

MODERN ROLLING STOCK



To meet the demands of increasing passenger traffic, decrease travel times, and reduce ticket prices, FPC purchases carriages with advanced technical features and improved interior design. All new rolling stock is equipped with environmentally friendly toilet facilities (bio toilets) and air conditioning units.

Double-decker carriages

The Company's inventory fleet comprises 362 double-decker carriages.

The fundamental advantage of a double-decker carriage is its increased passenger capacity allowing to carry more passengers on busy routes, especially to southern resorts.

Double-decker carriages are as comfortable and equipped as modern conventional carriages, and even surpass them in many other respects. Depending on the class, double-decker carriages have double berth or four-berth compartments.

Air conditioning and heating units in each carriage help constantly maintain a comfortable microclimate. Environmentally friendly toilet

facilities with three cabins allow passengers to use toilets at stops and in resort areas. Slackless couplings and pressure-proof gangways helped reduce noise and vibration in carriages and increase the safety of passengers when moving from carriage to carriage.

The demands of disabled persons have also been considered: one of the carriages in each train (administrative carriage) is equipped with special lifts for boarding wheelchair users from low platforms and has a special compartment and toilet.

In 2015, the Company additionally purchased 15 double-decker carriages with seats: ten with standard and five with improved interior.

A double-decker carriage with seats was designed in Russia using the latest technology, equipment, and materials, as well as advanced passenger carriage building expertise and know-how of TVZ. One of the key features of the new rolling stock is the change of the side wall shape and curved glass windows used for the first time in the history of Russian carriage building.

The carriage is equipped with new modern rigid slackless couplings and gangways which ensure safe and convenient move from carriage to carriage, protection of passengers and staff in gangways from noise, precipitation, dust, sudden temperature and pressure drops. For visually impaired passengers, all signage in carriages is duplicated in Braille.

Double-decker carriages with seats are operated on the Moscow-Voronezh route.



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RIC carriages

From 2012 to 2015, the Company purchased 200 RIC carriages to replace rolling stock on international routes.

The RIC sleeping carriage, model 61-4476 (WLABmz), is intended for international passenger services in the UIC countries (1,435 mm gauge), the European part of the Russian Federation, the CIS, and Baltic countries (1,520 mm gauge).

The carriage complies with mandatory standards of the Russian Federation (GOST, NB ZhT) and the European Community (TSI, EN, UIC) in terms of conception, as well as exterior and interior design.

Operation between railway networks with different track gauges is carried out by replacing bogies at gauge-changers using existing infrastructure facilities (gauge changing station at Brest).

The maximum operating speed is 200 km/h on 1,435 mm gauge tracks and 160 km/h on 1,520 mm gauge tracks.

Each WLABmz carriage has eight passenger compartments (each with four berths), one service compartment, one carriage attendant compartment, a standard toilet, and a toilet with shower. Entrance doors are located at the end of the carriage on the side of the service compartment. HÜBNER GmbH semi-sealed gangways are installed at both end sides allowing passengers and service staff to move between carriages.

Auxiliary elements (folding ramp, retractable steps, handrails) provide convenient and safe entry into the carriage from platforms with a height of 550 mm or 760 mm for 1,435 mm gauge, and also from platforms with a height of 200 mm or 1,100 mm for 1,520 mm gauge.

Sliding doors separate carriage interior at both ends from vestibules. A similar door is installed between the sleeping compartments area and toilets.

The compartments have four berths that can be used as four conventional seats with headrests during the daytime and a folding table under the window with an integrated sink with hot and cold water, as well as a waste bin. The space under the lower berths can be used for storing luggage.

Each sleeping compartment has two power sockets to charge phones or laptops, a shelf for storing small items, bedside reading lights, hooks for clothes, a temperature control device of the climate system and an information system. The compartments are equipped with hinged doors.

Toilets are equipped with environmentally friendly closed loop vacuum facilities, as well as a washbasin with cold and hot water supply, a mirror, and an automatic soap dispenser. One of the toilets is equipped with a shower.

The Company obtained permits for operating new RIC carriages in 16 European countries.





Talgo trains

The Company has purchased 140 Talgo carriages since 2015.

The maximum speed of the trains in service is 200 km/h.

Due to their original design and technology solutions, passenger carriages by Patentes Talgo S.L. have several specific technical features, which significantly increase the average speed of the rolling stock on the existing track infrastructure, including:

- natural (passive) tilting system
- no wheelsets – trucks with independently rotating wheels
- radial positioning of trucks in curves;
- variable-gauge system
- independent power supply
- articulated flexible connection (coupling).



The natural tilting system allows to increase the speed of the train on curved tracks, while reducing the negative impact of unbalanced lateral force on passenger comfort.

The system for radial positioning of trucks in curves allows to increase the service life of running gear while reducing rail wear.

The use of air suspension in conjunction with the natural tilting system and the system for radial positioning of trucks in curves provides soft riding and, thereby, significantly improves the passenger comfort.

To continuously diagnose the most safety-critical systems, the train is equipped with an automatic monitoring system allowing to monitor the brake system parameters (including antiskid device), and the operation of the climate system, electrical equipment, safety systems, fire alarm, fire extinguishing system, etc.

Currently, Talgo trains run on the Moscow–Nizhny Novgorod and Moscow–Berlin routes.

The Moscow–Berlin train does not need bogie exchange to operate on the European track gauge, which allows to reduce travel time significantly.

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