ISSUE 5
0415

INSTALLATION AND USER GUIDE

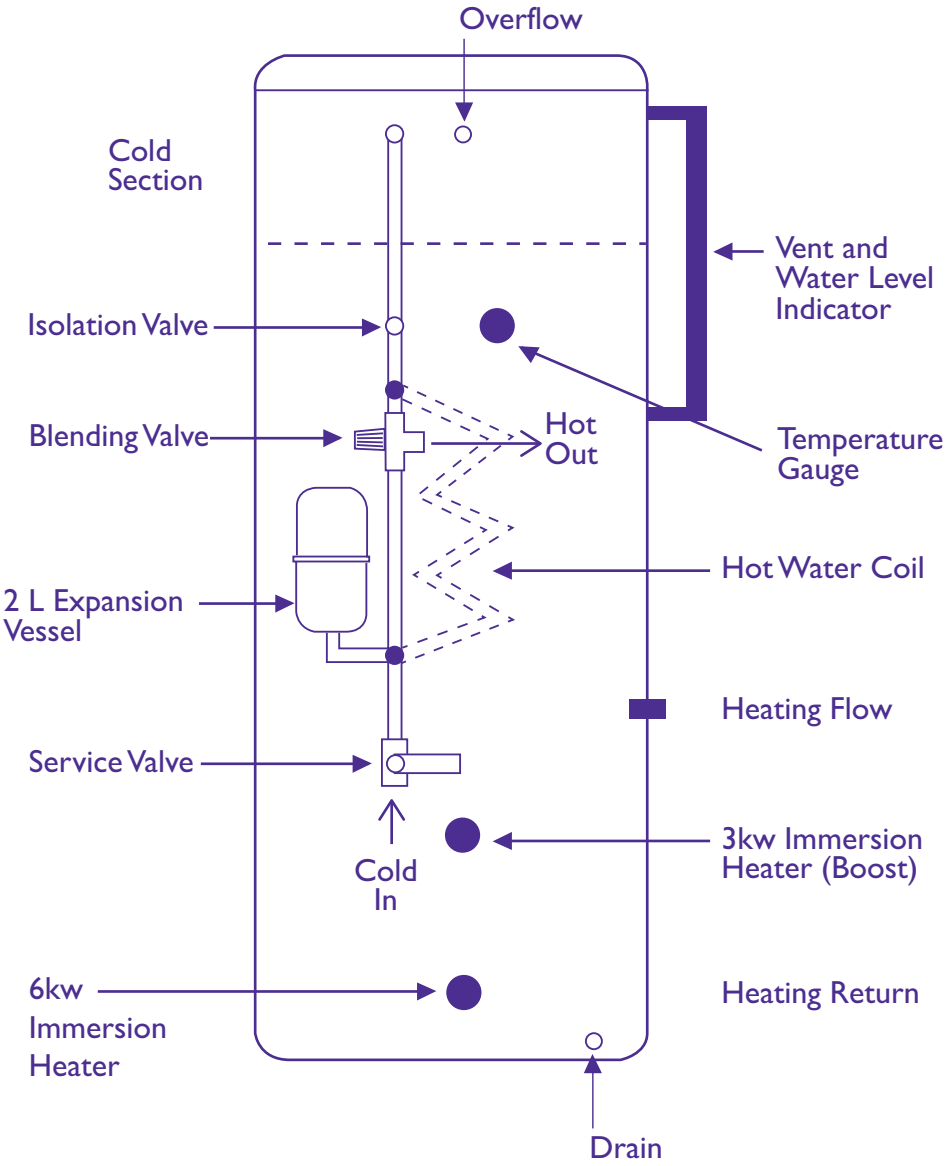
ADVANCE ECB ELECTRIC COMBINATION BOILER

CE

ADVANCE APPLIANCES LTD

HOUSEHOLDER - PLEASE RETAIN AND ENSURE SERVICE RECORDS ARE KEPT UP TO DATE

SCHEMATIC


Overflow
Cold Section
Vent and Water Level Indicator
Isolation Valve
Blending Valve
Hot Out
Temperature Gauge
Hot Water Coil
2 L Expansion Vessel
Heating Flow
Service Valve
3kw Immersion Heater (Boost)
Cold In
6kw Immersion Heater
Heating Return
Drain


advance
appliances

INTRODUCTION

The Advance Electric Combination boiler is perfect for modern all electric apartment dwellers who prefer the comfort of wet central heating systems and mains pressure hot water for powerful showers and quick bath filling.

