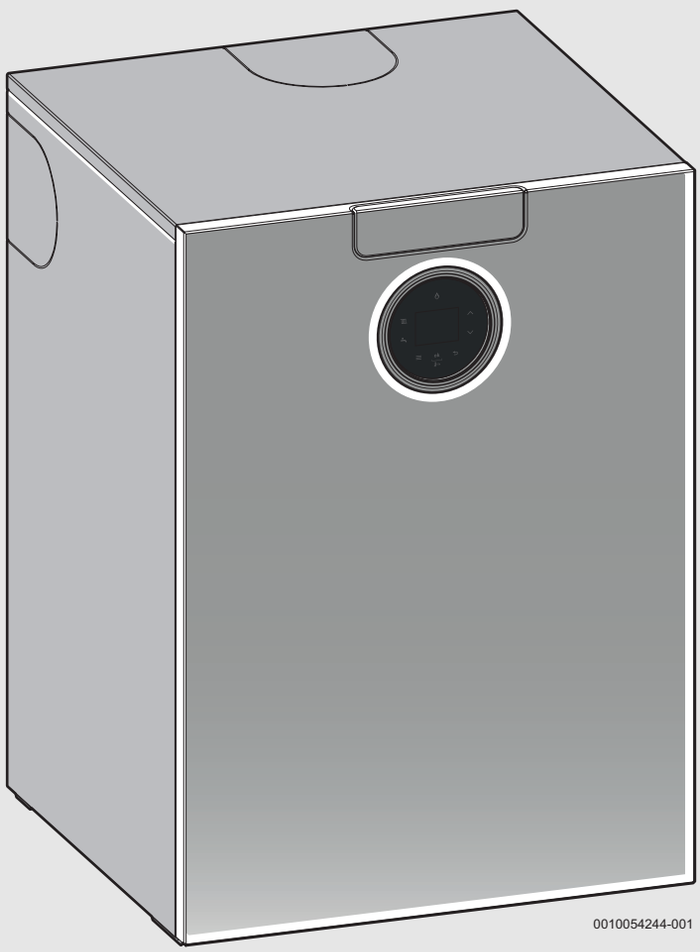
Operating Instructions

Floor standing gas fired condensing appliance

Greenstar 8000 F Combi

GR8700iF C 35 | GR8700iF C 50



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Preface

Dedicated to heating comfort.

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

Worcester, Bosch group has led the field in innovative product 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 products 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 Explanation of symbols and safety instructions

1.1 Explanation of symbols

Warnings

In warnings, signal words at the beginning of a warning are used to indicate the type and seriousness of the ensuing risk if measures for minimizing danger are not taken.

The following signal words are defined and can be used in this document:

DANGER

DANGER indicates that severe to life-threatening personal injury will occur.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in serious personal injury or danger to life.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor to moderate personal injury.

NOTICE

ATTENTION indicates that material damage may occur.

Important information

The info symbol indicates important information where there is no risk to people or property.

Additional symbols

Symbol	Meaning
▶	a step in an action sequence
→	a reference to a related part in the document
•	a list entry
–	a list entry (second level)

Table 1

1.2 General safety instructions

⚠ Notices for the target group

These operating instructions are intended for the heating system operator.

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

- ▶ Read and retain the operating instructions (heat generator, heating controller, etc.) prior to operation.
- ▶ Observe the safety instructions and warnings.
- ▶ Operate the heat generator only with the casing fitted and closed.

⚠ Determined use

The product may only be used for the heating of boiler water and for DHW heating.

Any other use is considered inappropriate. We assume no liability for damage occurring due to non-permitted use.

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

⚠ Danger to life from poisoning by flue gas

There is a danger to life from escaping flue gas.

- ▶ **Never modify any parts through which flue gas is routed**.

If flues are damaged or leaking, or if you smell flue gas, observe the following rules.

- ▶ Switch off the heat source.
- ▶ Open doors and windows
- ▶ Warn your neighbours and leave the building immediately.
- ▶ Prevent third parties from entering the building.
- ▶ Notify an approved contractor.
- ▶ Have any defects rectified.

⚠ Danger to life from carbon monoxide

Carbon monoxide (CO) is a poisonous gas, which arises during the incomplete combustion of fossil fuels such as oil, gas or solid fuels.

Dangers arise, if carbon monoxide escapes from the heating system due to a fault or a leak and collects unnoticed in enclosed spaces.

You can neither see, taste nor smell carbon monoxide.

To avoid danger from carbon monoxide:

- ▶ Have the heating system inspected and serviced regularly by an approved contractor.
- ▶ Use a CO detector, which gives an alarm in good time if CO escapes.
- ▶ If you suspect a CO leak:
  - – Warn your neighbours and leave the building immediately.
  - – Call an approved contractor.
  - – Have any defects rectified.

⚠ Inspection, cleaning and maintenance

The user is responsible for ensuring the heating system is safe and environmentally compatible.

Non-existent or improper inspection, cleaning and maintenance may result in personal injury, including danger to life or material damage.

We recommend that you enter into a contract covering an annual inspection and responsive cleaning and maintenance with an approved contractor.

- ▶ Have work carried out only by an approved contractor.
- ▶ Have the heating system inspected by an approved contractor at least once a year.
- ▶ Have any required cleaning or maintenance work carried out immediately.
- ▶ Have any defects in the heating system remedied immediately, independent of the annual inspection.

⚠ Fittings and modification

Only a competent engineer can remove the appliance case and carry out any work, in accordance with the relevant Installation Regulations.

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.

⚠ Combustion air/ambient air

The air in the installation location must be free of flammable or chemically aggressive substances.

- ▶ Do not store or use any flammable or explosive materials (paper, petrol, thinners, paints, etc.) in the vicinity of the heat source.
- ▶ Do not store or use any corrosive substances (solvents, adhesives, chlorinated cleaning agents, etc.) in the vicinity of the heat source.

⚠ General considerations

- ▶ The boiler must be installed in a well ventilated area. The openings must be kept in good condition.
- ▶ The vents or any other component contributing to the functioning of the boiler must not be reduced or sealed.
- ▶ We recommend an annual service of the appliance by an approved engineer to ensure reliable and efficient operation.

⚠ 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 product model/s stated on the front cover only.
- ▶ These instructions apply in the UK only and must be followed except for any statutory obligation.

2 Product Information

2.1 Declaration of Conformity

2.1.1 Declaration of Conformity

The design and operating characteristics of this product comply with the British, European and supplementary national requirements.

The UKCA and CE markings declare that the product complies with all the applicable British and European legislation, which is stipulated by attaching these markings.

You can request the complete text of the Declaration of Conformity from the UK address indicated in this document.

