



ACE HE 24, 30 & 35

USER INSTRUCTIONS

TO BE GIVEN TO THE USER



0086

Pin 87/BQ/44

G.C. Appliance No. 47-333-19 (Ace HE 24)

G.C. Appliance No. 47-333-20 (Ace HE 30)

G.C. Appliance No. 47-260-13 (Ace HE 35)

COMBINATION CONDENSING BOILER

1

INTRODUCTION

The **Halstead Ace HE24, HE30 and HE35** are high efficiency condensing, fully automatic, wall mounted gas appliances for use with natural gas. The appliances incorporate a microprocessor based, fully modulating pre-mix gas control system with direct burner ignition.

The **Ace HE24** provides central heating at outputs between 6.0 kW (20,500 Btu/h) and 18.0 kW (61,500 Btu/h) and domestic hot water at outputs between 6.0 kW (20,500 Btu/h) and 24.0 kW (82,000 Btu/h).

The **Ace HE30** provides central heating at outputs between 7.2 kW (24,600 Btu/h) and 23.1 kW (78,900 Btu/h) and domestic hot water at outputs between 7.2 kW (24,600 Btu/h) and 30.0 kW (102,400 Btu/h).

The **Ace HE35** provides central heating at outputs between 8.3 kW (28,300 Btu/h) and 24 kW (81,900 Btu/h) and domestic hot water at outputs between 8.3 kW (28,300 Btu/h) and 35 kW (119,400 Btu/h).

Heat output is controlled according to demand (in both domestic hot water and central heating modes) by the fully modulating pre-mix burner control. The appliance always gives priority to domestic hot water supply. The appliance incorporates frost protection. However this is not operational when the main electrical supply to the appliance is isolated. An electro/mechanical 24hr time clock is fitted as standard.

Gas Consumer Council: The Gas Consumer Council (GCC) is an independent organization which protects the interests of gas users. If you need advice, you will find the telephone number in your local directory under 'Gas'.

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SAFETY

Read these instructions and the user label (fitted on the boiler front panel) carefully before attempting to operate the appliance. Comply with all applicable warnings. **Do not interfere with any sealed components and use the appliance only in accordance with these instructions.**

2.1

CURRENT GAS SAFETY (INSTALLATION AND USE) REGULATIONS OR THE RULES IN FORCE.

It is the law that all gas appliances are installed by a competent person in accordance with the above regulations. Failure to install appliances correctly could lead to prosecution. It is in your own interest, and that of safety, to ensure that the law is complied with. If the appliance is damaged, turn off the appliance and consult a CORGI registered installer. If it is known or suspected that a fault exists on the appliance it **MUST NOT** be used until the fault has been rectified by a competent person.

2.2

ELECTRICAL SUPPLY

This appliance must be earthed.

Supply: 230V - 50Hz fused at 3A.

The method of connection to the mains supply must facilitate complete isolation of the appliance. Either a 3A fused three pin plug and unswitched shuttered socket outlet, or a 3A fused double pole switch having a 3 mm contact separation in both poles, serving only the boiler (and its external controls), may be used.

2.3

CLEARANCES AND VENTILATION

It is not necessary to have a purpose provided air vent in the room or internal space in which a room-sealed appliance is installed. Cupboard or compartment ventilation is not necessary for a room-sealed appliance providing that the minimum clearances are maintained.

Where an open flued (B23) system is used (for example KIT E 'Chimney flue liner kit') then an air vent must be provided in the same room or internal space as the flue duct air inlet with a minimum free-area as stated in section 3.4 of the boilers installation manual.

3

BOILER LOGBOOK

Please ensure that you have a Logbook supplied with your appliance. This Logbook should be completed by your installer to verify that the correct installation and commissioning procedure was followed.

Failure to complete the Logbook may result in difficulties should a problem arise with your appliance during the guarantee period.

