

Trailing and Motor Bogies for the PROTOS® Regional Train (EMU / DMU)



The PROTOS® trailing bogie

Factsheet 4.00028

Detail Information

Project details

- Customer: FTD Fahrzeugtechnik Dessau AG
- Operator: Connexion Netherlands
- Time frame:
Development / production: '05 – '06
Revenue service: starting Sept. 07

Technical data of the bogies

- Track gauge: 1435 mm
- Axle distance: 2500 mm
- Wheel diameter (new): 760 mm
- Axle load (max): 18.5 t
- Maximum speed: 160 km/h
- Top of transverse beam: 810 mm
- Mass of trailing bogie: 6.9t
- Mass of motor bogie: 10.2t

Modular design of the bogies

Bogie frames of trailing bogie and of motor bogie are basically identical, save specific supports for traction system installation and the installation of the magnetic track brake as well as the head beam for the signalling equipment and the motor ventilation.

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Customer Requirement

FTD Fahrzeugtechnik Dessau AG commissioned PROSE with the development of the trailing and motor bogies for the modular regional train PROTOS®. The development engineers faced a number of challenges, the major ones being the installation of the traction motor ventilation



Perspective view of the PROTOS® motor bogie

in the bogie itself and the very low interface between carbody and bogie.

Realisation

The PROSE team developed and engineered the bogies in a very short time and in close collaboration with FTD Fahrzeugtechnik Dessau AG. The necessary expertise for this type of work, namely engineering and design, performance of layout calculations, structural analysis and running dynamic analysis as well as project management and management of the suppliers is readily available in house. FTD Fahrzeugtechnik Dessau AG produced the manufacturing drawings.

Customer Advantage

- minimum time to market due to short development times (8 month only)
- low cost for coordination within the project and with the customer, minimum management attention
- low development risks due to a slim organisation, high professional competence and the long experience in international and intercultural teams of the PROSE engineers; knowledge off the specific country requirements
- low risk in the supply of long term components due to the good knowledge of PROSE of the market
- simple integration of the development process with the customer (e.g. conception and basic design with PROSE / detail manufacturing design with the customer)
- low manufacturing cost due to modular concept of the bogies
- advantageous profit / cost relation



Low floor vehicle PROTOS® for Connexion Netherlands by FTD Fahrzeugtechnik Dessau AG

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