2.1.2 Simplified UK/EU Declaration of conformity regarding radio equipment

Bosch Thermotechnik GmbH hereby declares, that the product Greenstar 8000 F Combi described in these instructions complies with the Directive UK S.I. 2017/1206 (UK) 2014/53/EU.

You can request the complete text of the UK/EU Declaration of Conformity from the UK address indicated in this document.

2.2 Appliance identification and serial number

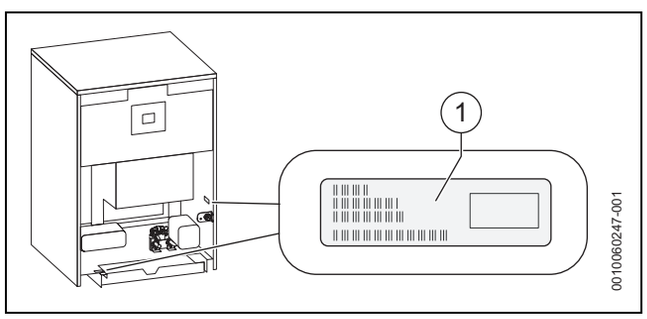

Fig. 1 Position of data label

The data label [1] contains information of the appliance model and serial number. There are two locations to the left on the bottom of the appliance frame and on the right hand side panel.

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

The appliance model and serial number can be found on the appliance data label.

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.

- ▶ To ensure the continued safe, reliable and environmentally optimum operation of the boiler, it must be thoroughly serviced annually by a competent, qualified person, such as a Worcester service engineer, British Gas engineer or other Gas Safe registered engineer.
  - – Having a contract covering annual servicing, cleaning and maintenance is a good way to ensure this is not missed.
  - – It is important that any required maintenance or repairs are carried out without delay.
- ▶ 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 by a competent, qualified person, Worcester service engineer, British Gas 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 the appliance's maximum working life, and to ensure the appliance continues to operate at peak efficiency and performance, it is essential that servicing and maintenance checks are performed at least once a year by a 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**.

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 should be fitted. Installation of a salt based water softener should be in accordance with the requirements of the local water company. A bypass valve must be fitted and used to fill/top up the heating system with untreated water.

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.

3 Prepare for operation

3.1 Sealed heating system

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.

- ▶ Check regularly that the pressure is maintained.
- ▶ Re-charge the system if the pressure indicator reads less than 0.8 bar.
- ▶ If a permanent significant decrease or increase in pressure is shown on the pressure indicator, contact your installer or maintenance engineer.

Pressure indicator

- ▶ Type of pressure indicator for the system pressure.
  - – Pressure gauge (an analogue dial showing the pressure)
  - – Pressure menu (a digital readout of the pressure)
- ▶ Your appliance may have one or both types of methods to indicate the system pressure. The type of method used on this appliance will be detailed in the following section.

Location of the pressure gauge.

The pressure gauge [1] is located on a bracket on the right hand side of the appliance.

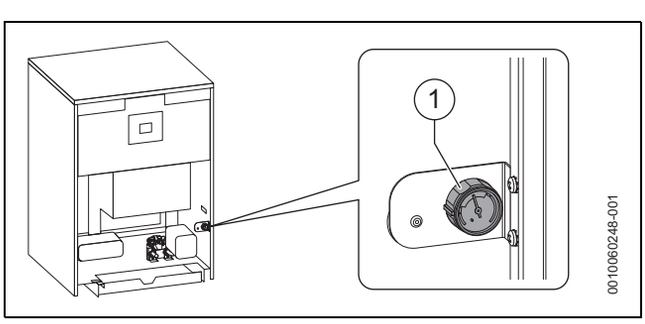

Fig. 2 Pressure gauge location

3.1.1 Checking the system pressure

The appliance pressure gauge/pressure menu indicates the pressure within the heating system during standby and operating periods.

Your installer will advise you of the optimum operating pressure.

- ▶ Check the system pressure on the pressure gauge/pressure menu.
  - – **Static pressure** is when appliance is cold and has not fired for heating or hot water. This will generally be 0.8 - 1.7 bar.
  - – **Operating pressure** is when the appliance is firing for a heating or hot water demand. This will generally be 1 - 2 bar.

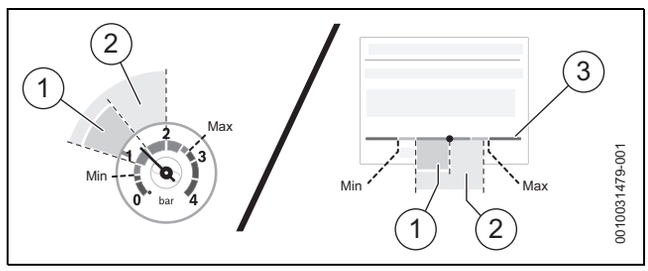

Fig. 3 Checking the operating pressure

[1] Static pressure range.
[2] Operating pressure range.
[3] Pressure menu indicator.

Appliances with Pressure gauge

- ▶ Check the system pressure on the pressure gauge
  - – **Indicator in red zone**: pressure is too low or too high
  - – **Indicator in green zone**: pressure is normal
- ▶ Top up the heating water, if the pressure is low or too low.

Appliances with Pressure menu on the HMI

The pressure menu can be accessed via the **Boiler status** screen.

- ▶ Press the menu key (☰). Select and confirm **Boiler status**. The screen **Boiler status** with a pressure menu indicator appears.
- ▶ Check the system pressure on the HMI display.
  - – **Indicator in red zone**: pressure is too low or too high.
  - – **Indicator in yellow zone**: pressure is low or slightly too high.
  - – **Indicator in green zone**: pressure is normal.
- ▶ Top up the heating water, if the pressure is low or too low.

3.1.2 Low pressure indication

Low pressure (shaded area [A]) will be indicated on the appliance:

- **Appliances with a pressure gauge** [1].
  - – The needle is within the area between 0 and 1 bar.
- **Appliances with a pressure menu on the HMI** [2].
  - – The pressure indicator is within the area between 0 and 0.79 bar in the pressure menu display (left hand yellow and red zone).
  - – Additionally there is a message displayed on the HMI.

