



THERMINO



EASYFIT SPACE- SAVING THERMAL STORAGE FOR HOT WATER





THERMINO

Discover world-leading thermal storage

Thermino™ heat batteries are modern-day, energy-saving thermal stores made with a high performance phase change material to deliver fast-flowing hot water, reliably, safely, and efficiently. Up to four times smaller than the equivalent hot water tank, the sleek, super-compact design means Therminos look great in any home and free up valuable storage space. They are also easy to install, kinder to the environment and require no mandatory annual 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 of daily use at two cycles per day of hot water application. Sunamp's own testing has so far confirmed failsafe performance to over 40,000 cycles, comparable to over 50 years continuous use.

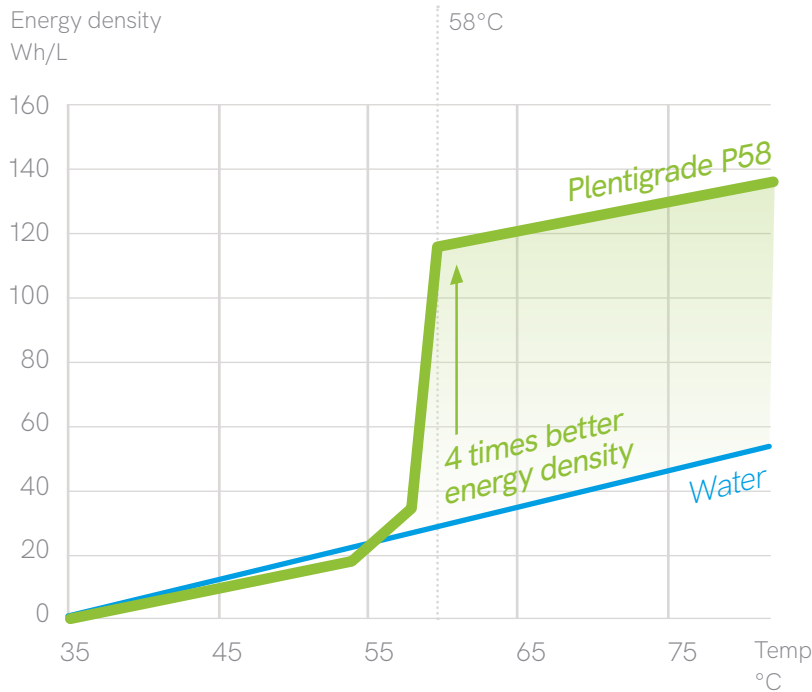
Why choose Thermino?

What do people want from their hot water system? Ideally, comfort and convenience with fast-flowing hot water on tap that doesn't cost the earth and is small enough to free up valuable storage space in the home.

Thermino heat batteries are the choice of property developers, landlords and householders conscious about lowering carbon emissions, reducing or eliminating gas and controlling energy bills. No annual mandatory maintenance means additional cost savings. Installers like Thermino heat batteries as they are easier to install than traditional hot water tanks, and provide flexibility for householders by fitting into much smaller spaces in the home.



How do phase change materials work?



- PCMs absorb, store and release large amounts of latent heat when changing state between solid and liquid. Heat is absorbed on melting and released on freezing
- Melting and freezing our Plentigrade P58 PCM stores up to four times more energy than heating and cooling hot water
- A high-powered heat exchanger or heating element immersed in our patented PCM rapidly charges the Thermino and heat is just as quickly extracted to provide fresh, mains pressure hot water at a constant temperature only when it's needed
- Reliable, safe, non-toxic, non-flammable
- Lowers energy use and carbon emissions

A SUSTAINED WITH TECHNOLOGY
A SUNAMP THERMAL PLENTIGRADE

The secret to the success of Sunamp heat batteries is our world leading Plentigrade technology. The Thermino range uses high-performance Plentigrade P58 phase change material to deliver hot water on demand. It absorbs and releases thermal energy during a melting and freezing process in a similar way to the gel in a pocket handwarmer. Freezing releases a huge amount of energy in the form of heat at a constant temperature.

