



The Keston 30C

# **KESTON**

## **30C**

User Guide

Gas Fired Condensing  
Combination Boiler

**KESTON**  
**Boilers**  
CE

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COMPLIANT WITH BUILDING REGULATION PART L1 & L2  
SEDBUK A RATED





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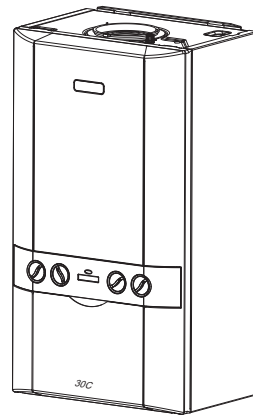
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# **KESTON 30C**

**(Natural Gas Only)**



**30                      G.C. Appliance No.                      47-930-03**

**Keston** is a member of the Benchmark scheme and fully supports the aims of the programme. Benchmark has been introduced to improve the standards of installation and commissioning of central heating systems in the UK and to encourage the regular servicing of all central heating systems to ensure safety and efficiency.



**THE BENCHMARK SERVICE INTERVAL RECORD MUST BE COMPLETED AFTER EACH SERVICE**





**FOR ANY QUERIES PLEASE RING THE  
KESTON CONSUMER HELPLINE : 0208 462 0262**

**NOTE. BOILER RESET PROCEDURE -**

**To reset boiler, turn mode knob to reset position and immediately turn knob back to required setting.  
The boiler will repeat the ignition sequence.**

**INTRODUCTION**

The **Keston 30C** is a wall mounted, room sealed, condensing combination boiler, featuring full sequence automatic spark ignition and fan assisted combustion.

Due to the high efficiency of the boiler, condensate is produced from the flue gases and this is drained to a suitable disposal point through a plastic waste pipe at the base of the boiler. A condensate 'plume' will also be visible at the flue terminal.

The **Keston 30C** is a combination boiler providing both central heating and instantaneous domestic hot water.

**SAFETY**

***Current Gas Safety (Installation & Use) Regulations or rules in force.***

In your own interest, and that of safety, it is the law that this boiler must be installed by a Gas Safe Registered Engineer, in accordance with the above regulations.

In IE, the installation must be carried out by a Registered Gas Installer (RGI) and installed in accordance with the current edition of I.S. 813 "Domestic Gas Installations", the current Building Regulations and reference should be made to the current ETCI rules for electrical installation.

***It is essential that the instructions in this booklet are strictly followed, for safe and economical operation of the boiler.***



### ELECTRICITY SUPPLY

This appliance must be earthed.

Supply: 230 V ~ 50 Hz. The fusing should be 3A.

#### **Important Notes**

- This appliance must not be operated without the casing correctly fitted and forming an adequate seal.
- If the boiler is installed in a compartment then the compartment **MUST NOT** be used for storage purposes.
- If it is known or suspected that a fault exists on the boiler then it **MUST NOT BE USED** until the fault has been corrected by a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGII).
- Under **NO** circumstances should any of the sealed components on this appliance be used incorrectly or tampered with.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instructions concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

In cases of repeated or continuous shutdown a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGII) should be called to investigate and rectify the condition causing this and carry out an operational test. Only the manufacturers original parts should be used for replacement.

### MINIMUM CLEARANCES

#### **Top clearance**

Ensure **30mm (1¼")** clearance above the highest elbow off the boiler, **100mm (4")** below, **2.5mm (1/8")** at the sides and **450mm (17 3/4")** at the front of the boiler casing must be allowed for servicing.

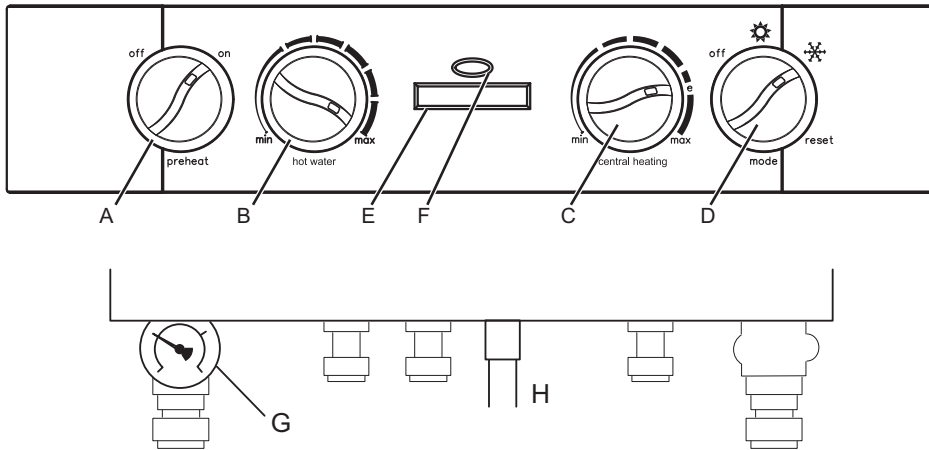
#### **Bottom clearance**

Bottom clearance after installation can be reduced to 5mm.