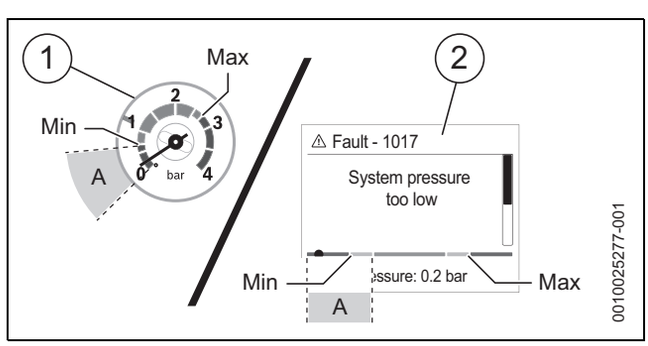

Fig. 4 Low pressure indication

[1] Pressure gauge
[2] Pressure menu
[A] Low pressure area

3.1.3 Constantly re-pressurising the system

Constantly having to re-pressurise the heating system should be investigated as it is an indicator of potential leaks and the concentration of inhibitor protection in the system will be reduced; this can result in corrosion within the heating system, reducing efficiency and increasing contaminates.

- ▶ Check for leaks on heating system (pipework and radiator valves).
- ▶ Contact your installer or maintenance engineer if a recurring significant decrease or increase in pressure is shown on the pressure indicator (pressure gauge or pressure display).

System pressure increasing:

- ▶ If the system pressure repeatedly increases and you need to vent air from the radiators, refer to → section 9.4 "System gassing troubleshooting", page 18.

3.2 Topping up the system pressure

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

NOTICE

System fill method

- ▶ The supplied Integral Keyless filling link and optional accessories, Intelligent Filling System/Keyed filling link comply with the current Water Authority regulations.

To aid in filling the system.

- ▶ Ensure the Central Heating is on.

Accessing the internal filling link.

Pressure gauge location.

- ▶ The pressure gauge [4] is located on a bracket on the right hand side of the appliance.

Refer to figure 5.

- ▶ Grip the top outer sides of the front panel [1] pull forward to release the ball catches [2].
- ▶ Lift away from the lip on the baseplate.
- ▶ Stow the panel [1] safely.
- ▶ Look to bottom right hand side of appliance for filling loop [3] location.

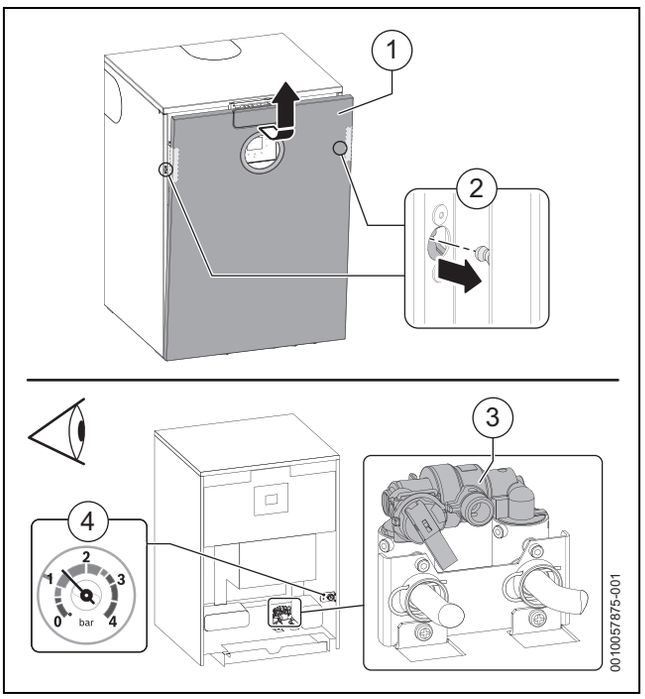

Fig. 5 Access and location of filling link (keyless filling link example shown).

Keyless filling link.

Pressure gauge location.

- The pressure gauge is located on a bracket on the right hand side of the appliance.

Locate the filling link (bottom right hand side of appliance) and follow the instructions for re-pressurising the system.

Refer to figure 6.

- To start the filling process, pull the lever [1] down.
  - Pressure gauge needle [2] begins to move.
    -or-
  - HMI [3] pressure menu indicator moves, the displayed message may change.
- To stop the filling process, Release the lever [1] when the:
  - Pressure gauge needle reaches between 1 and 1.5bar [5].
    -or-
  - HMI [4] indicates the pressure is ok, the pressure menu indicator is in the green zone.
- Top up the system pressure, if as a result of the air bleeding the pressure drops off.

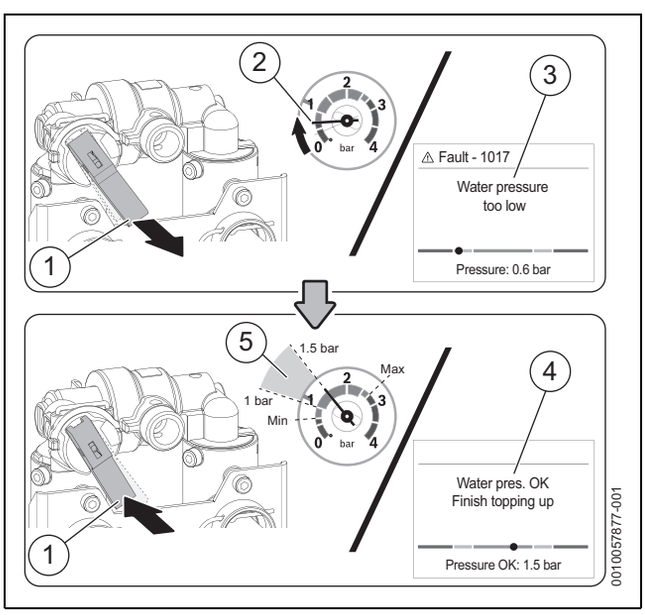

Fig. 6 Keyless filling link

(optional accessory)

Automatic filling facility

The automatic filling device refills the water into the heating system as required. Your installer programmes the filling device according to your heating system. Have your installer explain the function of the automatic filling device to you.

Automatic refilling keeps the pressure in the heating system at the programmed value.

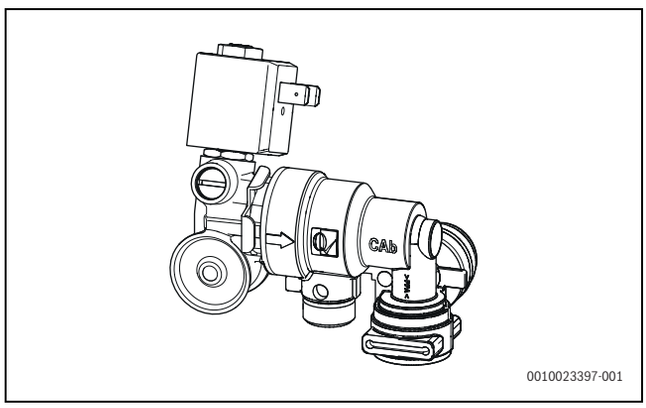

Fig. 7 Automatic filling facility

(optional accessory)

Keyed filling link

Pressure gauge location.

