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.

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.

Natural Heat or Fossil Fuel or Biomass or Solar Energy

Heat Pump
Boiler
PV or ST

Grid Electricity

or

PV Electricity

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.

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
- Smart pricing: provides excellent value for money
- Compact: can be floor mounted, fitted in a small kitchen unit, in the bathroom, in a cupboard or in the garage
- Environmentally friendly: no forests were cut down to make this product and we recycle or reuse everything at the end of life
- Innovative design: lower heat losses than a traditional hot water tank cutting fuel costs
- Dramatic efficiency gains: saving money and reducing CO2 emissions
- 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
- Sustainable 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

WHY CHOOSE UNIQ

Choose from:

- UniQ Heat: for space heating only, normally heated by one or more external heat sources via a hydraulic circuit.
- UniQ Dual: for both space heating and domestic hot water, normally heated by one or more external heat sources via a hydraulic circuit.
- UniQ Ideal: for both space heating and domestic hot water, normally heated by one or more integrated electric heaters.
- UniQ HW: for domestic hot water only, normally heated by one or more external heat sources via a hydraulic circuit.
- UniQ IPV: 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 eIPV: designed for using excess on-site generated solar energy to supply DHW heating and/or space heating.

APPLICATIONS OF THE UNIQ RANGE

Applications
- Space heating load shifting to cheaper off-peak electricity tariffs with eHP heat pumps and direct heat storage.
- Buffer vessel for heat pump & CHP 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.
- Lower heat losses, fuel bills and Feed-in Tariff income.
- Increases PV self-consumption, compliant with FIT.
- Higher SAP rating – Lower heat losses.
- No G59 or G83, no MCS, no FIT registration, no DNO notification.
- Operational needs – e.g. smaller space, buffering for heat pumps, gas boilers and CHP (avoids fast cycling and improves efficiency).
- Energy savings resulting from reduction in boiler operation and corrosive in replacement of this system.
- Lower OPEX – align to off-peak tariffs, lower fuel costs.
- Regulatory benefits – e.g. extra SAP points due to pre-heat.
- Energy savings and higher heat pump COP.
- Lower heat losses – aligned to off-peak electricity tariffs.
- No G3 compliance required – i.e. no PAS 2030 (60% use of 60% efficiency) valley fill and in seasonal demand peaks.
- Quicker and less costly installation.
- No necessary annual maintenance – less repair, admin.
- Lower water content & volume, downsizes domestic hot water systems.
- Heat storage increases energy efficiency and reduces fuel cost.
- Operational needs – e.g. smaller space, heat losses functionality.
- Energy savings and higher heat pump COP.
- No Co2 emissions required – i.e. no PAS 2030 (60% use of 60% efficiency) valley fill and in seasonal demand peaks.
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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.

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.

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
THE FUTURE OF HEAT STORAGE FOR HOMES

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