

**Compact thermal
storage for heating
and hot water.**

Discover world-leading thermal storage

Sunamp UniQ heat batteries are modern day, energy saving thermal stores containing high performance phase change materials that deliver warmth and comfort reliably, safely, and efficiently. Up to 4 times smaller than a hot water cylinder, their sleek, super-compact design means they look good in any home and free up valuable storage space. Not only that, but they are also easy to install, kinder to the environment and require little to no maintenance.



Sunamp is the only heat battery manufacturer in the world to be awarded A Grade RAL Certification, the independent quality mark and the only global standard for Phase Change Material (PCM) and PCM products. The award confirms performance with no noticeable degradation to 10,000 cycles– the equivalent of over 13 years daily use at 2 cycles per day of hot water application.

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Fit for now, fit for the future.

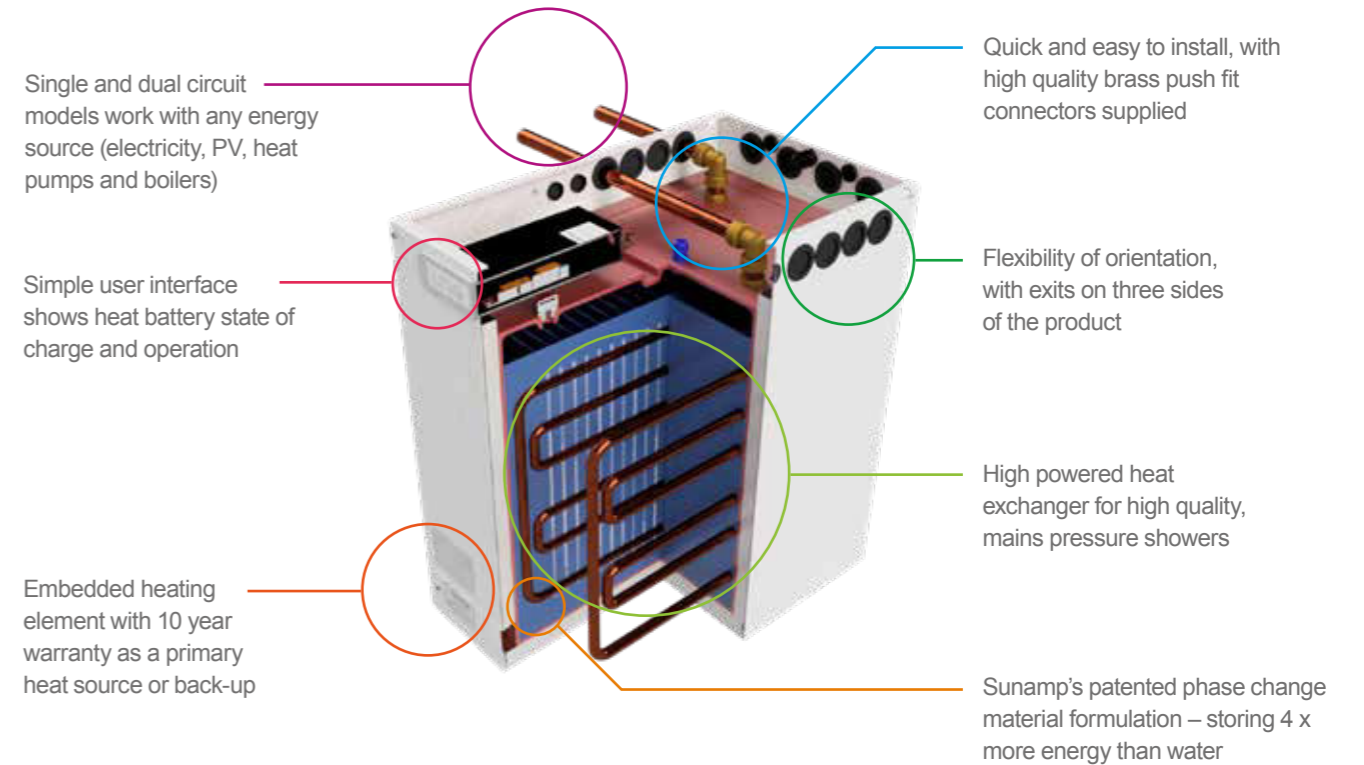
'40% of homes with heat pumps will have thermal storage ... However, finding enough space for thermal storage will be difficult in some homes and will be reliant on new, high density solutions such as phase change materials to minimise the amount of space required.'

Future Energy Scenarios
National Grid ESO, July 2020

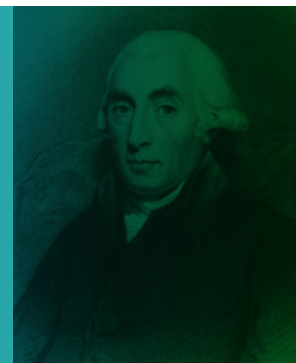
Sunamp

Energy storage is at the very heart of making renewables and energy efficient measures work. Based on the understanding that around 80% of energy in the home is used for heat, Sunamp set out to explore the potential of using thermal energy storage to make homes and buildings more energy efficient and sustainable, while reducing carbon emissions.

