
KESTON

C90 & C110

Users Instructions For C90 and C110 Models

The Gas Safety (Installation And Use) Regulations: 1996 (as amended) impose certain statutory obligations on gas users. Further information regarding these regulations can be obtained from your Gas Supplier.

All gas appliances must be installed by competent persons by law in accordance with these regulations. Membership of CORGI is indication of such a competent person with regard to gas installation.

It is in your interests, and that of safety, to ensure that the appliance is installed correctly and that the law is complied with. Failure to do so could lead to a hazardous &/or potentially dangerous situation.

Introduction

These instructions should be carefully read to ensure safe and economical use of your boiler.

The Keston C90 and C110 are high efficiency central heating condensing boilers designed to provide central heating and indirect sanitary hot water supply. They are designed for use with fully pumped systems only. The C90 and C110 models are supplied for natural gas use only.

Servicing

To ensure continual safe and efficient operation of the boiler it is recommended that the appliance be checked and serviced as necessary at regular intervals. Generally once per year will be sufficient. It is the law that any servicing must be carried out by a competent person.

NB: There are no user serviceable parts inside the boiler cabinet. The cabinet should only be removed by a qualified competent person.

Clearances

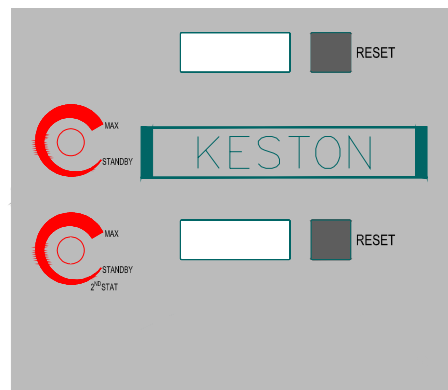
If fixtures are to positioned close to the boiler the following minimum clearances must be observed: Top : 350 mm, Bottom : 150 mm, Left : 25 mm,

Right : 25 mm & Front : 305 mm. Extended clearance is required to the front to allow for access for servicing.

Cleaning

Normal casing cleaning only requires dusting with a dry cloth. To remove more stubborn marks wipe with a damp cloth and finish with a dry cloth.

Boiler Setup



- 1) Check that the gas supply from the gas meter is turned ON
- 2) Switch on the electric supply to the boiler and controls and set the heating controls to call for heat.

To Light The Boiler

The C90 and C110 boilers incorporate dual thermostats to allow two different zones to be connected to operate at two different temperatures. Generally the central heating zone is connected to zone 1 and the DHW calorifier to zone 2. You should ask your installer to advise whether your boiler serves one or two zones.

To set thermostat temperatures you must turn the relevant knob to the required position. As you turn the knob both the displays, one for each module, will change to either “c nn” or “d nn”, depending on the knob being turned. As the knob is turned the required temperature (the last two digits of the displays) change. Set the knob to the position which gives the required temperature. When the knob is released the display, after a few seconds, will return to normal.

If the boiler detects whether zone requires heat the following sequence will occur:

- 1) The fan and pump will start inside the module and the displays will indicate “1 nn” to show the boiler modules have started the first stage of the ignition sequence.
- 2) After 5 seconds the displays will change to “2 nn” to indicate the spark ignition of the sequence has started.

- 3) After 3 seconds the displays will change to “3 nn” for zone 1 and “4 nn” for zone 2, to show the module is now alight. NG Zone 2 will be served by the left hand module only. A demand from zone 2 will only therefore be displayed on the upper display. If both zones call at the same time then Zone 1 will be served by the right hand module only until such time as the left hand module is released by zone 2.
- 4) The boiler will adjust the output to best match the demands of the system. The last two digits of the display will continuously show the relevant module temperature. The module control will allow the temperature to overshoot the setting by up to 5 degrees before shutting down. The standard display codes are as follows:

0 nn	Module in standby as no heat request from either zone
1 nn	Module commencing ignition sequence
2 nn	Module generating spark ignition
3 nn	Module burning for zone 1
4 nn	Module burning for zone 2
5 nn	Temporary mode whilst module adjusts its internal settings
6 nn	Burner off because required temperature has been reached
7 nn	Module at end of heat request from zone 1
8 nn	Module at end of heat request from zone 2
A nn	Temporary mode whilst module adjusts its internal settings
9 nn	Module off due to unexpected problem. The module will attempt to re-fire from this mode. In this mode the display will alternately flash “9 nn” and “b xx” where the “xx” has the following meaning:
b 18	Module ran too hot, > 95°C flow temperature
b 19	Module ran too hot, > 95°C return temperature
b 24	Module circulating in reverse. Check external pump
b 25	Module rising in temperature too quickly. Check for system blockages
b 26	Low water pressure. Top up system pressure and check for leaks.
b 28	No signal from fan, possible stuck fan motor.
b 29	Fan running when not required.
b 30	Circulation too slow. Check system for blockages
b 65	Waiting for fan to start. Possibly stuck.

All of the above displays, up to “A nn” indicate normal module operation. Display “9 nn” indicates a delay in module operation but will not stop module operation.

Precautions

Care must be taken at all times to ensure that no blockage or obstruction is present in the condensate drainage line. In addition the air intake and flue exhaust terminals of the appliance must be free of obstruction at all times.

Frost Protection

The C90 and C110 have an integral frost protection thermostat. However, care should also be taken to ensure that any exposed pipework is adequately insulated to prevent freezing.

Error Codes

In the event of a fault causing a module shutdown the display will show an error message "E nn".

Display	Description of fault
E 00	Flame detected when not expected. Check module earth and probe condition.
E 02	No ignition after restart. Check gas supply, gas valve operation, ignitor electrode spark generation.
E 03	Gas valve faulty or not connected
E 04	Power has been reset whilst module was in lockout
E 11	Internal electronics error - rest or replace control box
E 12	Thermal fuse blown or flue overheat thermostat activated.
E 18	Flow overheat - check water circulation
E 19	Maximum return temperature exceeded. Check circulation.
E 25	Flow temperature increased too quickly. Check water circulation.
E 30	Difference between flow and return temperatures too high. Check circulation.
E 31	Flow thermistor short circuit - check/replace connections/thermistor
E 32	Return thermistor short circuit - check/replace connections/thermistor
E 36	Flow thermistor open circuit - check/replace connections/thermistor
E 37	Return thermistor open circuit - check/replace connections/thermistor
E 44	Low water pressure

Gas Leak or Fault

If you suspect a gas leak turn off the appliance immediately, turn off the gas tap to the appliance and contact your local gas region without delay.

If you suspect a fault with the appliance it must not be used until the fault has been corrected by a competent person.

In the unlikely event of a breakdown consult your Installer or Service Engineer and advise the fault display and description of fault.

The boiler should be installed and serviced only by CORGI registered operatives. All CORGI registered Installers carry a CORGI ID card, and have a registration number. You can check your installer by calling CORGI direct on 01256 372300.