The unit is for use with a vented central heating system and also provides mains hot water. It utilises off peak electricity for economy in use and is pre wired and pre plumbed for ease of installation.

Two programmers are fitted to the unit, one for off peak (usually overnight) electricity tariffs and one for switching the central heating on and off during the day. The central heating programmer/room thermostat is wireless and can be used without the need for additional wiring.

There is sufficient hot water from an overnight charge for a shower and a bath. A second immersion heater is fitted which should be wired to a switched spur for hot water boost. If there are days when your hot water needs increase this can be manually switched.

The product meets the HWA thermal store specification and parts G and L of the Building Regulations.

The lower part of the store is dedicated to central heating. A 6kw immersion heater is fitted for this purpose, and can be used in systems up to four or five radiators. During start up periods the energy stored in the lower part of boiler is ready for immediate use. If the water in the radiators falls overnight to 20°C, for example, the 6kw heater is adequate for demand of up to 10kw when first switched on in the day.

Note: Electrical repairs must only be undertaken by the manufacturer, service agent or similarly qualified person in order to avoid a hazard.

OPERATION

When heating is switched on water is pumped from the store to the radiators and has the benefit of providing immediate heat. Using the off-peak controller, the immersion heater will have heated the store to 75°C which is the recommended temperature. A temperature gauge is fitted for convenience and diagnostics.

In the higher part of the tank is a large efficient hot water coil which draws water from the store for hot outlets in the property. It is connected to the mains so provides fast safe hot water to all outlets without the need for pumps. On one overnight charge this store will deliver enough hot water for one bath and one shower.

Your morning shower will not be compromised if the heating is on.

Two programmers are supplied. The time clock on the tank is for programming the unit to coincide with off peak tariff electricity. This keeps running costs down.

The remote wireless programmer is used for timing the on off periods of central heating and is left to the user.

Instructions are provided for these programmers.

HANDLING

Never lift the unit by holding the pipe work, always lift and position holding the body of the tank. It is a 2 man lift.

POSITIONING THE ECB

Position the unit on a flat level surface that is capable of bearing 250kg with controls accessible for any future maintenance. Leave a space of 200mm above the unit in case of a future requirement for servicing. The unit can sit directly on the floor.

COLD WATER SUPPLY

A minimum pressure of 2 bar through a 22mm pipe is preferred. If this is not achievable test the household supply by turning on a tap connected to the mains – usually a cold tap at the sink – as this will approximate the hot service. A flow of 18 litres per minute is recommended.

If hardness exceeds 200ppm you must fit a scale reducer. Scale build up is not covered and can happen quickly, reducing hot water flow and efficiency.

Pressures above 3 bar should be controlled by fitting a pressure reducing valve (not supplied).

HOT WATER

A 22mm pipe set incorporating service valve, shock arrestor and blending valve is fitted to the unit. This is needed to control the temperature at the hot water outlets and prevent water hammer. The shock arrestor should be checked annually and maintained at 3 bar pressure. The blending valve calibration should also be checked annually to ensure water is at an appropriate temperature.

The cold mains and domestic hot water is connected directly to this pipe work.

CENTRAL HEATING

The heating is connected to the lower 22mm tappings on the right hand side of the tank. A pump is fitted with isolation valves. Fit the flow to the heating to the pump connection.

Note that heating is vented and the water level in the header tank must be 500mm above the highest radiator. Central heating is self commissioning. Once it is connected the unit will fill automatically. Radiators should be bled to remove any excess air from the system.

The system must be inhibited. Use a proprietary brand and recommended dosage and concentration for central heating systems – don't forget the store volume of 210 litres.

To prevent nuisance gravity circulation (in Summer for example when heating is not required) a non return valve is fitted.

