

# Cold plate liquid cooling energy storage container

What is a liquid cold plate?

A Liquid Cold Plate (LCP) is responsible for efficiently transferring heat from surfaces with high heat loads to the fluid used within a liquid cooling system. The performance of the liquid cold plate is critical in defining the overall effectiveness of a liquid system. Reliable, 100% leak tested cold plates produced for decades.

What are liquid cooling systems & cold plates used for?

Military applications, including radar systems and communication equipment, often integrate liquid cooling systems and cold plates to maintain the operational readiness of electronic components in extreme ambient or operating conditions.

Does a cold plate cool a device?

A cold plate by itself does not cool devices; it must be integrated into a liquid loop that includes a pump for fluid circulation and a heat exchanger to reject the heat absorbed by the cold plate. Why use Liquid Cold Plates? Leverage the high heat capacity of liquid to quickly absorb more heat than air cooled thermal management solutions.

Are liquid cold plates a good choice for thermal management systems?

Liquid cold plates offer several advantages for thermal management systems, including the enhanced performance and lifespan of vital components, such as batteries. Overheating or excessive cooling can place unnecessary stress on these components. With strategic implementation, KUS cold plates help to avoid this.

Which cold plate is best for cooling fluid?

CP15, CP20, and CP30 provide the necessary thermal resistance. But because the cooling fluid is water, you should only consider the CP15 cold plate. We present cold plate performance data using local thermal resistance - the surface temperature versus the local liquid temperature.

How do cold plates work?

Cold plates remove the "heat load" on sensitive parts of a mechanical or electronic device via liquid cooling. Liquid cooling is particularly efficient where a standard forced convection cooling system would take too much space. Thus, shrinking spaces and increasing powers call for help from cold plates!

Liquid coolant circulates through channels or tubes integrated into the battery pack, absorbing and taking care of high heat loads via a liquid cold plate. These two cooling methods are frequently employed individually or in combination to ...

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