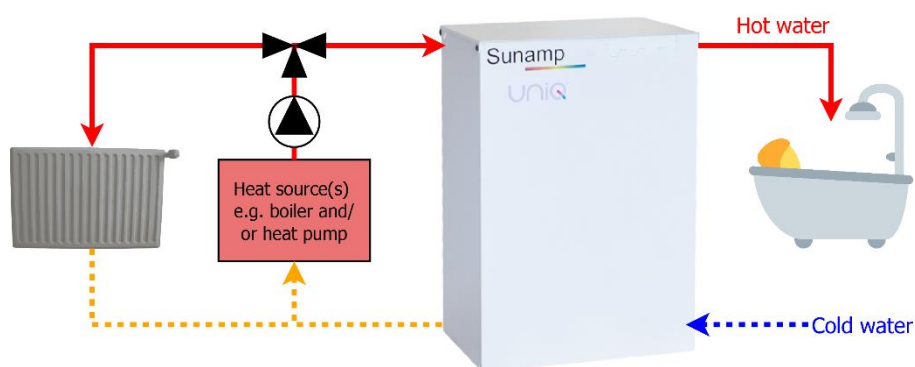




The Sunamp *UniQ HW* batteries use Phase Change Materials (PCMs) to store heat for producing mains pressure hot water in buildings. The hot water is heated instantaneously on demand by transferring heat from the PCMs to the mains cold water flowing through the battery.

The batteries are charged by one or more external heat sources (e.g. a boiler and/ or heat pump) which can sustain a flow temperature between 65°C and 85°C.



The hot water outlet temperature depends on the charged state of the battery; this can be as high as 75°C. Therefore, a thermostatic mixing valve (TMV) should be fitted to achieve safe and stable temperatures for your taps and showers.

UniQ HW batteries come in four sizes (3, 6, 9 and 12) which can be cascaded to increase your heat storage capacity. They are also supplied with controllers that provide the signal for controlling the external heat sources and manage the charging and discharging of the batteries.

Sizing your <i>UniQ HW</i> battery	1 shower only	1 bath only	1 bath & up to 2 showers	2 baths	2 baths & 1 shower	2 baths & 2 showers
Cylinder size/ water storage capacity ¹ , [L]	60	120	145	180	205	230
Equivalent energy storage capacity of cylinder ² , [kWh]	2.96	5.92	7.12	8.88	10.16	11.46
<i>UniQ HW</i> models	3	6	9	9	9	12

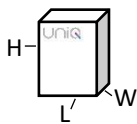
Key Features

- Instant hot water at mains pressure
- **Extremely** low heat losses
- Significantly reduced legionella risk
- Quicker and less costly installation
- No mandatory annual maintenance
- Compact: typically 2-3 times smaller than the equivalent hot water cylinders
- Reliable: lifespan of at least 50 years
- Modular: easily combined to increase storage capacity
- Compatible with any third-party controller, e.g. Nest, Honeywell and Danfoss

¹ Minimum storage capacities recommended by the National House Building Council (NHBC) for gas heating systems.

² The comparison assumes the cylinder thermostat is set at 60°C, mains cold water inlet temperature is 10°C and a utilisation factor of 0.85.

Technical specifications of UniQ HW standard batteries supplied with PCM58		Size 3	Size 6	Size 9	Size 12
Nominal heat storage capacity ³	[kWh]	3.5	7.0	10.5	14.0
Water content – Low power circuit (LPC) ⁴	[L]	1.30	2.36	3.46	4.56
Water content – High power circuit (HPC) ⁵	[L]	2.24	4.48	6.76	9.04
Equivalent hot water cylinder size ⁶	[L]	71	142	212	284
V ₄₀ , Volume of hot water available at 40°C ⁷	[L]	93	186	279	372
<ul style="list-style-type: none"> Heat loss rate Heat loss rate ErP Rating class – Hot water storage tank 	[kWh/24h]	0.449	0.649	0.738	0.809
	[W]	18.7	27.0	30.8	33.7
	[-]	A ⁺	A ⁺	A ⁺	A ⁺
Recommended maximum hot water flow rate	[L/min]	6	15	20	25
Minimum mains cold water supply pressure at inlet to the battery	[bar]	1.50	1.50	1.50	1.50
	[MPa]	0.15	0.15	0.15	0.15
Maximum working pressure of High power (HPC) and Low power (LPC) circuits	[bar]	10.0	10.0	10.0	10.0
	[MPa]	1.0	1.0	1.0	1.0
Pressure loss characteristics					
• K _v Value for the low power circuit (LPC)	[-]	1.623	1.255	1.066	0.963
• K _v Value for the high power circuit (HPC)	[-]	2.871	2.356	1.951	1.451
Minimum heat source flow temperature ⁸	[°C]	65	65	65	65
Maximum heat source flow temperature ⁹	[°C]	85	85	85	85
Typical hot water outlet temperature settings with thermostatic mixing valve (TMV)	[°C]	45 – 55	45 – 55	45 – 55	45 – 55
Battery controller power supply rating at 230V, AC, 50Hz ¹⁰	[A]	6	6	6	6
Nominal dimensions					
• Length, L	[mm]	575	575	575	575
• Width, W	[mm]	361	361	361	361
• Height, H	[mm]	390	591	817	1002
Dry weight ¹¹	[kg]	55	105	155	205



³ When measured under the following conditions: battery charged to 75°C and then discharged using mains cold water at 10°C until the hot water outlet temperature dropped to 40°C.

⁴ The LPC is connected to external heat source e.g. a boiler.

⁵ The HPC is connected to the mains cold water supply for producing hot water.

⁶ Calculated from the storage capacity of the 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 the cylinder is 0.85.

⁷ Calculated from the storage capacity of the battery and assuming that the hot water outlet temperature is set at 40°C, mains cold water inlet temperature is at 10°C and the stored energy utilisation factor of the cylinder is 0.95.

⁸ To fully charge the battery, the source flow temperature should be set so that it does not start to cycle on its internal thermostat. The battery will be fully charged when the battery return temperature is about 5°C less than the heat source flow temperature.

⁹ Maximum constant heat source flow temperature when charging the battery.

¹⁰ Power supply to the battery/system controller via local 2-pole isolator.

¹¹ The installed weight is between 5kg and 10kg greater than the dry weight.