Works With Any Energy Source



Standing on the Shoulders of Giants



1762
Joseph Black becomes the first person to describe latent heat, marking the beginning of the study of thermodynamics.



1948
The Dover Sun House, designed by Maria Telkes to showcase the power of solar energy, includes a prototype of a PCM heat battery. The system fails after 3 years of successful operation due to instability of the PCM.



2006
Concerned about climate change and fuel poverty, Andrew Bissell creates Sunamp to reduce our reliance on fossil-powered heat and drive down fuel costs for everyone and files a first patent application.



2010
Sunamp begins collaboration with the University of Edinburgh School of Chemistry to advance its new thermal storage technology and quickly achieves the breakthrough that would have made the Telkes prototype reliable.



2013
The first Sunamp heat battery is installed in an Edinburgh home. Heated by a heat pump the system delivers significant savings over the existing gas boiler to this day.



2016
Scottish Government funds EastHeat, the largest residential heat storage project in Europe, which saw Sunamp heat batteries installed in 650 homes, marking the beginning of mass production at Sunamp's factory.



2018
Sunamp launches the UniQ range of super compact heat batteries, the company's 3rd generation of phase change thermal storage units.



2019
Sunamp becomes the first heat battery manufacturer in the world to be awarded A Grade RAL Certification, the independent quality mark and only global standard for Phase Change Materials (PCM) and PCM products.



2020
The 10,000th heat battery is dispatched from Sunamp's factory in Scotland and the company's UK order book grows 67-fold in one year, despite economic disruption caused by the global pandemic.



The Future

Product Overview

Page No.	Heat Source					Use for	
	Grid Supply 24/7	Off Peak Timer/ Variable Tariff	PV	Boiler	Heat Pump	Hot Water	Heating
eHW	6-7	●	○			●	
HW	8-9			●	● ¹	●	
HW +i	8-9	○		●	● ¹	●	
eHW +iPV	10-11		○	●		● ³	
HW +iPV	10-11		○	●	● ¹	●	
HW +iLTHP	12-13	○			● ⁴	●	
Heat	14-15			●	● ¹		●
Heat +i	14-15	○		●	● ¹		●
CPSU Package	16-17	○	●			●	●
HThP Package	16-17		●		● ¹	●	●

1 Only compatible with selected heat pumps. Check product page or manual for more information.
 2 Contact Sunamp for more information.
 3 Can be used as a pre-heat to suitable combi-boilers, reducing gas demand for hot water.
 4 Compatible with selected R32 heat pumps from Samsung and Daikin.

● Primary Energy Source
 ○ Secondary / Optional / Back-up

Super-Compact Thermal Energy Storage



Traditional hot water cylinder Sunamp heat battery

- Space-saving – up to 4 times higher capacity
- Up to 4 times higher energy efficiency
- Lower fuel bills
- No routine maintenance
- High flow rate
- Easy to install
- Instantaneously heated for freshness

Direct Water Heater



The sleek alternative to direct cylinders – save space and energy

Sunamp UniQ eHW heat batteries are the smart way to heat water and save space and money too, especially when combined with an off-peak tariff. They are the ideal replacement for outdated direct hot water cylinders. Heated by an internal element, which is covered by our market leading 10-year warranty, they guarantee powerful showers at the temperature that is perfect for you. Their sleek new design and advanced storage technology makes them up to four times smaller than equivalent direct cylinders, freeing up valuable storage space in your home.

Available in four sizes which can also be combined, they are the right solution to perfectly match the exact hot water requirements of your property.

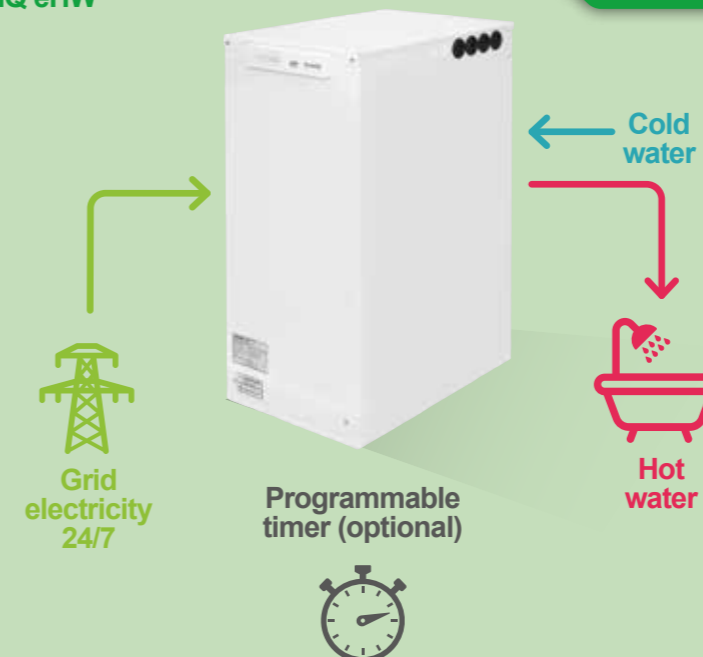


UniQ	eHW 3	eHW 6	eHW 9	eHW 12
MPN/Order Code	SGP-AAW-AVZ	SKP-AAW-AVZ	SNP-AAW-AVZ	DRP-AAW-AVY
Heat Storage Capacity (kWh) ¹	3.5	7	9	12
Equivalent Hot Water Cylinder Size ²	71	142	212	284
V40, Volume of Hot Water Available at 40°C (L)	85	185	300	370
Standby Heat Loss Rate (kWh/24h [W])	0.48 [20]	0.68 [28]	0.77 [32]	0.84 [35]
Energy Efficiency Rating	C	C	C	C
Recommended Maximum Flow Rate (L/Min)	6	15	20	25
Heater Power Rating (~230V)	2.8 kW	2.8 kW	2.8 kW	2.8 kW

