



INSTALLATION AND USER GUIDE

6, 9 & 12kW ELECTRIC BOILER



UK
CA

PLEASE RETAIN FOR REFERENCE

INTRODUCTION

Please read and understand these instructions prior to installation and commissioning. These instructions should be left with the customer once the unit is commissioned and running satisfactorily.

The boiler is available in three output versions, 6kW, 9kW and 12kW and can be specified for standard central heating circuits with an 80 degree flow or underfloor circuits with a 60 degree flow.

The unit is intended for domestic central heating systems and can be connected to single phase domestic electricity supplies, please see the Technical Specification for more information.

Advance eGlow boilers are compact and quiet in operation, require no fluing and can be located anywhere within the property. A pump is fitted in the eGlow making installation very straight forward. The pump has an over run facility and there is an automatic by pass fitted. The eGlow should be installed as a sealed system boiler. A sealed system kit is available for easy installation with an 8 litre expansion vessel. This can be sited anywhere in the circuit giving the installer flexibility.

The eGlow is controlled externally with a programmer and room thermostat arrangement with **voltage free switching** (not supplied). There is a connector in the boiler casing for this purpose. Standard central heating programmers and room thermostats can be used.

The boiler is fully modulating and soft switched on start up. This enhances the life of the heat exchangers as well as reducing the loading on domestic electricity. A single LED highlights running and fault modes.

A pressure switch prevents the boiler running in dry conditions and there are two levels of overheat protection.

The Advance eGlow boiler is guaranteed for two years against faulty manufacture, subject to terms and conditions, and a technical help desk service is offered during office hours. The unit requires no maintenance in ordinary operating conditions. Stainless steel heat exchangers are fitted for long life and reliability.

PRODUCT CODES

CODE	TYPE	SIZE	WEIGHT FULL KG
EG6	6KW CENTRAL HEATING BOILER	510h x 400w x 167d	15KG
EG6-U	6KW UNDERFLOOR HEATING BOILER	510h x 400w x 167d	15KG
EG9	9KW CENTRAL HEATING BOILER	510h x 400w x 167d	15KG
EG9-U	9KW UNDERFLOOR HEATING BOILER	510h x 400w x 167d	15KG
EG12	9KW CENTRAL HEATING BOILER	510h x 400w x 167d	15KG
EG12-U	9KW UNDERFLOOR HEATING BOILER	510h x 400w x 167d	15KG

OPTIONAL SEALED SYSTEM KIT AA 0400

KIT INCLUDES:

COLD FILL HOUSE WITH DOUBLE ISOLATION

3 BAR PRESSURE RELIEF VALVE 1/2"

EXPANSION VESSEL 8 LITRES

PRESSURE GAUGE

TECHNICAL SPECIFICATIONS

POWER RATING	6kW	9kW	12kW
FLOW AND RETURN	22MM BOTTOM ENTRY	22MM BOTTOM ENTRY	22MM BOTTOM ENTRY
ELECTRICAL SUPPLY	SP 240 VAC 50hz 30A	SP 240 VAC 50hz 40A	SP 240 VAC 50hz 50A
PROTECTION	32 AMPS	45 AMPS	63 AMPS
PUMP	15/50	15/50	15/50
PUMP SETTING	AUTO	AUTO	AUTO
OUTPUT TEMP (MAX)	80°C	80°C	80°C
UNDERFLOOR UNITS OUTPUT TEMP (MAX)	60°C	60°C	60°C
HIGH LIMIT TEMP CONTROL 2 STAGE	90°/95°C	90°/95°C	90°/95°C
NOM HEAT OUTPUT	20,000 BTU	30,000 BTU	40,000 BTU
AUTO AIR VENT	FITTED	FITTED	FITTED
PRESSURE SWITCH	FITTED	FITTED	FITTED
AUTO BY PASS	FITTED	FITTED	FITTED
MIN PRESSURE COLD FILL	0.6 BAR	0.6 BAR	0.6 BAR
MAX PRESSURE HOT	3 BAR	3 BAR	3 BAR
HEAT EXCHANGERS	STAINLESS STEEL 3Kw PODS x 2	STAINLESS STEEL 3Kw PODS x 3	STAINLESS STEEL 3Kw PODS x 4
IPX RATING	I	I	I

MOUNTING THE BOILER

Please ensure that all current local by laws and national building regulations are consulted prior to installation along with current codes of practice.

The unit must be mounted in a vertical position accessible for servicing. Effectively this means allowing front facing access to remove the outer door casing to access the eGlow.

Please check load bearing and ensure correct fixing is used. There are four holes in the casing for this purpose.

