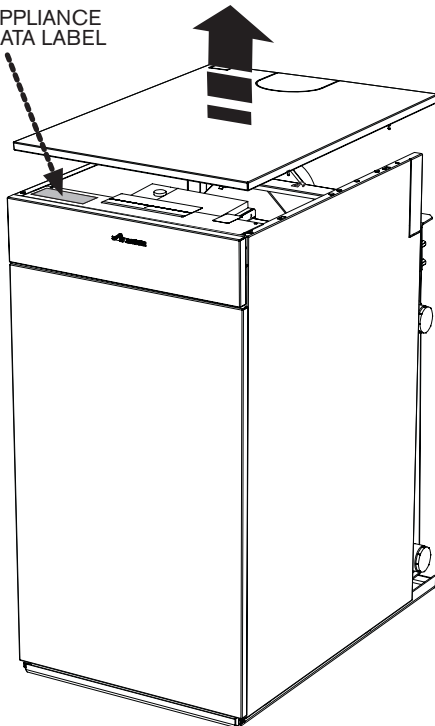
Specialist factory trained Service Engineers are available to attend a breakdown occurring on this appliance.

No charge will be made for parts and/or labour providing:

- ▶ An appliance fault is found and the appliance has been installed within the past 24 months
- ▶ Reasonable evidence of this must be supplied on request
- ▶ A call-out charge will be made where:
  - ▶ The appliance has been installed for over 24 months OR
  - ▶ Our Field Service Engineer finds no fault with the appliance (see Note). OR
  - ▶ The cause of breakdown is misuse or with other parts of your plumbing/heating system, or with equipment not supplied by BBT Themotechnology UK Ltd.

Note: NO APPLIANCE FAULT IS FOUND ON OVER 30% OF ALL SERVICE CALL OUTS.

APPLIANCE  
DATA LABEL



Please read this guide carefully to gain a good understanding of the operation of your appliance. In the case of a suspected fault, refer to the fault finding section of this guide.

If in doubt contact Worcester Bosch quoting the boiler serial and model number. These numbers are printed on a Data Label which is located as shown opposite. (You can record this information on the inside back cover of this manual.)

In the event of an appliance fault or breakdown please contact a contact centre (see inside front cover for details). Your service administrator will arrange for an Engineer to call with the minimum of delay. Under normal circumstances this will be from 1 to 3 working days (excluding weekends) for priority breakdown situations (no hot water and/or heating).

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

## GUARANTEE

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This appliance is guaranteed against faulty materials or workmanship for a period of 24 calendar months from the date of installation subject to the following conditions:

- ▶ That during the period of this guarantee any components of the unit which are proved to be faulty or defective in manufacture will be exchanged or repaired free of material charges and free of labour charges if repaired directly by BBT Thermotechnology UK Ltd. Invoices for attendance and repair of this appliance by third parties will not be accepted for payment by BBT Thermotechnology UK Ltd.
- ▶ That the householder may be asked to prove the date of installation that the appliance was correctly commissioned and, where appropriate, that the 12 month service inspection has been carried out to the satisfaction of BBT Thermotechnology UK Ltd, when requested. The guarantee card must then be returned within 30 days of installation.
- ▶ That any product or part thereof returned for servicing under the guarantee must be accompanied by a claim stating the Model, Serial Number and Date of Installation.
- ▶ That BBT Thermotechnology UK Ltd will not accept responsibility for damage caused by faulty installation, neglect, misuse or accidental damage the non-observance of the instructions contained in the Installation and Users Instructions leaflets.
- ▶ That the appliance has been used only for normal domestic purposes, for which it was designed.
- ▶ That this guarantee applies only to equipment purchased and used in mainland Great Britain.

This guarantee is given in addition to all your normal statutory rights.

*Worcester, Bosch Group is a trading name of BBT Thermotechnology UK Ltd.*

## GUARANTEE REGISTRATION

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You should complete and return the postpaid Guarantee Registration Card within 30 days of purchase.

Returning the card will register you as the owner of your new appliance and will assist us in maintaining an effective and efficient customer service by establishing a reference and permanent record for your boiler.

This does not affect your statutory rights.

*For your own record:*

MODEL: \_\_\_\_\_

SERIAL No. \_\_\_\_\_

(See identity label inside the appliance casing)

TYPE / SIZE: \_\_\_\_\_

DATE OF INSTALLATION: \_\_\_\_\_

GUARANTEE

# **USER INSTRUCTIONS & CUSTOMER CARE GUIDE**

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

**Worcester, Bosch Group**

**Cotswold Way, Warndon, Worcester WR4 9SW**

Part Number: 8-716-109-712a (04.05)

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