

ISSUE 8
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INSTALLATION AND USER GUIDE

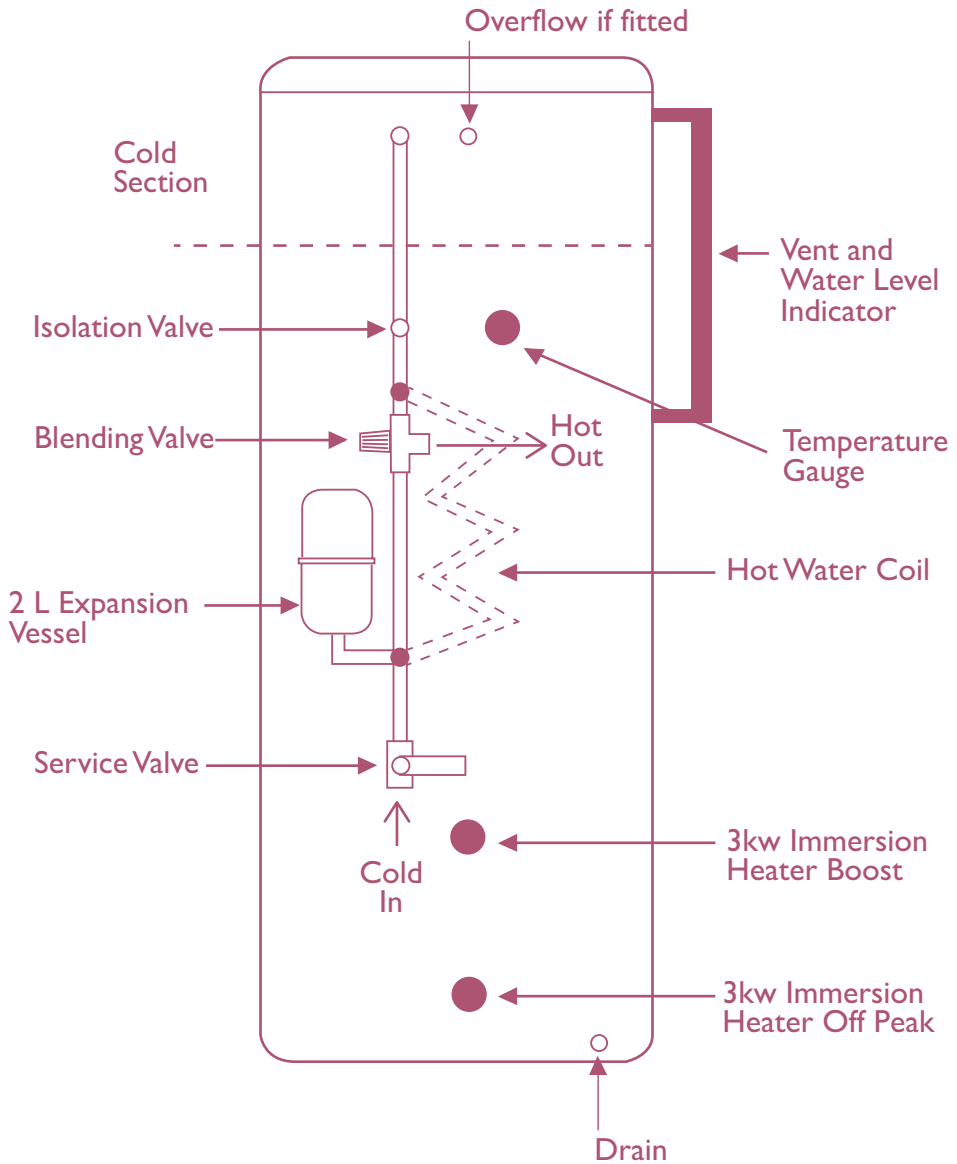
ADVANCE ELECTRIC THERMAL STORE



ADVANCE APPLIANCES LTD

**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.

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. 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

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.

If the cold service to the ballcock in the cold section is turned off or disconnected it will not be necessary to fit an overflow. Make sure that the cold section has a 50mm depth of water. Cap the overflow connection with a 22mm push-fit or compression end stop to prevent evaporation.

For additional protection a float switch can be used connected to a motorised two port valve on the cold inlet. This is available as a kit from Advance - please ask for AA0300.

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.

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 50°C. See manufacturer's leaflet if adjustment is required.

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.

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.

COMPONENT LIST

Component	Reference
3 kw immersion heater (high temp)	AA 0005
Control thermostat for above (high temp)	AA 0007
High limit thermostat for above	AA 0006
Blending valve	AA 0002
Expansion vessel 2 litre	AA 0001
Float switch and motorised valve kit	AA 0300

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	585 x 1450	1.5m	35 Kw
HEAT LOSS : 68 WATTS		CLASS : C	OFF PEAK USE		

Narec Distributed Energy (NDE) tested an ETS160 thermal store manufactured by Advance Appliances Ltd.

The test uses 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.

This report details 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
- Water heating efficiency of 36.02%, placing it in band C
- predicted annual electricity consumption AEC = 1425 kWhor
5.13GJ/annum

Measurement of the standing loss over a 48hr period showed this to be 136 Watts at the nominal operating setpoint of 75°C.

DISPOSAL

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

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.

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

NOTES

NOTES

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
.....
Signature

SERVICE 5

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

SERVICE 6

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

SERVICE 7

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

SERVICE 8

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

HOT WATER ASSOCIATION CHARTER MEMBER

Hot Water Association (HWA) Members undertake to offer their customers the following:

- To supply fit for purpose products clearly and honestly described
- To supply products that meet or exceed appropriate standards and building and water regulations
- To provide pre and post sales technical support
- To provide clear and concise warranty details to customers



www.hwacharter.org



UNIT 4 COPPICE SIDE IND EST BROWNHILLS WALSALL WS8 7EX TEL 01543 37723

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