This must be obtained with an easily removable panel, to enable the consumer to view the system pressure gauge, and to provide the 100mm clearance required for servicing.

**BOILER CONTROLS**



| LEGEND |                         |
|--------|-------------------------|
| A.     | Pre-heat On/off         |
| B.     | DHW temperature control |
| C.     | CH temperature control  |
| D.     | Mode Control            |
| E.     | Boiler Status           |
| F.     | Burner 'on' indicator   |
| G.     | Pressure Gauge          |
| H.     | Condensate Drain        |
| J.     | Economy Mode            |





### TO LIGHT THE BOILER. (REFER TO BOILER CONTROLS)

If a programmer is fitted refer to separate instructions for the programmer before continuing.

1. Check that the electricity supply to the boiler is off.
2. Set the mains Off/Summer/Winter control (D) to 'Off'.
3. Set the Domestic Hot Water temperature control (B) and Central Heating temperature control (C) to 'max'.
4. Set the preheat control (A) to 'on'.
5. Ensure that all hot water taps are turned off.
6. Switch ON electricity to the boiler and check that all external controls, e.g. programmer and room thermostat, are ON.
7. Set the Off/Summer/Winter control to winter (   ).

The boiler will commence the ignition sequence supplying heat to the central heating, if required.

**Note.** In normal operation the boiler status display (E) will display messages (see pages 14 & 15).

Boiler frost protection - boiler will fire if temperature is less than 5 degrees C.

During normal operation the burner on indicator (F) will remain illuminated when the burner is lit.

Note: If the boiler fails to light after five attempts the following fault messages will be displayed **"Ignition Lockout"** - **"1 Check other gas appliances"** - **"2 Reset boiler"** - **"3 Contact Installer"**.

To reset boiler, turn mode knob to reset position and immediately turn knob back to required setting. The boiler will repeat the ignition sequence. If the boiler still fails to light consult a Registered Gas Installer or in IE a Registered Gas Installer (RGII).



## OPERATION

### Winter Mode - i.e. CH and DHW required.

Ensure the off/summer/winter control (D) is set to winter ( ❄ ).

The boiler will fire and supply heat to the radiators but will give priority to DHW on demand.

The DHW preheat will operate as described under 'Summer conditions' during periods when there is no call for CH.

### Summer Mode - i.e. DHW only required.

Set the mode knob control to Summer ( ☀ ).

Set the CH external controls to OFF.

Preheat will operate with the preheat switch (A) set to ON.

The boiler will fire periodically for a few seconds to maintain the DHW calorifier in a pre-heated condition. The average time period between firing is 90 minutes. This may vary considerably due to the surrounding ambient temperature of the boiler.

The boiler will fire whenever there is a demand for DHW.

The boiler preheat facility can be immobilised by turning the preheat switch (A) to OFF. This will stop the boiler operating for short periods. This facility is primarily provided for boiler installations in a sensitive area (i.e. bedroom etc.).

**Note.** *If the pump and diverter valve have not operated in the last 24 hours they will run briefly to ensure they do not become seized.*

## CONTROL OF WATER TEMPERATURE

### Domestic Hot Water

The DHW temperature is limited by the boiler controls to 64°C maximum at low draw-off rate, adjustable via the DHW temperature control (B).

Due to system variations and seasonal temperature fluctuations DHW flow rates/temperature rise will vary, requiring adjustment at the draw off tap : the lower the rate the higher the temperature, and vice versa.





### Central Heating

The boiler controls the central heating radiator temperature to a maximum of 80°C, adjustable via the CH temperature control (C). Approx. flow temperatures for the boiler thermostat settings are:

| Knob Setting | Flow Temperature |
|--------------|------------------|
| Minimum      | 40°C (104°F)     |
| Maximum      | 64°C (147°F)     |

The Keston 30C is a high efficiency combination boiler which is most efficient when operating in condensing mode. The boiler will operate in this mode if the CH temperature control (C) is set to the 'e' position (economy mode) or below. This control should be set to a maximum for very cold periods.