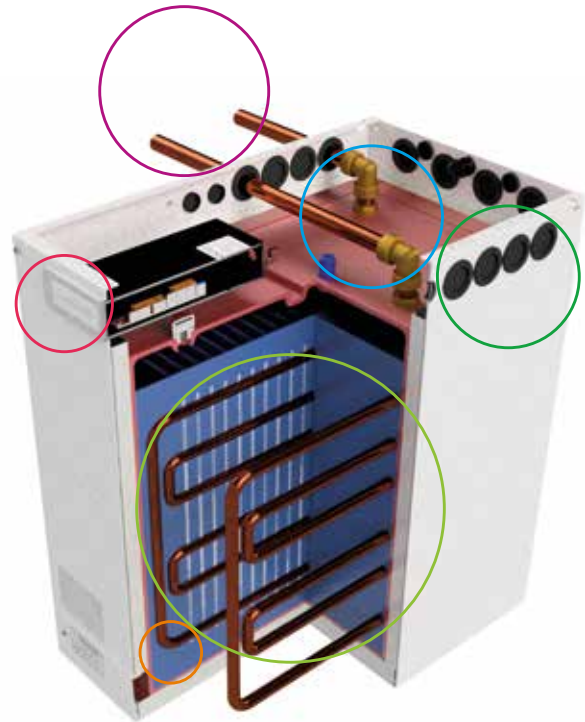
Our unique formula stores up to four times more energy than water, which means Thermino heat batteries are up to four times smaller than the hot water tanks they replace.

Plentigrade P58 does not contain any toxic or hazardous materials and there is no end-of-life disposal issues.

The 'Sustained with Plentigrade' quality mark on our products is assurance of performance, efficiency, safety and reliability.

- Single and dual circuit models work with a wide choice of energy sources (electricity, solar PV, heat pumps and boilers)
- Simple user interface shows heat battery state of charge
- Market leading 10-year warranty applies to heating element and storage core
- Quick and easy to install, with high quality brass push fit connectors supplied
- Flexibility of orientation, with exits on three sides of the product
- High powered heat exchanger for high quality, mains pressure showers
- Sunamp's patented Plentigrade P58 PCM phase change material formulation
 - storing 4 x more energy than water

Works with a wide choice of energy sources



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



THERMINO

Super-compact thermal storage

Old technology



h 58 inches
w 25 inches
d 28 inches

Thermino



h 34 inches
w 14.5 inches
d 22.5 inches

Works with almost any energy source

Lower heat losses – up to 4 x higher energy efficiency

A+ energy rating – saves up to 1000 kWh a year

High flow rate hot water

Instantaneously heats water for hygiene and freshness

Enables heat pump systems to be installed where otherwise they wouldn't fit

Fast and easy to install – no overflow pipework, no temperature and pressure (T&P) safety valve to maintain

No mandatory annual maintenance

Market-leading 10-year warranty on the heating element

Space-saving – up to 4 x smaller than hot water tank alternatives

Choose your Thermino

	Works with	Boiler	24 hour grid supply	Off peak timer/ Variable tariff	PV	Heat pump	
	Page No.						Replaces
Thermino e ²	6		●	○			Direct tank
Thermino i	8	●	○				Indirect tank
Thermino ¹	10	●				●	Indirect or heat pump tank without immersion

- Primary energy source
- Secondary/optional energy source

¹ Compatible with selected heat pumps. Check product manual for more information

² Can be used as primary hot water source or to pre-heat suitable combi-boilers, reducing gas demand for hot water. Check with boiler manufacturer for compatibility.



Energy-saving Thermino heat batteries come in four sizes – 20, 40, 60 and 80 – to indicate the size in gallons of the hot water tanks they replace. The advantage of their compactness and modular design is that they can meet the needs of any home. Simply select the Thermino to match the choice of energy source and hot water requirements of the household. The Thermino range is available to buy through major wholesalers and installers.