IMMERSION HEATERS

The highest position immersion heater is 3kW and should be wired to a 15amp switched spur. It can be used as a boost if extra demand is placed on the hot water during the day.

The lower immersion heater is 6kW and is wired to come on (a) when programmed to match off peak periods by programmer labelled OFF PEAK and (b) to come on during heating periods when the wireless room thermostat and programmer calls for heat. Instructions are supplied with the programmers.

Immersion heaters must be set at 75°C

Please note that the immersion heaters are high temperature and replacements should be ordered from Advance Appliances Ltd. The spares are listed at the back of this booklet with relevant code numbers.

GENERAL

ALL JOINTS INCLUDING IMMERSION HEATERS MUST BE CHECKED – THEY CAN LOOSEN IN TRANSIT

ALWAYS FIT A SOLVENT WELD OR METAL DISCHARGE

SERVICE ANNUALLY AND KEEP SERVICE RECORD

FLUSH AFTER COMMISSIONING, DRAIN DOWN AND RE-FILL ADDING CORROSION INHIBITOR TO RECOMMENDED STRENGTH – REMEMBER TO ADD 210 LITRES STORE VOLUME

DO NOT USE HEAVILY CHLORINATED SOLUTIONS FOR FLUSHING

WARRANTY

The tank is guaranteed for ten years. The parts are guaranteed for two years.

Warranty does not cover private water supply. Water must be from public supply and must meet all current drinking water standards.

Scale is not covered.

Chlorine levels must be below 200ppm.

The unit must be used as directed for heating and hot water in a domestic environment and installed correctly.

Service the unit annually to maintain guarantees.

The above does not affect your statutory rights.

PROGRAMMERS

Two programmers are supplied with the unit - a wireless one with integrated room thermostat for central heating and one attached to the ECB which must be programmed to come on during off peak periods. Consult your energy supplier regarding these times if you are unsure. This is important and will help reduce running costs of the ECB.

The instructions for programming are supplied with these instructions – they are separate leaflets and must be kept together with this installation guide for future.

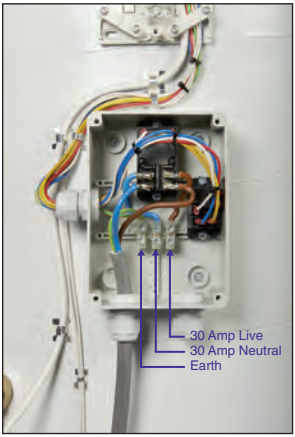
Note: Alarm may sound annually - consult installer to service ECB

WIRING

The ECB is pre wired. The installer must be a qualified electrician and the installation must meet all appropriate current Regulations and Codes of Practice.

A 3amp supply is to be wired to the main junction box as indicated in the box, live to No. 1, Neutral to No. 2 and Earth to No. 3.

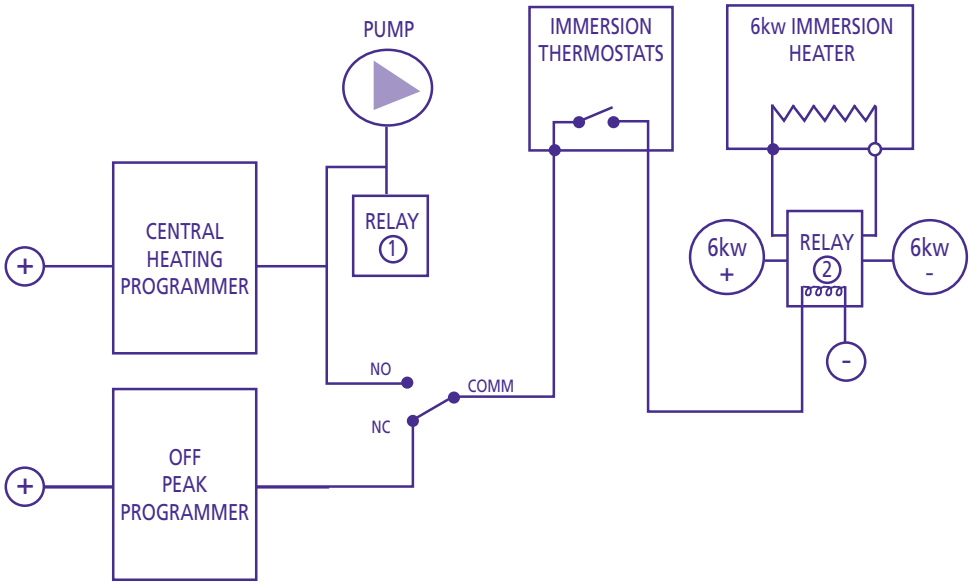
The large contactor must have a 30 amp switched and protected supply connected as below inside the box. This supply must be direct from the board in the property.