¹ Heat Battery charged to design operating temperature and then discharged using inlet water temperature at 10°C. ² Calculated from the storage capacity of the Heat Battery and assuming that the hot water cylinder thermostat is set at 60°C, mains cold water inlet temperature is at 10°C and the stored energy utilisation factor of cylinder is 0.85.

How it works

UniQ eHW



Key Features

- Save money with off-peak tariffs and improved efficiency
- Ultra-compact: up to 4 times smaller than equivalent hot water cylinders
- Instant hot water at mains pressure
- Energy efficient: extremely low heat losses
- Easy to install
- Safe: non-toxic and no risk of legionella
- Reliable: Market-leading 10-year warranty*
- No mandatory annual maintenance
- Modular: easily combined to increase storage capacity
- Compatible with any volt-free third-party

* Applies to heating element and to storage core

Indirect Water Heater

ErP Rating

A+

Swap out cylinders for hot water on tap for less

Sunamp UniQ HW batteries are the space-saving substitute for indirectly heated vented and unvented hot water cylinders and hot water only thermal stores. Easy-to-install, they are specially designed to work with one or more external heat sources such as a high temperature heat pump or boiler, or both.

The equally compact UniQ HW +i batteries come complete with standby internal electric heating element covered by our market leading 10-year warranty to provide a failsafe solution. You can be sure of cascades of hot water to comfortably carry out domestic tasks, for a vigorous shower to get you going in the morning or for a relaxing hot bath at the end of the day.

Thanks to our best-in-class insulation, lower heat losses mean lower carbon emissions, so you're helping the planet too. Available in 4 sizes to increase heat storage capacity to meet the needs of any size of household.

Our HW and HW +i models are also compatible with High Temperature Heat Pumps from Vaillant (arotherm plus), Daikin (Altherma 3H HT) and LG (Therma V HT Split).



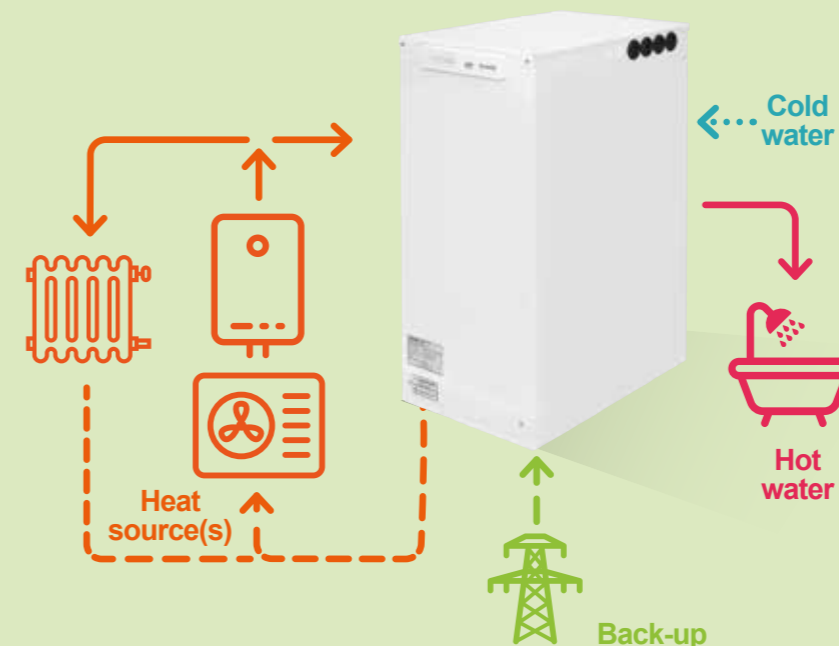
UniQ	HW 3	HW 6	HW 9	HW 12	HW 3 +i	HW 6 +i	HW 9 +i	HW 12 +i
MPN/Order Code	TGP-FGW-AVZ	TKP-FGW-AVZ	TNP-FGW-AVZ	TRP-FGW-AVZ	DGP-CBW-AVZ	DKP-CBW-AVZ	DNP-CBW-AVZ	DRP-CBW-AVZ
Heat Storage Capacity (kWh) ¹	3.5	7	10.5	14	3.5	7	10.5	14
Equivalent Hot Water Cylinder Size ²	71	142	212	284	71	142	212	284
V40, Volume of Hot water available at 40°C (L)	85	185	300	370	85	185	300	370
Standby heat loss rate (kWh/24h [W])	0.45 [19]	0.65 [27]	0.74 [31]	0.81 [34]	0.48 [20]	0.68 [28]	0.77 [32]	0.84 [35]
Energy Efficiency Rating	A+	A+	A+	A+	A+	A+	A+	A+
Heater Power Rating (~230V)	N/A	N/A	N/A	N/A	2.8 kW	2.8 kW	2.8 kW	2.8 kW
Height (mm)	387	588	814	999	455	650	860	1070
Width x Depth (mm)	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575

¹ Heat Battery charged to design operating temperature and then discharged using inlet water temperature at 10°C, ² Calculated from the storage capacity of the Heat Battery and assuming that the hot water cylinder thermostat is set at 60°C, mains cold water inlet temperature is at 10°C and the stored energy utilisation factor of cylinder is 0.85.

