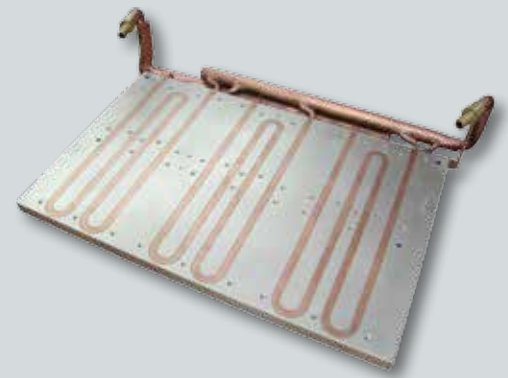
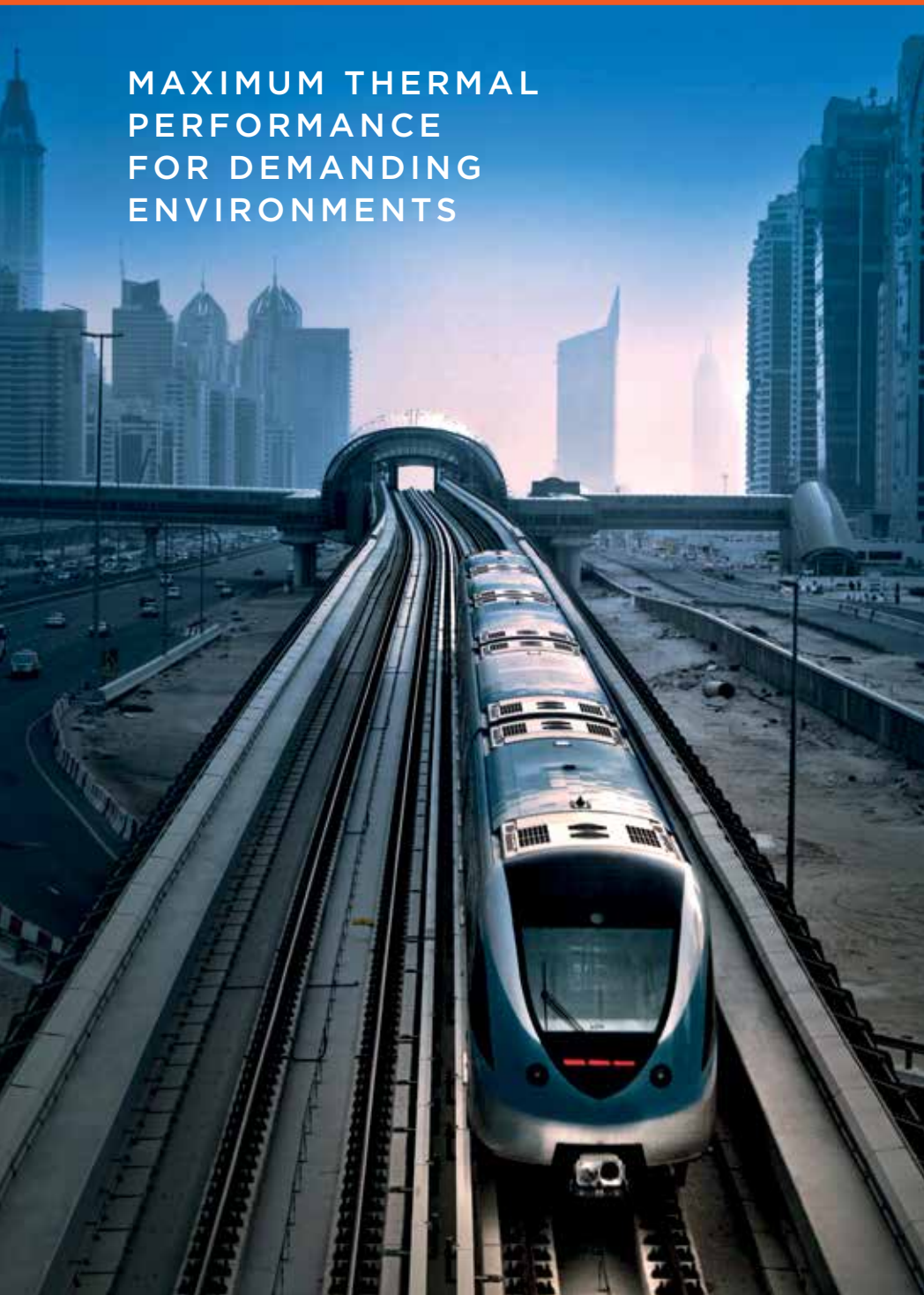




COLD  
PLATES

Eldre | Ferraz Shawmut | R-Theta

MAXIMUM THERMAL  
PERFORMANCE  
FOR DEMANDING  
ENVIRONMENTS



# LIQUID COOLING SOLUTIONS: DURABLE AND RELIABLE

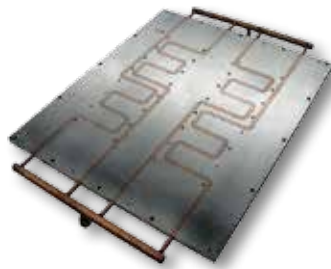
CUSTOM DESIGNED AND MADE TO FIT YOUR APPLICATION

Power electronics components (IGBTs, thyristors) need a cooling solution that is both effective and reliable, especially when installed in a confined space. Liquid cooling solutions from Mersen can effectively address this challenge. In addition to embedded or pressed copper tubing in aluminum plates, Mersen has mastered vacuum brazing technology to achieve a guaranteed water tight design with no seams resulting in an extremely robust and corrosion free heat sink with excellent thermal performance.

**Aquasurf** technology offers low to medium performance requirements at cost effective solutions. Flexibility in design, customized tube patterns, two-sided cooling options on tube material (copper, aluminum and stainless steel) are all part of the many advantages of the Aquasurf line of cold plates. Copper, aluminum or stainless steel tubes are embedded in the surface of an aluminum plate to provide the lowest thermal resistance between the semiconductor mounting surface and the cooling liquid. Tubes can be bent into complex arrays to ensure the cooling surface is directly under the semiconductor chips.

## Benefits:

- Cost Effective design
- Lower weight than all copper solution
- Flexibility in the tube layout and configurations
- Aluminum, copper and stainless steel available
- Tubes mounted flush with surface to minimize thermal resistance to cooling fluid
- Two sided cooling



**Mersen designs and builds prototypes to ensure our customers' performance needs are met.**

Please contact us at  
[Thermal.MIS@thm.mersen.com](mailto:Thermal.MIS@thm.mersen.com)  
or call us at  
+ 1 905 795 0077

**Aquamax** technology in copper and aluminum versions provides maximum thermal performance employing proprietary channeling techniques to optimize coolant velocity at low head loss while providing uniform temperature across the mounting surface. Precision machining techniques used at the vacuum braze, flux free, interface ensure leak and corrosion free construction.

## Benefits:

- Optimized cooling path while keeping pressure drop low
- Allow high thermal performances
- Monolithic piece (excellent thermal conductivity)
- Leak and corrosion free construction to last decades
- High pressure withstanding
- Flexibility in flow path designs

