



Cold Plate Liquid Cooling Solutions: High Efficiency for High Power

Protect high-power electronic components with high-performance liquid cold plates from Thermacore.

Thermal cooling for increasing heat fluxes and power loads in compact electronic packages is driving thermal solution designers away from the limitations of air cooling to liquid cooling in many demanding applications. To satisfy critical thermal management needs in applications as diverse as military/aerospace, medical equipment, power electronics, lasers, renewable energy and transportation, Thermacore liquid cold plates provide the top performance and reliability designers trust.

Thermacore's custom liquid cooling component cold plates include tube-in-plate, aluminium vacuum-brazed and copper brazed types for various applications. Tube-in-plate cold plate materials consist of copper or stainless steel tubes pressed into a channelled aluminium or copper extrusion or machined plate. Finally, Thermacore offers copper cold plates that incorporate vertical fin technology (e.g. micro-channel technology) or for higher performance, our specialised powdered metal construction. Thermacore's custom liquid cold plate assemblies are designed specifically for each application's unique thermal/mechanical requirements. Thermacore's liquid cooled cold plates can be engineered to perform with diverse coolants, including water, water/glycol solutions, dielectric fluids, oils and synthetic hydrocarbons (PAO).

Cold Plate Fluid Compatibility Table

Cold Plate Technology	Water	Glycol/ Water	De- ionised Water	Oil	Dielectric Fluids	PAO (Polyalphaolefin)
Copper Tube-In Cold Plate	X	X				
Copper-Nickel Tube-In Cold Plate	X	X				
Brazed Microchannel Copper Cold Plate	X	X				
Brazed Powder Metal Copper Cold Plate	X	X				
Stainless Steel Tube-In Cold Plate	X	X	X			
Aluminium Vacuum Brazed Cold Plates		X		X	X	X