The 22mm flow and return pipes are at the bottom of the boiler, and should be connected using compression fittings. Do not solder connections within 600mm of the boiler. Flow is the left pipe, marked red, return is the right pipe, marked blue. We suggest you install the means to isolate and drain the boiler independently.

SAFETY

No special precautions are required, however due care should be taken in installing, commissioning and servicing to prevent electric shock or water leakage.

INSTALLATION

Only persons competent to do so may fit this appliance.

Calculate space heating requirements and allow an extra 3kW for hot water provision if an indirect cylinder is to be installed.

Controls such as room thermostats and programmers or timers must be installed to comply with current Part L requirements.

Ensure that the correct appliance is fitted, for example by sizing to meet demand and by choosing underfloor or central heating models.

The system must be properly flushed and have inhibitor added according to manufacturer's specifications. Always choose a recognised brand and inhibit to the correct dilution. Always flush out completely as any chlorine based chemicals can attack stainless steel components. After drain down, even a partial one, inhibitor levels must be topped up.

Y, W or S plan systems may be used with the eGlow.

Primary pipe work in enclosed spaces such as boiler cupboards should be insulated. Fit isolation valves.

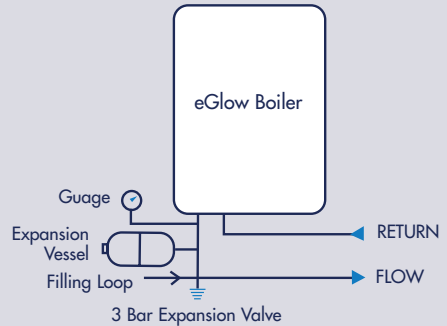
It is **important** to have a locked open radiator or open towel rail in the system.

Thermostatic radiator valves are recommended. Use a twin pipe 22mm system with 15mm tee off to radiators.

INSTALLATION SCHEMATICS

SEALED SYSTEM

Sealed System Kits are available from Advance Appliances and can be sited anywhere in the open pipework of the system



The eGlow boiler can only be configured into a sealed system. A sealed system kit can be purchased from Advance Appliances to make the job simple. An 8 litre expansion vessel is supplied with each kit but it should be noted that systems with high water content may require larger vessels. All heating systems must be isolated from the mains water supply after the system is filled.

ELECTRICAL CONNECTIONS

THIS APPLIANCE MUST BE EARTHED

The appropriate current regulations and best practices must always be followed. Installation must be carried out by a competent and qualified tradesman. Use off peak supplies where possible to reduce running costs.

Check the incoming supply meets the minimum requirements of the appliance and utilise a double pole RCD capable of breaking the full current load. Remember that the full house loading must be taken into consideration when calculating mains demand. Refer to IEE regulations for wiring size to the appliance. The mains feed goes directly to the terminal block identified on the schematic (on page 8) and the boiler itself. The earth must be connected to the marked point.

Standard switching is maintained through the controls, zero voltage switching is used and a separate power supply for programmer and room thermostat (if digital) should be used. In some cases this may be a battery or a mains charger with rechargeable cells in the programmer. This control circuit is identified on the schematic (on page 8) and will switch the boiler internally.

In the case of a combined hot water and heating system a Y plan or similar can be used with a three port motorised valve, in which case a separate mains supply will be required to operate the valve which will be switched via a suitable programmer NOT the boiler PCB. Use a relay if any voltage is present.

Always consult manufacturer's requirements and recommendations for controls, the above advice is of a general nature only.

ELECTRICAL CONNECTIONS continued

Check after installation

- Polarity
- Short circuit
- Earth continuity
- Resistance to earth
- Visual check for stray wiring strands etc
- Mechanical check for integrity of connections

Do not switch on until the unit is full of water and air has been purged from the system.

IMPORTANT

The switching in the boiler is zero voltage and cannot be used for mains switching e.g. three port valves.

We recommend hot water is provided by an independent electric/solar cylinder for optimum efficiency.

COMMISSIONING

Fill the system by opening isolating valves to the feed and expansion tank or to the filling loop of a sealed system. Charge sealed systems from 0.75 bar to 1 bar.

When the system is full, and has been thoroughly checked for leaks it should be flushed out to remove any debris.

Refill, add system cleanser and switch on the boiler.

The boiler controls are fully automatic. The LED will turn green showing that the boiler is powered up and awaiting demand. When heating demand is on (set the programmer and room thermostat to call for demand) the pump will be energised for 5 seconds in order for the flow switch to sense flow in the boiler. If it does not sense flow the boiler will switch off, the LED will show red (continuously) indicating that the circuit contains air (no flow).

Check that all air is purged and try again. The boiler can be switched back on again by turning the programmer/room thermostat off and on. It is usual for this process to take a little time in all heating circuits.