#### TO SHUT DOWN THE BOILER

Set the mode knob control to OFF.

#### TO RELIGHT THE BOILER

Repeat the procedure detailed in 'To light the boiler'.

#### FROST PROTECTION

If no frost protection is provided and frost is likely during a short absence from home, leave the heating controls (if fitted) at a reduced temperature setting. For longer periods, the entire system should be drained.

If the system includes a frost thermostat then the timer can be left off (if fitted). The mains supply should be left switched ON, with the boiler thermostat left in the normal running position.

#### BOILER OVERHEAT PROTECTION

The boiler controls will shut down the boiler in the event of overheating. Should this occur, a fault code **"Overheat Lockout"** - **"1 Fill system to 1.0 bar"** - **"2 Bleed radiators"** - **"3 Check radiator valves open"** - **4 Reset boiler"** - **"5 Contact Installer"** will be displayed.

Reset boiler by turning the mode control knob (D) to reset position and immediately turn knob back to required setting. The boiler will relight. If the fault recurs, turn off the boiler and consult a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGI).



### LOSS OF SYSTEM WATER PRESSURE

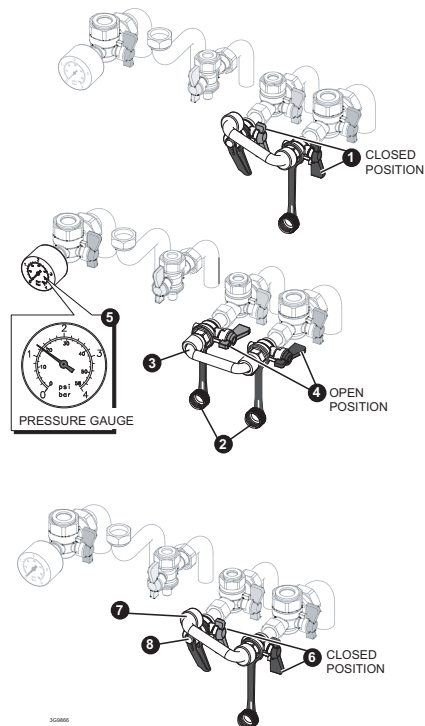
The gauge (G) indicates the central heating system pressure. If the pressure is seen to fall below the original installation pressure of 1-2 bar over a period of time then a water leak may be indicated. In this event conduct the re-pressurising procedure as shown below. If unable to do so or if the pressure continues to drop a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGI) should be consulted.

THE BOILER WILL NOT OPERATE IF THE PRESSURE HAS REDUCED TO LESS THAN 0.3 BAR UNDER THIS CONDITION.

In this case the boiler will display **“Low water pressure”** - **“1 fill system to 1.0 bar”** - **“2 Bleed radiators”** - **“3 Contact installer”**.

To re-pressurise:

1. Ensure filling loop isolation valves are closed.
2. Remove the left hand cap.
3. Attach on the filling loop.
4. Turn the filling loop isolation valves to the open position. The system will now fill.
5. Wait for pressure gauge to reach 1 to 1.5 bar.
6. Close the filling loop isolation valves.
7. Disconnect the filling loop at left hand side and angle upwards.
8. Replace cap.





#### **CONDENSATE DRAIN**

The condensate drain (H) must not be modified or blocked.

Blockage of the condensate drain, caused by debris or freezing, can cause automatic shutdown of the boiler.

If freezing is suspected and the pipe run is accessible an attempt may be made to free the obstruction by pouring hot water over the exposed pipe and clearing any blockage from the end of the pipe. If this fails to remedy the problem the assistance of a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGI) should be sought.

#### **ESCAPE OF GAS**

Should a gas leak or fault be suspected contact the National Gas Emergency Service without delay.

**Telephone 0800 111 999**

**DO NOT SEARCH FOR GAS LEAKS WITH A NAKED FLAME.**

#### **CLEANING**

For normal cleaning simply dust with a dry cloth. To remove stubborn marks and stains, wipe with a damp cloth and finish off with a dry cloth. DO NOT use abrasive cleaning materials.

#### **MAINTENANCE**

The appliance should be serviced at least once a year by a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGI).