- The pressure gauge is located on a bracket on the right hand side of the appliance.

Locate the filling key and filling link (bottom right hand side of appliance), follow the instructions for re-pressurising the system.
Refer to figure 8.

- Locating the filling key into position.
  - Push the filling key [3] firmly into the body of the filling link, ensuring the arrow [4] on the key shaft lines up with the open padlock [1] symbol.
  - Turn the filling key [3] to the right, to the stop, ensure the key is locked and that it cannot still turn. The arrow [4] should line up with the closed padlock [2] symbol. This bridges the gap between the two sections of the filling loop.

Re-pressurise the system.

Do not over-tighten the white knob [7] when closing.

- To start the filling process, turn the white knob [7] to the left.
  - The needle [5] on the pressure gauge will start to rise.
    -or-
  - HMI [6] pressure menu indicator moves, the displayed message may change.
- To stop the filling process, turn the white knob [7] to the right to close the valve when:
  - Pressure gauge needle reaches between 1 and 1.5bar [8].
    -or-
  - HMI [9] indicates the pressure is ok, the pressure menu indicator is in the green zone.
- Top up the system pressure, if as a result of the air bleeding the pressure drops off.

Once the pressure has settled between 1 and 1.5 bar.

- Ensure the valve is closed.
- Remove the filling key [3].
  - Turn the filling key to the left [3], to the stop, so that the arrow [4] lines up with the open padlock [1] symbol.
  - Pull the key [3] straight down to remove. Please remember to store the key in a safe place.

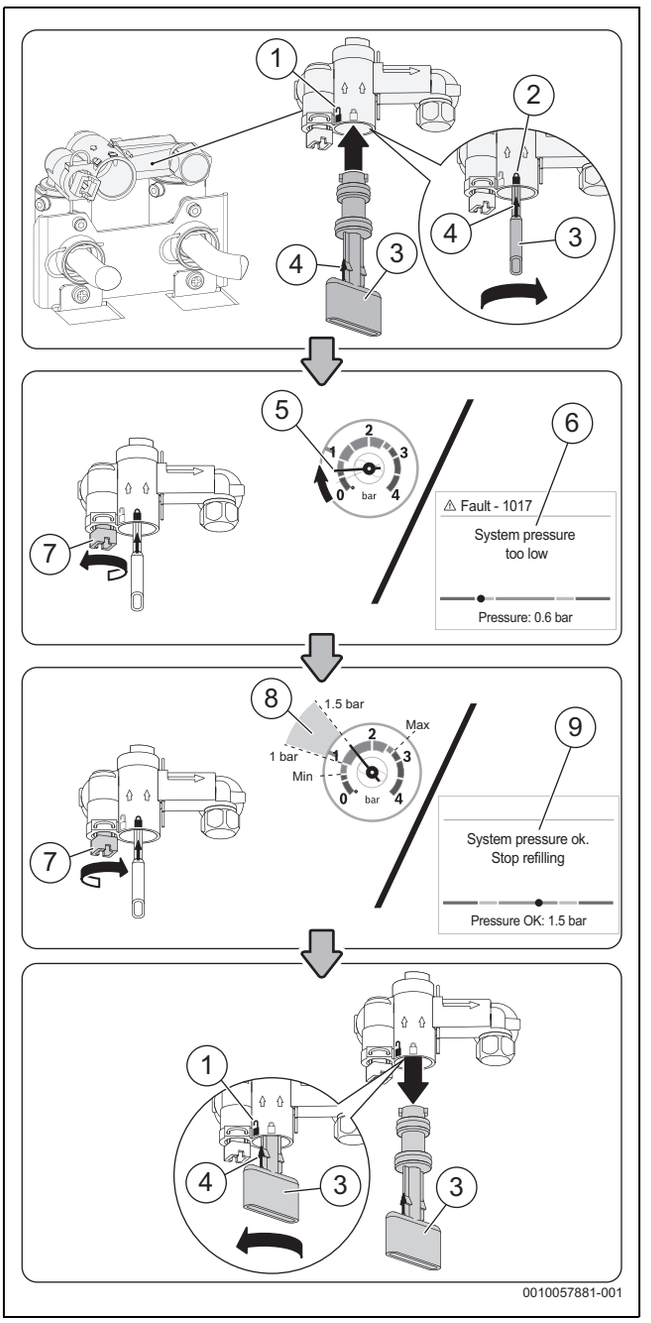

Fig. 8 Keyed filling link

If the pressure indicator reads more than 1.7 bar as a result of over filling:

- Bleed one radiator until the pressure indicator returns to between 1 and 1.7 bar.
- It is good practice to bleed any excess air that has entered the heating system due to pressure loss. Locate and open the radiator's bleed/ vent point, closing the valve when water begins to flow.
- If, through normal appliance operation, the PRV pipe starts to leak, it could be a sign of system pressure being too high. In this instance please bleed a radiator as described above.

4 Operation

These operating instructions describe the operation of the gas-fired condensing boiler. Therefore please also observe the operating instructions for the user interface.

4.1 Control panel overview

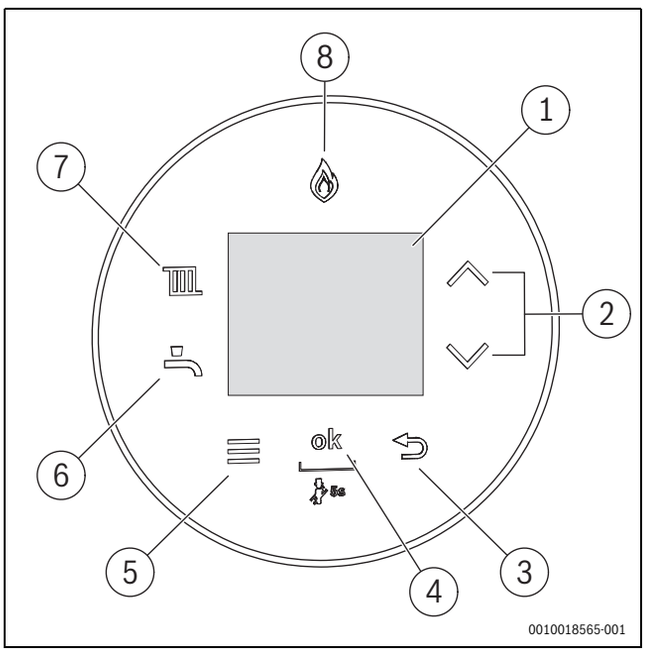

Fig. 9 Overview

[1] Display.
[2] ▲ and ▼ buttons: To navigate through menus and increase/ decrease settings.
[3] ⮌ button: Return/back.
[4] **ok** button[1]: Selection/save settings.
[5] Menu button.
[6] Hot water button: Hot water mode on/off, adjusting the hot water temperature.
[7] Heating button: Heating mode on/off, set the maximum flow temperature.
[8] Burner display: Illuminates when the burner is alight.

