



INSTALLATION AND USER GUIDE

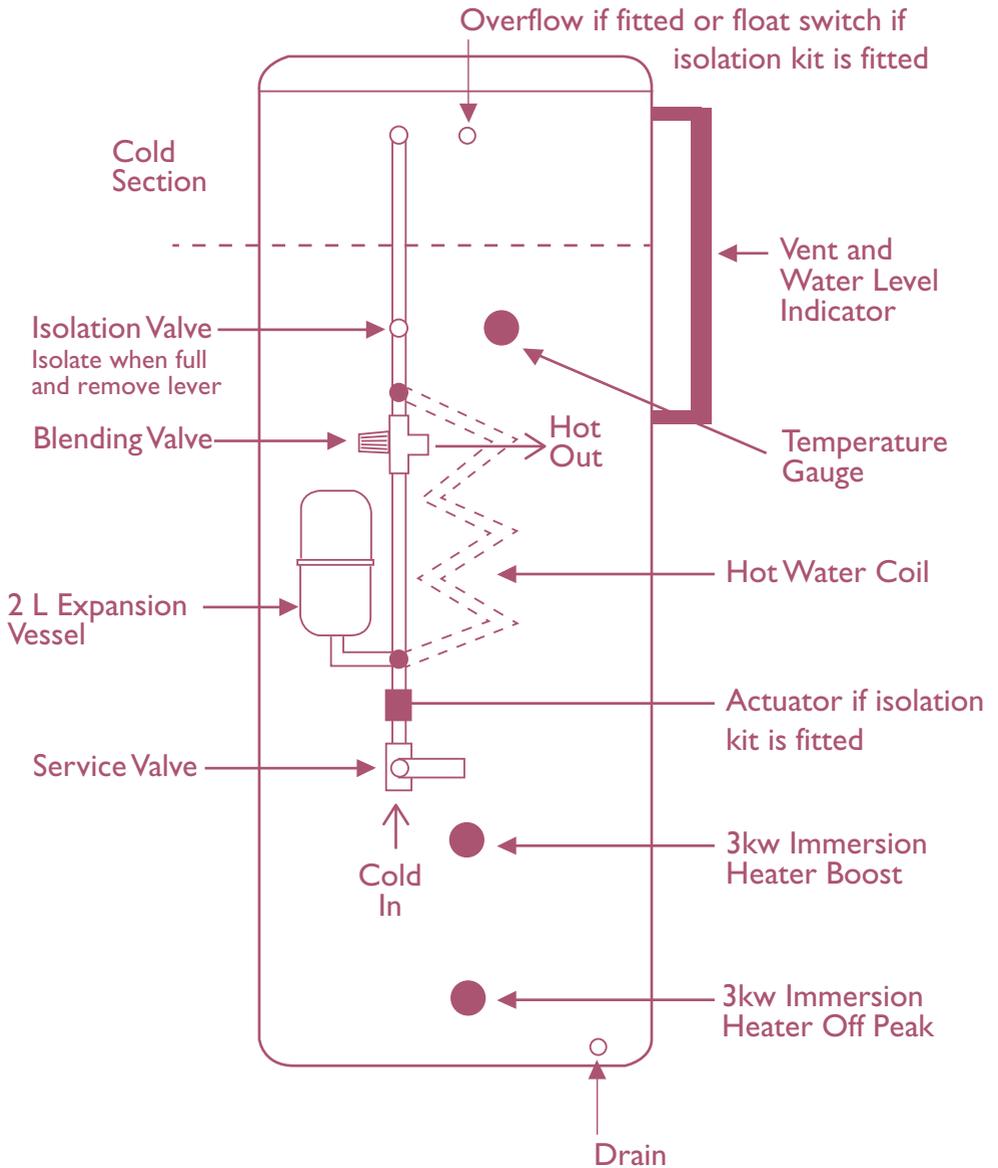
ADVANCE ELECTRIC THERMAL STORE



ADVANCE APPLIANCES LTD

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

SCHEMATIC



INTRODUCTION

Advance thermal stores meet the Hot Water Association Thermal Store Specification and Part G and Part L of the Building Regulations.

