

# EnergyManager sealed system thermal store

## High Efficiency Store with Integrated Heat Exchanger for Lower Temperature Operation

An unvented thermal store from Advance for sealed systems such as underfloor heating with fast, safe, mains pressure domestic hot water flow rates

Standard and solar patterns ■

65°C store creates a buffer for efficient boiler operation and fast radiator/underfloor heat up times

For sealed underfloor and radiator circuits ■

Meets Part L and Part G of Building Regulations ■

Meets HWA Thermal Store Specification ■

Pre wired and pre plumbed shunt pump and flow switch

Three levels of overheat protection ■

Use with gas, oil or biomass boilers ■

Flow rates up to 40 litres per minute ■

10 year cylinder guarantee ■



The Advance EnergyManager is a tried and tested design with an internal heat exchanger and shunt pump arrangement resulting in delivery of hot water equivalent to the volume of the tank at 43°C.

It comes in two sizes, 210 litres and 300 litres capacity, the 210 being suitable for single bath plus two showers and the 300 for two baths and two showers.

The shunt pump is pre fitted and wired to activate when taps or showers are turned on.

The EnergyManager comes as shown above with wiring centre for installers to complete the wiring for the rest of the system. Full instructions for wiring the total system are included.

At 65°C operation the EnergyManager is perfect for underfloor or low temperature radiator circuits and offers efficiencies due to the temperature being lower than most thermal stores. Technical support is available from Advance Appliances - the thermal store innovators.



## sizing guide

Cylinder Code	EM210	EMS210	EM300	EMS300
Storage volume	210 Litres	210 Litres	300 Litres	300 Litres
Standing heat loss (watts/class)	69/C	69/C	80/C	80/C
Thermostat setting	65°C	65°C	65°C	65°C
Maximum working temperature	75°C	75°C	75°C	75°C
Primary over-temperature cut-out setting	80°C	80°C	80°C	80°C
Secondary over-temperature cut-out setting	90°C	90°C	90°C	90°C
Thermal safety valve setting	97°C	97°C	97°C	97°C
Maximum working pressure	2 bar	2 bar	2 bar	2 bar
Pressure relief valve setting	3 bar	3 bar	3 bar	3 bar
Primary expansion vessel capacity	24 litres	24 litres	35 litres	35 litres
Primary expansion vessel charge pressure	1.5 bar	1.5 bar	1.5 bar	1.5 bar
Maximum mains inlet pressure	3.5 bar	3.5 bar	3.5 bar	3.5 bar
DHW output @ 43°C *	210 Litres @27 l/min	210 Litres * @27 l/min	300 Litres @40 l/min	300 Litres * @40 l/min
Maximum inlet flow rate	27 l/min	27 l/min	40 l/min	40 l/min
Hot water volume outlet temperature	43°C	43°C	43°C	43°C
DHW expansion vessel capacity	2 litres	2 litres	2 litres	2 litres
DHW expansion vessel charge pressure	3 bar	3 bar	3 bar	3 bar
Maximum pressure for solar coil	-	6 bar	-	6 bar
Surface area of solar heat exchanger	-	0.8 m <sup>2</sup>	-	0.8 m <sup>2</sup>
Dedicated solar volume (Vs)	-	60.4 litres	-	75.3 litres
Cylinder size	535 x 1507	535 x 1507	580 x 1750	580 x 1750

\* Utilising solar input

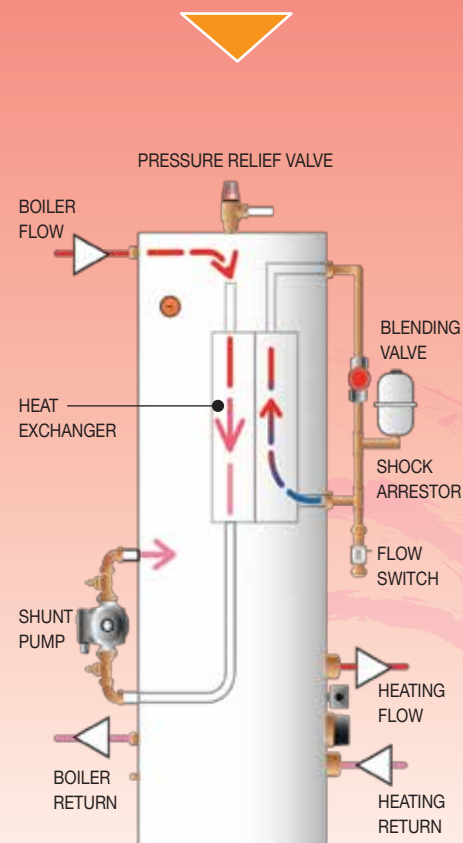
## EnergyManager unvented thermal store cylinder

The primary side of the thermal store must be pumped. Most sealed system boilers are fitted with pumps. A zone valve must be fitted - 28mm spring closed - and wired to the non adjustable thermostat fitted to the store to offer secondary high limit protection - instructions are provided.

On the heating side another pump is needed for heating flow (away from the store). Most underfloor manifolds will include a pump so for this reason it is not fitted. The pump is switched on by a programmer and room thermostat - a single channel programmer (not supplied) should be used as there is no requirement for hot water programming. When the store is at 65°C hot water is available.

These few add-ons to suit individual systems are all that will be needed to give a reliable and efficient system with the benefits of a buffer to reduce boiler cycling, fast heat up times and plenty of domestic hot water.

## How does it work?



Using an internal heat exchanger and shunt pump, which is fitted and wired to a flow switch gives very high efficiencies at temperatures of only 65°C in the store.

This makes the EnergyManager perfect for underfloor or low temperature radiator installations, using gas, oil or biomass boilers.



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