This Logbook forms part of the industry's Benchmark code of practice for the installation, commissioning and servicing of central heating systems. All CORGI Registered Installers carry a CORGI ID card and have a registration number. Both should be recorded in your Logbook. You can check your installer is CORGI registered by calling CORGI on 0870 401 2230.

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HOT WATER OPERATION

On a demand for DHW, water flow is detected and the ignition sequence initiated. The fan and pump will start and the boiler will light.

If the DHW draw off rate is high (over 10l/min.), the appliance will run continuously at full output until the tap is either turned off, or the flow rate is reduced, in which case the heat supplied will reduce accordingly to maintain a steady temperature (55°C max).

Hot water is made available at the appliance outlet almost immediately, but the final temperature and time taken for the hot water to reach a tap depends upon the rate at which water is drawn off and the length of the pipe runs between the boiler and taps.

When the tap is turned off, the appliance after a short period of time will revert to heating mode if there is a demand. Otherwise the burner will be extinguished until the next demand for hot water.



After a hot water draw off the burner may stay on for a few seconds (see clause 5.8 'Keep hot facility' in the installation manual)

Priority is always given to Domestic Hot Water supply.

5

OPERATING INSTRUCTIONS

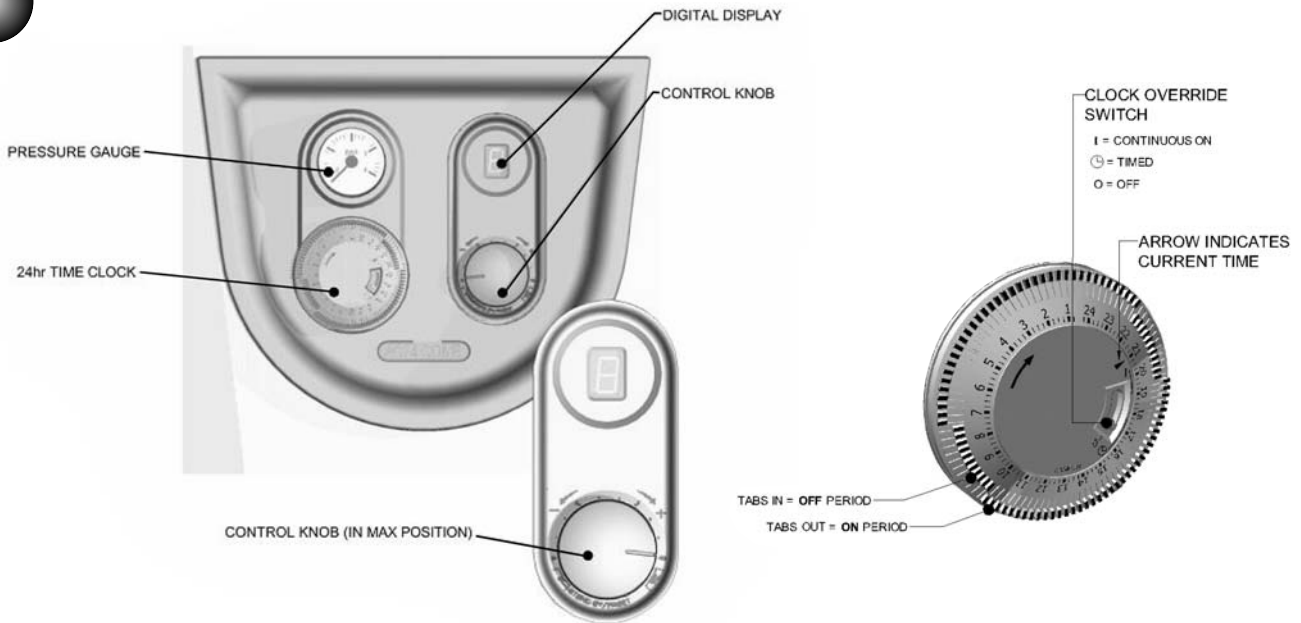
Refer to Fig. 1

5.1

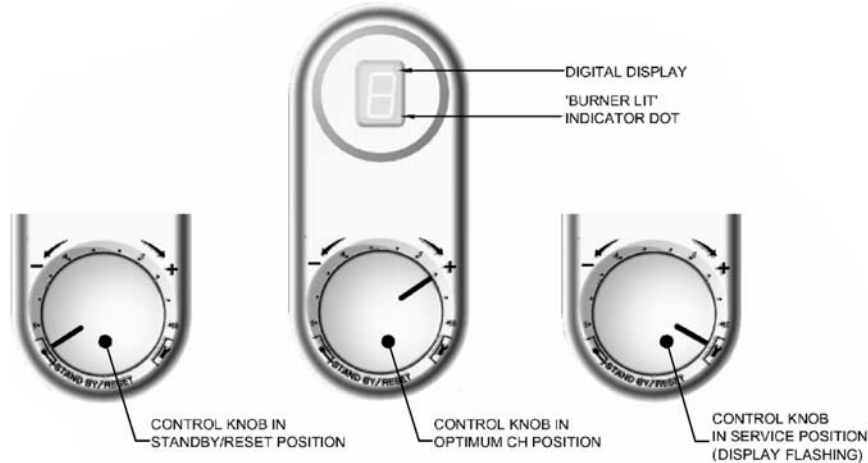
TO LIGHT THE BOILER IN CENTRAL HEATING MODE

- 1) Switch on the electrical supply. If heating is required, ensure that the clock is set to an ON period (see diagram) or set the clock over-ride switch to the ON position. Turn up the room thermostat (if fitted).
- 2) Turn the control knob to the midpoint between minimum and maximum setting. The digital display changes from 'C' to 'C'.
- 3) When the burner has lit the digital display changes to 'E' to indicate heating ON and a small dot will appear in the bottom right corner of the display.
