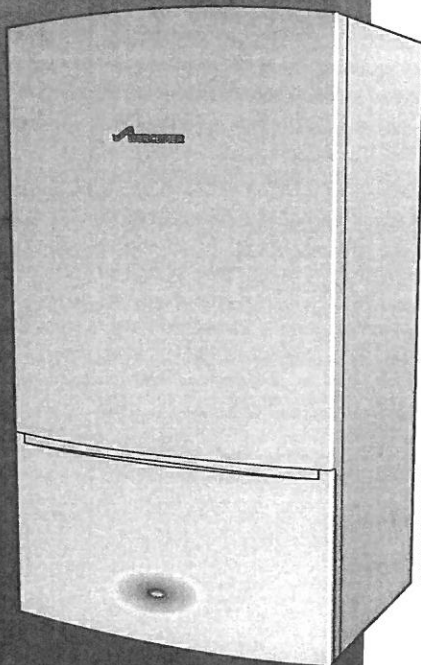


## User instructions

Wall hung RSF gas fired condensing combi boiler

# Greenstar i<sup>ErP</sup>

For central heating systems and indirect fired domestic hot water



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	Greenstar 25i <sup>ErP</sup>	47-406-60
	Greenstar 30i <sup>ErP</sup>	47-406-62
L.P.G.	Greenstar 25i <sup>ErP</sup>	47-406-61
	Greenstar 30i <sup>ErP</sup>	47-406-63

If you smell gas:

- ▶ 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.



6 720 806 946 (2015/03)

**WORCESTER**  
Bosch Group

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**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.

**Cleaning the appliance case:**

Use a damp, soft cloth to clean the outer painted metal case of the appliance, do not use chemicals or abrasive materials.

**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 Servicing**



Ensure that the service engineer completes the Service Record in the Benchmark Checklist after each service. The Benchmark Checklist and service interval record can be found at the rear of the Installation, Commissioning and Servicing Instructions.

- The appliance must be serviced regularly by a competent, qualified person, such as a Worcester service engineer or other Gas Safe registered engineer.
- Always use original spares, to help maintain the efficiency, safety and reliability of the appliance and have the Service Record completed in the Benchmark Checklist.

The completed Benchmark Checklist will be required in the event of any guarantee work and may be required by the local Building Control Inspector.

**2.3 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

**2.4 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.

Item	Description
7	Domestic hot water settings increase temperature/menu scroll up button <ul style="list-style-type: none"> <li>• Dual function button               <ul style="list-style-type: none"> <li>– Increase temperature (increase the desired hot water temperature)</li> <li>– Menu scroll up (scroll upwards through menu items)</li> </ul> </li> </ul>
8	Domestic hot water settings decrease temperature/menu scroll down button <ul style="list-style-type: none"> <li>• Dual function button               <ul style="list-style-type: none"> <li>– Decrease temperature (decrease the desired hot water temperature)</li> <li>– Menu scroll down (scroll downwards through menu items)</li> </ul> </li> </ul>
9	Central heating settings decrease button <ul style="list-style-type: none"> <li>• Decrease temperature (decrease the desired flow temperature)</li> </ul>
10	Central heating settings Increase button/Increase button <ul style="list-style-type: none"> <li>• Increase temperature (increase the desired flow temperature)</li> </ul>
11	Heat requirement demand and fault indicator (blue) <ul style="list-style-type: none"> <li>• Dual function               <ul style="list-style-type: none"> <li>– Heat requirement demand (illuminates during a central heating or hot water requirement demand)</li> <li>– Fault indicator (flashes during a fault condition)</li> </ul> </li> </ul>
12	Appliance identification label <ul style="list-style-type: none"> <li>• Details on appliance model, serial number and gas council number</li> </ul>