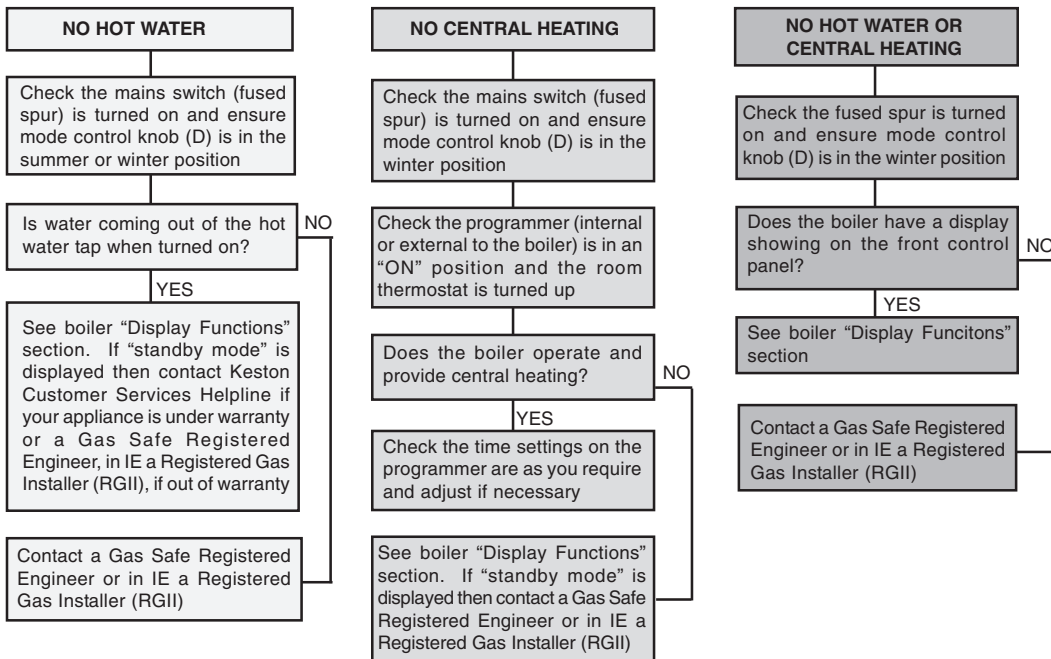
## POINTS FOR THE BOILER USER

**Note.** *In line with our current warranty policy we would ask that you check through the following guide to identify any problems external to the boiler prior to requesting a service engineers visit. Should the problem be found to be other than with the appliance we reserve the right to levy a charge for the visit, or for any pre-arranged visit where access is not gained by the engineer.*





## TROUBLESHOOTING





### DISPLAY FUNCTIONS - NORMAL OPERATION MODE

The display scrolls through a maximum of 3 messages under any operational condition, as shown below.

**Note.** The temperatures shown below are for illustration purposes only. The measured temperatures will be shown on the boiler.

| NORMAL OPERATION                                       | MESSAGE 1               | MESSAGE 2                                    | MESSAGE 3  |
|--|-------------------------|--|--|
| Mode knob in standby (off) position and no heat demand | Standby mode            | For hot water turn mode knob clockwise       | For central heating turn mode knob clockwise twice |
| Mode knob in summer (☀) position and no heat demand    | Summer mode             | For central heating turn mode knob clockwise |  |
| Mode knob in winter (❄) position and no heat demand    | Winter mode             | Timer or room stat off                       |  |
| Domestic hot water operation                           | Hot water               | Temperature 64°C                             | High efficiency                                    |
| Central heating operation                              | Central heating         | Radiator Temp 80°C                           | High efficiency                                    |
| Pre-heat operation                                     | Pre heat                | Temperature 59°C                             | High efficiency                                    |
| Boiler frost protection                                | Boiler frost protection | Temperature 5°C                              | High efficiency                                    |
| Pump overrun   | Pump overrun            |  |  |
| Fan post-purge   | Fan post-purge          |  |  |

**Note.** High efficiency will not be shown for central heating operation if the central heating flow temperature knob (c) is set to greater than 73°C.





