



Collecting power to drive your innovation



Very High Speed Pantograph

Electronically controlled pantograph



The first panto with web based real-time monitoring solution

Exclusively designed and service proven for commercial speed up to 450 km/h and multi-network operation vehicles.

Less wear and tear of contact wire and pantograph carbon strip thanks to high precision of pantograph setting by electronics and proportional valves.

- Aerodynamic shape of pantograph
- Electro-pneumatic control unit for electronic dynamic control of contact force
- Ethernet communication protocol with train TCMS
- Web base data exchange option
- Worldwide service proven and reliable solution with configurable software

CUSTOMER BENEFITS:



- + Eliminate airfoils and reduce line test duration by 30 - 50%
- + Reduces failures through remote monitoring
- + Less failures due to excess or insufficient contact pressure
- + Computer simulations for interaction with OHL to select best design in very beginning phase of tender or project

Prototype



Ready to quote



Ready to produce



In production



Designed for interoperability service according to TSI Standard

- Upper pantograph structure specifically shaped for enhanced aerodynamic behaviour
- Wide range of collector heads with single strip or double strip composition to reflect national standards and transmitted current.
- Successfully approved within World High Speed Record in France in 2007 – 574,8 km/h.
- Newly available in high reach extension up to 3,6 m.

Dynamic control of the contact force consists of

- Service-proven algorithm
- High availability of the system (back up mode)
- Possible control of one or two high speed pantographs in the same time

References:

- AMTRAK, High speed train ALSTOM, US
- 350 km/h STANDARD EMU CRRC, China
- RGV 2N2, High speed train ALSTOM, France
- KTX-II high speed train Hyundai Rotem, South Korea
- ICx and ICE 4 high speed train SIEMENS, Germany
- CRH1 ZEFIRO high speed train BOMBARDIER, China

Compliant with EN50206-1, EN50155 and EN50121

VHS panto data	
Maximum speed with EPCU	up to 450 km/h commercial speed versus 250 km/h without EPCU
Pantograph extension	2600 mm and 3600 mm
Current	up to 2500 A (DC)
Nominal voltage	25 kV AC/15 kV AC/ 3 kV DC/ 1,5 kV DC
Temperature range	-40°C to +50°C
Weight	From 120 kg without insulators
Pneumatic control unit	Piloted contact pressure by control unit and proportional valves
Line test duration	1-2 weeks against 3-4 weeks using the airfoils

To discover everything VHS pantos can do, contact

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