Table 2 Legend to figure 6

3.1.1 Appliance display

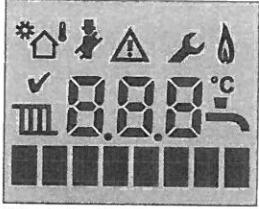









SCREEN DISPLAY	DESCRIPTION
<p>All possible screen symbols</p>  <p>6720806944-32.1W6</p>	<p>This screen is displayed briefly during appliance start up and shows all the symbols that could be displayed.</p>
<p>Alpha/Numerical display</p> 	<p>Displays a temperature or appliance status code.</p>
<p>Text display</p> 	<p>Displays status, diagnostic code and short description information.</p>
<p>Right hand arrows (text display)</p> 	<p>Use domestic hot water arrow buttons to alter the menu item.</p>
<p>Flashing T (text display)</p> 	<p>Appliance in component test mode.</p>
<p>Flashing A (text display)</p> 	<p>Appliance in air purge mode.</p>
<p>Hot water</p> 	<p>Displays this symbol during domestic hot water use.</p>
<p>Central Heating</p> 	<p>Displays this symbol during a central heating use.</p>
<p>Chimney sweep mode</p> 	<p>Displays during service when the appliance is set to maximum or minimum output.</p>

Table 3 Symbol description

**Info menu and operational status codes**

These are not faults, but provide information concerning the current status of the appliance.

During normal appliance operation various Status codes can be displayed by pressing the  button.

The first screen of the Information menu displays the current Status code, this will change as the appliance runs through the various modes and sequences.

Info menu No.	Description
i1	Current status <ul style="list-style-type: none"> <li>• Appliance current operating status (see table 5 for operational status codes).</li> </ul>
i2	Previous status <ul style="list-style-type: none"> <li>• Appliance previous operating status (see table 5 for operational status codes).</li> </ul>
i3	Maximum central heating output <ul style="list-style-type: none"> <li>• Maximum central heating output (kW) set on the appliance.</li> </ul>
i4	Maximum domestic hot water output (kW) <ul style="list-style-type: none"> <li>• Maximum domestic hot water output (kW) set on the appliance.</li> </ul>
i6	Domestic hot water flow detected <ul style="list-style-type: none"> <li>• A minimum flow rate of approximately 2.9 l/m has been detected by the appliance.               <ul style="list-style-type: none"> <li>- YES = Flow detected</li> <li>- No = No flow detected</li> </ul> </li> </ul>
i8	Ionization current <ul style="list-style-type: none"> <li>• Measured ionisation current (<math>\mu</math>A).</li> </ul>
i9	Flow temperature <ul style="list-style-type: none"> <li>• Measured primary flow temperature of the appliance (<math>^{\circ}</math>C).</li> </ul>
i11	Domestic hot water outlet temperature <ul style="list-style-type: none"> <li>• Measured DHW flow temperature of the appliance (<math>^{\circ}</math>C).</li> </ul>
i12	Domestic hot water set temperature <ul style="list-style-type: none"> <li>• Displays the current set temperature for the domestic hot water.</li> </ul>
i15	Outdoor sensor <ul style="list-style-type: none"> <li>• Temperature reading from outdoor temperature sensor, (only available if an outdoor sensor accessory is fitted)</li> </ul>
i20	CU version <ul style="list-style-type: none"> <li>• Software version of the control box</li> </ul>
i21	HMI version <ul style="list-style-type: none"> <li>• Software version of the HIS (Human Interface Software).</li> </ul>
i22	HCM version <ul style="list-style-type: none"> <li>• Identification number of the HCM (Heating Control Module) and release version.</li> </ul>

Table 4 Info menu

### 3.2 Central heating

#### 3.2.1 View central heating set temperature

The home screen will show the current appliance temperature [1].

- ▶ Briefly press either central heating adjustment buttons. The display will change to the set temperature for the central heating [2].
- ▶ Press the OK button to confirm that the set temperature has been viewed, the display will also return to home screen [3].
- or-
- ▶ Wait 4 seconds and the display will return to the home screen [3].