How it works

UniQ HW +i

A+ ErP Rating



Key Features

- Works with any heat source
- Ultra-compact: up to 4 times smaller than equivalent hot water cylinders
- Instant hot water at mains pressure
- Energy efficient: extremely low heat losses
- Easy to install
- Safe: non-toxic and no risk of legionella
- Reliable: Market-leading 10-year warranty*
- No mandatory annual maintenance
- Modular: easily combined to increase storage capacity

* Applies to heating element and to storage core

Sunamp and Solar PV

ErP Rating

A+

Hot water delivered more efficiently from Solar PV

Whatever your heating system, Sunamp has a reliable hot water solution that will save you even more energy. Solar PV systems convert solar energy captured from available sunlight into free and plentiful electricity. They are an attractive low maintenance and environmentally friendly alternative to fossil fuels for modern home heating systems.

Marrying your solar PV system with a Sunamp UniQ HW +iPV will give you even greater value by providing your household with piping hot water, even when the sun doesn't shine. It works by storing surplus electricity from your Solar PV that would otherwise be lost back to the grid, giving you an abundance of hot water for free when you need it. Your other heat source, such as a boiler or high temperature heat pump, is always ready to take over when the sun doesn't shine.

For even more flexibility, Sunamp UniQ eHW +iPV heat batteries use off peak electricity from the grid to top up the charge automatically when required. This means you can beat the winter chill and keep costs down by pre-heating water for your combi boiler or you can use it as a highly efficient stand-alone water heater to ensure instant, mains pressure hot water for all your taps and showers.

Super-compact to maximise your storage space, these products are available separately or as a myenergi eddi package* and are the ideal replacement for old-fashioned vented and unvented hot water cylinders and hot water only thermal stores.

*Other power diverters can be used with this product. Please consult Sunamp for more information.

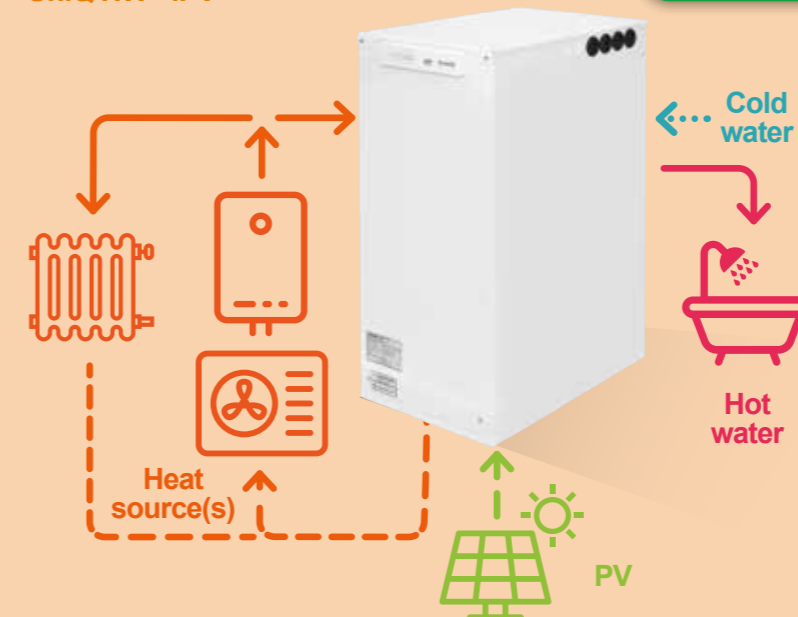


UniQ	eHW 3 +iPV	eHW 6 +iPV	eHW 9 +iPV	eHW 12 +iPV	HW 3 +iPV	HW 6 +iPV	HW 9 +iPV	HW 12 +iPV
MPN/Order Code								
With myenergi eddi	SGP-BAW-AWZ	SKP-BAW-AWZ	SNP-BAW-AWZ	DRP-BAW-AWY	DGP-DBW-AWZ	DKP-DBW-AWZ	DNP-DBW-AWZ	DRP-DBW-AWZ
Without myenergi eddi	SGP-BAW-ATZ	SKP-BAW-ATZ	SNP-BAW-ATZ	DRP-BAW-ATY	DGP-DBW-ATZ	DKP-DBW-ATZ	DNP-DBW-ATZ	DRP-DBW-ATZ
Heat Storage Capacity (kWh) ¹	3.5	7	10.5	14	3.5	7	10.5	14
Equivalent Hot Water Cylinder Size ²	71	142	212	284	71	142	212	284
V40, Volume of Hot water available at 40°C (L)	85	185	300	370	85	185	300	370
Standby heat loss rate (kWh/24h [W])	0.48 [20]	0.68 [28]	0.77 [32]	0.84 [35]	0.48 [20]	0.68 [28]	0.77 [32]	0.84 [35]
Energy Efficiency Rating	C	C	C	C	A+	A+	A+	A+
Heater Power Rating (~230V)	2.8 kW	2.8 kW	2.8 kW	2.8 kW	2.8 kW	2.8 kW	2.8 kW	2.8 kW
Height (mm)	455	650	860	1070	455	650	860	1070
Width x Depth (mm)	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575

