



THE FUTURE OF HEAT STORAGE FOR HOMES

COMPACT
& CLEAN
COST
EFFECTIVE
ENERGY
EFFICIENT

Powered by
Sunamp

SUNAMP AND SUSTAINABILITY

We have an holistic approach to sustainability that permeates our staff culture and affects everything we do as a business. It's a fact that 81% of energy used in the home is for heating or cooling. Heat batteries can be one of the best investments homeowners can make, and not just because of the money saved on fuel bills. We are committed to making a positive social and environmental impact, we source all our materials ethically and we recycle. Our heat batteries are non-toxic, non-flammable and we are able to fully re-use or re-cycle every component at end-of-life.

Pioneering technology to store heat energy

Ancient Romans stored heat in bricks, Victorian engineers used water. Sunamp heat batteries belong to a whole new generation of sustainable heat storage. Whether you are an architect designing a new house, or a landlord seeking to update housing stock to meet new environmental standards, or a housebuilder reaching for the highest possible energy efficiency standards, then Sunamp heat batteries are your way forward.

Based on the understanding that the world uses over three times as much heat as electricity, Sunamp heat batteries cut both fuel costs and carbon emissions by storing available energy from renewable and non-renewable sources as heat and releasing it on demand.

This is a tried and tested way of storing heat energy. No-one before has succeeded in perfecting our combination of low-cost materials, exceptional long-life, recyclability, safety and high energy density.

Competing technologies such as electrical batteries, hydrogen electrolysis or fuel cells are more expensive and less efficient. The innovation comes from using our own special formulation of heat energy storage material in a compact, stylish, insulated box that is not out of place in any home.

HEAT STORAGE SOLUTIONS

Sunamp's unrivalled super-compact heat battery technology has been intelligently designed to provide a clean, efficient and cost-effective heat energy storage solution.

Working with everything from gas boilers to solar and heat pumps, the UniQ range of heat batteries delivers cascades of hot water and highly responsive space heating with superb efficiency and proven savings of up to 75% on utility bills. This outstanding technology comes at an accessible price and offers limitless scalability for residential, commercial or industrial projects.

QUALITY ASSURED

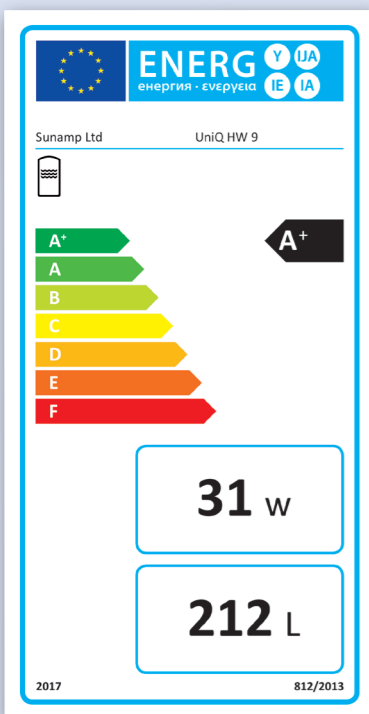
We work to the highest of standards and have ISO accreditation having achieved key International and UK quality certifications which underline our commitment to sustainability, health and safety and quality in everything that we do.

- ISO 9001:2015 – Quality Management
- ISO 14001:2015 – Environmental Management
- OSHAS 18001:2007 – Health & Safety

Sunamp products are also fully certificated for the UK, are fully compliant with LVD and EMC directives, conform to standards set out by the Water Regulation Advisory Scheme (WRAS) and are CE marked.