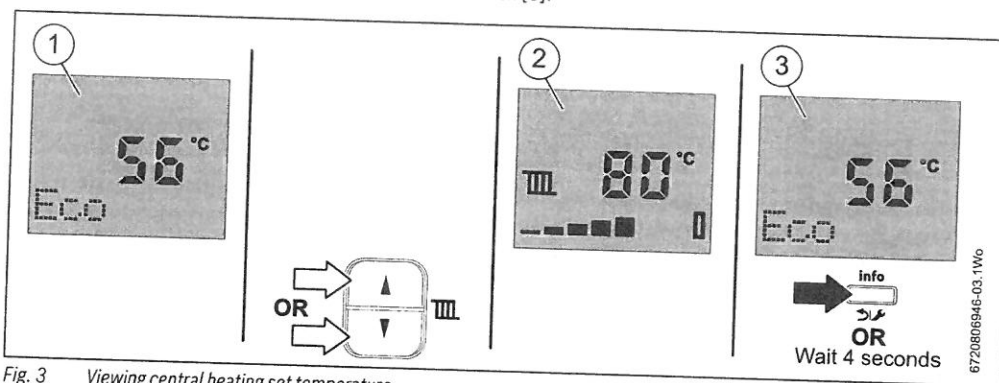


Fig. 3 Viewing central heating set temperature

#### 3.2.2 Setting the appliance flow temperature for the central heating system

The home screen will show the current appliance temperature [1].

- ▶ Press the central heating increase or decrease adjustment buttons to select the desired flow temperature. The temperature displayed increases [2] /decreases [3] according to the adjustment made. By holding the increase/decrease button the temperature displayed begins to change by larger increments.
- ▶ Press the OK button to confirm the value selected, the display will also return to the home screen [4].
- or-
- ▶ Wait 4 seconds for auto confirm and the display will return to the home screen [4].

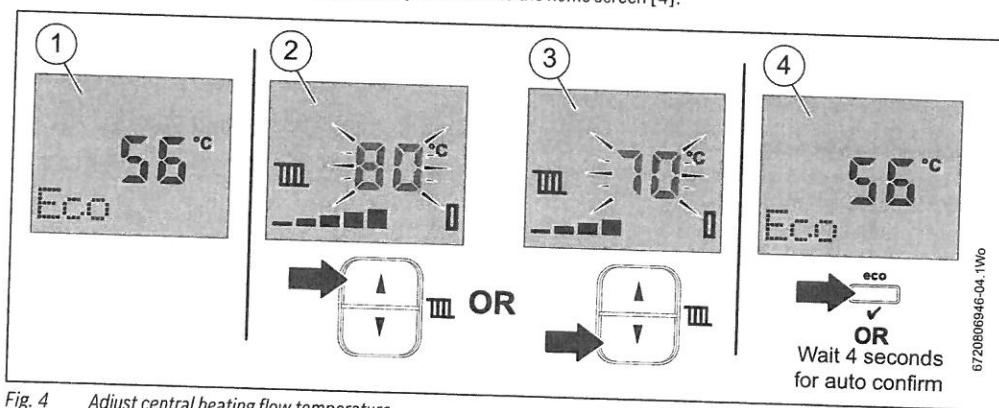


Fig. 4 Adjust central heating flow temperature

### 3.3 Domestic hot water

#### 3.3.1 View domestic hot water set temperature

The home screen will show the current appliance temperature [1].

- ▶ Briefly press either hot water adjustment buttons.  
The display will change to the set temperature for the hot water [2].
- ▶ Press the OK button to confirm the value selected, the display will also return to home screen [3].

-or-

- ▶ Wait 4 seconds and the display will return home screen [3].

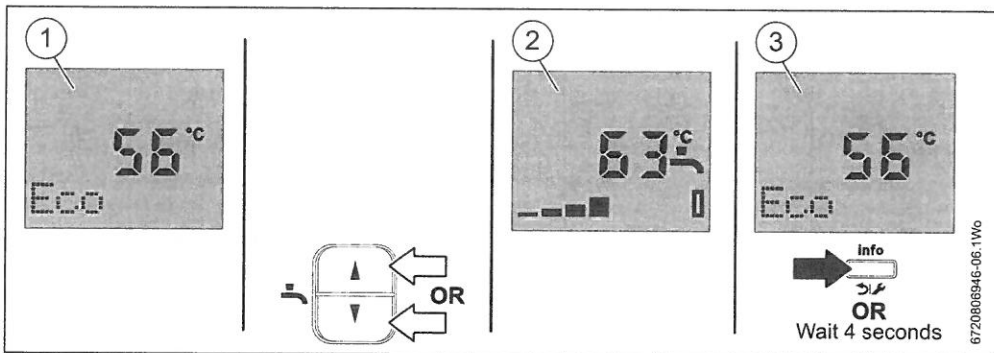


Fig. 6 Viewing hot water set temperature

#### 3.3.2 Setting the flow temperature for the domestic hot water

The home screen will show the current appliance temperature [1].

