

Voith Electrical Drive System (VEDS) Now standard in the first H₂ truck to be built in Germany

Voith continues to drive the mobility transformation forward at full speed through a collaboration with a strong partner, the Paul Nutzfahrzeuge GmbH. And "driving at full speed" is a very apt description ...

Whether for buses or trucks, the Voith Electrical Drive System (VEDS) offers all the basic components of an electric drive system for various applications in the commercial vehicle segment. It generally consists of an electric motor available in two power classes (medium-duty MD and heavy-duty HD), a traction inverter, and a corresponding ECU.

Since the beginning of 2023, the HD version of the VEDS has now also been used as standard in the first H₂ truck (FCEV) to be built in Germany: the Paul Hydrogen Power Truck (PH2P). The energy for the electric drive is generated in a fuel cell. The truck was developed, built and perfected by Paul Nutzfahrzeuge in close consultation with Voith to ensure optimum road performance in the final vehicle.

And with success, because the series-produced PH2P truck delivers impressive performance, efficiency and comfort. In addition, the VEDS is the first electric drive system for city buses to be certified according to ISO 26262, thus meeting

all functional safety requirements. This is without doubt yet another milestone on the path towards the mobility transformation, and naturally, in the success story of the VEDS.

Vehicle facts, figures and data

Туре	PH2P truck based on a Daimler Atego with VEDS HD	
Weight	16 t	
Drive	Voith Electrical Drive System (VEDS) HD	
Reach	Approx. 450 km	
Target group	Medium-range distribution trucks up to 16 t and distances greater than the electric-only range	

In collaboration with:



The VEDS HD installed in the PH2P truck at a glance

Technical specifications	
Continuous output	310 kW
Peak output	410 kW
Max. torque	3,100 Nm
Max. speed	3,800 rpm
Peak efficiency	97.3 %

Main benefits

- + First electrical drive system with functional safety conformity (ISO 26262)
- + High efficiency in all speed ranges
- + High power density
- + Robust and reliable design
- + Direct drive no gearbox necessary
- + Protection class IP6K9K

Additional information on our partner

Paul Nutzfahrzeuge has concluded a preferred partnership agreement. The purpose of the collaboration is to make greater use of synergies and profit from the respective partner's value chains in the commercial vehicle electrification segment.

Paul Nutzfahrzeuge is one of the European market leaders in special-purpose vehicle conversion and construction. In recent years, this business segment within the Paul Group has become a global player that now serves companies all over the world. Every year, the chassis experts carry out chassis rebuilds, axle modifications, frame extensions and special configurations on up to 1,000 commercial vehicles.

"Together with strong partners like Voith and Pepper Motion, we are striving to instigate a revolution in the hydrogen truck segment. By 2030, 45 percent of trucks are supposed to be carbonneutral. That's where you need people who say: Let's take a radical approach to getting this done!"

Bernhard Wasner, CEO of Paul Nutzfahrzeuge GmbH

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