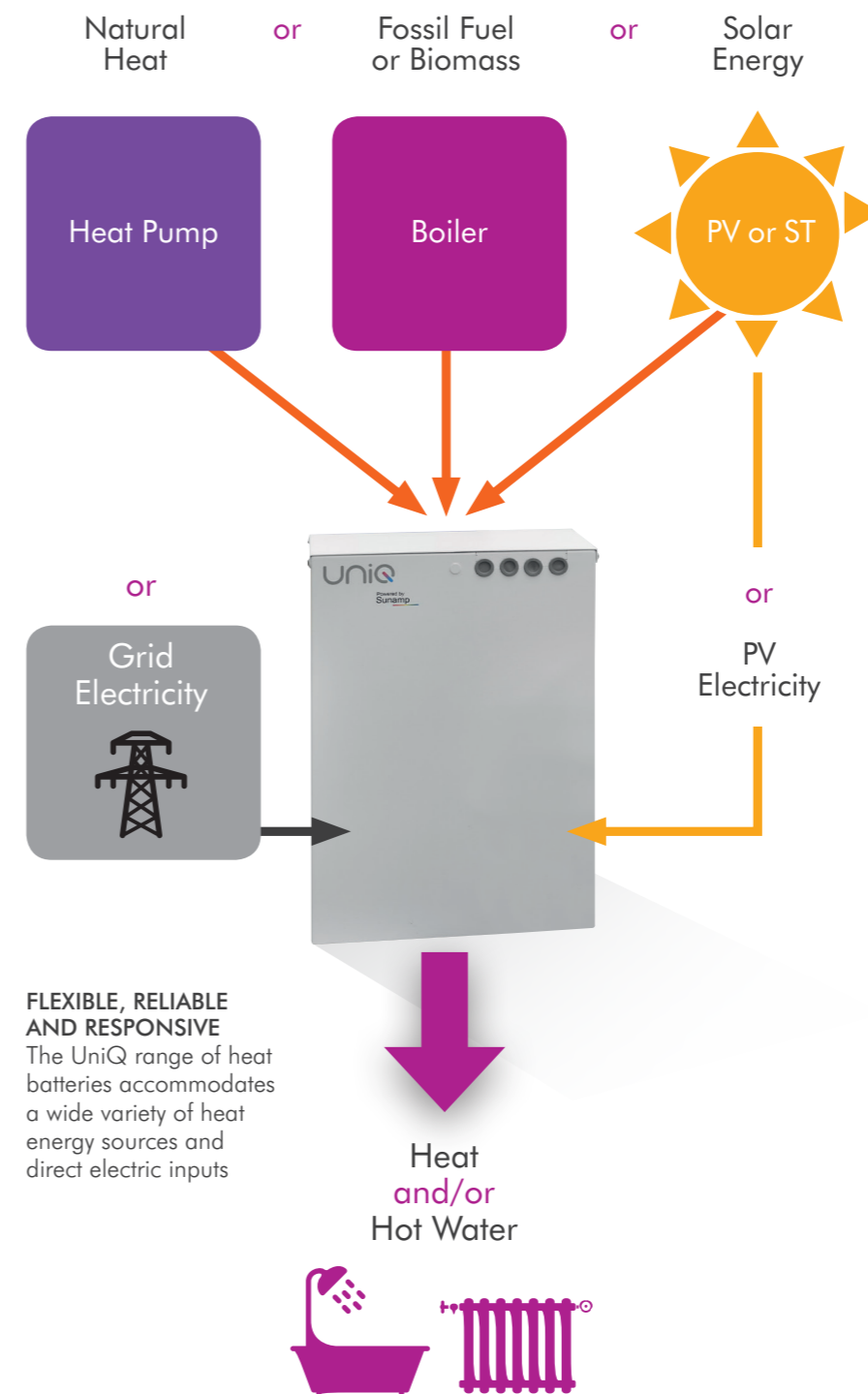


Best possible ERP performance
Cuts fuel bills
A+ rated for energy efficiency



Introducing the UniQ Range

The UniQ range of heat batteries provides more energy storage in less space, more efficiently. They are compact, scalable, low maintenance, easy to install and competitively priced. What's more, they are long lasting with a proven life cycle of over 40,000 cycles which is equivalent to over 50 years of normal use.



FLEXIBLE, RELIABLE AND RESPONSIVE
The UniQ range of heat batteries accommodates a wide variety of heat energy sources and direct electric inputs

Sunamp heat batteries contain non-toxic, non-flammable salt-based Phase Change Materials (PCM). When a PCM freezes, it releases a huge amount of energy in the form of latent heat at a selected constant temperature.



The UniQ Range

The UniQ range of heat batteries provides more energy storage in less space, more efficiently. They are compact, scalable, low maintenance, easy to install and competitively priced. What's more, they are long lasting with a proven life cycle of over 40 years.



Choose from:

UniQ HEAT for space heating only, normally heated by one or more external heat sources via hydronic circuit.

UniQ eHEAT for space heating only, normally heated by one or more integrated electric heaters.

UniQ rHEAT for space heating only, heated by an external heat pump using the heat pump refrigerant circuit. The refrigerant flows through the heat exchanger in the UniQ rHeat store. (OEM only)

UniQ HW for domestic hot water heating only, normally heated by one or more external heat sources via a hydronic circuit.

UniQ eHW for domestic hot water only, heated by one or more integrated electric heaters.

UniQ rHW for domestic hot water only, heated by an external heat pump using the heat pump refrigerant circuit. The refrigerant flows through the heat exchanger in the UniQ rHW store. (OEM only)

UniQ DUAL for both space heating and domestic hot water, normally heated by one or more external heat sources via a hydronic circuit.