- ▶ Press the hot water increase or decrease adjustment buttons to select the desired flow temperature.  
The temperature displayed increases [2] /decreases [3] according to adjustment made.  
By holding the increase/decrease button the temperature displayed begins to change by larger increments.
- ▶ Press the OK button to confirm the value selected, the display will also return to home screen [4].

-or-

- ▶ Wait 4 seconds for auto confirm and the display will return to the home screen [4].

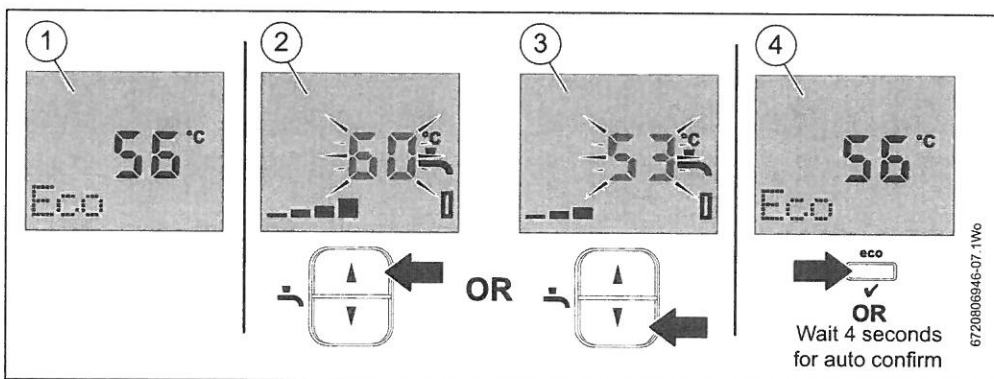


Fig. 7 Adjust hot water flow temperature



### 3.3.5 Domestic hot water preheat mode manual activation (Eco mode off)

Eco mode active [1]:

- ▶ Press the eco button (approximately 1 second) to enter the Preheat mode, when Preheat mode is active, "Preheat" will be displayed [2].
- ▶ To exit Preheat mode and return to Eco, press the eco button (approximately 1 second), Eco will be displayed [3].

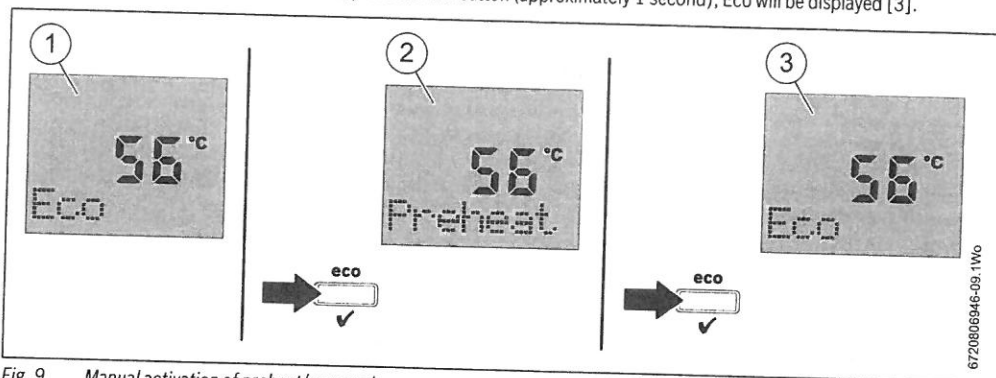


Fig. 9 Manual activation of preheat/eco mode

### 3.3.6 Domestic hot water preheat mode timed activation, with facia timer or external timer connected (eco mode off)

When a twin channel programmer is fitted/connected, the Preheat/Eco option can be selected via the programmer.

- Programmer hot water channel ON periods:
  - Preheat mode is active and indicated on the appliance display[2].
- Programmer hot water channel OFF periods:
  - Eco mode active and indicated on the appliance display [1] & [3].

