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Desiro HC Franconia-South Thuringia

Electric double-deck multiple units for Thuringia and Bavaria

DB Regio Bayern has placed an order with Siemens Mobility to deliver 26 regional multi-unit trains. The vehicles will be operated in the Franconia-South Thuringia network. A total of 18 four-part and 8 six-part Desiro HC electric double-deck multiple units will be delivered. Passenger operation is expected to begin as of December 2023 (4-part trainsets Dec. 2023/ 6-part trainsets June 2024).

The trains are intended for use on the Nuremberg – Bamberg – Coburg – Erfurt/Sonneberg, Nuremberg – Bamberg – Würzburg, Nuremberg – Bamberg – Lichtenfels – Saalfeld, and Nuremberg – Bamberg – Lichtenfels – Coburg lines.

Desiro HC

Desiro HC is designed as a four- or six-part electric multiple unit. The Nuremberg – Erfurt/Sonneberg link is via the VDE 8 high-speed line, for which these trains are equipped with the latest ETCS train control technology. With a top speed of 190 kilometers per hour, these routes provide some of the fastest regional direct train service in Germany. The vehicles are fit for oncoming traffic of up to 300 km/h. The combination of single-deck tractive units and double-deck trailer cars allows higher passenger capacities, while the arrangement of large components on the roof of the end cars facilitates maintenance and helps create more usable space inside the cars.

By making full use of the vehicle gauge profile (EN15273-2, line DE2), more head and shoulder room is available for passengers in the upper deck. A multipurpose zone is provided at each entrance.

Interior design

The interior construction and attractive design, including pleasant lighting and appealing, timeless color schemes, give the train a feeling of spaciousness, comfort, and safety.

Energy savings

A range of technical equipment helps drivers save energy.

Desiro HC 4-part



Desiro HC 6-part



Technical data	4-part	6-part
Wheel arrangement	Bo'Bo'+2'2'+2'2'+Bo'Bo'	Bo'Bo'+2'2'+2'2'+2'2'+2'2'+Bo'Bo'
Track gauge	1,435 mm	
Max. speed	160 km/h	190 km/h
Traction power	4,000 kW	
Starting acceleration	Up to 1.1 m/s ²	
Power supply	15 kV AC / 16.7 Hz	
Seats	380	634
Length of train	105,252 mm	157,252 mm
Access height	800 mm (end car) and 730 mm (middle car)	
Width	2,820 mm	
Car length	26,226 mm (end car) and 25,200 mm (middle cars)	
Weight	199 t	287 t
Crashworthiness	TSI and EN 15227-compliant	
Operating temperature	-25° C to +45° C (class T3 as per EN 50125-1)	

Traction system

The Desiro HC Franconia-South Thuringia has an efficient traction system with tractive power of up to 4,000 kW. With eight driven axles, this power can be transmitted even with a low friction coefficient, thus ensuring good dynamic performance.

Vehicle communication infrastructure

The vehicle's communication infrastructure systems, Train Control Network (TCN) and Train Operator Network (TON), are Ethernet-based and form the basis for a service-oriented architecture (SOA) and communication. Our customers benefit from the Ethernet-based vehicle infrastructure in the form of state-of-the-art technology, while passengers enjoy the latest high-resolution CCTV and innovative infotainment systems.

Vehicle details

- High-quality, timeless elegant atmosphere in the interior fittings
- WiFi and outlets throughout the train
- Double traction in the four-part trainset version
- One standard restroom in all middle cars
- One universal restroom in each lead car
- Barrier-free access in the lead cars for passengers with wheelchairs or strollers
- Space for up to 60 bicycles in the six-part trainset
- LED lighting throughout the vehicle
- Energy-optimized air-conditioning control based on passenger numbers
- Air-suspended motor and trailer bogies from the SF 100 and SF 500 families
- Innovative infotainment system
- High-resolution CCTV cameras
- Ethernet-based Train Control and Train Operator Networks
- Optimized cellular reception for passengers, thanks to a window coating patented by Siemens
- Future-proof, thanks to readiness for train protection according to the European standard (ETCS)
- Adapted to the latest acoustic requirements according to VDV 1541

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