THERMINO

Thermino e – the sleek alternative to direct hot water tanks with the functionality to schedule charging periods to maximise off peak/variable rates.



Thermino e

Thermino e heat batteries are the smart way to heat water and save space and money too, especially when combined with an off-peak rate. They are the ideal replacement for direct hot water tanks. Heated by an internal element, which is covered by our market-leading 10-year warranty, they guarantee powerful showers at a perfect temperature. A sleek new design and advanced storage technology make them up to four times smaller than equivalent direct tanks, freeing up valuable storage space in the home.

Available in four sizes that can also be combined, they are the right solution to perfectly match the exact hot water requirements of any home.

How it works – Thermino e



Key features

Space-saving – up to 4 x smaller than the hot water tank it replaces

Flexible orientation with exits on three sides

Lower heat losses – up to 4 x higher energy efficiency

Low heat losses – from only 0.48 kWh a day

High flow rate hot water

Instantaneously heated water for hygiene and freshness

Fast and easy to install – no high temp discharge pipework and T&P safety valve to maintain

No mandatory annual maintenance

Market-leading 10-year warranty on the heating element

Thermino e technical data and dimensions

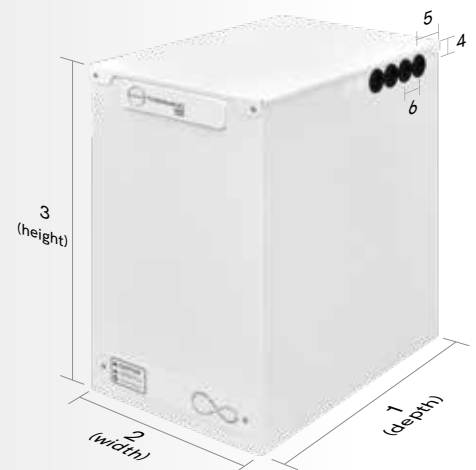
	20 e	40 e	60 e	80 e
Manufacturer's part number	SGP-AAW-AVZ-1	SKP-AAW-AVZ-1	SNP-AAW-AVZ-1	DRP-AAW-AVY-1
Equivalent hot water tank size (gallons)	19	37	56	81
V10 (gallons)*	28	52	79	115
Heat loss rate (kWh/24) (W)	0.48 (20)	0.68 (28)	0.77 (32)	0.84 (35)
Energy efficiency rating class	C			
Recommended flow rates (gpm)	1.5	4	5.5	7
Minimum mains supply pressure	22 psi			
Maximum mains pressure	145 psi			
Hot water temperature	113-131°F			
Connected load at 230v, 50hz (W)	2,800			
Annual electricity consumption (kWh/annum)	542	1,398	2,690	2,701
Product weight in use (lb)	174	306	392	514

* V10 refers to the volume (in gallons) of water available at 104°F.

NOTE: In line with US Building Regulations, Sunamp advise the installation of a suitable hot water supply mixing valve at the outlet of the appliance, to prevent the risk of scalding.

Dimensions

(inches)	20 e	40 e	60 e	80 e
Dimension 1	22.5	22.5	22.5	22.5
Dimension 2	14.5	14.5	14.5	14.5
Dimension 3	17.5	25.5	34.5	41.5
Dimension 4	1.5	1.5	1.5	1.5
Dimension 5	3	3	3	3
Dimension 6	2	2	2	2





THERMINO

Thermino i – An indirect tank alternative that works with boilers and comes with a standby internal electric heating element for greater flexibility.



Thermino i

Like the Thermino model, our equally compact Thermino i heat batteries are also designed to work with boilers and come complete with a back-up internal electric heating element covered by our market-leading 10-year warranty to provide a failsafe solution.

Thanks to our best-in-class insulation, gas, oil, or LPG consumption will be reduced. Lower heat losses mean lower carbon emissions and lower energy use, to help save money and the planet too. Available in four sizes to meet the needs of any size of household.