4.2 Overview of keys

Key	Function
	Heating • Heating mode
	Domestic Hot Water (DHW) • DHW mode
	Menu • Access to menus
ok [1]	**Select/save** • Confirm a selection • Save setting • DHW eco/preheat
	Back arrow • Exit menu (without saving changes)
∧	**Up arrow** • Menu navigation • Increase values
∨	**Down arrow** • Menu navigation • Reduce values

1) When the display is in power save mode the **ok** button will re-activate the screen

Table 3 Overview of keys

4.3 Symbols on the display

Symbol	Explanation
	Connection with the Wi-Fi network (only available with accessories)
	Connection with Radio Frequency (RF) transmitter, e.g. Comfort+ I RF room thermostat (only available with Key accessories)
	Central heating adjustment [1] **On**: Heating is on. **Auto**: Heating is switched on and off according to programmed times for heating. **Advance**: Move to the next on or off time and directly switch on or off heating. **Off**: Heating is off.
	Central heating off
	Domestic Hot water adjustment **On**: Hot water preheat is on **Auto** [1]: Hot water is switched on and off according to programmed times for hot water. **Once** [1]: Hot water heating on, from the first programmed switched-on time to the last programmed switch-off time. **Off (eco)**: Hot water preheat off (boiler in eco mode)
	Hot water off
	Displays with the appliance status code and diagnostic code during a fault condition.
	Cleaning mode, locks the screen for 15 seconds to enable cleaning.
	Central heating or hot water can be switched either permanently on or off.
	Energy consumption [2]
kWh	Gas consumption

1) This feature is available the timer Key accessories

2) The displayed energy values are estimated based on the internal data of the appliance. Under real conditions many factors influence the energy consumption and the displayed energy values differ from the energy values of an energy meter. The energy values are for information and should not be used for billing purposes. The energy values can be used to compare the energy consumption between different days / weeks / months.

Table 4 Symbols on the display

The heating and hot water system has been set up by the installer to its optimum settings.

▶ It is advised to make a note of these settings before adjusting so that you can return to these optimum settings in the future.

4.4 Adjusting the appliance flow temperature

4.4.1 Setting the flow temperature

With underfloor heating systems observe the maximum permissible flow temperature.

The maximum flow temperature can be adjusted between 40 °C and 82 °C [1].

- ▶ Press the key.
  The set maximum flow temperature appears.
- ▶ Press the ▲ or ▼ keys to set the desired maximum flow temperature.

Flow temperature	Sample application
Approx. 50 °C	Underfloor heating system
Approx. 60 °C [1]	Radiator heating system

1) In certain cases, for example, where radiators are undersized or homes are poorly insulated higher flow temperatures may be required, however, please refer to the relevant scalding risk advice in this manual.

Table 5 Maximum flow temperature

- ▶ The setting is saved automatically after two seconds.
  Then the ✓ symbol is briefly displayed.

WARNING

Risk of scalding!

- ▶ This appliance is supplied with the CH control set at approximately 60 °C, a temperature that should be suitable for most installations. When the boiler switches from CH to DHW, the temperature of the hot water may briefly exceed the DHW set point if the CH temperature is set higher than the DHW temperature. If the CH temperature is changed to 65 °C or above, it is advisable to fit a thermostatic mixing valve (TMV) at the point of use (e.g. before the bath hot tap or shower) to protect vulnerable people from scalding.

Heating On/Off

- ▶ Press the key.
  The set maximum flow temperature appears.
- ▶ Press the **ok** key.
  This toggles the heating On ( ) or Off ( ), which is shown on the display.

4.5 Hot water mode

Setting the DHW temperature

- ▶ Press the key.
  The set DHW temperature appears.
- ▶ To set the desired DHW temperature, press the ▲ or ▼ keys.
- ▶ The setting is saved automatically after two seconds.
  Then the ✓ symbol is briefly displayed.

WARNING

Risk of scalding!

- ▶ This appliance is supplied with the CH control set at approximately 60 °C, a temperature that should be suitable for most installations. When the boiler switches from CH to DHW, the temperature of the hot water may briefly exceed the DHW set point if the CH temperature is set higher than the DHW temperature. If the CH temperature is changed to 65 °C or above, it is advisable to fit a thermostatic mixing valve (TMV) at the point of use (e.g. before the bath hot tap or shower) to protect vulnerable people from scalding.

Setting preheat mode or eco mode

Press the **ok** key to switch between **Eco**/**Preheat**.

In **Preheat** mode, the hot water heat exchanger is kept pre-heated to reduce the time taken to deliver hot water at the tap.

Eco mode is an energy saving feature which disables the Preheat function. **Eco** mode is enabled by default, during the initial appliance start up.

Available with Key (accessories):

- ▶ If DHW **Preheat** is on **Auto**, press the **ok** key to switch between **Auto** and **Advance**.

4.6 Setting the heating control device

Observe the operating instructions of the heating controller. This shows you:

- ▶ how to set the room temperature.
- ▶ how to heat economically and save energy.

Heating/DHW via time program (Key control accessories)

Time programs are available with Key control accessories fitted. If a time program is available and the heating/DHW mode is set on **Auto** press the **ok** key to select **Advance**.

Auto: Heating/DHW mode is switched on and off according to programmed times.

Advance: Switch to **Advance** to move to the next central heating/DHW on or off time.

1) The maximum value can be reduced by the service technician.

4.7 Operating the menu

Opening and closing the menu

- ▶ To open the menu, press the ☰ key.
- ▶ To exit the menu, press the ☰ key again.

-or-

- ▶ Press the ⮌ key.

Changing the setting values

- ▶ To highlight a menu item, press the ▲ key or the ▼ key.
- ▶ Select the menu item with the **ok** key.
- ▶ To change the value, press the ▲ or ▼ key.
- ▶ Press the **ok** key.
  The new value is saved.

Exiting the menu without saving values

- ▶ Press the ⮌ key.

4.8 Settings in the menu

The factory settings are **highlighted** in the following table.

