

*express*

# **AS 18 SYSTEM**

## **SEALED SYSTEM CONDENSING BOILER**

**USER INSTRUCTIONS**

**TO BE GIVEN TO THE USER**

**CE**  
0086  
Pin 87/BQ/44

**G.C. Appliance No. 41-260-20**

## 1

## INTRODUCTION

The **WW Express Boilers AS18 System** is a high efficiency condensing, fully automatic, wall mounted gas appliance for use with natural gas. The appliance incorporates a microprocessor based, fully modulating pre-mix gas control system with direct burner ignition.

The **AS18 System** provides central heating outputs between 6.0 kW (20,500 BTU/h) and 18.0 kW (61,500 BTU/h).

Heat output is controlled according to demand by the fully modulating pre-mix burner control. The appliance incorporates frost protection.

However this is not operational when the main electrical supply to the appliance is isolated.

### Gas Consumer Council

The Gas Consumer Council (GCC) is an independent organization which protects the interests of gas users. If you need advice concerning energy issues, they may be contacted on the consumer Help Line number:

08459 060708, or via their website: <http://www.energywatch.org.uk>

## 2

## 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.

## 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.

## 4

## OPERATING INSTRUCTIONS

Refer to Fig. 1

### 4.1

## TO LIGHT THE BOILER IN CENTRAL HEATING MODE

- 1) Switch on the electrical supply.  
If heating is required, ensure any programmer is set to an ON time. 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 '0' to '1'.
- 3) When the burner has lit the digital display changes to '1' to indicate heating ON and a small dot will appear in the bottom right corner of the display.
- 4) 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.
- 5) If the digital display reads 'H' it is an indication that the heating is satisfied, and the boiler is performing a pump over-run function. This is perfectly normal.

### 4.2

## CONTROL OF WATER TEMPERATURE

**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 any programmer or room thermostat to OFF.

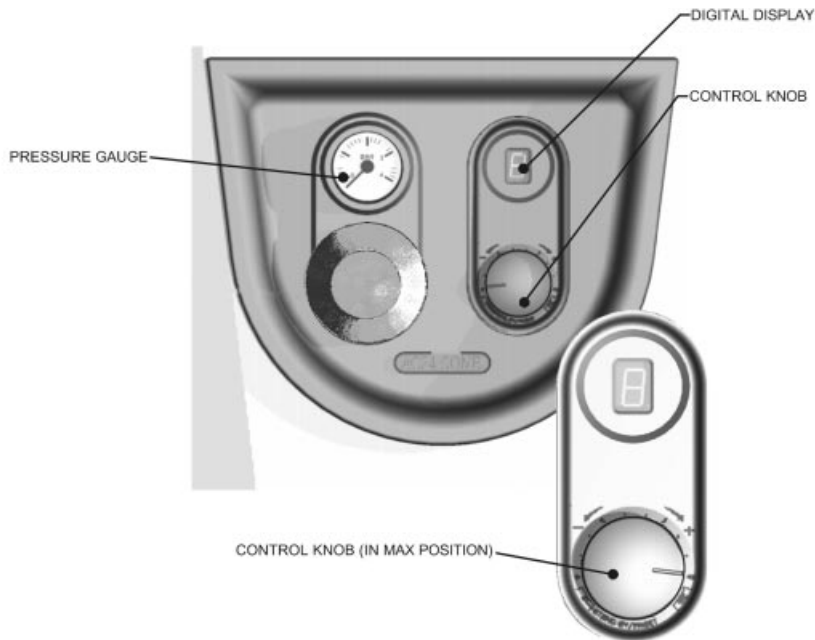


**Note:** All the Lock-out and Blocking codes will flash if displayed.

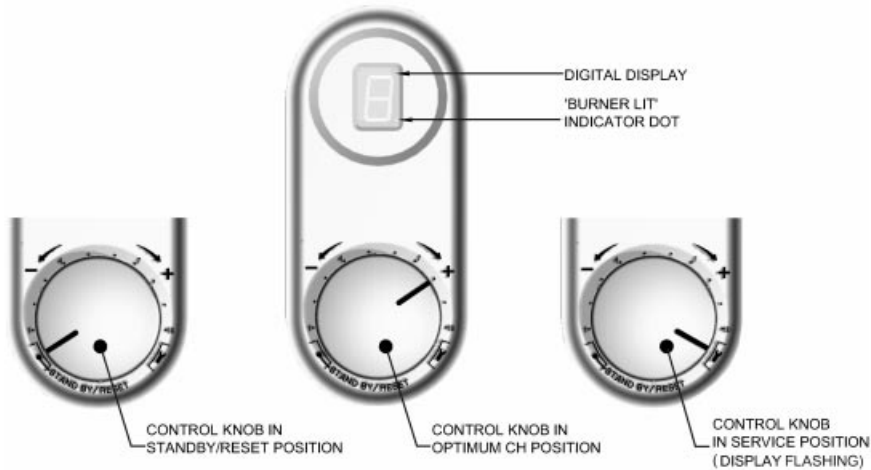
A flashing '1' indicates that the boiler is in service mode and that the boiler will fire continuously at minimum input. (See fig.2)

**This setting is for the convenience of the Service engineer ONLY.**

1



2



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 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 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)
d	Safety system failure	Failure of internal self checking system
E	BCC error (if fitted)	Incorrect /missing BCC
U	Water flow failure/Flame for a short period only	Sensor temperature differential incorrect
P	Power supply error	Low mains voltage
L	Lock out	Faulty Low Voltage Harness
(No display)	No light indication	Defective power supply



**NOTE:** FAULT CODES 1 TO 4 MAY BE RESET BY FOLLOWING THE PROCEDURE IN SECTION 5.4 OF THE INSTALLATION MANUAL, HOWEVER IF ANY OTHER FAULT CODE IS SHOWING PLEASE CONTACT YOUR INSTALLER OR WW EXPRESS BOILERS SERVICE HELPLINE TEL: 01926 834834

## 4.3 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.

## 4.4 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 'F'. 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.

## 4.5 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 faultfinding, refer to the diagnostic chart shown on the previous page, together with the notes given in sections 8.1, 8.2, 8.3 and 8.4 of the boilers installation manual.

## 4.6 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.**

## 5 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.

## 6 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.

## 7 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).**

## 8 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.**

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Manufactured for William Wilson by Halstead Boilers Limited.

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Enquiries Line: 01224 877522. Service Helpline: 01926 834834.

*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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**WRAS**  
APPROVED  
PRODUCT

**benchmark**

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

**SERVICE HELPLINE: 01926 834834**