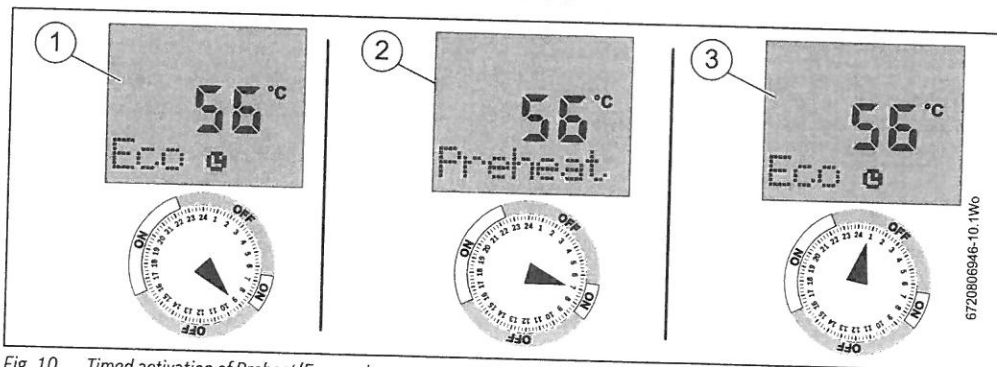


Fig. 10 Timed activation of Preheat/Eco mode

### 3.3.7 Turn off the heat requirement demand light (blue)

You may choose to deactivate the heat requirement demand light. Please ask your installer to set-up this feature.

The light will still flash to alert you to a possible fault, but will not activate during a heat requirement demand for heating or hot water.

### 4.3 Optional integral keyless filling link

Locate the filling link and follow the instructions for re-pressurising.

1. If the needle [1] on the appliance pressure gauge reads less than 1 bar, re-charge the system.
2. Pull the blue lever down to start the filling process.
3. Monitor the pressure gauge on the appliance fascia.

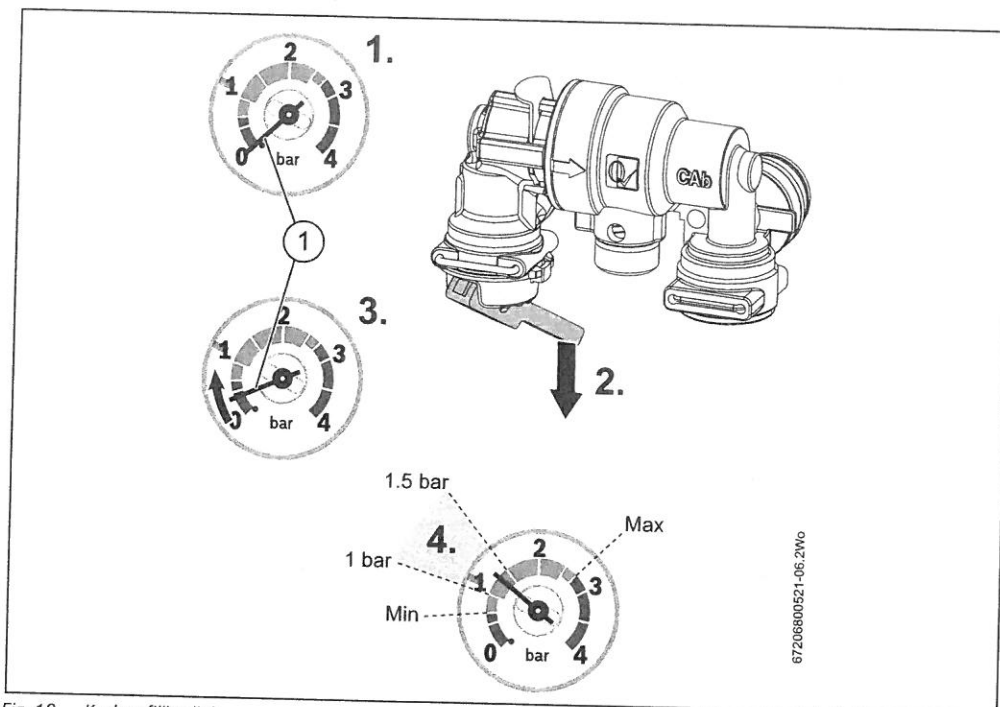


Fig. 12 Keyless filling link

4. When the needle reaches between 1 to 1.5 bar on the gauge, release the blue lever to stop the filling process.

#### 4.5 External filling link

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

1. Unscrew blanking cap.
2. Attach the hose to the valves, screw on hand-tight.
3. Turn the handle/screwdriver slot through 90° to open the valves.
4. The handle/screwdriver slot will be in-line with the valves