Menu item	Function definition
Heating mode[1)]	• **On** • Auto: Activate time program. • Once: Heating is on from the first programmed on time to the last programmed off time without off periods. • Off
Heat. time prog.[1)]	Timer for heating: Weekday(s) selection, day program and timer adjustment (→ 5.3 "Setting the time program", page 14).
DHW preheat	• On • Auto[1)] • Once[1)] • **Off**
DHW time prog.[1)]	Timer for hot water: Weekday(s) selection, day program and timer adjustment (→ 5.3 "Setting the time program", page 14).[1)]
Boiler status	Current system values including the pressure indicator.
Information	The current system values and the active operating conditions can be called up in the Information menu. Changes are not possible. • System pressure • Hot water Temp. (DHW temperature) • Weather comp. (where fitted) • System Fill (automatic filling) [2)] • Key (Type of installed key is shown, e.g. "Comfort + RF Key") • Internet connect.
Energy consump.	Display Gas consumption • Last 24h • Last 30 days
Settings	• Time: Set the current time.[1)] • Date: Set the current date.[1)] • DST: enable automatic time shift change summer/ winter time • Parental lock – On – **Off** • Display – Switch off after: Set the time after which the display is switched off. – Brightness: Set the display brightness. • Key illum. (Key illumination) • Language: Change the language of the menu and the menu items. • Units [1)]
Cleaning funct.	Boiler keypad is disabled for 15 seconds.
Emergency mode[3)]	• On: Set the desired heating flow temperature by pressing back or menu key after selecting On. • **Off**
Start filling[2)]	• On – Are you sure there is no leak in your heating system? – Cancel now? – Start filling • **Off**

1) Only available with installed Key (accessories)
2) Only available with automatic filling facility (accessory)
3) Allows manual control of heating during loss of Radio Frequency (RF) Key signal

Table 6 Settings Menu

5 Key (accessories)

5.1 Key (accessories)

The Key allows additional Functions on the appliance (→ Installation and Operating Instructions of the Key).

- ▶ Switch off the appliance.
- ▶ Grip the top outer sides of the front panel [2], pull forward to release the ball catches [1].
- ▶ Lift away from the lip on the baseplate.
- ▶ Stow the front panel [2] safely.

Short Key [I]

- ▶ Insert Key [4] into housing [3].

Long Key [II]

- ▶ Insert Key [4] into housing [3].
- ▶ Pinch the catches [6] and push the Key and housing [5] until it reaches the stop point and no longer protrudes.

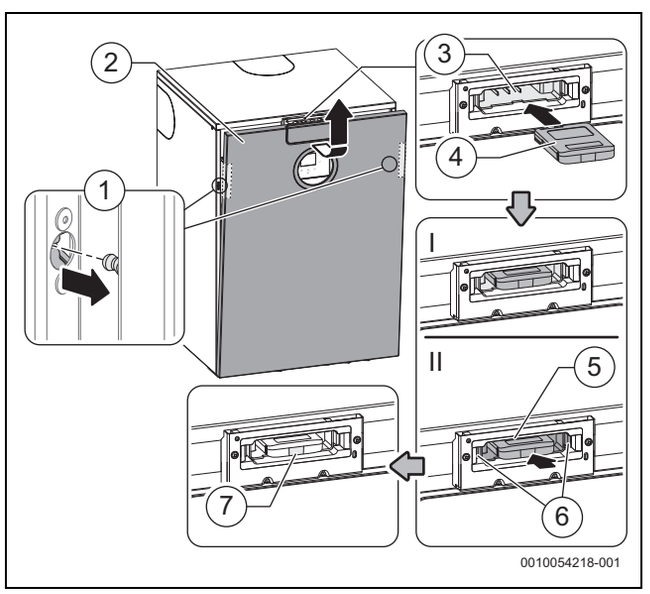

Fig. 10 Fitting the Key

- ▶ Switch the appliance on again.
  The LED [7] flashes green.
- ▶ Wait until LED is constantly yellow.

In normal operation, the LED goes off to save energy.

Further information on the LED status → Installation and Operating Instructions of the Key.

5.2 Key LED

Key LED status

The LED on the Key displays different states with flashing or constant colours.

Description of the LED displays	Example
Flashing red: Fault, e.g. no communication between the Key and appliance: ▶ Install the Key again, restore the last functioning status.	
Flashing yellow: No fault, user please wait.	
Flashing green: No fault, initialisation process is running.	
Constant red: Temporary fault: ▶ Wait for normal operating condition to be resumed.	
Constant yellow: No fault, time and date not available: ▶ Set the time and date on the appliance. **-or-** ▶ Key with touch-sensitive indicator: Press touch-sensitive indicator on Key to start pairing.	
Constant green: No fault, normal operating condition.	
LED Off: No fault, power-saving mode or appliance without power.	

Table 7 LED status

5.3 Setting the time program

Time program

The same method for setting the time program for heating is used to set the time program for hot water.

- ▶ Press the ☰ key.
- ▶ Select and confirm the **Heat. time prog.** or **DHW time prog.**menu.
- ▶ Select and confirm the **Time program** menu.
  The menu items **Mon - Fri**, **Sat - Sun**, **Mon** ... **Sun** are displayed.

Possible items to change:

- **Mon - Fri** for change switching times for all weekdays together
- **Mon** ... **Sun** to change switching times for individual weekdays
- **Sat - Sun** to change switching times for weekends

- ▶ Select and confirm item you want to change.
- ▶ Select and confirm time entry you want to change.
- ▶ To change the time, press the ▲ or ▼ key.
- ▶ Press the **ok** key.
  The new time is saved. Next time entry is selected.

Add one additional switching time block by selecting +. Delete an existing switching time block by selecting 🗑 .

6 Shutdown

6.1 Setting frost protection

NOTICE

Risk of damage to the system from frost!

The heating system can freeze up after a prolonged period (e.g. during a power failure, switching off the power supply, faulty fuel supply, boiler fault etc.).

- ▶ Ensure that the heating system is in constant use (particularly when there is a risk of frost).

If you are leaving your property unoccupied during cold weather, please leave your external programmer on constant and your room thermostat set to 12 °C.

7 Clearances and ventilation information

7.1 Appliance clearances

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

- The following detail the necessary clearance around the appliance for service and maintenance.

⚠ CAUTION

Risk of damage to appliance or property

- ▶ 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.

