

Liquid Cooling Energy Storage Launch Time





Overview

FRANKFURT, Germany, Sept. 10, 2025 /PRNewswire/ -- AlphaESS, a global leader in advanced energy storage solutions, has officially announced the launch of its latest product — Aster 5000, a next-generation 5MWh liquid-cooling energy storage system, and fully integrated 20-foot container. What is a 5MWh liquid-cooling energy storage system?

The 5MWh liquid-cooling energy storage system comprises cells, BMS, a 20'GP container, thermal management system, firefighting system, bus unit, power distribution unit, wiring harness, and more. And, the container offers a protective capability and serves as a transportable workspace for equipment operation.

Why is liquid cooling important for energy storage systems?

With sustainability and high-performance applications becoming a priority, liquid cooling is emerging as the most effective technology for energy storage systems. Effective cooling is crucial in battery storage systems to prevent overheating, ensure longer battery lifespan, and optimize efficiency.

Is liquid cooling a viable solution for battery energy storage systems?

With increasing regulatory requirements and the push for sustainability, liquid cooling is rapidly becoming the preferred solution for battery energy storage systems. Companies investing in liquid-cooled air conditioners and advanced energy storage cooling systems will benefit from enhanced efficiency, improved safety, and long-term cost savings.

How does liquid cooling work in battery energy storage systems?

The above diagram illustrates how liquid cooling works in battery energy storage systems. The coolant circulates through cold plates attached to battery modules, absorbing heat and transferring it to an external refrigerant cycle, ensuring maximum efficiency.

What is a liquid cooling unit?



The product installs a liquid-cooling unit for thermal management of energy storage battery system. It effectively dissipates excess heat in high-temperature environments while in low temperatures, it preheats the equipment. Such measures ensure that the equipment within the cabin maintains its lifespan.

How long is a 5MWh liquid-cooling energy storage cabin?

The layout project for the 5MWh liquid-cooling energy storage cabin is shown in Figure 1. The cabin length follows a non-standard 20'GP design (6684mm length × 2634mm width × 3008mm height). Inside, there are 12 battery clusters arranged back-to-back, each with an access door for equipment entry, installation, debugging, and maintenance.



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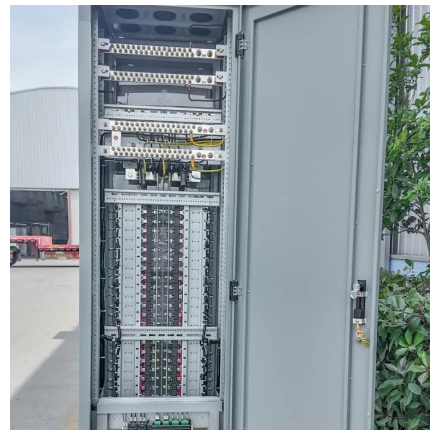


[AlphaESS Launches Aster 5000: Advanced 5MWh Liquid-Cooling Energy](#)

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[How liquid-cooled technology unlocks the potential of energy storage](#)

The advantages of liquid cooling ultimately result in 40 percent less power consumption and a 10 percent longer battery service life. The reduced size of the liquid-cooled storage container has ...



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