

Product Data – Thermal Battery

The EnergiVault thermal battery is a modular cold thermal energy storage system. It complements new and existing chiller installations enabling flexible, low energy cost, low carbon chiller installations with added resilience.

Energivault is a highly scalable cold energy storage thermal system with its batteries and charger configurable for low and medium charge rates and high storage levels and cooling rates.

The EnergiVault thermal battery provides ultra quick cooling response to high discharge rates of cooling. EnergiVault has been designed, built and tested in the UK by Organic heat Exchangers.

EnergiVault Thermal Battery, EVS-1000 Specification

Stored Thermal Energy	1,000 kWh _t
Nominal Cooling Capacity	500 kW _t
Cooling Duration	A function of cooling demand and operational fluid temperatures
Internal battery temperature	-10°C to -3°C
Compatible chiller circuit temperature	+5°C to +20°C
Volume of energy storage fluid	c.20,000L
Energy storage fluid	Water with 10% propylene glycol
Maximum operating pressure	< 0.5 bar g (static head pressure of battery volume)
Standby losses	< 1%
Round trip efficiency	> 95%
Lifetime cycles	No Limit
Noise – Pressure Level (dB(A) @ 10m)	60
Lifetime degradation	None
Lifetime	20 years
Dimensions (L x W X H)	Contained: External Dims: 6.1m x 2.44m x 2.6m
Electrical Input Power	Up to 4kW when discharging. Taken from Charger.
User Interface	Touch screen with operator and service dashboards
Approximate Operating Weight	22,500 kg
Compliance, Safety	European Pressure Equipment Directive; 2014/68/EU. Article 4, para 3 – Sound Engineering Practice

Standard Interface HX: Customer side	
Type/ Material	Plate and frame HX, 316 Alloy
Flow rate	Rated at 17L/s
Design temperature difference	Inlet +13°C; Outlet +6°C
Connections	DN50 flanged to interface HX
Pressure drop	50kPa