¹ Heat Battery charged to design operating temperature and then discharged using inlet water temperature at 10°C, until the outlet water temperature dropped to 40°C. ² Calculated from the storage capacity of the Heat Battery and assuming that the hot water cylinder thermostat is set at 60°C, mains cold water inlet temperature is at 10°C and the stored energy utilisation factor of cylinder is 0.85.

How it works

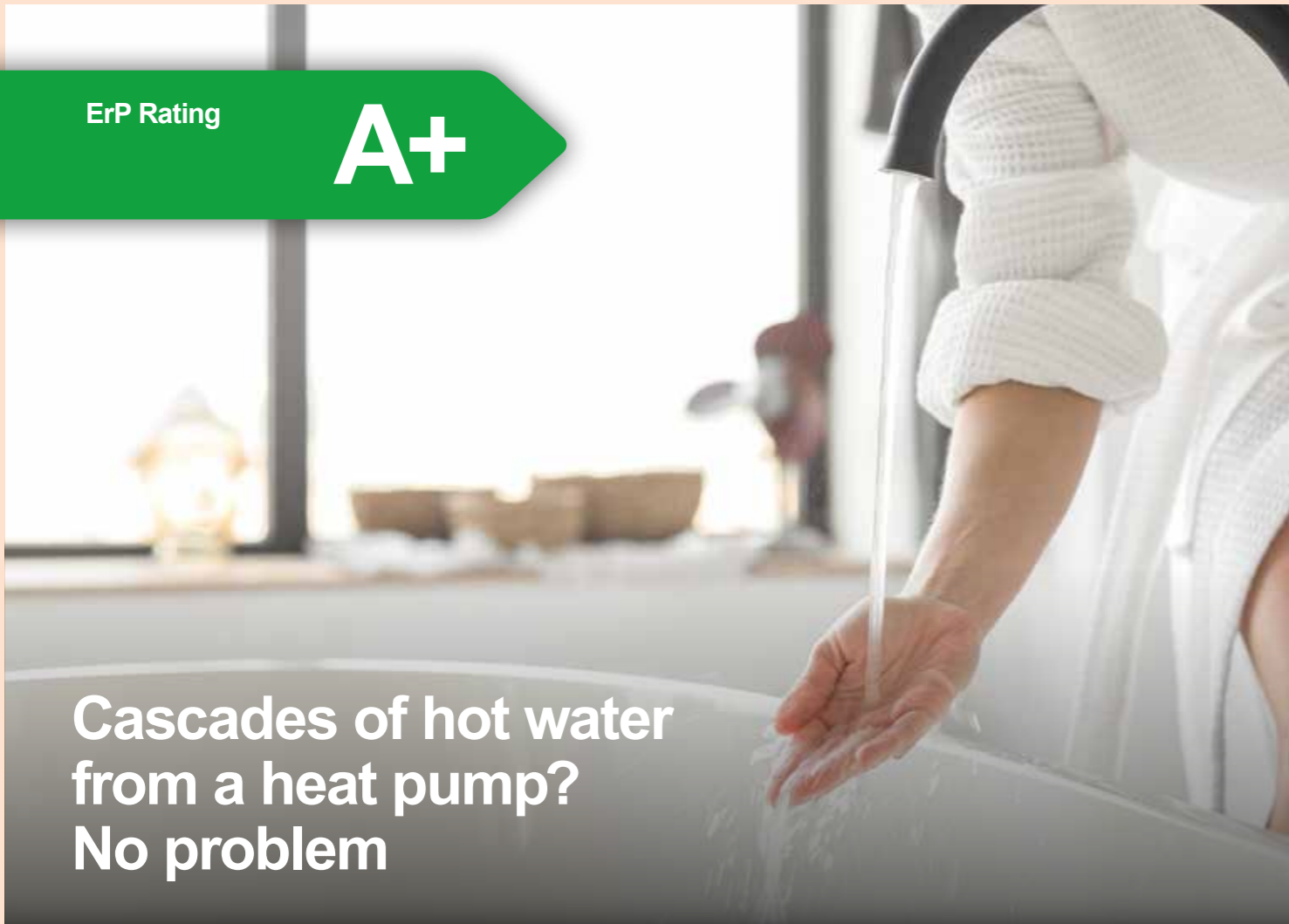
UniQ HW +iPV



Key Features

- Saves cost and carbon by using electricity from Solar PV
- Instant hot water at mains pressure
- Failsafe: backup internal electric heating element
- Extremely low heat losses
- Significantly reduced legionella risk
- Quicker and less costly installation
- No mandatory annual maintenance
- Space-saving: up to 4 times smaller than the equivalent hot water cylinders
- Reliable: Market-leading 10-year warranty
- Modular: easily combined to increase storage capacity

Sunamp and Heat Pumps



ErP Rating

A+

Cascades of hot water from a heat pump? No problem

Cheaper to run, with lower carbon emissions and minimal maintenance requirements, heat pumps are a sensible alternative to fossil fuel heating systems – especially if you care about the environment. They work by extracting heat from the air, ground or a water source providing a sustainable, energy-saving heating solution for your home. However, they also require hot water storage, which could rob valuable space in your home.