The higher immersion heater can be wired to a 15 amp switched spur for the householder to use as boost during periods of heavy hot water demand.

Note: The means for disconnecting and isolation must be incorporated in the fixed wiring in accordance with the wiring rules.

WIRING SCHEMATIC



SPECIFICATION

CAPACITY	HEATING RATING	WEIGHT FULL	HGT x DIA	HEAT LOSS
210 HOT 20 COLD	6KW TO 10 KW	250KG	1750 x 535	1.92KWHR/24HRS

SPARES

EXPANSION VESSEL	AA 0001
BLENDING VALVE	AA 0002
IMMERSION 3KW HI TEMP	AA 0005
IMMERSION 6KW HI TEMP	AA 0284
A RATED PUMP	AA 0031
10 WAY WIRING CENTRE	AA 0027
PRE WIRED RELAYS AND CONNECTOR BLOCK ENCLOSURE	AA 0034
TEMPERATURE GAUGE	AA 0019
OFF PEAK PROGRAMMER	AA 0033
CENTRAL HEATING PROGRAMMER	AA 0032

INSTALLER & COMMISSIONING ENGINEER DETAILS

Customer Details

Name .....

Address .....

.....

Tel No. .....

Installer Details

Name .....

Address .....

.....

Tel No. .....

DATE .....

REGISTRATION DETAILS
(where applicable for unvented systems)

REG No. .....

ID SERIAL No. etc. .....

Commissioning Engineer Details

Name .....

Address .....

.....

Tel No. .....

DATE .....

REGISTRATION DETAILS
(where applicable for unvented systems)

REG No. .....

ID SERIAL No. etc. .....

Servicing Requirements

1. Check pressure reducing valve (if fitted) is 3.0 bar static and adjust if necessary.
2. Check flow rates are correct at 18 litres per minute. Clean filter in pressure reducing valve only if required.
3. Check inhibitor levels in system
4 Check expansion vessel(s) are appropriately charged.
5. Check blending valve output temperature is 55°C or lower.

Should further assistance or clarification be required contact Advance Advice on 01543 377723.

Failure to carry out annual service/ maintenance requirements and log proof in service/maintenance records may invalidate warranty.

Appliance Details

Manufacturer .....

Capacity ..... Litres

Serial No. .....

General Installation

Has a check been done for joint tightness and leaks? Yes ☐ No ☐

Has a check been done for electrical safety? Yes ☐ No ☐

SERVICE INTERVAL RECORD

Service regularly by an approved engineer and record details below

SERVICE 1 Date

Engineers Name .....
Company Name .....
Tel No. .....
ID Serial No. .....
Comments .....
.....
Signature .....

SERVICE 2 Date

Engineers Name .....
Company Name .....
Tel No. .....
ID Serial No. .....
Comments .....
.....
Signature .....

SERVICE 3 Date

Engineers Name .....
Company Name .....
Tel No. .....
ID Serial No. .....
Comments .....
.....
Signature .....

SERVICE 4 Date

Engineers Name .....
Company Name .....
Tel No. .....
ID Serial No. .....
Comments .....
.....
Signature .....

SERVICE 5 Date

Engineers Name .....
Company Name .....
Tel No. .....
ID Serial No. .....
Comments .....
.....
Signature .....

SERVICE 6 Date

Engineers Name .....
Company Name .....
Tel No. .....
ID Serial No. .....
Comments .....
.....
Signature .....

advance appliances

hot water association CHARTER MEMBER

UNIT 4 COPPICE SIDE IND EST BROWNHILLS WALSALL WS8 7EX TEL 01543 377723