Advance Electric Thermal Store Systems are perfect for installations where oil or gas is not available or preferred such as rural dwellings or modern apartments.

No flues are required and the unit is quiet in operation.

Off peak tariffs can be utilised and all units are fitted with two 3kW immersion heaters. The unit is designed to make use of off-peak tariffs. The top heater is for top-up during peak tariff times. If only one immersion heater is used for single tariff or low load preferences, please connect only the bottom heater. This is a hot water only thermal store.

Mains pressure hot water is provided safely at 20 litres per minute provided an adequate service is connected to the unit. This enables power showering without a pump and fast bath filling.

The unit can be fitted and left isolated from the filling point if it is not possible to fit an overflow. Please see page 4.

The blending valve can be orientated to right or left hand hot water service. Loosen the compression nuts, move valve and re-tighten the nuts.

SITING

The unit can be positioned anywhere within the property, even below hot water outlets, on a flat even surface.

Do not site in aggressive environments or areas subject to frost.

Please note that the unit must be installed in a position where it can be serviced and maintained in the future. Please make sure all parts are accessible for future maintenance, ESPECIALLY immersion heaters. 200mm top access should be allowed for. Please also take into account the weight of the unit when full and ensure that the floor can take the load.

PERFORMANCE

160 litre unit for single standard bath and shower up to 20 litres/minute.
210 litre unit for bath plus two showers or two baths up to 20 litres/minute.

INSTALLATION

The unit must be installed to meet current best practice by a person competent to do so.

Incoming mains of 22mm with a pressure of 2 bar or above is recommended for best performance. Lesser pressures/pipe diameters will compromise performance; this must be taken into account as the decision rests with the installer/householder.

Incoming pressures of more than 3 bar must be controlled at 3 bar by a pressure reducing valve (Not supplied).

Recommended flow rate from 18 to 20 litres per minute. Excessive flow rates may result in lower hot water temperatures.

In hard water areas where concentrations exceed 200ppm a suitable scale reducer must be installed. The choice is left to the installer to suit local conditions. Chlorine levels must be below 200ppm.

We recommend that the cold service to the ballcock in the cold section is turned off using the isolation valve fitted. Remove the plastic lever to prevent customer error. Make sure that the cold section has a 50mm depth of water.

If you wish to install the unit without an overflow (warning) pipe, order with the isolation kit fitted. This kit is pre-plumbed and pre-wired to the unit and detects any rise in the water level of the cold section. If the level rises, it activates a float switch which energises (closes) an actuator valve to prevent further flow into the unit. The actuator needs to be set to automatic.

The valve takes 3 minutes to open. The wiring enclosure should be connected to a 5A 230V AC protected and switched supply. Cap the overflow connection with a 22mm blank compression fitting. Where the isolation kit is fitted the unit is supplied with manual fill only. Turn on isolation valve to fill to marked point on sight glass then turn off. Remove and cap the flexi connector. Check the level annually.

If the overflow is connected it must be in line with current practice. A metal overflow should be fitted. Push fit or solvent weld are not recommended. Discharge must be to a safe point. We also recommend that the ball valve is isolated even if an overflow is fitted. To access the valve locking nut push back foam in top section.

Inhibitor must be added via the top of the store to manufacturers' recommended dosage.

PIPEWORK

In order to comply with Part L Building Regulations it is necessary to insulate any hot water (primary and secondary) pipework within one metre of the cylinder. Guidance is given in the Table 5 (Page 20) of the 2013 Domestic Heating Compliance guide. Insulation values for the most popular pipe sizes are reproduced below.

Pipe outside diameter	Maximum heat loss in W/m
15	7.89
22	9.12
28	10.07
35	11.08

COMMISSIONING

ALL JOINTS MUST BE TESTED AS THEY CAN LOOSEN IN TRANSIT.

