

## Media Release

Voith Turbo

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### The new VEDS 1.5: Bus manufacturers and operators benefit from groundbreaking developments

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- New inverter system Drive Inverter System (DIS) with integrated drive management unit (DMU) meets automotive cybersecurity standards based on ISO 21434
- Automotive-compliant connector system for faster installation and simpler maintenance
- Smaller and lighter design of modular drive system without compromising efficiency

**HEIDENHEIM, GERMANY.** Whether for buses or commercial vehicles, with its innovative Voith Electrical Drive System (VEDS), Heidenheim-based global technology group Voith has been delivering customized, highly efficient electrical drive solutions that measurably reduce CO<sub>2</sub> emissions and sustainably protect the environment for more than five years now.

The proven VEDS 1.0 is being successfully used worldwide in many new electrically-powered vehicles from prestigious manufacturers and has won several awards in Europe for its efficiency and sustainability. But that's not all: With the new VEDS 1.5, Voith is now introducing numerous groundbreaking refinements that take account of and fully satisfy all current requirements for modern electric mobility applications.

"The centerpiece of the new development is the inverter platform that meets state-of-the-art cybersecurity standards. In this context, we follow ISO 21434," explains Robin Gundel, Product Manager E-Mobility at Voith. Moreover, the new inverter system with integrated DMU meets the relevant requirements of the functional safety standard ISO 26262 for applications up to ASIL C and is based on an AUTOSAR software architecture.

Another key advantage of the new VEDS 1.5 is the system's modular approach. Voith relies on a universal inverter with a voltage range of 560 to

850 V that covers both electric motor variants – i.e., HD (heavy duty) and MD (medium duty). Thanks to the smaller and lighter design, the inverter is also reducing the weight without compromising efficiency. With a system weight of just 22 kilograms, it achieves a peak power of up to 390 kW.

Voith also attached particular importance to developing a modular system that is easy to install and service. Automotive-compliant connections, an integrated diagnostics unit and a new I/O gateway for extended charging functions accelerate and simplify the installation and maintenance of the new VEDS 1.5.

As a partner and pioneer for integrated electric mobility solutions, Voith therefore continues to support the transition to climate-friendly mobility – as always by being reliable, innovative and sustainable. The rigorous ongoing development of the proven VEDS once again testifies to the company's outstanding expertise in the bus segment in particular.

“Whether our customers are bus manufacturers or fleet operators, the cybersecurity features, compactness and flexibility of the new VEDS 1.5 gives them a powerful, future-ready modular drive system that meets the most exacting technical and safety standards,” Gundel stresses.

Depending on the application and requirements, VEDS 1.5 comes in two variants: small scope or extended scope. The small scope version consists of the basic components of the modular system, i.e., electric motor plus new inverter system DIS with integrated DMU. The extended scope version offers additional components on request, e.g., a new power distribution box (PDB) an interface to the battery and central distribution box to supply energy to all electrical consumers, auxiliary inverter, HV and LV cables, Central Electric Interface (CEI) for communication with the vehicle, and a charging control unit.

Incidentally, you can find out more about the Voith Electrical Drive System at Busworld Europe 2025, the most important global mobility event for the sector in Brussels. Visit us from October 4 to 9 at our Booth No. 517 in Hall 5.



The HD and MD motors of the new VEDS 1.5: The modular drive system achieves peak power of up to 390 kW.

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The new Voith inverter platform that meets state-of-the-art cyber security standards.

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## About the Voith Group

The Voith Group is a global technology company. With its broad portfolio of systems, products, services and digital applications, Voith sets standards in the markets of energy, paper, raw materials and transport. Founded in 1867, Voith today has around 22,000 employees, sales of € 5.2 billion and locations in over 60 countries worldwide and thus is one of the larger family-owned companies in Europe.

The Group Division Voith Turbo is part of the Voith Group and a specialist for intelligent drive technology, systems as well as tailor-made services. With its innovative and smart products, Voith offers highest efficiency and reliability. Customers from highly diverse industries such as oil and gas, energy, mining and mechanical engineering, ship technology, rail and commercial vehicles rely on the advanced technologies and digital applications of Voith.

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