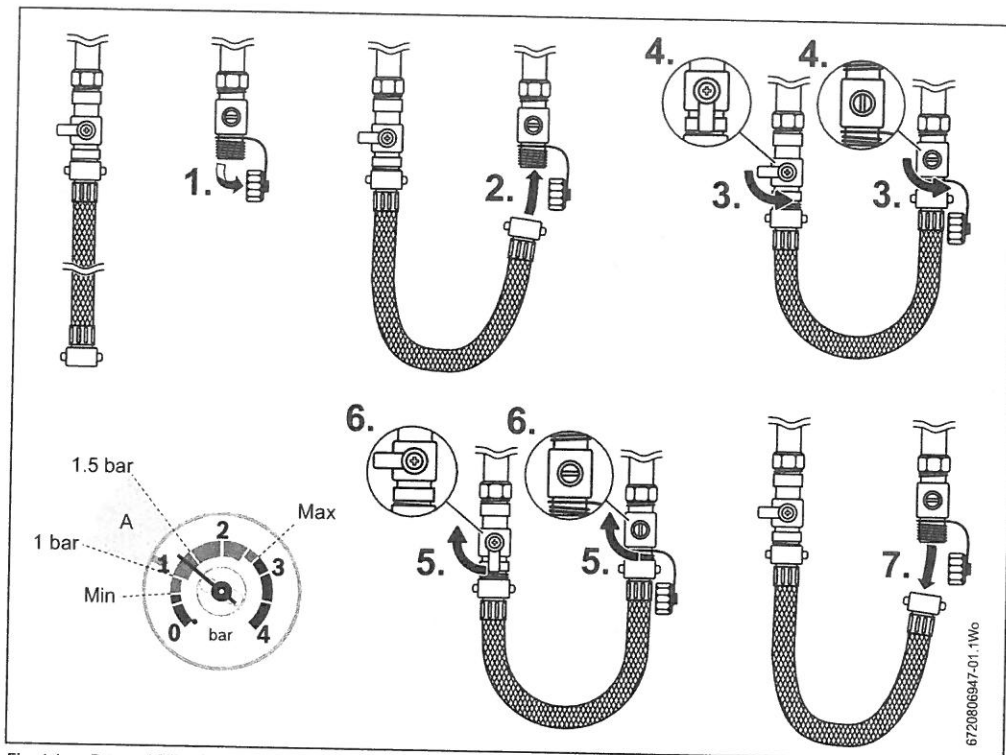


Fig. 14 External filling loop

5. When the pressure reaches between the 1 and 1.5 bar marks (zone A), turn the handle/screwdriver slot back, through 90°, to close the valve.
6. The handle/screwdriver slot will be at 90° to the valves
7. Remove the hose and replace the blanking caps.

## **6 Maintaining your appliance**

Your new gas-fired 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 your appliance receives regular servicing and maintenance checks from a competent person beyond the initial guarantee period.

If your Greenstar gas-fired appliance should fail to operate correctly or requires servicing, please contact the Worcester, Bosch Group Appointments Team (see rear cover for details).

Details of the appliance including the Gas Council number can be found on the front cover of these User Instructions and on the appliance identification label on the appliance fascia.

The Gas Council number is also listed on the front cover of your Installation, Commissioning and Servicing Instructions.

### 7.1 Appliance alert state

In the event of an alert, a fault code and an alert symbol  will be displayed, and the blue operation/fault light will flash.

The information about the alert state will flash and scroll along the text display segment of the screen, giving more details of the alert state.

