DOSTO MÄLARTÅG

AB Transitio, Sweden

Rolling stock operator AB Transitio has acquired on behalf of MÄLAB 33 four-car, double-decker electrical multiple units of the DOSTO model from Stadler. In Sweden, the trains have been given the type designation ER1 and will be delivered in 2019 and 2020. The trains will service the lines Stockholm – Eskilstuna – Örebro, Stockholm – Katrineholm – Hallsberg, Stockholm – Nyköping – Norrköping and Sala – Västerås – Eskilstuna – Norrköping. 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 a depth of 80 cm snow on the track. Some examples of the design solutions incorporated to handle this 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 can accommodate 333 passengers, who can sit comfortably in adjustable seats fitted with individual reading lights and dual power outlets. There is storage space to suit normal sized trolley suitcases under the seats. To increase comfort, the new trains have been built 12 cm wider and 10 cm higher than the DOSTO trains that were previously delivered.

www.stadlerrail.com

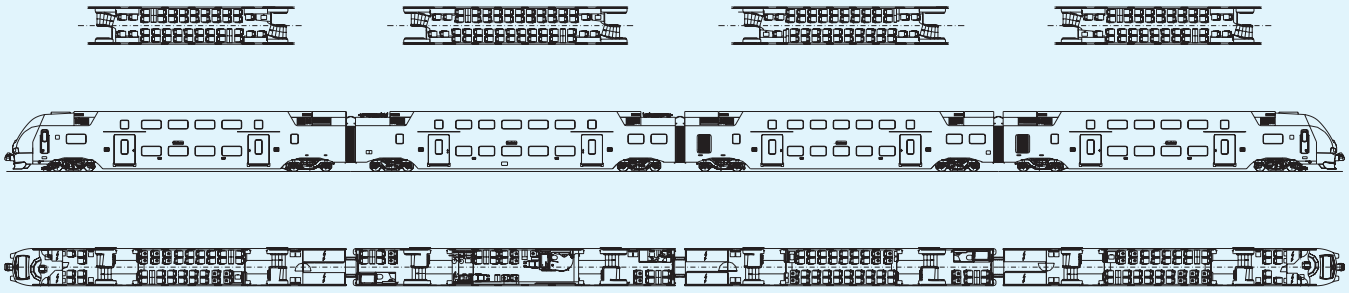
Stadler Rail Group

Ernst-Stadler-Strasse 1
CH-9565 Bussnang
Phone +41 71 626 21 20
stadler.rail@stadlerrail.com

Stadler Altenrhein AG

Industrie- und Gewerbepark
CH-9423 Altenrhein
Phone +41 58 595 50 00
stadler.altenrhein@stadlerrail.com

STADLER



Technical features

Technology

- The cars are made of aluminium profiles. This makes the trains light and environmentally friendly, while meeting all the applicable requirements, including the requirements for crash resistance
- 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 matting throughout the train.
- Indirect general lighting throughout the train and reading lamps 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, it has also been designed in line with the latest findings 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

- Redundant propulsion equipment with three fully separated traction units with dry-type power transformers and water-cooled IGBT converters
- All vital systems are at least duplicated to ensure that disturbances resulting from technical failures are avoided as far as possible

Vehicle data

Track width	1435 mm
Overhead line power	15 kV AC
Axle arrangement	2' Bo' + 2' 2' + Bo' 2' + Bo'2
Seats (incl. tip-up seats)	333 (357)
Floor height above the top of rail	
Entrance height	605 mm
Low-floor	450 mm
High-floor	2597 mm
Width external doors	1300 mm
Ceiling height	2000 mm
Length over coupler	104810 mm
Vehicle width	2920 mm
Vehicle height	4700 mm
Bogie wheelbase	2500 mm
Wheel diameter, new/worn wheels	920 mm
Maximum output	4500 kW
Tractive force	240 kN (up to 67 km/h)
Acceleration	0.95 m/s² (up to 67 km/h) giving 0–100 in 33 seconds
Maximum speed	200 km/h
Exceedance curve	Cat B