The space-saving Sunamp UniQ HW +iLTHP heat batteries work with low temperature heat pumps to provide hot water for all your kitchen and bathroom needs. And they won't let you down. With a signal from the heat pump these heat batteries can be boosted electrically if required, and the internal element will also operate as an automatic backup. This means you can be sure of having an abundance of hot water always.

Our easy to fit Sunamp UniQ HW +iLTHP offers a better alternative to outdated indirect cylinders and thermal stores for compatible heat pumps.

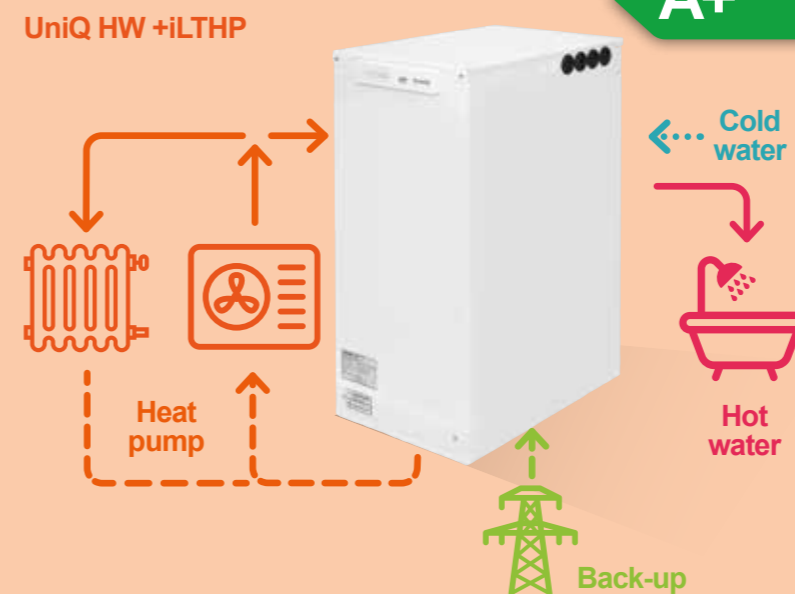


UniQ	HW3 +iLTHP-SG	HW6 +iLTHP-SG	HW9 +iLTHP-SG	HW 12 +iLTHP-SG	HW3 +iLTHP-DN	HW6 +iLTHP-DN	HW9 +iLTHP-DN	HW12 +iLTHP-DN
Compatible with	Samsung Heat Pumps AE050RXYDEG/EU, AE080RXYDEG/EU & AE120RXYDEG/EU (+MIM-E03CN)				Daikin Heat Pumps ERGA04DVA, ERGA06DVA & ERGA08DVA (+EHBH04D6V or EHBH08D6V)			
MPN/Order code	DGP-ECW-AXZ	DKP-ECW-AXZ	DNP-ECW-AXZ	DRP-ECW-AXZ	DGP-EDW-AYZ	DKP-EDW-AYZ	DNP-EDW-AYZ	DRP-EDW-AYZ
Heat Storage Capacity (kWh) ¹	3.2	6.3	9.5	12.6	3.2	6.3	9.5	12.6
Equivalent Hot Water Cylinder Size ²	65	128	192	256	65	128	192	256
V40, Volume of Hot water available at 40°C (L)	78	167	271	333	78	167	271	333
Standby Heat Loss (kWh/24h [W])	0.48 [20]	0.68 [28]	0.77 [32]	0.84 [35]	0.48 [20]	0.68 [28]	0.77 [32]	0.84 [35]
Energy Label	A+	A+	A+	A+	A+	A+	A+	A+
Heater Power Rating (~230V)	2.8 kW	2.8 kW	2.8 kW	2.8 kW	2.8 kW	2.8 kW	2.8 kW	2.8 kW
Height (mm)	455	650	860	1070	455	650	860	1070
Width x Depth (mm)	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575

¹ Heat Battery charged to design operating temperature and then discharged using inlet water temperature at 10°C. ² Calculated from the storage capacity of the Heat Battery and assuming that the hot water cylinder thermostat is set until the outlet water temperature dropped to 40°C. ³ Calculated from the storage capacity of the Heat Battery and assuming that the hot water cylinder thermostat is set at 60°C, mains cold water inlet temperature is at 10°C and the stored energy utilisation factor of cylinder is 0.85.