TIP:

Run the boiler with pods disconnected until air is purged. You may need to increase the pump speed to do this.

NEVER link the pressure switch out – it is dangerous and will damage the heater pods. This action will void guarantees.

Allow the boiler to run for 30 minutes to ensure that it is operating correctly and flush again.

Refill the system adding inhibitor following manufacturer's instructions and switch on.

USER INSTRUCTIONS

Set the programmer to match your own preferences for heating periods. The room thermostat should be set at a comfort level, usually 20°C. The room thermostat should be in a room where the radiator is locked on e.g. a hallway, study etc rather than a living room or bedroom. The boiler is automatic and should give a trouble free life.

The green LED means that there is power to the boiler; it doesn't mean that the boiler is actually heating the system. It does this when there is demand for heating through the programmer and room thermostat.

If there is insufficient water in the system the red LED will be on continuously. Switch the room thermostat off and on (making sure that the programmer is on) to start the boiler up again, air may be present in the system. If the fault persists the system may need recharging – consult your installer.

The case can be kept clean with a damp cloth.

FAILURE

The LED may flash red, indicating overheat. The unit is protected by the PCB controller in addition to a thermomechanical device. The appliance will reset itself when it cools. If the overheat recurs please ensure that the connection from the thermistor (on page 8) to the PCB is soundly made. Check circulation is free in your heating system. A continuous red LED relates to a no flow condition and air must be purged from the heating circuit or low pressure, please charge system. Consult problem solving on page 9 if failure persists.

PROTECTION

In situations where this appliance may be subject to temperatures below 5°C (e.g. holiday lets not occupied in winter etc) a frost thermostat can be linked to the control circuit. The unit should always be installed in the main envelope of the property, never outside.

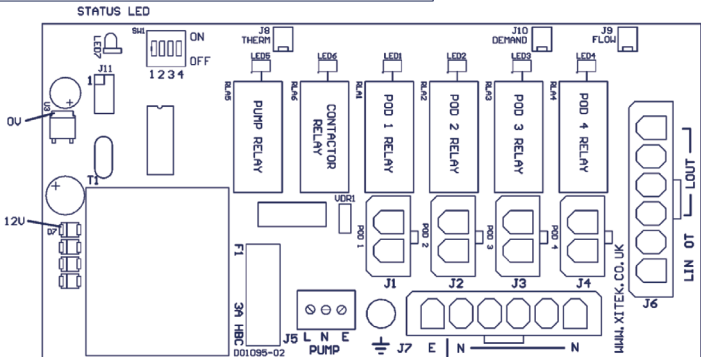
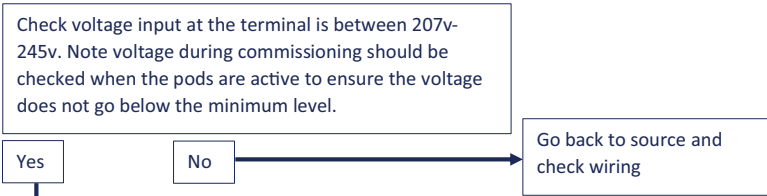
The eGlow can be safely installed in most situations, however, excessive moisture or temperature extremes should be avoided.

