

# The new 561: the strong type

Europeans like to be prepared for anything that comes their way. They are increasingly buying large size sport utility vehicles (SUVs). This trend also has consequences for logistics providers in the automotive industry, who need to adapt their means of transport to the new vehicles.

DB Cargo has now developed a wagon that can transport heavy cars.

**E**urope is driving SUVs: market research institute Jato reports that 5.51 million of the big cars were sold in Europe in 2017, up nearly 20% from the previous year. These vehicles are selling so well that car manufacturers are switching their production. At the same time, logistics companies are adjusting their supply chains, since transport of the large and

heavy vehicles (possibly even with alternative drive systems) alters existing systems. DB Cargo Logistics is also adjusting to the trend and is now adapting its freight wagon fleet to the needs of its customers. “Today, we continually run into limits when it comes to efficiently transporting SUVs”, says Markus Fischer, Head of the Sales & Operations Centre Finished Vehicles at DB Cargo Logistics.

“The wider and heavier vehicles are a drag on the capacity utilisation of our wagons, which pushes up the unit costs of transport.” DB has therefore developed a new type of wagon for finished vehicles that uniquely combines the advantages of existing fleets with innovative new elements: the Laaeffrs 561.

## Stringent technical requirements

For the construction of the wagon, DB Cargo Logistics relied on tried-and-tested partners that were familiar with the requirements of auto transporters and able to bring excellent industry expertise to the table. After all, developing the new model 561 was a very tough nut to crack from a technical perspective. New SUV models had to be transported as efficiently as possible. Having an especially low bottom loading level was of prime importance, because cars that are roughly two metres tall can barely be loaded onto existing double-decker wagons. To avoid running up against track clearance limits, the maximum possible height and width of the load on the transport route had to be factored into the development of the wagon. Given the increasing weight of the vehicles, freight wagons also need to be more stable. “We modified techniques from



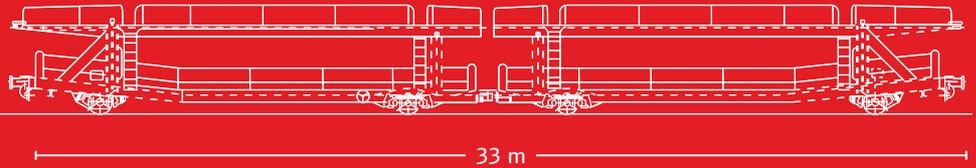
— The wagon is 33 m long and equipped with telematics and a flexible load securing system.

## TECHNICAL DATA

<b>Total length:</b>	33,000 mm
<b>Upper load length:</b>	32,550 mm
<b>Upper load width:</b>	2,794 mm
<b>Lower load length:</b>	32,080 mm
<b>Lower load width:</b>	2,950 mm
<b>Max. car height</b>	
<b>Double-decker:</b>	roughly 1,990 mm
<b>Empty weight:</b>	36.5 t
<b>Max. payload:</b>	35.5 t

**LAAEFFRS 561**

The wagon is equipped with telematics. The flexible load securing system enables a wide variety of transport and loading options.



existing freight wagons in order to combine all of these aspects regarding the structure of the wagon and the high level of stability”, explains Tobias Sander, Project Manager Equipment at DB Cargo Logistics. For instance, the 561 model has flexible upper loading levels for vehicles of various heights. Small wheelsets reduce the height of the overall wagon. Other improvements that were made include flexible elements on the lower loading level, a special geometry of the upper loading level and the loading surface, which is two metres longer than that of conventional flexible freight wagons.

# 16%

more vehicles can be transported by the open Laaeffrs 561 type wagon.

a new order that the company recently landed. A market leader for large off-road-capable cars and SUVs opened a plant in Slovakia in October 2018 to manufacture two particularly stately members of the SUV class. The company invested several million dollars in the state-of-the-art production site. The plant produces various versions of SUVs, and in the future they will even have a range of drive systems. The vehicles are already larger and heavier as it is, and the electric drive systems will add another couple of hundred kilograms to the weight of the vehicles themselves and therefore their transport weight. Deutsche Bahn applied for the order back in 2016, and was awarded the rail transport contract after a year of bid processing.

DB Cargo Logistics will now transport the vehicles to the exporting port of Zeebrugge. “It is rare for new car plants to be built in Europe. It is a wonderful confirmation of our work that we are able to be there from day one to transport new vehicles”, says Markus Fischer.

**Prototypes win over the customer**

DB Cargo Logistics will use the Laaeffrs 561 to transport over 200 vehicles per train to Zeebrugge several times a week. The new wagons will

**FURTHER DEVELOPMENT**

The freight wagon with two load levels is able to transport cars, SUVs and vans throughout Europe. Its special geometry and flexible, adjustable elements makes it perfectly suited for transporting SUVs and vans efficiently even for low clearances. Given the high load limit of 35.5 tonnes, it can also transport vehicles that are particularly heavy.

increase the proportion of the fleet that is able to transport heavier passenger cars. “The additional flexible elements and the load securing systems allow us to transport roughly 16% more vehicles on one train”, says Elisa Glinkowski, Account Manager at the Sales & Operations Centre Finished Vehicles. Soon, other car manufacturers will also be able to appreciate this advantage, as the wagon can be used all over Europe. ●

**Maiden voyages**

It took two years of development time before DB Cargo Logistics was able to present the first prototype in 2018. The first freight wagons will be delivered in April 2019. More than 200 more will follow in the coming months. DB Cargo intends to use the freight wagons for the first time with



Markus Fischer, Head of the Sales & Operations Centre Finished Vehicles, DB Cargo Logistics  
[markus.ma.fischer@deutschebahn.com](mailto:markus.ma.fischer@deutschebahn.com)

Experience technology up close in the outdoor area of the transport logistic trade fair:

**Track  
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→ Map of trade fair, p. 11