How it works – Thermino i



Key features

Space-saving – up to 4 x smaller than the hot water tank it replaces

Flexible orientation with exits on three sides

Lower heat losses – up to 4 x higher energy efficiency

A+ energy rating – saves up to 1000 kWh a year

High flow rate hot water

Instantaneously heated for hygiene and freshness

Fast and easy to install – no high temp discharge pipework and T&P safety valve to maintain

No mandatory annual maintenance

Market-leading 10-year warranty on the heating element

A+

Energy Efficiency
Rating Class

Thermino i technical data and dimensions

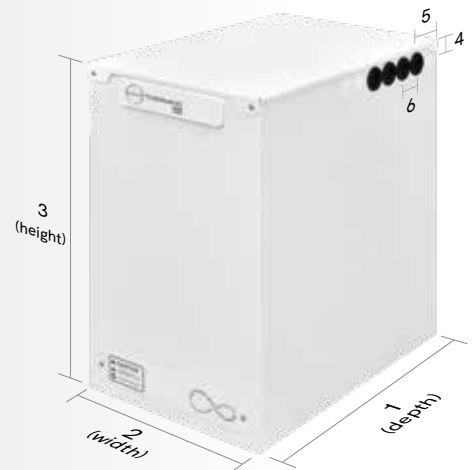
	20 i	40 i	60 i	80 i
Manufacturer's part number	DGP-CBW-AVZ-1	DKP-CBW-AVZ-1	DNP-CBW-AVZ-1	DRP-CBW-AVZ-1
Equivalent hot water tank size (gallons)	19	49	56	75
V10 (gallons)*	22	49	79	98
Heat loss rate (kWh/24) (W)	0.48 (20)	0.68 (28.1)	0.77 (32.1)	0.84 (35)
Energy efficiency rating class	A+			
Recommended flow rates (gpm)	1.5	4	5.5	7
Minimum heat source flow temperature	149°F			
Maximum heat source flow temperature	176°C			
Minimum mains supply pressure	22 psi			
Maximum mains pressure	145 psi			
Hot water temperature	113-131°F			
Connected load at 230v, 50hz (W)	2,800			
Product weight in use (lb)	174	300	412	514

* V10 refers to the volume (in gallons) of water available at 104°F.

NOTE: In line with US Building Regulations, Sunamp advise the installation of a suitable hot water supply mixing valve at the outlet of the appliance, to prevent the risk of scalding.

Dimensions

(inches)	20 i	40 i	60 i	80 i
Dimension 1	22.5	22.5	22.5	22.5
Dimension 2	14.5	14.5	14.5	14.5
Dimension 3	17.5	25.5	34.5	41.5
Dimension 4	1.5	1.5	1.5	1.5
Dimension 5	3	3	3	3
Dimension 6	2	2	2	2





THERMINO

Thermino – The energy saving, indirect hot water heater that works with boilers to lower fuel consumption.



Thermino

Thermino is the space-saving alternative for indirectly heated vented and unvented hot water tanks and hot water only thermal stores. Easy to install, they are specially designed to work with boilers. Thanks to high performance insulation, oil, gas or LPG consumption will be much lower. Lower heat losses mean lower carbon emissions which is a first step on the road to net zero.

How it works – Thermino



Key features

- Space-saving – up to 4 x smaller than the hot water tank it replaces
- Flexible orientation with exits on three sides
- Lower heat losses – up to 4 x higher energy efficiency
- A+ energy rating – saves up to 1000 kWh a year
- High flow rate hot water
- Instantaneously heated for hygiene and freshness
- Fast and easy to install – no high temp discharge pipework and T&P safety valve to maintain
- No mandatory annual maintenance
- Market-leading 10-year warranty on the heating element
- Works with any type of condensing or atmospheric boiler