The blending valve is set to 55°C. See manufacturer's leaflet if adjustment is required. Do not set it at maximum as this will deplete store energy too quickly.

The immersion heaters are rated at 3kW each, and should be set at 75°C. There is a thermal cut out on the thermostat. This may trip from time to time and need to be re-set. Use only approved replacements.

The expansion vessel is charged at 3 bar and acts as a shock arrestor to prevent water hammer and takes up expansion in the internal heat exchanger.

SERVICING

This should be done every year. Fill in the form at the back of this publication - you may need it in case of warranty issues. Keep proof of servicing (receipts etc).

Service the expansion vessel by inflating to 3 bar, check condition of ball and float valve and ensure store is inhibited with a proprietary brand of inhibitor. (See page 9).

USING THE UNIT

It is critical that the water level is checked if the unit doesn't have the cold service connected to the ballcock. About 50mm depth in the cold section is required. The transparent vent pipe acts as a sight glass to check water level without removing the top. Simply open the valve on the flexible hose to re-fill the unit.

USING THE UNIT (Continued)

Do not allow water levels to drop below the immersion heater as it will fail if switched on in air.

Please note that if you are using one immersion heater only, it **must** be the lower one otherwise performance will be compromised.

The store temperature should be 75°C in the morning.

WARRANTY

Warranty is for ten years on the tank against failure due to manufacturing fault, and two years on components supplied and fitted to the heating manifold and thermal store.

Conditions apply, the unit must be serviced annually and a record of service must be maintained. It must be in a frost free environment and must be used for public mains potable water only. It must be installed and used correctly in accordance with manufacturer's requirements and current best practice. Corrosion and scale are not covered. Chlorine/chloride levels must be below 200ppm. The store must be inhibited to correct dose.

Scale is not covered

Your statutory rights are not affected by the above.

Please see www.advanceappliances.co.uk for full terms and conditions and to register your product.

COMPONENT LIST

Component	Reference
3 kw immersion heater (high temp)	AA 0005
Plug in thermostat for above (high temp)	AA 0018
Blending valve	AA 0002B
Expansion vessel 2 litre	AA 0001
Float switch and motorised valve kit	AA 0300

All spare parts can be found on www.advanceappliances.co.uk

Only use authorised replacement components.

TECHNICAL DATA

CAPACITY	WEIGHT FULL Kg	IMM HEATERS	HGT X DIA	HOT WATER COIL M ²	HW COIL OUTPUT
160 ltrs	230	2 x 3Kw	1410 x 580	1.5m	35 Kw
210 ltrs	250	2 x 3Kw	1750 x 580	1.5m	35 Kw

CAPACITY: 160 LITRE	CLASS : C	OFF PEAK USE
CAPACITY: 210 LITRE	CLASS : C	OFF PEAK USE

These tests use EN13203 tapping cycle no.s; which aligns with tap cycle M within the EU regulation No 812/2013 with regard to the energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device.

The reports detail the test method used, analysis results and presents the key test parameters used for energy labelling within EU regulation no. 812/2013, namely:

- Water heating function is M for both 160 and 210 litres
- Water heating efficiency of 36.02%, placing it in band C for 160 litres
- Water heating efficiency of 36.1%, placing it in band C for 210 litres
- Predicted annual electricity consumption AEC = 1425 kWhor 5.13GJ/annum for 160 litres
- Predicted annual electricity consumption AEC = 1421 kWhor 6.74GJ/annum for 210 litres
- Thermostat temperature setting 75°C for both 160 and 210 litres

DISPOSAL

At the end of the life of the product please dispose of in line with any regulations ruling at the time.

