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Desiro RUS Sochi

Russian Railways (RZD)

Siemens is to deliver 54 regional trains to Russian Railways (RZD), with the trains due to enter service in autumn 2013. Orders were placed for 38 of the 54 trains back in December 2009. In September 2010 the contract for the remaining 16 units was signed, which are to be partly built in Russia.

In terms of technology, the Desiro® RUS for Sochi is based on the reliable Desiro ML vehicle platform. The vehicles have been further developed to meet the needs of the Russian market: they have been designed to withstand temperatures as low as $-40\text{ }^{\circ}\text{C}$ and have been given a car body which is 3,480 wide, a floor 1,400 mm high and a bogie with a track gauge of 1,520 mm.

The Desiro RUS provides a solution for Russian mass transit systems and regional lines. Thanks to the flexibility of the interior partitioning adopted from the Desiro ML, the train is in a position to deal with the special demands which will be placed on it during service for the Olympic Games in 2014. When serving Sochi on the Black Sea, the trains must be able to handle gradients of 4% to reach the Winter Olympics venues up in the mountains.

Technical Data

Wheel arrangement	Bo'Bo'+2'2'+2'2'+2'2'+Bo'Bo' (5-car)
Power supply	DC 3 kV and AC 25 kV / 50 Hz
Top speed	160 km/h
Traction power rating	1,520 mm
Track gauge	1,520 mm
Vehicle length	126,462 mm
Width	3,480 mm
Floor height	1,400 mm
Mass	270 t
Seats	443
Temperature range	$-40\text{ }^{\circ}\text{C}$... $+40\text{ }^{\circ}\text{C}$
Crash requirements	Based on EN 15227



Technology and aesthetics

The new Desiro RUS trainsets are characterized by their modern and attractive design and uniform architecture. Modern technology and sheer elegance are combined with technological aesthetics. With its all-round visibility and light colors, the interior design offers comfortable surroundings for passengers, personnel and especially for persons with restricted mobility.

The efficient and reliable heating and ventilation system ensures pleasant ambient conditions and allows fast temperature control. A modern passenger information system provides useful information in Russian and other languages whenever it is required.

The trains have multifunctional areas with sufficient space for 4 wheelchairs as well as two modern, disabled-friendly restrooms and space for bulky baggage. A ramp ensures trouble-free boarding.

The Russian BLOK train control system has been integrated into the train's own system.

Flexibility

The 2-system design – 3 kV DC and 25 kV AC – means that uninterrupted journeys are possible on routes with mixed power systems (e.g. Adler – Alpika service). The interior has been designed with flexibility in mind. The capacity can be increased thanks to the train's double-running capability. Thanks to this high level of flexibility, the Desiro RUS can be adapted to make it ideal for airport services for the 2014 Olympics.

Safety

The car bodies are made of extruded aluminum profiles and feature air suspension, giving a high level of comfort at any speed. Energy absorbing and crash elements protect passengers and personnel in the unlikely event of an unforeseen incident.

Energy efficiency

The lightweight construction of the car bodies helps reduce power consumption. This effect is also supported by an autopilot system as well as by an intelligent vehicle and traction control system, which feeds braking energy from the regenerative braking system back into the power grid.

High performance

2,550 kW of traction power are sufficient to ensure fast acceleration. The bogies with a track gauge of 1,520 mm were developed especially for the Russian market and originate from the proven SF 6000 family. They have a second air spring for added passenger comfort.

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The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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