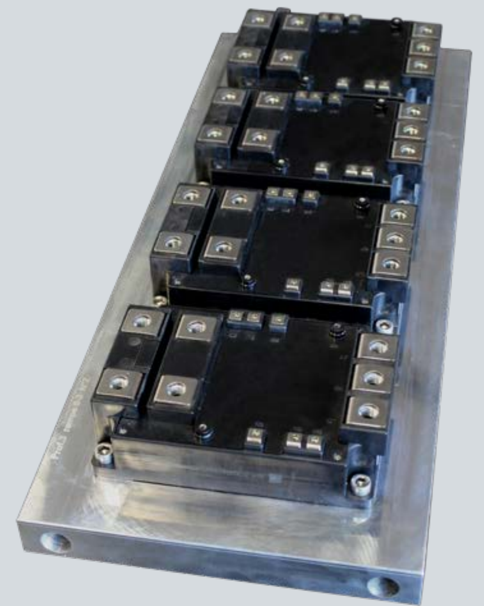
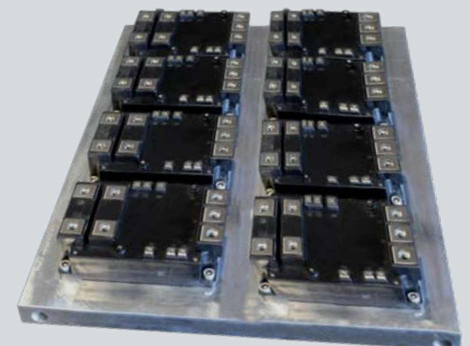
Ferraz Shawmut | Eldre | Idealec | FTCAP

MERSEN ECS LV100 MAXX

HIGH PERFORMANCE VACUUM BRAZED COLD PLATE FOR Si OR SiC LV100 MODULE





ENHANCED COOLING SOLUTION FOR LATEST GENERATION OF Si & SiC MODULE: LV100, XHPTM OR LV NHPD2

As today's market needs for more efficient electrical power conversion designs grow, so do the technological advancements from power electronic module manufacturers. The new generation of LV100 package module now boast an increased power dissipation compared to previous generations (SiC transition) . Inverter manufacturers are also looking to minimize foot print in their design by condensing their power conversion designs and running semiconductors at higher switching frequencies. This increased level of optimization in power conversion designs raises a new set of challenges for effective cooling of power modules. The fact of the matter remains that traditional heat sink designs cannot meet these stringent cooling requirements.

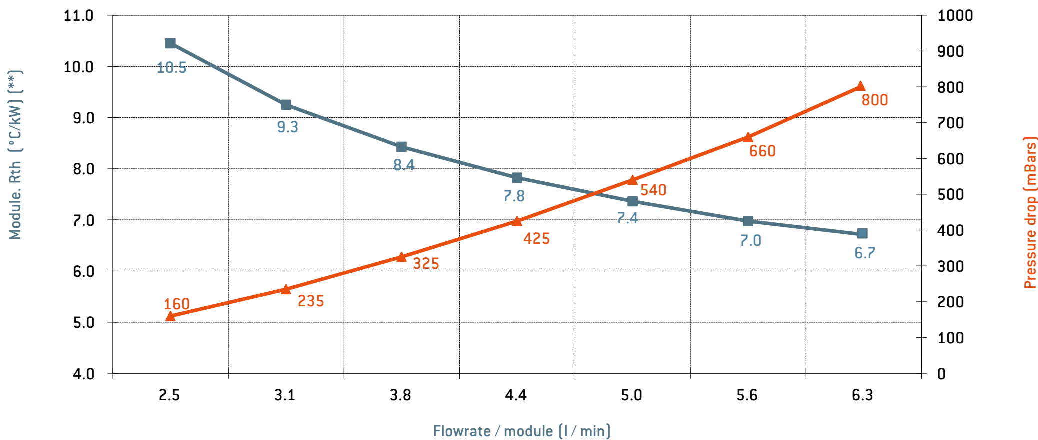
INTRODUCING NEW GENERATION OF MERSEN VACUUM BRAZED COLD PLATE FOR LV100 MODULE

Engineers at Mersen have designed the ECS LV100 MAXX cold plate with efficient cooling pattern adapted to Si or SiC based module.

CUSTOMER BENEFITS:

- **Unsurpassed thermal performance** compared to traditional cold plates.
- **Optimized pressure drop** compared to existing cold plates designs.
- **Unparalleled thermal homogeneity:** chip-to-chip (neglectable) and module-to-module on a multi-module cooling plate.
- **Compact design** as there will be no minimum clearance distance between modules: designers can mount modules closer to each other to reduce overall inverter footprint.
- **Modular solution** that covers all designs. Mersen is able to provide. coldplates, regardless of the number of modules on the cold plate.
- **Cost competitive** compared to other efficient design solutions.

LV100 MODULE RTH & PRESSURE DROP FOR COOLING CIRCUIT ONLY(*)



(*) without pressure drop of Liquid inlet / outlet of a cold plate / connectors
(**) thermal resistance based on module heat source specificity: power applied on 80*80 mm and based on DI water 50°C

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