

# TRACTION

# TR

## For all kind of railways applications Air / Water-Cooled



INGETEAM presents a new development to answer railways operators' challenges: an standardized all-purpose converter module that suits all kind of railways applications (750Vdc 1,500 Vdc and 3,000 Vdc) for new rolling stock or modernizations.

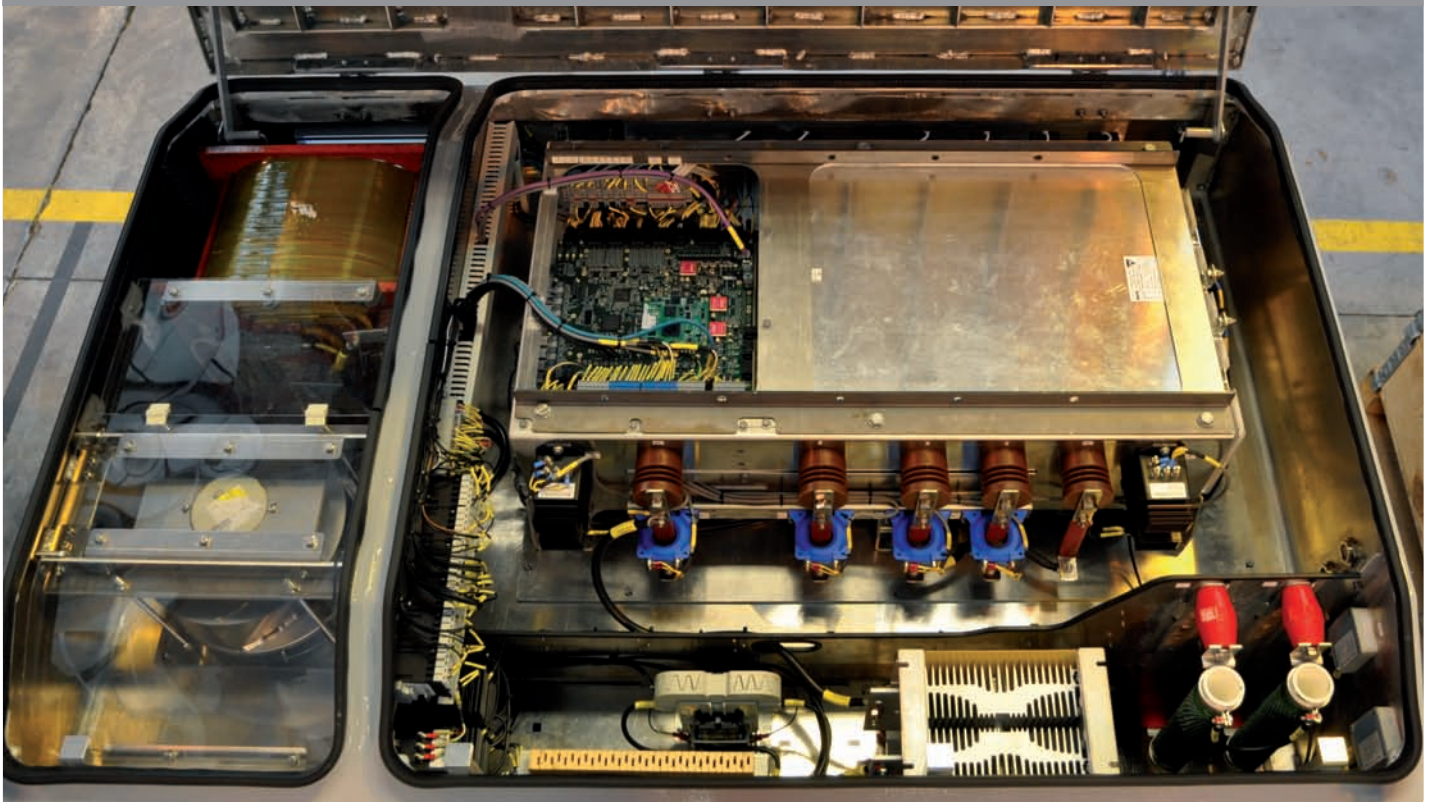
The concept has been based on INGETEAM experience on design and production of traction converters with a high degree of modularity and standardization.

The IGBT – based converter modules, are suitable for AC motor drives, DC choppers and also for auxiliary applications and can be fitted into the roof or underframe.

Each converter module integrates an ELECTRA control unit, in-house developed for railways applications by INGETEAM. ELECTRA adds new functions to traditional CPUs such as preventive maintenance, self-diagnosis and thermal analysis of semi-conductors.

The mechanical frame of this equipment has been designed to optimize weight and space, always keeping cost-effectiveness in mind.

The maintenance activities are based on Plug&Play concept, without need of sophisticated tools, allowing to minimize maintenance costs and the time of such activities.



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# Ingeteam

Power diagram

