



SPEEDELIAS THE VERY HIGH SPEED PLATFORM

THE CHALLENGE

In a market environment where very high speed systems are increasingly popular on all continents, operators in various countries throughout the world all have different needs and strategies, and issue different requests. As a result, Alstom is further broadening its portfolio of Very High Speed trains, adding new options that are combined on a third platform: a new very high-speed, high-capacity, single-level, fully interoperable train designed for UIC-compliant and broader gauges (as used in Nordic Countries, Russia, China, etc.).

THE CONCEPT

Alstom's new platform is designed to be TSI-compliant and to run seamlessly across borders. It is equipped with 6 pantographs (3 redundant pantographs) of different voltages (1,500 volts DC; 3,000 volts DC; 15,000 volts AC; 25,000 volts AC). Ten different signalling systems and an "integrated" driver's desk can be installed on-board.

The platform draws on sub-systems and components that have been tried and tested on the latest generations of Alstom's very high speed trains. The new platform therefore includes traction equipment which uses integrated IGBT technology, currently in operation on TGV Duplex, TGV and Pendolino trains, providing an outstanding power/mass ratio. Its control and monitoring technology is based on Alstom's proven TCMS (Train Control and Monitoring System) and ETCS (European Train Control System) systems.

The braking systems integrate a combination of mechanical braking, electric braking (rheostatic and regenerative) and electromagnetic braking. The traction equipment has been designed with a high degree of redundancy, with 50% of the wheel sets being motorised. The motor bogies are fitted with two self-ventilated traction motors.

The new platform is able to carry approximately 600 sitting passengers (UIC gauge) in maximum comfort, at commercial speeds of up to 360 kph.

ADVANTAGES

TRAINSET TYPE : Non-articulated train

COMFORT: equipped with a redundant air conditioning system, acoustic insulation, ergonomic solutions for seats and all the passenger areas.

SAFETY: TSI-compliant crash energy absorption, smoke and fire protection that meets the most recent national standards.

TRACTION PERFORMANCE: 8 traction converters with 16 traction motors in 8 powered bogies, delivering a total of 10 MW for a commercial speed of 360 kph.

INTERIOR MODULARITY: high degree of modularity so that each operator may customise their product.

MAINTENANCE: integrated maintenance systems, in-service maintenance equipment and the "Traintracer" diagnostics system for optimised maintenance cycles.

ECODESIGNED: use of environmentally-friendly materials that are easily recyclable and optimised energy consumption..

INTEROPERABILITY: adapted for use with 1,500 volt DC, 3,000 volt DC, 15,000 volt AC and 25,000 volt AC systems and with 10 different signalling systems.