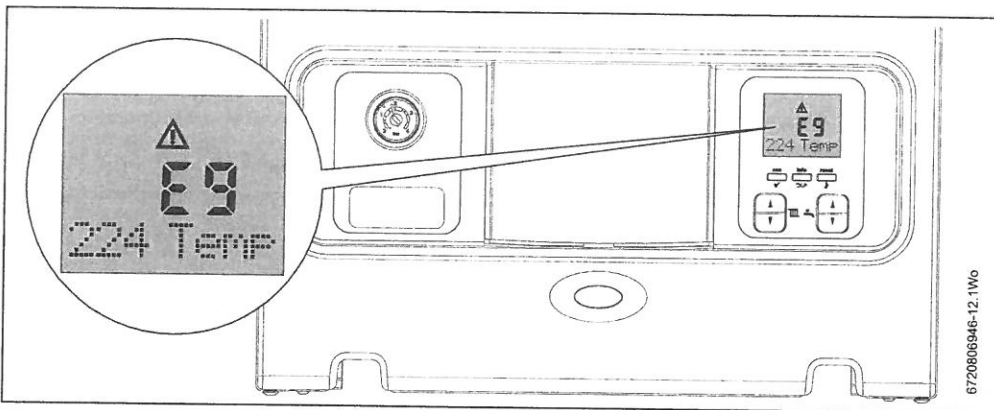




Fig. 16 Alert state example

### 7.2 Appliance reset

- ▶ To reset the appliance, press  briefly once.
- ▶ "Reset" and  are briefly displayed.
- ▶ If the reset was successful the appliance will return to normal operation.
- ▶ If the reset was not successful then the alert code will be displayed again, and the blue operation/fault light will continue to flash.

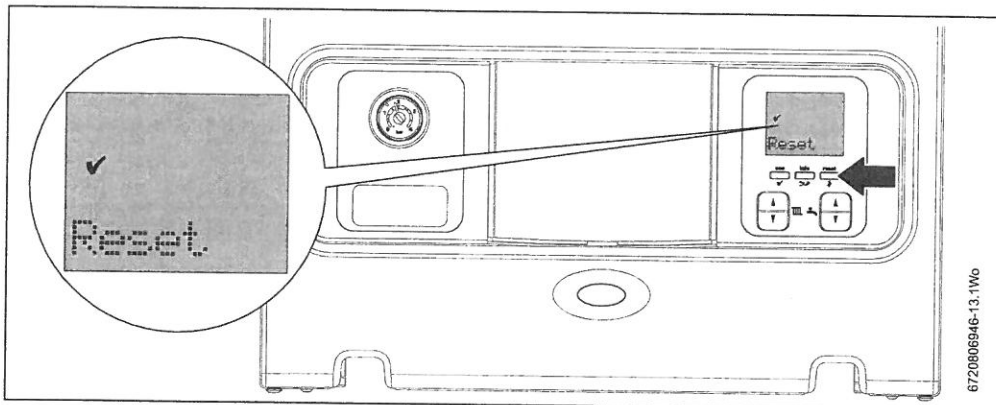


Fig. 17 Reset confirmation

Due to the internal safety systems of your Greenstar i appliance, some codes cannot be cleared by a simple reset. Please contact Worcester, Bosch Group for further assistance.

When calling Worcester, Bosch Group about a fault, it will be useful to quote the alert code and three digit number under the alert code, e.g. EA and 227. If there is a fault that cannot be reset by you, the user, then a service engineer visit will be necessary.

## 9 Tips on energy saving

### Heating economically

The appliance provides a high level of comfort whilst keeping gas consumption low and so minimising the environmental impact.

The gas supply to the appliance's burner is regulated according to the demand for heat. The appliance operates with a low flame if the demand for heat reduces. The technical term for this process is modulating control.

Modulating control reduces temperature fluctuations and provides an even distribution of heat throughout the home. This means that the appliance may stay on for relatively long periods of time but will use less gas than a appliance that continually switches on and off.

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

With modern heating systems designed around a 20 °C heat loss across the system, the optimum setting for a condensing appliance as described on page 14 set economic temperature. The system must be balanced correctly and the radiators may need upgrading.

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.

---

## 12 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.

This appliance is fitted to a sealed system. Should water leaks be 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 guarantee.

### 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.