- 4) Hot water will be supplied as soon as any Domestic Hot Water tap is turned on and the digital display will change to 'H' to indicate hot water is being supplied. A small dot will appear in the bottom right corner of the display.
- 5) If the burner fails to light the fan will stop. Initially this may be due to air in the gas supply. The boiler will automatically have five attempts at ignition. After the five attempts it may be necessary to RESET the boiler by turning the control knob fully anti-clockwise to the RESET position and repeat from step 3.
- 6) If the digital display reads 'h' it is an indication that the heating or hot water mode is satisfied, and the boiler is performing a pump over-run function. This is perfectly normal.

1



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LED CODE	FAULT/EFFECT	REASON
1	Overheated appliance	Water temperature greater than 105 °C
2	Differential check faulty/Flame for 15 seconds	Zero check faulty DHW or CH
3	No gas or lockout flame signal/Lockout after 5 ignition attempts	Low gas pressure. No flame signal on ignition, or loss of signal during operation
4	Flue gas sensor	Flue gas temperature greater than 95 °C
5	Defective sensor or thermal fuse	Defective flow, return, DHW or flue sensor or open circuit thermal fuse.
6	Defective gas valve/Flame continues after demand ends	5 sec flame signal after burner is switched off
7	Defective fan	Missing or Erroneous RPM signal
R	PCB error	Internal error
b	Activate BCC (if fitted)	New BCC (if required)
⚡	Safety system failure	Failure of internal self checking system
E	BCC error (if fitted)	Incorrect /missing BCC
⊠	Water flow failure/Flame for a short period only	Sensor temperature differential incorrect
P	Power supply error	Low mains voltage
⚡	DHW cold	Defective DHW thermister or open circuit
(No display)	No light indication	Defective power supply



NOTE: FAULT CODES 1 TO 4 MAY BE RESET BY FOLLOWING THE PROCEDURE IN SECTION 5.5 OF THE INSTALLATION MANUAL, HOWEVER IF ANY OTHER FAULT CODE IS SHOWING PLEASE CONTACT YOUR INSTALLER OR HALSTEAD BOILERS SERVICE HELPLINE TEL: 01926 834834

5.2 CONTROL OF WATER TEMPERATURE

DHW: Hot water temperature is limited to a maximum of 55°C at low draw-off rates and is not adjustable.

