Lithuanian manufacturers of vehicle transporters a European leader in the transition to the electric era

Patented vehicle mounting system Adero was developed for transporting electric vehicles that are heavier than regular cars.

Patented electric vehicle mounting system Adero built on Scania's chassis

VILNIUS, LITHUANIA, September 16, 2021 /EINPresswire.com/ -- Electric vehicles are fast becoming the go-to alternative to more conventional means of transportation. And this uptick in interest is clearly evidenced by the stable growth in demand. This also raises certain challenges to carriers, mostly related to the difficulty of transporting vehicles that are heavier than regular cars.

"Modern electric vehicles are wide, low, and can weigh up to 3 tonnes and more. For this reason, transporting them in ordinary vehicle transporters intended for light vehicles is risky due to the potential that there will be too much weight, and costly because it is often impossible to fully load the transporter vehicles," said Rimantas Blažulionis, Director of the vehicle transporter manufacturer Patikima Linija.

> Our partnership with Scania, which includes exchanging technical information and know-how, has given us the Group's official approval to adapts its cab design to our needs."
>
> *Rimantas Blažulionis, Director of Patikima Linija*

Lithuanian manufacturers of vehicle transporters pursue innovation

The Lithuanian company Patikima Linija (in Europe mostly known under the brand Rimo),– one of the four largest manufacturers of vehicle transporters in Europe – has developed a new vehicle transporter model called Adero. The company was actively looking for technology and design solutions that would be attractive

and suitable for the transportation of next-gen vehicles. The company's engineers took on the challenge of increasing carrying capacity, while ensuring driving comfort, cost-effectiveness and sustainability.

Adero is equipped with a lift axle and designed to carry up to 21.5 tonnes of cargo, which is more than any other vehicle transporter currently available on the market. This was achieved by adding no more than 1 tonne of additional weight over its predecessor (the PL7), which means that Adero's carrying capacity has increased without a corresponding increase in fuel consumption. Thanks to its additional axle and modified trailer design, Adero is capable of carrying 5-6 tonnes more cargo than the PL7. Over the period of five years, this could net a carrier some 22,000 euros of extra income, depending on the total number of transported vehicles," said the Director of Patikima Linija, adding that Adero also has a 15% lower carbon footprint than its predecessor.

Rimantas Blažulionis, Director of the vehicle transporter manufacturer Patikima Linija

Darius Snieška, Regional Manager of Scania Lithuania

A patented vehicle mounting system

In developing Adero, the company has created a unique tin sheet platform and a patented vehicle mounting system. Previously, one of the biggest challenges to innovation were the tin sheet elements that were used in the platform's construction. These caused problems, as cracks in the perimeter of the holes drilled into them eventually led to ruptures.

"The platform was developed using a combination of technologies, including laser cutting, press forming, and others. This allowed us to create a shape that minimises the risk of rupture. In the process, we also achieved a three-fold reduction in the diameter of the holes and oriented them in the direction of travel. The holes themselves were designed to match the belt hook and when it is attached to the platform, connects with the holes in a crescent shape, thereby distributing the belt's tensile load over a larger area of the sheets. As a result, the likelihood of ruptures damaging vehicle tires and requiring additional maintenance costs is reduced," Mr. Blažulionis

explained.

In addition, the new design of the holes in terms of their diameter and distance from each other has made for a much studier platform with better traction. As a result, driver's safety is improved and it's also easier to secure the transported vehicles.

Prioritising ergonomics and driving performance

Adero was designed with the safety and comfort of drivers in mind. "It's no secret that companies often face shortages of drivers of vehicle transporters, mostly due to harsh working conditions and high skill requirements. For this reason, we wanted Adero to be a solution beneficial to businesses in the long-term and comfortable to drivers in routine situations. Since the driver is required to be standing up during vehicle loading, we chose an ergonomic placement of the control levers to reduce the need for bending and other uncomfortable positions. In addition, Adero has a hydraulic second floor extendable safety fence with walking platforms, which increases driver safety and ensures faster loading," said Mr. Blažulionis.

A heavy-duty chassis by Scania

To develop next-gen vehicle transporter solutions, Patikima Linija has partnered with the Swedish heavy transport vehicle manufacturer Scania and its local representative Scania Lietuva. "Scania is highly focused on innovation, efficiency and sustainability, which are crucial for the development of advanced solutions. The result of the synergy between Scania and Patikima Linija is one of the first electric vehicle transporters on the market. It is very encouraging to see Lithuania developing patented world-class innovations," said Darius Snieška, Regional Manager of Scania Lietuva.

Patikima Linija's representatives highlights the importance of the smart layout of Scania's chassis, which allows the transporter to remain as functional and manoeuvrable as possible. Even though Adero has shorter wheelbases than its predecessors, they still manage to fit a 900-liter fuel tank, two spare wheels, and several compartments for the driver's belongings. This arrangement of components allows for the additional space to be used for a lifting axle, thereby ensuring a more even load distribution.

"Our partnership with Scania, which includes exchanging technical information and know-how, has given us the Group's official approval to adapts its cab design to our needs, and established an overall sustainable basis for the development of important innovations. The specific cutting technique agreed upon with Scania in advance enabled us to create a sloping cab roof that makes the over-the-cab loading process more efficient and reduces the transporter's overall height. The height parameter is of paramount importance to carriers who are often forced to make calculations with the precision of centimetres to make sure they meet the permissible height requirements of this or that particular country," Director of Patikima Linija explained. According to him, flexible loading options are also highly valued by carriers of pre-owned

vehicles.

“Loading 8-9 vehicles of the same model requires a solution that’s different from the one intended for loading the same number of pre-owned vehicles of varying heights and sizes. Adero was created with these challenges in mind,” added Blažulionis.

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