A+

Energy Efficiency Rating Class

Thermino technical data and dimensions

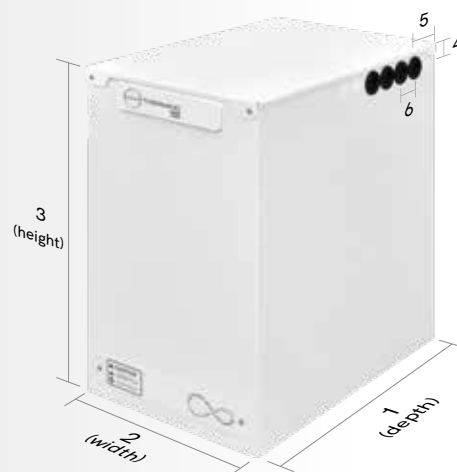
	20	40	60	80
Manufacturer's part number	TGP-FGW-AVZ-1	TKP-FGW-AVZ-1	TNP-FGW-AVZ-1	TRP-FGW-AVZ-1
Equivalent hot water tank size (gallons)	19	37	56	75
V10 (gallons)*	22	49	79	98
Heat loss rate (kWh/24) (W)	0.45 (18.7)	0.65 (27)	0.74 (30.7)	0.81 (33.7)
Energy efficiency rating class	A+			
Recommended flow rates (gpm)	1.5	4	5.5	7
Minimum heat source flow temperature	149°F			
Maximum heat source flow temperature	176°F			
Minimum mains supply pressure	22 psi			
Maximum mains pressure	145 psi			
Hot water temperature	113-131°F			
Product weight in use (lb)	130	271	388	480

* V10 refers to the volume (in gallons) of water available at 104°F.

NOTE: In line with US Building Regulations, Sunamp advise the installation of a suitable hot water supply mixing valve at the outlet of the appliance, to prevent the risk of scalding.

Dimensions

(inches)	20	40	60	80
Dimension 1	22.5	22.5	22.5	22.5
Dimension 2	14	14	14	14
Dimension 3	16	24	32	40.5
Dimension 4	1.5	1.5	1.5	1.5
Dimension 5	3	3	3	3
Dimension 6	2	2	2	2





THERMINO

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 online 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 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 wholesalers.

For a current list of distributors visit sunamp.com

How do I become a Sunamp certified installer?

We run regular training sessions. To find out if you qualify for our free training packages simply email training@sunamp.com

Sunamp and sustainability

Reducing carbon footprint to achieve a net zero economy is at the heart of everything we do as a business. We have signed up to the SME Climate Hub commitment to halve our greenhouse gases by 2030 and achieve net zero emissions before 2050. Recent analysis shows the greenhouse gas intensity per sold product associated with our direct business activities is already approximately zero.

Our Thermino heat batteries are non-toxic, non-flammable and we are able to fully re-use or recycle every component at end-of-life. They are produced in a factory and offices heated and powered by carbon-free electricity from wind generation. We have carbon accounting systems in place to collect relevant data and report on our emissions reduction progress annually.



Sales enquiries

Project specifiers, housing developers and social landlords interested to find out how Sunamp can help you on your road to net zero, please email sales@sunamp.com

Customer support

If you would like more detailed information on our products or have a technical enquiry please contact customerservice@sunamp.com

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

Sunamp has protected their technology in a wide range of global patents based on the patent applications listed on our website [sunamp.com](https://www.sunamp.com)

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Quality assured

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

ISO 9001 – Quality Management

ISO 14001 – Environmental Management

ISO 45001 – Occupational Health & Safety



Certificate number 12881

Sunamp products are also fully certified for the US, UK and European markets, are fully compliant with the low voltage directive (LVD) and electromagnetic compatibility (EMC) directive, conform to standards set out by CE and UL.



for thermal stores

Sunamp is an industrial associate of:



Sunamp technology developed in association with:



As an innovative company committed to achieving net zero, Sunamp Ltd continuously improves its products which means data and other information are subject to change without prior notice. While every effort has been made to ensure that all specifications and descriptions are correct at the time of going to press, this brochure should not be regarded as an infallible guide nor as an offer of sale for a particular product.

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