



DOSTO TÅG I BERGSLAGEN

AB Transitio, Sweden

In summer 2021, AB Transitio purchased on behalf of Tåg i Bergslagen 7 four-car, double-decker electrical multiple units of the DOSTO model from Stadler. In Sweden, the trains have been given the type designation ER1. Boasting a top speed of 200 km/h, the trains have been specially adapted for operation in Swedish winters. They are designed to run at minus 40 degrees and with a depth of 800 mm of snow on the track. Some examples of the design solutions incorporated to withstand the extreme weather conditions are inter-carriage connections with twin bellows, large snow ploughs, efficient floor and wall heating systems and specially adapted insulation. The underframes of the trains have been designed to minimize freezing. Each train provides comfortable seating for 333 passengers in adjustable seats with individual reading lights and dual power outlets, as well as seating for 24 passengers in tip-up seats. There is storage space to accommodate cabin size luggage under the seats.

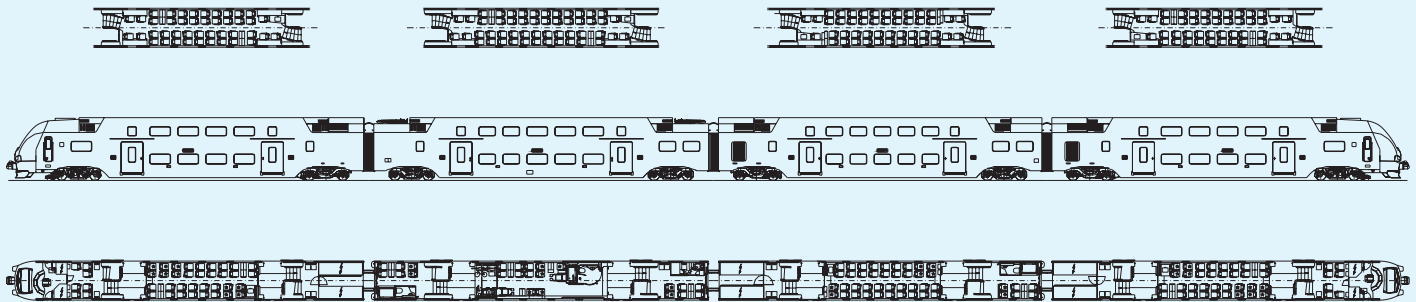
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Technical features

Technology

- The cars are made of aluminum profiles. This makes the trains light and environmentally friendly, while meeting all the applicable requirements, including the requirements for crashworthiness
- It is possible to operate up to four trains coupled together
- The trains have an extremely powerful electric brake which returns a large part of the energy used to the electrical system for braking

Comfort

- Light and airy interior
- Generously sized entrance areas and wide staircases with a boarding area for optimum passenger flow
- Sound damping and non-slip flooring throughout the train
- Indirect lighting throughout the train and reading lights at each seat
- The carriages are pressure-tight, which means that discomfort caused by sudden pressure variations when travelling through tunnels is eliminated
- Air conditioning in passenger compartments and driver's cabs

Personnel

- The driver's desk has not only been designed according to the applicable requirements, but has also been designed in line with the latest developments in ergonomics, including cognitive ergonomics
- The driver's cabs have two side doors and fixed steps for driver safety
- The driver's cabs are pressurized
- The information system is state-of-the-art with loudspeakers and information screens

Reliability/Availability/Maintainability/Safety

- The propulsion equipment is designed with built in redundancy, with three fully separated traction units with dry-type power transformers and water-cooled IGBT converters
- All vital systems have redundancy to ensure that disturbances resulting from technical failures are avoided as far as possible

Vehicle data

Customer	AB Transitio
Track width	1435 mm
Overhead line power	15 kV AC
Axle arrangement	2'Bo' + 2'2' + Bo'2' + Bo'2'
Number of vehicles	7
Commissioning	2022/2023
Seats (incl. tip-up seats)	333 (357)
Floor height (above rail level)	
Entrance height	605 mm
Low-floor	450 mm
High-floor	2597 mm
External door width	1300 mm
Ceiling height	2000 mm
Length over coupler	104 810 mm
Vehicle width	2920 mm
Vehicle height	4700 mm
Bogie wheelbase	2500 mm
Wheel diameter	920 mm (new)/850 mm (worn)
Maximum output	4500 kW
Tractive force	240 kN
Acceleration	0.95 m/s ²
Maximum speed	200 km/h
Exceedance curve	Cat B