



METRO GLASGOW EMU

Strathclyde Partnership for Transport (SPT), UK

In March 2016, SPT ordered 17 new metro trains from Stadler as part of a programme to modernise the underground system. Glasgow Subway is the third-oldest underground system in the world and started commercial operations in 1896. Even though the Victorian tunnel system required a very compact vehicle design, Stadler has succeeded in building a vehicle that meets current customer requirements. Optimum use has been made of the space available; there is also space for wheelchairs. The interior is open and welcoming. The newly developed bogie with pneumatic suspension contributes to a smoother ride. The vehicles operate fully automatically, without drivers. Power is supplied via a third rail at 600 V DC. The vehicles are designed for a maximum running speed of 58 km/h.

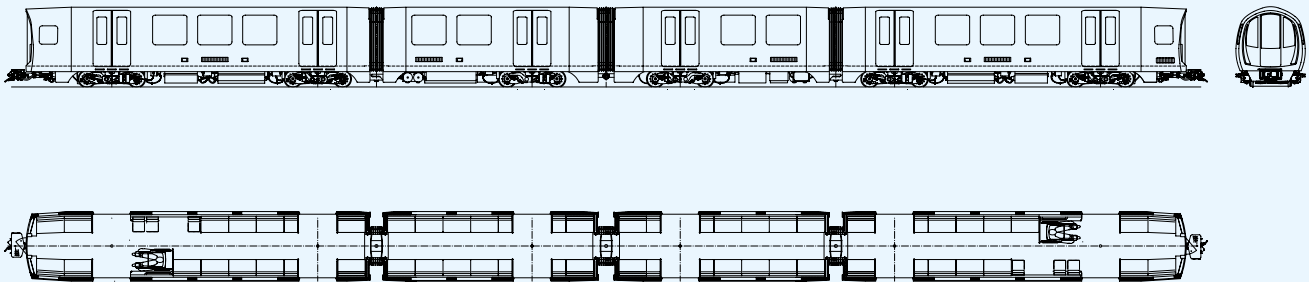
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Technical features

Technology

- Car body made of extruded aluminium profiles
- Motor bogies and trailer bogies with pneumatic suspension
- Modern vehicle control system
- Two half-trains with identical drive equipment
- Automatic front coupler for degraded operation

Comfort

- Bright, passenger-friendly interior with scope for individual design
- Continuous floor height throughout entire passenger compartment
- Spacious multi-function area
- Six entrance doors on each side for rapid passenger flow
- Modern passenger information system and video surveillance
- Powerful ventilation system

Personnel

- Equipped for fully automatic operation
- Temporary driver's cab for migration phase
- Auxiliary desk for shunting and degraded operation

Reliability/Availability/Maintainability/Safety

- Redundant drive equipment with water-cooled IGBT power converters
- Ergonomic vehicle diagnostics with remote reading option to support status-based maintenance
- 16 of 17 units in operation during peak hours

Vehicle data

Customer	Strathclyde Partnership for Transport (SPT)
Area serviced	Glasgow, UK
Gauge	1220 mm
Supply voltage	600 V DC
Axle arrangement	Bo'Bo'+ 2'+ 2'+ Bo'Bo'
Number of vehicles	17
Seats (second class only)	104
Tip-up seats	6
Standing capacity (6 pers./m²)	200
Floor height	695 mm
Entrance width	1200 mm
Axial thrust	800 kN
Overall length	39 510 mm
Vehicle width	2309 mm
Vehicle height	2642 mm
Bogie wheelbase	
Motor bogie	1650 mm
Trailer bogie	1650 mm
Driving wheel diameter, new	540 mm
Carrying wheel diameter, new	540 mm
Continuous output at wheel	520 kW
Max. output at wheel	820 kW
Starting tractive effort (up to 23 km/h)	130 kN
Starting acceleration, gross	1,3 m/s ²
Maximum speed	58 km/h