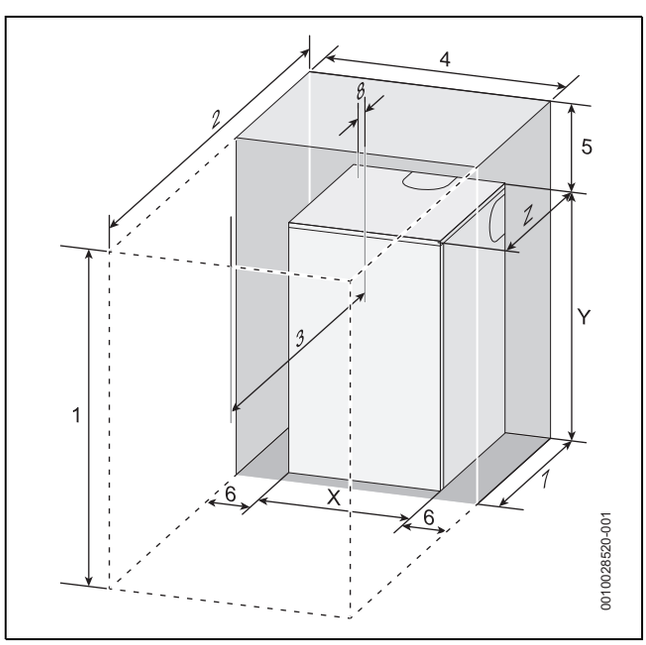

Fig. 11 Appliance minimum clearances

	Minimum clearances	
	Description	**Dimensions (mm)**
X	Appliance width	600
Y	Appliance height	850
Z	Appliance depth	600
	Description	**Maintenance**
1	Overall clearance height	865
2	Overall clearance depth	1200
3	Clear standing space in front of appliance	600
4	Overall clearance width	610
5	Above the appliance	15
6	Either side of appliance	5
7	Compartment depth	625
8	Appliance to removable door	25

Table 8 Appliance minimum clearances (Unventilated compartment)

7.2 Ventilation information

The air supply must not be restricted or contaminated.

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.

8 Maintenance

⚠ Inspection, cleaning and maintenance

The user is responsible for ensuring the heating system is safe and environmentally compatible.

Non-existent or improper inspection, cleaning and maintenance may result in personal injury, including danger to life or material damage.

We recommend that you enter into a contract covering an annual inspection and responsive cleaning and maintenance with an approved contractor.

- ▶ Have work carried out only by an approved contractor.
- ▶ Have the heating system inspected by an approved contractor at least once a year.
- ▶ Have any required cleaning or maintenance work carried out immediately.
- ▶ Have any defects in the heating system remedied immediately, independent of the annual inspection.

Cleaning the casing

Never use aggressive or corrosive cleaning agents.

- ▶ Wipe the casing with a damp cloth.

9 Malfunction or failure

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

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 low?
- Is the cylinder thermostat (if fitted) set too low?
- Is the cold water main turned on?
- Sealed heating system:
  - Is the static system pressure (when appliance is cold) between 1 and 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:	

Table 9

Worcester, Bosch Group

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

Specialist service engineers are available to attend an appliance breakdown.

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. a completed Commissioning and service record and has been regularly serviced at least once a year.
- A call-out charge will be made where:
  - The appliance is outside the guarantee period or has not been serviced in accordance with the manufacturers instructions.
  - 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 an 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).

9.1 Troubleshooting (fault reset)

If there is fault in the system, there will be a message shown on the display with an icon on the right up corner. The color of this icon depends on the severity of the fault in the system. The cause of the fault is coded (e.g. fault code 232) and displayed as text.

▶ Press the ▲ and ▼ keys until **Reset** is displayed.
The appliance starts up again and the current supply temperature is displayed.

If a fault persists:

▶ Contact the contractor or the customer service.

▶ Provide them with the displayed fault code and the device data (→ table 2).

9.2 Fault 2980

CAUTION

Fault 2980

▶ If fault 2980 is visible on the boiler display then contact a qualified heating engineer immediately. Do not attempt to remedy the fault otherwise there is a chance this could lead to a serious, safety-related fault. Heating and hot water will not be available until remedied by a qualified heating engineer.

9.3 Extreme cold weather

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

A frozen/blocked condensate pipe will cause the boiler to shut down. Worcester, Bosch Group have available helpful videos on thawing frozen condensate pipe work 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 condensate pipe that is at ground level and easily accessible.
- ▶ Never attempt to thaw a condensate pipe that is at height.

CAUTION

Risk of damage to pipe work!

Thermal shock from boiling water can damage plastic pipes.

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

CAUTION

Slip hazard

- ▶ Ensure that the subsequent freezing of any water does not result in a slip hazard.

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.
- ▶ Reset the appliance and wait two or three minutes for the appliance to restart.
- ▶ Contact Worcester, Bosch Group Appointments Team on: 0330 123 9339, if the boiler does not restart.
- ▶ Contact your installer in order to find a permanent solution to the problem.

9.4 System gassing troubleshooting

WARNING

Caution must be exercised when venting radiators or adjusting system pressure after commissioning of your boiler.

Do not repeatedly vent your radiators, if symptoms persist, contact a heating engineer.

- Do not vent air from radiators whilst the central heating is switched on; turn your boiler off.
- Whilst venting radiators, do not allow the pressure on the boiler to drop below the pressure at which it is normally set.

CAUTION

If the pressure in your heating system is repeatedly rising (this can be checked via the boilers pressure gauge or digital display and should be checked when the system is cold), and especially if you need to keep venting the radiators, urgent action is required and you must contact a heating engineer. This can indicate that there is corrosion occurring within the heating system

Note: Ensure the reading stays between minimum and maximum operating pressures at all times whilst the boiler is operating

- This must be properly addressed to prevent serious damage to the entire system.
- Failure to properly maintain the heating system may affect your warranty.