CH: Adjustable via the CH temperature control knob to give radiator temperatures of between 30°C and 80°C. To operate the boiler more efficiently it is recommended to set the CH temperature about half way (between '+' and '-'). To avoid setting the control knob temperature to 'STANDBY' in summer when CH is not required, switch the clock override switch to the OFF position OR turn the room thermostat off.



Note: If the digital display shows a flashing 'E' the boiler is in a service mode and the boiler will fire continuously at minimum input. (See fig.2)

This setting is for the convenience of the Service Engineer ONLY.

5.3 TO TURN THE BOILER OFF

For short or long periods

Switch the programmer and/or room thermostat switch to the **OFF** position.

Note: The appliance is fitted with a frost protection device. In the event of very cold conditions, the pump may operate and the boiler light for a few minutes to protect the appliance from potential frost damage. This can only function if the gas and electricity supplies are maintained and the control knob on the appliance is set to the 'STANDBY' position.

This function automatically operates the boiler when the heating system water reaches temperatures below 5°C.

If either the gas or electricity services are to be isolated during a period when frost is likely, the water circuits must be drained.

5.4 BOILER OVERHEAT PROTECTION

The appliance is fitted with two water temperature thermistors located on the flow and return pipes. In the event of overheating, the boiler will shut down and the digital display will show 'H'. Allow the boiler to cool, then briefly turn the control knob fully anti-clockwise to the RESET/STANDBY position and then back to 'ON' within TWO seconds.

If the fault persists, consult a CORGI registered installer.

5.5 DIAGNOSTIC DIGITAL DISPLAY

Refer to Fig. 2

If the digital display shows an error code between 1 and 4 the boiler is in lockout condition

To RESET the boiler turn the control knob fully anti-clockwise to the RESET/STANDBY position and then back to 'ON' within TWO seconds.

For fault finding refer to diagnostic chart shown on the previous page, together with the notes given in sections 8.3, 8.4 and 8.5 of the boilers installation manual.

WRAS
APPROVED
PRODUCT

benchmark

The code of practice for the installation,
commissioning & servicing of central heating systems

5.6 PRESSURE GAUGE

The pressure gauge on the control fascia panel indicates the central heating system pressure. If the normal running pressure is seen to decrease from the original installation pressure of around 1 bar (cold) over a period of time, then there may be a water leak. In this event consult a CORGI registered installer.

Do not attempt to fire the boiler if the pressure has reduced to zero from the original setting.

6 GENERAL CARE

The front panel, being a powder coated white finish should be cleaned with a damp cloth and mild detergent. Do not use abrasive cleaners.

7 ROUTINE SERVICING

To ensure continued efficient operation of the appliance, it is recommended that it is checked and serviced as necessary at regular intervals. The frequency of servicing will depend upon the particular installation conditions and usage but in general once a year should be adequate. It is law that any service work must be carried out by a competent person such as British Gas or other CORGI registered personnel.

8 WARNING

If a gas leak is suspected or exists, turn the gas OFF at the incoming mains (adjacent to the meter). Do not operate any electrical switches. Do not operate any electrical appliances. Open all windows and doors. Do not smoke. Extinguish all naked lights. Phone the Transco 24 hour emergency number immediately on 0800 111 999. (Do not call from a mobile phone).

The boiler is fitted with a condensate trap.

The condensate drain point must not be modified or blocked (see section 4.6 of the installation manual).

9 PLUMBING FROM TERMINAL

Like all condensing boilers this appliance will produce a plume of condensation from the flue terminal. This is due to the high efficiency and hence low flue gas temperature of the boiler. It is normal and not a fault indication.

HALSTEAD

HALSTEAD

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Website: www.halsteadboilers.co.uk

Halstead Boilers is continuously improving its products and may therefore change specifications without prior notice.
The statutory rights of the consumer are not affected.

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SERVICE HELPLINE: 01926 834834 TRAINING: 01926 834838