UniQ eDUAL for both space heating and domestic hot water, normally heated by one or more integrated electric heaters.

UniQ dPV designed for using on-site solar energy by buffering heat for DHW heating and/or space heating. Fitted with DC electric heaters and heated directly by solar PV system.

UniQ ePV designed for using excess on-site behind-the-meter solar PV electricity (above what is consumed by on-site AC electricity loads). Fitted with AC electric heaters and heated by means of AC electricity diverted by a power diverter controller. The stored heat can be used for DHW heating and/or space heating.

WHY CHOOSE UNIQ

Key features

- Scalable, modular: can be easily combined to increase the storage capacity
- Flexible design: can be recharged electrically or thermally from most energy sources
- Reliable: exceptionally long-life, proven to last beyond 40,000 cycles (50 years of normal use)
- Simple installation: unlike water tanks, no additional parts are required with UniQ products saving on installation costs
- Smart pricing: provides excellent value for money
- No annual maintenance fees: no need for the annual inspection and service required for unvented cylinders
- Innovative design: Lower heat losses than a traditional hot water tank cutting fuel costs

- Dramatic efficiency gains: saving money and reducing CO₂
- Fast-flowing hot water on-demand: Hot water is at mains pressure always
- Instant heat: high power brings heating system to temperature in just 90 seconds, saving energy, money and improving comfort and regulatory compliance
- Compact: can be floor mounted, fitted in a small kitchen unit, in the bathroom, in a cupboard or in the garage
- Safe: Sunamp's Phase Change Material is non-toxic, non-flammable and salt-based
- Sustainably sourced: No forests were cut down to make this product and we recycle or reuse everything at the end of life
- No legionella risk
- Making renewables work: Provides heating and hot water when the sun doesn't shine

APPLICATIONS OF THE UNIQ RANGE

Applications	UniQ Heat	UniQ eHeat	UniQ rHeat	UniQ HW	UniQ eHW	UniQ rHW	UniQ Dual	UniQ eDual	UniQ rDual	UniQ dPV	UniQ ePV
Space heating load shifting to cheaper off-peak electricity tariffs e.g. with heat pumps and demand side management.	✓		✓								
Buffer vessels for heat pumps & mCHP heating systems	✓										
Reducing pre-heat time required in building i.e. rapid warming of heat emitters	✓										
Integration of multiple heat sources operating at different times and/or temperatures by use of multiple heat batteries	✓	✓	✓				✓	✓			
Supports direct solar thermal input	✓										
Space heating load shifting to cheaper off-peak; also known as the Time of Use (ToU) tariffs and demand side management.	✓										
Replacing inefficient night storage radiators with responsive hydronic heating system.		✓									
Integration of multiple heat sources operating at different times and/or temperatures, including one or more refrigerant circuits by using multiple UniQ rHeat units		✓									
Hot water heating load shifting to cheaper off-peak tariffs e.g. with heat pumps and demand side management.			✓	✓		✓					
Integration of multiple heat sources operating at different times and/or temperatures.				✓							
Replacement for indirect hot water cylinders and hot water only thermal stores.				✓							
Supports direct solar thermal input				✓							
Hot water heating load shifting to cheaper off-peak tariffs and demand side management.				✓	✓						
Replacement for direct hot water cylinders and electrically heated hot water only thermal stores.				✓							
Replacement for indirect heat pump hot water cylinders and hot water only thermal stores.						✓					
Space DHW heating load shifting to cheaper off-peak tariffs e.g. with heat pumps and demand side management.							✓	✓			
Integrated buffer vessels for heat pumps & mCHP heating systems							✓	✓			
Integration of multiple heat sources operating at different times and/or temperatures.							✓	✓			
Replacement for integrated thermal stores							✓	✓			
Replacement for electric integrated thermal stores i.e. CPSUs (e.g. Gledhill ElectroMate, McDonald Engineering ElectroFlow, Elson, Heatrae Sadia, etc)								✓			
Converting nearly all the PV output to heat for DHW and/or space heating.										✓	
Converting PV output that is excess to household electricity consumption to heat for DHW and/or space heating.											✓