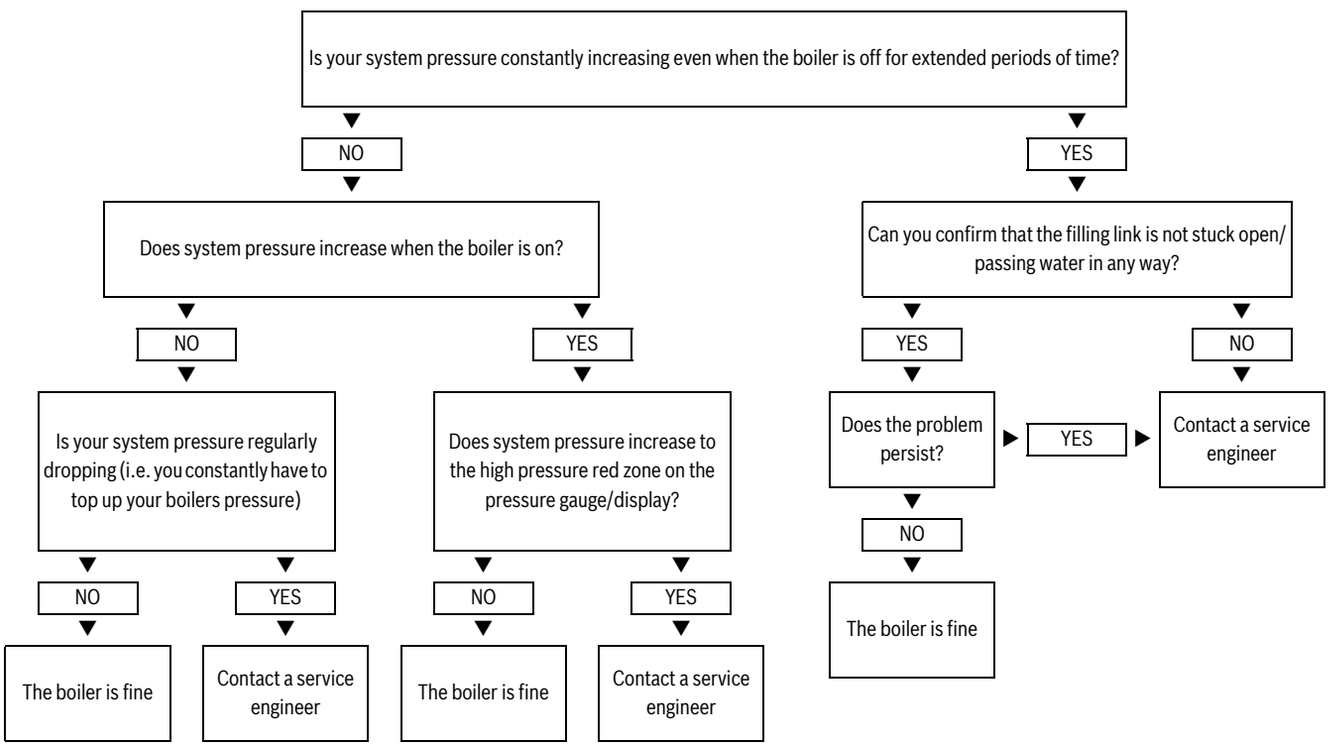

Table 10 System gassing flow chart

10 Environmental protection and 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.

Compostable packaging
Compostable packaging is used wherever possible in an effort to reduce the product's impact on the environment and the overall demand for plastic packaging. Where the following symbol is shown the material is compostable:

Compostable packaging can be disposed of in a number of ways:
- Home compost heap
- Local Authority garden waste collection
- Local Authority food waste collection, ideally as a food waste bin bag
- Local Authority household waste

Please note that compostable materials **cannot 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.

Old electrical and electronic devices

This symbol means that the product cannot be disposed of with other waste, but must be taken to waste collection points for treatment, collection, recycling and disposal.

The symbol is valid for countries that have directives on electronic waste, e.g. "European Union Directive 2012/19/EC on end-of-life electrical and electronic appliances". These provisions define the regulatory framework of the directive valid for the return and recycling of used electronic appliances in each country.

Electronic appliances that may contain hazardous substances must be recycled responsibly in order to minimise possible damage to the environment and dangers to people's health. To this end, the recycling of electronic waste contributes to the preservation of natural resources.

For more information on the environmentally safe disposal of used electrical and electronic appliances, please contact the local authorities, waste disposal company or distributor from which you purchased the product.

You can find more information here:
www.bosch-homecomfortgroup.com/en/company/legal-topics/weee/

Batteries
Batteries must not be disposed together with your household waste.
Used batteries must be disposed of in local collection systems.

11 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 thermostatic radiator valves
With modern heating systems set around a 20 °C heat loss, the optimum setting for a condensing boiler will be approximately 65 °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 boiler 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 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.

12 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 that 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, serviced to the satisfaction of Bosch Thermotechnology Ltd. These should be documented in the commissioning and service records in the Installation and Maintenance Instructions.
- The appliance has been used only for the normal domestic purposes for which it was designed.

This guarantee does not affect your statutory rights.

Guarantee registration

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

To read the full Terms & Conditions please visit us on-line at www.worcester-bosch.co.uk/guarantee.

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

13 Energy consumption

13.1 Product data on energy consumption

The following product data comply with the requirements of the EU Regulations No. 811/2013, No. 812/2013, No. 813/2013 and No. 814/2013 supplementing the Regulation (EU) 2017/1369.

Product data	Symbol	Unit	7731600297/7731600298	7731600299/7731600300
Product type	–	–	GR8700iF 35 C NG/LPG	GR8700iF 50 C NG/LPG
Condensing boiler	–	–	✓	✓
Low temperature boiler	–	–	×	×
B1 boiler	–	–	×	×
Cogeneration space heater	–	–	×	×
Equipped with a supplementary heater?	–	–	–	–
Combination heater	–	–	✓	✓
Rated heat output	P_{rated}	kW	35	50
Seasonal space heating energy efficiency	η_s	%	92	93
Energy Efficiency Class	–	–	A	A
Useful heat output				
At rated heat output and high temperature regime [1]	P_4	kW	32.6	46.3
At 30 % of rated heat output and low temperature regime [2]	P_1	kW	11.1	15.6
Efficiency				
At rated heat output and high temperature regime [1]	η_4	%	87.9	86.9
At 30 % of rated heat output and low temperature regime [2]	η_1	%	97.3	97.6
Auxiliary electricity consumption				
At full load	el_{max}	kW	0.050	0.086
At part load	el_{min}	kW	0.014	0.015
In standby mode	P_{SB}	kW	0.004	0.004
Other items				
Standby heat loss	P_{stby}	kW	0.134	0.147
Ignition burner power consumption	P_{ign}	kW	–	–
Emissions of nitrogen oxides (only gas- or oil fired)	NO_x	mg/kWh	37	35
Annual energy consumption	Q_{HE}	kWh	–	–
Annual energy consumption	Q_{HE}	GJ	105	147
Sound power level, indoors	L_{WA}	dB	52	55
Additional data for combination heaters				
Declared load profile	–	–	XL	XL
Water heating energy efficiency	η_{wh}	%	82	82
Water heating energy efficiency class	–	–	A	A
Daily electricity consumption (average climate conditions)	Q_{elec}	kWh	0.232	0.225
Annual electricity consumption	AEC	kWh	51	50
Daily fuel consumption	Q_{fuel}	kWh	23.627	23.753
Annual fuel consumption	AFC	GJ	19	19
Indication about ability working only during off-peak hours	–	–	×	×
Other load profiles	–	–	–	–
Standing loss	S	W	–	–
Storage volume	V	l	–	–
Non-solar storage volume (Vbu)	Vbu	l	–	–

1) High-temperature regime means 60 °C return temperature at heater inlet and 80 °C feed temperature at heater outlet.

2) Low temperature means for condensing boilers 30 °C, for low-temperature boilers 37 °C and for other heaters 50 °C return temperature (at heater inlet).

Table 11 Product data on energy consumption Greenstar 8000 F Combi

14 Data Protection Notice

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15 Open Source Software

15.1 List of used Open Source Components

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Table 12

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15.3 Appendix - License Text

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SLA0044 Rev5/February 2018

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