PART NUMBERS

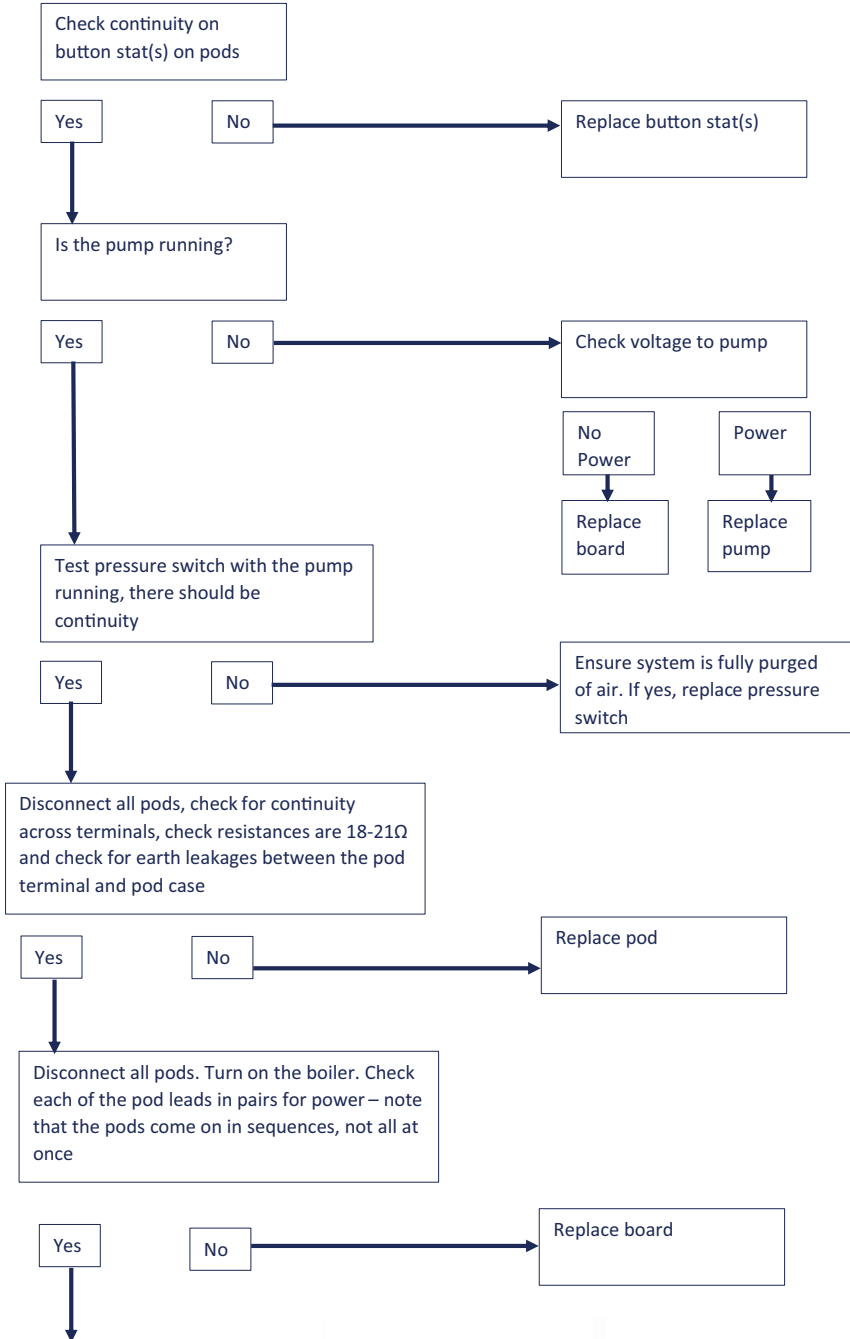
3Kw HEATER PODS	AA0401
PCB ASSEMBLY	AA0402
PUMP	AA0031
AUTO AIR VENT	AA0404
AUTO BY PASS	AA0405
THERMISTOR	AA0406
PRESSURE SWITCH	AA0407
CONTACTOR	AA0408
HIGH LIMIT THERMOSTAT	AA0409

EGLOW PROBLEM SOLVING

Note: Main fault modes LED7 **Red Cont** – Pressure Switch
Red Flashing – overheat **Green** – All ok



EGLOW PROBLEM SOLVING continued



EGLOW PROBLEM SOLVING continued

Connect each pod in turn.
Does any one pod, when connected, turn off the boiler?

Yes

Replace pod

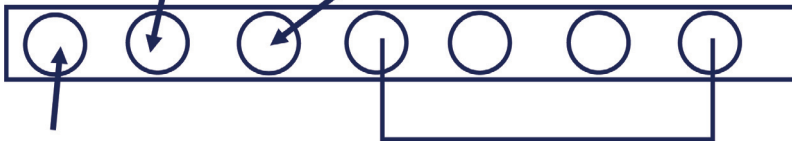
Notes

LED layout

Contactor

Pump

Diagram



Green: ON

Red: off but board powered

Fault: Red Cont= Flow

Red Flash= Overheat

Mode	SW1	SW2	SW3	SW4
Central heating	Off	X	X	X
Under floor	On	X	X	X
3KW	X	Off	Off	X
6KW	X	Off	On	X
9KW	X	On	Off	X
12KW	X	On	On	X
Enable main contactor	X	X	X	On
Disable main contactor	X	X	X	Off

X = Any position

TO CHECK INDIVIDUAL PODS MAKE SURE THERE IS CONTINUITY ACROSS THE TERMINALS AND THAT THE RESISTANCE IS 21 OHMS

ADVANCE APPLIANCES GUARANTEE

The eGlow has been manufactured and tested to a high specification and should give years of trouble free life. If it should go wrong you will be covered for a period of two years from the date of installation provided that

- You keep proof of purchase/installation date
- Warranty is registered on Advance Appliances Website
- It is installed correctly and the benchmark paperwork is completed
- It is used for its intended purpose
- It is operated properly
- It has not been tampered with or altered in any other way (for example removing the caps on flow switches)

The foregoing does not affect your statutory rights.



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For Terms and Conditions go to www.advanceappliances.co.uk