How it works

UniQ HW +iLTHP



Key Features

- Works with Daikin and Samsung LTHPs
- Instant hot water at mains pressure
- Failsafe: backup internal electric heating element
- Extremely low heat losses
- Significantly reduced legionella risk
- Easier installation
- No mandatory annual maintenance
- Space-saving: typically up to 4 times smaller than the equivalent hot water cylinders
- Reliable
- Modular: easily combined to increase storage capacity

Sunamp for Heating



Warm and cosy – the heating solution that makes financial sense

Home comfort climbs up a notch with Sunamp UniQ Heat and UniQ Heat +i batteries. Why huddle round a fire when you can warm the whole house for less, and lower your carbon footprint into the bargain? These easy-to-install heat batteries are charged by one or more external heat sources such as a boiler or heat pump, or both, perfect for ensuring your house is never chilly. The space heating flow temperature is adjusted to suit your radiators or underfloor heating and kept at a constant temperature of your choice. For peace of mind, Sunamp UniQ Heat +i batteries may also be charged by standby internal electric heating elements which are covered by our market-beating 10-year guarantee.

Our heat batteries boast far lower heat losses than even the best hot water cylinder currently available and are ultra-compact and scalable to heat homes of any size, super-efficiently and reliably.



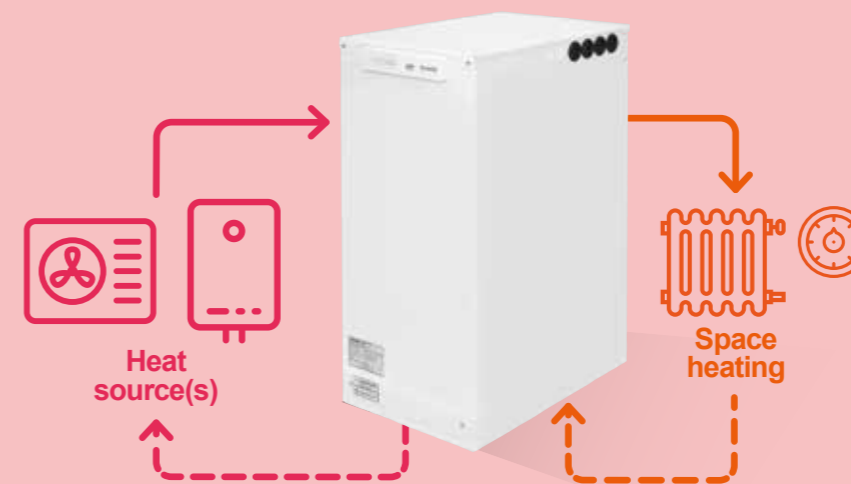
UniQ	Heat 3	Heat 6	Heat 9	Heat 12	Heat 3 +i	Heat 6 +i	Heat 9 +i	Heat 12 +i
MPN/Order Code	TGP-FGH-AVZ	TKP-FGH-AVZ	TNP-FGH-AVZ	TRP-FGH-AVZ	DGP-CBH-AVZ	DKP-CBH-AVZ	DNP-CBH-AVZ	DRP-CBH-AVZ
Heat Storage Capacity (kWh) ¹	2.8	5.6	8.4	11.2	2.8	5.6	8.4	11.2
Standby heat loss (kWh/24h [W])	0.45 [19]	0.65 [27]	0.74 [31]	0.81 [34]	0.48 [20]	0.68 [28]	0.77 [32]	0.84 [35]
Energy Label	A+	A+	A+	A+	A+	A+	A+	A+
Heater Power Rating (~230V)	N/A	N/A	N/A	N/A	2.8 kW	2.8 kW	2.8 kW	2.8 kW
Height (mm)	387	588	814	999	455	650	860	1070
Width x Depth (mm)	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575	365 x 575

¹ Heat Battery charged to design operating temperature and then discharged with a return temperature of 40°C.

How it works

UniQ Heat

A+ ErP Rating



Key Features

- Rapid warm-up
- Extremely low heat losses
- Quicker and less costly installation
- No mandatory annual maintenance
- Compact: typically 2-3 times smaller than equivalent hot water based thermal stores
- Reliable
- Compatible with any third-party controller, e.g. Nest, Honeywell and Danfoss

Combined Heating and Hot Water Packages



Low carbon high performance – marvel system for heating and hot water

A warm home with hot water on demand powered by affordable clean energy is no longer the stuff of dreams. As the move towards all electric homes accelerates, it's time to make a positive change. Your search for the best heating system to keep fuel costs down and comfort levels up ends here.

Combined Primary Storage Unit (CPSU) system packages using Sunamp UniQ heat batteries will keep your home as cosy as you like, and you can count on having plenty of hot water whenever you need it. Our batteries are charged by internal electric heating elements and maximise the use of lower-cost electricity tariffs by storing heat during the cheaper off-peak periods.

Thermally charged Sunamp UniQ Heat Batteries are a great addition to High Temperature Heat Pump (HTHP) system packages too, allowing you to improve running costs by using off-peak tariffs.

