



DR19, DIESEL-ELECTRIC CENTRAL-CAB LOCOMOTIVE

VR Group Ltd, Finland

Finland's national railway, VR Group, selected Stadler to supply sixty diesel-electric locomotives with central cab to improve the operational efficiency in marshalling yards, freight terminals and on non-electrified lines which make up 45% of the Finnish network. The multipurpose locomotives can be used as shunting locomotive and for hauling freight and passenger trains up to 120km/h. The contract includes an option for up to 100 additional locomotives.

The 18m long, 88 tonne locomotives have two 950 kW engines complying with EU Stage V emission regulations. They have a maximum tractive effort of 346 kN. They are more environmentally friendly and reliable than current fleet. Tailored to meet the demands of Finland's extreme weather conditions, they can withstand the effects of the snow and ice and operate at temperatures as low as -40°C. The top-of-the-range locomotives are fitted with radio remote control equipment and ETCS Baseline 3 with a local STM ATP safety system.

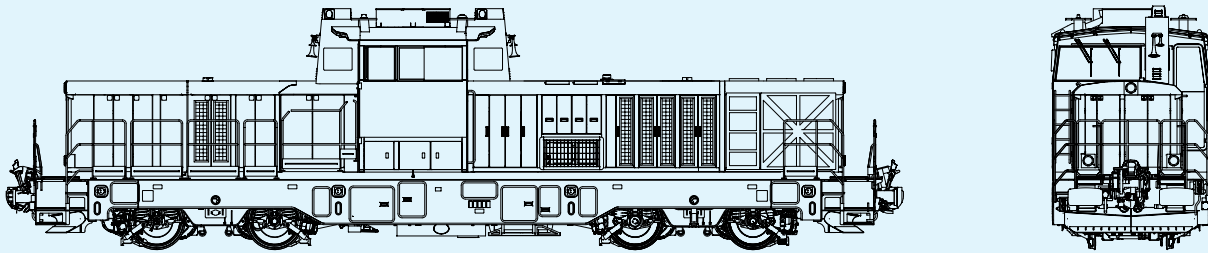
www.stadlerail.com

Stadler Rail Group

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

Stadler Rail Valencia S.A.

Pol. Ind. Mediterráneo. Mitjera 6
E-46550 Albuixech (Valencia)
Phone +34 96 141 50 00
stadler.valencia@stadlerail.com



Technical features

Technology

- Multipurpose locomotive for shunting and transport services
- Efficient AC traction system with IGBT, one inverter per axle
- Very high starting and continuous tractive effort
- High performance electric brake with energy recovery on locomotive auxiliaries
- Pneumatic brakes; modular concept with ep/EBO brake for passenger operation
- Designed for multiple unit operation, up to three locomotives
- Automatic coupler
- Coaches communication

Personnel

- Single central cab ergonomically designed with HVAC system
- Two totally equipped driver's desk: right side
- Two doors giving direct access to longitudinal corridors
- Doors control
- Fast desk swap
- Optimal visibility from driver's seat

Reliability / Availability / Maintainability / Safety

- Reduced operation/maintenance costs
- EC 26/2004 Stage V Compliant
- TSI 2014 and Finland's national normative compliant
- Protection against collision with animals. Impact detection
- Winterization Package including snow plow
- Latest generation of vehicle control system including remote diagnosis features and radio remote control
- ETCS Baseline 3, with local STM ATP safety system
- High degree of redundancy

Vehicle data

Customer	VR Group
Region	Finland
Number of vehicles	60
Commissioning	2022
Locomotive type	Diesel-electric
Track gauge	1524 mm
Axle arrangement	Bo'Bo'
Diesel engine	2 x CAT C32, Stage V
Diesel power engine	2 x 950 kW
Transmission	AC/AC
Starting tractive effort	346 kN
Continuous tractive effort	277 kN
Weight	88 tons
Fuel tank	3000 l
Maximum speed	120 km/h
Minimum radio curve	80 m
Brake system	Mechanic: pneumatic Dynamic: regenerative / rheostatic
Suspension	Primary: helical coil spring and triangular guiding rod Secondary: rubber metal