### DISPLAY FUNCTIONS - SETTINGS CHANGED

**Note.** The temperatures shown below are for illustration purposes only. The measured temperatures will be shown on the boiler.

| NORMAL OPERATION                          | MESSAGE 1     | MESSAGE 2                         | MESSAGE 3   |
|---|---------------|-----------------------------------|---|
| Pre-heat knob moved to off position       | Pre heat off  |                                   |   |
| Pre-heat knob moved to on position        | Pre heat on   |                                   |   |
| DHW temperature knob moved                | 64°C DHW temp | Hot water temperature 64°C        | May not be achieved for high flow rates in winter |
| CH temperature knob moved                 | 80°C CH temp  | Maximum radiator temperature 80°C |   |
| Mode knob moved to standby (off) position | Standby mode  | Central heating off               | Hot water off                                     |
| Mode knob moved to summer (☀) position    | Summer mode   | Central heating off               | Hot water on                                      |
| Mode knob moved to winter (❄) position    | Winter mode   | Central heating on                | Hot water on                                      |
| Mode knob moved to reset position         | Reset         |                                   |   |

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**DISPLAY FUNCTIONS - FAULT MESSAGES**

| <b>BOILER DISPLAY MESSAGE</b>                       | <b>DESCRIPTION</b>            | <b>ACTION</b>  |
|---|-------------------------------|--|
| Outside Sensor Fault<br>Contact Installer           | Outside Sensor Failure        | Reset the appliance - if the boiler fails to operate then please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII).                        |
| Low Mains Voltage<br>Contact Electricity Provider   | Low Mains Voltage             | Contact a qualified electrician or your electricity provider.  |
| PCB Fault<br>Contact Installer                      | Unconfigured PCB              | Unconfigured PCB. Please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII).  |
| No Water Flow Thermistor Fault<br>Contact Installer | No Water Flow Thermistor      | Reset the appliance - if the boiler fails to operate then please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII).                        |
| Too Many Resets<br>Contact Installer                | 5 Boiler Resets in 15 Minutes | 1. Turn power off and on at the fused spur.<br>2. If the boiler fails to operate please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII). |
| Lockout 6<br>Contact Installer                      | False Flame Lockout           | Reset the appliance - if the boiler fails to operate then please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII).                        |

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**DISPLAY FUNCTIONS - FAULT MESSAGES**

| <b>BOILER DISPLAY MESSAGE</b>   | <b>DESCRIPTION</b>        | <b>ACTION</b>   |
|---|---------------------------|---|
| Boiler Type Card Fault<br>Contact Installer   | BCC Activation Fault      | Reset the appliance - if the boiler fails to operate then please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII).   |
| PCB Replacement<br>Reset Boiler   | BCC Fault                 | Reset the appliance - if the boiler fails to operate then please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII).   |
| Low Water Pressure<br>1 Fill System to 1.0 Bar<br>2 Bleed Radiators<br>3 Contact Installer  | Low Water Pressure        | Check system pressure is between 1 & 1.5bar on the pressure gauge. If the fails to operate then please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII).                             |
| Overheat Lockout<br>1 Fill System to 1.0 Bar<br>2 Bleed Radiators<br>3 Check Radiator Valves Open<br>4 Reset Boiler<br>5 Contact Installer      | Flow Temperature Overheat | Check system pressure is between 1 & 1.5bar on the pressure gauge. Reset the appliance. If the boiler fails to operate then please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII). |
| No Water Flow Lockout<br>1 Fill System to 1.0 Bar<br>2 Bleed Radiators<br>3 Check Radiator Valves Open<br>4 Reset Boiler<br>5 Contact Installer | No Water Flow             |   |

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#### DISPLAY FUNCTIONS - FAULT MESSAGES

| BOILER DISPLAY MESSAGE   | DESCRIPTION       | ACTION  |
|--|-------------------|---|
| Flame Loss<br>1 Check Other Gas Appliances Work<br>2 Contact Installer                         | Flame Loss        | 1. Check other gas appliances in the house are working to confirm a supply is present in the property.<br>2. If other appliances do not work or there are no other appliances, check the gas supply is on at the meter and/or pre payment meter has credit. If the boiler fails to operate then please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII). |
| Ignition Lockout<br>1 Check Other Gas Appliances Work<br>2 Reset Boiler<br>3 Contact Installer |                   |   |
| Fan Fault<br>Contact Installer   | Fan Fault         | Reset the appliance - if the boiler fails to operate then please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII).   |
| Flow Thermistor Fault<br>Contact Installer   | Flow Thermistor   | Reset the appliance - if the boiler fails to operate then please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII).   |
| Return Thermistor Fault<br>Contact Installer   | Return Thermistor | Reset the appliance - if the boiler fails to operate then please contact Keston (if under warranty) or alternatively a Gas Safe Registered Engineer if outside of the warranty period. In IE contact a Registered Gas Installer (RGII).   |





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March 2010 UIN 205532 A01

**Keston** pursues a policy of continuing improvement in the design and performance of its products. The right is therefore reserved to vary specification without notice.

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