ELECTRICAL SAFETY

Incorrectly made electrical connections can result in overheating and risk of fire. When installing the product, please ensure the wiring is adequate to minimise risk of overheating. Please ensure you have:

- Used the correct type and cross sectional area cable to meet manufacturer and Wiring Regulation requirements.
- Stripped the insulation from the individual conductors, taking care to not damage the strands of the conductor wire, which would reduce the cross sectional area of the conductor.
- Ensured the conductors are tightly and securely connected to the controls or immersion heater.
- Ensured the bared conductors are correctly inserted into the terminals, to avoid bearing on the insulation sleeve or only partially clamping the conductors.
- Securely anchored the supply cable using the means provided to avoid exerting any external strain to the cable and hence to the terminals.
- Checked to ensure the product is earthed correctly; the Live and Neutral connections are to the correct terminals, and the Residual Current Device (RCD) operates correctly.
- As part of the annual service checked the electrical connections to ensure the wires remain in good condition and terminations remain secure. Ensure any spare parts used during maintenance of the product are an authorised spare part and meet the manufacturers' requirement.

The Manufacturers' wiring instructions must always be followed.

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 charge is 3.0 bar - inflate as required after decommissioning the cold supply.
5. Check blending valve temperature is 55°C or lower. See manufacturer's installation instructions for any further requirements.
6. Inspect water level in sight glass and top up if necessary by opening isolation valve. Level should be about half way up the glass.

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

Model

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

COMMISSIONING PROCEDURE INFORMATION

ALL MAINS PRESSURE SYSTEMS

WHAT IS INCOMING COLD WATER PRESSURE?BAR

HAS A WATER TREATMENT DEVICE BEEN FITTED? YES NO

IF YES TO ABOVE THEN WHAT TYPE?

THERMAL STORE SYSTEMS ONLY

IS THE STORE TREATED WITH INHIBITOR? YES NO

(NOTE - FOR INDIRECT THERMAL STORES THE STORE MUST BE TREATED IN TYPE.....
ADDITION TO THE PRIMARY SYSTEM) CONCENTRATION.....

IS A 3 BAR PRESSURE REDUCING VALVE FITTED? YES NO

IS THE FITTED SHOCK ARRESTOR FULLY CHARGED AT 3 BAR? YES NO

IS THE OVERFLOW/WARNING PIPE INSTALLED IN LINE WITH
BEST PRACTICE? YES NO

IF OVERFLOW NOT FITTED IS ISOLATION KIT FITTED
AND FUNCTIONAL? YES NO

IS THE BLENDING VALVE SET AT 55°C? YES NO

IS THE DHW FLOW CONTROLLED TO THE APPROPRIATE RATE? YES NO

IF CYLINDER IS IT VENTED CORRECTLY? YES NO

IS THE CYLINDER STAT SET TO 70°C TO 80°C? YES NO

ALL PRODUCTS

HAS THE SYSTEM BEEN EXPLAINED TO THE HOUSEHOLDER? YES NO

HAS THE SYSTEMS LITERATURE BEEN LEFT WITH
THE HOUSEHOLDER? YES NO

ENGINEERS SIGNATURE CUSTOMERS SIGNATURE

SERVICE INTERVAL RECORD

Service regularly by an approved engineer and record details below

SERVICE 1

Engineers Name

Company Name

Tel No.

ID Serial No.

Comments

.....

Signature

SERVICE 2

Engineers Name

Company Name

Tel No.

ID Serial No.

Comments

.....

Signature

SERVICE 3

Engineers Name

Company Name

Tel No.

ID Serial No.

Comments

.....

Signature

SERVICE 4

Engineers Name

Company Name

Tel No.

ID Serial No.

Comments

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Signature

SERVICE 5

Engineers Name

Company Name

Tel No.

ID Serial No.

Comments

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Signature

SERVICE 6

Engineers Name

Company Name

Tel No.

ID Serial No.

Comments

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Signature

SERVICE 7

Engineers Name

Company Name

Tel No.

ID Serial No.

Comments

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Signature

SERVICE 8

Engineers Name

Company Name

Tel No.

ID Serial No.

Comments

.....

Signature



UNIT 4 COPPICE SIDE IND EST BROWNHILLS WALSALL WS8 7EX TEL 01543 377723
For Terms and Conditions go to www.advanceappliances.co.uk