BENEFITS OF THE UNIQ RANGE

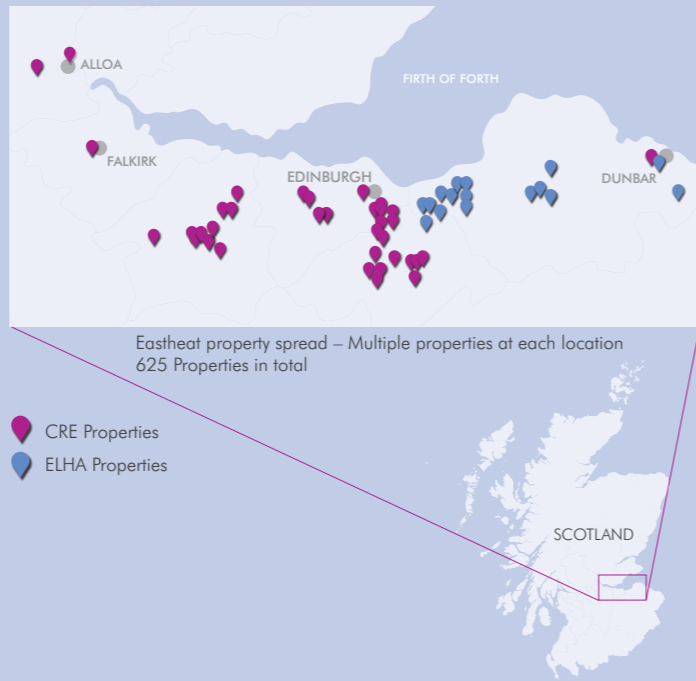
Benefits	UniQ Heat	UniQ eHeat	UniQ rHeat	UniQ HW	UniQ eHW	UniQ rHW	UniQ Dual	UniQ eDual	UniQ rDual	UniQ dPV	UniQ ePV
Lower OPEX – aligns to off-peak tariffs, saves fuel	✓	✓	✓	✓	✓	✓	✓				
Operational needs – e.g. smaller space, buffering for heat pumps, gas boilers and CHP (avoids fast cycling and improves efficiency)	✓										
Customer satisfaction – Highly responsive heating system & rapid warming of radiators	✓	✓	✓								
Energy savings resulting from reduction in boiler cycling and increase in responsiveness of the system	✓										
Regulatory benefits – e.g. extra SAP points due to pre-heat	✓										
Operational needs e.g. smaller space		✓									
Alternative to Quantum night storage heaters		✓									
Regulatory benefits – e.g. extra SAP points due to faster responding system and lower fuel costs.		✓									
Operational needs e.g. smaller space, heat source functionality			✓								
Energy savings and higher heat pump COP			✓								
No G3 compliance required i.e. no P&T (Pressure & Temperature) safety valve and no associated discharge pipework.				✓	✓	✓	✓	✓		✓	✓
Quicker and less costly installation				✓	✓	✓					
No mandatory annual maintenance – less expense, admin				✓	✓	✓					
Low water content & instantaneous domestic hot water (DHW) heating – no legionella risks.				✓	✓	✓	✓	✓		✓	✓
Operational needs e.g. smaller space, clean installation.				✓	✓	✓					
Energy savings – Lower heat losses				✓	✓		✓	✓			
Energy savings – Lower heat losses and higher COP						✓					
Operational needs e.g. smaller space, heat source functionality, clean installation.							✓	✓			
Quicker installation							✓	✓			
Competitor to Dimplex Quantum heating system								✓			
No G59 or G83, no MCS, no FIT registration, no DNO notification										✓	
Low cost, low voltage (48V) wiring with no inverter costs										✓	
Higher SAP rating – Lower heat losses										✓	
Increases PV self-consumption, compliant with FIT											✓
Lower heat losses, fuel bills and Feed-in Tariff income											✓

EASTHEAT The UK's Largest Domestic Energy Storage Project

School pupils created a book of sustainable energy stories, poems and inventions inspired by the EastHeat project and workshops with Sunamp's heat storage experts.



Sunamp technology is already cutting fuel costs and increasing comfort for over one thousand residents across Edinburgh and the Lothians. The EastHeat project to retrofit solar panels and UniQ heat batteries in housing association properties received funding from Scottish Government's Local Energy Challenge Fund. Gas and electricity fuel costs have been cut by up to 60% annually by unlocking the potential to use low-cost and low-carbon electricity from solar panels.



MACKAY HOMES UniQ batteries in all new-build developments



Eco housebuilder McKay Homes pioneered the use of Sunamp heat batteries in new-build homes in Scotland, and now specifies the UniQ range as standard instead of hot water tanks across all its new developments. The homes are super insulated, airtight and are certified Band A for energy efficiency, achieving 96 points or more, and the residents are delighted with the results. Using Sunamp technology alongside other green energy initiatives, the company has a vision of homes that do not need to be connected to the grid.

'Heat batteries are the future. They are super-compact and can be designed in from the start to fit in small, out of the way spaces. They are easy to install, improve home comfort and cut fuel costs for the owners. I'd say hot water tanks are set to be a thing of the past.'

John Mackay





Uniq

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