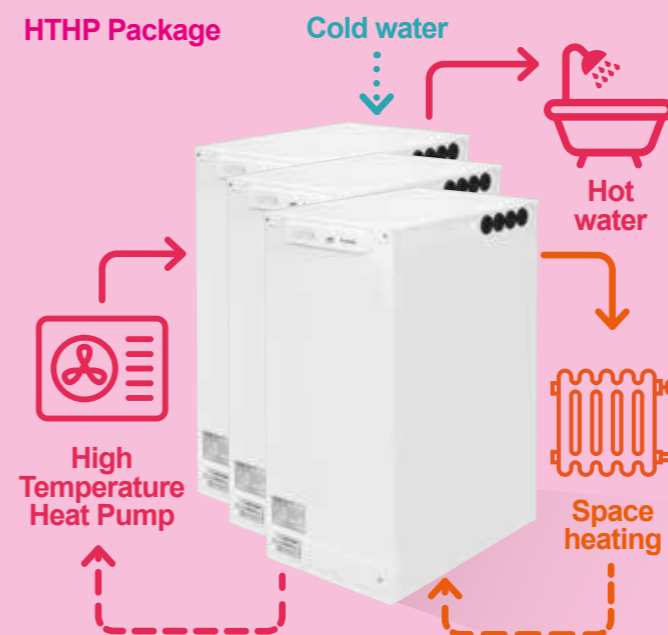
The super compact and modular design means that Sunamp Heat Batteries can bring thermal storage to any size of home.



Use Sunamp heat batteries in housing projects to save space, make renewable systems work better and help the environment.

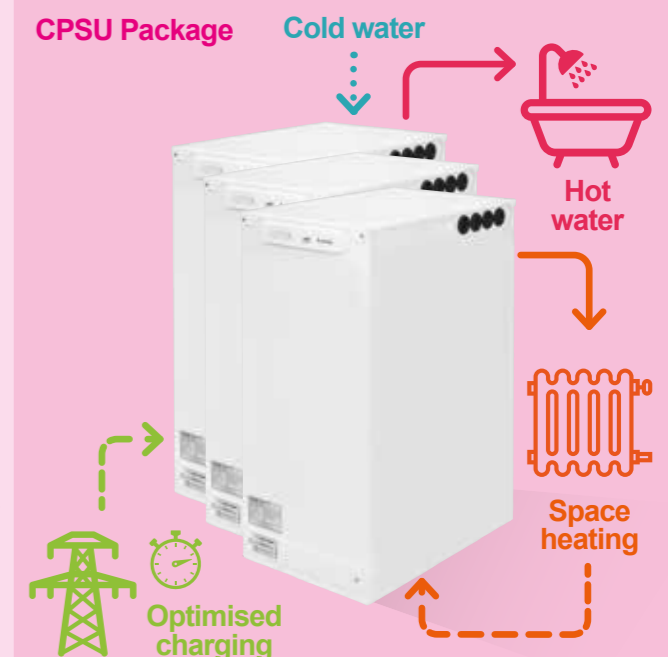
How it works

HTHP Package



How it works

CPSU Package



Sunamp for Business and Industry

ERP Performance

A+

**Not just for homes –
businesses benefit too**

From dairy farms to distilleries, airports to hotels, heating and cooling is more cost and energy efficient with Sunamp UniQ batteries. Modular and scalable, they are perfect for commercial, leisure and industrial use, and are as flexible and effective as they are compact and environmentally friendly.

Sunamp heat batteries are designed to charge when energy prices are low, or when renewable generation or waste heat is abundant, and discharge heat, hot water, air conditioning or refrigeration during peak demand when energy costs are high.

Our thermal storage technology can also be used off-grid and to move waste heat by road, rail or waterway in shipping container units to commercial districts, factories, housing, leisure facilities, district heating/cooling networks, or any other site with a hot water, cooling or heating requirement. The Sunamp UniQ 80 is our largest single unit available off the shelf.

To find out more visit www.sunamp.com



Sunamp heat batteries can be filled with a wide range of different phase change temperatures from -30°C for freezing applications through 5°C for cooling applications such as district cooling networks to 118°C for high temperature >80°C hot water applications such as sterilisation. Contact us to learn more about the available temperatures.



**Greater control, reliability and
security of supply for industry
- saving energy costs and
speeding up processes**

Installation and technical support



Sunamp heat batteries are world-leading high-power density, high-energy density, super-compact thermal stores. For best performance and peace of mind it is important to ensure that they are correctly specified and expertly installed.

All Sunamp certified installers receive free training and ongoing technical support to ensure they have the knowledge and skills to provide the best solution for their customers. Training is available remotely and in person at the Sunamp Factory where we have a state-of-the-art facility designed especially for these sessions. Technical manuals can be downloaded at www.sunamp.com

Where can I buy Sunamp products?

Sunamp does not sell to individuals – any direct sales enquiries are forwarded to our installer and distributor network and our products are available through our approved stockists. For a current list of distributors visit www.sunamp.com

How do I become a Sunamp certified installer?

We run regular training sessions. To find if you qualify for our free training packages simply email training@sunamp.com with some details about yourself and why you want to become a Sunamp certified installer.

Contact

Email: customerservice@sunamp.com

Please include all details of your enquiry and your warranty information. We will respond to all enquiries in clear and friendly manner within 2 working days.

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www.sunamp.com

Sunamp has protected their technology in wide range of global patents based on the patent applications listed here www.sunamp.com/downloads/sunamp-patents/

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 and European markets, are fully compliant with LVD and EMC directives, conform to standards set out by the Water Regulation Advisory Scheme (WRAS) and are CE marked.



Sunamp is an industrial associate of:



Technology developed in association with:



Direct Contact

